



**Radius Recycling Oakland Nonferrous Scrap Materials
Enclosures and Conveyor Project**

Initial Study/Negative Declaration

Draft

May 2024

**Prepared for
Port of Oakland**



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Acronyms and Abbreviations

2022 Scoping Plan	California Air Resources Board 2022 Scoping Plan for Achieving Carbon Neutrality
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACFCWCD	Alameda County Flood Control and Water Conservation District
APE	Area of Potential Effects
ARB	California Air Resources Board
BCE	before Common Era
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
BART	Bay Area Rapid Transit
BGS	below ground surface
BMP	best management practice
BTU	British thermal unit
CAA	Clean Air Act
CAAA	Clean Air Act Amendment
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Code of Regulations Title 20, Energy Building Regulations, and Title 24, Energy Conservation Standards
Cal OES	California Office of Emergency Services
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAO	Cleanup and Abatement Order
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDOC	California Department of Conservation
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CH ₄	methane

CHRIS	California Historical Resources Information System
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
COC	contaminants of concern
CRHR	California Register of Historical Resources
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DMV	Department of Motor Vehicles
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
EBMUD	East Bay Municipal Utilities District
EIR	environmental impact report
EISA	Energy Independence and Security Act
EO	Executive Order
EPA	United States Environmental Protection Agency
ESA	Federal Endangered Species Act
ESL	Environmental Screening Level
facility	Radius Recycling's existing scrap metal and recovery facility
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Mapping
FTA	Federal Transit Administration
GHG	greenhouse gas
GWP	Global Warming Potential
H ₂ S	hydrogen sulfide
HAP	hazardous air pollutant
HASP	Health and Safety Plan
HMMG	Hazardous Materials Management Guide
HOP	Petroleum-hydrocarbon oxidation product
Hz	hertz
I-880	Interstate 880
ICAP	Interim Corrective Action Plan

in/sec	inches per second
IS	Initial Study
L _{dn}	day/night noise level
LED	light-emitting diode
L _{eq}	equivalent sound level
Leq[h]	1-hour, A-weighted equivalent sound level
L _{max}	maximum sound level
L _n	statistical descriptor
LUST	leaking underground storage tank
LUTE	Land Use and Transportation Element
MACT	Maximum Available Control Technology
µg/m ³	micrograms per cubic meter
mg/m ³	milligrams per cubic meter
µin/sec	microinch per second
MLD	Most Likely Descendant
MMBTU	Million British thermal units
MND	mitigated negative declaration
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone
MS4	municipal separate storm sewer system
MT	metric ton
MTC	Metropolitan Transportation Commission
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NAS	Naval Air Station
ND	negative declaration
NFR	nonferrous residue
NHTSA	National Highway Traffic Safety Administration
NO ₂	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOD	Notice of Deficiency
NO _x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRCS	National Resource Conservation Service
NRHP	National Register of Historic Places

NWIC	Northwest Information Center
OEHHA	Office of Environmental Health Hazard Assessment
OHP	California Office of Historic Preservation
OSHA	Occupational Safety and Health Administration
PBR	purlin-bearing rib
PCB	polychlorinated biphenyl
PG&E	Pacific Gas and Electric Company
PM	particulate matter
PM ₁₀	particulate matter equal to or less than 10 microns in diameter
PM _{2.5}	particulate matter equal to or less than 2.5 microns in diameter
Port	Port of Oakland
Porter-Cologne	Porter-Cologne Water Quality Control Act
ppb	parts per billion
ppm	parts per million
PPV	peak particle velocity
PQR	premium quality residue
PQS	premium quality shred
PRC	Public Resources Code
proposed Project	Radius Recycling Oakland Nonferrous Scrap Materials Enclosures and Conveyor Project
RCNM	Roadway Construction Noise Model
RCRA	Resource Conservation and Recovery Act of 1976
RECP	Regional Emergency Coordination Plan
RFS	Renewable Fuel Standard Program
RMS	root-mean-square
ROG	reactive organic gases
RPS	Renewable Portfolio Standards
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCS	Sustainable Communities Strategy
SFBAAB	San Francisco Bay Area Air Basin
SFBRWQCB	California Regional Water Quality Control Board, San Francisco Bay Region
SIP	State Implementation Plan
SLF	Sacred Lands File
SO ₂	sulfur dioxide
State SIP Strategy	2022 State Strategy for the State Implementation Plan

SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TPH	total petroleum hydrocarbons
UPRR	Union Pacific Railroad
USACE	United States Army Corps of Engineers
USC	United States Code
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VdB	vibration decibels
VMT	vehicle miles traveled
WDR	waste discharge requirement
WHO	World Health Organization
Williamson Act	California Land Conservation Act of 1965
ZEV	zero-emission vehicle

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1 INTRODUCTION

1.1 PURPOSE OF AN INITIAL STUDY

The California Environmental Quality Act (CEQA) was enacted in 1970 for the purpose of providing decision makers and the public with information regarding environmental effects of proposed projects, identifying means of avoiding environmental damage, and disclosing to the public the reasons behind a project's approval even if it leads to environmental damage. The Port of Oakland (Port) has determined that the Radius Recycling Oakland Nonferrous Scrap Materials Enclosures and Conveyor Project (proposed Project) is subject to CEQA and that no exemptions apply. Therefore, preparation of an Initial Study (IS) is required.

An IS is a preliminary analysis conducted by the lead agency, in consultation with other agencies (responsible or trustee agencies, as applicable), to determine whether there is substantial evidence that a project may have a significant effect on the environment. If the IS concludes that the project, with mitigation, may have a significant effect on the environment, an environmental impact report (EIR) should be prepared; otherwise, the lead agency may adopt a negative declaration (ND) or mitigated negative declaration (MND).

1.2 DOCUMENT ORGANIZATION

This document consists of six sections, as described in the following paragraphs.

- **Section 1, Introduction**, provides an overview of the Project and the CEQA environmental documentation process.
- **Section 2, Project Description**, provides a brief description of the Project background, purpose and need, existing conditions, and Project construction and operations.
- **Section 3, Environmental Checklist and Analysis**, provides the lead agency determination and a detailed discussion of the environmental factors that could potentially be affected by this Project, as indicated by an analysis based on the CEQA Guidelines Appendix G checklist.
- **Section 4, List of Preparers**, provides the names and roles of the individuals who contributed to the development of this IS/ND.
- **Section 5, Distribution List**, provides a list of the agencies and individuals to whom this IS/ND will be delivered.
- **Section 6, References**, provides information regarding the documents and other reference materials used during the preparation of this IS/ND.

1.3 CEQA PROCESS

To begin the CEQA process, the lead agency identifies a proposed Project, then prepares an IS to identify the preliminary environmental impacts of the proposed project. This IS/ND has been prepared in accordance with CEQA provisions to analyze the possible environmental impacts of the proposed Project so that the public can take these impacts into account when considering action on the Project. The Port

has discretionary authority over the Project through issuance of a Development Permit (with Radius Recycling as applicant) and is therefore the CEQA lead agency.

In accordance with CEQA Section 15073, the Port will circulate this Draft IS/ND for review for 30 days, from May 6, 2024, to June 5, 2024. During the 30-day public review period, the public and responsible and trustee agencies can submit comments on this Draft IS/ND to the Port. The Port will consider the comments and will respond to the comments after the 30-day public review period. Written comments may be forwarded to:

Port of Oakland
Eric Englehart, Port Associate Environmental Scientist/Planner
530 Water Street
Oakland, CA 94607
Email: eenglehart@portoakland.com

After comments have been received from the public and from responsible and trustee agencies, the Port may take any of the following actions:

1. Grant environmental approval to the Project.
2. Conduct additional environmental studies.
3. Abandon the Project.

If the Project is granted environmental approval and funding is obtained, the Port could authorize design and construction of all or part of the Project.

Within 5 days of the Port's approval of the Final IS/ND, the Port will file a Notice of Determination with the County Clerk. The Notice of Determination will be posted by the County Clerk within 24 hours of receipt. This begins a 30-day statute of limitations on legal challenges to the approval under CEQA. During that time, the ability to challenge the approval in court may be limited to only those persons who objected to the approval of the Project, and to issues that were presented to the lead agency by any person, either orally or in writing.

1.4 PROJECT INFORMATION SUMMARY

Project Title:

Radius Recycling Oakland Nonferrous Scrap Materials Enclosures and Conveyor Project

Lead Agency Name and Address:

Port of Oakland
530 Water Street
Oakland, CA 94607

Contact Person and Phone Number:

Eric Englehart, Port Associate Environmental Scientist/Planner

Port of Oakland

530 Water Street

Oakland, CA 94607

Office# (510) 627-1187

Email: eenglehart@portoakland.com

Project Location:

The Project is located at the Radius Recycling (formerly Schnitzer Steel) Oakland Facility at the Port. The property address is 1101 Embarcadero West, Oakland, California (Assessor's Parcel Number 018 039500100)

General Plan Designation:

General Industry and Transportation

Zoning:

General Industrial (IG)

Project Description:

Radius Recycling is proposing to construct three buildings (Buildings A, B, and C) to enclose existing storage and processing of nonferrous scrap materials (materials that do not contain iron) and other operations. In addition, a new conveyor would be constructed inside the proposed Building A to minimize the need for multiple handling of the nonferrous scrap materials. The buildings and conveyor would be constructed and operated at Radius Recycling's existing scrap metal and recovery facility (the facility) near the Port in Oakland, California.

Surrounding Land Uses and Setting:

The Radius Recycling Oakland facility is in an urbanized industrial, transportation-related development. Directly surrounding the Project site are Union Pacific Railroad (UPRR) to the north, Howard Marine terminals to the east, Oakland Inner Harbor to the south, and American President Lines Limited and the Port to the west. The general vicinity consists of a mix of commercial, industrial, and residential properties, including Interstate 880 (I-880) and the City of Oakland to the north and east, the City of Alameda to the south, and San Francisco Bay to the west.

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2 PROJECT DESCRIPTION

2.1 PROJECT OVERVIEW

Radius Recycling, formerly Schnitzer Steel, is proposing to construct three buildings (Buildings A, B, and C) to enclose existing storage and processing of nonferrous scrap metals (metals that do not contain iron) and other operations. In addition, a new conveyor would be constructed inside the proposed Building A to minimize the need for multiple handling of the nonferrous scrap materials. The facility at which the buildings and conveyor would be constructed and operated is at 1101 Embarcadero West, Oakland, California (Assessor's Parcel Number 018 039500100; Figure 2-1, Figure 2-2, Figure 2-3, and Figure 2-4).

The proposed Project would include construction and operation of the following components:

- (1) Building A is an approximately 22,800-square-foot building proposed for containment of recyclable nonferrous scrap materials recovered from the facility's recycling process.
- (2) Building B is an approximately 11,875-square-foot building proposed for containment of premium quality shred (PQS) equipment (equipment that improves the quality of shredded material).
- (3) Building C is an approximately 1,925-square-foot building proposed for containment of an existing conveyor.
- (4) A new conveyor system (electrically powered radial stacking telescoping conveyor, including four hoppers) in proposed Building A would move nonferrous scrap materials into the hoppers, to be transported by trucks. A hopper is a container for bulk materials that tapers downward and is able to discharge its contents at the bottom. The conveyor system, including hoppers, is shown on Figure 2-4.

Construction activities would be limited to installation of the buildings on an existing impermeable concrete slab (which will be upgraded to support the new buildings and the hoppers); minimal trenching (up to 36 inches below ground surface [BGS]); downspout connections between the new buildings and the existing drainage system; and electrical connections for limited light-emitting diode (LED) interior lighting, the conveyor, and an air handling and filtration system. No demolition work is required (other than concrete removal for the foundation thickening). The anticipated duration of construction is approximately 6 to 8 months. Operational changes would be minimal and would be related to the movement of nonferrous materials in the facility (e.g., reduction of handling with the use of the proposed conveyor belt and hopper system), a change from moving and containing materials in open stockpiles or other containment locations in the existing facility, and minor facility maintenance. It is anticipated that the proposed buildings and conveyor would be operated for the life of the facility. No new emission-generating equipment would be needed, and operational utility demand would be limited to electricity needed for LED lighting, the new conveyor belt, and the new air handling and filtration system.

Figure 2-1 Vicinity Map



Figure 2-2 Project Location

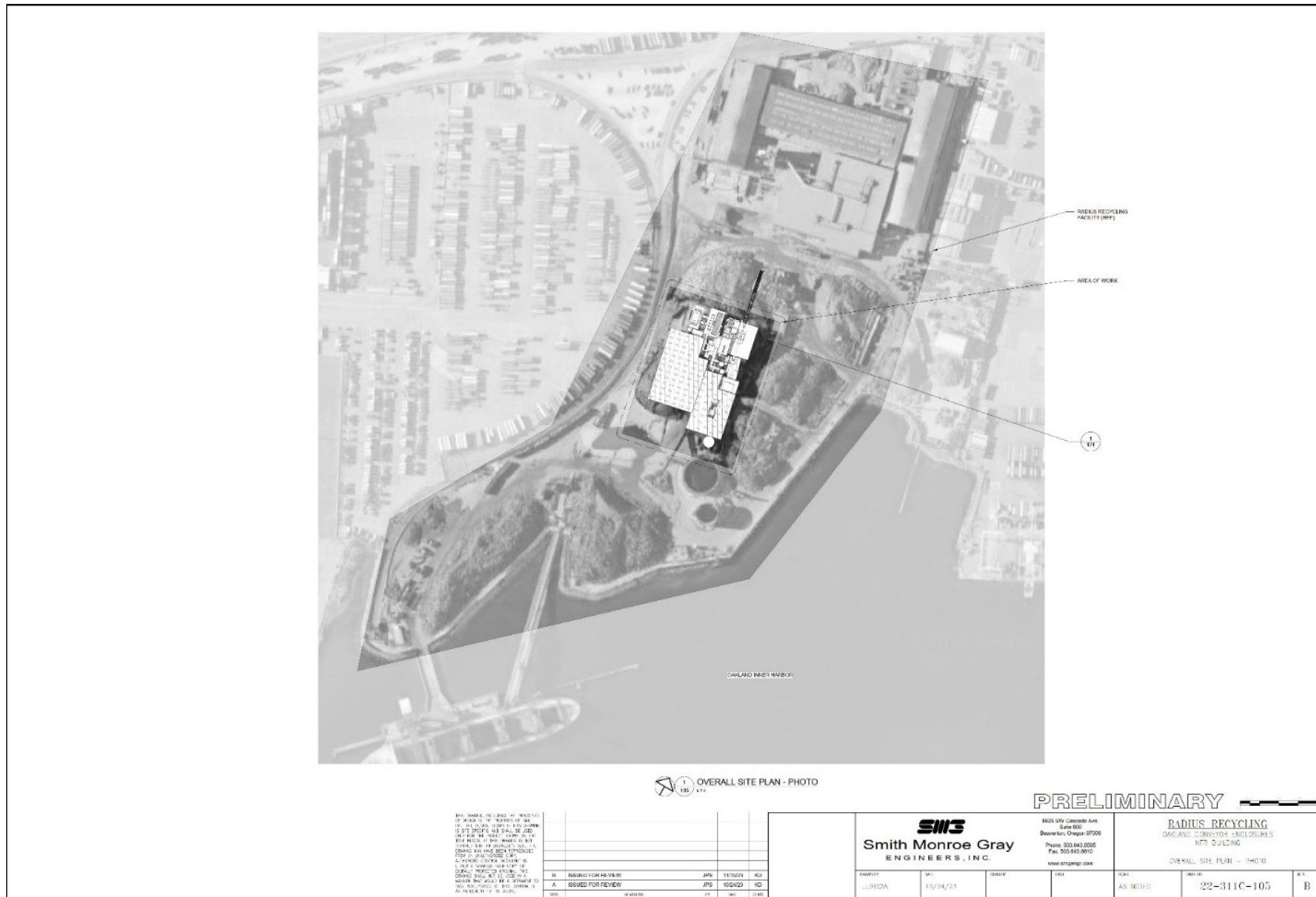
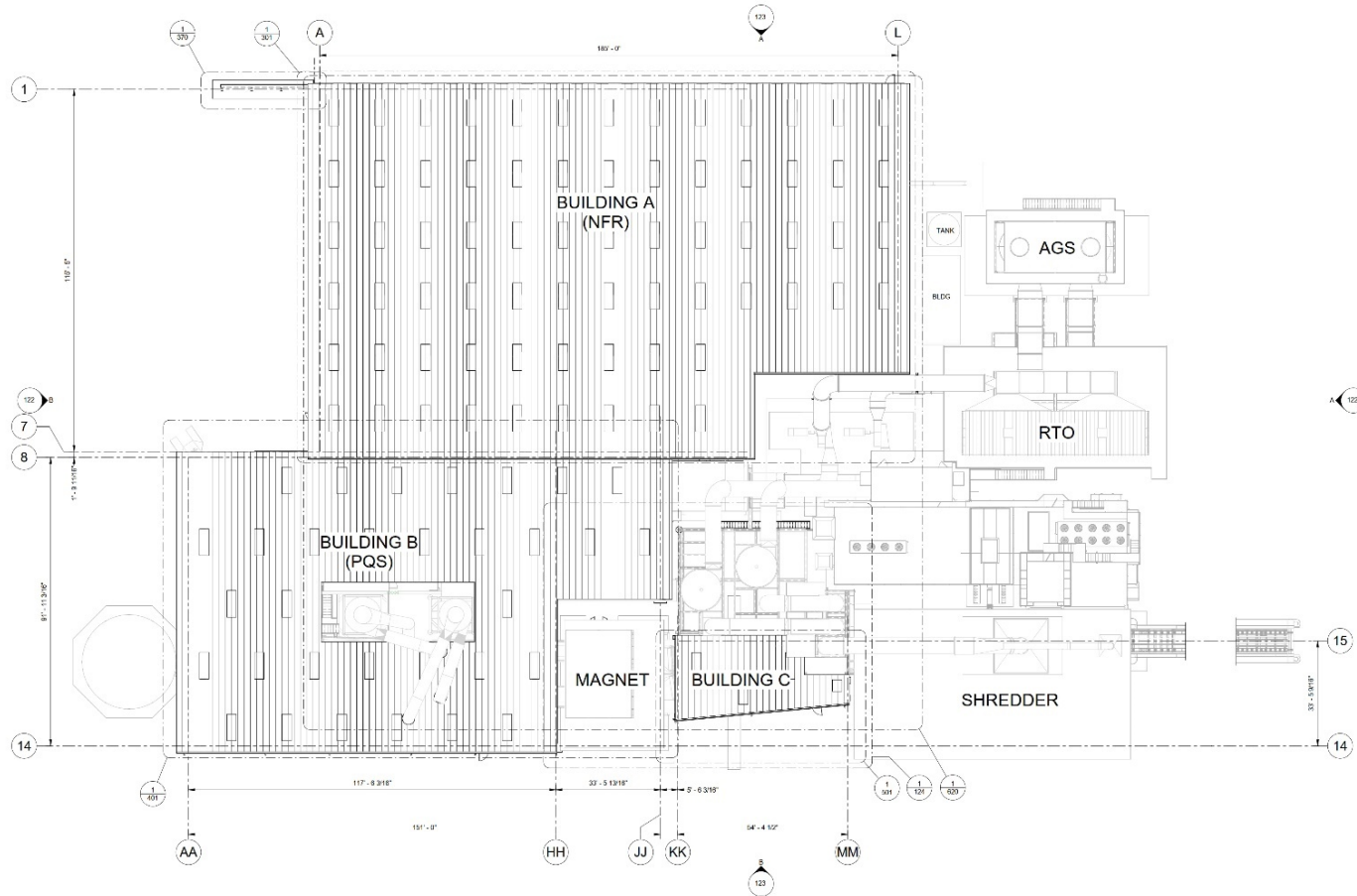


Figure 2-3 Project Layout



1 GENERAL ARRANGEMENT PLAN

FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

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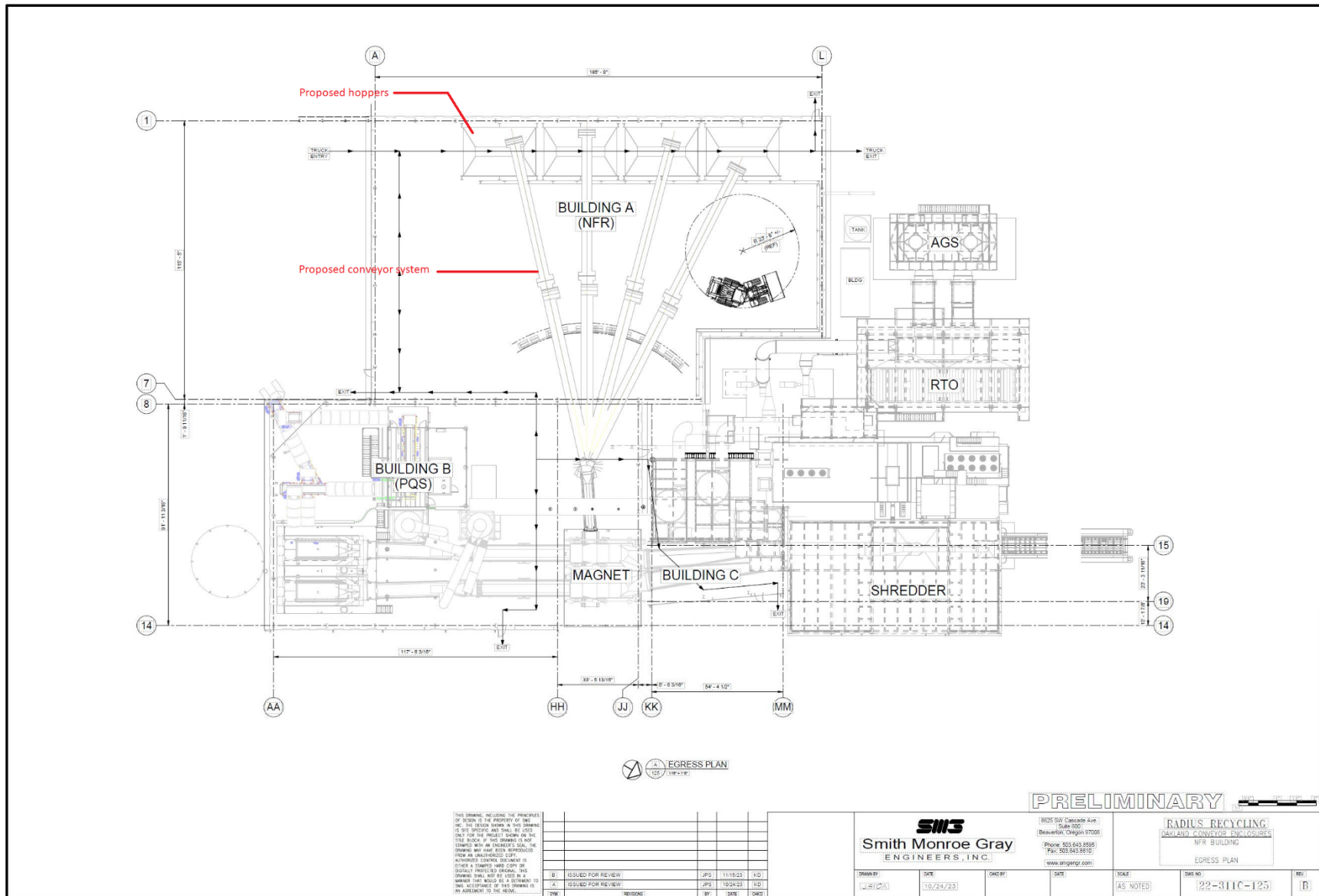
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Figure 2-4 Conveyor System Layout, Including Hoppers



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2.2 PURPOSE AND NEED

The purpose of the proposed Project is to construct and operate three buildings and a new conveyor for the protection of existing stockpiled materials and operations from wind dispersal, rain, and other weather conditions during material storage and processing.

2.3 EXISTING CONDITIONS AND BACKGROUND

The Project would be located at Radius Recycling's scrap metal recovery and recycling facility at 1101 Embarcadero West, Oakland, California, occupying approximately 33.2 acres adjacent to the Oakland Inner Harbor waterfront and the Port (see Figure 2-1). The Radius Recycling facility is bounded to the south by the Oakland Inner Harbor, to the east and west by the Port (Howard Terminal and Roundhouse Terminal, respectively), and to the north by Embarcadero West and UPRR tracks. Portions of the facility property are owned by Radius Recycling, including the area proposed for construction and operation of the three buildings and conveyor; other portions of the facility are owned by the Port and leased to Radius Recycling. The Radius Recycling facility is largely covered by either buildings or pavement.

Radius Recycling's existing operations at the facility include but are not limited to:

- collecting, sorting, and transporting waste metallic-containing materials using conveyor belts and heavy equipment;
- shredding end-of-life automobiles, appliances, and other recyclable-metal-containing items;
- shearing recyclable metals;
- preparing and sorting ferrous and nonferrous metal recycling feedstock;
- stockpiling unprocessed feedstock, metal shredder aggregate (partially sorted shredder output), and processed metal;
- processing residue from the metal shredding and separation operations; and
- loading of processed materials for disposition and to minimize dispersion.

Currently, nonferrous scrap materials are moved from a magnet unit to the existing open stockpile area onsite using an open conveyor. The nonferrous scrap materials are largely stored as open-air stockpiles in the center of the Radius Recycling facility. The materials are then loaded onto trucks by a wheeled loader. Storage and processing of nonferrous scrap materials under these existing conditions occurs with stockpiles and machinery exposed to wind, rain, and other weather conditions. An adjacent area housing the PQS equipment is also exposed to these elements. These exposed areas are proposed to be contained in the new buildings to provide all-weather protection.

The Project location is in the area of the SWRCB Water Quality Order No. 2013-0001-DWQ National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000004, Waste Discharge Requirements (WDR) for Storm Water Discharges from the Port's municipal separate storm sewer system (MS4) permit, which allows discharge of stormwater from the site. Radius Recycling also holds an East Bay Municipal Utilities District (EBMUD) Wastewater Discharge Permit (Port 2016).

2.4 PROPOSED PROJECT

The proposed Project entails construction and operation of three buildings and a new radial stacking telescoping conveyor system for storage and processing of nonferrous scrap materials in the facility. Building A would surround and enclose existing nonferrous scrap materials stockpiles, Building B would surround and enclose the existing PQS equipment, and Building C would surround and enclose an existing conveyor north of the PQS equipment. The new radial stacking telescoping conveyor system would be constructed inside Building A and would move scrap materials into hoppers. The materials would then be loaded into trucks parked directly below the hoppers. Table 2-1 summarizes the approximate dimensions and purpose for each of the three buildings.

Table 2-1 Proposed Building Dimensions and Purposes

Building	Purpose	Approximate Length (feet)	Approximate Width (feet)	Approximate Height Range (feet)
A	Containment of shredded NFR materials and proposed radial conveyor	190	120	55 to 65
B	Containment of PQR equipment	125	95	36 to 43
C	Containment for existing conveyor belt	55	35	37 to 39

Notes:

NFR = nonferrous residue; PQR = premium quality residue

All construction equipment and vehicles for the Project would be staged at the Radius Recycling facility. Construction would involve site preparation work (i.e., reinforcing the existing concrete slab and minimal trenching), building construction, drainage system connections, and electrical connections.

Buildings would be constructed on an existing impermeable concrete slab foundation, with the perimeter foundation thickened to 2 feet in depth for Buildings A and B, and 3 feet in depth for Building C and the area under the proposed hoppers in Building A. Reinforcing the concrete slab in these areas would require saw cutting, breaking up, and removing existing concrete; excavating the foundation to 1 foot below the reinforcement depth (i.e., 3 to 4 feet BGS); and installing 1 foot of structural backfill (typically crushed rock), followed by 2 to 3 feet of rebar-reinforced concrete, depending on the specific building.

Electricity for the proposed Project features would be provided by new connections to existing electrical infrastructure, including new utility trenches where needed. Trenching would also be required for the drainage system connections. Trenching for utilities and drainage is anticipated to be required for the following infrastructure:

- Equipment control and monitoring cabling would be installed between the enclosures and the communication infrastructure in the shredder enclosure. These trenches would carry low-voltage cables and are anticipated to be approximately 9 inches wide and 30 inches deep.

- Electrical connections would be installed between the enclosures and the electrical infrastructure in the shredder enclosures. These trenches would carry electrical conduits and cables and are anticipated to be approximately 18 inches wide and 36 inches deep.
- Downspout connections would be installed between the new enclosure buildings and the existing drainage system to convey storm runoff from the roof of the enclosures to the existing water treatment facility immediately south of the enclosures.

All trenches would be covered with either concrete or compacted fill upon completion of the installation.

The buildings will be clad with steel and translucent purlin-bearing rib (PBR) paneling. Figure 2-3 provides the general arrangement of the proposed new structures. Detailed plans are provided in Appendix A. Interior LED lights would be installed, with power provided by connections to existing onsite utilities. An air handling and filtration system would also be installed at Building A to allow fresh air to be drawn into the enclosed space. Any exhaust air will be filtered prior to being expelled. The Project footprint would be outside of the Coastal Zone.

Operational changes would be minimal and would be primarily related to the containment and movement of nonferrous materials in the facility (e.g., containment of material stockpiles and equipment, use of the proposed new conveyor). Other incidental operational changes would include new LED interior lighting, a new air handling and filtration system, and maintenance of proposed improvements. Typically, materials would be transported between buildings and/or in and out of the facility from 7 a.m. to 5 p.m., consistent with existing facility operations. Limited maintenance would be needed, such as cleaning or ensuring proper operation of new conveyor, LED lighting, and air handling and filtration system. Such maintenance would be negligible in scale relative to overall facility maintenance.

2.5 CONSTRUCTION METHODS AND SEQUENCE

Construction activities would involve site preparation, building and conveyor system construction, and connection with existing drainage infrastructure and electrical utilities. Table 2-2 provides a summary of the general construction sequence. Buildings would be constructed using spread footings, and no piles would be required. LED lighting would be installed inside the buildings, with power provided via connections to existing electrical infrastructure. No demolition (other than removing concrete from select areas of the existing 12-inch slab) would be required. Other than electrical connections for LED lighting, the conveyor belt, and the air handling and filtration system, no utility connections would be required. Ground disturbance would be limited to excavations and to reinforcing the existing concrete slab and trenching for utility and drainage connections. Stormwater runoff during both construction and operations would be captured and contained in the existing stormwater treatment system, with stormwater runoff control devices installed during the initial site preparation construction phase. Construction staging would require a relatively small area to contain equipment and materials, which would be confined within the Radius Recycling facility. Table 2-3 includes an anticipated list of construction equipment.

Table 2-2 Approximate Construction Sequence

General Construction Phase	Activity Sequence
Site Preparation	Install safety fencing around the construction work area. Install safety and stormwater runoff control devices (e.g., straw wattles).
	Perform minor excavation, as needed, and site preparation of existing concrete for the building perimeter and hopper foundation trenches.
	Backfill trenches with approved materials and compact as needed.
Building Construction and Utility Connection	Install building foundation rebar and anchors. Pour foundation slabs.
	Install steel building frames and PBR panels, doors, and other coverings.
	Perform minor trenching for utility and storm drainage. Install electrical system and lighting, and connect electric utilities.
	Install hoppers, mechanical equipment, and conveyor systems.
	Test improvements, clean up, complete, and finish Project construction.

Notes:

PBR = purlin-bearing rib

Table 2-3 Construction Equipment

Equipment	No.	Transportation
Pickup trucks	Up to 4	Self-propelled
Concrete pump truck	1	Self-propelled
Backhoe	1	Low-bed trailer
Excavator with hoe ram	1	Low-bed trailer
Compactor	1	Low-bed trailer
80-ton hydraulic crane (truck-mounted)	1	Self-propelled
Forklift/SkyTrak	Up to 2	Low-bed trailer
Personal lift/boom lift	Up to 2	Low-bed trailer
Compressors	Up to 2	Towed

Construction is anticipated to start in late summer or fall 2024, as soon as all Project entitlements are fulfilled (e.g., CEQA compliance and building permit), and would last between 6 and 8 months. Construction personnel are expected to range between 12 and 42 workers on the site daily. The construction activities are estimated to fewer than 250 vendor trips over the duration of construction. Most of these trips would be less than 100 miles long, transporting project materials and supplies or construction equipment, and would likely occur during daytime hours (between 6 a.m. and 6 p.m.). The export and import of cut-and-fill material (i.e., concrete and soil) would require approximately 130 haul truck round trips over the excavation and backfill construction phases. Local vehicle access to the Project site would be provided from Embarcadero West, which connects to Market Street. These streets are near the East Bay hub of the Bay Area freeway system near the Bay Bridge Toll Plaza, and Market Street has access to I-880 via local roadways such as 3rd Street.

2.6 BEST MANAGEMENT PRACTICES

Construction at the site would be conducted in conformance with applicable laws and regulations, including laws and regulations pertaining to the handling and management of scrap metals for recycling. To further reduce impact from construction, the proposed Project would also implement the measures discussed in the following sections.

2.6.1 Air Quality

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered as necessary to control dust. Ground disturbance would be limited to minor trenching and installation of spread footings.
- All construction vehicles will use a truck wheel wash when leaving the site.
- All vehicle speeds on unpaved roads will be limited to 15 miles per hour.
- Idling times will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage will be provided for construction workers at all access points.
- All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will be checked by a certified mechanic and determined to be running in proper condition prior to operation.

2.6.2 Water Quality

- All stormwater will be contained, stored, and reclaimed or evaporated with the current treatment system during construction.
- All outbound trucks will pass through a wheel wash when leaving the site.
- A sweeper truck will sweep internal roads and Embarcadero West daily, as is done under current facility operations.
- The construction contractor will keep a clean and safe workplace. Good housekeeping procedures will include conducting fueling and equipment maintenance activities away from the Bay, avoiding spills through employee training, and cleaning accidental spills of construction-related materials (such as concrete, equipment fuel, or hydraulic fluid) immediately.
- Construction debris will be disposed of in accordance with all relevant City of Oakland recycling ordinances.

2.6.3 Noise

- The construction contractor will meet City of Oakland construction noise standards set in the Oakland Planning Code, including limits on the hours of noise-generating activities, limits on the number of consecutive days of noisy construction activities, and limits on the maximum noise at receiving properties.

2.6.4 Soil Management and Hazards

- The construction contractor will prepare a Health and Safety Plan (HASP) for approval by the Radius Recycling regional environmental manager.
- Minor excavation will be done for the proposed Project, including trenching for utility and drainage connections and to construct the concrete slab foundation reinforcement.
- For excavations extending deeper than 4 feet BGS, groundwater controls may need to be implemented if groundwater is encountered. This may include pumping from shallow sumps, as recommended in the geotechnical engineering report for the proposed Project (SMG Engineers, Inc. 2023).
- If groundwater encountered during excavation has evidence of contamination (e.g., visual staining, suspicious odors, or evidence of physical debris), or if the groundwater is emanating from, in contact with, or near soil that has evidence of contamination, a groundwater sample would be collected and analyzed in accordance with United States Environmental Protection Agency (EPA) Methods 6010B/7470A for CAM 17 Metals; 8260 for volatile organic compounds; and 8015 for total petroleum hydrocarbons (TPH) as gasoline, diesel, and motor oil, at a minimum. Water generated from dewatering activities will be contained on site until analytical results are evaluated for appropriate treatment or disposal. Water generated from dewatering activities will not be discharged to any water bodies.
- Ground disturbance will occur in adherence with the Radius Recycling facility's Soil Management Plan (Schnitzer Steel 2014a) and consistent with California Stormwater Best Management Practice (BMP) Handbook measure WM-3 for stockpile management (e.g., placed on and covered by heavy-duty polyethylene plastic sheeting to mitigate dust generation and rain runoff; and labeled and secured to prevent accidental removal, disposal, or use), testing and sampling materials for contaminants of concern (COCs), and proper soil disposal once profiling analytical results have been received.

2.6.5 Cultural Resources

- The construction contractor will prepare, for approval by Radius Recycling's regional environmental manager, an emergency plan of action for discoveries of unknown historic or archaeological resources. This plan will be followed should workers encounter any unidentified resources during construction.

2.6.6 Biological Resources

If Project construction begins during the nesting season (February 1 through August 15), a preconstruction survey for nesting raptors and other migratory birds shall be conducted by a qualified biologist within 7 days prior to the onset of work activities, to identify any active nests.

- The preconstruction nesting bird survey shall be performed within 50 feet of the Project site to locate any active passerine (e.g., songbird) nests, and within 200 feet to locate any active raptor (bird of prey) nests.
- If no active nests are identified during the survey period, or if development is initiated during the nonbreeding season (August 16 through January 31), construction may proceed with no restrictions. If

the survey indicates the presence of nesting raptors or other birds, the biologist shall determine an appropriately sized buffer around the nest in which no work will be allowed until the young have successfully fledged. The size of the nest buffer will be determined by the biologist and will largely be based on the nesting species and its sensitivity to disturbance. In general, buffer sizes of 200 feet for raptors and 50 feet for other birds should suffice to prevent disturbance to birds nesting in the urban environment; these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest.

- Any work that must occur within established no-disturbance buffers around active nests shall be monitored by a qualified biologist. If adverse effects in response to project work within the buffer are observed and could compromise the nest's success, work within the no-disturbance buffer shall halt until the nest occupants have fledged.
- Any birds that begin nesting amid construction activities shall be assumed to be habituated to construction-related or similar noise and disturbance levels, and no work exclusion zones shall be established around active nests in these cases; however, no work activities that result in the direct destruction (e.g., crushing of eggs) or removal of such nests is allowed.

3 ENVIRONMENTAL CHECKLIST AND ANALYSIS

This section presents the IS that was completed for the proposed Radius Recycling Oakland Nonferrous Scrap Materials Enclosures and Conveyor Project, in accordance with the requirements of CEQA. The IS identifies site-specific conditions and impacts; evaluates their potential significance; and, where applicable, discusses ways to avoid or lessen impacts that may be potentially significant. The information, analysis, and conclusions included in the IS provide the basis for determining the appropriate document needed to comply with CEQA. For the proposed Project, based on the analysis and information contained herein, the Port finds that the Project could have an effect on the environment; however, all effects would be less than significant, and no mitigation measures are required. As a result, the Port has concluded that a ND is the appropriate CEQA document for the Project.

The evaluation of environmental impacts provided in this section is based in part on the environmental impact questions contained in Appendix G of the CEQA Guidelines. Each question is followed by four categories of impact assessment that can be selected based on the analysis:

- **Potentially Significant Impact.** This determination is made if there is substantial evidence that a Project-related environmental effect may be significant. If there is one or more "Potentially Significant Impacts," an EIR would be prepared for the Project.
- **Less than Significant with Mitigation.** This determination is made when the Project may result in a significant environmental impact, but the incorporation of identified Project revisions or mitigation measures would reduce the identified effect(s) to a less-than-significant level.
- **Less-than-Significant Impact.** This determination is made when the Project would not result in any significant effects. The Project's impact would be less than significant even without the incorporation of Project-specific mitigation measures.
- **No Impact.** This determination is made when the Project would not result in any impact in the category, or if the category does not apply.

The environmental resource categories checked below would be potentially affected by this Project. Detailed descriptions and analyses of impacts associated with the proposed Project for each category are provided in Sections 3.1 through 3.17.

Aesthetics	Agriculture and Forestry	X Air Quality
X Biological Resources	Cultural Resources	X Energy
X Geology/Soils	X Greenhouse Gas Emissions	X Hazards and Hazardous Materials
X Hydrology/Water Quality	Land Use/Planning	Mineral Resources
X Noise	Population/Housing	Public Services
Recreation	Transportation/Traffic	Tribal Cultural Resources
Utilities/Service Systems	Wildfire	Mandatory Findings of Significance

Detailed descriptions and analyses of impacts from the proposed Project activities and the basis for their significance determinations are provided for most of the resource topics identified in the preceding table, as listed below. Relevant laws, regulations, and policies potentially applicable to the Project are listed in the Regulatory Setting subsection for each environmental factor analyzed in this IS/ND.

- Section 3.1, Aesthetics
- Section 3.2, Air Quality
- Section 3.3, Biological Resources
- Section 3.4, Cultural Resources
- Section 3.5, Energy
- Section 3.6, Geology and Soils
- Section 3.7, Greenhouse Gas Emissions
- Section 3.8, Hazards and Hazardous Materials
- Section 3.9, Hydrology and Water Quality
- Section 3.10, Land Use and Planning
- Section 3.11, Noise
- Section 3.12, Public Services
- Section 3.13, Recreation
- Section 3.14, Transportation
- Section 3.15, Tribal Cultural Resources
- Section 3.16, Utilities and Service Systems
- Section 3.17, Mandatory Findings of Significance

Effects Found Not to Be Significant

The remaining resources topics were considered but were not addressed in the detailed impact analysis because they are not present in the proposed Project analysis area, do not apply based on the scope of the proposed Project, or otherwise would have no potential to be adversely impacted by the proposed Project. This includes Agriculture and Forestry Resources, Mineral Resources, Population and Housing, and Wildfire. Brief descriptions of the rationales for dismissing these topics from detailed analysis are provided in the following paragraphs.

Agriculture and Forestry Resources. The proposed Project would take place entirely inside the existing Radius Recycling facility, a highly developed industrial facility in an urbanized area with no existing agricultural production or forest resources. The Project is in an area designated as urban and built-up land by the California Department of Conservation's (CDOC's) Farmland Mapping and Monitoring Program; the proposed Project sites and surrounding area contain no designated Prime Farmland or Farmland of Statewide or Local Importance (CDOC 2018). No land under California Land Conservation Act of 1965 (Williamson Act) contract is on or near the proposed Project site (CDOC 2021). Therefore, the proposed Project would not convert designated farmland or conflict with an existing Williamson Act contract.

The City of Oakland does not designate land uses for agriculture or forestry in its General Plan or Zoning Map (City of Oakland 2015a, 2022). The proposed Project site does not contain agricultural production or forest land. Therefore, the proposed Project would not conflict with existing zoning for agricultural use, forest land, or timberland, nor would it result in the loss or conversion of forest land. Therefore, no impact on agricultural or forestry resources would occur.

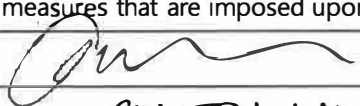
Mineral Resources. The proposed Project is on land classified by CDOC's Division of Mines and Geology as Mineral Resource Zone 1 (MRZ-1), which is defined as an area where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence (CDOC 1987). Adjacent or nearby areas are not designated as an MRZ by the City of Oakland General Plan (City of Oakland 2015a). As a result, the proposed Project would not interfere with any mineral extraction operations and would not result in the loss of land designated for mineral resources. Therefore, the proposed Project would not result in the loss of availability of a known mineral resource and would not result in the loss of a locally important mineral resource recovery site. Therefore, no impact on mineral resources would occur.

Population and Housing. The proposed Project would not involve any activities that would directly or indirectly induce unplanned population growth or result in the construction of any housing. Over the 6- to 8-month construction duration, the daily construction workforce for the proposed Project is estimated to range between 12 and 42 workers. It is expected that the local or regional labor force would be sufficient to meet construction demand. The proposed Project would not result in any new permanent employment following the completion of construction.

Wildfire. The proposed Project is not in a designated wildland area that would contain substantial forest fire risks or hazards. The Radius Recycling facility is developed and is in a highly urbanized area of the City of Oakland. The Project site does not contain dense vegetation; it is surrounded by other developed properties, roadways, and the San Francisco Bay Estuary. Wildfire was added to the CEQA Guidelines as an environmental topic for consideration of impacts that could occur in areas in or near State Responsibility Areas (areas recognized by the Board of Forestry and Fire Protection as areas where the California Department of Forestry and Fire Protection [CAL FIRE] is the primary emergency response agency responsible for fire suppression and prevention). The Project site is not in or near a State Responsibility Area or lands classified as very high fire severity zones (CAL FIRE 2024). Therefore, no impact would occur related to wildfire.

AGENCY DETERMINATION

Based on the environmental impact analysis provided by this IS:

X	I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
	I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	I find that the proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION , including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.
Signature: 	
Date: 4/29/24	
Printed Name: COLLEEN LIANG	

3.1 AESTHETICS

Except as provided in Public Resources Code (PRC) Section 21099, would the Project:

Question	CEQA Determination
a) Have a substantial adverse effect on a scenic vista?	No Impact
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No Impact
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?	No Impact
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	No Impact

3.1.1 Environmental Setting

The Project site is at the Radius Recycling facility in the Port, along the northern shoreline of the Oakland Estuary-Inner Harbor Channel. In Oakland, the shoreline of San Francisco Bay extends 19 miles from San Leandro Bay to the Oakland-San Francisco Bay Bridge. At its northern end, the shoreline is dominated by the Port’s marine terminals. At the southern end lies San Francisco Bay Oakland International Airport (formerly Oakland International Airport). The Oakland Estuary is one of California’s most diverse shores, encompassing a variety of physical environments and settings, each with its own distinct visual quality and character. The Oakland Estuary-Inner Harbor Channel borders the northern side of Alameda Island and acts as a shipping corridor serving the Port and other marine terminals.

The Project site, which has frontage along the Oakland Estuary-Inner Harbor Channel Estuary, is a flat, expansive, concrete-surfaced area in the Radius Recycling facility. The Radius Recycling facility is characterized by industrial structures, appurtenances, and storage of materials associated with metal recycling. This includes, but is not limited to, large warehouse-type buildings, storage tanks, rail lines, open-air material stockpiles, vehicle parking and staging, cranes and conveyors, and storage tanks. The overall visual quality of the Project site is considered low due to the visual dominance of features associated with heavy industrial uses in the area. No unique scenic vistas or state scenic highways occur near the Project site.

The site’s immediate vicinity is also characterized by industrial or transportation-related land uses and developments. Surrounding the site are UPRR to the north, Howard Marine terminals to the east, Oakland Inner Harbor to the south, and American President Lines Limited and the Port to the west. The general vicinity consists of a mix of commercial, industrial, and residential properties, including I-880 and the City of Oakland to the north and east; the City of Alameda to the south; and San Francisco Bay to the west. Given the flat topography of this part of Oakland, the Project site is only visible from locations in its immediate vicinity. Areas of the city that are higher in elevation are a relatively far from the site. Therefore,

from those higher elevations, the Project site is not easily discernible when viewed in the context of the larger landscape.

The most dominant visual features in the vicinity of the Project site are the large number of stacked shipping containers at the Port, docked cargo ships, and the Port's visually prominent 381-foot-tall white steel cranes with multiple light fixtures used to load and unload cargo from the ships.

The existing visual setting on the southern side of the Oakland Estuary-Inner Harbor Channel (from Alameda Island) near the shoreline is characterized by more mixed land uses, including the Alameda Ferry Terminal, local baseball and soccer fields, single-family residential units, and several commercial facilities. The topography of this area is flat, and potential viewpoints of the Project site likely include only locations immediately along the shoreline, such as the Alameda Ferry Terminal. However, it is likely that views of the Project site are obscured or partially obscured from most viewpoints due to existing features in the Radius Recycling facility (such as fencing, stockpiles, buildings, and staged equipment), neighboring developments (such as shipping containers), or vessels docked in the Oakland Estuary-Inner Harbor Channel. The Project site is not generally visible from locations more distant from the shoreline due to the flat topography as well as intervening buildings and/or vegetation.

3.1.2 Regulatory Setting

There are no federal or state regulations pertaining to aesthetics that would apply to the Project. Local regulations and policies are listed in the following paragraphs.

Regional and Local

Port of Oakland Exterior Lighting Policy

The Port's Exterior Lighting Policy prescribes measures to prevent light pollution from development and operations in all areas under the jurisdiction of the Port. The General Mitigation Measures and Practices of the policy state that the "design of exterior lighting shall generally follow Illuminating Engineering Society of North America – Recommended Levels for Exterior Lighting. The Dark-Sky Association further recommends that lighting designers minimize illumination levels, pole height and spacing, glare, lighting system depreciation, and life-cycle cost. Additionally, lighting pollution mitigation measures include specifying full cutoff light fixtures, horizontally oriented lamps (bulbs), and low-reflectivity architectural surfaces."

City of Oakland General Plan

The City of Oakland General Plan contains goals and policies in various elements that are intended to protect existing scenic views in Oakland, particularly views of the Oakland Hills from the flatlands; views of downtown and Lake Merritt; views of the shoreline; and panoramic views from hillside locations. In addition, the General Plan includes objectives to enhance underused visual resources, including the waterfront, creeks, San Leandro Bay, architecturally significant buildings or landmarks, and major thoroughfares (City of Oakland 1996a). Policies relevant to the proposed Project are listed in the following paragraphs.

- **General Policy 2:** All or portions of visually significant trafficways are eligible for future designation as scenic routes and for the protective restrictions that may be appropriate thereto.

- **General Policy 3:** Urban development should be related sensitively to the natural setting.
 - **MacArthur Freeway Policy 2:** Visual intrusions within the scenic corridor should be removed, converted, buffered, or screened from the motorist's view.
 - **MacArthur Freeway Policy 3:** Panoramic vistas and interesting views now available to the motorist should not be obliterated by new structures.
 - **MacArthur Freeway Policy 4:** New construction within the scenic corridor should demonstrate architectural merit and a harmonious relationship with the surrounding landscape.
 - **Policy I/C4.1:** Protecting Existing Activities. Existing industrial, residential, and commercial activities and areas that are consistent with long-term land use plans for the City should be protected from the intrusion of potentially incompatible land uses.
 - **Policy T6.5:** Protecting Scenic Routes. The City should protect and encourage enhancement of the distinctive character of scenic routes within the City through prohibition of billboards, design review, and other means.
 - **Policy OS7.3:** Waterfront Appreciation. Promote a greater appreciation of the Oakland waterfront by preserving and enhancing waterfront views, promoting its educational value, and exploring new and creative ways to provide public access to the shoreline without interfering with transportation and shipping operations or endangering public safety.
 - **Policy OS-9.3:** Gateway Improvements. Enhance neighborhood and City identity by maintaining or creating gateways. Maintain view corridors and enhance the sense of arrival at the major entrances to the City, including freeways, San Francisco Bay Area Rapid Transit (BART) lines, and the airport entry. Use public art, landscaping, and signage to create stronger City and neighborhood gateways.
 - **Policy OS10.1:** View Protection. Protect the character of existing scenic views in Oakland, paying particular attention to (a) views of the Oakland hills from the flatlands, (b) views of downtown and Lake Merritt, (c) views of the shoreline, and (d) panoramic views from Skyline Boulevard, Grizzly Peak Road, and other hillside locations.
 - **Policy OS10.2:** Minimizing Adverse Visual Impacts. Encourage site planning for new development that minimizes adverse visual impacts and takes advantage of opportunities for new vistas and scenic enhancement.

City of Alameda General Plan

The City of Alameda General Plan contains goals and policies to preserve and enhance Alameda's waterfronts as important destinations by maximizing waterfront physical and visual access from adjoining neighborhoods and streets, considering land uses that complement the waterfront setting, and maintaining existing views (City of Alameda 2022). View corridors to the waterfront along public streets, pathways, and trails should be preserved. Policy OS10.2, which is relevant to the proposed Project, is included in the following paragraph.

- **Policy OS10.2:** Minimizing Adverse Visual Impacts. Encourage site planning for new development that minimizes adverse visual impacts and takes advantage of opportunities for new vistas and scenic enhancement.

3.1.3 Impact Analysis

a, b) No Impact

The Project site is not a part of any officially designated scenic vista, and the Project would not damage any scenic resources, including trees, rock outcroppings or historic buildings in a state scenic highway. Additionally, there are no officially designated or eligible state scenic highways in or near the Project vicinity, nor are there any roads designated scenic by the City of Oakland General Plan, Scenic Highways Element (City of Oakland 1996b). Nondesignated scenic vistas could potentially include the Alameda Ferry Terminal on the southern shoreline of the Oakland Estuary-Inner Harbor Channel, across from the Radius Recycling facility. However, the proposed Project components would be partially or fully obscured by existing improvements at or near the ferry terminal and Radius Recycling facility, or by vessels operating or moored in channel; and the proposed improvements would be consistent with the existing industrial setting.

Therefore, there would be no impact to scenic resources.

c) No Impact

The Project site vicinity is heavily urbanized. The Radius Recycling facility itself and the surrounding terrestrial parcels have existing industrial and commercial land uses, and other more distant parcels on the northern shoreline of the Oakland Estuary-Inner Harbor Channel have existing industrial, commercial, and residential uses. Therefore, the relevant significance threshold is whether the Project would conflict with applicable zoning and other regulations governing scenic quality.

As stated above, the Project vicinity has a low degree of existing visual character, due to long-standing heavy industrial uses, which lack visual harmony. There are multiple intrusive features, such as large cranes and stacks of shipping containers, and a lack of visual order and coherence. The visual character of the Project vicinity is marked by the dominant form of the aforementioned cranes and shipping containers, as well as large cargo vessels. Colors include the earth tones of the Project site and neighboring industrial parcels, hewn by the stark blue of the Oakland Estuary-Inner Harbor Channel when viewed from the south. Distinct textures include the rough material stockpiles at the Project site, and the seawall along the shoreline.

The Project would construct three buildings on the existing Radius Recycling facility site to enclose existing storage and materials processing, as well as a new conveyor within the proposed buildings. This would completely enclose and conceal the existing nonferrous material stockpiles on the site. Shredded ferrous materials would remain in unenclosed stockpiles near the proposed buildings. This would slightly alter the visual character of the area by concealing existing material stockpiles from public views.

As shown in Table 2-1, the proposed buildings would range from 36 to 65 feet in height. In terms of form, the proposed buildings would not appear out of place in the context of the existing area, nor would they be a dominant feature in the larger context of the Project vicinity.

Both the City of Oakland's and the City of Alameda's general plans contain policies regarding the minimization of adverse visual impacts (see Section 3.1.2, above). The concealment of existing material stockpiles may be viewed as enhancing the visual quality of the shoreline, and the proposed buildings

would be consistent in scale and materials with existing improvements at the facility and in the general vicinity. Therefore, there would be no impact related to damage of scenic resources.

d) No Impact

Current conditions in the Project vicinity and the Port in general include lights that operate on a 24-hour-per-day basis. The Project does not include any new permanent exterior lighting. Interior LED lights would be installed, with power provided by connections to existing onsite utilities, but these would not be visible from public viewpoints. The building skin materials would be steel and translucent PBR paneling, resulting in less glare than flat panels or panels with more reflective surfaces (e.g., bare metal). Therefore, there would be no impact related to new sources of substantial light or glare.

3.1.4 Mitigation Summary

No mitigation measures would be necessary.

3.2 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations. Would the Project:

Question	CEQA Determination
a) Conflict with or obstruct implementation of the applicable air quality plan?	Less-than-Significant Impact
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?	Less-than-Significant Impact
c) Expose sensitive receptors to substantial pollutant concentrations?	Less-than-Significant Impact
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less-than-Significant Impact

3.2.1 Environmental Setting

The proposed Project is in Alameda County and is part of the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The SFBAAB is a large, shallow air basin surrounded by coastal hills. It is characterized by warm and mainly dry summers, and mild and moderately wet winters.

Criteria Air Pollutants

Individual air pollutants at certain concentrations may adversely affect human or animal health, reduce visibility, damage property, and reduce the productivity or vigor of crops and natural vegetation. Six air pollutants have been identified by EPA and the California Air Resources Board (ARB) as being of concern both on a nationwide and statewide level: ozone; carbon monoxide (CO); nitrogen dioxide (NO₂); sulfur dioxide (SO₂); lead; and particulate matter (PM), which is subdivided into two classes based on particle size—PM equal to or less than 10 microns in diameter (PM₁₀) and PM equal to or less than 2.5 microns in diameter (PM_{2.5}). Because the air quality standards for these air pollutants are regulated using human and environment health-based criteria, they are commonly referred to as “criteria air pollutants.” Sources and health effects of the criteria air pollutants are summarized in Table 3-1.

Table 3-1 Common Sources and Health Effects of Criteria Air Pollutants

Pollutants	Sources	Health Effects
Ozone	Atmospheric reaction of organic gases with ozone precursors (NO _x and ROG) in sunlight—ozone precursor emissions from motor vehicle exhaust; stationary combustion; chemical processes; coatings	Aggravation of respiratory and cardiovascular diseases; reduced lung function; increased cough and chest discomfort
Inhalable Particulate Matter (PM ₁₀)	Stationary combustion of solid fuels; motor vehicles; fugitive dust from construction activities; industrial processes; forest fires	Respiratory symptoms; aggravation of respiratory diseases
Fine Particulate Matter (PM _{2.5})	Stationary combustion of solid fuels; motor vehicles; fugitive dust from construction activities; industrial processes; forest fires	Respiratory symptoms; aggravation of respiratory and cardiovascular diseases; weakened immune system; cancer
NO ₂	Motor vehicle exhaust; stationary combustion; atmospheric reactions	Aggravation of respiratory illness; development of asthma or respiratory infections
CO	Incomplete combustion of fuels and other carbon-containing substances, such as on-road and non-road mobile sources, wood-burning stoves, incinerators, industrial sources, and wildfires	Aggravation of some heart diseases; dizziness, headaches, and fatigue; death at high levels of exposure
SO ₂	Combination of sulfur-containing fossil fuels; smelting of sulfur-bearing metal ore; industrial processes	Aggravation of respiratory diseases; reduced lung function
Lead	Contaminated soil; metal processing; waste incinerators	Behavioral and hearing disabilities in children; nervous system impairment; decreased kidney function; cardiovascular issues; reproductive problems

Source: EPA 2023a, 2023b, 2023c, 2024a, 2024b; World Health Organization 2021.

Notes:

CO = carbon monoxide; NO_x = nitrogen oxides; NO₂ = nitrogen dioxide; PM₁₀ = particulate matter equal to or less than 10 microns in diameter; PM_{2.5} = particulate matter equal to or less than 2.5 microns in diameter; ROG = reactive organic gases; SO₂ = sulfur dioxide

Toxic Air Contaminants

Toxic air contaminants (TACs) are a set of airborne pollutants that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. The health effects associated with TACs are quite diverse and generally are assessed locally rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage; or short-term acute affects, such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches.

Public exposure to TACs can result from emissions from normal operations, as well as accidental releases. Stationary sources of TACs include gasoline stations, dry cleaners, and diesel backup generators. On-road motor vehicles and off-road sources, such as construction equipment and trains, are also common sources of TACs. According to the California Almanac of Emissions and Air Quality (ARB 2013), most of the estimated health risk from TACs can be attributed to relatively few compounds—the most important being diesel particulate matter (DPM). Other TACs for which data are available that currently pose the greatest ambient risk in California are benzene, formaldehyde, hexavalent chromium, 1,3-butadiene, and acetaldehyde.

The greatest potential TAC emissions associated with the Project would be related to DPM emissions from off-road and on-road diesel-fueled equipment used for construction activities during the anticipated 6- to 8-month construction duration. DPM differs from other TACs because it is not a single substance, but a complex mixture of hundreds of substances. Although DPM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, type of lubricating oil, and presence or absence of an emission control system. Emissions of DPM have and are forecast to continue to decline; it is estimated that emissions of DPM in 2035 will be less than half those in 2010, further reducing statewide cancer risk and noncancer health effects (ARB 2013).

3.2.2 Regulatory Setting

Federal

Clean Air Act

Federal air quality policies are regulated through the federal Clean Air Act (CAA). The CAA delegates primary responsibility for clean air to EPA. EPA develops rules and regulations to preserve and improve air quality, delegating specific responsibilities to state and local agencies, including the ARB. Health-based air quality standards have been established for criteria air pollutants by EPA at the national level and by ARB at the state level. These standards are referred to as the national ambient air quality standards (NAAQS) and the California ambient air quality standards (CAAQS), respectively.¹ The NAAQS and CAAQS were established to protect the public, with a margin of safety from adverse health impacts caused by exposure to air pollution. Both EPA and ARB designate areas of California as "attainment," "nonattainment," "maintenance," or "unclassified" for the various pollutant standards according to the CAA and the California CAA (CCAA), respectively. The current NAAQS and CAAQS are listed in Table 3-2. With respect to regional air quality, the SFBAAB is currently designated as being in nonattainment for the CAAQS for ozone, PM₁₀, and PM_{2.5}, and in nonattainment for the NAAQS for ozone and PM_{2.5}.²

Air quality regulations also focus on hazardous air pollutants (HAPs), referred to at the state level as TACs. HAPs can be separated into carcinogens (cancer-causing) and noncarcinogens, based on the nature of the effects associated with exposure to the pollutant. For regulatory purposes, carcinogens are assumed to have no safe threshold below which health impacts would not occur. Noncarcinogens differ in that there is assumed to be a safe level of exposure below which no negative health impact is believed to occur. EPA regulates HAPs through statutes and regulations that require the use of the maximum available control technology (MACT) or best available control technology (BACT) for toxics to limit emissions.

¹ Current CAAQS available at <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf> and NAAQS are available at: <https://www.epa.gov/criteria-air-pollutants/naqs-table>.

² Current air quality designations are available at <https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations>.

Table 3-2 National and California Ambient Air Quality Standards

Pollutant	Averaging Time	CAAQS ¹	Primary NAAQS ^{2,3}	Secondary NAAQS ^{2,3}
CO	1 hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	NA
CO	8 hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	NA
NO ₂	1 hour	0.18 ppm (339 µg/m ³)	100 ppb (188 µg/m ³)	NA
NO ₂	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)	Same as Primary
Ozone	1 hour	0.09 ppm (180 µg/m ³)	NA ⁵	NA
Ozone	8 hour	0.070 ppm (137 µg/m ³) ⁸	0.070 ppm (137 µg/m ³) ⁴	Same as Primary
PM ₁₀	24 hour	50 µg/m ³	150 µg/m ³	Same as Primary
PM ₁₀	Annual Arithmetic Mean	20 µg/m ³ ⁶	NA	NA
PM _{2.5}	24 hour	NA	35 µg/m ³	Same as Primary
PM _{2.5}	Annual Arithmetic Mean	12 µg/m ³ ⁶	9 µg/m ³ ¹⁰	15.0 µg/m ³
SO ₂	1 hour	0.25 ppm (655 µg/m ³)	0.075 ppm (196 µg/m ³)	NA
SO ₂	24 hour	0.04 ppm (105 µg/m ³)	0.14 ppm (365 µg/m ³)	NA
SO ₂	Annual Arithmetic Mean	NA	0.030 ppm (80 µg/m ³)	NA
Sulfates	24 hour	25 µg/m ³	NA	NA
H ₂ S	1 hour	0.03 ppm (42 µg/m ³)	NA	NA
Lead	30-day Average	1.5 µg/m ³	NA	NA
Lead	Calendar quarter	NA	1.5 µg/m ³	Same as Primary
Lead	Rolling 3-month Average	NA	0.15 µg/m ³ ⁹	
Vinyl Chloride	24 hour	0.01 ppm (26 µg/m ³)	NA	NA
Visibility-Reducing Particles	8 hour	See Note 7	NA	NA

Source: ARB 2016, EPA 2024c

Notes: CAAQS = California ambient air quality standards; CO = carbon monoxide; EPA = United States Environmental Protection Agency; H₂S = hydrogen sulfide; µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; NAAQS = national ambient air quality standards; NO₂ = nitrogen dioxide; O₃ = ozone; ppb = parts per billion; PM₁₀ = particulate matter 10 microns in diameter or less; PM_{2.5} = particulate matter 2.5 microns in diameter or less; ppm = parts per million; SO₂ = sulfur dioxide

¹ California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter – PM₁₀, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour, or 24-hour average (i.e., all standards except for lead and the PM₁₀ annual standard), then some measurements may be excluded. In particular, measurements are excluded that ARB determines would occur less than once per year on the average. The Lake Tahoe CO standard is 6.0 ppm, a level one-half the national standard and two-thirds the state standard.

² The “primary” NAAQS are those designed to protect public health, including the health of “sensitive” populations such as asthmatics, children, and the elderly. The “secondary” NAAQS are designed to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. National standards other than for ozone, particulates, and those based on annual averages are not to be exceeded more than once a year. The 1-hour ozone standard is attained if, during the most recent 3-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than 1. The 8-hour ozone standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm (70 ppb) or less. The 24-hour PM₁₀ standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m³. The 24-hour PM_{2.5} standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m³. Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM₁₀ is met if the 3-year average falls below the standard at every site. The annual PM_{2.5} standard is met if the 3-year average of annual averages spatially averaged across officially designed clusters of sites falls below the standard.

³ National air quality standards are set by the EPA at levels determined to be protective of public health with an adequate margin of safety.

- ⁴ On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour ozone concentration per year, averaged over 3 years, is equal to or less than 0.070 ppm. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the ozone level in the area.
- ⁵ The national 1-hour ozone standard was revoked by the EPA on June 15, 2005.
- ⁶ In June 2002, ARB established new annual standards for PM_{2.5} and PM₁₀.
- ⁷ Statewide Visibility-Reducing Particles Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.
- ⁸ The 8-hour California ozone standard was approved by ARB on April 28, 2005, and became effective on May 17, 2006.
- ⁹ National lead standard, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.
- ¹⁰ In December 2012, EPA strengthened the annual PM_{2.5} NAAQS from 15.0 to 12.0 µg/m³. In December 2014, EPA issued final area designations for the 2012 primary annual PM_{2.5} NAAQS. Areas designated “unclassifiable/attainment” must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015. In February 2024, EPA strengthened the annual PM_{2.5} NAAQS to 9.0 µg/m³; this rule is effective May 6, 2024.

State

ARB coordinates and oversees state and local air pollution control programs in California and implements the CCAA.

Criteria Air Pollutants

Adopted in 1988, the CCAA required ARB to establish the CAAQS. Differences in the standards between CAAQS and NAAQS are explained by the health-effects studies considered during the standard-setting process and the interpretation of the studies. The current NAAQS and CAAQS are listed in Table 3-2.

The CCAA requires that all local air districts in California endeavor to achieve and maintain the CAAQS by the earliest practicable date. The act specifies that local air districts should focus particular attention on reducing the emissions from transportation and areawide emission sources and provides districts with the authority to regulate indirect sources. ARB also maintains air quality monitoring stations throughout the state in conjunction with air districts. ARB uses the data collected at these stations to classify air basins as being in attainment or nonattainment with respect to each pollutant, and to monitor progress in attaining air quality standards.

ARB is the lead agency for the State Implementation Plans (SIPs) in California. SIPs are not single documents. They are a compilation of new and previously submitted plans, programs (such as monitoring, modelling, or permitting), district rules, state regulations, and federal controls. Many of California’s SIPs rely on the same core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations, and limits on emissions from consumer products. Local air districts and other agencies prepare SIP elements and submit them to ARB for review and approval. ARB forwards SIP revisions to EPA for approval and publication in the Federal Register. Most recently, in September 2022, ARB adopted the *2022 State Strategy for the State Implementation Plan* (State SIP Strategy), describing the proposed commitment to achieve the reductions necessary from mobile sources, fuels, and consumer products to meet federal ozone and PM_{2.5} standards over the next 15 years (ARB 2022a).

Among ARB’s other responsibilities are overseeing local air districts’ compliance with California and federal laws; determining and updating area designations and maps; and setting emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

ARB has established emission standards for vehicles sold in California and for various types of equipment. California gasoline specifications are governed by both state and federal agencies, which have imposed numerous requirements on the production and sale of gasoline in California during the past 30 years. In December 2004, ARB adopted a fourth phase of emission standards (Tier 4) in the Clean Air Non-Road Diesel Rule; these standards are nearly identical to those finalized by EPA earlier that year. The standards required engine manufacturers to meet after-treatment-based exhaust standards for nitrogen oxides (NO_x) and PM, starting in 2011, that were more than 90 percent lower than then-current levels. ARB has also adopted control measures for DPM and more stringent emissions standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors or generators).

Adopted in 2008, ARB's Truck and Bus Regulation requires heavy-duty diesel vehicles (i.e., with a gross vehicle weight rating greater than 14,000 pounds) that operate in California to reduce exhaust TAC emissions. To reduce PM and NO_x emissions this regulation requires nearly all trucks and buses are to have 2010 or newer model-year engines, or equivalent. In 2017, Senate Bill (SB) 1 (the Road Repair and Accountability Act of 2017) was passed, which, in addition to funding transportation-related projects, requires the Department of Motor Vehicles (DMV) to refuse registration, renewal, or transfer of registration for certain diesel-fueled vehicles, based on weight and model year, that are subject to specified provisions relating to the reduction of emissions of DPM, NO_x, and other criteria pollutants from in-use diesel-fueled vehicles. As of January 1, 2020, compliance with the ARB Truck and Bus regulation was automatically verified by the California DMV as part of the vehicle registration process. ARB completed the last replacement phase of the regulation within the final deadline of January 1, 2023, for upgrading to 2010 or newer model year engines.

In June 2020, ARB approved the Advanced Clean Trucks regulation, requiring truck manufacturers to sell zero-emission trucks as an increasing percentage of their annual California sales beginning in 2024, with increasingly stringent requirements to be phased in through 2035. By 2035, under the Advanced Clean Trucks regulation, zero-emission truck/chassis sales would need to be 55 percent of Class 2b to 3 truck sales, 75 percent of Class 4 to 8 straight truck sales, and 40 percent of truck tractor sales.

In April 2023, ARB adopted the Advanced Clean Fleets regulation, requiring that targeted fleets phase in the use of zero-emissions vehicles (ZEV) and that manufacturers only manufacture ZEV trucks starting in the 2036 model year. The Advanced Clean Fleets regulation is expected to introduce 1,690,000 ZEVs into the California fleet by 2050 and result in \$26.5 billion in statewide health benefits from improved air quality.

The ARB Advanced Clean Cars program combines several regulations into one package, including the Low-Emission Vehicle criteria and greenhouse gas (GHG) regulations and the ZEV regulation. Advanced Clean Cars I was adopted in 2012, and Advanced Clean Cars II was adopted in 2022. Under the Advanced Clean Cars II regulations, manufacturers of light-duty passenger cars, trucks, and sport utility vehicles are required to transition to ZEVs, beginning with model year 2026, and to phase in increasingly stringent requirements through 2035. By that date, all new passenger vehicles sold in the state would be required to have zero emissions.

Toxic Air Contaminants

As described under the federal regulations above, ARB regulates TACs, a subset of which are the federally identified and regulated HAPs, through statutes and regulations that generally require the use of MACT and BACT.

TACs in California are regulated primarily through the Tanner Air Toxics Act (Chapter 1047, Statutes of 1983) and the Air Toxics Hot Spots Information and Assessment Act (Assembly Bill [AB] 2588; Chapter 1252, Statutes of 1987). The Air Toxics Hot Spots Information and Assessment Act seeks to identify and evaluate risks from air toxics sources but does not regulate air toxics emissions. TAC emissions from individual facilities are quantified and prioritized. "High-priority" facilities must perform a health risk assessment; if specific thresholds are violated, the results must be communicated to the public in the form of notices and public meetings. TACs are regulated through statutes and rules that require the use of MACT or BACT to limit TAC emissions.

According to the *California Almanac of Emissions and Air Quality* (ARB 2013), and as discussed above, most of the estimated health risk from TACs is attributed to few compounds, the most dominant being DPM. In 2000, ARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled vehicles and engines.³

The State of California has also implemented regulations to reduce DPM emissions. Two such regulations applicable to the Proposed Project are CCR Title 13, Section 2485 and Section 2449, which limit idling time to a maximum of 5 minutes for heavy-duty commercial diesel vehicles (defined as diesel vehicles heavier than 10,000 pounds gross vehicle rated weight) and off-road diesel-fueled construction vehicles, respectively. These regulatory measures are driven by the ARB Airborne Toxic Control Measure and subsequent amendments.

Regional and Local

BAAQMD is the regional government agency responsible for air quality in the SFBAAB. BAAQMD's clean-air strategy involves preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations for air pollution generators, and issuing permits for stationary sources of air pollution. BAAQMD also inspects stationary sources and responds to citizen complaints; monitors ambient air quality and meteorological conditions; and implements programs and regulations required by the CAA, Clean Air Act Amendment (CAAA), and CCAA.

BAAQMD Air Quality Plans

The CCAA requires air quality management/air pollution control districts to assess, once every 3 years, the extent of air quality improvements and emissions reductions that they have achieved by using control measures. During this triennial assessment, the districts must review their air quality attainment plans and revise them, if necessary, to correct deficiencies in progress and incorporate new data or projections. BAAQMD prepares plans to attain ambient air quality standards in the SFBAAB in coordination with the

³ Additional regulations apply to new trucks and diesel fuel. Subsequent ARB regulations on diesel emissions include the On-Road Heavy Duty Diesel Vehicle (In Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-road Diesel Vehicle Regulation, and the New Off-road Compression Ignition Diesel Engines and Equipment Program. All of these regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment.

Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG). Among these plans are ozone attainment plans for the national ozone standard and clean-air plans for the California standard.

On April 19, 2017, the BAAQMD Board of Directors adopted the 2017 Clean Air Plan, which describes a comprehensive control strategy that BAAQMD will implement to reduce emissions of PM, TACs, ozone precursors (i.e., reactive organic gases [ROG] and NO_x), and GHGs to protect public health and the climate. Consistent with the GHG reduction targets adopted by the state of California, the Plan lays the groundwork for a long-term effort to reduce Bay Area GHG emissions 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050. Several measures of this effort have co-benefits for reducing criteria air pollutants and TACs and improving air quality. To fulfill California ozone planning requirements, the 2017 control strategy includes all feasible measures to reduce emissions of ozone precursors—ROG and NO_x—and reduce transport of ozone and its precursors to neighboring air basins. In addition, the Plan builds on and enhances BAAQMD’s efforts to reduce emissions of fine PM and TACs.

BAAQMD Rules and Regulations

BAAQMD is responsible for monitoring air pollution and developing and administering programs to reduce air pollution levels throughout the SFBAAB. Specific rules and regulations limit the emissions that various uses and activities can generate and identify specific pollution reduction measures that must be implemented. These rules regulate the emissions not only of criteria pollutants, but also TACs. The rules are also subject to ongoing refinement by BAAQMD. All projects within BAAQMD’s jurisdictional area are subject to BAAQMD rules and regulations. Specific BAAQMD rules that could be applicable include, but are not limited to, the following:

- *Regulation 2, Rule 1: Permits – General Requirements*
- *Regulation 6, Rule 1: Particulate Matter – General Requirements*
- *Regulation 6, Rule 6: Particulate Matter – Prohibition of Trackout*
- *Regulation 7: Odorous Substances*

BAAQMD CEQA Guidelines

The most recent BAAQMD CEQA Air Quality Guidelines were published in April 2023 to assist lead agencies in evaluating air quality and climate impacts from proposed land use projects and plans in the SFBAAB (BAAQMD 2023a). These guidelines include nonbinding recommendations for how a lead agency can evaluate, measure, and mitigate air quality and climate impacts generated from land use construction and operational activities. The guidelines do not replace the state CEQA statute and guidelines; rather, they are designed to provide BAAQMD-recommended procedures that are consistent with CEQA requirements and may be used for evaluating potential air quality and climate impacts (assessed separately in Section 3.7) during the environmental review process. This advisory document provides lead agencies, consultants, and project applicants with uniform procedures for addressing air quality in environmental documents.

In developing thresholds of significance for criteria air pollutants, BAAQMD considered the emission levels for which a project’s individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in potentially significant adverse air quality impacts to the region’s existing air quality conditions.

Table 3-3 presents the thresholds of significance for construction-related criteria air pollutant and precursor emissions. If daily average emissions of construction-related criteria air pollutants or precursors would exceed any applicable threshold of significance listed in Table 3-3, the Project would potentially result in a significant cumulative impact.

Table 3-3 BAAQMD Air Quality Construction-Related Thresholds of Significance (Project Level)

Pollutant/Precursor	Daily Average Emissions (lbs/day)
ROG	54
NO _x	54
PM ₁₀ (exhaust emissions only)	82
PM _{2.5} (exhaust emissions only)	54
PM ₁₀ / PM _{2.5} (fugitive dust)	Best Management Practices
Risk and Hazards for new sources and receptors	Compliance with Qualified Community Risk Reduction Plan; OR Increased cancer risk of > 10.0 in a million Increased noncancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient PM _{2.5} increase: > 0.3 µg/m ³ annual average

Source: BAAQMD 2023a

Notes:

BAAQMD = Bay Area Air Quality Management District; lbs/day = pounds per day; µg/m³ = microgram per cubic meter; NO_x = oxides of nitrogen; PM₁₀ = particulate matter equal to or less than 10 microns in diameter; PM_{2.5} = particulate matter equal to or less than 2.5 microns in diameter; ROG = reactive organic gases

City of Oakland General Plan

The City of Oakland adopted the Oakland General Plan in June 1996. Updates to plan elements for the 2045 horizon year are currently in development, with an expected approval date of 2025. Although many elements of the Oakland General Plan are not directly applicable to the proposed Project, Policy CO-12.4 sets requirements for development projects to minimize air quality impacts; and Policy CO-12.6 lists specific practices that are required to be implemented during construction, demolition, and grading activities to minimize fugitive dust emissions.

West Oakland Community Action Plan

The West Oakland Community Action Plan, *Owning Our Air*, was published by BAAQMD in October 2019 and outlines strategies to reduce air pollution in the West Oakland area, including the Project location (BAAQMD 2019). The Plan primarily focuses on addressing PM and TAC emissions from the following:

- mobile sources, including on-road vehicles, cargo equipment, locomotives, and marine vessels;
- stationary sources in and adjacent to West Oakland, such as the EBMUD wastewater treatment plant; recycling facilities such as Schnitzer Steel, CASS, and California Waste Solutions; and gas stations; back-up diesel generators; and auto-body shops; and
- sources in the area, including restaurants, other businesses with commercial cooking, and open burning.

No strategies outlined in the West Oakland Community Action Plan would be directly applicable to the proposed Project.

Port of Oakland Seaport Air Quality 2020 and Beyond Plan

In June 2019, the Port released the final Seaport Air Quality 2020 and Beyond Plan, which serves as the Port's master plan for achieving its vision of a zero-emissions Seaport (Port 2019b). The Port's 2020 and Beyond Plan relies on six key strategies for achieving its vision of a zero-emissions seaport over the course of three planning horizons through 2050, with a focus on reducing DPM by 85 percent from 2017 baseline levels. DPM from ocean-going vessels and harbor craft account for 95 percent of the residual DPM emissions in the Port; as a result, the Port's 2020 and Beyond Plan focuses on DPM reduction through vessel speed reduction and other actions, such as converting the Port's fleet to electric vehicles. No strategies outlined in the Port's 2020 and Beyond Plan would be directly applicable to the Proposed Project.

3.2.3 Impact Analysis

a) Less Than Significant

Air quality plans describe air pollution control strategies to be implemented to reduce criteria air pollutant emissions for which the region is designated as being in nonattainment; to achieve NAAQS and CAAQS by the earliest practicable date; or to maintain existing compliance with those standards, pursuant to the requirements of the CAA and CCAA. As discussed in Section 3.2.2, "Regulatory Setting," BAAQMD has adopted the 2017 Clean Air Plan that BAAQMD will implement to reduce emissions of PM, TACs, ozone precursors, and GHGs to protect public health and the climate. BAAQMD has included comprehensive control strategies into their air quality plan that combine regulatory and incentive-based measures to reduce emissions in the region. The Project would not result in a conflict with the 2017 Clean Air Plan if it supports the goals of the Clean Air Plan, includes applicable control measures from the Clean Air Plan, and would not disrupt or hinder implementation of any control measures from the Clean Air Plan.

Consistency with the 2017 Clean Air Plan is determined by evaluating project-related air quality impacts and demonstrating that project-related emissions would not increase the frequency or severity of existing violations or contribute to a new violation of the NAAQS or CAAQS. The BAAQMD CEQA Air Quality Guidelines' thresholds of significance included in Table 3-3 are applied to evaluate regional impacts of project-specific emission of air pollutants and their impact on BAAQMD's ability to reach attainment (BAAQMD 2023a). Emissions that are above these thresholds may not have been accommodated in, and may not be consistent with, the air quality plan.

Construction activities associated with the proposed Project would involve the temporary use of off-road equipment, haul trucks, and worker commute trips which would result in emissions of criteria air pollutants and ozone precursors—including ROG, NO_x, PM₁₀, and PM_{2.5}, the pollutants for which the SFBAAB is designated as being in nonattainment under either the NAAQS or CAAQS. These activities would include exhaust emissions from use of off-road equipment and on-road vehicles for material delivery, material import and export, and construction worker commutes. Ozone precursor emissions of ROG and NO_x are associated primarily with exhaust emissions and application of architectural coatings. Earthwork (e.g., site preparation) and re-entrained road dust from on-road traffic would contribute to fugitive dust generation. The primary anticipated operational activity changes associated with the proposed Project would be related to the movement of nonferrous materials in the facility (e.g., reduction of handling with the use of the proposed conveyor belt and hopper system), a change from moving and

containing materials in open stockpiles or other containment locations in the existing facility, and minor facility maintenance. Other minor operational changes include new interior lighting and operation of the conveyor belt and air handling and filtration system which would be provided by connections to existing onsite utilities. The Project operational changes would not result in the generation of any additional onsite criteria air pollutants compared to existing conditions.

In accordance with the BMPs listed in Section 2.6.1 of this IS/ND, the Project would implement the following measures to reduce potential air quality impacts:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered as necessary to control dust. The Project includes minor trenching and otherwise minimal ground disturbance.
- All construction vehicles will use a truck wheel wash when leaving the site.
- All vehicle speeds on unpaved roads will be limited to 15 miles per hour.
- Idling times will be minimized either by shutting equipment off when not in use or by reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485 of CCR). Clear signage will be provided for construction workers at all access points.
- All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will be checked by a certified mechanic and determined to be running in proper condition prior to operation.

Based on the foregoing, the Project would incorporate all of the BAAQMD basic BMPs for construction-related fugitive dust emissions that are applicable to the proposed construction activities. In addition, construction-related activities for the Project would comply with applicable BAAQMD rules and regulations, including but not limited to Regulation 6, Rule 1 (Particulate Matter) and Regulation 6, Rule 6 (Trackout).

As shown below in the discussion for question b), Table 3-4, emissions generated during construction would not exceed the BAAQMD-recommended thresholds of significance. The Project would adhere to the dust and exhaust control measures discussed above to reduce emissions during construction activities, in addition to the applicable BAAQMD rules and regulations listed above that are established, in part, to ensure consistency with the air quality attainment plans. Therefore, construction activities related to the proposed Project would not conflict with or obstruct implementation of the applicable air quality plan, and this impact would be **less than significant**.

An air quality analysis for operations was not evaluated because no operational activities resulting in air pollutant emissions would occur associated with the Project.

b) Less Than Significant

As detailed in Section 3.2.2, Regulatory Setting, the SFBAAB is currently in nonattainment for both NAAQS and CAAQS for ozone and PM_{2.5}, and in nonattainment for CAAQS for PM₁₀. BAAQMD developed the thresholds of significance to ensure that no individual project has the potential to create a significance adverse impact, with a focus on criteria air pollutants for which the SFBAAB is designated as being in nonattainment. Therefore, the thresholds of significance can be used to inform whether a project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment.

Construction-related emissions associated with the proposed Project are included in Table 3-4 for comparison with the BAAQMD-recommended thresholds of significance. Average daily emissions were estimated by dividing the total construction emissions generated during the 6 to 8 months of construction by the total number of days that emissions-generating construction activities will be expected to occur.

Table 3-4 Average Daily Construction Emissions Estimates Compared to BAAQMD Construction Thresholds of Significance

	ROG	NO _x	PM ₁₀ Exhaust	PM _{2.5} Exhaust
	Pounds per day			
Average Daily Project Emissions	2.2	16.2	0.58	0.53
BAAQMD Thresholds of Significance	54	54	82	54
Threshold exceeded?	No	No	No	No

Source: BAAQMD 2023a; Calculations Prepared by AECOM, 2024 (See Appendix B)

Notes:

BAAQMD = Bay Area Air Quality Management District; NO_x = nitrogen oxides; PM₁₀ = particulate matter less than 10 microns in diameter; PM_{2.5} = particulate matter less than 2.5 microns in diameter; ROG = reactive organic gases

As shown in Table 3-4, emissions resulting from construction of the Project would not exceed the BAAQMD-recommended thresholds of significance, and therefore would not result in a cumulatively considerable net increase of nonattainment pollutants. BAAQMD does not have quantitative mass emissions thresholds for fugitive PM₁₀ and PM_{2.5} dust. Instead, BAAQMD recommends that all projects, regardless of the level of average daily emissions, implement applicable BMPs, including those listed as Basic Construction Measures in the BAAQMD CEQA Guidelines (BAAQMD 2023a). Fugitive dust emissions are considered significant unless the project implements BAAQMD’s BMPs for fugitive dust during construction. Therefore, with implementation of the BMPs included in Section 2.6.1, and because the construction-related emissions would not exceed the BAAQMD-recommended thresholds of significance, this impact would be **less than significant**.

Health Effects of Criteria Air Pollutants

Criteria air pollutants can have human health effects at various concentrations, depending on the duration of exposure and type of pollutant. CAAQS and NAAQS were established to protect the public with a margin of safety from adverse health impacts caused by exposure to air pollution. Similarly, air districts develop region-specific CEQA thresholds of significance in consideration of existing air quality concentrations and attainment designations under the NAAQS and CAAQS. With respect to regional air

quality, as detailed in Section 3.2.2, Regulatory Setting, the SFBAAB is currently designated as being in nonattainment for the NAAQS for ozone and PM_{2.5}, and in nonattainment for the CAAQS for ozone, PM₁₀, and PM_{2.5}. As noted above, projects that emit criteria air pollutants that exceed the BAAQMD thresholds of significance are considered “cumulatively considerable” and may contribute to the regional cumulative degradation of air quality that could result in impacts to human health.

Health effects associated with ozone include respiratory symptoms, worsening of lung disease, and damage to lung tissue. ROG and NO_x are precursors to ozone, for which the SFBAAB is designated as being in as nonattainment with respect to the NAAQS and CAAQS. The contribution of ROG and NO_x to regional ambient ozone concentrations is the result of complex photochemistry. Due to the lack of quantitative methods to assess this complex photochemistry, the holistic effect of a single project’s emissions of ozone precursors is speculative. Health effects associated with short- and long-term exposure to elevated concentrations of PM₁₀ include respiratory symptoms, aggravation of respiratory and cardiovascular diseases, a weakened immune system, and cancer (WHO 2021). PM_{2.5} poses an increased health risk because these very small particles can be inhaled deep in the lungs and may contain substances that are particularly harmful to human health.

The proposed Project would generate criteria air pollutant emissions during construction activities, and the primary pollutants of concern would be ozone precursors (ROG and NO_x) and PM. Adverse health effects induced by regional criteria pollutant emissions generated by the proposed Project (ozone precursors and PM) are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, and the number and character [e.g., age, gender] of exposed individuals). For these reasons, ozone precursors (ROG and NO_x) contribute to the formation of ground-borne ozone on a regional scale, where emissions of ROG and NO_x generated in one area may not equate to a specific ozone concentration in that same area. Similarly, some types of particulate pollutant may be transported over long distances or formed through atmospheric reactions. Therefore, the magnitude and locations of specific health effects from exposure to increased ozone or regional PM concentrations are the product of emissions generated by numerous sources throughout a region, as opposed to a single individual project or plan area.

As discussed above, activities associated with implementation of the Project would meet the BAAQMD screening level criteria, indicating emissions below BAAQMD’s threshold of significance, and therefore would be unlikely to result in adverse health effects. As also discussed above, the nature of criteria pollutants is such that the emissions from an individual project or plan area cannot be directly identified as responsible for health impacts in any specific geographic location. As a result, attributing health risks at any specific geographic location to a single proposed project is not feasible, and this information and consideration is presented for informational purposes only.

c) Less Than Significant

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. BAAQMD identifies sensitive receptors as children, the elderly, offsite workers, students, and those with preexisting health conditions (BAAQMD 2023a). Accordingly, land uses that are typically considered sensitive receptors include schools, daycare centers, parks and playgrounds, and medical facilities. Industrial and commercial areas are considered the least sensitive to air pollution;

exposure periods are relatively short and intermittent because most of the workers tend to stay indoors most of the time.

Residential areas are considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to pollutants present. Recreational land uses are considered moderately sensitive to air pollution. Exercise places a high demand on respiratory functions, which can be impaired by air pollution, even though exposure periods during exercise are generally short. In addition, noticeable air pollution can detract from the enjoyment of recreation. The nearest sensitive receptor to the Project site is the residential Phoenix Lofts Residential at 737 2nd Street, Oakland, approximately 2,000 feet to the northeast. Other sensitive receptors surrounding the Project site include residences to the north across I-880, as well as offsite workers who may be present at surrounding industrial Port operational land uses. The exposure of sensitive receptors (e.g., existing offsite residents) to substantial pollutant concentrations is discussed in the following paragraphs.

Construction Emissions and Exposure to TACs at Surrounding Land Uses

Construction of the Project would generate emissions from the use of off-road diesel-powered equipment required for buildout of the enclosure structures and conveyor system. These activities may expose nearby receptors, including residents in adjacent areas, to TACs, primarily in the form of DPM.

Health risk is a function of the concentration of contaminants in the environment and the duration of exposure to those contaminants. Even in intensive phases of construction, there would not be substantial pollutant concentrations from an individual project, with the potential exception of the immediate vicinity of the construction site. Concentrations of mobile-source DPM emissions are typically reduced by approximately 60 percent at a distance of approximately 300 feet (100 meters) (Zhu and Hinds 2002). Because the nearest offsite residence (the Phoenix Lofts Residential/737 2nd Street, Oakland) is approximately 2,000 feet to the northeast of the Project site, construction activities would not take place close to offsite residences; and other sensitive land uses, such as schools, daycare centers, medical facilities, and recreational facilities, are even more distant. Offsite workers may be present intermittently at adjacent industrial land uses, but the adjacent land uses are storage and transport areas for shipping containers; they are not likely to be locations at which individual workers would remain for extended periods of time.

The dose to which receptors are exposed is a primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent to which a person is exposed to the substance. Exhaust PM_{2.5} emissions during construction would be low due to the limited quantity of construction equipment anticipated for the proposed Project. The risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer time. Health effects from TACs are often described in terms of individual cancer risk, which is based on a 30-year lifetime exposure to TACs for residences and a 25-year exposure for workers (OEHHA 2015). The total construction duration is projected to take place over approximately 6 to 8 months. As a result, the exposure of sensitive receptors to construction emissions would be intermittent and temporary in nature, and the exposure would be less than 3 percent of the total exposure period used for typical health risk calculations.

Construction of the Project would result in temporary construction emissions that would cease after the completion of the Project (approximately 6 to 8 months). As discussed above, concentrations of DPM are highest within 300 feet of the source and drop off substantially at greater distances, and the closest offsite

residence is approximately 2,000 feet away. Therefore, the possibility that construction activities could occur within a distance and for a duration that would generate substantial TAC exposure to sensitive receptors would be minimized, and this impact would be **less than significant**.

Carbon Monoxide Hotspots

A mobile-source pollutant of localized concern is CO. Relatively high concentrations are typically found near crowded intersections and along heavily used roadways carrying slow-moving traffic. Even under the most severe meteorological and traffic conditions, high concentrations of CO are limited to locations within a relatively short distance (300 to 600 feet) of heavily traveled roadways. Vehicle traffic emissions can cause localized CO impacts, and severe vehicle congestion at major signalized intersections can generate elevated CO levels, called "hot spots." Emissions and ambient concentrations of CO have decreased substantially throughout California in the past three decades. The national CO standard is attained statewide in California, and an exceedance of NAAQS or CAAQS in the region was last recorded in 1993. This is primarily attributable to requirements for cleaner vehicle emissions. Although ambient CO concentrations in the region have not exceeded NAAQS or CAAQS in many years, localized CO concentrations could still occur, particularly at intersections of high-volume roadways where a substantial number of gasoline-powered vehicles idle for prolonged durations throughout the day. Construction sites are less likely to result in localized CO hot spots due to the nature of construction activities, which normally use diesel-powered equipment for intermittent or short durations.

Construction activities associated with the proposed Project would be temporary, lasting approximately 6 to 8 months, and emissions associated with construction would cease once construction activities have been completed. Additionally, construction activities would follow regulatory limitations to minimize heavy-duty truck and equipment idling times to 5 minutes or less, and on-road vehicles would be primarily diesel-powered, exception for daily construction worker commute trips to and from the site. Approximately 12 to 42 workers would commute to the site daily, depending on the construction phase. There would be no operational increase in mobile trips associated with the Project. Accordingly, the Project would not contribute to regionally high-volume, congested roadways. Therefore, the proposed Project would not violate air quality standards for CO or have the potential to result in CO hotspots, and this impact would be **less than significant**.

An air quality analysis for operations was not evaluated because no operational activities resulting in air pollutant emissions are expected associated with the Project.

d) Less Than Significant

Exhaust odors from diesel engines and emissions associated with the application of architectural coatings may be considered offensive to some individuals. However, the Project site is in an industrial area of the Port, approximately 2,000 feet from the nearest residence, and would not introduce a substantial level of new diesel-powered equipment or architectural coating activity. Furthermore, the Project would be required to comply with BAAQMD's Regulation 7 (Odorous Substances), which place general limitations on odorous substances and nuisances to limit the generation of odors in the SFBAAB. Taking into consideration the fact that odors would be temporary and disperse rapidly with distance from the source, construction of the proposed Project would not result in other emissions, such as those leading to odors,

that would adversely affect a substantial number of people. Therefore, this impact would be **less than significant**.

An air quality analysis for operations was not evaluated because no operational activities resulting in air quality emissions are expected as a result of the Project.

3.2.4 Mitigation Summary

No mitigation measures would be necessary.

3.3 BIOLOGICAL RESOURCES

Would the Project:

Question	CEQA Determination
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW), United States Fish and Wildlife Service (USFWS), or NOAA Fisheries?	Less-than-Significant Impact
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS?	No Impact
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, or similar) through direct removal, filling, hydrological interruption, or other means?	No Impact
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	No Impact

3.3.1 Environmental Setting

This section describes the sensitive biological resources present or with potential to occur in the Project site. Database searches and a background literature review (City of Oakland 1996a, 2021, 2023; Port 2023; Schnitzer Steel 2014; Smith Monroe Gray Engineers, Inc. 2023) were conducted to characterize biological resources in the Project site. No wildlife or botanical surveys were conducted.

Searches of the following databases were performed to identify special-status species⁴ and/or sensitive biological resources (e.g., wetlands and/or waters) known to occur or with potential to occur in the Project site and vicinity:

⁴ Special-status species include species listed by the State of California or the federal government as endangered, threatened, or rare; candidates for state or federal listing as endangered or threatened; species identified by the California Department of Fish and Wildlife (CDFW) as species of special concern; species listed as fully protected under the California Fish and Game Code; species afforded protection under local or regional planning documents; taxa (i.e., taxonomic categories or groups) that meet the criteria for listing, even if not currently

- California Natural Diversity Database (CNDDDB) within a 1-mile radius from the project site (CDFW 2024)
- California Native Plant Society (CNPS) Rare Plant Inventory quadrangle search for the United States Geological Survey (USGS) Oakland West quad (CNPS 2024)
- National Resource Conservation Service (NRCS) Web Soil Survey Data for the Project Site (NRCS 2024)
- United States Fish and Wildlife Service’s (USFWS) Information for Planning and Consultation database identifying federally regulated sensitive resources with potential to occur in the project site (USFWS 2024a)
- USFWS’s Critical Habitat for Threatened and Endangered Species Online Mapping Tool (USFWS 2024b)
- National Wetland Inventory Wetlands Mapper (USFWS 2024c)

The Project site is approximately 200 feet north of the Oakland Estuary-Inner Harbor Channel and approximately 2 miles east of the Outer Harbor Channel, in San Francisco Bay. The Project site is in an urbanized industrial, transportation-related development area (see Section 2, Project Description), in a continuously disturbed, partially paved, urban and industrial setting.

No natural habitats, plant communities, or trees occur in the Project site. No wetlands are mapped in the Project site (USFWS 2024c), and soils in the Project site are characterized as “urban land” (NRCS 2024). Due to the highly developed and continuously disturbed nature of the Project site and the lack of vegetation there, suitable conditions to support protected wetlands and other waters do not exist in the Project site. No Critical Habitat occurs within 5 miles from the Project site (USFWS 2024b). No special-status species have been documented in the Project site, according to the CNDDDB (CDFW 2024). Although several special-status wildlife and plants were identified in database searches in the Project site vicinity, none of these species have potential to occur in the Project site due to its developed nature, lack of vegetation, and continuous disturbances—with the exception of potential occasional flyovers by special-status birds moving between known habitat areas in nearby areas in the Oakland Estuary and during migration along the Pacific Flyway. Both the shoreline and open waters of San Francisco Bay and Oakland Inner Harbor are potential wildlife corridors (City of Oakland 2023a).

San Francisco Bay is a critical migration stopover point along the Pacific Flyway migration route; the nearest Audubon Important Bird area is mapped at the Alameda Wildlife Refuge (National Audubon Society 2023), approximately 1.5 miles southwest of the Project site across the Oakland Inner Harbor. The Project site may also be used by common urban-adapted species such as migratory birds.

included on any list, as described in California Code of Regulations (CCR) Section 15380 of the CEQA Guidelines; and taxa considered by CDFW to be “rare, threatened, or endangered in California” as assigned a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, or 2B.

3.3.2 Regulatory Setting

Federal

Federal Endangered Species Act

The Federal Endangered Species Act (ESA) provides for the conservation of threatened and endangered species, including plants and animals and the habitats in which they are found. The law requires federal agencies, in consultation with the USFWS and/or the National Oceanic and Atmospheric Administration (NOAA) Fisheries Service, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species. The law also prohibits any action that causes a “taking” of any listed species of endangered fish or wildlife. Likewise, import, export, interstate, and foreign commerce of listed species are all generally prohibited.

Clean Water Act

The Clean Water Act (CWA) (33 United States Code [USC] 1251 et seq.) establishes the basic structure for regulating discharges of pollutants into waters of the United States, and provides EPA with the authority to implement pollution control programs, including setting wastewater standards for industry, and water quality standards for contaminants in surface waters. Under the CWA, it is unlawful for any person to discharge any pollutant from a point source into navigable waters without a permit. Section 404 of the Federal CWA requires a project applicant to obtain a permit from the United States Army Corps of Engineers (USACE) before engaging in any activity that involves any discharge of dredged or fill material placed in waters of the United States, including wetlands. Under Section 401 of the CWA, an applicant applying for a Section 404 permit must obtain a certificate from the appropriate state agency stating that the intended dredging or filling activity is consistent with the state’s water quality standards and criteria.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 protects migratory birds by prohibiting the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by USFWS.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act prohibits anyone without a permit issued by the Secretary of the Interior from “taking” bald or golden eagles, including their parts (including feathers), nests, or eggs. In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present—if, on the eagle’s return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death, or nest abandonment.

State

California Endangered Species Act

The California Endangered Species Act (CESA) is a California environmental law that conserves and protects plant and animal species at risk of extinction. Originally enacted in 1970, CESA was repealed and

replaced by an updated version in 1984, which was amended in 1997. Pursuant to the requirements of CESA, an agency reviewing a project within its jurisdiction must determine whether any California-listed endangered or threatened species may be present in the project area and whether the project would have a potentially significant impact on such species. In addition, the California Department of Fish and Wildlife (CDFW) encourages informal consultation on any project that may affect a candidate species. CESA prohibits the take of California-listed animals and plants in most cases, but CDFW may issue incidental take permits under special conditions.

California Native Plant Protection Act

The California Native Plant Protection Act (NPPA) (Fish and Game Code, Section 1900 et seq.) was enacted in 1977; it allows the Fish and Game Commission to designate plants as rare or endangered. There are 64 species, subspecies, and varieties of plants that are protected as rare under NPPA. NPPA prohibits take of endangered or rare native plants, but it includes some exceptions for agricultural and nursery operations, and emergencies. After properly notifying CDFW, exceptions are also made for vegetation removal from canals, roads, and other sites; changes in land use; and certain other situations.

California Fish and Game Code

Section 3503 of the California Fish and Game Code (CFGF) states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird; Section 3503.5 states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders Falconiformes and Strigiformes), including their nests or eggs; and Section 3513 states that it is unlawful to take any migratory nongame bird. Typical violations include destruction of active nests as a result of tree removal; and failure of nesting attempts, resulting in loss of eggs and/or young. These violations can be caused by disturbance of nesting pairs by nearby human activity.

Sections 3511, 4700, 5050, and 5515 of the CFGF specifically prohibit the take of wildlife species that are classified as “fully protected” in California, even if other CFGF sections provide for incidental take of the species. CDFW has informed nonfederal agencies and private parties that they must avoid take of any fully protected species when they carry out projects.

Regional and Local

Alameda County does not have a Habitat Conservation Plan or a Natural Community Conservation Plan for the Port area. However, local policies applicable to the Project site are included in City of Oakland General Plan Open Space, Conservation and Recreation Element, as described in the following section.

City of Oakland General Plan Policies

The City of Oakland General Plan Open Space, Conservation and Recreation Element contains policies relevant to the protection of biological resources, native plant communities, and wetlands (City of Oakland 1996a), including the following relevant to the Proposed Project:

- **Policy CO-6.5:** Protection of Bay and Estuary Waters. Protect the surface waters of the San Francisco Estuary system, including San Francisco Bay, San Leandro Bay, and the Oakland Estuary. Discourage shoreline activities which negatively impact marine life in the water and marshland areas.

- **Policy CO-11.1:** Protection from Urbanization. Protect wildlife from the hazards of urbanization, including loss of habitat and predation by domestic animals.
- **Policy CO-11.2:** Migratory Corridors. Protect and enhance migratory corridors for wildlife. Where such corridors are privately owned, require new development to retain native habitat or take other measures which help sustain local wildlife population and migratory patterns.

3.3.3 Impact Analysis

a) Less-than-Significant Impact

The proposed Project would occur in a highly developed industrial area that lacks vegetation and natural wildlife habitat and is continuously disturbed by existing operations. Furthermore, no special-status species are anticipated to occur in the project site, except for occasional flyovers, possibly during migration along the Pacific Flyway (see the discussion for the discussion for question d) below).

Common urban-adapted migratory birds could nest in the Project site prior to construction or during operations. If construction activities occur during the nesting bird season, and nesting birds are present on site, Project activities could disturb nest sites and/or cause nests to be abandoned or to fail.

Operational activities associated with the proposed Project are unlikely to indirectly impact nesting birds if they select nest sites near operational activities because they would be expected to be habituated to site disturbances, and the Project would not introduce new or worsened site disturbance. Implementation of Project-related BMPs (see Section 2.6) including a preconstruction nesting bird survey if construction is to occur during the nesting season, would ensure that the Project's potential impact on this checklist item is **less than significant**.

b) No Impact

The Project site does not contain riparian habitat or any sensitive natural communities; therefore, the Proposed Project would have **no impact** on this biological resource checklist item.

c) No Impact

The Project site does not support any wetlands or other waters. Although the Project site is approximately 200 feet from the Oakland Inner Harbor, the proposed Project construction and operations would be confined to within the existing Radius Recycling facility. A concrete barrier-style fence line further discourages or prevents encroachment of site activities into the adjacent Harbor. No construction or Project-related operations would occur in or immediately adjacent to the open water or shoreline. Furthermore, all construction- and operations-related stormwater would be contained, stored, and reclaimed or evaporated with the current facility treatment system to the extent that it does not enter the Oakland Inner Harbor or greater San Francisco Bay (see Section 2.6, Best Management Practices). Therefore, the Project would result in **no impact** (direct or indirect) to state or federally protected wetlands or other waters.

d) No Impact

As discussed in the discussion for question c) above, the Project site is approximately 200 feet from the Oakland Inner Harbor, which is a potential aquatic wildlife movement corridor. The Project site is also situated between nearby areas of importance for the Pacific Flyway, a bird migration corridor. Construction and operation of the proposed Project would be confined to within the existing facility, except for construction vehicle trips on local roadways, and therefore would not directly encroach on the Oakland Inner Harbor or habitat area of importance for the Pacific Flyway.

The proposed 36- to 65-foot tall buildings are not likely to pose a substantial collision risk to birds that may fly over the Project site during migration along the Pacific Flyway, because the buildings would be approximately 200 feet or more from the Harbor, in the existing developed industrial facility, and would be no taller than existing infrastructure at the facility and its surrounding areas. Furthermore, potential lighting-induced bird collisions or entrapment inside the buildings (in particular to migratory songbirds, which tend to migrate at night) are not anticipated, because lighting would be minimal and limited to inside the building structures. Potential for daytime entrapment of birds inside the buildings (particularly during periods of inclement weather during spring and fall migration) would be limited by the regular opening and closing of the building doors during operational hours, and generally continuous operational disturbances during daytime operations, typically between 7 a.m. and 5 p.m.

Project construction is not anticipated to generate noise levels that would disturb nearby habitat areas of importance for the Pacific Flyway. Based on the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) (FHWA 2006), noise levels for combined Project equipment required for construction would be 82 decibels (dB), equivalent sound level (L_{eq}) and 83 dB maximum sound level (L_{max}) at 50 feet. This is comparable to noise levels generated by heavy traffic, and noise levels would substantially decrease farther from the source (e.g., reduction to 50 dB, L_{eq} at 2,000 feet from construction [noise level comparable to a normal conversation]). The operational noise levels of the Radius Recycling facilities would be largely unchanged under the Project, and the facility would remain subject to City of Oakland construction noise standards (see Section 2.6, Best Management Practices). Additional detail on Project-generated noise is provided in Section 3.11, Noise.

Project construction and operations would not encroach on the neighboring Oakland Inner Harbor, and indirect impacts to the Oakland Inner Harbor and associated aquatic wildlife movement are not anticipated. Any stormwater runoff during the approximately 6- to 8-month duration of construction would be captured and contained in the existing stormwater treatment system, as would stormwater during operations. The Project would not add any impervious areas or otherwise affect drainage in a way that would affect potential pollutant runoff. Radius Recycling operates under an active NPDES Permit, in accordance with the State Water Resources Control Board (SWRCB) Permit Records database, which includes measures to avoid discharges of pollutants to sensitive areas (see additional discussion in Section 3.9, Hydrology and Water Quality). Operational changes under the Project would be minimal and would not result in new or increased potential for discharge of pollutants to the Oakland Inner Harbor. The Project does not entail any pile driving or other construction activities that could potentially generate significant underwater noise to disturb aquatic wildlife movement or migration.

In consideration of the Project's location in the existing industrial Radius Recycling facility, the relatively small scale of the Project, and the existing runoff controls, the Project would result in **no impact** related to movement or migration of wildlife.

e) No Impact

The Project site is highly industrialized and developed and does not contain any protected trees or other protected biological resources. Furthermore, as discussed in the discussion for question d) above, the Project does not support any wildlife habitat, including trees subject to local city ordinances. Furthermore, as discussed in the discussion for question d) above, the proposed Project (i.e., three buildings, conveyor system, and appurtenances) would pose minimal hazards to wildlife that uses the surrounding areas and may fly over the Project site. Therefore, there would be **no impact** from the proposed Project related to conflicts with local policies or ordinances protecting biological resources.

f) No Impact

There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans applicable to the Project; therefore, there would be **no impact**.

3.3.4 Mitigation Summary

No mitigation would be necessary.

3.4 CULTURAL RESOURCES

Would the Project:

Question	CEQA Determination
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in Section 15064.5?	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	No Impact
c) Disturb any human remains, including those interred outside of formal cemeteries?	No Impact

3.4.1 Environmental Setting

Cultural resources, both archaeological and historic architecture, are identified and assessed in association with their natural and cultural contexts. The brief discussion of the cultural settings of the study area and vicinity provided in the following paragraphs was developed as part of the recent cultural resources technical report prepared for the Port’s Oakland Harbor Turning Basins Widening project completed by AECOM (2023), which overlaps with the Project site (AECOM 2023)

San Francisco Bay, as we now know it, was formed during a period of relatively rapid sea-level rise. After 4,000 before Common Era (BCE), the sea-level rise slowed, and marshes began to develop around the Bay. During this post-4,000 BCE period, numerous shell middens were created as a result of human activity in the Bay Area. Marshes are particularly productive ecosystems, and most of the San Francisco Bay shell middens were near marshes (Nelson 1909; Bickel 1978). The area’s prehistoric populations took advantage of this productivity by harvesting fish, shellfish, birds, and land mammals that lives or fed in or near the marsh, as well as the marsh plants themselves. Prior to historic-period development, both the Inner and Outer Harbor Turning Basins were undeveloped marshlands.

By around 1500 BCE, Costanoans entered the Bay Area from the Sacramento River Delta region and occupied most of the eastern shore of San Francisco Bay, presumably displacing or assimilating older Esselen language speakers as they advanced. The study area is situated within the *Chochenyo* territory of the Costanoan Indians. Costanoan is not a native term, but rather is derived from the Spanish word *Costanos*, meaning coast people. The term Ohlone is preferred by tribal groups representing the area. The basic unit of the Ohlone political organization was the tribelet, consisting of one or more socially linked villages and smaller settlements within a recognized territory. Subsistence activities emphasized gathering berries, greens, and bulbs; harvesting seeds and nuts—of which acorn was the most important; hunting for elk, deer, pronghorn, and smaller animals; collecting shellfish; and taking varied fishes in stream, bay, lagoon, and open coastal waters.

The population and traditional lifeways of the Ohlone were severely affected by the influences of the Spanish colonists and the Mission system. Spanish explorers first sighted San Francisco Bay in 1769, and a Spanish supply ship entered it in 1775. The first settlers—Spanish soldiers and missionaries—arrived in the Bay Area in 1776. The native Ohlone culture was radically transformed when European settlers moved into northern California, instituting the mission system and exposing the native population to diseases to which they had no immunity. By 1800, few if any Ohlone remained on the land or subsisted in native

lifeways; in fact, native population had declined in some areas by as much as 90 percent. By the 1820s, the Bay Area had a Spanish fort, town, and five missions in the region. During this period, large tracts of land were granted to individuals for cattle ranches. The King of Spain granted Don Luis Maria Peralta the Rancho San Antonio (also known as the Peralta Grant), which comprised approximately 44,800 acres, and all of the present-day cities of Oakland, Piedmont, Berkeley, Emeryville, Alameda, Albany, and part of San Leandro.

Peralta's land grant was confirmed after Mexico's independence from Spain in 1822, and the title would be honored again when California entered the Union in 1848. In 1850, Colonel Henry S. Fitch attempted to make the first purchase of land that would become Oakland; a year later, William Worthington Chipman and Gideon Aughinbaugh purchased the 160-acre "Encinal" on the peninsula of what is now the island of Alameda. The township of Oakland was incorporated in 1852. During the 1850s and 1860s, Oakland developed as a small residential and industrial center. In 1863, a wharf was constructed at the foot of 7th Street to provide ferry service to San Francisco. By 1869, Oakland was the western terminus for the first transcontinental railway.

Following passage of the Rivers and Harbors Act of 1873, USACE began the planning of improvements in what was to ultimately become Oakland Harbor. The Act authorized improvements to San Antonio Creek, including deepening the channel leading to the Oakland Estuary and the Brooklyn Basin. USACE's first project was to build parallel "training walls," running 750 to 1,000 feet apart, to direct (i.e., train) the tides in such a way as to scour the bottom of the newly created channel. Construction of two "training" walls commenced in 1875 and appears to have been completed by 1896. The first infill behind the walls was the construction of the railroad moles. The Southern Pacific Railroad built a mole on the Alameda side in the late 19th century; the Western Pacific Railroad built their mole behind the northern training wall in the mid-1910s. The two cities and some private parties gradually filled in (i.e., reclaimed) land behind the moles. During the late 1930s and early 1940s, the Army and Navy filled in thousands of acres behind the two training walls. The training walls ultimately established the boundaries for the future development of the area, including what was to become Alameda to the south of the channel; and the Western Pacific Railroad rail yards (now UPRR), the Naval Supply Center, and the Oakland Army Base on the Oakland (northern) side of the channel. In time, the tidelands and waterways south of the Alameda Training Wall and north of the Oakland Training Wall, including the area of the former Schnitzer Steel parcel, would be infilled, and this infill obscured from view the surfaces of the two training walls. With the completion of the Bay Bridge in 1936, and the increasing reliance on automobiles for routine transportation needs, suburbs expanded, leading to land use changes across the East Bay.

Baseline Conditions

A cultural resources records search was conducted by AECOM Senior Archaeologist and Historian Karin G. Beck at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS), Sonoma State University, on June 30, 2021 (File No. 202678) for the aforementioned Oakland Harbor Turning Basins Widening project cultural resources technical report (AECOM 2023). The cultural records search included the proposed Project area. The NWIC, an affiliate of the State of California Office of Historic Preservation, is the official state repository of cultural resource records and studies for Alameda County. Site records and previous studies on files at the NWIC were accessed, and the following references were also reviewed:

- National Register of Historic Places (NRHP) (NPS 2021)
- California Register of Historical Resources (CRHR) (OHP 2021)
- *Five Views: An Ethnic Historic Site Survey for California* (OHP 1988)
- California State Historical Landmarks (OHP 1996)
- California Inventory of Historic Resources (California Department of Parks and Recreation 1976)
- California Points of Historical Interest (OHP 1992)
- Built Environment Resources Directory (OHP 2020)
- Handbook of the North American Indians: Costanoan (Levy 1978)
- USGS 15-minute *San Francisco, California* Topographic Map (USGS 1895, 1915, 1947)
- USGS 7.5-minute Oakland West, California Topographic Maps (USGS 1949)
- Historic Aerial Photographs, Oakland and Alameda (University of California, Santa Barbara 1931, 1939, 1965)

In addition to the NWIC records search, many documents were reviewed in support of the Oakland Harbor Turning Basins Widening project's cultural resources technical report. These included other environmental documents, cultural resources reports, and technical data that could provide insight into the potential for cultural resources to occur in that study area, inclusive of the Radius Recycling property.

The records search at the NWIC, in concert with the review of relevant documents supplied by the Port and USACE, revealed that the entirety of the former Schnitzer Steel property, now Radius Recycling, had been previously inventoried for cultural resources in the past, with negative results for the Proposed Project site (Basin 1997; Lerner 1988).

The record search effort revealed that there are 10 historic resources in the general vicinity of the former Schnitzer Steel property, but none occur on the current Radius Recycling Project site. These include:

- Oakland Harbor Training Walls and Federal Channel
- Naval Supply Center Oakland Historic District
- Oakland Army Base Historic District
- Southern Pacific West Oakland Shops Historic District
- Naval Air Station (NAS) Alameda Historic District on NAS Alameda
- Southern Pacific Railroad Industrial Landscape Historic District in Oakland
- Todd Shipyard
- Main Shop Building of the Todd Shipyard (individually eligible)
- USS Potomac
- Crane X422 – Howard Terminal

The closest resource to the Proposed Project area is Crane X422 at Howard Terminal. It should be noted that the significance of Crane X422 is disputed; however, as discussed in the recent Waterfront Ballpark District at Howard Terminal EIR (City of Oakland 2021), the final significance of the potential historic resource would not affect the cultural resource analysis for the proposed Project, because Crane X422 is situated approximately 0.10 mile away, at its closest, to the Project site (Crane X422 can be moved on a set of rail tracks, and is often farther away than 0.10 mile).

The archaeological sensitivity of the sediments below the Project site is considered low, given that the Project site and surrounding vicinity were constructed atop introduced fill. The lack of archeological sensitivity in sediment underlying the Project site and surrounding areas is also documented in the

forementioned cultural resources technical report completed for the Port's Oakland Harbor Turning Basins Widening project (AECOM 2023). It should be noted that the anticipated maximum depth of disturbance for the proposed Project is 4 feet below existing grade. From the surface downward, materials underlying the concrete slab where improvements would be constructed include:

- 1 to 2 feet of cement paving at the surface,
- 1 foot of dense and graded aggregate base,
- 5 to 10 feet of loose to dense introduced fill,
- 25 to 40 feet of native San Francisco Bay Mud, and
- medium dense to dense fine-grained Merritt Sand.

Therefore, Project ground disturbance would not extend beneath the 5 to 10 feet of loose to dense introduced fill.

3.4.2 Regulatory Setting

Federal

National Historic Preservation Act

The National Historic Preservation Act (16 USC 470 et seq.) declares federal policy to protect historic sites and values, in cooperation with other nations, states, and local governments. Subsequent amendments designated the State Historic Preservation Officer as the individual responsible for administering state-level programs. Federal agencies are required to consider the effects of their undertakings on historic resources, and to give the Advisory Council on Historic Preservation a reasonable opportunity to comment on those undertakings. Federal agencies are required by statute to "take into account" the effects of their actions and undertakings on "historic properties." A historic property is the federal term that refers to cultural resources (e.g., prehistoric or historical archaeological sites; maritime historical resources, including shipwrecks, buildings, and structures on the shore or in the water; and cultural artifacts) that are 50 or more years old, possess integrity, and meet the criteria of the NRHP. The NRHP eligibility criteria are found at 36 Code of Federal Regulations (CFR) Section 60.4. A lead federal agency is responsible for project compliance with Section 106 of the National Historic Preservation Act and its implementing regulations (36 CFR Part 800).

State

California Environmental Quality Act

CEQA requires lead agencies to determine whether a proposed project would have a significant effect on historical resources, including both archaeological and historic architectural (built environment) resources. The CEQA Guidelines (Section 15064.5(a)) define a historical resource as: (1) a resource listed in or determined to be eligible by the State Historic Resources Commission for listing in the CRHR; (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (3) any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. Such resources may be

considered historically significant, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

In addition, Section 15064.5 (a)(4) states that "the fact that a resource is not listed in, or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to PRC Section 5020.1(k)), or identified in an historical resources survey (meeting the criteria in PRC Section 5024.1(g)) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC Sections 5020.1(j) or 5024.1." If a lead agency determines that an archaeological site is a historical resource, the provisions of PRC Section 21084.1 and CEQA Guidelines Section 15064.5 would apply.

If an archaeological site does not meet the CEQA Guidelines criteria for a historical resource, then the site may meet the threshold of PRC Section 21083 regarding unique archaeological resources. A unique archaeological resource is an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. It is associated with the lives of persons important in our past.
3. It 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.
4. It has yielded, or may be likely to yield, information important in prehistory or history (PRC Section 5024.1[c]).

The CEQA Guidelines note that if a resource is neither a unique archaeological resource nor a historical resource, the effects of the project on that resource shall not be considered a significant effect on the environment (CEQA Guidelines Section 15064[c][4]).

California Native American Graves Protection and Repatriation Act (2001)

In the California Health and Safety Code, Division 7, Part 2, Chapter 5 (Sections 80108030), broad provisions are made for the protection of Native American cultural resources. The Act sets the state policy to ensure that all California Native American human remains and cultural items are treated with due respect and dignity. The Act also provides the mechanism for disclosure and return of human remains and cultural items held by publicly funded agencies and museums in California. Likewise, the Act outlines the mechanism with which California Native American tribes not recognized by the federal government may file claims to human remains and cultural items held in agencies or museums.

California PRC, Section 5020

This California code created the California Historic Landmarks Committee in 1939. It authorizes the Department of Parks and Recreation to designate Registered Historical Landmarks and Registered Points of Historical Interest.

California PRC, Section 5097.9

PRC Section 5097.9 details procedures to be followed whenever Native American remains are discovered. It states that no public agency—and no private party using or occupying public property, or operating on public property, under a public license, permit, grant, lease, or contract made on or after July 1, 1977—shall interfere with the free expression or exercise of Native American religion as provided in the United States Constitution and the California Constitution. It further states that no such agency or party shall cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine on public property, except on a clear and convincing showing that the public interest and necessity so require.

California PRC, Section 7050.5

Every person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in Section 5097.99 of the PRC. In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, the PRC states that there shall be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlie adjacent remains, until the coroner of the county in which the human remains are discovered has determined the remains to be archaeological. If the coroner determines that the remains are not subject to his or her authority, and if the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact the Native American Heritage Commission (NAHC) by telephone within 24 hours.

California Health and Safety Code, Section 7051

Under this code, every person who removes any part of any human remains from any place where it has been interred, or from any place where it is deposited while awaiting interment or cremation, with intent to sell it or to dissect it, without authority of law, or written permission of the person or persons having the right to control the remains under Section 7100, or with malice or wantonness, has committed a public offense that is punishable by imprisonment in the state prison.

California Code of Regulations, Title 14, Section 4307

Under this state preservation law, no person shall remove, injure, deface, or destroy any object of paleontological, archaeological, or historical interest or value.

Regional and LocalCity of Oakland General Plan

The City of Oakland's General Plan Historic Preservation Element contains policies related to historic preservation (City of Oakland 1998a). This includes the following goal.

- **Goal 2** – to preserve, protect, enhance, perpetuate, use, and prevent the unnecessary destruction or impairment of properties or physical features of special character or special historic, cultural, educational, architectural, or aesthetics interest or value

3.4.3 Impact Analysis

a) No Impact

There are no historical resources at the Project site or Radius Recycling facility, nor are there any historical resources on neighboring parcels other than the disputed mobile CraneX422 at Howard terminal. Project construction and operations would be confined to within the Radius Recycling facility, except for construction vehicles traveling on area roadways. Therefore, the Project would result in **no impact** related to historical resources pursuant to Section 15064.5.

b, c) No Impact

As detailed in Section 2, Project Description, the proposed Project—inclusive of the three new buildings, conveyor system, and appurtenances—will be limited to site preparation, erecting the proposed structures and improvements, bringing electrical connections to them (from existing nearby electrical sources, including trenching), and providing connections to the existing drainage system (including trenching). The new structures, conveyor system, and appurtenances will be constructed on an existing impermeable concrete slab, with the perimeter foundation thickened to 2 feet in depth for Buildings A and B, and 3 feet in depth for Building C and the area under the hoppers in Building A. This “thickening” of the existing slab will require excavations with a maximum depth of 4 feet below existing grade for the thickest perimeter foundation below Building C and the area under the hoppers in Building A (including 1 foot of over-excavation to allow for the placement of engineered base material). The excavations for the thickening of the concrete slab below Building B and the remainder of Building A will be approximately 1 foot shallower. In addition, trenching to a maximum depth of 3 feet below the existing grade will be required for the electrical and drainage connections. All of this ground-disturbing activity would be confined to within the 1 to 2 feet of concrete paving at the surface, 1 foot of dense and graded aggregate base, and 5 to 10 feet of loose to dense introduced fill (the top 1 to 2 feet).

The proposed Project therefore does not require any ground-disturbing activities in native soils that could result in an adverse change to the significance of an archaeological resource pursuant to Section 15064.5 or could result in disturbing human remains. Furthermore, the proposed Project site is situated on reclaimed land, and past construction required to build the Radius Recycling/Schnitzer Steel facility and neighboring Howard Terminal were extensive in scale and heavily disturbed the original fill and underlying sediments. Therefore, the likelihood of intact archaeological or human remains beneath the Project site is low, and the Project would have **no impact** related to the significance of archaeological resources pursuant to Section 15065.5, or related to disturbance of human remains.

3.4.4 Mitigation Summary

No mitigation measures would be necessary.

3.5 ENERGY

Would the Project:

Question	CEQA Determination
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?	Less-than-Significant Impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less-than-Significant Impact

3.5.1 Environmental Setting

The Project site is in Alameda County, which is under the jurisdiction of BAAQMD. Existing conditions are discussed in the following paragraphs.

The transportation sector (predominantly from vehicles) is by far the largest consumer of energy, accounting for 38 percent of end-use energy consumption in California (United States Energy Information Administration 2023). There is a direct link between the vehicle miles traveled (VMT) and energy use, as well as related GHG emissions. In addition to mobile sources in the transportation sector, energy is consumed from residential and commercial/industrial building usage. Energy is consumed by building uses primarily in the form of electricity and natural gas, and by transportation uses primarily in the form of gasoline and diesel fuel.

In the Project site, electrical and natural gas services are provided by Pacific Gas and Electric Company (PG&E). In 2022, PG&E provided 104,694,978 megawatt hours of electricity to its customers (CEC 2023a). Electricity is generated from a variety of sources, including hydropower, natural-gas-fired generators, renewable resources eligible under the state’s Renewable Portfolio Standards (RPS) program (e.g., solar, wind, geothermal, hydroelectric, and bioenergy), and purchases from other energy suppliers. PG&E’s electricity base mix as of 2021 was provided by 48 percent qualified renewable energy sources and 91 percent by GHG-free sources (PG&E 2022). In addition, the proportion of PG&E-delivered electricity for all customers generated from eligible renewable energy sources is anticipated to increase to 100 percent by 2040. The general electrical power mix for PG&E as of 2021 is presented in Table 3-5.

Natural gas service is provided to Alameda County and the surrounding areas of northern and central California by PG&E through portions of PG&E’s approximately 43,000 miles of natural gas distribution pipelines (PG&E 2024). Natural gas consumption in the PG&E service area was approximately 4,449 million therms in 2022 (CEC 2023b), approximately 8.5 percent (377 million therms) of which were provided to users in Alameda County (CEC 2023c).

Table 3-5 PG&E Electrical Power General Mix, 2021

Energy Source	Percentage (%)
Eligible renewable, total	47.7
<i>Biomass and biowaste</i>	4.2
<i>Geothermal</i>	5.2
<i>Eligible hydroelectric</i>	1.8
<i>Solar</i>	25.7
<i>Wind</i>	10.9
Coal	0.0
Large hydroelectric	4.8
Natural gas	8.9
Nuclear	39.3
Other	0.0
Unspecified power	0.0
Total	100.0

Source: PG&E 2022

Notes:

¹ As defined in Senate Bill 1078, and in Senate Bill 1038, which modified the definition of “in-state renewable electricity generation technology,” an eligible renewable resource includes geothermal facilities; hydroelectric facilities with a capacity rating of 30 MW or less; biomass and biogas; selected municipal solid waste facilities; photovoltaic, solar thermal, and wind facilities; and ocean thermal, tidal current, and wave energy generation technologies.

² “Unspecified Power” sources refer to electricity that has been purchased through open-market transactions and is not traceable to a specific generation source.

MW = megawatt

Energy Use for Transportation

As discussed above, transportation is the largest energy-consuming sector in California, accounting for approximately 38 percent of all energy use in the state (United States Energy Information Administration 2023). More motor vehicles are registered in California than in any other state, and commute times in California are among the longest in the country. Because transportation accounts for more energy consumption than other end-use sectors, the fuel use and travel demand associated with the buildout of the Project would be important for consideration in an assessment of energy efficiency.

Transportation fuel has and will continue to diversify in California and elsewhere. Although gasoline and diesel fuel have historically accounted for nearly all demand, there are now numerous options, including ethanol, natural gas, electricity, and hydrogen. Currently, despite advancements in alternative fuels and clean vehicle technologies, gasoline and diesel remain the primary fuels used for transportation in California, and California remains the second-highest consumer of motor gasoline in the country (United States Energy Information Administration 2023).

3.5.2 Regulatory Setting

Although many federal, state, regional, and local energy-related plans, policies, and regulations do not directly apply to the implementation of the Proposed Project, an overview of the regulatory setting applicable to energy use is helpful for understanding the overall context for energy conservation and

efficiency actions locally and regionally. Many of the statewide and regional policies and plans developed to reduce GHG emissions, such as the ARB (2022b) Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan), also target reductions in energy use through reduced VMT and increased energy efficiency.

There are also several energy sector regulations established to reduce GHG emissions in California. Established in 2002, California's RPS requires electricity providers to provide a specified minimum portion of their electricity supply from eligible renewable resources by milestone target years. The RPS requires retail sellers of electricity to serve 60 percent of their electric load with renewable energy by 2030, with interim targets of 44 percent by 2024 and 52 percent by 2027, as well as requiring that all of the state's electricity come from carbon-free resources (not only RPS-eligible ones) by 2045. In addition, new buildings constructed in California must comply with the standards contained in CCR Title 20, Energy Building Regulations, and Title 24, Energy Conservation Standards (CALGreen), which are designed to increase energy efficiency and conservation.

On April 19, 2017, the BAAQMD Board of Directors adopted the 2017 Clean Air Plan, which describes a comprehensive control strategy that BAAQMD will implement to reduce emissions of PM, TACs, ozone precursors, and GHGs in the SFBAAB. Consistent with the GHG reduction targets adopted by the State of California, the Clean Air Plan lays the groundwork for a long-term effort to reduce Bay Area GHG emissions 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050. A key component of this relates to reduced reliance on fossil fuels for energy production, and increased energy efficiency.

Additionally, the Oakland 2030 Equitable Climate Action Plan contains policies regarding energy efficiency (City of Oakland 2020). The plan's Goal B-2 includes planning for all existing buildings to be efficient and all electric by 2040. Additionally, plan Goal P-2 calls for a reduction of emissions from electricity specific to the Port. Specifically, it states that by 2023, the Port should procure 100 percent carbon-free and nuclear-free electricity for Port operations and all electricity supplied to tenants or other end users.

3.5.3 Impact Analysis

a) Less Than Significant

Energy use is generally separated into two main categories: direct and indirect energy. In the context of transportation, direct energy is typically associated with fuel consumed for vehicle propulsion and is a function of traffic characteristics such as VMT; calculated as volume by distance traveled), speed, vehicle mix, and thermal value of the fuel being used. Indirect energy is all the remaining energy use of a project needed to construct, operate, and maintain facilities.

The Project would not change the operational capacity of the existing facility and would therefore nor result in increased throughput. Therefore, no change in direct energy use would result from the Project. Instead, this section analyzes the indirect energy that would be used during construction and operations.

Indirect energy for construction was quantified by converting CalEEMod air quality outputs to British thermal units (BTU), which is a measure of the heat content of fuels. This data are presented in Table 3-6.

Table 3-6 Indirect Energy Use for Construction

Phase	Vehicle Type	Fuel	MT CO ₂	CO ₂ Factor (lb CO ₂ /MMBTU)	CO ₂ Factor (lb CO ₂ /gal)	MMBTU	Gallons
Site preparation	Off-road	Diesel	9.22	163.45	22.45	124.36	905.41
Site preparation	Worker	Gasoline	0.53	148.57	17.86	7.82	65.05
Excavate for foundation	Off-road	Diesel	22.86	163.45	22.45	308.31	2,244.66
Excavate for foundation	Worker	Gasoline	1.23	148.57	17.86	18.25	151.78
Excavate for foundation	Vendor	Diesel	2.71	163.45	22.45	36.60	266.49
Excavate for foundation	Hauling	Diesel	6.28	163.45	22.45	84.75	617.05
Backfill	Off-road	Diesel	9.62	163.45	22.45	129.77	944.80
Backfill	Worker	Gasoline	0.61	148.57	17.86	9.12	75.89
Backfill	Vendor	Diesel	0.95	163.45	22.45	12.78	93.06
Backfill	Hauling	Diesel	2.14	163.45	22.45	28.83	209.92
Foundation	Off-road	Diesel	15.76	163.45	22.45	212.63	1,548.10
Foundation	Worker	Gasoline	1.48	148.57	17.86	21.90	182.14
Foundation	Vendor	Diesel	6.25	163.45	22.45	84.29	613.65
Frame and panels	Off-road	Diesel	79.70	163.45	22.45	1,074.95	7,826.29
Frame and panels	Worker	Gasoline	7.03	148.57	17.86	104.26	867.32
Frame and panels	Vendor	Diesel	14.08	163.45	22.45	189.89	1,382.50
Connect utilities	Off-road	Diesel	7.01	163.45	22.45	94.55	688.40
Connect utilities	Worker	Gasoline	11.07	148.57	17.86	164.21	1,366.03
Install systems and doors	Off-road	Diesel	49.81	163.45	22.45	671.84	4,891.43
Install systems and doors	Worker	Gasoline	5.71	148.57	17.86	84.71	704.70
Install systems and doors	Vendor	Diesel	4.93	163.45	22.45	66.46	483.87
Testing	Off-road	Diesel	36.77	163.45	22.45	496.02	3,611.30
Testing	Worker	Gasoline	4.61	148.57	17.86	68.42	569.18
Total			300.35	3,640.31		4,094.72	30,309.02

Notes:

CO₂ = carbon dioxide; gal = gallons; lb = pounds; MMBTU = million British thermal units; MT = metric ton

As shown in Table 3-6, construction of the Project would require a one-time commitment of approximately 4,094.72 million British thermal units (MMBTU). Project-related construction activities would be temporary in nature and would be conducted in accordance with all applicable laws and regulations, including applicable federal, state, and local laws that are intended to promote efficient use of resources and minimize environmental impacts. Construction equipment and heavy-duty trucks used for the proposed Project would be required to comply with all federal and state standards and regulations, including limiting idling to 5 minutes or less (Section 2449 of the CCR, Title 13, Article 4.8, Chapter 9), which would minimize the wasteful consumption of fuel during construction. The Project does not include unusual characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites. In addition, construction-related energy consumption would cease after the completion of construction, which would be relatively short-term (i.e., approximately 6 to 8 months).

Ongoing electricity use related to Project operations would be minimal and would be limited to interior lighting, the conveyor system, and the air handling and filtration system. Therefore, construction and operation of the Project would not result in inefficient, wasteful, or unnecessary use of fuel or other energy sources, and the impact would be **less than significant**.

b) Less Than Significant

Construction activities under the proposed Project would use construction equipment and vehicles that are in compliance with federal and state standards for fuel efficiency. In addition, as described above, proposed construction and operational activities would not result in an inefficient or wasteful consumption of energy resources. Construction and operations of the Project would take place at the existing Radius Recycling facility in the Port, consistent with existing land uses.

The Project would include the construction three new buildings, the conveyor system, and appurtenances, which would require the use of operational power. However, this would be accommodated by the existing energy infrastructure in place and would not require the expansion of energy infrastructure. Therefore, the impact would be less than significant.

3.5.4 Mitigation Summary

No mitigation measures would be necessary.

3.6 GEOLOGY AND SOILS

Would the Project:

Question	CEQA Determination
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: <ul style="list-style-type: none"> <li data-bbox="228 453 946 632">i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. <li data-bbox="228 632 946 684">ii) Strong seismic ground shaking? <li data-bbox="228 684 946 737">iii) Seismic-related ground failure, including liquefaction? <li data-bbox="228 737 946 772">iv) Landslides? 	Less-than-Significant Impact
b) Result in substantial soil erosion or the loss of topsoil?	Less-than-Significant Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	Less-than-Significant Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	No Impact

3.6.1 Environmental Setting

The proposed Project site lies in the Coast Ranges geomorphic region. The Coast Ranges region lies between the Pacific Ocean and the Great Valley (Sacramento and San Joaquin Valleys) geomorphic region and stretches from the Oregon border to the Santa Ynez Mountains near Santa Barbara (ESA 2009). Much of the Coast Ranges is composed of marine sedimentary deposits and volcanic rocks that form northwest-trending mountain ridges and valleys, running subparallel to the San Andreas Fault Zone. In the San Francisco Bay Area, movement along this plate boundary is distributed across a complex system of strike-slip, right-lateral, parallel, and sub-parallel faults. These faults include the San Andreas, Hayward, Rodgers Creek-Healdsburg, Concord-Green Valley, Greenville-Marsh Creek, Calaveras, and West Napa Faults (ESA 2009).

The Coast Ranges can be further divided into the northern and southern ranges, which are separated by San Francisco Bay. San Francisco Bay lies in a broad depression created from an east-west expansion between the San Andreas and the Hayward Fault systems (ESA 2009). The San Francisco and San Pablo

Bays, including shoreline areas, are generally composed of soft, compressible sediments known as Bay Mud, which can be very thick in areas (ESA 2009). The Project area is in a seismically active region.

The Hayward Fault, approximately 4 miles northeast of the site, is the nearest major active fault. Other active faults in the region include the San Andreas Fault, approximately 13 miles to the west, and the Calaveras Fault, approximately 20 miles to the east. The 2007 Working Group on California Earthquake Probabilities has estimated that there is a 63 percent probability that one or more large earthquakes (magnitude 6.7 or greater) will occur along one of the major fault zones (San Andreas, San Gregorio, Hayward, Calaveras, or Rodgers Creek) and minor faults in the San Francisco Bay area during the 30 years between approximately 2008 and 2038 (USGS 2008).

The California Geological Survey composite map (composite map) of seismic hazard zones for the USGS Oakland West Quadrangle indicates the landside proposed Project is in a Liquefaction Zone (California Geological Survey 2024). Damaged pavement from liquefaction was documented just east of the Project site at Howard Terminal following the 1989 Loma Prieta Earthquake (USACE 2023). In addition to liquefaction, other potential geologic hazards in the proposed Project area include compaction consolidation (settlement) and seismically induced settlement. The composite map indicates that the proposed Project is in neither an earthquake fault zone nor a landslide zone.

The Radius Recycling facility is underlain by artificial reclaimed land fill overlying tidal mudflat deposits. Approximately 10 feet of fill (consisting of mainly medium dense silty sand with gravel) overlies approximately 45 feet of Bay Mud (Qhbm), which overlies Merritt Sand (Qms). The Merritt sands are generally dense enough to be considered nonliquefiable. At the Radius facility, the top few feet of the layer appear to be reworked, clayey, and loose to medium dense. Franciscan Complex (KJf), a variable mixture of sheared and metamorphosed graywacke, shale, mafic volcanic rock, chert, ultramafic rock, limestone, and conglomerate, underlies the Merritt sands (SMG Engineers, Inc. 2023).

The proposed Project Improvements would be constructed on the facility's existing concrete slab. From the surface downward, materials underlying the concrete slab where improvements would be constructed include:

- 1 to 2 feet of cement paving at the surface,
- 1 foot of dense and graded aggregate base,
- 5 to 10 feet of loose to dense introduced fill,
- 25 to 40 feet of native San Francisco Bay Mud, and
- medium dense to dense fine-grained Merritt Sand.

There is no potential for recovering paleontological resources in the concrete slab or artificial fill directly beneath the Project site. However, the geologic units below the fill (i.e., Merritt Sand and San Antonio Formation) are considered to have a high sensitivity for paleontological resources.

3.6.2 Regulatory Setting

Chapter 3, *Geologic Hazards*, of the *Safety Element* of the City of Oakland General Plan (City of Oakland 2004a) describes the following policies regarding geological resources that were adopted for the purpose of avoiding or mitigating an environmental effect, and that apply to the proposed Project.

- **Policy GE1:** Develop and continue to enforce and carry out regulations and programs to reduce seismic hazards and hazards from seismically triggered phenomena.
- **Policy GE2:** Continue to enforce ordinances and implement programs that seek specifically to reduce the landslide and erosion hazards.

3.6.3 Impact Analysis

a i, ii, iii, iv) Less-than-Significant Impact

The proposed Project site does not lie in or near an Alquist-Priolo Earthquake zone and would have a very low potential for fault rupture to occur. The Project site is in an area that has the potential to be subject to strong ground shaking from an earthquake along any of the active faults in the region, including Hayward Fault, the closest fault to the Project site. Loose to medium soils exist in the subsurface at the Project site. During a liquefaction event, lateral spreading and seismically induced settlement could take place at the Project site. Liquefaction and subsequent settlement of soils were experienced in the seaport area during the 1989 Loma Prieta earthquake. The Project site and surrounding areas to the north, east, and west are mostly level and therefore have limited susceptibility to landslides; although slopes are present in the shoreline and the shipping channel south of the Project site, these would be unaffected by the Project.

The proposed Project would procure a structural building permit from the City of Oakland and Port and would subsequently adhere to the most current seismic design requirements to minimize impacts from ground shaking. Infrastructure and project elements of the proposed Project would meet Uniform Building Code seismic zone design standards or better to withstand expected earthquake ground shaking, liquefaction, or other ground failures. Appropriate construction practices would be implemented during construction to ensure the safety of workers and/or equipment during strong seismic shaking. Furthermore, project excavation and backfill would be designed and constructed in conformance with recommendations contained in the geotechnical engineering report for the proposed Project (SMG Engineers, Inc. 2023), which would further reduce or eliminate the potential for adverse effects from seismic or geologic hazards. Therefore, there would be **less than significant impacts** related to seismic or geologic hazards.

b) Less-than-Significant Impact

Project construction and operation would not result in substantial erosion or loss of topsoil. The proposed Project includes relatively minor excavation for electrical and drainage trenching and foundation improvements (estimated at no more than 1,546 cubic yards). The proposed buildings and new conveyer system would be constructed on an existing concrete slab lacking exposed soils and topsoils, and excavation below the concrete slab would occur in aggregate base and introduced fill. Trenching for utility and drainage connections would occur in the introduced fill, which is unlikely to include topsoil of substantial value for growing and supporting vegetation, as evidenced by the lack of vegetation at the facility and in consideration of the facility's industrial uses. Facility operations would be largely unchanged from existing conditions (minor changes primarily related to the containment of material stockpiles and equipment, and use of the new conveyor and hoppers system) and would not result in new or worsened potential for erosion or loss of topsoil. The Project would not increase impervious surface areas or substantially change drainage in a manner that could result in erosion. For these reasons, there would be **less-than-significant impacts** related to erosion or loss of topsoil.

c) Less-than-Significant Impact

Although the Project site may be on soils susceptible to liquefaction or settlement (loose silty sand fill and parts of the Merritt sand beneath the Bay Mud), the proposed buildings would have little or no effect on these potential hazards. They would be constructed in compliance with current standards for seismic safety, as ensured through building permit processes and regulatory compliance. As discussed in the site-specific geotechnical engineering report, because the liquefiable material is deep (7 feet deep) relative to the planned foundation bearing elevation (1.5 feet deep; or maximum thickness of 3 feet), there is little risk of liquefaction-induced bearing capacity reduction. Footing bearing surfaces will be inspected to ensure that they are not built directly on liquefiable soil (SMG Engineers, Inc. 2023). The proposed buildings would be erected on an existing concrete slab and would have negligible—if any—effect on the site’s susceptibility to seismic or other geologic hazards. The Project site and surrounding areas to the north, east, and west are mostly level and therefore have limited susceptibility to landslides; although slopes are present in the shoreline and the shipping channel, these would be unaffected by the Project. Appropriate construction practices would be implemented during construction to ensure the safety of workers and/or equipment during strong seismic shaking that could result in liquefaction. Operations would be largely unchanged from existing conditions and would not affect the potential for liquefaction or settlement. Therefore, impacts related to the site’s potential susceptibility would be **less than significant**.

d) No Impact

Expansive soils are soils that expand when water is added and shrink when they dry out. This continuous change in soil volume can cause structures built on this type of soil to move unevenly and crack when the moisture content in the soil changes. Bay Muds may be considered expansive soils, although imported fill has a relatively low expansive potential. No significant changes in soil moisture would occur during construction or operation, because the Project site is surfaced in impermeable concrete and the Project only includes minor excavation. Stormwater runoff from new proposed buildings would be conveyed through gutters, downspouts, and new or existing connections to the facility’s storm drain system. Therefore, there would be **no impact** related to expansive soils.

e) No Impact

The Project would not involve a septic system or alternative wastewater system. There would be **no impact** related to supporting the use of septic or wastewater systems.

f) No Impact

The Project site and depths where excavation would occur are underlain by concrete, aggregate base, or fill, which have no potential for paleontological resources; and the Project does not entail any excavations operations. Therefore, there would be **no impact** related to paleontological resources.

3.6.4 Mitigation Summary

No mitigation measures would be necessary.

3.7 GREENHOUSE GAS EMISSIONS

Would the Project:

Question	CEQA Determination
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less than Cumulatively Considerable
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less than Cumulatively Considerable

3.7.1 Environmental Setting

Unlike emissions of criteria air pollutants and TACs, which have local or regional impacts, emissions of GHGs generated locally contribute to global concentrations of GHGs, which result in changes to the climate and environment. GHGs are present in the atmosphere naturally, are released by natural and anthropogenic (human-caused) sources, and are formed from secondary reactions taking place in the atmosphere. Natural sources of GHGs include the respiration of humans, animals, and plants; decomposition of organic matter; volcanic activity; and evaporation from the oceans. Anthropogenic sources include the combustion of fossil fuels by stationary and mobile sources, waste treatment, and agricultural processes. The principal GHGs contributing to climate change are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated compounds. Human-caused emissions of these GHGs in excess of natural ambient concentrations are responsible for intensifying the greenhouse effect (the warming of Earth’s lower atmosphere due to the trapping of heat by GHG) and have led to a trend of unnatural warming of the earth’s climate, known as global climate change (IPCC 2021).

The Global Warming Potential (GWP) of GHGs compares the ability of each GHG to trap heat in the atmosphere relative to another gas. GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and the length of time the gas remains in the atmosphere (its “atmospheric lifetime”). The GWP of each gas is measured relative to CO₂. Therefore, CO₂ has a GWP of 1. GHGs with lower emissions rates than CO₂ may still contribute to climate change because they are more effective at absorbing outgoing infrared radiation than CO₂ (i.e., high GWP). For example, N₂O has a GWP of 273, meaning that 1 ton of N₂O has the same contribution to the greenhouse effect as approximately 273 tons of CO₂. The concept of CO₂ equivalence (CO₂e) is used to account for the different GWP potentials of GHGs. GHG emissions are typically measured in terms of pounds or tons of CO₂e and are often expressed in metric tons (MT) CO₂e.

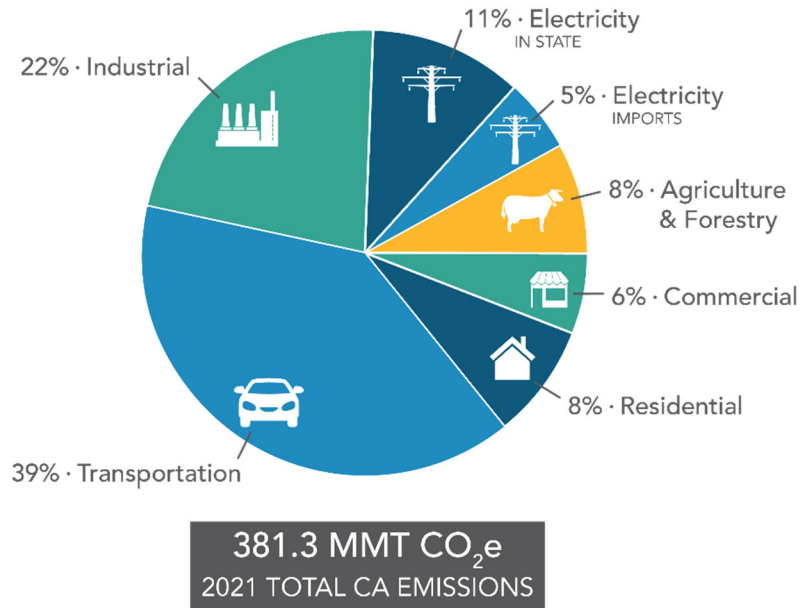
GHG emissions have the potential to adversely affect the environment because such emissions contribute cumulatively to global climate change. It is unlikely that a single project would contribute significantly to climate change, but cumulative emissions from many projects and activities affect global GHG concentrations and the climate system, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Therefore, impacts are analyzed within the cumulative context of the project’s potential contribution to the significant impact of global climate change.

Greenhouse Gas Emissions Inventory and Trends

The EPA prepares an annual report that tracks nationwide GHG emissions and sinks by source, economic sector, and GHG from 1990 to the present. The annual report provides a comprehensive accounting of total GHG emissions from all anthropogenic sources in the United States. In 2022, GHG emissions in the United States totaled 6,341.2 million MT CO₂e, and emissions increased by 1 percent compared to 2021; this increase was largely driven by an increase in CO₂ emissions from fossil fuel combustion (EPA 2024d). Fossil fuel combustion is the largest source of GHG emissions in the United States, at 75 percent of all CO₂e emissions (EPA 2024d). Transportation, electricity generation, and industrial are the top contributing sectors to GHG emissions from fossil fuel combustion (EPA 2024d).

ARB prepares an annual inventory of statewide GHG emissions. As shown on Figure 3-1, which presents statewide GHG emissions by sector (or type of activity), 381.3 million MT CO₂e were generated in 2021. Combustion of fossil fuel in the transportation sector was the single largest source of California’s GHG emissions in 2021, accounting for 39 percent of total GHG emissions. Transportation was followed by industry, which accounted for 22 percent; and then the electric power sector (including in-state and out-of-state sources), which accounted for 16 percent of total GHG emissions (ARB 2023).

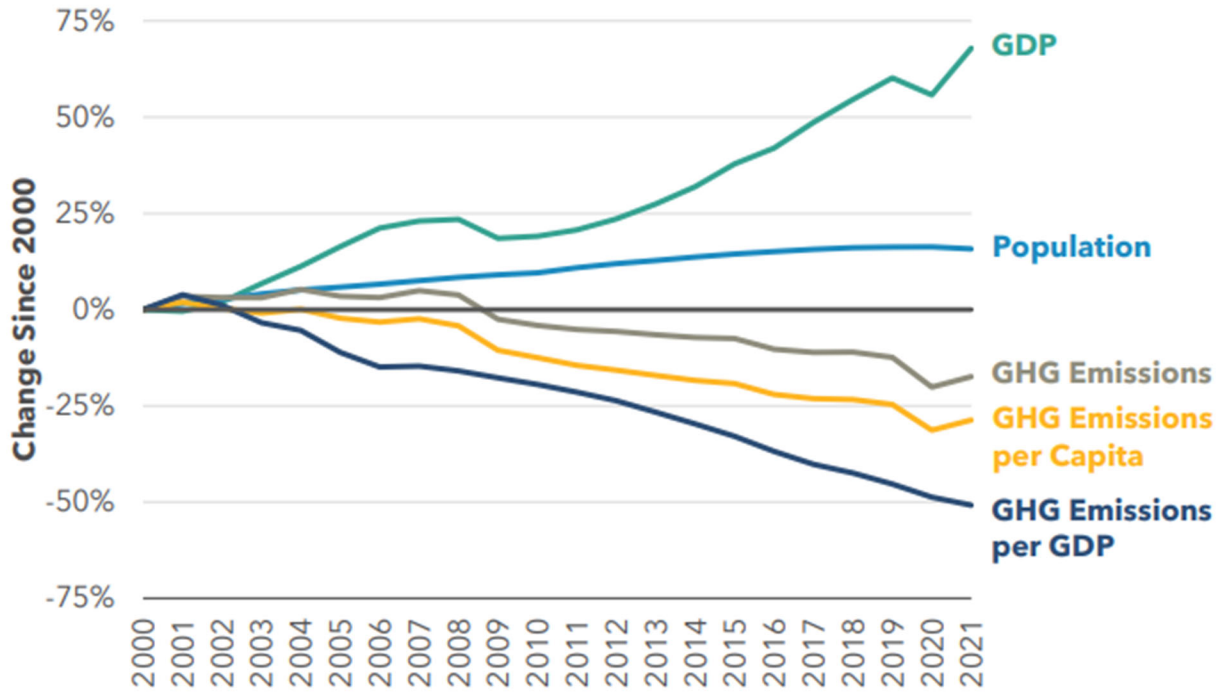
Figure 3-1 2021 California Greenhouse Gas Emissions Inventory by Sector



Source: ARB 2023

California has implemented several programs and regulatory measures to reduce GHG emissions. Figure 3-2 demonstrates California’s progress in reducing statewide GHG emissions. Since 2007, California’s GHG emissions have been declining, even as population and gross domestic product have increased. Per capita GHG emissions in 2021 were 30 percent lower than the peak per capita GHG emissions recorded in 2001. Similarly, GHG emissions per million dollars of gross domestic product have decreased by 51 percent since the peak in 2001.

Figure 3-2 Trends in California Greenhouse Gas Emissions (Years 2000 to 2020)



Source: ARB 2023

3.7.2 Regulatory Setting

Although many federal, state, regional, and local GHG-related plans, policies, and regulations do not directly apply to the implementation of the Project, the regulatory framework is helpful for understanding the overall context for GHG emissions impacts and strategies to reduce GHG emissions.

Federal

Clean Air Act

EPA is the federal agency responsible for implementing the federal CAA. The United States Supreme Court ruled on April 2, 2007, that CO₂ is an air pollutant as defined in the CAA, and that EPA has the authority to regulate emissions of GHGs. In *Massachusetts v. Environmental Protection Agency et al.*, 12 states and cities (including California), along with several environmental organizations, sued to require EPA to regulate GHGs as pollutants under the CAA (127 S. Ct. 1438 [2007]). The Supreme Court ruled that GHGs fit in the CAA’s definition of a pollutant and that EPA had the authority to regulate GHGs. The Inflation Reduction Act, signed on August 16, 2022, affirms EPA’s authority to regulate GHG emissions under the CAA.

The Energy Independence and Security Act (EISA) of 2007 amended the Energy Policy and Conservation Act to further reduce fuel consumption and expand production of renewable fuels. The EISA’s amendment statutorily mandated that the National Highway Traffic Safety Administration (NHTSA) set average fuel economy standards for light duty cars and trucks for each model year. The first phase targeted vehicle model years 2012–2016; the second phase of the standards includes GHG and fuel economy standards for model years 2017–2025. On May 2, 2022, finalized standards for 2024–2026 model years were published,

which require the fuel economy standards to increase 8 percent year over year for model years 2024 and 2025, and 10 percent annually for model year 2026. In 2026, if all standards are met through fuel efficiency improvements, the average industry fleetwide fuel efficiency for light-duty cars and trucks would be approximately 49 miles per gallon (NHTSA 2022). The 2024-2026 standards are anticipated to save approximately 200 billion gallons of oil and 2.5 billion MT of GHG emissions.

In addition to standards for light duty cars and trucks, EPA and NHTSA are also implementing the Medium- and Heavy-Duty Vehicle GHG Emissions and Fuel Efficiency Standards. These standards include phased requirements for GHG reduction and fuel efficiency in medium- and heavy-duty vehicles and are also anticipated to generate development and research jobs focused on advanced cost-effective technologies for cleaner and more efficient commercial vehicles.

The Energy Policy Act of 2005, which amended the CAA, created the 2005 Renewable Fuel Standard Program (RFS) to reduce the reliance on fossil fuels. Although applicable to obligated parties, such as refiners and importers of gasoline or diesel fuel, and not consumers, the RFS established requirements for volumes of renewable fuel used to replace petroleum-based fuels. The four renewable fuels accepted as part of RFS are biomass-based diesel, cellulosic biofuel, advanced biofuel, and total renewable fuel. The 2007 EISA expanded the program and its requirements to include long-term goals of using 36 billion gallons of renewable fuels and extending annual renewable fuel volume requirements to year 2022; and requires EPA to set renewable fuel volumes for 2023 and beyond, in coordination with the Secretary of Energy and according to certain criteria defined in the statute.

State

The legal framework for GHG emission reductions has come about through Executive Orders (EOs), legislation, and regulations. The major components of California's climate change initiatives are outlined in the following paragraphs.

Assembly and Senate Bills

The statewide legislative context for GHG emissions analysis is established by AB 32 (2006), which requires reduction of statewide GHG emissions to 1990 levels by 2020; SB 32, which established a GHG reduction mandate of 40 percent below 1990 statewide emissions levels by 2030; and AB 1279, which established a statewide policy of achieving carbon neutrality no later than 2045, and achieving and maintaining net negative emissions thereafter, and requires that statewide anthropogenic GHG emissions are reduced to at least 85 percent below the 1990 levels by 2045. These near-term and long-term legislative targets create a framework that can be used to inform the level of emissions reductions necessary, and whether GHG emissions associated with a project would represent a cumulatively considerable contribution to the significant cumulative impact of climate change. As the Supreme Court held, "consistency with meeting [those] statewide goals [is] a permissible significance criterion for project emissions" (Center for Biological Diversity v. Department of Fish & Wildlife [2015] 62 Cal.4th 220).

California Air Resources Board 2022 Scoping Plan

The ARB 2022 Scoping Plan, which was approved by ARB on December 15, 2022, assesses progress toward the statutory 2030 target, while laying out a path to achieving carbon neutrality no later than 2045. Carbon neutrality is not a standard to be achieved on an individual project basis, or even by an

individual municipality, but through the implementation of best available technology, increasingly stringent regulations to reduce emissions from various sources, state and regional plans to reduce VMT and increase carbon-free vehicle use, and carbon capture and sequestration actions focused on the natural and working lands sector, as identified in the final 2022 Scoping Plan.

Transportation Sector Regulations

California has established several regulatory actions to reduce GHG emissions from the transportation sector. EO B-16-12 orders state entities through several actions to support the rapid commercialization of ZEVs. EO N-79-20 sets the goal to transition to 100 percent ZEVs for in-state sales of new passenger cars and trucks by 2035, and for medium- and heavy-duty vehicles by 2045. In addition, EO N-79-20 sets the goal for California to transition to 100 percent zero-emission off-road vehicles and equipment by 2035. The Low Carbon Fuel Standard requires the state to further reduce the fuel carbon intensity of transportation fuels to 20 percent or greater by 2030. The Advanced Clean Cars Program/ZEV Program establishes requirements to achieve the maximum feasible reduction in GHG emissions from vehicles used for personal transportation; and under the proposed Advanced Clean Cars II Regulations, establishes the phasing to reach the goal of EO N-79-20 for all new passenger vehicles sold in the state to be zero emission by 2035.

Energy Sector Regulations

There are several energy sector regulations established to reduce GHG emissions in California. Established in 2002, California's RPS requires electricity providers to provide a specified minimum portion of their electricity supply from eligible renewable resources by milestone target years. The RPS requires retail sellers of electricity to serve 60 percent of their electric load with renewable energy by 2030, with interim targets of 44 percent by 2024, and 52 percent by 2027, as well as requiring that all of the state's electricity come from carbon-free resources (not only RPS-eligible ones) by 2045. In addition, new buildings constructed in California must comply with the standards contained in CALGreen, which are designed to increase energy efficiency and conservation.

Regional and Local

Sustainable Communities and Climate Protection Act

The Sustainable Communities and Climate Protection Act (SB 375), signed in September 2008, requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS), that will prescribe land use allocation in that MPO's Regional Transportation Plan (RTP). Each MPO is required to incorporate these GHG emissions targets into the regional transportation planning process to identify land use, housing, and transportation strategies that will achieve the regional GHG reduction targets. Adopted by the MTC and ABAG in October 2021, Plan Bay Area 2050 is the current RTP/SCS for the region. No strategies outlined in Plan Bay Area 2050 would be directly applicable to the proposed Project.

Bay Area Air Quality Management District 2017 Clean Air Plan

On April 19, 2017, the BAAQMD Board of Directors adopted the 2017 Clean Air Plan, which describes a comprehensive control strategy that BAAQMD will implement to reduce emissions of PM, TACs, ozone precursors, and GHGs to protect public health and the climate. Consistent with the GHG reduction targets adopted by the State of California, the Plan lays the groundwork for a long-term effort to reduce Bay Area

GHG emissions 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050. No strategies outlined in the 2017 Clean Air Plan related to climate change would be directly applicable to the proposed Project.

City of Oakland Natural Gas Use Regulations

The City of Oakland is undertaking efforts to eliminate natural gas use in buildings. The City began requiring all new construction to be all-electric as of December 2020 as the first step toward the pathway for complete electrification. Currently, the City of Oakland is developing the roadmap for transitioning existing buildings away from natural gas, which includes rebates, grants, and tax credits for electrification projects. Such projects include installing solar, upgrading electric panels, transitioning to all-electric commercial kitchens, installing electric vehicle chargers, and switching residential appliances from natural gas to heat pumps, electric clothes dryers, or induction stoves. The proposed Project would use existing onsite electric utility connections and would not use natural gas in the proposed new buildings; therefore, the proposed Project meets the City of Oakland's requirements for new construction to be all-electric.

Bay Area Air Quality Management District CEQA Guidelines

BAAQMD has developed CEQA Guidelines (BAAQMD 2023b) to assist lead agencies in evaluating air quality and climate impacts from proposed land use projects and plans in the SFBAAB. The most recent CEQA Air Quality Guidelines were published in April 2023. The guidelines include nonbinding recommendations for how a lead agency can evaluate, measure, and mitigate air quality and climate impacts generated from land use construction and operational activities. The guidelines include separate thresholds of significance for project- and plan-level analyses. At the project level, BAAQMD's recommended climate impact thresholds of significance include either incorporating design criteria or showing consistency with a GHG reduction strategy. Additionally, the guidelines include no numerical thresholds of significance for construction-related emissions of GHGs.

Port of Oakland Seaport Air Quality 2020 and Beyond Plan

In 2019, the Port introduced their Seaport Air Quality 2020 and Beyond Plan to achieve its vision of a zero-emissions Seaport. The Port's Seaport is one of the sources of DPM emissions affecting West Oakland (Port 2019b). Reducing DPM, GHGs, and other TACs will reduce health risks for people living and working nearby and reduce emissions contributing to climate change. No strategies outlined in the Port's Air Quality 2020 and Beyond Plan would be directly applicable to the proposed Project.

City of Oakland Zero-Emission Vehicle Action Plan

The City of Oakland ZEV Action Plan (City of Oakland 2023b) provides a roadmap for transitioning to a zero-emission transportation system. The plan includes strategies to increase access to ZEV, electric vehicle supply equipment, and hydrogen fueling stations for all Oakland residents and visitors. The ZEV Action Plan contains the following goal actions relevant to vehicle emissions:

- **Overall ZEV Goal #2.** Shift all remaining vehicles to zero-emission technologies.
- **Action CL-4:** Collaborate with partner agencies to expand the network of public electric vehicle chargers.
- **Action MHD-2:** Require upgrades to medium- and heavy-duty fleets vehicle fleet sites.

3.7.3 Impact Analysis

a, b) Less Than Cumulatively Considerable

Implementation of the proposed Project would generate short-term GHG emissions during construction. Exhaust GHG emissions would be generated from a variety of sources, such as heavy-duty construction equipment, haul trucks, material delivery trucks, and construction worker vehicles. Construction would be temporary, anticipated to last approximately 6 to 8 months, and the generation of construction-related GHG emissions would cease at the end of construction. Operational GHG emissions can be direct and indirect. Direct GHG emissions are generated at the location of consumption or use, and indirect emissions occur at a different time or location from the point of consumption or use. Operation of the proposed Project would not generate any direct GHG emissions but may generate a minimal amount of indirect GHG emissions associated with electricity to power interior lighting, the conveyor system, and the air handling and filtration system. Other operational changes, such as conveying material via the hoppers and trucks, would have negligible, if any, effect on GHG emissions because the Project is anticipated to result in overall reduced handling of materials and associated equipment use.

Construction GHG Emissions

BAAQMD does not have a threshold of significance for construction-related GHG emissions. The BAAQMD CEQA Guidelines explain that construction emissions are temporary and variable, and represent a very small portion of a project's lifetime GHG emissions (BAAQMD 2023c). The Project's magnitude of emissions generated and consistency with applicable plans, policies, and regulations for reducing GHG emissions are evaluated to determine whether implementation of the Project would result in cumulatively considerable effects. The applicable GHG reduction plan is the state's 2022 Scoping Plan, because it is the only relevant plan that considers the relatively recently adopted legislation of AB 1279 for accelerated GHG reduction targets and statewide carbon neutrality. It provides the framework, based on extensive modeling and scenario evaluation, of what is required to achieve the state's 2045 carbon neutrality target, and what specifically is required of new development to contribute to the achievement of the target. The discussion of consistency focuses on those actions identified in the 2022 Scoping Plan that are applicable to the proposed Project.

The 2022 Scoping Plan includes action for 25 percent of construction equipment energy demand to be electrified by 2030, and 75 percent by 2045. Although this calls for electrification of construction equipment to reduce demand for fossil fuel energy and GHGs, this is achieved at a fleetwide level and not as a percentage applied to individual projects. In addition, construction activities for the proposed Project would be complete prior to the 2022 Scoping Plan's timeline for construction equipment electrification. Implementation of construction BMPs related to equipment exhaust emissions, as detailed in Section 3.2, Air Quality, would further reduce GHG emissions from construction activities.

Operational GHG Emissions

Operational emissions are limited to indirect emissions from use of electricity for indoor lighting, the conveyor system, and the air handling and filtration system. As noted earlier, material handling via the conveyor system and receiving trucks is expected to result in an overall reduction in equipment use from reduced handling of materials compared to existing conditions. There are no actions of the 2022 Scoping Plan directly applicable to operation of the proposed Project. However, the shift to a more predominantly

GHG-free power mix, consistent with state RPS requirements, would inherently reduce long-term GHG emissions associated with electricity use. As detailed in Section 3.7.2, "Regulatory Setting," California's RPS requires electricity providers to provide a specified minimum portion of their electricity supply from eligible renewable sources by milestone target years. Consistent with the state RPS requirements, electricity used for Project operations would be provided by electric utilities that follow the RPS regulatory requirements for renewables. Therefore, electricity used for Project operations and the associated indirect GHG emissions would not conflict with an applicable plan, policy, or regulation adopted to reduce GHG emissions.

As detailed above, construction would be temporary and short in duration (approximately 6 to 8 months) and would generate limited GHG emissions. Furthermore, operational emissions would be limited to minor indirect emissions from the use of electricity, the power source for which would shift to predominantly GHG-free sources over time. Therefore, the Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted to reduce GHG emissions. These impacts would be **less than cumulatively considerable**.

3.7.4 Mitigation Summary

No mitigation required.

3.8 HAZARDS AND HAZARDOUS MATERIALS

Would the Project:

Question	CEQA Determination
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less Than Significant Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Less Than Significant Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Less Than Significant Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the project area?	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	No Impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	No Impact

3.8.1 Environmental Setting

This section presents hazards and hazardous materials conditions in the Project vicinity and evaluates the potential for the construction or operation of the proposed Project to result in significant impacts related to 1) exposing people or the environment to adverse hazards and hazardous materials conditions; and 2) impairment of emergency response and access plans. Impacts related to water quality are analyzed in Section 3.9, Hydrology and Water Quality; impacts related to air quality are analyzed in Section 3.2, Air Quality; and impacts related to exposure of people or structures to wildland fires are addressed in Section 3 under the heading Effects Found Not to Be Significant.

Radius Recycling Operations

Radius Recycling operations include the shredding of automobiles, appliances, and other recyclable light steel materials; shearing and torch-cutting of heavy recyclable steel products; preparation and sorting of ferrous and nonferrous material recycling feedstock; temporary storage of finished recycled products and shredder residue; and maintenance of facility equipment. As described in Section 2.3, nonferrous materials planned for containment and conveyance in the proposed buildings and conveyor system are currently stored and managed primarily in open-air stockpiles and conveyance equipment.

Hazardous waste generated and managed at the facility includes light fibrous material, aqueous solution (2 < pH < 12.5) with organic residues (California Waste Codes 133 and 134); off-specification, aged, or surplus inorganics (California Waste Code 141); asbestos-containing waste (California Waste Code 151); other inorganic solid wastes (California Waste Code 181); hydrocarbon solvents (California Waste Code 213); waste oil and mixed oil (California Waste Code 221); oil/water separation sludge (California Waste Code 222); unspecified oil-containing wastes (California Waste Code 223); pesticides/pesticide production waste (California Waste Code 232); polychlorinated biphenyls (PCBs) and materials with PCBs (California Waste Code 261); latex waste (California Waste Code 291); off-specification, aged, or surplus organics (California Waste Code 331); unspecified organic liquid mixture (California Waste Code 343); other organic solids (California Waste Code 352); contaminated soils from site clean-up (California Waste Code 611); liquid with halogenated organic compounds equal or greater than 1,000 milligrams per liter (California Waste Code 741); ignitables (Resource Conservation and Recovery Act of 1976 [RCRA] Waste Code D001); corrosives (RCRA Waste Code D002); lead (RCRA Waste Code D008); benzene (RCRA Waste Code D018); halogenated solvents (RCRA Waste Code F002); and nonhalogenated solvents (RCRA Waste Codes F003 and F005; DTSC 2021).

Currently, Radius Recycling's hazardous waste treatment operations are being conducted under an Interim Status authority approval overseen by the Department of Toxic Substances Control (DTSC). This allows Radius Recycling's Oakland facility to conduct chemical treatment of hazardous residues resulting from metal processing operations on site (DTSC 2023a). Radius Recycling's hazardous waste facility permit application to DTSC was submitted on January 1, 2023, and was determined to be administratively complete by DTSC on January 30, 2023 (DTSC 2023b). DTSC issued a Notice of Deficiency (1st NOD) for the application on June 27, 2023, and Radius Recycling provided the 1st NOD response on October 26, 2023. The application remains under review, with the final permit determination anticipated for January 2025. DTSC's draft decision will be made available for public comment and review before a final decision is made.

Hazardous Material Site Records

The proposed Project site includes the following historical and current cases pertaining to environmental contamination:

- A former leaking underground storage tank (LUST) was recorded northeast of the Project site, as reported in the SWRCB GeoTracker database. The LUST cleanup (Case ID: T0600101666) was initiated in November 1988 and completed in February 1996 (SWRCB 2023).
- The Radius Recycling facility is listed as an open cleanup site for metals and PCB contamination (Case ID: SL0600116612) in soil and groundwater from contaminants traced to the site from Berkeley Landfill (DTSC 2023b). Investigation and cleanup activities at this site are ongoing; additional detail on the most recent soils investigations is provided below under the heading 2019 Soil Summary Report.

On January 2, 2013, the California Regional Water Quality Control Board, San Francisco Bay Region (SFBRWQCB), issued Cleanup and Abatement Order (CAO) No. R2-2013-1001 to Schnitzer Steel (now Radius Recycling). The CAO requires the cleanup and abatement of wastes, including sediment, industrial process wastewater, and metal shredding by-products that have discharged to adjacent waterways of the Proposed Project site. The CAO is discussed and analyzed in Section 3.9, Hydrology and Water Quality. Groundwater conditions, including potential contamination, are also discussed in Section 3.9.

DTSC Corrective Order

On February 23, 2021, DTSC ordered Schnitzer Steel (now Radius Recycling), through a formal Enforcement Order for Corrective Action, to clean up contamination, both on site and in the surrounding community; modify the facility as needed to prevent releases; and submit a plan to control immediate threats from metal shredding practices (DTSC 2021, 2023a). The Enforcement Order for Corrective Action was issued after DTSC conducted several inspections at the facility and noted various violations of hazardous waste laws, including the failure to operate the facility in a manner to minimize the release of hazardous waste and/or hazardous waste constituents. The Enforcement Order for Corrective Action, included in Appendix C, provides additional detail on DTSC's findings, and required corrective actions at the facility. Radius Recycling installed a cap and a water treatment system as part of their site remediation (Apex 2021).

2019 Soil Summary Report

A soil summary report by Terraphase Engineering was prepared in 2019 that summarized the scope and findings of soil investigations at the Radius Recycling facility from 1987 through 2017, including findings related to soil contamination (Terraphase Engineering 2019a). The data indicate that soil underlying the facility is affected by TPH, metals, and PCBs. There have also been minor detections of other organic contaminants, but generally at concentrations below environmental screening levels (ESLs). Therefore, TPH, metals, and PCBs are the site's COCs. The data indicate that, in most cases, the highest concentrations of COCs are in deeper soil that represents historical fill, and not in shallow soil. Radius Recycling is in the process of capping the entire facility with 12 inches of reinforced concrete to effectively eliminate potential leaching of COCs from soil to groundwater (City of Oakland 2021).

The 2019 Terraphase report provides detailed COC findings for a soil boring just north of the existing shredder (SB-14) at or near the Project area, including findings related to concentrations of TPH as diesel, selected metals (copper, lead, nickel, and zinc), and PCBs at 2 to 3 feet BGS. Of these sampled and reported constituents, SB-14 exceeded only the SFBRWQCB ESLs for lead. Older sampling from 1987 at unknown depths in the area of the proposed Project similarly show ESL exceedances for select metals (lead and nickel), but no exceedances for total PCBs. However, according to the 2019 Terraphase report, the existing data do not generally indicate "hot spots" typically associated with specific sources, and COCs would be expected to be randomly distributed throughout most of the facility's subsurface.

Proximity to Schools and Airports

There are no schools within 0.25 mile of the Project site; the nearest school is Martin Luther King Junior Elementary School, approximately 0.64 mile northeast of the Project site. The closest airport is San Francisco Bay Oakland International Airport, which is approximately 5.5 miles to the southeast of the Project site.

3.8.2 Regulatory Setting

Federal

The primary federal agencies with responsibility for hazardous materials management include the EPA, United States Department of Labor Occupational Safety and Health Administration (OSHA), and the

United States Department of Transportation (USDOT). Federal laws, regulations, and responsible agencies are summarized in Table 3-7.

Table 3-7 Federal Laws and Regulations Related to Hazardous Materials Management

Classification	Law or Responsible Agency	Description
Oil Pollution Act	33 USC Section 2701 et sec, and Part 155	The Oil Pollution Act establishes a liability system for oil spills into navigable waters or adjacent shorelines that injure or are likely to injure natural resources, and/or the services that those resources provide to the ecosystem or humans. Pursuant to this act, federal and state agencies and Indian tribes may act as Trustees on behalf of the public to assess the injuries, scale restoration to compensate for those injuries, and implement restoration.
CWA	33 USC Section 1257 et sec	The federal CWA and subsequent amendments, under the enforcement authority of EPA, was enacted “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” The CWA gave EPA the authority to implement pollution control programs such as setting wastewater standards for industry. In California, implementation and enforcement of the NPDES program is conducted through the California SWRCB and the nine RWQCBs. The CWA also sets water quality standards for surface waters and established the NPDES program to protect water quality. Several sections of the CWA pertain to regulating impacts on waters of the United States, as summarized below.
	Section 402 – NPDES	The 1972 amendments to the CWA established the NPDES permit program to control discharges of pollutants from point sources. The 1987 amendments to the CWA created a new section of the CWA devoted to stormwater permitting (Section 402[p]). EPA has delegated administering and enforcing the provisions of CWA and NPDES to the State of California. NPDES is the primary federal program that regulates point-source and nonpoint-source discharges to waters of the United States.
Hazardous Materials Management	Community Right-to- Know Act of 1986 (also known as Title III of the Superfund Amendments and Reauthorization Act)	This Act imposes requirements to ensure that hazardous materials are properly handled, used, stored, and disposed of and to prevent or mitigate injury to human health or the environment in the event that such materials are accidentally released.
Hazardous Waste Handling	RCRA	Under RCRA, EPA regulates the generation, transportation, treatment, storage, and disposal of hazardous waste from “cradle to grave.”
	Hazardous and Solid Waste Act	Amended RCRA in 1984, affirming and extending the “cradle to grave” system of regulating hazardous wastes. The amendments specifically prohibit the use of certain techniques for the disposal of some hazardous wastes.
Hazardous Materials Transportation	USDOT	USDOT has the regulatory responsibility for the safe transportation of hazardous materials. The USDOT regulations govern all means of transportation except packages shipped by mail (49 CFR).
	United States Postal Service	Postal service regulations govern the transportation of hazardous materials shipped by mail.
Occupational Safety	Occupational Safety and Health Act of 1970	The federal Occupational Safety and Health Administration sets standards for safe workplaces and work practices, including the reporting of accidents and occupational injuries (29 CFR 1910).
Structural and Building Components (Lead-based paint, polychlorinated biphenyls, and asbestos)	Toxic Substances Control Act	This Act regulates the use and management of polychlorinated biphenyls in electrical equipment and sets forth detailed safeguards to be followed during the disposal of such items.
	EPA	EPA monitors and regulates hazardous materials used in structural and building components, and their effects on human health.

Notes:

CFR = Code of Federal Regulations; CWA = Clean Water Act; EPA = United States Environmental Protection Agency; NPDES = National Pollutant Discharge Elimination System; RCRA = Resource Conservation and Recovery Act of 1976; RWQCB = Regional Water Quality Control Board; SWRCB = State Water Resources Control Board; USC = United States Code; USDOT = Department of Transportation

State and local agencies often have either parallel or more stringent rules than federal agencies. In most cases, state law mirrors or overlaps federal law, and enforcement of these laws is the responsibility of the state or of a local agency to which enforcement powers are delegated. For these reasons, the requirements of the law and its enforcement are discussed under either the state or local agency section.

State

The primary state agencies with responsibility for hazardous materials management in the region include DTSC and SFBRWQCB within the California Environmental Protection Agency, California OSHA, California Department of Health Services, California Highway Patrol, and the California Department of Transportation (Caltrans). State laws, regulations, and responsible agencies are summarized in Table 3-8.

Table 3-8 State Laws and Regulations Related to Hazardous Materials Management

Classification	Law or Responsible Agency	Description
Hazardous Materials Management	Unified Hazardous Waste and Hazardous Materials Management Regulatory Program; CUPA (Health and Safety Code Sections 25404 et seq.)	In January 1996, CalEPA adopted regulations that implemented a Unified Program at the local level. The agency responsible for implementation of the Unified Program is called the CUPA, which for the City of Oakland is the Alameda County Department of Health Services, discussed further below.
	State Hazardous Waste and Substances List (Cortese List); DTSC, RWQCB, Alameda County Environmental Health Department.	The Radius Recycling facility is listed on the "Cortese List" compiled pursuant to Government Code Section 65962.5 and referenced in Public Resources Code Section 21092.6. The oversight of hazardous materials sites often involves several different agencies that may have overlapping authority and jurisdiction. DTSC is the lead agency.
Hazardous Waste Handling	California Hazardous Materials Release Response Plan and Inventory Law of 1985; CUPA	The California Hazardous Materials Release Response Plan and Inventory Law of 1985 requires that businesses that store hazardous materials on site prepare a Hazardous Materials Business Plan and submit it to the local CUPA, which in this case is the Alameda County Department of Health Services.
	California Hazardous Waste Control Act; DTSC	Under the California Hazardous Waste Control Act, California Health and Safety Code, Division 20, Chapter 6.5, Article 2, Section 25100 et seq., DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste in California. The hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; dictate the management of hazardous waste; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in landfills. DTSC is also the administering agency for the California Hazardous Substance Account Act. California Health and Safety Code, Division 20, Chapter 6.8, Section 25300 et seq., also known as the State Superfund law, provides for the investigation and remediation of hazardous substances pursuant to state law.

Classification	Law or Responsible Agency	Description
	California Fire Code	The California Fire Code regulates the storage and handling of hazardous materials, including the requirement for secondary containment, separation of incompatible materials, and preparation of spill response procedures. In addition, the Fire Code includes designing structures to enable ingress and egress during fires and other emergencies. The code includes designing for ingress and egress, emergency escape routes, exit design requirements, and lighting.
Hazardous Materials Transportation	Titles 13, 22, and 26 of the California Code of Regulations	These sections regulate the transportation of hazardous waste originating in and passing through the state, including requirements for shipping, containers, and labeling.
	California Highway Patrol and Caltrans	These two state agencies have primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies.
Occupational Safety	Cal/OSHA	Cal/OSHA has primary responsibility for developing and enforcing workplace safety regulations in California. Because California has a federally approved OSHA program, it is required to adopt regulations that are at least as stringent as those found in Title 29 of the CFR. Cal/OSHA standards are generally more stringent than federal regulations.
	Cal/OSHA regulations (Title 8 California Code of Regulations)	The use of hazardous materials in the workplace requires employee safety training, safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation.
Emergency Response	Cal OES and local government partners	The State of California and local governments throughout the Bay Area, including Alameda County, have made investments in the planning and resources necessary to respond to natural and human-caused emergencies and disasters. Cal OES and its local government partners developed the Bay Area Regional Emergency Coordination Plan with support from the Department of Homeland Security to provide a framework for collaboration and coordination during regional events. The RECP has been prepared in accordance with national and state emergency management systems and plans. The RECP provides an all-hazards framework for collaboration among responsible entities, and coordination during emergencies in the San Francisco Bay Area. The RECP defines procedures for regional coordination, collaboration, decision-making, and resource sharing among emergency response agencies in the Bay Area.

Notes:

CalEPA = California Environmental Protection Agency; Cal OES = California Office of Emergency Services; Cal/OSHA = California Occupational Safety and Health Administration; Caltrans = California Department of Transportation; CFR = Code of Federal Regulations; CUPA = Certified Unified Program Agency; DTSC = Department of Toxic Substances Control; OSHA = Occupational Safety and Health Administration; RECP = Regional Emergency Coordination Plan; RWQCB = Regional Water Quality Control Board

Regional and Local

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

The Unified Program, codified in Health and Safety Code Sections 25404 et seq., requires the administrative consolidation of six hazardous materials and waste programs under one agency, a Certified Unified Program Agency (CUPA). The following programs are consolidated under the unified program:

- Hazardous Materials Release Response Plans, and Inventory (also referred to as Hazardous Materials Business Plans)

- California Accidental Release Program
- Underground Storage Tanks
- Aboveground Petroleum Storage Spill Prevention Control and Countermeasures
- Hazardous Waste Generation and Onsite Treatment
- Uniform Fire Code Plans and Inventory Requirements

The state Secretary for Environmental Protection designated the Alameda County Department of Environmental Health as the local CUPA. The CUPA is charged with the responsibility of conducting compliance inspections of hazardous materials facilities in Alameda County, including the City of Oakland. These facilities handle hazardous materials, generate or treat a hazardous waste, and/or operate underground storage tanks. The CUPA uses education and enforcement to minimize the risk of chemical exposure to human health and the environment. The CUPA forwards important facility information to local fire prevention agencies, enabling the agencies to take appropriate protective action in the event of emergencies at regulated facilities. To legally store and use hazardous materials above the trigger quantities, users must apply for permits and demonstrate satisfactory compliance with regulations. The quantities that trigger disclosure are based on the maximum quantity on site at any time:

- 55 gallons, 500 pounds, or 200-cubic-foot capacity for 30 days or more at any time in the course of a year
- Any amount of hazardous waste
- Category I or II pesticides
- Explosives
- Extremely hazardous substances above the threshold planning quantity

Port of Oakland Administrative Code, Chapter 9.01 (Environmental Provisions)

Chapter 9.01 of the Port Administrative Code establishes environmental requirements that apply to all entities that access or use Port property. The requirements cover, among other matters, storage tanks, compliance with environmental laws, hazardous materials management and cleanup, imported fill, reuse of excavated materials, asbestos, permits, and reporting.

Port Hazardous Materials Management Guide

The Port's Hazardous Materials Management Guide (HMMG) (Port 2019a) identifies requirements for the storage, use, generation, and disposal of hazardous materials and waste on Port property. The HMMG identifies individuals responsible for hazardous materials management at the Port; describes typical hazardous materials/wastes stored, generated, and handled; provides management procedures; and provides information on regulatory requirements, training requirements, and recordkeeping procedures, including inspection checklists.

Port Soil Management Plan

The Port's Soil Management Plan (Port 2010) provides protocols for characterization of soil excavated from Port-owned properties, soil storage, soil reuse in Port-owned properties, and handling and disposal of soils found to exceed applicable regulatory hazardous waste thresholds.

City of Oakland General Plan

The Public Safety Element of the Oakland General Plan describes the following policies regarding hazards and hazardous materials, which were adopted for the purpose of avoiding or mitigating an environmental effect, and are applicable to the proposed Project.

- **Policy HM-1:** Minimize the potential risks to human and environmental health and safety associated with the past and present use, handling, storage, and disposal of hazardous materials.
 - **Action HM-1.1:** Continue to exercise unified-program responsibilities, including the issuance of permits for and inspection of certain industrial facilities, monitoring the filing of disclosure forms and risk-management plans, hazardous-materials assessment reports and remediation plans, and closure plans by such facilities.
 - **Action HM-1.6:** Through the Urban Land Redevelopment program, and along with other participating agencies, continue to assist developers in the environmental clean-up of contaminated properties.
- **Policy HM-2:** Reduce the public's exposure to TACs through appropriate land use and transportation strategies.
 - **Action HM-2.1:** Continue to enforce performance standards controlling the emission of air contaminants, PM, smoke, and unpleasant odors.
- **Policy HM-3:** Seek to prevent industrial and transportation accidents involving hazardous materials, and enhance the city's capacity to respond to such incidents.
 - **Action HM-3.1:** Continue to enforce regulations limiting truck travel through certain areas of the city to designated routes, and consider establishing time-based restrictions on truck travel on certain routes to reduce the risk and potential impact of accidents during peak traffic hours.

Oakland Municipal Code

Under Oakland Municipal Code, Title 8 Section 12.010, the City of Oakland assumes the authority and responsibility for the implementation of Chapter 6.95 of the California Health and Safety Code (Health and Safety Code Section 25500 et seq.), as to the handling of the hazardous materials in the city. Pursuant to Section 25502 of Chapter 6.95, the City of Oakland shall have exclusive jurisdiction within its boundaries for the purposes of carrying out Chapter 6.95.

Oakland Municipal Code, Title 8 Section 42 previously described the City of Oakland as the local CUPA. However, that role has been transferred to the Alameda County Department of Environmental Health, as previously noted.

3.8.3 Impact Analysis

a, b) Less Than Significant Impact

Project construction includes limited ground disturbance associated with trenching for utility and drainage connections and for foundation thickening, which could potentially occur within underlying soils affected by TPH, metals, and PCBs. Although recent 2016 sampling indicates that soils at 2 to 3 feet BGS in the

Project area near the existing shredder exceed only SFBRWQCB screening levels for lead, other constituents may be present, given the heterogenous distribution of contaminants throughout the facility. Excavation would occur to a maximum depth of 4 feet BGS and is estimated at no more than 1,546 cubic yards.

Contaminated soils generated during ground disturbance would be managed in accordance with the facility's Soil Management Plan and consistent with California Stormwater BMP Handbook measure WM-3 for stockpile management, as described in Section 2.6.4. This would generally include properly storing excavated materials (e.g., placed on and covered by heavy duty polyethylene plastic sheeting to mitigate dust generation and rain runoff; and labeled and secured to prevent accidental removal, disposal, or use), testing and sampling materials for COCs, and proper soil disposal once profiling analytical results have been received. If the excavated material is designated a state hazardous waste, a federal hazardous waste, or otherwise exceeds ESLs, the material will be profiled for offsite disposal at a permitted facility. USDOT regulates offsite shipment of hazardous waste under 49 CFR 172., which assigns hazardous material shipper responsibilities such as proper labeling, packaging, and tracking. Soils that are not designated as state or federal hazardous waste and do not exceed ESLs may be transported to a Port-designated storage site or for subsequent reuse on Port-owned properties.

Hazards to workers during ground disturbance required for Project construction would be avoided or minimized through adherence to applicable regulations and policies. This includes California Occupational Safety and Health Administration (Cal/OSHA) occupational safety policies for employee safety training, safety equipment, accident and illness prevention programs, and hazardous substance exposure warnings. As described in Section 2.6.4, soil sampling activities will be conducted in accordance with a site-specific HASP meeting the requirements of Title 8, CCR Section 5192 for the protection of construction workers. The site-specific HASP will include monitoring requirements to ensure that contaminant levels do not exceed action levels for specific contaminants at the site boundary, as appropriate.

Use of any common construction materials and equipment (e.g., fuels, lubricants, and construction equipment listed in Section 2.5, Table 2-3) would occur in compliance with manufacturers' specifications, standard construction BMPs, and applicable regulations.

Operational changes would be minimal and would be primarily related to the containment and movement of nonferrous materials in the facility (e.g., containment of material stockpiles and equipment, and use of the proposed new conveyor system), with other incidental operational changes such as new LED interior lighting, new air handling and filtration system, and maintenance of proposed improvements. These operational changes would not result in new or increased hazards to the public or environment.

Oversight from regulatory agencies to ensure safe facility operations, including through enforcement actions in the event of a violation, would continue and be unaffected by the Project's operations. This includes, but is not limited to, continued operation under the Interim Status authority granted by DTSC, and future operations under the hazardous waste facility permit (pending issuance); and continued implementation and adherence to DTSC's Enforcement Order for Corrective Action. The proposed buildings, conveyor system, and appurtenances would not adversely affect Radius Recycling's implementation of corrective actions.

Construction and operation of the proposed Project is not anticipated to result in any increased potential for upset and accident conditions. The proposed buildings and conveyor system would be used for

containment of nonferrous materials during processing; under existing conditions, this primarily occurs in open-air conditions. This operational change is not anticipated to result in new or exacerbated potential for accidents involving hazardous materials stored and managed on site. As described above, oversight from regulatory agencies to ensure safe facility operations, including through enforcement actions in the event of a violation, would continue and be unaffected by the Project's operations; and the facility operates and would continue to operate under permitting authority of regulatory agencies, primarily DTSC.

In consideration of the Project's adherence to applicable regulations and policies and implementation of avoidance and minimization measures, Project construction would result in **less-than-significant impacts** related to routine transport, use, or disposal of hazardous materials, or upset and accident conditions involving hazardous materials. Operational impacts are not anticipated, given the limited changes to existing operations and in consideration of regulatory agency oversight, including existing permits and corrective actions.

c) No Impact

There are no existing or proposed schools within 0.25 mile of the proposed Project; the nearest school is Martin Luther King Junior Elementary School, approximately 0.64 mile northeast of the Project site. Although the proposed Project may encounter contaminated soils that require offsite disposal, under these circumstances transport would occur in compliance with USDOT regulations for transport to avoid or minimize potential accident or release hazards. Project construction and operations are not anticipated to result in any other changes to routine use or accidents involving hazardous materials that could affect offsite receptors. Therefore, there would be **no impact** related to hazardous material emissions within 0.25 mile of a school.

d) Less Than Significant Impact

The Radius Recycling facility is listed as an open cleanup site for metals and PCB contamination (Case ID: SL0600116612) in soil and groundwater from contaminants traced to the site from Berkeley Landfill. Investigation and cleanup activities at this site are ongoing.

As described in the discussion for questions a) and b), above, excavations for utility and drainage connection trenching and foundation thickening could potentially encounter soils affected by TPH, metals, and PCBs. Adverse impacts to the public and environment during construction would be avoided or minimized by implementing the facility's Soil Management Plan and California Stormwater BMP Handbook measure WM-3 for stockpile management (see Section 2.6.4), and by complying with state and federal regulations. Potential adverse impacts to workers would be addressed by preparing and implementing a HASP and by complying with Cal/OSHA policies and regulations. The Project entails minor operational changes that are not anticipated to result in new or increased hazardous material impacts.

As described in Section 3.8.1, DTSC has issued a formal Enforcement Order for Corrective Action to clean up contamination both on site and in the surrounding community, following inspections that identified various violations of hazardous waste laws (Appendix C). The Enforcement Order includes a scope of work for facility investigation, which would document facility conditions and operations; and a scope of work

for a corrective measures study, followed by corrective measure implementation, which would entail developing and implementing corrective measures. Construction and operation of the proposed Project is not expected to interfere with the facility investigation, corrective measure study, corrective measure implementation, or other requirements outlined in the Enforcement Order for Corrective Action. Proposed Project elements would be described and considered as needed in any reporting or corrective actions associated with the Enforcement Order.

In consideration of the Project's adherence with applicable regulations and policies, and implementation of avoidance and minimization measures, Project construction would result in **less-than-significant impacts** related to its existing open cleanup status. Operational impacts are not anticipated, given the limited changes to existing operations and in consideration of regulatory agency oversight, including existing permits and corrective actions.

e) No Impact

There are no airports within 2 miles of the Project site; the nearest airport, San Francisco Bay Oakland International Airport, is approximately 5.5 miles to the southeast of the Project site. As noted in the discussion for question c), above, transport of hazardous materials offsite (if needed) would occur in compliance with USDOT regulations to avoid or minimize potential for accidents or releases involving hazardous materials. Therefore, there would be **no impact** related to airports.

f) No Impact

No Project construction activities would occur outside the private property boundaries of the proposed Project site, other than movement of trucks and vehicles. Construction personnel are expected to range between 12 and 42 workers on the site daily, depending on the construction phase. The construction activities are estimated to require fewer than 250 vendor trips over the duration of construction. The export and import of cut-and-fill material would require approximately 130 haul truck round trips over the excavation and backfill construction phases. These trips would occur on local truck routes, as designated in Section 10.52.070 of the City of Oakland Municipal Code, and would be consistent with existing uses of these roadways (see Section 3.14, Transportation, for additional details). Operations would not result in additional offsite trips. Therefore, there would be no impact related to emergency response or evacuation.

g) No Impact

As described in Section 3, wildfire hazards are not present in the proposed Project area. The proposed Project is not in a designated wildland area that would contain substantial forest fire risks or hazards. The Radius Recycling facility is currently developed in a highly urbanized area of the City of Oakland. The Project site does not contain dense vegetation, and is surrounded by other developed properties, roadways, and the San Francisco Bay Estuary. The Project site is not in or near a state Responsibility Area or lands classified as very high fire severity zones (CAL FIRE 20024). Therefore, no impact would occur with regard to wildfire.

3.8.4 Mitigation Summary

No mitigation measures would be necessary.

3.9 HYDROLOGY AND WATER QUALITY

Would the Project:

Question	CEQA Determination
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	No Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	No Impact
i) result in substantial erosion or siltation on- or off-site;	No Impact
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	No Impact
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	No Impact
iv) impede or redirect flood flows?	No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?	No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	No Impact

3.9.1 Environmental Setting

Radius Recycling Facility Surface Hydrology and Stormwater Conveyance

Approximately one-third of the Radius Recycling facility is covered by either buildings or pavement. The rest of the ground surface is unpaved dirt. There are no natural streams, channels, or ponds on the site. Operations-related stormwater is currently stored and reclaimed or evaporated with the facility’s existing treatment system. The concrete slab area proposed for development of the containment buildings, conveyor system, and appurtenances is impermeable, and stormwater in this area is conveyed to the existing treatment system.

The Project location is in the area of the SWRCB Water Quality Order No. 2013-0001-DWQ NPDES General Permit No. CAS000004, WDR for Storm Water Discharges, from the Port’s MS4 permit that allows discharge of stormwater from the site. Radius Recycling also holds an EBMUD Wastewater Discharge Permit (Port 2016).

California Regional Water Quality Control Board Cleanup and Abatement Order

On January 2, 2013, SFBRWQCB issued CAO No. R2-2013-1001 to Schnitzer Steel (now Radius Recycling). The CAO requires the cleanup and abatement of wastes, including sediment, industrial process wastewater, and metal shredding by-products that have discharged to adjacent waterways of the Radius Recycling facility. Radius Recycling has developed and initiated planning for a Stormwater Improvement Project (Port 2016). The CAO and Stormwater Improvement Project CEQA process also resulted in the development of several operational BMPs, several of which have been incorporated into the proposed Project (see Section 2.6). Site-wide groundwater sampling has also detected petroleum-hydrocarbon oxidation products (HOPs), leading to additional SFBRWQCB corrective action requests, described in the following paragraphs.

In 2016, Radius Recycling performed site-wide sampling, which included the collection and analysis of groundwater samples from soil borings and monitoring wells (Terraphase Engineering 2019b). HOPs have been detected in several wells. SFBRWQCB requested in 2019 that Radius Recycling develop an Interim Corrective Action Plan (ICAP) to address potential discharges of HOPs and metals to the Oakland Harbor. As an alternative to the requested ICAP, Radius Recycling recommended, in a letter dated May 16, 2019, the collection of additional data to evaluate whether groundwater discharges to the Bay are posing an ecological risk. Radius Recycling proposed to conduct a comprehensive site-specific groundwater evaluation to accurately define site-related hydrogeologic conditions and evaluate the characteristics of site-related groundwater discharges to the Bay. SFBRWQCB approved the proposed groundwater evaluation in a letter dated June 11, 2019. The scope of the groundwater evaluation was discussed during a meeting on June 18, 2019, with SFBRWQCB, Radius Recycling, and consultant Terraphase representatives. This meeting was documented by SFBRWQCB in a letter dated July 2, 2019. Radius Recycling prepared a Draft Hydrogeologic Investigation Work Plan dated August 9, 2019 (Terraphase Engineering 2019c). Radius Recycling is currently awaiting approval from the SFBRWQCB to implement the work plan (City of Oakland 2021).

Department of Toxic Substances Control Cleanup and Abatement Order

This site is currently under a CAO issued by DTSC. A variety of contaminants have been detected at various levels on the site, including dioxin, polycyclic aromatic hydrocarbons, PCBs, heavy metals, benzene, and asbestos (Apex 2021). Radius Recycling installed a cap and a water treatment system as part of their site remediation.

Storm-Induced Flooding

The Federal Emergency Management Agency (FEMA), through its Flood Insurance Rate Mapping (FIRM) program, designates areas where flooding could occur during 100-year and 500-year flood events. The FEMA FIRM identifies the Radius Recycling facility as being within Zone X (an area of minimal flood hazard or 0.2 percent annual chance of flood hazard [500-year flood zone]) (FEMA 2018). Surrounding upland areas are also in Zone X, but the Oakland Inner Harbor is mapped as Zone AE (1 percent annual chance of flood hazard [100-year flood zone]).

Groundwater

The facility is in the Santa Clara Valley Groundwater Basin (Basin No. 2-009.04) (Department of Water Resources 2011). According to the Geotechnical Engineering Report prepared for the site and Project, groundwater at the site is shallow, and was observed as shallow as 2 feet below existing concrete slabs (SMG 2023). Groundwater at the site was found to be several feet higher than the level in the nearby Inner Harbor. Historically, groundwater onsite has been encountered at depths of 2.5 to 11 feet BGS. According to GeoTracker records, monitoring wells closest to the construction exhibit groundwater elevations as shallow as 4.49 feet BGS (SWRCB 2023).

Groundwater at the Radius Recycling facility has been sampled since 1991 (Terraphase Engineering 2019c). Groundwater samples have been tested for TPH as diesel and motor oil, metals, and PCBs. Concentrations of TPH as diesel have been below the saltwater ecotoxicity ESL, except for one sample collected in 2017. TPH as motor oil is usually not detected or is detected at concentrations below ESLs. Minor exceedances of the nickel saltwater ecotoxicity ESL have been observed in three shoreline wells. Minor exceedances of the saltwater ecotoxicity ESLs for arsenic, copper, lead, and zinc were measured in one shoreline well. HOPs have been detected in several wells at concentrations that exceed the saltwater ecotoxicity ESL. The highest concentrations of HOPs were found in wells in the southeastern portion of the Radius Recycling facility, including in wells along the southeastern shoreline along the Oakland Harbor and adjacent to the Inner Harbor Turning Basin. As noted above, Radius Recycling prepared an Investigation Work Plan to evaluate groundwater conditions, and review of the plan by the SFBRWQCB remains pending. Soil evaluations completed for the facility concluded that, given the shallow depths to groundwater, it is reasonable to assume that TPH and metals (specifically nickel) detected in groundwater are from the fill materials beneath the Radius Recycling facility (City of Oakland 2021).

Leaching of COCs from soil to groundwater due to surface infiltration may be occurring in unpaved areas of the Radius Recycling facility (Terraphase Engineering 2019c). Historically, a larger portion of the Radius Recycling facility was unpaved, and the potential for leaching to groundwater was greater. Radius Recycling has completed capping the entire facility with 12 inches of reinforced concrete to effectively eliminate potential leaching of COCs from soil to groundwater (City of Oakland 2021).

Tsunami and Seiche

The Project site is in the Alameda County Tsunami Hazard Area (California Governor's Office of Emergency Services et al. 2023). Seiche⁵ risk at areas along Oakland's shoreline, including the Oakland Inner Harbor, is minimal because there are no large, confined bodies of water with depths that would cause this hazard (City of Oakland 2016). Tsunami hazards in Oakland are described and assessed in the Oakland 2045 Oakland Safety Element Public Review Draft (Safety Element) (City of Oakland 2023c). As discussed in the Safety Element, the Inner Harbor area would be sheltered from tsunamis by the island of Alameda. The overall risk from tsunamis in Oakland appears to be small, especially because there would usually be several hours to evacuate residents and undertake other emergency preparations for most tsunamis approaching the coast. The 2016 Alameda County Local Hazard Mitigation Plan further substantiates that

⁵ Seiches are water-level oscillations in an enclosed or semi-enclosed body of water such as a lake, reservoir, or harbor.

tsunamis have not been a major problem in Alameda County or most of the Bay Area, and have not resulted in significant damage (Alameda County 2016).

3.9.2 Regulatory Setting

Federal

Clean Water Act (33 USC 1257 et seq.)

The CWA established the federal structure for regulating surface water quality standards and discharges of pollutants into waters of the United States. The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. The genesis of the CWA, enacted in 1948, was the Federal Water Pollution Control Act. It was significantly reorganized and expanded in 1972 by the CWA. The CWA requires states to set standards to protect water quality.

Under Section 402 of the CWA, discharge of pollutants to navigable waters is prohibited unless the discharge complies with general or individual NPDES permits. This includes both point-source and nonpoint-source (i.e., stormwater) discharges. NPDES stormwater regulations are intended to improve the quality of stormwater discharged to receiving waters to the "maximum extent practicable" by using structural and nonstructural BMPs. BMPs can include educational measures, regulatory measures, public policy measures, or structural measures. Implementation and enforcement of the NPDES program is conducted through the SWRCB and the nine Regional Water Quality Control Boards (RWQCBs).

State

Porter-Cologne Act

The California Legislature enacted the Porter-Cologne Water Quality Control Act (Porter-Cologne) in 1969 to preserve, enhance, and restore the quality of the state's water resources. Porter-Cologne established the SWRCB and nine RWQCBs. These agencies are responsible for setting the state's water quality policy and enforcing ground- and surface-water quality standards. The Porter-Cologne Act provides for the adoption of water quality control plans to designate beneficial uses of water, set water quality objectives to protect beneficial uses, and provide for a program to achieve those objectives. The plans may include prohibitions against the discharges of waste, or certain types of waste, in specified areas or under specified conditions. The RWQCBs are authorized to issue WDRs and Water Quality Certifications for activities that may affect water quality. A WDR would not be required for the Project.

Industrial General Permit

The Industrial General Permit adopted by the SWRCB regulates industrial stormwater discharges and authorized nonstormwater discharges from industrial facilities in California. The Industrial General Permit requires dischargers to:

- eliminate unauthorized non-stormwater discharges;
- develop and implement Stormwater Pollution Prevention Plans that include BMPs;
- implement minimum BMPs, and advanced BMPs as necessary, to achieve compliance with the effluent and receiving water limitations of the Industrial General Permit;

- conduct monitoring, including visual observations and analytical stormwater monitoring for indicator parameters;
- compare monitoring results for monitored parameters to applicable numeric action levels derived from the United States EPA 2008 Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity and other industrial stormwater discharge monitoring data collected in California;
- perform the appropriate Exceedance Response Actions when there are exceedances of the applicable numeric action levels; and
- certify and submit all permit-related compliance documents via the Storm Water Multiple Application and Report Tracking System.

The Industrial General Permit was amended by the SWRCB in 2018 to additionally incorporate the following requirements:

- Federal Sufficiently Sensitive Test Method Ruling;
- Total Maximum Daily Load Implementation Requirements; and
- Statewide Compliance Options incentivizing onsite or regional stormwater capture and use.

Municipal Storm Water Program

Stormwater discharges from MS4s are regulated through the Municipal Storm Water Program. Municipalities with populations of 100,000 or more are covered by the Phase I Permit Program; municipalities with populations of less than 100,000 and nontraditional municipalities designated by the state are covered by the Phase II Permit Program. The SWRCB and the individual RWQCBs implement and enforce the Municipal Storm Water Program. The Small MS4 permit (MS4 NPDES Permit No. CAS000004 and Order No. 2013-0001-DWQ) issued by the SWRCB designates the Port as a Non-Traditional Small MS4.

Regional and Local

The Open Space, Conservation, and Recreation Element of the Oakland General Plan (City of Oakland 1996a) describes the following policies that were adopted for the purpose of protecting water resources and are relevant to the proposed Project:

- **Policy CO-5.1:** the City's goal to protect groundwater recharge by, for example, limiting impervious surfaces
- **Policy CO-5.2:** improve groundwater quality such as cleaning up contaminated sites and through ongoing monitoring of groundwater
- **Policy CO-5.3:** strategies to control urban runoff, such as reducing water pollution associated with stormwater runoff or reducing water pollution from hazardous material areas
- **Policy CO 6.5:** protect the surface waters of the San Francisco Bay and San Francisco Estuary system, by such means as discouraging shoreline activities that negatively impact marine life in the water and marshland areas

The City of Oakland's General Plan Safety Element contains policies related to flooding, tsunami and seiche (City of Oakland 2023c). These policies include:

- **Policy SAF-3.1:** continuing or strengthening City programs that seek to minimize the storm-induced flooding hazard
- **Policy SAF-3.2:** enforcing and updating local ordinances to comply with regional orders that would reduce the risk of storm-induced flooding
- **Policy SAF-3.4:** continue to coordinate with FEMA, the Alameda County Flood Control and Water Conservation District (ACFCWCD), and the State Division of Safety of Dams on flood-control-related projects

3.9.3 Impact Analysis

a) No Impact

The proposed Project entails construction and operation of three buildings and a new conveyor system for storage and processing of nonferrous scrap materials. Construction activities would be limited to installation of the buildings and conveyor system on an existing impermeable concrete slab (which will be upgraded to support the new buildings and the hoppers); minimal trenching (up to 36 inches BGS); downspout connections between the new buildings and the existing drainage system; and installation of electrical connections for limited LED interior lighting, the conveyor, and an air handling and filtration system. Project construction would occur in adherence with the water quality BMPs described in Section 2.6, which would avoid or minimize water quality impacts such as those potentially occurring from accidental spills or otherwise conveying materials to water bodies. Stormwater runoff generated during construction (if any) would be collected and reclaimed or evaporated in the existing treatment system.

As described in Section 3.9.1, groundwater has been observed as shallow as 4.9 feet BGS at monitoring wells closest to the construction footprint, and therefore could be encountered during deeper excavations for utility or drainage trenching or foundation thickening. As recommended in the Project's geotechnical report (SMG 2023), and as detailed in Section 2.6.4, groundwater controls such as pumping from shallow sumps would be implemented as needed for excavations beneath 4 feet BGS. If groundwater encountered during excavation has evidence of contamination (e.g., visual staining, suspicious odors, or evidence of physical debris), or if the groundwater is emanating from, in contact with, or near soil that has evidence of contamination, a groundwater sample would be collected and analyzed in accordance with the methods described in Section 2.6.4. Water generated from dewatering activities will not be discharged to any water bodies. As also detailed in Section 2.6.4, ground disturbance will occur in adherence with the facility's Soil Management Plan and consistent with California Stormwater BMP Handbook measure WM-3 for stockpile management. Adverse impacts to the groundwater table from utility and drainage trenching and installation or from foundation thickening are not anticipated. The existing Investigation Work Plan (pending SFBRWQCB review) for evaluating the facility's groundwater conditions would remain applicable with the proposed Project.

The proposed improvements would be constructed on an existing impermeable concrete slab and would not increase impermeable surface areas or result in more than negligible effects on stormwater conveyance in the facility. Stormwater runoff during both construction and operations would be captured

and contained in the existing stormwater treatment system, including through new drainage connections to the existing system for operational stormwater conveyance. The Project would not introduce any new or increased potential for pollutant discharge. Long-term maintenance needs would be minimal and would be similar to those required for existing structures throughout the site (e.g., cleaning and as-needed repairs).

The Project location is in the area of the SWRCB Water Quality Order No. 2013-0001-DWQ NPDES General Permit No. CAS000004 WDR for Storm Water Discharges, from the Port's MS4 permit that allows discharge of stormwater from the site. Radius Recycling also holds an EBMUD Wastewater Discharge Permit. Operation of the proposed improvements is not anticipated to conflict with or otherwise affect these existing authorizations.

The Project site has been issued a CAO from SFBRWQCB for the cleanup and abatement of wastes, including sediment, industrial process wastewater, and metal shredding by-products that have discharged to adjacent waterways of the proposed Project site; and a Draft Hydrogeologic Investigation Work Plan to evaluate potential groundwater contamination was prepared by Radius Recycling and remains under SFBRWQCB review. The proposed Project entails construction and operation of containment buildings, a new conveyor system, and appurtenances in an existing concrete surfaced area; and, as discussed above, construction and operation are not anticipated to result in new or worsened sources of pollutant inputs to water bodies. Project excavations for the utility and drainage connections and foundation thickening would occur on or near the existing concrete slab at the approximate center of the facility; they would not encroach on existing monitoring wells, which are predominantly near the facility's perimeter (Terraphase Engineering 2019b). Therefore, the proposed Project would not interfere with any monitoring equipment, or otherwise affect ongoing compliance investigations or actions.

In consideration of the Project's small scale and location on an existing concrete pad, the implementation of BMPs to avoid water quality impacts and address the potential for encountering groundwater during construction, and existing facility infrastructure and operating permits, the Project would result in **no impact** related to WDRs or groundwater quality.

b) No Impact

The proposed Project would have no effect on groundwater supplies or recharge. The proposed buildings, conveyor system, and their components would be constructed on an existing concrete slab and would not result in increased impervious surface areas or result in drainage changes that would affect groundwater recharge. Installation of buried utility and drainage connections is similarly not anticipated to affect groundwater supplies or recharge. Shallow groundwater may be encountered during excavations for the proposed foundation thickening or utility and drainage trenching, and BMPs such as use of shallow sumps would be implemented to control groundwater. Potential groundwater control would only occur during the brief duration of construction for these elements; this is anticipated to have no more than negligible effects on groundwater and would not affect groundwater supplies or recharge. Although the Radius Recycling facility is under the CAO partially related to groundwater contamination, Project construction and operation would not introduce new or increased sources of potential groundwater pollution. The Project trenching and foundation excavations would not occur near existing groundwater monitoring wells and would not otherwise interfere with corrective action investigation or implementation. Therefore, there would be **no impact** related to groundwater recharge or management.

c i, ii, iii, iv) No Impact

The proposed Project would be constructed on an existing impermeable slab and would not result in increased impervious surface areas or surface runoff. Stormwater runoff would continue to be captured and contained in the existing stormwater treatment system, including through new connections to the existing drainage system for operational stormwater conveyance. There are no water bodies, streams, or rivers present on the site. The Project site is in an area of minimal flood hazard, and the construction or operation of the proposed improvements is unlikely to impede flood flows or have more than negligible effects on flood flow conveyance. Construction does not entail any changes to the facility's existing drainage system other than new connections, and construction BMPs described in Section 2.6.2 would be implemented to avoid or minimize temporary impacts to drainage patterns. Given that the Project would not increase surface runoff or result in more than negligible changes in drainage patterns, and in consideration of the existing stormwater treatment system, the Project would result in **no impact** related to altered drainage patterns, the addition of impervious surfaces, erosive potential, or exceeding the capacity of existing drainage systems.

d) No Impact

As discussed in Section 3.9.1, Environmental Setting, the proposed Project is in a mapped tsunami inundation area and is outside of the 100-year flood zone, or any special flood zones. Tsunami risk in the Project area is relatively small, and seiches are unlikely to pose a risk to the Project area. The proposed Project would have negligible effects on stormwater conveyance, which would not affect flood hazard or tsunami susceptibility or introduce new or increased potential for release of pollutants. Potential release of pollutants from inundation could include disturbance of construction materials or equipment in the unlikely event of a tsunami or substantial storm event coinciding with construction. The Project includes implementation of BMPs, including, but not limited to proper storage and use of equipment materials away from the Bay. Furthermore, NOAA operates the National Tsunami Warning Center and the Pacific Tsunami Warning Center, which alert local authorities ahead of tsunamis. For most tsunamis approaching the coast, several hours are available to evacuate residents and undertake other emergency preparations, such as securing work sites. Therefore, the Project would result in **no impact** related to release of pollutants due to inundation from storms, tsunamis, or seiches.

e) No Impact

The proposed Project would be constructed in a manner that would minimize potential water quality effects, including through implementation of water-quality-related BMPs such as avoiding spills through employee training, and cleaning accidental spills immediately. Project operations would entail negligible changes from existing operating conditions, and the facility would continue to operate in compliance with regulatory conditions from required permits and approvals, such as the existing NPDES General Permit and EBMUD Wastewater Discharge Permit. As described in the discussion for question a), above, although the Project site is under the CAO from SFBRWQCB, the proposed Project construction and operation are not anticipated to result in new or increased sources of pollutant inputs to water bodies, nor would the Project interfere with any monitoring equipment, or otherwise affect ongoing compliance investigations or actions. Therefore, the Project would not conflict with any water quality control plan or sustainable groundwater management plan.

3.9.4 Mitigation Summary

No mitigation measures would be necessary.

3.10 LAND USE AND PLANNING

Would the Project:

Question	CEQA Determination
a) Physically divide an established community?	No Impact
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	No Impact

3.10.1 Environmental Setting

The Radius Recycling facility, including the Project site, is entirely in industrial use. These uses are related to scrap material recovery and recycling. The site and most of the surrounding areas have a zoning designation of General Industry and Transportation (City of Oakland 2023c). This zoning area is intended to create, preserve, and enhance areas of the City of Oakland that are appropriate for a wide variety of businesses and related commercial and industrial establishments that may have the potential to generate offsite impacts, such as noise, light/glare, odor, and traffic. This zoning allows heavy industrial and manufacturing uses, transportation facilities, warehousing and distribution, and similar and related supporting uses. General Industry and Transportation areas are characterized by sites with good freeway, rail, seaport, and/or airport access.

3.10.2 Regulatory Setting

There are no federal or state regulations pertaining to land use and planning that would apply to the analysis herein. Local regulations and policies are listed in the following paragraphs.

Regional and Local

Port of Oakland Building Permits

Under Section 708 of the City Charter, any construction, alteration, or other development in the Port Area requires a Port Building Permit (more often referred to as a Port Development Permit). The Board of Port Commissioners must approve a Port Building Permit prior to the start of such work, and prior to submittal for a City of Oakland building permit. Applications for Port Building Permits for privately owned property in the Port Area are considered and acted on by the Port Executive Director in the same manner as applications made to the Board of Port Commissioners. The Board of Port Commissioners has adopted ordinances governing the application and issuance of Port Building Permits, including Port Ordinance No. 2083, as amended by Port Ordinance Nos. 2972, 3689, and 3943. Furthermore, as the lessor of certain lands in the Port Area, the Port enforces additional standards for its lessees through each applicable tenancy agreement.

City of Oakland General Plan

The Radius Recycling facility, including the Project site, is in the General Industry and Transportation General Plan land use classification established by the Land Use and Transportation Element (LUTE) (City of Oakland 2023d). The LUTE of the Oakland General Plan contains the following land use policies that address issues related to land use and planning, and/or are particularly relevant to the proposed Project (City of Oakland 2023d). The LUTE was updated in September 2023, as part of Phase 1 of the General Plan Update.

- **Industry and Commerce Policy I/C.4.1:** Protecting Existing Activities. Existing industrial, residential, and commercial activities and areas which are consistent with long term land use plans for the City should be protected from the intrusion of potentially incompatible land uses.
- **Industry and Commerce Policy I/C.4.2:** Minimizing Nuisances. The potential for new or existing industrial or commercial uses, including seaport and airport activities, to create nuisance impacts on surrounding residential land uses should be minimized through appropriate siting and efficient implementation and enforcement of environmental and development controls.
- **Waterfront Policy W1.1:** General Plan Conformance of Projects in the Seaport and Airport Areas. The Port shall make a written determination on General Plan conformity for each project, plan, and/or land use guideline it approves in the Port Area. Prior to making such a determination the Port will forward its proposed determination to the Director of City Planning, who may provide the Port with written comments within a specified time period. Any comments so provided shall be considered and responded to in writing by the Port in its conformity determination.

For projects in the Port Area outside the Seaport and airport areas, the Port's determination of General Plan conformity may be appealed to the City Council within 10 days. If not appealed within 10 days the Port's determination shall be deemed final. If appealed, the City Council, by a vote of at least six members, shall make a final determination on the appeal within 30 days. The City Planning Commission shall provide recommendation to the City Council for consideration in hearing on appeal of the Port's conformity determination.

- **Waterfront Policy W1.2:** Planning with the Port. Plans for maritime and aviation operations as well as activities on all lands in Port jurisdiction should be coordinated with, and generally consistent with, the Oakland General Plan.
- **Waterfront Policy W1.3:** Reducing Land Use Conflicts. Land uses and impacts generated from Port or neighborhood activities should be buffered, protecting adjacent residential areas from the impacts of seaport, airport, or other industrial uses. Appropriate siting of industrial activities, buffering (e.g., landscaping, fencing, transitional uses), truck traffic management efforts, and other mitigations should be used to minimize the impact of incompatible uses.
- **Waterfront Policy W2.2:** Buffering of Heavy Industrial Uses. Appropriate buffering measures for heavy industrial uses and transportation uses on adjacent residential neighborhoods should be developed and implemented.

3.10.3 Impact Analysis

a, b) No Impact

The proposed Project would not physically divide an established community. The proposed Project is in an industrial area bordered by other industrial facilities and is consistent with the City of Oakland's General Plan and industrial zoning. The Project would be generally consistent with all applicable state, regional, and local plans and programs; hence, there would be **no impact**.

3.10.4 Mitigation Summary

No mitigation measures would be necessary.

3.11 NOISE

Would the Project result in:

Question	CEQA Determination
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Less-than-Significant Impact
b) Generation of excessive ground borne vibration or ground borne noise levels?	Less-than-Significant Impact
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	No Impact

3.11.1 Environmental Setting

Sound, Noise, and Acoustics

Sound is the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air). Noise is defined as sound that is unwanted (i.e., loud, unexpected, or annoying). Acoustics is the physics of sound.

The amplitude of pressure waves generated by a sound source determines the perceived loudness of that source. A logarithmic scale is used to describe sound pressure level in terms of dB. The threshold of human hearing (near-total silence) is approximately 0 dB. A doubling of sound energy corresponds to an increase of 3 dB. In other words, when two sources at a given location are each producing sound of the same loudness, the resulting sound level at a given distance from that location is approximately 3 dB higher than the sound level produced by only one of the sources. For example, if one automobile produces a sound pressure level of 70 dB when it passes an observer, two cars passing simultaneously do not produce 140 dB; rather, they combine to produce 73 dB.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 hertz (Hz) and above 5,000 Hz in a manner corresponding to the human ear’s decreased sensitivity to low and extremely high frequencies in comparison to the frequency mid-range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). All noise levels reported in this section are in terms of A-weighting. There is a strong correlation between A-weighted sound levels and community response to noise. As discussed above, doubling sound energy results in a 3 dB increase in sound. In typical noisy environments, noise-level changes of 1 to 2 dB are generally not perceptible by the healthy human ear; however, people can begin to detect 3 dB increases in noise levels. An increase of 5 dB is generally perceived as distinctly noticeable, and a 10 dB increase is generally perceived as a doubling

of loudness. The following are the sound level descriptors commonly used in environmental noise analysis:

- L_{eq} is an average of the sound energy occurring over a specified time. In effect, the L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound that occurs during the same period. The 1-hour, A-weighted L_{eq} ($L_{eq(t)}$) is the energy average of A-weighted sound levels occurring during a 1-hour period.
- L_{max} is the highest instantaneous sound level measured during a specified period.
- L_{dn} (Day-Night Noise Level) is the 24-hour L_{eq} with a 10 dB “penalty” applied during nighttime noise-sensitive hours (10:00 p.m. through 7:00 a.m.). The L_{dn} attempts to account for the fact that noise during this specific period of time is a potential source of disturbance with respect to normal sleeping hours.
- L_n (Statistical Descriptor) is the noise level exceeded n percent of a specific period of time, generally accepted as an hourly statistic. An L_{10} would be the noise level exceeded in 10 percent of the measurement period.

Sound from a localized source (i.e., point source) propagates uniformly outward in a spherical pattern, and the sound level attenuates (decreases) at a rate of 6 dB for each doubling of distance from a point/stationary source. Roadways and highways and, to some extent, moving trains consist of several localized noise sources on a defined path; these are treated as “line” sources, which approximate the effect of several point sources. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. Therefore, noise from a line source attenuates less with distance than noise from a point source with increased distance.

Groundborne Vibration

Groundborne vibration is energy transmitted in waves through the ground. Vibration attenuates at a rate of approximately 50 percent for each doubling of distance from the source. This approach considers only the attenuation from geometric spreading and tends to provide for a conservative assessment of vibration level at the receiver.

Vibration is an oscillatory motion that can be described in terms of the displacement, velocity, or acceleration. Vibration typically is described by its peak and root-mean-square (RMS) amplitudes. The RMS value can be considered an average value over a given time interval. The peak vibration velocity is the same as the “peak particle velocity” (PPV), generally presented in units of inches per second (in/sec). PPV is the maximum instantaneous positive or negative peak of the vibration signal and is generally used to assess the potential for damage to buildings and structures. The RMS amplitude typically is used to assess human annoyance to vibration, and the abbreviation “VdB” is used in this document for vibration decibels to reduce the potential for confusion with sound decibels.

Existing Noise Environment

The existing noise environment in the project area is influenced by surface-transportation noise emanating from vehicular traffic on I-880 and Adeline Street; by trains (BART and UPRR) to the north and the San Francisco Bay Oakland International Airport to the southeast; and by intermittent noise from activities at the surrounding industrial and commercial uses. The Radius Recycling facility currently operates as a scrap material recovery and recycling facility, and associated industrial equipment also contributes to the Project area noise environment.

The nearest commercial uses are approximately 1,050 feet to the north, north of the railway. The nearest residential uses to the Project site are approximately 2,000 feet to the northeast (the Phoenix Lofts Residential/737 2nd Street, Oakland). These commercial and residential uses are within the 60 dBA, L_{dn} contours of both the railways and the roadways (City of Oakland 2004b).

3.11.2 Regulatory Setting

Federal, State, Regional, and Local

Federal, state, regional, and local policies and regulations form a framework of quantitative and qualitative thresholds for assessing project impacts. These regulations are described in this section in the context of whether the proposed Project would result in significant adverse impacts related to noise and vibration. The Project would have a significant impact on the environment if it would generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding construction noise, except if an acoustical analysis is performed that identifies recommended measures to reduce potential impacts. These thresholds are listed in Table 3-9.

Table 3-9 City of Oakland Construction Noise Standards at Receiving Property Line, dBA

Receiving Land Use	Maximum Allowable Noise Level (dBA)	
	Weekdays	Weekends
	7 a.m. to 7 p.m.	9 a.m. to 8 p.m.
Less than 10 Days		
Residential	80	65
Commercial, industrial	85	70
More than 10 Days		
Residential	65	55
Commercial, industrial	70	60

Notes:

If the ambient noise level exceeds these standards, the standard shall be adjusted to equal the ambient noise level.

dBA = A-weighted decibels

During the hours of 7 p.m. to 7 a.m. on weekdays and 8 p.m. to 9 a.m. on weekends and federal holidays, noise levels received by any land use from construction or demolition shall not exceed the applicable nighttime operational noise level standard (see Table 3-10).

Table 3-10 City of Oakland Operational Noise Standards at Receiving Property Line, dBA

Receiving Land Use	Cumulative Number of Minutes in a 1-Hour Period ²	Maximum Allowable Noise Level (dBA)	
		Daytime 7 a.m. to 10 p.m.	Nighttime 10 P.m. to 7 a.m.
Residential and Civic ³	20 (L33)	<u>60</u>	45
	10 (L16.7)	<u>65</u>	50
	5 (L8.3)	<u>70</u>	55
	1 (L1.7)	<u>75</u>	60
	0 (L _{max})	<u>80</u>	65
		Anytime	
Commercial	20 (L33)	65	
	10 (L16.7)	70	
	5 (L8.3)	75	
	1 (L1.7)	80	
	0 (L _{max})	85	
Manufacturing, Mining, and Quarrying	20 (L33)	70	
	10 (L16.7)	75	
	5 (L8.3)	80	
	1 (L1.7)	85	
	0 (L _{max})	90	

Notes:

1. These standards are reduced by 5 dBA for simple tone noise, noise consisting primarily of speech or music, or recurring impact noise. If the ambient noise level exceeds these standards, the standard shall be adjusted to equal the ambient noise level.
 2. L_x represents the noise level that is exceeded X percent of a given period. L_{max} is the maximum instantaneous noise level.
 3. Legal residences, schools and childcare facilities, health care or nursing homes, public open space, or similarly sensitive land uses.
- dBA = A weighted decibel; L_{max} = Maximum Noise Level

The Project would have a significant impact on the environment if it would generate noise in violation of the City of Oakland nuisance standards (Oakland Municipal Code section 8.18.020) regarding persistent construction-related noise.

The Project would have a significant impact on the environment if it would generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding operational noise.

The Project would have a significant impact on the environment if it would generate noise resulting in a 5 dBA permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project; or, if under a cumulative scenario where the cumulative increase results in a 5 dBA permanent increase in ambient noise levels in the Project vicinity without the Project (i.e., the cumulative condition including the Project compared to the existing conditions) and a 3 dBA permanent increase is attributable to the Project (i.e., the cumulative condition including the Project compared to the cumulative baseline condition without the Project) [NOTE: Outside of a laboratory, a 3 dBA change is considered a just-perceivable difference. Therefore, 3 dBA is used to determine whether the project-related noise increases are cumulatively considerable. Project-related noise should include both vehicle trips and Project operations].

The Project would have a significant impact on the environment if it would expose persons to interior L_{dn} or Community Noise Level Equivalent greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories, and long-term care facilities (and may be extended by local legislative action to include single-family dwellings), according to California Noise Insulation Standards (CCR Part 2, Title 24).

The Project would have a significant impact on the environment if it would expose the project to community noise in conflict with the land use compatibility guidelines of the Oakland General Plan after incorporation of all applicable Standard Conditions of Approval.⁶

The Project would have a significant impact on the environment if it would expose persons to or generate noise levels in excess of applicable standards established by a regulatory agency (e.g., occupational noise standards of OSHA).

The Project would have a significant impact on the environment if, during either Project construction or Project operation, it would expose persons to or generate groundborne vibration that exceeds the criteria established by the Federal Transit Administration (FTA) (see Table 3-11).⁷

Table 3-11 FTA Groundborne Vibration Impact Criteria

Land Use Category	Frequent Events ¹	Occasional Events ²	Infrequent Events ³
Category I: Buildings where vibration would interfere with interior operations	65 VdB ⁴	65 VdB ⁴	65 VdB ⁴
Category II: Residences and buildings where people normally sleep	72 VdB	75 VdB	80 VdB
Category III: Institutional land uses with primarily daytime use	75 VdB	78 VdB	83 VdB

Notes:

1. More than 70 vibration events of the same source per day.
2. Between 30 and 70 vibration events of the same source per day.
3. Fewer than 30 vibration events of the same source per day.
4. This criterion is based on levels that are acceptable for most moderately sensitive equipment, such as optical microscopes. Vibration-sensitive manufacturing or research should always require detailed evaluation to define the acceptable vibration levels. Ensuring low vibration levels in a building requires special design of heating ventilation, air conditioning systems, and stiffened floors.

FTA = Federal Transit Administration; VdB = vibration decibels

The Project would have a significant impact on the environment if it would be in an airport land use plan and would expose people residing or working in the Project area to excessive noise levels.

The Project would have a significant impact on the environment if it would be in the vicinity of a private airstrip and would expose people residing or working in the Project area to excessive noise levels.

⁶ The evaluation of land use compatibility should consider the following factors: type of noise source; the sensitivity of the noise receptor; the noise reduction likely to be provided by structures; the degree to which the noise source may interfere with speech, sleep or other activities characteristic of the land use; seasonal variations in noise source levels; existing outdoor ambient levels; general societal attitudes toward the noise source; prior history of the noise source; and tonal characteristics of the noise source. To the extent that any of these factors can be evaluated, the measured or computed noise exposure values may be adjusted to more accurately assess local sentiments toward acceptable noise exposure. (Oakland General Plan, Noise Element, 2005).

⁷ The FTA criteria were developed to apply to transit-related groundborne vibration. However, these criteria should be applied to transit-related and non-transit-related sources of vibration.

3.11.3 Impact Analysis

a) Less-than-Significant Impact

Construction of the proposed improvements would occur at Radius Recycling facility at the location shown on Figure 2-1 and Figure 2-2. As shown in Table 3-12, based on the FHWA RCNM (FHWA 2006), noise levels for combined project equipment would be 82 dB L_{eq} and 83 dB L_{max} at 50 feet. The nearest commercial uses are approximately 1,050 feet to the north. The nearest residential uses to the Project site are approximately 2,000 feet to the northeast (the Phoenix Lofts Residential/737 2nd Street, Oakland). Project construction noise at these distances would be 56 dB L_{eq} and 50 dB L_{eq} , respectively. Also, there are buildings and structures between the construction site and the nearest residences and commercial facilities, which would provide a reduction of at least 5 to 10 dB in noise, reducing the project construction noise to below 50 dB, L_{eq} . This level of noise is below the City’s threshold of 65 dB. Also, as stated above, the commercial and residential uses are within the 60 dBA, L_{dn} contour of the railways, and within 60 dBA, L_{dn} contour of the roadways (City of Oakland 2004b). Project construction noise of up to 50 dB would not cause an increase of 5 dB above the ambient noise levels. Therefore, this impact would be **less than significant** associated with Project construction.

The Proposed project would have minimal operational changes, largely related to the storage and movement of nonferrous materials, which would result in no more than negligible changes in operational noise (if any). Therefore, no impact would occur associated with Project operation.

Table 3-12 Construction Phases, Equipment, and Calculated Noise Levels, dB

Construction Phase	Anticipated Type of Equipment that May Be Used by the Contractor*	Noise Level at 50 Feet	
		L_{max} , dBA	L_{eq} , dBA
Fence off the work area and install safety, storm runoff control devices	Pickup truck	75	71
	Backhoe	78	74
	Compressor (air)	78	74
	Maximum and combined noise level	78	78
Excavate for foundation and trenching and installation of utility connections	Pickup truck	75	71
	Backhoe	78	74
	Excavator	81	77
	Compactor (ground)	83	76
	Compressor (air)	78	74
	Maximum and combined noise level	83	82
Backfill with approved materials with needed compaction	Pickup truck	75	71
	Backhoe	78	74
	Compactor (ground)	83	76
	Compressor (air)	78	74
	Maximum and combined noise level	83	80
Install foundation rebar, install anchors, and pour foundation slabs	Pickup truck	75	71
	Concrete pump truck	81	74
	Compressor (air)	78	74
	Maximum and combined noise level	81	78

Construction Phase	Anticipated Type of Equipment that May Be Used by the Contractor*	Noise Level at 50 Feet	
		L _{max} , dBA	L _{eq} , dBA
Install steel frames and PBR panels	Pickup truck	75	71
	Man lift	75	68
	Compressor (air)	78	74
	Maximum and combined noise level	78	77
Connect utilities	Backhoe	78	74
	Pickup truck	75	71
	Man lift	75	68
	Compressor (air)	78	74
	Maximum and combined noise level	78	79
Install mechanical and conveyor systems	Pickup truck	75	71
	Man lift	75	68
	Compressor (air)	78	74
	Maximum and combined noise level	78	77
Install doors and other coverings	Pickup truck	75	71
	Man lift	75	68
	Compressor (air)	78	74
	Maximum and combined noise level	78	77
Testing and complete construction	Pickup truck	75	71
	Man lift	75	68
	Compressor (air)	78	74
	Maximum and combined noise level	78	77

Notes:

dBA = A-weighted decibels; L_{eq} = equivalent sound level; L_{max} = maximum sound level, PBR = purlin-bearing rib

b) Less-than-Significant Impact

Construction activities have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and operations involved. Vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

Onsite construction equipment would be rubber tired. According to FTA (2018), vibration levels associated with the use of a loaded truck are 0.003 in/sec PPV; and 58 VdB referenced to 1 microinch per second (µin/sec) and based on the RMS velocity amplitude at 25 feet.

These vibration levels would not exceed Caltrans’s recommended standard of 0.2 in/sec PPV (Caltrans 2020) with respect to the prevention of structural damage for normal buildings or the FTA’s maximum-acceptable vibration standard of 80 VdB (FTA 2018) with respect to human annoyance for residential uses.

The long-term operation of the of the Radius Recycling site would be minimally affected by the proposed buildings and conveyor system operations, and short-term construction would not result in the exposure of persons or structures to or generation of excessive groundborne vibration or groundborne noise levels. As a result, this impact would be **less than significant**.

c) No Impact

The project site is not within 2 nautical miles of an airport. The closest airport is San Francisco Bay Oakland International Airport , which is approximately 5.5 miles to the southeast of the project site. Thus, the Project would not expose people residing or working in the project area to excessive noise levels. **No impact** would occur.

3.11.4 Mitigation Summary

No mitigation measures would be necessary.

3.12 PUBLIC SERVICES

Question	CEQA Determination
a) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:	
i) Fire protection?	No Impact
ii) Police protection?	No Impact
iii) Schools?	No Impact
iv) Parks?	No Impact
v) Other public facilities?	No Impact

3.12.1 Environmental Setting

The Project site is industrial and is in an industrial setting. There are no schools, parks, or other public facilities in or surrounding the proposed Project site.

Police and Fire Protection

The City of Oakland provides police and fire protection services for the Port area, with additional security services provided by the United States Department of Homeland Security, United States Customs, and the United States Coast Guard. Each marine terminal also has an internal security system.

The closest City of Oakland Fire Department fire station is at 47 Clay Street. The personnel at this fire station respond to fire and emergency response calls at the Port area. The response times vary depending on the number of calls at any given time, and the distance that responders have to travel. The City of Oakland police response time to the Project site for life-threatening emergencies is usually less than 5 minutes; and for the fire department, it is approximately 3 to 5 minutes (Parametrix 2014).

Schools

The Project site is in the Oakland Unified School District. There are no schools near (within 0.5 mile of) the site; the nearest school is Martin Luther King Junior Elementary School, approximately 0.64 mile northeast of the Project site (Oakland Unified School District 2023).

Parks

The City of Oakland has more than 2,500 acres of open space, including 100 parks. The closest parks to the Project site on the northern shoreline of the Oakland Inner Harbor are Jefferson Square Dog Park approximately 0.6 mile to the northeast; and Lower Bottoms Park, approximately 0.6 mile to the

northwest. Estuary Park and Challenger Field are 0.5 mile from the Project site, but are separated from it by the Oakland Estuary-Inner Harbor Channel.

Other Public Facilities

Jack London Square, with its associated commercial and recreational facilities, is approximately 0.5 mile east of the proposed Project site. Recreational boating may occur throughout the Inner Harbor waterway, although boats may not stop or anchor in the federal navigation channel or turning basins.

3.12.2 Regulatory Setting

The public service analysis presented herein is predominantly affected by regional and local regulations or policies, which are described in the following section.

Regional and Local

City of Oakland General Plan

The City of Oakland General Plan LUTE and Safety Element contain the following policies related to public services (City of Oakland 2023c):

- **Objective N.12:** Provide adequate infrastructure to meet the needs of Oakland’s growing community.
 - **Policy SAF-8.3:** Maintain and update as necessary the Oakland Emergency Operations Plan, Annex of Emergency Support Functions, and Integrated Preparedness Plans, which describes how the City will prepare for, prevent, respond to, recover from and mitigate the effects of all types of hazards and threats.
 - **Policy SAF-8.1:** Maintain and enhance the city’s capacity for emergency response, fire prevention, and fire-fighting.

3.12.3 Impact Analysis

a i, ii, iii, iv, v) No impact

The proposed Project would result in minor operational changes that would not affect long-term levels of staffing. Project construction would be relatively brief, lasting approximately 6 to 8 months, and requiring approximately 12 to 42 workers on the site daily, depending on the construction phase. Therefore, there would be no anticipated change in the need for police or fire protection relative to existing conditions. Furthermore, because the level of operations expected following the Project would be similar to those under existing conditions, there would be no anticipated increase in the local population and, therefore, no need for any additional schools, parks, or other public facilities as a result of the proposed Project. Therefore, the proposed Project would have **no impact** related to public services.

3.12.4 Mitigation Summary

No mitigation measures would be necessary.

3.13 RECREATION

Question	CEQA Determination
a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	No Impact
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	No Impact

3.13.1 Environmental Setting

The Project site is in the industrial Radius Recycling facility, which does not provide for public access or recreation. The surrounding terrestrial land uses on the northern shoreline of the Oakland Estuary-Inner Harbor Channel are also industrial and do not provide recreational opportunities. The Oakland Inner Harbor, which is immediately south of the site, is used by recreational boaters and for fishing. However, boats may not stop or anchor in the federal navigation channel or turning basins. There are no parks or open spaces within a 0.25-mile radius of the project area. The closest parks to the Project site on the northern shoreline of the Oakland Inner Harbor are Jefferson Square Dog Park, approximately 0.6 mile to the northeast; and Lower Bottoms Park, approximately 0.6 mile to the northwest. Estuary Park and Challenger Field are 0.5 mile from the Project site but are separated from it by the Oakland Estuary-Inner Harbor Channel.

3.13.2 Regulatory Setting

No federal laws related to recreation are directly applicable to the CEQA analysis for the proposed Project. Regional and local policies or regulations applicable to recreation are described in the following section.

Regional and Local

City of Oakland General Plan

The City of Oakland General Plan’s Open Space, Conservation, and Recreation Element contains goals and policies that are intended to provide for parklands, reduce potential land use conflicts, maintain such parklands, and provide park-related programs. In addition, land uses along the shoreline should promote the beneficial uses of the Estuary and Bay waters, including a balanced mix of commercial shipping facilities; water-dependent industry, commerce, and transportation; recreation; water-oriented services and housing; and resource conservation (City of Oakland 1996a). Policies relevant to the proposed Project include the following:

- **Policy OS2.1:** Protection of Park Open Space. Manage Oakland’s urban parks to protect and enhance their open space character while accommodating a wide range of outdoor recreational activities.
- **Policy OS6.1:** Intergovernmental Coordination. Coordinate Oakland’s open space planning with other agencies, including adjacent cities and counties, the Port, and the East Bay Regional Park District.
- **Policy OS7.1:** Promotion of Beneficial Waterfront Uses. Require land uses along the shoreline that promote the beneficial uses of the Estuary and Bay waters, including a balanced mix of commercial

shipping facilities; water-dependent industry, commerce and transportation; recreation; water-oriented services and housing; and resource conservation.

- **Policy OS7.2:** Dedication of Shoreline Public Access. Support the Bay Conservation and Development District requirements, which mandate that all new shoreline development designate the water's edge as publicly accessible open space where safety and security are not compromised, and where access can be achieved without interfering with waterfront industrial and maritime uses. Where such conflicts or hazards would result, support the provision of offsite access improvements in lieu of onsite improvements. In such cases, the extent of offsite improvements should be related to the scale of the development being proposed.

3.13.3 Impact Analysis

a, b) No Impact

The Project would construct three buildings on the existing Radius Recycling facility site to enclose existing storage and materials processing, as well as a new conveyor system within the proposed buildings. There are no recreational uses on the Project site or surrounding terrestrial parcels. The proposed Project would not interfere with existing recreational uses in the Oakland Inner Harbor, or interfere with shoreline access. Construction would last approximately 6 to 8 months, there would be no operational changes that would affect recreational areas or recreational demand (i.e., no need for new staffing), and expansion of recreational facilities would not be needed. Therefore, there would be **no impact** related to recreation.

3.13.4 Mitigation Summary

No mitigation measures would be necessary.

3.14 TRANSPORTATION

Would the Project:

Question	CEQA Determination
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	No Impact
b) Would the Project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	No Impact
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	No Impact
d) Result in inadequate emergency access?	No Impact

3.14.1 Environmental Setting

Local vehicle access to the Project site is provided from Embarcadero West, which connects to Market Street. These streets are near the East Bay hub of the Bay Area freeway system near the Bay Bridge Toll Plaza, and Market Street has access to I-880 via local roadways such as 3rd Street. Truck traffic follows local routes, as designated in Section 10.52.070 of the City of Oakland Municipal Code.

Embarcadero West is generally oriented east-west and begins from the Radius Recycling facility east to Oak Street, where it continues across the Lake Merritt Channel into the Brooklyn Basin and East Peralta neighborhoods as Embarcadero. It functions as a frontage road for properties on either side of the UPRR Niles Subdivision through the Jack London Square area, and generally accommodates one travel lane in each direction.

Market Street is generally oriented north-south and connects North Oakland (where it diverges from Sacramento Street near Alcatraz Avenue) with West Oakland (where it terminates at the main access for Howard Terminal at Embarcadero West). It generally accommodates two travel lanes in each direction, although the Local Street portion between 3rd Street and Embarcadero West through the at-grade crossing with the UPRR Niles Subdivision is striped, with three travel lanes in the southbound direction and one travel lane in the northbound direction.

I-880 generally has a north-south orientation along the Seaport, then curves more east-west before generally following a northwest-southeast orientation through the remainder of Oakland and cities farther south. I-880 provides access to I-80, which is a major east-west transcontinental highway that terminates on the West Coast in San Francisco.

Local bus service in Oakland is provided by the Alameda-Contra Costa Transit District. High-frequency local and regional rail service is provided by BART (with the closest stations at West Oakland 12th Street/Oakland City Center, and Lake Merritt), supplemented by less-frequent regional and intercity mainline rail services on the Amtrak Capitol Corridor and San Joaquins, with the closest stations at Oakland (Jack London Square) and Emeryville. There are no existing transit services in the immediate vicinity (i.e., within reasonable walking distance) of the Project site.

There are existing and planned bikeways in the vicinity of the Project site. Nearby existing and proposed bikeways in the vicinity of the Project site are summarized in Table 3-13.

Table 3-13 Existing and Proposed Bikeway Network – Radius Recycling Facility Vicinity

Bikeway Class	Oakland Routes
Class I (bike path)	<ul style="list-style-type: none"> ● Bay Trail: Water Street/Clay Street to Estuary Park ● Bay Trail: Water Street/Clay Street to Embarcadero West/Filbert Street ● Howard Terminal portions of Bay Trail (proposed as part of the proposed Oakland Waterfront Ballpark District Project) ● Water Street: Martin Luther King Jr. Way to Clay Street (proposed) ● Brush Street: 2nd Street to Embarcadero West (proposed) ● Clay Street: Embarcadero West to waterfront (proposed) ● Washington Street: Embarcadero West to waterfront (proposed)
Class II (bike lane)	<ul style="list-style-type: none"> ● Brush Street: 3rd Street to 2nd Street ● 2nd Street: East of Brush Street ● Market Street: North of 3rd Street ● Clay Street: Embarcadero West to Water Street ● Washington Street: North of 3rd Street ● Clay Street: 3rd Street to 2nd Street (proposed) ● Washington Street: 2nd Street to Embarcadero West (proposed)
Class IIB (buffered bike lane)	<ul style="list-style-type: none"> ● 3rd Street: Brush Street to Mandela Parkway/5th Street ● Clay Street: 2nd Street to Embarcadero West ● Broadway: 6th Street to Embarcadero West (proposed)
Class III (bike route)	<ul style="list-style-type: none"> ● Martin Luther King Jr. Way: North of Embarcadero West
Class IV (cycle track)	<ul style="list-style-type: none"> ● Market Street: North of Embarcadero West (proposed) ● Martin Luther King Jr. Way: North of Embarcadero West (proposed) ● 3rd Street: Market Street to Oak Street

Source: USACE2023

Because the Radius Recycling facility is in the Seaport, pedestrian facilities and access in the immediate vicinity are limited. The heavy industrial nature of this area means that pedestrian activity is generally low (City of Oakland 2017). Direct pedestrian access to/from the Project site is provided by Embarcadero West, with the nearest crossing opportunities across the UPRR railroad tracks at Market Street and Martin Luther King Jr. Way.

Emergency access for the Project site is generally provided by the existing roadway network.

3.14.2 Regulatory Setting

No federal laws related to transportation are directly applicable to the CEQA analysis for the proposed Project. State, regional, and local policies or regulations applicable to transportation are described in the following sections.

State

Senate Bill 743

SB 743 shifted priorities for measuring transportation-related environmental impacts away from congestion and level of service and toward VMT. SB 743 eliminates traffic delay as an environmental impact in the CEQA Guidelines. The bill was passed in 2013 and implemented in 2018. The goals of SB 743 include promoting policies that combat climate change by reducing GHG emissions and particulates; encourage infill development and a diversity of uses instead of sprawl; and promote multi-modal transportation networks, providing clean, efficient access to destinations and improving public health through active transportation. As noted in the Technical Advisory on Evaluating Transportation Impacts in CEQA (Office of Planning and Research 2018), VMT refers to the amount and distance of automobile travel attributable to a project. Heavy-duty truck VMT is not required to be evaluated. The Technical Advisory recommends that, for land use projects, a per capita or per employee VMT that is 15 percent below that of existing development may be a reasonable threshold. In making this recommendation, the Office of Planning and Research recognized that land use development projects (i.e., those involving residential, office, and retail proposals) tend to have the greatest influence on VMT, as a result of permanent trips generated during operations. For other types of projects, lead agencies should consider the purposes in PRC Section 21099(b)(1) (i.e., promote reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses) in applying a threshold of significance.

Regional and Local

Plan Bay Area 2050 and Regional Goods Movement Plan

Plan Bay Area 2050 is the combined RTP and SCS for the nine-county MTC region. Plan Bay Area 2050 is a regional plan that allocates discretionary funds toward the regional goods movement plan (the San Francisco Bay Area Goods Movement Plan). Plan Bay Area 2050 elements include transportation, housing, economy, and environment. Transportation strategies include maintaining existing systems, supporting transportation equity enhancements, removing barriers to multi-operator transit trips, reforming transit fare policies, implementing congestion tolling, improving interchanges and highway bottlenecks, and advancing other regional programs and priorities.

West Oakland Truck Management Plan

The West Oakland Truck Management Plan was released in May 2019 (City of Oakland and Port 2019) as a joint effort between the City of Oakland and the Port to implement a mitigation measure from the Oakland Army Base Redevelopment EIR.

The goals of the plan are to reduce disruptions to residents and businesses of West Oakland from truck circulation and truck parking, and to increase safety along designated truck routes. Ten strategies resulted from the planning process, and the City and Port committed to implement them in a span of 5 years:

- Strategy 1: Improve safety at street intersections near the Port
- Strategy 2: Improve truck routing
- Strategy 3: Update the network of truck routes and truck-prohibited streets
- Strategy 4: Improve truck route signage
- Strategy 5: Conduct traffic enforcement spot-checks

- Strategy 6: Use urban design to promote use of truck routes
- Strategy 7: Improve training for issuing parking tickets
- Strategy 8: Change parking regulations
- Strategy 9: Consider increasing truck parking fines
- Strategy 10: Conduct targeted parking enforcement

On April 19, 2022, Oakland City Council adopted updates to the truck parking regulations in West Oakland, in accordance with Strategy 8, prohibiting truck parking in West Oakland except on a limited number of blocks in industrial areas away from residences and parks. Although updates to the truck route network (Strategy 3) were proposed at the same time, Oakland City Council did not pass the updates to the truck route network, and instead asked for more community process before returning the updates to City Council. The City and Port are currently working on an approach to fulfill this request.

City of Oakland General Plan

The Oakland General Plan comprises numerous elements, and those containing policies relevant to transportation resources are contained primarily in the LUTE. The City's Bicycle Master Plan and Pedestrian Master Plan, and subsequent updates to these plans (described below), are incorporated into the General Plan.

The following policies are included in the LUTE (City of Oakland 1998b) pertaining to truck routes:

- **Policy T1.6:** Designating Truck Routes. An adequate system of roads connecting port terminals, warehouses, freeways and regional arterials, and other important truck destinations should be designated. This system should rely upon arterial streets away from residential neighborhoods.
- **Policy T1.8:** Re-Routing and Enforcing Truck Routes. The City should make efforts to reroute truck traffic away from neighborhoods, wherever possible, and enforce truck route controls.

Oakland Municipal Code

As noted in Section 3.14.1, local truck routes in Oakland are defined in the California Vehicle Code and Oakland Municipal Code.

3.14.3 Impact Analysis

a-d) No Impact

The Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. The Project would install the buildings, conveyor system, and appurtenances in an existing industrial facility. Overall operational changes would be minimal and would be related to the movement of nonferrous materials in the facility (e.g., reduction of handling and use of new proposed conveyor belt), a change from moving and containing materials in open stockpiles or other containment locations in the existing facility, and minor facility maintenance. The Project would not increase the capacity of roadways or affect demand on roadways. The Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). The Project would have no permanent impact on VMT. Additionally, the proposed Project will not include hazardous design features or introduce features or designs that would pose an incompatible use and would not result in inadequate emergency access. There would be **no impact**.

3.14.4 Mitigation Summary

No mitigation measures would be necessary.

3.15 TRIBAL CULTURAL RESOURCES

Would the Project:

Question	CEQA Determination
Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	No Impact
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision I of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision I of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	No Impact

3.15.1 Environmental Setting

Tribal cultural resources may include physical cultural items; or may be places or contributing elements within a tribal cultural resources landscape, such as gathering places, sacred sites, landscape features, culturally significant plants, or other locations or items that are related to the religious and cultural practices, traditions, beliefs, lifeways, arts, crafts, or social institutions of a living tribal community. This category of resources under CEQA recognizes that tribes may have unique knowledge, expertise, and information about tribal cultural resources that are important to the self-identity of tribal groups and can only be identified by members of the relevant tribe, thereby requiring consultation under CEQA pursuant to AB 52 (described under Section 3.15.2 below). Historical resources, unique archaeological resources, or nonunique archaeological resources may also be tribal cultural resources if they meet criteria outlined in PRC Section 21074, as further explained in Section 3.15.2. This section addresses tribal cultural resources, including archaeological resources that can be defined as tribal cultural resources, as addressed in Section 3.4.

Ethnographic Background of Proposed Project Area

As described in Section 3.4.1, the proposed Project is in the *Chochenyo* territory of the Costanoan Indians. Costanoan is not a native term, but rather is derived from the Spanish word *Costanos*, meaning coast people. The term Ohlone is generally preferred by tribal groups representing the area and is more commonly used today.

Native American Consultation

AECOM, on behalf the Port, electronically submitted a Sacred Lands File (SLF) and Native American Contacts List Request form to the NAHC on October 31, 2023, for the recent Radius Recycling Oakland Storage Tent Project. The Radius Recycling Oakland Storage Tent Project entailed construction and operation of a nonferrous material storage tent within the existing Radius Recycling facility, just west of the proposed Project footprint. The NAHC replied to AECOM's request on November 16, 2023, providing both a list of Native American contacts and the results of the SLF review. The NAHC indicated that their review of the SLF was "positive," meaning that Native American resources may be in or near the proposed Radius Recycling Oakland Storage Tent Project area of potential effects (APE). The NAHC identified the Amah Mutsun Tribal Band of Mission San Juan Bautista and the North Valley Yokuts as the parties to contact concerning this finding. The complete list of tribal groups identified by the NAHC was provided to the Port and identified the following tribal entities:

- Amah Mutsun Tribal Band of Mission San Juan Bautista
- Costanoan Rumsen Carmel Tribe
- Indian Canyon Mutsun Band of Costanoan
- Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
- North Valley Yokuts Tribe
- the Ohlone Indian Tribe
- Wuksache Indian Tribe/Eshom Valley Band
- the Confederated Villages of Lisjan

The APE for the proposed Project is immediately adjacent to the Radius Recycling Oakland Storage Tent Project; given the proximity of the two projects to each other and the recentness of the NAHC review, a new request to the NAHC for the currently proposed project was deemed unnecessary.

On March 27, 2024, contact letters were sent by AECOM on behalf of the Port to all of the groups and individuals identified in the November 16, 2023, response from the NAHC. The letters requested any information these groups may have regarding properties, features, or materials in the current Project area and immediate vicinity that may be of concern to the local Native American community. As of week-ending Saturday, April 27, 2024 (one calendar month), two responses to the March request for tribal information were received:

- On March 27, 2024, the Amah Mutsun Tribal Band of San Juan Bautista responded via email to the Port's CEQA consultant (AECOM). In a letter attached to the email correspondence, it was highly recommended that both a review of the NAHC's SLF and a records search at the California Historical Resource Information Systems be conducted to determine whether the project is in a culturally and/or historically sensitive area. The letter also recommended that, if these reviews identify potentially sensitive areas within 1 mile of the project area, all crews, individuals, and personnel who will be moving any earth receive cultural sensitivity training; that a qualified California-trained archaeological monitor be present during any earth movement; and that a qualified Native American monitor be present during any earth movement.
- On March 28, 2024, Ms. Corrina Gould, Tribal Chair of the Confederated Villages of Lisjan Nation also responded via email to the Port's CEQA consultant. In her response, she requested a copy of the

records search materials, the EIR for this project, the SLF review from the NAHC, and any additional presumably relevant archeological reports that the Port and AECOM may retain.

No other responses were received from the other tribal entities who were contacted.

On April 26, 2024, AECOM, on behalf of the Port, responded to both the Amah Mutsun Tribal Band of San Juan Bautista and Ms. Gould, Tribal Chair of the Confederated Villages of Lisjan Nation. These correspondences as well as the reply from the NAHC, the initial outreach letters, and the two received responses are found in Appendix D.

In the response to the Amah Mutsun Tribal Band of San Juan Bautista, it was noted that both a review of the NAHC's SLF and a records search at the NWIC of the CHRIS records search had been completed. It was also noted that the review of the SLF was "positive" and that they, the Amah Mutsun Tribal Band of Mission San Juan Bautista, were one of the groups who were identified by the NAHC to provide information on the actual presence of sacred lands in the current project area. It was further noted in the response that no precontact or tribal cultural resources were identified in the CHRIS records search and that the proposed project is occurring entirely within introduced fill.

In the response to Ms. Gould, it was indicated that an IS/ND rather than an EIR was being completed for the project. Ms. Gould was also informed that notification on how to access the IS/ND, once available, would be provided. A summary of the records searches as well as electronic copies of the reports relevant to precontact archeological and tribal cultural resources were provided, and the response from the NAHC was also attached to the correspondence.

Archaeological Assessment

No precontact archaeological resources, including those that could be considered tribal cultural resources, were identified in the records search materials used for this analysis. As described in Section 3.4, Cultural Resources, there is a very low potential for intact (i.e., undisturbed, *in situ*) archaeological resources, precontact or otherwise, in the Project area because the Project site is anticipated to only require excavation into concrete, aggregate base, and introduced fill. Consequently, the Project would not disturb native soils.

3.15.2 Regulatory Setting

The state laws discussed in this section are relevant to the protection of tribal cultural resources.

State

California Environmental Quality Act

CEQA requires lead agencies to consider, as a separate category of environmental analysis, whether projects will impact tribal cultural resources. In some cases, tribal cultural resources are viewsheds, cultural landscapes, plant gathering areas, or other sacred spaces that are not readily identifiable to people outside of the tribe. In many cases, tribal cultural resources also include an archaeological component, such as artifacts, features, and sites (with or without human remains). PRC Section 21074 states the following:

- a. "Tribal cultural resources" are either of the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - A. Included or determined to be eligible for inclusion in the California Register of Historical Resources.
 - B. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in division (c) of Section 5024.1. In applying the criteria set forth in division (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.
 - b. A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.
 - c. A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

California Health and Safety Code

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains can occur until the county coroner has examined the remains (Section 7050.5b). PRC Sections 5097.94 and 5097.98 also outline the process to be followed if human remains are discovered. On determining or having reason to believe the remains are those of a Native American, the coroner must contact the California NAHC within 24 hours (Section 7050.5c). The NAHC will notify the Most Likely Descendant (MLD). With the permission of the landowner, the MLD may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the MLD by the NAHC. The MLD may recommend means of treating or disposition of, with appropriate dignity, the Native American human remains, and any cultural or funerary items associated with Native American people.

Assembly Bill 52

AB 52 (effective July 1, 2015) added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to CEQA, pertaining to consultation with California Native American tribes, consideration of tribal cultural resources, and confidentiality. AB 52 provides procedural and substantive requirements for lead agency consultation with California Native American tribes and consideration of impacts on tribal cultural resources, as well as examples of mitigation measures to avoid or minimize impacts to tribal cultural resources. AB 52 establishes that if a project may cause a substantial adverse change in the significance of a tribal cultural resource, that project may have a significant effect on the

environment. Lead agencies must avoid damaging impacts to tribal cultural resources, when feasible, and shall keep information submitted by tribes confidential unless the information is deemed publicly available by the tribe.

AB 52 requires a lead agency to consult with California Native American tribes that are traditionally and culturally affiliated with the geographic area of a project if the tribe has requested, in writing, to be informed and consulted by the lead agency of proposed projects in that geographic area. Section 21080.3.1(d) states that the lead agency shall provide formal notification to the designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice. This shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency's contact information, and a notification that the California Native American tribe has 30 days to request consultation.

3.15.3 Impact Analysis

a, b) No Impact

As detailed in Section 2, Project Description, construction of the proposed Project inclusive of the three new buildings and conveyor system, as well as the utility and drainage connections, will not extend below the 5 to 10 feet of introduced fill underlying the Project site. Furthermore, the Project does not entail any demolition of existing structures, other than removal of concrete to reinforce the existing concrete slab.

There are no historical resources at the Project site or Radius Recycling facility, nor are there any historical resources on neighboring parcels other than the disputed mobile Crane X422 at Howard Terminal. Project construction and operations would be confined to within the Radius Recycling facility, except for construction vehicles traveling on area roadways. The proposed construction and operation would be consistent with existing industrial structures and uses at the Radius Recycling facility and surrounding areas. Therefore, there would be no effect on the potential historical significance of Crane X422.

As evidenced by records searches and outreach conducted for the recent Radius Recycling Oakland Storage Tent Project, there are no potential tribal cultural resources in the Project site.

Given that the proposed Project does not entail any demolition of existing structures (other than minor excavation of the existing concrete slab) or ground disturbance beneath nonnative fill, given the Project's consistency with existing site and area uses, and in consideration of tribal outreach conducted to date, the Project would result in **no impact** from adverse change in the significance of a tribal cultural resource.

3.15.4 Mitigation Summary

No mitigation measures would be necessary.

3.16 UTILITIES AND SERVICE SYSTEMS

Would the Project:

Question	CEQA Determination
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	No Impact
b) Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?	No Impact
c) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project’s projected demand in addition to the provider’s existing commitments?	No Impact
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	No Impact
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	No Impact

3.16.1 Environmental Setting

In the Project site, electrical and natural gas services are provided by PG&E. Potable water and wastewater treatment service are supplied to the Project site by EBMUD (Parametrix 2014).

Stormwater runoff at the Project site is currently stored and reclaimed or evaporated with the facility’s existing treatment system. Radius Recycling holds an NPDES General Permit allowing discharge of stormwater from the site, as well as an EBMUD Wastewater Discharge Permit (Port 2016).

In the City of Oakland, municipal solid waste⁸ is collected by Waste Management of Alameda County and transported to the Waste Management Davis Street Transfer Station in the City of San Leandro. From the transfer station, trucks haul most of the waste to the Altamont Landfill and Resource Facility near the City of Livermore, or the Keller Canyon Landfill in Contra Costa County (City of Oakland 2015b). Both the Altamont and Keller Canyon facilities have substantial remaining capacity, according to the most recent 2016 estimates (65.4 million cubic yards and 60 million cubic yards, respectively) (CalRecycle 2023a, 2023b).

Radius Recycling also generates and manages hazardous waste. Currently, Radius Recycling’s hazardous waste treatment operations are being conducted under an Interim Status authority overseen by DTSC. Radius Recycling’s hazardous waste facility permit application to DTSC was submitted on January 1, 2023. The application remains under review, with the final permit determination anticipated for January 2025. Hazardous waste management is described in greater detail in Section 3.8, Hazards and Hazardous Materials.

⁸ Residential and commercial garbage-containing products like packaging, furniture, and clothing, and considered nonhazardous waste.

3.16.2 Regulatory Setting

There are no federal plans, policies, regulations, or laws related to utilities and service systems that would apply to the proposed Project. State, regional, and local regulations and policies pertaining to the proposed Project are described in the following sections. Regulations and policies pertaining to hazardous waste management are described in Section 3.8, Hazards and Hazardous Materials. Regulations and policies pertaining to stormwater discharge and industrial stormwater management are described in Section 3.9, Hydrology and Water Quality.

State

Municipal Storm Water Program

Stormwater discharges from MS4s are regulated through the Municipal Storm Water Program. Municipalities with populations of 100,000 or more are covered by the Phase I Permit Program; municipalities with populations less than 100,000 and nontraditional municipalities designated by the state are covered by the Phase II Permit Program. The SWRCB and the individual RWQCBs implement and enforce the Municipal Storm Water Program. The Small MS4 permit (MS4 NPDES Permit No. CAS000004 and Order No. 2013-0001-DWQ) issued by the SWRCB designates the Port as a Non-Traditional Small MS4.

Regional and Local

City of Oakland General Plan

The City of Oakland General Plan Open Space, Conservation and Recreation Element (City of Oakland 1996a) contains the following goals relevant to utilities and services systems:

- **Policy CO-4.1:** Emphasize water conservation and recycling strategies in efforts to meet future demand.
- **Policy CO-13.3:** Encourage the use of energy-efficient construction and building materials. Encourage site plans for new development which maximize energy efficiency.

3.16.3 Impact Analysis

a) No Impact

The proposed Project would result in minimal demand on electrical power required for the building interior LED lighting, the conveyor system, and the air handling and filtration system. Power would be provided via connections to existing onsite electrical infrastructure. The Project would result in no new or increased demand on water, natural gas, or telecommunications facilities, except for potential negligible increases related to building and conveyor system maintenance. Stormwater runoff at the Project site would continue to be stored and reclaimed, or evaporated, with the facility's existing treatment system; the Project would not increase stormwater runoff, create new impervious surfaces, or result in more than negligible changes to drainage patterns from installing the new structures, including connections to the existing drainage system. No new facilities would be needed to serve the Project's utility demands. Therefore, there would be **no impact** related to new utility facilities.

b) No Impact

As described in the discussion for question a), above, proposed Project operations may include negligible maintenance needs such as regular cleaning of the building areas, which may potentially require a nominal amount of water. It is anticipated that existing water supplies would be sufficient for operation of the proposed Project, during both normal and dry years. No new or expanded entitlements to the water supply are needed. Construction would last for a period of 6 to 8 months, which is unlikely to require more than nominal amounts of water, if any. Therefore, the proposed Project would result in **no impact** related to water supply.

c) No Impact

The proposed Project would not result in new or increased wastewater discharges. Wastewater would continue to be stored and reclaimed or evaporated in the facility's existing treatment system, including through new drainage connections. The three proposed buildings, the conveyor system, and appurtenances would be constructed on an existing impermeable concrete slab, with minor foundation improvements (thickening to support new structures). The Project would not construct any new impermeable surfaces that would increase runoff to the existing treatment system, and the proposed Project would have no more than negligible effects on drainage patterns that would not increase or otherwise adversely affect stormwater inputs to the existing treatment system. Therefore, the Project would have **no impact** related to wastewater treatment demand.

d) and e) No Impact

The proposed Project construction would not require any demolition or off haul of materials other than limited amounts of demolished concrete and soil removal associated with foundation thickening, and potentially soil from trenching and foundation thickening; and the proposed buildings and conveyor system operations would not generate solid waste or increase existing solid waste generation at the facility. Demolished concrete would be disposed of at the appropriate facility. Municipal solid waste from the Radius Recycling facility would continue to be collected by Waste Management of Alameda County and transported to area landfills that currently have sufficient operating capacity. Hazardous waste management and disposal would continue to occur in compliance with the Interim Status authority granted by DTSC, or future operational permits such as the pending hazardous waste facility permit. Hazardous waste management is discussed in additional detail in Section 3.8, Hazards and Hazardous Materials. The proposed Project operations would store existing nonferrous scrap materials for containment in Building A, instead of predominantly in open-air stockpiles as occurs under existing conditions. Other material handling changes include moving scrap materials via the new conveyor system and hoppers into trucks parked directly below the hoppers for conveyance to subsequent processing steps. These changes are not anticipated to affect management of hazardous waste. Therefore, the Project would result in **no impact** related to solid waste or solid waste regulations.

3.16.4 Mitigation Summary

No mitigation measures would be necessary.

3.17 MANDATORY FINDINGS OF SIGNIFICANCE

Question	CEQA Determination
a) Does the Project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	No Impact
b) Does the Project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a Project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	No Impact
c) Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	No Impact

3.17.1 Impact Analysis

a-c) No Impact

As supported by the impact analyses of this IS/ND, the proposed Project would result in no impact on the quality of the environment, would not be cumulatively considerable, and would not cause substantial adverse effects on human beings, either directly or indirectly. Therefore, there would be **no impact** related to mandatory findings of significance.

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4 LIST OF PREPARERS

The Port's Environmental Department staff, with the assistance of AECOM, Inc., prepared this IS/ND. The analysis in the IS/ND is based on information identified, acquired, reviewed, and synthesized based on the Port's guidance and recommendations. The primary people responsible for contributing to, preparing, and reviewing this report are listed in Table 4-1.

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APPENDIX A – DESIGN PLANS

RADIUS RECYCLING

OAKLAND CONVEYOR ENCLOSURES

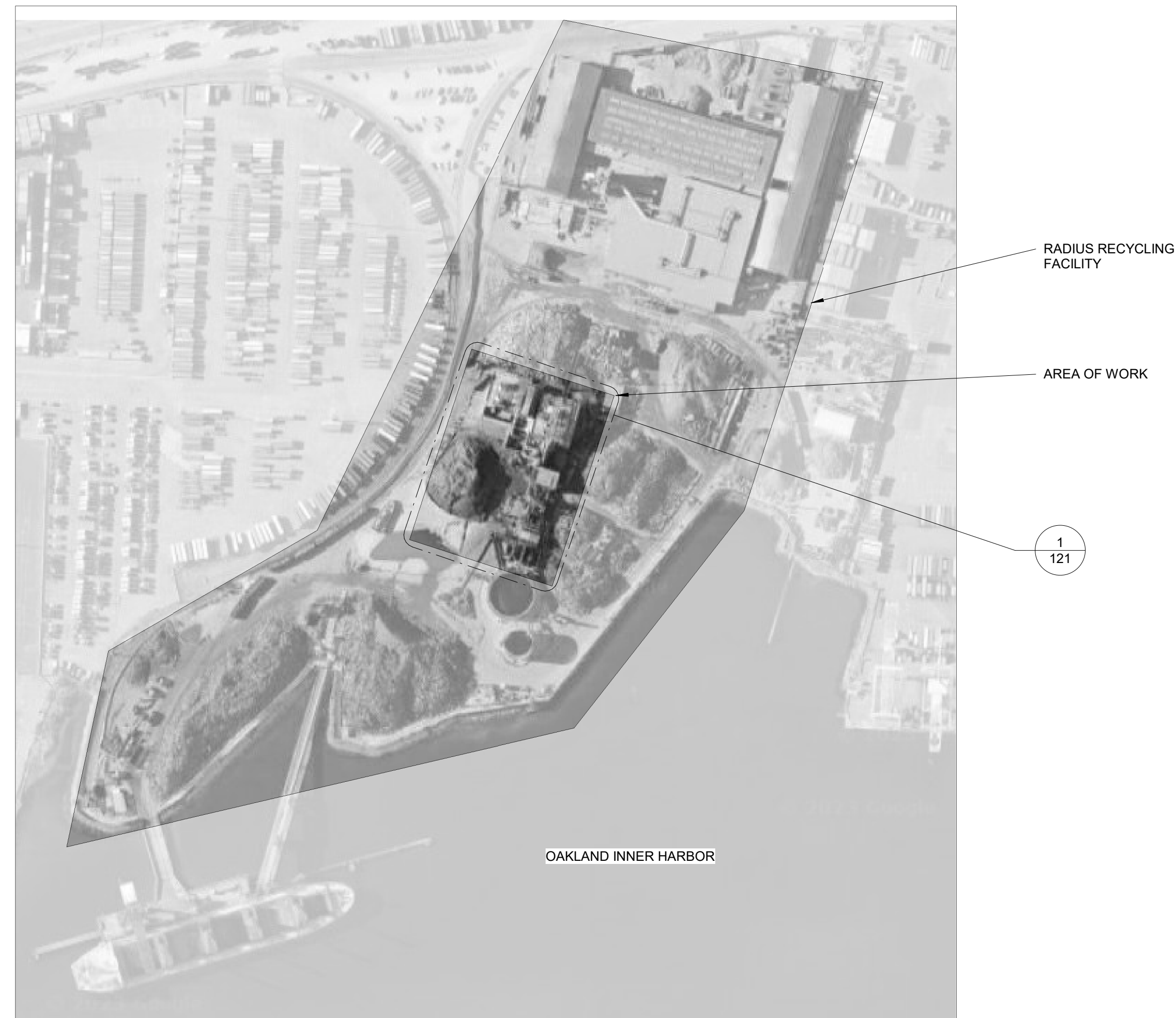
NFR BUILDING

PROJECT ENGINEER:

SMITH MONROE GRAY ENGINEERS, INC.
 8625 SW CASCADE AVE, SUITE 600
 BEAVERTON, OR 97008
 PHONE: (503) 643-8595 FAX: (503) 643-8610

OWNER:

RADIUS RECYCLING
 299 SW CLAY ST, SUITE 400
 PORTLAND, OR
 PHONE: (510) 444-3919



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SYMBOL	REVISIONS	BY	DATE	CHKD
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A	ISSUED FOR REVIEW	JPS	10/24/23	KD

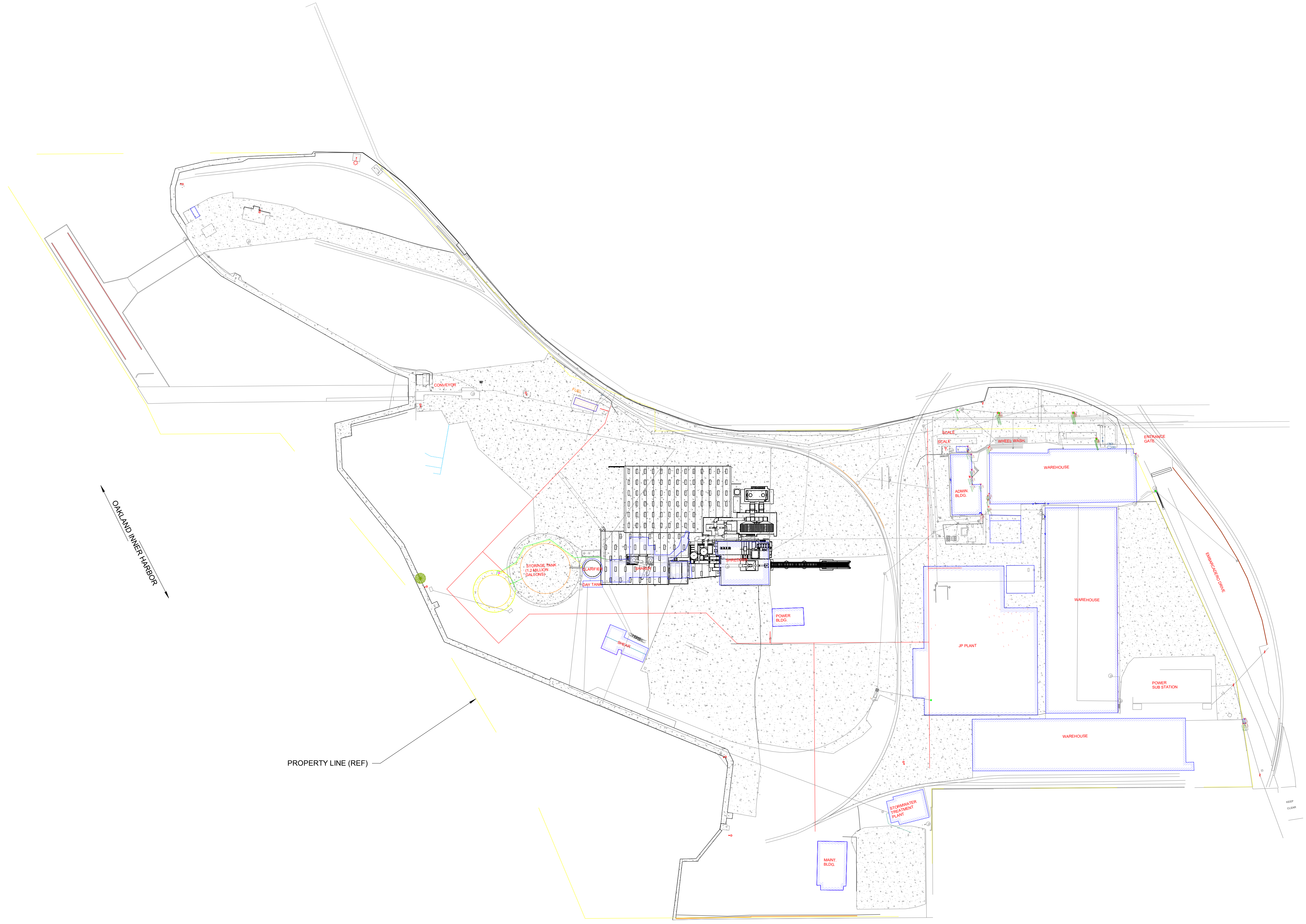
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Smith Monroe Gray ENGINEERS, INC.

DRAWN BY <i>J.STOA</i>		DATE 10/24/23	CHKD BY	DATE
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8625 SW Cascade Ave.
Suite 600
Beaverton, Oregon 97008
Phone: 503.643.8595
Fax: 503.643.8610
www.smgenr.com

<p><u>RADIUS RECYCLING</u> <u>OAKLAND CONVEYOR ENCLOSURES</u> NFR BUILDING</p>		
COVER SHEET		
SCALE AS NOTED	DWG. NO. 22-311C-100	REV. B



3 OVERALL SITE PLAN
104 1" = 100'-0"

PRELIMINARY

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B	ISSUED FOR REVIEW	JPS	11/15/23	KD
A	ISSUED FOR REVIEW	JPS	10/24/23	KD

DRAWN BY	DATE	CHKD BY	DATE
J.STOA	10/24/23		

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RADIUS RECYCLING OAKLAND CONVEYOR ENCLOSURES NFR BUILDING		OVERALL SITE PLAN	
SCALE	DWG. NO.	REV.	
AS NOTED	22-311C-105	B	



RADIUS RECYCLING FACILITY (REF)

AREA OF WORK

1
121

OAKLAND INNER HARBOR

1
105 OVERALL SITE PLAN - PHOTO
N.T.S.

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SYMBOL	REVISIONS	BY	DATE	CHKD
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A	ISSUED FOR REVIEW	JPS	10/24/23	KD

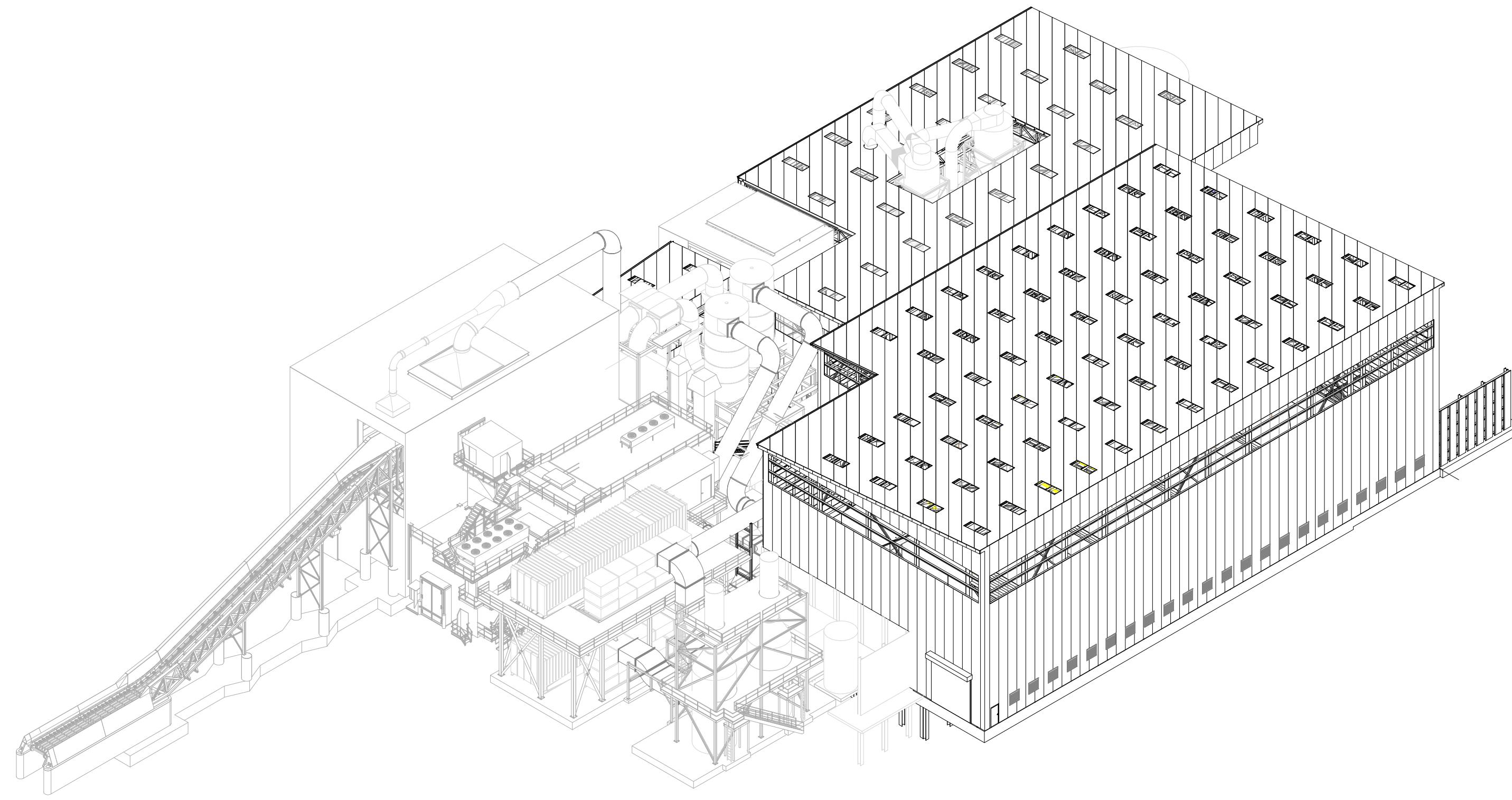
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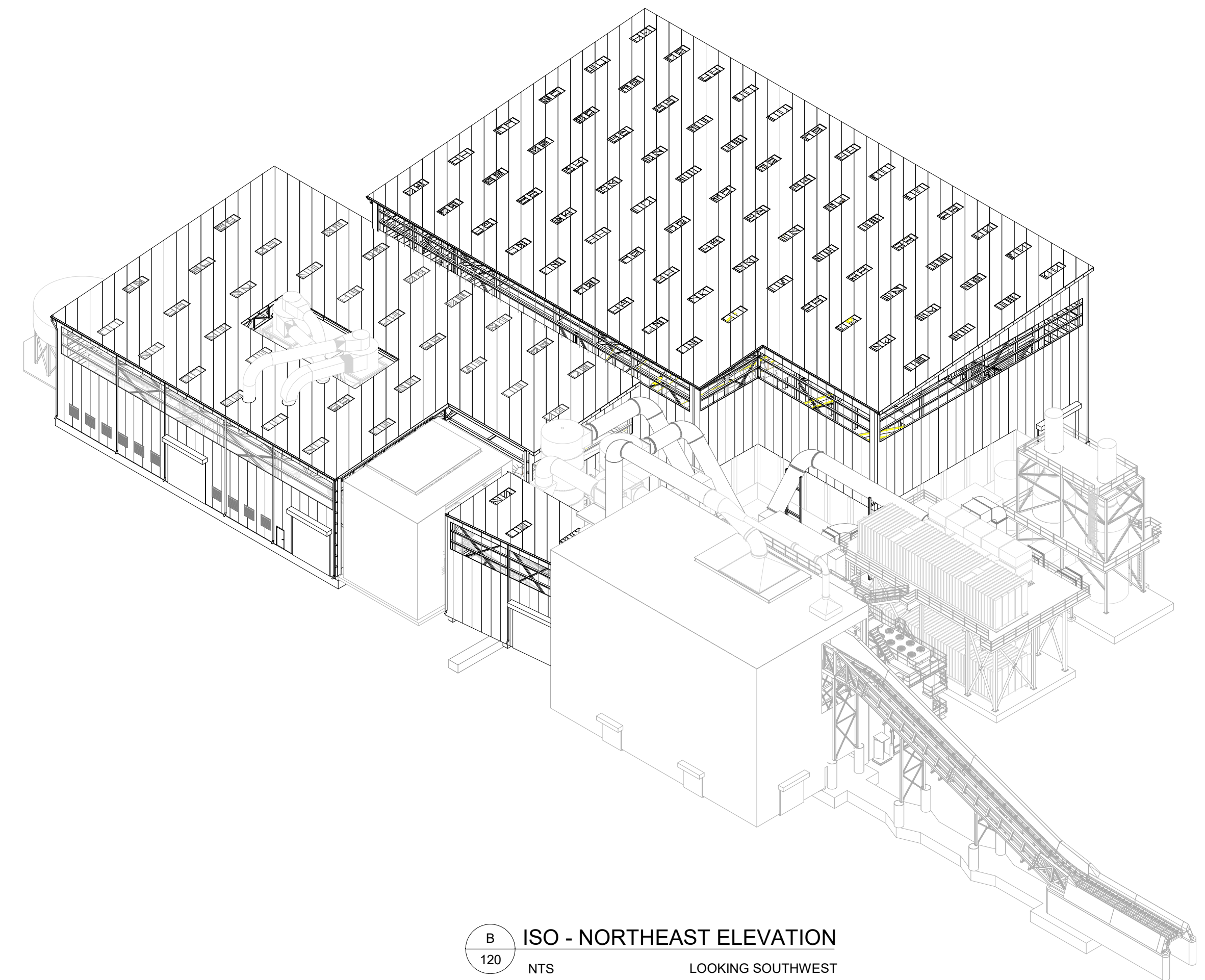
RADIUS RECYCLING
OAKLAND CONVEYOR ENCLOSURES
NFR BUILDING

OVERALL SITE PLAN - PHOTO

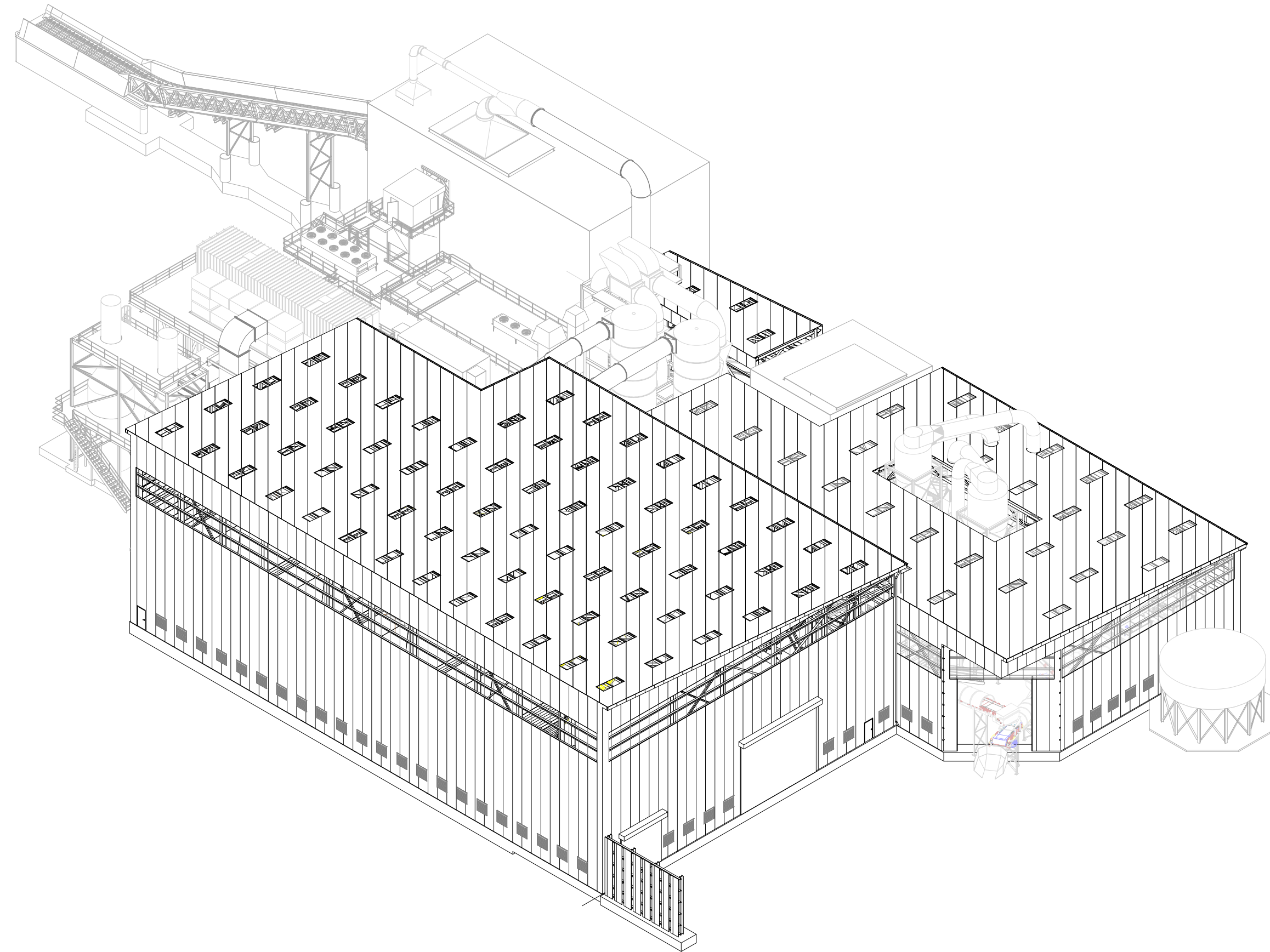
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J.STOA	10/24/23			AS NOTED	22-311C-105	B



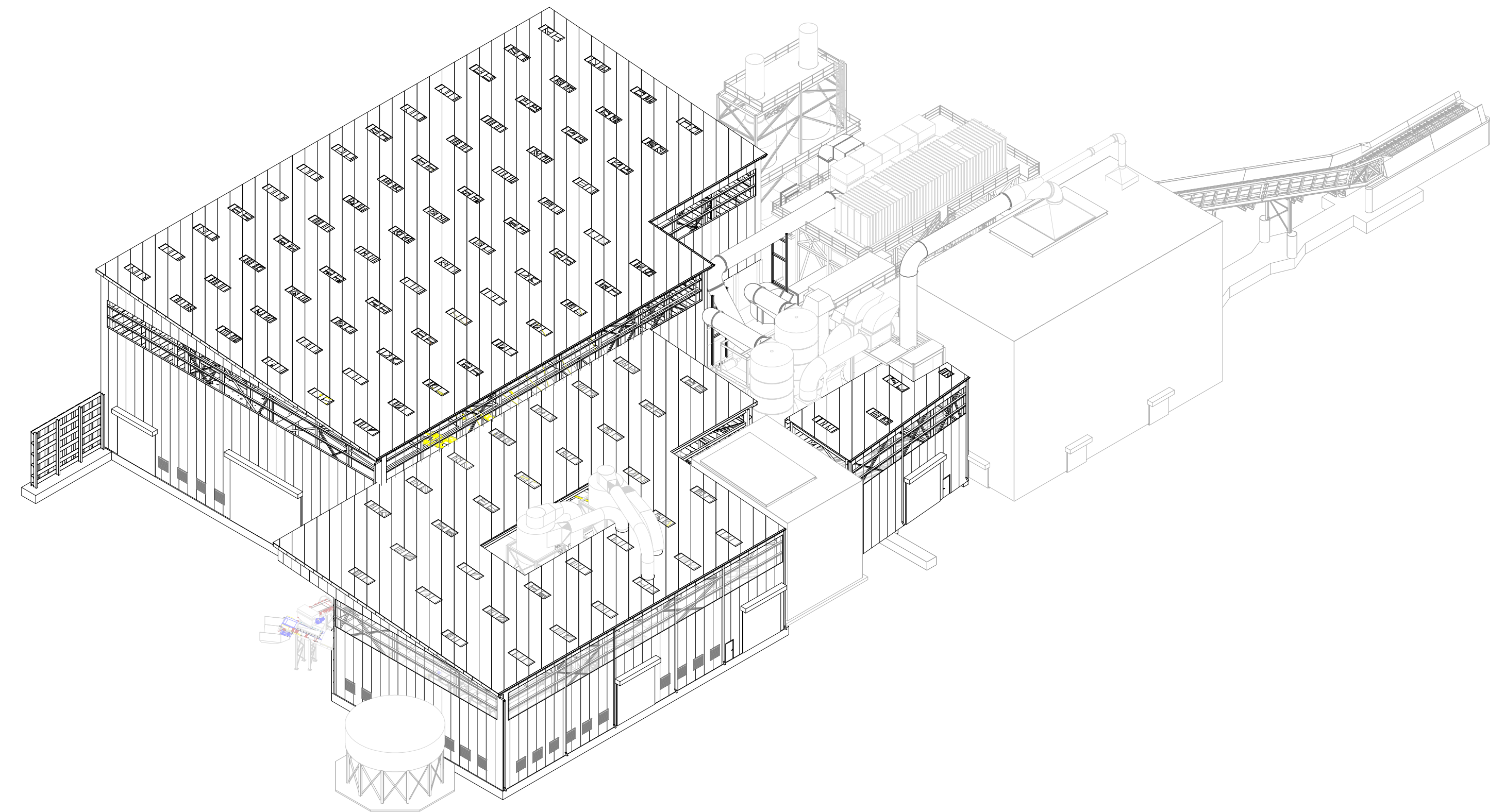
A ISO - NORTHWEST ELEVATION
120 NTS
LOOKING SOUTHEAST



B ISO - NORTHEAST ELEVATION
120 NTS
LOOKING SOUTHWEST



C ISO - SOUTHWEST ELEVATION
120 NTS
LOOKING NORTHEAST



D ISO - SOUTHEAST ELEVATION
120 NTS
LOOKING NORTHWEST

PRELIMINARY

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A	ISSUED FOR REVIEW	JPS	10/24/23	KD

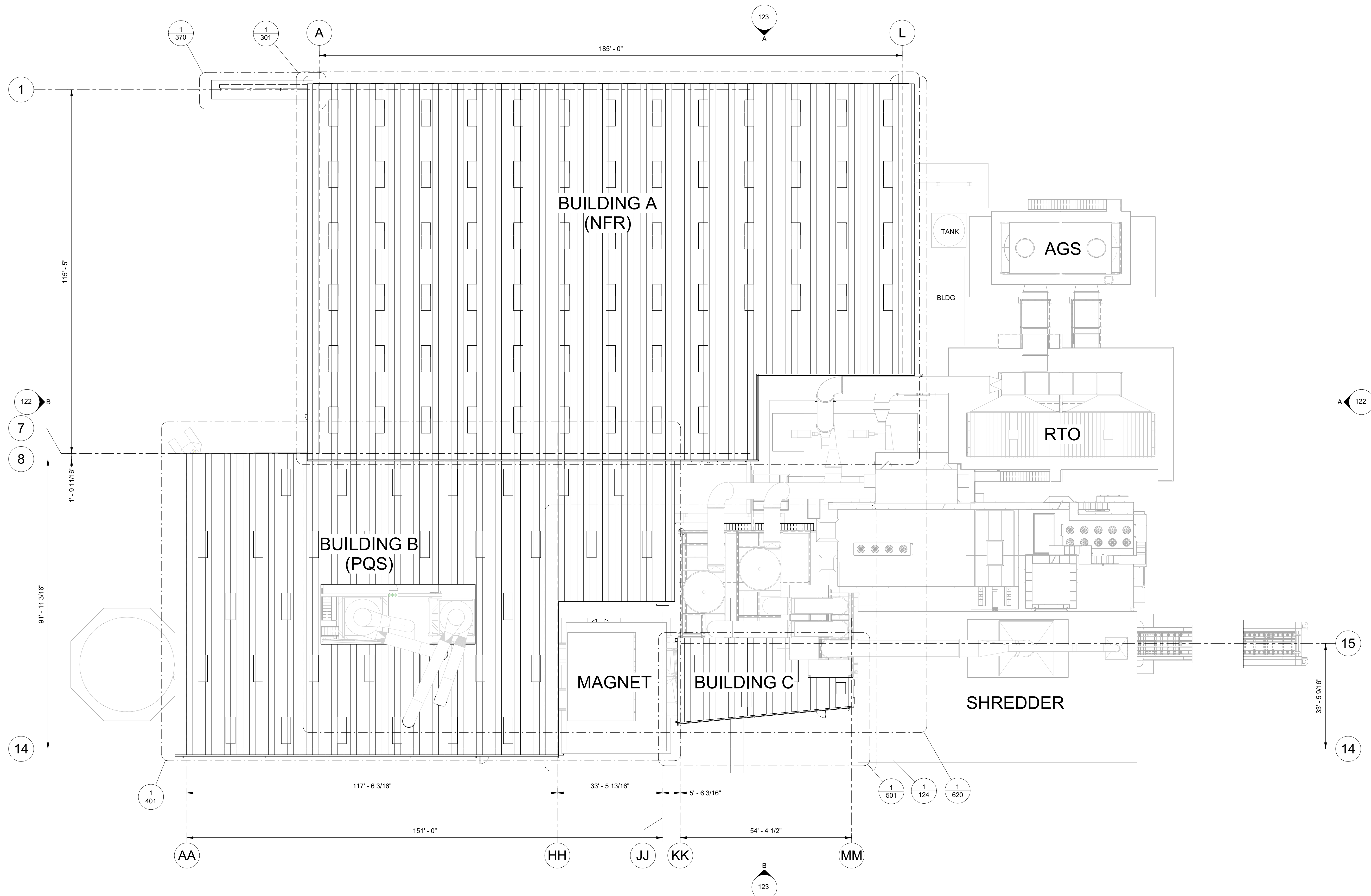
DRAWN BY	DATE	CHKD BY	DATE
J.STOA	10/24/23		

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RADIUS RECYCLING
OAKLAND CONVEYOR ENCLOSURES
NFR BUILDING
GENERAL ARRANGEMENT - ISO VIEWS

SCALE	DWG. NO.	REV.
AS NOTED	22-311C-120	B



1 121 1/16" = 1'-0" GENERAL ARRANGEMENT PLAN

FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

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SYN	REVISIONS	BY	DATE	CHKD
B	ISSUED FOR REVIEW	JPS	11/15/23	KD
A	ISSUED FOR REVIEW	JPS	10/24/23	KD

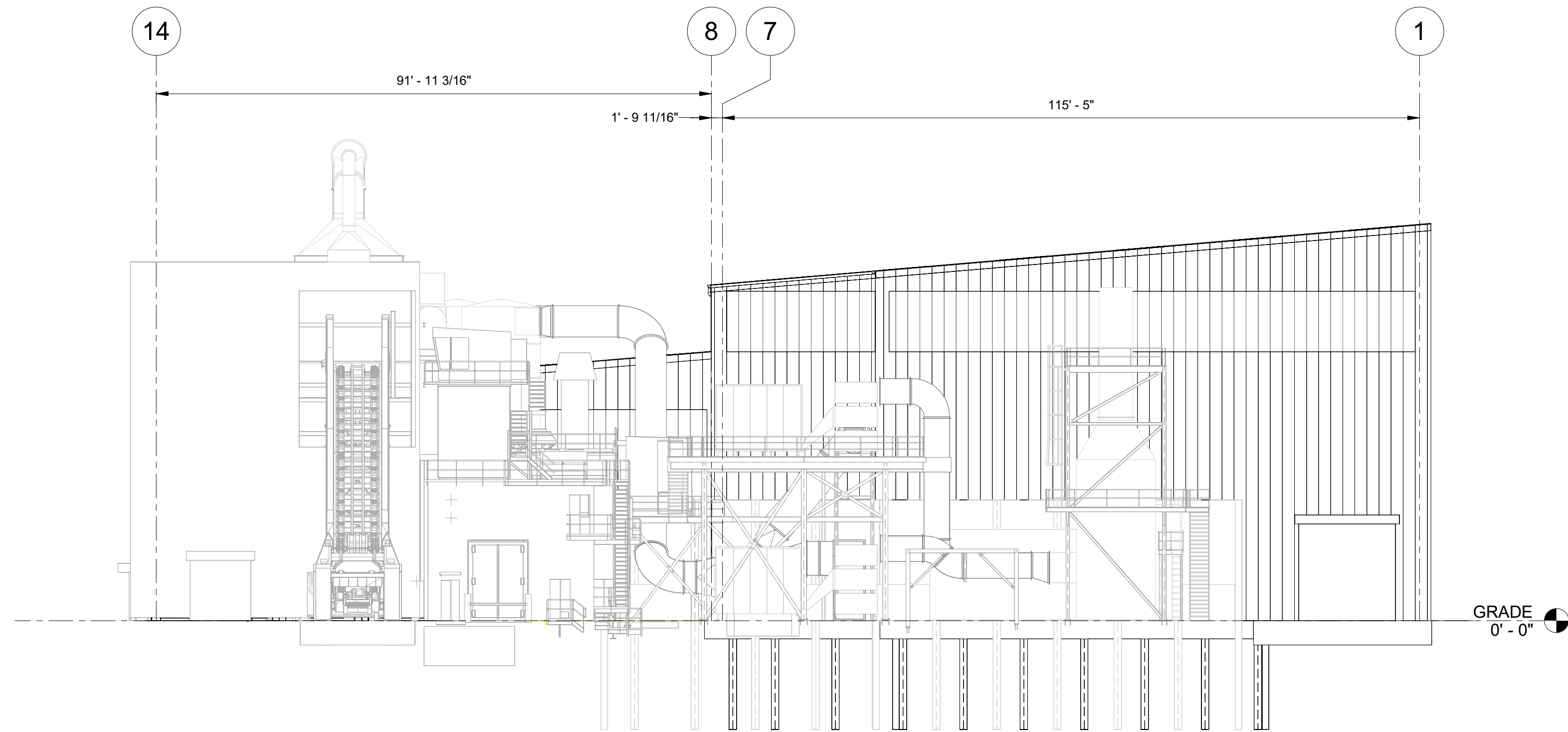
DRAWN BY	DATE	CHKD BY	DATE
J.STOA	10/24/23		

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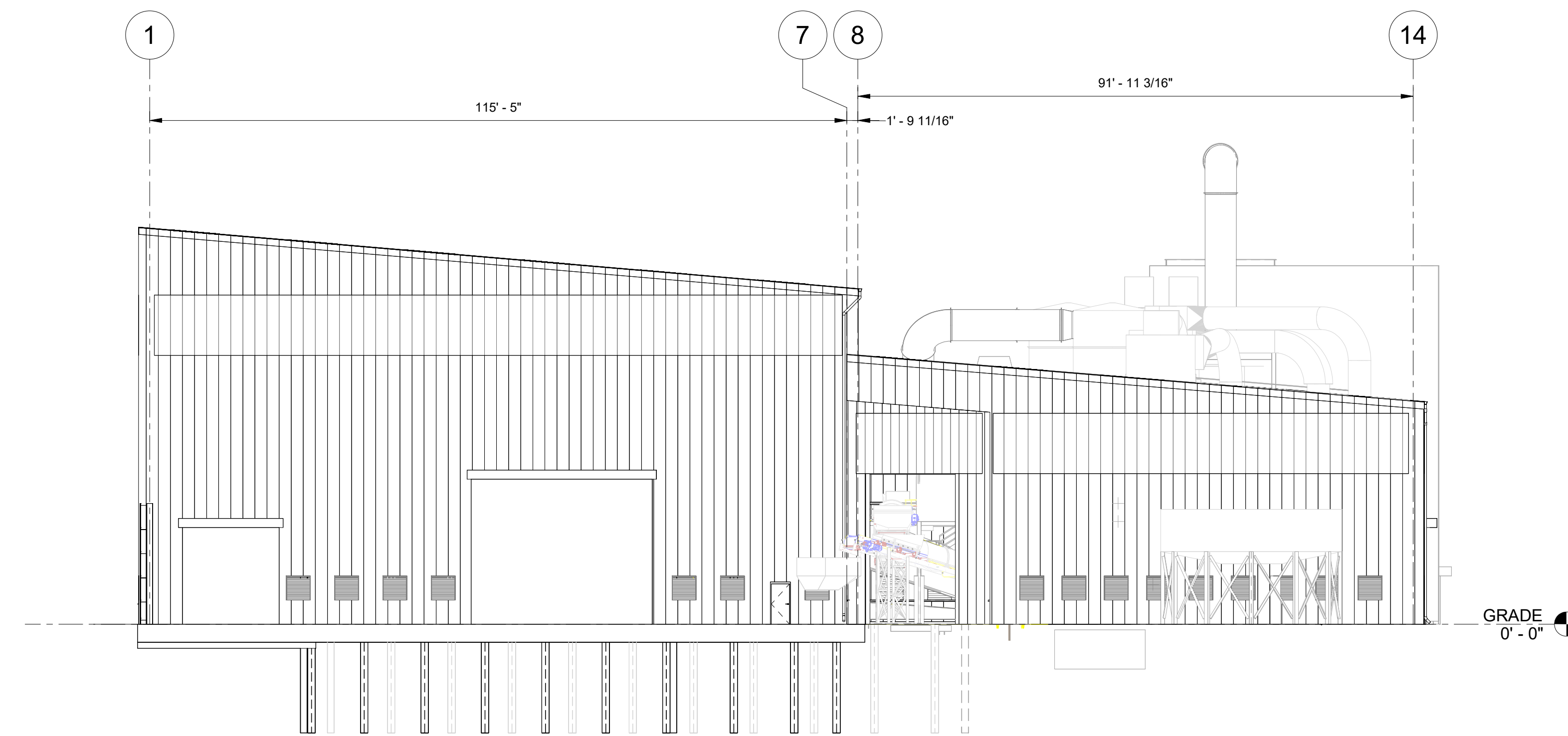
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RADIUS RECYCLING
OAKLAND CONVEYOR ENCLOSURES
NFR BUILDING
GENERAL ARRANGEMENT
PLAN

SCALE	DWG. NO.	REV.
AS NOTED	22-311C-121	B



A GENERAL ARRANGEMENT - NORTH ELEVATION
 122 1/16" = 1'-0"
 LOOKING SOUTH



B GENERAL ARRANGEMENT - SOUTH ELEVATION
 122 1/16" = 1'-0"
 LOOKING NORTH

PRELIMINARY

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B	ISSUED FOR REVIEW	JPS	11/15/23	KD
A	ISSUED FOR REVIEW	JPS	10/24/23	KD

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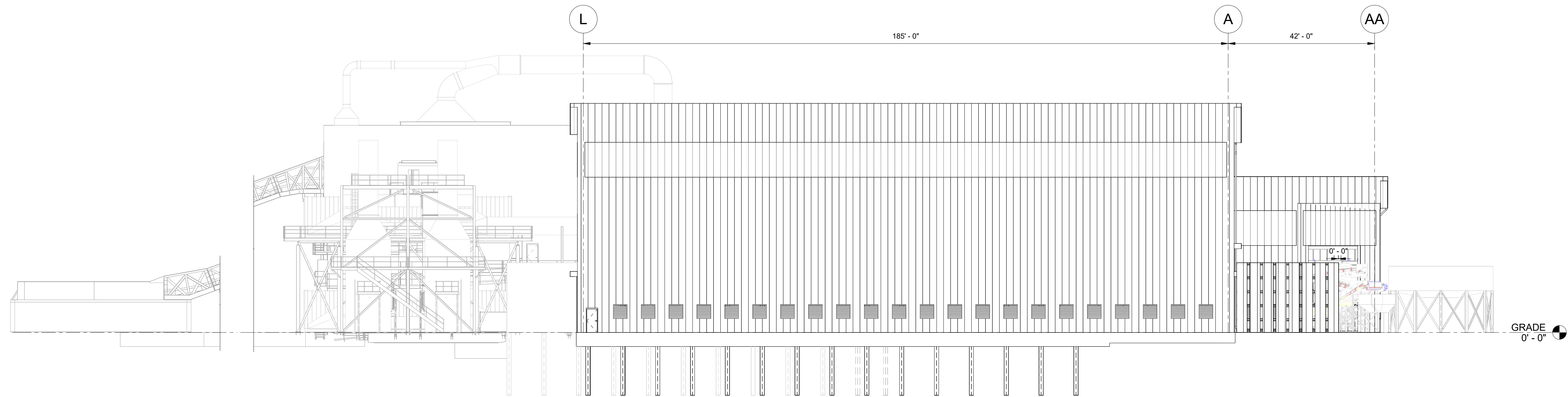
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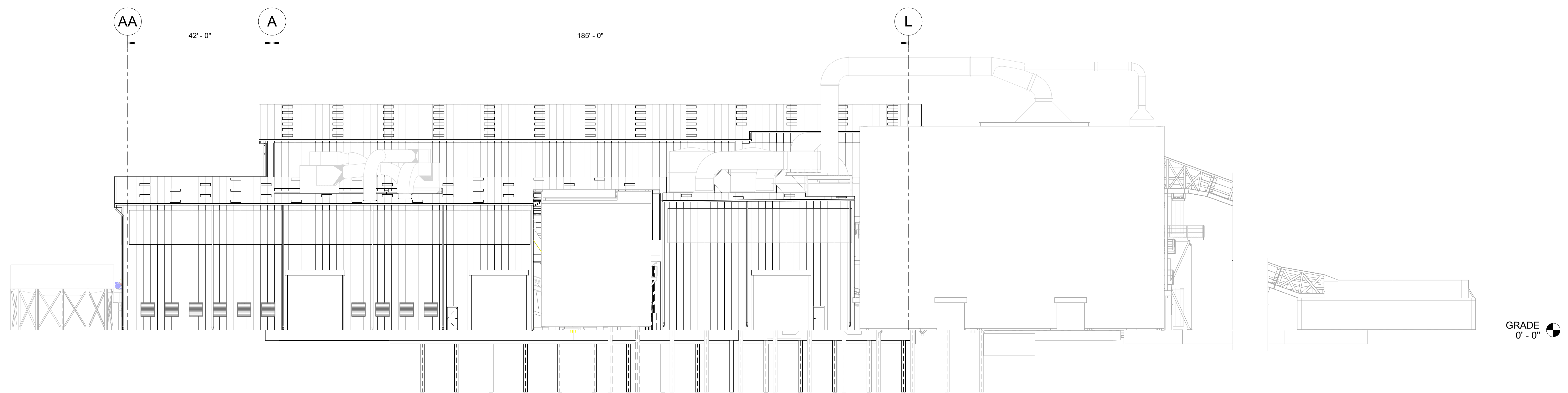
DRAWN BY J.STOA	DATE 10/24/23	CHKD BY	DATE
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RADIUS RECYCLING
OAKLAND CONVEYOR ENCLOSURES
 NFR BUILDING
 GENERAL ARRANGEMENT
 NORTH & SOUTH ELEVATIONS

SCALE AS NOTED	DWG. NO. 22-311C-122	REV. B
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A GENERAL ARRANGEMENT - WEST ELEVATION
 123 1/16" = 1'-0" LOOKING EAST



B GENERAL ARRANGEMENT - EAST ELEVATION
 123 1/16" = 1'-0" LOOKING WEST

PRELIMINARY

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A	ISSUED FOR REVIEW	JPS	10/24/23	KD

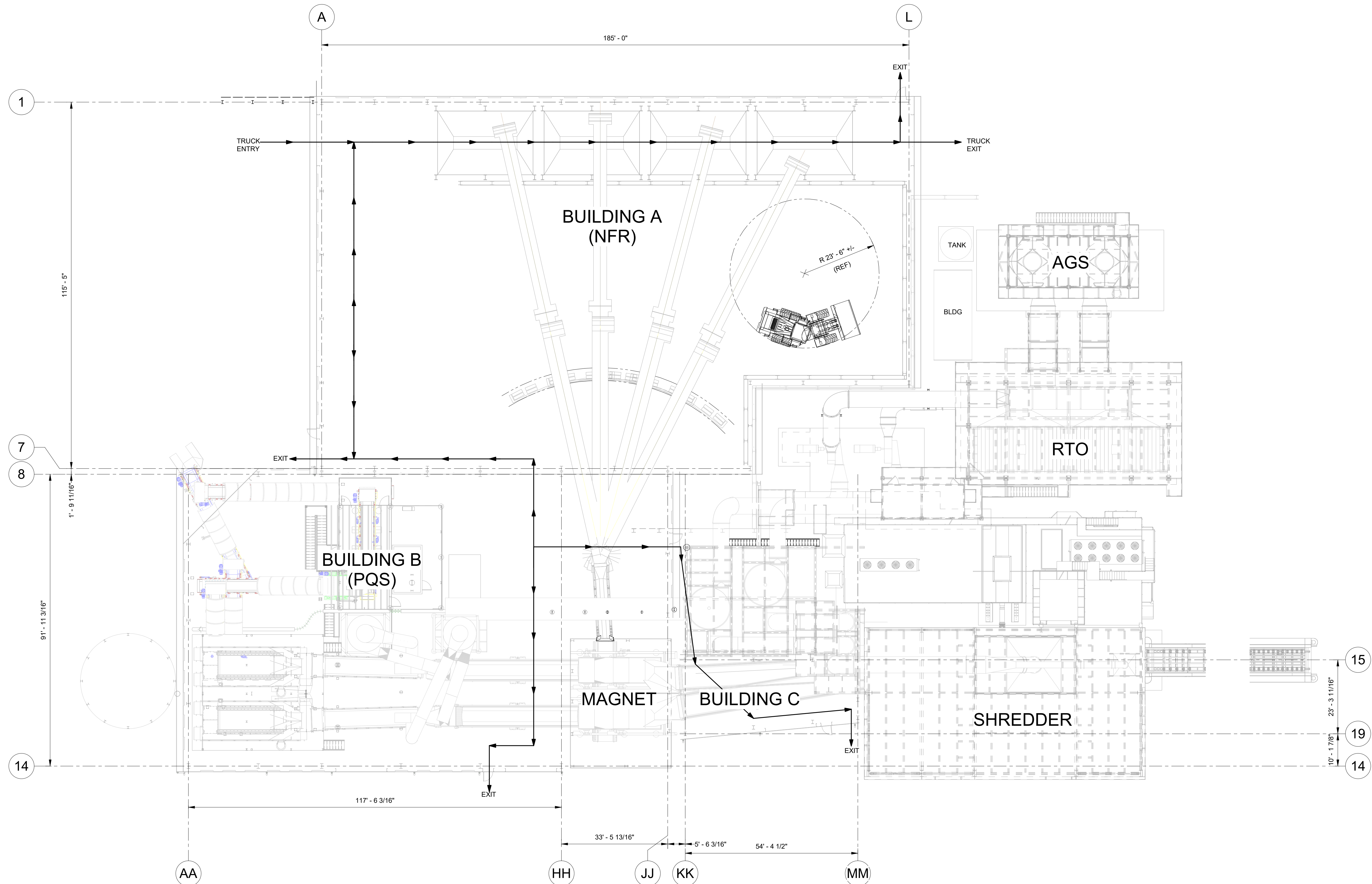
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DRAWN BY J.STOA	DATE 10/24/23	CHKD BY	DATE
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RADIUS RECYCLING
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 NFR BUILDING
 GENERAL ARRANGEMENT
 WEST & EAST ELEVATIONS

SCALE AS NOTED	DWG. NO. 22-311C-123	REV. B
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EGRESS PLAN
 1/16" = 1'-0"

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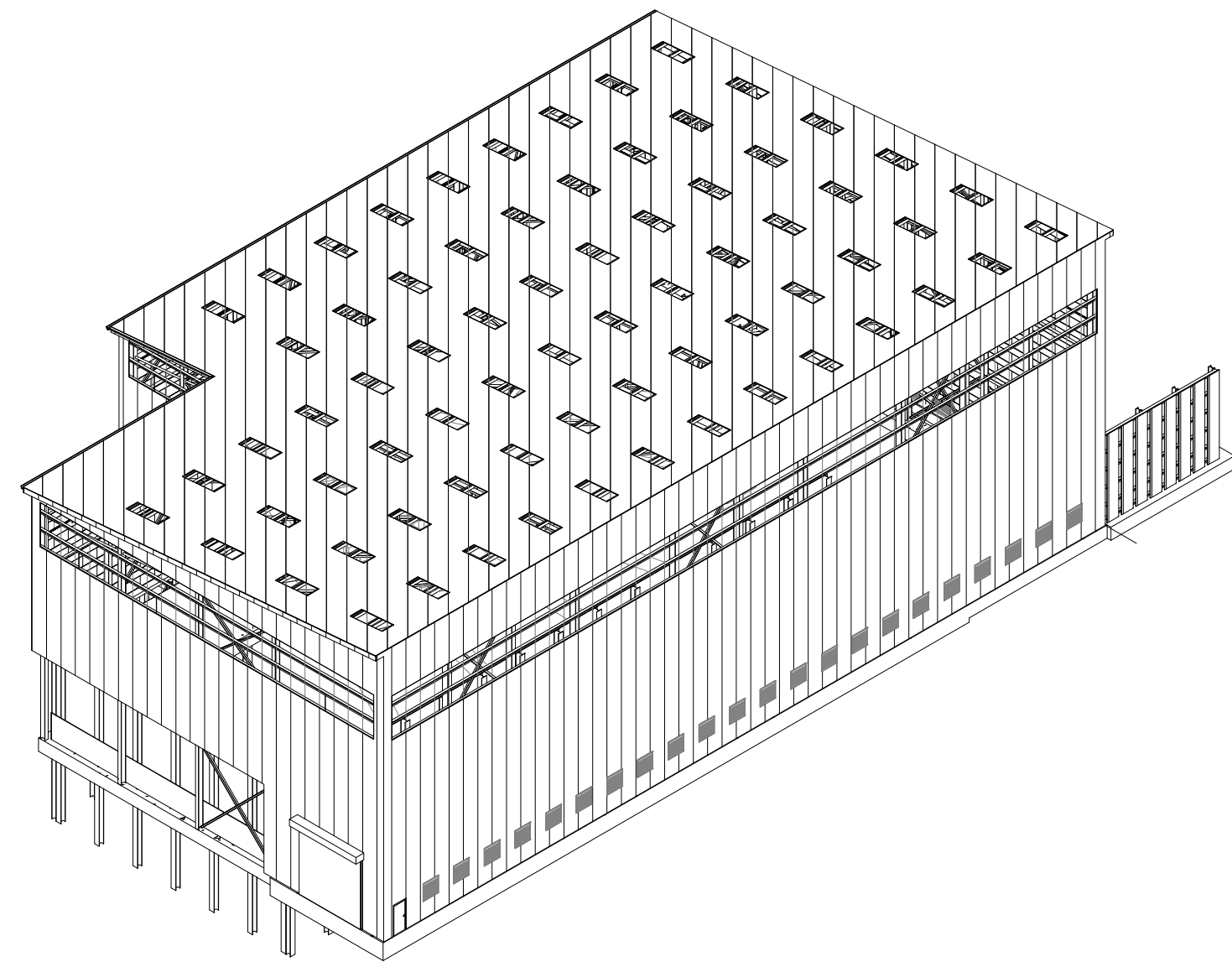
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B	ISSUED FOR REVIEW	JPS	11/15/23	KD
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DRAWN BY	DATE	CHKD BY	DATE
J.S.TOA	10/24/23		

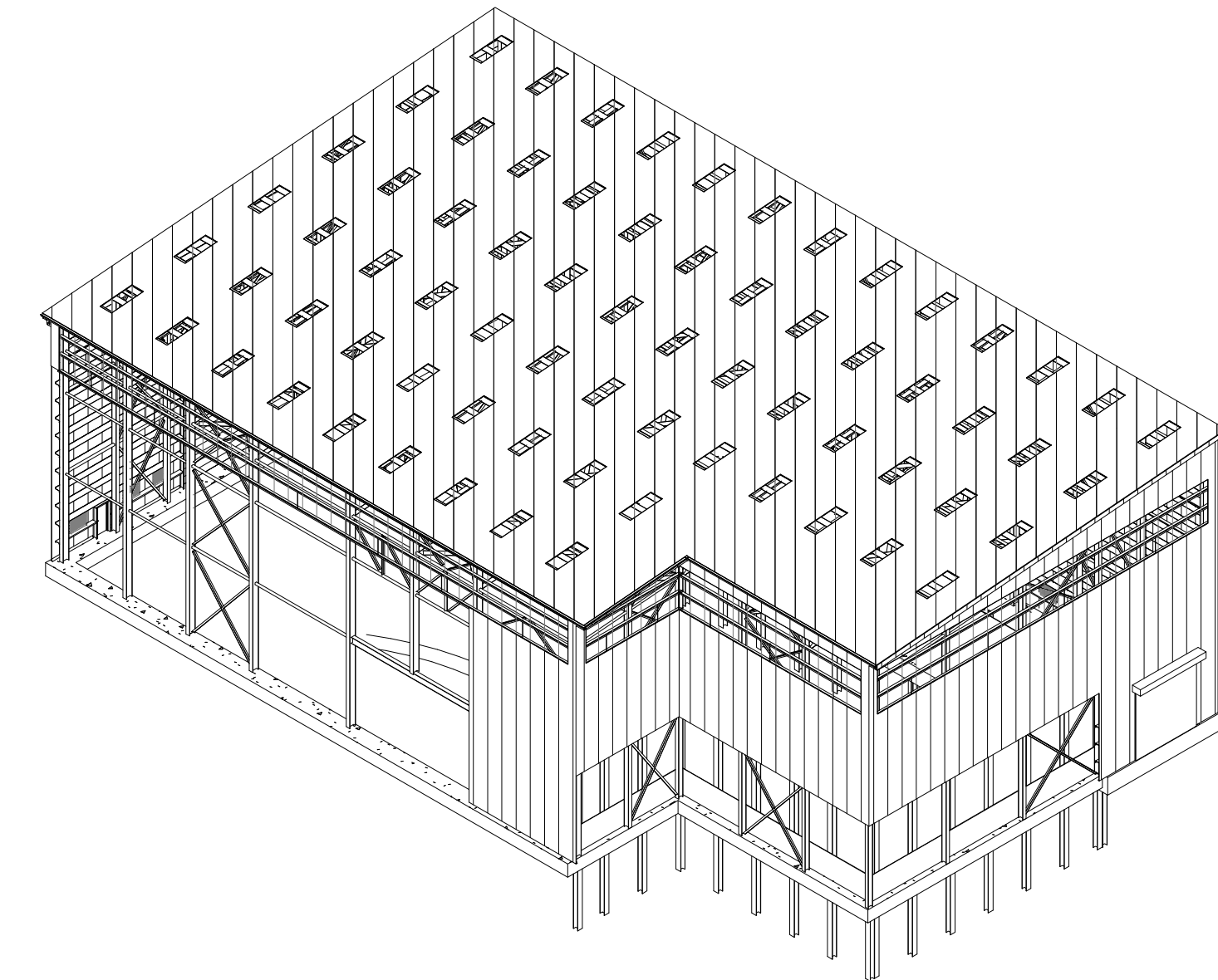
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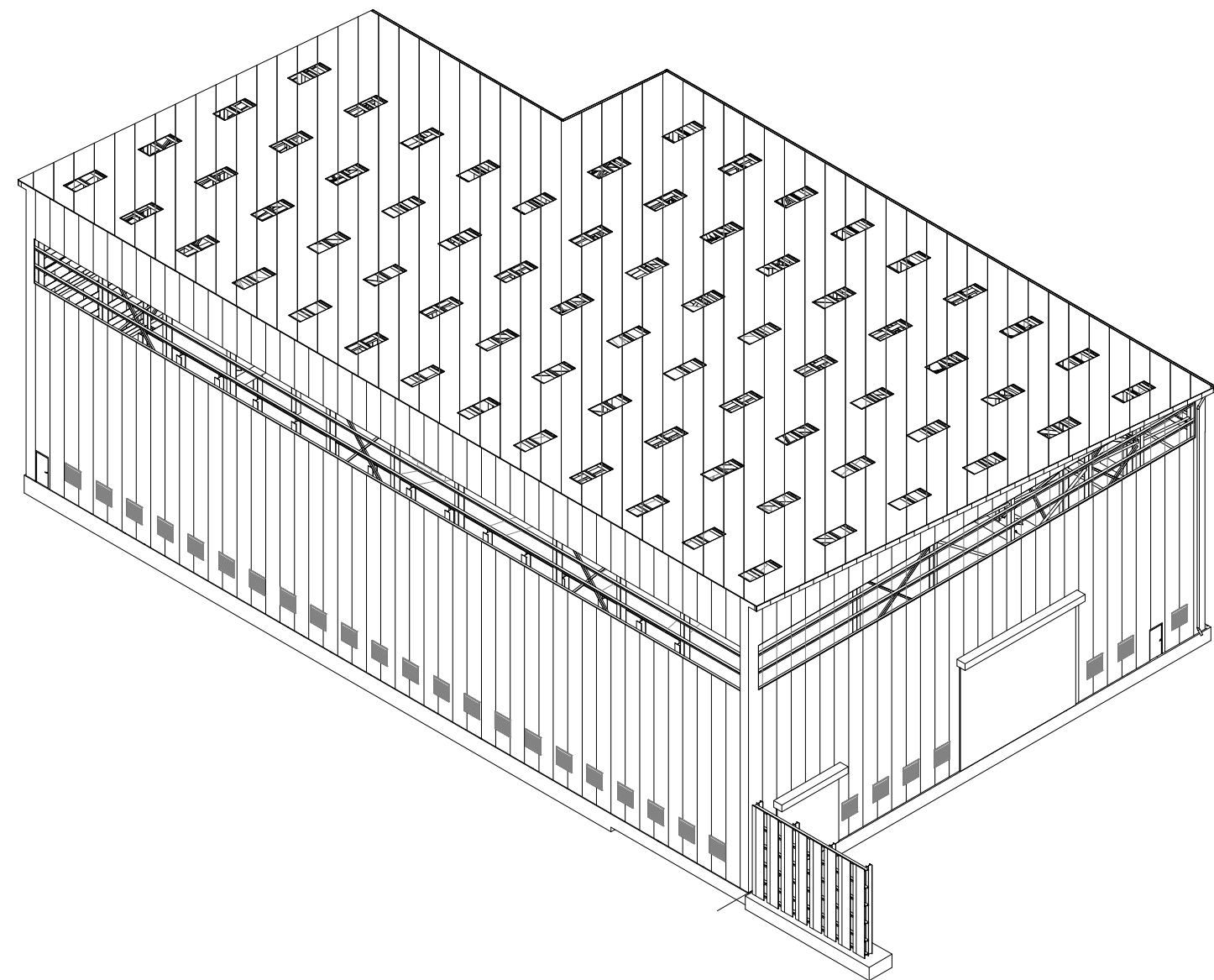
RADIUS RECYCLING OAKLAND CONVEYOR ENCLOSURES NFR BUILDING		EGRESS PLAN	
SCALE	DWG. NO.	REV.	
AS NOTED	22-311C-125	B	



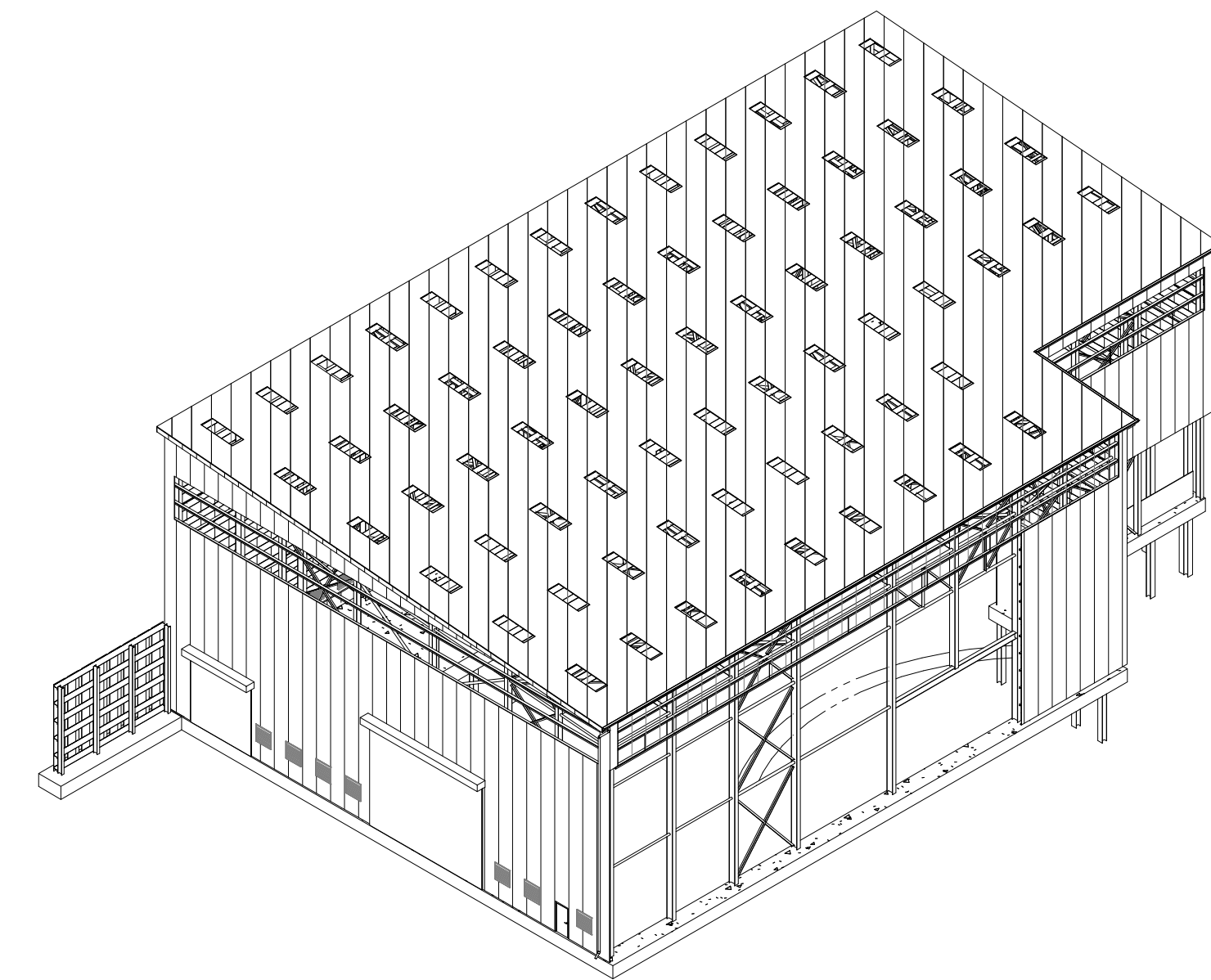
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300 NTS LOOKING SOUTHEAST



B ISO - NFR NORTHEAST ELEVATION
300 NTS LOOKING SOUTHWEST

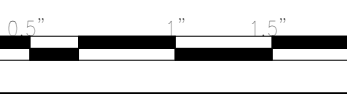


C ISO - NFR SOUTHWEST ELEVATION
300 NTS LOOKING NORTHEAST



D ISO - NFR SOUTHEAST ELEVATION
300 NTS LOOKING NORTHWEST

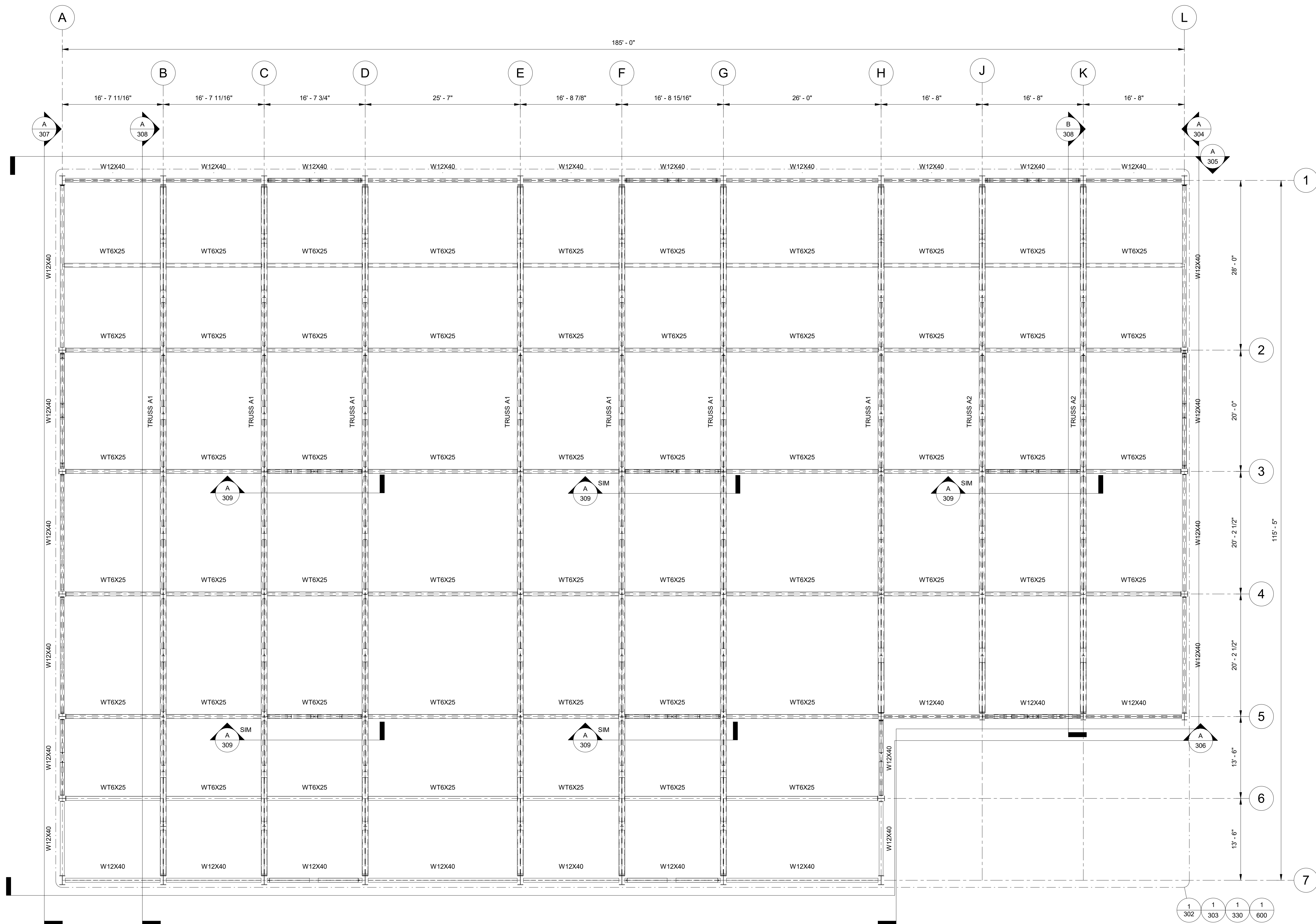
PRELIMINARY



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B	ISSUED FOR REVIEW	JPS	11/15/23	KD
A	ISSUED FOR REVIEW	JPS	10/24/23	KD

 Smith Monroe Gray ENGINEERS, INC.		8625 SW Cascade Ave. Suite 600 Beaverton, Oregon 97008 Phone: 503.643.8595 Fax: 503.643.8610 www.smgenr.com		RADIUS RECYCLING <u>OAKLAND CONVEYOR ENCLOSURES</u> NFR BUILDING ISO VIEWS		
		DRAWN BY J.STOA	DATE 10/24/23	CHKD BY [Blank]	DATE [Blank]	SCALE AS NOTED



1 ENLARGED PLAN AT TOP TRUSS CHORD
1/8" = 1'-0"

PRELIMINARY

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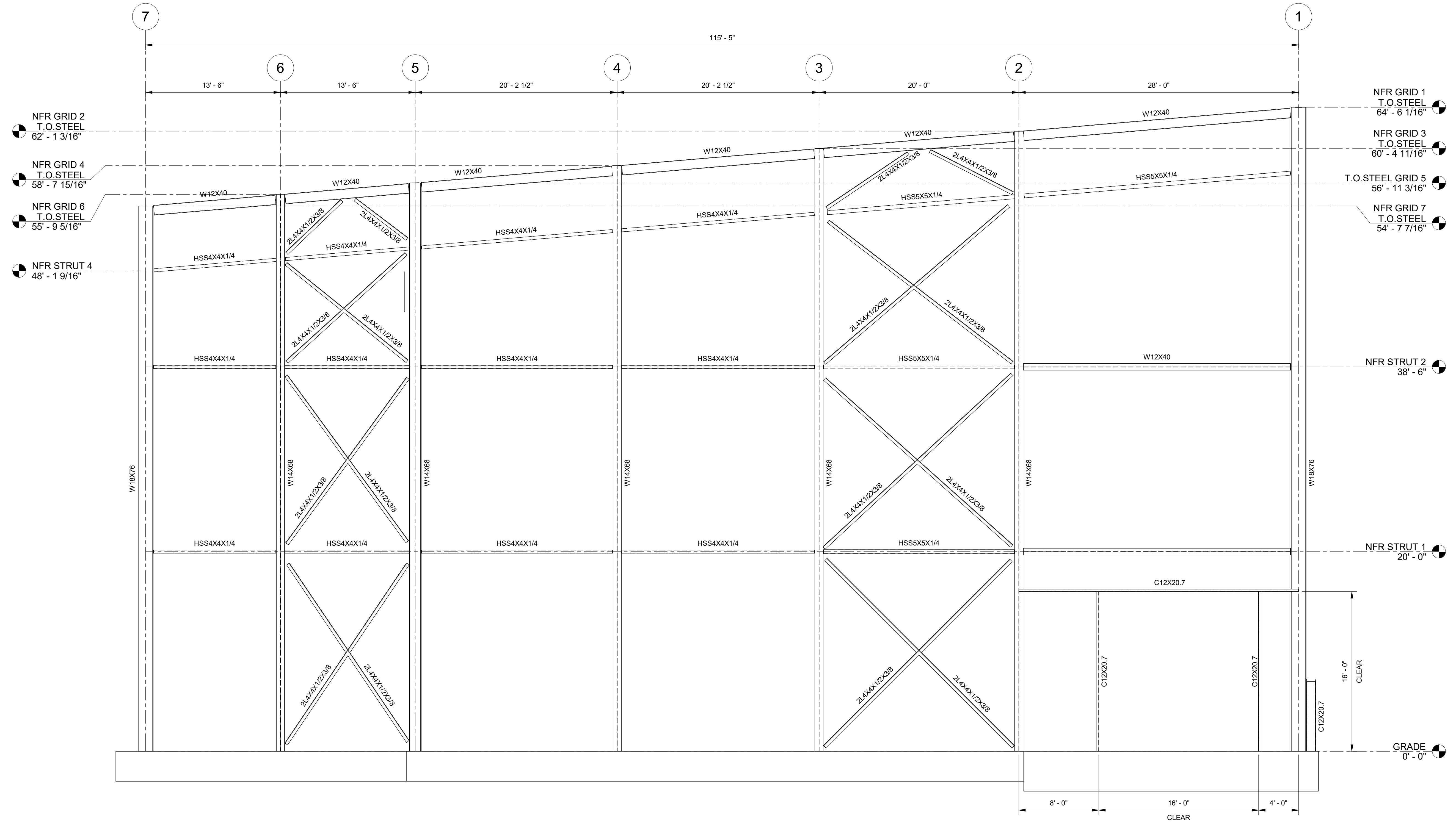
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A	ISSUED FOR REVIEW	JPS	10/24/23	KD

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RADIUS RECYCLING
OAKLAND CONVEYOR ENCLOSURES
NFR BUILDING
ENLARGED PLAN

DRAWN BY J.STOA	DATE 10/24/23	CHKD BY	DATE	SCALE AS NOTED	DWG. NO. 22-311C-301	REV. B
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A NORTH ELEVATION
304 3/16" = 1'-0"

PRELIMINARY

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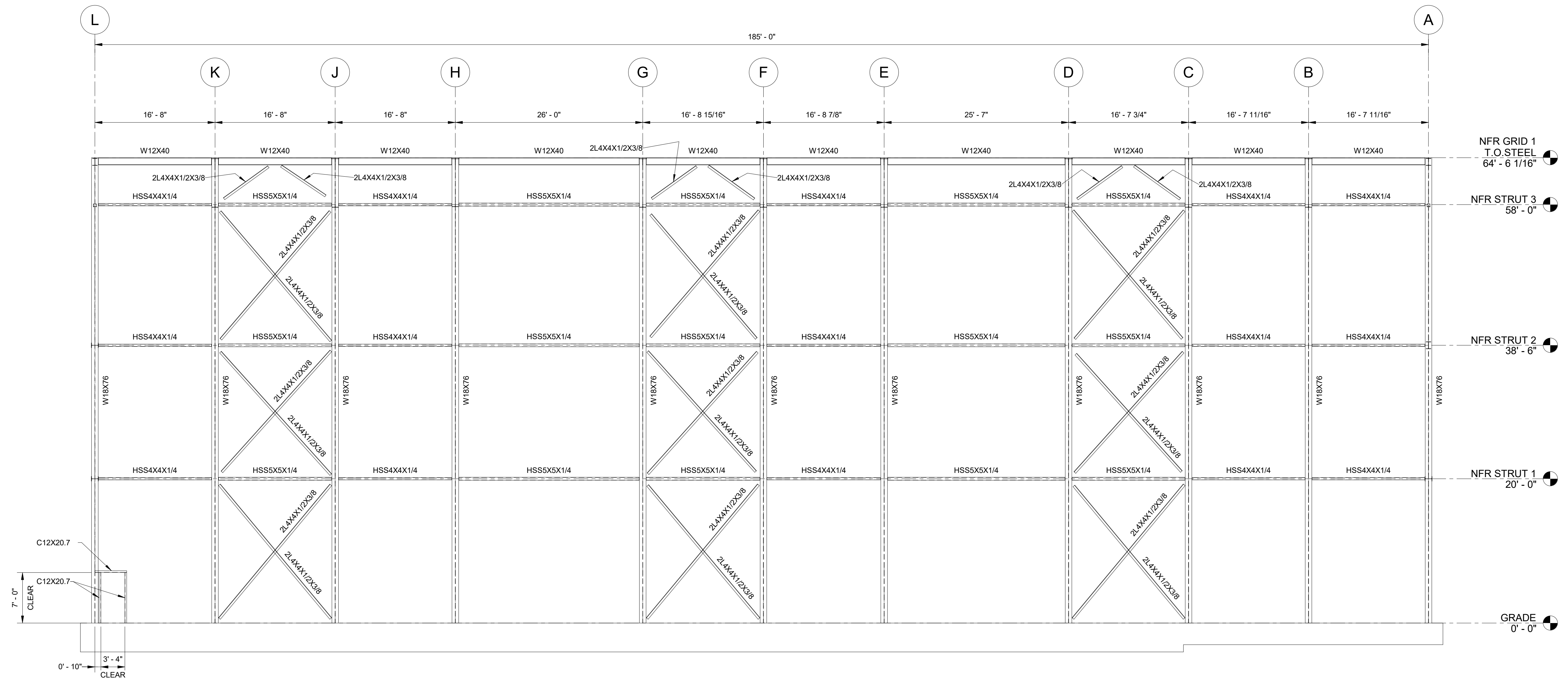
SYMBOL	REVISIONS	BY	DATE	CHKD
B	ISSUED FOR REVIEW	JPS	11/15/23	KD
A	ISSUED FOR REVIEW	JPS	10/24/23	KD

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ENGINEERS, INC.

8625 SW Cascade Ave.
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Fax: 503.643.8610
www.smgenr.com

RADIUS RECYCLING
OAKLAND CONVEYOR ENCLOSURES
NFR BUILDING
NORTH ELEVATION

DRAWN BY J.STOA	DATE 10/24/23	CHKD BY	DATE	SCALE AS NOTED	DWG. NO. 22-311C-304	REV. B
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A WEST ELEVATION
305 1/8" = 1'-0"

PRELIMINARY

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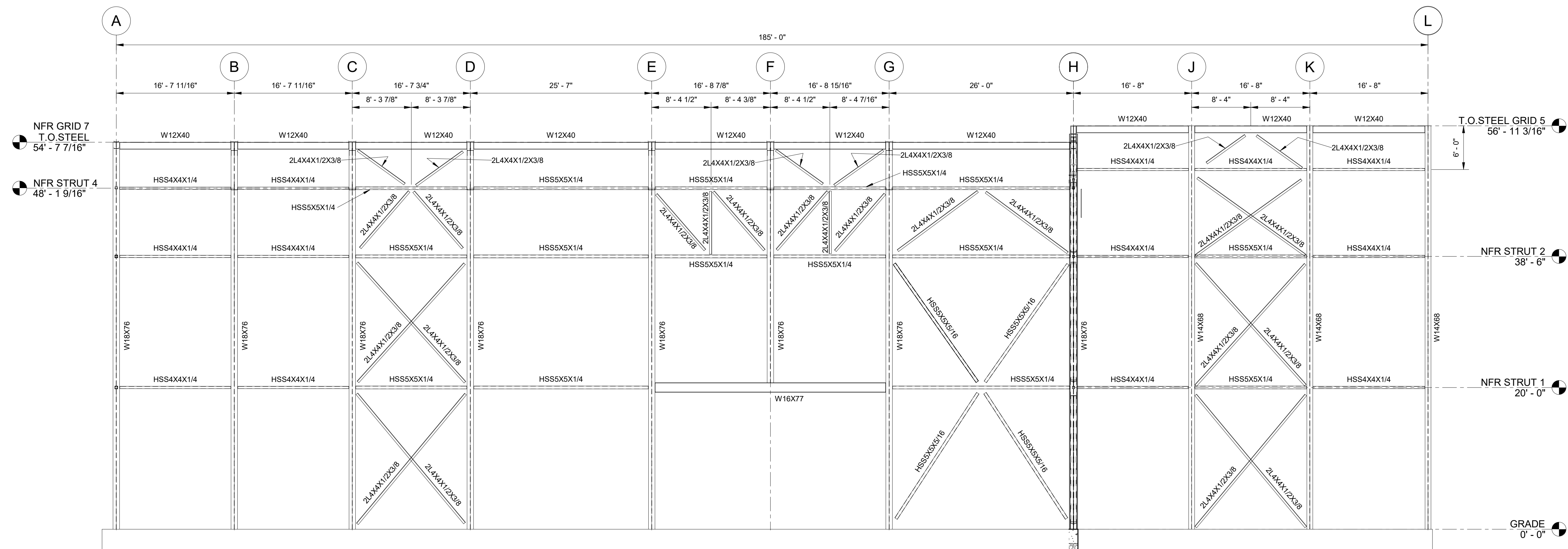
SYN	REVISIONS	BY	DATE	CHKD
B	ISSUED FOR REVIEW	JPS	11/15/23	KD
A	ISSUED FOR REVIEW	JPS	10/24/23	KD

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WEST ELEVATION

DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J.STOA	10/24/23			AS NOTED	22-311C-305	B



A EAST ELEVATION
306 1/8" = 1'-0"

PRELIMINARY

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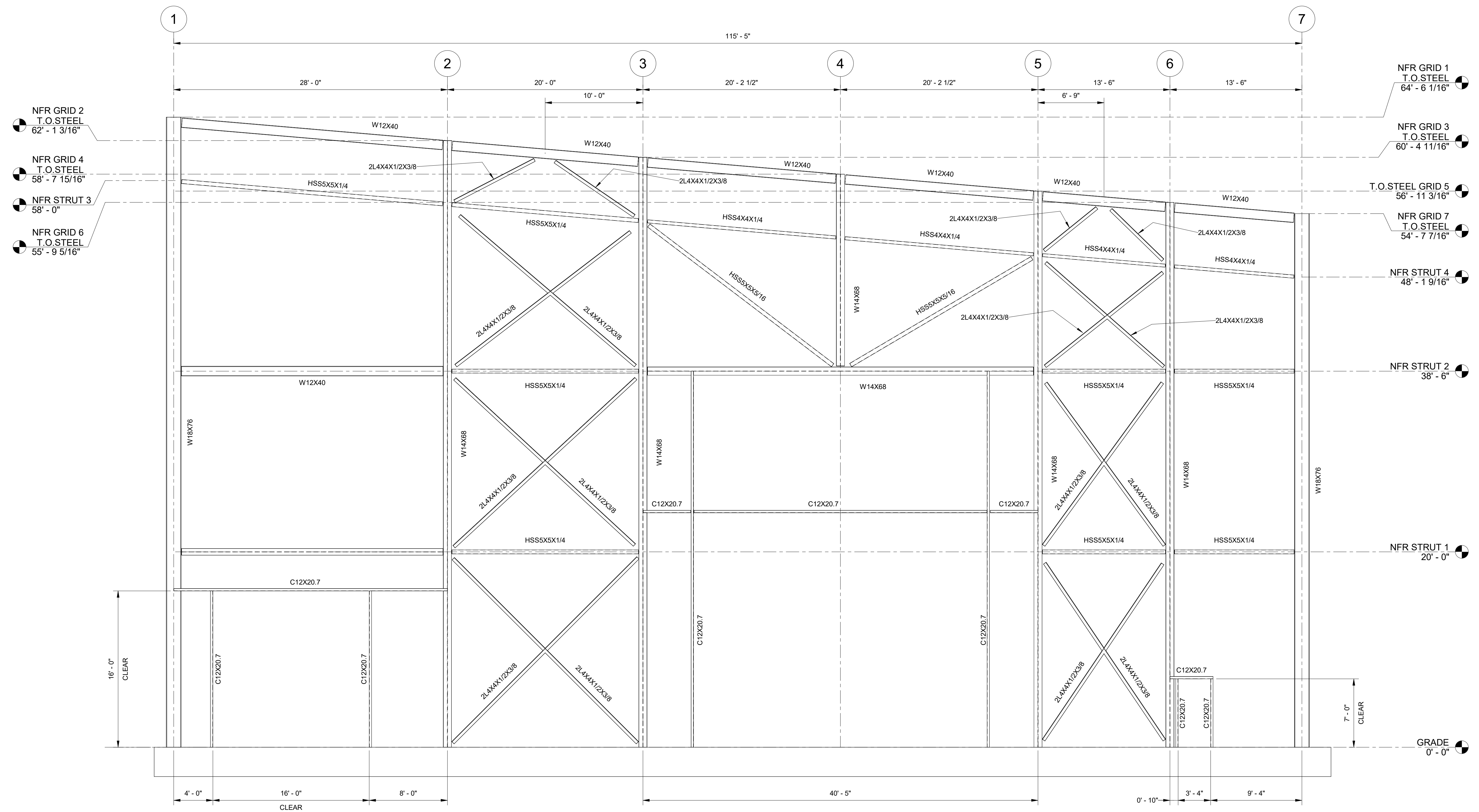
SYMBOL	REVISIONS	BY	DATE	CHKD
B	ISSUED FOR REVIEW	JPS	11/15/23	KD
A	ISSUED FOR REVIEW	JPS	10/24/23	KD

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EAST ELEVATION

DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J.STOA	10/24/23			AS NOTED	22-311C-306	B



A SOUTH ELEVATION
307 3/16" = 1'-0"

PRELIMINARY

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SYN	REVISIONS	BY	DATE	CHKD
B	ISSUED FOR REVIEW	JPS	11/15/23	KD
A	ISSUED FOR REVIEW	JPS	10/24/23	KD

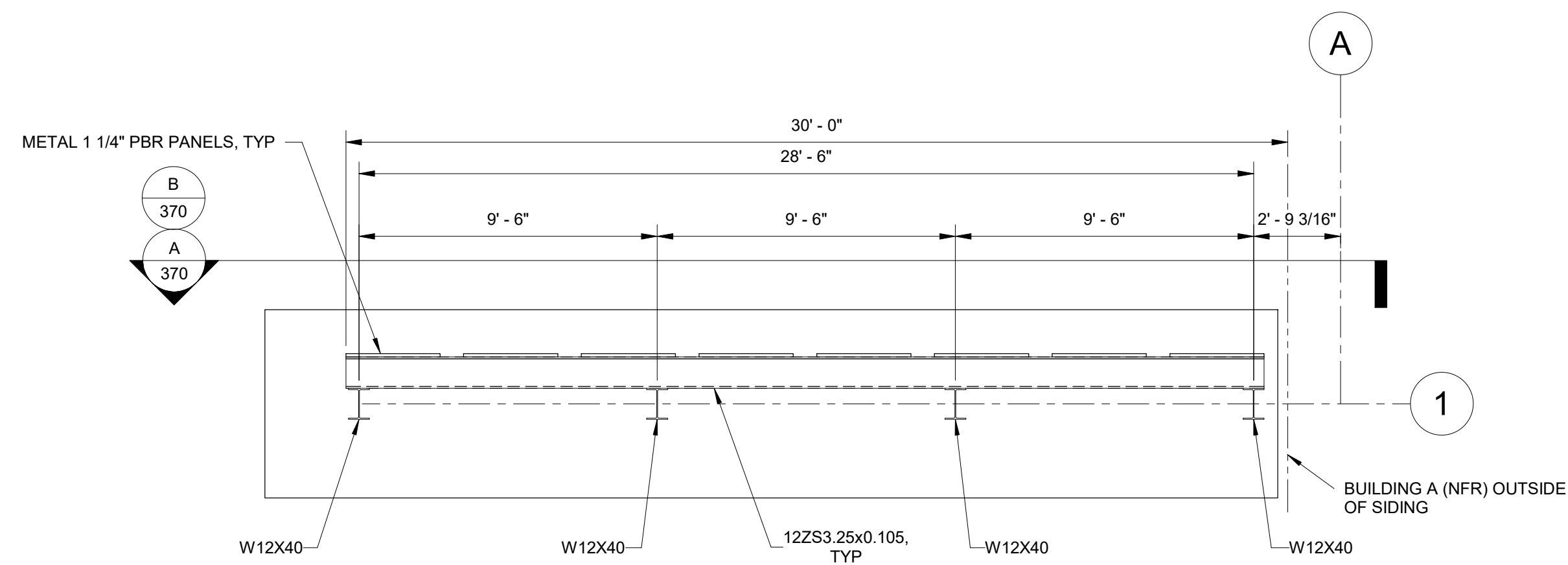
DRAWN BY	DATE	CHKD BY	DATE
J.STOA	10/24/23		

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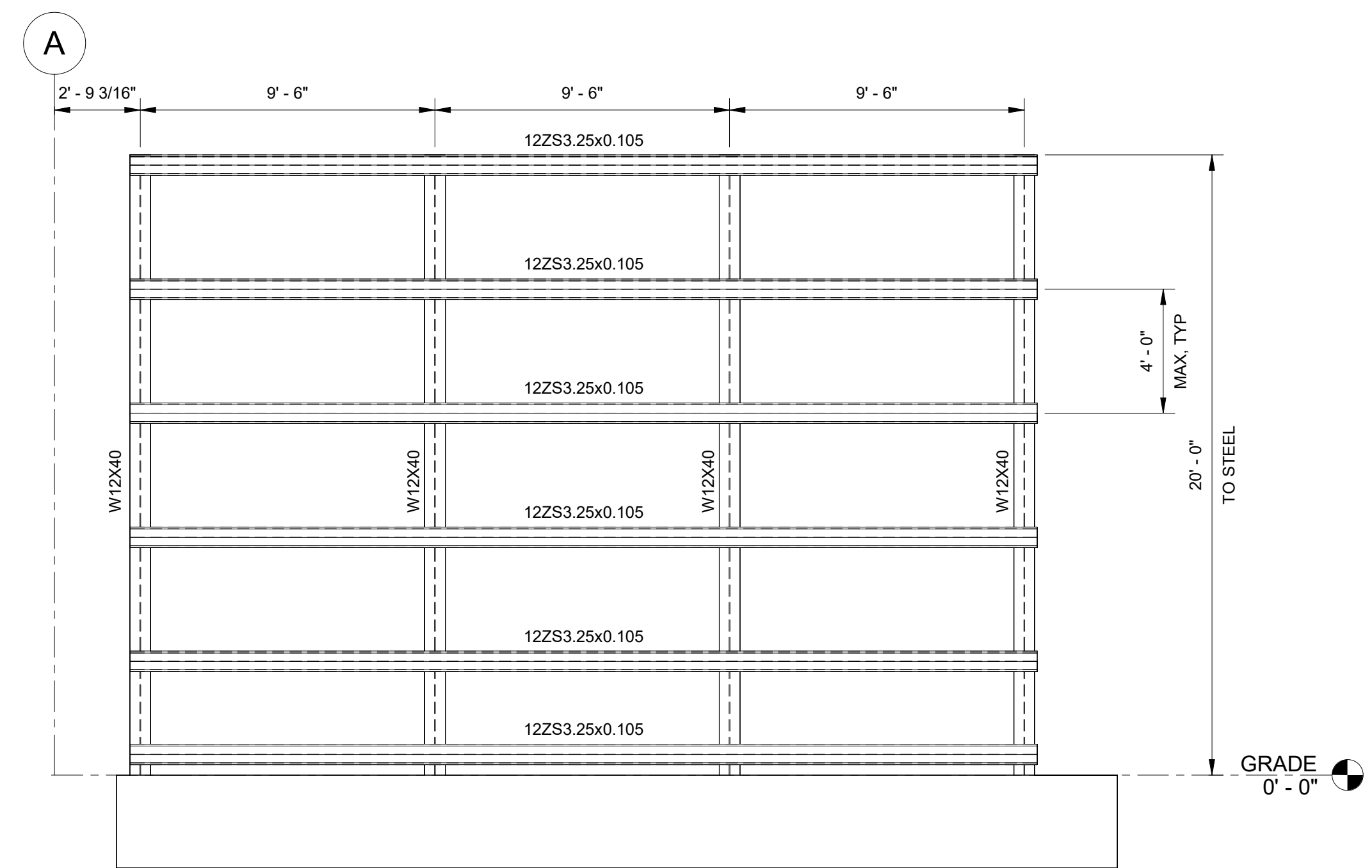
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RADIUS RECYCLING
OAKLAND CONVEYOR ENCLOSURES
NFR BUILDING
SOUTH ELEVATION

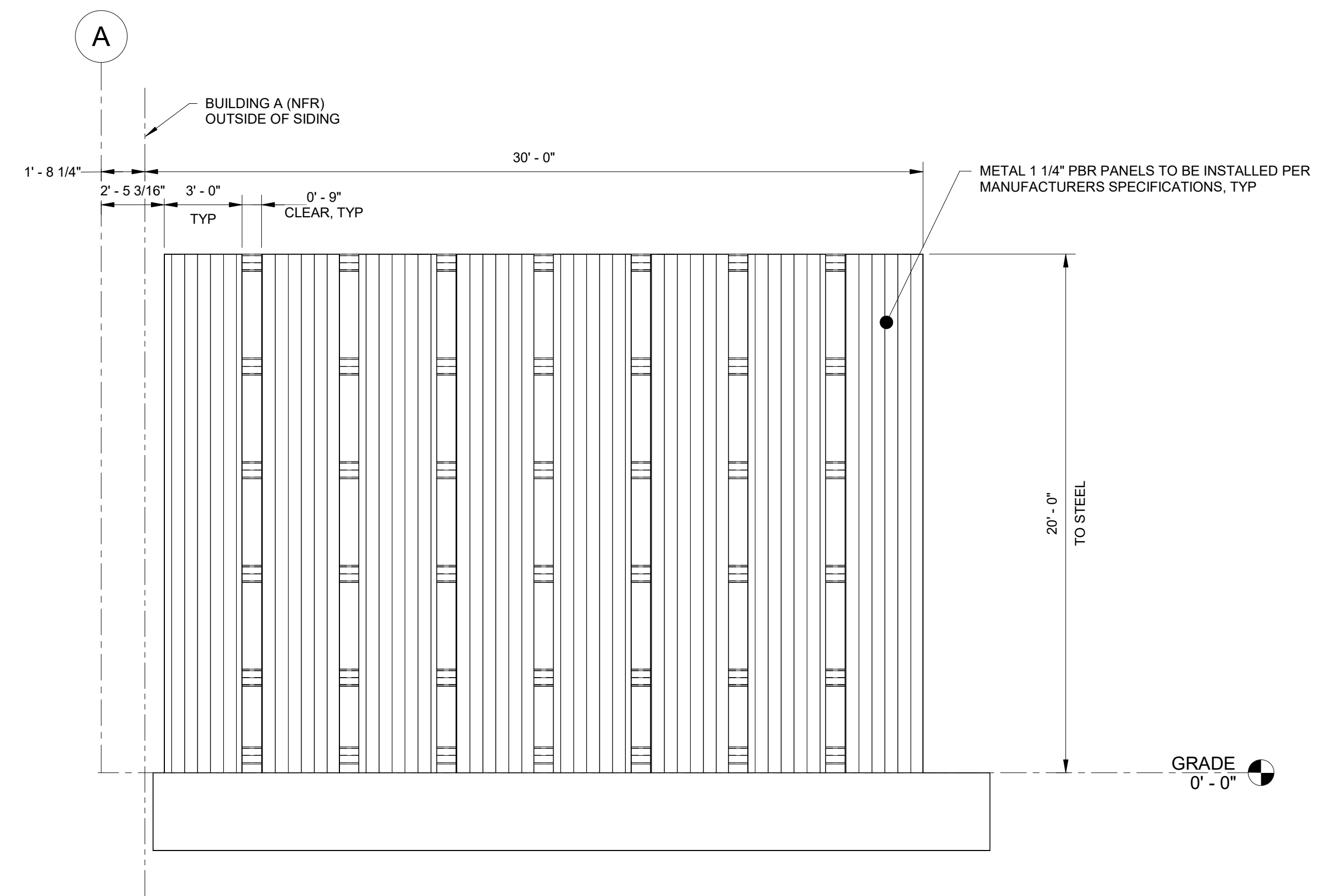
SCALE: AS NOTED
DWG. NO.: 22-311C-307
REV.: B



PLAN - WIND BREAK
 1/4" = 1'-0"



WEST ELEVATION - STRUCTURE
 1/4" = 1'-0"
 NOTE:
 METAL 1 1/4" PBR PANELS HIDDEN FOR CLARITY



WEST ELEVATION - ENCLOSURE
 1/4" = 1'-0"

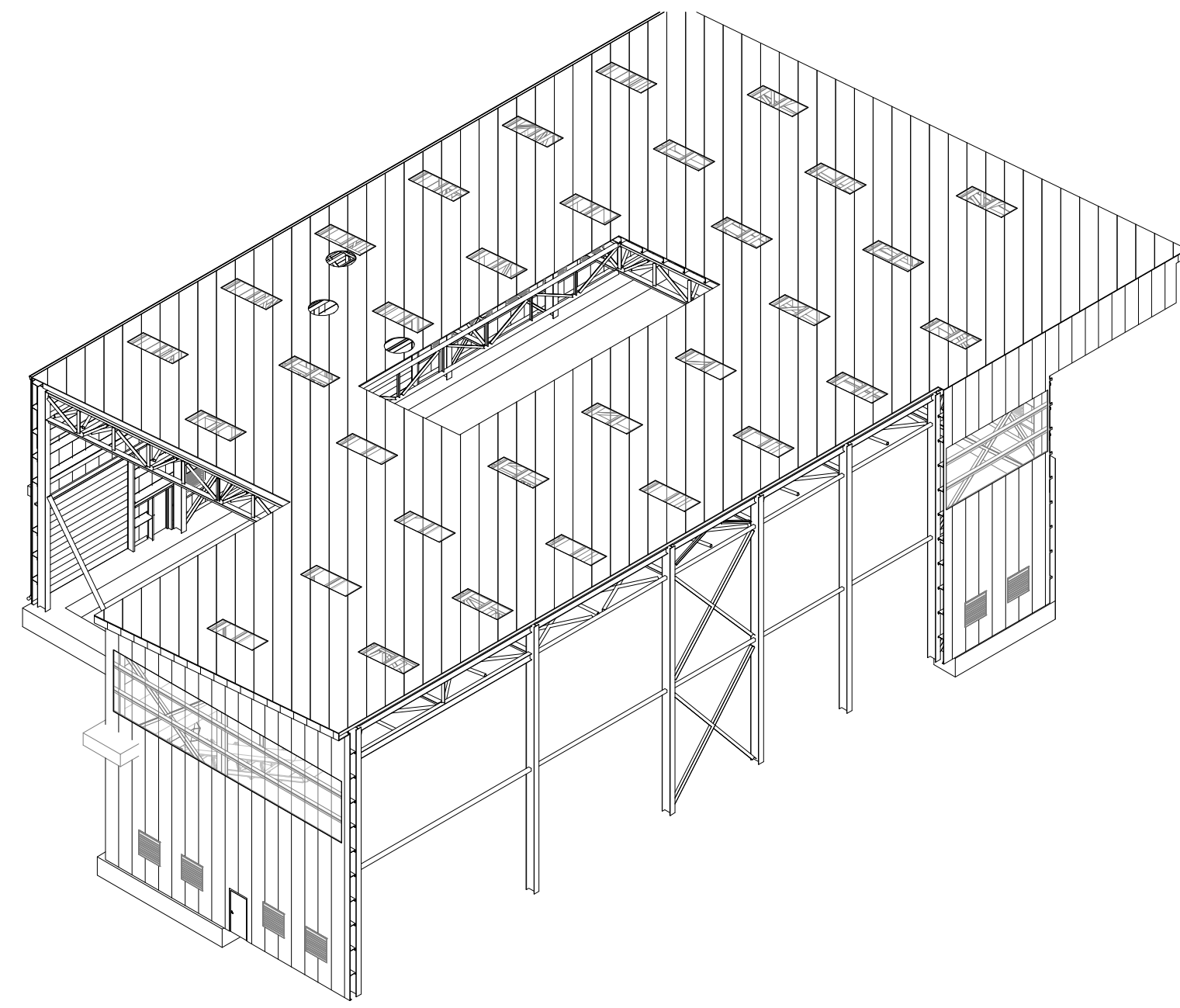
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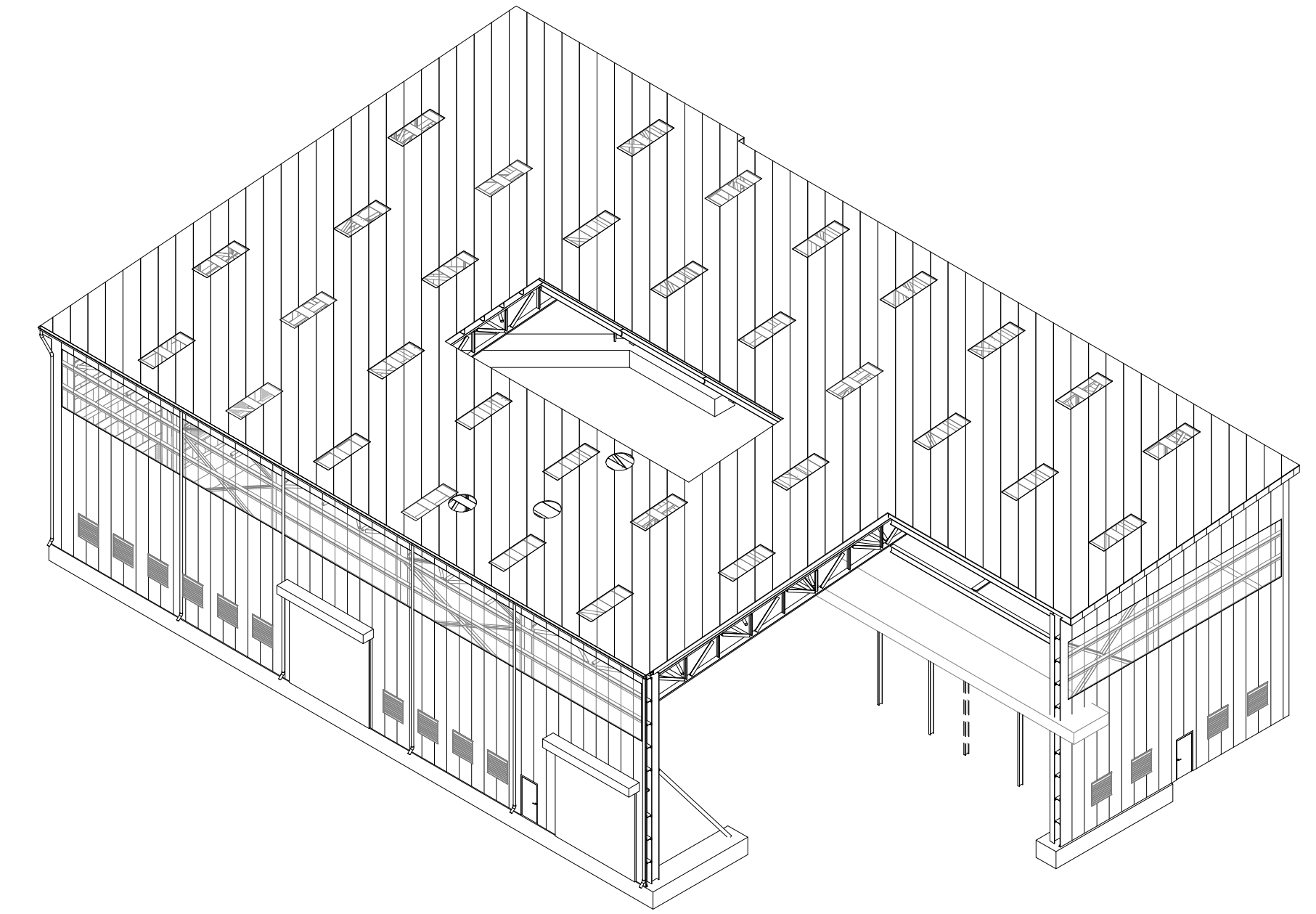
SYMBOL	REVISIONS	BY	DATE	CHKD
B	ISSUED FOR REVIEW	JPS	11/15/23	KD
A	ISSUED FOR REVIEW	JPS	10/24/23	KD

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		DRAWN BY J.STOA	DATE 10/24/23	CHKD BY [Blank]	DATE [Blank]

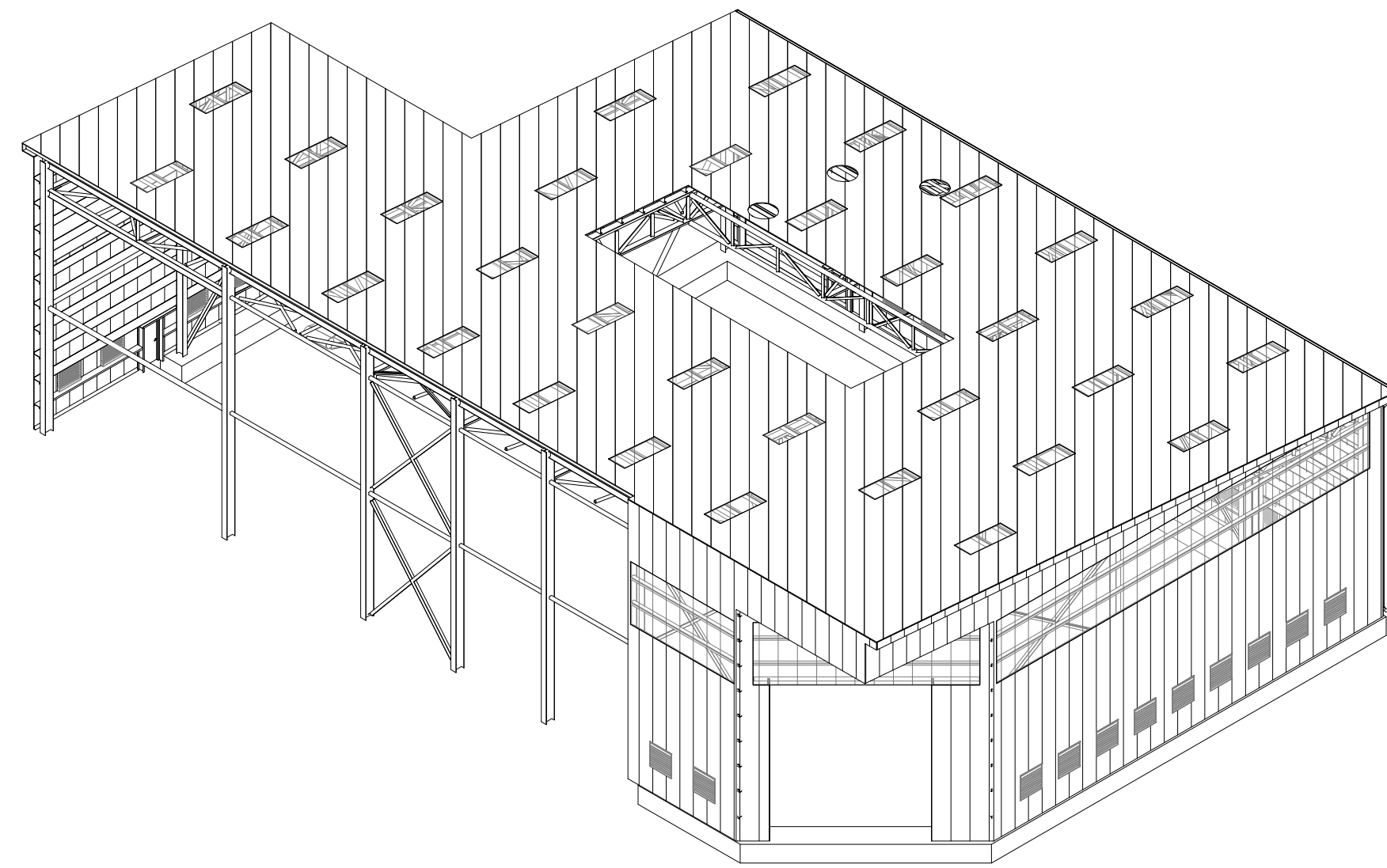




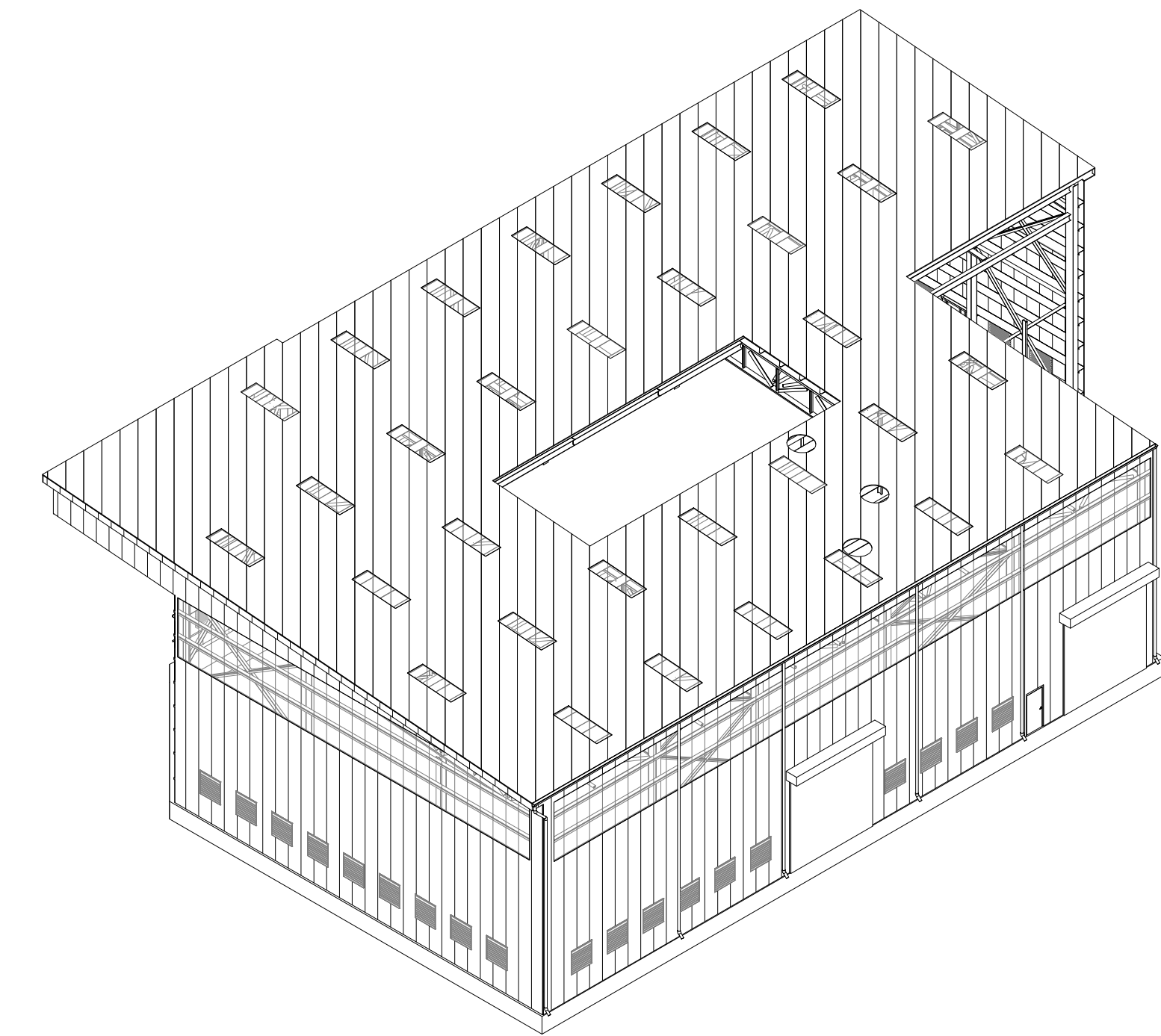
A ISO - BLDG B NORTHWEST ELEVATION
400 NTS LOOKING SOUTHEAST



B ISO - BLDG B NORTHEAST ELEVATION
400 NTS LOOKING SOUTHWEST



C ISO - BLDG B SOUTHWEST ELEVATION
400 NTS LOOKING NORTHEAST




D ISO - BLDG B SOUTHEAST ELEVATION
400 NTS LOOKING NORTHWEST

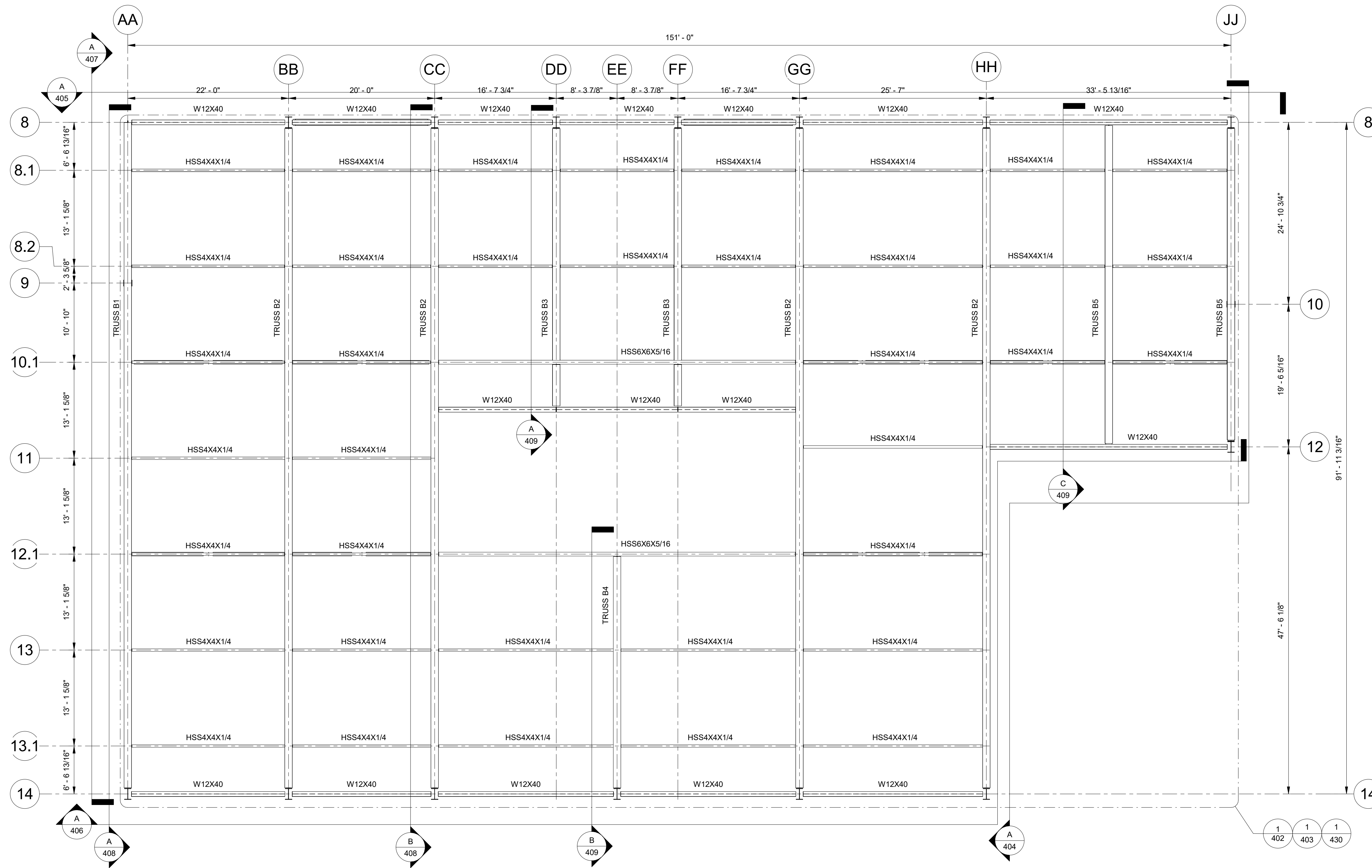
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A	ISSUED FOR REVIEW	JPS	10/24/23	KD

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		DRAWN BY J.STOA	DATE 10/24/23	CHKD BY	DATE	SCALE AS NOTED



1 ENLARGED PLAN
1/8" = 1'-0"

PRELIMINARY

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SYL	REVISIONS	BY	DATE	CHKD
B	ISSUED FOR REVIEW	JPS	11/15/23	KD
A	ISSUED FOR REVIEW	JPS	10/24/23	KD

DATE	CHKD BY
10/24/23	J.S.TOA

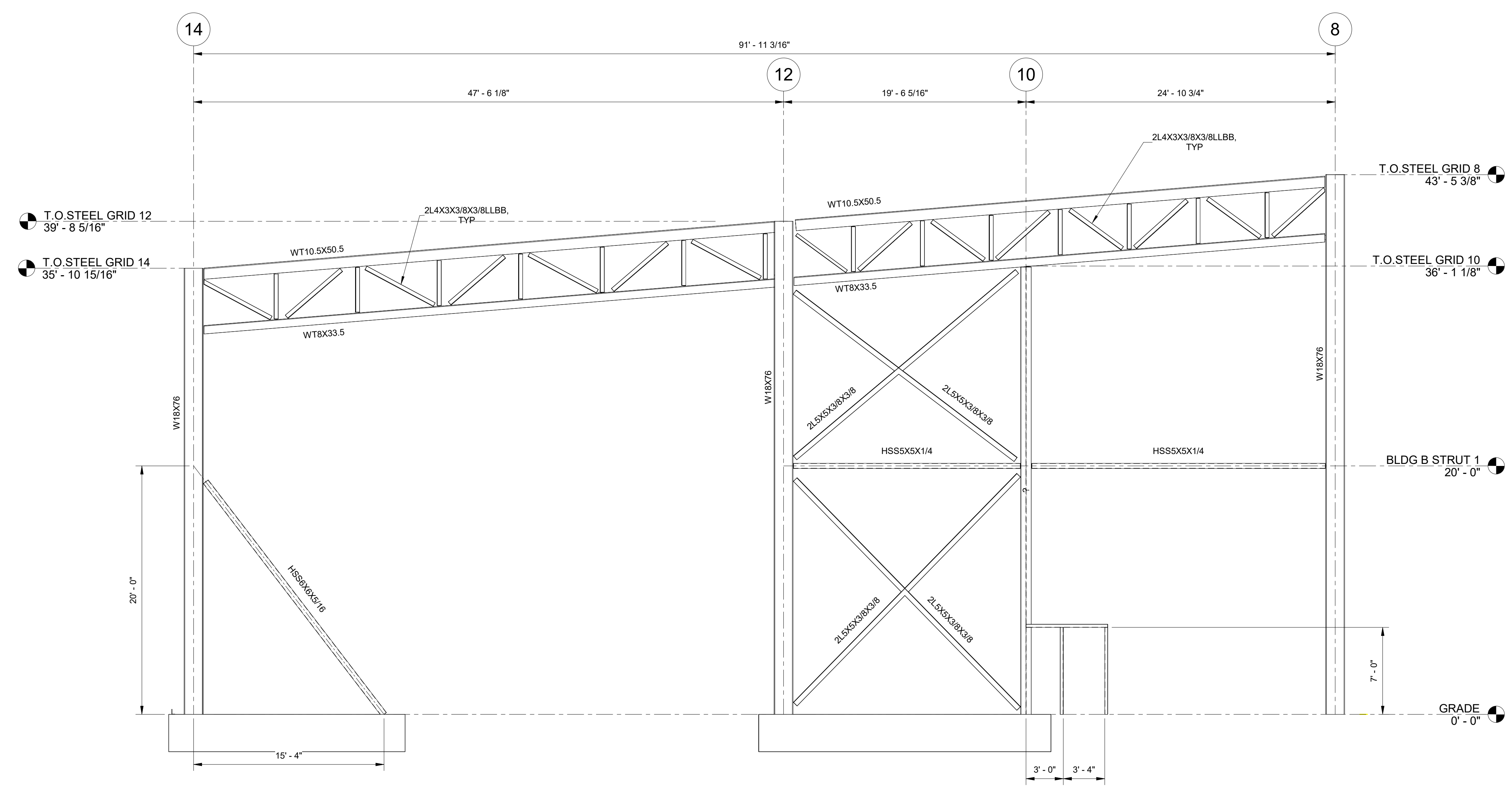
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DRAWN BY: J.S.TOA
DATE: 10/24/23
CHKD BY: [Blank]
DATE: [Blank]

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RADIUS RECYCLING
OAKLAND CONVEYOR ENCLOSURES
NFR BUILDING
BUILDING B
ENLARGED PLAN

SCALE: AS NOTED
DWG. NO.: 22-311C-401
REV.: B



A BUILDING B - NORTH ELEVATION
 404 3/16" = 1'-0"

PRELIMINARY

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SYMBOL	REVISIONS	BY	DATE	CHKD
B	ISSUED FOR REVIEW	JPS	11/15/23	KD
A	ISSUED FOR REVIEW	JPS	10/24/23	KD

DRAWN BY	DATE	CHKD BY	DATE
J.STOA	10/24/23		

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RADIUS RECYCLING
 OAKLAND CONVEYOR ENCLOSURES
 NFR BUILDING
 BUILDING B
 NORTH ELEVATION

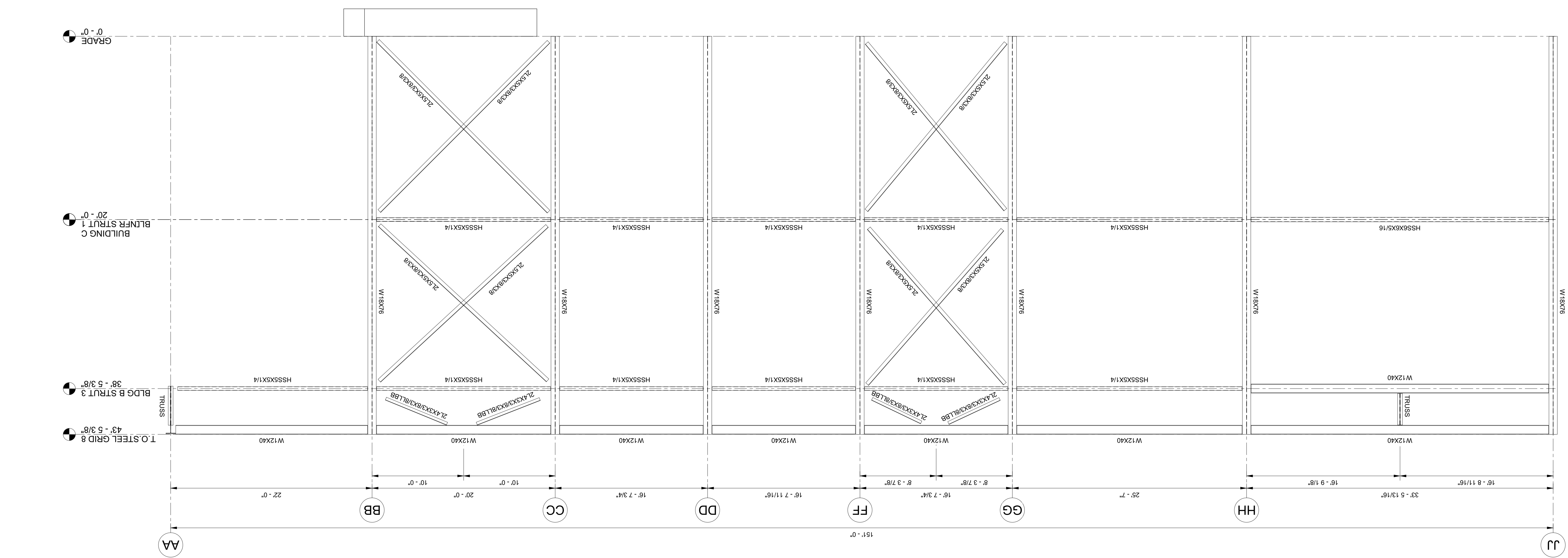
SCALE	DWG. NO.	REV.
AS NOTED	22-311C-404	B

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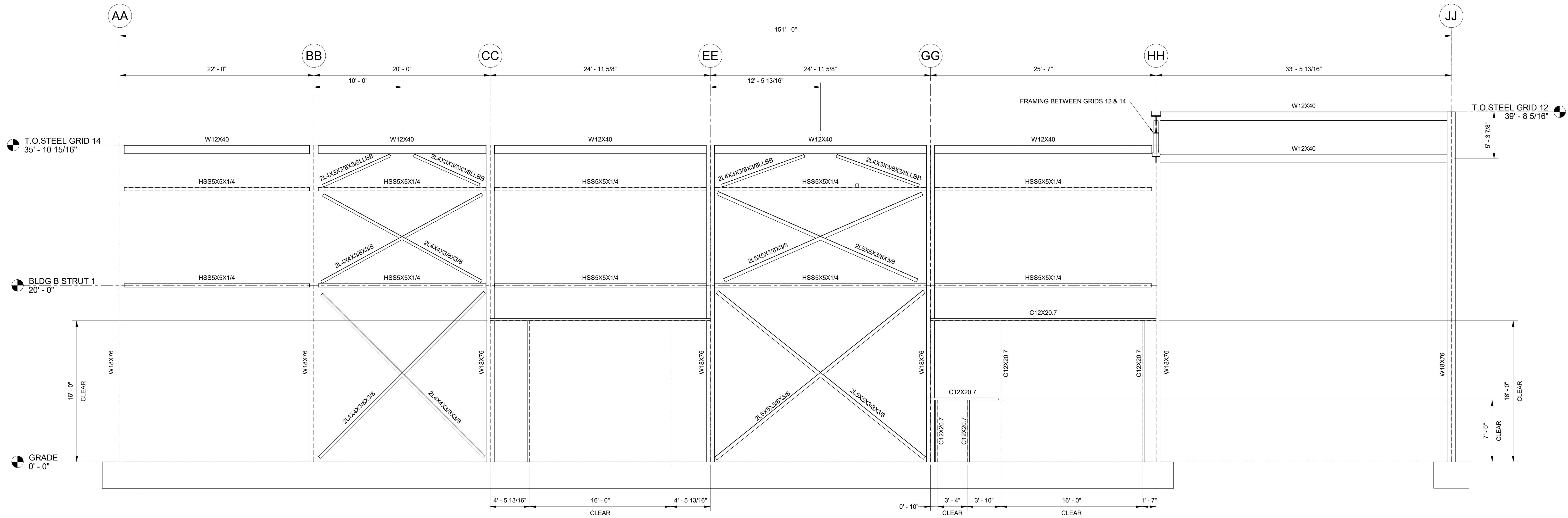
SYD	ISSUED FOR REVIEW	BY	DATE	CHKD
A	ISSUED FOR REVIEW	JPS	10/24/23	KD
B	ISSUED FOR REVIEW	JPS	11/15/23	KD

REV. B	DWG. NO. 22-311C-105	AS NOTED	DATE	CHKD. BY	DATE	DRAWN BY	DATE	SCALE	DATE
	WEST ELEVATION BUILDING B NFR BUILDING OAKLAND CONVEYOR ENCLOSURES				10/24/23	JSTOA	10/24/23		
RADIUS RECYCLING 8625 SW Cascade Ave. Suite 600 Beaverton, Oregon 97008 Phone: 503.643.8595 Fax: 503.643.8610 www.smgengr.com		Smith Monroe Gray ENGINEERS, INC. SMSG							

A BUILDING B - WEST ELEVATION
3/16" = 1'-0"



PRELIMINARY



A BUILDING B - EAST ELEVATION
406 3/16" = 1'-0"

PRELIMINARY

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SYMBOL	REVISIONS	BY	DATE	CHKD
B	ISSUED FOR REVIEW	JPS	11/15/23	KD
A	ISSUED FOR REVIEW	JPS	10/24/23	KD

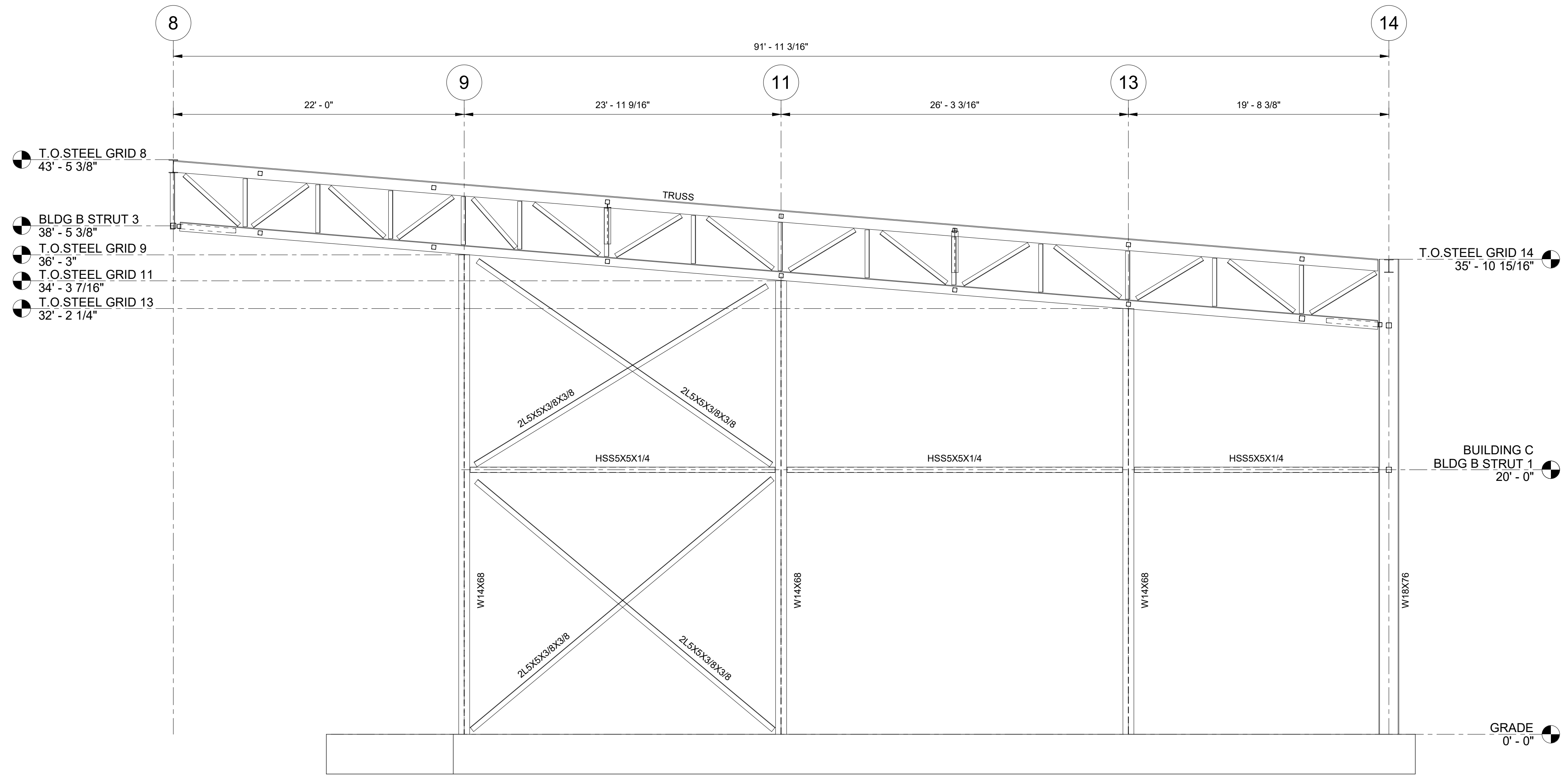
DRAWN BY	DATE	CHKD BY	DATE
J.STOA	10/24/23		

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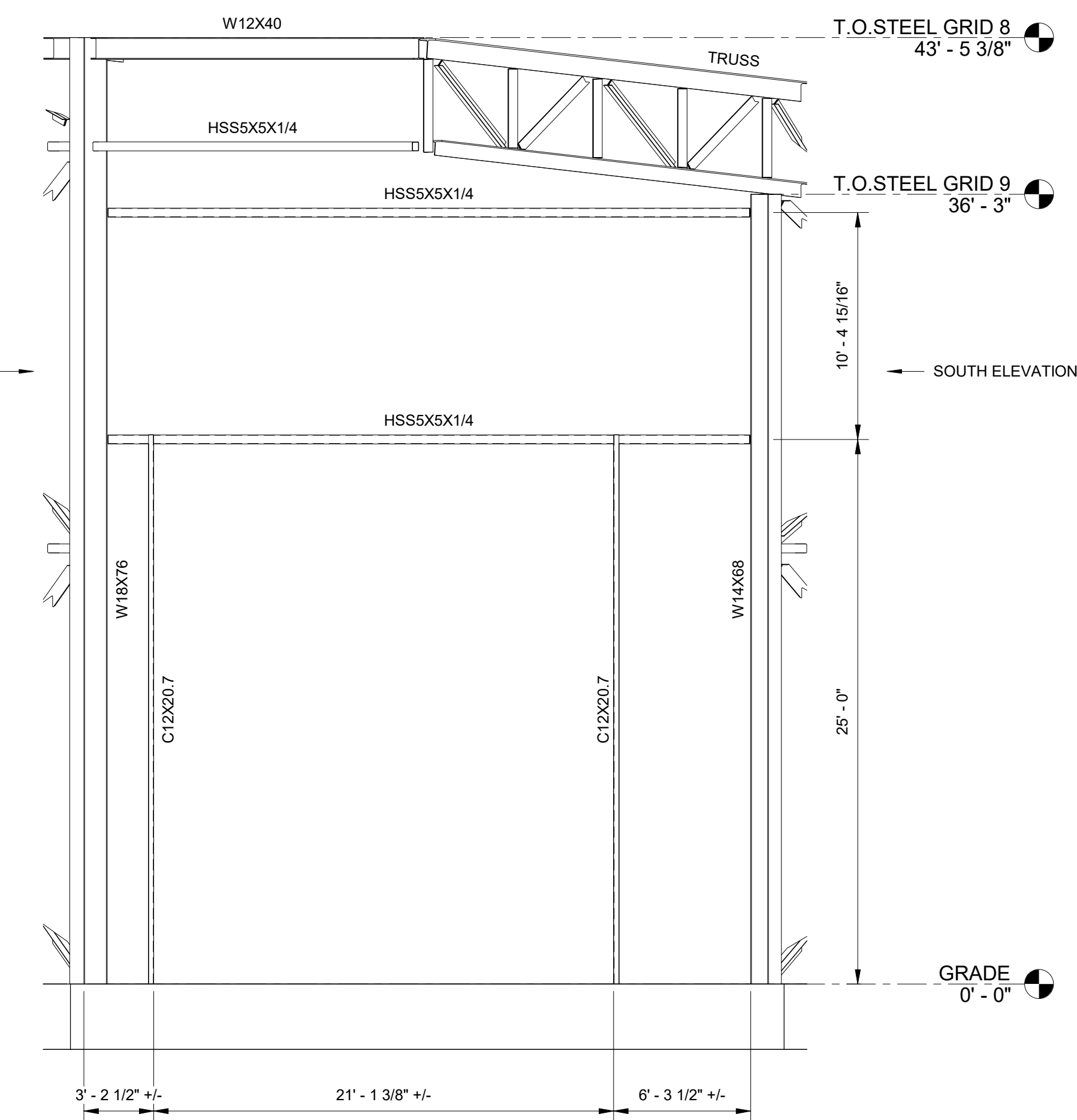
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RADIUS RECYCLING
OAKLAND CONVEYOR ENCLOSURES
NFR BUILDING
BUILDING B - EAST ELEVATION

SCALE	DWG. NO.	REV.
AS NOTED	22-311C-406	B



A BUILDING B - SOUTH ELEVATION
407 3/16" = 1'-0"



B SECTION - SW CORNER
407 3/16" = 1'-0"

PRELIMINARY

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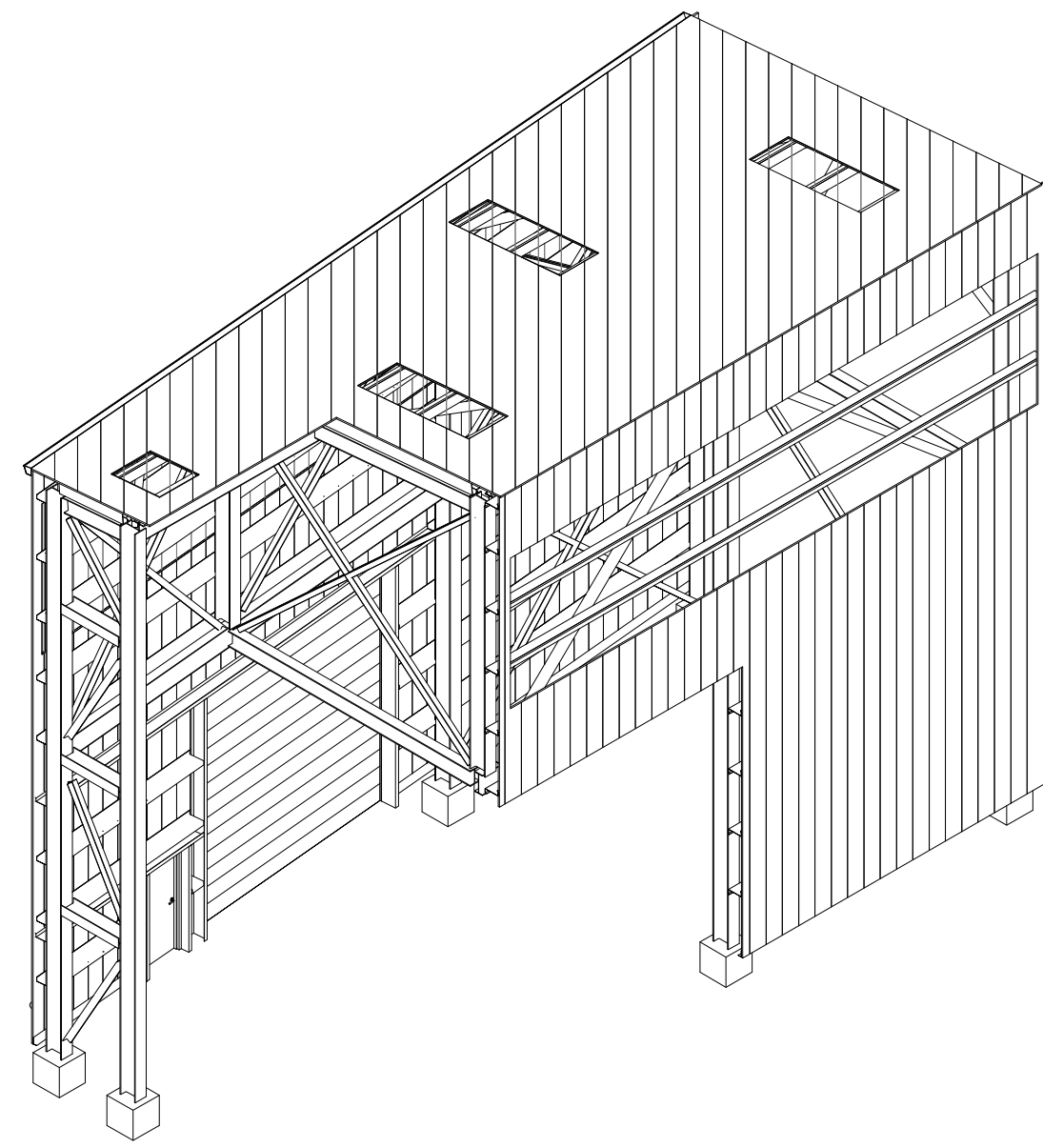
SYN	REVISIONS	BY	DATE	CHKD
B	ISSUED FOR REVIEW	JPS	11/15/23	KD
A	ISSUED FOR REVIEW	JPS	10/24/23	KD

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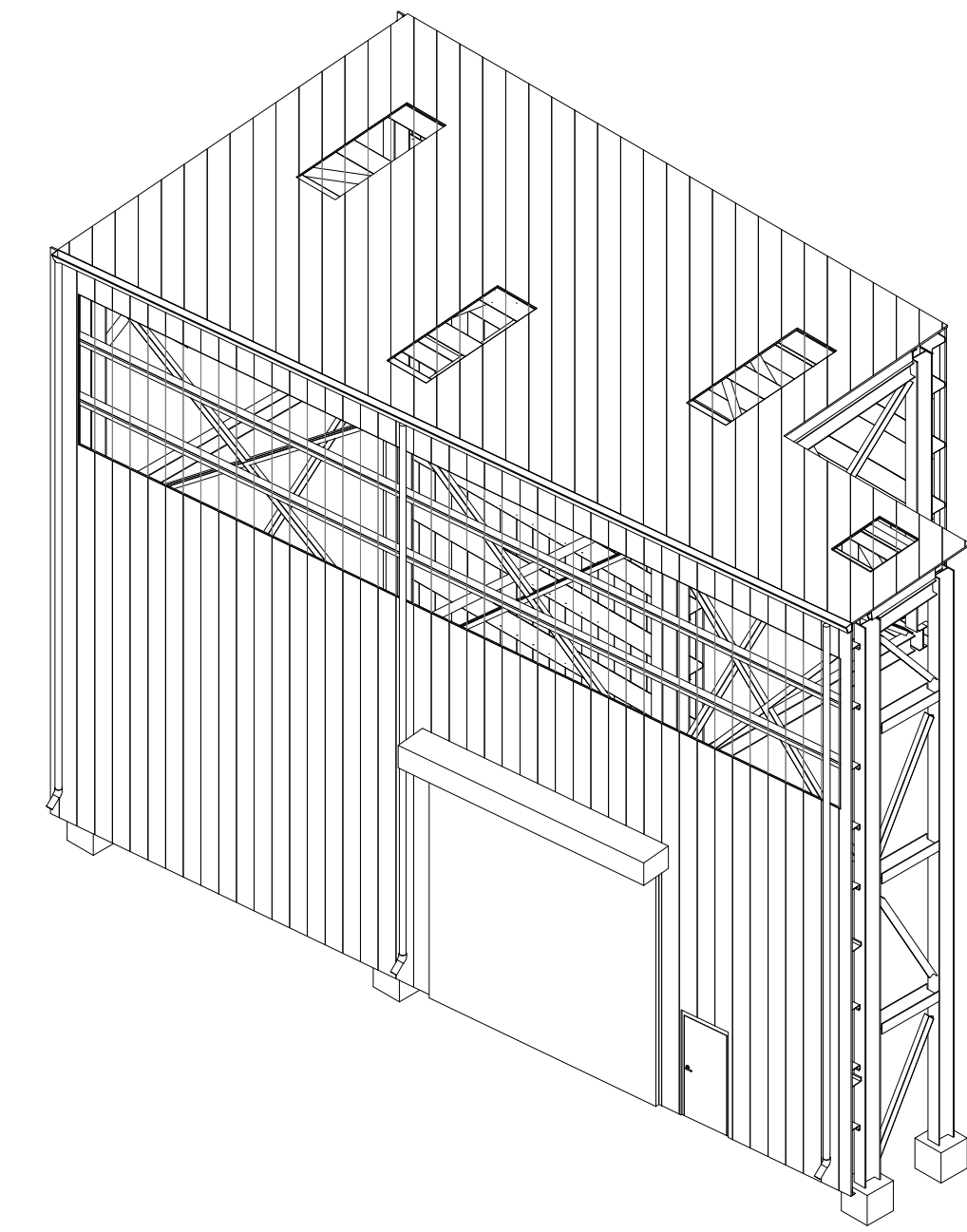
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Fax: 503.643.8610
www.smgengr.com

RADIUS RECYCLING
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NFR BUILDING
BUILDING B - SOUTH ELEVATION

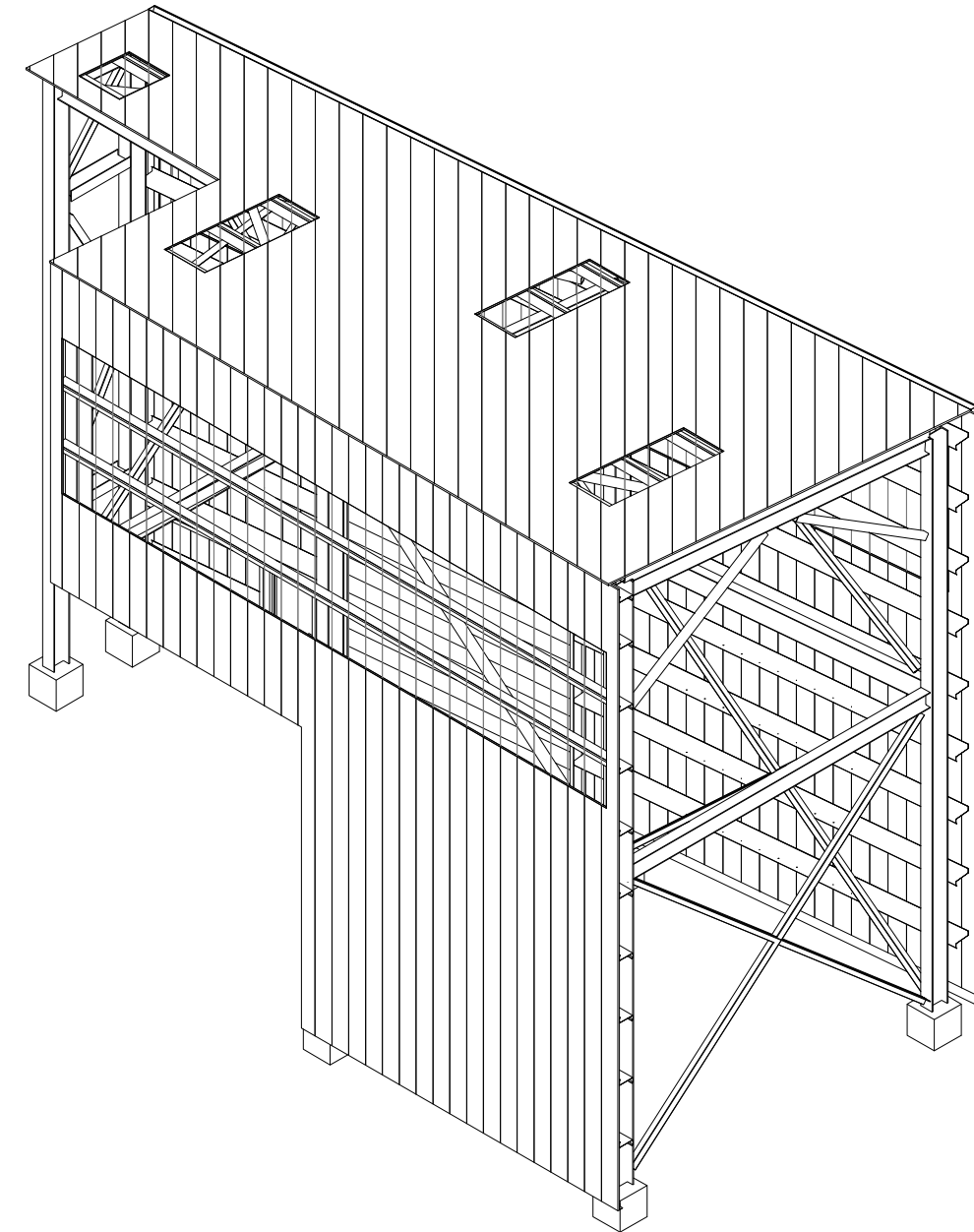
DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J.STOA	10/24/23			AS NOTED	22-311C-407	B



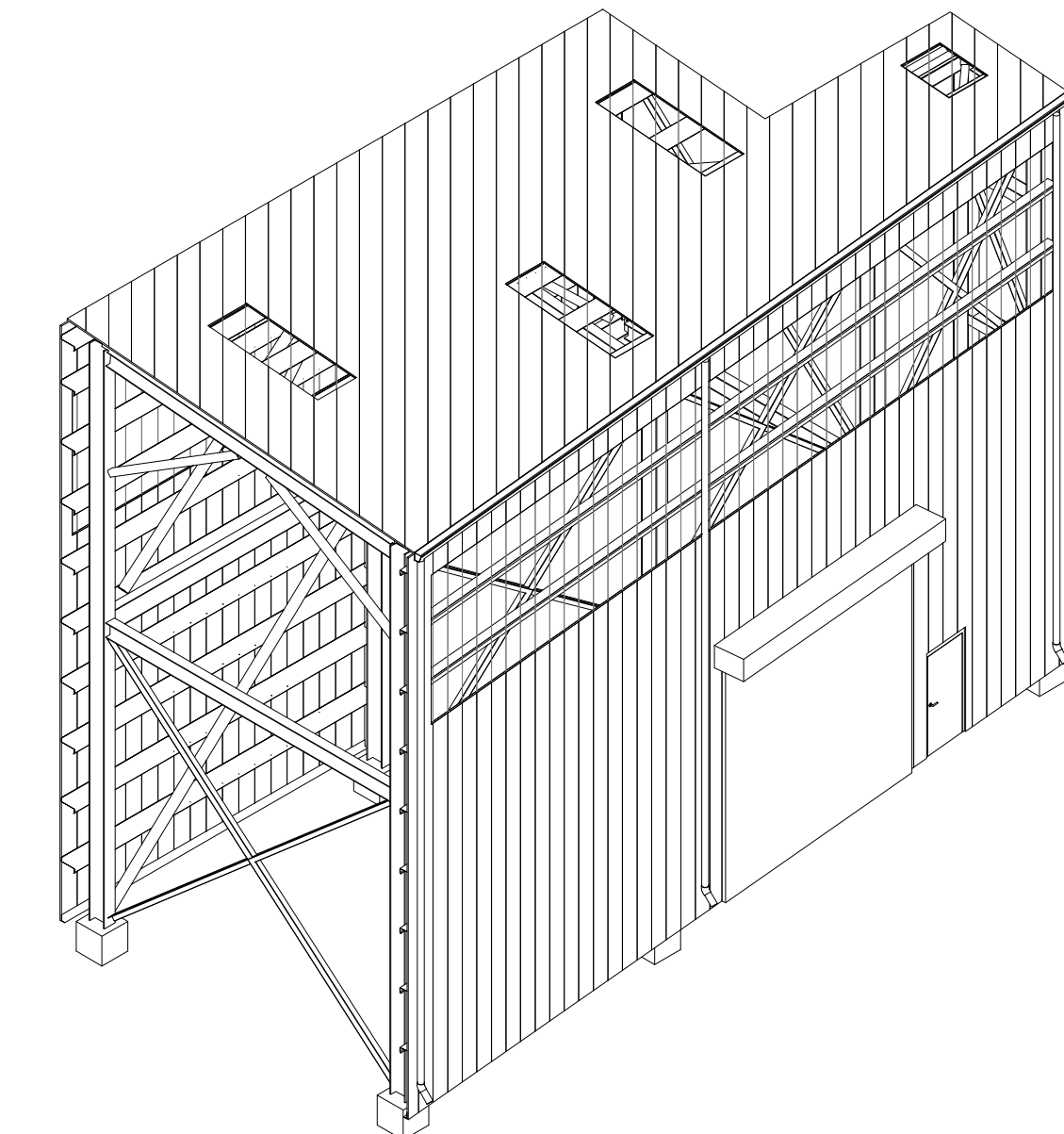
A ISO - BLDG C NORTHWEST ELEVATION
500 NTS LOOKING SOUTHEAST



B ISO - BLDG C NORTHEAST ELEVATION
500 NTS LOOKING SOUTHWEST



C ISO - BLDG C SOUTHWEST ELEVATION
500 NTS LOOKING NORTHEAST



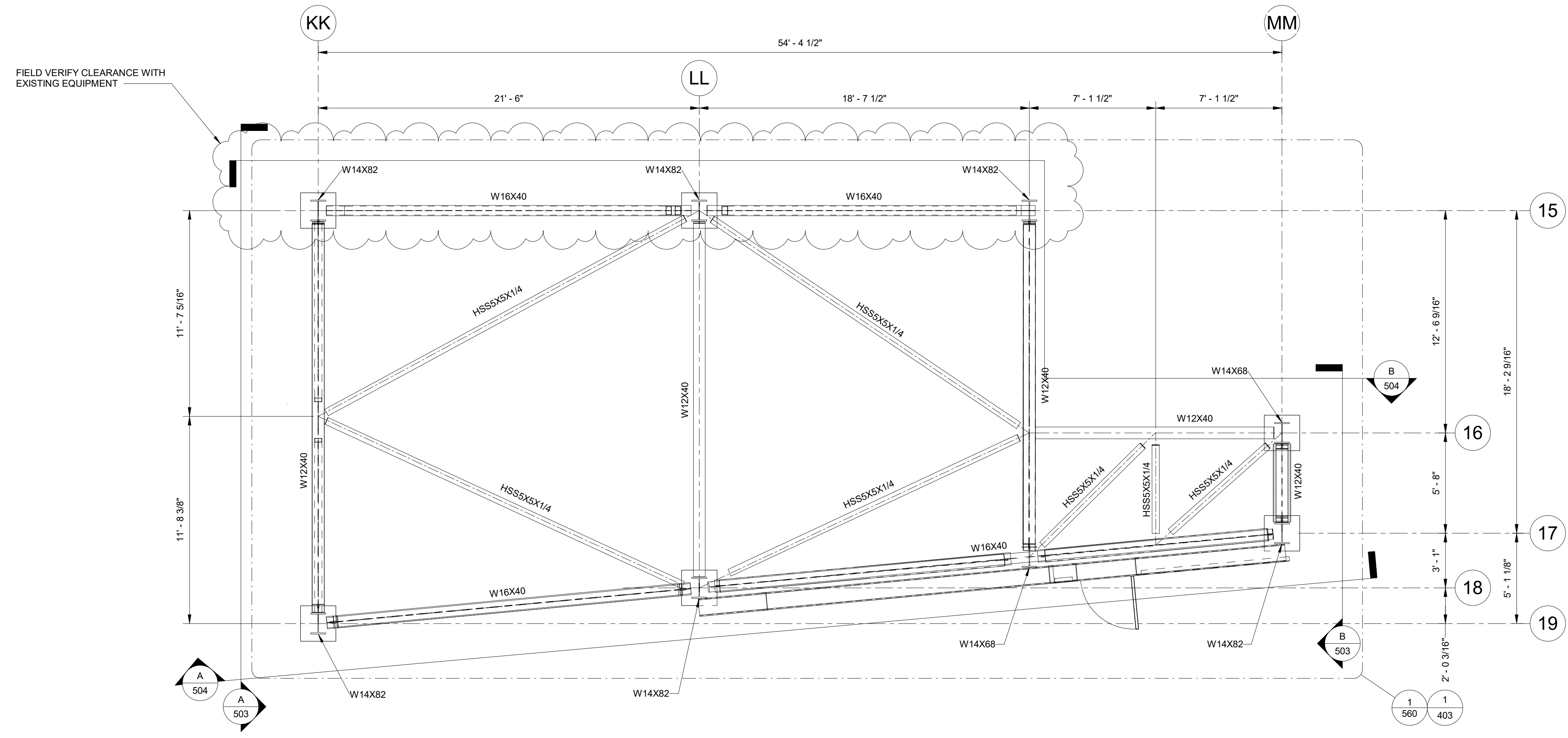
D ISO - BLDG C SOUTHEAST ELEVATION
500 NTS LOOKING NORTHWEST

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B	ISSUED FOR REVIEW	JPS	11/15/23	KD
A	ISSUED FOR REVIEW	JPS	10/24/23	KD

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		DRAWN BY J.STOA	DATE 10/24/23	CHKD BY	DATE	SCALE AS NOTED



1 ENLARGED PLAN
501 1/4" = 1'-0"

PRELIMINARY

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A	ISSUED FOR REVIEW	JPS	10/24/23	KD

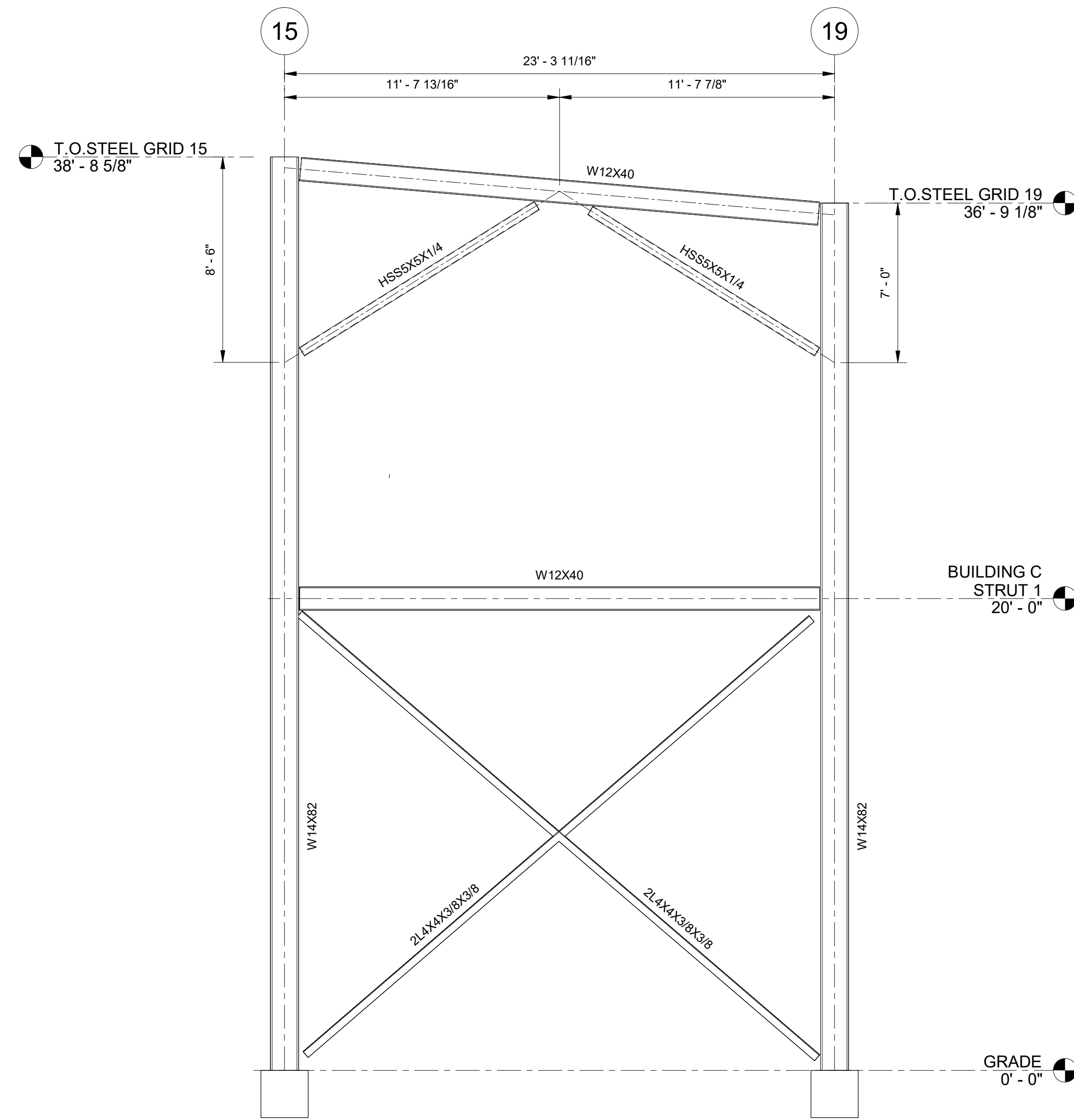
DRAWN BY	DATE	CHKD BY	DATE
J.STOA	10/24/23		

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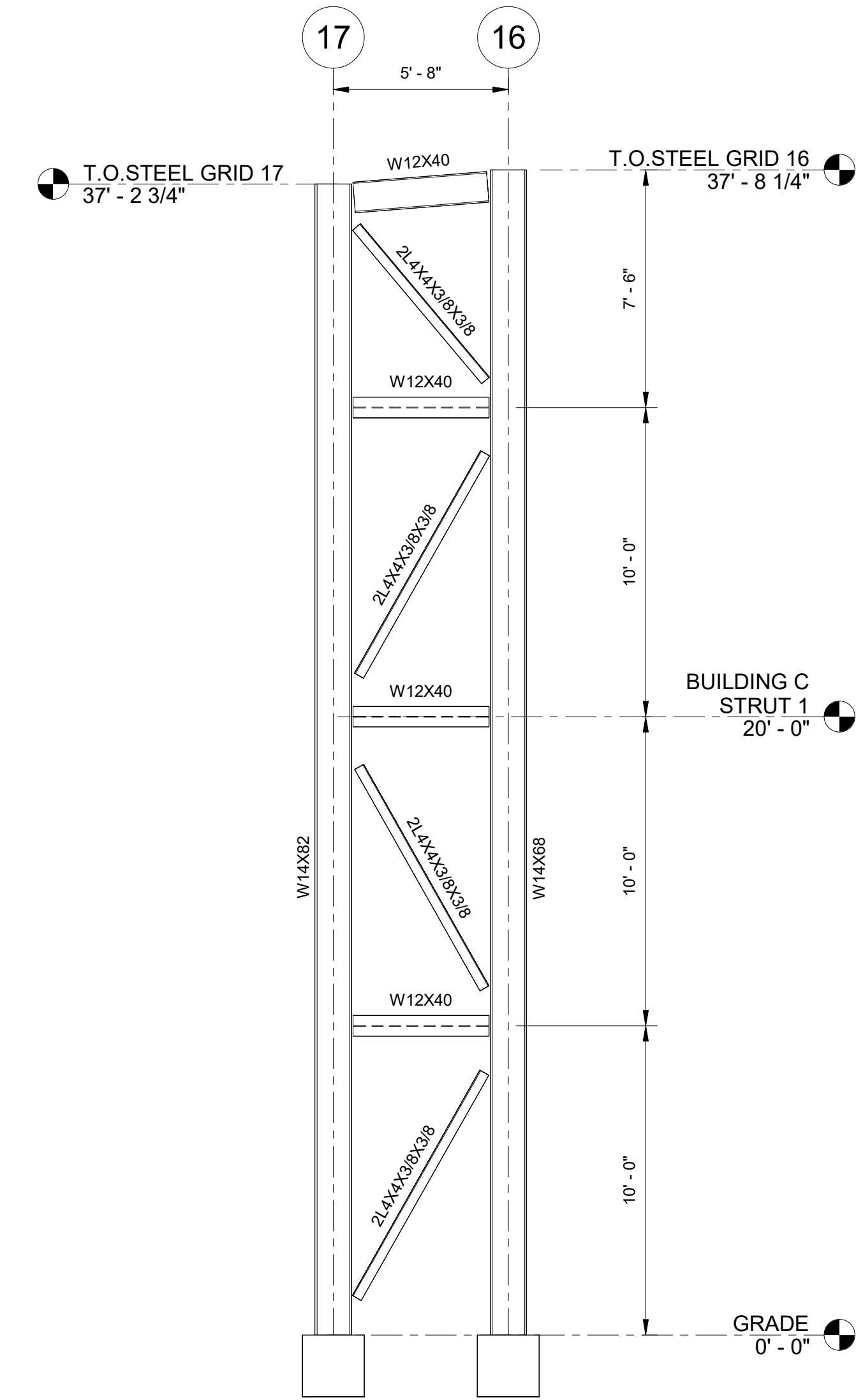
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Fax: 503.643.8610
www.smgenr.com

RADIUS RECYCLING
OAKLAND CONVEYOR ENCLOSURES
NFR BUILDING
BUILDING C
ENLARGED PLAN

SCALE	DWG. NO.	REV.
AS NOTED	22-311C-501	B



A SOUTH ELEVATION
503 1/4" = 1'-0"



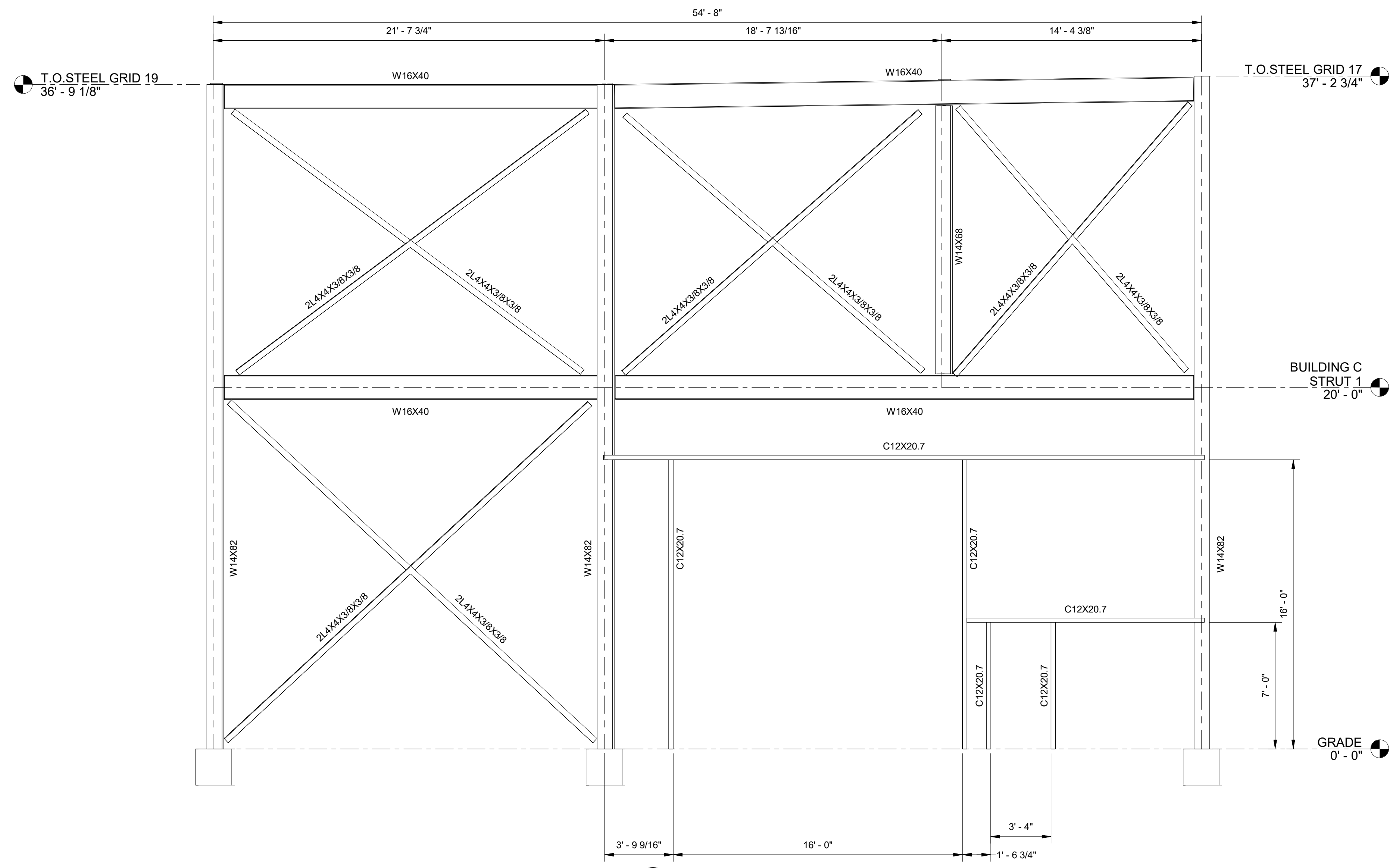
B NORTH ELEVATION
503 1/4" = 1'-0"

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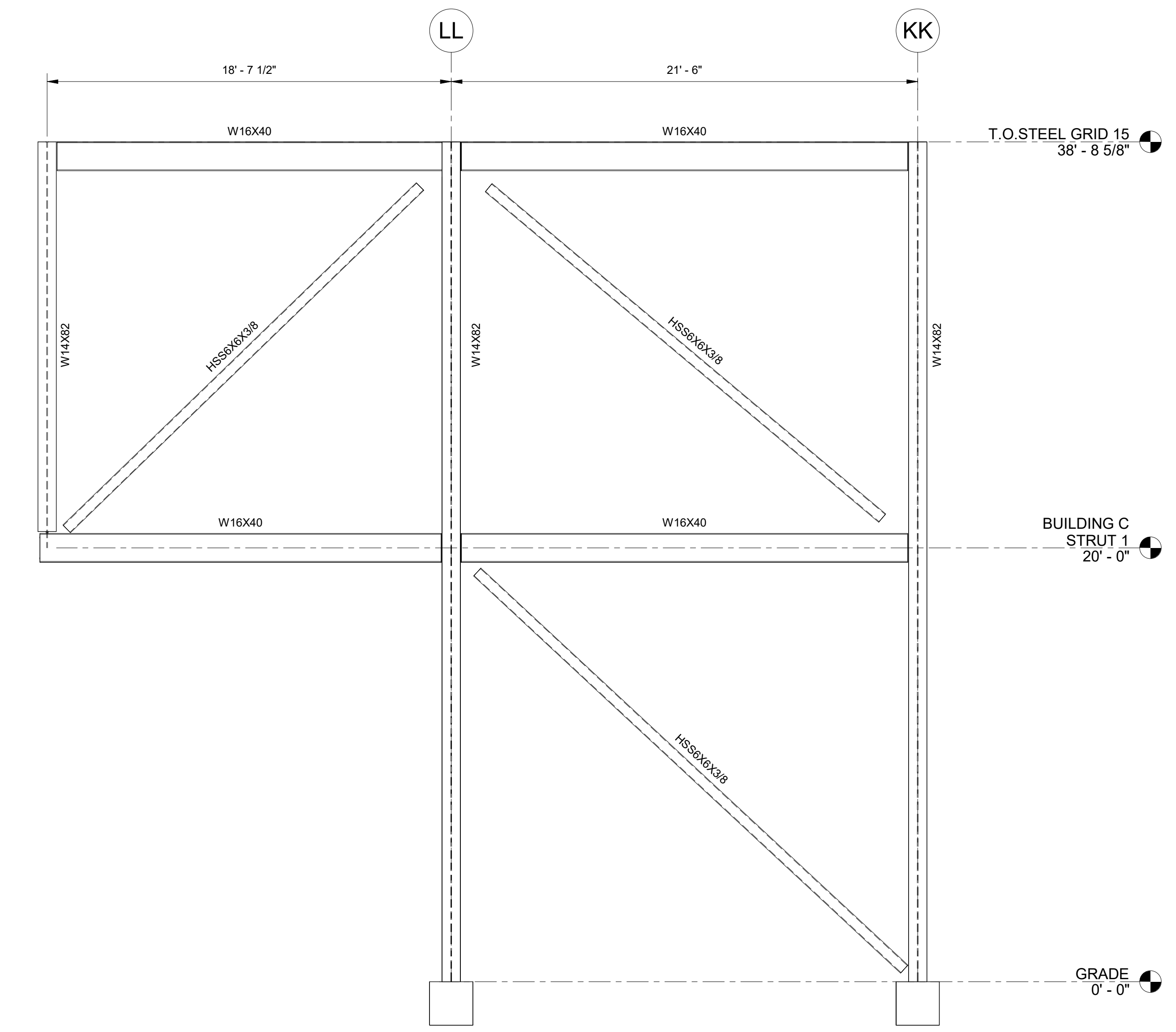
SYN	REVISIONS	BY	DATE	CHKD
B	ISSUED FOR REVIEW	JPS	11/15/23	KD
A	ISSUED FOR REVIEW	JPS	10/24/23	KD

 Smith Monroe Gray ENGINEERS, INC.		8625 SW Cascade Ave. Suite 600 Beaverton, Oregon 97008 Phone: 503.643.8595 Fax: 503.643.8610 www.smgenr.com		RADIUS RECYCLING OAKLAND CONVEYOR ENCLOSURES NFR BUILDING BUILDING C NORTH & SOUTH ELEVATIONS		
		DRAWN BY J.STOA	DATE 10/24/23	CHKD BY	DATE	SCALE AS NOTED

PRELIMINARY



A EAST ELEVATION
504
1/4" = 1'-0"



B WEST ELEVATION
504
1/4" = 1'-0"

PRELIMINARY

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SMG
Smith Monroe Gray
ENGINEERS, INC.

8625 SW Cascade Ave.
Suite 600
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RADIUS RECYCLING
OAKLAND CONVEYOR ENCLOSURES
NFR BUILDING
BUILDING C
EAST & WEST ELEVATIONS

DRAWN BY J.STOA	DATE 10/24/23	CHKD BY	DATE	SCALE AS NOTED	DWG. NO. 22-311C-504	REV. B
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APPENDIX B – EMISSIONS CALCULATIONS

Project Characteristics	Input	Notes
Project Name	Radius NFR Enclosures	
Project Location	Alameda County	Zip Code: 94607
Climate Zone	1	
Land Use Setting	Urban	
Construction Start Date	7/29/2024	
Operational Year	2025	
Utility	PG&E	

acre	sq ft
	1 43560

Land Use

Project Component	CalEEMod Land Use Type	CalEEMod Land Use Subtype	Square Feet	Acreage	Landscaped Area (sq ft)	Notes
NFR Enclosures	Industrial	Unrefrigerated Warehouse-No Rail	36,600	0.84	0	Assumed square footage of Buildings A, B, and C

Construction Phases and Equipment	Start Date	End Date
8 months	7/29/2024	12/27/2024
Construction Work Days:	5 days/week	

Construction Equipment

Project Activity	CalEEMod Phase Name	CalEEMod Phase Type	Duration (days)	Construction Start Date	Construction End Date	Equipment	CalEEMod Equipment Category	Quantity	Hours per Day	HP
Fence off the work area and install safety, storm runoff control devices;	Site Preparation	Site Preparation	5	7/29/2024	8/2/2024	Pickup Truck	Off-Highway Trucks	4	4	325
						Backhoe	Tractor/Loader/Backhoe	1	8	150
						Air Compressor	Air Compressor	2	8	50
Excavate for foundation and trenching and installation of utility connections;	Excavate for Foundation	Grading	10	8/5/2024	8/16/2024	Pickup Truck	Off-Highway Trucks	4	4	325
						Backhoe	Tractor/Loader/Backhoe	1	8	150
						Excavator w/hoeram	Excavator	1	8	275
Backfill with approved materials with needed compaction	Backfill	Grading	5	8/19/2024	8/23/2024	Air Compressor	Air Compressor	2	8	50
						Pickup Truck	Off-Highway Trucks	4	4	325
						Backhoe	Tractor/Loader/Backhoe	1	8	150
Install foundation rebar, anchors and pour foundation slabs	Foundation	Building Construction	7	8/22/2024	8/30/2024	Compactor	Roller	1	8	50
						Air Compressor	Air Compressor	2	8	50
						Pickup Truck	Off-Highway Trucks	4	4	325
Install steel frames and PBR panels	Frame and Panels	Building Construction	40	9/2/2024	10/25/2024	Concrete Pump Truck	Off-Highway Trucks	1	8	400
						Air Compressor	Air Compressor	2	8	50
						80-ton hydraulic crane (truck-mounted)	Crane	1	8	450
Connect utilities	Connect utilities	Building Construction	30	9/30/2024	11/8/2024	Pickup Truck	Off-Highway Trucks	4	4	325
						Fork lift/SkyTrak	Forklift	2	8	110
						Personal lift/Boom lift	Aerial Lift	2	8	75
Install mechanical and conveyor systems, and doors and other coverings	Install systems and doors	Building Construction	25	9/23/2024	10/25/2024	Air Compressor	Air Compressor	2	8	50
						80-ton hydraulic crane (truck-mounted)	Crane	1	8	450
						Pickup Truck	Off-Highway Trucks	2	4	325
Testing and complete construction	Testing	Building Construction	25	11/25/2024	12/27/2024	Fork lift/SkyTrak	Forklift	2	8	110
						Personal lift/Boom lift	Aerial Lift	2	8	75
						Air Compressor	Air Compressor	2	8	50
Notes:			Total workdays =	110						

- All diesel equipment
- Equipment HP based on anticipated equipment type provided by Radius

CalEEMod Material Import/Export

Project Activity	CalEEMod Phase	Import (cy)	Export (cy)
Excavate for foundation and trenching and installation of utility connections;	Excavate for Foundation	0	1546
Backfill with approved materials with needed compaction	Backfill	522	0

Construction Trips and VMT

Project Component	CalEEMod Phase	Worker Trips	Vendor Truck Trips		
		trips/day	Total Truck Round Trips	Truck Trips/Day	One-Way Distance (miles)
Fence off the work area and install safety, storm runoff control devices;	Site Preparation	24	0	0	N/A
Excavate for foundation and trenching and installation of utility connections;	Excavate for Foundation	28	63	12.6	15
Backfill with approved materials with needed compaction	Backfill	28	22	8.8	15
Install foundation rebar, anchors and pour foundation slabs	Foundation	48	88	25.1	25
Install steel frames and PBR panels	Frames and Panels	40	49	2.45	100
Connect utilities	Connect utilities	84	0	0	0
Install mechanical and conveyor systems, and doors and other coverings	Install systems and doors	52	17	1.4	100
Testing and complete construction	Testing	42	0	0	N/A

- Notes:
- Trips per day are one way trips.
 - Vendor truck trips per day are based on total round trips * 2 one way trips per round trip, divided over the number of days in the phase.
 - Haul truck trips calculated in CalEEMod based on material movement quantities and truck capacity defaults.

Construction Energy Consumption

Phase	Vehicle Type	Fuel	MT CO2	CO2 Factor (lb CO2/MMBTU)	CO2 Factor (lb CO2/gal)	MMBTU	Gallons
Site Preparation	Off-Road	Diesel	7.4739128	163.45	22.45	100.8	733.9
Site Preparation	Worker	Gasoline	0.5269734	148.57	17.86	7.8	65.0
Excavate for Foundation	Off-Road	Diesel	19.3656796	163.45	22.45	261.2	1901.7
Excavate for Foundation	Worker	Gasoline	1.2296045	148.57	17.86	18.2	151.8
Excavate for Foundation	Vendor	Diesel	2.7136791	163.45	22.45	36.6	266.5
Excavate for Foundation	Hauling	Diesel	6.2835179	163.45	22.45	84.8	617.0
Backfill	Off-Road	Diesel	7.8750358	163.45	22.45	106.2	773.3
Backfill	Worker	Gasoline	0.6148023	148.57	17.86	9.1	75.9
Backfill	Vendor	Diesel	0.9476340	163.45	22.45	12.8	93.1
Backfill	Hauling	Diesel	2.1376916	163.45	22.45	28.8	209.9
Foundation	Off-Road	Diesel	17.1753094	163.45	22.45	231.7	1686.6
Foundation	Worker	Gasoline	1.4755254	148.57	17.86	21.9	182.1
Foundation	Vendor	Diesel	6.2489378	163.45	22.45	84.3	613.7
Frame and Panels	Off-Road	Diesel	87.7580674	163.45	22.45	1183.7	8618.0
Frame and Panels	Worker	Gasoline	7.0263115	148.57	17.86	104.3	867.3
Frame and Panels	Vendor	Diesel	14.0782078	163.45	22.45	189.9	1382.5
Connect utilities	Off-Road	Diesel	7.0101337	163.45	22.45	94.6	688.4
Connect utilities	Worker	Gasoline	11.0664406	148.57	17.86	164.2	1366.0
Install systems and doors	Off-Road	Diesel	54.8487921	163.45	22.45	739.8	5386.2
Install systems and doors	Worker	Gasoline	5.7088781	148.57	17.86	84.7	704.7
Install systems and doors	Vendor	Diesel	4.9273727	163.45	22.45	66.5	483.9
Testing	Off-Road	Diesel	28.0444392	163.45	22.45	378.3	2754.0
Testing	Worker	Gasoline	4.6110169	148.57	17.86	68.4	569.2

	MMBTU	Gallons
Diesel	3599.801	26208.8
Gasoline	478.6973	3982.086
Total	4078.499	30190.88

1 MT = 2204.62 lb

	lb CO2/MMBTU	lb CO2/gallon
Diesel	163.45	22.45
Gasoline	148.57	17.86

U.S. Energy Information Administration released September 7, 2023 (https://www.eia.gov/environment/emissions/co2_vol_mass.php)

Diesel = Diesel and Home Heating Fuel

Gasoline = Finished Motor Gasoline

Radius NFR Enclosures Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Radius NFR Enclosures
Construction Start Date	7/29/2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.90
Precipitation (days)	17.0
Location	37.794913212774205, -122.29312293529226
County	Alameda
City	Oakland
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1480
EDFZ	1
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific 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
Unrefrigerated Warehouse-No Rail	36.6	1000sqft	0.84	36,600	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

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.	5.83	4.89	35.8	48.3	0.11	1.41	2.04	3.32	1.30	0.49	1.72	—	13,225	13,225	0.50	0.61	12.0	13,346
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.75	4.86	35.6	47.2	0.11	1.27	2.04	3.32	1.17	0.49	1.67	—	13,092	13,092	0.49	0.33	0.29	13,203
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.79	0.67	4.90	6.28	0.01	0.17	0.25	0.43	0.16	0.06	0.22	—	1,807	1,807	0.07	0.05	0.64	1,825
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.14	0.12	0.89	1.15	< 0.005	0.03	0.05	0.08	0.03	0.01	0.04	—	299	299	0.01	0.01	0.11	302

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2024	5.83	4.89	35.8	48.3	0.11	1.41	2.04	3.32	1.30	0.49	1.72	—	13,225	13,225	0.50	0.61	12.0	13,346
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	5.75	4.86	35.6	47.2	0.11	1.27	2.04	3.32	1.17	0.49	1.67	—	13,092	13,092	0.49	0.33	0.29	13,203
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.79	0.67	4.90	6.28	0.01	0.17	0.25	0.43	0.16	0.06	0.22	—	1,807	1,807	0.07	0.05	0.64	1,825
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.14	0.12	0.89	1.15	< 0.005	0.03	0.05	0.08	0.03	0.01	0.04	—	299	299	0.01	0.01	0.11	302

3. Construction Emissions Details

3.1. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.75	1.46	10.0	12.4	0.03	0.38	—	0.38	0.35	—	0.35	—	3,295	3,295	0.13	0.03	—	3,307
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.02	0.02	0.14	0.17	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	45.1	45.1	< 0.005	< 0.005	—	45.3
Dust From Material Movement:	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.47	7.47	< 0.005	< 0.005	—	7.50
Dust From Material Movement:	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.10	0.09	0.07	1.14	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	249	249	< 0.005	0.01	1.06	253
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	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.18	3.18	< 0.005	< 0.005	0.01	3.23
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	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	—	0.53	0.53	< 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	

3.3. Excavate for Foundation (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.06	1.72	12.1	14.4	0.04	0.44	—	0.44	0.41	—	0.41	—	4,269	4,269	0.17	0.03	—	4,284
Dust From Material Movement:	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.33	0.39	< 0.005	0.01	—	0.01	0.01	—	0.01	—	117	117	< 0.005	< 0.005	—	117
Dust From Material Movement:	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	19.4	19.4	< 0.005	< 0.005	—	19.4
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.08	1.33	0.00	0.00	0.27	0.27	0.00	0.06	0.06	—	290	290	< 0.005	0.01	1.24	295	
Vendor	0.04	0.01	0.67	0.27	< 0.005	0.01	0.16	0.17	0.01	0.04	0.05	—	598	598	0.02	0.09	1.62	627	
Hauling	0.10	0.03	1.70	0.68	0.01	0.03	0.36	0.39	0.03	0.10	0.12	—	1,385	1,385	0.07	0.22	3.06	1,455	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	7.43	7.43	< 0.005	< 0.005	0.01	7.53	
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.4	16.4	< 0.005	< 0.005	0.02	17.2	
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	38.0	38.0	< 0.005	0.01	0.04	39.8	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.23	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	—	2.71	2.71	< 0.005	< 0.005	< 0.005	2.84	
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.28	6.28	< 0.005	< 0.005	0.01	6.59	

3.5. Backfill (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.50	2.09	15.1	14.4	0.03	0.73	—	0.73	0.68	—	0.68	—	3,472	3,472	0.14	0.03	—	3,484
Dust From Material Movement:	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.21	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	47.6	47.6	< 0.005	< 0.005	—	47.7
Dust From Material Movement:	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.88	7.88	< 0.005	< 0.005	—	7.90

Dust From Material Movement:	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 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	0.11	0.10	0.08	1.33	0.00	0.00	0.27	0.27	0.00	0.06	0.06	—	290	290	< 0.005	0.01	1.24	295
Vendor	0.03	0.01	0.47	0.19	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	418	418	0.01	0.06	1.13	438
Hauling	0.07	0.02	1.15	0.46	0.01	0.02	0.24	0.26	0.02	0.07	0.08	—	942	942	0.05	0.15	2.08	990
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.72	5.72	< 0.005	< 0.005	0.01	5.99
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.9	12.9	< 0.005	< 0.005	0.01	13.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.61	0.61	< 0.005	< 0.005	< 0.005	0.62
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.95	0.95	< 0.005	< 0.005	< 0.005	0.99
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.14	2.14	< 0.005	< 0.005	< 0.005	2.24

3.7. Foundation (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.71	2.27	16.9	16.4	0.05	0.62	—	0.62	0.57	—	0.57	—	5,409	5,409	0.22	0.04	—	5,428
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	0.05	0.04	0.32	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	104	104	< 0.005	< 0.005	—	104
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	0.06	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.2	17.2	< 0.005	< 0.005	—	17.2
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	0.20	0.18	0.13	2.28	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	498	498	0.01	0.02	2.13	505
Vendor	0.12	0.04	2.05	0.77	0.01	0.03	0.53	0.55	0.03	0.15	0.17	—	1,968	1,968	0.06	0.29	5.38	2,063
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	—	8.91	8.91	< 0.005	< 0.005	0.02	9.04
Vendor	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	37.7	37.7	< 0.005	0.01	0.04	39.5
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	—	1.48	1.48	< 0.005	< 0.005	< 0.005	1.50
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.25	6.25	< 0.005	< 0.005	0.01	6.54
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. Frame and Panels (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.42	2.03	16.2	18.3	0.05	0.60	—	0.60	0.55	—	0.55	—	4,837	4,837	0.20	0.04	—	4,853
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	2.42	2.03	16.2	18.3	0.05	0.60	—	0.60	0.55	—	0.55	—	4,837	4,837	0.20	0.04	—	4,853
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	0.27	0.22	1.77	2.00	0.01	0.07	—	0.07	0.06	—	0.06	—	530	530	0.02	< 0.005	—	532

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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.32	0.37	< 0.005	0.01	—	0.01	0.01	—	0.01	—	87.8	87.8	< 0.005	< 0.005	—	88.1	
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	0.16	0.15	0.11	1.90	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	415	415	0.01	0.01	1.77	421	
Vendor	0.04	0.01	0.74	0.25	0.01	0.01	0.21	0.22	0.01	0.06	0.07	—	776	776	0.02	0.12	2.14	813	
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	0.15	0.14	0.14	1.64	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	385	385	0.01	0.02	0.05	390	
Vendor	0.04	0.01	0.78	0.26	0.01	0.01	0.21	0.22	0.01	0.06	0.07	—	776	776	0.02	0.12	0.06	811	
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	0.02	0.02	0.02	0.17	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	42.4	42.4	< 0.005	< 0.005	0.08	43.1	
Vendor	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	85.0	85.0	< 0.005	0.01	0.10	89.0	
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	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.03	7.03	< 0.005	< 0.005	0.01	7.13	
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.1	14.1	< 0.005	< 0.005	0.02	14.7	
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	

3.11. Connect utilities (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.35	3.03	< 0.005	0.07	—	0.07	0.06	—	0.06	—	515	515	0.02	< 0.005	—	517
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	0.21	0.17	1.35	3.03	< 0.005	0.07	—	0.07	0.06	—	0.06	—	515	515	0.02	< 0.005	—	517
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	0.11	0.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	42.3	42.3	< 0.005	< 0.005	—	42.5
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	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.01	7.01	< 0.005	< 0.005	—	7.03
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	0.34	0.31	0.23	3.99	0.00	0.00	0.82	0.82	0.00	0.19	0.19	—	871	871	0.01	0.03	3.72	885
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	0.30	0.30	0.30	3.44	0.00	0.00	0.82	0.82	0.00	0.19	0.19	—	808	808	0.02	0.03	0.10	818
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	0.02	0.02	0.02	0.28	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	66.8	66.8	< 0.005	< 0.005	0.13	67.8
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	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.1	11.1	< 0.005	< 0.005	0.02	11.2
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. Install systems and doors (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	2.42	2.03	16.2	18.3	0.05	0.60	—	0.60	0.55	—	0.55	—	4,837	4,837	0.20	0.04	—	4,853
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	2.42	2.03	16.2	18.3	0.05	0.60	—	0.60	0.55	—	0.55	—	4,837	4,837	0.20	0.04	—	4,853
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	0.17	0.14	1.11	1.25	< 0.005	0.04	—	0.04	0.04	—	0.04	—	331	331	0.01	< 0.005	—	332
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	0.03	0.20	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	54.8	54.8	< 0.005	< 0.005	—	55.0
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	0.21	0.19	0.14	2.47	0.00	0.00	0.51	0.51	0.00	0.12	0.12	—	539	539	0.01	0.02	2.30	548
Vendor	0.02	0.01	0.42	0.14	< 0.005	0.01	0.12	0.12	0.01	0.03	0.04	—	435	435	0.01	0.07	1.20	455
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	0.19	0.18	0.19	2.13	0.00	0.00	0.51	0.51	0.00	0.12	0.12	—	500	500	0.01	0.02	0.06	506

Vendor	0.02	0.01	0.44	0.14	< 0.005	0.01	0.12	0.12	0.01	0.03	0.04	—	435	435	0.01	0.07	0.03	454
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	0.14	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	34.5	34.5	< 0.005	< 0.005	0.07	35.0
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.8	29.8	< 0.005	< 0.005	0.04	31.1
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	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.71	5.71	< 0.005	< 0.005	0.01	5.79
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.93	4.93	< 0.005	< 0.005	0.01	5.16
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

3.15. Testing (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	1.37	1.14	8.59	11.8	0.02	0.30	—	0.30	0.28	—	0.28	—	2,473	2,473	0.10	0.02	—	2,482
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	0.09	0.08	0.59	0.81	< 0.005	0.02	—	0.02	0.02	—	0.02	—	169	169	0.01	< 0.005	—	170

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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.11	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	28.0	28.0	< 0.005	< 0.005	—	28.1	
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.15	0.15	0.15	1.72	0.00	0.00	0.41	0.41	0.00	0.10	0.10	—	404	404	0.01	0.02	0.05	409	
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	0.01	0.01	0.01	0.11	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.9	27.9	< 0.005	< 0.005	0.05	28.3	
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	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.61	4.61	< 0.005	< 0.005	0.01	4.68	
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

4.10. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Site Preparation	Site Preparation	7/29/2024	8/2/2024	5.00	5.00	Fence off the work area and install safety, storm runoff control devices
Excavate for Foundation	Grading	8/5/2024	8/16/2024	5.00	10.0	Excavate for foundation and trenching and installation of utility connections
Backfill	Grading	8/19/2024	8/23/2024	5.00	5.00	Backfill with approved materials with needed compaction
Foundation	Building Construction	8/22/2024	8/30/2024	5.00	7.00	Install foundation rebar, anchors and pour foundation slabs
Frame and Panels	Building Construction	9/2/2024	10/25/2024	5.00	40.0	Install steel frames and PBR panels
Connect utilities	Building Construction	9/30/2024	11/8/2024	5.00	30.0	Connect utilities
Install systems and doors	Building Construction	9/23/2024	10/25/2024	5.00	25.0	Install mechanical and conveyor systems, and doors and other coverings
Testing	Building Construction	11/25/2024	12/27/2024	5.00	25.0	Testing and complete construction

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
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	150	0.37
Site Preparation	Off-Highway Trucks	Diesel	Average	4.00	4.00	325	0.38
Site Preparation	Air Compressors	Diesel	Average	2.00	8.00	50.0	0.48
Excavate for Foundation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	150	0.37
Excavate for Foundation	Off-Highway Trucks	Diesel	Average	4.00	4.00	325	0.38
Excavate for Foundation	Air Compressors	Diesel	Average	2.00	8.00	50.0	0.48
Excavate for Foundation	Excavators	Diesel	Average	1.00	8.00	275	0.38
Backfill	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	150	0.37
Backfill	Off-Highway Trucks	Diesel	Average	4.00	4.00	325	0.38
Backfill	Air Compressors	Diesel	Average	2.00	8.00	50.0	0.48
Backfill	Rollers	Diesel	Average	1.00	8.00	50.0	0.38
Foundation	Off-Highway Trucks	Diesel	Average	4.00	4.00	325	0.38
Foundation	Off-Highway Trucks	Diesel	Average	1.00	8.00	400	0.38
Foundation	Air Compressors	Diesel	Average	2.00	8.00	50.0	0.48
Foundation	Cranes	Diesel	Average	1.00	8.00	450	0.29
Frame and Panels	Forklifts	Diesel	Average	2.00	8.00	110	0.20
Frame and Panels	Off-Highway Trucks	Diesel	Average	4.00	4.00	325	0.38
Frame and Panels	Aerial Lifts	Diesel	Average	2.00	8.00	75.0	0.31
Frame and Panels	Air Compressors	Diesel	Average	2.00	8.00	50.0	0.48
Frame and Panels	Cranes	Diesel	Average	1.00	8.00	450	0.29
Connect utilities	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	150	0.37

Install systems and doors	Forklifts	Diesel	Average	2.00	8.00	110	0.20
Install systems and doors	Aerial Lifts	Diesel	Average	2.00	8.00	75.0	0.31
Install systems and doors	Off-Highway Trucks	Diesel	Average	4.00	4.00	325	0.38
Install systems and doors	Air Compressors	Diesel	Average	2.00	8.00	50.0	0.48
Install systems and doors	Cranes	Diesel	Average	1.00	8.00	450	0.29
Testing	Air Compressors	Diesel	Average	2.00	8.00	50.0	0.48
Testing	Off-Highway Trucks	Diesel	Average	2.00	4.00	325	0.38
Testing	Forklifts	Diesel	Average	2.00	8.00	110	0.20
Testing	Aerial Lifts	Diesel	Average	2.00	8.00	75.0	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	24.0	13.8	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.30	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Excavate for Foundation	—	—	—	—
Excavate for Foundation	Worker	28.0	13.8	LDA,LDT1,LDT2
Excavate for Foundation	Vendor	12.6	15.0	HHDT,MHDT
Excavate for Foundation	Hauling	19.4	20.0	HHDT
Excavate for Foundation	Onsite truck	—	—	HHDT

Backfill	—	—	—	—
Backfill	Worker	28.0	13.8	LDA,LDT1,LDT2
Backfill	Vendor	8.80	15.0	HHDT,MHDT
Backfill	Hauling	13.2	20.0	HHDT
Backfill	Onsite truck	—	—	HHDT
Foundation	—	—	—	—
Foundation	Worker	48.0	13.8	LDA,LDT1,LDT2
Foundation	Vendor	25.1	25.0	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	—	—	HHDT
Frame and Panels	—	—	—	—
Frame and Panels	Worker	40.0	13.8	LDA,LDT1,LDT2
Frame and Panels	Vendor	2.50	100	HHDT,MHDT
Frame and Panels	Hauling	0.00	20.0	HHDT
Frame and Panels	Onsite truck	—	—	HHDT
Connect utilities	—	—	—	—
Connect utilities	Worker	84.0	13.8	LDA,LDT1,LDT2
Connect utilities	Vendor	0.00	7.30	HHDT,MHDT
Connect utilities	Hauling	0.00	20.0	HHDT
Connect utilities	Onsite truck	—	—	HHDT
Install systems and doors	—	—	—	—
Install systems and doors	Worker	52.0	13.8	LDA,LDT1,LDT2
Install systems and doors	Vendor	1.40	100	HHDT,MHDT
Install systems and doors	Hauling	0.00	20.0	HHDT
Install systems and doors	Onsite truck	—	—	HHDT
Testing	—	—	—	—
Testing	Worker	42.0	13.8	LDA,LDT1,LDT2

Testing	Vendor	0.00	7.30	HHDT,MHDT
Testing	Hauling	0.00	20.0	HHDT
Testing	Onsite truck	0.00	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

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)
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5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	0.00	0.00	—
Excavate for Foundation	0.00	1,546	0.00	0.00	—
Backfill	522	0.00	0.00	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Unrefrigerated Warehouse-No Rail	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	204	0.03	< 0.005

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
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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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	5.62	annual days of extreme heat
Extreme Precipitation	6.50	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	7.25	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	2	0	0	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
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	0	0	0	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	2	1	1	3
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	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	1	1	1	2

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	3.12
AQ-PM	46.8
AQ-DPM	99.1
Drinking Water	4.21
Lead Risk Housing	—

Pesticides	0.00
Toxic Releases	50.0
Traffic	56.1
Effect Indicators	—
CleanUp Sites	99.5
Groundwater	99.3
Haz Waste Facilities/Generators	98.0
Impaired Water Bodies	83.0
Solid Waste	0.00
Sensitive Population	—
Asthma	99.0
Cardio-vascular	54.1
Low Birth Weights	—
Socioeconomic Factor Indicators	—
Education	83.2
Housing	—
Linguistic	—
Poverty	—
Unemployment	—

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	—
Employed	—
Median HI	—

Education	—
Bachelor's or higher	—
High school enrollment	—
Preschool enrollment	—
Transportation	—
Auto Access	—
Active commuting	—
Social	—
2-parent households	—
Voting	—
Neighborhood	—
Alcohol availability	—
Park access	—
Retail density	—
Supermarket access	—
Tree canopy	—
Housing	—
Homeownership	—
Housing habitability	—
Low-inc homeowner severe housing cost burden	—
Low-inc renter severe housing cost burden	—
Uncrowded housing	—
Health Outcomes	—
Insured adults	—
Arthritis	88.1
Asthma ER Admissions	0.8
High Blood Pressure	62.1

Cancer (excluding skin)	49.7
Asthma	95.7
Coronary Heart Disease	93.8
Chronic Obstructive Pulmonary Disease	97.2
Diagnosed Diabetes	94.5
Life Expectancy at Birth	0.0
Cognitively Disabled	1.5
Physically Disabled	99.8
Heart Attack ER Admissions	70.3
Mental Health Not Good	96.5
Chronic Kidney Disease	55.3
Obesity	84.3
Pedestrian Injuries	0.0
Physical Health Not Good	97.0
Stroke	96.9
Health Risk Behaviors	—
Binge Drinking	6.6
Current Smoker	94.5
No Leisure Time for Physical Activity	98.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	7.8
Children	99.4
Elderly	90.8
English Speaking	0.0
Foreign-born	0.0
Outdoor Workers	34.6

Climate Change Adaptive Capacity	—
Impervious Surface Cover	0.9
Traffic Density	0.0
Traffic Access	66.5
Other Indices	—
Hardship	0.0
Other Decision Support	—
2016 Voting	0.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	—
Healthy Places Index Score for Project Location (b)	—
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)	West Oakland

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	Project activities and schedule provided by Radius
Construction: Off-Road Equipment	Equipment list, activity schedule, and equipment HP provided by Radius
Construction: Trips and VMT	Number of workers and vendor truck trip quantities and distances provided by Radius
Operations: Architectural Coatings	No operational architectural coating application
Operations: Energy Use	No increase in operational activities
Operations: Water and Waste Water	No indoor water use
Construction: Architectural Coatings	No architectural coating

APPENDIX C – ENFORCEMENT ORDER FOR CORRECTIVE ACTION

STATE OF CALIFORNIA
ENVIRONMENTAL PROTECTION AGENCY
DEPARTMENT OF TOXIC SUBSTANCES CONTROL

In the Matter of:

Schnitzer Steel Industries, Inc.
1101 Embarcadero West
Oakland, California 94607
EPA ID: C A D981634496

Respondent:

Schnitzer Steel Industries Inc.
299 SW Clay Street, Suite 350
Portland, Oregon 97201

Docket No. HWCA-FY20/21-006

ENFORCEMENT ORDER FOR
CORRECTIVE ACTION

Health and Safety Code Section 25187

1.0 INTRODUCTION

1.1 Parties. The State Department of Toxic Substances Control (DTSC or Department) issues this Enforcement Order for Corrective Action (Order) to Schnitzer Steel Industries, Inc., an Oregon corporation doing business in California (Respondent).

1.2 Facility Status. Respondent is the owner and operator of a hazardous waste management facility located at 1101 Embarcadero West, Oakland, California 94607 (Facility). Beginning in 1961, and continuing through the present, Respondent has operated a metal recycling business which includes operation of a shredder and other equipment at the Facility. Hazardous waste generated and managed at the Facility includes light fibrous material (LFM), aqueous solution ($2 < \text{PH} < 12.5$) with organic residues [California (CA) Waste Codes 133 and 134]; off-specification, aged or surplus inorganics (CA Waste Code 141); asbestos-containing waste (CA Waste Code 151); other inorganic solid wastes (CA Waste Code 181); hydrocarbon solvents (CA Waste Code 213); waste oil and mixed oil (CA Waste Code 221); oil/water separation sludge (CA Waste Code 222); unspecified oil-containing wastes (CA Waste Code 223);

pesticides/pesticide production waste (CA Waste Code 232); polychlorinated biphenyls (PCBs) and materials with PCBs (CA Waste Code 261); latex waste (CA Waste Code 291); off-specification, aged, or surplus organics (CA Waste Code 331); unspecified organic liquid mixture (CA Waste Code 343); other organic solids (CA Waste Code 352); contaminated soils from site clean-up (CA Waste Code 611); liquid with halogenated organic compounds equal or greater than 1,000 milligrams per liter (CA Waste Code 741); ignitables (RCRA Waste Code D001); corrosives (RCRA Waste Code D002); lead (RCRA Waste Code D008); benzene (RCRA Waste Code D018); halogenated solvents (RCRA Waste Code F002); and non-halogenated solvents (RCRA Waste Codes F003 and F005).

1.3 LFM is material produced during the metal shredding process which can be uncontrollably dispersed offsite due to wind or rain if not adequately managed. LFM typically consists of residues from metal shredding operations such as glass, rubber, automobile fluids, dirt, and plastics from shredded dashboards, car seats, and other non-metallic car parts and household appliances. Samples of LFM have been shown to meet the criteria for hazardous waste in California due to concentrations of metals at levels exceeding the toxicity criteria defined in California Code of Regulations, title 22, section 66261.24 (a)(2)(A).

1.4 Jurisdiction. Jurisdiction exists pursuant to Health and Safety Code section 25187, which authorizes DTSC to issue an order to require corrective action when DTSC determines that there is or may be a release of hazardous waste or hazardous waste constituents into the environment from a hazardous waste facility.

1.5 Definition of Terms. The terms used in this Order are as defined in the California Code of Regulations, title 22, section 66260.10, except as otherwise provided.

1.6 Attachments. All attachments to this Order are incorporated herein by reference.

2.0 FINDINGS OF FACT

2.1 DTSC conducted several inspections at the Facility and noted various violations of hazardous waste laws including the failure to operate the Facility in a manner to minimize the release of hazardous waste and/or hazardous waste constituents. From October 11, 2012 to January 17, 2014, during 10 sampling events, DTSC collected 43 samples of LFM from the border of the facility and the neighboring sidewalk and properties. Constituents of concern (COCs) detected in the LFM samples include copper, lead, zinc, cadmium, and chromium. Copper, lead, and zinc were detected at maximum concentrations of 3,280 milligrams per kilogram (mg/kg), 3,100 mg/kg, and 21,200 mg/kg, respectively, exceeding the Total Threshold Limit Concentration (TTLIC) values as specified in California Code of Regulations, title 22, section 66261.24(a)(2)(A). In addition, cadmium and chromium were detected at maximum concentrations of 2.04 milligrams per liter (mg/L) and 5.18 mg/L respectively, exceeding the Soluble Threshold Limit Concentration (STLC) values as specified in California Code of Regulations, title 22, section 66261.24(a)(2)(A). These sampling results and locations are documented in DTSC's Sampling Report dated March 20, 2014.

2.2 On March 17 and 18, 2015, DTSC collected 14 soil, solid and debris, aggregate, auto shredder residue and/or LFM samples from within the Facility. All samples detected metals exceeding TTLC or STLC values and the presence of PCBs. Lead, zinc, copper, and nickel concentrations in the collected samples exceeded TTLC values and were detected at maximum concentrations of 24,600 mg/kg, 24,300 mg/kg, 24,700 mg/kg, and 3,970 mg/kg, respectively. The sample results and locations are documented in DTSC's Report of Investigation, dated August 6, 2015.

2.3 Terraphase Engineering, Inc. collected soil, groundwater, and LFM samples from the Facility on behalf of Schnitzer between May 23, 2016 and June 2, 2016. Lead in soil was detected at maximum concentrations of 6,550 mg/kg at 0-1 feet below ground surface (ft bgs), 8,200 mg/kg at 2-3 ft bgs, and 11,000 mg/kg at 3-4 ft bgs, exceeding the TTLC value. Zinc was detected in soil at a maximum concentration of 64,000 mg/kg, exceeding the TTLC value. LFM samples were collected at the Facility on May 26, 2016. Copper, lead, and zinc were detected at maximum concentrations of 2,560 mg/kg; 2,120 mg/kg; and 14,000 mg/kg, respectively, exceeding the TTLC values. Total PCBs in soil were detected at a maximum concentration of 104 mg/kg, exceeding the TTLC value. The sample results are documented in the September 28, 2016 Draft Multi-Media Investigation Report prepared by Terraphase Engineering Inc.

2.4 A letter, dated March 18, 2018, sent by Terraphase Engineering, Inc. to Port of Oakland, documented that LFM was present on paved surfaces in certain areas of Howard Marine Terminal (HMT) and a Port of Oakland property west of the Facility (also known as the Roundhouse property); and that the amount of observed LFM

decreased visibly at both HMT and the Roundhouse with increased distance from the Schnitzer facility. The March 18, 2018 letter contains pictures showing LFM deposited in cracks in the Roundhouse paved surface and on a stormwater drain at the Howard Terminal West boundary. LFM may be potentially released to soil and stormwater through the depicted cracks and stormwater drain, respectively.

2.5 On May 10, 2018, DTSC conducted a survey of the neighborhood surrounding the Facility and observed LFM deposited at several locations. DTSC collected an LFM sample from an adjacent property and the results indicated that soluble lead and zinc was detected at 26.9 mg/L and 404 mg/L, respectively, exceeding STLC values. The sample results are documented in DTSC's Sampling Report dated July 24, 2018.

2.6 On June 5, 2018, DTSC collected two residual burned scrap material samples near the conveyor belt after a fire incident that occurred on June 2, 2018. Both samples contained metals exceeding either TTLC or STLC values. Copper, lead, and zinc were detected at maximum concentrations of 8,050 mg/kg, 1,030 mg/kg, and 12,600 mg/kg, respectively, exceeding TTLC values. Dioxins and PCBs were also detected in both samples at concentrations below TTLC. The sample results are documented in DTSC's Sampling Report dated August 3, 2018.

2.7 On October 22, 2018, DTSC collected six LFM samples from neighboring streets across from the Facility, including Myrtle, Filbert, Linden, Chestnut, and Brush Streets. All six samples detected metals exceeding either TTLC or STLC values. Lead and zinc were detected at maximum concentrations of 1,270 mg/kg and 6,890 mg/kg,

respectively, exceeding the TTLC values. The sample results are documented in DTSC's Sampling Report dated December 21, 2018.

2.8 On November 12, 2020, DTSC conducted a survey of the neighborhood surrounding the Facility and observed LFM deposited at several locations including 1 Market Street, along the railroad right of way between Filbert Street and Market Street, Filbert Street between the railroad tracks and 3rd Street, inside and outside of the storm water drains outside of 95 Linden Street and 1 Market Street, and in the parking lot of 1021 3rd Street and at 95 Linden Street. X-ray fluorescence spectrometer readings of LFM observed in the parking lot of 1021 3rd Street indicated elevated concentrations of zinc and lead. Chalk drawings were also observed in this parking lot, indicating that the area may be used by children. DTSC collected six samples from these locations and all samples detected lead and/or zinc exceeding either TTLC or STLC values. Soluble lead and zinc were detected at maximum concentrations of 42.1 mg/L and 602 mg/L, respectively, exceeding the STLC values. Zinc was detected at a maximum concentration of 9,410 mg/kg, exceeding the TTLC value. The sample locations and results are documented in DTSC's Sampling Report, dated November 20, 2020.

2.9 For approximately six (6) years, Terraphase Engineering, Inc., on behalf of Schnitzer, has been conducting monthly and/or quarterly inspections and LFM removal at specified locations identified as the Target Area which includes (1) publicly accessible portions of the commercial/industrial area in the vicinity of the Facility, roughly bounded by Embarcadero West to the south, Union Street to the west, Clay Street to the east, and 5th Street to the north; (2) riprap areas at the Schnitzer Facility and adjacent Port of

Oakland property; (3) private residential properties to which access was granted; and (4) Port of Oakland properties known as Howard Marine Terminal (HMT) and the Roundhouse. The inspection and LFM removal activities are summarized in Quarterly Summary Reports. Approximately 113 cubic yards of LFM has been removed between the first quarter of 2015 and second quarter of 2020. This volume also includes street dirt, debris, and miscellaneous trash. The summary reports consistently document the presence of LFM in the Target Area that requires continuous LFM removal. Therefore, these activities are not corrective action measures that provide a long-term remedy. As LFM releases were observed in the riprap area and the Port of Oakland Property, both which are bordered by the San Francisco Bay to south, there is a potential for LFM released from the Facility to migrate into the Bay.

2.10 Based on the results of investigations conducted by DTSC and by Schnitzer, DTSC concludes that further investigation is needed to determine the nature and extent of any releases of hazardous waste or hazardous waste constituents at the Facility, and offsite area where surface cracks and stormwater drains are observed, including solid waste management units (SWMUs) and Areas of Concern (AOCs) that either have released or may release hazardous waste or hazardous waste constituents to the environment. The eighteen (18) SWMUs and two (2) AOCs as listed below:

- SWMU 1 Bay 1 Warehouse
- SWMU 2 Non-Ferrous Storage Building
- SWMU 3 Baghouse
- SWMU 4 Joint Product Plant
- SWMU 5 Substation

- SWMU 6 Bay 2 Joint Product Building (used for aggregate storage and treatment)
- SWMU 7 Maintenance Bay or Building
- SWMU 8 Boneyard including the area used for torch cutting (unpaved)
- SWMU 9 Shredder and associated separation and conveyor systems and surrounding aggregate stockpiles
- SWMU 10 Wastewater treatment unit (including a one-million-gallon storage tank and associated conveyance systems)
- SWMU 11 Shear area and surrounding piles
- SWMU 12 Ship loading area and associated conveyor system
- SWMU 13 Load receiving area
- SWMU 14 Former Engine Block Area
- SWMU 15 Unpaved areas used for heavy melt steel stockpiling
- SWMU 16 Wheel washing area and associated sump
- SWMU 17 Bin Storage Area
- SWMU 18 Other hazardous waste (including aggregate and heavy melt steel) stockpiling area(s)
- AOC 1 Other unpaved areas
- AOC 2 Off-site area surrounding the facility potentially impacted by hazardous waste and/or hazardous waste constituents (including, but not limited to, dust and/or LFM)

2.11 Hazardous wastes or hazardous waste constituents have migrated or may migrate from the Facility into the environment through the following pathways: release of

airborne particulate matter including LFM to air, deposition of airborne particulate matter including LFM, and leaching and migration to soil, surface water, storm water, and groundwater.

2.12 The hazardous waste and hazardous waste constituents of concern at the Facility are metals, volatile organic compounds, PCBs, total petroleum hydrocarbons, polycyclic aromatic hydrocarbons, dioxins, semi-volatile organic compounds, per- and poly-fluoroalkyl substances (PFAS), pesticides and asbestos.

2.13 The Facility is located near residential and industrial/commercial properties. The Facility is adjacent to Oakland Inner Harbor and the closest municipal drinking water well is located about 3331 feet away from the Facility, in Alameda City. There are approximately 18 daycare centers, 10 parks, 8 schools, 4 senior centers, and 2 hospitals located within a mile of the Facility. The Facility is in a census tract that experiences one of the state's highest pollution burden, as identified by a California Communities Environmental Health Screening Tool (Version 3.0) (CalEnviroScreen) score of 80-85 percentile. CalEnviroScreen is a screening tool used to help identify communities disproportionately burdened by multiple sources of pollution and with population characteristics that make them more sensitive to pollution. In 2016, California Environmental Protection Agency's (CalEPA) Environmental Justice Task Force selected this community for a focused environmental enforcement and regulatory compliance initiative due to high pollution burden and increased vulnerability to pollution in the community.

2.14 Releases from the Facility have or may have migrated towards soil, groundwater, air, neighboring properties, and the Oakland Inner Harbor, causing potential risk to nearby residents, children, offsite workers, and ecological receptors.

3.0 WORK TO BE PERFORMED

Based on the foregoing FINDINGS OF FACT, IT IS HEREBY ORDERED THAT:

3.1 Respondent shall perform the work required by this Order in a manner consistent with the following: the attached Scopes of Work; DTSC-approved Facility Investigation Workplan, Corrective Measures Study Workplan, Corrective Measures Implementation Workplan, and any other DTSC-approved Workplans; Health and Safety Code and other applicable state and federal laws and their implementing regulations; and applicable DTSC or United States Environmental Protection Agency (U.S. EPA) guidance documents. Applicable guidance documents include, but are not limited to, the "RCRA Facility Investigation (RFI) Guidance" (Interim Final, May 1989, EPA 530/SW-89-031), "RCRA Groundwater Monitoring Technical Enforcement Guidance Document" (OSWER Directive 9950.1, September 1986), "Test Methods for Evaluating Solid Waste" (SW-846), and "Construction Quality Assurance for Hazardous Waste Land Disposal Facilities" (EPA 530/SW-85-031, July 1986).

3.2 Interim Measures (IM).

3.2.1 Respondent shall evaluate available data and assess the need for interim measures in addition to those specifically required by this Order. Interim measures shall be used whenever possible to control or abate immediate threats to human health

and/or the environment, and to prevent and/or minimize the spread of contaminants while long-term corrective action alternatives are being evaluated.

3.2.2 Respondent shall submit a Current Conditions Report to DTSC in accordance with section 3.3.1. of this Order. The Current Conditions Report shall contain an assessment of interim measures. The assessment must include both previously implemented interim measures and other interim measures that could be implemented at the Facility. The assessment must also identify any additional data needed for making decisions on interim measures. This new data or information shall be collected during the early stages of the Facility Investigation. DTSC will review the Respondent's assessment and determine which interim measures, if any, Respondent will implement at the Facility. If deemed appropriate by DTSC, such determination may be deferred until additional data are collected.

3.2.3 Within 45 days of the effective date of this Order, Respondent shall submit to DTSC a Workplan for the implementation of Interim Measures ("IM Workplan"). The IM Workplan is subject to approval by DTSC and shall provide for the performance of all Interim Measures necessary to achieve stabilization at the Facility. The IM Workplan shall include a schedule for submitting to DTSC an IM Operation and Maintenance Plan and IM Plans and Specifications. The IM Workplan, IM Operation and Maintenance Plan, and IM Plans and Specifications shall be developed in a manner consistent with the Scope of Work for Interim Measures Implementation appended as Attachment 1.

3.2.4 In the event Respondent identifies an immediate or potential threat to human health and/or the environment, discovers new releases of hazardous waste and/or hazardous waste constituents, or discovers new solid waste management units

not previously identified, Respondent shall notify the DTSC Project Coordinator orally within 48 hours of discovery and notify DTSC in writing within 10 days of discovery summarizing the findings, including the immediacy and magnitude of the potential threat to human health and/or the environment. Within 30 days of receiving DTSC's written request, Respondent shall submit to DTSC an IM Workplan for approval. The IM Workplan shall include a schedule for submitting to DTSC an IM Operation and Maintenance Plan and IM Plans and Specifications. The IM Workplan, IM Operation and Maintenance Plan, and IM Plans and Specifications shall be developed in a manner consistent with the Scope of Work for Interim Measures Implementation appended as Attachment 1. If DTSC determines that immediate action is required, the DTSC Project Coordinator may orally authorize the Respondent to act prior to DTSC's receipt of the IM Workplan.

3.2.5 If DTSC identifies an immediate or potential threat to human health and/or the environment, discovers new releases of hazardous waste and/or hazardous waste constituents, or discovers new solid waste management units not previously identified, DTSC will notify Respondent in writing. Within 30 days of receiving DTSC's written notification, Respondent shall submit to DTSC for approval an IM Workplan that identifies Interim Measures that will mitigate the threat. The IM Workplan shall include a schedule for submitting to DTSC an IM Operation and Maintenance Plan and IM Plans and Specifications. The IM Workplan, IM Operation and Maintenance Plan, and IM Plans and Specifications shall be developed in a manner consistent with the Scope of Work for Interim Measures Implementation appended as Attachment 1. If DTSC

determines that immediate action is required, the DTSC Project Coordinator may orally authorize Respondent to act prior to receipt of the IM Workplan.

3.2.6 All IM Workplans shall ensure that the Interim Measures are designed to mitigate current or potential threats to human health and/or the environment, and should, to the extent practicable, be consistent with the objectives of, and contribute to the performance of, any remedy which may be required at the Facility.

3.2.7 Concurrent with the submission of an IM Workplan, Respondent shall submit to DTSC a Health and Safety Plan in accordance with the Scope of Work for a Health and Safety Plan, Attachment 2.

3.2.8 Concurrent with the submission of an IM Workplan, Respondent shall submit to DTSC a Community Profile for DTSC approval in accordance with Attachment 3. Based on the information provided in the Community Profile, if DTSC determines that there is a high level of community concern about the Facility, DTSC will require Respondent to prepare a Public Participation Plan.

3.3 Facility Investigation (FI).

3.3.1 Within 60 days of the effective date of this Order, Respondent shall submit to DTSC a Current Conditions Report and a Workplan for a Facility Investigation ("FI Workplan"). The Current Conditions Report and FI Workplan are subject to approval by DTSC and shall be developed in a manner consistent with the Scope of Work for a Facility Investigation contained in Attachment 4. DTSC will review the Current Conditions Report and FI Workplan and notify Respondent in writing of DTSC's approval or disapproval.

3.3.2 The FI Workplan shall detail the methodology to:

- (1) Gather data needed to make decisions on interim measures/
stabilization during the early phases of the Facility Investigation;
- (2) Identify and characterize all sources of contamination;
- (3) Define the nature, degree, and extent of contamination;
- (4) Define the rate of movement and direction of contamination flow;
- (5) Characterize the potential pathways of contaminant migration;
- (6) Identify actual or potential human and/or ecological receptors; and
- (7) Support development of alternatives from which a corrective measure
will be selected by DTSC. A specific schedule for implementation of all
activities shall be included in the FI Workplan.

3.3.3 Respondent shall submit a FI Report to DTSC for approval in accordance with DTSC-approved FI Workplan schedule. The FI Report shall be developed in a manner consistent with the Scope of Work for a Facility Investigation contained in Attachment 4. If there is a phased investigation, separate FI Reports and a report that summarizes the findings from all phases of the FI must be submitted to DTSC. DTSC will review the FI Report(s) and notify Respondent in writing of DTSC's approval or disapproval.

3.3.4 Concurrent with the submission of a FI Workplan, Respondent shall submit to DTSC a Health and Safety Plan in accordance with Attachment 2. If Workplans for both an IM and FI are required by this Order, Respondent may submit a single Health and Safety Plan that addresses the combined IM and FI activities.

3.3.5 Respondent shall submit a FI Summary Fact Sheet to DTSC that summarizes the findings from all phases of the FI. The FI Summary Fact Sheet shall be

submitted to DTSC in accordance with the schedule contained in the approved FI Workplan. DTSC will review the FI Summary Fact Sheet and notify Respondent in writing of DTSC's approval or disapproval, including any comments and/or modifications. When DTSC approves the FI Summary Fact Sheet, Respondent shall mail the approved FI Summary Fact Sheet to all individuals on the Facility mailing list established pursuant to California Code of Regulations, title 22, section 66271.9(c)(1)(D), within 15 calendar days of receipt of written approval.

3.3.6 If requested by DTSC, Respondent shall submit to DTSC a Community Profile for DTSC approval in accordance with Attachment 3. Based on the information provided in the Community Profile, if DTSC determines that there is a high level of community concern about the Facility, DTSC will require Respondent to prepare a Public Participation Plan.

3.4 Risk Assessment

3.4.1 Based on the information available to DTSC, Respondent is required to conduct a Risk Assessment to evaluate potential human health risk and ecological risk and to establish site-specific action levels and cleanup standards. Respondent shall submit to DTSC for approval a Risk Assessment Workplan within 30 days of receipt of DTSC's request. Respondent shall submit to DTSC for approval a Risk Assessment Report in accordance with DTSC-approved schedule or upon DTSC's request.

3.5 Corrective Measures Study (CMS).

3.5.1 Respondent shall prepare a Corrective Measures Study if contaminants concentrations exceed current health-based screening levels and/or if DTSC

determines that the contaminant releases pose a potential threat to human health and/or the environment.

3.5.2 Within 30 days of DTSC's approval of the FI Report or of Respondent's receipt of a written request from DTSC), Respondent shall submit a CMS Workplan to DTSC. The CMS Workplan is subject to approval by DTSC and shall be developed in a manner consistent with the Scope of Work for a Corrective Measures Study contained in Attachment 5.

3.5.3 The CMS Workplan shall detail the methodology for developing and evaluating potential corrective measures to remedy any contamination at the Facility. The CMS Workplan shall identify the potential corrective measures, including any innovative technologies, that may be used for the containment, treatment, remediation, and/or disposal of contamination.

3.5.4 Respondent shall prepare treatability studies for all potential corrective measures that involve treatment except where Respondent can demonstrate to DTSC's satisfaction that they are not needed. The CMS Workplan shall include, at a minimum, a summary of the proposed treatability study including a conceptual design, a schedule for submitting a treatability study workplan, or Respondent's justification for not proposing a treatability study.

3.5.5 Respondent shall submit a CMS Report to DTSC for approval in accordance with DTSC-approved CMS Workplan schedule. The CMS Report shall be developed in a manner consistent with the Scope of Work for a Corrective Measures Study contained in Attachment 5. DTSC will review the CMS Report and notify Respondent in writing of DTSC's approval or disapproval.

3.6 Remedy Selection.

3.6.1 DTSC will provide the public with an opportunity to review and comment on the final draft of the CMS Report, DTSC's proposed corrective measures for the Facility, and DTSC's justification for selection of such corrective measures.

3.6.2 Following the public comment period, DTSC may select final corrective measures or require Respondent to revise the CMS Report and/or perform additional corrective measures studies.

3.6.3 DTSC will notify Respondent of the final corrective measures selected by DTSC in the Final Decision and Response to Comments. The notification will include DTSC's reasons for selecting the corrective measures.

3.7 Corrective Measures Implementation (CMI).

3.7.1 Within 60 days of Respondent's receipt of notification of DTSC's selection of the corrective measures, Respondent shall submit to DTSC a Corrective Measures Implementation (CMI) Workplan. The CMI Workplan is subject to approval by DTSC and shall be developed in a manner consistent with the Scope of Work for Corrective Measures Implementation contained in Attachment 6.

3.7.2 Concurrent with the submission of a CMI Workplan, Respondent shall submit to DTSC a Health and Safety Plan in accordance with Attachment 2.

3.7.3 If requested by DTSC, Respondent shall submit to DTSC a Community Profile for DTSC approval in accordance with Attachment 3. Based on the information provided in the Community Profile, if DTSC determines that there is a high level of community concern about the Facility, DTSC will require Respondent to prepare a Public Participation Plan.

3.7.4 The CMI program shall be designed to facilitate the design, construction, operation, maintenance, and monitoring of corrective measures at the Facility. In accordance with the schedule contained in the approved CMI Workplan, Respondent shall submit to DTSC the documents listed below. These documents shall be developed in a manner consistent with the Scope of Work for Corrective Measures Implementation contained in Attachment 6:

- Operation and Maintenance Plan
- Draft Plans and Specifications
- Final Plans and Specifications
- Construction Workplan
- Construction Completion Report
- Corrective Measures Completion Report

3.7.5 DTSC will review all required CMI documents and notify Respondent in writing of DTSC's approval or disapproval.

3.7.6 Respondent shall provide a financial assurance mechanism for corrective action to DTSC within 90 days of DTSC's approval of a Corrective Measures Implementation Workplan, IM Workplan or a DTSC-approved equivalent. The financial assurance mechanism must consist of one of the options specified in California Code of Regulations, title 22, sections 66264.143 or 66265.143 as applicable. Respondent shall establish the financial assurance mechanism to allow DTSC access to the funds to undertake corrective measures implementation tasks if Respondent is unable or unwilling to undertake the required tasks. If Respondent proposes to use the financial test or corporate guarantee as the financial assurance mechanism for corrective action,

Respondent shall also establish a process that allows DTSC access to the funds to undertake corrective measures implementation tasks if DTSC determines that Respondent is unable or unwilling to undertake the required tasks. Any financial assurance mechanism or process proposed by Respondent shall be subject to DTSC's approval.

4.0 OTHER REQUIREMENTS AND PROVISIONS

4.1 Project Coordinator. Within 14 days of the effective date of this Order, DTSC and Respondent shall each designate a Project Coordinator and shall notify each other in writing of the Project Coordinator selected. Each Project Coordinator shall be responsible for overseeing the implementation of this Order and for designating a person to act in his/her absence. All communications between Respondent and DTSC, and all documents, report approvals, and other correspondence concerning the activities performed pursuant to this Order shall be directed through the Project Coordinators. Each party may change its Project Coordinator with at least seven days prior written notice.

4.2 Department Approval.

4.2.1 Respondent shall revise any workplan, report, specification, or schedule in accordance with DTSC's written comments. Respondent shall submit to DTSC any revised documents by the due date specified by DTSC. Revised submittals are subject to DTSC's approval or disapproval.

4.2.2 Upon receipt of DTSC's written approval, Respondent shall commence work and implement any approved workplan in accordance with the schedule and provisions contained therein.

4.2.3 Any Department approved workplan, report, specification, or schedule required by this Order shall be deemed incorporated into this Order.

4.2.4 Verbal advice, suggestions, or comments given by DTSC representatives will not constitute an official approval or decision.

4.3 Submittals.

4.3.1 Beginning with the first full month following the effective date of this Order, Respondent shall provide DTSC with quarterly progress reports of corrective action activities conducted pursuant to this Order. Progress reports are due on the fifth day of each month. The progress reports shall conform to the Scope of Work for Progress Reports contained in Attachment 7. DTSC may adjust the frequency of progress reporting to be consistent with site-specific activities.

4.3.2 Any report or other document submitted by Respondent pursuant to this Order shall be signed and certified by the project coordinator, a responsible corporate officer, or a duly authorized representative.

4.3.3 The certification required above, shall be in the following form:

I certify that the information contained in or accompanying this submittal is true, accurate, and complete. As to those portions of this submittal for which I cannot personally verify the accuracy, I certify that this submittal and all attachments were prepared at my direction in accordance with procedures designed to assure that qualified personnel properly gathered and evaluated the information submitted.

Signature: _____
Name: _____
Title: _____
Date: _____

4.3.4 Respondent shall provide two copies of all documents, including but not limited to, workplans, reports, and correspondence of 15 pages or longer. All copies should be submitted in paper copy and electronically. Submittals specifically exempted from this copy requirement are all progress reports and correspondence of less than 15 pages, of which one copy is required.

4.3.5 Unless otherwise specified, all reports, correspondence, approvals, disapprovals, notices, or other submissions relating to this Order shall be in writing and shall be sent to the current Project Coordinators.

4.4 Proposed Contractor/Consultant.

All work performed pursuant to this Order shall be under the direction and supervision of a professional engineer or registered geologist, registered in California, with expertise in hazardous waste site cleanup. Respondent's contractor or consultant shall have the technical expertise sufficient to fulfill his or her responsibilities. Within 14 days of the effective date of this Order, Respondent shall notify the DTSC Project Coordinator in writing of the name, title, and qualifications of the professional engineer or registered geologist and of any contractors or consultants and their personnel to be used in carrying out the requirements of this Order. DTSC may disapprove of Respondent's contractor and/or consultant.

4.5 Quality Assurance.

4.5.1 All sampling and analyses performed by Respondent under this Order shall follow applicable Department and U.S. EPA guidance for sampling and analysis. Workplans shall contain quality assurance/quality control and chain of custody procedures for all sampling, monitoring, and analytical activities. Any deviations from the approved workplans must be approved by DTSC prior to implementation, must be documented, including reasons for the deviations, and must be reported in the applicable report (e.g., FI Report).

4.5.2 The names, addresses, and telephone numbers of the California State certified analytical laboratories Respondent proposes to use must be specified in the applicable workplans.

4.5.3 All workplans required under this Order shall include data quality objectives for each data collection activity to ensure that data of known and appropriate quality are obtained, and that data are sufficient to support their intended uses.

4.5.4 Respondent shall monitor to ensure that high quality data are obtained by its consultant or contract laboratories. Respondent shall ensure that laboratories used by Respondent for analysis perform such analysis according to the latest approved edition of "Test Methods for Evaluating Solid Waste, (SW_846)", or other methods deemed satisfactory to DTSC. If methods other than U.S. EPA methods are to be used, Respondent shall specify all such protocols in the applicable workplan (e.g., FI Workplan). DTSC may reject any data that do not meet the requirements of the approved workplan, U.S. EPA analytical methods, or quality assurance/quality control procedures, and may require resampling and analysis.

4.5.5 Respondent shall ensure that the California State certified laboratories used by Respondent for analyses have a quality assurance/quality control program. DTSC may conduct a performance and quality assurance/quality control audit of the laboratories chosen by Respondent before, during, or after sample analyses. Upon request by DTSC, Respondent shall have its selected laboratory perform analyses of samples provided by DTSC to demonstrate laboratory performance. If the audit reveals deficiencies in a laboratory's performance or quality assurance/quality control procedures, resampling and analysis may be required.

4.6 Sampling and Data/Document Availability.

4.6.1 Respondent shall submit to DTSC upon request the results of all sampling and/or tests or other data generated by its employees, agents, consultants, or contractors pursuant to this Order.

4.6.2 Notwithstanding any other provisions of this Order, DTSC retains all its information gathering and inspection authority and rights, including enforcement actions related thereto, under Health and Safety Code, and any other state or federal statutes or regulations.

4.6.3 Respondent shall notify DTSC in writing at least 7 days prior to beginning each separate phase of field work approved under any workplan required by this Order. If Respondent believes it must commence emergency field activities without delay, Respondent may seek emergency telephone authorization from DTSC Project Coordinator or, if the Project Coordinator is unavailable, his/her Branch Chief, to commence such activities immediately.

4.6.4 At the request of DTSC, Respondent shall provide or allow DTSC or its authorized representative to take split or duplicate samples of all samples collected by Respondent pursuant to this Order. Similarly, at the request of Respondent, DTSC shall allow Respondent or its authorized representative to take split or duplicate samples of all samples collected by DTSC under this Order.

4.7 Access.

4.7.1 Subject to the Facility's security and safety procedures, Respondent shall provide DTSC and its representatives access at all reasonable times to the Facility and any other property to which access is required for implementation of this Order and shall permit such persons to inspect and copy all records, files, photographs, documents, including all sampling and monitoring data, that pertain to work undertaken pursuant to this Order and that are within the possession or under the control of Respondent or its contractors or consultants.

4.7.2 To the extent that work being performed pursuant to this Order must be done beyond the Facility property boundary, Respondent shall use its best efforts to obtain access agreements necessary to complete work required by this Order from the present owners of such property within 30 days of approval of any workplan for which access is required. Best efforts as used in this paragraph shall include, at a minimum, a letter by certified mail from the Respondent to the present owners of such property requesting an agreement to permit Respondent and DTSC and its authorized representatives access to such property and offering the payment by Respondent of reasonable sums of money in consideration of granting access. Any such access agreement shall provide for access to DTSC and its representatives. Respondent shall

provide DTSC's Project Coordinator with a copy of any access agreements. In the event that an agreement for access is not obtained within 30 days of approval of any workplan for which access is required, or of the date that the need for access becomes known to Respondent, Respondent shall notify DTSC in writing within 14 days thereafter regarding both the efforts undertaken to obtain access and its failure to obtain such agreements. DTSC may, at its discretion, assist Respondent in obtaining access.

4.7.3 Nothing in this section limits or otherwise affects DTSC's right of access and entry pursuant to any applicable state or federal law or regulation.

4.7.4 Nothing in this Order shall be construed to limit or otherwise affect Respondent's liability and obligation to perform corrective action including corrective action beyond the Facility boundary.

4.8 Record Preservation.

4.8.1 Respondent shall retain, during the implementation of this Order and for a minimum of six years thereafter, all data, records, and documents that relate in any way to the implementation of this Order or to hazardous waste management and/or disposal at the Facility. Respondent shall notify DTSC in writing 90 days prior to the destruction of any such records and shall provide DTSC with the opportunity to take possession of any such records. Such written notification shall reference the effective date, caption, and docket number of this Order and shall be addressed to:

Julie Pettijohn, Branch Chief
Site Mitigation and Restoration Program
Department of Toxic Substances Control
700 Heinz Avenue, Suite 200
Berkeley, California 94710

4.8.2 If Respondent retains or employs any agent, consultant, or contractor for the purpose of complying with the requirements of this Order, Respondent will require any such agents, consultants, or contractors to provide Respondent a copy of all documents produced pursuant to this Order.

4.8.3 All documents pertaining to this Order shall be stored in a central location at the Facility to afford ease of access by DTSC and its representatives.

4.9 Change in Ownership. No change in ownership or corporate or partnership status relating to the Facility shall in any way alter Respondent's responsibility under this Order. No conveyance of title, easement, or other interest in the Facility, or a portion of the Facility, shall affect Respondent's obligations under this Order. Unless DTSC agrees that such obligations may be transferred to a third party, Respondent shall be responsible for and liable for any failure to carry out all activities required of Respondent by the terms and conditions of this Order, regardless of Respondent's use of employees, agents, contractors, or consultants to perform any such tasks.

4.10 Notice to Contractors and Successors. Respondent shall provide a copy of this Order to all contractors, laboratories, and consultants retained to conduct or monitor any portion of the work performed pursuant to this Order and shall condition all such contracts on compliance with the terms of this Order. Respondent shall give written notice of this Order to any successor in interest prior to transfer of ownership or operation of the Facility and shall notify DTSC at least seven days prior to such transfer.

4.11 Compliance with Applicable Laws. All actions required to be taken pursuant to this Order shall be undertaken in accordance with the applicable

requirements of all local, state, and federal laws and regulations. Respondent shall obtain or cause its representatives to obtain all permits and approvals necessary under such laws and regulations.

4.12 Costs. Respondent is liable for all costs associated with the implementation of this Order, including all costs incurred by DTSC in overseeing the work required by this Order.

4.13 Endangerment during Implementation. In the event that DTSC determines that any circumstances or activities (whether or not pursued in compliance with this Order) may pose an imminent or substantial endangerment to the health or welfare of people at the Facility or in the surrounding area or to the environment, DTSC may order Respondent to stop further implementation of this Order for such period of time as needed to prevent or abate the endangerment. Any deadline in this Order directly affected by an Order to Stop Work under this section shall be extended for the term of the Order to Stop Work.

4.14 Liability. Nothing in this Order shall constitute or be construed as a satisfaction or release from liability for any conditions or claims arising as a result of past, current, or future operations of Respondent. Notwithstanding compliance with the terms of this Order, Respondent may be required to take further actions as are necessary to protect public health or welfare or the environment.

4.15 Government Liabilities. The State of California shall not be liable for injuries or damages to persons or property resulting from acts or omissions by Respondent or related parties specified in section 4.19 in carrying out activities pursuant

to this Order, nor shall the State of California be held as a party to any contract entered into by Respondent or its agents in carrying out activities pursuant to the Order.

4.16 Additional Enforcement Actions. By issuance of this Order, DTSC does not waive the right to take further enforcement actions.

4.17 Incorporation of Plans and Reports. All plans, schedules, and reports that require Department approval and are submitted by Respondent pursuant to this Order are incorporated in this Order upon approval by DTSC.

4.18 Penalties for Noncompliance. Failure to comply with the terms of this Order may subject Respondent to costs, penalties, and/or punitive damages for any costs incurred by DTSC or other government agencies as a result of such failure, as provided by Health and Safety Code section 25188 and other applicable provisions of law.

4.19 Parties Bound. This Order shall apply to and be binding upon Respondent, and its officers, directors, agents, employees, contractors, consultants, receivers, trustees, successors, and assignees, including but not limited to individuals, partners, and subsidiary and parent corporations.

4.20 Compliance with Waste Discharge Requirements. Respondent shall comply with all applicable waste discharge requirements issued by the State Water Resources Control Board or a California Regional Water Quality Control Board.

4.21 Submittal Summary. Below is a summary of the major reporting requirements contained in this Order. The summary is provided as a general guide and does not contain all requirements. Please refer to the specific language of this Order for all the requirements. Unless otherwise specified, all timeframes are calendar days.

Section	Action	Due Date
3.2.2.	Submit a Current Conditions Report	60 days of the effective date of this Order
3.2.3	Submit Interim Measures Workplan, Health and Safety Plan, and Public Involvement Plan	45 days of the effective date of this Order
3.2.4.	Notify DTSC orally of immediate of potential threats to human health and/or the environment	48 hours after discovery
	Notify DTSC in writing of potential threats to human health	10 days after discovery
	Submit an IM Workplan	30 days of receiving DTSC's written notification
3.2.5	Submit an IM Workplan	30 days of receiving DTSC's written notification
3.3.1 3.3.4 3.3.5 3.3.6	Submit FI Workplan, Health and Safety Plan, Summary Fact Sheet and Community Profile and Public Participation Plan	60 days from effective date of this Order
3.4.1	Risk Assessment Workplan	30 days of receipt of DTSC's determination
3.5.2	Submit CMS Workplan	30 days of DTSC's approval of the FI Report or of Respondent's receipt of a written request from DTSC
3.7.1. 3.7.2 3.7.3	Submit CMI Workplan, Health and Safety Plan, Community Profile and Public Participation Plan	60 days from receipt of notification of DTSC selection of a corrective measure
3.7.6	Submit Financial Assurance mechanism	90 days of DTSC's approval of an IM workplan or CMI Workplan
4.1.	Designate Project Coordinator and notify DTSC in writing	14 days from effective date of this Order
4.2.2	Implement approved workplans	In accordance with schedules contained in DTSC approved workplans
4.3.1	Submit first Progress Report	5th day of each month following the effective date of Order
	Submit Progress Reports	Quarterly
4.4.	Notify DTSC in writing of contractors to carry out the requirements of this Order	14 days from effective date of this Order

Section	Action	Due Date
4.6.3.	Notify DTSC of when field work starts	7 days before each phase of field work

5.0 RIGHT TO A HEARING

You may request a hearing to challenge the Order. Appeal procedures are described in the attached Statement to Respondent.

6.0 EFFECTIVE DATE

Service by mail This Order is final and effective 20 days from the date of signature, which is the date of the cover letter transmitting the Order to you, unless you request a hearing within the 20-day period.

Date of
Issuance:

2/23/2021



Steven Becker, Branch Chief
SSFL and LABRIC Branch
Site Mitigation and Restoration Program
Department of Toxic Substances Control

ATTACHMENT 1: SCOPE OF WORK FOR INTERIM MEASURES IMPLEMENTATION

PURPOSE

Interim measures are actions to control and/or eliminate releases of hazardous waste and/or hazardous constituents from a facility prior to the implementation of a final corrective measure. Interim measures must be used whenever possible to achieve the goal of stabilization which is to control or abate threats to human health and/or the environment, and to prevent or minimize the spread of contaminants while long-term corrective action alternatives are being evaluated.

SCOPE

The documents required for Interim Measures (IM) are, unless the Department of Toxic Substances Control (DTSC) specifies otherwise, an IM Workplan, an Operation and Maintenance Plan, and IM Plans and Specifications. The scope of work (SOW) for each document is specified below. The SOWs are intended to be flexible documents capable of addressing both simple and complex site situations. If Respondent can justify, to the satisfaction of DTSC, that a plan or portions thereof are not needed in the given site-specific situation, then DTSC may waive that requirement.

The scope and substance of interim measures should be focused to fit the site-specific situation and be balanced against the need to take quick action.

DTSC may require Respondent to conduct additional studies beyond what is discussed in the SOWs to support the IM program. Respondent will furnish all personnel, materials, and services necessary to conduct the additional tasks.

A. Interim Measures Workplan

Respondent shall prepare an IM Workplan that evaluates interim measure options and clearly describes the proposed interim measure, the key components or elements that are needed, describes the designer's vision of the interim measure in the form of conceptual drawings and schematics, and includes procedures and schedules for

implementing the interim measure(s). The IM Workplan must be approved by DTSC prior to implementation. The IM Workplan must, at a minimum, include the following elements:

1. Introduction/Purpose

Describe the purpose of the document and provide a summary of the project.

2. Conceptual Site Model of Contaminant Migration

Respondent must present a conceptual site model of contaminant migration to develop a preliminary understanding of the site's potential risks to human health and the environment, and to assist in developing the interim measures and/or facility investigation. The conceptual site model presents information about site conditions and potential impacts to receptors and may be updated as new information is obtained. The information can be provided in a schematic presentation or pictorially. The conceptual site model should illustrate possible contaminant (including but not limited to dust, debris and light fibrous materials) transport mechanisms and exposure pathways from various media that may be affected: air, soil, sediments, and water, including soil vapor, groundwater, and surface water.

The conceptual site model consists of a working hypothesis of how the contaminants may move from the release source to the receptor population. The conceptual site model is also developed by looking at the applicable physical parameters (e.g., water solubility, density, Henry's Law Constant, etc.) for each contaminant and assessing how the contaminant may migrate given the existing site conditions (geologic features, depth to ground water, etc.). Describe the phase (water, soil, gas, non-aqueous) and location where contaminants including but not limited to dust, debris and light fibrous materials are likely to be found. This analysis may have already been done as part of earlier work (e.g., Current Conditions Report). If this is the case, then provide a summary of the conceptual site model with a reference to the earlier document.

3. Evaluation of Interim Measure Alternatives

List, describe and evaluate interim measure alternatives that have the potential to stabilize the facility. Propose interim measures for implementation and provide rationale for the selection. Document the reasons for excluding any interim measure alternatives.

4. Description of Interim Measures

Qualitatively describe what the proposed interim measure is supposed to do and how it will function at the facility.

5. Data Sufficiency

Review existing data needed to support the design effort and establish whether there are sufficient accurate data available for this purpose. Respondent must summarize the assessment findings and specify any additional data needed to complete the interim measure design. DTSC may require, or Respondent may propose that sampling and analysis plans and/or treatability study workplans be developed to obtain the additional data. Submittal times for any new sampling and analysis plans and/or treatability study workplans must be included in the project schedule.

6. Project Management

Describe the levels of authority and responsibility (include organization chart), lines of communication and a description of the qualifications of key personnel who will direct the interim measure design and implementation effort (including contractor personnel).

7. Project Schedule

The project schedule must specify all significant steps in the process, when any key documents (e.g., plans and specifications, operation, and maintenance plan) are to be submitted to DTSC and when the interim measure is to be implemented.

8. Design Basis

Discuss the process and methods used to design all major components of the interim measure. Discuss the significant assumptions made and possible sources of error. Provide justification for the assumptions.

9. Conceptual Process/Schematic Diagrams.

10. Site plan showing preliminary plant layout and/or treatment and storage area.

11. Tables listing number and type of major components with approximate dimensions.

12. Tables giving preliminary mass balances.

13. Site safety and security provisions (e.g., fences, fire control, etc.).

14. Waste Management Practices

Describe the wastes generated by the construction of the interim measure and how they will be managed. Also discuss drainage and indicate how rainwater runoff will be managed.

15. Required Permits

List and describe the permits needed to construct the interim measure. Indicate on the project schedule when the permit applications will be submitted to the applicable agencies and an estimate of the permit issuance date.

16. Sampling and Monitoring

Sampling and monitoring activities may be needed for design and during construction and operation of the interim measure. If sampling activities are necessary, the IM Workplan must include a complete sampling and analysis section which specifies at a minimum the following information:

- a. Description and purpose of monitoring tasks.
- b. Data quality objectives.
- c. Analytical test methods, method detection limits, and practical quantitation limits.
- d. Name of analytical laboratory.
- e. Laboratory quality control (include laboratory QA/QC procedures in appendices).
- f. Sample collection procedures and equipment.

- g. Field quality control procedures:
 - duplicates (10% of all field samples)
 - blanks (field, equipment, etc.)
 - equipment calibration and maintenance
 - equipment decontamination
 - sample containers
 - sample preservation
 - sample holding times (must be specified)
 - sample packaging and shipment
 - sample documentation (field notebooks, sample labeling, etc.)
 - chain of custody
- h. Criteria for data acceptance and rejection; and
- i. Schedule of monitoring frequency.

Respondent shall follow all DTSC and USEPA guidance for sampling and analysis. DTSC may request that the sampling and analysis section be a separate document.

17. Appendices including:

- a. Design Data - Tabulations of significant data used in the design effort.
- b. Equations - List and describe the source of major equations used in the design process.
- c. Sample Calculations - Present and explain one example calculation for significant calculations; and
- d. Laboratory or Field Test Results.

B. Interim Measures Operation and Maintenance Plan

Respondent shall prepare an Interim Measures Operation and Maintenance (O&M) Plan that includes a strategy and procedures for performing operations, maintenance, and monitoring of the interim measure(s). An Interim Measures O&M Plan shall be

submitted to DTSC simultaneously with the Plans and Specifications. The Interim Measures O&M Plan shall, at a minimum, include the following elements:

1. Purpose/Approach

Describe the purpose of the document and provide a summary of the project.

2. Project Management

Describe the levels of authority and responsibility (include organization chart), lines of communication and a description of the qualifications of key personnel who will operate and maintain the interim measure(s) (including contractor personnel).

3. System Description

Describe the interim measure and identify significant equipment.

4. Personnel Training

Describe the training process for Interim Measures O&M personnel. Respondent shall prepare, and include in the technical specifications governing treatment systems, contractor requirements for providing: appropriate service visits by experienced personnel to supervise the installation, adjustment, start up and operation of the treatment systems, and training covering appropriate operational procedures once the start-up has been successfully accomplished.

5. Start-Up Procedures

Describe system start-up procedures including any operational testing.

6. Operation and Maintenance Procedures

Describe normal O&M procedures including:

- a. Description of tasks for operation.
- b. Description of tasks for maintenance.
- c. Description of prescribed treatment or operation condition; and
- d. Schedule showing frequency of each O&M task.

7. Replacement schedule for equipment and installed components.
8. Waste Management Practices

Describe the wastes generated by operation of the interim measure and how they will be managed. Also discuss drainage and indicate how rainwater runoff will be managed.

9. Sampling and Monitoring

Sampling and monitoring activities may be needed for effective operation and maintenance of the interim measure. If sampling activities are necessary, the Interim Measures O&M plan must include a complete sampling and analysis section which specifies at a minimum the following information:

- a. Description and purpose of monitoring tasks.
- b. Data quality objectives.
- c. Analytical test methods, method detection limits, and practical quantitation limits.
- d. Name of analytical laboratory.
- e. Laboratory quality control (include laboratory QA/QC procedures in appendices).
- f. Sample collection procedures and equipment.
- g. Field quality control procedures:
 - duplicates (10% of all field samples)
 - blanks (field, equipment, etc.)
 - equipment calibration and maintenance
 - equipment decontamination
 - sample containers
 - sample preservation
 - sample holding times (must be specified)
 - sample packaging and shipment
 - sample documentation (field notebooks, sample labeling, etc.)
 - chain of custody

- h. Criteria for data acceptance and rejection; and
- i. Schedule of monitoring frequency.

Respondent shall follow all DTSC and USEPA guidance for sampling and analysis. DTSC may request that the sampling and analysis section be a separate document.

10. Interim Measures O&M Contingency Procedures:

- a. Procedures to address system breakdowns and operational problems including a list of redundant and emergency back-up equipment and procedures.
- b. Should the interim measure suffer complete failure, specify alternate procedures to prevent release or threatened releases of hazardous substances, pollutants or contaminants which may endanger public health and/or the environment or exceed cleanup standards; and
- c. The Interim Measures O&M Plan must specify that, in the event of a major breakdown and/or complete failure of the interim measure (includes emergency situations), Respondent will orally notify DTSC within 24 hours of the event and will notify DTSC in writing within 72 hours of the event. The written notification must, at a minimum, specify what happened, what response action is being taken and/or is planned, and any potential impacts on human health and the environment.

11. Data Management and Documentation Requirements

Describe how analytical data and results will be evaluated, documented, and managed, including development of an analytical database. State the criteria that will be used by the project team to review and determine the quality of data.

The O&M Plan shall specify that Respondent collect and maintain the following information:

- a. Progress Report Information
 - Work Accomplishments (e.g., performance levels achieved, hours of treatment operation, treated and/or excavated volumes, concentration of

contaminants in treated and/or excavated volumes, nature and volume of wastes generated, etc.).

- Record of significant activities (e.g., sampling events, inspections, problems encountered, action taken to rectify problems, etc.).
- b. Monitoring and laboratory data.
- c. Records of operating costs; and
- d. Personnel, maintenance, and inspection records.

DTSC may require that Respondent submit additional reports that evaluate the effectiveness of the interim measure in meeting the stabilization goal.

C. Interim Measures Plans and Specifications

Respondent shall prepare Plans and Specifications for the interim measure that are based on the conceptual design but include additional detail. The Plans and Specifications shall be submitted to DTSC simultaneously with the Operation and Maintenance Plan. The design package must include drawings and specifications needed to construct the interim measure. Depending on the nature of the interim measure, many different types of drawings and specifications may be needed. Some of the elements that may be required are:

- General Site Plans
- Process Flow Diagrams
- Mechanical Drawings
- Electrical Drawings
- Structural Drawings
- Piping and Instrumentation Diagrams
- Excavation and Earthwork Drawings
- Equipment Lists
- Site Preparation and Field Work Standards
- Preliminary Specifications for Equipment and Material

General correlation between drawings and technical specifications is a basic requirement of any set of working construction plans and specifications. Before submitting the project specifications to DTSC, Respondent shall:

- a. Proofread the specifications for accuracy and consistency with the conceptual design; and
- b. Coordinate and cross-check the specifications and drawings.

ATTACHMENT 2: SCOPE OF WORK FOR HEALTH AND SAFETY PLAN

The Department of Toxic Substances Control (DTSC) may require that Respondent prepare a Health and Safety Plan for any corrective action field activity (e.g., soil or ground water sampling, drilling, construction, operation, and maintenance of a treatment system, etc.). The Health and Safety Plan must, at a minimum, include the following elements:

Objectives

Describe the goals and objectives of the Health and Safety Plan (must apply to on-site personnel and visitors). The Health and Safety Plan must be consistent with the facility Contingency Plan, OSHA Regulations, NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985), all state and local regulations and other DTSC guidance as provided.

Hazard Assessment

List and describe the potentially hazardous substances that could be encountered by field personnel during field activities.

Discuss the following:

- Inhalation Hazards
- Dermal Exposure
- Ingestion Hazards
- Physical Hazards
- Overall Hazard Rating
- Biological Hazards (including COVID-19)

Include a table that, at a minimum, lists: Known Contaminants, Highest Observed Concentration, Media, Symptoms/Effects of Acute Exposure.

Personal Protection/Monitoring Equipment

For each field task, describe personal protection levels and identify all monitoring equipment. Describe any action levels and corresponding response actions (i.e., when will levels of safety be upgraded). Describe decontamination procedures and areas.

Site Organization and Emergency Contacts

List and identify all contacts (include phone numbers). Identify the nearest hospital and provide a regional map showing the shortest route from the facility to the hospital. Describe site emergency procedures and any site safety organizations. Include evacuation procedures for neighbors (where applicable). Include a facility Map showing emergency station locations (first aid, eye wash areas, etc.).

ATTACHMENT 3: COMMUNITY PROFILE OUTLINE FOR SCHNITZER STEEL OAKLAND FACILITY

The following items should be included in the Community Profile:

Site Description

- Description of proposed project.
- Map.
- Description of the site/facility location.
- Description of the surrounding land uses and environmental resources (including proximity to residential housing, schools, churches, etc.).
- Visibility of the site to neighbors.
- Demographics of community in which the site is located (e.g., socioeconomic level, ethnic composition, specific language considerations, etc.). This information may be found in local libraries (e.g., census records).

Local Interest

- Contacts with community members - any inquiries from community members, groups, organizations, etc. (include names, phone numbers, and addresses on the key contact list).
- Community interactions - any current meetings, events, presentations, etc.
- Media coverage - any newspaper, magazine, television, etc., coverage.
- Government contacts - city and county staff, state, and local elected officials.

Key Contact List

- Names, addresses, and phone numbers of city manager, city/county planning department staff, local elected officials, and other community members with whom previous contact has been made.

Past Public Involvement Activities

- Any ad hoc committees, community meetings, workshops, letters, newsletters, etc., about the site or similar activity.

Key Issues and Concerns

- Any specific concerns/issues raised by the community regarding the site/facility or any activities performed on the site/facility.
- Any anticipated concerns/issues regarding the site/facility.
- Any general environmental concerns/issues in the community.

ATTACHMENT 4: SCOPE OF WORK FOR A FACILITY INVESTIGATION

PURPOSE

The purpose of this Facility Investigation (FI) is to determine the nature and extent of releases of hazardous waste or constituents from regulated units, solid waste management units, and other source areas at the Facility and to gather all necessary data to support the Corrective Measures Study. The FI must include characterization of the facility (processes, waste management, etc.), environmental setting, source areas, nature and extent of contamination, migration pathways (transport mechanisms) and all potential receptors.

SCOPE

The documents required for a FI are, unless the Department of Toxic Substances Control (DTSC) specifies otherwise, a Current Conditions Report, a Facility Investigation Workplan and a Facility Investigation Report. The scope of work (SOW) for each document is specified below. The SOWs are intended to be flexible documents capable of addressing both simple and complex site situations. If Respondent can justify, to the satisfaction of DTSC, that a plan and/or report or portions thereof are not needed in the given site-specific situation, then DTSC may waive that requirement.

The scope and substance of the FI should be focused to fit the complexity of the site-specific situation. It is anticipated that Respondent of sites with complex environmental problems may need more extensive FIs than other facilities with less complex problems.

DTSC may require Respondent to conduct additional studies beyond what is discussed in the SOWs to meet the objectives of the FI. Respondent will furnish all personnel, materials, and services necessary to conduct the additional tasks.

A. Current Conditions Report

The Current Conditions Report must describe existing information pertinent to the facility including operations, processes, waste management, geology, hydrogeology, contamination, migration pathways, potential receptor populations and interim corrective measures. The required format for a current conditions report is described below. If some of this information does not exist, so indicate in the applicable section.

1. Introduction

1.1 Purpose

Describe the purpose of the current conditions report (e.g., summary and evaluation of existing information related to the facility; required as a component of FI).

1.2 Organization of Report

Describe how the report is organized.

2. Facility Description

Summarize background, current operations, waste management and products produced at the facility. Include a map that shows the general geographic location of the facility.

Describe current facility structures including any buildings, tanks, sumps, wells, waste management areas, landfills, ponds, process areas and storage areas.

Include detailed facility maps that clearly show current property lines, the owners of all adjacent property, surrounding land use (residential, commercial, agricultural, recreational, etc.), all tanks, buildings, process areas, utilities, paved areas, easements, rights-of-way, waste management areas, ponds, landfills, piles, underground tanks, wells and other facility features.

3. Facility History

3.1 Ownership History

Describe the ownership history of the facility.

3.2 Operational History

Describe in detail how facility operations, processes and products have changed over time (historical aerial photographs could be useful for this purpose).

3.3 Regulatory History

Describe all permits (including waste discharge requirements) requested or received, any enforcement actions taken by DTSC or designated agencies and any closure activities that are planned or underway.

3.4 Waste Generation

Describe all wastes (solid or hazardous) that have been generated at the facility. Include approximate waste volumes generated and summaries of any waste analysis data. Show how the waste stream (volume and chemical composition) has changed over time.

3.5 Waste Management

Describe in detail all past and current solid and hazardous waste treatment, storage and disposal activities at the facility, including but not limited to, unit physical description (e.g., dimensions and pavement), unit operational designs (e.g., treatment and/or storage capacity, dimensions), operating procedures (e.g., hazardous waste determination, waste treatment and/or storage activities, controls to identify and minimize the releases). Include a description of facility operations with a comprehensive Block Process Flow Diagram and description of process flow. Show how these activities have changed over time and indicate the current status. Make a clear distinction between active waste management units and older out of service waste management units. Identify which waste management units are regulated under or California Health and Safety Code.

Include maps showing all known past solid waste or hazardous waste treatment, storage, or disposal areas regardless of whether they were active on November 19, 1980 and all known past or present underground tanks or piping.

3.6 Spill and Discharge History

Provide approximate dates or periods of past product and waste spills and releases (i.e., from light fibrous materials, fire suppression activities, radioactive materials, compressed gas cylinders, etc.), identify the materials spilled and describe any response actions conducted. Include a summary of any sampling data generated as a result of the spill. Include a map showing approximate locations of spill areas at the facility.

3.7 Chronology of Critical Events

Provide a chronological list (including a brief description) of major events, communications, agreements, notices of violation, spills, discharges, releases, fires, and explosions that occurred throughout the facility's history.

4. Environmental Setting

4.1 Location/Land Use

Discuss facility size, location, and adjacent land use. Include a rough demographic profile of the human population who use or have access to the facility and adjacent lands. Provide approximate distance to nearest residential areas, schools, nursing homes, hospitals, parks, playgrounds, etc.

4.2 Local Ecology

Describe any endangered or threatened species near the facility. Include a description of the ecological setting on and adjacent to the facility. Provide approximate distance to nearest environmentally sensitive areas such as marsh lands, wetlands, streams, oceans, forests, etc.

4.3 Topography and Surface Drainage

Describe the regional and site-specific topography and surface drainage patterns that exist at the facility. Include a map that shows the topography and surface drainage depicting all waterways, wetlands, floodplains, water features, drainage patterns and surface water containment areas.

4.4 Climate

Discuss mean annual temperatures, temperature extremes, 25-year 24-hour maximum rainfall, average annual rainfall, prevailing wind direction, etc.

4.5 Surface Water Hydrology

Describe the facility's proximity (distance) and access to surface water bodies (e.g., coastal waters, lakes, rivers, creeks, drainage basins, floodplains, vernal pools, wetlands, etc.). Describe flows on-site that lead to holding basins, etc., and describe flows that leave the site.

4.6 Geology

Describe the regional and site-specific geology including stratigraphy and structure. Include a geologic map and cross-sections to show the subsurface structure. Cross-sections should be at a natural scale (vertical equals horizontal) and of sufficient detail to accurately plot cut and fills, alluvium, and structural features. Cross-sections should be taken on a grid pattern oriented normal to major geologic structure and spaced close enough to determine geology and ground water flow on a unit-by-unit basis.

4.7 Hydrogeology

Describe the regional and site specific hydrogeologic setting including any information concerning local aquifers, ground water levels, gradients, flow direction, hydraulic conductivity, and velocity. Include potentiometric surface contour maps. Describe the beneficial uses of the ground water (e.g., drinking water supply, agricultural water supply, etc.). Plot ground water elevations on the geologic cross-sections and indicate ground water flow directions and likely contaminant pathways. Describe temporal variations (seasonal and historical).

4.8 Ground Water Monitoring System

Describe the facility's ground water monitoring system including a table detailing the existing well construction. The table must, at a minimum, identify the following construction details for each well:

- Well ID
- Completion Date
- Drilling Method
- Borehole Diameter (inches)

- Well Casing Diameter and Material Type
- Measuring Point and Ground Elevation [feet Mean Sea Level (MSL)]
- Borehole Depth [feet Below Ground Surface (BGS)]
- Depth of Well (feet)
- Screened Interval (feet BGS) and Formation Screened
- Slot Size & Type (inches)
- Filter Pack Material
- Filter Pack Thickness and Spacing
- Type of Filter Pack Seal
- Thickness of Filter Pack Seal
- Sampling Pump System (dedicated or non-dedicated)
- Type of Pump and Depth in the Well
- Approximate Depth to Water (feet BGS)

If some of this information is not available, so indicate on the table with an "NA".

The monitoring well locations must be shown on the facility map (see Section A.2 of Attachment 4).

5. Existing Degree and Extent of Contamination

For each medium where the Permit or Order identifies a release (e.g., soil, ground water, surface water, air, etc.), describe the existing extent of contamination. This description must include all available monitoring data and qualitative information on the locations and levels of contamination at the facility (both onsite and offsite).

Include a general assessment of the data quality, a map showing the location of all existing sampling points and potential source areas and contour maps showing any existing ground water plumes at the facility (if ground water release). Highlight potential ongoing release areas that would warrant use of interim corrective measures (see Section 8, Interim Corrective Measures).

5.1. Previous Investigations

List and briefly describe all previous investigations that have occurred at the facility, agencies (e.g., DTSC's Site Mitigation Branch, the Regional Water Quality

Control Board, etc.) which required and/or oversaw the investigations, and agency contacts.

6. Potential Migration Pathways

6.1 Physical Properties of Contaminants

Identify the applicable physical properties for each contaminant that may influence how the contaminant moves in the environment. These properties could include reactivity, melting point (degrees C), water solubility (mg/l), vapor pressure (mm/Hg), Henry's law constant (atm-m³/mol), density (g/cc), dynamic viscosity (cp), kinematic viscosity (cs), octanol/water partition coefficient (log Kow), soil organic carbon/water partition coefficient (log koc) and soil/water partition coefficients, etc. Include a table that summarizes the applicable physical properties for each contaminant.

6.2 Conceptual Site Model of Contaminant Migration

Develop a conceptual site model of contaminant migration to have a preliminary understanding of the site's potential risks to human health and the environment, and to assist in developing the facility investigation. The conceptual site model presents information about site conditions and potential impacts to receptors and may be updated as new information is obtained. The information can be provided in a schematic presentation or pictorially. The conceptual site model should illustrate possible contaminant transport mechanisms and exposure pathways from various media that may be affected: air, soil, sediments, and water, including soil vapor, groundwater, and surface water.

The conceptual site model consists of a working hypothesis of how the contaminants (including but not limited to dust, debris, and light fibrous materials) may move from the release source to the receptor population. The conceptual site model is also developed by looking at the applicable physical parameters for each contaminant and assessing how the contaminant may migrate given the existing site conditions (geologic features, depth to ground water, etc.).

Describe the phase (water, soil, gas, non-aqueous) and location where contaminants) are likely to be found (e.g., if a ground water contaminant has a low water solubility and a high density, then the contaminant will likely sink and be found at the bottom of the aquifer, phase: non-aqueous). Include a discussion of potential transformation reactions that could impact the type and number of contaminants (i.e., what additional contaminants could be expected as a result of biotic and abiotic transformation reactions given the existing soil conditions).

A typical conceptual site model should include a discussion similar to the following: benzene, ethylbenzene, toluene, and xylenes are potential contaminants at the facility. Based on their high vapor pressures and relatively low water solubilities (see Henry's Law constant), the primary fate of these compounds in surface soils or surface water is expected to be volatilization to the atmosphere and indoor air. These mono-cyclic aromatic hydrocarbons may leach from soils into ground water. The log K_{oc} (soil organic carbon/water partition coefficient) values for these compounds ranges from 1.9 to 4.0, indicating that sorption to organic matter in soils or sediments may occur only to a limited extent.

7. Potential Impacts of Existing Contamination

Describe the potential impacts on human health and the environment from any existing contamination and/or ongoing activities at the facility. This description must consider the possible impacts on sensitive ecosystems and endangered species as well as on local populations. Potential impacts from any releases to ground water, surface water, soil (including direct contact with contaminated surface soil) and air (including evaporation of volatile organic compounds from contaminated soil) must be discussed. If air could be a significant pathway, soil gas or vapor emissions and/or ambient air monitoring should be described.

7.1 Ground Water Releases

Identify all wells (municipal, domestic, agricultural, industrial, etc.) within a 1-mile radius of the facility. Include a summary of available water sampling data for any identified municipal, industrial, or domestic supply wells.

Develop a well inventory table that lists the following items for each identified well:

- Well Designation
- State ID
- Reported Owner
- Driller
- Date of Completion
- Original Use of Well
- Current Use of Well
- Drilling Method
- Borehole Diameter (inches)
- Casing Diameter (inches)
- Perforated Interval (feet) and Formation
- Gravel Pack Interval (feet)
- Total Well Depth (feet)
- Depth to Water (feet below ground surface)
- Date of Water Level Measurement

If some of this information is not available, so indicate on the table with an "NA".

Include a regional map showing the facility, ground water flow direction (if known) and the location of all identified wells within a 1-mile radius of the facility.

Identify and describe any potential ground water discharge to surface water bodies.

Identify and list all relevant and applicable water standards for the protection of human health and the environment (e.g., maximum contaminant levels, water quality standards, etc.).

7.2 Surface Water Releases

Discuss the facility's potential impact on surface water within a 2-mile radius of the facility. Describe the potential beneficial uses of the surface water (e.g., drinking water supply, recreational, agricultural, industrial, or environmentally sensitive). Identify all water supply intake points and contact areas within a 2-mile radius of the facility. Include a summary of the most recent water sampling data available

for each of the identified water supply intake points. Include a description of the biota in surface water bodies on, adjacent to, or which can be potentially affected by the release. Also summarize any available sediment sampling data.

Include a regional map showing the facility, surface water flow direction, beneficial use areas, and the location of any identified water supply intake points or contact areas that are within a 2-mile radius of the facility.

7.3 Sensitive Ecosystems/Habitats

Discuss the facility's potential impact on sensitive ecosystems.

8. Interim Corrective Measures and Stabilization Assessment

Identify all corrective measures that were or are being undertaken at the facility to stabilize contaminant releases. Describe the objectives of the corrective measures including how the measure is mitigating a potential threat to human health and the environment. Summarize the design features of the corrective measure. Include a schedule for completing any ongoing or future work.

Identify and describe potential interim corrective measure alternatives that could be implemented immediately to stabilize any ongoing releases and/or prevent further migration of contaminants and control source areas.

9. Data Needs

Assess amount and quality of existing data concerning facility and determine what additional information must be collected to meet the objectives of the FI. This assessment must identify any additional information that may be needed to (1) support development of interim measures for early action and (2) adequately evaluate and compare corrective measures alternatives (e.g., field work, treatability studies, computer modeling, literature searches, vendor contacts, etc.). For example, if soil vapor extraction (SVE) is a likely option to address contamination at the facility, then the FI should collect applicable field data to assess SVE (e.g., soil gas analysis, depth to ground water, etc.). The FI Workplan must detail how this additional information will be collected.

10. References

Provide a list of references cited in the Current Conditions Report.

B. Facility Investigation Workplan

The FI Workplan shall define the procedures necessary to:

- Gather all necessary data to determine where interim measures are needed and to support the use of interim measures to address immediate threats to human health and/or the environment, to prevent or minimize the spread of contaminants, to control sources of contamination and to accelerate the corrective action process (required for all releases).
- Characterize the presence, magnitude, extent (horizontal and vertical), rate of movement and direction of any ground water contamination in and around the facility (only required for releases to ground water)
- Characterize the geology and hydrogeology in and around the facility (only required for releases to ground water and possibly for releases to soil).
- Characterize the presence, magnitude, extent (horizontal and vertical), rate of movement and direction of any soil contamination in and around the facility (only required for releases to soil).
- Characterize the presence, magnitude, extent (horizontal and vertical), rate of movement and direction of any soil gas contamination in and around the facility (may be required for releases to ground water and/or soil depending on the circumstances).
- Characterize the presence, magnitude, extent (horizontal and vertical), rate of movement and direction of any surface water contamination (includes surface water sediments) at the facility (only required for releases to surface water).
- Characterize the presence, magnitude, extent (horizontal and vertical), rate of movement and direction of any air releases at the facility (only required for air releases);
- Characterize the presence, magnitude, extent (horizontal and vertical), rate of movement and direction of light fibrous material contamination in and around the facility (only required for releases of light fibrous materials).
- Characterize any potential sources of contamination (required for all releases).

- Characterize the potential pathways of contaminant migration (required for all releases).
- Identify any actual or potential receptors (required for all releases).
- Gather all data to support a risk and/or ecological assessment (if required); and
- Gather all necessary data to support the Corrective Measures Study (required for all releases). This could include conducting treatability, pilot, laboratory and/or bench scale studies to assess the effectiveness of a treatment method.

The FI Workplan shall describe all aspects of the investigation, including project management, sampling, and analysis, well drilling and installation and quality assurance and quality control. If the scope of the investigation is such that more than one phase is necessary, the "Phase 1" FI Workplan must include a summary description of each phase. For example, the first phase of a FI could be used to gather information necessary to focus the second phase into key areas of the facility that need further investigation.

The required format for a FI Workplan is described below:

1. Introduction

Briefly introduce the FI Workplan. Discuss the Order or Permit requiring the FI and how the FI Workplan is organized.

2. Investigation Objectives

2.1. Project Objectives

Describe the overall objectives and critical elements of the FI. State the general information needed from the site (e.g., soil chemistry, hydraulic conductivity of aquifer, stratigraphy, ground water flow direction, identification of potential receptors, etc.). The general information should be consistent with the objectives of the FI and the data needs identified in the Current Conditions Report.

2.2. Data Quality Objectives

Provide data quality objectives that identify what data are needed and the intended use of the data.

3. Project Management

Describe how the investigation will be managed, including the following information:

- Organization chart showing key personnel, levels of authority and lines of communication;
- Project Schedule; and
- Estimated Project Budget.

Identify the individuals or positions who are responsible for: project management, field activities, laboratory analysis, database management, overall quality assurance, data validation, etc. Include a description of qualifications for personnel performing or directing the FI, including contractor personnel.

4. Facility Background

Summarize existing contamination (e.g., contaminants, concentrations, etc.), local hydrogeologic setting and any other areas of concern at the facility. Include a map showing the general geographic location of the facility and a more detailed facility map showing the areas of contamination. Provide a reference to the Current Conditions Report and/or other applicable documents as a source of additional information.

5. Field Investigation

5.1. Task Description

Provide a qualitative description of each investigation task. Example tasks may include, but are not limited to the following:

Task 1: Surface Soil Sampling

Task 2: Surface Geophysics, Subsurface Soil Boring, and Borehole Geophysics

Task 3: Data Gathering to Support Interim Corrective Measures

Task 4: Monitoring Well Installation

Task 5: Aquifer Testing

Task 6: Ground Water Sampling

Task 7: Potential Receptor Identification

Task 8: Treatability Studies

5.2. Rationale for Sampling

Describe where all samples will be collected (location and depth), types of media that will be sampled and the analytical parameters. Explain the rationale for each sampling point, the total number of sampling points, and any statistical approach used to select these points. The conceptual site model of contaminant migration developed in the Current Conditions Report should be considered when selecting sampling locations and depths. If some possible sampling points are excluded, explain why. Describe any field screening techniques that will be used to identify samples for laboratory analysis. Include the rationale for use of field screening techniques and criteria for sample selection.

5.2.1 Background Samples

Background samples should be analyzed for the complete set of parameters for each medium; treat sediments, surface soils and subsurface soils as separate media. Background samples are collected, numbered, packaged, and sealed in the same manner as other samples. For long term and/or especially large projects, it is recommended that 10% of samples collected be from background locations.

5.3. Sample Analysis

List and discuss all analyses proposed for the project. Include a table that summarizes the following information for each analysis to be performed:

- Analytical Parameters
- Analytical Method Reference Number (from USEPA SW 846)
- Sample Preparation and/or Extraction Method Reference Number (from USEPA SW 846)

- Detection and Practical Quantitation Limits (Data above the detection limit but below the practical quantitation limit must be reported with the estimated concentration.)

Discuss the rationale for selection of the analytical parameters. The rationale must relate to site history and the FI objectives. The achievable detection limits or quantitation limits stated in the selected methods must be adequate for valid comparisons of analytical results against any action levels or standards. For example, the objective may be to collect ground water data for comparison with Maximum Contaminant Levels (MCLs) or Regional Screening Levels (RSLs). If this were the case, it would be important to ensure that any ground water test methods had detection limits below the MCLs or RSLs. Give an explanation if all samples from the same medium will not be analyzed for the same parameters.

Provide the name(s) of the laboratory(s) that will be doing the analytical work. Indicate any special certifications or ratings of the laboratory. Describe the steps that will be taken to select and pre-qualify analytical laboratories to be used including any previous audits and/or other criteria. If a definite laboratory has not yet been selected, list at least three (3) laboratories that are being considered for the analytical work.

5.4. Sample Collection Procedures

Describe how sampling points will be selected in the field, and how these locations will be documented and marked for future reference. If a sampling grid will be used, describe the dimensions, and lay out planned for the grid.

Outline sequentially or step-by-step the procedure for collecting a sample for each medium and each different sampling technique. Include a description of sampling equipment (including materials of construction), field measurements, sample preservation, housekeeping/ cleanliness techniques and well purging procedures. The procedure described must ensure that a representative sample is collected, and that sample handling does not result in cross contamination or unnecessary

loss of contaminants. Special care in sample handling for volatile organic samples must be addressed.

Describe how and when duplicates, blanks, laboratory quality control samples and background samples will be collected. If samples will be filtered, describe filtration equipment and procedures.

Respondent must include sufficient maps and tables to fully describe the sampling effort. This shall include, at a minimum, a map showing all proposed sampling locations and tables that contain the following information:

Sample Collection Table:

- Sampling Location/Interval
- Analytical Parameters (e.g., volatile organic compounds)
- Analytical Method Number
- Medium
- Preservation Method
- Holding Times (as specified in USEPA SW 846)
- Containers (quantity, size, type plus footnotes that discuss source and grade of containers)

Sample Summary Table:

- Sample Description/Area (include QC samples)
- Analytical Parameters
- Analytical Method Number
- Preparation or Extraction Method Number
- Medium
- Number of Sample Sites
- Number of Analyses

5.4.1 Equipment Decontamination

Describe the decontamination procedure for all drilling, sampling equipment (including metal sleeves), and field-parameter testing equipment.

The following is a recommended generic procedure for decontamination of sampling equipment:

- Wash with non-phosphate detergent
- Tap water rinse
- 0.1 Mole nitric acid rinse (when cross contamination from metals is a concern)
- Deionized/distilled water rinse
- Pesticide grade solvent rinse (when semi volatiles and non-volatile organic contamination may be present)
- Deionized/distilled water rinse (twice)
- Organic free water rinse [High Performance Liquid Chromatography (HPLC) grade]

The above procedure is not appropriate for every field condition. Clearly document the decontamination procedures.

5.4.2 Equipment Calibration and Maintenance

Logbooks or pre-formatted calibration worksheets should be maintained for major field instruments, to document servicing, maintenance, and instrument modification. The calibration, maintenance and operating procedures for all instruments, equipment and sampling tools must be based upon manufacturer's instructions. List all field equipment to be used, specify the maintenance/calibration frequency for each instrument and the calibration procedures (referenced in text and included in appendices).

5.4.3 Sample Packaging and Shipment

Describe how samples will be packaged and shipped. All applicable Department of Transportation regulations must be followed.

5.4.4 Sample Documentation

Discuss the use of all paperwork including field notebooks, record logs, photographs, sample paperwork, and Chain of Custody forms (include a blank copy in FI Workplan Appendices) and seals.

Describe how sample containers will be labeled and provide an example label if available. At a minimum, each sample container label should include project ID, sample location, analytical parameters, date sampled, and any preservative added to the sample.

A bound field logbook must be maintained by the sampling team to provide a daily record of events. Field logbooks shall provide the means of recording all data regarding sample collection. All documentation in field books must be made in permanent ink. If an error is made, corrections must be made by crossing a line through the error and entering the correct information. Changes must be initialed, no entries shall be obliterated or rendered unreadable. Entries in the logbook must include, at a minimum, the following for each day's sampling:

- Date
- Starting Time
- Meteorological Conditions
- Field Personnel Present
- Level of Personal Protection
- Site Identification
- Field Observations/Parameters
- Sample Identification Numbers
- Location and Description of Sampling Points
- Number of Samples Collected
- Time of Sample Collection
- Signature of Person Making the Entry
- Observation of Sample Characteristics
- Photo Log
- Deviations

5.4.5 Disposal of Contaminated Materials

Describe the storage and disposal methods for all contaminated cuttings, well development and purge water, disposable equipment, decontamination water,

and any other contaminated materials. The waste material must be disposed of in a manner consistent with local, state, and federal regulations.

5.4.6 Standard Operating Procedures

If Standard Operating Procedures (SOPs) are referenced, the relevant procedure must be summarized in the FI Workplan. The SOP must be specific to the type of tasks proposed and be clearly referenced in the FI Workplan. The SOP must also be directly applicable, as written, to the FI Workplan; otherwise, modifications to the SOP must be discussed. Include the full SOP description in the FI Workplan appendix.

5.5. Well Construction and Aquifer Testing

When new monitoring wells (or piezometers) are proposed, describe the drilling method, well design and construction details (e.g., depth of well, screen length, slot size, filter pack material, etc.) and well development procedures. Describe the rationale for proposed well locations and selection of all well design and construction criteria (i.e., provide rationale for selection of slot size and screen length).

When aquifer testing is proposed, describe the testing procedures, flow rates, which wells are involved, test periods, how water levels will be measured, and any other pertinent information.

6. Quality Assurance and Quality Control

Quality control checks of field and laboratory sampling and analysis serve two purposes: to document the data quality, and to identify areas of weakness within the measurement process which need correction.

Include a summary table of data quality assurance objectives that, at a minimum, lists:

- Analysis Group (e.g., volatile organic compounds)
- Medium
- Practical Quantitation Limits (PQL) and Method Detection Limits (MDL)

- Spike Recovery Control Limits (%R)
- Duplicate Control Limits +/- Relative Percent Difference (RPD)
- QA Sample Frequency
- Data Validation

A reference may note the specific pages from USEPA's SW 846 Guidance Document that list the test method objectives for precision and accuracy. If the field and laboratory numerical data quality objectives for precision are the same and presented on a single table, then a statement should be made to this effect and added as a footnote to the table (e.g., "These limits apply to both field and laboratory duplicates"). Include a copy of the analytical laboratory quality assurance/quality control plan in the appendices of the FI Workplan and provide the equations for calculating precision and accuracy.

6.1 Field Quality Control Samples

6.1.1 Field Duplicates

Duplicates are additional samples that must be collected to check for sampling and analytical precision. Duplicate samples for all parameters and media must be collected at a frequency of at least one sample per week or 10 percent of all field samples, whichever is greater.

Duplicates should be collected from points which are known or suspected to be contaminated. For large projects, duplicates should be spread out over the entire site and collected at regular intervals.

Duplicates must be collected, numbered, packaged, and sealed in the same manner as other samples; duplicate samples are assigned separate sample numbers and submitted blind to the laboratory.

6.1.2 Blank Samples

Blanks are samples that must be collected to check for possible cross-contamination during sample collection and shipment and in the laboratory. Blank samples should be analyzed for all parameters being evaluated. At least

one blank sample per day must be done for all water and air sampling. Additionally, field blanks are required for soil sampling if non-dedicated field equipment is being used for sample collection.

Blank samples must be prepared using analytically certified, organic-free (HPLC-grade) water for organic parameters and metal-free (deionized-distilled) water for inorganic parameters. Blanks must be collected, numbered, packaged, and sealed in the same manner as other samples; blank samples are assigned separate sample numbers and submitted blind to the laboratory.

The following types of blank samples may be required:

- **Equipment Blank:** An equipment blank must be collected when sampling equipment (e.g., bladder pump) or a sample collection vessel (e.g., a bailer or beaker) is decontaminated and reused in the field. Use the appropriate "blank" water to rinse the sampling equipment after the equipment has been decontaminated and then collect this water in the proper sample containers.
- **Field Bottle Blank:** This type of blank must be collected when sampling equipment decontamination is not necessary. The field bottle blank is obtained by pouring the appropriate "blank" water into a container at a sampling point.

6.2 Laboratory Quality Control Samples

Laboratories routinely perform matrix spike and laboratory duplicate analysis on field samples as a quality control check. A minimum of one field sample per week or 1 per 20 samples (including field blanks and duplicates), whichever is greater, must be designated as the "Lab QC Sample" for the matrix and laboratory duplicate analysis.

Laboratory quality control samples should be selected from sampling points which are suspected to be moderately contaminated. Label the bottles and all copies of the paperwork as "Lab QC Sample"; the laboratory must know that this sample is for their QC analyses. The first laboratory QC sample of the sampling effort

should be part of the first- or second-day's shipment. Subsequent laboratory QC samples should be spread out over the entire sampling effort.

For water media, 2-3 times the normal sample volume must be collected for the laboratory QC sample. Additional volume is usually not necessary for soil samples.

6.3 Performance System Audits by Respondent

This section should describe any internal performance and/or system audit which Respondent will conduct to monitor the capability and performance of the project. The extent of the audit program should reflect the data quality needs and intended data uses. Audits are used to quickly identify and correct problems thus preventing and/or reducing costly errors. For example, a performance audit could include monitoring field activities to ensure consistency with the workplan. If the audit strategy has already been addressed in a QA program plan or standard operating procedure, cite the appropriate section which contains the information.

7. Data Management

Describe how investigation data and results will be evaluated, documented, and managed, including development of an analytical database. State the criteria that will be used by the project team to review and determine the quality of data. To document any quality assurance anomalies, the FI QC Summary Forms must be completed by the analytical laboratory and submitted as part of the FI Report. In addition, provide examples of any other forms or checklists to be used.

Identify and discuss personnel and data management responsibilities, all field, laboratory, and other data to be recorded and maintained, and any statistical methods that may be used to manipulate the data.

8. References

Provide a list of references cited in the FI Workplan.

C. Facility Investigation Report

A FI Report must be prepared that describes the entire site investigation and presents the basic results. The FI Report must clearly present an evaluation of investigation results (e.g., all potential contaminant source areas must be identified, potential migration pathways must be described, and affected media shown, etc.).

The FI Report must also include an evaluation of the completeness of the investigation and indicate if additional work is needed. This work could include additional investigation activities and/or interim corrective measures to stabilize contaminant release areas and limit contaminant migration. If additional work is needed, Respondent must submit a Phase 2 FI Workplan and/or Interim Corrective Measures Workplan must be submitted to DTSC along with the FI Report.

At a minimum, the FI Report must include:

- A summary of investigation results (include tables that summarize analytical results).
- A complete description of the investigation, including all data necessary to understand the project in its entirety including all investigative methods and procedures.
- A discussion of key decision points encountered and resolved during the investigation.
- Graphical displays such as isopleths, potentiometric surface maps, cross-sections, plume contour maps (showing concentration levels, isoconcentration contours), facility maps (showing sample locations, etc.) and regional maps (showing receptor areas, water supply wells, etc.) that describe report results. Highlight important facts such as geologic features that may affect contaminant transport.
- Tables that list all chemistry data for each medium investigated.
- An analysis of current and existing ground water data to illustrate temporal changes for both water chemistry and piezometric data (use graphics whenever possible).

- A description of potential or known impacts on human and environmental receptors from releases at the facility. Depending on the site-specific circumstances, this analysis could be based on the results from contaminant dispersion models if field validation is performed.
- A discussion of any upset conditions that occurred during any sampling events or laboratory analysis that may influence the results. The discussion must include any problems with the chain of custody procedures, sample holding times, sample preservation, handling and transport procedures, field equipment calibration and handling, field blank results that show potential sample contamination and any field duplicate results that indicate a potential problem. Summary tables must be provided that show the upset condition and the samples that could be impacted. The FI QC Summary Forms must be completed by the analytical laboratory and submitted as part of the FI Report.
- Assessment of the entire QA/QC program effectiveness.
- Data validation results should be documented in the FI Report.

In addition to the FI Report, DTSC may require Respondent to submit the analytical results (database) in an electronic format (DTSC will specify the format). All raw laboratory and field data (e.g., analytical reports) must be kept at the facility and be made available or sent to the DTSC upon request.

In the event that DTSC determines that further action is needed, the following additional activities may be requested.

ATTACHMENT 5: SCOPE OF WORK FOR A CORRECTIVE MEASURES STUDY

PURPOSE

The purpose of the Corrective Measures Study (CMS) is to identify and evaluate potential remedial alternatives to address contaminant releases from a facility.

SCOPE

A Corrective Measures Study Workplan and a Corrective Measures Study Report are, unless otherwise specified by the Department of Toxic Substances Control (DTSC), required elements of the CMS. The Scope of Work (SOW) for the Corrective Measures Study Workplan and Report describe what should be included in each document. The SOWs are intended to be flexible documents capable of addressing both simple and complex site situations. If Respondent can justify, to the satisfaction of DTSC, that sections of a plan and/or report are not needed in the given site-specific situation, then DTSC may waive that requirement.

The scope and substance of the CMS should be focused to fit the complexity of the site-specific situation. It is anticipated that Respondent of sites with complex environmental problems may need to evaluate several technologies and corrective measure alternatives. For other facilities, however, it may be appropriate to evaluate a single corrective measure alternative.

DTSC may require Respondent to conduct additional studies beyond what is discussed in the SOWs to support the CMS. Respondent will furnish all personnel, materials, and services necessary to conduct the additional tasks. The SOW for the Corrective Measures Study Workplan and Report are specified below:

A. Corrective Measures Study Workplan

The purpose of the Corrective Measures Study (CMS) Workplan is to specify how the CMS Report will be prepared. The CMS Workplan shall, at a minimum, include the following elements:

1. A brief project summary.
2. A site-specific description of the overall purpose of the CMS.
3. A description of the proposed media cleanup standards and points of compliance that will be used in the corrective measures study report. Include the justification and supporting rationale for the proposed media cleanup standards and points of compliance. The proposed media cleanup standards must be based on available promulgated federal and state cleanup standards, risk-based analysis, data and information gathered during the corrective action process (e.g., from Facility Investigation, etc.), and/or information from other applicable guidance documents. DTSC may require that Respondent conduct a risk assessment to gather information for establishing cleanup standards. Based on the CMS Report and other information including public comments, DTSC will establish final cleanup standards and points of compliance as part of the remedy selection process.
4. A description of the specific corrective measure technologies and/or corrective measure alternatives which will be studied.
5. A description of the general approach to investigating and evaluating potential corrective measures.
6. A detailed description of any proposed treatability, pilot, laboratory and/or bench scale studies. Proposed studies must be further detailed in either the CMS Workplan or in separate workplans. Submittal times for separate workplans must be included in the CMS Workplan project schedule.
7. A proposed outline for the CMS Report including a description of how information will be presented.

8. A description of overall project management including overall approach, levels of authority (include organization chart), lines of communication, budget, and personnel. Include a description of qualifications for personnel directing or performing the work.
9. A project schedule that specifies all significant steps in the process and when key documents (e.g., CMS Report) are to be submitted to DTSC.

B. Corrective Measures Study Report

The CMS Report shall, at a minimum, include the following elements:

1. Introduction/Purpose

Describe the purpose and intent of the document.

2. Description of Current Conditions

Respondent shall include a brief discussion of any new information that has been developed since the Facility Investigation Report was finalized. This discussion should concentrate on those issues which could significantly affect the evaluation and selection of the corrective measure alternative(s).

3. Proposed Media Cleanup Standards

Respondent shall describe and justify the proposed media cleanup standards and points of compliance.

4. Identification and Screening of Corrective Measure Technologies

- a. Identification

List and briefly describe potentially applicable technologies for each affected media that may be used to achieve the media cleanup standards.

Respondent should consider including a table that summarizes the available technologies.

Respondent should consider innovative treatment technologies, especially in situations where there are a limited number of applicable corrective measure technologies. Innovative technologies are defined as those technologies for source control other than incineration, solidification/stabilization and pumping with conventional treatment for contaminated ground water. Innovative treatment technologies may require extra initial effort to gather information, analyze options and to adapt the technology to site specific situations. However, in the long run, innovative treatment technologies could be more cost effective. Treatability studies and on-site pilot scale studies may be necessary for evaluating innovative treatment technologies.

b. Screening

Technologies must be screened to eliminate those that may prove unfeasible to implement given the existing set of waste and site-specific conditions. The screening is accomplished by evaluating technology limitations (e.g., for volume, area, contaminant concentrations, interferences, etc.) and using contaminant and site characterization information from the Facility Investigation to screen out technologies that cannot be fully implemented at the facility. The screening process must focus on eliminating those technologies which have severe limitations for a given set of waste and site-specific conditions (e.g., depth to ground water and aquitards).

As with all decisions during the CMS, the screening of technologies must be fully documented. This is especially true if the screening step indicates that only one corrective action technology should proceed to the next step and be evaluated in detail. List the corrective action technologies selected for further evaluation. Also document the reasons for excluding any corrective action technologies. Respondent should consider including a table that summarizes the findings.

5. Corrective Measure Alternative Development

Assemble the technologies that pass the screening step into specific alternatives that have potential to meet the corrective action objectives. Options for addressing

less complex sites could be relatively straightforward and may only require evaluation of a single or limited number of alternatives.

Each alternative may consist of an individual technology or a combination of technologies used in sequence (e.g., treatment train). Depending on the site-specific situation, different alternatives may be considered for separate areas of the facility. List and briefly describe each corrective measure alternative.

6. Evaluation of Corrective Measure Alternatives

The four corrective action standards and five remedy selection decision factors described below shall be used to evaluate the corrective measure alternatives. All alternatives must meet the corrective action standards before the remedy selection decision factors are used for further evaluation.

The corrective action standards are as follows:

- Be protective of human health and the environment.
- Attain media cleanup standards.
- Control the source(s) of releases to reduce or eliminate, to the extent practicable, further releases of hazardous wastes (including hazardous constituents) that may pose a threat to human health and the environment; and
- Comply with any applicable federal, state, and local standards for management of wastes.

The remedy selection decision factors are as follows:

- Short- and Long-Term Effectiveness.
- Reduction of Toxicity, Mobility and/or Volume.
- Long-Term Reliability.
- Implementability; and
- Cost.

The corrective action standards and decision factors are described in further detail below.

a. Be Protective of Human Health and the Environment

Describe in detail how each corrective measure alternative is protective of human health and the environment.

This standard for protection of human health and the environment is a general mandate of the statute. The standard requires that remedies include any measures that are needed to be protective. These measures may or may not be directly related to media cleanup, source control, or management of wastes. An example would be a requirement to provide alternative drinking water supplies to prevent exposures to a contaminated drinking water supply.

b. Attain Media Cleanup Standards

Describe in detail each corrective measure alternatives ability to meet the proposed media cleanup standards.

c. Control the Sources of Releases

Describe in detail each corrective measure alternatives ability to control the sources of releases.

A critical objective of any remedy must be to stop further environmental degradation by controlling or eliminating further releases that may pose a threat to human health and the environment. Unless source control measures are taken, efforts to cleanup releases may be ineffective or, at best, will essentially involve a perpetual cleanup. Therefore, an effective source control program is essential to ensure the long-term effectiveness and protectiveness of the corrective action effort.

The source control standard is not intended to mandate a specific remedy or class of remedies. Instead, Respondent is encouraged to examine a wide range of options. This standard should not be interpreted to preclude the equal consideration of using other protective remedies to control the source,

such as partial waste removal, capping, slurry walls, in-situ treatment/stabilization, and consolidation.

d. Comply with Any Applicable Standards for Management of Wastes

Discuss how any specific waste management activities will be conducted in compliance with all applicable state or federal regulations (e.g., Corrective Action Management Unit closure requirements, land disposal restrictions).

e. Short- and Long-Term Effectiveness

Each corrective measure alternative must be evaluated with regard to its effectiveness in protecting human health and the environment and meeting the proposed media cleanup standards. Both short- and long-term components of effectiveness must be evaluated; short-term referring to the construction and implementation period, and long-term referring to the period after the remedial action is complete. Estimate approximately how much time it will take to implement each corrective measure alternative, the length of time before initial beneficial results are obtained, and the length of time required to achieve the proposed media cleanup standards.

The evaluation of short-term effectiveness must include possible threats to the safety of nearby communities, workers, and environmentally sensitive areas (e.g., oceans, wetlands) during construction of the corrective measure alternative. Factors to consider are fire, explosion, exposure to hazardous substances and potential threats associated with treatment, excavation, transportation and re-disposal or containment of waste material. Laboratory and/or field studies are extremely useful in estimating the effectiveness of corrective measures and should be used whenever possible.

The evaluation of long-term effectiveness must include possible threats to the safety of nearby communities, workers, and environmentally sensitive areas (e.g., oceans, wetlands) during operation of the corrective measure alternative.

f. Reduction of Toxicity, Mobility and/or Volume

Each corrective measure alternative must be evaluated for its ability to reduce the toxicity, mobility, and/or volume of the contaminated media. Reduction in toxicity, mobility, and/or volume refers to changes in one or more characteristics of the contaminated media using corrective measures that decrease the inherent threats associated with the media.

Estimate how much the corrective measure alternative will reduce the waste toxicity, volume and/or mobility (compare initial site conditions to post-corrective measure conditions). In general, DTSC strongly prefers corrective measures that have a high degree of permanence and reduce the contaminant toxicity, mobility, and volume through treatment.

g. Long-Term Reliability

Each corrective measure alternative must be evaluated with regards to its long-term reliability. This evaluation includes consideration of operation and maintenance requirements.

Demonstrated and expected reliability is a way of assessing the risk and effect of failure. Discuss whether the technology or combination of technologies have been used effectively together under analogous site conditions, whether failure of any one technology in the alternative has an impact on receptors or contaminant migration, and whether the alternative would have the flexibility to deal with uncontrollable changes at the site (e.g., heavy rain storms, earthquakes, etc.).

Operation and maintenance requirements include the frequency and complexity of necessary operation and maintenance. Technologies requiring frequent or complex operation and maintenance activities should be regarded as less reliable than technologies requiring little or straightforward operation and maintenance. The availability of labor and materials to meet these requirements must also be considered.

Most corrective measure technologies, with the exception of destruction, deteriorate with time. Often, deterioration can be slowed through proper system operation and maintenance, but the technology eventually may require replacement. Each corrective measure alternative shall be evaluated in terms of the projected useful life of the overall alternative and of its component technologies. Useful life is defined as the length of time the necessary or required level of effectiveness can be maintained.

h. Implementability of Corrective Measure Alternatives

The implementability criterion addresses the technical and administrative feasibility of implementing a corrective measure alternative and the availability of various services and materials needed during implementation. Each corrective measure alternative must be evaluated using the following criteria:

- **Construction and Operation:** Corrective measure alternatives must be feasible to implement given the existing set of waste and site-specific conditions. This evaluation was initially done for specific technologies during the screening process and is addressed again in this detailed analysis of the alternative as a whole. It is not intended that the screening process be repeated here, but instead to highlight key differences and/or changes from the screening analysis that may result from combining technologies.
- **Administrative Feasibility:** Discuss the administrative activities needed to implement the corrective measure alternative (e.g., permits, public acceptance, rights of way, off-site approvals, etc.).
- **Availability of Services and Materials:** Discuss the availability of adequate off-site treatment, storage capacity, disposal services, needed technical services and materials, and the availability of prospective technologies for each corrective measure alternative.

i. Cost

Develop a preliminary cost estimate for each corrective measure alternative (and for each phase or segment of the alternative). The cost estimate shall

include both capital and operation and maintenance costs. Include a description of how the costs were estimated and what assumptions were used.

- The preliminary capital cost estimate must consider all key costs including, at a minimum, costs for engineering, mobilization, demobilization, site preparation, construction, materials, labor, equipment purchase and rental, sampling, analysis, waste disposal, permitting and health and safety measures.
- The preliminary operation and maintenance cost estimate must consider all key costs including, at a minimum, costs for labor, training, sampling, analysis, maintenance materials, utilities, waste disposal, waste treatment, permitting and health and safety measures.
- Calculate the net present value of preliminary capital and operation and maintenance costs for each corrective measure alternative.

7. Respondent's Recommended Corrective Measure Alternative

Respondent may recommend a preferred corrective measure alternative for consideration by DTSC. Such a recommendation should include a description and supporting rationale for the preferred alternative that is consistent with the corrective action standards and remedy selection decision factors discussed above.

Based on the CMS Report and other information including public comments, DTSC will establish final cleanup standards, points of compliance and will select a final remedy for the facility.

ATTACHMENT 6: SCOPE OF WORK FOR CORRECTIVE MEASURES IMPLEMENTATION

PURPOSE

The purpose of the Corrective Measures Implementation (CMI) program is to design, construct, operate, maintain, and monitor the performance of the corrective measure or measures selected by DTSC. Corrective measures are intended to protect human health and/or the environment from hazardous waste releases from the Facility. Respondent will furnish all personnel, materials, and services necessary to implement the corrective measures program.

SCOPE

The documents required for Corrective Measures Implementation are, unless the Department of Toxic Substances Control (DTSC) specifies otherwise, a Corrective Measures Implementation Workplan, Operation and Maintenance Plan, Draft Plans and Specifications, Final Plans and Specifications, Construction Workplan, Construction Completion Report and Corrective Measure Completion Report. The scope of work (SOW) for each document is specified below. The SOWs are intended to be flexible documents capable of addressing both simple and complex site situations. If Respondent can justify, to the satisfaction of DTSC, that a plan and/or report or portions thereof are not needed in the given site-specific situation, then DTSC may waive that requirement.

The scope and substance of the CMI should be focused to fit the complexity of the site-specific situation. Not all the documents included in the CMI SOW may be needed for every facility.

DTSC may require Respondent to conduct additional studies beyond what is discussed in the SOWs to support the CMI program. Respondent will furnish all personnel, materials, and services necessary to conduct the additional tasks.

A. Corrective Measures Implementation Workplan

Respondent shall prepare a CMI Workplan that clearly describes the size, shape, form, and content of the proposed corrective measure, the key components or elements that are needed, describes the designers vision of the corrective measure in the form of conceptual drawings and schematics, and includes procedures and schedules for implementing the corrective measure(s).

Note that more than one CMI Workplan may be needed in situations where there is a complex site with multiple technologies being employed at different locations. The CMI Workplan must be approved by DTSC prior to implementation. The CMI Workplan must, at a minimum, include the following elements:

1. Introduction/Purpose

Describe the purpose of the document and provide a summary description of the project.

2. Media Cleanup Standards

Discuss the media cleanup standards for the facility.

3. Conceptual Site Model of Contaminant Migration

Respondent must present a conceptual site model of the contaminant migration to develop a preliminary understanding of the site's potential risks to human health and the environment, and to assist in developing the corrective measures study. The conceptual site model presents information about site conditions and potential impacts to receptors and may be updated as new information is obtained. The information can be provided in a schematic presentation or pictorially. The conceptual site model should illustrate possible contaminant transport mechanisms and exposure pathways from various media that may be affected: air, soil, sediments, and water, including soil vapor, groundwater, and surface water.

The conceptual site model also consists of a working hypothesis of how the contaminants (including but not limited to dust, debris, and light fibrous materials) may move from the release source to the receptor population. The conceptual site

model is developed by looking at the applicable physical parameters (e.g., water solubility, density, Henry's Law Constant, etc.) for each contaminant and assessing how the contaminant may migrate given the existing site conditions (geologic features, depth to ground water, etc.). Describe the phase (water, soil, gas, non-aqueous) and location where contaminants are likely to be found. This analysis may have already been done as part of earlier work (e.g., Current Conditions Report). If this is the case, then provide a summary of the conceptual site model with a reference to the earlier document. If not, then field validation of the conceptual site model is required.

4. Description of Corrective Measures

Considering the conceptual site model of contaminant migration, qualitatively describe what the corrective measure is supposed to do and how it will function at the Facility. Discuss the constructability of the corrective measure and its ability to meet the corrective measure objectives.

5. Data Sufficiency

Review existing data needed to support the design effort and establish whether there are sufficient accurate data available for this purpose. Respondent must summarize the assessment findings and specify any additional data needed to complete the corrective measure design. DTSC may require or Respondent may propose that sampling and analysis plans and/or treatability study workplans be developed to obtain the additional data. Submittal times for any new sampling and analysis plans and/or treatability study workplans must be included in the project schedule.

6. Project Management

Describe the management approach including levels of authority and responsibility (include organization chart), lines of communication and the qualifications of key personnel who will direct the corrective measure design and implementation effort (including contractor personnel).

7. Project Schedule

The project schedule must specify all significant steps in the process and when all CMI deliverables (e.g., Operation and Maintenance Plan, Corrective Measure Construction Workplan, etc.) are to be submitted to DTSC.

8. Design Criteria

Specify performance requirements for the overall corrective measure and for each major component. Respondent must select equipment that meets the performance requirements.

9. Design Basis

Discuss the process and methods for designing all major components of the corrective measure. Discuss the significant assumptions made and possible sources of error. Provide justification for the assumptions.

10. Conceptual Process/Schematic Diagrams.

11. Site plan showing preliminary plant layout and/or treatment area.

12. Tables listing number and type of major components with approximate dimensions.

13. Tables giving preliminary mass balances.

14. Site safety and security provisions (e.g., fences, fire control, etc.).

15. Waste Management Practices

Describe the wastes generated by the construction of the corrective measure and how they will be managed. Also discuss drainage and indicate how rainwater runoff will be managed.

16. Required Permits

List and describe the permits needed to construct and operate the corrective measure. Indicate on the project schedule when the permit applications will be submitted to the applicable agencies and an estimate of the permit issuance date.

17. Long-Lead Procurement Considerations

Respondent shall prepare a list of any elements or components of the corrective measure that will require custom fabrication or for some other reason must be considered as long-lead procurement items. The list must include the reason why the items are considered long-lead items, the length of time necessary for procurement, and recognized sources of such procurement.

18. Appendices including:

- a. Design Data - Tabulations of significant data and assumptions used in the design effort.
- b. Equations - List and describe the source of major equations used in the design process.
- c. Sample Calculations - Present and explain one example calculation for significant or unique design calculations; and
- d. Laboratory or Field Test Results.

B. Operation and Maintenance Plan

Respondent shall prepare an Operation and Maintenance (O&M) Plan that includes a strategy and procedures for performing operations, long term maintenance, and monitoring of the corrective measure. A draft O&M Plan shall be submitted to DTSC simultaneously with the draft Plans and Specifications. A final O&M Plan shall be submitted to DTSC simultaneously with the final Plans and Specifications. The O&M Plan shall, at a minimum, include the following elements:

1. Introduction/Purpose

Describe the purpose of the document and provide a summary description of the project.

2. Project Management

Describe the management approach including levels of authority and responsibility (include organization chart), lines of communication and the qualifications of key personnel who will operate and maintain the corrective measures (including contractor personnel).

3. System Description

Describe the corrective measure and identify significant equipment.

4. Personnel Training

Describe the training process for O&M personnel. Respondent shall prepare, and include in the technical specifications governing treatment systems, contractor requirements for providing: appropriate service visits by experienced personnel to supervise the installation, adjustment, start up and operation of the treatment systems, and training covering appropriate operational procedures once the start-up has been successfully accomplished.

5. Start-Up Procedures

Describe system start-up procedures including and operational testing.

6. Operation and Maintenance Procedures

Describe normal operation and maintenance procedures including:

- a. Description of tasks for operation.
- b. Description of tasks for maintenance;
- c. Description of prescribed treatment or operation conditions; and
- d. Schedule showing frequency of each O&M task.

7. Replacement schedule for equipment and installed components.

8. Waste Management Practices

Describe the wastes generated by operation of the corrective measure and how they will be managed. Also discuss drainage and indicate how rainwater runoff will be managed.

9. Sampling and Monitoring

Sampling and monitoring activities may be needed for effective operation and maintenance of the corrective measure. If sampling activities are necessary, the O&M Plan must include a complete sampling and analysis section which specifies at a minimum the following information:

- a. Description and purpose of monitoring tasks.
- b. Data quality objectives.
- c. Analytical test methods, method detection limits, and practical quantitation limits.
- d. Name of analytical laboratory.
- e. Laboratory quality control (include laboratory QA/QC procedures in appendices).
- f. Sample collection procedures and equipment.
- g. Field quality control procedures:
 - duplicates (10% of all field samples)
 - blanks (field, equipment, etc.)
 - equipment calibration and maintenance
 - equipment decontamination
 - sample containers
 - sample preservation
 - sample holding times (must be specified)
 - sample packaging and shipment
 - sample documentation (field notebooks, sample labeling, etc.)
 - chain of custody.

- h. Criteria for data acceptance and rejection; and
- i. Schedule of monitoring frequency.

Respondent shall follow all DTSC and USEPA guidance for sampling and analysis. DTSC may request that the sampling and analysis section be a separate document.

10. Corrective Measure Completion Criteria

Describe the process and criteria (e.g., ground water cleanup goal met at all compliance points for one year) for determining when corrective measures may cease. Also describe the process and criteria for determining when maintenance and monitoring may cease. Criteria for corrective measures such as a landfill cap must be carefully crafted to account for the fact that a landfill cap will never actually "cease" but will need to be maintained and monitored for a long period of time. Satisfaction of the completion criteria will trigger preparation and submittal of the Corrective Measure Completion Report.

11. O&M Contingency Procedures:

- a. Procedures to address system breakdowns and operational problems including a list of redundant and emergency back-up equipment and procedures.
- b. Should the corrective measure suffer complete failure, specify alternate procedures to prevent release or threatened releases of hazardous substances, pollutants or contaminants which may endanger public health and/or the environment or exceed cleanup standards.
- c. The O&M Plan must specify that, in the event of a major breakdown and/or complete failure of the corrective measure (includes emergency situations), Respondent will orally notify DTSC within 24 hours of the event and will notify DTSC in writing within 72 hours of the event. The written notification must, at a minimum, specify what happened, what response action is being taken and/or is planned, and any potential impacts on human health and/or the environment; and

- d. Procedures to be implemented in the event that the corrective measure is experiencing major operational problems, is not performing to design specifications and/or will not achieve the cleanup goals in the expected timeframe. For example, in certain circumstances both a primary and secondary corrective measure may be selected for the Facility. If the primary corrective measure were to fail, then the secondary would be implemented. This section would thus specify that if the primary corrective measure failed, then design plans would be developed for the secondary measure.

12. Data Management and Documentation Requirements

Describe how analytical data and results will be evaluated, documented, and managed, including development of an analytical database. State the criteria that will be used by the project team to review and determine the quality of data.

The O&M Plan shall specify that Respondent collect and maintain the following information:

- a. Progress Report Information
 - Work Accomplishments (e.g., performance levels achieved, hours of treatment operation, treated and/or excavated volumes, concentration of contaminants in treated and/or excavated volumes, nature and volume of wastes generated, etc.).
 - Record of significant activities (e.g., sampling events, inspections, problems encountered, action taken to rectify problems, etc.).
- b. Monitoring and laboratory data.
- c. Records of operating costs; and
- d. Personnel, maintenance, and inspection records.

These data and information should be used to prepare Progress Reports and the Corrective Measure Completion Report.

C. Draft Plans and Specifications

Respondent shall prepare draft Plans and Specifications that are based on the CMI Workplan but include additional design detail. A draft O&M Plan and Construction Workplan shall be submitted to DTSC simultaneously with the draft Plans and Specifications. The draft design package must include drawings and specifications needed to construct the corrective measure. Depending on the nature of the corrective measure, many different types of drawings and specifications may be needed. Some of the elements that may be required are:

- General Site Plans
- Process Flow Diagrams
- Mechanical Drawings
- Electrical Drawings
- Structural Drawings
- Piping and Instrumentation Diagrams
- Excavation and Earthwork Drawings
- Equipment Lists
- Site Preparation and Field Work Standards
- Preliminary Specifications for Equipment and Material

General correlation between drawings and technical specifications is a basic requirement of any set of working construction plans and specifications. Before submitting the project specifications to DTSC, Respondent shall:

- a. Proofread the specifications for accuracy and consistency with the CMI Workplan; and
- b. Coordinate and cross-check the specifications and drawings.

D. Final Plans and Specifications

Respondent shall prepare final Plans and Specifications that are sufficient to be included in a contract document and be advertised for bid. A final O&M Plan and

Construction Workplan shall be submitted to DTSC simultaneously with the final Plans and Specifications. The final design package must consist of the detailed drawings and specifications needed to construct the corrective measure. Depending on the nature of the corrective measure, many different types of drawings and specifications may be needed. Some of the elements that may be required are:

- General Site Plans
- Process Flow Diagrams
- Mechanical Drawings
- Electrical Drawings
- Piping and Instrumentation Diagrams
- Structural Drawings
- Excavation and Earthwork Drawings
- Site Preparation and Field Work Standards
- Construction Drawings
- Installation Drawings
- Equipment Lists
- Detailed Specifications for Equipment and Material

General correlation between drawings and technical specifications is a basic requirement of any set of working construction plans and specifications. Before submitting the final project specifications to DTSC, Respondent shall:

- a. Proofread the specifications for accuracy and consistency with the preliminary design; and
- b. Coordinate and cross-check the specifications and drawings.

E. Construction Workplan

Respondent shall prepare a Construction Workplan which documents the overall management strategy, construction quality assurance procedures and schedule for constructing the corrective measure. A draft Construction Workplan shall be submitted

to DTSC simultaneously with the draft Plans and Specifications and draft O&M Plan. A final Construction Workplan shall be submitted to DTSC simultaneously with the final Plans and Specifications and final O&M Plan. Upon receipt of written approval from DTSC, Respondent shall commence the construction process and implement the Construction Workplan in accordance with the schedule and provisions contained therein. The Construction Workplan must be approved by DTSC prior to the start of corrective measure construction. The Construction Workplan must, at a minimum, include the following elements:

1. Introduction/Purpose

Describe the purpose of the document and provide a summary description of the project.

2. Project Management

Describe the construction management approach including levels of authority and responsibility (include organization chart), lines of communication and the qualifications of key personnel who will direct the corrective measure construction effort and provide construction quality assurance/quality control (including contractor personnel).

3. Project Schedule

The project schedule must include timing for key elements of the bidding process, timing for initiation and completion of all major corrective measure construction tasks as specified in the Final Plans and Specifications, and specify when the Construction Completion Report is to be submitted to DTSC.

4. Construction Quality Assurance/Quality Control Program

The purpose of construction quality assurance is to ensure, with a reasonable degree of certainty, that a completed corrective measure will meet or exceed all design criteria, plans and specifications. The Construction Workplan must include a complete construction quality assurance program to be implemented by Respondent.

5. Waste Management Procedures

Describe the wastes generated by construction of the corrective measure and how they will be managed.

6. Sampling and Monitoring

Sampling and monitoring activities may be needed for construction quality assurance/quality control and/or other construction related purposes. If sampling activities are necessary, the Construction Workplan must include a complete sampling and analysis section which specifies at a minimum the following information:

- a. Description and purpose of monitoring tasks.
- b. Data quality objectives.
- c. Analytical test methods, method detection limits and practical quantitation limits.
- d. Name of analytical laboratory.
- e. Laboratory quality control (include laboratory QA/QC procedures in appendices)
- f. Sample collection procedures and equipment.
- g. Field quality control procedures:
 - duplicates (10% of all field samples)
 - blanks (field, equipment, etc.)
 - equipment calibration and maintenance
 - equipment decontamination
 - sample containers
 - sample preservation
 - sample holding times (must be specified)
 - sample packaging and shipment
 - sample documentation (field notebooks, sample labeling, etc.)

- chain of custody.
- h. Criteria for data acceptance and rejection; and
- i. Schedule of monitoring frequency.

Respondent shall follow all DTSC and USEPA guidance for sampling and analysis. DTSC may request that the sampling and analysis section be a separate document.

7. Construction Contingency Procedures

- a. Changes to the design and/or specifications may be needed during construction to address unforeseen problems encountered in the field. Procedures to address such circumstances, including notification of DTSC, must be included in the Construction Workplan.
- b. The Construction Workplan must specify that, in the event of a construction emergency (e.g., fire, earthwork failure, etc.), Respondent will orally notify DTSC within 24 hours of the event and will notify DTSC in writing within 72 hours of the event. The written notification must, at a minimum, specify what happened, what response action is being taken and/or is planned, and any potential impacts on public health and/or the environment; and
- c. Procedures to be implemented if unforeseen events prevent corrective measure construction. For example, in certain circumstances both a primary and secondary corrective measure may be selected for the Facility. If the primary corrective measure could not be constructed, then the secondary would be implemented. This section would thus specify that if the primary corrective measure could not be constructed, then design plans would be developed for the secondary measure.

8. Construction safety procedures should be specified in a separate Health and Safety Plan.

9. Data Management and Documentation Requirements

Describe how analytical data and results will be evaluated, documented, and managed, including development of an analytical database. State the criteria that will be used by the project team to review and determine the quality of data.

The Construction Workplan shall specify that Respondent collect and maintain the following information:

- a. Progress Report Information
 - Work Accomplishments (e.g., hours of operation, excavated volumes, nature, and volume of wastes generated, area of cap completed, length of trench completed, etc.).
 - Record of significant activities (e.g., sampling events, inspections, problems encountered, action taken to rectify problems, etc.).
- b. Monitoring and laboratory data.
- c. Records of construction costs; and
- d. Personnel, maintenance, and inspection records.

This data and information should be used to prepare progress reports and the Construction Completion Report.

10. Cost Estimate/Financial Assurance

If financial assurance for corrective measure construction and operation is required by an enforcement order, facility permit through use of DTSC discretion, the Construction Workplan must include a cost estimate, specify which financial mechanism will be used and when the mechanism will be established. The cost estimate shall include both construction and operation and maintenance costs. An initial cost estimate shall be included in the draft Construction Workplan and a final cost estimate shall be included in the final Construction Workplan. The financial assurance mechanism may include a performance or surety bond, a trust fund, a letter of credit, financial test and corporate guarantee equivalent to that in the California Code of Regulations, Title 22, Section 66264.143, 66265.143 or any other mechanism acceptable to DTSC.

Financial assurance mechanisms are used to assure DTSC that Respondent has adequate financial resources to construct and operate the corrective measure.

F. Construction Completion Report

Respondent shall prepare a Construction Completion Report which documents how the completed project is consistent with the Final Plans and Specifications. A Construction Completion Report shall be submitted to DTSC when the construction and any operational tests have been completed. The Construction Completion Report shall, at a minimum, include the following elements:

1. Purpose.
2. Synopsis of the corrective measure, design criteria, and certification that the corrective measure was constructed in accordance with the Final Plans and Specifications;
3. Explanation and description of any modifications to the Final Plans and Specifications and why these were necessary for the project.
4. Results of any operational testing and/or monitoring, indicating how initial operation of the corrective measure compares to the design criteria.
5. Summary of significant activities that occurred during construction. Include a discussion of problems encountered and how they were addressed.
6. Summary of any inspection findings (include copies of key inspection documents in appendices).
7. As built drawings; and
8. A schedule indicating when any treatment systems will begin full scale operations.

G. Corrective Measure Completion Report

Respondent shall prepare a Corrective Measure Completion Report when Respondent believes that the corrective measure completion criteria have been satisfied. The purpose of the Corrective Measure Completion Report is to fully document how the corrective measure completion criteria have been satisfied and to justify why the corrective measure and/or monitoring may cease. The Corrective Measure Completion Report shall, at a minimum, include the following elements:

1. Purpose.
2. Synopsis of the corrective measure.
3. Corrective Measure Completion Criteria

Describe the process and criteria for determining when corrective measures, maintenance and monitoring may cease. Corrective measure completion criteria were given in the final Operation and Maintenance (O&M) Plan.
4. Demonstration that the completion criteria have been met. Include results of testing and/or monitoring, indicating how operation of the corrective measure compares to the completion criteria.
5. Summary of work accomplishments (e.g., performance levels achieved, total hours of treatment operation, total treated and/or excavated volumes, nature and volume of wastes generated, etc.).
6. Summary of significant activities that occurred during operations. Include a discussion of problems encountered and how they were addressed.
7. Summary of inspection findings (include copies of key inspection documents in appendices); and
8. Summary of total operation and maintenance costs.

H. Submittal Summary

The following list provides a summary of when and how key documents should be submitted to DTSC. DTSC may adjust this list to meet site-specific circumstances.

1. The submittal schedule for the documents listed below should be included in an enforcement order, permit or otherwise specified by DTSC.
 - CMI Workplan
2. The submittal schedule for the documents listed below must be specified in the CMI Workplan. The groupings reflect which documents should be submitted together.
 - Draft Plans and Specifications
 - Draft Operation and Maintenance Plan
 - Draft Construction Workplan
 - Final Plans and Specifications
 - Final Operation and Maintenance Plan
 - Final Construction Workplan
3. The submittal schedule for the document listed below must be specified in the Final Construction Workplan.
 - Construction Completion Report
4. The submittal schedule for the document listed below is based on when Respondent believes the completion criteria have been satisfied.
 - Corrective Measure Completion Report
5. The submittal schedule for Progress Reports and a Health and Safety Plan shall be specified in the order or permit.

**ATTACHMENT 7:
SCOPE OF WORK FOR PROGRESS REPORTS**

Progress Reports shall, at a minimum, include the following information:

1. A description of significant activities and work completed during the reporting period.
2. A summary of any findings made during the reporting period.
3. Summaries of all problems or potential problems encountered during the reporting period.
4. Actions taken and/or planned to rectify problems.
5. All projected work for the next reporting period.
6. A discussion of any changes in personnel that occurred during the reporting period.
7. Summaries of all contacts with representatives of the press, local community, or public interest groups during the reporting period.
8. Summary of treatment system effectiveness. Provide a comparison of treatment system operation to predicted performance levels (applicable only if there is an operating treatment system); and
9. If requested by DTSC, the results of any sampling tests and/or other data generated during the reporting period.

APPENDIX D – TRIBAL OUTREACH DOCUMENTATION

Duffort, Nick

From: Duffort, Nick
Sent: Friday, April 26, 2024 11:31 AM
To: Lisjan Nation
Cc: Hale, Mark; Eric Englehart
Subject: RE: Port of Oakland (CEQA Lead Agency) AB 52 outreach for the Radius Recycling Oakland Non-Ferrous Scrap Materials Enclosures and Conveyor Project
Attachments: Basin_1997_A_Busby BRA, Corbett&Minor 10-1997 pt 1 Historic property survey report-finding of effect,50 ft project.pdf; Basin_1997_B_Busby BRA, Corbett&Minor 10-1997 pt 2 Historic property survey report Exhibits.pdf; Basin_1997_C_Busby BRA, Corbett&Minor 10-1997 pt 3 Historic property survey report Attachments.pdf; Lerner_1998_Historic property assessment...Turning Basin...Oakland Harbor.pdf; NAHC_2024_SLF Yes Radius Recycling Storage Tent, Port of Oakland Project 11.16.2023.pdf

Dear Ms. Gould,

Thank you for responding to our request for information on tribal concerns and resources as may relate to the Radius Recycling Oakland Nonferrous Scrap Materials Enclosures and Conveyor Project being proposed by Radius Recycling at the former Schnitzer Steel property at the Port of Oakland in the City of Oakland, California (the proposed project). On behalf of the Port of Oakland (the Port), please see the information below as well as the relevant documents attached to this message which are also detailed in the California Environmental Quality Act (CEQA) Initial Study/Negative Declaration (IS/ND) that will be available to you during the public review process beginning in late April or early May (you will receive notification on how to access this document upon its issuance).

A cultural resources records search was conducted by AECOM (acting as the Port's CEQA consultant) at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) on June 30, 2021 (File No. 202678) for the Port's Oakland Harbor Turning Basins Widening project which included the entirety of the current project area. As no other projects had been conducted on the Port's holdings since that time and given that the records search was less than five years old, use of the existing data was deemed adequate for the current investigation. This records search was completed by AECOM so there is no associated letter on the results from the NWIC.

In addition to the NWIC records search, many documents were reviewed in support of the Oakland Harbor Turning Basins Widening project. These included other environmental documents, cultural resources reports, and technical data that could provide insight into the potential for cultural resources to occur in that study area, inclusive of the Radius Recycling property. It should be noted that many of these documents are not held by the NWIC.

The records search at the NWIC, in concert with the review of relevant documents supplied by the Port and United States Army Corps of Engineers, revealed that the entirety of the former Schnitzer Steel property, now Radius Recycling, had been previously inventoried for cultural resources in the past, with negative results for the proposed project site (Basin 1997; Lerner 1988). You will find both of these reports appended to this correspondence.

Also attached to this correspondence are the results of the Native American Heritage Commission's (NAHC) review of the Sacred Lands File that they maintain, which was performed in support of the recent (2024) Radius Recycling Oakland Storage Tent Project located on the same parcel as the proposed project. You will see that the NAHC indicated that their review of the SLF for the Radius Recycling parcel was "positive," and identified the Amah Mutsun Tribal Band of Mission San Juan Bautista and the North Valley Yokuts as the parties to contact concerning this finding (both of whom were also contacted for the proposed project).

Lastly, we should point out that the proposed project footprint, horizontally and vertically, is confined entirely to fill introduced to the area during previous reclamation projects. This finding is presented in the forthcoming IS/ND.

Thank you for your response to our inquiry. Again, we will notify you when the IS/ND is issued for public review and comment.

Nick Duffort

AECOM

150 California Street, Suite 200
San Francisco, CA 94111, USA
Direct: 831-234-6686

nick.duffort@aecom.com

From: Lisjan Nation <cvltribe@gmail.com>
Sent: Thursday, March 28, 2024 2:11 PM
To: Duffort, Nick <Nick.Duffort@aecom.com>
Subject: Re: Port of Oakland (CEQA Lead Agency) AB 52 outreach for the Radius Recycling Oakland Non-Ferrous Scrap Materials Enclosures and Conveyor Project

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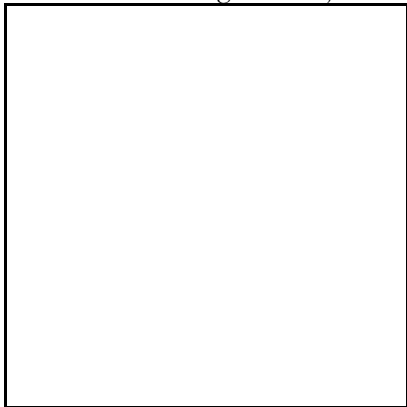
Hello,

Thank you for your email. The Tribe is requesting a copy of the final CHRIS and EIR for this project, along with the SLF from Native American Heritage Commission and any additional archeological reports. Our physical address is: PO BOX 6487 Oakland CA 94603 or if you would prefer to send them electronically, please send them to this email address.

'Uni (Respectfully),

Corrina Gould, Tribal Chair

Confederated Villages of Lisjan Nation



On Wed, Mar 27, 2024 at 1:23 PM Duffort, Nick <Nick.Duffort@aecom.com> wrote:

Dear Corrina, Deja, and Cheyenne,

The Port of Oakland (CEQA Lead Agency) has retained AECOM to assist with Assembly Bill 52 outreach in support of the Radius Recycling Oakland Non-Ferrous Scrap Materials Enclosures and Conveyor Project (the project). Please find attached the AB 52 consultation letter for the project, which includes a project description and accompanying figure depicting the project location. A letter is included addressed to each of you.

As part of the review process, we request information that identifies any resources that may hold traditional religious or cultural significance to your Tribe that could be affected by the proposed work, and, if applicable, assist in developing alternatives that would avoid, minimize, or mitigate any adverse effects.

To meet project timeframes, if you would like to participate or provide information regarding this project, we respectfully request that you notify us as soon as possible. Comments can be provided in response to this email (please reply all), or via hardcopy to Eric Englehart at the Port of Oakland (530 Water Street, Oakland, CA 94607).

Thank you for your time and attention.

Nick Duffort

AECOM

150 California Street, Suite 200
San Francisco, CA 94111, USA
Direct: 831-234-6686

nick.duffort@aecom.com

Duffort, Nick

From: Duffort, Nick
Sent: Friday, April 26, 2024 11:35 AM
To: Amah Mutsun
Cc: Hale, Mark; Eric Englehart
Subject: RE: Port of Oakland (CEQA Lead Agency) AB 52 outreach for the Radius Recycling Oakland Non-Ferrous Scrap Materials Enclosures and Conveyor Project
Attachments: Basin_1997_A_Busby BRA, Corbett&Minor 10-1997 pt 1 Historic property survey report-finding of effect,50 ft project.pdf; Basin_1997_B_Busby BRA, Corbett&Minor 10-1997 pt 2 Historic property survey report Exhibits.pdf; Basin_1997_C_Busby BRA, Corbett&Minor 10-1997 pt 3 Historic property survey report Attachments.pdf; Lerner_1998_Historic property assessment...Turning Basin...Oakland Harbor.pdf; NAHC_2024_SLF Yes Radius Recycling Storage Tent, Port of Oakland Project 11.16.2023.pdf

Dear Ms. Zwierlein,

Thank you for responding to our request for information on tribal concerns and resources as may relate to the Radius Recycling Oakland Nonferrous Scrap Materials Enclosures and Conveyor Project being proposed by Radius Recycling at the former Schnitzer Steel property at the Port of Oakland in the City of Oakland, California (the proposed project). Please see the information below as well as the relevant documents attached to this message which are also detailed in the forthcoming California Environmental Quality Act (CEQA) Initial Study/Negative Declaration (IS/ND) that will be available to you during the public review process beginning in late April or early May (you will receive notification on how to access this document upon its issuance).

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Thank you for your response to our inquiry. Again, we will notify you when the IS/ND is issued for public review and comment.

Nick Duffort

AECOM

150 California Street, Suite 200
San Francisco, CA 94111, USA
Direct: 831-234-6686

nick.duffort@aecom.com

From: Amah Mutsun <amahmutsuntribal@gmail.com>

Sent: Wednesday, March 27, 2024 1:27 PM

To: Duffort, Nick <Nick.Duffort@aecom.com>

Subject: Re: Port of Oakland (CEQA Lead Agency) AB 52 outreach for the Radius Recycling Oakland Non-Ferrous Scrap Materials Enclosures and Conveyor Project

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Report Suspicious

Thank you and please see attached.

On Wed, Mar 27, 2024 at 1:20 PM Duffort, Nick <Nick.Duffort@aecom.com> wrote:

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As part of the review process, we request information that identifies any resources that may hold traditional religious or cultural significance to your Tribe that could be affected by the proposed work, and, if applicable, assist in developing alternatives that would avoid, minimize, or mitigate any adverse effects.

To meet project timeframes, if you would like to participate or provide information regarding this project, we respectfully request that you notify us as soon as possible. Comments can be provided in response to this email (please reply all), or via hardcopy to Eric Englehart at the Port of Oakland (530 Water Street, Oakland, CA 94607).

Thank you for your time and attention.

Nick Duffort

Senior Planner and Project Manager

D 1-831-234-6686

Nick.Duffort@AECOM.com

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T 1-415-796-8100

aecom.com

Delivering a better world



**The Amah Mutsun Tribal Band of San Juan Bautista
&
A.M.T.B. Inc.**

Letter of Response

To whom it may concern:

It is our pride and privilege to be of service for any Native American Cultural Resource Monitoring, Consulting and/ or Sensitivity Training you may need or require. We take our Heritage and History seriously and are diligent about preserving as much of it as we can. Construction is a constant in the Bay Area and with that new discoveries are bound to happen. If you choose our services, we will gladly guide all personnel through proper procedures to safely protect and preserve: Culture, Heritage, and History.

It is highly recommended, if not previously done, to search through Sacred Lands Files (SLF) and California Historical Resource Information Systems (CHRIS) as well as reaching out to the Native American Heritage Commission (NAHC) In order to determine whether you are working in a Cultural and/ or Historic sensitivity.

If you have received any positive cultural or historic sensitivity within 1 mile of the project area here are A.M.T.B Inc's and Amah Mutsun Tribal Band of San Juan Bautista's recommendations:

- All Crews, Individuals and Personnel who will be moving any earth be Cultural Sensitivity Trained.
- A Qualified California Trained Archaeological Monitor is present during any earth movement.
- A Qualified Native American Monitor is present during any earth movement.

If further Consultation, Monitoring or Sensitivity Training is needed please feel free to contact A.M.T.B. Inc. or Myself Directly. A.M.T.B. Inc. 650 851 7747

Irenne Zwiierlein

Irenne Zwiierlein

**Amah Mutsun Tribal Band of San Juan Bautista
&
AMTB Inc.**

3030 Soda Bay Road Lakeport, CA 95453

Our rates for 2024 are

\$275.00 per hour.

4 hours minimum

Cancellations not 48 hours (about 2 days) prior will be charged as a 4-hour minimum. There is a round trip mileage charge if canceled after they have traveled to site.

Anything over 8 hours a day is charged as time and a half.

Weekends are charged at time and a half.

Holidays are charged at double the time.

For fiscal year (FY) 2024, standard per diem rate of \$412. (\$333. lodging, \$79 M&IE).

M&IE Breakdown FY 2023

M&IE Total¹	Continental Breakfast/ Breakfast²	Lunch²	Dinner²	Incidental Expenses	First & Last Day of Travel³
\$79.00	\$18.00	\$20.00	\$36.00	\$5.00	\$59.25

Beginning 2024, the standard mileage rates for the use of a car round trip (also vans, pickups or panel trucks) will be: \$.67 cents per mile driven for business use or what the current federal standard is at the time.

Our Payment terms are 5 days from date on invoice.

Our Monitors are Members of the Amah Mutsun Tribal Band of Mission San Juan Bautista.

If you have any questions, please feel free to contact the A.M.T.B. Inc. at the below contact information.

Sincerely,

Irenne Zwielerlein

Irenne Zwielerlein

3030 Soda Bay Rd, Lakeport
CA 95453
amtbin21@gmail.com
(650)851-7747



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

11/29/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Allied Brokers 591 Lytton Avenue Palo Alto CA 94301	CONTACT NAME: PHONE (A/C, No, Ext): (650) 328-1000 FAX (A/C, No): (650) 324-1142 E-MAIL: BusinessVIP@alliedbrokers.com ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	
INSURED Amah Mutsun Tribal Band Consulting & Monitoring, LLC 330 Soda Bay Rd Lakeport CA 95453	INSURER A: Scottsdale Insurance Company NAIC # 41297	
	INSURER B: United States Liability Insurance Company 25895	
	INSURER C:	
	INSURER D:	
	INSURER E:	
	INSURER F:	

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:			CPS7829150	07/09/2023	07/09/2024	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 1,000,000
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in Nh) <input type="checkbox"/> Y/N If yes, describe under DESCRIPTION OF OPERATIONS below		N/A				PER STATUTE OTHER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
B	Professional Liability			SP1573468C	06/21/2023	06/21/2024	Each Claim \$1,000,000 Aggregate \$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Proof of Coverage

CERTIFICATE HOLDER FOR YOUR INFORMATION	CANCELLATION SHOULD ANY OF THE ABOVE-DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE <i>Mimi Watson</i>

NATIVE AMERICAN HERITAGE COMMISSION

November 16, 2023

Mark Hale
AECOM

Via Email to: mark.hale@aecom.com

Re: Radius Recycling Storage Tent, Port of Oakland Project, Alameda County

To Whom It May Concern:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information submitted for the above referenced project. The results were positive. Please contact the Amah Mutsun Tribal Band of Mission San Juan Bautista and the North Valley Yokuts Tribe on the attached list for information. Please note that tribes do not always record their sacred sites in the SLF, nor are they required to do so. A SLF search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with a project's geographic area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites, such as the appropriate regional California Historical Research Information System (CHRIS) archaeological Information Center for the presence of recorded archaeological sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. Please contact all of those listed; if they cannot supply information, they may recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Cody.Campagne@nahc.ca.gov.

Sincerely,

Cody Campagne

Cody Campagne
Cultural Resources Analyst

Attachment



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