NORTH COUNTY FIRE PROTECTION DISTRICT

AGENDA FOR REGULAR BOARD MEETING
AUGUST 27, 2024, AT 5:00 p.m.

The August 27, 2024, meeting will be held in person and via Zoom. The public may attend remotely using:

The Zoom app, [Zoom website (https://zoom.us/)] [Meeting ID: 870 1784 6503; Passcode: 631628] at https://us06web.zoom.us/j/87017846503?pwd=ekF0RGt1Mm4vWXgrRFpXbUlPUFlmdz09 or
Dial by your location: +1 669 900 6833 US (San Jose); Meeting ID: 870 1784 6503; Passcode: 631628

The public may provide comments in advance or real-time by emailing ncfboardcomments@ncfire.org. E-mailed comments received will be read into the record by Staff. Please note that in the event of technical issues that disrupt the ability of members of the public to view the meeting or provide public comments through the web conference option, the meeting will continue.

Location:

Fallbrook Public Utility District
990 East Mission Road
Fallbrook, CA 92028

PUBLIC ACTIVITIES AGENDA

For those joining us for the public activities agenda, please feel free to depart at the close of the agenda.

Call To Order
Roll Call
Pledge Of Allegiance
Changes to the Agenda

1. Public Comment – President Pike (pgs. 5-6)

➢ Standing Item: Members of the public may directly address the Board of Directors on items of interest to the public provided no action will be taken on non-agenda items. The Presiding Officer may limit comments to three minutes per speaker (Board of Directors Meetings – SOG – § 7.2.).

DISCUSSION/PRESENTATION AGENDA

No action shall be undertaken on any discussion item. The Board may: acknowledge receipt of the information or report and make comments; refer the matter to Staff for further study or report; or refer the matter to a future agenda.

2. There are no discussion/presentation items for the August 27, 2024, Regular Board Meeting. (pgs.7-8)

ACTION AGENDA

Consent Items:

All items listed under the consent items are considered routine and will be enacted in one motion. There will be no separate discussion of these items prior to the Board action on the motion, unless members of the Board, Staff or public request specific items be removed from the consent agenda.

3. Regular Board Meeting Minutes, July 23, 2024 (pgs. 9-14)

➢ Standing Item: Review and approve minutes from the July meeting as presented.

4. Financial Reports for July 2024 (pgs. 15-18)

➢ Standing Item: Review and accept financial reports for July 2024 as presented.

Note: The Americans with Disabilities Act provides that no qualified individual with a disability shall be excluded from participation in, or denied the benefits of, District business. If you need assistance to participate in this meeting, please contact the District office 72 hours prior to the meeting at (760) 723-2012. Closed captioning and translation services are available to the public when the meeting is accessed using the Zoom platform.

NORTH COUNTY FIRE PROTECTION DISTRICT

AGENDA FOR REGULAR BOARD MEETING
AUGUST 27, 2024, AT 5:00 p.m.

5. Policies and Procedures (pgs. 19-20)
   - A) There are no policy and procedure revisions for the August 27, 2024, Regular Board Meeting.
6. Monthly Operations Activity Report (pgs. 21-32)
   - Standing Item: Monthly Report demonstrating call mix, turnout time, call by unit, transports, total response times, aid received & provided, monthly inspection report, health & safety, injuries & accidents, and turnover of care statistics.

Action Items:

All items listed under the action items agenda will be presented and discussed prior to the Board taking action on any matter. Members of the public may comment on items at the time they are presented. Time certain items will commence precisely at or after the time announced in the agenda.

7. Public Hearing Date/Time Certain August 27, 2024, at 5:05 p.m. to adopt Resolution 2024-12 and the proposed Ambulance Fee Schedule - Chief McReynolds (pgs. 33-36)
   - Recommendation: That the Board adopt Resolution 2024-12 reflecting updates to ambulance billing rates.
8. Public Hearing Date/Time Certain August 27, 2024, at 5:05 p.m. to adopt Resolution 2024-13 and the associated Cost Recovery Fee Schedule – Chief McReynolds (pgs. 37-44)
   - Recommendation: That the Board adopt Resolution 2024-13 and the proposed rate adjustments.
9. Public Hearing Date/Time Certain August 27, 2024, at 5:05 p.m. to adopt Resolution 2024-14 finding the Fire Station #4 Project exempt from the California Environmental Quality Act (CEQA) under a Class 2 Categorical Exemption, approving the Project – Chief McReynolds (pgs. 45-916)
   - Recommendation: That the Board adopt Resolution 2024-14 referencing the results in the attached CEQA report and approving the Project.
10. Fire Station #3 Renovation Contract Amendment: Guaranteed Maximum Price – Chief McReynolds (pgs. 917-928)
    - Recommendation: That the Board approve the contract amendment to the Fire Station #3 project to include the guaranteed maximum price, authorizing the project to move into the construction phase.
11. Fire Station #3 Dozer Barn Guaranteed Maximum Price – Chief McReynolds (pgs. 929-930)
    - Recommendation: That the Board approve the guaranteed maximum price bid alternate for dozer barn construction at Fire Station #3.
12. Revised North Regional Zone Automatic Aid Agreement – Chief McReynolds (pgs. 931-938)
    - Recommendation: That the Board authorize the Fire Chief to sign the revised agreement on behalf of the District.

STANDING DISCUSSION ITEMS

All items listed under the standing discussion items are presented at every meeting.

- LEGAL COUNSEL REPORT: (pgs. 939-942)
  Ethics Training Requirements for Elected Officials
- WRITTEN COMMUNICATION (pgs. 943-946)

NORTH COUNTY FIRE PROTECTION DISTRICT

AGENDA FOR REGULAR BOARD MEETING
AUGUST 27, 2024, AT 5:00 p.m.

- COMMENTS/QUESTIONS (pgs. 947-948)
- Staff:
  - Chief McReynolds
  - Other Staff
- Board
- Bargaining Groups
- Public Comment

CLOSED SESSION

The Board will enter closed session to discuss items as outlined herein. As provided in the Government Code, the public will not be present during these discussions. At the end of the closed session, the Board shall publicly report any action taken in closed session and the vote or abstention on that action of every member present in accordance with Government Code § 54950.

CS-1. Announcement — President Pike: (pgs. 949-950)

CS-2. Conference with Real Property Negotiator (Government Code §54956.8) Property: 315 E. Ivy Street, Fallbrook, CA & Vacant Land, Ivy Street, Fallbrook, CA 92028

➢ Agency Rep.: Wil Soholt and Chief McReynolds

CS-3. Conference with Legal Counsel - Anticipated Litigation (Govt. Code §54956.9(d)):

➢ One case

CS-4. Conference with Labor Negotiators (Government Code §54957.6):

➢ Agency Representative: Chief McReynolds — Management Group Employees, Fallbrook Firefighters Association (Safety Group Employees), & Non-Safety Group (Miscellaneous)

CS-5. Announcement — President Pike:

ADJOURNMENT

Scheduled Meetings:

The next regularly scheduled Board meeting is Tues. September 24, 2024, at 5:00 p.m.

CERTIFICATION OF AGENDA POSTING

"I certify that this agenda was posted in accordance with the provisions of the Government Code § 54950 et. seq. The posting locations were: [1] the entrance of North County Fire Protection District Administrative Offices, [2] the Fallbrook Public Utility District Administrative Offices, [3] the Roy Noon Meeting Hall, and [4] the District's website at www.ncfireca.gov. The agenda was also available for review at the office of the Board Clerk, located at located at 330 S. Main Avenue, Fallbrook, CA. Materials related to an item on this agenda submitted to the District after distribution of the agenda packet are available for public inspection in the office of the Board Clerk during normal business hours or may be found on the District website, subject to Staff's ability to post the documents before the meeting. The date of posting was August 22, 2024."

Board Clerk Mavis Canpinar: Mavis Canpinar Date: August 22, 2024

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NORTH COUNTY FIRE PROTECTION DISTRICT

STAFF REPORT

TO: BOARD OF DIRECTORS

FROM: CHIEF MCREYNOLDS

DATE: AUGUST 27, 2024

SUBJECT: PUBLIC COMMENT

PUBLIC COMMENT:

1. *Members of the Public may directly address the Board of Directors on items of interest to the Public provided no action will be taken on non-agenda items. The Board President may limit comments to three minutes per speaker (Board of Directors Meetings – SOG § 7.2.).*

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NORTH COUNTY FIRE PROTECTION DISTRICT

STAFF REPORT

TO: BOARD OF DIRECTORS

FROM: CHIEF MCREYNOLDS

DATE: AUGUST 27, 2024

SUBJECT: DISCUSSION/PRESENTATION AGENDA - NONE

There are no discussion/presentation agenda items for the August 27, 2024, Regular Board Meeting.

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July 23, 2024

REGULAR MEETING OF THE BOARD OF DIRECTORS OF

THE NORTH COUNTY FIRE PROTECTION DISTRICT

LOCATION: 990 E. MISSION ROAD, FALLBROOK CA 92028

President Pike called the meeting to order at 5:00 p.m.

ALL RECITED THE PLEDGE OF ALLEGIANCE.

ROLL CALL:

Present: Directors Acosta, Egkan, Pike, and Shaw (Shaw via teleconference)

Absent: Munson

Staff Present: Chief McReynolds, General Counsel Steinke, DFC MacMillan (via teleconference), DC August, BC Krumwiede, BC Bradshaw, IT Specialist Swanger, Board Clerk Canpinar, and members of the public.

CHANGES TO THE AGENDA:

There were no changes to the July 23, 2024, Regular Board Meeting agenda.

PUBLIC ACTIVITIES AGENDA

1. **PUBLIC COMMENT:** President Pike inquired if there were any public comments regarding items not on the agenda. There being no public comment, the public comment section was closed.

2. **COMMUNITY CHALLENGE COIN:** Chief McReynolds presented a challenge coin to Justin Demary of Rainbow Municipal Water District for his service repairing NCF Station #5 water lines when a mainline water valve was struck by a vehicle resulting in full interruption of water service to the station.

DISCUSSION/PRESENTATION AGENDA

3. There were no discussion/presentation items for the July 23, 2024, Regular Board Meeting.

ACTION AGENDA

CONSENT ITEMS:

4. **REVIEW AND ACCEPT REGULAR BOARD MEETING MINUTES FOR JUNE 25, 2024.**

5. **REVIEW AND ACCEPT FINANCIAL REPORTS FOR JUNE 2024.**

6. **REVIEW AND ACCEPT POLICIES & PROCEDURES:**

There were no policies or procedures for the July 23, 2024, Regular Board Meeting.

7. **REVIEW AND ACCEPT THE MONTHLY OPERATIONS ACTIVITY REPORT.**

8. **SECOND QUARTER 2024 CUSTOMER SATISFACTION SURVEY.**

9. **ANNUAL FLEET SERVICES REPORT.**

President Pike inquired whether there were any questions on Consent Items 4-9. There being no discussion, President Pike asked for a motion to approve the Consent Agenda. On a motion by Director Acosta seconded by Director Egkan, the motion to approve the Consent Agenda passed by the following roll call vote: **Acosta,** aye; **Egkan**, aye; **Pike**, aye; **Shaw**, aye; **Munson**, absent.

ACTION ITEMS:

10. **SET PUBLIC HEARING DATE/TIME CERTAIN AUGUST 27, 2024, AT 5:05 P.M. FOR THE FIRE STATION #4 PROJECT CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) FINDINGS:** After March 2023 Board approval of the construction of a permanent Fire Station #4, Staff executed a contract with TELACU Construction Management for design-build services. Staff has been working with CEQA consultants on the analysis of the project to determine if it is exempt from CEQA. At the public hearing, the Board will consider the report and the summary of the work performed by the District CEQA consultants, to determine the proposed findings. On a motion by Director Egkan seconded by Vice President Shaw, the motion to set a Public Hearing date for August 27, 2024, at 5:05 p.m. to consider the CEQA Report and any exemptions that may apply to the Fire Station #4 Project passed by the following roll call vote: **Acosta,** aye; **Egkan**, aye; **Pike**, aye; **Shaw**, aye; **Munson**, absent.

11. **REVIEW THE BIENNIAL CONFLICT OF INTEREST CODE, REPORTING NO CHANGES FOR 2024:** Government Code Section 87306.5 requires every local government agency to review its Conflict-of-Interest Code (COI) biennially to determine if a revision is needed. Once the determination has been made, a notice reporting the findings is required to be sent to the code reviewing body, The San Diego County Board of Supervisors. A Conflict-of-Interest code tells public officials, governmental employees, and consultants what financial interests they must disclose on their Statement of Economic Interests (Form 700). Chief McReynolds presented the notice, reporting that the last COI update was 2 years ago, and there were no new positions added or substantial changes in duties or responsibilities for any positions since the last code was approved. On a motion by Director Acosta seconded by Director Egkan, the motion to authorize the Board Clerk to submit the Biennial Conflict-of-Interest

paperwork in accordance with the requirements of San Diego County passed by the following roll call vote: **Acosta,** aye; **Egkan**, aye; **Pike**, aye; **Shaw**, aye; **Munson**, absent.

12. **RESOLUTION 2024-09: AUTHORIZING REVISIONS TO THE DISTRICT INVESTMENT POLICY SECTION 211.15 AND AUTHORIZING THE FIRE CHIEF/CEO AND FINANCE MANAGER TO TRANSFER FUNDS DURING FY 24/25 TO MAXIMIZE INVESTMENT INTEREST AND TO FUND CAPITAL EXPENDITURES THAT HAVE BEEN APPROVED BY THE BOARD**: Chief McReynolds presented the draft investment policy along with Resolution 2024-09. The adoption of both documents would authorize the Fire Chief and Finance Manager to transfer funds during FY 24/25 to maximize investment interest and to fund Board approved capital expenditures, noting the previous policy required Board action to move funds. If funding was to be moved out of California Cooperative Liquid Assets Securities System (CLASS), Board action would be required either through the preliminary budget and/or budget adoption at a Board meeting or through a separate Board action. Director Egkan asked if the rate of return was performing better in another investment portfolio such as the Local Agency Investment Fund (LAIF) instead of CLASS, would the policy allow the transfer of funds into that account. Chief McReynolds confirmed the policy would allow it; however, Resolution 2024-09 would need to be revised to align with these permissions. It was noted that the monthly financial reports included in the board packet consent agenda section are the Board authorization needed to move funds throughout different CLASS subcategories. Board discussion ensued. On a motion by Director Acosta seconded by Director Egkan, the motion to adopt Resolution 2024-09 pending a revision to the Resolution to include the language 'or any other District investment account,' and adopting the revised investment policy passed by the following roll call vote: **Acosta,** aye; **Egkan**, aye; **Pike**, aye; **Shaw**, aye; **Munson**, absent.

13. **RESOLUTION 2024-10: APPROVING AN AMENDMENT TO THE DISTRICT'S BUDGET REFLECTING AN INCREASE IN SALARY FOR THE FIRE CHIEF/CEO AND AN EXTENSION OF THE TERM OF THE EMPLOYMENT AGREEMENT BETWEEN THE DISTRICT AND THE FIRE CHIEF**: General Counsel Steinke requested the Board consider the results of the performance evaluation of Chief McReynolds conducted in closed session on June 25, 2024, and discuss and determine whether adjustments shall be made for compensation for the Chief as well as whether the term of the Chief's employment contract should be extended. On a motion by Director Acosta seconded by Director Egkan, the motion to increase the Fire Chief's salary

to $250k annually and extend the term of his employment contract one year through June 30, 2027, passed by the following roll call vote: **Acosta,** aye; **Egkan**, aye; **Pike**, aye; **Shaw**, aye; **Munson**, absent.

14. **RESOLUTION 2024-11: AUTHORIZATION OF HUMAN RESOURCES (HR) SPECIALIST GOSS AS SIGNATORY**: Chief McReynolds requested the Board consider authorizing HR Specialist Goss to sign payroll and purchase orders. Resolution 2024-11 would permit HR Specialist Goss to conduct business on behalf of the District in the same manner as the Fire Chief and Deputy Fire Chief. On a motion by Director Egkan seconded by Vice President Shaw, the motion to approve Resolution 2024-11 passed by the following roll call vote: **Acosta,** aye; **Egkan**, aye; **Pike**, aye; **Shaw**, aye; **Munson**, absent.

LEGAL COUNSEL REPORT: General Counsel Steinke reviewed the included report: Public Officials and social media, the Brown Act, and the Public Records Act.

- **WRITTEN COMMUNICATIONS:** Information only; no action required.
- **BOARD RECOGNITION PROGRAM**: Information only; no action required.
- **STAFF REPORTS/UPDATES:**
- **KEITH MCREYNOLDS, FIRE CHIEF:** Chief McReynolds informed the Board of the following items:
    - A grant application was submitted to the CA Office of Transportation Safety with the assistance of Hoch Consulting. If awarded, the grant could provide up to $165k to convert three (3) front line NCF engines to battery operated rescue equipment.
    - Local 1622 raised the most money in the County in their fundraising efforts for the Burn Institute. The total amount raised was close to $25k!
    - Bonsall Unified School District will hold a leadership summit at Fire Station #5 on Tuesday, July 30.
    - The first Woman's Empowerment Summit will be hosted collaboratively between NCF, Vista Fire, and Oceanside Fire in August.
    - Staff is currently researching Board of Director meeting compensation rates at similar agencies throughout the County and will bring this item back to the Board for consideration at a future meeting.
- **CHIEF OFFICERS AND OTHER STAFF: BC BRADSHAW:** BC Bradshaw provided staffing updates that included deployments to help neighboring agencies fight fires in northern California. **DC AUGUST**:

DC August provided an update on current facility projects, and confirmed IT Specialist Swanger successfully transitioned the phone system to the new vendor, Ring Central. A new social media campaign called 'Meet Your Firefighter' is currently being launched, along with anti drinking and driving reminders.

- **BOARD:** President Pike: President Pike thanked Staff and community groups for their participation and attendance at the community roundtable with California State Treasurer Fiona Ma last week.
- **BARGAINING GROUPS:** There was no comment from the Bargaining Groups.
- **PUBLIC COMMENT:** Jacqueline Howell of Howells Public Relations provided grant application updates.

CLOSED SESSION

There were no closed session items for the July 23, 2024, Regular Board Meeting.

ADJOURNMENT

A motion was made at 6:00 p.m. by Director Acosta seconded by Director Egkan to adjourn the meeting and reconvene on August 27, 2024, at 5:00 p.m., which motion carried unanimously.

Respectfully submitted,

Official Seal

Mavis Canpinar
Board Clerk

Minutes approved at the Board of Director's Meeting on: _____

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NORTH COUNTY FIRE PROTECTION DISTRICT

STAFF REPORT

TO: BOARD OF DIRECTORS

FROM: CHIEF MCREYNOLDS

DATE: AUGUST 27, 2024

SUBJECT: FINANCIAL REPORTS

Due to limited staffing availability, the July 2024 financial reports included in this board packet are limited to the following:

1. Warrant list

Questions regarding specific financial reports can be directed to members of senior staff. Regular monthly financial reports to resume September 2024.

NORTH COUNTY FIRE PROTECTION DISTRICT

Warrant Register

July 1, 2024 - July 31, 2024

Date	Vendor	Check #	Amount
7/1/2024	FEES FOR CREDIT CARDS	EFT	$ 813.32
7/1/2024	RETURNED CHECK	EFT	250.00
7/1/2024	RETURNED CHECK	EFT	275.00
7/1/2024	RETURNED CHECK	EFT	205.00
7/1/2024	BANK FEES FOR RETURNED CHECKS	EFT	30.00
7/1/2024	PITNEY BOWES LEASE	EFT	520.99
7/1/2024	LINDE - OXYGEN REFILL	EFT	1,281.37
7/1/2024	FALLBROOK WASTE 6/30/24	EFT	88.90
7/1/2024	FALLBROOK WASTE 6/30/24	EFT	88.90
7/1/2024	FALLBROOK WASTE 6/30/24	EFT	140.35
7/1/2024	FALLBROOK WASTE 6/30/24	EFT	230.78
7/1/2024	FALLBROOK WASTE 6/30/24	EFT	288.04
7/1/2024	FALLBROOK WASTE 6/30/24	EFT	327.90
7/1/2024	ATT MAY 14 - JUNE 13	EFT	2,440.23
7/1/2024	BOYETT - FUEL	EFT	4,705.92
7/1/2024	CHASE CARD	EFT	74,855.09
7/1/2024	SDGE ST1	EFT	3.88
7/1/2024	SDGE ST1	EFT	20.80
7/1/2024	SDGE ST1	EFT	26.80
7/1/2024	SDGE ST1	EFT	30.49
7/1/2024	SDGE ST5	EFT	66.46
7/1/2024	SDGE ST1	EFT	102.62
7/1/2024	SDGE ST1	EFT	109.67
7/1/2024	SDGE ADMIN	EFT	129.39
7/1/2024	SDGE ST5	EFT	258.57
7/1/2024	SDGE ADMIN	EFT	403.77
7/1/2024	SDGE ST4	EFT	1,010.10
7/1/2024	SDGE ST1	EFT	1,772.77
7/1/2024	CALCARD JUNE	EFT	69,574.34
7/1/2024	LINCOLN NATIONAL	EFT	971.41
7/1/2024	TRUST	EFT	98,120.51
7/2/2024	QAF CY2024 INVOICE #3	EFT	98,220.51
7/2/2024	WIRE FEE	EFT	50.00
7/2/2024	ADMIN OFFICE	EFT	189.65
7/5/2024	OVERDRAFT FEES	EFT	30.00
7/7/2024	BONSALL CHAMBER OF COMMERCE	67780	60.00
7/7/2024	BP BATTERY	67781	67.86
7/7/2024	CAL PACIFIC TRUCK CENTER LLC	67782	165.85
7/7/2024	CITY OF SAN MARCOS	67783	284,048.00
7/7/2024	CUSTOM GLASS & MIRROR INC	67784	1,784.34
7/7/2024	D.F. CLEANING SERVICE	67785	470.00
7/7/2024	DIESEL POLLUTION SOLUTIONS INC.	67786	343.72

Date	Vendor	Check #	Amount
7/7/2024	DIRECTV	67787	183.98
7/7/2024	FALLBROOK OIL COMPANY	67788	2,608.14
7/7/2024	FALLBROOK OVERHEAD DOORS AND ENT	67789	85.00
7/7/2024	FALLBROOK PUBLIC UTILITY DISTRICT	67790	666.01
7/7/2024	FOWLER PLUMBING	67791	1,925.00
7/7/2024	FRANCHISE TAX BOARD	67792	530.95
7/7/2024	FRMS	67793	9,398.28
7/7/2024	KEN GRODY FORD CARLSBAD	67794	117.96
7/7/2024	LEGAL SHIELD	67795	331.00
7/7/2024	LIFE-ASSIST INC	67796	4,358.02
7/7/2024	PARKHOUSE TIRE INC.	67797	541.33
7/7/2024	PINE TREE LUMBER	67798	711.05
7/7/2024	PTW INSURANCE SERVICES	67799	1,077.00
7/7/2024	RAINBOW MUNICIPAL WATER DIST	67800	266.44
7/7/2024	REED FAMILY ENTERPRISES INC	67801	20,235.32
7/7/2024	RIDEOUT ELECTRIC	67802	1,750.25
7/7/2024	SOUTH COAST FIRE EQUIPMENT	67803	358.81
7/7/2024	TELDATA ENTERPRISE NETWORKS INC	67804	2,670.00
7/7/2024	THE STANDARD	67805	522.00
7/7/2024	VERIZON WIRELESS	67806	38.01
7/8/2024	PITNEY BOWES - RED INK	EFT	143.08
7/9/2024	NAVIA - FSA	EFT	2,712.94
7/12/2024	DIRECT DEPOSIT TOTAL	EFT	343,447.66
7/12/2024	TRUST	EFT	13,177.24
7/15/2024	COX CABLE 6/22 - 7/21	EFT	473.07
7/16/2024	NAVIA - FSA	EFT	1,295.82
7/16/2024	XPS SHIP	EFT	100.00
7/16/2024	XPS SHIP	EFT	100.00
7/19/2024	SPECTRUM	EFT	242.85
7/22/2024	SPECTRUM	EFT	148.88
7/22/2024	SPECTRUM	EFT	148.88
7/23/2024	NAVIA	EFT	572.91
7/24/2024	STOP CHECK CHARGE	EFT	30.00
7/25/2024	READYFRESH - WATER AT ADMIN	EFT	154.90
7/25/2024	3 PEAKS CONSTRUCTION	67807	16,382.00
7/25/2024	AT&T	67808	202.29
7/25/2024	BURKE WILLIAMS & SORENSEN LLP	67809	16,134.25
7/25/2024	CHARTER COMMUNICATIONS	67810	1,857.27
7/25/2024	COUNTY OF SAN DIEGO - RCS	67811	5,935.50
7/25/2024	E.C.C.	67812	500.00
7/25/2024	EIDE BAILLY	67813	17,642.12
7/25/2024	ERICKSON-HALL CONSTRUCTION	67814	23,735.10
7/25/2024	FALLBROOK HTG & AIR CONDITIONING IN	67815	826.00
7/25/2024	FALLBROOK OVERHEAD DOORS AND ENT	67816	2,300.00
7/25/2024	FALLBROOK PUBLIC UTILITY DISTRICT	67817	567.88
7/25/2024	FALLBROOK WASTE	67818	521.84
7/25/2024	FIRE ETC.	67819	800.80
7/25/2024	FIRST ALARM WELLNESS	67820	1,237.50
7/25/2024	FRMS	67821	9,343.90
7/25/2024	HOCH CONSULTING	67822	12,492.50

Date	Vendor	Check #	Amount
7/25/2024	KOSMONT REALTY	67823	546.00
7/25/2024	LEGAL SHIELD	67824	331.00
7/25/2024	LIFE LINE EMERGENCY VEHICLES	67825	1,390.50
7/25/2024	MCNEIL & COMPANY INC	67826	145,560.00
7/25/2024	NAPA AUTO PARTS	67827	1,678.53
7/25/2024	NORTH COUNTY DISPATCH JPA	67828	194,679.82
7/25/2024	OJ INSULATION	67829	1,197.00
7/25/2024	O'REILLY AUTO PARTS	67830	406.04
7/25/2024	OSTARI	67831	1,850.00
7/25/2024	PTW INSURANCE SERVICES	67832	1,077.00
7/25/2024	RAINBOW MUNICIPAL WATER DIST	67833	1,963.16
7/25/2024	RAINBOW MUNICIPAL WATER DIST	67834	15.55
7/25/2024	RUSTY WALLIS INC	67835	162.00
7/25/2024	SAN DIEGO COUNTY FIRE CHIEF'S ASSOCI	67836	100.00
7/25/2024	SHERWIN-WILLIAMS CO.	67837	126.20
7/25/2024	SOCAL PPE	67838	1,519.75
7/25/2024	STREAMLINE	67839	1,800.00
7/25/2024	STREAMLINE AUTOMATION SYSTEMS LLC	67840	3,079.00
7/25/2024	TARGET SOLUTIONS	67841	17,405.84
7/25/2024	TELACU CONSTRUCTION MANAGEMENT	67842	20,489.10
7/25/2024	THE STANDARD	67843	522.00
7/25/2024	TRILOGY MEDWASTE	67844	266.27
7/25/2024	VELOCITY TRUCK CENTERS	67845	7,455.30
7/25/2024	WITTMAN ENTERPRISES LLC	67846	13,281.70
7/25/2024	XEROX - PASADENA	67847	545.25
7/26/2024	DIRECT DEPOSIT TOTAL	EFT	349,390.12
7/26/2024	BOYETT - FUEL	EFT	5,660.32
7/26/2024	TRUST	EFT	12,307.40
7/29/2024	PERS UAL	EFT	435,660.31
7/30/2024	XPS SHIP	EFT	100.00
7/30/2024	ATT JULY	EFT	189.65
	TOTAL		**$ 2,386,929.84**

NORTH COUNTY FIRE PROTECTION DISTRICT

STAFF REPORT

TO: BOARD OF DIRECTORS

FROM: CHIEF MCREYNOLDS

DATE: AUGUST 27, 2024

SUBJECT: POLICIES AND PROCEDURES

CONSENT AGENDA

There are no policy and procedure revisions for the August 27, 2024, Regular Board Meeting.

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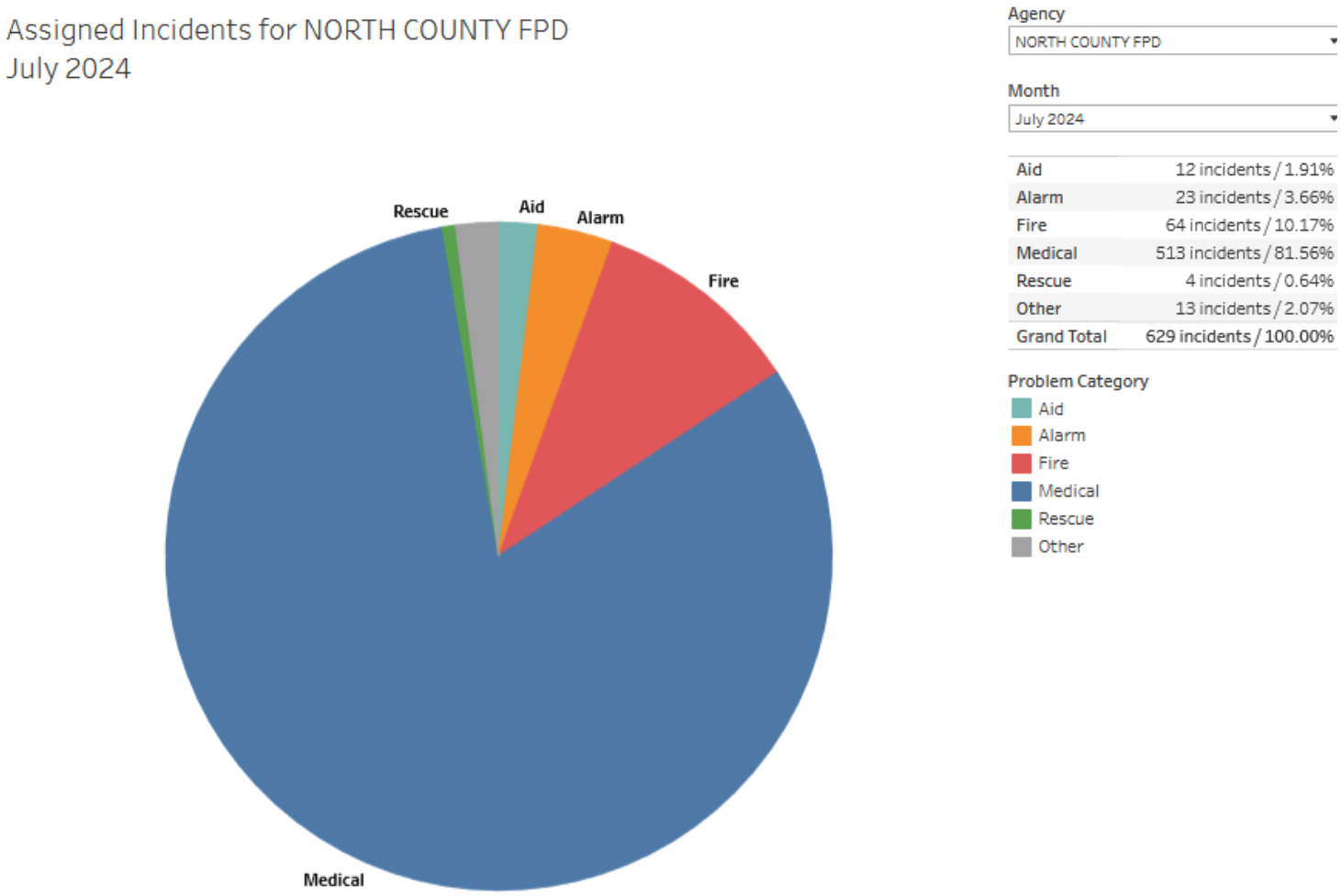
North County Fire

MONTHLY OPERATIONS ACTIVITY REPORT:

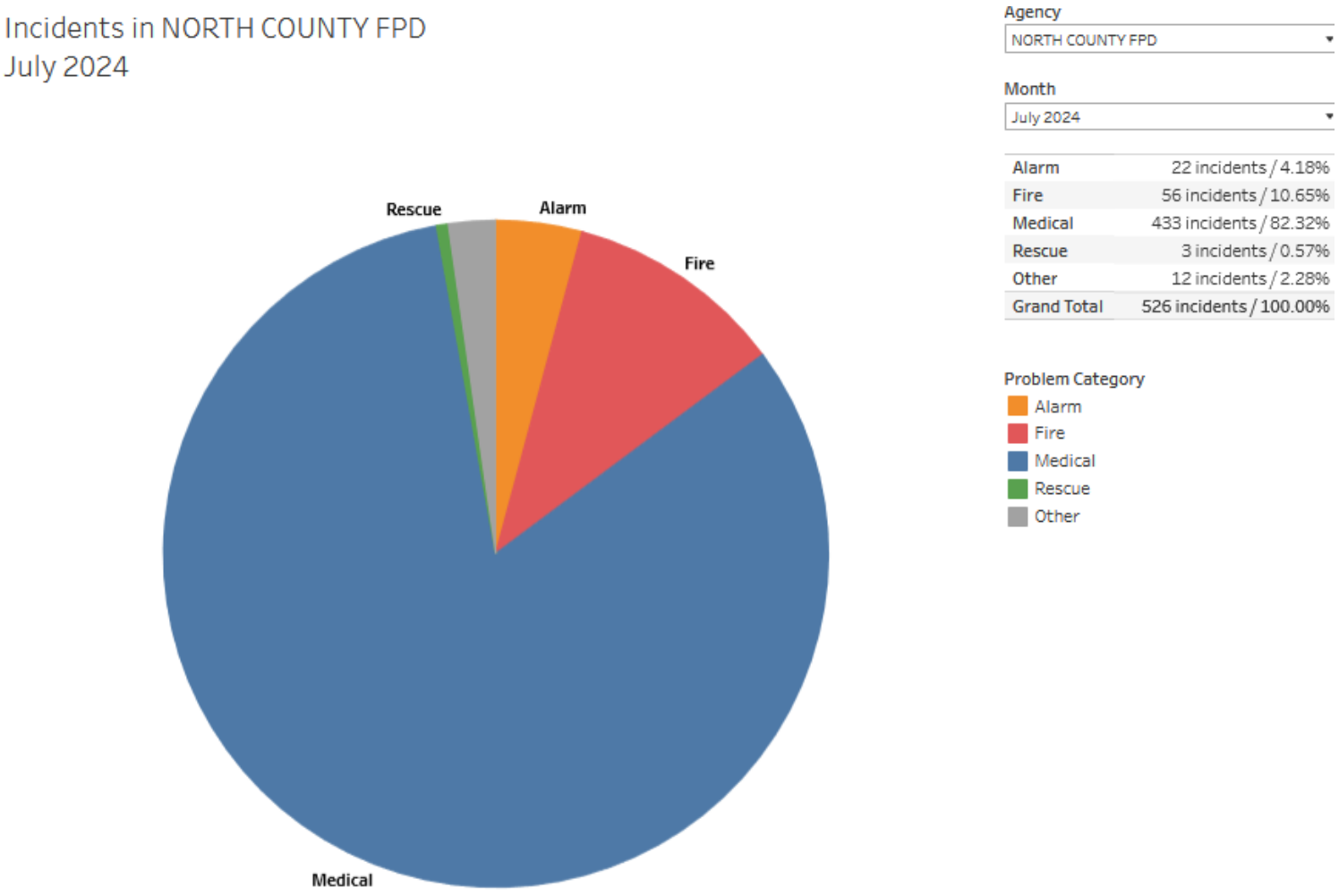
July 2024

Assigned Incidents



Total incidents year to date:
July 2023: 4,292
July 2024: 4,337

Incidents in Jurisdiction



Total incidents year to date:
July 2023: 3,655
July 2024: 3,717

Turnout Time

(Time of station notification to responding)

90th Percentile – Emergency Calls Only

Shift	Unit Name	July
A-SHIFT	B111	00:00:46 (5)
	E111	00:01:41 (56)
	E112	00:01:21 (18)
	E113	00:01:13 (19)
	E114	00:01:53 (39)
	E115	00:01:41 (28)
	M110	00:01:44 (36)
	M111	00:01:25 (30)
	M114	00:01:53 (39)
	M115	00:01:31 (37)
	RA111	00:01:02 (5)

Shift	Unit Name	July
B-SHIFT	B111	00:00:59 (10)
	E111	00:01:28 (65)
	E112	00:01:43 (35)
	E113	00:01:37 (15)
	E114	00:01:28 (40)
	E115	00:01:13 (36)
	M110	00:01:29 (39)
	M111	00:01:17 (38)
	M114	00:01:28 (42)
	M115	00:01:17 (47)
	RA111	00:00:24 (2)
	RA114	00:00:39 (2)

Shift	Unit Name	July
C-SHIFT	B111	00:00:55 (9)
	E111	00:01:43 (60)
	E112	00:01:37 (23)
	E113	00:01:26 (12)
	E114	00:01:57 (24)
	E115	00:01:29 (28)
	E116	00:01:41 (4)
	M110	00:01:43 (31)
	M111	00:01:44 (37)
	M114	00:01:56 (25)
	M115	00:01:34 (44)
	RA114	00:00:17 (1)

Aid Given/Received

Aid Given by NORTH COUNTY FPD
July 2024: Incident Count

CAL FIRE	18
CAMP PENDLETON	2
ESCONDIDO FD	1
OCEANSIDE FD	43
PALA FD	8
VALLEY CENTER FPD	7
VISTA FD	14
Grand Total	93

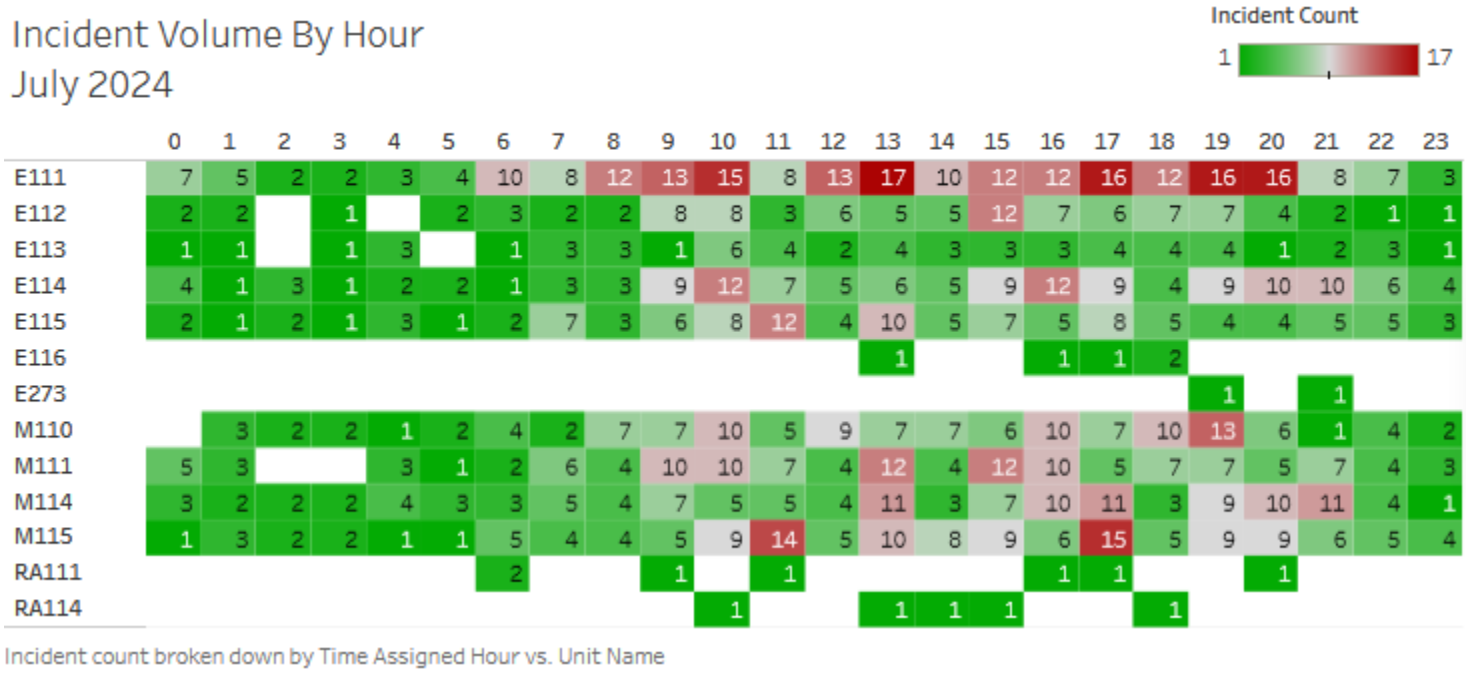
Aid Received by NORTH COUNTY FPD
July 2024: Incident Count

CAL FIRE	54
CAMP PENDLETON	1
OCEANSIDE FD	8
PALA FD	12
VISTA FD	22
Grand Total	97

Incidents within jurisdiction to which outside units were assigned, sorted by home jurisdiction.

Data Source: AgencyDashboard_v3_Extract_v4
Data Last Updated: 8/1/2024 4:09:25 PM

Incident Volume by Hour

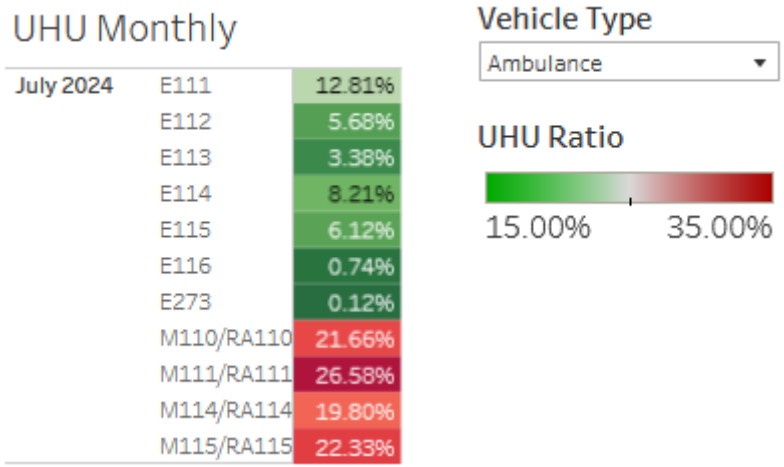


Incidents by Unit

Incidents by Unit for NORTH COUNTY FPD
July 2024

Ambulance	M110	128
	M111	134
	M114	129
	M115	143
	RA111	7
	RA114	6
	Total	547
Engine / Truck	E111	233
	E112	97
	E113	59
	E114	138
	E115	115
	E116	5
	E273	2
	Total	649
Grand Total		1,196

Ambulance Unit Hour Utilization



Transports

Transport Counts

M110	74
M111	85
M114	70
M115	79
RA111	4
RA114	3
Grand Total	315

*Only transports which arrive at a destination are counted.

Transport Destinations

TEMECULA VALLEY HOSPI..	146
PALOMAR HOSPITAL	125
TRI CITY MEDICAL CENTE..	17
KAISER SAN MARCOS ME..	10
CHILDRENS HOSPITAL	4
SCRIPPS ENCINTAS HOSPI..	4
MCP NAVAL HOSPITAL	3
INLAND VALLEY HOSPITAL	2
	1
AIR AMB LZ	1
PALOMAR HOSPITAL DOW..	1
RANCHO SPRINGS HOSP.	1
Grand Total	315

Health & Safety

Injuries & Illness

4 Injuries

Accidents

0 Vehicle

Social Media Metrics

	July
Instagram Followers	4,108
Facebook Followers	9,439
X (formally known as Twitter) Followers	
Post Reach Instagram	32.60%
Post Reach Facebook	-39.60%
Audience Growth Instagram	2.80%
Audience Growth Facebook	1.32%
Audience Growth X (formally known as Twitter)	
Engagement rate Instagram	73.90%
Engagement rate Facebook	81.80%
Engagement rate X (formally known as Twitter)	

Top performing posts:

FACEBOOK July 10th "Ignite Your Potential" Summit- This post, posted to the "Friends of Fallbrook" group got 93 reactions and 9 comments.
INSTAGRAM July 29th Trail Fire Post- This post got 503 likes, with 13 comments, 47 shares, and 8 saves.

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NORTH COUNTY FIRE PROTECTION DISTRICT

STAFF REPORT

TO: BOARD OF DIRECTORS

FROM: DEPUTY CHIEF MACMILLAN AND CHIEF MCREYNOLDS

DATE: AUGUST 27, 2024

SUBJECT: AMBULANCE FEE SCHEDULE ADOPTION

ACTION AGENDA

RECOMMENDATION:

That the Board approve Resolution 2024-12 and the attached Ambulance Fee Schedule (Exhibit "A").

BACKGROUND:

To recover costs for service, statute allows public entities to charge for emergency medical services (EMS). This may be accomplished by cost recovery based upon a full cost basis, or alternatively by charging a "reasonable fee." The District currently charges all users of the District's ambulances for services rendered.

DISCUSSION:

In September of 2016, the Board approved automatic rate increases equal to that of the CPI-Urban index for San Diego (CPI-U, San Diego). The annual increase is applied annually on October 1st. Resolution 2024-12 authorizes staff to implement the Board-approved annual automatic rate increase to the District's Ambulance Fee Schedule.

FISCAL ANALYSIS:

Per the District Statement of Revenue and Expenses produced for the July 2024 Board Package provided by the District's Finance Manager, the District received $4,692,438 in transport revenue as of June 30th, 2024. The District is currently budgeting for $4,500,000 of ambulance revenue for FY24/25 considering the revenue loss of BLS116 and gain of M110.

SUMMARY:

The adoption of resolution 2024-12 will finalize the ambulance rate adjustments approved with an implementation date of October 1, 2024.

NORTH COUNTY FIRE PROTECTION DISTRICT

RESOLUTION NO. 2024-12

RESOLUTION OF THE BOARD OF DIRECTORS OF THE NORTH COUNTY FIRE PROTECTION DISTRICT, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, AMENDING THE CURRENT FEE SCHEDULE FOR EMERGENCY AND NON-EMERGENCY MEDICAL SERVICES AND TRANSPORTATION

WHEREAS, the North County Fire Protection District provides emergency and non-emergency services as part of the operation of the Fire District; and

WHEREAS, the rules and regulatory fees and charges for services and transportation have previously been established for the operation of these services; and

WHEREAS, under the authority of the Health and Safety Code Section 13916, a District may charge a fee to cover the cost of any service which the District provides or the cost of enforcing any regulation for which the fee is charged; and

WHEREAS, it has been necessary to revise these rules, regulations, fees and charges from time to time on the recommendations of the Fire Chief/CEO and the Operations Chief; and

WHEREAS, the adoption of this fee schedule is required to recover the costs of providing emergency medical services, including pharmaceuticals, supplies, equipment and infrastructure charges from the users thereof to maintain an effective EMS Delivery System; and

WHEREAS, the fee structure was last changed in October of 2023 by Resolution; and

WHEREAS, the rate of user fees shall be that which is usual, customary and reasonable based upon the regional averages obtained from the most recent rate survey of 9-1-1 ambulance providers within San Diego County; and

WHEREAS, the Board of Directors of the North County Fire Protection District desires at this time and based on the findings submitted, deems it in the best public interest to increase EMS fees as set forth in “Exhibit A” (incorporated as a part of this Resolution) to become effective **October 1, 2024;**

NOW, THEREFORE, BE IT RESOLVED, by the Board of Directors of the North County Fire Protection District, a public agency in the County of San Diego, California, as follows:

1. The above recitations are true and correct and incorporated herein by this reference;

2. The Board of Directors hereby approves the Fee Schedule for the Emergency Medical Services, attached hereto and made part hereof as “Exhibit A” to this Resolution and which is incorporated herein by this reference;

3. That Resolution 2024-12 supersedes and replaces Resolution 2023-13.

NORTH COUNTY FIRE PROTECTION DISTRICT

RESOLUTION NO. 2024-12

RESOLUTION OF THE BOARD OF DIRECTORS OF THE NORTH COUNTY FIRE PROTECTION DISTRICT, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, AMENDING THE CURRENT FEE SCHEDULE FOR EMERGENCY AND NON-EMERGENCY MEDICAL SERVICES AND TRANSPORTATION

APPROVED, SIGNED AND ADOPTED by the Board of Directors, North County Fire Protection District, County of San Diego, State of California, on this **27th day of August 2024,** by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

RECUSED:

_____
Ross Pike, Board President

ATTEST:

I HEREBY CERTIFY that the foregoing is a true and correct copy of the Resolution duly and regularly adopted by the Board of Directors of the North County Fire Protection District thereof held on the **27th day of August 2024** and that the same now appears on record in my office.

IN WITNESS THEREOF, I hereunto set my hand and affixed by official seal this **27th day of August 2024**.

_____
Mavis Canpinar, Board Clerk

Official Seal

NORTH COUNTY FIRE PROTECTION DISTRICT

RESOLUTION NO. 2024-12

RESOLUTION OF THE BOARD OF DIRECTORS OF THE NORTH COUNTY FIRE PROTECTION DISTRICT, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, AMENDING THE CURRENT FEE SCHEDULE FOR EMERGENCY AND NON-EMERGENCY MEDICAL SERVICES AND TRANSPORTATION - EXHIBIT "A"

EMERGENCY MEDICAL SERVICES FEES

1. RESPONSE/TRANSPORT FEE:

Emergency ALS Base Transport Fee	$2522.81
Emergency ALS Base Transport - Non-Resident	$2589.26
Emergency ALS 2 Transport Fee	$2738.65
Emergency ALS 2 Transport Fee - Non-resident	$2803.66
Emergency BLS Transport Fee	$1515.34
Emergency BLS Transport - Non-Resident	$1565.10
ALS Treatment, Non-transport – Resident	$234.77
ALS Treatment, Non-transport – Non-Resident	$258.13
ALS Treatment, Non-transport CPR - Resident	$905.68
ALS Treatment, Non-transport CPR - Non-Resident	$934.61
ALS Treatment, Non-transport Level II Trauma	$715.42
ALS Treatment, Non-transport Level II Trauma - Non-Resident	$797.76
Mileage (per loaded mile or fraction)	$43.26

2. SUPPLIES/PHARMACEUTICALS/EQUIPMENT:

Level I Disposables Bundle (ALS, BLS, T&R)	$141.31
Level II Disposables Bundle (ALS2)	$271.48
Oxygen	$113.49
EKG	$41.17

3. Miscellaneous CHARGES:

Night Charge	$67.88
Admin/Continuous Quality Improvement (CQI)	$144.64

4. STANDBY: All Stand-by Charges are as defined and provided in the Fire Prevention Service Fee Schedule.

5. ANNUAL ADJUSTMENT OF TRANSPORTATION FEES AND MILEAGE CHARGE:

The Transport Fee identified in Section 1 will be increased annually on October 1st in an amount equal to the CPI-Urban index for San Diego (CPI-U, San Diego) as published the preceding January by the Bureau of Labor Statistics. This adjustment is not to exceed the regional average of increase.

AFFIDAVIT OF PUBLICATION FALLBROOK, CALIFORNIA 92028
COUNTY OF SAN DIEGO, STATE OF CALIFORNIA

I am a citizen of the United States, over twenty-one years of age, and the Associate Editor of said newspaper The Village News, Inc., 111 W. Alvarado St., Fallbrook, CA 92028 a newspaper adjudicated by the Superior Court, County of San Diego GIN013243 is a newspaper of general circulation, published and is circulated at least once a week in Fallbrook, County of San Diego, State of California.

The Notice of _____
PUBLIC NOTICE
Notice re: fee structure for Emergency Medical Services
North County Fire Protection District

_____
Legal Number: NA
Which the attached is a true printed copy, and Published in said newspaper for _2_ weeks, and on the following days: 08/15/24, 08/22/24

_____
in the regular issue of said newspaper,
THE VILLAGE NEWS, INC.,
111 W. Alvarado St., Fallbrook, CA 92028
and not in any other supplement.
I certify and declare under penalty that this statement is true and correct to the best of my knowledge.

Dated: August 22, 2024
Fallbrook, California 92028

Lucette Moramarco
Signature
LUCETTE MORAMARCO
ASSOCIATE EDITOR

PUBLIC NOTICE

NOTICE IS HEREBY GIVEN THAT THE BOARD OF DIRECTORS OF THE NORTH COUNTY FIRE PROTECTION DISTRICT, 330 South Main Avenue, Fallbrook, California, County of San Diego, will conduct a Public Hearing on **Tuesday, August 27, 2024, at a time certain of 5:05 p.m.** or as soon thereafter as such matter can be heard, at the Fallbrook Public Utility District, 990 E. Mission Road, Fallbrook, California, to discuss and approve modification to the fee structure for Emergency Medical Services. The potential rate modification is due to the increased cost of operating Emergency Medical Services and ambulance transport services in the greater Fallbrook, Bonsall and Rainbow area. Members of the public will have an opportunity to make public comment pertaining to the adoption of this fee structure. A copy of the suggested schedule may be obtained by calling (760) 723-2005, or it may be picked up in person at the District Office, located at 330 S. Main Avenue, Fallbrook, California, 92028, between 7:00 a.m. and 4:00 p.m., Monday through Thursday.

BOARD OF DIRECTORS OF THE NORTH COUNTY FIRE PROTECTION DISTRICT.

Mavis Canpinar
Board Clerk
August 8, 2024

Published August 15, 22, 2024

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NORTH COUNTY FIRE PROTECTION DISTRICT

STAFF REPORT

TO: BOARD OF DIRECTORS

FROM: DEPUTY FIRE CHIEF MACMILLAN AND CHIEF MCREYNOLDS

DATE: AUGUST 27, 2024

SUBJECT: COST RECOVERY FEE SCHEDULE INCREASE

ACTION AGENDA

RECOMMENDATION:

That the Board approve NCFPD Resolution 2024-13, and the associated Cost Recovery Fee Schedule (Exhibit "A").

BACKGROUND:

Under the authority of the Health and Safety Code § 13916, a District Board may charge a fee to cover the cost of any service which the District provides. Furthermore, the California Vehicle Code (CVC §§17300-17303) allows fire agencies to recover costs related to response for incidents that occur on a public roadway. As a result, in April of 2009, NCFPD instituted a Cost Recovery Program from which the District has been only seeking cost recovery from vehicle accidents.

DISCUSSION:

In September of 2016 the Board approved automatic rate increases equal to that of the CPI-Urban index for San Diego (CPI-U, San Diego). The annual increase is applied annually on October 1st. Resolution 2024-13 authorizes staff to implement the Board-approved annual automatic rate increase to the Districts cost recovery schedule.

FISCAL ANALYSIS:

Per the annual Cost Recovery report provided by the District's Finance Manager the District received $76,146.54 from July 2023 through June 2024, an 8.86% reduction in net revenue from the previous year. The District anticipates comparable revenue from cost recovery for FY 24/25.

SUMMARY:

The adoption of resolution 2024-13 will finalize the Cost Recovery rate adjustment approved with an implementation date of October 1, 2024.

NORTH COUNTY FIRE PROTECTION DISTRICT

RESOLUTION 2024-13

A RESOLUTION MODIFYING THE ESTABLISHED PROGRAM TO RECOVER COSTS FOR RESPONSE BY THE NORTH COUNTY FIRE PROTECTION DISTRICT TO CERTAIN INCIDENTS

WHEREAS, the North County Fire Protection District's emergency response activity to incidents continues to increase each year; Environmental Protection requirements involving equipment and training and Homeland Security regulations involving equipment and training, create additional demands on all operational aspects of the North County Fire Protection District; and

WHEREAS, the North County Fire Protection District has investigated different methods to maintain a high level of quality of emergency service capability throughout times of constantly increasing service demands and decreasing revenue while maintaining an effective response by the North County Fire Protection District; and

WHEREAS, cost effective, specific response costs to users decreases the costs of incidents to insurance carriers through timely and effective management of emergency situations, saving lives and reducing property damage; and

WHEREAS, under the authority of the Health and Safety Code Section 13916, a District may charge a fee to cover the cost of any service which the District provides or the cost of enforcing any regulation for which the fee is charged; and

WHEREAS, the California Vehicle Code (CVC 17300-17303) allows fire departments to recover costs incurred responding to motor vehicle accidents; including response equipment and manpower to secure, cleanup and/or dispose or any hazardous waste; and

WHEREAS, on November 14, 2023, the Board of Directors of the North County Fire Protection District adopted Resolution 2023-16 authorizing the recovery of costs associated with providing response to certain incidents; and

WHEREAS, the Board of Directors of the North County Fire Protection District desires to implement a fair and equitable procedure by which to recover said costs and shall establish a billing system in accordance with applicable laws, regulations and guidelines.

NOW, THEREFORE, LET IT BE RESOLVED BY THE BOARD OF DIRECTORS OF THE NORTH COUNTY FIRE PROTECTION DISTRICT:

SECTION 1: The North County Fire Protection District has initiated a Cost Recovery Program for the delivery of Fire and Rescue Services, personnel, supplies and equipment to the scene of emergency incidents occurring within the District. The rate of user fees shall be that which is usual, customary and reasonable (UCR) as shown in "EXHIBIT A," which may include any services, personnel, supplies and equipment and with baselines established by addendum to this document.

SECTION 2: For motor vehicle accidents the cost recovery fee shall be filed with the responsible party's motor vehicle insurance carrier, representing the cost of the claim to damages of the vehicles, property and/or injuries. In the event services are required relating to utilities causing safety problems and if the area is deemed unsafe by emergency responders, the same billing process shall apply to said utility, whose equipment related problems cause an emergency services response. The claim costs shall be filed with the insurance carrier of the owner of a vehicle, owner of property or responsible party/parties.

SECTION 3: The North County Fire Protection District Board of Directors authorizes the Fire Chief/CEO to take the necessary steps to continue this Cost Recovery Program, including development and amendment of the necessary policies and procedures and continuing/entering into a contract(s) with billing services to perform the actual cost recovery activity.

SECTION 4: The modification of this Cost Recovery Program shall take effect immediately and Resolution 2024-13 supersedes Resolution 2023-16.

PASSED, ADOPTED AND SIGNED by the Board of Directors, North County Fire Protection District, County of San Diego, State of California, on this **27th day of August 2024**, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____

Ross Pike, Board President

ATTEST:

I HEREBY CERTIFY that the foregoing is a true and correct copy of the resolution duly and regularly adopted by the Board of Directors of the North County Fire Protection District thereof held on the **27th day of August 2024**, and that the same now appears on record in my office.

NORTH COUNTY FIRE PROTECTION DISTRICT

RESOLUTION 2024-13

A RESOLUTION MODIFYING THE ESTABLISHED PROGRAM TO RECOVER COSTS FOR RESPONSE BY THE NORTH COUNTY FIRE PROTECTION DISTRICT TO CERTAIN INCIDENTS

IN WITNESS THEREOF, I hereunto set my hand and affixed by official seal this **27th day of August 2024**.

_____

Mavis Canpinar, Board Clerk

Official Seal

NORTH COUNTY FIRE PROTECTION DISTRICT

RESOLUTION 2024-13

A RESOLUTION MODIFYING THE ESTABLISHED PROGRAM TO RECOVER COSTS FOR RESPONSE BY THE NORTH COUNTY FIRE PROTECTION DISTRICT TO CERTAIN INCIDENTS

"EXHIBIT A"

MOTOR VEHICLE INCIDENTS

1. **SCENE ASSESSMENT AND STABILIZATION: $598.00**
2. **HAZARDOUS MATERIALS CLEANUP: $670.00**
3. **VEHICLE FIRE: $814.00**
4. **EXTRICATION: $1,763.00**
5. **LANDING ZONE CREATION: $536.00**
6. **MISCELLANEOUS/ADDITIONAL TIME ON SCENE** (for all levels of service):

   6.1. Engine billed at $520.00 per hour.
   6.2. Truck billed at $660.00 per hour.
   6.3. Miscellaneous equipment billed at $400.00.

7. **EMERGENCY DEBRIS CLEAN-UP: $598.00**
8. **ASSISTANCE WITH PATIENT INJURIES: $580.00**

False Alarm Cost Recovery

1. **ITEMIZED RESPONSE:** The False Alarm cost recovery fee assesses individuals whose alarm systems generate an excessive number of False Alarms responded to by the District. There is a graduating scale for continued False Alarms. In determining the number of false alarms that have occurred, the District shall only consider False Alarms that have occurred within on an annual basis, in the previous twelve (12) calendar months.

FALSE ALARM RESPONSE	RESPONSE FEE
1st Response	No Charge
2nd Response	$100
3rd Response	$200
4th Response	$300
5th Response and greater	$500

NORTH COUNTY FIRE PROTECTION DISTRICT

RESOLUTION 2024-13

A RESOLUTION MODIFYING THE ESTABLISHED PROGRAM TO RECOVER COSTS FOR RESPONSE BY THE NORTH COUNTY FIRE PROTECTION DISTRICT TO CERTAIN INCIDENTS

"EXHIBIT A"

ANNUAL CHARGE ADJUSTMENTS

1. ANNUAL ADJUSTMENT OF CHARGES:

1.1. The charges identified in this Resolution may be increased annually October 1st in an amount equal to the CPI-Urban index for San Diego (CPI-U, San Diego) as published the preceding January by the Bureau of Labor Statistics; and then rounded up to the nearest ten-dollar ($10) increment. This adjustment is not to exceed the regional average of increase.

AFFIDAVIT OF PUBLICATION FALLBROOK, CALIFORNIA 92028
COUNTY OF SAN DIEGO, STATE OF CALIFORNIA

I am a citizen of the United States, over twenty-one years of age, and the Associate Editor of said newspaper The Village News, Inc., 111 W. Alvarado St., Fallbrook, CA 92028 a newspaper adjudicated by the Superior Court, County of San Diego GIN013243 is a newspaper of general circulation, published and is circulated at least once a week in Fallbrook, County of San Diego, State of California.

The Notice of _____
PUBLIC NOTICE
Notice re: Cost Recovery Program
North County Fire Protection District

_____
Legal Number: NA
Which the attached is a true printed copy, and Published in said newspaper for _2_ weeks, and on the following days: 08/08/24, 08/15/24

_____
in the regular issue of said newspaper,
THE VILLAGE NEWS, INC.,
111 W. Alvarado St., Fallbrook, CA 92028
and not in any other supplement.
I certify and declare under penalty that this statement is true and correct to the best of my knowledge.

Dated: August 15, 2024
Fallbrook, California 92028

Lucette Moramarco
Signature
LUCETTE MORAMARCO
ASSOCIATE EDITOR

PUBLIC NOTICE

NOTICE IS HEREBY GIVEN THAT THE BOARD OF DIRECTORS OF THE NORTH COUNTY FIRE PROTECTION DISTRICT, 330 South Main Avenue, Fallbrook, California, County of San Diego, will conduct a Public Hearing on **Tuesday, August 27, 2024, at a time certain of 5:05 p.m.** or as soon thereafter as such matter can be heard, at the Fallbrook Public Utility District, 990 E. Mission Road, Fallbrook, California, to discuss and consider modification of the Cost Recovery Program. The Program permits the District to recover certain response costs. Members of the public will have an opportunity to make public comment pertaining to the modification of this Cost Recovery schedule. A copy of the suggested schedule may be obtained by calling (760) 723-2005, or it may be picked up in person at the District Office, located at 330 S. Main Avenue, Fallbrook, California, 92028, between 7:00 a.m. and 4:00 p.m., Monday through Thursday.

BOARD OF DIRECTORS OF THE NORTH COUNTY FIRE PROTECTION DISTRICT.

Mavis Canpinar
Board Clerk
August 5, 2024

Published August 8, 15, 2024

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NORTH COUNTY FIRE PROTECTION DISTRICT

STAFF REPORT

TO: BOARD OF DIRECTORS

FROM: CHIEF MCREYNOLDS

DATE: AUGUST 27, 2024

SUBJECT: FIRE STATION #4 PROJECT EXEMPTION FROM CALIFORNIA ENVIRONMENTAL QUALITY ACT ("CEQA") AND APPROVAL OF FIRE STATION #4 PROJECT

ACTION AGENDA

RECOMMENDATION:

That the Board make the findings included in the attached Resolution (Attachment A) that (1) the Station #4 Project is exempt from the California Environmental Quality Act ("CEQA") under a Class 2 Categorical Exemption ("CE") per CEQA Guidelines section 15302; and (2) approve the Fire Station #4 Project.

BACKGROUND:

In March of 2023 the Board of Directors approved the project site as the preferred site for CEQA review purposes for a potential project to build a new replacement Fire Station #4 on the Station's current site located at 4375 Pala Mesa Drive. In November of 2023 the Board authorized Staff to execute a contract with TELACU Construction Management (TCM) for Design-Build services for the Fire Station #4 Project.

District staff has been working with TCS and CEQA consultants (Rincon Consultants, Inc.) on the design of and CEQA review for the Project. As part of that analysis, Rincon, in conjunction with District staff, prepared the CEQA Categorical Exemption Report (Attachment B to this Staff Report).

Should federal funding become available, a similar process will be conducted through the federal lead agency (Camp Pendelton) to determine whether any exceptions apply for the Project under CEQA's federal counterpart, the National Environmental Policy Act ("NEPA").

DISCUSSION:

Work on the design of and CEQA review for Station #4 Project is moving forward at a steady pace and is currently in the end phases of design. It is now necessary, prior to issuing final approval for the Project, for the Board to consider any CEQA exemptions that may apply and, if appropriate, adopt findings determining that the Station #4 Project

is exempt from CEQA based on the information and analysis contained in the Exemption Report. If the Board agrees with and votes to deem the Station #4 Project to be exempt from CEQA and issue final project approval, a Notice of Exemption ("NOE") memorializing those determinations will be filed with the County of San Diego and with the State Clearinghouse division of the Governor's Office of Planning and Research.

Section 15302 of the CEQA Guidelines states a Class 2 CE applies to activities that involve the replacement or reconstruction of existing structures and facilities where the new structure would be located on the same site as the structure replaced and would have substantially the same purpose and capacity as the structure replaced.

As discussed in much more detail in the CEQA Categorical Exemption Report included here as Attachment B, staff believes the Station #4 Project clearly falls under Section 15302 of the State CEQA Guidelines, reconstruction or replacement of existing facilities, and thus is exempt from CEQA because the project does just that – i.e., it involves the replacement of the existing Fire Station # 4 and the new Fire Station will be located on the same site, and it will have the same purpose and capacity of the existing fire station.

As further discussed in Attachment B, in addition to falling under the Class 2 CE none of the exceptions in CEQA Guidelines Section 15300.2 apply that would preclude reliance on the Class 2 CE for this project. Replacement of a fire station in a rural area is not an unusual project, and there are no nearby similar projects that would cause cumulative environmental impacts. Moreover, although the area is rural, it is not within or adjacent to any sensitive environmental features or landscapes.

FISCAL ANALYSIS:

The CEQA findings proposed in this agenda item have no fiscal impact on the District.

SUMMARY:

Adoption of findings necessary under CEQA is a critical step in continuing with construction of a permanent Fire Station #4 and will allow the District to continue toward its goals of providing excellent service to the communities it serves.

Reference: ***NCFPD 2022 Strategic Plan***

Goal #13: **Replace the existing Station 4 with a new facility designed to provide the appropriate space for apparatus, living quarters, and the needs of the region.**

Attachment A

NORTH COUNTY FIRE PROTECTION DISTRICT

RESOLUTION 2024-14

RESOLUTION OF THE BOARD OF DIRECTORS OF THE NORTH COUNTY FIRE PROTECTION DISTRICT (1) FINDING THE STATION #4 PROJECT EXEMPT FROM THE CALIFORNIA ENVIRONMENTAL QUALITY ACT; AND (2) APPROVING THE FIRE STATION #4 PROJECT

Whereas, the Fire Station #4 Project has been progressing since the Board selected the existing Fire Station #4 as the preferred site for CEQA review purposes for a potential project to build a new replacement Fire Station #4 on the Station's current site located at 4375 Pala Mesa Drive in March 2023;

Whereas, the Fire Station #4 Project will replace the current Fire Station which has reached the end of its useful life and is in need of updates and renovations that will modernize the station to meet today's needs and the needs of the future;

Whereas, the Fire Station #4 Project is moving forward at a steady pace and the design phase of the Project is nearly complete;

Whereas, the North County Fire Protection District ("District") is required to comply with the California Environmental Quality Act ("CEQA") in its construction of new projects as well as renovations;

Whereas, the Fire Station #4 Project consists of the replacement of the current Fire Station #4 on the same property as is currently being used for the station at 4375 Pala Mesa Drive in Fallbrook, California;

Whereas, Section 15302 of the State CEQA Guidelines, categorically exempts projects consisting of the reconstruction or replacement of existing facilities from CEQA;

Whereas, in preparation for project approval the District hired Rincon Consultants, Inc. ("Rincon") to assess whether the Project falls under any CEQA exemptions; Rincon prepared a CEQA Categorical Exemption Report demonstrating that the Project falls under the Class 2 categorical exemption in CEQA Guidelines Section 15302 and that none of the exceptions in CEQA Guidelines Section 15300.2 apply;

Whereas, as demonstrated in Rincon's CEQA Categorical Exemption Report, the Fire Station #4 Project is within the same site, and its purpose and capacity will be the same as the existing fire station. The Fire Station will sit on the same site as the current fire station, will serve existing District and regional purposes, and will not change the capacity of the fire station in any way (i.e., same number of vehicles, equipment and personnel);

Whereas, replacement of a fire station in a rural area is not an unusual project, and there are no nearby similar projects that would cause cumulative environmental impacts. Moreover, although the area is rural, it is not within or adjacent to any sensitive environmental feature landscapes.

NOW, THEREFORE, the Board of Directors of the North County Fire Protection District does resolve as follows:

1. That the above recitations are true and correct.

2. That the District Board agrees with the analysis and findings of Rincon's CEQA Categorical Exemption Report attached hereto as Attachment A and adopts and incorporates it into this Resolution and based thereon finds and determines that the Fire Station #4 Project is exempt under Section 15302 of the State CEQA Guidelines.

3. The District Board further finds and determines that the Fire Station #4 Project does not present or involve any unusual circumstances and that none of the exceptions in CEQA Guidelines Section 15300.2 apply to negate the Project's CEQA exempt status.

4. That the District Board approves the Fire Station #4 Project and directs staff to move forward with all steps to secure necessary permits and approvals for the same.

5. The District Board directs staff to prepare and file a Notice of Exemption with the County Clerk and with the State Clearinghouse division of the Governor's Office of Planning and Research.

APPROVED, SIGNED AND ADOPTED by the Board of Directors, North County Fire Protection District, County of San Diego, State of California, on this **27th day of August 2024** by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____
Ross Pike, Board President

ATTEST:

I HEREBY CERTIFY that the foregoing is a true and correct copy of the Resolution duly and regularly adopted by the Board of Directors of the North County Fire Protection District thereof held on the **27th day of August 2024,** and that the same now appears on record in my office.

IN WITNESS THEREOF, I hereunto set my hand and affixed by official seal this **27th day of August 2024**

_____
Mavis Canpinar
Board Clerk

Official Seal

North County Fire Protection District Station No. 4

CEQA Categorical Exemption Report

prepared by

North County Fire Protection District
330 South Main Avenue
Fallbrook, California 92028
Contact: Keith Reynolds, Fire Chief

prepared with the assistance of

Rincon Consultants, Inc.
8825 Aero Drive, Suite 120
San Diego, California 92123

August 2024

RINCON CONSULTANTS, INC. SINCE 1994

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1 Introduction

This report serves as the technical documentation of the environmental analysis performed by Rincon Consultants, Inc. for the North County Fire Protection District Station No. 4 Project in Fallbrook, California. The intent of the analysis is to assess whether the project is eligible for a Class 2 Categorical Exemption (CE) per CEQA Guidelines Section 15302. The report provides an introduction, project description, evaluation of the project's consistency with the requirements for a Class 2 exemption and an analysis assessing whether any of the exceptions in CEQA Guidelines Section 15300.2 apply. The exceptions analysis includes an analysis of the project's potential impacts in the areas of air quality, biological resources, cultural/historic resources, hazardous materials, and noise as part of its discussion of the cumulative impact and significant effect exceptions. As discussed and demonstrated in more detail below, the project is eligible for a Class 2 CE and none of the exceptions apply.

Section 15302 of the CEQA Guidelines states a Class 2 CE applies to activities that involve the replacement or reconstruction of existing structures and facilities where the new structure would be located on the same site as the structure replaced and would have substantially the same purpose and capacity as the structure replaced.

CEQA Guidelines Sections 15300.2(a) through (f) list specific exceptions for which a CE shall not be used. These exceptions are as follows:

a. **Location.** Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located – a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply in all instances, except where the project may impact an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.
b. **Cumulative Impact.** All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.
c. **Significant Effect.** A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.
d. **Scenic Highways.** A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR.
e. **Hazardous Waste Sites.** A categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code.
f. **Historical Resources.** A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource.

Rincon Consultants, Inc. (Rincon) evaluated the project in the context of a Class 2 CE and in relation to these exceptions to assess the project's eligibility for an exemption under CEQA.

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2 Project Location and Description

2.1 Project Location

The project site encompasses the North County Fire Protection District's existing Fire Station No. 4, which is located in the southeast portion of Fallbrook, west of Old Highway 395 and south of Pala Mesa Drive at 4375 Pala Mesa Drive, in unincorporated San Diego County (County). The site is approximately 1.73 acres, located on Assessor Parcel Number (APN) 120-506-900.

Figure 2-1 shows the project location on a regional scale and Figure 2-2 shows the location of the site on a local scale.

2.2 General Plan Designation and Zoning

The County of San Diego General Plan (General Plan) calls for Community Plans to be maintained as part of the General Plan. Community Plans guide development to reflect the character and vision for each unincorporated community, consistent with the General Plan (Policy LU-2.1). The project site is within the Fallbrook Community Plan and has a General Plan land use designation of Specific Plan/Public-Semi Public Facilities (P/SP) (San Diego County 2021). The P/SP land use designation is applicable to areas where the County or another agency controls land under County jurisdiction to provide public facilities. This designation identifies major facilities built and maintained for public use. Examples include institutional uses, academic facilities, governmental complexes, and community service facilities, such as County airports, public schools, correctional institutions, solid waste facilities, water facilities, and sewer facilities. This designation may include privately owned facilities built and maintained for public use, such as hospitals, cemeteries, and landfills.

The project site has a zoning designation of A70/Limited Agriculture due to the County's lack of a public facilities zoning designation (San Diego County 2020). However, per Section 1006.b of the San Diego County Zoning Ordinance, public services such as fire stations are exempt from the Zoning Ordinance (San Diego County 2023). Thus, the project site is not subject to the provisions of the A70/ Limited Agriculture zoning designation. In sum, the project's fire station public services land use is consistent with all applicable policies and provisions of the County's General Plan and Zoning.

2.3 Existing Conditions and Surrounding Land Uses

The project site currently includes an existing fire station, ancillary structures and two driveways. The site is surrounded by a fence on the western boundary, separating the North County Fire Protection District's property from the undeveloped land to the west. Other than the developed structures, there are several mature trees (specifically, ornamental species including Monterey pine, Rocky Mountain juniper, Eastern red cedar) ruderal vegetation, and a gravel driveway. The site is bound by Pala Mesa Drive to the north; Old Highway 395 and Interstate Highway 15 to the east; unpaved roads and residential development to the south; and vacant/agricultural land to the west.

Figure 2-1 Regional Location

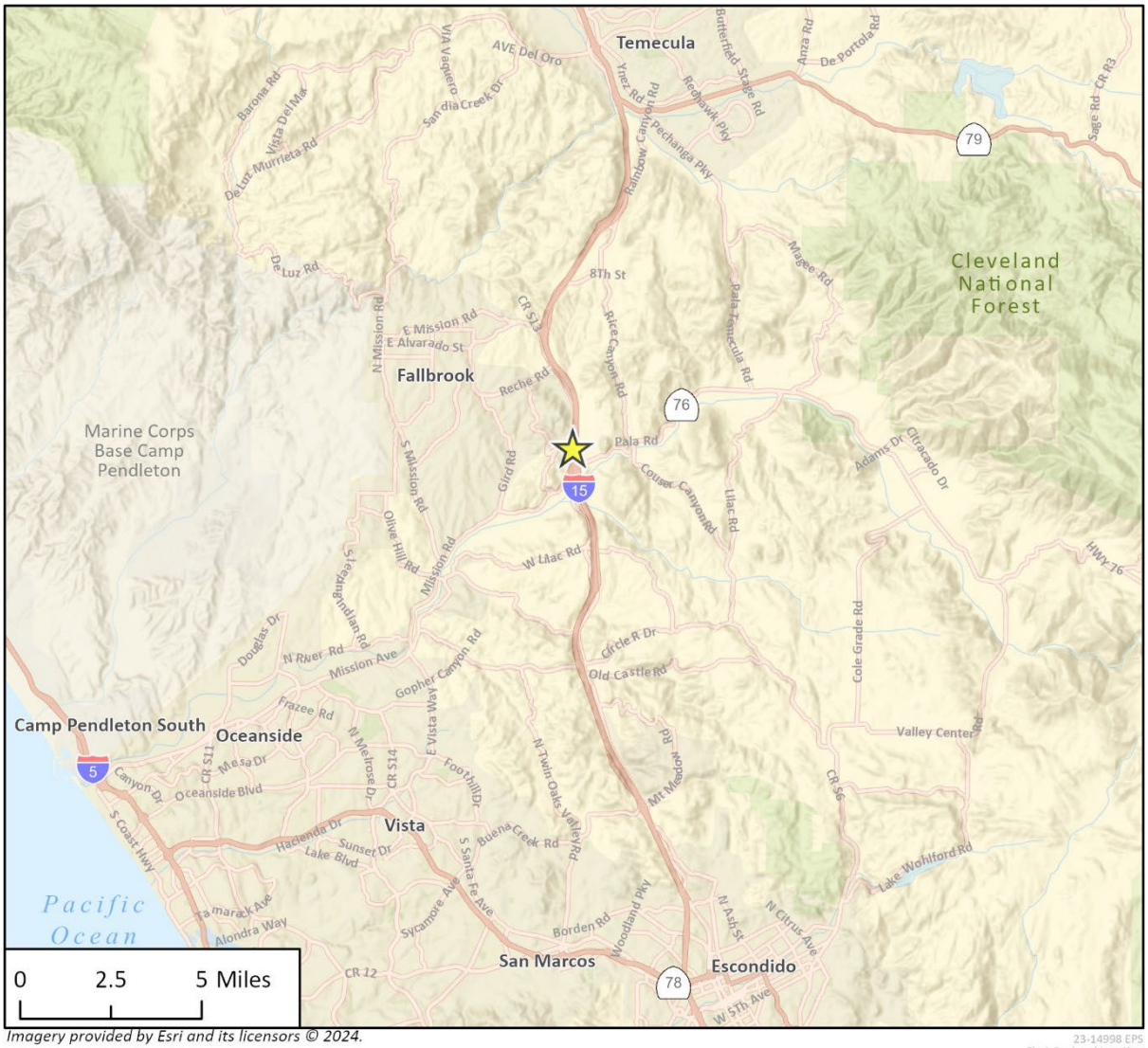

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Fig 1 Regional Location

Figure 2-2 Project Site Location

Imagery provided by Microsoft Bing and its licensors © 2024.

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Fig 2 Project Site Location

2.4 Project Background and Objectives

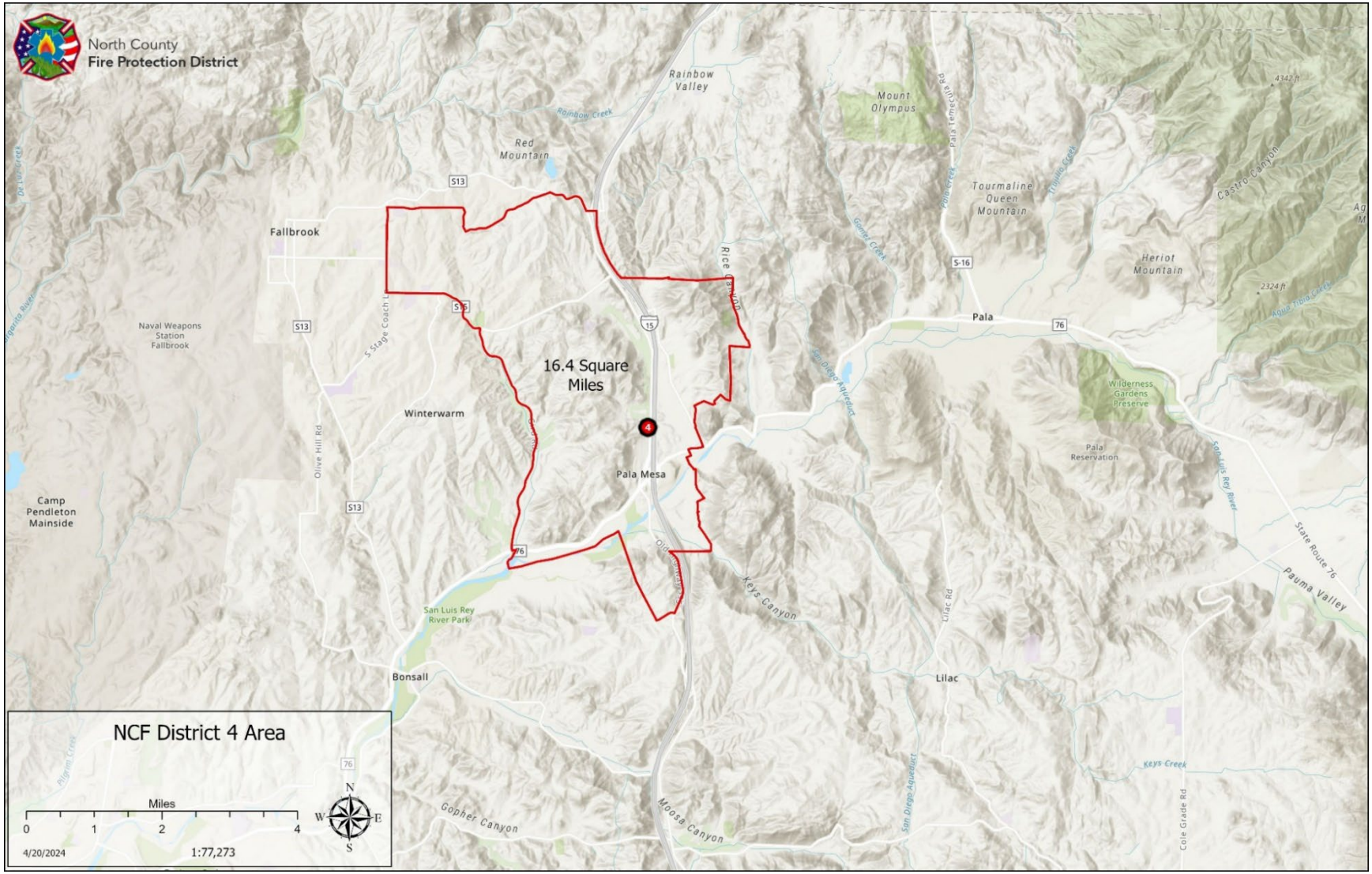
The North County Fire Protection District has a long history dating back to 1888 starting as a bucket brigade, evolving to the Fallbrook Volunteer Fire District in 1947 and the Fallbrook Local Fire District in 1953. The Fallbrook Local Fire District was reorganized as the Fallbrook Fire Protection District in 1961 and in 1987, the Fallbrook Fire Protection District merged with the Rainbow Volunteer Fire District to form the "North County Fire Protection District" (herein referred to as the "District).

The District is an independent community service District[1] established in 1987 to provide fire protection, emergency medical services, ambulance transport, hazardous materials response, and weed abatement (fuel reduction) in the unincorporated Fallbrook and Bonsall communities, of San Diego County. The District's service area covers approximately 92 square miles and has an estimated population of 55,000 people. The District's Station No. 4 has a service area of approximately 16.4 miles. Station No. 4's service area is shown in Figure 2-3. The District provides emergency medical services to an additional 40 square miles beyond its primary service area. Currently, the District operates five fire stations, each equipped with full-time personnel, as well as emergency medical technicians (EMTs).

The existing Fire Station No. 4 was constructed in 1979 and consists of a modular prefabricated structure intended as temporary quarters until a new facility could be built. In 2017, a comprehensive condition assessment evaluated all District facilities, leading to the recommendation to replace Fire Station No. 4. Subsequently, in October 2020, the District's Board of Directors approved a Facilities Replacement Plan outlining the timeline for renovating and constructing various District facilities. The Facilities Replacement Plan specifically called for the complete replacement of Fire Station No. 4, commencing in 2024 to address the growing service demands along the I-15 corridor and the broader Pala Mesa region.

[1] The District is an independent community service district formed under the California Community Services District Law ("CSD Law"), Government Code sections 61000 et seq. to provide fire protection and emergency medical services, ambulance transport, hazardous materials response and weed abatement.

Figure 2-3 Fire Station No. 4 Service Area



2.5 Project Description

The District's proposed Fire Station No. 4 (herein referred to as "Project") would involve the construction and operation of a new Fire Station No. 4 on the same site where the existing Fire Station No. 4 is located. The new Fire Station No. 4 would include an approximately 8,694-square foot fire station facility plus driveway and parking lot improvements. The Project would also include the demolition of the existing fire station. The existing fire station would remain in operation during construction of the new fire station (Stage I) and would be demolished after construction of the new fire station is completed (Stage II). The existing emergency generator located at the southwestern portion of the project site would be removed during project construction and relocated to the southeastern side of the project site. The existing above ground fuel tank located at the northwestern portion of the project site would be retained in its current location.

The new fire station would include living and working facilities and an apparatus bay that can house one fire engine, one brush engine, and one emergency services vehicle. The interior of the fire station would contain a lobby and bathroom, a conference room, two offices, a telecommunications room, a day room, an exercise room, a dining area, a kitchen, a laundry room, firefighter bedrooms and bathrooms, a workshop, and electrical and medical supply storage rooms. A flagpole and visitor parking would be located to the north of the new fire station, a covered patio and exercise patio would be located outside the new fire station to the west, firefighter parking, a new emergency generator, and a new propane tank would be located to the east, and additional firefighter parking would be located to the south. The proposed station would also include one hundred and fourteen 360 watt solar panels; however, no battery storage is proposed. The proposed features of the new fire station are summarized in Table 2-1, and the proposed project plans are shown in Figure 2-4, Figure 2-5,and Figure 2-6, respectively. The building elevations are shown in Figure 2-7 and Figure 2-8.

Table 2-1 Summary of Proposed New Fire Station Features

Feature	Area (square feet)
Fire Station	
Firefighter dormitories	741
Firefighter facilities	1,907
Community space and offices	889
Mechanical/Storage	409
Apparatus Room	2,921
Circulation Areas	
Hallways	764
Vestibules	145
Storage Rooms	104
Structure Area	814
Total Fire Station Area	**8,694**

Figure 2-4 Site Plan- Stage I

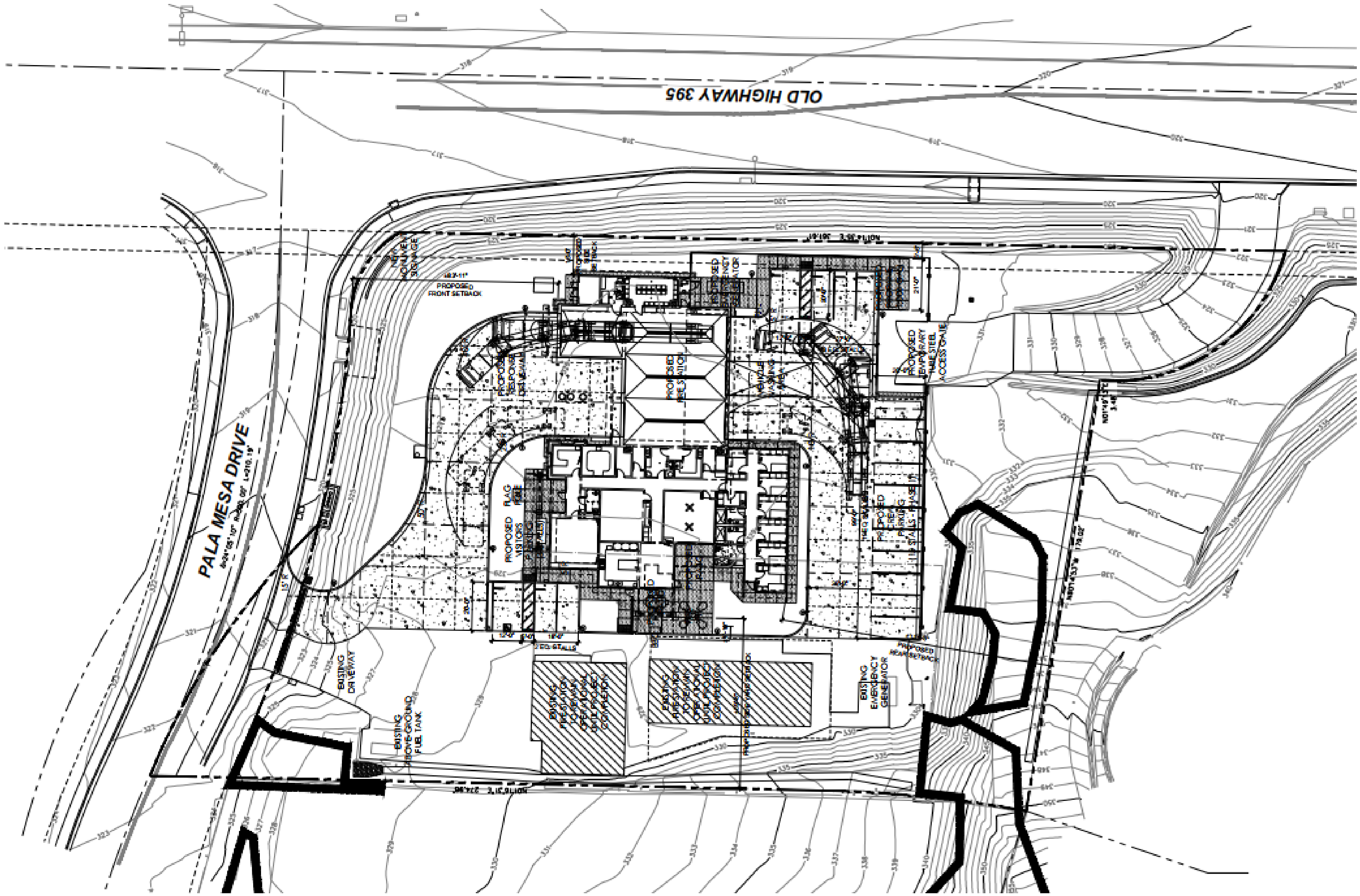


Figure 2-5 Site Plan- Stage II

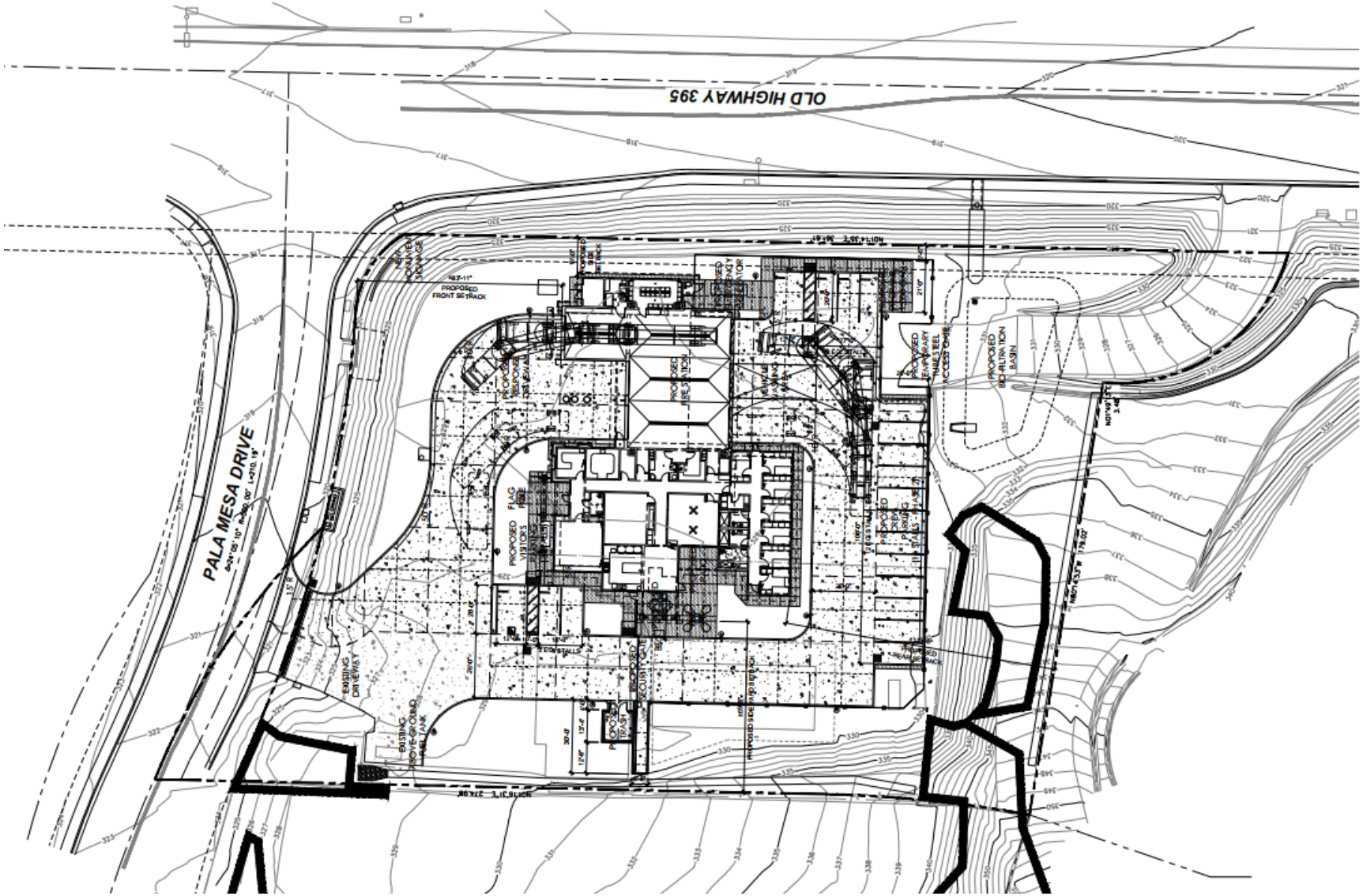


Figure 2-6 Floor Plan

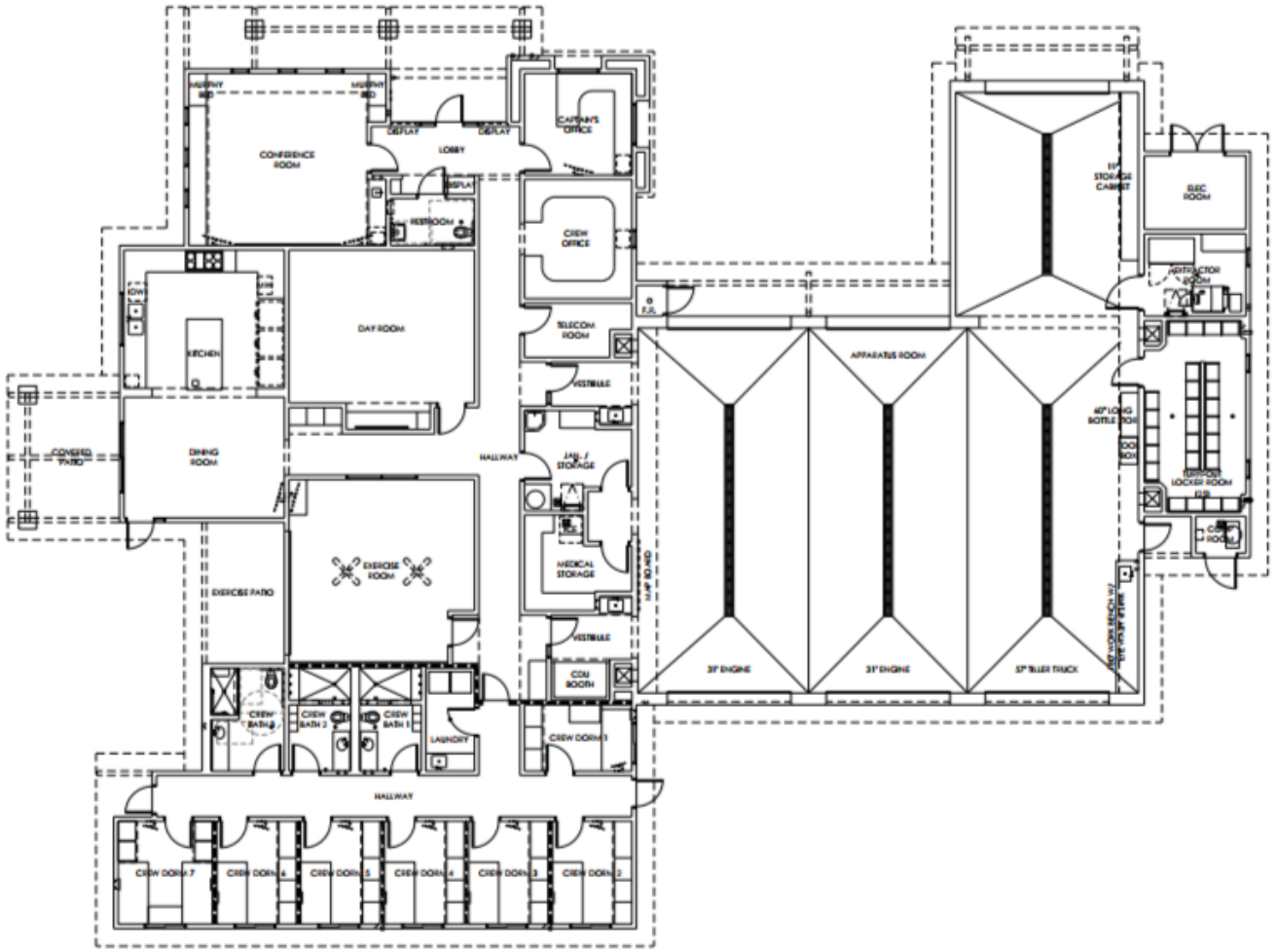


Figure 2-7 North and East Building Elevations

NORTH ELEVATION

EAST ELEVATION

Figure 2-8 South and West Building Elevations

SOUTH ELEVATION

WEST ELEVATION

Site Access

The Project would be accessible via the same two driveways that serve the existing fire station: one on the northern portion of the project site with existing access from Pala Mesa Dive and one on the southern portion of the project site with existing access from Old Highway 395. The driveway located on Pala Mesa Drive would provide ingress/egress to the apparatus bay and access to three public parking spaces. The driveway located on Old Highway 395 would provide gated ingress/egress to the apparatus bay and access to staff parking spaces. During Phase 1 of the Project, there would be access to 15 staff parking spaces. Phase 2 of the Project would add one additional staff parking space, totaling 16 staff parking spaces. The Old Highway 395 driveway would have a double-swing security gate, as shown in Figure 2-4 and Figure 2-5.

Construction

Project construction would occur over approximately 14 months from November 2024 to December 2025. The Project would be constructed in six phases, as shown in Table 2-2. Project grading would result in approximately 1,700 cubic feet (cf) of excavated soil, which would be exported from the project site to the nearest available refuse facility.

Table 2-2 Proposed Construction Schedule

Construction Phase	Duration (Days)
Earthwork	25
Site Utilities	20
Foundations	20
Structure	150
Site Work	30
Demolition of Existing Station and Repurposing	20

Construction work would occur Monday through Friday, from approximately 7:00 a.m. to 4:00 p.m. Weekend construction is not anticipated. Construction equipment would be staged on site, and workers would also park on site.

Operation

Currently, the fire station houses one fire engine, one brush engine, and one emergency service vehicle and is staffed with four full time fire fighters. The Project does not propose an increase in vehicles housed or firefighters staffed at the fire station. New station alerting equipment would be implemented on the north, west, and south sides of the station. The station alerting equipment includes speakers designed to notify firefighters of emergency calls requiring their attention. The alert consists of a low tone and brief announcement of the emergency call. This equipment would be consistent with the alerting systems already in place at the existing modular fire station, and the Project would not introduce any additional alerting equipment.

2.6 Project Design Features

The following Project Design Features (PDF) are industry standard best management practices that the District is including as part of the Project to ensure compliance with existing regulatory and legal

requirements and will be incorporated into all construction and other applicable contracts entered into for the construction and operation of the Project. Specifically, the PDFs outline protocols to ensure compliance with applicable legal and regulatory environmental requirements such as the Migratory Bird Treaty Act (MBTA), California Fish and Game Code (CFGC) Sections 3503, 3503.5, 3513, and local best management practices and tribal expectations in compliance with Section 106 36 CFR Parts 800.2(c)(2), 800.3(f), and 800.4(a).

Biological Resources PDFs

PDF BIO-1 Worker Environmental Awareness Program

The District will contract with a qualified biologist to develop and implement a Worker Environmental Awareness Program (WEAP) for the construction crew. Each employee (including temporary, contractors, and subcontractors) will receive the WEAP presentation on the first day of project work. They will be advised of sensitive species in the area and avoidance measures being implemented to protect them at the site. At a minimum, the WEAP will include the following topics: occurrence of the listed and sensitive species in the area, their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violations of federal and State laws, reporting requirements, and project features and conditions designed to reduce direct and indirect impacts to these species, and worker responsibilities to maintain compliance with the avoidance and minimization measures while working at the site.

PDF BIO-2 Work Limit Delineation

Approved construction work area limits will be delineated and marked clearly, by flagging or temporary orange construction fencing, in the field prior to vegetation removal. The marked boundaries will be maintained and clearly visible to personnel on foot and by heavy equipment operators. Fencing will be placed on the impact side of the work area to reduce the potential for encroachment and additional vegetation loss within adjacent open space. Fencing will be put in place by a qualified surveyor per the project proponent's approved construction and grading plans. All temporary fencing will be removed only after the conclusion of all grading, clearing, and construction. Employees will strictly limit their activities and vehicles to the designated project boundary, staging areas, and routes of travel. The qualified biologist will verify that the limits of construction have been staked based on the permitted impact area, entirely avoid adjacent sensitive habitat areas, and are readily identifiable to workers. Intrusion by unauthorized vehicles outside of construction limits shall be prohibited, with control exercised by an on-site foreman. Access routes to the construction area outside of work hours will be blocked with physical barriers, such as concrete blocks or large equipment.

PDF BIO-3 Nesting Bird Surveys

Pursuant to MBTA and CFGC Sections 3503, 3503.5, and 3513, if initial clearing/ground disturbing activities are to take place between February 1 and August 31, a nesting bird survey will be performed by a qualified biologist/ornithologist within 14 days from the start of the construction. The results will then be reported to the County of San Diego prior to grading and clearing. If nesting birds are found, a construction buffer (50 feet for non-raptor species and a minimum of 150 feet for raptor species) will be implemented, and construction activities prohibited within the buffer area until all young have left the nest or are determined to no longer be dependent on the nest.

PDF BIO-3.1 Coastal California Gnatcatcher Survey

Coastal California gnatcatcher could potentially occupy the Diegan coastal sage scrub adjacent to the project boundary. Therefore, the following measure is recommended to avoid indirect impacts to the species if initial project construction is to occur within the coastal California gnatcatcher breeding season (February 15 through August 30). If project construction occurs outside of the coastal California gnatcatcher breeding season (from September 1 through February 14), then nothing is required.

If project construction activities are to occur between February 15 and August 30, a qualified biologist will conduct three surveys at least one week apart (with the final survey to take place within 14 days of the commencement of construction activities) to determine the presence/absence of coastal California gnatcatchers in the survey area. The survey area will include the project site plus a 500 foot buffer.

If an active nest is located during the pre-construction surveys, a 500-foot no-construction buffer will be established around each nest site and each nest site will be regularly monitored by a qualified biologist until the nest is no longer active at which point the no-construction buffer will be eliminated. No brushing, grading, or excavation will take place within the no-construction buffer until the nest is no longer active however the qualified biologist may reduce the size of the no-construction buffer zone for certain other types of work depending on site-specific conditions such as topography, line-of-sight to the nest, or the existing ambient level of activity at the discretion of the qualified biologist so long as that work is monitored by the qualified biologist and carried out at their discretion.

Cultural Resources PDFs

PDF CR-1 Section 106 Tribal Outreach

Prior to ground disturbing activities, the District will retain a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (U.S. Department of the Interior 2008) and a Native American monitor from one or more (if requested by the tribes) of the local traditionally and culturally affiliated California Native American tribe(s) to establish a cultural resources Workers environmental Awareness Program and Monitoring Program as defined in PDF CR-2 and PDF CR-3.

The District will send formal notifications to the tribes, providing detailed information about the proposed project, including its scope, location, and any known cultural resources. The District will offer opportunities for tribes to engage in dialogue and provide input regarding the identification and protection of cultural resources.

All consultation efforts, including meetings, correspondence, and actions agreed upon during consultation, will be documented and included in the consultation files.

Consultation efforts will adhere to the timelines and procedures outlined in 36 CFR Part 800 to ensure compliance with Section 106.

PDF CR-2 Section 106 Tribal Consultation and Workers Environmental Awareness Program

If requested by the tribes during the outreach effort as described in PDF CR-1, the qualified archaeologist and a Native American monitor(s) will attend the pre-grading meeting with the

grading contractors. At the pre-grading meeting, both the qualified archaeologist and Native American monitor(s) will present a cultural resources sensitivity training that shall include a description of the types of cultural material that may be encountered, cultural sensitivity issues, anticipated frequency and duration of monitoring, regulatory issues, and the proper protocol for treatment of the materials in the event of a find.

PDF CR-3 Section 106 Tribal/Archaeological Monitoring

If requested by the tribes and/or archaeologist as described by PDF CR-1 and PDF CR-2, archaeological and Native American monitors will be present during initial Project-related, ground-disturbing activities (e.g., grubbing and grading). Monitors will have the authority to halt and redirect work should any archaeological resources be identified during project-related activities. If archaeological resources are encountered during ground-disturbing activities, work in the immediate area will halt and the find will be evaluated for listing in the NRHP and CRHR. Once initial Project-related, ground disturbing activities are completed, archaeological or Native American monitoring or both may be reduced or halted at the discretion of the monitors, in consultation with the District, as warranted by conditions that merit such reduction or suspension.

Hydrology and Water Quality PDF

PDF HYD-1

The State Water Resources Control Board requires projects that will disturb more than one acre during construction activities to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2022-0057-DWQ, National Pollutant Discharge Elimination System (NPDES) No. CAS000002 (Construction Stormwater General Permit). The Project would disturb more than one acre and therefore the District will obtain coverage under the Construction Stormwater General Permit prior to the start of construction. Obtaining coverage from the Construction Stormwater General Permit will entail the preparation and implementation of a SWPPP which will include project-specific erosion and sediment control BMPs to control erosion, sediment release, and otherwise reduce the potential for discharge of pollutants from construction into stormwater. Typical BMPs include, but are not limited to, covering stockpiled soils, installation of silt fences and erosion control blankets, and proper handling and disposal of wastes. In addition, the Construction Stormwater General Permit requires implementation of BMPs such as vehicle maintenance and proper storage of construction materials to reduce the potential for leaks and spills.

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3 Consistency Analysis

3.1 Class 2 CE Applicability

Section 15302 of the CEQA Guidelines states a Class 2 CE applies to activities that involve the replacement or reconstruction of existing structures and facilities where the new structure would be located on the same site as the structure replaced and would have substantially the same purpose and capacity as the structure replaced, including but not limited to:

(a) Replacement or reconstruction of existing schools and hospitals to provide earthquake resistant structures which do not increase capacity more than 50 percent.

(b) Replacement of a commercial structure with a new structure of substantially the same size, purpose, and capacity.

(c) Replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity.

(d) Conversion of overhead electric utility distribution system facilities to underground including connection to existing overhead electric utility distribution lines where the surface is restored to the condition existing prior to the undergrounding.

Location: The Project would involve the replacement of the existing Fire Station No. 4 with a new 8,694 square foot fire station facility plus driveway and parking lot improvements. The new Fire Station No. 4 would be located at the same site as the existing Fire Station No. 4, meeting the requirement for replacement of structures located on the same site.

Purpose: The purpose of the proposed Fire Station No. 4 is identical to the existing fire station structure use. The existing station serves as a fire facility to house fire engines, emergency service vehicles, and staff firefighters. This meets the requirement that the new structure serves substantially the same purpose.

Capacity: The Project does not involve an expansion of the fire station facilities or services. The Project does not propose an increase in the number of vehicles housed or the number of firefighters staffed. Therefore, the capacity remains substantially the same, with negligible or no expansion.

Because the Project involves the replacement of the existing Fire Station No. 4 where the new Fire Station No. 4 would be located on the same site as the old fire station No. 4 structure and would have substantially the same purpose and capacity as the old fire station No. 4 ,and, as discussed below in Section 4*, CE Exceptions Analysis*, because none of the exceptions apply, the Project meets the applicability requirements for a Class 2 CE pursuant to Section 15302 of the CEQA Guidelines.

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4 CE Exceptions Analysis

The applicability of CEs is qualified by the exceptions listed in CEQA Guidelines Section 15300.2(a) through (f). In the discussion below, each exception is followed by analysis demonstrating that none of the exceptions apply to the Project.

4.1 Location

15300.2(a) **Location**. Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the Project is to be located – a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply in all instances, except where the project may impact an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, State, or local agencies.

As discussed above, the Project qualifies under the Class 2 categorical exemption. Since this location exception only pertains to the categorical exemptions in Classes 3-6 and 11, this exception is not relevant and does not apply here. Nevertheless, to substantiate that no exceptions to exemptions would occur, the following analysis of the Project's potential impacts related to sensitive environments is provided (for informational purposes).

As determined by the Biological Resources Assessment (Rincon 2024) prepared for the Project (Attachment A), there are no environmental resources of hazardous or critical concern that are designated, precisely mapped, and officially adopted pursuant to law by federal, State, or local agencies on the Project site, such as critical habitat for listed threatened or endangered species. Implementation of the Project's recommended best management practices related to biological resources would ensure that the Project complies with all existing regulatory and legal requirements pertaining to and thus would avoid any impacts on sensitive biological resources. The biological resources best management practices are detailed in the Biological Resources Assessment and include: a Worker Environmental Awareness Program, Work Limit Delineation, Nesting Bird Surveys, and possible Coastal California Gnatcatcher Survey if construction work occurs during the breeding season (February 15 through August 30), pursuant to the MBTA and CFGC Sections 3503, 3503.5, and 3513. As noted above, the Project includes these practices as PDFs. Therefore, the Project would not have an impact on sensitive environments related to biological resources.

As further detailed below in Section 4.5, *Hazardous Waste Sites*, there are no active, designated hazardous waste sites on or within one mile of the project site (DTSC 2024; SWRCB 2024). Furthermore, any use of potentially hazardous materials during construction of the Project would be subject to all local, state, and federal regulations regarding the handling of potentially hazardous materials. The operation of the Project would likely involve the use of common materials in the regular maintenance of fire stations and landscaping, such as cleaning and degreasing solvents, fertilizers, and pesticides. The Project also involves the use of two propane storage tanks. The use of these materials would be subject to compliance with existing regulations, standards, and guidelines established by the federal, state, and local agencies related to storage, use and disposal of hazardous materials, such as the Hazardous Materials Transportation Act, Resource Conservation and Recovery Act, the California Hazardous Material Management Act, and the California Code

Regulations (CCR) Title 22. Thus, with compliance to all applicable federal, State, and local regulations, standards, and guidelines, the Project would not have an impact on sensitive environments related to hazardous materials.

As determined by the Cultural Resources Assessment prepared by Rincon for the Project (Attachment B), there is a moderate potential for encountering subsurface archaeological deposits during construction of the Project. The Cultural Resources Assessment recommends standard BMPs to ensure that the Project would adhere to existing regulations and adhere to Section 106 of the National Historic Preservation Act particularly sections 36 CFR Part 800.2(c)(2), 800.3(f), and 800.4(a). Application of PDFs CR-1, CR-2, and CR-3 would ensure that the Project would adhere to existing standards and regulations regarding the preservation of archaeological resources during construction of the project site. PDF CR-1 calls for coordination of a cultural resources monitoring program between the District, a qualified archaeologist, and Native American Monitors. PDF CR-2 recommends the Project proponent, Native American monitors, and the construction contractors meet prior to construction to provide training on cultural resources. PDF CR-3 calls for archeological and Native American monitoring (if requested by the tribes) during the initial project-related ground disturbing actives, giving the monitors the authority to halt construction work and evaluate any unanticipated cultural or tribal cultural discoveries. Thus, with implementation of the PDFs, the Project would not have an impact on sensitive environments related to archaeological resources.

4.2 Cumulative Impacts

15300.2(b) **Cumulative Impact**. All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.

The Project would involve the construction of an approximately 8,694-square-foot fire station and demolition of the existing fire station. No successive projects of the same type are planned or currently located adjacent to the site.

The potential for cumulative impacts during project construction is a function of several factors, including the proximity of other proposed development projects surrounding the project site, which could potentially generate excess construction traffic, noise, air quality and greenhouse gas (GHG) emissions at the same time as the Project's construction. However, not only are there no successive projects of the same type planned or currently located nearby the project site, no closely related past, present, or reasonably foreseeable future projects of any kind are currently located adjacent to or near the project site. Furthermore, construction of the Project would be temporary and would comply with applicable regulations. Construction of the Project would not result in significant cumulative impacts.

As determined by the Air Quality Report and Greenhouse Gas Emissions Report prepared for the Project by Terry A. Hayes Associates (Attachment C and D), the Project would not result in cumulative impacts related to air quality or greenhouse gas emissions during the construction or operation of the Project. Therefore, the Project would not result in significant cumulative air quality or greenhouse gas emissions impacts.

As determined by the Biological Resources Assessment prepared for the Project by Rincon Consultants (Attachment A), the Project would not result in significant cumulative impacts related to biological resources during the construction or operation of the Project due to the replacement fire station being located on the same previously disturbed site, the small size of the Project work limits

and the non-presence of native or sensitive habitat at the site. Therefore, the Project would not result in significant cumulative biological resources impacts.

With respect to cumulative operational traffic impacts, the Project would not involve expansion of services, emergency vehicles, or employees compared to the existing fire station. Thus, the Project would not result in an increase in vehicle trips and would not contribute to a significant cumulative traffic impact.

As determined by the Noise Report prepared for the Project (Rincon Consultants May 2024) (Attachment E), the Project would not increase noise or vibration levels beyond the County's standards. There are no other successive Projects of the same type or scale planned for the Project site or adjacent or nearby sites that, with the Project, would result in a significant cumulative impact related to noise in combination with the Project. Thus, the Project would not contribute to a significant cumulative noise impact.

Based on the foregoing analysis, no significant cumulative impacts would result from successive projects in the same place over time, and the cumulative impact exception to a CE does not apply to the Project.

4.3 Significant Effect

15300.2(c) **Significant Effect**. A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.

The circumstances of the Project are not considered unusual because: (1) the Project is located within the disturbed and developed existing fire station project site ; (2) the District's Facilities Replacement Plan specifically calls for the replacement of the existing fire structure due to the age and condition of the existing station; (3) the District's Facilities Replacement Plan also calls for the replacement of five fire stations, including Fire Station No. 4, thus the replacement of Fire Station No. 4 would not be an unusual circumstance; (4) construction activities would be typical of those associated with fire station demolition and construction; and (5) the Project would result in minimal operational changes as the Project does not propose an increase of employees or emergency vehicles. In addition, as mentioned in the Project Description, project construction would occur during normal construction hours (7:00 a.m. to 4:00 p.m.) Monday through Friday with no construction on weekends. And as discussed in this Section 4 and in [cite to all the technical reports/appendices], the Project will not result in any potentially significant adverse environmental impacts. Accordingly, the Project would not have a reasonable possibility of resulting in significant effects on the environment due to unusual circumstances. Therefore, the significant effect exception to a CE does not apply to the Project.

4.4 Scenic Highways

15300.2(d) **Scenic Highways**. A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR.

The project site is not near an officially designated state scenic highway. The nearest officially designated state scenic highway is State Route 74, located 34 miles northeast of the project site in Hemet (Caltrans 2024). The nearest highway eligible for state scenic designation is a portion of Interstate 15 located 350 feet east of the project site. However, because the Project consists of the replacement and reconstruction of an existing fire station, with a similar development footprint and building envelope on the previously developed site, no impacts to scenic resources would occur.

The Cultural Resources Assessment prepared for the Project (Rincon Consultants, July 2024) (Attachment B) determined that the existing Fire Station No. 4 is not considered a historic building and there are no historic buildings on the project site. Additionally, the Cultural Resources Assessment determined that the Project would not have an impact on any historical or unique archaeological resources. Moreover, there are no designated scenic resources such as trees or rock outcroppings located on the site.

The Cultural Resources Assessment includes best management practices to ensure that the Project would adhere to existing regulations and adhere to Section 106 of the National Historic Preservation Act. Implementation of PDFs CR-1, CR-2, and CR-3 will ensure that the Project complies with existing standards and regulations of Section 106 36 CFR Part 800.2(c)(2), 800.3(f), and 800.4(a), regarding the preservation of historical and unique archaeological and tribal resources. Thus, with application of the PDFs pursuant to Section 106 the Project would not result in a substantial adverse change to a historical resource within a state scenic highway. Thus, this exception to a CE does not apply to the Project.

4.5 Hazardous Waste Sites

15300.2(e) **Hazardous Waste Sites**. A categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code.

The Project is not located on a site that is included on any list compiled pursuant to Section 65962.5 of the Government Code (DTSC 2024; SWRCB 2024). In addition, according to the Phase I Environmental Site Assessment conducted by Rincon in January 2024 (Attachment F), none of the adjacent properties and properties within approximately 0.3miles were listed in any of the databases searched.

A review of the National Pipeline Mapping System (NPMS) online Public Map Viewer indicates that no natural gas transmission pipelines or hazardous liquid pipelines are located on the project site or adjacent properties. Additionally, no pipeline-related accidents or incidents are mapped within 0.25 miles of the project site (United States Department of Transportation 2023).

Contaminated soil, soil vapor, and/or groundwater plumes of petroleum hydrocarbons (within 528 feet of the subject property) and other contaminants of concern (within 1,760 feet of the project site) were not identified during the completion of the Phase I ESA. Therefore, the Project would not be located on or near a hazardous waste site, and this exception to a CE does not apply to the Project.

4.6 Historical Resources

15300.2(f) **Historical Resources**. A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource.

As stated above, the Cultural Resources Assessment prepared for the Project by Rincon Consultants (Attachment B) did not identify historical resources within the project site. A property may be eligible for listing in the California Register of Historical Resources (CRHR) if it meets one of more of the following criteria:

Criterion 1: Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage

Criterion 2: Is associated with the lives of persons important to our past

Criterion 3: Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values

Criterion 4: Has yielded, or may be likely to yield, information important in prehistory or history

The project site includes the existing Fire Station No. 4, constructed in 1979 with modular prefabricated structures originally intended as temporary quarters. The fire station is not linked to any significant events in California's history or culture, nor is it associated with notable individuals from the state's past. The building is a standard prefabricated modular unit without any distinctive architectural, creative, or artistic values, and it does not provide any important historical or prehistoric information.

Thus, the Project would not result in a substantial adverse change to a historical resource and this exception to a CE does not apply to the Project.

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5 Summary

Based on this analysis, the proposed North County Fire Protection District Station No. 4 Project meets all criteria for a Class 2 Categorical Exemption pursuant to Section 15302 of the State CEQA Guidelines. Furthermore, exceptions to the applicability of a CE, as specified in Section 15300.2(a) through (f) of the CEQA Guidelines, do not apply to the Project. Therefore, the Project is exempt from CEQA.

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6 References

California Department of Toxic Substances Control (DTSC). 2024. Envirostor. https://www.envirostor.dtsc.ca.gov/public/. (Accessed June 2024).

California Department of Transportation (Caltrans). 2024. California Highway System Map. https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. (Accessed July 2024).

California State Water Resources Control Board (SWRCB). 2024. Geotracker. https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=4375+pala+mesa+drive+fallbrook. (Accessed July 2024).

County of San Diego, Planning and Development Services (PDS). 2024. Initial Study Research Packet. https://gis-public.sandiegocounty.gov/ISRP/home. (accessed January 2024).

_____. 2021. County of San Diego - PDS - Zoning & Property Information. https://gis-portal.sandiegocounty.gov/arcgis/home/webmap/viewer.html?webmap=f1b69ba9d3dd4940b8d1efcc9dac2ac4. (accessed January 2024).

_____. 2011. San Diego County General Plan. Land Use Element. https://www.sandiegocounty.gov/content/dam/sdc/pds/gpupdate/docs/GP/LandUseElement.pdf. (Accessed January 2024).

_____. 2020. County of San Diego, Planning & Development Services Zoning Ordinance Summary. https://www.sandiegocounty.gov/content/dam/sdc/pds/zoning/formfields/PDS-444.pdf. (Accessed February 2024).

_____. 2023. County of San Diego Alphabetical List, by Type. https://www.sandiegocounty.gov/content/dam/sdc/pds/zoning/ALPHABETICAL%20LIST%20OF%20INDIVIDUAL%20LAND%20USES.pdf. (Accessed February 2024).

United States Department of Transportation (USDOT). 2023. National Pipeline Mapping System (NPMS) Public Map Viewer. https://www.npms.phmsa.dot.gov/PublicViewer/. (Accessed July 2024).

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Attachment A

Biological Resources Assessment

Rincon Consultants, Inc.
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760-918-9444

May 3, 2024
Revised: July 8, 2024
Project No: 23-14998

North County Fire Protection District
330 South Main Avenue
Fallbrook, California 92028

Subject: Biological Resource Letter Report for the San Diego County Fire Station No. 4 Project in San Diego County, California

Dear Fire Chief Keith McReynolds:

Rincon Consultants, Inc. (Rincon) is pleased to provide this Biological Resource Letter Report (Letter Report) for the San Diego County Fire Station No. 4 Project (project). This Letter Report was prepared by several biologists under the direction of principal biologist Steven J. Hongola with Rincon, County of San Diego Approved California Environmental Quality Act Consultant.

Summary

This Letter Report has been prepared to provide baseline biological conditions at the proposed San Diego County Fire Station No. 4 Project (project) site. In accordance with the County of San Diego Report Format and Content Requirements (County of San Diego 2010), this Letter Report describes and documents the existing biological resources in terms of vegetation communities/land covers, plants, and wildlife from the field reconnaissance survey performed by Rincon on March 8, 2024. This Letter Report describes the potential for sensitive biological resources to be present; potential project impacts to these special-status biological resources; and recommended avoidance and minimization measures, as needed.

The project site is approximately 1.7-acres located at 4375 Pala Mesa Drive, Fallbrook, CA., in the unincorporated community of Fallbrook, San Diego County. The project involves the demolition of an existing/operating fire station and the construction and operation of a new Fire Station No. 4. The new Fire Station No. 4 development would include an approximately 8,694-square foot fire station facility a new driveway and parking lot improvements.. The existing fire station would remain in operation during construction of the new fire station (Stage I) and would be demolished after construction of the new fire station is complete (Stage II). The existing emergency generator located at the southwestern portion of the project site would be removed during project construction and relocated to the southeastern side of the project site. The existing above ground fuel tank located at the northwestern portion of the project site would be retained.

The new fire station would include living and working facilities and an apparatus bay that can house one fire engine, one brush engine, and one emergency services vehicle. Visitors parking would be located to the north, a covered patio and exercise patio would be located outside the fire station to the west, and firefighter parking, a new emergency generator, and a new propane tank would be located to the east, and additional firefighter parking would be located to the south. Access to the site is provided via Pala Mesa Drive and Old Highway 395.

The 1.7-acre project site is comprised of mostly urban/developed land. The natural habitat value of the project site is limited.; However, I-15 and State Route 76 (SR 76)is between the project site and San Luis Rey River and developed private property surrounds the project boundaries on the north,

south and east. The western boundary of the project site is disturbed ruderal lands, however, within 500 feet of the western project boundary (biological survey boundary) are lands , within comprised of disturbed lands and Diegan Coastal Sage Scrub which could potentially support protected native nesting birds, and coastal California gnatcatcher (*Polioptila californica californica*). The nearby San Luis Rey River is approximately 0.8 miles southeast of the project site, beyond Interstate 15 (I-15). The San Luis Rey River contains riparian habitat and functions as a wildlife corridor, However, due to the distance of the site from the San Luis Rey River, the intervening I-15 and SR 76, the disturbed/developed nature of the site, and the disturbed Diegan CSS within the 500 foot boundary surveyed beyond the project boundary, , special-status species are not expected to be present on the project site and no direct project impacts to species-status species are anticipated to occur.

As best management practices the North San Diego County Fire District (Lead Agency) will instruct the construction contractor in coordination with a qualified biologist, to conduct a Workers' Environmental Awareness Program training to the construction crew will minimize potential project impacts to sensitive biological resources during demolition and construction. Additionally, the contractor and biologist will clearly delineate project boundaries to avoid potential impacts to adjacent disturbed Diegan coastal sage scrub. Pursuant to the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (CFGC) Sections 3503, 3503.5, and 3513, if construction occurs during the nesting season (February 15th to August 30th)., within seven days of the start of construction a pre-construction nesting bird survey would be conducted.

Recommended Best Management Practices

Worker Environmental Awareness Program

The applicant shall implement a Worker Environmental Awareness Program (WEAP) for the construction crew that will be developed by a qualified biologist. Each employee (including temporary, contractors, and subcontractors) will receive the WEAP presentation on the first day of project work. They will be advised of sensitive species in the area and avoidance measures being implemented to protect them at the site. At a minimum, the WEAP will include the following topics: occurrence of the listed and sensitive species in the area, their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violations of federal and State laws, reporting requirements, and project features and conditions designed to reduce direct and indirect impacts to these species, and worker responsibilities to maintain compliance with the avoidance and minimization measures while working at the site.

Work Limit Delineation

Approved construction work area limits shall be delineated and marked clearly, by flagging or temporary orange construction fencing, in the field prior to vegetation removal. The marked boundaries will be maintained and clearly visible to personnel on foot and by heavy equipment operators. Fencing shall be placed on the impact side of the work area to reduce the potential for encroachment and additional vegetation loss within adjacent open space. Fencing shall be put in place by a qualified surveyor per the project applicant's approved construction and grading plans. All temporary fencing shall be removed only after the conclusion of all grading, clearing, and construction. Employees shall strictly limit their activities and vehicles to the designated project boundary, staging areas, and routes of travel. A qualified biologist shall verify that the limits of construction have been staked based on the permitted impact area, entirely avoid adjacent sensitive habitat areas, and are readily identifiable to workers. Intrusion by unauthorized vehicles outside of construction limits shall be prohibited, with control exercised by an on-site foreman. Access routes to the construction area

outside of work hours shall be blocked with physical barriers, such as concrete blocks or large equipment.

Nesting Bird Surveys

Common, urban-adapted birds could potentially nest within the large ornamental trees and shrubs on the project site and within larger trees adjacent to the site. Therefore, the following measure is recommended to maintain compliance with the CFGC and MBTA with respect to nesting birds:

- Pursuant to MBTA and CFGC Sections 3503, 3503.5, and 3513, if initial clearing activities take place between February 1 and August 31, nesting bird surveys are recommended to be performed by a qualified biologist/ornithologist with results reported subsequently to the County of San Diego prior to grading and clearing. If nesting birds are found, a County-approved construction buffer may be required until all young are determined to be no longer dependent on the nest.

Coastal California Gnatcatcher Survey

Coastal California gnatcatcher could potentially occupy the Diegan coastal sage scrub adjacent to the project boundary. Therefore, the following measure is recommended to avoid indirect impacts to the species if project construction is to occur within the coastal California gnatcatcher breeding season (February 15 through August 30). If project construction occurs outside of the coastal California gnatcatcher breeding season (from September 1 through February 14), then nothing is required.

- A qualified biologist shall conduct three surveys at least one week apart to determine the presence/absence of coastal California gnatcatchers in the survey area as defined herein between February 15 and August 30 prior to the start of construction activities.
- All brushing, grading, or excavation taking place within 500 feet of active nest sites shall be delayed to September 1 through February 14, which is outside the coastal California gnatcatcher breeding season.
- If an active nest is located, a 500-foot no-construction buffer shall be established around each nest site that is regularly monitored by a qualified biologist. There may be a reduction of this buffer zone for certain types of work depending on site-specific conditions such as topography, line-of-sight to the nest, or the existing ambient level of activity at the discretion of the qualified biologist. No brushing, grading, or excavation shall take place within this buffer until the nest is no longer active. Other work may not occur unless it is monitored by the qualified biologist and carried out at their discretion.

Introduction

Project Description

The project involves constructing a new fire station within the 1.7-acre property at 4375 Pala Mesa Drive in Fallbrook, California to replace the existing fire station at the site. The existing fire station would remain in operation during construction of the new fire station (Stage I) and would be demolished after construction of the new fire station is completed (Stage II). The new fire station will include eight dorm rooms, four bathrooms, one exercise room, one dining room, one kitchen, two offices, one storage room, one covered patio, 22 parking stalls, a vehicle washing area, and a replaced driveway. Access to the site is provided via Pala Mesa Drive and Old Highway 395.

Project Location

The project site is generally located within unincorporated northern San Diego County. The project site is specifically located at 4375 Pala Mesa Drive in the unincorporated community of Fallbrook, California (33.340755°, -117.160421°). The project site is shown on the Bonsall 7.5-minute United States Geological Survey (USGS) topographic quadrangle map, in Township 10 South, Range 3 West, Section 00 (Figure 1) (USGS 2023). The elevation is 340 feet (103 meters) above mean sea level. The project site is approximately 0.8 miles from the San Luis Rey River and lies on a 1.7-acre parcel (located on Assessor's Parcel Number 120-506-900). The project site is bordered by Old Highway 395 to the east and Pala Mesa Drive to the north (Figure 2).

Geographical Setting

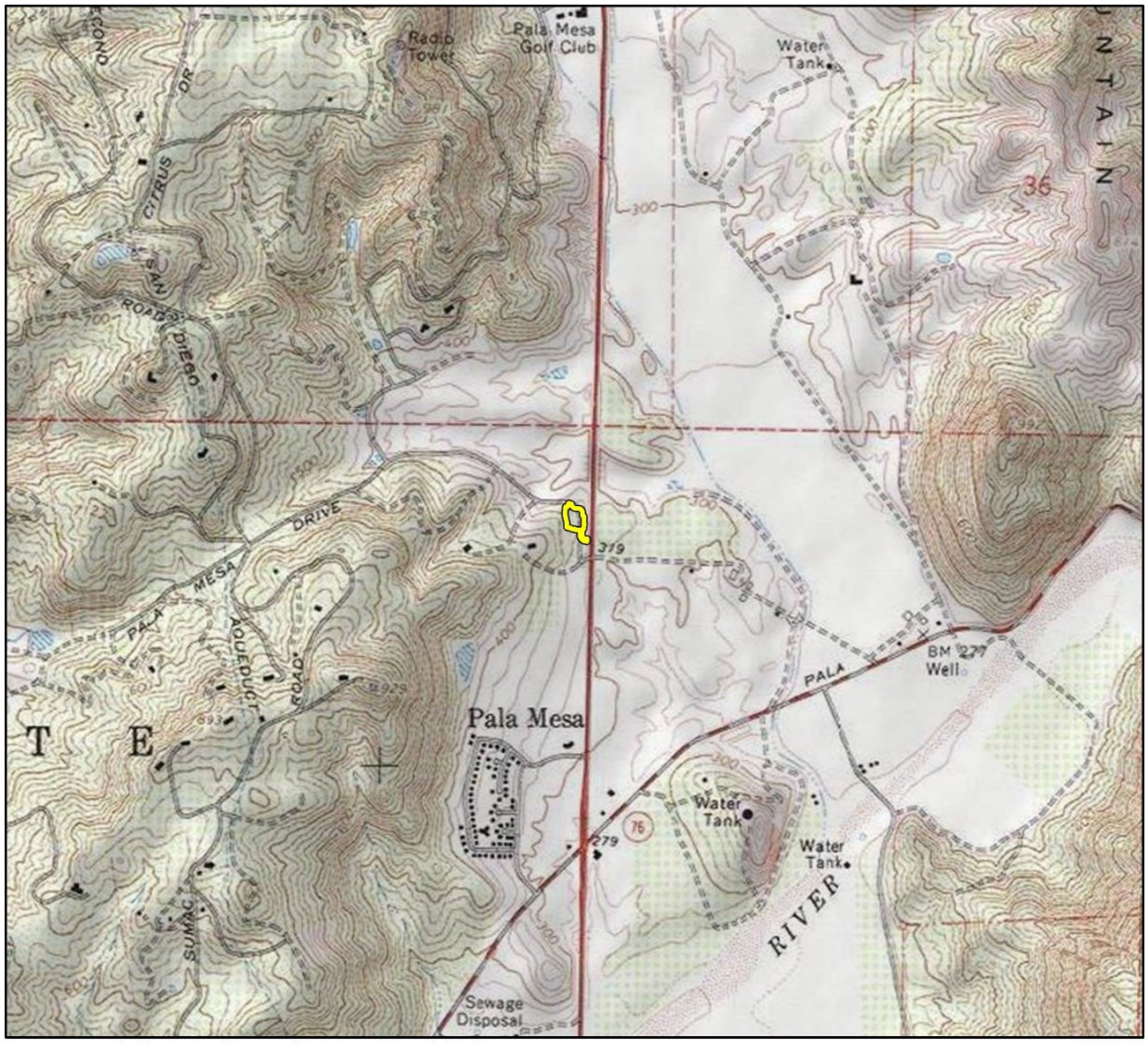
The project site occurs within an urban/developed setting with an existing fire station and frequent vehicle traffic on the north and east side of the project site. The site is on a flat developed private property. The San Luis Rey River is the closest water feature to the site which is approximately 0.8 miles away and separated by the I-15 freeway and SR 76.

Regional Context

(Figure 4). The project site is within an area designated for conservation (County of San Diego 1998), and within a Biological Core Area or Biological Linkage Area. The surrounding area is characterized by Urban/Developed, Disturbed Habitat, and Coastal Diegan Sage Scrub (Figure 5). The project site is northwest of the San Luis Rey River, which conveys flows into the Pacific Ocean. The project site is therefore located in the San Luis Rey River watershed. The project site is also located within the boundaries of the draft San Diego North County Multiple Species Conservation Program (MSCP) Subarea Plan.[1]

[1] The North County Multiple Species Conservation Plan (North County Plan) would extend the County's Multiple Species Conservation Program (MSCP) into the northern portion of the unincorporated county. On October 28, 2020 (6), the Board of Supervisors directed staff to continue development of the North County Plan as a joint Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) to achieve many of the same environmental and economic benefits realized through the adopted South County Subarea Plan. (https://www.sandiegocounty.gov/content/sdc/pds/mscp/nc.html (accessed June 19, 2024)

Figure 1 Project Vicinity



Basemap provided by National Geographic Society, Esri and their licensors © 2024. Bonsall Quadrangle. T10S R03W S02. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

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Fig 1 Project Vicinity

Project Location

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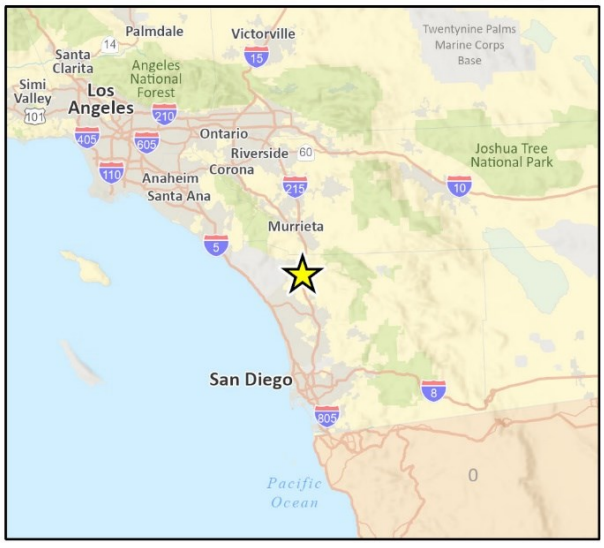

Figure 2 Project Location

Imagery provided by Microsoft Bing and its licensors © 2024.

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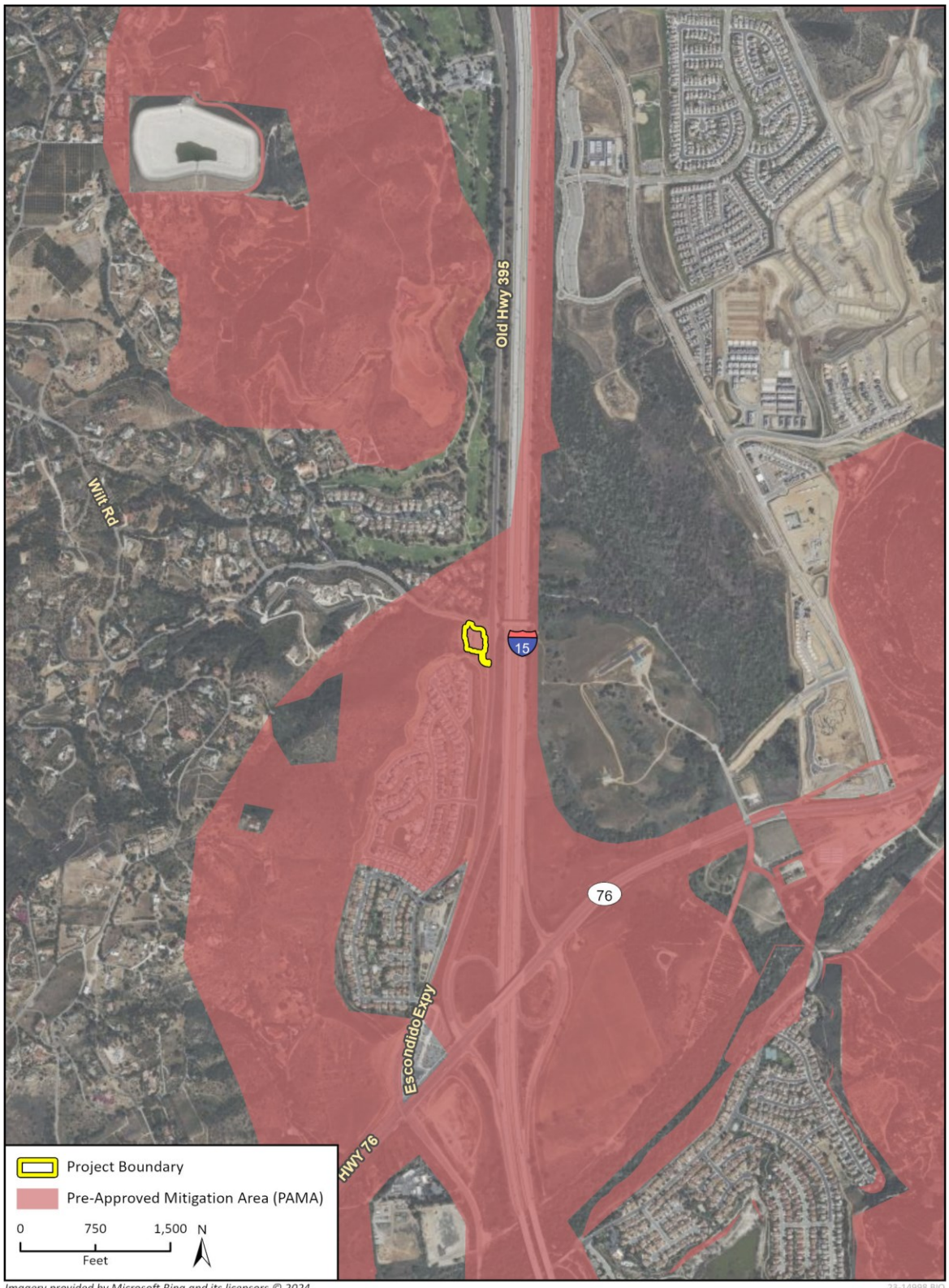
Fig 2 Project Location

Figure 3 Project Site and Pre-Approved Mitigation Area (PAMA)



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Additional data provided by Data Basin, San Diego North County MSCP, 2024.

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Fig X Project Site and PAMA

Figure 4 Project Site and MSCP Designation

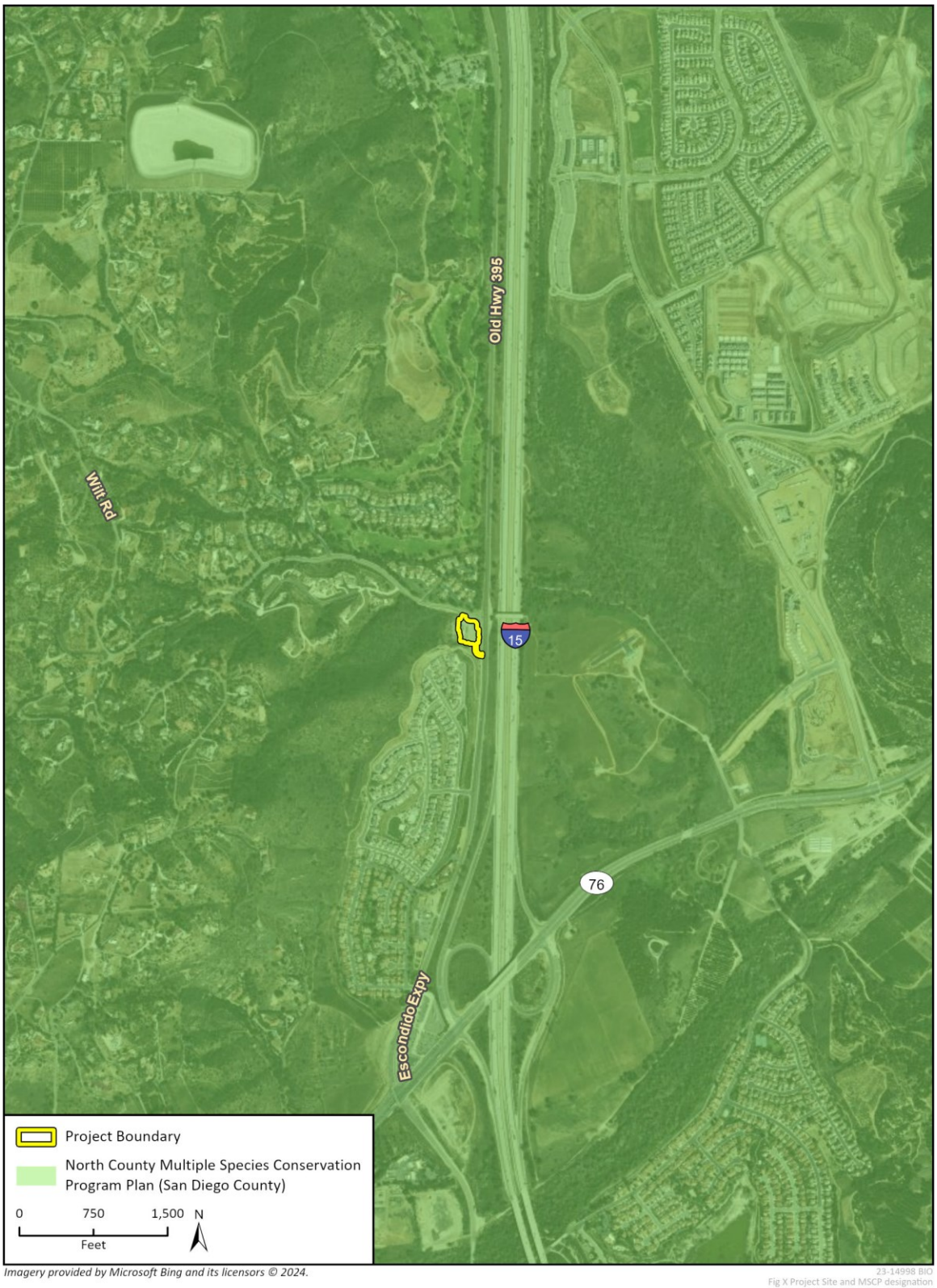
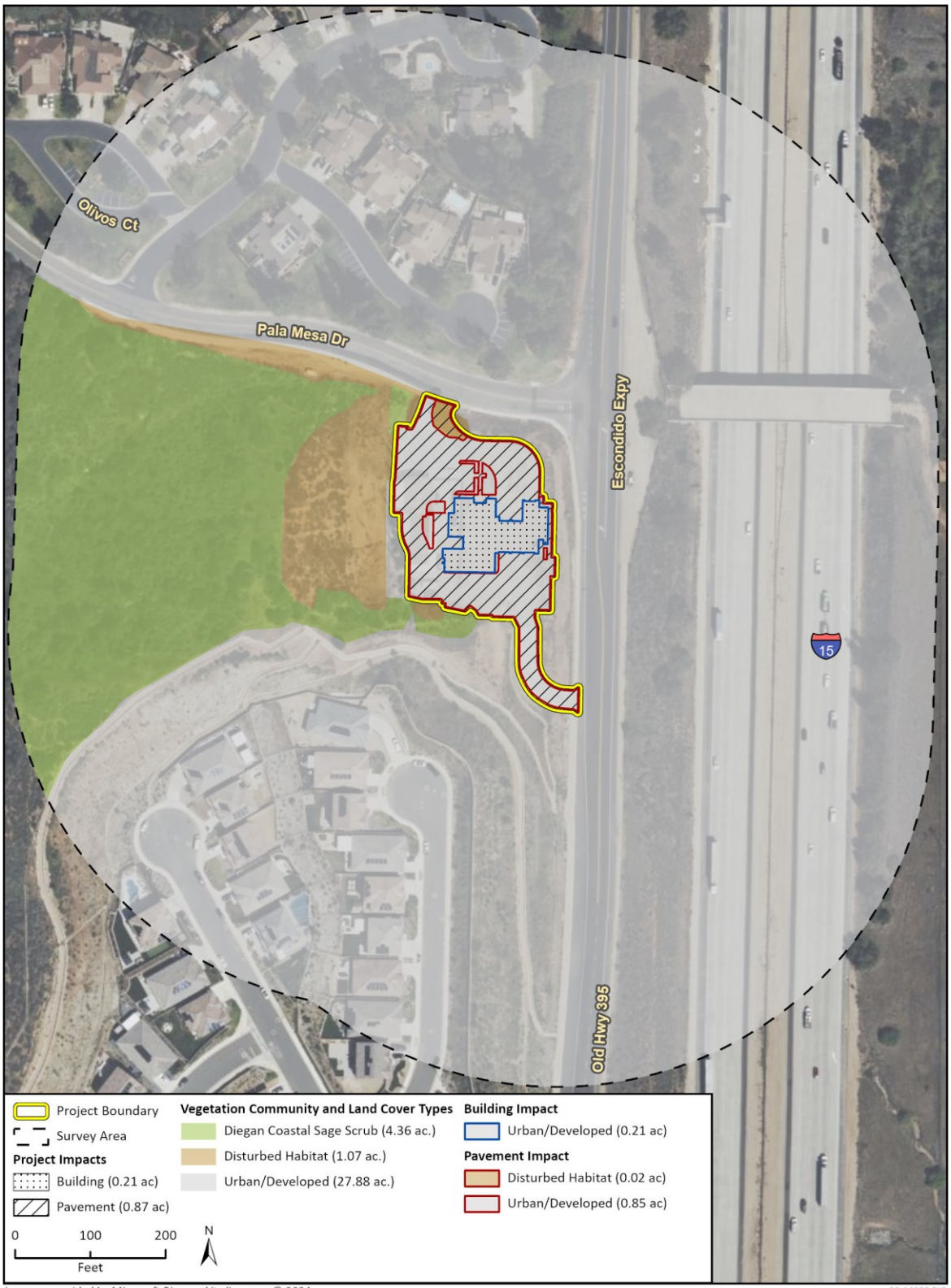


Figure 5 Vegetation Communities and Landcover Types



Methodology

The purpose of this Letter Report is to identify and document the general site characteristics, including habitat types, likelihood of sensitive resources to be present on site, and assess potential impacts to special-status biological resources that may result from construction and/or operation of the project. This Letter Report is based on a desktop database analysis and literature review as well as the results from the field reconnaissance-level biological survey of the site performed by Rincon biologist. It has been prepared in accordance with the County of San Diego Report Format and Content Requirements (County of San Diego 2010) and Process Guidance & Regulations/Statutes (County of San Diego 2006). The survey area is defined as the project site plus a 500-foot buffer area outside the project boundary (Figure 2). The methods employed are described in detail below. The findings and opinions conveyed in this report are based on this methodology.

Regulatory Setting

This section provides a general summary of the applicable federal, state, and local regulations related to biological resources that could occur within the project site boundary. Regulated or sensitive biological resources considered and evaluated in this Letter Report include special-status plant and wildlife species, nesting birds and raptors, sensitive plant communities, jurisdictional waters and wetlands, wildlife movement, and locally protected resources, such as protected trees.

The North County Fire Protection District is the lead agency for this project under the California Environmental Quality Act (CEQA).

Environmental Statutes

For the purpose of this Letter Report, potential project-related impacts to biological resources were analyzed according to the following regulatory statutes and guiding documents:

Federal

Federal Endangered Species Act (ESA)

Under the FESA, authorization is required to "take" a listed species. Take is defined under Section 3 of the FESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Under federal regulation (50 Code of Federal Regulations [CFR] Sections 17.3, 222.102), "harm" is further defined to include habitat modification or degradation where it would be expected to result in death or injury to listed wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Critical habitat is a specific geographic area that is essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery. Section 7 of the FESA outlines procedures for federal interagency cooperation to conserve federally listed species and designated critical habitat.

Section 7(a)(2) of the FESA and its implementing regulations require federal agencies to consult with the USFWS or National Marine Fisheries Service (NMFS) to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species, or result in the destruction or adverse modification of critical habitat. For projects where federal action is not involved and take of a listed species may occur, the project proponent may seek to obtain an incidental take permit under Section 10(a) of the FESA. Section 10(a) allows USFWS to permit the

incidental take of listed species if such take is accompanied by a habitat conservation plan that includes components to minimize and mitigate impacts associated with the take.

The USFWS and NMFS share responsibility and regulatory authority for implementing the FESA (7 United States Code [USC] Section 136, 16 USC Section 1531 et seq.).

Federal Clean Water Act (CWA)

Pursuant to Section 404 of the Clean Water Act, ACOE regulates the discharge of dredged and/or fill material into "waters of the United States." The term "wetlands" (a subset of waters of the United States) is defined in 33 Code of Federal Regulations (CFR) 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." In the absence of wetlands, the limits of ACOE jurisdiction in non-tidal waters, such as intermittent streams, extend to the "ordinary high water mark," which is defined in 33 CFR 328.3(e).

Migratory Bird Treaty Act (MBTA)

All migratory bird species that are native to the United States or its territories are protected under the federal Migratory Bird Treaty Act (MBTA), as amended under the Migratory Bird Treaty Reform Act of 2004 (FR Doc. 05-5127). The MBTA is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, the MBTA is now used to place restrictions on disturbance of active bird nests during the nesting season (generally February 1 to September 1). In addition, the USFWS commonly places restrictions on disturbances allowed near active raptor nests. As a standard condition, the Project must comply with the MBTA.

The Bald and Golden Eagle Protection Act (16 USC §§ 668 – 668d)

The Bald and Golden Eagle Protection Act makes it illegal to possess, sell, or hunt bald and golden eagles, including their feathers, nests, eggs, or body parts.

State

California Environmental Quality Act (CEQA)

CEQA requires identification of a project's potentially significant impacts on biological resources and feasible mitigation measures and alternatives that could avoid or reduce significant impacts. CEQA Guideline 15380(b)(1) defines endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors" (14 CCR 15000 et seq.). A rare animal or plant is defined in CEQA Guideline 15380(b)(2) as a species that, although not presently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or … [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in CEQA Guideline 15380(c). CEQA also requires identification of a project's potentially significant impacts on riparian habitats (such as wetlands, bays, estuaries, and marshes) and other sensitive natural communities, including habitats occupied by endangered, rare, and threatened species.

California Endangered Species Act (CESA)

The CDFW is responsible for administration of the CESA. For projects that may affect both a State and federal listed species, compliance with the FESA will satisfy the CESA, provided the CDFW determines that the federal incidental take authorization is consistent with the CESA.

Take is defined in the CFGC Section 86 as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The CESA allows for take incidental to otherwise lawful activities under the CFGC Section 2081. Project proponents wishing to obtain incidental take permits can do so through a permitting process outlined in the California Code of Regulations (CCR) Section 783. Additionally, some sensitive mammals and birds are protected by the State as Fully Protected Mammals or Fully Protected Birds, as described in the CFGC, Sections 4700 and 3511, respectively.

Projects that may result in a take of a California listed species require a take permit under the CESA. The federal and State acts lend protection to species considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or den locations, communal roosts, and other essential habitat.

The CESA defines an endangered species as:

"...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease."

A threatened species is defined as:

"a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985, is a threatened species."

Candidate species are defined as:

"a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list."

Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the FESA, the CESA does not include listing provisions for invertebrate species. Article 3, Sections 2080 through 2085 of the CESA addresses the taking of threatened or endangered species by stating:

"no person shall import into this State, export out of this State, or take, possess, purchase, or sell within this State, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided."

California Fish and Game Code (CFGC)

According to the CFGC Section 3503 it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird [except English sparrows (*Passer domesticus*) and European starlings (*Sturnus vulgaris*)]. Sections 3503 and 3513 prohibit the taking of specific birds, their nests, eggs, or any portion thereof during the nesting season. Section 3503.5 specifically protects birds in the orders Falconiformes and Strigiformes (birds-of-prey). Section 3513 essentially overlaps with the federal

MBTA, prohibiting the take or possession of any migratory nongame bird. Section 3800 states that all birds occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds are nongame birds.

Section 1600 et seq. of the CFGC prohibits, without prior notification to CDFW, the substantial diversion or obstruction of the natural flow of, or substantial change or use any material from the bed, channel, or bank of any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. In order for these activities to occur, the CDFW must receive written notification regarding the activity in the manner prescribed by the CDFW and may require a lake or streambed alteration agreement. Lakes, ponds, perennial and intermittent streams, and associated riparian vegetation, when present, are subject to this regulation.

In accordance with Section 1602 of the CFGC, the CDFW has jurisdiction over lakes and streambeds (including adjacent riparian resources). The CDFW regulates wetland areas that are part of a river, stream, or lake, but also temporary wetland features such as vernal pools.

Native Plant Protection Act (NPPA)

The NPPA was enacted in 1977 and allows the California Fish and Wildlife Commission to designate plants as rare or endangered. Currently, 64 species, subspecies, and varieties of plants are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations. Effective in 2015, the CDFW promulgated regulations (14 CCR 786.9) under the authority of the NPPA, establishing that the CESA permitting procedures (CFGC Section 2081) would be applied to plants listed under the NPPA as "Rare." With this change, there is little practical difference between regulations and protocols for plants listed under CESA and those listed under the NPPA.

Porter-Cologne Water Quality Control Act

Pursuant to Section 401 of the CWA, projects that apply for a USACE permit for discharge of dredge or fill material must also obtain water quality certification under Section 401 from the RWQCB. Additionally, the State Water Resources Control Board (SWRCB) and each of nine local RWQCBs have jurisdiction over “waters of the State” pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements (WDRs) regarding discharges to “isolated” waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the USACE to be Outside of Federal Jurisdiction). The local RWQCB, Los Angeles RWQCB implements this general order for isolated waters not subject to federal jurisdiction.

The CWA and associated federal regulations (Title 40 of the CFR 123.25(a)(9), 122.26(a), 122.26(b)(14)(x) and 122.26(b)(15)) require nearly all construction site operators engaged in clearing, grading, and excavating activities that disturb one acre or more, including smaller sites in a larger common plan of development or sale, to obtain coverage under a National Pollutant Discharge Elimination System (NPDES) permit for their stormwater discharges, and develop a Storm Water Pollution Prevention Plan (SWPPP). The NPDES Program is a federal program that has been delegated to the State of California for implementation through the SWRCB and RWQCBs.

Local

San Diego Multi-Species Conservation Program (MSCP)

The MSCP Conservation Plan aims to protect multiple species and their habitats within the Multi-Habitat Planning Area (MHPA). It involves preserving core biological resource areas, maximizing public lands, and facilitating development outside the preserve. The plan targets 171,917 acres for conservation, covering key vegetation communities and 85 species, including endangered and threatened ones. The strategy includes public land acquisition, habitat management, and mitigation measures for development impacts.

County of San Diego Biological Mitigation Ordinance (BMO)

The BMO provides detailed protocol for monitoring species and habitats, assessing ecosystem health, and ensuring compliance with conservation goals. The BMO includes various methodologies, species lists, and monitoring schedules to enhance the effectiveness of the conservation program in protecting biodiversity in San Diego County. The main goal is to track the health and trends of sensitive species and habitats within the MSCP area to ensure compliance with environmental regulations and inform adaptive management strategies.

Database and Literature Review

Rincon conducted a review of relevant literature to assess potentially occurring sensitive resources in the vicinity of the project site boundary. The literature review included an evaluation of current and historical aerial photographs of the site (Google Earth 2024 and Microsoft Bing 2024), regional and site-specific topographic maps [USGS 2024], geologic maps, climatic data, and other available background information (i.e., California Department of Fish and Wildlife [CDFW] California Natural Diversity Database [CNDDB] [CDFW 2024b], United States Fish and Wildlife Service [USFWS] Critical Habitat Portal [USFWS 2024a], USFWS National Wetlands Inventory Wetlands Mapper [USFWS 2024b] and USFWS Information for Planning and Conservation database [IPaC] [USFWS 2024c]). The databases and literature were reviewed to evaluate whether any special-status wildlife, plant, or vegetation communities are known or have potential to occur on site. Other resources reviewed included the California Native Plant Society (CNPS) online Inventory of Rare and Endangered Plants of California (CNPS 2024).

Definitions of Special Status Species

For the purposes of this report, special status species include:

- Species listed as threatened or endangered under the federal ESA, including proposed and candidate species
- Species listed as candidate, threatened, or endangered under the CESA
- Species designated as Fully Protected by the CFGC, and Species of Special Concern or Watch List by the CDFW
- NPPA – State Rare (SR)
- CNPS California Rare Plant Ranks (CRPR) 1A, 1B, 2A and 2B
- Species designated as locally important by the Local Agency and/or otherwise protected through ordinance, local policy, or HCPs/NCCPs

Field Reconnaissance Survey

A field reconnaissance survey was conducted on March 8, 2024, by Rincon biologist Kevin Gugerty to document site conditions and evaluate the presence or absence of special-status species or habitat for special-status species. The biologist surveyed the entire project site boundary and 500-foot buffer (survey area) by foot and visually surveyed areas with binoculars, where access was limited; vegetation communities (Table 1 and 5) and plants and wildlife (Table 2) observed during the survey are documented within the results. The survey includes mapping habitat and land cover within the entire survey area.

Results

The following section describes the biological resources observed within the survey area during the field survey.

Vegetation Communities and Land Cover Types

Table 1 lists the vegetation communities and land cover types observed during the field survey. The project site consists primarily of urban/developed land cover, with hard-packed soil, paved access roads, man-made structures, and common landscape vegetation, including treasure flower (*Gazania linearis*), and crimson fountain grass (*Pennisetum setaceum*). Disturbed habitat occurs within a small portion of the project site; however, the community is found within a larger area within the survey area buffer to the east. Two silver dollar eucalyptus (*Eucalyptus cinerea*), four rocky mountain junipers (*Juniperus scopulorum*) and two Monterey pines (*Pinus radiata*) were found within the buffer area as ornamental plantings. The Diegan Coastal Sage Scrub is found outside of the project boundary and largely located to the east of the project boundary which includes California sagebrush (*Artemisia californica*), laurel sumac (*Malosma laurina*), and California buckwheat (*Eriogonum fasciculatum*).

Table 1 Vegetation and Land Cover Types in the Survey Area

MSCP Tier[1]	Land Cover Type	Habitat Code[2]	Acres[3]
IV	Coastal Scrub	Diegan Coastal Sage Scrub (32500)	4.36
IV	Disturbed Habitat	Disturbed Habitat (11300)	1.07
IV	Developed Habitat	Urban/Developed (12000)	27.88

[1] MSCP Tier levels rank habitat sensitivity, with Tier I being most sensitive and Tier IV being least sensitive.

[2] Vegetation categories and numerical codes are based on Holland (1986) as modified by Oberbauer et al. (2008).

[3] Rounded to the nearest 0.01 acre; thus, total reflects rounding.

Disturbed Habitat

Approximately 1.07 acres of disturbed habitat occur within the survey area. According to existing literature, disturbed habitat consists of areas that have been physically disturbed (by previous legal human activity) and are no longer recognizable as a native or naturalized vegetation association but continues to retain a soil substrate. Typically, vegetation, if present, is nearly exclusively composed of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance or shows signs of past or present animal usage that removes any capability of providing viable natural habitat for uses other than dispersal (Oberbauer et al. 2008). Examples of disturbed habitat include areas that have been graded, repeatedly cleared for fuel management purposes and/or experienced repeated use that prevents natural revegetation (i.e., dirt parking lots, trails that have been present for several decades), recently graded firebreaks, graded construction pads, construction staging areas, off-road vehicle trails, and old home sites.

Characteristic species of this vegetation community/habitat type include invasive, non-native forb species, and a variety of thistles. Some disturbed habitat species from the field survey included short-pod mustard (*Hirschfeldia incana*), crimson fountain grass, and red brome (*Bromus rubens*).

Urban/Developed

Approximately 27.88 acres of urban/developed land covers occur within the survey area. The urban/developed land covers are areas that have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is characterized by permanent or semi-permanent structures, pavement, hardscape, and landscaped areas that often require irrigation. The primary characteristic species include either unvegetated or landscaped with a variety of ornamental, non-native, plant species (Oberbauer et al. 2008). The dominant plant species within these portions of the survey area include ornamentals consisting of treasure flower, Monterey pine, Rocky Mountain juniper, and Eastern red cedar *(Juniperus virginiana).*

Diegan Coastal Sage Scrub

Approximately 4.36 acres of Diegan Coastal Sage Scrub occurs off of and in the buffer area to the west of the project site in an area that will be disturbed by theproject. Diegan Coastal Sage Scrub typically occurs on low moisture-availability sites which are steep, xeric slopes or within clay rich soils found throughout coastal Southern California from Los Angeles into Baja California. Many of the species within this vegetation community are drought tolerant and primarily dominated by California sagebrush, California buckwheat and laurel sumac (Oberbauer et al. 2008). All three of these species, California sagebrush, California buckwheat and laurel sumac were found within the survey area as dominant species.

Table 2 provides a list of the floral and faunal species observed within the survey area during the recent field reconnaissance survey on March 8, 2024. The project site contains habitat for wildlife species that commonly occur within urban areas, including black phoebe (*Sayornis nigricans*), Anna's hummingbird (*Calypte anna*), house finch (*Haemorhous mexicanus*) and western fence lizard (*Sceloporus occidentalis*). No special status species were observed within the survey area during the reconnaissance survey.

Table 2 Floral and Faunal Species List

Scientific Name	Common Name	Native or Introduced
Plants		
Trees/Shrubs/Grasses		
Amsinckia menziesii	Menzies` fiddleneck	Native
Artemisia californica	California sagebrush	Native
Asphodelus fistulosus	onionweed	Introduced
Baccharis salicifolia ssp. *salicifolia*	mule fat	Native
Bromus rubens	red brome	Introduced
Callistemon citrinus	crimson bottlebrush	Introduced
Ceratopteris thalictroides	watersprite	Introduced
Encelia farinosa	brittlebush	Native
Eriogonum fasciculatum	California buckwheat	Native
Eucalyptus cinerea	silver dollar eucalyptus	Introduced
Gazania linearis	treasure flower	Introduced
Hirschfeldia incana	short-pod mustard	Introduced
Juniperus scopulorum	Rocky mountain juniper	Introduced
Juniperus virginiana	Eastern red cedar	Introduced
Malosma laurina	laurel sumac	Native
Pennisetum setaceum	crimson fountain grass	Introduced
Pinus radiata	Monterey pine	Native
Sanicula tuberosa	turkey pea	Native
Animals		
Birds		
Buteo jamaicensis	red-tailed hawk	Native
Calypte anna	Anna's hummingbird	Native
Corvus brachyrhynchos	American crow	Native

Scientific Name	Common Name	Native or Introduced
Haemorhous mexicanus	house finch	Native
Psaltriparus minimus	bushtit	Native
Sayornis nigricans	black phoebe	Native
Reptile		
Sceloporus occidentalis	western fence lizard	Native

Special-Status Species

Assessments for the potential occurrence of special status species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDB and other sources, species occurrence records from other sites in the vicinity of the project boundary, previous reports for the project boundary, and the results of surveys of the project boundary. The potential for each special status species to occur in the project boundary was evaluated according to the following criteria:

- **No Potential.** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime), and species would have been identifiable on the site if present (e.g., oak [*Quercus* sp.] trees). Species are not present in the vicinity of the site.
- **Low Potential.** Few of the habitat components (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime) meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species may occur in the region but is not very likely to be found on the site.
- **Moderate Potential.** Some of the habitat components (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime) meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species is known to occur in the regional vicinity and has a moderate probability of being found on the site.
- **High Potential.** All the habitat components (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime) meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has been recently documented in the vicinity and has a high probability of being found on the site.
- **Present.** Species is observed on the site or have been recorded (e.g., CNDDB, other reports) on the site recently (within the last five years).

Special-Status Plant Species

The CNDDB results include 72 special-status plant species recorded as occurring within five miles of the survey area. The IPaC results include 11 federally listed plant species that are recorded in the vicinity of the survey area. A potential to occur analysis for the species identified by the CNDDB and IPaC search as well as those listed in Attachment E in the County of San Diego's scoping memorandum for this project is provided in Attachment 1 of this Letter Report. The potential for special-status plant species to occur within the project boundary was assessed based on known distribution, habitat requirements, and existing site conditions observed during the field reconnaissance survey. Monterey pine is a CNPS CRPR 1B.1 protected species which was introduced to the site as an ornamental planting and is thus not within its native range. No additional special-status plant species were observed on the project site and the field survey confirmed the absence of suitable habitat for special-

status plant species identified by the database search and within the North County Multiple Species Conservation Program's (MSCP) County Subarea Plan (County of San Diego 2006).

Special-Status Wildlife Species

The CNDDB results include 67 special-status wildlife species recorded as occurring within five miles of the survey area. The IPaC results include 18 federally listed wildlife species that are recorded in the vicinity of the survey area. A potential to occur analysis for the species identified by the CNDDB and IPaC search as well as those listed in Attachment E in the County of San Diego's scoping memorandum for this project is provided in Attachment 1 of this Letter Report. The potential for special-status animal species to occur in the survey area was assessed based on known distribution, habitat requirements, and existing site conditions. San Diego County has two groupings for ranking animals. Group 1 includes mostly listed species or species that may become listed in the future. Group 2 species are mostly vulnerable or rare species, with a lower likelihood of becoming listed. The County also ranks sensitive plant species as A through D. List A includes (rare, threatened or endangered in California and elsewhere) were considered to have a higher potential for listing, while List B (Plants rare, threatened or endangered in California but more common elsewhere), List C (Plants which may be rare, but need more information to determine their true rarity status) and List D (Plants of limited distribution and are uncommon, but not presently rare or endangered) were generally considered to have a low potential for listing. No federal or state listed, or otherwise special-status animal species were observed or are expected to occur within the project boundary due to a lack of suitable habitat. Additionally, no County Group 1 and 2, and County List A, B, C, and D animal species are expected to occur within the project boundary (County of San Diego 2006). Diegan coastal scrub habitat found within the survey area buffer provide elements of low quality habitat for a few special-status species that rely on coastal scrub habitat including Dulzura pocket mouse (*Chaetodipus californicus femoralis*), the northwestern pocket mouse (*Chaetodipus fallax)* and moderate habitat quality for coastal California gnatcatcher and Crotch's bumble bee (*Bombus crotchii*). Vegetation within the project boundary is not suitable to support these species. However, ruderal vegetation and ornamental trees on the project site have the potential to support nesting birds.

Based on the review of the existing literature and desktop analysis, no federally designated critical habitat exists within the project boundary.

Nesting Birds

As previously described, the survey area contains trees and other vegetation suitable for nesting birds that may be impacted by project construction. Under the provisions of the MBTA of 1918, it is unlawful "by any means or manner to pursue, hunt, take, capture (or) kill" any migratory birds except as permitted by regulations issued by the USFWS. The term "take" is defined by USFWS regulation to mean to "pursue, hunt, shoot, wound, kill, trap, capture or collect" any migratory bird or any part, nest or egg of any migratory bird covered by the conventions, or to attempt those activities. The CFGC extends protection to non-migratory birds identified as resident game birds (Section 3500) and any birds in the orders Falconiformes or Strigiformes (birds-of-prey) (Section 3503).

Crotch's Bumble Bee

Crotch's bumble bee is now considered a state candidate for listing as endangered. Crotch's bumble bee and is a nonmigratory species that can be found in a variety of habitats in California (Xerces Society, 2024). This species inhabits scrub and open grassland habitats with floral associations for foraging that include California buckwheat (*Eriogonum fasciculatum*), California cleome or bladderpod (*Peritoma Cleomella arborea*), larkspurs (*Delphinium* spp.), yerba santa (*Eriodictyon* sp.), phacelia

(*Phacelia* sp.), and blue curls (*Trichostema* sp.). Food plants include milkweeds (*Asclepias* sp.), chaenactis (*Chaenactis* sp.), lupines (*Lupinus* sp.), burclovers (*Medicago* sp.), and sages (*Salvia* sp.) (Williams et. al. 2014). Nests can be located underground in abandoned rodent nests, above ground in tufts of grass, old bird nests, rock piles, or cavities in dead trees (Xerces Society, 2023). California buckwheat (*Eriogonum fasciculatum*) is found within the survey area buffer which could provide suitable habitat for foraging. The mature ornamental tree species in the survey area provide potential cavities and canopy cover for nesting birds which equally provides potential nesting habitat for Crotch's bumble bee once the bird nests are abandoned. The survey area is within the known range of Crotch's bumble bee, and the species has recent observations ranging from Oceanside, California to Temecula, California, approximately 14 to 16 miles from the site to the southwest and north of the survey area. Crotch's bumble bee has a moderate potential to occur in the Diegan coastal sage scrub habitat within the survey area; however, the disturbed and developed habitats of the project area are not expected to support the species.

Coastal California Gnatcatcher

Coastal California gnatcatcher is a federally listed threatened species, which is a permanent resident within Southern California. This species inhabits coastal sage scrub found outside of the project boundaries, but within the 500-foot survey area that includes California sagebrush, California buckwheat, and laurel sumac. The species breeding season typically occurs from late February to mid-July, utilizing the dense low shrub habitat found in coastal sage scrub for nesting habitat and is a permanent resident of the vegetation community (USFWS 2024). The survey area is within the known range of coastal California gnatcatcher and a known sighting occurred within the survey area in 2015. Coastal California gnatcatcher has a moderate potential to occur in the habitat within the survey area. However, it is not expected to utilize the disturbed and developed habitats of the project area.

Raptor Foraging/Nesting Habitat Evaluation

Although various locally common raptors are known to occur in the vicinity of the survey area (such as red-tailed hawk [*Buteo jamaicensis*], red-shouldered hawk [*Buteo lineatus*], Cooper's hawk [*Accipiter cooperii*], American kestrel [*Falco sparverius*], and others), these bird species are recognized as tolerant of human presence, and none are listed as Rare, Threatened, or Endangered by either the state or federal governments. No raptors would be dependent on any resources provided solely by the project site given its mostly developed nature. No highly sensitive raptors, such as prairie falcons (*Falco mexicanus*), golden eagles (*Aquila chrysaetos*), or bald eagles (*Haliaeetus leucocephalus*) would utilize the project site, given its location, current use, small size, developed nature, and proximity to existing development. For these reasons, the project site does not constitute high-value raptor foraging or nesting habitat, and the project site does not constitute a significant biological resource with respect to local raptors.

Sensitive Habitats

Habitats are also considered sensitive biological resources if they have limited distributions, have high wildlife value, include sensitive species, or are particularly susceptible to disturbance. The County of San Diego considers urban/developed land cover and disturbed habitat as Tier IV Habitats (least sensitive) and Diegan coastal sage scrub as Tier II habitat (uncommon upland). As described above, Diegan coastal sage scrub is present in the western portion of the survey area outside the project site. Disturbed habitat and Urban/Developed habitat, such as that present within the project boundary, are not identified as vegetation communities of special concern by the County, CNDDB, or CDFW. Jurisdictional Wetlands and Waterways

A formal jurisdictional waters of the U.S./wetland delineation was not conducted for the survey area. Based on the desktop database analysis and literature review and the field reconnaissance survey, no state or federally defined unvegetated stream(s), swale(s), wetland vernal pools, or potential vernal pools occur within the survey area. The closest mapped water feature is the San Luis Rey River, a perennial riverine wetland. The San Luis Rey River is located approximately 0.8 miles southeast of the project boundary located on the opposite side of I-15 and Hwy 76 from the Project.

Wildlife Corridors and Linkages

Wildlife movement corridors are defined as areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features such as canyon drainages, ridgelines, or areas with vegetation cover provide corridors for wildlife travel. Wildlife movement corridors are important because they provide access to mates, food, and water; allow the dispersal of individuals away from high population density areas; and facilitate the exchange of genetic traits between populations. The project boundary is positioned inside a conservation planning linkage zone; however, the site is surrounded by private residential housing, rural development, and paved roads which limit connectivity of the project boundary to undisturbed habitat. The San Luis Rey River, which functions as a wildlife corridor (BIOS 2024), is approximately 0.8 miles southeast of the project boundary and is separated from the project boundary by I-15 and SR 76, resulting in potential habitat fragmentation and loss of connectivity.

Topography/Connectivity

The project site occurs at an elevation of approximately 340 feet above mean sea level. The site topography is relatively flat with a 9-15% slope. Connectivity to unique topographic features is absent due to the urbanized surrounding land uses.

Regional or Local Setting

The project site is located in a rural urbanized setting, as residential and rural development and highways/roadways surround the project site. The nearest relatively natural habitat occurs adjacent to the project site approximately 0.03-miles (143 feet) west of the project site, comprised of Diegan coastal sage scrub.

Other Biological Functions

The project site supports low foraging, nesting, and roosting potential for common, urban-adapted species due to the presence of urban and developed habitat with ornamental shrubs and trees as well. Rock outcroppings are not present on the project site.

The field reconnaissance survey documented trees on the project site (Table 2). Specifically, ornamental species including Monterey pine, Rocky Mountain juniper, and Eastern red cedar were detected and provide potential foraging, nesting, and roosting habitat for bird species.

Sensitive Soils

Sensitive soils are not expected on the project site, as native substrates have presumably been removed due to the development of the project site. The USGS soil types that occur within the Survey Area are Greenfield Sandy Loam, Vista Coarse Sandy Loam, and Cienba Rocky Coarse Sandy Loam which are not considered to be sensitive soils (USGS 2024).

Significance of Project Impacts

The construction of the new Fire Station No.4 is subject to review under CEQA and the County of San Diego's Biological Mitigation Ordinance (BMO). The BMO enables the County of San Diego to achieve the conservation goals set forth in the Subarea Plan for the MSCP[2]. The BMO sets forth the criteria for avoiding impacts to biological resource core areas and to plant and animal populations within those areas, as well as the mitigation requirements for most projects requiring a discretionary permit. Therefore, the County of San Diego requires that project-related impacts to native habitat and species be "less than significant," as defined by CEQA, which requires the adoption of mitigation measures intended to reduce "significant" impacts to a level that is "less than "significant."

The project site is located within a PAMA of the North County MSCP Subarea Plan (Figure 3). This plan does not identify the project boundary and survey area as being subject to habitat conservation. The proposed development on the project site would therefore be in compliance with this and any other future habitat conservation plan insofar as all project impacts are considered less than significant.

Due to the moderate potential for Crotch's bumble bee, a state candidate species, and coastal California gnatcatcher, a federally protected species, to occur within the survey area, the project could have potential adverse effects on the species if nearby Diegan coastal sage scrub were to be impacted. However, the development footprint does not contain Diegan coastal sage scrub, thereby avoiding direct impacts to this habitat. The project would not have substantial adverse effects on riparian or wetland habitat as the project impact site does not support any of these regulated aquatic feature's wetlands.

The project is in a rural residential developed area and will result in the removal of 0.02 acre of disturbed habitat and 0.85 acre of urban/developed habitat (Figure 6). It will not involve the direct removal, filling, hydrological interruption, or other means of impact to a jurisdictional aquatic feature. The Diegan coastal sage scrub habitat within the survey area will be avoided by direct impacts from the proposed development within the project boundary. The nearest aquatic feature is separated from the site by I-15 and SR 76. Therefore, implementation of the project would not have substantial adverse effects on local, state, or federally protected wetlands or habitat types. The project boundary is positioned inside a conservation planning linkage zone; however, due to the existing disturbed nature of the site and developed land uses immediately adjacent, the project would not contribute to impeding wildlife movement or the use of native wildlife nursery sites.

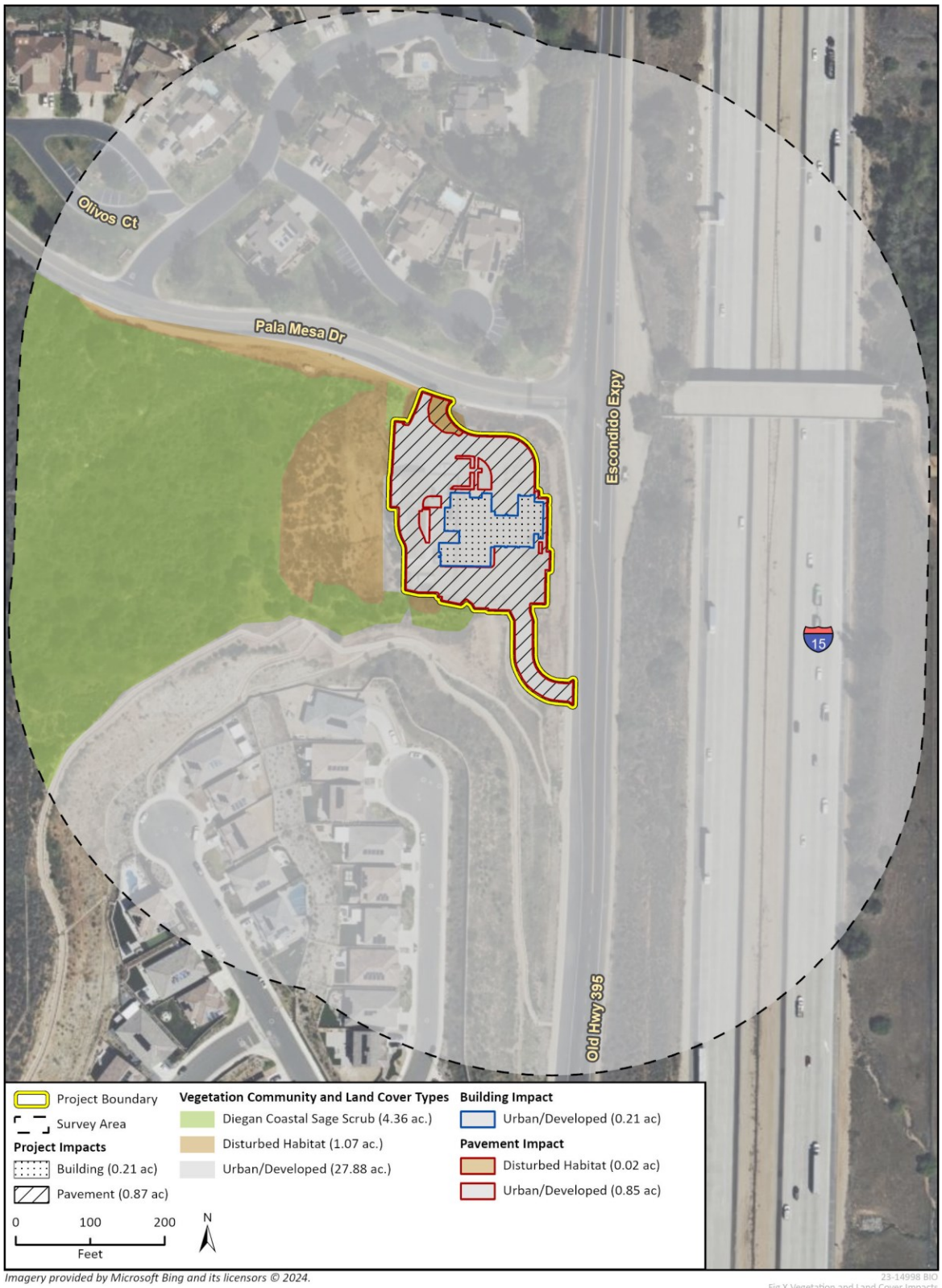
The project would avoid any removal or impact to the Diegan coastal sage scrub which is a native vegetation community; therefore, future development at the site is not expected to conflict with the conservation goals of the MSCP, previously defined, nor any other local, regional, or state habitat conservation plan.

Due to the disturbed nature of this site, the project would not cause substantial adverse effects that have not historically existed with this site. The construction of the new/replacement Fire Station No.4 Project would not create any new adverse effects to sensitive or special-status species because the project footprint lies within a disturbed habitat and urban/developed habitat and avoids direct impacts to the Diegan coastal sage scrub and large, mature ornamental trees within the survey area (Figure 6). Coastal California gnatcatcher could potentially occupy the Diegan coastal sage scrub adjacent to the project boundary. Although the project avoids direct habitat impacts and loss, there is potential for

[2] The names of the habitat types used in the Subarea Plan are consistent with the habitat types used in the MSCP or are included within or specifically identified as one of the habitat types listed in the Biological Mitigation Ordinance. The mitigation ratios included in the Subarea Plan are identical to the mitigation ratios in the Biological Mitigation Ordinance. No Mitigation Ratios are given or required for Tier IV resources.

indirect impacts to the species during its breeding season from and increase in adjacent noise and dust during project construction.

Figure 6 Project Impacts



Cumulative Impacts Analysis

Pursuant to Section 15130(a) of the CEQA Guidelines, cumulative impacts must be discussed when project impacts, even though individually limited, are cumulatively considerable. Cumulatively considerable means the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, other current projects, and probable future projects. The project site is developed/highly disturbed and of little to no long-term biological value.

The project would construct a new fire station on the already developed property. The project is limited and encompassed by neighboring private properties and adjacent roadways. Therefore, the project is not expected to contribute significantly to cumulative impacts to the area.

The small size of this site limits project impacts from a regional perspective. Further, no native or sensitive habitat is present on the project development site. Therefore, cumulative impacts associated with the project would be "less than significant."

Recommended Best Management Practices

Worker Environmental Awareness Program

The applicant shall implement a Worker Environmental Awareness Program (WEAP) for the construction crew that will be developed by a qualified biologist. Each employee (including temporary, contractors, and subcontractors) will receive the WEAP presentation on the first day of project work. They will be advised of sensitive species in the area and avoidance measures being implemented to protect them at the site. At a minimum, the WEAP will include the following topics: occurrence of the listed and sensitive species in the area, their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violations of federal and State laws, reporting requirements, and project features and conditions designed to reduce direct and indirect impacts to these species, and worker responsibilities to maintain compliance with the avoidance and minimization measures while working at the site.

Work Limit Delineation

Approved construction work area limits shall be delineated and marked clearly, by flagging or temporary orange construction fencing, in the field prior to vegetation removal. The marked boundaries will be maintained and clearly visible to personnel on foot and by heavy equipment operators. Fencing shall be placed on the impact side of the work area to reduce the potential for encroachment and additional vegetation loss within adjacent open space. Fencing shall be put in place by a qualified surveyor per the project applicant's approved construction and grading plans. All temporary fencing shall be removed only after the conclusion of all grading, clearing, and construction. Employees shall strictly limit their activities and vehicles to the designated project boundary, staging areas, and routes of travel. A qualified biologist shall verify that the limits of construction have been staked based on the permitted impact area, entirely avoid adjacent sensitive habitat areas, and are readily identifiable to workers. Intrusion by unauthorized vehicles outside of construction limits shall be prohibited, with control exercised by an on-site foreman. Access routes to the construction area outside of work hours shall be blocked with physical barriers, such as concrete blocks or large equipment.

Nesting Bird Surveys

Common, urban-adapted birds could potentially nest within the large ornamental trees and shrubs on the project site and within larger trees adjacent to the site. Therefore, the following measure is recommended to maintain compliance with the CFGC and MBTA with respect to nesting birds:

- Pursuant to MBTA and CFGC Sections 3503, 3503.5, and 3513, if initial clearing activities take place between February 1 and August 31, nesting bird surveys are recommended to be performed by a qualified biologist/ornithologist with results reported subsequently to the County of San Diego prior to grading and clearing. If nesting birds are found, a County-approved construction buffer may be required until all young are determined to be no longer dependent on the nest.

Coastal California Gnatcatcher Survey

Coastal California gnatcatcher could potentially occupy the Diegan coastal sage scrub adjacent to the project boundary. Therefore, the following measure is recommended to avoid indirect impacts to the species if project construction is to occur within the coastal California gnatcatcher breeding season (February 15 through August 30). If project construction occurs outside of the coastal California gnatcatcher breeding season (from September 1 through February 14), then nothing is required.

- A qualified biologist shall conduct three surveys at least one week apart to determine the presence/absence of coastal California gnatcatchers in the survey area as defined herein between February 15 and August 30 prior to the start of construction activities.
- All brushing, grading, or excavation taking place within 500 feet of active nest sites shall be delayed to September 1 through February 14, which is outside the coastal California gnatcatcher breeding season.
- If an active nest is located, a 500-foot no-construction buffer shall be established around each nest site that is regularly monitored by a qualified biologist. There may be a reduction of this buffer zone for certain types of work depending on site-specific conditions such as topography, line-of-sight to the nest, or the existing ambient level of activity at the discretion of the qualified biologist. No brushing, grading, or excavation shall take place within this buffer until the nest is no longer active. Other work may not occur unless it is monitored by the qualified biologist and carried out at their discretion.

Thank you for the opportunity to assist you with this project. If you have any questions regarding this revised biological inventory report, please contact us at jreed@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

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Prepared for the North County Fire Protection District

Attachments

Attachment 1 Special Status Species Evaluation Table
Attachment 2 Site Photographs

References

California Department of Fish and Wildlife (CDFW). 2024. California Natural Diversity Database (CNDDB), Rarefind 5 (online). Commercial Version. Accessed: March 2024.

California Native Plant Society (CNPS). 2024. Rare Plant Program. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Available at: http://www.rareplants.cnps.org/advanced.html. Accessed: March 2024.

County of San Diego. 1998. Final Multiple Species Conservation Program (MSCP) Plan. August. Available at:http://www.sandiegocounty.gov/content/dam/sdc/pds/mscp/docs/SCMSCP/FinalMSCPProgramPlan.pdf> Accessed: March 2024.

_____. 2006. Process Guidance & Regulations/Statutes: Biological Resources. Available at: http://www.sandiegocounty.gov/pds/procguid.html#biological. Accessed: March 2024.

_____. 2010. Report Format and Content Requirements for Biological Resources, Department of Public Works. Fourth Revision. March 2024. Available at: http://www.sandiegocounty.gov/content/dam/sdc/pds/ProjectPlanning/docs/Biological_Report_Format.pdf.

Holland, R. F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Prepared for California Department of Fish and Game.

Oberbauer. 2008. Draft Vegetation Communities of San Diego County. Available at: http://www.sandiegocounty.gov/content/dam/sdc/pds/ceqa/Soitec-Documents/Final-EIR-Files/references/rtcref/ch9.0/rtcrefaletters/014%202014-12-19_OberbauerTM2008.pdf Accessed: March 2024.

San Diego Association of Governments (SANDAG). 2024 SanGIS. Available at http://www.sangis.org/sangisinteractive/viewer/viewer.asp. Accessed: March 2024.

United States Fish and Wildlife Service (USFWS). 2024a. Critical Habitat Portal Mapper. Available at: https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77. Accessed: March 2024.

_____. 2024b. National Wetlands Inventory Interactive Wetlands Mapper. Available at: http://www.nwi.fws.gov. Accessed: March 2024.

_____. 2024c. Information, Planning, and Conservation System. Available at: http://ecos.fws.gov/ipac/. Accessed: March 2024.

Attachment 1

Special Status Species Evaluation Table

Special Status Species Evaluation Table

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Plants and Lichens				
Abronia villosa var. *aurita* chaparral sand-verbena	None/None G5T2?/S2 1B.1	Annual herb. Chaparral, coastal scrub, desert dunes. Sandy. Elevations: 245-5250ft. (75-1600m.) Blooms (Jan)Mar-Sep.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. No coastal dunes are present, and the species was not detected during the reconnaissance survey.
Acanthomintha ilicifolia San Diego thorn-mint	FT/SE G1/S1 1B.1	Annual herb. Chaparral, coastal scrub, valley and foothill grassland, vernal pools. Clay, openings. Elevations: 35-3150ft. (10-960m.) Blooms Apr-Jun.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. No clay soils occur within the survey area. The species was not detected during the reconnaissance survey.
Acmispon prostratus Nuttall's acmispon	None/None G1G2/S1 1B.1	Annual herb. Coastal dunes, coastal scrub. On sand dunes. Elevations: 0-35ft. (0-10m.) Blooms Mar-Jun (Jul).	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.
Adolphia californica California adolphia	None/None G3/S2 2B.1	Perennial deciduous shrub. Chaparral, coastal scrub, valley and foothill grassland. Clay. Elevations: 35-2430ft. (10-740m.) Blooms Dec-May.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The site does not support clay soils and is primarily sandy loam. The species was not detected during the reconnaissance survey.
Allium marvinii Yucaipa onion	None/None G1/S1 1B.2	Perennial bulbiferous herb. Chaparral. In openings on clay soils. Elevations: 2495-3495ft. (760-1065m.) Blooms Apr-May.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The site does not support clay soils and is primarily sandy loam. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.
Almutaster pauciflorus alkali marsh aster	None/None G4/S1S2 2B.2	Perennial herb. Meadows and seeps. Alkaline. Elevations: 785-2625ft. (240-800m.) Blooms Jun-Oct.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Ambrosia pumila San Diego ambrosia	FE/None G1/S1 1B.1	Perennial rhizomatous herb. Chaparral, coastal scrub, valley and foothill grassland, vernal pools. Alkaline (sometimes), clay (sometimes), disturbed areas (often), sandy (sometimes). Elevations: 65-1360ft. (20-415m.) Blooms Apr-Oct.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The site is developed with frequent vehicle and foot traffic and does not support chaparral, coastal scrub, or grassland. The species can occur in disturbed areas however the species was not detected during the reconnaissance survey and is not expected to occur.
Aphanisma blitoides aphanisma	None/None G3G4/S2 1B.2	Annual herb. Coastal bluff scrub, coastal dunes, coastal scrub. Gravelly (sometimes), sandy (sometimes). Elevations: 5-1000ft. (1-305m.) Blooms Feb-Jun.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The site does not support coastal bluff or dune habitat and is primarily disturbed. The species was not detected during the reconnaissance survey.
Arctostaphylos glandulosa ssp. *crassifolia* Del Mar manzanita	FE/None G5T2/S2 1B.1	Perennial evergreen shrub. Chaparral. Sandy coastal mesas and ocean bluffs; in chaparral or Torrey pine forest. Elevations: 0-1200ft. (0-365m.) Blooms Jun-Apr.	No Potential/ Not Expected	Habitat on the project boundary is disturbed and unsuitable for the species to occur. No sandy coastal mesas and ocean bluffs occur. The species was not detected during the reconnaissance survey.
Arctostaphylos rainbowensis Rainbow manzanita	None/None G2/S2 1B.1	Perennial evergreen shrub. Chaparral. Usually found in gabbro chaparral. Elevations: 675-2200ft. (205-670m.) Blooms Dec-Mar.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.
Astragalus pachypus var. *jaegeri* Jaeger's milk-vetch	None/None G4T1/S1 1B.1	Perennial shrub. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Rocky (sometimes), sandy (sometimes). Elevations: 1200-3200ft. (365-975m.) Blooms Dec-Jun.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.
Atriplex coulteri Coulter's saltbush	None/None G3/S1S2 1B.2	Perennial herb. Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. Alkaline (sometimes), clay (sometimes). Elevations: 10-1510ft. (3-460m.) Blooms Mar-Oct.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The site does not support clay soils and alkaline soils or coastal bluff or dune habitat and is primarily disturbed. The species was not detected during the reconnaissance survey

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Atriplex pacifica south coast saltscale	None/None G4/S2 1B.2	Annual herb. Coastal bluff scrub, coastal dunes, coastal scrub, playas. Alkali soils. Elevations: 0-460ft. (0-140m.) Blooms Mar-Oct.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The site does not support alkali soils and is primarily sandy loam. No dunes are present. The species was not detected during the reconnaissance survey
Baccharis vanessae Encinitas baccharis	FT/SE G1/S1 1B.1	Perennial deciduous shrub. Chaparral, cismontane woodland. Sandstone. Elevations: 195-2360ft. (60-720m.) Blooms Aug-Nov.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The site does not support sandstone, or the required land cover. The species was not detected during the reconnaissance survey
Berberis nevinii Nevin's barberry	FE/SE G1/S1 1B.1	Perennial evergreen shrub. Chaparral, cismontane woodland, coastal scrub, riparian scrub. Gravelly (sometimes), sandy (sometimes). Elevations: 230-2705ft. (70-825m.) Blooms (Feb) Mar-Jun.	No Potential/ Not Expected	The species has potential to occur within the survey area, but not within the project boundary. The survey area has coastal scrub habitat and occurs at 340 feet above mean sea level. However, the species was not detected during the reconnaissance survey during the blooming period. No habitat occurs within the project site.
Bloomeria clevelandii San Diego goldenstar	None/None G2G3/S3 1B.1	Perennial bulbiferous herb. Chaparral, coastal scrub, valley and foothill grassland, vernal pools. Clay. Elevations: 165-1525ft. (50-465m.) Blooms Apr-May.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The site does not support clay soils and is primarily sandy loam. The species was not detected during the reconnaissance survey.
Brodiaea filifolia thread-leaved brodiaea	FT/SE G2/S2 1B.1	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools. Clay (often). Elevations: 80-3675ft. (25-1120m.) Blooms Mar-Jun.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The site does not support clay soils and is primarily sandy loam. No chaparral, playas, vernal pools occur, and the site is disturbed. The species was not detected during the reconnaissance survey.
Brodiaea orcuttii Orcutt's brodiaea	None/None G2/S2 1B.1	Perennial bulbiferous herb. Chaparral, cismontane woodland, closed-cone coniferous forest, meadows and seeps, valley and foothill grassland, vernal pools. Clay, Mesic. Elevations: 100-5550ft. (30-1692m.) Blooms May-Jul.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The site does not support clay or mesic soils and is primarily sandy loam. The species was not detected during the reconnaissance survey.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Brodiaea santarosae Santa Rosa Basalt brodiaea	None/None G1/S1 1B.2	Perennial bulbiferous herb. Valley and foothill grassland. Santa Rosa Basalt. Elevations: 1855-3430ft. (565-1045m.) Blooms May-Jun.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.
Ceanothus ophiochilus Vail Lake ceanothus	FT/SE G1/S1 1B.1	Perennial evergreen shrub. Chaparral. Gabbro seams on north-facing ridges on the eastern sides of mountains. Elevations: 1905-3495ft. (580-1065m.) Blooms Feb-Mar.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.
Ceanothus pendletonensis Pendleton ceanothus	None/None G1/S1 1B.2	Perennial shrub. Chaparral, cismontane woodland. Granitic. Elevations: 360-2855ft. (110-870m.) Blooms Mar-Jun.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.
Ceanothus verrucosus wart-stemmed ceanothus	None/None G2/S2? 2B.2	Perennial evergreen shrub. Chaparral. Elevations: 5-1245ft. (1-380m.) Blooms Dec-May.	No Potential/ Not Expected	Habitat adjacent to the site has low potential to support the species. The survey area has chaparral and perennial evergreen shrub habitat, however not within the disturbed project boundary. The species was not detected during the reconnaissance survey.
Centromadia parryi ssp. *australis* southern tarplant	None/None G3T2/S2 1B.1	Annual herb. Marshes and swamps, valley and foothill grassland, vernal pools. Often in disturbed sites near the coast at marsh edges; also in alkaline soils sometimes with saltgrass (*Distichlis spicata*). Sometimes on vernal pool margins. Elevations: 0-1575ft. (0-480m.) Blooms May-Nov.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The site is not located near the coast at any marsh edges. No alkaline soils occur. The species was not detected during the reconnaissance survey.
Centromadia pungens ssp. *laevis* smooth tarplant	None/None G3G4T2/S2 1B.1	Annual herb. Chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland. Alkaline. Elevations: 0-2100ft. (0-640m.) Blooms Apr-Sep.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The site does not support alkaline soil and is primarily sandy loam. The species was not detected during the reconnaissance survey.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Chaenactis glabriuscula var. *orcuttiana* Orcutt's pincushion	None/None G5T1/S1 1B.1	Annual herb. Coastal bluff scrub, coastal dunes. Sandy sites. Elevations: 0-330ft. (0-100m.) Blooms Jan-Aug.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The site does not support coastal bluffs or dunes and is outside of the elevation range. The species was not detected during the reconnaissance survey.
Chorizanthe polygonoides var. *longispina* long-spined spineflower	None/None G5T3/S3 1B.2	Annual herb. Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools. Clay (often). Elevations: 100-5020ft. (30-1530m.) Blooms Apr-Jul.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The site does not support clay soils and is primarily sandy loam. The species was not detected during the reconnaissance survey.
Clarkia delicata delicate clarkia	None/None G3/S3 1B.2	Annual herb. Chaparral, cismontane woodland. Gabbroic (often). Elevations: 770-3280ft. (235-1000m.) Blooms Apr-Jun.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.
Clinopodium chandleri San Miguel savory	None/None G2G3/S2 1B.2	Perennial shrub. Chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Gabbroic (sometimes), rocky (sometimes). Elevations: 395-3525ft. (120-1075m.) Blooms Mar-Jul.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.
Comarostaphylis diversifolia ssp. *diversifolia* summer holly	None/None G3T2/S2 1B.2	Perennial evergreen shrub. Chaparral, cismontane woodland. Often in mixed chaparral in California, sometimes post-burn. Elevations: 100-2590ft. (30-790m.) Blooms Apr-Jun.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The habitat on-site is developed and disturbed.The species was not detected during the reconnaissance survey.
Corethrogyne filaginifolia var. *linifolia* Del Mar Mesa sand aster	None/None G4T1Q/S1 1B.1	Perennial herb. Chaparral, coastal bluff scrub, coastal scrub. In coastal, shrubby communities on maritime sediments and conglomerates; in openings. Elevations: 15-490ft. (5-150m.) Blooms May-Sep.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The site does not support maritime sediment and conglomerates and is primarily sandy loam. The species was not detected during the reconnaissance survey.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Cryptantha wigginsii Wiggins' cryptantha	None/None G2/S1 1B.2	Annual herb. Coastal scrub. Often on clay soils. Elevations: 65-900ft. (20-275m.) Blooms Feb-Jun.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The site does not support clay soil and is primarily sandy loam. The species was not detected during the reconnaissance survey.
Dodecahema leptoceras slender-horned spineflower	FE/SE G1/S1 1B.1	Annual herb. Chaparral, cismontane woodland, coastal scrub. Flood deposited terraces and washes; associates include *Encelia*, *Dalea*, *Lepidospartum*, etc. Sandy soils. Elevations: 655-2495ft. (200-760m.) Blooms Apr-Jun.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The site does not support flood deposited terraces or washes and is outside of the species elevation. The species was not detected during the reconnaissance survey.
Dudleya blochmaniae ssp. *blochmaniae* Blochman's dudleya	None/None G3T2/S2 1B.1	Perennial herb. Chaparral, coastal bluff scrub, coastal scrub, valley and foothill grassland. Open, rocky slopes; often in shallow clays over serpentine or in rocky areas with little soil. Elevations: 15-1475ft. (5-450m.) Blooms Apr-Jun.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The species was not detected during the reconnaissance survey.
Dudleya multicaulis many-stemmed dudleya	None/None G2/S2 1B.2	Perennial herb. Chaparral, coastal scrub, valley and foothill grassland. In heavy, often clayey soils or grassy slopes. Elevations: 50-2590ft. (15-790m.) Blooms Apr-Jul.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The species was not detected during the reconnaissance survey.
Dudleya viscida sticky dudleya	None/None G2/S2 1B.2	Perennial herb. Chaparral, cismontane woodland, coastal bluff scrub, coastal scrub. On north and south-facing cliffs and banks. Elevations: 35-1805ft. (10-550m.) Blooms May-Jun.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. No north and south banking slopes with suitable habitat occur on the project site. The species was not detected during the reconnaissance survey.
Eryngium aristulatum var. *parishii* San Diego button-celery	FE/SE G5T1/S1 1B.1	Annual/perennial herb. Coastal scrub, valley and foothill grassland, vernal pools. San Diego mesa hardpan and claypan vernal pools and southern interior basalt flow vernal pools; usually surrounded by scrub. Elevations: 65-2035ft. (20-620m.) Blooms Apr-Jun.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The habitat on-site is developed and disturbed. The species was not detected during the reconnaissance survey.
Erysimum ammophilum sand-loving wallflower	None/None G2/S2 1B.2	Perennial herb. Chaparral, coastal dunes, coastal scrub. Sandy openings. Elevations: 0-195ft. (0-60m.) Blooms Feb-Jun (Jul-Aug).	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The habitat on-site is developed and disturbed. The species was not detected during the reconnaissance survey.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Euphorbia misera cliff spurge	None/None G5/S2 2B.2	Perennial shrub. Coastal bluff scrub, coastal scrub, Mojavean desert scrub. Rocky sites. Elevations: 35-1640ft. (10-500m.) Blooms (Oct)Dec-Aug.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The habitat on-site is developed and disturbed. The species was not detected during the reconnaissance survey.
Ferocactus viridescens San Diego barrel cactus	None/None G3?/S2S3 2B.1	Perennial stem. Chaparral, coastal scrub, valley and foothill grassland, vernal pools. Often on exposed, level or south-sloping areas; often in coastal scrub near crest of slopes. Elevations: 10-1475ft. (3-450m.) Blooms May-Jun.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The habitat on-site is developed and disturbed. The species was not detected during the reconnaissance survey.
Geothallus tuberosus Campbell's liverwort	None/None G2/S2 1B.1	Ephemeral liverwort. Coastal scrub, vernal pools. Liverwort known from mesic soil. Elevations: 35-1970ft. (10-600m.)	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The habitat on-site is developed and disturbed. The species was not detected during the reconnaissance survey.
Hazardia orcuttii Orcutt's hazardia	None/ST G1/S1 1B.1	Perennial evergreen shrub. Chaparral, coastal scrub. Often on clay; in grassy edges of chaparral and coastal scrub. Elevations: 260-280ft. (80-85m.) Blooms Aug-Oct.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The site does not support clay soil and is primarily sandy loam. The species was not detected during the reconnaissance survey.
Horkelia cuneata var. *puberula* mesa horkelia	None/None G4T1/S1 1B.1	Perennial herb. Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. Elevations: 230-2660ft. (70-810m.) Blooms Feb-Jul (Sep).	No Potential/ Not Expected	Habitat adjacent to the site has low potential to support the species. The survey area has chaparral and perennial evergreen shrub habitat, however not within the disturbed project site. The species was not detected during the reconnaissance survey.
Horkelia truncata Ramona horkelia	None/None G3/S3 1B.3	Perennial herb. Chaparral, cismontane woodland. Habitats in California include: mixed chaparral, vernal streams, and disturbed areas near roads. Clay soil; at least sometimes on gabbro. Elevations: 1310-4265ft. (400-1300m.) Blooms May-Jun.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.
Isocoma menziesii var. *decumbens* decumbent goldenbush	None/None G3G5T2T3/S2 1B.2	Perennial shrub. Chaparral, coastal scrub. Sandy soils; often in disturbed sites. Elevations: 35-445ft. (10-135m.) Blooms Apr-Nov.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The species was not detected during the reconnaissance survey.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Iva hayesiana San Diego marsh-elder	None/None G3/S2 2B.2	Perennial herb. Marshes and swamps, playas. Riverwashes. Elevations: 35-1640ft. (10-500m.) Blooms Apr-Oct.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The species was not detected during the reconnaissance survey.
Juncus luciensis Santa Lucia dwarf rush	None/None G3/S3 1B.2	Annual herb. Chaparral, great basin scrub, lower montane coniferous forest, meadows and seeps, vernal pools. Vernal pools, ephemeral drainages, wet meadow habitats and streamside's. Elevations: 985-6695ft. (300-2040m.) Blooms Apr-Jul.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	None/None G4T2/S2 1B.1	Annual herb. Marshes and swamps, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. Elevations: 5-4005ft. (1-1220m.) Blooms Feb-Jun.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The species was not detected during the reconnaissance survey.
Lepechinia cardiophylla heart-leaved pitcher sage	None/None G3/S2S3 1B.2	Perennial shrub. Chaparral, cismontane woodland, closed-cone coniferous forest. Elevations: 1705-4495ft. (520-1370m.) Blooms Apr-Jul.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.
Leptosyne maritima sea dahlia	None/None G2/S1S2 2B.2	Perennial herb. Coastal bluff scrub, coastal scrub. Occurs on a variety of soil types, including sandstone. Elevations: 15-490ft. (5-150m.) Blooms Mar-May.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The species was not detected during the reconnaissance survey.
Mielichhoferia shevockii Shevock's copper moss	None/None G2/S2 1B.2	Moss. Cismontane woodland. Moss on metamorphic rocks containing heavy metals; mesic sites. On rocks along roads. Elevations: 2460-4595ft. (750-1400m.)	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.
Monardella hypoleuca ssp. *intermedia* intermediate monardella	None/None G4T2?/S2? 1B.3	Perennial rhizomatous herb. Chaparral, cismontane woodland, lower montane coniferous forest. Often in steep, brushy areas. Elevations: 1310-4100ft. (400-1250m.) Blooms Apr-Sep.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Monardella hypoleuca ssp. *lanata* felt-leaved monardella	None/None G4T3/S3 1B.2	Perennial rhizomatous herb. Chaparral, cismontane woodland. Occurs in understory in mixed chaparral, chamise chaparral, and southern oak woodland, sandy soil. Elevations: 985-5170ft. (300-1575m.) Blooms Jun-Aug.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.
Monardella macrantha ssp. *hallii* Hall's monardella	None/None G5T3/S3 1B.3	Perennial rhizomatous herb. Broad leafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Dry slopes and ridges in openings. Elevations: 2395-7200ft. (730-2195m.) Blooms Jun-Oct.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.
Nama stenocarpa mud nama	None/None G4G5/S1S2 2B.2	Annual/perennial herb. Marshes and swamps. Lake shores, riverbanks, intermittently wet areas. Elevations: 15-1640ft. (5-500m.) Blooms Jan-Jul.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The species was not detected during the reconnaissance survey.
Navarretia fossalis spreading navarretia	FT/None G2/S2 1B.1	Annual herb. Chenopod scrub, marshes and swamps, playas, vernal pools. San Diego hardpan and San Diego claypan vernal pools; in swales and vernal pools, often surrounded by other habitat types. Elevations: 100-2150ft. (30-655m.) Blooms Apr-Jun.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The species was not detected during the reconnaissance survey.
Nemacaulis denudata var. *denudata* coast woolly-heads	None/None G3G4T2/S2 1B.2	Annual herb. Coastal dunes. Elevations: 0-330ft. (0-100m.) Blooms Apr-Sep.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The species was not detected during the reconnaissance survey.
Nemacaulis denudata var. *gracilis* slender cottonheads	None/None G3G4T3?/S2 2B.2	Annual herb. Coastal dunes, desert dunes, Sonoran desert scrub. In dunes or sand. Elevations: 165-1310ft. (-50-400m.) Blooms (Mar) Apr-May.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The species was not detected during the reconnaissance survey.
Nolina cismontana chaparral nolina	None/None G3/S3 1B.2	Perennial evergreen shrub. Chaparral, coastal scrub. Primarily on sandstone and shale substrates; also known from gabbro. Elevations: 460-4185ft. (140-1275m.) Blooms (Mar) May-Jul.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Packera ganderi Gander's ragwort	None/SR G2/S2 1B.2	Perennial herb. Chaparral. Recently burned sites and gabbro outcrops. Elevations: 1310-3935ft. (400-1200m.) Blooms Apr-Jun.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.
Pseudognaphalium leucocephalum white rabbit-tobacco	None/None G4/S2 2B.2	Perennial herb. Chaparral, cismontane woodland, coastal scrub, riparian woodland. Sandy, gravelly sites. Elevations: 0-6890ft. (0-2100m.) Blooms (Jul) Aug-Nov (Dec).	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The species was not detected during the reconnaissance survey.
Quercus dumosa Nuttall's scrub oak	None/None G3/S3 1B.1	Perennial evergreen shrub. Chaparral, closed-cone coniferous forest, coastal scrub. Generally, on sandy soils near the coast; sometimes on clay loam. Elevations: 50-1310ft. (15-400m.) Blooms Feb-Apr (May-Aug).	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The species was not detected during the reconnaissance survey.
Saltugilia latimeri Latimer's woodland-gilia	None/None G3/S3 1B.2	Annual herb. Chaparral, Mojavean desert scrub, pinyon and juniper woodland. Rocky or sandy substrate; sometimes in washes, sometimes limestone. Elevations: 1310-6235ft. (400-1900m.) Blooms Mar-Jun.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.
Senecio aphanactis chaparral ragwort	None/None G3/S2 2B.2	Annual herb. Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. Elevations: 50-2625ft. (15-800m.) Blooms Jan-Apr (May).	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The species was not detected during the reconnaissance survey.
Sidalcea neomexicana salt spring checkerbloom	None/None G4/S2 2B.2	Perennial herb. Chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, playas. Alkali springs and marshes. Elevations: 50-5020ft. (15-1530m.) Blooms Mar-Jun.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The species was not detected during the reconnaissance survey.
Sphaerocarpos drewiae bottle liverwort	None/None G1/S1 1B.1	Ephemeral liverwort. Chaparral, coastal scrub. Liverwort in openings; on soil. Elevations: 295-1970ft. (90-600m.)	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The species was not detected during the reconnaissance survey.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Sphenopholis interrupta ssp. *Californica* prairie false oat	None/None G4T1/S1 1B.1	Annual herb. Chaparral. Clay. Elevations: 50-50ft. (15-15m.) Blooms Apr.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.
Suaeda esteroa estuary seablite	None/None G3/S2 1B.2	Perennial herb. Marshes and swamps. Coastal salt marshes in clay, silt, and sand substrates. Elevations: 0-15ft. (0-5m.) Blooms (Jan-May) Jul-Oct.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.
Tetracoccus dioicus Parry's tetracoccus	None/None G2G3/S2 1B.2	Perennial deciduous shrub. Chaparral, coastal scrub. Stony, decomposed gabbro soil. Elevations: 540-3280ft. (165-1000m.) Blooms Apr-May.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The elevation of the site occurs at 340 feet, outside of the species range. The species was not detected during the reconnaissance survey.
Tortula californica California screw moss	None/None G2G3/S2? 1B.2	Moss. Chenopod scrub, valley and foothill grassland. Moss growing on sandy soil. Elevations: 35-4790ft. (10-1460m.)	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. The species was not detected during the reconnaissance survey.
Invertebrates				
Bombus crotchii Crotch's bumble bee	None/SCE G2/S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include *Antirrhinum*, *Phacelia*, *Clarkia*, *Dendromecon*, *Eschscholzia*, and *Eriogonum*.	Moderate Potential in survey Area, not expected in the Project Area	Eriogonum (California buckwheat) occurs within the survey area which provides foraging habitat. Large ornamental trees within the survey area provide potential nesting habitat. However suitable foraging and nesting habitat does not occur within the project boundary. Occurrence was observed 16 miles away in Oceanside and 14 miles away in Temecula.
Branchinecta sandiegonensis San Diego fairy shrimp	FE/None G2/S1	Endemic to San Diego and Orange County mesas. Vernal pools.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. No vernal pools were detected during the reconnaissance survey.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Danaus plexippus plexippus pop. 1 monarch - California overwintering population	FC/None G4T1T2Q/S2	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	No Potential/ Not Expected	Habitat required by the species is not present on or adjacent to the site. Monterey pine, cypress, and Eucalyptus are present, however, are not protected by the wind and no groves occur. Species is not likely to occur.
Euphydryas editha quino quino checkerspot butterfly	FE/None G4G5T1T2/S1S2	Sunny openings within chaparral and coastal sage shrublands in parts of Riverside and San Diego counties. Hills and mesas near the coast. Need high densities of food plants dwarf plantain (*Plantago erecta*), woolly plantain (*P. insularis*), and purple owls clover (*Castilleja exserta* ssp. *exserta*).	No Potential/ Not Expected	Habitat required by the species is present adjacent to the project site, however no food resources were observed during the reconnaissance survey. This species was not observed.
Streptocephalus woottoni Riverside fairy shrimp	FE/None G1G2/S2	Endemic to Western Riverside, Orange, and San Diego counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub. Inhabit seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. No aquatic habitat occurs within the survey area.
Fish				
Eucyclogobius newberryi tidewater goby	FE/None G3/S3	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. No aquatic resources are present to support the species requirements.
Gila orcuttii arroyo chub	None/None G2/S2 SSC	Native to streams from Malibu Creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mojave and San Diego River basins. Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. No aquatic resources are present to support the species requirements.
Amphibians				
Anaxyrus californicus arroyo toad	FE/None G2G3/S2 SSC	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc. Rivers with sandy banks, willows (*Salix* spp.), cottonwoods (*Populus* spp.), and sycamores (*Platanus* spp.); loose, gravelly areas of streams in drier parts of range.	No Potential/ Not Expected	The site is surrounded by disturbed/developed habitat with I-15 between any potential habitat. The substrate and required foraging/breeding habitat does not occur.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Spea hammondii western spadefoot	FPT/None G2G3/S3S4 SSC	Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	No Potential/ Not Expected	Habitat on and adjacent to the site is unsuitable for the species requirements. No vernal pools were detected during the reconnaissance survey.
Taricha torosa Coast Range newt	None/None G4/S4 SSC	Coastal drainages from Mendocino County to San Diego County. Lives in terrestrial habitats and will migrate over 1 kilometer (km) to breed in ponds, reservoirs and slow moving streams.	No Potential/ Not Expected	No coastal drainages occur within the project site. The nearest water source (San Luis Rey River) is approximately 1.5 km away with a heavily trafficked freeway in between with no wildlife crossings. Habitat on and adjacent to the site is unsuitable for the species requirements.
Reptiles				
Anniella stebbinsi Southern California legless lizard	None/None G3/S3 SSC	Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County. Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.	No Potential/ Not Expected	The site is surrounded by disturbed/developed habitat with a highway between any potential habitat. The site is heavily disturbed and compacted. The substrate and required foraging/breeding habitat does not occur.
Arizona elegans occidentalis California glossy snake	None/None G5T2/S2 SSC	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	No Potential/ Not Expected	The site is surrounded by disturbed/developed habitat with I-15 between any potential habitat. The site is heavily disturbed and compacted. The substrate and required foraging/breeding habitat does not occur.
Aspidoscelis hyperythra orange-throated whiptail	None/None G5/S2S3 WL	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food: termites.	No Potential/ Not Expected	The site is surrounded by disturbed/developed habitat with I-15 between any potential habitat. The site is heavily disturbed, and no termites required for foraging are present. The substrate and required foraging/breeding habitat does not occur.
Aspidoscelis tigris stejnegeri coastal whiptail	None/None G5T5/S3 SSC	Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland and riparian areas. Ground may be firm soil, sandy, or rocky.	No Potential/ Not Expected	The site is surrounded by disturbed/developed habitat with I-15 between any potential habitat. The site is heavily disturbed and compacted. The substrate and required foraging/breeding habitat does not occur.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Crotalus ruber red-diamond rattlesnake	None/None G4/S3 SSC	Chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	No Potential/ Not Expected	The site is surrounded by disturbed/developed habitat with I-15 between any potential habitat limiting any wildlife movement. No rocky outcrops occur.
Emys marmorata western pond turtle	FPT/None G3G4/S3 SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	No Potential/ Not Expected	No aquatic resources are present to support the species requirements.
Phrynosoma blainvillii coast horned lizard	None/None G4/S4 SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	No Potential/ Not Expected	No aquatic resources are present to support the species requirements.
Plestiodon skiltonianus interparietalis Coronado skink	None/None G5T5/S2S3 WL	Grassland, chaparral, pinon-juniper and juniper sage woodland, pine-oak and pine forests in Coast Ranges of Southern California. Prefers early successional stages or open areas. Found in rocky areas close to streams and on dry hillsides.	No Potential/ Not Expected	The site is surrounded by disturbed/developed habitat with I-15 between any potential habitat limiting any wildlife movement. No loose compacted soil occurs.
Salvadora hexalepis virgultea coast patch-nosed snake	None/None G5T4/S3 SSC	Brushy or shrubby vegetation in coastal Southern California. Require small mammal burrows for refuge and overwintering sites.	No Potential/ Not Expected	The site is surrounded by disturbed/developed habitat and no small mammal burrows were observed.
Thamnophis hammondii two-striped gartersnake	None/None G4/S3S4 SSC	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	No Potential/ Not Expected	The species is unlikely to occur as no aquatic resources are present. The nearest suitable habitat is 0.8 mile away across I-15.
Thamnophis sirtalis pop. 1 south coast gartersnake	None/None G5T1T2/S1S2 SSC	Southern California coastal plain from Ventura County to San Diego County, and from sea level to about 850 meters. Marsh and upland habitats near permanent water with good strips of riparian vegetation.	No Potential/ Not Expected	Species are unlikely to occur as no aquatic resources are present. The nearest suitable habitat is 0.8 miles away across I-15.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Birds				
Accipiter cooperii Cooper's hawk	None/None G5/S4 WL	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river floodplains; also, live oaks (*Quercus* spp.).	No Potential/ Not Expected	The species' associated nesting and foraging habitat is not present on site, however potential habitat is located 0.8 miles away within San Luis Rey River.
Agelaius tricolor tricolored blackbird	None/ST G1G2/S2 SSC	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	No Potential/ Not Expected	The species associated nesting and foraging habitat is not present on site.
Aimophila ruficeps canescens southern California rufous-crowned sparrow	None/None G5T3/S4 WL	Resident in Southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	Low Potential	The habitat required for the species is adjacent to the project site within Diegan coastal sage scrub. The project site, however, is disturbed and mostly developed.
Aquila chrysaetos golden eagle	None/None G5/S3 FP WL	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	No Potential/ Not Expected	The species associated nesting and foraging habitat is not present on site.
Artemisiospiza belli belli Bell's sparrow	None/None G5T2T3/S3 WL	Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yards apart.	Low Potential	The habitat required for the species is adjacent to the project site within Diegan coastal sage scrub. The project site, however, is disturbed and mostly developed.
Athene cunicularia burrowing owl	None/None G4/S2 SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel (*Otospermophilus beecheyi*).	No Potential/ Not Expected	The species associated with nesting and foraging habitat is not present on site. No small mammal burrows were observed.
Buteo regalis ferruginous hawk	None/None G4/S3S4 WL	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	No Potential/ Not Expected	The species associated nesting and foraging habitat is not present on site.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Buteo swainsoni Swainson's hawk	None/ST G5/S4	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	No Potential/ Not Expected	The species associated nesting and foraging habitat is not present on site.
Campylorhynchus brunneicapillus sandiegensis coastal cactus wren	None/None G5T3Q/S2 SSC	Southern California coastal sage scrub. Wrens require tall opuntia cactus for nesting and roosting.	No Potential/ Not Expected	The species associated nesting and foraging habitat is not present on site. No cactus species occur on-site.
Charadrius nivosus nivosus western snowy plover	FT/None G3T3/S3 SSC	Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	No Potential/ Not Expected	The species associated nesting and foraging habitat is not present on site. No sandy, gravelly or friable soils occur on-site.
Circus hudsonius northern harrier	None/None G5/S3 SSC	Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	No Potential/ Not Expected	The species associated nesting and foraging habitat is not present on site.
Coccyzus americanus occidentalis western yellow-billed cuckoo	FT/SE G5T2T3/S1	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry (*Rubus* sp.), nettles (*Urtica* sp.), or wild grape (*Vitis* sp.).	No Potential/ Not Expected	The species associated nesting and foraging habitat is not present on site.
Elanus leucurus white-tailed kite	None/None G5/S3S4 FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	No Potential/ Not Expected	The species associated nesting and foraging habitat is not present on site.
Empidonax traillii extimus southwestern willow flycatcher	FE/SE G5T2/S3	Riparian woodlands in Southern California.	No Potential/ Not Expected	The project site is approximately 0.8 miles from the San Luis Rey River which has high potential to support the species. Due to the high level of disturbance of the site and lack of riparian habitat the species is not expected to occur on site.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Eremophila alpestris actia California horned lark	None/None G5T4Q/S4 WL	Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	No Potential/ Not Expected	The species associated nesting and foraging habitat is not present on site.
Icteria virens yellow-breasted chat	None/None G5/S4 SSC	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.	No Potential/ Not Expected	The species associated nesting and foraging habitat is not present on site.
Ixobrychus exilis least bittern	None/None G4G5/S2 SSC	Colonial nester in marshlands and borders of ponds and reservoirs which provide ample cover. Nests usually placed low in tules (*Schoenoplectus* sp.), over water.	No Potential/ Not Expected	The species associated nesting and foraging habitat is not present on site. This species requires water which is not present.
Laterallus jamaicensis coturniculus California black rail	None/ST G3T1/S2 FP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	No Potential/ Not Expected	The species associated nesting and foraging habitat is not present on site. This species requires water which is not present.
Passerculus sandwichensis beldingi Belding's savannah sparrow	None/SE G5T3/S3	Inhabits coastal salt marshes from Santa Barbara south through San Diego County. Nests in saltwort (*Salicornia* sp.) on and about margins of tidal flats.	No Potential/ Not Expected	The species associated nesting and foraging habitat is not present on site. No coastal salt marshes occur on-site.
Plegadis chihi white-faced ibis	None/None G5/S3S4 WL	Shallow freshwater marsh. Dense tule thickets for nesting, interspersed with areas of shallow water for foraging.	No Potential/ Not Expected	The species associated nesting and foraging habitat is not present on site. No coastal salt marshes occur on-site.
Polioptila californica californica coastal California gnatcatcher	FT/None G4G5T3Q/S2 SSC	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	Moderate Potential in the Survey Area	There are known occurrences observed in 2015 which overlap with the Survey Area. California coastal sage scrub occurs adjacent to the Project boundary. The species has moderate potential to occur adjacent to the site.
Rallus obsoletus levipes light-footed Ridgway's rail	FE/SE G3T1T2/S1 FP	Found in salt marshes traversed by tidal sloughs, where cord grass (*Spartina* sp.) and pickleweed (*Arthrocnemum* sp.) are the dominant vegetation. Requires dense growth of either pickleweed or cord grass for nesting or escape cover; feeds on mollusks and crustaceans.	No Potential/ Not Expected	The species' associated nesting and foraging habitat is not present on site. No salt marshes occur on-site.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Riparia riparia bank swallow	None/ST G5/S3	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	No Potential/ Not Expected	The species associated nesting and foraging habitat is not present on site. No vertical banks are present; the site is relatively flat.
Setophaga petechia yellow warbler	None/None G5/S3 SSC	Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash (*Fraxinus* sp.), and alders (*Alnus* sp.).	No Potential/ Not Expected	Some nesting habitat is present within the project site, however, the frequent disturbance adjacent to the nesting habitat makes the occurrence on-site unlikely.
Sternula antillarum browni California least tern	FE/SE G4T2T3Q/S2 FP	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	No Potential/ Not Expected	The species associated nesting and foraging habitat is not present on site. The site has frequent disturbance and occurrence is unlikely.
Vireo bellii pusillus least Bell's vireo	FE/SE G5T2/S3	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite (*Prosopis* sp.).	No Potential/ Not Expected	Riparian habitat is present 0.8 miles away within the San Luis Rey River. No nesting potential is within the site from the frequent disturbance and poor habitat. I-15 is between the project site and any potential habitat.
Mammals				
Antrozous pallidus pallid bat	None/None G4/S3 SSC	Found in a variety of habitats including deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts in crevices of rock outcrops, caves, mine tunnels, buildings, bridges, and hollows of live and dead trees which must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	No Potential/ Not Expected	The species associated roosting habitat may be present on-site. No dead trees are present; however, the eucalyptus species on-site could provide potential habitat for roosting. The species sensitivity to human disturbance makes it is unlikely any roosting will occur.
Corynorhinus townsendii Townsend's big-eared bat	None/None G4/S2 SSC	Occurs throughout California in a wide variety of habitats. Most common in mesic sites, typically coniferous or deciduous forests. Roosts in the open, hanging from walls & ceilings in caves, lava tubes, bridges, and buildings. This species is extremely sensitive to human disturbance.	No Potential/ Not Expected	The species associated roosting habitat is not present on-site. Large eucalyptus occur on-site which may provide potential substitute roosting sites; however occurrence is unlikely.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Dipodomys stephensi Stephens' kangaroo rat	FT/ST G2/S3	Found primarily in annual and perennial grasslands, but also occurs in coastal scrub and sagebrush with sparse canopy cover. Prefers buckwheat (*Eriogonum* sp.), chamise (*Adenostoma fasciculatum*), brome grass and filaree. Will burrow into firm soil and use the burrows of California ground squirrels and pocket gophers (*Thomomys* sp.). Occurs only in southern California.	No Potential/ Not Expected	The vegetation on-site is disturbed and developed and not associated with the species preferred sparse open canopy cover. The frequent site disturbance and lack of suitable burrows on-site provide no potential for the species to occur on-site.
Eumops perotis californicus western mastiff bat	None/None G4G5T4/S3S4 SSC	Occurs in open, semi-arid to arid habitats, including coniferous and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces and caves, and buildings. Roosts typically occur high above ground.	No Potential/ Not Expected	The species' associated roosting habitat is not present on-site. Trees that occur on-site do not provide potential roosting sites, and occurrence is unlikely.
Lasiurus xanthinus western yellow bat	None/None G4G5/S3 SSC	Occurs in arid regions of the southwestern United States. Typically found in riparian woodlands, oak or pinyon-juniper woodland, desert wash, palm oasis habitats, and urban or suburban areas. Roosts in trees, often between palm fronds.	No Potential/ Not Expected	The species' associated roosting habitat is not present on-site.
Leptonycteris yerbabuenae lesser long-nosed bat	FD/None G3/S1 SSC	Arid regions such as desert grasslands and shrub land. Suitable day roosts (caves, mines) and suitable concentrations of food plants (columnar cacti, agaves) are critical resources. No maternity roosts known from California; may only be vagrant. Caves and mines are used as day roosts. Caves, mines, rock crevices, trees and shrubs, and abandoned buildings are used as night roosts for digesting meals. Nectar, pollen, and fruit eating bat; primarily feeding on agaves, saguaro, and organ pipe cactus.	No Potential/ Not Expected	The species' associated roosting habitat is not present on-site.
Neotoma lepida intermedia San Diego desert woodrat	None/None G5T3T4/S3S4 SSC	Occurs in scrub habitats of southern California from San Luis Obispo County to San Diego County.	No Potential/ Not Expected	Scrub habitat associated with the species is present adjacent to the site, however the site is disturbed and developed. No middens were found during the survey and the freeway between the site and the San Luis Rey River provides a barrier limiting species movement.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Nyctinomops femorosaccus pocketed free-tailed bat	None/None G5/S3 SSC	Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. Rocky areas with high cliffs.	No Potential/ Not Expected	The habitat associated with the species does not occur on-site. No rocky areas with high cliffs occur.
Nyctinomops macrotis big free-tailed bat	None/None G5/S3 SSC	Low-lying arid areas in Southern California. Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	No Potential/ Not Expected	The habitat associated with the species does not occur on-site. No rocky areas with high cliffs occur.
Perognathus longimembris brevinasus Los Angeles pocket mouse	None/None G5T2/S1S2 SSC	Lower elevation grasslands and coastal sage communities in and around the Los Angeles Basin. Open ground with fine, sandy soils. May not dig extensive burrows, hiding under weeds and dead leaves instead.	No Potential/ Not Expected	Habitat associated with the species occurs adjacent to the site, however the site is outside of the Los Angeles Basin and the species is unlikely to occur.
Taxidea taxus American badger	None/None G5/S3 SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	No Potential/ Not Expected	The level of fragmentation and disturbance on-site would limit the occurrence of the species. The associated soils and food sources needed are not present. No diagnostic sign of the species (e.g., burrows or digs) were identified during field reconnaissance survey.

Regional Vicinity refers to within a 9-quad search radius of site.

Status (Federal/State)
FE = Federal Endangered
FT = Federal Threatened
FPE = Federal Proposed Endangered
FPT = Federal Proposed Threatened
FD = Federal Delisted
FC = Federal Candidate
SE = State Endangered
ST = State Threatened
SCE = State Candidate Endangered
SCT = State Candidate Threatened
SR = State Rare
SD = State Delisted
SSC = CDFW Species of Special Concern
FP = CDFW Fully Protected
WL = CDFW Watch List

CRPR (CNPS California Rare Plant Rank)
1A = Presumed extirpated in California, and rare or extinct elsewhere
1B = Rare, Threatened, or Endangered in California and elsewhere
2A = Presumed extirpated in California, but common elsewhere
2B= Rare, Threatened, or Endangered in California, but more common elsewhere
3 = Need more information (Review List)
4 = Limited Distribution (Watch List)

CRPR Threat Code Extension
.1 = Seriously endangered in California (>80% of occurrences threatened/high degree and immediacy of threat)
.2 = Moderately threatened in California (20-80% of occurrences threatened/moderate degree and immediacy of threat)
.3 = Not very endangered in California (<20% of occurrences threatened/low degree and immediacy of threat)

Other Statuses
G1 or S1 Critically Imperiled Globally or Subnationally (state)
G2 or S2 Imperiled Globally or Subnationally (state)
G3 or S3 Vulnerable to extirpation or extinction Globally or Subnationally (state)
G4/5 or S4/5 Apparently secure, common and abundant
GH or SH Possibly Extirpated – missing; known from only historical occurrences but still some hope of rediscovery

Additional notations may be provided as follows
T – Intraspecific Taxon (subspecies, varieties, and other designations below the level of species)
Q – Questionable taxonomy that may reduce conservation priority
? – Inexact numeric rank

Attachment 2

Site Photographs

Photograph 1. View looking northwest from the eastern project boundary showing existing fire station. March 2024.

Photograph 2. View looking southwest showing the urban/developed habitat and Diegan coastal sage scrub habitat behind the firehouse. March 2024.

Photograph 3. View looking southeast showing the urban/developed habitat within the project site. March 2024.

Photograph 4. View looking south showing urban/developed habitat within the project site. March 2024.

Photograph 5. View looking west showing the Diegan coastal sage scrub habitat within the survey area. March 2024.

Photograph 6. View looking north showing the ornamental species and disturbed habitat within the project site. March 2024.

Photograph 7. View looking south towards the project site from Pala Mesa Drive and Old Highway 395.

Photograph 8. View looking south towards project site from Pala Mesa Drive showing the Disturbed habitat and Diegan coastal sage scrub habitat. March 2024.

Attachment B

Cultural Resources Assessment

The information in Attachment B has been removed as it is confidential in nature. Please refer to Staff for full report.

Attachment C

Air Quality Impacts Study

NORTH COUNTY FIRE PROTECTION DISTRICT FIRE STATION NO. 4 PROJECT

Air Quality Impacts Study

Prepared for:
Rincon Consultants

Prepared by:
Terry A. Hayes Associates Inc.

July 2024

taha
environmental planners

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1.0 SUMMARY OF FINDINGS

Terry A. Hayes Associates Inc. (TAHA) completed an Air Quality Impact Study (Study) for the North County Fire Protection District's Fire Station No. 4 Project (proposed project) located in the Fallbrook community within the County of San Diego (County). This Study addresses the potential environmental impacts associated with air pollutant emissions generated by the construction and operation of the proposed project in accordance with San Diego Air Pollution Control District (SDAPCD) and County guidance methodologies. A summary of the air quality impacts significance determinations under the California Environmental Quality Act (CEQA) Environmental Checklist criteria is shown in **Table 1-1**. The Study concludes that the proposed project would result in less-than-significant impacts related to construction and operational emissions.

TABLE 1-1: SUMMARY OF IMPACT STATEMENTS

Impact Statement	Proposed Project Level of Significance	Applicable Mitigation Measures
Would the proposed project conflict with or obstruct implementation of the applicable air quality plan?	Less-Than-Significant Impact	None
Would the proposed project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?	Less-Than-Significant Impact	None
Would the proposed project expose sensitive receptors to substantial pollutant concentrations?	Less-Than-Significant Impact	None
Would the proposed project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less-Than-Significant Impact	None

SOURCE: TAHA, 2024.

2.0 INTRODUCTION

2.1 STUDY PURPOSE

The purpose of this Study is to evaluate the potential environmental impacts related to air quality resulting from implementation of the proposed project. Consistent with SDAPCD and County guidance, potential impacts to air quality are characterized by comparing daily emissions of air pollutants that would be generated during construction and operation of the proposed project to the applicable Air Quality Significance Thresholds.

2.2 PROJECT DESCRIPTION

The proposed project includes the construction of a new 8,694-square-foot fire station building and the demolition of the existing 5,530-square-foot fire station building located at 4375 Pala Mesa Drive in the Fallbrook community of the County of San Diego.[1] The existing fire station will remain operational during the construction of the new fire station at the same location and will be demolished once construction of the proposed project is completed. The proposed new fire station building includes eight dormitories, a conference room, an exercise room, a day room, and two offices.

Figure 2-1 shows the location of the proposed project. **Figure 2-2** displays the site plan.

2.3 CONSTRUCTION SCHEDULE

Construction of the proposed project is expected to start in November 2024 and require 14 months to complete. Activities would include site preparation, grading, building construction, paving, and architectural coating, followed by demolition of the existing structure on the site. The existing fire station would remain operational until the completion of the new building. Construction activities would typically occur Monday through Friday between the hours of 7:00 a.m. to 4:00 p.m.; it is not anticipated that any construction would occur on weekends.

[1]Initial design plans for the proposed project included an anticipated floor area of 9,762 square feet. The building size has since been reduced, but this has no bearing on the content or results of the impacts analysis under the purview of CEQA.

Source: TAHA, 2024.

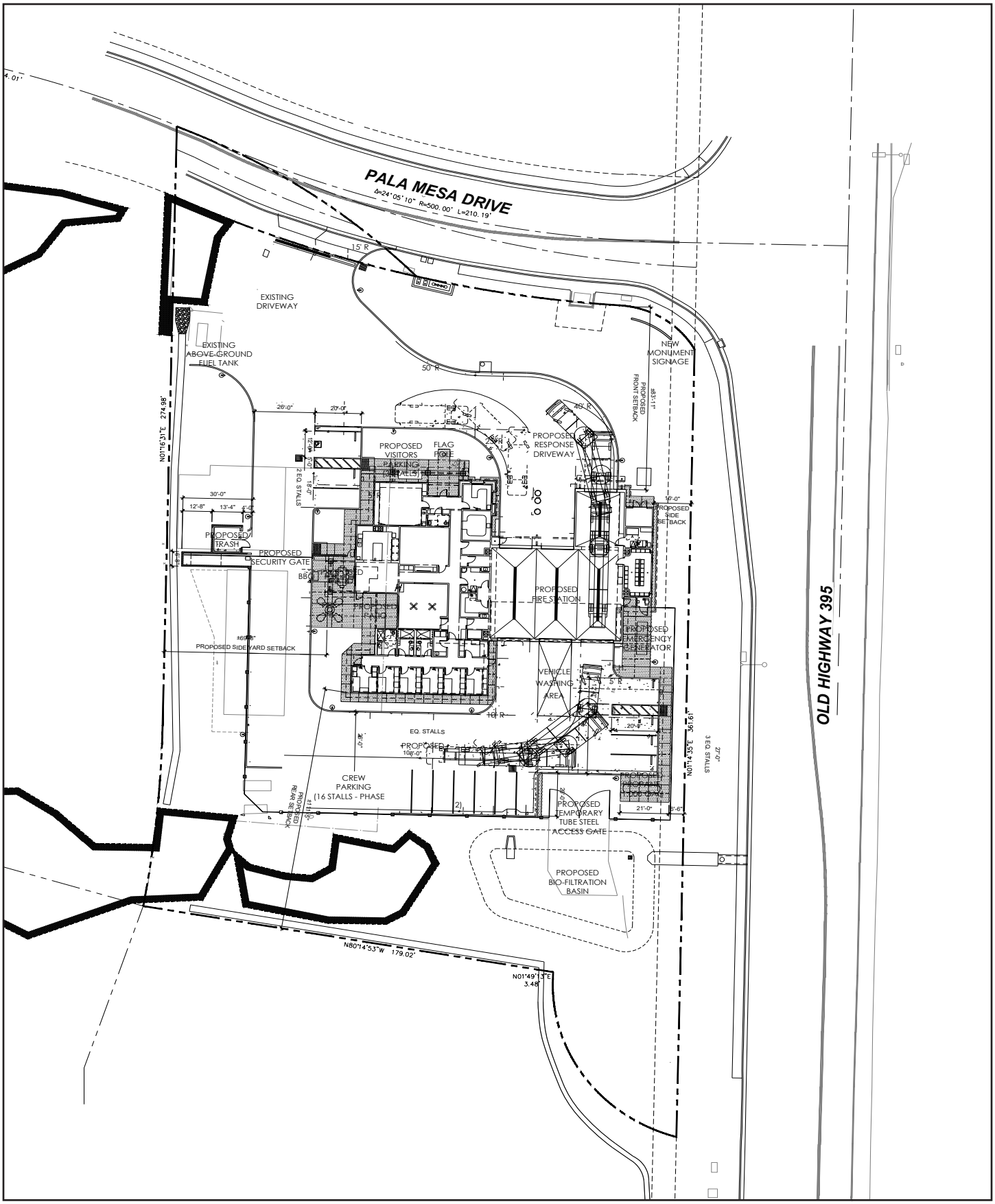
North County Fire Protection District Fire Station No. 4 Project
Air Quality Impacts Assessment

TAHA 2024-015

RINCON CONSULTANTS

FIGURE 2-1

PROJECT LOCATION



Source: PBK Architects, 2024.

3.0 AIR QUALITY

This section evaluates the proposed project's potential impacts on air quality. This section estimates the air pollutant emissions generated by the proposed project and analyzes whether those emissions would conflict with or obstruct implementation of the applicable air quality plan; result in a cumulatively considerable net increase of any criteria pollutant for which the region is in non-attainment under an applicable federal or State ambient air quality standard; expose sensitive receptors to substantial pollutant concentrations; or result in other emissions, such as those leading to odors, affecting a substantial number of people.

3.1 AIR QUALITY BACKGROUND

3.1.1 Air Quality and Public Health

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or indirectly by way of their reaction with other pollutants, due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of an overall endeavor to prevent further deterioration and to facilitate improvement in air quality. The National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been set at levels considered safe to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly with a margin of safety, and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.[2] As the scientific methods for the study of air pollution and related health effects have progressed over the past decades, adverse effects have been shown to occur at lower levels of exposure than previously understood. New findings over time have, in turn, led to the revision and lowering of NAAQS which, in the judgment of the United States Environmental Protection Agency (USEPA), are necessary to protect public health. The NAAQS and CAAQS are listed in **Table 3-1**.

The project site is located within the San Diego Air Basin (SDAB). The San Diego Air Pollution Control District (SDAPCD) and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB.

[2]USEPA, *NAAQS Table*, available at https://www.epa.gov/criteria-air-pollutants/naaqs-table; Accessed January 18, 2024.

TABLE 3-1: AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Period	Federal Standard[/a,b/]	California Standard[/a,b/]	San Diego County Air Basin Attainment Status[/c/]	
				Federal Standard[/d/]	California Standard[/d/]
Ozone (O_3)	1-hour	—	0.09 ppm (180 µg/m^3)	—	Non-Attainment
	8-hour	0.070 ppm (137 µg/m^3)	0.07 ppm (137 µg/m^3)	Non-Attainment	Non-Attainment
Respirable Particulate Matter (PM_{10})	24-hour	150 µg/m^3	50 µg/m^3	Unclassifiable	Non-Attainment
	Annual	—	20 µg/m^3		
Fine Particulate Matter ($PM_{2.5}$)	24-hour	35 µg/m^3	—	Attainment	Non-Attainment
	Annual	9.0 µg/m^3	12 µg/m^3		
Carbon Monoxide (CO)	1-hour	35 ppm (40 mg/m^3)	20 ppm (23 mg/m^3)	Attainment	Attainment
	8-hour	9 ppm (10 mg/m^3)	9.0 ppm (10 mg/m^3)		
Nitrogen Dioxide (NO_2)	1-hour	0.10 ppm (188 µg/m^3)	0.18 ppm (339 µg/m^3)	Attainment	Attainment
	Annual	0.053 ppm (100 µg/m^3)	0.030 ppm (57 µg/m^3)		
Sulfur Dioxide (SO_2)	1-hour	0.075 ppm (196 µg/m^3)	0.25 ppm (655 µg/m^3)	Attainment	Attainment
	3-hour	0.5 ppm (1,300 µg/m^3)	—		
	24-hour	0.14 ppm (365 µg/m^3)	0.04 ppm (105 µg/m^3)		
	Annual	0.03 ppm (80 µg/m^3)	—		
Lead (Pb)	30-day average	—	1.5 µg/m^3	Attainment	Attainment
	Rolling 3-month average	0.15 µg/m^3	—		
Sulfates ($–SO_4^{2-}$)	24-hour	—	25 µg/m^3	—	Attainment
Hydrogen Sulfide (H_2S)	1-hour	—	0.03 ppm (42 µg/m^3)	—	Unclassified

Note: ppm = parts per million by volume; µg/m^3 = micrograms per cubic meter

/a/ An ambient air quality standard is a concentration level expressed in either parts per million or micrograms per cubic meter and averaged over a specific time period (e.g., 1 hour). The different averaging times and concentrations are meant to protect against different exposure effects. Some ambient air quality standards are expressed as a concentration that is not to be exceeded. Others are expressed as a concentration that is not to be equaled or exceeded.

/b/ Ambient Air Quality Standards obtained from the CARB and USEPA.

/c/ "Attainment" means that the regulatory agency has determined based on established criteria, that the Air Basin meets the identified standard. "Non-attainment" means that the regulatory agency has determined that the Air Basin does not meet the standard. "Unclassified" means there is insufficient data to designate an area, or designations have yet to be made. "Unclassifiable" means that the available data does not support a designation of attainment or nonattainment at the time of designation.

/d/ California and Federal standard attainment status based on updates from the CARB and USEPA. https://www.sdapcd.org/content/sdapcd/planning/attainment-status.html

SOURCE: USEPA, *NAAQS Table*, https://www.epa.gov/criteria-air-pollutants/naaqs-table, accessed March 21, 2024; CARB, *Ambient Air Quality Standards,* https://ww3.arb.ca.gov/research/aaqs/aaqs2.pdf, May 4, 2016; SDAPCD, *Attainment Status*, https://www.sdapcd.org/content/sdapcd/planning/attainment-status.html, accessed March 21, 2024.

3.1.2 Local Air Quality and Air Pollution Sources

The climate within the SDAB is largely dominated by the strength and position of the semi-permanent high-pressure system over the Pacific Ocean, known as the Pacific High. This high-pressure ridge over the West Coast often creates a pattern of late-night and early-morning low clouds, hazy afternoon sunshine, daytime onshore breezes, and little temperature variation year-round. The climatic classification for San Diego County is a Mediterranean climate, with warm, dry summers and mild, wet winters. Average annual precipitation ranges from approximately 10 inches on the coast to over 30 inches in the mountains to the east (the desert regions of San Diego County generally receive between 4 and 6 inches per year).

The Pacific High-pressure system drives the prevailing winds in the SDAB. The winds tend to blow onshore in the daytime and offshore at night. In the summer, an inversion layer is created over the coastal areas and increases the ozone levels. In the winter, San Diego often experiences a shallow inversion layer which tends to increase carbon monoxide and fine particulate matter concentration levels due to the increased use of residential wood burning.

In the fall months, the SDAB is often impacted by Santa Ana winds. These winds are the result of a high-pressure system over the Nevada-Utah region that overcomes the westerly wind pattern and forces hot, dry winds from the east to the Pacific Ocean. These winds are powerful and incessant. They blow the air basin's pollutants out to sea. However, weak Santa Ana winds can transport air pollution from the South Coast Air Basin and greatly increase the San Diego ozone concentrations.

3.1.3 Air Pollutant Types

3.1.3.1 Criteria Pollutants

The six principal pollutants for which national and State criteria and standards have been promulgated, known as "criteria pollutants," and which are most relevant to current air quality planning and regulation in the SDAB include: ozone (O_3), respirable and fine particulate matter (PM_{10} and $PM_{2.5}$, respectively), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead (Pb). These pollutants are referred to as "criteria air pollutants" as a result of the specific standards, or criteria, which have been adopted for them.

i. *Ozone (O_3)*

O_3 is a gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO_X) - both byproducts of internal combustion engine exhaust - undergo slow photochemical reactions in the presence of sunlight. O_3 concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable. An elevated level of O_3 irritates the lungs and breathing passages, causing coughing and pain in the chest and throat, thereby increasing susceptibility to respiratory infections and reducing the ability to exercise. Effects are more severe in people with asthma and other respiratory ailments. Long-term exposure may lead to scarring of lung tissue and may lower lung efficiency.

ii. *Particulate Matter (PM_{10} and $PM_{2.5}$)*

Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases

emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. Respirable and fine particulate matter, PM_{10} and $PM_{2.5}$, consist of extremely small, suspended particles or droplets 10 microns and 2.5 microns or smaller in diameter, respectively. Some sources of particulate matter, like pollen and windstorms, are naturally occurring. However, in areas like the proposed project, most particulate matter is caused by road dust, diesel soot, combustion products, abrasion of tires and brakes, and construction activities. The human body naturally prevents the entry of larger particles into the body. However, small particles can enter the body and become trapped in the nose, throat, and upper respiratory tract. These small particulates can potentially aggravate existing heart and lung diseases, change the body's defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM_{10} and $PM_{2.5}$. Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulates can become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids.

iii. *Carbon Monoxide (CO)*

CO is a colorless, odorless gas primarily emitted from combustion processes and motor vehicles due to incomplete combustion of carbon-containing fuels such as gasoline or wood. In urban areas automobile exhaust accounts for the majority of CO emissions. CO concentrations tend to be the highest during the winter mornings, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike O_3, motor vehicles operating at slow speeds are the primary source of CO in the SDAB. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease. Inhalation of CO can cause nausea, dizziness, and headaches at moderate concentrations and can be fatal at high concentrations.

iv. *Nitrogen Dioxide (NO_2)*

Nitrogen dioxide is a nitrogen oxide compound that is produced by the combustion of fossil fuels, such as in internal combustion engines (both gasoline and diesel powered), as well as point sources, especially power plants. Of the seven types of NO_X compounds, NO_2 is the most abundant in the atmosphere. As ambient concentrations of NO_2 are related to traffic density, commuters in heavy traffic areas, such as urban areas like the proposed project, may be exposed to higher concentrations of NO_2 than those indicated by regional monitors. NO_2 absorbs blue light and results in a brownish-red cast to the atmosphere and reduced visibility. NO_2 also contributes to the formation of PM_{10}. Nitrogen oxides irritate the nose and throat, and increase one's susceptibility to respiratory infections, especially in people with asthma. The principal concern of NO_X is as a precursor to the formation of O_3.

v. Sulfur Dioxide (SO_2)

Sulfur oxides (SO_X) are compounds of sulfur and oxygen molecules. SO_2 is the predominant form found in the lower atmosphere and is a product of burning sulfur or burning materials that contain sulfur. Major sources of SO_2 include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Generally, the highest levels of SO_2 are found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent

controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels. Emissions of SO_2 aggravate lung diseases, especially bronchitis. It also constricts the breathing passages, especially in asthmatics and people involved in moderate to heavy exercise. SO_2 potentially causes wheezing, shortness of breath, and coughing. High levels of particulates appear to worsen the effect of SO_2, and long-term exposures to both pollutants lead to higher rates of respiratory illness.

vi. Lead (Pb)

Pb is a metal found naturally in the environment as well as in manufactured products. The highest levels of lead in air are usually found near lead smelters. The major sources of lead emissions to the air are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline. Pb is also emitted from the sanding or removal of old lead-based paint. Pb emissions are primarily a regional pollutant. Pb affects the brain and other parts of the body's nervous system. Exposure to Pb in very young children impairs the development of the nervous system, kidneys, and blood forming processes in the body.

3.1.3.2 Additional Criteria Pollutants (California Only)

In addition to the national standards, the State of California regulates State-identified criteria pollutants, including sulfates (SO_4^2), hydrogen sulfide (H_2S), visibility-reducing particles, and vinyl chloride. With respect to the State-identified criteria pollutants, most land use development projects either do not emit them (*i.e.*, H_2S [nuisance odor] and vinyl chloride), or otherwise account for these pollutants (*i.e.*, SO_4^2 and visibility reducing particles) through other criteria pollutants. For example, SO_4^2 are associated with SO_X emissions, and visibility-reducing particles are associated with particulate matter emissions. A description of the health effects of the State-identified criteria air pollutants is provided below.

i. Sulfates (SO_4^2)

SO_4^2 are the fully oxidized ionic form of sulfur. SO_4^2 occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized during the combustion process and subsequently converted to sulfate compounds in the atmosphere. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. *SO_4^2* are particularly effective in degrading visibility, and, due to the fact that they are usually acidic, can harm ecosystems and damage materials and property.

ii. Hydrogen Sulfide (H_2S)

H_2S is a colorless gas with the odor of rotten eggs. The most common sources of H_2S emissions are oil and natural gas extraction and processing, and natural emissions from geothermal fields. Industrial sources of H_2S include petrochemical plants and kraft paper mills. H_2S is also formed during bacterial decomposition of human and animal wastes, and is present in emissions from

sewage treatment facilities and landfills.[3] Exposure to H_2S can induce tearing of the eyes and symptoms related to overstimulation of the sense of smell, including headache, nausea, or vomiting; additional health effects of eye irritation have only been reported with exposures greater than 50 parts per million (ppm), which is considerably higher than the odor threshold.[4] H_2S is regulated as a nuisance based on its odor detection level; if the standard were based on adverse health effects, it would be set at a much higher level.[5]

iii. Visibility Reducing Particles

Visibility-reducing particles come from a variety of natural and manmade sources and can vary greatly in shape, size and chemical composition. Visibility reduction is caused by the absorption and scattering of light by the particles in the atmosphere before it reaches the observer. Certain visibility-reducing particles are directly emitted to the air, such as windblown dust and soot, while others are formed in the atmosphere through chemical transformations of gaseous pollutants (e.g., SO_4^2, nitrates, organic carbon particles) which are the major constituents of particulate matter. As the number of visibility-reducing particles increases, more light is absorbed and scattered, resulting in less clarity, color, and visual range.[6] Exposure to some haze-causing pollutants have been linked to adverse health impacts similar to PM_{10} and $PM_{2.5,}$ as discussed above.[7]

iv. Vinyl Chloride

Vinyl chloride is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products and is generally emitted from industrial processes. Other major sources of vinyl chloride have been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.[8] Short-term health effects of exposure to high levels of vinyl chloride in the air include central nervous system effects, such as dizziness, drowsiness, and headaches while long-term exposure to vinyl chloride through inhalation and oral exposure causes liver damage and has been shown to increase the risk of angiosarcoma, a rare form of liver cancer in humans.[9] Most health data on vinyl chloride relate to carcinogenicity; thus, the people most at risk are those who have long-term exposure to elevated levels, which is more likely to occur in occupational or industrial settings; however, control methodologies applied to industrial facilities generally prevent emissions to the ambient air.[10]

[3]CARB, *Hydrogen Sulfide & Health*, https://ww2.arb.ca.gov/resources/hydrogen-sulfide-and-health, accessed March 21, 2024.

[4]CARB, *Hydrogen Sulfide & Health*, https://ww2.arb.ca.gov/resources/hydrogen-sulfide-and-health, accessed March 21, 2024..

[5]*Ibid*.

[6]CARB, *Visibility-Reducing Particles & Health*, https://www.arb.ca.gov/research/aaqs/common-pollutants/vrp/vrp.htm, accessed March 21, 2024.

[7]*Ibid*.

[8]CARB, *Vinyl Chloride & Health*, https://ww2.arb.ca.gov/resources/vinyl-chloride-and-health, accessed March 21, 2024.

[9]*Ibid*.

[10]*Ibid*.

3.1.3.3 Volatile Organic Compounds (VOCs) and Toxic Air Contaminants (TACs)

Although the SDAPCD's primary mandate is attaining the NAAQS and the CAAQS for criteria pollutants within the district, SDAPCD also has a general responsibility to control emissions of air contaminants and prevent endangerment to public health. As a result, the SDAPCD has regulated pollutants other than criteria pollutants such as VOCs and TACs.

i. Volatile Organic Compounds (VOCs)

VOCs are organic chemical compounds of carbon and are not "criteria" pollutants themselves; however, VOCs are a prime component (along with NO_X) of the photochemical processes by which such criteria pollutants as O_3, nitrogen dioxide, and certain fine particles are formed. They are therefore regulated as "precursors" to formation of these criteria pollutants. Some are also identified as TACs and have adverse health effects. VOCs are typically formed from combustion of fuels and/or released through evaporation of organic liquids, internal combustion associated with motor vehicle usage, and consumer products (e.g., architectural coatings, etc.).

ii. Toxic Air Contaminants (TACs)

TACs is a term used to describe airborne pollutants that may be expected to result in an increase in mortality or serious illness or which may pose a present or potential hazard to human health and include both carcinogens and non-carcinogens. The California Air Resources Board (CARB) and the California Office of Environmental Health Hazard Assessment (OEHHA) determine if a substance should be formally identified, or "listed," as a TAC in California. CARB has listed approximately 200 toxic substances, including those identified by the USEPA, which are identified on the California Air Toxics Program's TAC List. TACs are also not classified as "criteria" air pollutants. The greatest potential for TAC emissions during construction is related to diesel particulate matter (DPM) emissions associated with heavy-duty equipment. During long-term operations, sources of DPM may include heavy duty diesel-fueled delivery trucks and stationary emergency generators. The effects of TACs can be diverse and their health impacts tend to be local rather than regional; consequently, ambient air quality standards for these pollutants have not been established, and analysis of health effects is instead based on cancer risk and exposure levels.

3.2 REGULATORY FRAMEWORK

There are several plans, regulations, and programs that include policies, requirements, and guidelines regarding Air Quality at the federal, State, regional, and local levels. As described below, these plans, guidelines, and laws include the following:

- Federal Clean Air Act (CAA)
- California Clean Air Act (CCAA)
- California Code of Regulations (CCR)
- State Programs for Toxic Air Contaminants
- Diesel Risk Reduction Program

- San Diego Air Pollution Control District (SDAPCD)
  - 2022 Regional Air Quality Strategy (2022 RAQS)
  - Rules and Regulations
- County of San Diego
  - County of San Diego General Plan
  - Air Quality Guidelines for Determining Significance

3.2.1 Federal

3.2.1.1 Federal Clean Air Act (CAA)

The CAA was enacted in 1970 and has been amended numerous times in subsequent years, with the most recent amendments occurring in 1990.[11] The CAA is the comprehensive federal law that regulates air emissions in order to protect public health and welfare.[12] The USEPA is responsible for the implementation and enforcement of the CAA, which establishes federal NAAQS, specifies future dates for achieving compliance, and requires the USEPA to designate areas as attainment, nonattainment, or maintenance. The CAA also mandates that each state submit and implement a State Implementation Plan (SIP) for each criteria pollutant for which the state has not achieved the applicable NAAQS. The SIP includes pollution control measures that demonstrate how the standards for those pollutants will be met. The sections of the CAA most applicable to land use development projects include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions).[13]

Title I requirements are implemented for the purpose of attaining NAAQS for criteria air pollutants. **Table 3-1**, *Ambient Air Quality Standards*, shows the NAAQS currently in effect for each criteria pollutant. The Air Basin fails to meet national standards for O_3 and $PM_{2.5}$ and, therefore, is considered a federal "non-attainment" area for these pollutants. The NAAQS, and the CAAQS for the California criteria air pollutants (discussed below), have been set at levels considered safe to protect public health, including the health of sensitive populations and to protect public welfare.

Title II pertains to mobile sources, which include on-road vehicles (e.g., cars, buses, motorcycles) and non-road vehicles (e.g., aircraft, trains, construction equipment). Reformulated gasoline and automobile pollution control devices are examples of the mechanisms the USEPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have been strengthened in recent years to improve air quality. For example, the standards for NO_X emissions have been lowered substantially and the specification requirements for cleaner burning gasoline are more stringent.

[11] 42 United States Code §7401 et seq. (1970).
[12] USEPA, *Summary of the Clean Air Act*, https://www.epa.gov/laws-regulations/summary-clean-air-act, accessed March 21, 2024.
[13] USEPA, *Clean Air Act Overview, Clean Air Act Table of Contents by Title*, https://www.epa.gov/clean-air-act-overview/clean-air-act-text, accessed March 21, 2024.

3.2.2 State

3.2.2.1 California Clean Air Act (CCAA)

The CCAA, signed into law in 1988, requires all areas of the State to achieve and maintain the CAAQS by the earliest practicable date. CARB, a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both State and federal air pollution control programs within California. In this capacity, CARB conducts research, sets the CAAQS, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products, and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. **Table 3-1** includes the CAAQS currently in effect for each of the criteria pollutants, as well as other pollutants recognized by the State. As shown in **Table 3-1**, the CAAQS include more stringent standards than the NAAQS. The SDAB fails to meet State standards for O_3, PM_{10}, and $PM_{2.5}$ and, therefore, is considered "non-attainment" for these pollutants.

3.2.2.2 California Code of Regulations (CCR)

The CCR is the official compilation and publication of regulations adopted, amended or repealed by the State agencies pursuant to the Administrative Procedure Act. The CCR includes regulations that pertain to air quality emissions. Specifically, Section 2485 in Title 13 of the CCR states that the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location. In addition, Section 93115 in Title 17 of the CCR states that operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.

3.2.2.3 State Programs for Toxic Air Contaminants

The California Air Toxics Program is an established two-step process of risk identification and risk management to address potential health effects from exposure to toxic substances in the air. In the risk identification step, CARB and OEHHA determine if a substance should be formally identified, or "listed," as a TAC in California. In the risk management step, CARB reviews emission sources of an identified TAC to determine whether regulatory action is needed to reduce risk. Based on results of that review, CARB has promulgated a number of Airborne Toxic Control Measures (ATCMs), both for stationary and mobile sources, including On-Road and Off-Road Vehicle Rules. These ATCMs include measures such as limits on heavy-duty diesel motor vehicle idling and emission standards for off-road diesel construction equipment in order to reduce public exposure to DPM and other TACs.

These actions are also supplemented by the Assembly Bill (AB) 2588 Air Toxics "Hot Spots" program and Senate Bill (SB) 1731, which require facilities to report their air toxics emissions, assess health risks, notify nearby residents and workers of significant risks if present, and reduce their risk through implementation of a risk management plan. SDAPCD has further adopted two rules to limit cancer and non-cancer health risks from facilities located within its jurisdiction. Rule 1200 (Toxic Air Contaminants – New Source Review) establishes acceptable risk levels and emission control requirements for new and modified facilities. Rule 1210 (Toxic Air Contaminants Health Risks - Public Notification and Risk Reduction) implements the public notification and risk reduction requirements

of State law, and requires facilities with high potential health risk levels to reduce health risks below significant risk levels.

3.2.2.4 Diesel Risk Reduction Program

CARB identified particulate emissions from diesel-fueled engines as TACs in August 1998. Following the identification process, the CARB was required by law to determine if there is a need for further control, which moved us into the risk management phase of the program. CARB developed the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines* and the *Vehicles and the Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines*. The Diesel Advisory Committee approved these documents on September 28, 2000, paving the way for the next step in the regulatory process: the control measure phase. During the control measure phase, specific statewide regulations designed to further reduce DPM emissions from diesel-fueled engines and vehicles have and continue to be evaluated and developed. The goal of each regulation is to make diesel engines as clean as possible by establishing state-of-the-art technology requirements or emission standards to reduce DPM emissions.

3.2.2.5 Assembly Bill 32.

The California Global Warming Solutions Act of 2006, also known as Assembly Bill (AB) 32, was signed into law. AB 32 focuses on reducing GHG emissions in California and requires the CARB to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020. The 2020 target reductions were estimated to be 174 million metric tons of CO_2e. In November 2017 CARB adopted the final *2017 Scoping Plan: The Strategy for Achieving California's 2030 GHG target* (2017 Scoping Plan). The 2017 Scoping Plan incorporates, coordinates, and leverages many existing and ongoing efforts and identifies new policies and actions to accomplish the state's climate goals. The most recent iteration of the Scoping Plan was published in December 2022—the *2022 Scoping Plan for Achieving Carbon Neutrality*—and outlines statewide investment strategies and regulatory control measures to reduce GHG emissions to a level 85 percent below the 1990 emissions inventory by the horizon year of 2045. Analysis conducted by CARB staff determined that fulfilling all objectives of the plan would reduce statewide GHG emissions by 85 percent, would reduce air pollution by 71 percent, and would reduce statewide petroleum demand by 94 percent.

3.2.3 Regional

3.2.3.1 San Diego Air Pollution Control District (SDAPCD)

The SDAPCD is the government agency which regulates sources of air pollution within the SDAB. The SDAB lies in the southwest corner of California and comprises the entire County of San Diego. The County of San Diego encompasses approximately 4,260 square miles and is bounded on the north by Orange and Riverside Counties, on the east by Imperial County, on the west by the Pacific Ocean, and on the south by the Mexican State of Baja California.

i. 2022 Regional Air Quality Strategy (2022 RAQS)

The San Diego County RAQS for the SDAB was initially adopted in 1991, and most recently revised in 2022. The 2022 RAQS outlines SDAPCD's plans and control measures designed to attain the

State air quality standards for O_3. These plans accommodate emissions from all sources, including natural sources, through implementation of control measures, where feasible, on sources to attain the standards. The 2022 RAQS relies on information from the SANDAG including the SANDAG Transportation Control Measures Plan, as well as information regarding projected growth in the County, to identify strategies for the reduction of stationary source emissions through regulatory control.

ii. Rules and Regulations

As stated above, the SDAPCD is responsible for planning, implementing, and enforcing federal and state ambient standards in the SDAB. The following rules and regulations apply to all sources in the jurisdiction of SDAPCD and would apply to the proposed project.

Regulation II – Permits

- **Rule 20.2 – New Source Review Non-Major Stationary Sources:** This rule requires new or modified stationary source units (that are not major stationary sources) with the potential to emit 10 pounds per day or more of VOC, NOx, SOx, or PM_{10} to be equipped with best available control technology. For those units with a potential to emit above Air Quality Impact Assessments Trigger Levels, the units must demonstrate that such emissions would not violate or interfere with the attainment of any national air quality standard.[14]

Regulation IV – Prohibitions

- **Rule 50 – Visible Emissions:** This rule prohibits discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than three minutes in any period of 60 consecutive minutes, which is darker in shade than that designated as Number 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or of such opacity as to obscure an observer's view to a degree greater than does smoke of a shade designated as Number 1 on the Ringelmann Chart.[15]

- **Rule 51 – Public Nuisance:** This rule prohibits the discharge, from any source, of such quantities of air contaminants or other materials that cause or have a tendency to cause injury, detriment, nuisance, annoyance to people and/or the public, or damage to any business or property.[16]

- **Rule 55 – Fugitive Dust Control:** This rule regulates fugitive dust emissions from any commercial construction or demolition activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as track-out and carry-out onto paved roads beyond a project area.[17]

[14]SDAPCD, *Regulations II – Permits: Rule 20.2 – New Source Review Non-Major Stationary Sources*, June 26, 2019.
[15]SDAPCD, *Regulations IV – Prohibitions: Rule 50 – Visible Emissions*, August 13, 1997.
[16]SDAPCD, *Regulations IV – Prohibitions: Rule 51 – Nuisance*, January 1, 1969.
[17]SDAPCD, *Regulations IV – Prohibitions: Rule 55 – Fugitive Dust Control*, June 24, 2009.

- **Rule 67.0.1 – Architectural Coatings:** This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.[18]

Regulation XII – Toxic Air Contaminants

- **Rule 1200 – Toxic Air Contaminants - New Source Review:** This rule requires new or modified stationary source units with the potential to emit TACs above rule threshold levels to either demonstrate that they will not increase the maximum incremental cancer risk above one in 1 million at every receptor location; demonstrate that toxics best available control technology will be employed if maximum incremental cancer risk is equal to or less than 10 in one million; or demonstrate compliance with the SDAPCD's protocol for those sources with an increase in maximum incremental cancer risk at any receptor location of greater than 10 in one million but less than 100 in one million.[19]

- **Rule 1210 – Toxic Air Contaminants Health Risks - Public Notification and Risk Reduction:** This rule requires each stationary source required to prepare a public risk assessment to provide written public notice of risks at or above the following levels: maximum incremental cancer risks equal to or greater than 10 in one million, cancer burden equal to or greater than 1.0, total acute non-cancer health hazard index equal to or greater than 1.0, or total chronic non-cancer health hazard index equal to or greater than 1.0.[20]

3.2.4 Local

3.2.4.1 County of San Diego

i. County of San Diego General Plan

Local jurisdictions, such as the County, have the authority and responsibility to reduce air pollution through their land use decision-making authority. The County of San Diego's General Plan (including the Land Use, Mobility, Conservation and Open Space, and Housing Elements) contain policies to carry out the primary objectives of AB 32: mitigation (reduce greenhouse gas emissions) and adaptation (changing current strategies to adapt to climate change).

The County's General Plan, adopted August 3, 2011, takes steps to address the challenging issue of climate change by reducing GHG emissions, retaining and enhancing natural areas, improving energy efficiency, reducing waste, recycling, and managing water use. The General Plan will reduce GHG emissions primarily through minimizing vehicle trips and approving land use patterns that support increased density in areas where there is infrastructure to support it, increased opportunities for transit, pedestrians, and bicycles, and through green building and land development conservation initiatives. Policies also address adaptation to climate change, such as continued wildfire

[18]SDAPCD, *Regulations IV – Prohibitions: Rule 67.0.1 – Architectural Coatings*, February 10, 2021.

[19]SDAPCD, *Regulations XII – Toxic Air Contaminants: Rule 1200 – Toxic Air Contaminants - New Source Review*, September 19, 2023.

[20]SDAPCD, *Regulations XII – Toxic Air Contaminants: Rule 1210 Toxic Air Contaminants Health Risks - Public Notification and Risk Reduction*, September 19, 2023.

management and protection, monitoring flood hazards, and regional collaboration on biological preservation, water use and supply, and other areas of concern.

ii. County of San Diego Guidelines for Determining Significance and Format and Content Requirements – Air Quality

The County of San Diego published the *Guidelines for Determining Significance – Air Quality* to provide guidance for evaluating adverse environmental effects that a proposed residential development or other land development projects may have on air quality. The SDAPCD also recommends using the County of San Diego thresholds of significance when evaluating air quality impacts for a project.

3.3 EXISTING SETTING

3.3.1 Regional Air Quality

The favorable climate of San Diego also works to create air pollution problems. Sinking, or subsiding air from the Pacific high pressure creates a temperature inversion, known as a subsidence inversion, which acts as a lid to vertical dispersion of pollutants. Weak summertime pressure gradients further limit horizontal dispersion of pollutants in the mixed layer below the subsidence inversion. Poorly dispersed anthropogenic emissions combined with strong sunshine leads to photochemical reactions, which results in the creation of ozone at this surface layer.

Daytime onshore flow (i.e., sea breeze) and nighttime offshore flow (i.e., land breeze) are quite common in Southern California. The sea breeze helps to moderate daytime temperatures in the western portion of San Diego County, which greatly adds to the climatic draw of the region. This also leads to emissions being blown out to sea at night and returning to land the following day. Under certain conditions, this atmospheric oscillation results in the offshore transport of air from the Los Angeles region to San Diego County, which often results in high ozone concentrations being measured at San Diego County air pollution monitoring stations. Transport of air pollutants from Los Angeles to San Diego has also been shown to occur aloft within the stable layer of the elevated subsidence inversion. In this layer, removed from fresh emissions of oxides of nitrogen, which would scavenge and reduce ozone concentrations, high levels of ozone are transported into San Diego County.

3.3.2 Local Air Quality

Air pollutant emissions are generated in the local vicinity by stationary and area-wide sources, such as commercial and industrial activity, space and water heating, landscape maintenance, consumer products, and mobile sources primarily consisting of automobile traffic. Motor vehicles are the primary source of pollutants in the local vicinity.

3.3.2.1 Existing Pollutant Levels at Nearby Monitoring Stations

The SDAPCD operates a network of ambient air monitoring stations throughout the County that measure ambient concentrations of pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. The nearest SDAPCD-operated monitoring station is the Camp Pendleton Station located at 21441 West B Street approximately 15 miles to the southwest of the

project site. This station only monitors concentrations of O_3 and NO_2. The nearest monitoring station to the proposed project is the Pala Airpad Station located approximately 4 miles east of the project site. This is a tribal monitoring station that only monitors concentrations of O_3 and $PM_{2.5}$. **Table 3-2** displays measured pollutant concentrations at the Camp Pendleton and Pala Airpad monitoring stations, the State and federal standards, and the frequency of concentrations recorded above the standards during the three-year period from 2020 to 2022.

TABLE 3-2: MONITORED AMBIENT AIR QUALITY DATA

Pollutant	Data Statistics and Air Quality Standards	Maximum Annual Concentrations and Frequencies of Exceeded Standards		
		2020	2021	2022
CAMP PENDLETON STATION				
Ozone (O_3)	Maximum 1-hr Concentration (ppm)	0.094	0.074	0.076
	Days > 0.09 ppm (State 1-hr standard)	1	0	0
	Maximum 8-hr Concentration (ppm)	0.074	0.059	0.067
	Days > 0.070 ppm (State 8-hr standard)	3	0	0
	Days > 0.070 ppm (National 8-hr standard)	3	0	0
Nitrogen Dioxide (NO_2)	Maximum 1-hr Concentration (ppm)	0.058	0.059	0.050
	Days > 0.18 ppm (State 1-hr standard)	0	0	0
	Days > 0.100 ppm (National 1-hr standard)	0	0	0
PALA AIRPAD STATION				
Ozone (O_3)	Maximum 1-hr Concentration (ppm)	0.078	0.064	0.087
	Days > 0.09 ppm (State 1-hr standard)	0	0	0
	Maximum 8-hr Concentration (ppm)	0.072	0.059	0.080
	Days > 0.070 ppm (State 8-hr standard)	1	0	2
	Days > 0.070 ppm (National 8-hr standard)	1	0	2
Fine Particulate Matter ($PM_{2.5}$)	Maximum 24-hr Concentration ($\mu g/m^3$)	96.7	26.7	22.4
	Days > 35 $\mu g/m^3$ (National 24-hr standard)	24	0	0
	Annual Concentration ($\mu g/m^3$)	20.6	11.2	10.2
	Exceed State Annual Standard (12 $\mu g/m^3$)?	Yes	No	No
	Exceed Federal Annual Standard (9.0 $\mu g/m^3$)?	Yes	Yes	Yes

Note: PM_{10} and CO data representative of local air quality conditions is not available.

SOURCE: SDAPCD, *Annual Air Quality Monitoring Network Report 2020*, May 14, 2021; SDAPCD, *Annual Air Quality Monitoring Network Report 2021*, May 17, 2022; SDAPCD, *Annual Air Quality Monitoring Network Report 2022*, May 23, 2023; EPA, *Annual Data Summary – Concentration by Monitor 2020, 2021, 2022*, accessed March 27, 2024.

Neither SDAPCD nor CARB has posted audited and certified air quality data from 2023. As shown in Table 3-2, concentrations of O_3 and $PM_{2.5}$ exceeded applicable standards in 2020, reflecting the regional nonattainment designation.

3.3.3 Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. The CARB has identified the following groups who are most likely to be affected by air pollution: children less than 14 years of age, the elderly over 65 years of age, athletes, and people with cardiovascular and chronic respiratory diseases. The SDAPCD identifies sensitive receptors as those who are especially susceptible to adverse health

effects from exposure to TACs, such as children, the elderly, and the ill. Sensitive receptors include schools (Preschool-12th Grade), hospitals, resident care facilities, day-care centers, residences, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. The closest sensitive receptors to the proposed project are residences located approximately 150 feet to the north and south of the property boundary.

3.4 PROJECT IMPACTS

This section describes the applicable thresholds of significance and the methodological approach and analyzes potential impacts related to air quality.

3.4.1 Thresholds of Significance

This Assessment was undertaken to determine whether construction or operation of the proposed project would have the potential to result in significant environmental impacts related to air quality in the context of the Appendix G Environmental Checklist criteria of the CEQA Guidelines. Implementation of the proposed project may result in a significant environmental impact related to air quality if the proposed project would:

[a] Conflict with or obstruct implementation of the applicable air quality plan;

[b] Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard;

[c] Expose sensitive receptors to substantial pollutant concentrations; and/or

[d] Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

For this analysis, the Appendix G Thresholds listed above are relied upon. The SDAPCD does not provide quantitative thresholds for determining the significance of construction or mobile source-related impacts. However, the district does specify Air Quality Impact Analysis trigger levels for new or modified stationary sources (SDAPCD Rule 20.2). The SDAPCD sets forth quantitative emissions thresholds below which a stationary source would not have a significant impact on ambient air quality. Project-related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in **Table 3-3** are exceeded.

Table 3-3 lists the screening-level thresholds that can be used to evaluate whether project-related emissions could cause a significant impact on air quality. Emissions below the screening-level thresholds would not cause a significant impact. For nonattainment pollutants, if emissions exceed the thresholds shown in **Table 3-3**, the proposed project could have the potential to result in a cumulatively considerable net increase in these pollutants and, thus, could have a significant impact on the ambient air quality.

TABLE 3-3: SDAPCD AIR QUALITY SIGNIFICANCE THRESHOLDS			
CONSTRUCTION EMISSIONS			
Pollutant	**Total Emissions (Pounds per Day)**		
PM_{10}	100		
$PM_{2.5}$	55		
NO_x	250		
SO_x	250		
CO	550		
VOCs	75 /a/		
OPERATIONAL EMISSIONS			
Pollutant	**Total Emissions**		
	Pounds per Hour	**Pounds per Day**	**Tons per Year**
PM_{10}	—	100	15
$PM_{2.5}$	—	55	10
NO_x	25	250	40
SO_x	25	250	40
CO	100	550	100
Lead and Lead Compounds	—	3.2	0.6
VOCs	—	75 /a/	13.7

Note: /a/ VOC threshold based on the threshold of significance for VOCs from the South Coast Air Quality Management District for the Coachella Valley as stated in the San Diego County Guidelines for Determining Significance.

SOURCE: SDAPCD, 1995, 2016.

With respect to odors, SDAPCD Rule 51 (Public Nuisance) prohibits emission of any material that creates a nuisance for a considerable number of persons or endangers the comfort, health, or safety of any person. A project that proposes a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors.

The SDAPCD document, *Supplemental Guidelines for Submission of Air Toxics "Hot Spots" Program Health Risk Assessments*, provides guidance with which to perform health risk assessments (HRAs) within the SDAB. The current SDAPCD thresholds of significance for TAC emissions from the operations of both permitted and non-permitted sources are combined and are less than 10 in 1 million for cancer and less than one for the chronic hazard index.[21]

[21] SDAPCD, *Supplemental Guidelines for Submission of Air Toxics "Hot Spots" Program Health Risk Assessments (HRAs)*, July 2022.

3.4.2 Methodology

This analysis focuses on the potential impacts to regional and local air quality as a result of implementing the proposed project and addresses both temporary emissions associated with construction activities as well as long-term operational emissions. Emissions are generally quantified on a daily basis and expressed in terms of pounds per day (lbs./day). Detailed emissions modeling files can be found in the **Appendix**. Specific methodologies used to evaluate these emissions are discussed below.

Construction

Construction activities would generate emissions from off-road equipment usage, on-road vehicle travel (truck hauling, vendor deliveries, and workers commuting), architectural coating, and paving. Each of these source types is discussed in more detail below. Construction emissions were calculated using the SDAPCD recommended CalEEMod (Version 2022.1.1.22).

Construction of proposed project components would be subject to SDAPCD Rule 55, Fugitive Dust Control, which requires that proposed construction include steps to restrict visible emissions of fugitive dust beyond the property line. Compliance with Rule 55 would limit fugitive dust (PM_{10} and $PM_{2.5}$) that may be generated during proposed grading and construction activities.

Construction Equipment Exhaust Emissions

Since the majority of off-road equipment used for construction projects are diesel-fueled, CalEEMod assumes all of the equipment operates on diesel fuel which leads to a conservative analysis. CalEEMod employs the following equation to estimate daily emissions of VOC, NO_X, CO, SO_2, PM_{10}, and $PM_{2.5}$ from diesel-fueled off-road construction equipment exhaust:

$$Emission_{DieselEx}[grams] = \sum_{i} (EF_i \times Pop_i \times AvgHp_i \times Load_i \times Activity_i)$$

Where:

$Emission_{DieselEx}$[grams]	=	Emissions from diesel-fueled off-road equipment exhaust [grams]
EF_i	=	Emission factor in grams per horsepower-hour [g/hp-hr.] from OFFROAD2017
Pop_i	=	Population, or number of pieces of equipment
$AvgHP_i$	=	Maximum rated average horsepower [HP]
$Load_i$	=	Load factor (average ratio of actual output to the maximum output, unitless)
$Activity_i$	=	Daily hours of operation
i	=	Equipment type

The OFFROAD model is the statewide emissions inventory for off-road equipment compiled by the CARB; factors from OFFROAD are built into the CalEEMod software based on the project location.

CalEEMod provides options for specifying equipment types, horsepower ratings, load factors, and operational hours per day during each activity. Construction equipment inventories were provided by the Applicant for each phase of construction, and default average equipment horsepower and default load factors derived from the statewide inventory for each type of equipment were relied upon to estimate daily emissions. Daily emissions from construction equipment during each phase were estimated using the equation above and converted from grams to pounds by dividing 453.592 grams per pound.

CalEEMod also estimates fugitive dust emissions associated with construction equipment use in grading activities, demolition debris truck loading, and excavated soil truck loading. The fugitive dust emissions (PM_{10} and $PM_{2.5}$) from grading and leveling activities are calculated using the methodology described in USEPA AP-42. The CalEEMod software assumes that graders and bulldozers will disturb 0.5 acres per day of ground cover during eight hours of use.[22] Detailed equations used to estimate fugitive dust emissions associated with various equipment types—as well as demolition dust and haul truck loading of debris and excavated soil—can be found in the **Appendix** to the CalEEMod User's Guide.[23]

On-Road Vehicle Trips Mobile Source Emissions

Additionally, construction activities generate air pollutant emissions from on-road vehicle exhaust and evaporative and dust emissions from personal vehicles for worker commuting, vendor deliveries of equipment and materials, and trucks for soil and debris hauling. These emissions are based on the number of trips and the VMT, along with emission factors from EMFAC2020, the CARB on-road mobile source emissions model. CalEEMod estimates running exhaust emissions, running evaporative loss VOC emissions, and PM emissions from tire and brake wear as well as entrained road dust. Running exhaust emissions of VOC, NO_X, CO, SO_2, PM_{10}, and $PM_{2.5}$ are estimated in CalEEMod using the following equation:

$$Emissions_{Pollutant} = VMT \times EF_{running,pollutant}$$

Where:

$Emissions_{pollutant}$	=	Emissions from vehicle running for each pollutant [grams]
VMT	=	Vehicle miles traveled
$EF_{running,pollutant}$	=	Emission factor for running exhaust emissions in grams per mile [g/mi]

The CalEEMod program contains default trip lengths for workers, vendors, and material hauling based on regional survey data. The EMFAC2020 mobile source emission rates are built into the program as well. Running exhaust is the primary mobile source of VOC, NO_X, CO, and SO_2 emissions associated with vehicle travel. Vehicle trip PM_{10} and $PM_{2.5}$ emissions are predominantly attributed to particulate matter generated by degradation of brakes and tires on the road surface,

[22]South Coast Air Quality Management District (SCAQMD), *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds*, February 2011.

[23]California Air Pollution Control Officers Association (CAPCOA), *California Emissions Estimator Model (CalEEMod) Version 2022.1 User's Guide Appendix A Calculation Details for CalEEMod*, April 2022.

with running exhaust being a secondary contributor to total mobile source emissions. Detailed equations used for calculating PM_{10} and $PM_{2.5}$ emissions associated with brake and tire wear—as well as re-entrained dust from paved road travel—can be found in the **Appendix**.[24]

Architectural Coating Emissions

CalEEMod estimates emissions of VOC off-gassing from the application of architectural surface coatings containing solvents. The CalEEMod program uses the following equation to estimate evaporative emissions during architectural coating activities:

$$Emissions_{VOC}[lbs] = EF_{VOC-coating} \times A_{Paint} \times F$$

Where:

$Emissions_{VOC}$	=	Emissions of VOC in pounds [lbs]
$EF_{VOC\text{-}coating}$	=	Emission factor in pounds VOC per square foot [lbs/sq. ft]
A_{Paint}	=	Building Surface Area [square footage]
F	=	Fraction of surface area [%] CalEEMod Default Values: Interior Surfaces = 75% of Building Surface Area Exterior Shell = 25% of Building Surface Area Parking Surfaces = 6% of Parking Area

CalEEMod assumes the total surface area for painting equals 2.7 times the building floor area square footage for residential uses and twice the building floor area square footage for non-residential uses. Based on preliminary design renderings, it is anticipated that no more than approximately 25 percent of the exterior surface area and 75 percent of the interior surface area will require the application of architectural coatings. A majority of the materials for building construction will arrive with coatings pre-applied. CalEEMod assigns the appropriate surface coating emission factor ($EF_{VOC\text{-}coating}$) to interior and exterior surfaces and parking surfaces. CalEEMod calculates the surface coating emission factor using the following equation:

$$EF_{VOC-coating}\left[{}^{lb}/_{sq.ft}\right] = \frac{C_{VOC}}{453.592\ {}^{g}/_{lb}} \times \frac{3.785\ {}^{L}/_{Gal}}{180\ sq.\ ft}$$

Where:

$EF_{VOC\text{-}coating}$	=	Emission factor in pounds VOC per square foot [lbs./sq-ft]
C_{VOC}	=	VOC content of coating in grams per liter [g/L]

[24] *Ibid.*

The emission factors for coating categories are calculated using the equation above based on default VOC content provided by the air districts or CARB's statewide limits. Project-specific VOC contents for architectural coatings can be entered into CalEEMod if included as a design feature.

Paving Emissions

CalEEMod estimates VOC off-gassing emissions from asphalt paving of parking lots using the following equation based on the acreage of the parking lot entered on the land use input screen:

$$E_{VOC,paving}\,[lbs] = EF_{paving} \times A_{parking}$$

Where:

$E_{VOC\text{-}paving}$	=	Emissions of VOC in pounds
EF_{paving}	=	Emission factor in pounds per acre [lbs./acre]; Default = 2.62 lbs./acre
$A_{parking}$	=	Area of the parking lot [acres]

Operations

Analysis of the proposed project impact on regional air quality during long-term operations (i.e., after construction is complete) takes into consideration three types of sources: (1) area; (2) energy; and (3) stationary. Area source emissions are generated by, among other things, landscape equipment, fireplaces, and the use of consumer products. Energy source emissions are generated as a result of activities in buildings for which natural gas is used (e.g., natural gas for heat or cooking). Stationary source emissions are generated from proposed emergency generators.

Criteria pollutants are emitted during the generation of electricity at fossil fuel power plants. When electricity is used in buildings, the electricity generation typically takes place at off-site power plants, the majority of which burn fossil fuels. Because power plants are existing stationary sources permitted by air districts and/or the USEPA, criteria pollutant emissions are generally associated with the power plants themselves and not individual buildings or electricity users. Additionally, criteria pollutant emissions from power plants are subject to local, State, and federal control measures, which can be considered to be the maximum feasible level of mitigation for stack emissions. CalEEMod, therefore, does not calculate criteria pollutant emissions from regional power plants associated with building electricity use.

SDAPCD's CalEEMod model was used to estimate emissions during operation. Area source emissions are based on natural gas (building heating and water heaters), landscaping equipment, and consumer product usage (including paints) rates provided in CalEEMod. Natural gas usage factors in CalEEMod are based on the California Energy Commission (CEC) *California Commercial End Use Survey* data set, which provides energy demand by building type and climate zone.

To determine if a significant air quality impact would occur, the net increase in operational emissions was compared against SDAPCD's significance thresholds presented in **Table 3-3**. Refer to the **Appendix** for detailed operational modeling data.

Emissions Calculations

Operations would generate emissions of air pollutants from a variety of sources, including area sources including natural gas combustion from water heaters, landscaping equipment, and the use of consumer products. Periodic re-application of architectural coatings would generate VOC off-gassing emissions on a recurring yet infrequent basis; CalEEMod assumes the re-application rate is once every ten years. CalEEMod estimates emissions from these sources based on the land use type and size, as well as default or project-specific trip generation data. Area source emissions are based on natural gas combustion rates for building heating, water heaters and cooking, landscape equipment fuel combustion, and consumer products usage (including paints) rates built into the CalEEMod program. Natural gas usage factors in CalEEMod are based on the CEC Commercial End Use Survey data set, which provides energy demand by building type and climate zone. The following discussions provide a succinct overview of the operational emissions sources and processes that are accounted for in the CalEEMod program.

Area Source Emissions

Area source emissions were calculated using CalEEMod default assumptions for the government office building land use. CalEEMod does not include fire stations as a listed land use category. The land use category that would be most similar to the proposed project would be a government office building. CalEEMod defines a government office building land use to be an individual building containing either the entire function or simply one agency of a city, county, state, federal, or other governmental unit. Area sources include VOC off-gassing from consumer products use and architectural coatings, as well as emissions from landscape maintenance equipment. Consumer products are chemically formulated products used by household and institutional consumers—such as detergents, cleaning compounds, polishes, floor finishes, personal care products, disinfectants, and sanitizers—but does not include other paint products, furniture coatings, or architectural coatings.

CalEEMod uses the following equation to calculate daily VOC emissions from consumer products use:

$$E_{VOC,consumer\ products}\ [lbs]\ =\ EF_{VOC,consumer\ products}\ \left[{}^{lbs}/_{sq.ft}\right] \times\ A_{building}\ [sq.ft]$$

Where:

$E_{VOC,\ consumer\ products}$	=	Emissions of VOC in pounds per day
$EF_{VOC,\ consumer\ products}$	=	Emission factor in pounds per square foot of building area per day
$A_{building}$	=	Total square footage (floor area) of all buildings

In addition to consumer products use, CalEEMod estimates daily and annual VOC emissions from operational application of architectural coatings. Operational architectural coating VOC emissions are estimated using the same equation presented above under construction sources assuming an average reapplication rate of once every ten years.

Landscape Equipment

Operational emissions associated with landscape maintenance equipment are also estimated in CalEEMod, which include fuel combustion emissions from equipment such as lawn mowers, roto tillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers. The emissions associated with landscape equipment use were processed using OFFROAD and the CARB *Technical Memo: Change in Population and Activity Factors for Land and Garden Equipment*.[25] The CARB used the results of the inventory-wide emissions processing to derive two landscaping emissions factors: one for commercial landscape equipment in terms of grams per square foot of non-residential building space per day, and a second for residential landscape equipment in terms of grams per dwelling unit per day. These emission factors are multiplied by the number of operational days per year to estimate annual emissions within CalEEMod. Annual operating days are 250 for non-residential projects.

Building Energy Use

The consumption of fossil fuels to generate electricity and to provide heating and hot water generates criteria pollutants. Future fuel consumption rates are estimated based on the specific square footage of the new fire station included in the proposed project. Energy use (off-site electricity generation and on-site natural gas combustion) for the proposed project is calculated within CalEEMod using the CEC Commercial End-Use Survey (CEUS) data set.[26] This data set provides energy intensities of different land uses throughout the state and in different climate zones. Since the data contained in the CEUS is from 2002, the CalEEMod software incorporates correction factors to reflect compliance with the Title 24 Building Standards Code. CalEEMod defaults are the 2019 Title 24 energy efficiency standards. The Title 24 energy efficiency standards are updated every three years. All new construction associated with the proposed project will be subject to the requirements of the 2022 Title 24 energy efficiency standards, which went into effect in January 2023 and are more stringent than the 2019 standards. Therefore, electricity and natural gas consumption estimated using CalEEMod represent conservative approximations of future operational building energy use.

Toxic Air Contaminants – Construction & Operations

Potential TAC impacts are initially evaluated by conducting a qualitative analysis consistent with the CARB Handbook and SDAPCD guidance, both of which are discussed in detail below. The qualitative analysis consists of reviewing the proposed project to identify any new or modified TAC emission sources and evaluating the potential for such sources to cause significant TAC impacts. If the qualitative evaluation determines the potential for significant impacts from a new TAC source, or modification of an existing TAC emissions source, a more detailed dispersion analysis is conducted to evaluate estimated TAC emissions against the applicable SDAPCD significance thresholds based on downwind sensitive receptor locations.

[25]CARB, *OFFROAD Modeling Change Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment*, revised June 2003.

[26]CEC*, Commercial End-Use Survey,* 2006.

a. State Guidance

CARB published the *Air Quality and Land Use Handbook* (CARB Handbook) on April 28, 2005, to serve as a general guide for considering health effects associated with siting sensitive receptors proximate to sources of TAC emissions.[27] The recommendations provided therein are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts. The goal of the guidance document is to protect sensitive receptors, such as children, the elderly, acutely ill, and chronically ill persons, from exposure to TAC emissions. Some examples of CARB's siting recommendations include the following: (1) avoid siting sensitive receptors within 500 feet of a freeway, urban road with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day; (2) avoid siting sensitive receptors within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week); and (3) avoid siting sensitive receptors within 300 feet of any dry cleaning operation using perchloroethylene and within 500 feet of operations with two or more machines.

CARB published a supplemental technical advisory entitled *Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways* as a follow-up to the *Handbook*. It is intended to provide planners and other stakeholders involved in land use planning and decision-making with information on scientifically based strategies (e.g., solid barriers, vegetation buffers for pollutant dispersion, and indoor high efficiency filtration) to reduce exposure to traffic emissions near high-volume roadways in order to protect public health and promote equity and environmental justice.

b. Regional Guidance

The SDAPCD has adopted two rules to limit cancer and non-cancer health risks from facilities located within its jurisdiction. Rule 1210 (Toxic Air Contaminants Health Risks - Public Notification and Risk Reduction) implements the public notification and risk reduction requirements of State law, and requires facilities with high potential health risk levels to reduce health risks below significant risk levels. In addition, Rule 1200 (Toxic Air Contaminants - New Source Review) establishes acceptable risk levels and emission control requirements for new and modified facilities that may emit additional TACs. Under Rule 1200, permits to operate may not be issued when emissions of TACs result in an incremental cancer risk greater than 1 in 1 million without application of Toxics-BACT (T-BACT), or an incremental cancer risk greater than 10 in 1 million with application of T-BACT, or a health hazard index (chronic and acute) greater than one.[28] The human health risk analysis is based on the time, duration, and exposures expected.

[27]CARB, *Air Quality and Land Use Handbook: A Community Health Perspective*, April 2005.

[28]SDAPCD, *Regulations XII – Toxic Air Contaminants: Rule 1200 – Toxic Air Contaminants - New Source Review*, September 19, 2023.

3.4.3 Analysis of Project Impacts

[a] Would the proposed project conflict with or obstruct implementation of the applicable air quality plan? (*Less-Than-Significant Impact*)

Impact Analysis

The SDAPCD and SANDAG are responsible for developing and implementing the clean air plans for attainment and maintenance of the ambient air quality standards in the SDAB, specifically, the SIP and RAQS. For the purpose of this discussion, the relevant federal air quality plan is the ozone maintenance plan, and the RAQS is the applicable plan for purposes of state air quality planning.[29] Both plans reflect growth projections in the SDAB. The federal O_3 maintenance plan, which is part of the SIP, was adopted in 2012. The most recent O_3 attainment plan was adopted in 2022. The SIP includes a demonstration that current strategies and tactics will maintain acceptable air quality in the SDAB based on the NAAQS. The RAQS was initially adopted in 1991 and is updated on a triennial basis (most recently in 2022). The RAQS outlines SDAPCD's strategies and control measures designed to attain the state air quality standards for O_3. The SIP and RAQS rely on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County as a whole and the cities in the County, to project future emissions and determine the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by the County and the cities in the County as part of the development of their general plans.

If a project proposes development that is greater than that anticipated in the local plan and SANDAG's growth projections, the project might be in conflict with the SIP and RAQS and may contribute to a potentially significant cumulative impact on air quality. The proposed project would replace the existing North County Fire Protection District Station No. 4 with a new fire station and would not change the existing land use nor increase the population. Implementation of the proposed project would not materially change the nature of existing land uses on the project site, and would not result in increases in employment within the County.

The SDAPCD does not provide guidance regarding the analysis of impacts associated with air quality plan conformance. However, the County's Guidelines for Determining Significance and Report and Format and Content Requirements – Air Quality discusses conformance with the RAQS.[30] The guidance indicates that if a project, in conjunction with other projects, contributes to growth projections that would not exceed SANDAG's growth projections for the County, the project would not be in conflict with the RAQS. As previously discussed, the proposed project would not directly or indirectly result in additional population, employment, or housing within the County and would not contribute to growth in the region. Therefore, impacts would be less than significant.

Mitigation Measures

Impacts would be less than significant; no mitigation measures are required.

[29]SDAPCD, *Redesignation Request and Maintenance Plan for the 1997 National Ozone Standard for San Diego County*, December 5, 2012.

[30]County of San Diego, *Guidelines for Determining Significance and Format and Content Requirements – Air Quality*, March 19, 2007.

[b] Would the proposed project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard? (*Less-Than-Significant Impact*)

Impact Analysis

The SDAB is presently designated as nonattainment of either the federal or state ambient air quality standards for O_3, PM_{10}, and $PM_{2.5}$. Therefore, there is an ongoing regional cumulative impact associated with these air pollutants. The SDAPCD published guidance addressing the evaluation of potential cumulative impacts for CEQA projects. The SDAPCD asserts that if construction or operation of a project would produce maximum daily emissions exceeding the applicable project-specific thresholds, those emissions would also be considered cumulatively significant. Conversely, if construction and operation of a project would not generate emissions of sufficient quantity to exceed any of the applicable mass daily thresholds, then that project and its associated emissions would be considered less than significant in the cumulative context.

I. Construction

Construction activities have the potential to create air quality impacts through emissions generated using heavy-duty construction equipment and through vehicle trips associated with construction worker commutes and haul and delivery vehicles traveling to and from the proposed project. Fugitive dust emissions would primarily result from site preparation and grading activities. It is mandatory for all construction projects in the SDAB to comply with SDAPCD Rule 50 for Visible Emissions and Rule 55 for Fugitive Dust. Rule 50 prohibits the discharge of visible emissions darker in shade than that designated as Number 1 on the Ringelmann Chart for more than three minutes in any period of 60 consecutive minutes. Rule 55 includes the following standards for airborne dust beyond the property line and track-out/carry-out:

- **Airborne Dust Beyond the Property Line**: No person shall engage in construction or demolition activity subject to this rule in a manner that discharges visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than three minutes in any 60-minute period.

- **Track-Out/Carry-Out**: Visible roadway dust as a result of active operations, spillage from transport trucks, erosion, or track-out/carry-out shall:

    - be minimized by the use of any of the following or equally effective track-out/carry-out and erosion control measures that apply to the project or operation: track-out grates or gravel beds at each egress point, wheel-washing at each egress during muddy conditions, soil binders, chemical soil stabilizers, geotextiles, mulching, or seeding; and for outbound transport trucks: using secured tarps or cargo covering, watering, or treating of transported material; and

    - be removed at the conclusion of each workday when active operations cease, or every 24 hours for continuous operations. If a street sweeper is used to remove any track-out/carry-out, only PM_{10}-efficient street sweepers certified to meet the current SDAPCD requirements shall be used. The use of blowers for removal of track-out/carry-out is prohibited under any circumstances.

NO_X emissions would predominantly result from the use of construction equipment and haul truck trips. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions.

The air quality analysis focuses on maximum daily emissions during construction activities. Project-specific information was provided describing the anticipated schedule of construction activities. Details pertaining to the schedule and equipment can be found in the California Emissions Estimator (CalEEMod, Version 2022.1.1.22) output files in the **Appendix**. Construction phases would generally not overlap except for potential overlap between the Paving and Architectural Coating phases. The analysis in **Table 3-4** identifies the maximum daily emissions that would occur during construction of the proposed project and compares those emissions to the applicable SDAPCD threshold of significance. Daily construction activities would fluctuate throughout the fourteen-month construction period, and the maximum daily emissions identified in **Table 3-4** that are compared to the significance thresholds do not represent emissions that would be occurring every day of construction. Emissions would not exceed the SDAPCD significance thresholds. Therefore, construction activities would result in a less than significant impact related to cumulative impacts.

TABLE 3-4: ESTIMATED CONSTRUCTION EMISSIONS

Construction Phase	Maximum Daily Emissions (Pounds Per Day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
EMISSIONS ANALYSIS						
Site Preparation	0.7	5.2	7.3	<0.1	1.3	0.3
Grading	1.5	12.8	13.3	<0.1	3.5	1.7
Building Construction	0.8	6.8	12.9	<0.1	0.7	0.3
Paving	0.6	4.0	6.3	<0.1	0.8	0.3
Architectural Coating	2.0	1.5	2.2	<0.1	0.1	0.1
Paving + Architectural Coating	2.6	5.5	8.5	<0.1	0.9	0.3
Demolition of Existing Structures	0.7	6.4	8.3	<0.1	1.1	0.4
IMPACT ANALYSIS						
Maximum Daily Emissions	2.6	12.8	13.3	<0.1	3.5	1.7
Significance Threshold	75	250	550	250	100	55
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Emissions modeling files can be found in the **Appendix**.
SOURCE: TAHA, 2024.

II. Operations

The proposed project would generate regional operational emissions from area sources, energy use, and stationary sources. As discussed above, CalEEMod was used to estimate daily operational air pollutant emissions using the project-specific land use data obtained from the site plans. CalEEMod default values were used to estimate emissions from the proposed project area, energy, and stationary sources.

Table 3-5 presents the CalEEMod results for daily operational emissions estimates of the proposed project from area sources, energy use, and stationary sources. Daily emissions of ozone precursors and criteria pollutants would be below the SDAPCD thresholds. Energy source emissions are included for informational purposes, as implementation of the proposed project would not result in increases in natural gas consumption at the project site. Operational activities would not result in a new substantial source of air pollutant emissions.

TABLE 3-5: PROPOSED PROJECT OPERATIONAL EMISSIONS

Operational Activity	Maximum Daily Emissions (Pounds Per Day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
EMISSIONS ANALYSIS						
Area Sources	0.3	<0.1	0.4	<0.1	<0.1	<0.1
Energy Sources	<0.1	<0.1	0.1	<0.1	<0.1	<0.1
Stationary Sources	0.9	4.6	3.6	<0.1	0.4	0.4
IMPACT ANALYSIS						
Total Daily Emissions	1.2	4.6	4.1	<0.1	0.4	0.4
Regional Threshold	75	250	550	250	100	55
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Emissions modeling files can be found in the **Appendix**.
SOURCE: TAHA, 2024.

Regarding long-term cumulative operational emissions in relation to consistency with local air quality plans, the SIP and RAQS serve as the primary air quality planning documents for the state and SDAB, respectively. Therefore, projects that propose development that is consistent with the growth anticipated by local plans would be consistent with the SIP and RAQS and would not be considered to result in cumulatively considerable impacts from operational emissions. The proposed project does not include the addition of housing and would not result in significant regional growth that is not accounted for within the RAQS. As a result, the proposed project would not result in a cumulatively considerable contribution to regional O_3 concentrations or other criteria pollutant emissions. Therefore, operational activity would result in a less than significant impact related to cumulative impacts.

Mitigation Measures

Impacts would be less than significant; no mitigation measures are required.

[c] Would the proposed project expose sensitive receptors to substantial pollutant concentrations? (*Less-Than-Significant Impact*)

Impact Analysis

I. Construction

The sensitive receptors near the project site (e.g., residences) may be exposed to pollutant concentrations from emissions sources involved in construction activities. If maximum daily emissions remain below the SDAPCD significance thresholds during construction activities, it is highly unlikely that air pollutant concentrations in ambient air would reach substantial levels sufficient to create public health concerns for sensitive receptors. As shown on **Table 3-4**, construction of the proposed project would not exceed any significance thresholds for any criteria pollutants or ozone precursors.

In addition to impacts from criteria pollutants, typical land development project impacts may include emissions of TACs or hazardous air pollutants. For typical land use projects that do not propose stationary source of emissions regulated by SDAPCD, DPM is the primary TAC of concern. The use of heavy-duty construction equipment and haul trucks during construction activities would release DPM to the atmosphere through exhaust emissions. However, carcinogenic risks are typically assessed over timescales of several decades, as the carcinogenic dose response is cumulative in nature. Construction of the proposed project would last for approximately fourteen months, and daily emissions of DPM would fluctuate throughout the construction period. All construction equipment would be maintained in accordance with the CARB Portable Engine Air Toxics Control Measure and the Off-Road Diesel Regulation to control emissions to the maximum extent feasible. Additionally, construction of the proposed project would comply with SDAPCD Rule 1200 – Toxic Air Contaminants - New Source Review and Rule 1210 – Toxic Air Contaminants Health Risks - Public Notification and Risk Reduction. Therefore, construction of the proposed project would result in a less than significant impact related to the exposure of sensitive receptors to substantial pollutant concentrations.

II. Operations

The proposed project would replace the existing San Diego North County Fire Station No. 4 with a new fire station and would not change the existing land use. Future operation of the proposed project would be similar to existing operations and would not create a new substantial permanent source of air pollutant emissions to the project area. The operational emissions analysis shown in **Table 3-5** demonstrates that operation of the proposed project would not produce emissions capable of resulting in substantial pollutant concentrations at sensitive receptor locations. Therefore, operation of the proposed project would result in a less than significant impact related to the exposure of sensitive receptors to substantial pollutant concentrations.

Mitigation Measures

Impacts would be less than significant; no mitigation measures are required.

[d] Would the proposed project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? (Less-Than-Significant Impact)

Impact Analysis

I. Construction

A significant impact would occur if construction activities would result in the creation of nuisance odors that would be noxious to a substantial number of people, or visible dust plumes. Potential sources that may produce objectionable odors include equipment exhaust, application of asphalt and architectural coatings, and other interior and exterior finishes. Odors from these sources would be localized and generally confined to the immediate area surrounding the proposed project and would be temporary in nature and would not persist beyond the termination of construction activities. The proposed project would utilize typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. All construction activities would be subject to SDAPCD Rule 51 (Nuisance), which prohibits emissions from any source whatsoever in such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to the public health or damage to property and prohibits emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of any person. In addition, as construction-related emissions dissipate away from the construction area, the odors associated with these emissions would also decrease and would be quickly diluted. Therefore, the proposed project would result in a less-than-significant impact related to construction odors.

II. Operations

Land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies and fiberglass molding.[31] The proposed project does not include a land use typically associated with odor complaints and the implementation of the proposed project would not include significant sources of odors. Therefore, the proposed project would result in a less-than-significant impact related to operations odors.

Mitigation Measures

Impacts would be less than significant; no mitigation measures are required.

[31]SCAQMD, *CEQA Air Quality Handbook (Version 3)*, Revised 2001.

3.5 CUMULATIVE IMPACTS

Impact Analysis

Ambient air quality conditions and pollutant concentrations are generally influenced by the cumulative effect of air pollutant emissions from all sources within a particular region, and attainment dates and control strategies incorporated into air quality plans are contingent upon compliance with regulatory standards and enforcement at the administrative level as well as the facility and project level. The SDAB is presently designated as nonattainment of either the federal or state ambient air quality standards for O_3, PM_{10}, and $PM_{2.5}$. Therefore, there is an ongoing regionally significant cumulative impact associated with these air pollutants as an existing condition prior to implementation of the proposed project.

The County published guidance addressing the evaluation of potential cumulative impacts for CEQA projects. The SDAPCD asserts that if construction or operation of a project would produce maximum daily emissions exceeding the applicable project-specific thresholds, then those emissions would also be considered cumulatively significant. For this reason, the SDAPCD applies the same project-level thresholds to cumulative assessments. Conversely, if construction and operation of a project would not generate emissions of sufficient quantity to exceed any of the applicable daily thresholds, then that project and its associated emissions would be considered less than significant in the cumulative context despite the existing cumulatively significant conditions. Emissions that would be generated by construction and operation of the proposed project are addressed in accordance with the rationale established by the SDAPCD.

I. Construction

Construction of the proposed project would involve temporary emissions sources of air pollutants that include ozone precursors and particulate matter, for which there is an ongoing cumulative impact in the region. **Table 3-4**, above, presents the results of the construction emissions modeling. Construction emissions of ozone precursors VOC and NO_X as well as nonattainment pollutants PM_{10} and $PM_{2.5}$ would remain below applicable SDAPCD thresholds. Therefore, short-term operation of the proposed project would result in a less than significant cumulative impact related to emissions of nonattainment pollutants according to the County guidance. Construction emissions would not significantly contribute to the existing cumulatively considerable impact.

II. Operations

Future operation of the proposed project would introduce permanent sources of air pollutants that include ozone precursors and particulate matter, for which there is an ongoing cumulative impact in the region. **Table 3-5**, above, presents the results of the operational emissions modeling. Operational emissions of ozone precursors VOC and NO_X as well as nonattainment pollutants PM_{10} and $PM_{2.5}$ would remain below applicable SDAPCD thresholds. Therefore, long-term operation of the proposed project would result in a less than significant cumulative impact related to emissions of nonattainment pollutants according to the County guidance. Operational emissions would not significantly contribute to the existing cumulatively considerable impact.

Mitigation Measures

Impacts would be less-than-significant, and no mitigation measures are required.

4.0 REFERENCES

42 United States Code §7401 et seq. (1970).

CAPCOA, *California Emissions Estimator Model (CalEEMod Version 2022.1) User's Guide*, April 2022.

CAPCOA, *California Emissions Estimator Model (CalEEMod) Version 2022.1) User's Guide – Appendix A Calculation Details for CalEEMod*, April 2022.

CAPCOA, *CalEEMod User's Guide – Appendix E Technical Source Documentation*, April 2022.

CARB, *Air Quality and Land Use Handbook: A Community Health Perspective*, April 2005.

CARB, *Air Quality Data Statistics: Top 4 Summary,* http://www.arb.ca.gov/adam/topfour/topfour1.php, accessed March 21, 2024.

CARB, *Ambient Air Quality Standards*, https://ww3.arb.ca.gov/research/aaqs/aaqs2.pdf, May 4, 2016.

CARB, *California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles*, amended September 2010.

CARB, *Hydrogen Sulfide and Health*, https://ww2.arb.ca.gov/resources/hydrogen-sulfide-and-health, accessed March 21, 2024.

CARB, *OFFROAD Modeling Change Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment*, Revised June 2003.

CARB, *Vinyl Chloride and Health*, https://ww2.arb.ca.gov/resources/vinyl-chloride-and-health, accessed March 21, 2024.

CARB, *Visibility-Reducing Particles and Health*, https://www.arb.ca.gov/research/aaqs/common-pollutants/vrp/vrp.htm, accessed March 21, 2024.

CEC, *California Commercial End Use Survey*, 2006.

County of San Diego, *County of San Diego General Plan: A Plan for Growth, Conservation and Sustainability*, August 3, 2011.

County of San Diego, *Guidelines for Determining Significance and Format and Content Requirements – Air Quality*, March 19, 2007.

EPA, *Annual Data Summary – Concentration by Monitor 2020, 2021, 2022*, https://aqs.epa.gov/aqsweb/airdata/download_files.html#Annual, accessed March 27, 2024.

SANDAG, *Final 2021 Regional Plan*, December 11, 2021.

SANDAG, *2023 Regional Transportation Improvement Program*, September 23, 2022.

SCAQMD, *CEQA Air Quality Handbook (Version 3)*, Revised 2001.

SCAQMD, *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds*, February 2011.

SDAPCD, *Annual Air Quality Monitoring Network Report 2020*, May 14, 2021.

SDAPCD, *Annual Air Quality Monitoring Network Report 2021*, May 17, 2022.

SDAPCD, *Annual Air Quality Monitoring Network Report 2022*, May 23, 2023.

SDAPCD, *Attainment Status*, available at https://www.sdapcd.org/content/sdapcd/planning/attainment-status.html, accessed March 21, 2024.

SDAPCD, *Redesignation Request and Maintenance Plan for the 1997 National Ozone Standard for San Diego County*, December 5, 2012.

SDAPCD, *Regulations II – Permits: Rule 20.2 – New Source Review Non-Major Stationary Sources*, June 26, 2019.

SDAPCD, *Regulations IV – Prohibitions: Rule 50 – Visible Emissions*, August 13, 1997.

SDAPCD, *Regulations IV – Prohibitions: Rule 51 – Nuisance*, January 1, 1969.

SDAPCD, *Regulations IV – Prohibitions: Rule 55 – Fugitive Dust Control*, June 24, 2009.

SDAPCD, *Regulations IV – Prohibitions: Rule 67.0.1 – Architectural Coatings*, February 10, 2021.

SDAPCD, *Regulations XII – Toxic Air Contaminants: Rule 1200 – Toxic Air Contaminants - New Source Review*, September 19, 2023.

SDAPCD, *Regulations XII – Toxic Air Contaminants: Rule 1210 Toxic Air Contaminants Health Risks - Public Notification and Risk Reduction*, September 19, 2023.

USEPA, *Air Quality Criteria for Carbon Monoxide [EPA 600/P-099/001F]*, 2000.

USEPA, *Clean Air Act Overview, Clean Air Act Table of Contents by Title,* https://www.epa.gov/clean-air-act-overview/clean-air-act-text, accessed March 21, 2024.

USEPA, *NAAQS Table*, https://www.epa.gov/criteria-air-pollutants/naaqs-table, accessed March 21, 2024.

USEPA, *Summary of the Clean Air Act*, https://www.epa.gov/laws-regulations/summary-clean-air-act, accessed March 21, 2024.

USEPA, *Timeline of Major Accomplishments in Transportation, Air Pollution, and Climate Change*, https://www.epa.gov/transportation-air-pollution-and-climate-change/timeline-major-accomplishments-transportation-air, accessed March 21, 2024.

APPENDIX

CalEEMod Files

San Diego North County Fire Station Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	San Diego North County Fire Station
Construction Start Date	11/4/2024
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	1.80
Location	33.34095104369612, -117.16053281147936
County	San Diego
City	Unincorporated
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6247
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Other Asphalt Surfaces	36.2	1000sqft	0.83	0.00	3,965	—	—	Parking lot and driveways
Government Office Building	9.73	1000sqft	0.00	0.00	0.00	—	—	Proposed fire station

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-10-A	Water Exposed Surfaces

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.68	1.13	4.43	6.12	0.01	0.19	0.15	0.34	0.18	0.03	0.21	—	989	989	0.04	0.01	0.62	995
Mit.	0.68	1.13	4.43	6.12	0.01	0.19	0.15	0.34	0.18	0.03	0.21	—	989	989	0.04	0.01	0.62	995
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.07	1.74	16.1	16.8	0.02	0.78	6.69	7.47	0.71	2.72	3.44	—	2,696	2,696	0.11	0.05	0.02	2,707
Mit.	2.07	1.74	16.1	16.8	0.02	0.78	3.13	3.90	0.71	1.12	1.84	—	2,696	2,696	0.11	0.05	0.02	2,707
% Reduced	—	—	—	—	—	—	53%	48%	—	59%	47%	—	—	—	—	—	—	—

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.31	0.30	2.45	3.46	0.01	0.11	0.38	0.49	0.10	0.16	0.26	—	550	550	0.02	0.01	0.04	553
Mit.	0.31	0.30	2.45	3.46	0.01	0.11	0.19	0.30	0.10	0.07	0.17	—	550	550	0.02	0.01	0.04	553
% Reduced	—	—	—	—	—	—	50%	39%	—	57%	36%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.06	0.05	0.45	0.63	< 0.005	0.02	0.07	0.09	0.02	0.03	0.05	—	91.1	91.1	< 0.005	< 0.005	0.01	91.6
Mit.	0.06	0.05	0.45	0.63	< 0.005	0.02	0.03	0.05	0.02	0.01	0.03	—	91.1	91.1	< 0.005	< 0.005	0.01	91.6
% Reduced	—	—	—	—	—	—	50%	39%	—	57%	36%	—	—	—	—	—	—	—
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	250	550	250	—	—	100	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	250	550	250	—	—	100	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.68	1.13	4.43	6.12	0.01	0.19	0.15	0.34	0.18	0.03	0.21	—	989	989	0.04	0.01	0.62	995
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.07	1.74	16.1	16.8	0.02	0.78	6.69	7.47	0.71	2.72	3.44	—	2,696	2,696	0.11	0.03	0.01	2,707
2025	1.33	1.13	10.1	10.4	0.02	0.46	5.75	6.21	0.43	2.62	3.05	—	1,786	1,786	0.07	0.05	0.02	1,793
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.12	0.10	0.90	0.96	< 0.005	0.04	0.36	0.40	0.04	0.14	0.18	—	153	153	0.01	< 0.005	0.01	154
2025	0.31	0.30	2.45	3.46	0.01	0.11	0.38	0.49	0.10	0.16	0.26	—	550	550	0.02	0.01	0.04	553
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.02	0.02	0.16	0.18	< 0.005	0.01	0.07	0.07	0.01	0.03	0.03	—	25.4	25.4	< 0.005	< 0.005	< 0.005	25.5
2025	0.06	0.05	0.45	0.63	< 0.005	0.02	0.07	0.09	0.02	0.03	0.05	—	91.1	91.1	< 0.005	< 0.005	0.01	91.6

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.68	1.13	4.43	6.12	0.01	0.19	0.15	0.34	0.18	0.03	0.21	—	989	989	0.04	0.01	0.62	995
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.07	1.74	16.1	16.8	0.02	0.78	3.13	3.90	0.71	1.12	1.84	—	2,696	2,696	0.11	0.03	0.01	2,707
2025	1.33	1.13	10.1	10.4	0.02	0.46	2.51	2.97	0.43	1.05	1.48	—	1,786	1,786	0.07	0.05	0.02	1,793
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2024	0.12	0.10	0.90	0.96	< 0.005	0.04	0.17	0.21	0.04	0.06	0.10	—	153	153	0.01	< 0.005	0.01	154
2025	0.31	0.30	2.45	3.46	0.01	0.11	0.19	0.30	0.10	0.07	0.17	—	550	550	0.02	0.01	0.04	553
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.02	0.02	0.16	0.18	< 0.005	0.01	0.03	0.04	0.01	0.01	0.02	—	25.4	25.4	< 0.005	< 0.005	< 0.005	25.5
2025	0.06	0.05	0.45	0.63	< 0.005	0.02	0.03	0.05	0.02	0.01	0.03	—	91.1	91.1	< 0.005	< 0.005	0.01	91.6

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.58	1.66	10.2	0.87	0.01	0.00	34.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.58	1.66	10.2	0.87	0.01	0.00	34.7
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.58	1.66	10.2	0.87	0.01	0.00	34.7
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00	< 0.005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.42	0.28	1.70	0.14	< 0.005	0.00	5.74
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	250	550	250	—	—	100	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	250	550	250	—	—	100	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	13.7	40.0	100	40.0	—	—	15.0	—	—	10.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	0.01	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	3.70	1.66	5.37	0.38	0.01	—	17.6
Waste	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.58	1.66	10.2	0.87	0.01	0.00	34.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	3.70	1.66	5.37	0.38	0.01	—	17.6
Waste	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.58	1.66	10.2	0.87	0.01	0.00	34.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	0.01	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	3.70	1.66	5.37	0.38	0.01	—	17.6
Waste	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.58	1.66	10.2	0.87	0.01	0.00	34.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	< 0.005	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.61	0.28	0.89	0.06	< 0.005	—	2.92
Waste	—	—	—	—	—	—	—	—	—	—	—	0.81	0.00	0.81	0.08	0.00	—	2.82
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.00	< 0.005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.42	0.28	1.70	0.14	< 0.005	0.00	5.74

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	0.01	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	3.70	1.66	5.37	0.38	0.01	—	17.6
Waste	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.58	1.66	10.2	0.87	0.01	0.00	34.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	3.70	1.66	5.37	0.38	0.01	—	17.6
Waste	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.58	1.66	10.2	0.87	0.01	0.00	34.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	0.01	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	3.70	1.66	5.37	0.38	0.01	—	17.6
Waste	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.58	1.66	10.2	0.87	0.01	0.00	34.7

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	< 0.005	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.61	0.28	0.89	0.06	< 0.005	—	2.92
Waste	—	—	—	—	—	—	—	—	—	—	—	0.81	0.00	0.81	0.08	0.00	—	2.82
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.00	< 0.005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.42	0.28	1.70	0.14	< 0.005	0.00	5.74

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	0.41	3.78	4.70	0.01	0.13	—	0.13	0.12	—	0.12	—	707	707	0.03	0.01	—	709
Demolition	—	—	—	—	—	—	0.17	0.17	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	5.26	5.26	< 0.005	< 0.005	< 0.005	5.52
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.02	0.21	0.26	< 0.005	0.01	—	0.01	0.01	—	0.01	—	38.7	38.7	< 0.005	< 0.005	—	38.9
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.29	0.29	< 0.005	< 0.005	< 0.005	0.30
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.41	6.41	< 0.005	< 0.005	—	6.44
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.05	0.05	< 0.005	< 0.005	< 0.005	0.05
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.30	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	67.2	67.2	< 0.005	< 0.005	0.01	68.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	< 0.005	0.31	0.11	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	230	230	0.01	0.04	0.01	241
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.71	3.71	< 0.005	< 0.005	0.01	3.77
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.6	12.6	< 0.005	< 0.005	0.01	13.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.62	0.62	< 0.005	< 0.005	< 0.005	0.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.09	2.09	< 0.005	< 0.005	< 0.005	2.19

3.2. Demolition (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	0.41	3.78	4.70	0.01	0.13	—	0.13	0.12	—	0.12	—	707	707	0.03	0.01	—	709
Demolition	—	—	—	—	—	—	0.17	0.17	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	5.26	5.26	< 0.005	< 0.005	< 0.005	5.52
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.26	< 0.005	0.01	—	0.01	0.01	—	0.01	—	38.7	38.7	< 0.005	< 0.005	—	38.9
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.29	0.29	< 0.005	< 0.005	< 0.005	0.30
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.41	6.41	< 0.005	< 0.005	—	6.44
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.05	0.05	< 0.005	< 0.005	< 0.005	0.05
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.30	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	67.2	67.2	< 0.005	< 0.005	0.01	68.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	< 0.005	0.31	0.11	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	230	230	0.01	0.04	0.01	241
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.71	3.71	< 0.005	< 0.005	0.01	3.77
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.6	12.6	< 0.005	< 0.005	0.01	13.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.62	0.62	< 0.005	< 0.005	< 0.005	0.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.09	2.09	< 0.005	< 0.005	< 0.005	2.19

3.3. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60	0.50	4.60	5.56	0.01	0.24	—	0.24	0.22	—	0.22	—	858	858	0.03	0.01	—	861

Dust From Material Movement	—	—	—	—	—	—	0.53	0.53	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	5.36	5.36	< 0.005	< 0.005	< 0.005	5.63
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.32	0.38	< 0.005	0.02	—	0.02	0.02	—	0.02	—	58.8	58.8	< 0.005	< 0.005	—	59.0
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.37	0.37	< 0.005	< 0.005	< 0.005	0.38
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.73	9.73	< 0.005	< 0.005	—	9.76
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.22	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	45.7	45.7	< 0.005	< 0.005	0.01	46.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.16	3.16	< 0.005	< 0.005	0.01	3.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.52	0.52	< 0.005	< 0.005	< 0.005	0.53
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60	0.50	4.60	5.56	0.01	0.24	—	0.24	0.22	—	0.22	—	858	858	0.03	0.01	—	861
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	5.36	5.36	< 0.005	< 0.005	< 0.005	5.63
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.32	0.38	< 0.005	0.02	—	0.02	0.02	—	0.02	—	58.8	58.8	< 0.005	< 0.005	—	59.0

Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.37	0.37	< 0.005	< 0.005	< 0.005	0.38
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.73	9.73	< 0.005	< 0.005	—	9.76
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.22	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	45.7	45.7	< 0.005	< 0.005	0.01	46.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.16	3.16	< 0.005	< 0.005	0.01	3.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.52	0.52	< 0.005	< 0.005	< 0.005	0.53
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	5.31	5.31	—	2.57	2.57	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	5.36	5.36	< 0.005	< 0.005	< 0.005	5.63
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.58	0.55	< 0.005	0.03	—	0.03	0.02	—	0.02	—	87.2	87.2	< 0.005	< 0.005	—	87.5
Dust From Material Movement	—	—	—	—	—	—	0.27	0.27	—	0.13	0.13	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.27	0.27	< 0.005	< 0.005	< 0.005	0.29
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.4	14.4	< 0.005	< 0.005	—	14.5

Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.05	0.05	< 0.005	< 0.005	< 0.005	0.05
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.32	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	68.5	68.5	< 0.005	< 0.005	0.01	69.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.52	3.52	< 0.005	< 0.005	0.01	3.57
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.58	0.58	< 0.005	< 0.005	< 0.005	0.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	2.07	2.07	—	1.00	1.00	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	5.36	5.36	< 0.005	< 0.005	< 0.005	5.63
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.58	0.55	< 0.005	0.03	—	0.03	0.02	—	0.02	—	87.2	87.2	< 0.005	< 0.005	—	87.5
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.27	0.27	< 0.005	< 0.005	< 0.005	0.29
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.4	14.4	< 0.005	< 0.005	—	14.5
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.05	0.05	< 0.005	< 0.005	< 0.005	0.05
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.32	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	68.5	68.5	< 0.005	< 0.005	0.01	69.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.52	3.52	< 0.005	< 0.005	0.01	3.57
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.58	0.58	< 0.005	< 0.005	< 0.005	0.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.29	1.09	10.1	10.0	0.02	0.46	—	0.46	0.43	—	0.43	—	1,714	1,714	0.07	0.01	—	1,720

Dust From Material Movement	—	—	—	—	—	—	5.31	5.31	—	2.57	2.57	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	5.26	5.26	< 0.005	< 0.005	< 0.005	5.52
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.59	0.59	< 0.005	0.03	—	0.03	0.03	—	0.03	—	101	101	< 0.005	< 0.005	—	101
Dust From Material Movement	—	—	—	—	—	—	0.31	0.31	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.32
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.7	16.7	< 0.005	< 0.005	—	16.7
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.05	0.05	< 0.005	< 0.005	< 0.005	0.05
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.30	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	67.2	67.2	< 0.005	< 0.005	0.01	68.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.98	3.98	< 0.005	< 0.005	0.01	4.04
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.66	0.66	< 0.005	< 0.005	< 0.005	0.67
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Grading (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.29	1.09	10.1	10.0	0.02	0.46	—	0.46	0.43	—	0.43	—	1,714	1,714	0.07	0.01	—	1,720
Dust From Material Movement	—	—	—	—	—	—	2.07	2.07	—	1.00	1.00	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	5.26	5.26	< 0.005	< 0.005	< 0.005	5.52
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.59	0.59	< 0.005	0.03	—	0.03	0.03	—	0.03	—	101	101	< 0.005	< 0.005	—	101

Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.32
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.7	16.7	< 0.005	< 0.005	—	16.7
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.05	0.05	< 0.005	< 0.005	< 0.005	0.05
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.30	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	67.2	67.2	< 0.005	< 0.005	0.01	68.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.98	3.98	< 0.005	< 0.005	0.01	4.04
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.66	0.66	< 0.005	< 0.005	< 0.005	0.67
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.33	3.31	5.38	0.01	0.14	—	0.14	0.13	—	0.13	—	810	810	0.03	0.01	—	812
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.33	3.31	5.38	0.01	0.14	—	0.14	0.13	—	0.13	—	810	810	0.03	0.01	—	812
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.14	1.36	2.21	< 0.005	0.06	—	0.06	0.05	—	0.05	—	333	333	0.01	< 0.005	—	334
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.25	0.40	< 0.005	0.01	—	0.01	0.01	—	0.01	—	55.1	55.1	< 0.005	< 0.005	—	55.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.39	0.33	3.31	5.38	0.01	0.14	—	0.14	0.13	—	0.13	—	810	810	0.03	0.01	—	812
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.33	3.31	5.38	0.01	0.14	—	0.14	0.13	—	0.13	—	810	810	0.03	0.01	—	812
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.14	1.36	2.21	< 0.005	0.06	—	0.06	0.05	—	0.05	—	333	333	0.01	< 0.005	—	334
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.25	0.40	< 0.005	0.01	—	0.01	0.01	—	0.01	—	55.1	55.1	< 0.005	< 0.005	—	55.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	0.51	4.37	5.31	0.01	0.19	—	0.19	0.18	—	0.18	—	823	823	0.03	0.01	—	826
Paving	—	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.03	0.24	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	45.1	45.1	< 0.005	< 0.005	—	45.3
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.47	7.47	< 0.005	< 0.005	—	7.50
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.81	0.00	0.00	0.15	0.15	0.00	0.03	0.03	—	166	166	0.01	0.01	0.62	169
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.67	8.67	< 0.005	< 0.005	0.01	8.79
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.44	1.44	< 0.005	< 0.005	< 0.005	1.46
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	0.51	4.37	5.31	0.01	0.19	—	0.19	0.18	—	0.18	—	823	823	0.03	0.01	—	826
Paving	—	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.24	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	45.1	45.1	< 0.005	< 0.005	—	45.3
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.47	7.47	< 0.005	< 0.005	—	7.50
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.08	0.07	0.05	0.81	0.00	0.00	0.15	0.15	0.00	0.03	0.03	—	166	166	0.01	0.01	0.62	169
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.67	8.67	< 0.005	< 0.005	0.01	8.79
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.44	1.44	< 0.005	< 0.005	< 0.005	1.46
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	1.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	1.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.66	3.66	< 0.005	< 0.005	—	3.67
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.61	0.61	< 0.005	< 0.005	—	0.61
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	1.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	1.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.66	3.66	< 0.005	< 0.005	—	3.67
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.61	0.61	< 0.005	< 0.005	—	0.61
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.1.2. Mitigated

Mobile source emissions results are presented in Sections 2.5. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Government Office Building	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.01	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architect Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	< 0.005	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.01	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	< 0.005	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.04	0.04	< 0.005	< 0.005	—	0.04
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	3.70	1.63	5.33	0.38	0.01	—	17.6
Total	—	—	—	—	—	—	—	—	—	—	—	3.70	1.66	5.37	0.38	0.01	—	17.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.04	0.04	< 0.005	< 0.005	—	0.04
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	3.70	1.63	5.33	0.38	0.01	—	17.6
Total	—	—	—	—	—	—	—	—	—	—	—	3.70	1.66	5.37	0.38	0.01	—	17.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.01	0.01	< 0.005	< 0.005	—	0.01
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	0.61	0.27	0.88	0.06	< 0.005	—	2.91
Total	—	—	—	—	—	—	—	—	—	—	—	0.61	0.28	0.89	0.06	< 0.005	—	2.92

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.04	0.04	< 0.005	< 0.005	—	0.04
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	3.70	1.63	5.33	0.38	0.01	—	17.6
Total	—	—	—	—	—	—	—	—	—	—	—	3.70	1.66	5.37	0.38	0.01	—	17.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.04	0.04	< 0.005	< 0.005	—	0.04
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	3.70	1.63	5.33	0.38	0.01	—	17.6
Total	—	—	—	—	—	—	—	—	—	—	—	3.70	1.66	5.37	0.38	0.01	—	17.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.01	0.01	< 0.005	< 0.005	—	0.01
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	0.61	0.27	0.88	0.06	< 0.005	—	2.91
Total	—	—	—	—	—	—	—	—	—	—	—	0.61	0.28	0.89	0.06	< 0.005	—	2.92

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Total	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Total	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	0.81	0.00	0.81	0.08	0.00	—	2.82

Total	—	—	—	—	—	—	—	—	—	—	—	0.81	0.00	0.81	0.08	0.00	—	2.82

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Total	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Total	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Government Office Building	—	—	—	—	—	—	—	—	—	—	—	0.81	0.00	0.81	0.08	0.00	—	2.82
Total	—	—	—	—	—	—	—	—	—	—	—	0.81	0.00	0.81	0.08	0.00	—	2.82

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	10/13/2025	11/7/2025	5.00	20.0	Demo of Existing Station and Repurposing
Site Preparation	Site Preparation	11/4/2024	12/6/2024	5.00	25.0	Earthwork
Grading	Grading	12/6/2024	1/30/2025	5.00	40.0	Site utilities and foundation
Building Construction	Building Construction	2/3/2025	8/29/2025	5.00	150	Structure

Paving	Paving	9/1/2025	9/26/2025	5.00	20.0	Site work
Architectural Coating	Architectural Coating	9/29/2025	10/10/2025	5.00	10.0	Site work

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	1.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	1.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix

Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	12.0	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.63	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	1.00	1.00	HHDT
Grading	—	—	—	—
Grading	Worker	7.50	12.0	LDA,LDT1,LDT2
Grading	Vendor	—	7.63	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	1.00	1.00	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	0.00	12.0	LDA,LDT1,LDT2
Building Construction	Vendor	0.00	7.63	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	12.0	LDA,LDT1,LDT2
Paving	Vendor	—	7.63	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	12.0	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	7.63	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Demolition	—	—	—	—
Demolition	Worker	7.50	12.0	LDA,LDT1,LDT2

Demolition	Vendor	—	7.63	HHDT,MHDT
Demolition	Hauling	3.20	20.0	HHDT
Demolition	Onsite truck	1.00	1.00	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	12.0	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.63	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	1.00	1.00	HHDT
Grading	—	—	—	—
Grading	Worker	7.50	12.0	LDA,LDT1,LDT2
Grading	Vendor	—	7.63	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	1.00	1.00	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	0.00	12.0	LDA,LDT1,LDT2
Building Construction	Vendor	0.00	7.63	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	12.0	LDA,LDT1,LDT2
Paving	Vendor	—	7.63	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—

Architectural Coating	Worker	0.00	12.0	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	7.63	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Demolition	—	—	—	—
Demolition	Worker	7.50	12.0	LDA,LDT1,LDT2
Demolition	Vendor	—	7.63	HHDT,MHDT
Demolition	Hauling	3.20	20.0	HHDT
Demolition	Onsite truck	1.00	1.00	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	0.00	0.00	2,171

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	5,530	—
Site Preparation	—	—	12.5	0.00	—
Grading	—	—	30.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.83

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Asphalt Surfaces	0.83	100%
Government Office Building	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	540	0.03	< 0.005
2025	0.00	540	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year

Total all Land Uses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	0.00	0.00	2,171

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Other Asphalt Surfaces	0.00	45.1	0.0330	0.0040	0.00
Government Office Building	0.00	45.1	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Other Asphalt Surfaces	0.00	45.1	0.0330	0.0040	0.00
Government Office Building	0.00	45.1	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Other Asphalt Surfaces	0.00	59,254
Government Office Building	1,932,164	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Other Asphalt Surfaces	0.00	59,254
Government Office Building	1,932,164	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Other Asphalt Surfaces	0.00	—
Government Office Building	9.05	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Other Asphalt Surfaces	0.00	—
Government Office Building	9.05	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Government Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Government Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Government Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Government Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	16.7	annual days of extreme heat

Extreme Precipitation	4.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	40.6	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	2	1
Wildfire	1	1	2	1
Flooding	1	1	2	1
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	2	1
Wildfire	1	1	2	1
Flooding	1	1	2	1
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	55.4
AQ-PM	18.1
AQ-DPM	17.2
Drinking Water	15.0
Lead Risk Housing	12.3
Pesticides	57.7

Toxic Releases	10.3
Traffic	56.8
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	6.97
Haz Waste Facilities/Generators	0.00
Impaired Water Bodies	72.2
Solid Waste	0.00
Sensitive Population	—
Asthma	15.4
Cardio-vascular	40.8
Low Birth Weights	16.0
Socioeconomic Factor Indicators	—
Education	15.8
Housing	15.9
Linguistic	18.1
Poverty	20.6
Unemployment	9.72

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	72.6806108
Employed	10.67624791
Median HI	69.04914667
Education	—

Bachelor's or higher	69.2416271
High school enrollment	4.773514693
Preschool enrollment	18.29847299
Transportation	—
Auto Access	82.44578468
Active commuting	48.94135763
Social	—
2-parent households	83.16437829
Voting	97.35660208
Neighborhood	—
Alcohol availability	89.31092006
Park access	14.03823945
Retail density	7.198768125
Supermarket access	14.60284871
Tree canopy	77.68510201
Housing	—
Homeownership	93.98177852
Housing habitability	79.66123444
Low-inc homeowner severe housing cost burden	51.90555627
Low-inc renter severe housing cost burden	35.05710253
Uncrowded housing	83.16437829
Health Outcomes	—
Insured adults	52.48299756
Arthritis	0.0
Asthma ER Admissions	75.5
High Blood Pressure	0.0
Cancer (excluding skin)	0.0

Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	69.7
Cognitively Disabled	18.3
Physically Disabled	32.1
Heart Attack ER Admissions	73.1
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	74.1
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	31.5
SLR Inundation Area	0.0
Children	76.4
Elderly	2.1
English Speaking	71.4
Foreign-born	6.7
Outdoor Workers	33.9
Climate Change Adaptive Capacity	—

Impervious Surface Cover	94.2
Traffic Density	57.1
Traffic Access	23.0
Other Indices	—
Hardship	33.6
Other Decision Support	—
2016 Voting	97.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	6.00
Healthy Places Index Score for Project Location (b)	52.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification

Construction: Construction Phases	Client provided construction schedule
Construction: Off-Road Equipment	removed cranes

Attachment D

Greenhouse Gas Emissions Impacts Study

NORTH COUNTY FIRE PROTECTION DISTRICT FIRE STATION NO. 4 PROJECT

Greenhouse Gas Emissions Impacts Study

Prepared for:
Rincon Consultants

Prepared by:
Terry A. Hayes Associates Inc.

July 2024

taha
environmental planners

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1.0 SUMMARY OF FINDINGS

Terry A. Hayes Associates Inc. (TAHA) completed a Greenhouse Gas (GHG) Emissions Impact Study (Study) for the San Diego North County Fire Protection District Fire Station No. 4 Project (proposed project) located in the Fallbrook community of the County of San Diego (County). The Study analyzes environmental impacts related to GHG emissions that would occur during construction and future operation of the proposed project in accordance with the California Environmental Quality Act (CEQA) Statute and Guidelines. The determination of potentially significant impacts is framed through addressing the Environmental Checklist criteria outlined in Appendix G of the CEQA Guidelines. **Table 1-1** presents the Appendix G criteria for GHG Emissions and discloses the conclusions of the Study for the proposed project. Potential impacts related to GHG emissions were determined to be less-than-significant and no mitigation measures are required.

TABLE 1-1: SUMMARY OF IMPACT STATEMENTS

Impact Statement	Proposed Project Level of Significance	Applicable Mitigation Measures
Would the proposed project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less-Than-Significant Impact	None
Would the proposed project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less-Than-Significant Impact	None

SOURCE: TAHA, 2024.

2.0 INTRODUCTION

2.1 STUDY PURPOSE

This Study compares the proposed project characteristics with applicable regulations, plans, and policies to reduce GHG emissions to determine whether the proposed project is consistent with and/or would conflict with the provisions of these plans. To assist in analyzing the proposed project's potential to conflict with applicable regulations, plans and policies, this section also estimates GHG emissions generated by construction and operational activities.

2.2 PROJECT DESCRIPTION

The proposed project would include construction of a new 8,694-square-foot fire station building and the demolition of the existing 5,530-square-foot fire station building located at 4375 Pala Mesa Drive in the Fallbrook community of the County of San Diego.[1] The existing fire station will remain operational until construction of the new fire station is completed. The proposed building would include eight dormitories, a conference room, an exercise room, a day room, and two offices.

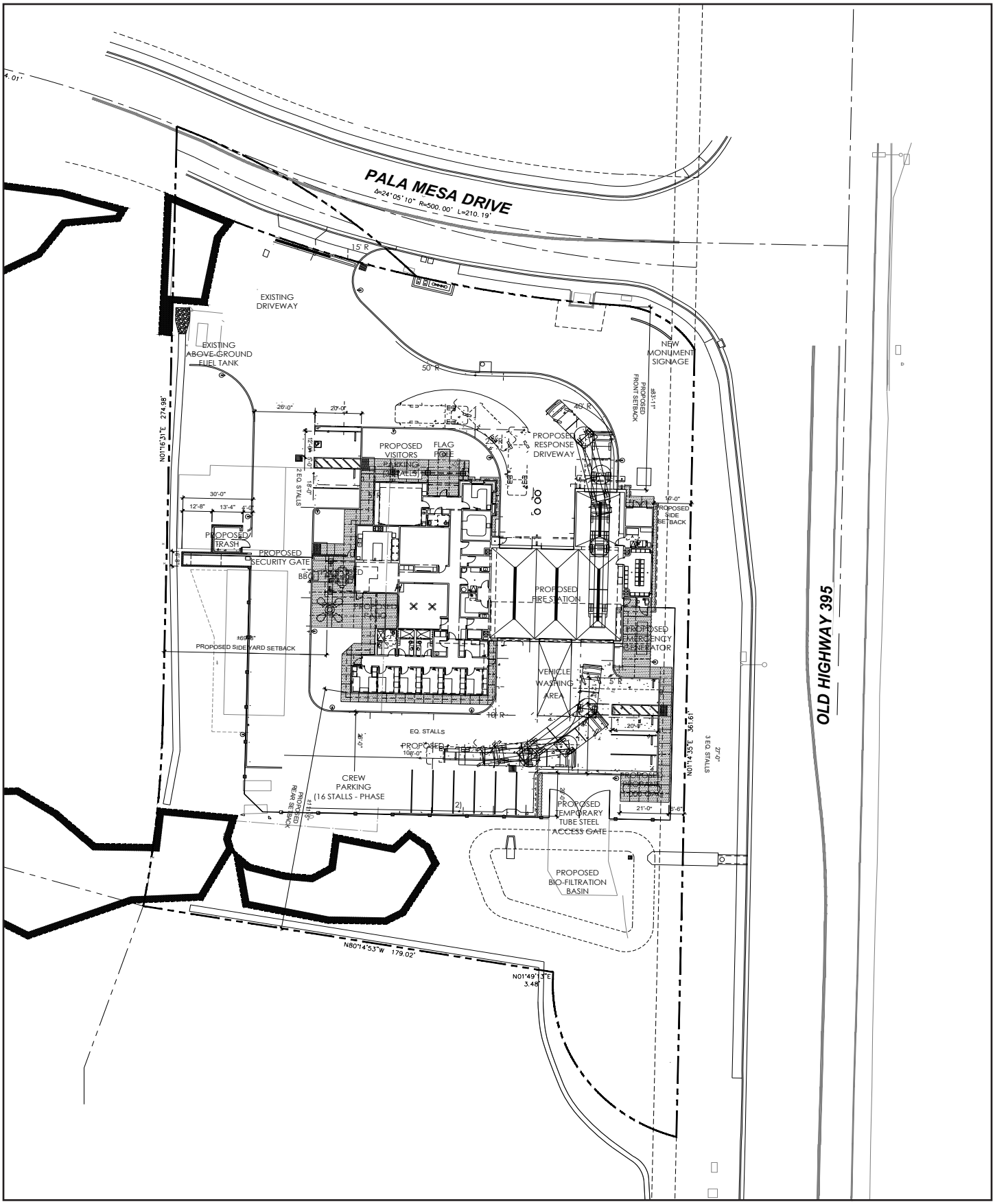
Figure 2-1 shows the location of the proposed project. **Figure 2-2** shows the site plan.

2.3 CONSTRUCTION SCHEDULE

Construction of the proposed project is expected to start in November 2024 and require fourteen months to complete. Activities would include site preparation, grading, building construction, paving, and architectural coating, followed by demolition of the existing building structure. The existing fire station would remain operational until the completion of the new building. Construction activities would typically occur Monday through Friday between the hours of 7:00 a.m. to 4:00 p.m.; it is not anticipated that any construction would need to occur on weekends.

[1]Initial design plans for the proposed project included an anticipated floor area of 9,762 square feet. The building size has since been reduced, but this has no bearing on the content or results of the impacts analysis under the purview of CEQA.

Source: TAHA, 2024.



Source: PBK Architects, 2024.

3.0 GREENHOUSE GAS EMISSIONS

This section describes the characteristics of GHGs, and the regulatory framework of applicable rules, regulations, plans, and guidance related to GHG emissions; discusses the existing GHG emissions landscape and quantifies and evaluates GHG emissions that would be generated by construction and operations of the proposed project.

3.1 ENVIRONMENTAL SETTING

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation, and severe weather events. Global warming, a related concept, is the observed increase in average temperature of Earth's surface and atmosphere. One identified cause of global warming is an increase of GHGs in the atmosphere. GHGs are those compounds in Earth's atmosphere that play a critical role in determining Earth's surface temperature.

Earth's natural warming process is known as the "greenhouse effect." It is called the greenhouse effect because Earth and the atmosphere surrounding it are similar to a greenhouse with glass panes in that the glass allows solar radiation (sunlight) into Earth's atmosphere but prevents radiative heat from escaping, thus warming Earth's atmosphere. Some levels of GHGs keep the average surface temperature of Earth close to a hospitable 60 degrees Fahrenheit. However, it is believed that excessive concentrations of anthropogenic GHGs in the atmosphere can result in increased global mean temperatures, with associated adverse climatic and ecological consequences.[2]

Scientists studying the particularly rapid rise in global temperatures have determined that human activity has resulted in increased emissions of GHGs, primarily from the burning of fossil fuels (from motor vehicle travel, electricity generation, consumption of natural gas, industrial activity, manufacturing, etc.), deforestation, agricultural activity, and the decomposition of solid waste. Scientists refer to the global warming context of the past century as the "enhanced greenhouse effect" to distinguish it from the natural greenhouse effect.[3]

Global GHG emissions due to human activities have grown since pre-industrial times. As reported by the United States Environmental Protection Agency (USEPA), global carbon emissions from fossil fuels increased by over 16 times between 1900 and 2008 and by about 1.5 times between 1990 and 2008. In addition, in the Global Carbon Budget 2014 report, published in September 2014, atmospheric carbon dioxide (CO_2) concentrations in 2013 were found to be 43 percent above the concentration at the start of the Industrial Revolution, and the present concentration is the highest during at least the last 800,000 years.[4] Global increases in CO_2 concentrations are due primarily to fossil fuel use, with land use change providing another significant but smaller contribution. With regard to emissions of non-CO_2 GHG, these have also increased significantly since 1990.[5] In

[2]USEPA, *Climate Change: Basic Information*, https://19january2017snapshot.epa.gov/climatechange/climate-change-basic-information_.html, accessed March 27, 2024.

[3]Pew Center on Global Climate Change, *Climate Change 101: Understanding and Responding to Global Climate Change*.

[4]C. Le Quéré, et al., *Global Carbon Budget 2014*, (Earth System Science Data, 2015, doi:10.5194/essd–7–47–2015).

[5]USEPA, *Global Greenhouse Gas Emissions Data*, www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data, accessed March 27, 2024.

particular, studies have concluded that it is highly likely that the observed increase in methane (CH_4) concentration is predominantly due to agriculture and fossil fuel use.[6]

In August 2007, international climate talks held under the auspices of the United Nations Framework Convention on Climate Change led to the official recognition by the participating nations that global emissions of GHG must be reduced. According to the "Ad Hoc Working Group on Further Commitments of Annex I Parties under the Kyoto Protocol," avoiding the most catastrophic events forecast by the United Nations Intergovernmental Panel on Climate Change (IPCC) would entail emissions reductions by industrialized countries in the range of 25 to 40 percent below 1990 levels. Because of the Kyoto Protocol's Clean Development Mechanism, which gives industrialized countries credit for financing emission-reducing projects in developing countries, such an emissions goal in industrialized countries could ultimately spur efforts to cut emissions in developing countries as well.[7]

3.1.1 GHG Fundamentals

GHGs are those compounds in the Earth's atmosphere which play a critical role in determining temperature near the Earth's surface. GHGs include CO_2, CH_4, nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3).[8] More specifically, these gases allow high-frequency shortwave solar radiation to enter the Earth's atmosphere, but retain some of the low frequency infrared energy, which is radiated back from the Earth towards space, resulting in a warming of the atmosphere. Compounds that are regulated as GHGs are discussed below in **Table 3-1**.[9,10]

Not all GHGs possess the same ability to induce climate change. CO_2 is the most abundant GHG in Earth's atmosphere. Other GHGs are less abundant but have higher global warming potential (GWP) than CO_2. Thus, emissions of other GHGs are commonly quantified in the units of equivalent mass of carbon dioxide (CO_2e). GWP is based on several factors, including the radiative efficiency (heat-absorbing ability) of each gas relative to that of CO_2, as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years otherwise referred to as atmospheric lifetime) relative to that of CO_2.

[6]USEPA, *Atmospheric Concentrations of Greenhouse Gas*, updated June 2015.

[7]United Nations Framework Convention on Climate Change, *Press Release—Vienna UN Conference Shows Consensus on Key Building Blocks for Effective International Response to Climate Change*, August 31, 2007.

[8]As defined by California Assembly Bill (AB) 32 and Senate Bill (SB) 104.

[9]Intergovernmental Panel on Climate Change, *Second Assessment Report, Working Group I: The Science of Climate Change*, 1995.

[10]Intergovernmental Panel on Climate Change, *Fourth Assessment Report, Working Group I Report: The Physical Science Basis*, *Table 2.14,* 2007.

TABLE 3-1: DESCRIPTION OF REGULATED GREENHOUSE GASES[a]

Greenhouse Gas	General Description
Carbon Dioxide (CO_2)	An odorless, colorless GHG, which has both natural and anthropocentric sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic (human-caused) sources of CO_2 are burning coal, oil, natural gas, and wood.
Methane (CH_4)	A flammable gas and the main component of natural gas. When one molecule of CH_4 is burned in the presence of oxygen, one molecule of CO_2 and two molecules of water are released. A natural source of CH_4 is the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain CH_4, which is extracted for fuel. Other sources are from landfills, fermentation of manure, and cattle.
Nitrous Oxide (N_2O)	A colorless GHG. High concentrations can cause dizziness, euphoria, and sometimes slight hallucinations. N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used in rocket engines, race cars, and as an aerosol spray propellant.
Hydrofluorocarbons (HFCs)	Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are non-toxic, non-flammable, insoluble, and chemically unreactive in the troposphere (the level of air at Earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. Because they destroy stratospheric ozone, the production of CFCs was stopped as required by the Montreal Protocol in 1987. HFCs are synthetic man-made chemicals that are used as a substitute for CFCs as refrigerants. HFCs deplete stratospheric ozone, but to a much lesser extent than CFCs.
Perfluorocarbons (PFCs)	PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. PFCs have exceptionally long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane and hexafluoroethane. The two main sources of PFCs are primary aluminum production and semi-conductor manufacturing.
Sulfur Hexafluoride (SF_6)	An inorganic, odorless, colorless, non-toxic, and non-flammable gas. SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semi-conductor manufacturing, and as a tracer gas for leak detection.
Nitrogen Trifluoride (NF_3)	An inorganic, non-toxic, odorless, non-flammable gas. NF_3 is used in the manufacture of semi-conductors, as an oxidizer of high energy fuels, for the preparation of tetrafluoro-hydrazine, as an etchant gas in the electronic industry, and as a fluorine source in high power chemical lasers.

[a] GHGs identified in this table are identified in the Kyoto Protocol and other synthetic gases recently added to the IPCC's Fifth Assessment Report.

SOURCES: Association of Environmental Professionals (AEP), *Alternative Approaches to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents, Final*, June 29, 2007; USEPA, *Acute Exposure Guideline Levels (AEGLs) for Nitrogen Trifluoride*; January 2009.

The larger the GWP, the more that a given gas warms the Earth compared to CO_2 over that time period.[11] These GWP ratios are available from the IPCC. Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's Second Assessment Report (SAR). The IPCC updated the GWP values based on the latest science in its Fourth Assessment Report (AR4). The GWPs in the IPCC AR4 are used by the California Air Resources Board (CARB) for reporting statewide GHG emissions inventories, consistent with international reporting standards. By applying the GWP ratios, project-related CO_2e emissions can be tabulated in metric tons per year. Typically, the GWP ratio corresponding to the warming potential of CO_2 over a 100-year period is used as a baseline.

The IPCC has issued an updated Sixth Assessment Report (AR6), which has revised down the majority of the GWP for key regulated pollutants. As CARB still uses AR4 values and the modeling software California Emissions Estimator Model (CalEEMod) is built on these assumptions, AR4 GWP values are used for the proposed project and provide for a more conservative analysis. The GWP from AR4 and atmospheric lifetimes for key regulated GHGs are provided in **Table 3-2**.

TABLE 3-2: ATMOSPHERIC LIFETIMES AND GLOBAL WARMING POTENTIALS

Greenhouse Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide (CO_2)	-	1
Methane (CH_4)	12	25
Nitrous Oxide (N_2O)	114	298
HFC-23: Fluoroform (CHF_3)	270	14,800
HFC-134a: 1,1,1,2-Tetrafluoroethane (CH_2FCF_3)	14	1,430
HFC-152a: 1,1-Difluoroethane ($C_2H_4F_2$)	1.4	124
PFC-14: Tetrafluoromethane (CF_4)	50,000	7,390
PFC-116: Hexafluoroethane (C_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800
Nitrogen Trifluoride (NF_3)	740	17,200

SOURCE: CARB, GHG Global Warming Potential, available at https://ww2.arb.ca.gov/ghg-gwps, accessed March 27, 2024

[11]GWPs and associated CO_2e values were developed by the Intergovernmental Panel on Climate Change (IPCC) and published in its SAR in 1996. Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's SAR. The IPCC updated the GWP values based on the latest science in its Fourth Assessment Report (AR4). The CARB has begun reporting GHG emission inventories for California using the GWP values from the IPCC AR4.

3.1.2 Projected Impacts of Global Warming in California

In 2009, California adopted a statewide Climate Adaptation Strategy (CAS) that summarizes climate change impacts and recommends adaptation strategies across seven sectors: Public Health, Biodiversity and Habitat, Oceans and Coastal Resources, Water, Agriculture, Forestry, and Transportation and Energy. The California Natural Resources Agency will be updating the CAS and is responsible for preparing reports for the Governor on the status of the CAS. The Natural Resources Agency has produced climate change assessments which detail impacts of global warming in California.[12] These include:

- Sea level rise, coastal flooding and erosion of California's coastlines would increase, as well as sea water intrusion.
- The Sierra snowpack would decline between 70 and 90 percent, threatening California's water supply.
- Higher risk of forest fires resulting from increasing temperatures and making forests and brush drier. Climate change will affect tree survival and growth.
- Attainment of air quality standards would be impeded by increasing emissions, accelerating chemical processes, and raising inversion temperatures during stagnation episodes resulting in public health impacts.
- Habitat destruction and loss of ecosystems due to climate change affecting plant and wildlife habitats.
- Global warming can cause drought, warmer temperatures and saltwater contamination resulting in impacts to California's agricultural industry.

With regard to public health, as reported by the Center for Health and the Global Environment at the Harvard Medical School, the following are examples of how climate change can affect cardio-respiratory disease: (1) pollen is increased by higher levels of atmospheric CO_2; (2) heat waves can result in temperature inversions, leading to trapped masses or unhealthy air contaminants by smog, particulates, and other pollutants; and (3) the incidence of forest fires is increased by drought secondary to climate change and to the lack of spring runoff from reduced winter snows. These fires can create smoke and haze, which can settle over urban populations causing acute and exacerbating chronic respiratory illness.[13]

[12]State of California, Department of Justice, Office of the Attorney General, *Climate Change Impacts in California*, https://oag.ca.gov/environment/impact, accessed March 27, 2024.

[13]Paul R. Epstein, et al., *Urban Indicators of Climate Change – Report from the Center for Health and the Global Environment*, (Harvard Medical School and the Boston Public Health Commission, August 2003), unpaginated.

3.2 REGULATORY FRAMEWORK

There are several plans, regulations, and programs that include policies, requirements, and guidelines regarding GHG Emissions at the federal, State, regional, and local levels. These plans, guidelines, and laws are listed below, along with agencies that administer these items.

- Corporate Average Fuel Economy (CAFE) Standards
- Energy Independence and Security Act (EISA)
- California Air Resources Board (CARB)
- California Greenhouse Gas Reduction Targets
- California Global Warming Solutions Act (AB 32)
- Climate Change Scoping Plan
- Cap-and-Trade Program
- Emissions Performance Standards
- Renewables Portfolio Standard Program
- Clean Energy and Pollution Reduction Act
- Pavley Standards
- California Low Carbon Fuel Standard
- Advanced Clean Cars Regulations
- Advanced Clean Fleet Regulations
- Advanced Clean Truck Regulations
- Truck and Bus Regulation
- Sustainable Communities and Climate Protection Act (SB 375)
- SB 743
- Executive Order N-79-20
- California Appliance Efficiency Regulations
- Title 24, Building Standards Code and CALGreen Code
- CEQA Guidelines
- San Diego Air Pollution Control District
- SANDAG 2021 Regional Plan

3.2.1 Federal

3.2.1.1 Corporate Average Fuel Economy (CAFE) Standards

In response to *the Massachusetts v. Environmental Protection Agency* ruling, President George W. Bush issued Executive Order 13432 in 2007, directing the USEPA, the United States Department of Transportation (USDOT), and the United States Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. The National Highway Traffic Safety Administration (NHTSA) subsequently issued multiple final rules regulating fuel efficiency for and GHG emissions from cars and light-duty trucks for model year 2011 and later for model years 2012–2016. On May 19, 2009, the President of the United States announced a national policy for fuel efficiency and emissions standards in the auto industry. The adopted federal standard applies to passenger cars and light-duty trucks for model years 2012 through 2016.[14] These standards set a combined fleet wide average of 36.9 to 37 for the model years affected.[15]

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011 the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the USEPA, this regulatory program would reduce GHG emissions and fuel consumption for the affected vehicles by six to 23 percent over the 2010 baselines.[16] Building on the first phase of standards, in August 2016, the USEPA and NHTSA finalized Phase 2 standards for medium and heavy-duty vehicles through model year 2027 that will improve fuel efficiency and cut carbon pollution. The Phase 2 standards are expected to lower CO_2 emissions by approximately 1.1 billion metric tons.[17]

3.2.1.2 Energy Independence and Security Act (EISA)

The EISA of 2007 facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;

[14]USEPA, *Final Rule for Model Year 2012 – 2016 Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards*, 2010.

[15]National Highway Traffic Safety Administration (NHTSA*), Corporate Average Fuel Economy standards*.

[16]The emission reductions attributable to the regulations for medium- and heavy-duty trucks were not included in the Project's emissions inventory due to the difficulty in quantifying the reductions. Excluding these reductions results in a more conservative (i.e., higher) estimate of emissions for the Project.

[17]USEPA, *EPA and NHTSA Adopt Standards to Reduce GHG and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles for Model Year 2018 and Beyond,* August 2016.

- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and,
- While superseded by the USEPA and NHTSA actions described above, (i) establishing miles per gallon targets for cars and light trucks and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."[18]

3.2.2 State

3.2.2.1 California Air Resources Board (CARB)

CARB, a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and State air pollution control programs within California. In this capacity, CARB conducts research, sets the California Ambient Air Quality Standards, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB has primary responsibility for the development of the State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts. The SIP is required for the State to take over implementation of the Clean Air Act. CARB also has primary responsibility for adopting regulations to meet the State's goal of reducing GHG emissions to 1990 levels by 2020. Subsequent State goals include reducing GHG emissions to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050.

3.2.2.2 California Greenhouse Gas Reduction Targets

Executive Order S-3-05. Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05,[19] the following GHG emission reduction targets:

- By 2010, California shall reduce GHG emissions to 2000 levels;
- By 2020, California shall reduce GHG emissions to 1990 levels; and,
- By 2050, California shall reduce GHG emissions to 80 percent below 1990 levels.

In accordance with Executive Order S-3-05, the Secretary of CalEPA is required to coordinate efforts of various agencies, which comprise the California Climate Action Team (CAT), in order to collectively and efficiently reduce GHGs. The CAT provides periodic reports to the Governor and

[18]A green job, as defined by the United States Department of Labor, is a job in business that produces goods or provides services that benefit the environment or conserve natural resources.

[19]Center for Climate Strategies, *Executive Order S-3-05*, June 2, 2005.

Legislature on the State of GHG reductions in the State as well as strategies for mitigating and adapting to climate change.

The CAT stated that smart land use is an umbrella term for strategies that integrate transportation and land-use decisions. Such strategies generally encourage jobs/housing proximity, promote transit-oriented development, and encourage high-density residential/commercial development along transit corridors. These strategies develop more efficient land-use patterns within each jurisdiction or region to match population increases, workforce, and socioeconomic needs for the full spectrum of the population.

Executive Order B-30-15. On April 29, 2015, Governor Brown issued Executive Order B-30-15. Therein, the Governor directed the following:

- Established a new interim statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030.
- Ordered all State agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets.
- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent.

Executive Order B-55-18. Executive Order B-55-18, issued by Governor Brown in September 2018, establishes a new statewide goal to achieve carbon neutrality as soon as possible, but no later than 2045, and achieve and maintain net negative emissions thereafter. Based on this executive order, the CARB would work with relevant State agencies to develop a framework for implementation and accounting that tracks progress towards this goal as well as ensuring future scoping plans identify and recommend measures to achieve the carbon neutrality goal.

3.2.2.3 California Global Warming Solutions Act (AB 32)

In 2006, the California State Legislature adopted Assembly Bill (AB) 32 (codified in the California Health and Safety Code (HSC), Division 25.5 – California Global Warming Solutions Act of 2006), which focuses on reducing GHG emissions in California to 1990 levels by 2020. HSC Division 25.5 defines regulated GHGs as CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6 and represents the first enforceable statewide program to limit emissions of these GHGs from all major industries, with penalties for noncompliance. The law further requires that reduction measures be technologically feasible and cost effective. Under HSC Division 25.5, CARB has the primary responsibility for reducing GHG emissions. CARB is required to adopt rules and regulations directing State actions that would achieve GHG emissions reductions.

To achieve these goals, which are consistent with the California CAT GHG targets for 2010 and 2020, AB 32 mandates that CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce statewide GHG emissions from stationary sources consistent with the CAT strategies, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. In order to achieve the reduction targets, AB 32 requires

CARB to adopt rules and regulations in an open public process that achieve the maximum technologically feasible and cost-effective GHG reductions.[20]

In 2016, the California State Legislature adopted Senate Bill (SB) 32 and its companion bill AB 197, and both were signed by Governor Brown. SB 32 and AB 197 amend HSC Division 25.5, establish a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and include provisions to ensure that the benefits of State climate policies reach disadvantaged communities. The new plan, outlined in SB 32, involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

Climate Change Scoping Plan. AB 32 requires CARB to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020 (HSC Section 38561 (h)). The *2008 Climate Change Scoping Plan* proposes a "comprehensive set of actions designed to reduce overall carbon GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health."[21] The 2008 Climate Change Scoping Plan has a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms, such as a cap-and-trade system, and an AB 32 implementation fee to fund the program.

The *2008 Climate Change Scoping Plan* calls for a "coordinated set of solutions" to address all major categories of GHG emissions. Transportation emissions were addressed through a combination of higher standards for vehicle fuel economy, implementation of the Low Carbon Fuel Standard (LCFS), and greater consideration to reducing trip length and generation through land use planning and transit-oriented development. Buildings, land use, and industrial operations were encouraged and, sometimes, required to use energy more efficiently. Utility energy providers were required to include more renewable energy sources through implementation of the Renewables Portfolio Standard (RPS).[22] Additionally, the *2008 Climate Change Scoping Plan* emphasizes opportunities for households and businesses to save energy and money through increasing energy efficiency. It indicates that substantial savings of electricity and natural gas will be accomplished through "improving energy efficiency by 25 percent." The *2008 Climate Change Scoping Plan* identifies a number of specific issues relevant to the proposed project, including:

- The potential of using the green building framework as a mechanism, which could enable GHG emissions reductions in other sectors (i.e., electricity, natural gas), noting that:

> *A Green Building strategy will produce greenhouse gas savings through buildings that exceed minimum energy efficiency standards, decrease consumption of potable water, reduce solid waste during construction and operation, and incorporate sustainable materials. Combined, these*

[20]CARB's list of discrete early action measures that could be adopted and implemented before January 1, 2010, was approved on June 21, 2007. The three adopted discrete early action measures are: (1) a low-carbon fuel standard, which reduces carbon intensity in fuels statewide; (2) reduction of refrigerant losses from motor vehicle air conditioning system maintenance; and (3) increased methane capture from landfills, which includes requiring the use of state-of-the-art capture technologies.

[21]CARB, *Climate Change Scoping Plan*, December 2008.

[22]For a discussion of Renewables Portfolio Standard, refer to subsection 3.2.2(D)(i) Renewables Portfolio Standard.

measures can also contribute to healthy indoor air quality, protect human health, and minimize impacts to the environment.

- The importance of supporting the Department of Water Resources' work to implement the Governor's objective to reduce per capita water use by 20 percent by 2020. Specific measures to achieve this goal include water use efficiency, water recycling, and reuse of urban runoff. The Climate Change Scoping Plan notes that water use requires significant amounts of energy, including approximately one-fifth of statewide electricity.
- Encouraging local governments to set quantifiable emission reduction targets for their jurisdictions and use their influence and authority to encourage reductions in emissions caused by energy use, waste and recycling, water and wastewater systems, transportation, and community design.

As required by HSC Division 25.5, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions reduction target for 2020. The 2020 emissions reduction target was originally set at 427 MMT CO_2e using the GWP values from the IPCC SAR. Forecasting the amount of emissions that would occur in 2020 if no actions are taken was necessary to assess the scope of the reductions California has to make to return to the 1990 emissions level by 2020 as required by AB 32. CARB originally defined the "business-as-usual" (BAU) scenario as emissions in the absence of any GHG emission reduction measures discussed in the *2008 Climate Change Scoping Plan*, as approximately 596 $MMTCO_2e$ (using GWP values from the IPCC SAR). For example, in further explaining CARB's BAU methodology, CARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards. Therefore, under these original projections, the State would have had to reduce its 2020 BAU emissions by 28.4 percent to meet the 1990 target of 427 $MMTCO_2e$.

In the *2008 Climate Change Scoping Plan*, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 28.5 percent from the otherwise projected 2020 emissions level (i.e., those emissions that would occur in 2020, absent GHG-reducing laws and regulations).[23] CARB originally used an average of the State's GHG emissions from 2002 through 2004 and projected the 2020 levels at approximately 596 $MMTCO_2e$ (using GWP values from the IPCC SAR). Therefore, under the original projections, the State would have had to reduce its 2020 BAU emissions by 28.4 percent in order to meet the 1990 target of 427 $MMTCO_2e$.

2014 Update to the Climate Change Scoping Plan. The First Update to the Scoping Plan was approved by CARB in May 2014 and built upon the initial Scoping Plan with new strategies and recommendations.[24] In 2014, CARB revised the target using the GWP values from the IPCC AR4 and determined the 1990 GHG emissions inventory and 2020 GHG emissions limit to be 431 $MMTCO_2e$. CARB also updated the State's 2020 BAU emissions estimate to account for the effect of the 2007–2009 economic recession, new estimates for future fuel and energy demand, and the reductions required by regulation that had recently been adopted for motor vehicles and renewable energy. CARB's projected statewide 2020 emissions estimate using the GWP values from the IPCC AR4 is 509.4 $MMTCO_2e$. Therefore, under the first update to the Scoping Plan, the emission reductions necessary to

[23]CARB, *Climate Change Scoping Plan: A Framework for Change*, p. 12, December 2008.

[24]CARB, *First Update to the Climate Change Scoping Plan: Building on the Framework Pursuant to AB 32 The California Global Warming Solutions Act of 2006*, May 2014.

achieve the 2020 emissions target of 431 $MMTCO_2e$ would have been 78.4 $MMTCO_2e$, or a reduction of GHG emissions by approximately 15.4 percent, (down from 28.4 percent).

The stated purpose of the First Update was to "highlight… California's success to date in reducing its GHG emissions and lay… the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050."[25] The First Update found that California is on track to meet the 2020 emissions reduction mandate established by AB 32 and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the State realizes the expected benefits of existing policy goals.[26]

In conjunction with the First Update, CARB identified "six key focus areas comprising major components of the State's economy to evaluate and describe the larger transformative actions that will be needed to meet the State's more expansive emission reduction needs by 2050."[27] Those six areas are: (1) energy; (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure); (3) agriculture; (4) water; (5) waste management; and (6) natural and working lands. The First Update identifies key recommended actions for each sector that will facilitate achievement of the 2050 reduction target.

Based on CARB's research efforts, it has a "strong sense of the mix of technologies needed to reduce emissions through 2050."[28] Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies.

The First Update discusses new residential and commercial building energy efficiency improvements, specifically identifying progress towards zero net energy buildings as an element of meeting mid-term and long-term GHG reduction goals. The First Update expresses CARB's commitment to working with the California Public Utilities Commission (CPUC) and California Energy Commission (CEC) to facilitate further achievements in building energy efficiency.

2017 Update to the Climate Change Scoping Plan. In response to the passage of SB 32 and the identification of the 2030 GHG reduction target, CARB adopted the *2017 Climate Change Scoping Plan* at a public meeting held in December 2017.[29] The 2017 Update builds upon the framework established by the *2008 Climate Change Scoping Plan* and the *First Update* while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health. The *2017 Update* includes policies to require direct GHG reductions at some of the State's largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and-Trade program, which constraints and reduces emissions at covered sources.[30]

[25] *Ibid*, p. 4.
[26] *Ibid*, p. 14.
[27] *Ibid*, p. 6.
[28] *Ibid*, p. 32.
[29] CARB, *California's 2017 Climate Change Scoping Plan*, November 2017.
[30] CARB, *California's 2017 Climate Change Scoping Plan*, p. 6, November 2017.

CARB's projected statewide 2030 emissions inventory takes into account 2020 GHG reduction policies and programs.[31] The 2017 Scoping Plan also addresses GHG emissions from natural and working lands of California, including the agriculture and forestry sectors. Under the Scoping Plan Scenario, the majority of the reductions would result from the continuation of the Cap-and-Trade regulation. Additional reductions would be achieved from electricity sector standards (i.e., utility providers to supply 50 percent renewable electricity by 2030), doubling the energy efficiency savings at end uses, additional reductions from the LCFS, implementing the short-lived GHG strategy (e.g., HCFs), and implementing the mobile source strategy and sustainable freight action plan. Implementation of mobile source strategies (cleaner technology and fuels) include the following:

- At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025
- At least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030
- Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean Cars regulations
- Medium- and heavy-duty GHG Phase 2
- Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NO_X standard.
- Last Mile Delivery: New regulation that would result in the use of low NO_X or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for Class 3–7 last mile delivery trucks in California. This measure assumes Zero-Emission Vehicles (ZEVs) comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030.
- Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document "Potential VMT Reduction Strategies for Discussion."

The alternatives in the Scoping Plan are designed to consider various combinations of these programs, as well as consideration of a carbon tax in the event the Cap-and-Trade regulation is not continued. However, in July 2017, the California Legislature voted to extend the Cap-and-Trade regulation to 2030.

The 2017 Scoping Plan discusses the role of local governments in meeting the State's greenhouse gas reductions goals because local governments have jurisdiction and land use authority related to: community-scale planning and permitting processes, local codes and actions, outreach and

[31] *Ibid*.

education programs, and municipal operations.[32] Furthermore, local governments may have the ability to incentivize renewable energy, energy efficiency, and water efficiency measures.[33]

For individual projects under CEQA, the 2017 Scoping Plan states that local governments can support climate action when considering discretionary approvals and entitlements. According to the 2017 Scoping Plan, lead agencies have the discretion to develop evidence-based numeric thresholds consistent with the Scoping Plan, the State's long-term goals, and climate change science.[34]

The County has not developed per capita targets for 2030 or 2050; however, the County recognizes that GHG emissions reductions are necessary in the public and private sectors. The County has taken the initiative in combating climate change by developing programs such as the Green New Deal and Green Building Code. Each of these programs is discussed further below.

A summary of the GHG emissions reductions required under HSC Division 25.5 is provided in **Table 3-3**, *Estimated Statewide Greenhouse Gas Emissions Reductions Required by HSC Division 25.5*. Under the Scoping Plan Scenario, continuation of the Cap-and-Trade regulation (or carbon tax) is expected to cover approximately 34 to 79 $MMTCO_2$ of the 2030 reduction obligation.[35] The State's short-lived climate pollutants strategy, which is for GHGs that remain in the atmosphere for shorter periods of time compared to longer-lived GHGs like CO_2, is expected to cover approximately 17 to 35 $MMTCO_2e$. The Renewables Portfolio Standard with 50 percent renewable electricity by 2030 is expected to cover approximately 3 $MMTCO_2$. The mobile source strategy and sustainable freight action plan includes maintaining the existing vehicle GHG emissions standards, increasing the number of zero emission vehicles and improving the freight system efficiency, and is expected to cover approximately 11 to 13 $MMTCO_2$.

[32]CARB, *California's 2017 Climate Change Scoping Plan*, p. 97, November 2017.
[33]*Ibid.*
[34]*Ibid*, p. 100.
[35]I*bid, Appendix G*.

TABLE 3-3: STATEWIDE GHG EMISSIONS REDUCTIONS REQUIRED BY HSC DIVISION 25.5	
Emissions Scenario	**GHG Emissions ($MMTCO_2e$)**
2008 SCOPING PLAN (IPCC SAR)	
2020 BAU Forecast (CARB 2008 Scoping Plan Estimate)	596
2020 Emissions Target Set by AB 32 (i.e., 1990 level)	427
Reduction below Business-As-Usual necessary to achieve 1990 levels by 2020	169 (28.4%) /a/
2011 SCOPING PLAN (IPCC AR4)	
2020 BAU Forecast (CARB 2011 Scoping Plan Estimate)	509.4
2020 Emissions Target Set by AB 32 (i.e., 1990 level)	431
Reduction below Business-As-Usual necessary to achieve 1990 levels by 2020	78.4 (15.4%) /b/
2017 SCOPING PLAN UPDATE	
2030 BAU Forecast ("Reference Scenario" which includes 2020 GHG reduction policies and programs)	389
2030 Emissions Target Set by HSC Division 25.5 (i.e., 40% below 1990 Level)	260
Reduction below Business-As-Usual Necessary to Achieve 40% below 1990 Level by 2030	129 (33.2%) /c/

Notes: $MMTCO_2e$ = million metric tons of carbon dioxide equivalents
/a/ 596 – 427 = 169 / 596 = 28.4%
/b/ 509.4 – 431 = 78.4 / 509.4 = 15.4%
/c/ 389 – 260 = 129 / 389 = 33.2%
SOURCE: CARB, *Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document (FED), Attachment D*, August 19, 2011; CARB, *2020 Business-as-Usual (BAU) Emissions Projection, 2014 Edition*, 2017; CARB, *California's 2017 Climate Change Scoping Plan*, November 2017.

2022 Scoping Plan for Achieving Carbon Neutrality. The 2022 Scoping Plan Update is the most comprehensive and far-reaching Scoping Plan developed to date. It identifies a technologically feasible, cost-effective, and equity-focused path to achieve new targets for carbon neutrality by 2045 and to reduce anthropogenic GHG emissions to at least 85 percent below 1990 levels, while also assessing the progress California is making toward reducing its GHG emissions by at least 40 percent below 1990 levels by 2030, as called for in SB 32 and laid out in the 2017 Scoping Plan.[36] The 2030 target is an interim but important stepping stone along the critical path to the broader goal of deep decarbonization by 2045. The relatively longer path assessed in the 2022 Scoping Plan Update incorporates, coordinates, and leverages many existing and ongoing efforts to reduce GHGs and air pollution, while identifying new clean technologies and energy. Given the focus on carbon neutrality, the 2022 Scoping Plan Update also includes discussion for the first time of the natural and working lands sectors as sources for both sequestration and carbon storage, and as sources of emissions as a result of wildfires. **Table 3-4** provides an overview of the GHG emissions reductions that are forecasted in the 2022 Scoping Plan Update.

[36] *CARB, California's 2017 Climate Change Scoping Plan, 2017,* ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf.

TABLE 3-4: STATEWIDE GHG EMISSIONS REDUCTIONS IN THE 2022 SCOPING PLAN	
Emissions Scenario	**GHG Emissions ($MMTCO_2e$)**
2019 Baseline Year	
2019 State GHG Emissions	404
2030 Forecast Year	
2030 BAU Forecast	312
2030 GHG Emissions without Carbon Removal and Capture	233
2030 GHG Emissions with Carbon Removal and Capture	226
2030 Emissions Target Set by AB 32 (i.e., 1990 levels by 2030)	260
Reduction below BAU Necessary to Achieve 1990 Levels by 2030	52 (16.7%)[a]
2045 Horizon Year	
2045 BAU Forecast	266
2045 GHG Emissions without Carbon Removal and Capture	72
2045 GHG Emissions with Carbon Removal and Capture	(3)

Notes: *$MMTCO_2e$ = million metric tons of carbon dioxide equivalents; parenthetical numbers represent negative values.*
/a/ 312 – 260 = 52; 52 / 312 = 16.7%
SOURCE: CARB, *2022 Climate Change Scoping Plan for Achieving Carbon Neutrality*, December 2022.

Cap-and-Trade Program. The Climate Change Scoping Plan identified a Cap-and-Trade Program as one of the strategies California would employ to reduce GHG emissions. CARB asserts that this program will help put California on the path to meeting its goal of reducing GHG emissions to 1990 levels by the year 2020, and ultimately achieving an 80 percent reduction from 1990 levels by 2050. Under Cap-and-Trade, an overall limit on GHG emissions from capped sectors is established and facilities subject to the cap will be able to trade permits to emit GHGs. CARB designed and adopted a California Cap-and-Trade Program pursuant to its authority under AB 32.[37] The development of this Program included a multi-year stakeholder process and consideration of potential impacts on disproportionately impacted communities. The Cap-and-Trade Program is designed to reduce GHG emissions from public and private major sources (deemed "covered entities") by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve AB 32's emission-reduction mandate of returning to 1990 levels of emissions by 2020. The statewide cap for GHG emissions from the capped sectors (e.g., electricity generation, petroleum refining, and cement production) commenced in 2013 and will decline over time, achieving GHG emission reductions throughout the Program's duration.[38]

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities that emit more than 25,000 $MTCO_2e$ per year must comply with the Cap-and-Trade Program.[39] Triggering of the 25,000 $MTCO_2e$ per year "inclusion threshold" is measured against a

[37]California Code of Regulations 17, Sections 95800 to 96023.
[38]California Code of Regulations 17, Sections 95811 and 95812.
[39]*Ibid,* Section 95812.

subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (Mandatory Reporting Rule or "MRR").[40]

Each covered entity with a compliance obligation is required to surrender "compliance instruments"[41] for each $MTCO_2e$ of GHGs they emit. Covered entities are allocated free allowances in whole or part (if eligible), and are able to buy allowances at auction, purchase allowances from others, or purchase offset credits.

The Cap-and-Trade Regulation provides a firm cap, ensuring that the statewide emission limits will not be exceeded. In sum, the Cap-and-Trade Program will achieve aggregate, rather than site-specific or project-level, GHG emissions reductions. Also, due to the regulatory architecture adopted by CARB under AB 32, the reductions attributed to the Cap-and-Trade Program can change over time depending on the State's emissions forecasts and the effectiveness of direct regulatory measures.

The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-State or imported.[42] Accordingly, for projects that are subject to the CEQA, GHG emissions from electricity consumption are covered by the Cap-and-Trade Program. The Program applies to emissions that cover approximately 80 percent of the State's GHG emissions. Demonstrating the efficacy of AB 32 policies, California achieved its 2020 GHG Reduction Target four years earlier than mandated. The largest reductions were the result of increased renewable electricity in the electricity sector, which is a covered sector in the Cap-and-Trade Program.

AB 398 was enacted in 2017 to extend and clarify the role of the State's Cap-and-Trade Program through December 31, 2030. As part of AB 398, refinements were made to the Cap-and-Trade program to establish updated protocols and allocation of proceeds to reduce GHG emissions.

3.2.2.4 Energy-Related (Stationary) Sources

Emission Performance Standards. SB 1368, signed September 29, 2006, is a companion bill to AB 32, which requires the CPUC and the CEC to establish GHG emission performance standards for the generation of electricity. These standards also generally apply to power that is generated outside of California and imported into the State. SB 1368 provides a mechanism for reducing the emissions of electricity providers, thereby assisting CARB to meet its mandate under AB 32.

Renewables Portfolio Standard. SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017 as an RPS. Subsequent amendments provided additional targets throughout the years. Most recently, on October 7, 2015, SB 350 (Chapter 547, Statues of 2015), also known as the Clean Energy and Pollution Reduction Act, further increased the RPS to 50 percent by 2030. The legislation also included interim targets of 40 percent by 2024 and 45 percent by 2027. SB 350 also requires the State to double statewide energy

[40] *Ibid,* Sections 95100-95158.

[41] Compliance instruments are permits to emit, the majority of which will be "allowances," but entities also are allowed to use CARB-approved offset credits to meet up to 8% of their compliance obligations.

[42] California Code of Regulations 17, Section 95811(b).

efficiency savings in electricity and natural gas end uses by 2030. The 2017 Climate Change Scoping Plan incorporated the SB 350 standards and estimated the GHG reductions would account for approximately 21 percent of the Scoping Plan reductions.[43] On September 10, 2018, SB 100, provided additional RPS targets of 44 percent by 2024, 52 percent by 2027, and 60 percent by 2030, and that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by 2045.[44]

3.2.2.5 Mobile Sources

Pavley Standards. AB 1493 (Chapter 200, Statutes of 2002), enacted on July 22, 2002, required CARB to set GHG emission standards for passenger vehicles, light duty trucks, and other vehicles whose primary use is non-commercial personal transportation manufactured in and after 2009. In 2004, CARB approved the Pavley regulation to require automakers to control GHG from new passenger vehicles for the 2009 through 2016 model years. Upon adoption of subsequent federal GHG standards by the USEPA that preserved the benefits of the Pavley regulations, the Pavley regulations were revised to accept compliance with the federal standards as compliance with California's standards in the 2012 through 2016 model years. This is referred to as the "deemed to comply" option.

In January 2012, CARB approved greenhouse gas emission regulations which require further reductions in passenger greenhouse gas emissions for 2017 and subsequent vehicle model years. As noted above, in August 2012, the USEPA and USDOT adopted GHG emission standards for model year 2017 through 2025 vehicles. On November 15, 2012, CARB approved an amendment that allows manufacturers to comply with the 2017-2025 national standards to meet State law. Automobile manufacturers generally comply with these standards through a combination of improved energy efficiency in vehicle equipment (e.g., air conditioning systems) and engines as well as sleeker aerodynamics, use of strong but lightweight materials, and lower-rolling resistance tires.[45]

California Low Carbon Fuel Standard. Executive Order S-01-07 was enacted on January 18, 2007. The order mandates the following: (1) that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and (2) that a LCFS for transportation fuels be established in California. The final regulation was approved by the Office of Administrative Law and filed with the Secretary of State on January 12, 2010. In September 2015, CARB approved the re-adoption of the LCFS to address procedural deficiencies in the way the original regulation was adopted.[46] The development of the 2017 Update has identified LCFS as a regulatory measure to reduce GHG emission to meet the 2030 emissions target. In September 2018, the standards were amended by CARB to require a 20 percent reduction in carbon intensity by 2030, aligning with California's 2030 targets set by SB 32.[47]

[43]CARB, *California's 2017 Climate Change Scoping Plan*, Table 3, p. 31, November 2017. Calculated as: (108 – 53) / 260 = 21 percent.

[44]California Legislative Information, *SB-100 California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases*.

[45]CARB, *California's Advanced Clean Cars Midterm Review*, pp. ES-17, C-9.

[46]CARB, *Low Carbon Fuel Standard*, 2018, https://www.arb.ca.gov/fuels/lcfs/lcfs.htm, accessed July 12, 2022.

[47]CARB, *CARB amends Low Carbon Fuel Standard for wider impact*, 2018, https://ww2.arb.ca.gov/index.php/news/carb-amends-low-carbon-fuel-standard-wider-impact, accessed March 27, 2024.

Advanced Clean Cars Regulations. In 2012, CARB approved the Advanced Clean Cars program, a new emissions-control program for model years 2015–2025.[48] The components of the Advanced Clean Cars program include the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the ZEV regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles in the 2018 through 2025 model years. During the March 2017 Midterm Review, CARB voted unanimously to continue with the vehicle GHG emission standards and the ZEV program for cars and light trucks sold in California through 2025.[49] Effective November 26, 2019, the federal SAFE Vehicles Rule Part One: One National Program withdrew the California waiver for the GHG and ZEV programs under section 209 of the Clean Air Act, which revokes California's authority to implement the Advanced Clean Cars and ZEV mandates. In response, several states including California filed a lawsuit challenging the withdrawal of the EPA waiver.[50] In April 2021, the USEPA announced it will move to reconsider its previous withdrawal of the waiver.[51]

In addition, Governor Gavin Newsom signed an executive order (Executive Order No. N-79-20) on September 23, 2020, that would phase out sales of new gas-powered passenger cars by 2035 in California with an additional 10-year transition period for heavy vehicles. The State would not restrict used car sales, nor forbid residents from owning gas-powered vehicles. In accordance with the Executive Order, CARB is developing a 2020 Mobile Source Strategy, a comprehensive analysis that presents scenarios for possible strategies to reduce the carbon, toxic and unhealthy pollution from cars, trucks, equipment, and ships. The strategies will provide important information for numerous regulations and incentive programs going forward by conveying what is necessary to address the aggressive emission reduction requirements.

The primary mechanism for achieving the ZEV target for passenger cars and light trucks is CARB's Advanced Clean Cars II (ACC II) Program. The ACC II regulations will focus on post-2025 model year light-duty vehicles, as requirements are already in place for new vehicles through the 2025 model year.

Advanced Clean Trucks Regulations. The Advanced Clean Trucks regulation, approved on March 15, 2021, is a manufacturers ZEV sales requirement and a one-time reporting requirement for large entities and fleets. The regulation is intended to accelerate the market for on-road zero-emission vehicles and to reduce emissions of oxides of nitrogen (NOx), fine particulate matter (PM), other criteria pollutants, toxic air contaminants, and GHG from medium- and heavy-duty on-road vehicles. Promoting the development and use of advanced clean trucks will help CARB achieve its emission reduction strategies as outlined in the State Implementation Plan (SIP), Sustainable Freight Action Plan, Senate Bill (SB) 350, and Assembly Bill (AB) 32.

Advanced Clean Fleet Regulations. The Advanced Clean Fleets (ACF) Regulation, effective October 1, 2023, complements CARB's adopted Advanced Clean Trucks regulation and will help

[48]CARB, *California's Advanced Clean Cars Program*, www.arb.ca.gov/msprog/acc/acc.htm.

[49]CARB, News Release: *CARB finds vehicle standards are achievable and cost-effective*, ww2.arb.ca.gov/news/carb-finds-vehicle-standards-are-achievable-and-cost-effective, accessed March 27, 2024.

[50]United States District Court for the District Court of Columbia, State of California vs. Chao, Case 1:19-cv-02826, 2019.

[51]United States Federal Register, *California State Motor Vehicle Pollution Control Standards; Advanced Clean Car Program; Reconsideration of a Previous Withdrawal of a Waiver of Preemption; Opportunity for Public Hearing and Public Comment (Document Number: 2021-08826),* April 28, 2021.

advance the introduction of zero-emission technologies into California's truck and bus fleets requiring fleets that are well suited for electrification to reduce emissions through requirements to both phase-in the use of ZEVs for targeted fleets and requirements that manufacturers only manufacture ZEV trucks starting in the 2036 model year. Achieving these milestones will contribute to meeting the goals in the Governor's Executive Order N-79-20. The ACF regulation is an important part of California's broader strategy to increase clean, affordable transportation options such as zero-emission technologies, innovative methods to improve freight activity, and transportation system efficiency in California.

Sustainable Communities and Climate Protection Act (SB 375). The Sustainable Communities and Climate Protection Act of 2008, or SB 375 (Chapter 728, Statutes of 2008), establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions, was adopted by the State on September 30, 2008. SB 375 finds that the "transportation sector is the single largest contributor of greenhouse gases of any sector."[52] Under SB 375, CARB is required, in consultation with the Metropolitan Planning Organizations, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. San Diego Association of Governments (SANDAG) is the Metropolitan Planning Organization in which the proposed project is located in. CARB set targets for 2020 and 2035 for each of the 18 metropolitan planning organization regions in 2010 and updated them in 2018.[53] As discussed further below, SANDAG has adopted an updated Regional Plan subsequent to the update of the emission targets. The plan combines the Regional Transportation Plan (RTP), Sustainable Communities Strategy (SCS), and Regional Comprehensive Plan.

Under SB 375, the target must be incorporated within that region's RTP, which is used for long-term transportation planning, in SCS) Certain transportation planning and programming activities would then need to be consistent with the SCS; however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plans) are not required to be consistent with either the RTP or SCS.

Senate Bill 743. Governor Brown signed SB 743 in 2013, which created a process to change the way that transportation impacts are analyzed under CEQA. Specifically, SB 743 required the Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to level of service methodology for evaluating transportation impacts. Particularly within areas served by transit, the required alternative criteria must "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." Measurements of transportation impacts may include "vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated." Implementing SB 743, the OPR developed amendments to the CEQA Guidelines, which included the creation of Section 15064.3. Section 15064.3 establishes vehicle miles traveled as the most appropriate measure of transportation impacts, shifting away from the previous level of service analysis.

[52]State of California, Senate Bill No. 375, September 30, 2008.

[53]CARB, *Sustainable Communities & Climate Protection Program – About*. https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-climate-protection-program/about, accessed March 27, 2024.

3.2.2.6 Building Standards

California Appliance Efficiency Regulations. The 2014 Appliance Efficiency Regulations (Title 20, Sections 1601 through 1608), adopted by the CEC, include standards for new appliances (e.g., refrigerators) and lighting, if they are sold or offered for sale in California. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances.

Title 24, Building Standards Code and CALGreen Code. The CEC first adopted the Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the State. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Standards is referred to as the California Green Building Standards (CALGreen) Code and was developed to help the State achieve its GHG reduction goals under HSC Division 25.5 (e.g., AB 32) by codifying standards for reducing building-related energy, water, and resource demand and the GHG emissions associated therewith. The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality."[54] The CALGreen Code is not intended to substitute for or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design and overall environmental quality.[55]

On August 11, 2021, the CEC adopted the 2022 Title 24 Standards, which went into effect on January 1, 2023. The 2022 standards continue to improve upon the previous (2019) Title 24 standards for new construction of, and additions and alterations to, residential and non-residential buildings.[56] The 2022 Title 24 Standards "build on California's technology innovations, encouraging energy efficient approaches to encourage building decarbonization, placing emphasis in particular on heat pumps for space heating and water heating. This set of Energy Codes also extends the benefits of photovoltaic and battery storage systems and other demand flexible technology to work in combinations with heat pumps to enable California buildings to be responsive to climate change. This Energy code also strengthens ventilation standards to improve indoor air quality. This update provides crucial steps in the state's progress toward 100 percent clean carbon neutrality by midcentury." The 2022 Energy Code is anticipated to reduce GHG emissions by 10 $MMTCO_2e$ over

[54]California Building Standards Commission, *2022 California Green Building Standards Code*, 2022.
[55]*Ibid.*
[56]CEC, 2022 *Building Energy Efficiency Standards*.

the next 30 years and result in approximately 1.5 billion dollars in consumer savings.[57] Compliance with Title 24 is enforced through the building permit process.

However, neither a threshold of significance nor any specific mitigation measures are included or provided in the 2018 CEQA Guidelines Amendments.[58] The Guidelines Amendments require a lead agency to make a good-faith effort, based on the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. The Guidelines Amendments give discretion to the lead agency whether to: (1) use a model or methodology to quantify GHG emissions resulting from a project, and which model or methodology to use; or (2) rely on a qualitative analysis or performance-based standards. Furthermore, the Guidelines Amendments identify three factors that should be considered in the evaluation of the significance of GHG emissions:

1. The extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and,
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.[59]

The administrative record for the Guidelines Amendments also clarifies "that the effects of greenhouse gas emissions are cumulative and should be analyzed in the context of California Environmental Quality Act's requirements for cumulative impact analysis."[60]

3.2.3 Regional

3.2.3.1 San Diego Air Pollution Control District (SDAPCD)

The SDAPCD has not established GHG rules, regulations, or policies.

3.2.3.2 SANDAG 2021 Regional Plan

SANDAG adopted the *San Diego Forward: The 2021 Regional Plan* on December 10, 2021. The 2021 Regional Plan provides a long-term blueprint for the San Diego region that seeks to meet regulatory requirements, address traffic congestion, and create equal access to jobs, education, healthcare, and other community resources. The plan combines the RTP, SCS, and Regional Comprehensive Plan. The 2021 Regional Plan envisions a fast, fair, and clean transportation system

[57]CEC, *Energy Commission Adopts Updated Building Standards to Improve Efficiency, Reduce Emissions from Homes and Businesses*, https://www.energy.ca.gov/news/2021-08/energy-commission-adopts-updated-building-standards-improve-efficiency-reduce-0, accessed March 27, 2024.

[58]See 14 Cal. Code Regs. ("CEQA Guidelines") §§ 15064.7 (generally giving discretion to lead agencies to develop and publish thresholds of significance for use in the determination of the significance of environmental effects), 15064.4 (giving discretion to lead agencies to determine the significance of impacts from GHGs).

[59]CEQA Guidelines§ 15064.4(b).

[60]Letter from Cynthia Bryant, Director of the Governor's Office of Planning and Research to Mike Chrisman, California Secretary for Natural Resources, dated April 13, 2009.

and a resilient region with the goals to have an efficient movement of people and goods, access to affordable, reliable, and safe mobility options, and to have healthier air and reduced GHG emissions regionwide.

The 2021 Regional Plan must comply with specific state and federal mandates, including an SCS, per SB 375, that achieves GHG reduction targets set by the CARB; compliance with federal civil rights requirements (Title VI); and environmental justice considerations, air quality conformity, and a public participation process. The 2021 Regional Plan's SCS describes coordinated transportation and land use planning that exceeds the state's target for reducing per capita GHG emissions set by the CARB. The state-mandated target is a 19 percent reduction—compared with 2005—in per capita GHG emissions from cars and light-duty trucks by 2035. The 2021 Regional Plan achieves a 20 percent reduction by then.

3.2.4 Local

3.2.4.1 County of San Diego Climate Action Plan

In February 2018, the County's Board of Supervisors adopted a Climate Action Plan (CAP) that serves as a long-term programmatic plan that identifies strategies and measures to meet the County's targets to reduce GHG emissions by 2020 and 2030, consistent with the State's legislative GHG reduction targets, and demonstrates progress toward the State's 2050 GHG reduction goal. The Board's adoption of the CAP is the culmination of a multiyear plan development process that followed from the judicial invalidation (see Sierra Club v. County of San Diego [Case No. D064243]) of the County's prior CAP, which was adopted in 2012. In March 2018, several petitioners filed a lawsuit against the County. In December 2018, the San Diego County Superior Court issued a writ ordering the approval of the CAP and its Supplementary Environmental Impact Report (SEIR) to be set aside. In January 2019, the County appealed the San Diego County Superior Court's ruling, but the Fourth District Court of Appeal, Division One (Case No. D075478) upheld the Superior Court's ruling.

In October 2023, the Draft 2024 CAP was made available for public review. The CAP Update will be considered by the Planning Commission on July 19, 2024, for a special meeting to hold a workshop on the project, and on July 26, 2024, for their recommendation for adoption by the Board of Supervisors by Fall 2024. Accordingly, there is currently no approved CAP in San Diego County; and the CAP cannot be used until it is approved in compliance with CEQA.

3.3 EXISTING SETTING

3.3.1 Statewide GHG Emissions Inventory

CARB is the State agency responsible for preparing, adopting, and updating California's GHG emissions inventory under AB 1803 (2006). The State's annual GHG emissions inventory provides an important tool for establishing historical emissions trends and tracking California's progress in reducing GHGs. The 2021 edition of the CARB GHG inventory includes emissions of seven GHGs identified in AB 32 for the years 2000–2019. **Table 3-5** displays the statewide GHG emissions from 2010 to 2019 by economic sector as defined in the 2008 Scoping Plan. Generally, California's GHG emissions have followed a declining trend over the past decade. In 2021, emissions from routine emitting activities statewide were approximately 54.2 $MMTCO_2e$ (12 percent) lower than 2012 levels,

and approximately 50 $MMTCO_2e$ below the 1990 level (431 $MMTCO_2e$), which was the State's 2020 GHG target.

TABLE 3-5: CALIFORNIA GREENHOUSE GAS EMISSIONS INVENTORY TREND

Sector	CO_2e Emissions (Million Metric Tons)									
	2012	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Transportation	156.9	156.9	157.6	161.2	165.0	166.4	165.2	162.3	135.6	145.6
Electric Power	99.4	94.0	90.3	86.3	70.8	64.4	65.0	60.2	59.5	62.4
Industrial	80.7	82.7	85.0	82.7	81.2	81.4	82.0	80.8	73.3	73.9
Commercial and Residential	39.1	39.0	35.5	37.2	37.7	38.3	37.5	40.6	38.9	38.8
Agriculture	35.2	33.7	33.7	32.6	32.1	31.6	32.1	31.3	31.5	30.9
High Global Warming Potential	15.8	17.0	17.9	18.8	19.4	20.1	20.5	20.7	21.3	21.3
Recycling and Waste	8.4	8.3	8.1	8.1	7.9	8.2	8.3	8.4	8.6	8.4
Emissions Total	**435.5**	**431.6**	**428.2**	**426.9**	**414.2**	**410.4**	**410.7**	**404.4**	**368.7**	**381.3**

SOURCE: CARB, *2000–2021 GHG Inventory (2023 Edition)*, available at https://ww2.arb.ca.gov/ghg-inventory-data.

The transportation sector remains the largest source of statewide GHG emissions. The CARB data indicates that direct emissions from vehicle exhaust, off-road transportation mobile sources, intrastate aviation, rail, and watercraft accounted for approximately 38 percent of California's emissions in 2021. Emissions from the electricity sector accounted for approximately 16 percent of the inventory. The industrial sector has been relatively flat in recent years, representing approximately 19 percent of the total inventory. Emissions from other sectors have remained relatively constant in recent years, despite statewide population growth.

Of note, between October 23, 2015, and February 18, 2016, an exceptional natural gas leak event occurred at the Aliso Canyon natural gas storage facility that resulted in unexpected GHG emissions of considerable magnitude. The exceptional incident released approximately 109,000 metric tons of CH_4, which equated to approximately 1.96 $MMTCO_2e$ of unanticipated emissions in 2015 and an additional 0.52 $MMTCO_2e$ in 2016. Emissions associated with the transportation sector in 2017 were similar to those in 2009 despite substantial statewide growth, demonstrating improvements made in fuel economy to reduce average vehicle emissions.

3.4 IMPACT ANALYSIS

This section describes the applicable thresholds of significance and the methodological approach and analyzes potential impacts related to GHG emissions.

3.4.1 Thresholds of Significance

This Assessment was undertaken to determine whether construction or operation of the proposed project would have the potential to result in significant environmental impacts related to GHG emissions in the context of the CEQA Guidelines Appendix G Environmental Checklist criteria . Implementation of the proposed project may result in a significant environmental impact related to GHG emissions if the proposed project would:

[a] Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; and/or

[b] Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

Section 15064.4 of the CEQA Guidelines states that a lead agency should make a good-faith effort to describe, calculate, or estimate the amount of GHG emissions resulting from a project. The lead agency has the discretion to elect whether to quantify GHG emissions resulting from a project or rely on a qualitative analysis or performance-based standards. If a quantitative approach is chosen, the CEQA Guidelines promulgate that the lead agency should consider the following factors when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and,
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The CEQA Guidelines encourage lead agencies to develop and publish thresholds of significance that the agency uses to standardize the determination of the significance of potential environmental effects of proposed projects. When adopting or using particular thresholds, the amended Guidelines allow lead agencies to consider thresholds of significance adopted or recommended by other public agencies, or recommended by experts, provided that use of the thresholds are supported by substantial evidence, and/or to develop their own significance threshold.

Neither the County of San Diego nor the SDAPCD has officially adopted a quantitative threshold screening value for determining the significance of GHG emissions that will be generated by projects under CEQA. Estimated GHG emissions are presented for disclosure. The potential for a significant impact is based on consistency with applicable plans, policies, regulations, and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

3.4.2 Methodology

In accordance with Section 15064.4(c), GHG emissions that will be generated by the proposed project were estimated using CalEEMod, Version 2022.1.1.22, which is the statewide preferred regulatory tool for estimating GHG emissions from proposed land use development projects. CalEEMod was developed for the California Air Pollution Officers Association (CAPCOA) in collaboration with the California Air Districts and was designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. CalEEMod relies on an emissions factors database compiled from the CARB EMission FACtor (EMFAC) on-road mobile source emissions inventory model and the CARB OFFROAD off-road equipment model, as well as regional survey data for energy resource consumption, water use, and solid waste generation. The following discussions describe sources of GHG emissions during temporary construction activities and future long-term operations.

Construction

Sources of GHG emissions during construction will include heavy-duty off-road diesel equipment and vehicular travel to and from the project site. GHG emissions that would be generated during construction were estimated using CalEEMod. GHG emissions that would be generated by construction of the proposed project were estimated and amortized over a 30-year operational lifetime.

Construction Equipment Exhaust Emissions

Construction would result in short-term GHG emissions produced by construction equipment exhaust. CalEEMod calculates emissions of CO_2, CH_4, and N_2O from construction equipment using the following equation, where the emission factors (EFs) for CO_2, CH_4, and N_2O are populated from the CARB OFFROAD model and incorporated into CalEEMod for each type of equipment:

$$Emission_{DieselEx}[MTCO_2e] = \frac{\sum(EF_i \times GWP \times Pop_i \times AvgHp_i \times Load_i \times Activity_i)}{10^6}$$

Where:

$Emission_{DieselEx}$	=	Total emissions from diesel-fuel construction equipment exhaust
$[MTCO_2e]$	=	GHG emissions expressed in units of metric tons of CO_2 equivalents
EF_i	=	Emission factor in grams per horsepower-hour [g/hp-hr] from OFFROAD2017
GWP	=	Global Warming Potential Value (CO_2 = 1, CH_4 = 25, N_2O = 298)
Pop_i	=	Population, or number of pieces of equipment
$AvgHP_i$	=	Maximum rated average horsepower [HP]
$Load_i$	=	Load factor (average ratio of actual output to the maximum output, unitless)
$Activity_i$	=	Hours of operation
i	=	Equipment type
10^{-6}	=	Conversion factor [g/MT]

The OFFROAD model is the statewide emissions inventory for off-road equipment compiled by the CARB; factors from OFFROAD are built into the CalEEMod software based on the Project location. CalEEMod provides options for specifying equipment types, horsepower ratings, load factors, and operational hours per day during each activity. Construction equipment inventories were provided by the Applicant for each phase of construction, and default average equipment horsepower and default load factors derived from the statewide inventory for each type of equipment were relied upon to estimate daily emissions. Daily emissions from construction equipment during each phase were estimated using the equation above and converted from grams to pounds.

On-Road Vehicle Trips Mobile Source Emissions

Additionally, construction activities generate GHG emissions from on-road vehicle trips from personal vehicles for worker commuting, vendor deliveries of equipment and materials, and trucks for soil and debris hauling. These GHG emissions are based on the number of trips and the VMT, along with emission factors from EMFAC for CO_2, CH_4, and N_2O. CalEEMod accounts for running exhaust and evaporative emissions, as well as vehicle starts. Running exhaust GHG emissions are estimated in CalEEMod using the following equation:

$$Emissions_{Pollutant}[MTCO_2e] = \frac{VMT \times EF_{running,pollutant} \times GWP}{10^6}$$

Where:

$Emissions_{pollutant}$	=	Estimated GHG emissions from vehicle travel for each pollutant
[$MTCO_2e$]	=	GHG emissions expressed in units of metric tons of CO_2 equivalents
VMT	=	Vehicle miles traveled, in distance units of miles
$EF_{running,pollutant}$	=	Emission factor for running exhaust emissions in grams per mile [g/mi]
GWP	=	Global Warming Potential Value (CO_2 = 1, CH_4 = 25, N_2O = 298)
10^{-6}	=	Conversion factor of grams to metric tons [g/MT]

The CalEEMod program contains default trip lengths for workers, vendors, and material hauling based on regional survey data. The default values were replaced with project-specific information provided by the project design team. Detailed calculation inputs can be found in the **Appendix**.

Operations

Sources of GHG emissions during project operation include area, energy, and stationary sources. The emissions are generally indirect emissions from the production of electricity to power these systems. GHG emissions are then calculated based on the amount of electricity consumed multiplied by the GHG intensity factors for the utility provider. In this case, embodied energy for southern California supplied water and GHG intensity factors for San Diego Gas & Electric were selected in CalEEMod.

3.4.3 Analysis of Proposed Project Impacts

[a] Would the proposed project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment? (*Less-Than-Significant Impact*)

Impact Analysis

The proposed project would generate GHG emissions during temporary construction activities and future long-term operations. Construction of the proposed project would generate a total of approximately 263.5 $MTCO_2e$, which equates to approximately 8.8 $MTCO_2e$ annually over a 30-year amortization schedule. GHG emissions generated during construction of the proposed project would be short-term in nature, lasting only for the duration of the construction period for each phase, and would not represent a long-term source of GHG emissions. Operation of the proposed project would not change the existing number of vehicle trips, energy and water consumption, and waste generation. Operational emissions would be similar to the emissions of the existing fire station. **Table 3-6** presents the estimated annual GHG emissions that would be generated by operation of the proposed project from area and stationary sources, as well as the amortized construction emissions. Total annual GHG emissions would be approximately 28.6 $MTCO_2e$ during the first full year of operations and would represent a small change to existing conditions. Therefore, implementation of the proposed project would result in a less-than-significant impact related to the magnitude of GHG emissions.

TABLE 3-6: ESTIMATED ANNUAL GREENHOUSE GAS EMISSIONS

Emissions Source	CO_2e Emissions (Metric Tons per Year)
Construction Emissions Amortized (Direct)	8.8
Operational Area Source Emissions (Direct)	0.1
Operational Energy Source Emissions (Indirect)	19.3
Operational Stationary Source Emissions	0.4
TOTAL	**28.6**

SOURCE: TAHA, 2024.

Mitigation Measures

Impacts would be less than significant; no mitigation measures are required.

[b] Would the proposed project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs? (*Less-Than-Significant Impact*)

Impact Analysis

AB 32 requires CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions and directs CARB to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill sets a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner. On December 11, 2008, CARB adopted the Scoping Plan, which sets forth the framework for facilitating the state's goal of reducing GHG emissions to 1990 levels by 2020. The First Update of the Scoping Plan was adopted on May 22, 2014. CARB adopted the 2017 Scoping Plan in November 2017, which details strategies to cut back 40 percent of GHGs by 2030. AB 32, the updated first Scoping Plan, and the 2017 Scoping Plan did not establish regulations implementing, for specific projects, the Legislature's statewide goals for reducing GHGs. The Scoping Plan outlines a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions, including expanding energy efficiency programs, increasing electricity production from renewable resources (at least 33 percent of the statewide electricity mix), and increasing automobile efficiency, implementing the Low-Carbon Fuel Standard, and developing a cap-and-trade program. These measures are designed to be implemented by state agencies.

The most recent 2022 Scoping Plan lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045. The actions and outcomes in the plan aim to achieve significant reductions in fossil fuel combustion by deploying clean technologies and fuels, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon. GHG emissions associated with the proposed project would be relatively low and would not have the potential to interfere with any GHG reduction goals specified in the Scoping Plan. The proposed project would not interfere with implementation of AB 32 and measures contained within the Scoping Plan to reduce GHG emissions.

The California legislature enacted SB 375 in 2008 to set regional targets for the reduction of GHG emissions and to require the preparation of SCS by metropolitan planning organizations. SB 743 was enacted in 2013 to evolve the assessment of transportation impacts under CEQA, and SB 743 was incorporated into the CEQA Guidelines in 2018 by promulgating the use of vehicle miles traveled and vehicle miles traveled reductions as a significance threshold metric. Future operation of the proposed project would include operations similar to the current fire station and would not include the addition of new vehicles trips or additional vehicle miles traveled. The proposed project would not have the potential to conflict with the regional GHG emissions targets and vehicle miles traveled reduction efforts of SB 375 and SB 743, respectively.

The proposed project would not impede the attainment of the GHG reduction goals for 2030 or 2050 identified in Executive Order S-03-05 and SB 32, or the carbon neutrality goal for 2045 identified in Executive Order B-55-18. Executive Order S-03-05 establishes the following goals: GHG emissions

should be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. SB 32 establishes a statewide GHG emissions reduction target by which CARB, in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions, shall ensure that statewide GHG emissions are reduced to at least 40 percent below 1990 levels by December 31, 2030. Executive Order B-55-18 establishes an additional statewide policy goal to achieve carbon neutrality as soon as possible and no later than 2045 and to achieve and maintain net negative emissions thereafter.

The proposed project would be consistent with GHG reduction plans and would not generate significant emissions. Therefore, the proposed project would result in a less-than-significant impact related to conflict with GHG reduction plans.

Mitigation Measures

Impacts would be less than significant; no mitigation measures are required.

3.5 CUMULATIVE IMPACTS

The primary focus of many of the statewide and regional plans, policies, and regulations is to address issues related to global climate change. Due to the complex physical and chemical mechanisms involved in how GHG emissions influence climate change at the global scale, there is no contextual basis for determining the extent to which the proposed project's net increase in GHG emissions would affect climate patterns. The emission of GHGs by a single project into the atmosphere is not itself necessarily an adverse environmental effect. Rather, it is the increased accumulation of GHG emissions from more than one project and many sources in the atmosphere that may result in global climate change. The consequences of change in long-term climate patterns can cause adverse environmental effects. A project's GHG emissions typically would be miniscule in comparison to State or global GHG emissions and, consequently, they would, in isolation, have no significant direct impact on climate change.

Pursuant to CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to cumulative impacts can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem with the geographic area of the project. The State has mandated a goal of reducing statewide emissions to 1990 levels by 2020, even though statewide population and commerce is predicted to continue to expand. AB 32 has acknowledged that GHG emissions are a statewide impact. Emissions generated by the proposed project in combination with past, present, and reasonably probable future related projects could contribute to this impact. The CEQA Guidelines emphasize that the effects of GHG emissions are cumulative in nature and should be analyzed in the context of CEQA's existing cumulative impacts analysis. The Office of Planning and Research acknowledges that although climate change is cumulative in nature, not every individual proposed project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment. As discussed above, the proposed project's incremental contribution to the statewide cumulative impact would not be cumulatively considerable.

4.0 REFERENCES

Association of Environmental Professionals, *Alternative Approaches to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents, Final*, June 29, 2007.

CAPCOA, *California Emissions Estimator Model (CalEEMod, Version 2022.1) User's Guide*, April 2022.

CAPCOA, *California Emissions Estimator Model (CalEEMod, Version 2022.1) User's Guide – Appendix A Calculation Details for CalEEMod*, April 2022.

CAPCOA, *California Emissions Estimator Model (CalEEMod, Version 2022.1) User's Guide – Appendix E Technical Source Documentation*, April 2022.

CAPCOA, *CEQA & Climate Change – Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*, January 2008.

CAPCOA, *Quantifying Greenhouse Gas Mitigation Measures – A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures*, August 2010.

CARB, *2022 Scoping Plan for Achieving Carbon Neutrality*, December 2022.

CARB, *California Greenhouse Gas Emissions for 2000 to 2021 – Trends of Emissions and Other Indicators, 2023 Edition*, available at https://ww2.arb.ca.gov/ghg-inventory-data.

CARB, *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target*, November 2017.

CARB, *Climate Change Scoping Plan: A Framework for Change*, December 2008.

CARB, *"Comparison of Greenhouse Gas Reductions for all Fifty United States under CAFE Standards and ARB Regulations Adopted Pursuant to AB 1493,"* January 23, 2008.

CARB, *Determination of Total Methane Emissions from the Aliso Canyon Natural Gas Leak Incident*, October 2016.

California Air Resources Board, *Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document (FED), Attachment D*, August 19, 2011.

CARB, *First Update to the Climate Change Scoping Plan: Building on the Framework Pursuant to AB 32 The California Global Warming Solutions Act of 2006*, May 2014.

CARB, *News Release: CARB finds vehicle standards are achievable and cost-effective*, ww2.arb.ca.gov/news/carb-finds-vehicle-standards-are-achievable-and-cost-effective.

CARB, *Proposed Early Action Measures to Mitigate Climate Change in California*, April 20, 2007.

CARB, *Supplement to the AB 32 Scoping Plan Functional Equivalent Document*, Table 1.2-2.

CARB, *Sustainable Communities*, March 28, 2017, https://www.arb.ca.gov/cc/sb375/sb375.htm.

California Building Standards Commission, *2022 California Green Building Standards Code | CALGreen*, available at https://www.dgs.ca.gov/BSC/CALGreen.

California Energy Commission, *Energy Commission Adopts Updated Building Standards to Improve Efficiency, Reduce Emissions from Homes and Businesses*, https://www.energy.ca.gov/news/2021-08/energy-commission-adopts-updated-building-standards-improve-efficiency-reduce-0, accessed March 27, 2024.

California Energy Commission, *California's Energy Efficiency Standards for Residential and Nonresidential Buildings, Title 24, Part 6, of the California Code of Regulations*, information available at http://www.energy.ca.gov/title24.

California Energy Commission, *California's Energy Future – The View to 2050*, May 2011.

California Environmental Protection Agency, *Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature*, 2006.

California Legislative Information, *SB-100 California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases*, https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180.

California Office of Planning and Research, *Technical Advisory – CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act Review*, June 2008.

Center for Climate Strategies, *Executive Order S-3-05*, June 1, 2005.

Energy+Environmental Economics, *Summary of the California State Agencies' PATHWAYS Project: Long-term Greenhouse Gas Reduction Strategies*, April 6, 2015.

Epstein, et al., *Urban Indicators of Climate Change – Report from the Center for Health and the Global Environment*, (Harvard Medical School and the Boston Public Health Commission, August 2003), unpaginated.

Federal Register, Executive Order 13783 of March 28, 2017: Promoting Energy Independence and Economic Growth, Vol. 82, No. 61, March 21, 2017.

Federal Register, Executive Order 13795 of April 28, 2017: Implementing an America-First Offshore Energy Strategy, Vol. 82, No. 84, May 3, 2017.

Intergovernmental Panel on Climate Change, *Climate Change 2013: The Physical Science Basis, Fifth Assessment Report*, ISBN 978 1 107 05799-1 Hardback; 978 1 66182-0 Paperback. 2013.

Intergovernmental Panel on Climate Change, *Fourth Assessment Report, Working Group I Report: The Physical Science Basis*, *Table 2.14,* 2007.

Intergovernmental Panel on Climate Change, *Second Assessment Report, Working Group I: The Science of Climate Change*, 1995.

Le Quéré, et al., *Global Carbon Budget 2014*, (Earth System Science Data, 2015, doi:10.5194/essd–7–47–2015).

Office of the Governor Arnold Schwarzenegger, *Executive Order S-01-07*, https://www.arb.ca.gov/fuels/lcfs/eos0107.pdf, 2007.

Pew Center on Global Climate Change, *Climate Change 101: Understanding and Responding to Global Climate Change*.

SANDAG, *San Diego Forward: The 2021 Regional Plan*, December 10, 2021.

State of California, Department of Justice, Office of the Attorney General, *Climate Change Impacts in California*, https://oag.ca.gov/environment/impact.

State of California, *Senate Bill No. 375*, September 30, 2008, https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200720080SB375.

The White House, *President Obama Announces National Fuel Efficiency Policy*, May 19, 2009, https://obamawhitehouse.archives.gov/the-press-office/president-obama-announces-national-fuel-efficiency-policy.

United Nations Framework Convention on Climate Change, *Press Release—Vienna UN Conference Shows Consensus on Key Building Blocks for Effective International Response to Climate Change*, August 31, 2007.

United States Environmental Protection Agency, *2012 Final Rules for Oil and Natural Gas Industry*, April 17, 2012, www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry/2012-final-rules-oil-and-natural-gas-industry.

United States Environmental Protection Agency, *Acute Exposure Guideline Levels (AEGLs) for Nitrogen Trifluoride*; January 2009.

United States Environmental Protection Agency, *Atmospheric Concentrations of Greenhouse Gas*, updated June 2015.

United States Environmental Protection Agency, *Climate Change: Basic Information*, https://19january2017snapshot.epa.gov/climatechange/climate-change-basic-information_.html.

United States Environmental Protection Agency, *Draft Endangerment Finding, 74 Fed. Reg. 18886, 18904*, April 24, 2009.

United States Environmental Protection Agency, *EPA and NHTSA Adopt Standards to Reduce GHG and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles for Model Year 2018 and Beyond*, August 2016.

United States Environmental Protection Agency, *Final Rule for Model Year 2012 – 2016 Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards*, 2010.

United States Environmental Protection Agency, *Global Greenhouse Gas Emissions Data*, www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data.

APPENDIX

CalEEMod Files

San Diego North County Fire Station Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	San Diego North County Fire Station
Construction Start Date	11/4/2024
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	1.80
Location	33.34095104369612, -117.16053281147936
County	San Diego
City	Unincorporated
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6247
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Other Asphalt Surfaces	28.1	1000sqft	0.65	0.00	3,965	3,965	—	Parking lot and driveways
Government Office Building	9.73	1000sqft	0.22	9,726	0.00	0.00	—	Proposed fire station

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Energy	E-1	Buildings Exceed 2019 Title 24 Building Envelope Energy Efficiency Standards
Water	W-4	Require Low-Flow Water Fixtures
Water	W-5	Design Water-Efficient Landscapes
Waste	S-4*	Recycle Demolished Construction Material

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.90	2.57	6.76	12.8	0.02	0.20	0.75	0.95	0.19	0.13	0.32	—	2,316	2,316	0.10	0.06	2.33	2,338
Mit.	0.90	2.57	6.76	12.8	0.02	0.20	0.75	0.95	0.19	0.13	0.32	—	2,316	2,316	0.10	0.06	2.33	2,338
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	1.77	2.57	12.8	13.3	0.02	0.64	2.86	3.50	0.59	1.13	1.72	—	2,290	2,290	0.10	0.08	0.06	2,310
Mit.	1.77	2.57	12.8	13.3	0.02	0.64	2.86	3.50	0.59	1.13	1.72	—	2,290	2,290	0.10	0.08	0.06	2,310
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.64	0.70	4.73	7.75	0.01	0.15	0.53	0.69	0.14	0.15	0.29	—	1,421	1,421	0.06	0.04	0.61	1,435
Mit.	0.64	0.70	4.73	7.75	0.01	0.15	0.53	0.69	0.14	0.15	0.29	—	1,421	1,421	0.06	0.04	0.61	1,435
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.12	0.13	0.86	1.42	< 0.005	0.03	0.10	0.13	0.03	0.03	0.05	—	235	235	0.01	0.01	0.10	238
Mit.	0.12	0.13	0.86	1.42	< 0.005	0.03	0.10	0.13	0.03	0.03	0.05	—	235	235	0.01	0.01	0.10	238
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	250	550	250	—	—	100	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	250	550	250	—	—	100	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.90	2.57	6.76	12.8	0.02	0.20	0.75	0.95	0.19	0.13	0.32	—	2,316	2,316	0.10	0.06	2.33	2,338
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.77	1.50	12.8	13.3	0.02	0.64	2.86	3.50	0.59	1.13	1.72	—	2,260	2,260	0.10	0.04	0.05	2,276
2025	1.62	2.57	11.5	12.5	0.02	0.55	2.86	3.41	0.50	1.13	1.64	—	2,290	2,290	0.10	0.08	0.06	2,310
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.11	0.10	0.76	0.92	< 0.005	0.04	0.15	0.19	0.04	0.05	0.08	—	158	158	0.01	< 0.005	0.08	159
2025	0.64	0.70	4.73	7.75	0.01	0.15	0.53	0.69	0.14	0.15	0.29	—	1,421	1,421	0.06	0.04	0.61	1,435
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.02	0.02	0.14	0.17	< 0.005	0.01	0.03	0.04	0.01	0.01	0.02	—	26.1	26.1	< 0.005	< 0.005	0.01	26.3
2025	0.12	0.13	0.86	1.42	< 0.005	0.03	0.10	0.13	0.03	0.03	0.05	—	235	235	0.01	0.01	0.10	238

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.90	2.57	6.76	12.8	0.02	0.20	0.75	0.95	0.19	0.13	0.32	—	2,316	2,316	0.10	0.06	2.33	2,338
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2024	1.77	1.50	12.8	13.3	0.02	0.64	2.86	3.50	0.59	1.13	1.72	—	2,260	2,260	0.10	0.04	0.05	2,276
2025	1.62	2.57	11.5	12.5	0.02	0.55	2.86	3.41	0.50	1.13	1.64	—	2,290	2,290	0.10	0.08	0.06	2,310
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.11	0.10	0.76	0.92	< 0.005	0.04	0.15	0.19	0.04	0.05	0.08	—	158	158	0.01	< 0.005	0.08	159
2025	0.64	0.70	4.73	7.75	0.01	0.15	0.53	0.69	0.14	0.15	0.29	—	1,421	1,421	0.06	0.04	0.61	1,435
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.02	0.02	0.14	0.17	< 0.005	0.01	0.03	0.04	0.01	0.01	0.02	—	26.1	26.1	< 0.005	< 0.005	0.01	26.3
2025	0.12	0.13	0.86	1.42	< 0.005	0.03	0.10	0.13	0.03	0.03	0.05	—	235	235	0.01	0.01	0.10	238

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.06	1.18	4.71	4.06	< 0.005	0.40	0.00	0.40	0.40	0.00	0.40	8.58	577	585	0.91	0.01	0.02	612
Mit.	1.06	1.18	4.70	4.06	< 0.005	0.40	0.00	0.40	0.40	0.00	0.40	8.26	572	580	0.88	0.01	0.02	606
% Reduced	—	—	< 0.5%	< 0.5%	—	—	—	—	—	—	—	4%	1%	1%	4%	—	—	1%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.98	1.12	4.70	3.64	< 0.005	0.40	0.00	0.40	0.40	0.00	0.40	8.58	575	583	0.91	0.01	0.02	611
Mit.	0.98	1.12	4.70	3.63	< 0.005	0.40	0.00	0.40	0.40	0.00	0.40	8.26	570	578	0.88	0.01	0.02	604
% Reduced	—	—	< 0.5%	< 0.5%	—	—	—	—	—	—	—	4%	1%	1%	4%	—	—	1%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.05	0.27	0.11	0.30	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	8.58	125	133	0.89	0.01	0.02	159
Mit.	0.05	0.27	0.11	0.30	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	8.26	120	128	0.86	0.01	0.02	153
% Reduced	—	—	3%	1%	—	—	—	—	—	—	—	4%	4%	4%	4%	—	—	4%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.01	0.05	0.02	0.05	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	1.42	20.7	22.1	0.15	< 0.005	< 0.005	26.3
Mit.	0.01	0.05	0.02	0.05	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	1.37	19.9	21.3	0.14	< 0.005	< 0.005	25.3
% Reduced	1%	< 0.5%	3%	1%	4%	3%	—	3%	3%	—	3%	4%	4%	4%	4%	8%	—	4%
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	250	550	250	—	—	100	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	250	550	250	—	—	100	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	13.7	40.0	100	40.0	—	—	15.0	—	—	10.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.08	0.29	< 0.005	0.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.74	1.74	< 0.005	< 0.005	—	1.75
Energy	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	120	120	0.02	< 0.005	—	121
Water	—	—	—	—	—	—	—	—	—	—	—	3.70	1.71	5.41	0.38	0.01	—	17.7
Waste	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Stationary	0.97	0.89	4.62	3.57	< 0.005	0.39	0.00	0.39	0.39	0.00	0.39	0.00	453	453	0.02	< 0.005	0.00	455
Total	1.06	1.18	4.71	4.06	< 0.005	0.40	0.00	0.40	0.40	0.00	0.40	8.58	577	585	0.91	0.01	0.02	612
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	—	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	120	120	0.02	< 0.005	—	121
Water	—	—	—	—	—	—	—	—	—	—	—	3.70	1.71	5.41	0.38	0.01	—	17.7
Waste	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Stationary	0.97	0.89	4.62	3.57	< 0.005	0.39	0.00	0.39	0.39	0.00	0.39	0.00	453	453	0.02	< 0.005	0.00	455
Total	0.98	1.12	4.70	3.64	< 0.005	0.40	0.00	0.40	0.40	0.00	0.40	8.58	575	583	0.91	0.01	0.02	611
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.04	0.26	< 0.005	0.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.86	0.86	< 0.005	< 0.005	—	0.86
Energy	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	120	120	0.02	< 0.005	—	121
Water	—	—	—	—	—	—	—	—	—	—	—	3.70	1.71	5.41	0.38	0.01	—	17.7
Waste	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Stationary	0.01	< 0.005	0.03	0.02	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.48	2.48	< 0.005	< 0.005	0.00	2.49
Total	0.05	0.27	0.11	0.30	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	8.58	125	133	0.89	0.01	0.02	159
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.01	0.05	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.14	0.14	< 0.005	< 0.005	—	0.14
Energy	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.8	19.8	< 0.005	< 0.005	—	20.0
Water	—	—	—	—	—	—	—	—	—	—	—	0.61	0.28	0.90	0.06	< 0.005	—	2.93
Waste	—	—	—	—	—	—	—	—	—	—	—	0.81	0.00	0.81	0.08	0.00	—	2.82
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Stationary	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	0.41	0.41	< 0.005	< 0.005	0.00	0.41
Total	0.01	0.05	0.02	0.05	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	1.42	20.7	22.1	0.15	< 0.005	< 0.005	26.3

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.08	0.29	< 0.005	0.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.74	1.74	< 0.005	< 0.005	—	1.75
Energy	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	115	115	0.02	< 0.005	—	116

Water	—	—	—	—	—	—	—	—	—	—	—	3.39	1.46	4.85	0.35	0.01	—	16.1
Waste	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Stationary	0.97	0.89	4.62	3.57	< 0.005	0.39	0.00	0.39	0.39	0.00	0.39	0.00	453	453	0.02	< 0.005	0.00	455
Total	1.06	1.18	4.70	4.06	< 0.005	0.40	0.00	0.40	0.40	0.00	0.40	8.26	572	580	0.88	0.01	0.02	606
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	—	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	115	115	0.02	< 0.005	—	116
Water	—	—	—	—	—	—	—	—	—	—	—	3.39	1.46	4.85	0.35	0.01	—	16.1
Waste	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Stationary	0.97	0.89	4.62	3.57	< 0.005	0.39	0.00	0.39	0.39	0.00	0.39	0.00	453	453	0.02	< 0.005	0.00	455
Total	0.98	1.12	4.70	3.63	< 0.005	0.40	0.00	0.40	0.40	0.00	0.40	8.26	570	578	0.88	0.01	0.02	604
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.04	0.26	< 0.005	0.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.86	0.86	< 0.005	< 0.005	—	0.86
Energy	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	115	115	0.02	< 0.005	—	116
Water	—	—	—	—	—	—	—	—	—	—	—	3.39	1.46	4.85	0.35	0.01	—	16.1
Waste	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Stationary	0.01	< 0.005	0.03	0.02	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.48	2.48	< 0.005	< 0.005	0.00	2.49
Total	0.05	0.27	0.11	0.30	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	8.26	120	128	0.86	0.01	0.02	153
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.01	0.05	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.14	0.14	< 0.005	< 0.005	—	0.14
Energy	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.1	19.1	< 0.005	< 0.005	—	19.3
Water	—	—	—	—	—	—	—	—	—	—	—	0.56	0.24	0.80	0.06	< 0.005	—	2.66
Waste	—	—	—	—	—	—	—	—	—	—	—	0.81	0.00	0.81	0.08	0.00	—	2.82
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Stationary	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	0.41	0.41	< 0.005	< 0.005	0.00	0.41
Total	0.01	0.05	0.02	0.05	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	1.37	19.9	21.3	0.14	< 0.005	< 0.005	25.3

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	0.60	5.68	7.27	0.01	0.28	—	0.28	0.26	—	0.26	—	1,067	1,067	0.04	0.01	—	1,071
Demolition	—	—	—	—	—	—	0.17	0.17	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	8.76	8.76	< 0.005	< 0.005	< 0.005	9.20
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	0.03	0.31	0.40	< 0.005	0.02	—	0.02	0.01	—	0.01	—	58.5	58.5	< 0.005	< 0.005	—	58.7
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.48	0.48	< 0.005	< 0.005	< 0.005	0.50
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.68	9.68	< 0.005	< 0.005	—	9.71
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.08
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.07	0.81	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	180	180	0.01	0.01	0.02	182
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	0.01	0.59	0.21	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	431	431	0.02	0.07	0.02	452
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.93	9.93	< 0.005	< 0.005	0.02	10.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.6	23.6	< 0.005	< 0.005	0.02	24.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.64	1.64	< 0.005	< 0.005	< 0.005	1.67
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.91	3.91	< 0.005	< 0.005	< 0.005	4.10

3.2. Demolition (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	0.60	5.68	7.27	0.01	0.28	—	0.28	0.26	—	0.26	—	1,067	1,067	0.04	0.01	—	1,071
Demolition	—	—	—	—	—	—	0.17	0.17	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	8.76	8.76	< 0.005	< 0.005	< 0.005	9.20
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.31	0.40	< 0.005	0.02	—	0.02	0.01	—	0.01	—	58.5	58.5	< 0.005	< 0.005	—	58.7
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.48	0.48	< 0.005	< 0.005	< 0.005	0.50
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.68	9.68	< 0.005	< 0.005	—	9.71
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.08
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.07	0.81	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	180	180	0.01	0.01	0.02	182
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	0.01	0.59	0.21	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	431	431	0.02	0.07	0.02	452
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.93	9.93	< 0.005	< 0.005	0.02	10.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.6	23.6	< 0.005	< 0.005	0.02	24.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.64	1.64	< 0.005	< 0.005	< 0.005	1.67
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.91	3.91	< 0.005	< 0.005	< 0.005	4.10

3.3. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	0.55	4.89	5.44	0.01	0.30	—	0.30	0.27	—	0.27	—	781	781	0.03	0.01	—	784

Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	8.94	8.94	< 0.005	< 0.005	< 0.005	9.38
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.33	0.37	< 0.005	0.02	—	0.02	0.02	—	0.02	—	53.5	53.5	< 0.005	< 0.005	—	53.7
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.61	0.61	< 0.005	< 0.005	< 0.005	0.64
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.86	8.86	< 0.005	< 0.005	—	8.89
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.10	0.10	< 0.005	< 0.005	< 0.005	0.11
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.18	0.17	0.15	1.73	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	366	366	0.02	0.01	0.04	371
Vendor	0.01	< 0.005	0.15	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	107	107	< 0.005	0.01	0.01	111
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	25.3	25.3	< 0.005	< 0.005	0.05	25.7
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.30	7.30	< 0.005	< 0.005	0.01	7.62
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.19	4.19	< 0.005	< 0.005	0.01	4.25
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.21	1.21	< 0.005	< 0.005	< 0.005	1.26
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	0.55	4.89	5.44	0.01	0.30	—	0.30	0.27	—	0.27	—	781	781	0.03	0.01	—	784
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	8.94	8.94	< 0.005	< 0.005	< 0.005	9.38
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.33	0.37	< 0.005	0.02	—	0.02	0.02	—	0.02	—	53.5	53.5	< 0.005	< 0.005	—	53.7

Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.61	0.61	< 0.005	< 0.005	< 0.005	0.64
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.86	8.86	< 0.005	< 0.005	—	8.89
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.10	0.10	< 0.005	< 0.005	< 0.005	0.11
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.18	0.17	0.15	1.73	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	366	366	0.02	0.01	0.04	371
Vendor	0.01	< 0.005	0.15	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	107	107	< 0.005	0.01	0.01	111
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	25.3	25.3	< 0.005	< 0.005	0.05	25.7
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.30	7.30	< 0.005	< 0.005	0.01	7.62
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.19	4.19	< 0.005	< 0.005	0.01	4.25
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.21	1.21	< 0.005	< 0.005	< 0.005	1.26

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.58	1.33	12.5	11.5	0.02	0.64	—	0.64	0.59	—	0.59	—	1,778	1,778	0.07	0.01	—	1,784
Dust From Material Movement	—	—	—	—	—	—	2.12	2.12	—	1.01	1.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	8.94	8.94	< 0.005	< 0.005	< 0.005	9.38
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.39	0.36	< 0.005	0.02	—	0.02	0.02	—	0.02	—	55.7	55.7	< 0.005	< 0.005	—	55.9
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.28	0.28	< 0.005	< 0.005	< 0.005	0.29
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.22	9.22	< 0.005	< 0.005	—	9.25

Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.05	0.05	< 0.005	< 0.005	< 0.005	0.05
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.18	0.17	0.15	1.73	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	366	366	0.02	0.01	0.04	371
Vendor	0.01	< 0.005	0.15	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	107	107	< 0.005	0.01	0.01	111
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.6	11.6	< 0.005	< 0.005	0.02	11.7
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.34	3.34	< 0.005	< 0.005	< 0.005	3.48
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.92	1.92	< 0.005	< 0.005	< 0.005	1.94
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.55	0.55	< 0.005	< 0.005	< 0.005	0.58
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.58	1.33	12.5	11.5	0.02	0.64	—	0.64	0.59	—	0.59	—	1,778	1,778	0.07	0.01	—	1,784
Dust From Material Movement	—	—	—	—	—	—	2.12	2.12	—	1.01	1.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	8.94	8.94	< 0.005	< 0.005	< 0.005	9.38
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.39	0.36	< 0.005	0.02	—	0.02	0.02	—	0.02	—	55.7	55.7	< 0.005	< 0.005	—	55.9
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.28	0.28	< 0.005	< 0.005	< 0.005	0.29
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.22	9.22	< 0.005	< 0.005	—	9.25
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.05	0.05	< 0.005	< 0.005	< 0.005	0.05
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.18	0.17	0.15	1.73	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	366	366	0.02	0.01	0.04	371
Vendor	0.01	< 0.005	0.15	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	107	107	< 0.005	0.01	0.01	111
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.6	11.6	< 0.005	< 0.005	0.02	11.7
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.34	3.34	< 0.005	< 0.005	< 0.005	3.48
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.92	1.92	< 0.005	< 0.005	< 0.005	1.94
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.55	0.55	< 0.005	< 0.005	< 0.005	0.58
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.43	1.20	11.2	10.8	0.02	0.55	—	0.55	0.50	—	0.50	—	1,778	1,778	0.07	0.01	—	1,784

Dust From Material Movement	—	—	—	—	—	—	2.12	2.12	—	1.01	1.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	8.76	8.76	< 0.005	< 0.005	< 0.005	9.20
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.83	0.80	< 0.005	0.04	—	0.04	0.04	—	0.04	—	132	132	0.01	< 0.005	—	133
Dust From Material Movement	—	—	—	—	—	—	0.16	0.16	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.65	0.65	< 0.005	< 0.005	< 0.005	0.68
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	21.9	21.9	< 0.005	< 0.005	—	22.0
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.11	0.11	< 0.005	< 0.005	< 0.005	0.11
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.16	0.14	1.63	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	359	359	0.02	0.01	0.04	364
Vendor	0.01	< 0.005	0.14	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	105	105	< 0.005	0.01	0.01	109
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.0	27.0	< 0.005	< 0.005	0.05	27.3
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.79	7.79	< 0.005	< 0.005	0.01	8.14
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.46	4.46	< 0.005	< 0.005	0.01	4.53
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.29	1.29	< 0.005	< 0.005	< 0.005	1.35
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Grading (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.43	1.20	11.2	10.8	0.02	0.55	—	0.55	0.50	—	0.50	—	1,778	1,778	0.07	0.01	—	1,784
Dust From Material Movement	—	—	—	—	—	—	2.12	2.12	—	1.01	1.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	8.76	8.76	< 0.005	< 0.005	< 0.005	9.20
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.83	0.80	< 0.005	0.04	—	0.04	0.04	—	0.04	—	132	132	0.01	< 0.005	—	133

Dust From Material Movement	—	—	—	—	—	—	0.16	0.16	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.65	0.65	< 0.005	< 0.005	< 0.005	0.68
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	21.9	21.9	< 0.005	< 0.005	—	22.0
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.11	0.11	< 0.005	< 0.005	< 0.005	0.11
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.16	0.14	1.63	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	359	359	0.02	0.01	0.04	364
Vendor	0.01	< 0.005	0.14	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	105	105	< 0.005	0.01	0.01	109
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.0	27.0	< 0.005	< 0.005	0.05	27.3
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.79	7.79	< 0.005	< 0.005	0.01	8.14
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.46	4.46	< 0.005	< 0.005	0.01	4.53
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.29	1.29	< 0.005	< 0.005	< 0.005	1.35

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	6.34	10.4	0.02	0.17	—	0.17	0.16	—	0.16	—	1,631	1,631	0.07	0.01	—	1,636
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	6.34	10.4	0.02	0.17	—	0.17	0.16	—	0.16	—	1,631	1,631	0.07	0.01	—	1,636
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.25	2.86	4.69	0.01	0.08	—	0.08	0.07	—	0.07	—	737	737	0.03	0.01	—	740
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.52	0.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	122	122	< 0.005	< 0.005	—	122
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.20	0.15	2.32	0.00	0.00	0.42	0.42	0.00	0.10	0.10	—	476	476	0.02	0.02	1.78	483
Vendor	0.02	0.01	0.28	0.13	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	209	209	0.01	0.03	0.54	219
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.20	0.17	2.03	0.00	0.00	0.42	0.42	0.00	0.10	0.10	—	449	449	0.02	0.02	0.05	455
Vendor	0.02	0.01	0.29	0.13	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	210	210	0.01	0.03	0.01	219
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	0.93	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	205	205	0.01	0.01	0.35	208
Vendor	0.01	< 0.005	0.13	0.06	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	94.7	94.7	< 0.005	0.01	0.11	98.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.17	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.9	33.9	< 0.005	< 0.005	0.06	34.4
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	15.7	15.7	< 0.005	< 0.005	0.02	16.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.67	0.56	6.34	10.4	0.02	0.17	—	0.17	0.16	—	0.16	—	1,631	1,631	0.07	0.01	—	1,636
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	6.34	10.4	0.02	0.17	—	0.17	0.16	—	0.16	—	1,631	1,631	0.07	0.01	—	1,636
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.25	2.86	4.69	0.01	0.08	—	0.08	0.07	—	0.07	—	737	737	0.03	0.01	—	740
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.52	0.86	< 0.005	0.01	—	0.01	0.01	—	0.01	—	122	122	< 0.005	< 0.005	—	122
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.20	0.15	2.32	0.00	0.00	0.42	0.42	0.00	0.10	0.10	—	476	476	0.02	0.02	1.78	483
Vendor	0.02	0.01	0.28	0.13	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	209	209	0.01	0.03	0.54	219
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.20	0.17	2.03	0.00	0.00	0.42	0.42	0.00	0.10	0.10	—	449	449	0.02	0.02	0.05	455

Vendor	0.02	0.01	0.29	0.13	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	210	210	0.01	0.03	0.01	219
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	0.93	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	205	205	0.01	0.01	0.35	208
Vendor	0.01	< 0.005	0.13	0.06	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	94.7	94.7	< 0.005	0.01	0.11	98.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.17	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.9	33.9	< 0.005	< 0.005	0.06	34.4
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	15.7	15.7	< 0.005	< 0.005	0.02	16.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.43	3.75	4.83	0.01	0.17	—	0.17	0.16	—	0.16	—	739	739	0.03	0.01	—	741
Paving	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	8.74	8.74	< 0.005	< 0.005	0.02	9.19
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.43	3.75	4.83	0.01	0.17	—	0.17	0.16	—	0.16	—	739	739	0.03	0.01	—	741
Paving	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	8.76	8.76	< 0.005	< 0.005	< 0.005	9.20
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.31	0.40	< 0.005	0.01	—	0.01	0.01	—	0.01	—	60.7	60.7	< 0.005	< 0.005	—	60.9
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.72	0.72	< 0.005	< 0.005	< 0.005	0.76
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.1	10.1	< 0.005	< 0.005	—	10.1
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.12	0.12	< 0.005	< 0.005	< 0.005	0.13
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.09	1.39	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	285	285	0.01	0.01	1.07	290
Vendor	0.01	< 0.005	0.14	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	105	105	< 0.005	0.01	0.27	110
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.10	1.22	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	269	269	0.01	0.01	0.03	273
Vendor	0.01	< 0.005	0.14	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	105	105	< 0.005	0.01	0.01	109
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	22.3	22.3	< 0.005	< 0.005	0.04	22.7
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.61	8.61	< 0.005	< 0.005	0.31	8.99

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.70	3.70	< 0.005	< 0.005	0.01	3.75
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.43	1.43	< 0.005	< 0.005	< 0.005	1.49
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.43	3.75	4.83	0.01	0.17	—	0.17	0.16	—	0.16	—	739	739	0.03	0.01	—	741
Paving	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	8.74	8.74	< 0.005	< 0.005	0.02	9.19
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.43	3.75	4.83	0.01	0.17	—	0.17	0.16	—	0.16	—	739	739	0.03	0.01	—	741
Paving	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	8.76	8.76	< 0.005	< 0.005	< 0.005	9.20
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.31	0.40	< 0.005	0.01	—	0.01	0.01	—	0.01	—	60.7	60.7	< 0.005	< 0.005	—	60.9
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.72	0.72	< 0.005	< 0.005	< 0.005	0.76
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.1	10.1	< 0.005	< 0.005	—	10.1
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.12	0.12	< 0.005	< 0.005	< 0.005	0.13
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.09	1.39	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	285	285	0.01	0.01	1.07	290
Vendor	0.01	< 0.005	0.14	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	105	105	< 0.005	0.01	0.27	110
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.10	1.22	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	269	269	0.01	0.01	0.03	273
Vendor	0.01	< 0.005	0.14	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	105	105	< 0.005	0.01	0.01	109
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	22.3	22.3	< 0.005	< 0.005	0.04	22.7
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.61	8.61	< 0.005	< 0.005	0.01	8.99
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.70	3.70	< 0.005	< 0.005	0.01	3.75
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.43	1.43	< 0.005	< 0.005	< 0.005	1.49
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.42	1.72	< 0.005	0.03	—	0.03	0.03	—	0.03	—	244	244	0.01	< 0.005	—	245
Architectural Coatings	—	1.76	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.42	1.72	< 0.005	0.03	—	0.03	0.03	—	0.03	—	244	244	0.01	< 0.005	—	245
Architectural Coatings	—	1.76	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.12	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.1	20.1	< 0.005	< 0.005	—	20.1
Architectural Coatings	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.32	3.32	< 0.005	< 0.005	—	3.33
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.46	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	95.1	95.1	< 0.005	< 0.005	0.36	96.6
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	52.4	52.4	< 0.005	0.01	0.14	54.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.41	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	89.8	89.8	< 0.005	< 0.005	0.01	91.0
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	52.4	52.4	< 0.005	0.01	< 0.005	54.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.45	7.45	< 0.005	< 0.005	0.01	7.56
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.31	4.31	< 0.005	< 0.005	< 0.005	4.50
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.23	1.23	< 0.005	< 0.005	< 0.005	1.25
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.71	0.71	< 0.005	< 0.005	< 0.005	0.74
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.42	1.72	< 0.005	0.03	—	0.03	0.03	—	0.03	—	244	244	0.01	< 0.005	—	245
Architectural Coatings	—	1.76	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.42	1.72	< 0.005	0.03	—	0.03	0.03	—	0.03	—	244	244	0.01	< 0.005	—	245
Architectural Coatings	—	1.76	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.12	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.1	20.1	< 0.005	< 0.005	—	20.1
Architectural Coatings	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.32	3.32	< 0.005	< 0.005	—	3.33
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.46	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	95.1	95.1	< 0.005	< 0.005	0.36	96.6
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	52.4	52.4	< 0.005	0.01	0.14	54.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.41	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	89.8	89.8	< 0.005	< 0.005	0.01	91.0
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	52.4	52.4	< 0.005	0.01	< 0.005	54.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.45	7.45	< 0.005	< 0.005	0.01	7.56
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.31	4.31	< 0.005	< 0.005	< 0.005	4.50
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.23	1.23	< 0.005	< 0.005	< 0.005	1.25
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.71	0.71	< 0.005	< 0.005	< 0.005	0.74
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.1.2. Mitigated

Mobile source emissions results are presented in Sections 2.5. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	19.9	19.9	0.01	< 0.005	—	20.8
Total	—	—	—	—	—	—	—	—	—	—	—	—	19.9	19.9	0.01	< 0.005	—	20.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Government	—	—	—	—	—	—	—	—	—	—	—	—	19.9	19.9	0.01	< 0.005	—	20.8
Total	—	—	—	—	—	—	—	—	—	—	—	—	19.9	19.9	0.01	< 0.005	—	20.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	3.30	3.30	< 0.005	< 0.005	—	3.45
Total	—	—	—	—	—	—	—	—	—	—	—	—	3.30	3.30	< 0.005	< 0.005	—	3.45

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	19.3	19.3	0.01	< 0.005	—	20.2
Total	—	—	—	—	—	—	—	—	—	—	—	—	19.3	19.3	0.01	< 0.005	—	20.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Governm Office Building	—	—	—	—	—	—	—	—	—	—	—	—	19.3	19.3	0.01	< 0.005	—	20.2
Total	—	—	—	—	—	—	—	—	—	—	—	—	19.3	19.3	0.01	< 0.005	—	20.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Governm ent Office Building	—	—	—	—	—	—	—	—	—	—	—	—	3.20	3.20	< 0.005	< 0.005	—	3.34
Total	—	—	—	—	—	—	—	—	—	—	—	—	3.20	3.20	< 0.005	< 0.005	—	3.34

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Governm ent Office Building	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	99.8	99.8	0.01	< 0.005	—	100
Total	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	99.8	99.8	0.01	< 0.005	—	100
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	99.8	99.8	0.01	< 0.005	—	100
Total	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	99.8	99.8	0.01	< 0.005	—	100
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.5	16.5	< 0.005	< 0.005	—	16.6
Total	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.5	16.5	< 0.005	< 0.005	—	16.6

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	96.0	96.0	0.01	< 0.005	—	96.3
Total	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	96.0	96.0	0.01	< 0.005	—	96.3

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	96.0	96.0	0.01	< 0.005	—	96.3
Total	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	96.0	96.0	0.01	< 0.005	—	96.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.9	15.9	< 0.005	< 0.005	—	15.9
Total	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.9	15.9	< 0.005	< 0.005	—	15.9

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.08	0.07	< 0.005	0.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.74	1.74	< 0.005	< 0.005	—	1.75
Total	0.08	0.29	< 0.005	0.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.74	1.74	< 0.005	< 0.005	—	1.75
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.14	0.14	< 0.005	< 0.005	—	0.14
Total	0.01	0.05	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.14	0.14	< 0.005	< 0.005	—	0.14

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.08	0.07	< 0.005	0.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.74	1.74	< 0.005	< 0.005	—	1.75
Total	0.08	0.29	< 0.005	0.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.74	1.74	< 0.005	< 0.005	—	1.75
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.14	0.14	< 0.005	< 0.005	—	0.14
Total	0.01	0.05	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.14	0.14	< 0.005	< 0.005	—	0.14

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.09	0.09	< 0.005	< 0.005	—	0.09
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	3.70	1.63	5.33	0.38	0.01	—	17.6
Total	—	—	—	—	—	—	—	—	—	—	—	3.70	1.71	5.41	0.38	0.01	—	17.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.09	0.09	< 0.005	< 0.005	—	0.09
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	3.70	1.63	5.33	0.38	0.01	—	17.6
Total	—	—	—	—	—	—	—	—	—	—	—	3.70	1.71	5.41	0.38	0.01	—	17.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.01	0.01	< 0.005	< 0.005	—	0.01

Government Office Building	—	—	—	—	—	—	—	—	—	—	—	0.61	0.27	0.88	0.06	< 0.005	—	2.91
Total	—	—	—	—	—	—	—	—	—	—	—	0.61	0.28	0.90	0.06	< 0.005	—	2.93

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	-0.03	-0.03	> -0.005	> -0.005	—	-0.03
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	3.39	1.49	4.88	0.35	0.01	—	16.1
Total	—	—	—	—	—	—	—	—	—	—	—	3.39	1.46	4.85	0.35	0.01	—	16.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	-0.03	-0.03	> -0.005	> -0.005	—	-0.03
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	3.39	1.49	4.88	0.35	0.01	—	16.1
Total	—	—	—	—	—	—	—	—	—	—	—	3.39	1.46	4.85	0.35	0.01	—	16.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	> -0.005	> -0.005	> -0.005	> -0.005	—	> -0.005
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	0.56	0.25	0.81	0.06	< 0.005	—	2.66
Total	—	—	—	—	—	—	—	—	—	—	—	0.56	0.24	0.80	0.06	< 0.005	—	2.66

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Total	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Government Office Building	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Total	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	0.81	0.00	0.81	0.08	0.00	—	2.82
Total	—	—	—	—	—	—	—	—	—	—	—	0.81	0.00	0.81	0.08	0.00	—	2.82

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Total	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Total	—	—	—	—	—	—	—	—	—	—	—	4.87	0.00	4.87	0.49	0.00	—	17.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	0.81	0.00	0.81	0.08	0.00	—	2.82
Total	—	—	—	—	—	—	—	—	—	—	—	0.81	0.00	0.81	0.08	0.00	—	2.82

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.97	0.89	4.62	3.57	< 0.005	0.39	0.00	0.39	0.39	0.00	0.39	0.00	453	453	0.02	< 0.005	0.00	455
Total	0.97	0.89	4.62	3.57	< 0.005	0.39	0.00	0.39	0.39	0.00	0.39	0.00	453	453	0.02	< 0.005	0.00	455
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.97	0.89	4.62	3.57	< 0.005	0.39	0.00	0.39	0.39	0.00	0.39	0.00	453	453	0.02	< 0.005	0.00	455

Total	0.97	0.89	4.62	3.57	< 0.005	0.39	0.00	0.39	0.39	0.00	0.39	0.00	453	453	0.02	< 0.005	0.00	455
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	0.41	0.41	< 0.005	< 0.005	0.00	0.41
Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	0.41	0.41	< 0.005	< 0.005	0.00	0.41

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.97	0.89	4.62	3.57	< 0.005	0.39	0.00	0.39	0.39	0.00	0.39	0.00	453	453	0.02	< 0.005	0.00	455
Total	0.97	0.89	4.62	3.57	< 0.005	0.39	0.00	0.39	0.39	0.00	0.39	0.00	453	453	0.02	< 0.005	0.00	455
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.97	0.89	4.62	3.57	< 0.005	0.39	0.00	0.39	0.39	0.00	0.39	0.00	453	453	0.02	< 0.005	0.00	455
Total	0.97	0.89	4.62	3.57	< 0.005	0.39	0.00	0.39	0.39	0.00	0.39	0.00	453	453	0.02	< 0.005	0.00	455
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	0.41	0.41	< 0.005	< 0.005	0.00	0.41

Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	0.41	0.41	< 0.005	< 0.005	0.00	0.41

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	11/10/2025	12/5/2025	5.00	20.0	Demo of Existing Station and Repurposing

Site Preparation	Site Preparation	11/11/2024	12/13/2024	5.00	25.0	Earthwork
Grading	Grading	12/16/2024	2/7/2025	5.00	40.0	Site utilities and foundation
Building Construction	Building Construction	2/10/2025	9/26/2025	5.00	165	Structure
Paving	Paving	9/29/2025	11/7/2025	5.00	30.0	Site work
Architectural Coating	Architectural Coating	9/29/2025	11/7/2025	5.00	30.0	Site work

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	6.00	33.0	0.73
Demolition	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Demolition	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Site Preparation	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Site Preparation	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Rough Terrain Forklifts	Diesel	Average	2.00	8.00	96.0	0.40
Building Construction	Welders	Diesel	Average	1.00	6.00	46.0	0.45

Building Construction	Aerial Lifts	Diesel	Average	1.00	8.00	46.0	0.31
Building Construction	Skid Steer Loaders	Diesel	Average	1.00	1.00	71.0	0.37
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	2.00	6.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Architectural Coating	Aerial Lifts	Diesel	Average	1.00	6.00	46.0	0.31

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	6.00	33.0	0.73
Demolition	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Demolition	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Site Preparation	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Site Preparation	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37

Building Construction	Rough Terrain Forklifts	Diesel	Average	2.00	8.00	96.0	0.40
Building Construction	Welders	Diesel	Average	1.00	6.00	46.0	0.45
Building Construction	Aerial Lifts	Diesel	Average	1.00	8.00	46.0	0.31
Building Construction	Skid Steer Loaders	Diesel	Average	1.00	1.00	71.0	0.37
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	2.00	6.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Architectural Coating	Aerial Lifts	Diesel	Average	1.00	6.00	46.0	0.31

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	40.0	12.0	LDA,LDT1,LDT2
Site Preparation	Vendor	4.00	8.00	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	1.00	2.00	HHDT
Grading	—	—	—	—
Grading	Worker	40.0	12.0	LDA,LDT1,LDT2
Grading	Vendor	4.00	8.00	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	1.00	2.00	HHDT
Building Construction	—	—	—	—

Building Construction	Worker	50.0	12.0	LDA,LDT1,LDT2
Building Construction	Vendor	8.00	8.00	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	0.00	0.00	HHDT
Paving	—	—	—	—
Paving	Worker	30.0	12.0	LDA,LDT1,LDT2
Paving	Vendor	4.00	8.00	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	1.00	2.00	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	10.0	12.0	LDA,LDT1,LDT2
Architectural Coating	Vendor	2.00	8.00	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	0.00	0.00	HHDT
Demolition	—	—	—	—
Demolition	Worker	20.0	12.0	LDA,LDT1,LDT2
Demolition	Vendor	0.00	8.00	HHDT,MHDT
Demolition	Hauling	6.00	20.0	HHDT
Demolition	Onsite truck	1.00	2.00	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	40.0	12.0	LDA,LDT1,LDT2
Site Preparation	Vendor	4.00	8.00	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	1.00	2.00	HHDT

Grading	—	—	—	—
Grading	Worker	40.0	12.0	LDA,LDT1,LDT2
Grading	Vendor	4.00	8.00	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	1.00	2.00	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	50.0	12.0	LDA,LDT1,LDT2
Building Construction	Vendor	8.00	8.00	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	0.00	0.00	HHDT
Paving	—	—	—	—
Paving	Worker	30.0	12.0	LDA,LDT1,LDT2
Paving	Vendor	4.00	8.00	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	1.00	2.00	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	10.0	12.0	LDA,LDT1,LDT2
Architectural Coating	Vendor	2.00	8.00	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	0.00	0.00	HHDT
Demolition	—	—	—	—
Demolition	Worker	20.0	12.0	LDA,LDT1,LDT2
Demolition	Vendor	0.00	8.00	HHDT,MHDT
Demolition	Hauling	6.00	20.0	HHDT
Demolition	Onsite truck	1.00	2.00	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	14,589	4,863	1,689

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	5,530	—
Site Preparation	0.00	0.00	12.5	0.00	—
Grading	0.00	0.00	35.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.65

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Asphalt Surfaces	0.65	100%
Government Office Building	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	540	0.03	< 0.005
2025	0.00	540	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	14,589	4,863	1,689

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Other Asphalt Surfaces	0.00	45.1	0.0330	0.0040	0.00
Government Office Building	161,399	45.1	0.0330	0.0040	311,456

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Other Asphalt Surfaces	0.00	45.1	0.0330	0.0040	0.00
Government Office Building	156,475	45.1	0.0330	0.0040	299,527

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Other Asphalt Surfaces	0.00	131,675
Government Office Building	1,932,164	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Other Asphalt Surfaces	0.00	-43,972
Government Office Building	1,768,703	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Other Asphalt Surfaces	0.00	—
Government Office Building	9.05	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Other Asphalt Surfaces	0.00	—

Government Office Building	9.05	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Government Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Government Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Government Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Government Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Emergency Generator	Diesel	1.00	12.0	24.0	45.0	0.73

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	16.7	annual days of extreme heat
Extreme Precipitation	4.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	40.6	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	0	3	1
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	2	1	2	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	1	4	1
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	2	1	2	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

6.4.1. Temperature and Extreme Heat

User Selected Measures	Co-Benefits Achieved	Exposure Reduction	Sensitivity Reduction	Adaptive Capacity Increase
D-3: Install Drought Resistant Landscaping	Water Conservation	—	1.00	1.00

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	55.4
AQ-PM	18.1
AQ-DPM	17.2
Drinking Water	15.0
Lead Risk Housing	12.3
Pesticides	57.7
Toxic Releases	10.3
Traffic	56.8
Effect Indicators	—

CleanUp Sites	0.00
Groundwater	6.97
Haz Waste Facilities/Generators	0.00
Impaired Water Bodies	72.2
Solid Waste	0.00
Sensitive Population	—
Asthma	15.4
Cardio-vascular	40.8
Low Birth Weights	16.0
Socioeconomic Factor Indicators	—
Education	15.8
Housing	15.9
Linguistic	18.1
Poverty	20.6
Unemployment	9.72

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	72.6806108
Employed	10.67624791
Median HI	69.04914667
Education	—
Bachelor's or higher	69.2416271
High school enrollment	4.773514693
Preschool enrollment	18.29847299

Transportation	—
Auto Access	82.44578468
Active commuting	48.94135763
Social	—
2-parent households	83.16437829
Voting	97.35660208
Neighborhood	—
Alcohol availability	89.31092006
Park access	14.03823945
Retail density	7.198768125
Supermarket access	14.60284871
Tree canopy	77.68510201
Housing	—
Homeownership	93.98177852
Housing habitability	79.66123444
Low-inc homeowner severe housing cost burden	51.90555627
Low-inc renter severe housing cost burden	35.05710253
Uncrowded housing	83.16437829
Health Outcomes	—
Insured adults	52.48299756
Arthritis	0.0
Asthma ER Admissions	75.5
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0

Diagnosed Diabetes	0.0
Life Expectancy at Birth	69.7
Cognitively Disabled	18.3
Physically Disabled	32.1
Heart Attack ER Admissions	73.1
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	74.1
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	31.5
SLR Inundation Area	0.0
Children	76.4
Elderly	2.1
English Speaking	71.4
Foreign-born	6.7
Outdoor Workers	33.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	94.2
Traffic Density	57.1
Traffic Access	23.0

Other Indices	—
Hardship	33.6
Other Decision Support	—
2016 Voting	97.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	6.00
Healthy Places Index Score for Project Location (b)	52.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Client provided construction schedule
Construction: Off-Road Equipment	No cranes; Site geometry not logistically pragmatic for graders, used crawler tractors instead.

Construction: Trips and VMT	Trips estimated based on site size (~1.65 acres), size of building structures (~10,000 sf), and area of paving (~30,000 sf).
Construction: On-Road Fugitive Dust	Existing site conditions have paved areas.

Attachment E

Noise Report

Fire Station No. 4

Noise Report

prepared for
County of San Diego

Project Proponent
North County Fire Protection District
330 South Main Avenue
Fallbrook, California 92028

prepared by
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May 2024

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Glossary

ADT	average daily traffic
ANSI	American National Standards Institute
CNEL	Community Noise Equivalent Level (also referred to as L_{DEN})
dB	decibel
dBA	A-weighted decibel
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HVAC	heating, ventilation, and air conditioning
in./sec.	inches per second
Ldn	Day Night sound level
Leq	equivalent noise level
Lmax	Highest RMS sound pressure level
Lmin	Lowest RMS sound pressure level
NSLU	noise sensitive land use
PPV	peak particle velocity
RCNM	Roadway Construction Noise Model
RMS	root mean squared

Executive Summary

This report analyzes the potential construction and operational noise impacts from the North County Fire Protection District's proposed Fire Station No. 4 Project (herein referred to as "proposed project" or "project"), which would involve demolition of the existing fire station, and construction and operation of a new Fire Station No. 4. The station would include an approximately 9,762-square foot fire station facility plus driveway and parking lot improvements. The project site is located in the southeast portion of Fallbrook, west of Old Highway 395 and south of Pala Mesa Drive at 4375 Pala Mesa Drive, in unincorporated San Diego County (County).

Noise on the project site is primarily generated from off-site traffic. The closest potential exterior use area are patios on the western edge of the building, located approximately 450 feet from the centerline of Interstate 15. The project site was measured to have an ambient noise level of 65 community noise equivalent level (CNEL). This value does not exceed the 65 CNEL standard applicable to government land uses like the proposed project. As such, the project would be consistent with the exterior noise land use compatibility standards for the County. On-site noise levels from off-site traffic noise at the project's interior areas would be 40 A-weighted decibels (dBA) equivalent noise level (L_{eq}) and is within County of San Diego land use compatibility standards for a governmental use of 50 dBA L_{eq}. Impacts would be less than significant.

The existing Fire Station No. 4 currently generates vehicle trips from workers commuting to and from the site, and from fire trucks responding to emergencies. According to the North County Fire Protection District (District), the proposed project would neither expand the services provided nor the number of employees compared to the existing fire station. Therefore, the proposed fire station would not result in a net change in vehicle trips on area roadways and would not create a perceptible change in traffic noise. Accordingly, the project's potential noise impacts from operational vehicle trips would be less than significant.

The project's noise sources would include HVAC units, fire station alert system exterior speakers, a standby generator, and emergency sirens. Combined on-site operational noise from the HVAC units and speakers would reach up to 41 dBA L_{eq} at the nearest single-family property line to the south, which would not exceed either the County's 50 dBA L_{eq} daytime or the 45 dBA L_{eq} nighttime standard. Emergency sirens would be exempt from County standards, pursuant to Section 36.417 of the San Diego County Code, and would be similar to existing conditions. The proposed emergency generator would not be new but rather would replace an existing emergency generator that is located at the southwestern portion of the project. The new generator would result in reduced operational noise impacts at nearby sensitive receptors because it would be located on the southeastern portion of the site, which is further from residences to the south and shielded from residences to the north. In addition, the new generator activities, such as testing, would be similar to those that occur on-site. Therefore, operational noise levels would be less with the project and also would not exceed the adjusted ambient noise limits.

At a distance of 200 feet to the nearest sensitive receiver, project construction would generate noise levels of 71 dBA L_{eq} and 73 dBA L_{max}. These noise levels would not exceed the County's 75 dBA L_{eq} or 82 dBA L_{max} threshold for construction. In addition, construction activities would not occur

between the hours of 7:00 p.m. and 7:00 a.m. Therefore, construction noise impacts would be less than significant.

Vibration from construction activities would not exceed County thresholds at the nearest residential structures. In addition, the project does not include any substantial vibration sources associated with operation. Therefore, vibration impacts would be less than significant.

1 Introduction

This report has been prepared in accordance with the County of San Diego's Guidelines for Determining Significance (County of San Diego 2009a) and Report Format and Content Requirements (County of San Diego 2009b) for noise.

1.1 Environmental Settings & Existing Conditions

1.1.1 Setting and Location

The project site encompasses the existing North County Fire Protection District's Fire Station No. 4, which is located in the southeast portion of Fallbrook, west of Old Highway 395 and south of Pala Mesa Drive at 4375 Pala Mesa Drive, in unincorporated County. The site is approximately 1.73 acres, located at Assessor Parcel Number (APN) 120-506-900. Figure 1 and shows the project location on a regional scale Figure 2 shows the location of the site on a local scale.

The project site currently includes an existing fire station, ancillary structures and two driveways. The site is surrounded by a fence on the western boundary, separating the District's property from the undeveloped land to the west. Other than the developed structures, there are several mature trees, specifically ornamental species including Monterey pine, Rocky Mountain juniper, Eastern red cedar and ruderal vegetation and a gravel driveway. The site is bound by Pala Mesa Drive to the north; Old Highway 395 and Interstate Highway 15 to the east; unpaved roads and residential development to the south; and vacant/agricultural land to the west.

1.2 Project Background and Objectives

The District is an independent special district established in 1987 to provide fire protection, emergency medical services, ambulance transport, hazardous materials response, and weed abatement (fuel reduction) in the unincorporated Fallbrook and Bonsall communities, of San Diego County. The District's service area covers approximately 92 square miles and has an estimated population of 55,000 people. The District's Station No. 4 has a service area of approximately 16.4 miles.. The District provides emergency medical services to an additional 40 square miles beyond its primary service area. Currently, the District operates five fire stations, each equipped with full-time, paid personnel, as well as Single Role Paramedics and emergency medical technicians (EMTs).

The existing Fire Station No. 4 was constructed in 1979 and consists of modular prefabricated structures intended as temporary quarters until a new facility could be built. In 2017, a comprehensive condition assessment evaluated all District facilities, leading to the recommendation to replace Fire Station No. 4. Subsequently, in October 2020, the Board of Directors approved a Facilities Replacement Plan outlining the timeline for renovating and constructing District facilities. The Facilities Replacement Plan specifically called for the complete replacement of Fire Station No. 4, commencing in 2024 to address the growing service demands along the I-15 corridor and the broader Pala Mesa region.

Figure 1 Regional Location

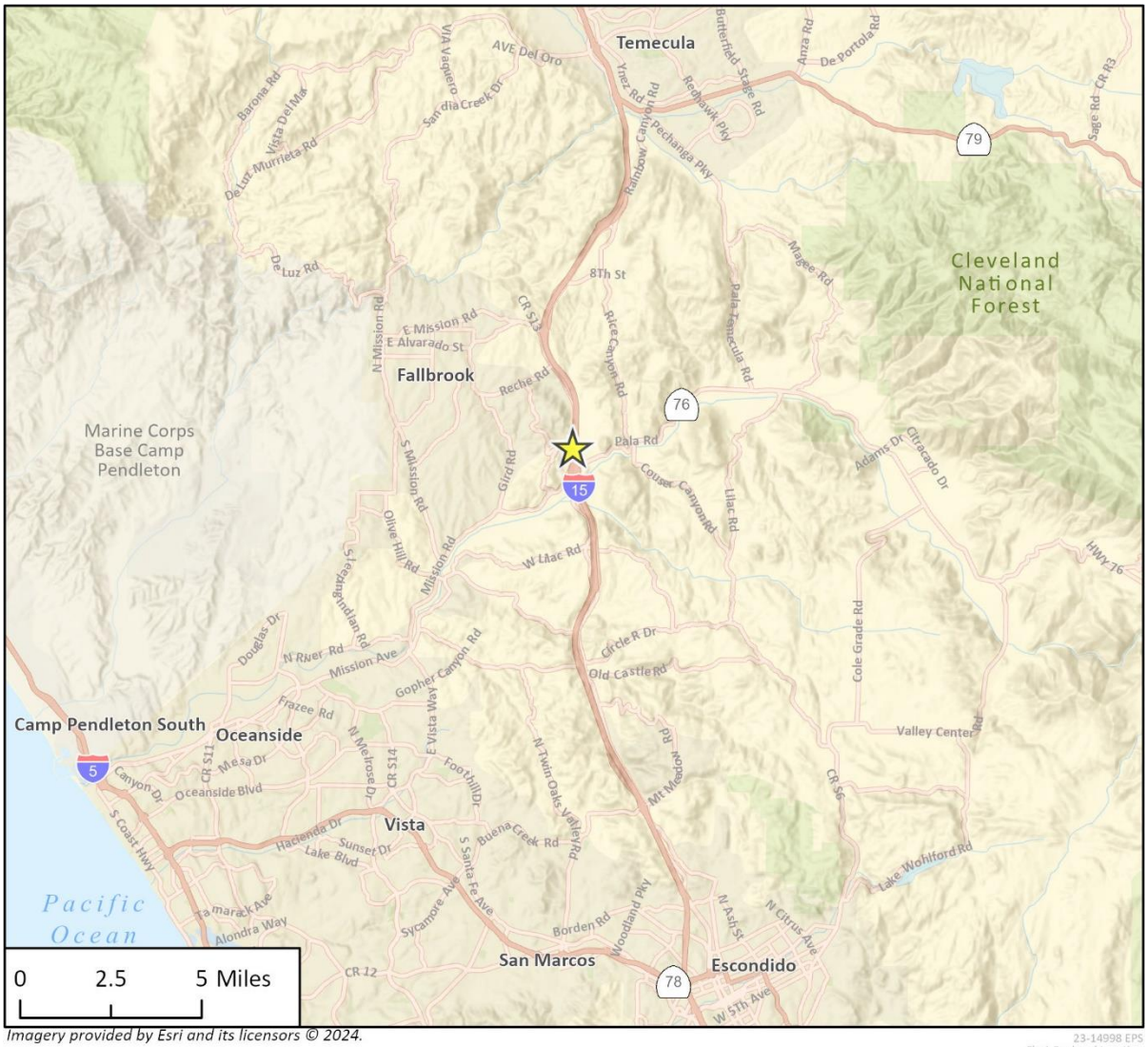

Figure 2 Project Location

Imagery provided by Microsoft Bing and its licensors © 2024.

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Fig 2 Project Site Location

1.3 Description of the Proposed Project

The proposed project would involve construction and operation of a new Fire Station No. 4, which would include an approximately 9,762-square foot fire station facility plus driveway and parking lot improvements. The proposed project would also include the eventual demolition of the existing fire station. The existing fire station would remain in operation during construction of the new fire station (Stage I), as shown in Figure 3, and would be demolished after construction of the new fire station is completed (Stage II), as shown in Figure 4. The existing emergency generator located at the southwestern portion of the project site would be removed during project construction and a new generator would be installed at the southeastern side of the project site. The existing above ground fuel tank located at the northwestern portion of the project site would be retained in place and an additional fuel tank would be added to the Old Highway 395 rear entry driveway.

The new fire station would include living and working facilities and an apparatus bay that can house one fire engine, one brush engine, and one emergency services vehicle. The interior of the fire station would contain a lobby and bathroom, a conference room, two offices, a telecommunications room, a day room, an exercise room, a dining area, a kitchen, a laundry room, firefighter bedrooms and bathrooms, a workshop, and electrical and medical supply storage rooms. A flagpole and visitors parking would be located to the north, a covered patio and exercise patio would be located outside the fire station to the west, and firefighter parking, a new emergency generator, and a new propane tank would be located to the east, and additional firefighter parking would be located to the south. The proposed features of the fire station are summarized in Table 1 and building elevations are shown in Figure 5.

Table 1 Summary of Fire Station Features

Feature	Area (square feet)
Fire Station	
Firefighter dormitories	941
Firefighter facilities	2,156
Community space and offices	946
Mechanical/Storage	389
Apparatus Room	2,876
Covered Patios	307
Circulation Areas	
Hallways	894
Vestibules	195
Storage Rooms	96
Structure Area	926
Total Fire Station Area	**9,762**

Site Access

The project would be accessible via two driveways: one on the northern portion of the project site with existing access from Pala Mesa Dive and one on the southern portion of the project site with existing access from Old Highway 395. The driveway located on Pala Mesa Drive would provide ingress/egress to the apparatus bay and include three public parking spaces. The driveway on Old

Highway 395 would provide ingress/egress to the apparatus bay and 19 staff parking spaces. The Old Highway 395 driveway would have a sliding security gate.

Construction

Project construction would occur over approximately 14 months from November 2024 to December 2025. The project would be constructed in six phases, outlined in Table 2 and described further below.

Table 2 Proposed Construction Schedule

Construction Phase	Duration	Approximate Start and End Dates
Earthwork	25 days	11/24 – 12/24
Site Utilities	20 days	12/24 – 1/25
Foundations	20 days	12/24 – 1/25
Structure	150 days	2/25 – 9/25
Site Work	30 days	10/25 – 11/25
Demolition of Existing Station and Repurposing	20 days	11/25 – 12/25

Construction work would occur Monday through Friday, from approximately 7:00 a.m. to 4:00 p.m. Weekend construction is not anticipated. Construction equipment would be staged on site, and workers would also park on site.

Operation

Currently, the fire station houses one fire engine, one brush engine, and one emergency service vehicle and is staffed with four full time fire fighters. The project does not propose an increase in vehicles housed or firefighters staffed at the station. Fire station alert system exterior speakers would be implemented on the north, west, and south sides of the station.

Figure 3 Site Plan – Phase I

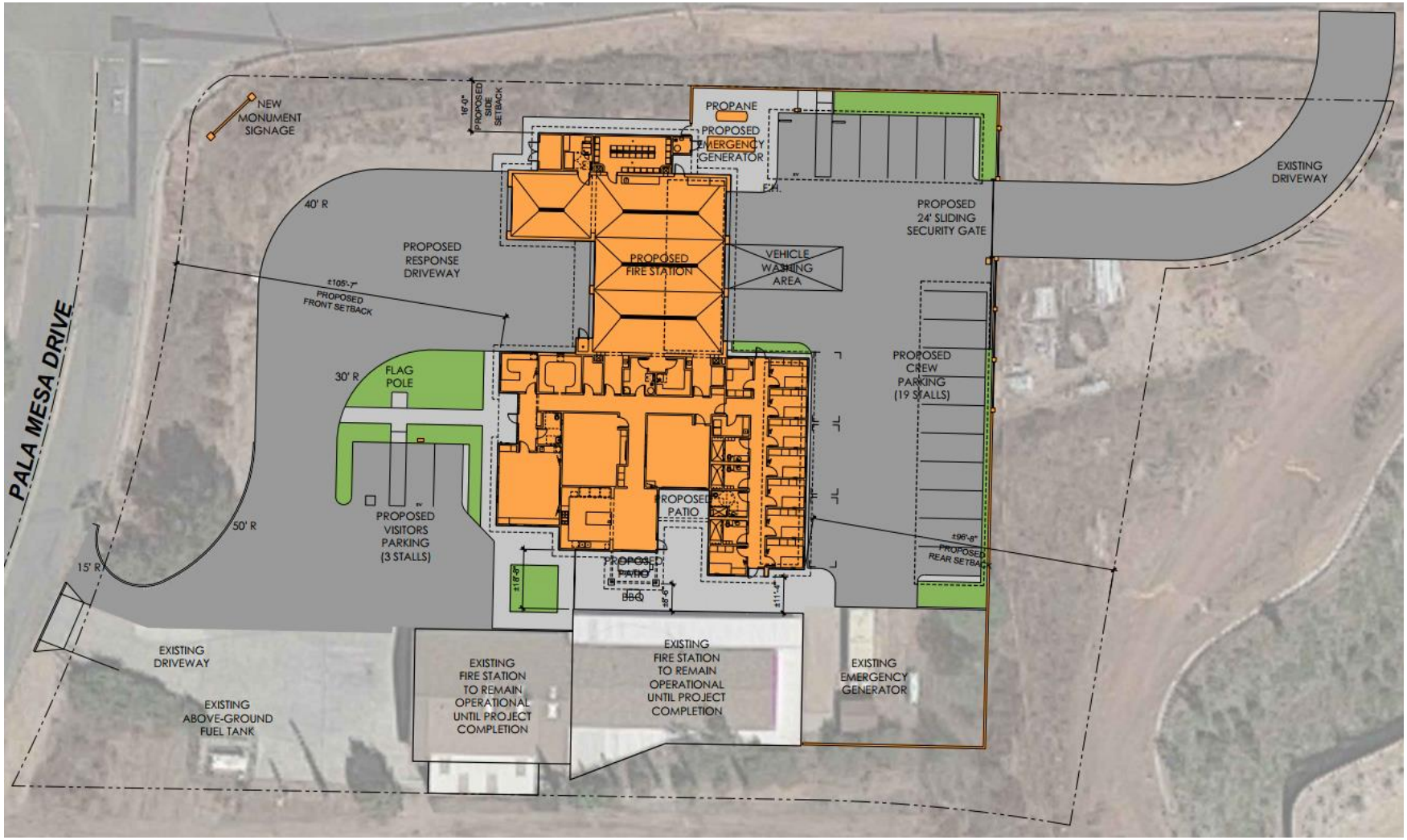


Figure 4 Site Plan – Phase II

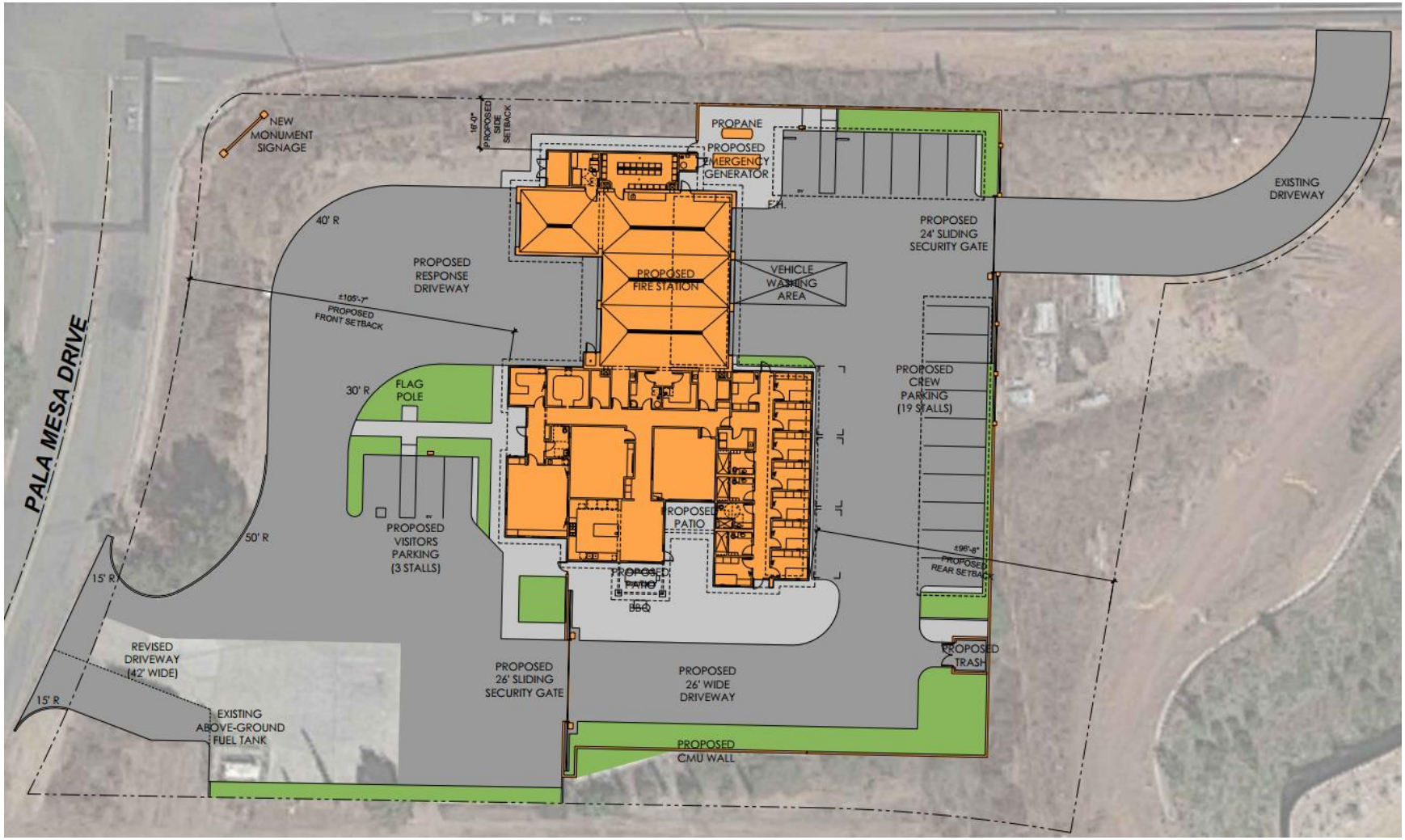


Figure 5 Building Elevations

1.3.1 Overview of Noise

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (Caltrans 2013).

Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response. Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; dividing the energy in half would result in a 3 dB decrease (Caltrans 2013).

Human perception of noise has no simple correlation with sound energy: the perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not "sound twice as loud" as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease (*i.e.*, twice the sound energy); that a change of 5 dBA is readily perceptible (8 times the sound energy); and that an increase (or decrease) of 10 dBA sounds twice (half) as loud (10.5x the sound energy) (Caltrans 2013).

Sound changes in both level and frequency spectrum as it travels from the source to the receiver. The most obvious change is the decrease in the noise level as the distance from the source increases. The manner by which noise reduces with distance depends on factors such as the type of sources (*e.g.*, point or line), the path the sound will travel, site conditions, and obstructions.

Sound levels are described as either a "sound power level" or a "sound pressure level," which are two distinct characteristics of sound. Both share the same unit of measurement, dB. However, sound power (expressed as L_{pw}) is the energy converted into sound by the source. As sound energy travels through the air, it creates a sound wave that exerts pressure on receivers, such as an eardrum or microphone, which is the sound pressure level. Sound measurement instruments only measure sound pressure, and noise level limits are typically expressed as sound pressure levels.

Noise levels from a point source (*e.g.*, construction, industrial machinery, air conditioning units) typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance. Noise from a line source (*e.g.*, roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance (Caltrans 2013). Noise levels may also be reduced by intervening structures; the amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain features, such as hills and dense woods, and man-made features, such as buildings and walls, can significantly alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5-dBA reduction in source noise levels at the receiver (Federal Highway Administration [FHWA] 2011). Structures can substantially reduce exposure to noise as well. The FHWA's guidance indicates that modern building construction generally provides an exterior-to-interior noise level reduction of 10 dBA with open windows and an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows (FHWA 2011).

The impact of noise is not a function of loudness alone. The time of day when noise occurs, and the duration of this noise are also key factors of project noise impact. Most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been

developed. The noise descriptors used for this study are the equivalent noise level (L_{eq}), Day-Night Average Level (DNL; may also be symbolized as L_{dn}), and the community noise equivalent level (CNEL; may also be symbolized as L_{DEN}).

L_{eq} is one of the most frequently used noise metrics; it considers both duration and sound power level. The L_{eq} is defined as the single steady-state A-weighted sound level equal to the average sound energy over a time period. When no time period is specified, a 1-hour period is assumed. The L_{max} is the highest noise level within the sampling period, and the L_{min} is the lowest noise level within the measuring period. Normal conversational levels are in the 60 to 65-dBA L_{eq} range, and ambient noise levels greater than 65 dBA L_{eq} can interrupt conversations (Federal Transit Administration [FTA] 2018).

Noise that occurs at night tends to be more disturbing than that occurring during the day. Community noise is usually measured using Day-Night Average Level (L_{dn}), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime hours (10:00 p.m. to 7:00 a.m.). Community noise can also be measured using Community Noise Equivalent Level (CNEL or L_{DEN}), which is the 24-hour average noise level with a +5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a +10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m. (Caltrans 2013).[1] The relationship between the peak-hour L_{eq} value and the L_{dn}/CNEL depends on the distribution of noise during the day, evening, and night; however noise levels described by L_{dn} and CNEL usually differ by 1 dBA or less. Quiet suburban areas typically have CNEL noise levels in the range of 40 to 50 CNEL, while areas near arterial streets are in the 50 to 60+ CNEL range (FTA 2018).

1.3.2 Overview of Vibration

Ground-borne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent structures. The number of cycles per second of oscillation makes up the vibration frequency, described in terms of Hertz. The frequency of a vibrating object describes how rapidly it oscillates. The normal frequency range of most ground-borne vibration that can be felt by the human body starts from a low frequency of less than 1 Hertz and goes to a high of about 200 Hertz (Crocker 2007).

While people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration. Vibration in buildings, such as from nearby construction activities, may cause windows, items on shelves, and pictures on walls to rattle. Vibration of building components can also take the form of an audible low-frequency rumbling noise, referred to as ground-borne noise. Ground-borne noise is usually only a problem when the originating vibration spectrum is dominated by frequencies in the upper end of the range (60 to 200 Hertz), or when foundations or utilities, such as sewer and water pipes, physically connect the structure and the vibration source (FTA 2018). Although ground-borne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors. The primary concern of vibration is that it can be intrusive and annoying to building occupants and vibration-sensitive land uses.

Vibration energy spreads out as it travels through the ground, causing the vibration level to diminish with distance away from the source. High-frequency vibrations diminish much more rapidly than low frequencies, so low frequencies tend to dominate the spectrum at large distances from the source. Discontinuities in the soil strata can also cause diffractions or channeling effects that affect

[1] Because DNL and CNEL are typically used to assess human exposure to noise, the use of A-weighted sound pressure level (dBA) is implicit. Therefore, when expressing noise levels in terms of DNL or CNEL, the dBA unit is not included.

the propagation of vibration over long distances (Caltrans 2020). When a building is impacted by vibration, a ground-to-foundation coupling loss will usually reduce the overall vibration level. However, under rare circumstances, the ground-to-foundation coupling may actually amplify the vibration level due to structural resonances of the floors and walls.

Vibration amplitudes are usually expressed in peak particle velocity (PPV), or root mean squared (RMS) vibration velocity. The PPV and RMS velocity are normally described in inches per second (in./sec.). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used in monitoring of blasting vibration because it is related to the stresses that are experienced by buildings (Caltrans 2020).

1.3.3 Noise-Sensitive Land Uses

Noise-sensitive land uses (NSLUs) are land uses that may be subject to stress or interference from excessive noise. The following land uses are considered noise sensitive in the County of San Diego: residential uses, public and private educational facilities, hospitals, convalescent homes, hotels/motels, daycare facilities, and passive recreation parks (County of San Diego 2011). "Exterior Noise" refers to noise measured at an outdoor living area that meets specified minimum area requirements for projects, such as exterior areas which are provided for group or private usable open space. The NSLUs nearest to the project site are single-family residences located approximately 125 feet to the south of the project site boundary. Single-family residences are also located approximately 150 feet to the north of the project site boundary.

Vibration sensitive receivers are similar to noise sensitive receivers, such as residences, and institutional uses, such as schools, churches, and hospitals. However, vibration sensitive receivers also include buildings where vibrations may interfere with vibration-sensitive equipment, and/or that are affected by levels that may be well below those associated with human annoyance.

1.3.4 Regulatory Framework

San Diego County General Plan, Noise Element

The Noise Element for the San Diego County General Plan (County of San Diego 2011) includes guidelines for noise compatibility (Tables N-1 and N-2 from the General Plan), as detailed below in Table 3, and noise standards, as detailed in Table 4. There is not a land use category that is a direct fit for a fire station; the proposed project is closest to and thus treated as a government land use that is a part of Land Use Category G as shown in Table 3.

Table 3 San Diego County Noise Compatibility Guidelines

Land Use Category		Exterior Noise Level (CNEL)					
		55	60	65	70	75	80
A	Residential—single family residences, mobile homes, senior housing, convalescent homes						
B	Residential—multi-family residences, mixed-use (commercial/residential)						
C	Transient lodging—motels, hotels, resorts						
D[1]	Schools, churches, hospitals, nursing homes, child care facilities						
E[1]	Passive recreational parks, nature preserves, contemplative spaces, cemeteries						
F[1]	Active parks, golf courses, athletic fields, outdoor spectator sports, water recreation						
G[1]	Office\professional, government, medical\dental, commercial, retail, laboratories						
H[1]	Industrial, manufacturing, utilities, agriculture, mining, stables, ranching, warehouse, maintenance/repair						

Acceptable—Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal construction, without any special noise insulation requirements.

Conditionally Acceptable—New construction or development should be undertaken only after a detailed noise analysis is conducted to determine if noise reduction measures are necessary to achieve acceptable levels for land use. Criteria for determining exterior and interior noise levels are listed in Table 5, Noise Standards. If a project cannot mitigate noise to a level deemed Acceptable, the appropriate County of San Diego decision-maker must determine that mitigation has been provided to the greatest extent practicable or that extraordinary circumstances exist.

Unacceptable—New construction or development shall not be undertaken.

[1] Denotes facilities used for part of the day; therefore, an hourly standard would be used rather than CNEL

[2] For projects located within an Airport Influence Area of an adopted Airport Land Use Compatibility Plan (ALUCP), additional Noise Compatibility Criteria restrictions may apply as specified in the ALUCP.

Source: San Diego County 2011

Table 4 San Diego County General Plan Noise Standards

Standard	Description
1	The exterior noise level (as defined in Item 3) standard for Category A shall be 60 CNEL, and the interior noise level standard for indoor habitable rooms shall be 45 CNEL.
2	The exterior noise level standard for Categories B and C shall be 65 CNEL, and the interior noise level standard for indoor habitable rooms shall be 45 CNEL.
3	The exterior noise level standard for Categories D and G shall be 65 CNEL and the interior noise level standard shall be 50 dBA L_{EQ} (one-hour average).
4	For single-family detached dwelling units, "exterior noise level" is defined as the noise level measured at an outdoor living area which adjoins and is on the same lot as the dwelling, and which contains at least the following minimum net lot area: (i) for lots less than 4,000 square feet in area, the exterior area shall include 400 square feet, (ii) for lots between 4,000 square feet to 10 acres in area, the exterior area shall include 10 percent of the lot area; (iii) for lots over 10 acres in area, the exterior area shall include 1 acre.
5	For all other residential land uses, "exterior noise level" is defined as noise measured at exterior areas that are provided for private or group usable open space purposes. "Private Usable Open Space" is defined as usable open space intended for use of occupants of one dwelling unit, normally including yards, decks, and balconies. When the noise limit for Private Usable Open Space cannot be met, then a Group Usable Open Space that meets the exterior noise level standard shall be provided. "Group Usable Open Space" is defined as usable open space intended for common use by occupants of a development, either privately owned and maintained or dedicated to a public agency, normally including swimming pools, recreation courts, patios, open landscaped areas, and greenbelts with pedestrian walkways and equestrian and bicycle trails, but not including off-street parking and loading areas or driveways.
6	For non-residential noise sensitive land uses, exterior noise level is defined as noise measured at the exterior area provided for public use.
7	For noise sensitive land uses where people normally do not sleep at night, the exterior and interior noise standard may be measured using either CNEL or the one-hour average noise level determined at the loudest hour during the period when the facility is normally occupied.
8	The exterior noise standard does not apply for land uses where no exterior use area is proposed or necessary, such as a library.
9	For Categories E and F, the exterior noise level standard shall not exceed the limit defined as "Acceptable" in Table 3 (Table N-1 in the General Plan) or an equivalent one-hour noise standard.

Note: Exterior Noise Level compatibility guidelines

County of San Diego Code – Noise Abatement and Control Ordinance

Noise requirements in the County are further discussed in the Noise Abatement and Control Ordinance, Sections 36.401 through 36.423 of the County of San Diego Code. The purpose of the ordinance is to regulate noise in the unincorporated area of the County to promote the public health, comfort, and convenience of the County's inhabitants and its visitors.

The Noise and Abatement Control Ordinance sets limits pertaining to the generation of exterior noise. Section 36.404 of the ordinance makes it unlawful for any person to cause or allow the creation of any noise which exceeds the one-hour average sound level limits in Table 5, when measured at the property line from where the noise is being produced or at any location on a property that is receiving the noise. The project parcel is zoned A-70; the residences to the south are zoned S-88; and the residences to the north are zoned R-S.

Table 5 County of San Diego Code Exterior Sound Level Limits

Zone	Time	One-Hour Average Sound Level Limits (dBA)
R-S, R-D, R-R, R-MH, A-70, A-72, S-80, S-81, S-87, S-90, S-92 and R-V and R-U with a density of less than 11 dwelling units per acre.	7:00 a.m. to 10:00 p.m.	50
	10:00 p.m. to 7:00 a.m.	45
R-RO, R-C, R-M, S-86, V5 and R-V and R-U with a density of 11 or more dwelling units per acre.	7:00 a.m. to 10:00 p.m.	55
	10:00 p.m. to 7:00 a.m.	50
S-94, V4 and all other commercial zones.	7:00 a.m. to 10:00 p.m.	60
	10:00 p.m. to 7:00 a.m.	55
V1, V2	7:00 a.m. to 7:00 p.m.	60
	7:00 p.m. to 10:00 p.m.	55
V1	10:00 p.m. to 7:00 a.m.	55
V2	10:00 p.m. to 7:00 a.m.	50
V3	7:00 a.m. to 10:00 p.m.	70
	10:00 p.m. to 7:00 a.m.	65
M-50, M-52, and M-54	Anytime	70
S-82, M-56, and M-58	Anytime	75
S-88	Depends on Use	-

Source: County of San Diego Code Section 36.404.

Zoning Code Definitions: R-S = Single-Family Residential; R-D = Duplex Residential; R-R = Rural Residential; R-MH = Mobile home Residential; A-70 = Limited Agriculture; A-72 = General Agriculture; S-80 = Open Space; S-90 = Holding Area; S-92 = General Rural; S-94 = Transportation and Utility Corridor; R-V = Variable-Family Residential; R-RO = Residential-Recreation Oriented; R-C = Residential-Commercial; R-M = Multi-Family Residential; S-86 = Parking; R-U = Urban Residential; V1, V2, V3, V4, and V5 = Village Designations; M-50 = Basic Industrial; M-52 = Limited Industrial; M-54 = General Impact Industrial; S-82 = Extractive Use; M-56 = Mixed Industrial; M-58 = High-Impact Industrial; S-88 = Specific Plan

If the measured ambient noise level exceeds the applicable limit noted above, the allowable one-hour average sound level shall be the ambient noise level, plus 3 dBA. The ambient noise level shall be measured when the alleged noise violation source is not operating. At a location on the boundary of two zones, the noise level limit is the arithmetic mean of the respective limits for the two zones.

Section 36.409 Construction Noise

Except for emergency work, it shall be unlawful for any person to operate construction equipment or cause construction equipment to be operated, that exceeds an average sound level of 75 dB for an 8-hour period, between 7:00 a.m. and 7:00 p.m., when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received.

Section 36.410 Impulsive Noise

Section 36.410 provides additional limitation on construction equipment beyond Section 36.404 pertaining to impulsive noise. Except for emergency work or work on a public road project, no

person shall produce or cause to be produced an impulsive noise that exceeds the maximum sound level shown in Table 6, when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is received, for 25 percent of the minutes in the measurement period.

Table 6 County of San Diego Maximum Sound Levels

Occupied Property Use	Decibels (dBA) L_{MAX}
Residential, village zoning or civic use	82
Agricultural, commercial, or industrial use	85

Source: County of San Diego Section 36.410

The minimum measurement period for any measurements is one hour. During the measurement period, a measurement must be conducted every minute from a fixed location on an occupied property. The measurements must measure the maximum sound level during each minute of the measurement period. If the sound level caused by construction equipment or the producer of the impulsive noise exceeds the maximum sound level for any portion of any minute, it will be deemed that the maximum sound level was exceeded during that minute.

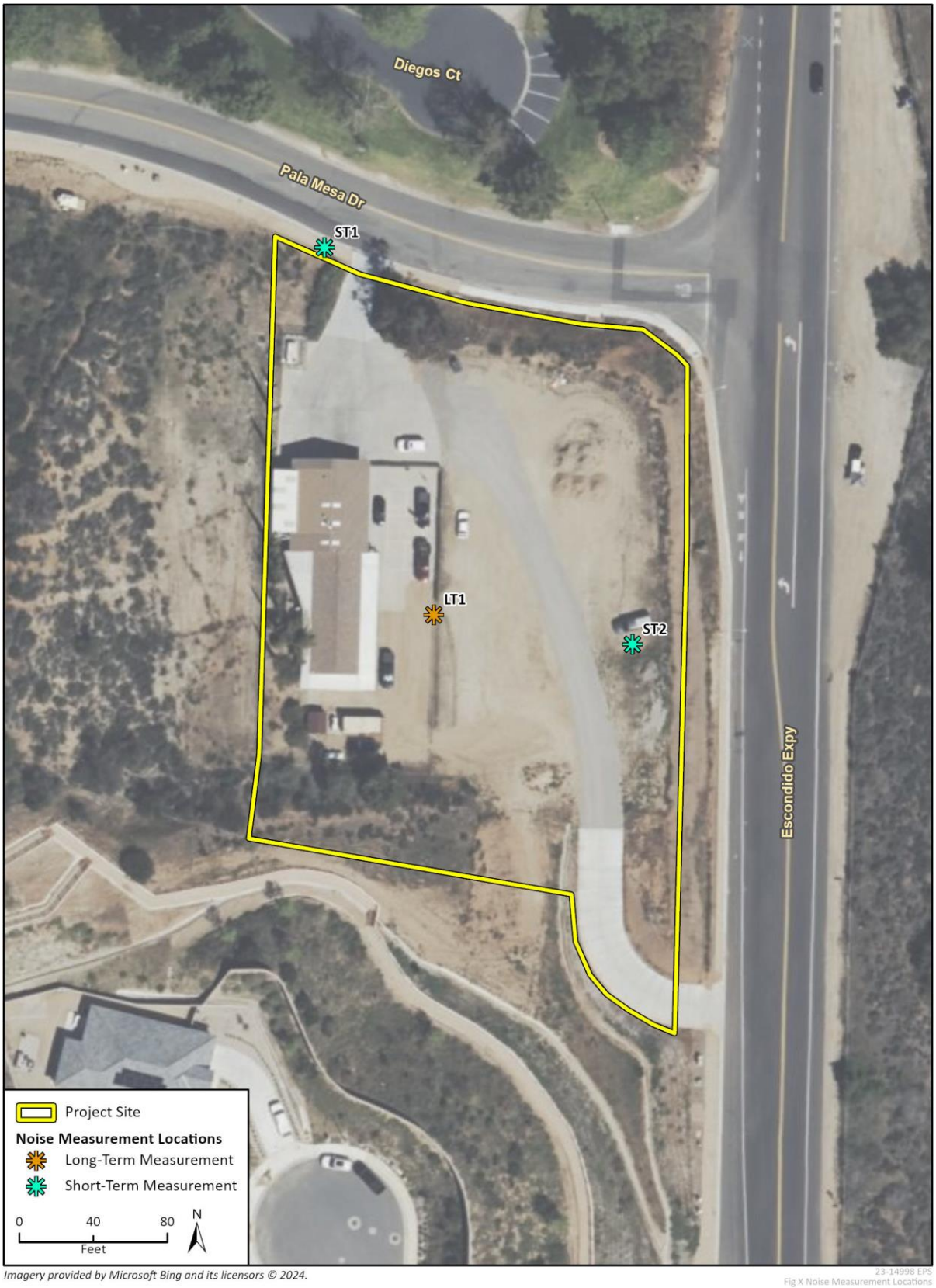
Section 36.417 Exemptions

Section 36.417 provides exemptions to the Noise Abatement and Control Ordinance. These exemptions include emergency work and the operation of an emergency generator after a power failure, by an employee or agent of a law enforcement agency, fire department, hospital or other medical or surgical facility that is providing emergency medical services.

1.3.5 Existing Noise Conditions

The dominant source of noise in the vicinity of the project site is vehicular traffic on Interstate 5. The project site is not near any active airports; the closest airport is Fallbrook Airport, located five miles to the west. To characterize ambient sound levels at and near the project site, two 15-minute sound level measurements were conducted on Wednesday, February 14, 2024, between 10:56 a.m. and 11:30 a.m., and a 24-hour sound level measurement was conducted from 12:00 p.m. on February 14 to 12:00 p.m. on February 15, 2024. Short-term (ST) measurement 1 was taken on the northern portion of the project site, while ST2 was taken on the eastern portion of the site. The long-term (LT) measurement was taken in a central portion of the project site to best represent ambient noise levels from Interstate 5. Figure 6 shows the noise measurement locations, Table 7 summarizes the results of the short-term noise measurements, and Table 8 shows the results of the long-term noise measurements. Detailed sound level measurement data are included in Appendix A.

Figure 6 Noise Measurement Locations



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23-14998 EPS
Fig X Noise Measurement Locations

Table 7 Project Vicinity Sound Level Monitoring Results

Measurement	Location	Sample Times	Approximate Distance to Primary Noise Source	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)
ST1	Northern area of project site	10:56-11:11 a.m.	Approximately 25 feet from centerline of Pala Mesa Drive	53.4	48.3	74.7
ST2	Eastern area of project site	11:15-11:30 a.m.	Approximately 300 feet from centerline of Interstate 5	60.5	56.3	67.2

Refer to Figure 6 for Noise Measurement Locations.

Detailed sound level measurement data are included in Appendix A.

Table 8 Project Site Vicinity Noise Monitoring Results – Long Term

Sample Time	dBA L_{eq}	Sample Time	dBA L_{eq}
24-hour Measurement (LT1) – Central Portion of Project Site – February 14-15, 2024			
12:00 PM	63	12:00 AM	58
1:00 PM	55	1:00 AM	57
2:00 PM	57	2:00 AM	55
3:00 PM	59	3:00 AM	56
4:00 PM	58	4:00 AM	57
5:00 PM	58	5:00 AM	60
6:00 PM	57	6:00 AM	60
7:00 PM	60	7:00 AM	61
8:00 PM	62	8:00 AM	58
9:00 PM	61	9:00 AM	57
10:00 PM	60	10:00 AM	56
11:00 PM	60	11:00 AM	56
24-hour Noise Level (dBA L_{eq})			**58.9**
24-hour Noise Level (CNEL)			**64.9**

L_{eq} = average noise level equivalent; dBA = A-weighted decibel; CNEL = Community Noise Equivalent Level

Detailed sound level measurement data are included in Appendix A.

1.4 Methodology & Equipment

1.4.1 Ambient Noise Survey

The following equipment was used to measure existing noise levels at the project site:

- Piccolo Integrating Sound Level Meter, Class 2, model number Piccolo-II
- Hangzhou Aihua Instruments Co., Ltd Calibrator, Class 2, model number AWA 6022A

- Windscreen and tripod for the sound level meter

The sound level meter was field calibrated immediately prior to the noise measurements to ensure accuracy. All sound level measurements conducted and presented in this report were made with a sound level meter that conforms to the American National Standards Institute (ANSI) specifications for sound level meters (ANSI SI.4-1983 R2001). All instruments were maintained with National Bureau of Standards traceable calibration per the manufacturers' standards.

1.4.2 Construction Noise

Construction noise was estimated using the FHWA Roadway Construction Noise Model (RCNM) (FHWA 2006). RCNM predicts construction noise levels for a variety of construction operations based on empirical data and the application of acoustical propagation formulas. Using RCNM, construction noise levels were estimated at noise sensitive receivers near the project site. RCNM provides reference noise levels for standard construction equipment, with an attenuation of 6 dBA per doubling of distance for stationary equipment.

Variation in power imposes additional complexity in characterizing the noise source level from construction equipment. Power variation is accounted for by describing the noise at a reference distance from the equipment operating at full power and adjusting it based on the duty cycle of the activity to determine the L_{eq} of the operation (FTA 2018). Each phase of construction has a specific equipment mix, depending on the work to be accomplished during that phase. Each phase also has its own noise characteristics; some will have higher continuous noise levels than others, and some have high-impact noise levels.

Construction activity would result in temporary noise in the project site vicinity, potentially exposing surrounding sensitive receivers to increased noise levels. The project would involve demolition, site preparation, grading, building construction, paving, and architectural coating. Construction noise would typically be higher during the heavier periods of initial construction (*e.g.*, grading) and would be lower during the later construction phases. Exact equipment is unknown at this stage of planning; typical heavy construction equipment could include graders, dozers, and backhoes. It is assumed that diesel engines would power all construction equipment. Construction equipment would not all operate at the same time or location. In addition, construction equipment would not be in constant use during the 8-hour operating day.

1.4.3 Ground-borne Vibration

Operation of the proposed project would not include any substantial vibration sources. Thus, construction activities have the greatest potential to generate groundborne vibration affecting nearby receivers, especially during grading and excavation of the project site. The greatest vibratory source during construction would be anticipated from vibratory rollers, dozers, and loaded trucks. Neither blasting nor pile driving would be required for construction of the proposed project. Construction vibration estimates are based on vibration levels reported by Caltrans and shown in Table 9 (Caltrans 2020).

Table 9 Construction Equipment Vibration Estimates

Equipment	PPV at 25 ft. (in./sec.)	RMS Velocity at 25 ft. (in./sec.)
Vibratory Roller	0.210	0.050
Large Bulldozer	0.089	0.022
Loaded Trucks	0.076	0.014
Small Bulldozer	0.003	0.001

Source: Caltrans 2020

1.4.4 Operational Noise Sources

Traffic Noise

Methodology

The existing Fire Station No. 4 currently generates vehicle trips from workers commuting to and from the site, and from fire trucks responding to emergencies. According to the District, the proposed project would have no expansion of services or employees compared to the existing fire station. Therefore, traffic noise from the project is qualitatively analyzed.

Stationary Noise

Methodology

Onsite noise sources were modeled assuming a 6 dBA reduction per doubling of distance from the source. The assessment methodology conservatively assumes that all receptors would be downwind of stationary sources. This is a worst-case assumption for total noise impacts, since, in reality, only some receivers would be downwind at any one time.

On-site noise sources would include mechanical equipment (*e.g.*, standby generator and heating, ventilation, and air conditioning [HVAC] equipment, outdoor speakers, and emergency sirens on the fire engines. Fire station equipment, such as engine sirens, would not be tested as the District does not test equipment in residential areas; therefore, sirens would only be active during an emergency.

The fire station alert system exterior speakers would use an alerting tone to announce emergency calls. The District estimates receiving approximately five to eight calls per day, with the internal speaker for internal staff notifications and are not audible alerts. The alerts last up to one minute. According to the District, the new notification system will be similar to the existing system. The existing external speaker was measured at the current fire station on May 21, 2024. Over the course of six seconds, a system alert was played that was measured at 60.8 dBA L_{eq} at 10 feet. This noise level was used to estimate future speaker noise from the proposed project.

The size and type of HVAC unit is currently unknown at this stage of planning. Potential HVAC units for a project of this size could include a Carrier 50HCQA06, which is a 6-ton unit. The noise specifications for a Carrier 50HCQA06 are shown in Table 10 (detailed specifications are included in Appendix B). A typical assumption for the amount of HVAC needed for a building is one ton per 600 square feet. Therefore, as the project building is approximately 10,000 square feet, it is assumed that it would need 17 tons of HVAC, or three Carrier 50HCQA06 units. The units were assumed to operate continuously and were conservatively not modeled with screening.

Table 10 HVAC Noise Levels

Noise Levels in dB[1] Measured at Octave Frequencies							Overall Noise Level in A-weighted Scale (dBA)[1]
125 Hz	250 Hz	500 Hz	1 KHz	2 KHz	4 KHz	8 KHz	
66.6	68.7	72.9	74.5	71.1	67.6	62.6	79

[1] Noise Levels for a Carrier 50HCQA06 split system condenser (refer to Appendix B for specification sheets).

Hz = Hertz; KHz = kilohertz

The proposed emergency generator would replace an existing emergency generator that is currently located at the southwestern portion of the project. The new generator would be located on the southeastern portion of the site. The generator activities, such as testing, would be similar to those that currently occur on-site.

2 Noise Sensitive Land Uses (NSLU) Affected by Airborne Noise

2.1 Guidelines for the Determination of Significance

2.1.1 On-site Traffic Noise

In accordance with the County's government land use category noise compatibility guidelines (Table 3), a significant impact from traffic noise would occur to on-site project uses if exterior noise levels exceed 65 CNEL at an exterior use area and if interior noise levels exceed 50 CNEL. The County defines an exterior use area for a non-residential noise sensitive land use as an exterior area provided for group or private usable open space (e.g., park, patio, balcony, etc.).

2.1.2 Off-site Traffic Noise

In accordance with the County of San Diego's Guidelines for Determining Significance (County of San Diego 2009a) and Report Format and Content Requirements (County of San Diego 2009b) for noise, a significant impact from project-generated traffic noise would occur:

- If existing ambient noise levels are below the County's acceptable land use category noise compatibility guidelines for that land use in Table 3, the project's traffic would have a direct impact if it results in an increase of 10 CNEL or more over existing ambient noise levels;
- If existing ambient noise levels meet or exceed the County's acceptable land use category noise compatibility guidelines for that land use in Table 3 the project's traffic would have a direct impact if it more than doubles the existing noise level (i.e., increases levels by more than 3 CNEL).

2.2 Potential Noise Impacts

2.2.1 Potential Build-out Noise Conditions & Impacts

The proposed project would include possible exterior areas with patios on the western edge of the building, which is located approximately 450 feet from the centerline of Interstate 5. The on-site 24-hour noise measurement included in Table 8 showed a noise level of 65 CNEL at this approximate location. This would not exceed the 65 CNEL exterior use area noise limit; therefore, the project would be consistent with the exterior noise land use compatibility standards for the County. In addition, the patio areas as designed would be heavily shielded from Interstate 5 by the project building, and thus would be exposed to lower noise levels than measured.

Typical modern building materials would be anticipated to attenuate noise levels from the exterior to interior by at least 20 dBA L_{eq} with closed windows. Therefore, as the project would be built with modern building materials, with attenuation interior noise levels would be approximately 45 dBA L_{eq}. This would be below the County's 50 dBA L_{eq} standard for interior noise levels at a governmental use and impacts would be less than significant.

2.2.2 Design Considerations and Mitigation Measures

Because impacts would be less than significant, no design considerations or mitigation measures are required.

2.3 Off-site Noise Impacts

2.3.1 Potential Noise Conditions & Impacts

According to the San Diego Association of Governments' (SANDAG) Transportation Forecast Information Center, Old Highway 395 has 5,700 average daily trips in front of the project site (SANDAG 2024). The existing Fire Station No. 4 currently generates vehicle trips from workers commuting to and from the site, and from fire trucks responding to emergencies. According to the District, the proposed project would have no expansion of services or employees compared to the existing fire station. Therefore, the proposed fire station would not result in a net change in vehicle trips on area roadways and would not create a perceptible change in traffic noise, and impacts would be less than significant.

2.3.2 Design Considerations and Mitigation Measures

Because impacts would be less than significant, no design considerations or mitigation measures are required.

3 Project-Generated Airborne Noise

3.1 Guidelines for the Determination of Significance

The project would have significant impacts if it would generate airborne noise that would be in excess of the County operational and construction noise thresholds, described below.

Operational Noise

Operational noise shall not exceed the limits specified in San Diego County Code Section 36.404, *General Sound Level Limits*, at the property line of the property on which the noise is produced or at any location on a property that is receiving the noise. The project parcel is zoned A-70; the residences to the south are zoned S-88; and the residences to the north are zoned R-S. The limits for these mix of zones are presented in Table 5. As S-88 limits "depend on use", it is assumed the strictest single-family residential limits apply to this zone. Therefore, all nearby zones would fall under the strictest single-family residential limits of 50 dBA during the daytime hours of 7:00 a.m. to 10:00 p.m.; and 45 dBA during the nighttime hours of 10:00 p.m. to 7:00 a.m.

Construction Noise

Noise generated by construction activities related to the project shall not exceed the standards listed in San Diego County Code Section 36.409, *Sound Level Limitations on Construction Equipment*. Construction noise shall not exceed:

- 75 dBA for an eight-hour period between 7:00 a.m. and 7:00 p.m.
- 82 dBA $L_{max(0.25)}$

3.2 Potential Operational Noise Impacts (Non-Construction Noise)

3.2.1 Potential Build-out Noise Conditions without Mitigation

Stationary Noise

The project's noise sources would include HVAC units, speakers, standby generator, and emergency sirens. HVAC units and speakers are currently present on the existing building; because the new project building would move their location potentially closer to residences, they are analyzed as a new source. The standby generator and emergency sirens are also previously existing noise sources; however, they represent emergency-related noise; these sources are discussed further below.

Noise levels at the nearest residences from HVAC units and speakers, and their combined noise levels, are shown in Table 11. As shown in Table 11, operational noise levels would reach as high as 41 dBA L_{eq} at the nearest residences to the south, which would not exceed the nighttime threshold of 45 dBA L_{eq}. Therefore, operational noise levels from these sources would be less than significant.

Table 11 Operational Noise Levels at Off-site Residences

Description	Zone	Noise Level (dBA L_{eq})					
		HVAC[1]	Speakers[2]	Combined Noise Level	Daytime Threshold	Nighttime Threshold	Exceed Threshold?
Single-family Residences to the North	S-88	30	32	34	50	45	**No**
Single-family Residences to the South	R-S	39	35	41	50	45	**No**

[1] HVAC equipment estimated to be 300 feet and 225 feet from the residences to the north and south, respectively.

[2] Speakers estimated to be 275 feet and 200 feet from the residences to the north and south, respectively.

Noise-sensitive receivers in the immediate project vicinity may also experience periodic exposure to high noise levels due to sirens. Pursuant to Section 36.417 of the San Diego County Code, emergency work is exempt from the County's noise standards. In terms of magnitude of noise exposure, a typical siren emits approximately 100 dB at 100 feet. However, because emergency vehicle response is by nature rapid, the duration of exposure to these peak noise levels is estimated to last for a maximum of ten seconds as emergency vehicles pause at the driveway exit, engage the siren, and turn onto the roadway and accelerate rapidly away from the fire station. Therefore, residents of existing nearby homes would be exposed to short-duration high noise levels for approximately ten seconds during an emergency event. Further, the typical practice for emergency siren use is to use sirens to break traffic at intersections or warn drivers of the emergency vehicle's approach when traffic is congested. Responses to nighttime emergency calls, when nuisance noise is most noticeable, routinely occur without the use of sirens. Other homes and residents along routes used for emergency access would also be exposed to similar noise levels, although the magnitude and frequency of this exposure would vary by distance from the road and proximity to the project site. The duration of such exposure would likely be less than the projected ten seconds for homes and residents further away from the project site, as the emergency vehicles would generally be assumed to be passing at rapid speed, with no time required for turning out of the driveway or accelerating. Therefore, operational noise impacts from sirens would be less than significant.

The proposed emergency generator would replace an existing emergency generator that is located at the southwestern portion of the project. The new generator would be located on the southeastern portion of the site. The generator activities, such as testing, would be similar to those that currently occur on-site. Therefore, the new generator would not represent a new noise source to be quantified. Section 36.417 of the San Diego County Code exempts operation of an emergency generator during an emergency, and also exempts "reasonable testing of an emergency generator by any person provided that the testing is conducted between the hours of 7 a.m. and 7 p.m." In addition, the new generator is located approximately 290 feet from the closest residences to the south, as compared to 160 feet from the existing generator. This would result in further noise reductions compared to existing conditions. While the new generator would be slightly closer to the residences to the north at a distance of 350 feet compared to 390 feet for the existing generator, the new generator would be heavily shielded from these residences with the project building intervening between the generator and the residences. Therefore, generator noise impacts would be less than significant.

3.2.2 Design Considerations and Mitigation Measures

Because impacts would be less than significant, no design considerations or mitigation measures are necessary for the project for this impact issue.

3.3 Potential General Construction Noise Impacts

3.3.1 Potential Temporary Construction Noise Impacts without Mitigation

The NSLUs nearest to the project site are single-family residences located approximately 125 feet to the south of the project site. Single-family residences are also located approximately 150 feet to the north of the project site. Over the course of a typical construction day, construction equipment from on-site construction activities would be located as close as these distances to the residential properties but would typically be located at an average distance further away due to the nature of construction where construction equipment is mobile on the site throughout the day. For example, the site length is approximately 200 feet running vertically from north to south and 200 feet running horizontally from east to west. Therefore, it is assumed that over the course of a typical construction day the construction equipment would operate 200 feet from the nearest residential property lines.

The County construction noise thresholds are 75 dBA L_{eq} for an eight-hour period between 7:00 a.m. and 7:00 p.m. and 82 dBA L_{max}. Based on RCNM, at a distance of 200 feet, a grader, dozer, and a backhoe operating simultaneously would generate a noise level of 71 dBA L_{eq} and 73 dBA L_{max} (RCNM calculations are included in Appendix C). Therefore, noise levels would not exceed the 75 dBA L_{eq} or 82 dBA L_{max} thresholds. In addition, construction activities would not occur outside of the hours of 7:00 a.m. and 7:00 p.m. or at all on weekends. Because construction activities would not generate noise exceeding the County significance thresholds at the property line of the nearest property with an occupied structure, construction noise impacts would be less than significant.

3.3.2 Design Considerations and Mitigation Measures

Because impacts would be less than significant, no design considerations or mitigation measures are necessary for the project for this impact issue.

4 Ground-Borne Vibration and Noise Impacts

4.1 Guidelines for the Determination of Significance

Exposure of NSLUs and other vibration sensitive uses (*i.e.*, research and manufacturing) to existing and future ground-borne vibration and noise arising from operations related to, but not limited by, materials handling, blasting, transportation corridors, railroads, and extractive industries is another typical adverse effect of development. This includes vibration sources caused by new development impacting existing or reasonably foreseeable future vibration sensitive uses. It also includes new development that creates or locates vibration sensitive uses in such a place that they may be impacted by ground-borne vibration and noise.

The following thresholds for ground-borne vibration impacts have been established by the County of San Diego Noise Guidelines for Determining Significance (County of San Diego 2009a). Impacts are considered significant if project implementation would expose uses listed in Table 12 to ground-borne vibration levels equal to or in excess of the levels shown.

Table 12 Guideline for Determining the Significance of Ground-Borne Vibration and Noise Impacts

Land Use Category	Ground-Borne Vibration Impact Levels (inches/sec rms)		Ground-Borne Noise Impact Levels (dB re 20 micro Pascals)	
	Frequent Events[1]	Occasional or Infrequent Events[2]	Frequent Events[1]	Occasional or Infrequent Events[2]
Category 1: Buildings where low ambient vibration is essential for interior operations. (research & manufacturing facilities with special vibration constraints)	0.0018[3]	0.0018[3]	Not Applicable[5]	Not Applicable[5]
Category 2: Residences and buildings where people normally sleep. (hotels, hospitals, residences, & other sleeping facilities)	0.0040	0.010	35 dBA	43 dBA
Category 3: Institutional land uses with primarily daytime use. (schools, churches, libraries, other institutions, & quiet offices)	0.0056	0.014	40 dBA	48 dBA

Source: County of San Diego 2009a

Notes:

1. "Frequent Events" is defined as more than 70 vibration events per day. Most rapid transit projects fall into this category.
2. "Occasional or Infrequent Events" are defined as fewer than 70 vibration events per day. This combined category includes most commuter rail systems.
3. This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration sensitive manufacturing or research will require detailed evaluation to define acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the HVAC systems and stiffened floors.
4. Vibration-sensitive equipment is not sensitive to ground-borne noise. Guidelines for Determining Significance for 14 Noise
5. There are some buildings, such as concert halls, TV and recording studios, and theaters that can be sensitive to vibration and noise but do not fit into any of the three categories. Table 7 gives criteria for acceptable levels of ground-borne vibration and noise for these various types of special uses.
6. For Categories 2 and 3 with occupied facilities, isolated events such as blasting are significant when the peak particle velocity (PPV) exceeds one inch per second. Non-transportation vibration sources such as impact pile drivers or hydraulic breakers are significant when their PPV exceeds 0.1 inch per second. More specific criteria for structures and potential annoyance were developed by Caltrans (2004) and will be used to evaluate these continuous or transient sources in San Diego County

4.2 Potential Operational Vibration Impacts

4.2.1 Potential Operational Vibration Impacts without Mitigation

The project does not include any substantial vibration sources associated with operation. Therefore, operational vibration impacts would be less than significant.

4.2.2 Design Considerations and Mitigation Measures

Because impacts would be less than significant, no design considerations or mitigation measures are required.

4.3 Potential General Construction Vibration Impacts

4.3.1 Potential General Construction Vibration Impacts without Mitigation

Residential land uses nearest the project site are assessed for ground-borne vibration impacts utilizing the Category 2 thresholds outlined above in Table 12. The “Occasional Events” threshold of 0.010 RMS velocity is used, as impact devices and blasting would not be utilized during project construction, and ground-borne vibration would be primarily generated by typical construction equipment that would be mobile and would not operate continuously at a single distance. As Category 2 only applies to these uses when people are sleeping, this threshold is only applied if construction were to occur during the nighttime hours, outside of the allowed construction hours in the San Diego County Code (7:00 a.m. and 7:00 p.m.).

This analysis uses an assessment of vibration generated by a vibratory roller, which is assumed to be the piece of construction equipment to be used on the site that would generate the highest levels of vibration and is therefore most likely to be felt at nearby residences. The shortest distance from where construction equipment would occur to the nearest residential property line is 125 feet, when accounting for the size of the equipment and setbacks.

According to the Caltrans Transportation and Construction Guidance Manual, a vibratory roller generates a peak vibratory wave of 0.050 in./sec. RMS velocity at a reference distance of 25 feet (Caltrans 2020). Damping occurs in the vibratory waves as they propagate through the soil, resulting in a smaller in./sec. RMS velocity being felt at further distances. The estimated in./sec. RMS velocity that would be experienced at the nearest residential property at a distance of 125 feet would be 0.009 in./sec. RMS. In addition, vibration would not occur during the nighttime hours when people would typically be sleeping in the residences. Therefore, ground-borne vibration generated from construction activities would have a less than significant impact to the nearby residences.

4.3.2 Design Considerations and Mitigation Measures

Because impacts would be less than significant, no design considerations or mitigation measures are required.

5 Summary of Project Impacts, Design Considerations, Mitigation & Conclusion

Noise on the project site is primarily generated from off-site traffic. The closest potential exterior use area is patios on the western edge of the building, which is located approximately 450 feet from the centerline of Interstate 5. The project site was measured to have an ambient noise level of 65 community noise equivalent level (CNEL). This value does not exceed the 65 CNEL standard for government land uses. As such, the project would be consistent with the exterior noise land use compatibility standards for the County. On-site noise levels from off-site traffic noise at the project's interior areas would be 40 A-weighted decibels (dBA) equivalent noise level (L_{eq}), and is within County land use compatibility standards for a government land use of 50 dBA L_{eq}. Impacts would be less than significant.

Currently, Fire Station No. 4 generates vehicle trips from workers commuting to and from the site, and from fire trucks responding to emergencies. According to the District, the proposed project would have no expansion of services or employees compared to the existing fire station. Therefore, the proposed fire station would not result in a net change in vehicle trips on area roadways and would not create a perceptible change in traffic noise, and impacts would be less than significant.

The project's noise sources would include HVAC units, speakers, standby generator, and emergency sirens. Combined on-site operational noises from the HVAC units and speakers would be up to 40 dBA L_{eq} at the nearest single-family property line to the south, which would not exceed the County's 50 dBA L_{eq} daytime and 45 dBA L_{eq} nighttime standard. Potential emergency sirens would be exempt from County standards and would be similar to existing conditions. The proposed emergency generator would replace an existing emergency generator that is located at the southwestern portion of the project. The new generator would be located on the southeastern portion of the site, which is further from residences to the south and shielded from residences to the north. In addition, the generator activities, such as testing, would be similar to those that occur on-site. Therefore, operational noise levels would not exceed the adjusted ambient noise limits.

At a distance of 200 feet to the nearest sensitive receiver, project construction would generate noise levels of 71 dBA L_{eq} and 73 dBA L_{max}. These noise levels would not exceed the County's 75 dBA L_{eq} or 82 dBA L_{max} threshold for construction. In addition, construction activities would not occur between the hours of 7:00 p.m. and 7:00 a.m. Therefore, construction noise impacts would be less than significant.

Vibration from construction activities would not exceed County thresholds at the nearest residential structures. In addition, the project does not include any substantial vibration sources associated with operation. Therefore, vibration impacts would be less than significant.

6 Certification

The contents of this report represent an accurate depiction of the noise environment and impacts within and surrounding the proposed project site. This report was prepared utilizing project-appropriate analytical methodologies and modeling programs established by the County of San Diego's Department of Planning and Land Use.

This report was prepared by Bill Vosti of Rincon Consultants, Inc. The statements furnished in this report and associated figures are true and correct to the best of my knowledge and belief.

Bill Vosti, County-Approved Noise Consultant

4/10/2024
Date

7 References

California Department of Transportation (Caltrans). 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. (CT-HWANP-RT-13-069.25.2) September. Available at: http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf

_____. 2020. *Transportation and Construction Vibration Guidance Manual*. April. Available at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf

County of San Diego. 2009a. Guidelines for Determining Significance, Noise. January 27.

_____. 2009b. Report Format and Content Requirements. January 27.

_____. 2011. San Diego County General Plan. August.

Federal Highway Administration (FHWA). 2006. *FHWA Highway Construction Noise Handbook*. (FHWAHEP-06-015; DOT-VNTSC-FHWA-06-02). Available at: http://www.fhwa.dot.gov/environment/construction_noise/handbook. Accessed November 2018.

_____. 2011. Highway Traffic Noise: Analysis and Abatement Guidance (FHWA-HEP-10-025). https://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/analysis_and_abatement_guidance/revguidance.pdf

Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment*. November. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf

San Diego Association of Governments (SANDAG). 2024. Traffic Forecast Information Center. Available at: https://experience.arcgis.com/experience/81b2daca1827470ca8beeb4708139f79/#data_s=id%3AdataSource_1-189ac79ca1c-layer-6%3A325664

Appendix A

Noise Measurement Data

ST1

Number	Start Date	Start Time	End Time	Duration	LZeq	LCeq	LAeq
1	2/14/2024	10:56:34 AM	10:56:35 AM	0:00:01	71.3	68.9	53.8
2	2/14/2024	10:56:35 AM	10:56:36 AM	0:00:01	70.9	69.3	54.1
3	2/14/2024	10:56:36 AM	10:56:37 AM	0:00:01	70.6	68.4	56.3
4	2/14/2024	10:56:37 AM	10:56:38 AM	0:00:01	70.1	67.6	54.1
5	2/14/2024	10:56:38 AM	10:56:39 AM	0:00:01	72.1	68.4	53.4
6	2/14/2024	10:56:39 AM	10:56:40 AM	0:00:01	72.7	69.1	53.6
7	2/14/2024	10:56:40 AM	10:56:41 AM	0:00:01	71.7	68.7	53.3
8	2/14/2024	10:56:41 AM	10:56:42 AM	0:00:01	70.9	68	53.6
9	2/14/2024	10:56:42 AM	10:56:43 AM	0:00:01	70.9	67.8	53.2
10	2/14/2024	10:56:43 AM	10:56:44 AM	0:00:01	69.2	66.9	52.4
11	2/14/2024	10:56:44 AM	10:56:45 AM	0:00:01	70.6	67.4	52.9
12	2/14/2024	10:56:45 AM	10:56:46 AM	0:00:01	69.8	66.7	53.4
13	2/14/2024	10:56:46 AM	10:56:47 AM	0:00:01	69.4	66.8	53.8
14	2/14/2024	10:56:47 AM	10:56:48 AM	0:00:01	69.2	66.8	53
15	2/14/2024	10:56:48 AM	10:56:49 AM	0:00:01	72	67.4	52.3
16	2/14/2024	10:56:49 AM	10:56:50 AM	0:00:01	70.5	67.3	52.1
17	2/14/2024	10:56:50 AM	10:56:51 AM	0:00:01	68.9	66.1	52.2
18	2/14/2024	10:56:51 AM	10:56:52 AM	0:00:01	70.4	67	52.3
19	2/14/2024	10:56:52 AM	10:56:53 AM	0:00:01	70.1	66.6	52.4
20	2/14/2024	10:56:53 AM	10:56:54 AM	0:00:01	68.4	66.3	52.8
21	2/14/2024	10:56:54 AM	10:56:55 AM	0:00:01	68.6	66.6	53.6
22	2/14/2024	10:56:55 AM	10:56:56 AM	0:00:01	69.3	66.8	53.4
23	2/14/2024	10:56:56 AM	10:56:57 AM	0:00:01	69.9	67.5	53.5
24	2/14/2024	10:56:57 AM	10:56:58 AM	0:00:01	68.5	66.5	53.4
25	2/14/2024	10:56:58 AM	10:56:59 AM	0:00:01	68.9	66.8	53.4
26	2/14/2024	10:56:59 AM	10:57:00 AM	0:00:01	68.3	66.6	54.8
27	2/14/2024	10:57:00 AM	10:57:01 AM	0:00:01	69.8	68.3	62.5
28	2/14/2024	10:57:01 AM	10:57:02 AM	0:00:01	73.7	72.8	68.6
29	2/14/2024	10:57:02 AM	10:57:03 AM	0:00:01	75.2	74	67.6
30	2/14/2024	10:57:03 AM	10:57:04 AM	0:00:01	70	68.5	58.9
31	2/14/2024	10:57:04 AM	10:57:05 AM	0:00:01	68.3	66.7	55.9
32	2/14/2024	10:57:05 AM	10:57:06 AM	0:00:01	67.1	65.3	54.5
33	2/14/2024	10:57:06 AM	10:57:07 AM	0:00:01	67.1	65.7	52.9
34	2/14/2024	10:57:07 AM	10:57:08 AM	0:00:01	66.7	65.2	51.9
35	2/14/2024	10:57:08 AM	10:57:09 AM	0:00:01	67.7	66	51.6
36	2/14/2024	10:57:09 AM	10:57:10 AM	0:00:01	66.5	64.9	51.6
37	2/14/2024	10:57:10 AM	10:57:11 AM	0:00:01	67	65.3	51.5
38	2/14/2024	10:57:11 AM	10:57:12 AM	0:00:01	66.5	64.9	51.9
39	2/14/2024	10:57:12 AM	10:57:13 AM	0:00:01	66.5	65	53
40	2/14/2024	10:57:13 AM	10:57:14 AM	0:00:01	67.4	65.9	52.3
41	2/14/2024	10:57:14 AM	10:57:15 AM	0:00:01	66.7	65.4	52.2
42	2/14/2024	10:57:15 AM	10:57:16 AM	0:00:01	67.4	65.6	52.8
43	2/14/2024	10:57:16 AM	10:57:17 AM	0:00:01	68	65.3	52.9
44	2/14/2024	10:57:17 AM	10:57:18 AM	0:00:01	68	66.3	53.3
45	2/14/2024	10:57:18 AM	10:57:19 AM	0:00:01	67.3	65.6	53.2

46	2/14/2024	10:57:19 AM	10:57:20 AM	0:00:01	67.2	65.2	55.4
47	2/14/2024	10:57:20 AM	10:57:21 AM	0:00:01	68.5	66.7	57.9
48	2/14/2024	10:57:21 AM	10:57:22 AM	0:00:01	69.6	68.3	61.7
49	2/14/2024	10:57:22 AM	10:57:23 AM	0:00:01	72	70.8	64
50	2/14/2024	10:57:23 AM	10:57:24 AM	0:00:01	70.4	68.2	56.2
51	2/14/2024	10:57:24 AM	10:57:25 AM	0:00:01	69.3	67.9	56
52	2/14/2024	10:57:25 AM	10:57:26 AM	0:00:01	70.2	68.2	55.5
53	2/14/2024	10:57:26 AM	10:57:27 AM	0:00:01	69.2	67.7	54.7
54	2/14/2024	10:57:27 AM	10:57:28 AM	0:00:01	69.3	68	54.5
55	2/14/2024	10:57:28 AM	10:57:29 AM	0:00:01	69.5	68.2	53.9
56	2/14/2024	10:57:29 AM	10:57:30 AM	0:00:01	69.6	67.7	54.2
57	2/14/2024	10:57:30 AM	10:57:31 AM	0:00:01	69	67.3	54.9
58	2/14/2024	10:57:31 AM	10:57:32 AM	0:00:01	70.3	68.6	58.7
59	2/14/2024	10:57:32 AM	10:57:33 AM	0:00:01	73.4	72.5	68
60	2/14/2024	10:57:33 AM	10:57:34 AM	0:00:01	73.3	72.1	66.2
61	2/14/2024	10:57:34 AM	10:57:35 AM	0:00:01	69.3	67.8	61.3
62	2/14/2024	10:57:35 AM	10:57:36 AM	0:00:01	67.9	66.3	57.5
63	2/14/2024	10:57:36 AM	10:57:37 AM	0:00:01	68.8	66.8	54.7
64	2/14/2024	10:57:37 AM	10:57:38 AM	0:00:01	68.4	66.4	53.5
65	2/14/2024	10:57:38 AM	10:57:39 AM	0:00:01	68.3	66.1	52.8
66	2/14/2024	10:57:39 AM	10:57:40 AM	0:00:01	67.6	65.8	52.7
67	2/14/2024	10:57:40 AM	10:57:41 AM	0:00:01	67.8	66	52.1
68	2/14/2024	10:57:41 AM	10:57:42 AM	0:00:01	68.4	66.5	52.3
69	2/14/2024	10:57:42 AM	10:57:43 AM	0:00:01	68.4	66.4	51.6
70	2/14/2024	10:57:43 AM	10:57:44 AM	0:00:01	68.1	65.7	51.2
71	2/14/2024	10:57:44 AM	10:57:45 AM	0:00:01	68.8	66.7	50.8
72	2/14/2024	10:57:45 AM	10:57:46 AM	0:00:01	68.3	66.3	52.7
73	2/14/2024	10:57:46 AM	10:57:47 AM	0:00:01	68.6	66.4	52
74	2/14/2024	10:57:47 AM	10:57:48 AM	0:00:01	70.4	67	51.7
75	2/14/2024	10:57:48 AM	10:57:49 AM	0:00:01	68.6	66.1	51.2
76	2/14/2024	10:57:49 AM	10:57:50 AM	0:00:01	67.7	65.5	51.6
77	2/14/2024	10:57:50 AM	10:57:51 AM	0:00:01	70.5	67.2	52.1
78	2/14/2024	10:57:51 AM	10:57:52 AM	0:00:01	68.5	66.6	52.2
79	2/14/2024	10:57:52 AM	10:57:53 AM	0:00:01	68.7	66.3	54.5
80	2/14/2024	10:57:53 AM	10:57:54 AM	0:00:01	68.8	66.2	54.3
81	2/14/2024	10:57:54 AM	10:57:55 AM	0:00:01	68	66.3	53.4
82	2/14/2024	10:57:55 AM	10:57:56 AM	0:00:01	68.6	66.9	53.1
83	2/14/2024	10:57:56 AM	10:57:57 AM	0:00:01	67.9	66.2	52.7
84	2/14/2024	10:57:57 AM	10:57:58 AM	0:00:01	67.1	65.4	52.7
85	2/14/2024	10:57:58 AM	10:57:59 AM	0:00:01	68	66.4	53
86	2/14/2024	10:57:59 AM	10:58:00 AM	0:00:01	67.5	66	53
87	2/14/2024	10:58:00 AM	10:58:01 AM	0:00:01	68.1	66.5	52.6
88	2/14/2024	10:58:01 AM	10:58:02 AM	0:00:01	67.6	65.9	52.4
89	2/14/2024	10:58:02 AM	10:58:03 AM	0:00:01	67.9	65.9	52.1
90	2/14/2024	10:58:03 AM	10:58:04 AM	0:00:01	66.9	65.1	52.1
91	2/14/2024	10:58:04 AM	10:58:05 AM	0:00:01	66.8	65.3	51.7
92	2/14/2024	10:58:05 AM	10:58:06 AM	0:00:01	66.5	65.1	52.3

93	2/14/2024	10:58:06 AM	10:58:07 AM	0:00:01	66.5	65	52.6
94	2/14/2024	10:58:07 AM	10:58:08 AM	0:00:01	66.4	65	51.2
95	2/14/2024	10:58:08 AM	10:58:09 AM	0:00:01	66	64.7	51.4
96	2/14/2024	10:58:09 AM	10:58:10 AM	0:00:01	82.5	78.6	62
97	2/14/2024	10:58:10 AM	10:58:11 AM	0:00:01	66.5	64.8	51.8
98	2/14/2024	10:58:11 AM	10:58:12 AM	0:00:01	66	64.7	52.4
99	2/14/2024	10:58:12 AM	10:58:13 AM	0:00:01	66	64.3	51.8
100	2/14/2024	10:58:13 AM	10:58:14 AM	0:00:01	67	65.6	52.7
101	2/14/2024	10:58:14 AM	10:58:15 AM	0:00:01	67.2	65.7	52.4
102	2/14/2024	10:58:15 AM	10:58:16 AM	0:00:01	67.5	65.7	52.6
103	2/14/2024	10:58:16 AM	10:58:17 AM	0:00:01	66.2	64.5	52.9
104	2/14/2024	10:58:17 AM	10:58:18 AM	0:00:01	67.4	65.8	53.2
105	2/14/2024	10:58:18 AM	10:58:19 AM	0:00:01	68.1	66.5	53.6
106	2/14/2024	10:58:19 AM	10:58:20 AM	0:00:01	68.5	66.3	53.2
107	2/14/2024	10:58:20 AM	10:58:21 AM	0:00:01	68.9	66.7	54.2
108	2/14/2024	10:58:21 AM	10:58:22 AM	0:00:01	68.6	66.6	53.4
109	2/14/2024	10:58:22 AM	10:58:23 AM	0:00:01	67.9	65.5	54
110	2/14/2024	10:58:23 AM	10:58:24 AM	0:00:01	68.6	66.3	54.7
111	2/14/2024	10:58:24 AM	10:58:25 AM	0:00:01	68.6	66.6	55.6
112	2/14/2024	10:58:25 AM	10:58:26 AM	0:00:01	69.5	67.6	57.6
113	2/14/2024	10:58:26 AM	10:58:27 AM	0:00:01	70.6	69	58.2
114	2/14/2024	10:58:27 AM	10:58:28 AM	0:00:01	71.8	69.8	56.7
115	2/14/2024	10:58:28 AM	10:58:29 AM	0:00:01	69.8	68	55.6
116	2/14/2024	10:58:29 AM	10:58:30 AM	0:00:01	70.9	68.9	58.7
117	2/14/2024	10:58:30 AM	10:58:31 AM	0:00:01	75	74	68.9
118	2/14/2024	10:58:31 AM	10:58:32 AM	0:00:01	75.5	74.4	69.5
119	2/14/2024	10:58:32 AM	10:58:33 AM	0:00:01	72.7	70.2	62.3
120	2/14/2024	10:58:33 AM	10:58:34 AM	0:00:01	69.5	67.7	57.9
121	2/14/2024	10:58:34 AM	10:58:35 AM	0:00:01	69.6	68.4	55.9
122	2/14/2024	10:58:35 AM	10:58:36 AM	0:00:01	69.6	68.3	54.7
123	2/14/2024	10:58:36 AM	10:58:37 AM	0:00:01	69.9	68.4	54.3
124	2/14/2024	10:58:37 AM	10:58:38 AM	0:00:01	69.6	67.8	54.6
125	2/14/2024	10:58:38 AM	10:58:39 AM	0:00:01	69.6	67.9	55.3
126	2/14/2024	10:58:39 AM	10:58:40 AM	0:00:01	70.3	68	57.2
127	2/14/2024	10:58:40 AM	10:58:41 AM	0:00:01	78.2	77.5	62.5
128	2/14/2024	10:58:41 AM	10:58:42 AM	0:00:01	79.2	78.5	64.1
129	2/14/2024	10:58:42 AM	10:58:43 AM	0:00:01	77.6	76.4	61.9
130	2/14/2024	10:58:43 AM	10:58:44 AM	0:00:01	80	76.3	57.8
131	2/14/2024	10:58:44 AM	10:58:45 AM	0:00:01	75.3	73	56.1
132	2/14/2024	10:58:45 AM	10:58:46 AM	0:00:01	72.2	70.3	54
133	2/14/2024	10:58:46 AM	10:58:47 AM	0:00:01	70.4	68.5	52.1
134	2/14/2024	10:58:47 AM	10:58:48 AM	0:00:01	74.7	70.4	52.1
135	2/14/2024	10:58:48 AM	10:58:49 AM	0:00:01	71.5	68	51.9
136	2/14/2024	10:58:49 AM	10:58:50 AM	0:00:01	69.6	66.5	51.8
137	2/14/2024	10:58:50 AM	10:58:51 AM	0:00:01	73.1	68.2	51.4
138	2/14/2024	10:58:51 AM	10:58:52 AM	0:00:01	69.9	67	51.9
139	2/14/2024	10:58:52 AM	10:58:53 AM	0:00:01	73.7	68.6	51.4

140	2/14/2024	10:58:53 AM	10:58:54 AM	0:00:01	73.2	69.3	51
141	2/14/2024	10:58:54 AM	10:58:55 AM	0:00:01	73.2	68.9	50.8
142	2/14/2024	10:58:55 AM	10:58:56 AM	0:00:01	72.7	68.8	50.6
143	2/14/2024	10:58:56 AM	10:58:57 AM	0:00:01	71.6	68.2	51.4
144	2/14/2024	10:58:57 AM	10:58:58 AM	0:00:01	69.7	67.3	51.7
145	2/14/2024	10:58:58 AM	10:58:59 AM	0:00:01	73.5	69	52.3
146	2/14/2024	10:58:59 AM	10:59:00 AM	0:00:01	73.5	68.5	52
147	2/14/2024	10:59:00 AM	10:59:01 AM	0:00:01	75	69.2	51.9
148	2/14/2024	10:59:01 AM	10:59:02 AM	0:00:01	70.1	67	51.7
149	2/14/2024	10:59:02 AM	10:59:03 AM	0:00:01	69.2	66.2	52.4
150	2/14/2024	10:59:03 AM	10:59:04 AM	0:00:01	69.8	67.2	52
151	2/14/2024	10:59:04 AM	10:59:05 AM	0:00:01	70.4	67.7	52.4
152	2/14/2024	10:59:05 AM	10:59:06 AM	0:00:01	70.7	67.4	51.7
153	2/14/2024	10:59:06 AM	10:59:07 AM	0:00:01	70.1	67.2	51.5
154	2/14/2024	10:59:07 AM	10:59:08 AM	0:00:01	71.3	68.2	51.7
155	2/14/2024	10:59:08 AM	10:59:09 AM	0:00:01	72.1	67.8	51.9
156	2/14/2024	10:59:09 AM	10:59:10 AM	0:00:01	72.1	68.2	51.9
157	2/14/2024	10:59:10 AM	10:59:11 AM	0:00:01	72.2	68.2	52.3
158	2/14/2024	10:59:11 AM	10:59:12 AM	0:00:01	73.1	68.8	52.6
159	2/14/2024	10:59:12 AM	10:59:13 AM	0:00:01	71.6	68.1	52.8
160	2/14/2024	10:59:13 AM	10:59:14 AM	0:00:01	71.5	67.8	53.1
161	2/14/2024	10:59:14 AM	10:59:15 AM	0:00:01	73.2	68.5	54.1
162	2/14/2024	10:59:15 AM	10:59:16 AM	0:00:01	75.6	69.7	57.9
163	2/14/2024	10:59:16 AM	10:59:17 AM	0:00:01	72.6	69.7	61.8
164	2/14/2024	10:59:17 AM	10:59:18 AM	0:00:01	73.1	70.1	59.3
165	2/14/2024	10:59:18 AM	10:59:19 AM	0:00:01	75.5	71.7	56.4
166	2/14/2024	10:59:19 AM	10:59:20 AM	0:00:01	75.4	71.6	57.3
167	2/14/2024	10:59:20 AM	10:59:21 AM	0:00:01	74.7	71.1	57.9
168	2/14/2024	10:59:21 AM	10:59:22 AM	0:00:01	80.5	75.3	59.4
169	2/14/2024	10:59:22 AM	10:59:23 AM	0:00:01	78.9	74.8	61.9
170	2/14/2024	10:59:23 AM	10:59:24 AM	0:00:01	79.8	77.3	68.5
171	2/14/2024	10:59:24 AM	10:59:25 AM	0:00:01	81.8	80.7	72.9
172	2/14/2024	10:59:25 AM	10:59:26 AM	0:00:01	80.5	79.6	73.4
173	2/14/2024	10:59:26 AM	10:59:27 AM	0:00:01	80.2	78.5	74.7
174	2/14/2024	10:59:27 AM	10:59:28 AM	0:00:01	78.5	77.5	70.9
175	2/14/2024	10:59:28 AM	10:59:29 AM	0:00:01	76.7	74.9	67
176	2/14/2024	10:59:29 AM	10:59:30 AM	0:00:01	75.3	72.7	63.6
177	2/14/2024	10:59:30 AM	10:59:31 AM	0:00:01	78	73.8	61.3
178	2/14/2024	10:59:31 AM	10:59:32 AM	0:00:01	74.6	70.7	57
179	2/14/2024	10:59:32 AM	10:59:33 AM	0:00:01	70.6	68	54.5
180	2/14/2024	10:59:33 AM	10:59:34 AM	0:00:01	68	65.9	52.6
181	2/14/2024	10:59:34 AM	10:59:35 AM	0:00:01	67.1	65.5	52
182	2/14/2024	10:59:35 AM	10:59:36 AM	0:00:01	68.4	66.2	52.6
183	2/14/2024	10:59:36 AM	10:59:37 AM	0:00:01	71.3	67.7	52.8
184	2/14/2024	10:59:37 AM	10:59:38 AM	0:00:01	74	69.2	53
185	2/14/2024	10:59:38 AM	10:59:39 AM	0:00:01	68.8	66.6	53.2
186	2/14/2024	10:59:39 AM	10:59:40 AM	0:00:01	71.5	68.1	54.2

187	2/14/2024	10:59:40 AM	10:59:41 AM	0:00:01	70.8	67.2	53.5
188	2/14/2024	10:59:41 AM	10:59:42 AM	0:00:01	69.8	67.3	54.3
189	2/14/2024	10:59:42 AM	10:59:43 AM	0:00:01	67.6	65.4	53.4
190	2/14/2024	10:59:43 AM	10:59:44 AM	0:00:01	68	65.6	54.8
191	2/14/2024	10:59:44 AM	10:59:45 AM	0:00:01	68.7	66.3	54.9
192	2/14/2024	10:59:45 AM	10:59:46 AM	0:00:01	68.3	65.8	53.5
193	2/14/2024	10:59:46 AM	10:59:47 AM	0:00:01	68.7	65.9	52.4
194	2/14/2024	10:59:47 AM	10:59:48 AM	0:00:01	68.3	65.9	51.8
195	2/14/2024	10:59:48 AM	10:59:49 AM	0:00:01	66.7	65.1	52
196	2/14/2024	10:59:49 AM	10:59:50 AM	0:00:01	66.7	65.3	52.1
197	2/14/2024	10:59:50 AM	10:59:51 AM	0:00:01	66.7	65.2	51.9
198	2/14/2024	10:59:51 AM	10:59:52 AM	0:00:01	66.2	64.8	51.4
199	2/14/2024	10:59:52 AM	10:59:53 AM	0:00:01	66.2	64.8	51.7
200	2/14/2024	10:59:53 AM	10:59:54 AM	0:00:01	65	63.9	51.2
201	2/14/2024	10:59:54 AM	10:59:55 AM	0:00:01	65	64	51.3
202	2/14/2024	10:59:55 AM	10:59:56 AM	0:00:01	65.7	64.5	51.2
203	2/14/2024	10:59:56 AM	10:59:57 AM	0:00:01	65.4	64.4	50.8
204	2/14/2024	10:59:57 AM	10:59:58 AM	0:00:01	65.7	64.6	50.7
205	2/14/2024	10:59:58 AM	10:59:59 AM	0:00:01	66.5	65.2	51
206	2/14/2024	10:59:59 AM	11:00:00 AM	0:00:01	67.1	65.9	51.3
207	2/14/2024	11:00:00 AM	11:00:01 AM	0:00:01	66.7	65.3	51.8
208	2/14/2024	11:00:01 AM	11:00:02 AM	0:00:01	65.9	64.7	51.3
209	2/14/2024	11:00:02 AM	11:00:03 AM	0:00:01	66.6	65.4	51.1
210	2/14/2024	11:00:03 AM	11:00:04 AM	0:00:01	66.2	65	50.8
211	2/14/2024	11:00:04 AM	11:00:05 AM	0:00:01	65.7	64.6	51
212	2/14/2024	11:00:05 AM	11:00:06 AM	0:00:01	65.3	64.3	51.1
213	2/14/2024	11:00:06 AM	11:00:07 AM	0:00:01	65.2	64.1	51
214	2/14/2024	11:00:07 AM	11:00:08 AM	0:00:01	65.7	64.6	50.6
215	2/14/2024	11:00:08 AM	11:00:09 AM	0:00:01	65.6	64.3	50.2
216	2/14/2024	11:00:09 AM	11:00:10 AM	0:00:01	65.7	64.5	50.5
217	2/14/2024	11:00:10 AM	11:00:11 AM	0:00:01	64.8	63.6	51.1
218	2/14/2024	11:00:11 AM	11:00:12 AM	0:00:01	65.4	64.1	50.4
219	2/14/2024	11:00:12 AM	11:00:13 AM	0:00:01	66.9	65.7	52.2
220	2/14/2024	11:00:13 AM	11:00:14 AM	0:00:01	69.3	68.2	52.3
221	2/14/2024	11:00:14 AM	11:00:15 AM	0:00:01	74.2	73.5	56.3
222	2/14/2024	11:00:15 AM	11:00:16 AM	0:00:01	74	73.3	58.4
223	2/14/2024	11:00:16 AM	11:00:17 AM	0:00:01	70.8	70.3	63.1
224	2/14/2024	11:00:17 AM	11:00:18 AM	0:00:01	72.1	71.5	61.8
225	2/14/2024	11:00:18 AM	11:00:19 AM	0:00:01	68.7	68	56.8
226	2/14/2024	11:00:19 AM	11:00:20 AM	0:00:01	65.4	64.5	56.6
227	2/14/2024	11:00:20 AM	11:00:21 AM	0:00:01	65.9	64.9	56.6
228	2/14/2024	11:00:21 AM	11:00:22 AM	0:00:01	65	64	54.9
229	2/14/2024	11:00:22 AM	11:00:23 AM	0:00:01	63.5	62.6	52.9
230	2/14/2024	11:00:23 AM	11:00:24 AM	0:00:01	62.2	61.1	52.1
231	2/14/2024	11:00:24 AM	11:00:25 AM	0:00:01	63.4	62.1	51.4
232	2/14/2024	11:00:25 AM	11:00:26 AM	0:00:01	63.2	62	51.2
233	2/14/2024	11:00:26 AM	11:00:27 AM	0:00:01	63.7	62.2	51.1

234	2/14/2024	11:00:27 AM	11:00:28 AM	0:00:01	64.3	62.3	52.3
235	2/14/2024	11:00:28 AM	11:00:29 AM	0:00:01	63.8	62.3	50.8
236	2/14/2024	11:00:29 AM	11:00:30 AM	0:00:01	63.2	61.8	50.8
237	2/14/2024	11:00:30 AM	11:00:31 AM	0:00:01	64.1	61.9	50.9
238	2/14/2024	11:00:31 AM	11:00:32 AM	0:00:01	64.5	62.3	51.6
239	2/14/2024	11:00:32 AM	11:00:33 AM	0:00:01	63.7	61	51.7
240	2/14/2024	11:00:33 AM	11:00:34 AM	0:00:01	64.7	61.6	51.5
241	2/14/2024	11:00:34 AM	11:00:35 AM	0:00:01	64.2	61.3	51.3
242	2/14/2024	11:00:35 AM	11:00:36 AM	0:00:01	62.6	60.5	50.6
243	2/14/2024	11:00:36 AM	11:00:37 AM	0:00:01	62.5	60.5	50
244	2/14/2024	11:00:37 AM	11:00:38 AM	0:00:01	62.8	61	51.1
245	2/14/2024	11:00:38 AM	11:00:39 AM	0:00:01	65.2	63.1	52.7
246	2/14/2024	11:00:39 AM	11:00:40 AM	0:00:01	66.4	65.4	55.3
247	2/14/2024	11:00:40 AM	11:00:41 AM	0:00:01	65.6	63.9	52.7
248	2/14/2024	11:00:41 AM	11:00:42 AM	0:00:01	64.6	62.2	51.7
249	2/14/2024	11:00:42 AM	11:00:43 AM	0:00:01	63.9	61.4	51.4
250	2/14/2024	11:00:43 AM	11:00:44 AM	0:00:01	63.1	60.9	51
251	2/14/2024	11:00:44 AM	11:00:45 AM	0:00:01	64	61.6	51.7
252	2/14/2024	11:00:45 AM	11:00:46 AM	0:00:01	64.3	61.3	52.4
253	2/14/2024	11:00:46 AM	11:00:47 AM	0:00:01	64	61.7	53
254	2/14/2024	11:00:47 AM	11:00:48 AM	0:00:01	64.3	61	52.7
255	2/14/2024	11:00:48 AM	11:00:49 AM	0:00:01	65.7	62.2	52.7
256	2/14/2024	11:00:49 AM	11:00:50 AM	0:00:01	66	62.4	52.1
257	2/14/2024	11:00:50 AM	11:00:51 AM	0:00:01	66.1	63.1	52.1
258	2/14/2024	11:00:51 AM	11:00:52 AM	0:00:01	66.4	63.6	51.9
259	2/14/2024	11:00:52 AM	11:00:53 AM	0:00:01	65.6	62.7	51.8
260	2/14/2024	11:00:53 AM	11:00:54 AM	0:00:01	66.1	63.4	51.9
261	2/14/2024	11:00:54 AM	11:00:55 AM	0:00:01	67.4	64.5	51.7
262	2/14/2024	11:00:55 AM	11:00:56 AM	0:00:01	67.9	65.3	52.8
263	2/14/2024	11:00:56 AM	11:00:57 AM	0:00:01	68	65.3	54.7
264	2/14/2024	11:00:57 AM	11:00:58 AM	0:00:01	66.1	63	52.1
265	2/14/2024	11:00:58 AM	11:00:59 AM	0:00:01	65	62.6	51.7
266	2/14/2024	11:00:59 AM	11:01:00 AM	0:00:01	65	62.9	54.9
267	2/14/2024	11:01:00 AM	11:01:01 AM	0:00:01	66.5	64.8	58.3
268	2/14/2024	11:01:01 AM	11:01:02 AM	0:00:01	69.4	68	62.9
269	2/14/2024	11:01:02 AM	11:01:03 AM	0:00:01	71.7	70.3	63.5
270	2/14/2024	11:01:03 AM	11:01:04 AM	0:00:01	70.1	68.1	57.6
271	2/14/2024	11:01:04 AM	11:01:05 AM	0:00:01	69	67.7	60.7
272	2/14/2024	11:01:05 AM	11:01:06 AM	0:00:01	71.4	68.6	61.1
273	2/14/2024	11:01:06 AM	11:01:07 AM	0:00:01	65.3	63.5	54.6
274	2/14/2024	11:01:07 AM	11:01:08 AM	0:00:01	65.2	63.4	55.4
275	2/14/2024	11:01:08 AM	11:01:09 AM	0:00:01	65.3	63.8	58.3
276	2/14/2024	11:01:09 AM	11:01:10 AM	0:00:01	67.5	66.7	62.8
277	2/14/2024	11:01:10 AM	11:01:11 AM	0:00:01	68.8	66.8	60.3
278	2/14/2024	11:01:11 AM	11:01:12 AM	0:00:01	66.8	64.4	54.1
279	2/14/2024	11:01:12 AM	11:01:13 AM	0:00:01	64.2	62	53
280	2/14/2024	11:01:13 AM	11:01:14 AM	0:00:01	66.3	64.2	54.3

281	2/14/2024	11:01:14 AM	11:01:15 AM	0:00:01	65.9	63.9	53.6
282	2/14/2024	11:01:15 AM	11:01:16 AM	0:00:01	64.9	62.9	52.6
283	2/14/2024	11:01:16 AM	11:01:17 AM	0:00:01	63.5	61.6	53
284	2/14/2024	11:01:17 AM	11:01:18 AM	0:00:01	64.2	62.3	53.6
285	2/14/2024	11:01:18 AM	11:01:19 AM	0:00:01	63.3	61.9	53.8
286	2/14/2024	11:01:19 AM	11:01:20 AM	0:00:01	63.4	61.9	53.3
287	2/14/2024	11:01:20 AM	11:01:21 AM	0:00:01	65.5	63.4	53.6
288	2/14/2024	11:01:21 AM	11:01:22 AM	0:00:01	64	62.4	53.8
289	2/14/2024	11:01:22 AM	11:01:23 AM	0:00:01	64.6	62.9	53.6
290	2/14/2024	11:01:23 AM	11:01:24 AM	0:00:01	64.3	62.4	53.1
291	2/14/2024	11:01:24 AM	11:01:25 AM	0:00:01	66.9	65.5	54.6
292	2/14/2024	11:01:25 AM	11:01:26 AM	0:00:01	66.6	65.1	54.3
293	2/14/2024	11:01:26 AM	11:01:27 AM	0:00:01	66.4	65.1	54.3
294	2/14/2024	11:01:27 AM	11:01:28 AM	0:00:01	67.3	66	54.5
295	2/14/2024	11:01:28 AM	11:01:29 AM	0:00:01	67.3	65.9	54.5
296	2/14/2024	11:01:29 AM	11:01:30 AM	0:00:01	68.3	67.3	54.7
297	2/14/2024	11:01:30 AM	11:01:31 AM	0:00:01	66	64.9	54
298	2/14/2024	11:01:31 AM	11:01:32 AM	0:00:01	67.4	66	54.6
299	2/14/2024	11:01:32 AM	11:01:33 AM	0:00:01	67.5	65.9	55.2
300	2/14/2024	11:01:33 AM	11:01:34 AM	0:00:01	68.4	66.9	54.8
301	2/14/2024	11:01:34 AM	11:01:35 AM	0:00:01	68.3	66.9	54
302	2/14/2024	11:01:35 AM	11:01:36 AM	0:00:01	68.4	67.1	54.3
303	2/14/2024	11:01:36 AM	11:01:37 AM	0:00:01	69.1	68	55
304	2/14/2024	11:01:37 AM	11:01:38 AM	0:00:01	67.3	65.8	54.5
305	2/14/2024	11:01:38 AM	11:01:39 AM	0:00:01	66.1	64.3	54.2
306	2/14/2024	11:01:39 AM	11:01:40 AM	0:00:01	67.7	65.8	54.7
307	2/14/2024	11:01:40 AM	11:01:41 AM	0:00:01	65.9	63.9	53.3
308	2/14/2024	11:01:41 AM	11:01:42 AM	0:00:01	66	63.7	53.2
309	2/14/2024	11:01:42 AM	11:01:43 AM	0:00:01	66.6	63.7	53.3
310	2/14/2024	11:01:43 AM	11:01:44 AM	0:00:01	65.8	63.3	51.9
311	2/14/2024	11:01:44 AM	11:01:45 AM	0:00:01	64.8	62.6	51.6
312	2/14/2024	11:01:45 AM	11:01:46 AM	0:00:01	65	62.7	51.6
313	2/14/2024	11:01:46 AM	11:01:47 AM	0:00:01	64.3	62.2	50.4
314	2/14/2024	11:01:47 AM	11:01:48 AM	0:00:01	64.3	62.4	50.2
315	2/14/2024	11:01:48 AM	11:01:49 AM	0:00:01	64.4	62.8	50.7
316	2/14/2024	11:01:49 AM	11:01:50 AM	0:00:01	64.4	63.1	51.5
317	2/14/2024	11:01:50 AM	11:01:51 AM	0:00:01	66	64.5	52.2
318	2/14/2024	11:01:51 AM	11:01:52 AM	0:00:01	65.6	64.1	52.3
319	2/14/2024	11:01:52 AM	11:01:53 AM	0:00:01	65.5	63.9	52.1
320	2/14/2024	11:01:53 AM	11:01:54 AM	0:00:01	65.8	64.1	51.9
321	2/14/2024	11:01:54 AM	11:01:55 AM	0:00:01	65.7	63.8	51.8
322	2/14/2024	11:01:55 AM	11:01:56 AM	0:00:01	67	64.7	52
323	2/14/2024	11:01:56 AM	11:01:57 AM	0:00:01	65.4	63.9	52.7
324	2/14/2024	11:01:57 AM	11:01:58 AM	0:00:01	66.5	64.7	52.8
325	2/14/2024	11:01:58 AM	11:01:59 AM	0:00:01	67.9	65.3	53.5
326	2/14/2024	11:01:59 AM	11:02:00 AM	0:00:01	67.7	65.9	53.3
327	2/14/2024	11:02:00 AM	11:02:01 AM	0:00:01	68.6	66.3	54

328	2/14/2024	11:02:01 AM	11:02:02 AM	0:00:01	68.1	66.6	54.3
329	2/14/2024	11:02:02 AM	11:02:03 AM	0:00:01	70	67.8	54.7
330	2/14/2024	11:02:03 AM	11:02:04 AM	0:00:01	70.6	68.6	56.4
331	2/14/2024	11:02:04 AM	11:02:05 AM	0:00:01	70.7	69.1	57.4
332	2/14/2024	11:02:05 AM	11:02:06 AM	0:00:01	70.9	69.7	59.7
333	2/14/2024	11:02:06 AM	11:02:07 AM	0:00:01	73.7	72.9	66.8
334	2/14/2024	11:02:07 AM	11:02:08 AM	0:00:01	74.4	73.8	67.8
335	2/14/2024	11:02:08 AM	11:02:09 AM	0:00:01	71.5	70.7	66.1
336	2/14/2024	11:02:09 AM	11:02:10 AM	0:00:01	72.3	71.5	66.2
337	2/14/2024	11:02:10 AM	11:02:11 AM	0:00:01	71.8	70.8	64.5
338	2/14/2024	11:02:11 AM	11:02:12 AM	0:00:01	68.6	67.3	60.1
339	2/14/2024	11:02:12 AM	11:02:13 AM	0:00:01	67.4	66.1	57.2
340	2/14/2024	11:02:13 AM	11:02:14 AM	0:00:01	66.3	64.8	55.5
341	2/14/2024	11:02:14 AM	11:02:15 AM	0:00:01	66.5	64.2	54.4
342	2/14/2024	11:02:15 AM	11:02:16 AM	0:00:01	65.8	63.8	54.3
343	2/14/2024	11:02:16 AM	11:02:17 AM	0:00:01	65.2	63.4	53.9
344	2/14/2024	11:02:17 AM	11:02:18 AM	0:00:01	65.1	63.3	53.7
345	2/14/2024	11:02:18 AM	11:02:19 AM	0:00:01	65.9	63.2	53.4
346	2/14/2024	11:02:19 AM	11:02:20 AM	0:00:01	66.1	63.5	54.1
347	2/14/2024	11:02:20 AM	11:02:21 AM	0:00:01	64.9	62.5	52.9
348	2/14/2024	11:02:21 AM	11:02:22 AM	0:00:01	65.8	63.3	53.2
349	2/14/2024	11:02:22 AM	11:02:23 AM	0:00:01	66.5	64.4	53.3
350	2/14/2024	11:02:23 AM	11:02:24 AM	0:00:01	66.1	63.8	52.9
351	2/14/2024	11:02:24 AM	11:02:25 AM	0:00:01	67.7	64.7	53.1
352	2/14/2024	11:02:25 AM	11:02:26 AM	0:00:01	65.7	63.6	53.6
353	2/14/2024	11:02:26 AM	11:02:27 AM	0:00:01	65.3	63.6	52.8
354	2/14/2024	11:02:27 AM	11:02:28 AM	0:00:01	65.2	63.4	52.1
355	2/14/2024	11:02:28 AM	11:02:29 AM	0:00:01	66.2	64.2	52.3
356	2/14/2024	11:02:29 AM	11:02:30 AM	0:00:01	66.1	63.7	51.9
357	2/14/2024	11:02:30 AM	11:02:31 AM	0:00:01	64.1	61.9	51.6
358	2/14/2024	11:02:31 AM	11:02:32 AM	0:00:01	65.2	62.3	52
359	2/14/2024	11:02:32 AM	11:02:33 AM	0:00:01	65.2	62.9	51.9
360	2/14/2024	11:02:33 AM	11:02:34 AM	0:00:01	64.5	62.6	52.2
361	2/14/2024	11:02:34 AM	11:02:35 AM	0:00:01	63.1	61.5	53.3
362	2/14/2024	11:02:35 AM	11:02:36 AM	0:00:01	64.9	63.3	53.3
363	2/14/2024	11:02:36 AM	11:02:37 AM	0:00:01	66.8	65.7	53.5
364	2/14/2024	11:02:37 AM	11:02:38 AM	0:00:01	67.9	66.9	54
365	2/14/2024	11:02:38 AM	11:02:39 AM	0:00:01	65	63.7	52.9
366	2/14/2024	11:02:39 AM	11:02:40 AM	0:00:01	64.7	62.8	52.1
367	2/14/2024	11:02:40 AM	11:02:41 AM	0:00:01	64.1	62.2	52.5
368	2/14/2024	11:02:41 AM	11:02:42 AM	0:00:01	64.3	62.1	52.3
369	2/14/2024	11:02:42 AM	11:02:43 AM	0:00:01	64.2	62.1	52.5
370	2/14/2024	11:02:43 AM	11:02:44 AM	0:00:01	63.6	61.8	52.6
371	2/14/2024	11:02:44 AM	11:02:45 AM	0:00:01	64.1	62.4	53.1
372	2/14/2024	11:02:45 AM	11:02:46 AM	0:00:01	63.9	62.1	53.4
373	2/14/2024	11:02:46 AM	11:02:47 AM	0:00:01	64.6	62.9	53.5
374	2/14/2024	11:02:47 AM	11:02:48 AM	0:00:01	64.7	62.8	53

375	2/14/2024	11:02:48 AM	11:02:49 AM	0:00:01	64.8	63	52.9
376	2/14/2024	11:02:49 AM	11:02:50 AM	0:00:01	66.5	64.7	53.5
377	2/14/2024	11:02:50 AM	11:02:51 AM	0:00:01	67	65.6	55
378	2/14/2024	11:02:51 AM	11:02:52 AM	0:00:01	66.7	65.2	53.7
379	2/14/2024	11:02:52 AM	11:02:53 AM	0:00:01	66	64.3	53.2
380	2/14/2024	11:02:53 AM	11:02:54 AM	0:00:01	66	64.3	53.9
381	2/14/2024	11:02:54 AM	11:02:55 AM	0:00:01	66.7	65.3	53.5
382	2/14/2024	11:02:55 AM	11:02:56 AM	0:00:01	65.4	64	53.3
383	2/14/2024	11:02:56 AM	11:02:57 AM	0:00:01	65.3	63.5	53.5
384	2/14/2024	11:02:57 AM	11:02:58 AM	0:00:01	64.4	62.2	53
385	2/14/2024	11:02:58 AM	11:02:59 AM	0:00:01	64.5	62.5	53.3
386	2/14/2024	11:02:59 AM	11:03:00 AM	0:00:01	63.9	62.1	54.3
387	2/14/2024	11:03:00 AM	11:03:01 AM	0:00:01	64.5	63.1	56.8
388	2/14/2024	11:03:01 AM	11:03:02 AM	0:00:01	67.6	66.6	60.9
389	2/14/2024	11:03:02 AM	11:03:03 AM	0:00:01	68.1	66.8	60
390	2/14/2024	11:03:03 AM	11:03:04 AM	0:00:01	66.7	64.4	54
391	2/14/2024	11:03:04 AM	11:03:05 AM	0:00:01	66.2	64.8	54.5
392	2/14/2024	11:03:05 AM	11:03:06 AM	0:00:01	66.8	65.6	56.8
393	2/14/2024	11:03:06 AM	11:03:07 AM	0:00:01	70.9	70.3	63.5
394	2/14/2024	11:03:07 AM	11:03:08 AM	0:00:01	71	70.4	63
395	2/14/2024	11:03:08 AM	11:03:09 AM	0:00:01	68.4	67.6	58.9
396	2/14/2024	11:03:09 AM	11:03:10 AM	0:00:01	66.5	65.7	55.6
397	2/14/2024	11:03:10 AM	11:03:11 AM	0:00:01	64.7	63.5	56.6
398	2/14/2024	11:03:11 AM	11:03:12 AM	0:00:01	64.7	63.3	53.6
399	2/14/2024	11:03:12 AM	11:03:13 AM	0:00:01	64.4	62.9	52.7
400	2/14/2024	11:03:13 AM	11:03:14 AM	0:00:01	62.9	61.6	52.3
401	2/14/2024	11:03:14 AM	11:03:15 AM	0:00:01	64.1	62.5	53
402	2/14/2024	11:03:15 AM	11:03:16 AM	0:00:01	64.2	62.7	52.8
403	2/14/2024	11:03:16 AM	11:03:17 AM	0:00:01	63.5	62.1	52.6
404	2/14/2024	11:03:17 AM	11:03:18 AM	0:00:01	64.9	63.4	53.4
405	2/14/2024	11:03:18 AM	11:03:19 AM	0:00:01	63.7	61.8	53.1
406	2/14/2024	11:03:19 AM	11:03:20 AM	0:00:01	65.3	63.3	53
407	2/14/2024	11:03:20 AM	11:03:21 AM	0:00:01	65.3	63.5	53
408	2/14/2024	11:03:21 AM	11:03:22 AM	0:00:01	65.8	63.6	52.6
409	2/14/2024	11:03:22 AM	11:03:23 AM	0:00:01	64.7	62.8	52.8
410	2/14/2024	11:03:23 AM	11:03:24 AM	0:00:01	64.4	63	53.1
411	2/14/2024	11:03:24 AM	11:03:25 AM	0:00:01	65.2	63.8	53.2
412	2/14/2024	11:03:25 AM	11:03:26 AM	0:00:01	66.1	64.1	53
413	2/14/2024	11:03:26 AM	11:03:27 AM	0:00:01	65.2	63.3	52.6
414	2/14/2024	11:03:27 AM	11:03:28 AM	0:00:01	65	63.2	52.9
415	2/14/2024	11:03:28 AM	11:03:29 AM	0:00:01	63.9	62.7	53.1
416	2/14/2024	11:03:29 AM	11:03:30 AM	0:00:01	65	63.2	52.8
417	2/14/2024	11:03:30 AM	11:03:31 AM	0:00:01	64.6	62.9	52.4
418	2/14/2024	11:03:31 AM	11:03:32 AM	0:00:01	63.8	62	52.5
419	2/14/2024	11:03:32 AM	11:03:33 AM	0:00:01	63.2	61.7	52.3
420	2/14/2024	11:03:33 AM	11:03:34 AM	0:00:01	63.1	61.5	52.1
421	2/14/2024	11:03:34 AM	11:03:35 AM	0:00:01	62.4	60.8	52.1

422	2/14/2024	11:03:35 AM	11:03:36 AM	0:00:01	62.2	60.6	51.7
423	2/14/2024	11:03:36 AM	11:03:37 AM	0:00:01	62	60.5	51.3
424	2/14/2024	11:03:37 AM	11:03:38 AM	0:00:01	61	59.6	51.3
425	2/14/2024	11:03:38 AM	11:03:39 AM	0:00:01	62.3	60.3	50.7
426	2/14/2024	11:03:39 AM	11:03:40 AM	0:00:01	61.2	59.4	50.9
427	2/14/2024	11:03:40 AM	11:03:41 AM	0:00:01	62.5	60.2	51.3
428	2/14/2024	11:03:41 AM	11:03:42 AM	0:00:01	60.9	59.2	50.8
429	2/14/2024	11:03:42 AM	11:03:43 AM	0:00:01	62.7	60.9	50.6
430	2/14/2024	11:03:43 AM	11:03:44 AM	0:00:01	63.5	60.9	50.3
431	2/14/2024	11:03:44 AM	11:03:45 AM	0:00:01	64.6	62.4	50.8
432	2/14/2024	11:03:45 AM	11:03:46 AM	0:00:01	64.8	61.8	50.7
433	2/14/2024	11:03:46 AM	11:03:47 AM	0:00:01	65.5	62	50.8
434	2/14/2024	11:03:47 AM	11:03:48 AM	0:00:01	65	62.4	51.4
435	2/14/2024	11:03:48 AM	11:03:49 AM	0:00:01	67.4	64.2	51.6
436	2/14/2024	11:03:49 AM	11:03:50 AM	0:00:01	66.8	64	51.8
437	2/14/2024	11:03:50 AM	11:03:51 AM	0:00:01	66.8	62.5	51.4
438	2/14/2024	11:03:51 AM	11:03:52 AM	0:00:01	68.3	64.2	51.5
439	2/14/2024	11:03:52 AM	11:03:53 AM	0:00:01	69.9	65.3	51.7
440	2/14/2024	11:03:53 AM	11:03:54 AM	0:00:01	66.7	63.1	51.3
441	2/14/2024	11:03:54 AM	11:03:55 AM	0:00:01	65.7	62.5	50.9
442	2/14/2024	11:03:55 AM	11:03:56 AM	0:00:01	64.4	61.7	51.6
443	2/14/2024	11:03:56 AM	11:03:57 AM	0:00:01	63.6	61.7	51.2
444	2/14/2024	11:03:57 AM	11:03:58 AM	0:00:01	63.6	61.7	50.4
445	2/14/2024	11:03:58 AM	11:03:59 AM	0:00:01	63.4	60.6	49.8
446	2/14/2024	11:03:59 AM	11:04:00 AM	0:00:01	63.7	61.8	50.4
447	2/14/2024	11:04:00 AM	11:04:01 AM	0:00:01	63.7	61.7	51.3
448	2/14/2024	11:04:01 AM	11:04:02 AM	0:00:01	62.5	60.6	51.1
449	2/14/2024	11:04:02 AM	11:04:03 AM	0:00:01	62.9	60.6	51.3
450	2/14/2024	11:04:03 AM	11:04:04 AM	0:00:01	61.3	59.6	51.4
451	2/14/2024	11:04:04 AM	11:04:05 AM	0:00:01	62.3	60.5	51.6
452	2/14/2024	11:04:05 AM	11:04:06 AM	0:00:01	61.2	59.4	51.9
453	2/14/2024	11:04:06 AM	11:04:07 AM	0:00:01	61.6	59.9	52.9
454	2/14/2024	11:04:07 AM	11:04:08 AM	0:00:01	63	60.8	53.8
455	2/14/2024	11:04:08 AM	11:04:09 AM	0:00:01	64.5	63.3	55.9
456	2/14/2024	11:04:09 AM	11:04:10 AM	0:00:01	69.4	68.5	64.1
457	2/14/2024	11:04:10 AM	11:04:11 AM	0:00:01	70.6	69.6	65.4
458	2/14/2024	11:04:11 AM	11:04:12 AM	0:00:01	68.8	67.9	62.9
459	2/14/2024	11:04:12 AM	11:04:13 AM	0:00:01	65.6	64.6	59
460	2/14/2024	11:04:13 AM	11:04:14 AM	0:00:01	64.2	62.8	56.5
461	2/14/2024	11:04:14 AM	11:04:15 AM	0:00:01	66	62.6	53.5
462	2/14/2024	11:04:15 AM	11:04:16 AM	0:00:01	66.2	63.3	52
463	2/14/2024	11:04:16 AM	11:04:17 AM	0:00:01	67.9	62.5	51.3
464	2/14/2024	11:04:17 AM	11:04:18 AM	0:00:01	65.4	61.5	50.8
465	2/14/2024	11:04:18 AM	11:04:19 AM	0:00:01	65.6	61.3	51.2
466	2/14/2024	11:04:19 AM	11:04:20 AM	0:00:01	63.2	60.4	51.6
467	2/14/2024	11:04:20 AM	11:04:21 AM	0:00:01	63.4	61	51.8
468	2/14/2024	11:04:21 AM	11:04:22 AM	0:00:01	63	60.4	51

469	2/14/2024	11:04:22 AM	11:04:23 AM	0:00:01	63.1	60.6	50.8
470	2/14/2024	11:04:23 AM	11:04:24 AM	0:00:01	65.4	62	51.1
471	2/14/2024	11:04:24 AM	11:04:25 AM	0:00:01	65.5	62.6	51.7
472	2/14/2024	11:04:25 AM	11:04:26 AM	0:00:01	65.4	62.9	51.2
473	2/14/2024	11:04:26 AM	11:04:27 AM	0:00:01	64.6	62.7	51.5
474	2/14/2024	11:04:27 AM	11:04:28 AM	0:00:01	66	63.4	51.3
475	2/14/2024	11:04:28 AM	11:04:29 AM	0:00:01	66.3	64.2	51.5
476	2/14/2024	11:04:29 AM	11:04:30 AM	0:00:01	68	65.4	51.4
477	2/14/2024	11:04:30 AM	11:04:31 AM	0:00:01	67.1	64.6	51.2
478	2/14/2024	11:04:31 AM	11:04:32 AM	0:00:01	66.9	64.6	51.4
479	2/14/2024	11:04:32 AM	11:04:33 AM	0:00:01	66.4	63.9	51.3
480	2/14/2024	11:04:33 AM	11:04:34 AM	0:00:01	67.4	64.5	51.1
481	2/14/2024	11:04:34 AM	11:04:35 AM	0:00:01	66.6	64.1	51.7
482	2/14/2024	11:04:35 AM	11:04:36 AM	0:00:01	66.1	63.3	51.4
483	2/14/2024	11:04:36 AM	11:04:37 AM	0:00:01	66.3	63.5	51.4
484	2/14/2024	11:04:37 AM	11:04:38 AM	0:00:01	65.3	62.7	50.9
485	2/14/2024	11:04:38 AM	11:04:39 AM	0:00:01	66.2	63	50.8
486	2/14/2024	11:04:39 AM	11:04:40 AM	0:00:01	67.2	63.5	50.6
487	2/14/2024	11:04:40 AM	11:04:41 AM	0:00:01	65	62.2	50.4
488	2/14/2024	11:04:41 AM	11:04:42 AM	0:00:01	63.8	61.7	50.3
489	2/14/2024	11:04:42 AM	11:04:43 AM	0:00:01	63.7	60.9	50.4
490	2/14/2024	11:04:43 AM	11:04:44 AM	0:00:01	63.6	60.6	49.8
491	2/14/2024	11:04:44 AM	11:04:45 AM	0:00:01	62.8	60.1	49.9
492	2/14/2024	11:04:45 AM	11:04:46 AM	0:00:01	62.2	59.8	49.9
493	2/14/2024	11:04:46 AM	11:04:47 AM	0:00:01	61.7	59.6	49.7
494	2/14/2024	11:04:47 AM	11:04:48 AM	0:00:01	60.9	59	49.7
495	2/14/2024	11:04:48 AM	11:04:49 AM	0:00:01	63	61.1	50.2
496	2/14/2024	11:04:49 AM	11:04:50 AM	0:00:01	61	59.4	50
497	2/14/2024	11:04:50 AM	11:04:51 AM	0:00:01	59.8	58.4	49.9
498	2/14/2024	11:04:51 AM	11:04:52 AM	0:00:01	60.5	58.4	49.9
499	2/14/2024	11:04:52 AM	11:04:53 AM	0:00:01	60.9	59.2	49.6
500	2/14/2024	11:04:53 AM	11:04:54 AM	0:00:01	60.9	58.9	49.8
501	2/14/2024	11:04:54 AM	11:04:55 AM	0:00:01	60.7	58.5	50.1
502	2/14/2024	11:04:55 AM	11:04:56 AM	0:00:01	61.1	59.2	49.7
503	2/14/2024	11:04:56 AM	11:04:57 AM	0:00:01	60.3	58.7	50.2
504	2/14/2024	11:04:57 AM	11:04:58 AM	0:00:01	61	59.1	50.4
505	2/14/2024	11:04:58 AM	11:04:59 AM	0:00:01	61	59.2	50.8
506	2/14/2024	11:04:59 AM	11:05:00 AM	0:00:01	61.6	60.4	51.4
507	2/14/2024	11:05:00 AM	11:05:01 AM	0:00:01	61.5	60.2	51.7
508	2/14/2024	11:05:01 AM	11:05:02 AM	0:00:01	63.1	61.7	52.4
509	2/14/2024	11:05:02 AM	11:05:03 AM	0:00:01	65.3	64.4	54.2
510	2/14/2024	11:05:03 AM	11:05:04 AM	0:00:01	66.3	65.6	56
511	2/14/2024	11:05:04 AM	11:05:05 AM	0:00:01	67.4	66.6	58.7
512	2/14/2024	11:05:05 AM	11:05:06 AM	0:00:01	70.1	69.2	63.3
513	2/14/2024	11:05:06 AM	11:05:07 AM	0:00:01	71	70.3	63.7
514	2/14/2024	11:05:07 AM	11:05:08 AM	0:00:01	67.7	66.8	55.4
515	2/14/2024	11:05:08 AM	11:05:09 AM	0:00:01	68.1	67.3	55.8

516	2/14/2024	11:05:09 AM	11:05:10 AM	0:00:01	67.7	66.4	57.2
517	2/14/2024	11:05:10 AM	11:05:11 AM	0:00:01	69	67.8	60.2
518	2/14/2024	11:05:11 AM	11:05:12 AM	0:00:01	71.8	71.1	64.3
519	2/14/2024	11:05:12 AM	11:05:13 AM	0:00:01	71.8	70.8	63.9
520	2/14/2024	11:05:13 AM	11:05:14 AM	0:00:01	69.5	67.7	57.2
521	2/14/2024	11:05:14 AM	11:05:15 AM	0:00:01	69.5	67.5	57.7
522	2/14/2024	11:05:15 AM	11:05:16 AM	0:00:01	73.2	71.4	63
523	2/14/2024	11:05:16 AM	11:05:17 AM	0:00:01	73.3	71.1	62.6
524	2/14/2024	11:05:17 AM	11:05:18 AM	0:00:01	70.2	67.8	55.8
525	2/14/2024	11:05:18 AM	11:05:19 AM	0:00:01	67.8	65.6	53.8
526	2/14/2024	11:05:19 AM	11:05:20 AM	0:00:01	68.3	65.5	53.9
527	2/14/2024	11:05:20 AM	11:05:21 AM	0:00:01	67.2	64.4	53.2
528	2/14/2024	11:05:21 AM	11:05:22 AM	0:00:01	65.6	63	52.8
529	2/14/2024	11:05:22 AM	11:05:23 AM	0:00:01	65.7	64	52.8
530	2/14/2024	11:05:23 AM	11:05:24 AM	0:00:01	65.9	63.6	52
531	2/14/2024	11:05:24 AM	11:05:25 AM	0:00:01	65.6	63.2	52.4
532	2/14/2024	11:05:25 AM	11:05:26 AM	0:00:01	65.7	63.3	52.4
533	2/14/2024	11:05:26 AM	11:05:27 AM	0:00:01	66.1	64.2	53.1
534	2/14/2024	11:05:27 AM	11:05:28 AM	0:00:01	64.5	62	52.1
535	2/14/2024	11:05:28 AM	11:05:29 AM	0:00:01	63.6	62.2	51.9
536	2/14/2024	11:05:29 AM	11:05:30 AM	0:00:01	64.1	62.3	52.1
537	2/14/2024	11:05:30 AM	11:05:31 AM	0:00:01	65.6	63.6	52.7
538	2/14/2024	11:05:31 AM	11:05:32 AM	0:00:01	66.1	63.6	52.8
539	2/14/2024	11:05:32 AM	11:05:33 AM	0:00:01	68.5	65.6	54
540	2/14/2024	11:05:33 AM	11:05:34 AM	0:00:01	69.7	67.1	54.7
541	2/14/2024	11:05:34 AM	11:05:35 AM	0:00:01	68.7	66.1	54.5
542	2/14/2024	11:05:35 AM	11:05:36 AM	0:00:01	69.9	67.2	54.7
543	2/14/2024	11:05:36 AM	11:05:37 AM	0:00:01	69.7	67.8	56.2
544	2/14/2024	11:05:37 AM	11:05:38 AM	0:00:01	71.1	69.3	56.3
545	2/14/2024	11:05:38 AM	11:05:39 AM	0:00:01	71.5	69.3	55.9
546	2/14/2024	11:05:39 AM	11:05:40 AM	0:00:01	70.6	68.1	54.2
547	2/14/2024	11:05:40 AM	11:05:41 AM	0:00:01	70.1	68.2	56.5
548	2/14/2024	11:05:41 AM	11:05:42 AM	0:00:01	71.4	68.5	54.6
549	2/14/2024	11:05:42 AM	11:05:43 AM	0:00:01	70.3	67.9	54.4
550	2/14/2024	11:05:43 AM	11:05:44 AM	0:00:01	69.6	66.4	53
551	2/14/2024	11:05:44 AM	11:05:45 AM	0:00:01	69.4	66	52
552	2/14/2024	11:05:45 AM	11:05:46 AM	0:00:01	71	67.3	52.6
553	2/14/2024	11:05:46 AM	11:05:47 AM	0:00:01	68.9	65.1	51.8
554	2/14/2024	11:05:47 AM	11:05:48 AM	0:00:01	66.5	63.7	51.4
555	2/14/2024	11:05:48 AM	11:05:49 AM	0:00:01	67.4	64.2	51.3
556	2/14/2024	11:05:49 AM	11:05:50 AM	0:00:01	65.7	63.5	51.4
557	2/14/2024	11:05:50 AM	11:05:51 AM	0:00:01	64.1	62	50.7
558	2/14/2024	11:05:51 AM	11:05:52 AM	0:00:01	65	62.6	50.7
559	2/14/2024	11:05:52 AM	11:05:53 AM	0:00:01	64.3	62.2	50.9
560	2/14/2024	11:05:53 AM	11:05:54 AM	0:00:01	64.6	62.5	50.8
561	2/14/2024	11:05:54 AM	11:05:55 AM	0:00:01	63	61.2	50.2
562	2/14/2024	11:05:55 AM	11:05:56 AM	0:00:01	62.4	60.7	50.3

563	2/14/2024	11:05:56 AM	11:05:57 AM	0:00:01	63.3	61.4	50.5
564	2/14/2024	11:05:57 AM	11:05:58 AM	0:00:01	63.6	61.6	50.8
565	2/14/2024	11:05:58 AM	11:05:59 AM	0:00:01	63.3	61.4	50.4
566	2/14/2024	11:05:59 AM	11:06:00 AM	0:00:01	63.5	61.5	50.8
567	2/14/2024	11:06:00 AM	11:06:01 AM	0:00:01	63	61.2	50.6
568	2/14/2024	11:06:01 AM	11:06:02 AM	0:00:01	62.5	60.5	50.5
569	2/14/2024	11:06:02 AM	11:06:03 AM	0:00:01	63.6	61.7	50.3
570	2/14/2024	11:06:03 AM	11:06:04 AM	0:00:01	63.5	61.3	50.1
571	2/14/2024	11:06:04 AM	11:06:05 AM	0:00:01	61.7	60.1	49.4
572	2/14/2024	11:06:05 AM	11:06:06 AM	0:00:01	63.1	61.2	49.9
573	2/14/2024	11:06:06 AM	11:06:07 AM	0:00:01	64.3	62.5	49.6
574	2/14/2024	11:06:07 AM	11:06:08 AM	0:00:01	64.5	62	49.9
575	2/14/2024	11:06:08 AM	11:06:09 AM	0:00:01	63.6	61	49.6
576	2/14/2024	11:06:09 AM	11:06:10 AM	0:00:01	64.3	62.2	50.3
577	2/14/2024	11:06:10 AM	11:06:11 AM	0:00:01	64.8	62.3	49.9
578	2/14/2024	11:06:11 AM	11:06:12 AM	0:00:01	64.6	62.8	50.7
579	2/14/2024	11:06:12 AM	11:06:13 AM	0:00:01	63.7	61.4	51.2
580	2/14/2024	11:06:13 AM	11:06:14 AM	0:00:01	65.7	63.4	51.3
581	2/14/2024	11:06:14 AM	11:06:15 AM	0:00:01	65.7	63	50.4
582	2/14/2024	11:06:15 AM	11:06:16 AM	0:00:01	64.7	62.4	50.1
583	2/14/2024	11:06:16 AM	11:06:17 AM	0:00:01	64.6	62.7	50.3
584	2/14/2024	11:06:17 AM	11:06:18 AM	0:00:01	65.1	62.3	50.2
585	2/14/2024	11:06:18 AM	11:06:19 AM	0:00:01	64.2	61.8	50.7
586	2/14/2024	11:06:19 AM	11:06:20 AM	0:00:01	63.3	60.8	50.2
587	2/14/2024	11:06:20 AM	11:06:21 AM	0:00:01	63.9	60.7	50.7
588	2/14/2024	11:06:21 AM	11:06:22 AM	0:00:01	64	61.1	51
589	2/14/2024	11:06:22 AM	11:06:23 AM	0:00:01	66.1	62.6	52.4
590	2/14/2024	11:06:23 AM	11:06:24 AM	0:00:01	68.5	64.7	53.3
591	2/14/2024	11:06:24 AM	11:06:25 AM	0:00:01	69.4	65.9	55.4
592	2/14/2024	11:06:25 AM	11:06:26 AM	0:00:01	69.7	67.1	57.1
593	2/14/2024	11:06:26 AM	11:06:27 AM	0:00:01	72.9	71.4	66.4
594	2/14/2024	11:06:27 AM	11:06:28 AM	0:00:01	73.1	71.5	66.1
595	2/14/2024	11:06:28 AM	11:06:29 AM	0:00:01	69.4	67.2	61.1
596	2/14/2024	11:06:29 AM	11:06:30 AM	0:00:01	66.8	64.7	57.7
597	2/14/2024	11:06:30 AM	11:06:31 AM	0:00:01	66.8	64.1	54.6
598	2/14/2024	11:06:31 AM	11:06:32 AM	0:00:01	67.2	63.9	51.9
599	2/14/2024	11:06:32 AM	11:06:33 AM	0:00:01	67.4	63.9	50.1
600	2/14/2024	11:06:33 AM	11:06:34 AM	0:00:01	66.3	62.9	49.2
601	2/14/2024	11:06:34 AM	11:06:35 AM	0:00:01	64.8	61.4	49.8
602	2/14/2024	11:06:35 AM	11:06:36 AM	0:00:01	64.4	61.5	50.5
603	2/14/2024	11:06:36 AM	11:06:37 AM	0:00:01	63.2	60.9	51.1
604	2/14/2024	11:06:37 AM	11:06:38 AM	0:00:01	63.1	60.2	49.6
605	2/14/2024	11:06:38 AM	11:06:39 AM	0:00:01	63.3	59.9	49.1
606	2/14/2024	11:06:39 AM	11:06:40 AM	0:00:01	62.3	59.7	49.8
607	2/14/2024	11:06:40 AM	11:06:41 AM	0:00:01	62	59.6	49.9
608	2/14/2024	11:06:41 AM	11:06:42 AM	0:00:01	62.3	60.5	50.7
609	2/14/2024	11:06:42 AM	11:06:43 AM	0:00:01	63.1	61.4	50.8

610	2/14/2024	11:06:43 AM	11:06:44 AM	0:00:01	63.9	62.4	50.7
611	2/14/2024	11:06:44 AM	11:06:45 AM	0:00:01	64.5	63.1	51.1
612	2/14/2024	11:06:45 AM	11:06:46 AM	0:00:01	65.2	63.7	51.5
613	2/14/2024	11:06:46 AM	11:06:47 AM	0:00:01	67.1	65	52.5
614	2/14/2024	11:06:47 AM	11:06:48 AM	0:00:01	67.1	63.9	51.6
615	2/14/2024	11:06:48 AM	11:06:49 AM	0:00:01	66.3	64.2	51.9
616	2/14/2024	11:06:49 AM	11:06:50 AM	0:00:01	65.5	63.7	52
617	2/14/2024	11:06:50 AM	11:06:51 AM	0:00:01	66.1	63.7	51.9
618	2/14/2024	11:06:51 AM	11:06:52 AM	0:00:01	66	64.1	51.7
619	2/14/2024	11:06:52 AM	11:06:53 AM	0:00:01	67.9	64.7	51.7
620	2/14/2024	11:06:53 AM	11:06:54 AM	0:00:01	66.3	64.2	51.5
621	2/14/2024	11:06:54 AM	11:06:55 AM	0:00:01	66	64.6	51.3
622	2/14/2024	11:06:55 AM	11:06:56 AM	0:00:01	65.5	63.7	51.8
623	2/14/2024	11:06:56 AM	11:06:57 AM	0:00:01	67.1	64.8	51.4
624	2/14/2024	11:06:57 AM	11:06:58 AM	0:00:01	64.2	62.6	50.9
625	2/14/2024	11:06:58 AM	11:06:59 AM	0:00:01	64.1	61.9	50.9
626	2/14/2024	11:06:59 AM	11:07:00 AM	0:00:01	64.4	61.6	50.9
627	2/14/2024	11:07:00 AM	11:07:01 AM	0:00:01	63.8	61.7	51.2
628	2/14/2024	11:07:01 AM	11:07:02 AM	0:00:01	63	61.4	51.6
629	2/14/2024	11:07:02 AM	11:07:03 AM	0:00:01	62.5	61.1	53.8
630	2/14/2024	11:07:03 AM	11:07:04 AM	0:00:01	65.2	64.2	58.8
631	2/14/2024	11:07:04 AM	11:07:05 AM	0:00:01	68.7	67.6	62.2
632	2/14/2024	11:07:05 AM	11:07:06 AM	0:00:01	65.5	63.8	55.2
633	2/14/2024	11:07:06 AM	11:07:07 AM	0:00:01	63.6	62.1	53.1
634	2/14/2024	11:07:07 AM	11:07:08 AM	0:00:01	63.7	62.2	52
635	2/14/2024	11:07:08 AM	11:07:09 AM	0:00:01	62.3	60.9	51.2
636	2/14/2024	11:07:09 AM	11:07:10 AM	0:00:01	61.8	60.2	50.5
637	2/14/2024	11:07:10 AM	11:07:11 AM	0:00:01	61.9	60.3	50.4
638	2/14/2024	11:07:11 AM	11:07:12 AM	0:00:01	61.8	60	50.5
639	2/14/2024	11:07:12 AM	11:07:13 AM	0:00:01	61.8	60	50.6
640	2/14/2024	11:07:13 AM	11:07:14 AM	0:00:01	61.6	60.1	50.2
641	2/14/2024	11:07:14 AM	11:07:15 AM	0:00:01	61.9	59.5	50.5
642	2/14/2024	11:07:15 AM	11:07:16 AM	0:00:01	61.9	59.7	50.3
643	2/14/2024	11:07:16 AM	11:07:17 AM	0:00:01	61.1	59.3	50
644	2/14/2024	11:07:17 AM	11:07:18 AM	0:00:01	63.2	60.3	50.2
645	2/14/2024	11:07:18 AM	11:07:19 AM	0:00:01	63.8	60.7	50.5
646	2/14/2024	11:07:19 AM	11:07:20 AM	0:00:01	61.3	59.1	50.8
647	2/14/2024	11:07:20 AM	11:07:21 AM	0:00:01	61.4	59.6	50.8
648	2/14/2024	11:07:21 AM	11:07:22 AM	0:00:01	62.8	59.8	51.3
649	2/14/2024	11:07:22 AM	11:07:23 AM	0:00:01	64.3	61.3	51.4
650	2/14/2024	11:07:23 AM	11:07:24 AM	0:00:01	63.6	60.9	51.4
651	2/14/2024	11:07:24 AM	11:07:25 AM	0:00:01	65.1	62	51.5
652	2/14/2024	11:07:25 AM	11:07:26 AM	0:00:01	64.4	61.3	51.6
653	2/14/2024	11:07:26 AM	11:07:27 AM	0:00:01	63.7	61	51.8
654	2/14/2024	11:07:27 AM	11:07:28 AM	0:00:01	65.2	62.1	51.4
655	2/14/2024	11:07:28 AM	11:07:29 AM	0:00:01	63.4	60.8	51.5
656	2/14/2024	11:07:29 AM	11:07:30 AM	0:00:01	66	62	51.5

657	2/14/2024	11:07:30 AM	11:07:31 AM	0:00:01	62.2	60	51.3
658	2/14/2024	11:07:31 AM	11:07:32 AM	0:00:01	62.4	59.8	51
659	2/14/2024	11:07:32 AM	11:07:33 AM	0:00:01	63.1	60	52.1
660	2/14/2024	11:07:33 AM	11:07:34 AM	0:00:01	62	59.6	50.9
661	2/14/2024	11:07:34 AM	11:07:35 AM	0:00:01	63.8	60.6	50.7
662	2/14/2024	11:07:35 AM	11:07:36 AM	0:00:01	62.6	60.3	51.6
663	2/14/2024	11:07:36 AM	11:07:37 AM	0:00:01	64.5	62	53.5
664	2/14/2024	11:07:37 AM	11:07:38 AM	0:00:01	66.8	64.4	55.7
665	2/14/2024	11:07:38 AM	11:07:39 AM	0:00:01	68.1	66.5	59.1
666	2/14/2024	11:07:39 AM	11:07:40 AM	0:00:01	71.9	70.8	65.5
667	2/14/2024	11:07:40 AM	11:07:41 AM	0:00:01	68	66.9	63.6
668	2/14/2024	11:07:41 AM	11:07:42 AM	0:00:01	65.6	63.9	59.2
669	2/14/2024	11:07:42 AM	11:07:43 AM	0:00:01	65.6	63.4	56.3
670	2/14/2024	11:07:43 AM	11:07:44 AM	0:00:01	66.2	62.7	53.8
671	2/14/2024	11:07:44 AM	11:07:45 AM	0:00:01	64.5	61.6	53
672	2/14/2024	11:07:45 AM	11:07:46 AM	0:00:01	63.2	61.2	52.3
673	2/14/2024	11:07:46 AM	11:07:47 AM	0:00:01	63.2	60.6	52
674	2/14/2024	11:07:47 AM	11:07:48 AM	0:00:01	63.8	61.7	51.8
675	2/14/2024	11:07:48 AM	11:07:49 AM	0:00:01	63.1	61	51.3
676	2/14/2024	11:07:49 AM	11:07:50 AM	0:00:01	63.6	61.7	51.7
677	2/14/2024	11:07:50 AM	11:07:51 AM	0:00:01	63.8	61.9	50.9
678	2/14/2024	11:07:51 AM	11:07:52 AM	0:00:01	63.8	62	51.2
679	2/14/2024	11:07:52 AM	11:07:53 AM	0:00:01	63.7	61.8	50.6
680	2/14/2024	11:07:53 AM	11:07:54 AM	0:00:01	63.6	61.7	50.4
681	2/14/2024	11:07:54 AM	11:07:55 AM	0:00:01	63.3	61.1	50.2
682	2/14/2024	11:07:55 AM	11:07:56 AM	0:00:01	63.6	61.2	50.9
683	2/14/2024	11:07:56 AM	11:07:57 AM	0:00:01	63.6	61	50.8
684	2/14/2024	11:07:57 AM	11:07:58 AM	0:00:01	65.2	61.8	52.1
685	2/14/2024	11:07:58 AM	11:07:59 AM	0:00:01	63.7	60.9	51.4
686	2/14/2024	11:07:59 AM	11:08:00 AM	0:00:01	64.7	61.8	51.2
687	2/14/2024	11:08:00 AM	11:08:01 AM	0:00:01	65	61.9	51.1
688	2/14/2024	11:08:01 AM	11:08:02 AM	0:00:01	63.9	61.2	51.1
689	2/14/2024	11:08:02 AM	11:08:03 AM	0:00:01	63.8	61.2	51.5
690	2/14/2024	11:08:03 AM	11:08:04 AM	0:00:01	65	61.9	51.2
691	2/14/2024	11:08:04 AM	11:08:05 AM	0:00:01	66.9	62.5	51.6
692	2/14/2024	11:08:05 AM	11:08:06 AM	0:00:01	65.5	62	51.6
693	2/14/2024	11:08:06 AM	11:08:07 AM	0:00:01	67.1	63.6	51.6
694	2/14/2024	11:08:07 AM	11:08:08 AM	0:00:01	67	63.4	51.3
695	2/14/2024	11:08:08 AM	11:08:09 AM	0:00:01	65.6	63	50.9
696	2/14/2024	11:08:09 AM	11:08:10 AM	0:00:01	67.3	63.2	51.1
697	2/14/2024	11:08:10 AM	11:08:11 AM	0:00:01	66.4	63.5	52.5
698	2/14/2024	11:08:11 AM	11:08:12 AM	0:00:01	65.9	62.7	53.2
699	2/14/2024	11:08:12 AM	11:08:13 AM	0:00:01	67.8	64.2	52.3
700	2/14/2024	11:08:13 AM	11:08:14 AM	0:00:01	66.6	63.5	51.9
701	2/14/2024	11:08:14 AM	11:08:15 AM	0:00:01	65	62.5	52.5
702	2/14/2024	11:08:15 AM	11:08:16 AM	0:00:01	65.8	64.1	52.8
703	2/14/2024	11:08:16 AM	11:08:17 AM	0:00:01	65.7	64.3	52.4

704	2/14/2024	11:08:17 AM	11:08:18 AM	0:00:01	64.9	63.2	52.5
705	2/14/2024	11:08:18 AM	11:08:19 AM	0:00:01	64.6	62.6	52.6
706	2/14/2024	11:08:19 AM	11:08:20 AM	0:00:01	65.1	63	51.8
707	2/14/2024	11:08:20 AM	11:08:21 AM	0:00:01	64.5	62.3	51.8
708	2/14/2024	11:08:21 AM	11:08:22 AM	0:00:01	63.7	61.6	51.9
709	2/14/2024	11:08:22 AM	11:08:23 AM	0:00:01	64.1	61.8	51.6
710	2/14/2024	11:08:23 AM	11:08:24 AM	0:00:01	64.8	62.2	51.4
711	2/14/2024	11:08:24 AM	11:08:25 AM	0:00:01	63.7	61.7	50.9
712	2/14/2024	11:08:25 AM	11:08:26 AM	0:00:01	64.3	62	51.1
713	2/14/2024	11:08:26 AM	11:08:27 AM	0:00:01	65.7	63.1	51.5
714	2/14/2024	11:08:27 AM	11:08:28 AM	0:00:01	66.4	64	51.5
715	2/14/2024	11:08:28 AM	11:08:29 AM	0:00:01	67.3	63.8	52.4
716	2/14/2024	11:08:29 AM	11:08:30 AM	0:00:01	66.7	63.7	52.8
717	2/14/2024	11:08:30 AM	11:08:31 AM	0:00:01	66.2	63.5	52
718	2/14/2024	11:08:31 AM	11:08:32 AM	0:00:01	66.2	63.4	52.5
719	2/14/2024	11:08:32 AM	11:08:33 AM	0:00:01	66.9	64.1	53.7
720	2/14/2024	11:08:33 AM	11:08:34 AM	0:00:01	67.6	65.3	54.9
721	2/14/2024	11:08:34 AM	11:08:35 AM	0:00:01	66.2	64.2	55.3
722	2/14/2024	11:08:35 AM	11:08:36 AM	0:00:01	66.7	63.8	52.9
723	2/14/2024	11:08:36 AM	11:08:37 AM	0:00:01	65.2	63.7	52.3
724	2/14/2024	11:08:37 AM	11:08:38 AM	0:00:01	66.3	64.4	52.4
725	2/14/2024	11:08:38 AM	11:08:39 AM	0:00:01	67.5	65.6	53.1
726	2/14/2024	11:08:39 AM	11:08:40 AM	0:00:01	67.9	65.8	53
727	2/14/2024	11:08:40 AM	11:08:41 AM	0:00:01	66.8	64.6	53
728	2/14/2024	11:08:41 AM	11:08:42 AM	0:00:01	67.6	66.1	53.2
729	2/14/2024	11:08:42 AM	11:08:43 AM	0:00:01	67.4	65.8	55.1
730	2/14/2024	11:08:43 AM	11:08:44 AM	0:00:01	66	64.3	51.4
731	2/14/2024	11:08:44 AM	11:08:45 AM	0:00:01	64.7	63	50.8
732	2/14/2024	11:08:45 AM	11:08:46 AM	0:00:01	65.3	64.1	51.3
733	2/14/2024	11:08:46 AM	11:08:47 AM	0:00:01	65.2	63.9	51.2
734	2/14/2024	11:08:47 AM	11:08:48 AM	0:00:01	65.6	64.4	51.8
735	2/14/2024	11:08:48 AM	11:08:49 AM	0:00:01	64.6	63.2	52.1
736	2/14/2024	11:08:49 AM	11:08:50 AM	0:00:01	64.6	62.4	50.6
737	2/14/2024	11:08:50 AM	11:08:51 AM	0:00:01	63.6	62	50.3
738	2/14/2024	11:08:51 AM	11:08:52 AM	0:00:01	63.5	61.4	50.6
739	2/14/2024	11:08:52 AM	11:08:53 AM	0:00:01	64.5	61.3	51
740	2/14/2024	11:08:53 AM	11:08:54 AM	0:00:01	63.5	60.9	50.4
741	2/14/2024	11:08:54 AM	11:08:55 AM	0:00:01	65.6	62.8	51.4
742	2/14/2024	11:08:55 AM	11:08:56 AM	0:00:01	65.2	63.3	52.5
743	2/14/2024	11:08:56 AM	11:08:57 AM	0:00:01	63.9	61.7	51.5
744	2/14/2024	11:08:57 AM	11:08:58 AM	0:00:01	65.5	62.1	50
745	2/14/2024	11:08:58 AM	11:08:59 AM	0:00:01	65.1	62.4	50.7
746	2/14/2024	11:08:59 AM	11:09:00 AM	0:00:01	63.9	61.9	51.2
747	2/14/2024	11:09:00 AM	11:09:01 AM	0:00:01	63.9	61.9	51
748	2/14/2024	11:09:01 AM	11:09:02 AM	0:00:01	64.3	62.5	51.3
749	2/14/2024	11:09:02 AM	11:09:03 AM	0:00:01	65.3	62.6	51.2
750	2/14/2024	11:09:03 AM	11:09:04 AM	0:00:01	64.5	62.2	51.2

751	2/14/2024	11:09:04 AM	11:09:05 AM	0:00:01	64.1	61.9	51.3
752	2/14/2024	11:09:05 AM	11:09:06 AM	0:00:01	64.5	62.5	51.6
753	2/14/2024	11:09:06 AM	11:09:07 AM	0:00:01	62.3	60.6	51.2
754	2/14/2024	11:09:07 AM	11:09:08 AM	0:00:01	63.8	61.6	50.9
755	2/14/2024	11:09:08 AM	11:09:09 AM	0:00:01	63.4	61	51.8
756	2/14/2024	11:09:09 AM	11:09:10 AM	0:00:01	63.5	60.8	50.6
757	2/14/2024	11:09:10 AM	11:09:11 AM	0:00:01	63.1	60.5	50.2
758	2/14/2024	11:09:11 AM	11:09:12 AM	0:00:01	62.4	60	50.9
759	2/14/2024	11:09:12 AM	11:09:13 AM	0:00:01	63.3	60.6	50.3
760	2/14/2024	11:09:13 AM	11:09:14 AM	0:00:01	64.6	61.9	49.6
761	2/14/2024	11:09:14 AM	11:09:15 AM	0:00:01	64.3	61.8	50.2
762	2/14/2024	11:09:15 AM	11:09:16 AM	0:00:01	64.8	61.9	49.7
763	2/14/2024	11:09:16 AM	11:09:17 AM	0:00:01	65.7	63.3	54.3
764	2/14/2024	11:09:17 AM	11:09:18 AM	0:00:01	65.7	62.8	51.9
765	2/14/2024	11:09:18 AM	11:09:19 AM	0:00:01	65	61.7	49.8
766	2/14/2024	11:09:19 AM	11:09:20 AM	0:00:01	66.2	62.8	50.6
767	2/14/2024	11:09:20 AM	11:09:21 AM	0:00:01	65	62.4	53.5
768	2/14/2024	11:09:21 AM	11:09:22 AM	0:00:01	66.4	63	51.5
769	2/14/2024	11:09:22 AM	11:09:23 AM	0:00:01	62.9	60.3	49.9
770	2/14/2024	11:09:23 AM	11:09:24 AM	0:00:01	62.8	60.5	50.7
771	2/14/2024	11:09:24 AM	11:09:25 AM	0:00:01	63.3	61.5	50.7
772	2/14/2024	11:09:25 AM	11:09:26 AM	0:00:01	63.5	62.1	51.7
773	2/14/2024	11:09:26 AM	11:09:27 AM	0:00:01	64.7	63.8	53.4
774	2/14/2024	11:09:27 AM	11:09:28 AM	0:00:01	66.7	66	55.8
775	2/14/2024	11:09:28 AM	11:09:29 AM	0:00:01	67.4	66.9	56.9
776	2/14/2024	11:09:29 AM	11:09:30 AM	0:00:01	68.3	67.9	56.7
777	2/14/2024	11:09:30 AM	11:09:31 AM	0:00:01	68.1	67.5	56.7
778	2/14/2024	11:09:31 AM	11:09:32 AM	0:00:01	69	68.5	57.2
779	2/14/2024	11:09:32 AM	11:09:33 AM	0:00:01	66.5	65.9	54.2
780	2/14/2024	11:09:33 AM	11:09:34 AM	0:00:01	66.3	65.6	52.7
781	2/14/2024	11:09:34 AM	11:09:35 AM	0:00:01	65.9	65.1	52.5
782	2/14/2024	11:09:35 AM	11:09:36 AM	0:00:01	64.7	64.2	52.5
783	2/14/2024	11:09:36 AM	11:09:37 AM	0:00:01	64.7	63.9	52
784	2/14/2024	11:09:37 AM	11:09:38 AM	0:00:01	64	63.2	52
785	2/14/2024	11:09:38 AM	11:09:39 AM	0:00:01	63.2	61.9	51
786	2/14/2024	11:09:39 AM	11:09:40 AM	0:00:01	63.6	62.4	51.1
787	2/14/2024	11:09:40 AM	11:09:41 AM	0:00:01	63	61.8	50.8
788	2/14/2024	11:09:41 AM	11:09:42 AM	0:00:01	62.5	61	51.2
789	2/14/2024	11:09:42 AM	11:09:43 AM	0:00:01	62.8	61.4	51.3
790	2/14/2024	11:09:43 AM	11:09:44 AM	0:00:01	63.2	61.8	50.3
791	2/14/2024	11:09:44 AM	11:09:45 AM	0:00:01	62.7	61.2	49.8
792	2/14/2024	11:09:45 AM	11:09:46 AM	0:00:01	62.2	60.4	49.1
793	2/14/2024	11:09:46 AM	11:09:47 AM	0:00:01	62.7	61.1	49.2
794	2/14/2024	11:09:47 AM	11:09:48 AM	0:00:01	63.4	61.7	49.6
795	2/14/2024	11:09:48 AM	11:09:49 AM	0:00:01	62.1	60.6	48.5
796	2/14/2024	11:09:49 AM	11:09:50 AM	0:00:01	62.1	60.5	48.3
797	2/14/2024	11:09:50 AM	11:09:51 AM	0:00:01	62.4	61	48.7

798	2/14/2024	11:09:51 AM	11:09:52 AM	0:00:01	61.9	60	49.1
799	2/14/2024	11:09:52 AM	11:09:53 AM	0:00:01	65.3	62.4	49.8
800	2/14/2024	11:09:53 AM	11:09:54 AM	0:00:01	64.7	62.8	50.4
801	2/14/2024	11:09:54 AM	11:09:55 AM	0:00:01	63.4	61.7	50.4
802	2/14/2024	11:09:55 AM	11:09:56 AM	0:00:01	63.7	62	49.9
803	2/14/2024	11:09:56 AM	11:09:57 AM	0:00:01	62.6	61.1	50
804	2/14/2024	11:09:57 AM	11:09:58 AM	0:00:01	62.6	60.8	50.3
805	2/14/2024	11:09:58 AM	11:09:59 AM	0:00:01	61.3	59.9	50.1
806	2/14/2024	11:09:59 AM	11:10:00 AM	0:00:01	62.1	60.3	50.3
807	2/14/2024	11:10:00 AM	11:10:01 AM	0:00:01	61.5	59.6	50.5
808	2/14/2024	11:10:01 AM	11:10:02 AM	0:00:01	62.5	60.4	50.4
809	2/14/2024	11:10:02 AM	11:10:03 AM	0:00:01	63	60.9	50.8
810	2/14/2024	11:10:03 AM	11:10:04 AM	0:00:01	61.5	59.7	51
811	2/14/2024	11:10:04 AM	11:10:05 AM	0:00:01	63	60.9	51
812	2/14/2024	11:10:05 AM	11:10:06 AM	0:00:01	64.9	62.3	51.2
813	2/14/2024	11:10:06 AM	11:10:07 AM	0:00:01	63.9	61.6	50.8
814	2/14/2024	11:10:07 AM	11:10:08 AM	0:00:01	64.8	62	50.7
815	2/14/2024	11:10:08 AM	11:10:09 AM	0:00:01	64.8	62.5	51
816	2/14/2024	11:10:09 AM	11:10:10 AM	0:00:01	64	61.9	50.6
817	2/14/2024	11:10:10 AM	11:10:11 AM	0:00:01	64.6	62.5	50.4
818	2/14/2024	11:10:11 AM	11:10:12 AM	0:00:01	65.5	63.2	51.4
819	2/14/2024	11:10:12 AM	11:10:13 AM	0:00:01	65.8	63.2	50.6
820	2/14/2024	11:10:13 AM	11:10:14 AM	0:00:01	64.9	62.1	50.8
821	2/14/2024	11:10:14 AM	11:10:15 AM	0:00:01	64.6	61.7	50.3
822	2/14/2024	11:10:15 AM	11:10:16 AM	0:00:01	65.3	62.4	50.3
823	2/14/2024	11:10:16 AM	11:10:17 AM	0:00:01	64.7	61.7	50.5
824	2/14/2024	11:10:17 AM	11:10:18 AM	0:00:01	64.9	62.5	50.4
825	2/14/2024	11:10:18 AM	11:10:19 AM	0:00:01	64.1	61.6	50.3
826	2/14/2024	11:10:19 AM	11:10:20 AM	0:00:01	64.3	62.4	50.8
827	2/14/2024	11:10:20 AM	11:10:21 AM	0:00:01	63.8	61.3	50.5
828	2/14/2024	11:10:21 AM	11:10:22 AM	0:00:01	64.3	61.9	50.7
829	2/14/2024	11:10:22 AM	11:10:23 AM	0:00:01	64.9	61.7	50.3
830	2/14/2024	11:10:23 AM	11:10:24 AM	0:00:01	65.2	63.1	49.9
831	2/14/2024	11:10:24 AM	11:10:25 AM	0:00:01	64.3	62.6	49.9
832	2/14/2024	11:10:25 AM	11:10:26 AM	0:00:01	65.8	63.3	51
833	2/14/2024	11:10:26 AM	11:10:27 AM	0:00:01	66.3	64.1	51.5
834	2/14/2024	11:10:27 AM	11:10:28 AM	0:00:01	65.7	63.7	51.7
835	2/14/2024	11:10:28 AM	11:10:29 AM	0:00:01	67	64.8	52.8
836	2/14/2024	11:10:29 AM	11:10:30 AM	0:00:01	66.6	64.7	54.2
837	2/14/2024	11:10:30 AM	11:10:31 AM	0:00:01	67.5	65.3	55.1
838	2/14/2024	11:10:31 AM	11:10:32 AM	0:00:01	68.3	66.2	58.1
839	2/14/2024	11:10:32 AM	11:10:33 AM	0:00:01	70.8	69.9	66.6
840	2/14/2024	11:10:33 AM	11:10:34 AM	0:00:01	71.6	70.5	65.8
841	2/14/2024	11:10:34 AM	11:10:35 AM	0:00:01	69.9	68.7	64
842	2/14/2024	11:10:35 AM	11:10:36 AM	0:00:01	70.9	69.6	63.9
843	2/14/2024	11:10:36 AM	11:10:37 AM	0:00:01	66.4	64.6	56.9
844	2/14/2024	11:10:37 AM	11:10:38 AM	0:00:01	66	64.1	55.3

845	2/14/2024	11:10:38 AM	11:10:39 AM	0:00:01	64.5	62.6	53.6
846	2/14/2024	11:10:39 AM	11:10:40 AM	0:00:01	65.5	63.5	52.6
847	2/14/2024	11:10:40 AM	11:10:41 AM	0:00:01	66	63.9	51.7
848	2/14/2024	11:10:41 AM	11:10:42 AM	0:00:01	65.2	63.2	51.5
849	2/14/2024	11:10:42 AM	11:10:43 AM	0:00:01	66	64	51.2
850	2/14/2024	11:10:43 AM	11:10:44 AM	0:00:01	65.7	63.8	51.2
851	2/14/2024	11:10:44 AM	11:10:45 AM	0:00:01	65.9	64.2	53.6
852	2/14/2024	11:10:45 AM	11:10:46 AM	0:00:01	66.6	65	52.1
853	2/14/2024	11:10:46 AM	11:10:47 AM	0:00:01	66.2	63.9	51.7
854	2/14/2024	11:10:47 AM	11:10:48 AM	0:00:01	66.1	63.6	52.4
855	2/14/2024	11:10:48 AM	11:10:49 AM	0:00:01	67	64.4	53.2
856	2/14/2024	11:10:49 AM	11:10:50 AM	0:00:01	66.2	64.2	53.7
857	2/14/2024	11:10:50 AM	11:10:51 AM	0:00:01	67	65.2	55
858	2/14/2024	11:10:51 AM	11:10:52 AM	0:00:01	67.5	66.2	57.4
859	2/14/2024	11:10:52 AM	11:10:53 AM	0:00:01	72	71.1	65.8
860	2/14/2024	11:10:53 AM	11:10:54 AM	0:00:01	72.3	71.2	65.6
861	2/14/2024	11:10:54 AM	11:10:55 AM	0:00:01	69.1	67.9	61.6
862	2/14/2024	11:10:55 AM	11:10:56 AM	0:00:01	67.4	65.6	57.4
863	2/14/2024	11:10:56 AM	11:10:57 AM	0:00:01	67.1	65	56.3
864	2/14/2024	11:10:57 AM	11:10:58 AM	0:00:01	68.4	66.7	59.7
865	2/14/2024	11:10:58 AM	11:10:59 AM	0:00:01	71.7	71	66
866	2/14/2024	11:10:59 AM	11:11:00 AM	0:00:01	69.9	68.9	63.3
867	2/14/2024	11:11:00 AM	11:11:01 AM	0:00:01	66.6	65.1	58.8
868	2/14/2024	11:11:01 AM	11:11:02 AM	0:00:01	66.4	64.8	57.2
869	2/14/2024	11:11:02 AM	11:11:03 AM	0:00:01	65.6	63.7	53.4
870	2/14/2024	11:11:03 AM	11:11:04 AM	0:00:01	65.9	63.8	53
871	2/14/2024	11:11:04 AM	11:11:05 AM	0:00:01	65.1	63	52.5
872	2/14/2024	11:11:05 AM	11:11:06 AM	0:00:01	66	62.9	52.7
873	2/14/2024	11:11:06 AM	11:11:07 AM	0:00:01	66.3	63.6	52.9
874	2/14/2024	11:11:07 AM	11:11:08 AM	0:00:01	66.2	63.7	53.4
875	2/14/2024	11:11:08 AM	11:11:09 AM	0:00:01	66.2	63.3	53.1
876	2/14/2024	11:11:09 AM	11:11:10 AM	0:00:01	67	63.7	53
877	2/14/2024	11:11:10 AM	11:11:11 AM	0:00:01	66.2	63.3	53.1
878	2/14/2024	11:11:11 AM	11:11:12 AM	0:00:01	67.1	64.5	53.1
879	2/14/2024	11:11:12 AM	11:11:13 AM	0:00:01	67.6	64.7	53.1
880	2/14/2024	11:11:13 AM	11:11:14 AM	0:00:01	68.1	65.6	53.3
881	2/14/2024	11:11:14 AM	11:11:15 AM	0:00:01	66.8	64.3	53.6
882	2/14/2024	11:11:15 AM	11:11:16 AM	0:00:01	66.6	64.1	53.5
883	2/14/2024	11:11:16 AM	11:11:17 AM	0:00:01	66.9	64.3	53.4
884	2/14/2024	11:11:17 AM	11:11:18 AM	0:00:01	64.9	62	53.3
885	2/14/2024	11:11:18 AM	11:11:19 AM	0:00:01	66	63.8	53.7
886	2/14/2024	11:11:19 AM	11:11:20 AM	0:00:01	64.9	62.8	53.8
887	2/14/2024	11:11:20 AM	11:11:21 AM	0:00:01	66	63.7	53.3
888	2/14/2024	11:11:21 AM	11:11:22 AM	0:00:01	67	64.6	53
889	2/14/2024	11:11:22 AM	11:11:23 AM	0:00:01	66.5	64.4	52.8
890	2/14/2024	11:11:23 AM	11:11:24 AM	0:00:01	66.1	63.9	53.6
891	2/14/2024	11:11:24 AM	11:11:25 AM	0:00:01	68.1	64.9	53.2

892	2/14/2024	11:11:25 AM	11:11:26 AM	0:00:01	69.7	66	52.7
893	2/14/2024	11:11:26 AM	11:11:27 AM	0:00:01	67.8	64.4	52.7
894	2/14/2024	11:11:27 AM	11:11:28 AM	0:00:01	71.8	67.6	53.2
895	2/14/2024	11:11:28 AM	11:11:29 AM	0:00:01	71.6	67.2	52.1
896	2/14/2024	11:11:29 AM	11:11:30 AM	0:00:01	71.5	67.1	51.9
897	2/14/2024	11:11:30 AM	11:11:31 AM	0:00:01	70.7	66.4	52.5
898	2/14/2024	11:11:31 AM	11:11:32 AM	0:00:01	72.2	67.5	53.1
899	2/14/2024	11:11:32 AM	11:11:33 AM	0:00:01	69.6	65.3	52.1
900	2/14/2024	11:11:33 AM	11:11:34 AM	0:00:01	69.7	65.6	52.2
901	2/14/2024	11:11:34 AM	11:11:35 AM	0:00:01	68.4	64.4	52.3
902	2/14/2024	11:11:35 AM	11:11:36 AM	0:00:01	67.4	63.8	52.4
903	2/14/2024	11:11:36 AM	11:11:37 AM	0:00:01	69.5	65.3	53
904	2/14/2024	11:11:37 AM	11:11:38 AM	0:00:01	67	63.7	52.6
905	2/14/2024	11:11:38 AM	11:11:39 AM	0:00:01	65.7	63.1	52.3
906	2/14/2024	11:11:39 AM	11:11:40 AM	0:00:01	66	63.7	52.8

ST2

Number	Start Date	Start Time	End Time	Duration	LZeq	LCeq	LAeq	LZFmax	LCFmax	LAFmax
907	2/14/2024	11:15:22 AM	11:15:23 AM	0:00:01	68.3	67.2	61.7	69.3	67.7	62.4
908	2/14/2024	11:15:23 AM	11:15:24 AM	0:00:01	68.8	67.5	62.2	69.8	68.4	62.8
909	2/14/2024	11:15:24 AM	11:15:25 AM	0:00:01	70	68.9	62.9	70.8	70.1	65.5
910	2/14/2024	11:15:25 AM	11:15:26 AM	0:00:01	70.5	69.2	60.7	72.3	70.9	61.3
911	2/14/2024	11:15:26 AM	11:15:27 AM	0:00:01	71.6	70.3	60.3	72.4	71	60.6
912	2/14/2024	11:15:27 AM	11:15:28 AM	0:00:01	70.2	68.9	60.3	71.6	70.2	60.8
913	2/14/2024	11:15:28 AM	11:15:29 AM	0:00:01	71.6	70	59.4	72.7	71	60.6
914	2/14/2024	11:15:29 AM	11:15:30 AM	0:00:01	70.8	69.5	58.9	72.2	70.9	59.9
915	2/14/2024	11:15:30 AM	11:15:31 AM	0:00:01	71.7	70.2	59.2	72.7	71.1	60.1
916	2/14/2024	11:15:31 AM	11:15:32 AM	0:00:01	70.8	69.7	59.8	73.1	71.6	60.5
917	2/14/2024	11:15:32 AM	11:15:33 AM	0:00:01	72.5	71.1	61.4	73.9	72.3	62.7
918	2/14/2024	11:15:33 AM	11:15:34 AM	0:00:01	71.5	70.3	62.7	73	71.9	63.1
919	2/14/2024	11:15:34 AM	11:15:35 AM	0:00:01	72.6	70.5	62.2	74.2	71.9	63.1
920	2/14/2024	11:15:35 AM	11:15:36 AM	0:00:01	72	69.8	60.2	73.8	71.8	61.6
921	2/14/2024	11:15:36 AM	11:15:37 AM	0:00:01	71.8	68.2	58.8	76	70.9	59.8
922	2/14/2024	11:15:37 AM	11:15:38 AM	0:00:01	69.3	67.5	58.2	70.9	69.3	58.6
923	2/14/2024	11:15:38 AM	11:15:39 AM	0:00:01	68.4	66.8	59.1	70.1	68.7	59.8
924	2/14/2024	11:15:39 AM	11:15:40 AM	0:00:01	67	66	60.4	68.1	66.7	60.7
925	2/14/2024	11:15:40 AM	11:15:41 AM	0:00:01	67.4	66.3	60.5	69.4	68.3	61.1
926	2/14/2024	11:15:41 AM	11:15:42 AM	0:00:01	67.1	66.2	60	68.8	67.9	60.5
927	2/14/2024	11:15:42 AM	11:15:43 AM	0:00:01	67.8	66.5	59.3	68.6	67.1	60.3
928	2/14/2024	11:15:43 AM	11:15:44 AM	0:00:01	66.9	65.6	59.1	68	66.5	59.9
929	2/14/2024	11:15:44 AM	11:15:45 AM	0:00:01	68.2	67.1	60.9	69.4	67.9	61.3
930	2/14/2024	11:15:45 AM	11:15:46 AM	0:00:01	66.3	65.3	60.4	67.4	66.3	60.9
931	2/14/2024	11:15:46 AM	11:15:47 AM	0:00:01	67.4	65.8	58.9	68.2	66.6	60.2
932	2/14/2024	11:15:47 AM	11:15:48 AM	0:00:01	66.3	65	58.8	67.4	65.6	59.7
933	2/14/2024	11:15:48 AM	11:15:49 AM	0:00:01	70.8	67.8	58.7	74.9	70.2	60.4
934	2/14/2024	11:15:49 AM	11:15:50 AM	0:00:01	69.7	67.5	58.5	70.5	68.7	59.6
935	2/14/2024	11:15:50 AM	11:15:51 AM	0:00:01	70	68.2	57.5	71	69.2	58.2
936	2/14/2024	11:15:51 AM	11:15:52 AM	0:00:01	70.4	68.5	57.9	71.8	69.3	58.4
937	2/14/2024	11:15:52 AM	11:15:53 AM	0:00:01	70.4	68.4	58.3	72.2	69.6	59.2
938	2/14/2024	11:15:53 AM	11:15:54 AM	0:00:01	72.5	70.8	58.8	74.4	72	59.7
939	2/14/2024	11:15:54 AM	11:15:55 AM	0:00:01	72.2	70.7	60.3	73.4	72.1	60.9
940	2/14/2024	11:15:55 AM	11:15:56 AM	0:00:01	72.1	70.6	60.8	73.7	72.3	61.9
941	2/14/2024	11:15:56 AM	11:15:57 AM	0:00:01	71.1	69.9	60.5	72.3	70.9	61.5
942	2/14/2024	11:15:57 AM	11:15:58 AM	0:00:01	72.6	71	59.9	74.3	72.2	60.6
943	2/14/2024	11:15:58 AM	11:15:59 AM	0:00:01	72.2	70.8	59.9	73.1	71.6	60.5
944	2/14/2024	11:15:59 AM	11:16:00 AM	0:00:01	72.5	71.4	60.2	74.8	73.8	61.1
945	2/14/2024	11:16:00 AM	11:16:01 AM	0:00:01	74.4	73.5	61.2	75.5	75	62.4
946	2/14/2024	11:16:01 AM	11:16:02 AM	0:00:01	76.6	76.1	63.1	77.5	77	63.6
947	2/14/2024	11:16:02 AM	11:16:03 AM	0:00:01	76.1	75.7	62.7	77.5	76.8	63.7
948	2/14/2024	11:16:03 AM	11:16:04 AM	0:00:01	77	76.5	63.3	78	77.6	64.5
949	2/14/2024	11:16:04 AM	11:16:05 AM	0:00:01	75.9	75.6	62.6	76.7	76.3	63
950	2/14/2024	11:16:05 AM	11:16:06 AM	0:00:01	76.6	76.3	63.1	77.6	77.3	64
951	2/14/2024	11:16:06 AM	11:16:07 AM	0:00:01	76	75.7	62.7	76.7	76.4	63.3

952	2/14/2024	11:16:07 AM	11:16:08 AM	0:00:01	76.9	76.5	64.8	78.7	78.4	65.7
953	2/14/2024	11:16:08 AM	11:16:09 AM	0:00:01	76.8	76.4	64	77.4	77	65.3
954	2/14/2024	11:16:09 AM	11:16:10 AM	0:00:01	74.4	73.9	63.8	77.1	76.6	65.4
955	2/14/2024	11:16:10 AM	11:16:11 AM	0:00:01	72.2	71.7	63.6	74.3	73.7	64.4
956	2/14/2024	11:16:11 AM	11:16:12 AM	0:00:01	71.2	70.4	63.9	72.4	71.7	65.2
957	2/14/2024	11:16:12 AM	11:16:13 AM	0:00:01	70.3	69.5	62.6	71.9	71.1	62.9
958	2/14/2024	11:16:13 AM	11:16:14 AM	0:00:01	70	69.2	62	70.7	69.7	62.9
959	2/14/2024	11:16:14 AM	11:16:15 AM	0:00:01	70.2	69.5	62.7	71	70.2	63.2
960	2/14/2024	11:16:15 AM	11:16:16 AM	0:00:01	70.9	70.1	62.5	71.7	71	63.2
961	2/14/2024	11:16:16 AM	11:16:17 AM	0:00:01	70.8	70.1	62.3	72.2	71.6	63
962	2/14/2024	11:16:17 AM	11:16:18 AM	0:00:01	71.9	71.3	62.4	73.1	72.4	63.4
963	2/14/2024	11:16:18 AM	11:16:19 AM	0:00:01	73.3	72.7	62.5	74.9	74.2	62.9
964	2/14/2024	11:16:19 AM	11:16:20 AM	0:00:01	71.6	70.6	62.6	72.6	71.5	62.8
965	2/14/2024	11:16:20 AM	11:16:21 AM	0:00:01	72	71	63	73.1	72.4	63.8
966	2/14/2024	11:16:21 AM	11:16:22 AM	0:00:01	71.6	70.7	62.2	73	72.1	62.9
967	2/14/2024	11:16:22 AM	11:16:23 AM	0:00:01	78.6	78	64.3	81.5	81	66.9
968	2/14/2024	11:16:23 AM	11:16:24 AM	0:00:01	75.8	75	62.4	77.8	77.1	63
969	2/14/2024	11:16:24 AM	11:16:25 AM	0:00:01	72.5	71.7	62.1	75.4	74.6	62.6
970	2/14/2024	11:16:25 AM	11:16:26 AM	0:00:01	73.6	73.1	63.6	75.2	74.8	64.6
971	2/14/2024	11:16:26 AM	11:16:27 AM	0:00:01	75.5	75.1	64.4	76.4	76	65.1
972	2/14/2024	11:16:27 AM	11:16:28 AM	0:00:01	73.7	73.1	63.9	75.4	74.8	64.4
973	2/14/2024	11:16:28 AM	11:16:29 AM	0:00:01	75.7	75.2	63.3	76.3	75.9	63.9
974	2/14/2024	11:16:29 AM	11:16:30 AM	0:00:01	73.6	73.1	63.1	76	75.6	63.7
975	2/14/2024	11:16:30 AM	11:16:31 AM	0:00:01	71.5	70.7	62.1	72.9	72.3	63
976	2/14/2024	11:16:31 AM	11:16:32 AM	0:00:01	70.7	69.7	61.7	71.8	71	62.1
977	2/14/2024	11:16:32 AM	11:16:33 AM	0:00:01	71.8	70.1	61.1	73.3	71.2	61.6
978	2/14/2024	11:16:33 AM	11:16:34 AM	0:00:01	71.6	69.7	62.5	73.2	71.1	63.7
979	2/14/2024	11:16:34 AM	11:16:35 AM	0:00:01	72.9	70.6	61.8	74.5	71.6	62.5
980	2/14/2024	11:16:35 AM	11:16:36 AM	0:00:01	72.7	70.6	61.9	74.4	71.8	62.3
981	2/14/2024	11:16:36 AM	11:16:37 AM	0:00:01	71	69.5	61	72.4	70.5	62.2
982	2/14/2024	11:16:37 AM	11:16:38 AM	0:00:01	71.6	70.1	61.1	72.8	70.9	61.5
983	2/14/2024	11:16:38 AM	11:16:39 AM	0:00:01	72.6	70.1	61.8	73.9	71	62.3
984	2/14/2024	11:16:39 AM	11:16:40 AM	0:00:01	71.3	68.8	61.5	73.1	70.1	62
985	2/14/2024	11:16:40 AM	11:16:41 AM	0:00:01	72.7	69.6	60.9	74.5	70.7	61.5
986	2/14/2024	11:16:41 AM	11:16:42 AM	0:00:01	70.1	68.2	61.9	72.6	69.2	62.5
987	2/14/2024	11:16:42 AM	11:16:43 AM	0:00:01	69.2	67.8	61.8	70	68.8	62.4
988	2/14/2024	11:16:43 AM	11:16:44 AM	0:00:01	70.6	69.2	62.3	72.5	69.9	63.2
989	2/14/2024	11:16:44 AM	11:16:45 AM	0:00:01	70.4	69.3	62.8	71.1	69.8	63.5
990	2/14/2024	11:16:45 AM	11:16:46 AM	0:00:01	70.7	69.6	63.2	72.3	71.1	64
991	2/14/2024	11:16:46 AM	11:16:47 AM	0:00:01	70.1	69.2	62.7	71.3	70.1	63.6
992	2/14/2024	11:16:47 AM	11:16:48 AM	0:00:01	71	70.2	62.5	71.7	70.9	63.6
993	2/14/2024	11:16:48 AM	11:16:49 AM	0:00:01	70.4	69.3	61.6	71.6	70.8	62.6
994	2/14/2024	11:16:49 AM	11:16:50 AM	0:00:01	70.3	69.1	61.4	71	69.7	62
995	2/14/2024	11:16:50 AM	11:16:51 AM	0:00:01	71.9	70	61.5	74.3	71.4	62.1
996	2/14/2024	11:16:51 AM	11:16:52 AM	0:00:01	72.3	69.5	62.3	75.1	71	62.7
997	2/14/2024	11:16:52 AM	11:16:53 AM	0:00:01	69.9	68.1	61.7	71.7	69.5	62.7
998	2/14/2024	11:16:53 AM	11:16:54 AM	0:00:01	69.1	67.9	61.8	70.3	68.8	62.1

999	2/14/2024	11:16:54 AM	11:16:55 AM	0:00:01	69.1	68	62.6	70	68.7	63.4
1000	2/14/2024	11:16:55 AM	11:16:56 AM	0:00:01	69	68.1	62.7	69.8	68.7	63.8
1001	2/14/2024	11:16:56 AM	11:16:57 AM	0:00:01	70	68.8	63.3	71.2	69.7	64
1002	2/14/2024	11:16:57 AM	11:16:58 AM	0:00:01	69.5	68.5	63.6	70.4	69.4	64.5
1003	2/14/2024	11:16:58 AM	11:16:59 AM	0:00:01	70.1	69	64	70.7	69.4	64.8
1004	2/14/2024	11:16:59 AM	11:17:00 AM	0:00:01	70.3	69.5	65.1	70.8	70.1	65.8
1005	2/14/2024	11:17:00 AM	11:17:01 AM	0:00:01	70.9	69.9	64.7	71.9	70.8	65.5
1006	2/14/2024	11:17:01 AM	11:17:02 AM	0:00:01	71.6	70.6	65.4	72.6	71.6	66.2
1007	2/14/2024	11:17:02 AM	11:17:03 AM	0:00:01	71.5	70.4	65.4	72.2	71.2	66.2
1008	2/14/2024	11:17:03 AM	11:17:04 AM	0:00:01	72	70.8	64.6	72.7	71.7	65.4
1009	2/14/2024	11:17:04 AM	11:17:05 AM	0:00:01	72.1	71.1	64.5	73.1	71.9	65.1
1010	2/14/2024	11:17:05 AM	11:17:06 AM	0:00:01	72.5	71.3	63.7	74.3	73.4	64.1
1011	2/14/2024	11:17:06 AM	11:17:07 AM	0:00:01	72.4	71.2	64.3	73.3	72.2	65
1012	2/14/2024	11:17:07 AM	11:17:08 AM	0:00:01	72.5	71.2	63.7	73.6	72.4	64.4
1013	2/14/2024	11:17:08 AM	11:17:09 AM	0:00:01	71.1	70	63.7	73	71.4	64.3
1014	2/14/2024	11:17:09 AM	11:17:10 AM	0:00:01	70.9	69.5	63.2	72.3	70.9	64.1
1015	2/14/2024	11:17:10 AM	11:17:11 AM	0:00:01	71.1	70	63.4	72.6	71.2	63.8
1016	2/14/2024	11:17:11 AM	11:17:12 AM	0:00:01	70	69	64.5	71.3	70.3	65.2
1017	2/14/2024	11:17:12 AM	11:17:13 AM	0:00:01	69.8	68.7	63.9	71.1	70	64.8
1018	2/14/2024	11:17:13 AM	11:17:14 AM	0:00:01	69.4	68.2	63.1	71	69.9	63.8
1019	2/14/2024	11:17:14 AM	11:17:15 AM	0:00:01	70	68.7	63.5	71.7	69.7	64.6
1020	2/14/2024	11:17:15 AM	11:17:16 AM	0:00:01	70.7	69	62.8	72.3	69.9	63.9
1021	2/14/2024	11:17:16 AM	11:17:17 AM	0:00:01	70.2	68.5	62.7	71.2	69.1	63.3
1022	2/14/2024	11:17:17 AM	11:17:18 AM	0:00:01	70.6	68.9	63	71.5	70.1	63.6
1023	2/14/2024	11:17:18 AM	11:17:19 AM	0:00:01	71.3	69.3	63.3	73.8	70.7	63.7
1024	2/14/2024	11:17:19 AM	11:17:20 AM	0:00:01	72.1	70.2	63.7	73.9	71.6	64.1
1025	2/14/2024	11:17:20 AM	11:17:21 AM	0:00:01	74.1	72.3	64.6	76.2	74.2	65.2
1026	2/14/2024	11:17:21 AM	11:17:22 AM	0:00:01	72.9	71.2	63.6	74.4	72.6	64.8
1027	2/14/2024	11:17:22 AM	11:17:23 AM	0:00:01	72.4	70.5	63.3	73.4	71.3	64.1
1028	2/14/2024	11:17:23 AM	11:17:24 AM	0:00:01	72.3	70.9	64.2	73.2	71.9	64.9
1029	2/14/2024	11:17:24 AM	11:17:25 AM	0:00:01	71.9	70.4	63.9	73.1	71.5	64.6
1030	2/14/2024	11:17:25 AM	11:17:26 AM	0:00:01	72.4	70.9	63.8	73.3	71.9	64.2
1031	2/14/2024	11:17:26 AM	11:17:27 AM	0:00:01	72.7	71.1	64.1	74.3	72.3	64.7
1032	2/14/2024	11:17:27 AM	11:17:28 AM	0:00:01	72.1	70.9	64.4	73.4	72	65.1
1033	2/14/2024	11:17:28 AM	11:17:29 AM	0:00:01	72	70.7	63.6	73.2	71.8	64.3
1034	2/14/2024	11:17:29 AM	11:17:30 AM	0:00:01	72.5	71.3	64.2	74.5	73	64.6
1035	2/14/2024	11:17:30 AM	11:17:31 AM	0:00:01	72.7	71.4	63.7	73.5	72.4	64.3
1036	2/14/2024	11:17:31 AM	11:17:32 AM	0:00:01	73.4	72.1	63.8	74.1	72.9	64.3
1037	2/14/2024	11:17:32 AM	11:17:33 AM	0:00:01	73.1	71.8	63.9	75.1	73.8	64.4
1038	2/14/2024	11:17:33 AM	11:17:34 AM	0:00:01	72.5	71.3	62.7	74.2	73	63.5
1039	2/14/2024	11:17:34 AM	11:17:35 AM	0:00:01	71.3	70.2	62.6	72.8	71.6	63.1
1040	2/14/2024	11:17:35 AM	11:17:36 AM	0:00:01	72.6	71.3	62.7	74.2	72.7	63.3
1041	2/14/2024	11:17:36 AM	11:17:37 AM	0:00:01	71.8	70.5	62.4	74.2	72.2	62.9
1042	2/14/2024	11:17:37 AM	11:17:38 AM	0:00:01	72.1	71.1	63.2	73	72.1	63.8
1043	2/14/2024	11:17:38 AM	11:17:39 AM	0:00:01	71	70.1	63.9	72	71.2	64.4
1044	2/14/2024	11:17:39 AM	11:17:40 AM	0:00:01	70	69.1	63.3	71.1	70.2	63.9
1045	2/14/2024	11:17:40 AM	11:17:41 AM	0:00:01	70.4	69.3	62.8	71.6	70.5	63.4

1046	2/14/2024	11:17:41 AM	11:17:42 AM	0:00:01	69.3	68.4	63.4	70	68.9	64.6
1047	2/14/2024	11:17:42 AM	11:17:43 AM	0:00:01	69.5	68.7	63.3	70.1	69.3	65.4
1048	2/14/2024	11:17:43 AM	11:17:44 AM	0:00:01	69.9	69.2	63.6	71.5	70.8	64.3
1049	2/14/2024	11:17:44 AM	11:17:45 AM	0:00:01	70.6	69.9	63.2	71.7	71	64.1
1050	2/14/2024	11:17:45 AM	11:17:46 AM	0:00:01	69.4	68.4	62.3	70.5	69.3	62.8
1051	2/14/2024	11:17:46 AM	11:17:47 AM	0:00:01	69.6	68.6	61.9	70.8	69.7	63
1052	2/14/2024	11:17:47 AM	11:17:48 AM	0:00:01	69.8	68.7	61.7	71.7	70.7	62.4
1053	2/14/2024	11:17:48 AM	11:17:49 AM	0:00:01	70.3	69.1	61.8	71.7	70.3	62.8
1054	2/14/2024	11:17:49 AM	11:17:50 AM	0:00:01	71.5	70	61	72.9	71.5	62.7
1055	2/14/2024	11:17:50 AM	11:17:51 AM	0:00:01	71.8	70.4	60.7	73.1	71.6	61.8
1056	2/14/2024	11:17:51 AM	11:17:52 AM	0:00:01	72.2	70.7	59.8	73.8	72	61.2
1057	2/14/2024	11:17:52 AM	11:17:53 AM	0:00:01	72.2	71.2	60.1	73.7	72.6	61
1058	2/14/2024	11:17:53 AM	11:17:54 AM	0:00:01	73.8	72.8	59.6	75.2	74.4	60.6
1059	2/14/2024	11:17:54 AM	11:17:55 AM	0:00:01	75.8	74.9	59.9	76.4	75.4	60.7
1060	2/14/2024	11:17:55 AM	11:17:56 AM	0:00:01	74.6	73.9	60.7	76.2	75.3	61.8
1061	2/14/2024	11:17:56 AM	11:17:57 AM	0:00:01	75.1	74.1	61.6	76	75.1	63.1
1062	2/14/2024	11:17:57 AM	11:17:58 AM	0:00:01	73.6	72.8	61.1	75.3	74.3	62.1
1063	2/14/2024	11:17:58 AM	11:17:59 AM	0:00:01	73.3	72.1	60.2	74.9	73.7	61.4
1064	2/14/2024	11:17:59 AM	11:18:00 AM	0:00:01	73.7	72.2	60.2	75.7	74.3	60.9
1065	2/14/2024	11:18:00 AM	11:18:01 AM	0:00:01	72.3	70.9	60.6	73.4	71.9	61.3
1066	2/14/2024	11:18:01 AM	11:18:02 AM	0:00:01	73.3	71.3	61	74.9	72.3	61.9
1067	2/14/2024	11:18:02 AM	11:18:03 AM	0:00:01	73	71	61.6	74.5	72.5	62.6
1068	2/14/2024	11:18:03 AM	11:18:04 AM	0:00:01	76.1	72.9	61	79.2	75.1	62.8
1069	2/14/2024	11:18:04 AM	11:18:05 AM	0:00:01	72.1	69.8	59.9	75.3	72.1	60.7
1070	2/14/2024	11:18:05 AM	11:18:06 AM	0:00:01	71.2	69.7	60.6	71.8	70.5	60.9
1071	2/14/2024	11:18:06 AM	11:18:07 AM	0:00:01	70.6	68.8	60	71.7	70.4	60.8
1072	2/14/2024	11:18:07 AM	11:18:08 AM	0:00:01	70.6	68.8	60.1	72.7	70.7	60.7
1073	2/14/2024	11:18:08 AM	11:18:09 AM	0:00:01	70.7	69.5	61.1	71.6	70.4	61.6
1074	2/14/2024	11:18:09 AM	11:18:10 AM	0:00:01	71.2	70.3	61.5	72.4	71.3	62
1075	2/14/2024	11:18:10 AM	11:18:11 AM	0:00:01	70.3	69.2	61.1	71.2	70	61.7
1076	2/14/2024	11:18:11 AM	11:18:12 AM	0:00:01	70.1	69.1	60.5	71.2	69.9	60.9
1077	2/14/2024	11:18:12 AM	11:18:13 AM	0:00:01	71.4	70.3	60.8	72.6	71.5	61.2
1078	2/14/2024	11:18:13 AM	11:18:14 AM	0:00:01	71.5	70.3	59.5	72.7	71.4	60.3
1079	2/14/2024	11:18:14 AM	11:18:15 AM	0:00:01	71.2	69.7	58.9	72.7	71.1	59.2
1080	2/14/2024	11:18:15 AM	11:18:16 AM	0:00:01	72.1	70.5	59.7	73.7	71.9	60.7
1081	2/14/2024	11:18:16 AM	11:18:17 AM	0:00:01	71.6	70.1	59.7	73.1	71.8	60.1
1082	2/14/2024	11:18:17 AM	11:18:18 AM	0:00:01	71	69.7	60.1	72.8	71.5	60.5
1083	2/14/2024	11:18:18 AM	11:18:19 AM	0:00:01	71	69.9	60.9	72.4	71.1	61.5
1084	2/14/2024	11:18:19 AM	11:18:20 AM	0:00:01	71.5	69.9	61.2	72.7	70.8	61.9
1085	2/14/2024	11:18:20 AM	11:18:21 AM	0:00:01	70.9	69.6	61.7	72.8	71.1	62.3
1086	2/14/2024	11:18:21 AM	11:18:22 AM	0:00:01	71.3	69.9	60.9	73.4	71.7	61.5
1087	2/14/2024	11:18:22 AM	11:18:23 AM	0:00:01	71.9	70.3	60.7	73	71.4	61.2
1088	2/14/2024	11:18:23 AM	11:18:24 AM	0:00:01	72.6	71.1	61.2	74.1	72.3	61.7
1089	2/14/2024	11:18:24 AM	11:18:25 AM	0:00:01	72.9	71.2	61.4	74.2	72.3	61.7
1090	2/14/2024	11:18:25 AM	11:18:26 AM	0:00:01	72.4	70.8	61.9	73.8	72.3	62.4
1091	2/14/2024	11:18:26 AM	11:18:27 AM	0:00:01	74.5	72.2	62.5	76.6	73.7	62.9
1092	2/14/2024	11:18:27 AM	11:18:28 AM	0:00:01	74.8	72.3	61.7	76.4	73.9	63.1

1093	2/14/2024	11:18:28 AM	11:18:29 AM	0:00:01	73.6	71.7	61.7	74.7	72.2	62.1
1094	2/14/2024	11:18:29 AM	11:18:30 AM	0:00:01	72.3	70.4	61.3	74	72.4	61.9
1095	2/14/2024	11:18:30 AM	11:18:31 AM	0:00:01	71.2	69.7	61.2	72.5	70.5	62
1096	2/14/2024	11:18:31 AM	11:18:32 AM	0:00:01	75.3	74.5	62.4	76.2	75.5	63.9
1097	2/14/2024	11:18:32 AM	11:18:33 AM	0:00:01	75.3	74.7	63.8	76.2	75.7	65.7
1098	2/14/2024	11:18:33 AM	11:18:34 AM	0:00:01	73.3	72.6	63.6	75.5	74.9	64.4
1099	2/14/2024	11:18:34 AM	11:18:35 AM	0:00:01	70.5	69.6	63.8	72	70.8	64.7
1100	2/14/2024	11:18:35 AM	11:18:36 AM	0:00:01	71.8	70.9	64.4	73.3	72.3	64.8
1101	2/14/2024	11:18:36 AM	11:18:37 AM	0:00:01	73	71.9	64.3	74.4	73.4	65.5
1102	2/14/2024	11:18:37 AM	11:18:38 AM	0:00:01	73.5	72.5	64.8	74.3	73.6	65.9
1103	2/14/2024	11:18:38 AM	11:18:39 AM	0:00:01	74	73.1	63.8	75.2	74.4	64.9
1104	2/14/2024	11:18:39 AM	11:18:40 AM	0:00:01	72.6	71.6	64	73.6	72.6	64.5
1105	2/14/2024	11:18:40 AM	11:18:41 AM	0:00:01	72.5	71.3	63.9	73.9	72.6	64.9
1106	2/14/2024	11:18:41 AM	11:18:42 AM	0:00:01	73.8	72.7	63.6	75.1	74	64.4
1107	2/14/2024	11:18:42 AM	11:18:43 AM	0:00:01	72	70.6	62.4	73.5	72	63.4
1108	2/14/2024	11:18:43 AM	11:18:44 AM	0:00:01	71.4	70.1	62.1	73.2	71.9	62.8
1109	2/14/2024	11:18:44 AM	11:18:45 AM	0:00:01	77.3	76.8	63.3	78.3	77.8	63.8
1110	2/14/2024	11:18:45 AM	11:18:46 AM	0:00:01	77.4	77	63.5	78.3	77.8	63.9
1111	2/14/2024	11:18:46 AM	11:18:47 AM	0:00:01	75.3	74.6	63.4	77.1	76.6	63.9
1112	2/14/2024	11:18:47 AM	11:18:48 AM	0:00:01	73.5	72.5	62.6	75.1	74.4	63.6
1113	2/14/2024	11:18:48 AM	11:18:49 AM	0:00:01	71.2	70.1	61.3	72.6	71.6	62.1
1114	2/14/2024	11:18:49 AM	11:18:50 AM	0:00:01	70.4	69.4	60.7	71.5	70.4	61.6
1115	2/14/2024	11:18:50 AM	11:18:51 AM	0:00:01	69.9	68.8	59.8	71.3	69.9	60.3
1116	2/14/2024	11:18:51 AM	11:18:52 AM	0:00:01	69.9	69	60	70.9	70.1	60.7
1117	2/14/2024	11:18:52 AM	11:18:53 AM	0:00:01	70.9	70.1	60.3	72.6	71.9	60.7
1118	2/14/2024	11:18:53 AM	11:18:54 AM	0:00:01	71.6	70.7	60.5	73.6	72.7	61.2
1119	2/14/2024	11:18:54 AM	11:18:55 AM	0:00:01	70.7	69.8	60.2	73.3	72.4	60.7
1120	2/14/2024	11:18:55 AM	11:18:56 AM	0:00:01	70.9	70.1	59.8	72.2	71.6	60.4
1121	2/14/2024	11:18:56 AM	11:18:57 AM	0:00:01	67.8	66.9	59.5	70.5	69.7	60.4
1122	2/14/2024	11:18:57 AM	11:18:58 AM	0:00:01	67.7	66.4	59.9	68.9	67.8	60.9
1123	2/14/2024	11:18:58 AM	11:18:59 AM	0:00:01	68.1	66.5	60.2	69.4	67.2	60.8
1124	2/14/2024	11:18:59 AM	11:19:00 AM	0:00:01	69	67.3	60.9	70.2	68.6	62.8
1125	2/14/2024	11:19:00 AM	11:19:01 AM	0:00:01	69.3	67.8	59.9	70.6	69.2	61
1126	2/14/2024	11:19:01 AM	11:19:02 AM	0:00:01	70.7	69.1	59.9	72.1	70.3	60.3
1127	2/14/2024	11:19:02 AM	11:19:03 AM	0:00:01	70.8	69.1	60.2	72.2	70.5	60.8
1128	2/14/2024	11:19:03 AM	11:19:04 AM	0:00:01	71.8	70	60.2	74	71.9	61.2
1129	2/14/2024	11:19:04 AM	11:19:05 AM	0:00:01	70.3	68.6	60.2	72.5	70.6	60.7
1130	2/14/2024	11:19:05 AM	11:19:06 AM	0:00:01	70.5	69.1	60.5	71.4	69.9	61.4
1131	2/14/2024	11:19:06 AM	11:19:07 AM	0:00:01	70.5	68.9	61	71.4	69.9	61.4
1132	2/14/2024	11:19:07 AM	11:19:08 AM	0:00:01	70.9	69.4	61.6	72.3	70.8	62.8
1133	2/14/2024	11:19:08 AM	11:19:09 AM	0:00:01	70	68.5	60.4	71.4	70	61
1134	2/14/2024	11:19:09 AM	11:19:10 AM	0:00:01	71.1	69.7	60.6	72.7	71.2	61.1
1135	2/14/2024	11:19:10 AM	11:19:11 AM	0:00:01	71	69.7	61.8	72.7	71.2	62.7
1136	2/14/2024	11:19:11 AM	11:19:12 AM	0:00:01	72.2	70.9	61	73.4	71.9	61.5
1137	2/14/2024	11:19:12 AM	11:19:13 AM	0:00:01	69.7	68.4	59.8	71	69.7	60.9
1138	2/14/2024	11:19:13 AM	11:19:14 AM	0:00:01	68.1	66.7	59	69.9	68.1	59.6
1139	2/14/2024	11:19:14 AM	11:19:15 AM	0:00:01	68.4	66.8	60.6	69.3	67.5	61.5

1140	2/14/2024	11:19:15 AM	11:19:16 AM	0:00:01	69.7	68.2	60.8	71.1	69.7	61.3
1141	2/14/2024	11:19:16 AM	11:19:17 AM	0:00:01	70.3	68.3	59.8	71.2	69.1	60.4
1142	2/14/2024	11:19:17 AM	11:19:18 AM	0:00:01	70.7	69	60.4	71.8	69.8	61.1
1143	2/14/2024	11:19:18 AM	11:19:19 AM	0:00:01	70.8	69.3	61.4	72.2	70.4	62
1144	2/14/2024	11:19:19 AM	11:19:20 AM	0:00:01	72.9	71.1	62.7	74.4	71.8	63.4
1145	2/14/2024	11:19:20 AM	11:19:21 AM	0:00:01	73.4	71.8	63.7	75	73.3	64.2
1146	2/14/2024	11:19:21 AM	11:19:22 AM	0:00:01	72.2	70.7	63	73.7	71.7	63.5
1147	2/14/2024	11:19:22 AM	11:19:23 AM	0:00:01	71.9	69.9	61.2	73.2	70.9	62.4
1148	2/14/2024	11:19:23 AM	11:19:24 AM	0:00:01	70.7	68.9	60.1	72.6	70.6	60.9
1149	2/14/2024	11:19:24 AM	11:19:25 AM	0:00:01	72.5	69.6	59.8	74.8	71.3	60.2
1150	2/14/2024	11:19:25 AM	11:19:26 AM	0:00:01	69.7	68	60.3	73.4	70.3	60.9
1151	2/14/2024	11:19:26 AM	11:19:27 AM	0:00:01	69.4	67.7	59.1	71.5	69	59.8
1152	2/14/2024	11:19:27 AM	11:19:28 AM	0:00:01	69.1	67.3	59	71.3	68.7	59.5
1153	2/14/2024	11:19:28 AM	11:19:29 AM	0:00:01	69.2	67.6	59	71.2	69.3	59.5
1154	2/14/2024	11:19:29 AM	11:19:30 AM	0:00:01	68.5	67.1	59	69.8	68.1	59.5
1155	2/14/2024	11:19:30 AM	11:19:31 AM	0:00:01	68.5	67.2	59.1	69.6	68.4	59.8
1156	2/14/2024	11:19:31 AM	11:19:32 AM	0:00:01	68.7	67.5	59.4	70.3	68.8	60.4
1157	2/14/2024	11:19:32 AM	11:19:33 AM	0:00:01	68.3	67	59.2	69.6	68.3	59.6
1158	2/14/2024	11:19:33 AM	11:19:34 AM	0:00:01	68.5	66.9	59.1	69.2	67.8	59.5
1159	2/14/2024	11:19:34 AM	11:19:35 AM	0:00:01	68.7	67.3	58.9	70	68.1	59.6
1160	2/14/2024	11:19:35 AM	11:19:36 AM	0:00:01	68.5	67	58.2	69.9	68.1	59.1
1161	2/14/2024	11:19:36 AM	11:19:37 AM	0:00:01	68	66.3	58.2	69.6	67.7	59.7
1162	2/14/2024	11:19:37 AM	11:19:38 AM	0:00:01	67.2	65.8	58.8	68	66.9	59.8
1163	2/14/2024	11:19:38 AM	11:19:39 AM	0:00:01	68.8	66.7	59.9	70.3	67.8	61.1
1164	2/14/2024	11:19:39 AM	11:19:40 AM	0:00:01	68.3	66.5	59.8	70.4	68.1	61
1165	2/14/2024	11:19:40 AM	11:19:41 AM	0:00:01	68.6	66.5	61.1	70.3	68.3	61.4
1166	2/14/2024	11:19:41 AM	11:19:42 AM	0:00:01	69.2	67.5	61	71.3	68.8	62.1
1167	2/14/2024	11:19:42 AM	11:19:43 AM	0:00:01	69.4	67.9	61	70.5	69	61.6
1168	2/14/2024	11:19:43 AM	11:19:44 AM	0:00:01	69.5	68	61.2	70.9	69.2	61.6
1169	2/14/2024	11:19:44 AM	11:19:45 AM	0:00:01	68.3	67	61.5	69.3	68	61.9
1170	2/14/2024	11:19:45 AM	11:19:46 AM	0:00:01	69.5	66.9	60.6	71	68.1	61.9
1171	2/14/2024	11:19:46 AM	11:19:47 AM	0:00:01	68.7	66.5	60.2	71.1	68.3	60.8
1172	2/14/2024	11:19:47 AM	11:19:48 AM	0:00:01	68	66.4	61.3	68.6	66.7	62
1173	2/14/2024	11:19:48 AM	11:19:49 AM	0:00:01	68.2	66.8	61.8	69.3	67.7	62.6
1174	2/14/2024	11:19:49 AM	11:19:50 AM	0:00:01	68.3	66.9	61.4	69.2	67.6	62.4
1175	2/14/2024	11:19:50 AM	11:19:51 AM	0:00:01	66.9	65.6	60.6	68.1	66.5	61.4
1176	2/14/2024	11:19:51 AM	11:19:52 AM	0:00:01	65.9	64.9	60.3	66.9	65.7	61.4
1177	2/14/2024	11:19:52 AM	11:19:53 AM	0:00:01	66.2	64.8	59.4	67	65.8	61.3
1178	2/14/2024	11:19:53 AM	11:19:54 AM	0:00:01	65.8	64.4	58.5	67.1	65.5	59.1
1179	2/14/2024	11:19:54 AM	11:19:55 AM	0:00:01	65.7	64.2	57.9	66.7	65.2	58.9
1180	2/14/2024	11:19:55 AM	11:19:56 AM	0:00:01	64.7	62.9	57.5	66.2	64.3	58.7
1181	2/14/2024	11:19:56 AM	11:19:57 AM	0:00:01	65.3	63.9	57.1	66.1	64.7	57.7
1182	2/14/2024	11:19:57 AM	11:19:58 AM	0:00:01	69.2	67.7	58	70.1	68.5	58.4
1183	2/14/2024	11:19:58 AM	11:19:59 AM	0:00:01	68.9	67.3	58.4	70.2	68.6	59.4
1184	2/14/2024	11:19:59 AM	11:20:00 AM	0:00:01	69.7	68	58.6	70.9	69	59.2
1185	2/14/2024	11:20:00 AM	11:20:01 AM	0:00:01	69.3	67.5	59.4	70.4	68.5	60.3
1186	2/14/2024	11:20:01 AM	11:20:02 AM	0:00:01	70.4	68.5	60.7	71.5	70.1	61.5

1187	2/14/2024	11:20:02 AM	11:20:03 AM	0:00:01	70.9	69.4	61.9	71.8	70.4	62.7
1188	2/14/2024	11:20:03 AM	11:20:04 AM	0:00:01	71.9	70.2	61.5	73	71.3	62.1
1189	2/14/2024	11:20:04 AM	11:20:05 AM	0:00:01	72.9	70.4	61.9	75.8	72	62.2
1190	2/14/2024	11:20:05 AM	11:20:06 AM	0:00:01	72.5	70.1	61.6	75.8	72.2	62.2
1191	2/14/2024	11:20:06 AM	11:20:07 AM	0:00:01	71.8	69.5	62.3	73.8	71.1	63.1
1192	2/14/2024	11:20:07 AM	11:20:08 AM	0:00:01	71.4	69.3	61.5	73	70.2	62.8
1193	2/14/2024	11:20:08 AM	11:20:09 AM	0:00:01	70.5	68.9	62.3	71.7	70.1	63
1194	2/14/2024	11:20:09 AM	11:20:10 AM	0:00:01	72	70	62.3	73.4	71.2	62.7
1195	2/14/2024	11:20:10 AM	11:20:11 AM	0:00:01	71.4	69.5	62.1	74	71.2	63.3
1196	2/14/2024	11:20:11 AM	11:20:12 AM	0:00:01	71.2	69.4	62	73.2	71	63.1
1197	2/14/2024	11:20:12 AM	11:20:13 AM	0:00:01	71.6	70.1	62.9	73.2	71.7	63.2
1198	2/14/2024	11:20:13 AM	11:20:14 AM	0:00:01	71.4	69.2	61.5	73.1	70.9	62.6
1199	2/14/2024	11:20:14 AM	11:20:15 AM	0:00:01	70.7	69	61.7	72.2	70	62.2
1200	2/14/2024	11:20:15 AM	11:20:16 AM	0:00:01	70.4	69.1	61.6	72.1	70.3	62.2
1201	2/14/2024	11:20:16 AM	11:20:17 AM	0:00:01	70.6	69	61.1	72	70	61.6
1202	2/14/2024	11:20:17 AM	11:20:18 AM	0:00:01	70	68.4	60.5	71.2	69.4	61.4
1203	2/14/2024	11:20:18 AM	11:20:19 AM	0:00:01	69.2	67.8	61.2	71.5	69.6	62.1
1204	2/14/2024	11:20:19 AM	11:20:20 AM	0:00:01	69	67.7	60.5	70.1	68.6	62.2
1205	2/14/2024	11:20:20 AM	11:20:21 AM	0:00:01	68.9	67.7	59.6	70.3	69	60.3
1206	2/14/2024	11:20:21 AM	11:20:22 AM	0:00:01	69.4	67.7	59.9	70.5	68.7	60.5
1207	2/14/2024	11:20:22 AM	11:20:23 AM	0:00:01	68.4	67.2	59.9	69.2	68.1	60.6
1208	2/14/2024	11:20:23 AM	11:20:24 AM	0:00:01	68.8	67.4	60.1	70.1	68.7	60.7
1209	2/14/2024	11:20:24 AM	11:20:25 AM	0:00:01	68.3	66.9	60.2	69.5	67.9	60.8
1210	2/14/2024	11:20:25 AM	11:20:26 AM	0:00:01	68.8	67.5	59.9	70.2	68.8	60.8
1211	2/14/2024	11:20:26 AM	11:20:27 AM	0:00:01	70.3	68.6	60	72.2	70.1	60.4
1212	2/14/2024	11:20:27 AM	11:20:28 AM	0:00:01	69.4	68.2	61.3	70.2	68.8	62
1213	2/14/2024	11:20:28 AM	11:20:29 AM	0:00:01	68.3	67.1	60.2	69.5	68	61.4
1214	2/14/2024	11:20:29 AM	11:20:30 AM	0:00:01	66.9	65.8	60	68	67	61.3
1215	2/14/2024	11:20:30 AM	11:20:31 AM	0:00:01	68.1	67.2	61.6	69	68	62
1216	2/14/2024	11:20:31 AM	11:20:32 AM	0:00:01	67.1	66.2	61.3	68.4	67.7	61.9
1217	2/14/2024	11:20:32 AM	11:20:33 AM	0:00:01	67.3	66.3	60.9	68.6	67.7	61.8
1218	2/14/2024	11:20:33 AM	11:20:34 AM	0:00:01	68.1	67.3	64.1	69.1	68.1	65.7
1219	2/14/2024	11:20:34 AM	11:20:35 AM	0:00:01	68.8	67.8	63.2	70.1	69.2	64.5
1220	2/14/2024	11:20:35 AM	11:20:36 AM	0:00:01	68.7	67.7	63	69.9	69.1	64
1221	2/14/2024	11:20:36 AM	11:20:37 AM	0:00:01	68.4	67.3	63	69.6	68	63.8
1222	2/14/2024	11:20:37 AM	11:20:38 AM	0:00:01	69.1	67.9	63.2	69.4	68.4	64.8
1223	2/14/2024	11:20:38 AM	11:20:39 AM	0:00:01	68.9	67.8	63	69.7	68.6	63.7
1224	2/14/2024	11:20:39 AM	11:20:40 AM	0:00:01	68.9	67.9	63	70.8	69.2	63.9
1225	2/14/2024	11:20:40 AM	11:20:41 AM	0:00:01	68.9	67.8	62.9	69.7	68.4	63.9
1226	2/14/2024	11:20:41 AM	11:20:42 AM	0:00:01	68.5	67.6	62.2	69.7	68.6	63
1227	2/14/2024	11:20:42 AM	11:20:43 AM	0:00:01	69.4	68.5	62.7	70.2	69.4	63.9
1228	2/14/2024	11:20:43 AM	11:20:44 AM	0:00:01	70.8	69.7	62.6	71.9	70.8	63.3
1229	2/14/2024	11:20:44 AM	11:20:45 AM	0:00:01	68.3	67.4	62.5	69.8	68.6	63.5
1230	2/14/2024	11:20:45 AM	11:20:46 AM	0:00:01	68.1	67	62.3	69.4	67.9	62.8
1231	2/14/2024	11:20:46 AM	11:20:47 AM	0:00:01	68	67.2	62.4	69.3	68.5	62.9
1232	2/14/2024	11:20:47 AM	11:20:48 AM	0:00:01	69.1	68.1	62.8	70	69	63.6
1233	2/14/2024	11:20:48 AM	11:20:49 AM	0:00:01	68.7	67.7	61	69.9	68.8	63.2

1234	2/14/2024	11:20:49 AM	11:20:50 AM	0:00:01	69.9	69	63.2	71.2	70.3	64
1235	2/14/2024	11:20:50 AM	11:20:51 AM	0:00:01	70.3	69.3	63.5	71.3	70.3	64.4
1236	2/14/2024	11:20:51 AM	11:20:52 AM	0:00:01	70.5	69.6	63.4	71.8	70.8	63.8
1237	2/14/2024	11:20:52 AM	11:20:53 AM	0:00:01	71.5	70.3	63.2	72.5	71.2	63.8
1238	2/14/2024	11:20:53 AM	11:20:54 AM	0:00:01	69.7	68.4	62.6	70.5	69.2	63.3
1239	2/14/2024	11:20:54 AM	11:20:55 AM	0:00:01	68.6	67.7	63.3	69.6	68.7	63.6
1240	2/14/2024	11:20:55 AM	11:20:56 AM	0:00:01	68.4	67.3	63.2	69.4	68.4	64.2
1241	2/14/2024	11:20:56 AM	11:20:57 AM	0:00:01	68.1	67.2	62.6	69.2	68.4	63.3
1242	2/14/2024	11:20:57 AM	11:20:58 AM	0:00:01	68.9	68.1	63.4	69.6	68.9	63.9
1243	2/14/2024	11:20:58 AM	11:20:59 AM	0:00:01	69.1	68.2	62.1	70.2	69.3	62.9
1244	2/14/2024	11:20:59 AM	11:21:00 AM	0:00:01	69.6	68.6	62.5	70.3	69.3	63
1245	2/14/2024	11:21:00 AM	11:21:01 AM	0:00:01	70	68.7	62.6	71.4	69.7	63.2
1246	2/14/2024	11:21:01 AM	11:21:02 AM	0:00:01	70.7	69.6	63.3	71.7	70.6	64
1247	2/14/2024	11:21:02 AM	11:21:03 AM	0:00:01	71.3	70.1	63.5	71.9	70.6	63.9
1248	2/14/2024	11:21:03 AM	11:21:04 AM	0:00:01	70.9	70	62.8	71.8	70.8	63.4
1249	2/14/2024	11:21:04 AM	11:21:05 AM	0:00:01	71.5	70.5	63.6	72.2	71.2	64.1
1250	2/14/2024	11:21:05 AM	11:21:06 AM	0:00:01	70.8	69.8	63.2	71.5	70.4	63.8
1251	2/14/2024	11:21:06 AM	11:21:07 AM	0:00:01	71.6	70.3	64	72.8	72	64.9
1252	2/14/2024	11:21:07 AM	11:21:08 AM	0:00:01	71.2	70.4	64.2	71.9	71.2	65.6
1253	2/14/2024	11:21:08 AM	11:21:09 AM	0:00:01	72.3	71	64.4	73.8	72.6	65.6
1254	2/14/2024	11:21:09 AM	11:21:10 AM	0:00:01	72.9	71.7	64.4	73.6	72.5	65.2
1255	2/14/2024	11:21:10 AM	11:21:11 AM	0:00:01	72.2	71.1	63.7	74.3	72.8	64
1256	2/14/2024	11:21:11 AM	11:21:12 AM	0:00:01	71.8	70.8	63.5	72.5	71.6	64.3
1257	2/14/2024	11:21:12 AM	11:21:13 AM	0:00:01	70.7	69.7	63.3	71.5	70.6	63.9
1258	2/14/2024	11:21:13 AM	11:21:14 AM	0:00:01	70.5	69.6	64.3	71.5	70.5	65.9
1259	2/14/2024	11:21:14 AM	11:21:15 AM	0:00:01	70.6	69.4	62.9	71.3	70	63.8
1260	2/14/2024	11:21:15 AM	11:21:16 AM	0:00:01	70.7	69.3	63.3	71.9	70.5	63.9
1261	2/14/2024	11:21:16 AM	11:21:17 AM	0:00:01	70.6	69.3	62.8	71.5	69.8	63.3
1262	2/14/2024	11:21:17 AM	11:21:18 AM	0:00:01	70	69	62.9	70.7	69.5	63.9
1263	2/14/2024	11:21:18 AM	11:21:19 AM	0:00:01	70.1	68.9	62.7	71.2	69.8	63.9
1264	2/14/2024	11:21:19 AM	11:21:20 AM	0:00:01	69.7	68.4	62.4	70.7	69.1	63
1265	2/14/2024	11:21:20 AM	11:21:21 AM	0:00:01	71.4	69.5	62.2	72.4	70.6	62.6
1266	2/14/2024	11:21:21 AM	11:21:22 AM	0:00:01	71.3	70	61.5	73.1	71.9	62.2
1267	2/14/2024	11:21:22 AM	11:21:23 AM	0:00:01	72.1	70.3	62.6	73	71	63.3
1268	2/14/2024	11:21:23 AM	11:21:24 AM	0:00:01	72.9	70.7	64.1	75	71.7	65
1269	2/14/2024	11:21:24 AM	11:21:25 AM	0:00:01	74.3	72.5	64.9	75.2	73.5	65.7
1270	2/14/2024	11:21:25 AM	11:21:26 AM	0:00:01	75.4	73.6	64.4	77	74.4	65.9
1271	2/14/2024	11:21:26 AM	11:21:27 AM	0:00:01	76.5	73.8	63.6	78.8	75.8	65.8
1272	2/14/2024	11:21:27 AM	11:21:28 AM	0:00:01	76.4	73	62.6	77.8	73.9	63.1
1273	2/14/2024	11:21:28 AM	11:21:29 AM	0:00:01	75.1	72.1	61.9	76.3	73.9	62.6
1274	2/14/2024	11:21:29 AM	11:21:30 AM	0:00:01	74.5	71.2	61.6	75.9	72.5	62.5
1275	2/14/2024	11:21:30 AM	11:21:31 AM	0:00:01	72.1	69.9	62.1	75.4	71.7	62.7
1276	2/14/2024	11:21:31 AM	11:21:32 AM	0:00:01	73.6	71.8	62.9	75.9	74.7	64
1277	2/14/2024	11:21:32 AM	11:21:33 AM	0:00:01	73.4	72.3	63.3	75.7	74.6	63.9
1278	2/14/2024	11:21:33 AM	11:21:34 AM	0:00:01	73.7	72.8	63.9	74.6	73.8	64.5
1279	2/14/2024	11:21:34 AM	11:21:35 AM	0:00:01	74.1	73.2	64.3	75.2	74	65.5
1280	2/14/2024	11:21:35 AM	11:21:36 AM	0:00:01	73.6	71.8	64.1	75.2	73.5	64.6

1281	2/14/2024	11:21:36 AM	11:21:37 AM	0:00:01	73.2	71.4	64.4	74.7	72.5	65
1282	2/14/2024	11:21:37 AM	11:21:38 AM	0:00:01	73	71.3	65.5	74.2	72.3	66.1
1283	2/14/2024	11:21:38 AM	11:21:39 AM	0:00:01	72.7	70.7	64.7	74	72	65.8
1284	2/14/2024	11:21:39 AM	11:21:40 AM	0:00:01	72.7	71.1	65.7	74.3	72.1	67.2
1285	2/14/2024	11:21:40 AM	11:21:41 AM	0:00:01	71.8	70	65.2	72.9	71.4	67.1
1286	2/14/2024	11:21:41 AM	11:21:42 AM	0:00:01	72.7	71	65.7	74	71.9	66.4
1287	2/14/2024	11:21:42 AM	11:21:43 AM	0:00:01	73.3	71.8	66.5	74.5	72.8	67.8
1288	2/14/2024	11:21:43 AM	11:21:44 AM	0:00:01	72.9	71.6	67	73.7	72.3	67.5
1289	2/14/2024	11:21:44 AM	11:21:45 AM	0:00:01	72.3	70.6	64.7	74.2	72.1	66.4
1290	2/14/2024	11:21:45 AM	11:21:46 AM	0:00:01	72.1	70.5	64.1	73.3	71.4	65.1
1291	2/14/2024	11:21:46 AM	11:21:47 AM	0:00:01	72.4	71	64.8	73.2	71.8	65.4
1292	2/14/2024	11:21:47 AM	11:21:48 AM	0:00:01	72.9	71	64.6	74.3	72.1	65.5
1293	2/14/2024	11:21:48 AM	11:21:49 AM	0:00:01	73	70.9	63.5	75.9	72.7	65.5
1294	2/14/2024	11:21:49 AM	11:21:50 AM	0:00:01	71.4	70.2	62.5	73.1	71.3	63
1295	2/14/2024	11:21:50 AM	11:21:51 AM	0:00:01	72.1	69.9	62.4	73.3	71	63.1
1296	2/14/2024	11:21:51 AM	11:21:52 AM	0:00:01	72.1	70.4	62.4	73.4	71.6	62.9
1297	2/14/2024	11:21:52 AM	11:21:53 AM	0:00:01	73.1	71.1	62.1	74.7	72.3	62.5
1298	2/14/2024	11:21:53 AM	11:21:54 AM	0:00:01	72	70.7	62.1	73.6	71.7	63
1299	2/14/2024	11:21:54 AM	11:21:55 AM	0:00:01	72.3	70.8	61.9	73.4	71.9	62.9
1300	2/14/2024	11:21:55 AM	11:21:56 AM	0:00:01	71.4	70.3	62.1	72.6	71.1	63.1
1301	2/14/2024	11:21:56 AM	11:21:57 AM	0:00:01	71	69.8	62.7	72.3	71.3	63.7
1302	2/14/2024	11:21:57 AM	11:21:58 AM	0:00:01	72.2	70.9	63.8	73.3	71.8	64.7
1303	2/14/2024	11:21:58 AM	11:21:59 AM	0:00:01	72.6	71.5	62.3	73.3	72.4	64.1
1304	2/14/2024	11:21:59 AM	11:22:00 AM	0:00:01	73.8	72.9	62.6	74.9	74	63.2
1305	2/14/2024	11:22:00 AM	11:22:01 AM	0:00:01	75.4	74.4	63.9	77	76.2	64.5
1306	2/14/2024	11:22:01 AM	11:22:02 AM	0:00:01	76.2	75.5	63.4	77.5	76.8	64.2
1307	2/14/2024	11:22:02 AM	11:22:03 AM	0:00:01	73	72.2	63.2	75.7	75	65.2
1308	2/14/2024	11:22:03 AM	11:22:04 AM	0:00:01	71.6	70.8	62.6	72.7	71.9	64.4
1309	2/14/2024	11:22:04 AM	11:22:05 AM	0:00:01	69.7	69	61.6	72	71.4	63
1310	2/14/2024	11:22:05 AM	11:22:06 AM	0:00:01	68.7	67.8	60.8	69.4	68.6	61.4
1311	2/14/2024	11:22:06 AM	11:22:07 AM	0:00:01	69.4	68.4	60.6	70.9	69.3	61.4
1312	2/14/2024	11:22:07 AM	11:22:08 AM	0:00:01	70.3	68.9	61.5	72.2	70.2	62.1
1313	2/14/2024	11:22:08 AM	11:22:09 AM	0:00:01	70.1	68.5	61.3	71.3	69.2	62
1314	2/14/2024	11:22:09 AM	11:22:10 AM	0:00:01	69.8	67.9	61.1	72.7	69.1	62.3
1315	2/14/2024	11:22:10 AM	11:22:11 AM	0:00:01	68.8	67.4	60.8	70.6	69.3	61.7
1316	2/14/2024	11:22:11 AM	11:22:12 AM	0:00:01	68.1	67.1	60.4	68.9	68	61.9
1317	2/14/2024	11:22:12 AM	11:22:13 AM	0:00:01	76.5	72.1	60.3	80	74.9	61
1318	2/14/2024	11:22:13 AM	11:22:14 AM	0:00:01	79.3	73.5	60.1	84.8	77.8	60.9
1319	2/14/2024	11:22:14 AM	11:22:15 AM	0:00:01	75	69.8	59	77.6	71.7	60.1
1320	2/14/2024	11:22:15 AM	11:22:16 AM	0:00:01	79.3	73.5	59.4	81.8	75.9	60.1
1321	2/14/2024	11:22:16 AM	11:22:17 AM	0:00:01	77.4	73.5	60.6	82	76.4	61.3
1322	2/14/2024	11:22:17 AM	11:22:18 AM	0:00:01	76.2	72.4	60.9	82	76.5	61.6
1323	2/14/2024	11:22:18 AM	11:22:19 AM	0:00:01	71.9	71	60.3	72.9	71.7	60.9
1324	2/14/2024	11:22:19 AM	11:22:20 AM	0:00:01	72.4	70.1	60.1	73.9	72.4	60.4
1325	2/14/2024	11:22:20 AM	11:22:21 AM	0:00:01	72.7	69.7	60.3	75.2	70.7	61
1326	2/14/2024	11:22:21 AM	11:22:22 AM	0:00:01	72.6	69	60.4	75.4	70.4	60.9
1327	2/14/2024	11:22:22 AM	11:22:23 AM	0:00:01	79.4	75	61	82.9	78.9	61.6

1328	2/14/2024	11:22:23 AM	11:22:24 AM	0:00:01	75.4	71.1	61.3	79	74.1	61.7
1329	2/14/2024	11:22:24 AM	11:22:25 AM	0:00:01	75.4	70.9	61.2	77.7	72.6	61.8
1330	2/14/2024	11:22:25 AM	11:22:26 AM	0:00:01	74.3	70.9	60.9	76.7	72.2	61.4
1331	2/14/2024	11:22:26 AM	11:22:27 AM	0:00:01	76.5	72.4	61.5	79.1	74.2	62.3
1332	2/14/2024	11:22:27 AM	11:22:28 AM	0:00:01	74.1	71.2	60.7	78.8	74.3	61.4
1333	2/14/2024	11:22:28 AM	11:22:29 AM	0:00:01	77.6	73.5	60.2	82.1	77.4	61.8
1334	2/14/2024	11:22:29 AM	11:22:30 AM	0:00:01	75.5	71.4	59.8	77.8	73.7	60.1
1335	2/14/2024	11:22:30 AM	11:22:31 AM	0:00:01	79.2	74.3	60.6	83.8	78.1	61.4
1336	2/14/2024	11:22:31 AM	11:22:32 AM	0:00:01	77.7	73.4	60.8	83.2	77.6	61.3
1337	2/14/2024	11:22:32 AM	11:22:33 AM	0:00:01	76.3	72.8	60.5	79.5	74.9	60.7
1338	2/14/2024	11:22:33 AM	11:22:34 AM	0:00:01	76.6	72.9	60.8	78.2	74.2	62.1
1339	2/14/2024	11:22:34 AM	11:22:35 AM	0:00:01	73.3	71.4	60.1	75.7	72.6	60.9
1340	2/14/2024	11:22:35 AM	11:22:36 AM	0:00:01	73.5	71.3	59.8	75.2	72.1	60.6
1341	2/14/2024	11:22:36 AM	11:22:37 AM	0:00:01	73.9	70.7	58.8	75.7	72	59.3
1342	2/14/2024	11:22:37 AM	11:22:38 AM	0:00:01	74.1	71.7	58.8	75.5	73.4	59.4
1343	2/14/2024	11:22:38 AM	11:22:39 AM	0:00:01	75.4	72.3	58.8	77.2	73.4	59.5
1344	2/14/2024	11:22:39 AM	11:22:40 AM	0:00:01	72.9	70.7	58.8	74.9	71.7	59.6
1345	2/14/2024	11:22:40 AM	11:22:41 AM	0:00:01	75.9	71.8	59	78.5	73.9	59.4
1346	2/14/2024	11:22:41 AM	11:22:42 AM	0:00:01	78.2	74.1	59.2	81.2	76.2	59.8
1347	2/14/2024	11:22:42 AM	11:22:43 AM	0:00:01	75.1	71.6	59.2	78.3	73.8	59.5
1348	2/14/2024	11:22:43 AM	11:22:44 AM	0:00:01	71.1	69.8	59.4	72.4	70.5	59.8
1349	2/14/2024	11:22:44 AM	11:22:45 AM	0:00:01	72.9	71.2	60.1	74.6	72.7	60.7
1350	2/14/2024	11:22:45 AM	11:22:46 AM	0:00:01	70.6	68.8	60.2	72.1	70.4	60.6
1351	2/14/2024	11:22:46 AM	11:22:47 AM	0:00:01	70.4	69.1	60.7	71.1	69.8	61.7
1352	2/14/2024	11:22:47 AM	11:22:48 AM	0:00:01	71.7	70.1	61.5	72.6	70.8	61.9
1353	2/14/2024	11:22:48 AM	11:22:49 AM	0:00:01	69.2	67.9	61	71.7	70	61.8
1354	2/14/2024	11:22:49 AM	11:22:50 AM	0:00:01	71	69.6	61.1	72	70.3	61.3
1355	2/14/2024	11:22:50 AM	11:22:51 AM	0:00:01	72.2	71.2	61.8	72.9	72.1	62.6
1356	2/14/2024	11:22:51 AM	11:22:52 AM	0:00:01	71.2	69.8	61.6	72.3	71	62
1357	2/14/2024	11:22:52 AM	11:22:53 AM	0:00:01	70.6	69	60.3	72.4	70.5	61.3
1358	2/14/2024	11:22:53 AM	11:22:54 AM	0:00:01	71.1	69.3	59.1	73.3	70.6	59.9
1359	2/14/2024	11:22:54 AM	11:22:55 AM	0:00:01	69.7	67.8	58.5	72.5	70.1	58.9
1360	2/14/2024	11:22:55 AM	11:22:56 AM	0:00:01	70.1	68.3	59.2	71.7	69.4	59.6
1361	2/14/2024	11:22:56 AM	11:22:57 AM	0:00:01	68.7	66.8	58.9	70.5	68.7	59.4
1362	2/14/2024	11:22:57 AM	11:22:58 AM	0:00:01	67.9	66.2	59.4	69.2	67.7	60
1363	2/14/2024	11:22:58 AM	11:22:59 AM	0:00:01	68.8	67	59.9	70.2	68.3	60.5
1364	2/14/2024	11:22:59 AM	11:23:00 AM	0:00:01	69.3	67.9	60.6	70.3	68.4	61
1365	2/14/2024	11:23:00 AM	11:23:01 AM	0:00:01	72.3	70.2	60	73.9	71.3	60.7
1366	2/14/2024	11:23:01 AM	11:23:02 AM	0:00:01	72.8	70.6	60.6	73.9	71.6	61.1
1367	2/14/2024	11:23:02 AM	11:23:03 AM	0:00:01	73.2	71.2	60.7	74.7	72.5	61.8
1368	2/14/2024	11:23:03 AM	11:23:04 AM	0:00:01	75.6	72.5	60	78	73.5	60.5
1369	2/14/2024	11:23:04 AM	11:23:05 AM	0:00:01	75.9	72.5	59.8	77.9	73.6	60.3
1370	2/14/2024	11:23:05 AM	11:23:06 AM	0:00:01	75.7	72.6	59.3	77.7	74	60
1371	2/14/2024	11:23:06 AM	11:23:07 AM	0:00:01	74.8	71.8	59	76.9	73.4	59.6
1372	2/14/2024	11:23:07 AM	11:23:08 AM	0:00:01	73.5	71	58.8	75.1	72.1	59.7
1373	2/14/2024	11:23:08 AM	11:23:09 AM	0:00:01	71.7	69.6	59.2	73.4	71.3	59.9
1374	2/14/2024	11:23:09 AM	11:23:10 AM	0:00:01	72	70.3	58.8	73.2	71.2	59.2

1375	2/14/2024	11:23:10 AM	11:23:11 AM	0:00:01	70.8	68.9	58.4	72.3	70.3	58.9
1376	2/14/2024	11:23:11 AM	11:23:12 AM	0:00:01	70.9	69	58.4	72.1	69.7	58.8
1377	2/14/2024	11:23:12 AM	11:23:13 AM	0:00:01	70.5	68.9	58.9	71.5	70	59.6
1378	2/14/2024	11:23:13 AM	11:23:14 AM	0:00:01	71.2	70.1	61.8	72.3	71.4	62.9
1379	2/14/2024	11:23:14 AM	11:23:15 AM	0:00:01	73.3	72.5	66.9	74.3	73.5	68.1
1380	2/14/2024	11:23:15 AM	11:23:16 AM	0:00:01	73.3	72.6	66.9	74.1	73.3	67.9
1381	2/14/2024	11:23:16 AM	11:23:17 AM	0:00:01	71.2	70.3	64.3	73.6	72.8	67
1382	2/14/2024	11:23:17 AM	11:23:18 AM	0:00:01	69.6	68.5	60.6	70.7	69.5	62.8
1383	2/14/2024	11:23:18 AM	11:23:19 AM	0:00:01	69.6	68.2	60.2	70.9	69.2	61.1
1384	2/14/2024	11:23:19 AM	11:23:20 AM	0:00:01	70.1	68.3	59.8	71.3	69.5	61
1385	2/14/2024	11:23:20 AM	11:23:21 AM	0:00:01	70.2	67.8	59.3	71.8	69	59.9
1386	2/14/2024	11:23:21 AM	11:23:22 AM	0:00:01	69.8	67.5	58.4	70.8	68.7	59.3
1387	2/14/2024	11:23:22 AM	11:23:23 AM	0:00:01	70.2	68.1	57.7	71.9	69.2	58.2
1388	2/14/2024	11:23:23 AM	11:23:24 AM	0:00:01	70.3	67.3	58.1	72.9	68.8	58.9
1389	2/14/2024	11:23:24 AM	11:23:25 AM	0:00:01	71.4	67.9	57.2	72.4	68.7	57.8
1390	2/14/2024	11:23:25 AM	11:23:26 AM	0:00:01	71.9	68.3	57.6	73.9	70.1	58.2
1391	2/14/2024	11:23:26 AM	11:23:27 AM	0:00:01	71.5	69.1	57.8	73.9	71.2	58.4
1392	2/14/2024	11:23:27 AM	11:23:28 AM	0:00:01	70.5	67.9	58.8	72.2	69	59.5
1393	2/14/2024	11:23:28 AM	11:23:29 AM	0:00:01	68.7	67.1	57.7	69.7	68	58.6
1394	2/14/2024	11:23:29 AM	11:23:30 AM	0:00:01	68.9	67.5	58.5	69.8	68.1	59.1
1395	2/14/2024	11:23:30 AM	11:23:31 AM	0:00:01	68.7	67.6	59.3	69.4	68.4	60.8
1396	2/14/2024	11:23:31 AM	11:23:32 AM	0:00:01	68.5	67.2	58.6	69.5	68.1	59
1397	2/14/2024	11:23:32 AM	11:23:33 AM	0:00:01	67.7	66.6	59.1	69.2	68.2	59.7
1398	2/14/2024	11:23:33 AM	11:23:34 AM	0:00:01	68	67	58.6	69.2	68.3	59.2
1399	2/14/2024	11:23:34 AM	11:23:35 AM	0:00:01	68.5	67	59	70	68	59.6
1400	2/14/2024	11:23:35 AM	11:23:36 AM	0:00:01	69	67.6	60.4	70.1	67.9	61.3
1401	2/14/2024	11:23:36 AM	11:23:37 AM	0:00:01	69.5	67.2	60.2	72.2	68.2	61.5
1402	2/14/2024	11:23:37 AM	11:23:38 AM	0:00:01	69	68	60.9	70.1	68.9	61.6
1403	2/14/2024	11:23:38 AM	11:23:39 AM	0:00:01	69.3	68.4	61.7	70.3	69.3	62.5
1404	2/14/2024	11:23:39 AM	11:23:40 AM	0:00:01	68.9	67.9	62.1	70	68.9	63.3
1405	2/14/2024	11:23:40 AM	11:23:41 AM	0:00:01	68.2	67.1	61.2	69.4	68.4	61.9
1406	2/14/2024	11:23:41 AM	11:23:42 AM	0:00:01	68.1	66.8	60.9	69.1	67.6	61.3
1407	2/14/2024	11:23:42 AM	11:23:43 AM	0:00:01	72	69	61.8	75.1	71.5	62.6
1408	2/14/2024	11:23:43 AM	11:23:44 AM	0:00:01	71.1	69	61.8	74.5	70.8	62.5
1409	2/14/2024	11:23:44 AM	11:23:45 AM	0:00:01	73.4	69.7	61	75.7	71	61.4
1410	2/14/2024	11:23:45 AM	11:23:46 AM	0:00:01	73.5	70	61.4	75.8	71	62.3
1411	2/14/2024	11:23:46 AM	11:23:47 AM	0:00:01	72.6	69.4	60.6	76.8	71.9	61.1
1412	2/14/2024	11:23:47 AM	11:23:48 AM	0:00:01	73.5	69.6	61	77.2	72.1	61.3
1413	2/14/2024	11:23:48 AM	11:23:49 AM	0:00:01	71	68	60.6	72.6	69.4	61.3
1414	2/14/2024	11:23:49 AM	11:23:50 AM	0:00:01	69.8	67.3	61.1	71.1	68.4	62.3
1415	2/14/2024	11:23:50 AM	11:23:51 AM	0:00:01	69.1	66.7	60.8	71.2	68.4	62.1
1416	2/14/2024	11:23:51 AM	11:23:52 AM	0:00:01	68.6	66.4	60.5	69.5	67.1	60.8
1417	2/14/2024	11:23:52 AM	11:23:53 AM	0:00:01	68.2	66.5	61.1	69.6	67.5	62
1418	2/14/2024	11:23:53 AM	11:23:54 AM	0:00:01	67.7	66.3	61.3	69	67.1	62.1
1419	2/14/2024	11:23:54 AM	11:23:55 AM	0:00:01	69.6	67.4	61.7	71.7	68.4	62.4
1420	2/14/2024	11:23:55 AM	11:23:56 AM	0:00:01	69.3	67.8	62.3	70.5	69.1	63.1
1421	2/14/2024	11:23:56 AM	11:23:57 AM	0:00:01	70.9	68.9	62.1	72.3	70.1	63.2

1422	2/14/2024	11:23:57 AM	11:23:58 AM	0:00:01	69.4	67.7	62.3	70.8	68.7	63.1
1423	2/14/2024	11:23:58 AM	11:23:59 AM	0:00:01	70.7	68.9	63.1	71.6	69.6	63.9
1424	2/14/2024	11:23:59 AM	11:24:00 AM	0:00:01	71.3	69.6	63.2	72.3	70.5	64
1425	2/14/2024	11:24:00 AM	11:24:01 AM	0:00:01	71.1	69.5	63.2	72.3	70.4	64.1
1426	2/14/2024	11:24:01 AM	11:24:02 AM	0:00:01	70.2	68.9	63.2	71.4	69.9	63.7
1427	2/14/2024	11:24:02 AM	11:24:03 AM	0:00:01	72.6	70.4	63.7	74.6	71.5	64.3
1428	2/14/2024	11:24:03 AM	11:24:04 AM	0:00:01	74	71.1	63.3	75.3	71.8	64.1
1429	2/14/2024	11:24:04 AM	11:24:05 AM	0:00:01	72.3	70.6	62.9	74.8	71.8	63.9
1430	2/14/2024	11:24:05 AM	11:24:06 AM	0:00:01	73.3	71.7	63	74.8	73.6	65.4
1431	2/14/2024	11:24:06 AM	11:24:07 AM	0:00:01	71.6	69.9	61.1	72.7	71.1	61.8
1432	2/14/2024	11:24:07 AM	11:24:08 AM	0:00:01	71.5	70	61.1	72.8	71.2	61.7
1433	2/14/2024	11:24:08 AM	11:24:09 AM	0:00:01	70.8	69.3	61.9	72.4	70.6	62.2
1434	2/14/2024	11:24:09 AM	11:24:10 AM	0:00:01	70.8	69.5	62	71.8	70.2	62.8
1435	2/14/2024	11:24:10 AM	11:24:11 AM	0:00:01	71	69.6	61.4	72.5	70.9	61.9
1436	2/14/2024	11:24:11 AM	11:24:12 AM	0:00:01	71.6	70.5	62.4	73.6	71.9	62.6
1437	2/14/2024	11:24:12 AM	11:24:13 AM	0:00:01	71.7	70.4	63.2	73	71.5	64.2
1438	2/14/2024	11:24:13 AM	11:24:14 AM	0:00:01	72.7	71.5	63.3	73.7	72.5	64
1439	2/14/2024	11:24:14 AM	11:24:15 AM	0:00:01	73.6	72.2	63.9	74.4	73.2	64.4
1440	2/14/2024	11:24:15 AM	11:24:16 AM	0:00:01	72.7	71	64.1	74.3	72.5	64.7
1441	2/14/2024	11:24:16 AM	11:24:17 AM	0:00:01	72.9	71.4	63.1	74.5	72.9	64.7
1442	2/14/2024	11:24:17 AM	11:24:18 AM	0:00:01	73.4	72.2	63.7	74.4	73.3	64.1
1443	2/14/2024	11:24:18 AM	11:24:19 AM	0:00:01	72.9	71.7	63.8	74.2	73	65.1
1444	2/14/2024	11:24:19 AM	11:24:20 AM	0:00:01	72.5	71.4	62.4	73.8	72.7	62.9
1445	2/14/2024	11:24:20 AM	11:24:21 AM	0:00:01	72.7	71.3	61.8	73.6	72.3	62.2
1446	2/14/2024	11:24:21 AM	11:24:22 AM	0:00:01	71.9	70.9	61.3	72.9	71.8	62.2
1447	2/14/2024	11:24:22 AM	11:24:23 AM	0:00:01	72.9	71.5	61.6	73.6	72.3	62
1448	2/14/2024	11:24:23 AM	11:24:24 AM	0:00:01	73.3	72.4	62	74.5	73.4	62.8
1449	2/14/2024	11:24:24 AM	11:24:25 AM	0:00:01	74.9	74.2	63.6	76.5	75.7	63.9
1450	2/14/2024	11:24:25 AM	11:24:26 AM	0:00:01	76.6	75.4	65.1	78.2	76.8	65.6
1451	2/14/2024	11:24:26 AM	11:24:27 AM	0:00:01	77.9	76.8	65.6	78.8	77.8	66.4
1452	2/14/2024	11:24:27 AM	11:24:28 AM	0:00:01	77	76	64.1	78.5	77.4	64.9
1453	2/14/2024	11:24:28 AM	11:24:29 AM	0:00:01	73.8	72.9	61.9	76.1	75.1	63.4
1454	2/14/2024	11:24:29 AM	11:24:30 AM	0:00:01	71.4	70.3	61	72.1	71	61.3
1455	2/14/2024	11:24:30 AM	11:24:31 AM	0:00:01	71.1	70.1	61.1	72.4	71.4	62.5
1456	2/14/2024	11:24:31 AM	11:24:32 AM	0:00:01	71.8	70	61	73.7	70.9	61.3
1457	2/14/2024	11:24:32 AM	11:24:33 AM	0:00:01	71.7	70	63	73.3	71	64.1
1458	2/14/2024	11:24:33 AM	11:24:34 AM	0:00:01	71.4	69.6	62.2	73.4	71.6	63.9
1459	2/14/2024	11:24:34 AM	11:24:35 AM	0:00:01	70	68	62.6	72	69.6	63.3
1460	2/14/2024	11:24:35 AM	11:24:36 AM	0:00:01	69.8	67.9	63	71.1	69	64.1
1461	2/14/2024	11:24:36 AM	11:24:37 AM	0:00:01	77.2	72.5	62.3	81.1	75.3	63.1
1462	2/14/2024	11:24:37 AM	11:24:38 AM	0:00:01	75.7	71.2	62.7	79	74.5	63.2
1463	2/14/2024	11:24:38 AM	11:24:39 AM	0:00:01	77.8	72	61.6	82.6	75.2	62.7
1464	2/14/2024	11:24:39 AM	11:24:40 AM	0:00:01	78.3	73.2	62.8	82.7	76.6	63.9
1465	2/14/2024	11:24:40 AM	11:24:41 AM	0:00:01	73.8	70.7	62.5	77.9	72.8	63.8
1466	2/14/2024	11:24:41 AM	11:24:42 AM	0:00:01	72.7	69.7	62.4	75.2	71.5	62.8
1467	2/14/2024	11:24:42 AM	11:24:43 AM	0:00:01	72.7	70	63.1	74	71.2	63.7
1468	2/14/2024	11:24:43 AM	11:24:44 AM	0:00:01	71.7	70.2	64.4	73.4	71.2	65.3

1469	2/14/2024	11:24:44 AM	11:24:45 AM	0:00:01	73.1	70.7	63.5	74.6	71.6	64.8
1470	2/14/2024	11:24:45 AM	11:24:46 AM	0:00:01	73.3	71.5	64.1	74.8	72.4	64.7
1471	2/14/2024	11:24:46 AM	11:24:47 AM	0:00:01	75.8	72.4	63.3	78	74.3	63.8
1472	2/14/2024	11:24:47 AM	11:24:48 AM	0:00:01	76.5	73.4	63.6	79.2	75.8	64.6
1473	2/14/2024	11:24:48 AM	11:24:49 AM	0:00:01	80.4	76.1	63.9	83.1	79.3	65.4
1474	2/14/2024	11:24:49 AM	11:24:50 AM	0:00:01	78.2	74	63.1	81.2	76.9	63.6
1475	2/14/2024	11:24:50 AM	11:24:51 AM	0:00:01	78	74.4	62.6	81	77.4	62.9
1476	2/14/2024	11:24:51 AM	11:24:52 AM	0:00:01	74.8	71.2	62.6	78.1	74.6	63.5
1477	2/14/2024	11:24:52 AM	11:24:53 AM	0:00:01	73.3	71	63	74.7	72.4	63.4
1478	2/14/2024	11:24:53 AM	11:24:54 AM	0:00:01	75.8	72.8	62.7	78.8	75.3	63.1
1479	2/14/2024	11:24:54 AM	11:24:55 AM	0:00:01	71.9	70.5	62.4	75.3	72.1	63.1
1480	2/14/2024	11:24:55 AM	11:24:56 AM	0:00:01	72.2	70.9	63.3	73.9	73	63.7
1481	2/14/2024	11:24:56 AM	11:24:57 AM	0:00:01	73.2	72.7	63.6	75.1	74.7	64.5
1482	2/14/2024	11:24:57 AM	11:24:58 AM	0:00:01	74.6	74.1	62.9	75.3	74.9	64.4
1483	2/14/2024	11:24:58 AM	11:24:59 AM	0:00:01	76.1	74	62.5	78	74.6	63
1484	2/14/2024	11:24:59 AM	11:25:00 AM	0:00:01	73.9	73.1	62.6	77	74.3	63.6
1485	2/14/2024	11:25:00 AM	11:25:01 AM	0:00:01	73.1	71.7	61.9	74.4	72.8	62.9
1486	2/14/2024	11:25:01 AM	11:25:02 AM	0:00:01	72.9	70.9	61.6	75.2	71.6	62
1487	2/14/2024	11:25:02 AM	11:25:03 AM	0:00:01	73.9	71.8	61.1	76	73.6	62
1488	2/14/2024	11:25:03 AM	11:25:04 AM	0:00:01	72.5	68.9	60.7	75.7	71.5	61.2
1489	2/14/2024	11:25:04 AM	11:25:05 AM	0:00:01	69.8	68.1	60.9	71	68.6	61.9
1490	2/14/2024	11:25:05 AM	11:25:06 AM	0:00:01	70.3	69.1	61.8	71.5	70.1	62.6
1491	2/14/2024	11:25:06 AM	11:25:07 AM	0:00:01	72.4	71.2	62.7	73.6	72.1	64
1492	2/14/2024	11:25:07 AM	11:25:08 AM	0:00:01	70.6	69.2	61.8	74.1	72.5	63.3
1493	2/14/2024	11:25:08 AM	11:25:09 AM	0:00:01	67.3	66.4	60.2	67.8	66.9	61.2
1494	2/14/2024	11:25:09 AM	11:25:10 AM	0:00:01	67.1	66.1	60	67.6	66.6	60.4
1495	2/14/2024	11:25:10 AM	11:25:11 AM	0:00:01	67.2	66	60.3	68.2	67.1	60.8
1496	2/14/2024	11:25:11 AM	11:25:12 AM	0:00:01	67.4	66.2	60.8	69	67.1	61.3
1497	2/14/2024	11:25:12 AM	11:25:13 AM	0:00:01	71.1	70.1	61.7	71.6	70.6	62.4
1498	2/14/2024	11:25:13 AM	11:25:14 AM	0:00:01	72.1	71.1	62.9	72.9	71.6	63.5
1499	2/14/2024	11:25:14 AM	11:25:15 AM	0:00:01	72.2	71	63.6	73.7	72.5	64.5
1500	2/14/2024	11:25:15 AM	11:25:16 AM	0:00:01	72.5	71.3	64.4	73.9	72.6	64.8
1501	2/14/2024	11:25:16 AM	11:25:17 AM	0:00:01	72.5	71.3	63.2	73.4	72	63.7
1502	2/14/2024	11:25:17 AM	11:25:18 AM	0:00:01	71.7	70.2	62.2	72.9	71.4	63.2
1503	2/14/2024	11:25:18 AM	11:25:19 AM	0:00:01	72.7	71	61.7	74.4	71.8	62.5
1504	2/14/2024	11:25:19 AM	11:25:20 AM	0:00:01	70.6	68.7	62.4	72.6	70.6	63.6
1505	2/14/2024	11:25:20 AM	11:25:21 AM	0:00:01	70	68.3	62.6	71.7	70.3	63.5
1506	2/14/2024	11:25:21 AM	11:25:22 AM	0:00:01	69.8	67.8	62.3	71.8	68.9	62.9
1507	2/14/2024	11:25:22 AM	11:25:23 AM	0:00:01	69.4	67.8	62.3	70.4	68.3	62.6
1508	2/14/2024	11:25:23 AM	11:25:24 AM	0:00:01	68.8	67.7	62.6	70.1	68.9	63.1
1509	2/14/2024	11:25:24 AM	11:25:25 AM	0:00:01	69.2	67.9	62.4	70.4	69	63.1
1510	2/14/2024	11:25:25 AM	11:25:26 AM	0:00:01	68.9	68.1	62.4	70.2	69.2	63.2
1511	2/14/2024	11:25:26 AM	11:25:27 AM	0:00:01	69	68.2	62	69.8	69.2	63
1512	2/14/2024	11:25:27 AM	11:25:28 AM	0:00:01	69.7	67.5	61.1	71.6	68.6	61.7
1513	2/14/2024	11:25:28 AM	11:25:29 AM	0:00:01	69.3	67.5	60.3	72.7	69.8	60.7
1514	2/14/2024	11:25:29 AM	11:25:30 AM	0:00:01	68.3	67.5	61.8	69.2	68.4	62.4
1515	2/14/2024	11:25:30 AM	11:25:31 AM	0:00:01	68	67.1	60.4	68.5	67.6	61.4

1516	2/14/2024	11:25:31 AM	11:25:32 AM	0:00:01	67.6	66.5	60.9	68.5	67.4	61.1
1517	2/14/2024	11:25:32 AM	11:25:33 AM	0:00:01	67.4	66.5	60.5	68.1	67.1	60.9
1518	2/14/2024	11:25:33 AM	11:25:34 AM	0:00:01	68.1	66.8	61.7	69.2	67.7	62.3
1519	2/14/2024	11:25:34 AM	11:25:35 AM	0:00:01	68.8	67	61.3	70.4	67.8	62.3
1520	2/14/2024	11:25:35 AM	11:25:36 AM	0:00:01	68.5	67	61.5	70	67.8	62
1521	2/14/2024	11:25:36 AM	11:25:37 AM	0:00:01	69.8	67.9	61.3	71.5	68.8	61.7
1522	2/14/2024	11:25:37 AM	11:25:38 AM	0:00:01	71.1	68.7	60.8	73.7	70.3	61.3
1523	2/14/2024	11:25:38 AM	11:25:39 AM	0:00:01	71	69	61.2	73.2	70.1	62
1524	2/14/2024	11:25:39 AM	11:25:40 AM	0:00:01	69.8	68.1	60.8	71.1	69.2	61.2
1525	2/14/2024	11:25:40 AM	11:25:41 AM	0:00:01	70.7	68.6	60.4	72.6	69.8	61
1526	2/14/2024	11:25:41 AM	11:25:42 AM	0:00:01	72.3	70.1	59.7	74.2	72.1	60.2
1527	2/14/2024	11:25:42 AM	11:25:43 AM	0:00:01	71.5	69.1	59.7	74.3	71	60.3
1528	2/14/2024	11:25:43 AM	11:25:44 AM	0:00:01	71.8	69.8	60.2	73.4	71	61.1
1529	2/14/2024	11:25:44 AM	11:25:45 AM	0:00:01	72.1	69.1	60	74.2	71.4	61.6
1530	2/14/2024	11:25:45 AM	11:25:46 AM	0:00:01	73.4	70.3	61.7	76.5	71.4	63
1531	2/14/2024	11:25:46 AM	11:25:47 AM	0:00:01	72.3	70.2	62.7	74	71.6	63.4
1532	2/14/2024	11:25:47 AM	11:25:48 AM	0:00:01	72.5	71	64.7	73.2	71.9	66.6
1533	2/14/2024	11:25:48 AM	11:25:49 AM	0:00:01	70.9	68.9	62.2	72.9	71.4	63.2
1534	2/14/2024	11:25:49 AM	11:25:50 AM	0:00:01	72.2	69.7	62.5	74.5	70.9	63.3
1535	2/14/2024	11:25:50 AM	11:25:51 AM	0:00:01	72.6	69.7	61.9	73.8	70.4	62.8
1536	2/14/2024	11:25:51 AM	11:25:52 AM	0:00:01	72.1	69.6	61.2	73.6	70.7	62.1
1537	2/14/2024	11:25:52 AM	11:25:53 AM	0:00:01	70.2	68.2	61.5	71.5	68.8	62.4
1538	2/14/2024	11:25:53 AM	11:25:54 AM	0:00:01	69.4	68	61	70.7	68.9	62.2
1539	2/14/2024	11:25:54 AM	11:25:55 AM	0:00:01	68.9	67.8	62	70.7	69.7	62.8
1540	2/14/2024	11:25:55 AM	11:25:56 AM	0:00:01	68.1	66.9	61.8	69.4	68.1	63.5
1541	2/14/2024	11:25:56 AM	11:25:57 AM	0:00:01	68.7	67.6	59	69.8	68.9	60.4
1542	2/14/2024	11:25:57 AM	11:25:58 AM	0:00:01	70	68.9	58.9	70.7	69.6	59.2
1543	2/14/2024	11:25:58 AM	11:25:59 AM	0:00:01	70.3	69.5	59.3	72.1	71.2	60.1
1544	2/14/2024	11:25:59 AM	11:26:00 AM	0:00:01	68.7	67.6	58.4	69.9	69	60.1
1545	2/14/2024	11:26:00 AM	11:26:01 AM	0:00:01	68.9	67.8	58.3	69.8	68.8	58.9
1546	2/14/2024	11:26:01 AM	11:26:02 AM	0:00:01	68.2	67.1	59.2	69	68.2	60.1
1547	2/14/2024	11:26:02 AM	11:26:03 AM	0:00:01	67.9	66.8	60	69	67.9	60.8
1548	2/14/2024	11:26:03 AM	11:26:04 AM	0:00:01	68.6	67.5	61.1	69.4	68.1	62.5
1549	2/14/2024	11:26:04 AM	11:26:05 AM	0:00:01	68.6	67.7	60.9	69.3	68.3	61.4
1550	2/14/2024	11:26:05 AM	11:26:06 AM	0:00:01	69.4	68.2	61.8	69.9	68.6	62.3
1551	2/14/2024	11:26:06 AM	11:26:07 AM	0:00:01	70.3	68.9	61.8	71.9	69.9	62.3
1552	2/14/2024	11:26:07 AM	11:26:08 AM	0:00:01	70.4	69	62.2	70.8	69.8	62.9
1553	2/14/2024	11:26:08 AM	11:26:09 AM	0:00:01	71.1	69.6	61.7	72.1	70.6	62.4
1554	2/14/2024	11:26:09 AM	11:26:10 AM	0:00:01	73.5	70.9	62.4	75.3	72.2	62.8
1555	2/14/2024	11:26:10 AM	11:26:11 AM	0:00:01	72.7	70.4	62.6	74.6	71.7	63.1
1556	2/14/2024	11:26:11 AM	11:26:12 AM	0:00:01	73.7	70.9	63.3	75.9	72.3	63.8
1557	2/14/2024	11:26:12 AM	11:26:13 AM	0:00:01	73.9	71.1	63.7	77.1	73.4	64.1
1558	2/14/2024	11:26:13 AM	11:26:14 AM	0:00:01	76.1	73.1	64.8	77.9	74.7	66
1559	2/14/2024	11:26:14 AM	11:26:15 AM	0:00:01	74.8	72.3	64.8	75.8	73.2	65.7
1560	2/14/2024	11:26:15 AM	11:26:16 AM	0:00:01	75.3	72.8	65.4	77.6	74	66.7
1561	2/14/2024	11:26:16 AM	11:26:17 AM	0:00:01	75.1	73.5	66.7	76.9	74.9	67.4
1562	2/14/2024	11:26:17 AM	11:26:18 AM	0:00:01	73.1	71.8	65.8	74.2	72.8	66.8

1563	2/14/2024	11:26:18 AM	11:26:19 AM	0:00:01	73.7	72.1	65.4	75.1	72.7	66.2
1564	2/14/2024	11:26:19 AM	11:26:20 AM	0:00:01	73.2	71.1	64.3	74.5	72.5	64.8
1565	2/14/2024	11:26:20 AM	11:26:21 AM	0:00:01	73.9	72.5	65	75.3	73.7	66
1566	2/14/2024	11:26:21 AM	11:26:22 AM	0:00:01	73.5	72.3	64.5	74.3	72.9	65.5
1567	2/14/2024	11:26:22 AM	11:26:23 AM	0:00:01	73.3	72.1	64.2	74.8	73.3	64.8
1568	2/14/2024	11:26:23 AM	11:26:24 AM	0:00:01	72.1	71	64.3	73.4	72.3	65.3
1569	2/14/2024	11:26:24 AM	11:26:25 AM	0:00:01	72.4	71	63.4	73.4	71.8	63.9
1570	2/14/2024	11:26:25 AM	11:26:26 AM	0:00:01	72.2	70.9	62.9	73.4	72	63.6
1571	2/14/2024	11:26:26 AM	11:26:27 AM	0:00:01	72.3	70.9	63	73.9	72.5	63.8
1572	2/14/2024	11:26:27 AM	11:26:28 AM	0:00:01	71.9	70.6	62.8	73	71.6	63.3
1573	2/14/2024	11:26:28 AM	11:26:29 AM	0:00:01	72.1	70.8	63.5	73.1	71.9	64.4
1574	2/14/2024	11:26:29 AM	11:26:30 AM	0:00:01	72.5	70.9	63.9	73.6	72	64.5
1575	2/14/2024	11:26:30 AM	11:26:31 AM	0:00:01	72.5	71.1	64.6	74	72.2	65.2
1576	2/14/2024	11:26:31 AM	11:26:32 AM	0:00:01	72.5	70.8	63.9	74.6	73.3	64.9
1577	2/14/2024	11:26:32 AM	11:26:33 AM	0:00:01	77.3	73.1	63.4	81.3	75.8	64
1578	2/14/2024	11:26:33 AM	11:26:34 AM	0:00:01	74.5	71.7	63.4	76.9	73.9	64.5
1579	2/14/2024	11:26:34 AM	11:26:35 AM	0:00:01	75	71.6	63.3	76.6	73.1	64.3
1580	2/14/2024	11:26:35 AM	11:26:36 AM	0:00:01	74	71.4	62.7	75.5	72.4	63.3
1581	2/14/2024	11:26:36 AM	11:26:37 AM	0:00:01	75.2	71.5	61.9	78.7	73.7	62.3
1582	2/14/2024	11:26:37 AM	11:26:38 AM	0:00:01	73.8	70.6	62	76.3	71.7	62.3
1583	2/14/2024	11:26:38 AM	11:26:39 AM	0:00:01	73.9	70.8	62.8	75.3	72.2	63.7
1584	2/14/2024	11:26:39 AM	11:26:40 AM	0:00:01	73.5	70.5	62.4	75.3	71.8	63.1
1585	2/14/2024	11:26:40 AM	11:26:41 AM	0:00:01	72.5	69.9	61.7	74.4	71.1	62.4
1586	2/14/2024	11:26:41 AM	11:26:42 AM	0:00:01	73.8	71.1	62.1	75.9	73.2	62.9
1587	2/14/2024	11:26:42 AM	11:26:43 AM	0:00:01	70.7	69	62.2	72	70	62.7
1588	2/14/2024	11:26:43 AM	11:26:44 AM	0:00:01	71.8	69.5	62.4	74.1	70.3	63
1589	2/14/2024	11:26:44 AM	11:26:45 AM	0:00:01	71.9	70.4	62.5	72.7	71.3	63.4
1590	2/14/2024	11:26:45 AM	11:26:46 AM	0:00:01	71.8	70	63.1	72.8	71.1	63.5
1591	2/14/2024	11:26:46 AM	11:26:47 AM	0:00:01	72.1	69.3	63.1	75.4	70.8	63.7
1592	2/14/2024	11:26:47 AM	11:26:48 AM	0:00:01	72.4	69.8	63.7	74.3	70.9	64.4
1593	2/14/2024	11:26:48 AM	11:26:49 AM	0:00:01	71	69.3	64.2	72.6	70.2	64.5
1594	2/14/2024	11:26:49 AM	11:26:50 AM	0:00:01	70.1	68.9	63.9	71.5	69.6	64.7
1595	2/14/2024	11:26:50 AM	11:26:51 AM	0:00:01	69.9	68.3	63.3	70.8	69.1	63.7
1596	2/14/2024	11:26:51 AM	11:26:52 AM	0:00:01	70.7	69.4	64.5	72.3	70.3	65.6
1597	2/14/2024	11:26:52 AM	11:26:53 AM	0:00:01	70.2	69	63.6	71.2	70.1	64
1598	2/14/2024	11:26:53 AM	11:26:54 AM	0:00:01	69.7	68.7	63.6	70.8	69.6	64.3
1599	2/14/2024	11:26:54 AM	11:26:55 AM	0:00:01	70.5	69.4	63.1	71.3	69.9	64.2
1600	2/14/2024	11:26:55 AM	11:26:56 AM	0:00:01	70.4	69.3	63.8	71.6	70.2	64.5
1601	2/14/2024	11:26:56 AM	11:26:57 AM	0:00:01	71	69.6	63.6	72.3	71	64.3
1602	2/14/2024	11:26:57 AM	11:26:58 AM	0:00:01	70.9	69.2	62.4	71.8	70.3	63.1
1603	2/14/2024	11:26:58 AM	11:26:59 AM	0:00:01	70.7	68.9	61	72	69.8	61.9
1604	2/14/2024	11:26:59 AM	11:27:00 AM	0:00:01	71.4	69.4	61.1	72.3	70.5	61.5
1605	2/14/2024	11:27:00 AM	11:27:01 AM	0:00:01	72	70.1	61.7	73.3	71.3	62.2
1606	2/14/2024	11:27:01 AM	11:27:02 AM	0:00:01	70.3	68.5	61.6	72.7	70	62.7
1607	2/14/2024	11:27:02 AM	11:27:03 AM	0:00:01	69.9	68.4	61.6	70.9	69.5	62.4
1608	2/14/2024	11:27:03 AM	11:27:04 AM	0:00:01	70.8	69.1	62.9	72.7	70.8	63.3
1609	2/14/2024	11:27:04 AM	11:27:05 AM	0:00:01	70.3	68.7	62.5	71.6	69.9	63.2

1610	2/14/2024	11:27:05 AM	11:27:06 AM	0:00:01	70.6	69.1	62.9	72.1	70.6	64.7
1611	2/14/2024	11:27:06 AM	11:27:07 AM	0:00:01	70.9	69.5	63.1	71.8	70.2	63.8
1612	2/14/2024	11:27:07 AM	11:27:08 AM	0:00:01	71.7	70.4	63.8	72.5	71.4	64.5
1613	2/14/2024	11:27:08 AM	11:27:09 AM	0:00:01	73.3	72.1	64.4	74.2	72.9	65.1
1614	2/14/2024	11:27:09 AM	11:27:10 AM	0:00:01	74.3	72.9	65.6	76	74.3	65.9
1615	2/14/2024	11:27:10 AM	11:27:11 AM	0:00:01	74.6	73	65.5	76	74.2	66.3
1616	2/14/2024	11:27:11 AM	11:27:12 AM	0:00:01	74.7	72.5	66.1	76.6	73.3	68.1
1617	2/14/2024	11:27:12 AM	11:27:13 AM	0:00:01	75.3	72.3	63.5	77.6	74.3	64.8
1618	2/14/2024	11:27:13 AM	11:27:14 AM	0:00:01	74.5	71.3	63.8	76.9	72.3	64.3
1619	2/14/2024	11:27:14 AM	11:27:15 AM	0:00:01	72.7	70.3	63.2	73.7	71.4	64
1620	2/14/2024	11:27:15 AM	11:27:16 AM	0:00:01	72.1	70.3	63.1	73.2	71.4	64
1621	2/14/2024	11:27:16 AM	11:27:17 AM	0:00:01	71.7	70	64.1	72.5	70.6	65.2
1622	2/14/2024	11:27:17 AM	11:27:18 AM	0:00:01	71.7	69.9	63.7	73.5	71.3	65.1
1623	2/14/2024	11:27:18 AM	11:27:19 AM	0:00:01	70.9	69.1	62.7	73.2	70.7	63.1
1624	2/14/2024	11:27:19 AM	11:27:20 AM	0:00:01	72.4	69.3	62.4	75.1	70.7	63.6
1625	2/14/2024	11:27:20 AM	11:27:21 AM	0:00:01	70.3	68.4	61.1	71.5	69.1	61.9
1626	2/14/2024	11:27:21 AM	11:27:22 AM	0:00:01	71.2	69	61.5	72.7	69.9	62.2
1627	2/14/2024	11:27:22 AM	11:27:23 AM	0:00:01	70.1	68.6	61.1	70.8	69.3	61.7
1628	2/14/2024	11:27:23 AM	11:27:24 AM	0:00:01	70.8	68.7	60.5	73.7	70.9	61.4
1629	2/14/2024	11:27:24 AM	11:27:25 AM	0:00:01	69.1	67.8	59.6	70.5	68.9	60.5
1630	2/14/2024	11:27:25 AM	11:27:26 AM	0:00:01	70.5	68.8	59.6	72.1	69.8	60.2
1631	2/14/2024	11:27:26 AM	11:27:27 AM	0:00:01	69.8	68.6	59.5	71.6	70	59.7
1632	2/14/2024	11:27:27 AM	11:27:28 AM	0:00:01	69.5	67.8	60.3	70.6	68.7	61.1
1633	2/14/2024	11:27:28 AM	11:27:29 AM	0:00:01	72	70.4	62.7	72.9	71.4	64.1
1634	2/14/2024	11:27:29 AM	11:27:30 AM	0:00:01	73	71.7	64.3	73.4	72.2	65.1
1635	2/14/2024	11:27:30 AM	11:27:31 AM	0:00:01	72	70.8	62.8	73.4	72.3	63.6
1636	2/14/2024	11:27:31 AM	11:27:32 AM	0:00:01	70.6	69.4	62.2	71.5	70.4	63.4
1637	2/14/2024	11:27:32 AM	11:27:33 AM	0:00:01	71	69.2	62.2	72.5	70.2	62.8
1638	2/14/2024	11:27:33 AM	11:27:34 AM	0:00:01	70.5	68.7	61.9	72	69.9	62.7
1639	2/14/2024	11:27:34 AM	11:27:35 AM	0:00:01	71	69.5	61	72.1	70.6	62.2
1640	2/14/2024	11:27:35 AM	11:27:36 AM	0:00:01	71.3	70	60.4	72.4	71.5	61
1641	2/14/2024	11:27:36 AM	11:27:37 AM	0:00:01	71.7	70.2	60.6	72.6	71.1	61.3
1642	2/14/2024	11:27:37 AM	11:27:38 AM	0:00:01	72.5	71.3	60.8	73.5	72.1	61.1
1643	2/14/2024	11:27:38 AM	11:27:39 AM	0:00:01	71.4	70.3	61.8	72.9	71.7	62.5
1644	2/14/2024	11:27:39 AM	11:27:40 AM	0:00:01	72	70.5	61.5	73	71.4	62.2
1645	2/14/2024	11:27:40 AM	11:27:41 AM	0:00:01	70.6	69.1	61.5	72	70.6	62.3
1646	2/14/2024	11:27:41 AM	11:27:42 AM	0:00:01	72.1	70.1	61.4	74.2	70.9	61.9
1647	2/14/2024	11:27:42 AM	11:27:43 AM	0:00:01	71.4	69.7	60.5	72.6	70.7	62.1
1648	2/14/2024	11:27:43 AM	11:27:44 AM	0:00:01	72.8	70.9	60.2	73.9	71.9	60.8
1649	2/14/2024	11:27:44 AM	11:27:45 AM	0:00:01	72.5	70.3	60.2	74.5	72	60.9
1650	2/14/2024	11:27:45 AM	11:27:46 AM	0:00:01	72.5	70.9	60.6	73.6	71.6	61.4
1651	2/14/2024	11:27:46 AM	11:27:47 AM	0:00:01	72.8	71	61	74.5	72.2	61.6
1652	2/14/2024	11:27:47 AM	11:27:48 AM	0:00:01	71.1	69.6	60.2	73.2	71.5	61.1
1653	2/14/2024	11:27:48 AM	11:27:49 AM	0:00:01	72.4	70.1	60.1	74	70.9	61.1
1654	2/14/2024	11:27:49 AM	11:27:50 AM	0:00:01	72.7	70.8	62	74.7	72	63
1655	2/14/2024	11:27:50 AM	11:27:51 AM	0:00:01	72.7	70.8	62.8	73.7	71.7	63.2
1656	2/14/2024	11:27:51 AM	11:27:52 AM	0:00:01	72	70.5	63.9	73.5	71.4	64.4

1657	2/14/2024	11:27:52 AM	11:27:53 AM	0:00:01	72.5	71	63.7	73.5	71.9	64.1
1658	2/14/2024	11:27:53 AM	11:27:54 AM	0:00:01	71.5	70	62.5	72.2	70.9	63.4
1659	2/14/2024	11:27:54 AM	11:27:55 AM	0:00:01	71.6	69.6	61.9	73.2	71.1	62.8
1660	2/14/2024	11:27:55 AM	11:27:56 AM	0:00:01	72.7	70.3	63.7	73.7	71.3	64.8
1661	2/14/2024	11:27:56 AM	11:27:57 AM	0:00:01	73.5	70.8	63.3	75.2	72.4	64.7
1662	2/14/2024	11:27:57 AM	11:27:58 AM	0:00:01	74	70.8	63.3	76	72.4	63.8
1663	2/14/2024	11:27:58 AM	11:27:59 AM	0:00:01	74.5	70.9	62.4	77.1	72.5	63.3
1664	2/14/2024	11:27:59 AM	11:28:00 AM	0:00:01	73.3	70.4	61.5	75.3	71.8	62.1
1665	2/14/2024	11:28:00 AM	11:28:01 AM	0:00:01	73.5	69.8	61.9	76.8	71.9	62.6
1666	2/14/2024	11:28:01 AM	11:28:02 AM	0:00:01	72	69.2	61.1	72.9	69.7	61.7
1667	2/14/2024	11:28:02 AM	11:28:03 AM	0:00:01	70.7	68.3	60.8	73.1	69.6	61.3
1668	2/14/2024	11:28:03 AM	11:28:04 AM	0:00:01	69.9	67.9	60	71.7	69	61
1669	2/14/2024	11:28:04 AM	11:28:05 AM	0:00:01	69.6	67.6	60	71	68.5	60.5
1670	2/14/2024	11:28:05 AM	11:28:06 AM	0:00:01	69.6	67.7	59.6	70.5	68.6	60.3
1671	2/14/2024	11:28:06 AM	11:28:07 AM	0:00:01	68.9	67.4	59.6	70.6	68.7	60.2
1672	2/14/2024	11:28:07 AM	11:28:08 AM	0:00:01	69	67.7	60.5	71	68.7	61
1673	2/14/2024	11:28:08 AM	11:28:09 AM	0:00:01	68.7	67.4	59.8	69.6	68.2	60.8
1674	2/14/2024	11:28:09 AM	11:28:10 AM	0:00:01	69.6	68.2	59.9	70.4	69.1	60.4
1675	2/14/2024	11:28:10 AM	11:28:11 AM	0:00:01	69.9	68.8	59.9	71.3	70.2	60.8
1676	2/14/2024	11:28:11 AM	11:28:12 AM	0:00:01	70.8	69.9	61.5	72	70.8	61.9
1677	2/14/2024	11:28:12 AM	11:28:13 AM	0:00:01	72.6	71.8	63	73.9	73.1	63.3
1678	2/14/2024	11:28:13 AM	11:28:14 AM	0:00:01	73	72	63.3	73.7	72.6	63.7
1679	2/14/2024	11:28:14 AM	11:28:15 AM	0:00:01	72.7	70.8	61.7	74.3	72.2	63.1
1680	2/14/2024	11:28:15 AM	11:28:16 AM	0:00:01	71.7	70.1	60.3	73.3	70.9	61.1
1681	2/14/2024	11:28:16 AM	11:28:17 AM	0:00:01	71	69	60	72.3	70.3	60.9
1682	2/14/2024	11:28:17 AM	11:28:18 AM	0:00:01	69.6	68.3	61	71.1	69.5	61.8
1683	2/14/2024	11:28:18 AM	11:28:19 AM	0:00:01	70.8	68.7	62.3	71.9	69.6	63.3
1684	2/14/2024	11:28:19 AM	11:28:20 AM	0:00:01	73.6	70	61.6	76	71.7	62.4
1685	2/14/2024	11:28:20 AM	11:28:21 AM	0:00:01	71.3	68.2	60.9	73.4	69.7	61.6
1686	2/14/2024	11:28:21 AM	11:28:22 AM	0:00:01	70.9	68.1	60.6	74.6	70.1	61.1
1687	2/14/2024	11:28:22 AM	11:28:23 AM	0:00:01	71.1	68.4	60.9	72.6	69.8	62.2
1688	2/14/2024	11:28:23 AM	11:28:24 AM	0:00:01	70.2	68.6	60.9	71.3	69.3	61.5
1689	2/14/2024	11:28:24 AM	11:28:25 AM	0:00:01	74.2	70.4	61.3	77.5	72.7	61.9
1690	2/14/2024	11:28:25 AM	11:28:26 AM	0:00:01	72.2	69.8	61.1	73.7	70.8	61.6
1691	2/14/2024	11:28:26 AM	11:28:27 AM	0:00:01	72.6	70	61.9	74.3	71.1	62.6
1692	2/14/2024	11:28:27 AM	11:28:28 AM	0:00:01	72.4	69.9	61.6	74.6	71.4	62.4
1693	2/14/2024	11:28:28 AM	11:28:29 AM	0:00:01	73.3	70.5	62.1	75.7	71.5	62.9
1694	2/14/2024	11:28:29 AM	11:28:30 AM	0:00:01	73.8	71.3	64.3	75.7	72.3	64.8
1695	2/14/2024	11:28:30 AM	11:28:31 AM	0:00:01	74.1	72.2	65.8	75.2	72.9	66.7
1696	2/14/2024	11:28:31 AM	11:28:32 AM	0:00:01	73.3	70.9	63.9	75.1	71.9	64.7
1697	2/14/2024	11:28:32 AM	11:28:33 AM	0:00:01	71.8	69.8	62.9	73.8	71	63.4
1698	2/14/2024	11:28:33 AM	11:28:34 AM	0:00:01	72.6	70.4	63.1	73.9	71.6	63.8
1699	2/14/2024	11:28:34 AM	11:28:35 AM	0:00:01	71.1	69.2	62.7	72.2	70.2	63.7
1700	2/14/2024	11:28:35 AM	11:28:36 AM	0:00:01	70.7	68.8	62.6	72.5	70.1	63.1
1701	2/14/2024	11:28:36 AM	11:28:37 AM	0:00:01	70.5	68.9	62.1	71.6	70	63.3
1702	2/14/2024	11:28:37 AM	11:28:38 AM	0:00:01	71.3	69.5	62	72.5	70.6	62.4
1703	2/14/2024	11:28:38 AM	11:28:39 AM	0:00:01	73	71	62.6	76	72.7	63.4

1704	2/14/2024	11:28:39 AM	11:28:40 AM	0:00:01	71.1	70	61.7	72.6	71.1	62.9
1705	2/14/2024	11:28:40 AM	11:28:41 AM	0:00:01	71.4	69.3	60.9	72.4	70	62.2
1706	2/14/2024	11:28:41 AM	11:28:42 AM	0:00:01	73.7	70.2	60.5	76.3	72.7	61.1
1707	2/14/2024	11:28:42 AM	11:28:43 AM	0:00:01	72.4	69.7	60.2	75.3	71.2	60.9
1708	2/14/2024	11:28:43 AM	11:28:44 AM	0:00:01	70.3	68.3	60.8	71.5	69.9	62.4
1709	2/14/2024	11:28:44 AM	11:28:45 AM	0:00:01	72.5	68.9	59.9	75.9	71	60.2
1710	2/14/2024	11:28:45 AM	11:28:46 AM	0:00:01	71	68.5	60.6	72.9	69.7	61.6
1711	2/14/2024	11:28:46 AM	11:28:47 AM	0:00:01	72.9	70.8	63.2	75.8	72.7	65.3
1712	2/14/2024	11:28:47 AM	11:28:48 AM	0:00:01	72.5	71.2	62.6	73.9	72.4	63.5
1713	2/14/2024	11:28:48 AM	11:28:49 AM	0:00:01	72.7	71	64.3	74.6	72.3	66.3
1714	2/14/2024	11:28:49 AM	11:28:50 AM	0:00:01	72.4	70.9	63.6	74.2	72.8	64.5
1715	2/14/2024	11:28:50 AM	11:28:51 AM	0:00:01	72.7	71.3	63.7	74.4	72.2	65.1
1716	2/14/2024	11:28:51 AM	11:28:52 AM	0:00:01	73.1	71.3	61.6	75.7	73.3	62.5
1717	2/14/2024	11:28:52 AM	11:28:53 AM	0:00:01	71.6	70	61.1	73.2	70.9	62
1718	2/14/2024	11:28:53 AM	11:28:54 AM	0:00:01	71.1	69.7	61.2	72.8	71.3	61.8
1719	2/14/2024	11:28:54 AM	11:28:55 AM	0:00:01	72.1	70.7	62.6	72.8	71.5	62.9
1720	2/14/2024	11:28:55 AM	11:28:56 AM	0:00:01	73.8	72.5	64.8	75.6	73.9	65.7
1721	2/14/2024	11:28:56 AM	11:28:57 AM	0:00:01	72.7	71.3	64.7	76.1	74.3	65.6
1722	2/14/2024	11:28:57 AM	11:28:58 AM	0:00:01	70.5	69.3	62.9	71.5	70.1	64.3
1723	2/14/2024	11:28:58 AM	11:28:59 AM	0:00:01	71.5	68.8	61.5	74.6	70.8	62.2
1724	2/14/2024	11:28:59 AM	11:29:00 AM	0:00:01	71.2	68.9	61.8	73	70.2	62.6
1725	2/14/2024	11:29:00 AM	11:29:01 AM	0:00:01	73.7	69.9	62.7	76.6	71.3	63.1
1726	2/14/2024	11:29:01 AM	11:29:02 AM	0:00:01	76.9	72.6	63.9	82.1	76.4	64.6
1727	2/14/2024	11:29:02 AM	11:29:03 AM	0:00:01	75.8	72.8	65	78.5	75.5	65.6
1728	2/14/2024	11:29:03 AM	11:29:04 AM	0:00:01	73.9	71.5	63.5	75.8	72.9	64.6
1729	2/14/2024	11:29:04 AM	11:29:05 AM	0:00:01	75.1	72.6	61.9	76.5	74.4	63.3
1730	2/14/2024	11:29:05 AM	11:29:06 AM	0:00:01	73.5	70.8	61.1	77.1	73.3	61.6
1731	2/14/2024	11:29:06 AM	11:29:07 AM	0:00:01	73.3	70.4	61	75.3	71.7	61.4
1732	2/14/2024	11:29:07 AM	11:29:08 AM	0:00:01	73.1	69.9	61.3	74.9	70.7	61.7
1733	2/14/2024	11:29:08 AM	11:29:09 AM	0:00:01	71.9	69.2	60.9	75.1	70.8	62
1734	2/14/2024	11:29:09 AM	11:29:10 AM	0:00:01	70.8	68.9	60.4	72.1	69.8	60.9
1735	2/14/2024	11:29:10 AM	11:29:11 AM	0:00:01	72.6	70.1	61.5	75.3	72.2	62.7
1736	2/14/2024	11:29:11 AM	11:29:12 AM	0:00:01	73.5	70.5	61.2	75.6	72.5	61.6
1737	2/14/2024	11:29:12 AM	11:29:13 AM	0:00:01	73.5	70.5	61.5	75.6	71.9	61.9
1738	2/14/2024	11:29:13 AM	11:29:14 AM	0:00:01	71.7	69.3	62.2	74.5	71.5	63.4
1739	2/14/2024	11:29:14 AM	11:29:15 AM	0:00:01	73.1	69.7	61.8	74.2	70.9	63.6
1740	2/14/2024	11:29:15 AM	11:29:16 AM	0:00:01	75	72.4	61.1	80.3	78	62
1741	2/14/2024	11:29:16 AM	11:29:17 AM	0:00:01	72.3	69.2	61.3	74.3	70.6	62.3
1742	2/14/2024	11:29:17 AM	11:29:18 AM	0:00:01	73.3	69.1	60.7	75.1	70.3	61
1743	2/14/2024	11:29:18 AM	11:29:19 AM	0:00:01	69.6	67.6	61.8	73.2	68.9	62.3
1744	2/14/2024	11:29:19 AM	11:29:20 AM	0:00:01	68.7	67.2	61.4	69.9	67.9	62.2
1745	2/14/2024	11:29:20 AM	11:29:21 AM	0:00:01	68.3	66.7	61.5	69.2	67.4	62
1746	2/14/2024	11:29:21 AM	11:29:22 AM	0:00:01	68	67	62.5	68.8	67.6	62.9
1747	2/14/2024	11:29:22 AM	11:29:23 AM	0:00:01	68.4	67.1	61.9	70.4	68.4	62.6
1748	2/14/2024	11:29:23 AM	11:29:24 AM	0:00:01	67.2	66.1	61.3	68	67	61.8
1749	2/14/2024	11:29:24 AM	11:29:25 AM	0:00:01	67.4	66.2	61.7	68	66.8	62.3
1750	2/14/2024	11:29:25 AM	11:29:26 AM	0:00:01	66.9	65.9	62	67.9	66.7	62.7

1751	2/14/2024	11:29:26 AM	11:29:27 AM	0:00:01	66.9	65.6	61.6	67.7	66.2	62.2
1752	2/14/2024	11:29:27 AM	11:29:28 AM	0:00:01	66.2	65.3	61.6	67.2	66.4	62.8
1753	2/14/2024	11:29:28 AM	11:29:29 AM	0:00:01	65.5	64.1	60.1	66.3	64.8	60.6
1754	2/14/2024	11:29:29 AM	11:29:30 AM	0:00:01	66.3	65.4	61.9	66.8	65.8	62.5
1755	2/14/2024	11:29:30 AM	11:29:31 AM	0:00:01	65.5	64.7	61.4	66.4	65.5	62.1
1756	2/14/2024	11:29:31 AM	11:29:32 AM	0:00:01	65.8	64.9	61	66.5	65.5	61.8
1757	2/14/2024	11:29:32 AM	11:29:33 AM	0:00:01	66.4	65.5	61.4	67.6	66.2	61.9
1758	2/14/2024	11:29:33 AM	11:29:34 AM	0:00:01	67.6	66.8	62.2	68.3	67.5	62.6
1759	2/14/2024	11:29:34 AM	11:29:35 AM	0:00:01	68.2	67.2	62.6	68.8	67.8	63.2
1760	2/14/2024	11:29:35 AM	11:29:36 AM	0:00:01	68.5	67.7	63.2	69.4	68.4	63.7
1761	2/14/2024	11:29:36 AM	11:29:37 AM	0:00:01	67.4	66.5	62.3	68.7	67.4	63.6
1762	2/14/2024	11:29:37 AM	11:29:38 AM	0:00:01	66.3	65.5	61.3	67.4	66.5	62.2
1763	2/14/2024	11:29:38 AM	11:29:39 AM	0:00:01	65.5	64.6	60.8	66.3	65.4	61.4
1764	2/14/2024	11:29:39 AM	11:29:40 AM	0:00:01	64.8	63.9	60.4	66	65.1	61.5
1765	2/14/2024	11:29:40 AM	11:29:41 AM	0:00:01	64.7	63.5	58.5	65.6	64.3	59.8
1766	2/14/2024	11:29:41 AM	11:29:42 AM	0:00:01	63.4	62.5	58.3	65	64	59
1767	2/14/2024	11:29:42 AM	11:29:43 AM	0:00:01	63.8	62.7	58.2	64.4	63.2	58.7
1768	2/14/2024	11:29:43 AM	11:29:44 AM	0:00:01	64.2	63.1	57.8	65	64	58.5
1769	2/14/2024	11:29:44 AM	11:29:45 AM	0:00:01	63.6	62.6	57.1	64.4	63.4	57.8
1770	2/14/2024	11:29:45 AM	11:29:46 AM	0:00:01	64.1	62.7	56.7	65.3	63.8	57.2
1771	2/14/2024	11:29:46 AM	11:29:47 AM	0:00:01	64.5	63.4	56.3	65.8	64.7	57.2
1772	2/14/2024	11:29:47 AM	11:29:48 AM	0:00:01	64.6	63.5	57.1	65.6	64.6	57.9
1773	2/14/2024	11:29:48 AM	11:29:49 AM	0:00:01	65.9	65	57.2	67.7	66.6	57.8
1774	2/14/2024	11:29:49 AM	11:29:50 AM	0:00:01	66.5	65.2	57.6	67.9	66.8	58
1775	2/14/2024	11:29:50 AM	11:29:51 AM	0:00:01	65.7	64.4	58.1	67	65.8	58.6
1776	2/14/2024	11:29:51 AM	11:29:52 AM	0:00:01	67.7	65.2	58.7	69	65.8	59.5
1777	2/14/2024	11:29:52 AM	11:29:53 AM	0:00:01	65.9	64.7	59.4	68.4	65.5	59.8
1778	2/14/2024	11:29:53 AM	11:29:54 AM	0:00:01	66.2	64.4	58.7	66.9	65.2	60
1779	2/14/2024	11:29:54 AM	11:29:55 AM	0:00:01	66.5	65.2	60	67.6	66.2	62
1780	2/14/2024	11:29:55 AM	11:29:56 AM	0:00:01	67.7	66.6	61.1	68.5	67.1	62.1
1781	2/14/2024	11:29:56 AM	11:29:57 AM	0:00:01	67	66.1	60.2	67.7	66.7	60.6
1782	2/14/2024	11:29:57 AM	11:29:58 AM	0:00:01	67.2	66.2	60.2	68.5	67.2	61.4
1783	2/14/2024	11:29:58 AM	11:29:59 AM	0:00:01	66.5	65.6	59.3	67.7	66.7	60.3
1784	2/14/2024	11:29:59 AM	11:30:00 AM	0:00:01	67	66.2	60.4	67.7	66.9	61.2
1785	2/14/2024	11:30:00 AM	11:30:01 AM	0:00:01	67.4	66.3	60.3	68.3	67.1	60.8
1786	2/14/2024	11:30:01 AM	11:30:02 AM	0:00:01	68	67	61.2	69	68	62
1787	2/14/2024	11:30:02 AM	11:30:03 AM	0:00:01	67	65.9	60.9	67.9	66.7	61.6
1788	2/14/2024	11:30:03 AM	11:30:04 AM	0:00:01	67.6	66.5	60	68.5	67.6	60.9
1789	2/14/2024	11:30:04 AM	11:30:05 AM	0:00:01	68.1	66.9	60.1	69.1	67.9	60.6
1790	2/14/2024	11:30:05 AM	11:30:06 AM	0:00:01	68.4	67	60.6	69.5	68.4	61.3
1791	2/14/2024	11:30:06 AM	11:30:07 AM	0:00:01	68.8	67.1	60.7	70.9	68.8	61.4
1792	2/14/2024	11:30:07 AM	11:30:08 AM	0:00:01	68.4	67.1	60.3	69.6	68.1	61.4
1793	2/14/2024	11:30:08 AM	11:30:09 AM	0:00:01	68.6	67.1	60.9	69.9	68.2	61.1
1794	2/14/2024	11:30:09 AM	11:30:10 AM	0:00:01	69.4	67	60.5	71	68	61
1795	2/14/2024	11:30:10 AM	11:30:11 AM	0:00:01	70.4	68.8	62.2	73	70	62.8
1796	2/14/2024	11:30:11 AM	11:30:12 AM	0:00:01	69.4	68	62.1	70.7	69.3	62.5
1797	2/14/2024	11:30:12 AM	11:30:13 AM	0:00:01	70	69.1	62.2	70.9	70	62.7

1798	2/14/2024	11:30:13 AM	11:30:14 AM	0:00:01	69.1	68.1	60.8	70.7	70	61.5
1799	2/14/2024	11:30:14 AM	11:30:15 AM	0:00:01	68.2	66.7	60.4	69.6	67.6	61
1800	2/14/2024	11:30:15 AM	11:30:16 AM	0:00:01	69.8	68.7	60.7	72.4	71.2	61.9
1801	2/14/2024	11:30:16 AM	11:30:17 AM	0:00:01	69.9	69.1	61.8	72.3	71.3	62.1
1802	2/14/2024	11:30:17 AM	11:30:18 AM	0:00:01	70.9	69.9	63.1	72	71.2	63.4
1803	2/14/2024	11:30:18 AM	11:30:19 AM	0:00:01	69.9	68.4	61	70.7	69.5	62.7
1804	2/14/2024	11:30:19 AM	11:30:20 AM	0:00:01	68.7	67.3	59.6	70.2	68.8	60.4
1805	2/14/2024	11:30:20 AM	11:30:21 AM	0:00:01	67.7	66.7	58.7	68.8	67.8	59.2
1806	2/14/2024	11:30:21 AM	11:30:22 AM	0:00:01	67	65.9	58.2	69	68	59.3
1807	2/14/2024	11:30:22 AM	11:30:23 AM	0:00:01	66.3	65.1	57.5	67.3	65.7	58.1
1808	2/14/2024	11:30:23 AM	11:30:24 AM	0:00:01	66.2	65	57.4	67.1	66	57.9
1809	2/14/2024	11:30:24 AM	11:30:25 AM	0:00:01	66.9	65.8	57.4	68.2	67.3	58.1
1810	2/14/2024	11:30:25 AM	11:30:26 AM	0:00:01	67	65.8	58.6	67.9	66.7	59.3
1811	2/14/2024	11:30:26 AM	11:30:27 AM	0:00:01	67.5	66.2	59.2	69.1	67.3	60
1812	2/14/2024	11:30:27 AM	11:30:28 AM	0:00:01	68.3	66.6	59	69.4	68	59.6
1813	2/14/2024	11:30:28 AM	11:30:29 AM	0:00:01	69.3	66.7	58.7	71.4	68.9	59.3
1814	2/14/2024	11:30:29 AM	11:30:30 AM	0:00:01	67.7	66	59.1	69.3	67.2	59.7
1815	2/14/2024	11:30:30 AM	11:30:31 AM	0:00:01	68.1	66.3	60.2	69.2	67.3	61
1816	2/14/2024	11:30:31 AM	11:30:32 AM	0:00:01	70.4	69.1	60.6	71.9	70.7	61.4
1817	2/14/2024	11:30:32 AM	11:30:33 AM	0:00:01	71.1	69.5	61	72.4	71	61.9
1818	2/14/2024	11:30:33 AM	11:30:34 AM	0:00:01	71.3	69.7	61.1	72.2	70.8	61.5
1819	2/14/2024	11:30:34 AM	11:30:35 AM	0:00:01	71.7	70.1	61.9	73.1	71.5	63.1
1820	2/14/2024	11:30:35 AM	11:30:36 AM	0:00:01	71.9	69.9	62	73.6	71.1	62.9
1821	2/14/2024	11:30:36 AM	11:30:37 AM	0:00:01	71.5	69.8	62.2	72.3	70.8	62.7
1822	2/14/2024	11:30:37 AM	11:30:38 AM	0:00:01	72.7	70.7	62.4	73.8	71.6	63.3
1823	2/14/2024	11:30:38 AM	11:30:39 AM	0:00:01	74.2	72.7	62.9	75.7	73.3	63.5
1824	2/14/2024	11:30:39 AM	11:30:40 AM	0:00:01	74.4	73.6	63.9	76	74.9	64.8
1825	2/14/2024	11:30:40 AM	11:30:41 AM	0:00:01	76.2	75.7	64.9	77.2	76.8	65.5
1826	2/14/2024	11:30:41 AM	11:30:42 AM	0:00:01	76.8	76.3	64.9	77.7	77.3	65.5
1827	2/14/2024	11:30:42 AM	11:30:43 AM	0:00:01	78.5	78.2	66.3	79.5	79.2	66.8
1828	2/14/2024	11:30:43 AM	11:30:44 AM	0:00:01	80.7	80.4	67.2	81.3	81	67.6
1829	2/14/2024	11:30:44 AM	11:30:45 AM	0:00:01	80	79.6	65.3	80.9	80.6	67
1830	2/14/2024	11:30:45 AM	11:30:46 AM	0:00:01	73.5	72.5	61.1	78.3	77.8	63.2
1831	2/14/2024	11:30:46 AM	11:30:47 AM	0:00:01	72.7	71.6	61.1	73.6	72.2	61.7
1832	2/14/2024	11:30:47 AM	11:30:48 AM	0:00:01	73.8	71.7	61	77.5	74.3	61.4
1833	2/14/2024	11:30:48 AM	11:30:49 AM	0:00:01	72.5	71.2	60.9	73.5	72.1	61.6
1834	2/14/2024	11:30:48 AM	11:30:49 AM	0:00:01	73.6	72.4	61	74.4	73.2	61.4

LT1

Number	Start Date	Start Time	End Time	Duration	LZeq	LCeq	LAeq	LZFmax
1835	2/14/2024	11:32:26 AM	12:00:00 PM	0:27:34	70.2	68.6	63.3	91.3
1836	2/14/2024	12:00:00 PM	1:00:00 PM	1:00:00	69.6	67.5	55.4	87
1837	2/14/2024	1:00:00 PM	2:00:00 PM	1:00:00	74.9	71.2	56.8	95.5
1838	2/14/2024	2:00:00 PM	3:00:00 PM	1:00:00	78.9	74.8	58.7	98
1839	2/14/2024	3:00:00 PM	4:00:00 PM	1:00:00	72.5	69.4	57.8	91.5
1840	2/14/2024	4:00:00 PM	5:00:00 PM	1:00:00	71.2	69	58.4	89.5
1841	2/14/2024	5:00:00 PM	6:00:00 PM	1:00:00	68.2	67.2	57	82.8
1842	2/14/2024	6:00:00 PM	7:00:00 PM	1:00:00	69.1	68.1	60.1	87.5
1843	2/14/2024	7:00:00 PM	8:00:00 PM	1:00:00	69.2	68.1	61.6	80
1844	2/14/2024	8:00:00 PM	9:00:00 PM	1:00:00	68.8	67.7	60.6	81.7
1845	2/14/2024	9:00:00 PM	10:00:00 PM	1:00:00	68.7	67.4	60	82.6
1846	2/14/2024	10:00:00 PM	11:00:00 PM	1:00:00	68.8	67.3	60.2	86.3
1847	2/14/2024	11:00:00 PM	12:00:00 AM	1:00:00	66.8	65.2	57.9	79.9
1848	2/15/2024	12:00:00 AM	1:00:00 AM	1:00:00	65.9	64.4	57.3	83.4
1849	2/15/2024	1:00:00 AM	2:00:00 AM	1:00:00	65.6	63.4	54.7	78
1850	2/15/2024	2:00:00 AM	3:00:00 AM	1:00:00	65.6	64	55.8	77.1
1851	2/15/2024	3:00:00 AM	4:00:00 AM	1:00:00	66.5	64.9	57.2	78.6
1852	2/15/2024	4:00:00 AM	5:00:00 AM	1:00:00	69.2	68	59.7	81.2
1853	2/15/2024	5:00:00 AM	6:00:00 AM	1:00:00	70.5	69.5	60	85.4
1854	2/15/2024	6:00:00 AM	7:00:00 AM	1:00:00	71.1	69.9	60.6	85.1
1855	2/15/2024	7:00:00 AM	8:00:00 AM	1:00:00	70.1	68.8	58.1	86.6
1856	2/15/2024	8:00:00 AM	9:00:00 AM	1:00:00	69.5	68.2	57.1	82.9
1857	2/15/2024	9:00:00 AM	10:00:00 AM	1:00:00	68.6	67	55.7	85.7
1858	2/15/2024	10:00:00 AM	11:00:00 AM	1:00:00	68	66.3	55.5	86.3
1859	2/15/2024	11:00:00 AM	12:00:00 PM	1:00:00	68.9	66.5	54.1	91.5
1860	2/15/2024	11:59:59 AM	12:26:58 PM	0:26:59	70.7	67.3	57.6	104.6

Existing Speaker

Number	Start Date	Start Time	End Time	Duration	LZeq	LCeq	LAeq	LZFmax
1	5/21/2024	10:06:34 AM	10:06:35 AM	0:00:01	64.6	63.5	61.9	67.5
2	5/21/2024	10:06:35 AM	10:06:36 AM	0:00:01	64.4	63.4	62.3	68
3	5/21/2024	10:06:36 AM	10:06:37 AM	0:00:01	62	59.9	50.8	63.8
4	5/21/2024	10:06:37 AM	10:06:38 AM	0:00:01	66	64.9	62.5	67.4
5	5/21/2024	10:06:38 AM	10:06:39 AM	0:00:01	64.3	63.6	61.6	67.3
6	5/21/2024	10:06:39 AM	10:06:40 AM	0:00:01	63.1	61.7	57.9	65

Appendix B

HVAC Specifications

Carrier

Turn to the experts

Product Data

WeatherMaster® Single Packaged Rooftop Heat Pump Units

3 to 10 Nominal Tons

WeatherMaster®

50HCQ 04, 05, 06, 07, 08, 09, 12
with Puron® (R-410) Refrigerant

Form 50HCQ-4-12-07PD Rev. A

Features/Benefits

Carrier WeatherMaster® 3 to 10 Ton rooftop unit (RTU) was designed by customers for customers. With "no-strip" screw collars, handled access panels, and more we've made your unit easy to install, easy to maintain, easy to use and reliable.

Easy to install:

All WeatherMaster® units are field-convertible to horizontal air flow; no special kit required on 04-09 models. Supply duct kit required for size 12 only. Convertible airflow design makes it easy to adjust to unexpected job site complications. Lighter units make easy replacement. Carrier 3 to 10 ton 50HCQ rooftops fit on existing Carrier curbs dating back to 1989. Also, our large control box gives you room to work and room to mount Carrier accessory controls.

Easy to maintain:

Easy access handles by Carrier provide quick and easy access to all normally serviced components. Our "no-strip" screw system has superior holding power and guides screws into position while preventing the screw from stripping the unit's metal.

Easy to use:

The central terminal board puts all your connections and troubleshooting points in one convenient place, standard. Most low voltage connections are made to the same board and make it easy to find what you're looking for and easy to access it.

Reliable:

Each unit comes with precision sized and tested scroll compressor that is internally protected from over temperature and pressures. Each refrigerant circuit is further protected with a high pressure, loss of charge and freeze protection switch. In addition, a liquid line filter drier and suction line accumulator protects each circuit. Each unit is factory tested prior to shipment to help ensure units operation once properly installed.

Key features:

Key features are:

- Up to 28% lighter than similar industry units. Lighter rooftops make easier replacement jobs.
- SEER up to 15.8, EER up to 12.8.
- IEER up to 14.0 with single speed indoor fan motor and up to 15.6 with 2-speed/VFD indoor fan motor.
- 3 to 10 ton units fit on existing Carrier rooftop curbs which saves time and money on replacement jobs.
- Standardized components and layout. Standardized components and controls make service and stocking parts easier.
- Scroll compressors on all units. This makes service, stocking parts, replacement, and troubleshooting easier.
- Crankcase heater on all models (except 04 size) provides added protection in all applications.
- Precision-sized refrigerant suction line accumulator provides high reliability by preventing liquid from entering the compressor during low ambient conditions and reverse cycle switch over.
- Field convertible from vertical to horizontal airflow on all models. No special kits required on 04 to 09 models. Supply duct kit required for 12 size model only.
- 4-way reversing valve rapidly changes the flow of refrigerant to quickly changeover from cooling to heating and heating to cooling.
- Easy-adjust, belt drive motor available on all sizes. Carrier provides a factory-solution for most points in the fan performance table. There's no need for field-supplied drives or motors.
- 3-5 ton models come standard with a Direct Drive X13, 5 speed/torque motor to provide exact performance in many applications. Belt drive motor optional on all three phase voltage models.
- Provisions for bottom or side condensate drain.
- Capable of thru-the-base or thru-the-curb electrical routing.
- Dependable time/temperature defrost logic provides a defrost cycle, if needed, every 30, 60, 90 or 120 minutes and is adjustable.
- Single-point electrical connection.
- Sloped, composite drain pan sheds water; and won't rust.
- Standardized controls and control box layout. Standardized components and controls make stocking parts and service easier.
- Clean, large, easy to use control box.
- Standard coils are copper round tube, aluminum plate fin with optional coil coatings and copper fin design.
- Large, laminated wiring and power wiring drawings which are affixed to unit make troubleshooting easy.
- Single, central terminal board for test and wiring connections.
- Fast-access, handled, panels for easy access to the blower and blower motor, control box, and compressors.
- "No-strip" screw system guides screws into the panel and captures them tightly without stripping the screw, the panel, or the unit.
- Exclusive, newly-designed indoor refrigerant header for easier maintenance and replacement.
- Standard mechanical cooling (125°F to 30°F or 52°C to –1°C).
- 2-in. (51mm) disposable filters on all units.
- High capacity refrigerant filter drier and TXV metering device on each circuit.
- High pressure switch, loss of charge switch and freeze protection adds greater unit reliability.
- Optional Staged Air Volume (SAV™) system utilizes a Variable Frequency Drive (VFD) to automatically adjust the indoor fan motor speed between cooling stages. Available on 2-stage cooling model sizes 07 to 12 with electro-mechanical controls or RTU Open controller.

Table of contents

Model number nomenclature

50HCQ MODEL NUMBER NOMENCLATURE (EXAMPLE)

Position:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Example:	5	0	H	C	Q	A	0	6	A	0	A	6	–	0	B	2	A	0

Series - WeatherMaster®
50HC - Packaged Rooftop - High Efficiency

Q = Heat Pump

Refrig. Systems Options
A = One Stage Cooling Models
D = Two Stage Cooling Models

Cooling Tons
04 - 3 ton
05 - 4 ton
06 - 5 ton
07 - 6 ton
08 - 7.5 ton
09 - 8.5 ton
12 - 10 ton

Sensor Options
A = None
B = RA Smoke Detector
C = SA Smoke Detector
D = RA + SA Smoke Detector
E = CO_2
F = RA Smoke Detector and CO_2
G = SA Smoke Detector and CO_2
H = RA + SA Smoke Detector and CO_2
J = Condensate Overflow Switch
K = Condensate Overflow Switch and RA Smoke Detectors
L = Condensate Overflow Switch and RA + SA Smoke Detectors

Indoor Fan Options
0 = Electric Drive X13 Motor (04-06)
1 = Standard Static Option - Belt Drive
2 = Medium Static Option - Belt Drive
3 = High Static Option - Belt Drive
C = High Static Option with High Efficiency Motor- Belt Drive (size 12 only)

Coil Options - Round Tube/Plate Fin Condenser Coil (Outdoor - Indoor - Hail Guard)
A = Al/Cu - Al/Cu
B = Precoat Al/Cu - Al/Cu
C = E-coat Al/Cu - Al/Cu
D = E-coat Al/Cu - E-coat Al/Cu
E = Cu/Cu - Al/Cu
F = Cu/Cu - Cu/Cu
M = Al/Cu -Al/Cu — Louvered Hail Guard
N = Precoat Al/Cu - Al/Cu — Louvered Hail Guard
P = E-coat Al/Cu - Al/Cu — Louvered Hail Guard
Q = E-coat Al/Cu - E-coat Al/Cu — Louvered Hail Guard
R = Cu/Cu - Al/Cu — Louvered Hail Guard
S = Cu/Cu - Cu/Cu — Louvered Hail Guard

NOTE: On single phase (-3 voltage code) models, the following are not available as a factory-installed option:
- Coated Coils or Cu Fin Coils
- Louvered Hail Guards
- Economizer or 2 Position Damper
- Powered 115 Volt Convenience Outlet

Factory Assigned
0 = Standard
1 = LTL
2 = California Seismic Compliant - OSHPD
1 = California Seismic Compliant - OSHPD plus LTL

Electrical Options
A = None
C = Non-Fused Disconnect
D = Thru-The-Base Connections
F = Non-Fused Disconnect and Thru-The-Base Connections
G = 2-Speed Indoor Fan Controller (VFD)
J = 2-Speed Indoor Fan Controller (VFD) and Non-Fused Disconnect
K = 2-Speed Indoor Fan Controller (VFD) and Thru-The-Base Connections
M = 2-Speed Indoor Fan Controller (VFD) with Non-Fused Disconnect and Thru-The-Base Connections

Service Options
0 = None
1 = Unpowered Convenience Outlet
2 = Powered Convenience Outlet
3 = Hinged Access Panels
4 = Hinged Access Panels and Unpowered Convenience Outlet
5 = Hinged Panels and Powered Convenience Outlet

Intake / Exhaust Options
A = None
B = Temperature Economizer w/ Barometric Relief
F = Enthalpy Economizer w/ Barometric Relief
K = 2-Position Damper
U = Temperature Ultra Low Leak Economizer w/ Barometric Relief
W = Enthalpy Ultra Low Leak Economizer w/ Barometric Relief

Base Unit Controls
0 = Electro-mechanical Controls can be used with W7212 EconoMi$er® IV (Non-Fault Detection and Diagnostic
1 = PremierLink™ Controller
2 = RTU Open Multi-Protocol Controller
6 = Electro-mechanical w/ 2-speed fan and W7220 Economizer controller Controls. Can be used with W7220 EconoMi$er X (with Fault Detection and Diagnostic)

Design Revision
– = Factory Design Revision

Voltage
1 = 575/3/60
3 = 208-230/1/60
5 = 208-230/3/60
6 = 460/3/60

Capacity ratings

AHRI COOLING RATINGS

50HCQ UNIT	COOLING STAGES	NOM. CAPACITY (TONS)	NET COOLING CAPACITY (MBH)	TOTAL POWER (kW)	SEER	EER	IEER
A04	1	3.0	36,400	2.8	15.60	12.70	N/A
A05	1	4.0	47,000	3.6	15.80	12.80	N/A
A06	1	5.0	58,500	4.6	15.00	11.70	N/A
A07	1	6.0	72,000	6.0	N/A	12.00	12.8

50HCQ UNIT	COOLING STAGES	NOM. CAPACITY (TONS)	NET COOLING CAPACITY (MBH)	TOTAL POWER (kW)	SEER	EER	IEER WITH SINGLE SPEED INDOOR FAN MOTOR	IEER WITH 2-SPEED INDOOR FAN MOTOR
D07	2	6.0	70,000	5.8	N/A	12.00	14.0	15.6
D08	2	7.5	90,000	7.4	N/A	12.10	12.8	13.7
D09	2	8.5	100,000	8.3	N/A	12.00	12.5	12.9
D12	2	10.0	119,000	9.6	N/A	12.30	13.0	13.6

HEATING RATINGS

50HCQ UNIT	HSPF	HEATING, LOW AT 17°F (-8°C) AMBIENT		HEATING, HIGH AT 47°F (8°C) AMBIENT	
		Capacity (BTUH)	COP	Capacity (BTUH)	COP
A04	8.00	18,400	N/A	34,000	N/A
A05	8.10	23,800	N/A	46,000	N/A
A06	8.20	28,600	N/A	55,000	N/A
A07	N/A	39,000	2.40	70,000	3.40
D07	N/A	38,000	2.40	69,000	3.40
D08	N/A	47,000	2.40	84,000	3.50
D09	N/A	56,000	2.26	100,000	3.40
D12	N/A	65,000	2.40	116,000	3.50

LEGEND

AHRI — Air-Conditioning, Heating and Refrigeration Institute
ASHRAE — American Society of Heating, Refrigerating and Air-Conditioning Engineers
COP — Coefficient of Performance
EER — Energy Efficiency Ratio
HSPF — Heating Seasonal Performance Factor
IECC — International Energy Conservation Code
IEER — Integrated Energy Efficiency Ratio
N/A — Not applicable
SEER — Seasonal Energy Efficiency Ratio

NOTES:

1. Rated and certified under AHRI Standard 210/240 or 340/360, as appropriate.
2. Ratings are based on:
   Cooling Standard: 80°F (27°C) db, 67°F (19°C) wb indoor air temp and 95°F db outdoor air temp.
   IEER Standard: A measure that expresses cooling partload EER efficiency for commercial unitary air conditioning and heat pump equipment on the basis of weighted operation at variable load capacities.
3. All 50HCQ units comply with ASHRAE 90.1-2016, DOE-2018 and IECC[1] 2015 minimum efficiency requirements when equipped with the SAV (staged air volume) option.

AHRI CERTIFIED™ www.ahridirectory.org
Unitary Small AC
AHRI Standard 210/240
Certification applies only when the complete system is listed with AHRI.

1. IECC is a registered trademark of International Code Council, Inc.

MINIMUM - MAXIMUM AIRFLOWS (CFM) COOLING AND ELECTRIC HEAT

UNIT	COOLING			ELECTRIC HEATERS		
	Minimum CFM	Minimum CFM 2-Speed Fan Motor (at High Speed)	Minimum CFM 2-Speed Fan Motor (at Low Speed)	Maximum CFM	Minimum CFM	Maximum CFM
50HCQA04	900	N/A	N/A	1500	900	1500
50HCQA05	1200	N/A	N/A	2000	1200	2000
50HCQA06	1500	N/A	N/A	2500	1500	2500
50HCQA07	1800	N/A	N/A	3000	1800	3000
50HCQD07	1800	1800	1200	3000	1800	3000
50HCQD08	2250	2250	1500	3750	2250*	3750
50HCQD09	2550	2873	1915	4250	2252*	4250
50HCQD12	3000	3380	2253	5000	3000*	5000

* Minimum electric heat CFM exceptions:

UNIT	UNIT VOLTAGE	HEATER kW	UNIT CONFIGURATION	REQUIRED MINIMUM CFM
50HCQD08 50HCQD09	575	17.0	Horizontal or Vertical	2800
		34.0		2350
50HCQD12	230	50.0	Vertical	3550
		50.0	Horizontal	3420
		43.5	Horizontal or Vertical	3040
	575	50.0	Vertical	3150
		33.5	Vertical	3520
		33.5	Horizontal	3420
		26.5	Vertical	3610

SOUND PERFORMANCE

50HCQ UNIT	OUTDOOR SOUND (dB) AT 60 Hz								
	A-Weighted	63	125	250	500	1000	2000	4000	8000
A04	76	51.8	69.0	64.6	67.8	70.7	63.8	60.9	59.0
A05	79	56.1	69.6	68.7	72.5	72.8	68.9	65.0	61.2
A06	79	57.7	66.6	68.7	72.9	74.5	71.1	67.6	62.6
A07	81	86.7	82.7	79.1	78.4	75.4	71.2	67.8	62.9
D07	81	86.7	82.7	79.1	78.4	75.4	71.2	67.8	62.9
D08	83	87.3	81.6	79.7	80.6	79.0	73.5	69.2	66.1
D09	87	61.7	74.7	77.4	82.6	84.9	81.9	78.8	75.9
D12	83	61.0	67.3	75.1	77.7	78.1	75.5	71.2	66.7

LEGEND

dB —Decibel

NOTES:

1. Outdoor sound data is measure in accordance with AHRI standard 270.
2. Measurements are expressed in terms of sound power. Do not compare these values to sound pressure values because sound pressure depends on specific environmental factors which normally do not match individual applications. Sound power values are independent of the environment and therefore more accurate.
3. A-weighted sound ratings filter out very high and very low frequencies, to better approximate the response of “average” human ear. A-weighted measurements for Carrier units are taken in accordance with AHRI standard 270.

Physical data

PHYSICAL DATA (COOLING) — 3-6 TONS

		50HCQA04	50HCQA05	50HCQA06	50HCQA07	50HCQD07
REFRIGERATION SYSTEM						
# Circuits / # Comp. / Type		1 / 1 / Scroll	1 / 1 / Scroll	1 / 1 / 1-Stage Scroll	1 / 1 / 1-Stage Scroll	1 / 1 / 2-Stage Scroll
Puron® (R-410A) Refrigerant Charge per circuit A/B (lbs-oz)		12 - 8 / -	15 - 8 / -	17 - 8 / -	15 - 8/ -	18 - 8 / -
Metering device		TXV	TXV	TXV	TXV	TXV
High-press. Trip / Reset (psig)		630 / 505	630 / 505	630 / 505	630 / 505	630 / 505
Loss of Charge Press. Trip / Reset (psig)		27 / 44	27 / 44	27 / 44	27 / 44	27 / 44
EVAP. COIL						
Material - Tube / Fin		Cu / Al	Cu / Al	Cu / Al	Cu / Al	Cu / Al
Coil Type (Tube Dia.)		3/8-in. RTPF	3/8-in. RTPF	3/8-in. RTPF	3/8-in. RTPF	3/8-in. RTPF
Rows / FPI		3 / 15	3 / 15	3 / 15	3 / 15	3 / 15
Total face area (ft^2)		5.5	7.3	7.3	8.9	8.9
Condensate drain conn. size		3/4-in.	3/4-in.	3/4-in.	3/4-in.	3/4-in.
EVAPORATOR FAN AND MOTOR						
Standard Static 1-Phase	Motor Qty. / Driver Type	1 / Direct	1 / Direct	1 / Direct	—	—
	Max BHP	1.0	1.0	1.0	—	—
	RPM range	600-1200	600-1200	600-1200	—	—
	Motor frame size	48	48	48	—	—
	Fan Qty. / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	—	—
	Fan Dia. x Length (in.)	10 x 10	10 x 10	10 x 11	—	—
Standard Static 3-Phase	Motor Qty. / Driver Type	1 / Direct	1 / Direct	1 / Direct	1 / Belt	1 / Belt
	Max BHP	1.0	1.0	1.0	1.2	1.2
	RPM range	600-1200	600-1200	600-1200	489-747	489-652
	Motor frame size	48	48	48	56	56
	Fan Qty. / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Dia. x Length (in.)	10 x 10	10 x 10	11 x 10	15 x 15	15 x 15
Medium Static 3-Phase	Motor Qty. / Driver Type	1 / Belt	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	1.5	1.5	2.0	2.9	2.9
	RPM range	819-1251	920-1303	1066-1380	733-949	591-838
	Motor frame size	56	56	56	56	56
	Fan Qty. / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Dia. x Length (in.)	10 x 10	10 x 10	10 x 10	15 x 15	15 x 15
High Static 3-Phase	Motor Qty. / Driver Type	1 / Belt	1 / Belt	1 / Belt	1 / Belt	1 / Belt
	Max BHP	2.0	2.0	2.9	4.0	2.9
	RPM range	1035-1466	1035-1466	1208-1550	909-1102	838-1084
	Motor frame size	56	56	56	45	145
	Fan Qty. / Type	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
	Fan Dia. x Length (in.)	10 x 10	10 x 10	10 x 10	15 x 15	15 x 15
CONDENSER COIL						
Material (Tube/Fin)		Cu / Al	Cu / Al	Cu / Al	Cu / Al	Cu / Al
Coil type		3/8-in RTPF	3/8-in RTPF	3/8-in RTPF	3/8-in RTPF	3/8-in RTPF
Rows / FPI		2 / 17	2 / 17	2 / 17	2 / 17	2 / 17
Total Face Area (ft^2)		16.5	21.3	21.3	20.5	20.5
COND. FAN / MOTOR						
Qty / Motor Drive Type		1 / direct	1 / direct	1 / direct	2 / direct	2 / direct
Motor HP / RPM		1/8 / 825	1/4 / 1100	1/4 / 1100	1/4 / 1100	1/4 / 1100
Fan diameter (in.)		22	22	22	22	22
FILTERS						
RA Filter # / Size (in.)		2 / 16 x 25 x 2	4 / 16 x 16 x 2	4 / 16 x 16 x 2	4 / 16 x 20 x 2	4 / 16 x 20 x 2
OA inlet screen # / Size (in.)		1 / 20 x 24 x 1	1 / 20 x 24 x 1	1 / 20 x 24 x 1	1 / 20 x 36 x 1	1 / 20 x 36 x 1

PHYSICAL DATA (COOLING) — 7.5-10 TONS

		50HCQD08	50HCQD09	50HCQD12
REFRIGERATION SYSTEM				
# Circuits / # Comp. / Type		2 / 2 / Scroll	2 / 2 / Scroll	2 / 2 / Scroll
Puron® (R-410A) Refrigerant Charge per circuit A/B (lbs-oz)		11 - 12 / 11 - 12	14-1/14-4	16-3/17-3
Metering device		TXV	TXV	TXV
High-press. Trip / Reset (psig)		630 / 505	630 / 505	630 / 505
Loss of Charge Press. Trip / Reset (psig)		27 / 44	27 / 44	27 / 44
EVAP. COIL		50 / 100	50 / 100	50 / 100
Material - Tube / Fin				
Coil Type (Tube Dia.)		Cu / Al	Cu / Al	Cu / Al
Rows / FPI		3/8-in. RTPF	3/8-in. RTPF	3/8-in. RTPF
Total face area (ft²)		4 / 15	4 / 15	3 / 15
Condensate drain conn. size		11.1	11.1	17.3
EVAPORATOR FAN AND MOTOR		3/4-in.	3/4-in.	3/4-in.
Standard Static 1-Phase	Motor Qty. / Driver Type			
	Max BHP	1 / Belt	1 / Belt	1 / Belt
	RPM range	1.2	1.7	1.9
	Motor frame size	518-733	460-652	440-609
	Fan Qty. / Type	56	56	56
	Fan Dia. x Length (in.)	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
Standard Static 3-Phase	Motor Qty. / Driver Type	15 x 15	15 x 15	18 x 18
	Max BHP	1 / Belt	1 / Belt	1 / Belt
	RPM range	1.7	2.9	2.9
	Motor frame size	690-936	591-838	547-757
	Fan Qty. / Type	56	56	56
	Fan Dia. x Length (in.)	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
Medium Static 3-Phase	Motor Qty. / Driver Type	15 X 15	15 X 15	18 x 18
	Max BHP	1 / Belt	1 / Belt	1 / Belt
	RPM range	2.8	2.8	6.1
	Motor frame size	838-1084	838-1084	762-963
	Fan Qty. / Type	56	56	S184T
	Fan Dia. x Length (in.)	1 / Centrifugal	1 / Centrifugal	1 / Centrifugal
High Static 3-Phase	Motor Qty. / Driver Type	15 X 15	15 X 15	18 x 18
	Max BHP	—	—	1 / Belt
	RPM range	—	—	6.5/6.9/7.0/8.3*
	Motor frame size	—	—	762-963
	Fan Qty. / Type	—	—	S184T
	Fan Dia. x Length (in.)	—	—	1 / Centrifugal
CONDENSER COIL		—	—	18 x 18
Material (Tube/Fin)				
Coil type		Cu / Al	Cu / Al	Cu / Al
Rows / FPI		3/8-in RTPF	3/8-in RTPF	3/8-in RTPF
Total Face Area (ft²)		2 / 17	3 / 17	2 / 17
COND. FAN / MOTOR		25.1	25.1	46.2
Qty / Motor Drive Type				
Motor HP / RPM		2 / direct	1 / direct	3 / direct
Fan diameter (in.)		1/4 / 1100	1 / 1175	1 / 1100
FILTERS		22	30	22
RA Filter # / Size (in.)				
OA inlet screen # / Size (in.)		4 / 20 x 20 x 2	4 / 20 x 20 x 2	6 / 18 x 24 x 2
REFRIGERATION SYSTEM		1 / 20 x 24 x 1	1 / 20 x 24 x 1	2 / 24 x 27 x 1 (Vert) 1 / 30 x 39 x 1 (Horiz)

* On Size 12 units, Max BHP for the High Static motor varies with the motor's voltage; see the table below.

Voltage	BHP
208	6.5
230	6.9
460	7.0
575	8.3

Options and accessories

FACTORY-INSTALLED AND FIELD-INSTALLED ACCESSORIES

CATEGORY	ITEM	FACTORY INSTALLED OPTION	FIELD INSTALLED ACCESSORY
CABINET	Hinged access doors	X	
	Thru-the-base electrical connections	X	X
	Supply duct kit-Horizontal air applications (size 12 only)		X
COIL OPTIONS	Cu/Cu indoor and/or outdoor coils [1]	X	
	Pre-coated outdoor coils [1]	X	
	Premium, E-coated outdoor coils [1]	X	
CONDENSER PROTECTION	Condenser coil hail guard (louvered design) [1]	X	X
CONTROLS	Thermostats, temperature sensors, and subbases		X
	PremierLink™ DDC communicating controller [2]	X	X
	RTU Open Multi-protocol controller	X	
	Smoke detector (supply and/or return air)	X	
	Horn/Strobe Annunciator [3]		X
	Time Guard II compressor delay control circuit		X
	Phase Monitor		X
	Condensate Overflow switch	X	X
ECONOMIZERS & OUTDOOR AIR DAMPERS	EconoMi$er® IV for electro–mechanical controls – Non FDD (Standard air leak damper models) [1, 4]	X	X
	EconoMi$er2 for DDC controls, complies with FDD (Standard and Ultra Low Leak air damper models) [1, 5]	X	X
	Motorized 2 position outdoor air damper [1, 2]	X	X
	Manual outdoor air damper (25% and 50%) [2]		X
	Barometric relief [6]	X	X
	Power exhaust		X
	EconoMi$er X for electro–mechanical controls, complies with FDD (Standard and Ultra Low Leak air damper models) [1, 4]	X	X
ECONOMIZER SENSORS & IAQ DEVICES	Single dry bulb temperature sensors [7]	X	X
	Differential dry bulb temperature sensors [7]		X
	Single enthalpy sensors [7]	X	X
	Differential enthalpy sensors [7]		X
	CO_2 sensor (wall, duct, or unit mounted) [7]	X	X
ELECTRIC HEAT	Electric Resistance Heaters		X
	Single Point Kit		X
INDOOR MOTOR & DRIVE	Multiple motor and belt drive packages	X	
	Electric Drive, X13, 5-speed/torque (3-5 ton)	X	
	Staged Air Vol (SAV™) system with VFD controller (2-stage cool only with electrical mechanical and RTU Open controls)	X	
	Display Kit for SAV system with VFD		X
LOW AMBIENT CONTROL	Motormaster® head pressure controller [8]		X
POWER OPTIONS	Convenience outlet (powered) [6]	X	
	Convenience outlet (unpowered): 15 amp factory-installed 20 amp field-installed	X	X
	Non–fused disconnect [9]	X	
ROOF CURBS	Roof curb 14-in. (356 mm)		X
	Roof curb 24-in. (610 mm)		X

NOTES:

1. Not available as a factory-installed option on single phase (208-230/1/60) models. Use field-install accessory where available.
2. Not available with SAV.
3. Requires a field-supplied 24V transformer for each application. See price pages for details.
4. FDD (Fault Detection and Diagnostic) capability per California Title 24 section 120.2.
5. Models with RTU Open DDC controller comply with California Title 24 Fault Detection and Diagnostic (FDD). PremierLink controller is not FDD.
6. Included with economizer.
7. Sensors for optimizing economizer.
8. See application data for assistance.
9. Non-fused disconnect switch cannot be used when unit electrical rating exceeds:
   04-09 sizes: 208-230/1/60 and 208-230/3/60 = 80 amps (FLA)
   460/3/60 and 575/3/60 = 80 amps (FLA)
   12 size: 208-230/3/60 = 115 amps (MCA)
   460/3/60 and 575/3/60 = 100 amps (FLA)
   Carrier RTUBuilder automatically selects the amps limitations.

Economizer

Economizers can reduce operating costs. They bring in fresh, outside air for ventilation; and provide cool outside air to cool your building. This also is the preferred method of low ambient cooling. When coupled to CO_2 sensors, economizers can limit the ventilation air to only that amount required.

Economizers are available, installed and tested by the factory, with either enthalpy or temperature dry-bulb inputs. There are also models for electro-mechanical, direct digital controllers and single speed fan or 2-speed indoor fan motors. Additional sensors are available as accessories to optimize the economizer.

Economizers include gravity controlled barometric relief that helps equalize building pressure and ambient air pressures. This can be a cost effective solution to prevent building pressurization. Economizers are available in Ultra Low Leak and standard low leak versions.

CO_2 sensor

The CO_2 sensor works with the economizer to intake only the correct amount of outside air for ventilation. As occupants fill your building, the CO_2 sensor detects their presence through increasing CO_2 levels, and opens the economizer appropriately.

When the occupants leave, the CO_2 levels decrease, and the sensor appropriately closes the economizer. This intelligent control of the ventilation air, called Demand Controlled Ventilation (DCV) reduces the overall load on the rooftop, saving money.

Smoke detectors

Trust the experts. Smoke detectors make your application safer and your job easier. Carrier smoke detectors immediately shut down the rooftop unit when smoke is detected. They are available, installed by the factory, for supply air, return air, or both.

Louvered hail guards

Sleek, louvered panels protect the condenser coil from hail damage, foreign objects, and incidental contact.

Convenience outlet (powered or unpowered)

Reduce service and/or installation costs by including a convenience outlet in your specification. Carrier will install this service feature at our factory. Provides a convenient, 15 amp, 115v GFCI receptacle with "Wet in Use" cover. The "powered" option allows the installer to power the outlet from the line side of the disconnect or load side as required by code. The "unpowered" option is to be powered from a separate (non-unit) 115/120v power source. The unpowered convenience outlet is available as a 15 amp factory-installed option or a 20 amp field-installed accessory.

The 20 amp unpowered convenience outlet kit provides a flexible installation method which allows code compliance for height requirements of the GFCI outlet from the finished roof surface as well as the capability to relocate the outlet to a more convenient location, if necessary.

Non-fused disconnect

This OSHA-compliant, factory-installed, safety switch allows a service technician to locally secure power to the rooftop. When selecting a factory-installed non-fused disconnect, note they are sized for the unit as ordered from the factory. The sizing of these do not accommodate field-installed items such as power exhaust devices, etc.

Power exhaust pressure relief

Superior internal building pressure control. This field-installed accessory may eliminate the need for costly, external pressure control fans.

PremierLink™ DDC controller

This CCN (Carrier Comfort Network®) controller regulates the rooftop's performance to tighter tolerances and expanded limits, as well as facilitates zoning systems and digital accessories. It also unites a Carrier HVAC equipment together on one, coherent CCN network. The PremierLink controller can be factory-installed, or easily field-installed.

RTU Open, multi-protocol controller

Connect the rooftop to an existing BAS (building automation system) without needing complicated translators or adapter modules using the RTU Open controller. The RTU Open controller speaks the 4 most common building automation system languages (BACnet[1], Modbus[2], N2, and LonWorks[3]). Use this controller when you have an existing BAS. Besides the 4 protocols, it also communicates with a Carrier Open system (i-Vu® and VVT®).

Time guard II control circuit

This accessory protects your compressor by preventing short-cycling in the event of some other failure, prevents the compressor from restarting for 30 seconds after stopping. Not required with PremierLink™ controller, RTU Open controller, or authorized commercial thermostats.

Motorized 2-position damper

The new Carrier 2-position, motorized outdoor air damper admits up to 100% outside air. Using reliable, gear-driven technology, the 2-position damper opens to allow ventilation air and closes when the rooftop stops, stopping unwanted infiltration. Not available with Staged Air Volume (SAV™) models.

Manual OA damper

Manual outdoor air dampers are an economical way to bring in ventilation air. The dampers are available in 25% and 50% versions. Not available with Staged Air Volume (SAV) models.

Electric heaters

Carrier offers a full line of field-installed accessory heaters. The heaters are very easy to use and install. All are pre-engineered and certified.

Hinged access panels

Allows access to unit's major components with specifically designed hinged access panels. Panels are: filter, control box, fan motor and compressor.

Staged air volume (SAV™) indoor fan speed system

Carrier's Staged Air Volume (SAV) system saves energy and installation time by utilizing a Variable Frequency Drive (VFD) to automatically adjust the indoor fan motor speed in sequence with the units cooling operation. Per ASHRAE 90.1-2016 and IECC-2015 standards, during the first stage of cooling operation the VFD will adjust the fan motor to provide 66% of the total cfm established for the

1. BACnet is a registered trademark of ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers).
2. Modbus is a registered trademark of Schneider Electric.
3. LonWorks is a registered trademark of Echelon Corporation.

unit. When a call for the second stage of cooling is required, the VFD will allow the total cfm for the unit established (100%). During the heating mode the VFD will allow total design cfm (100%) operation and during the ventilation mode the VFD will allow operation to 66% of total cfm.

Compared to single speed indoor fan motor systems, Carrier's SAV system can save substantial energy, 25%+, versus single speed indoor fan motor systems.

IMPORTANT: Data based on .10 ($/kWh) in an office application utilizing Carrier's HAP 4.6 simulation software program.

The VFD used in Carrier's SAV system has soft start capabilities to slowly ramp up the speeds, thus eliminating any high inrush air volume during initial start-up. It also has internal over current protection for the fan motor and a field-installed display kit that allows adjustment and in depth diagnostics of the VFD.

This SAV system is available on models with 2-stage cooling operation with electrical mechanical or RTU Open (multi protocol) controls. Both space sensor and conventional thermostats controls can be used to provide accurate control in any application.

The SAV system is very flexible for initial fan performance set up and adjustment. The standard factory shipped VFD is pre-programmed to automatically stage the fan speed between the first and second stage of cooling. The unit fan performance static pressure and cfm can be easily adjusted using the traditional means of pulley adjustments. The other means to adjust the unit static and cfm performance is to utilize the field-installed Display Kit and adjust the frequency and voltage in the VFD to required performance requirements. In either case, once set up, the VFD will automatically adjust the speed between the cooling stage operations.

Motormaster® head pressure controller

The Motormaster motor controller is a low ambient, head pressure controller kit that is designed to maintain the unit's condenser head pressure during periods of low ambient cooling operation. This device should be used as an alternative to economizer free cooling when economizer usage is either not appropriate or desired. The Motormaster will either cycle the outdoor fan motors or operate them at reduced speed to maintain the unit operation, depending on the model.

Alternate motors and drives

Some applications need larger horsepower motors, some need more airflow, and some need both. Regardless of the case, your Carrier expert has a factory-installed combination to meet your application. A wide selection of motors and pulleys (drives) are available, factory-installed, to handle nearly any application.

Thru-the-base connections

Thru-the-base connections, available as either an accessory or as a factory option, are necessary to ensure proper connection and seal when routing wire and piping through the rooftop's basepan and curb. These couplings eliminate roof penetration and should be considered for main power lines, as well as control power.

Condenser overflow switch (factory-installed option)

This sensor and related controller monitors the condensate level in the drain pan and shuts down compression operation when overflow conditions occur. It includes:

- Indicator light — solid red (more than 10 seconds on water contact — compressors disabled), blinking red (sensor disconnected)
- 10 second delay to break — eliminates nuisance trips from splashing or waves in pan (sensor needs 10 seconds of constant water contact before tripping)
- Disables the compressor(s) operation when condensate plug is detected, but still allows fans to run for Economizer.

California OSHPD Seismic Certification Label

Units meet the seismic requirements of the International Code Council Evaluation Service (ICC-ES) document AC156 (Acceptance Criteria for Seismic Qualification by Shake-Table Testing of Nonstructural Components and Systems) and per International Building Code (IBC 2009) at an SDS (g) value of 2.00 z/h=1.0, Ip=1.5 and certified by independent structural engineers. A certification label is applied to the unit that meets the CA OSHPD Special Seismic Certification pre-approval labeling requirements on the external chassis of the unit.

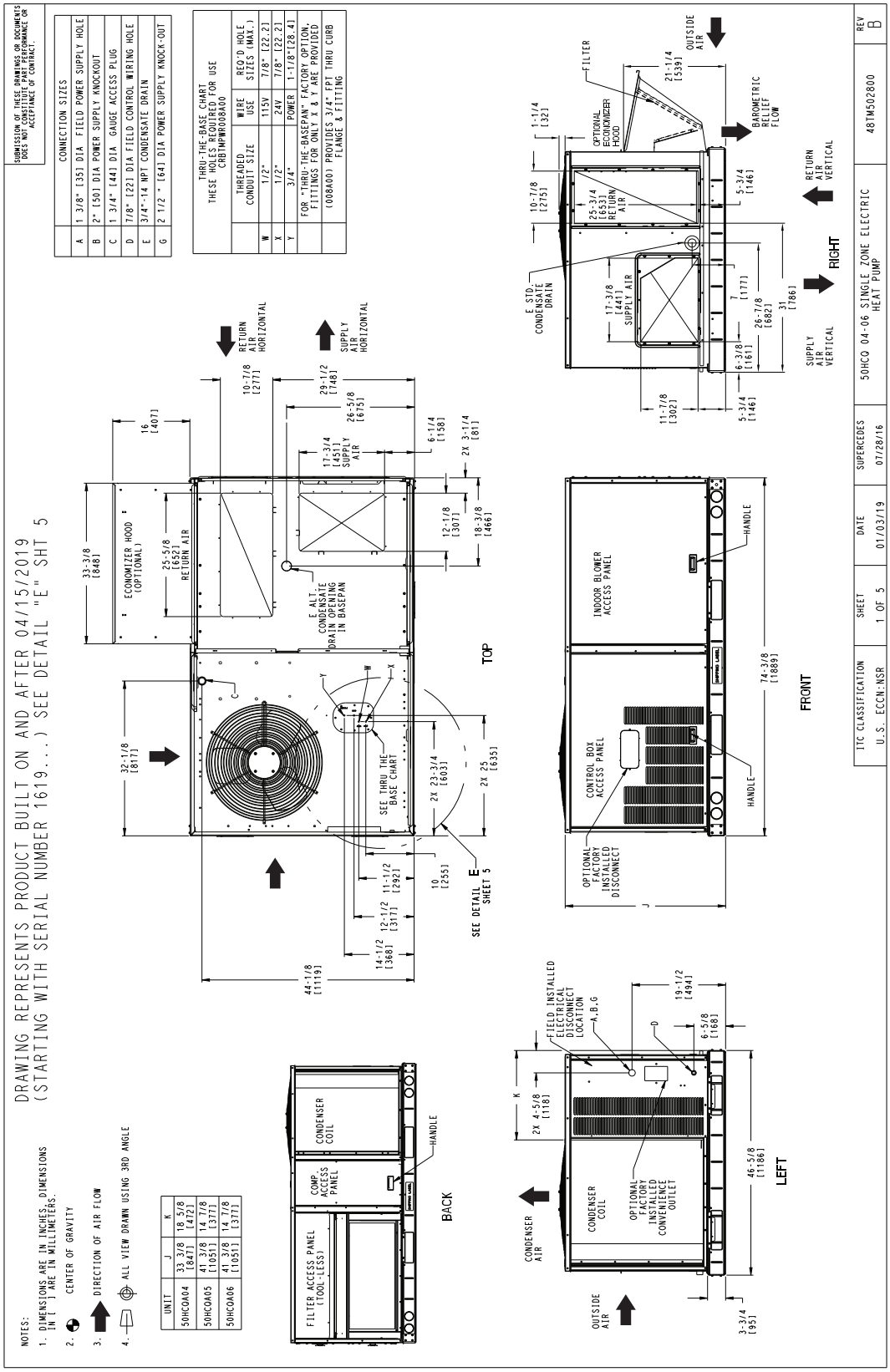
OSHPD not available on units with factory-installed hail guards.

OPTIONS AND ACCESSORIES — WEIGHT ADDERS

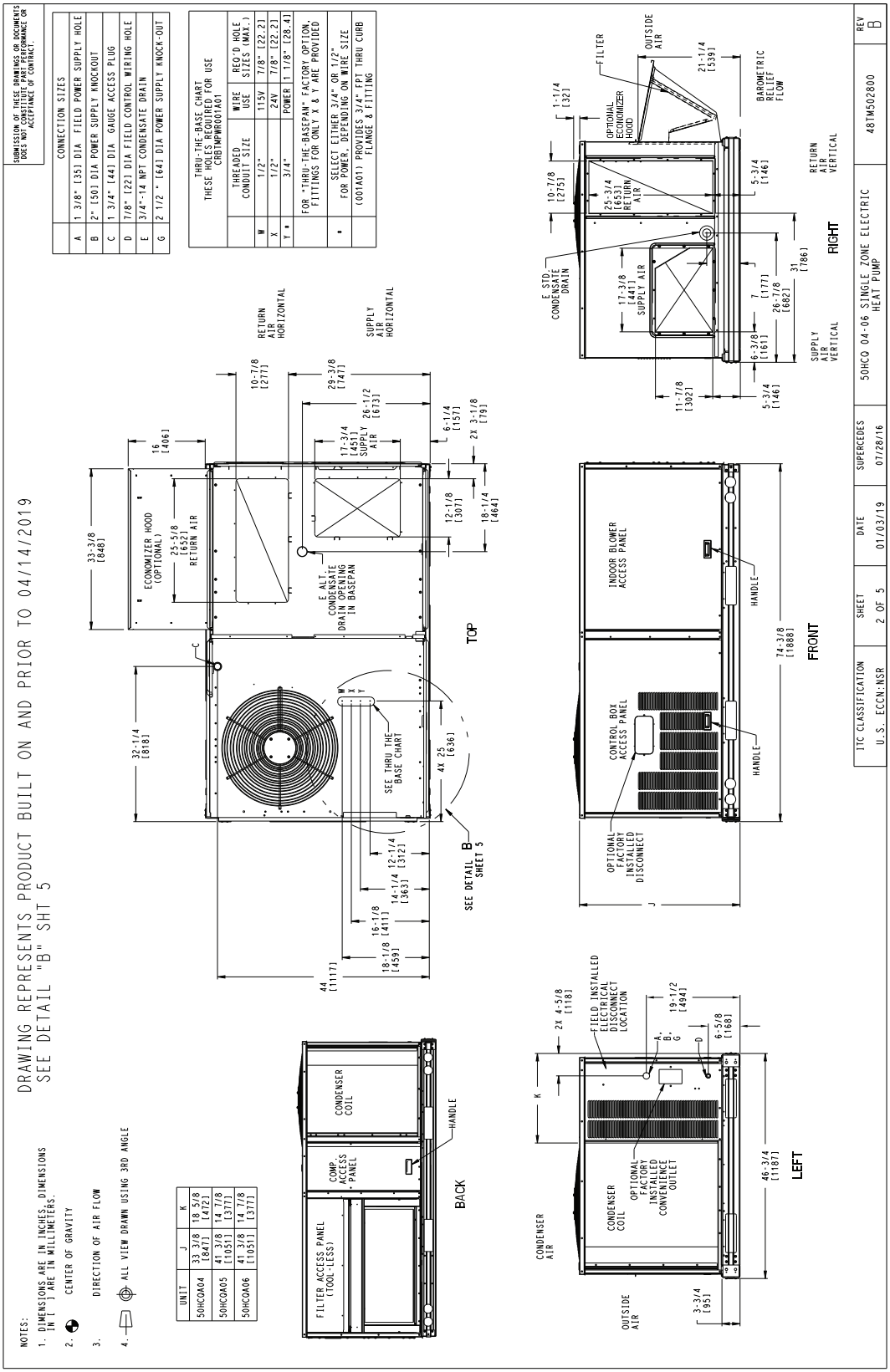
BASE UNIT WITH OPTIONS AND ACCESSORIES (WEIGHT ADDERS)	50HCQ MAX WEIGHT ADDER													
	04		05		06		07		08		09		12	
	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg
Power Exhaust - vertical	50	23	50	23	50	23	50	23	75	34	75	34	85	39
Power Exhaust - horizontal	30	14	30	14	30	14	30	14	30	14	30	14	75	34
EconoMi$er® (IV, X, or 2)	50	23	50	23	50	23	50	23	75	34	75	34	115	52
Two Position damper	39	18	39	18	39	18	39	18	58	26	58	26	65	29
Manual Dampers	12	5	12	5	12	5	12	5	18	8	18	8	25	11
Hail Guard (louvered)	16	7	16	7	16	7	16	7	34	15	34	15	45	20
Cu/Cu Condenser Coil	35	16	35	16	35	16	95	43	95	43	95	43	160	73
Cu/Cu Cond. and Evaporator Coils	60	27	60	27	90	41	165	75	140	64	195	88	280	127
Roof Curb 14-in. (356 mm)	115	52	115	52	115	52	143	65	143	65	143	65	180	82
Roof Curb 24-in. (610 mm)	197	89	197	89	197	89	245	111	245	111	245	111	255	116
CO_2 sensor	5	2	5	2	5	2	5	2	5	2	5	2	5	2
Electric Heater	30	14	30	14	30	14	30	14	45	20	45	20	25	11
Single Point Kit	10	5	10	5	10	5	10	5	12	5	12	5	25	11
Optional Indoor Motor / Drive	10	5	10	5	10	5	10	5	15	7	15	7	45	20
Motormaster® Controller	35	16	35	16	35	16	35	16	35	16	35	16	35	16
Return Smoke Detector	5	2	5	2	5	2	5	2	5	2	5	2	5	2
Supply Smoke Detector	5	2	5	2	5	2	5	2	5	2	5	2	5	2
Non-Fused Disconnect	15	7	15	7	15	7	15	7	15	7	15	7	15	7
Powered Convenience Outlet	35	16	35	16	35	16	35	16	35	16	35	16	35	16
Non-Powered Convenience Outlet	5	2	5	2	5	2	5	2	5	2	5	2	5	2
Enthalpy Sensor	2	1	2	1	2	1	2	1	2	1	2	1	2	1
Differential Enthalpy Sensor	3	1	3	1	3	1	3	1	3	1	3	1	3	1
SAV™ System with VFD	—	—	—	—	—	—	20	9	20	9	20	9	20	9

NOTE: Where multiple variations are available, the heaviest combination is listed.

UNIT DIMENSIONAL DRAWING - UNIT SIZES 04-06 (UNITS BUILT ON AND AFTER 4/15/2019)

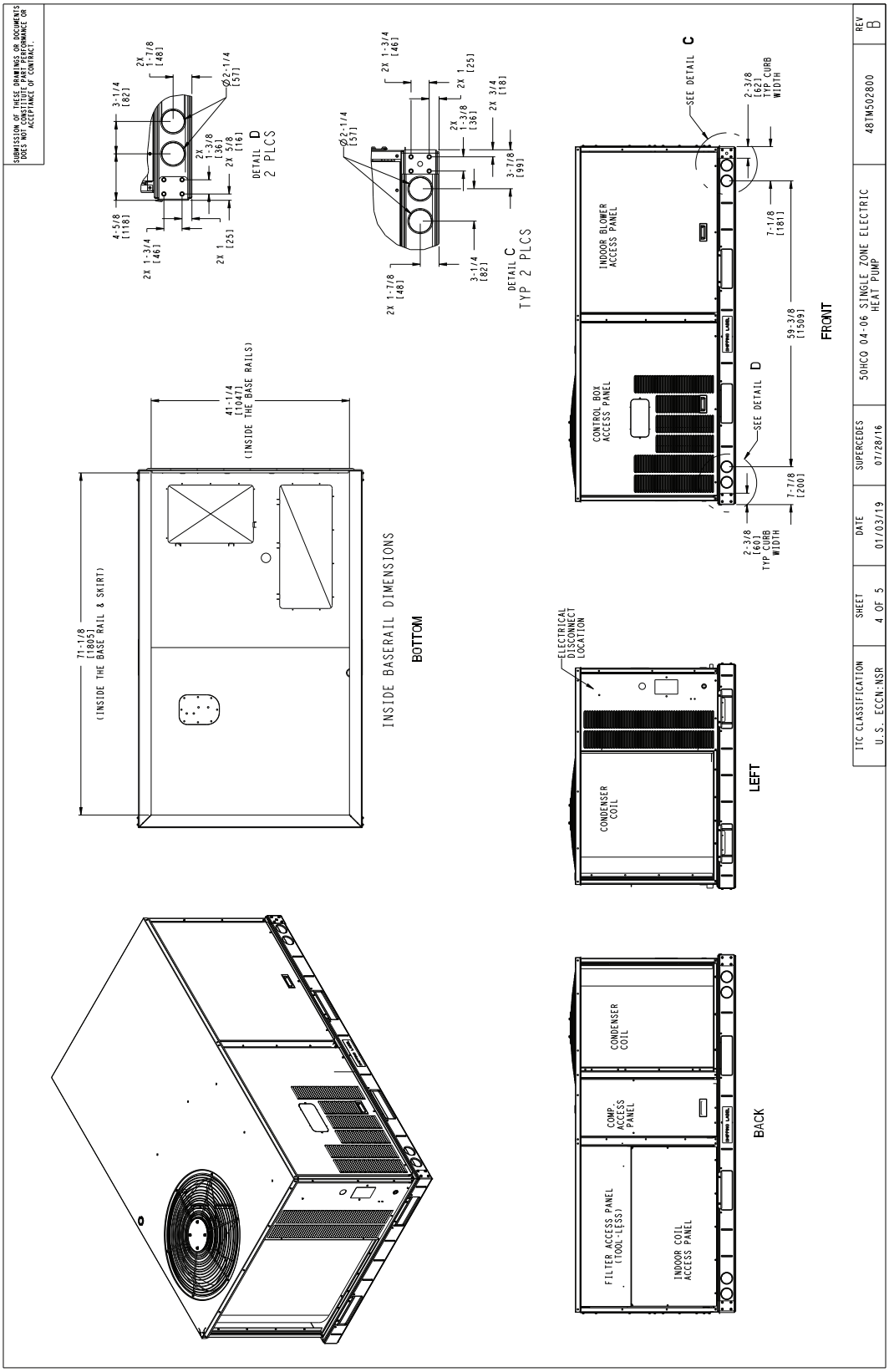


UNIT DIMENSIONAL DRAWING - UNIT SIZES 04-06 (UNITS BUILT ON AND PRIOR TO 4/14/2019)

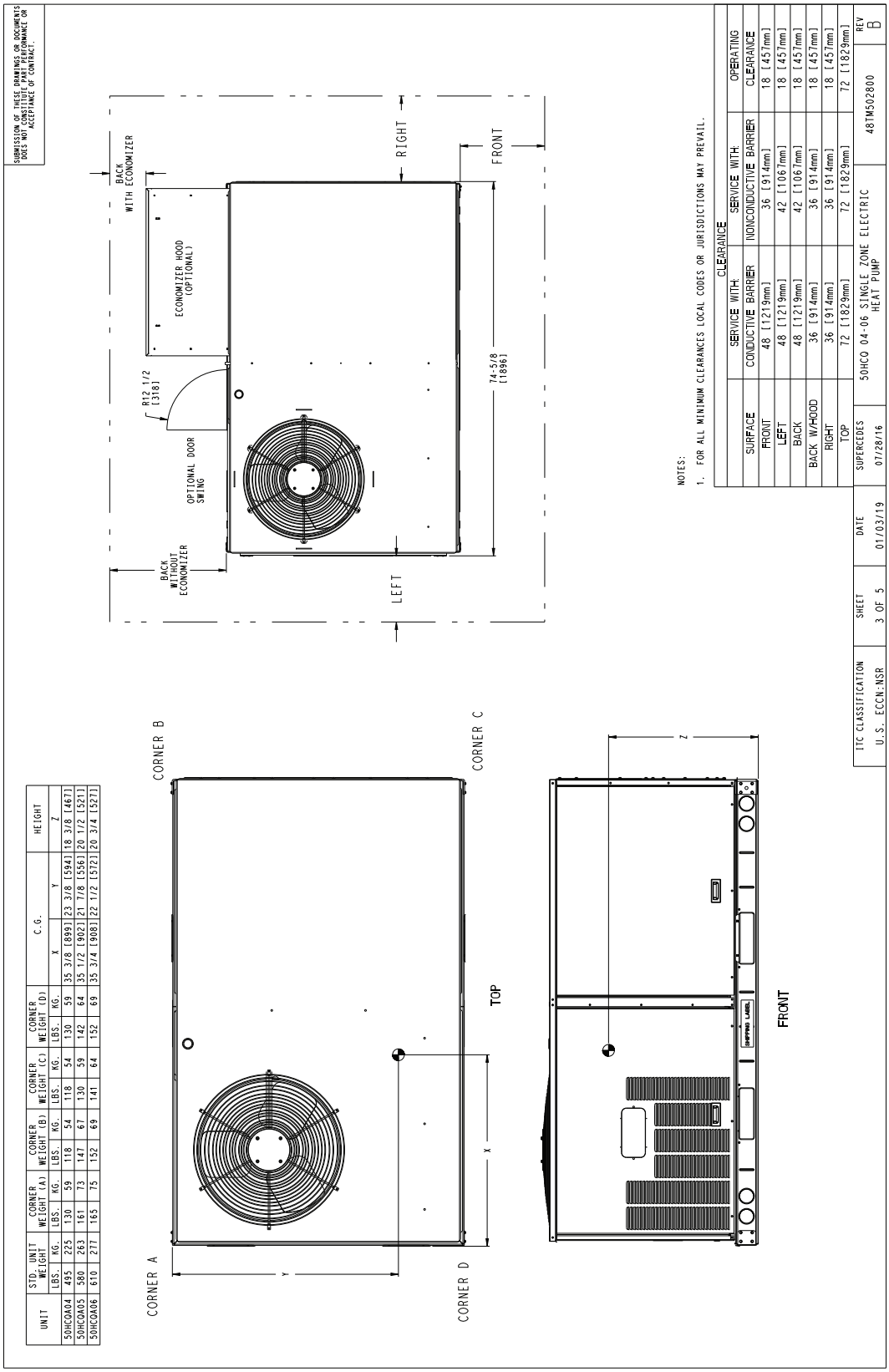


Base unit dimensions (cont)

UNIT DIMENSIONAL DRAWING - UNIT SIZES 04-06 BACK VIEW AND CONDENSATE DRAIN LOCATION

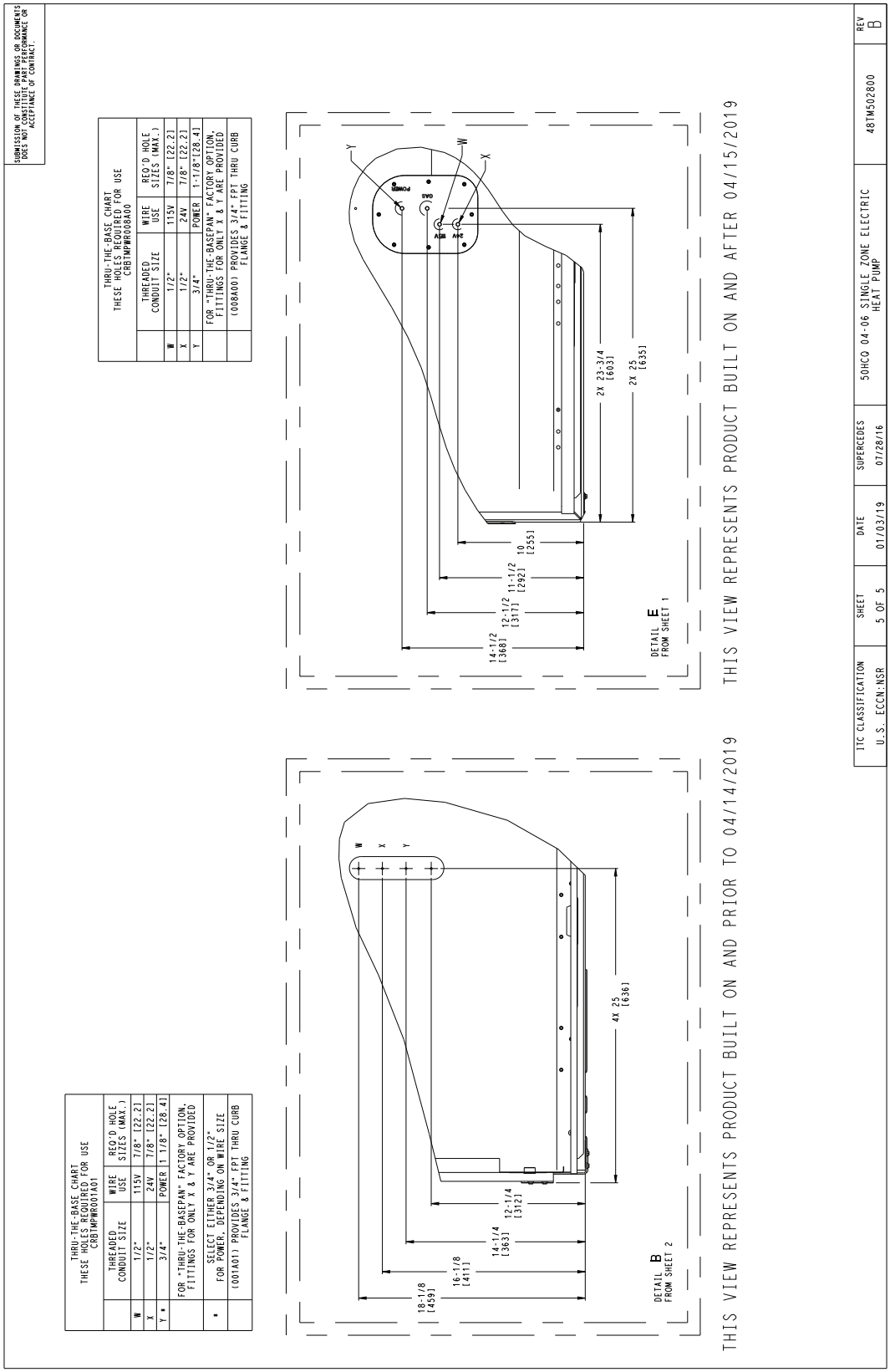


UNIT DIMENSIONAL DRAWING - UNIT SIZES 04-06 CORNER WEIGHTS AND CLEARANCES

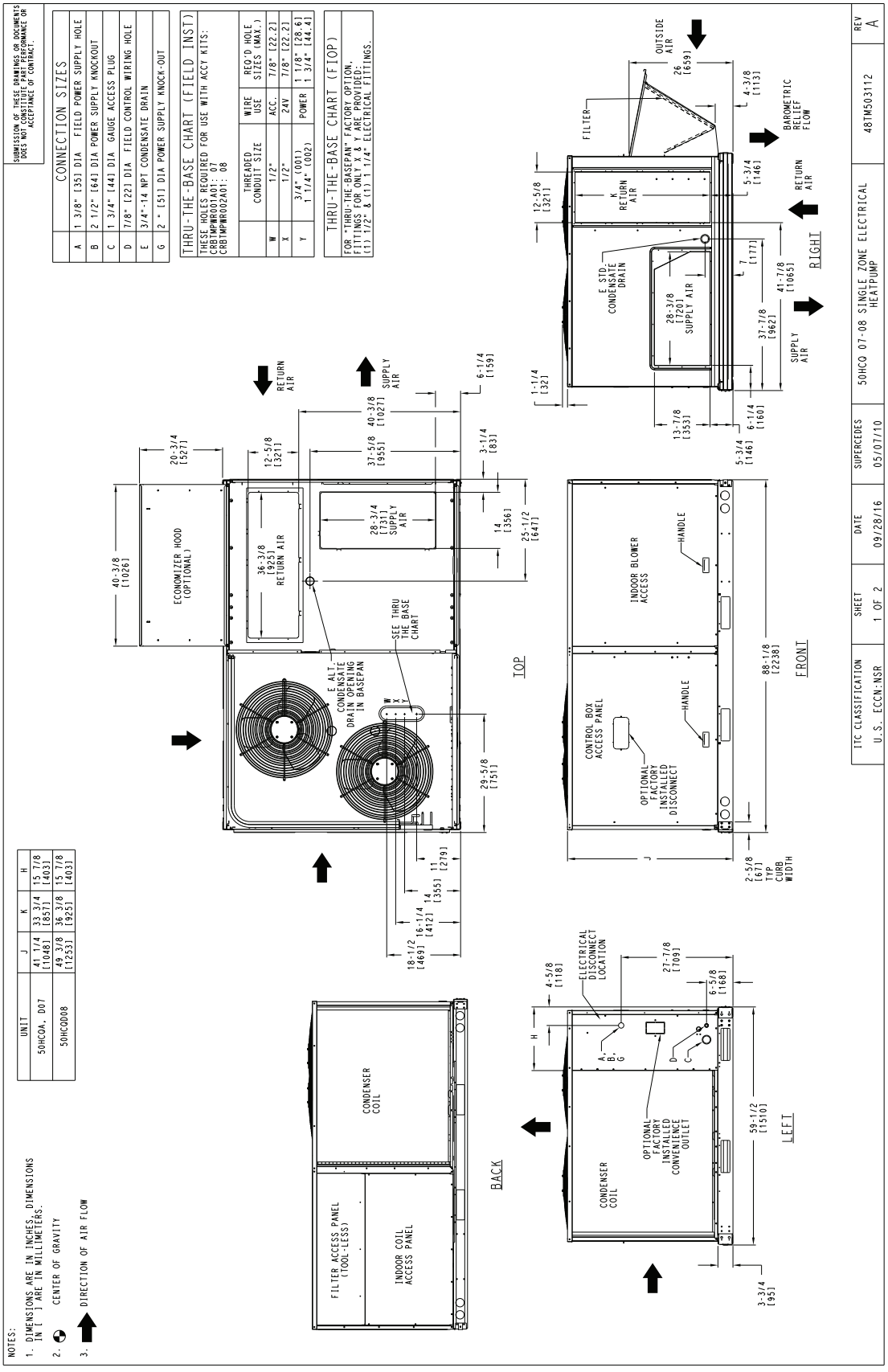


UNIT	STD. UNIT WEIGHT		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		HEIGHT
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
50HCQA04	495	225	130	59	118	54	118	54	130	59	35 3/8 [899]	23 3/8 [594]	18 3/8 [467]
50HCQA05	580	263	161	73	147	67	130	59	142	64	35 1/2 [902]	21 7/8 [556]	20 1/2 [521]
50HCQA06	610	277	165	75	152	69	141	64	152	69	35 3/4 [908]	22 1/2 [572]	20 3/4 [527]

UNIT DIMENSIONAL DRAWING - UNIT SIZES 04-06 THRU-THE-BASE CONNECTIONS

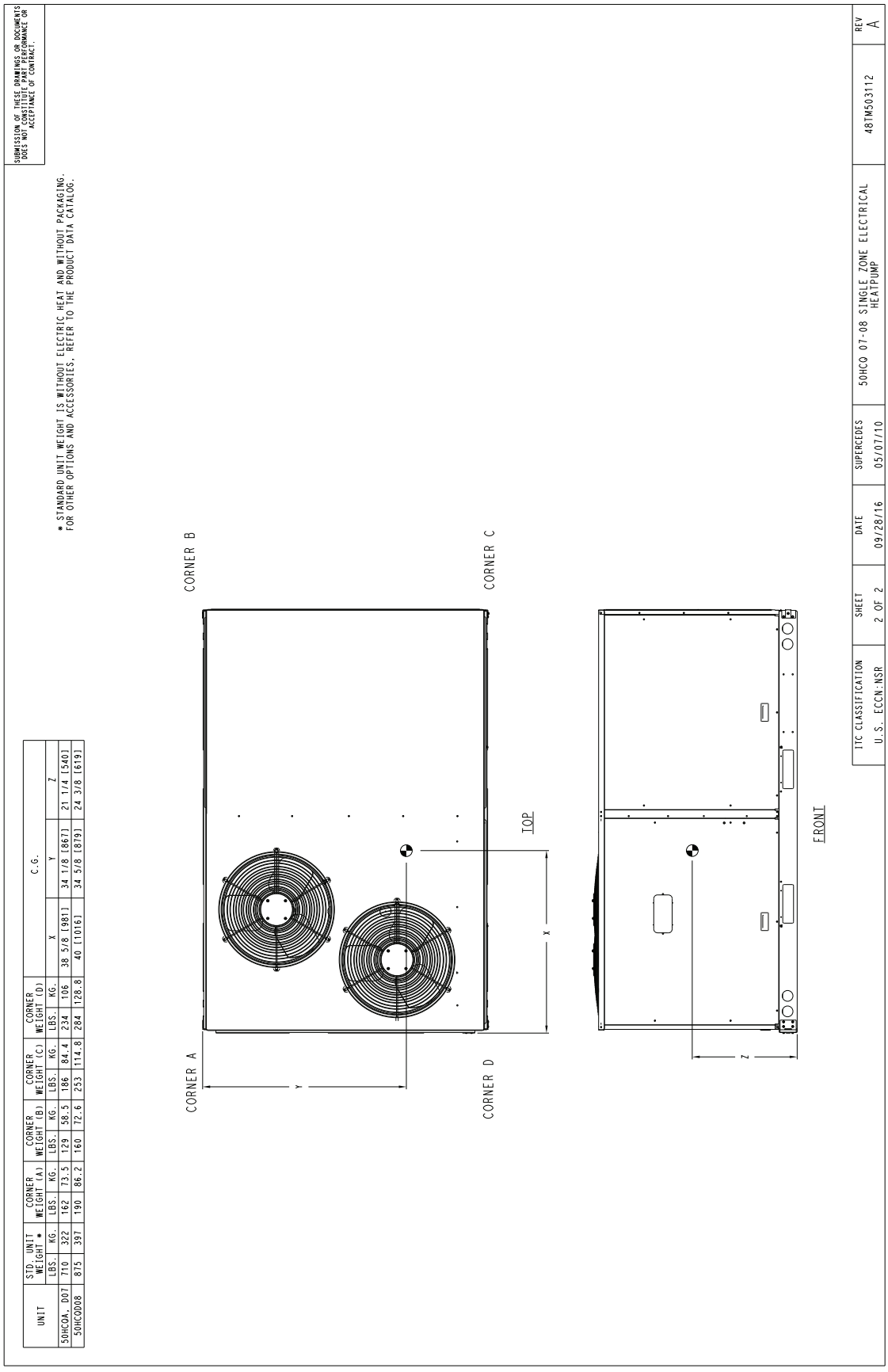


UNIT DIMENSIONAL DRAWING - UNIT SIZES 07-08



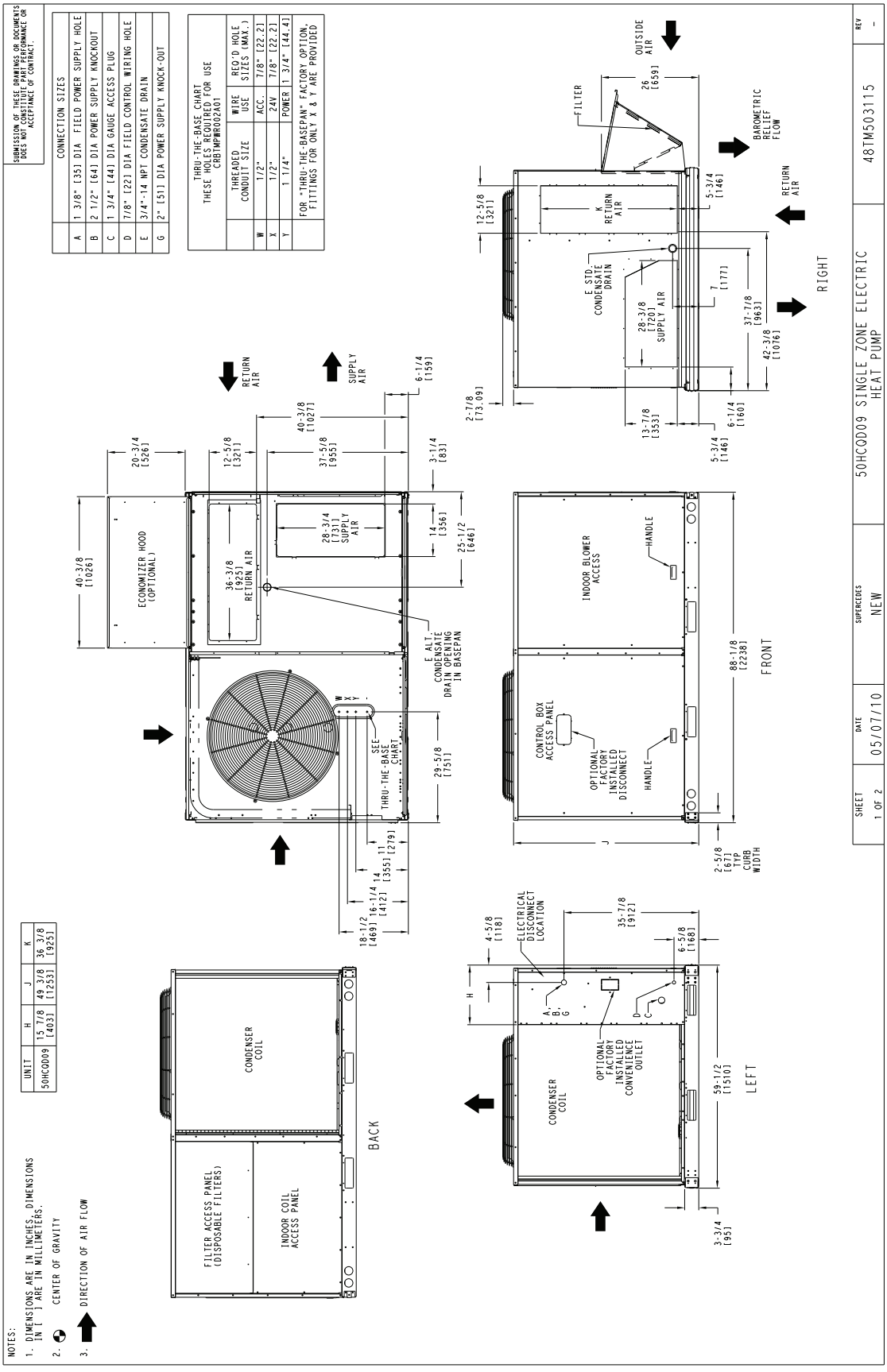
Base unit dimensions (cont)

UNIT DIMENSIONAL DRAWING - UNIT SIZES 07-08 (cont)

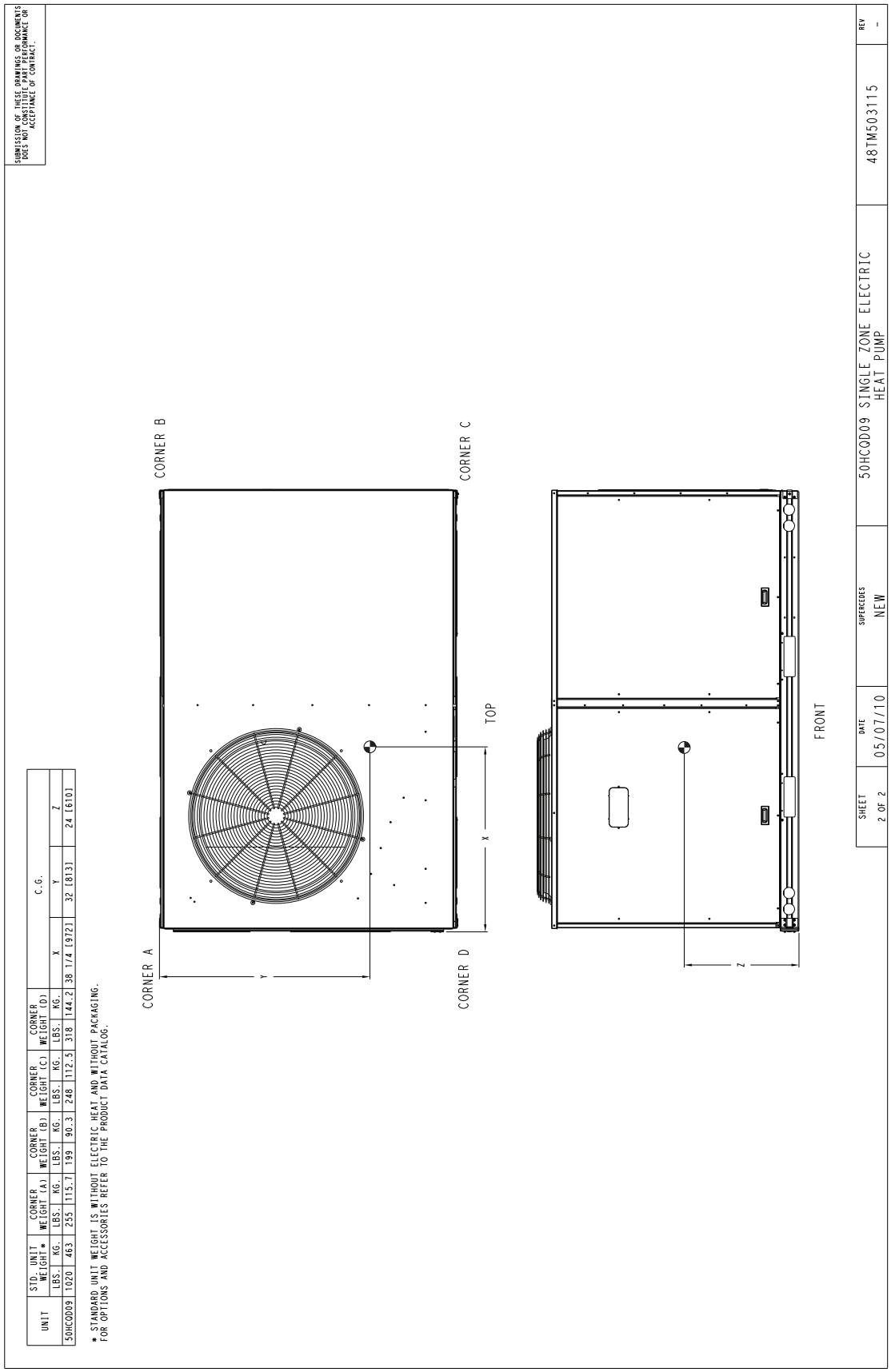


UNIT	STD. UNIT WEIGHT *		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
50HCQA, D07	710	322	162	73.5	129	58.5	186	84.4	234	106	38 5/8 [981]	34 1/8 [867]	21 1/4 [540]
50HCQD08	875	397	190	86.2	160	72.6	253	114.8	284	128.8	40 [1016]	34 5/8 [879]	24 3/8 [619]

UNIT DIMENSIONAL DRAWING - UNIT SIZE 09



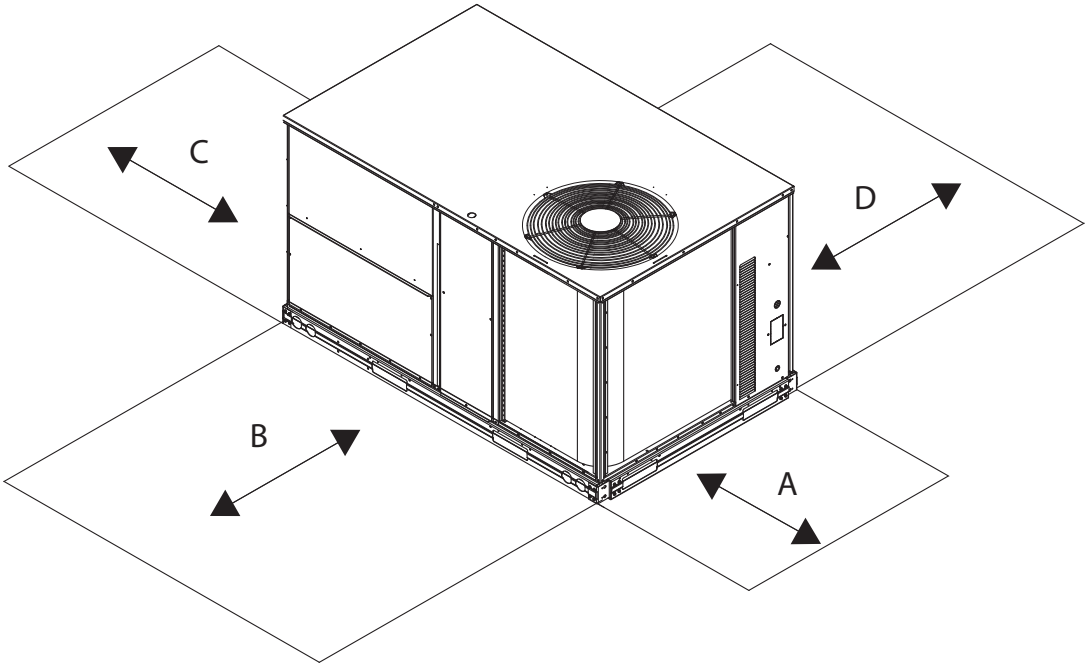
UNIT DIMENSIONAL DRAWING - UNIT SIZE 09 (cont)



UNIT	STD. UNIT WEIGHT*		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
50HCQD09	1020	463	255	115.7	199	90.3	248	112.5	318	144.2	38 1/4 [972]	32 [813]	24 [610]

* STANDARD UNIT WEIGHT IS WITHOUT ELECTRIC HEAT AND WITHOUT PACKAGING.
FOR OPTIONS AND ACCESSORIES REFER TO THE PRODUCT DATA CATALOG.

SERVICE CLEARANCE DIMENSIONAL DRAWING - UNIT SIZE 09

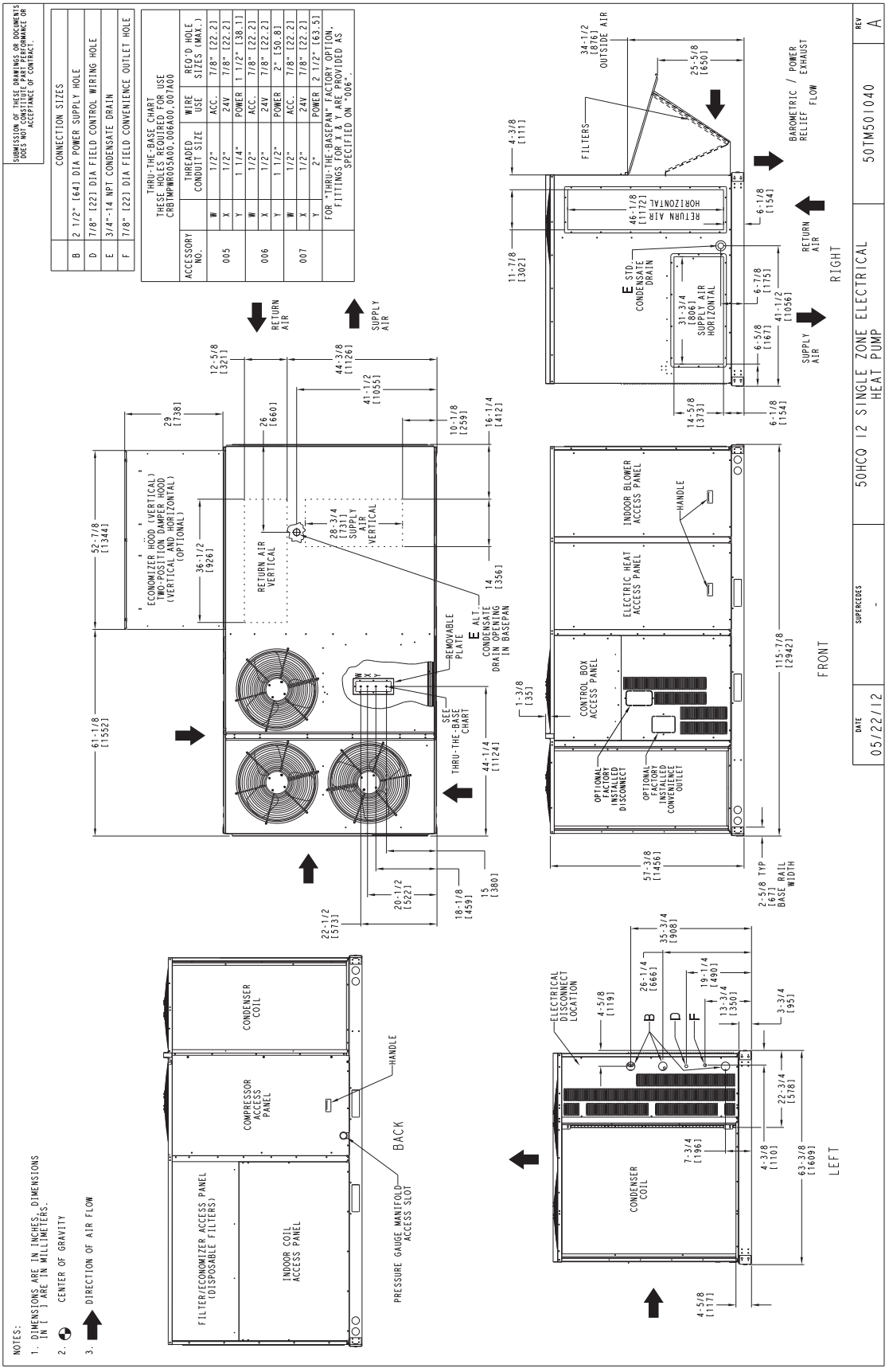


LOCATION	DIMENSION	CONDITION
A	48-in. (1219 mm) 18-in. (457 mm) 18-in. (457 mm) 12-in. (305 mm)	• Unit disconnect is mounted on panel • No disconnect, convenience outlet option • Recommended service clearance • Minimum clearance
B	42-in. (1067 mm) 36-in. (914 mm) Special	• Surface behind servicer is grounded (e.g., metal, masonry wall) • Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass) • Check for sources of flue products within 10-ft of unit fresh air intake hood
C	36-in. (914 mm) 18-in. (457 mm)	• Side condensate drain is used • Minimum clearance
D	42-in. (1067 mm) 36-in. (914 mm)	• Surface behind servicer is grounded (e.g., metal, masonry wall, another unit) • Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass)

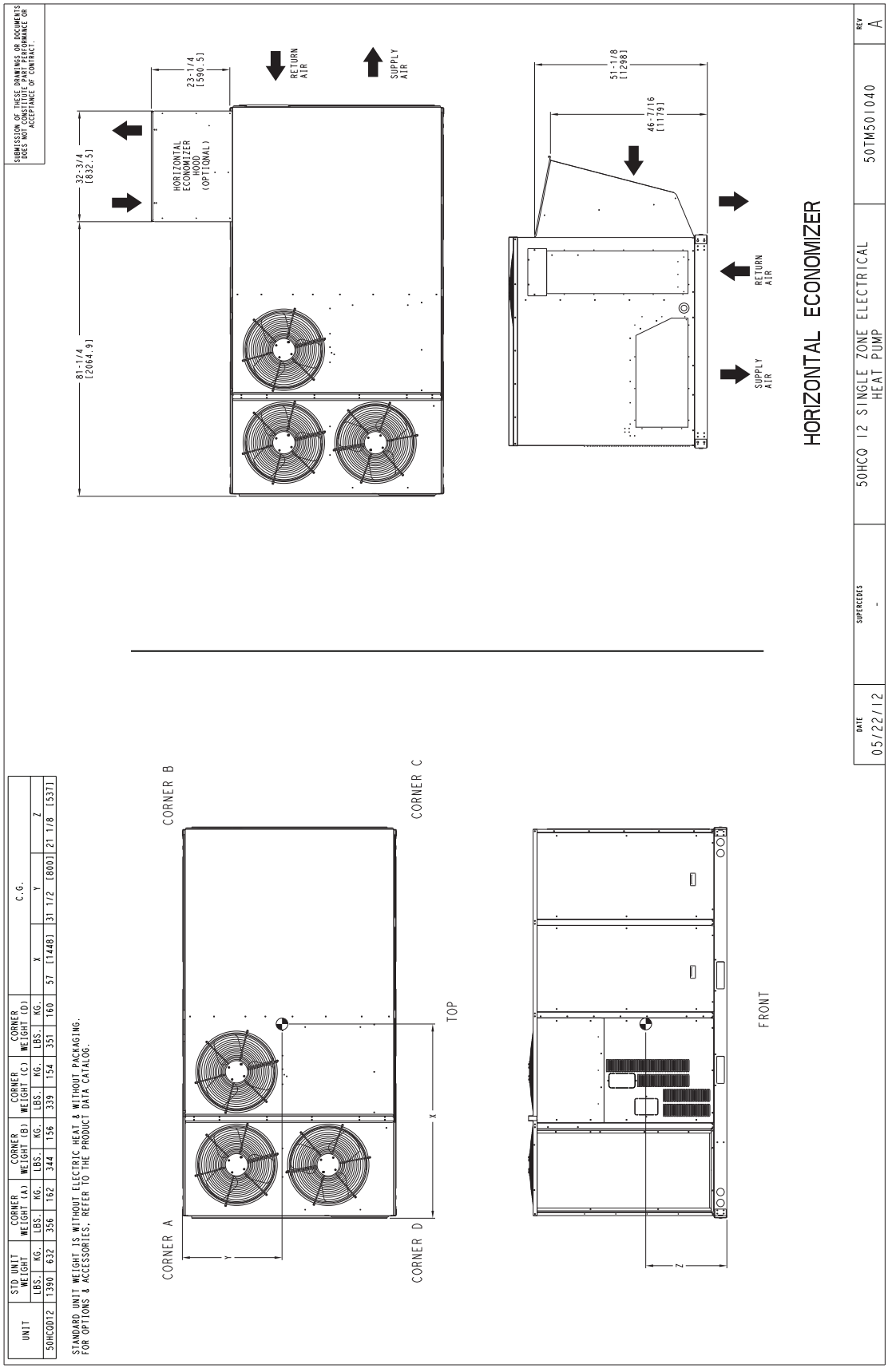
NOTE: Unit not designed to have overhead obstruction. Contact Application Engineering for guidance on any application planning overhead obstruction or for vertical clearances.

Base unit dimensions (cont)

UNIT DIMENSIONAL DRAWING - UNIT SIZE 12



UNIT DIMENSIONAL DRAWING - UNIT SIZE 12 (cont)

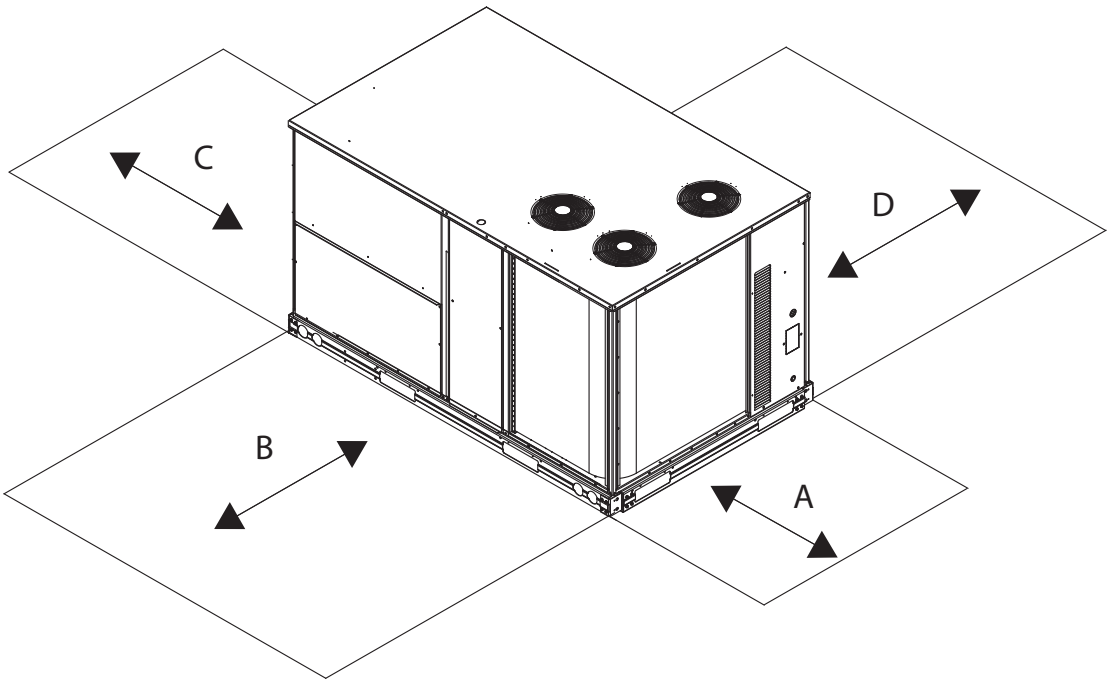


UNIT	STD UNIT WEIGHT		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
50HCQD12	1390	632	356	162	344	156	339	154	351	160	57 [1448]	31 1/2 [800]	21 1/8 [537]

STANDARD UNIT WEIGHT IS WITHOUT ELECTRIC HEAT & WITHOUT PACKAGING.
FOR OPTIONS & ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.

Base unit dimensions (cont)

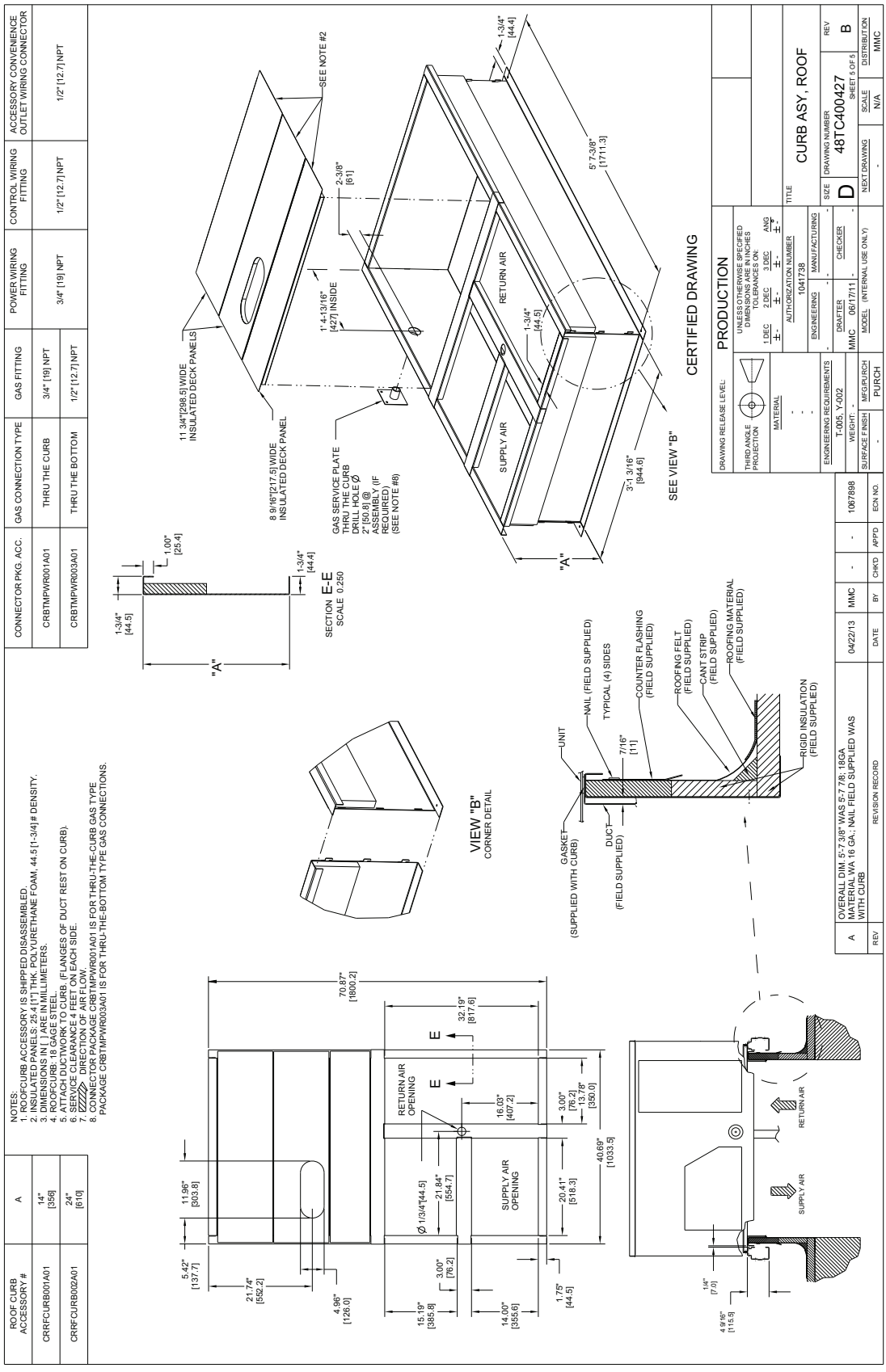
SERVICE CLEARANCE DIMENSIONAL DRAWING - UNIT SIZE 12



LOCATION	DIMENSION	CONDITION
A	48-in. (1219 mm) 18-in. (457 mm) 18-in. (457 mm) 12-in. (305 mm)	• Unit disconnect is mounted on panel • No disconnect, convenience outlet option • Recommended service clearance • Minimum clearance
B	42-in. (1067 mm) 36-in. (914 mm) Special	• Surface behind servicer is grounded (e.g., metal, masonry wall) • Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass) • Check for sources of flue products within 10-ft of unit fresh air intake hood
C	36-in. (914 mm) 18-in. (457 mm)	• Side condensate drain is used • Minimum clearance
D	42-in. (1067 mm) 36-in. (914 mm)	• Surface behind servicer is grounded (e.g., metal, masonry wall, another unit) • Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass)

NOTE: Unit not designed to have overhead obstruction. Contact Application Engineering for guidance on any application planning overhead obstruction or for vertical clearances.

ROOF CURB DETAILS - UNIT SIZES 04-06



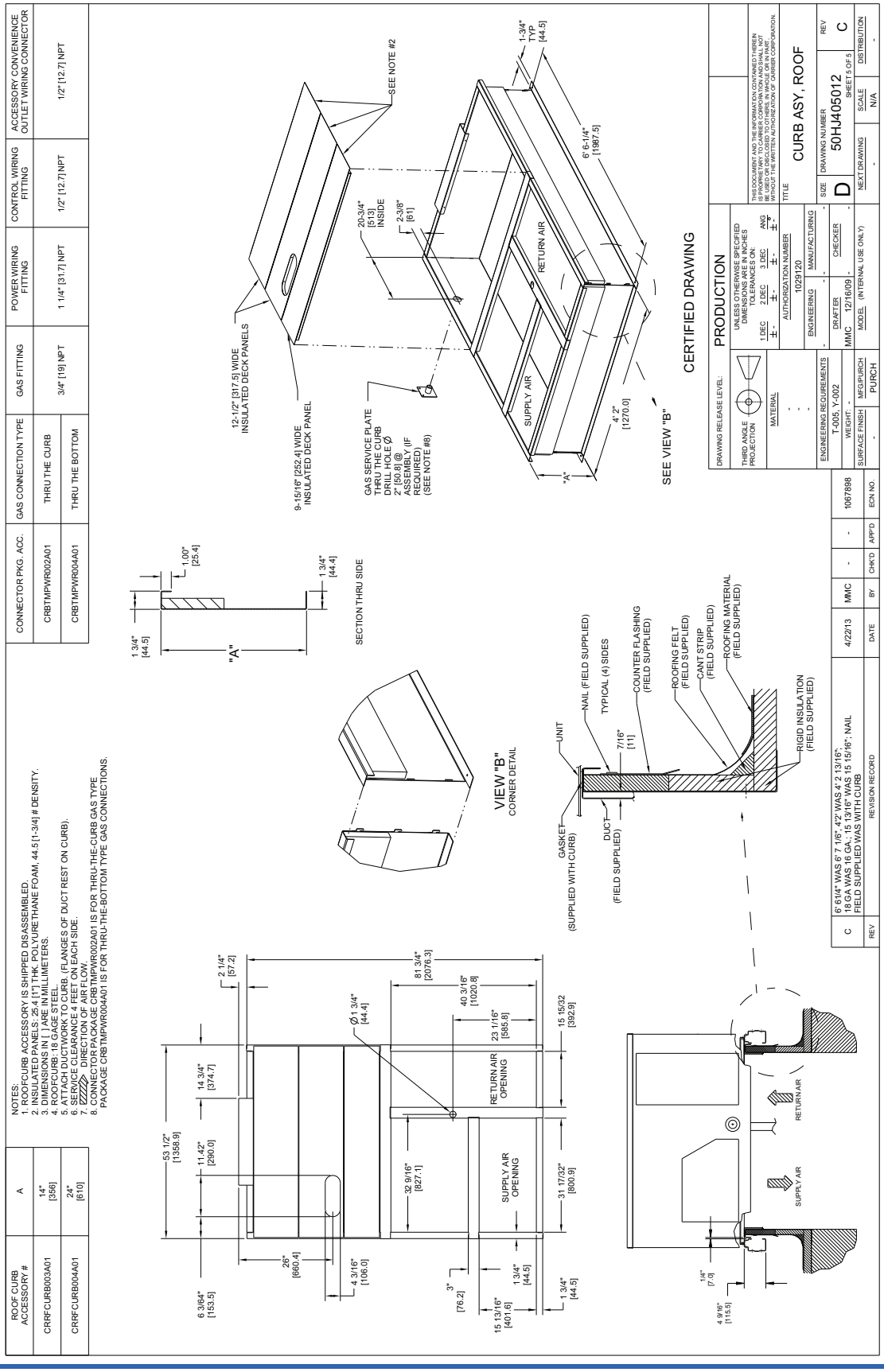
ROOF CURB ACCESSORY #	A
CRRFCURB001A01	14" [356]
CRRFCURB002A01	24" [610]

CONNECTOR PKG. ACC.	GAS CONNECTION TYPE	GAS FITTING	POWER WIRING FITTING	CONTROL WIRING FITTING	ACCESSORY CONVENIENCE OUTLET WIRING CONNECTOR
CRBTMPWR001A01	THRU THE CURB	3/4" [19] NPT	3/4" [19] NPT	1/2" [12.7] NPT	1/2" [12.7] NPT
CRBTMPWR003A01	THRU THE BOTTOM	1/2" [12.7] NPT			

REV	REVISION RECORD	DATE	BY	CHK'D	APP'D	ECN NO.
A	OVERALL DIM. 5'-7 3/8" WAS 5'-7 7/8; 18GA MATERIAL WA 16 GA.; NAIL FIELD SUPPLIED WAS WITH CURB	04/22/13	MMC	-	-	1067898

ENGINEERING REQUIREMENTS	DRAWING RELEASE LEVEL: PRODUCTION
T-005, Y-002	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: 1 DEC ±- 2 DEC ±- 3 DEC ±- ANG ±°
WEIGHT: -	THIRD ANGLE PROJECTION
SURFACE FINISH -	MATERIAL - - -
MFG/PURCH PURCH	AUTHORIZATION NUMBER 1041738
ENGINEERING -	MANUFACTURING -
DRAFTER MMC 06/17/11	CHECKER -
MODEL (INTERNAL USE ONLY) -	NEXT DRAWING -
TITLE CURB ASY, ROOF	SIZE D
DRAWING NUMBER 48TC400427 SHEET 5 OF 5	REV B
SCALE N/A	DISTRIBUTION MMC

ROOF CURB DETAILS - UNIT SIZES 07-09



ROOF CURB ACCESSORY #	A
CRRFCURB003A01	14" [356]
CRRFCURB004A01	24" [610]

CONNECTOR PKG. ACC.	GAS CONNECTION TYPE	GAS FITTING	POWER WIRING FITTING	CONTROL WIRING FITTING	ACCESSORY CONVENIENCE OUTLET WIRING CONNECTOR
CRBTMPWR002A01	THRU THE CURB	3/4" [19] NPT	1 1/4" [31.7] NPT	1/2" [12.7] NPT	1/2" [12.7] NPT
CRBTMPWR004A01	THRU THE BOTTOM				

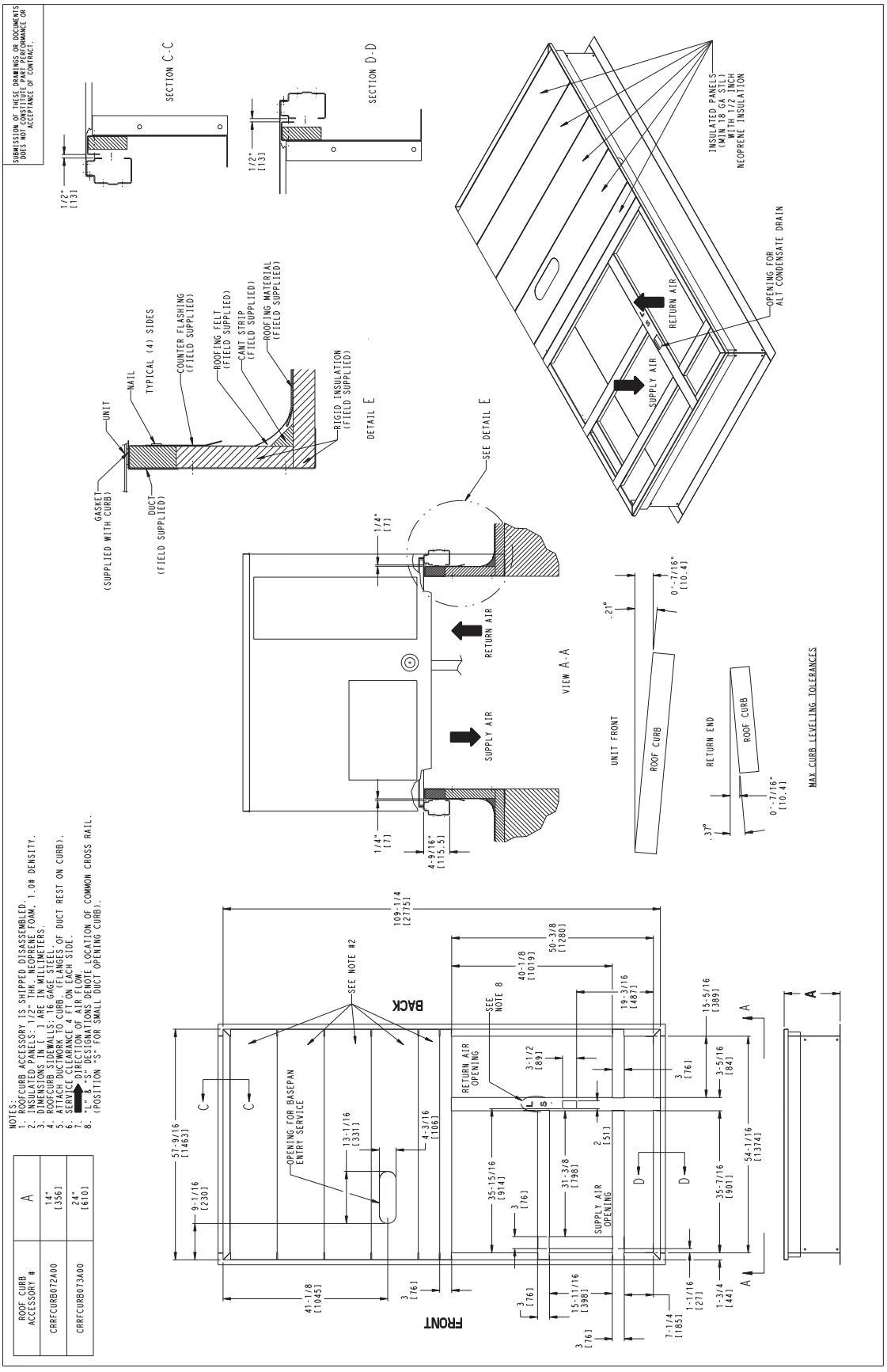
REV	REVISION RECORD	DATE	BY	CHK'D	APP'D	ECN NO.
C	6' 6 1/4" WAS 6' 7 1/8", 4'2" WAS 4' 2 13/16"; 18 GA WAS 16 GA.; 15 13/16" WAS 15 15/16"; NAIL FIELD SUPPLIED WAS WITH CURB	4/22/13	MMC	-	-	1067898

DRAWING RELEASE LEVEL:	PRODUCTION
THIRD ANGLE PROJECTION	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: 1 DEC ±, 2 DEC ±, 3 DEC ±, ANG ±
MATERIAL - - -	AUTHORIZATION NUMBER 1029120
ENGINEERING REQUIREMENTS T-005, Y-002	ENGINEERING -, MANUFACTURING -, DRAFTER MMC 12/16/09, CHECKER -
WEIGHT: -	MODEL (INTERNAL USE ONLY)
SURFACE FINISH -	MFG/PURCH PURCH

THIS DOCUMENT AND THE INFORMATION CONTAINED THEREIN IS PROPRIETARY TO CARRIER CORPORATION AND SHALL NOT BE USED OR DISCLOSED TO OTHERS, IN WHOLE OR IN PART, WITHOUT THE WRITTEN PERMISSION OF CARRIER CORPORATION.

SIZE	DRAWING NUMBER	REV
D	50HJ405012	C
NEXT DRAWING -	SCALE N/A	SHEET 5 OF 5
DISTRIBUTION -		

ROOF CURB DETAILS - UNIT SIZE 12



ROOF CURB ACCESSORY #	A
CRRFCURBD072A00	14" [356]
CRRFCURBD073A00	24" [610]

NOTES:
1. ROOFCURB ACCESSORY IS SHIPPED DISASSEMBLED.
2. INSULATED PANELS: 1/2" THK NEOPRENE FOAM, 1.0# DENSITY.
3. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
4. ROOFCURB SIDEWALLS: 16 GAGE STEEL.
5. ATTACH DUCTWORK TO CURB. (FLANGES OF DUCT REST ON CURB).
6. SERVICE CLEARANCE 4 FT ON EACH SIDE.
7. "L" AND "S" DESIGNATIONS DENOTE LOCATION OF COMMON CROSS RAIL. (POSITION "S" FOR SMALL DUCT OPENING CURB).
8. "L" AND "S" DESIGNATIONS DENOTE LOCATION OF COMMON CROSS RAIL.

50HCQ - STAGED AIR VOLUME (SAV) - VARIABLE FREQUENCY DRIVE (VFD) HP RATING

UNIT SIZE	VOLTAGE	STATIC OPTION	VFD HP RATING
07	208/230, 460, 575	STD	3
	208/230, 460	MED	3
	575	MED	5
	208/230, 460, 575	HIGH	7.5
08	208/230, 460, 575	STD	3
	208/230, 460, 575	MED	3
	208/230, 460, 575	HIGH	5
09	208/230, 460, 575	STD	3
	208/230, 460	MED	3
	575	MED	5
	208/230, 460, 575	HIGH	5
12	208/230, 460, 575	STD	3
	208/230, 460	MED	3
	575	MED	5
	208/230, 460, 575	HIGH	7.5

COOLING CAPACITIES 1-STAGE COOLING, 3 TONS

50HCQA04				AMBIENT TEMPERATURE (F)															
				85			95			105			115			125		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
900 Cfm	EAT (wb)	58	TC	31.8	31.8	36.0	30.5	30.5	34.5	29.0	29.0	32.9	27.5	27.5	31.1	25.7	25.7	29.2
			SHC	27.5	31.8	36.0	26.4	30.5	34.5	25.2	29.0	32.9	23.8	27.5	31.1	22.3	25.7	29.2
		62	TC	33.5	33.5	34.2	31.8	31.8	33.4	30.0	30.0	32.5	28.0	28.0	31.4	25.9	25.9	30.2
			SHC	24.9	29.5	34.2	24.0	28.7	33.4	23.2	27.8	32.5	22.2	26.8	31.4	21.1	25.7	30.2
		67	TC	36.8	36.8	36.8	34.9	34.9	34.9	32.9	32.9	32.9	30.8	30.8	30.8	28.4	28.4	28.4
			SHC	20.6	25.2	29.9	19.8	24.4	29.1	18.9	23.6	28.3	18.0	22.7	27.4	17.0	21.7	26.4
		72	TC	40.4	40.4	40.4	38.4	38.4	38.4	36.2	36.2	36.2	33.8	33.8	33.8	31.3	31.3	31.3
			SHC	16.1	20.9	25.6	15.4	20.1	24.8	14.5	19.2	24.0	13.6	18.3	23.0	12.7	17.4	22.1
		76	TC	—	43.4	43.4	—	41.2	41.2	—	38.9	38.9	—	36.4	36.4	—	33.7	33.7
			SHC	—	17.3	22.2	—	16.5	21.5	—	15.7	20.6	—	14.8	19.6	—	13.9	18.7
1050 Cfm	EAT (wb)	58	TC	33.5	33.5	38.0	32.1	32.1	36.4	30.6	30.6	34.7	28.9	28.9	32.7	27.0	27.0	30.6
			SHC	29.0	33.5	38.0	27.8	32.1	36.4	26.5	30.6	34.7	25.0	28.9	32.7	23.4	27.0	30.6
		62	TC	34.6	34.6	37.4	32.8	32.8	36.5	30.9	30.9	35.5	28.9	28.9	34.1	27.0	27.0	31.9
			SHC	26.7	32.1	37.4	25.9	31.2	36.5	24.9	30.2	35.5	23.8	28.9	34.1	22.2	27.0	31.9
		67	TC	37.9	37.9	37.9	35.9	35.9	35.9	33.8	33.8	33.8	31.5	31.5	31.5	29.0	29.0	29.0
			SHC	21.8	27.2	32.6	21.0	26.4	31.8	20.1	25.5	30.9	19.2	24.6	29.9	18.2	23.6	28.9
		72	TC	41.5	41.5	41.5	39.4	39.4	39.4	37.1	37.1	37.1	34.6	34.6	34.6	31.9	31.9	31.9
			SHC	16.7	22.1	27.6	15.9	21.3	26.7	15.0	20.4	25.9	14.1	19.5	24.9	13.1	18.6	24.0
		76	TC	—	44.6	44.6	—	42.3	42.3	—	39.8	39.8	—	37.2	37.2	—	34.4	34.4
			SHC	—	18.0	23.6	—	17.2	22.8	—	16.3	21.9	—	15.4	21.0	—	14.5	20.0
1200 Cfm	EAT (wb)	58	TC	35.0	35.0	39.7	33.5	33.5	38.0	31.8	31.8	36.1	30.0	30.0	34.0	28.1	28.1	31.8
			SHC	30.3	35.0	39.7	29.0	33.5	38.0.	27.6	31.8	36.1	26.0	30.0	34.0	24.3	28.1	31.8
		62	TC	35.5	35.5	40.4	33.7	33.7	39.3	31.9	31.9	37.6	30.1	30.1	35.4	28.1	28.1	33.1
			SHC	28.4	34.4	40.4	27.4	33.3	39.3	26.2	31.9	37.6	24.7	30.1	35.4	23.1	28.1	33.1
		67	TC	38.7	38.7	38.7	36.7	36.7	36.7	34.5	34.5	34.5	32.1	32.1	32.4	29.5	29.5	31.4
			SHC	22.9	29.0	35.1	22.1	28.2	34.3	21.2	27.3	33.4	20.3	26.3	32.4	19.2	25.3	31.4
		72	TC	42.4	42.4	42.4	40.2	40.2	40.2	37.8	37.8	37.8	35.2	35.2	35.2	32.5	32.5	32.5
			SHC	17.1	23.3	29.4	16.3	22.5	28.6	15.5	21.6	27.7	14.5	20.7	26.8	13.6	19.7	25.8
		76	TC	—	45.5	45.5	—	43.1	43.1	—	40.6	40.6	—	37.8	37.8	—	34.9	34.9
			SHC	—	18.6	25.0	—	17.8	24.1	—	17.0	23.2	—	16.0	22.3	—	15.1	21.3
1350 Cfm	EAT (wb)	58	TC	36.2	36.2	41.1	34.6	34.6	39.3	32.9	32.9	37.3	31.0	31.0	35.1	28.9	28.9	32.8
			SHC	31.4	36.2	41.1	30.0	34.6	39.3	28.5	32.9	37.3	26.9	31.0	35.1	25.1	28.9	32.8
		62	TC	36.3	36.3	42.8	34.7	34.7	40.9	32.9	32.9	38.8	31.0	31.0	36.6	29.0	29.0	34.1
			SHC	29.8	36.3	42.8	28.5	34.7	40.9	27.1	32.9	38.8	25.5	31.0	36.6	23.8	29.0	34.1
		67	TC	39.4	39.4	39.4	37.3	37.3	37.3	35.0	35.0	35.8	32.5	32.5	34.8	29.9	29.9	33.7
			SHC	24.0	30.8	37.6	23.2	30.0	36.8	22.3	29.1	35.8	21.3	28.1	34.8	20.3	27.0	33.7
		72	TC	43.1	43.1	43.1	40.8	40.8	40.8	38.3	38.3	38.3	35.7	35.7	35.7	32.9	32.9	32.9
			SHC	17.6	24.4	31.3	16.8	23.6	30.4	15.9	22.7	29.5	14.9	21.8	28.6	14.0	20.8	27.6
		76	TC	—	46.2	46.2	—	43.8	43.8	—	41.1	41.1	—	38.3	38.3	—	35.3	35.3
			SHC	—	19.2	26.2	—	18.4	25.4	—	17.5	24.5	—	16.6	23.5	—	15.6	22.5
1500 Cfm	EAT (wb)	58	TC	37.3	37.3	42.3	35.6	35.6	40.4	33.8	33.8	38.3	31.8	31.8	36.1	29.7	29.7	33.6
			SHC	32.3	37.3	42.3	30.9	35.6	40.4	29.3	33.8	38.3	27.6	31.8	36.1	25.7	29.7	33.6
		62	TC	37.3	37.3	44.0	35.7	35.7	42.0	33.9	33.9	39.9	31.9	31.9	37.5	29.7	29.7	35.0
			SHC	30.7	37.3	44.0	29.3	35.7	42.0	27.8	33.9	39.9	26.2	31.9	37.5	24.4	29.7	35.0
		67	TC	39.9	39.9	40.0	37.8	37.8	39.1	35.4	35.4	38.1	32.9	32.9	37.1	30.3	30.3	35.9
			SHC	25.1	32.5	40.0	24.2	31.7	39.1	23.3	30.7	38.1	22.3	29.7	37.1	21.2	28.5	35.9
		72	TC	43.7	43.7	43.7	41.3	41.3	41.3	38.8	38.8	38.8	36.1	36.1	36.1	33.2	33.2	33.2
			SHC	18.0	25.5	33.0	17.2	24.7	32.1	16.3	23.8	31.2	15.3	22.8	30.3	14.3	21.8	29.3
		76	TC	—	46.8	46.8	—	44.3	44.3	—	41.6	41.6	—	38.7	38.7	—	35.6	35.6
			SHC	—	19.8	27.4	—	19.0	26.6	—	18.1	25.7	—	17.1	24.7	—	16.1	23.7

LEGEND

— —Do Not Operate
Cfm —Cubic Feet Per Minute (Supply Air)
EAT (db) —Entering Air Temperature (Dry Bulb)
EAT (wb) —Entering Air Temperature (Wet Bulb)
SHC —Sensible Heat Capacity (1000 Btuh) Gross
TC —Total Capacity (1000 Btuh) Gross

Performance data (cont)

COOLING CAPACITIES 1-STAGE COOLING, 4 TONS

50HCQA05				AMBIENT TEMPERATURE (F)																
				85			95			105			115			125				
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)				
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85		
1200 Cfm	EAT (wb)	58	TC	41.1	41.1	46.6	39.5	39.5	44.8	37.7	37.7	42.7	35.8	35.8	40.6	33.7	33.7	38.2		
			SHC	35.6	41.1	46.6	34.2	39.5	44.8	32.7	37.7	42.7	31.0	35.8	40.6	29.2	33.7	38.2		
		62	TC	43.1	43.1	44.7	41.0	41.0	43.6	38.7	38.7	42.5	36.3	36.3	41.2	33.8	33.8	39.8		
			SHC	32.3	38.5	44.7	31.3	37.5	43.6	30.2	36.3	42.5	29.0	35.1	41.2	27.8	33.8	39.8		
		67	TC	47.4	47.4	47.4	45.1	45.1	45.1	42.6	42.6	42.6	39.9	39.9	39.9	37.1	37.1	37.1		
			SHC	26.7	32.9	39.1	25.7	31.9	38.0	24.6	30.8	37.0	23.5	29.7	35.9	22.4	28.5	34.7		
		72	TC	52.1	52.1	52.1	49.6	49.6	49.6	46.8	46.8	46.8	43.9	43.9	43.9	40.8	40.8	40.8		
			SHC	20.8	27.1	33.4	19.9	26.1	32.3	18.8	25.1	31.3	17.7	24.0	30.2	16.6	22.8	29.0		
		76	TC	—	56.1	56.1	—	53.3	53.3	—	50.4	50.4	—	47.3	47.3	—	44.0	44.0		
			SHC	—	22.4	29.0	—	21.4	28.0	—	20.4	26.9	—	19.3	25.7	—	18.2	24.6		
1400 Cfm	EAT (wb)	58	TC	43.3	43.3	49.1	41.6	41.6	47.1	39.6	39.6	44.9	37.6	37.6	42.6	35.4	35.4	40.1		
			SHC	37.5	43.3	49.1	36.0	41.6	47.1	34.4	39.6	44.9	32.6	37.6	42.6	30.6	35.4	40.1		
		62	TC	44.5	44.5	48.9	42.3	42.3	47.7	39.9	39.9	46.3	37.7	37.7	44.4	35.4	35.4	41.7		
			SHC	34.7	41.8	48.9	33.6	40.7	47.7	32.4	39.4	46.3	30.9	37.7	44.4	29.1	35.4	41.7		
		67	TC	48.8	48.8	48.8	46.3	46.3	46.3	43.7	43.7	43.7	40.9	40.9	40.9	37.9	37.9	38.1		
			SHC	28.3	35.4	42.5	27.2	34.4	41.5	26.2	33.3	40.4	25.0	32.2	39.3	23.8	31.0	38.1		
		72	TC	53.6	53.6	53.6	50.9	50.9	50.9	48.0	48.0	48.0	45.0	45.0	45.0	41.7	41.7	41.7		
			SHC	21.6	28.7	35.9	20.5	27.7	34.9	19.5	26.6	33.8	18.4	25.5	32.7	17.2	24.3	31.5		
		76	TC	—	57.6	57.6	—	54.7	54.7	—	51.6	51.6	—	48.4	48.4	—	44.9	44.9		
			SHC	—	23.3	30.9	—	22.3	29.8	—	21.3	28.7	—	20.1	27.5	—	19.0	26.3		
1600 Cfm	EAT (wb)	58	TC	45.2	45.2	51.3	43.3	43.3	49.1	41.3	41.3	46.8	39.1	39.1	44.3	36.7	36.7	41.6		
			SHC	39.2	45.2	51.3	37.5	43.3	49.1	35.8	41.3	46.8	33.9	39.1	44.3	31.8	36.7	41.6		
		62	TC	46.1	46.1	50.5	43.4	43.4	51.1	41.3	41.3	48.7	39.1	39.1	46.1	36.7	36.7	43.3		
			SHC	36.0	43.3	50.5	35.7	43.4	51.1	33.9	41.3	48.7	32.1	39.1	46.1	30.2	36.7	43.3		
		67	TC	49.9	49.9	49.9	47.3	47.3	47.3	44.6	44.6	44.6	41.6	41.6	42.6	38.6	38.6	41.3		
			SHC	29.8	37.8	45.9	28.7	36.8	44.8	27.6	35.7	43.7	26.5	34.5	42.6	25.2	33.3	41.3		
		72	TC	54.7	54.7	54.7	51.9	51.9	51.9	48.9	48.9	48.9	45.7	45.7	45.7	42.4	42.4	42.4		
			SHC	22.2	30.3	38.4	21.2	29.2	37.3	20.1	28.2	36.2	18.9	27.0	35.1	17.7	25.8	33.9		
		76	TC	—	58.8	58.8	—	55.8	55.8	—	52.6	52.6	—	49.2	49.2	—	45.6	45.6		
			SHC	—	24.2	32.6	—	23.1	31.5	—	22.1	30.3	—	20.9	29.1	—	19.7	27.9		
1800 Cfm	EAT (wb)	58	TC	46.8	46.8	53.1	44.8	44.8	50.8	42.7	42.7	48.3	40.3	40.3	45.7	37.8	37.8	42.9		
			SHC	40.6	46.8	53.1	38.8	44.8	50.8	37.0	42.7	48.3	34.9	40.3	45.7	32.8	37.8	42.9		
		62	TC	46.9	46.9	55.2	44.8	44.8	52.8	42.7	42.7	50.3	40.4	40.4	47.6	37.9	37.9	44.6		
			SHC	38.5	46.9	55.2	36.8	44.8	52.8	35.1	42.7	50.3	33.2	40.4	47.6	31.1	37.9	44.6		
		67	TC	50.8	50.8	50.8	48.1	48.1	48.1	45.2	45.2	46.9	42.2	42.2	45.7	39.1	39.1	44.3		
			SHC	31.2	40.2	49.1	30.1	39.1	48.0	29.0	37.9	46.9	27.8	36.7	45.7	26.6	35.4	44.3		
		72	TC	55.7	55.7	55.7	52.7	52.7	52.7	49.6	49.6	49.6	46.4	46.4	46.4	42.9	42.9	42.9		
			SHC	22.8	31.8	40.8	21.7	30.7	39.7	20.6	29.6	38.6	19.5	28.4	37.4	18.3	27.2	36.2		
		76	TC	—	59.7	59.7	—	56.6	56.6	—	53.3	53.3	—	49.8	49.8	—	46.1	46.1		
			SHC	—	25.0	34.2	—	23.9	33.1	—	22.8	31.9	—	21.6	30.7	—	20.4	29.5		
2000 Cfm	EAT (wb)	58	TC	48.2	48.2	54.6	46.1	46.1	52.2	43.8	43.8	49.7	41.4	41.4	46.9	38.8	38.8	44.0		
			SHC	41.8	48.2	54.6	39.9	46.1	52.2	38.0	43.8	49.7	35.9	41.4	46.9	33.6	38.8	44.0		
		62	TC	48.2	48.2	56.8	46.1	46.1	54.4	43.9	43.9	51.7	41.4	41.4	48.8	38.8	38.8	45.7		
			SHC	39.6	48.2	56.8	37.9	46.1	54.4	36.0	43.9	51.7	34.0	41.4	48.8	31.9	38.8	45.7		
		67	TC	51.4	51.4	52.2	48.7	48.7	51.1	45.8	45.8	49.9	42.7	42.7	48.6	39.5	39.5	47.1		
			SHC	32.6	42.4	52.2	31.5	41.3	51.1	30.3	40.1	49.9	29.1	38.8	48.6	27.8	37.4	47.1		
		72	TC	56.4	56.4	56.4	53.4	53.4	53.4	50.2	50.2	50.2	46.9	46.9	46.9	43.3	43.3	43.3		
			SHC	23.3	33.2	43.0	22.2	32.1	41.9	21.1	31.0	40.8	20.0	29.8	39.6	18.8	28.6	38.4		
		76	TC	—	60.4	60.4	—	57.2	57.2	—	53.9	53.9	—	50.3	50.3	—	46.5	46.5		
			SHC	—	25.7	35.7	—	24.6	34.6	—	23.5	33.5	—	22.3	32.2	—	21.1	31.0		

LEGEND

— —Do Not Operate
Cfm —Cubic Feet Per Minute (Supply Air)
EAT (db) —Entering Air Temperature (Dry Bulb)
EAT (wb) —Entering Air Temperature (Wet Bulb)
SHC —Sensible Heat Capacity (1000 Btuh) Gross
TC —Total Capacity (1000 Btuh) Gross

COOLING CAPACITIES 1-STAGE COOLING, 5 TONS

50HCQA06				AMBIENT TEMPERATURE (F)															
				85			95			105			115			125			
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	
1500 Cfm	EAT (wb)	58	TC	53.8	53.8	60.7	51.7	51.7	58.3	49.4	49.4	55.8	46.9	46.9	53.0	44.2	44.2	49.9	
			SHC	46.9	53.8	60.7	45.0	51.7	58.3	43.0	49.4	55.8	40.9	46.9	53.0	38.5	44.2	49.9	
		62	TC	56.2	56.2	58.3	53.5	53.5	57.0	50.6	50.6	55.5	47.5	47.5	53.9	44.2	44.2	51.8	
			SHC	42.6	50.5	58.3	41.3	49.1	57.0	39.9	47.7	55.5	38.4	46.2	53.9	36.6	44.2	51.8	
		67	TC	61.7	61.7	61.7	58.7	58.7	58.7	55.5	55.5	55.5	52.0	52.0	52.0	48.2	48.2	48.2	
			SHC	35.1	43.0	50.9	33.8	41.7	49.6	32.5	40.4	48.3	31.1	38.9	46.8	29.5	37.4	45.3	
		72	TC	67.7	67.7	67.7	64.4	64.4	64.4	60.9	60.9	60.9	57.1	57.1	57.1	53.0	53.0	53.0	
			SHC	27.4	35.3	43.3	26.1	34.1	42.0	24.8	32.7	40.7	23.4	31.3	39.2	21.9	29.8	37.7	
		76	TC	—	72.7	72.7	—	69.2	69.2	—	65.4	65.4	—	61.3	61.3	—	56.9	56.9	
			SHC	—	29.0	37.3	—	27.8	36.1	—	26.5	34.7	—	25.1	33.2	—	23.5	31.6	
1750 Cfm	EAT (wb)	58	TC	56.7	56.7	64.0	54.4	54.4	61.4	51.9	51.9	58.6	49.2	49.2	55.6	46.2	46.2	52.2	
			SHC	49.4	56.7	64.0	47.4	54.4	61.4	45.2	51.9	58.6	42.9	49.2	55.6	40.3	46.2	52.2	
		62	TC	58.0	58.0	63.8	55.2	55.2	62.3	52.2	52.2	60.5	49.3	49.3	57.8	46.3	46.3	54.2	
			SHC	45.9	54.8	63.8	44.5	53.4	62.3	42.9	51.7	60.5	40.8	49.3	57.8	38.3	46.3	54.2	
		67	TC	63.4	63.4	63.4	60.3	60.3	60.3	56.9	56.9	56.9	53.2	53.2	53.2	49.3	49.3	49.7	
			SHC	37.3	46.4	55.5	36.0	45.1	54.2	34.6	43.7	52.8	33.1	42.2	51.3	31.5	40.6	49.7	
		72	TC	69.5	69.5	69.5	66.0	66.0	66.0	62.4	62.4	62.4	58.3	58.3	58.3	54.0	54.0	54.0	
			SHC	28.3	37.5	46.7	27.0	36.2	45.4	25.7	34.8	44.0	24.2	33.4	42.5	22.7	31.8	41.0	
		76	TC	—	74.5	74.5	—	70.9	70.9	—	66.9	66.9	—	62.6	62.6	—	58.0	58.0	
			SHC	—	30.2	39.7	—	29.0	38.4	—	27.6	37.0	—	26.2	35.5	—	24.6	33.9	
2000 Cfm	EAT (wb)	58	TC	59.1	59.1	66.7	56.7	56.7	64.0	54.0	54.0	61.0	51.1	51.1	57.7	48.0	48.0	54.1	
			SHC	51.5	59.1	66.7	49.4	56.7	64.0	47.1	54.0	61.0	44.5	51.1	57.7	41.8	48.0	54.1	
		62	TC	59.5	59.5	68.7	56.7	56.7	66.5	54.1	54.1	63.4	51.2	51.2	60.0	48.0	48.0	56.2	
			SHC	48.7	58.7	68.7	47.0	56.7	66.5	44.8	54.1	63.4	42.4	51.2	60.0	39.7	48.0	56.2	
		67	TC	64.7	64.7	64.7	61.5	61.5	61.5	57.9	57.9	57.9	54.1	54.1	55.6	50.1	50.1	53.9	
			SHC	39.3	49.6	59.9	38.0	48.3	58.6	36.6	46.9	57.2	35.0	45.3	55.6	33.4	43.7	53.9	
		72	TC	70.9	70.9	70.9	67.3	67.3	67.3	63.4	63.4	63.4	59.3	59.3	59.3	54.8	54.8	54.8	
			SHC	29.2	39.5	49.9	27.9	38.2	48.6	26.5	36.8	47.2	25.0	35.3	45.7	23.4	33.8	44.1	
		76	TC	—	75.9	75.9	—	72.1	72.1	—	68.0	68.0	—	63.6	63.6	—	58.8	58.8	
			SHC	—	31.3	41.9	—	30.0	40.6	—	28.7	39.2	—	27.2	37.6	—	25.6	36.0	
2250 Cfm	EAT (wb)	58	TC	61.2	61.2	69.1	58.6	58.6	66.1	55.8	55.8	63.0	52.7	52.7	59.5	49.4	49.4	55.7	
			SHC	53.3	61.2	69.1	51.0	58.6	66.1	48.6	55.8	63.0	45.9	52.7	59.5	43.0	49.4	55.7	
		62	TC	61.2	61.2	71.8	58.6	58.6	68.7	55.8	55.8	65.4	52.8	52.8	61.9	49.4	49.4	57.9	
			SHC	50.7	61.2	71.8	48.6	58.6	68.7	46.2	55.8	65.4	43.7	52.8	61.9	40.9	49.4	57.9	
		67	TC	65.8	65.8	65.8	62.4	62.4	62.8	58.8	58.8	61.3	54.9	54.9	59.7	50.7	50.7	57.9	
			SHC	41.2	52.7	64.2	39.9	51.3	62.8	38.4	49.9	61.3	36.9	48.3	59.7	35.2	46.5	57.9	
		72	TC	72.0	72.0	72.0	68.3	68.3	68.3	64.3	64.3	64.3	60.0	60.0	60.0	55.4	55.4	55.4	
			SHC	30.0	41.5	53.0	28.6	40.1	51.6	27.2	38.7	50.2	25.8	37.2	48.7	24.2	35.6	47.1	
		76	TC	—	77.0	77.0	—	73.1	73.1	—	68.9	68.9	—	64.3	64.3	—	59.5	59.5	
			SHC	—	32.3	44.1	—	31.0	42.7	—	29.6	41.3	—	28.1	39.7	—	26.6	38.1	
2500 Cfm	EAT (wb)	58	TC	62.9	62.9	71.1	60.2	60.2	68.0	57.3	57.3	64.7	54.1	54.1	61.1	50.6	50.6	57.1	
			SHC	54.8	62.9	71.1	52.5	60.2	68.0	49.9	57.3	64.7	47.1	54.1	61.1	44.1	50.6	57.1	
		62	TC	63.0	63.0	73.8	60.3	60.3	70.6	57.3	57.3	67.2	54.1	54.1	63.4	50.6	50.6	59.3	
			SHC	52.2	63.0	73.8	49.9	60.3	70.6	47.5	57.3	67.2	44.8	54.1	63.4	41.9	50.6	59.3	
		67	TC	66.6	66.6	68.2	63.2	63.2	66.8	59.5	59.5	65.2	55.5	55.5	63.5	51.3	51.3	61.5	
			SHC	43.1	55.6	68.2	41.7	54.2	66.8	40.2	52.7	65.2	38.6	51.0	63.5	36.8	49.1	61.5	
		72	TC	72.8	72.8	72.8	69.0	69.0	69.0	65.0	65.0	65.0	60.6	60.6	60.6	55.9	55.9	55.9	
			SHC	30.7	43.3	56.0	29.4	42.0	54.6	28.0	40.6	53.2	26.5	39.1	51.7	24.9	37.5	50.1	
		76	TC	—	77.9	77.9	—	73.9	73.9	—	69.5	69.5	—	64.9	64.9	—	59.9	59.9	
			SHC	—	33.3	46.1	—	32.0	44.7	—	30.6	43.3	—	29.1	41.7	—	27.5	40.1	

LEGEND

— —Do Not Operate
Cfm —Cubic Feet Per Minute (Supply Air)
EAT (db) —Entering Air Temperature (Dry Bulb)
EAT (wb) —Entering Air Temperature (Wet Bulb)
SHC —Sensible Heat Capacity (1000 Btuh) Gross
TC —Total Capacity (1000 Btuh) Gross

Performance data (cont)

COOLING CAPACITIES 1-STAGE COOLING, 6 TONS

50HCQA07				AMBIENT TEMPERATURE (F)																
				85			95			105			115			125				
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)				
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85		
1800 Cfm	EAT (wb)	58	TC	63.5	63.5	71.7	60.1	60.1	67.9	56.4	56.4	63.7	52.3	52.3	59.1	47.8	47.8	54.0		
			SHC	55.2	63.5	71.7	52.3	60.1	67.9	49.1	56.4	63.7	45.5	52.3	59.1	41.6	47.8	54.0		
		62	TC	66.5	66.5	68.9	62.1	62.1	66.9	57.4	57.4	64.6	52.4	52.4	61.4	47.9	47.9	56.2		
			SHC	50.2	59.5	68.9	48.1	57.5	66.9	45.9	55.2	64.6	43.3	52.4	61.4	39.6	47.9	56.2		
		67	TC	73.9	73.9	73.9	69.9	69.9	69.9	64.6	64.6	64.6	59.0	59.0	59.0	52.8	52.8	52.8		
			SHC	40.7	50.0	59.4	39.2	48.7	58.1	37.2	46.6	56.0	35.0	44.5	53.9	32.7	42.1	51.6		
		72	TC	78.2	78.2	78.2	76.9	76.9	76.9	73.1	73.1	73.1	67.5	67.5	67.5	61.0	61.0	61.0		
			SHC	29.8	38.9	47.9	29.4	38.7	48.0	28.0	37.4	46.8	26.1	35.5	44.9	23.9	33.3	42.7		
		76	TC	—	79.5	79.5	—	79.9	79.9	—	78.1	78.1	—	74.0	74.0	—	68.1	68.1		
			SHC	—	29.8	39.7	—	29.9	39.8	—	29.3	39.1	—	27.9	37.5	—	26.1	35.5		
2100 Cfm	EAT (wb)	58	TC	67.7	67.7	76.4	64.0	64.0	72.3	60.1	60.1	67.9	55.8	55.8	63.0	51.0	51.0	57.7		
			SHC	58.9	67.7	76.4	55.7	64.0	72.3	52.3	60.1	67.9	48.5	55.8	63.0	44.4	51.0	57.7		
		62	TC	69.2	69.2	75.6	64.7	64.7	73.5	60.2	60.2	70.5	55.8	55.8	65.5	51.1	51.1	60.0		
			SHC	54.2	64.9	75.6	52.2	62.8	73.5	49.7	60.1	70.5	46.2	55.8	65.5	42.2	51.1	60.0		
		67	TC	75.6	75.6	75.6	72.1	72.1	72.1	66.9	66.9	66.9	60.9	60.9	60.9	54.5	54.5	56.9		
			SHC	42.8	53.4	63.9	41.8	52.6	63.3	39.9	50.7	61.6	37.6	48.5	59.3	35.3	46.1	56.9		
		72	TC	78.9	78.9	78.9	78.2	78.2	78.2	75.0	75.0	75.0	69.6	69.6	69.6	63.0	63.0	63.0		
			SHC	30.2	40.2	50.2	30.1	40.6	51.0	29.1	39.8	50.5	27.3	38.1	48.9	25.1	35.9	46.7		
		76	TC	—	79.7	79.7	—	80.5	80.5	—	79.1	79.1	—	75.5	75.5	—	69.8	69.8		
			SHC	—	30.7	42.3	—	30.8	42.1	—	30.3	41.4	—	29.1	40.1	—	27.4	38.3		
2400 Cfm	EAT (wb)	58	TC	70.8	70.8	80.0	67.3	67.3	76.1	63.1	63.1	71.3	58.6	58.6	66.2	53.7	53.7	60.7		
			SHC	61.6	70.8	80.0	58.6	67.3	76.1	54.9	63.1	71.3	51.0	58.6	66.2	46.7	53.7	60.7		
		62	TC	71.3	71.3	81.4	67.4	67.4	79.0	63.1	63.1	74.1	58.7	58.7	68.9	53.7	53.7	63.1		
			SHC	57.7	69.6	81.4	55.7	67.4	79.0	52.2	63.1	74.1	48.5	58.7	68.9	44.4	53.7	63.1		
		67	TC	76.7	76.7	76.7	73.7	73.7	73.7	68.5	68.5	68.5	62.4	62.4	64.4	56.0	56.0	62.0		
			SHC	44.7	56.2	67.8	44.1	56.1	68.1	42.3	54.5	66.7	40.1	52.2	64.4	37.8	49.9	62.0		
		72	TC	79.3	79.3	79.3	79.0	79.0	79.0	76.3	76.3	76.3	71.1	71.1	71.1	64.4	64.4	64.4		
			SHC	30.5	41.3	52.1	30.7	42.1	53.6	29.9	41.8	53.8	28.3	40.4	52.5	26.2	38.3	50.5		
		76	TC	—	80.0	80.0	—	80.8	80.8	—	79.8	79.8	—	76.5	76.5	—	71.0	71.0		
			SHC	—	31.2	43.5	—	31.4	43.6	—	31.1	43.3	—	30.2	42.4	—	28.6	40.8		
2700 Cfm	EAT (wb)	58	TC	73.3	73.3	82.8	70.0	70.0	79.1	65.8	65.8	74.3	61.0	61.0	68.9	55.9	55.9	63.2		
			SHC	63.7	73.3	82.8	60.9	70.0	79.1	57.2	65.8	74.3	53.1	61.0	68.9	48.7	55.9	63.2		
		62	TC	73.3	73.3	85.8	70.1	70.1	82.3	65.8	65.8	77.3	61.1	61.1	71.7	56.0	56.0	65.7		
			SHC	60.5	73.2	85.8	58.0	70.1	82.3	54.4	65.8	77.3	50.5	61.1	71.7	46.3	56.0	65.7		
		67	TC	77.5	77.5	77.5	74.9	74.9	74.9	70.0	70.0	71.5	63.7	63.7	69.2	57.2	57.2	66.6		
			SHC	46.1	58.6	71.1	46.1	59.3	72.5	44.7	58.1	71.5	42.4	55.8	69.2	40.0	53.3	66.6		
		72	TC	79.6	79.6	79.6	79.5	79.5	79.5	77.2	77.2	77.2	72.3	72.3	72.3	65.6	65.6	65.6		
			SHC	30.8	42.3	53.7	31.1	43.4	55.8	30.7	43.7	56.7	29.2	42.5	55.9	27.2	40.6	54.1		
		76	TC	—	80.1	80.1	—	81.1	81.1	—	80.3	80.3	—	77.1	77.1	—	71.9	71.9		
			SHC	—	31.6	44.5	—	32.0	44.9	—	31.8	44.9	—	31.0	44.3	—	29.6	43.0		
3000 Cfm	EAT (wb)	58	TC	75.0	75.0	84.8	72.2	72.2	81.6	68.1	68.1	76.9	63.1	63.1	71.2	57.8	57.8	65.3		
			SHC	65.3	75.0	84.8	62.9	72.2	81.6	59.2	68.1	76.9	54.9	63.1	71.2	50.3	57.8	65.3		
		62	TC	75.1	75.1	88.1	72.3	72.3	84.8	68.1	68.1	79.9	63.1	63.1	74.1	57.9	57.9	67.9		
			SHC	62.1	75.1	88.1	59.8	72.3	84.8	56.3	68.1	79.9	52.2	63.1	74.1	47.8	57.9	67.9		
		67	TC	77.9	77.9	77.9	75.9	75.9	76.5	71.1	71.1	76.0	65.0	65.0	73.8	58.4	58.4	70.9		
			SHC	47.3	60.6	73.8	48.0	62.2	76.5	46.8	61.4	76.0	44.6	59.2	73.8	42.1	56.5	70.9		
		72	TC	79.3	79.3	79.3	79.9	79.9	79.9	77.9	77.9	77.9	73.2	73.2	73.2	66.5	66.5	66.5		
			SHC	30.9	42.8	54.6	31.6	44.6	57.7	31.3	45.3	59.3	30.0	44.5	59.0	28.1	42.7	57.4		
		76	TC	—	80.1	80.1	—	81.2	81.2	—	80.6	80.6	—	77.6	77.6	—	72.5	72.5		
			SHC	—	32.0	45.4	—	32.4	46.0	—	32.5	46.4	—	31.8	46.1	—	30.6	45.1		

LEGEND

— —Do Not Operate
Cfm —Cubic Feet Per Minute (Supply Air)
EAT (db) —Entering Air Temperature (Dry Bulb)
EAT (wb) —Entering Air Temperature (Wet Bulb)
SHC —Sensible Heat Capacity (1000 Btuh) Gross
TC —Total Capacity (1000 Btuh) Gross

COOLING CAPACITIES 2-STAGE COOLING, 6 TONS

50HCQD07				AMBIENT TEMPERATURE (F)															
				85			95			105			115			125			
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	
1800 Cfm	EAT (wb)	58	TC	64.5	64.5	72.8	61.9	61.9	69.9	59.1	59.1	66.7	56.0	56.0	63.3	52.7	52.7	59.6	
			SHC	56.1	64.5	72.8	53.8	61.9	69.9	51.4	59.1	66.7	48.7	56.0	63.3	45.8	52.7	59.6	
		62	TC	67.4	67.4	69.3	64.1	64.1	67.5	60.6	60.6	65.7	56.9	56.9	63.7	53.0	53.0	61.4	
			SHC	50.7	60.0	69.3	49.0	58.3	67.5	47.2	56.5	65.7	45.3	54.5	63.7	43.2	52.3	61.4	
		67	TC	73.7	73.7	73.7	70.0	70.0	70.0	66.2	66.2	66.2	62.2	62.2	62.2	57.8	57.8	57.8	
			SHC	41.7	51.0	60.3	40.0	49.3	58.6	38.3	47.6	56.9	36.5	45.8	55.1	34.6	43.9	53.2	
		72	TC	80.6	80.6	80.6	76.8	76.8	76.8	72.7	72.7	72.7	68.3	68.3	68.3	63.6	63.6	63.6	
			SHC	32.4	41.8	51.2	30.8	40.2	49.6	29.1	38.5	47.9	27.4	36.7	46.1	25.5	34.9	44.2	
		76	TC	—	86.6	86.6	—	82.4	82.4	—	78.1	78.1	—	73.4	73.4	—	68.4	68.4	
			SHC	—	34.4	44.3	—	32.8	42.7	—	31.2	40.9	—	29.4	39.1	—	27.6	37.2	
2100 Cfm	EAT (wb)	58	TC	67.9	67.9	76.7	65.0	65.0	73.5	62.0	62.0	70.1	58.8	58.8	66.4	55.2	55.2	62.5	
			SHC	59.1	67.9	76.7	56.6	65.0	73.5	53.9	62.0	70.1	51.1	58.8	66.4	48.0	55.2	62.5	
		62	TC	69.3	69.3	75.5	66.0	66.0	73.6	62.4	62.4	71.5	58.8	58.8	69.1	55.3	55.3	65.0	
			SHC	54.3	64.9	75.5	52.6	63.1	73.6	50.7	61.1	71.5	48.6	58.8	69.1	45.6	55.3	65.0	
		67	TC	75.6	75.6	75.6	71.7	71.7	71.7	67.7	67.7	67.7	63.5	63.5	63.5	59.0	59.0	59.0	
			SHC	44.0	54.7	65.3	42.3	53.0	63.6	40.6	51.2	61.9	38.7	49.4	60.0	36.8	47.5	58.1	
		72	TC	82.6	82.6	82.6	78.6	78.6	78.6	74.3	74.3	74.3	69.7	69.7	69.7	64.8	64.8	64.8	
			SHC	33.5	44.2	54.9	31.8	42.5	53.2	30.1	40.8	51.5	28.3	39.0	49.7	26.5	37.1	47.7	
		76	TC	—	88.5	88.5	—	84.3	84.3	—	79.7	79.7	—	74.8	74.8	—	69.6	69.6	
			SHC	—	35.7	46.9	—	34.1	45.2	—	32.4	43.5	—	30.6	41.6	—	28.7	39.6	
2400 Cfm	EAT (wb)	58	TC	70.6	70.6	79.7	67.6	67.6	76.3	64.4	64.4	72.7	60.9	60.9	68.9	57.2	57.2	64.7	
			SHC	61.5	70.6	79.7	58.8	67.6	76.3	56.0	64.4	72.7	53.0	60.9	68.9	49.7	57.2	64.7	
		62	TC	71.1	71.1	81.0	67.9	67.9	78.2	64.4	64.4	75.6	61.0	61.0	71.6	57.3	57.3	67.3	
			SHC	57.6	69.3	81.0	55.4	66.8	78.2	53.3	64.4	75.6	50.4	61.0	71.6	47.3	57.3	67.3	
		67	TC	77.0	77.0	77.0	73.0	73.0	73.0	68.9	68.9	68.9	64.5	64.5	64.6	59.9	59.9	62.6	
			SHC	46.2	58.1	70.0	44.5	56.4	68.3	42.7	54.6	66.5	40.9	52.7	64.6	38.9	50.8	62.6	
		72	TC	84.1	84.1	84.1	79.9	79.9	79.9	75.5	75.5	75.5	70.8	70.8	70.8	65.8	65.8	65.8	
			SHC	34.4	46.4	58.3	32.7	44.7	56.6	31.0	42.9	54.9	29.2	41.1	53.0	27.3	39.2	51.0	
		76	TC	—	90.1	90.1	—	85.6	85.6	—	80.9	80.9	—	75.9	75.9	—	70.5	70.5	
			SHC	—	36.9	49.3	—	35.3	47.6	—	33.5	45.8	—	31.7	43.9	—	29.8	41.9	
2700 Cfm	EAT (wb)	58	TC	72.8	72.8	82.1	69.6	69.6	78.6	66.3	66.3	74.9	62.7	62.7	70.9	58.8	58.8	66.5	
			SHC	63.4	72.8	82.1	60.6	69.6	78.6	57.7	66.3	74.9	54.5	62.7	70.9	51.2	58.8	66.5	
		62	TC	72.8	72.8	85.3	69.7	69.7	81.7	66.4	66.4	77.9	62.8	62.8	73.7	58.9	58.9	69.2	
			SHC	60.3	72.8	85.3	57.7	69.7	81.7	54.9	66.4	77.9	51.9	62.8	73.7	48.6	58.9	69.2	
		67	TC	78.0	78.0	78.0	74.0	74.0	74.0	69.8	69.8	70.9	65.4	65.4	69.0	60.7	60.7	66.9	
			SHC	48.2	61.3	74.4	46.5	59.6	72.7	44.7	57.8	70.9	42.8	55.9	69.0	40.8	53.9	66.9	
		72	TC	85.2	85.2	85.2	81.0	81.0	81.0	76.4	76.4	76.4	71.6	71.6	71.6	66.5	66.5	66.5	
			SHC	35.2	48.4	61.5	33.6	46.7	59.8	31.8	44.9	58.0	30.0	43.0	56.1	28.1	41.1	54.1	
		76	TC	—	91.2	91.2	—	86.6	86.6	—	81.8	81.8	—	76.7	76.7	—	71.2	71.2	
			SHC	—	38.0	51.5	—	36.3	49.8	—	34.6	47.9	—	32.7	46.0	—	30.8	44.0	
3000 Cfm	EAT (wb)	58	TC	74.8	74.8	84.4	71.4	71.4	80.7	68.0	68.0	76.8	64.2	64.2	72.6	60.2	60.2	68.1	
			SHC	65.1	74.8	84.4	62.2	71.4	80.7	59.1	68.0	76.8	55.9	64.2	72.6	52.4	60.2	68.1	
		62	TC	74.8	74.8	87.7	71.5	71.5	83.8	68.0	68.0	79.8	64.3	64.3	75.4	60.3	60.3	70.8	
			SHC	62.0	74.8	87.7	59.2	71.5	83.8	56.2	68.0	79.8	53.1	64.3	75.4	49.8	60.3	70.8	
		67	TC	78.9	78.9	78.9	74.9	74.9	76.9	70.6	70.6	75.0	66.1	66.1	73.0	61.4	61.4	70.8	
			SHC	50.1	64.4	78.6	48.4	62.6	76.9	46.6	60.8	75.0	44.7	58.8	73.0	42.6	56.7	70.8	
		72	TC	86.2	86.2	86.2	81.8	81.8	81.8	77.2	77.2	77.2	72.3	72.3	72.3	67.1	67.1	67.1	
			SHC	36.0	50.3	64.5	34.3	48.6	62.8	32.6	46.8	60.9	30.7	44.9	59.0	28.8	42.9	57.0	
		76	TC	—	92.1	92.1	—	87.4	87.4	—	82.5	82.5	—	77.3	77.3	—	71.8	71.8	
			SHC	—	39.0	53.6	—	37.3	51.8	—	35.5	49.9	—	33.6	48.0	—	31.7	45.9	

LEGEND

— —Do Not Operate
Cfm —Cubic Feet Per Minute (Supply Air)
EAT (db) —Entering Air Temperature (Dry Bulb)
EAT (wb) —Entering Air Temperature (Wet Bulb)
SHC —Sensible Heat Capacity (1000 Btuh) Gross
TC —Total Capacity (1000 Btuh) Gross

Performance data (cont)

COOLING CAPACITIES 2-STAGE COOLING, 7.5 TONS

50HCQD08				AMBIENT TEMPERATURE (F)																
				85			95			105			115			125				
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)				
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85		
2250 Cfm	EAT (wb)	58	TC	81.1	81.1	92.1	76.4	76.4	86.8	73.0	73.0	82.9	69.3	69.3	78.7	65.2	65.2	74.1		
			SHC	70.1	81.1	92.1	66.0	76.4	86.8	63.1	73.0	82.9	59.8	69.3	78.7	56.4	65.2	74.1		
		62	TC	86.2	86.2	86.2	80.1	80.1	83.0	75.6	75.6	80.9	70.8	70.8	78.6	65.9	65.9	76.1		
			SHC	62.5	74.2	85.9	59.7	71.3	83.0	57.6	69.3	80.9	55.4	67.0	78.6	53.0	64.5	76.1		
		67	TC	94.3	94.3	94.3	87.6	87.6	87.6	82.8	82.8	82.8	77.6	77.6	77.6	72.1	72.1	72.1		
			SHC	51.3	63.0	74.6	48.5	60.1	71.8	46.5	58.1	69.8	44.4	56.0	67.7	42.2	53.8	65.5		
		72	TC	102.9	102.9	102.9	95.6	95.6	95.6	90.3	90.3	90.3	84.7	84.7	84.7	78.7	78.7	78.7		
			SHC	39.6	51.4	63.1	36.9	48.6	60.3	34.9	46.6	58.3	32.9	44.5	56.2	30.7	42.4	54.1		
		76	TC	—	109.9	109.9	—	102.1	102.1	—	96.4	96.4	—	90.5	90.5	—	84.1	84.1		
			SHC	—	41.8	54.2	—	39.1	51.4	—	37.2	49.4	—	35.2	47.2	—	33.1	45.0		
2625 Cfm	EAT (wb)	58	TC	85.7	85.7	97.3	80.6	80.6	91.5	76.9	76.9	87.3	72.8	72.8	82.7	68.5	68.5	77.8		
			SHC	74.0	85.7	97.3	69.6	80.6	91.5	66.4	76.9	87.3	62.9	72.8	82.7	59.2	68.5	77.8		
		62	TC	89.0	89.0	94.2	82.6	82.6	91.1	78.0	78.0	88.7	73.3	73.3	85.3	68.5	68.5	81.0		
			SHC	67.3	80.7	94.2	64.3	77.7	91.1	62.1	75.4	88.7	59.3	72.3	85.3	56.1	68.5	81.0		
		67	TC	97.2	97.2	97.2	90.1	90.1	90.1	85.0	85.0	85.0	79.6	79.6	79.6	73.8	73.8	73.8		
			SHC	54.3	67.8	81.2	51.4	64.9	78.3	49.4	62.8	76.3	47.3	60.7	74.1	45.0	58.5	71.9		
		72	TC	105.8	105.8	105.8	98.1	98.1	98.1	92.6	92.6	92.6	86.7	86.7	86.7	80.5	80.5	80.5		
			SHC	40.9	54.4	67.9	38.1	51.5	65.0	36.1	49.5	63.0	34.0	47.4	60.9	31.8	45.3	58.7		
		76	TC	—	112.7	112.7	—	104.5	104.5	—	98.6	98.6	—	92.4	92.4	—	85.8	85.8		
			SHC	—	43.5	57.6	—	40.7	54.6	—	38.7	52.5	—	36.7	50.4	—	34.5	48.1		
3000 Cfm	EAT (wb)	58	TC	89.5	89.5	101.6	84.1	84.1	95.5	80.1	80.1	90.9	75.7	75.7	86.0	71.2	71.2	80.8		
			SHC	77.3	89.5	101.6	72.6	84.1	95.5	69.2	80.1	90.9	65.5	75.7	86.0	61.5	71.2	80.8		
		62	TC	91.3	91.3	101.9	84.8	84.8	97.7	80.3	80.3	94.3	75.8	75.8	89.5	71.2	71.2	84.1		
			SHC	71.7	86.8	101.9	68.2	83.0	97.7	65.5	79.9	94.3	62.1	75.8	89.5	58.3	71.2	84.1		
		67	TC	99.5	99.5	99.5	92.1	92.1	92.1	86.8	86.8	86.8	81.1	81.1	81.1	75.1	75.1	78.2		
			SHC	57.2	72.4	87.5	54.2	69.4	84.6	52.2	67.4	82.6	50.0	65.2	80.4	47.8	63.0	78.2		
		72	TC	108.1	108.1	108.1	100.0	100.0	100.0	94.3	94.3	94.3	88.2	88.2	88.2	81.8	81.8	81.8		
			SHC	42.0	57.2	72.4	39.1	54.3	69.5	37.1	52.3	67.4	35.0	50.2	65.3	32.9	48.0	63.1		
		76	TC	—	114.8	114.8	—	106.3	106.3	—	100.3	100.3	—	93.8	93.8	—	87.0	87.0		
			SHC	—	44.9	60.6	—	42.0	57.6	—	40.1	55.5	—	38.0	53.3	—	35.8	51.0		
3375 Cfm	EAT (wb)	58	TC	92.8	92.8	105.4	87.0	87.0	98.8	82.8	82.8	94.0	78.2	78.2	88.9	73.4	73.4	83.4		
			SHC	80.2	92.8	105.4	75.2	87.0	98.8	71.5	82.8	94.0	67.6	78.2	88.9	63.4	73.4	83.4		
		62	TC	93.6	93.6	108.0	87.1	87.1	102.8	82.8	82.8	97.8	78.3	78.3	92.5	73.5	73.5	86.8		
			SHC	75.3	91.6	108.0	71.3	87.1	102.8	67.9	82.8	97.8	64.1	78.3	92.5	60.1	73.5	86.8		
		67	TC	101.3	101.3	101.3	93.6	93.6	93.6	88.1	88.1	88.6	82.3	82.3	86.4	76.2	76.2	84.0		
			SHC	59.9	76.8	93.6	56.9	73.8	90.7	54.8	71.7	88.6	52.6	69.5	86.4	50.3	67.2	84.0		
		72	TC	109.8	109.8	109.8	101.5	101.5	101.5	95.6	95.6	95.6	89.3	89.3	89.3	82.8	82.8	82.8		
			SHC	43.0	59.9	76.7	40.1	56.9	73.8	38.1	54.9	71.7	36.0	52.8	69.6	33.8	50.6	67.4		
		76	TC	—	116.4	116.4	—	107.6	107.6	—	101.4	101.4	—	94.8	94.8	—	87.9	87.9		
			SHC	—	46.1	63.3	—	43.2	60.2	—	41.2	58.1	—	39.1	55.9	—	37.0	53.6		
3750 Cfm	EAT (wb)	58	TC	95.6	95.6	108.6	89.5	89.5	101.7	85.1	85.1	96.7	80.4	80.4	91.3	75.3	75.3	85.5		
			SHC	82.6	95.6	108.6	77.4	89.5	101.7	73.6	85.1	96.7	69.4	80.4	91.3	65.1	75.3	85.5		
		62	TC	95.7	95.7	113.0	89.6	89.6	105.8	85.2	85.2	100.6	80.4	80.4	95.0	75.4	75.4	89.0		
			SHC	78.3	95.7	113.0	73.4	89.6	105.8	69.7	85.2	100.6	65.8	80.4	95.0	61.7	75.4	89.0		
		67	TC	102.7	102.7	102.7	94.8	94.8	96.6	89.2	89.2	94.4	83.3	83.3	92.1	77.1	77.1	89.6		
			SHC	62.5	81.0	99.6	59.5	78.0	96.6	57.4	75.9	94.4	55.1	73.6	92.1	52.8	71.2	89.6		
		72	TC	111.3	111.3	111.3	102.8	102.8	102.8	96.7	96.7	96.7	90.3	90.3	90.3	83.6	83.6	83.6		
			SHC	44.0	62.4	80.8	41.1	59.5	77.9	39.0	57.4	75.8	36.9	55.3	73.7	34.7	53.1	71.5		
		76	TC	—	117.5	117.5	—	108.6	108.6	—	102.3	102.3	—	95.6	95.6	—	88.6	88.6		
			SHC	—	47.2	65.7	—	44.3	62.6	—	42.3	60.5	—	40.2	58.2	—	38.0	55.9		

LEGEND

— —Do Not Operate
Cfm —Cubic Feet Per Minute (Supply Air)
EAT (db) —Entering Air Temperature (Dry Bulb)
EAT (wb) —Entering Air Temperature (Wet Bulb)
SHC —Sensible Heat Capacity (1000 Btuh) Gross
TC —Total Capacity (1000 Btuh) Gross

COOLING CAPACITIES 2-STAGE COOLING, 8.5 TONS

50HCQD09				AMBIENT TEMPERATURE (F)															
				85			95			105			115			125			
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	
2550 Cfm	EAT (wb)	58	TC	85.8	85.8	97.8	80.9	80.9	91.8	75.7	75.7	85.9	70.2	70.2	79.7	64.4	64.4	73.1	
			SHC	73.9	85.8	97.8	70.0	80.9	91.8	65.5	75.7	85.9	60.7	70.2	79.7	55.7	64.4	73.1	
		62	TC	90.4	90.4	94.5	83.8	83.8	91.4	76.8	76.8	88.0	70.5	70.5	82.7	64.5	64.5	76.1	
			SHC	67.8	81.1	94.5	64.8	78.1	91.4	61.6	74.8	88.0	57.6	70.1	82.7	52.8	64.5	76.1	
		67	TC	101.6	101.6	101.6	95.0	95.0	95.0	87.4	87.4	87.4	79.3	79.3	79.3	71.0	71.0	71.0	
			SHC	55.5	68.7	81.9	52.9	66.3	79.7	49.9	63.3	76.7	46.9	60.3	73.7	43.8	57.2	70.6	
		72	TC	109.3	109.3	109.3	106.0	106.0	106.0	99.6	99.6	99.6	91.4	91.4	91.4	82.7	82.7	82.7	
			SHC	41.1	54.1	67.2	39.9	53.3	66.6	37.7	51.1	64.6	34.9	48.3	61.7	32.0	45.4	58.8	
		76	TC	—	114.5	114.5	—	111.2	111.2	—	107.7	107.7	—	101.0	101.0	—	92.6	92.6	
			SHC	—	42.6	56.7	—	41.6	55.6	—	40.5	54.5	—	38.3	51.9	—	35.6	49.2	
2975 Cfm	EAT (wb)	58	TC	91.8	91.8	104.5	86.4	86.4	98.0	80.7	80.7	91.6	74.7	74.7	84.8	68.6	68.6	77.8	
			SHC	79.1	91.8	104.5	74.7	86.4	98.0	69.8	80.7	91.6	64.6	74.7	84.8	59.3	68.6	77.8	
		62	TC	94.4	94.4	104.4	87.5	87.5	100.5	81.0	81.0	95.1	74.8	74.8	88.3	68.7	68.7	81.0	
			SHC	73.8	89.1	104.4	70.3	85.4	100.5	66.1	80.6	95.1	61.3	74.8	88.3	56.3	68.7	81.0	
		67	TC	104.3	104.3	104.3	98.6	98.6	98.6	90.6	90.6	90.6	82.1	82.1	82.1	73.4	73.4	78.4	
			SHC	58.7	73.7	88.6	56.8	72.3	87.8	53.8	69.3	84.8	50.7	66.1	81.6	47.5	62.9	78.4	
		72	TC	111.3	111.3	111.3	108.0	108.0	108.0	102.7	102.7	102.7	94.5	94.5	94.5	85.5	85.5	85.5	
			SHC	42.2	56.7	71.3	41.0	56.1	71.3	39.3	54.8	70.3	36.6	52.1	67.6	33.7	49.2	64.7	
		76	TC	—	116.3	116.3	—	112.7	112.7	—	109.2	109.2	—	103.5	103.5	—	95.4	95.4	
			SHC	—	44.3	60.6	—	43.1	59.0	—	41.9	57.7	—	40.2	56.0	—	37.7	53.4	
3400 Cfm	EAT (wb)	58	TC	96.6	96.6	109.9	91.1	91.1	103.4	85.1	85.1	96.6	78.7	78.7	89.3	72.1	72.1	81.8	
			SHC	83.3	96.6	109.9	78.8	91.1	103.4	73.6	85.1	96.6	68.1	78.7	89.3	62.4	72.1	81.8	
		62	TC	97.7	97.7	112.8	91.7	91.7	106.8	85.3	85.3	100.7	78.8	78.8	93.0	72.2	72.2	85.2	
			SHC	78.6	95.7	112.8	74.4	90.6	106.8	69.9	85.3	100.7	64.6	78.8	93.0	59.2	72.2	85.2	
		67	TC	106.0	106.0	106.0	101.2	101.2	101.2	93.0	93.0	93.0	84.4	84.4	89.2	75.5	75.5	85.8	
			SHC	61.6	78.1	94.7	60.2	77.7	95.1	57.4	74.9	92.4	54.2	71.7	89.2	50.9	68.4	85.8	
		72	TC	112.7	112.7	112.7	109.3	109.3	109.3	104.8	104.8	104.8	96.8	96.8	96.8	87.7	87.7	87.7	
			SHC	43.1	59.0	75.0	41.9	58.5	75.2	40.7	58.0	75.4	38.1	55.7	73.2	35.2	52.8	70.4	
		76	TC	—	117.6	117.6	—	113.9	113.9	—	110.2	110.2	—	105.2	105.2	—	97.2	97.2	
			SHC	—	45.4	63.0	—	44.2	61.5	—	43.1	60.5	—	41.8	59.4	—	39.5	57.2	
3825 Cfm	EAT (wb)	58	TC	100.5	100.5	114.2	95.1	95.1	107.9	88.9	88.9	100.8	82.2	82.2	93.3	75.3	75.3	85.5	
			SHC	86.7	100.5	114.2	82.3	95.1	107.9	76.9	88.9	100.8	71.1	82.2	93.3	65.2	75.3	85.5	
		62	TC	100.6	100.6	119.0	95.4	95.4	112.5	89.0	89.0	105.0	82.3	82.3	97.1	75.4	75.4	89.0	
			SHC	82.3	100.6	119.0	78.2	95.4	112.5	72.9	89.0	105.0	67.5	82.3	97.1	61.8	75.4	89.0	
		67	TC	107.3	107.3	107.3	103.1	103.1	103.1	95.1	95.1	99.8	86.3	86.3	96.4	77.3	77.3	92.6	
			SHC	64.1	82.2	100.2	63.4	82.7	102.0	60.8	80.3	99.8	57.6	77.0	96.4	54.2	73.4	92.6	
		72	TC	113.8	113.8	113.8	110.3	110.3	110.3	106.3	106.3	106.3	98.5	98.5	98.5	89.3	89.3	89.3	
			SHC	44.0	61.2	78.3	42.7	60.8	78.9	41.8	61.0	80.1	39.5	59.0	78.5	36.6	56.2	75.7	
		76	TC	—	118.6	118.6	—	114.8	114.8	—	110.9	110.9	—	106.3	106.3	—	98.5	98.5	
			SHC	—	46.4	65.1	—	45.2	63.9	—	44.2	63.0	—	43.2	62.5	—	41.1	60.7	
4250 Cfm	EAT (wb)	58	TC	103.2	103.2	117.2	98.5	98.5	111.8	92.2	92.2	104.6	85.3	85.3	96.8	78.1	78.1	88.7	
			SHC	89.1	103.2	117.2	85.2	98.5	111.8	79.7	92.2	104.6	73.8	85.3	96.8	67.6	78.1	88.7	
		62	TC	103.2	103.2	121.8	98.6	98.6	116.3	92.3	92.3	108.9	85.4	85.4	100.7	78.2	78.2	92.3	
			SHC	84.6	103.2	121.8	80.8	98.6	116.3	75.6	92.3	108.9	70.0	85.4	100.7	64.1	78.2	92.3	
		67	TC	108.3	108.3	108.3	104.5	104.5	108.3	96.8	96.8	106.7	88.0	88.0	103.2	79.3	79.3	97.6	
			SHC	66.5	86.0	105.5	66.3	87.3	108.3	64.0	85.3	106.7	60.7	82.0	103.2	56.6	77.1	97.6	
		72	TC	114.7	114.7	114.7	111.1	111.1	111.1	107.3	107.3	107.3	99.9	99.9	99.9	90.6	90.6	90.6	
			SHC	44.8	63.1	81.5	43.5	62.9	82.3	42.8	63.5	84.2	40.7	62.1	83.5	37.9	59.4	81.0	
		76	TC	—	119.4	119.4	—	115.5	115.5	—	111.4	111.4	—	107.1	107.1	—	99.5	99.5	
			SHC	—	47.3	67.0	—	46.2	66.0	—	45.2	65.3	—	44.5	65.3	—	42.6	63.9	

LEGEND

— —Do Not Operate
Cfm —Cubic Feet Per Minute (Supply Air)
EAT (db) —Entering Air Temperature (Dry Bulb)
EAT (wb) —Entering Air Temperature (Wet Bulb)
SHC —Sensible Heat Capacity (1000 Btuh) Gross
TC —Total Capacity (1000 Btuh) Gross

Performance data (cont)

COOLING CAPACITIES 2-STAGE COOLING, 10 TONS

50HCQD12				AMBIENT TEMPERATURE (F)																
				85			95			105			115			125				
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)				
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85		
3000 Cfm	EAT (wb)	58	TC	106.0	106.0	119.9	102.0	102.0	115.3	97.6	97.6	110.4	92.9	92.9	105.0	87.5	87.5	98.9		
			SHC	92.2	106.0	119.9	88.6	102.0	115.3	84.9	97.6	110.4	80.7	92.9	105.0	76.1	87.5	98.9		
		62	TC	112.3	112.3	113.3	107.1	107.1	110.7	101.5	101.5	107.9	95.4	95.4	104.7	88.9	88.9	100.5		
			SHC	83.4	98.3	113.3	80.8	95.8	110.7	78.1	93.0	107.9	75.1	89.9	104.7	71.5	86.0	100.5		
		67	TC	123.3	123.3	123.3	117.6	117.6	117.6	111.4	111.4	111.4	104.5	104.5	104.5	97.0	97.0	97.0		
			SHC	69.2	84.3	99.3	66.7	81.7	96.8	64.1	79.1	94.1	61.2	76.2	91.2	58.0	73.0	88.0		
		72	TC	135.2	135.2	135.2	128.8	128.8	128.8	121.9	121.9	121.9	114.4	114.4	114.4	106.2	106.2	106.2		
			SHC	54.5	69.8	85.0	52.0	67.3	82.5	49.4	64.6	79.8	46.5	61.7	76.8	43.4	58.5	73.6		
		76	TC	—	145.1	145.1	—	138.2	138.2	—	130.7	130.7	—	122.6	122.6	—	113.7	113.7		
			SHC	—	57.9	74.3	—	55.4	71.8	—	52.8	69.1	—	50.0	66.1	—	46.9	62.8		
3500 Cfm	EAT (wb)	58	TC	111.6	111.6	126.2	107.3	107.3	121.4	102.6	102.6	116.0	97.4	97.4	110.2	91.6	91.6	103.6		
			SHC	97.1	111.6	126.2	93.3	107.3	121.4	89.2	102.6	116.0	84.7	97.4	110.2	79.6	91.6	103.6		
		62	TC	115.9	115.9	123.6	110.5	110.5	120.7	104.6	104.6	117.4	98.6	98.6	112.5	92.1	92.1	106.9		
			SHC	89.4	106.5	123.6	86.7	103.7	120.7	83.7	100.5	117.4	79.8	96.1	112.5	75.4	91.2	106.9		
		67	TC	127.0	127.0	127.0	120.9	120.9	120.9	114.3	114.3	114.3	107.1	107.1	107.1	99.2	99.2	99.2		
			SHC	73.2	90.5	107.8	70.7	87.9	105.2	67.9	85.1	102.4	64.9	82.2	99.4	61.7	78.9	96.1		
		72	TC	139.1	139.1	139.1	132.3	132.3	132.3	125.0	125.0	125.0	117.0	117.0	117.0	108.4	108.4	108.4		
			SHC	56.4	73.8	91.3	53.8	71.2	88.6	51.1	68.4	85.8	48.1	65.4	82.8	44.9	62.2	79.5		
		76	TC	—	149.0	149.0	—	141.7	141.7	—	133.8	133.8	—	125.2	125.2	—	—	—		
			SHC	—	60.3	79.1	—	57.7	76.3	—	54.9	73.3	—	52.0	70.1	—	—	—		
4000 Cfm	EAT (wb)	58	TC	116.5	116.5	131.7	111.8	111.8	126.5	106.8	106.8	120.7	101.2	101.2	114.4	95.0	95.0	107.4		
			SHC	101.2	116.5	131.7	97.2	111.8	126.5	92.8	106.8	120.7	88.0	101.2	114.4	82.5	95.0	107.4		
		62	TC	118.9	118.9	133.1	113.5	113.5	128.6	107.8	107.8	123.8	101.7	101.7	118.4	95.1	95.1	111.7		
			SHC	94.9	114.0	133.1	91.4	110.0	128.6	87.6	105.7	123.8	83.4	100.9	118.4	78.5	95.1	111.7		
		67	TC	129.9	129.9	129.9	123.5	123.5	123.5	116.6	116.6	116.6	109.1	109.1	109.1	100.9	100.9	103.8		
			SHC	77.0	96.4	115.9	74.4	93.8	113.2	71.5	90.9	110.3	68.5	87.8	107.2	65.2	84.5	103.8		
		72	TC	142.0	142.0	142.0	135.0	135.0	135.0	127.3	127.3	127.3	119.1	119.1	119.1	110.1	110.1	110.1		
			SHC	58.0	77.6	97.2	55.4	74.9	94.5	52.6	72.1	91.6	49.6	69.0	88.5	46.3	65.7	85.1		
		76	TC	—	152.0	152.0	—	144.4	144.4	—	136.2	136.2	—	—	—	—	—	—		
			SHC	—	62.4	83.1	—	59.7	80.2	—	56.9	77.2	—	—	—	—	—	—		
4500 Cfm	EAT (wb)	58	TC	120.6	120.6	136.3	115.7	115.7	130.8	110.3	110.3	124.7	104.4	104.4	118.0	97.8	97.8	110.5		
			SHC	104.8	120.6	136.3	100.5	115.7	130.8	95.9	110.3	124.7	90.7	104.4	118.0	85.0	97.8	110.5		
		62	TC	122.1	122.1	139.4	116.6	116.6	134.6	110.6	110.6	129.9	104.4	104.4	122.7	97.8	97.8	114.9		
			SHC	98.8	119.1	139.4	95.1	114.9	134.6	91.3	110.6	129.9	86.2	104.4	122.7	80.7	97.8	114.9		
		67	TC	132.2	132.2	132.2	125.5	125.5	125.5	118.4	118.4	118.4	110.6	110.6	114.6	102.2	102.2	111.0		
			SHC	80.6	102.1	123.7	77.8	99.4	120.9	74.9	96.4	117.9	71.8	93.2	114.6	68.4	89.7	111.0		
		72	TC	144.4	144.4	144.4	137.1	137.1	137.1	129.2	129.2	129.2	120.7	120.7	120.7	111.4	111.4	111.4		
			SHC	59.5	81.2	102.8	56.8	78.4	100.1	54.0	75.5	97.1	50.9	72.4	93.9	47.6	69.1	90.5		
		76	TC	—	154.4	154.4	—	146.5	146.5	—	138.0	138.0	—	—	—	—	—	—		
			SHC	—	64.2	86.9	—	61.5	84.0	—	58.7	81.0	—	—	—	—	—	—		
5000 Cfm	EAT (wb)	58	TC	124.1	124.1	140.4	119.0	119.0	134.5	113.3	113.3	128.1	107.1	107.1	121.1	100.1	100.1	113.2		
			SHC	107.9	124.1	140.4	103.4	119.0	134.5	98.5	113.3	128.1	93.1	107.1	121.1	87.0	100.1	113.2		
		62	TC	124.9	124.9	144.9	119.2	119.2	140.0	113.4	113.4	133.2	107.1	107.1	125.8	100.2	100.2	117.7		
			SHC	102.2	123.6	144.9	98.4	119.2	140.0	93.6	113.4	133.2	88.4	107.1	125.8	82.7	100.2	117.7		
		67	TC	134.0	134.0	134.0	127.2	127.2	128.2	119.8	119.8	125.1	111.9	111.9	121.6	103.3	103.3	117.6		
			SHC	83.9	107.5	131.1	81.1	104.7	128.2	78.2	101.6	125.1	74.9	98.3	121.6	71.3	94.5	117.6		
		72	TC	146.3	146.3	146.3	138.8	138.8	138.8	130.7	130.7	130.7	121.9	121.9	121.9	112.5	112.5	112.5		
			SHC	60.9	84.6	108.3	58.1	81.8	105.4	55.2	78.8	102.4	52.2	75.6	99.1	48.8	72.2	95.6		
		76	TC	—	156.4	156.4	—	148.2	148.2	—	—	—	—	—	—	—	—	—		
			SHC	—	66.0	90.6	—	63.3	87.6	—	—	—	—	—	—	—	—	—		

LEGEND

— —Do Not Operate
Cfm —Cubic Feet Per Minute (Supply Air)
EAT (db) —Entering Air Temperature (Dry Bulb)
EAT (wb) —Entering Air Temperature (Wet Bulb)
SHC —Sensible Heat Capacity (1000 Btuh) Gross
TC —Total Capacity (1000 Btuh) Gross

HEATING CAPACITIES, 3 TONS

50HCQA04										
RETURN AIR (°F db)	CFM (STANDARD AIR)		TEMPERATURE AIR ENTERING OUTDOOR COIL (°F db at 70% RH)							
			–10	0	10	17	30	40	47	50	60
55	900	Capacity		13.3	17.2	20	26	31.3	35.6	37.0	42.7
		Int. Cap		12.3	15.8	18.3	22.8	31.3	35.6	37.0	42.7
	1200	Capacity		13.8	17.8	20.8	27.0	32.8	36.9	38.3	44.1
		Int. Cap		12.7	16.3	18.9	23.6	32.8	36.9	38.3	45.1
	1500	Capacity			18.7	21.8	28.2	34.0	38.1	39.4	45.1
		Int. Cap			17.2	19.8	24.7	34.0	38.1	39.4	45.1
70	900	Capacity	7.5	11	14.9	17.8	23.6	28.5	32.7	34.2	40.4
		Int. Cap	6.9	10.2	13.7	16.2	20.7	28.5	32.7	34.2	40.4
	1200	Capacity	7.9	11.6	15.6	18.6	24.7	29.9	34.6	36.0	41.9
		Int. Cap	7.3	10.7	14.3	16.9	21.6	29.9	34.6	36.0	41.9
	1500	Capacity	8.7	12.4	16.5	19.6	25.8	31.3	35.9	37.3	43.1
		Int. Cap	8.0	11.4	15.1	17.8	22.6	31.3	35.9	37.3	43.1
80	900	Capacity	5.7	9.3	13.2	16.1	21.9	26.8	30.5	32.1	38.4
		Int. Cap	5.3	8.5	12.1	14.7	19.2	26.8	30.5	32.1	38.4
	1200	Capacity	6.1	9.8	13.9	16.9	22.9	28.1	32.3	33.9	40.3
		Int. Cap	5.6	9.0	12.7	15.4	20.1	28.1	32.3	33.9	40.3
	1500	Capacity	6.8	10.6	14.8	17.9	24.1	29.4	34.0	35.6	41.6
		Int. Cap	6.3	9.8	13.6	16.3	21.1	29.4	34.0	35.6	41.6

LEGEND

Indicates operation not permissible
Capacity — Instantaneous Capacity (1000 Btuh) includes indoor fan motor heat at AHRI static conditions
db — Dry Bulb
Int. Cap. — Integrated Capacity is Instantaneous Capacity minus the effects of frost on the outdoor coil and the heat required to defrost
RH — Relative Humidity

HEATING CAPACITIES, 4 TONS

50HCQA05										
RETURN AIR (°F db)	CFM (STANDARD AIR)		TEMPERATURE AIR ENTERING OUTDOOR COIL (°F db at 70% RH)							
			–10	0	10	17	30	40	47	50	60
55	1200	Capacity		18.5	23.8	27.7	35.3	41.9	47.6	49.3	56.5
		Int. Cap		17.1	21.8	25.2	30.9	41.9	47.6	49.3	56.5
	1600	Capacity		18.8	24.3	28.4	36.1	43.6	48.7	50.4	57.4
		Int. Cap		17.3	22.3	25.9	31.6	43.6	48.7	50.4	57.4
	2000	Capacity		19.8	25.3	29.7	37.5	44.9	49.8	51.4	58.0
		Int. Cap		18.2	23.2	27.1	32.9	44.9	49.8	51.4	58.0
70	1200	Capacity	10.9	16.2	21.4	25.2	32.8	38.9	44.0	46.0	54.0
		Int. Cap	10.1	14.9	19.7	23.0	28.7	38.9	44.0	46.1	54.0
	1600	Capacity	11.2	16.6	22.0	25.9	34.0	40.0	46.1	48.0	55.2
		Int. Cap	10.3	15.3	20.2	23.6	29.8	40.0	46.1	48.0	55.2
	2000	Capacity	12.1	17.7	23.2	27.1	35.2	41.8	47.7	49.4	56.2
		Int. Cap	11.2	16.2	21.2	24.7	30.9	41.8	47.7	49.4	56.2
80	1200	Capacity	8.9	14.3	19.6	23.3	30.8	37.4	41.8	43.6	51.8
		Int. Cap	8.2	13.1	18.0	21.3	27.0	37.4	41.8	43.6	51.8
	1600	Capacity	9.2	14.7	20.2	24.1	31.9	38.4	43.4	45.5	53.5
		Int. Cap	8.5	13.6	18.6	22.0	28.0	38.4	43.4	45.5	53.5
	2000	Capacity	10.1	15.8	21.4	25.3	33.4	39.8	45.4	47.4	54.7
		Int. Cap	9.4	14.5	19.6	23.1	29.2	39.8	45.4	47.4	54.7

LEGEND

Indicates operation not permissible
Capacity — Instantaneous Capacity (1000 Btuh) includes indoor fan motor heat at AHRI static conditions
db — Dry Bulb
Int. Cap. — Integrated Capacity is Instantaneous Capacity minus the effects of frost on the outdoor coil and the heat required to defrost
RH — Relative Humidity

HEATING CAPACITIES, 5 TONS

50HCQA06										
RETURN AIR (°F db)	CFM (STANDARD AIR)		TEMPERATURE AIR ENTERING OUTDOOR COIL (°F db at 70% RH)							
			–10	0	10	17	30	40	47	50	60
55	1500	Capacity		22.0	28.5	33.3	43.5	51.4	58.0	60.1	68.6
		Int. Cap		20.3	26.1	30.4	38.1	51.4	58.0	60.1	68.6
	2000	Capacity		23.9	30.5	35.5	45.7	54.1	60.4	62.3	69.9
		Int. Cap		22.0	28.0	32.4	40.1	54.1	60.4	62.3	69.9
	2500	Capacity		25.0	31.7	36.9	47.1	55.2	60.7	62.3	68.8
		Int. Cap		23.0	29.1	33.6	41.3	55.2	60.7	62.3	68.8
70	1500	Capacity		18.9	25.3	30.1	40.1	48.4	54.8	56.8	65.4
		Int. Cap		17.4	23.3	27.5	35.2	48.4	54.8	56.8	65.4
	2000	Capacity		20.7	27.4	32.3	43.0	50.9	57.4	59.3	67.4
		Int. Cap		19.1	25.1	29.4	37.7	50.9	57.4	59.3	67.4
	2500	Capacity		21.9	28.6	33.6	44.4	52.5	58.5	60.3	67.3
		Int. Cap		20.1	26.3	30.7	38.9	52.5	58.5	60.3	67.3
80	1500	Capacity	10.3	16.5	23.1	27.8	37.4	46.2	52.4	54.7	63.2
		Int. Cap	9.5	15.2	21.2	25.4	32.8	46.2	52.4	54.7	63.2
	2000	Capacity	12.0	18.4	25.1	30.0	40.1	48.9	55.2	57.4	65.4
		Int. Cap	11.1	16.9	23.0	27.4	35.2	48.9	55.2	57.4	65.4
	2500	Capacity	13.0	19.5	26.3	31.4	41.9	50.5	56.6	58.4	65.7
		Int. Cap	12.0	18.0	24.2	28.6	36.7	50.5	56.6	58.4	65.7

LEGEND

Indicates operation not permissible
Capacity — Instantaneous Capacity (1000 Btuh) includes indoor fan motor heat at AHRI static conditions
db — Dry Bulb
Int. Cap. — Integrated Capacity is Instantaneous Capacity minus the effects of frost on the outdoor coil and the heat required to defrost
RH — Relative Humidity

HEATING CAPACITIES, 6 TONS

50HCQA07										
RETURN AIR (°F db)	CFM (STANDARD AIR)		TEMPERATURE AIR ENTERING OUTDOOR COIL (°F db at 70% RH)							
			–10	0	10	17	30	40	47	50	60
55	1800	Capacity	20.5	28.2	36.0	41.6	52.8	62.7	71.0	73.5	83.8
		Int. Cap	19.0	25.9	33.0	38.0	46.3	62.7	71.0	73.5	83.8
	2400	Capacity	21.2	29.0	37.0	42.8	54.4	65.4	73.0	75.4	86.1
		Int. Cap	19.6	26.7	34.0	39.1	47.7	65.4	73.0	75.4	86.1
	3000	Capacity	21.5	29.5	37.6	43.5	55.4	66.4	73.9	76.4	87.2
		Int. Cap	19.9	27.1	34.5	39.7	48.5	66.4	73.9	76.4	87.2
70	1800	Capacity	15.8	23.6	31.6	37.3	48.5	57.7	65.5	68.5	79.7
		Int. Cap	14.6	21.7	29.0	34.0	42.5	57.7	65.5	68.5	79.7
	2400	Capacity	16.4	24.6	32.8	38.7	50.2	60.1	**68.9**	71.7	82.3
		Int. Cap	15.1	22.6	30.1	35.3	44.0	60.1	**68.9**	71.7	82.3
	3000	Capacity	16.8	25.1	33.5	39.5	51.3	61.6	70.5	73.0	83.6
		Int. Cap	15.5	23.1	30.8	36.1	44.9	61.6	70.5	73.0	83.6
80	1800	Capacity	11.9	20.0	28.1	33.9	45.2	54.3	61.5	64.5	76.1
		Int. Cap	11.0	18.4	25.8	30.9	39.6	54.3	61.5	64.5	76.1
	2400	Capacity	12.5	20.9	29.3	35.4	47.0	56.7	64.6	67.7	79.4
		Int. Cap	11.5	19.2	26.9	32.3	41.2	56.7	64.6	67.7	79.4
	3000	Capacity	12.8	21.4	30.1	36.2	48.1	57.9	66.5	69.6	80.9
		Int. Cap	11.8	19.7	27.6	33.0	42.1	57.9	66.5	69.6	80.9

LEGEND

BOLDFACE Indicates standard rating point
Capacity — Instantaneous Capacity (1000 Btuh) includes indoor fan motor heat at AHRI static conditions
db — Dry Bulb
Int. Cap. — Integrated Capacity is Instantaneous Capacity minus the effects of frost on the outdoor coil and the heat required to defrost
RH — Relative Humidity

HEATING CAPACITIES, 6 TONS

50HCQD07										
RETURN AIR (°F db)	CFM (STANDARD AIR)		TEMPERATURE AIR ENTERING OUTDOOR COIL (°F db at 70% RH)							
			–10	0	10	17	30	40	47	50	60
55	1500	Capacity	25.6	31.8	39.0	44.4	54.8	63.2	70.0	73.1	83.7
		Int. Cap	23.7	29.3	35.8	40.5	48.0	63.2	70.0	73.1	83.7
	2000	Capacity	26.2	32.6	40.3	45.3	55.8	65.1	72.1	75.1	85.0
		Int. Cap	24.2	30.0	37.0	41.3	48.9	65.1	72.1	75.1	85.0
	2500	Capacity	26.6	33.0	40.8	45.9	56.7	66.1	72.6	75.3	83.9
		Int. Cap	24.6	30.4	37.5	41.9	49.7	66.1	72.6	75.3	83.9
70	1500	Capacity	22.5	28.8	35.5	41.0	51.5	59.8	66.2	69.2	79.8
		Int. Cap	20.8	26.5	32.6	37.4	45.1	59.8	66.2	69.2	79.8
	2000	Capacity	23.1	29.6	36.5	42.7	52.9	61.6	**68.3**	71.5	81.5
		Int. Cap	21.4	27.2	33.5	39.0	46.3	61.6	**68.3**	71.5	81.5
	2500	Capacity	23.5	30.1	37.2	43.4	53.7	62.6	69.4	72.3	81.3
		Int. Cap	21.8	27.7	34.1	39.6	47.0	62.6	69.4	72.3	81.3
80	1500	Capacity	20.0	26.3	33.1	38.2	49.4	57.5	63.8	66.5	77.0
		Int. Cap	18.5	24.2	30.4	34.8	43.3	57.5	63.8	66.5	77.0
	2000	Capacity	20.7	27.2	34.2	39.6	50.7	59.2	65.7	68.7	78.8
		Int. Cap	19.1	25.0	31.4	36.1	44.4	59.2	65.7	68.7	78.8
	2500	Capacity	21.1	27.7	34.8	40.5	51.6	60.3	66.9	69.9	79.1
		Int. Cap	19.5	25.5	31.9	36.9	45.2	60.3	66.9	69.9	79.1

LEGEND

BOLDFACE Indicates standard rating point
Capacity — Instantaneous Capacity (1000 Btuh) includes indoor fan motor heat at AHRI static conditions
db — Dry Bulb
Int. Cap. — Integrated Capacity is Instantaneous Capacity minus the effects of frost on the outdoor coil and the heat required to defrost
RH — Relative Humidity

HEATING CAPACITIES, 7.5 TONS

50HCQD08										
RETURN AIR (°F db)	CFM (STANDARD AIR)		TEMPERATURE AIR ENTERING OUTDOOR COIL (°F db at 70% RH)							
			–10	0	10	17	30	40	47	50	60
55	2250	Capacity	24.3	33.6	43.4	50.6	66.3	78.0	87.4	90.4	102.6
		Int. Cap	22.4	30.9	39.8	46.2	58.1	78.0	87.4	90.4	102.6
	3000	Capacity	24.7	34.2	44.3	51.8	67.8	80.2	89.6	92.5	104.6
		Int. Cap	22.8	31.5	40.7	47.3	59.4	80.2	89.6	92.5	104.6
	3750	Capacity	24.9	34.6	44.9	52.6	68.7	81.3	90.4	93.1	104.3
		Int. Cap	23.1	31.9	41.2	48.0	60.2	81.3	90.4	93.1	104.3
70	2250	Capacity	20.3	29.6	39.3	46.5	60.8	73.8	82.7	85.9	98.3
		Int. Cap	18.7	27.2	36.1	42.4	53.3	73.8	82.7	85.9	98.3
	3000	Capacity	20.8	30.4	40.5	47.9	63.4	75.9	**85.4**	88.5	100.6
		Int. Cap	19.3	28.0	37.2	43.6	55.6	75.9	**85.4**	88.5	100.6
	3750	Capacity	21.2	31.0	41.2	48.7	64.8	77.2	86.8	89.8	101.4
		Int. Cap	19.6	28.5	37.8	44.4	56.7	77.2	86.8	89.8	101.4
80	2250	Capacity	16.8	26.2	36.0	43.2	57.2	70.2	79.5	82.8	95.2
		Int. Cap	15.5	24.1	33.0	39.4	50.1	70.2	79.5	82.8	95.2
	3000	Capacity	17.4	27.1	37.2	44.6	59.3	73.0	82.1	85.4	97.7
		Int. Cap	16.1	24.9	34.2	40.7	52.0	73.0	82.1	85.4	97.7
	3750	Capacity	17.7	27.6	38.0	45.5	60.6	74.3	83.7	87.0	98.8
		Int. Cap	16.4	25.4	34.9	41.5	53.1	74.3	83.7	87.0	98.8

LEGEND

BOLDFACE Indicates standard rating point
Capacity — Instantaneous Capacity (1000 Btuh) includes indoor fan motor heat at AHRI static conditions
db — Dry Bulb
Int. Cap. — Integrated Capacity is Instantaneous Capacity minus the effects of frost on the outdoor coil and the heat required to defrost
RH — Relative Humidity

HEATING CAPACITIES, 8.5 TONS

50HCQD09										
RETURN AIR (°F db)	CFM (STANDARD AIR)		TEMPERATURE AIR ENTERING OUTDOOR COIL (°F db at 70% RH)							
			–10	0	10	17	30	40	47	50	60
55	2250	Capacity	35.1	37.7	49.0	57.4	74.4	87.8	98.9	102.6	118.3
		Int. Cap	32.5	34.7	45.0	52.3	65.2	87.8	98.9	102.6	118.3
	3400	Capacity	32.6	39.1	50.8	59.4	76.8	90.8	102.1	105.7	121.3
		Int. Cap	30.1	36.0	46.6	54.1	67.3	90.8	102.1	105.7	121.3
	4250	Capacity	34.4	42.6	54.4	63.3	80.9	95.1	106.1	109.6	125.0
		Int. Cap	31.8	39.2	50.0	57.7	70.9	95.1	106.1	109.6	125.0
70	2250	Capacity	35.2	33.3	44.5	52.8	69.3	83.1	93.6	97.3	112.9
		Int. Cap	32.6	30.6	40.9	48.1	60.7	83.1	93.6	97.3	112.9
	3400	Capacity	35.6	34.9	46.5	55.0	72.5	86.1	**97.1**	100.8	116.2
		Int. Cap	32.9	32.1	42.7	50.1	63.5	86.1	**97.1**	100.8	116.2
	4250	Capacity	38.2	38.6	50.3	59.0	76.7	90.5	101.6	105.2	120.2
		Int. Cap	35.3	35.5	46.2	53.7	67.2	90.5	101.6	105.2	120.2
80	2250	Capacity	34.6	29.6	40.9	49.1	65.4	79.8	89.9	93.8	109.1
		Int. Cap	32.0	27.2	37.5	44.8	57.3	79.8	89.9	93.8	109.1
	3400	Capacity	35.2	31.2	42.8	51.4	68.2	82.7	93.4	97.2	112.5
		Int. Cap	32.5	28.7	39.3	46.8	59.8	82.7	93.4	97.2	112.5
	4250	Capacity	38.2	34.9	46.7	55.4	72.7	87.1	98.2	101.8	116.8
		Int. Cap	35.3	32.1	42.9	50.5	63.7	87.1	98.2	101.8	116.8

LEGEND

BOLDFACE Indicates standard rating point
Capacity — Instantaneous Capacity (1000 Btuh) includes indoor fan motor heat at AHRI static conditions
db — Dry Bulb
Int. Cap. — Integrated Capacity is Instantaneous Capacity minus the effects of frost on the outdoor coil and the heat required to defrost
RH — Relative Humidity

HEATING CAPACITIES, 10 TONS

50HCQD12										
RETURN AIR (°F db)	CFM (STANDARD AIR)		TEMPERATURE AIR ENTERING OUTDOOR COIL (°F db at 70% RH)							
			–10	0	10	17	30	40	47	50	60
55	3000	Capacity		50.9	62.9	72.7	91.4	106.1	117.2	121.0	136.2
		Int. Cap		46.8	57.8	66.3	80.1	106.1	117.2	121.0	136.2
	4000	Capacity		53.5	66.0	75.9	94.8	109.6	120.7	124.3	139.4
		Int. Cap		49.2	60.6	69.2	83.0	109.6	120.7	124.3	139.4
	5000	Capacity		56.0	69.1	79.1	97.5	112.3	123.0	126.3	140.9
		Int. Cap		51.5	63.4	72.1	85.4	112.3	123.0	126.3	140.9
70	3000	Capacity		45.8	57.9	66.9	86.4	101.6	112.2	116.3	131.2
		Int. Cap		42.1	53.1	61.0	75.7	101.6	112.2	116.3	131.2
	4000	Capacity		48.5	60.9	70.4	90.4	105.1	**116.1**	120.0	134.8
		Int. Cap		44.6	55.9	64.2	79.3	105.1	**116.1**	120.0	134.8
	5000	Capacity		51.1	63.7	73.6	93.5	108.0	118.9	122.5	137.0
		Int. Cap		47.0	58.4	67.1	81.9	108.0	118.9	122.5	137.0
80	3000	Capacity	30.4	41.9	54.1	63.1	82.6	98.5	108.9	113.1	127.9
		Int. Cap	28.1	38.6	49.6	57.6	72.3	98.5	108.9	113.1	127.9
	4000	Capacity	32.8	44.6	57.1	66.5	86.5	102.1	112.7	116.9	131.5
		Int. Cap	30.4	41.1	52.4	60.6	75.8	102.1	112.7	116.9	131.5
	5000	Capacity	35.2	47.2	59.9	69.4	89.8	105.1	115.8	119.6	134.0
		Int. Cap	32.6	43.5	55.0	63.3	78.7	105.1	115.8	119.6	134.0

LEGEND

Indicates operation not permissible
BOLDFACE Indicates standard rating point
Capacity — Instantaneous Capacity (1000 Btuh) includes indoor fan motor heat at AHRI static conditions
db — Dry Bulb
Int. Cap. — Integrated Capacity is Instantaneous Capacity minus the effects of frost on the outdoor coil and the heat required to defrost
RH — Relative Humidity

STATIC PRESSURE ADDERS (IN WG.) — FACTORY OPTIONS AND/OR ACCESSORIES

Economizer

50HCQ 3-5 TONS											
CFM (in. wg)	600	800	1000	1250	1500	1750	2000	2250	2500	2750	3000
Vertical Economizer	0.01	0.02	0.04	0.05	0.07	0.09	0.12	0.15	0.18	0.22	0.26
Horizontal Economizer	0.02	0.03	0.04	0.06	0.08	0.10	0.13	0.15	0.18	0.23	0.28

50HCQ 6-8.5 TONS																
CFM (in. wg)	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000
Vertical Economizer	0.06	0.08	0.09	0.12	0.13	0.15	0.17	0.20	0.22	0.25	0.29	0.33	0.36	0.40	0.44	0.48
Horizontal Economizer	0.08	0.10	0.13	0.15	0.18	0.21	0.25	0.28	0.30	0.34	0.39	0.43	0.47	0.51	0.56	0.60

50HCQ 10 TONS																
CFM (in. wg)	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000
Vertical Economizer	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.06
Horizontal Economizer	0.04	0.04	0.05	0.07	0.08	0.09	0.10	0.12	0.13	0.15	0.17	0.19	0.21	0.23	0.25	0.27

Electric Heaters

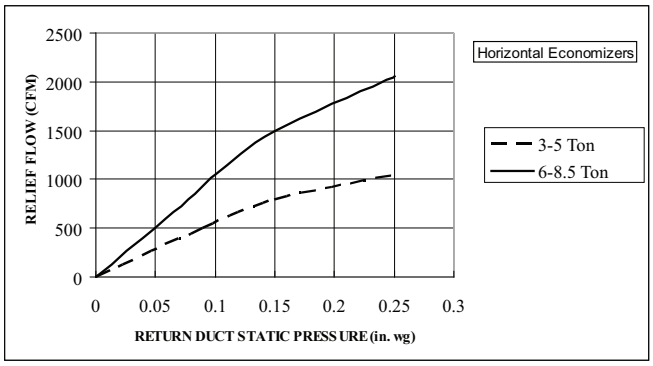
50HCQ 3-5 TONS										
CFM (in. wg)	600	900	1200	1400	1600	1800	2000	2200	2400	2600
1 Electric Heater Module	0.03	0.05	0.07	0.09	0.09	0.10	0.11	0.11	0.12	0.13
2 Electric Heater Modules	0.13	0.15	0.16	0.16	0.16	0.17	0.17	0.17	0.18	0.18

50HCQ 6-8.5 TONS																
CFM (in. wg)	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000
1 Electric Heater Module	0.03	0.04	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.12	0.13	0.14	0.15	0.16	0.18
2 Electric Heater Modules	0.04	0.05	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.12	0.13	0.15	0.16	0.17	0.19	0.20

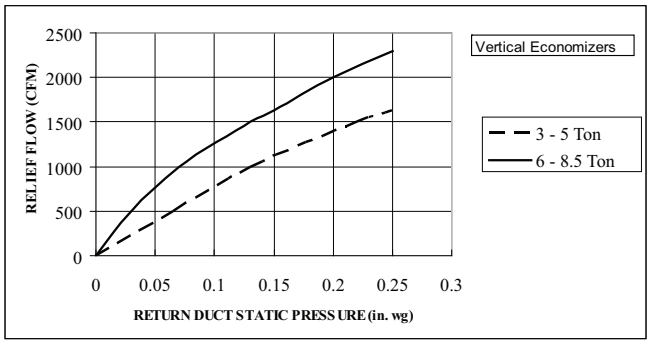
50HCQ 10 TONS																
CFM (in. wg)	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000
Vertical 1 Electric Heater Module	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.04
Vertical 2 Electric Heater Modules	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.07
Horizontal 1 Electric Heater Module	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.05	0.05	0.05	0.06	0.06	0.07	0.07	0.08	0.08
Horizontal 2 Electric Heater Modules	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.05	0.06	0.06	0.07	0.07

ECONOMIZER, BAROMETRIC RELIEF AND PE PERFORMANCE 3 TO 8.5 TON

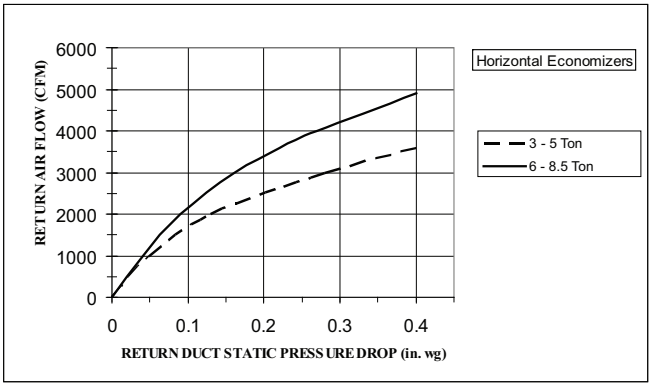
Barometric Relief Flow Capacity



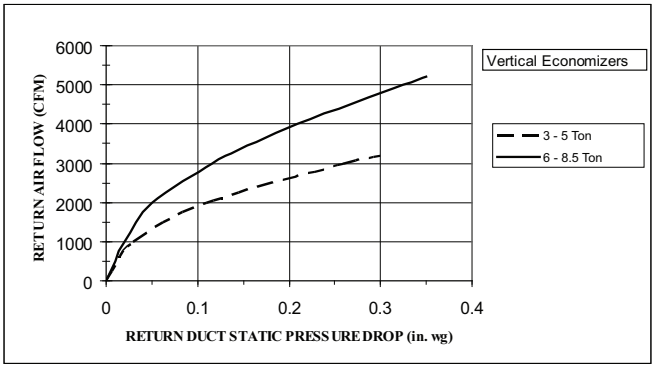
Barometric Relief Flow Capacity



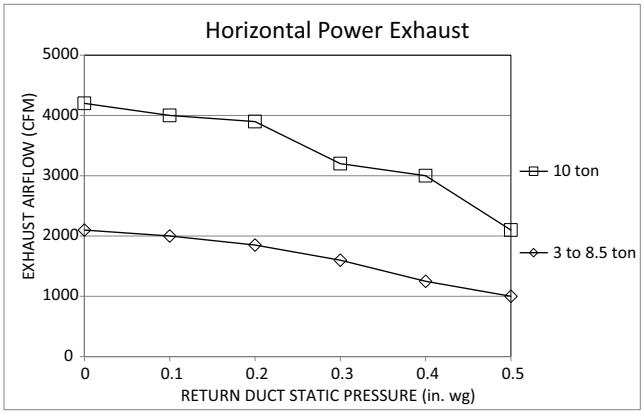
Return Air Pressure Drop



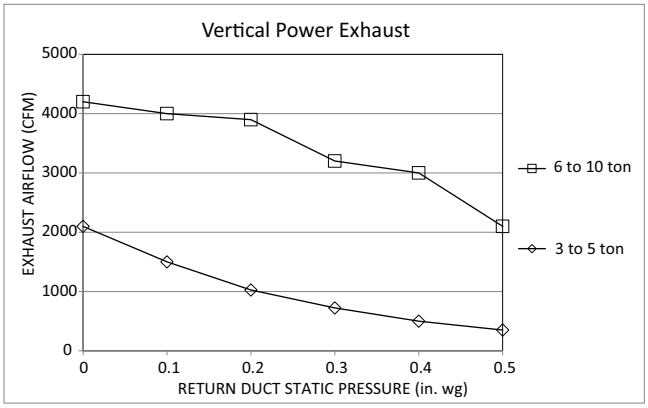
Return Air Pressure Drop



Horizontal Power Exhaust Performance

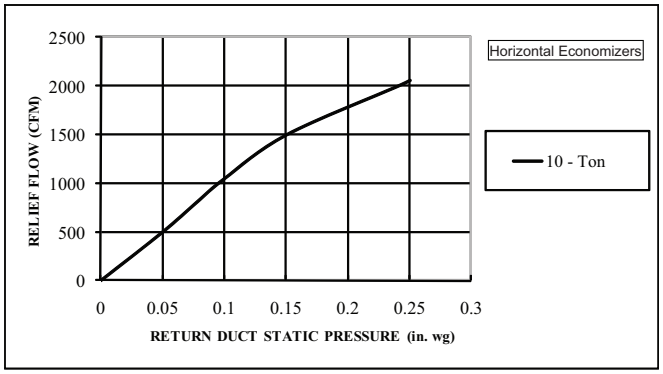


Vertical Power Exhaust Performance

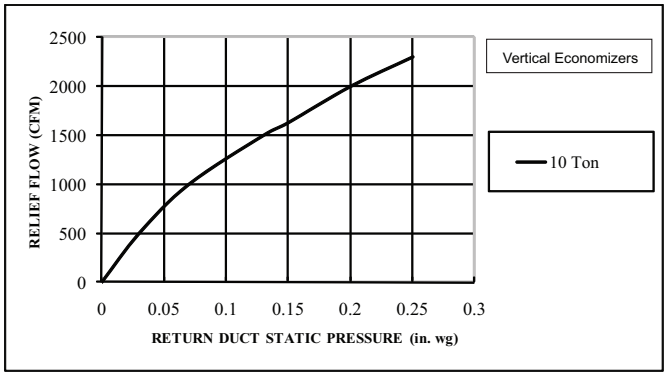


ECONOMIZER, BAROMETRIC RELIEF AND PE PERFORMANCE 10 TON

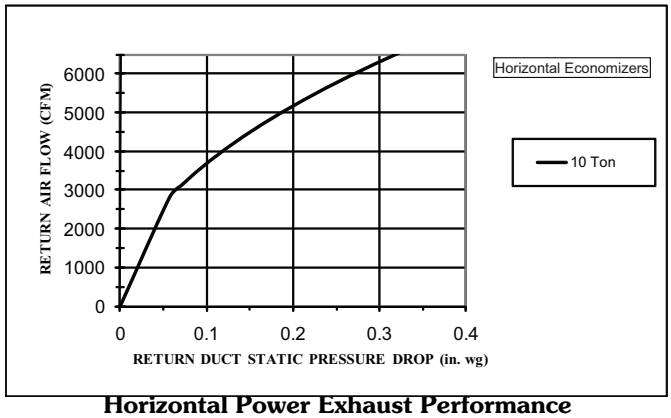
Barometric Relief Flow Capacity



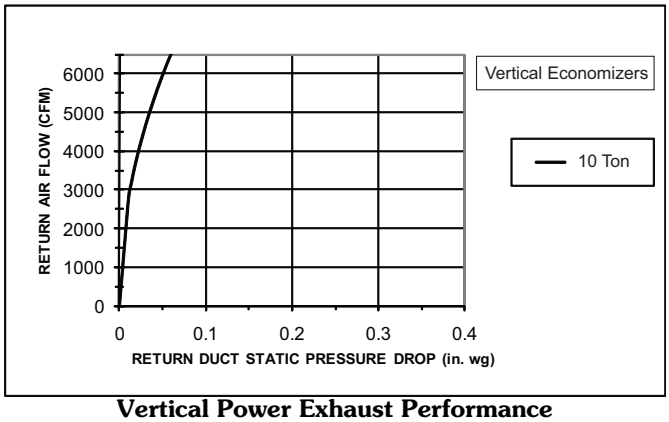
Barometric Relief Flow Capacity



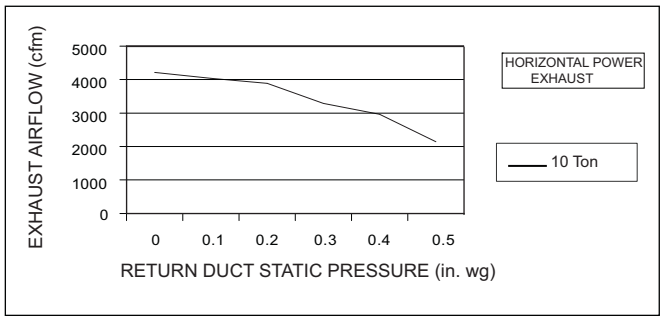
Return Air Pressure Drop



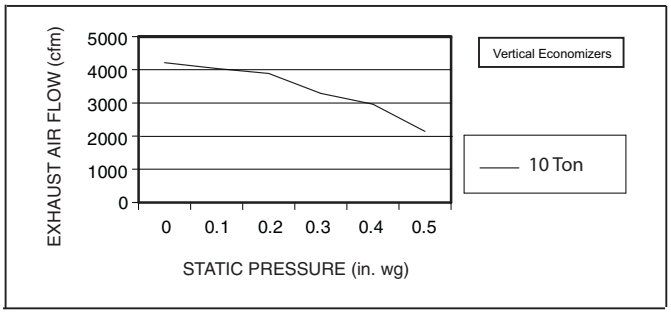
Return Air Pressure Drop



Horizontal Power Exhaust Performance



Vertical Power Exhaust Performance



GENERAL FAN PERFORMANCE NOTES

1. Interpolation is permissible. Do not extrapolate.
2. External static pressure is the static pressure difference between the return duct and the supply duct plus the static pressure caused by any FIOPs or accessories.
3. Tabular data accounts for pressure loss due to clean filters, unit casing, and wet coils. Factory options and accessories may add static pressure losses, as shown on page 41. Selection software is available, through your salesperson, to help you select the best motor/drive combination for your application.
4. The Fan Performance tables offer motor/drive recommendations. In cases when two motor/drive combinations would work, Carrier recommended the lower horsepower option.
5. For information on the electrical properties of Carrier motors, please see the Electrical information section of this book.
6. For more information on the performance limits of Carrier motors, see the application data section of this book.

50HCQ 3 TON UNIT DIRECT DRIVE

SPEED (TORQUE) TAP	HORIZONTAL			VERTICAL		
	CFM	ESP	BHP	CFM	ESP	BHP
1	900	0.57	0.25	900	0.44	0.19
	975	0.47	0.24	975	0.34	0.18
	1050	0.37	0.22	1050	0.24	0.17
	1125	0.27	0.21	1125	0.15	0.16
	1200	0.18	0.20	1200	0.07	0.16
	1275	0.09	0.20	1275	—	—
	1350	—	—	1350	—	—
	1425	—	—	1425	—	—
	1500	—	—	1500	—	—
2	900	0.73	0.30	900	0.60	0.24
	975	0.62	0.29	975	0.49	0.23
	1050	0.51	0.28	1050	0.38	0.22
	1125	0.41	0.27	1125	0.28	0.21
	1200	0.30	0.25	1200	0.18	0.20
	1275	0.19	0.24	1275	0.09	0.19
	1350	0.08	0.22	1350	—	—
	1425	—	—	1425	—	—
	1500	—	—	1500	—	—
3	900	1.04	0.41	900	0.93	0.36
	975	0.93	0.40	975	0.81	0.35
	1050	0.82	0.39	1050	0.70	0.34
	1125	0.70	0.38	1125	0.58	0.33
	1200	0.58	0.36	1200	0.47	0.31
	1275	0.46	0.35	1275	0.36	0.30
	1350	0.34	0.33	1350	0.25	0.29
	1425	0.23	0.31	1425	0.14	0.27
	1500	0.12	0.30	1500	—	—
4	900	1.26	0.49	900	1.15	0.44
	975	1.18	0.50	975	1.07	0.45
	1050	1.09	0.50	1050	0.97	0.46
	1125	0.99	0.50	1125	0.86	0.46
	1200	0.88	0.49	1200	0.74	0.43
	1275	0.76	0.47	1275	0.61	0.41
	1350	0.63	0.46	1350	0.48	0.40
	1425	0.50	0.44	1425	0.35	0.39
	1500	0.37	0.42	1500	0.23	0.37
5	900	1.35	0.52	900	1.24	0.51
	975	1.30	0.54	975	1.19	0.52
	1050	1.26	0.57	1050	1.24	0.54
	1125	1.21	0.59	1125	1.24	0.57
	1200	1.16	0.62	1200	1.03	0.59
	1275	1.12	0.64	1275	0.98	0.61
	1350	1.07	0.67	1350	0.93	0.64
	1425	1.02	0.70	1425	0.88	0.67
	1500	0.97	0.73	1500	0.82	0.69

LEGEND

BHP — Brake Horsepower
CFM — Cubic Feet Per Minute
ESP — External Static Pressure

Fan data (cont)

50HCQ 4 TON UNIT DIRECT DRIVE

SPEED (TORQUE) TAP	HORIZONTAL			VERTICAL		
	CFM	ESP	BHP	CFM	ESP	BHP
1	1200	0.93	0.48	1200	0.87	0.43
	1300	0.80	0.46	1300	0.73	0.41
	1400	0.66	0.44	1400	0.59	0.39
	1500	0.51	0.41	1500	0.43	0.37
	1600	0.36	0.39	1600	0.27	0.34
	1700	0.22	0.36	1700	0.12	0.33
	1800	0.08	0.33	1800	—	—
	1900	—	—	1900	—	—
	2000	—	—	2000	—	—
2	1200	1.04	0.53	1200	0.96	0.48
	1300	0.91	0.51	1300	0.84	0.46
	1400	0.76	0.48	1400	0.69	0.44
	1500	0.61	0.46	1500	0.53	0.41
	1600	0.45	0.43	1600	0.37	0.39
	1700	0.30	0.40	1700	0.21	0.36
	1800	0.16	0.38	1800	0.06	0.34
	1900	0.04	0.35	1900	—	—
	2000	—	—	2000	—	—
3	1200	1.18	0.58	1200	1.13	0.53
	1300	1.09	0.59	1300	1.06	0.53
	1400	0.98	0.60	1400	0.98	0.54
	1500	0.86	0.60	1500	0.88	0.56
	1600	0.72	0.57	1600	0.76	0.54
	1700	0.57	0.54	1700	0.62	0.52
	1800	0.42	0.51	1800	0.47	0.50
	1900	0.28	0.48	1900	0.31	0.47
	2000	0.15	0.45	2000	0.15	0.45
4	1200	1.24	0.60	1200	1.16	0.57
	1300	1.18	0.63	1300	1.12	0.59
	1400	1.12	0.66	1400	1.07	0.62
	1500	1.04	0.71	1500	1.00	0.67
	1600	0.95	0.70	1600	0.91	0.66
	1700	0.85	0.71	1700	0.80	0.67
	1800	0.73	0.71	1800	0.67	0.67
	1900	0.60	0.69	1900	0.52	0.63
	2000	0.45	0.65	2000	0.35	0.61
5	1200	1.25	0.61	1200	1.16	0.59
	1300	1.20	0.65	1300	1.11	0.63
	1400	1.12	0.68	1400	1.01	0.67
	1500	1.04	0.68	1500	0.91	0.67
	1600	1.05	0.76	1600	0.96	0.75
	1700	1.01	0.76	1700	0.91	0.75
	1800	0.96	0.84	1800	0.86	0.83
	1900	0.91	0.89	1900	0.80	0.87
	2000	0.87	0.93	2000	0.74	0.91

LEGEND

BHP — Brake Horsepower
CFM — Cubic Feet Per Minute
ESP — External Static Pressure

50HCQ 5 TON UNIT DIRECT DRIVE

SPEED (TORQUE) TAP	HORIZONTAL			VERTICAL		
	CFM	ESP	BHP	CFM	ESP	BHP
1	1500	0.37	0.35	1500	0.27	0.32
	1625	0.22	0.33	1625	0.13	0.30
	1750	0.08	0.31	1750	—	—
	1875	—	—	1875	—	—
	2000	—	—	2000	—	—
	2125	—	—	2125	—	—
	2250	—	—	2250	—	—
	2375	—	—	2375	—	—
	2500	—	—	2500	—	—
2	1500	0.54	0.44	1500	0.42	0.40
	1625	0.37	0.41	1625	0.25	0.37
	1750	0.20	0.38	1750	0.08	0.34
	1875	0.04	0.35	1875	—	—
	2000	—	—	2000	—	—
	2125	—	—	2125	—	—
	2250	—	—	2250	—	—
	2375	—	—	2375	—	—
	2500	—	—	2500	—	—
3	1500	1.28	0.83	1500	1.11	0.79
	1625	1.10	0.81	1625	0.91	0.76
	1750	0.90	0.78	1750	0.70	0.74
	1875	0.68	0.74	1875	0.50	0.70
	2000	0.47	0.70	2000	0.30	0.67
	2125	0.27	0.66	2125	0.12	0.63
	2250	0.10	0.62	2250	—	—
	2375	—	—	2375	—	—
	2500	—	—	2500	—	—
4	1500	1.46	0.94	1500	1.29	0.90
	1625	1.32	0.92	1625	1.13	0.88
	1750	1.16	0.96	1750	0.95	0.91
	1875	0.96	0.95	1875	0.74	0.88
	2000	0.76	0.91	2000	0.52	0.84
	2125	0.54	0.86	2125	0.30	0.80
	2250	0.33	0.82	2250	0.11	0.77
	2375	0.14	0.78	2375	—	—
	2500	0.00	0.72	2500	—	—
5	1500	1.52	0.97	1500	1.36	0.94
	1625	1.42	1.01	1625	1.24	0.99
	1750	1.16	1.05	1750	0.95	1.02
	1875	0.96	1.09	1875	0.74	1.05
	2000	1.00	1.09	2000	0.74	1.03
	2125	0.82	1.06	2125	0.53	0.99
	2250	0.62	1.02	2250	0.31	0.94
	2375	0.40	0.98	2375	0.08	0.90
	2500	0.16	0.93	2500	-0.14	0.86

LEGEND

BHP — Brake Horsepower
CFM — Cubic Feet Per Minute
ESP — External Static Pressure

Fan data (cont)

50HCQA04 — 3 TON HORIZONTAL SUPPLY

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	574	0.13	707	0.23	817	0.34	913	0.47	999	0.61	1078	0.77	1151	0.93	1220	1.11	1284	1.30	1346	1.49
975	597	0.15	727	0.25	835	0.37	929	0.50	1015	0.64	1093	0.80	1165	0.97	1233	1.15	1297	1.33	1358	1.53
1050	621	0.18	747	0.28	853	0.40	946	0.53	1030	0.68	1108	0.84	1180	1.01	1247	1.19	1311	1.38	1371	1.58
1125	646	0.20	768	0.31	872	0.43	964	0.57	1047	0.72	1123	0.88	1195	1.05	1261	1.23	1325	1.42	1385	1.62
1200	671	0.23	790	0.34	892	0.47	982	0.61	1064	0.76	1140	0.92	1210	1.10	1276	1.28	1339	1.47	1399	1.68
1275	696	0.26	812	0.38	912	0.51	1001	0.65	1082	0.81	1157	0.97	1226	1.15	1292	1.33	1354	1.53	1414	1.73
1350	723	0.30	835	0.42	933	0.55	1020	0.70	1100	0.86	1174	1.02	1243	1.20	1308	1.39	1370	1.59	1429	1.80
1425	749	0.34	859	0.46	955	0.60	1040	0.75	1119	0.91	1192	1.08	1260	1.26	1325	1.45	1386	1.65	1444	1.86
1500	776	0.38	883	0.51	977	0.65	1061	0.80	1138	0.97	1210	1.14	1278	1.33	1342	1.52	1403	1.72	1461	1.93

LEGEND

— Med Static Motor and Drive - 819-1251 RPM, Max BHP 1.5 (motor is new 1.7 HP)
— High Static Motor and Drive - 1035-1466 RPM, Max BHP 2.0 (motor is 2.4 HP)

50HCQA04 — 3 TON VERTICAL SUPPLY

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	594	0.15	740	0.25	867	0.37	981	0.52	1084	0.68	1180	0.86	1269	1.05	1354	1.25	1434	1.47	**1511**	**1.70**
975	618	0.17	758	0.28	881	0.40	991	0.55	1092	0.71	1186	0.89	1275	1.08	1358	1.29	1437	1.51	**1513**	**1.74**
1050	642	0.19	777	0.30	896	0.43	1003	0.58	1102	0.75	1194	0.92	1281	1.12	1363	1.32	1441	1.54	**1516**	**1.78**
1125	668	0.22	797	0.34	912	0.47	1017	0.62	1113	0.79	1204	0.97	1289	1.16	1370	1.37	1447	1.59	**1520**	**1.82**
1200	695	0.25	818	0.37	930	0.51	1032	0.66	1126	0.83	1215	1.01	1298	1.21	1378	1.42	1454	1.64	**1526**	**1.87**
1275	722	0.29	841	0.41	949	0.55	1048	0.71	1140	0.88	1227	1.06	1309	1.26	1387	1.47	1462	1.69	**1533**	**1.92**
1350	750	0.33	864	0.46	968	0.60	1065	0.76	1155	0.93	1240	1.12	1321	1.32	1397	1.53	**1471**	**1.75**	**1541**	**1.99**
1425	778	0.37	888	0.50	989	0.65	1083	0.81	1171	0.99	1254	1.18	1333	1.38	1409	1.59	**1481**	**1.82**	—	—
1500	807	0.42	913	0.56	1011	0.71	1103	0.87	1188	1.05	1270	1.24	1347	1.45	1421	1.66	**1492**	**1.89**	—	—

LEGEND

— Med Static Motor and Drive - 819-1251 RPM, Max BHP 1.5 (motor is new 1.7 HP)
— High Static Motor and Drive - 1035-1466 RPM, Max BHP 2.0 (motor is 2.4 HP)
BOLD — Field-supplied drive recommended using field supplied fan pulley (part no. KR11AZ606) motor pulley (part no. KR11HY191), and belt (KR29AF043)

50HCQA05 — 4 TON HORIZONTAL SUPPLY

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	630	0.20	755	0.31	859	0.43	949	0.56	1030	0.70	1104	0.84	1173	0.99	1237	1.15	1298	1.32	1356	1.49
1300	659	0.24	781	0.36	883	0.48	972	0.61	1052	0.76	1125	0.91	1194	1.06	1258	1.23	1318	1.40	1375	1.58
1400	689	0.28	808	0.40	908	0.53	995	0.67	1075	0.82	1147	0.98	1215	1.14	1278	1.31	1338	1.48	1395	1.67
1500	720	0.33	836	0.46	933	0.59	1020	0.74	1098	0.89	1170	1.05	1237	1.22	1299	1.39	1359	1.57	1416	1.76
1600	752	0.38	864	0.52	960	0.66	1044	0.81	1121	0.97	1193	1.13	1259	1.31	1321	1.49	1380	1.67	1437	1.86
1700	784	0.44	893	0.58	986	0.73	1070	0.89	1146	1.05	1216	1.22	1282	1.40	1344	1.59	1402	1.78	1458	1.97
1800	816	0.50	922	0.65	1014	0.81	1096	0.97	1171	1.14	1240	1.32	1305	1.50	1366	1.69	1424	1.89	*1480*	*2.09*
1900	849	0.58	952	0.73	1042	0.90	1122	1.07	1196	1.24	1265	1.43	1329	1.61	1390	1.81	*1447*	*2.01*	*1502*	*2.22*
2000	882	0.66	982	0.82	1070	0.99	1149	1.17	1222	1.35	1290	1.54	1353	1.73	1413	1.93	*1470*	*2.14*	*1525*	*2.35*

LEGEND

— Med Static Motor and Drive - 920-1303 RPM, Max BHP 1.5 (motor is new 1.7 HP)
— High Static Motor and Drive - 1035-1466 RPM, Max BHP 2.0 (motor is 2.4 HP)
Italics — Field-supplied motor and drive required recommend using field supplied motor (HD58FE651-230v and 460v, HD58FE576-575 volt), fan pulley (part no. KR11AZ606), motor pulley (part no. KR11HY213), and belt (KR29AF043)

50HCQA05 — 4 TON VERTICAL SUPPLY

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	682	0.25	800	0.36	897	0.48	982	0.61	1058	0.75	1128	0.89	1192	1.03	1252	1.18	1309	1.34	1363	1.50
975	717	0.29	832	0.42	928	0.55	1011	0.68	1086	0.82	1155	0.97	1219	1.12	1279	1.28	1336	1.44	1389	1.61
1050	753	0.34	865	0.48	958	0.61	1041	0.76	1115	0.91	1183	1.06	1247	1.22	1306	1.38	1362	1.55	1416	1.72
1125	789	0.40	898	0.54	990	0.69	1071	0.84	1144	1.00	1212	1.16	1275	1.32	1334	1.49	1389	1.67	1443	1.85
1200	826	0.47	932	0.62	1022	0.77	1102	0.93	1174	1.09	1241	1.26	1303	1.43	1362	1.61	1417	1.79	1470	1.98
1275	863	0.54	966	0.70	1055	0.86	1133	1.03	1205	1.20	1271	1.37	1332	1.55	1390	1.74	1445	1.93	*1498*	*2.12*
1350	901	0.62	1001	0.79	1088	0.96	1165	1.13	1235	1.31	1301	1.50	1362	1.68	1419	1.87	*1474*	*2.07*	*1526*	*2.27*
1425	939	0.71	1037	0.89	1121	1.07	1197	1.25	1267	1.44	1331	1.63	1392	1.82	*1449*	*2.02*	*1503*	*2.22*	—	—
1500	978	0.81	1073	0.99	1156	1.18	1230	1.37	1299	1.57	1362	1.77	1422	1.97	*1478*	*2.18*	*1532*	*2.38*	—	—

LEGEND

— Med Static Motor and Drive - 920-1303 RPM, Max BHP 1.5 (motor is new 1.7 HP)
— High Static Motor and Drive - 1035-1466 RPM, Max BHP 2.0 (motor is 2.4 HP)
Italics — Field-supplied motor and drive required recommend using field supplied motor (HD58FE651-230v and 460v, HD58FE576-575 volt), fan pulley (part no. KR11AZ606), motor pulley (part no. KR11HY213), and belt (KR29AF043)

Fan data (cont)

50HCQA06 — 5 TON HORIZONTAL SUPPLY

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	725	0.33	840	0.46	937	0.60	1023	0.75	1101	0.90	1172	1.06	1239	1.23	1302	1.40	1361	1.58	1418	1.77
1625	765	0.40	876	0.54	970	0.68	1054	0.84	1131	1.00	1201	1.16	1267	1.34	1329	1.52	1388	1.71	1444	1.90
1750	806	0.48	912	0.63	1004	0.78	1087	0.94	1162	1.11	1231	1.28	1296	1.46	1358	1.65	1416	1.84	1472	2.04
1875	847	0.57	950	0.72	1039	0.88	1120	1.05	1194	1.23	1262	1.41	1326	1.60	1387	1.79	1445	1.99	1499	2.20
2000	889	0.66	988	0.83	1075	1.00	1154	1.18	1226	1.36	1294	1.55	1357	1.74	1417	1.95	1474	2.15	1528	2.36
2125	931	0.78	1027	0.95	1112	1.13	1189	1.31	1260	1.50	1326	1.70	1388	1.90	1447	2.11	1504	2.33	—	—
2250	974	0.90	1067	1.08	1149	1.27	1224	1.46	1294	1.66	1359	1.87	1420	2.08	1479	2.29	1534	2.51	—	—
2375	1018	1.03	1107	1.23	1187	1.43	1261	1.63	1329	1.84	1393	2.05	1453	2.27	1511	2.49	—	—	—	—
2500	1061	1.19	1148	1.39	1226	1.59	1297	1.81	1364	2.02	1427	2.24	1487	2.47	1543	2.70	—	—	—	—

LEGEND

— Med Static - 1066-1380 RPM, Max BHP 2.0 (motor is new 2.4 HP)
— High Static - 1208-1550 RPM, Max BHP 2.9 (motor is 2.9 HP)

50HCQA06 — 5 TON VERTICAL SUPPLY

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	794	0.41	902	0.55	993	0.69	1074	0.85	1147	1.00	1214	1.16	1277	1.33	1336	1.50	1392	1.67	1445	1.85
1625	840	0.49	945	0.64	1034	0.80	1113	0.96	1185	1.13	1251	1.30	1313	1.47	1371	1.65	1427	1.83	1479	2.02
1750	888	0.59	988	0.75	1075	0.92	1153	1.09	1223	1.26	1289	1.44	1350	1.63	1407	1.81	1462	2.01	1514	2.20
1875	936	0.70	1033	0.87	1117	1.05	1193	1.23	1263	1.41	1327	1.60	1387	1.80	1444	1.99	1498	2.19	1550	2.40
2000	984	0.82	1078	1.00	1160	1.19	1235	1.39	1303	1.58	1366	1.78	1426	1.98	1482	2.19	1535	2.40	—	—
2125	1033	0.96	1124	1.15	1204	1.35	1277	1.56	1343	1.76	1406	1.97	1464	2.18	1520	2.40	—	—	—	—
2250	1083	1.11	1170	1.32	1248	1.53	1319	1.74	1385	1.96	1446	2.18	1504	2.40	—	—	—	—	—	—
2375	1133	1.28	1217	1.50	1293	1.72	1363	1.95	1427	2.17	1487	2.40	1544	2.63	—	—	—	—	—	—
2500	1183	1.47	1265	1.70	1339	1.93	1406	2.17	1470	2.41	1529	2.64	—	—	—	—	—	—	—	—

LEGEND

— Med Static - 1066-1380 RPM, Max BHP 2.0 (motor is new 2.4 HP)
— High Static - 1208-1550 RPM, Max BHP 2.9 (motor is 2.9 HP)

50HCQA/D07 — 6 TON HORIZONTAL SUPPLY

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	415	0.28	510	0.46	588	0.65	655	0.85	715	1.08	770	1.31	821	1.56	868	1.82	913	2.09	955	2.36
1950	431	0.32	525	0.51	601	0.71	668	0.93	727	1.16	782	1.40	832	1.66	879	1.92	924	2.20	966	2.49
2100	448	0.38	540	0.57	615	0.78	681	1.01	740	1.25	794	1.50	844	1.76	891	2.03	935	2.32	977	2.61
2250	465	0.43	555	0.64	629	0.86	694	1.10	753	1.34	806	1.60	856	1.87	903	2.15	947	2.45	988	2.75
2400	483	0.49	571	0.71	644	0.94	708	1.19	766	1.45	819	1.71	868	1.99	915	2.28	958	2.58	1000	2.89
2550	501	0.56	587	0.79	659	1.04	722	1.29	779	1.56	832	1.83	881	2.12	927	2.42	971	2.73	1012	3.05
2700	519	0.64	603	0.88	674	1.14	737	1.40	793	1.68	845	1.96	894	2.26	940	2.57	983	2.88	1024	3.21
2850	538	0.72	620	0.98	689	1.24	751	1.52	807	1.80	859	2.10	907	2.41	953	2.72	995	3.05	1036	3.38
3000	557	0.82	637	1.08	705	1.36	766	1.64	822	1.94	873	2.24	921	2.56	966	2.89	1008	3.22	1049	3.56

LEGEND

— Std Static - 489-747 RPM, Max BHP 1.2 (motor is 1.7 HP)
— Med Static - 733-949 RPM, Max BHP 2.9 (motor is 2.9 HP)
— High Static - 909-1102 RPM, Max BHP 4.0 (motor is 4.9 HP)

50HCQA/D07 — 6 TON VERTICAL SUPPLY

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	446	0.33	534	0.50	609	0.70	676	0.91	736	1.14	791	1.39	843	1.65	892	1.93	938	2.22	981	2.53
1950	467	0.39	552	0.57	625	0.77	690	0.99	750	1.23	804	1.49	855	1.76	903	2.04	949	2.34	992	2.65
2100	489	0.45	571	0.64	642	0.86	706	1.08	764	1.33	818	1.59	868	1.87	915	2.16	961	2.46	1003	2.78
2250	511	0.53	591	0.73	660	0.95	722	1.19	779	1.44	832	1.71	882	1.99	928	2.29	973	2.59	1015	2.92
2400	534	0.61	611	0.82	678	1.05	739	1.30	795	1.56	847	1.83	896	2.12	942	2.43	986	2.74	1028	3.07
2550	558	0.71	631	0.93	697	1.17	756	1.42	811	1.69	862	1.97	910	2.27	956	2.58	999	2.90	1041	3.23
2700	581	0.81	652	1.04	716	1.29	774	1.55	828	1.83	878	2.12	926	2.42	971	2.74	1013	3.07	1055	3.41
2850	605	0.93	674	1.17	736	1.43	792	1.70	845	1.98	895	2.28	941	2.59	986	2.92	1028	3.25	1069	3.60
3000	630	1.06	696	1.31	756	1.58	811	1.86	863	2.15	912	2.46	958	2.78	1001	3.11	1043	3.45	1083	3.80

LEGEND

— Std Static - 489-747 RPM, Max BHP 1.2 (motor is 1.7 HP)
— Med Static - 733-949 RPM, Max BHP 2.9 (motor is 2.9 HP)
— High Static - 909-1102 RPM, Max BHP 4.0 (motor is 4.9 HP)

Fan data (cont)

50HCQA08 — 7.5 TON HORIZONTAL SUPPLY

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2250	433	0.29	518	0.41	596	0.54	667	0.67	733	0.81	795	0.96	854	1.11	910	1.27	963	1.43	1014	1.60
2438	454	0.35	535	0.48	609	0.61	677	0.75	741	0.90	802	1.05	859	1.21	913	1.38	966	1.55	1016	1.72
2625	477	0.42	553	0.55	624	0.69	689	0.84	751	1.00	810	1.16	865	1.32	919	1.49	970	1.67	1019	1.85
2813	500	0.49	572	0.64	640	0.78	703	0.94	763	1.10	819	1.27	874	1.44	925	1.62	975	1.80	1023	1.99
3000	523	0.58	592	0.73	657	0.88	718	1.05	775	1.22	830	1.39	883	1.57	934	1.76	982	1.95	1029	2.14
3188	547	0.68	613	0.83	675	1.00	733	1.17	789	1.34	843	1.53	894	1.71	943	1.90	990	2.10	1036	2.30
3375	571	0.78	634	0.95	694	1.12	750	1.30	804	1.48	856	1.67	905	1.86	953	2.06	1000	2.27	1045	2.48
3563	596	0.90	656	1.07	713	1.25	768	1.44	820	1.63	870	1.83	918	2.03	965	2.23	1010	2.44	1054	2.66
3750	621	1.03	679	1.21	734	1.40	786	1.59	837	1.79	885	1.99	932	2.20	978	2.42	1022	2.64	1065	2.86

LEGEND

— Std Static - 518-733 RPM, Max BHP 1.2 (motor is 1.7 HP)
— Med Static - 690-936 RPM, Max BHP 1.7 (motor is 2.4 HP)
— High Static - 838-1084 RPM, Max BHP 2.8 (motor is 3.7 HP)

50HCQA08 — 7.5 TON VERTICAL SUPPLY

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2250	457	0.32	536	0.44	604	0.55	664	0.67	719	0.79	770	0.91	817	1.03	861	1.15	903	1.28	943	1.40
2438	481	0.39	557	0.51	623	0.64	682	0.77	735	0.89	785	1.02	832	1.15	876	1.28	917	1.41	957	1.55
2625	505	0.47	578	0.60	642	0.73	700	0.87	753	1.00	802	1.14	847	1.28	891	1.42	932	1.56	971	1.70
2813	530	0.55	601	0.70	663	0.84	719	0.98	771	1.13	819	1.27	864	1.42	907	1.57	947	1.72	986	1.87
3000	556	0.65	623	0.80	684	0.95	738	1.11	789	1.26	836	1.42	881	1.57	923	1.73	963	1.89	1001	2.05
3188	582	0.76	647	0.92	705	1.08	759	1.25	808	1.41	855	1.57	898	1.74	940	1.90	979	2.07	1017	2.24
3375	608	0.88	671	1.05	727	1.22	779	1.40	828	1.57	873	1.74	916	1.91	957	2.09	996	2.26	1034	2.44
3563	634	1.01	695	1.19	750	1.38	801	1.56	848	1.74	893	1.92	935	2.11	975	2.29	1014	2.47	1051	2.66
3750	661	1.16	719	1.35	773	1.54	822	1.73	869	1.93	912	2.12	954	2.31	994	2.50	1031	2.70	1068	2.89

LEGEND

— Std Static - 518-733 RPM, Max BHP 1.2 (motor is 1.7 HP)
— Med Static - 690-936 RPM, Max BHP 1.7 (motor is 2.4 HP)
— High Static - 838-1084 RPM, Max BHP 2.8 (motor is 3.7 HP)

50HCQD09 — 8.5 TON HORIZONTAL SUPPLY

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2550	468	0.39	546	0.52	618	0.66	684	0.80	747	0.96	806	1.11	863	1.28	916	1.45	968	1.62	1018	1.80
2763	493	0.47	567	0.61	635	0.76	699	0.91	760	1.07	817	1.24	871	1.41	924	1.59	974	1.77	1022	1.95
2975	520	0.57	589	0.72	654	0.87	716	1.03	774	1.20	829	1.37	882	1.55	932	1.74	981	1.93	1028	2.12
3188	547	0.68	613	0.83	675	1.00	733	1.17	789	1.34	843	1.53	894	1.71	943	1.90	990	2.10	1036	2.30
3400	575	0.80	637	0.96	696	1.14	752	1.31	806	1.50	858	1.69	907	1.88	955	2.09	1001	2.29	1046	2.50
3613	603	0.94	662	1.11	719	1.29	773	1.48	824	1.67	874	1.87	922	2.07	968	2.28	1013	2.49	1057	2.71
3825	631	1.09	688	1.27	742	1.46	794	1.66	843	1.86	891	2.07	938	2.28	983	2.49	1027	2.71	—	—
4038	660	1.26	714	1.45	766	1.65	816	1.85	864	2.06	910	2.28	955	2.50	999	2.72	—	—	—	—
4250	689	1.45	741	1.65	790	1.86	838	2.07	885	2.29	930	2.51	973	2.74	—	—	—	—	—	—

LEGEND

— Std static - 440-609 RPM, Max BHP 1.7 (motor is 2.4 HP)
— Med static - 591-838 RPM, Max BHP 2.9 (motor is 2.9 HP)
— High static - 838-1084 RPM, Max BHP 2.8 (motor is 3.7 HP)

50HCQD09 — 8.5 TON VERTICAL SUPPLY

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2550	495	0.43	570	0.56	634	0.70	693	0.83	746	0.96	795	1.09	841	1.23	885	1.36	926	1.50	965	1.64
2763	524	0.53	595	0.67	657	0.81	714	0.95	766	1.09	814	1.24	859	1.38	902	1.53	943	1.68	982	1.82
2975	552	0.63	620	0.79	681	0.94	736	1.09	787	1.24	834	1.40	878	1.55	921	1.71	961	1.86	999	2.02
3188	582	0.76	647	0.92	705	1.08	759	1.25	808	1.41	855	1.57	898	1.74	940	1.90	979	2.07	1017	2.24
3400	611	0.89	674	1.07	730	1.24	782	1.42	831	1.59	876	1.76	919	1.94	960	2.12	998	2.29	1036	2.47
3613	641	1.05	701	1.23	756	1.42	806	1.60	854	1.79	898	1.97	940	2.16	980	2.34	1018	2.53	1055	2.72
3825	672	1.22	729	1.42	782	1.61	831	1.81	877	2.00	921	2.20	962	2.40	1001	2.59	1039	2.79	—	—
4038	702	1.41	758	1.62	809	1.83	857	2.03	901	2.24	944	2.45	984	2.65	—	—	—	—	—	—
4250	733	1.62	787	1.84	836	2.06	883	2.28	926	2.49	968	2.71	1007	2.93	—	—	—	—	—	—

LEGEND

— Std static - 440-609 RPM, Max BHP 1.7 (motor is 2.4 HP)
— Med static - 591-838 RPM, Max BHP 2.9 (motor is 2.9 HP)
— High static - 838-1084 RPM, Max BHP 2.8 (motor is 3.7 HP)

50HCQD12 — 10 TON HORIZONTAL SUPPLY

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	335	0.32	**421**	**0.51**	500	0.74	572	1.00	637	1.29	697	1.59	751	1.91	801	2.24	847	2.59	891	2.94
3250	**350**	**0.38**	**430**	**0.58**	505	0.81	575	1.08	640	1.37	699	1.68	753	2.01	803	2.35	850	2.71	895	3.08
3500	**365**	**0.45**	441	0.65	512	0.89	579	1.16	642	1.46	701	1.78	755	2.12	806	2.47	853	2.84	898	3.22
3750	**381**	**0.53**	452	0.74	520	0.98	584	1.26	645	1.56	703	1.88	757	2.23	808	2.59	855	2.97	900	3.36
4000	**397**	**0.61**	464	0.83	529	1.08	590	1.36	650	1.67	706	2.00	*759*	*2.35*	809	2.72	857	3.11	902	3.51
4250	**413**	**0.70**	477	0.93	538	1.19	598	1.47	655	1.78	709	2.12	*761*	*2.48*	811	2.86	858	3.25	903	3.66
4500	**429**	**0.81**	491	1.05	549	1.31	606	1.60	661	1.91	714	2.25	765	2.62	813	3.00	860	3.40	905	3.82
4750	445	0.92	505	1.17	561	1.44	615	1.73	667	2.05	719	2.40	768	2.77	816	3.15	862	3.56	906	3.99
5000	462	1.04	519	1.30	573	1.58	625	1.88	675	2.21	725	2.55	773	2.93	820	3.32	865	3.73	908	4.16

LEGEND

— Std Static - 440-609 RPM, Max BHP 1.9 (motor is 2.4 HP)
— Med Static - 547-757 RPM, Max BHP 2.9 (motor is 2.9 HP)
— High Static - 762-963 RPM, Max BHP 6.5* (motor is 5.0 HP)
BOLD — Field-supplied drive (motor pulley = KR11HY151, use belt and blower pulley from standard static), rpm range = 338-507
Italics — Field-supplied drive (motor pulley = KR11HY186, blower pulley = KR51BJ413, belt = KR30BE072, use medium static motor), rpm range = 684-864

* On Size 12 units, Max BHP for the High-Static High-Efficiency motor varies with the motor's voltage; see the table below.

Voltage	BHP
208	6.5
230	6.9
460	7.0
575	8.3

50HCQD12 — 10 TON VERTICAL SUPPLY

CFM	Available External Static Pressure (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	**383**	**0.39**	470	0.60	549	0.85	620	1.13	684	1.42	742	1.73	795	2.05	845	2.38	891	2.73	935	3.08
3250	**402**	**0.47**	483	0.68	559	0.94	629	1.22	692	1.53	749	1.85	802	2.19	852	2.54	899	2.89	943	3.26
3500	**421**	**0.55**	498	0.78	570	1.04	637	1.33	699	1.65	756	1.98	809	2.33	859	2.69	906	3.06	950	3.45
3750	441	0.65	513	0.88	582	1.15	647	1.45	707	1.78	764	2.12	816	2.48	866	2.86	912	3.24	956	3.64
4000	461	0.75	529	0.99	594	1.27	657	1.58	716	1.91	771	2.27	824	2.64	873	3.03	919	3.42	963	3.83
4250	481	0.87	545	1.12	608	1.41	668	1.72	725	2.06	780	2.43	831	2.81	880	3.21	926	3.62	970	4.04
4500	502	1.01	563	1.26	622	1.55	680	1.88	735	2.22	788	2.60	839	2.99	887	3.40	933	3.82	976	4.25
4750	522	1.15	581	1.42	637	1.72	693	2.05	746	2.40	798	2.78	847	3.18	895	3.60	940	4.03	983	4.47
5000	543	1.31	599	1.59	653	1.90	706	2.23	*758*	*2.59*	808	2.98	856	3.38	903	3.81	947	4.25	990	4.71

LEGEND

— Std Static - 440-609 RPM, Max BHP 1.9 (motor is 2.4 HP)
— Med Static - 547-757 RPM, Max BHP 2.9 (motor is 2.9 HP)
— High Static - 762-963 RPM, Max BHP 6.5* (motor is 5.0 HP)
BOLD — Field-supplied drive (motor pulley = KR11HY151, use belt and blower pulley from standard static), rpm range = 338-507
Italics — Field-supplied drive (motor pulley = KR11HY186, blower pulley = KR51BJ413, belt = KR30BE072, use medium static motor), rpm range = 684-864
Underline — Field-supplied (motor pulley = KR11HY194, blower pulley = KR51BJ413, belt = KR30BE072, use high static motor), rpm range = 846-1061

* On Size 12 units, Max BHP for the High-Static High-Efficiency motor varies with the motor's voltage; see the table below.

Voltage	BHP
208	6.5
230	6.9
460	7.0
575	8.3

PULLEY ADJUSTMENT — BELT DRIVE

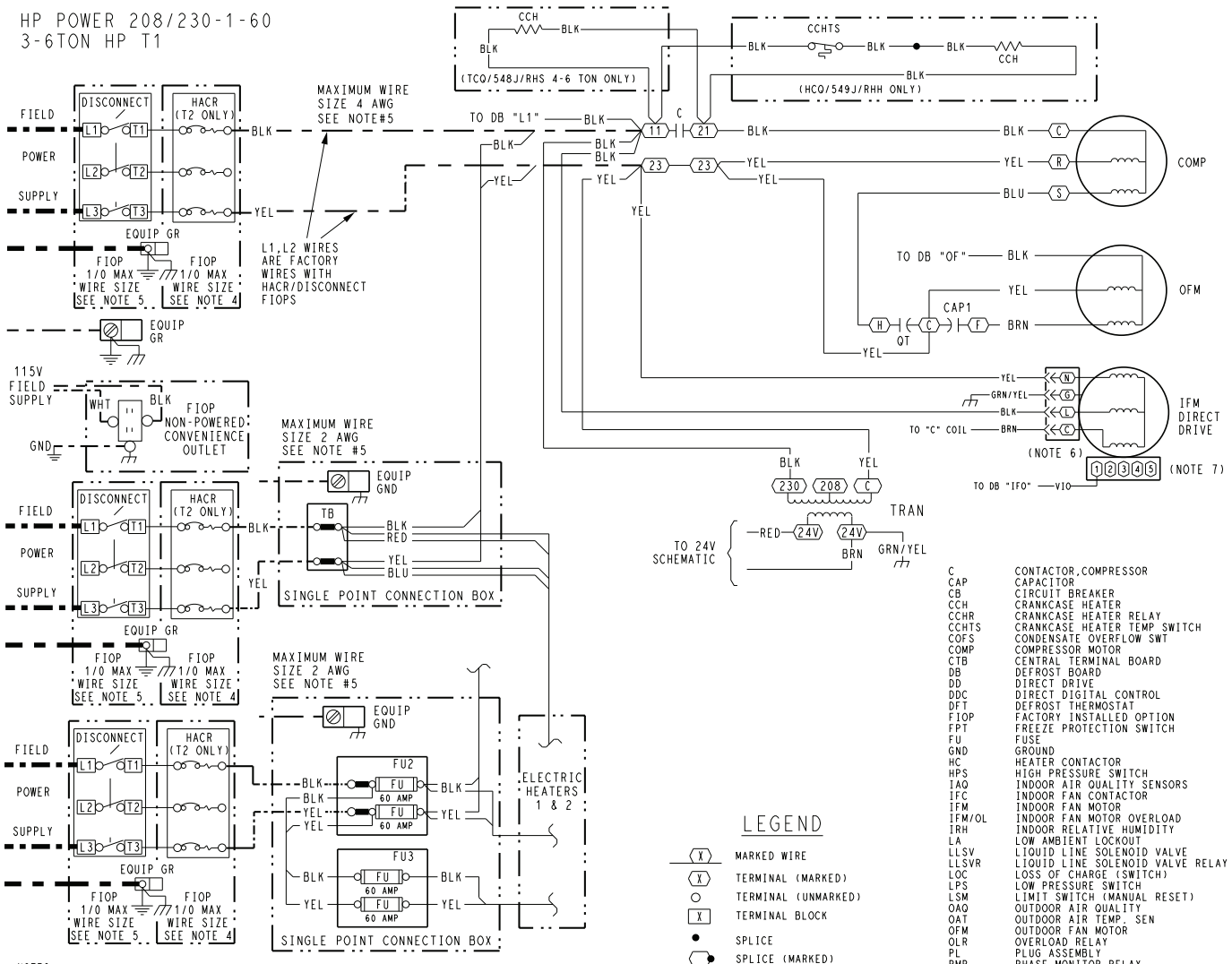
50HCQ UNIT		MOTOR/DRIVE COMBO	MOTOR PULLEY TURNS OPEN (RPM)										
			0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
04	3 Phase	Medium Static	1251	1208	1165	1121	1078	1035	992	949	905	862	819
		High Static	1466	1423	1380	1337	1294	1251	1207	1164	1121	1078	1035
05	3 Phase	Medium Static	1303	1265	1226	1188	1150	1112	1073	1035	997	958	920
		High Static	1466	1423	1380	1337	1294	1251	1207	1164	1121	1078	1035
06	3 Phase	Medium Static	1380	1349	1317	1286	1254	1223	1192	1160	1129	1097	1066
		High Static	1639	1596	1553	1510	1467	1424	1380	1337	1294	1251	1208
07	3 Phase	Standard Static	747	721	695	670	644	618	592	566	541	515	489
		Medium Static	949	927	906	884	863	841	819	798	776	755	733
		High Static	1102	1083	1063	1044	1025	1006	986	967	948	928	909
08	3 Phase	Standard Static	733	712	690	669	647	626	604	583	561	540	518
		Medium Static	936	911	887	862	838	813	788	764	739	715	690
		High Static	1084	1059	1035	1010	986	961	936	912	887	863	838
09	3 Phase	Standard Static	652	633	614	594	575	556	537	518	498	479	460
		Medium Static	838	813	789	764	739	715	690	665	640	616	591
		High Static	1084	1059	1035	1010	986	961	936	912	887	863	838
12	3 Phase	Standard Static	609	592	575	558	541	525	508	491	474	457	440
		Medium Static	757	736	715	694	673	652	631	610	589	568	547
		High Static	963	943	923	903	883	863	842	822	802	782	762

NOTE: Do not adjust pulley further than 5 turns open.

LEGEND

— Factory settings

TYPICAL POWER WIRING DIAGRAM: 1-STAGE COOLING UNIT SHOWN



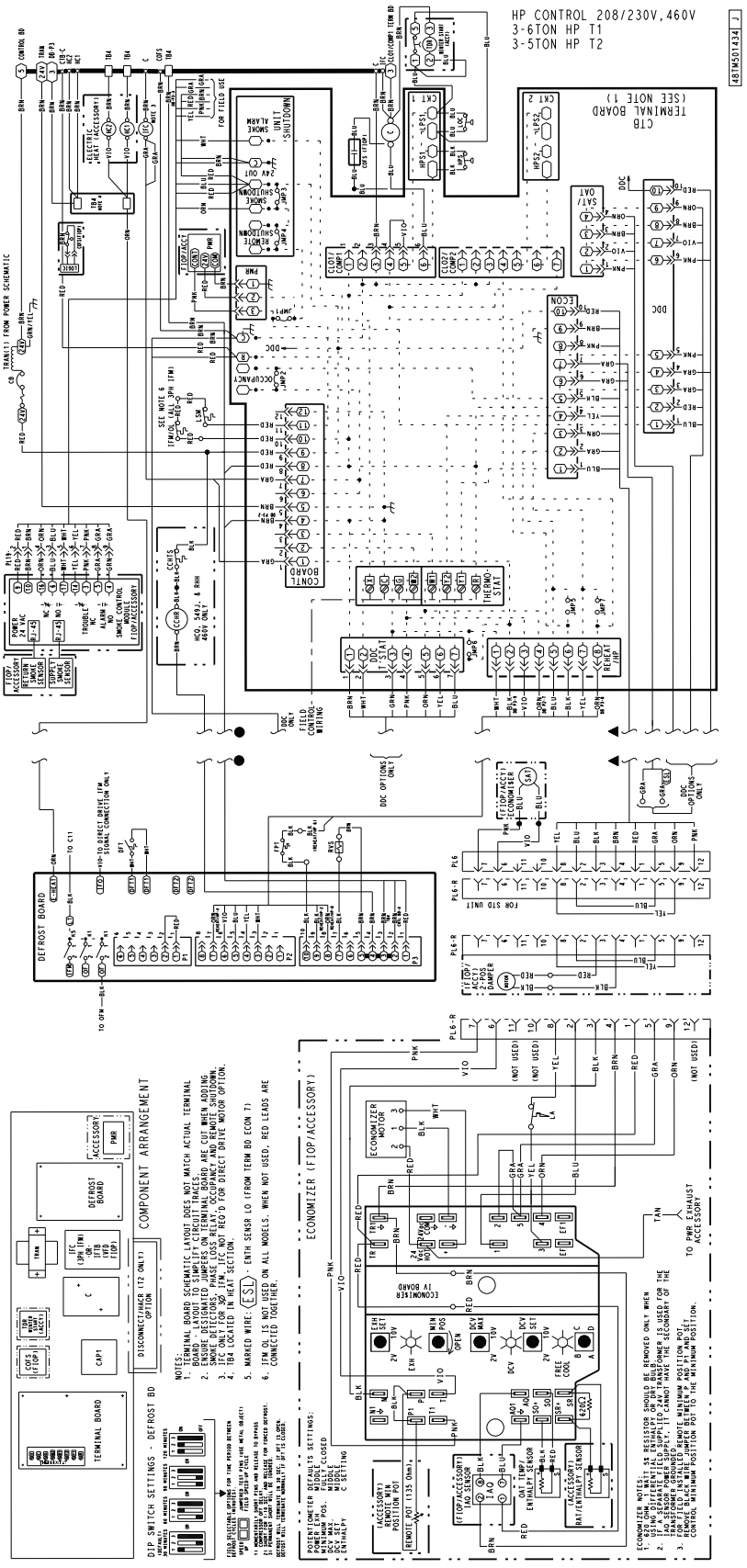
NOTES

1. IF REQUIRED, ORIGINAL UNIT WIRING MUST BE REPLACED WITH TYPE 90 C WIRE OR EQUIVALENT.
2. COMPRESSOR AND FAN MOTORS ARE THERMALLY PROTECTED.
3. 208/230V UNIT TRAN IS WIRED FOR 230V UNIT. IF UNIT IS TO BE RUN WITH 208V POWER SUPPLY DISCONNECT BLK WIRE FROM 230V TAP AND CONNECT TO 200V TAP.
4. USE COPPER, COPPER CLAD ALUMINUM OR ALUMINUM CONDUCTORS.
5. USE COPPER CONDUCTOR ONLY.
6. DO NOT DISCONNECT POWER PLUG OR SIGNAL WIRE WHILE UNDER LOAD.
7. FACTORY WIRING FOR SIGNAL CONNECTION: 3 - 6 TON =1. RELOCATION OF SIGNAL CONNECTION MAY BE REQUIRED WHEN USING FIELD INSTALLED ACCESSORIES - CONSULT INSTALLATION INSTRUCTION FOR PROPER SELECTION.

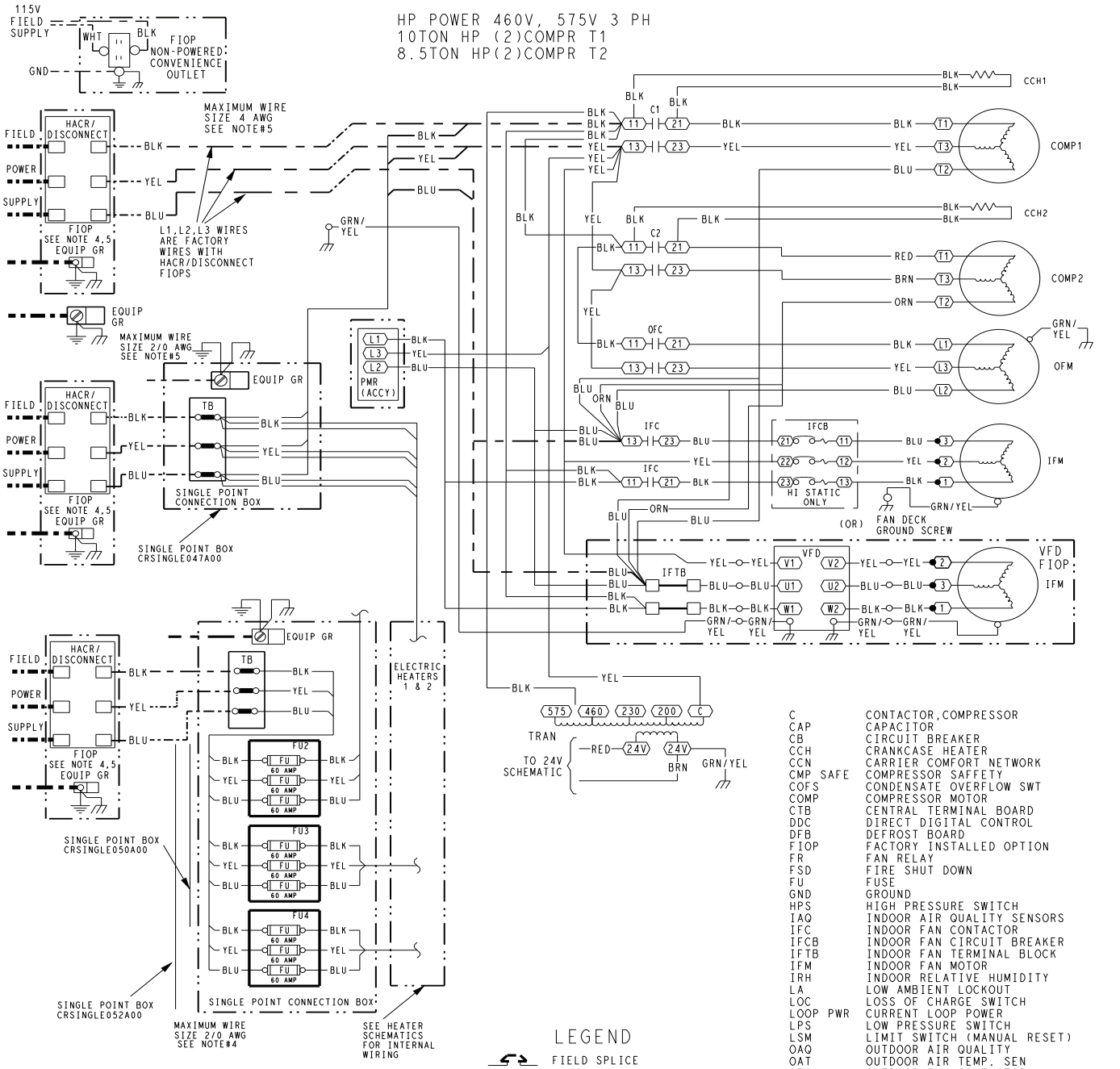
C	CONTACTOR,COMPRESSOR
CAP	CAPACITOR
CB	CIRCUIT BREAKER
CCH	CRANKCASE HEATER
CCHR	CRANKCASE HEATER RELAY
CCHTS	CRANKCASE HEATER TEMP SWITCH
COFS	CONDENSATE OVERFLOW SWT
COMP	COMPRESSOR MOTOR
CTB	CENTRAL TERMINAL BOARD
DB	DEFROST BOARD
DD	DIRECT DRIVE
DDC	DIRECT DIGITAL CONTROL
DFT	DEFROST THERMOSTAT
FIOP	FACTORY INSTALLED OPTION
FPT	FREEZE PROTECTION SWITCH
FU	FUSE
GND	GROUND
HC	HEATER CONTACTOR
HPS	HIGH PRESSURE SWITCH
IAQ	INDOOR AIR QUALITY SENSORS
IFC	INDOOR FAN CONTACTOR
IFM	INDOOR FAN MOTOR
IFM/OL	INDOOR FAN MOTOR OVERLOAD
IRH	INDOOR RELATIVE HUMIDITY
LA	LOW AMBIENT LOCKOUT
LLSV	LIQUID LINE SOLENOID VALVE
LLSVR	LIQUID LINE SOLENOID VALVE RELAY
LOC	LOSS OF CHARGE (SWITCH)
LPS	LOW PRESSURE SWITCH
LSM	LIMIT SWITCH (MANUAL RESET)
OAQ	OUTDOOR AIR QUALITY
OAT	OUTDOOR AIR TEMP. SEN
OFM	OUTDOOR FAN MOTOR
OLR	OVERLOAD RELAY
PL	PLUG ASSEMBLY
PMR	PHASE MONITOR RELAY
QT	QUADRUPLE TERMINAL
R	RELAY
RAT	RETURN AIR TEMP. SEN
RMT OCC	REMOTE OCCUPANCY
RVS	REVERSING VALVE SOLENOID
SAT	SUPPLY AIR TEMP. SENSOR
SEN	SENSOR
SET	SET POINT OFFSET
TB	TERMINAL BOARD
TDR	TIME DELAY RELAY(WINTER START)
TRAN	TRANSFORMER

48TM501435 | I

TYPICAL CONTROL WIRING DIAGRAM: 1-STAGE UNIT WITH ELECTRO-MECHANICAL CONTROL SHOWN



TYPICAL POWER WIRING DIAGRAM: 2-STAGE UNIT WITH 2-SPEED INDOOR FAN MOTOR AND VFD SHOWN



NOTES:

1. IF ANY OF THE ORIGINAL WIRE FURNISHED MUST BE REPLACED. IT MUST BE REPLACED WITH TYPE 90 C WIRE OR ITS EQUIVALENT.
2. COMPRESSOR AND FAN MOTORS ARE THERMALLY PROTECTED. THREE PHASE MOTORS ARE PROTECTED AGAINST PRIMARY SINGLE PHASING CONDITIONS.
4. USE COPPER, COPPER CLAD ALUMINUM OR ALUMINUM CONDUCTORS. MAX 1/0 FOR HACR (T2 ONLY)
5. USE COPPER CONDUCTOR ONLY. MAX 1/0 FOR DISCONNECT.

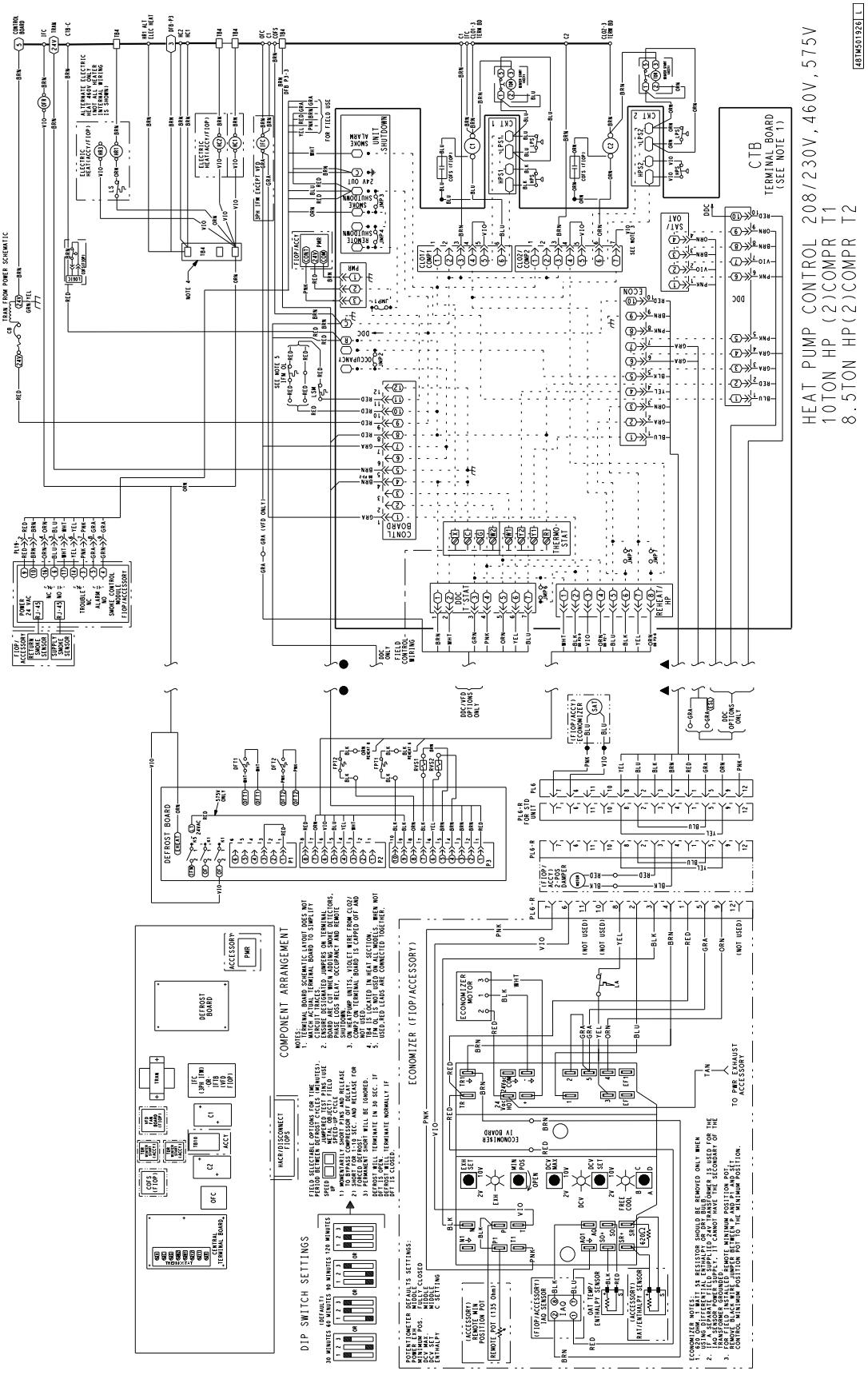
LEGEND

	FIELD SPLICE
X	MARKED WIRE
X	TERMINAL (MARKED)
	TERMINAL (UNMARKED)
X	TERMINAL BLOCK
	FACTORY WIRING
	FIELD CONTROL WIRING
	FIELD POWER WIRING
	CIRCUIT BOARD TRACE
	ACCESSORY OR FIOP
	TO INDICATE COMMON POTENTIAL ONLY: NOT TO REPRESENT WIRING

C	CONTACTOR,COMPRESSOR
CAP	CAPACITOR
CB	CIRCUIT BREAKER
CCH	CRANKCASE HEATER
CCN	CARRIER COMFORT NETWORK
CMP SAFE	COMPRESSOR SAFFETY
COFS	CONDENSATE OVERFLOW SWT
COMP	COMPRESSOR MOTOR
CTB	CENTRAL TERMINAL BOARD
DDC	DIRECT DIGITAL CONTROL
DFB	DEFROST BOARD
FIOP	FACTORY INSTALLED OPTION
FR	FAN RELAY
FSD	FIRE SHUT DOWN
FU	FUSE
GND	GROUND
HPS	HIGH PRESSURE SWITCH
IAQ	INDOOR AIR QUALITY SENSORS
IFC	INDOOR FAN CONTACTOR
IFCB	INDOOR FAN CIRCUIT BREAKER
IFTB	INDOOR FAN TERMINAL BLOCK
IFM	INDOOR FAN MOTOR
IRH	INDOOR RELATIVE HUMIDITY
LA	LOW AMBIENT LOCKOUT
LOC	LOSS OF CHARGE SWITCH
LOOP PWR	CURRENT LOOP POWER
LPS	LOW PRESSURE SWITCH
LSM	LIMIT SWITCH (MANUAL RESET)
OAQ	OUTDOOR AIR QUALITY
OAT	OUTDOOR AIR TEMP. SEN
OFC	OUTDOOR FAN CONTACTOR
OFM	OUTDOOR FAN MOTOR
OL	OVERLOAD
PL	PLUG ASSEMBLY
POT	POTENTIOMETER
PMR	PHASE MONITOR RELAY
QT	QUADRUPLE TERMINAL
R	RELAY
RAT	RETURN AIR TEMP. SEN
RMT OCC	REMOTE OCCUPANCY
SAT	SUPPLY AIR TEMP. SENSOR
SEN	SENSOR
SET	SET POINT OFFSET
SFS	SUPPLY FAN STATUS
TDR	TIME DELAY RELAY(WINTER START)
TRAN	TRANSFORMER
VFD	VARIABLE FREQUENCY DRIVE

48TM501958 | H

TYPICAL CONTROL WIRING DIAGRAM: 2-STAGE UNIT WITH ELECTRO-MECHANICAL CONTROL SHOWN



ELECTRIC HEAT - ELECTRICAL DATA
SINGLE STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR

UNIT SIZE	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER ****00	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE***A00			
						Without C.O. or UNPWRD C.O.		With PWRD C.O.	
						Without P.E.	With P.E. (pwrd fr/unit)	Without P.E.	With P.E. (pwrd fr/unit)
50HCQA04	208/230-1-60	DD-STD	101A00	4.4	3.3/4.0	037A00	037A00	—	—
			102A00	6.5	4.9/6.0	040A00	040A00	—	—
			103B00	8.7	6.5/8.0	040A00	040A00	—	—
			104B00	10.5	7.9/9.6	040A00	040A00	—	—
			102A00,102A00	13.0	9.8/11.9	041A00	041A00	—	—
	208/230-3-60	DD-STD	101A00	4.4	3.3/4.0	—	—	—	—
			102A00	6.5	4.9/6.0	—	—	—	—
			103B00	8.7	6.5/8.0	—	—	037A00	037A00
			104B00	10.5	7.9/9.6	037A00	037A00	037A00	037A00
			105A00	16.0	12.0/14.7	038A00	038A00	038A00	038A00
		MED	101A00	4.4	3.3/4.0	—	—	—	—
			102A00	6.5	4.9/6.0	—	—	—	—
			103B00	8.7	6.5/8.0	—	—	—	037A00
			104B00	10.5	7.9/9.6	037A00	037A00	037A00	037A00
			105A00	16.0	12.0/14.7	038A00	038A00	038A00	038A00
		HIGH	101A00	4.4	3.3/4.0	—	—	—	—
			102A00	6.5	4.9/6.0	—	—	—	—
			103B00	8.7	6.5/8.0	—	—	037A00	037A00
			104B00	10.5	7.9/9.6	037A00	037A00	037A00	037A00
			105A00	16.0	12.0/14.7	038A00	038A00	038A00	038A00
	460-3-60	DD-STD	106A00	6.0	5.5	—	—	—	—
			107A00	8.8	8.1	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
		MED	106A00	6.0	5.5	—	—	—	—
			107A00	8.8	8.1	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
		HIGH	106A00	6.0	5.5	—	—	—	—
			107A00	8.8	8.1	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
	575-3-60	DD-STD	297A00	10.0	9.2	—	—	—	—
			298A00	15.0	13.8	—	—	—	—
		MED	297A00	10.0	9.2	—	—	—	—
			298A00	15.0	13.8	—	—	—	—
		HIGH	297A00	10.0	9.2	—	—	—	—
			298A00	15.0	13.8	—	—	—	—

LEGEND

—	— No Single Point Kit Required
APP PWR	— 208 / 230V / 460V / 575V
C.O.	— Convenience Outlet
DD	— Electric Drive X13 5 Speed/Torque Motor
IFM	— Indoor Fan Motor
NOM PWR	— 240V / 480V / 600V
P.E.	— Power Exhaust
PWRD	— Powered Convenience Outlet
pwrd fr/unit	— Powered From Unit
UNPWRD	— Unpowered Convenience Outlet

ELECTRIC HEAT - ELECTRICAL DATA
SINGLE STAGE COOLING SINGLE SPEED INDOOR FAN AND FACTORY-INSTALLED NON-FUSED DISCONNECT SWITCH

UNIT SIZE	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER ****00	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE***A00			
						Without C.O. or UNPWRD C.O.		With PWRD C.O.	
						Without P.E.	With P.E. (pwrd fr/unit)	Without P.E.	With P.E. (pwrd fr/unit)
50HCQA04	208/230-1-60	DD-STD	101A00	4.4	3.3/4.0	037A00	037A00	—	—
			102A00	6.5	4.9/6.0	040A00	040A00	—	—
			103B00	8.7	6.5/8.0	040A00	040A00	—	—
			104B00	10.5	7.9/9.6	040A00	040A00	—	—
			102A00,102A00	13.0	9.8/11.9	041A00	041A00	—	—
	208/230-3-60	DD-STD	101A00	4.4	3.3/4.0	037A00	037A00	037A00	037A00
			102A00	6.5	4.9/6.0	037A00	037A00	037A00	037A00
			103B00	8.7	6.5/8.0	037A00	037A00	037A00	037A00
			104B00	10.5	7.9/9.6	037A00	037A00	037A00	037A00
			105A00	16.0	12.0/14.7	038A00	038A00	038A00	038A00
		MED	101A00	4.4	3.3/4.0	049A00	037A00	037A00	037A00
			102A00	6.5	4.9/6.0	049A00	037A00	037A00	037A00
			103B00	8.7	6.5/8.0	051A00	037A00	037A00	037A00
			104B00	10.5	7.9/9.6	051A00	037A00	037A00	037A00
			105A00	16.0	12.0/14.7	038A00	038A00	038A00	038A00
		HIGH	101A00	4.4	3.3/4.0	049A00	037A00	037A00	037A00
			102A00	6.5	4.9/6.0	049A00	037A00	037A00	037A00
			103B00	8.7	6.5/8.0	051A00	037A00	037A00	037A00
			104B00	10.5	7.9/9.6	051A00	037A00	037A00	037A00
			105A00	16.0	12.0/14.7	038A00	038A00	038A00	038A00
	460-3-60	DD-STD	106A00	6.0	5.5	—	—	—	—
			107A00	8.8	8.1	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
		MED	106A00	6.0	5.5	—	—	—	—
			107A00	8.8	8.1	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
		HIGH	106A00	6.0	5.5	—	—	—	—
			107A00	16.5	8.1	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
	575-3-60	DD-STD	297A00	10.0	9.2	—	—	—	—
			298A00	15.0	13.8	—	—	—	—
		MED	297A00	10.0	9.2	—	—	—	—
			298A00	15.0	13.8	—	—	—	—
		HIGH	297A00	10.0	9.2	—	—	—	—
			298A00	15.0	13.8	—	—	—	—

LEGEND

—	— No Single Point Kit Required
APP PWR	— 208 / 230V / 460V / 575V
C.O.	— Convenience Outlet
DD	— Electric Drive X13 5 Speed/Torque Motor
IFM	— Indoor Fan Motor
NOM PWR	— 240V / 480V / 600V
P.E.	— Power Exhaust
PWRD	— Powered Convenience Outlet
pwrd fr/unit	— Powered From Unit
UNPWRD	— Unpowered Convenience Outlet

ELECTRIC HEAT - ELECTRICAL DATA
SINGLE STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR

UNIT SIZE	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER ****00	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE***A00			
						Without C.O. or UNPWRD C.O.		With PWRD C.O.	
						Without P.E.	With P.E. (pwrd fr/unit)	Without P.E.	With P.E. (pwrd fr/unit)
50HCQA05	208/230-1-60	DD-STD	101A00	4.4	3.3/4.0	037A00	037A00	—	—
			103B00	8.7	6.5/8.0	040A00	040A00	—	—
			102A00,102A00	13.0	9.8/11.9	041A00	041A00	—	—
			103B00,103B00	17.4	13.1/16.0	041A00	041A00	—	—
			104B00,104B00	21.0	15.8/19.3	041A00	041A00	—	—
	208/230-3-60	DD-STD	102A00	6.5	4.9/6.0	—	—	—	037A00
			103B00	8.7	6.5/8.0	037A00	037A00	037A00	037A00
			105A00	16.0	12.0/14.7	038A00	038A00	038A00	038A00
			104B00,104B00	21.0	15.8/19.3	039A00	039A00	039A00	039A00
		MED	102A00	6.5	4.9/6.0	—	—	—	—
			103B00	8.7	6.5/8.0	—	037A00	037A00	037A00
			105A00	16.0	12.0/14.7	038A00	038A00	038A00	038A00
			104B00,104B00	21.0	15.8/19.3	039A00	039A00	039A00	039A00
		HIGH	102A00	6.5	4.9/6.0	—	—	—	037A00
			103B00	8.7	6.5/8.0	037A00	037A00	037A00	037A00
			105A00	16.0	12.0/14.7	038A00	038A00	038A00	038A00
			104B00,104B00	21.0	15.8/19.3	039A00	039A00	039A00	039A00
	460-3-60	DD-STD	106A00	6.0	5.5	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
			108A00,108A00	23.0	21.1	037A00	037A00	037A00	037A00
		MED	106A00	6.0	5.5	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
			108A00,108A00	23.0	21.1	037A00	037A00	037A00	037A00
		HIGH	106A00	6.0	5.5	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
			108A00,108A00	23.0	21.1	037A00	037A00	037A00	037A00
	575-3-60	DD-STD	297A00	10.0	9.2	—	—	—	—
			298A00	15.0	13.8	—	—	—	—
		MED	297A00	10.0	9.2	—	—	—	—
			298A00	15.0	13.8	—	—	—	—
		HIGH	297A00	10.0	9.2	—	—	—	—
			298A00	15.0	13.8	—	—	—	—

LEGEND

—	— No Single Point Kit Required
APP PWR	— 208 / 230V / 460V / 575V
C.O.	— Convenience Outlet
DD	— Electric Drive X13 5 Speed/Torque Motor
IFM	— Indoor Fan Motor
NOM PWR	— 240V / 480V / 600V
P.E.	— Power Exhaust
PWRD	— Powered Convenience Outlet
pwrd fr/unit	— Powered From Unit
UNPWRD	— Unpowered Convenience Outlet

ELECTRIC HEAT - ELECTRICAL DATA
SINGLE STAGE COOLING SINGLE SPEED INDOOR FAN AND FACTORY-INSTALLED NON-FUSED DISCONNECT SWITCH

UNIT SIZE	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER ****00	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE***A00			
						Without C.O. or UNPWRD C.O.		With PWRD C.O.	
						Without P.E.	With P.E. (pwrd fr/unit)	Without P.E.	With P.E. (pwrd fr/unit)
50HCQA05	208/230-1-60	DD-STD	101A00	4.4	3.3/4.0	037A00	037A00	—	—
			103B00	8.7	6.5/8.0	040A00	040A00	—	—
			102A00,102A00	13.0	9.8/11.9	041A00	041A00	—	—
			103B00,103B00	17.4	13.1/16.0	041A00	041A00	—	—
			104B00,104B00	21.0	15.8/19.3	041A00	041A00	—	—
	208/230-3-60	DD-STD	102A00	6.5	4.9/6.0	037A00	037A00	037A00	037A00
			103B00	8.7	6.5/8.0	037A00	037A00	037A00	037A00
			105A00	16.0	12.0/14.7	038A00	038A00	038A00	038A00
			104B00,104B00	21.0	15.8/19.3	039A00	039A00	039A00	039A00
		MED	102A00	6.5	4.9/6.0	037A00	037A00	037A00	037A00
			103B00	8.7	6.5/8.0	037A00	037A00	037A00	037A00
			105A00	16.0	12.0/14.7	038A00	038A00	038A00	038A00
			104B00,104B00	21.0	15.8/19.3	039A00	039A00	039A00	039A00
		HIGH	102A00	6.5	4.9/6.0	037A00	037A00	037A00	037A00
			103B00	8.7	6.5/8.0	037A00	037A00	037A00	037A00
			105A00	16.0	12.0/14.7	038A00	038A00	038A00	038A00
			104B00,104B00	21.0	15.8/19.3	039A00	039A00	039A00	039A00
	460-3-60	DD-STD	106A00	6.0	5.5	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
			108A00,108A00	23.0	21.1	037A00	037A00	037A00	037A00
		MED	106A00	6.0	5.5	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
			108A00,108A00	23.0	21.1	037A00	037A00	037A00	037A00
		HIGH	106A00	6.0	5.5	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
			108A00,108A00	23.0	21.1	037A00	037A00	037A00	037A00
	575-3-60	DD-STD	297A00	10.0	9.2	—	—	—	—
			298A00	15.0	13.8	—	—	—	—
		MED	297A00	10.0	9.2	—	—	—	—
			298A00	15.0	13.8	—	—	—	—
		HIGH	297A00	10.0	9.2	—	—	—	—
			298A00	15.0	13.8	—	—	—	—

LEGEND

—	— No Single Point Kit Required
APP PWR	— 208 / 230V / 460V / 575V
C.O.	— Convenience Outlet
DD	— Electric Drive X13 5 Speed/Torque Motor
IFM	— Indoor Fan Motor
NOM PWR	— 240V / 480V / 600V
P.E.	— Power Exhaust
PWRD	— Powered Convenience Outlet
pwrd fr/unit	— Powered From Unit
UNPWRD	— Unpowered Convenience Outlet

Electrical data (cont)

ELECTRIC HEAT - ELECTRICAL DATA
SINGLE STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR

UNIT SIZE	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER ****00	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE***A00			
						Without C.O. or UNPWRD C.O.		With PWRD C.O.	
						Without P.E.	With P.E. (pwrd fr/unit)	Without P.E.	With P.E. (pwrd fr/unit)
50HCQA06	208/230-1-60	DD-STD	102A00	6.5	4.9/6.0	040A00	040A00	—	—
			103B00	8.7	6.5/8.0	040A00	040A00	—	—
			102A00,102A00	13.0	9.8/11.9	041A00	041A00	—	—
			103B00,103B00	17.4	13.1/16.0	041A00	041A00	—	—
			104B00,104B00	21.0	15.8/19.3	041A00	041A00	—	—
	208/230-3-60	DD-STD	102A00	6.5	4.9/6.0	—	037A00	037A00	037A00
			104B00	10.5	7.9/9.6	038A00	038A00	038A00	038A00
			105A00	16.0	12.0/14.7	038A00	038A00	038A00	038A00
			104B00,104B00	21.0	15.8/19.3	039A00	039A00	039A00	039A00
			104B00,105A00	26.5	19.9/24.3	039A00	039A00	039A00	039A00
		MED	102A00	6.5	4.9/6.0	—	038A00	037A00	037A00
			104B00	10.5	7.9/9.6	037A00	037A00	038A00	038A00
			105A00	16.0	12.0/14.7	038A00	038A00	038A00	038A00
			104B00,104B00	21.0	15.8/19.3	039A00	039A00	039A00	039A00
			104B00,105A00	26.5	19.9/24.3	039A00	039A00	039A00	039A00
		HIGH	102A00	6.5	4.9/6.0	—	037A00	037A00	037A00
			104B00	10.5	7.9/9.6	038A00	038A00	038A00	038A00
			105A00	16.0	12.0/14.7	038A00	038A00	038A00	038A00
			104B00,104B00	21.0	15.8/19.3	039A00	039A00	039A00	039A00
			104B00,105A00	26.5	19.9/24.3	039A00	039A00	039A00	039A00
	460-3-60	DD-STD	106A00	6.0	5.5	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
			108A00,108A00	23.0	21.1	037A00	037A00	037A00	037A00
			108A00,109A00	25.5	23.4	037A00	037A00	037A00	037A00
		MED	106A00	6.0	5.5	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
			108A00,108A00	23.0	21.1	037A00	037A00	037A00	037A00
			108A00,109A00	25.5	23.4	037A00	037A00	037A00	037A00
		HIGH	106A00	6.0	5.5	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
			108A00,108A00	23.0	21.1	037A00	037A00	037A00	037A00
			108A00,109A00	25.5	23.4	037A00	037A00	037A00	037A00
	575-3-60	DD-STD	298A00	15.0	13.8	—	—	—	—
			301A00	25.0	23.0	—	—	—	—
		MED	298A00	15.0	13.8	—	—	—	—
			301A00	25.0	23.0	—	—	—	—
		HIGH	298A00	15.0	13.8	—	—	—	—
			301A00	25.0	23.0	—	—	—	—

LEGEND

— — No Single Point Kit Required
APP PWR — 208 / 230V / 460V / 575V
C.O. — Convenience Outlet
DD — Electric Drive X13 5 Speed/Torque Motor
IFM — Indoor Fan Motor
NOM PWR — 240V / 480V / 600V
P.E. — Power Exhaust
PWRD — Powered Convenience Outlet
pwrd fr/unit — Powered From Unit
UNPWRD — Unpowered Convenience Outlet

ELECTRIC HEAT - ELECTRICAL DATA
SINGLE STAGE COOLING SINGLE SPEED INDOOR FAN AND FACTORY-INSTALLED NON-FUSED DISCONNECT SWITCH

UNIT SIZE	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER ****00	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE***A00			
						Without C.O. or UNPWRD C.O.		With PWRD C.O.	
						Without P.E.	With P.E. (pwrd fr/unit)	Without P.E.	With P.E. (pwrd fr/unit)
50HCQA06	208/230-1-60	DD-STD	102A00	6.5	4.9/6.0	040A00	040A00	—	—
			103B00	8.7	6.5/8.0	040A00	040A00	—	—
			102A00,102A00	13.0	9.8/11.9	041A00	041A00	—	—
			103B00,103B00	17.4	13.1/16.0	041A00	041A00	—	—
			104B00,104B00	21.0	15.8/19.3	041A00	041A00	—	—
	208/230-3-60	DD-STD	102A00	6.5	4.9/6.0	037A00	037A00	037A00	037A00
			104B00	10.5	7.9/9.6	038A00	038A00	038A00	038A00
			105A00	16.0	12.0/14.7	038A00	038A00	038A00	038A00
			104B00,104B00	21.0	15.8/19.3	039A00	039A00	039A00	039A00
			104B00,105A00	26.5	19.9/24.3	039A00	039A00	039A00	039A00
		MED	102A00	6.5	4.9/6.0	037A00	037A00	037A00	037A00
			104B00	10.5	7.9/9.6	038A00	038A00	038A00	038A00
			105A00	16.0	12.0/14.7	038A00	038A00	038A00	038A00
			104B00,104B00	21.0	15.8/19.3	039A00	039A00	039A00	039A00
			104B00,105A00	26.5	19.9/24.3	039A00	039A00	039A00	039A00
		HIGH	102A00	6.5	4.9/6.0	037A00	037A00	037A00	037A00
			104B00	10.5	7.9/9.6	038A00	038A00	038A00	038A00
			105A00	16.0	12.0/14.7	038A00	038A00	038A00	038A00
			104B00,104B00	21.0	15.8/19.3	039A00	039A00	039A00	039A00
			104B00,105A00	26.5	19.9/24.3	039A00	039A00	039A00	039A00
	460-3-60	DD-STD	106A00	6.0	5.5	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
			108A00,108A00	23.0	21.1	037A00	037A00	037A00	037A00
			108A00,109A00	25.5	23.4	037A00	037A00	037A00	037A00
		MED	106A00	6.0	5.5	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
			108A00,108A00	23.0	21.1	037A00	037A00	037A00	037A00
			108A00,109A00	25.5	23.4	037A00	037A00	037A00	037A00
		HIGH	106A00	6.0	5.5	—	—	—	—
			108A00	11.5	10.6	—	—	—	—
			109A00	14.0	12.9	—	—	—	—
			108A00,108A00	23.0	21.1	037A00	037A00	037A00	037A00
			108A00,109A00	25.5	23.4	037A00	037A00	037A00	037A00
	575-3-60	DD-STD	298A00	15.0	13.8	—	—	—	—
			301A00	25.0	23.0	037A00	037A00	037A00	037A00
		MED	298A00	15.0	13.8	—	—	—	—
			301A00	25.0	23.0	037A00	037A00	037A00	037A00
		HIGH	298A00	15.0	13.8	—	—	—	—
			301A00	25.0	23.0	037A00	037A00	037A00	037A00

LEGEND

—	— No Single Point Kit Required
APP PWR	— 208 / 230V / 460V / 575V
C.O.	— Convenience Outlet
DD	— Electric Drive X13 5 Speed/Torque Motor
IFM	— Indoor Fan Motor
NOM PWR	— 240V / 480V / 600V
P.E.	— Power Exhaust
PWRD	— Powered Convenience Outlet
pwrd fr/unit	— Powered From Unit
UNPWRD	— Unpowered Convenience Outlet

ELECTRIC HEAT - ELECTRICAL DATA
SINGLE STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR
WITH AND WITHOUT FACTORY-INSTALLED NON-FUSED DISCONNECT SWITCH

UNIT SIZE	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER ****00	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE***A00			
						Without C.O. or UNPWRD C.O.		With PWRD C.O.	
						Without P.E.	With P.E. (pwrd fr/unit)	Without P.E.	With P.E. (pwrd fr/unit)
50HCQA07	208/230-3-60	STD	264A00	6.5	4.9/6.0	042A00	042A00	042A00	045A00
			117A00	10.4	7.8/9.6	043A00	043A00	043A00	043A00
			110A00	16.0	12.0/14.7	043A00	043A00	043A00	043A00
			117A00,117A00	21.0	15.8/19.3	045A00	045A00	045A00	045A00
			110A00,117A00	26.5	19.9/24.3	045A00	045A00	045A00	045A00
		MED	264A00	6.5	4.9/6.0	042A00	042A00	045A00	045A00
			117A00	10.4	7.8/9.6	043A00	043A00	043A00	043A00
			110A00	16.0	12.0/14.7	043A00	043A00	043A00	043A00
			117A00,117A00	21.0	15.8/19.3	045A00	045A00	045A00	045A00
			110A00,117A00	26.5	19.9/24.3	045A00	045A00	045A00	045A00
		HIGH	264A00	6.5	4.9/6.0	042A00	045A00	045A00	045A00
			117A00	10.4	7.8/9.6	043A00	043A00	043A00	043A00
			110A00	16.0	12.0/14.7	043A00	043A00	043A00	043A00
			117A00,117A00	21.0	15.8/19.3	045A00	045A00	045A00	045A00
			110A00,117A00	26.5	19.9/24.3	045A00	045A00	045A00	045A00
	460-3-60	STD	265A00	6.0	5.5	042A00	042A00	042A00	042A00
			266A00	11.5	10.6	042A00	042A00	042A00	042A00
			267A00	14.0	12.9	042A00	042A00	042A00	042A00
			268A00	23.0	21.1	042A00	042A00	042A00	042A00
			269A00	25.5	23.4	042A00	042A00	042A00	042A00
		MED	265A00	6.0	5.5	042A00	042A00	042A00	042A00
			266A00	11.5	10.6	042A00	042A00	042A00	042A00
			267A00	14.0	12.9	042A00	042A00	042A00	042A00
			268A00	23.0	21.1	042A00	042A00	042A00	042A00
			269A00	25.5	23.4	042A00	042A00	042A00	048A00
		HIGH	265A00	6.0	5.5	042A00	042A00	042A00	042A00
			266A00	11.5	10.6	042A00	042A00	042A00	042A00
			267A00	14.0	12.9	042A00	042A00	042A00	042A00
			268A00	23.0	21.1	042A00	042A00	042A00	042A00
			269A00	25.5	23.4	042A00	048A00	048A00	048A00
	575-3-60	DD-STD	118A00	18.0	16.5	042A00	042A00	042A00	042A00
			299A00	28.0	25.7	042A00	042A00	042A00	042A00
		MED	118A00	18.0	16.5	042A00	042A00	042A00	042A00
			299A00	28.0	25.7	042A00	042A00	042A00	042A00
		HIGH	118A00	18.0	16.5	042A00	042A00	042A00	042A00
			299A00	28.0	25.7	042A00	042A00	042A00	042A00

LEGEND

—	— No Single Point Kit Required
APP PWR	— 208 / 230V / 460V / 575V
C.O.	— Convenience Outlet
DD	— Electric Drive X13 5 Speed/Torque Motor
IFM	— Indoor Fan Motor
NOM PWR	— 240V / 480V / 600V
P.E.	— Power Exhaust
PWRD	— Powered Convenience Outlet
pwrd fr/unit	— Powered From Unit
UNPWRD	— Unpowered Convenience Outlet

ELECTRIC HEAT - ELECTRICAL DATA
2-STAGE COOLING SINGLE SPEED INDOOR FAN MOTOR
WITH AND WITHOUT FACTORY-INSTALLED NON-FUSED DISCONNECT SWITCH

UNIT SIZE	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER ****00	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE***A00			
						Without C.O. or UNPWRD C.O.		With PWRD C.O.	
						Without P.E.	With P.E. (pwrd fr/unit)	Without P.E.	With P.E. (pwrd fr/unit)
50HCQD07	208/ 230-3-60	STD	264A00	6.5	4.9/6.0	042A00	042A00	042A00	045A00
			117A00	10.4	7.8/9.6	043A00	043A00	043A00	043A00
			110A00	16.0	12.0/14.7	043A00	043A00	043A00	043A00
			117A00,117A00	21.0	15.8/19.3	045A00	045A00	045A00	045A00
			110A00,117A00	26.5	19.9/24.3	045A00	045A00	045A00	045A00
		MED	264A00	6.5	4.9/6.0	042A00	042A00	042A00	045A00
			117A00	10.4	7.8/9.6	043A00	043A00	043A00	043A00
			110A00	16.0	12.0/14.7	043A00	043A00	043A00	043A00
			117A00,117A00	21.0	15.8/19.3	045A00	045A00	045A00	045A00
			110A00,117A00	26.5	19.9/24.3	045A00	045A00	045A00	045A00
		HIGH	264A00	6.5	4.9/6.0	042A00	045A00	045A00	045A00
			117A00	10.4	7.8/9.6	043A00	043A00	043A00	043A00
			110A00	16.0	12.0/14.7	043A00	043A00	043A00	043A00
			117A00,117A00	21.0	15.8/19.3	045A00	045A00	045A00	045A00
			110A00,117A00	26.5	19.9/24.3	045A00	045A00	045A00	045A00
	460-3-60	STD	265A00	6.0	5.5	042A00	042A00	042A00	042A00
			266A00	11.5	10.6	042A00	042A00	042A00	042A00
			267A00	14.0	12.9	042A00	042A00	042A00	042A00
			268A00	23.0	21.1	042A00	042A00	042A00	042A00
			269A00	25.5	23.4	042A00	042A00	042A00	042A00
		MED	265A00	6.0	5.5	042A00	042A00	042A00	042A00
			266A00	11.5	10.6	042A00	042A00	042A00	042A00
			267A00	14.0	12.9	042A00	042A00	042A00	042A00
			268A00	23.0	21.1	042A00	042A00	042A00	042A00
			269A00	25.5	23.4	042A00	042A00	042A00	042A00
		HIGH	265A00	6.0	5.5	042A00	042A00	042A00	042A00
			266A00	11.5	10.6	042A00	042A00	042A00	042A00
			267A00	14.0	12.9	042A00	042A00	042A00	042A00
			268A00	23.0	21.1	042A00	042A00	042A00	042A00
			269A00	25.5	23.4	042A00	042A00	048A00	048A00
	575-3-60	STD	118A00	18.0	16.5	042A00	042A00	042A00	042A00
			299A00	28.0	25.7	042A00	042A00	042A00	042A00
		MED	118A00	18.0	16.5	042A00	042A00	042A00	042A00
			299A00	28.0	25.7	042A00	042A00	042A00	042A00
		HIGH	118A00	18.0	16.5	042A00	042A00	042A00	042A00
			299A00	28.0	25.7	042A00	042A00	042A00	042A00

LEGEND

—	— No Single Point Kit Required
APP PWR	— 208 / 230V / 460V / 575V
C.O.	— Convenience Outlet
DD	— Electric Drive X13 5 Speed/Torque Motor
IFM	— Indoor Fan Motor
NOM PWR	— 240V / 480V / 600V
P.E.	— Power Exhaust
PWRD	— Powered Convenience Outlet
pwrd fr/unit	— Powered From Unit
UNPWRD	— Unpowered Convenience Outlet

Electrical data (cont)

ELECTRIC HEAT - ELECTRICAL DATA
2-STAGE COOLING 2-SPEED INDOOR FAN WITH AND WITHOUT FACTORY-INSTALLED NON-FUSED DISCONNECT SWITCH

UNIT SIZE	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER ****00	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE***A00			
						Without C.O. or UNPWRD C.O.		With PWRD C.O.	
						Without P.E.	With P.E. (pwrd fr/unit)	Without P.E.	With P.E. (pwrd fr/unit)
50HCQD07	208/ 230-3-60	STD	264A00	6.5	4.9/6.0	042A00	042A00	042A00	045A00
			117A00	10.4	7.8/9.6	043A00	043A00	043A00	043A00
			110A00	16.0	12.0/14.7	043A00	043A00	043A00	043A00
			117A00,117A00	21.0	15.8/19.3	045A00	045A00	045A00	045A00
			110A00,117A00	26.5	19.9/24.3	045A00	045A00	045A00	045A00
		MED	264A00	6.5	4.9/6.0	042A00	042A00	042A00	045A00
			117A00	10.4	7.8/9.6	043A00	043A00	043A00	043A00
			110A00	16.0	12.0/14.7	043A00	043A00	043A00	043A00
			117A00,117A00	21.0	15.8/19.3	045A00	045A00	045A00	045A00
			110A00,117A00	26.5	19.9/24.3	045A00	045A00	045A00	045A00
		HIGH	264A00	6.5	4.9/6.0	042A00	045A00	045A00	045A00
			117A00	10.4	7.8/9.6	043A00	043A00	043A00	043A00
			110A00	16.0	12.0/14.7	043A00	043A00	043A00	043A00
			117A00,117A00	21.0	15.8/19.3	045A00	045A00	045A00	045A00
			110A00,117A00	26.5	19.9/24.3	045A00	045A00	045A00	045A00
	460-3-60	STD	265A00	6.0	5.5	042A00	042A00	042A00	042A00
			266A00	11.5	10.6	042A00	042A00	042A00	042A00
			267A00	14.0	12.9	042A00	042A00	042A00	042A00
			268A00	23.0	21.1	042A00	042A00	042A00	042A00
			269A00	25.5	23.4	042A00	042A00	042A00	042A00
		MED	265A00	6.0	5.5	042A00	042A00	042A00	042A00
			266A00	11.5	10.6	042A00	042A00	042A00	042A00
			267A00	14.0	12.9	042A00	042A00	042A00	042A00
			268A00	23.0	21.1	042A00	042A00	042A00	042A00
			269A00	25.5	23.4	042A00	042A00	042A00	042A00
		HIGH	265A00	6.0	5.5	042A00	042A00	042A00	042A00
			266A00	11.5	10.6	042A00	042A00	042A00	042A00
			267A00	14.0	12.9	042A00	042A00	042A00	042A00
			268A00	23.0	21.1	042A00	042A00	042A00	042A00
			269A00	25.5	23.4	042A00	048A00	048A00	048A00
	575-3-60	STD	118A00	18.0	16.5	042A00	042A00	042A00	042A00
			299A00	28.0	25.7	042A00	042A00	042A00	042A00
		MED	118A00	18.0	16.5	042A00	042A00	042A00	042A00
			299A00	28.0	25.7	042A00	042A00	042A00	042A00
		HIGH	118A00	18.0	16.5	042A00	042A00	042A00	042A00
			299A00	28.0	25.7	042A00	042A00	042A00	042A00

LEGEND

—	— No Single Point Kit Required
APP PWR	— 208 / 230V / 460V / 575V
C.O.	— Convenience Outlet
DD	— Electric Drive X13 5 Speed/Torque Motor
IFM	— Indoor Fan Motor
NOM PWR	— 240V / 480V / 600V
P.E.	— Power Exhaust
PWRD	— Powered Convenience Outlet
pwrd fr/unit	— Powered From Unit
UNPWRD	— Unpowered Convenience Outlet

ELECTRIC HEAT - ELECTRICAL DATA
2-STAGE COOLING SINGLE SPEED INDOOR FAN WITH AND WITHOUT FACTORY-INSTALLED NON-FUSED DISCONNECT SWITCH

UNIT SIZE	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER ****00	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE***A00			
						Without C.O. or UNPWRD C.O.		With PWRD C.O.	
						Without P.E.	With P.E. (pwrd fr/unit)	Without P.E.	With P.E. (pwrd fr/unit)
50HCQD08	208/ 230-3-60	STD	117A00	10.4	7.8/9.6	049A00	049A00	049A00	049A00
			110A00	16.0	12.0/14.7	049A00	049A00	049A00	049A00
			111A00	24.8	18.6/22.8	051A00	051A00	051A00	051A00
			112A00	32.0	24.0/29.4	051A00	051A00	051A00	051A00
			112A00,117A00	42.4	31.8/38.9	053A00	053A00	053A00	053A00
		MED	117A00	10.4	7.8/9.6	049A00	049A00	049A00	049A00
			110A00	16.0	12.0/14.7	049A00	049A00	049A00	049A00
			111A00	24.8	18.6/22.8	051A00	051A00	051A00	051A00
			112A00	32.0	24.0/29.4	051A00	051A00	051A00	051A00
			112A00,117A00	42.4	31.8/38.9	053A00	053A00	053A00	053A00
		HIGH	117A00	10.4	7.8/9.6	049A00	049A00	049A00	049A00
			110A00	16.0	12.0/14.7	049A00	049A00	049A00	049A00
			111A00	24.8	18.6/22.8	051A00	051A00	051A00	051A00
			112A00	32.0	24.0/29.4	051A00	051A00	051A00	051A00
			112A00,117A00	42.4	31.8/38.9	053A00	053A00	053A00	053A00
	460-3-60	STD	116B00	13.9	12.8	047A00	047A00	047A00	047A00
			113B00	16.5	15.2	047A00	047A00	047A00	047A00
			114B00	27.8	25.5	047A00	050A00	050A00	050A00
			115B00	33.0	30.3	050A00	050A00	050A00	050A00
		MED	116B00	13.9	12.8	047A00	047A00	047A00	047A00
			113B00	16.5	15.2	047A00	047A00	047A00	047A00
			114B00	27.8	25.5	050A00	050A00	050A00	050A00
			115B00	33.0	30.3	050A00	050A00	050A00	050A00
		HIGH	116B00	13.9	12.8	047A00	047A00	047A00	047A00
			113B00	16.5	15.2	047A00	047A00	047A00	047A00
			114B00	27.8	25.5	050A00	050A00	050A00	050A00
			115B00	33.0	30.3	050A00	050A00	050A00	050A00
	575-3-60	STD	118A00	18.0	16.5	047A00	047A00	047A00	047A00
			119A00	36.0	33.1	050A00	050A00	050A00	050A00
		MED	118A00	18.0	16.5	047A00	047A00	047A00	047A00
			119A00	36.0	33.1	050A00	050A00	050A00	050A00
		HIGH	118A00	18.0	16.5	047A00	047A00	047A00	047A00
			119A00	36.0	33.1	050A00	050A00	050A00	050A00

LEGEND

—	— No Single Point Kit Required
APP PWR	— 208 / 230V / 460V / 575V
C.O.	— Convenience Outlet
DD	— Electric Drive X13 5 Speed/Torque Motor
IFM	— Indoor Fan Motor
NOM PWR	— 240V / 480V / 600V
P.E.	— Power Exhaust
PWRD	— Powered Convenience Outlet
pwrd fr/unit	— Powered From Unit
UNPWRD	— Unpowered Convenience Outlet

ELECTRIC HEAT - ELECTRICAL DATA
2-STAGE COOLING 2-SPEED INDOOR FAN WITH AND WITHOUT FACTORY-INSTALLED NON-FUSED DISCONNECT SWITCH

UNIT SIZE	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER ****00	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE***A00			
						Without C.O. or UNPWRD C.O.		With PWRD C.O.	
						Without P.E.	With P.E. (pwrd fr/unit)	Without P.E.	With P.E. (pwrd fr/unit)
50HCQD08	208/ 230-3-60	STD	117A00	10.4	7.8/9.6	049A00	049A00	049A00	049A00
			110A00	16.0	12.0/14.7	049A00	049A00	049A00	049A00
			111A00	24.8	18.6/22.8	051A00	051A00	051A00	051A00
			112A00	32.0	24.0/29.4	051A00	051A00	051A00	051A00
			112A00,117A00	42.4	31.8/38.9	053A00	053A00	053A00	053A00
		MED	117A00	10.4	7.8/9.6	049A00	049A00	049A00	049A00
			110A00	16.0	12.0/14.7	049A00	049A00	049A00	049A00
			111A00	24.8	18.6/22.8	051A00	051A00	051A00	051A00
			112A00	32.0	24.0/29.4	051A00	051A00	051A00	051A00
			112A00,117A00	42.4	31.8/38.9	053A00	053A00	053A00	053A00
		HIGH	117A00	10.4	7.8/9.6	049A00	049A00	049A00	049A00
			110A00	16.0	12.0/14.7	049A00	049A00	049A00	049A00
			111A00	24.8	18.6/22.8	051A00	051A00	051A00	051A00
			112A00	32.0	24.0/29.4	051A00	051A00	051A00	051A00
			112A00,117A00	42.4	31.8/38.9	053A00	053A00	053A00	053A00
	460-3-60	STD	116B00	13.9	12.8	047A00	047A00	047A00	047A00
			113B00	16.5	15.2	047A00	047A00	047A00	047A00
			114B00	27.8	25.5	047A00	050A00	050A00	050A00
			115B00	33.0	30.3	050A00	050A00	050A00	050A00
		MED	116B00	13.9	12.8	047A00	047A00	047A00	047A00
			113B00	16.5	15.2	047A00	047A00	047A00	047A00
			114B00	27.8	25.5	050A00	050A00	050A00	050A00
			115B00	33.0	30.3	050A00	050A00	050A00	050A00
		HIGH	116B00	13.9	12.8	047A00	047A00	047A00	047A00
			113B00	16.5	15.2	047A00	047A00	047A00	047A00
			114B00	27.8	25.5	050A00	050A00	050A00	050A00
			115B00	33.0	30.3	050A00	050A00	050A00	050A00
	575-3-60	STD	118A00	18.0	16.5	047A00	047A00	047A00	047A00
			119A00	36.0	33.1	050A00	050A00	050A00	050A00
		MED	118A00	18.0	16.5	047A00	047A00	047A00	047A00
			119A00	36.0	33.1	050A00	050A00	050A00	050A00
		HIGH	118A00	18.0	16.5	047A00	047A00	047A00	047A00
			119A00	36.0	33.1	050A00	050A00	050A00	050A00

LEGEND

—	— No Single Point Kit Required
APP PWR	— 208 / 230V / 460V / 575V
C.O.	— Convenience Outlet
DD	— Electric Drive X13 5 Speed/Torque Motor
IFM	— Indoor Fan Motor
NOM PWR	— 240V / 480V / 600V
P.E.	— Power Exhaust
PWRD	— Powered Convenience Outlet
pwrd fr/unit	— Powered From Unit
UNPWRD	— Unpowered Convenience Outlet

ELECTRIC HEAT - ELECTRICAL DATA
2-STAGE COOLING SINGLE SPEED INDOOR FAN WITH AND WITHOUT FACTORY-INSTALLED NON-FUSED DISCONNECT SWITCH

UNIT SIZE	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER ****00	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE***A00			
						Without C.O. or UNPWRD C.O.		With PWRD C.O.	
						Without P.E.	With P.E. (pwrd fr/unit)	Without P.E.	With P.E. (pwrd fr/unit)
50HCQD09	208/ 230-3-60	STD	117A00	10.4	7.8/9.6	049A00	049A00	049A00	049A00
			110A00	16.0	12.0/14.7	049A00	049A00	049A00	049A00
			111A00	24.8	18.6/22.8	051A00	051A00	051A00	051A00
			112A00	32.0	24.0/29.4	051A00	051A00	051A00	051A00
			112A00,117A00	42.4	31.8/38.9	053A00	053A00	053A00	053A00
		MED	117A00	10.4	7.8/9.6	049A00	049A00	049A00	051A00
			110A00	16.0	12.0/14.7	049A00	049A00	049A00	051A00
			111A00	24.8	18.6/22.8	051A00	051A00	051A00	053A00
			112A00	32.0	24.0/29.4	051A00	051A00	051A00	053A00
			112A00,117A00	42.4	31.8/38.9	053A00	053A00	053A00	054A00
		HIGH	117A00	10.4	7.8/9.6	049A00	049A00	049A00	051A00
			110A00	16.0	12.0/14.7	049A00	049A00	049A00	051A00
			111A00	24.8	18.6/22.8	051A00	051A00	051A00	053A00
			112A00	32.0	24.0/29.4	051A00	051A00	051A00	053A00
			112A00,117A00	42.4	31.8/38.9	053A00	053A00	053A00	054A00
	460-3-60	STD	116B00	13.9	12.8	047A00	047A00	047A00	047A00
			113B00	16.5	15.2	047A00	047A00	047A00	047A00
			114B00	27.8	25.5	050A00	050A00	050A00	050A00
			115B00	33.0	30.3	050A00	050A00	050A00	050A00
		MED	116B00	13.9	12.8	047A00	047A00	047A00	047A00
			113B00	16.5	15.2	047A00	047A00	047A00	047A00
			114B00	27.8	25.5	050A00	050A00	050A00	050A00
			115B00	33.0	30.3	050A00	050A00	050A00	050A00
		HIGH	116B00	13.9	12.8	047A00	047A00	047A00	047A00
			113B00	16.5	15.2	047A00	047A00	047A00	047A00
			114B00	27.8	25.5	050A00	050A00	050A00	050A00
			115B00	33.0	30.3	050A00	050A00	050A00	050A00
	575-3-60	STD	118A00	18.0	16.5	047A00	047A00	047A00	047A00
			119A00	36.0	33.1	050A00	050A00	050A00	050A00
		MED	118A00	18.0	16.5	047A00	047A00	047A00	047A00
			119A00	36.0	33.1	050A00	050A00	050A00	050A00
		HIGH	118A00	18.0	16.5	047A00	047A00	047A00	047A00
			119A00	36.0	33.1	050A00	050A00	050A00	050A00

LEGEND

—	— No Single Point Kit Required
APP PWR	— 208 / 230V / 460V / 575V
C.O.	— Convenience Outlet
DD	— Electric Drive X13 5 Speed/Torque Motor
IFM	— Indoor Fan Motor
NOM PWR	— 240V / 480V / 600V
P.E.	— Power Exhaust
PWRD	— Powered Convenience Outlet
pwrd fr/unit	— Powered From Unit
UNPWRD	— Unpowered Convenience Outlet

ELECTRIC HEAT - ELECTRICAL DATA
2-STAGE COOLING 2-SPEED INDOOR FAN WITH AND WITHOUT FACTORY-INSTALLED NON-FUSED DISCONNECT SWITCH

UNIT SIZE	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER ****00	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE***A00			
						Without C.O. or UNPWRD C.O.		With PWRD C.O.	
						Without P.E.	With P.E. (pwrd fr/unit)	Without P.E.	With P.E. (pwrd fr/unit)
50HCQD09	208/ 230-3-60	STD	117A00	10.4	7.8/9.6	049A00	049A00	049A00	049A00
			110A00	16.0	12.0/14.7	049A00	049A00	049A00	049A00
			111A00	24.8	18.6/22.8	051A00	051A00	051A00	051A00
			112A00	32.0	24.0/29.4	051A00	051A00	051A00	051A00
			112A00,117A00	42.4	31.8/38.9	053A00	053A00	053A00	053A00
		MED	117A00	10.4	7.8/9.6	049A00	049A00	049A00	051A00
			110A00	16.0	12.0/14.7	049A00	049A00	049A00	051A00
			111A00	24.8	18.6/22.8	051A00	051A00	051A00	053A00
			112A00	32.0	24.0/29.4	051A00	051A00	051A00	053A00
			112A00,117A00	42.4	31.8/38.9	053A00	053A00	053A00	054A00
		HIGH	117A00	10.4	7.8/9.6	049A00	049A00	049A00	051A00
			110A00	16.0	12.0/14.7	049A00	049A00	049A00	051A00
			111A00	24.8	18.6/22.8	051A00	051A00	051A00	053A00
			112A00	32.0	24.0/29.4	051A00	051A00	051A00	053A00
			112A00,117A00	42.4	31.8/38.9	053A00	053A00	053A00	054A00
	460-3-60	STD	116B00	13.9	12.8	047A00	047A00	047A00	047A00
			113B00	16.5	15.2	047A00	047A00	047A00	047A00
			114B00	27.8	25.5	050A00	050A00	050A00	050A00
			115B00	33.0	30.3	050A00	050A00	050A00	050A00
		MED	116B00	13.9	12.8	047A00	047A00	047A00	047A00
			113B00	16.5	15.2	047A00	047A00	047A00	047A00
			114B00	27.8	25.5	050A00	050A00	050A00	050A00
			115B00	33.0	30.3	050A00	050A00	050A00	050A00
		HIGH	116B00	13.9	12.8	047A00	047A00	047A00	047A00
			113B00	16.5	15.2	047A00	047A00	047A00	047A00
			114B00	27.8	25.5	050A00	050A00	050A00	050A00
			115B00	33.0	30.3	050A00	050A00	050A00	050A00
	575-3-60	STD	118A00	18.0	16.5	047A00	047A00	047A00	047A00
			119A00	36.0	33.1	050A00	050A00	050A00	050A00
		MED	118A00	18.0	16.5	047A00	047A00	047A00	047A00
			119A00	36.0	33.1	050A00	050A00	050A00	050A00
		HIGH	118A00	18.0	16.5	047A00	047A00	047A00	047A00
			119A00	36.0	33.1	050A00	050A00	050A00	050A00

LEGEND

—	— No Single Point Kit Required
APP PWR	— 208 / 230V / 460V / 575V
C.O.	— Convenience Outlet
DD	— Electric Drive X13 5 Speed/Torque Motor
IFM	— Indoor Fan Motor
NOM PWR	— 240V / 480V / 600V
P.E.	— Power Exhaust
PWRD	— Powered Convenience Outlet
pwrd fr/unit	— Powered From Unit
UNPWRD	— Unpowered Convenience Outlet

ELECTRIC HEAT - ELECTRICAL DATA
2-STAGE COOLING SINGLE SPEED INDOOR FAN WITH AND WITHOUT FACTORY-INSTALLED NON-FUSED DISCONNECT SWITCH

UNIT SIZE	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER ****00	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE***A00			
						Without C.O. or UNPWRD C.O.		With PWRD C.O.	
						Without P.E.	With P.E. (pwrd fr/unit)	Without P.E.	With P.E. (pwrd fr/unit)
50HCQD12	208/ 230-3-60	STD	288A00	10.0	7.5/9.2	049A00	049A00	049A00	049A00
			291A00	16.5	12.4/15.2	049A00	049A00	049A00	049A00
			294A00	33.5	25.2/30.8	051A00	051A00	051A00	051A00
			288A00,294A00	43.5	32.7/40.0	053A00	053A00	053A00	053A00
			291A00,294A00	50.0	37.6/45.9	053A00	053A00	053A00	053A00
		MED	288A00	10.0	7.5/9.2	049A00	049A00	049A00	051A00
			291A00	16.5	12.4/15.2	049A00	049A00	049A00	051A00
			294A00	33.5	25.2/30.8	051A00	051A00	051A00	053A00
			288A00,294A00	43.5	32.7/40.0	053A00	053A00	053A00	054A00
			291A00,294A00	50.0	37.6/45.9	053A00	053A00	053A00	054A00
		HIGH	288A00	10.0	7.5/9.2	051A00	051A00	051A00	051A00
			291A00	16.5	12.4/15.2	051A00	051A00	051A00	051A00
			294A00	33.5	25.2/30.8	053A00	053A00	053A00	053A00
			288A00,294A00	43.5	32.7/40.0	054A00	054A00	054A00	054A00
			291A00,294A00	50.0	37.6/45.9	054A00	054A00	054A00	054A00
	460-3-60	STD	289A00	10.0	9.2	047A00	047A00	047A00	047A00
			292A00	16.5	15.2	047A00	047A00	047A00	047A00
			295A00	33.5	30.8	050A00	050A00	050A00	050A00
			289A00,295A00	43.5	40.0	052A00	052A00	052A00	052A00
			292A00,295A00	50.0	45.9	052A00	052A00	052A00	052A00
		MED	289A00	10.0	9.2	047A00	047A00	047A00	047A00
			292A00	16.5	15.2	047A00	047A00	047A00	047A00
			295A00	33.5	30.8	050A00	050A00	050A00	050A00
			289A00,295A00	43.5	40.0	052A00	052A00	052A00	052A00
			292A00,295A00	50.0	45.9	052A00	052A00	052A00	052A00
		HIGH	289A00	10.0	9.2	047A00	047A00	047A00	047A00
			292A00	16.5	15.2	047A00	047A00	047A00	047A00
			295A00	33.5	30.8	050A00	050A00	050A00	050A00
			289A00,295A00	43.5	40.0	052A00	052A00	052A00	052A00
			292A00,295A00	50.0	45.9	052A00	052A00	052A00	052A00
	575-3-60	STD	290A00	10.0	9.2	047A00	047A00	047A00	047A00
			293A00	16.5	15.2	047A00	047A00	047A00	047A00
			296A00	33.5	30.8	047A00	050A00	047A00	050A00
			290A00,296A00	43.5	40.0	052A00	052A00	052A00	052A00
			293A00,296A00	50.0	45.9	052A00	052A00	052A00	052A00
		MED	290A00	10.0	9.2	047A00	047A00	047A00	047A00
			293A00	16.5	15.2	047A00	047A00	047A00	047A00
			296A00	33.5	30.8	047A00	050A00	047A00	050A00
			290A00,296A00	43.5	40.0	052A00	052A00	052A00	052A00
			293A00,296A00	50.0	45.9	052A00	052A00	052A00	052A00
		HIGH	290A00	10.0	9.2	047A00	047A00	047A00	047A00
			293A00	16.5	15.2	047A00	047A00	047A00	047A00
			296A00	33.5	30.8	050A00	050A00	050A00	050A00
			290A00,296A00	43.5	40.0	052A00	052A00	052A00	052A00
			293A00,296A00	50.0	45.9	052A00	052A00	052A00	052A00

LEGEND

—	— No Single Point Kit Required
APP PWR	— 208 / 230V / 460V / 575V
C.O.	— Convenience Outlet
DD	— Electric Drive X13 5 Speed/Torque Motor
IFM	— Indoor Fan Motor
NOM PWR	— 240V / 480V / 600V
P.E.	— Power Exhaust
PWRD	— Powered Convenience Outlet
pwrd fr/unit	— Powered From Unit
UNPWRD	— Unpowered Convenience Outlet

ELECTRIC HEAT - ELECTRICAL DATA
2-STAGE COOLING 2-SPEED INDOOR FAN WITH AND WITHOUT FACTORY-INSTALLED NON-FUSED DISCONNECT SWITCH

UNIT SIZE	NOM. V-Ph-Hz	IFM TYPE	ELECTRIC HEATER PART NUMBER CRHEATER ****00	NOM PWR (kW)	APP PWR (kW)	SINGLE POINT KIT PART NUMBER CRSINGLE***A00			
						Without C.O. or UNPWRD C.O.		With PWRD C.O.	
						Without P.E.	With P.E. (pwrd fr/unit)	Without P.E.	With P.E. (pwrd fr/unit)
50HCQD12	208/230-3-60	STD	288A00	10.0	7.5/9.2	049A00	049A00	049A00	049A00
			291A00	16.5	12.4/15.2	049A00	049A00	049A00	049A00
			294A00	33.5	25.2/30.8	051A00	051A00	051A00	051A00
			288A00,294A00	43.5	32.7/40.0	053A00	053A00	053A00	053A00
			291A00,294A00	50.0	37.6/45.9	053A00	053A00	053A00	053A00
		MED	288A00	10.0	7.5/9.2	049A00	049A00	049A00	051A00
			291A00	16.5	12.4/15.2	049A00	049A00	049A00	051A00
			294A00	33.5	25.2/30.8	051A00	051A00	051A00	053A00
			288A00,294A00	43.5	32.7/40.0	053A00	053A00	053A00	054A00
			291A00,294A00	50.0	37.6/45.9	053A00	053A00	053A00	054A00
		HIGH	288A00	10.0	7.5/9.2	051A00	051A00	051A00	051A00
			291A00	16.5	12.4/15.2	051A00	051A00	051A00	051A00
			294A00	33.5	25.2/30.8	053A00	053A00	053A00	053A00
			288A00,294A00	43.5	32.7/40.0	054A00	054A00	054A00	054A00
			291A00,294A00	50.0	37.6/45.9	054A00	054A00	054A00	054A00
	460-3-60	STD	289A00	10.0	9.2	047A00	047A00	047A00	047A00
			292A00	16.5	15.2	047A00	047A00	047A00	047A00
			295A00	33.5	30.8	050A00	050A00	050A00	050A00
			289A00,295A00	43.5	40.0	052A00	052A00	052A00	052A00
			292A00,295A00	50.0	45.9	052A00	052A00	052A00	052A00
		MED	289A00	10.0	9.2	047A00	047A00	047A00	047A00
			292A00	16.5	15.2	047A00	047A00	047A00	047A00
			295A00	33.5	30.8	050A00	050A00	050A00	050A00
			289A00,295A00	43.5	40.0	052A00	052A00	052A00	052A00
			292A00,295A00	50.0	45.9	052A00	052A00	052A00	052A00
		HIGH	289A00	10.0	9.2	047A00	047A00	047A00	047A00
			292A00	16.5	15.2	047A00	047A00	047A00	047A00
			295A00	33.5	30.8	050A00	050A00	050A00	050A00
			289A00,295A00	43.5	40.0	052A00	052A00	052A00	052A00
			292A00,295A00	50.0	45.9	052A00	052A00	052A00	052A00
	575-3-60	STD	290A00	10.0	9.2	047A00	047A00	047A00	047A00
			293A00	16.5	15.2	047A00	047A00	047A00	047A00
			296A00	33.5	30.8	047A00	050A00	050A00	050A00
			290A00,296A00	43.5	40.0	052A00	052A00	052A00	052A00
			293A00,296A00	50.0	45.9	052A00	052A00	052A00	052A00
		MED	290A00	10.0	9.2	047A00	047A00	047A00	047A00
			293A00	16.5	15.2	047A00	047A00	047A00	047A00
			296A00	33.5	30.8	047A00	050A00	050A00	050A00
			290A00,296A00	43.5	40.0	052A00	052A00	052A00	052A00
			293A00,296A00	50.0	45.9	052A00	052A00	052A00	052A00
		HIGH	290A00	10.0	9.2	047A00	047A00	047A00	047A00
			293A00	16.5	15.2	047A00	047A00	047A00	047A00
			296A00	33.5	30.8	050A00	050A00	050A00	050A00
			290A00,296A00	43.5	40.0	052A00	052A00	052A00	052A00
			293A00,296A00	50.0	45.9	052A00	052A00	052A00	052A00

LEGEND

—	— No Single Point Kit Required
APP PWR	— 208 / 230V / 460V / 575V
C.O.	— Convenience Outlet
DD	— Electric Drive X13 5 Speed/Torque Motor
IFM	— Indoor Fan Motor
NOM PWR	— 240V / 480V / 600V
P.E.	— Power Exhaust
PWRD	— Powered Convenience Outlet
pwrd fr/unit	— Powered From Unit
UNPWRD	— Unpowered Convenience Outlet

50HCQA04 — SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

V-Ph-Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-1-60	187	253	16.6	79	190	1.0	DD-STD	78%	7.4
230-1-60	187	253	16.6	79	190	1.0	DD-STD	78%	7.4
208-3-60	187	253	10.4	73	190	1.0	DD-STD	78%	7.4
							MED	87%	5.2
							HIGH	89%	8.4
230-3-60	187	253	10.4	73	190	1.0	DD-STD	78%	7.4
							MED	87%	4.9
							HIGH	89%	8.3
460-3-60	414	506	5.8	38	190	0.5	DD-STD	78%	4.0
							MED	87%	2.5
							HIGH	89%	4.2
575-3-60	518	633	3.8	37	190	0.5	DD-STD	78%	4.0
							MED	72%	1.6
							HIGH	78%	2.0

50HCQA05 — SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

V-Ph-Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-1-60	187	253	19.8	109	325	1.4	DD-STD	78%	7.4
230-1-60	187	253	19.8	109	325	1.4	DD-STD	78%	7.4
208-3-60	187	253	13.1	83	325	1.4	DD-STD	78%	7.4
							MED	87%	5.2
							HIGH	89%	8.4
230-3-60	187	253	13.1	83	325	1.4	DD-STD	78%	7.4
							MED	87%	4.9
							HIGH	89%	8.3
460-3-60	414	506	6.1	41	325	0.8	DD-STD	78%	4.0
							MED	87%	2.5
							HIGH	89%	4.2
575-3-60	518	633	4.4	33	325	0.8	DD-STD	78%	4.0
							MED	72%	1.6
							HIGH	78%	2.0

50HCQA06 — SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

V-Ph-Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-1-60	187	253	25.0	134	325	1.4	DD-STD	78%	7.4
230-1-60	187	253	25.0	134	325	1.4	DD-STD	78%	7.4
208-3-60	187	253	15.9	110	325	1.4	DD-STD	78%	7.4
							MED	89%	8.4
							HIGH	89%	8.4
230-3-60	187	253	15.9	110	325	1.4	DD-STD	78%	7.4
							MED	89%	8.3
							HIGH	89%	8.3
460-3-60	414	506	7.0	52	325	0.8	DD-STD	78%	4.0
							MED	89%	4.2
							HIGH	89%	4.2
575-3-60	518	633	5.1	40	325	0.8	DD-STD	78%	4.0
							MED	78%	2.0
							HIGH	77%	2.8

LEGEND

EFF — Efficiency
FLA — Full Load Amps
IFM — Indoor Fan Motor
LRA — Locked Rotor Amps
RLA — Rated Load Amps

Electrical data (cont)

50HCQA07 — SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

V-Ph-Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	19.6	136	325	1.5	STD	75%	5.2
							MED	79%	7.5
							HIGH	83%	13.6
230-3-60	187	253	19.6	136	325	1.5	STD	75%	5.2
							MED	79%	7.5
							HIGH	83%	12.7
460-3-60	414	506	8.2	66	325	0.8	STD	75%	2.6
							MED	79%	3.4
							HIGH	83%	6.4
575-3-60	518	633	6.6	55	325	0.6	STD	72%	1.6
							MED	77%	2.8
							HIGH	81%	5.6

50HCQD07 — 2-STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

V-Ph-Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	18.9	136	325	1.5	STD	75%	5.2
							MED	79%	7.5
							HIGH	83%	13.6
230-3-60	187	253	18.9	136	325	1.5	STD	75%	5.2
							MED	79%	7.5
							HIGH	83%	12.7
460-3-60	414	506	9.7	66	325	0.8	STD	75%	2.6
							MED	79%	3.4
							HIGH	83%	6.4
575-3-60	518	633	7.7	55	325	0.6	STD	72%	1.6
							MED	77%	2.8
							HIGH	81%	5.6

50HCQD07 — 2-STAGE COOLING WITH 2-SPEED INDOOR FAN MOTOR

V-Ph-Hz	VOLTAGE RANGE		COMP (ea)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	18.9	136	325	1.5	STD	84%	5.8
							MED	85%	8.6
							HIGH	84%	13.6
230-3-60	187	253	18.9	136	325	1.5	STD	84%	5.6
							MED	85%	7.8
							HIGH	84%	12.7
460-3-60	414	506	9.7	66	325	0.8	STD	79%	2.9
							MED	85%	3.8
							HIGH	84%	6.4
575-3-60	518	633	7.7	55	325	0.6	STD	81%	2.8
							MED	84%	4.5
							HIGH	83%	6.2

LEGEND

EFF — Efficiency
FLA — Full Load Amps
IFM — Indoor Fan Motor
LRA — Locked Rotor Amps
RLA — Rated Load Amps

50HCQD08 — 2-STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

V-Ph-Hz	VOLTAGE RANGE		COMP (Cir 1)		COMP (Cir 2)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	13.1	83	13.1	83	325	1.5	STD	75%	5.2
									MED	87%	6.9
									HIGH	87%	10.6
230-3-60	187	253	13.1	83	13.1	83	325	1.5	STD	75%	5.2
									MED	87%	6.7
									HIGH	87%	10.6
460-3-60	414	506	6.1	41	6.1	41	325	0.8	STD	75%	2.6
									MED	87%	3.4
									HIGH	87%	5.3
575-3-60	518	633	4.4	33	4.4	33	325	0.6	STD	72%	1.6
									MED	78%	2.0
									HIGH	77%	2.8

50HCQD08 — 2-STAGE COOLING WITH 2-SPEED INDOOR FAN MOTOR

V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	13.1	83	13.1	83	325	1.5	STD	84%	5.8
									MED	77%	7.1
									HIGH	82%	10.8
230-3-60	187	253	13.1	83	13.1	83	325	1.5	STD	84%	5.6
									MED	77%	6.8
									HIGH	82%	9.8
460-3-60	414	506	6.1	41	6.1	41	325	0.8	STD	79%	2.9
									MED	77%	3.4
									HIGH	82%	4.9
575-3-60	518	633	4.4	33	4.4	33	325	0.6	STD	81%	2.8
									MED	80%	3.5
									HIGH	84%	4.5

LEGEND

EFF — Efficiency
FLA — Full Load Amps
IFM — Indoor Fan Motor
LRA — Locked Rotor Amps
RLA — Rated Load Amps

Electrical data (cont)

50HCQD09 — 2-STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

V-Ph-Hz	VOLTAGE RANGE		COMP (Cir 1)		COMP (Cir 2)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	16.0	91	13.7	83	1070	6.2	STD	69%	5.2
									MED	89%	8.4
									HIGH	87%	10.6
230-3-60	187	253	16.0	91	13.7	83	1070	6.2	STD	69%	5.2
									MED	89%	8.3
									HIGH	87%	10.6
460-3-60	414	506	7.0	46	6.2	41	1070	3.1	STD	69%	2.6
									MED	89%	4.2
									HIGH	87%	5.3
575-3-60	518	633	5.6	37	4.8	33	1070	2.5	STD	78%	2.0
									MED	77%	2.8
									HIGH	77%	2.8

50HCQD09 — 2-STAGE COOLING WITH 2-SPEED INDOOR FAN MOTOR

V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	16.0	91	13.7	83	1070	6.2	STD	77%	7.1
									MED	85%	8.6
									HIGH	82%	10.8
230-3-60	187	253	16.0	91	13.7	83	1070	6.2	STD	77%	6.8
									MED	85%	7.8
									HIGH	82%	9.8
460-3-60	414	506	7.0	46	6.2	41	1070	3.1	STD	77%	3.4
									MED	85%	3.8
									HIGH	82%	4.9
575-3-60	518	633	5.6	37	4.8	33	1070	2.5	STD	80%	3.5
									MED	84%	4.5
									HIGH	84%	4.5

LEGEND

EFF — Efficiency
FLA — Full Load Amps
IFM — Indoor Fan Motor
LRA — Locked Rotor Amps
RLA — Rated Load Amps

50HCQD12 — 2-STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

V-Ph-Hz	VOLTAGE RANGE		COMP (Cir 1)		COMP (Cir 2)		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	15.6	110	15.9	110	280	1.5	STD	69%	5.20
									MED	89%	8.40
									HIGH	90%	20.40
230-3-60	187	253	15.6	110	15.9	110	280	1.5	STD	69%	5.20
									MED	89%	8.30
									HIGH	90%	20.46
460-3-60	414	506	7.7	52	7.7	52	280	0.8	STD	69%	2.60
									MED	89%	4.20
									HIGH	90%	10.20
575-3-60	518	633	5.8	39	5.7	39	280	0.7	STD	78%	2.00
									MED	77%	2.80
									HIGH	94%	9.00

50HCQD12 — 2-STAGE COOLING WITH 2-SPEED INDOOR FAN MOTOR

V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		IFM		
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	TYPE	EFF at Full Load	FLA
208-3-60	187	253	15.6	110	15.9	110	280	1.5	STD	77%	7.1
									MED	85%	8.6
									HIGH	90%	20.4
230-3-60	187	253	15.6	110	15.9	110	280	1.5	STD	77%	6.8
									MED	85%	7.8
									HIGH	90%	20.4
460-3-60	414	506	7.7	52	7.7	52	280	0.8	STD	77%	3.4
									MED	85%	3.8
									HIGH	90%	10.2
575-3-60	518	633	5.8	39	5.7	39	280	0.7	STD	80%	3.5
									MED	84%	4.5
									HIGH	94%	9.0

LEGEND

EFF — Efficiency
FLA — Full Load Amps
IFM — Indoor Fan Motor
LRA — Locked Rotor Amps
RLA — Rated Load Amps

Electrical data (cont)

LEGEND AND NOTES

Applicable for Electrical Data Tables on pages 81-104

LEGEND

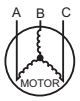
BRKR	— Circuit Breaker
C.O.	— Convenience Outlet
DISC	— Disconnect
EFF	— Efficiency
FLA	— Full Load Amps
LRA	— Locked Rotor Amps
MCA	— Minimum Circuit Amps
P.E.	— Power Exhaust
Pwrd fr/unit	— Powered From Unit
PWRD C.O.	— Powered Convenience Outlet
UNPWR C.O.	— Unpowered Convenience Outlet

NOTES:

1. In compliance with NEC requirements for multi-motor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be fuse or HACR breaker. Canadian units may be fuse or circuit breaker.
2. For 208/230 v units, where one value is shown it is the same for either 208 or 230 volts.
3. Unbalanced 3-Phase Supply Voltage
   Never operate 105a motor where a phase imbalance in supply voltage is greater than 2%. Use the following formula to determine the percentage of voltage imbalance.

$$\text{\% Voltage Imbalance} = 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

Example: Supply voltage is 230-3-60



AB = 224 v
BC = 231 v
AC = 226 v

$$\text{Average Voltage} = \frac{(224 + 231 + 226)}{3} = \frac{681}{3} = 227$$

Determine maximum deviation from average voltage.

(AB) 227-224 = 3 v

(BC) 231-227 = 4 v

(AC) 227-226 = 1 v

Maximum deviation is 4 v.

Determine percent of voltage imbalance.

$$\text{\% Voltage Imbalance} = 100x \frac{4}{227} = 1.78\%$$

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

IMPORTANT: If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.

50HCQA04 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-1-60	DD-STD	NONE	—	—	30	45	29	88	32	45	31	90
		101A	3.3/4.4	15.9/18.3	49/52	60/60	47/50	104/106	51/54	60/60	49/52	106/108
		102A	4.9/6.5	23.5/27.1	59/63	60/70	56/60	112/115	61/65	70/70	58/62	114/117
		103B	6.5/8.7	31.4/36.3	69/75	70/80	65/70	119/124	71/77	80/80	67/73	121/126
		104B	7.9/10.5	37.9/43.8	77/84	80/90	72/79	126/132	79/86	80/90	75/81	128/134
		102A+102A	9.8/13.0	46.9/54.2	88/97	90/100	83/91	182/196	90/99	90/100	85/93	184/198
208/230-3-60	DD-STD	NONE	—	—	22	30	22	82	24	30	24	84
		101A	3.3/4.4	9.2/10.6	33/35	40/40	32/34	91/93	35/37	40/40	34/36	93/95
		102A	4.9/6.5	13.6/15.6	39/41	45/45	37/40	96/98	41/43	45/45	39/42	98/100
		103B	6.5/8.7	18.1/20.9	44/48	45/50	42/46	100/103	46/50	50/50	45/48	102/105
		104B	7.9/10.5	21.9/25.3	49/53	50/60	47/51	104/107	51/55	60/60	49/53	106/109
		105A	12.0/16.0	33.4/38.5	64/70	70/70	60/66	115/121	66/72	70/80	62/68	117/123
	MED	NONE	—	—	20/19	25/25	19/19	111	22/21	30/30	21/21	113
		101A	3.3/4.4	9.2/10.6	31/33	35/35	30/31	120/122	33/35	40/40	32/33	122/124
		102A	4.9/6.5	13.6/15.6	37/39	40/40	35/37	125/127	39/41	45/45	37/39	127/129
		103B	6.5/8.7	18.1/20.9	42/45	45/50	40/43	129/132	44/47	45/50	42/45	131/134
		104B	7.9/10.5	21.9/25.3	47/51	50/60	44/48	133/136	49/53	50/60	46/50	135/138
		105A	12.0/16.0	33.4/38.5	61/67	70/70	58/63	144/150	63/69	70/70	60/65	146/152
	HIGH	NONE	—	—	23/23	30/30	23/23	147	25/25	30/30	25/25	149
		101A	3.3/4.4	9.2/10.6	34/36	40/40	33/35	156/158	36/38	40/45	36/37	158/160
		102A	4.9/6.5	13.6/15.6	40/42	45/45	38/41	161/163	42/44	45/50	41/43	163/165
		103B	6.5/8.7	18.1/20.9	45/49	50/50	44/47	165/168	47/51	50/60	46/49	167/170
		104B	7.9/10.5	21.9/25.3	50/54	50/60	48/52	169/172	52/56	60/60	50/54	171/174
		105A	12.0/16.0	33.4/38.5	65/71	70/80	61/67	180/186	67/73	70/80	63/69	182/188
460-3-60	DD-STD	NONE	—	—	12	15	12	43	13	15	13	44
		106A	6.0	7.2	21	25	20	50	22	25	21	51
		107A	8.8	10.6	25	25	24	54	26	30	25	55
		108A	11.5	13.8	29	30	28	57	30	30	29	58
		109A	14.0	16.8	33	35	31	60	34	35	32	61
	MED	NONE	—	—	11	15	10	57	12	15	11	58
		106A	6.0	7.2	20	20	18	64	21	25	20	65
		107A	8.8	10.6	24	25	22	68	25	25	23	69
		108A	11.5	13.8	28	30	26	71	29	30	27	72
		109A	14.0	16.8	32	35	29	74	33	35	31	75
	HIGH	NONE	—	—	12	15	12	75	13	15	13	76
		106A	6.0	7.2	21	25	20	82	22	25	22	83
		107A	8.8	10.6	26	30	24	86	27	30	25	87
		108A	11.5	13.8	30	30	28	89	31	35	29	90
		109A	14.0	16.8	33	35	31	92	34	35	33	93
575-3-60	DD-STD	NONE	—	—	10	15	10	42	12	15	12	44
		297A	10.0	9.6	22	25	21	52	24	25	23	54
		298A	15.0	14.4	28	30	26	56	30	30	28	58
	MED	NONE	—	—	7	15	7	45	9	15	9	47
		297A	10.0	9.6	19	20	18	55	21	25	20	57
		298A	15.0	14.4	25	25	23	59	27	30	26	61
	HIGH	NONE	—	—	8	15	7	49	10	15	9	51
		297A	10.0	9.6	20	20	18	59	22	25	20	61
		298A	15.0	14.4	26	30	24	63	28	30	26	65

See Legend and Notes on page 80.

50HCQA04 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR (cont)

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			WITH PWRD C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-1-60	DD-STD	NONE	—	—	34	50	34	93	36	50	36	95
		101A	3.3/4.4	15.9/18.3	54/57	60/60	53/55	109/111	56/59	60/60	55/58	111/113
		102A	4.9/6.5	23.5/27.1	64/68	70/70	61/65	117/120	66/70	70/70	63/68	119/122
		103B	6.5/8.7	31.4/36.3	74/80	80/80	70/76	124/129	76/82	80/90	73/78	126/131
		104B	7.9/10.5	37.9/43.8	82/89	90/90	78/85	131/137	84/91	90/100	80/87	133/139
		102A+102A	9.8/13.0	46.9/54.2	93/102	100/110	88/97	187/201	95/104	100/110	90/99	189/203
208/230-3-60	DD-STD	NONE	—	—	27	30	27	87	29	35	29	89
		101A	3.3/4.4	9.2/10.6	38/40	45/45	38/39	96/98	40/42	45/45	40/42	98/100
		102A	4.9/6.5	13.6/15.6	44/46	50/50	43/45	101/103	46/48	50/50	45/47	103/105
		103B	6.5/8.7	18.1/20.9	49/53	50/60	48/51	105/108	51/55	60/60	50/53	107/110
		104B	7.9/10.5	21.9/25.3	54/58	60/60	52/56	109/112	56/60	60/60	55/58	111/114
		105A	12.0/16.0	33.4/38.5	68/75	70/80	66/71	120/126	70/77	70/80	68/74	122/128
	MED	NONE	—	—	24/24	30/30	25/24	116	26/26	30/30	27/26	118
		101A	3.3/4.4	9.2/10.6	36/37	40/40	35/36	125/127	38/39	45/45	37/39	127/129
		102A	4.9/6.5	13.6/15.6	41/44	45/45	40/42	130/132	43/46	45/50	42/44	132/134
		103B	6.5/8.7	18.1/20.9	47/50	50/50	45/48	134/137	49/52	50/60	48/50	136/139
		104B	7.9/10.5	21.9/25.3	52/56	60/60	50/53	138/141	54/58	60/60	52/56	140/143
		105A	12.0/16.0	33.4/38.5	66/72	70/80	63/69	149/155	68/74	70/80	65/71	151/157
	HIGH	NONE	—	—	28/28	30/30	28/28	152	30/29	35/35	30/30	154
		101A	3.3/4.4	9.2/10.6	39/41	45/45	39/40	161/163	41/43	45/45	41/43	163/165
		102A	4.9/6.5	13.6/15.6	45/47	50/50	44/46	166/168	47/49	50/50	46/48	168/170
		103B	6.5/8.7	18.1/20.9	50/54	50/60	49/52	170/173	52/56	60/60	51/54	172/175
		104B	7.9/10.5	21.9/25.3	55/59	60/60	53/57	174/177	57/61	60/70	56/59	176/179
		105A	12.0/16.0	33.4/38.5	69/76	70/80	67/72	185/191	71/78	80/80	69/75	187/193
460-3-60	DD-STD	NONE	—	—	14	20	14	45	15	20	16	46
		106A	6.0	7.2	23	25	23	52	24	25	24	53
		107A	8.8	10.6	28	30	27	56	29	30	28	57
		108A	11.5	13.8	32	35	30	59	33	35	31	60
		109A	14.0	16.8	35	35	34	62	36	40	35	63
	MED	NONE	—	—	13	15	13	59	14	15	14	60
		106A	6.0	7.2	22	25	21	66	23	25	22	67
		107A	8.8	10.6	26	30	25	70	27	30	26	71
		108A	11.5	13.8	30	30	29	73	31	35	30	74
		109A	14.0	16.8	34	35	32	76	35	35	33	77
	HIGH	NONE	—	—	15	20	15	77	16	20	16	78
		106A	6.0	7.2	24	25	23	84	25	25	24	85
		107A	8.8	10.6	28	30	27	88	29	30	28	89
		108A	11.5	13.8	32	35	30	91	33	35	32	92
		109A	14.0	16.8	36	40	34	94	37	40	35	95
575-3-60	DD-STD	NONE	—	—	11	15	12	44	13	15	14	46
		297A	10.0	9.6	23	25	23	54	25	25	25	56
		298A	15.0	14.4	29	30	28	58	31	35	30	60
	MED	NONE	—	—	9	15	9	47	11	15	11	49
		297A	10.0	9.6	21	25	20	57	23	25	22	59
		298A	15.0	14.4	27	30	25	61	29	30	27	63
	HIGH	NONE	—	—	9	15	9	51	11	15	11	53
		297A	10.0	9.6	21	25	20	61	23	25	22	63
		298A	15.0	14.4	27	30	26	65	29	30	28	67

See Legend and Notes on page 80.

50HCQA05 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-1-60	DD-STD	NONE	—	—	34	50	33	119	36	50	35	121
		101A	3.3/4.4	15.9/18.3	54/57	60/60	51/54	135/137	56/59	60/60	53/56	137/139
		103B	6.5/8.7	31.4/36.3	73/79	80/80	69/75	150/155	75/81	80/90	71/77	152/157
		102A+102A	9.8/13.0	46.9/54.2	93/102	100/110	87/95	213/227	95/104	100/110	89/97	215/229
		103B+103B	13.1/17.4	62.8/72.5	113/125	125/125	105/116	245/264	114/127	125/150	107/118	247/266
		104B+104B	15.8/21.0	75.8/87.5	129/143	150/150	120/134	271/294	131/145	150/150	122/136	273/296
208/230-3-60	DD-STD	NONE	—	—	26	30	25	93	28	40	27	95
		102A	4.9/6.5	13.6/15.6	43/45	50/50	41/43	107/109	45/47	50/50	43/45	109/111
		103B	6.5/8.7	18.1/20.9	48/52	50/60	46/49	111/114	50/54	50/60	48/51	113/116
		105A	12.0/16.0	33.4/38.5	67/74	70/80	64/69	126/132	69/76	70/80	66/72	128/134
		104B+104B	15.8/21.0	43.8/50.5	80/89	80/90	76/83	181/194	82/91	90/100	78/85	183/196
	MED	NONE	—	—	23/23	30/30	23/22	122	25/25	30/30	25/24	124
		102A	4.9/6.5	13.6/15.6	40/43	45/50	38/40	136/138	42/45	50/50	40/42	138/140
		103B	6.5/8.7	18.1/20.9	46/49	50/50	43/46	140/143	48/51	50/60	46/49	142/145
		105A	12.0/16.0	33.4/38.5	65/71	70/80	61/67	155/161	67/73	70/80	63/69	157/163
		104B+104B	15.8/21.0	43.8/50.5	78/86	80/90	73/80	210/223	80/88	80/90	75/83	212/225
	HIGH	NONE	—	—	27/27	30/30	26/26	158	29/28	40/40	29/28	160
		102A	4.9/6.5	13.6/15.6	44/46	50/50	42/44	172/174	46/48	50/50	44/46	174/176
		103B	6.5/8.7	18.1/20.9	49/53	50/60	47/50	176/179	51/55	60/60	49/52	178/181
		105A	12.0/16.0	33.4/38.5	68/75	70/80	65/70	191/197	70/77	70/80	67/73	193/199
		104B+104B	15.8/21.0	43.8/50.5	81/90	90/90	77/84	246/259	83/92	90/100	79/86	248/261
460-3-60	DD-STD	NONE	—	—	13	15	13	47	14	15	14	48
		106A	6.0	7.2	22	25	21	54	23	25	22	55
		108A	11.5	13.8	30	30	28	61	31	35	30	62
		109A	14.0	16.8	34	35	32	64	35	35	33	65
		108A+108A	23.0	27.7	48	50	44	102	49	50	46	103
	MED	NONE	—	—	11	15	11	61	12	15	12	62
		106A	6.0	7.2	20	20	19	68	21	25	20	69
		108A	11.5	13.8	29	30	27	75	30	30	28	76
		109A	14.0	16.8	32	35	30	78	33	35	31	79
		108A+108A	23.0	27.7	46	50	43	116	47	50	44	117
	HIGH	NONE	—	—	13	15	13	79	14	20	14	80
		106A	6.0	7.2	22	25	21	86	23	25	22	87
		108A	11.5	13.8	30	30	29	93	31	35	30	94
		109A	14.0	16.8	34	35	32	96	35	35	33	97
		108A+108A	23.0	27.7	48	50	45	134	49	50	46	135
575-3-60	DD-STD	NONE	—	—	11	15	11	39	13	15	13	41
		297A	10.0	9.6	23	25	22	49	25	25	24	51
		298A	15.0	14.4	29	30	27	53	31	35	29	55
	MED	NONE	—	—	8	15	8	42	10	15	10	44
		297A	10.0	9.6	20	20	19	52	22	25	21	54
		298A	15.0	14.4	26	30	24	56	28	30	27	58
	HIGH	NONE	—	—	9	15	8	46	11	15	10	48
		297A	10.0	9.6	21	25	19	56	23	25	22	58
		298A	15.0	14.4	27	30	25	60	29	30	27	62

See Legend and Notes on page 80.

50HCQA05 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR (cont)

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			WITH PWRD C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-1-60	DD-STD	NONE	—	—	39	50	38	124	41	60	41	126
		101A	3.3/4.4	15.9/18.3	59/62	60/70	57/59	140/142	61/64	70/70	59/62	142/144
		103B	6.5/8.7	31.4/36.3	78/84	80/90	75/80	155/160	80/86	80/90	77/82	157/162
		102A+102A	9.8/13.0	46.9/54.2	97/107	100/110	92/101	218/232	99/108	100/110	95/103	220/234
		103B+103B	13.1/17.4	62.8/72.5	117/129	125/150	111/122	250/269	119/131	125/150	113/124	252/271
		104B+104B	15.8/21.0	75.8/87.5	134/148	150/150	126/139	276/299	135/150	150/150	128/141	278/301
208/230-3-60	DD-STD	NONE	—	—	30	40	31	98	32	40	33	100
		102A	4.9/6.5	13.6/15.6	47/50	50/50	46/49	112/114	49/52	50/60	49/51	114/116
		103B	6.5/8.7	18.1/20.9	53/57	60/60	52/55	116/119	55/58	60/60	54/57	118/121
		105A	12.0/16.0	33.4/38.5	72/79	80/80	69/75	131/137	74/80	80/90	71/77	133/139
		104B+104B	15.8/21.0	43.8/50.5	85/94	90/100	81/89	186/199	87/95	90/100	83/91	188/201
	MED	NONE	—	—	28/28	40/40	28/28	127	30/30	40/40	30/30	129
		102A	4.9/6.5	13.6/15.6	45/47	50/50	44/46	141/143	47/49	50/50	46/48	143/145
		103B	6.5/8.7	18.1/20.9	51/54	60/60	49/52	145/148	53/56	60/60	51/54	147/150
		105A	12.0/16.0	33.4/38.5	70/76	70/80	67/72	160/166	72/78	80/80	69/74	162/168
		104B+104B	15.8/21.0	43.8/50.5	83/91	90/100	79/86	215/228	85/93	90/100	81/88	217/230
	HIGH	NONE	—	—	31/31	40/40	32/32	163	33/33	45/45	34/34	165
		102A	4.9/6.5	13.6/15.6	48/51	50/60	47/50	177/179	50/53	50/60	50/52	179/181
		103B	6.5/8.7	18.1/20.9	54/57	60/60	53/56	181/184	56/59	60/60	55/58	183/186
		105A	12.0/16.0	33.4/38.5	73/79	80/80	70/76	196/202	75/81	80/90	72/78	198/204
		104B+104B	15.8/21.0	43.8/50.5	86/94	90/100	82/90	251/264	88/96	90/100	84/92	253/266
460-3-60	DD-STD	NONE	—	—	15	20	15	49	16	20	16	50
		106A	6.0	7.2	24	25	23	56	25	25	24	57
		108A	11.5	13.8	32	35	31	63	33	35	32	64
		109A	14.0	16.8	36	40	34	66	37	40	36	67
		108A+108A	23.0	27.7	50	50	47	104	51	60	48	105
	MED	NONE	—	—	14	15	13	63	15	20	14	64
		106A	6.0	7.2	23	25	22	70	24	25	23	71
		108A	11.5	13.8	31	35	29	77	32	35	30	78
		109A	14.0	16.8	35	35	33	80	36	40	34	81
		108A+108A	23.0	27.7	48	50	45	118	49	50	46	119
	HIGH	NONE	—	—	15	20	15	81	16	20	16	82
		106A	6.0	7.2	24	25	24	88	25	25	25	89
		108A	11.5	13.8	33	35	31	95	34	35	32	96
		109A	14.0	16.8	36	40	35	98	37	40	36	99
		108A+108A	23.0	27.7	50	50	47	136	51	60	48	137
575-3-60	DD-STD	NONE	—	—	12	15	13	41	14	20	15	43
		297A	10.0	9.6	24	25	24	51	26	30	26	53
		298A	15.0	14.4	30	30	29	55	32	35	31	57
	MED	NONE	—	—	10	15	10	44	12	15	12	46
		297A	10.0	9.6	22	25	21	54	24	25	23	56
		298A	15.0	14.4	28	30	26	58	30	30	29	60
	HIGH	NONE	—	—	10	15	10	48	12	15	12	50
		297A	10.0	9.6	22	25	21	58	24	25	23	60
		298A	15.0	14.4	28	30	27	62	30	30	29	64

See Legend and Notes on page 80.

50HCQA06 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-1-60	DD-STD	NONE	—	—	41	60	39	144	42	60	41	146
		102A	4.9/6.5	23.5/27.1	70/74	80/80	66/70	168/171	72/76	80/80	68/72	170/173
		103B	6.5/8.7	31.4/36.3	80/86	80/100	75/81	175/180	82/88	90/100	77/83	177/182
		102A+102A	9.8/13.0	46.9/54.2	99/108	100/110	93/101	238/252	101/110	110/110	95/103	240/254
		103B+103B	13.1/17.4	62.8/72.5	119/131	125/150	111/122	270/289	121/133	125/150	113/124	272/291
		104B+104B	15.8/21.0	75.8/87.5	135/150	150/150	126/139	296/319	137/152	150/175	128/142	298/321
208/230-3-60	DD-STD	NONE	—	—	29	40	28	120	31	45	31	122
		102A	4.9/6.5	13.6/15.6	46/49	50/60	44/46	134/136	48/51	60/60	46/49	136/138
		104B	7.9/10.5	21.9/25.3	57/61	60/70	54/58	142/145	58/63	60/70	56/60	144/147
		105A	12.0/16.0	33.4/38.5	71/77	80/80	67/73	153/159	73/79	80/80	69/75	155/161
		104B+104B	15.8/21.0	43.8/50.5	84/92	90/100	79/86	208/221	86/94	90/100	81/89	210/223
		104B+105A	19.9/26.5	55.2/63.8	98/109	100/110	92/102	230/248	100/111	100/125	94/104	232/250
	MED	NONE	—	—	30/30	45/45	30/29	185	32/32	45/45	32/32	187
		102A	4.9/6.5	13.6/15.6	47/50	50/60	45/47	199/201	49/51	60/60	47/50	201/203
		104B	7.9/10.5	21.9/25.3	58/62	60/70	55/59	207/210	59/64	60/70	57/61	209/212
		105A	12.0/16.0	33.4/38.5	72/78	80/80	68/74	218/224	74/80	80/80	70/76	220/226
		104B+104B	15.8/21.0	43.8/50.5	85/93	90/100	80/88	273/286	87/95	90/100	82/90	275/288
		104B+105A	19.9/26.5	55.2/63.8	99/110	100/110	93/103	295/313	101/112	110/125	95/105	297/315
	HIGH	NONE	—	—	30/30	45/45	30/29	185	32/32	45/45	32/32	187
		102A	4.9/6.5	13.6/15.6	47/50	50/60	45/47	199/201	49/51	60/60	47/50	201/203
		104B	7.9/10.5	21.9/25.3	58/62	60/70	55/59	207/210	59/64	60/70	57/61	209/212
		105A	12.0/16.0	33.4/38.5	72/78	80/80	68/74	218/224	74/80	80/80	70/76	220/226
		104B+104B	15.8/21.0	43.8/50.5	85/93	90/100	80/88	273/286	87/95	90/100	82/90	275/288
		104B+105A	19.9/26.5	55.2/63.8	99/110	100/110	93/103	295/313	101/112	110/125	95/105	297/315
460-3-60	DD-STD	NONE	—	—	14	20	14	58	15	20	15	59
		106A	6.0	7.2	23	25	22	65	24	25	23	66
		108A	11.5	13.8	31	35	29	72	32	35	31	73
		109A	14.0	16.8	35	35	33	75	36	40	34	76
		108A+108A	23.0	27.7	49	50	45	113	50	50	47	114
		108A+109A	25.5	30.7	52	60	49	119	53	60	50	120
	MED	NONE	—	—	14	20	14	90	15	20	15	91
		106A	6.0	7.2	23	25	22	97	24	25	23	98
		108A	11.5	13.8	31	35	30	104	32	35	31	105
		109A	14.0	16.8	35	35	33	107	36	40	34	108
		108A+108A	23.0	27.7	49	50	46	145	50	50	47	146
		108A+109A	25.5	30.7	53	60	49	151	54	60	50	152
	HIGH	NONE	—	—	14	20	14	90	15	20	15	91
		106A	6.0	7.2	23	25	22	97	24	25	23	98
		108A	11.5	13.8	31	35	30	104	32	35	31	105
		109A	14.0	16.8	35	35	33	107	36	40	34	108
		108A+108A	23.0	27.7	49	50	46	145	50	50	47	146
		108A+109A	25.5	30.7	53	60	49	151	54	60	50	152
575-3-60	DD-STD	NONE	—	—	12	15	11	46	14	15	14	48
		298A	15.0	14.4	30	30	28	60	32	35	30	62
		301A	25.0	24.1	42	45	39	94	44	45	41	96
	MED	NONE	—	—	10	15	9	53	12	15	11	55
		298A	15.0	14.4	28	30	26	67	30	30	28	69
		301A	25.0	24.1	40	40	37	101	42	45	39	103
	HIGH	NONE	—	—	10	15	10	64	12	15	12	66
		298A	15.0	14.4	28	30	27	78	30	30	29	80
		301A	25.0	24.1	41	45	38	112	42	45	40	114

See Legend and Notes on page 80.

Electrical data (cont)

50HCQA06 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR (cont)

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			WITH PWRD C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-1-60	DD-STD	NONE	—	—	45	60	44	149	47	60	47	151
		102A	4.9/6.5	23.5/27.1	75/79	80/80	71/76	173/176	77/81	80/90	74/78	175/178
		103B	6.5/8.7	31.4/36.3	85/91	100/100	81/86	180/185	86/93	100/100	83/88	182/187
		102A+102A	9.8/13.0	46.9/54.2	104/113	110/125	98/107	243/257	106/115	110/125	101/109	245/259
		103B+103B	13.1/17.4	62.8/72.5	124/136	125/150	117/128	275/294	126/138	150/150	119/130	277/296
		104B+104B	15.8/21.0	75.8/87.5	140/155	150/175	132/145	301/324	142/157	150/175	134/147	303/326
208/230-3-60	DD-STD	NONE	—	—	34	45	34	125	36	50	36	127
		102A	4.9/6.5	13.6/15.6	51/53	60/60	50/52	139/141	53/55	60/60	52/54	141/143
		104B	7.9/10.5	21.9/25.3	61/66	70/70	59/63	147/150	63/67	70/70	61/65	149/152
		105A	12.0/16.0	33.4/38.5	76/82	80/90	72/78	158/164	78/84	80/90	75/80	160/166
		104B+104B	15.8/21.0	43.8/50.5	89/97	90/100	84/92	213/226	91/99	100/100	86/94	215/228
		104B+105A	19.9/26.5	55.2/63.8	103/114	110/125	97/107	235/253	105/116	110/125	100/109	237/255
	MED	NONE	—	—	35/35	50/50	35/35	190	37/37	50/50	37/37	192
		102A	4.9/6.5	13.6/15.6	52/54	60/60	51/53	204/206	54/56	60/60	53/55	206/208
		104B	7.9/10.5	21.9/25.3	62/66	70/70	60/64	212/215	64/68	70/70	62/66	214/217
		105A	12.0/16.0	33.4/38.5	77/83	80/90	73/79	223/229	79/85	80/90	76/81	225/231
		104B+104B	15.8/21.0	43.8/50.5	90/98	90/100	85/93	278/291	92/100	100/100	88/95	280/293
		104B+105A	19.9/26.5	55.2/63.8	104/115	110/125	99/108	300/318	106/116	110/125	101/111	302/320
	HIGH	NONE	—	—	35/35	50/50	35/35	190	37/37	50/50	37/37	192
		102A	4.9/6.5	13.6/15.6	52/54	60/60	51/53	204/206	54/56	60/60	53/55	206/208
		104B	7.9/10.5	21.9/25.3	62/66	70/70	60/64	212/215	64/68	70/70	62/66	214/217
		105A	12.0/16.0	33.4/38.5	77/83	80/90	73/79	223/229	79/85	80/90	76/81	225/231
		104B+104B	15.8/21.0	43.8/50.5	90/98	90/100	85/93	278/291	92/100	100/100	88/95	280/293
		104B+105A	19.9/26.5	55.2/63.8	104/115	110/125	99/108	300/318	106/116	110/125	101/111	302/320
460-3-60	DD-STD	NONE	—	—	16	20	16	60	17	20	17	61
		106A	6.0	7.2	25	25	24	67	26	30	26	68
		108A	11.5	13.8	33	35	32	74	34	35	33	75
		109A	14.0	16.8	37	40	35	77	38	40	37	78
		108A+108A	23.0	27.7	51	60	48	115	52	60	49	116
		108A+109A	25.5	30.7	55	60	51	121	56	60	53	122
	MED	NONE	—	—	16	20	16	92	17	20	17	93
		106A	6.0	7.2	25	30	25	99	26	30	26	100
		108A	11.5	13.8	34	35	32	106	35	35	33	107
		109A	14.0	16.8	37	40	36	109	38	40	37	110
		108A+108A	23.0	27.7	51	60	48	147	52	60	49	148
		108A+109A	25.5	30.7	55	60	52	153	56	60	53	154
	HIGH	NONE	—	—	16	20	16	92	17	20	17	93
		106A	6.0	7.2	25	30	25	99	26	30	26	100
		108A	11.5	13.8	34	35	32	106	35	35	33	107
		109A	14.0	16.8	37	40	36	109	38	40	37	110
		108A+108A	23.0	27.7	51	60	48	147	52	60	49	148
		108A+109A	25.5	30.7	55	60	52	153	56	60	53	154
575-3-60	DD-STD	NONE	—	—	13	15	13	48	15	20	16	50
		298A	15.0	14.4	31	35	30	62	33	35	32	64
		301A	25.0	24.1	43	45	41	96	45	45	43	98
	MED	NONE	—	—	11	15	11	55	13	15	13	57
		298A	15.0	14.4	29	30	28	69	31	35	30	71
		301A	25.0	24.1	41	45	39	103	43	45	41	105
	HIGH	NONE	—	—	12	15	12	66	14	15	14	68
		298A	15.0	14.4	30	30	29	80	32	35	31	82
		301A	25.0	24.1	42	45	40	114	44	45	42	116

See Legend and Notes on page 80.

50HCQA07 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-3-60	STD	NONE	—	—	33	50	32	161	37	50	36	165
		264A	4.9/6.5	13.6/15.6	50/53	60/60	48/50	175/177	54/56	60/60	52/54	179/181
		117A	7.8/10.4	21.7/25.0	60/64	60/70	57/61	183/186	64/68	70/80	61/65	187/190
		110A	12.0/16.0	33.4/38.5	75/81	80/90	70/76	194/200	79/85	80/90	75/81	198/204
		117A+117A	15.8/21.0	43.8/50.5	88/96	90/100	82/90	249/262	92/100	100/100	87/94	253/266
		110A+117A	19.9/26.5	55.2/63.8	102/113	110/125	95/105	271/289	106/117	110/125	100/110	275/293
	MED	NONE	—	—	35	50	35	198	39	50	39	202
		264A	4.9/6.5	13.6/15.6	52/55	60/60	50/53	212/214	56/59	60/60	55/57	216/218
		117A	7.8/10.4	21.7/25.0	63/67	70/70	60/63	220/223	66/71	80/80	64/68	224/227
		110A	12.0/16.0	33.4/38.5	77/84	80/90	73/79	231/237	81/87	90/90	77/83	235/241
		117A+117A	15.8/21.0	43.8/50.5	90/99	90/100	85/93	286/299	94/102	100/110	89/97	290/303
		110A+117A	19.9/26.5	55.2/63.8	104/115	110/125	98/108	308/326	108/119	110/125	102/112	312/330
	HIGH	NONE	—	—	42/41	60/50	42/41	230	45/44	60/60	46/45	234
		264A	4.9/6.5	13.6/15.6	59/60	60/70	57/59	244/246	62/64	70/70	62/63	248/250
		117A	7.8/10.4	21.7/25.0	69/72	80/80	67/69	252/255	72/76	80/80	71/74	256/259
		110A	12.0/16.0	33.4/38.5	83/89	90/90	80/85	263/269	87/93	90/100	84/89	267/273
		117A+117A	15.8/21.0	43.8/50.5	96/104	100/110	92/99	318/331	100/108	100/110	96/103	322/335
		110A+117A	19.9/26.5	55.2/63.8	111/120	125/125	105/114	340/358	114/124	125/125	109/118	344/362
460-3-60	STD	NONE	—	—	15	20	14	79	17	20	16	81
		265A	6.0	7.2	24	25	23	86	26	30	25	88
		266A	11.5	13.8	32	35	30	93	34	35	32	95
		267A	14.0	16.8	36	40	34	96	38	40	36	98
		268A	23.0	27.7	50	50	46	107	51	60	48	109
		269A	25.5	30.7	53	60	50	110	55	60	52	112
	MED	NONE	—	—	16	20	15	98	18	25	17	100
		265A	6.0	7.2	25	30	23	105	27	30	26	107
		266A	11.5	13.8	33	35	31	112	35	35	33	114
		267A	14.0	16.8	37	40	35	115	39	40	37	117
		268A	23.0	27.7	50	50	47	126	52	60	49	128
		269A	25.5	30.7	54	60	50	129	56	60	53	131
	HIGH	NONE	—	—	19	25	19	114	21	25	21	116
		265A	6.0	7.2	28	30	27	121	30	30	29	123
		266A	11.5	13.8	36	40	35	128	38	40	37	130
		267A	14.0	16.8	40	40	38	131	42	45	40	133
		268A	23.0	27.7	53	60	50	142	55	60	53	144
		269A	25.5	30.7	57	60	54	145	59	60	56	147
575-3-60	STD	NONE	—	—	12	15	11	66	15	20	15	70
		118A	18.0	17.3	33	35	31	83	37	40	35	87
		299A	28.0	26.9	45	45	42	93	49	50	46	97
	MED	NONE	—	—	13	15	12	81	17	20	17	85
		118A	18.0	17.3	34	35	32	98	38	40	36	102
		299A	28.0	26.9	46	50	43	108	50	50	47	112
	HIGH	NONE	—	—	16	20	15	95	19	25	20	99
		118A	18.0	17.3	37	40	35	112	41	45	40	116
		299A	28.0	26.9	49	50	46	122	53	60	51	126

See Legend and Notes on page 80.

50HCQA07 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
SINGLE STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR (cont)

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			WITH PWRD C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-3-60	STD	NONE	—	—	38	50	37	166	42	60	42	170
		264A	4.9/6.5	13.6/15.6	55/57	60/60	53/55	180/182	59/61	60/70	58/60	184/186
		117A	7.8/10.4	21.7/25.0	65/69	70/80	62/66	188/191	69/73	80/80	67/71	192/195
		110A	12.0/16.0	33.4/38.5	80/86	80/90	76/82	199/205	84/90	90/90	80/86	203/209
		117A+117A	15.8/21.0	43.8/50.5	93/101	100/110	88/96	254/267	97/105	100/110	92/100	258/271
		110A+117A	19.9/26.5	55.2/63.8	107/118	110/125	101/111	276/294	111/122	125/125	105/115	280/298
	MED	NONE	—	—	40	50	40	203	44	60	45	207
		264A	4.9/6.5	13.6/15.6	57/60	60/70	56/58	217/219	61/64	70/70	60/62	221/223
		117A	7.8/10.4	21.7/25.0	67/72	80/80	65/69	225/228	71/75	80/80	69/73	229/232
		110A	12.0/16.0	33.4/38.5	82/88	90/90	79/84	236/242	86/92	90/100	83/89	240/246
		117A+117A	15.8/21.0	43.8/50.5	95/103	100/110	91/98	291/304	99/107	100/110	95/103	295/308
		110A+117A	19.9/26.5	55.2/63.8	109/120	110/125	104/114	313/331	113/124	125/125	108/118	317/335
	HIGH	NONE	—	—	46/45	60/60	47/46	235	50/49	60/60	52/50	239
		264A	4.9/6.5	13.6/15.6	63/65	70/80	63/64	249/251	67/69	80/80	67/68	253/255
		117A	7.8/10.4	21.7/25.0	73/77	80/80	72/75	257/260	77/81	80/90	76/79	261/264
		110A	12.0/16.0	33.4/38.5	88/94	90/100	86/90	268/274	92/97	100/100	90/95	272/278
		117A+117A	15.8/21.0	43.8/50.5	101/109	110/110	98/104	323/336	105/112	110/125	102/109	327/340
		110A+117A	19.9/26.5	55.2/63.8	115/125	125/125	111/119	345/363	119/129	125/150	115/124	349/367
460-3-60	STD	NONE	—	—	17	20	17	81	19	25	19	83
		265A	6.0	7.2	26	30	25	88	28	30	27	90
		266A	11.5	13.8	34	35	33	95	36	40	35	97
		267A	14.0	16.8	38	40	36	98	40	40	38	100
		268A	23.0	27.7	52	60	49	109	54	60	51	111
		269A	25.5	30.7	55	60	52	112	57	60	54	114
	MED	NONE	—	—	18	25	18	100	20	25	20	102
		265A	6.0	7.2	27	30	26	107	29	30	28	109
		266A	11.5	13.8	35	35	34	114	37	40	36	116
		267A	14.0	16.8	39	40	37	117	41	45	39	119
		268A	23.0	27.7	53	60	50	128	54	60	52	130
		269A	25.5	30.7	56	60	53	131	58	60	55	133
	HIGH	NONE	—	—	21	25	21	116	23	30	23	118
		265A	6.0	7.2	30	30	29	123	32	35	32	125
		266A	11.5	13.8	38	40	37	130	40	40	39	132
		267A	14.0	16.8	42	45	40	133	44	45	43	135
		268A	23.0	27.7	56	60	53	144	57	60	55	146
		269A	25.5	30.7	59	60	56	147	61	70	59	149
575-3-60	STD	NONE	—	—	13	15	13	68	17	20	17	72
		118A	18.0	17.3	35	35	33	85	39	40	37	89
		299A	28.0	26.9	47	50	44	95	51	60	48	99
	MED	NONE	—	—	14	20	14	83	18	20	19	87
		118A	18.0	17.3	36	40	34	100	40	40	38	104
		299A	28.0	26.9	48	50	45	110	52	60	49	114
	HIGH	NONE	—	—	17	20	17	97	21	25	22	101
		118A	18.0	17.3	39	40	37	114	43	45	42	118
		299A	28.0	26.9	51	60	48	124	55	60	53	128

See Legend and Notes on page 80.

50HCQD07 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
TWO STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-3-60	STD	NONE	—	—	32	50	31	161	36	50	36	165
		264A	4.9/6.5	13.6/15.6	49/52	60/60	47/49	175/177	53/56	60/60	51/53	179/181
		117A	7.8/10.4	21.7/25.0	59/64	60/70	56/60	183/186	63/67	70/70	60/64	187/190
		110A	12.0/16.0	33.4/38.5	74/80	80/80	70/75	194/200	78/84	80/90	74/80	198/204
		117A+117A	15.8/21.0	43.8/50.5	87/95	90/100	82/89	249/262	91/99	100/100	86/94	253/266
		110A+117A	19.9/26.5	55.2/63.8	101/112	110/125	95/105	271/289	105/116	110/125	99/109	275/293
	MED	NONE	—	—	35	50	34	198	38	50	38	202
		264A	4.9/6.5	13.6/15.6	52/54	60/60	49/52	212/214	55/58	60/60	54/56	216/218
		117A	7.8/10.4	21.7/25.0	62/66	70/70	59/63	220/223	66/70	70/80	63/67	224/227
		110A	12.0/16.0	33.4/38.5	76/83	80/90	72/78	231/237	80/87	80/90	77/82	235/241
		117A+117A	15.8/21.0	43.8/50.5	89/98	90/100	84/92	286/299	93/102	100/110	89/96	290/303
		110A+117A	19.9/26.5	55.2/63.8	104/114	110/125	97/107	308/326	107/118	110/125	102/112	312/330
	HIGH	NONE	—	—	41/40	50/50	41/40	230	44/44	60/60	45/44	234
		264A	4.9/6.5	13.6/15.6	58/59	60/60	56/58	244/246	61/63	70/70	61/62	248/250
		117A	7.8/10.4	21.7/25.0	68/71	80/80	66/69	252/255	72/75	80/80	70/73	256/259
		110A	12.0/16.0	33.4/38.5	82/88	90/90	79/84	263/269	86/92	90/100	84/88	267/273
		117A+117A	15.8/21.0	43.8/50.5	95/103	100/110	91/98	318/331	99/107	100/110	96/102	322/335
		110A+117A	19.9/26.5	55.2/63.8	110/120	110/125	104/113	340/358	113/123	125/125	109/118	344/362
460-3-60	STD	NONE	—	—	17	25	16	79	19	25	18	81
		265A	6.0	7.2	26	30	24	86	28	30	26	88
		266A	11.5	13.8	34	35	32	93	36	40	34	95
		267A	14.0	16.8	38	40	35	96	40	40	37	98
		268A	23.0	27.7	51	60	48	107	53	60	50	109
		269A	25.5	30.7	55	60	51	110	57	60	53	112
	MED	NONE	—	—	18	25	17	98	19	25	19	100
		265A	6.0	7.2	27	30	25	105	28	30	27	107
		266A	11.5	13.8	35	40	33	112	37	40	35	114
		267A	14.0	16.8	39	40	36	115	40	45	38	117
		268A	23.0	27.7	52	60	49	126	54	60	51	128
		269A	25.5	30.7	56	60	52	129	58	60	54	131
	HIGH	NONE	—	—	21	25	20	114	22	30	22	116
		265A	6.0	7.2	30	30	29	121	31	35	31	123
		266A	11.5	13.8	38	40	36	128	40	45	38	130
		267A	14.0	16.8	42	45	40	131	43	45	42	133
		268A	23.0	27.7	55	60	52	142	57	60	54	144
		269A	25.5	30.7	59	60	56	145	61	70	58	147
575-3-60	STD	NONE	—	—	13	20	12	66	17	20	16	70
		118A	18.0	17.3	35	35	32	83	38	40	36	87
		299A	28.0	26.9	47	50	43	93	50	50	47	97
	MED	NONE	—	—	14	20	13	81	18	25	18	85
		118A	18.0	17.3	36	40	33	98	40	40	38	102
		299A	28.0	26.9	48	50	44	108	52	60	49	112
	HIGH	NONE	—	—	17	20	17	95	21	25	21	99
		118A	18.0	17.3	39	40	37	112	42	45	41	116
		299A	28.0	26.9	51	60	48	122	54	60	52	126

See Legend and Notes on page 80.

50HCQD07 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
TWO STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR (cont)

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			WITH PWRD C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-3-60	STD	NONE	—	—	37	50	37	166	41	50	41	170
		264A	4.9/6.5	13.6/15.6	54/57	60/60	52/55	180/182	58/60	60/70	57/59	184/186
		117A	7.8/10.4	21.7/25.0	64/68	70/80	62/65	188/191	68/72	80/80	66/70	192/195
		110A	12.0/16.0	33.4/38.5	79/85	80/90	75/81	199/205	83/89	90/90	79/85	203/209
		117A+117A	15.8/21.0	43.8/50.5	92/100	100/100	87/95	254/267	96/104	100/110	91/99	258/271
		110A+117A	19.9/26.5	55.2/63.8	106/117	110/125	100/110	276/294	110/121	110/125	105/114	280/298
	MED	NONE	—	—	39	50	39	203	43	60	44	207
		264A	4.9/6.5	13.6/15.6	56/59	60/60	55/57	217/219	60/63	70/70	59/62	221/223
		117A	7.8/10.4	21.7/25.0	67/71	70/80	64/68	225/228	70/74	80/80	69/72	229/232
		110A	12.0/16.0	33.4/38.5	81/88	90/90	78/84	236/242	85/91	90/100	82/88	240/246
		117A+117A	15.8/21.0	43.8/50.5	94/103	100/110	90/97	291/304	98/106	100/110	94/102	295/308
		110A+117A	19.9/26.5	55.2/63.8	108/119	110/125	103/113	313/331	112/123	125/125	107/117	317/335
	HIGH	NONE	—	—	45/45	60/60	46/45	235	49/48	60/60	51/50	239
		264A	4.9/6.5	13.6/15.6	62/64	70/70	62/63	249/251	66/68	80/80	66/68	253/255
		117A	7.8/10.4	21.7/25.0	73/76	80/80	71/74	257/260	76/80	80/80	76/78	261/264
		110A	12.0/16.0	33.4/38.5	87/93	90/100	85/90	268/274	91/97	100/100	89/94	272/278
		117A+117A	15.8/21.0	43.8/50.5	100/108	100/110	97/103	323/336	104/112	110/125	101/108	327/340
		110A+117A	19.9/26.5	55.2/63.8	114/124	125/125	110/119	345/363	118/128	125/150	114/123	349/367
460-3-60	STD	NONE	—	—	19	25	19	81	21	30	21	83
		265A	6.0	7.2	28	30	27	88	30	30	29	90
		266A	11.5	13.8	36	40	34	95	38	40	36	97
		267A	14.0	16.8	40	45	38	98	42	45	40	100
		268A	23.0	27.7	54	60	50	109	55	60	52	111
		269A	25.5	30.7	57	60	54	112	59	60	56	114
	MED	NONE	—	—	20	25	19	100	22	30	22	102
		265A	6.0	7.2	29	30	28	107	31	35	30	109
		266A	11.5	13.8	37	40	35	114	39	40	37	116
		267A	14.0	16.8	41	45	39	117	43	45	41	119
		268A	23.0	27.7	54	60	51	128	56	60	53	130
		269A	25.5	30.7	58	60	55	131	60	60	57	133
	HIGH	NONE	—	—	23	30	23	116	25	30	25	118
		265A	6.0	7.2	32	35	31	123	34	40	33	125
		266A	11.5	13.8	40	45	39	130	42	45	41	132
		267A	14.0	16.8	44	45	42	133	46	50	44	135
		268A	23.0	27.7	57	60	55	144	59	60	57	146
		269A	25.5	30.7	61	70	58	147	63	70	60	149
575-3-60	STD	NONE	—	—	15	20	14	68	18	25	18	72
		118A	18.0	17.3	36	40	34	85	40	40	38	89
		299A	28.0	26.9	48	50	45	95	52	60	49	99
	MED	NONE	—	—	16	20	15	83	20	25	20	87
		118A	18.0	17.3	37	40	35	100	41	45	40	104
		299A	28.0	26.9	49	50	46	110	53	60	51	114
	HIGH	NONE	—	—	19	25	19	97	22	25	23	101
		118A	18.0	17.3	40	40	39	114	44	45	43	118
		299A	28.0	26.9	52	60	50	124	56	60	54	128

See Legend and Notes on page 80.

50HCQD08 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
TWO STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-3-60	STD	NONE	—	—	38	50	40	191	42	50	44	195
		117A	7.8/10.4	21.7/25.0	65/69	70/70	65/68	213/216	69/73	70/80	69/73	217/220
		110A	12.0/16.0	33.4/38.5	80/86	80/90	78/84	224/230	84/90	90/90	82/88	228/234
		111A	18.6/24.8	51.7/59.7	103/113	110/125	99/108	243/251	107/117	110/125	103/113	247/255
		112A	24.0/32.0	66.7/77.0	122/134	125/150	116/128	258/268	125/138	125/150	121/132	262/272
		112A+117A	31.8/42.4	88.4/102.0	149/166	150/175	141/157	368/395	152/169	175/175	146/161	372/399
	MED	NONE	—	—	40/40	50/50	42/41	229	44/43	50/50	46/46	233
		117A	7.8/10.4	21.7/25.0	67/71	70/80	66/70	251/254	71/75	80/80	71/74	255/258
		110A	12.0/16.0	33.4/38.5	82/88	90/90	80/86	262/268	85/92	90/100	84/90	266/272
		111A	18.6/24.8	51.7/59.7	104/114	110/125	101/110	281/289	108/118	110/125	105/114	285/293
		112A	24.0/32.0	66.7/77.0	123/136	125/150	118/130	296/306	127/140	150/150	123/134	300/310
		112A+117A	31.8/42.4	88.4/102.0	150/167	150/175	143/159	406/433	154/171	175/175	148/163	410/437
	HIGH	NONE	—	—	44	50	46	258	47	60	50	262
		117A	7.8/10.4	21.7/25.0	71/75	80/80	71/75	280/283	74/79	80/80	75/79	284/287
		110A	12.0/16.0	33.4/38.5	85/92	90/100	84/90	291/297	89/95	90/100	89/94	295/301
		111A	18.6/24.8	51.7/59.7	108/118	110/125	105/114	310/318	112/122	125/125	110/119	314/322
		112A	24.0/32.0	66.7/77.0	127/140	150/150	122/134	325/335	131/144	150/150	127/139	329/339
		112A+117A	31.8/42.4	88.4/102.0	154/171	175/175	147/163	435/462	158/175	175/175	152/167	439/466
460-3-60	STD	NONE	—	—	18	20	19	95	20	25	21	97
		116B	13.9	16.7	39	40	38	112	41	45	40	114
		113B	16.5	19.8	43	45	42	115	45	45	44	117
		114B	27.8	33.4	60	60	57	128	62	70	59	130
		115B	33.0	39.7	68	70	65	135	70	70	67	137
		128B	41.7	50.2	81	90	77	145	83	90	79	147
	MED	NONE	—	—	19	25	20	114	21	25	22	116
		116B	13.9	16.7	40	40	39	131	42	45	41	133
		113B	16.5	19.8	44	45	43	134	46	50	45	136
		114B	27.8	33.4	61	70	58	147	63	70	60	149
		115B	33.0	39.7	69	70	65	154	71	80	68	156
		128B	41.7	50.2	82	90	78	164	84	90	80	166
	HIGH	NONE	—	—	21	25	22	129	23	25	24	131
		116B	13.9	16.7	42	45	41	146	44	45	43	148
		113B	16.5	19.8	46	50	45	149	48	50	47	151
		114B	27.8	33.4	63	70	60	162	65	70	62	164
		115B	33.0	39.7	71	80	68	169	73	80	70	171
		128B	41.7	50.2	84	90	80	179	86	90	82	181
575-3-60	STD	NONE	—	—	13	15	13	77	17	20	18	81
		118A	18.0	17.3	35	35	33	94	39	40	38	98
		119A	36.0	34.6	56	60	53	112	60	60	58	116
	MED	NONE	—	—	14	15	14	81	17	20	18	85
		118A	18.0	17.3	35	35	34	98	39	40	38	102
		119A	36.0	34.6	57	60	54	116	61	70	58	120
	HIGH	NONE	—	—	14	20	15	92	18	20	19	96
		118A	18.0	17.3	36	40	35	109	40	40	39	113
		119A	36.0	34.6	58	60	55	127	61	70	59	131

See Legend and Notes on page 80.

50HCQD08 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
TWO STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR (cont)

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			WITH PWRD C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-3-60	STD	NONE	—	—	43	50	45	196	47	50	49	200
		117A	7.8/10.4	21.7/25.0	70/74	70/80	70/74	218/221	74/78	80/80	74/78	222/225
		110A	12.0/16.0	33.4/38.5	85/91	90/100	83/89	229/235	88/95	90/100	88/94	233/239
		111A	18.6/24.8	51.7/59.7	108/118	110/125	105/114	248/256	111/121	125/125	109/118	252/260
		112A	24.0/32.0	66.7/77.0	126/139	150/150	122/134	263/273	130/143	150/150	126/138	267/277
		112A+117A	31.8/42.4	88.4/102.0	153/170	175/175	147/162	373/400	157/174	175/175	151/167	377/404
	MED	NONE	—	—	45/44	50/50	47/47	234	48/48	60/60	51/51	238
		117A	7.8/10.4	21.7/25.0	72/76	80/80	72/76	256/259	76/79	80/80	76/80	260/263
		110A	12.0/16.0	33.4/38.5	86/93	90/100	85/91	267/273	90/96	90/100	90/95	271/277
		111A	18.6/24.8	51.7/59.7	109/119	110/125	106/115	286/294	113/123	125/125	111/120	290/298
		112A	24.0/32.0	66.7/77.0	128/141	150/150	124/135	301/311	132/144	150/150	128/140	305/315
		112A+117A	31.8/42.4	88.4/102.0	155/172	175/175	149/164	411/438	159/176	175/200	153/168	415/442
	HIGH	NONE	—	—	48	60	51	263	52	60	56	267
		117A	7.8/10.4	21.7/25.0	75/80	80/80	76/80	285/288	79/83	80/90	81/84	289/292
		110A	12.0/16.0	33.4/38.5	90/96	90/100	90/96	296/302	94/100	100/100	94/100	300/306
		111A	18.6/24.8	51.7/59.7	113/123	125/125	111/120	315/323	117/127	125/150	115/124	319/327
		112A	24.0/32.0	66.7/77.0	132/145	150/150	128/140	330/340	136/148	150/150	132/144	334/344
		112A+117A	31.8/42.4	88.4/102.0	159/176	175/200	153/169	440/467	163/180	175/200	157/173	444/471
460-3-60	STD	NONE	—	—	21	25	21	97	22	25	23	99
		116B	13.9	16.7	41	45	41	114	43	45	43	116
		113B	16.5	19.8	45	45	44	117	47	50	46	119
		114B	27.8	33.4	62	70	60	130	64	70	62	132
		115B	33.0	39.7	70	70	67	137	72	80	69	139
		128B	41.7	50.2	83	90	79	147	85	90	81	149
	MED	NONE	—	—	21	25	22	116	23	25	24	118
		116B	13.9	16.7	42	45	42	133	44	45	44	135
		113B	16.5	19.8	46	50	45	136	48	50	47	138
		114B	27.8	33.4	63	70	61	149	65	70	63	151
		115B	33.0	39.7	71	80	68	156	73	80	70	158
		128B	41.7	50.2	84	90	80	166	86	90	82	168
	HIGH	NONE	—	—	23	25	24	131	25	30	27	133
		116B	13.9	16.7	44	45	44	148	46	50	46	150
		113B	16.5	19.8	48	50	47	151	50	50	49	153
		114B	27.8	33.4	65	70	63	164	67	70	65	166
		115B	33.0	39.7	73	80	70	171	75	80	72	173
		128B	41.7	50.2	86	90	82	181	88	90	84	183
575-3-60	STD	NONE	—	—	15	20	15	79	19	20	20	83
		118A	18.0	17.3	36	40	35	96	40	40	40	100
		119A	36.0	34.6	58	60	55	114	62	70	59	118
	MED	NONE	—	—	15	20	16	83	19	20	20	87
		118A	18.0	17.3	37	40	36	100	41	45	40	104
		119A	36.0	34.6	59	60	56	118	62	70	60	122
	HIGH	NONE	—	—	16	20	17	94	20	25	21	98
		118A	18.0	17.3	38	40	37	111	41	45	41	115
		119A	36.0	34.6	59	60	56	129	63	70	61	133

See Legend and Notes on page 80.

50HCQD09 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
TWO STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-3-60	STD	NONE	—	—	46	60	47	236	49	60	52	240
		117A	7.8/10.4	21.7/25.0	73/77	80/80	72/76	258/261	76/81	80/90	77/80	262/265
		110A	12.0/16.0	33.4/38.5	87/94	90/100	86/92	269/275	91/97	100/100	90/96	273/279
		111A	18.6/24.8	51.7/59.7	110/120	110/125	107/116	288/296	114/124	125/125	111/120	292/300
		112A	24.0/32.0	66.7/77.0	129/142	150/150	124/136	303/313	133/146	150/150	128/140	307/317
		112A+117A	31.8/42.4	88.4/102.0	156/173	175/175	149/165	413/440	160/177	175/200	153/169	417/444
	MED	NONE	—	—	49/49	60/60	51/51	278	53/52	60/60	55/55	282
		117A	7.8/10.4	21.7/25.0	76/80	80/80	76/80	300/303	80/84	80/90	80/84	304/307
		110A	12.0/16.0	33.4/38.5	91/97	100/100	89/95	311/317	94/101	100/110	94/99	315/321
		111A	18.6/24.8	51.7/59.7	113/123	125/125	110/119	330/338	117/127	125/150	115/124	334/342
		112A	24.0/32.0	66.7/77.0	132/145	150/150	128/139	345/355	136/149	150/150	132/144	349/359
		112A+117A	31.8/42.4	88.4/102.0	159/176	175/200	153/168	455/482	163/180	175/200	157/173	459/486
	HIGH	NONE	—	—	51	60	53	292	55	60	58	296
		117A	7.8/10.4	21.7/25.0	78/82	80/90	78/82	314/317	82/86	90/90	83/87	318/321
		110A	12.0/16.0	33.4/38.5	93/99	100/100	92/98	325/331	97/103	100/110	96/102	329/335
		111A	18.6/24.8	51.7/59.7	116/126	125/150	113/122	344/352	119/129	125/150	117/127	348/356
		112A	24.0/32.0	66.7/77.0	134/147	150/150	130/142	359/369	138/151	150/175	135/146	363/373
		112A+117A	31.8/42.4	88.4/102.0	161/178	175/200	155/171	469/496	165/182	175/200	160/175	473/500
460-3-60	STD	NONE	—	—	21	25	22	118	23	25	24	120
		116B	13.9	16.7	42	45	41	135	44	45	43	137
		113B	16.5	19.8	46	50	45	138	48	50	47	140
		114B	27.8	33.4	63	70	60	151	65	70	62	153
		115B	33.0	39.7	71	80	67	158	73	80	69	160
		128B	41.7	50.2	84	90	79	168	86	90	82	170
	MED	NONE	—	—	23	25	24	139	25	30	26	141
		116B	13.9	16.7	44	45	43	156	45	45	45	158
		113B	16.5	19.8	47	50	46	159	49	50	48	161
		114B	27.8	33.4	64	70	62	172	66	70	64	174
		115B	33.0	39.7	72	80	69	179	74	80	71	181
		128B	41.7	50.2	85	90	81	189	87	90	83	191
	HIGH	NONE	—	—	24	30	25	146	26	30	27	148
		116B	13.9	16.7	45	45	44	163	46	50	46	165
		113B	16.5	19.8	49	50	48	166	50	50	50	168
		114B	27.8	33.4	66	70	63	179	67	70	65	181
		115B	33.0	39.7	73	80	70	186	75	80	73	188
		128B	41.7	50.2	87	90	83	196	88	90	85	198
575-3-60	STD	NONE	—	—	17	20	17	97	21	25	22	101
		118A	18.0	17.3	38	40	37	114	42	45	41	118
		119A	36.0	34.6	60	60	57	132	64	70	61	136
	MED	NONE	—	—	18	20	18	108	21	25	22	112
		118A	18.0	17.3	39	40	38	125	43	45	42	129
		119A	36.0	34.6	61	70	58	143	65	70	62	147
	HIGH	NONE	—	—	18	20	18	108	21	25	22	112
		118A	18.0	17.3	39	40	38	125	43	45	42	129
		119A	36.0	34.6	61	70	58	143	65	70	62	147

See Legend and Notes on page 80.

50HCQD09 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
TWO STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR (cont)

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			WITH PWRD C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-3-60	STD	NONE	—	—	50	60	53	241	54	60	57	245
		117A	7.8/10.4	21.7/25.0	77/82	80/90	78/82	263/266	81/85	90/90	82/86	267/270
		110A	12.0/16.0	33.4/38.5	92/98	100/100	91/97	274/280	96/102	100/110	96/101	278/284
		111A	18.6/24.8	51.7/59.7	115/125	125/125	112/121	293/301	119/129	125/150	117/126	297/305
		112A	24.0/32.0	66.7/77.0	134/147	150/150	129/141	308/318	138/150	150/150	134/146	312/322
		112A+117A	31.8/42.4	88.4/102.0	161/178	175/200	154/170	418/445	165/182	175/200	159/174	422/449
	MED	NONE	—	—	54/53	60/60	56/56	283	57/57	70/70	61/61	287
		117A	7.8/10.4	21.7/25.0	81/85	90/90	81/85	305/308	84/89	90/90	86/89	309/312
		110A	12.0/16.0	33.4/38.5	95/102	100/110	95/101	316/322	99/105	100/110	99/105	320/326
		111A	18.6/24.8	51.7/59.7	118/128	125/150	116/125	335/343	122/132	125/150	120/129	339/347
		112A	24.0/32.0	66.7/77.0	137/150	150/150	133/145	350/360	141/154	150/175	138/149	354/364
		112A+117A	31.8/42.4	88.4/102.0	164/181	175/200	158/174	460/487	168/185	175/200	162/178	464/491
	HIGH	NONE	—	—	56	60	59	297	60	70	63	301
		117A	7.8/10.4	21.7/25.0	83/87	90/90	84/88	319/322	87/91	90/100	88/92	323/326
		110A	12.0/16.0	33.4/38.5	98/104	100/110	97/103	330/336	101/108	110/110	102/108	334/340
		111A	18.6/24.8	51.7/59.7	120/130	125/150	118/128	349/357	124/134	125/150	123/132	353/361
		112A	24.0/32.0	66.7/77.0	139/152	150/175	136/148	364/374	143/156	150/175	140/152	368/378
		112A+117A	31.8/42.4	88.4/102.0	166/183	175/200	161/176	474/501	170/187	175/200	165/181	478/505
460-3-60	STD	NONE	—	—	23	25	24	120	25	30	26	122
		116B	13.9	16.7	44	45	43	137	46	50	46	139
		113B	16.5	19.8	48	50	47	140	50	50	49	142
		114B	27.8	33.4	65	70	63	153	67	70	65	155
		115B	33.0	39.7	73	80	70	160	75	80	72	162
		128B	41.7	50.2	86	90	82	170	88	90	84	172
	MED	NONE	—	—	25	30	26	141	27	30	28	143
		116B	13.9	16.7	46	50	45	158	48	50	47	160
		113B	16.5	19.8	50	50	49	161	51	60	51	163
		114B	27.8	33.4	67	70	65	174	68	70	67	176
		115B	33.0	39.7	75	80	72	181	76	80	74	183
		128B	41.7	50.2	88	90	84	191	89	90	86	193
	HIGH	NONE	—	—	26	30	27	148	28	30	29	150
		116B	13.9	16.7	47	50	47	165	49	50	49	167
		113B	16.5	19.8	51	60	50	168	53	60	52	170
		114B	27.8	33.4	68	70	66	181	70	70	68	183
		115B	33.0	39.7	76	80	73	188	77	80	75	190
		128B	41.7	50.2	89	90	85	198	91	100	87	200
575-3-60	STD	NONE	—	—	18	20	19	99	22	25	23	103
		118A	18.0	17.3	40	40	39	116	44	45	43	120
		119A	36.0	34.6	62	70	59	134	66	70	63	138
	MED	NONE	—	—	19	25	20	110	23	25	24	114
		118A	18.0	17.3	41	45	40	127	45	45	44	131
		119A	36.0	34.6	63	70	60	145	66	70	64	149
	HIGH	NONE	—	—	19	25	20	110	23	25	24	114
		118A	18.0	17.3	41	45	40	127	45	45	44	131
		119A	36.0	34.6	63	70	60	145	66	70	64	149

See Legend and Notes on page 80.

50HCQD12 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
TWO STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-3-60	STD	NONE	—	—	46	60	47	262	49	60	52	266
		288A	7.5/10.0	20.9/24.1	72/76	80/80	71/75	283/286	76/80	80/80	76/79	287/290
		291A	12.4/16.5	34.4/39.7	89/95	90/100	87/93	296/302	92/99	100/100	91/97	300/306
		294A	25.2/33.5	69.9/80.6	133/146	150/150	128/140	332/343	137/150	150/150	132/144	336/347
		288A+294A	32.7/43.5	90.7/104.7	159/177	175/200	152/168	443/471	163/180	175/200	156/172	447/475
		291A+294A	37.6/50.0	104.3/120.3	176/166	200/175	167/186	471/503	180/170	200/175	172/190	475/507
	MED	NONE	—	—	49/49	60/60	51/51	304	53/53	60/60	55/55	308
		288A	7.5/10.0	20.9/24.1	75/79	80/80	75/79	325/328	79/83	80/90	79/83	329/332
		291A	12.4/16.5	34.4/39.7	92/98	100/100	91/97	338/344	96/102	100/110	95/101	342/348
		294A	25.2/33.5	69.9/80.6	136/149	150/150	131/144	374/385	140/153	150/175	136/148	378/389
		288A+294A	32.7/43.5	90.7/104.7	162/180	175/200	155/171	485/513	166/183	175/200	160/176	489/517
		291A+294A	37.6/50.0	104.3/120.3	179/169	200/175	171/189	513/545	183/173	200/200	175/194	517/549
	HIGH	NONE	—	—	62	80	65	324	66	80	69	328
		288A	7.5/10.0	20.9/24.1	88/92	100/100	89/93	345/348	92/96	100/100	93/97	349/352
		291A	12.4/16.5	34.4/39.7	105/112	110/125	104/111	358/364	109/115	110/125	109/115	362/368
		294A	25.2/33.5	69.9/80.6	149/163	150/175	145/158	394/405	153/167	175/175	150/162	398/409
		288A+294A	32.7/43.5	90.7/104.7	175/193	175/200	169/185	505/533	179/197	200/200	174/190	509/537
		291A+294A	37.6/50.0	104.3/120.3	192/182	200/200	185/203	533/565	196/186	200/200	189/208	537/569
460-3-60	STD	NONE	—	—	23	30	23	125	25	30	26	127
		289A	10.0	12.0	38	40	37	137	40	40	39	139
		292A	16.5	19.9	48	50	46	145	49	50	48	147
		295A	33.5	40.3	73	80	70	165	75	80	72	167
		289A+295A	43.5	52.3	88	90	84	230	90	90	86	232
		292A+295A	50.0	60.2	83	90	93	245	85	90	95	247
	MED	NONE	—	—	24	30	25	146	26	30	27	148
		289A	10.0	12.0	39	40	39	158	41	45	41	160
		292A	16.5	19.9	49	50	48	166	51	60	50	168
		295A	33.5	40.3	75	80	72	186	77	80	74	188
		289A+295A	43.5	52.3	90	90	85	251	92	100	88	253
		292A+295A	50.0	60.2	85	90	95	266	86	90	97	268
	HIGH	NONE	—	—	31	40	32	156	33	40	34	158
		289A	10.0	12.0	46	50	46	168	48	50	48	170
		292A	16.5	19.9	56	60	55	176	58	60	57	178
		295A	33.5	40.3	81	90	79	196	83	90	81	198
		289A+295A	43.5	52.3	96	100	92	261	98	100	94	263
		292A+295A	50.0	60.2	91	100	101	276	93	100	104	278
575-3-60	STD	NONE	—	—	18	20	18	95	21	25	22	99
		290A	10.0	9.6	30	30	29	105	33	35	33	109
		293A	16.5	15.9	37	40	36	111	41	45	41	115
		296A	33.5	32.2	58	60	55	127	62	70	59	131
		290A+296A	43.5	41.9	70	70	66	179	74	80	70	183
		293A+296A	50.0	48.1	66	70	73	191	69	80	78	195
	MED	NONE	—	—	18	20	19	106	22	25	23	110
		290A	10.0	9.6	30	30	30	116	34	35	34	120
		293A	16.5	15.9	38	40	37	122	42	45	42	126
		296A	33.5	32.2	59	60	56	138	62	70	60	142
		290A+296A	43.5	41.9	71	80	67	190	74	80	71	194
		293A+296A	50.0	48.1	66	70	74	202	70	80	79	206
	HIGH	NONE	—	—	25	30	26	118	29	35	30	122
		290A	10.0	9.6	37	40	37	128	41	45	41	132
		293A	16.5	15.9	45	45	44	134	49	50	49	138
		296A	33.5	32.2	66	70	63	150	69	70	67	154
		290A+296A	43.5	41.9	78	80	74	202	81	90	79	206
		293A+296A	50.0	48.1	73	80	81	214	77	80	86	218

See Legend and Notes on page 80.

50HCQD12 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
TWO STAGE COOLING WITH SINGLE SPEED INDOOR FAN MOTOR (cont)

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			WITH PWRD C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-3-60	STD	NONE	—	—	50	60	53	267	54	60	57	271
		288A	7.5/10.0	20.9/24.1	77/81	80/90	77/81	288/291	80/84	80/90	81/85	292/295
		291A	12.4/16.5	34.4/39.7	93/100	100/100	92/99	301/307	97/104	100/110	97/103	305/311
		294A	25.2/33.5	69.9/80.6	138/151	150/175	133/146	337/348	142/155	150/175	138/150	341/352
		288A+294A	32.7/43.5	90.7/104.7	164/181	175/200	157/173	448/476	168/185	175/200	162/178	452/480
		291A+294A	37.6/50.0	104.3/120.3	181/171	200/175	173/191	476/508	185/175	200/200	177/196	480/512
	MED	NONE	—	—	54/54	60/60	57/56	309	57/57	70/70	61/61	313
		288A	7.5/10.0	20.9/24.1	80/84	80/90	81/84	330/333	84/87	90/90	85/89	334/337
		291A	12.4/16.5	34.4/39.7	97/103	100/110	96/102	343/349	100/107	100/110	101/106	347/353
		294A	25.2/33.5	69.9/80.6	141/154	150/175	137/149	379/390	145/158	150/175	141/154	383/394
		288A+294A	32.7/43.5	90.7/104.7	167/184	175/200	161/177	490/518	171/188	175/200	165/181	494/522
		291A+294A	37.6/50.0	104.3/120.3	184/174	200/200	177/195	518/550	188/178	200/200	181/199	522/554
	HIGH	NONE	—	—	67	80	70	329	71	80	75	333
		288A	7.5/10.0	20.9/24.1	93/97	100/100	94/98	350/353	97/101	100/110	99/102	354/357
		291A	12.4/16.5	34.4/39.7	110/116	110/125	110/116	363/369	114/120	125/125	114/120	367/373
		294A	25.2/33.5	69.9/80.6	154/168	175/175	151/163	399/410	158/171	175/175	155/167	403/414
		288A+294A	32.7/43.5	90.7/104.7	180/198	200/200	175/191	510/538	184/201	200/225	179/195	514/542
		291A+294A	37.6/50.0	104.3/120.3	197/187	200/200	190/209	538/570	201/191	225/200	195/213	542/574
460-3-60	STD	NONE	—	—	25	30	26	127	27	30	28	129
		289A	10.0	12.0	40	40	40	139	42	45	42	141
		292A	16.5	19.9	50	50	49	147	52	60	51	149
		295A	33.5	40.3	75	80	72	167	77	80	74	169
		289A+295A	43.5	52.3	90	90	86	232	92	100	88	234
		292A+295A	50.0	60.2	85	90	95	247	87	90	97	249
	MED	NONE	—	—	27	30	28	148	28	30	30	150
		289A	10.0	12.0	42	45	42	160	43	45	44	162
		292A	16.5	19.9	51	60	51	168	53	60	53	170
		295A	33.5	40.3	77	80	74	188	79	80	76	190
		289A+295A	43.5	52.3	92	100	88	253	94	100	90	255
		292A+295A	50.0	60.2	87	90	97	268	89	100	99	270
	HIGH	NONE	—	—	33	40	35	158	35	40	37	160
		289A	10.0	12.0	48	50	49	170	50	50	51	172
		292A	16.5	19.9	58	60	58	178	60	60	60	180
		295A	33.5	40.3	84	90	81	198	85	90	83	200
		289A+295A	43.5	52.3	99	100	95	263	100	100	97	265
		292A+295A	50.0	60.2	93	100	104	278	95	100	106	280
575-3-60	STD	NONE	—	—	19	25	20	97	23	25	24	101
		290A	10.0	9.6	31	35	31	107	35	35	35	111
		293A	16.5	15.9	39	40	38	113	43	45	43	117
		296A	33.5	32.2	59	60	57	129	63	70	61	133
		290A+296A	43.5	41.9	72	80	68	181	75	80	72	185
		293A+296A	50.0	48.1	67	70	75	193	71	80	80	197
	MED	NONE	—	—	20	25	21	108	24	25	25	112
		290A	10.0	9.6	32	35	32	118	36	40	36	122
		293A	16.5	15.9	40	40	39	124	44	45	43	128
		296A	33.5	32.2	60	60	58	140	64	70	62	144
		290A+296A	43.5	41.9	72	80	69	192	76	80	73	196
		293A+296A	50.0	48.1	68	70	76	204	72	80	81	208
	HIGH	NONE	—	—	27	30	28	120	31	35	32	124
		290A	10.0	9.6	39	45	39	130	43	45	43	134
		293A	16.5	15.9	47	50	46	136	51	60	51	140
		296A	33.5	32.2	67	70	65	152	71	80	69	156
		290A+296A	43.5	41.9	79	80	76	204	83	90	81	208
		293A+296A	50.0	48.1	75	80	83	216	79	90	88	220

See Legend and Notes on page 80.

50HCQD07 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
TWO STAGE COOLING WITH TWO SPEED INDOOR FAN MOTOR

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-3-60	STD	NONE	—	—	33/33	50/50	32/32	165	37/36	50/50	36/36	169
		264A	4.9/6.5	13.6/15.6	50/52	60/60	47/50	179/181	54/56	60/60	52/54	183/185
		117A	7.8/10.4	21.7/25.0	60/64	60/70	57/60	187/190	64/68	70/70	61/65	191/194
		110A	12.0/16.0	33.4/38.5	75/81	80/90	70/76	198/204	78/85	80/90	75/80	202/208
		117A+117A	15.8/21.0	43.8/50.5	88/96	90/100	82/90	253/266	91/100	100/100	87/94	257/270
		110A+117A	19.9/26.5	55.2/63.8	102/112	110/125	95/105	275/293	106/116	110/125	100/109	279/297
	MED	NONE	—	—	36/35	50/50	35/34	195	39/39	50/50	39/39	199
		264A	4.9/6.5	13.6/15.6	53/54	60/60	51/52	209/211	56/58	60/60	55/56	213/215
		117A	7.8/10.4	21.7/25.0	63/66	70/70	60/63	217/220	67/70	70/80	64/67	221/224
		110A	12.0/16.0	33.4/38.5	77/83	80/90	73/78	228/234	81/87	90/90	78/83	232/238
		117A+117A	15.8/21.0	43.8/50.5	90/98	90/100	85/92	283/296	94/102	100/110	90/97	287/300
		110A+117A	19.9/26.5	55.2/63.8	105/115	110/125	99/108	305/323	108/118	110/125	103/112	309/327
	HIGH	NONE	—	—	41/40	50/50	41/40	230	44/44	60/60	45/44	234
		264A	4.9/6.5	13.6/15.6	58/59	60/60	56/58	244/246	61/63	70/70	61/62	248/250
		117A	7.8/10.4	21.7/25.0	68/71	80/80	66/69	252/255	72/75	80/80	70/73	256/259
		110A	12.0/16.0	33.4/38.5	82/88	90/90	79/84	263/269	86/92	90/100	84/88	267/273
		117A+117A	15.8/21.0	43.8/50.5	95/103	100/110	91/98	318/331	99/107	100/110	96/102	322/335
		110A+117A	19.9/26.5	55.2/63.8	110/120	110/125	104/113	340/358	113/123	125/125	109/118	344/362
460-3-60	STD	NONE	—	—	17	25	16	81	19	25	18	83
		265A	6.0	7.2	26	30	25	88	28	30	27	90
		266A	11.5	13.8	34	40	32	95	36	40	34	97
		267A	14.0	16.8	38	40	36	98	40	40	38	100
		268A	23.0	27.7	52	60	48	109	54	60	50	111
		269A	25.5	30.7	55	60	52	112	57	60	54	114
	MED	NONE	—	—	18	25	17	97	20	25	19	99
		265A	6.0	7.2	27	30	26	104	29	30	28	106
		266A	11.5	13.8	35	40	33	111	37	40	35	113
		267A	14.0	16.8	39	40	37	114	41	45	39	116
		268A	23.0	27.7	53	60	49	125	54	60	51	127
		269A	25.5	30.7	56	60	53	128	58	60	55	130
	HIGH	NONE	—	—	21	25	20	114	22	30	22	116
		265A	6.0	7.2	30	30	29	121	31	35	31	123
		266A	11.5	13.8	38	40	36	128	40	45	38	130
		267A	14.0	16.8	42	45	40	131	43	45	42	133
		268A	23.0	27.7	55	60	52	142	57	60	54	144
		269A	25.5	30.7	59	60	56	145	61	70	58	147
575-3-60	STD	NONE	—	—	14	20	13	68	18	25	18	72
		118A	18.0	17.3	36	40	33	85	40	40	38	89
		299A	28.0	26.9	48	50	44	95	52	60	49	99
	MED	NONE	—	—	16	20	15	81	20	25	20	85
		118A	18.0	17.3	37	40	35	98	41	45	40	102
		299A	28.0	26.9	49	50	46	108	53	60	51	112
	HIGH	NONE	—	—	17	20	17	95	21	25	22	99
		118A	18.0	17.3	39	40	37	112	43	45	42	116
		299A	28.0	26.9	51	60	48	122	55	60	53	126

See Legend and Notes on page 80.

50HCQD07 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
TWO STAGE COOLING WITH TWO SPEED INDOOR FAN MOTOR (cont)

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			WITH PWRD C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-3-60	STD	NONE	—	—	38/37	50/50	37/37	170	41/41	50/50	42/42	174
		264A	4.9/6.5	13.6/15.6	55/57	60/60	53/55	184/186	58/61	60/70	57/59	188/190
		117A	7.8/10.4	21.7/25.0	65/69	70/80	62/66	192/195	69/73	80/80	67/70	196/199
		110A	12.0/16.0	33.4/38.5	79/86	80/90	76/81	203/209	83/89	90/90	80/86	207/213
		117A+117A	15.8/21.0	43.8/50.5	92/101	100/110	88/95	258/271	96/104	100/110	92/100	262/275
		110A+117A	19.9/26.5	55.2/63.8	107/117	110/125	101/111	280/298	110/121	125/125	105/115	284/302
	MED	NONE	—	—	40/40	50/50	41/40	200	44/43	60/60	45/44	204
		264A	4.9/6.5	13.6/15.6	57/59	60/60	56/58	214/216	61/63	70/70	61/62	218/220
		117A	7.8/10.4	21.7/25.0	68/71	80/80	66/68	222/225	71/75	80/80	70/73	226/229
		110A	12.0/16.0	33.4/38.5	82/88	90/90	79/84	233/239	86/92	90/100	83/88	237/243
		117A+117A	15.8/21.0	43.8/50.5	95/103	100/110	91/98	288/301	99/107	100/110	95/102	292/305
		110A+117A	19.9/26.5	55.2/63.8	109/119	110/125	104/113	310/328	113/123	125/125	108/117	314/332
	HIGH	NONE	—	—	45/45	60/60	46/45	235	49/48	60/60	51/50	239
		264A	4.9/6.5	13.6/15.6	62/64	70/70	62/63	249/251	66/68	80/80	66/68	253/255
		117A	7.8/10.4	21.7/25.0	73/76	80/80	71/74	257/260	76/80	80/80	76/78	261/264
		110A	12.0/16.0	33.4/38.5	87/93	90/100	85/90	268/274	91/97	100/100	89/94	272/278
		117A+117A	15.8/21.0	43.8/50.5	100/108	100/110	97/103	323/336	104/112	110/125	101/108	327/340
		110A+117A	19.9/26.5	55.2/63.8	114/124	125/125	110/119	345/363	118/128	125/150	114/123	349/367
460-3-60	STD	NONE	—	—	19	25	19	83	21	30	21	85
		265A	6.0	7.2	28	30	27	90	30	35	29	92
		266A	11.5	13.8	37	40	35	97	38	40	37	99
		267A	14.0	16.8	40	45	38	100	42	45	40	102
		268A	23.0	27.7	54	60	51	111	56	60	53	113
		269A	25.5	30.7	58	60	54	114	59	60	56	116
	MED	NONE	—	—	20	25	20	99	22	30	22	101
		265A	6.0	7.2	29	30	28	106	31	35	30	108
		266A	11.5	13.8	37	40	36	113	39	45	38	115
		267A	14.0	16.8	41	45	39	116	43	45	41	118
		268A	23.0	27.7	55	60	52	127	57	60	54	129
		269A	25.5	30.7	59	60	55	130	60	60	57	132
	HIGH	NONE	—	—	23	30	23	116	25	30	25	118
		265A	6.0	7.2	32	35	31	123	34	40	33	125
		266A	11.5	13.8	40	45	39	130	42	45	41	132
		267A	14.0	16.8	44	45	42	133	46	50	44	135
		268A	23.0	27.7	57	60	55	144	59	60	57	146
		269A	25.5	30.7	61	70	58	147	63	70	60	149
575-3-60	STD	NONE	—	—	16	20	15	70	20	25	20	74
		118A	18.0	17.3	37	40	35	87	41	45	40	91
		299A	28.0	26.9	49	50	46	97	53	60	51	101
	MED	NONE	—	—	17	20	17	83	21	25	22	87
		118A	18.0	17.3	39	40	37	100	43	45	42	104
		299A	28.0	26.9	51	60	48	110	55	60	53	114
	HIGH	NONE	—	—	19	25	19	97	23	30	24	101
		118A	18.0	17.3	41	45	39	114	45	45	44	118
		299A	28.0	26.9	53	60	50	124	57	60	55	128

See Legend and Notes on page 80.

50HCQD08 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
TWO STAGE COOLING WITH TWO SPEED INDOOR FAN MOTOR

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-3-60	STD	NONE	—	—	39/39	50/50	40/40	195	43/42	50/50	45/44	199
		117A	7.8/10.4	21.7/25.0	66/70	70/70	65/69	217/220	70/74	70/80	70/73	221/224
		110A	12.0/16.0	33.4/38.5	80/87	90/90	79/84	228/234	84/90	90/90	83/89	232/238
		111A	18.6/24.8	51.7/59.7	103/113	110/125	100/109	247/255	107/117	110/125	104/113	251/259
		112A	24.0/32.0	66.7/77.0	122/135	125/150	117/129	262/272	126/139	150/150	121/133	266/276
		112A+117A	31.8/42.4	88.4/102.0	149/166	150/175	142/157	372/399	153/170	175/175	146/162	376/403
	MED	NONE	—	—	40/40	50/50	42/41	199	44/44	50/50	46/46	203
		117A	7.8/10.4	21.7/25.0	67/71	70/80	67/70	221/224	71/75	80/80	71/75	225/228
		110A	12.0/16.0	33.4/38.5	82/88	90/90	80/86	232/238	86/92	90/100	85/90	236/242
		111A	18.6/24.8	51.7/59.7	105/114	110/125	101/110	251/259	108/118	110/125	106/114	255/263
		112A	24.0/32.0	66.7/77.0	123/136	125/150	118/130	266/276	127/140	150/150	123/134	270/280
		112A+117A	31.8/42.4	88.4/102.0	151/167	175/175	143/159	376/403	154/171	175/175	148/163	380/407
	HIGH	NONE	—	—	44/43	50/50	46/45	249	48/47	60/50	50/49	253
		117A	7.8/10.4	21.7/25.0	71/74	80/80	71/74	271/274	75/78	80/80	75/78	275/278
		110A	12.0/16.0	33.4/38.5	85/91	90/100	84/89	282/288	89/95	90/100	89/93	286/292
		111A	18.6/24.8	51.7/59.7	108/117	110/125	105/114	301/309	112/121	125/125	110/118	305/313
		112A	24.0/32.0	66.7/77.0	127/139	150/150	123/133	316/326	131/143	150/150	127/138	320/330
		112A+117A	31.8/42.4	88.4/102.0	154/170	175/175	148/162	426/453	158/174	175/175	152/167	430/457
460-3-60	STD	NONE	—	—	19	20	19	97	20	25	21	99
		116B	13.9	16.7	40	40	38	114	41	45	40	116
		113B	16.5	19.8	43	45	42	117	45	45	44	119
		114B	27.8	33.4	60	60	58	130	62	70	60	132
		115B	33.0	39.7	68	70	65	137	70	70	67	139
		128B	41.7	50.2	81	90	77	147	83	90	79	149
	MED	NONE	—	—	19	25	20	100	21	25	22	102
		116B	13.9	16.7	40	40	39	117	42	45	41	119
		113B	16.5	19.8	44	45	43	120	46	50	45	122
		114B	27.8	33.4	61	70	58	133	63	70	60	135
		115B	33.0	39.7	69	70	65	140	71	80	68	142
		128B	41.7	50.2	82	90	78	150	84	90	80	152
	HIGH	NONE	—	—	21	25	22	125	22	25	24	127
		116B	13.9	16.7	42	45	41	142	43	45	43	144
		113B	16.5	19.8	45	45	44	145	47	50	46	147
		114B	27.8	33.4	62	70	60	158	64	70	62	160
		115B	33.0	39.7	70	70	67	165	72	80	69	167
		128B	41.7	50.2	83	90	79	175	85	90	81	177
575-3-60	STD	NONE	—	—	14	20	15	79	18	20	19	83
		118A	18.0	17.3	36	40	35	96	40	40	39	100
		119A	36.0	34.6	58	60	55	114	61	70	59	118
	MED	NONE	—	—	15	20	16	83	19	20	20	87
		118A	18.0	17.3	37	40	35	100	40	45	40	104
		119A	36.0	34.6	58	60	55	118	62	70	60	122
	HIGH	NONE	—	—	16	20	17	92	20	25	21	96
		118A	18.0	17.3	38	40	37	109	42	45	41	113
		119A	36.0	34.6	59	60	56	127	63	70	61	131

See Legend and Notes on page 80.

50HCQD08 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
TWO STAGE COOLING WITH TWO SPEED INDOOR FAN MOTOR (cont)

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			WITH PWRD C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-3-60	STD	NONE	—	—	44/43	50/50	46/46	200	47/47	60/50	50/50	204
		117A	7.8/10.4	21.7/25.0	71/75	80/80	71/74	222/225	74/78	80/80	75/79	226/229
		110A	12.0/16.0	33.4/38.5	85/91	90/100	84/90	233/239	89/95	90/100	89/94	237/243
		111A	18.6/24.8	51.7/59.7	108/118	110/125	105/114	252/260	112/122	125/125	110/119	256/264
		112A	24.0/32.0	66.7/77.0	127/140	150/150	122/134	267/277	131/143	150/150	127/138	271/281
		112A+117A	31.8/42.4	88.4/102.0	154/171	175/175	147/163	377/404	158/175	175/175	152/167	381/408
	MED	NONE	—	—	45/45	50/50	47/47	204	49/48	60/60	52/51	208
		117A	7.8/10.4	21.7/25.0	72/76	80/80	72/76	226/229	76/80	80/80	77/80	230/233
		110A	12.0/16.0	33.4/38.5	87/93	90/100	86/91	237/243	90/96	90/100	90/96	241/247
		111A	18.6/24.8	51.7/59.7	109/119	110/125	107/116	256/264	113/123	125/125	111/120	260/268
		112A	24.0/32.0	66.7/77.0	128/141	150/150	124/135	271/281	132/145	150/150	128/140	275/285
		112A+117A	31.8/42.4	88.4/102.0	155/172	175/175	149/164	381/408	159/176	175/200	153/169	385/412
	HIGH	NONE	—	—	49/48	60/60	52/50	254	52/51	60/60	56/55	258
		117A	7.8/10.4	21.7/25.0	76/79	80/80	76/79	276/279	79/83	80/90	81/83	280/283
		110A	12.0/16.0	33.4/38.5	90/96	90/100	90/95	287/293	94/99	100/100	94/99	291/297
		111A	18.6/24.8	51.7/59.7	113/122	125/125	111/119	306/314	117/126	125/150	115/123	310/318
		112A	24.0/32.0	66.7/77.0	132/144	150/150	128/139	321/331	136/148	150/150	133/143	325/335
		112A+117A	31.8/42.4	88.4/102.0	159/175	175/175	153/168	431/458	163/179	175/200	158/172	435/462
460-3-60	STD	NONE	—	—	21	25	22	99	23	25	24	101
		116B	13.9	16.7	42	45	41	116	44	45	43	118
		113B	16.5	19.8	46	50	45	119	47	50	47	121
		114B	27.8	33.4	63	70	60	132	64	70	62	134
		115B	33.0	39.7	71	80	67	139	72	80	69	141
		128B	41.7	50.2	84	90	79	149	85	90	82	151
	MED	NONE	—	—	21	25	22	102	23	25	24	104
		116B	13.9	16.7	42	45	42	119	44	45	44	121
		113B	16.5	19.8	46	50	45	122	48	50	47	124
		114B	27.8	33.4	63	70	61	135	65	70	63	137
		115B	33.0	39.7	71	80	68	142	73	80	70	144
		128B	41.7	50.2	84	90	80	152	86	90	82	154
	HIGH	NONE	—	—	23	25	24	127	25	30	26	129
		116B	13.9	16.7	44	45	43	144	46	50	45	146
		113B	16.5	19.8	48	50	47	147	49	50	49	149
		114B	27.8	33.4	65	70	62	160	66	70	65	162
		115B	33.0	39.7	73	80	70	167	74	80	72	169
		128B	41.7	50.2	86	90	82	177	87	90	84	179
575-3-60	STD	NONE	—	—	16	20	17	81	20	25	21	85
		118A	18.0	17.3	38	40	37	98	41	45	41	102
		119A	36.0	34.6	59	60	56	116	63	70	61	120
	MED	NONE	—	—	17	20	17	85	21	25	22	89
		118A	18.0	17.3	38	40	37	102	42	45	42	106
		119A	36.0	34.6	60	60	57	120	64	70	62	124
	HIGH	NONE	—	—	18	20	19	94	22	25	23	98
		118A	18.0	17.3	39	40	39	111	43	45	43	115
		119A	36.0	34.6	61	70	58	129	65	70	63	133

See Legend and Notes on page 80.

50HCQD09 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
TWO STAGE COOLING WITH TWO SPEED INDOOR FAN MOTOR

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-3-60	STD	NONE	—	—	47/47	60/60	49/49	233	51/51	60/60	54/53	237
		117A	7.8/10.4	21.7/25.0	75/78	80/80	74/78	255/258	78/82	80/90	79/82	259/262
		110A	12.0/16.0	33.4/38.5	89/95	90/100	88/93	266/272	93/99	100/100	92/98	270/276
		111A	18.6/24.8	51.7/59.7	112/122	125/125	109/118	285/293	116/126	125/150	113/122	289/297
		112A	24.0/32.0	66.7/77.0	131/143	150/150	126/138	300/310	135/147	150/150	131/142	304/314
		112A+117A	31.8/42.4	88.4/102.0	158/175	175/175	151/166	410/437	162/178	175/200	155/171	414/441
	MED	NONE	—	—	49/48	60/60	51/50	259	53/52	60/60	56/55	263
		117A	7.8/10.4	21.7/25.0	76/79	80/80	76/79	281/284	80/83	80/90	81/83	285/288
		110A	12.0/16.0	33.4/38.5	91/96	100/100	90/95	292/298	95/100	100/100	94/99	296/302
		111A	18.6/24.8	51.7/59.7	114/123	125/125	111/119	311/319	117/127	125/150	115/123	315/323
		112A	24.0/32.0	66.7/77.0	132/144	150/150	128/139	326/336	136/148	150/150	132/143	330/340
		112A+117A	31.8/42.4	88.4/102.0	159/176	175/200	153/168	436/463	163/179	175/200	157/172	440/467
	HIGH	NONE	—	—	51/50	60/60	54/53	283	55/54	60/60	58/57	287
		117A	7.8/10.4	21.7/25.0	78/81	80/90	79/81	305/308	82/85	90/90	83/86	309/312
		110A	12.0/16.0	33.4/38.5	93/98	100/100	92/97	316/322	97/102	100/110	96/101	320/326
		111A	18.6/24.8	51.7/59.7	116/125	125/125	113/121	335/343	120/129	125/150	118/126	339/347
		112A	24.0/32.0	66.7/77.0	135/146	150/150	130/141	350/360	138/150	150/150	135/145	354/364
		112A+117A	31.8/42.4	88.4/102.0	162/178	175/200	155/170	460/487	165/181	175/200	160/174	464/491
460-3-60	STD	NONE	—	—	22	25	23	117	24	30	25	119
		116B	13.9	16.7	43	45	42	134	45	45	44	136
		113B	16.5	19.8	47	50	45	137	48	50	47	139
		114B	27.8	33.4	64	70	61	150	65	70	63	152
		115B	33.0	39.7	72	80	68	157	73	80	70	159
		128B	41.7	50.2	85	90	80	167	86	90	82	169
	MED	NONE	—	—	22	25	23	130	24	30	25	132
		116B	13.9	16.7	43	45	42	147	45	45	44	149
		113B	16.5	19.8	47	50	46	150	49	50	48	152
		114B	27.8	33.4	64	70	62	163	66	70	64	165
		115B	33.0	39.7	72	80	69	170	74	80	71	172
		128B	41.7	50.2	85	90	81	180	87	90	83	182
	HIGH	NONE	—	—	23	25	24	142	25	30	26	144
		116B	13.9	16.7	44	45	44	159	46	50	46	161
		113B	16.5	19.8	48	50	47	162	50	50	49	164
		114B	27.8	33.4	65	70	63	175	67	70	65	177
		115B	33.0	39.7	73	80	70	182	75	80	72	184
		128B	41.7	50.2	86	90	82	192	88	90	84	194
575-3-60	STD	NONE	—	—	18	20	19	99	22	25	23	103
		118A	18.0	17.3	40	40	39	116	44	45	43	120
		119A	36.0	34.6	62	70	59	134	65	70	63	138
	MED	NONE	—	—	19	25	20	108	23	25	24	112
		118A	18.0	17.3	41	45	40	125	45	45	44	129
		119A	36.0	34.6	63	70	60	143	66	70	64	147
	HIGH	NONE	—	—	19	25	20	108	23	25	24	112
		118A	18.0	17.3	41	45	40	125	45	45	44	129
		119A	36.0	34.6	63	70	60	143	66	70	64	147

See Legend and Notes on page 80.

50HCQD09 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
TWO STAGE COOLING WITH TWO SPEED INDOOR FAN MOTOR (cont)

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			WITH PWRD C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-3-60	STD	NONE	—	—	52/52	60/60	55/55	238	56/56	60/60	59/59	242
		117A	7.8/10.4	21.7/25.0	79/83	80/90	80/83	260/263	83/87	90/90	84/88	264/267
		110A	12.0/16.0	33.4/38.5	94/100	100/100	93/99	271/277	98/104	100/110	98/103	275/281
		111A	18.6/24.8	51.7/59.7	117/127	125/150	114/123	290/298	121/130	125/150	119/128	294/302
		112A	24.0/32.0	66.7/77.0	136/148	150/150	132/143	305/315	139/152	150/175	136/148	309/319
		112A+117A	31.8/42.4	88.4/102.0	163/179	175/200	157/172	415/442	167/183	175/200	161/176	419/446
	MED	NONE	—	—	54/53	60/60	57/56	264	58/57	70/70	61/60	268
		117A	7.8/10.4	21.7/25.0	81/84	90/90	82/85	286/289	85/88	90/90	86/89	290/293
		110A	12.0/16.0	33.4/38.5	96/101	100/110	95/100	297/303	99/105	100/110	99/104	301/307
		111A	18.6/24.8	51.7/59.7	118/128	125/150	116/124	316/324	122/131	125/150	121/129	320/328
		112A	24.0/32.0	66.7/77.0	137/149	150/150	133/144	331/341	141/153	150/175	138/149	335/345
		112A+117A	31.8/42.4	88.4/102.0	164/180	175/200	158/173	441/468	168/184	175/200	163/177	445/472
	HIGH	NONE	—	—	56/55	60/60	59/58	288	60/59	70/70	64/62	292
		117A	7.8/10.4	21.7/25.0	83/86	90/90	84/87	310/313	87/90	90/90	89/91	314/317
		110A	12.0/16.0	33.4/38.5	98/103	100/110	98/102	321/327	102/107	110/110	102/107	325/331
		111A	18.6/24.8	51.7/59.7	121/130	125/150	119/127	340/348	124/133	125/150	123/131	344/352
		112A	24.0/32.0	66.7/77.0	139/151	150/175	136/147	355/365	143/155	150/175	140/151	359/369
		112A+117A	31.8/42.4	88.4/102.0	166/182	175/200	161/175	465/492	170/186	175/200	165/180	469/496
460-3-60	STD	NONE	—	—	24	30	25	119	26	30	27	121
		116B	13.9	16.7	45	45	44	136	47	50	46	138
		113B	16.5	19.8	49	50	48	139	51	60	50	141
		114B	27.8	33.4	66	70	64	152	68	70	66	154
		115B	33.0	39.7	74	80	71	159	76	80	73	161
		128B	41.7	50.2	87	90	83	169	89	90	85	171
	MED	NONE	—	—	25	30	26	132	26	30	28	134
		116B	13.9	16.7	45	45	45	149	47	50	47	151
		113B	16.5	19.8	49	50	48	152	51	60	50	154
		114B	27.8	33.4	66	70	64	165	68	70	66	167
		115B	33.0	39.7	74	80	71	172	76	80	73	174
		128B	41.7	50.2	87	90	83	182	89	90	85	184
	HIGH	NONE	—	—	26	30	27	144	27	30	29	146
		116B	13.9	16.7	46	50	46	161	48	50	48	163
		113B	16.5	19.8	50	50	50	164	52	60	52	166
		114B	27.8	33.4	67	70	65	177	69	70	67	179
		115B	33.0	39.7	75	80	73	184	77	80	75	186
		128B	41.7	50.2	88	90	85	194	90	90	87	196
575-3-60	STD	NONE	—	—	20	25	21	101	24	25	25	105
		118A	18.0	17.3	42	45	41	118	45	45	45	122
		119A	36.0	34.6	63	70	61	136	67	70	65	140
	MED	NONE	—	—	21	25	22	110	25	30	26	114
		118A	18.0	17.3	43	45	42	127	46	50	46	131
		119A	36.0	34.6	64	70	62	145	68	70	66	149
	HIGH	NONE	—	—	21	25	22	110	25	30	26	114
		118A	18.0	17.3	43	45	42	127	46	50	46	131
		119A	36.0	34.6	64	70	62	145	68	70	66	149

See Legend and Notes on page 80.

50HCQD12 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
TWO STAGE COOLING WITH TWO SPEED INDOOR FAN MOTOR

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-3-60	STD	NONE	—	—	48/47	60/60	50/49	259	51/51	60/60	54/54	263
		288A	7.5/10.0	20.9/24.1	74/77	80/80	74/77	280/283	77/81	80/90	78/81	284/287
		291A	12.4/16.5	34.4/39.7	91/97	100/100	89/95	293/299	94/101	100/110	93/99	297/303
		294A	25.2/33.5	69.9/80.6	135/148	150/150	130/142	329/340	139/152	150/175	134/146	333/344
		288A+294A	32.7/43.5	90.7/104.7	161/178	175/200	154/170	440/468	165/182	175/200	158/174	444/472
		291A+294A	37.6/50.0	104.3/120.3	178/168	200/175	170/188	468/500	182/171	200/175	174/192	472/504
	MED	NONE	—	—	49/48	60/60	51/50	285	53/52	60/60	56/55	289
		288A	7.5/10.0	20.9/24.1	75/78	80/80	75/78	306/309	79/82	80/90	80/82	310/313
		291A	12.4/16.5	34.4/39.7	92/98	100/100	91/96	319/325	96/102	100/110	95/100	323/329
		294A	25.2/33.5	69.9/80.6	136/149	150/150	132/143	355/366	140/153	150/175	136/147	359/370
		288A+294A	32.7/43.5	90.7/104.7	162/179	175/200	156/171	466/494	166/183	175/200	160/175	470/498
		291A+294A	37.6/50.0	104.3/120.3	179/169	200/175	171/189	494/526	183/172	200/200	176/193	498/530
	HIGH	NONE	—	—	62	80	65	324	66	80	69	328
		288A	7.5/10.0	20.9/24.1	88/92	100/100	89/93	345/348	92/96	100/100	93/97	349/352
		291A	12.4/16.5	34.4/39.7	105/112	110/125	104/111	358/364	109/115	110/125	109/115	362/368
		294A	25.2/33.5	69.9/80.6	149/163	150/175	145/158	394/405	153/167	175/175	150/162	398/409
		288A+294A	32.7/43.5	90.7/104.7	175/193	175/200	169/185	505/533	179/197	200/200	174/190	509/537
		291A+294A	37.6/50.0	104.3/120.3	192/182	200/200	185/203	533/565	196/186	200/200	189/208	537/569
460-3-60	STD	NONE	—	—	24	30	24	124	25	30	26	126
		289A	10.0	12.0	39	40	38	136	40	40	40	138
		292A	16.5	19.9	48	50	47	144	50	50	49	146
		295A	33.5	40.3	74	80	71	164	76	80	73	166
		289A+295A	43.5	52.3	89	90	85	229	91	100	87	231
		292A+295A	50.0	60.2	84	90	94	244	86	90	96	246
	MED	NONE	—	—	24	30	25	137	26	30	27	139
		289A	10.0	12.0	39	40	39	149	41	45	41	151
		292A	16.5	19.9	49	50	48	157	51	60	50	159
		295A	33.5	40.3	74	80	71	177	76	80	73	179
		289A+295A	43.5	52.3	89	90	85	242	91	100	87	244
		292A+295A	50.0	60.2	84	90	94	257	86	90	96	259
	HIGH	NONE	—	—	31	40	32	156	33	40	34	158
		289A	10.0	12.0	46	50	46	168	48	50	48	170
		292A	16.5	19.9	56	60	55	176	58	60	57	178
		295A	33.5	40.3	81	90	79	196	83	90	81	198
		289A+295A	43.5	52.3	96	100	92	261	98	100	94	263
		292A+295A	50.0	60.2	91	100	101	276	93	100	104	278
575-3-60	LOW	NONE	—	—	19	25	20	97	23	25	24	101
		290A	10.0	9.6	31	35	31	107	35	35	35	111
		293A	16.5	15.9	39	40	38	113	43	45	42	117
		296A	33.5	32.2	59	60	57	129	63	70	61	133
		290A+296A	43.5	41.9	71	80	68	181	75	80	72	185
		293A+296A	50.0	48.1	67	70	75	193	71	80	79	197
	MED	NONE	—	—	20	25	21	106	24	25	25	110
		290A	10.0	9.6	32	35	32	116	36	40	36	120
		293A	16.5	15.9	40	40	39	122	44	45	43	126
		296A	33.5	32.2	60	60	58	138	64	70	62	142
		290A+296A	43.5	41.9	72	80	69	190	76	80	73	194
		293A+296A	50.0	48.1	68	70	76	202	72	80	81	206
	HIGH	NONE	—	—	25	30	26	118	29	35	30	122
		290A	10.0	9.6	37	40	37	128	41	45	41	132
		293A	16.5	15.9	45	45	44	134	49	50	49	138
		296A	33.5	32.2	66	70	63	150	69	70	67	154
		290A+296A	43.5	41.9	78	80	74	202	81	90	79	206
		293A+296A	50.0	48.1	73	80	81	214	77	80	86	218

See Legend and Notes on page 80.

50HCQD12 UNIT WIRE/FUSE OR HACR BREAKER SIZING DATA
TWO STAGE COOLING WITH TWO SPEED INDOOR FAN MOTOR (cont)

NOM. V-Ph-Hz	IFM TYPE	ELEC. HTR			WITH PWRD C.O.							
					NO P.E.				WITH P.E. (pwrd fr/ unit)			
		CRHEATER ****00	Nom (kW)	FLA	MCA	Max Fuse or HACR Brkr	Disc. Size		MCA	Max Fuse or HACR Brkr	Disc. Size	
							FLA	LRA			FLA	LRA
208/230-3-60	STD	NONE	—	—	52/52	60/60	55/55	264	56/56	60/60	59/59	268
		288A	7.5/10.0	20.9/24.1	78/82	80/90	79/82	285/288	82/86	90/90	83/87	289/292
		291A	12.4/16.5	34.4/39.7	95/102	100/110	95/100	298/304	99/105	100/110	99/105	302/308
		294A	25.2/33.5	69.9/80.6	140/153	150/175	135/147	334/345	144/157	150/175	140/152	338/349
		288A+294A	32.7/43.5	90.7/104.7	166/183	175/200	159/175	445/473	170/187	175/200	164/180	449/477
		291A+294A	37.6/50.0	104.3/120.3	183/172	200/200	175/193	473/505	187/176	200/200	179/197	477/509
	MED	NONE	—	—	54/53	60/60	57/56	290	58/57	70/70	61/60	294
		288A	7.5/10.0	20.9/24.1	80/83	80/90	81/84	311/314	84/87	90/90	85/88	315/318
		291A	12.4/16.5	34.4/39.7	97/103	100/110	96/102	324/330	101/106	110/110	101/106	328/334
		294A	25.2/33.5	69.9/80.6	141/154	150/175	137/149	360/371	145/158	150/175	142/153	364/375
		288A+294A	32.7/43.5	90.7/104.7	167/184	175/200	161/176	471/499	171/188	175/200	165/181	475/503
		291A+294A	37.6/50.0	104.3/120.3	184/173	200/200	177/194	499/531	188/177	200/200	181/199	503/535
	HIGH	NONE	—	—	67	80	70	329	71	80	75	333
		288A	7.5/10.0	20.9/24.1	93/97	100/100	94/98	350/353	97/101	100/110	99/102	354/357
		291A	12.4/16.5	34.4/39.7	110/116	110/125	110/116	363/369	114/120	125/125	114/120	367/373
		294A	25.2/33.5	69.9/80.6	154/168	175/175	151/163	399/410	158/171	175/175	155/167	403/414
		288A+294A	32.7/43.5	90.7/104.7	180/198	200/200	175/191	510/538	184/201	200/225	179/195	514/542
		291A+294A	37.6/50.0	104.3/120.3	197/187	200/200	190/209	538/570	201/191	225/200	195/213	542/574
460-3-60	STD	NONE	—	—	26	30	27	126	28	30	29	128
		289A	10.0	12.0	41	45	41	138	43	45	43	140
		292A	16.5	19.9	51	60	50	146	52	60	52	148
		295A	33.5	40.3	76	80	73	166	78	80	75	168
		289A+295A	43.5	52.3	91	100	87	231	93	100	89	233
		292A+295A	50.0	60.2	86	90	96	246	88	90	98	248
	MED	NONE	—	—	26	30	27	139	28	30	29	141
		289A	10.0	12.0	41	45	41	151	43	45	43	153
		292A	16.5	19.9	51	60	50	159	53	60	52	161
		295A	33.5	40.3	77	80	74	179	78	80	76	181
		289A+295A	43.5	52.3	92	100	88	244	93	100	90	246
		292A+295A	50.0	60.2	86	90	97	259	88	90	99	261
	HIGH	NONE	—	—	33	40	35	158	35	40	37	160
		289A	10.0	12.0	48	50	49	170	50	50	51	172
		292A	16.5	19.9	58	60	58	178	60	60	60	180
		295A	33.5	40.3	84	90	81	198	85	90	83	200
		289A+295A	43.5	52.3	99	100	95	263	100	100	97	265
		292A+295A	50.0	60.2	93	100	104	278	95	100	106	280
575-3-60	LOW	NONE	—	—	21	25	22	99	25	30	26	103
		290A	10.0	9.6	33	35	33	109	37	40	37	113
		293A	16.5	15.9	41	45	40	115	44	45	44	119
		296A	33.5	32.2	61	70	59	131	65	70	63	135
		290A+296A	43.5	41.9	73	80	70	183	77	80	74	187
		293A+296A	50.0	48.1	69	70	77	195	73	80	81	199
	MED	NONE	—	—	22	25	23	108	26	30	27	112
		290A	10.0	9.6	34	35	34	118	38	40	38	122
		293A	16.5	15.9	42	45	41	124	45	45	45	128
		296A	33.5	32.2	62	70	60	140	66	70	64	144
		290A+296A	43.5	41.9	74	80	71	192	78	80	75	196
		293A+296A	50.0	48.1	70	80	78	204	74	80	82	208
	HIGH	NONE	—	—	27	30	28	120	31	35	32	124
		290A	10.0	9.6	39	45	39	130	43	45	43	134
		293A	16.5	15.9	47	50	46	136	51	60	51	140
		296A	33.5	32.2	67	70	65	152	71	80	69	156
		290A+296A	43.5	41.9	79	80	76	204	83	90	81	208
		293A+296A	50.0	48.1	75	80	83	216	79	90	88	220

See Legend and Notes on page 80.

Cooling, unit without economizer

Cooling (single speed indoor fan motor)

When thermostat calls for cooling, terminals G and Y1 are energized. The indoor fan contactor (IFC), reversing valve solenoid (RVS) and compressor contactor are energized and indoor fan motor, compressor, and outdoor fan starts. On 2-Stage 07 units, Y1 allows compressor to operate unloaded at 67% of unit capacity. For all units, the outdoor fan motor runs continuously while unit is cooling.

Two-stage models: If Stage 1 cooling does not satisfy the space load, the space temperature will rise until thermostat calls for Stage 2 cooling (Y2 closes). On two compressor units, Defrost Board activates Stage 2 Compressor. Reversing valve 2 switches to Cooling position. Compressor 2 contactor is energized; Compressor 2 starts and Circuit 2 operates in Cooling mode. On 2-Stage 07 units, Y2 energizes the loader plug, allowing compressor to operate at 100% in cooling mode.

On two compressor units when Cooling Stage 2 is satisfied, thermostat Y2 opens. Compressor 2 contactor is de-energized; Compressor 2 stops. Reversing Valve 2 remains energized. On 2-Stage 07 units, the loader plug is de-energized and compressor operates at 67%. Reversing Valve remains energized.

When Cooling Stage 1 is satisfied, thermostat Y1 opens. Compressor 1 contactor is de-energized; Compressor 1 stops. Outdoor fan relay is de-energized; outdoor fans stop. After the Fan Delay period, the Indoor fan contactor is de-energized; indoor fan stops (unless Continuous Fan operation has been selected). Reversing Valve 1 remains energized.

Reversing valve solenoids are energized in Cooling modes. Each solenoid will remain energized until the next Heating mode is initiated for this circuit.

Cooling (2-speed indoor fan motor)

Per ASHRAE 90.1-2016 and IECC-2015 standards, during the first stage of cooling operation the VFD will adjust the fan motor to provide 66% of the total cfm established for the unit. When a call for the second stage of cooling is required, the VFD will allow the total cfm established for the unit (100%).

Heating, unit without economizer

Upon a request for heating from the space thermostat, terminal W1 will be energized with 24V. The IFC, outdoor fan contactor (OFC), C1, and C2 will be energized. The indoor fan, outdoor fans, and compressor no. 1, and compressor no. 2 are energized and reversing valves are de-energized and switch position.

If the space temperature continues to fall while W1 is energized, W2 will be energized with 24V, and the heater contactor(s) (HC) will be energized, which will energize the electric heater(s).

When the space thermostat is satisfied, W2 will be de-energized first, and the electric heater(s) will be de-energized.

Upon a further rise in space temperature, W1 will be de-energized.

Two compressor models: When the thermostat calls for heating, terminal W1 is energized. Defrost Board de-energizes both reversing valve solenoids and reversing valves move to Heating position. The indoor fan contactor is energized; indoor fan motor starts. Outdoor fan relay is energized; both outdoor fan motors run. Compressor contactors C1 and C2 are energized; both refrigeration circuits operate in Heating mode.

If Stage 1 heating does not satisfy the space load, the space temperature will fall until thermostat calls for Stage 2 heating (W2 closes). Terminal W2 is energized. Defrost Board issues an output at EHEAT. Heater contactor 1 and heater contactor 2 (if installed) are energized; all electric heaters are energized.

When space heating load is partially satisfied, thermostat terminal W2 is de-energized; heater contactors are de-energized and all electric heat is terminated. Stage 1 heating continues.

When the space heating load is fully satisfied, thermostat terminal W1 is also de-energized.

Reversing valve solenoids remain de-energized until the next call for Cooling mode is initiated.

Cooling, unit with EconoMi$er® IV, X

When free cooling is not available, the compressors will be controlled by the zone thermostat. When free cooling is available, the outdoor air damper is modulated by the EconoMi$er IV, X control to provide a 50 to 55°F (10 to 13°C) mixed air temperature into the zone. As the mixed air temperature fluctuates above 55 or below 50°F (13 to 10°C), the dampers will be modulated (open or close) to bring the mixed air temperature back within control.

If mechanical cooling is utilized with free cooling, the outdoor-air damper will maintain its current position at the time the compressor is started. If the increase in cooling capacity causes the mixed-air temperature to drop below 45°F (7°C), then the outdoor-air damper position will be decreased to the minimum position. If the mixed-air temperature continues to fall, the outdoor-air damper will close. Control returns to normal once the mixed-air temperature rises above 48°F (9°C).

If optional power exhaust is installed, as the outdoor air damper opens and closes, the power exhaust fans will be energized and de-energized.

If field-installed accessory CO_2 sensors are connected to the EconoMi$er IV, X control, a demand controlled ventilation strategy will begin to operate. As the CO_2 level in the zone increases above the CO_2 setpoint, the minimum position of the damper will be increased proportionally. As the CO_2 level decreases because of the increase in fresh air, the outdoor air damper will be proportionally closed.

For EconoMi$er IV, X operation, there must be a thermostat call for the fan (G). If the unit is occupied and the fan is on, the damper will operate at minimum position. Otherwise, the damper will be closed.

When the EconoMi$er IV, X control is in the occupied mode and a call for cooling exists (Y1 on the thermostat), the control will first check for indoor fan operation. If the fan is not on, then cooling will not be activated. If the fan is on, then the control will open the EconoMi$er® IV, X damper to the minimum position.

On the initial power to the EconoMi$er IV, X control, it will take the damper up to $2^1/_2$ minutes before it begins to position itself. Any change in damper position will take up to 30 seconds to initiate. Damper movement from full closed to full open (or vice versa) will take between $1\ ^1/_2$ and $2\ ^1/_2$ minutes.

If free cooling can be used as determined from the appropriate changeover command (switch, dry bulb, enthalpy curve, differential dry bulb, or differential enthalpy), then the control will modulate the dampers open to maintain

the mixed air temperature setpoint at 50 to 55°F (10 to 13°C).

If there is a further demand for cooling (cooling second stage — Y2 is energized), then the control will bring on compressor stage 1 to maintain the mixed air temperature setpoint. The EconoMi$er IV, X damper will be open at maximum position. EconoMi$er IV, X controller operation is limited to a single compressor.

2-Speed Note: When operating in ventilation mode only, the indoor fan motor will automatically adjust to 66% of the total cfm established.

Heating, unit with EconoMi$er controller

When the room temperature calls for heat through terminal W1, the indoor (evaporator) fan contactor (IFC) and heater contactor no. 1 (HC1) are energized and the reversing valve(s) de-energize and switches position. On units equipped for 2 stages of heat, when additional heat is needed, heater contactor no. 2 is energized through W2. The economizer damper moves to the minimum position. When the thermostat is satisfied, the damper moves to the fully closed position.

Cooling, unit with EconoMi$er2 controller, PremierLink™ controller and a thermostat

When free cooling is not available, the compressors will be controlled by the PremierLink controller in response to the Y1 and Y2 inputs from the thermostat.

The PremierLink controller will use the following information to determine if free cooling is available:

- Indoor fan has been on for at least 30 seconds.
- The SPT, SAT, and OAT inputs must have valid readings.
- OAT must be less than 75°F (24°C).
- OAT must be less than SPT.
- Enthalpy must be LOW (may be jumpered if an enthalpy sensor not available).
- Economizer position is NOT forced.

Pre-cooling occurs when there is no call from the thermostat except G. Pre-cooling is defined as the economizer modulates to provide 70°F (21°C) supply air.

When free cooling is available the PremierLink controller will control the compressors, energize the reversing valve(s) and economizer to provide a supply air temperature determined to meet the Y1 and Y2 calls from the thermostat.

If optional power exhaust is installed, as the outdoor air damper opens and closes, the power exhaust fans will be energized and de-energized.

If field-installed accessory CO_2 sensors are connected to the PremierLink controller, a PID controlled demand ventilation strategy will begin to operate. As the CO_2 level in the zone increases above the CO_2 setpoint, the minimum position of the damper will be increased proportionally. As the CO_2 level decreases because of the increase in fresh air, the outdoor air damper will be proportionally closed.

Heating, unit with EconoMi$er2 controller, PremierLink controller and a thermostat

When the thermostat calls for heating, terminal W1 is energized. The PremierLink controller will move the economizer damper to the minimum position if there is a call for G and closed if there is a call for W1 without G. In order to prevent thermostat from short cycling, the unit is locked into the heating mode for at least 10 minutes when W1 is energized. The reversing valve solenoid(s) de-energizes and switches position.

On units equipped for two stages of heat, when additional heat is needed, W2 is energized and the electric heat (if used) comes on. When the thermostat is satisfied and W1 is de-energized, the IFM stops.

Cooling, unit with EconoMi$er2 controller, PremierLink controller and a room sensor

When free cooling is not available, the compressors will be controlled by the PremierLink controller using a PID Error reduction calculation.

The PremierLink controller will use the following information to determine if free cooling is available:

- Indoor fan has been on for at least 30 seconds.
- The SPT, SAT, and OAT inputs must have valid readings.
- OAT must be less than 75°F (24°C).
- OAT must be less than SPT.
- Enthalpy must be LOW (may be jumpered if an enthalpy sensor is not available).
- Economizer position is NOT forced.

When free cooling is available, the outdoor air damper is positioned through the use of a Proportional Integral (PID) control process to provide a calculated supply air temperature into the zone. The supply air will maintain the space temperature between the heating and cooling setpoints.

The PremierLink™ controller will integrate the compressors stages with the economizer based on similar logic as the three routines listed in the previous section. The supply air set point (SASP) will float up and down based on the error reduction calculations that compare space temperature and space setpoint. The reversing valves will be energized.

If an optional power exhaust is installed, as the outdoor air damper opens and closes, the power exhaust fans will be energized and de-energized.

If field-installed accessory CO_2 sensors are connected to the PremierLink controller, a PID-controlled demand ventilation strategy will begin to operate. As the CO_2 level in the zone increases above the CO_2 setpoint, the minimum position of the damper will be increased proportionally. As the CO_2 level decreases because of the increase in fresh air, the outdoor air damper will be proportionally closed.

Heating, unit with EconoMi$er2, PremierLink controller and a room sensor

Every 40 seconds the controller will calculate the required heat stages (maximum of 3) to maintain Supply Air Temperature (SAT) if the following qualifying conditions are met:

- Indoor fan has been on for at least 30 seconds.
- COOL mode is not active.
- OCCUPIED, TEMP.COMPENSATED START or HEAT mode is active.
- SAT reading is available.
- Fire shutdown mode is not active.

If all of the above conditions are met, the number of heat stages is calculated; otherwise the required number of heat stages will be set to 0.

If the PremierLink controller determines that heat stages are required, the economizer damper will be moved to minimum position if occupied and closed if unoccupied.

Defrost

When the temperature of the outdoor coil drops below 28°F (–2°C) as sensed by the defrost thermostat (DFT2) and the defrost timer is at the end of a timed period (adjustable at 30, 60, 90 or 120 minutes), reversing valve solenoids (RVS1 and RVS2) are energized and the OFC is de-energized. This switches the position of the reversing valves and shuts off the outdoor fan. The electric heaters (if installed) will be energized.

The unit continues to defrost until the coil temperature as measured by DFT2 reaches 65°F (18°C), or the duration of defrost cycle completes a 10-minute period.

During the Defrost mode, if circuit 1 defrosts first, RVS1 will oscillate between Heating and Cooling modes until the Defrost mode is complete.

At the end of the defrost cycle, the electric heaters (if installed) will be de-energized; the reversing valves switch and the outdoor fan motor will be energized. The unit will now operate in the Heating mode.

If the space thermostat is satisfied during a defrost cycle, the unit will continue in the Defrost mode until the time or temperature constraints are satisfied.

Automatic changeover

When the system selection switch is set at AUTO. position, unit automatically changes from heating operation to cooling operation when the temperature of the conditioned space rises to the cooling level setting. When the temperature of the conditioned space falls to the heating level setting, unit automatically changes from cooling to heating operation (with a 3°F deadband in between).

Continuous air circulation

Turn unit power on. Set system control at OFF position. Set fan switch at ON position. The indoor fan contactor is energized through the thermostat switch and the indoor fan runs continuously.

Emergency heat

When the switch is on (thermostat is set to the EM HT position), compressor circuit and outdoor thermostats are bypassed, and the second stage of thermostat energizes the indoor blower and the electric resistance heaters.

RTU Open Controller (Factory Option)

For details on operating 50HCQ units equipped with the factory-installed RTU Open controller option refer to *Factory Installed RTU Open Multi-Protocol Controller Controls, Start-Up, Operation and Troubleshooting* manual.

Min operating ambient temp (cooling)

In mechanical cooling mode, your Carrier rooftop can safely operate down to an outdoor ambient temperature of 30°F (–1°C). It is possible to provide cooling at lower outdoor ambient temperatures by using less outside air, economizers, and/or accessory low ambient kits.

Max operating ambient temp (cooling)

The maximum operating ambient temperature for cooling mode is 125°F (52°C). While cooling operation above 125°F (52°C) may be possible, it could cause either a reduction in performance, reliability, or a protective action by the unit's internal safety devices.

Min and max airflow (cooling and heating mode)

To maintain safe and reliable operation of your rooftop, operate within the cooling airflow limits. Operating above the max may cause blow-off, undesired airflow noise, or airflow related problems with the rooftop unit. Operating below the min may cause problems with coil freeze-up. For proper minimum-maximum CFM values see the table on page 5.

Airflow

All units are draw-though in cooling mode.

Outdoor air application strategies

Economizers reduce operating expenses and compressor run time by providing a free source of cooling and a means of ventilation to match application changing needs. In fact, they should be considered for most applications. Also, consider the various economizer control methods and their benefits, as well as sensors required to accomplish your application goals. Please contact your local Carrier representative for assistance.

Motor limits, break horsepower (BHP)

Due to Carrier's internal unit design, air path, and specially designed motors, the full horsepower (maximum continuous BHP) band, as listed in this manual, can be used with the utmost confidence. There is no need for extra safety factors, as Carrier's motors are designed and rigorously tested to use the entire, listed BHP range without either nuisance tripping or premature motor failure.

Sizing a rooftop

Bigger isn't necessarily better. While an air conditioner needs to have enough capacity to meet the load, it doesn't need excess capacity. In fact, having excess capacity typically results in very poor part load performance and humidity control.

Using higher design temperatures than ASHRAE recommends for your location, adding "safety factors" to the calculated load, and rounding up to the next largest unit, are all signs of oversizing air conditioners. Oversizing can cause short-cycling, and short cycling leads to poor humidity control, reduced efficiency, higher utility bills, drastic indoor temperature swings, excessive noise, and increased wear and tear on the air conditioner.

Rather than oversizing an air conditioner, wise contractors and engineers "right-size" or even slightly undersize air conditioners. Correctly sizing an air conditioner controls humidity better; promotes efficiency; reduces utility bills; extends equipment life, and maintains even, comfortable temperatures.

Low ambient applications

When equipped with a Carrier economizer, your rooftop unit can cool your space by bringing in fresh, cool outside air. In fact, when so equipped, accessory low ambient kit may not be necessary. In low ambient conditions, unless the outdoor air is excessively humid or contaminated, economizer-based "free cooling" is the preferred less costly and energy conscious method.

In low ambient applications where outside air might not be desired (such as contaminated or excessively humid outdoor environments), your Carrier rooftop can operate at ambient temperatures down to –20°F (–29°C) using the recommended accessory Motormaster® low ambient controller.

Application/Selection Option

Selection software by Carrier saves time by calculating performance in the selection process. Contact your Carrier sales representative for assistance.

Staged Air Volume (SAV) with Variable Frequency Drive (VFD)

Carrier's Staged Air Volume (SAV) system utilizes a Variable Frequency Drive (VFD) to automatically adjust the indoor fan motor speed in sequence with the units cooling operation. Per ASHRAE 90.1-2016 and IECC-2015 standards, during the first stage of cooling operation the VFD will adjust the fan motor to provide 66% of the total cfm established for the unit. When a call for the second stage of cooling is required, the VFD will allow the total cfm for the unit established (100%). During the heating mode, the VFD will allow total design cfm (100%) operation and during the ventilation mode the VFD will allow operation to 66% of total cfm.

The VFD used in Carrier's SAV system has soft start capabilities to slowly ramp up the speeds, thus eliminating any high inrush air volume during initial start-up. It also has internal over current protection for the fan motor and a field-installed display kit that allows adjustment and in depth diagnostics of the VFD.

This SAV system is available on models with 2-stage cooling operation with electrical mechanical or RTU Open (multi Protocol) controls. Both space sensor and conventional thermostat controls can be used to provide accurate control in any application.

The SAV system is very flexible for initial fan performance set up and adjustment. The standard factory shipped VFD is pre-programmed to automatically stage the fan speed between the first and second stage of cooling. The unit fan performance static pressure and cfm can be easily adjusted using the traditional means of pulley adjustments. The other means to adjust the unit static and cfm performance is to utilize the field-installed display module and adjust the frequency and voltage in the VFD to required performance requirements. In either case, once set up the VFD will automatically adjust the speed between the cooling stage operations.

Guide specifications

Note about this specification: These specifications are written in "Masterformat" as published by the Construction Specification Institute. Please feel free to copy this specification directly into your building spec.

Rooftop Packaged Heat Pump

HVAC guide specifications

Size range: **3 to 10 Nominal Tons**

Carrier Model Number: **50HCQ*04-12**

Part 1 — (23 06 80) Schedules for decentralized HVAC equipment

1.01 (23 06 80.13) Decentralized Unitary HVAC Equipment Schedule

A. (23 06 80.13.A.) Rooftop unit (RTU) schedule

1. Schedule is per the project specification requirements.

Part 2 — (23 07 16) HVAC equipment insulation

2.01 (23 07 16.13) Decentralized, Rooftop Units:

A. (23 07 16.13.A.) Evaporator fan compartment:

1. Interior cabinet surfaces shall be insulated with a minimum $^1/_2$-in. thick, minimum $1^1/_2$-lb density, flexible fiberglass insulation bonded with a phenolic binder, neoprene coated on the air side.
2. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.
3. Unit internal insulation linings shall be resistant to mold growth in accordance with "mold growth and humidity" test in ASTM C1338, G21, and UL 181 or comparable test method. Air stream surfaces shall be evaluated in accordance with the "Erosion Test" in UL 181, as part of ASTM C1071.

Part 3 — (23 09 13) Instrumentation and control devices for HVAC

3.01 (23 09 13.23) Sensors and Transmitters:

A. (23 09 13.23.A.) Thermostats:

1. Thermostat must:
   a. have capability to energize 2 different stages of cooling, and 2 different stages of heating.
   b. include capability for occupancy scheduling.

Part 4 — (23 09 23) Direct-digital control system for HVAC

4.01 (23 09 23.13) Decentralized, Rooftop Units:

A. (23 09 23.13.A.) PremierLink™ controller:

1. Shall be ASHRAE 62 compliant.
2. Shall accept 18-32 VAC input power.
3. Shall have an operating temperature range from –40°F (–40°C) to 158°F (70°C), 10% to 95% RH (non-condensing).
4. Shall include an integrated economizer controller to support an economizer with 4 to 20 mA actuator input and no microprocessor controller.
5. Controller shall accept the following inputs: space temperature, setpoint adjustment, outdoor air temperature, indoor air quality, outdoor air quality, indoor relative humidity, compressor lock-out, fire shutdown, enthalpy, fan status, remote time clock/door switch.
6. Shall accept a CO_2 sensor in the conditioned space, and be Demand Controlled Ventilation (DCV) ready.
7. Shall provide the following outputs: economizer, fan, cooling stage 1, cooling stage 2, heat stage 1, heat stage 2, heat stage 3/exhaust/ reversing valve/ dehumidify/ occupied.
8. Unit shall provide surge protection for the controller through a circuit breaker.
9. Shall be Internet capable, and communicate at a Baud rate of 38.4K or faster.
10. Shall have an LED display independently showing the status of activity on the communication bus, and processor operation.
11. Shall include an EIA-485 protocol communication port, an access port for connection of either a computer or a Carrier technician tool, an EIA-485 port for network communication to intelligent space sensors and displays, and a port to connect an optional LonWorks[1] plug-in communications card.
12. Shall have built-in Carrier Comfort Network® (CCN) protocol, and be compatible with other CCN devices, including ComfortLink and ComfortVIEW™ controllers.
13. Shall have built-in support for Carrier technician tool.
14. Software upgrades will be accomplished by local download. Software upgrades through chip replacements are not allowed.
15. Shall be shock resistant in all planes to 5G peak, 11ms during operation, and 100G peak, 11ms during storage.
16. Shall be vibration resistant in all planes to 1.5G at 20-300 Hz.
17. Shall support a bus length of 4000 ft (1219 m) max, 60 devices per 1000 ft (305 m) section, and 1 RS-485 repeater per 1000 ft (305 m) sections.

B. (23 09 23.13.B.) RTU Open protocol, direct digital controller:

1. Shall be ASHRAE 62 compliant.
2. Shall accept 18-30VAC, 50-60Hz, and consume 15VA or less power.
3. Shall have an operating temperature range from –40°F (–40°C) to 130°F (54°C), 10% to 90% RH (non-condensing).

1.LonWorks is a registered trademark of Echelon Corporation.

4. Shall include built-in protocol for BACnet[1] (MS/TP and PTP modes), Modbus[2] (RTU and ASCII), Johnson N2 and LonWorks. LonWorks Echelon processor required for all Lon applications shall be contained in separate communication board.
5. Shall allow access of up to 62 network variables (SNVT). Shall be compatible with all open controllers.
6. Baud rate controller shall be selectable using a dip switch.
7. Shall have an LED display independently showing the status of serial communication, running, errors, power, all digital outputs, and all analog inputs.
8. Shall accept the following inputs: space temperature, setpoint adjustment, outdoor air temperature, indoor air quality, outdoor air quality, compressor lockout, fire shutdown, enthalpy switch, and fan status / filter status / humidity / remote occupancy.
9. Shall provide the following outputs: economizer, variable frequency drive, fan, cooling stage 1, cooling stage 2, heat stage 1, heat stage 2, exhaust reversing valve/high fan speed.
10. Shall have built-in surge protection circuitry through solid-state polyswitches. Polyswitches shall be used on incoming power and network connections. Polyswitches will return to normal when the "trip" condition clears.
11. Shall have a battery backup capable of a minimum of 10,000 hours of data and time clock retention during power outages.
12. Shall have built-in support for Carrier technician tool.
13. Shall include an RS-485 protocol communication port, an access port for connection of either a computer or a Carrier technician tool, an RS-485 port for network communication to intelligent space sensors and displays, and a port to connect an optional LonWorks communications card.
14. Software upgrades will be accomplished by either local or remote download. No software upgrades through chip replacements are allowed.

Part 5 — (23 09 33) Electric and electronic control system for HVAC

5.01 (23 09 33.13) Decentralized, rooftop units:

A. (23 09 33.13.A) General:

1. Shall be complete with self-contained low-voltage control circuit protected by a resettable circuit breaker on the 24-v transformer side. Transformer shall have 75VA capability.
2. Shall utilize color-coded wiring.
3. Shall include a central control terminal board to conveniently and safely provide connection points for vital control functions such as: smoke detectors, phase monitor, economizer, thermostat, DDC control options, loss of charge, freeze switch, high pressure switches.
4. Unit shall include a minimum of one 8-pin screw terminal connection board for connection of control wiring.
5. Shall include integrated defrost system to prevent excessive frost accumulation during heating duty, and shall be controlled as follows:
   a. Defrost shall be initiated on the basis of time and coil temperature.
   b. A 30, 60, 90, 120 minute timer shall activate the defrost cycle only if the coil temperature is low enough to indicate a heavy frost condition.
   c. Defrost cycle shall terminate when defrost thermostat is satisfied and shall have a positive termination time of 10 minutes.
6. Defrost system shall also include:
   a. Defrost Cycle Indicator LED.
   b. Dip switch selectable defrost time between 30, 60, 90 and 120 minutes. Factory set at 30 minutes.
   c. Molded plug connection to ensure proper connection.

B. (23 09 33.23.B) Safeties:

1. Compressor over-temperature, over-current.
2. Low-pressure switch:
   a. Units with 2 compressors shall have different sized connectors for the circuit 1 and circuit 2 loss of charge switches. They shall physically prevent the cross-wiring of the safety switches between circuits 1 and 2.
   b. Loss of charge switch shall use different color wire than the high pressure switch. The purpose is to assist the installer and service technician to correctly wire and/or troubleshoot the rooftop unit.
3. High-pressure switch:
   a. Units with 2 compressors shall have different sized connectors for the circuit 1 and circuit 2 high-pressure switches. They shall physically prevent the cross-wiring of the safety switches between circuits 1 and 2.
   b. High-pressure switch shall use different color wire than the low-pressure switch. The purpose is to assist the installer and service technician to correctly wire and/or troubleshoot the rooftop unit.
4. Freeze protection thermostat, evaporator coil.

1. BACnet is a registered trademark of ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers).
2. Modbus is a registered trademark of Schneider Electric.

5. Automatic reset, motor thermal overload protector.

Part 6 — (23 09 93) Sequence of operations for HVAC controls

6.01 (23 09 93.13) Decentralized, Rooftop Units:

A. (23 09 93.13.A) INSERT SEQUENCE OF OPERATION

Part 7 — (23 40 13) Panel air filters

7.01 (23 40 13 13) Decentralized rooftop units:

A. (23 40 13 13.A) Standard filter section:

1. Shall consist of factory-installed, low velocity, throwaway 2-in. thick fiberglass filters of commercially available sizes.
2. Unit shall use only one filter size. Multiple sizes are not acceptable.
3. Filters shall be accessible through an access panel with "no-tool" removal as described in the unit cabinet section of this specification (23 81 19.13.G).

Part 8 — (23 81 19) Self-contained air conditioners

8.01 (23 81 19.13) Small-Capacity Self-Contained Air Conditioners (50HCQ*04-12):

A. (23 81 19.13.A) General:

1. Outdoor, rooftop mounted, electrically controlled, heating and cooling unit utilizing hermetic scroll compressor(s) for cooling duty and heat pump for heating duty.
2. Factory assembled, single piece heating and cooling rooftop unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, and special features required prior to field start-up.
3. Unit shall use Puron® (R-410A) refrigerant.
4. Unit shall be installed in accordance with the manufacturer's instructions.
5. Unit must be selected and installed in compliance with local, state, and federal codes.

B. (23 81 19.13.B.) Quality Assurance:

1. Unit meets ASHRAE 90.1-2016 and IECC-2015 minimum efficiency requirements.
2. Units are ENERGY STAR[1] certified (except for 04 single phase models).
3. Unit shall be rated in accordance with AHRI Standards 210/240 and 340/360.
4. Unit shall be designed to conform to ASHRAE 15.
5. Unit shall be UL-tested and certified in accordance with ANSI Z21.47 Standards and UL or ETL-listed and certified under Canadian standards as a total package for safety requirements.
6. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.
7. Unit internal insulation linings shall be resistant to mold growth in accordance with "mold growth and humidity" test in ASTM C1338, G21, and UL 181 or comparable test method. Air stream surfaces shall be evaluated in accordance with the "Erosion Test" in UL 181, as part of ASTM C1071.
8. Unit casing shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).
9. Roof curb shall be designed to conform to NRCA Standards.
10. Unit shall be subjected to a completely automated run test on the assembly line. The data for each unit will be stored at the factory, and must be available upon request.
11. Unit shall be designed in accordance with UL Standard 1995, including tested to withstand rain.
12. Unit shall be constructed to prevent intrusion of snow and tested to prevent snow intrusion into the control box up to 40 mph.
13. Unit shake tested to assurance level 1, ASTM D4169 to ensure shipping reliability.
14. High Efficiency Motors listed shall meet section 313 of the Energy Independence and Security Act of 2007 (EISA 2007).

C. (23 81 19.13.C) Delivery, storage, and handling:

1. Unit shall be stored and handled per manufacturer's recommendations.
2. Lifting by crane requires either shipping top panel or spreader bars.
3. Unit shall only be stored or positioned in the upright position.

D. (23 81 19.13.D) Project conditions:

As specified in the contract.

E. (23 81 19.13.E) Operating characteristics:

1. Unit shall be capable of starting and running at 125°F (52°C) ambient outdoor temperature, meeting maximum load criteria of AHRI Standard 210/240 or 340/360 at ± 10% voltage.
2. Compressor with standard controls shall be capable of operation down to 30°F (–1°C), ambient outdoor temperatures. Accessory Low Ambient controls are available if mechanically cooling at ambient temperatures below 30°F (–1°C).
3. Unit shall be capable of simultaneous heating duty and defrost cycle operation when using accessory electric heaters.
4. Unit shall discharge supply air vertically or horizontally as shown on contract drawings.

1. ENERGY STAR is a registered trademark of the U.S. Environmental Protection Agency.

5. Unit shall be factory configured for vertical supply and return configurations.
6. Unit shall be field convertible from vertical to horizontal configuration. No special kits on 04 to 09 sizes. Size 12 model shall require a supply duct kit for field installation.
7. Unit shall be capable of mixed operation: vertical supply with horizontal return or horizontal supply with vertical return.

F. (23 81 19.13.F) Electrical Requirements:
1. Main power supply voltage, phase, and frequency must match those required by the manufacturer.
2. Control Panel SCCR (short circuit current rating): 5kA RMS at Rated Symmetrical Voltage.

G. (23 81 19.13.G) Unit cabinet:
1. Unit cabinet shall be constructed of galvanized steel, and shall be bonderized and coated with a pre-painted baked enamel finish on all externally exposed surfaces.
2. Unit cabinet exterior paint shall be: film thickness, (dry) 0.003 inches minimum, gloss (per ASTM D523, 60°F): 60, Hardness: H-2H Pencil hardness.
3. Evaporator fan compartment interior cabinet insulation shall conform to AHRI Standards 210/240 or 340/360 minimum exterior sweat criteria. Interior surfaces shall be insulated with a minimum $^{1}/_{2}$ in. thick, 1 lb density, flexible fiberglass insulation, neoprene coated on the air side. Aluminum foil-faced fiberglass insulation shall be used in the heat compartment.
4. Unit internal insulation linings shall be resistant to mold growth in accordance with "mold growth and humidity" test in ASTM C1338, G21, and UL 181 or comparable test method. Air stream surfaces shall be evaluated in accordance with the "Erosion Test" in UL 181, as part of ASTM C1071.
5. Base of unit shall have a minimum of three locations for thru-the-base electrical connections (factory-installed or field-installed), standard.
6. Base rail:
   a. Unit shall have base rails on a minimum of 2 sides.
   b. Holes shall be provided in the base rails for rigging shackles to facilitate maneuvering and overhead rigging.
   c. Holes shall be provided in the base rail for moving the rooftop by fork truck.
   d. Base rail shall be a minimum of 16-gauge thickness.
7. Condensate pan and connections:
   a. Shall be a sloped condensate drain pan made of a non-corrosive material.
   b. Shall comply with ASHRAE Standard 62.
   c. Shall use a $^{3}/_{4}$-in. -14 NPT drain connection, possible either through the bottom or end of the drain pan. Connection shall be made per manufacturer's recommendations.
8. Top panel:
   a. Shall be a single piece on all 04 to 09 models. Two piece on size 12 models.
9. Electrical connections:
   a. All unit power wiring shall enter unit cabinet at a single, factory prepared, knockout location.
   b. Thru-the-base capability.
      1.) Standard unit shall have a thru-the-base electrical location(s) using a raised, embossed portion of the unit basepan.
      2.) Optional, factory approved, watertight connection method must be used for thru-the-base electrical connections.
      3.) No basepan penetration, other than those authorized by the manufacturer, is permitted.
10. Component access panels (standard):
   a. Cabinet panels shall be easily removable for servicing.
   b. Unit shall have one factory-installed, toolless, removable, filter access panel.
   c. Panels covering control box, indoor fan, indoor fan motor, and compressors shall have molded composite handles.
   d. Handles shall be UV modified, composite, permanently attached, and recessed into the panel.
   e. Screws on the vertical portion of all removable access panels shall engage into heat resistant, molded composite collars.
   f. Collars shall be removable and easily replaceable using manufacturer recommended parts.

H. (23 81 19.13.H.) Coils:
1. Standard Aluminum/Copper Coils on all models:
   a. Standard evaporator and condenser coils shall have aluminum lanced plate fins mechanically bonded to seamless internally grooved copper tubes with all joints brazed.
   b. Evaporator coils shall be leak tested to 150 psig. Pressure tested to 450 psig and qualified to UL 1995 burst test at 1775 psig.
   c. Condenser coils shall be leak tested to 150 psig. Pressure tested to 650 psig and qualified to UL 1995 burst test at 1980 psig.
2. Optional Pre-coated aluminum fin condenser coils on all models:

a. Shall have a durable epoxy-phenolic coating to provide protection in mildly corrosive coastal environments.
b. Coating shall be applied to the aluminum fin stock prior to the fin stamping process to create an inert barrier between the aluminum fin and copper tube.
c. Epoxy-phenolic barrier shall minimize galvanic action between dissimilar metals.
d. Corrosion durability of fin stock shall be confirmed through testing to be no less than 6000 hours salt spray per ASTM B117-90.
e. Corrosion durability of fin stock shall be confirmed through testing to have no visible corrosion after 48 hour immersion in a room temperature solution of 5% salt, 1% acetic acid.
f. Fin stock coating shall pass 2000 hours of the following: one week exposure in the prohesion chamber followed by one week of accelerated ultraviolet light testing. Prohesion chamber: the solution shall contain 3.5% sodium chloride and 0.35% ammonium sulfate. The exposure cycle is one hour of salt fog application at ambient followed by one hour drying at 95°F (35°C).

3. Optional Copper-fin evaporator and condenser coils on all models:
   a. Heat exchanger shall be of the tubular-section type constructed of a minimum of 20-gauge steel coated with a nominal 1.2-mil aluminum-silicone alloy to aid with corrosion resistance.
   b. Burners shall be of the inshot type constructed of aluminum-coated steel.
   c. Burners shall incorporate orifices for rated heat output up to 2000 ft (610 m) elevation. Additional accessory kits may be required for applications above 2000 ft (610 m) elevation, depending on local gas supply conditions.
   d. Each heat exchanger tube shall contain multiple dimples for increased heating effectiveness.
4. Optional E-coated aluminum-fin evaporator and condenser coils on all models:
   a. Shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins.
   b. Coating process shall ensure complete coil encapsulation of tubes, fins and headers.
   c. Color shall be high gloss black with gloss per ASTM D523-89.
   d. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges.
   e. Superior hardness characteristics of 2H per ASTM D3363-92A and cross-hatch adhesion of 4B-5B per ASTM D3359-93.
   f. Impact resistance shall be up to 160 in.-lb (ASTM D2794-93).
   g. Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92).
   h. Corrosion durability shall be confirmed through testing to be no less than 6000 hours salt spray per ASTM B117-90.

I. (23 81 19.13.I) Refrigerant components:
   1. Refrigerant circuit shall include the following control, safety, and maintenance features:
      a. Thermostatic Expansion Valve (TXV) shall help provide optimum performance across the entire operating range. Shall contain removable power element to allow change out of power element and bulb without removing the valve body.
      b. Refrigerant filter drier on each refrigerant circuit.
      c. Service gauge connections on suction and discharge lines.
      d. Pressure gauge access through a specially designed access port in the top panel of the unit.
      e. Suction line accumulator to provide protection in all operating modes from cooling, heating and reverse cycle switching. Standard on each refrigerant circuit.
   2. There shall be gauge line access port in the top of the rooftop, covered by a black, removable plug.
      a. The plug shall be easy to remove and replace.
      b. When the plug is removed, the gauge access port shall enable maintenance personnel to route their pressure gauge lines.
      c. This gauge access port shall facilitate correct and accurate condenser pressure readings by enabling the reading with the compressor access panel on.
      d. The plug shall be made of a leak proof, UV-resistant, composite material.
   3. Compressors:
      a. Unit shall use one fully hermetic, scroll compressor for each independent refrigeration circuit.
      b. Models shall be available with single compressor/single stage cooling designs on 04 to 07 models, single compressor/2-stage cooling on 07 size, and 2 compressor/2-stage cooling models on 08 to 12 sizes.

c. Compressor motors shall be cooled by refrigerant gas passing through motor windings.
d. Compressors shall be internally protected from high discharge temperature conditions.
e. Compressors shall be protected from an overtemperature and over-amperage conditions by an internal, motor overload device.
f. Compressor shall be factory mounted on rubber grommets.
g. Compressor motors shall have internal line break thermal, current overload and high pressure differential protection.
h. Crankcase heaters shall be utilized on all models to protect compressor with specific refrigerant charge.

J. (23 81 19.13.J) Filter section
1. Filters access is specified in the unit cabinet section of this specification.
2. Filters shall be held in place by a pivoting filter tray, facilitating easy removal and installation.
3. Shall consist of factory-installed, low velocity, throw-away 2-in. thick fiberglass filters.
4. Filters shall be standard, commercially available sizes.
5. Only one size filter per unit is allowed.

K. (23 81 19.13.K) Evaporator fan and motor:
1. Evaporator fan motor:
a. Shall have permanently lubricated bearings.
b. Shall have inherent automatic-reset thermal overload protection or circuit breaker.
c. Shall have a maximum continuous bhp rating for continuous duty operation; no safety factors above that rating shall be required.
2. Electric Drive (Direct Drive) X13 – 5 Speed/ Torque Evaporator Fan:
a. Multi-speed motor with easy quick adjustment settings.
b. Blower fan shall be double- inlet type with forward-curved blades.
c. Shall be constructed from steel with a corrosion resistant finish and dynamically balanced.
d. Standard on all 04-06 models.
3. Belt-driven evaporator fan:
a. Belt drive shall include an adjustable pitch motor pulley.
b. Shall use sealed, permanently lubricated ball-bearing type.
c. Blower fan shall be double inlet type with forward curved blades.
d. Shall be constructed from steel with a corrosion resistant finish and dynamically balanced.
e. Standard on all 07-12 size models. Optional on all 04-06 3-phase models.

L. (23 81 19.13.L) Condenser Fans and Motors:
1. Condenser fan motors:
a. Shall be a totally enclosed motor.
b. Shall use permanently lubricated bearings.
c. Shall have inherent thermal overload protection with an automatic reset feature.
d. Shall use a shaft down design on all sizes.
2. Condenser fans:
a. Shall be a direct driven propeller type fan.
b. Shall have aluminum blades riveted to corrosion resistant steel spiders and shall be dynamically balanced.

M. (23 81 19.13.M.) Special features, options, and accessories:
1. Staged Air Volume System (SAV™) for 2-stage cooling models only:
a. Evaporator fan motor:
1.) Shall have permanently lubricated bearings.
2.) Shall have a maximum continuous bhp rating for continuous duty operation; no safety factors above that rating.
3.) Shall be Variable Frequency duty and 2-speed control.
4.) Shall contain motor shaft grounding ring to prevent electrical bearing fluting damage by safely diverting harmful shaft voltages and bearing currents to ground.
2. Variable frequency drive (VFD). Only available on 2-speed indoor fan motor option (SAV™):
a. Factory-supplied VFDs qualify, through ABB for a 12-month warranty from date of commissioning or 18 months from date of sale, whichever occurs first.
b. Shall be installed inside the unit cabinet, mounted, wired and tested.
c. Shall contain Electromagnetic Interference (EMI) frequency protection.
d. Insulated Gate Bi-Polar Transistors (IGBT) used to produce the output pulse width modulated (PWM) waveform, allowing for quiet motor operation.
e. Self diagnostics with fault and power code LED indicator. Field accessory Display Kit available for further diagnostics and special setup applications.
f. RS485 capability standard.
g. Electronic thermal overload protection.
h. 5% swinging chokes for harmonic reduction and improved power factor.
i. All printed circuit boards shall be conformal coated.

3. Integrated EconoMi$er® IV, EconoMi$er® 2, and EconoMi$er X low leak rate models. (Factory-installed on 3-phase models only. Field installed on all 3 and 1-phase models):
   a. Integrated, gear driven opposing modulating blade design type capable of simultaneous economizer and compressor operation.
   b. Independent modules for vertical or horizontal return configuration shall be available. Vertical return modules shall be available as a factory-installed option.
   c. Damper blades shall be galvanized steel with composite gears. Plastic or composite blades on intake or return shall not be acceptable.
   d. Shall include all hardware and controls to provide free cooling with outdoor air when temperature and/or humidity are below setpoints.
   e. Shall be equipped with gear driven dampers for both the outdoor ventilation air and the return air for positive air stream control.
   f. Low leak rate models shall be equipped with dampers not to exceed 2% leakage at 1 in. wg pressure differential.
   g. Economizer controller on EconoMi$er IV models shall be Honeywell W7212 that provides:
      1.) Combined minimum and DCV maximum damper position potentiometers with compressor staging relay.
      2.) Functions with solid state analog enthalpy or dry bulb changeover control sensing.
      3.) LED indicators for: when free cooling is available, when module is in DCV mode, when exhaust fan contact is closed.
   h. Economizer controller on EconoMi$er X models shall be the Honeywell W7220 that provides:
      1.) 2-line LCD interface screen for setup, configuration and troubleshooting.
      2.) On-board Fault Detection and Diagnostics (FDD) that senses and alerts when the economizer is not operating properly, per California Title 24.
      3.) Sensor failure loss of communication identification.
      4.) Automatic sensor detection.
      5.) Capabilities for use with multiple-speed indoor fan systems.
      6.) Utilize digital sensors: Dry bulb and Enthalpy.
   i. Economizer controller on EconoMi$er 2 models with PremierLink™ controller shall be 4 to 20mA design and controlled by the PremierLink controller. PremierLink does not comply with California Title 24 Fault Detection and Diagnostic (FDD) requirements.
   j. Economizer controller on EconoMi$er 2 models with RTU Open controller shall be a 4 to 20mA design controlled directly by the RTU Open controller. RTU Open controller meets California Title 24 Fault Detection and Diagnostic (FDD) requirements.
   k. Shall be capable of introducing up to 100% outdoor air.
   l. Shall be equipped with a barometric relief damper capable of relieving up to 100% return air and contain seals that meet ASHRAE 90.1-2016 and IECC-2015 requirements.
   m. Shall be designed to close damper(s) during loss-of-power situations with spring return built into motor.
   n. Dry bulb outdoor air temperature sensor shall be provided as standard. Enthalpy sensor is also available on factory-installed only. Outdoor air sensor setpoint shall be adjustable and shall range from 40 to 100°F (4 to 38°C). Additional sensor options shall be available as accessories.
   o. The economizer controller shall also provide control of an accessory power exhaust unit function. Factory set at 100%, with a range of 0% to 100%.
   p. The economizer shall maintain minimum airflow into the building during occupied period and provide design ventilation rate for full occupancy.
   q. Dampers shall be completely closed when the unit is in the unoccupied mode.
   r. Economizer controller shall accept a 2 to 10 Vdc CO_2 sensor input for IAQ/DCV control. In this mode, dampers shall modulate the outdoor air damper to provide ventilation based on the sensor input.
   s. Compressor lockout temperature on W7220 is adjustable from –45°F to 80°F, set at a factory default of 32°F. Others shall open at 35°F (2°C) and close at 50°F (10°C).
   t. Actuator shall be direct coupled to economizer gear. No linkage arms or control rods shall be acceptable.
   u. Economizer controller shall provide indications when in free cooling mode, in the DCV mode, or the exhaust fan contact is closed.
4. Integrated EconoMi$er2, and EconoMi$er X Ultra Low Leak rate models.(Factory-installed on 3 phase models only. Field-installed on all 3 and 1 phase models):
   a. Integrated, gear driven opposing modulating blade design type capable of simultaneous economizer and compressor operation.

b. Independent modules for vertical or horizontal return configuration shall be available. Vertical return modules shall be available as a factory-installed option.

c. Damper blades shall be galvanized steel with composite gears. Plastic or composite blades on intake or return shall not be acceptable.

d. Shall include all hardware and controls to provide free cooling with outdoor air when temperature and/or humidity are below setpoints.

e. Shall be equipped with gear driven dampers for both the outdoor ventilation air and the return air for positive air stream control.

f. Ultra Low Leak design meets California Title 24 section 140.4 and, ASHRAE 90.1-2016 and IECC-2015 requirements for 4 cfm per sq ft on the outside air dampers and 10 cfm per sq ft on the return dampers.

g. Economizer controller on EconoMi$er X models shall be the Honeywell W7220 that provides:

1.) 2-line LCD interface screen for setup, configuration and troubleshooting.
2.) On-board Fault Detection and Diagnostics (FDD) that senses and alerts when the economizer is not operating properly, per California Title 24.
3.) Sensor failure loss of communication identification.
4.) Automatic sensor detection.
5.) Capabilities for use with multiple-speed indoor fan systems.
6.) Utilize digital sensors: Dry bulb and Enthalpy.

h. Economizer controller on EconoMi$er2 models with RTU Open controller shall be a 4 to 20mA design controlled directly by the RTU Open controller. RTU Open controller meets California Title 24 Fault Detection and Diagnostic (FDD) requirements.

i. Shall be capable of introducing up to 100% outdoor air.

j. Shall be equipped with a barometric relief damper capable of relieving up to 100% return air and contain seals that meet ASHRAE 90.1-2016 and IECC-2015 requirements.

k. Shall be designed to close damper(s) during loss-of-power situations with spring return built into motor.

l. Dry bulb outdoor air temperature sensor shall be provided as standard. Enthalpy sensor is also available on factory-installed only. Outdoor air sensor setpoint shall be adjustable and shall range from 40 to 100°F (4 to 38°C). Additional sensor options shall be available as accessories.

m. The economizer controller shall also provide control of an accessory power exhaust unit function. Factory set at 100%, with a range of 0% to 100%.

n. The economizer shall maintain minimum airflow into the building during occupied period and provide design ventilation rate for full occupancy.

o. Dampers shall be completely closed when the unit is in the unoccupied mode.

p. Economizer controller shall accept a 2 to 10 Vdc CO_2 sensor input for IAQ/DCV control. In this mode, dampers shall modulate the outdoor air damper to provide ventilation based on the sensor input.

q. Compressor lockout temperature on W7220 is adjustable from –45°F to 80°F (–42°C to 26°C), set at a factory default of 32°F. Others shall open at 35°F (2°C) and closes at 50°F (10°C).

r. Actuator shall be direct coupled to economizer gear. No linkage arms or control rods shall be acceptable.

s. Economizer controller shall provide indications when in free cooling mode, in the DCV mode, or the exhaust fan contact is closed.

5. Two-Position Damper (Factory-installed on 3 Phase Models Only. Field-installed on all 3 and 1 Phase Models):

a. Damper shall be a Two-Position Motorized Damper. Damper travel shall be from the full closed position to the field adjustable %-open setpoint.

b. Damper shall include adjustable damper travel from 25% to 100% (full open).

c. Damper shall include single or dual blade, gear driven dampers and actuator motor.

d. Actuator shall be direct coupled to damper gear. No linkage arms or control rods shall be acceptable.

e. Damper will admit up to 100% outdoor air for applicable rooftop units.

f. Damper shall close upon indoor (evaporator) fan shutoff and/or loss of power.

g. The damper actuator shall plug into the rooftop unit's wiring harness plug. No hard wiring shall be required.

h. Outside air hood shall include aluminum water entrainment filter.

i. Not available with Staged Air Volume (SAV™) models.

6. Manual damper:

a. Manual damper package shall consist of damper, air inlet screen, and rain hood which can be preset to admit up to 50% outdoor air for year round ventilation.

b. Not available with Staged Air Volume (SAV).

7. Head pressure control package (Motormaster®):
   a. Controller shall control coil head pressure by condenser fan speed modulation or condenser fan cycling and wind baffles.
   b. Shall consist of solid state control and condenser coil temperature sensor to maintain condensing temperature between 90°F (32°C) and 110°F (43°C) at outdoor ambient temperatures down to –20°F (–29°C).
   c. Condenser Coil Hail Guard Assembly (Factory-installed option on 3 phase models. Field-installed on all 3 and 1 phase models):
      1.) Shall protect against damage from hail.
      2.) Shall be louvered style design.
8. Unit-mounted, non-fused disconnect switch:
   a. Switch shall be factory-installed, internally mounted.
   b. National Electric Code (NEC) and UL approved non-fused switch shall provide unit power shutoff.
   c. Shall be accessible from outside the unit.
   d. Shall provide local shutdown and lockout capability.
   e. Sized only for the unit as ordered from the factory. Does not accommodate field-installed devices.
9. Convenience outlet:
   a. Powered convenience outlet. (Not available on single phase models):
      1.) Outlet shall be powered from main line power to the rooftop unit.
      2.) Outlet shall be powered from line side or load side of disconnect by installing contractor, as required by code. If outlet is powered from load side of disconnect, unit electrical ratings shall be UL certified and rated for additional outlet amperage.
      3.) Outlet shall be factory-installed and internally mounted with easily accessible 115-v female receptacle.
      4.) Outlet shall include 15 amp GFI receptacles with independent fuse protection.
      5.) Voltage required to operate convenience outlet shall be provided by a factory-installed step down transformer.
      6.) Outlet shall be accessible from outside the unit.
      7.) Outlet shall include a field-installed "Wet in Use" cover.
   b. Factory-Installed Non-powered convenience outlet.
      1.) Outlet shall be powered from a separate 115-120v power source.
      2.) A transformer shall not be included.
      3.) Outlet shall be factory-installed and internally mounted with easily accessible 115-v female receptacle.
      4.) Outlet shall include 15 amp GFI receptacles.
      5.) Outlet shall be accessible from outside the unit.
      6.) Outlet shall include a field-installed "Wet in Use" cover.
   c. Field-Installed Non-powered convenience outlet.
      1.) Outlet shall be powered from a separate 115-120v power source.
      2.) A transformer shall not be included.
      3.) Outlet shall be factory-installed and internally mounted with easily accessible 115-v female receptacle.
      4.) Outlet shall include 20 amp GFI receptacles. This kit provides a flexible installation method which allows code compliance for height requirements of the GFCI outlet from the finished roof surface as well as the capability to relocate the outlet to a more convenient location.
      5.) Outlet shall be accessible from outside the unit.
      6.) Outlet shall include a field-installed "Wet in Use" cover.
10. Thru- the-base connectors:
    a. Kits shall provide connectors to permit electrical connections to be brought to the unit through the unit basepan.
    b. Minimum of three connection locations per unit.
11. Propeller power exhaust:
    a. Power exhaust shall be used in conjunction with an integrated economizer.
    b. Independent modules for vertical or horizontal return configurations shall be available.
    c. Horizontal power exhaust shall be mounted in return ductwork.
    d. Power exhaust shall be controlled by economizer controller operation. Exhaust fans shall be energized when dampers open past the 0 to 100% adjustable setpoint on the economizer control.
12. Roof curbs (vertical):
    a. Full perimeter roof curb with exhaust capability providing separate air streams for energy recovery from the exhaust air without supply air contamination.
    b. Formed galvanized steel with wood nailer strip and shall be capable of supporting entire unit weight.
    c. Permits installation and securing of ductwork to curb prior to mounting unit on the curb.

13. Medium and High Static Indoor Fan Motor(s) and Drive(s) (04-12):
    a. Medium and high static motor(s) and drive(s) shall be factory-installed to provide additional performance range.
14. Outdoor air enthalpy sensor:
    a. The outdoor air enthalpy sensor shall be used to provide single enthalpy control. When used in conjunction with a return air enthalpy sensor, the unit will provide differential enthalpy control. The sensor allows the unit to determine if outside air is suitable for free cooling.
15. Return air enthalpy sensor:
    a. The return air enthalpy sensor shall be used in conjunction with an outdoor air enthalpy sensor to provide differential enthalpy control.
16. Indoor air quality (CO_2) sensor:
    a. Shall be able to provide demand ventilation indoor air quality (IAQ) control.
    b. The IAQ sensor shall be available in duct mount, wall mount, or wall mount with LED display. The setpoint shall have adjustment capability.
17. Smoke detectors (factory-installed only):
    a. Shall be a four-wire controller and detector.
    b. Shall be environmental compensated with differential sensing for reliable, stable, and drift-free sensitivity.
    c. Shall use magnet-activated test/reset sensor switches.
    d. Shall have tool-less connection terminal access.
    e. Shall have a recessed momentary switch for testing and resetting the detector.
    f. Controller shall include:
        1.) One set of normally open alarm initiation contacts for connection to an initiating device circuit on a fire alarm control panel.
        2.) Two Form-C auxiliary alarm relays for interface with rooftop unit or other equipment.
        3.) One Form-C supervision (trouble) relay to control the operation of the Trouble LED on a remote test/reset station.
        4.) Capable of direct connection to two individual detector modules.
        5.) Can be wired to up to 14 other duct smoke detectors for multiple fan shutdown applications.
18. Horn/Strobe Annunciator:
    a. Provides an audible/visual signaling device for use with factory-installed option or field-installed accessory smoke detectors.
        1.) Requires installation of a field-supplied 24-v transformer suitable for 4.2 VA (AC) or 3.0 VA (DC) per horn/strobe accessory.
        2.) Requires field-supplied electrical box, North American 1-gang box, 2-in. (51 mm) x 4-in. (102 mm).
        3.) Shall have a clear colored lens.
19. Time guard compressor delay control circuit:
    a. Shall prevent compressor short cycling by providing a 5-minute delay (±2 minutes) before restarting a compressor after shutdown for any reason.
    b. One device shall be required per compressor.
20. Condensate Overflow Switch (for units with electro-mechanical controls only):
    a. This sensor and related controller monitors the condensate level in the drain pan and shuts down compression operation when overflow conditions occur. It includes:
        1.) Indicator light - solid red (more than 10 seconds on water contact - compressors disabled), blinking red (sensor disconnected).
        2.) 10 second delay to break - eliminates nuisance trips from splashing or waves in pan (sensor needs 10 seconds of constant water contact before tripping).
        3.) Disables the compressor(s) operation when condensate plug is detected, but still allows fans to run for economizer.
21. Electric Heat:
    a. Heating Section
        1.) Heater element open coil resistance wire, nickel-chrome alloy, 0.29 inches inside diameter, strung through ceramic insulators mounted on metal frame. Coil ends are staked and welded to terminal screw slots.
        2.) Heater assemblies are provided with integral fusing in the single point box (if applicable) for protection of internal heater circuits not exceeding 48 amps each. Electric heaters other than CRHEATER113B00-116B00 use 24v control side break/auto-reset or line-break/auto-reset limit switches to protect the unit against over-temperature situations. CRHEATER113B00-116B00 electric heater applications use a combination of 24v control side break/auto-reset, line-break/non-resettable “one shot” limit switches to protect the unit against over-temperature situations. All heaters use magnetic heater contactors (24 v coil) and terminal block all mounted in electric heater control

box (minimum 18 ga galvanized steel) attached to end of heater assembly.

22. Hinged Access panels:
    a. Shall provide easy access through integrated quarter turn latches.
    b. Shall be on major panels of filter, control box, fan motor and compressor.
23. Display kit for variable frequency drive:
    a. Kit allows the ability to access the VFD controller programs to provide special setup capabilities and diagnostics.
    b. Kit contains display module and communication cable.
    c. Display kit can be permanently installed in the unit or used on any SAV system VFD controller as needed.
24. California OSHPD Seismic Certification Label:
    a. Units meet the seismic capacity requirements of the International Code Council Evaluation Service (ICC-ES) document AC156 (Acceptance Criteria for Seismic Qualification by Shake-Table Testing of Non-structural Components and Systems) and per International Building Code (IBC 2009) at an SDS (g) value of 2.00 z/h=1.0, Ip=1.5 and certified by independent structural engineers.
    b. Units shall include a certification label that meets the CA OSHPD Special Seismic Certification pre-approval labeling requirements on the external chassis of the unit.
    c. OSHPD is not available on units with factory-installed hail guard.

Appendix C

Construction Noise Calculations

Report date: 1/16/2024
Case Description: Garvey Reservoir - Phase 1 - I/O Tower Demolition

		Baselines (dBA)		---- Receptor #1 ----
Description	Land Use	Daytime	Evening	Night
Residential	Residential	80	80	80

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	675	0
Backhoe	No	40		77.6	675	0
Drill Rig Truck	No	20		79.1	675	0
Compressor (air)	No	40		77.7	675	0
Compressor (air)	No	40		77.7	675	0
Compressor (air)	No	40		77.7	675	0
Compressor (air)	No	40		77.7	675	0
Compressor (air)	No	40		77.7	675	0
Dozer	No	40		81.7	675	0
Dozer	No	40		81.7	675	0
Excavator	No	40		80.7	675	0
Excavator	No	40		80.7	675	0
Front End Loader	No	40		79.1	675	0
Front End Loader	No	40		79.1	675	0
Front End Loader	No	40		79.1	675	0
Front End Loader	No	40		79.1	675	0

	Calculated (dBA)		Results	Noise Limits (dBA)			
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Backhoe	55	51	N/A	N/A	N/A	N/A	N/A
Backhoe	55	51	N/A	N/A	N/A	N/A	N/A
Drill Rig Truck	56.5	49.5	N/A	N/A	N/A	N/A	N/A
Compressor (air)	55.1	51.1	N/A	N/A	N/A	N/A	N/A
Compressor (air)	55.1	51.1	N/A	N/A	N/A	N/A	N/A
Compressor (air)	55.1	51.1	N/A	N/A	N/A	N/A	N/A
Compressor (air)	55.1	51.1	N/A	N/A	N/A	N/A	N/A
Compressor (air)	55.1	51.1	N/A	N/A	N/A	N/A	N/A
Dozer	59.1	55.1	N/A	N/A	N/A	N/A	N/A
Dozer	59.1	55.1	N/A	N/A	N/A	N/A	N/A
Excavator	58.1	54.1	N/A	N/A	N/A	N/A	N/A
Excavator	58.1	54.1	N/A	N/A	N/A	N/A	N/A

Front End Loader		56.5	52.5	N/A	N/A	N/A	N/A	N/A
Front End Loader		56.5	52.5	N/A	N/A	N/A	N/A	N/A
Front End Loader		56.5	52.5	N/A	N/A	N/A	N/A	N/A
Front End Loader		56.5	52.5	N/A	N/A	N/A	N/A	N/A
	Total	59.1	64.6	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Report date: 1/16/2024
Case Description: Garvey Reservoir - Phase 1 - Reservoir Cover Demolition

		Baselines (dBA)		---- Receptor #1 ----
Description	Land Use	Daytime	Evening	Night
Residential	Residential	80	80	80

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Generator	No	50		80.6	425	0
Generator	No	50		80.6	425	0
Generator	No	50		80.6	425	0
Front End Loader	No	40		79.1	425	0
Compressor (air)	No	40		77.7	425	0
Compressor (air)	No	40		77.7	425	0
Compressor (air)	No	40		77.7	425	0
Compressor (air)	No	40		77.7	425	0
Front End Loader	No	40		79.1	425	0
Front End Loader	No	40		79.1	425	0
Vacuum Street Sweeper	No	10		81.6	425	0

	Calculated (dBA)		Results	Noise Limits (dBA)			
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Generator	62	59	N/A	N/A	N/A	N/A	N/A
Generator	62	59	N/A	N/A	N/A	N/A	N/A
Generator	62	59	N/A	N/A	N/A	N/A	N/A
Front End Loader	60.5	56.5	N/A	N/A	N/A	N/A	N/A
Compressor (air)	59.1	55.1	N/A	N/A	N/A	N/A	N/A
Compressor (air)	59.1	55.1	N/A	N/A	N/A	N/A	N/A
Compressor (air)	59.1	55.1	N/A	N/A	N/A	N/A	N/A
Compressor (air)	59.1	55.1	N/A	N/A	N/A	N/A	N/A
Front End Loader	60.5	56.5	N/A	N/A	N/A	N/A	N/A
Front End Loader	60.5	56.5	N/A	N/A	N/A	N/A	N/A
Vacuum Street Sweeper	63	53	N/A	N/A	N/A	N/A	N/A
Total	63	67.2	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Report date: 1/16/2024
Case Description: Garvey Reservoir Phase 1/2 - Surge Tank Infrastructure Installation

		Baselines (dBA)		---- Receptor #1 ----
Description	Land Use	Daytime	Evening	Night
Residential	Residential	80	80	80

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Generator	No	50		80.6	500	0
Generator	No	50		80.6	500	0
Generator	No	50		80.6	500	0
Crane	No	16		80.6	500	0
Compressor (air)	No	40		77.7	500	0
Compressor (air)	No	40		77.7	500	0
Front End Loader	No	40		79.1	500	0
Vacuum Street Sweeper	No	10		81.6	500	0

	Calculated (dBA)		Results	Noise Limits (dBA)			
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Generator	60.6	57.6	N/A	N/A	N/A	N/A	N/A
Generator	60.6	57.6	N/A	N/A	N/A	N/A	N/A
Generator	60.6	57.6	N/A	N/A	N/A	N/A	N/A
Crane	60.6	52.6	N/A	N/A	N/A	N/A	N/A
Compressor (air)	57.7	53.7	N/A	N/A	N/A	N/A	N/A
Compressor (air)	57.7	53.7	N/A	N/A	N/A	N/A	N/A
Front End Loader	59.1	55.1	N/A	N/A	N/A	N/A	N/A
Vacuum Street Sweeper	61.6	51.6	N/A	N/A	N/A	N/A	N/A
Total	61.6	64.6	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Report date: 2/28/2024
Case Description: Garvey Reservoir Phase 2 - Junction Structure Infrastructure Installation

		---- Receptor #1 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residential	80	80	80

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Generator	No	50		80.6	110	0
Generator	No	50		80.6	110	0
Generator	No	50		80.6	110	0
Crane	No	16		80.6	110	0
Compressor (air)	No	40		77.7	110	0
Compressor (air)	No	40		77.7	110	0
Compressor (air)	No	40		77.7	110	0
Welder / Torch	No	40		74	110	0

			Results				
		Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening		Night
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Generator		73.8	70.8	N/A	N/A	N/A	N/A	N/A
Generator		73.8	70.8	N/A	N/A	N/A	N/A	N/A
Generator		73.8	70.8	N/A	N/A	N/A	N/A	N/A
Crane		73.7	65.7	N/A	N/A	N/A	N/A	N/A
Compressor (air)		70.8	66.8	N/A	N/A	N/A	N/A	N/A
Compressor (air)		70.8	66.8	N/A	N/A	N/A	N/A	N/A
Compressor (air)		70.8	66.8	N/A	N/A	N/A	N/A	N/A
Welder / Torch		67.2	63.2	N/A	N/A	N/A	N/A	N/A
	Total	73.8	77.5	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Report date: 2/28/2024
Case Description: Garvey Reservoir Phase 3 - Pump Station Infrastructure Installation

				---- Receptor #1 ----
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residential	80	80	80

			Equipment				
			Spec	Actual	Receptor	Estimated	
	Impact		Lmax	Lmax	Distance	Shielding	
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)	
Generator	No	50		80.6	90	0	
Generator	No	50		80.6	90	0	
Generator	No	50		80.6	90	0	
Front End Loader	No	40		79.1	90	0	

			Results				
	Calculated (dBA)		Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Generator	75.5	72.5	N/A	N/A	N/A	N/A	N/A
Generator	75.5	72.5	N/A	N/A	N/A	N/A	N/A
Generator	75.5	72.5	N/A	N/A	N/A	N/A	N/A
Front End Loader	74	70	N/A	N/A	N/A	N/A	N/A
Total	75.5	78	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Attachment F

Phase I Environmental Site Assessment

Phase I Environmental Site Assessment

North County Fire Protection District Station No. 4
4375 Pala Mesa Drive
Fallbrook, California

prepared for

North County Fire Protection District
330 South Main Avenue
Fallbrook, California 92028

prepared by

Rincon Consultants, Inc.

Report Date – January 25, 2024
Date of First Research – December 18, 2023

RINCON CONSULTANTS, INC.
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January 25, 2024
Project No.: 23-14998

Mavis Canpinar, Executive Assistant
North County Fire Protection District
330 South Main Avenue
Fallbrook, California 92028
Via email: mavis@ncfire.org

Subject: Phase I Environmental Site Assessment, North County Fire Protection District Station No. 4 4375 Pala Mesa Drive, Fallbrook, California

Dear Ms. Canpinar:

This report presents the findings of a Phase I Environmental Site Assessment (ESA) completed by Rincon Consultants, Inc. (Rincon) for the North County Fire Protection District Station No. 4 property located at 4375 Pala Mesa Drive in Fallbrook, California. The Phase I ESA was performed in accordance with our proposal dated September 7, 2023 and contract dated November 20, 2023.

The accompanying report presents our findings and provides an opinion regarding the presence of recognized environmental conditions in connection with the subject property. Our work program for this project, as referenced in our contract, is intended to meet the guidelines outlined in the ASTM International (ASTM) Standard Practice for Environmental Site Assessments: *Phase I Environmental Site Assessment Process* (ASTM Standard E1527-21). Our scope of services, pursuant to ASTM practice, did not include any inquiries with respect to asbestos-containing building materials unrelated to releases into the environment; biological agents; cultural and historic resources; ecological resources; endangered species; health and safety; indoor air quality unrelated to releases of hazardous substances or petroleum products into the environment; industrial hygiene; lead-based paint unrelated to releases into the environment; lead in drinking water; mold or microbial growth conditions; polychlorinated biphenyl-containing building materials (e.g., interior fluorescent light ballasts, paint, and caulk); naturally-occurring radon; regulatory compliance; substances not defined as hazardous substances (including some substances sometimes generally referred to as emerging contaminants) unless or until such substances are classified as a Comprehensive Environmental Response, Compensation, and Liability Act hazardous substance; and wetlands.

Thank you for selecting Rincon for this project. If you have any questions, or if we can be of any future assistance, please contact us.

Sincerely,
Rincon Consultants, Inc.

Savanna Vrevich
Environmental Scientist

Julie Lynne Welch, REPA
Director of Due Diligence

Elsa Rafter
Environmental Scientist

Taryn Sparacio, PG
Senior Supervising Geologist

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1 Executive Summary

This report presents the findings of a Phase I Environmental Site Assessment (ESA) for the North County Fire Protection District Station No. 4 property located at 4375 Pala Mesa Drive in Fallbrook, California (subject property). The Phase I ESA was performed for North County Fire Protection District by Rincon Consultants, Inc. (Rincon). North County Fire Protection District has requested this assessment and will use the information for the purpose of constructing a new fire station on the subject property. Rincon understands that the existing fire station on the subject property is proposed for demolition and replacement with a new fire station.

The research completed as part of this Phase I ESA is listed below:

Task	Completed	Date Reviewed	Concern Identified?
User-Provided – Title Report	Yes	01/09/2024	No
User-Provided – Lien Search Report	Requested	Not Applicable (N/A)	N/A
User-Provided – Additional Documents	No	N/A	N/A
Historical Research – Aerial Photographs	Yes	12/19/2023	Yes
Historical – Topographic Maps	Yes	12/19/2023	Yes
Historical – Fire Insurance Maps	Yes, none available	N/A	N/A
Historical – City Directories	Yes	12/19/2023	No
Physical Setting	Yes	12/19/2023	No
Agency Database Report	Yes	01/09/2024	No
Agency File Reviews	No	N/A	N/A
Interviews – User Questionnaire	Yes	01/03/2024	No
Interviews – Owner Questionnaire	Yes	01/09/2024	No
Interviews – Other	Yes	01/04/2024	No
Site Reconnaissance	Yes	01/04/2024	No
Vapor Migration Research	Yes	01/09/2024	No

Based on the findings of this Phase I ESA, it is our opinion that there is one Recognized Environmental Condition (REC) and three Notable Findings in connection with the subject property as follows.

Recognized Environmental Conditions	Former agricultural use of the subject property
Notable Findings	1. Current and former subject property use as a fire station with aboveground storage tanks (ASTs) and hazardous materials storage 2. Reported per- and polyfluoroalkyl substances (PFAS) in groundwater within 9 miles of the subject property 3. Potential asbestos-containing materials (ACM) and lead-based paint (LBP) at the subject property

To evaluate the potential subject property impact associated with the former agricultural use of the subject property, we recommend that a shallow soil investigation be conducted prior to grading/construction activities. No additional assessment is recommended with regard to the

current and former subject property use as a fire station with ASTs and hazardous materials storage, or the nearby PFAS in groundwater. In addition, although not considered an REC, based on the age of the onsite structure (constructed in approximately 1989) we recommend that an ACM and LBP survey be conducted prior to demolition.

2 Introduction

This report presents the findings of a Phase I Environmental Site Assessment (ESA) conducted for the North County Fire Protection District Station No. 4 property located at 4375 Pala Mesa Drive in Fallbrook, California (subject property; Figure 1). The Phase I ESA was performed by Rincon Consultants, Inc. (Rincon) for North County Fire Protection District (NCFPD) in general conformance with ASTM International (ASTM) Standard E1527-21, our proposal dated September 7, 2023, and our contract dated November 20, 2023. This report presents our findings and provides our opinion as to the presence of recognized environmental conditions (RECs) on the subject property.

2.1 Subject Property Description

The subject property is located west of Old Highway 395 and south of Pala Mesa Drive in Fallbrook, California (Figure 2). Additional information regarding the subject property is listed in Table 1.

Table 1 Subject Property Characteristics

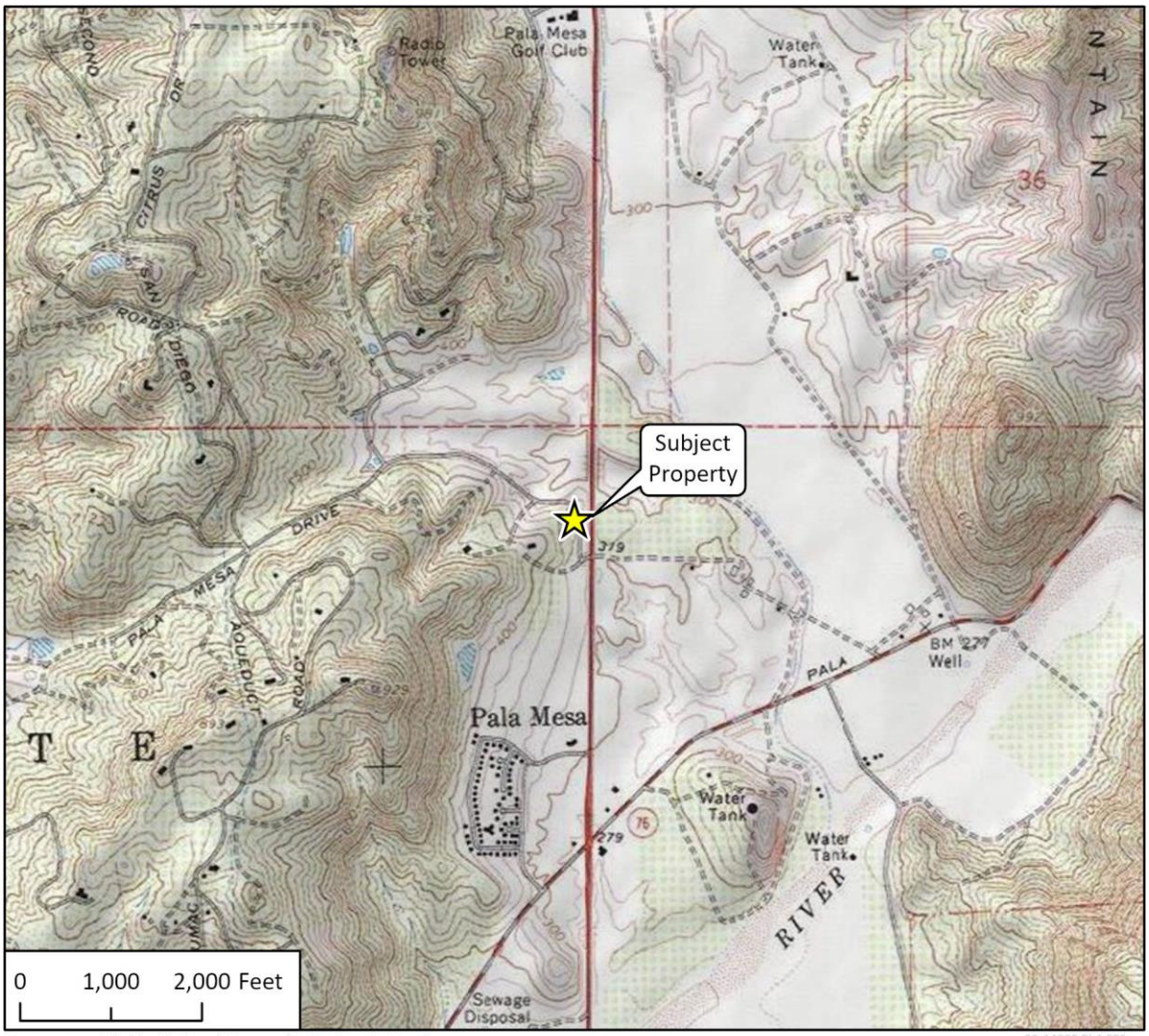
Property Characteristic	Description
Subject Property Address	4375 Pala Mesa Drive, Fallbrook, California
Historical Subject Property Address(es)	4375 Pala Mesa Drive, Fallbrook, California
Assessor's Parcel Number(s)/Acreage	1250-506-900/1.73 acres
No. of Buildings/Year of Construction	1/1989
Subterranean Features	None
Current Subject Property Use	North County Fire Protection District Fire Station No. 4
Current Owner of Subject Property	North County Fire Protection District
Current Tenant(s) of Subject Property	North County Fire Protection District

2.1.1 Descriptions of Roads and Other Improvements on the Subject Property

During the site reconnaissance, one modular office/dwelling building with attached garage, a storage shed, and a shipping container (used for storage) were observed on the subject property. Wire fencing was noted around the perimeter of the subject property. Access to the subject property is available from driveways on Pala Mesa Drive and Old Highway 395. The following utility providers service the subject property:

Electrical Service	San Diego Gas & Electric
Natural Gas Service	San Diego Gas & Electric
Water Service	Rainbow Municipal Water District
Sewer Service	San Diego County
Solid Waste Service	Private vendors

Figure 1 Vicinity



Imagery provided by National Geographic Society, Esri and their licensors © 2024. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

23-14998 PhI EES
PhIFig 1 Vicinity Map

Project Location

N

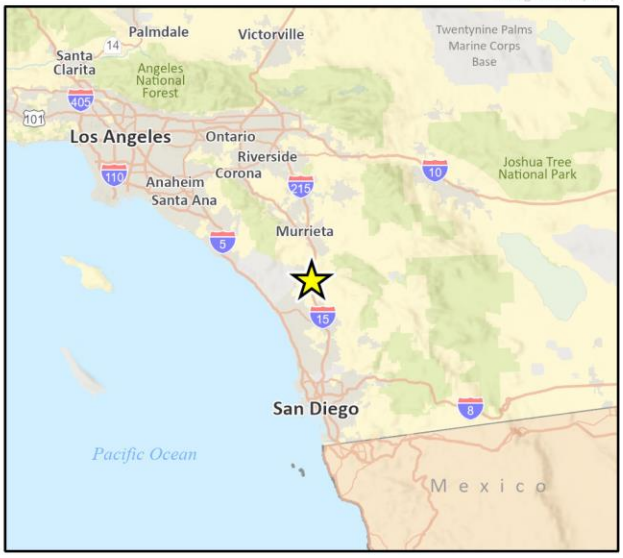
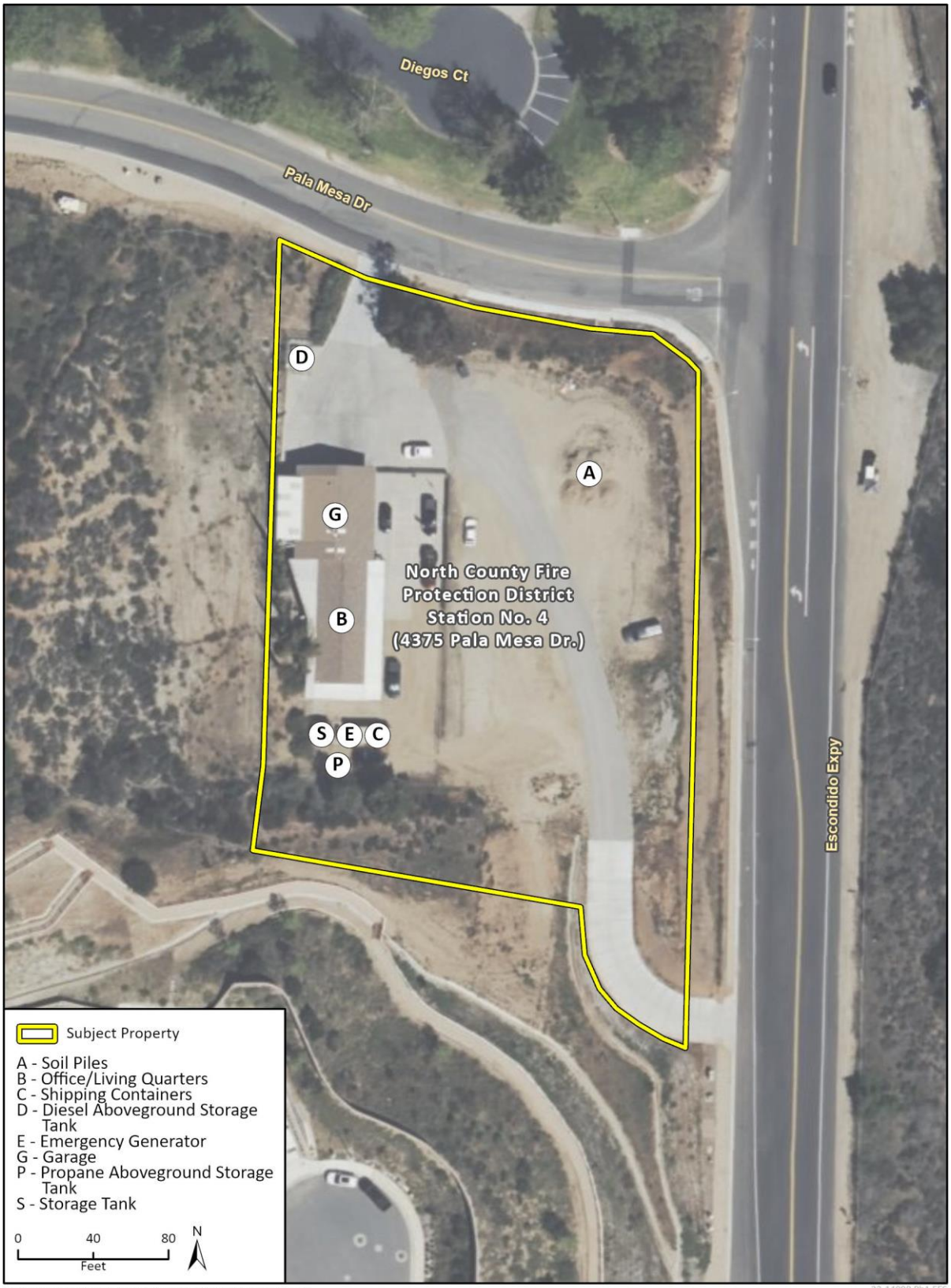


Figure 2 Subject Property



2.1.2 General Vicinity Characteristics

The subject property is located in an area that is primarily composed of residential and undeveloped land. The current adjacent land uses are described in Table 2 and depicted on Figure 3.

Table 2 Current Uses of Adjacent Properties

Area	Use
Northern Properties	Pala Mesa Drive followed by single-family residences
Eastern Properties	Old Highway 395 and vacant land followed by Interstate 15
Southern Properties	Unpaved roads followed by single-family residences
Western Properties	Undeveloped land with vegetation

Figure 3 Adjacent Land Use

2.2 Purpose and Definitions

North County Fire Protection District has requested this assessment and will use the information for the purpose of demolishing the existing fire station and constructing a new fire station on the subject property. The purpose of this Phase I ESA was to determine if there are RECs on the subject property, taking into account commonly and reasonably ascertainable information, and to qualify for Landowner Liability Protections under the Brownfields Amendments to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

A **Recognized Environmental Condition (REC)** is defined pursuant to ASTM E1527-21 as,

"(1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment;

(2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or

(3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment."

As stated in ASTM E1527-21, "**likely** is that which is neither certain nor proved, but can be expected or believed by a reasonable observer based on the logic and/or experience of the environmental professional, and/or available evidence, as stated in the report to support the opinions given therein."

A **Controlled REC** is defined pursuant to ASTM E1527-21 as, "recognized environmental condition affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations)."

A **Historical REC** is defined pursuant to ASTM E1527-21 as, "a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, activity and use limitations or other property use limitations). A historical recognized environmental condition is not a recognized environmental condition."

A ***de minimis*** condition is defined pursuant to ASTM E1527-21 as, "a condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. A condition determined to be a de minimis condition is not a recognized environmental condition nor a controlled recognized environmental condition."

A **Property Use Limitation (PUL)** is defined pursuant to ASTM E1527-21 as, "a limitation or restriction on current or future use of a property in connection with a response to a release, in accordance with the applicable regulatory authority or authorities that allows hazardous substances or petroleum products to remain in place at concentrations exceeding unrestricted use criteria."

A **Significant Data Gap** is defined pursuant to ASTM E1527-21 as, "a data gap that affects the ability of the environmental professional to identify a recognized environmental condition."

2.2.1 Notable Finding

Although not defined by ASTM E1527-21, Rincon utilizes the term *Notable Finding* for potential environmental concerns present at or possibly present at a property that do not specifically fit one of the above ASTM-defined situations, yet may impact current or future use of the subject property.

2.3 Scope of Services

The scope of services conducted during this study is outlined below:

- Performed a reconnaissance of the subject property to identify obvious indicators of the existence of hazardous materials.
- Observed adjacent or nearby properties from public thoroughfares in an attempt to see if such properties are likely to use, store, generate, or dispose of hazardous materials.
- Obtained and reviewed an environmental records database search to obtain information about the potential for hazardous materials to exist at the subject property or at properties located in the vicinity of the subject property.
- Reviewed files for the subject property and immediately adjacent properties as identified in the database report, as applicable.
- Reviewed the current United States Geological Survey (USGS) topographic map to obtain information about the subject property and regional topography and uses of the subject property and surrounding sites.
- Reviewed additional pertinent record sources (e.g., California Geologic Energy Management Division [CalGEM] records, online databases of hazardous substance release sites), as necessary, to identify the presence of RECs at the subject property.
- Reviewed the California State Water Resources Control Board (SWRCB) Statewide Per- and Polyfluoroalkyl Substances (PFAS) Investigation online Public Map Viewer regarding current PFAS orders issued to facilities located in the vicinity of the subject property.
- Reviewed reasonably ascertainable historical resources (e.g., aerial photographs, topographic maps, fire insurance maps, city directories) to assess the historical land use of the subject property and adjacent properties.
- Provided a user interview questionnaire to a representative of Client, the user of the Phase I ESA.
- Provided a property owner interview questionnaire to the property owner or a designated subject property representative identified to Rincon by Client.
- Conducted interviews with other property representatives (e.g., key site manager, occupants), as applicable.
- Reviewed available Client-provided information (e.g., previous environmental reports, title documentation).
- Requested Title Search Information Reports and environmental lien search information from the user of the report.

2.4 Significant Assumptions, Limitations, Deviations, Exceptions, Special Terms, and Conditions

This work is intended to adhere to good commercial, customary, and generally accepted environmental investigation practices for similar investigations conducted at this time and in this geographic area. No guarantee or warranties, expressed or implied, are provided. The findings and opinions conveyed in this report are based on findings derived from a site reconnaissance, review of an environmental database report, specified regulatory records and historical sources, and comments made by interviewees. This report is not intended as a comprehensive site characterization and should not be construed as such. Standard data sources relied upon during the completion of Phase I ESAs may vary with regard to accuracy and completeness. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the

authenticity or reliability of the data sources it has used. Additionally, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research.

Rincon has not found evidence that hazardous materials or petroleum products exist at the subject property at levels likely to warrant mitigation. Rincon does not under any circumstances warrant or guarantee that not finding evidence of hazardous materials or petroleum products means that hazardous materials or petroleum products do not exist on the subject property. Additional research, including surface or subsurface sampling and analysis, can reduce North County Fire Protection District's risks, but no techniques commonly employed can eliminate these risks altogether.

In addition, pursuant to ASTM E1527-21 practice, our scope of services did not include any inquiries with respect to asbestos-containing building materials unrelated to releases into the environment; biological agents; cultural and historic resources; ecological resources; endangered species; health and safety; indoor air quality unrelated to releases of hazardous substances or petroleum products into the environment; industrial hygiene; lead-based paint unrelated to releases into the environment; lead in drinking water; mold or microbial growth conditions; polychlorinated biphenyl (PCB)-containing building materials (e.g., interior fluorescent light ballasts, paint, and caulk); naturally-occurring radon; regulatory compliance; substances not defined as hazardous substances (including some substances sometimes generally referred to as emerging contaminants) unless or until such substances are classified as a CERCLA hazardous substance; and wetlands.

2.5 ASTM Deviations

Deviations from ASTM E1527-21 practice were not encountered during the completion of this Phase I ESA. An environmental lien search was not completed as part of this assessment; however, one was requested from the user.

2.6 User Reliance

North County Fire Protection District has requested this assessment and will use the information for the purpose of demolishing the existing fire station and constructing a new fire station on the subject property. This Phase I ESA was prepared for use solely and exclusively by North County Fire Protection District. No other use or disclosure is intended or authorized by Rincon. Also, this report is issued with the understanding that it is to be used only in its entirety. It is intended for use only by North County Fire Protection District and no other person or entity may rely upon the report without the express written consent of Rincon.

3 User-Provided Information and Responsibilities

3.1 Review Land Title Records and Judicial Records for Environmental Liens and Activity and Use Limitations

Rincon requested title search information reports from the user of the report. Pursuant to ASTM E1527-21,

> "the title search information reports shall identify environmental covenants, environmental easements, land use covenant and agreements, declaration of environmental land use restrictions, environmental land use controls, environmental use controls, environmental liens, or any other recorded instrument that restricts, affects, or encumbers the title to the subject property due to restrictions or encumbrances associated with the presence of hazardous substances or petroleum products. Title search information reports shall review land title records for documents recorded between 1980 and the present. If judicial records are not reviewed, the title search information report shall include a statement providing that the law or custom in the jurisdiction at issue does not require a search for judicial records in order to identify environmental liens."
>
> As stated in ASTM E1527-21 it is the "user's responsibility to search for environmental liens and activity and land use limitations (AULs)." This is in "addition to the environmental professional's search of institutional control and engineering control registries described in" ASTM E1527-21 Section 8.2.

A copy of the title search information records provided by the user is included in Appendix A and described in Section 3.3.

3.2 User Questionnaire

As described in ASTM E1527-21 Section 6, a User Questionnaire as provided by ASTM E1527-21 Appendix X3 was provided to North County Fire Protection District. The purpose of the User Questionnaire is for the user of the Phase I ESA to provide actual knowledge pertaining to the subject property to help identify RECs. Mavis Canpinar, Executive Assistant with North County Fire Protection District, completed the User Questionnaire on January 2, 2024. A copy of the completed questionnaire is included as Appendix A.

Based on our review of the completed questionnaire, the user indicated the following:

- The Phase I ESA is being performed for the construction of a new fire station on the subject property.
- No transaction is planned for the subject property, the proposed fire station will be built on an existing property already owned by North County Fire Protection District.

Based on our review of the completed questionnaire, the user reviewed the Preliminary Title Report and is unaware of information regarding the following:

- Environmental cleanup liens or AULs for the subject property

Based on our review of the completed questionnaire, the user did not review the following sources of information and is unaware of information regarding the following:

- Recorded land title records (or judicial records, where appropriate) that identify any environmental liens filed or recorded against the subject property
- Recorded land title records (or judicial records, where appropriate) that identify any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the property and/or have been filed or recorded against the subject property under federal, tribal, state, or local law

Based on our review of the completed questionnaire, the user is unaware of information regarding the following:

- Specialized knowledge or experience related to the subject property or nearby properties
- Reduction in value for the subject property relative to any known environmental issues
- Commonly known or reasonably ascertainable information about the subject property that would help the environmental professional to identify conditions indicative of releases or threatened releases
- Obvious indicators that point to the presence or likely presence of releases at the subject property
- Pending, threatened, or past litigation relevant to hazardous substances or petroleum products, in, on, or from the subject property
- Pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the subject property
- Notice from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products

3.3 User-Provided Document Review

The following documents regarding the subject property were provided by North County Fire Protection District:

- *Preliminary Title Report, First American Title, August 2023.* Based on our review of this report, the title of the subject property is vested in North County Fire Protection District. There are easements for sanitary sewer, drainage, roads, public utilities, community antenna television system, public highway, open space and restrictions, gas pipelines, telegraph and telephone lines, electrical energy and water, storm drains, slope rights, and maintenance rights, located on the subject property.

4 Physical Setting Resources and Government Records

4.1 Physical Setting Resources

4.1.1 Topography

The current USGS topographic map (Bonsall Quadrangle 2022) indicates that the subject property is situated at an elevation of approximately 340 feet above mean sea level with topography sloping down to the northeast. The adjacent topography consists of hills with peak elevations ranging from 900 to 1,200 feet. A copy of the current USGS topographic map is included in Appendix B (EDR 2023e).

4.1.2 Geology and Hydrogeology

Based on information provided by North County Fire Protection District, there are no site-specific geotechnical or geologic reports available for the subject property.

According to the Geologic Map of California (Jennings et al. 2010), the subject property is underlain by plutonic rock, which is described as Mesozoic granite, quartz monzonite, granodiorite, and quartz diorite.

During the preparation of this Phase I ESA, we reviewed the California SWRCB's online GeoTracker database to determine groundwater flow direction in the vicinity of the subject property. File reviews conducted for the subject property and/or surrounding release sites indicate that groundwater is typically encountered in the upper 15 to 60 feet below grade with gradients to south, southeast, southwest, and northwest. The information obtained regarding groundwater in the vicinity of the subject property is listed below:

Source Address, Distance, and Direction from Subject Property	Groundwater Depth (feet below grade)	Groundwater Flow Direction	Source
Horse Creek Ridge – Equestrian Staging Area Southeastern corner of Pankey Rd. and Pankey Pl. (0.6 mile southeast)	15 to 40 feet	South and southeast	GeoTracker website (Case Closure Summary, July 2021)
Proposed Meadowood Development 5326 Pala Rd. (0.7 mile northeast)	40 feet (estimated)	South (estimated)	GeoTracker website (Case Closure Summary, April 2020)
Mobil 18-034 4730 Highway 76 (0.8 mile south)	24.80 to 60.27 feet	Northwest and southwest	GeoTracker website (Environmental Case Closure Request, April 2015)

4.2 Government Record Sources and Agency Records Review

Rincon outsourced with a regulatory database search contractor, Environmental Data Resources, Inc. (EDR), to obtain records of sites that generate, store, treat, or dispose of hazardous materials and sites for which a hazardous material release incident has occurred. The regulatory database search was conducted for the subject property and included data from surrounding sites within specified radii of the subject property. A copy of the database report, which specifies the ASTM E1527-21 search distance for each public list, is included as Appendix C. As shown on the December 18, 2023 database report, federal, state, and county lists were reviewed as part of the research effort. Please refer to Appendix C for a complete listing of sites reported by EDR and a description of the databases reviewed.

The Map Findings Summary, included in the database report, provides a summary of the databases searched, the number of reported facilities within the search radii, and whether the facility is located onsite or adjacent to the subject property.

As a follow-up to the database search, Rincon reviewed regulatory information for the subject property and nearby listings that were interpreted to have the potential to impact the subject property, based on one or more of the factors listed below:

- Reported distance of the facility from the subject property;
- The nature of the database on which the facility is listed, and/or whether the facility was listed on a database reporting unauthorized releases of hazardous materials, petroleum products, or hazardous wastes;
- Reported case type (e.g., soil only, failed underground storage tank [UST] test only);
- Reported substance released (e.g., chlorinated solvents, gasoline, metals);
- Reported regulatory agency status (e.g., case closed, “no further action”); and,
- Location of the facility with respect to the reported groundwater flow direction (discussed in Section 4.1 of this report).

Facilities/properties that were interpreted by Rincon to be of potential environmental concern to the subject property, based on one or more of the factors listed above, are summarized below. In accordance with ASTM E1527-21, contamination migration pathways in soil, groundwater, and soil vapor were considered in our analysis of offsite properties of potential environmental concern.

The following sections include a summary of our review of the database report. Because no database-listed sites were interpreted to be of potential environmental concern to the subject property, no agency files were reviewed as part of this research effort.

4.2.1 Orphan Listings

The EDR database report identified three orphan or unmapped site listings, which were unable to be plotted due to insufficient address information. Based on Rincon’s review of the limited address information or site descriptions for the orphan listings, none of the listings are expected to impact the subject property.

4.2.2 National Priorities List

National Priorities List sites were not identified in the EDR database report.

4.2.3 Subject Property

The subject property was listed in 3 non-release databases in the EDR report as described below.

4.2.3.1 4375 Pala Mesa Drive (North County Fire Protection District Station #4)

Database Summary	The subject property was listed in three non-release databases: FINDS, CERS, and HMMD San Diego. These listings indicate that hazardous materials are handled and stored onsite; however, no releases have been reported.
Agency Records	Because the subject property was not listed on any release databases, GeoTracker, or EnviroStor, agency records for the subject property were not reviewed.

4.2.4 Adjacent Properties

None of the adjacent properties were listed in any of the databases searched.

4.2.5 Nearby Release Sites within 1/3 Mile

None of the properties located within 1/3 mile are listed in any of the release databases searched as part of this assessment.

4.3 Review of State of California Geologic Energy Management Division (CalGEM) Records

A review of the CalGEM Online Mapping System indicates that no oil wells are located on the subject property or adjacent properties, or within 0.25 mile of the subject property (CalGEM 2023).

4.4 Review of National Pipeline Mapping System Records

A review of the National Pipeline Mapping System (NPMS) online Public Map Viewer indicates that no natural gas transmission pipelines or hazardous liquid pipelines are located on the subject property or adjacent properties. Additionally, no pipeline-related accidents or incidents are mapped within 0.25 mile of the subject property (United States Department of Transportation 2023).

4.5 Review of California Statewide PFAS Investigation

Beginning in 2019, the SWRCB sent assessment requirements to property owners of sites that may be potential sources of PFAS. These sites currently include select airports, chrome plating facilities, Department of Defense (DoD) sites, landfills, publicly owned treatment works facilities, and bulk fuel storage terminals and refineries. According to the SWRCB, “PFAS are a large group of human-

made substances that do not occur naturally in the environment and are resistant to heat, water, and oil" (SWRCB 2023b). There are 57 known classes of PFAS comprising hundreds of individual PFAS compounds that were, or still are commercially produced. Only two PFAS compounds have undergone sufficient toxicological testing to have been assigned United States Environmental Protection Agency (USEPA) Health Advisory Levels: perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS). Other PFAS compounds can be transformed into PFOA and PFOS in the environment (USEPA 2023).

Our December 19, 2023 review of the California PFAS Investigations online map viewer indicates that there are no current airport, chrome plating, DoD, landfill, publicly owned treatment works facilities, or bulk fuel storage terminals and refineries with PFAS orders listed as located within 0.5 mile of the subject property (SWRCB 2023c).

Our December 19, 2023 review of the online GeoTracker PFAS Map viewer indicates that PFOA and PFOS were detected in a series of 12 San Diego County Water District drinking water wells located approximately 9 to 12 miles southeast of the subject property and tested quarterly as part of a PFAS investigative order (SWRCB 2023c). Seven of these wells contained PFOS at concentrations between the SWRCB notification and response levels, while five wells contained PFOS at concentrations above the SWRCB response level. Additionally, three wells contained PFOA at concentrations between the SWRCB notification and response levels, while four wells contained PFOA at concentrations above the SWRCB response level.

5 Historical Records

5.1 Methodology

The historical records review completed for this Phase I ESA includes aerial photographs, topographic maps, fire insurance maps, city directories, and building permits as detailed in the following sections. Copies of the historical resources reviewed are included in Appendix B. Table 3 provides a summary of the historical use information available for the subject property and adjacent properties.

Review of Aerial Photographs	Aerial photographs from EDR's aerial photograph collection were obtained. In addition, a current aerial photograph from Google Earth was reviewed. The aerial photographs were reviewed on December 19, 2023.
Review of Historical Topographic Maps	Historical topographic maps from EDR's map collection were obtained. The historical topographic maps were reviewed on December 19, 2023.
Review of City Directory Listings	EDR was contracted to provide copies of city directory listings for the subject property. The city directory listings were reviewed on December 22, 2023.
Review of Fire Insurance Maps	As indicated in the attached report, fire insurance maps were not available for the subject property or adjacent properties.
Review of Building Permit Records	Based on the sufficient amount of information obtained from the above sources, building permit records were not reviewed.
Other Historical Sources	Based on the sufficiency of historical information obtained for the purposes of this report, no additional historical sources were reviewed.

5.2 Summary of Subject Property and Adjacent Historical Uses

Table 3 Historical Use of the Subject Property and Adjoining Properties

Year	Source	Subject Property Use	Adjoining Property Use
1901	Topographic Map (TM)	Undeveloped/vacant land	North (N): Undeveloped/vacant land East (E): Undeveloped/vacant land South (S): Undeveloped/vacant land with an intermittent stream trending northwest (NW) to southeast (SE) West (W): Undeveloped/vacant land
1939	Aerial Photograph (AP)	Cleared land with a section of undeveloped land in the NW corner of the property	N: Undeveloped land E, S: Cleared land W: Undeveloped land to the NW and cleared land to the southwest (SW)
1946	AP	Similar to the 1939 AP	N, S, W: Similar to the 1939 AP E: A primary highway (Highway 395) followed by cleared land

Year	Source	Subject Property Use	Adjoining Property Use
1947	TM	Undeveloped/vacant land with an intermittent stream traversing W to SE in the southern portion of the property that terminates at the western boundary of the property	N: Undeveloped/vacant land E: Undeveloped/vacant land with an intermittent stream in the SE traversing NW to SE, Highway 395 is not depicted S: Undeveloped/vacant land W: Undeveloped land
1948, 1949	TM	Undeveloped/vacant land	N, W: Undeveloped/vacant land E: Primary highway (Highway 395) followed by undeveloped/vacant land S: Undeveloped/vacant land followed by an unimproved road and an orchard
1953	AP	Similar to the 1953 AP with an unpaved road running along the eastern boundary of the property	N: Undeveloped land with an unpaved road that curves in a semicircle starting at the northeast (NE) corner of the property and ending NW of the property E, S, W: Similar to the 1946 AP
1964, 1967	AP	An **orchard** with a curved unpaved road running along the boundary of the property from the SE corner to the NW corner	N: Vacant land with the remnants of a curved road that is no longer in use W: Highway 395 followed by an orchard S: An orchard in the S and SW, an unpaved road trending N to S, and cleared land to the SE W: An orchard followed by vacant land and a residential building to the SW
1968, 1975	TM	An **orchard** with a curved road running along the boundary of the property from the SE corner to the NW corner	N: A road (Pala Mesa Drive) followed by vacant land W: Highway 395 followed by an orchard S: An orchard in the S and SW, an unpaved road trending N to S, and cleared land to the SE W: An orchard followed by vacant land and a residential building to the SW
1970	AP	Similar to the 1967 AP	N: Vacant land with a residential building and an adjoining structure E, S, W: Similar to the 1967 AP
1985	AP	Cleared land with an **orchard** in the southern portion of the property and an unpaved road in the SE corner	N: A road (Pala Mesa Drive) followed by a cul-de-sac (Diegos Court) and several residential structures W: A road (Old Highway 395) followed by Interstate 15 (I-15)
1986	City Directory (CD)	No Listings	N: Residential (4304, 4308, 4316, 4328, 4332, and 4336 Diegos Ct.) S, E, W: No Listings
1989	AP	Cleared land with North County Fire District Fire Station #4 (Fire Station #4) and unpaved roads	N, W: Similar to the 1985 TM S: Cleared land with an unpaved road trending N to S W: Vacant land with an orchard to the SW
1992	CD	No Listings	N: Residential (4315, 4320, 4332, and 4336 Diegos Ct.) S, E, W: No Listings
1995, 2000, 2005, 2010	CD	No Listings	N: Residential (4304, 4308, 4309, 4315, 4316, 4320, 4324, 4328, 4332, and 4336 Diegos Ct.) S, E, W: No Listings
2005, 2009,	AP	Similar to the 1989 AP, fire	N, W, S: Similar to the 1989 AP

Year	Source	Subject Property Use	Adjoining Property Use
2012, 2016		trucks are parked on the land	W: Vacant land with vegetation
2012	TM	North County Fire District Fire Station #4 (Fire Station #4) with a road that terminates at the SW corner of the property	N: Pala Mesa Drive followed by a cul-de-sac (Diegos Court), buildings are not depicted W: A road (Old Highway 395) followed by Interstate 15 (I-15) S: Vacant land with a road trending N to S W: Vacant land
2014	CD	No Listings	N: Residential (4304, 4308, 4309, 4315, 4316, 4324, 4328, 4332, and 4336 Diegos Ct.) S, E, W: No Listings
2015	TM	Similar to the 2012 TM, road is no longer present	N, E, W: Similar to the 2012 TM (buildings are still not depicted) S: Vacant land
2017	CD	No Listings	N: Residential (4304, 4308, 4309, 4315, 4316, 4320, 4324, 4328, and 4336 Diegos Ct.) S, E, W: No Listings
2018	TM	Fire Station #4 and a road running along the eastern boundary of the property	N, E, W: Similar to the 2015 TM (buildings are still not depicted) S: Vacant land with a road trending N to S
2020	AP	Fire Station #4 with fire trucks and other vehicles parked on the land	N, E, W: Similar to the 2016 AP S: Vacant land with vegetation followed by a cul-de-sac (Panache Drive) and several residential buildings
2020	CD	No Listings	N: Residential (4304, 4308, 4309, 4315, 4316, 4320, 4324, 4328, and 4336 Diegos Ct.) S, E, W: No Listings
2022	TM	Fire Station #4	N, E, W: Similar to the 2018 TM S: Vacant land followed by a cul-de-sac (Panache Drive) and several residential buildings

*__Bold__ listings indicate land uses with the potential to impact the subject property

5.3 Gaps in Historical Sources

Several gaps of greater than 5 years were identified in the historical records reviewed, from 1901 to 1939, from 1939 to 1946, from 1953 to 1964, from 1970 to 1985, and from 1989 to 1995. Based on the availability of other relevant information, this data gap is not considered significant.

6 Interviews

Rincon performed interviews regarding the subject property and surrounding areas. The purpose of the interviews was to discuss current and historical conditions and to obtain information indicating the presence of RECs in connection with the subject property.

6.1 Interview Summaries

6.1.1 Interview with Owner

An interview questionnaire was provided to the property owner, North County Fire Protection District, prior to the site reconnaissance. Mavis Canpinar, Executive Assistant with North County Fire Protection District, completed the Owner Questionnaire on January 2, 2024. A copy of the completed questionnaire is included in Appendix A. The following information is based on our review of the completed document.

The property owner indicated the following:

- The subject property is currently used as an active fire station.
- North County Fire Protection District obtained ownership of the subject property in 1986.

The property owner also presented the following information regarding hazardous material and petroleum hydrocarbon storage and waste generation at the subject property.

- There is one propane tank and one fuel tank stored onsite (identified as propane and diesel aboveground storage tanks during site reconnaissance).

The property owner indicated that she is unaware of the presence of industrial drums, fill dirt, pits, ponds, lagoons, sumps, clarifiers, solvent degreasers, stained soil, vent pipes, fill pipes, or access ways, stained surfaces, private wells, non-public water systems, transformers, capacitors, or hydraulic equipment, records indicating the presence of PCBs, or records indicating the presence of pesticides or herbicides at the subject property.

The property owner indicated that she is not aware of any pending, threatened, or past litigation or administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the subject property. In addition, she is not aware of any notice from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products at the subject property.

6.1.2 Interview with Site Manager

Keith McReynolds, Fire Chief, and Peter August, Division Chief with North County Fire Protection District, the site managers, were interviewed during the site reconnaissance. The site managers indicated that vehicle maintenance and repairs are conducted offsite, at Fire Station No. 1, while daily vehicle checks and light washes are conducted onsite. The vehicles are all currently diesel-powered and a vehicle exhaust extraction system operates in the garage. Additional information provided by the site managers is included in Section 7.

6.1.3 Interviews with Occupants

Keith McReynolds, Fire Chief, and Peter August, Division Chief, with North County Fire Protection District, the site managers, were interviewed during the site reconnaissance. Information provided by the site managers is included above and in Section 7.

6.1.4 Interviews with Others

Rincon did not attempt to interview neighboring property owners or others as part of this Phase I ESA.

7 Site Reconnaissance

Rincon performed a reconnaissance of the subject property on January 4, 2024 accompanied by Keith McReynolds, Fire Chief, and Peter August, Division Chief with North County Fire Protection District. The purpose of the reconnaissance was to observe existing subject property conditions and to obtain information indicating the presence of RECs in connection with the subject property.

7.1 Methodology and Limiting Conditions

The site reconnaissance was conducted by:

1. Observing the subject property from public thoroughfares,
2. Observing the adjacent properties from public thoroughfares,
3. Walking the subject property,
4. Observing the interior of the onsite structures,
5. Observing the exterior of the structures,
6. Backtracking to correlate exterior features with interior features, as necessary, and
7. Observing the subject property from driveways, roads, and sidewalks.

7.2 General Subject Property Information

7.2.1 Current Use of Subject Property and Adjacent Properties

The subject property is currently in use as a fire station. Adjacent properties include single-family residences and undeveloped land.

7.2.2 Past Use of Subject Property and Adjacent Properties

Based on our site reconnaissance, past uses at the subject property and adjacent properties are not readily apparent.

7.2.3 Current or Past Uses in the Surrounding Areas

The subject property is surrounded by residential land uses and undeveloped land as detailed in Section 2.1 of this report. Past uses of the surrounding area are not readily apparent based on the site reconnaissance.

7.2.4 Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions

Geologic, hydrogeologic, hydrologic, and topographic information are as previously stated in Section 4.1 of this report.

7.2.5 General Description of Subject Property

Structures	One modular office/dwelling building with attached garage, a storage shed, and a shipping container (used for storage) were observed on the subject property.
Roads	Pala Mesa Drive is located adjacent to the north of the subject property and Old Highway 395 is located adjacent to the east of the subject property.
Potable Water Supply	Rainbow Municipal Water District currently supplies potable water to the subject property.
Sewage Disposal System	The subject property is connected to the San Diego County sewer system.
Stormwater Runoff	Surface water runoff at the subject property appears to flow toward the northern and eastern adjacent roads with stormwater infrastructure.

7.3 Interior and Exterior Observations

Table 4 provides details regarding the interior and exterior observations noted during the site reconnaissance. Photographs 1 through 12 are shown below.

Table 4 Interior and Exterior Observations

Item	Observed	Photograph Number	Description
Hazardous Substances and Petroleum Products in Connection with Identified Uses	Yes	4, 6	Office/Living Quarters – Various small quantities of household cleaning products Garage – Several containers of spray paint, paint (1-gallon cans), and household cleaning products; oxygen cylinders Storage Shed – Several containers of paint (1-gallon cans), insecticide (including two backpack sprayers), hydrocarbon fuels polar solvent, and petroleum (four containers, one labeled diesel, others unlabeled) Rincon did not observe indications of releases from these containers. A puddle of water was observed on the concrete floor of the storage shed from a recent rain event. Mr. McReynolds indicated that firefighting foam training does not currently and has not formerly occurred on the subject property.
Aboveground or Underground Storage Tanks	Yes	5, 7	Northwestern corner of the subject property – One 500-gallon diesel aboveground storage tank (AST) South of onsite building – One 500-gallon propane AST Rincon did not observe indications of releases from the ASTs on the subject property. Mr. McReynolds indicated that a spill has not occurred from the diesel AST which was installed in approximately 1989.
Odors	No	Not Applicable (N/A)	None noted
Pools of Liquid	Yes	8	Puddles of water were observed on the subject property from a recent rain event.
Drums	No	N/A	None observed
Hazardous Substances and Petroleum Products Containers Not in Connection with Identified Uses	No	N/A	None observed

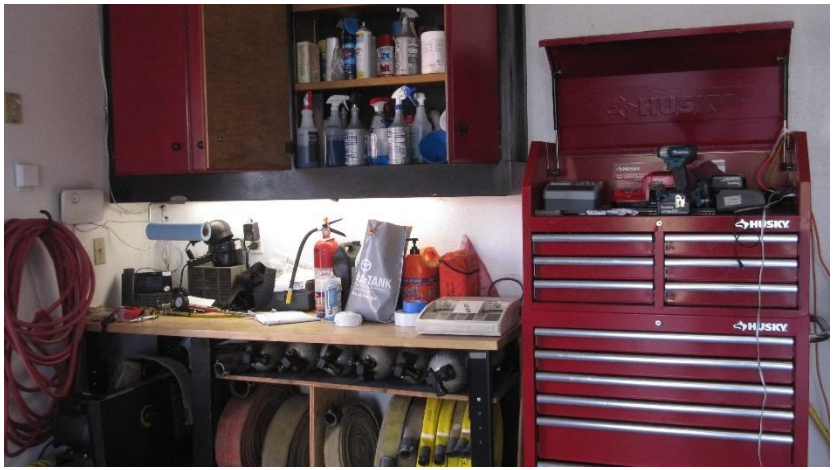
Item	Observed	Photograph Number	Description
Unidentified Substance Containers	Yes	6	Storage Shed – Several unlabeled containers of various sizes (each less than 10 gallons)
Indications of PCBs	No	N/A	None observed
Heating/Cooling Systems	No	N/A	Heating/cooling units were observed on the western side of the onsite building.
Stains or Corrosion / Stained Soil or Stained Pavement	No	N/A	None observed
Drains, Clarifiers, and Sumps	Yes	N/A	Garage – Floor drains
Degreasers/Parts Washers	No	N/A	None observed
Pits, Ponds, and Lagoons	No	N/A	None observed
Stressed Vegetation	No	N/A	None observed
Solid Waste/Debris	No	N/A	None observed
Wastewater	No	N/A	None observed
Wells	No	N/A	None observed
Septic Systems/Effluent Disposal Systems	No	N/A	None observed
Soil Piles	Yes	8	Northeastern portion of the subject property – Piles of sand noted by Mr. McReynolds to be provided by San Diego County for the public to use for sandbags.
Fill Material	No	N/A	None observed

Photographs 1-4

Photograph 1. View of the onsite fire station building, facing east.

Photograph 2. View of the onsite garage, facing south.

Photograph 3. View of the office in the onsite building.



Photograph 4. View of household cleaning products in the onsite garage.

Photographs 5-8

Photograph 5. View of the diesel AST in the northwestern portion of the subject property, facing northwest.

Photograph 6. View of the interior of the storage shed, with pooled water, located south of the onsite building.

Photograph 7. View of the emergency generator (with associated propane AST in the background) in the southwestern portion of the subject property, facing south.

Photograph 8. View of the eastern portion of the subject property, vacant land and a gravel driveway with piles of sand in the northeastern portion, facing north-northeast.

Photographs 9-12

Photograph 9. View of northern adjacent single-family residences, facing northeast across Pala Mesa Drive.

Photograph 10. View of the eastern adjacent Old Highway 395 followed by Interstate 15, facing east.

Photograph 11. View of southern adjacent single-family residences, facing west.

Photograph 12. View of western adjacent undeveloped land, facing west.

8 Potential Vapor Migration

The database report and other resources were reviewed to identify nearby known or suspect contaminated sites that have the potential for contaminated vapor originating from the nearby sites to migrate beneath the subject property. Based on the ASTM E2600-15, *Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions*, the following minimum search distances were initially used to determine if contaminated soil vapors from a nearby known or suspect contaminated site have the potential to be migrating beneath the subject property:

- 1/10 mile (528 feet) for petroleum hydrocarbons
- 1/3 mile (1,760 feet) for other contaminants of concern (COCs)

Groundwater depth and flow direction are also utilized to determine risk of vapor migration. Groundwater in the vicinity of the subject property is reportedly present at the upper 15 to 60 feet below grade with gradients to the south, southeast, southwest, and northwest (Section 4.1).

Online agency resources are reviewed to determine the extent of the contaminated soil or groundwater plume at known or suspect contaminated sites as specified below:

- Onsite or adjacent to the subject property,
- Within 100 feet, or
- Within the above referenced distances from the subject property and upgradient or cross gradient to the subject property.

Contaminated soil, soil vapor, and/or groundwater plumes of petroleum hydrocarbons (within 528 feet of the subject property) and other COCs (within 1,760 feet of the subject property) were not identified during the completion of this Phase I ESA.

8.1 Vapor Intrusion Summary

Contaminated soil, soil vapor, and/or groundwater plumes of petroleum hydrocarbons (30 feet from the subject property) and other COCs (100 feet from the subject property) were not identified during the completion of this Phase I ESA.

9 Evaluation

Rincon has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E1527-21 for the North County Fire Protection District Station No. 4 property located at 4375 Pala Mesa Drive in Fallbrook, California. Any exceptions to, or deletions from, this practice are described in Section 2.5 of this report.

9.1 Significant Data Gaps

No significant data gaps were identified during the preparation of this report.

9.2 Findings, Opinions, Conclusions, and Recommendations

This assessment has revealed environmental conditions in connection with the subject property, as detailed in Table 5.

Table 5 Findings, Opinions, Conclusions, and Recommendations

No.	Finding	Opinion	Conclusion	Recommendations
1	Former agricultural use of the subject property	According to the historical resources reviewed, the subject property appears to have been used for agricultural purposes (orchard) from approximately 1964 through 1985. Agricultural land use is typically associated with the use of pesticides and arsenic. Because the subject property is planned for redevelopment that will involve soil disturbance, soils containing residual pesticides and arsenic may be encountered during grading/construction.	REC	Subsurface investigation prior to grading/construction
2	Current and former subject property use as a fire station with ASTs and hazardous materials storage	According to the historical resources reviewed, the subject property was developed with the existing fire station since approximately 1989. During the site reconnaissance, the subject property was observed to be an active fire station with hazardous materials storage, one diesel AST, and one propane AST. No indications of release were observed in the vicinity of the stored hazardous materials or ASTs.	Notable Finding	None
3	Potential asbestos-containing materials (ACM) and lead-based paint (LBP) at the subject property	Based on the age of the onsite structure (constructed in approximately 1989), ACM and LBP may be present in building materials at the subject property.	Notable Finding	ACM and LBP survey prior to demolition
4	Reported PFAS in groundwater within 9 miles of the subject property	According to the California Statewide Drinking Water System Quarterly Testing Results online Public Map Viewer, PFOA and PFOS were detected in drinking water wells located approximately 9 to 12 miles away from the subject property at concentrations greater than their respective SWRCB notification and response levels. It is unknown if these wells are currently in service, or if concentrations of PFAS have an impact on water quality with the subject property's service area. Groundwater beneath the subject property is not planned for use onsite; therefore, no further assessment of PFAS in groundwater is recommended at this time.	Notable Finding	None

10 References

California Department of Conservation, Geologic Energy Management Division (CalGEM). 2023. "Well Finder." https://www.conservation.ca.gov/calgem/Pages/WellFinder.aspx (accessed December 19, 2023).

California Department of Toxic Substances Control (DTSC). 2024. "EnviroStor." http://www.envirostor.dtsc.ca.gov/public/ (accessed January 9, 2024).

California State Water Resources Control Board (SWRCB). 2023a. "GeoTracker." http://geotracker.waterboards.ca.gov/ (accessed December 19, 2023).

_____. 2023b. "California PFAS Investigations." https://www.waterboards.ca.gov/pfas/ (accessed December 19, 2023).

_____. 2023c. "GeoTracker PFAS Map." https://geotracker.waterboards.ca.gov/map/pfas_map (accessed December 19, 2023).

Environmental Data Resources, Inc. 2023a. Aerial Photographs. December 18, 2023.

_____. 2023b. City Directory Report. December 21, 2023.

_____. 2023c. Fire Insurance Map Report. December 18, 2023.

_____. 2023d. Radius Map Report. December 18, 2023.

_____. 2023e. Topographic Maps. December 18, 2023.

Jennings, C.W., Gutierrez, C., Bryant, W., Saucedo, G., and Wills, C. 2010. *Geologic Map of California*. California Geological Survey. https://maps.conservation.ca.gov/cgs/gmc/ (December 20, 2023).

United States Environmental Protection Agency (USEPA). 2023. "Drinking Water Health Advisories for PFOA and PFOS." https://www.epa.gov/sdwa/drinking-water-health-advisories-pfoa-and-pfos (accessed December 19, 2023).

United States Department of Transportation (USDOT). 2023. "National Pipeline Mapping System (NPMS) Public Map Viewer." Pipeline and Hazardous Materials Safety Administration (PHMSA). https://www.npms.phmsa.dot.gov/PublicViewer/ (accessed December 19, 2023).

11 Signatures of Environmental Professionals

The qualified environmental professionals that are responsible for preparing the report include Taryn Sparacio, Julie Lynne Welch, and Savanna Vrevich. Their qualifications are summarized in the following section.

"We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in 312.10 of 40 CFR 312. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312."

Signature	January 25, 2024 Date
Taryn Sparacio, PG Name	Senior Supervising Geologist Title
Signature	January 25, 2024 Date
Julie Lynne Welch, REPA Name	Director of Due Diligence Title
Signature	January 25, 2024 Date
Savanna Vrevich Name	Environmental Scientist Title

12 Qualifications of Environmental Consultants

The environmental consultants responsible for conducting this Phase I ESA and preparing the report include Taryn Sparacio, Julie Lynne Welch, Savanna Vrevich, and Elsa Rafter. Their qualifications are summarized below.

Environmental Professional Qualifications	X2.1.1 (2) (i) - Professional Engineer or Professional Geologist License or Registration, and 3 years of full-time relevant experience	X2.1.1 (2) (ii) - Licensed or certified by the Federal Government, State, Tribe, or U.S. Territory to perform environmental inquiries	X2.1.1 (2) (iii) – Baccalaureate or Higher Degree from and accredited institution of higher education in a discipline of engineering or science and the equivalent of 5 years of full-time relevant experience	X2.1.1 (2) (iii) – Equivalent of 10 years of full-time relevant experience
Taryn Sparacio	PG		MBA, BS Geology	22 years
Julie Lynne Welch			BS Environmental Engineering	29 years
Savanna Vrevich			BS Environmental Studies	8 years
Elsa Rafter			BS Environmental Engineering	1 year

Taryn Sparacio, PG is a Senior Supervising Geologist at Rincon Consultants with over 22 years of experience assessing complex environmental sites throughout the United States. She provides scientific and strategic consultation to public agencies and private clients in support of redevelopment projects. Ms. Sparacio's experience includes reconstructing historical chemical releases to determine the sources, timing, and mechanisms of the releases to identify liable parties, apportion responsibility, and allocate costs for remediation. She has assessed and evaluated numerous types of sites including airplane manufacturing plants, airport runways and flight lines, shipbuilding facilities, power plants, smelters, mines, manufactured gas plants, and wood treatment facilities.

Julie Lynne Welch, REPA, serves as the Director of Rincon's Due Diligence team, which involves the execution of hundreds of Phase I and II Environmental Site Assessments annually. Ms. Welch has 29 years of professional experience in the field of environmental science and assessment, during which time she has managed and contributed to a variety of successful land use, water and energy planning, and residential, commercial, industrial, and infrastructure projects.

She holds a Bachelor of Science degree in Environmental Engineering from Rensselaer Polytechnic Institute, Troy, New York, a Hazardous Materials Management Certificate from the University of California, Santa Barbara Extension program, and a Business Management Certificate from the University of California, San Diego Extension program. Ms. Welch is a Registered Environmental Property Assessor (#14066029011231127) with the National Registry of Environmental Professionals.

Ms. Welch was also a member of the ASTM Committee E50 on Environmental Assessment, Risk Management and Corrective Action (2021) and routinely attends webinars and conferences regarding ASTM E1527-21 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

Savanna Vrevich is an Environmental Scientist with Rincon Consultants. She holds a Bachelor of Science degree in Environmental Studies with an outside concentration in Ecology, Evolution, and Marine Biology from the University of California, Santa Barbara. Ms. Vrevich has experience in working on large-scale, multi-site projects for developers, banks, regulatory agencies, and other public and private clients. Ms. Vrevich's responsibilities at Rincon include implementation of Phase I Environmental Site Assessments, Caltrans Initial Site Assessments, and preparation of other environmental reports for a variety of commercial, rural, and industrial properties.

Elsa Rafter is a recent graduate of California Polytechnic State University, San Luis Obispo with a B.S. in Environmental Engineering. She has been working with Rincon Consultants since 2021 and has experience with data management, data quality assessment and quality control, soil and water quality sampling, technical reporting, stormwater pollution prevention, and surface flow.

Appendix A

Interview and Title Documentation

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
rinconconsultants.com

User Questionnaire

Rincon Project Number: 23-14998

Site Name and Full Address: NCFPD Station No. 4, 4375 Pala Mesa Drive, Fallbrook, California

To qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the user must provide the following information to the environmental professional. Failure to conduct these inquiries could result in a determination that "all appropriate inquiries" is not complete.

We respectfully request that you fill out this form and email it to Savanna Vrevich at SVrevich@RinconConsultants.com within one week from the date of this transmittal.

Project Description

1. **Why is the Phase I ESA required or being performed?**

   A new fire station will be built on the property.

2. **What type of property transaction is planned? (i.e. sale, purchase, exchange)**

   None. The station will be built on an existing site already owned by the District.

3. **What is the entire site address?**

   4375 Pala Mesa Drive, Fallbrook CA 92028

4. **What is the Assessor's Parcel Number(s)?**

   125-050-69-00

5. **Are any considerations beyond the requirements of Practice E1527 to be considered? (i.e. lien search, asbestos & lead based paint, radon)**

   None

Rincon Project Number: 23-14998

Site Name and Full Address: NCFPD Station No. 4, 4375 Pala Mesa Drive, Fallbrook, California

6. **Identify all parties who will rely on the Phase I report.**

NCFPD

7. **Identify the Site Manager/Contact and how the contact can be reached.**

Keith McReynolds - kmcreynolds@ncfire.org
Mavis Canpinar - mavis@ncfire.org
Peter August - paugust@ncfire.org

8. **Identify the Site Owner and how the owner can be reached.**

Keith McReynolds - kmcreynolds@ncfire.org
Mavis Canpinar - mavis@ncfire.org
Peter August - paugust@ncfire.org

9. **Do you have copies of any available prior environmental site assessment reports, documents, correspondence, etc., concerning any other knowledge or experience with the property that may be pertinent to the environmental professional (i.e. lien search, title report, chain of title, previous Ph Iand II ESAs, Environmental Impact Studies)?**

A preliminary title report completed in 2023 is available.

Rincon Project Number: 23-14998

Site Name and Full Address: NCFPD Station No. 4, 4375 Pala Mesa Drive, Fallbrook, California

Subject Property Information

1. **Did a search of recorded land title records (or judicial records, where appropriate) identify any environmental liens filed or recorded against the property?**

Please mark the box with the most appropriate response:

- ☐ I **have not** reviewed the records and **do not know** if there are any filed or recorded environmental liens.
- ■ I **have** reviewed the records, and **No, there aren't any** filed or recorded environmental liens.
- ☐ I **have** reviewed the records, and **Yes, there are** environmental liens. Explain:

2. **Did a search of recorded land title records (or judicial records, where appropriate) identify any activity and land use limitations (AULs), such as engineering controls, land use restrictions or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state or local law?**

Please mark the box with the most appropriate response:

- ☐ I **have not** reviewed the records and **do not know** if there are any filed/recorded AULs or any AULs in place at the site.
- ■ I **have** reviewed the records, and **No, there aren't any** filed/recorded AULs or any AULs in place at the site.
- ☐ I **have** reviewed the records, and **Yes, there are** AULs filed, recorded, and/or in place at the site. Explain:

3. **Does the Title Report provide any information pertaining to environmental cleanup liens or activity and use limitations (AULs) for the subject property?**

Please mark the box with the most appropriate response:

- ☐ I **have not** reviewed the Title Report and **do not know** if it provides environmental cleanup liens or AULs information.
- ■ I **have** reviewed the Title Report, and **No, it does not provide** environmental cleanup liens or AULs information..
- ☐ I **have** reviewed the Title Report, and **Yes, it does provide** environmental cleanup liens or AULs information. Explain:

Rincon Project Number: 23-14998

Site Name and Full Address: NCFPD Station No. 4, 4375 Pala Mesa Drive, Fallbrook, California

4. Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

Please mark the box with the most appropriate response:

- ■ **No,** I **do not** have any specialized knowledge and/or experience related to the property or nearby properties.
- ☐ Yes, I **do** have specialized knowledge and/or experience related to the property or nearby properties. Explain:

5. As the user of this ESA, based on your knowledge and experience related to the property, are you aware of any information pertaining to a reduction in value for the subject property relative to any known environmental issues?

Please mark the box with the most appropriate response:

- ■ **No,** I **do not** have any information about a reduction in property value relative to environmental issues.
- ☐ **Yes**, I **do** have information about a reduction in property value relative to environmental issues. Explain:

6. Does the purchase price being paid for this property reasonably reflect the fair market value of the property?

Please mark the box with the most appropriate response:

- ■ **Yes**, I **do** believe the purchase price being paid for this property reasonably reflects the fair market value of the property. Skip to question #7.
- ☐ **No**, I **do not** believe the purchase price being paid for this property reasonably reflects the fair market value of the property. Proceed to question #6a.

a. If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property? (40 CFR 312.29)

Please mark the box with the most appropriate response

- ☐ **No**, I **have not** considered the idea that known or believed contamination at the site has caused the lower purchase price.
- ☐ **Yes**, I **have** considered the idea that known or believed contamination at the site has caused the lower purchase price. Explain:

Rincon Project Number: 23-14998

Site Name and Full Address: NCFPD Station No. 4, 4375 Pala Mesa Drive, Fallbrook, California

7. Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example:

Please mark the box with the most appropriate response:

a. Do you know the past uses of the property?

- [■] I **do not** know.
- [ ] I **do** know. Explain:

b. Do you know of specific chemicals are present or once were present at the property?

- [■] I **do not** know.
- [ ] I **do** know. Explain:

c. Do you know of any spills or other chemical releases that have taken place at the property?

- [■] I **do not** know.
- [ ] I **do** know. Explain:

d. Do you know of any environmental cleanups have taken place at the property?

- [■] I **do not** know.
- [ ] I **do** know. Explain:

8. Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of releases at the property?

Please mark the box with the most appropriate response:

- [■] **No**, I do not know and/or do not have any experience with any obvious indicators that point to the presence or likely presence of contamination at the property.
- [ ] **Yes**, I do know of and/or do have experience with obvious indicators that point to the presence or likely presence of contamination at the property. Explain:

Rincon Project Number: 23-14998

Site Name and Full Address: NCFPD Station No. 4, 4375 Pala Mesa Drive, Fallbrook, California

9. Are you aware of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products, in, on, or from the site?

Please mark the box with the most appropriate response:

- [■] **No**, I am not aware of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products, in, on, or from the site.
- [ ] **Yes**, I am aware of pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the site. Explain:

10. Are you aware of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the site?

Please mark the box with the most appropriate response:

- [■] **No**, I am not aware of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the site.
- [ ] **Yes**, I am aware of pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the site. Explain:

11. Are you aware of any notice from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?

Please mark the box with the most appropriate response:

- [■] **No**, I am not aware of any notice from any government entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products..
- [ ] **Yes**, I am aware of a notice, or notices, from a government entity (or multiple government entities) regarding a possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products. Explain:

Rincon Project Number: 23-14998

Site Name and Full Address: NCFPD Station No. 4, 4375 Pala Mesa Drive, Fallbrook, California

This questionnaire was completed by (please print)

Name: Mavis Canpinar

Title: Executive Assistant

Firm: North County Fire Protection District

Street Address: 330 S. Main Ave.

City, State, Zip Code: Falbrook CA 92028

Phone Number: 760-723-2012

Fax Number:

What is the Preparer's relationship to the property (i.e., owner, occupant, property manager, employee, agent, consultant, etc.)? Employee of Agency

Copies of the completed questionnaire should be emailed (preferably) or mailed to:

Rincon Consultants, Inc.
Attention: Environmental Site Assessment Division
2215 Faraday Avenue, Suite A
Carlsbad, CA 92008
Email: SVrevich@RinconConsultants.com

Preparer represents that to the best of the preparer's knowledge the above statements and facts are true and correct and to the best of the preparer's knowledge no material facts have been suppressed or misstated.

Signature Mavis Canpinar Digitally signed by: caa5a672-b5da-4a36-b4ef-a5495ca37c3a DN: CN = caa5a672-b5da-4a36-b4ef-a5495ca37c3a Date: 2024.01.02 15:26:00 -08'00' Date 1-2-24

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
rinconconsultants.com

Property Owner Interview Questionnaire

Rincon Project Number: 23-14998

Site Name and Full Address: NCFPD Station No. 4, 4375 Pala Mesa Drive, Fallbrook, California

This questionnaire should be completed by the current property owner or a designated representative of the current property owner. We respectfully request that you fill out and return this form via email to us at SVrevich@RinconConsultants.com within one week from the date of this transmittal.

1. Was the subject property or any adjoining property ever used as:

- ☐ an airport
- ☐ a fire training area
- ☐ a gasoline or other fueling station
- ☐ a motor vehicle repair facility
- ☐ a commercial printing facility
- ☐ a dry cleaners
- ☐ a photo developing laboratory
- ☐ a metal plating facility
- ☐ a farm
- ☐ a Department of Defense facility or training area
- ☐ a junkyard or landfill
- ☐ a waste treatment, storage, disposal, processing or recycling facility
- ☐ a machine shop
- ☐ a manufacturing facility
- ☐ an oil production facility (including oil wells)
- ☐ any other industrial use

Please check all that apply above and describe:

2. Please describe the current land uses of the subject property and those surrounding your property. Please indicate all businesses/companies located on property.

2a. Current Use of Subject Property:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☒ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ☐ Other- Please Describe	There is currently an active and operating fire station on the property. Residential units border the south and west side of the property.

2b. Current Use of Northern Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ☒ Other- Please Describe	There is a street to the north of the property line.

Rincon Project Number: 23-14998

Site Name and Full Address: NCFPD Station No. 4, 4375 Pala Mesa Drive, Fallbrook, California

2c. Current Use of Eastern Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ■ Other- Please Describe	There is a street to the east of the property line.

2d. Current Use of Southern Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ■ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ☐ Other- Please Describe	There is a housing development to the south of the property line.

2e. Current Use of Western Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ■ Other- Please Describe	There is vacant land to the west of the property line.

3. Please describe the previous land uses of your property and those surrounding your property. Include property ownership and dates of operation if known.

3a. Previous Use of Subject Property:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ■ Other- Please Describe	None.

3b. Previous Use of Northern Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ■ Other- Please Describe	Unknown

Rincon Project Number: 23-14998

Site Name and Full Address: NCFPD Station No. 4, 4375 Pala Mesa Drive, Fallbrook, California

3c. Previous Use of Eastern Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ■ Other- Please Describe	Unknown

3d. Previous Use of Southern Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ■ Other- Please Describe	Unknown

3e. Previous Use of Western Adjoining Properties:

Please check all that apply:	Please include a brief description of current operation:
☐ Commercial (retail, offices, etc.) ☐ Residential (single family or apartments) ☐ Industrial (manufacturing, warehousing, processing) ■ Other- Please Describe	Unknown

4. Who is the current owner of the property?

North County Fire Protection District

5. When did current ownership begin?

1986

6. What is the age of the on-site facility?

38+ years

7. Who is the previous owner of the property?

N/A

8. Please indicate the property's current:

Electrical service provider	SDG&E
Natural Gas service provider	SDG&E
Water service provider	Rainbow Municipal Water District
Sewer service provider	Rainbow Municipal Water District
Solid waste hauler	EDCO

Rincon Project Number: 23-14998

Site Name and Full Address: NCFPD Station No. 4, 4375 Pala Mesa Drive, Fallbrook, California

9. **To the best of your knowledge, has your facility previously or does your facility currently store or use any of the following in individual containers larger than 5 gallons in volume or 50 gallons in the aggregate? (if Yes or Unknown, include how many, type, and size)**

☐ Damaged or discarded automotive or industrial batteries	
☐ Paints	
☐ Oils or solvents	
☐ Motor vehicle fleet	
☐ Pesticides or herbicides	
☐ Other chemicals or hazardous substances	

10. **Please indicate any wastes generated at the facility:**

Hazardous Waste	Quantity	Disposal Method

11. **Are there currently or to the best of your knowledge have there been previously, any industrial drums (typically 55 gallon) or sacks of chemicals located on the property or at the facility?**

☐ Yes ■ No ☐ Unknown	If Yes or Unknown, please describe:

12. **Are there currently or to the best of your knowledge have there been previously, any evidence of fill dirt having been brought onto the property that originated from a contaminated site or that is of an unknown origin?**

☐ Yes ■ No ☐ Unknown	If Yes or Unknown, please describe:

Rincon Project Number: 23-14998

Site Name and Full Address: NCFPD Station No. 4, 4375 Pala Mesa Drive, Fallbrook, California

13. Are there currently or to the best of your knowledge have there been previously, any pits, ponds or lagoons located on the property in connection with waste treatment or waste disposal?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

14. Are there currently or to the best of your knowledge have there been previously, any sumps, clarifiers, or solvent degreasers on the property?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

15. Are there currently or to the best of your knowledge have there been previously, any stained soil on the property?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

16. Are there currently or to the best of your knowledge have there been previously, any storage tanks (above or below ground) located on the property?

☒ Yes ☐ No ☐ Unknown	If Yes or Unknown, please describe: Propane tank and fuel tank

17. Are there currently or to the best of your knowledge have there been previously, any vent pipes, fill pipes, or access ways (etc.) indicating a fill pipe protruding from the ground on the property or adjacent to any structure located on the property?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

18. If the property is served by a private well or non-public water system, have contaminants been identified in the well or system that exceed guidelines applicable to the water system or has the well been designated as contaminated by any government agency?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

Rincon Project Number: 23-14998

Site Name and Full Address: NCFPD Station No. 4, 4375 Pala Mesa Drive, Fallbrook, California

19. Are there currently or to the best of your knowledge have there been previously, any flooring, drains, or walls located within the facility that are stained by substances other than water, or are emitting foul odors?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

20. To the best of your knowledge has your facility previously or does your facility currently, discharge wastewater on or adjacent to the property other than storm water into a sanitary sewer system?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

21. Have any of the following ever been dumped above grade, buried and/or burned on the property? (please check all that apply and describe if possible)

☐ Hazardous substances	
☐ Petroleum products	
☐ Unidentified waste materials	
☐ Tires	
☐ Automotive or industrial batteries	
☐ Other waste materials (please describe)	

22. Are there currently or to the best of your knowledge have there been previously, a transformer, capacitor or any hydraulic equipment on the property?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

23. Are there currently or to the best of your knowledge have there been previously any records indicating the presence of PCBs?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

24. Are there currently or to the best of your knowledge have there been previously any records indicating the presence of pesticides or herbicides?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

25. Do you have any knowledge of environmental liens that may have been recorded against the property or governmental notification relating to past or recurrent violations of environmental laws with respect to the property or any facility located on the property?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

26. Do you have any knowledge of activity and use limitations (AULs) such as engineering controls, deed restrictions, land use restrictions, or institutional controls that may have been recorded against the property?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

27. Have you been informed of the past or current existence of hazardous substances, petroleum products, or environmental violations with respect to the property or any facility located on the property?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

28. Do you have any knowledge of any environmental site assessments of the property or facility?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

29. Do you know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release of any hazardous substances or petroleum products involving the property by any owner or occupant of the property?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

Rincon Project Number: 23-14998

Site Name and Full Address: NCFPD Station No. 4, 4375 Pala Mesa Drive, Fallbrook, California

30. Are there any site-specific geotechnical or geologic reports available for the subject property?

☐ Yes ☒ No ☐ Unknown	If Yes or Unknown, please describe:

31. Is there a Title Report available for the subject property?

☒ Yes ☐ No ☐ Unknown	If Yes or Unknown, please describe: A preliminary title report was completed in 2023.

This questionnaire was completed by (please print)

Name: Mavis Canpinar

Title: Executive Assistant

Firm: North County Fire Protection District

Street Address: 330 S. Main Ave.

City, State, Zip Code: Fallbrook CA 92028

Phone Number: 760-723-2012

Fax Number:

What is the Preparer's relationship to the property (i.e., owner, occupant, property manager, employee, agent, consultant, etc.)? Employee of Agency

Copies of the completed questionnaire should be emailed (preferably) or mailed to:

Rincon Consultants, Inc.
Attention: Environmental Site Assessment Division
2215 Faraday Avenue, Suite A
Carlsbad, CA 92008
Email: SVrevich@RinconConsultants.com

Preparer represents that to the best of the preparer's knowledge the above statements and facts are true and correct and to the best of the preparer's knowledge no material facts have been suppressed or misstated.

Signature: Mavis Canpinar Digitally signed by: caa5a672-b5da-4a36-b4ef-a5495ca37c3a DN: CN = caa5a672-b5da-4a36-b4ef-a5495ca37c3a Date: 2024.01.02 14:20:03 -08'00'

Date: 1-2-24

Appendix B

Historical Research Documentation

NCFPD Station No. 4

4375 Pala Mesa Dr

Fallbrook, CA 92028

Inquiry Number: 7523814.8

December 18, 2023

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

12/18/23

Site Name:

NCFPD Station No. 4
4375 Pala Mesa Dr
Fallbrook, CA 92028
EDR Inquiry # 7523814.8

Client Name:

Rincon
180 North Ashwood Avenue
Ventura, CA 93003-0000
Contact: Savanna Vrevich

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2020	1"=500'	Flight Year: 2020	USDA/NAIP
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2005	1"=500'	Flight Year: 2005	USDA/NAIP
1989	1"=500'	Flight Date: August 15, 1989	USDA
1985	1"=500'	Flight Date: February 24, 1985	USDA
1970	1"=500'	Flight Date: March 06, 1970	EDR Proprietary Landiscor
1967	1"=500'	Flight Date: May 07, 1967	USGS
1964	1"=500'	Flight Date: April 10, 1964	USDA
1953	1"=500'	Flight Date: April 14, 1953	USDA
1946	1"=500'	Flight Date: December 18, 1946	USGS
1939	1"=500'	Flight Date: July 08, 1939	USDA

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.


INQUIRY #: 7523814.8
YEAR: 2020
= 500'
N
EDR

INQUIRY #: 7523814.8

YEAR: 2016

= 500'

N

EDR

INQUIRY #: 7523814.8

YEAR: 2012

= 500'

N

EDR

INQUIRY #: 7523814.8

YEAR: 2009

= 500'

N

EDR

INQUIRY #: 7523814.8

YEAR: 2005

= 500'

N

EDR

INQUIRY #: 7523814.8

YEAR: 1989

= 500'

N

EDR

INQUIRY #: 7523814.8

YEAR: 1985

= 500'

N

EDR

INQUIRY #: 7523814.8

YEAR: 1970

= 500'

N

EDR

INQUIRY #: 7523814.8

YEAR: 1967

= 500'

N

EDR

INQUIRY #: 7523814.8

YEAR: 1964

= 500'

N

EDR

INQUIRY #: 7523814.8

YEAR: 1953

= 500'

N

EDR

INQUIRY #: 7523814.8

YEAR: 1946

= 500'

N

EDR

INQUIRY #: 7523814.8

YEAR: 1939

= 500'

N

EDR

NCFPD Station No. 4
4375 Pala Mesa Dr
Fallbrook, CA 92028

Inquiry Number: 7523814.4
December 18, 2023

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

12/18/23

Site Name:

NCFPD Station No. 4
4375 Pala Mesa Dr
Fallbrook, CA 92028
EDR Inquiry # 7523814.4

Client Name:

Rincon
180 North Ashwood Avenue
Ventura, CA 93003-0000
Contact: Savanna Vrevich

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Rincon were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# NA
Project: 23-14998

Coordinates:

Latitude:	33.34081 33° 20' 27" North
Longitude:	-117.160467 -117° 9' 38" West
UTM Zone:	Zone 11 North
UTM X Meters:	485067.73
UTM Y Meters:	3689081.70
Elevation:	344.62' above sea level

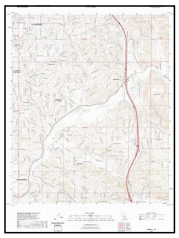
Maps Provided:

2022
2018
2015
2012
1975
1968
1949
1948
1947
1901

Topo Sheet Key

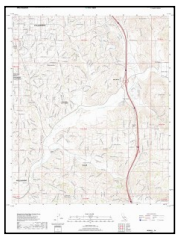
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2022 Source Sheets



Bonsall
2022
7.5-minute, 24000

2018 Source Sheets



Bonsall
2018
7.5-minute, 24000

2015 Source Sheets

Bonsall
2015
7.5-minute, 24000

2012 Source Sheets

Bonsall
2012
7.5-minute, 24000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1975 Source Sheets

Bonsall
1975
7.5-minute, 24000
Aerial Photo Revised 1967

1968 Source Sheets

Bonsall
1968
7.5-minute, 24000
Aerial Photo Revised 1967

1949 Source Sheets

Bonsall
1949
7.5-minute, 24000
Aerial Photo Revised 1946

1948 Source Sheets

Bonsall
1948
7.5-minute, 24000
Aerial Photo Revised 1946

Topo Sheet Key

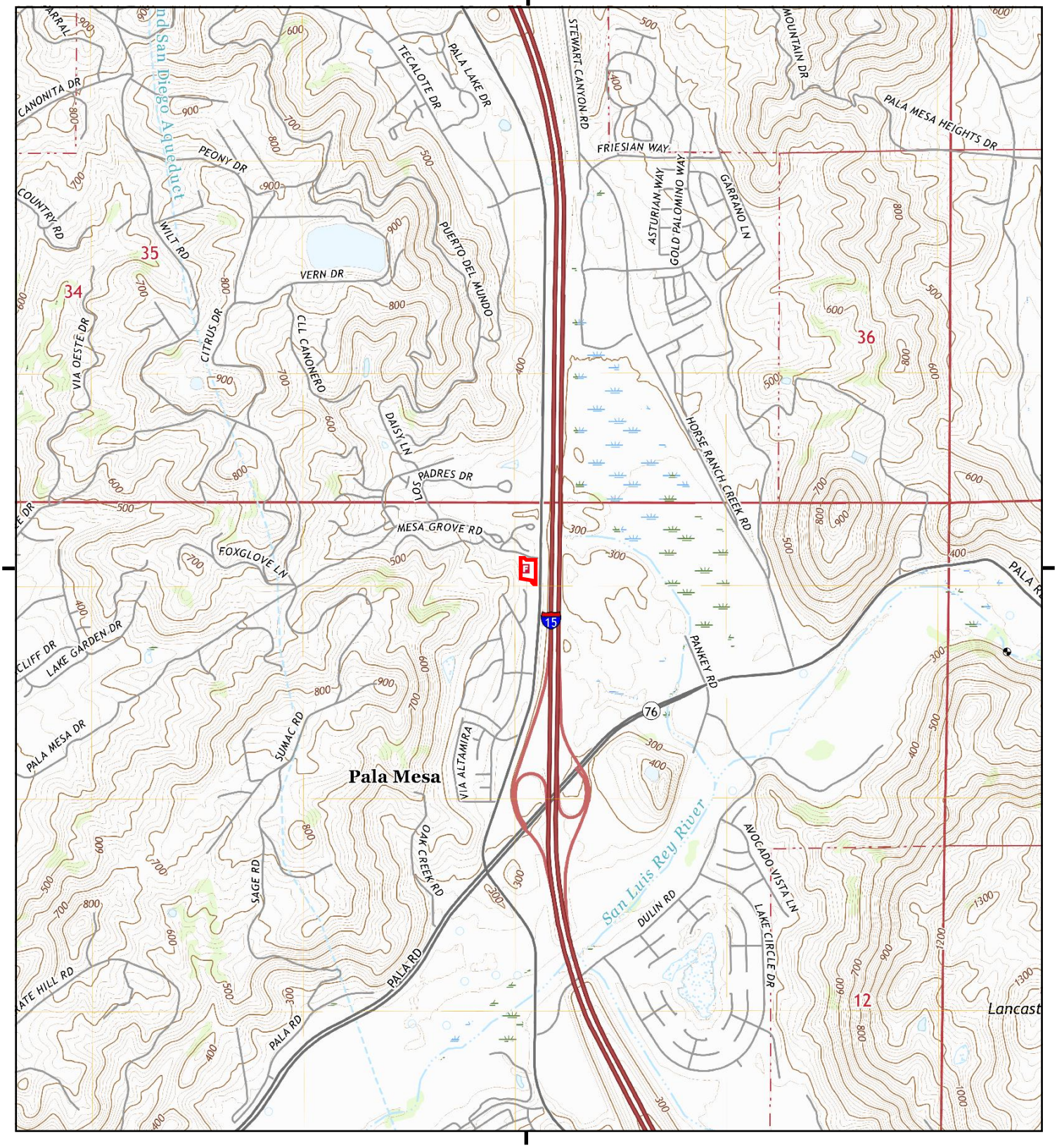
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1947 Source Sheets

TEMECULA
1947
15-minute, 50000

1901 Source Sheets

San Luis Rey
1901
30-minute, 125000



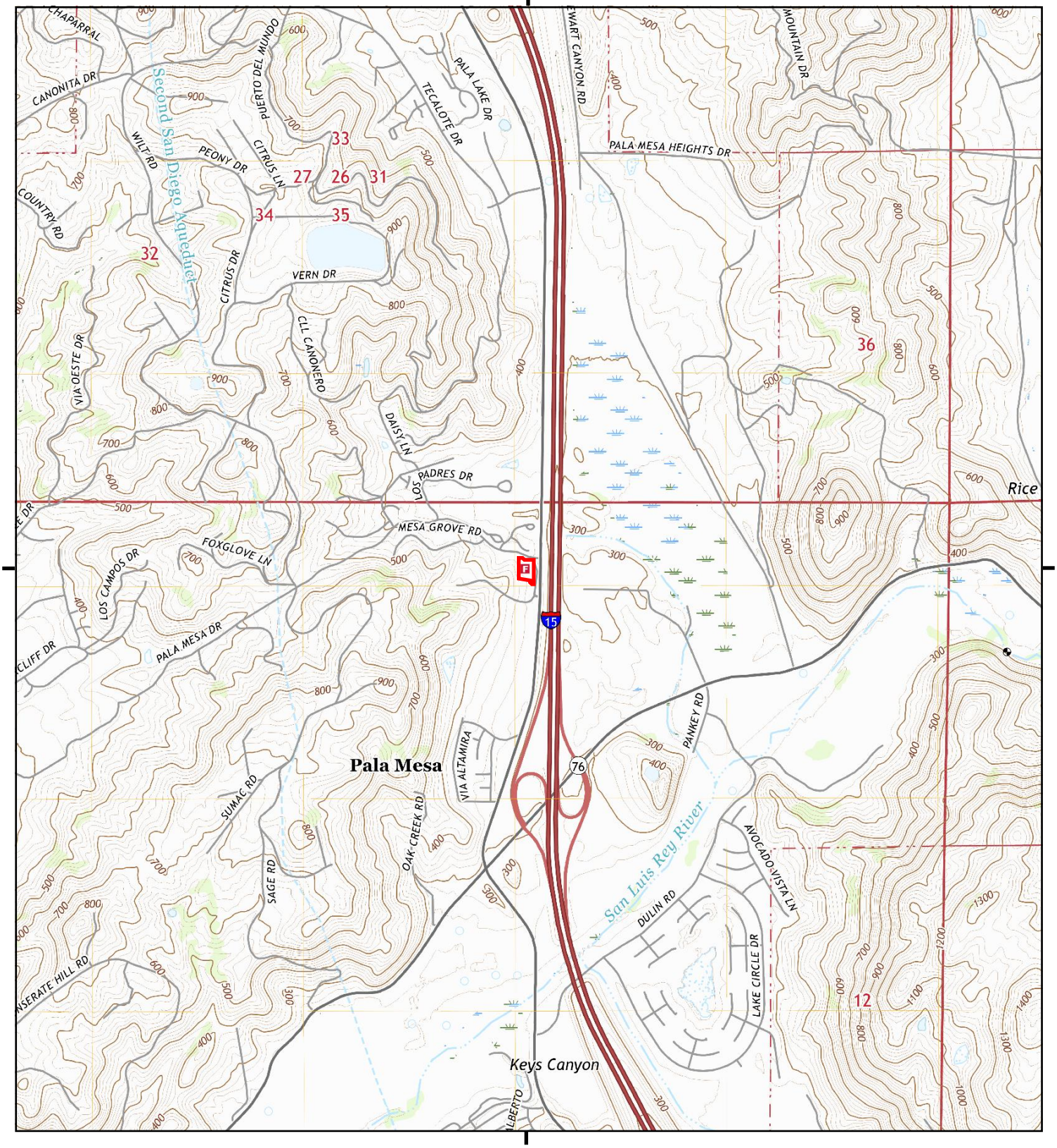
This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Bonsall, 2022, 7.5-minute

SITE NAME: NCFPD Station No. 4
ADDRESS: 4375 Pala Mesa Dr
Fallbrook, CA 92028
CLIENT: Rincon



This report includes information from the following map sheet(s).

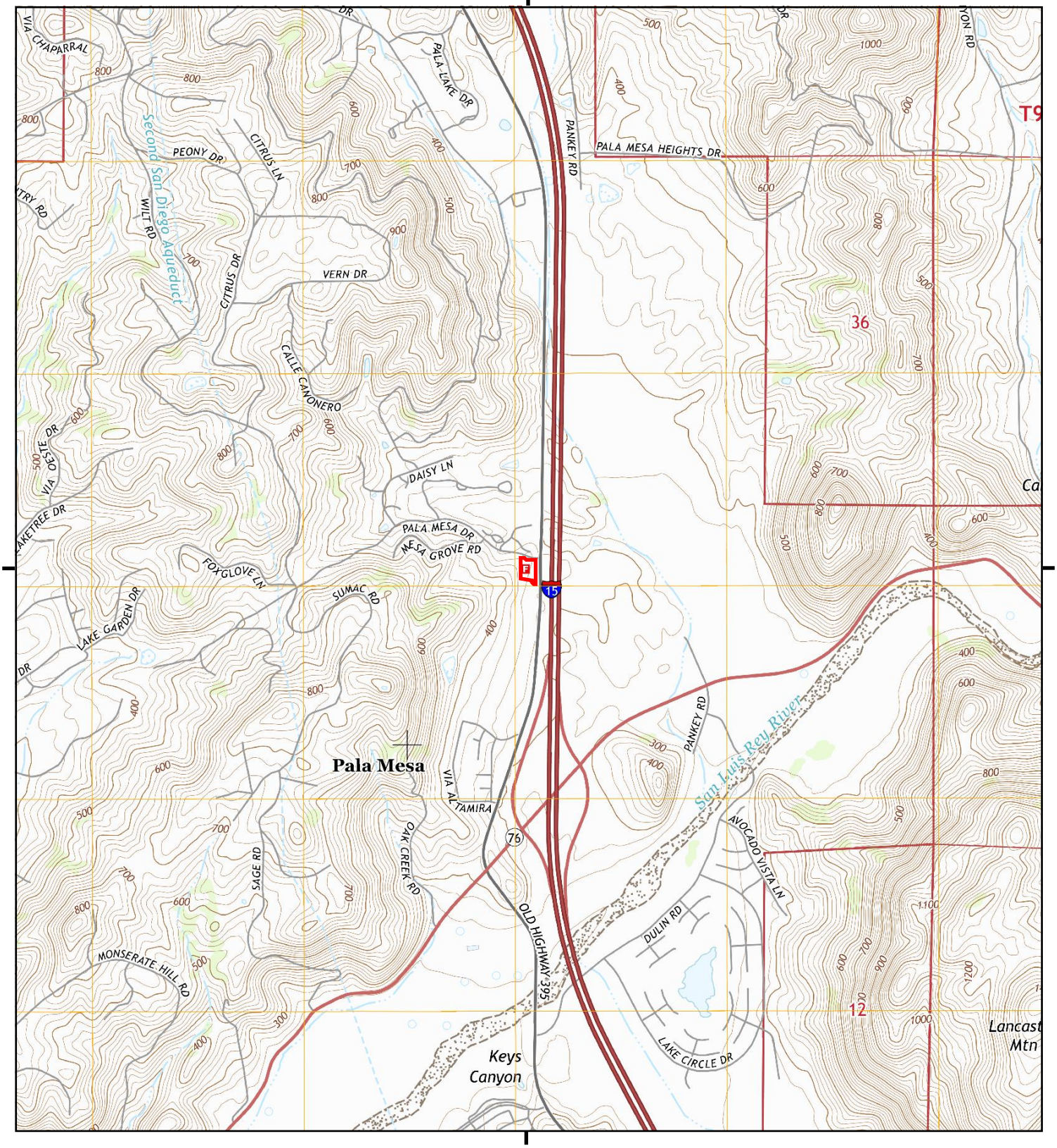
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Bonsall, 2018, 7.5-minute

SITE NAME: NCFPD Station No. 4
ADDRESS: 4375 Pala Mesa Dr
Fallbrook, CA 92028
CLIENT: Rincon

N



This report includes information from the following map sheet(s).

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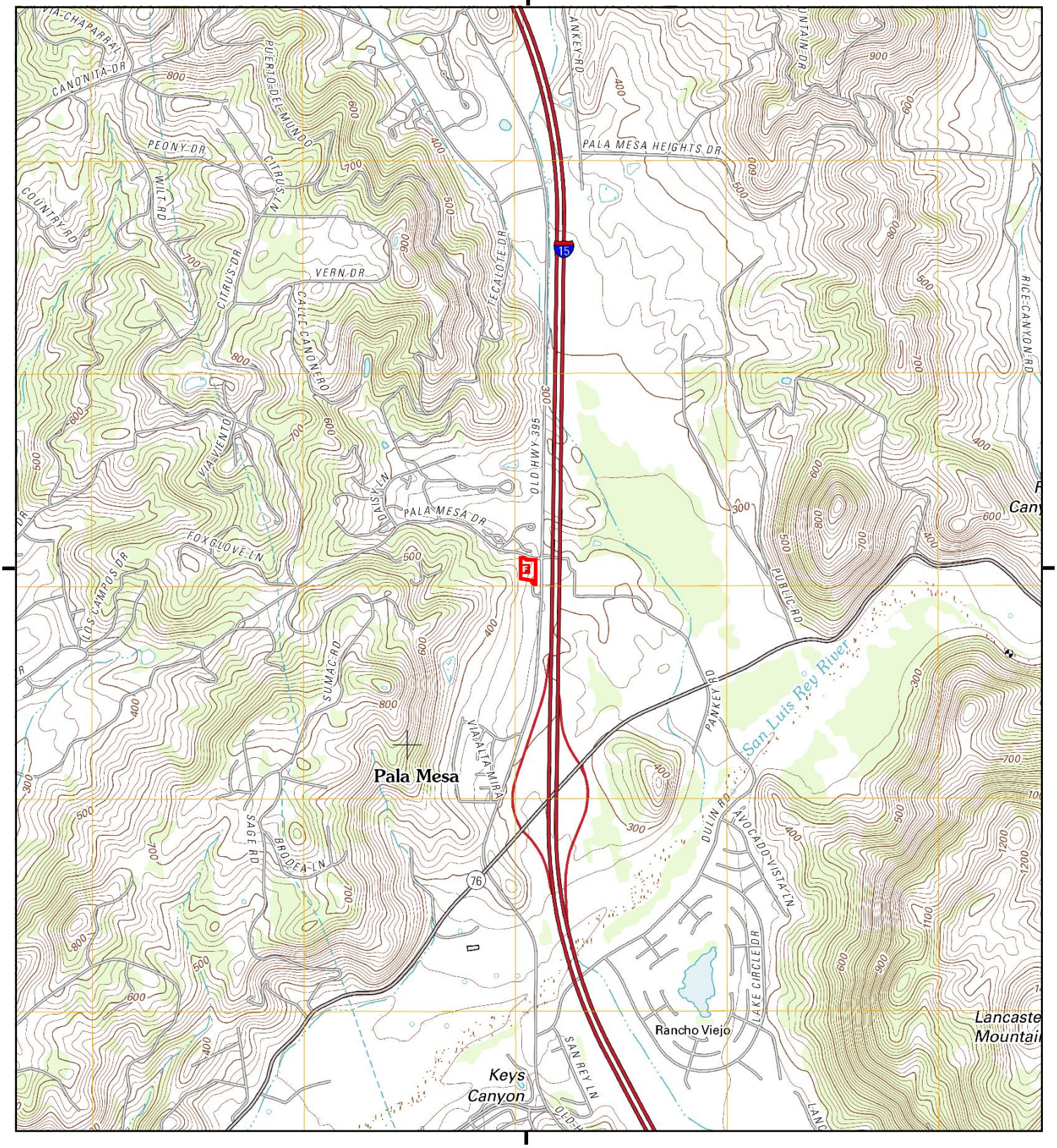
NW N NE
W E
SW S SE

TP, Bonsall, 2015, 7.5-minute

SITE NAME: NCFPD Station No. 4
ADDRESS: 4375 Pala Mesa Dr
Fallbrook, CA 92028
CLIENT: Rincon

Historical Topo Map

2012



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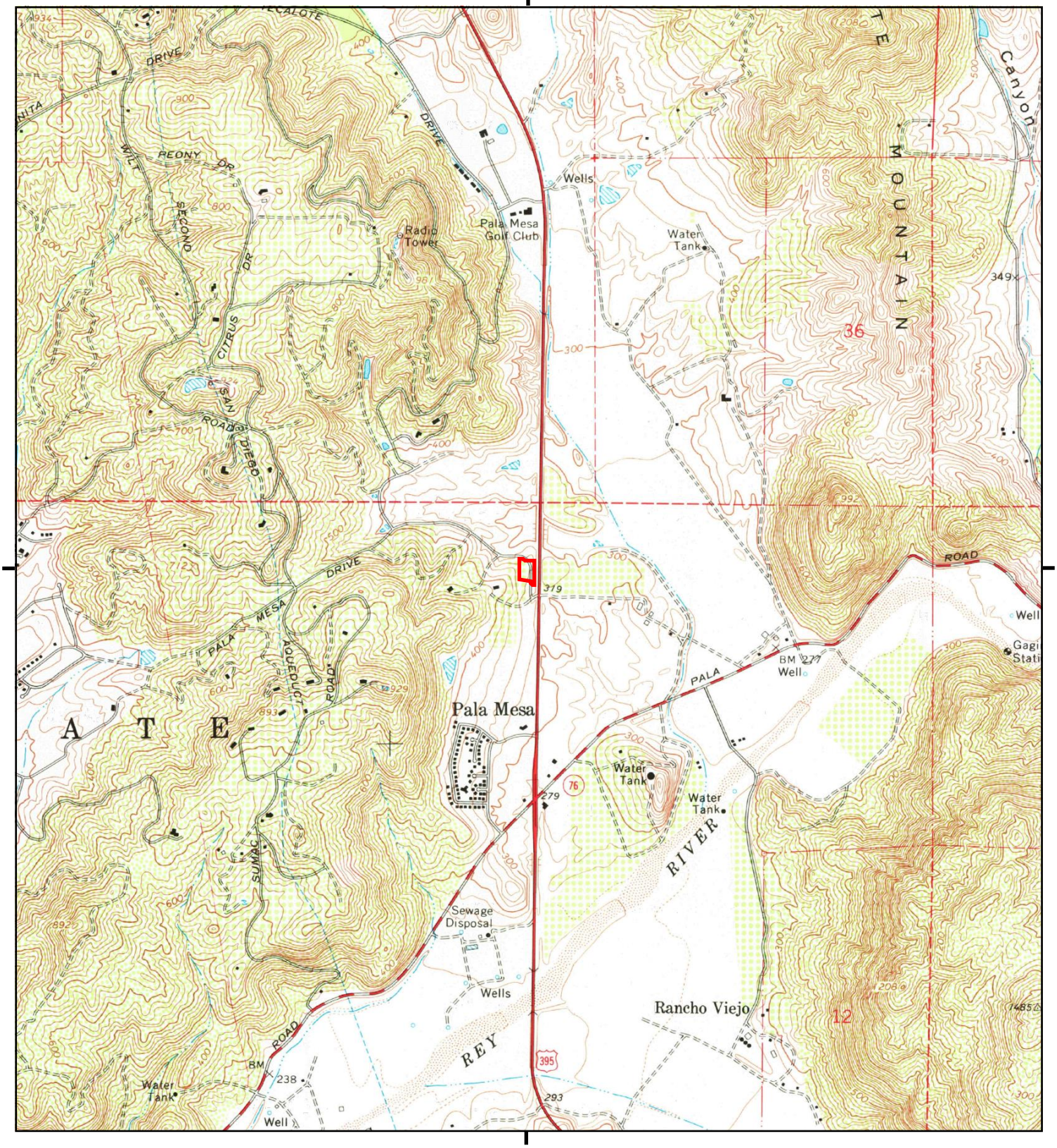
W E
SW S SE

TP, Bonsall, 2012, 7.5-minute

SITE NAME: NCFPD Station No. 4
ADDRESS: 4375 Pala Mesa Dr
Fallbrook, CA 92028
CLIENT: Rincon



This report includes information from the following map sheet(s).

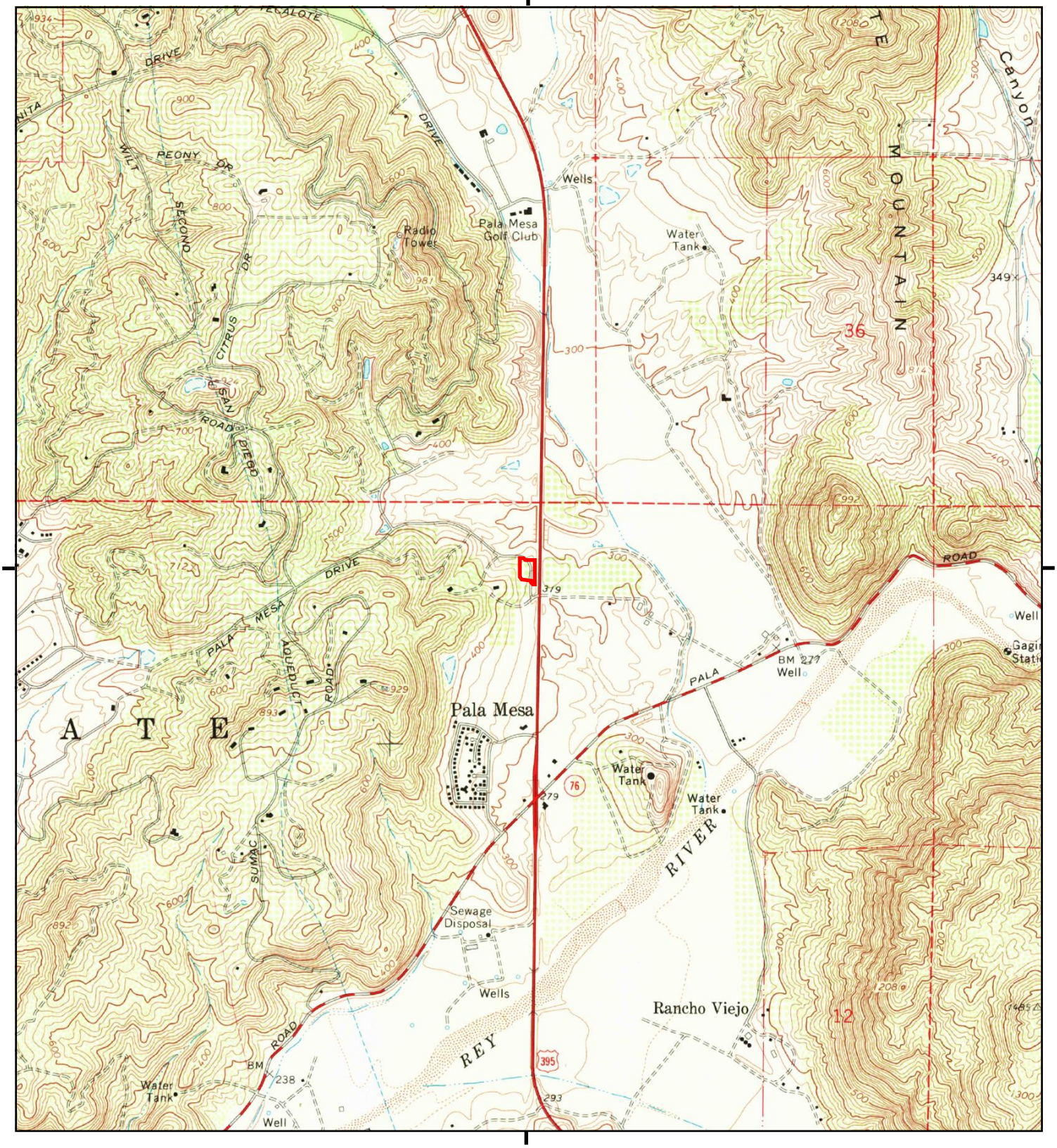
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Bonsall, 1975, 7.5-minute

SITE NAME: NCFPD Station No. 4
ADDRESS: 4375 Pala Mesa Dr
Fallbrook, CA 92028
CLIENT: Rincon

N



This report includes information from the following map sheet(s).

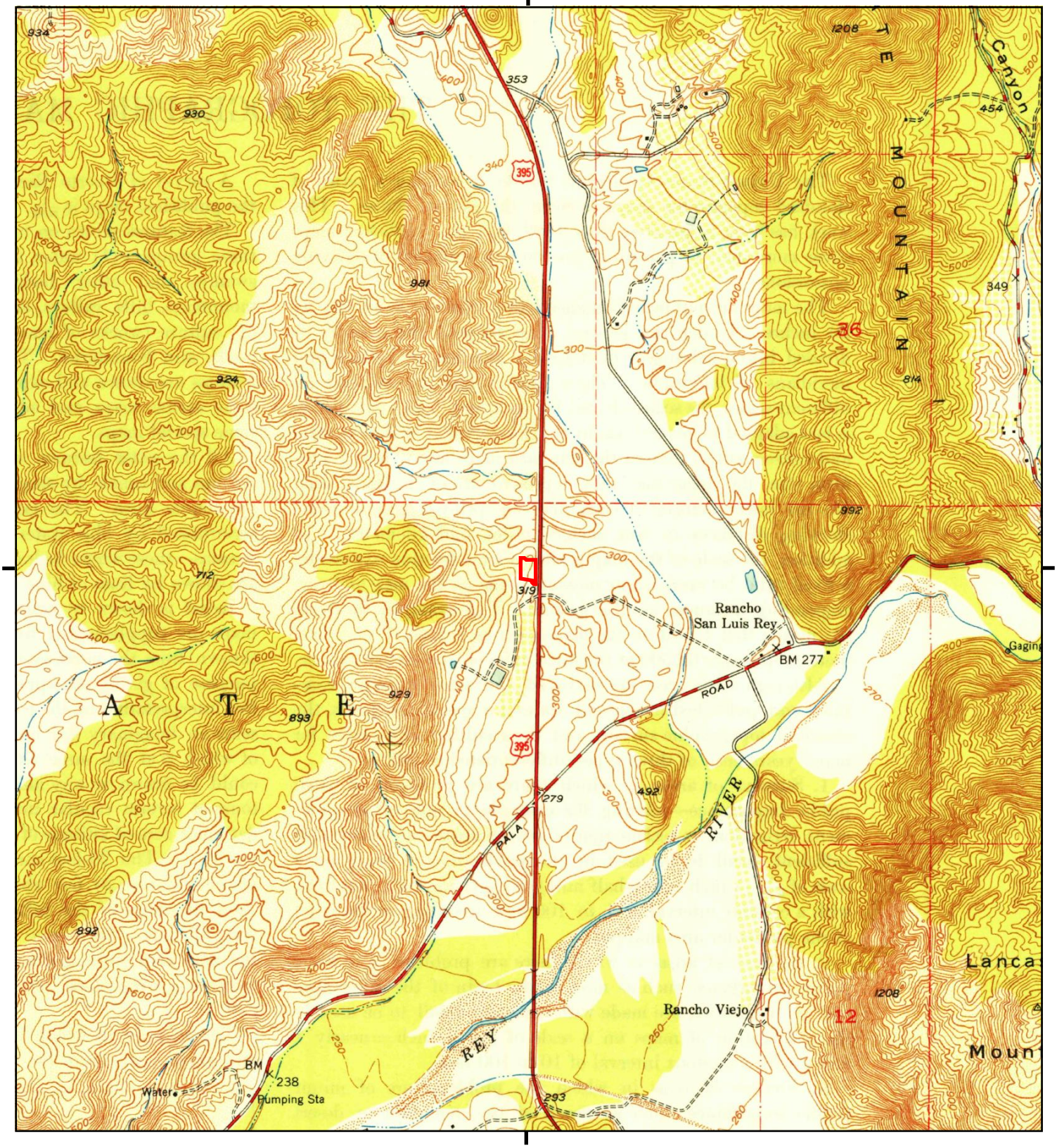
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Bonsall, 1968, 7.5-minute

SITE NAME: NCFPD Station No. 4
ADDRESS: 4375 Pala Mesa Dr
Fallbrook, CA 92028
CLIENT: Rincon

N



This report includes information from the following map sheet(s).

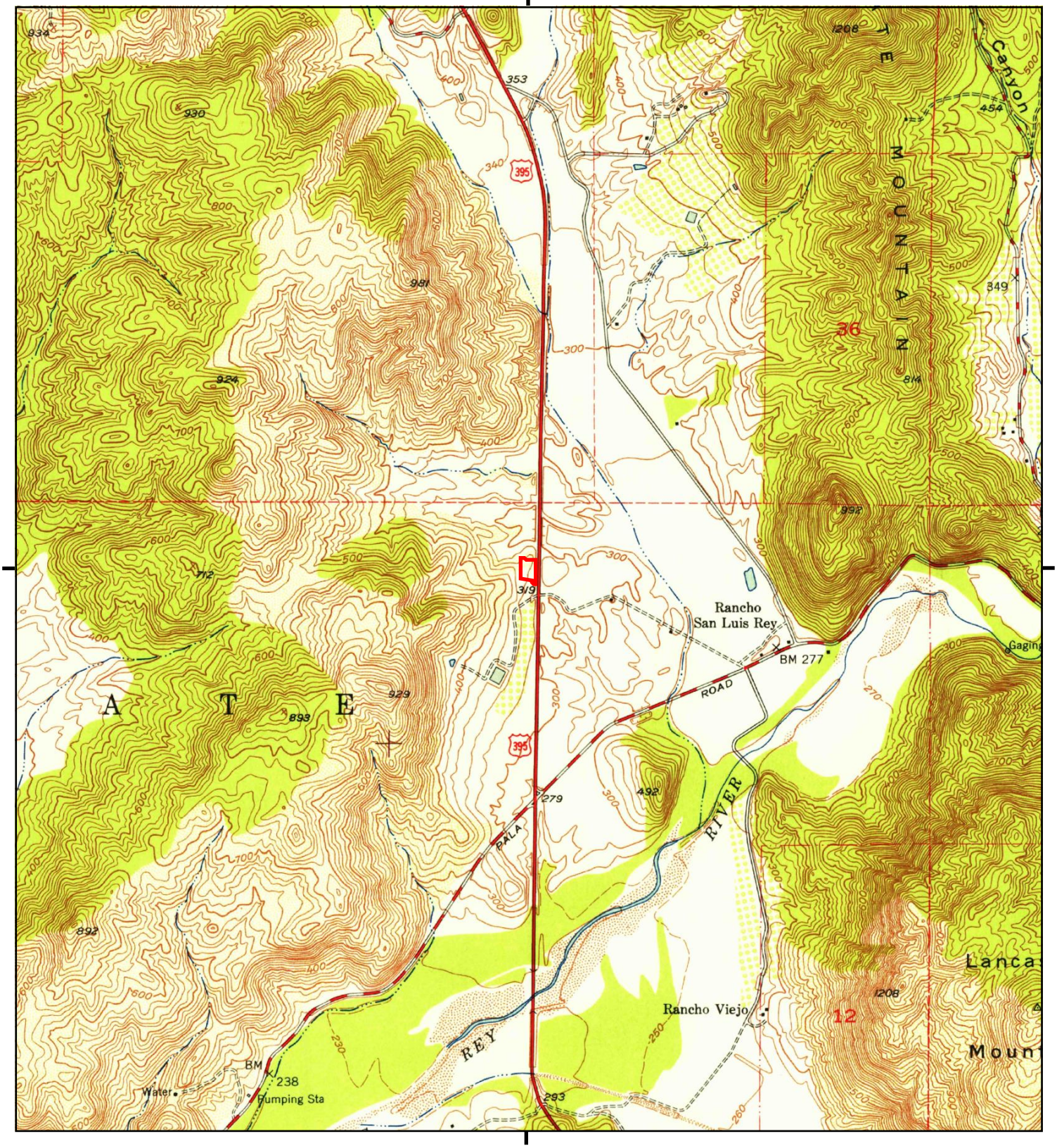
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Bonsall, 1949, 7.5-minute

SITE NAME: NCFPD Station No. 4
ADDRESS: 4375 Pala Mesa Dr
Fallbrook, CA 92028
CLIENT: Rincon

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

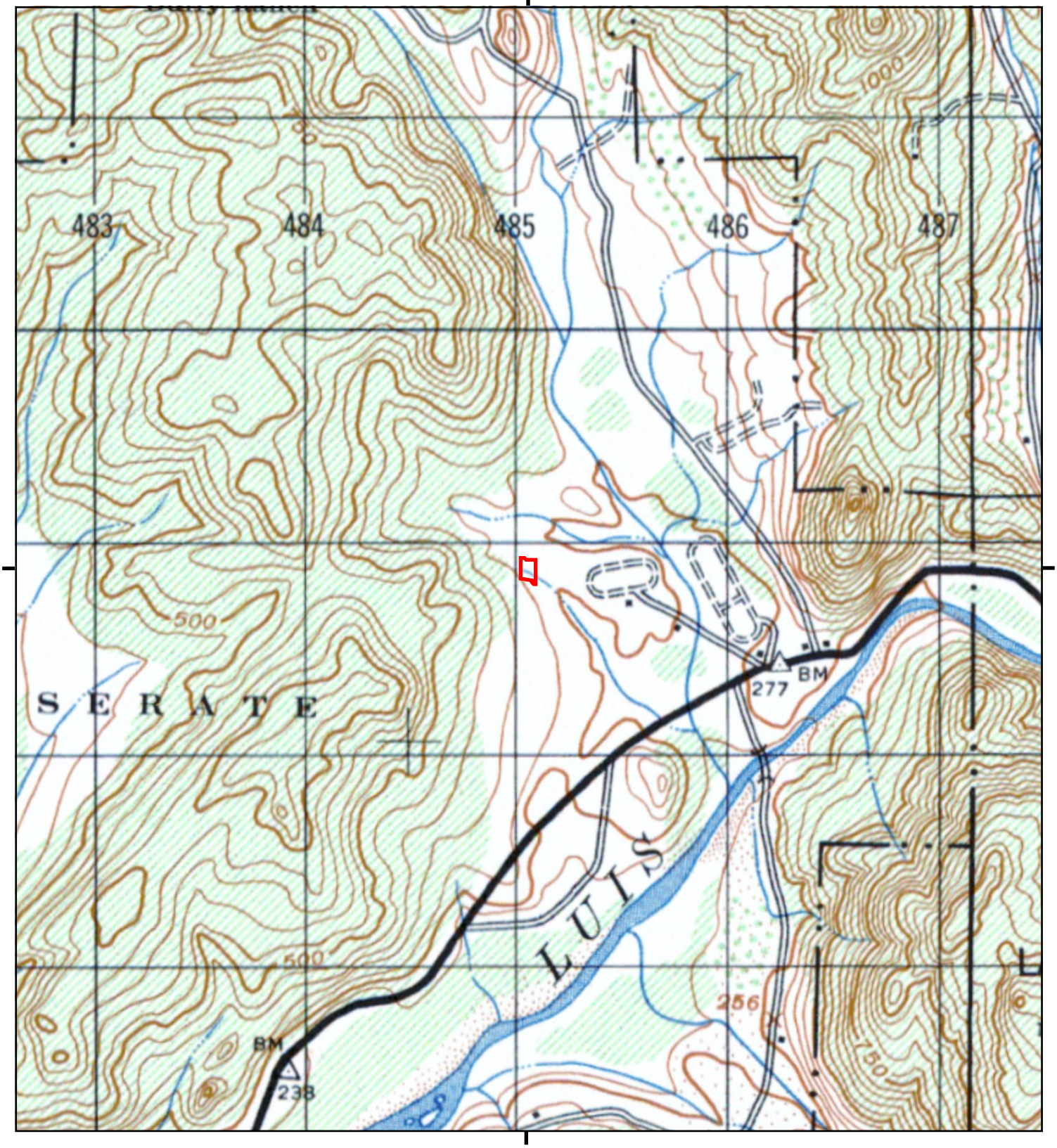
TP, Bonsall, 1948, 7.5-minute

SITE NAME: NCFPD Station No. 4
ADDRESS: 4375 Pala Mesa Dr
Fallbrook, CA 92028
CLIENT: Rincon

N

Historical Topo Map

1947



This report includes information from the following map sheet(s).

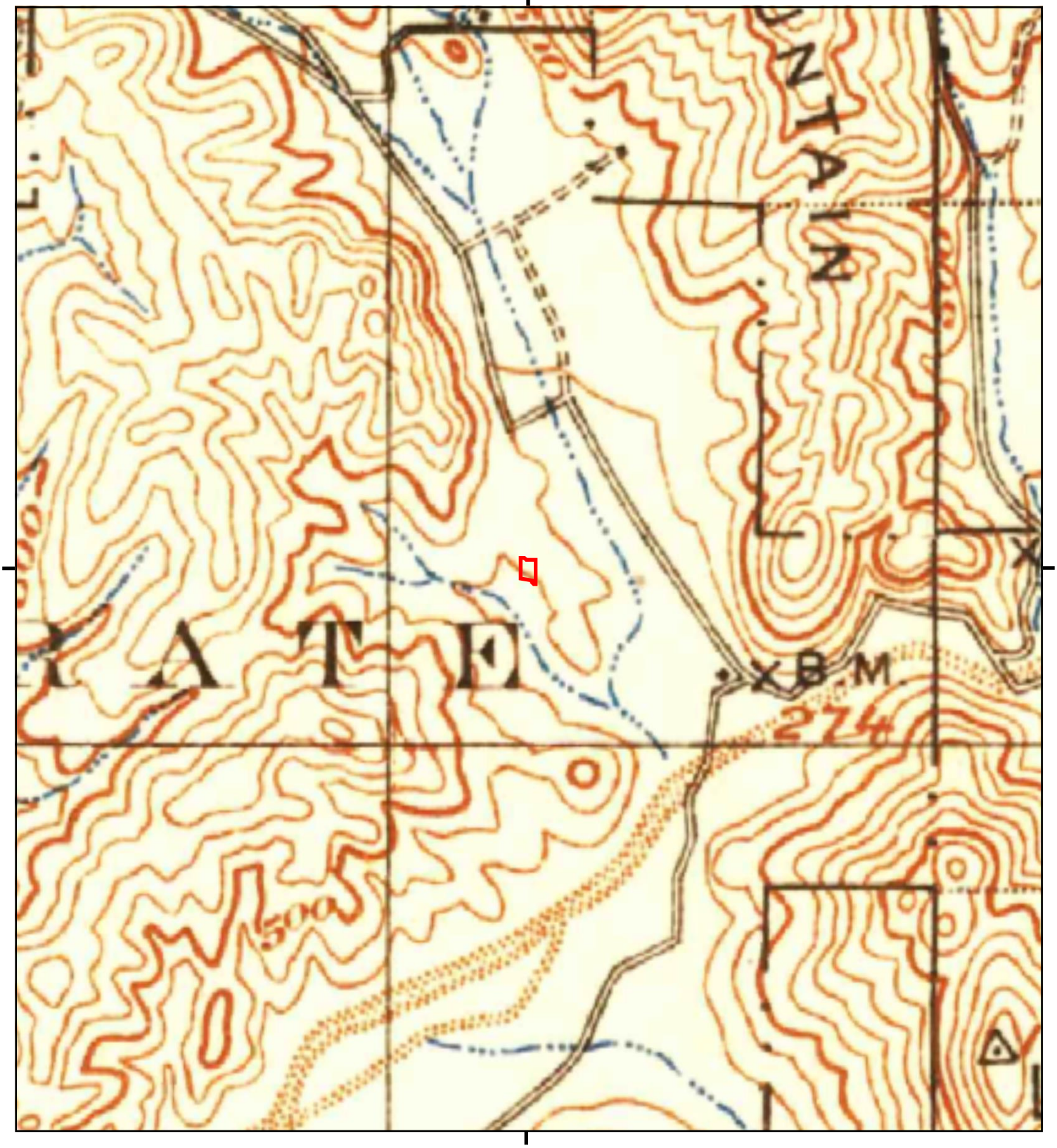
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, TEMECULA, 1947, 15-minute

SITE NAME: NCFPD Station No. 4
ADDRESS: 4375 Pala Mesa Dr
Fallbrook, CA 92028
CLIENT: Rincon

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, San Luis Rey, 1901, 30-minute

SITE NAME: NCFPD Station No. 4
ADDRESS: 4375 Pala Mesa Dr
Fallbrook, CA 92028
CLIENT: Rincon

N

NCFPD Station No. 4

4375 Pala Mesa Dr

Fallbrook, CA 92028

Inquiry Number: 7523814.3

December 18, 2023

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

12/18/23

Site Name:

NCFPD Station No. 4
4375 Pala Mesa Dr
Fallbrook, CA 92028
EDR Inquiry # 7523814.3

Client Name:

Rincon
180 North Ashwood Avenue
Ventura, CA 93003-0000
Contact: Savanna Vrevich

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Rincon were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # F7EE-4CF5-AA12

PO # NA

Project 23-14998

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: F7EE-4CF5-AA12

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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NCFPD Station No. 4
4375 Pala Mesa Dr
Fallbrook, CA 92028

Inquiry Number: 7523814.5
December 21, 2023

The EDR-City Directory Image Report

Environmental Data Resources Inc
6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available business directory data at approximately five year intervals.

RECORD SOURCES

The EDR City Directory Report accesses a variety of business directory sources, including Haines, InfoUSA, Polk, Cole, Bresser, and Stewart. Listings marked as EDR Digital Archive access Cole and InfoUSA records. The various directory sources enhance and complement each other to provide a more thorough and accurate report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	*Target Street*	*Cross Street*	*Source*
2020	☑	☑	EDR Digital Archive
2017	☑	☑	Cole Information
2014	☑	☑	Cole Information
2010	☑	☑	Cole Information
2005	☑	☑	Cole Information
2000	☑	☑	Cole Information
1995	☑	☑	Cole Information
1992	☑	☑	Cole Information
1986	☑	☑	Haines Criss-Cross Directory
1982	☑	☐	Haines Criss-Cross Directory
1979	☑	☐	Haines Criss-Cross Directory
1975	☑	☐	Haines Criss-Cross Directory
1971	☑	☐	Haines Criss-Cross Directory

FINDINGS

TARGET PROPERTY STREET

4375 Pala Mesa Dr
Fallbrook, CA 92028

Year	CD Image	Source

PALA MESA DR

2020	pg A2	EDR Digital Archive
2017	pg A4	Cole Information
2014	pg A6	Cole Information
2010	pg A8	Cole Information
2005	pg A10	Cole Information
2000	pg A12	Cole Information
1995	pg A14	Cole Information
1992	pg A16	Cole Information
1986	pg A18	Haines Criss-Cross Directory
1982	pg A19	Haines Criss-Cross Directory
1979	pg A20	Haines Criss-Cross Directory
1975	pg A21	Haines Criss-Cross Directory
1971	pg A22	Haines Criss-Cross Directory

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*	
DIEGOS CT			
2020	pg. A1	EDR Digital Archive	
2017	pg. A3	Cole Information	
2014	pg. A5	Cole Information	
2010	pg. A7	Cole Information	
2005	pg. A9	Cole Information	
2000	pg. A11	Cole Information	
1995	pg. A13	Cole Information	
1992	pg. A15	Cole Information	
1986	pg. A17	Haines Criss-Cross Directory	
1982	-	Haines Criss-Cross Directory	Street not listed in Source
1979	-	Haines Criss-Cross Directory	Street not listed in Source
1975	-	Haines Criss-Cross Directory	Street not listed in Source
1971	-	Haines Criss-Cross Directory	Street not listed in Source

City Directory Images

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

DIEGOS CT 2020

4304	DEREK GORDON
	JERRY GORDON
	WILLIAM GORDON
4308	GEOFFREY SIODMAK
	JUDY SIODMAK
4309	RICHARD ROGSTAD
4315	LEONARD BERKSTRESSER
4316	BERNARD STEINBACHER
4320	DAVID QUISTBERG
4324	GLORIA CORDOVA
	NELDA OWENS
4328	JANET HAYDEN
4336	BETTY WITTY
	CAROL HIPPERT
	DANIEL HIPPERT
	REBECCA HIPPERT

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

PALA MESA DR 2020

4023 BRETT PACK
HEATHER PACK

Target Street	Cross Street	Source
-	✓	Cole Information

DIEGOS CT 2017

4304	GORDON, JERRY A
4308	RUTLEDGE, JACK
4309	LOVELACE, WILLIAM A
4315	BERKSTRESSER, LEN E
4316	STEINBACHER, BERNARD J
4320	REILLE, ANN E
4324	BAJWA, HASAN A
4328	THOMPSON, ROBERT D
4336	WITTY, BETTY M

Target Street	Cross Street	Source
✓	-	Cole Information

PALA MESA DR 2017

4023 PACK, BRETT R

Target Street	Cross Street	Source
-	✓	Cole Information

DIEGOS CT 2014

4304	GORDON, JERRY Y
4308	SCOPIS, WILLIAM N
4309	LOVELACE, CLAUDE G
4315	BERKSTRESSER, LEN E
4316	STEINBACHER, BERNARD J
4324	OCCUPANT UNKNOWN,
4328	AVILA, TONY G
4332	LINDSAY, WINIFRED H
4336	WITTY, BETTY M

Target Street	Cross Street	Source
✓	-	Cole Information

PALA MESA DR 2014

4023 PACK, BRETT R

Target Street	Cross Street	Source
-	✓	Cole Information

DIEGOS CT 2010

4304	GORDON, JERRY Y
4308	SCOPIS, WILLIAM N
4309	BRENNAN, ANNE K
4315	BERKSTRESSER, LEN E
4316	STEINBACHER, JOHN
4320	COLE, JOYCE L
4324	OCCUPANT UNKNOWN,
4328	OCCUPANT UNKNOWN,
4332	LINDSAY, WINIFRED H
4336	WITTY, BETTY M

Target Street	Cross Street	Source
✓	-	Cole Information

PALA MESA DR 2010

4023 PACK, BRETT R

Target Street	Cross Street	Source
-	✓	Cole Information

DIEGOS CT 2005

4304	OCCUPANT UNKNOWN, SIODMAK CO INC
4308	SCOPIS, WILLIAM N
4309	OCCUPANT UNKNOWN,
4315	BERKSTRESSER, LEN E
4316	MANTZ, ART E
4320	COLE, JOYCE L
4324	OCCUPANT UNKNOWN,
4328	OCCUPANT UNKNOWN,
4332	LINDSAY, WINIFRED H
4336	WITTY, ROBERT C

Target Street	Cross Street	Source
✓	-	Cole Information

PALA MESA DR 2005

4023 OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
-	✓	Cole Information

DIEGOS CT 2000

4304	FORMILLER, GERALD D
4308	SCOPIS, WILLIAM
4309	OCCUPANT UNKNOWN,
4315	BERKSTRESSER, LEN
4316	WIGGAM, DONALD L
4320	OCCUPANT UNKNOWN,
4328	HAYDEN, JANET G
4332	LINDSAY, W H
4336	WITTY, ROBERT C

Target Street	Cross Street	Source
✓	-	Cole Information

PALA MESA DR 2000

3945 RAINEY, THOMAS

Target Street	Cross Street	Source
-	✓	Cole Information

DIEGOS CT 1995

4304	SCHMIDT, JOAN C
4308	CILCH, DONITA M
4309	LIEBER, ROBERT
4315	HAZEL, JAMES H
4316	HAPPER, MARY
4320	BAKER, CHESTER
4324	MORRIS, JAY O
4328	JUNGKEIT, DONA C
4332	LINDSAY, W H
4336	PEDERSON, PETER O

Target Street	Cross Street	Source
✓	-	Cole Information

PALA MESA DR 1995

3945 HILL, ROBERT

Target Street	Cross Street	Source
-	✓	Cole Information

DIEGOS CT 1992

4315	HAZEL, JAMES H
4320	BAKER, CHESTER
4332	LINDSAY, DONALD W
4336	PEDERSON, PETER O

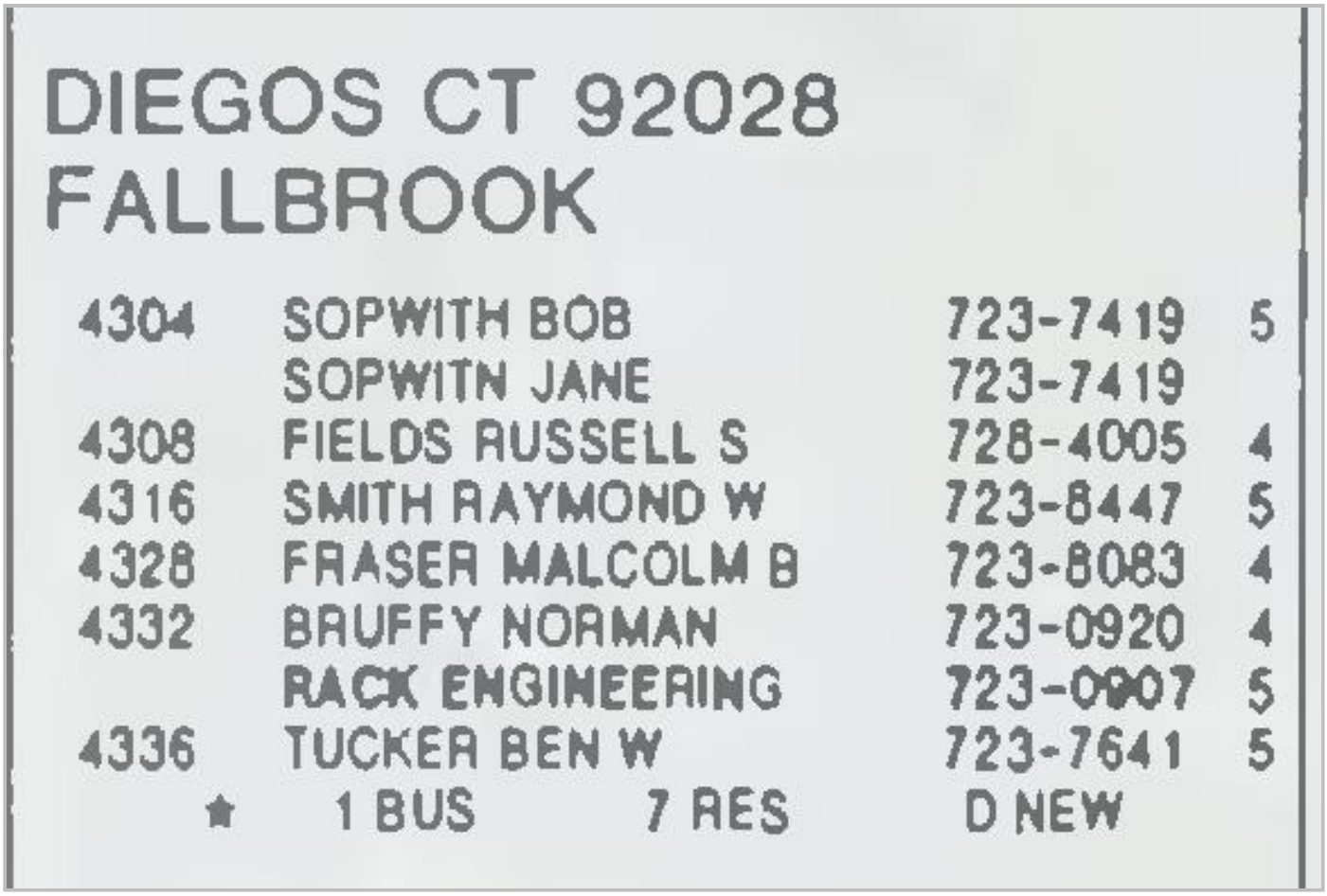
Target Street	Cross Street	Source
✓	-	Cole Information

PALA MESA DR 1992

4135 VILLEGAS, S

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

DIEGOS CT 1986



DIEGOS CT 92028
FALLBROOK

4304	SOPWITH BOB	723-7419	5
	SOPWITN JANE	723-7419	
4308	FIELDS RUSSELL S	728-4005	4
4316	SMITH RAYMOND W	723-8447	5
4328	FRASER MALCOLM B	723-8083	4
4332	BRUFFY NORMAN	723-0920	4
	RACK ENGINEERING	723-0907	5
4336	TUCKER BEN W	723-7641	5

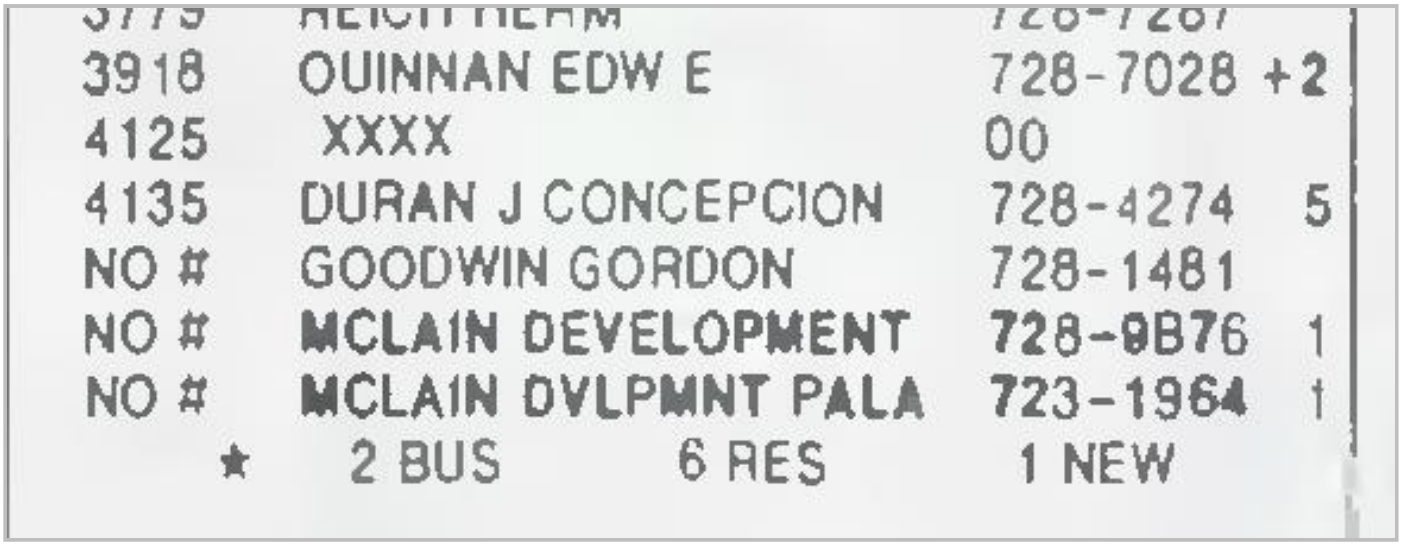
★ 1 BUS 7 RES D NEW

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

PALA MESA DR 1986

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

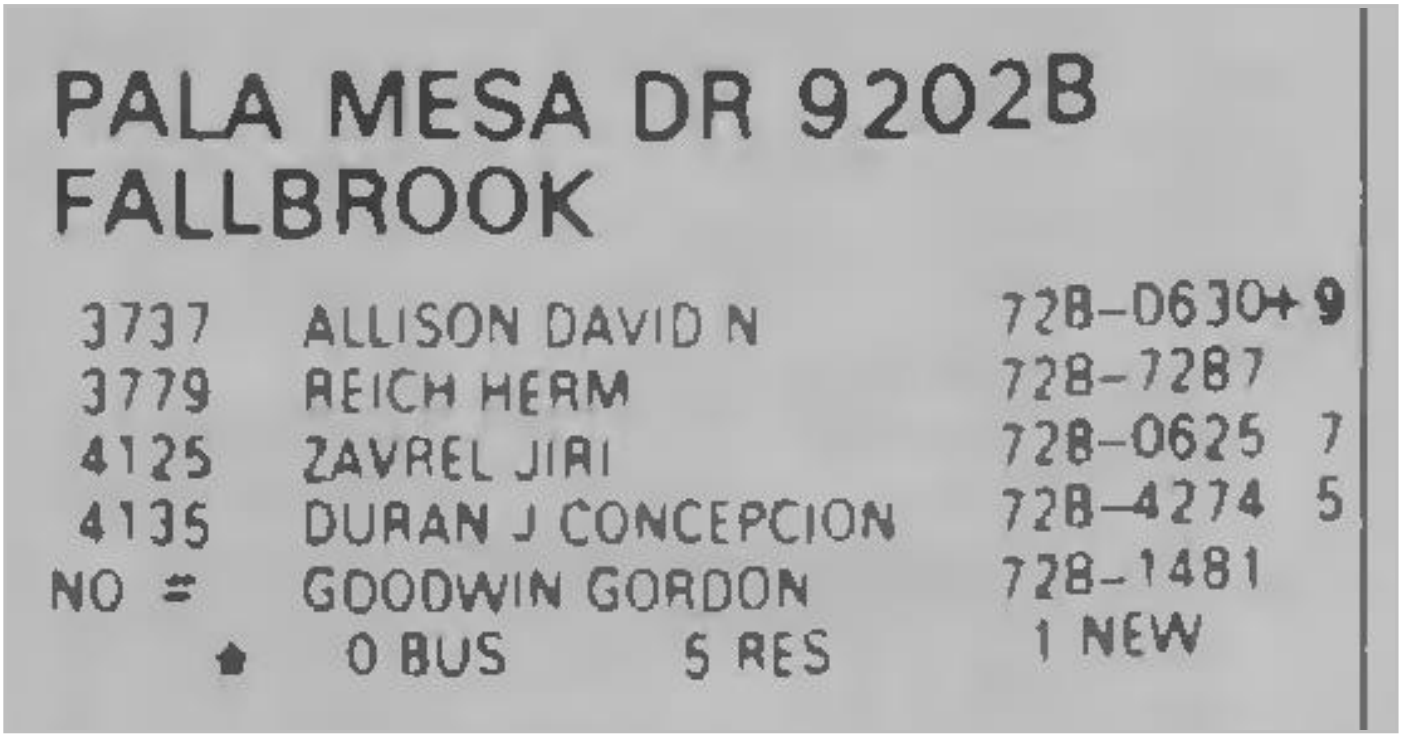
PALA MESA DR 1982



3779	HEIGHTHEAM	728-7287	
3918	OUINNAN EDW E	728-7028	+2
4125	XXXX	00	
4135	DURAN J CONCEPCION	728-4274	5
NO #	GOODWIN GORDON	728-1481	
NO #	MCLAIN DEVELOPMENT	728-9B76	1
NO #	MCLAIN DVLPMNT PALA	723-1964	1
★	2 BUS 6 RES	1 NEW	

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

PALA MESA DR 1979

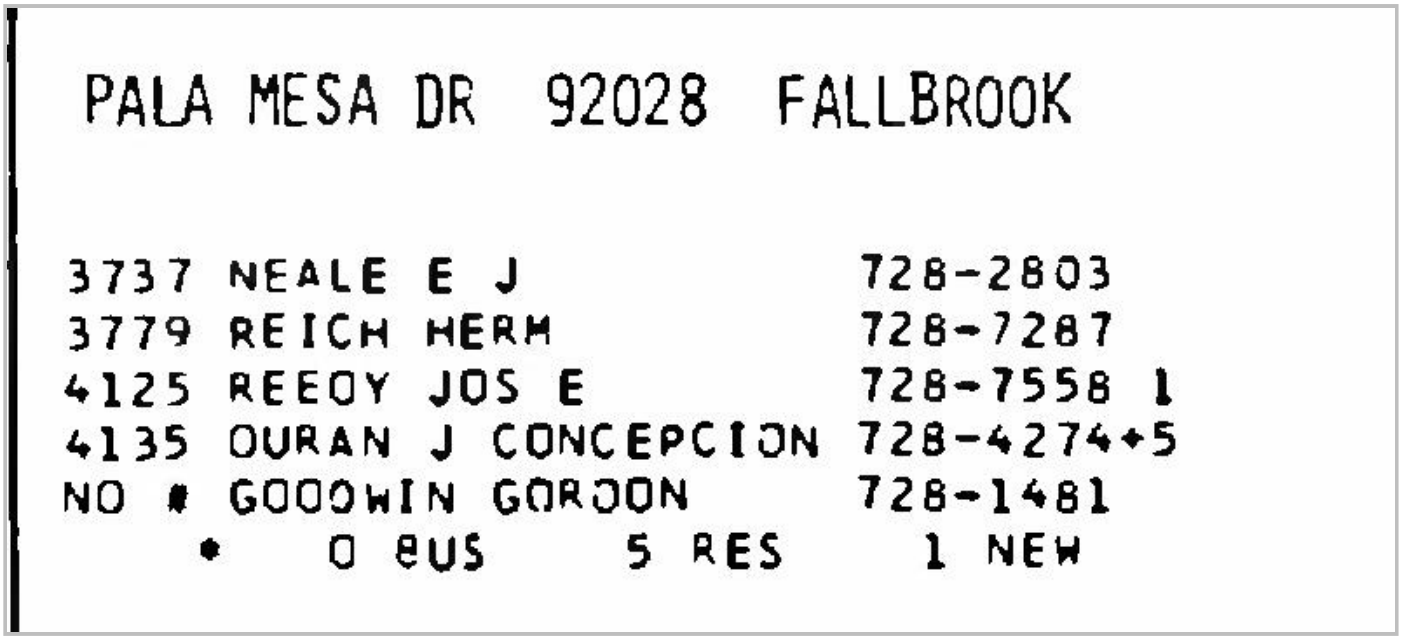


PALA MESA DR 9202B
FALLBROOK

3737	ALLISON DAVID N	728-0630+ 9
3779	REICH HERM	728-7287
4125	ZAVREL JIRI	728-0625 7
4135	DURAN J CONCEPCION	728-4274 5
NO =	GOODWIN GORDON	728-1481
	0 BUS 5 RES	1 NEW

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

PALA MESA DR 1975



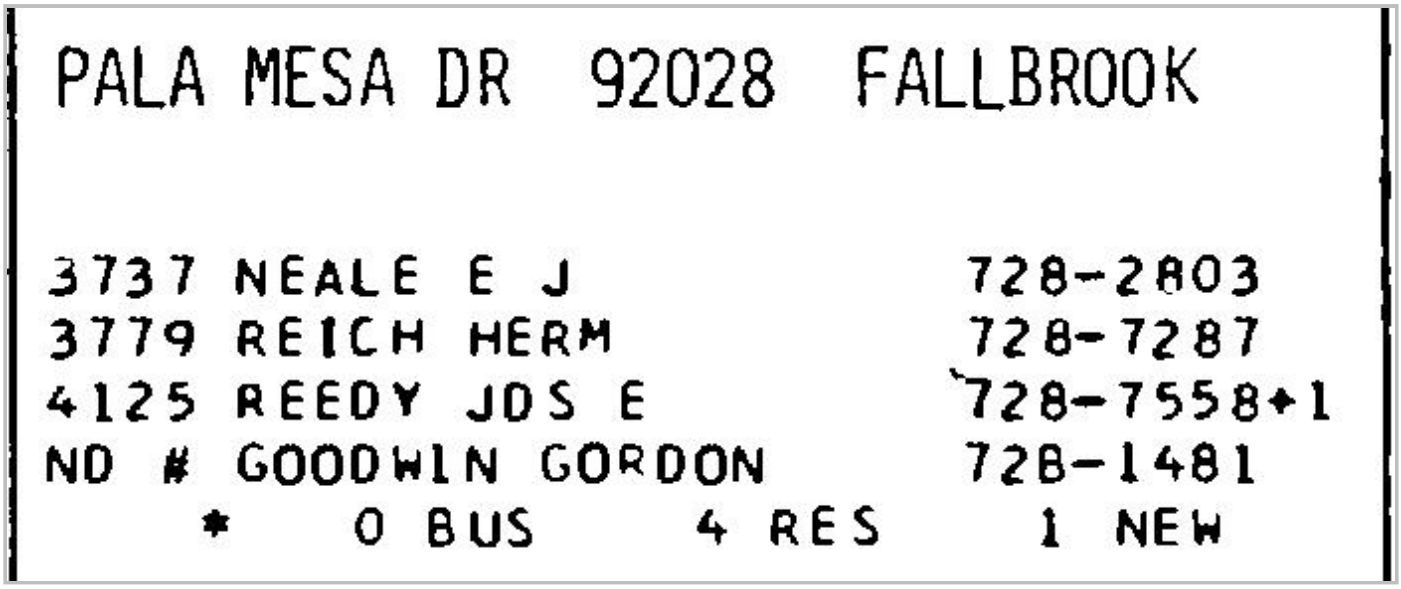
PALA MESA DR 92028 FALLBROOK

3737	NEALE E J	728-2803
3779	REICH HERM	728-7287
4125	REEOY JOS E	728-7558 1
4135	OURAN J CONCEPCION	728-4274+5
NO #	GOOOWIN GORJON	728-1481

• 0 BUS 5 RES 1 NEW

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

PALA MESA DR 1971



PALA MESA DR 92028 FALLBROOK

3737	NEALE E J	728-2803
3779	REICH HERM	728-7287
4125	REEDY JDS E	728-7558+1
ND #	GOODWIN GORDON	728-1481

* 0 BUS 4 RES 1 NEW

Appendix C

Regulatory Records Database Search

NCFPD Station No. 4
4375 Pala Mesa Dr
Fallbrook, CA 92028

Inquiry Number: 07523814.2r
December 18, 2023

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

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with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E2247 - 16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E1528 - 22) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

4375 PALA MESA DR
FALLBROOK, CA 92028

COORDINATES

Latitude (North):	33.3408100 - 33° 20' 26.91''
Longitude (West):	117.1604670 - 117° 9' 37.68''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	485067.4
UTM Y (Meters):	3688889.5
Elevation:	344 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	50005737 BONSALL, CA
Version Date:	2022

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20200520
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
4375 PALA MESA DR
FALLBROOK, CA 92028

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	NORTH COUNTY FIRE PR	4375 PALA MESA DR	FINDS		TP
A2	NORTH COUNTY FIRE PR	4375 PALA MESA DR	San Diego Co. HMMD, CERS		TP
3	MEADOWOOD PA2-OPTION	NO ADDRESS - PROPERT	ENVIROSTOR, SCH	Lower	3351, 0.635, ENE
4	MOBIL OIL CORPORATIO	4730 NW CORNER HWY 7	Notify 65	Lower	4156, 0.787, South

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 9 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
NORTH COUNTY FIRE PR 4375 PALA MESA DR FALLBROOK, CA 92028	FINDS Registry ID:: 110065762543	N/A
NORTH COUNTY FIRE PR 4375 PALA MESA DR FALLBROOK, CA 92028	San Diego Co. HMMD Record ID: DEH2004-HUPFP-204354 CERS	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Lists of Federal Delisted NPL sites

Delisted NPL ---------- National Priority List Deletions

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS ---------- Corrective Action Report

Lists of Federal RCRA TSD facilities

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

EXECUTIVE SUMMARY

Lists of Federal RCRA generators

RCRA-LQG ..... RCRA - Large Quantity Generators
RCRA-SQG ..... RCRA - Small Quantity Generators
RCRA-VSQG ..... RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ..... Land Use Control Information System
US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROLS ..... Institutional Controls Sites List

Federal ERNS list

ERNS ..... Emergency Response Notification System

Lists of state- and tribal (Superfund) equivalent sites

RESPONSE ..... State Response Sites

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF ..... Solid Waste Information System

Lists of state and tribal leaking storage tanks

SAN DIEGO CO. SAM ..... Environmental Case Listing
LUST ..... Geotracker's Leaking Underground Fuel Tank Report
INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land
CPS-SLIC ..... Statewide SLIC Cases

Lists of state and tribal registered storage tanks

FEMA UST ..... Underground Storage Tank Listing
UST ..... Active UST Facilities
AST ..... Aboveground Petroleum Storage Tank Facilities
INDIAN UST ..... Underground Storage Tanks on Indian Land

Lists of state and tribal voluntary cleanup sites

INDIAN VCP ..... Voluntary Cleanup Priority Listing
VCP ..... Voluntary Cleanup Program Properties

Lists of state and tribal brownfield sites

BROWNFIELDS ..... Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ..... A Listing of Brownfields Sites

EXECUTIVE SUMMARY

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT	Waste Management Unit Database
SWRCY	Recycler Database
HAULERS	Registered Waste Tire Haulers Listing
INDIAN ODI	Report on the Status of Open Dumps on Indian Lands
ODI	Open Dump Inventory
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS	Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL	Delisted National Clandestine Laboratory Register
HIST Cal-Sites	Historical Calsites Database
SCH	School Property Evaluation Program
CDL	Clandestine Drug Labs
CERS HAZ WASTE	California Environmental Reporting System Hazardous Waste
Toxic Pits	Toxic Pits Cleanup Act Sites
US CDL	National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

SWEEPS UST	SWEEPS UST Listing
HIST UST	Hazardous Substance Storage Container Database
CERS TANKS	California Environmental Reporting System (CERS) Tanks
CA FID UST	Facility Inventory Database

Local Land Records

LIENS	Environmental Liens Listing
LIENS 2	CERCLA Lien Information
DEED	Deed Restriction Listing

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
CHMIRS	California Hazardous Material Incident Report System
LDS	Land Disposal Sites Listing
MCS	Military Cleanup Sites Listing
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated
FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision

EXECUTIVE SUMMARY

RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
MINES MRDS	Mineral Resources Data System
ABANDONED MINES	Abandoned Mines
DOCKET HWC	Hazardous Waste Compliance Docket Listing
UXO	Unexploded Ordnance Sites
ECHO	Enforcement & Compliance History Information
FUELS PROGRAM	EPA Fuels Program Registered Listing
PFAS NPL	Superfund Sites with PFAS Detections Information
PFAS FEDERAL SITES	Federal Sites PFAS Information
PFAS TSCA	PFAS Manufacture and Imports Information
PFAS TRIS	List of PFAS Added to the TRI
PFAS RCRA MANIFEST	PFAS Transfers Identified In the RCRA Database Listing
PFAS ATSDR	PFAS Contamination Site Location Listing
PFAS WQP	Ambient Environmental Sampling for PFAS
PFAS NPDES	Clean Water Act Discharge Monitoring Information
PFAS ECHO	Facilities in Industries that May Be Handling PFAS Listing
PFAS ECHO FIRE TRAINING	Facilities in Industries that May Be Handling PFAS Listing
PFAS PART 139 AIRPORT	All Certified Part 139 Airports PFAS Information Listing
AQUEOUS FOAM NRC	Aqueous Foam Related Incidents Listing
BIOSOLIDS	ICIS-NPDES Biosolids Facility Data
PFAS	PFAS Contamination Site Location Listing
AQUEOUS FOAM	Former Fire Training Facility Assessments Listing
CA BOND EXP. PLAN	Bond Expenditure Plan
CHROME PLATING	Chrome Plating Facilities Listing
Cortese	"Cortese" Hazardous Waste & Substances Sites List
CUPA Listings	CUPA Resources List
DRYCLEANERS	Cleaner Facilities
EMI	Emissions Inventory Data
ENF	Enforcement Action Listing
Financial Assurance	Financial Assurance Information Listing
ICE	Inspection, Compliance and Enforcement
HIST CORTESE	Hazardous Waste & Substance Site List
HWP	EnviroStor Permitted Facilities Listing
HWT	Registered Hazardous Waste Transporter Database
HWTS	Hazardous Waste Tracking System

HAZNET Facility and Manifest Data
MINES Mines Site Location Listing
MWMP Medical Waste Management Program Listing
NPDES NPDES Permits Listing
PEST LIC Pesticide Regulation Licenses Listing
PROC Certified Processors Database
HAZMAT Hazardous Material Facilities
UIC UIC Listing
UIC GEO UIC GEO (GEOTRACKER)
WASTEWATER PITS Oil Wastewater Pits Listing
WDS Waste Discharge System
WIP Well Investigation Program Case List
MILITARY PRIV SITES MILITARY PRIV SITES (GEOTRACKER)
PROJECT PROJECT (GEOTRACKER)
WDR Waste Discharge Requirements Listing
SAN DIEGO CO LOP Local Oversight Program Listing
CIWQS California Integrated Water Quality System
NON-CASE INFO NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ Well Stimulation Project (GEOTRACKER)

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP EDR Proprietary Manufactured Gas Plants
EDR Hist Auto EDR Exclusive Historical Auto Stations
EDR Hist Cleaner EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF Recovered Government Archive Solid Waste Facilities List
RGA LUST Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

Lists of state- and tribal hazardous waste facilities

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 07/24/2023 has revealed that there is 1 ENVIROSTOR site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
MEADOWOOD PA2-OPTION Facility Id: 60001970 Status: No Further Action	***NO ADDRESS - PROPERT***	***ENE 1/2 - 1 (0.635 mi.)***	***3***	***22***

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

Notify 65: Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

A review of the Notify 65 list, as provided by EDR, and dated 09/07/2023 has revealed that there is 1 Notify 65 site within approximately 1 mile of the target property.

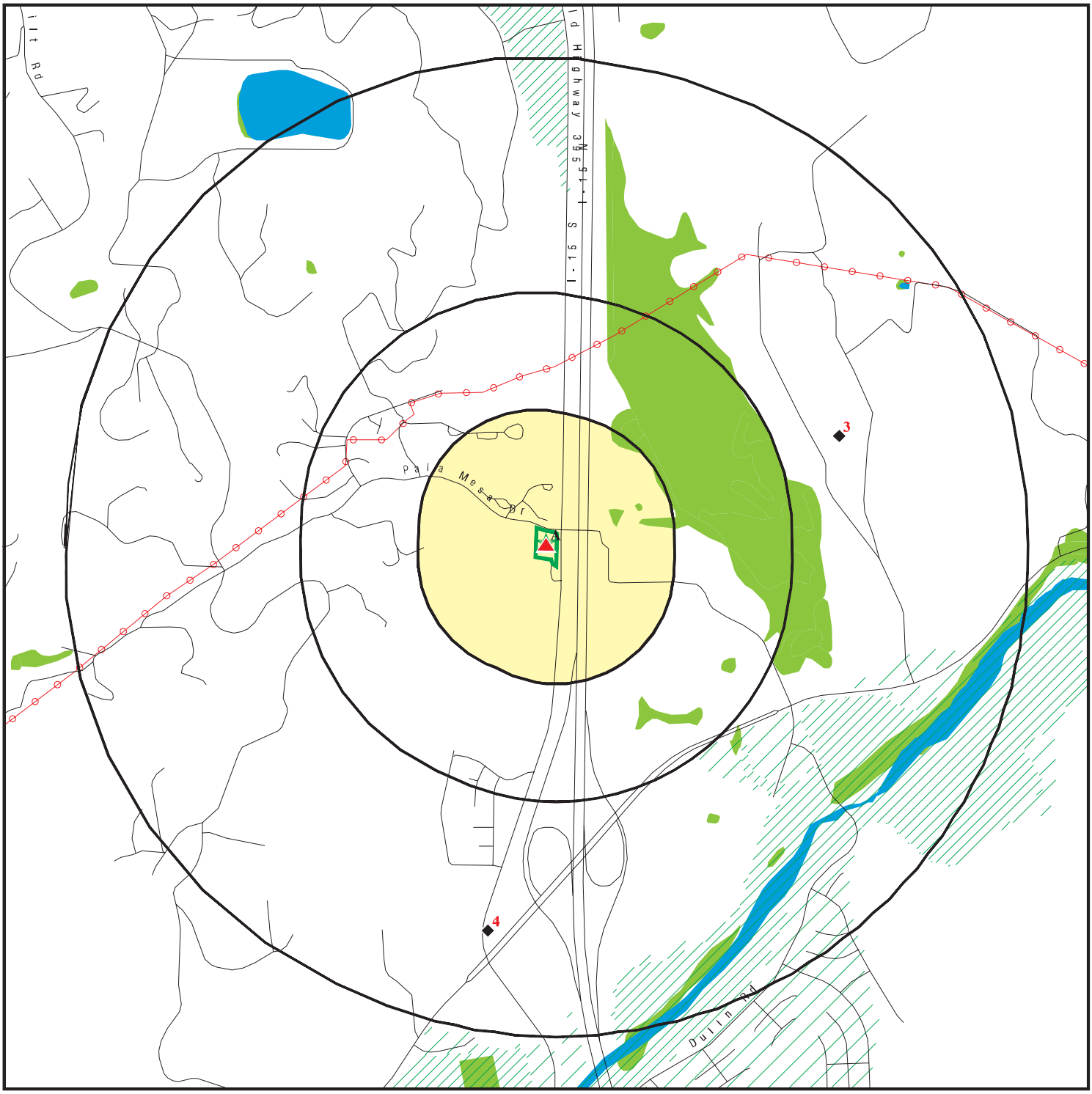
Lower Elevation	Address	Direction / Distance	Map ID	Page
MOBIL OIL CORPORATIO	4730 NW CORNER HWY 7	S 1/2 - 1 (0.787 mi.)	4	26

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 3 records.

Site Name	Database(s)
SDG&E - PALA SUBSTATION	San Diego Co. HMMD
HORSE CREEK RIDGE - EQUESTRIAN STA	CPS-SLIC
PROPOSED MEADOWOOD DEVELOPMENT	CPS-SLIC

OVERVIEW MAP - 07523814.2R



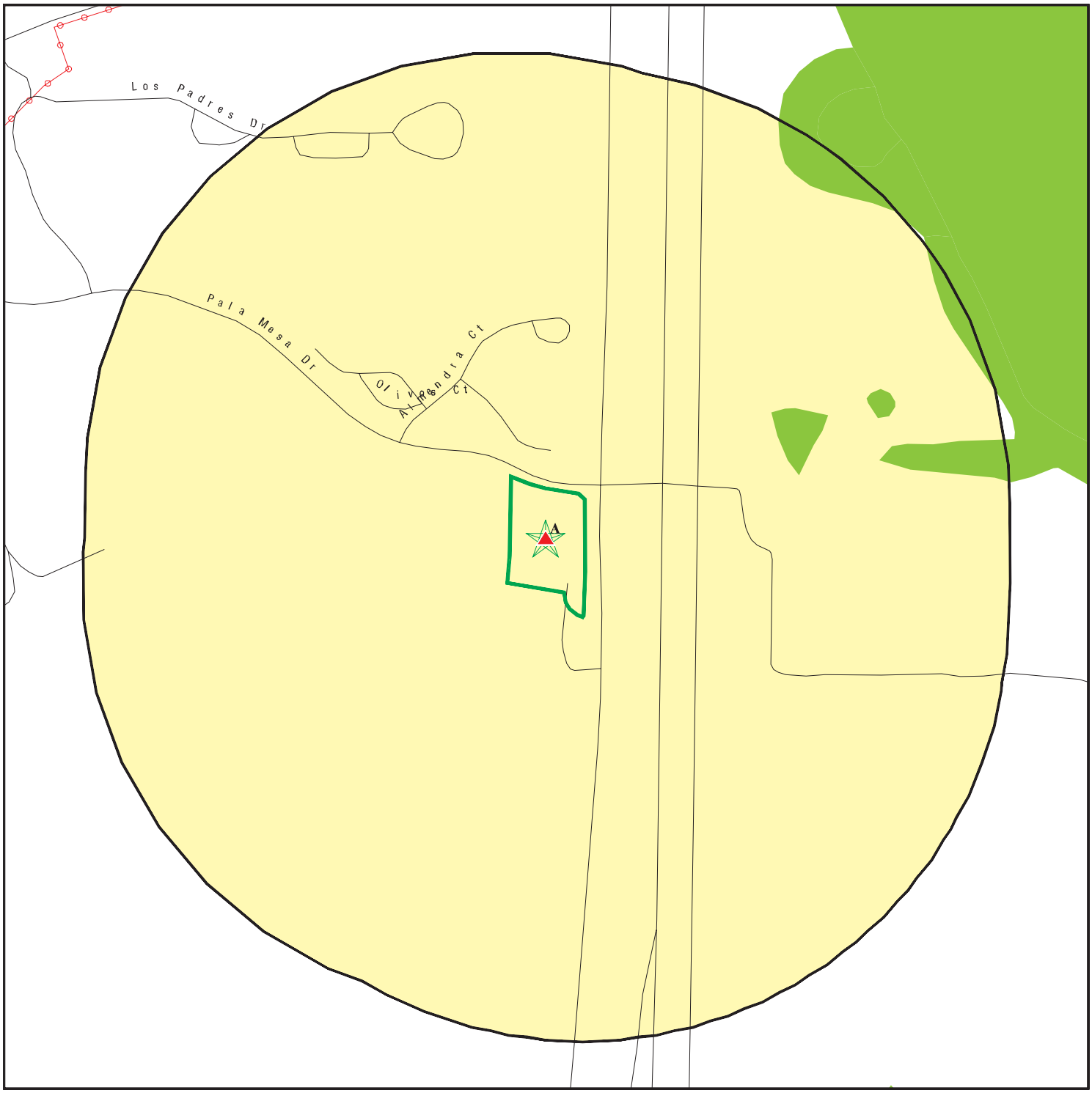
0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	NCFPD Station No. 4	CLIENT:	Rincon
ADDRESS:	4375 Pala Mesa Dr Fallbrook CA 92028	CONTACT:	Savanna Vrevich
LAT/LONG:	33.34081 / 117.160467	INQUIRY #:	07523814.2r
		DATE:	December 18, 2023 5:00 pm

DETAIL MAP - 07523814.2R



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites

0 1/16 1/8 1/4 Miles

- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Concern

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	NCFPD Station No. 4	CLIENT:	Rincon
ADDRESS:	4375 Pala Mesa Dr Fallbrook CA 92028	CONTACT:	Savanna Vrevich
LAT/LONG:	33.34081 / 117.160467	INQUIRY #:	07523814.2r
		DATE:	December 18, 2023 5:01 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
Lists of state- and tribal (Superfund) equivalent sites								
RESPONSE	1.000		0	0	0	0	NR	0
Lists of state- and tribal hazardous waste facilities								
ENVIROSTOR	1.000		0	0	0	1	NR	1
Lists of state and tribal landfills and solid waste disposal facilities								
SWF/LF	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
Lists of state and tribal leaking storage tanks								
SAN DIEGO CO. SAM	0.500		0	0	0	NR	NR	0
LUST	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
Lists of state and tribal registered storage tanks								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
Lists of state and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
Lists of state and tribal brownfield sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
San Diego Co. HMMD	0.001	1	0	NR	NR	NR	NR	1
CERS HAZ WASTE	0.250		0	0	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CA FID UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
MINES MRDS	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001	1	0	NR	NR	NR	NR	1
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
ECHO	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0
PFAS TSCA	0.250		0	0	NR	NR	NR	0
PFAS TRIS	0.250		0	0	NR	NR	NR	0
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0
PFAS NPDES	0.250		0	0	NR	NR	NR	0
PFAS ECHO	0.250		0	0	NR	NR	NR	0
PFAS ECHO FIRE TRAINING	0.250		0	0	NR	NR	NR	0
PFAS PART 139 AIRPORT	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM NRC	0.250		0	0	NR	NR	NR	0
BIOSOLIDS	0.001		0	NR	NR	NR	NR	0
PFAS	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
CHROME PLATING	0.500		0	0	0	NR	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	0	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
HWTS	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001		0	NR	NR	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	1	NR	1
HAZMAT	0.250		0	0	NR	NR	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
UIC GEO	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
PROJECT	0.001		0	NR	NR	NR	NR	0
WDR	0.001		0	NR	NR	NR	NR	0
SAN DIEGO CO LOP	0.001		0	NR	NR	NR	NR	0
CIWQS	0.001		0	NR	NR	NR	NR	0
CERS	0.001	1	0	NR	NR	NR	NR	1
NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		3	0	0	0	2	0	5

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1
Target Property
NORTH COUNTY FIRE PROTECT DIS STA #4
4375 PALA MESA DR
FALLBROOK, CA 92028

FINDS **1023285269**
N/A

Site 1 of 2 in cluster A

Actual:
344 ft.

FINDS:
Registry ID: 110065762543

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:
The California Environmental Protection Agency (CalEPA) has recently implemented a new data warehouse system (nSite). This data warehouse combines and merges facility and site information from five different systems managed within CalEPA. The five systems are: California Environmental Reporting System (CERS),EnviroStor, GeoTracker, California Integrated Water Quality System (CIWQS), andToxic Release Inventory (TRI).

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

A2
Target Property
NORTH COUNTY FIRE PROTECT DIS STA #4
4375 PALA MESA DR
FALLBROOK, CA 92028

San Diego Co. HMMD **S104753683**
CERS **N/A**

Site 2 of 2 in cluster A

Actual:
344 ft.

HMMD SAN DIEGO:

Name:	NORTH COUNTY FIRE PROTECT DIS STA #4
Address:	4375 PALA MESA DR
City,State,Zip:	FALLBROOK, CA 92028
Permit Number:	Not reported
Business Type:	Not reported
EPA Id Number:	Not reported
APN:	Not reported
Last HMMD Inspection:	Not reported
Facility Telephone:	760-723-2005
Permit Status:	Permit Renewed
Permit Expiration:	Not reported
Date Last Updated:	05/11/2023
Facility Owner:	Not reported
Facility Mailing Address:	330 S MAIN Ave, FALLBROOK, CA 92028
Facility Mailing City:	Not reported
Facility Mailing State:	Not reported
Facility Mailing Zip:	Not reported
UST Owner:	N
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	N
Treat Haz Waste:	N
Generate Medical Waste:	Not reported

Inspection Violation:

Record ID:	DEH2004-HUPFP-204354
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-204354
Program Element:	Medical Waste
Inspection Type:	Routine

NORTH COUNTY FIRE PROTECT DIS STA #4 (Continued) **S104753683**

Inspection Number:	4486078
Return To Compliance Date:	2015-12-01T00:00:00.000
Nov:	No
Violation Classification:	Minor
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2023-05-11T01:51:40.000
Inspection Date:	2015-09-17T16:41:00.000
Violation Code:	HMD4303 Did not retain on file disposal receipts, tracking/shipping documents for medical waste shipped offsite for 3 years. HSC 117945

Record ID:	DEH2004-HUPFP-204354
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-204354
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	6923495
Return To Compliance Date:	Not reported
Nov:	Not reported
Violation Classification:	Not reported
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2023-05-11T01:51:40.000
Inspection Date:	2022-05-26T00:00:00.000
Violation Code:	HMD0000 HAZARDOUS MATERIALS REQUIREMENTS

Record ID:	DEH2004-HUPFP-204354
Permit Status:	Permit Renewed
Active Permit:	Y
Facility Id Number:	37-000-204354
Program Element:	Hazardous Materials Release Response Plans
Inspection Type:	Routine
Inspection Number:	6923495
Return To Compliance Date:	2022-05-26T00:00:00.000
Nov:	No
Violation Classification:	Class II
Underground Storage Tank Id:	Not reported
Container/Tank Id:	Not reported
Last Update:	2023-05-11T01:51:40.000
Inspection Date:	2022-05-26T00:00:00.000
Violation Code:	1010004 Chemical inventory incomplete or not submitted in CERS. HSC 25505(a)(1); 25507(a); 25508.1(a-b); 19 CCR 2654 (a) or (d)

Waste and Materials:

Record ID:	DEH2004-HUPFP-204354
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2019-HCHEM-0221326
Trade Secret:	N
Hazardous Material Type:	Pure
Last Updated:	2020-02-25T02:34:54.000
Chemical Name:	propane gas
Common Name:	LPG
Case Number:	68476-85-7

Record ID:	DEH2004-HUPFP-204354

NORTH COUNTY FIRE PROTECT DIS STA #4 (Continued) **S104753683**

Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HCHEM-0183820
Trade Secret:	N
Hazardous Material Type:	Pure
Last Updated:	2019-02-23T02:33:05.000
Chemical Name:	propane gas
Common Name:	LPG
Case Number:	68476-85-7

Record ID:	DEH2004-HUPFP-204354
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2018-HCHEM-0183821
Trade Secret:	N
Hazardous Material Type:	Pure
Last Updated:	2019-02-23T02:33:05.000
Chemical Name:	diesel fuel
Common Name:	diesel fuel
Case Number:	68476-34-6

Record ID:	DEH2004-HUPFP-204354
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2020-HCHEM-0266324
Trade Secret:	N
Hazardous Material Type:	Pure
Last Updated:	2022-02-24T02:30:55.000
Chemical Name:	propane gas
Common Name:	LPG
Case Number:	68476-85-7

Record ID:	DEH2004-HUPFP-204354
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2020-HCHEM-0266325
Trade Secret:	N
Hazardous Material Type:	Pure
Last Updated:	2022-02-24T02:30:55.000
Chemical Name:	diesel fuel
Common Name:	diesel fuel
Case Number:	68476-34-6

Record ID:	DEH2004-HUPFP-204354
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2022-HCHEM-0331031
Trade Secret:	N
Hazardous Material Type:	Pure
Last Updated:	2023-02-18T02:30:48.000
Chemical Name:	propane gas
Common Name:	LPG
Case Number:	68476-85-7

Record ID:	DEH2004-HUPFP-204354
Permit Status:	Permit Renewed
Active Permit:	Y

NORTH COUNTY FIRE PROTECT DIS STA #4 (Continued) **S104753683**

Child Record Id:	DEH2022-HCHEM-0331032
Trade Secret:	N
Hazardous Material Type:	Pure
Last Updated:	2023-02-18T02:30:48.000
Chemical Name:	diesel fuel
Common Name:	diesel fuel
Case Number:	68476-34-6
Record ID:	DEH2004-HUPFP-204354
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2022-HCHEM-0331033
Trade Secret:	N
Hazardous Material Type:	Pure
Last Updated:	2023-02-18T02:30:48.000
Chemical Name:	Oxygen
Common Name:	Oxygen Gas
Case Number:	7782-44-7
Record ID:	DEH2004-HUPFP-204354
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2015-HCHEM-0075078
Trade Secret:	N
Hazardous Material Type:	Pure
Last Updated:	2017-01-25T02:35:59.000
Chemical Name:	diesel fuel
Common Name:	diesel fuel
Case Number:	68476-34-6
Record ID:	DEH2004-HUPFP-204354
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2015-HCHEM-0075079
Trade Secret:	N
Hazardous Material Type:	Pure
Last Updated:	2017-01-25T02:35:59.000
Chemical Name:	propane gas
Common Name:	propane gas
Case Number:	68476-85-7
Record ID:	DEH2004-HUPFP-204354
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2015-HWAST-0058946
Trade Secret:	N
Hazardous Material Type:	Not reported
Last Updated:	2017-01-25T02:35:59.000
Chemical Name:	waste pharmacueticals
Common Name:	pharmacuetical waste
Case Number:	Not reported
Record ID:	DEH2004-HUPFP-204354
Permit Status:	Permit Renewed
Active Permit:	Y
Child Record Id:	DEH2015-HWAST-0058947
Trade Secret:	N

NORTH COUNTY FIRE PROTECT DIS STA #4 (Continued) **S104753683**

Hazardous Material Type: Not reported
Last Updated: 2017-01-25T02:35:59.000
Chemical Name: sharps waste
Common Name: sharps waste
Case Number: Not reported

Record ID: DEH2004-HUPFP-204354
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HCHEM-0153622
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2018-02-21T02:32:22.000
Chemical Name: propane gas
Common Name: LPG
Case Number: 68476-85-7

Record ID: DEH2004-HUPFP-204354
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HCHEM-0153623
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2018-02-21T02:32:22.000
Chemical Name: diesel fuel
Common Name: diesel fuel
Case Number: 68476-34-6

Record ID: DEH2004-HUPFP-204354
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0131928
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-02-21T02:32:22.000
Chemical Name: waste pharmacueticals
Common Name: pharmacuetical waste
Case Number: Not reported

Record ID: DEH2004-HUPFP-204354
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2017-HWAST-0131929
Trade Secret: N
Hazardous Material Type: Not reported
Last Updated: 2018-02-21T02:32:22.000
Chemical Name: sharps waste
Common Name: sharps waste
Case Number: Not reported

Record ID: DEH2004-HUPFP-204354
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2019-HCHEM-0221327
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2020-02-25T02:34:54.000

NORTH COUNTY FIRE PROTECT DIS STA #4 (Continued) **S104753683**

Chemical Name: diesel fuel
Common Name: diesel fuel
Case Number: 68476-34-6

Record ID: DEH2004-HUPFP-204354
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2022-HCHEM-0330136
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2022-05-24T00:57:02.000
Chemical Name: propane gas
Common Name: LPG
Case Number: 68476-85-7

Record ID: DEH2004-HUPFP-204354
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2022-HCHEM-0330137
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2022-05-24T00:57:02.000
Chemical Name: diesel fuel
Common Name: diesel fuel
Case Number: 68476-34-6

Record ID: DEH2004-HUPFP-204354
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2022-HCHEM-0329133
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2022-05-11T01:26:30.000
Chemical Name: propane gas
Common Name: LPG
Case Number: 68476-85-7

Record ID: DEH2004-HUPFP-204354
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2022-HCHEM-0329134
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2022-05-11T01:26:30.000
Chemical Name: diesel fuel
Common Name: diesel fuel
Case Number: 68476-34-6

Record ID: DEH2004-HUPFP-204354
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2023-HCHEM-0370018
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2023-05-11T01:51:43.000
Chemical Name: propane gas
Common Name: LPG

NORTH COUNTY FIRE PROTECT DIS STA #4 (Continued) **S104753683**

Case Number: 68476-85-7

Record ID: DEH2004-HUPFP-204354
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2023-HCHEM-0370019
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2023-05-11T01:51:43.000
Chemical Name: diesel fuel
Common Name: diesel fuel
Case Number: 68476-34-6

Record ID: DEH2004-HUPFP-204354
Permit Status: Permit Renewed
Active Permit: Y
Child Record Id: DEH2023-HCHEM-0370020
Trade Secret: N
Hazardous Material Type: Pure
Last Updated: 2023-05-11T01:51:43.000
Chemical Name: Oxygen
Common Name: Oxygen Gas
Case Number: 7782-44-7

Name: NORTH COUNTY FIRE PROTECT DIS STA #4
Address: 4375 PALA MESA DR
City,State,Zip: FALLBROOK, CA 92028
Permit Number: 204354
Business Type: 6HK52
EPA Id Number: Not reported
APN: 125-050-58-00
Last HMMD Inspection: 08/20/2012
Facility Telephone: 760-723-2005
Permit Status: OPEN
Permit Expiration: 02/28/2013
Date Last Updated: 11/02/2012
Facility Owner: NORTH COUNTY FIRE PROTECTION DISTRICT
Facility Mailing Address: 330 S MAIN ST
Facility Mailing City: FALLBROOK
Facility Mailing State: CA
Facility Mailing Zip: 92028
UST Owner: Not reported
Handle Regulated Hazmat: Y
Own Or Operate UST: Not reported
Subject To APSA: Not reported
Generate Haz Waste: Not reported
Treat Haz Waste: Not reported
Generate Medical Waste: Not reported

Inventory Active Permits (not SQG Medical):
Permit Number: 204354
Update Date: 11/02/2012
Case Number: 68476-34-6
Name: DIESEL FUEL
Other Information: Not reported
Material Waste: Material
Hazardous Categories 1: FIRE

NORTH COUNTY FIRE PROTECT DIS STA #4 (Continued) **S104753683**

Hazardous Categories 2: CHRONIC

Permit Number: 204354
Update Date: 11/02/2012
Case Number: 68476-85-7
Name: PROPANE
Other Information: Not reported
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: PRESSURE RELEASE

Permit Number: 204354
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 311 PHARMACEUTICAL WASTE
Other Information: Not reported
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 204354
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 901 INFECTIOUS WASTE, GENERAL
Other Information: P/U 2X / MO
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 204354
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 902 INFECTIOUS WASTE, SHARPS
Other Information: P/U 2X / MO
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Violations Active Permits:

Permit Number: 204354
Update Date: 11/02/2012
Inspection Date: 06/23/2009
Violation Code: 6HV4303
Violation: SQG:NO MED WASTE DISPOSAL RECORDS
Violation Citation: Generator did not retain on file disposal receipts and/or tracking documents for waste shipped offsite for at least 2 years (SQG). 117945(b)
Activity: ACTIVE

Permit Number: 204354
Update Date: 11/02/2012
Inspection Date: 06/23/2009
Violation Code: 6HV4309
Violation: SQG:MWMP OR EQUIV NOT ONSITE
Violation Citation: Medical Waste Management Plan or equivalent information not onsite for review (SQG). 117945
Activity: ACTIVE

NORTH COUNTY FIRE PROTECT DIS STA #4 (Continued) **S104753683**

Permit Number:	204354
Update Date:	11/02/2012
Inspection Date:	08/20/2012
Violation Code:	6HV4303
Violation:	SQG:NO MED WASTE DISPOSAL RECORDS
Violation Citation:	Generator did not retain on file disposal receipts and/or tracking documents for waste shipped offsite for at least 2 years (SQG). 117945(b)
Activity:	ACTIVE

Permit Number:	204354
Update Date:	11/02/2012
Inspection Date:	11/04/2004
Violation Code:	6HV1002
Violation:	HMBP NOT ESTABISHED/IMPLEMENTED.
Violation Citation:	Hazardous materials handler has not established/implemented a business plan. HSC 25503.5(a)
Activity:	ACTIVE

Name:	NORTH COUNTY FIRE PROTECT DIS STA #4
Address:	4375 PALA MESA DR
City,State,Zip:	FALLBROOK, CA 92028
Permit Number:	204354
Business Type:	6HK52
EPA Id Number:	Not reported
APN:	125-050-58-00
Last HMMD Inspection:	08/20/2012
Facility Telephone:	760-723-2005
Permit Status:	OPEN
Permit Expiration:	02/28/2013
Date Last Updated:	11/02/2012
Facility Owner:	NORTH COUNTY FIRE PROTECTION DISTRICT
Facility Mailing Address:	330 S MAIN ST
Facility Mailing City:	FALLBROOK
Facility Mailing State:	CA
Facility Mailing Zip:	92028
UST Owner:	Not reported
Handle Regulated Hazmat:	Y
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Not reported
Treat Haz Waste:	Not reported
Generate Medical Waste:	Y

Inventory Active Permits (not SQG Medical):

Permit Number:	204354
Update Date:	11/02/2012
Case Number:	68476-34-6
Name:	DIESEL FUEL
Other Information:	Not reported
Material Waste:	Material
Hazardous Categories 1:	FIRE
Hazardous Categories 2:	CHRONIC

Permit Number:	204354
Update Date:	11/02/2012
Case Number:	68476-85-7

NORTH COUNTY FIRE PROTECT DIS STA #4 (Continued) **S104753683**

Name: PROPANE
Other Information: Not reported
Material Waste: Material
Hazardous Categories 1: FIRE
Hazardous Categories 2: PRESSURE RELEASE

Permit Number: 204354
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 311 PHARMACEUTICAL WASTE
Other Information: Not reported
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 204354
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 901 INFECTIOUS WASTE, GENERAL
Other Information: P/U 2X / MO
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Permit Number: 204354
Update Date: 11/02/2012
Case Number: Not reported
Name: WASTE 902 INFECTIOUS WASTE, SHARPS
Other Information: P/U 2X / MO
Material Waste: Waste
Hazardous Categories 1: Not reported
Hazardous Categories 2: Not reported

Violations Active Permits:
Permit Number: 204354
Update Date: 11/02/2012
Inspection Date: 06/23/2009
Violation Code: 6HV4303
Violation: SQG:NO MED WASTE DISPOSAL RECORDS
Violation Citation: Generator did not retain on file disposal receipts and/or tracking documents for waste shipped offsite for at least 2 years (SQG). 117945(b)
Activity: ACTIVE

Permit Number: 204354
Update Date: 11/02/2012
Inspection Date: 06/23/2009
Violation Code: 6HV4309
Violation: SQG:MWMP OR EQUIV NOT ONSITE
Violation Citation: Medical Waste Management Plan or equivalent information not onsite for review (SQG). 117945
Activity: ACTIVE

Permit Number: 204354
Update Date: 11/02/2012
Inspection Date: 08/20/2012
Violation Code: 6HV4303

NORTH COUNTY FIRE PROTECT DIS STA #4 (Continued) **S104753683**

Violation:	SQG:NO MED WASTE DISPOSAL RECORDS
Violation Citation:	Generator did not retain on file disposal receipts and/or tracking documents for waste shipped offsite for at least 2 years (SQG). 117945(b)
Activity:	ACTIVE
Permit Number:	204354
Update Date:	11/02/2012
Inspection Date:	11/04/2004
Violation Code:	6HV1002
Violation:	HMBP NOT ESTABISHED/IMPLEMENTED.
Violation Citation:	Hazardous materials handler has not established/implemented a business plan. HSC 25503.5(a)
Activity:	ACTIVE
Name:	NORTH COUNTY FIRE PROTECTION#4
Address:	4375 PALA MESA DR
City,State,Zip:	FALLBROOK, CA 92028
Permit Number:	133261
Business Type:	6HK18
EPA Id Number:	Not reported
APN:	125-050-63-00
Last HMMD Inspection:	12/13/1995
Facility Telephone:	619-723-2005
Permit Status:	INAC
Permit Expiration:	12/13/1995
Date Last Updated:	11/02/2012
Facility Owner:	NORTH COUNTY FIRE PROTECTION#4
Facility Mailing Address:	315 E IVY ST
Facility Mailing City:	FALLBROOK
Facility Mailing State:	CA
Facility Mailing Zip:	92028-
UST Owner:	Not reported
Handle Regulated Hazmat:	Not reported
Own Or Operate UST:	Not reported
Subject To APSA:	Not reported
Generate Haz Waste:	Not reported
Treat Haz Waste:	Not reported
Generate Medical Waste:	Not reported

CERS:

Name:	NORTH COUNTY FIRE PROTECT DIS STA #4
Address:	4375 PALA MESA DR
City,State,Zip:	FALLBROOK, CA 92028
Site ID:	138691
CERS ID:	10369738
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	138691
Site Name:	NORTH COUNTY FIRE PROTECT DIS STA #4
Violation Date:	05-26-2022
Citation:	HSC 6.95 25508(a)(3) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(3)
Violation Description:	Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site

NORTH COUNTY FIRE PROTECT DIS STA #4 (Continued) **S104753683**

at or above reportable quantities.
Violation Notes: Returned to compliance on 05/26/2022. Inspection Sequence ID:6923495
Violation Division: San Diego County Department of Env Health
Violation Program: HMRRP
Violation Source: CERS,

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-17-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Walsh Todd Inspection ID:4486078
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-26-2022
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Inspector: Shoyeb Abida Inspection ID:6923495
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-14-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Kieu Bridget Inspection ID:6237902
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-24-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Inspector: Calcagno Leonardo Inspection ID:5741329
Eval Division: San Diego County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS,

Coordinates:
Site ID: 138691
Facility Name: NORTH COUNTY FIRE PROTECT DIS STA #4
Env Int Type Code: HMBP
Program ID: 10369738
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.,
Latitude: 33.341220
Longitude: -117.160220

Affiliation:
Affiliation Type Desc: Legal Owner
Entity Name: NORTH COUNTY FIRE PROTECTION.

NORTH COUNTY FIRE PROTECT DIS STA #4 (Continued) **S104753683**

Entity Title:	Not reported
Affiliation Address:	330 S MAIN AV.
Affiliation City:	FALLBROOK
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92028
Affiliation Phone:	(760) 723-2005,
Affiliation Type Desc:	CUPA District
Entity Name:	San Diego County Env Health Qlty
Entity Title:	Not reported
Affiliation Address:	PO Box 129261
Affiliation City:	San Diego
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92112-9261
Affiliation Phone:	(858) 505-6880,
Affiliation Type Desc:	Environmental Contact
Entity Name:	Brent Itzaina
Entity Title:	Not reported
Affiliation Address:	330 S MAIN AV
Affiliation City:	FALLBROOK
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92028
Affiliation Phone:	,
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	330 S Main Ave
Affiliation City:	FALLBROOK
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92028
Affiliation Phone:	,
Affiliation Type Desc:	Document Preparer
Entity Name:	Brent Itzaina
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,
Affiliation Type Desc:	Operator
Entity Name:	NORTH COUNTY FIRE PROTECTION DISTRICT
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(760) 723-2005,

NORTH COUNTY FIRE PROTECT DIS STA #4 (Continued) **S104753683**

Affiliation Type Desc:	Parent Corporation
Entity Name:	NORTH COUNTY FIRE DEPT
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,

Affiliation Type Desc:	Property Owner
Entity Name:	North County Fire Prot Dist
Entity Title:	Not reported
Affiliation Address:	330 S. MAIN AVENUE
Affiliation City:	Fallbrook
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92028
Affiliation Phone:	(760) 723-2008,

Affiliation Type Desc:	Identification Signer
Entity Name:	Brent Itzaina
Entity Title:	Engineer / Paramedic
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,

3
ENE
1/2-1
0.635 mi.
3351 ft.

MEADOWOOD PA2-OPTIONAL SCHOOL SITE
NO ADDRESS - PROPERTY UNDER DEVELOPMENT
FALLBROOK, CA 92028

ENVIROSTOR SCH **S115779973 N/A**

Relative: Lower

Actual: 305 ft.

ENVIROSTOR:

Name:	MEADOWOOD PA2-OPTIONAL SCHOOL SITE
Address:	NO ADDRESS - PROPERTY UNDER DEVELOPMENT
City,State,Zip:	FALLBROOK, CA 92028
Facility ID:	60001970
Status:	No Further Action
Status Date:	02/23/2017
Site Code:	404894
Site Type:	School Investigation
Site Type Detailed:	School
Acres:	12.7
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Aslam Shareef
Supervisor:	Shahir Haddad
Division Branch:	Southern California Schools & Brownfields Outreach
Assembly:	75
Senate:	40
Special Program:	Not reported
Restricted Use:	NO

MEADOWOOD PA2-OPTIONAL SCHOOL SITE (Continued) **S115779973**

Site Mgmt Req: NONE SPECIFIED
Funding: Responsible Party
Latitude: 33.34415
Longitude: -117.1497
APN: NONE SPECIFIED
Past Use: AGRICULTURAL - ORCHARD, RESIDENTIAL AREA
Potential COC: Arsenic Chlordane Total Chromium (1:6 ratio Cr VI:Cr III DDD DDE DDT Endrin Polychlorinated biphenyls (PCBs Silver Tetrachloroethylene (PCE Toxaphene
Confirmed COC: 30001-NO 30004-NO 30005-NO 30006-NO 30007-NO 30008-NO 30010-NO 30022-NO 30018-NO 30021-NO 30023-NO
Potential Description: SOIL, SV
Alias Name: 404894
Alias Type: Project Code (Site Code)
Alias Name: 60001970
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Tech Memo
Completed Date: 11/21/2016
Comments: DTSC approved the Preliminary Environmental Assessment Technical Memorandum for implementation.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 10/24/2017
Comments: Closeout Form 1554 submitted on 10/20/17 and processed by CRBU on 10/24/17; closeout complete.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 02/24/2017
Comments: DTSC approved the PEA with a No Further Action determination

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 12/20/2016
Comments: Conducted PEA Field Oversight

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Standard Voluntary Agreement
Completed Date: 02/20/2014
Comments: Fully executed VCA sent (FedEx) to Pardee Homes.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 11/20/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

MEADOWOOD PA2-OPTIONAL SCHOOL SITE (Continued) **S115779973**

Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	04/21/2015
Comments:	Not reported
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

SCH:

Name:	MEADOWOOD PA2-OPTIONAL SCHOOL SITE
Address:	NO ADDRESS - PROPERTY UNDER DEVELOPMENT
City,State,Zip:	FALLBROOK, CA 92028
Facility ID:	60001970
Site Type:	School Investigation
Site Type Detail:	School
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	12.7
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Aslam Shareef
Supervisor:	Shahir Haddad
Division Branch:	Southern California Schools & Brownfields Outreach
Site Code:	404894
Assembly:	75
Senate:	40
Special Program Status:	Not reported
Status:	No Further Action
Status Date:	02/23/2017
Restricted Use:	NO
Funding:	Responsible Party
Latitude:	33.34415
Longitude:	-117.1497
APN:	NONE SPECIFIED
Past Use:	AGRICULTURAL - ORCHARD, RESIDENTIAL AREA
Potential COC:	Arsenic, Chlordane, Total Chromium (1:6 ratio Cr VI:Cr III, DDD, DDE, DDT, Endrin, Polychlorinated biphenyls (PCBs, Silver, Tetrachloroethylene (PCE, Toxaphene
Confirmed COC:	30001-NO, 30004-NO, 30005-NO, 30006-NO, 30007-NO, 30008-NO, 30010-NO, 30022-NO, 30018-NO, 30021-NO, 30023-NO
Potential Description:	SOIL, SV
Alias Name:	404894
Alias Type:	Project Code (Site Code)
Alias Name:	60001970
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported

MEADOWOOD PA2-OPTIONAL SCHOOL SITE (Continued) **S115779973**

Completed Document Type: Preliminary Endangerment Assessment Tech Memo
Completed Date: 11/21/2016
Comments: DTSC approved the Preliminary Environmental Assessment Technical Memorandum for implementation.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 10/24/2017
Comments: Closeout Form 1554 submitted on 10/20/17 and processed by CRBU on 10/24/17; closeout complete.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 02/24/2017
Comments: DTSC approved the PEA with a No Further Action determination

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 12/20/2016
Comments: Conducted PEA Field Oversight

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Standard Voluntary Agreement
Completed Date: 02/20/2014
Comments: Fully executed VCA sent (FedEx) to Pardee Homes.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 11/20/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 04/21/2015
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

4
South
1/2-1
0.787 mi.
4156 ft.

MOBIL OIL CORPORATION 18-034
4730 NW CORNER HWY 76 & I
FALLBROOK, CA

Notify 65

U000029771
N/A

Relative:
Lower

Actual:
337 ft.

NOTIFY 65:

Name:	MOBIL OIL CORPORATION 18-034
Address:	4730 NW CORNER HWY 76 & I
City,State,Zip:	FALLBROOK, CA
Date Reported:	Not reported
Staff Initials:	Not reported
Board File Number:	Not reported
Facility Type:	Not reported
Discharge Date:	Not reported
Issue Date:	Not reported
Incident Description:	Not reported
Global ID:	Not reported
Status:	Not reported

Count: 3 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
FALLBROOK	S127815556	HORSE CREEK RIDGE - EQUESTRIAN STA	SE CORNER OF PANKEY RD AND PAN	92028	CPS-SLIC
FALLBROOK	S125952655	PROPOSED MEADOWOOD DEVELOPMENT	5326 PALA ROAD	92028	CPS-SLIC
PALA	S110498377	SDG&E - PALA SUBSTATION	HWY 76 & PALA DEL NORTE 4 MI E	92059	San Diego Co. HMMD

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 12/04/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 12/04/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 12/04/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 09/25/2023
Date Data Arrived at EDR: 09/26/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 77

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 09/26/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/04/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/04/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/06/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/06/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/06/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/06/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/06/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 08/03/2023
Date Data Arrived at EDR: 08/07/2023
Date Made Active in Reports: 10/10/2023
Number of Days to Update: 64

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 11/02/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 08/21/2023
Date Data Arrived at EDR: 08/21/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 78

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/17/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 08/21/2023
Date Data Arrived at EDR: 08/21/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 78

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/17/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/18/2023
Date Data Arrived at EDR: 09/20/2023
Date Made Active in Reports: 12/11/2023
Number of Days to Update: 82

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 12/13/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Quarterly

Lists of state- and tribal (Superfund) equivalent sites

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 07/24/2023
Date Data Arrived at EDR: 07/25/2023
Date Made Active in Reports: 10/11/2023
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/24/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 07/24/2023
Date Data Arrived at EDR: 07/25/2023
Date Made Active in Reports: 10/11/2023
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/24/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Quarterly

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 08/07/2023
Date Data Arrived at EDR: 08/08/2023
Date Made Active in Reports: 10/26/2023
Number of Days to Update: 79

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 11/07/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: Quarterly

Lists of state and tribal leaking storage tanks

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)
Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/22/2023
Number of Days to Update: 77

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Quarterly

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/19/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/19/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/25/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/26/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/14/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)
Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/28/2023
Number of Days to Update: 83
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18
Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30
Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28
Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47
Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16
Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 03/08/2023
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 05/30/2023
Number of Days to Update: 82

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/28/2023
Number of Days to Update: 83

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Semi-Annually

MILITARY UST SITES: Military UST Sites (GEOTRACKER)
Military ust sites

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases
UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 08/10/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/28/2023
Number of Days to Update: 83

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 11/30/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/25/2024
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/25/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/19/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/26/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/14/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

Lists of state and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 12/12/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 07/24/2023
Date Data Arrived at EDR: 07/25/2023
Date Made Active in Reports: 10/11/2023
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/24/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Quarterly

Lists of state and tribal brownfield sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 09/20/2023
Date Made Active in Reports: 12/08/2023
Number of Days to Update: 79

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 12/13/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 08/15/2023
Date Data Arrived at EDR: 08/30/2023
Date Made Active in Reports: 12/01/2023
Number of Days to Update: 93

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 12/14/2023
Next Scheduled EDR Contact: 03/25/2024
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 10/20/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/28/2023
Number of Days to Update: 83

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 11/29/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 11/16/2022
Date Data Arrived at EDR: 11/22/2022
Date Made Active in Reports: 02/13/2023
Number of Days to Update: 83

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 12/12/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 10/23/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 10/28/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 08/21/2023
Date Data Arrived at EDR: 08/21/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 78

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/17/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database
The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program
This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 07/24/2023
Date Data Arrived at EDR: 07/25/2023
Date Made Active in Reports: 10/11/2023
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/24/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs
A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2022
Date Made Active in Reports: 02/09/2023
Number of Days to Update: 71

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

CERS HAZ WASTE: California Environmental Reporting System Hazardous Waste
List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 07/17/2023
Date Data Arrived at EDR: 07/18/2023
Date Made Active in Reports: 10/06/2023
Number of Days to Update: 80

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 10/17/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 08/21/2023
Date Data Arrived at EDR: 08/21/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 78

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/17/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Quarterly

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing

Aboveground storage tank sites

Date of Government Version: 08/04/2023
Date Data Arrived at EDR: 08/08/2023
Date Made Active in Reports: 10/25/2023
Number of Days to Update: 78

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

CERS TANKS: California Environmental Reporting System (CERS) Tanks

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 07/17/2023
Date Data Arrived at EDR: 07/18/2023
Date Made Active in Reports: 10/06/2023
Number of Days to Update: 80

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 10/17/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Quarterly

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 08/22/2023
Date Data Arrived at EDR: 08/24/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 75

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/21/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 11/01/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 08/28/2023
Date Data Arrived at EDR: 08/29/2023
Date Made Active in Reports: 11/13/2023
Number of Days to Update: 76

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 11/22/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/18/2023
Date Data Arrived at EDR: 09/20/2023
Date Made Active in Reports: 11/14/2023
Number of Days to Update: 55

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 12/13/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System
California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 06/01/2023
Date Data Arrived at EDR: 07/18/2023
Date Made Active in Reports: 10/05/2023
Number of Days to Update: 79

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 10/20/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)
Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/22/2023
Number of Days to Update: 77

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)
Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/22/2023
Number of Days to Update: 77

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch
Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/06/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 08/07/2023
Date Data Arrived at EDR: 08/15/2023
Date Made Active in Reports: 10/10/2023
Number of Days to Update: 56

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 11/10/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 10/09/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/04/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 07/30/2021
Date Data Arrived at EDR: 02/03/2023
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 09/18/2023
Date Data Arrived at EDR: 09/20/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 12/13/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 10/31/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 11/03/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 06/14/2022
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 283

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 12/14/2023
Next Scheduled EDR Contact: 03/25/2024
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 08/18/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 81

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 11/13/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 07/17/2023
Date Data Arrived at EDR: 07/18/2023
Date Made Active in Reports: 10/10/2023
Number of Days to Update: 84

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/20/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 12/04/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 05/09/2023
Date Data Arrived at EDR: 06/29/2023
Date Made Active in Reports: 09/25/2023
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 09/26/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 12/04/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 03/20/2023
Date Data Arrived at EDR: 04/04/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 66

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/06/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 09/27/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/20/2023
Date Data Arrived at EDR: 09/01/2023
Date Made Active in Reports: 09/20/2023
Number of Days to Update: 19

Source: Nuclear Regulatory Commission
Telephone: 301-415-0717
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 04/14/2023
Date Made Active in Reports: 07/10/2023
Number of Days to Update: 87

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 11/27/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 11/27/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 11/03/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 09/22/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80
Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 10/04/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2023
Date Data Arrived at EDR: 07/19/2023
Date Made Active in Reports: 10/10/2023
Number of Days to Update: 83
Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11
Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 12/06/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546
Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/02/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 03/03/2023
Date Data Arrived at EDR: 03/03/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 98
Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74
Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 11/09/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16
Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 12/04/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 09/25/2023
Number of Days to Update: 82

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 10/04/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: Quarterly

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/01/2023
Date Data Arrived at EDR: 08/22/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 77

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 11/17/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 01/07/2022
Date Data Arrived at EDR: 02/24/2023
Date Made Active in Reports: 05/17/2023
Number of Days to Update: 82

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/20/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/20/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

Date of Government Version: 08/23/2022
Date Data Arrived at EDR: 11/22/2022
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 98

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 11/20/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 11/28/2023
Date Data Arrived at EDR: 11/29/2023
Date Made Active in Reports: 12/11/2023
Number of Days to Update: 12

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 11/28/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/03/2023
Date Data Arrived at EDR: 11/08/2023
Date Made Active in Reports: 11/20/2023
Number of Days to Update: 12

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 06/24/2023
Date Data Arrived at EDR: 06/29/2023
Date Made Active in Reports: 09/25/2023
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 11/15/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/06/2023
Date Data Arrived at EDR: 09/13/2023
Date Made Active in Reports: 12/11/2023
Number of Days to Update: 89

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 09/13/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 08/14/2023
Date Data Arrived at EDR: 08/15/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 65

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 11/10/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Quarterly

PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 10/02/2023
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 703-603-8895
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 10/02/2023
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 10/02/2023
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS TRIS: List of PFAS Added to the TRI

Section 7321 of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) immediately added certain per- and polyfluoroalkyl substances (PFAS) to the list of chemicals covered by the Toxics Release Inventory (TRI) under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and provided a framework for additional PFAS to be added to TRI on an annual basis.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 10/02/2023
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 202-566-0250
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST_HANDLING_INSTR), Non-hazardous waste description (NON_HAZ_WASTE_DESCRIPTION), DOT printed information (DOT_PRINTED_INFORMATION), Waste line handling instructions (WASTE_LINE_HANDLING_INSTR), Waste residue comments (WASTE_RESIDUE_COMMENTS).

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 10/02/2023
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 03/17/2021
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 601

Source: Department of Health & Human Services
Telephone: 202-741-5770
Last EDR Contact: 10/23/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Varies

PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

Date of Government Version: 09/23/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/10/2023
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits. Caveats and Limitations: Less than half of states have required PFAS monitoring for at least one of their permittees and fewer states have established PFAS effluent limits for permittees. New rulemakings have been initiated that may increase the number of facilities monitoring for PFAS in the future.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 10/02/2023
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 09/25/2023
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS ECHO FIRE TRAINING: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facilitys name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 09/25/2023
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS PART 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration?s document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 09/25/2023
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/06/2023
Date Made Active in Reports: 09/25/2023
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 202-267-2675
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 09/28/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: No Update Planned

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 09/28/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

BIOSOLIDS: ICIS-NPDES Biosolids Facility Data

The data reflects compliance information about facilities in the biosolids program.

Date of Government Version: 07/16/2023
Date Data Arrived at EDR: 07/18/2023
Date Made Active in Reports: 08/28/2023
Number of Days to Update: 41

Source: Environmental Protection Agency
Telephone: 202-564-4700
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 11/30/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

AQUEOUS FOAM: Former Fire Training Facility Assessments Listing

Airports shown on this list are those believed to use Aqueous Film Forming Foam (AFFF), and certified by the Federal Aviation Administration (FAA) under Title 14, Code of Federal Regulations (CFR), Part 139 (14 CFR Part 139). This list was created by SWRCB using information available from the FAA. Location points shown are from the latitude and longitude listed on the FAA airport master record.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/28/2023
Number of Days to Update: 83

Source: State Water Resources Control Board
Telephone: 916-341-5455
Last EDR Contact: 11/30/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CHROME PLATING: Chrome Plating Facilities Listing

This listing represents chrome plating facilities the California State Water Resources Control Board staff identified as possibly being a source of Per- and polyfluoroalkyl substance (PFAS) contamination. Sites and locations were identified by staff with the Division of Water Quality in the California State Water Board. Data was collected from the CA Air Resources Board 2013 and 2018 - Cr VI emission survey, CA Emission Inventory, CA HAZ Waste discharge database and by reviewing storm water permits. Former chrome plating sites are also included that are open site investigation or remediation cases with the Regional Water Quality Control Boards and the Department of Toxic Substances Control.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 916-341-5455
Last EDR Contact: 11/30/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 09/20/2023
Date Made Active in Reports: 12/08/2023
Number of Days to Update: 79

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 12/13/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 03/31/2023
Date Data Arrived at EDR: 05/08/2023
Date Made Active in Reports: 07/31/2023
Number of Days to Update: 84

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 11/09/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: Varies

DRYCLEAN FEATHER RIVER DIST: Feather River Air Quality Management District Drycleaner Facility Listing

A listing of drycleaner facility locations, for the Feather River Air Quality Management District.

Date of Government Version: 03/08/2023
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 06/05/2023
Number of Days to Update: 88

Source: Feather River Air Quality Management District
Telephone: 530-634-7659
Last EDR Contact: 06/08/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 08/18/2023
Date Data Arrived at EDR: 08/18/2023
Date Made Active in Reports: 11/01/2023
Number of Days to Update: 75

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 11/13/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 08/22/2023
Date Data Arrived at EDR: 08/24/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 75

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 11/21/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Varies

DRYCLEAN SAN JOAQ VAL DIST: San Joaquin Valley Air Pollution Control District District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the San Joaquin Valley Air Pollution Control District.

Date of Government Version: 05/24/2023
Date Data Arrived at EDR: 05/30/2023
Date Made Active in Reports: 08/21/2023
Number of Days to Update: 83
Source: San Joaquin Valley Air Pollution Control District
Telephone: 559-230-6001
Last EDR Contact: 05/11/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN EAST KERN DIST: Eastern Kern Air Pollution Control District District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Eastern Kern Air Pollution Control District.

Date of Government Version: 01/12/2023
Date Data Arrived at EDR: 04/26/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 79
Source: Eastern Kern Air Pollution Control District
Telephone: 661-862-9684
Last EDR Contact: 04/25/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN IMPERIAL CO DIST: Imperial County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Imperial County Air Pollution Control District

Date of Government Version: 04/25/2023
Date Data Arrived at EDR: 04/26/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 79
Source: Imperial County Air Pollution Control District
Telephone: 442-265-1800
Last EDR Contact: 04/25/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN MENDO CO DIST: Mendocino County Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Mendocino County Air Quality Management District.

Date of Government Version: 04/27/2023
Date Data Arrived at EDR: 04/28/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 77
Source: Mendocino County Air Quality Management District
Telephone: 707-463-4354
Last EDR Contact: 04/25/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN MOJAVE DESERT DIST: Mojave Desert Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Mojave Desert Air Quality Management District.

Date of Government Version: 04/26/2023
Date Data Arrived at EDR: 04/27/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 78
Source: Mojave Desert Air Quality Management District
Telephone: 760-245-1661
Last EDR Contact: 04/25/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN MONTEREY BAY DIST: Monterey Bay Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Monterey Bay Air Quality Management District.

Date of Government Version: 04/25/2023
Date Data Arrived at EDR: 04/26/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 79
Source: Monterey Bay Air Quality Management District
Telephone: 831-647-9411
Last EDR Contact: 04/25/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SHASTA CO DIST: Shasta County Air Quality Management District District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Shasta County Air Quality Management District.

Date of Government Version: 04/26/2023
Date Data Arrived at EDR: 04/27/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 78
Source: Shasta County Air Quality Management District
Telephone: 530-225-5674
Last EDR Contact: 04/25/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN YOLO-SOLANO DIST: Yolo-Solano Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Yolo-Solano Air Quality Management District.

Date of Government Version: 04/25/2023
Date Data Arrived at EDR: 04/27/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 78
Source: Yolo-Solano Air Quality Management District
Telephone: 530-757-3650
Last EDR Contact: 04/25/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN PLACER CO DIST: Placer County Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Placer County Air Quality Management District.

Date of Government Version: 05/15/2023
Date Data Arrived at EDR: 05/17/2023
Date Made Active in Reports: 08/14/2023
Number of Days to Update: 89
Source: Placer County Air Quality Management District
Telephone: 530-745-2335
Last EDR Contact: 05/11/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN BAY AREA DIST: Bay Area Air Quality Management District Drycleaner Facility Listing
Bay Area Air Quality Management District Drycleaner Facility Listing.

Date of Government Version: 02/20/2019
Date Data Arrived at EDR: 05/30/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1432
Source: Bay Area Air Quality Management District
Telephone: 415-516-1916
Last EDR Contact: 12/04/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN BUTTE CO DIST: Butte County Air Quality Management DistrictDrycleaner Facility Listing
Butte County Air Quality Management DistrictDrycleaner Facility Listing.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1469
Source: Butte County Air Quality Management District
Telephone: 530-332-9400
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN CALAVERAS CO DIST: Calaveras County Environmental Management Agency Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Calaveras County Environmental Management Agency.

Date of Government Version: 06/17/2019
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1412
Source: Calaveras County Environmental Management Agency
Telephone: 209-754-6399
Last EDR Contact: 04/24/2023
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Varies

DRYCLEAN GRANT: Grant Recipients List
Assembly Bill 998 (AB 998) established the Non-Toxic Dry Cleaning Incentive Program to provide financial assistance to the dry cleaning industry to switch from systems using perchloroethylene (Perc), an identified toxic air contaminant and potential human carcinogen, to non-toxic and non-smog forming alternatives.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 02/04/2021
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 816
Source: California Air Resources Board
Telephone: 916-323-0006
Last EDR Contact: 10/28/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Varies

DRYCLEAN LAKE CO DIST: Lake County Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Lake County Air Quality Management District,

Date of Government Version: 04/29/2019
Date Data Arrived at EDR: 05/07/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1455
Source: Lake County Air Quality Management District
Telephone: 707-263-7000
Last EDR Contact: 05/11/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN NO COAST UNIFIED DIST: North Coast Unified Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the North Coast Unified Air Quality Management District.

Date of Government Version: 11/30/2016
Date Data Arrived at EDR: 04/19/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1473
Source: North Coast Unified Air Quality Management District
Telephone: 707-443-3093
Last EDR Contact: 04/25/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN NO SIERRA DIST: Northern Sierra Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Northern Sierra Air Quality Management District,

Date of Government Version: 05/07/2019
Date Data Arrived at EDR: 05/07/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1455
Source: Northern Sierra Air Quality Management District
Telephone: 530-274-9350
Last EDR Contact: 04/25/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN NO SONOMA CO DIST: Norther Sonoma County County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Northern Sonoma County Air Pollution Control District.,

Date of Government Version: 04/17/2019
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1475
Source: Santa Barbara County Air Pollution Control District
Telephone: 707-433-5911
Last EDR Contact: 04/25/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SANTA BARB CO DIST: Santa Barbara County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Santa Barbara County Air Pollution Control District.

Date of Government Version: 02/19/2019
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1475
Source: Santa Barbara County Air Pollution Control District
Telephone: 805-961-8867
Last EDR Contact: 04/25/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN TEHAMA CO DIST: Tehama County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Tehama County Air Pollution Control District.

Date of Government Version: 04/24/2019
Date Data Arrived at EDR: 04/24/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1468
Source: Tehama County Air Pollution Control District
Telephone: 530-527-3717
Last EDR Contact: 04/25/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN VENTURA CO DIST: Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Ventura County Air Pollution Control District.

Date of Government Version: 04/16/2019
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1475
Source: Ventura County Air Pollution Control District
Telephone: 805-645-1421
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SACRAMENTO METO DIST: Sacramento Metropolitan Air Quality Management DistrictDrycleaner Facility Listing
A listing of drycleaner facility locations, for the Sacramento Metropolitan Air Quality Management District.

Date of Government Version: 08/15/2023
Date Data Arrived at EDR: 08/17/2023
Date Made Active in Reports: 10/31/2023
Number of Days to Update: 75
Source: Sacramento Metropolitan Air Quality Management District
Telephone: 916-874-3958
Last EDR Contact: 08/15/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN AMADOR: Amador Air District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Amador Air Quality Management District

Date of Government Version: 04/26/2023
Date Data Arrived at EDR: 04/27/2023
Date Made Active in Reports: 07/13/2023
Number of Days to Update: 77

Source: Amador Air Quality Management District
Telephone: 209-257-0112
Last EDR Contact: 04/24/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 08/31/2023
Date Data Arrived at EDR: 09/08/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 80

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Annually

DRYCLEAN GLENN CO DIST: Glenn County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Glenn County Air Pollution Control District.

Date of Government Version: 05/02/2023
Date Data Arrived at EDR: 05/03/2023
Date Made Active in Reports: 07/25/2023
Number of Days to Update: 83

Source: Glenn County Air Pollution Control District
Telephone: 530-934-6500
Last EDR Contact: 05/03/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SAN DIEGO CO DIST: San Diego County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the San Diego County Air Pollution Control District.

Date of Government Version: 08/08/2023
Date Data Arrived at EDR: 08/09/2023
Date Made Active in Reports: 10/26/2023
Number of Days to Update: 78

Source: San Diego County Air Pollution Control District
Telephone: 858-586-2616
Last EDR Contact: 08/08/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SAN LUIS OB CO DIST: San Luis Obispo County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the San Luis Obispo County Air Pollution Control District.

Date of Government Version: 07/26/2023
Date Data Arrived at EDR: 07/27/2023
Date Made Active in Reports: 10/13/2023
Number of Days to Update: 78

Source: San Luis Obispo County Air Pollution Control District
Telephone: 805-781-5756
Last EDR Contact: 07/25/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

EMI: Emissions Inventory Data
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 06/09/2023
Date Made Active in Reports: 08/30/2023
Number of Days to Update: 82

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 12/14/2023
Next Scheduled EDR Contact: 03/25/2024
Data Release Frequency: Varies

ENF: Enforcement Action Listing
A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 07/17/2023
Date Data Arrived at EDR: 07/18/2023
Date Made Active in Reports: 10/05/2023
Number of Days to Update: 79

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 10/17/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 09/13/2023
Date Data Arrived at EDR: 09/14/2023
Date Made Active in Reports: 09/21/2023
Number of Days to Update: 7

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 09/13/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 08/03/2023
Date Data Arrived at EDR: 08/16/2023
Date Made Active in Reports: 11/01/2023
Number of Days to Update: 77

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 11/13/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: Varies

ICE: Inspection, Compliance and Enforcement

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 08/14/2023
Date Data Arrived at EDR: 08/14/2023
Date Made Active in Reports: 10/31/2023
Number of Days to Update: 78

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 11/10/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 08/14/2023
Date Data Arrived at EDR: 08/14/2023
Date Made Active in Reports: 10/31/2023
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/10/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 06/29/2023
Date Data Arrived at EDR: 06/29/2023
Date Made Active in Reports: 09/19/2023
Number of Days to Update: 82
Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 10/04/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Quarterly

HWTS: Hazardous Waste Tracking System

DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

Date of Government Version: 08/04/2023
Date Data Arrived at EDR: 08/09/2023
Date Made Active in Reports: 10/26/2023
Number of Days to Update: 78
Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 09/27/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 07/05/2022
Date Made Active in Reports: 09/19/2022
Number of Days to Update: 76
Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 07/05/2022
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Annually

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82
Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 11/29/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 08/08/2023
Date Data Arrived at EDR: 08/29/2023
Date Made Active in Reports: 11/13/2023
Number of Days to Update: 76
Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 11/22/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 08/07/2023
Date Data Arrived at EDR: 08/08/2023
Date Made Active in Reports: 10/26/2023
Number of Days to Update: 79
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 11/07/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 08/28/2023
Date Data Arrived at EDR: 08/29/2023
Date Made Active in Reports: 11/13/2023
Number of Days to Update: 76

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 11/22/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 11/29/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 09/07/2023
Date Data Arrived at EDR: 09/08/2023
Date Made Active in Reports: 11/28/2023
Number of Days to Update: 81

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/25/2024
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 82

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Annually

SANTA CRUZ CO SITE MITI: Site Mitigation Listing
Sites may become contaminated with toxic chemicals through illegal dumping or disposal, from leaking underground storage tanks, or through industrial or commercial activities.The goal of the site mitigation program is to protect the public health and the environment while facilitating completion of contaminated site clean-up projects in a timely manner.

Date of Government Version: 12/03/2018
Date Data Arrived at EDR: 06/23/2023
Date Made Active in Reports: 07/13/2023
Number of Days to Update: 20

Source: Santa Cruz Environmental Health Services
Telephone: 831-454-2761
Last EDR Contact: 11/16/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/28/2023
Number of Days to Update: 83

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 11/29/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82

Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing

Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 02/11/2021
Date Data Arrived at EDR: 07/01/2021
Date Made Active in Reports: 09/29/2021
Number of Days to Update: 90

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 10/06/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 11/10/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 12/12/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)

Military privatized sites

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)

Projects sites

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing

In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/28/2023
Number of Days to Update: 83

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 11/29/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 08/28/2023
Date Data Arrived at EDR: 08/29/2023
Date Made Active in Reports: 11/13/2023
Number of Days to Update: 76

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 11/22/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 07/17/2023
Date Data Arrived at EDR: 07/18/2023
Date Made Active in Reports: 10/06/2023
Number of Days to Update: 80

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 10/17/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)

Produced water ponds sites

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)

Sampling point - public sites

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners
EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 09/27/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 06/27/2023
Date Data Arrived at EDR: 06/28/2023
Date Made Active in Reports: 09/14/2023
Number of Days to Update: 78

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 09/27/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List

Cupa Facility List

Date of Government Version: 04/27/2023
Date Data Arrived at EDR: 04/27/2023
Date Made Active in Reports: 07/13/2023
Number of Days to Update: 77

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

BUTTE COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 09/27/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 09/12/2023
Date Data Arrived at EDR: 09/13/2023
Date Made Active in Reports: 12/04/2023
Number of Days to Update: 82

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 12/12/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 78

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/20/2023
Date Made Active in Reports: 10/05/2023
Number of Days to Update: 77

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 10/20/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 08/02/2023
Date Data Arrived at EDR: 08/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 77

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 10/20/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 08/08/2022
Date Data Arrived at EDR: 08/09/2022
Date Made Active in Reports: 09/01/2022
Number of Days to Update: 23

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 10/20/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 06/28/2021
Date Data Arrived at EDR: 12/21/2021
Date Made Active in Reports: 03/03/2022
Number of Days to Update: 72

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 09/28/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 08/12/2021
Date Data Arrived at EDR: 08/12/2021
Date Made Active in Reports: 11/08/2021
Number of Days to Update: 88

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 07/11/2023
Date Data Arrived at EDR: 07/12/2023
Date Made Active in Reports: 09/26/2023
Number of Days to Update: 76

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

KERN COUNTY:

CUPA KERN: CUPA Facility List
A listing of sites included in the Kern County Hazardous Material Business Plan.

Date of Government Version: 07/26/2023
Date Data Arrived at EDR: 07/27/2023
Date Made Active in Reports: 08/09/2023
Number of Days to Update: 13

Source: Kern County Public Health
Telephone: 661-321-3000
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 07/26/2023
Date Data Arrived at EDR: 07/27/2023
Date Made Active in Reports: 08/03/2023
Number of Days to Update: 7

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 12/03/2020
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/14/2021
Number of Days to Update: 78

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 10/27/2023
Date Data Arrived at EDR: 11/01/2023
Date Made Active in Reports: 11/21/2023
Number of Days to Update: 20

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 10/04/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 07/31/2020
Date Data Arrived at EDR: 08/21/2020
Date Made Active in Reports: 11/09/2020
Number of Days to Update: 80

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/25/2024
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 06/21/2023
Date Data Arrived at EDR: 06/28/2023
Date Made Active in Reports: 09/14/2023
Number of Days to Update: 78

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 09/27/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 07/10/2023
Date Data Arrived at EDR: 07/10/2023
Date Made Active in Reports: 09/27/2023
Number of Days to Update: 79

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 10/09/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 12/31/2022
Date Data Arrived at EDR: 01/12/2023
Date Made Active in Reports: 03/29/2023
Number of Days to Update: 76

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 10/04/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 12/13/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills

This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/13/2023
Date Data Arrived at EDR: 07/13/2023
Date Made Active in Reports: 09/27/2023
Number of Days to Update: 76

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 10/04/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory

A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 12/01/2023
Date Data Arrived at EDR: 12/13/2023
Date Made Active in Reports: 12/14/2023
Number of Days to Update: 1

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 12/13/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory

A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 09/01/2023
Date Data Arrived at EDR: 09/20/2023
Date Made Active in Reports: 12/08/2023
Number of Days to Update: 79

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 12/13/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 03/02/2023
Date Data Arrived at EDR: 04/18/2023
Date Made Active in Reports: 07/07/2023
Number of Days to Update: 80

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 10/17/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 10/04/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 04/12/2023
Date Data Arrived at EDR: 05/02/2023
Date Made Active in Reports: 06/13/2023
Number of Days to Update: 42

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 08/10/2020
Date Data Arrived at EDR: 08/12/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 72

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 09/21/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Semi-Annually

MENDOCINO COUNTY:

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/22/2021
Date Data Arrived at EDR: 11/18/2021
Date Made Active in Reports: 11/22/2021
Number of Days to Update: 4

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 11/13/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 07/25/2023
Date Data Arrived at EDR: 08/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 77

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 02/22/2021
Date Data Arrived at EDR: 03/02/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 78

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 11/13/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 10/04/2021
Date Data Arrived at EDR: 10/06/2021
Date Made Active in Reports: 12/29/2021
Number of Days to Update: 84

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 11/02/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 11/13/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 11/13/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 07/21/2023
Date Data Arrived at EDR: 07/25/2023
Date Made Active in Reports: 10/11/2023
Number of Days to Update: 78

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 10/20/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 05/15/2023
Date Data Arrived at EDR: 07/31/2023
Date Made Active in Reports: 08/09/2023
Number of Days to Update: 9

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/01/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 05/15/2023
Date Data Arrived at EDR: 07/31/2023
Date Made Active in Reports: 08/09/2023
Number of Days to Update: 9

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/01/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 04/01/2023
Date Data Arrived at EDR: 05/18/2023
Date Made Active in Reports: 06/14/2023
Number of Days to Update: 27

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/01/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 11/09/2023
Date Data Arrived at EDR: 11/09/2023
Date Made Active in Reports: 11/21/2023
Number of Days to Update: 12

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 11/01/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 07/10/2023
Date Data Arrived at EDR: 07/11/2023
Date Made Active in Reports: 09/26/2023
Number of Days to Update: 77

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/25/2024
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 07/10/2023
Date Data Arrived at EDR: 07/11/2023
Date Made Active in Reports: 09/26/2023
Number of Days to Update: 77

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/25/2024
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 11/07/2022
Date Data Arrived at EDR: 12/21/2022
Date Made Active in Reports: 03/16/2023
Number of Days to Update: 85

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 09/25/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 11/07/2022
Date Data Arrived at EDR: 12/09/2022
Date Made Active in Reports: 03/01/2023
Number of Days to Update: 82

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 09/25/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List
Cupa facility list

Date of Government Version: 05/02/2023
Date Data Arrived at EDR: 05/04/2023
Date Made Active in Reports: 07/25/2023
Number of Days to Update: 82

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 10/18/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 08/15/2023
Date Data Arrived at EDR: 08/16/2023
Date Made Active in Reports: 11/01/2023
Number of Days to Update: 77

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 10/26/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 08/28/2023
Date Data Arrived at EDR: 08/29/2023
Date Made Active in Reports: 11/13/2023
Number of Days to Update: 76

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 11/27/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 04/04/2023
Date Data Arrived at EDR: 04/05/2023
Date Made Active in Reports: 06/27/2023
Number of Days to Update: 83

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing

A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 07/22/2021
Date Data Arrived at EDR: 10/19/2021
Date Made Active in Reports: 01/13/2022
Number of Days to Update: 86

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 11/21/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 08/04/2023
Date Data Arrived at EDR: 08/08/2023
Date Made Active in Reports: 10/26/2023
Number of Days to Update: 79

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

LUST SAN FRANCISCO: Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 08/04/2023
Date Data Arrived at EDR: 08/08/2023
Date Made Active in Reports: 10/25/2023
Number of Days to Update: 78

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Quarterly

SAN FRANCISO COUNTY:

SAN FRANCISCO MAHER: Maher Ordinance Property Listing
a listing of properties that fall within a Maher Ordinance, for all of San Francisco

Date of Government Version: 07/17/2023
Date Data Arrived at EDR: 07/18/2023
Date Made Active in Reports: 10/05/2023
Number of Days to Update: 79

Source: San Francisco Planning
Telephone: 628-652-7483
Last EDR Contact: 10/17/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/25/2024
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 08/09/2023
Date Data Arrived at EDR: 08/10/2023
Date Made Active in Reports: 10/27/2023
Number of Days to Update: 78

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 12/07/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 11/28/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 11/07/2023
Date Data Arrived at EDR: 11/08/2023
Date Made Active in Reports: 11/16/2023
Number of Days to Update: 8

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 10/31/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 11/13/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: No Update Planned

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 11/21/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 09/15/2021
Date Data Arrived at EDR: 09/16/2021
Date Made Active in Reports: 12/09/2021
Number of Days to Update: 84

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 11/21/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 07/02/2021
Date Data Arrived at EDR: 07/06/2021
Date Made Active in Reports: 07/14/2021
Number of Days to Update: 8

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 12/12/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 06/30/2021
Date Data Arrived at EDR: 06/30/2021
Date Made Active in Reports: 09/24/2021
Number of Days to Update: 86

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 12/12/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 02/08/2022
Date Data Arrived at EDR: 02/10/2022
Date Made Active in Reports: 05/04/2022
Number of Days to Update: 83

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 10/04/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 08/03/2023
Date Data Arrived at EDR: 08/24/2023
Date Made Active in Reports: 09/12/2023
Number of Days to Update: 19

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 11/21/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 08/01/2023
Date Data Arrived at EDR: 08/02/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 78

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 07/11/2023
Date Data Arrived at EDR: 07/12/2023
Date Made Active in Reports: 09/26/2023
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 10/07/2022
Date Data Arrived at EDR: 10/07/2022
Date Made Active in Reports: 12/21/2022
Number of Days to Update: 75

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 06/26/2023
Date Data Arrived at EDR: 07/20/2023
Date Made Active in Reports: 10/03/2023
Number of Days to Update: 75

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 10/16/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/21/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 11/02/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 06/26/2023
Date Data Arrived at EDR: 07/25/2023
Date Made Active in Reports: 10/13/2023
Number of Days to Update: 80

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 10/16/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 08/28/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/28/2023
Number of Days to Update: 83

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 11/29/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 04/03/2023
Date Data Arrived at EDR: 04/18/2023
Date Made Active in Reports: 06/13/2023
Number of Days to Update: 56

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 09/21/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 07/24/2023
Date Data Arrived at EDR: 07/26/2023
Date Made Active in Reports: 10/11/2023
Number of Days to Update: 77

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 10/20/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 08/07/2023
Date Data Arrived at EDR: 08/08/2023
Date Made Active in Reports: 10/24/2023
Number of Days to Update: 77

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 11/07/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 09/28/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 11/30/2023
Date Made Active in Reports: 12/01/2023
Number of Days to Update: 1

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 11/30/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 10/05/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 11/09/2022
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 11/29/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

NCFPD STATION NO. 4
4375 PALA MESA DR
FALLBROOK, CA 92028

TARGET PROPERTY COORDINATES

Latitude (North):	33.34081 - 33° 20' 26.92''
Longitude (West):	117.160467 - 117° 9' 37.68''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	485067.4
UTM Y (Meters):	3688889.5
Elevation:	344 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	50005737 BONSALL, CA
Version Date:	2022

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

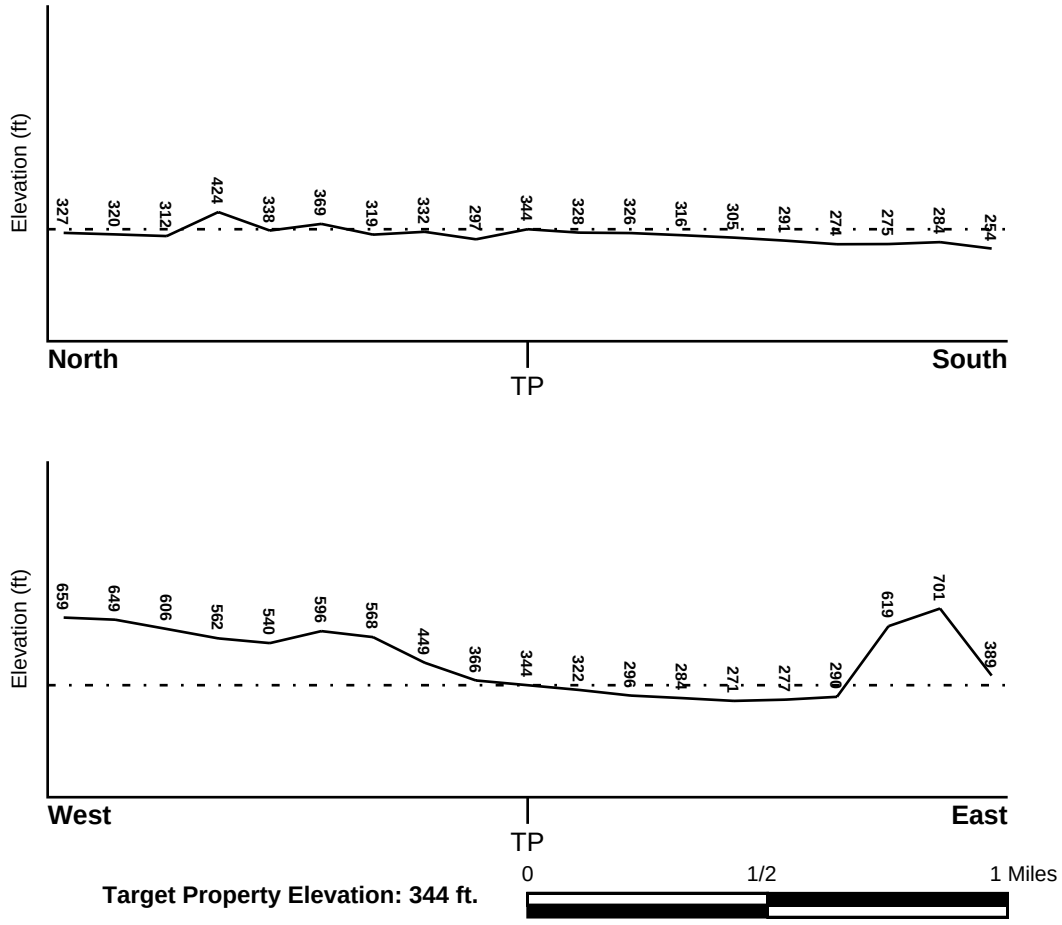
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General East

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06073C0485G	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06073C0481G	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
BONSALL	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

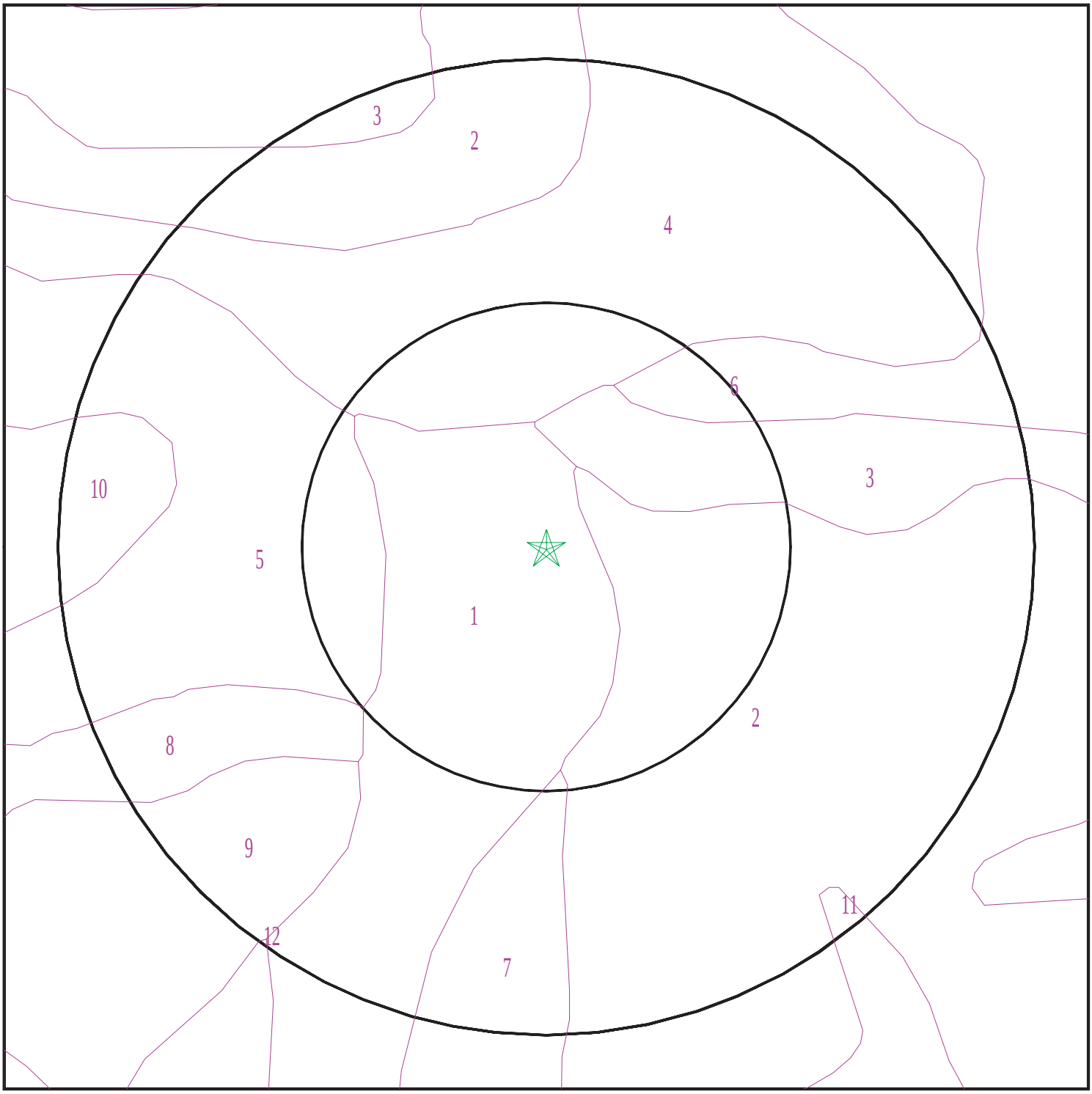
Era:	Mesozoic
System:	Cretaceous
Series:	Cretaceous granitic rocks
Code:	Kg *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Plutonic and Intrusive Rocks

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 07523814.2r



SITE NAME:	NCFPD Station No. 4	CLIENT:	Rincon
ADDRESS:	4375 Pala Mesa Dr Fallbrook CA 92028	CONTACT:	Savanna Vrevich
LAT/LONG:	33.34081 / 117.160467	INQUIRY #:	07523814.2r
		DATE:	December 18, 2023 5:01 pm

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: GREENFIELD

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 6.6
2	5 inches	33 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 6.6
3	33 inches	66 inches	stratified loamy coarse sand to sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 6.6

Soil Map ID: 2

Soil Component Name: RAMONA

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	16 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 4 Min: 1.4	Max: 7.3 Min: 6.6
2	16 inches	59 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 4 Min: 1.4	Max: 7.3 Min: 6.6
3	59 inches	74 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 4 Min: 1.4	Max: 7.3 Min: 6.6

Soil Map ID: 3

Soil Component Name: RAMONA

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 4 Min: 1.4	Max: 7.3 Min: 6.6
2	9 inches	59 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 4 Min: 1.4	Max: 7.3 Min: 6.6
3	59 inches	74 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 4 Min: 1.4	Max: 7.3 Min: 6.6

Soil Map ID: 4

Soil Component Name: RAMONA

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 4 Min: 1.4	Max: 7.3 Min: 6.6
2	9 inches	59 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 4 Min: 1.4	Max: 7.3 Min: 6.6
3	59 inches	74 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 4 Min: 1.4	Max: 7.3 Min: 6.6

Soil Map ID: 5

Soil Component Name: VISTA

Soil Surface Texture: coarse sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
2	14 inches	29 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
3	29 inches	33 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:

Soil Map ID: 6

Soil Component Name: GRANGEVILLE

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class:
Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 92 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 8.4 Min: 7.9
2	11 inches	59 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 8.4 Min: 7.9

Soil Map ID: 7

Soil Component Name: GREENFIELD

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 6.6

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	5 inches	33 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 6.6
3	33 inches	66 inches	stratified loamy coarse sand to sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 6.6

Soil Map ID: 8

Soil Component Name: VISTA

Soil Surface Texture: coarse sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	14 inches	29 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
3	29 inches	33 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:

Soil Map ID: 9

Soil Component Name: CIENEBA

Soil Surface Texture: coarse sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 5 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	7 inches	11 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:

Soil Map ID: 10

Soil Component Name: VISTA

Soil Surface Texture: coarse sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: Min:	Max: Min:

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Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	14 inches	29 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: Min:	Max: Min:
3	29 inches	33 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: Min:	Max: Min:

Soil Map ID: 11

Soil Component Name: VISALIA

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 6.5 Min: 6.1
2	11 inches	40 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 6.5 Min: 6.1
3	40 inches	59 inches	very fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 6.5 Min: 6.1

Soil Map ID: 12

Soil Component Name: VISTA

Soil Surface Texture: coarse sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	18 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
2	18 inches	35 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
3	35 inches	38 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A3	USGS40000132487	1/2 - 1 Mile ESE
B5	USGS40000132470	1/2 - 1 Mile SE

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
C7	USGS40000132635	1/2 - 1 Mile NW
D11	USGS40000132454	1/2 - 1 Mile SE
E18	USGS40000132498	1/2 - 1 Mile ESE
23	USGS40000132415	1/2 - 1 Mile South
G25	USGS40000132455	1/2 - 1 Mile SE
H27	USGS40000132491	1/2 - 1 Mile ESE
I29	USGS40000132508	1/2 - 1 Mile ESE
G30	USGS40000132443	1/2 - 1 Mile SE
J32	USGS40000132476	1/2 - 1 Mile ESE
K36	USGS40000132411	1/2 - 1 Mile SSE
L37	USGS40000132404	1/2 - 1 Mile SSE
M41	USGS40000132512	1/2 - 1 Mile ESE
M42	USGS40000132513	1/2 - 1 Mile ESE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

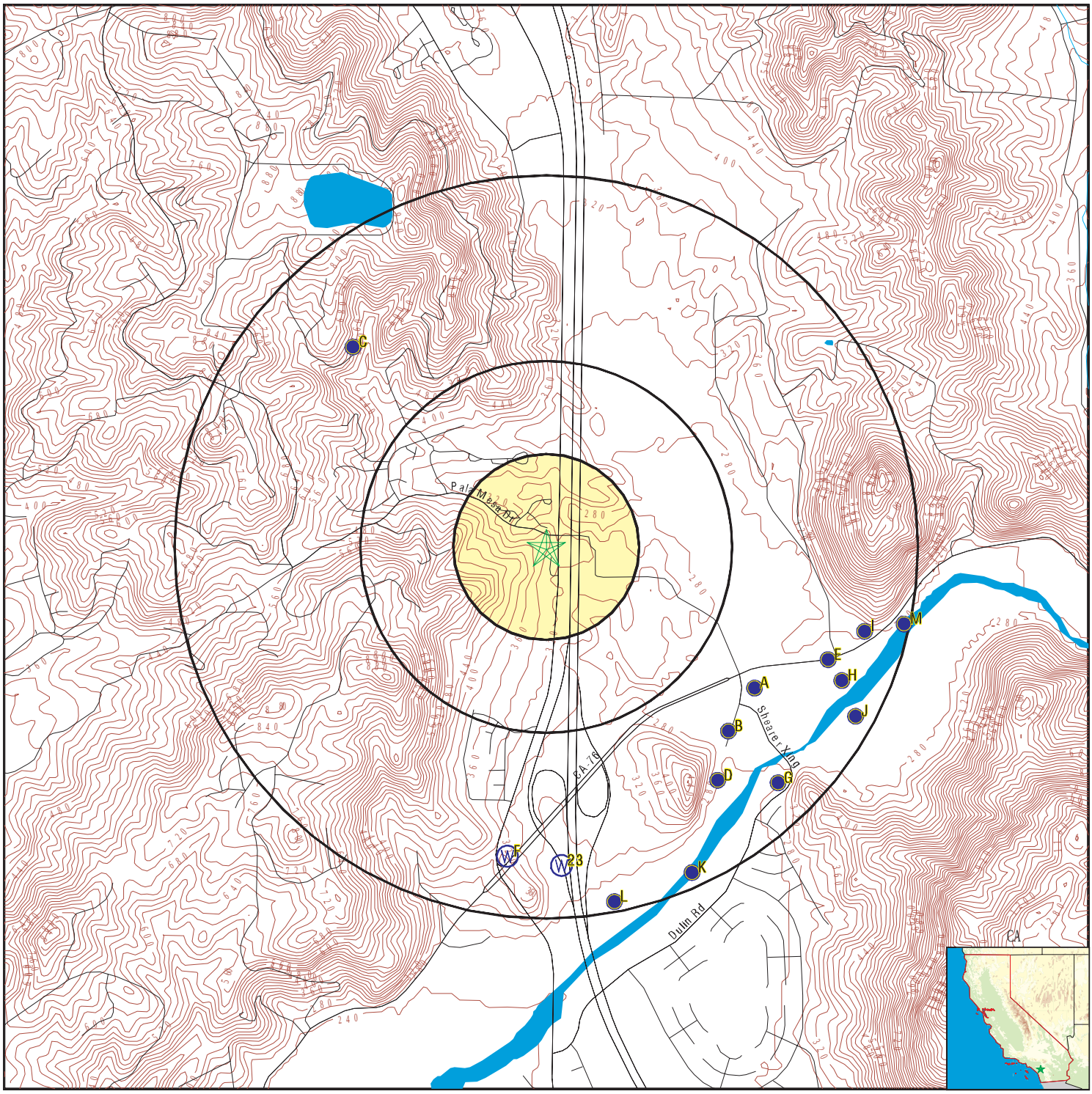
MAP ID	WELL ID	LOCATION FROM TP
A1	CADWR0000023558	1/2 - 1 Mile SE
A2	CADWR9000002237	1/2 - 1 Mile SE
A4	CAUSGSN00001570	1/2 - 1 Mile ESE
B6	CADWR9000002225	1/2 - 1 Mile SE
D8	CADWR9000002217	1/2 - 1 Mile SE
C9	CADWR9000002352	1/2 - 1 Mile NW
E10	CADWR9000002245	1/2 - 1 Mile ESE
F12	CAEDF0000102343	1/2 - 1 Mile South
F13	CAEDF0000137141	1/2 - 1 Mile South
F14	CAEDF0000019649	1/2 - 1 Mile South
F15	CAEDF0000050087	1/2 - 1 Mile South
F16	CAEDF0000138634	1/2 - 1 Mile South
F17	CAEDF0000133004	1/2 - 1 Mile South
F19	CAEDF0000041567	1/2 - 1 Mile South
G20	CADWR9000002218	1/2 - 1 Mile SE
G21	CADWR0000002038	1/2 - 1 Mile SE
H22	CADWR9000002241	1/2 - 1 Mile ESE
I24	CADWR9000002254	1/2 - 1 Mile ESE
G26	CAUSGSN00011808	1/2 - 1 Mile SE
G28	CADWR9000002210	1/2 - 1 Mile SE
G31	CAUSGSN00003485	1/2 - 1 Mile SE
K33	CADWR9000002189	1/2 - 1 Mile SSE
J34	CADWR9000002231	1/2 - 1 Mile ESE
L35	CADWR9000002183	1/2 - 1 Mile South

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
M38	CADWR9000002257	1/2 - 1 Mile ESE
M39	CADWR9000002258	1/2 - 1 Mile ESE
L40	CAUSGSN00008926	1/2 - 1 Mile SSE

PHYSICAL SETTING SOURCE MAP - 07523814.2r



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	NCFPD Station No. 4	CLIENT:	Rincon
ADDRESS:	4375 Pala Mesa Dr Fallbrook CA 92028	CONTACT:	Savanna Vrevich
LAT/LONG:	33.34081 / 117.160467	INQUIRY #:	07523814.2r
		DATE:	December 18, 2023 5:01 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A1
SE
1/2 - 1 Mile
Lower

CA WELLS **CADWR0000023558**

Well ID:	10S03W01L001S	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	10S03W01L001S	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=10S03W01L001S&store_num=		
GeoTracker Data:	Not Reported		

A2
SE
1/2 - 1 Mile
Lower

CA WELLS **CADWR9000002237**

State Well #:	10S03W01L001S	Station ID:	30559
Well Name:	Not Reported	Basin Name:	Lower San Luis Rey Valley
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

A3
ESE
1/2 - 1 Mile
Lower

FED USGS **USGS40000132487**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	010S003W01L001S	Type:	Well
Description:	Not Reported	HUC:	18070303
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19260101	Well Depth:	100
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	77	Level reading date:	1985-09-23
Feet below surface:	20.73	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	1985-07-15	Feet below surface:	9.70
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1985-06-18	Feet below surface:	15.38
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1985-05-30	Feet below surface:	14.18
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1985-04-15	Feet below surface:	12.74
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1985-03-19	Feet below surface:	14.94
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1985-02-25	Feet below surface:	12.39
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1985-01-15	Feet below surface:	12.22
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1984-12-19	Feet below surface:	18.83
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1984-11-24	Feet below surface:	20.16
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1984-05-18	Feet below surface:	13.53
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1984-04-20	Feet below surface:	12.40
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1984-03-23	Feet below surface:	12.15
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1984-02-17	Feet below surface:	11.95
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1984-01-16	Feet below surface:	11.39
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1983-11-09	Feet below surface:	11.34
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1973-03-21	Feet below surface:	11.40
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1972-04-26	Feet below surface:	40.25
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1966-06-29	Feet below surface:	69.2
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1945-10-09	Feet below surface:	10.20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-09-16	Feet below surface:	10.25
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-08-04	Feet below surface:	10.35
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-07-06	Feet below surface:	10.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-06-07	Feet below surface:	10.49
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-05-08	Feet below surface:	10.46
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-04-05	Feet below surface:	10.32
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1945-03-03	Feet below surface:	10.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-02-07	Feet below surface:	10.32
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-01-04	Feet below surface:	10.25
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-12-06	Feet below surface:	10.28
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-11-04	Feet below surface:	10.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-10-11	Feet below surface:	10.35
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-09-12	Feet below surface:	10.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-08-09	Feet below surface:	9.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-07-03	Feet below surface:	9.75
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-05-10	Feet below surface:	9.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-04-01	Feet below surface:	9.10
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-03-04	Feet below surface:	9.13
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-02-06	Feet below surface:	9.15
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-01-05	Feet below surface:	9.25
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-12-03	Feet below surface:	9.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-11-03	Feet below surface:	9.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-10-05	Feet below surface:	9.45
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-08-02	Feet below surface:	8.93
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-07-01	Feet below surface:	8.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-05-30	Feet below surface:	8.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-04-29	Feet below surface:	7.80
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1941-04-03	Feet below surface:	7.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-03-05	Feet below surface:	7.12
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-02-03	Feet below surface:	8.72
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-12-02	Feet below surface:	8.92
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-10-30	Feet below surface:	10.56
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-10-01	Feet below surface:	10.60
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-09-02	Feet below surface:	10.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-08-02	Feet below surface:	9.60
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-06-29	Feet below surface:	8.60
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-06-03	Feet below surface:	8.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-05-01	Feet below surface:	8.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-04-04	Feet below surface:	8.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-03-04	Feet below surface:	8.85
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-01-29	Feet below surface:	8.88
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-01-02	Feet below surface:	8.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-11-30	Feet below surface:	8.92
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-10-31	Feet below surface:	9.20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-09-30	Feet below surface:	9.10
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-08-30	Feet below surface:	9.82
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-08-02	Feet below surface:	9.52
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-07-01	Feet below surface:	9.18
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1939-06-05	Feet below surface:	9.19
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-04-28	Feet below surface:	8.67
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-03-06	Feet below surface:	8.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-02-08	Feet below surface:	8.12
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-01-02	Feet below surface:	8.32
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-11-30	Feet below surface:	8.57
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-10-05	Feet below surface:	8.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-10-03	Feet below surface:	8.56
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1929-09-25	Feet below surface:	11.5
Feet to sea level:	Not Reported	Note:	Not Reported

A4
ESE
1/2 - 1 Mile
Lower

CA WELLS **CAUSGSN00001570**

Well ID:	USGS-332007117085901	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-332007117085901	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-332007117085901&store_num=		
GeoTracker Data:	Not Reported		

B5
SE
1/2 - 1 Mile
Lower

FED USGS **USGS40000132470**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	010S003W01Z003S	Type:	Well
Description:	Not Reported	HUC:	18070303
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	2	Level reading date:	1930-01-16
Feet below surface:	4.05	Feet to sea level:	Not Reported

Note:	Not Reported		
Level reading date:	1929-09-28	Feet below surface:	5.05
Feet to sea level:	Not Reported	Note:	Not Reported

B6
SE
1/2 - 1 Mile
Lower

CA WELLS **CADWR9000002225**

State Well #:	10S03W01Z003S	Station ID:	10315
Well Name:	Not Reported	Basin Name:	Lower San Luis Rey Valley
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

C7
NW
1/2 - 1 Mile
Higher

FED USGS **USGS40000132635**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	009S003W35L001S	Type:	Well
Description:	Not Reported	HUC:	18070303
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	2	Level reading date:	1966-06-28
Feet below surface:	6.62	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	1966-06-01	Feet below surface:	7.00
Feet to sea level:	Not Reported	Note:	Not Reported

D8
SE
1/2 - 1 Mile
Lower

CA WELLS **CADWR9000002217**

State Well #:	10S03W01P003S	Station ID:	30560
Well Name:	Not Reported	Basin Name:	Lower San Luis Rey Valley
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

C9
NW
1/2 - 1 Mile
Higher

CA WELLS **CADWR9000002352**

State Well #:	09S03W35L001S	Station ID:	13476
Well Name:	Not Reported	Basin Name:	Not Reported
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

E10
ESE
1/2 - 1 Mile
Lower

CA WELLS **CADWR9000002245**

State Well #:	10S03W01G002S	Station ID:	39498
Well Name:	Not Reported	Basin Name:	Lower San Luis Rey Valley
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

D11
SE
1/2 - 1 Mile
Lower

FED USGS **USGS40000132454**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	010S003W01P003S	Type:	Well
Description:	Not Reported	HUC:	18070303
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	72
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1966-07-01
Feet below surface:	49.00	Feet to sea level:	Not Reported
Note:	Not Reported		

F12
South
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000102343**

Well ID:	T0607399243-MW-7	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-7
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0607399243&assigned_name=MW-7&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0607399243&assigned_name=MW-7		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

F13
South
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000137141**

Well ID:	T0607399243-MW-1	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0607399243&assigned_name=MW-1&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0607399243&assigned_name=MW-1		

F14
South
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000019649**

Well ID:	T0607399243-MW-5	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-5
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0607399243&assigned_name=MW-5&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0607399243&assigned_name=MW-5		

F15
South
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000050087**

Well ID:	T0607399243-MW-6	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-6
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0607399243&assigned_name=MW-6&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0607399243&assigned_name=MW-6		

F16
South
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000138634**

Well ID:	T0607399243-MW-4	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-4
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0607399243&assigned_name=MW-4&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0607399243&assigned_name=MW-4		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

F17
South
1/2 - 1 Mile
Lower

CA WELLS **CAEDF0000133004**

Well ID:	T0607399243-MW-2	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-2
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0607399243&assigned_name=MW-2&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0607399243&assigned_name=MW-2		

E18
ESE
1/2 - 1 Mile
Lower

FED USGS **USGS40000132498**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	010S003W01G002S	Type:	Well
Description:	Not Reported	HUC:	18070303
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	76
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	6	Level reading date:	1966-06-29
Feet below surface:	52.66	Feet to sea level:	Not Reported
Note:	A nearby site that taps the same aquifer was being pumped.		
Level reading date:	1966-06-01	Feet below surface:	53.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-04-01	Feet below surface:	48.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-03-12	Feet below surface:	49
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-03-03	Feet below surface:	49.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1965-02-25	Feet below surface:	50
Feet to sea level:	Not Reported	Note:	Not Reported

F19
South
1/2 - 1 Mile
Higher

CA WELLS **CAEDF0000041567**

Well ID:	T0607399243-MW-3	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-3

GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=T0607399243&assigned_name=MW-3&store_num=
GeoTracker Data: https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=T0607399243&assigned_name=MW-3

G20
SE
1/2 - 1 Mile
Lower

CA WELLS **CADWR9000002218**

State Well #: 10S03W01P002S
Station ID: 10313
Well Name: Not Reported
Basin Name: Lower San Luis Rey Valley
Well Use: Unknown
Well Type: Unknown
Well Depth: 0
Well Completion Rpt #: Not Reported

G21
SE
1/2 - 1 Mile
Lower

CA WELLS **CADWR0000002038**

Well ID: 10S03W01P002S
Well Type: UNK
Source: Department of Water Resources
Other Name: 10S03W01P002S
GAMA PFAS Testing: Not Reported
Groundwater Quality Data: https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=10S03W01P002S&store_num=
GeoTracker Data: Not Reported

H22
ESE
1/2 - 1 Mile
Lower

CA WELLS **CADWR9000002241**

State Well #: 10S03W01K001S
Station ID: 10311
Well Name: Not Reported
Basin Name: Lower San Luis Rey Valley
Well Use: Unknown
Well Type: Unknown
Well Depth: 0
Well Completion Rpt #: Not Reported

23
South
1/2 - 1 Mile
Lower

FED USGS **USGS40000132415**

Organization ID: USGS-CA
Organization Name: USGS California Water Science Center
Monitor Location: 010S003W11A001S
Type: Well
Description: Not Reported
HUC: 18070303
Drainage Area: Not Reported
Drainage Area Units: Not Reported
Contrib Drainage Area: Not Reported
Contrib Drainage Area Unts: Not Reported
Aquifer: California Coastal Basin aquifers
Formation Type: Not Reported
Aquifer Type: Not Reported
Construction Date: Not Reported
Well Depth: 71
Well Depth Units: ft
Well Hole Depth: Not Reported
Well Hole Depth Units: Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

I24
ESE
1/2 - 1 Mile
Lower

CA WELLS **CADWR9000002254**

State Well #:	10S03W01G001S	Station ID:	30557
Well Name:	Not Reported	Basin Name:	Lower San Luis Rey Valley
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

G25
SE
1/2 - 1 Mile
Lower

FED USGS **USGS40000132455**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	010S003W01P002S	Type:	Well
Description:	Not Reported	HUC:	18070303
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19630101	Well Depth:	77
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1966-07-19
Feet below surface:	57.3	Feet to sea level:	Not Reported
Note:	The site was being pumped.		

G26
SE
1/2 - 1 Mile
Lower

CA WELLS **CAUSGSN00011808**

Well ID:	USGS-331955117085501	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-331955117085501	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-331955117085501&store_num=		
GeoTracker Data:	Not Reported		

H27
ESE
1/2 - 1 Mile
Lower

FED USGS **USGS40000132491**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	010S003W01K001S	Type:	Well
Description:	Not Reported	HUC:	18070303
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported

Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	88
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	4	Level reading date:	1973-03-22
Feet below surface:	7.07	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1972-04-26	Feet below surface:	16.50
Feet to sea level:	Not Reported	Note:	The site was being pumped.

Level reading date:	1971-10-27	Feet below surface:	12.89
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1966-06-29	Feet below surface:	85.6
Feet to sea level:	Not Reported	Note:	The site was being pumped.

G28
SE
1/2 - 1 Mile
Lower

CA WELLS **CADWR9000002210**

State Well #:	10S03W01P001S	Station ID:	10312
Well Name:	Not Reported	Basin Name:	Lower San Luis Rey Valley
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

I29
ESE
1/2 - 1 Mile
Lower

FED USGS **USGS40000132508**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	010S003W01G001S	Type:	Well
Description:	Not Reported	HUC:	18070303
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	222	Level reading date:	1953-04-02
Feet below surface:	8.93	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1952-04-21	Feet below surface:	6.19
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1952-02-07	Feet below surface:	8.18
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1952-01-11	Feet below surface:	13.31

Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1951-06-16	Feet below surface:	15.25
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1951-05-15	Feet below surface:	10.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1951-04-15	Feet below surface:	9.05
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1951-04-05	Feet below surface:	9.53
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1951-03-15	Feet below surface:	10.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1951-02-16	Feet below surface:	13.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1950-07-15	Feet below surface:	16.45
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1950-07-10	Feet below surface:	15.98
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1950-06-17	Feet below surface:	13.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1950-05-15	Feet below surface:	11.60
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1950-04-14	Feet below surface:	9.60
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1950-04-03	Feet below surface:	9.53
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1950-03-18	Feet below surface:	8.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1950-02-18	Feet below surface:	8.35
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1950-01-14	Feet below surface:	10.40
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1950-01-03	Feet below surface:	13.14
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1949-09-15	Feet below surface:	17.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1949-08-16	Feet below surface:	15.60
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1949-07-11	Feet below surface:	12.85
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1949-07-05	Feet below surface:	13.47
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1949-06-15	Feet below surface:	10.05
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1949-05-18	Feet below surface:	8.45
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1949-04-18	Feet below surface:	8.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1949-04-04	Feet below surface:	8.39
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1949-03-15	Feet below surface:	8.25
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1949-02-16	Feet below surface:	8.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1949-01-15	Feet below surface:	8.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1949-01-03	Feet below surface:	9.54
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-12-15	Feet below surface:	14.65
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-11-15	Feet below surface:	15.55
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-10-16	Feet below surface:	16.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-10-04	Feet below surface:	15.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-09-18	Feet below surface:	15.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-08-17	Feet below surface:	14.33
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-08-16	Feet below surface:	14.35
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-07-20	Feet below surface:	12.20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-07-12	Feet below surface:	12.22
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-06-16	Feet below surface:	10.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-05-15	Feet below surface:	9.25
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-04-17	Feet below surface:	8.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-04-05	Feet below surface:	8.21
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1948-03-20	Feet below surface:	8.43
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-02-21	Feet below surface:	8.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-01-22	Feet below surface:	8.45
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-01-05	Feet below surface:	8.39
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-12-15	Feet below surface:	8.70
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-11-19	Feet below surface:	13.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-10-06	Feet below surface:	16.63
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-09-12	Feet below surface:	16.35
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-09-02	Feet below surface:	15.70
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-08-15	Feet below surface:	16.10
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-07-16	Feet below surface:	12.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-07-07	Feet below surface:	12.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-06-16	Feet below surface:	10.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-05-16	Feet below surface:	8.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-04-16	Feet below surface:	8.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-04-07	Feet below surface:	8.56
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-03-14	Feet below surface:	8.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-02-15	Feet below surface:	8.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-01-18	Feet below surface:	8.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-01-06	Feet below surface:	4.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1946-12-14	Feet below surface:	8.10
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1946-11-15	Feet below surface:	9.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1946-10-18	Feet below surface:	13.14
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1946-10-07	Feet below surface:	13.17
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1946-09-16	Feet below surface:	14.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1946-08-21	Feet below surface:	12.35
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1946-07-15	Feet below surface:	8.58
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1946-07-02	Feet below surface:	9.05
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1946-06-15	Feet below surface:	8.60
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1946-05-15	Feet below surface:	8.20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1946-04-17	Feet below surface:	8.06
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1946-04-04	Feet below surface:	7.68
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1946-03-02	Feet below surface:	8.05
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1946-02-15	Feet below surface:	7.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1946-01-08	Feet below surface:	7.70
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1946-01-07	Feet below surface:	7.60
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-12-05	Feet below surface:	7.89
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-11-07	Feet below surface:	8.34
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-10-09	Feet below surface:	7.94
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-10-02	Feet below surface:	7.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-09-13	Feet below surface:	8.02
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-08-04	Feet below surface:	8.27
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1945-07-06	Feet below surface:	8.40
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-07-02	Feet below surface:	8.10
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-06-07	Feet below surface:	8.10
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-05-08	Feet below surface:	7.98
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-04-05	Feet below surface:	7.35
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-04-02	Feet below surface:	7.45
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-03-03	Feet below surface:	7.40
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-02-07	Feet below surface:	7.29
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-01-04	Feet below surface:	7.43
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-01-01	Feet below surface:	7.54
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-12-06	Feet below surface:	7.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-11-04	Feet below surface:	7.53
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-10-11	Feet below surface:	7.88
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-10-02	Feet below surface:	7.82
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-09-12	Feet below surface:	8.55
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-08-09	Feet below surface:	8.12
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-07-03	Feet below surface:	8.55
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-05-10	Feet below surface:	8.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-04-03	Feet below surface:	6.33
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-04-01	Feet below surface:	7.35
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-03-04	Feet below surface:	7.31
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1944-02-06	Feet below surface:	7.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-01-18	Feet below surface:	7.29
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-01-05	Feet below surface:	7.35
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-12-14	Feet below surface:	7.32
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-12-03	Feet below surface:	7.41
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-11-16	Feet below surface:	7.54
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-11-03	Feet below surface:	7.53
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-10-12	Feet below surface:	7.58
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-10-05	Feet below surface:	8.06
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-09-14	Feet below surface:	7.72
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-08-17	Feet below surface:	8.03
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-07-14	Feet below surface:	8.86
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-06-15	Feet below surface:	7.74
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-05-14	Feet below surface:	7.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-04-12	Feet below surface:	7.01
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-03-15	Feet below surface:	7.01
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-02-15	Feet below surface:	7.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-01-18	Feet below surface:	7.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-12-14	Feet below surface:	7.78
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-11-16	Feet below surface:	7.52
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-10-19	Feet below surface:	7.76
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1942-09-14	Feet below surface:	8.08
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-08-24	Feet below surface:	8.21
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-07-13	Feet below surface:	8.72
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-06-15	Feet below surface:	8.08
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-05-18	Feet below surface:	7.79
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-04-15	Feet below surface:	7.31
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-03-18	Feet below surface:	7.19
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-02-16	Feet below surface:	7.39
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-01-12	Feet below surface:	7.72
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-12-15	Feet below surface:	7.29
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-11-17	Feet below surface:	7.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-10-13	Feet below surface:	7.68
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-09-15	Feet below surface:	7.76
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-08-18	Feet below surface:	7.64
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-07-14	Feet below surface:	7.92
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-06-16	Feet below surface:	7.68
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-05-12	Feet below surface:	7.12
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-04-14	Feet below surface:	6.41
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-03-17	Feet below surface:	6.33
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-02-17	Feet below surface:	7.65
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-01-17	Feet below surface:	8.02
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1940-12-16	Feet below surface:	8.13
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-11-18	Feet below surface:	8.17
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-10-14	Feet below surface:	8.46
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-09-16	Feet below surface:	9.51
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-08-12	Feet below surface:	9.49
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-07-15	Feet below surface:	9.28
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-06-17	Feet below surface:	8.89
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-05-13	Feet below surface:	8.88
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-04-15	Feet below surface:	8.09
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-03-18	Feet below surface:	8.06
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-02-12	Feet below surface:	7.98
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-01-15	Feet below surface:	7.82
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-12-18	Feet below surface:	8.08
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-11-13	Feet below surface:	8.10
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-10-16	Feet below surface:	8.07
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-09-15	Feet below surface:	8.93
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-08-14	Feet below surface:	8.83
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-07-14	Feet below surface:	8.64
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-06-16	Feet below surface:	8.56
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-05-16	Feet below surface:	8.82
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-04-14	Feet below surface:	7.74
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1939-03-16	Feet below surface:	7.93
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-03-01	Feet below surface:	7.78
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-02-15	Feet below surface:	7.74
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-01-12	Feet below surface:	7.51
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-12-15	Feet below surface:	8.09
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-11-14	Feet below surface:	7.76
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-10-15	Feet below surface:	7.65
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-09-12	Feet below surface:	8.37
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-07-08	Feet below surface:	8.27
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-12-15	Feet below surface:	7.29
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-10-29	Feet below surface:	7.27
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-09-13	Feet below surface:	8.18
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-06-10	Feet below surface:	7.52
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-08-24	Feet below surface:	16.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-05-12	Feet below surface:	9.53
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1933-10-30	Feet below surface:	13.98
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1933-07-31	Feet below surface:	10.32
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1933-05-25	Feet below surface:	8.47
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1933-03-07	Feet below surface:	7.24
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1932-09-10	Feet below surface:	16.65
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer had been pumped recently.		
Level reading date:	1932-05-27	Feet below surface:	8.26

Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1932-04-14	Feet below surface:	7.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1931-08-26	Feet below surface:	12.55
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1931-07-08	Feet below surface:	10.41
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer had been pumped recently.		
Level reading date:	1931-06-16	Feet below surface:	7.92
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1931-03-19	Feet below surface:	8.58
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1930-11-04	Feet below surface:	10.60
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1930-07-18	Feet below surface:	7.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1930-05-19	Feet below surface:	7.33
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1930-04-17	Feet below surface:	7.40
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1930-03-01	Feet below surface:	7.36
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1929-12-07	Feet below surface:	12.38
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer had been pumped recently.		
Level reading date:	1929-10-24	Feet below surface:	11.36
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1929-07-12	Feet below surface:	9.75
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1929-04-29	Feet below surface:	9.58
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1928-09-13	Feet below surface:	15.96
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1928-04-11	Feet below surface:	8.73
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer had been pumped recently.		
Level reading date:	1927-09-30	Feet below surface:	16.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1927-09-12	Feet below surface:	14.28
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer had been pumped recently.		
Level reading date:	1927-04-28	Feet below surface:	8.98
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1926-10-26	Feet below surface:	9.99
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer had been pumped recently.		
Level reading date:	1926-09-22	Feet below surface:	11.85
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer had been pumped recently.		
Level reading date:	1926-05-02	Feet below surface:	7.04
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1926-03-28	Feet below surface:	6.66
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1925-09-30	Feet below surface:	12.16
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer had been pumped recently.		
Level reading date:	1925-07-28	Feet below surface:	10.15
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer had been pumped recently.		
Level reading date:	1925-05-22	Feet below surface:	7.54
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer had been pumped recently.		
Level reading date:	1924-08-30	Feet below surface:	9.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1924-05-09	Feet below surface:	6.58
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1923-12-21	Feet below surface:	6.58
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1923-11-28	Feet below surface:	6.61
Feet to sea level:	Not Reported	Note:	Not Reported

G30
SE
1/2 - 1 Mile
Lower

FED USGS **USGS40000132443**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	010S003W01P001S	Type:	Well
Description:	Not Reported	HUC:	18070303
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	100
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	5	Level reading date:	1973-03-22
Feet below surface:	8.08	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	1972-09-14	Feet below surface:	19.22

Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1971-10-07	Feet below surface:	43.37
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1966-07-19	Feet below surface:	65.77
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1964-10-28	Feet below surface:	61.62
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		

G31
SE
1/2 - 1 Mile
Lower

CA WELLS **CAUSGSN00003485**

Well ID:	USGS-331952117085501	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-331952117085501	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-331952117085501&store_num=		
GeoTracker Data:	Not Reported		

J32
ESE
1/2 - 1 Mile
Lower

FED USGS **USGS40000132476**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	010S003W01Z004S	Type:	Well
Description:	Not Reported	HUC:	18070303
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	94	Level reading date:	1952-11-17
Feet below surface:	16.32	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	1952-04-21	Feet below surface:	7.20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1952-01-11	Feet below surface:	18.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1951-10-08	Feet below surface:	20.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1951-07-17	Feet below surface:	15.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1951-04-05	Feet below surface:	11.42

Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1951-01-03	Feet below surface:	11.23
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1950-10-09	Feet below surface:	10.74
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1950-07-10	Feet below surface:	9.34
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1950-04-03	Feet below surface:	8.75
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1950-01-03	Feet below surface:	12.11
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1949-10-03	Feet below surface:	11.20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1949-07-05	Feet below surface:	8.51
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1949-04-04	Feet below surface:	7.45
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1949-01-03	Feet below surface:	9.84
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-10-04	Feet below surface:	9.34
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-08-17	Feet below surface:	9.19
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-07-12	Feet below surface:	8.95
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-04-05	Feet below surface:	8.91
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-01-05	Feet below surface:	12.73
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-10-06	Feet below surface:	11.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-07-07	Feet below surface:	8.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-04-07	Feet below surface:	7.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-01-06	Feet below surface:	7.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1946-10-07	Feet below surface:	8.40
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1946-07-02	Feet below surface:	7.67
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1946-04-04	Feet below surface:	6.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1946-01-07	Feet below surface:	6.71
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-10-02	Feet below surface:	7.38
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-07-02	Feet below surface:	7.22
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-04-02	Feet below surface:	6.20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-01-01	Feet below surface:	6.52
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-10-02	Feet below surface:	6.88
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-07-03	Feet below surface:	6.83
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-04-03	Feet below surface:	6.22
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-01-18	Feet below surface:	6.13
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-12-14	Feet below surface:	6.01
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-11-16	Feet below surface:	6.42
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-10-12	Feet below surface:	6.58
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-09-14	Feet below surface:	6.67
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-08-17	Feet below surface:	6.70
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-07-14	Feet below surface:	6.62
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-06-15	Feet below surface:	6.49
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-05-14	Feet below surface:	6.32
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-04-12	Feet below surface:	5.84
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-03-15	Feet below surface:	5.53
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-02-15	Feet below surface:	5.82
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1943-01-18	Feet below surface:	6.20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-12-14	Feet below surface:	6.47
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-11-16	Feet below surface:	6.55
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-10-19	Feet below surface:	6.67
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-09-14	Feet below surface:	6.81
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-08-24	Feet below surface:	6.85
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-07-13	Feet below surface:	6.78
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-06-15	Feet below surface:	6.62
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-05-18	Feet below surface:	6.44
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-04-15	Feet below surface:	6.13
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-03-18	Feet below surface:	5.82
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-02-16	Feet below surface:	6.15
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-01-12	Feet below surface:	5.84
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-12-15	Feet below surface:	5.97
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-11-17	Feet below surface:	6.02
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-10-13	Feet below surface:	6.43
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-09-15	Feet below surface:	6.52
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-08-18	Feet below surface:	6.58
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-07-14	Feet below surface:	6.55
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-06-16	Feet below surface:	6.32
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-05-12	Feet below surface:	5.85
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1941-04-14	Feet below surface:	5.01
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-03-17	Feet below surface:	4.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-02-17	Feet below surface:	5.12
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-01-17	Feet below surface:	5.40
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-12-16	Feet below surface:	5.29
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-11-18	Feet below surface:	5.41
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-10-14	Feet below surface:	6.55
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-09-16	Feet below surface:	6.51
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-08-12	Feet below surface:	6.37
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-07-15	Feet below surface:	6.06
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-06-17	Feet below surface:	5.65
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-05-13	Feet below surface:	5.53
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-04-15	Feet below surface:	5.33
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-03-18	Feet below surface:	5.23
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-02-12	Feet below surface:	4.95
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-01-15	Feet below surface:	4.87
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-12-18	Feet below surface:	5.25
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-11-13	Feet below surface:	5.31
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-10-16	Feet below surface:	5.53
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-09-15	Feet below surface:	5.99
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-08-14	Feet below surface:	6.03
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1939-07-14	Feet below surface:	5.79
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-06-16	Feet below surface:	5.58
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-05-16	Feet below surface:	5.33
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-05-15	Feet below surface:	5.31
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-04-14	Feet below surface:	5.17
Feet to sea level:	Not Reported	Note:	Not Reported

K33
SSE
1/2 - 1 Mile
Lower

CA WELLS **CADWR9000002189**

State Well #:	10S03W12D002S	Station ID:	11044
Well Name:	Not Reported	Basin Name:	Lower San Luis Rey Valley
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

J34
ESE
1/2 - 1 Mile
Lower

CA WELLS **CADWR9000002231**

State Well #:	10S03W01Z004S	Station ID:	10316
Well Name:	Not Reported	Basin Name:	Lower San Luis Rey Valley
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

L35
South
1/2 - 1 Mile
Lower

CA WELLS **CADWR9000002183**

State Well #:	10S03W12D001S	Station ID:	11043
Well Name:	Not Reported	Basin Name:	Lower San Luis Rey Valley
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

K36
SSE
1/2 - 1 Mile
Lower

FED USGS **USGS40000132411**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	010S003W12D002S	Type:	Well
Description:	Not Reported	HUC:	18070303
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported

Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1966-07-20
Feet below surface:	53.20	Feet to sea level:	Not Reported
Note:	The site was being pumped.		

L37
SSE
1/2 - 1 Mile
Lower

FED USGS **USGS40000132404**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	010S003W12D001S	Type:	Well
Description:	Not Reported	HUC:	18070303
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1966-07-20
Feet below surface:	60.63	Feet to sea level:	Not Reported
Note:	The site was being pumped.		

M38
ESE
1/2 - 1 Mile
Lower

CA WELLS **CADWR9000002257**

State Well #:	10S03W01Z005S	Station ID:	30562
Well Name:	Not Reported	Basin Name:	Lower San Luis Rey Valley
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

M39
ESE
1/2 - 1 Mile
Lower

CA WELLS **CADWR9000002258**

State Well #:	10S03W01Z006S	Station ID:	10317
Well Name:	Not Reported	Basin Name:	Lower San Luis Rey Valley
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

L40
SSE
1/2 - 1 Mile
Lower

CA WELLS **CAUSGSN00008926**

Well ID:	USGS-331937117092201	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-331937117092201	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-331937117092201&store_num=		
GeoTracker Data:	Not Reported		

M41
ESE
1/2 - 1 Mile
Lower

FED USGS **USGS40000132512**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	010S003W01Z005S	Type:	Well
Description:	Not Reported	HUC:	18070303
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	23	Level reading date:	1915-10-10
Feet below surface:	4.58	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1915-08-02	Feet below surface:	4.75
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1914-08-19	Feet below surface:	7.25
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1914-05-09	Feet below surface:	5.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1914-04-25	Feet below surface:	5.25
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1914-03-01	Feet below surface:	4.92
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1914-01-23	Feet below surface:	4.92
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1913-06-13	Feet below surface:	7.58
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1913-05-09	Feet below surface:	5.17
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1913-04-18	Feet below surface:	5.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1913-02-20	Feet below surface:	4.92
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1913-01-19	Feet below surface:	4.92
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1913-01-02	Feet below surface:	4.83
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1912-12-18	Feet below surface:	5.25
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1912-10-30	Feet below surface:	4.83
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1912-07-20	Feet below surface:	7.42
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1912-07-11	Feet below surface:	5.42
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1912-06-25	Feet below surface:	5.17
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1912-05-22	Feet below surface:	5.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1912-04-19	Feet below surface:	4.25
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1912-04-12	Feet below surface:	4.08
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1912-04-10	Feet below surface:	4.83
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1912-04-09	Feet below surface:	4.83
Feet to sea level:	Not Reported	Note:	Not Reported

M42
ESE
1/2 - 1 Mile
Lower

FED USGS **USGS40000132513**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	010S003W01Z006S	Type:	Well
Description:	Not Reported	HUC:	18070303
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	137	Level reading date:	1952-04-21

Feet below surface:	7.69	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	1952-01-11	Feet below surface:	14.81
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1950-07-10	Feet below surface:	15.98
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1950-04-03	Feet below surface:	9.53
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1950-01-03	Feet below surface:	13.14
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1949-07-05	Feet below surface:	13.47
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1949-04-04	Feet below surface:	8.39
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1949-01-03	Feet below surface:	9.54
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-10-04	Feet below surface:	15.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-08-17	Feet below surface:	14.33
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-07-12	Feet below surface:	12.22
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-04-05	Feet below surface:	8.21
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1948-01-05	Feet below surface:	8.39
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-10-06	Feet below surface:	16.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-07-07	Feet below surface:	12.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-04-07	Feet below surface:	8.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1947-01-06	Feet below surface:	7.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1946-10-07	Feet below surface:	13.17
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1946-07-02	Feet below surface:	9.05
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1946-04-04	Feet below surface:	7.68
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1946-01-07	Feet below surface:	7.60
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1945-10-02	Feet below surface:	7.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-07-02	Feet below surface:	8.10
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-04-02	Feet below surface:	7.45
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1945-01-01	Feet below surface:	7.54
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-10-02	Feet below surface:	7.82
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-07-03	Feet below surface:	8.55
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-04-03	Feet below surface:	7.33
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-01-18	Feet below surface:	7.29
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-12-14	Feet below surface:	7.32
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-11-16	Feet below surface:	7.54
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-10-12	Feet below surface:	7.58
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-09-14	Feet below surface:	7.72
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-08-17	Feet below surface:	8.03
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-07-14	Feet below surface:	8.86
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-06-15	Feet below surface:	7.74
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-05-14	Feet below surface:	7.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-04-12	Feet below surface:	7.01
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-03-15	Feet below surface:	7.01
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-02-15	Feet below surface:	7.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-01-18	Feet below surface:	7.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-12-14	Feet below surface:	7.78
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1942-11-16	Feet below surface:	7.52
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-10-19	Feet below surface:	7.76
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-09-14	Feet below surface:	8.08
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-08-24	Feet below surface:	8.21
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-07-13	Feet below surface:	8.72
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-06-15	Feet below surface:	8.08
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-05-18	Feet below surface:	7.79
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-04-15	Feet below surface:	7.31
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-03-18	Feet below surface:	7.19
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-02-16	Feet below surface:	7.39
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-01-12	Feet below surface:	7.27
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-12-15	Feet below surface:	7.29
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-11-17	Feet below surface:	7.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-10-13	Feet below surface:	7.68
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-09-15	Feet below surface:	7.76
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-08-18	Feet below surface:	7.64
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-07-14	Feet below surface:	7.92
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-06-16	Feet below surface:	7.68
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-05-12	Feet below surface:	7.12
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-04-14	Feet below surface:	6.41
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-03-17	Feet below surface:	6.33
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1941-02-17	Feet below surface:	7.65
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-01-17	Feet below surface:	8.02
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-12-16	Feet below surface:	8.13
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-11-18	Feet below surface:	8.17
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-10-14	Feet below surface:	8.46
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-09-16	Feet below surface:	9.51
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-08-12	Feet below surface:	9.49
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-07-15	Feet below surface:	9.28
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-06-17	Feet below surface:	8.89
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-05-13	Feet below surface:	8.88
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-04-15	Feet below surface:	8.09
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-03-18	Feet below surface:	8.06
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-02-12	Feet below surface:	7.98
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-01-15	Feet below surface:	7.82
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-12-18	Feet below surface:	8.08
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-11-13	Feet below surface:	8.10
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-10-16	Feet below surface:	8.07
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-09-15	Feet below surface:	8.93
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-08-14	Feet below surface:	8.83
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-07-14	Feet below surface:	8.64
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-06-16	Feet below surface:	8.56
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1939-05-16	Feet below surface:	8.82
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-04-14	Feet below surface:	7.74
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-03-16	Feet below surface:	7.93
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-03-01	Feet below surface:	7.78
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-02-15	Feet below surface:	7.74
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-01-12	Feet below surface:	7.51
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-12-15	Feet below surface:	8.09
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-11-14	Feet below surface:	7.76
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-10-15	Feet below surface:	7.65
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-09-12	Feet below surface:	8.37
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-07-08	Feet below surface:	8.27
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-12-15	Feet below surface:	7.29
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-10-29	Feet below surface:	11.27
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-09-13	Feet below surface:	8.18
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-06-10	Feet below surface:	7.52
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-08-24	Feet below surface:	16.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-05-12	Feet below surface:	9.53
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1933-10-30	Feet below surface:	13.98
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1933-07-31	Feet below surface:	10.32
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1933-05-25	Feet below surface:	8.47
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1933-03-07	Feet below surface:	7.24
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1932-09-10	Feet below surface:	12.65
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer was being pumped.		
Level reading date:	1932-05-27	Feet below surface:	8.26
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1932-04-14	Feet below surface:	7.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1931-08-26	Feet below surface:	12.55
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1931-07-08	Feet below surface:	10.41
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer was being pumped.		
Level reading date:	1931-06-16	Feet below surface:	7.92
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1931-03-19	Feet below surface:	8.58
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1930-11-04	Feet below surface:	10.60
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1930-07-18	Feet below surface:	7.90
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1930-05-19	Feet below surface:	7.33
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1930-04-17	Feet below surface:	7.40
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1930-03-01	Feet below surface:	7.36
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1929-12-07	Feet below surface:	12.38
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer was being pumped.		
Level reading date:	1929-10-24	Feet below surface:	11.36
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1929-07-12	Feet below surface:	9.73
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1929-04-29	Feet below surface:	9.58
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1928-09-13	Feet below surface:	15.96
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1928-04-11	Feet below surface:	8.73
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer was being pumped.		
Level reading date:	1927-09-30	Feet below surface:	16.30
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1927-09-12	Feet below surface:	14.28

Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer was being pumped.		
Level reading date:	1927-04-28	Feet below surface:	8.98
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1926-10-26	Feet below surface:	9.89
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer was being pumped.		
Level reading date:	1926-09-22	Feet below surface:	11.85
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer was being pumped.		
Level reading date:	1926-05-02	Feet below surface:	7.04
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1926-03-28	Feet below surface:	6.66
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1925-09-30	Feet below surface:	12.16
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer was being pumped.		
Level reading date:	1925-07-28	Feet below surface:	10.15
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer was being pumped.		
Level reading date:	1925-05-22	Feet below surface:	7.54
Feet to sea level:	Not Reported		
Note:	A nearby site that taps the same aquifer was being pumped.		
Level reading date:	1924-08-30	Feet below surface:	9.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1924-05-09	Feet below surface:	6.58
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1923-12-21	Feet below surface:	6.58
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1923-11-28	Feet below surface:	6.61
Feet to sea level:	Not Reported	Note:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92028	59	4

Federal EPA Radon Zone for SAN DIEGO County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 92028

Number of sites tested: 2

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.650 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

Groundwater Ambient Monitoring & Assessment Program
State Water Resources Control Board
Telephone: 916-341-5577
The GAMA Program is Californias comprehensive groundwater quality monitoring program. GAMA collects data by testing the untreated, raw water in different types of wells for naturally-occurring and man-made chemicals. The GAMA data includes Domestic, Monitoring and Municipal well types from the following sources, Department of Water Resources, Department of Heath Services, EDF, Agricultural Lands, Lawrence Livermore National Laboratory, Department of Pesticide Regulation, United States Geological Survey, Groundwater Ambient Monitoring and Assessment Program and Local Groundwater Projects.

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

California Oil and Gas Well Locations
Source: Dept of Conservation, Geologic Energy Management Division
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

PHYSICAL SETTING SOURCE RECORDS SEARCHED

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

NOTICE OF EXEMPTION

TO:	Office of Planning and Research P.O. Box 3044, Room 113 Sacramento, CA 95812-3044	**FROM**:	North County Fire Protection District 330 South Main Avenue Fallbrook, CA 92028
County Clerk:	County of San Diego 1600 Pacific Highway #260 San Diego, CA 92101		

Project Title: Fire Station No. 4 Replacement

Project Applicant: North County Fire Protection District

Location - Specific: 4375 Pala Mesa Drive, in the unincorporated community of Fallbrook in San Diego County). The site is approximately 1.73 acres, located on Assessor Parcel Number (APN) 120-506-900.

Description of Nature, Purpose, and Beneficiaries of Project: The North County Fire Protection District (District) is an independent special district established in 1987 to provide fire protection, emergency medical services, ambulance transport, hazardous materials response, and weed abatement (fuel reduction) in the unincorporated Fallbrook and Bonsall communities, of San Diego County. The existing Fire Station No. 4 was constructed in 1979 and consists of modular prefabricated structures intended as temporary quarters until a new facility could be built. In 2017, a comprehensive condition assessment evaluated all District facilities, leading to the recommendation to replace Fire Station No. 4. Subsequently, in October 2020, the Board of Directors approved a Facilities Replacement Plan outlining the timeline for renovating and constructing District facilities. The Facilities Replacement Plan specifically called for the complete replacement of Fire Station No. 4, commencing in 2024 to address the growing service demands along the I-15 corridor and the broader Pala Mesa region.

The District's Fire Station No. 4 Replacement (project) would involve the construction and operation of a new Fire Station No. 4, which would include an approximately 8,694-square foot fire station facility plus driveway and parking lot improvements. The proposed project would also include the demolition of the existing fire station. The existing fire station would remain in operation during construction of the new fire station (Stage I) and would be demolished after construction of the new fire station is completed (Stage II).

The new fire station would include living and working facilities and an apparatus bay that can house one fire engine, one brush engine, and one emergency services vehicle. The interior of the fire station would contain a lobby and bathroom, a conference room, two offices, a telecommunications room, a day room, an exercise room, a dining area, a kitchen, a laundry room,

firefighter bedrooms and bathrooms, a workshop, and electrical and medical supply storage rooms. A flagpole and visitors parking would be located to the north, a covered patio and exercise patio would be located outside the fire station to the west, and firefighter parking, a new emergency generator, and a new propane tank would be located to the east, and additional firefighter parking would be located to the south.

Currently, the fire station houses one fire engine, one brush engine, and one emergency service vehicle and is staffed with four full time fire fighters. The project does not propose an increase in vehicles housed or firefighters staffed.

Exempt Status:

_____ Ministerial
_____ Statutory Exemption: Pub. Res. Code § 21080.21 and Ca. Water Code § 1729
__X__ Categorical Exemption: Class 2
_____ Emergency Project
_____ No Possibility of Significant Effect

Cite specific CEQA and/or CEQA Guidelines Section: CEQA Guidelines Section 15302

Reasons why the project is exempt: The project has been determined to qualify for a Categorical Exemption under CEQA Guidelines Section 15302, for replacement or reconstruction of existing structures and facilities where the new structure would be located on the same site as the structure replaced and would have substantially the same purpose and capacity as the structure replaced.

The project would involve the replacement of the existing Fire Station No. 4 with a new 8,694 square foot fire station facility plus driveway and parking lot improvements. The new Fire Station No. 4 would be located at the same site as the existing Fire Station No. 4, meeting the requirement for replacement of structures located on the same site. The purpose of the proposed Fire Station No. 4 is identical to the existing fire station structure use. The existing station serves as a fire facility to house fire engines, emergency service vehicles, and staff firefighters. This meets the requirement that the new structure serves substantially the same purpose. The project does not involve an expansion of the fire station facilities or services. The project does not propose an increase in the number of vehicles housed or the number of firefighters staffed. Therefore, the capacity remains substantially the same, with negligible or no expansion.

Construction and operation of the proposed project would not cause a significant effect on the environment and would not constitute a substantial expansion of use or introduce new uses to the site. The proposed project would continue to serve the City with enough water to serve the existing uses.

Lead Agency Contact Person: Keith McReynolds

Phone #: (760) 723-2012

[Insert Signature]:

Date: _____

Acceptance Date: _____

Date Filed by County Clerk: _____

AFFIDAVIT OF PUBLICATION FALLBROOK, CALIFORNIA 92028
COUNTY OF SAN DIEGO, STATE OF CALIFORNIA

I am a citizen of the United States, over twenty-one years of age, and the Associate Editor of said newspaper The Village News, Inc., 111 W. Alvarado St., Fallbrook, CA 92028 a newspaper adjudicated by the Superior Court, County of San Diego GIN013243 is a newspaper of general circulation, published and is circulated at least once a week in Fallbrook, County of San Diego, State of California.

The Notice of _____
PUBLIC NOTICE
Notice re: Fire Station #4 project
North County Fire Protection District

_____
Legal Number: NA
Which the attached is a true printed copy, and Published in said newspaper for _2_ weeks, and on the following days: 08/08/24, 08/15/24

_____
in the regular issue of said newspaper,
THE VILLAGE NEWS, INC.,
111 W. Alvarado St., Fallbrook, CA 92028
and not in any other supplement.
I certify and declare under penalty that this statement is true and correct to the best of my knowledge.

Dated: August 15, 2024
Fallbrook, California 92028

Lucette Moramarco
Signature
LUCETTE MORAMARCO
ASSOCIATE EDITOR

PUBLIC NOTICE

NOTICE IS HEREBY GIVEN that the BOARD OF DIRECTORS OF THE NORTH COUNTY FIRE PROTECTION DISTRICT, 330 S. Main Avenue, Fallbrook, California, County of San Diego will conduct a Public Hearing on **TUESDAY, AUGUST 27, 2024, AT A TIME CERTAIN OF 5:05 P.M.** or as soon thereafter as such matter can be heard, at the Fallbrook Public Utility District, 990 E. Mission Road, Fallbrook, California, to consider whether to find the Fire Station #4 Project categorically exempt from the California Environmental Quality Act (CEQA) and whether to approve the Project. Any interested person or taxpayer may appear at the said time and place and be heard regarding this agenda item.

BY ORDER OF THE BOARD OF DIRECTORS OF THE NORTH COUNTY FIRE PROTECTION DISTRICT.

Mavis Canpinar
Board Clerk
July 23, 2024

Published August 8, 15, 2024

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NORTH COUNTY FIRE PROTECTION DISTRICT

STAFF REPORT

TO: BOARD OF DIRECTORS

FROM: CHIEF MCREYNOLDS

DATE: AUGUST 27, 2024

SUBJECT: FIRE STATION #3 RENOVATION CONTRACT AMENDMENT - GUARANTEED MAXIMUM PRICE

ACTION AGENDA

RECOMMENDATION:

That the Board of Directors approve a contract amendment with *TELACU Construction Management* (TCM) on the Fire Station #3 renovation project to include the Guaranteed Maximum Price (GMP).

BACKGROUND:

In April 2023 the Board awarded a contract with TCM for design/build services of the Fire Station #3 renovation project. The project is using a "Progressive Design-Build" delivery method and is currently in the Design and Pre-Construction phase. The second and final phase will be construction.

DISCUSSION:

For the project to move to the construction phase the Board must approve a Contract Amendment for the GMP (Attachment A).

FISCAL ANALYSIS:

The GMP Amendment for construction of the Fire Station #3 renovation is $6,699,012.00, which includes a base bid of $5,749,425.00 and a Bid Alternate for the Dozer Barn of $949,587.00. The total GMP amount will now be $7,102,798.00, which includes the $403,786.00 for preconstruction and design, with an additional owner's allowance of $248,598.00 (or 3.5%). The station renovation project will be funded with California State Pass-Through grant funding, American Rescue Plan Act (ARPA) funding, County of San Diego Rainbow General Funds, and District Capital Facility Reserve funding.

SUMMARY:

Once the Board approves the contract amendment Staff will ensure that the amendment is reviewed by District General Counsel and executed in a timely manner. Construction on the Station 3 renovation is anticipated to begin in September of 2024 with project completion currently scheduled for August of 2025.
Reference: **NCFPD 2022 Strategic Plan**

Goal #13: *Continue to improve the facilities of the North County Fire Protection District*

Attachment A

FIRST AMENDMENT TO THE CONTRACT BETWEEN THE NORTH COUNTY FIRE PROTECTION DISTRICT AND TELACU CONSTRUCTION MANAGEMENT, INC. FOR DESIGN / BUILD SERVICES FOR THE FIRE STATION NO. 3 RENOVATION AND EXPANSION PROJECT

THIS FIRST AMENDMENT ("First Amendment") to the Contract between the North County Fire Protection District and TELACU Construction Management, Inc. dated May 10, 2023 ("Contract"), is made and entered into as of _____ ("First Amendment Date"), by and between the **North County Fire Protection District**, a California Independent Special District and a political subdivision of the State of California organized and operating under California Health and Safety Code Sections 13800 et seq., ("District"), and **TELACU Construction Management, Inc.,** a California corporation ("Design Build Contractor").

Recitals: District and Design Build Contractor now desire to enter into a First Amendment to the Contract by modifying the terms of the Contract.

NOW, THEREFORE, in consideration of these recitals and the mutual covenants contained herein, District and Design Build Contractor agree as follows:

1. The Guaranteed Maximum Price (GMP) for construction of Fire Station No. 3 Renovation and Expansion is hereby established as $7,102,798.00, including the acceptance of Bid Alternate #1 at $949,587.00 for the construction of the CalFire Dozer Barn Storage Building, and $403,786.00 in preconstruction and design services, in accordance with Section 1.3 of the Contract. A breakdown of the GMP is included as Exhibit A.

2. The construction schedule is established as set forth in Exhibit B.

3. County of San Diego approval of the Storm Water Quality Management Plan is required to obtain 100% Construction Documents prior to Written Notice to Proceed with Construction Services.

4. All other conditions of the Contract not specifically amended or superseded by the terms herein shall continue in full force and effect.

[Text and signatures on following page.]

IN WITNESS WHEREOF, the parties have executed and entered into this First Amendment as of the First Amendment Date.

NORTH COUNTY FIRE PROTECTION DISTRICT, a California Independent Special District

By:_____

KEITH McREYNOLDS, FIRE CHIEF

APPROVED AS TO FORM:
DISTRICT COUNSEL

By:_____

KRISTEN STEINKE, ESQ

TELACU CONSTRUCTION MANAGEMENT, INC., a California corporation

By:_____

JOHN CLEM, PRESIDENT

TELACU CONSTRUCTION MANAGEMENT

EXHIBIT A

NORTH COUNTY FIRE PROTECTION DISTRICT
FIRE STATION NO. 3

Guaranteed Maximum Price Tabulation — **REV.2**
NORTH COUNTY FIRE PROTECTION DISTRICT FIRE STATION NO. 3 — **8/19/2024**

			BASE BID		BID ALT # 1 DOZER BARN
PHASE 2					
CONTRACT ADMINISTRATION			$ 60,000		$ -
GENERAL CONDITIONS			$ 463,495		$ -
SPECIAL CONDITIONS			$ 211,453		$ -
SUBCONTRACTOR SUBTOTAL			$ 4,172,383		$ 811,895
ALLOWANCES			$ 125,000		$ 19,255
CONTINGENCY	5%		$ 251,617		$ 41,558
FEE	5%		$ 264,197		$ 43,635
GL INSURANCE	1%		$ 55,481		$ 9,163
BUILDERS RISK	1.09%		$ 88,874		$ 14,679
BONDS	1%		$ 56,925		$ 9,402
GMP			**$ 5,749,425**		**$ 949,587**

GMP TOTAL BASE BID + BID ALT #1		**$ 6,699,012**
PRECONSTRUCTION		**$ 403,786**
TOTAL		**$ 7,102,798**

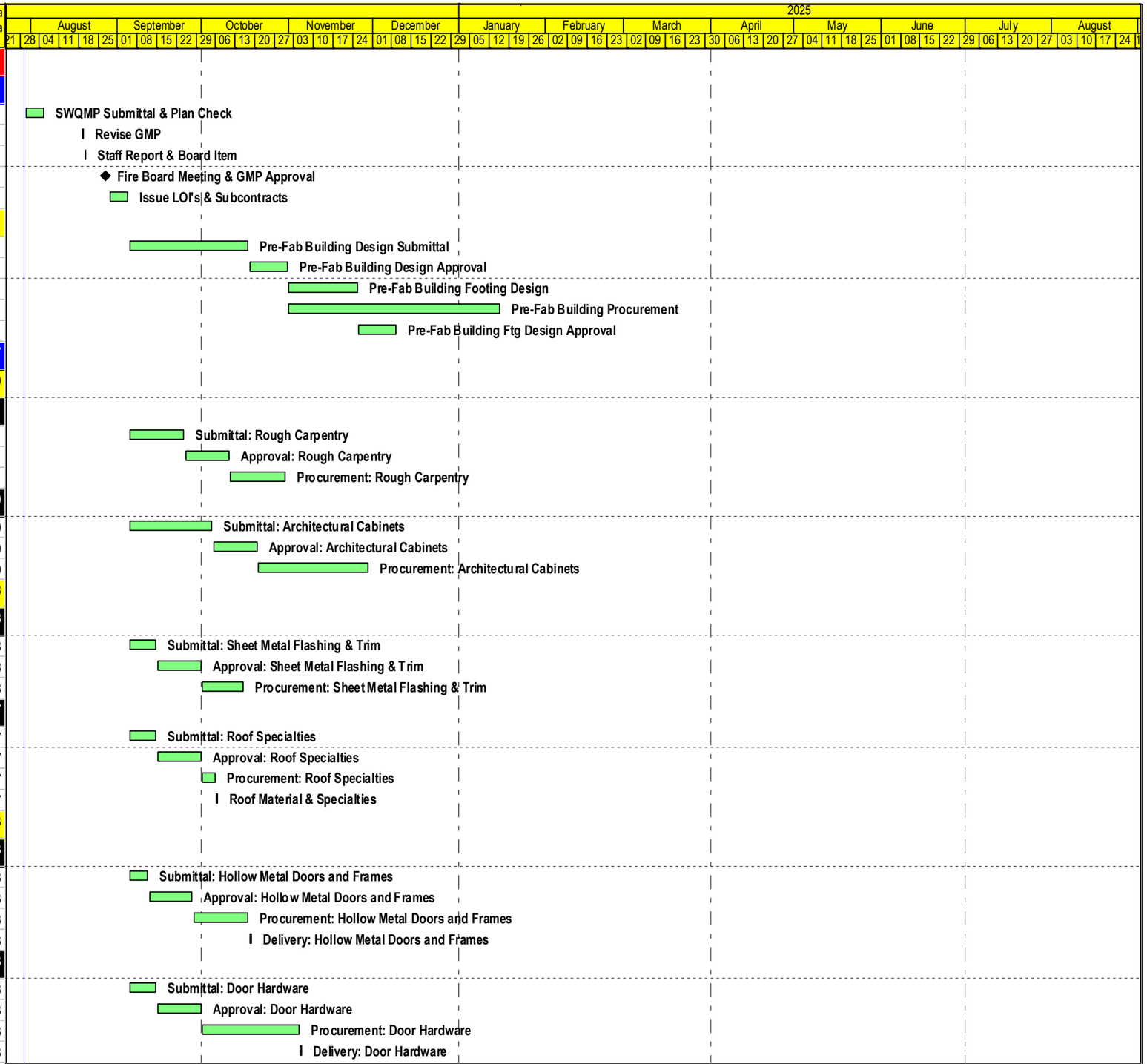
GMP CLARIFICATIONS - This GMP is based upon the following documents:
Technical Specifications dated February 2024, Bid Drawings dated 3/13/24, Addendum 1 dated 3/26/24, Addendum 2 dated 4/4/24, Bid Clarification dated 4/5/24, drawing revisions Delta 1-8, Geotechnical Report by Leighton dated 6/28/23, and Hazardous Materials Report by Masek dated 6/5/23. Note: The Delta 7 Civil Drawings have been submitted to the County of San Diego for plan check and SWQMP compliance and are still under review by the County and are not yet approved. Changes to the drawings required through plan check may result in changes to the GMP.

This GMP includes a schedule duration extended from 10 months as stated in the original RFQ/P, to 11 months which is necessary per the scope of work added by the storm water collection and storage system, and the attendant excavation and site work.

Allowances:
The GMP includes Allowances for several items the cost of which is estimated at this time, but for which it was not advisable to include hard pricing in the GMP. The most notable item is excavation through shallow granite bedrock for the storm water collection and storage system. Please see below detail of Allowances:

METAL BUILDING ALLOWANCE				
21	Metal Building	$	17,505	Escalation Allowance 1.5% x 3 Months contract to material release
21	Metal Building	$	1,750	Roof curb for mech fan & roof framing
WQMP ALLOWANCES (PENDING PLAN CHECK APPROVAL AND ELECTRICAL ENGINEERING)				
25	Plumbing & Site Utilities	$	90,000	Granite Bedrock Excavation
REPLACE EXISTING POWER OUTLETS SHOWN TO REMAIN				
27	Electrical	$	35,000	Outlets in existing bldg. that are shown to remain - replace conduits, wiring and devices

Activity ID	Activity Name	Orig Dur	Start	Finish	Total Float
North County Fire Protection District Fire Station #3		251	30-Jul-24	25-Jul-25	0
Preconstruction		117	30-Jul-24	15-Jan-25	32
A1650	SWQMP Submittal & Plan Check	5	30-Jul-24*	05-Aug-24	16
A2820	Revise GMP	1	19-Aug-24*	19-Aug-24	0
A1640	Staff Report & Board Item	1	20-Aug-24	20-Aug-24	5
A1090	Fire Board Meeting & GMP Approval	0		27-Aug-24	0
A1330	Issue LOI's & Subcontracts	5	29-Aug-24	04-Sep-24	29
Pre-Fab Design Approval & Procurement		90	05-Sep-24	15-Jan-25	32
A2020	Pre-Fab Building Design Submittal	30	05-Sep-24	17-Oct-24	29
A2030	Pre-Fab Building Design Approval	10	18-Oct-24	31-Oct-24	29
A2040	Pre-Fab Building Footing Design	15	01-Nov-24	25-Nov-24	29
A2050	Pre-Fab Building Procurement	50	01-Nov-24	15-Jan-25	32
A2060	Pre-Fab Building Ftg Design Approval	10	26-Nov-24	09-Dec-24	29
Critical Submittals		87	05-Sep-24	30-Nov-24	237
Division 06 - Wood, Plastics, and Composites		86	05-Sep-24	29-Nov-24	149
Rough Carpentry		56	05-Sep-24	30-Oct-24	84
SUBM-0610	Submittal: Rough Carpentry	20	05-Sep-24	24-Sep-24	84
APPR-0624	Approval: Rough Carpentry	16	25-Sep-24	10-Oct-24	84
PROC-0624	Procurement: Rough Carpentry	20	11-Oct-24	30-Oct-24	84
Architectural Cabinets		86	05-Sep-24	29-Nov-24	149
SUBM-0641	Submittal: Architectural Cabinets	30	05-Sep-24	04-Oct-24	149
APPR-0631	Approval: Architectural Cabinets	16	05-Oct-24	20-Oct-24	149
PROC-0637	Procurement: Architectural Cabinets	40	21-Oct-24	29-Nov-24	149
Division 07 - Thermal and Moisture Protection		41	05-Sep-24	15-Oct-24	138
Sheet Metal Flashing & Trim		41	05-Sep-24	15-Oct-24	138
SUBM-0762	Submittal: Sheet Metal Flashing & Trim	10	05-Sep-24	14-Sep-24	138
APPR-0731	Approval: Sheet Metal Flashing & Trim	16	15-Sep-24	30-Sep-24	138
PROC-0737	Procurement: Sheet Metal Flashing & Trim	15	01-Oct-24	15-Oct-24	138
Roofing		32	05-Sep-24	06-Oct-24	147
SUBM-3341	Submittal: Roof Specialties	10	05-Sep-24	14-Sep-24	147
APPR-3332	Approval: Roof Specialties	16	15-Sep-24	30-Sep-24	147
PROC-3339	Procurement: Roof Specialties	5	01-Oct-24	05-Oct-24	147
DELI-333926	Roof Material & Specialties	1	06-Oct-24	06-Oct-24	147
Division 08 - Openings		62	05-Sep-24	05-Nov-24	173
Hollow Metal Doors and Frames		44	05-Sep-24	18-Oct-24	103
SUBM-0811	Submittal: Hollow Metal Doors and Frames	7	05-Sep-24	11-Sep-24	103
APPR-0830	Approval: Hollow Metal Doors and Frames	16	12-Sep-24	27-Sep-24	103
PROC-0839	Procurement: Hollow Metal Doors and Frames	20	28-Sep-24	17-Oct-24	103
DELI-083926	Delivery: Hollow Metal Doors and Frames	1	18-Oct-24	18-Oct-24	103
Door Hardware		62	05-Sep-24	05-Nov-24	173
SUBM-0871	Submittal: Door Hardware	10	05-Sep-24	14-Sep-24	173
APPR-0830	Approval: Door Hardware	16	15-Sep-24	30-Sep-24	173
PROC-0836	Procurement: Door Hardware	35	01-Oct-24	04-Nov-24	173
DELI-083696	Delivery: Door Hardware	1	05-Nov-24	05-Nov-24	173



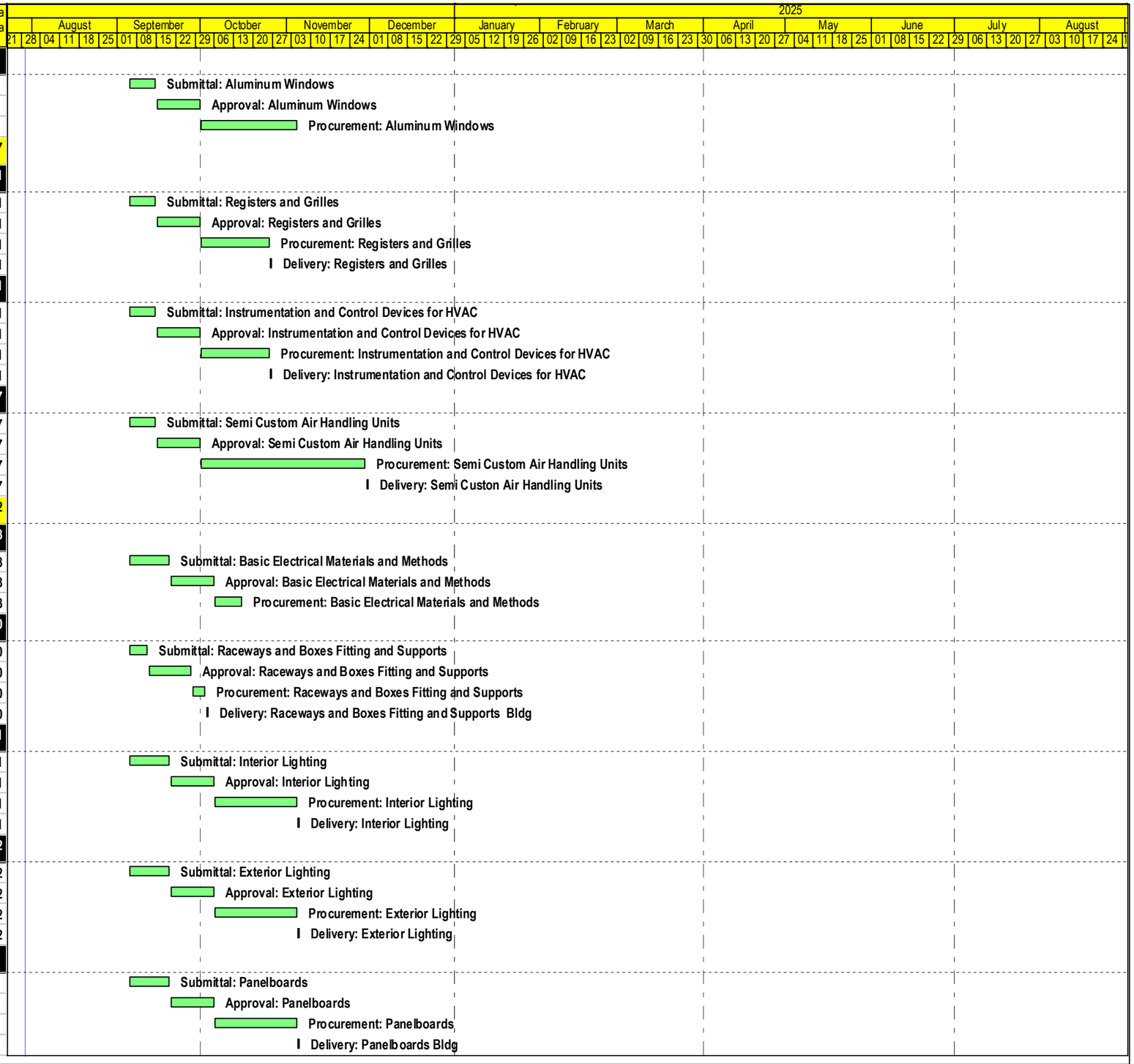
Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone

North County Fire Protection District
Fire Station #3

 Proposed Baseline Schedule Run Date 21-Aug-24

TELACU

Activity ID	Activity Name	Orig Dur	Start	Finish	Total Float
Aluminum Windows		61	05-Sep-24	04-Nov-24	91
SUBM-3341	Submittal: Aluminum Windows	10	05-Sep-24	14-Sep-24	91
APPR-3332	Approval: Aluminum Windows	16	15-Sep-24	30-Sep-24	91
PROC-3339	Procurement: Aluminum Windows	35	01-Oct-24	04-Nov-24	91
Division 23 - Mechanical		87	05-Sep-24	30-Nov-24	237
Registers and Grilles		52	05-Sep-24	26-Oct-24	141
SUBM-2337	Submittal: Registers and Grilles	10	05-Sep-24	14-Sep-24	141
APPR-2331	Approval: Registers and Grilles	16	15-Sep-24	30-Sep-24	141
PROC-2337	Procurement: Registers and Grilles	25	01-Oct-24	25-Oct-24	141
DELI-233828	Delivery: Registers and Grilles	1	26-Oct-24	26-Oct-24	141
Instrumentation & Control Devices for HVAC		52	05-Sep-24	26-Oct-24	141
SUBM-3340	Submittal: Instrumentation and Control Devices for HVAC	10	05-Sep-24	14-Sep-24	141
APPR-3332	Approval: Instrumentation and Control Devices for HVAC	16	15-Sep-24	30-Sep-24	141
PROC-3338	Procurement: Instrumentation and Control Devices for HVAC	25	01-Oct-24	25-Oct-24	141
DELI-333896	Delivery: Instrumentation and Control Devices for HVAC	1	26-Oct-24	26-Oct-24	141
HVAC Equipment		87	05-Sep-24	30-Nov-24	237
SUBM-2373	Submittal: Semi Custom Air Handling Units	10	05-Sep-24	14-Sep-24	237
APPR-2331	Approval: Semi Custom Air Handling Units	16	15-Sep-24	30-Sep-24	237
PROC-2338	Procurement: Semi Custom Air Handling Units	60	01-Oct-24	29-Nov-24	237
DELI-233829	Delivery: Semi Custon Air Handling Units	1	30-Nov-24	30-Nov-24	237
Division 26 - Electrical		62	05-Sep-24	05-Nov-24	202
Basic Electrical Materials and Methods		41	05-Sep-24	15-Oct-24	118
SUBM-2605	Submittal: Basic Electrical Materials and Methods	15	05-Sep-24	19-Sep-24	118
APPR-2627	Approval: Basic Electrical Materials and Methods	16	20-Sep-24	05-Oct-24	118
PROC-2634	Procurement: Basic Electrical Materials and Methods	10	06-Oct-24	15-Oct-24	118
Raceways and Boxes Fitting and Supports		29	05-Sep-24	03-Oct-24	130
SUBM-2605	Submittal: Raceways and Boxes Fitting and Supports	7	05-Sep-24	11-Sep-24	130
APPR-2630	Approval: Raceways and Boxes Fitting and Supports	16	12-Sep-24	27-Sep-24	130
PROC-2636	Procurement: Raceways and Boxes Fitting and Supports	5	28-Sep-24	02-Oct-24	130
DELI-263696	Delivery: Raceways and Boxes Fitting and Supports Bldg	1	03-Oct-24	03-Oct-24	130
Interior Lighting		62	05-Sep-24	05-Nov-24	131
SUBM-2650	Submittal: Interior Lighting	15	05-Sep-24	19-Sep-24	131
APPR-2630	Approval: Interior Lighting	16	20-Sep-24	05-Oct-24	131
PROC-2638	Procurement: Interior Lighting	30	06-Oct-24	04-Nov-24	131
DELI-263716	Delivery: Interior Lighting	1	05-Nov-24	05-Nov-24	131
Exterior Lighting		62	05-Sep-24	05-Nov-24	202
SUBM-3341	Submittal: Exterior Lighting	15	05-Sep-24	19-Sep-24	202
APPR-3333	Approval: Exterior Lighting	16	20-Sep-24	05-Oct-24	202
PROC-3339	Procurement: Exterior Lighting	30	06-Oct-24	04-Nov-24	202
DELI-333946	Delivery: Exterior Lighting	1	05-Nov-24	05-Nov-24	202
Panelboards		62	05-Sep-24	05-Nov-24	97
SUBM-2624	Submittal: Panelboards	15	05-Sep-24	19-Sep-24	97
APPR-2631	Approval: Panelboards	16	20-Sep-24	05-Oct-24	97
PROC-2637	Procurement: Panelboards	30	06-Oct-24	04-Nov-24	97
DELI-263806	Delivery: Panelboards Bldg	1	05-Nov-24	05-Nov-24	97



Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone

Activity ID	Activity Name	Orig Dur	Start	Finish	Total Float
Construction		230	28-Aug-24	25-Jul-25	0
Milestones		230	28-Aug-24	25-Jul-25	0
A1340	NTP Phase 2	1	28-Aug-24	28-Aug-24	0
A2850	Weather Allowance	15	10-Jun-25	24-Jun-25	0
A2860	Substantial Completion	0		24-Jun-25	0
A2870	Project Completion	0		25-Jul-25*	0
Project Set-up & Mobilzation		7	23-Sep-24	01-Oct-24	11
A1370	Set-up Temp Fence	2	23-Sep-24	24-Sep-24	0
A1380	Set-up Erosion Control	2	25-Sep-24	26-Sep-24	3
A1390	Pothole/Locate Existing Utilities	5	25-Sep-24	01-Oct-24	11
A2070	Set-up Temp Water & Electrical	5	25-Sep-24	01-Oct-24	0
New Building		175	27-Sep-24	06-Jun-25	1
Demolition & Building Pad		48	27-Sep-24	05-Dec-24	31
A1410	Sawcut & Remove Concrete	5	27-Sep-24	03-Oct-24	8
A1400	Remove Trees Clear & Grub	3	02-Oct-24	04-Oct-24	11
A1420	Cut & Cap Utilities	4	04-Oct-24	09-Oct-24	8
A1430	Demo Existing Building & Solar Panels	10	10-Oct-24	23-Oct-24	8
A1760	Over ex & Recompact Slab	12	14-Nov-24	03-Dec-24	0
A1770	Certify Building Pad	2	04-Dec-24	05-Dec-24	0
A1780	Certify Pre-fab Building Pad	1	04-Dec-24	04-Dec-24	32
Site Utilities		85	02-Oct-24	03-Feb-25	54
A1520	Excavate & Rock Removal	21	02-Oct-24	30-Oct-24	0
A1560	Install New Storm Drain	10	31-Oct-24	13-Nov-24	0
A1630	Set Precast Stormwater Bio Filtration Box	10	14-Nov-24	29-Nov-24	54
A1570	Install New Sewer Line	12	02-Dec-24	17-Dec-24	54
A1900	Modular Wetlands System A Storm Drain	5	18-Dec-24	24-Dec-24	54
A1910	Modular Wetlands System B Storm Drain	7	26-Dec-24	06-Jan-25	54
A1940	Install Fire Water Line	10	07-Jan-25	20-Jan-25	54
A1620	Install New Water Line	6	21-Jan-25	28-Jan-25	54
A2250	Remove Existing Water Service	4	29-Jan-25	03-Feb-25	54
Building Foundations & Structure		52	06-Dec-24	20-Feb-25	4
A1440	Survey Control	1	06-Dec-24	06-Dec-24	0
A1450	U/G Plumbing	5	09-Dec-24	13-Dec-24	2
A1460	U/G Electrical	3	09-Dec-24	11-Dec-24	0
A1470	Excavate Grade Beams & Footings	4	12-Dec-24	17-Dec-24	0
A1880	Footing Formwork & Templates	3	18-Dec-24	20-Dec-24	0
A1890	Install Rebar	4	18-Dec-24	23-Dec-24	0
A1920	Inspection	1	24-Dec-24	24-Dec-24	0
A1930	Pour Footings	2	26-Dec-24	27-Dec-24	0
A2130	Footing Cure & Clean-up	5	30-Dec-24	06-Jan-25	0
A1970	Backfill Footings & Slab Base	4	07-Jan-25	10-Jan-25	0
A2080	Slab Edge Forms	2	13-Jan-25	14-Jan-25	0
A2090	Slab Rebar	4	15-Jan-25	20-Jan-25	0
A2100	Slab Inspections	1	21-Jan-25	21-Jan-25	0
A2110	Pour Slab on Grade	1	22-Jan-25	22-Jan-25	0
A1950	Structural Wood Frame	15	23-Jan-25	13-Feb-25	0

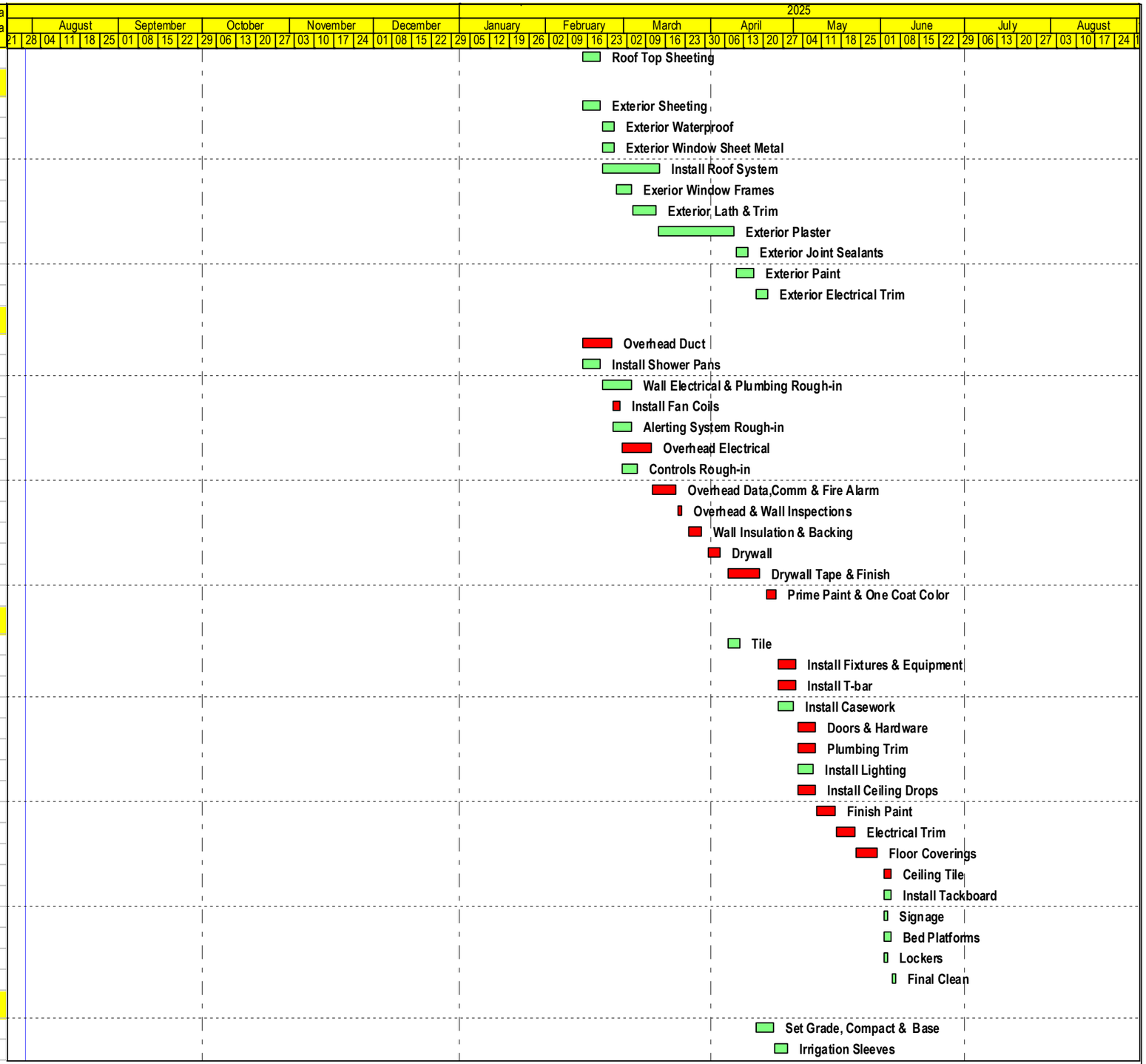
Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone

North County Fire Protection District
Fire Station #3

Proposed Baseline Schedule Run Date 21-Aug-24

TELACU

Activity ID	Activity Name	Orig Dur	Start	Finish	Total Float
A2200	Roof Top Sheeting	5	14-Feb-25	20-Feb-25	4
Building Exterior		**47**	**14-Feb-25**	**21-Apr-25**	**27**
A2270	Exterior Sheeting	5	14-Feb-25	20-Feb-25	3
A2230	Exterior Waterproof	3	21-Feb-25	25-Feb-25	3
A2730	Exterior Window Sheet Metal	3	21-Feb-25	25-Feb-25	3
A2630	Install Roof System	15	21-Feb-25	13-Mar-25	4
A2220	Exerior Window Frames	4	26-Feb-25	03-Mar-25	3
A2240	Exterior Lath & Trim	7	04-Mar-25	12-Mar-25	3
A2300	Exterior Plaster	20	13-Mar-25	09-Apr-25	3
A2310	Exterior Joint Sealants	3	10-Apr-25	14-Apr-25	5
A2320	Exterior Paint	5	10-Apr-25	16-Apr-25	3
A2330	Exterior Electrical Trim	3	17-Apr-25	21-Apr-25	27
Building Rough-in's		**50**	**14-Feb-25**	**24-Apr-25**	**0**
A1540	Overhead Duct	7	14-Feb-25	24-Feb-25	0
A2760	Install Shower Pans	5	14-Feb-25	20-Feb-25	12
A1530	Wall Electrical & Plumbing Rough-in	7	21-Feb-25	03-Mar-25	12
A2140	Install Fan Coils	3	25-Feb-25	27-Feb-25	0
A2120	Alerting System Rough-in	5	25-Feb-25	03-Mar-25	12
A1550	Overhead Electrical	7	28-Feb-25	10-Mar-25	0
A1830	Controls Rough-in	4	28-Feb-25	05-Mar-25	10
A1820	Overhead Data,Comm & Fire Alarm	7	11-Mar-25	19-Mar-25	0
A1840	Overhead & Wall Inspections	2	20-Mar-25	21-Mar-25	0
A2150	Wall Insulation & Backing	5	24-Mar-25	28-Mar-25	0
A2160	Drywall	5	31-Mar-25	04-Apr-25	0
A2170	Drywall Tape & Finish	10	07-Apr-25	18-Apr-25	0
A2180	Prime Paint & One Coat Color	4	21-Apr-25	24-Apr-25	0
Building Finishes		**44**	**07-Apr-25**	**06-Jun-25**	**1**
A2910	Tile	5	07-Apr-25	11-Apr-25	14
A1490	Install Fixtures & Equipment	5	25-Apr-25	01-May-25	0
A2780	Install T-bar	5	25-Apr-25	01-May-25	0
A2880	Install Casework	4	25-Apr-25	30-Apr-25	6
A1480	Doors & Hardware	5	02-May-25	08-May-25	0
A1510	Plumbing Trim	5	02-May-25	08-May-25	0
A2770	Install Lighting	4	02-May-25	07-May-25	1
A2790	Install Ceiling Drops	5	02-May-25	08-May-25	0
A2810	Finish Paint	5	09-May-25	15-May-25	0
A1580	Electrical Trim	5	16-May-25	22-May-25	0
A1500	Floor Coverings	5	23-May-25	30-May-25	0
A2800	Ceiling Tile	3	02-Jun-25	04-Jun-25	0
A2890	Install Tackboard	3	02-Jun-25	04-Jun-25	1
A2900	Signage	2	02-Jun-25	03-Jun-25	2
A2920	Bed Platforms	3	02-Jun-25	04-Jun-25	1
A2930	Lockers	2	02-Jun-25	03-Jun-25	2
A3010	Final Clean	2	05-Jun-25	06-Jun-25	1
Site Hardscape & Landscape		**31**	**17-Apr-25**	**30-May-25**	**3**
A1590	Set Grade, Compact & Base	5	17-Apr-25	23-Apr-25	3
A1660	Irrigation Sleeves	3	24-Apr-25	28-Apr-25	11

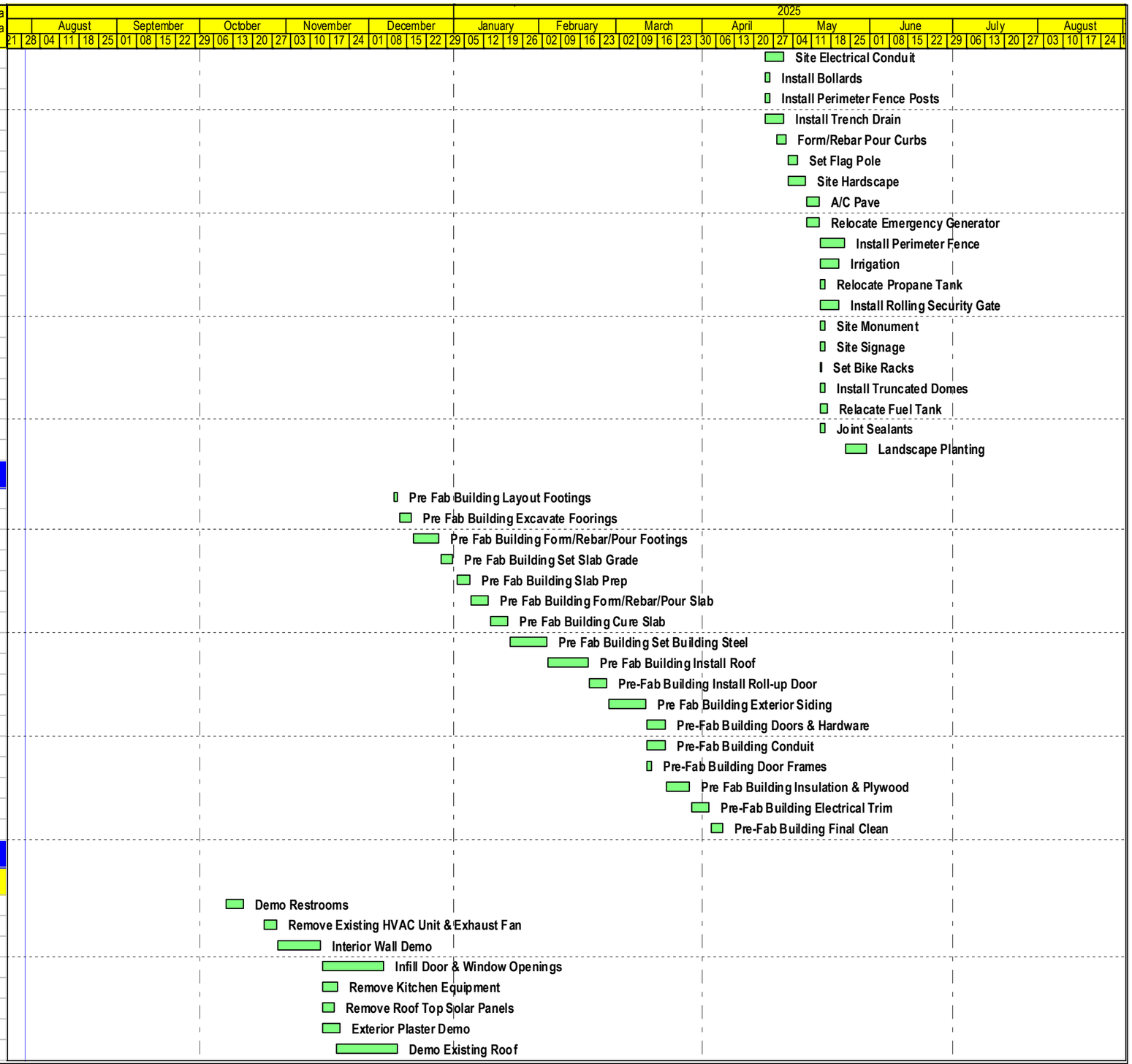


Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone

North County Fire Protection District
Fire Station #3

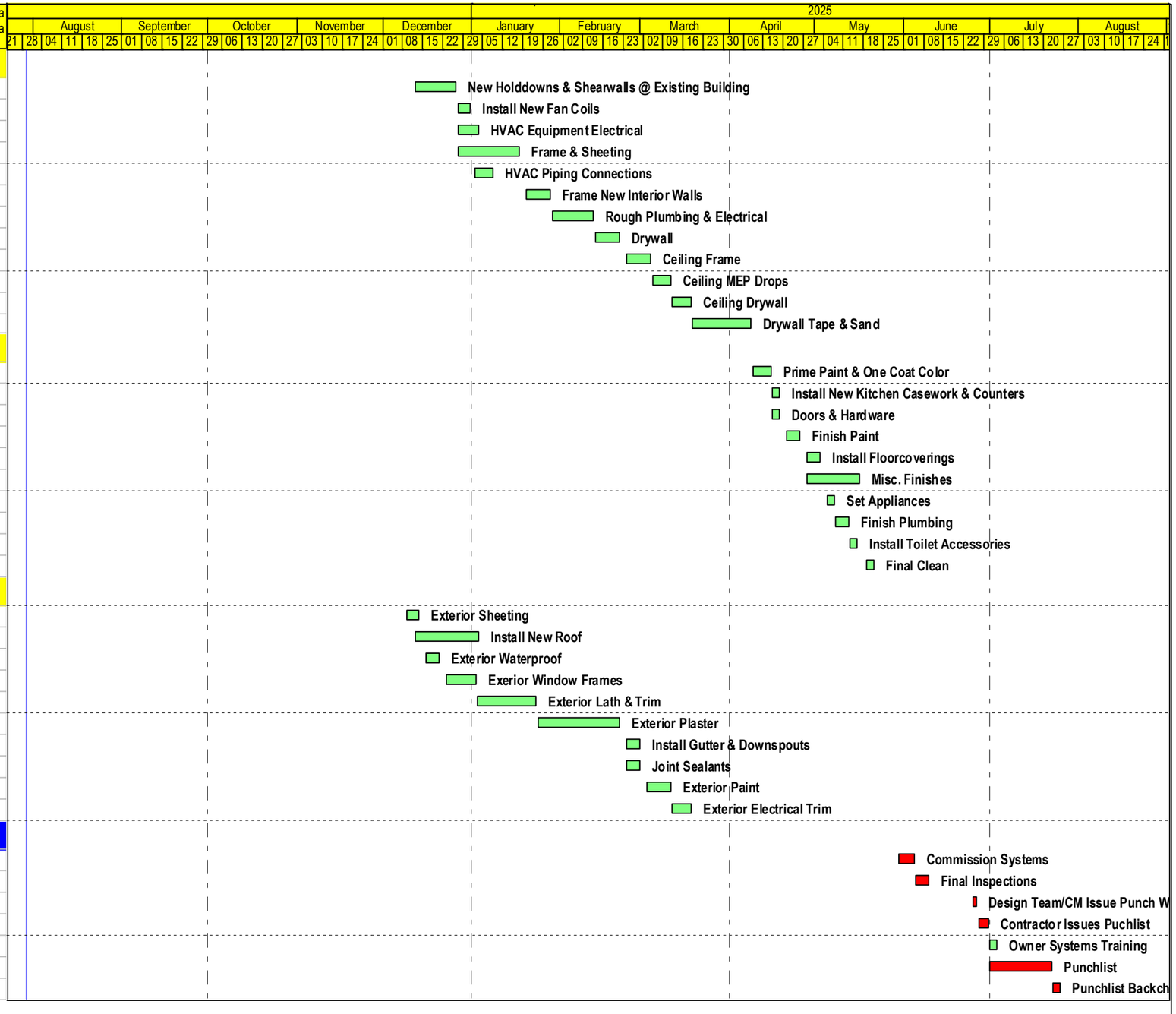
 Proposed Baseline Schedule Run Date 21-Aug-24

Activity ID	Activity Name	Orig Dur	Start	Finish	Total Float
A2740	Site Electrical Conduit	5	24-Apr-25	30-Apr-25	4
A2260	Install Bollards	2	24-Apr-25	25-Apr-25	7
A2280	Install Perimeter Fence Posts	2	24-Apr-25	25-Apr-25	3
A2960	Install Trench Drain	5	24-Apr-25	30-Apr-25	4
A1600	Form/Rebar Pour Curbs	4	28-Apr-25	01-May-25	3
A1700	Set Flag Pole	2	02-May-25	05-May-25	4
A2750	Site Hardscape	5	02-May-25	08-May-25	3
A1670	A/C Pave	3	09-May-25	13-May-25	3
A1730	Relocate Emergency Generator	3	09-May-25	13-May-25	11
A1610	Install Perimeter Fence	7	14-May-25	22-May-25	3
A1680	Irrigation	5	14-May-25	20-May-25	5
A1710	Relocate Propane Tank	2	14-May-25	15-May-25	9
A1720	Install Rolling Security Gate	5	14-May-25	20-May-25	10
A1740	Site Monument	2	14-May-25	15-May-25	13
A1750	Site Signage	2	14-May-25	15-May-25	13
A2290	Set Bike Racks	1	14-May-25	14-May-25	14
A2610	Install Truncated Domes	2	14-May-25	15-May-25	13
A2620	Relacate Fuel Tank	3	14-May-25	16-May-25	12
A2970	Joint Sealants	2	14-May-25	15-May-25	8
A1690	Landscape Planting	5	23-May-25	30-May-25	3
Pre-Fab Building		83	10-Dec-24	08-Apr-25	43
A2340	Pre Fab Building Layout Footings	2	10-Dec-24	11-Dec-24	29
A2350	Pre Fab Building Excavate Foorings	3	12-Dec-24	16-Dec-24	29
A2360	Pre Fab Building Form/Rebar/Pour Footings	7	17-Dec-24	26-Dec-24	29
A2370	Pre Fab Building Set Slab Grade	3	27-Dec-24	31-Dec-24	29
A2380	Pre Fab Building Slab Prep	3	02-Jan-25	06-Jan-25	29
A2390	Pre Fab Building Form/Rebar/Pour Slab	5	07-Jan-25	13-Jan-25	29
A2430	Pre Fab Building Cure Slab	5	14-Jan-25	20-Jan-25	29
A2400	Pre Fab Building Set Building Steel	10	21-Jan-25	03-Feb-25	29
A2410	Pre Fab Building Install Roof	10	04-Feb-25	18-Feb-25	29
A2840	Pre-Fab Building Install Roll-up Door	5	19-Feb-25	25-Feb-25	29
A2420	Pre Fab Building Exterior Siding	10	26-Feb-25	11-Mar-25	29
A2940	Pre-Fab Building Doors & Hardware	5	12-Mar-25	18-Mar-25	58
A2660	Pre-Fab Building Conduit	5	12-Mar-25	18-Mar-25	43
A3030	Pre-Fab Building Door Frames	2	12-Mar-25	13-Mar-25	46
A2640	Pre Fab Building Insulation & Plywood	7	19-Mar-25	27-Mar-25	43
A2950	Pre-Fab Building Electrical Trim	5	28-Mar-25	03-Apr-25	43
A3020	Pre-Fab Building Final Clean	3	04-Apr-25	08-Apr-25	43
Existing Building		155	10-Oct-24	21-May-25	12
Existing Building Select Demolition		43	10-Oct-24	11-Dec-24	26
A1870	Demo Restrooms	5	10-Oct-24	16-Oct-24	16
A1980	Remove Existing HVAC Unit & Exhaust Fan	3	24-Oct-24	28-Oct-24	8
A1790	Interior Wall Demo	12	29-Oct-24	13-Nov-24	8
A1800	Infill Door & Window Openings	15	14-Nov-24	06-Dec-24	29
A1810	Remove Kitchen Equipment	4	14-Nov-24	19-Nov-24	22
A1850	Remove Roof Top Solar Panels	3	14-Nov-24	18-Nov-24	8
A2980	Exterior Plaster Demo	5	14-Nov-24	20-Nov-24	21
A1860	Demo Existing Roof	15	19-Nov-24	11-Dec-24	8



Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone

Activity ID	Activity Name	Orig Dur	Start	Finish	Total Float
Existing Building Rough-in's		**81**	**12-Dec-24**	**08-Apr-25**	**8**
A1960	New Holddowns & Shearwalls @ Existing Building	10	12-Dec-24	26-Dec-24	8
A1990	Install New Fan Coils	3	27-Dec-24	31-Dec-24	22
A2010	HVAC Equipment Electrical	5	27-Dec-24	03-Jan-25	25
A2190	Frame & Sheeting	15	27-Dec-24	17-Jan-25	8
A2000	HVAC Piping Connections	5	02-Jan-25	08-Jan-25	22
A2210	Frame New Interior Walls	7	20-Jan-25	28-Jan-25	8
A2440	Rough Plumbing & Electrical	10	29-Jan-25	12-Feb-25	8
A2520	Drywall	7	13-Feb-25	21-Feb-25	8
A2480	Ceiling Frame	7	24-Feb-25	04-Mar-25	8
A2490	Ceiling MEP Drops	5	05-Mar-25	11-Mar-25	8
A2500	Ceiling Drywall	5	12-Mar-25	18-Mar-25	8
A2510	Drywall Tape & Sand	15	19-Mar-25	08-Apr-25	8
Existing Building- Finishes		**31**	**09-Apr-25**	**21-May-25**	**12**
A2550	Prime Paint & One Coat Color	5	09-Apr-25	15-Apr-25	8
A2450	Install New Kitchen Casework & Counters	3	16-Apr-25	18-Apr-25	8
A2710	Doors & Hardware	3	16-Apr-25	18-Apr-25	8
A2560	Finish Paint	5	21-Apr-25	25-Apr-25	8
A2460	Install Floorcoverings	5	28-Apr-25	02-May-25	9
A2830	Misc. Finishes	15	28-Apr-25	16-May-25	8
A2470	Set Appliances	3	05-May-25	07-May-25	9
A2690	Finish Plumbing	3	08-May-25	12-May-25	9
A2700	Install Toilet Accessories	3	13-May-25	15-May-25	9
A3000	Final Clean	3	19-May-25	21-May-25	12
Existing Building Exterior & Roof		**69**	**09-Dec-24**	**18-Mar-25**	**51**
A2570	Exterior Sheeting	5	09-Dec-24	13-Dec-24	29
A2530	Install New Roof	15	12-Dec-24	03-Jan-25	54
A2580	Exterior Waterproof	5	16-Dec-24	20-Dec-24	29
A2590	Exerior Window Frames	7	23-Dec-24	02-Jan-25	29
A2600	Exterior Lath & Trim	15	03-Jan-25	23-Jan-25	29
A2650	Exterior Plaster	20	24-Jan-25	21-Feb-25	29
A2540	Install Gutter & Downspouts	5	24-Feb-25	28-Feb-25	29
A2990	Joint Sealants	5	24-Feb-25	28-Feb-25	29
A2670	Exterior Paint	7	03-Mar-25	11-Mar-25	29
A2680	Exterior Electrical Trim	5	12-Mar-25	18-Mar-25	51
Construction Close Out		**40**	**30-May-25**	**25-Jul-25**	**0**
A2720	Commission Systems	4	30-May-25	04-Jun-25	0
A1170	Final Inspections	3	05-Jun-25	09-Jun-25	0
COMM-4170	Design Team/CM Issue Punch Walk	2	25-Jun-25	26-Jun-25	0
COMM-4430	Contractor Issues Puchlist	2	27-Jun-25	30-Jun-25	0
A1160	Owner Systems Training	3	01-Jul-25	03-Jul-25	15
COMM-4460	Punchlist	15	01-Jul-25	22-Jul-25	0
COMM-4440	Punchlist Backcheck	3	23-Jul-25	25-Jul-25	0



Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone

North County Fire Protection District
Fire Station #3

 Proposed Baseline Schedule Run Date 21-Aug-24

NORTH COUNTY FIRE PROTECTION DISTRICT

STAFF REPORT

TO: BOARD OF DIRECTORS

FROM: CHIEF MCREYNOLDS

DATE: AUGUST 27, 2024

SUBJECT: FIRE STATION #3 DOZER BARN GUARANTEED MAXIMUM PRICE

ACTION AGENDA

RECOMMENDATION:

That the Board approve Bid Alternate #1 for the dozer barn construction included within Guaranteed Maximum Price (GMP) for the Fire Station #3 construction project.

BACKGROUND:

In December 2023 the Board directed Staff to execute a multi-year lease agreement with the State of California *Department of Governmental Services* (DGS) for a Cal Fire dozer barn facility on the Fire Station #3 property. The Board also directed Staff to execute a change order with *TELACU Construction Management* (TCM) for dozer barn construction design services.

DISCUSSION:

Staff has successfully executed a dozer barn lease agreement with CA DGS and, a change order with TCM for dozer barn construction design services. The lease agreement with DGS is for $1,192,023.00, which will be paid to the Fire District in three payments, following a 40/40/20 payment schedule. The first 40% payment ($476,809.20) will be made after all necessary permits are obtained; the second 40% payment ($476,809.20) will be made upon completion of interior finishes and electrical wiring; the third payment of 20% ($238,404.60) will be made after obtaining substantial and project completion. The lease agreement includes repayment from DGS for the cost of planning and design, permitting, construction management services, construction, staff, and legal counsel time. Staff is now asking the Board to approve Bid Alternate #1 included in the GMP and issue an amendment to TCM for construction of the dozer barn.

FISCAL ANALYSIS:

The GMP included Bid Alternate #1 for the construction of the dozer barn with associated costs of $949,587.00.

SUMMARY:

Approving the GMP Amendment bid alternate for the dozer barn at Fire Station #3 will launch the project into the construction phase. The construction schedule will allow this project to move forward alongside the Fire Station renovation allowing for oversite and collaboration of construction crews. The dozer barn and Fire Station renovation projects will run concurrent, with an anticipated completion in 11 months.

Reference: ***NCFPD 2022 Strategic Plan***

Goal #6: *Continue to support the North Regional Zone and enhance the collaboration between agencies in various areas to includes training, prevention, risk reduction, and outreach*.

NORTH COUNTY FIRE PROTECTION DISTRICT

STAFF REPORT

TO: BOARD OF DIRECTORS

FROM: CHIEF MCREYNOLDS

DATE: AUGUST 27, 2024

SUBJECT: REVISED NORTH REGIONAL ZONE AUTOMATIC AID AGREEMENT

ACTION AGENDA

RECOMMENDATION:

That the Board authorize Board President Pike and Chief McReynolds to sign the revised North Regional Zone Automatic Aid Agreement on behalf of the District.

BACKGROUND:

Periodically the North Zone Fire Chiefs revisit the North Regional Zone Automatic Aid Agreement to ensure the agreement remains comprehensive and relevant. The Agreement ensures a consistent approach to support provided between and amongst the agencies when the need arises.

DISCUSSION:

The revision occurred over the past six (6) months and included a careful review by each of the North Zone Fire Chiefs and each City, District, and Tribal General Counsel. The attached exhibit “A” is the version that was approved by the North Zone Fire Chiefs and agency General Counsel.

FISCAL ANALYSIS:

None

SUMMARY:

Once signing authority is given to the Fire Chief the document will be signed and returned to North Comm. where all the participating agency signatures will be collected and incorporated into a single document for distribution.

NORTH REGIONAL ZONE MASTER INTEROPERABLE AUTOMATIC AID AGREEMENT FOR FIRE-RESCUE RESPONSES & SUPPORT ACTIVITIES

FINAL: AUGUST 2024

WHEREAS, the Camp Pendleton, Carlsbad, Del Mar, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista Fire Departments, the Deer Springs, Rincon Del Diablo, North County, Rancho Santa Fe, San Diego County, San Marcos, Valley Center, and Vista Fire Protection Districts, and the Pala, Pauma, Rincon, and San Pasqual Reservation Fire Departments, and Cal Fire in San Diego County maintain as part of their service, an organized and equipped Fire Agency charged with the duty of fire protection, emergency medical, and rescue services within the limits of said jurisdictions, collectively referred to as the "agencies" and individually as "party" or "agency"; and

WHEREAS, it would be to the benefit of the agencies that the fire suppression, emergency medical, rescue services, incident management, fire investigation, resource support, and training services of each of their Fire agencies be, in some circumstances, extended outside of the jurisdictional limits of each party to this Agreement; and into the jurisdictional limits of the other agencies; and

WHEREAS, under certain circumstances jurisdictions wish to have other Fire agencies respond to fire suppression, emergency medical, rescue, and support services for incidents within the limits of their jurisdiction.

NOW, THEREFORE BE IT RESOLVED:

1. The agencies to this Automatic Aid Agreement (Agreement), as identified in Exhibit "A," which is incorporated by reference, have agreed to respond to emergency alarms and related support activities (which include, but may not be limited to, fire suppression, medical, rescue, incident management, fire investigation, resource support, and training) outside of their respective service areas as delineated, now or in the future, by LAFCO, and within the delineated service areas of the other agencies, in accordance with the terms and conditions of this Agreement.
2. Any party to this Agreement may, upon determining mutual benefit, agree to provide resources without regard to political and/or jurisdictional boundaries, and adhere to the closest available resource concept for determining response patterns as a part of this Agreement.
3. The use of Automatic Aid Shall not be used to shift costs to another agency for providing primary coverage within said agencies jurisdiction.

4. The details as to the method of operations, procedures, and other planning as may be necessary to effectuate this Agreement and type of units and responses shall be as set forth in the Operational Plan (Zone Emergency Operation Manual-EOM) in effect between the Fire Chiefs of the respective Fire agencies.
5. The details as to the method of ambulance operations, procedures, and other planning as may be necessary to effectuate this Agreement and type of units and responses shall be as set forth by the California Health and Safety Code Section 1797.201, 1797.224, 1797.230 or 1797.231. Contracts or MOA's that are agreed upon between individual agencies for ambulance response shall be in effect between said agencies.
6. Emergency medical patients requiring service or transport for medical care shall be billed for services provided by the party providing the services, at the established rate of such party.
7. Cooperative planning and interdepartmental training are necessary to support emergency incident activity. All resources covered by this Agreement should train together to ensure safe and effective incident operations. Each party shall bear the costs and expenses incurred for training its own personnel.
8. Non-emergency resource support, training and education activities will be coordinated and agreed upon between the Fire Chiefs or designees of the respective Fire agencies.
9. There shall be an operational committee, which shall consist of the Chiefs or their designee of the respective agencies, for the purpose of implementing the provisions of this Agreement relating to operational procedures.
10. The duties of Incident Commander shall be assumed by the first fire officer from a participating agency who arrives at the scene of the incident, regardless of the jurisdiction in which the incident occurs. There shall be an orderly transfer of command when an Officer from the jurisdiction in which the incident occurs arrives at the scene, if said Officer chooses to assume Incident Command.
11. All agencies agree to indemnify the other agencies for any liability imposed upon the other agencies pursuant to Government Code Section 895.4, based upon a negligent or wrongful act or omission of the indemnifying party's officers, agents, or employees occurring in the performance of this Agreement. This indemnification Agreement is entered into pursuant to Government Code Section 895.4 and is intended to eliminate the pro rata right of contribution described in Government Code Section
895.6 and the joint and several liability described in Government Code Section 895.2 agencies so that each party bears the liability and cost of its own negligence.

12. Each party to this Agreement shall maintain proper Worker's Compensation Insurance or be self-insured for Workers' Compensation liability covering its own employees without cost to the other agencies, and each party shall be responsible for all salary and benefits for its own personnel without cost to the other agencies.

13. Each of the agencies shall be fully responsible for all repairs, maintenance, and upkeep, including gas, oil, lubrications, parts replacement, and repair of casualty damage, of all its own equipment used, in furtherance of this Agreement, while said equipment is used outside of its service area. However, during prolonged all-hazard activities (beyond 12-hours), the requesting party shall replenish chemical agents and fuel as needed; provide minor maintenance of all equipment; and provide for the well- being of personnel involved in the all-hazard activity.

14. The assurance of automatic aid set forth in this Agreement shall constitute the sole consideration for the performance. It is, therefore, understood and agreed that no money payments shall be made between the agencies, that no charges shall be assessed by any party against any other party, and that each party shall be fully responsible for all of its costs in connection with the performance of this Agreement except as provided for in Section 16 of this Agreement.

15. Nothing in this Agreement shall limit any party from participating in separate agreements with other fire jurisdictions and shall have no effect upon existing agreements. Additionally, nothing in this Agreement is intended to, nor shall it operate or be interpreted to, eliminate, modify, or abrogate the terms of other existing agreements.

16. This agreement will only be effective between the San Diego County Fire Protection District and Sovereign Tribal Nations upon the negotiations and approval of a separate addendum with Sovereign Tribal Nations to enact the terms and conditions of this Agreement. Other NZ agencies may also require a separate addendum with Sovereign Tribal Nations to enact the terms and conditions of this Agreement, provided that each Sovereign Tribal Nation agrees to negotiate and approve any terms and conditions in the addendum.

17. Subject to the provisions of any separate addendum between a Sovereign Tribal Nation and San Diego County Fire Protection District and/or any other NZ agencies pursuant to Section 16 of this Agreement, this Agreement shall be construed and interpreted in accordance with the laws of the State of California. Venue shall lie in the County of San Diego, State of California.

18. Nothing in the indemnification of this Agreement is intended to, nor shall it operate or be interpreted to, eliminate, modify, or abrogate the terms of agreements between a party owning a training facility and any other party with respect to the use or rental of such training facility by such other party.

19. This Agreement shall become effective upon the execution by all the agencies hereto and shall continue until terminated by mutual agreement of each of the individual agencies or until any party gives sixty (60) days written notice of intention to terminate to each of the other agencies. No cause shall be required for any termination. Termination of this Agreement by any party shall not terminate the Agreement with respect to the remaining agencies to the Agreement, each of which may determine their continued participation independently.

EXHIBIT A

PARTIES TO THE AGREEMENT	RATIFICATION DATE
CAL FIRE SAN DIEGO	
CAMP PENDLETON FIRE AND EMERGENCY SERVICES	
CITY OF CARLSBAD	
DEER SPRINGS FIRE PROTECTION DISTRICT	
CITY OF DEL MAR	
CITY OF ENCINITAS	
CITY OF ESCONDIDO	
NORTH COUNTY FIRE PROTECTION DISTRICT	
CITY OF OCEANSIDE	
PALA RESERVATION FIRE DEPARTMENT	
PAUMA RESERVATION FIRE DEPARTMENT	
RANCHO SANTA FE FIRE PROTECTION DISTRICT	
RINCON RESERVATION FIRE DEPARTMENT	
SAN DIEGO COUNTY FIRE PROTECTION DISTRICT	
CITY OF SAN MARCOS	
SAN MARCOS FIRE PROTECTION DISTRICT	
SAN PASQUAL RESERVATION FIRE DEPARTMENT	
CITY OF SOLANA BEACH	
VALLEY CENTER FIRE PROTECTION DISTRICT	
CITY OF VISTA	
VISTA FIRE PROTECTION DISTRICT	

IN WITNESS WHEREOF, this Agreement has been executed by the Parties by their duly authorized officers.

JURISDICTION: _____

By: _____

Name: _____

Title: _____

By: _____

Name: _____

Title: _____

Approved: _____

Date

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501 West Broadway - Suite 1600
San Diego, California 92101-8474
voice 619.814.5800 - fax 619.814.6799
www.bwslaw.com

MEMORANDUM

TO: Board of Directors
North County Fire Protection District

FROM: Kristen S. Steinke, General Counsel

DATE: August 27, 2024

RE: General Counsel Report for Monthly Board Meeting

In a recent publication for California County News, Denise Bazanno and Thomas Jex with Burke, Williams and Sorensen, LLP authored the article quoted below on California's ethics training requirements for local public officials. As always, I am happy to answer any questions you may have. Enjoy!

As we approach the November 5, 2024 election, many local government elected officials and candidates for local elected offices may be thinking about the ethical obligations of holding office. Ethics training is a critical part of understanding the ethical standards required for anyone who serves in local government. Assembly Bill (AB) 1234, which was signed into law in 2005 and became effective on January 1, 2006, requires, among other things, that elected and appointed officials who receive compensation for their services or are reimbursed for their expenses receive training on both ethics principles and ethics laws (Government Code §§ 53234-53235.2).

AB 1234 applies to local agencies, which includes a number of different types of public agencies such as a city, county, city and county, charter city, school district and special district, among others. (Government Code § 53234(b)). If a local agency provides any type of compensation, salary, or stipend to a member of a legislative body, or provides reimbursement for actual and necessary expenses incurred by a member of a legislative body in the performance of official duties, then all "local agency officials" shall receive training in ethics. (Government Code § 53235(a)(1)). A "local agency official" is defined as a member of a local agency legislative body or an elected local agency official who receives any type of compensation, salary, or stipend or reimbursement for actual and necessary expenses incurred in the performance of official duties but can also mean an employee designated by a local agency governing body to receive the training specified under this article. (Government Code § 53234(c)).

What are the Ethics Training Requirements?

Each local agency official that is required to receive training must undertake at least two hours of training in general ethics principles and ethics laws relevant to the official's public service every two years. (Government Code § 53235(b)).

The training on "general ethical principles" should include topics that address values such as trustworthiness, respect, fairness and responsibility and promote public trust in government. It should also include the importance of avoiding even the appearance of impropriety.

"Ethics laws" can include:

Laws relating to personal financial gain by public servants, including, but not limited to, laws prohibiting bribery and conflict-of-interest laws (e.g., Conflicts of Interest under the Political Reform Act (Government Code §§ 87100, 87103), Contractual Conflicts of Interest (Government Code § 1090)); or

Laws relating to claiming perquisites of office, including, but not limited to, gift and travel restrictions, prohibitions against the use of public resources for personal or political purposes, prohibitions against gifts of public funds, mass mailing restrictions, and prohibitions against acceptance of free or discounted transportation by transportation companies (e.g., Limitations on Receipt of Gifts (Government Code §§ 86203, 89503, 89506), prohibitions against gifts of public funds (Cal. Const., art. XVI, § 6), mass mailing restrictions (Government Code § 89001)); or

Government transparency laws, including, but not limited to, financial interest disclosure requirements and open government laws (e.g., the Brown Act (Government Code § 54950 et seq.) and the Public Records Act (Government Code § 79200 et seq.)); or

Laws relating to fair processes, including, but not limited to, common law bias prohibitions, due process requirements, incompatible offices, competitive bidding requirements for public contracts, and disqualification from participating in decisions affecting family members (Government Code § 53234(d)).

The training can consist of self-study materials, an online course, or in-person training. Any online or self-study training should include testing to assess retention of the information presented. (Government Code § 53235(d)). The two hour training requirement is a minimum and local agency officials are encouraged to participate in

additional training to reinforce the official's knowledge of the ethical laws. The California Attorney General's Office has determined that for in-person training, the ethics law portion of any course should be delivered by an attorney licensed to practice law in California and knowledgeable about California's ethics laws. For online and self-study training materials, the course should be prepared under the supervision of such an attorney.

When is the Training Required?

Each local agency official is required to receive the training required by AB 1234 at least once every two years. For recently elected officials, the training is required no later than one year from the first day of service with the local agency. If a local agency official serves more than one local agency then they must satisfy their AB 1234 training once every two years without regard to the number of local agencies they serve. When the training is given to local agency officials, proof of participation is usually provided at the end of the training, which should be provided to the local agency for retention. A local agency that requires its local agency officials to complete the AB 1234 training must maintain records that show the dates the official satisfied the training requirements and the entity that provided the training. (Government Code § 53235.2(a)). The record of the training is a public record (subject to disclosure under the California Public Records Act) and must be retained for at least five years. (Government Code § 53235.2(b)).

Where Can I Find More Resources About AB 1234 Training?

Your agency's general counsel can provide you with answers to any specific questions you may have regarding AB 1234 training. For general questions, the Fair Political Practices Commission (FPPC) and the Institute for Local Government offer resources and training opportunities relating to AB 1234 on their website. The California Attorney General has also published guidelines on ethics training for local officials.

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NORTH COUNTY FIRE PROTECTION DISTRICT

STAFF REPORT

TO: BOARD OF DIRECTORS

FROM: CHIEF MCREYNOLDS

DATE: AUGUST 27, 2024

SUBJECT: WRITTEN CORRESPONDENCE

- **WRITTEN COMMUNICATION**:
  - There is no written communication for the August 27, 2024, Regular Board Meeting.
- **BOARD RECOGNITION PROGRAM:**

  July and August 2024:
  - Acknowledgement of DJ Soriano
  - Acknowledgement of Paul Moritz

NORTH COUNTY FIRE PROTECTION DISTRICT

BOARD RECOGNITION

Date: 07/20/2024

Employee: DJ Soriano

Reason for Recognition:

I am writing to formally recognize the exceptional dedication and hard work demonstrated by DJ Soriano in coordinating multiple events in collaboration with Home For Our Troops.

Home For Our Troops is a nonprofit organization that builds and donates specially adapted custom homes nationwide for severely injured post-9/11 Veterans, to enable them to rebuild their lives. Most of these Veterans have sustained injuries including multiple limb amputations, partial or full paralysis, and/or severe traumatic brain injury (TBI). These homes restore some of the freedom and independence our Veterans sacrificed while defending our country, and enable them to focus on their family, recovery, and rebuilding their lives. A part of this process involves a landscape day, where volunteers help with the front and backyard of the property.

DJ has shown remarkable commitment in organizing groups of volunteers and on-duty personnel for several of these landscape days. DJ's ability to rally support and coordinate efforts has helped to create a significant difference in the lives of our Veterans and their families in Fallbrook, which exemplifies the very best of North County Fire's values and commitment to service.

Submitted by: Matt Lindsey

NORTH COUNTY FIRE PROTECTION DISTRICT

BOARD RECOGNITION

Date: 08/11/2024

Employee: Paul Moritz

Reason for Recognition:

Paul Mortiz was getting off-duty on the morning of 08/06, which was right when a structure fire response came out. Despite being off-duty, Paul demonstrated exceptional dedication and selflessness by getting into his private vehicle and driving to the address. He took the initiative to ensure the safety of all the occupants of the house by not allowing them back inside and provided crucial support to the first arriving engine. This included trying to locate the fire, assisting with pulling hose, forcing entry of the front door, and notifing the Captain about the location of several animals inside. Paul's willingness to step-up and contribute to NCF's mission, even when off-duty, is a testament to his remarkable professionalism and courage.

Submitted by: Matt Lindsey

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NORTH COUNTY FIRE PROTECTION DISTRICT

STAFF REPORT

TO: BOARD OF DIRECTORS

FROM: CHIEF MCREYNOLDS

DATE: AUGUST 27, 2024

SUBJECT: COMMENTS, REPORTS, AND UPDATES

- **STAFF COMMENTS/REPORTS/UPDATES:**
- **CHIEF MCREYNOLDS:**
- **CHIEF OFFICERS & STAFF:**
- **BOARD:**
- **BARGAINING GROUPS:**
- **PUBLIC COMMENT:**

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NORTH COUNTY FIRE PROTECTION DISTRICT

STAFF REPORT

TO: BOARD OF DIRECTORS

FROM: CHIEF MCREYNOLDS

DATE: AUGUST 27, 2024

SUBJECT: CLOSED SESSION

CS.1. Announcement — President Pike

- An announcement regarding the items to be discussed in closed session will be made prior to the commencement of closed session.

CS.2. Conference with Real Property Negotiator (Government Code §54956.8) Property: 315 E. Ivy Street, Fallbrook, CA & Vacant Land, Ivy Street, Fallbrook, CA 92028

- Agency Rep.: Wil Soholt and Chief McReynolds

CS.3. Conference with Legal Counsel - Anticipated Litigation (Govt. Code §54956.9(d)):

- One case

CS.4. Conference with Labor Negotiator (Government Code §54957.6)

- Agency Representative: Chief McReynolds
  Employee Organizations: Management Group Employees, Fallbrook Firefighters Association (Safety Group Employees), and Non-Safety Group (Miscellaneous).

CS.5. Report from Closed Session – President Pike

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