Naval Facilities Engineering Systems Command Southwest
Travis ROICC/CODE ROPWT
Travis Air Force Base, CA

Draft Final

Remedial Action Work Plan
Parcel G Building Demolition

Hunters Point Naval Shipyard,
San Francisco, California

January 2026

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Acronyms and Abbreviations

%	percent
AC	asphaltic concrete
ACM	asbestos-containing material
APP	Accident Prevention Plan
ARAR	applicable or relevant and appropriate requirements
BAAD	Bay Area Air District
BRAC	Base Realignment and Closure
BMP	Best Management Practices
Cal/OSHA	California Occupational Safety and Health Administration
CCR	California Code of Regulations
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CSO	Caretaker Site Officer
DTSC	Department of Toxic Substance Control
ECC	ECC Infrastructure, LLC
EPP	Environmental Protection Plan
ERRG	Engineering/Remediation Resources Group, Inc.
ESD	Explanation of Significant Differences
FFA	Federal Facility Agreement
HEPA	high-efficiency particulate air
HID	high-intensity discharge
HPNS	Hunters Point Naval Shipyard
HVAC	heating, ventilation, and air conditioning
IDW	investigation derived waste
IR	Installation Restoration
LBP	lead-based paint
mg/kg	milligrams per kilogram
msl	mean sea level
Navy	United States Department of the Navy
NPDES	National Pollutant Discharge Elimination System
PCB	polychlorinated biphenyl
PMO	Program Management Office
QA	quality assurance
QC	quality control
QCM	Quality Control Manager
RA	Remedial Action
RACM	Regulated asbestos-containing material
RACR	Remedial Action Completion Report
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act
RD	remedial design
ROD	Record of Decision
ROICC	Resident Officer in Charge of Construction
RPM	Remedial Project Manager

SAP	Sampling and Analysis Plan
USEPA	United States Environmental Protection Agency
WMP	Waste Management Plan

History of Revisions

DCN #	Date	Notes
ECC-1205-4397-0003.00	July-2025	Ver R0-D1 / Original Submission (Internal Navy Draft) / 03-July-2025
ECC-1205-4397-0003.01	Aug-2025	Ver R0-D2 / 2nd round Internal Navy Draft / 20-Aug-2025
ECC-1205-4397-0003.02	Aug-2025	Ver R0-D3 / Regulatory Draft / 28-Aug-2025
ECC-1205-4397-0003.03	Jan-2026	Ver R1-D4 / 1st round Regulatory Review / 11-Dec-2025

1.0 INTRODUCTION

This Remedial Action Work Plan (RAWP) describes the demolition work that will be implemented at Parcel G, Hunters Point Naval Shipyard (HPNS), San Francisco, California (**Figures 1** and **2**). This RAWP was prepared by ECC Infrastructure, LLC (ECC) on behalf of the United States Department of the Navy (Navy), Naval Facilities Engineering Systems Command Southwest for the Navy Base Realignment and Closure Program Management Office (BRAC PMO) West, under Contract No. N62473-21-D-1205, Delivery Order: N6247325F4397. The work under this delivery order will be completed in compliance with the contract plans and specifications, and local, State, and federal regulations.

1.1 Project Objectives and Remedial Action Activities

The purpose of the building demolition is to complete the Remedial Action for “structures” as outlined in the Record of Decision (ROD). Buildings were to be surveyed and, if possible, cleared for unrestricted reuse. If clearance was not achievable, the ROD planned for further remediation, including dismantling. The scope of work includes the following:

1. HPNS Federal Facility Agreement (FFA) Regulatory Agencies concurrence on this Work Plan. FFA parties include United States Environmental Protection Agency (USEPA), Department of Toxic Substance Control (DTSC) and the San Francisco Bay Regional Water Quality Control Board (Water Board).
2. Utility Clearance - Notify Underground Service Alert North (811), a minimum of 72 hours prior to field activities; conduct a geophysical survey to ensure no utilities or obstructions exist in the intrusive work areas.
3. Set up environmental controls including placement of fences, air monitoring stations, and stormwater Best Management Practices (BMPs) in accordance with the Environmental Protection Plan (EPP) (**Appendix A**) in the Remedial Action Work Plan (RAWP).
4. Establish investigation derived waste (IDW) staging areas and signage in accordance with the Waste Management Plan (WMP) (**Appendix B**).
5. Buildings 351, 351A, 366, 401, 411, and 439 and building pad 408 abatement, demolition, and partial slab/foundation removal. Manage and transport building debris per the WMP (**Appendix B**).
6. Stage approved imported soil and/or excavated soil designated for re-use for backfilling of excavation in the equipment laydown area and IDW storage area.
7. Manage remaining IDW per the WMP (**Appendix B**).
8. Reporting will routinely document site activities for the Navy. Air Monitoring Reports will include, but are not limited to, air monitoring results by parameter; comparisons of monitoring results against project specific action levels with any exceedances identified; mitigation measures implemented in response to potential exceedances; and maps and figures showing monitoring station locations in relation to active demolition areas and prevailing wind direction. QC

Reports will include but not limited to waste stream segregation and abatement progress updates, as well as stormwater management observations.

9. Document the site activities at Parcel G in a Remedial Action Completion Report (RACR).

All building abatement, demolition and slab/foundation removal are shown on **Figures 5a- 8b**. The Abatement Plan is presented in **Appendix D, Attachment A**, showing lacks floor plans, and negative air machines' location. The demolition will be conducted in a controlled manner as described in **Section 4.0**. The EPP is presented in **Appendix A**. The WMP is presented in **Appendix B**. Additional details are presented in **Section 4**.

1.2 Regulatory Framework and Parcel G Remedial Action Objectives

The Record of Decision (ROD) for Parcel G was signed on February 18, 2009 (Navy, 2009a) and the 2017 Parcel G ROD Explanation of Significant Differences (ESD) was signed on April 19, 2017 (Navy, 2017). The 2025 Parcel G ROD ESD (Navy, 2025) documented the increased cost for the demolition of six buildings and a concrete building pad. These documents established the selected remedy and provided the framework for implementation under this task order.

All site work will be performed in coordination with the Navy Remedial Project Manager (RPM), Navy Caretaker Site Office (CSO), and the Resident Officer in Charge of Construction (ROICC) representative.

This document was developed in accordance with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 and the National Oil and Hazardous Substances Pollution Contingency Plan (Title 40 Code of Federal Regulations [CFR], Part 300). Regulatory oversight and guidance are provided by USEPA, California Environmental Protection Agency, Regional Water Quality Control Board, San Francisco Bay Region, and California Department of Public Health.

Parcel G is undergoing remediation in accordance with a FFA between the Navy, USEPA, and the State of California through the California EPA DTSC and Water Board, collectively referred to as the FFA Signatories.

The project areas are located within the jurisdiction of the Bay Area Air District (BAAD. However, as the project is being implemented under the Comprehensive Environmental Response, Compensation, and Liability Act, it is not required to have a permit from the BAAD. Nevertheless, the project will meet the substantive aspects of BAAD air quality requirements such as:

- *BAAD Regulation 6, Rule 1: General Requirements - Particulate Matter ; 6-1-301 Ringelmann No. 1 Limitation; 6-2-302 Opacity Limitation; and 6-1-305 Visible Particles* (*BAAQMD.gov, 05-Dec-2007; Revised 24-Apr-2018*).
- BAAD, Regulation 11, Rule 2: Asbestos Demolition, Renovation, & Manufacturing, *Sections to include: 11-2-303 / Demolition, Renovation & Removal; 11-2-304 / Waste Disposal; 11-2-401 / Reporting, Demolition, &*

Renovation; 11-2-502 / Waste Shipment Records; and 11-2-601 / Waste Disposal Warning Labels. *(BAAQMD.gov, 07-Oct-1998, Revised 24-Apr-2018)*

ECC will consult with the EPA's OSR Coordinator and adhere to the EPA Off-Site Rule prior to the start of T&D operations and when the facilities for all waste are finalized. The applicable or relevant and appropriate requirements (ARARs) identified in the ROD will be followed, as they pertain to building demolition. Additional rules and ARARs include but are not limited to Resource Conservation and Recovery Act [(RCRA) (Title 42 U.S.C., Chapter 82, §§ 6901-6991[i])]; , Clean Air Act (Title 42 U.S.C. §§ 7401-7671), Clean Water Act (Title 33 U.S.C., Chapter 26, §§ 1251-1387), Migratory Bird Treaty Act (MBTA), Endangered Species Act (ESA)/California Endangered Species Act (CESA).

1.3 Community/Public Involvement

This project has been discussed with the public during Citizens Advisory Committee meetings held on May 19, and July 17, 2025, with another meeting scheduled for September 18, 2025. As per the task order's contractual requirements, three CAC meetings are required annually.

1.4 Project Schedule

Table 1 summarizes the proposed schedule for the pre-construction, demolition, excavation, and pre-Remedial Action (RA) and post-RA sampling activities.

1.5 RAWP Organization

This RAWP is organized as follows:

- ***Section 1.0: Introduction*** – Provides an overview of the project, scope of work, regulatory framework, and project schedule.
- ***Section 2.0: Background and Site History*** – Describes the project location, site history, previous investigations, RAs, site geology, and site hydrogeology.
- ***Section 3.0: Pre-Demolition Activities*** – Describes site preparation activities to be conducted prior to the Parcel G Demolition, including the Site/Traffic plan (**Figure 2**), Initial Staging Area (**Figure 3**) and haul road (**Figure 4**).
- ***Section 4.0: Demolition Activities*** – Describes the demolition of Parcel G buildings, including the open air demolition at two buildings: Building 401 (**Figures 5a** and **5b**) and Building 411 (**Figures 6a** and **6b**), and standard abatement and demolition at Building 439 and Building Pad 408 (**Figures 7a** and **7b**) and Buildings 351, 351A and 366 (**Figures 8a** and **8b**).
- ***Section 5.0: Waste Management*** – Describes the handling of waste and debris including on-site transportation and stockpile management and loading activities.
- ***Section 6.0: Post-Demolition Activities*** – Describes site restoration, and demobilization.
- ***Section 7.0: Quality Control (QC) Procedures and Reporting*** – Describes the QC procedures, and documentation of field activities for completion of the Parcel G Demolition.

- ***Section 8.0: References*** – Presents references used throughout this RAWP. Several supporting documents are presented as appendices to this RAWP as follows:
- ***Appendices***
    - Appendix A: Environmental Protection Plan (EPP)
        - Attachment A: Storm Water Pollution and Prevention Plan (SWPPP)
        - Attachment B: Dust Management Plan/ Air Monitoring Plan
    - Appendix B: Waste Management Plan (WMP)
    - Appendix C: Sampling and Analysis Plan (SAP)
    - Appendix D: Subcontractor Plans
        - Attachment A: Abatement Plan
        - Attachment B: Structural Engineering Plans
    - Appendix E: Response to Comments

2.0 BACKGROUND AND SITE HISTORY

The following subsections describe the HPNS and Parcel G background and site history. **Table 2** summarizes the previous investigations, and actions at Parcel G. All background information has been derived from the Land Use Control (LUC) Remedial Design (RD) Parcel G (ChaduxTt, 2010), Parcel G Removal Site Evaluation Work Plan (Chem2 Hill, 2019), Explanation of Signification Difference to the Final Record of Decision (ROD) (Langan, 2016).

The HPNS is located on a peninsula that extends into San Francisco Bay in the southern part of San Francisco, California (**Figure 1**). The HPNS includes about 866 acres (420 acres on land and 446 acres under water in San Francisco Bay). In 1940, the Navy obtained ownership of HPNS for shipbuilding, repair, and maintenance activities. After World War II, activities at HPNS shifted to decontamination of ships used during atomic weapons testing in the South Pacific as well as submarine maintenance and repair through the 1970s. HPNS was also the site of the Naval Radiological Defense Laboratory (NRDL) from the late-1940s until 1969.

HPNS was deactivated in 1974 and remained largely unused until 1976. Between 1976 and 1986, the Navy leased most of HPNS to Triple A Machine Shop, Inc. (a private ship repair company). The Navy resumed occupancy of HPS in 1987. HPNS property was placed on the National Priorities List in 1989 pursuant to CERCLA, due to past shipyard operations that had left hazardous substances on site.

In 1991, HPNS was designated for closure pursuant to the BRAC of 1990. The mission of BRAC Program Management Office is to expeditiously and cost effectively provide all services necessary to realign, close, and dispose of Navy BRAC properties.

Radiological surveys and remediation were previously conducted at former HPNS as part of a base wide Time-Critical Removal Action (TCRA). Tetra Tech EC, Inc. (TtEC), under contracts with the Navy, conducted a large portion of the base wide TCRA, including Parcel G. Data manipulation and falsification were committed by TtEC employees during the TCRA. An independent third-party evaluation of previous data identified additional potential manipulation, falsification, and data quality issues with data collected at Parcel G. As a result, the Navy continues to investigate affected parcels (B, C, D-2, E, G, UC-1, UC-2, and UC-3), including the North Pier and Ship Berths.

The six buildings to be demolished under this contract (Buildings 351, 351A, 366, 401, 411, and 439 and Building Pad 408), have been reinvestigated and radiologically remediated as per the DEPH's RURR letters and NRC's TDR letters, which are available on the Hunters Point website.

2.1 Project Location, Description, and Site History

Parcel G is approximately 40 acres central inland portion of HPNS (**Figures 1 and 2**). The parcel was constructed in the 1940s by placing borrowed fill material from various sources.

Most of Parcel G was formerly part of the industrial support area and was used for shipping, ship repair, offices, and commercial activities and is nearly all covered with buildings or pavement

Descriptions of the six buildings to be demolished (Buildings 351, 351A, 366, 401, 411, and 439 and Building Pad 408) are as follows:

2.1.1 Building 351

Building 351 (**Figures 8a** and **8b**) is a vacant three-story reinforced concrete shop building with a five-story tower at its northwest corner. It was constructed around 1945 and covers approximately 38,204 square feet. The building was previously used as electronics work area/shop, optical laboratories, Navy Bureau of Medicine and Surgery storeroom, machine shop (first floor), sampling laboratory, general research laboratories, and biological research laboratories. The NRDL also used Building 351 as materials and accounts division, technical information division, office services branch, thermal branch, engineering division, and library.

2.1.2 Building 351A

Building 351A (**Figures 8a** and **8b**) is a vacant concrete building, covering approximately 35,166 square feet of floor space, constructed in 1952 over a crawl space that abuts the southern end of Building 351. Building 351A was used as a radiation detection, indication and computation repair facility and electronics shop for radiation detection equipment and a facility for the calibration, repair, and reconditioning of other instruments. The NRDL also used the building as a chemistry laboratory, applied research branch, administrative offices, nuclear and physical chemistry laboratory, and chemical technology division.

2.1.3 Building 366

Building 366 (**Figures 8a** and **8b**) is a vacant, one-story, measuring approximately 36,965 square feet (280 feet by 140 feet and 22 feet high). Building 366 was used as administrative offices, applied research and technical development branches, radiological safety branch, management planning division, nucleonics division, instruments evaluation section, general laboratories, chemical research laboratory, shipyard radiography shop, boat/plastic shop, and other military/Navy branch project officers' station. NRDL also used the building for instrument calibration and management engineering and comptroller department.

2.1.4 Building 401

Building 401 (**Figures 5a** and **5b**) is a two-story, large wood framed shop. It is estimated to be 26,796 square feet in area and approximately 24 feet in height. The building is constructed on a reinforced concrete slab-on-grade foundation, with wood columns located along the perimeter and interior. It is assumed to be reinforced with either welded wire fabric or reinforcing steel. While the building's height can accommodate two stories, only a portion of the structure includes a second floor.

There is another one-story building portion at the southeast corner (south wall) of the building. It is on a concrete pad approximately 36 inches above the adjacent grade. tall,

north side of the building there are exterior concrete pads approximately 36-inches tall by approximately 40 feet long by approximately 12 feet wide at the east and west ends of the north wall. Concrete ramps that face each other serve the concrete pads.

2.1.5 Building 411

Building 411 (**Figures 6a** and **6b**) is a two-story structure with a larger, taller segment to the north and is estimated to be 184,985 square feet (approximately 355 feet wide and 525 feet long) and 30 feet high. The ground floor of the entire facility is slab on grade. However, the service/repair area has a sequence of floor recesses that are approximately five feet deep. Some are completely open, and some have grated, cast-iron covers.

Building 411 served as source storage, civilian cafeteria, radiography shop, shipfitters, service/repair area, and boilermaker's shop

2.1.6 Building 439

Building 439 (**Figures 7a** and **7b**) is a single-story concrete building that is estimated to be 102,166 square feet (approximately 250 feet long and 410 feet wide) and 35 feet high. The building served as a sheet metal shop. It is unknown when the building was constructed. It consists of structural steel columns and roof beams with steel joist roof framing supporting the metal roof deck.

2.1.7 Building Pad 408

The building pad 408 (**Figures 7a** and **7b**) with an approximate thickness of 10 inches is all that remains. but will be field verified, south of Building 411 and east of Building 439.

2.1.8 Future Site Utilization

The Candlestick Point and HPNS Phase 2 development (is a 693-acre, expert-planned, urban infill project approved for implementation along the southeastern edge of San Francisco. The development, entitled, envisions two new waterfront neighborhoods (Candlestick Point and HPNS Phase 2), both of which will provide new housing, commercial, retail and office uses to Bayview Hunters Point, and includes over 340 acres of parks and open space.

2.2 Site Geology and Hydrogeology

2.2.1 Geology

The peninsula that forms HPNS is within a northwest-trending belt of Franciscan Complex bedrock known as the Hunters Point Shear Zone. HPNS is underlain by five geologic units: the youngest of Quaternary age; and the oldest, the Franciscan Complex bedrock, of Jurassic-Cretaceous age.

Artificial Fill covers the entire surface at Parcel G. The Bay Mud separates the Undifferentiated Upper Sands and the Artificial Fill from the lower Undifferentiated Sedimentary Deposits throughout Parcel G. These site soils and the proposed remedy were assessed for stability (ChaduxTt, 2010).

The Franciscan Complex contains a variety of rock types, including basalt, chert, sandstone, shale, and serpentinite. Some of these rock types contain wide-ranging concentrations of naturally occurring metals; serpentinite also contains naturally occurring asbestos minerals (ChaduxTt, 2010).

Parcel G consists of flat lowlands with surface elevations between seven and 11 feet above mean sea level (msl). The parcel was constructed in the 1940s by placing borrowed fill material from various sources, including crushed serpentinite bedrock from the adjacent highlands and dredged sediments (ChaduxTt, 2010).

2.2.2 Hydrogeology

The hydrostratigraphic units at Parcel G include:

- the A-aquifer
- the aquitard
- the B-aquifer, and
- the deep bedrock water-bearing zone.

The A-aquifer consists mainly of unconsolidated Artificial Fill that overlies the aquitard and bedrock and forms a continuous zone of unconfined groundwater across the parcel. Undifferentiated Upper Sand Deposits and shallow bedrock also are part of the A-aquifer at various locations across Parcel G (ChaduxTt, 2010). The A-aquifer extends to about 15 feet below msl over most of Parcel G.

The B-aquifer consists mainly of discontinuous lenses of Undifferentiated Sedimentary Deposits that overlie bedrock or are contained within the Bay Mud Deposits at a few locations. Bay Mud Deposits act as an aquitard that separates the A- and B-aquifers throughout Parcel G. The aquitard zone varies in thickness but extends from about 15 to about 45 feet below msl and is thickest in the southern sections of the parcel (ChaduxTt, 2010). The B-aquifer is found at depths ranging from about 10 feet below msl in the central part of Parcel G to around 40 feet below msl in the southern portion.

The bedrock water-bearing zone is not considered an aquifer because of its low capacity for water production (primarily from fractures). The bedrock surface dips bayward from about five feet below msl in northern Parcel G to about 90 feet below msl at the southern parcel boundary (ChaduxTt, 2010).

Groundwater elevations in the A-aquifer at Parcel G range from about five feet above msl in inland (northern) areas to near msl in southern areas closer to the shoreline. In general, groundwater flows to the southeast and southwest, away from a slight groundwater divide along the central, long axis of the parcel and follows the topographic gradient toward San Francisco Bay (ChaduxTt, 2010).

2.2.3 Surface Water Hydrology

No permanent surface water features exist at HPNS. Surface water runoff flows to nearby San Francisco Bay or infiltrates into the ground. The City and County of San Francisco supplies drinking water to HPNS through its municipal supply from the Hetch

Hetchy watershed in the Sierra Nevada (Innovex-Engineering/Remediation Resources Group, Inc. [ERRG], 2019).

2.3 Nature and Extent of Contamination

Brief descriptions of the contamination from each building are shown below. For a complete report, please review the *Pre-Demolition Hazardous Materials Survey* (Terracon, 2024).

2.3.1 Building 351

- Asbestos (Regulated asbestos containing material [RACM], friable) was found in a variety of building material (sealants, suspect debris – black cement, drywall compound, transite debris, gray electrical equipment debris, oakum pipe seal asphaltic roof felt field mastics, glues, gaskets etc.).
- Lead-based paints (LBPs) were identified and sampled in the building. Uncharacterized paints and/or suspect materials should be assumed to contain lead.
- Polychlorinated biphenyls (PCBs) from fluorescent light ballasts were identified.
- Mercury-containing lighting and equipment, refrigerants and batteries were not identified during the survey.

2.3.2 Building 351A

- Asbestos (RACM, friable) was found in a variety of building material (pipe run insulation, sealants, roof field elevated roof pad, roof flashing system, mechanical curb, drywall compound, transite debris, gray electrical equipment debris, mastics, glues, gaskets etc.).
- LBPs were identified and sampled in the building. Uncharacterized paints and/or suspect materials should be assumed to contain lead.
- PCBs from building enclosure sealants and window putty were in concentrations exceeding the laboratory reporting limit, but less than 50 milligrams per kilogram (mg/kg).
- Mercury-containing lighting and equipment, refrigerants and batteries were identified.

2.3.3 Building 366

- Asbestos (RACM, friable) was found in a variety of building material (metal roof panels, fiberglass roof panels, drywall compound, insulation, thermal system insulation (TSI) hard pack elbows, transite panels, window/door putty, fire rated door insulation, heating, ventilation and air conditioning [HVAC] vibration cloth, sealant, mastics, glues, etc.).
- LBPs and bulk material were identified and sampled in the building. Uncharacterized paints and/or suspect materials should be assumed to contain lead.

- PCBs from building enclosure sealants and window putty were in concentrations exceeding the laboratory reporting limit, but less than 50 mg/kg. PCBs from fluorescent light ballasts were identified.
- Mercury-containing lighting and equipment, refrigerants and batteries were not identified during the survey.

2.3.4 Building 401

- Asbestos was found in a variety of building material (Silver paint and black/grey roofing mastics)
- LBPs and bulk material were identified and sampled in the building. Uncharacterized paints and/or suspect materials should be assumed to contain lead
- PCBs from window putty were found in concentrations exceeding the laboratory reporting limit, and one exceeding 500 mg/kg defined it as a PCB containing material.
- Mercury-containing lighting and equipment, refrigerants and batteries were not identified during the survey.

2.3.5 Building 411

- Asbestos (RACM, friable) was found in a variety of building material (pipe, beams, gaskets, joint compound, transite cement debris, sawtooth roof flashing system, main roof, roof- flashing system, mechanical curbs, tan fireproofing, drain pipe oakum, white insulation, black floor coating, corrugated cement wall panels, electrical wires insulation and debris, transite debris, panels, window/door putty, fire rated door insulation, sealant, mastics, glues, etc.).
- LBPs were identified and sampled in the building. Uncharacterized paints and/or suspect materials should be assumed to contain lead.
- PCBs from building enclosure sealants and window putty were in concentrations exceeding the laboratory reporting limit, but less than 50 mg/kg. PCBs from fluorescent light ballasts were identified.
- Mercury containing lighting and equipment, refrigerants and batteries were not identified during the survey.

2.3.6 Building 439

- Asbestos (RACM, friable) was found in a variety of building material (drywall with joint compound, mastics, glues, texture on drywall, HVAC duct seam tape, gaskets etc.)
- LBPs and window putty were identified and sampled in the building as well as cast iron plumbing hubs with oakum and lead seals. Uncharacterized paints and/or suspect materials should be assumed to contain lead

- PCBs from building enclosure sealants and window putty were in concentrations exceeding the laboratory reporting limit, but less than 50 mg/kg
- Mercury-containing lighting and equipment, refrigerants and batteries were identified

2.3.7 Building Pad 408

- Asbestos was found in the concrete slab at less than 1 percent [%] Chrysotile.

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3.0 PRE-DEMOLITION ACTIVITIES

Upon Navy and regulatory approval of the RAWP, which contains the building engineering survey and reporting and stamped engineered demolition plan, mobilization and pre-demolition activities will begin. Pre-demolition activities are discussed in the following subsections. The Parcel G layout is presented in **Figure 2**.

3.1 Substantive Permit Requirements

In accordance with Section 121(e) of CERCLA 1980 (42 United States Code, Section 9621[e]), as amended, no Federal, State, or local permits shall be required for the portion of any removal or RA conducted entirely on site. However, the Navy will meet the substantive provisions of applicable or relevant and appropriate requirements specified in the Amended ROD (Navy, 2009) including the following:

- Air monitoring for Bay Area Air District (BAAD) requirements (see **Section 3.6)**.
- Waste management requirements in accordance with **Appendix B.**

3.2 ECC Safety Orientation and Meetings

Prior to the start of any work, a safety orientation will be conducted by ECC and, if necessary, by its subcontractors. Primary subcontractors include Bayview Environmental Services (BES) and Silverado Contractors Inc. (SCI). This orientation is required for all personnel performing work onsite.

Each working day, prior to the beginning of activities, the ECC superintendent and SSHO will conduct a morning tailgate meeting to review the activities scheduled for the day. This review will address the activities of the day, highlight coordination across teams, as well as hazards identified and listed on the Activity Hazard Analysis (AHA), and the control measures to be used to prevent injury and illness. Daily tailgate meeting sign in rosters or QR codes will be used to record attendance. Please refer to the QC Plan for further details.

At the end of each workday, ECC staff and lead subcontractor personnel will conduct an End of Day (EOD) meeting to review daily activities, highlight accomplishments, discuss lessons learned, and plan for the following day or upcoming activity. This meeting will include a review of the work schedule to ensure alignment with project timelines, document review, and promote coordination across all teams.

Refer to the Accident Prevention Plan/Site Safey and Health Plan (ECC, 2025a) for additional safety details and requirements.

3.3 Site Security and Access Areas

Security measures will be provided after hours and on weekends, including one security guard and a patrol vehicle. Temporary fencing will be erected around the site areas (buildings, debris staging areas, etc.) as needed. Laydown areas will be selected and may move over the duration of the site activities for project optimization. Equipment and tools will be secured daily in a locked Conex storage box. Security incidents will be reported to the Navy.

Prior to mobilization, ECC will request HPNS security passes for site workers. Field personnel, including subcontractors, will enter through the guard station at HPNS. Regular working hours will fall between 7:00 A.M. and 5:00 P.M., Monday through Friday, excluding Federal holidays. Weather conditions (e.g., wind, rain) may require an earlier start time to ensure health and safety. If work outside of regular working hours or on Federal holidays is required, the Navy CSO representative, ROICC, and Navy RPM will be consulted for approval. Personnel will be required to follow sign-in procedures and check in with the site superintendent.

3.3.1 Area Access

The work area barriers will consist of red "**Danger**" tape or flagging with appropriate signage identifying the associated hazard (Asbestos, overhead hazards, etc.).

No person will be allowed beyond the designated barriers without proper training, PPE, and respiratory protection. Only authorized personnel will be allowed into a containment or regulated work area.

Asbestos-containing materials will be removed within the controlled environment using wet methods to minimize the release of asbestos fibers. All personnel performing abatement activities will be required to pass through designated decontamination facilities before exiting the work area for any reason (**Appendix D, Attachment A**).

Loose and flaky lead-based paint removal, as well as chemical stripping activities, will be conducted within a regulated work area. This area will be clearly identified and controlled using red '**Danger**' tape and signage indicating the task in progress and associated hazards. No individual may cross the designated barriers without proper PPE. Only authorized personnel will be permitted to enter containment or regulated work areas (**Appendix D, Attachment A**)

3.3.2 Abatement Site Specific Safety

All abatement workers assigned to this project will be trained and certified as EPA/AHERA asbestos workers. They will receive instruction on the hazards associated with asbestos, proper work procedures, and protective measures in accordance with 29 CFR 1926.1101 and 8 CCR 1529. HAZWOPER training will be required for all workers.

Workers assigned to lead-related tasks will also hold a valid California Department of Public Health Lead-Related Construction Certification.

All abatement supervisors and supervisors have been trained and certified in the following:

- First Aid, CCR Title 8 1512
- CPR, CCR Title 8 1504
- Fire Extinguisher, CCR Title 8 1920
- Power actuated tools, CCR Title 8 1685

In addition, all equipment operators will hold current certifications for the specific equipment they are assigned to operate.

A BES Corporate Safety Officer (CSO) will be responsible for ensuring worker compliance with all aspects of the abatement Corporate Safety Program. The CSO has successfully completed all EPA Training Center courses related to asbestos and lead abatement procedures and has received specialized training in construction safety practices.

The Safety Coordinator and Project Superintendent will conduct regular safety audits and provide ongoing worker training sessions at each job site.

BES will supply materials and equipment that are either new or used but in undamaged, serviceable condition. Only equipment that is recognized as suitable for its intended use and compliance with applicable standards will be utilized.

All HEPA-filtered equipment, including vacuums and exhaust systems, will be DOP challenge tested onsite by an independent third party. Certification of each unit will be provided upon completion of testing.

A safety bulletin board will be conspicuously located onsite to be visible daily, by all employees. Bulletin boards will contain Cal-OSHA postings, BES permits, notifications, and other appropriate safety related notices.

Binders containing Safety Data Sheets, the Injury and Illness Prevention Plan, the Code of Safe Practices, other related safety programs such as Fall Protection, Confined Space Entry etc. are kept in the superintendent's truck and are available for review by employees and/or owner or general contractor personnel at any time, upon request.

Refer to the Abatement Plan (**Appendix D, Attachment A**) for additional details and requirements.

3.3.2.1 Abatement Safety Meeting

Each working day, prior to the beginning of activities, the BES superintendent will conduct a morning tailgate meeting to review the abatement activities scheduled for the day. This review will address the scope of work for the day as well as hazards identified and listed on the Job Hazard Analysis (JHA), and the control measures to be used to prevent injury and illness.

Refer to the Abatement Plan (**Appendix D, Attachment A**) for additional details and requirements.

3.3.2.2 Abatement Medical Examinations

All personnel entering work areas where respiratory protection is required must have received a medical examination within the past twelve months, in compliance with CCR Title 8, Section 1529. For each person entering the work area, BES will maintain onsite a written physician's certificate stating the individual is medically cleared to enter an atmosphere where asbestos fibers may be present and is approved to use a respiratory device.

All BES personnel will be trained in the proper use and cleaning of respiratory equipment. They will be fit-tested for the specific respiratory device, and documentation of the fit test will be kept onsite for all individuals required to wear respiratory protection

or enter the regulated work area. Fit tests must be current within the past twelve months.

Blood testing for lead-exposed workers will be conducted before and after the project, as required.

Refer to the Abatement Plan (**Appendix D, Attachment A**) for additional details and requirements.

3.3.3 Demolition Site Specific Safety

All newly hired demolition employees are required to attend a SCI demolition safety orientation and site-specific orientation prior to beginning their duties. This training includes a review of SCI's Injury and Illness Prevention Plan and Code of Safe Practices, and employee responsibilities. Any required training such as fall protection, fire protection etc. is provided prior to the assignment to any job site.

A safety bulletin board will be conspicuously located onsite to be visible daily, by all employees. Bulletin boards will contain Cal-OSHA postings, SCI permits, notifications, and other appropriate safety related notices.

Binders containing Safety Data Sheets, the Injury and Illness Prevention Plan, the Code of Safe Practices, other related safety programs such as Fall Protection, Confined Space Entry etc. are kept in the superintendent's truck and are available for review by employees and/or owner or general contractor personnel at any time, upon request.

3.3.3.1 Demolition Safety Meetings

Each working day, prior to the beginning of activities, the demolition superintendent will conduct a morning tailgate meeting to review the demolition activities scheduled for the day. This review will address the scope of work for the day as well as hazards identified and listed on the Job Hazard Analysis (JHA), and the control measures to be used to prevent injury and illness. Daily tailgate meeting rosters will be kept and the names of those in attendance will be entered into the High-Capacity Storage System (HCSS – known as "Heavy Job") application.

In addition to the daily tailgate topics, a weekly topic, focusing on more general safety policies, will be assigned by SCI's Corporate Safety Director. Attendance rosters from these meetings will also be uploaded into the HCSS system for documentation purposes.

Monthly superintendent meetings will be conducted and led by SCI's Operations Manager. Each meeting will start with a brief safety discussion, led by SCI's Regional Safety Manager, prior to starting discussions regarding the individual jobs themselves.

3.4 Temporary Construction Facilities and Mobilization

Temporary facilities to be mobilized to Parcel G will include portable restrooms, hand washing stations, stormwater runoff controls, and one or more secure storage (Conex) boxes for short-term storage of materials, as needed. Construction materials mobilized to the site will allow for building of equipment decontamination pads, and staging areas.

The equipment to be used on the project is listed below. Equipment of similar size and weight from alternate manufacturers may be substituted or added if necessary during the project. All equipment will comply with USEPA emissions standards for off-road diesel-powered equipment used during construction, except for specialized construction equipment for which such standards are not available. Although certain concrete breaker types are specified, they may be interchanged as needed to meet the structural requirements. Each excavator may use a bucket or a bucket with a thumb attachment instead of a breaker hammer for loading debris, removing building materials, or dismantling structural components.

3.4.1 Abatement Mobilization

Where full containment (Class I Containment) is required to control friable regulated asbestos-containing materials (RACM), BES will mobilize materials and construct critical barriers to fully isolate the work area. Impermeable barriers will be installed at all openings, including doors, windows, duct chases, mechanical shafts, floor openings, and drains. Each opening will be sealed with two layers of fire-retardant 6-mil polyethylene sheeting, secured using duct tape at least 2 inches wide. The tape will be capable of sealing polyethylene joints and adhering to both finished and unfinished surfaces.

Negative pressure will be established and maintained at 0.02 inches water column by installing the appropriate number of 2000 CFM HEPA-filtered negative air machines. These machines will be placed within the containment and vented to the exterior of the building.

A worker decontamination station will be constructed at the exit of each regulated area. The station will be equipped with clean running water, soap, and clean towels for personnel use during egress.

All regulated and controlled work areas will be clearly marked using barrier tape, chain, or flagging, along with signage identifying the associated hazards.

Refer to the Abatement Plan (**Appendix D, Attachment A**) for additional details and requirements.

3.4.2 Proposed Demolition Equipment

- Hitachi ZX850/870 LC-3 185,000 Pound Class Pound Hi – Reach Excavator.
- Link Belt 750 LX 160,000 Pound Class Excavator.
- Hitachi ZX670LC-5 150,000 Pound Class Excavator.
- Link Belt 490 113,000 Pound Class Excavator.
- Link Belt 350X3-4 80,000 Pound Class Excavator.
- CAT 973 66,000 Pound Class Track Front End Loader.
- 2,500 Gallon Water Truck.
- Xtreme XR1270 12,000 Pound Telehandler.

- S750 9,000-Pound Class Bobcat Skid Steer Loader
- S450 5,370-Pound Class Bobcat Skid Steer Loader.
- Hyundai HI770 51,810 Pound Class Wheel Loader.
- Excavator Atlas Copco Hammer Attachments: HB 3000 6,613 (6,613 pounds), HB 3600 (7,900 pounds), HB 4700 (10,361 pounds) Hammer HB 5800 (12,780 pounds)
- Excavator Shear Attachments: Allied Gator MT40 (7,000 Lbs.), MT70 (12,500 Lbs.), MT90 (20,000 pounds), MT 100 (28,000 pounds)
- Excavator LaBounty Pulverize attachments: CP 80 (4,475 pounds), CP100 (6,500 pounds)
- Excavator LaBounty Pulverize/Shear Attachments: UP30 (7,800 pounds), UP 75 (12,650 pounds)
- Temporary office trailer or Conex box throughout the period of construction to store project documents, hold project meetings, and store and charge analytical equipment
- Air monitoring equipment
- Industrial hygiene monitoring equipment
- Generators (when power is not available)
- Polyethylene sheeting
- Miscellaneous hand tools

3.5 Laydown Area

Site activities will generate IDW including demolition debris, personal protective equipment, decontamination fluids, wastewater, and waste from demolition and excavation. **Figure 3** shows anticipated site staging and proposed IDW containment areas. Staging areas may change pending project activities.

3.6 Dust Control and Air Monitoring

All necessary precautions will be taken to minimize the exposure of nuisance and fugitive dust to employees, the public, and surrounding buildings. The control and evaluation of potential dust hazards will be accomplished through monitoring and observance by experienced personnel and coordination of hazard observation with supervisory personnel.

Dust control measures will be implemented beginning with site mobilization and continuing during all phases of the construction activities. Residual dust control water will be contained within the limits of the demolition work. At the exterior demolition limits of work, the CERCLA Storm Water Plan BMPs to contain the stormwater/dust control water will be by installing Eco block and or hay bale berms that are fully wrapped with poly, the trap water will be vacuumed up and deposited into a frac tank. If required, the

remaining stormwater/dust control water will be tested, and if necessary either treated prior to discharge into the existing site sanitary sewers and/or deposited offsite to a public owned treatment works plant (POTW).

Work areas will be kept free of debris, and all dirt and soil will be cleaned from the work areas at the end of daily activities. Although not expected, all demolition-generated stockpiles will be covered at the end of each workday to minimize dust generation. Ambient dust will be monitored in accordance with the Dust Management Plan/ Air Monitoring Plan which is found in Attachment B of the EPP (**Appendix A**).

Control measures will be implemented when either the project QC Manager (QCM) or site superintendent determines it is necessary. These measures may include one or more of the following:

1. The demolition project superintendent shall ensure that proper dust control activities are being implemented at all times.
2. The workforce will receive training to ensure dust is minimized, and this training will be documented in the pre-task job hazard analyses.
3. Skilled workers using 1.5-inch water hoses from water trucks or boom lifts will apply water to suppress dust generated during demolition operations.
4. All haul trucks transporting debris, concrete, or asphalt will be covered or sprayed with water to suppress dust during transit.
5. Haul trucks will be covered to prevent dust emissions.
6. If wind speeds exceed 15 mph, water quantity will be increased, if wind speeds reach 25 mph, work will be stopped.
7. Traffic speed onsite is limited to 10 mph.
8. Minimize sources of emissions. Keep work areas neat so dust is not allowed to accumulate.

Dust control water will be applied at a level that is absorbed by the demolition debris and does not create runoff or puddling. To ensure that water runoff from partially demolished buildings is contained, one of the following site perimeter berm protection measures will be implemented:

1. Furnishing and installing Hay Bales wrapped in poly and placing a fiber roll at the ground level inboard of the Hay Bale protection berm.
2. Furnishing and installing Eco Blocks wrapped in poly and placing a fiber roll at the ground level inboard of the Eco Block protection berm.
3. Furnish and installing a 3-foot-tall Geo fabric impermeable berm fastened to the concrete deck with metal straps and placing a fiber roll at the ground level inboard of the protection berm.

As part of the Environmental Protection Plan (EPP) (**Appendix A**), erosion and Sediment Control Measures are presented in the CERCLA Storm Water Plan (Attachment A of the EPP (**Appendix A**)] and discussed in **Section 3.11.** Dust control measures are presented **Section 3.6** and in the Dust Management Plan/ Air Monitoring Plan [Attachment B of the EPP (**Appendix A**)].

Analytical methods and sampling frequency are presented in the Sampling and Analysis Plan (SAP) (**Appendix C**) and conducted in accordance with local, state, and federal regulations, including the BAAQMD. All air monitoring data will be summarized in the air monitoring report and provided to the Navy Remedial Project Manager (RPM). In addition, the substantive requirement of the BAAQMD's 24-hour air monitoring action level of 50 micrograms per cubic meter for total particles with a diameter of 10 micrometers or less will be implemented and enforced.

3.7 Utility Clearance and Geophysical Survey

Underground Service Alert-North (1-800-642-2444) will be notified to obtain utility clearance a minimum of 72 hours prior to intrusive activities. In parallel, existing site utility drawings will be reviewed, and a site walk/pre-construction meeting with the site superintendent, Caretaker Site Office (CSO), and Resident Officer in Charge of Construction (ROICC) will be held to review the RA areas and specific intrusive work locations. The required 24-hour notification will be provided before excavation activities begin. In addition, a geophysical survey will be conducted to ensure no utilities and/or obstructions are identified in areas of proposed intrusive activities.

ECC will complete the Mechanical, Electrical, and Plumbing (MEP) investigation and Safe-Offs before beginning project activities.

3.8 Hazardous Materials Survey

As discussed in **Section 2.0**, a Hazardous Materials Survey for each building was conducted by Terracon in 2023-2024 (Terracon 2024) prior to contract award. These reports identified locations of asbestos-containing material (ACM) and other hazardous materials and quantified the amounts and volumes that needed to be abated. The abatement work required for each building prior to demolition as described in **Section 4.0** is based on these surveys.

While unlikely, if any uncharacterized hazardous waste is discovered, work will stop and the ROICC will be notified. An evaluation will then be conducted, followed by coordination with BRAC to determine how to proceed.

3.9 Land Survey

A California-licensed land surveyor will conduct a pre-construction land survey to establish or identify the following: site topographic features, including the limits of the excavation area; and to provide the basis for calculating the excavation quantities. The excavation quantities will be calculated to determine the quantity of backfill material required.

Following demolition and excavation activities, a California-licensed land surveyor will survey the area. This data will be used to evaluate the total volume excavated, confirm the 12-inch below grade removal was achieved and will be used to create an as-built drawing of final site conditions.

3.10 Decontamination Area

3.10.1 Abatement

A three-stage decontamination facility consisting of a clean room, shower, and dirty room will be provided at the entrance to each Class I containment area. Hot and cold running water, soap, and clean towels will be available for personnel decontamination. All personnel entering the contaminated work zone will be required to decontaminate before exiting the area.

For the abatement of non-friable Class II asbestos-containing materials, BES will provide a two-stage air lock at the entrance to each containment. Clean water, soap, and towels will be available outside the containment for personnel to decontaminate.

One shower will be provided for every ten workers or shifts and breaks will be staggered to prevent overloading of the shower facilities. Wastewater will be filtered through a series of filters down to 5 microns before being discharged to the sanitary sewer.

Access to the work area will be permitted only through a personnel decontamination unit, air lock, or other designated work area entrance. All other means of access will be closed off and sealed, and warning signs will be displayed on the clean side of the closed access. No one will be allowed to enter the work area that does not have a direct need to do so.

A third party Private Qualified Person (PQP) will facilitate the air clearances.

Everyone entering the work area must follow all entry procedures, including the removal of street clothing, donning protective clothing, using the appropriate respiratory protective device, and complying with the requirements of the company's respiratory protection program.

For additional details, the Abatement Plan is provided in **Appendix D, Attachment A.**

3.10.2 Equipment

A decontamination area will be set up with site mobilization and decontamination measures will be implemented during all phases of the construction activities. Work activities will involve the use of heavy equipment such as drill rigs, excavators, haul trucks, forklifts, support vehicles, and trucks transporting contaminated materials for off-site disposal (**Table 3**), along with various hand tools. Heavy equipment, vehicles, and hand tools that are in contact with contaminated materials (soil, liquids, and/or infrastructure) will be decontaminated prior to demobilization from the work site to prevent contaminants from being transferred out of work zones.

Dry brushing or wiping will be the primary decontamination methods used for equipment and vehicles to minimize the volume of decontamination rinsate water requiring treatment and/or disposal. If necessary, due to heavy contamination or wet conditions, equipment, and vehicles (especially tires) will be washed with a low-volume pressure washer at the Wash Station shown on **Figure 2.** Decontamination will proceed until the soil and residues are removed. Rinsing activities will be performed at a suitably constructed vehicle wash station within the contaminant reduction zones. Rinsate water

generated during these activities will be captured and containerized in a storage tank in the IDW-designated area for further profiling and disposal per the WMP (**Appendix B**).

Reusable equipment or any related demolition activity (e.g., water-level meters, submersible pumps or surge blocks, and hand-sampling tools) will be decontaminated prior to initial use and after each use by washing with a non-phosphate detergent (e.g., Liquinox™ or equivalent) and rinsed with fresh potable water, followed by rinsing with deionized water. The rinsed equipment will be placed on clean plastic sheeting and allowed to air dry. If the equipment is not reused immediately, it will be placed in plastic bags or covered in clean plastic sheeting until used. Residual solids or liquids will be collected, properly containerized, and transported to and placed in the staging area pending characterization and disposal per the WMP (**Appendix B**).

3.11 Erosion and Sediment Control Measures

The National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity (State Water Resources Control Board Order No. 2009- 0009-DWQ, NPDES No. CAS000002) requires the development and implementation of a Stormwater Pollution and Prevention Plan (SWPPP) for construction sites and linear utility projects with equal to or greater than one acre of soil disturbance. However, SWPPPs are not required for CERCLA sites, but CERCLA Storm Water Plans [Attachment A of the EPP (**Appendix A**)] are created and implemented to meet the substantive requirements of NPDES permit. The substantive requirements implemented from the stormwater program will control the discharge of pollutants to surface waters with the focus of protecting the drainage swales adjacent to the Parcel G buildings that discharge to the San Francisco Bay.

3.12 Traffic Control

Large commercial truck traffic is required to follow the municipal truck route to and from the Crisp Road entrance to HPNS (**Figure 4**). ECC will provide access to the Crisp Road gate and will monitor all ECC project trucks' ingress and egress. Small commercial and passenger vehicles will enter HPNS via the Galvez Avenue entrance.

Traffic control activities will conform to the applicable specifications of *the Manual of Traffic Control for Construction and Maintenance Work Zones* (Caltrans, 1996).

3.13 Noise Control

Elevated levels of noise are generally associated with construction projects due to the heavy equipment utilized to conduct site operations. During field activities, low noise emission equipment will be utilized, when possible, to minimize noise levels above background.

ECC will monitor construction for excessive noise and will comply with the provisions of California Noise Control regulations. Further discussion of personal hearing protection is discussed in the APP (ECC, 2025a). FFA signatories will be notified if fieldwork is to be conducted outside of normal working hours

3.14 Weather Conditions and Work Shutdown Requirements

Wind Safety Shutdown Criteria

- Wind speeds of 40 MPH or higher will result in a full site shutdown.
- Wind speeds between 20 and 30 MPH will require crane operations to shut down.
- Wind speeds exceeding 30 MPH will require material handling operations to shut down.
- Wind speeds exceeding 25 MPH will require work on scaffolding to shut down.
- Wind speeds exceeding 25 MPH will require mobile elevated work platforms to shut down.

Rain Safety Shutdown Criteria

A forecast indicating a 50 percent or greater probability of 0.5 inches or more of precipitation within a 24-hour period will result in a site shutdown.

Lightning Safety

- A written lightning safety protocol will be prepared to define how workers will be notified of lightning warnings.
- Onsite safe shelter locations and required response times will be identified.
- Daily weather forecasts and storm tracking will be monitored by the onsite safety manager.
- Weather radios, mobile applications, or lightning detection services will be used to monitor conditions.
- All outdoor activities will stop immediately if thunder is heard within 30 seconds of a lightning strike, and work will not resume until at least 30 minutes have passed since the last sound of thunder.

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4.0 DEMOLITION ACTIVITIES

Demolition activities for Parcel G are summarized below. Demolition and deconstruction activities will be executed in a controlled and safe manner in accordance with applicable engineering standards and safety regulations. No explosive methods will be employed. For a more detailed overview, refer to the engineered stamped demolition plans in **Appendix D**.

BES, a licensed abatement contractor, will perform the abatement, and SCI, a demolition contractor licensed by the State of California with DOSH Certification Registration Number 863, will perform the demolition. A third party PQP will conduct the abatement clearances.

Abatement will be conducted in accordance with BAAQMD substantive permit requirements, and the findings of the Parcel G Hazardous Materials Survey (Terracon. 2024). Air monitoring procedures are outlined in the Dust Management Plan/ Air Monitoring Plan (Attachment B) within the EPP (**Appendix A**)

The demolition methodology may be adjusted to address safety concerns, weather conditions, equipment limitations, or other factors, based on the professional judgment of supervisors or safety officers at the time of execution. The methodology is not intended as an “instruction manual” but as a general description of the means and methods that may be used for the demolition scope of work.

4.1 Building 351

See **Figures 8a** and **8b**.

4.1.1 Abatement

The scope of work includes:

1. Removal of ACMs including roofing mastics and felts, ACM glue on metal panels, black ACM mastic on sheet metal HVAC, ACM rope gasket, ACM drywall residue on columns, ACM debris, Oakum pipe seal using wet methods, high-efficiency particulate air (HEPA) vacuums, and manual scraping.
2. Removal of loose and flaky LBP including stabilization by application of a commercial primer in areas where lead paint was abated.
3. Establishment of negative pressure containments where friable materials are present and erection of regulated areas for non-friable materials.
4. Provision of temporary power via portable generators for containment and lighting.
5. Submission of required notifications to BAAQMD (10-day notice) and California/ Occupational Safety and Health Administration (Cal/OSHA) (24-hour notice).

4.1.2 Demolition

1. Using skilled laborers and a 5,370-skid steer bobcat, remove the building's main roofing materials.
2. Skilled laborers will remove a window at the east side of the building for equipment access into the 2nd and 3rd floors of the building.
3. Using an Xtreme XR1270 Telehandler Forklift capable of lifting 12,000 pounds at 70 feet above the ground. Rig and place a 5,370-pound class skid steer bobcat into 2nd and 3rd Floors and remove the interior building combustible materials.
4. Using a 160,000-pound class excavator equipped with a hydraulic hammer attachment, and a supporting 100,000-pound class excavator equipped with a thumb and bucker attachment, demolished the building from the top down to the slab on grade in a south to north direction. Leaving the concrete stair/elevator tower in place.
5. Using a 200,000-pound class Hi – Reach excavator equipped with a hydraulic hammer and a supporting 100,000-pound class excavator equipped with a thumb and bucket attachment to manage the demolition debris, demolished the concrete stair/elevator tower from the top down to grade level.
6. Using two 100,000-pound class excavators, one equipped with hydraulic hammer and one equipped with a thumb bucket attachment, demolish the concrete slab and foundations down to one foot below the surrounding adjacent grade. Slabs or foundations will be removed until soil is encountered or to a depth of 12 inches, whichever occurs first.
7. A 100,000-pound class excavator equipped with a thumb bucket attachment, sort separate and stockpile the demolished debris for truck loading operations
8. A 100,000-pound class excavator with a thumb bucket attachment will be used to load trucks for offsite disposal during work.

4.2 Building 351 A

See **Figures 8a** and **8b.**

4.2.1 Abatement

The scope of work includes:

1. Removal of ACM including ACM pipe insulation, various roof mastics and roof field, floor tile and mastic, HVAC sealant, pipe flange gaskets.
2. Collection and double bagging of loose debris using HEPA vacuums and wet cleanup techniques.
3. Stabilization of deteriorating LBP through wet scraping and primer application.
4. Control of access to crawl space using barriers, warning signage, and PPE protocols.

4.2.2 Demolition

1. Using a 100,000-pound class excavator equipped with a hydraulic hammer attachment and a supporting 5,370-pound class skid steer bobcat, with supporting ground crew laborers. Demolish 60 feet of the exterior south wall to create an access point into the building. Stockpile the concrete materials onsite.
2. A 100,000-to-150,000-pound class excavator equipped with a hydraulic shear will be utilized to mechanically cut steel framing elements in a bay x bay approach.
3. Starting from the south and working towards the north. A 100,000 Pound Class excavator equipped with a thumb and bucket attachment, and a 5,370-pound skid steer bobcat Loader, with supporting site workers, remove the wood frame roof, the interior building steel framing, and the interior wood framing studs.
4. Using two 100,000-pound class excavators, one equipped with a hydraulic hammer and one equipped with a thumb bucket attachment, demolish the concrete super structure and concrete mezzanine down to the top of the building concrete dock level slab in a south to north direction.
5. Using two 100,000-pound excavators, one equipped with a hydraulic hammer and one equipped with a thumb bucket attachment, demolish the concrete dock loading slab and foundations down to one foot below the surrounding adjacent grade. Slabs or foundations will be removed until soil is encountered or to a depth of 12 inches, whichever occurs first.
6. A 100,000-pound class excavator equipped with a thumb bucket attachment, sort separate and stockpile the demolished debris for truck loading operations.
7. A 100,000-pound class excavator with a thumb bucket attachment will be used to load trucks for offsite disposal during work.

4.3 Building 366

See **Figures 8a** and **8b.**

4.3.1 Abatement

The scope of work includes

1. Removal of ACM including roof penetration mastic, TSI pipe runs and fittings, flange gaskets, drywall joint compound, window putty, and sealant, transite panels, fire doors, door frame putty, HVAC vibration cloth.
2. Removal and proper packaging of fluorescent tubes and ballasts.
3. Pressure washing of slab post-demolition.
4. Stabilization of deteriorating lead-based paint through wet scraping and primer application.

   Please see Section 3.6 for dust control measures and Appendix D, Attachment A for the Abatement Plan.

4.3.2 Demolition

1. Using a 5,370-pound class skid steers bobcats and skilled laborer crews, remove the interior building combustible debris prior to starting the structural building demolition work.
2. Using two 100,000-pound class excavators, one equipped with a hydraulic shear and one equipped with a thumb bucket attachment, remove the super structure from top down to the slab on grade level in an east to west direction.

   2a. Using a bay x bay approach, one to two 100,000 pound class excavators equipped with hydraulic shears will be used to strategically cut the lateral steel framing that connects steel trusses being removed to steel trusses scheduled to remain in place. This work will occur sequentially in a bay x bay pattern. The excavators will then cut the lateral steel framing between columns being removed and columns scheduled to remain in place, also following a bay x bay sequence. This bay x bay demolition sequencing will not transfer excess loads or create eccentric loading on the remaining columns and will leave the remaining portions of the structure in a structurally safe condition.
3. Using two 100,000-pound excavators, one equipped with hydraulic hammer and one equipped with a thumb bucket attachment, demolish the concrete slab and foundations down to one foot below the surrounding adjacent grade. Slabs or foundations will be removed until soil is encountered or to a depth of 12 inches, whichever occurs first.
4. A 100,000-pound class excavator equipped with a thumb bucket attachment, sort separate and stockpile the demolished debris for truck loading operations.
5. A 100,000-pound class excavator with a thumb bucket attachment will be used to load trucks for offsite disposal during work.

4.4 Building 401

See **Figures 5a** and **5b**.

4.4.1 Abatement

The scope of work includes:

1. Stabilization of deteriorating lead-based paint through wet scraping and primer application.
2. Removal of accessible PCB-laden window sealant without substrate scraping.
3. Removal of eight exterior high-intensity discharge (HID) fixtures.
4. Pressure washing of the slab post-demolition.

4.4.2 Demolition

Building 401 is a heavy wood timber framed structure supported by large wood columns. A 100,000 pound class excavator equipped with a thumb and bucket attachment will begin demolition from the top down using a bay x bay approach, starting

at the exterior east end. As demolition progresses, all remaining wood trusses and columns will remain in place.

The bay x bay demolition approach maintains the structural integrity of the remaining building and prevents premature collapse.

Dust control water generated during demolition operations will be applied appropriately and absorbed within the demolition debris. Any residual dust control water will be contained within the limits of the demolition work. Regular inspections by the QSDs of record will be conducted, and approval from the air district will be obtained prior to the start of work.

An Open-Air Demolition Work Plan (**Appendix D**), was submitted, detailing the necessary worker safety measures and engineering controls to allow demolition without removing ACM that could not be safely abated in advance. During the building demolition, a crane supporting a debris screen will be used to enhance the protection to the adjacent neighborhood to the north from any escaping demolition debris.

FBA Engineers, Inc has surveyed this weather damage building and has deemed that the building is unsafe for workers to remove the asbestos containing roof materials and other hazardous materials located inside the building prior to the building demolition work.

Silverado Contractors, a Cal/OSHA Certified Registered Contractor, and Bay View Environmental, the Environmental Abatement Contractor, has designed an “Open – Air” Regulated Demolition Work Plan Structural Stability Survey of the Roofs of Building Numbers 401 and 411 (**Appendix D**), prepared by FBA Structural Engineers, Inc. to demolish the building with the remaining ACM in place that cannot be removed safely.

Once the “Open – Air” regulated work area and engineering controls are in place, the building structural demolition work will start from the east and work to the west direction. A 100,000-pound excavator equipped with a thumb bucket attachment will demolish the building from the top down to the slab on grade in a bay-by-bay approach. A 100,000-pound excavator equipped with a thumb bucket attachment will be used to manage and stockpile the demolished debris.

5. Using two 100,000-pound excavators, one equipped with hydraulic hammer and one equipped with a thumb bucket attachment, demolish the concrete slab and foundations down to one foot below the surrounding adjacent grade. Slabs or foundations will be removed until soil is encountered or to a depth of 12 inches, whichever occurs first.
6. A 100,000-pound class excavator equipped with a thumb bucket attachment, sort separate and stockpile the demolished debris for truck loading operations.
7. A 100,000-pound class excavator with a thumb bucket attachment will be used to load trucks for offsite disposal during work.

4.5 Building 411

Building 411 see **Figures 6a** and **6b**.

4.5.1 Abatement

The scope of work includes:

1. Removal, packaging, and off-haul of the ACM identified/quantified in the North & South Office Structure, concrete structures along the East side of the main building. Remove exterior transite panels where accessible and excluding hazardous areas where building is deteriorated.
2. Use boom lifts to reach exterior panels.
3. Stabilize lead paint on accessible exterior and office areas.
4. Removal of 10 exterior HID bulbs.

Note: Exclusion of work in unsafe interior areas.

4.5.2 Demolition

4.5.2.1 Administration Building

1. Using 5,370-pound class skid steer bobcats and skilled laborer crews, remove the interior building combustible debris prior to starting the structural building demolition work.
2. Using three 100,000-pound excavators, two equipped with hydraulic hammers and one equipped with a thumb bucket attachment, demolish the concrete and steel super structure from the top to the bottom is a south to north direction.
3. Using three 100,000-pound excavators, two equipped with hydraulic hammers and one equipped with a thumb bucket attachment, demolish the concrete slab and foundations down to one below the surrounding adjacent grade.
4. Using a 100,000-pound class excavator equipped with a thumb bucket attachment, sort separate and stockpile the demolished debris for truck loading operations.
5. A 100,000-pound class excavator with a thumb bucket attachment will be used to load trucks for offsite disposal during work.

Note: At the end of each work shift, the intent is to remove all structural roof framing and supporting columns within the active bay to the next supporting bay. If any structural element must remain in place, the onsite demolition superintendent will determine what can safely remain based on an evaluation of the size of the remaining structural member in relation to the supporting structural framing of the building that remains in place.

4.5.2.2 Repair/Service Area Warehouse Building

FBA Engineers, Inc has surveyed this building and has deemed that the “Repair/Service” roof area and interior mezzanine/balcony has been severely damage by weather and neglect and is unsafe for workers to remove the ACM roof materials and

other hazardous materials located inside the building prior to the building demolition work. (**Appendix D**).

Silverado Contractors, a Cal/OSHA-Certified Registered Contractor, and Bay View Environmental, the Environmental Abatement Contractor, has designed an “Open – Air” Regulated Demolition Work Plan to demolish the building with the remaining ACM in place that cannot be removed safely.

The “Open – Air” Demolition work plan can be found in **Appendix D**.

1. Prior to starting the building demolition work, a 51,000-pound class wheel loader and a 9,000-pound class skid steer bobcat will be used to place the demolished concrete rubble from the demolished administration building work into the existing Service/Repair warehouse area pits to create a safe working surface for the super structure demolition scope of work.
2. Starting from the south and working towards the northern direction, two 187,000-pound class Hi – Reach excavators equipped with shear attachments, and two 100,000-pound class excavators equipped with thumb and buckets attachments will be used to demolish the building from the top down to the slab on grade in a bay-by-bay approach, including the mezzanine. The top/down building demolition will be sequenced to isolate and expose the six each 100-foot-long trusses at Grid Lines A – I/4 – 6 and supporting columns for the crane access demolition approach.
3. Each of the six, 100-foot-long trusses and supporting columns will be demolished by the following approach:
    a. Using a 145-ton crane and skilled torch cutting crews working from 100-to-120-foot boom lifts. The 145 Ton Crane will be rigged (NON – Critical Crane Pick) to the truss and once the truss is secure by the crane, two torch cutting crews will commence the simultaneous torch cutting the truss at the supporting steel column connections. Once the truss is torch cut free, the 145 Ton Crane will lower the truss to the ground level. A 150,000-pound excavator with a shear attachment will shear apart the steel truss at grade level. A 150,000-pound Class excavator equipped with a shear attachment will remove the remaining truss columns. Repeat this sequence to demolish the remaining 100-foot-long trusses and supporting columns.
    b. Using 150,000 to 100,000-pound class excavators, equipped with hydraulic hammers and thumb bucket attachment, remove the pit and vault temporary concrete backfill and demolish the concrete slab and foundations down to one foot below the surrounding adjacent grade. Slabs or foundations will be removed until soil is encountered or to a depth of 12 inches, whichever occurs first.
    c. Using a 100,000-pound class excavator equipped with a thumb bucket attachment, sort separate and stockpile the demolished debris for truck loading operations.

d. A 100,000-pound class excavator with a thumb bucket attachment will be used to load trucks for offsite disposal during work.

4. The vaults and pits that are inside Building 411 currently contain an unknown amount of water. If the water is still present when the demolition is ready to commence, it will be sampled for waste characterization to determine the removal method, treatment, and disposal of the water and any found sediments. The water will be pumped into FRAC tanks and decanted to allow the sediments to settle for sampling and characterization. This will be done upon award of optional work elements 0012 or 0013.

4.6 Building 439

See **Figures 7a** and **7b**.

4.6.1 Abatement

The scope of work includes:

1. removal, packaging, and off-haul of the asbestos-containing materials identified from the survey report (Drywall joint compound, cove base mastic, floor tiles and associated mastics, roofing mastic materials, HVAC coating on ducts).
2. stabilization of loose & flaking lead-containing paint from interior and exterior walls/ceilings.
3. removal of universal waste as identified (fluorescent light tubes, HID light tubes, exit sign batteries, mercury switches, and HVAC coolant evacuation).

4.6.2 Demolition

1. Using a 5,370-pound class skid steer bobcats and skilled laborer crews, remove the interior building combustible debris prior to starting the structural building demolition work.
2. Using two 100,000-pound class excavators, one equipped with a hydraulic shear and one equipped with a thumb bucket attachment, remove the super structure from top down to the slab on grade in a south to north direction
3. Using two 100,000-pound excavators, one equipped with hydraulic hammer and one equipped with a thumb bucket attachment, demolish the concrete slab and foundations down to one foot below the surrounding adjacent grade. Slabs or foundations will be removed until soil is encountered or to a depth of 12 inches, whichever occurs first.
4. Using a bay x bay approach, one to two 100,000-pound class excavators equipped with hydraulic shears will be used to strategically cut the lateral steel framing that connects steel trusses being removed to steel trusses scheduled to remain in place. This work will be completed sequentially in a bay x bay sequence. The excavators will then cut the lateral steel framing between columns being removed and columns scheduled to remain in place, also following a bay x bay sequence. This bay x bay demolition sequencing will not transfer excess

loads or create eccentric loading on the remaining columns and will leave the remaining building in a structurally safe condition.

5. A 100,000-pound class excavator equipped with a thumb bucket attachment, sort separate and stockpile the demolished debris for truck loading operations.
6. A 100,000-pound class excavator with a thumb bucket attachment will be used to load trucks for offsite disposal during work.

4.7 Building 408 Pad

See **Figures 7a** and **7b.**

1. Using a 100,000-pound class excavator equipped with a hydraulic hammer, demolish the concrete pad to one foot below the adjacent grade. Slabs or foundations will be removed until soil is encountered or to a depth of 12 inches, whichever occurs first.
2. Using a 100,000-pound class excavator equipped with a thumb bucket attachment, load the concrete debris into trucks for offsite disposal.

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5.0 WASTE MANAGEMENT

All waste generated during field activities will be properly managed and disposed of per the WMP (**Appendix B**). All abated hazardous materials and demolished building materials will be transported to out-of-state licensed disposal facilities for disposal and recycling.

5.1 Abatement Waste Handling and Packaging

1. ACMs will be double-bagged and labeled with OSHA/EPA/DOT-compliant warnings labels.
2. Friable debris packaged in sealed drums or super sacks, bulk loading into a double lined waste container is permitted. Bulk loading will be the method for non-friable roofing and transite panels and other non-friable asbestos waste.
3. Lead paint waste and chemical stripper residue placed into DOT-approved 55-gallon drums.
4. Universal waste sorted and packed: light tubes will be packaged in cartons, PCB light ballasts will be placed into 55-gal DOT approved drums, batteries will be palletized and shrink wrapped.
5. Freon coolant will be recovered into cylinders for offsite processing.
6. Windows with PCB caulk will be bulk loaded into a double lined waste container.

5.1.1 Disposal and Hauling

All abated hazardous materials and demolished building materials will be transported to licensed out-of-state disposal facilities for proper disposal and recycling.

ECC will consult with the EPA's Region 9's OSR prior to the start of T&D operations and when the facilities for all waste are finalized.

Hazardous materials will be transported in compliance with all regulations using permitted and licensed trucking subcontractors.

All asbestos containing materials will be placed into 40-yard closed top waste containers. The waste containers will be lined with two layers of 6-mil poly or with a manufactured bin liner. The waste containers will be closed and locked when not in use. Two types of asbestos waste will be generated from this project:

1. Friable regulated materials: shall be disposed of as hazardous asbestos waste on a Uniform Hazardous Waste Manifest.
2. Non-friable asbestos waste: will be disposed of as a non-hazardous asbestos waste and will be manifest as such on a non-hazardous manifest.

Lead waste and chemical paint remover shall be manifested as a RCRA Hazardous waste.

5.2 Transportation of Building and Slab/Foundation Material

Utilizing a 100,000-pound class excavator equipped with a thumb and bucket attachment, the debris will be loaded into lined containers or trucks for offsite disposal.

All waste will be properly packaged and transported to a licensed accepting disposal facility.

Prior to the start of transport activities, signage will be used to establish the designated haul routes. Vehicular traffic will comply with the HPNS speed limits.

5.3 Loading Activities

Dust control measures, including spraying demolition debris with water, will be implemented during removal, and loading activities to minimize fugitive dust emissions.. Although not expected, all demolition-generated stockpiles will be covered at the end of each workday to minimize dust generation. See **Section 3.6** for dust control measures

5.4 Demolition Waste and Debris

Site activities will generate waste and debris including building materials, concrete, PPE, decontamination fluids, wastewater, and possible soil from the excavation.

5.5 Transportation and Disposal of Waste and Debris

The anticipated staging areas and traffic maps are shown in **Figures 2 and Figure 3**. Signage will be used to establish the designated haul route shown in **Figure 4** and **Appendix B**. The designated haul route may have to be adjusted to minimally impact other ongoing site activities. Vehicular traffic will comply with the HPNS 15 miles per hour (mph) speed limit (**Appendix B**). Waste will be transported to an approved offsite location (**Table 3).**

All trucks used to off-haul waste will be screened through the Radiation Portal before exiting HPNS.

Waste and debris will be generated from all the field activities and will consist of:

- Building demolition material including concrete
- Building 411 vault/pit water
- General construction debris
- Scrap steel and metal for recycling

All waste and debris will be staged within Parcel G and profiled in accordance with the California Code of Regulations (CCR) Title 22 Limits for Hazardous Waste, the Resource Conservation and Recovery Act (RCRA) as implemented by the U.S. Environmental Protection Agency (EPA) (detailed in Title 40 of the Code of Federal Regulations (CFR), Parts 260–273), the receiving facility's Waste Acceptance Guidelines (CCR, 2018), and the WMP (**Appendix B**). The profiles and manifests will be submitted in draft to the CSO for review prior to transport to the offsite disposal facility.

Waste will be segregated by type (solid/liquid) and anticipated hazard profile. Pending satisfactory profiling and manifesting, waste and debris will be loaded, covered, and inspected on site by ECC's Field QCM before being transported for disposal to an

appropriate offsite out-of-state facility. A general refuse bin will be used to handle daily operations and construction waste.

6.0 POST-DEMOLITION ACTIVITIES

Post construction activities including site restoration and demobilization activities are discussed in the following subsections.

6.1 Backfill

With 12 inches below grade removed, each footprint will be backfilled with six (6) inches of approved material. For each borrow site, testing for will be done for material characteristics and any potential hazardous materials; acceptance criteria will follow DTSC.

During placement, the backfill will be compacted in accordance with the UFGS 31 00 00 Earthwork specifications. Testing for compaction and density during placement will occur and following the specification and be overseen by the QC Team.

6.2 Site Restoration

Surface restoration will be conducted to meet durable cover specifications per the Design Basis Report (ChaduxTt, 2010 and 2012), consistent with the existing durable cover materials used elsewhere on the parcel. A durable, non-erodible asphalt cover, consisting of four inches of asphalt base material and a minimum of two inches of an asphaltic concrete (AC) wear surface, for a total thickness of six inches will be placed where the Parcel G slab/foundations were removed. Prior to placement of asphalt, the concrete foundation edge will be cleaned using dry methods (brush, broom, etc.) and an AC bonding agent will be applied to the edge of the concrete foundation. This will maintain the integrity of the durable cover and provide a secure bond between the AC and concrete. The durable cover will continue to be inspected during (and after) asphalt placement. Any areas with compromised material will be removed, the underlying material re-compacted and the AC repaired.

The remainder of the area to receive asphalt pavement will have a minimum 0.5% slope to guide stormwater flow toward the existing drainage channels and minimize accumulation of water on the asphalt pavement cover. The drainage channels will be graded to maintain constant slope along the channel flow line and convey stormwater efficiently.

In areas where the slab/foundation was not removed, all cracks will be sealed to ensure it meets surface restoration and durable cover requirements (ChaduxTt, 2010 and 2012).

Following site restoration, a pre-final inspection will be held with the Navy and regulatory agencies to verify that field work has been completed in accordance with the approved work plan and the durable cover is installed per **Section 6.1.** Any concerns noted by the Navy and regulatory agencies that do not conform to specifications, and any other requirements will be documented and presented to ECC. ECC will be responsible for correcting any findings prior to a follow-on final inspection. Sign-off on the final inspection will serve as acceptance of site work and task completion.

6.3 Demobilization

Demobilization consists of decontamination and removal of equipment used to conduct removal action, as well as the transportation and off-site disposal of waste, debris and possible IDW, including decontamination water and disposable equipment per the WMP (**Appendix B**).

7.0 QUALITY CONTROL PROCEDURES AND REPORTING

QC procedures are discussed in the Contractor Quality Control Plan (ECC, 2025b).

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8.0 REFERENCES

California Code of Regulations (CCR), Title 22. 2018. Toxicity Criteria for Human Health Risk Assessments, Screening Levels, and Remediation Goals; Title 22, California Code of Regulations, Section 69021. Effective Date September 4.

California Department of Transportation (Caltrans). 1996. Manual of Traffic Control for Construction and Maintenance Work Zones.

Ch2m Hill. 2019. Final Parcel G Removal Site Evaluation Work Plan. June.

ChaduxTt. 2010. Remedial Design Package Parcel B (Excluding Installation Restoration Sites 7 and 18). Design Basis Report, RA Monitoring Plan, Land Use Control Remedial Design, Preconstruction Operation and Maintenance Plan, Opinion of Probably Construction Cost, Hunters Point Shipyard, San Francisco, California. December 10.

ChaduxTt. 2012. Final Amendment to Revised Final Design Basis Report, Parcel B (Excluding Installation Restoration Sites 7 and 18), Hunters Point Shipyard, San Francisco, California. September 28.

Department of the Navy (Navy). 2009. Record of Decision for Parcel G, Hunters Point Shipyard, San Francisco, California. Final. February 18

Department of the Navy (Navy). 2025. Explanation of Significant Differences to the Final Record of Decision for Parcel G. Final. July.

Environmental Chemical Corporation Infrastructure, LLC. 2025a. Accident Prevention Plan. Parcel G, Hunters Point Naval Shipyard San Francisco, California. July.

2025b. Contractor Quality Control Plan, Parcel G, Hunters Point Naval Shipyard San Francisco, California. July.

Innovex-Engineering/Remediation Resources Group, Inc. (ERRG). 2019. Final Fourth Five-Year Review, Hunters Point Naval Shipyard, San Francisco, California. July.

Navy Facilities Engineering Systems Command (NAVFAC).

Terracon. 2024. Pre-Demolition Hazardous Materials Survey – Former Hunters Point Naval Shipyard – Parcel G. March 13

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TABLES

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Table 1. Project Schedule

Description	Estimated Completion Date
Final Work Plan	January 2026
Field Implementation ✓ Notifications and Clearances ✓ Mobilization and Site Set Up ✓ Building Demolition and Foundation Removal ✓ Backfilling ✓ Replace Durable Cover ✓ Waste Management	January 2026 – July 2027* ✓ January 2026 ✓ January 2026 ✓ February 2026 – April 2027 ✓ May 2027 ✓ July 2027 ✓ March 2026 - July 2027

Note - Placeholder Schedule until Navy approval of initial schedule.

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Table 2. Previous Reports and Site Work

Reference Title	Date	Author
Final Environmental Impact Statement for the Disposal and Reuse of Hunters Point Shipyard, Vol 1: Main Text and Appendices	2000	Department of the Navy
Final Historical Radiological Assessment, Volume II, Use of General Radioactive Materials, 1939-2003	2004	NAVSEA
Basewide Radiological Removal Action, Action Memorandum, HPS, San Francisco, California, Revised Final	2006	TtEC
Basewide Radiological Removal Action, Action Memorandum- Revision 2006, HPNS, San Francisco, California	2006	TtEC
Addendum 1 to the Final Sampling and Analysis Plan for the Base-Wide Sewer Systems (Field Sampling Plan and Quality Assurance Project Plan), Base-wide Storm Drain and Sanitary Sewer Removal, HPS, San Francisco, California	2006	TtEC
Base-wide Radiological Work Plan, HPS, San Francisco, California, Revision 1	2007	TtEC
Project Work Plan, Basewide Storm Drain and Sanitary Sewer Removal, HPNS, San Francisco, California, Revision 3	2008	TtEC
Record of Decision for Parcel G	2009	Department of the Navy
Project Work Plan, Base-wide Storm Drain and Sanitary Sewer Removal, HPS, San Francisco, California, Revision 4	2010	TtEC
Design Basis Report Remedial Action Monitoring Plan Land Use Control Remedial Design Preconstruction Operation and Maintenance Plan. Opinion of Probable Construction Cost	2010	ChaduxTt
Basewide Radiological Management Plan	2012	TtEC
Air Sampling Summary Report No. 015, Interim	2015	Aptim
Work Plan, Basewide Radiological Support, HPNS, San Francisco, California	2015	TtEC
Radiological Data Evaluation Findings Report for Parcels B and G Soil	2017	Department of the Navy
Building Data Initial Evaluation Report, Draft	2018	Department of the Navy
Parcel G Removal Site Evaluation Work Plan, Final	2019	Ch2m Hill, Inc.
Concrete Slab Investigation	2023	Terracon
Pre-Demolition Hazardous Materials Survey	2024	Terracon
Site Engineering Investigation Report	2024	Michael Baker International

Notes:
NAVSEA = Naval Sea Systems Command
ChaduxTt = St. George Chadux Corp and Tetra Tech EM, Inc
TtEC = Tetra Tech EM, Inc.

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Table 3. Waste Streams

Waste Type	Transportation Mode	Out-Of-State Disposal or Recycling Facilities, Location –
ACM Waste	Truck/Container/Liner	US Ecology Nevada, Beatty Facility, Beatty, Nevada, La Paz Landfill, Republic Services, Parker, Arizona
Hazardous Material (ACM, PCB, Lead Paint, Mercury Waste, Refrigerant, Universal Waste, PPE)	Truck/Container	
Demolition Debris	Truck/Container	Lockwood Landfill, Sparks, Nevada
Salvageable Structural Steel and Scrap Metal	High Side Truck	SA Recycling Reno – Port of Richmond transload
Recyclable Concrete	High Side Truck	Rilite Aggregate, Sparks, Nevada
Non-Hazardous/Hazardous Water	Tanker Truck/container	Waste Management, Arlington, Oregon

Notes:
ACM – asbestos containing material
PCB – polychlorinated biphenyl
PPE – personal protective equipment

** Additional Disposal and Recycling Facilities may be added during the task order **

FIGURES

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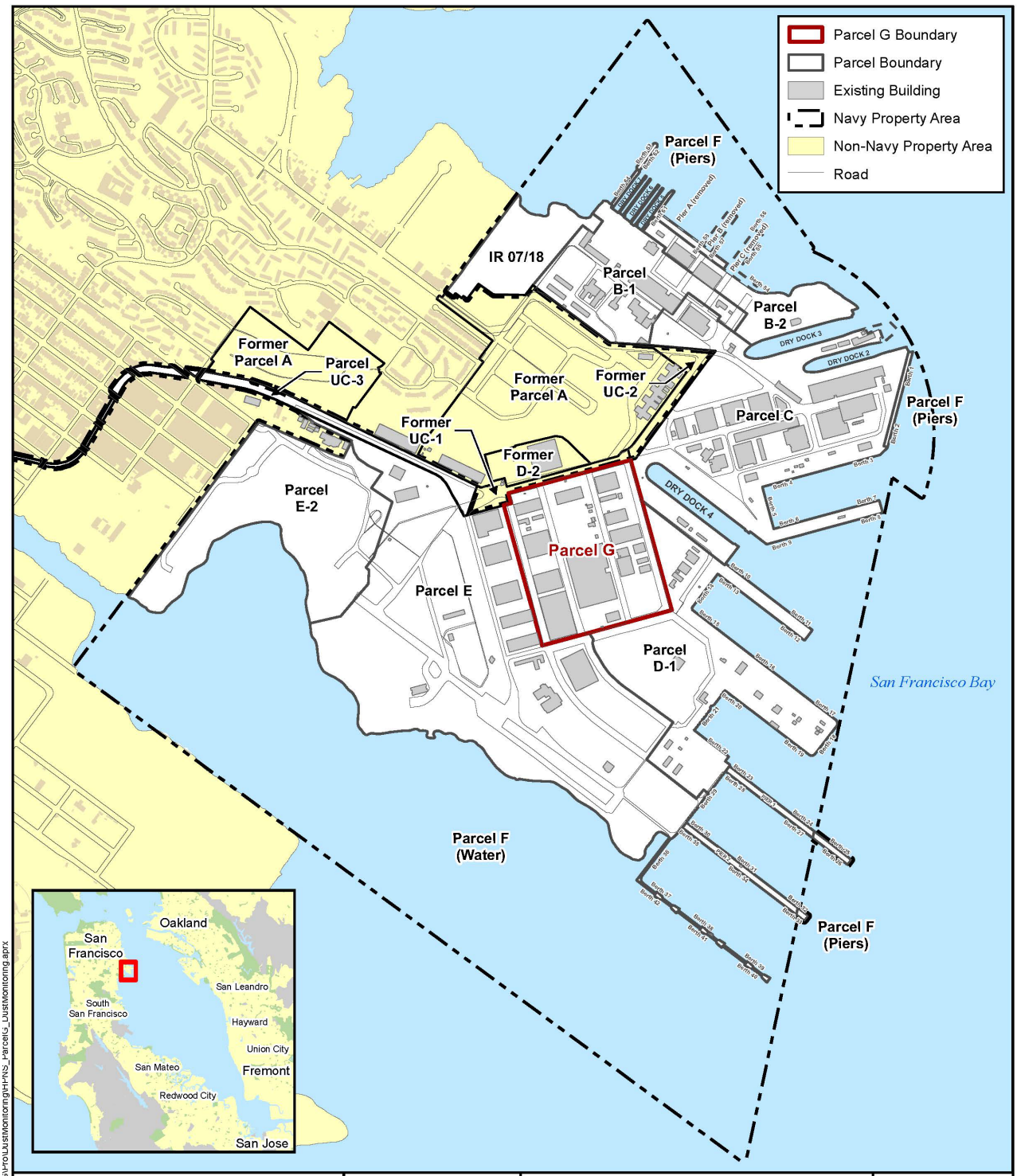
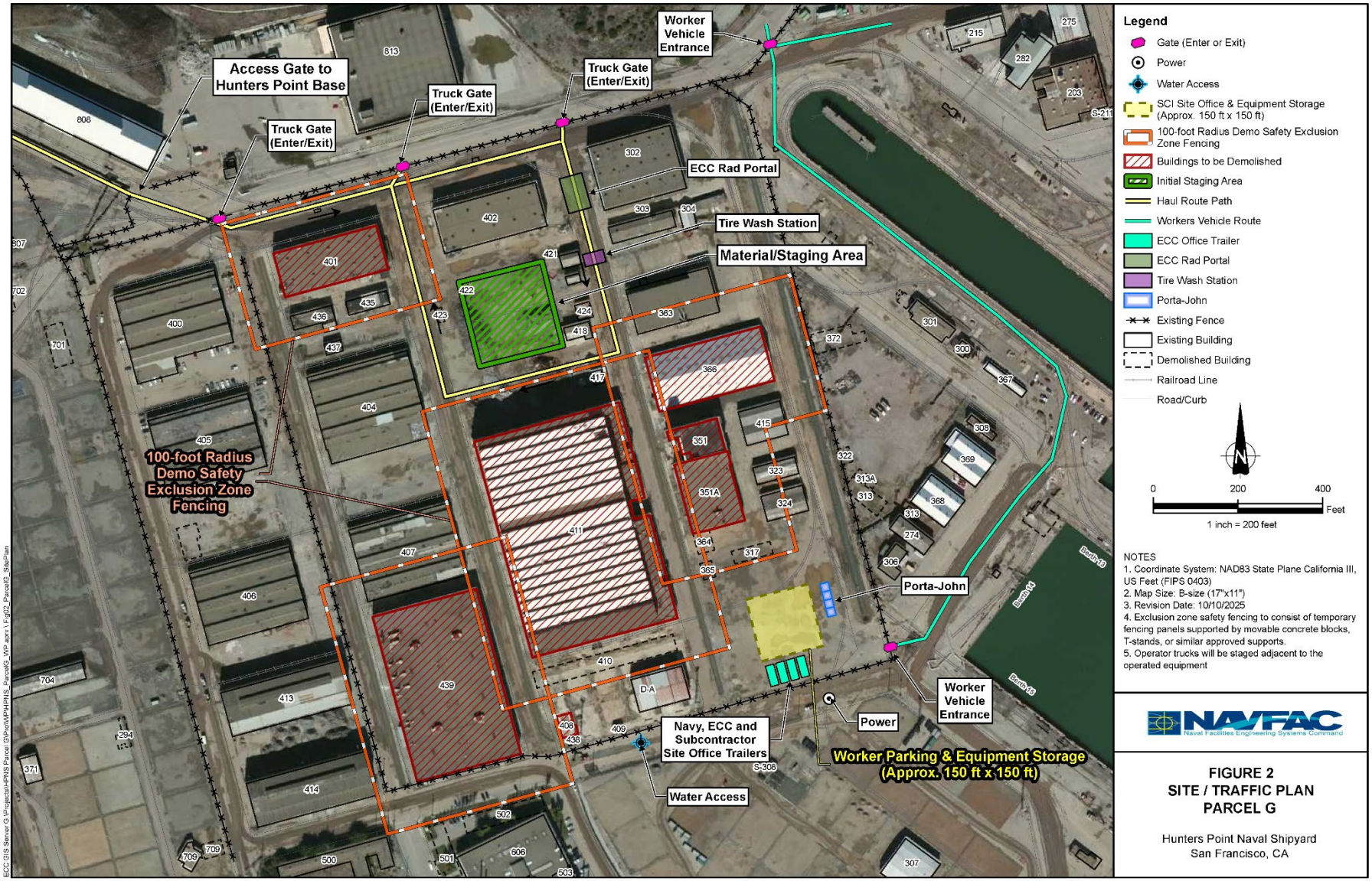
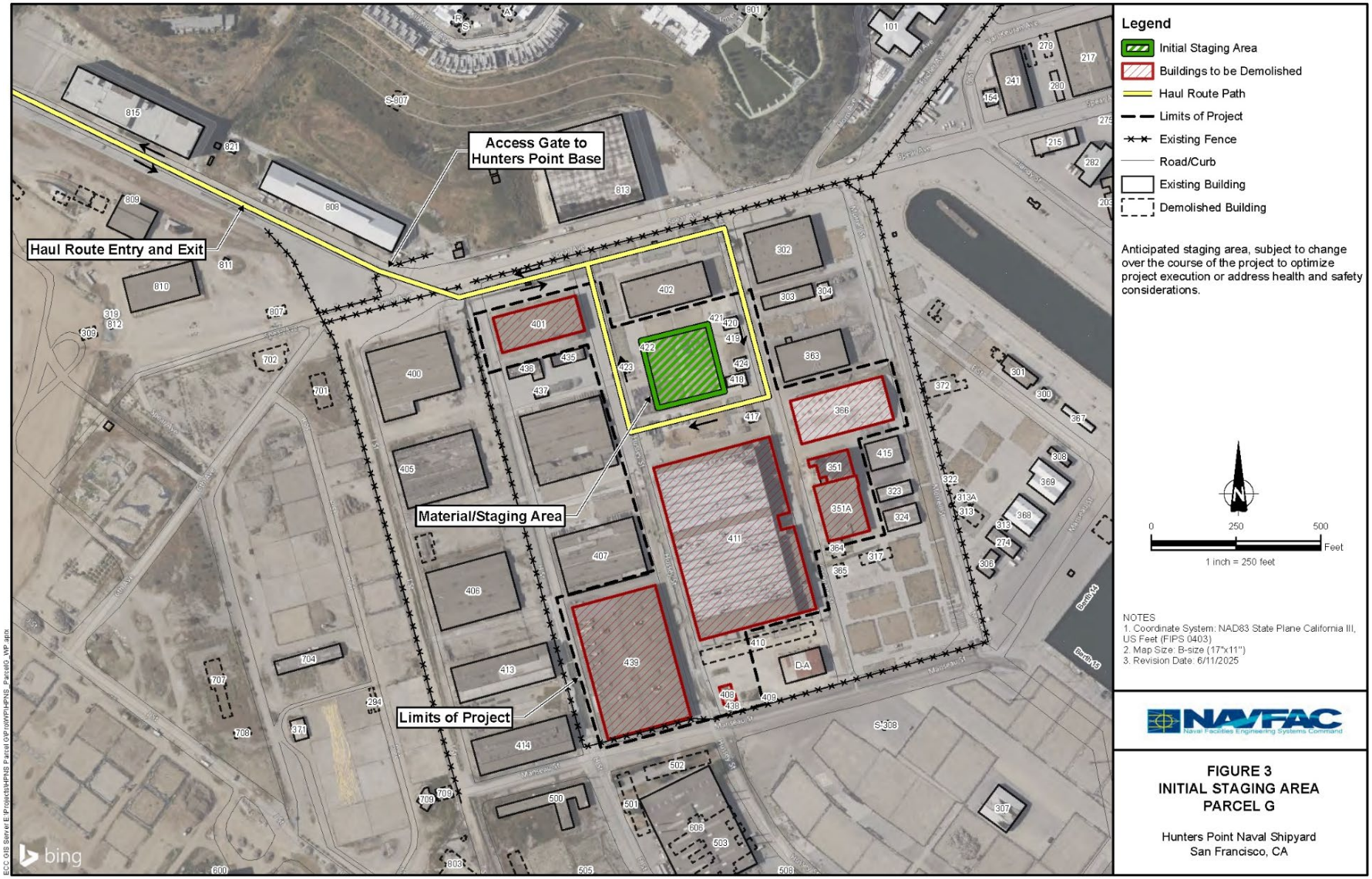

Parcel G Boundary
Parcel Boundary
Existing Building
Navy Property Area
Non-Navy Property Area
Road
Parcel F (Piers)
IR 07/18
Parcel B-1
Parcel B-2
Former Parcel A
Parcel UC-3
Former Parcel A
Former UC-2
Former UC-1
Former D-2
Parcel C
Parcel F (Piers)
Parcel E-2
Parcel G
Parcel E
Parcel D-1
San Francisco Bay
Parcel F (Water)
Parcel F (Piers)
DRY DOCK 2
DRY DOCK 3
DRY DOCK 4
Oakland
San Francisco
South San Francisco
San Leandro
Hayward
Union City
Fremont
San Mateo
Redwood City
San Jose
U.S. Department of the Navy
NAVFAC SW
San Diego, California
NAVFAC
Naval Facilities Engineering Systems Command
N
0
600
1,200
Feet
PARCEL G
BUILDING DEMOLITION
HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CALIFORNIA
SITE LOCATION MAP
PARCEL G
DATE
JUNE 2025
SCALE
1 in = 1,200 ft
FIGURE
1


Worker Vehicle Entrance
Access Gate to Hunters Point Base
Truck Gate (Enter/Exit)
Truck Gate (Enter/Exit)
Truck Gate (Enter/Exit)
ECC Rad Portal
Tire Wash Station
Material/Staging Area
100-foot Radius Demo Safety Exclusion Zone Fencing
Porta-John
Worker Vehicle Entrance
Power
Navy, ECC and Subcontractor Site Office Trailers
Worker Parking & Equipment Storage (Approx. 150 ft x 150 ft)
Water Access
Legend
Gate (Enter or Exit)
Power
Water Access
SCI Site Office & Equipment Storage (Approx. 150 ft x 150 ft)
100-foot Radius Demo Safety Exclusion Zone Fencing
Buildings to be Demolished
Initial Staging Area
Haul Route Path
Workers Vehicle Route
ECC Office Trailer
ECC Rad Portal
Tire Wash Station
Porta-John
Existing Fence
Existing Building
Demolished Building
Railroad Line
Road/Curb
N
0
200
400
Feet
1 inch = 200 feet
NOTES
1. Coordinate System: NAD83 State Plane California III, US Feet (FIPS 0403)
2. Map Size: B-size (17"x11")
3. Revision Date: 10/10/2025
4. Exclusion zone safety fencing to consist of temporary fencing panels supported by movable concrete blocks, T-stands, or similar approved supports.
5. Operator trucks will be staged adjacent to the operated equipment
NAVFAC
Naval Facilities Engineering Systems Command
FIGURE 2
SITE / TRAFFIC PLAN
PARCEL G
Hunters Point Naval Shipyard
San Francisco, CA


Access Gate to Hunters Point Base
Haul Route Entry and Exit
Material/Staging Area
Limits of Project
Legend
Initial Staging Area
Buildings to be Demolished
Haul Route Path
Limits of Project
Existing Fence
Road/Curb
Existing Building
Demolished Building
Anticipated staging area, subject to change over the course of the project to optimize project execution or address health and safety considerations.
0
250
500
Feet
1 inch = 250 feet
NOTES
1. Coordinate System: NAD83 State Plane California III, US Feet (FIPS 0403)
2. Map Size: B-size (17"x11")
3. Revision Date: 6/11/2025
NAVFAC
Naval Facilities Engineering Systems Command
FIGURE 3
INITIAL STAGING AREA
PARCEL G
Hunters Point Naval Shipyard
San Francisco, CA
bing

Haul Route Entry and Exit
Access Gate to Hunters Point Base
Material/Staging Area
Limits of Project
Highway 101
Quesada Ave
Palou Ave
Revere Ave
Shafter Ave
Thomas Ave
Underwood Ave
Keith St
Griffith St
Crisp Rd
Carroll Ave
Ingalls St
Jennings St
Hollister Ave
Gilman Ave
Ingerson Ave
South Basin
Gilman Park
Candlestick Point State Recreation Area
Bayview Park Rd
Harney Way
HUNTERS POINT
Legend
Truck Route from HPNS Crisp Rd to Highway 101
Vehicle Traffic Allowed
NO Truck Traffic Allowed
Initial Staging Area
Buildings to be Demolished
Limits of Project
Existing Fence
Road/Curb
Existing Building
Demolished Building
N
0
800
1,600
Feet
1 inch = 800 feet
NOTES
1. Coordinate System: NAD83 State Plane California III, US Feet (FIPS 0403)
2. Map Size: B-size (17"x11")
3. Revision Date: 6/16/2025
NAVFAC
Naval Facilities Engineering Systems Command
FIGURE 4
HAUL ROAD
PARCEL G
Hunters Point Naval Shipyard
San Francisco, CA
bing

SPEAR AVE
EX PERIMETER FENCE
EX UNKNOWN UTILITY
SEE PHOTO 2501, SHEET P-100
EX ELECTRICAL SERVICE
SEE PHOTO 2503, SHEET P-100
BUILDING 401
H STREET
HUSSEY STREET
EX PERIMETER FENCE
ASSUMED EX WATER LINE (TYP.)
EX POST INDICATOR VALVE
SEE PHOTO 2513, SHEET P-100
EX POST INDICATOR VALVE
SEE PHOTO 2512, SHEET P-100
EX POST INDICATOR VALVE
SEE PHOTO 2508, SHEET P-100
EX OPEN CHANNEL
STORM DRAIN
EX OPEN CHANNEL
STORM DRAIN
Legend
EXISTING PERIMETER FENCE
ASSUMED EXISTING WATER LINE
EXISTING OPEN CHANNEL STORM DRAIN
EXISTING BOLLARD
EXISTING ELECTRICAL MANHOLE
EXISTING ELECTRICAL
EXISTING FIRE HYDRANT
EXISTING GAS
EXISTING POST INDICATOR VALVE
EXISTING STORM DRAIN
EXISTING SPRINKLER SYSTEM
EXISTING TRANSFORMER WITH CONC PAD
EXISTING WATER MANHOLE
EXISTING UNKNOWN UTILITY
EXISTING CONCRETE
EXISTING BUILDING
0
35
70
Feet
1 inch = 35 feet
NOTES
1. Coordinate System: NAD83 State Plane California III, US Feet (FIPS 0403)
2. Map Size: B-size (17"x11")
3. Revision Date: 6/11/2025
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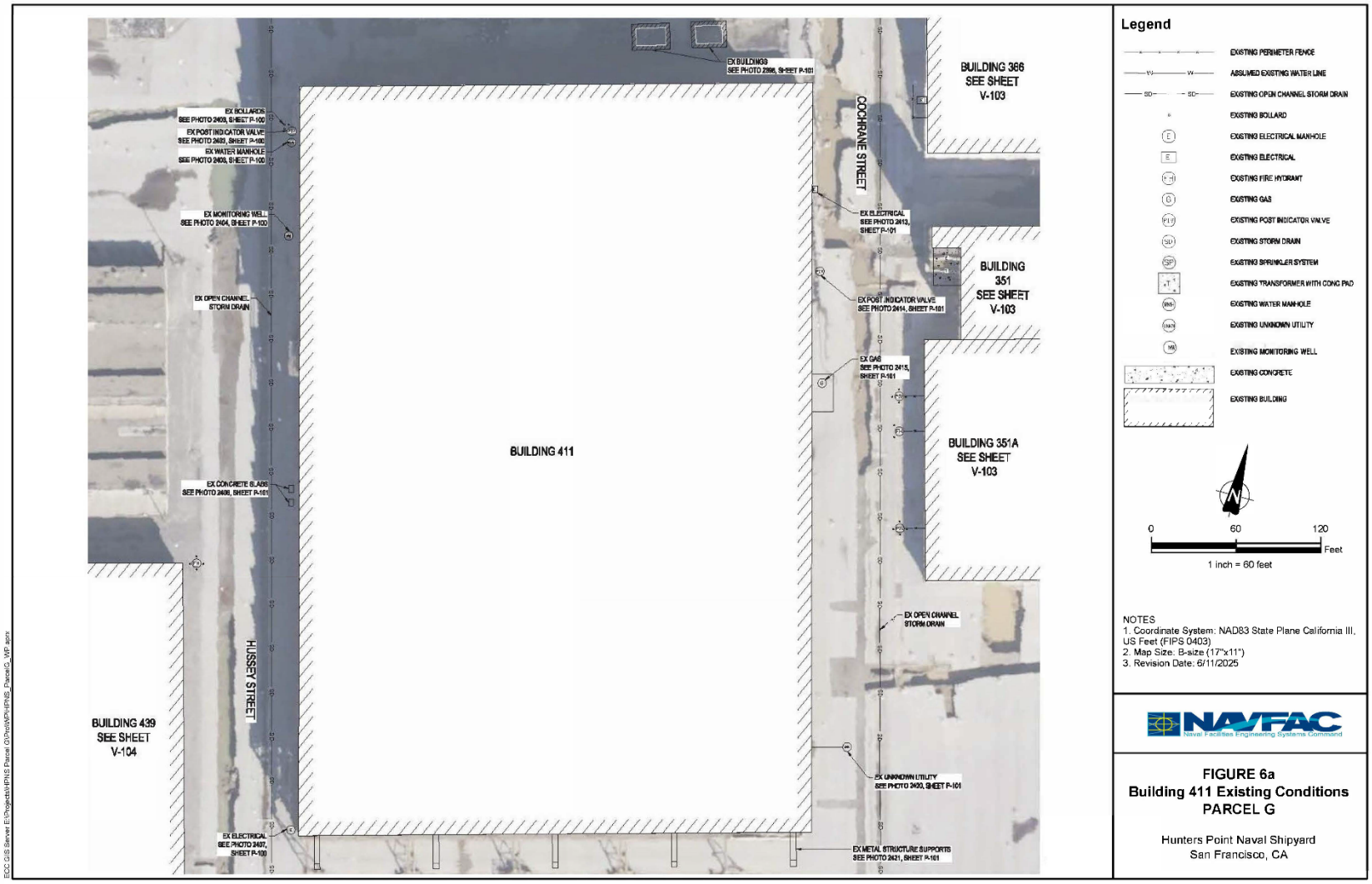
FIGURE 5a
Building 401 Existing Conditions
PARCEL G
Hunters Point Naval Shipyard
San Francisco, CA

SPEAR AVE
H STREET
HUSSEY STREET
BUILDING 401
DEMO UNKNOWN UTILITY
DEMO ELECTRICAL SERVICE
DEMO POST INDICATOR VALVE AND BOLLARDS
DEMO POST INDICATOR VALVE AND BOLLARDS
DEMO POST INDICATOR VALVE AND BOLLARDS
STORM DRAIN CHANNEL ABANDON IN PLACE
STORM DRAIN CHANNEL ABANDON IN PLACE
Legend
DEMO BUILDING
DEMO ABOVE GROUND UTILITY
0
35
70
Feet
1 inch = 35 feet
NOTES
1. Coordinate System: NAD83 State Plane California III, US Feet (FIPS 0403)
2. Map Size: B-size (17"x11")
3. Revision Date: 6/11/2025
NAVFAC
Naval Facilities Engineering Systems Command
FIGURE 5b
Building 401 Demolition Plan
PARCEL G
Hunters Point Naval Shipyard
San Francisco, CA


BUILDING 411
BUILDING 366
SEE SHEET
V-103
BUILDING
351
SEE SHEET
V-103
BUILDING 351A
SEE SHEET
V-103
BUILDING 439
SEE SHEET
V-104
COCHRANE STREET
HUSSEY STREET
EX BUILDING
SEE PHOTO 2399, SHEET P-101
EX BOLLARDS
SEE PHOTO 2409, SHEET P-100
EX POST INDICATOR VALVE
SEE PHOTO 2403, SHEET P-100
EX WATER MANHOLE
SEE PHOTO 2409, SHEET P-100
EX MONITORING WELL
SEE PHOTO 2404, SHEET P-100
EX OPEN CHANNEL
STORM DRAIN
EX CONCRETE SLABS
SEE PHOTO 2406, SHEET P-101
EX ELECTRICAL
SEE PHOTO 2407,
SHEET P-100
EX ELECTRICAL
SEE PHOTO 2413,
SHEET P-101
EX POST INDICATOR VALVE
SEE PHOTO 2414, SHEET P-101
EX GAS
SEE PHOTO 2415,
SHEET P-101
EX OPEN CHANNEL
STORM DRAIN
EX UNKNOWN UTILITY
SEE PHOTO 2400, SHEET P-101
EX METAL STRUCTURE SUPPORTS
SEE PHOTO 2421, SHEET P-101
Legend
EXISTING PERIMETER FENCE
ASSUMED EXISTING WATER LINE
EXISTING OPEN CHANNEL STORM DRAIN
EXISTING BOLLARD
EXISTING ELECTRICAL MANHOLE
EXISTING ELECTRICAL
EXISTING FIRE HYDRANT
EXISTING GAS
EXISTING POST INDICATOR VALVE
EXISTING STORM DRAIN
EXISTING SPRINKLER SYSTEM
EXISTING TRANSFORMER WITH CONC PAD
EXISTING WATER MANHOLE
EXISTING UNKNOWN UTILITY
EXISTING MONITORING WELL
EXISTING CONCRETE
EXISTING BUILDING
N
0
60
120
Feet
1 inch = 60 feet
NOTES
1. Coordinate System: NAD83 State Plane California III, US Feet (FIPS 0403)
2. Map Size: B-size (17"x11")
3. Revision Date: 6/11/2025
NAVFAC
Naval Facilities Engineering Systems Command
FIGURE 6a
Building 411 Existing Conditions
PARCEL G
Hunters Point Naval Shipyard
San Francisco, CA

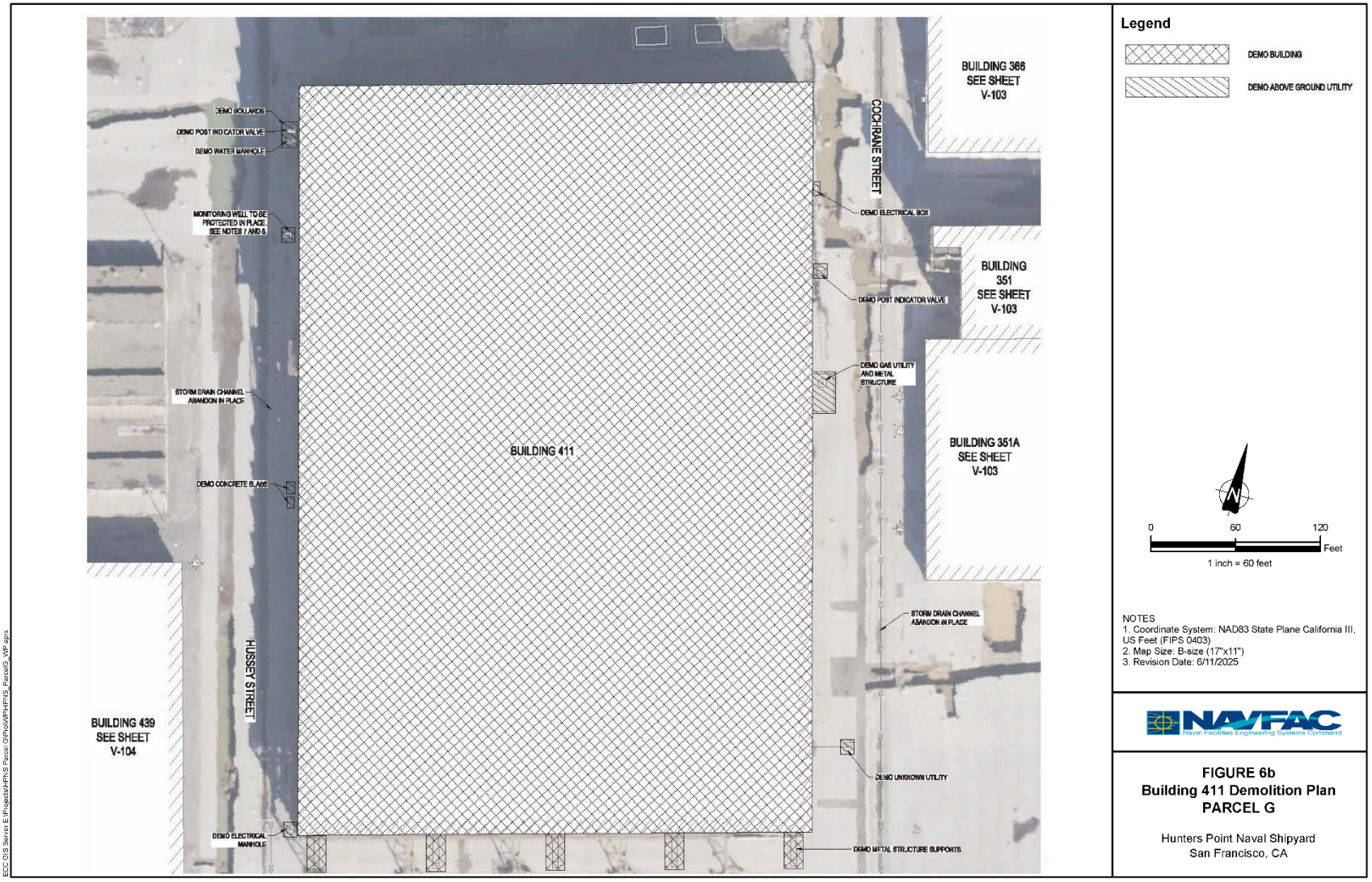

BUILDING 366
SEE SHEET
V-103
COCHRANE STREET
DEMO BOLLARDS
DEMO POST IND CATOR VALVE
DEMO WATER MANHOLE
MONITORING WELL TO BE PROTECTED IN PLACE SEE NOTES 7 AND 8
DEMO ELECTRICAL BOX
BUILDING 351
SEE SHEET
V-103
DEMO POST INDICATOR VALVE
DEMO GAS UTILITY AND METAL STRUCTURE
STORM DRAIN CHANNEL ABANDON IN PLACE
BUILDING 411
BUILDING 351A
SEE SHEET
V-103
DEMO CONCRETE SLABS
STORM DRAIN CHANNEL ABANDON IN PLACE
HUSSEY STREET
BUILDING 439
SEE SHEET
V-104
DEMO UNKNOWN UTILITY
DEMO ELECTRICAL MANHOLE
DEMO METAL STRUCTURE SUPPORTS
Legend
DEMO BUILDING
DEMO ABOVE GROUND UTILITY
N
0
60
120
Feet
1 inch = 60 feet
NOTES
1. Coordinate System: NAD83 State Plane California III, US Feet (FIPS 0403)
2. Map Size: B-size (17"x11")
3. Revision Date: 6/11/2025
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FIGURE 6b
Building 411 Demolition Plan
PARCEL G
Hunters Point Naval Shipyard
San Francisco, CA
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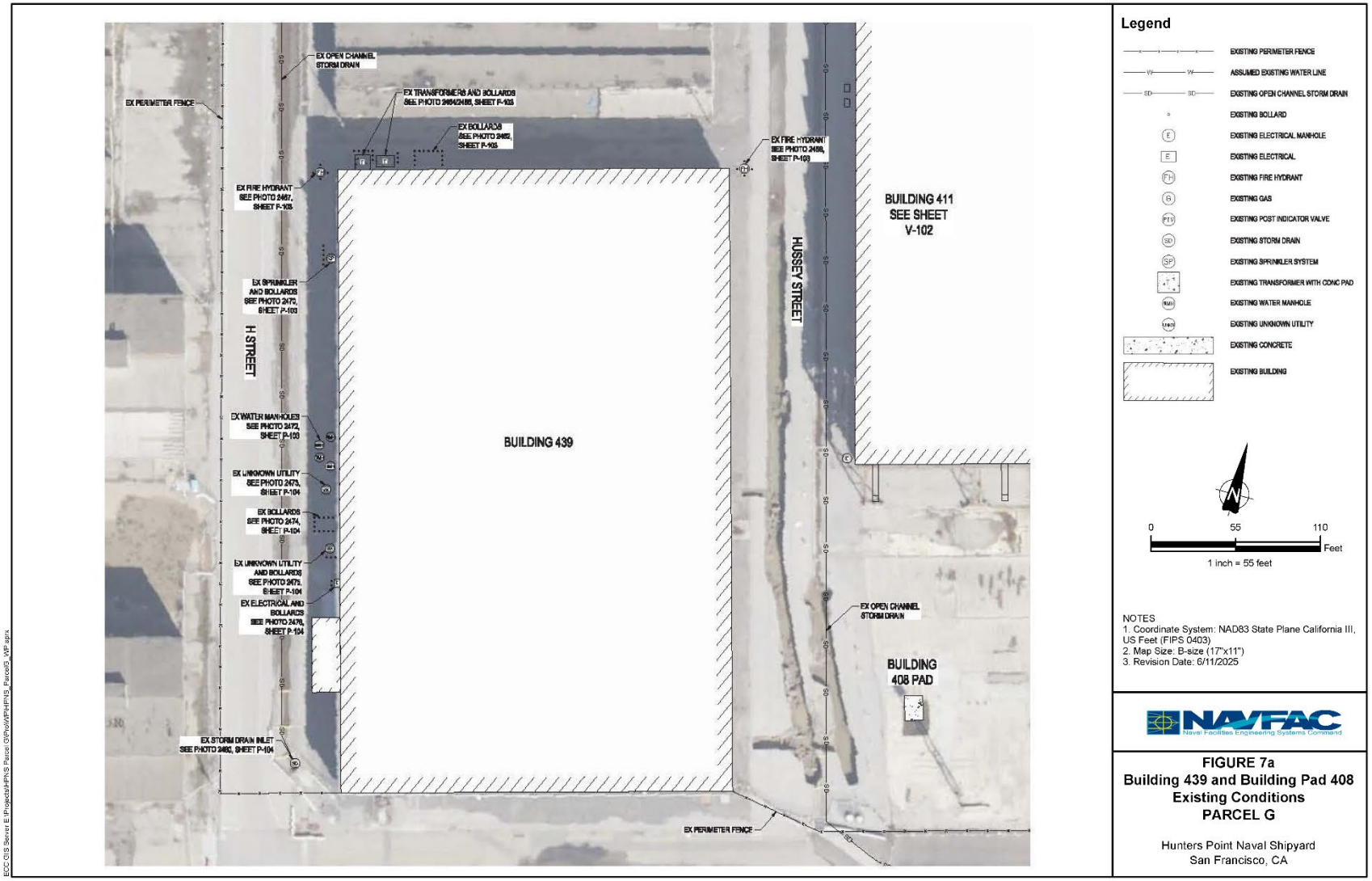
EX OPEN CHANNEL STORM DRAIN
EX PERIMETER FENCE
EX TRANSFORMERS AND BOLLARDS SEE PHOTO 2469/2469, SHEET P-103
EX BOLLARDS SEE PHOTO 2462, SHEET P-103
EX FIRE HYDRANT SEE PHOTO 2468, SHEET P-103
EX FIRE HYDRANT SEE PHOTO 2467, SHEET P-103
EX SPRINKLER AND BOLLARDS SEE PHOTO 2470, SHEET P-103
H STREET
HUSSEY STREET
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EX WATER MANHOLES SEE PHOTO 2472, SHEET P-103
BUILDING 439
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EX BOLLARDS SEE PHOTO 2474, SHEET P-104
EX UNKNOWN UTILITY AND BOLLARDS SEE PHOTO 2475, SHEET P-104
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BUILDING 408 PAD
EX STORM DRAIN INLET SEE PHOTO 2460, SHEET P-104
EX PERIMETER FENCE
Legend
EXISTING PERIMETER FENCE
ASSUMED EXISTING WATER LINE
EXISTING OPEN CHANNEL STORM DRAIN
EXISTING BOLLARD
EXISTING ELECTRICAL MANHOLE
EXISTING ELECTRICAL
EXISTING FIRE HYDRANT
EXISTING GAS
EXISTING POST INDICATOR VALVE
EXISTING STORM DRAIN
EXISTING SPRINKLER SYSTEM
EXISTING TRANSFORMER WITH CONC PAD
EXISTING WATER MANHOLE
EXISTING UNKNOWN UTILITY
EXISTING CONCRETE
EXISTING BUILDING
N
0
55
110
Feet
1 inch = 55 feet
NOTES
1. Coordinate System: NAD83 State Plane California III, US Feet (FIPS 0403)
2. Map Size: B-size (17"x11")
3. Revision Date: 6/11/2025
NAVFAC
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FIGURE 7a
Building 439 and Building Pad 408
Existing Conditions
PARCEL G
Hunters Point Naval Shipyard
San Francisco, CA
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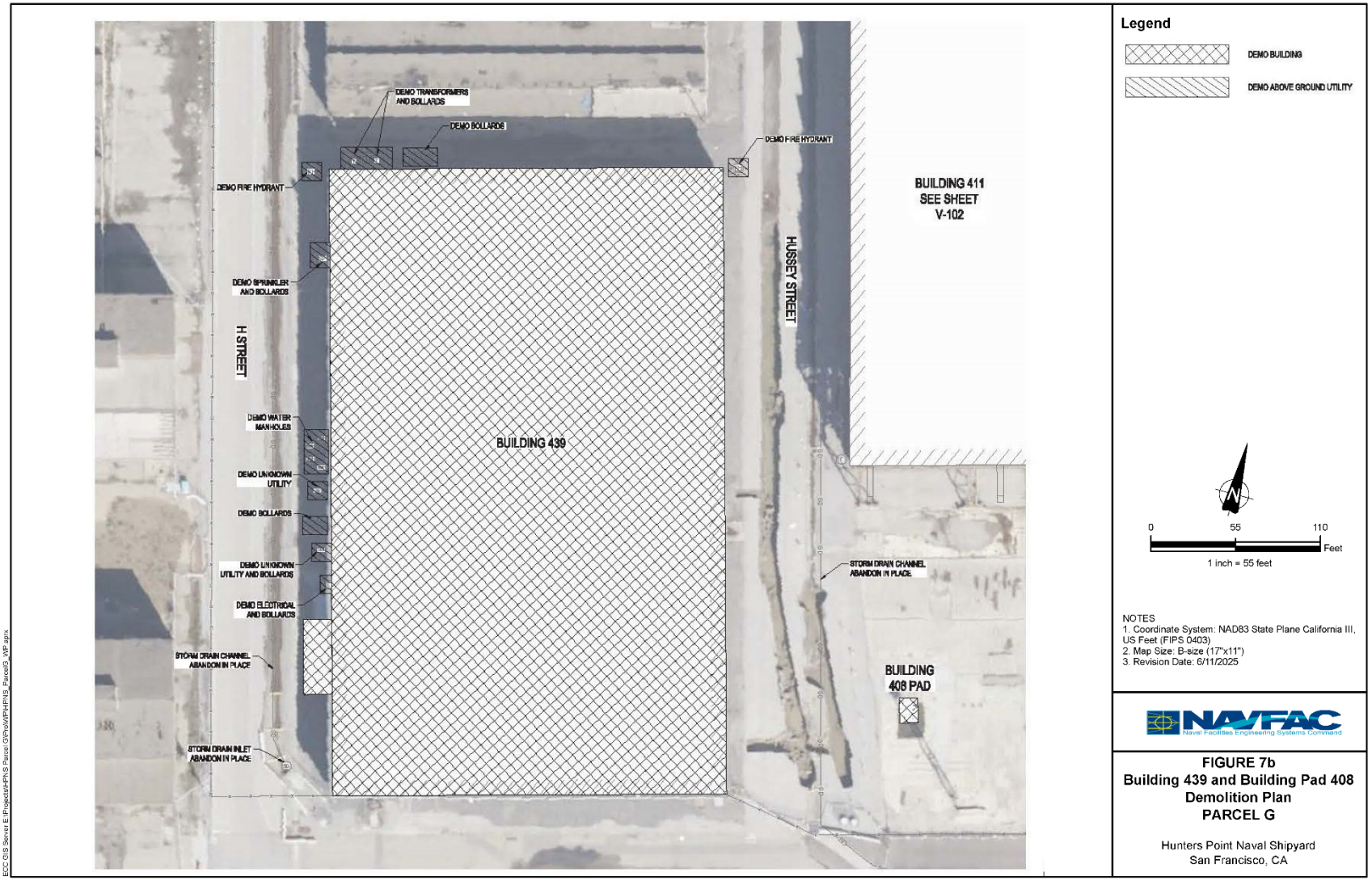
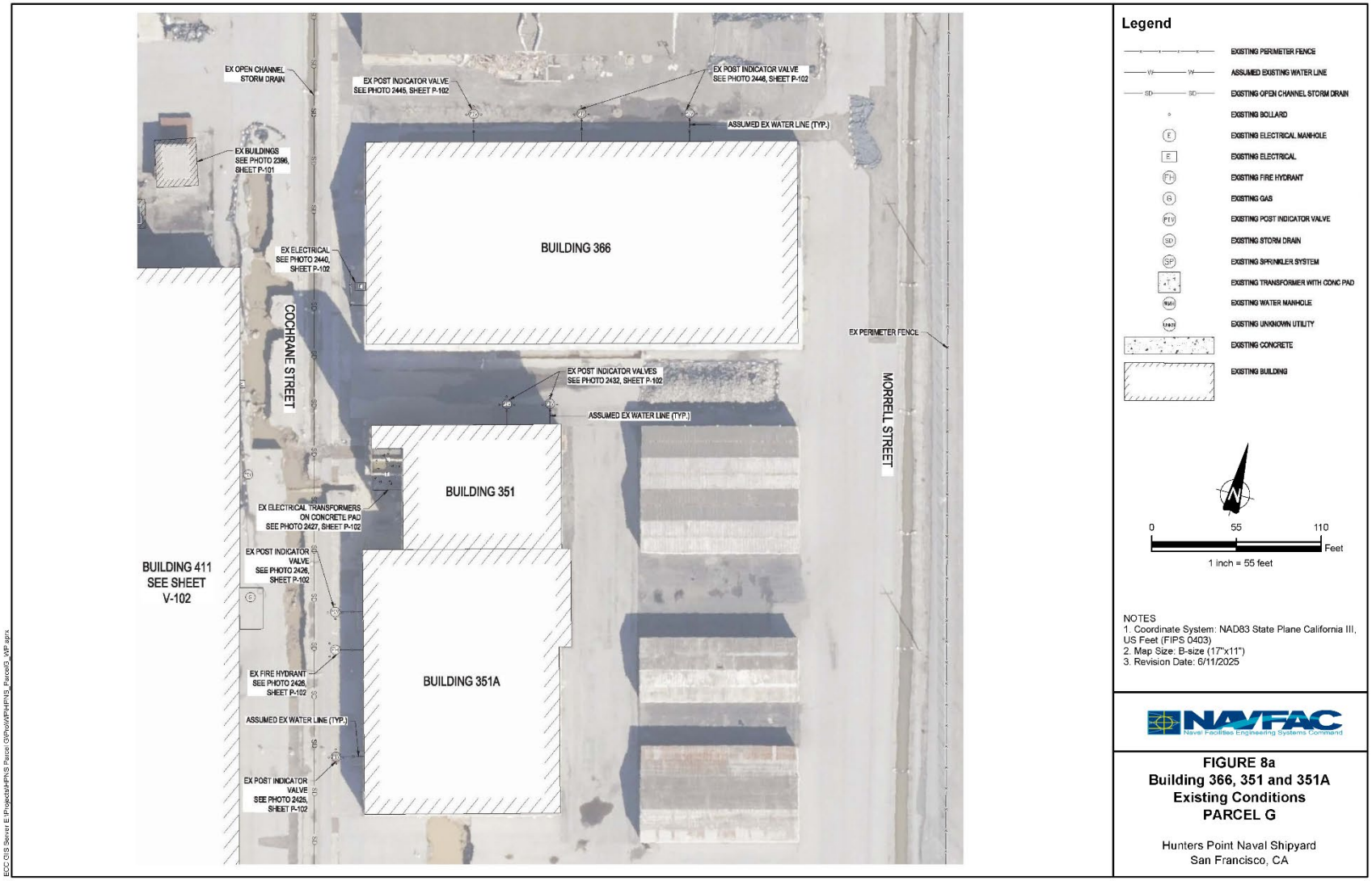

DEMO TRANSFORMERS AND BOLLARDS
DEMO BOLLARDS
DEMO FIRE HYDRANT
DEMO FIRE HYDRANT
BUILDING 411
SEE SHEET
V-102
HUSSEY STREET
DEMO SPRINKLER AND BOLLARDS
H STREET
DEMO WATER MANHOLES
BUILDING 439
DEMO UNKNOWN UTILITY
DEMO BOLLARDS
DEMO UNKNOWN UTILITY AND BOLLARDS
DEMO ELECTRICAL AND BOLLARDS
STORM DRAIN CHANNEL ABANDON IN PLACE
STORM DRAIN CHANNEL ABANDON IN PLACE
STORM DRAIN INLET ABANDON IN PLACE
BUILDING 408 PAD
Legend
DEMO BUILDING
DEMO ABOVE GROUND UTILITY
N
0
55
110
Feet
1 inch = 55 feet
NOTES
1. Coordinate System: NAD83 State Plane California III, US Feet (FIPS 0403)
2. Map Size: B-size (17"x11")
3. Revision Date: 6/11/2025
NAVFAC
Naval Facilities Engineering Systems Command
FIGURE 7b
Building 439 and Building Pad 408
Demolition Plan
PARCEL G
Hunters Point Naval Shipyard
San Francisco, CA
ECC GIS Server E:\Projects\HPNS Parcel G\Plots\HPNS_ParcelG_MP.aprx


EX OPEN CHANNEL STORM DRAIN
EX POST INDICATOR VALVE SEE PHOTO 2445, SHEET P-102
EX POST INDICATOR VALVE SEE PHOTO 2448, SHEET P-102
ASSUMED EX WATER LINE (TYP.)
EX BUILDINGS SEE PHOTO 2396, SHEET P-101
BUILDING 366
EX ELECTRICAL SEE PHOTO 2440, SHEET P-102
COCHRANE STREET
EX PERIMETER FENCE
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MORRELL STREET
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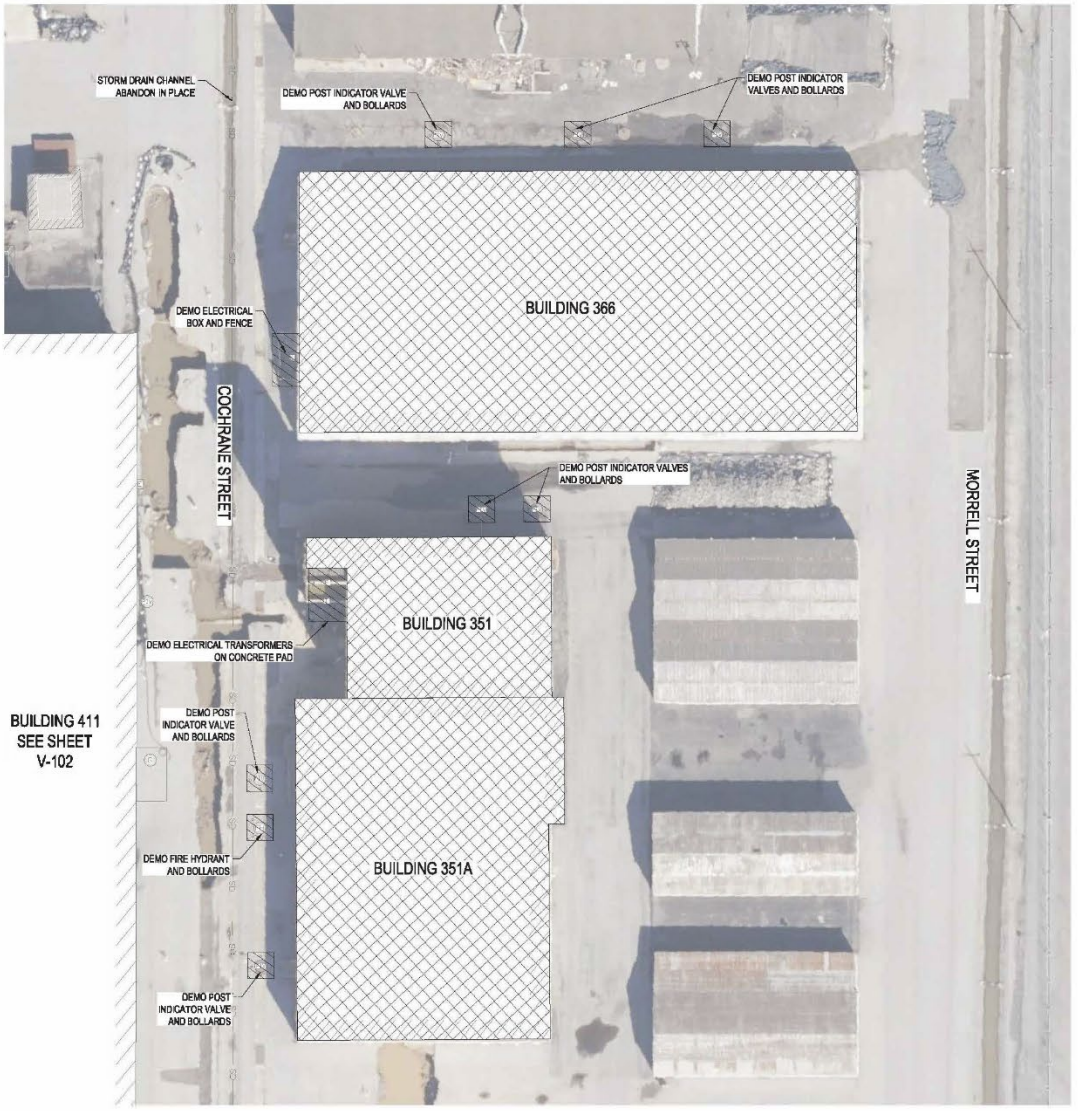
EX FIRE HYDRANT SEE PHOTO 2428, SHEET P-102
ASSUMED EX WATER LINE (TYP.)
EX POST INDICATOR VALVE SEE PHOTO 2425, SHEET P-102
Legend
EXISTING PERIMETER FENCE
ASSUMED EXISTING WATER LINE
EXISTING OPEN CHANNEL STORM DRAIN
EXISTING BOLLARD
EXISTING ELECTRICAL MANHOLE
EXISTING ELECTRICAL
EXISTING FIRE HYDRANT
EXISTING GAS
EXISTING POST INDICATOR VALVE
EXISTING STORM DRAIN
EXISTING SPRINKLER SYSTEM
EXISTING TRANSFORMER WITH CONC PAD
EXISTING WATER MANHOLE
EXISTING UNKNOWN UTILITY
EXISTING CONCRETE
EXISTING BUILDING
N
0
55
110
Feet
1 inch = 55 feet
NOTES
1. Coordinate System: NAD83 State Plane California III, US Feet (FIPS 0403)
2. Map Size: B-size (17"x11")
3. Revision Date: 6/11/2025
NAVFAC
Naval Facilities Engineering Systems Command
FIGURE 8a
Building 366, 351 and 351A
Existing Conditions
PARCEL G
Hunters Point Naval Shipyard
San Francisco, CA
ECC GIS Server E:\Projects\HPNS Parcel G\Pro\WP\HPNS_ParcelG_WP.aprx



Legend

DEMO BUILDING

DEMO ABOVE GROUND UTILITY

0 55 110 Feet

1 inch = 55 feet

NOTES
1. Coordinate System: NAD83 State Plane California III, US Feet (FIPS 0403)
2. Map Size: B-size (17"x11")
3. Revision Date: 6/11/2025

NAVFAC Naval Facilities Engineering Systems Command

FIGURE 8b
Building 366, 351 and 351A
Demolition Plan
PARCEL G

Hunters Point Naval Shipyard
San Francisco, CA

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APPENDIX A
Environmental Protection Plan

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Naval Facilities Engineering Systems Command Southwest
Travis ROICC/CODE ROPWT
Travis Air Force Base, CA

Draft

Environmental Protection Plan
Parcel G Building Demolition

Hunters Point Naval Shipyard,
San Francisco, California

January 2026

Distribution Statement A: Approved for public release; distribution unlimited.

Naval Facilities Engineering Systems Command Southwest
Travis ROICC/CODE ROPWT
Travis Air Force Base, CA

Draft

Environmental Protection Plan
Parcel G Building Demolition

Hunters Point Naval Shipyard,
San Francisco, California

January 2026

DCN: ECC-1205-4397-0003e.01

Prepared for:

Naval Facilities Engineering Systems Command Southwest
Travis ROICC/CODE ROPWT
Travis Air Force Base
191 W ST
Travis AFB, CA 94535

Prepared by:

ECC Infrastructure LLC
700 Airport Blvd, Suite 250
Burlingame, CA 94010

Contract Number: N62473-21-D-1205
Delivery Order: N6247325F4397

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Acronyms and Abbreviations

APP	Accident Prevention Plan
BMP	best management practice
BRAC	Base Realignment and Closure
CSO	Caretaker Site Office
ECC	Environmental Chemical Corporation Infrastructure, LLC.
EPP	Environmental Protection Plan
HPNS	Hunters Point Naval Shipyard
IDW	investigation derived waste
Navy	United States Department of the Navy
NPDES	National Pollutant Discharge Elimination System
PMO	Program Management Office
RACR	Remedial Action Completion Report
RAWP	Remedial Action Work Plan
ROICC	Resident Officer in Charge of Construction
RPM	Remedial Project Manager
SSHP	Site Safety and Health Plan
WMP	Waste Management Plan

History of Revisions

DCN #	Date	Notes
DCN: ECC-1205-4397-0003e.00	July-2025	Ver R0-D1 / Original Submission (Internal Navy Draft) / 03-July-2025
DCN: ECC-1205-4397-0003e.01	Dec-2025	Ver R0-D2 / 1st round Regulatory Review / 11-Dec-2025

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1.0 INTRODUCTION

This Environmental Protection Plan (EPP) was prepared by ECC Infrastructure, LLC (ECC) to guide protection of the environment during activities associated with building and foundation demolition, backfill and site restoration, waste staging, and transportation at Parcel G Building Demolition at Hunters Point Naval Shipyard (HPNS) in San Francisco, California (**Figures 1** and **2**). The purpose of the building demolition is to complete the Remedial Action for “structures” as outlined in the Record of Decision (ROD). Buildings were to be surveyed and, if possible, cleared for unrestricted reuse. If clearance was not achievable, the ROD planned for further remediation, including dismantling. The scope of work includes the following:

The scope of work includes the following:

1. HPNS Federal Facility Agreement (FFA) Regulatory Agencies concurrence on this Work Plan. FFA parties include USEPA, DTSC and the San Francisco RWQCB.

2. Utility Clearance - notify Underground Service Alert North (811), a minimum of 72 hours prior to field activities; conduct a geophysical survey to ensure no utilities or obstructions exist in the intrusive work areas.
3. Set up environmental controls including placement of fences, air monitoring stations, and stormwater Best Management Practices (BMPs) in accordance with this EPP [Appendix A in the Remedial Action Work Plan (RAWP) (ECC, 2025b)].
4. Establish investigation derived waste (IDW) staging areas and signage in accordance with the Waste Management Plan (WMP) (Appendix B of the RAWP [ECC, 2025b).
5. Buildings 351, 351A, 366, 401, 411, and 439 and building pad 408 abatement, demolition, and partial slab/foundation removal. Manage and transport building debris per the WMP (Appendix B of the RAWP [ECC, 2025b).
6. Stage approved imported fill materials designated for re-use for backfilling of excavation in the equipment laydown area and IDW storage area.
7. Manage remaining IDW per the WMP (Appendix B of the RAWP [ECC, 2025b).
8. Document the site activities at Parcel G in a Remedial Action Completion Report (RACR).

ECC has been contracted to perform this work for the Base Realignment and Closure (BRAC) Program Management Office (PMO) West, United States Department of the Navy (Navy), Naval Facilities Engineering Systems Command Southwest under Contract No. N62473-21-D-1205, Delivery Order: N6247325F4397. The work under this delivery order will be completed in compliance with the contract plans and specifications, and local, State, and federal regulations.

All site work will be performed in coordination with the Navy Remedial Project Manager (RPM), Navy Caretaker Site Office (CSO), and the Resident Officer in Charge of Construction (ROICC) representative.

This document was developed in accordance with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 and the National Oil and Hazardous Substances Pollution Contingency Plan (Title 40 Code of Federal Regulations [CFR], Part 300). Regulatory oversight and guidance are provided by USEPA, California Environmental Protection Agency, Regional Water Quality Control Board, San Francisco Bay Region, and California Department of Public Health. The applicable or relevant and appropriate requirements (ARARs) identified in the ROD will be followed, as they pertain to building demolition. Additional ARARs include but are not limited to: the EPA Region 9's Off-Site Rule, Resource Conservation and Recovery Act [(RCRA) (Title 42 U.S.C., Chapter 82, §§ 6901-6991[i])]; , Clean Air Act (Title 42 U.S.C. §§ 7401-7671), Clean Water Act (Title 33 U.S.C., Chapter 26, §§ 1251-1387), Migratory Bird Treaty Act (MBTA), Endangered Species Act (ESA)/California Endangered Species Act (CESA).

Parcel G is undergoing remediation in accordance with a Federal Facility Agreement (FFA) between the Navy, United States Environmental Protection Agency (USEPA), and the State of California through the California Environmental Protection Agency Department of Toxic Substances Control and San Francisco Bay Regional Water Quality Control Board (Water Board), collectively referred to as the FFA Signatories.

The Field Manager, Site Superintendent, or competent person, as supported by the Quality Control Manager will be responsible for implementing and monitoring compliance with this EPP.

Field personnel working on the site, including subcontractor personnel, will be instructed on the contents of this EPP. Training will include instruction on detection and prevention of pollution on site, as well as procedures for responding to potential spills or pollution on site. Field personnel will also be instructed on the installation and maintenance of site control features.

Releases of hazardous materials to the environment are not expected to occur during the proposed site activities. This EPP describes on-site procedures that will be in place to prevent or minimize environmental impacts by either work activities or proper use of hazardous materials.

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2.0 LAND RESOURCE MANAGEMENT

The land resources within the property of HPNS will be restored to similar conditions before removal action activities or restored to a condition that is specified in other sections of this EPP after completion of field activities. Removal actions will be limited to areas defined by the Parcel G RAWP. Equipment and material storage areas will be identified and approved by the Navy CSO/ROICC prior to initiating field activities. Project team personnel will not use areas on the HPNS property other than those designated for remediation activities, unless specifically approved by the CSO/ROICC.

Parcel G is located within a developed former industrial area with limited vegetation. Existing vegetation consists of *Dittrichia viscosa*, an invasive species that is removed on an as needed basis by the NAVFAC Base Closure Caretakers Office. A survey will be conducted prior to fieldwork to determine whether plant removal is necessary.

The administrative provisions of the applicable permit programs will be applied to protect wetlands and streams, if appropriate. As HPNS is a Comprehensive Environmental Response, Compensation, and Liability Act site, permits are not required. However, all substantive agency requirements will be met regarding during implementation of this project.

No site work is anticipated at stream crossings, native habitat areas, or wetland areas. No land formations will be altered, and no trees will be removed, cut, defaced, injured, or destroyed without the prior approval of the CSO/ROICC.

2.1 Access and Site Security

Work zones, where field activities pose a potential physical or chemical hazard, will be cordoned off using barricades, orange safety cones, yellow caution tape, or other effective methods to limit access to workers only. Site vehicles will remain on designated access roads or hardscapes and will be prohibited from driving on land areas outside the work zones, as defined on a site-specific basis.

2.1.1 Work Zone Controls and Vehicle Access

Work zones, where field activities pose a potential physical or chemical hazard, will be cordoned off using barricades, orange safety cones, yellow caution tape, or other effective methods to limit access to workers only. Site vehicles will remain on designated access roads or hardscapes and will be prohibited from driving on land areas outside the work zones, as defined on a site-specific basis.

2.1.2 Site Security and Site Entry Management

Fencing may be installed around the site where determined necessary. Warning and/or "**No Trespassing**" signs will be posted in both English and Spanish. Signs will be provided around contaminated areas as described in Title 22 California Code of Regulations (Section 66265 14). Signs will be posted and visible from all points of potential entry and at distances that allow employees to read them and take protective steps before entering. Access to the site will be limited to authorized personnel only and

will be controlled at the site entrances and exits. The Site Superintendent or competent person onsite will maintain a field log to sign personnel in and out and verify the log to ensure personnel have left the site at the end of each workday.

Security measures will be provided after hours and on weekends, including one security guard and a patrol vehicle.

2.2 Utility Location and Clearance

A review of available as-built documents for details regarding utilities both above and below ground and improvements in proximity to the proposed work will be made prior to commencement of the work. The sites will be inspected to identify above ground utilities or connection with underground utilities, and the locations of excavations will be marked for reference. Locations of former site features such as underground storage tanks, above ground storage tanks, borings of concern, wells, or previous excavations needed for locating planned demolition locations or excavations will be discovered from prior surveys or from location coordinates available from Naval Installation Restoration Information Solution and/or geographic information system databases.

The contractor will contact the Underground Service Alert at least 1 week prior to subsurface activities, and the Underground Service Alert will notify member entities. The locations of pipelines and underground utilities in the vicinity of the proposed work will also be identified by performing a geophysical survey using an independent underground utility location contractor.

3.0 STORMWATER, SEDIMENT AND EROSION CONTROL

Stormwater, sediment, and erosion control will be managed through the Stormwater Pollution Prevention Plan (SWPPP) (**Attachment A**) and the use of BMPs.

3.1 Stormwater Pollution Prevention

A general National Pollutant Discharge Elimination System (NPDES) permit is typically required at sites with construction activities which disturb one acre or more of soil. There will be no disturbance of soil; the site is fully paved in asphalt. Therefore, an NPDES permit is not required. In addition, since this action is regulated under the Comprehensive Environmental Response, Compensation, and Liability Act, the site is exempt from the requirement to retain a general NPDES permit. However, the substantive requirements (i.e., intent) of the law will be met. The SWPPP is provided as **Attachment A** of this EPP.

3.2 Erosion/Sediment Control

Prior to disturbing site debris or importing material for backfilling the excavation, temporary erosion/sediment controls will be established. In locations where stockpiling will occur, control measures will be implemented to reduce erosion from removal actions, which could result in potential water pollution. Surface water quality must be maintained throughout the construction and post-construction phases of the project by implementing proper erosion controls and monitoring. Erosion control measures will include grading, temporary drainage/interceptor swales, and placing hay bales/sandbags in drainage pathways to collect sediment. In addition, erosion control techniques, such as sediment traps, may be employed.

To reduce the potential for pollution due to removal actions, best management practices will be used as described in the California Storm Water BMP Handbook (*Construction Activity Handbook*) prepared by the California Stormwater Quality Association.

Maintenance of the erosion/sediment controls (**Attachment A**) will continue, as needed, and throughout the duration of removal action activities. Stormwater patterns in flat terrain are difficult to predict, and the locations of erosion/sediment controls will be interpreted by the Site Superintendent, or competent person based on site conditions. During mobilization, the Site Superintendent or competent person will use the Base-wide Stormwater Layout, routing, and field verification to locate and protect the appropriate stormwater catch basins, utility holes, and swales. Stockpiles of contaminated debris awaiting transportation or import material for backfilling the excavation will be surrounded by a berm to prevent erosion of the stockpiles by run-on water from upstream and to prevent contamination eroded from the stockpile from being carried downstream. During periods of no work, high winds, or heavy rainfall, the contaminated stockpiles will either be covered with at least 10-millimeter-thick plastic sheeting weighed down with sandbags or will be sprayed with magnesium chloride, as appropriate, to prevent erosion by wind and/or water.

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4.0 SPILL CONTROL

The project spill plan is provided in the Accident Prevention Plan (APP)/Site Safety and Health Plan (SSHP) (ECC, 2025a).

Equipment will be stored in a designated location on site. Excavating equipment and trucks will be maintained to prevent oil and/or fuel leaks. Measures will be taken to prevent chemicals, fuels, oils, greases, bituminous materials, and contaminated materials from entering drainage swales. Fuel will be distributed using a mobile service to eliminate on-site storage of hazardous materials.

Chemicals, oils, and lubricants required to complete site operations will be stored in a designated location within bermed areas lined with plastic sheeting. The bermed area will be of sufficient size and volume to contain spills and runoff. Adsorbents will be made available on site to help clean up leaks or spills that might occur outside the containment area. The site is fully paved with asphalt, so there is no exposed soil. However, if soil becomes contaminated by an oil or fuel spill, it will be removed immediately and placed in appropriate containers. . Provisions will be in place to respond to spills that could adversely affect the environment. The local fire department, RPM, and CSO/ROICC will be notified in the event of a spill.

4.1 Fire Prevention and Control

Appropriate measures will be taken to reduce the risk of fire during field activities. A supply of A:B:C-rated (“A” trash, wood’ paper; “B” liquids; “C” electrical) fire extinguishers will be maintained in each work site truck or vehicle. Spark- or flame-producing devices will be kept away from combustible liquids. If a fire occurs, the Site Superintendent or competent person will assess the safety of the situation, alert, evacuate personnel, and notify the fire department and the Navy as directed in the APP/SSHP (ECC, 2025a). Personnel trained in firefighting may elect to use fire extinguishers, shovels, or other tools to dampen or extinguish the fire, but only if their own safety can be assured. The default condition is that field personnel will evacuate and allow trained professional firefighters to extinguish the fire.

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5.0 WILDLIFE RESOURCES

Precautions will be taken during excavation activities to minimize the disturbance of areas of construction and excavations.

As noted in Section 2.0, Parcel G is located within a developed former industrial area with limited vegetation. Existing vegetation consists of *Dittrichia viscosa*, an invasive species that is removed on an as needed basis by the NAVFAC Base Closure Caretakers Office. A survey will be conducted prior to fieldwork to determine whether plant removal is necessary.

This EPP provides specific information to provide adequate environmental protection of various endangered/protected species and plants that may inhabit HPNS during and following completion of remedial activities. There are no known wildlife habitats adjacent to the work areas. ECC will take necessary precautions to minimize disturbances. If any wildlife is encountered, work will be stopped until proper notifications to the RPM and CSO/ROICC are made.

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6.0 DUST CONTROL/AIR POLLUTION

Equipment operations and activities or processes performed by ECC will be in accordance with Air Pollution Control District rules, and Federal performance laws and standards. ECC will control dust around excavations, stockpiles, waste areas, and other work areas to avoid hazardous or nuisance conditions. ECC will control and reduce surface and air movement of dust using the Dust Management and Air Monitoring Plan (**Attachment B**).

Activities to be performed at Parcel G have the potential to generate air emissions in the form of fugitive dust. Possible sources of emissions include the following activities:

- ***Building demolition*** – Fugitive dust generation during demolition of the building.
- ***Construction Traffic*** – Movement of construction equipment around the work areas can create emissions.
- ***Material Stockpiles*** – Backfill material may be stockpiled prior to site restoration. Fugitive emissions during stockpiling and truck unloading, as well as wind erosion, are possible.
- ***Transportation of Solid Bulk Material*** – If solid bulk material is left uncovered, fugitive emissions could occur.
- ***Site Restoration*** – Backfilling of excavated areas may produce fugitive dust emissions.

ECC will use air-monitoring stations at upwind and downwind locations of work area to monitor air during site activities. The predominant wind direction at HPNS is generally from the west. Real-time air monitoring and sample analysis will be performed in accordance with Dust Management and Air Monitoring Plan (**Attachment B**).

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7.0 NOISE CONTROL

Elevated levels of noise are generally associated with construction projects due to the heavy equipment utilized to conduct site operations. During field activities, low-noise-emission equipment will be utilized, when possible, to minimize noise levels above background. While no residential receptors are near the site, ECC will monitor construction for excessive noise and will comply with the provisions of California Noise Control regulations.

Working around heavy equipment entails the possibility for excessive noise. Based upon monitoring conducted previously at similar construction sites, noise levels typically range from 75 to 95 decibels in the vicinity of heavy equipment operations. Occupational Safety and Health Administration defines the permissible exposure limit for excessive noise at 90 decibels, average over eight hours on the “A” scale of a standard dosimeter therefore, personnel working in the vicinity of heavy equipment and/or trucks will be instructed to employ hearing protection, such as earplugs or earmuffs.

Because noise levels decrease dramatically with increased distance, noise more than local ordinance requirements is not expected to affect the public during site activities. Sound level surveys will be measured using a noise level meter during site activities that are expected to generate excessive noise (e.g., drilling, jackhammering, or asphalt compaction, loading/unloading of materials, or other use of heavy machinery). Further discussion of personal hearing protection is discussed in the APP/SSHP (ECC, 2025a).

Transportation of equipment and waste will take place on posted truck routes outside the HPNS gate (**Figure 3**). Due to concerns from residents on and around HPNS, heavy equipment operations are not permitted before 0600 hours daily.

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8.0 DECONTAMINATION AND POST DEMOLITION CLEAN-UP

Decontamination procedures for equipment and personnel will be performed in accordance with the APP/SSHP (ECC, 2025a) prepared for this project. Excavation and grading equipment (backhoes, front loaders, compactors, graders, etc.) will remain on site until demobilized; therefore, daily decontamination will not occur. However, when excavation equipment does leave the site, either during equipment exchanges or at the completion of the project, the equipment will be decontaminated. A decontamination pad will be constructed. Decontamination will consist of scraping and/or pressure washing to remove visible debris from equipment, including tires and undercarriage. Dry brushing or wiping will be used to minimize the volume of water requiring treatment. Decontamination will proceed until debris is removed from equipment.

Trucks transporting debris from the excavation operations will not be dry brushed. However, these trucks will be decontaminated as described above for excavating and grading equipment. Rinsate water from the decontamination station will be collected for off-site disposal, in accordance with the WPM (Appendix B of the RAWP [ECC, 2025b). Personnel being exposed to contamination in the exclusion zone will undergo personnel decontamination procedures as outlined in the APP/SSHP (ECC, 2025a).

Equipment, supplies, materials, and debris will be removed at the conclusion of site activities. If needed, rinsate water will be collected for off-site disposal, in accordance with the WPM (Appendix B of the RAWP [ECC, 2025b]. Debris will be disposed of at a local landfill; sanitary sewer; waste treatment, storage, and disposal facility; and/or approved recycling facility.

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9.0 REFERENCES

California Code of Regulations Title 22, Section 66265 14.

Environmental Chemical Corporation Infrastructure, LLC. 2025a. *Accident Prevention Plan. Parcel G, Hunters Point Naval Shipyard San Francisco,* California. July.

2025b. *Remedial Action Work Plan, Parcel G, Hunters Point Naval Shipyard San Francisco, California*. July.

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Figures

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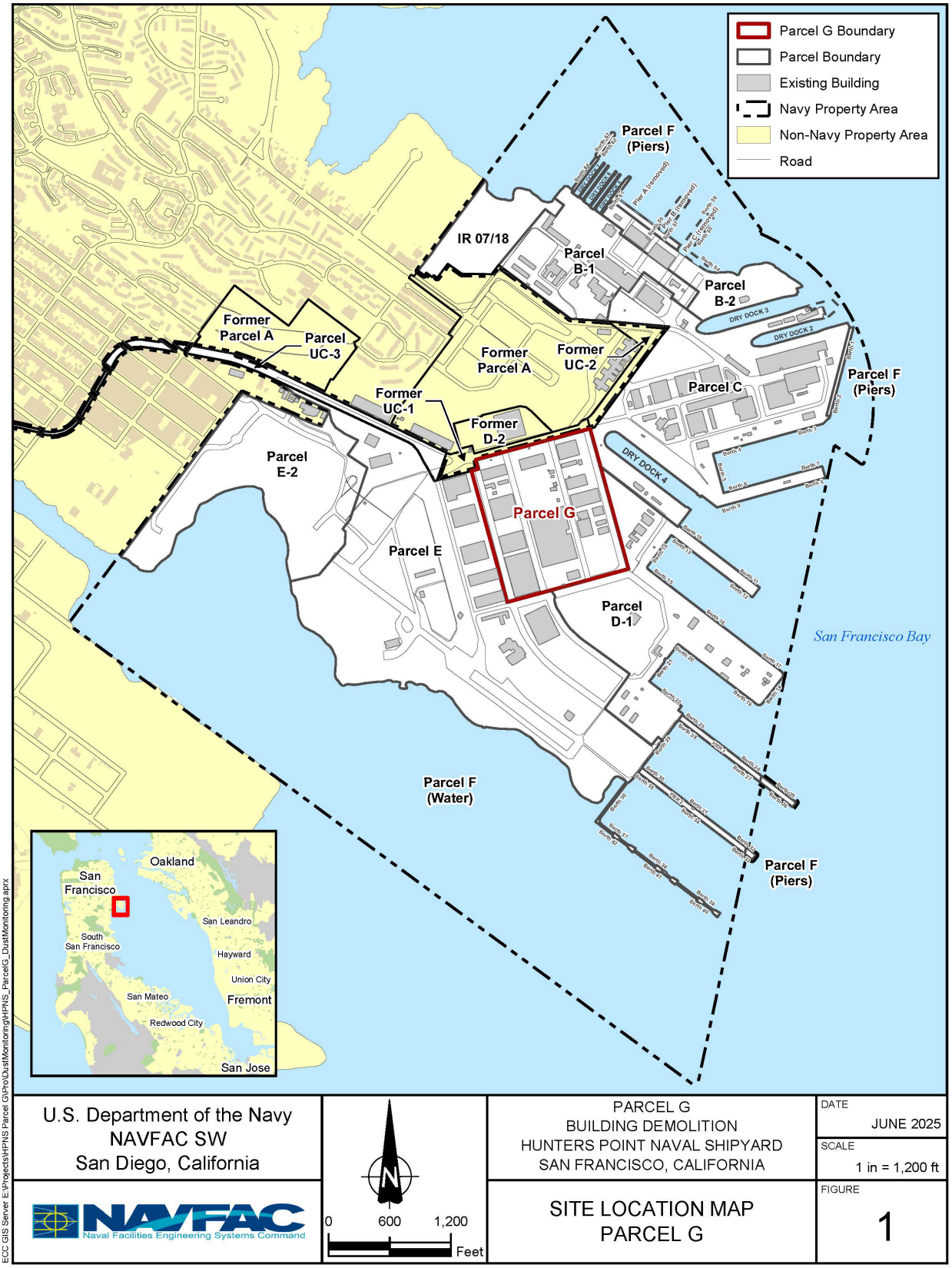
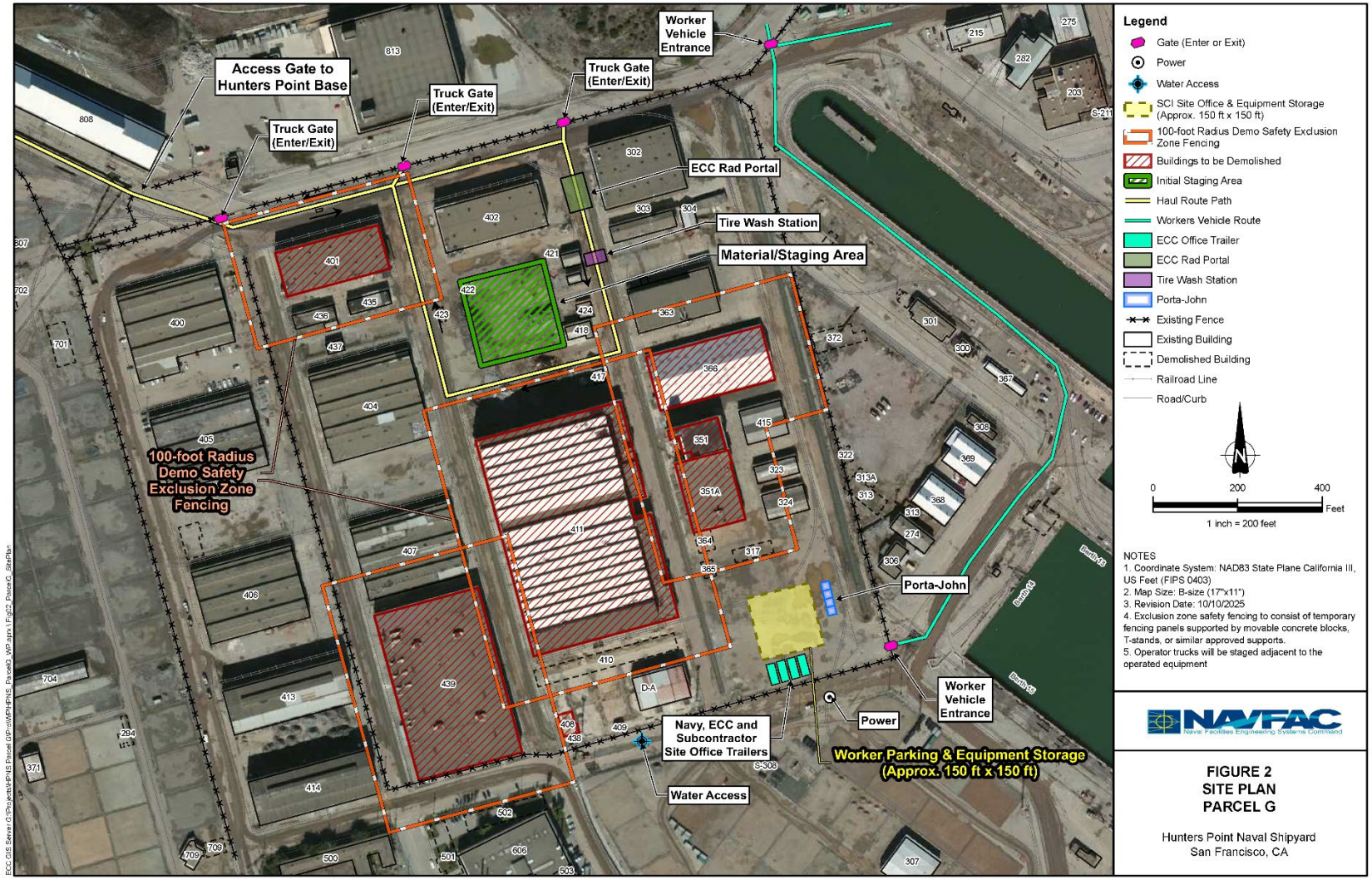

Parcel G Boundary
Parcel Boundary
Existing Building
Navy Property Area
Non-Navy Property Area
Road
Parcel F (Piers)
IR 07/18
Parcel B-1
Parcel B-2
Former Parcel A
Parcel UC-3
Former Parcel A
Former UC-2
Former UC-1
Former D-2
Parcel C
Parcel F (Piers)
Parcel E-2
Parcel G
Parcel E
Parcel D-1
San Francisco Bay
Parcel F (Water)
Parcel F (Piers)
DRY DOCK 2
DRY DOCK 3
DRY DOCK 4
Oakland
San Francisco
San Leandro
South San Francisco
Hayward
Union City
San Mateo
Fremont
Redwood City
San Jose
U.S. Department of the Navy
NAVFAC SW
San Diego, California
NAVFAC
Naval Facilities Engineering Systems Command
N
0
600
1,200
Feet
PARCEL G
BUILDING DEMOLITION
HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CALIFORNIA
DATE
JUNE 2025
SCALE
1 in = 1,200 ft
SITE LOCATION MAP
PARCEL G
FIGURE
1
ECC GIS Server E:\Projects\HPNS Parcel G\Pro\DustMonitoring\HPNS_ParcelG_DustMonitoring.aprx


Access Gate to Hunters Point Base
Truck Gate (Enter/Exit)
Truck Gate (Enter/Exit)
Truck Gate (Enter/Exit)
Worker Vehicle Entrance
ECC Rad Portal
Tire Wash Station
Material/Staging Area
100-foot Radius Demo Safety Exclusion Zone Fencing
Porta-John
Worker Vehicle Entrance
Power
Navy, ECC and Subcontractor Site Office Trailers
Worker Parking & Equipment Storage (Approx. 150 ft x 150 ft)
Water Access
Legend
Gate (Enter or Exit)
Power
Water Access
SCI Site Office & Equipment Storage (Approx. 150 ft x 150 ft)
100-foot Radius Demo Safety Exclusion Zone Fencing
Buildings to be Demolished
Initial Staging Area
Haul Route Path
Workers Vehicle Route
ECC Office Trailer
ECC Rad Portal
Tire Wash Station
Porta-John
Existing Fence
Existing Building
Demolished Building
Railroad Line
Road/Curb
N
0
200
400
Feet
1 inch = 200 feet
NOTES
1. Coordinate System: NAD83 State Plane California III, US Feet (FIPS 0403)
2. Map Size: B-size (17"x11")
3. Revision Date: 10/10/2025
4. Exclusion zone safety fencing to consist of temporary fencing panels supported by movable concrete blocks, T-stands, or similar approved supports.
5. Operator trucks will be staged adjacent to the operated equipment
NAVFAC
Naval Facilities Engineering Systems Command
FIGURE 2
SITE PLAN
PARCEL G
Hunters Point Naval Shipyard
San Francisco, CA

Haul Route Entry and Exit
Access Gate to Hunters Point Base
Material/Staging Area
Limits of Project
Highway 101
Quesada Ave
Palou Ave
Thomas Ave
Revere Ave
Shafter Ave
Keith St
Underwood Ave
Lane St
Crisp Rd
Griffith St
Carroll Ave
Ingalls St
Jennings St
Holister Ave
Gilman Ave
Ingerson Ave
South Basin
Candlestick Point State Recreation Area
Gilman Park
Bayview Park Rd
Legend
Truck Route from HPNS Crisp Rd to Highway 101
OK Vehicles
NO Truck Traffic Allowed
Initial Staging Area
Buildings to be Demolished
Limits of Project
Existing Fence
Road/Curb
Existing Building
Demolished Building
0
800
1,600
Feet
1 inch = 800 feet
NOTES
1. Coordinate System: NAD83 State Plane California III, US Feet (FIPS 0403)
2. Map Size: B-size (17"x11")
3. Revison Date: 6/16/2025
NAVFAC
FIGURE 3
HAUL ROAD
PARCEL G
Hunters Point Naval Shipyard
San Francisco, CA
bing

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Attachment A
Stormwater Pollution Prevention Plan

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STORMWATER POLLUTION PREVENTION PLAN
REVISION 1

for

Parcel G Building Demolition at BRAC Former
Hunters Point Naval Shipyard

WDID:
RISK LEVEL: 2

Prepared for:
ECC Infrastructure LLC (ECC) 700 Airport Blvd, Suite 250
Burlingame, CA 94010

Project Address:
Hunters Point Naval Shipyard Parcel G, San Francisco, CA 94124

Estimated Project Dates:
Start of Construction: 2/15/2026
Completion of Construction: 10/15/2026

SWPPP Prepared by:

Pacific Engineering & Construction, Inc.
470 3rd Street, Suite 105 San Francisco, CA 94107

QSD Name and Signature:

A. Mark Waldman, PE, QSD #38905 QSP #22075

SWPPP Preparation Date:
AUGUST 18, 2025

REVISED:
January 19, 2026

Contact Information

Role	Name	Phone Number	License or Certification Number, if Applicable
Qualified SWPPP Developer (QSD)	A. Mark Waldman	(415) 516-8545	#38905
Qualified SWPPP Practitioner (QSP)	A. Mark Waldman	(415) 516-8545	#22075

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Appendix I: BMP Inspection Form
Appendix J: Weather Reports
Appendix K: QSD/QSP Certifications

Qualified SWPPP Developer

Approval and Certification of the Stormwater Pollution Prevention Plan

Project Name: **PARCEL G BUILDING DEMOLITION BRAC FORMER NAVAL SHIPYARD HUNTERS POINT**

Prime Contract No. N62473-21-D-1205 / Task Order No. N62473-25-F-4397.

"This Stormwater Pollution Prevention Plan and its appendices were prepared under my direction to meet the requirements of the California Construction Stormwater General Permit (Order No. 2022-0057-DWQ). I certify that I am a Qualified SWPPP Developer in good standing as of the date signed below and will maintain up to date credentials for the duration of the project."

A. Mark Waldman	12/10/2025
QSD Signature	*Date*
A. Mark Waldman	*38905*
QSD Name	*QSD Certificate Number*
QSD	(415) 516-8545
Title and Affiliation	*Telephone Number*
amwaldman@sbcglobal.net	
Email	

Legally Responsible Person

Approval and Certification of the Stormwater Pollution Prevention Plan

Project Name: **PARCEL G BUILDING DEMOLITION BRAC FORMER NAVAL SHIPYARD HUNTERS POINT**

Prime Contract No. N62473-21-D-1205 Task Order No. N62473-25-F-4397

Either the Legally Responsible Person (LRP) or Approved Signatory must electronically sign, certify, and submit via SMARTS to the SWRCB for Notice of Intent, Changes of Information, Annual Reports, and Notices of Termination. In doing so, the LRP or Approved Signatory is certifying:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

The LRP (and Approved Signatory, if applicable) for this project are:

_____
Legally Responsible Person

_____
Approved Signatory

Amendment Log

Project Name: **PARCEL G BUILDING DEMOLITION BRAC FORMER NAVAL SHIPYARD HUNTERS POINT**

Prime Contract No. N62473-21-D-1205 Task Order No. N62473-25-F-4397

Amendment No.	Date	Brief Description of Amendment (include section and page number)	Prepared and Approved By
			Name: QSD#
			Name: QSD#

The SWPPP will be revised when:

- There is a 2022 CGP violation (2022 CGP Section VI.Q.1);
- There is a reduction or increase in total disturbed acreage (2022 CGP Section III.F.2. and F.4);
- BMPs are not effective and are not resulting in a reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges (2022 CGP Section VI.Q.1 and Attachment E Section III.C.5);
- There is a change in the project duration that changes the project Risk Type (2022 CGP Section III.F.1);
- Dischargers with projects where all construction activities (including passive treatment, active treatment systems, and/or active equipment) will be suspended for 30 days or more (2022 CGP Section III.G);
- There is a change in construction or operations that may affect the discharge of pollutants to surface waters, groundwater(s), or a municipal separate storm sewer system (MS4) (2022 CGP Sections IV.O. and VI.Q.1); or

When deemed necessary by the QSD. The QSD has determined that the changes listed in Table 1-1 can be field determined by the QSP. All other changes will be made by the QSD as formal amendments to the SWPPP. Note that the 2022 CGP requires that the QSD "revise the SWPPP to address potential problems identified by visual inspections, sampling data, comments from a QSP, or their own site observations (2022 CGP Section V.C.2.).

SWPPP Amendment QSD Certifications are located in Appendix D.

Section 1 SWPPP Requirements

1.1 INTRODUCTION

This Stormwater Pollution Prevention Plan (SWPPP) is designed to comply with California's *General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (2022 CGP),* State Water Resources Control Board (State Water Board) *Order No. 2022-0057-DWQ (NPDES No. CAS000002)* (Appendix N). This SWPPP has been prepared following the 2022 CGP SWPPP Template for Traditional Projects provided in the California Stormwater Quality Association (CASQA) Stormwater *Best Management Practice (BMP) Handbook: Construction* (CASQA 2023).

This project is considered a traditional construction project.

In accordance with the 2022 CGP, Section IV.O, this SWPPP is designed to address the following:

- Identification of all pollutants, their sources, and control mechanisms, including sources of sediment associated with all construction activities (e.g., sediment, paint, cement, stucco, cleaners, site erosion);
- Pollutant source assessments, including a list of potential pollutant sources and identification of site areas where additional BMPs are necessary to reduce or prevent pollutants in stormwater and authorized non-stormwater discharges, per the minimum requirements when developing the pollutant source assessment;
- Description of site-specific Best Management Practices (BMPs) implemented to reduce or eliminate stormwater pollution;
- Where not otherwise required to be under a Regional Water Quality Control Board (Regional Water Board) permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated;
- Site BMPs are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity to the Best Available Technology/Best Control Technology (BAT/BCT) standard; and;
- Stabilization BMPs are installed to reduce or eliminate pollutants after construction is completed are effective and maintained; and
- Calculations and design details, as well as BMP controls, are complete and correct.

1.2 PERMIT REGISTRATION DOCUMENTS

Required Permit Registration Documents (PRDs) shall be submitted to the State Water Board via the Stormwater Multi Application and Report Tracking System (SMARTS) by the LRP or DAR. The project-specific PRDs include (2022 CGP Section III.A):

1. Notice of Intent (NOI);
2. Risk Level Determination (Construction Site Sediment and Receiving Water Risk Determination);
3. Site Drawings and Map;

4. SWPPP;
5. Applicable plans, calculations, and other supporting documentation for compliance with the Phase I or Phase II municipal separate storm sewer system (MS4) post construction requirements or the post-construction standards of the 2022 CGP.
6. Annual Fee per the current 23 California Code of Regulations Chapter 9 fee schedule for National Pollutant Discharge Elimination System (NPDES) stormwater permits; and
7. Signed Certification Statement (LRP Certification is provided electronically with SMARTS PRD submittal).

Site Maps can be found in Appendix B. A copy of the submitted PRDs shall also be kept in Appendix C along with the Waste Discharge Identification (WDID) confirmation.

1.3 SWPPP AVAILABILITY AND IMPLEMENTATION

The SWPPP will be available at the construction site during working hours, while construction is occurring and shall be made available upon request by a federal, state, or municipal inspector. A current copy of the site-specific SWPPP and any site inspection reports required by the 2022 CGP may be kept in electronic format at the site so long as the information requested by a federal, state, or municipal inspector can be made available during an inspection. Legible maps in hard copy must be available at the site (2022 CGP Section IV.O.1.).

The SWPPP must be implemented at the appropriate level to protect water quality at all times throughout the life of the project. The SWPPP must remain on the site during construction activities, commencing with the initial mobilization and ending with the termination of coverage under the 2022 CGP.

1.4 SWPPP AMENDMENTS

SWPPP changes or amendments will be uploaded through SMARTS within 30 calendar days. The SWPPP will be revised when:

- If there is a 2022 CGP violation (2022 CGP Section VI.Q.1);
- There is a reduction or increase in total disturbed acreage (2022 CGP Section III.F.2 and F.4.);
- BMPs are not effective and are not resulting in a reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges (2022 CGP Section VI.Q.1 and Attachment D Section III.C.5);
- There is a change in the project duration that changes the project's risk level (2022 CGP Section III.F.1); or
- Dischargers with projects where all construction activities (including passive treatment, active treatment systems, and/or active equipment) will be suspended for 30 days or more (2022 CGP Section III.G.).

Additionally, the SWPPP will be amended when:

- There is a change in construction or operations that may affect the discharge of pollutants to surface waters, groundwater(s), or a municipal separate storm sewer system (MS4) (2022 CGP Sections IV.O. and VI.Q.1); or

When deemed necessary by the QSD. The QSD has determined that the changes listed in Table 1-1 can be field determined by the QSP. All other changes will be made by the QSD as formal amendments to the SWPPP. Note that the 2022 CGP requires that the QSD revise the SWPPP to address potential problems identified by visual inspections, sampling data, comments from a QSP, or their own site observations (2022 CGP Section V.C.2.).

The following items shall be included in each amendment:

- Who requested the amendment;
- The location of proposed change;
- The reason for change;
- The original BMP(s) proposed, if any;
- The new BMP(s) proposed; and
- QSD certification.

SWPPP amendments will be logged at the front of the SWPPP and SWPPP Amendment QSD certifications will be located in Appendix D. The SWPPP text will be revised, replaced and/or hand annotated as necessary to properly convey the amendment. SWPPP amendments must be made by a QSD. The following changes have been designated by the QSD as "to be field determined" and constitute minor changes that the QSP may implement based on field conditions.

Table 1-1 List of Changes to be Field Determined

Candidate changes for field location or determination by QSP (1)	Check changes that can be field located or field determined by QSP
Increase quantity of an Erosion or Sediment Control Measure	
Relocate/add stockpiles or stored materials	
Relocate or add toilets	
Relocate vehicle storage and/or fueling locations	
Relocate areas for waste storage	
Relocate water storage and/or water transfer location	
Changes to access points (entrance/exits)	
Change type or location of Erosion or Sediment Control Measure	
Minor changes to schedule or phases	
Changes in construction materials	
(1) Any field changes not identified for field location or field determination by the QSP must be made as an amendment by the QSD.	

1.5 RETENTION OF RECORDS

Paper or electronic records of documents required by this SWPPP will be retained for a minimum of three years from the date generated or date submitted, whichever is later, for the following items:

- SWPPP;
- Visual monitoring reports;
- Sampling equipment calibration records;
- pH and turbidity sampling field sheets;
- Analytical laboratory reports; and

These records will be available at the Site until construction is complete. Records assisting in the determination of compliance with the 2022 CGP will be made available within a reasonable time to the Regional Water Board, State Water Board, or U.S. Environmental Protection Agency (EPA) upon request. Requests by the Regional Water Board for retention of records for a period longer than three years will be adhered to.

1.6 REPORTING

Completed inspection checklists are not required to be submitted to the Regional Water Board. However, completed inspection checklists will be kept with the SWPPP on-site or electronically. The 2022 CGP requires that permittees prepare, certify, and electronically submit an Annual Report no later than September 1 of each year. Reporting requirements are identified in 2022 CGP Section VI.P. Annual reports will be filed in SMARTS and in accordance with information required by the online forms.

Planned changes in site construction activities that may result in non-compliance with the 2022 CGP are required to be provided in writing to the Regional Water Board and local stormwater agency in advance of the changes.

If a 2022 CGP discharge violation occurs, the QSP will immediately notify the LRP. The LRP will include information on the violation with the Annual Report. Corrective measures will be implemented immediately following identification of the discharge or written notice of non-compliance from the Regional Board. Discharges and corrective actions must be documented and include the following items:

- The date, time, location, nature of operation, and type of unauthorized discharge;
- The cause or nature of the notice or order;
- The BMPs deployed before the discharge event, or prior to receiving notice or order; and
- The date of deployment and type of BMPs deployed after the discharge event, or after receiving the notice or order, including additional measures installed or planned to reduce or prevent re-occurrence.

Results of (pH and turbidity, etc.) monitoring will be electronically submitted through SMARTS for all field sampling results within 30 days of the completion of the precipitation event or within 10 days if the field sampling results demonstrate the exceedance of the pH and/or turbidity NALs. See Section 7 for additional discussion of the reporting requirements.

Reporting requirements for pH and turbidity Receiving Water Monitoring Triggers are discussed in Section 7.

Results of non-visible pollutant monitoring and corrective actions will be electronically submitted within 30 days after obtaining analytical results or within 10 days if the analytical results demonstrate the exceedance of an applicable TMDL-related NAL or NEL or Basin Plan parameter. See Section 7 for additional discussion of the reporting requirements.

In the event of a TMDL NEL exceedance, by the end of each reporting year the project will submit and certify, in SMARTS, documentation of the site assessment, SWPPP evaluation, and implementation of the corrective actions.

Results of monitoring (pH, turbidity, flowrate, volume discharged, and freeboard storage) will be electronically submitted monthly during the project. See the ATS Plan for additional discussion of the reporting requirements.

In the event of an ATS NEL exceedance results will be electronically certified and submitted to SMARTS within 24-hours of obtaining the results.

The Regional Water Board will be notified via email 24 hours prior to the beginning of a planned dewatering discharge.

In the event of an emergency dewatering, the Regional Water Board and applicable MS4 are to be notified within 24 hours of a discharge occurring. An emergency is defined as the need to protect human life and health or prevent severe property damage.

Results of (pH and turbidity, etc.) monitoring will be electronically submitted through SMARTS for all field sampling results within 30 days of the completion of the precipitation event or within 10 days if the field sampling results demonstrate the exceedance of the pH and/or turbidity NALs.

See Section 7 for additional discussion of the reporting requirements including contacts for Regional Water Board and MS4 notifications.

A Passive Treatment Plan will be submitted electronically 14 days before passive treatment chemicals are used on site. See the Passive Treatment Plan for additional discussion of the reporting requirements.

1.7 CHANGES TO PERMIT COVERAGE

The 2022 CGP allows for the reduction or increase of the total acreage covered under the 2022 CGP when: a portion of the project is complete and/or conditions for termination of coverage have been met; when ownership of a portion of the project is purchased by a different entity; or when new acreage is added to the project.

Modified PRDs will be filed electronically through a Change of Information (COI) within 30 days of a reduction or increase in total disturbed area if a change in permit-covered acreage is to be sought. The SWPPP will be modified appropriately and will be logged at the front of the SWPPP. SWPPP Amendments QSD Certifications will be located in Appendix D. COIs submitted electronically via SMARTS can be found in Appendix E.

1.8 NOTICE OF TERMINATION

A Notice of Termination (NOT) must be submitted electronically by the LRP or DAR via SMARTS to terminate coverage under the 2022 CGP.

According to the requirements of 2022 CGP Section III.H.4., the following final stabilization method will be used to satisfy final stabilization condition requirements:

70 percent final cover method supported by pre- and post-project photographs demonstrating stabilization.

The Regional Water Board will consider a construction site complete when the conditions of the 2022 CGP Section III.H., have been met.

The discharger is required to submit the following in SMARTS:

- NOT SMARTS Form;
- QSP-prepared final NOT inspection which includes the QSP name and valid QSP certificate number;
- Final site map with photo orientation references;
- Photos demonstrating final stabilization and the applicable post-construction BMPs and/or low impact development; and
- A long-term maintenance plan for the post-construction stormwater runoff BMPs and/or low impact development features being implemented.

According to the 2022 CGP, the NOT will be automatically approved within 30 calendar days after the date the NOT was submitted, unless, within the 30 calendar days the Regional Water Board notifies the discharger through SMARTS that the Notice of Termination has been denied, returned, or accepted for review (2022 CGP Section III.H.7).

Note: If an Annual Report has not been filed in the current reporting year, an Annual Report will need to be submitted prior to the NOT.

Section 2 Project Information

2.1 PROJECT AND SITE DESCRIPTION

The work is located at Parcel G of the Hunters Point Naval Shipyard (HPNS) in San Francisco, California. The work includes demolition of buildings and concrete slabs for 351, 351A, 366, B401, B411, and B439 and demolition of concrete pad from previous building 408 and incidental related work including capping existing utility laterals servicing the demolished buildings

2.1.1 Site Description

Parcel G is approximately 40 acres central inland portion of HPNS. The parcel was constructed in the 1940s by placing borrowed fill material from various sources. Most of Parcel G was formerly part of the industrial support area and was used for shipping, ship repair, offices, and commercial activities and is nearly all covered with buildings or pavement. The project site is Parcel G at the Hunters Point Shipyard which sits directly adjacent to the San Francisco Bay

2.1.2 Existing Conditions

As of the initial date of this SWPPP, the project site consists of asphalt paved roads, concrete slabs, and abandoned structures from the work described in Section 2.1.1.

2.1.3 Project Description

The scope of work includes demolition and off-haul of six structures located on Parcel G (351, 351A, 366, 401, 411,and 439), demolition and off-haul of concrete pad from building 408, and demolition and partial slab/foundation removal and off-haul from the six structures. Upon completion of demolition and off-haul activities, soil shall be imported to the site and used for backfill and compaction at excavated areas.

2.2 PERMITS AND GOVERNING DOCUMENTS

In addition to the General Permit, the following documents have been taken into account while preparing this SWPPP

- Regional Water Quality Control Board Requirements;
- Contract Documents;

2.3 STORMWATER RUN-ON FROM OFFSITE AREAS

The 2022 CGP requires that temporary BMPs be implemented to direct offsite run-on away from disturbed areas through the use of runoff controls. Linear Controls such as Fiber Roll (BMP SE-5) or gravel bag berm (BMP SE-6) will be used to intercept run-on to the project, if any.

2.4 FINDINGS OF THE CONSTRUCTION SITE SEDIMENT AND RECEIVING WATER RISK DETERMINATION

A construction site risk assessment has been performed for the project, and the resultant risk level is Risk Level 2.

The risk level was determined through the use of Caltrans K & LS Maps and EPA Rainfall Erosivity Calculator. The risk level is based on project duration, location, proximity to impaired receiving waters and soil conditions. A copy of the Risk Level determination submitted on SMARTS with the PRDs is included in Appendix A.

Table 2.1 and Table 2.2 summarize the sediment and receiving water risk factors and document the sources of information used to derive the factors.

Table 2.1 Summary of Sediment Risk

RUSLE Factor	**Value**	**Method for establishing value**
R	2.0	EPA Rainfall Erosivity Calculator
K	0.20	Caltrans K Factor Map
LS	17.18	Caltrans LS Factor Map
Total Predicted Sediment Loss (tons/acre)		**7.5592**
Overall Sediment Risk Low Sediment Risk < 15 tons/ acre Medium Sediment Risk >= 15 and < 75 tons/acre High Sediment Risk >= 75 tons/acre		Low Medium **High**

Table 2.2 Summary of Receiving Water Risk

Receiving Water Name	**303(d) Listed for Sediment Related Pollutant(1)**	**TMDL for Sediment Related Pollutant(1)**	**Beneficial Uses of COLD, SPAWN, and MIGRATORY(1)**
San Francisco Bay	☐ Yes ☒ No	☐ No ☒ Yes	☒ Yes ☐ No
Overall Receiving Water Risk			☐ **Low** ☒ **High**
(1) If yes is selected for any option the Receiving Water Risk is High			

Risk Level 2 sites are subject to both the narrative effluent limitations and numeric action limitations (NALs). The narrative effluent limitations require stormwater discharges associated with construction activity to minimize or prevent pollutants in stormwater and authorized non-stormwater through the use of controls, structures and best management practices (BMPs). Discharges from Risk Level 2 site are subject to NALs for pH and turbidity shown in Table 2.3.

This SWPPP has been prepared to address Risk Level 2 requirements (2022 CGP Attachment D).

Table 2.3 Numeric Action Levels and Numeric Effluent Limits

Parameter	Unit	Numeric Action Level	Numeric Effluent Limit
pH	pH units	Lower NAL < 6.5 Upper NAL > 8.5	Not Applicable
Turbidity	NTU	> 250 NTU	Not Applicable

Projects that discharge to a water body and or watershed listed in Table H-2 are subject to both the narrative and numeric effluent limitations imposed by the TMDL requirements in Attachment H. Narrative effluent limitations applicable to this project are: None. This SWPPP has been prepared to address the TMDL requirements (2022 CGP Attachment H).

2.5 CONSTRUCTION SCHEDULE

The site sediment risk was determined based on construction taking place between 6/1/2025 and 9/30/2025. Modification or extension of the schedule (start and end dates) may affect risk determination and permit requirements. The QSD shall contact the LRP if the schedule changes during construction to address potential impact to the SWPPP. The estimated schedule for planned work can be found in Appendix F.

2.6 POTENTIAL CONSTRUCTION ACTIVITY AND POLLUTANT SOURCES

Following is a list of construction activities and associated materials that are anticipated to be used onsite. These activities and associated materials will or could potentially contribute pollutants to stormwater runoff.

- Demolition
- Excavation
- Imported soil backfill and compaction
- Chemical waste from stationary toilets
- Vehicle and equipment fueling and maintenance
- General site litter

The anticipated activities and associated pollutants were used in Section 3 to select the Best Management Practices for the project. Location of anticipated pollutants and associated BMPs are show on the Site Map in Appendix B.

Additionally, proper measures will be taken to ensure that trench spoils or any other soils disturbed during construction activities that are assumed to be contaminated are not discharged with stormwater or non-stormwater discharges into storm drains or water bodies (except pursuant to a separate NPDES Permit). If contaminated soils are found on site, and the responsible party cannot be identified or fails to take action, soils will be sampled and analyzed to determine proper transportation and disposal methods and to protect public health. The appropriate local, State, and federal agencies, along with the appropriate Regional Water Board, will be notified when contaminated soils are observed.

For sampling requirements for non-visible pollutants associated with construction activity please refer to Section 7.7.1. For a full and complete list of onsite pollutants, refer to the Material Safety Data Sheets (MSDS), which are retained onsite at the construction trailer.

2.7 IDENTIFICATION OF NON-STORMWATER DISCHARGES

Non-stormwater discharges into storm drainage systems or waterways, which are not authorized under the 2022 CGP and listed in the SWPPP, or authorized under a separate NPDES permit, are prohibited. Non-stormwater discharges into storm drainage systems or waterways, which are not authorized under the General Permit and listed in the SWPPP, or authorized under a separate NPDES permit, are prohibited.

These authorized non-stormwater discharges will be managed with the stormwater and non-stormwater BMPs described in Section 3 of this SWPPP and will be minimized by the QSP.

Activities at this site that may result in unauthorized non-stormwater discharges include:

- Chemical waste from stationary toilets
- Vehicle and equipment fueling and maintenance
- Illegal connection or discharge
- Water used for dust control

Steps will be taken, including the implementation of appropriate BMPs, to ensure that unauthorized discharges are eliminated, controlled, disposed, or treated on-site.

Discharges of construction materials and waste, such as fuel or paint, resulting from dumping, spills, or direct contact with rainwater or stormwater runoff, are also prohibited.

2.8 REQUIRED SITE MAP INFORMATION

The construction project's Site Map(s) showing the project location, surface water boundaries, geographic features, construction site perimeter and general topography, locations of storm drain inlets that receive runoff from the project, and other requirements identified in 2022 CGP Sections IV.O.2. k. and l are located in Appendix B.

Section 3 Best Management Practices

3.1 SCHEDULE FOR BMP IMPLEMENTATION

BMPs will be implemented as per the schedule indicated in Table 3-1.

Table 3.1 BMP Implementation Schedule

	BMP	Implementation	Duration
Erosion Control	EC-1: Scheduling	Prior to Demolition	Entirety of Project
	EC-2: Preservation of Existing Vegetation	Prior to Demolition	Entirety of Project
	EC-7: Geotextiles and Mats	Beginning of Soil disturbing activities & Stockpiling Materials	Entirety of Project
Sediment Control	SE-5: Fiber Rolls	Beginning of Soil disturbing activities & Stockpiling Materials	Entirety of Project
	SE-6: Gravel Bag	Beginning of Soil disturbing activities & Stockpiling Materials	Entirety of Project
	SE-7: Street Sweeping	Throughout Project	Entirety of Project
	SE-8: Sandbag Barrier	Beginning of project	Entirety of Project
	SE-10: Inlet Protection	Prior to Demolition	Entirety of Project
Tracking Control	TC-1: Entrance/Exit Stabilization	Beginning of Soil disturbing activities	Entirety of Project
	TC-3: Entrance/Outlet Tire Wash	Beginning of Project	Entirety of Project
Wind Erosion	WE-01:Wind Erosion	Prior to Demolition	Entirety of Project

	BMP	Implementation	Duration
Non - Stormwater	NS-1: Water Conservation Practices	Throughout project	Entirety of Project
	NS-3: Paving and Grinding Operation	Various Times during construction	Entirety of Project
	NS-6: Illicit Connection, Illegal Discharge	Starting at beginning of project	Entirety of Project
	NS-8: Vehicle and Equipment Cleaning	Starting at beginning of project	Entirety of Project
	NS-9: Vehicle and Equipment Fueling	Starting at beginning of mobilization	Entirety of Project
	NS-10: Vehicle and Equipment Maintenance	Starting at beginning of mobilization	Entirety of Project
	NS-15: Structure Demolition/Removal Over or Adjacent to Water	Prior to Demolition	Entirety of Project
Materials Management	WM-1: Material Delivery & Storage	Starting at beginning of project	Entirety of Project
	WM-2: Material Use	Starting at beginning of project	Entirety of Project
	WM-3: Stockpile Management	Starting at beginning of demolition	Entirety of Project
	WM-4: Spill Prevention	Starting at beginning of project	Entirety of Project
	WM-5: Solid Waste Management	Starting at beginning of project	Entirety of Project
	WM-6: Hazardous Waste Management	Starting at beginning of Project	Entirety of Project
	WM-7: Contaminated Soil Management	Starting at beginning of Project	Entirety of Project
	WM-8: Concrete Waste Management	During concrete work	Entirety of Project
	WM-9: Sanitary & Septic Waste Management	Starting at beginning of project	Entirety of Project
	WM-10: Liquid Waste Management	Starting at beginning of project	Entirety of Project

3.2 EROSION AND SEDIMENT CONTROL

Erosion and sediment controls are required by the 2022 CGP to provide effective reduction or elimination of sediment related pollutants in stormwater discharges and authorized non-stormwater discharges from the Site. Applicable BMPs are identified in this section for erosion control, sediment control, tracking control, and wind erosion control.

3.2.1 Erosion Control

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in stormwater runoff. Erosion control BMPs protect the soil surface by covering and/or binding soil particles.

This construction project will implement the following practices to provide effective temporary and final erosion control during construction:

1. Preserve existing vegetation where required and when feasible.
2. The area of soil disturbing operations shall be controlled such that the Contractor is able to implement erosion control BMPs quickly and effectively.
3. Stabilize non-active areas within 14 days of cessation of construction activities or sooner if stipulated by local requirements.
4. Control erosion in concentrated flow paths by applying erosion control blankets, check dams, erosion control seeding, or alternate methods.
5. Prior to the completion of construction, apply permanent erosion control to remaining disturbed soil areas.

Sufficient erosion control materials shall be maintained onsite to allow implementation in conformance with this SWPPP.

The following erosion control BMP selection table, Table 3-2 indicates the BMPs that will be implemented to control erosion on the construction site. Fact Sheets for temporary erosion control BMPs are provided in Appendix H.

These temporary erosion control BMPs shall be implemented in conformance with the following guidelines and as outlined in the BMP Factsheets provided in Appendix H. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

Table 3.2 Temporary Erosion Control BMPs

CASQA Fact Sheet	BMP Name	Considered for the Project (1)	BMP Used		If not used, state reason
			YES	NO	
EC-1	Scheduling	✓	Y		
EC-2	Preservation of Existing Vegetation	✓	Y		
EC-3	Hydraulic Mulch	✓(2)		N	Not anticipated for this project
EC-4	Hydroseed	✓(2)		N	Not anticipated for this project
EC-5	Soil Binders	✓(2)		N	Not anticipated for this project
EC-6	Straw Mulch	✓(2)		N	Not anticipated for this project
EC-7	Geotextiles and Mats	✓(2)	Y		
EC-8	Wood Mulching	✓(2)		N	Not anticipated for this project
EC-9	Earth Dike and Drainage Swales	✓(3)		N	Not anticipated for this project
EC-10	Velocity Dissipation Devices	✓(3)		N	Not anticipated for this project
EC-11	Slope Drains	✓(3)		N	Not anticipated for this project
EC-12	Stream Bank Stabilization			N	Not anticipated for this project
EC-14	Compost Blankets	✓(2)		N	Not anticipated for this project
EC-15	Soil Preparation-Roughening	✓		N	Not anticipated for this project
EC-16	Non-Vegetated Stabilization	✓(2)		N	Not anticipated for this project
WE-1	Wind Erosion Control	✓	Y		
Alternate BMPs Used:					**If used, state reason:**
Surface Roughening shall be implemented on disturbed areas before rain events.					

(1) The 2022 CGP Fact Sheet Section I.R.1.d.through I.R.1.i.describes various BMPs that should be considered for use on the construction site.
(2) The QSD shall ensure implementation of one of the minimum measures listed or a combination thereof to achieve and maintain the Risk Level requirements.
(3) All run-on and runoff from the construction site shall be managed for Risk Level 2 and 3 and Risk Level 1 if the evaluation of quantity and quality of run-on and runoff deems them necessary or visual inspections show that the site requires these controls. Run-on from offsite shall be directed away from all disturbed areas, diversion of offsite flows may require design/analysis by a licensed civil engineer and/or additional environmental permitting.

Scheduling (EC-1)

Contractor shall develop a plan that includes sequencing of construction activities and the implementation of BMPs such as erosion control and sediment control to reduce the amount and duration of soil exposed to erosion by wind, rain, runoff, and vehicle tracking, and to perform the construction activities and control practices in accordance with the planned schedule.

Preservation of Existing Vegetation (EC-2)

Existing vegetation to be preserved on the site must be protected from mechanical and other injury during the construction. Contractor shall provide temporary fencing prior to the commencement of soil disturbing activities to protect existing vegetation.

Geotextiles and Mats (EC-7)

Plastic sheeting should be used as stockpile covering or for very small graded areas for short periods of time (such as through one imminent storm event).

Wind Erosion Control (WE-1)

Wind erosion or dust control consists of applying water as necessary to prevent or alleviate dust nuisance generated by construction activities. Covering small stockpiles or areas is an alternative to applying water. The Contractor shall apply water for dust control when needed and provide effective soil cover for inactive areas (area idle with no soil disturbance for at least 14 days) and all finished slopes and open space. The Contractor shall also limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.

3.2.2 Sediment Controls

Sediment controls are temporary or permanent structural measures that are intended to complement the selected erosion control measures and reduce sediment discharges from active construction areas. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water.

The following sediment control BMP selection table indicates the BMPs that will be implemented to control sediment on the construction site. Fact Sheets for temporary sediment control BMPs are provided in Appendix H.

These temporary sediment control BMPs will be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix H. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

Table 3.3 Temporary Sediment Control BMPs

CASQA Fact Sheet	BMP Name	Considered for the Project [1]	BMP used		If not used, state reason
			YES	NO	
SE-1	Silt Fence	✓ [2] [3]	Y		
SE-2	Sediment Basin			N	Not required for this project
SE-3	Sediment Trap			N	Not required for this project
SE-4	Check Dams	[2] [3]		N	Not required for this project
SE-5	Fiber Rolls	✓ [2][3]	Y		
SE-6	Gravel Bag Berm	✓ [3]	Y		
SE-7	Street Sweeping	✓	Y		
SE-8	Sandbag Barrier	✓	Y		
SE-9	Straw Bale Barrier	✓	Y		
SE-10	Storm Drain Inlet Protection	✓ RL2&3	Y		
SE-11	ATS			N	Not required for this project
SE-12	Manufactured Linear Sediment Controls			N	Not required for this project
SE-13	Compost Sock and Berm	✓ [3]		N	Not required for this project
SE-14	Biofilter Bags	✓ [3]		N	Not required for this project
TC-1	Stabilized Construction Entrance and Exit	✓	Y		
TC-2	Stabilized Construction Roadway			N	Not required for this project
TC-3	Entrance Outlet Tire Wash		Y		
Alternate BMPs Used:					**If used, state reason:**

[1] The 2022 CGPs Fact Sheet Section I.R.1.d through I.R.1.i describes various BMPs that should be considered for use on the construction site.
[2] The QSD shall ensure implementation of one of the minimum measures listed or a combination thereof to achieve and maintain the Risk Level requirements.
[3] All run-on and runoff from the construction site shall be managed. Risk Level 2 and 3 shall provide linear sediment control along toe of slope, face of slope, and at the grade breaks of exposed slope.

Silt Fence (SE-1)

The Contractor shall use the sediment control and linear barrier BMPs at exposed soil areas and staging areas. BMPs shall be applied for perimeter protection throughout the construction site.

Silt Fencing, where feasible, shall be used as linear sediment control at disturbed soil areas and along the perimeter of job site to prevent silt from discharging off the construction area.

Fiber Rolls (SE-5)

The Contractor shall use the sediment control and linear barrier BMPs at exposed soil areas and staging areas. BMPs shall be applied for perimeter protection throughout the construction site.

Fiber rolls shall be used as linear sediment control at disturbed soil areas and along the perimeter of job site to prevent silt from discharging off the construction area.

Gravel Bag Berm (SE-6)

Gravel bags may be used as needed as a linear sediment control along the perimeter of staging areas to intercept any run-off from the site.

Street Sweeping (SE-7)

The Contractor shall inspect all immediate access roads daily. The Contractor shall remove any sediment or other construction activity related materials that are deposited on paved roads by sweeping on a daily basis and prior to any rain event.

Sandbag Barrier (SE-8)

Sandbag Barriers may be placed on a level contour to intercept or divert sheet flows. Sandbag barriers placed on a level contour pond sheet flow runoff, allowing sediment to settle out. Sandbag barriers may be placed around the perimeter of the construction site, and around temporary stockpiles and spoils areas.

Straw Bale Barrier (SE-9)

Straw Bale Barriers shall be placed on a level contour around localized demolition areas with fiber rolls placed at the inboard toe area to capture potential sediment release from storm runoff. Straw Bale Barriers pond sheet-flow runoff, allowing sediment to settle out.

Storm Drain Inlet Protection (SE-10)

Contractor shall locate all storm drain inlets within and downstream of the project site and install appropriate types of protection (Gravel Bags, Filter Fabric) at storm drain inlets.

Stabilized Construction Entrance and Exit (TC-1)

A stabilized construction access is defined by a point of entrance/exit to the construction site that is stabilized to reduce the tracking of mud and dirt onto public roads by construction vehicles. Contractor shall stabilize any such points at storage yards used for the project.

Entrance/Outlet Tire Wash (TC-3)

Tire wash shall be located at the stabilized construction access points to remove sediment from

tires and under carriages and to prevent sediment from being transported off the site onto public roadways.

3.3 NON-STORMWATER CONTROLS AND WASTE AND MATERIALS MANAGEMENT

3.3.1 Non-Stormwater Controls

Non-stormwater discharges into storm drainage systems or waterways which are not authorized under the 2022 CGP are prohibited. Non-stormwater discharges for which a separate NPDES permit is required by the local Regional Water Board are prohibited unless coverage under the separate NPDES permit has been obtained for the discharge. The selection of non-stormwater BMPs is based on the list of construction activities with a potential for non-stormwater discharges identified in Section 2.7 of this SWPPP.

The following non-stormwater control BMP selection table indicates the BMPs that will be implemented to control sediment on the construction site. Fact Sheets for temporary non-stormwater control BMPs are provided in Appendix H.

Non-stormwater BMPs will be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix H. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

Table 3.4 Temporary Non-Stormwater BMPs

CASQA Fact Sheet	BMP Name	Considered for the Project [1]	BMP used		If not used, state reason
			YES	NO	
NS-1	Water Conservation Practices	✓	Y		
NS-2	Dewatering Operation			N	Not anticipated for this project
NS-3	Paving and Grinding Operation		Y		
NS-4	Temporary Stream Crossing			N	Not anticipated for this project
NS-5	Clear Water Diversion			N	Not anticipated for this project
NS-6	Illicit Connection/Discharge	✓	Y		
NS-7	Potable Water/Irrigation			N	Not anticipated for this project
NS-8	Vehicle and Equipment Cleaning	✓	Y		
NS-9	Vehicle and Equipment Fueling	✓	Y		
NS-10	Vehicle and Equipment Maintenance	✓	Y		
NS-11	Pile Driving Operation			N	Not anticipated for this project
NS-12	Concrete Curing			N	Not anticipated for this project
NS-13	Concrete Finishing			N	Not anticipated for this project
NS-14	Material and Equipment Use Over Water			N	Not anticipated for this project
NS-15	Demolition Removal Adjacent to Water		Y		
NS-16	Temporary Batch Plants			N	Not anticipated for this project
Alternate BMPs Used:			**If used, state reason:**		

[1] The 2022 CGP Fact Sheet Section I.R.1.d through I.R.1.i describes various BMPs that should be considered for use on the construction site.

Water Conservation Practices (NS-1)

Water conservation practices are activities that use water during the construction of a project in a manner that avoids causing erosion and the transport of pollutants offsite. These practices will be used to reduce or eliminate non-stormwater discharges where water is used. Vehicles and equipment will not be washed on site. Water will not be used to clean construction areas.

Paving and Grinding Operation (NS-3)

Contractor shall prevent or reduce the discharge of pollutants from paving operations, using measures to prevent run on and runoff pollution, properly disposing of wastes, and training employees and subcontractors. Plastic material will be placed under paving equipment when not in use to catch drips or leaks. Paving equipment will be parked overnight at the staging area with plastic material placed underneath. Asphalt coated equipment will be cleaned off-site when possible. Residue from grinding or removal operations will be picked up by mechanical or manual means and disposed of properly. Inlets adjacent to paving operations will be protected. Following paving operations, the area will be swept and the inlets will be inspected for paving materials.

Illicit Connection/Discharge (NS-6)

Procedures and practices designed shall be conducted to recognize illicit connections or illegally dumped or discharged materials on a construction site and report incidents. Illicit connection/discharge and reporting is applicable anytime an illicit connection or discharge is discovered or illegally dumped material is found on the construction site.

The site will be inspected before the project commences and regularly during the project for illicit connections or illegal dumping or discharge. If any are found, they will be reported to the Project Manager and Construction Manager at the time of discovery.

Vehicle and Equipment Maintenance (NS-8)

Vehicle and equipment cleaning procedures and practices eliminate or reduce the discharge of pollutants to stormwater from vehicle and equipment cleaning operations. Procedures and practices include but are not limited to: using offsite facilities; washing in designated, contained areas only; eliminating discharges to the storm drain by infiltrating the wash water; and training employees and subcontractors in proper cleaning procedures.

Vehicle and Equipment Fueling (NS-9)

Vehicle equipment fueling procedures and practices will be used to prevent fuel spills and leaks and reduce or eliminate contamination of stormwater. This can be accomplished by using offsite facilities, fueling in designated areas only, enclosing or covering stored fuel, implementing spill controls, and training employees and subcontractors in proper fueling procedures.

Onsite vehicle and equipment fueling should only be used where it is impractical to send vehicles and equipment offsite for fueling. A dedicated fueling area will be designated at the project site. The dedicated fueling area will be located on a level-grade area located at least 50 feet away from downstream drainage facilities and watercourses. The dedicated fueling area will be protected with berms and/or dikes to prevent run-on and runoff and to contain spills.

Vehicle and Equipment Maintenance (NS-10)

Contractor will prevent or reduce the contamination of stormwater resulting from vehicle and equipment maintenance by running a “dry and clean site”. The best option would be to perform maintenance activities at an offsite facility. If this option is not available then work should be performed in designated areas only, while providing cover for materials stored outside, checking for leaks and spills, and containing and cleaning up spills immediately. Employees and subcontractors must be trained in proper procedures.

Structure Demolition/Removal Over or Adjacent to Water (NS-15)

Contractor will prevent or reduce the contamination of stormwater pathways and receiving bodies of water resulting from structure demolition and removal. Contractor shall collect and contain all demolished material within the containment system, including process water and visible dust produced during demolition and cleaning operations daily.

3.3.2 Materials Management and Waste Management

Materials management control practices consist of implementing procedural and structural BMPs for handling, storing, and using construction materials to prevent the release of those materials into stormwater discharges. The amount and type of construction materials to be utilized at the Site will depend upon the type of construction and the length of the construction period. The materials may be used continuously, such as fuel for vehicles and equipment, or the materials may be used for a discrete period, such as soil binders for temporary stabilization.

Waste management consist of implementing procedural and structural BMPs for handling, storing, and ensuring proper disposal of wastes to prevent the release of those wastes into stormwater discharges.

Materials and waste management pollution control BMPs will be implemented to minimize stormwater contact with construction materials, wastes, and service areas; and to prevent materials and wastes from being discharged off-site. The primary mechanisms for stormwater contact that shall be addressed include:

- Direct contact with precipitation
- Contact with stormwater run-on and runoff
- Wind dispersion of loose materials
- Direct discharge to the storm drain system through spills or dumping
- Extended contact with some materials and wastes, such as asphalt cold mix and treated wood products, which can leach pollutants into stormwater.

A list of construction activities is provided in Section 2.6. The following Materials and Waste Management BMP selection table, Table 3-5, indicates the BMPs that shall be implemented to handle materials and control construction site wastes associated with these construction activities. Fact Sheets for Materials and Waste Management BMPs are provided in Appendix H.

Material management BMPs will be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix H. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

Table 3.5 Temporary Materials Management BMPs

CASQA Fact Sheet	BMP Name	Considered for Project [1]	BMP used		If not used, state reason
			YES	NO	
WM-1	Material Delivery and Storage	✓	Y		
WM-2	Material Use	✓	Y		
WM-3	Stockpile Management	✓	Y		
WM-4	Spill Prevention and Control	✓	Y		
WM-5	Solid Waste Management	✓	Y		
WM-6	Hazardous Waste Management	✓	Y		
WM-7	Contaminated Soil Management	✓	Y		
WM-8	Concrete Waste Management	✓	Y		
WM-9	Sanitary-Septic Waste Management	✓	Y		
WM-10	Liquid Waste Management	✓	Y		
Alternate BMPs Used:				**If used, state reason:**	

[1] The 2022 CGP Fact Sheet Section I.R.1.d through I.R.1.i describes various BMPs that should be considered for use on the construction site.

Material Delivery and Storage (WM-01)

Contractor will prevent, reduce, or eliminate the discharge of pollutants from material delivery and storage to the stormwater system or watercourses by minimizing the storage of hazardous materials onsite, storing materials in watertight containers and/or a completely enclosed designated area, installing secondary containment, conducting regular inspections, and training employees and subcontractors.

Material Use (WM-02)

Discharge of pollutants to the storm drain system or watercourses from material use will be prevented or reduced by using alternative products, minimizing hazardous material use onsite, and training employees and subcontractors.

Stockpile Management (WM-03)

Stockpile management procedures and practices will be used to reduce or eliminate air and stormwater pollution from stockpiles of soil, soil amendments, sand, paving materials such as portland cement concrete (PCC) rubble, asphalt concrete (AC), asphalt concrete rubble, aggregate base, aggregate sub base or pre-mixed aggregate, asphalt minder (so called “cold mix” asphalt), and pressure treated wood.

Spill Prevention and Control (WM-04)

Discharge of pollutants to drainage systems or watercourses from leaks and spills shall be prevented or reduced by reducing the chance for spills, stopping the source of spills, containing and cleaning up spills, properly disposing of spill materials, and training employees.

Solid Waste Management (WM-05)

Solid waste management procedures and practices will be implemented to prevent or reduce the discharge of pollutants to stormwater from solid or construction waste by providing designated waste collection areas and containers, arranging for regular disposal, and training employees and subcontractors.

Hazardous Waste Management (WM-06)

Discharge of pollutants to stormwater from hazardous waste will be prevented or reduced through proper material use, waste disposal, and training of employees and subcontractors. Hazardous waste management practices will be implemented on construction activities that generate waste from the use of:

- Petroleum products
- Asphalt products
- Septic waste
- Pesticides
- Paints
- Concrete curing products
- Any materials deemed a hazardous waste in California, Title 22 Division 4.5

Contaminated Soil Management (WM-07)

Prevent or reduce the discharge or pollutants to stormwater from contaminated soil and highly acidic or alkaline soils by conducting pre-construction surveys, inspection excavations regularly, and remediating contaminated soils promptly.

Concrete Waste Management (WM-08)

Discharge of pollutants to stormwater from concrete waste will be prevented by conducting washout onsite or offsite in a designated area, and by employee and subcontractor training. Many types of construction materials, including mortar, concrete, stucco, cement and block and their associated wastes have basic chemical properties that can raise pH levels outside of the permitted range. Additional care should be taken when managing these materials to prevent them from coming into contact with stormwater flows and raising pH to levels outside the accepted range.

Sanitary-Septic Waste Management (WM-09)

Proper sanitary and septic waste management shall be used to prevent the discharge of pollutants to stormwater from sanitary and septic waste by providing convenient, well-maintained facilities, and arranging for regular service and disposal.

Liquid Waste Management (WM-10)

Liquid waste management procedures and practices will be implemented to prevent discharge of pollutants to the storm drain system or to watercourses as a result of the creation, collection, and disposal of non-hazardous liquid wastes.

3.4 POST CONSTRUCTION STORMWATER MANAGEMENT MEASURES

Post construction BMPs are permanent measures installed during construction, designed to reduce or eliminate pollutant discharges from the site after construction is completed.

This site is located in an area subject to a Phase I or Phase II Municipal Separate Storm Sewer System (MS4) permit approved Stormwater Management Plan. ☐ Yes ☒ No

The post construction runoff reduction requirements have been satisfied through the MS4 program, this project is exempt from 2022 CGP Provision IV.N.3.

Section 4 BMP Inspection and Maintenance

4.1 BMP INSPECTION AND MAINTENANCE

The 2022 CGP requires routine weekly inspections of BMPs, along with inspections before, during, and after qualifying precipitation events (QPE). A QPE is any weather pattern that is forecasted to have a 50 percent chance or greater probability of precipitation **and** a quantitative precipitation forecast of 0.5 inches or more within a 24-hour period. A BMP inspection checklist must be filled out for inspections and maintained on-site with the SWPPP. The inspection checklist includes the necessary information covered in Section 7.6. A blank inspection checklist can be found in Appendix I. Completed checklists shall be kept in CSMP Attachment 2 "Monitoring Records.

Maintenance, repair, or design and implementation of new BMPs alternatives will begin within 72 hours of the identification of failures or other shortcomings. Corrections will be completed as soon as possible, prior to the next forecasted precipitation event (2022 CGP Appendix D Section II.J).

The QSP will verify that all BMP maintenance and repairs were appropriately implemented during the next visual inspection following completion.

The QSP may delegate BMP maintenance and repair verification to an appropriately trained QSP Delegate.

Specific details for maintenance, inspection, and repair of Construction Site BMPs can be found in the BMP Factsheets in Appendix H.

Section 5 Training

Appendix L identifies the QSPs and QSP Delegates for the project. To promote stormwater management awareness specific for this project, periodic training of job-site personnel will be included as part of routine project meetings (e.g., daily/weekly tailgate safety meetings), or task specific training as needed. Refresher training will be provided as necessary.

The QSP will be responsible for providing this information at the meetings, and subsequently completing the Training Reporting Form shown in Appendix K, which identify the site-specific stormwater topics covered as well as the names of site personnel who attended the meeting.

The QSP may delegate specific tasks to trained QSP Delegates who have received the following training based on the guidelines developed by the Construction General Permit Training Team.

1. **Foundational training** for all QSP Delegate(s) regarding stormwater compliance roles and responsibilities, forecast information, and documentation and reporting procedures; and
2. **Site-specific training** regarding visual inspections, sampling procedures, and/or SWPPP and BMP implementation activities relevant to the responsibilities assigned to the QSP Delegate(s).

The delegate cannot perform the QSD and QSP inspections required in Section V.C.4 or Section V.D.2, respectively.

Documentation of training activities will be retained in Appendix K.

Section 6 Responsible Parties and Operators

6.1 RESPONSIBLE PARTIES

Duly Authorized Representatives (DARs) who are responsible for SWPPP implementation and have authority to sign permit-related documents are listed below. The DARs assigned to this project are:

Name	Title	Phone Number
Elizabeth Webb	Project manager	(808) 372-6030
Marc Mizrahi	Program Manager	(650) 347-1555

QSD(s) identified for the project are identified in Appendix L. The QSD will have primary responsibility for assessing how construction activities will affect sediment transport, erosion, and other discharges of pollutants in stormwater runoff throughout the project. The QSD is required to revise the SWPPP to address potential problems identified by visual inspections, sampling data, comments from a QSP, or their own site observations. The QSD is required to perform the following on-site visual inspections:

- Within 30 days of construction activities commencing on site;
- Within 30 days when a new QSD is assigned to the project;
- Twice annually, once August through October and once January through March;
- Within 14 calendar days after a numeric action level exceedance; and
- Within the time period requested in writing from Regional Water Board staff.

QSPs and QSP Delegates identified for the project are identified in Appendix L. The QSP will have primary responsibility and significant authority for the implementation, maintenance, and inspection/monitoring of SWPPP requirements. The QSP will be available at all times throughout the duration of the project.

Duties of the QSP include but are not limited to:

- Implementing all elements of the 2022 CGP and SWPPP, including, but not limited to:
  - Performing the following on-site visual inspections:
    - One inspection per calendar month; other weekly inspections in the month can be delegated to a trained QSP Delegate under the specific direction of the QSP.
    - Within 72 hours prior to a forecasted qualifying precipitation event, to inspect any areas of concern and to verify the status of any deficient BMPs, or other identified issues at the site. If extended forecast precipitation data (greater than 72 hours) is available from the *National Weather Service*, then the Pre-Precipitation Event inspection may be done up to 120 hours in advance.
    - Within 14 days after NAL exceedance, the QSP shall visually inspect the drainage area for exceedance and document any areas of concern.

- Prior to the submittal for the NOT or COI (for acreage changes) for all or part of the site.

  - Ensuring that all BMPs are implemented, inspected, and properly maintained.
  - Ensure that the SMARTS generated WDID Number Notification form is posted on-site, in a location viewable by the public or readily available upon request, and the dates are correct and match the dates listed in SMARTS.

- Implementing non-stormwater management, and materials and waste management activities such as: monitoring discharges; general Site clean-up; vehicle and equipment cleaning, fueling and maintenance; spill control; ensuring that no materials other than stormwater are discharged in quantities which will have an adverse effect on receiving waters or storm drain systems, etc…
- Ensuring elimination of unauthorized discharges.
- The QSPs shall be assigned authority by the LRP to mobilize crews in order to make immediate repairs to the control measures.
- Coordinate with the Contractor(s) to assure the necessary corrections/repairs are made immediately and that the project complies with the SWPPP, the 2022 CGP, and approved plans at all times.
- Notifying the LRP or Duly Authorized Representative immediately of off-site discharges or other non-compliance events.
- Providing foundation and site-specific training to QSP Delegates and overseeing QSP Delegate work. Tasks that may be delegated to appropriately trained QSP-delegates include:
  - Performing non-stormwater and stormwater visual observations and inspections;
  - Performing stormwater sampling and analysis, as required; and
  - Performing routine inspections and observations.

Table 6-1. QSP and QSP Delegate Authorized Inspections

	Weekly BMP and NSW	Pre-QPE	Daily-QPE Visual Inspections	Post-QPE Visual Inspections	Post NAL Exceedances	Monthly BMP and NSW	NOT
QSP	X	X	X	X	X	X	X
QSP Delegate	X		X	X			

6.2 CONTRACTOR LIST

Contractor Name:	
Contractor Company:	
Address	
Phone Number:	
Phone Number (24/7)	

Section 7 Construction Site Monitoring Program

7.1 Purpose

This Construction Site Monitoring Program was developed to address the following objectives:

1. To demonstrate that the site is in compliance with the Discharge Prohibitions [and Numeric Action Levels (NALs)];
2. To demonstrate that the site is in compliance with Total Maximum Daily Limits (TMDLs), NALs, and Numeric Effluent Limitations (NELs);
3. To determine whether non-visible pollutants discharged from the construction site are causing or contributing to exceedances of water quality objectives;
4. To determine whether immediate corrective actions, additional BMP implementation, or SWPPP revisions are necessary to reduce pollutants in stormwater discharges and authorized non-stormwater discharges;
5. To determine whether BMPs included in the SWPPP are effective in preventing or reducing pollutants in stormwater discharges and authorized non-stormwater discharges.

7.2 Applicability of Permit Requirements

This project has been determined to be a Risk Level 2 project. The 2022 CGP identifies the following types of monitoring as being applicable for a Risk Level 2 project.

Risk Level 2

- Visual inspections of BMPs;
- Visual monitoring of the site related to qualifying precipitation events;
- Visual monitoring of the site for non-stormwater discharges;
- Sampling and analysis of construction site runoff for pH and turbidity;
- Sampling and analysis of construction site runoff for non-visible pollutants [including TMDL pollutants] identified during the pollutant source assessments when applicable; and
- Sampling and analysis of construction site runoff as required by the Regional Water Board when applicable.

7.3. Weather and Rain Event Tracking

Visual monitoring and inspections requirements of the 2022 CGP are triggered by a Qualifying Precipitation Event. The 2022 CGP defines a Qualifying Precipitation Event as any weather pattern that is forecast to have a 50 percent or greater Probability of Precipitation (PoP) and a Quantitative Precipitation Forecast (QPF) of 0.5 inches or more within a 24-hour period. The event begins with the 24-hour period when 0.5 inches has been forecast and continues on subsequent 24-hour periods when 0.25 inches of precipitation or more is forecast.

7.3.1 Weather Tracking

The QSP should daily consult the National Oceanographic and Atmospheric Administration (NOAA) for the Forecast Weather Table Interface. These forecasts can be obtained at http://forecast.weather.gov. Weather reports should be printed and maintained with the SWPPP in Appendix J. Record the date and time the forecast was printed.

7.3.2 Rain Gauges

The QSP may install 1 rain gauge(s) on the project site. Locate the gauge in an open area away from obstructions such as trees or overhangs. Mount the gauge on a post at a height of 3 to 5 feet with the gauge extending several inches beyond the post. Make sure that the top of the gauge is level. Make sure the post is not in an area where rainwater can indirectly splash from sheds, equipment, trailers, etc.

The rain gauge(s) shall be read daily during normal site scheduled hours. The rain gauge should be read at approximately the same time every day and the date and time of each reading recorded. Log rain gauge readings in CSMP Attachment 1 "Weather Records". Follow the rain gauge instructions to obtain accurate measurements.

Once the rain gauge reading has been recorded, accumulated rain shall be emptied and the gauge reset.

7.4 Monitoring Locations

Monitoring locations are shown on the Site Maps in Appendix B. Monitoring locations are described in Sections 7.6 and 7.7.

Whenever changes in the construction site might affect the appropriateness of sampling locations, the sampling locations shall be revised accordingly. All such revisions shall be implemented as soon as feasible and the SWPPP amended. Temporary changes that result in a one-time additional sampling location do not require a SWPPP amendment.

7.5 Safety and Monitoring Exemptions

This project is not required to collect samples or conduct visual observations (inspections) under the following conditions (see Section III.B of the 2022 CGP):

- During dangerous weather conditions such as electrical storms, flooding, and high winds above 40 miles per hour;
- Outside of scheduled site operating hours; or
- When the site is not accessible to personnel.

If monitoring (visual monitoring or sample collection) of the site is unsafe because of the dangerous conditions noted above, then the QSP shall document the conditions for why an exception to performing the monitoring was necessary. The exemption documentation shall be filed in CSMP Attachment 2 "Monitoring Records".

7.6 Visual Monitoring

Per Section III.B.2. of Attachment D in the 2022 CGP, "For inactive projects, dischargers may reduce the visual inspection frequency and suspend sampling per Section III.G of the 2022 CGP. Dischargers shall provide an explanation with supporting information for all missed visual inspections or sampling required by this Attachment, to be included in the Annual Report."

Visual monitoring includes observations and inspections. Inspections of BMPs are required to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Visual observations of the site are required to observe storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources.

Table 7.1 identifies the required frequency of visual observations and inspections. Inspections and observations will be conducted at the locations identified in Section 7.6.3.

Table 7-1 Summary of Visual Monitoring and Inspections

Type of Inspection	Frequency
Routine Inspections[1]	
BMP Inspections	Weekly[2]
Qualifying Precipitation Event Triggered Inspections	
Site Inspections Prior to a Qualifying Precipitation Event	Within 72 hours of a qualifying precipitation event or up to 120 hours prior if supported with forecast [2]
BMP Inspections During an Extended Qualifying Precipitation Event	Once every 24-hour period of a qualifying precipitation event[3]
Site Inspections Following a Qualifying Precipitation Event	Within 96 hours of a qualifying precipitation event[2]

[1] Inspections are required during scheduled site operating hours.

[2] Most BMPs must be inspected weekly; those identified below must be inspected more frequently.

[3] Inspections are required during scheduled site operating hours on days that the forecast predicts at least 0.25 inches of precipitation once the qualifying precipitation event commences.

7.6.1 Routine Observations and Inspections

Routine site inspections and visual monitoring are necessary to confirm that the project is in compliance with the requirements of the 2022 CGP.

7.6.1.1 Routine BMP Inspections

Inspections of BMPs are conducted to identify and record:

- BMPs that are properly installed;
- BMPs that need maintenance to operate effectively;
- BMPs that have failed; or
- BMPs that could fail to operate as intended.

7.6.1.2 Non-Stormwater Discharge Observations

Each drainage area will be inspected for the presence of or indications of prior unauthorized and authorized non-stormwater discharges. Inspections will record:

- Presence or evidence of any non-stormwater discharge (authorized or unauthorized);
- Identification and elimination of unauthorized non-stormwater discharges
- Pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.); and
- Source of discharge.

7.6.2 Rain-Event Triggered Observations and Inspections

Visual observations of the site and inspections of BMPs are required prior to a qualifying precipitation event; following a qualifying precipitation event, and every 24-hour period during a

qualifying precipitation event. Pre-Qualifying Precipitation Event inspections will be conducted after consulting NOAA and determining that a precipitation event with a 50 percent or greater PoP and a QPF of 0.5 inches or more precipitation within a 24-hour period has been predicted by the National Weather Service Forecast Office.

7.6.2.1 Visual Observations Prior to a Forecasted Qualifying Precipitation Event

Within 72 hours prior to a qualifying precipitation event or up to 120 hours prior if extended forecast precipitation data is available, a stormwater visual monitoring site inspection will include observations of the following locations:

- All stormwater drainage areas to identify leaks, spills, or uncontrolled pollutant sources and when necessary, implement appropriate corrective actions.
- All BMPs to identify whether they have been properly implemented per the SWPPP and implement appropriate corrective actions, as necessary.
- All stormwater storage and containment areas to detect leaks and check for available capacity to prevent overflow.

The QSP must conduct the inspection prior to the qualifying precipitation event. Consistent with the requirements for a qualifying precipitation event, pre-rain BMP inspections and visual monitoring will be triggered by a NOAA forecast that indicates a 50 percent or greater probability of 0.5 inches of precipitation or more in a 24-hour period in the project area.

7.6.2.2 BMP Inspections During a Qualifying Precipitation Event

During an extended qualifying precipitation event BMP inspections will be conducted at least once every 24 hours. Qualifying precipitation events are extended for each subsequent 24-hour period forecast to have at least 0.25 inches of precipitation. The BMP inspections are to identify and record:

- If BMPs were adequately designed, implemented and effective.
- BMPs that require repair or replacement due to damage.
- Additional BMPs that need to be implemented and revised into the SWPPP accordingly.

If the construction site is not accessible during the rain event, visual inspections shall be performed at all relevant outfalls, discharge points, downstream locations. The inspections should record any projected maintenance activities.

7.6.2.3 Visual Observations Following a Qualifying Precipitation Event

Within 96 hours following the end of a qualifying precipitation event a stormwater visual monitoring site inspection is required to observe:

- If BMPs were adequately designed, implemented and effective.
- BMPs that require repair or replacement due to damage.
- Additional BMPs that need to be implemented and revised into the SWPPP accordingly.

7.6.3 Visual Monitoring Procedures

Visual monitoring shall be conducted by the QSP or QSP Delegates.

The name(s) and contact number(s) of the QSPs or QSP Delegates assigned to conduct visual observations are listed below and their training qualifications are provided in Appendix K.

Assigned inspector: TBD Contact phone: TBD

Stormwater observations shall be documented on the *Visual Inspection Field Log Sheet* (see CSMP Attachment 3 "Example Forms"). BMP inspections shall be documented on the site-specific BMP inspection checklist. Any photographs used to document observations will be referenced on stormwater site inspection report and maintained with the Monitoring Records in Attachment 2.

The completed reports will be kept in CSMP Attachment 2 "Monitoring Records".

7.6.4 Visual Monitoring Follow-Up and Reporting

Maintenance, repairs, and correction of deficiencies, including design changes to BMPs, identified by the observations or inspections, including required repairs or maintenance of BMPs, shall be initiated within 72 hours of identification and completed as soon as possible, prior to the next forecasted precipitation event.

When design changes to BMPs are required, the SWPPP shall be amended to reflect the changes

Deficiencies identified in site inspection reports and correction of deficiencies will be tracked on the *Inspection Field Log Sheet* or *BMP Inspection Report* and shall be submitted to the QSP and shall be kept in CSMP Attachment 2 "Monitoring Records". QSP Delegates shall report issues identified during inspections that require corrective action to the QSP within 24 hours of the observation.

The QSP shall, within 2 days of the inspection, submit copies of the completed *Inspection Field Log Sheet* or *BMP Inspection Report* with the corrective actions.

Results of visual monitoring must be summarized and reported in the Annual Report.

7.6.5 Visual Monitoring Locations

The inspections and observations identified in Sections 7.6.1 and 7.6.2 will be conducted at the locations identified in this section.

BMP locations are shown on the Site Maps in SWPPP Appendix A.

7.7 Water Quality Sampling and Analysis

7.7.1 Sampling and Analysis Plan for Non-Visible Pollutants in Stormwater Runoff Discharges

This Sampling and Analysis Plan for Non-Visible Pollutants describes the sampling and analysis strategy and schedule for monitoring non-visible pollutants in stormwater runoff discharges from the project site.

Sampling for non-visible pollutants will be conducted when (1) a breach, leakage, malfunction, or spill is observed; and (2) the leak or spill has not been cleaned up prior to the rain event; and (3) there is the potential for discharge of non-visible pollutants to surface waters or drainage system.

The following construction materials, wastes, or activities, as identified in Section 2.6, are potential sources of non-visible pollutants to stormwater discharges from the project.

- Demolition and excavation
- Chemical waste from stationary toilets

- Vehicle and equipment fueling and maintenance

The following existing site features are potential sources of non-visible pollutants to stormwater discharges from the project. Locations of existing site features contaminated with non-visible pollutants are shown on the Site Maps in Appendix B.

- All buildings and structures to be demolished.

The following soil amendments have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil and will be used on the project site.

- None

The project has the potential to receive stormwater run-on from the following locations with the potential to contribute non-visible pollutants to stormwater discharges from the project.

- None

7.7.1.1 Sampling Schedule

Samples for the potential non-visible pollutant(s) and a sufficiently large unaffected background sample shall be collected during the first two hours of discharge from rain events that result in a sufficient discharge for sample collection. Samples shall be collected during the site's scheduled hours and shall be collected regardless of the time of year and phase of the construction.

Collection of discharge samples for non-visible pollutant monitoring will be triggered when any of the following conditions are observed during site inspections conducted prior to or during a rain event.

- Materials or wastes containing potential non-visible pollutants are not stored under watertight conditions. Watertight conditions are defined as (1) storage in a watertight container, (2) storage under a watertight roof or within a building, or (3) protected by temporary cover and containment that prevents stormwater contact and runoff from the storage area.
- Materials or wastes containing potential non-visible pollutants are stored under watertight conditions, but (1) a breach, malfunction, leakage, or spill is observed, (2) the leak or spill is not cleaned up prior to the rain event, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- A construction activity, including but not limited to those in Section 2.6, with the potential to contribute non-visible pollutants (1) was occurring during or within 24 hours prior to the rain event, (2) BMPs were observed to be breached, malfunctioning, or improperly implemented, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- Soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied, and there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- Stormwater runoff from an area contaminated by historical usage of the site has been observed to combine with stormwater runoff from the site, and there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.

7.7.1.2 Sampling Locations

Sampling locations are based on proximity to planned non-visible pollutant storage, occurrence or use; accessibility for sampling, and personnel safety. Planned non-visible pollutant sampling locations are shown on the Site Maps in Appendix B.

If a stormwater visual monitoring site inspection conducted prior to or during a storm event identifies the presence of a material storage, waste storage, or operations area with spills or the potential for the discharge of non-visible pollutants to surface waters or a storm drain system that is at a location not listed above and has not been identified on the Site Maps, sampling locations will be selected by the QSP using the same rationale as that used to identify planned locations. Non-visible pollutant sampling locations shall be identified by the QSP on the pre-rain event inspection form prior to a forecasted qualifying rain event.

7.7.1.3 Monitoring Preparation

Non-visible pollutant samples will be collected by:

QSP	☒ Yes	☐ No
QSP Delegate	☐ Yes	☐ No

An adequate stock of monitoring supplies and equipment for monitoring non-visible pollutants will be available on the project site prior to a sampling event. Monitoring supplies and equipment will be stored in a cool temperature environment that will not come into contact with rain or direct sunlight. Sampling personnel will be available to collect samples in accordance with the sampling schedule. Supplies maintained at the project site will include, but are not limited to, clean powder-free nitrile gloves, sample collection equipment, coolers, appropriate number and volume of sample bottles, identification labels, re-sealable storage bags, paper towels, personal rain gear, ice, and *Effluent Sampling Field Log Sheets* and Chain of Custody (CoC) forms, which are provided in CSMP Attachment 3 “Example Forms”.

7.7.1.4 Analytical Constituents

Table 7.2 lists the specific sources and types of potential non-visible pollutants based on the project pollutant source assessment and the water quality indicator constituent(s) for that pollutant. Table 7.2 provides the specific analytical methods and reporting limits for the potential non-visible pollutants. Analytical methods were selected in compliance with U.S. EPA sufficiently sensitive method requirements in 40 Code of Federal Regulations Part 136, as evidenced by the method detection limit and minimum level.

Table 7.2 Potential Non-Visible Pollutants and Water Quality Indicator Constituents

Pollutant Source	Pollutant	Water Quality Indicator Constituent
Asphalt Work	Asphalt Products	VOCs
Concrete Curing Compounds	VOCs, SVOCs, PH	VOCs
Landscaping	Pesticides/Herbicides Fertilizers Aluminum sulfate Vegetation stockpiles	Product dependent TKN, NO3, NH3, Phosphate Al, TDS, Sulfate BOD
Painting/Striping	Resins Thinners Paint strippers Lacquers, varnishes, enamels Sealants Adhesives	COD, SVOCs, metals COD, VOCs SVOCs, VOCs, Metals COD, SVOCs, VOCs COD SVOCs, COD
Sanitary Waste	Portable Toilets	BOD, Total/Fecal coliform
Vehicle Fluids	Oil, grease, coolant	Refer to Laboratory
Batteries	Sulfuric Acid, PH, Lead	Sulfate, Lead
Chemicals of Concern (COCs)	Manganese, Arsenic, Benzo(a)pyrene, Benzo(b)fluoranthene, lead	TBD
Radionuclides of Concern (ROCs)[1]	Cesium-137, Cobalt-60, Plutonium-239, Radium-226, Strontium-90, Thorium-232, Hydrogen-3, and Uranium-235	TBD

1. At this time, the scope ofwork for the project does not include sampling and analysis for radionuclides

7.7.1.5 Sample Collection

Samples of discharge shall be collected at the designated non-visible pollutant sampling locations shown on the Site Maps in Appendix B or in the locations determined by observed breaches, malfunctions, leakages, spills, operational areas, soil amendment application areas, and historical site usage areas that triggered the sampling event.

Grab samples shall be collected and preserved in accordance with the methods identified in the Table, "Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants" provided in Section 7.7.1.6. Only the QSP, or personnel trained in water quality sampling under the direction of the QSP shall collect samples.

Sample collection and handling requirements are described in Section 7.7.7.

7.7.1.6 Sample Analysis

Samples shall be analyzed using the analytical methods identified in Table 7.3. Samples

will be analyzed by:

Laboratory Name: Eurofins Built Environment Testing EMLab P&K
Address: 111 Anza Blvd, Suite 122
City, State Zip: Burlingame, CA 94010
Telephone Number: (833)465-5857
Point of Contact: Angela Hetherington
ELAP Certification No.: 10285

Samples will be delivered to the laboratory by:

Driven by QSP/QSP Delegate/Contractor	☒	Yes	☐	No
Picked up by Laboratory Courier	☐	Yes	☐	No
Shipped	☐	Yes	☐	No

Table 7.3 Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants

Constituent	Analytical Method	Minimum Sample Volume	Sample Containers	Sample Preservation	Reporting Limit	Maximum Holding Time
Methyl Methacrylate (MMA)	EPA 625 2 L	1000 ml	glass	Store at 4° C	10 ug/L	14 days
Chlorine	SM 4500	500 mL	Polypropylene	Do not expose to light	0.1 mg/L	Immediate
CODs	EPA410.4	20 ml	250 ml glass	Store at 4° C, H2So4	10.0 mg/L	28 days
Nitrate	EPA300.0	500 mL	PE or glass	Store at 4° C	0.1 mg/L	14 days
Nitrogen	EPA351.3	100 mL	Glass	Store at 4° C	0.1 mg/L	28 days
VOCs	EPA 8260B	3 x 40 ml	Amber Glass	Store at 4° C, HCL to pH<2	1 ug/L	14 days
TOCs	EPA415.1 (TOC)	150 ml	250 ml glass	Store at 4° C, H2So4	1 mg/L	28 days
Herbicide	EPA 8151A	1000 ml	1 L amber glass	Store at 4° C	1 ug/L	7 days
Phenols	EPA 420.1 (Phenol)	500 ml	500 ml amber glass	Store at 4° C, H2So4	0.1 mg/L	28 days
Sulfate	EPA300.0	250 ml	Polypropylene	Store at 4° C	0.1 mg/L	28 days
Metals	EPA200.8	250 ml	Polypropylene	Store at 4° C, HNO3 to pH<2	0.2 mg/L	6 months
Benzo(a)pyrene	EPA **8270D** (SVOCs)	1 L	Amber Glass	Cool ≤6°C; dechlorinate if needed	0.05–0.2 µg/L	Extract within 7–14 days; analyze within 40 days
Benzo(b)fluoranthene	EPA **8270D**	1 L	Amber Glass	Cool ≤6°C; dechlorinate if needed	0.05–0.2 µg/L	Extract within 7–14 days; analyze within 40 days
Notes:						

7.7.1.7 Data Evaluation and Reporting

The QSP shall complete an evaluation of the water quality sample analytical results based on a comparison of the results to the unaffected sample [and to the TMDLs NALs or NELs].

Runoff/downgradient results shall be compared with the associated upgradient/unaffected results and any associated run-on results. Should the runoff/downgradient sample show an increased level of the tested analyte relative to the unaffected background sample, which cannot be explained by run-on results, the BMPs, site conditions, and surrounding influences shall be assessed to determine the probable cause for the increase.

As determined by the site and data evaluation, appropriate BMPs shall be repaired or modified to mitigate discharges of non-visible pollutant concentrations. Any revisions to the BMPs shall be recorded as an amendment to the SWPPP.

Analytical results of non-visible pollutant monitoring shall be submitted to SMARTS within 30 days of obtaining the analytical results.

The 2022 CGP prohibits storm water discharges that contain hazardous substances equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4. The results of any non-stormwater discharge results that indicate the presence of a hazardous substance in excess of established reportable quantities shall be immediately reported to the Regional Water Board and other agencies as required by 40 C.F.R. §§ 117.3 and 302.4.

The QSP shall compare the runoff sample results to the applicable TMDL [NALs and NELs] to determine whether the TMDL [NALs and NELs] have been exceeded, see Table 7.3.

Table 7.3 TMDL NAL and NEL Exceedances

Standard	Exceedance Evaluation
TMDL NAL	An exceedance occurs on the second, and each subsequent, analytical result for samples taken from any and all discharge location(s) within the same drainage area, during the same reporting year and taken in accordance with Attachment D Section III.D.3, that is above the concentration set forth in an applicable NAL.
TMDL NEL	An exceedance occurs on the second, and each subsequent, analytical result for samples taken from any and all discharge location(s) within the same drainage area, during the same reporting year and taken in accordance with Attachment D Section III.D.3, that is above the concentration set forth in an applicable NEL.

In the event that the TMDL NAL or NEL is exceeded, the QSP shall immediately notify Owners Representative and investigate the cause of the exceedance and identify corrective actions.

The LRP or DAR shall electronically report all analytical results to the State Water Board by the through SMARTS within 30 days of receiving the results. Exceedances of TMDL [NALs and NELs] shall be electronically reported to the State Water Board by the LRP or DAR through SMARTS within 10 days of receiving the results.

If requested by the Regional Water Board in writing, a TMDL NAL Exceedance report will be submitted within 30 days of the request. The TMDL NAL Exceedance Report must contain the following information:

- Analytical method(s), method reporting unit(s), and Method Detection Limit(s) of each parameter;
- Date, place, time of sampling, visual observation, and/or measurements, including precipitation; and
- Description of the current BMPs associated with the sample that exceeded the TMDL NAL, a description of each corrective action taken including photographs, and date of implementation.

In the event of a TMDL NEL exceedance, by the end of each reporting year, project shall implement the following water quality based corrective actions:

- Conducting a site assessment to identify pollutant source(s) within the site that are associated with construction activity and whether the BMPs described in the SWPPP have been properly implemented;
- Evaluating the SWPPP and its implementation to determine whether additional BMPs or SWPPP implementation measures are necessary to reduce or prevent pollutants in all regulated discharges to comply applicable NELs, and
- Certifying and submitting through SMARTS a report of the above site assessment and SWPPP evaluation that:
    - Additional BMPs or SWPPP implementation measures have been identified and included in the SWPPP, or
    - No additional BMPs or SWPPP implementation measures are required to reduce or prevent pollutants in all regulated discharges to comply with applicable NELs.

7.7.2 Sampling and Analysis Plan for pH and Turbidity in Stormwater Runoff Discharges

Sampling and analysis of runoff for pH and turbidity is required for this project. This Sampling and Analysis Plan describes the strategy for monitoring turbidity and pH levels of stormwater runoff discharges from the project site and run on that may contribute to an exceedance of a Numeric Action Level (NAL).

Samples for pH and turbidity will be collected at all discharge points where stormwater is discharged off-site.

7.7.2.1 Sampling Schedule

Stormwater runoff samples shall be collected for pH and turbidity from each day of a qualifying precipitation event that results in a discharge from the project site. One sample from each discharge location will be collected each 24 hour period of active discharge during a qualifying precipitation event. Samples should be representative of the discharge flow and characteristics.

Run-on samples shall be collected whenever the QSP identifies that run-on has the potential to contribute to an exceedance of a NAL.

7.7.2.2 Sampling Locations

Sampling locations are based on the site runoff discharge locations and locations where run-on enters the site, accessibility for sampling, and personnel safety. Planned pH and turbidity sampling locations will be determined by the QSP.

The project does not receive run-on with the potential to exceed NALs or Receiving Water Monitoring Triggers.

7.7.2.3 Monitoring Preparation

Turbidity and pH samples will be collected and analyzed by:

QSP ☒ Yes ☐ No

QSP Delegate ☐ Yes ☐ No

An adequate stock of monitoring supplies and equipment for monitoring turbidity will be available on the project site prior to a sampling event. Monitoring supplies and equipment will be stored in a cool temperature environment that will not come into contact with rain or direct sunlight. The QSP or QSP Delegates will be available to collect samples in accordance with the sampling schedule. Supplies maintained at the project site will include, but are not limited to, field meters, extra batteries, clean powder-free nitrile gloves, sample collection equipment, appropriate sample containers, paper towels, personal rain gear, and *Effluent Sampling Field Log Sheets* and CoC forms.

The QSP or QSP Delegates will obtain and maintain the field-testing instruments, as identified in Section 7.7.2.6, for analyzing samples in the field.

7.7.2.4 Field Parameters

Samples shall be analyzed for the constituents indicated in Table 7.4.

Table 7.4 Sample Collection and Analysis for Monitoring Turbidity and pH

Parameter	Test Method	Minimum Sample Volume [1]	Sample Collection Container Type	Detection Limit (minimum)
Turbidity	Field meter/probe with calibrated portable instrument	500 mL	Polypropylene or glass (Do not collect in meter sample cells)	1 NTU
pH	Field meter/probe with calibrated portable instrument or calibrated pH test kit	100 mL	Polypropylene	0.2 pH units

Notes: [1] Minimum sample volume recommended. Specific volume requirements will vary by instrument; check instrument manufacturer instructions.
L – Liter
mL – Milliliter
NTU – Nephelometric Turbidity Unit

7.7.2.5 Sample Collection

Samples of discharge shall be collected at the designated runoff and run-on sampling locations. Run-on samples shall be collected within close proximity of the point of run-on to the project.

Sample collection and handling requirements are described in Section 7.7.7.

7.7.2.6 Field Measurements

The collection and analysis of samples for field analysis, collection, analysis and the calibration of equipment shall be in accordance with the field instrument manufacturer's specifications.

Immediately following collection, samples for field analysis shall be tested in accordance with the field instrument manufacturer's instructions and results recorded on the *Effluent Sampling Field Log Sheet*.

The field instrument(s) listed in Table 7.5 will be used to analyze the following constituents:

Table 7.5 Field Instruments

Field Instrument (Manufacturer and Model)	Constituent
TBD	pH
TBD	Turbidity

The manufacturers' instructions are included in CSMP Attachment 4. Field sampling staff shall review the instructions prior to each sampling event and follow the instructions in completing measurement of the samples.

- The instrument(s) shall be maintained in accordance with manufacturer's instructions.
- The instrument(s) shall be calibrated before each sampling and analysis event.
- Maintenance and calibration records shall be maintained with the SWPPP.

The QSP may authorize alternate equipment provided that the equipment meets the 2022 CGP's requirements and the manufacturers' instructions for calibration and use are added to CSMP Attachment 4.

7.7.2.7 Data Evaluation and Reporting

The LRP or DAR shall electronically report all stormwater pH and turbidity results to the State Water Board by the through SMARTS within 30 days of receiving the results. Exceedances of NALs shall be electronically reported to the State Water Board by the LRP or DAR through SMARTS within 10 days of receiving the results.

Numeric Action Levels

Compliance with the NALs for pH and turbidity is based on a single sample evaluation. A NAL exceedance occurs when any sample exceeds the turbidity NAL or is outside of the pH range shown in Table 7.6.

Table 7.6 Numeric Action Levels

Parameter	Unit	NAL
pH	pH units	Lower NAL < 6.5 Upper NAL > 8.5
Turbidity	NTU	>250

Exceedances of NALs shall be electronically reported to the State Water Board by the LRP or DAR through the SMARTS within 10 days of the conclusion of the storm event.

If requested by the Regional Water Board in writing, a NAL Exceedance report will be submitted within 30 days of the request. The NAL Exceedance Report must contain the following information:

- Analytical method(s), method reporting unit(s), and Method Detection Limit(s) of each parameter;
- Date, place, time of sampling, visual observation, and/or measurements, including precipitation; and

An assessment of the existing BMPs associated with the sample that exceeded the NAL, a description of each corrective action taken including photographs, and date of implementation

7.7.3 Sampling and Analysis Plan for pH and Turbidity in Receiving Water

This project is not subject to Receiving Water Monitoring. Water monitoring is not required.

7.7.4 Sampling and Analysis Plan for Dewatering Discharges

☒ No dewatering activities are planned for this project.

7.7.5 Sampling and Analysis Plan for Demolition Runoff

Localized BMPs shall be installed around the perimeter of each demolition area to prevent runoff from each individual demolition area. This shall be accomplished by installing hay bale barriers together with fiber rolls at the inboard ground level of the installed BMP. During QPEs, sampling and analysis of stormwater runoff shall be performed to determine whether TMDLs, NELs, and NALs have been exceeded. In the event that exceedance levels are surpassed, further sampling and analysis shall be performed based upon the potential contaminants detailed in Section 2.3 of the ECC work plan and the *Pre-Demolition Hazardous Materials Survey* (Terracon, 2024).

Water used for dust control during demolition activities will be applied in an appropriate manner such that the water is expected to be absorbed within the demolition debris being generated. Residual dust control water will be contained within the limits of the demolition work areas as stated in the above paragraph.

7.7.6 Sampling and Analysis Plan for Other Pollutants Required by the Regional Water Board

Additional chemicals of concern (COCs) and radionuclides of concern (ROCs) have been identified and included in Table 7.2.

7.7.7 Training of Sampling Personnel

QSP Delegates assigned to conduct sampling shall be trained by the QSP to collect, maintain, and ship samples in accordance with the 2022 CGP Sample Collection and Handling Instructions and supplemental information as needed. Training records of QSP Delegates assigned to sample are provided in Appendix K.

The stormwater sampler(s) and alternate(s) have received the following stormwater sampling training:

The QSP and QSP Delegates have received the following stormwater sampling training:

Name	Training

Name	Training

The QSP and QSP Delegates have the following stormwater sampling experience:

Name	Experience

7.7.8 Sample Collection and Handling

7.7.8.1 Sample Collection

Samples shall be collected at the designated sampling locations shown on the Site Maps and listed in the preceding sections. Samples shall be collected, maintained and shipped in accordance with the 2022 CGP Sample Collection and Handling Instructions.

Grab samples shall be collected and preserved in accordance with the methods identified in preceding sections.

To maintain sample integrity and prevent cross-contamination, sample collection personnel shall follow the protocols below.

- Collect samples (for laboratory analysis) in analytical laboratory-provided or specified sample containers;
  - Use of any other type of containers could cause sample contamination and may result in NAL or NEL exceedances.
- Wear clean, powder-free nitrile gloves when collecting samples;
- Change gloves whenever something not known to be clean has been touched;
- Change gloves between sampling locations;
- Decontaminate all equipment (e.g., bucket, tubing) prior to sample collection;
  - using a trisodium phosphate water wash, distilled water rinse, and final rinse with distilled water..
  - Dispose of wash and rinse water appropriately (i.e., do not discharge to storm drain or receiving water).
  - Do not decontaminate laboratory provided sample containers;
- Do not smoke during sampling events;
- Never sample near a running vehicle;
- Do not park vehicles in the immediate sample collection area (even non-running vehicles);
- Do not eat or drink during sample collection; and
- Do not breathe, sneeze, or cough in the direction of an open sample container.

The most important aspect of grab sampling is to collect a sample that represents the entire runoff stream. Typically, samples are collected by dipping the collection container in the runoff flow paths and streams as noted below.

i. For small streams and flow paths, simply dip the bottle facing upstream until full.
ii. For larger stream that can be safely accessed, collect a sample in the middle of the flow stream by directly dipping the mouth of the bottle. Once again making sure that the

opening of the bottle is facing upstream as to avoid any contamination by the sampler.

iii. For larger streams that cannot be safely waded, pole-samplers may be needed to safely access the representative flow.

iv. Avoid collecting samples from ponded, sluggish or stagnant water.

v. Avoid collecting samples directly downstream from a bridge as the samples can be affected by the bridge structure or runoff from the road surface.

Note, that depending upon the specific analytical test, some containers may contain preservatives. These containers should **never** be dipped into the stream but filled indirectly from the collection container.

7.7.8.2 Sample Handling

Turbidity and pH measurements must be conducted immediately. Do not store turbidity or pH samples for later measurement.

Samples for laboratory analysis must be handled as follows. Immediately following sample collection:

- Cap sample containers;
- Complete sample container labels;
- Place sealed containers in a re-sealable storage bag;
- Place sample containers into an ice-chilled cooler;
- Document sample information on the *Effluent Sampling Field Log Sheet*; and
- Complete the CoC.

All samples for laboratory analysis must be maintained between 0-6 degrees Celsius during delivery to the laboratory. Samples must be kept on ice, or refrigerated, from sample collection through delivery to the laboratory. Place samples to be shipped inside coolers with ice. Make sure the sample bottles are well packaged to prevent breakage and secure cooler lids with packaging tape.

Ship samples that will be laboratory analyzed to the analytical laboratory right away. Hold times are measured from the time the sample is collected to the time the sample is analyzed. The 2022 CGP requires that samples be received by the analytical laboratory within 48 hours of the physical sampling (unless required sooner by the analytical laboratory to meet all hold times).

Laboratory Name: Eurofins Built Environment Testing EMLab P&K
Address: 111 Anza Blvd, Suite 122
City, State Zip: Burlingame, CA 94010
Telephone Number: (833)465-5857
Point of Contact: Angela Hetherington
ELAP Certification No.: 102856

7.7.8.3 Sample Documentation Procedures

All original data documented on sample container identification labels, *Effluent Sampling Field Log Sheet*, and CoCs shall be recorded using waterproof ink. These shall be considered accountable documents. If an error is made on an accountable document, the individual shall make corrections by lining through the error and entering the correct information. The erroneous information shall not be obliterated. All corrections shall be initialed and dated.

Duplicate samples shall be identified consistent with the numbering system for other samples to prevent the laboratory from identifying duplicate samples. Duplicate samples shall be identified in the Effluent Sampling Field Log Sheet.

Sample documentation procedures include the following:

Sample Bottle Identification Labels: Sampling personnel shall attach an identification label to each sample bottle. Sample identification shall uniquely identify each sample location. (These location identifiers should be listed in the tables in the SWPPP.)

Field Log Sheets: Sampling personnel shall complete the *Effluent Sampling Field Log Sheet* and *Receiving Water Sampling Field Log Sheet* for each sampling event, as appropriate.

Chain of Custody: Sampling personnel shall complete the CoC for each sampling event for which samples are collected for laboratory analysis. The sampler will sign the CoC when the sample(s) is turned over to the testing laboratory or courier.

7.8 Active Treatment System Monitoring

An Active Treatment System (ATS) will be deployed on the site?

☐ Yes ☒ No

This project does not require a project specific Sampling and Analysis Plan for an ATS because deployment of an ATS is not planned.

7.9 Passive Treatment Monitoring

Will passive treatment technologies be deployed on the site?

☐ Yes ☒ No

This project does not require a project specific Sampling and Analysis Plan for passive treatment because deployment of passive treatment is not planned.

7.10 Watershed Monitoring Option

This project is not participating in a watershed monitoring option.

7.11 Quality Assurance and Quality Control

An effective Quality Assurance and Quality Control (QA/QC) plan shall be implemented as part of the CSMP to ensure that analytical data can be used with confidence. QA/QC procedures to be initiated include the following:

- Field logs;
- Clean sampling techniques;

- CoCs;
- QA/QC Samples; and
- Data verification.

Each of these procedures is discussed in more detail in the following sections.

7.11.1 Field Logs

The purpose of field logs is to record sampling information and field observations during monitoring that may explain any uncharacteristic analytical results. Sampling information to be included in the field log include the date and time of water quality sample collection, sampling personnel, sample container identification numbers, and types of samples that were collected. Field observations should be noted in the field log for any abnormalities at the sampling location (color, odor, BMPs, etc.). Field measurements for pH and turbidity should also be recorded in the field log. A Visual Inspection Field Log, an Effluent Sampling Field Log Sheet are included in CSMP Attachment 3 "Example Forms".

7.11.2 Clean Sampling Techniques

Clean sampling techniques involve the use of certified clean containers for sample collection and clean powder-free nitrile gloves during sample collection and handling. As discussed in Section 7.7.7, adoption of a clean sampling approach will minimize the chance of field contamination and questionable data results.

7.11.3 Chain of Custody

The sample CoC is an important documentation step that tracks samples from collection through analysis to ensure the validity of the sample. Sample CoC procedures include the following:

- Proper labeling of samples;
- Use of CoC forms for all samples; and
- Prompt sample delivery to the analytical laboratory.

Analytical laboratories usually provide CoC forms to be filled out for sample containers. An example CoC is included in CSMP Attachment 3 "Example Forms".

7.11.4 QA/QC Samples

QA/QC samples provide an indication of the accuracy and precision of the sample collection; sample handling; field measurements; and analytical laboratory methods. The following types of QA/QC will be conducted for this project:

☒ Field Duplicates at a frequency of 5 percent or 1 duplicate minimum per sampling event
(Required for all sampling plans with field measurements or laboratory analysis)

☐ Equipment Blanks at a frequency of frequency required by method
(Only needed if equipment used to collect samples could add the pollutants to sample)

☐ Field Blanks at a frequency of frequency required by method
(Only required if sampling method calls for field blanks)

☒ Travel Blanks at a frequency of frequency required by method
(Required for sampling plans that include VOC laboratory analysis)

7.11.4.1 Field Duplicates

Field duplicates provide verification of laboratory or field analysis and sample collection. Duplicate samples shall be collected, handled, and analyzed using the same protocols as primary

samples. The sample location where field duplicates are collected shall be randomly selected from the discharge locations. Duplicate samples shall be collected immediately after the primary sample has been collected. Duplicate samples must be collected in the same manner and as close in time as possible to the original sample. Duplicate samples shall not influence any evaluations or conclusion.

7.11.4.2 Equipment Blanks

Equipment blanks provide verification that equipment has not introduced a pollutant into the sample. Equipment blanks are typically collected when:

- New equipment is used;
- Equipment that has been cleaned after use at a contaminated site;
- Equipment that is not dedicated for surface water sampling is used; or
- Whenever a new lot of filters is used when sampling metals.

7.11.4.3 Field Blanks

Field blanks assess potential sample contamination levels that occur during field sampling activities. De-ioninzed water field blanks are taken to the field, transferred to the appropriate container, and treated the same as the corresponding sample type during the course of a sampling event.

7.11.4.4 Travel Blanks

Travel blanks assess the potential for cross-contamination of volatile constituents between sample containers during shipment from the field to the laboratory. De-ioninzed water blanks are taken along for the trip and held unopened in the same cooler with the VOC samples.

7.11.5 Data Verification

After results are received from the analytical laboratory, the QSP or QSP Delegates shall verify the data to ensure that it is complete, accurate, and the appropriate QA/QC requirements were met. Data must be verified as soon as the data reports are received. Data verification shall include:

- Check the CoC and laboratory reports.
  Make sure all requested analyses were performed and all samples are accounted for in the reports.
- Check laboratory reports to make sure hold times were met and that the reporting levels meet or are lower than the reporting levels agreed to in the contract.
- Check data for outlier values and follow up with the laboratory.
  Occasionally typographical errors, unit reporting errors, or incomplete results are reported and should be easily detected. These errors need to be identified, clarified, and corrected quickly by the laboratory. The QSP or QSP Delegates should especially note data that is an order of magnitude or more different than similar locations or is inconsistent with previous data from the same location.
- Check laboratory QA/QC results.
  EPA establishes QA/QC checks and acceptable criteria for laboratory analyses. These data are typically reported along with the sample results. The QSP or QSP Delegates shall evaluate the reported QA/QC data to check for contamination (method, field, and equipment blanks), precision (laboratory matrix spike duplicates), and accuracy (matrix spikes and laboratory control samples). When QA/QC checks are outside acceptable ranges, the laboratory must flag the data, and usually provides an explanation of the potential impact to the sample results.

- Check the data set for outlier values and, accordingly, confirm results and re-analyze samples where appropriate.
  Sample re-analysis should only be undertaken when it appears that some part of the QA/QC resulted in a value out of the accepted range. Sample results may not be discounted unless the analytical laboratory identifies the required QA/QC criteria were not met and confirms this in writing.

Field data including inspections and observations must be verified as soon as the field logs are received, typically at the end of the sampling event. Field data verification shall include:

- Check field logs to make sure all required measurements were completed and appropriately documented;
- Check reported values that appear out of the typical range or inconsistent; Follow-up immediately to identify potential reporting or equipment problems, if appropriate, recalibrate equipment after sampling;
- Verify equipment calibrations;
- Review observations noted on the field logs; and
- Review notations of any errors and actions taken to correct the equipment or recording errors.

7.12 Records Retention

All records of stormwater monitoring information and copies of reports (including Annual Reports) must be retained for a period of at least three years from date of submittal or longer if required by the Regional Water Board.

Results of visual monitoring, field measurements, and laboratory analyses must be kept in the SWPPP along with CoCs, and other documentation related to the monitoring.

Records are to be kept onsite while construction is ongoing. Records to be retained include:

- The date, place, and time of inspections, sampling, visual observations, and/or measurements, including precipitation;
- The individual(s) who performed the inspections, sampling, visual observation, and/or field measurements;
- The date and approximate time of field measurements and laboratory analyses;
- The individual(s) who performed the laboratory analyses;
- A summary of all analytical results, the method detection limits and reporting limits, and the analytical techniques or methods used;
- Rain gauge readings from site inspections;
- QA/QC records and results;
- Calibration records;
- Visual observation and sample collection exemption records;
- The records of any corrective actions and follow-up activities that resulted from analytical results, visual observations, or inspections.

Appendix A: Calculations

Sediment and Receiving Water Risk Assessment

R Factor = 2.0

Facility Information

Start Date 02/17/2026

End Date 08/18/2027

Latitude 37.43.31

Longitude 122.22.36

Calculation Result

Rainfall erosivity factor (R factor) 58.74

A rainfall erosivity factor of 5.0 or greater has been calculated for the site's period of construction.

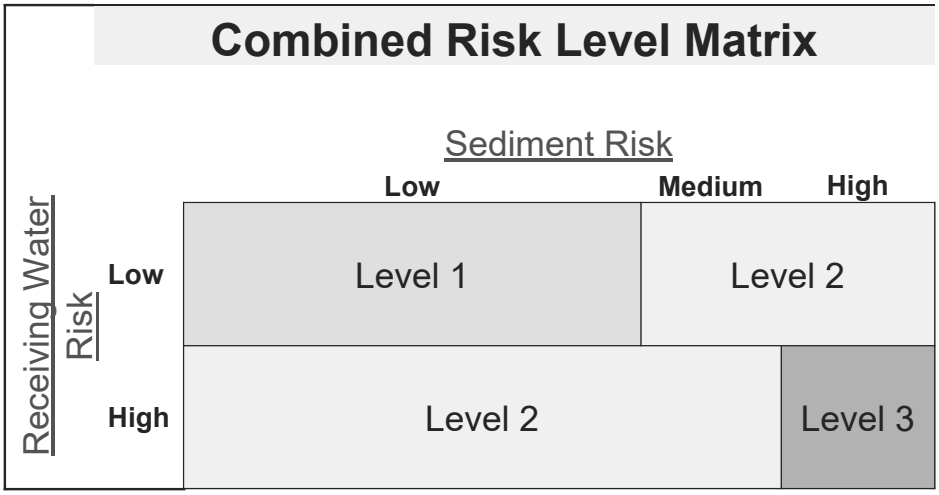
You do Not quality for a waiver from NPDES permitting requirements and must seek Construction General Permit Coverage. If you are located in an area where the EPA is the permitting authority, you must submit a Notice of Intent (NOI) through the NPDES eReporting Tool (NeT). Otherwise, you must seek coverage under your state's GCP.

K Factor = 0.20

LS Factor = 17.18

Sediment Risk Factor Worksheet	Entry
A) R Factor	
Analyses of data indicated that when factors other than rainfall are held constant, soil loss is directly proportional to a rainfall factor composed of total storm kinetic energy (E) times the maximum 30-min intensity (I30) (Wischmeier and Smith, 1958). The numerical value of R is the average annual sum of EI30 for storm events during a rainfall record of at least 22 years. "Isoerodent" maps were developed based on R values calculated for more than 1000 locations in the Western U.S. Refer to the link below to determine the R factor for the project site. http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm	
R Factor Value	2.0
B) K Factor (weighted average, by area, for all site soils)	
The soil-erodibility factor K represents: (1) susceptibility of soil or surface material to erosion, (2) transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition. Fine-textured soils that are high in clay have low K values (about 0.05 to 0.15) because the particles are resistant to detachment. Coarse-textured soils, such as sandy soils, also have low K values (about 0.05 to 0.2) because of high infiltration resulting in low runoff even though these particles are easily detached. Medium-textured soils, such as a silt loam, have moderate K values (about 0.25 to 0.45) because they are moderately susceptible to particle detachment and they produce runoff at moderate rates. Soils having a high silt content are especially susceptible to erosion and have high K values, which can exceed 0.45 and can be as large as 0.65. Silt-size particles are easily detached and tend to crust, producing high rates and large volumes of runoff. Use Site-specific data must be submitted. Site-specific K factor guidance	
K Factor Value	0.20
C) LS Factor (weighted average, by area, for all slopes)	
The effect of topography on erosion is accounted for by the LS factor, which combines the effects of a hillslope-length factor, L, and a hillslope-gradient factor, S. Generally speaking, as hillslope length and/or hillslope gradient increase, soil loss increases. As hillslope length increases, total soil loss and soil loss per unit area increase due to the progressive accumulation of runoff in the downslope direction. As the hillslope gradient increases, the velocity and erosivity of runoff increases. Use the LS table located in separate tab of this spreadsheet to determine LS factors. Estimate the weighted LS for the site prior to construction. LS Table	
LS Factor Value	17.18
Watershed Erosion Estimate (=RxKxLS) in tons/acre	7.56
Site Sediment Risk Factor Low Sediment Risk: < 15 tons/acre Medium Sediment Risk: >=15 and <75 tons/acre High Sediment Risk: >= 75 tons/acre	**Low**

Receiving Water (RW) Risk Factor Worksheet	Entry	Score
A. Watershed Characteristics	**yes/no**	
A.1. Does the disturbed area discharge (either directly or indirectly) to a **303(d)-listed waterbody impaired by sediment** (For help with impaired waterbodies please visit the link below) or has a **USEPA approved TMDL implementation plan for sediment**?: http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml **OR**	**Yes**	**High**
A.2. Does the disturbed area discharge to a waterbody with designated beneficial uses of SPAWN & COLD & MIGRATORY? (For help please review the appropriate Regional Board Basin Plan) http://www.waterboards.ca.gov/waterboards_map.shtml		



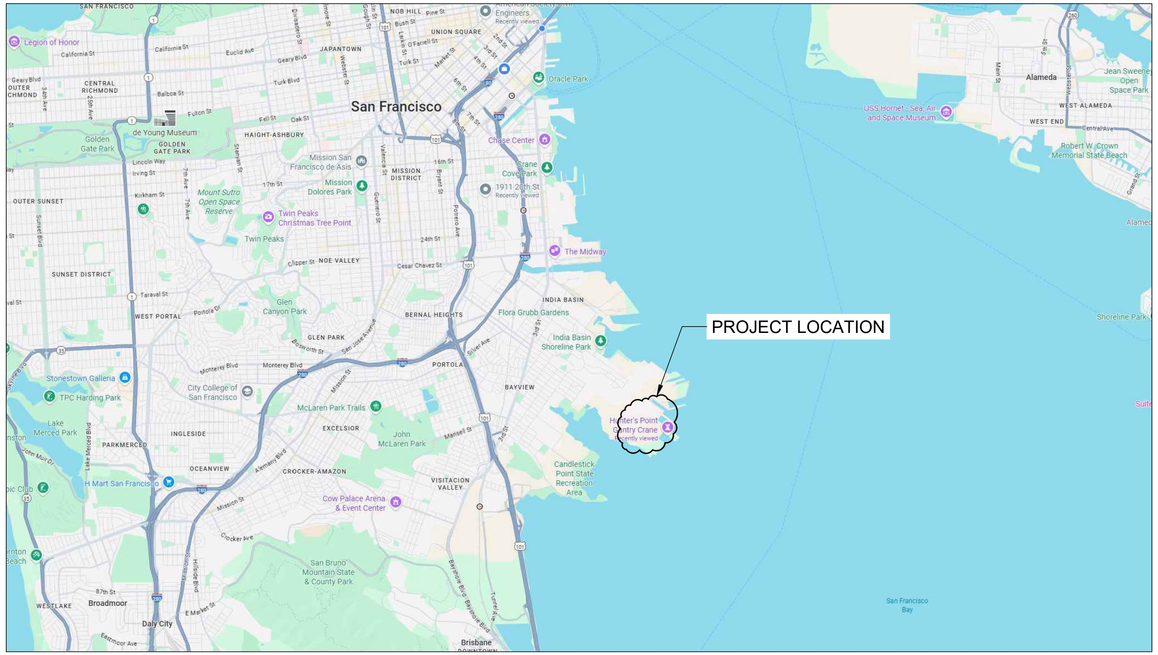
Project Sediment Risk: **Medium**

Project RW Risk: **Medium**

Project Combined Risk: **Level 2**

Appendix B: Site Maps

STORM WATER POLLUTION PREVENTION PLAN DRAWINGS
FOR
HUNTERS POINT NAVAL SHIPYARD - PARCEL G



WATER POLLUTION CONTROL NOTES:

1. THE FOLLOWING BMPS MUST BE IMPLEMENTED THROUGHOUT THE PROJECT:
   - EC-1 - SCHEDULING
   - EC-2 - PRESERVATION OF EXISTING VEGETATION
   - EC-7 - GEOTEXTILES AND MATS
   - WE-1 - WIND EROSION CONTROL
   - NS-1 - WATER CONSERVATION PRACTICES
   - NS-5 - SOLID WASTE MANAGEMENT
   - NS-6 - ILLICIT CONNECTION/DISCHARGE
   - NS-8 - VEHICLE AND EQUIPMENT CLEANING
   - NS-9/10 - VEHICLE AND EQUIPMENT MAINTENANCE/FUELING
   - NS-15 - STRUCTURE DEMOLITION/REMOVAL OVER OR ADJACENT TO WATER
   - SE-1 - SILT FENCE
   - SE-5/6 - FIBER ROLLS/GRAVEL BAG BERM
   - SE-7 - STREET SWEEPING
   - SE-8 - SANDBAG BARRIER
   - SE-9 - STRAW/HAY BALE BARRIER
   - SE-10 - STORM DRAIN INLET PROTECTION
   - TC-1 - ENTRANCE/EXIT STABILIZATION
   - TC-3 - ENTRANCE/OUTLET TIRE WASH
   - WM-1 - MATERIAL DELIVERY
   - WM-2 - MATERIAL USE
   - WM-3 - STOCKPILE MANAGEMENT
   - WM-4 - SPILL PREVENTION
   - WM-5 - SOLID WASTE MANAGEMENT
   - WM-6 - HAZARDOUS WASTE MANAGEMENT
   - WM-7 - CONTAMINATED SOIL MANAGEMENT
   - WM-8 - CONCRETE WASTE MANAGEMENT
   - WM-9 - SANITARY & SEPTIC WASTE MANAGEMENT
   - WM-10 - LIQUID WASTE MANAGEMENT
2. THE CONTRACTOR SHALL LOCATE AND PROTECT ANY STORM DRAIN INLETS WITHIN OR DOWNSTREAM OF WORK ACTIVITIES (SE-10)
3. FIELD CONDITIONS MAY REQUIRE MODIFICATIONS TO THESE DRAWINGS
4. BMPS MUST BE IMPLEMENTED EITHER PER CASQA BMP MANUAL OR THE MARCH 2024 CALTRANS CONSTRUCTION SITE BMP MANUAL
5. TENTATIVE POTENTIAL SAMPLING LOCATIONS SHALL BE AT EACH LOCALIZED DEMOLITION AREA. QSP SHALL MAKE FINAL DETERMINATION IN FIELD

BMP LEGEND:

- SE-5/6 LINEAR SEDIMENT CONTROL
- SE-7 STREET SWEEPING
- TC-1 CONSTRUCTION ENTRANCE/EXIT STABILIATION
- SE-10 STORM DRIAN INLET PROTECTION
- NS-9 & 10 — NS-9 VEHICLE AND EQUIPMENT FUELING; NS-10 VEHICLE AND EQUIPMENT MAINTENANCE
- WM-1 — WM-1 MATERIAL DELIVERY
- WM-3 STOCKPILE MANAGEMENT
- WM-4 SPILL PREVENTION AND CONTROL
- WM-5 — WM-5 SOLID WASTE MANAGEMENT
- SS — WM-9 SANITARY/SEPTIC WASTE MANAGEMENT

- FR FR FR FR FR — FIBER ROLL
- STRAW / HAY BALE BARRIER W/ FIBER ROLL AT INBOARD GROUND LEVEL
- TRUCK ROUTE
- LIMITS OF WORK / DISTURBANCE

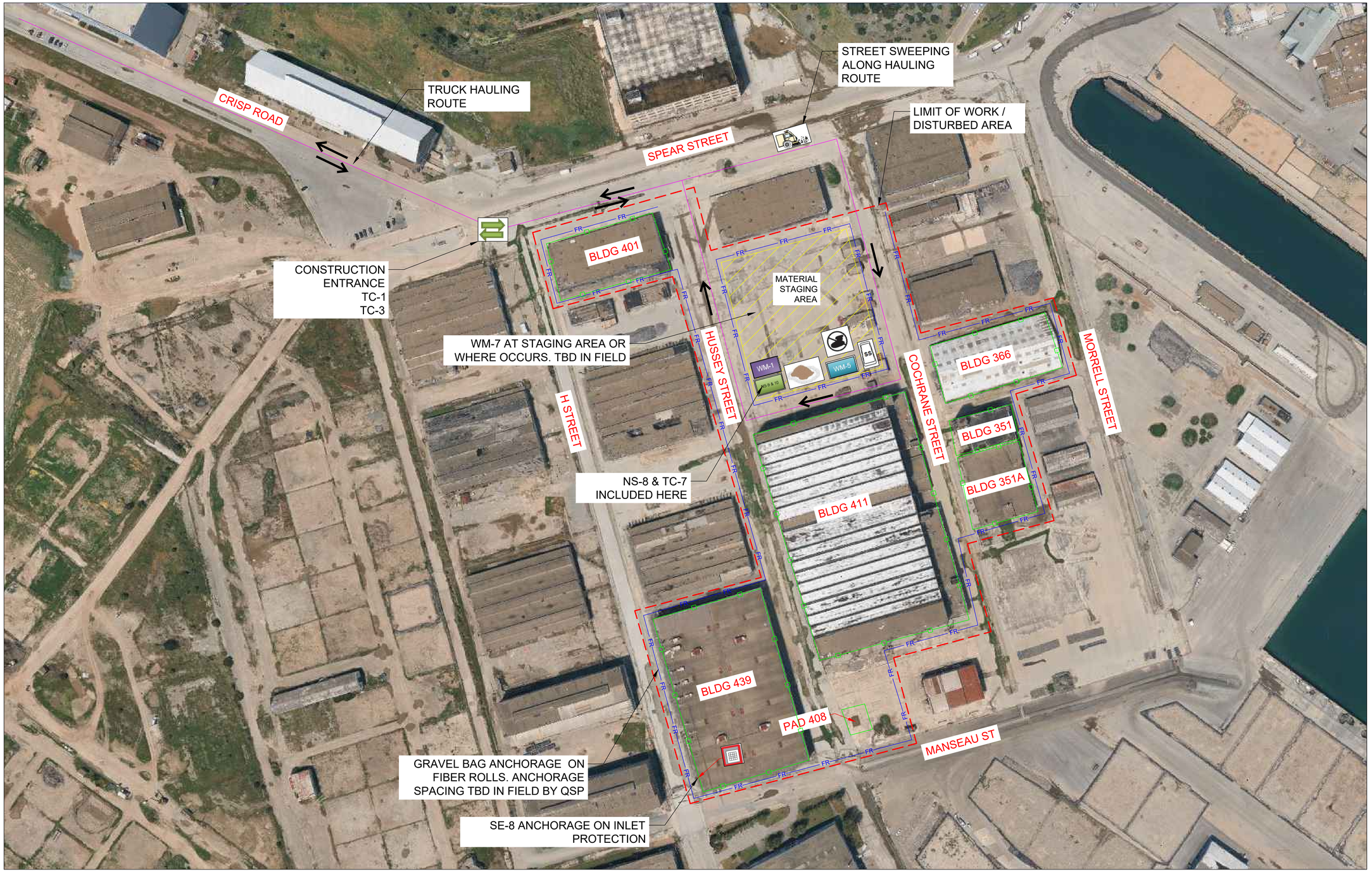
REGISTERED PROFESSIONAL ENGINEER — ALAN WILLIAMSON — No. 38905 Exp. 3/31/27 — CIVIL — STATE OF CALIFORNIA

PECI
Pacific Engineering & Construction, Inc.
470 3rd Street Suite 105
San Francisco,CA 94107
Phone/Fax: (415) 974-1853

STORM WATER POLLUTION PREVENTION DRAWINGS
PARCEL G BUILDING DEMOLITION - BRAC
HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO CA, 94124

COVER PAGE

REVISION: 1 BY: JSS
JOB NO:
DATE: DECEMBER 10, 2025
SCALE: AS SHOWN
DRAWN BY: JSS
SHEET NO:
SW-01



REGISTERED PROFESSIONAL ENGINEER
JEANNINE WILLIAMSON
No. 38905
Exp. 3/31/27
CIVIL
STATE OF CALIFORNIA

PECI
Pacific Engineering & Construction, Inc.
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San Francisco, CA 94107
Phone/Fax: (415) 974-1853

STORM WATER POLLUTION PREVENTION DRAWINGS
PARCEL G BUILDING DEMOLITION - BRAC
HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO CA, 94124

SWPPP SITE PLAN

REVISION: 1 BY: JSS
JOB NO:
DATE: DECEMBER 10, 2025
SCALE: NOT TO SCALE
DRAWN BY: JSS
SHEET NO:
SW-02

Appendix C: Permit Registration Documents

Appendix D: SWPPP Amendment Certifications

SWPPP Amendment No. _____

Project Name: _____

Project Number: _____

Qualified SWPPP Developer's Certification of the Stormwater Pollution Prevention Plan Amendment

"This Stormwater Pollution Prevention Plan and its appendices were prepared under my direction to meet the requirements of the 2022 CGP (SWRCB Order No. 2022-0057-DWQ). I certify that I am a Qualified SWPPP Developer in good standing as of the date signed below."

QSD's Signature	Date
QSD Name	QSD Certificate Number
Title and Affiliation	Telephone
Address	Email

Appendix E: Submitted Changes to PRDs

Log of Updated PRDs

The 2022 CGP allows for the reduction or increase of the total acreage when a portion of the project is complete and/or conditions for termination of coverage have been met; when ownership of a portion of the project is purchased by a different entity; or when new acreage is added to the project.

A Change of Information (COI) shall be filed electronically within the timeframe shown in the table below. The SWPPP shall be modified appropriately, with revisions and amendments recorded in the SWPPP Amendment Log at the front of the SWPPP. COIs submitted electronically via SMARTS can be found in this Appendix.

Reason for Filing COI	**Timeline for Filing COI**
Reduction or increase in total disturbed area	Within 30 days of the reduction or increase
Updating site specific BMPs	Within 14 days of design change
Change construction start or end date	At least 14 days prior to the date to be changed
Post-construction plans updated or approved by the municipal stormwater permittee	Within 14 days of approval

This appendix includes all of the following updated PRDs (check all that apply):

☐ Revised Notice of Intent (NOI);

☐ Revised Site Map;

☐ Revised Risk Assessment;

☐ New landowner's information (name, address, phone number, email address); and

☐ New signed certification statement.

_____
Legally Responsible Person [if organization]

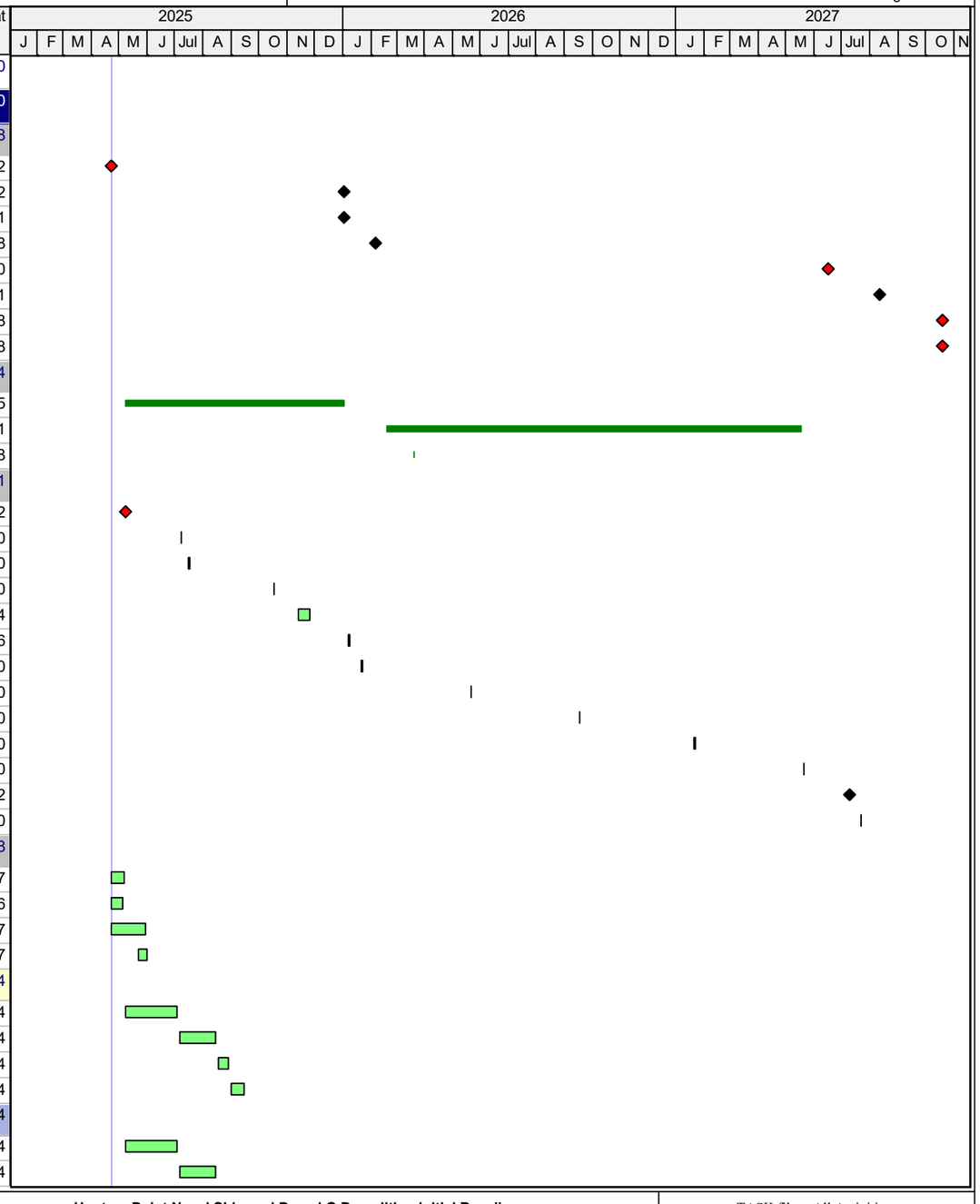
_____ Signature of [Authorized Representative of] Legally Responsible Person or Approved Signatory	_____ Date
_____ Name of [Authorized Representative of] Legally Responsible Person or Approved Signatory	_____ Telephone Number

Appendix F: Construction Schedule

Note: This is a draft schedule that will be updated in the final submittal.

Hunters Point | Hunters Point Naval Shipyard Parcel G Demolition Initial Baseline | 20-Aug-25 23:45

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
Hunters Point Naval Shipyard Parcel G Demolition Initial Baseline		622	23-Apr-25	18-Oct-27	0
Project Admin		622	23-Apr-25	18-Oct-27	0
Milestones		909	23-Apr-25	18-Oct-27	-28
MILE.1000	Project Award	0	23-Apr-25		-42
MILE.1050	Preconstruction Submittals Complete	0		02-Jan-26	2
MILE.1110	Structural Demo Plan Completion	0		02-Jan-26	-11
MILE.1060	Contractor Mobilization Complete	0		06-Feb-26	-38
MILE.1010	Transportation, Disposal and/or Recycling Out of State Complete	0		15-Jun-27	-30
MILE.1080	Substantial Completion	0		11-Aug-27	-21
MILE.1070	Project Completion	0		18-Oct-27	-28
MILE.1090	Contract Completion Date	0		18-Oct-27*	-28
Project Durations		740	08-May-25	17-May-27	154
SUM.1000	Pre Construction Submittals	240	08-May-25	02-Jan-26	-45
SUM.1020	Abatement/Demolition	454	18-Feb-26	17-May-27	-31
SUM.1030	Transportation, Disposal and/or Recycling	0	20-Mar-26	20-Mar-26	578
Meetings		551	08-May-25	22-Jul-27	41
M-1020	Post Award Kickoff Meeting	0	08-May-25		-42
M-1000	Partnering Meeting	1	08-Jul-25	08-Jul-25	70
M-1010	Attend CAC Meeting 1	1	17-Jul-25	17-Jul-25	100
M-1030	Attend CAC Meeting 2	1	18-Oct-25	18-Oct-25	100
M-1040	Career & Subcontractor Opportunity Fair	10	13-Nov-25	26-Nov-25	24
M-1050	Preconstruction Conference	1	08-Jan-26	08-Jan-26	-46
M-1060	Attend CAC Meeting 3	1	22-Jan-26	22-Jan-26	60
M-1070	Attend CAC Meeting 4 (Estimated Date)	1	21-May-26	21-May-26	60
M-1080	Attend CAC Meeting 5 (Estimated Date)	1	17-Sep-26	17-Sep-26	60
M-1090	Attend CAC Meeting 6 (Estimated Date)	1	21-Jan-27	21-Jan-27	60
M-1110	Attend CAC Meeting 7 (Estimated Date)	1	20-May-27	20-May-27	60
M-1100	Begin NAVFAC Red Zone Meetings	0	10-Jul-27		12
M-1120	Attend CAC Meeting 8 (Estimated Date)	1	22-Jul-27	22-Jul-27	60
Admin Submittals		174	23-Apr-25	02-Jan-26	448
ADMIN.1000	Submit Prelim Schedule	15	23-Apr-25	07-May-25	217
ADMIN.1010	Submit Insurance/Bonds	10	23-Apr-25	06-May-25	-6
ADMIN.1020	Submit Submittal Register	27	23-Apr-25	30-May-25	147
ADMIN.1130	Submit Initial Schedule	10	23-May-25	01-Jun-25	217
Accident Prevention Plan / APP		89	08-May-25	15-Sep-25	74
ADMIN.1040	Prepare & Submit Accident Prevention Plan	39	08-May-25	03-Jul-25	24
ADMIN.1100	NAVFAC Review Accident Prevention Plan	30	07-Jul-25	15-Aug-25	24
ADMIN.1160	Address Comments & Resubmit Accident Prevention Plan	10	18-Aug-25	29-Aug-25	74
ADMIN.1170	NAVFAC Review & Approve Accident Prevention Plan	10	02-Sep-25	15-Sep-25	74
Spill Prevention Control and Countermeasures / SPCC Plan		89	08-May-25	15-Sep-25	74
ADMIN.1340	Prepare & Submit SPCC Plan	39	08-May-25	03-Jul-25	74
ADMIN.1350	NAVFAC Review SPCC Plan	30	07-Jul-25	15-Aug-25	74



Project Start: 23-Apr-25
Project Finish: 18-Oct-27
Data Date: 23-Apr-25

Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone

Hunters Point Naval Shipyard Parcel G Demolition Initial Baseline
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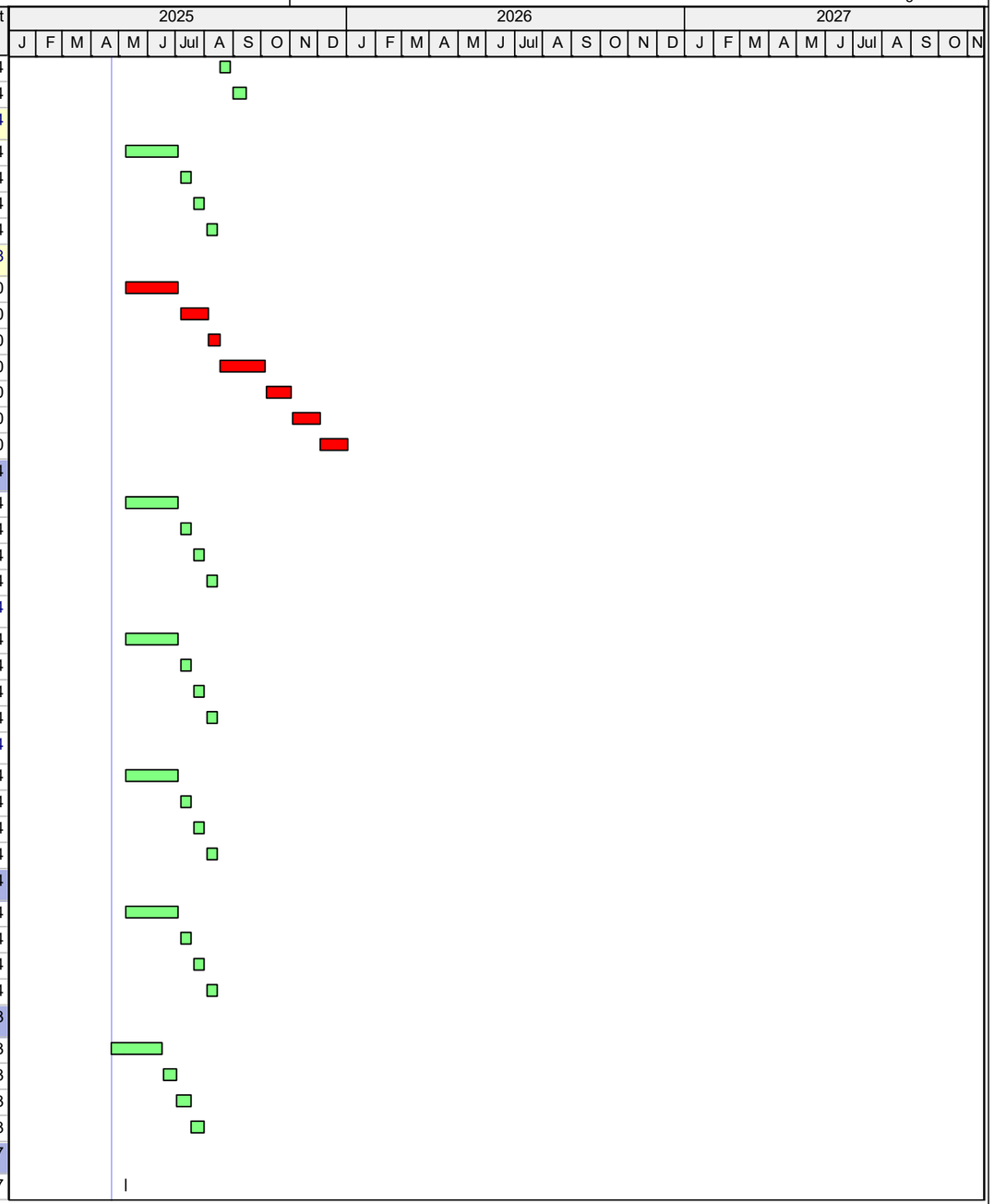
DCN: ECC-1205-4397-0003.03

Hunters Point | Hunters Point Naval Shipyard Parcel G Demolition Initial Baseline | 20-Aug-25 23:45

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
ADMIN.1360	Address Comments & Resubmit SPCC Plan	10	18-Aug-25	29-Aug-25	74
ADMIN.1370	NAVFAC Review & Approve SPCC Plan	10	02-Sep-25	15-Sep-25	74
Contractor Quality Control Plan / CQCP		69	08-May-25	15-Aug-25	94
ADMIN.1060	Prepare & Submit Quality Control Plan	39	08-May-25	03-Jul-25	94
ADMIN.1120	NAVFAC Review Quality Control Plan	10	07-Jul-25	18-Jul-25	94
ADMIN.1200	Address Comments & Resubmit Quality Control Plan	10	21-Jul-25	01-Aug-25	94
ADMIN.1210	NAVFAC Review & Approve Quality Control Plan	10	04-Aug-25	15-Aug-25	94
Remedial Action Workplan		174	23-Apr-25	02-Jan-26	448
RAW.1000	Develop and Submit Remedial Action Workplan	39	08-May-25	03-Jul-25	-30
RAW.1010	Navy Review and Comment on Remedial Action Workplan	22	07-Jul-25	05-Aug-25	-30
RAW.1020	Incorporate Comments Remedial Action Workplan	9	06-Aug-25	18-Aug-25	-30
RAW.1040	Regulatory Agencies Comments Remedial Action Workplan	34	19-Aug-25	06-Oct-25	-30
RAW.1050	Navy / Contractor Response to Comments Remedial Action Workplan	19	07-Oct-25	03-Nov-25	-30
RAW.1070	Agency Concurrence Remedial Action Workplan	20	04-Nov-25	03-Dec-25	-30
RAW.1080	Issue Final Remedial Action Workplan	20	04-Dec-25	02-Jan-26	-30
RAWP Appx A - Environmental Protection Plan (EPP)		69	08-May-25	15-Aug-25	94
ADMIN.1220	Prepare & Submit Environmental Protection Plan	39	08-May-25	03-Jul-25	94
ADMIN.1230	NAVFAC Review Environmental Protection Plan	10	07-Jul-25	18-Jul-25	94
ADMIN.1240	Address Comments & Resubmit Environmental Protection Plan	10	21-Jul-25	01-Aug-25	94
ADMIN.1250	NAVFAC Review & Approve Environmental Protection Plan	10	04-Aug-25	15-Aug-25	94
RAWP Att A - CERCLA Stormwater Plan (SWPPP)		69	08-May-25	15-Aug-25	94
ADMIN.13[illegible]	Prepare & Submit SWPPP	39	08-May-25	03-Jul-25	94
ADMIN.13[illegible]	NAVFAC Review SWPPP	10	07-Jul-25	18-Jul-25	94
ADMIN.14[illegible]	Address Comments & Resubmit SWPPP	10	21-Jul-25	01-Aug-25	94
ADMIN.14[illegible]	NAVFAC Review & Approve SWPPP	10	04-Aug-25	15-Aug-25	94
RAWP Att B - Dust Management Plan (DMP)		69	08-May-25	15-Aug-25	94
ADMIN.12[illegible]	Prepare & Submit Dust Management Plan	39	08-May-25	03-Jul-25	94
ADMIN.12[illegible]	NAVFAC Review Dust Management Plan	10	07-Jul-25	18-Jul-25	94
ADMIN.12[illegible]	Address Comments & Resubmit Dust Management Plan	10	21-Jul-25	01-Aug-25	94
ADMIN.12[illegible]	NAVFAC Review & Approve Dust Management Plan	10	04-Aug-25	15-Aug-25	94
RAWP Appx B - Waste Management Plan		69	08-May-25	15-Aug-25	94
ADMIN.1300	Prepare & Submit WMTDP	39	08-May-25	03-Jul-25	94
ADMIN.1310	NAVFAC Review WMTDP	10	07-Jul-25	18-Jul-25	94
ADMIN.1320	Address Comments & Resubmit WMTDP	10	21-Jul-25	01-Aug-25	94
ADMIN.1330	NAVFAC Review & Approve WMTDP	10	04-Aug-25	15-Aug-25	94
RAWP Appx C - Sampling & Analysis Plan (SAP)		69	23-Apr-25	31-Jul-25	553
ADMIN.1420	Prepare & Submit Sampling & Analysis Plan	39	23-Apr-25	17-Jun-25	553
ADMIN.1430	NAVFAC Review Sampling & Analysis Plan	10	18-Jun-25	02-Jul-25	553
ADMIN.1440	Address Comments & Resubmit Sampling & Analysis Plan	10	03-Jul-25	17-Jul-25	553
ADMIN.1450	NAVFAC Review & Approve Sampling & Analysis Plan	10	18-Jul-25	31-Jul-25	553
RAWP Appx D - Stamped Engineered Plans		163	08-May-25	02-Jan-26	-7
SDB.1000	Structural Demolition Site Inspection	1	08-May-25	08-May-25	-7



Project Start: 23-Apr-25
Project Finish: 18-Oct-27
Data Date: 23-Apr-25

Remaining Level of Effort | Remaining Work
Actual Level of Effort | Critical Remaining Work
Actual Work | Milestone

Hunters Point Naval Shipyard Parcel G Demolition Initial Baseline
5459.397-00-IN

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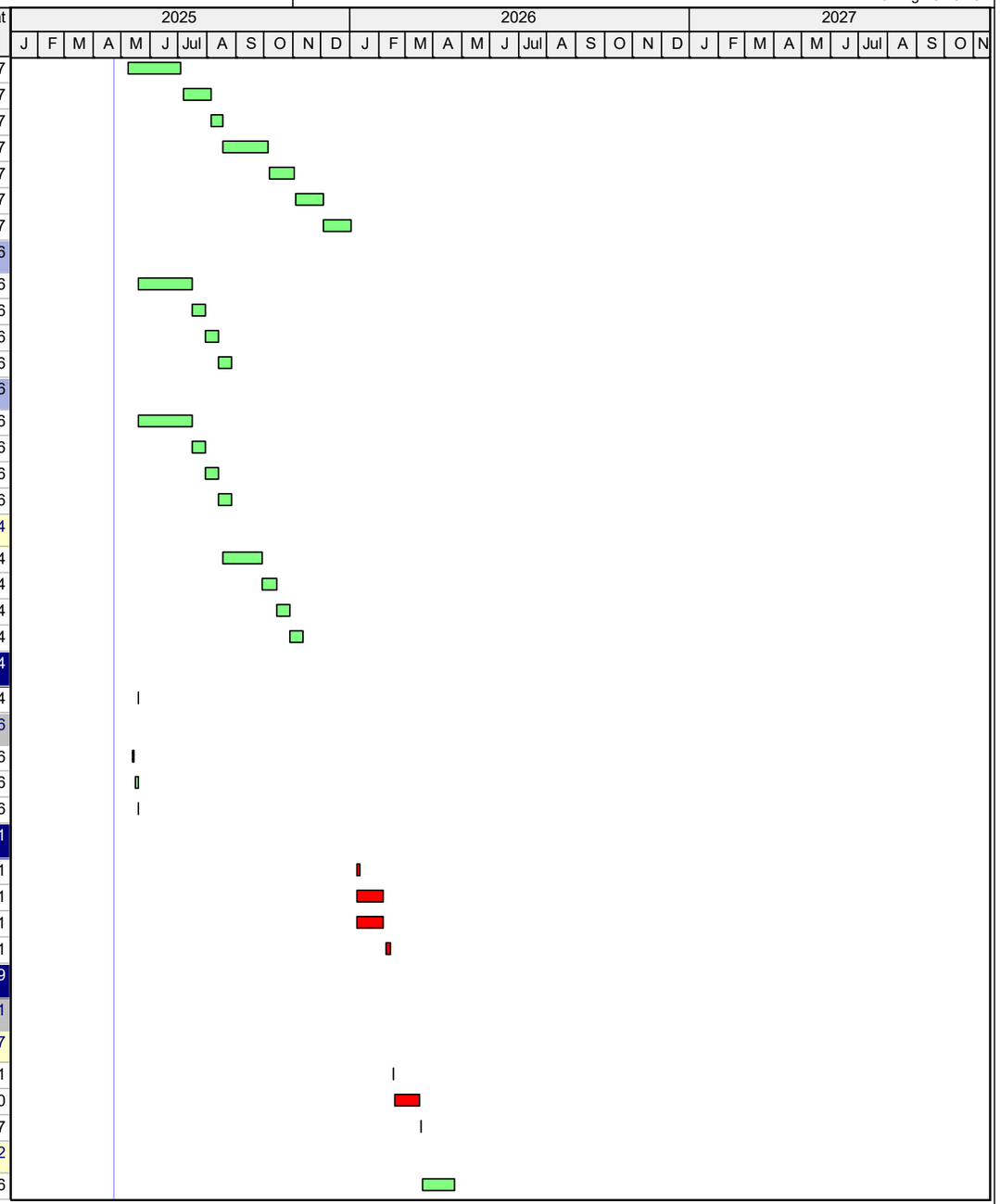
Hunters Point | Hunters Point Naval Shipyard Parcel G Demolition Initial Baseline | 20-Aug-25 23:45

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
SDB.1010	Develop and Submit Structural Demolition Plans for Bldgs.	38	09-May-25	03-Jul-25	-7
SDB.1020	Navy Review Structural Demolition Plans for Bldgs.	22	07-Jul-25	05-Aug-25	-7
SDB.1030	Incorporate Comments Structural Demolition Plans for Bldgs.	9	06-Aug-25	18-Aug-25	-7
SDB.1050	Regulatory Agencies Comments Structural Demolition Plans for Bldgs.	34	19-Aug-25	06-Oct-25	-7
SDB.1060	Contractor Response to Comments Structural Demolition Plans for Bldgs.	19	07-Oct-25	03-Nov-25	-7
SDB.1080	Agency Concurrence Structural Demolition Plans for Bldgs.	20	04-Nov-25	03-Dec-25	-7
SDB.1090	Issue Final Structural Demolition Plans for Bldgs.	20	04-Dec-25	02-Jan-26	-7
RAWP Figure 3 - Traffic Control Plan		69	20-May-25	27-Aug-25	86
SDB.1100	Prepare and Submit Traffic Control Plan	39	20-May-25	16-Jul-25	86
SDB.1120	NAVFAC Review Traffic Control Plan	10	17-Jul-25	30-Jul-25	86
SDB.1130	Address Comments & Resubmit Traffic Control Plan	10	31-Jul-25	13-Aug-25	86
SDB.1140	NAVFAC Review & Approve Traffic Control Plan	10	14-Aug-25	27-Aug-25	86
RAWP Figure 4 - Haul Road Plan		69	20-May-25	27-Aug-25	86
SDB.1180	Prepare and Submit Haul Road Plan	39	20-May-25	16-Jul-25	86
SDB.1200	NAVFAC Review Haul Road Plan	10	17-Jul-25	30-Jul-25	86
SDB.1210	Address Comments & Resubmit Haul Road Plan	10	31-Jul-25	13-Aug-25	86
SDB.1220	NAVFAC Review & Approve Haul Road Plan	10	14-Aug-25	27-Aug-25	86
Construction Site Plan		60	18-Aug-25	12-Nov-25	24
ADMIN.1050	Prepare & Submit Construction Site Plan	30	18-Aug-25	29-Sep-25	24
ADMIN.1110	NAVFAC Review Construction Site Plan	10	30-Sep-25	14-Oct-25	24
ADMIN.1180	Address Comments & Resubmit Construction Site Plan	10	15-Oct-25	28-Oct-25	24
ADMIN.1190	NAVFAC Review & Approve Construction Site Plan	10	29-Oct-25	12-Nov-25	24
Pre Construction		6	13-May-25	20-May-25	154
PC.1020	Parcel G Building Structural Inspection and Initial Site Survey	1	20-May-25	20-May-25	154
Abbreviated APP/AHA for Site Inspections and Initial Site Survey		5	13-May-25	19-May-25	86
APP.1000	Develop/Submit Abbreviated APP/AHA for Site Inspections and Initial Site Survey	3	13-May-25	15-May-25	86
APP.1010	Review Abbreviated APP/AHA for Site Inspections and Initial Site Survey	2	16-May-25	19-May-25	86
APP.1030	Approval of APP/AHA for Site Inspections and Initial Site Survey	1	19-May-25	19-May-25	86
Mobilization		25	09-Jan-26	13-Feb-26	-31
MOB.1000	Perform Survey of Existing Conditions	2	09-Jan-26	12-Jan-26	-31
MOB.1010	Setup Site Offices/Electrical Power	20	09-Jan-26	06-Feb-26	-31
MOB.1020	Setup/Maintain Air Monitoring, Temporary Facilities, Decon. Stations, Safety/QC	20	09-Jan-26	06-Feb-26	-31
MOB.1030	Mobilize Personnel to Site	5	09-Feb-26	13-Feb-26	-31
Construction		377	17-Feb-26	17-Aug-27	-19
Building 351		63	17-Feb-26	14-May-26	291
Abatement		23	17-Feb-26	19-Mar-26	107
351.1000	Establish Regulated Work Area Building 351	1	17-Feb-26	17-Feb-26	-31
351.1010	Hazardous Material Abatement Building 351	20	18-Feb-26	17-Mar-26	-30
351.1020	Environmental Consultant Inspection Building 351	2	18-Mar-26	19-Mar-26	107
Demolition		33	20-Mar-26	14-May-26	242
351.1030	Demolition/Segregate Building 351	20	20-Mar-26	23-Apr-26	206



Project Start: 23-Apr-25
Project Finish: 18-Oct-27
Data Date: 23-Apr-25

Remaining Level of Effort | Remaining Work
Actual Level of Effort | Critical Remaining Work
Actual Work | Milestone

Hunters Point Naval Shipyard Parcel G Demolition Initial Baseline
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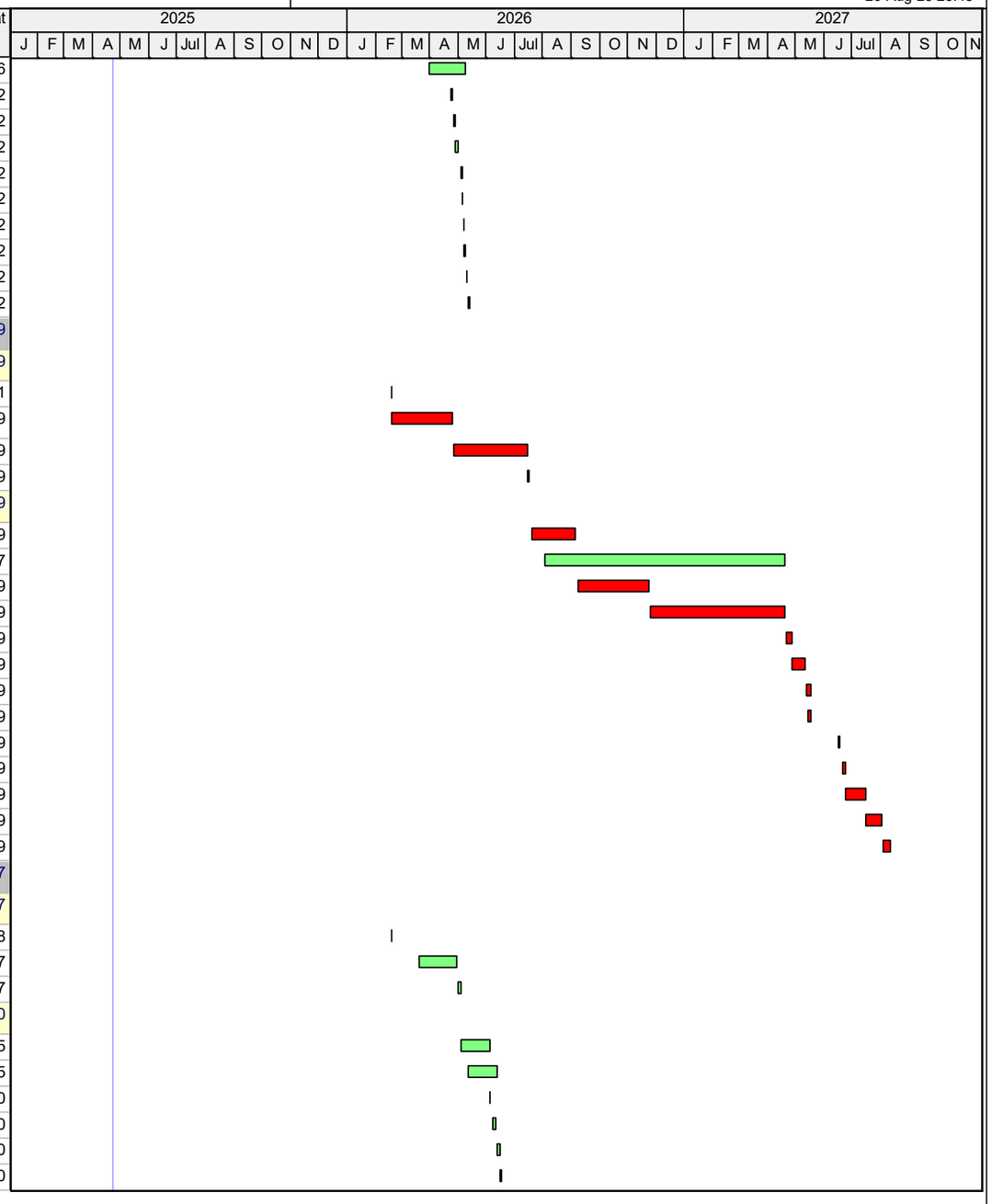
Hunters Point | Hunters Point Naval Shipyard Parcel G Demolition Initial Baseline | 20-Aug-25 23:45

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
351.1130	T&D Demolition Waste Building 351	25	31-Mar-26	08-May-26	206
351.1040	Concrete Slab Cleaning Building 351	1	24-Apr-26	24-Apr-26	242
351.1050	Demolition of Slab Building 351	2	27-Apr-26	28-Apr-26	242
351.1060	Concrete Slab Disposal Building 351	2	29-Apr-26	01-May-26	242
351.1070	Post Demolition Inspection Building 351	2	04-May-26	05-May-26	242
351.1080	Perform Civil Survey Building 351	1	06-May-26	06-May-26	242
351.1090	Cap Remaining Utilities Building 351	1	07-May-26	07-May-26	242
351.1100	Backfill Slab Area Building 351	1	08-May-26	08-May-26	242
351.1110	Install 4" Aggregate Base Course Building 351	1	11-May-26	11-May-26	242
351.1120	Install Asphalt / Concrete Building 351	2	12-May-26	14-May-26	242
Building 411		372	18-Feb-26	11-Aug-27	-19
Abatement		105	18-Feb-26	17-Jul-26	-19
411.1000	Establish Regulated Work Area Building 411	1	18-Feb-26	18-Feb-26	-31
411.1010	Hazardous Material Abatement Building 411 - North & South Office Bldg	35	19-Feb-26	24-Apr-26	-19
411.1130	Hazardous Material Abatement Building 411 - Main Bldg	51	27-Apr-26	15-Jul-26	-19
411.1020	Environmental Consultant Inspection Building 411	2	16-Jul-26	17-Jul-26	-19
Demolition		220	20-Jul-26	11-Aug-27	-19
411.1030	Demolition/Segregate Building 411 - North & South Bldg	35	20-Jul-26	04-Sep-26	-19
411.1180	T&D Demolition Waste Building 411	135	03-Aug-26	19-Apr-27	17
411.1160	Demolition/Segregate Building 411 - Open Air Demo	45	08-Sep-26	23-Nov-26	-19
411.1170	Demolition/Segregate Building 411 - Main Bldg	65	25-Nov-26	19-Apr-27	-19
411.1040	Concrete Slab Cleaning Building 411	4	21-Apr-27	26-Apr-27	-19
411.1050	Demolition of Slab Building 411	10	27-Apr-27	11-May-27	-19
411.1060	Concrete Slab Disposal Building 411	4	12-May-27	17-May-27	-19
411.1070	Post Demolition Inspection Building 411	2	14-May-27	17-May-27	-19
411.1080	Perform Civil Survey Building 411	2	16-Jun-27	17-Jun-27	-19
411.1090	Cap Remaining Utilities Building 411	3	21-Jun-27	23-Jun-27	-19
411.1100	Backfill Slab Area Building 411	15	24-Jun-27	15-Jul-27	-19
411.1110	Install 4" Aggregate Base Course Building 411	12	16-Jul-27	02-Aug-27	-19
411.1120	Install Asphalt / Concrete Building 411	7	03-Aug-27	11-Aug-27	-19
Building 366		96	18-Feb-26	06-Jul-26	257
Abatement		54	18-Feb-26	04-May-26	107
366.1000	Establish Regulated Work Area Building 366	1	18-Feb-26	18-Feb-26	128
366.1010	Hazardous Material Abatement Building 366	30	20-Mar-26	30-Apr-26	107
366.1020	Environmental Consultant Inspection Building 366	2	01-May-26	04-May-26	107
Demolition		39	05-May-26	06-Jul-26	210
366.1030	Demolition/Segregate Building 366	20	05-May-26	04-Jun-26	185
366.1130	T&D Demolition Waste Building 366	20	12-May-26	12-Jun-26	185
366.1040	Concrete Slab Cleaning Building 366	1	05-Jun-26	05-Jun-26	210
366.1050	Demolition of Slab Building 366	3	08-Jun-26	11-Jun-26	210
366.1060	Concrete Slab Disposal Building 366	2	12-Jun-26	15-Jun-26	210
366.1070	Post Demolition Inspection Building 366	2	16-Jun-26	17-Jun-26	210



Project Start: 23-Apr-25
Project Finish: 18-Oct-27
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Remaining Level of Effort
Actual Level of Effort
Actual Work
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Hunters Point Naval Shipyard Parcel G Demolition Initial Baseline
5459.397-00-IN

TASK filter: All Activities
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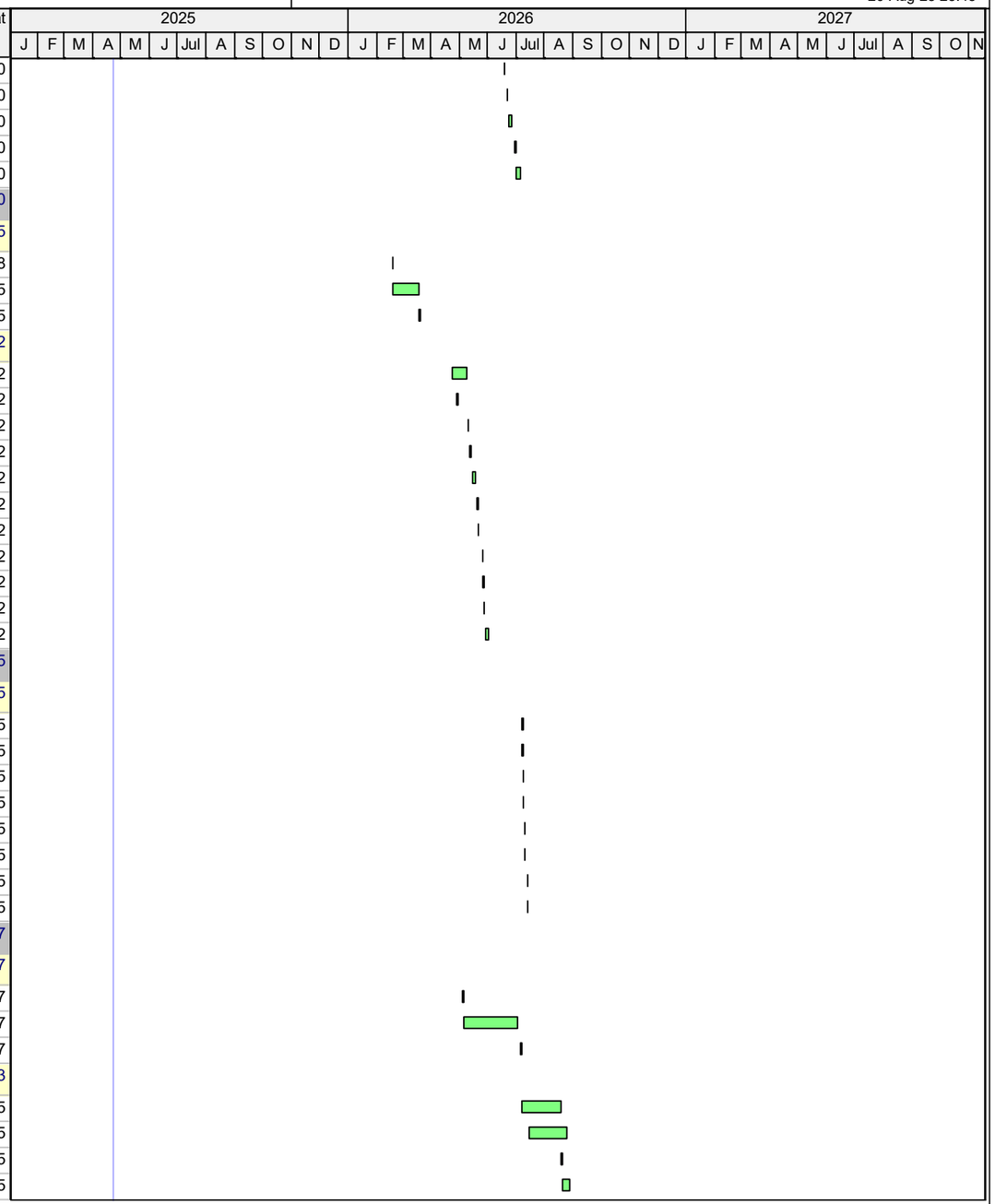
Hunters Point | Hunters Point Naval Shipyard Parcel G Demolition Initial Baseline | 20-Aug-25 23:45

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
366.1080	Perform Civil Survey Building 366	1	18-Jun-26	18-Jun-26	210
366.1090	Cap Remaining Utilities Building 366	1	22-Jun-26	22-Jun-26	210
366.1100	Backfill Slab Area Building 366	4	23-Jun-26	26-Jun-26	210
366.1110	Install 4" Aggregate Base Course Building 366	3	29-Jun-26	01-Jul-26	210
366.1120	Install Asphalt / Concrete Building 366	2	02-Jul-26	06-Jul-26	210
Building 351A		73	18-Feb-26	01-Jun-26	280
Abatement		23	18-Feb-26	20-Mar-26	285
351A.1000	Establish Regulated Work Area Building 351A	1	18-Feb-26	18-Feb-26	128
351A.1010	Hazardous Material Abatement Building 351A	20	19-Feb-26	18-Mar-26	285
351A.1020	Environmental Consultant Inspection Building 351A	2	19-Mar-26	20-Mar-26	285
Demolition		23	24-Apr-26	01-Jun-26	232
351A.1030	Demolition/Segregate Building 351A	10	24-Apr-26	08-May-26	212
351A.1130	T&D of Demolition Waste Building 351A	2	28-Apr-26	29-Apr-26	212
351A.1040	Concrete Slab Cleaning Building 351A	1	11-May-26	11-May-26	232
351A.1050	Demolition of Slab Building 351A	2	12-May-26	14-May-26	232
351A.1060	Concrete Slab Disposal Building 351A	2	15-May-26	18-May-26	232
351A.1070	Post Demolition Inspection Building 351A	2	20-May-26	21-May-26	232
351A.1080	Perform Civil Survey Building 351A	1	22-May-26	22-May-26	232
351A.1090	Cap Remaining Utilities Building 351A	1	26-May-26	26-May-26	232
351A.1100	Backfill Slab Area Building 351A	1	27-May-26	27-May-26	232
351A.1110	Install 4" Aggregate Base Course Building 351A	1	28-May-26	28-May-26	232
351A.1120	Install Asphalt / Concrete Building 351A	2	29-May-26	01-Jun-26	232
Former Building 408 Concrete Pad		4	08-Jul-26	13-Jul-26	205
Demolition		4	08-Jul-26	13-Jul-26	205
408.1000	Demolition/Segregate Building 408 Concrete Pad	1	08-Jul-26	08-Jul-26	205
408.1010	Concrete Slab Disposal 408 Concrete Pad	1	08-Jul-26	08-Jul-26	205
408.1020	Post Demolition Inspection 408 Concrete Pad	1	09-Jul-26	09-Jul-26	205
408.1030	Perform Civil Survey 408 Concrete Pad	1	09-Jul-26	09-Jul-26	205
408.1040	Cap Remaining Utilities 408 Concrete Pad	1	10-Jul-26	10-Jul-26	205
408.1050	Backfill Slab Area 408 Concrete Pad	1	10-Jul-26	10-Jul-26	205
408.1060	Install 4" Aggregate Base Course 408 Concrete Pad	1	13-Jul-26	13-Jul-26	205
408.1070	Install Asphalt / Concrete 408 Concrete Pad	1	13-Jul-26	13-Jul-26	205
Building 439		101	05-May-26	28-Sep-26	157
Abatement		43	05-May-26	07-Jul-26	107
439.1000	Establish Regulated Work Area Building 439	1	05-May-26	05-May-26	107
439.1010	Hazardous Material Abatement Building 439	40	06-May-26	02-Jul-26	107
439.1020	Environmental Consultant Inspection Building 439	2	06-Jul-26	07-Jul-26	107
Demolition		57	08-Jul-26	28-Sep-26	113
439.1030	Demolition/Segregate Building 439	30	08-Jul-26	18-Aug-26	95
439.1130	T&D of Demolition Materials Building 439	30	15-Jul-26	25-Aug-26	135
439.1040	Concrete Slab Cleaning Building 439	2	19-Aug-26	20-Aug-26	95
439.1050	Demolition of Slab Building 439	5	21-Aug-26	27-Aug-26	95



Project Start: 23-Apr-25
Project Finish: 18-Oct-27
Data Date: 23-Apr-25

Remaining Level of Effort | Remaining Work
Actual Level of Effort | Critical Remaining Work
Actual Work | Milestone

Hunters Point Naval Shipyard Parcel G Demolition Initial Baseline
5459.397-00-IN

TASK filter: All Activities
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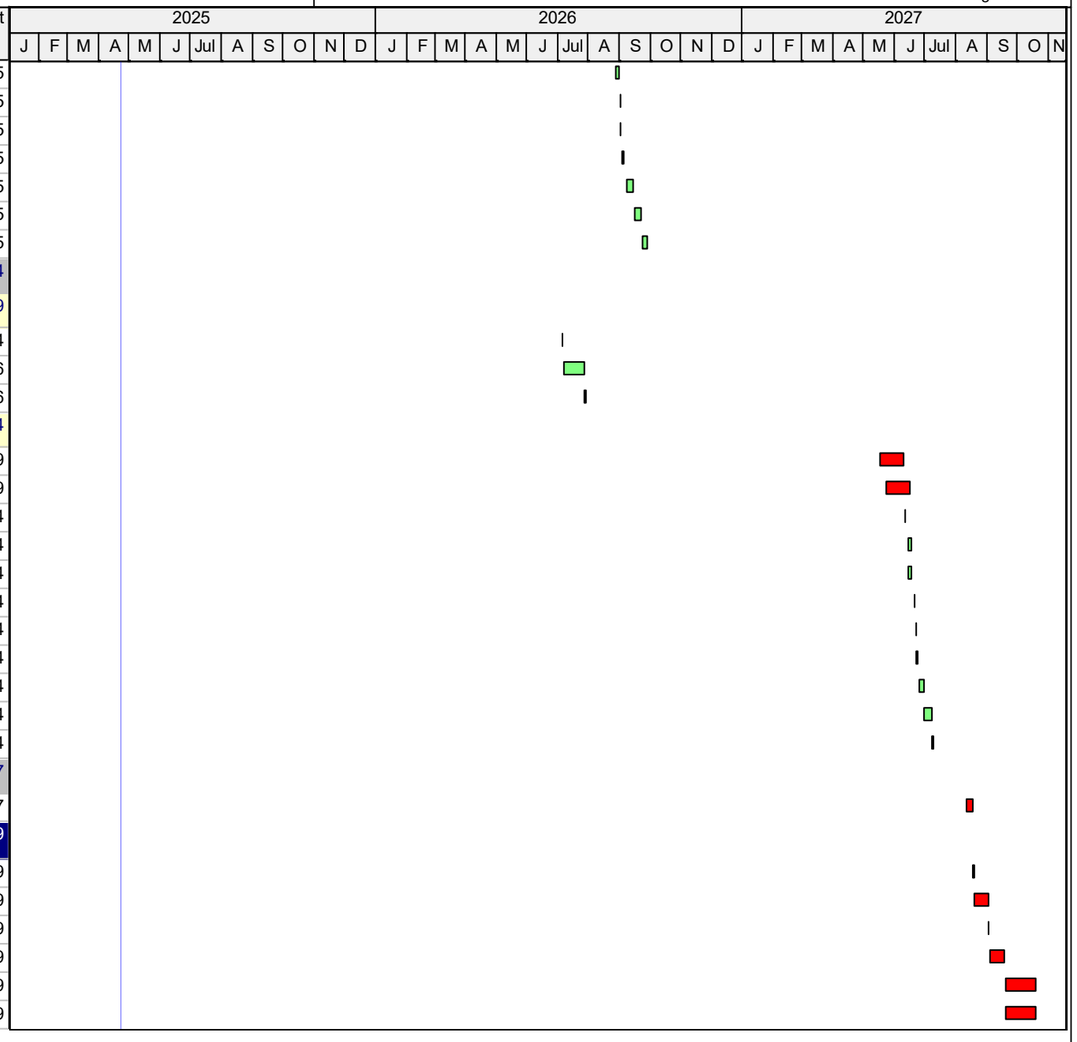
Hunters Point | Hunters Point Naval Shipyard Parcel G Demolition Initial Baseline | 20-Aug-25 23:45

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
439.1060	Concrete Slab Disposal Building 439	2	28-Aug-26	31-Aug-26	95
439.1070	Post Demolition Inspection Building 439	1	01-Sep-26	01-Sep-26	95
439.1080	Perform Civil Survey Building 439	1	02-Sep-26	02-Sep-26	95
439.1090	Cap Remaining Utilities Building 439	2	03-Sep-26	04-Sep-26	95
439.1100	Backfill Slab Area Building 439	5	08-Sep-26	14-Sep-26	95
439.1110	Install 4" Aggregate Base Course Building 439	5	15-Sep-26	22-Sep-26	95
439.1120	Install Asphalt / Concrete Building 439	4	23-Sep-26	28-Sep-26	95
Building 401		254	06-Jul-26	09-Jul-27	4
Abatement		18	06-Jul-26	29-Jul-26	179
401.1000	Establish Regulated Work Area Building	1	06-Jul-26	06-Jul-26	174
401.1010	Hazardous Material Abatement Building 401	15	07-Jul-26	27-Jul-26	136
401.1020	Environmental Consultant Inspection Building 401	2	28-Jul-26	29-Jul-26	136
Demolition		34	18-May-27	09-Jul-27	4
401.1030	Demolition/Segregate Building 401	15	18-May-27	10-Jun-27	-19
401.1130	T&D of Demolition Materials Building 401	15	24-May-27	15-Jun-27	-19
401.1040	Concrete Slab Cleaning Building 401	1	11-Jun-27	11-Jun-27	4
401.1050	Demolition of Slab Building 401	4	14-Jun-27	17-Jun-27	4
401.1060	Concrete Slab Disposal Building 401	3	15-Jun-27	17-Jun-27	4
401.1070	Post Demolition Inspection Building 401	1	21-Jun-27	21-Jun-27	4
401.1080	Perform Civil Survey Building 401	1	22-Jun-27	22-Jun-27	4
401.1090	Cap Remaining Utilities Building 401	2	23-Jun-27	24-Jun-27	4
401.1100	Backfill Slab Area Building 401	3	25-Jun-27	29-Jun-27	4
401.1110	Install 4" Aggregate Base Course Building 401	5	30-Jun-27	07-Jul-27	4
401.1120	Install Asphalt / Concrete Building 401	2	08-Jul-27	09-Jul-27	4
Demobilization		6	12-Aug-27	17-Aug-27	-27
DEMOB.1000	Final Site Clean Up and Demobilization	6	12-Aug-27	17-Aug-27	-27
Project Closeout		42	18-Aug-27	18-Oct-27	-19
PCO.1000	Pre-Final Inspection	1	18-Aug-27	18-Aug-27	-19
PCO.1010	Pre-Final Punch List	10	19-Aug-27	01-Sep-27	-19
PCO.1020	Final Inspection	1	02-Sep-27	02-Sep-27	-19
PCO.1030	NAVFAC Acceptance	10	03-Sep-27	17-Sep-27	-19
PCO.1040	Prepare & Submit As-Built Drawings	20	20-Sep-27	18-Oct-27	-19
PCO.1050	Prepare & Submit RACR	20	20-Sep-27	18-Oct-27	-19



Project Start: 23-Apr-25
Project Finish: 18-Oct-27
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Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone

Hunters Point Naval Shipyard Parcel G Demolition Initial Baseline
5459.397-00-IN

TASK filter: All Activities
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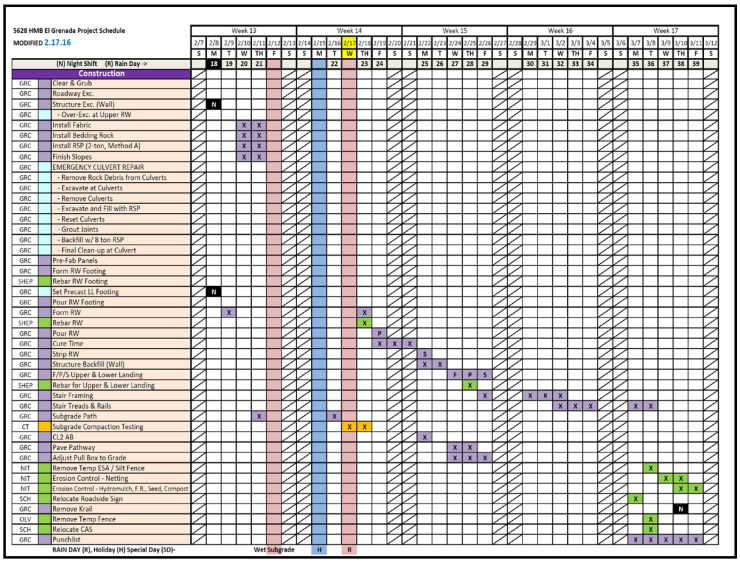
Appendix G: Construction Activities, Materials Used, and Associated Pollutants

Appendix H: Stormwater BMP Construction Fact Sheets

Scheduling



Standard Symbol

BMP Objectives

Soil Stabilization	☑
Sediment Control	☑
Tracking Control	☑
Wind Erosion Control	☑
Non-Stormwater Management	☐
Materials and Waste Management	☐

Definition and Purpose

This BMP involves developing, for every project, a schedule that includes construction activity sequencing with implementation of construction site BMPs such as temporary soil stabilization and temporary sediment control measures. The purpose is to reduce the amount and duration of soil exposed to erosion by wind, rain, runoff, and vehicle tracking, and to perform the construction activities and control practices in accordance with the planned schedule.

Appropriate Applications

Construction sequencing should be scheduled to minimize land disturbance during the wetter months for all projects. In addition, any construction windows required by regulatory permits, and any winter suspension work, should be described in the schedule. Appropriate BMPs must be implemented year-round.

Limitations

Environmental constraints such as nesting season prohibitions reduce the full capabilities of this BMP.

Standards and Specifications

General Requirements

- Developing a schedule and planning the project operations to minimize erosion and the potential to discharge pollutants to stormwater are the critical first steps in an effective stormwater program. The construction schedule must be incorporated into the Stormwater Pollution Prevention Plan (SWPPP) or Water Pollution Control Program (WPCP). Refer to

Section 8 and 13 of the Standard Specifications for specific requirements of what the schedule must include for water pollution control.

- The schedule should clearly show when work activities that could pollute stormwater with sediment or other contaminants (e.g., grading, move-in, move-out, stockpiling, pile driving) would occur and when soil stabilization, sediment control, and other BMPs associated with each phase of construction would be implemented.
- The schedule should include details on the implementation and deployment of BMPs related to:
  - Temporary and permanent soil stabilization
  - Temporary sediment control
  - Tracking control
  - Wind erosion control
  - Non-stormwater
  - Waste management and materials pollution control
- The schedule needs to be updated as part of the SWPPP annual winterization plan.
- The schedule should also include dates for significant long-term operations or activities that may have planned non-stormwater discharges, such as dewatering, saw cutting, grinding, drilling, boring, crushing, blasting, painting, hydro-demolition, mortar mixing, bridge cleaning, etc.
- The construction schedule should reflect requirements for in-water work and other construction activities with potential to disturb water and biological resources specified in regulatory agency permits and approvals (RWQCB 401 Water Quality Certification, U.S. Army Corps of Engineers 404 permit, 1602 permit, etc.).
- The construction schedule should also include dates when an active or passive treatment system is expected to be used. There are specific notification requirements in SMARTS that need to be processed prior to the commencement of these systems.

Recommendations

- Schedule work to minimize soil-disturbing activities during predicted rain events. Consider rescheduling activities for dry periods to minimize maintenance requirements.
- Develop the sequencing and timetable for the start and completion of each item, such as site clearing and grubbing, grading, excavation, paving, pouring foundations, installing utilities, etc., to minimize the active construction area.
- Schedule major grading operations during dryer months when practical.
- Stabilize inactive areas within 15 days from the cessation of soil-disturbing activities or 1 day prior to the onset of precipitation, whichever occurs first. It is important to consider manufacturer’s recommendations for the selected soil stabilization BMP to ensure they meet the minimum dry time required. See Appendix B of this Manual for additional guidance.
- Monitor the weather forecast for storm events, which are storms that produce or are forecast to produce at least 0.1 inch of precipitation within a 24-hour period. There is a qualifying precipitation event per CGP that begins with the 24-hour period when 0.5 inches has been forecast and continues on subsequent 24-hour periods when 0.25 inches of precipitation or more is forecast. When a rain event is predicted, adjust the construction schedule to allow the

implementation of soil stabilization, sediment controls, and, if applicable, sediment treatment controls on all disturbed areas prior to the onset of rain.

- Ensure an ample supply of BMP materials are on site in order to quickly mobilize and implement required BMPs, particularly ahead of rain events when materials may be in short supply or back ordered.
- Be prepared year-round to deploy soil stabilization and sediment control practices. Erosion may be caused during dry seasons by unseasonal rainfall, wind, and vehicle tracking. Keep the site stabilized year-round, and retain and maintain sediment trapping devices in operational condition.
- Sequence trenching activities so that most open portions are closed before new trenching begins. Trenched material should be stored on the upstream side of the trenches.
- Incorporate staged seeding and re-vegetation of graded slopes as work progresses.
- Consider the early planting and establishment of permanent vegetation in the schedule to maximize plant establishment success and minimize irrigation and continuous maintenance needs.
- Apply permanent erosion control to areas deemed substantially complete during the project's defined seeding window

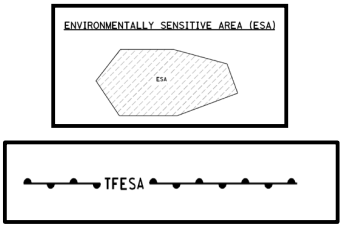
Maintenance and Inspection

- Verify that work is progressing in accordance with the schedule. If progress deviates, take corrective actions.
- Keep the schedule up to date and ensure it is consistent with the Contractor's 3-week look-ahead or other routine schedule submitted to the RE under the contract.
- Amend the schedule when changes are warranted or when directed by the RE.

SWPPP or WPCP

- A Water Pollution Control Schedule (WPCS) must include construction operations and BMP implementation for the entire duration of the project. The WPCS is to be included as an attachment (Attachment I) and discussed in Sections 600.1.1 and 600.1.2 of the SWPPP and Section 30.2.1 of the WPCP.

Preservation of Existing Vegetation



Standard Symbol

BMP Objectives

Soil Stabilization	☑
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☐
Materials and Waste Management	☐

Definition and Purpose

Preservation of existing vegetation is the identification and protection of desirable vegetation that provides erosion and sediment control benefits.

Appropriate Applications

- To preserve existing vegetation at areas on a site where no construction activity is planned or will occur at a later date. This BMP is very applicable for multi-year or multiple location projects, for which existing vegetation can be preserved until the area becomes active.
- On a year-round basis, temporary fencing shall be provided prior to the start of clearing and grubbing operations or other soil-disturbing activities in areas.
- Clearing and grubbing operations should be staged to preserve existing vegetation.
- Areas where natural vegetation exists and is designated for preservation. Such areas often include steep slopes, a watercourse, and building sites in wooded areas.
- Areas where local, state, and federal government require preservation, such as vernal pools, wetlands, marshes, certain oak trees, etc. Clearly marking and leaving a buffer area around these unique areas during construction will help to preserve these areas as well as take advantage of natural erosion prevention and sediment trapping.
- For any trenching or tunneling. Trenching shall be as far away from tree trunks as possible, usually outside of the tree drip line or canopy. Curve trenches around trees to avoid large roots or root concentrations. If roots are encountered, consider tunneling under them.

- When trenching and/or tunneling near or under trees are to be retained, tunnels shall be at least 8 inches below the ground surface, and not below the tree center, to minimize impact on the roots. Tree roots shall not be left exposed to air; they shall be covered with soil as soon as possible, protected, and kept moistened with wet burlap or peat moss until the tunnel and/or trench can be completed.

Limitations

- Protection of existing vegetation requires planning and may limit the area available for construction activities.
- For sites with diverse topography, it is often difficult and expensive to save existing trees while grading the site satisfactorily for the construction project.

Standards and Specifications

General Requirements

- Specifications for preservation of existing vegetation can be found in Standard Specifications Section 5-1.36A.
- Section 14 “Environmental Stewardship” of the Standard Specifications specifies the requirements related to environmental compliance and resource management, including requirements related to Environmentally Sensitive Areas (ESA).
- Refer to Section 16-2.03 of the Standard Specifications for “Temporary High-Visibility Fences” used to delineate ESAs.
- Refer to 16-2.04 of the Standard Specifications for “Temporary Construction Mats” used to protect wetlands and other areas.

Schedule

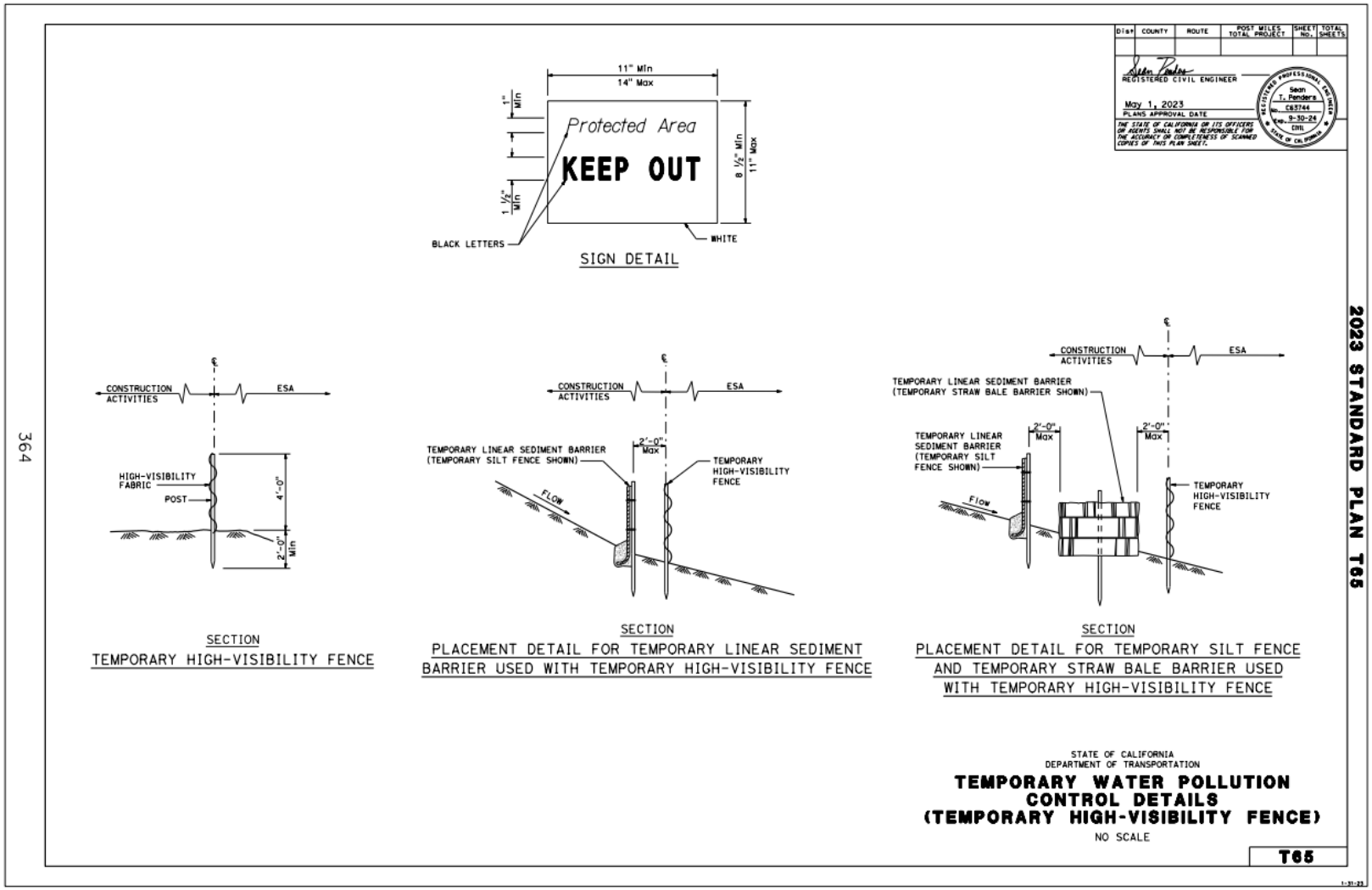
- Preservation of existing vegetation must be provided prior to the start of clearing and grubbing operations or other soil-disturbing activities in areas identified on the plans to be preserved, including areas designated as ESAs.
- Preservation of existing vegetation should conform to scheduling requirements set forth in the special provisions.

Design and Layout

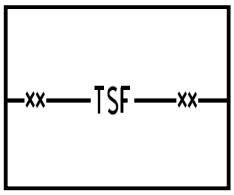
- Mark areas to be preserved with temporary fencing (Temporary High-Visibility Fence). The temporary fencing must be made of high-visibility fabric secured with 6-foot (minimum) posts. Refer to Section 16-2.03B of the Standard Specifications for more information on temporary high-visibility fence materials.
- Fence posts can be either wood or steel, at the Contractor’s discretion, as appropriate for the intended purpose. The post spacing must be 8 feet center-to-center (maximum) and embedded at least 16 inches into the ground to completely support the fence in an upright position.
- See Standard Plan T65 for “Temporary Water Pollution Control Details (temporary high-visibility fence).”

Installation

- Construction materials, equipment storage, and parking areas should be located where they will not cause damage to vegetation designated for preservation. This could include keeping equipment away from trees to prevent trunk and root damage, considering the impact of grade changes to existing vegetation and the root zone, and minimizing disturbed areas by avoiding stands of trees and shrubs and following existing contours to reduce cutting and filling for temporary roads.
- Maintain existing irrigation systems.
- Employees and subcontractors must be instructed to honor protective devices. No heavy equipment, vehicular traffic, or storage piles of any construction materials is permitted within the drip line of any tree to be retained. Removed trees should not be felled, pushed, or pulled into any retained trees. Fires should not be permitted within 100 feet of the drip line of any retained trees. Any fires must be of limited size and must be kept under continual surveillance. No toxic or construction materials (including paint, acid, nails, gypsum board, chemicals, fuels, and lubricants) should be stored within 50 feet of the drip line of any retained trees, nor disposed of in any way that would injure vegetation.
- The last activity after all other work is complete is to remove fences and barriers. This is to help protected trees that may otherwise be destroyed by carelessness during the final cleanup and landscaping.


364
2023 STANDARD PLAN T65
11" Min
14" Max
1" Min
Protected Area
KEEP OUT
8 ½" Min
11" Max
1 ½" Min
BLACK LETTERS
WHITE
SIGN DETAIL
CONSTRUCTION ACTIVITIES
ESA
HIGH-VISIBILITY FABRIC
POST
4'-0"
2'-0" Min
SECTION
TEMPORARY HIGH-VISIBILITY FENCE
TEMPORARY LINEAR SEDIMENT BARRIER (TEMPORARY SILT FENCE SHOWN)
2'-0" Max
TEMPORARY HIGH-VISIBILITY FENCE
FLOW
SECTION
PLACEMENT DETAIL FOR TEMPORARY LINEAR SEDIMENT BARRIER USED WITH TEMPORARY HIGH-VISIBILITY FENCE
TEMPORARY LINEAR SEDIMENT BARRIER (TEMPORARY STRAW BALE BARRIER SHOWN)
TEMPORARY LINEAR SEDIMENT BARRIER (TEMPORARY SILT FENCE SHOWN)
SECTION
PLACEMENT DETAIL FOR TEMPORARY SILT FENCE AND TEMPORARY STRAW BALE BARRIER USED WITH TEMPORARY HIGH-VISIBILITY FENCE
REGISTERED CIVIL ENGINEER
May 1, 2023
PLANS APPROVAL DATE
Sean T. Penders
C65744
9-30-24
CIVIL
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS
(TEMPORARY HIGH-VISIBILITY FENCE)
NO SCALE
T65

Temporary Silt Fence



Standard Symbol

BMP Objectives	
Soil Stabilization	☐
Sediment Control	☑
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☐
Materials and Waste Management	☐

Definition and Purpose

A silt fence is a temporary linear sediment barrier of permeable fabric designed to intercept and slow the flow of sediment-laden sheet flow runoff. Silt fences allow sediment to settle from runoff before water leaves the construction site.

Appropriate Applications

- Below the toe of exposed and erodible slopes.
- Down-slope of exposed soil areas.
- Around temporary stockpiles.
- Along streams and channels.
- Along the perimeter of a project.

Limitations

- Not effective unless trenched and keyed in.
- Not intended for use as mid-slope protection on slopes greater than 4:1 (H:V).
- Must be maintained.
- Must be removed and disposed.
- Do not use below slopes subject to creep, slumping, or landslides.
- Do not use in streams, channels, drain inlets, or anywhere flow is concentrated.
- Do not use silt fences to divert flow.
- Do not use in locations where ponded water may cause a flooding hazard.

Standards and Specifications

Design and Layout

- The drainage area above any fence should not exceed a quarter of an acre, (100 feet of silt fence per 10,000 square feet of DSA).
- Slope of area draining to silt fence should be less than 1:1 (H:V).
- Silt fences must be placed parallel to the slope contour.
- Silt fences rely on temporary ponding to encourage sediment deposition and achieve water quality benefits. Limit application to areas where ponding and deposition may occur on the uphill side of the silt fence.
- Temporary silt fence fabrics generally have life spans ranging between 5 and 8 months. Projects with longer durations may require replacing silt fence fabric.
- Silt fences constructed across concentrated flows are susceptible to washout. Silt fences shall not be installed across concentrated flows.
- For slopes adjacent to water bodies or environmentally sensitive areas (ESA), additional temporary soil stabilization BMPs should be used.
- For any 50-foot section of silt fence, the elevation of the base of the fence may not vary by more than 1/3 of the fence height.
- Install along a level contour to prevent water ponding more than 1.5 feet at any point along the silt fence.
- Join separate sections to form reaches not more than 500 feet without openings. Ensure there are no gaps between posts.

Reinforced Silt Fence

- Temporary reinforced silt fence is typically used in areas affected by high winds. They are also often used on slopes steeper than 2:1 (H:V) that contain a high number of rocks or large dirt clods that tend to dislodge, or where area draining fence contains moderate sediment loads.
- Temporary reinforced silt fence (type 2) may also be used to provide sediment control and delineate ESAs.

Materials

- Silt fence fabric should be a woven or unwoven geosynthetic textile that complies with Section 96-1.02E of the Standard Specifications. The Contractor must submit a certificate of compliance for silt fence fabric in accordance with Standard Specifications Section 6-2.03C.
- Wood posts should be untreated fir, redwood, cedar, or pine lumber. Each silt fence post should be at least 4 feet long, except reinforced silt fence posts, which should be at least 6 feet for Type 1 and 5 feet for Type 2 installations. Posts should be free from decay, splits, or cracks longer than the thickness of the post or other defects that would weaken the posts and cause the posts to be structurally unsuitable. Steel posts may be used as well. Posts should comply with the requirements in Standard Specifications sections 16-2.03B and 13-10.02C.
- Anchors may be used. Anchors consist of a number 4 steel reinforcing bar. End protection shall be provided for any exposed bar reinforcement.

- Staples used to fasten the fence fabric to the posts and to join adjacent silt fence sections shall be U-shaped and have 1/2-inch legs and a 1-inch crown. Staples should be 1/16-inches in diameter. At least four staples should be installed on each silt fence post for adequate fastening, with a maximum of 8 inches between each staple.

Installation

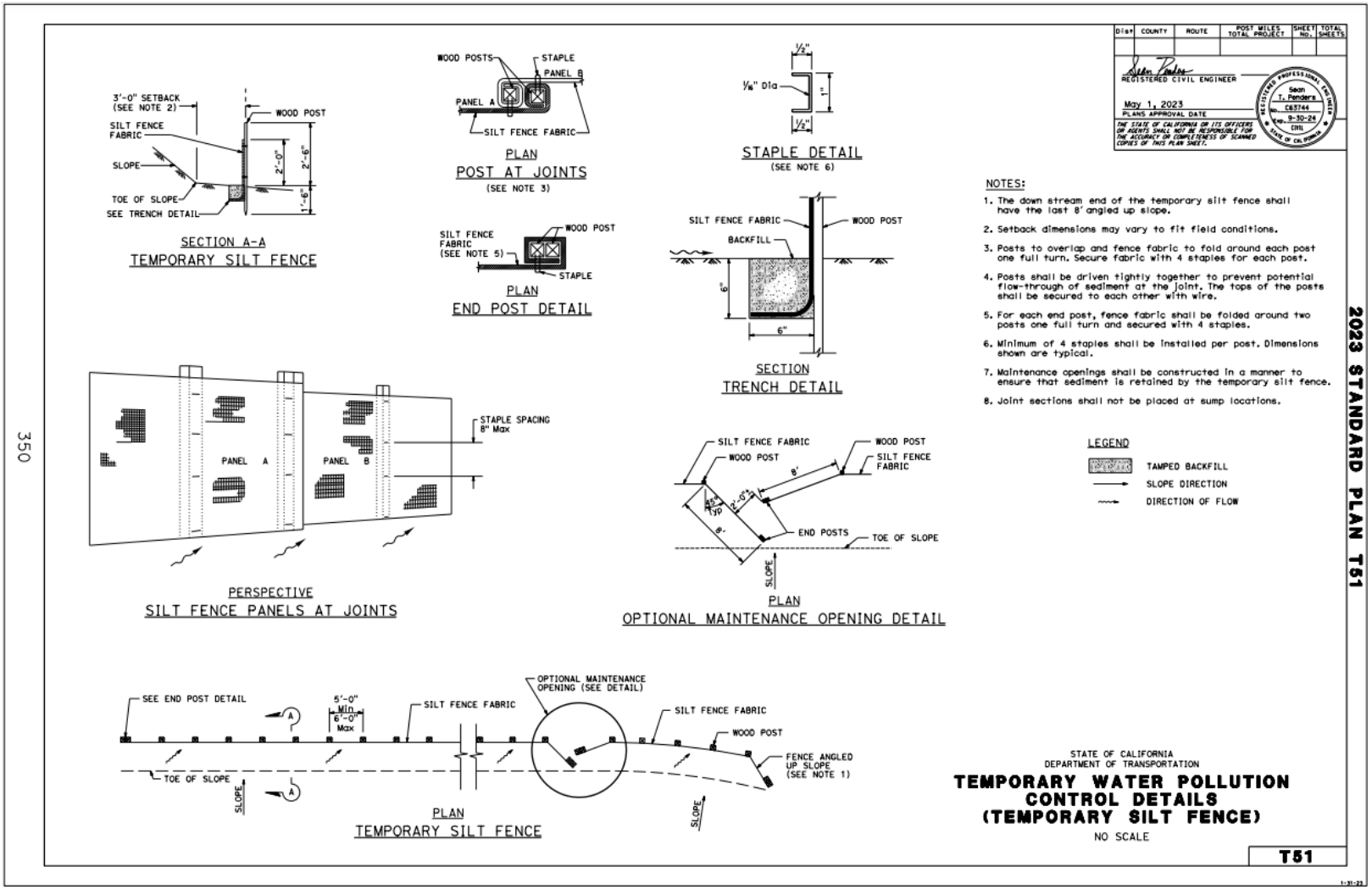
- Install in accordance with pages 5 and 6 of Standard Plans T51 “Temporary Silt Fence” and T60 “Temporary Reinforced Silt Fence”.
- Generally, silt fences should be used in conjunction with soil stabilization source controls up slope to provide effective erosion and sediment control.
- Excavate a trench that is 6 inches deep and 6 inches wide with a length consistent with the project design plans. Place the bottom of the silt fence fabric in the trench. Backfill the trench with soil over the base of the silt fence fabric. Compact the backfill soil by hand or mechanical methods.
- Construct the length of each reach so that the change in base elevation along any 50-foot reach does not exceed 1/3 the height of the barrier; in no case should any reach of temporary silt fence exceed 500 feet in length.
- Construct silt fences with a set-back of at least 3 feet from the toe of a slope. Where a silt fence is determined to be not practical with a 3-foot set-back from the toe due to specific site conditions, the silt fence may be constructed at the toe of the slope, but as far from the toe of the slope as practical.

Maintenance and Inspection

- Repair undercut silt fences.
- Repair or replace split, torn, slumping, or weathered fabric.
- Inspect silt fence when rain is forecasted. Perform necessary maintenance, or maintenance required by the Engineer.
- Inspect silt fence following rain events. Perform maintenance as necessary, or as required by the Engineer.
- Maintain silt fences to provide an adequate sediment-holding capacity. Sediment should be removed when the sediment accumulation reaches 1/3 of the barrier height.
- Silt fences that are damaged and become unsuitable for the intended purpose should be removed from the site of work, disposed outside the highway right of way in conformance with the Standard Specifications, and replaced with new silt fence barriers.
- Holes, depressions, or other ground disturbance caused by the removal of the temporary silt fences should be backfilled and repaired in conformance with the Standard Specifications.
- Remove silt fence when no longer needed. Fill and compact post holes and anchorage trench, remove sediment accumulation, and grade fence alignment to blend with adjacent ground.
- Silt fence placement is to be shown in the WPCDs along with other BMPs.

SWPPP or WPCP

- Temporary silt fence or reinforced silt fence must be discussed in Section 600.1.3 of the SWPPP or Section 30.2.2 of the WPCP.



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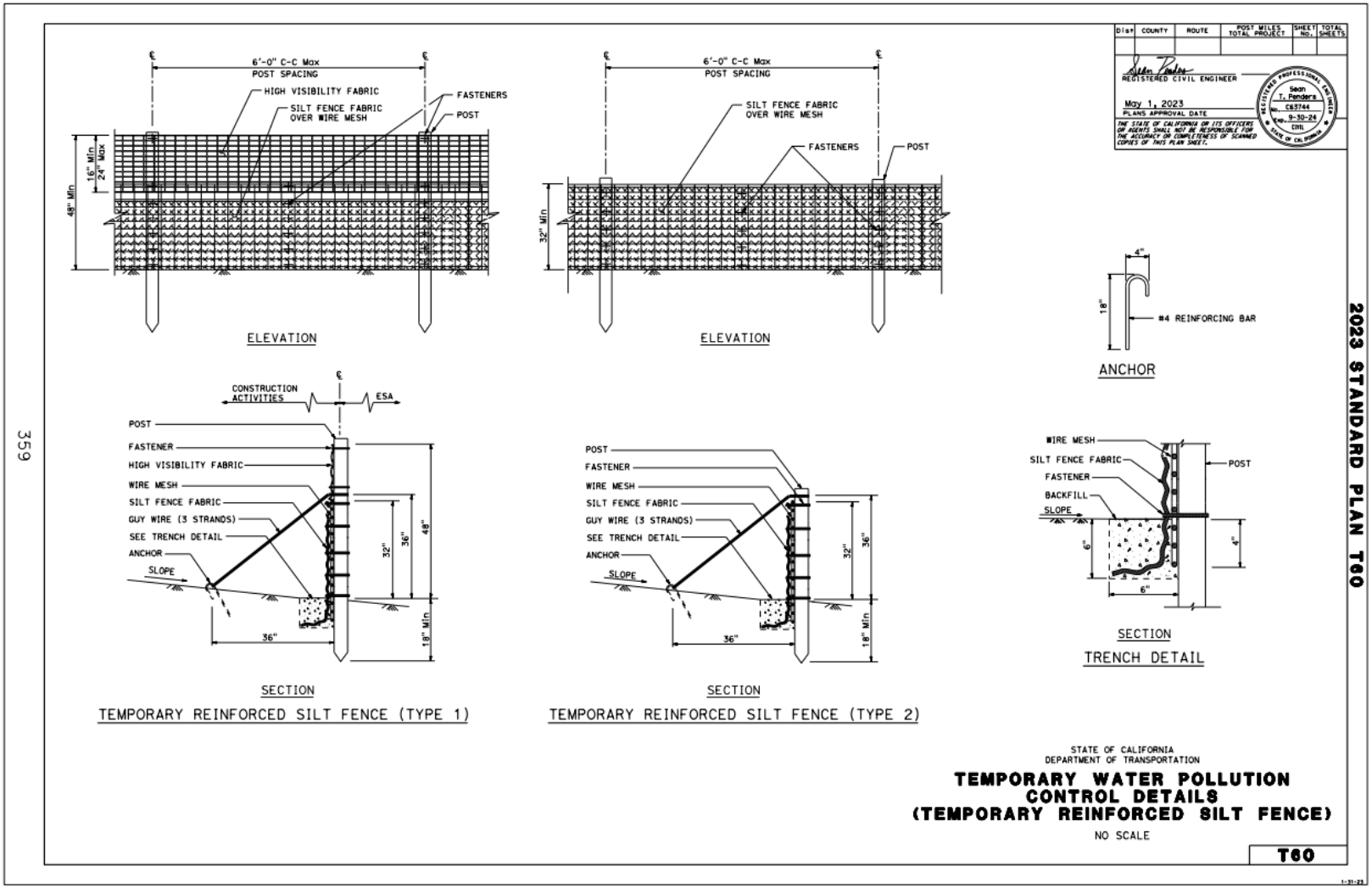

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Temporary Fiber Rolls

Standard Symbol

BMP Objectives	
Soil Stabilization	☑
Sediment Control	☑
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☐
Materials and Waste Management	☐

Definition and Purpose

A temporary fiber roll consists of wood excelsior, rice or wheat straw, or coconut fibers that are rolled or bound into a tight tubular roll and placed on the toe and face of slopes to intercept runoff, reduce its flow velocity, release the runoff as sheet flow, and remove sediment. Temporary fiber rolls may also be used for drainage inlet protection and as check dams under certain situations.

Appropriate Applications

- This BMP may be implemented on a project-by-project basis with other BMPs when determined necessary and feasible by the Resident Engineer (RE).
- Fiber rolls may be applied as both temporary and permanent sediment controls (after receiving approval from Division of Maintenance).
- Fiber rolls may be used as check dams in unlined ditches or as temporary drainage inlet protection down-slope of exposed soil areas.
- Along the toe, top, face, and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.
- Below the toe of exposed and erodible slopes.
- Around temporary stockpiles.
- Along the perimeter of a project.

Limitations

- Runoff and erosion may occur if fiber roll is not adequately trenched in.
- Fiber rolls at the toe of slopes greater than 5:1 (H:V) may require the use of a large sediment barrier as specified in Standard Specifications Section 13 – 10.03D Temporary Large Sediment

Barrier or installations achieving the same protection (i.e., stacked smaller-diameter fiber rolls, etc.).

- Difficult to move once saturated.
- Fiber rolls could be transported by high flows if not properly staked and/or trenched in.
- Fiber rolls have limited sediment capture zone.
- Do not use fiber rolls on slopes subject to creep, slumping, or landslide.
- Plastic netting should not be used.
- Plastic netting is only allowed where fiber rolls will be used for short durations and will be removed (requires RE approval).

Standards and Specifications

Materials

- Fiber rolls must be pre-manufactured and filled with weed-free rice or wheat straw, wood excelsior, or coconut fiber. Fiber rolls must be covered with biodegradable jute, sisal, or coir fiber netting secured tightly at each end.
- Fiber rolls must have a minimum functional longevity of 1 year.
- Fiber rolls must be:
  - 8 to 10 inches in diameter and at least 1.1 pounds per foot (lb/ft)
  - 10 to 12 inches in diameter and at least 3 lb/ft
- Large sediment barriers are a subset of fiber rolls. Large sediment barriers must be:
  - 18 to 22 inches in diameter
  - At least 8 feet in length
  - At least 6.5 lb/ft
- Fiber rolls used within the jurisdiction of the Lahontan Regional Water Quality Control Board must be made entirely of biodegradable materials if the project is near an environmentally sensitive area, are intended to be left in place after construction is completed, or regulatory permits prohibit the use of non-photo/biodegradable fiber rolls.
- Submit a Certificate of Compliance for fiber rolls.
- Rope to fasten fiber rolls must be 1/4 inches in diameter and biodegradable, such as sisal or manila.
- Wood stakes must be untreated fir, redwood, cedar, or pine and cut from sound timber. The ends must be pointed for driving into the ground. Notched stakes must be at least 1 by 2 by 24 inches in size. Stakes without notches must be at least 1 by 1 by 24 inches.

Typical Temporary Fiber Roll Installation

- Before installing fiber roll, remove obstructions from the ground, including rocks, clods, and debris greater than 1 inch in diameter.
- For any 20-foot section of fiber roll, prevent the fiber roll from varying more than 5 percent from level.
- Use the following spacing unless otherwise noted on the project plans or special provisions:
  - 10 feet apart for slopes steeper than 2:1 (H:V)
  - 15 feet apart for slopes from 2:1 to 4:1 (H:V)
  - 20 feet apart for slopes from 4:1 to 10:1 (H:V)
  - 50 feet apart for slopes flatter than 10:1 (H:V)
- For Type 1 installations:
  - Place in a furrow that is from 2 to 4 inches deep.
  - Fasten with wood stakes every 4 feet along the length of the fiber roll.
  - Fasten the ends of the fiber roll by placing a stake 6 inches from the end of the roll.
  - Drive the stakes into the soil so the top of the stake is less than 2 inches above the top of the fiber roll.
- For Type 2 installations:
  - Fasten with notched wood stakes and rope.
  - Drive stakes into the soil until the notch is even with the top of the fiber roll.
  - Lace the rope between stakes and over the fiber roll. Knot the rope at each stake.
  - Tighten the fiber roll to the surface of the slope by driving the stakes further into the soil.
- If more than one fiber roll is placed in a row, the rolls should overlap, not abut. Stagger overlapping joints in adjacent rows by 5 to 10 feet.

Typical Large Sediment Barrier Installation

- Place a single row of fiber rolls end-to-end approximately parallel with the slope contour. For any 20-foot section of fiber roll, do not allow the fiber roll to vary by more than 5 percent from level.
- Place the fiber rolls in a furrow that is from 6 to 8 inches deep.
- Secure the fiber rolls with wood stakes 4 feet apart.
- Place a stake 18 inches from each end of each fiber roll.
- Drive the stakes into the soil such that the top of the stakes are less than 2 inches above the top of the fiber rolls.
- Angle the last 6 feet upslope at the downhill end of the run.

Removal

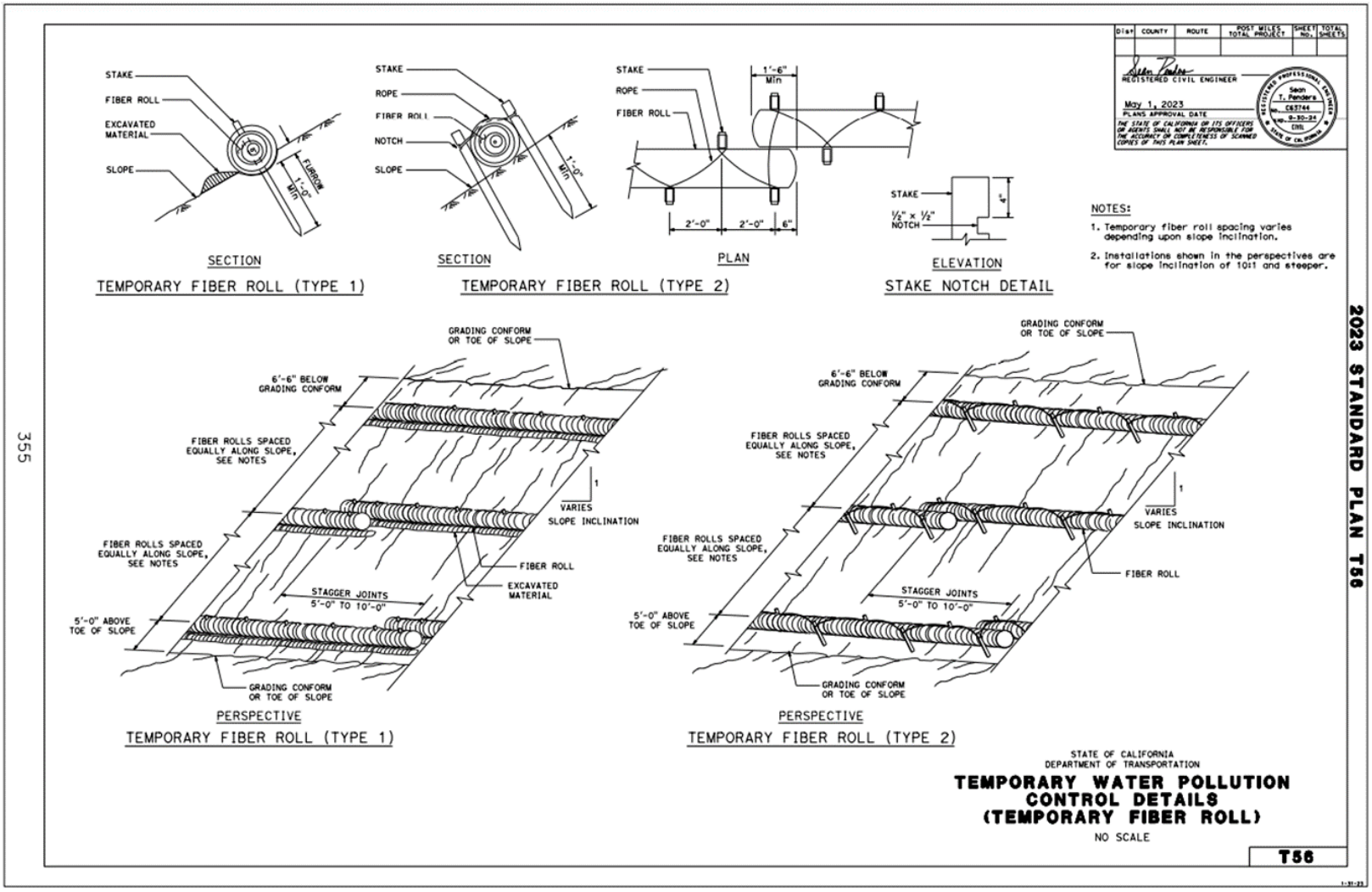
- For permanent installations, do not remove fiber rolls. Fiber rolls will degrade over time, while underlying soils are stabilized by other BMPs.
- For temporary installations, remove fiber rolls, collect and dispose sediment accumulation, and fill and compact holes, trenches, depressions or any other ground disturbance to blend with adjacent ground.

Maintenance and Inspection

- Remove sediment from behind the fiber roll if sediment is 1/3 of fiber roll height above ground.
- Repair or adjust the fiber roll if rills or other evidence of concentrated runoff occur beneath the fiber roll.
- Repair or replace the fiber roll if they become split, torn, or unraveled.
- Add stakes if the fiber roll slumps or sags.
- Replace broken or split wood stakes.
- Remove sediment deposits, trash, and debris from fiber roll as needed. If removed sediment is deposited within project limits, it must be stabilized and not exposed to erosion by wind or water.
- Perform maintenance as needed or as required by the RE or by Construction General Permit or the Lake Tahoe Hydrologic Unit Construction General Permit requirements.
- Inspect fiber rolls before and following rainfall events and a least daily during prolonged rainfall. Perform maintenance as needed or as required by the RE.
- Maintain fiber rolls to provide an adequate sediment holding capacity and runoff velocity reduction.
- Fiber roll placement must be shown on the WPCDs.

SWPPP or WPCP

- Fiber rolls must be discussed in Sections 600.1.1 and 600.1.3 of the SWPPP or Section 30.2.2 of the WPCP and the respective WPCDs.



DCN: ECC-1205-4397-0003.03

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER

May 1, 2023
PLANS APPROVAL DATE

Sean T. Penders
C65744
Exp. 9-30-24
CIVIL

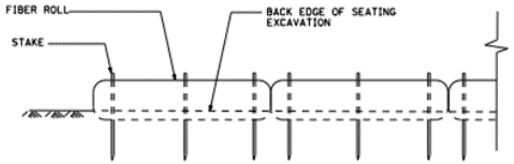
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

365

2023 STANDARD PLAN T66

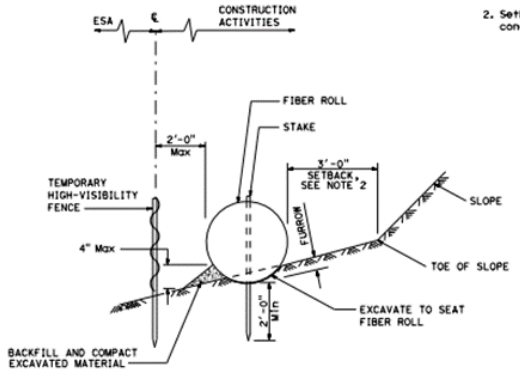
NOTES:

1. Temporary high-visibility fence shown for reference purposes only.
2. Setback dimension may vary according to field conditions or as designated on plans.



FRONT ELEVATION

TEMPORARY LARGE SEDIMENT BARRIER



SECTION

PLACEMENT DETAIL FOR TEMPORARY HIGH-VISIBILITY FENCE USED WITH TEMPORARY LARGE SEDIMENT BARRIER

See Note 1

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY LARGE SEDIMENT BARRIER)

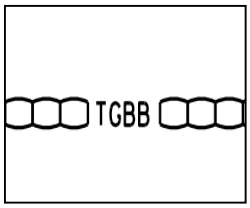
NO SCALE

T66

1-31-23

DCN: ECC-1205-4397-0003.03

Temporary Gravel Bag/Earthen Berm



Standard Symbol

BMP Objectives	
Soil Stabilization	☐
Sediment Control	☑
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☐
Materials and Waste Management	☐

Definition and Purpose

A temporary gravel bag berm consists of a single row of gravel bags that are installed end to end to form a barrier across a slope to intercept runoff, reduce its flow velocity, release the runoff as sheet flow, and provide some sediment removal. Gravel bags can be used where flows are moderately concentrated, such as ditches, swales, and storm drain inlets (see SC-10, “Drainage Inlet Protection”) to divert and/or detain flows.

Temporary earthen berms are linear sediment barriers designed to intercept sheet flows. Water gets impounded upstream of the earthen berm, which allows sediment to settle out and release runoff as sheet flow, preventing erosion.

Appropriate Applications

BMP may be implemented on a project-by-project basis with other BMPs when determined necessary and feasible by the Resident Engineer (RE).

- Along streams and channels.
- Below the toe of exposed and erodible slopes.
- Down slope of exposed soil areas.
- Around stockpiles.
- Across channels to serve as a barrier for utility trenches or provide a temporary channel crossing for construction equipment to reduce stream impacts.
- Parallel to a roadway to keep sediment off paved areas.
- At the top of slopes to divert roadway runoff away from disturbed slopes.
- Along the perimeter of a site.

- To divert or direct flow or create a temporary sediment basin.
- During construction activities in stream beds when the contributing drainage area is less than 5 acres.
- When extended construction period limits the use of either silt fences or straw bale barriers.
- When site conditions or construction sequencing require adjustments or relocation of the barrier to meet changing field conditions and needs during construction.
- At grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.

Limitations

- Degraded gravel bags may rupture when removed, spilling contents.
- Installation can be labor intensive.
- Limited durability for long-term projects.
- When used to detain concentrated flows, maintenance requirements increase.
- Earthen berms should not be used to intercept flows with moderate to high velocities that may erode the earthen berm.
- Earthen berms are susceptible to erosion from concentrated flows.

Standards and Specifications

Materials

- **Bag Material:** The gravel bag material must comply with Section 96-1.02F Gravel-Filled Bag of the Standard Specifications.
- **Bag Size:** Each gravel-filled bag should be 24 to 32 inches long, 16 to 20 inches wide, and 3 inches thick. Alternative bag sizes must be submitted to the RE for approval prior to deployment.
- **Gravel:** Fill material should be between 3/8 and 3/4 inches in diameter and be clean and free from clay balls, organic matter, and other deleterious materials. The opening of gravel-filled bags must be secured such that gravel does not escape. Gravel-filled bags weigh between 30 and 50 pounds. Fill material is subject to approval by the RE.
- Earthen berms must comply with Standard Specifications Section 13-10.03I

Installation

- When used as a linear control for sediment removal:
  - Install along a level contour.
  - Place gravel-filled bags end to end to eliminate gaps in a gravel-bag berm.
  - Angle the last 6 feet upslope at the downhill end of the run.
  - Stack the bags such that the upper row overlaps the joints in the lower row.

  - Add layers of gravel-filled bags to increase the height of a temporary gravel-bag berm if needed. Stack the bags in the upper row to overlap the joints in the lower row. Stabilize the rows by adding rows of bags in the lower layers.

- Generally, gravel-bag barriers can be used in conjunction with temporary soil stabilization controls up slope.
- Construct gravel-bag barriers with a setback from the toe of a slope. Where it is determined to be not practicable due to specific site conditions, the gravel-bag barrier may be constructed at the toe of the slope but be constructed as far from the slope toe as practicable.
- Refer to SC-4, “Temporary Check Dams” when used for concentrated flows.
- Submit a Certificate of Compliance for gravel-filled bag material.
- Earthen berms are constructed with either native soil or an alternative selected material.
- Earthen berms must be at least 8 inches high and 36 inches wide.
- Earthen berms must be compacted, either manually or mechanically.

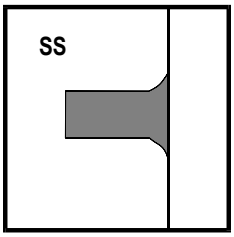
Maintenance and Inspection

- Gravel-bag/earthen berms must be inspected in accordance with CGP requirements for the associated project type and risk level, or with the LTCGP. At a minimum, BMPs must be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Reshape or replace gravel bags as needed, or as directed by the RE.
- Repair washouts or other damages as needed, or as directed by the RE.
- Inspect gravel-bag/earthen berms for sediment accumulations and remove sediment when accumulation reaches one-third of the berm height. Removed sediment can be incorporated in the project at locations designated by the RE or disposed outside the highway right of way in conformance with the Standard Specifications.
- Remove gravel-bag berms when no longer needed. Remove sediment accumulations and clean, re-grade, and stabilize the area.
- If using earthen berm, ensure soil remains compacted through the duration of the berm.
- Maintain earthen berms to provide sediment-holding capacity and to reduce concentrated flow velocities.
- Repair the berm if rills or other evidence of concentrated runoff has overtopped it.
- Gravel bag/Earthen berm placement must be shown on the WPCDs and reflect site conditions.

SWPPP or WPCP

- Gravel bag/Earthen berm must be discussed in Sections 600.1.1 and 600.1.3 of the SWPPP or Section 30.2.2 of the WPCP and shown in the respective WPCDs.

Street Sweeping



Standard Symbol

BMP Objectives	
Soil Stabilization	☐
Sediment Control	☑
Tracking Control	☑
Wind Erosion Control	☑
Non-Stormwater Management	☐
Materials and Waste Management	☐

Definition and Purpose

BMPs to remove tracked sediment to prevent the sediment from entering a storm drain or receiving waters.

Appropriate Applications

These practices are implemented anywhere sediment is tracked from the project site onto public or private paved roads, typically at jobsite entrances and exits.

Limitations

Sweeping and vacuuming may not be effective when soil is wet or muddy.

Standards and Specifications

General Requirements

- Sweep by hand or mechanical methods, such as vacuuming. Kick brooms or sweeper attachments may not be used.
- At least one street sweeper in good working order must be at the job site at all times when street sweeping work is required.
- Use one of the following types of street sweepers:
  - Mechanical sweeper followed by a vacuum-assisted sweeper
  - Vacuum-assisted, dry, waterless, sweeper
  - Regenerative-air sweeper

- Submit the number and type of street sweepers that will be used on the project for each activity at least 5 business days before starting the activities listed above. Keep and submit street sweeping activity records that include sweeping times, locations, and the quantity of material collected.
- Sweep paved roads at construction entrance and exit locations and on-site paved areas:
  - During clearing and grubbing, earthwork, trenching, and pavement-structure construction activities.
  - When vehicles are entering and leaving the job site.
  - After soil-disturbing activities.
  - After observing off-site tracking of material.
- Sweep within 1 hour if sediment or debris is observed during the activities described above that require sweeping.
- Sweep within 24 hours if sediment or debris is observed during activities that do not require sweeping.
- Keep dust to a minimum during street sweeping activities. Use water for dust control or a vacuum whenever dust generation is excessive or sediment pickup is ineffective. Refer to WE-1 for wind erosion control BMPs.
- Remove collected material, including sediment, from paved shoulders, drainage inlets, curbs and dikes, and other drainage areas.
- After sweeping is finished, collected material may be stockpiled. Stockpiles protection is included in WM-03 Stockpile Management. If not mixed with debris, trash, or potentially hazardous objects, consider incorporating the removed sediment back into the project if approved by the Resident Engineer. Otherwise, dispose stockpiled material at least once per week according to Standard Specifications Section 14-10.
- Street sweeping does not void the requirements for residue collection included in other work activities, such as grooving, grinding, or asphalt concrete planning.

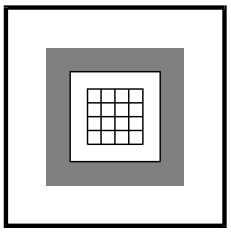
Maintenance and Inspection

- Inspect potential sediment tracking locations daily.
- Monitor and inspect tracking control BMPs such as TC-1, “Temporary Construction Entrance” to reduce sediment accumulation on roads.
- Be careful not to sweep up any unknown substance or any object that may be hazardous.
- Adjust brooms frequently; maximize efficiency of sweeping operations.
- Sweeper material must be disposed in compliance with waste regulations.

SWPPP or WPCP

- Street sweeping must be discussed in Section 600.1.3 of the SWPPP or Sections 30.2.2 and 30.2.3 of the WPCP.

Temporary Drainage Inlet Protection



Standard Symbol

BMP Objectives

Soil Stabilization	☐
Sediment Control	☑
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☐
Materials and Waste Management	☐

Definition and Purpose

Temporary drainage inlet protection consists of devices used at storm drain inlets that detain and/or filter sediment-laden runoff prior to discharge into storm drainage systems. This is achieved by allowing sediment to settle, and/or filtering sediment upstream of a linear sediment barrier.

Appropriate Applications

- Where ponding will not encroach into highway traffic.
- Where sediment-laden surface runoff may enter an inlet.
- Where disturbed drainage areas have not yet been permanently stabilized.
- Where the drainage area is 1 acre or less.
- Can be used year-round.

Limitations

- Requires an adequate area for water to pond without encroaching upon traveled way; it should not present an obstacle to oncoming traffic.
- May require other methods of temporary protection to prevent sediment-laden stormwater and non-stormwater discharges from entering the storm drain system.
- Sediment removal may be difficult in high-flow conditions or if runoff is heavily sediment laden. If high-flow conditions are expected, use other on-site sediment trapping techniques, such as SC-4 – “Temporary Check Dams,” in conjunction with temporary drainage inlet protection.
- Frequent maintenance is required.

- Silt fence inlet protection is appropriate in open areas that are subject to sheet flow and for flows not exceeding 0.5 cubic feet per second (cfs).
- Gravel bag barriers for inlet protection are applicable when sheet flows or concentrated flows exceed 0.5 cfs and it is necessary to allow overtopping to prevent flooding.
- Fiber rolls and foam barriers are not appropriate for locations where they cannot be properly anchored to the surface.
- Excavated drop inlet sediment traps are appropriate where relatively heavy flows are expected and overflow capability is needed.
- For drainage areas larger than 1 acre, runoff should be routed to a sediment trapping device designed for larger flows. See BMPs SC-2, “Sediment/Desilting Basin” and SC-3, “Sediment Trap/Curb Cutback.”

Standards and Specifications

General Requirements

- Refer to Standard Specifications Section 13-6.03C for “Temporary Drainage Inlet Protection” and 13-6.03F for “Rigid Plastic Barriers.”
- Identify existing and/or planned storm drain inlets that have the potential to receive sediment-laden surface runoff. Determine if storm drain inlet protection is needed, and which method or combination of methods to use. Update inlet protection as site conditions change.
- Use a linear sediment barrier to redirect runoff and control ponding to prevent ponding from encroaching on the traveled way or overtopping the curb or dike.
- Prior to installation, clear the area around each inlet of obstructions, including rocks, clods, and debris greater than 1 inch in diameter.
- Install linear sediment barriers upstream of the inlet and parallel with the curb, dike, or flow line to keep sediment from entering the inlet.
- Remove accumulated sediment according to maintenance and inspection recommendations. Accumulated sediment may be disposed outside the highway right-of-way in conformance with Standard Specifications Section 14-10.

Type 1 – Silt Fence

- This method should be used for drain inlets that require protection in areas where finished grade is established and erosion control seeding has been applied or is pending. The silt fence (Type 1) protection is illustrated on page 6. Do not place filter fabric underneath the inlet grate since the collected sediment may fall into the drain inlet when the fabric is removed or replaced.

Type 2 – Excavated Drop Inlet Sediment Trap

- This method may be used for drainage inlets that require protection in areas that have been cleared and grubbed, and where exposed soil areas are subject to grading. The excavated drop inlet sediment trap (Type 2) is illustrated on page 7. Construction is similar to a temporary silt fence; see BMP SC-1, “Temporary Silt Fence.” Size the excavated trap to provide a minimum storage capacity calculated at the rate of 67 cubic yards per acre of drainage area.

Type 3A – Gravel Bag Berm for Combined Inlets

- This method may be used for drain inlets surrounded by asphalt concrete (AC) or paved surfaces. The gravel-bag berm for combined inlets (Type 3A) is illustrated on pages 8-9. Flow from a severe storm must not overtop the curb. In areas of high clay and silts, use filter fabric and gravel as additional filter media. Construct gravel bags in accordance with BMP SC-6, “Temporary Gravel Bag/Earthen Berm.” Gravel bags are used due to their high permeability.

Type 3B – Gravel Bag Berm for Grate Inlets

- This method may be used for drainage inlets surrounded by AC or paved surfaces. The gravel bag berm for grate inlets (Type 3B) is illustrated on page 10. In areas of high clay and silts, use filter fabric and gravel as additional filter media. Place gravel bags in accordance with BMP SC-6, “Temporary Gravel Temporary Bag/Earthen Berm.” Gravel bags are used due to their high permeability.

Type 4A – Flexible Sediment Barrier for Grate Inlets

- This method may be used for drainage inlets that require protection in areas that have been cleared and grubbed, and where exposed soil areas are subject to grading. Flexible sediment barrier for grate inlets (Type 4A) is placed around the inlet and keyed and anchored to the surface. They are intended for use as inlet protection where the area around the inlet is unpaved and the foam barrier or fiber roll can be secured to the surface. Place fiber rolls over the erosion control blanket. Resident Engineer (RE) or appropriate licensed professional approval is required.

Type 4B – Flexible Sediment Barrier for Combined Inlets

- This method may be used for drainage inlets that require protection in areas that have been cleared and grubbed, and where exposed soil areas are subject to grading. Flexible sediment barrier for combined inlets (Type 4B) is placed in rows upstream of the inlet and along the curb or dike. The barriers are keyed and anchored to the surface. They are intended for use as inlet protection where the area around the inlet is unpaved and the foam barrier or fiber roll can be secured to the surface. Place the barrier to provide a tight joint with the curb or dike. Cut the cover fabric or jacket to ensure a tight fit. RE approval is required.

Type 5 – Sediment Filter Bag

- This method may be used in areas with vehicle and equipment traffic that could damage aboveground inlet protection devices. To install the sediment filter bags, (1) remove the drainage inlet grate, (2) place the sediment filter bag in the opening, and (3) replace the grate to secure the sediment filter bag in place.

Type 6A – Catch Basin with Grate

- Catch basin with grate (Type 6A) is shown on page 16. Cover grate inlet with rigid plastic barrier and secure on each end with gravel-filled bags. If using a rigid sediment barrier and the grated inlet does not have a curb opening, placed the barrier using a gasket to prevent runoff from flowing under the barrier. Secure the barrier to the pavement with nails and adhesive, gavel-filled bags, or a combination of both.

Type 6B – Curb Inlet without Grate

- Curb Inlet without Grate (Type 6B). Place the flexible sediment barrier across the curb inlet opening and secure with gravel-filled bags.

Maintenance and Inspection

General Requirements

- Inspect all drainage inlet protection devices before and after every rainfall event and weekly year-round. During extended rainfall events, inspect inlet protection devices at least once every 24 hours.
- Inspect the storm drain inlet after severe storms to check for bypassed material.
- Remove all drainage inlet protection devices within 30 days after the site is stabilized or when the inlet protection is no longer needed.
  - Bring the disturbed area to final grade and smooth and compact it. Appropriately stabilize all bare areas around the inlet.
  - Clean and re-grade area around the inlet and clean the inside of the storm drain inlet, as it must be free of sediment and debris at the time of final inspection.

Type 1 – Filter Fabric Fence

- Make sure the stakes are securely driven in the ground and are structurally sound (i.e., not bent, cracked, or splintered and are reasonably perpendicular to the ground). Replace damaged stakes.
- Replace or clean the fabric when it becomes clogged with sediment. Make sure the fabric does not have any holes or tears. Repair or replace fabric as needed or as directed by the RE.
- At a minimum, remove the sediment behind the fabric fence when accumulation reaches one-third the height of the fence or barrier height.

Type 2 – Excavated Drop Inlet Sediment Trap

- Remove sediment from basin when its volume has been reduced by one-half.

Type 3A – Gravel-bag Berm for Combined Inlets

- Inspect bags for holes, gashes, and snags.
- Check gravel bags for proper arrangement and displacement. Remove the sediment behind the barrier when it reaches one-third the height of the barrier.

Type 3B – Gravel-bag Berm for Grate Inlets

- Inspect bags for holes, gashes, and snags.
- Check gravel bags for proper arrangement and displacement. Remove the sediment behind the barrier when it reaches one-third the height of the barrier.

Type 4A – Flexible Sediment Barrier for Grate Inlets

- Check flexible sediment barrier for proper arrangement and displacement. Remove the sediment behind the barrier when it reaches one-third the height of the barrier.

Type 4B – Flexible Sediment Barrier for Combined Inlets

- Check flexible sediment barrier for proper arrangement and displacement. Remove the sediment behind the barrier when it reaches one-third the height of the barrier.

Type 5 – Sediment Filter Bag

- Change sediment filter bag carefully, ensuring captured sediment does not spill into the drainage inlet.

Type 6A – Catch Basin with Grate

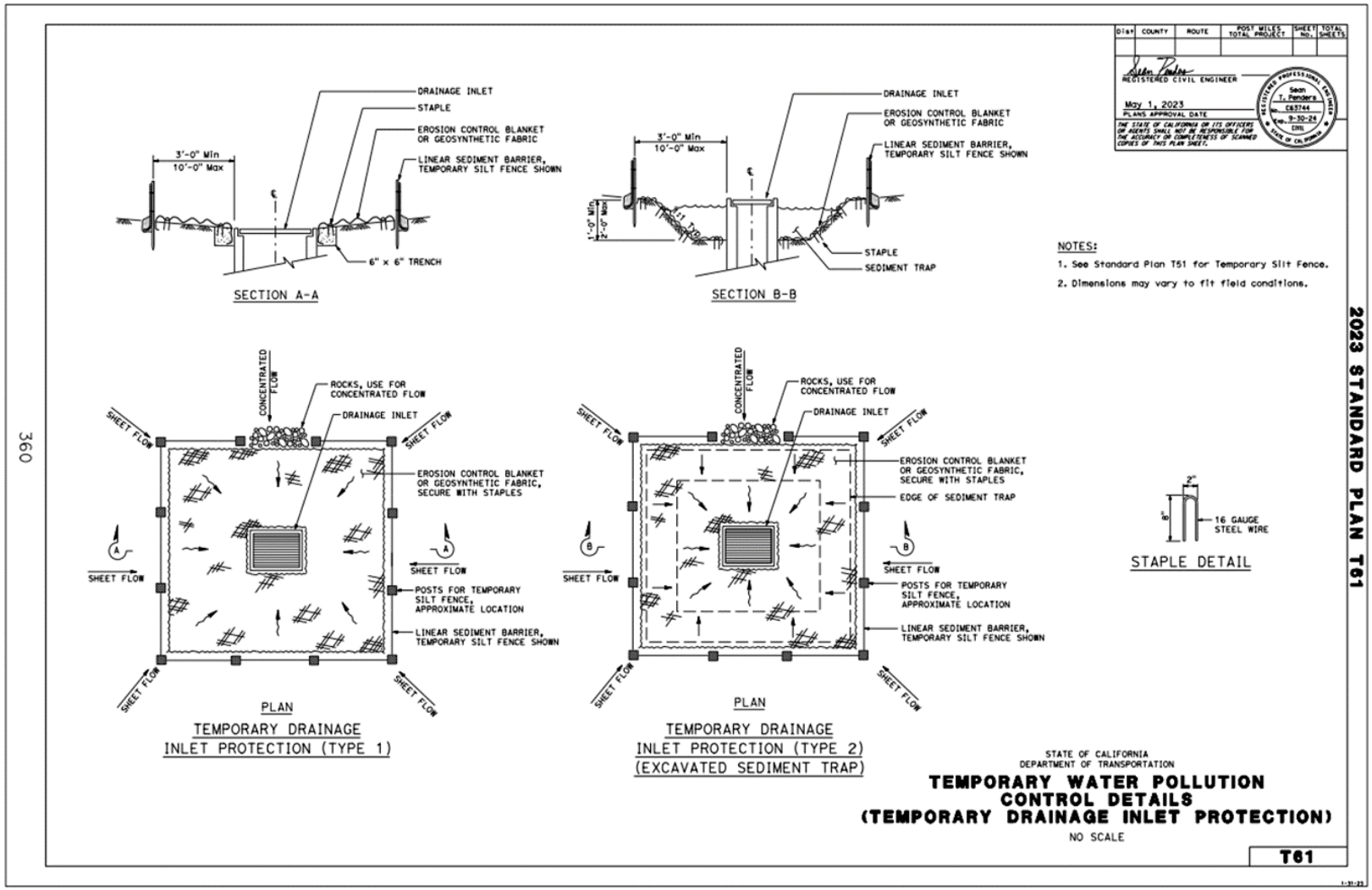
- Check barrier and gravel-filled bags for proper arrangement and displacement. Routinely remove accumulated sediment.

Type 6B – Curb Inlet without Grate

- Check barrier and gravel-filled bags for proper arrangement and displacement.
- Remove the sediment behind the barrier when it reaches one-third the height of the barrier.

SWPPP or WPCP

- Temporary drainage inlet protection must be discussed in Section 600.1.3 of the SWPPP or Section 30.2.2 of the WPCP. Temporary drainage inlet protection placement type must be shown on the WPCDs and reflect site conditions.



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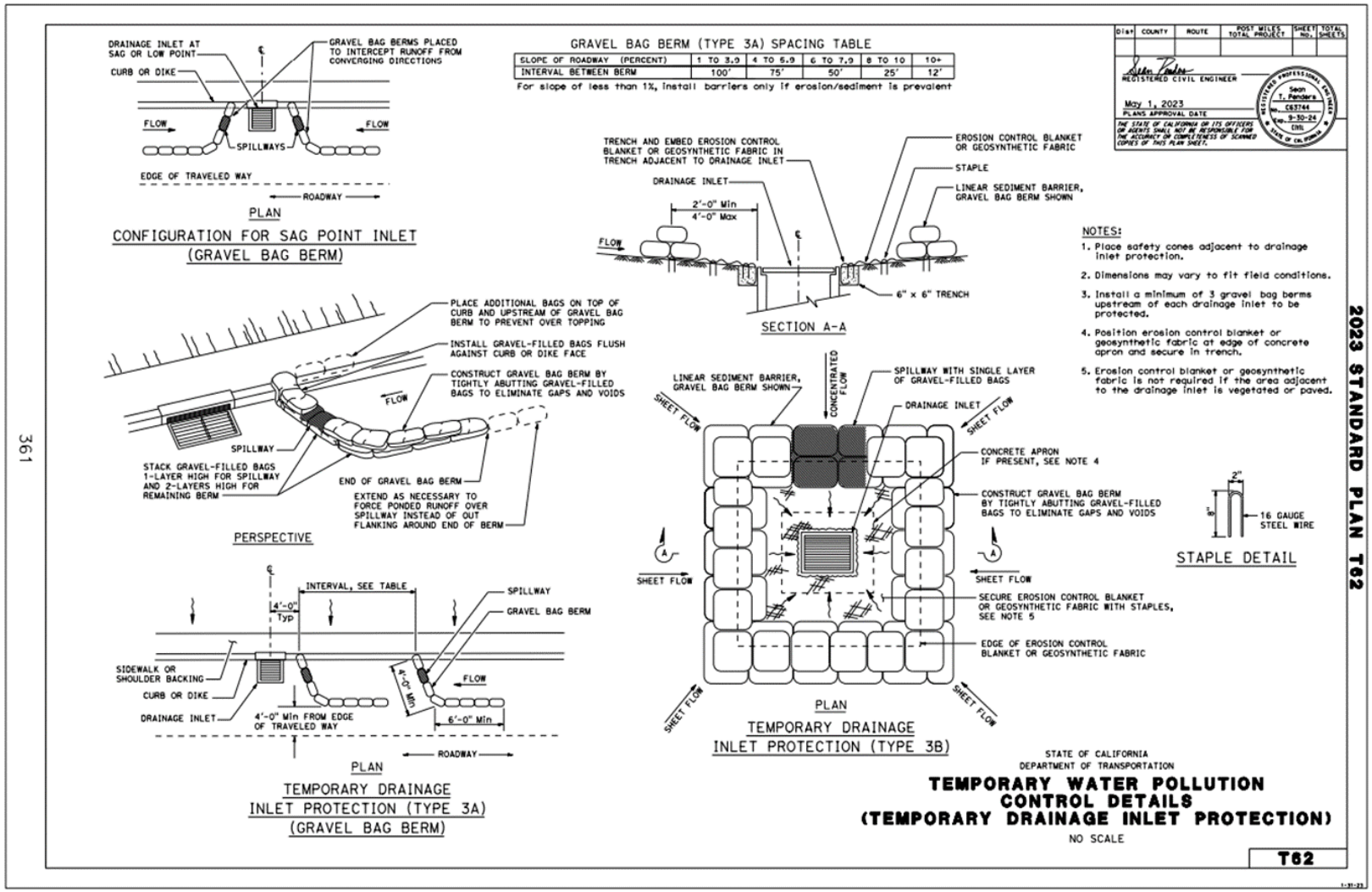
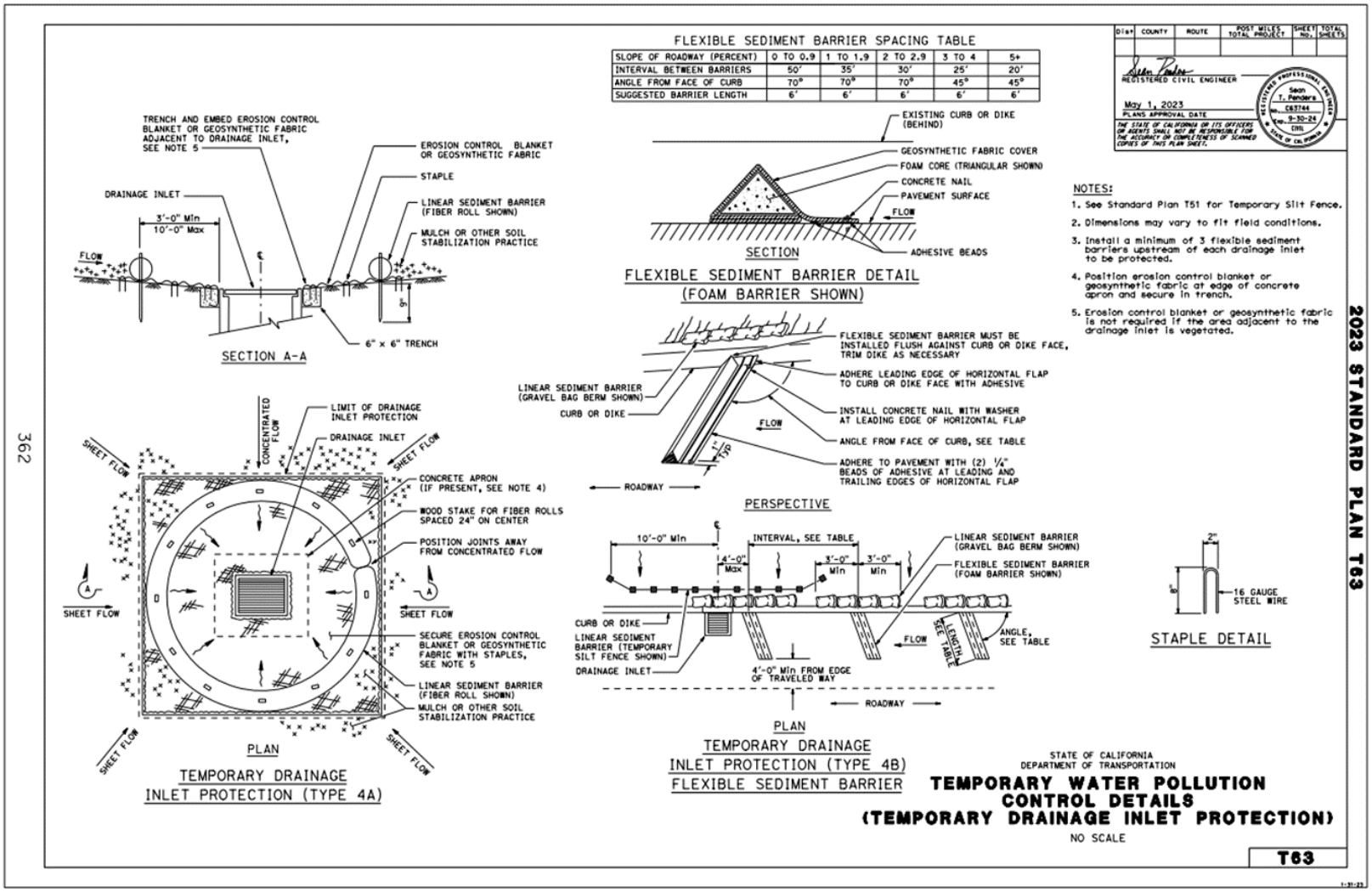
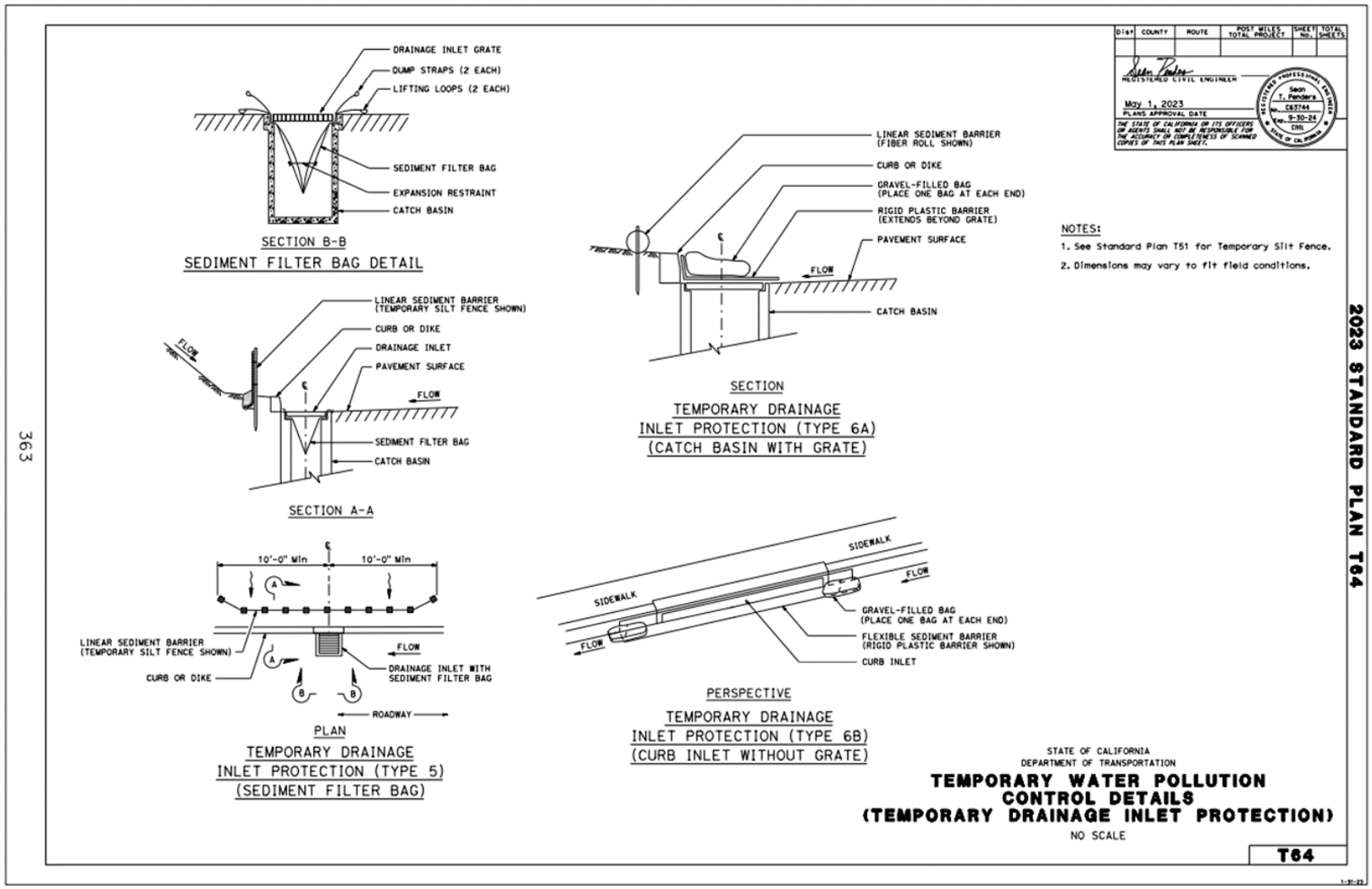

DRAINAGE INLET AT SAG OR LOW POINT
GRAVEL BAG BERMS PLACED TO INTERCEPT RUNOFF FROM CONVERGING DIRECTIONS
CURB OR DIKE
FLOW
FLOW
SPILLWAYS
EDGE OF TRAVELED WAY
ROADWAY
PLAN
CONFIGURATION FOR SAG POINT INLET
(GRAVEL BAG BERM)
GRAVEL BAG BERM (TYPE 3A) SPACING TABLE
SLOPE OF ROADWAY (PERCENT) | 1 TO 3.9 | 4 TO 5.9 | 6 TO 7.9 | 8 TO 10 | 10+
INTERVAL BETWEEN BERM | 100' | 75' | 50' | 25' | 12'
For slope of less than 1%, install barriers only if erosion/sediment is prevalent
TRENCH AND EMBED EROSION CONTROL BLANKET OR GEOSYNTHETIC FABRIC IN TRENCH ADJACENT TO DRAINAGE INLET
EROSION CONTROL BLANKET OR GEOSYNTHETIC FABRIC
STAPLE
LINEAR SEDIMENT BARRIER, GRAVEL BAG BERM SHOWN
DRAINAGE INLET
2'-0" Min
4'-0" Max
FLOW
6" x 6" TRENCH
SECTION A-A
NOTES:
1. Place safety cones adjacent to drainage inlet protection.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 gravel bag berms upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
5. Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated or paved.
PLACE ADDITIONAL BAGS ON TOP OF CURB AND UPSTREAM OF GRAVEL BAG BERM TO PREVENT OVER TOPPING
INSTALL GRAVEL-FILLED BAGS FLUSH AGAINST CURB OR DIKE FACE
CONSTRUCT GRAVEL BAG BERM BY TIGHTLY ABUTTING GRAVEL-FILLED BAGS TO ELIMINATE GAPS AND VOIDS
FLOW
SPILLWAY
STACK GRAVEL-FILLED BAGS 1-LAYER HIGH FOR SPILLWAY AND 2-LAYERS HIGH FOR REMAINING BERM
END OF GRAVEL BAG BERM
EXTEND AS NECESSARY TO FORCE PONDED RUNOFF OVER SPILLWAY INSTEAD OF OUT FLANKING AROUND END OF BERM
PERSPECTIVE
LINEAR SEDIMENT BARRIER, GRAVEL BAG BERM SHOWN
CONCENTRATED FLOW
SPILLWAY WITH SINGLE LAYER OF GRAVEL-FILLED BAGS
DRAINAGE INLET
SHEET FLOW
SHEET FLOW
CONCRETE APRON IF PRESENT, SEE NOTE 4
CONSTRUCT GRAVEL BAG BERM BY TIGHTLY ABUTTING GRAVEL-FILLED BAGS TO ELIMINATE GAPS AND VOIDS
A
A
SHEET FLOW
SHEET FLOW
SECURE EROSION CONTROL BLANKET OR GEOSYNTHETIC FABRIC WITH STAPLES, SEE NOTE 5
EDGE OF EROSION CONTROL BLANKET OR GEOSYNTHETIC FABRIC
SHEET FLOW
SHEET FLOW
PLAN
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3B)
2"
3"
16 GAUGE STEEL WIRE
STAPLE DETAIL
INTERVAL, SEE TABLE
4'-0" Typ
SPILLWAY
GRAVEL BAG BERM
SIDEWALK OR SHOULDER BACKING
CURB OR DIKE
DRAINAGE INLET
4'-0" Min
FLOW
4'-0" Min FROM EDGE OF TRAVELED WAY
6'-0" Min
ROADWAY
PLAN
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3A)
(GRAVEL BAG BERM)
DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS
REGISTERED CIVIL ENGINEER
May 1, 2023
PLANS APPROVAL DATE
Sean T. Penders
No. C63744
Exp. 9-30-24
CIVIL
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS
(TEMPORARY DRAINAGE INLET PROTECTION)
NO SCALE
T62
361
2023 STANDARD PLAN T62

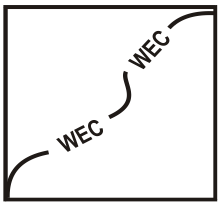


DCN: ECC-1205-4397-0003.03



DCN: ECC-1205-4397-0003.03

Wind Erosion Control



Standard Symbol

BMP Objectives	
Soil Stabilization	☑
Sediment Control	☑
Tracking Control	☐
Wind Erosion Control	☑
Non-Stormwater Management	☐
Materials and Waste Management	☐

Definition and Purpose

- Wind erosion control consists of applying water or other dust palliatives as necessary to prevent or alleviate erosion by the forces of wind. Dust control must be applied in accordance with Caltrans standard practices. Covering small stockpiles or areas is an alternative to applying water or other dust palliatives; see SS-7 for “Temporary Cover and Rolled Erosion Control Products.”
- Must comply with local agencies, such as air quality management districts that require dust control plans or dust control permits, as well as any Clean Air Act requirements.

Appropriate Applications

This practice is generally implemented on all exposed soils subject to wind erosion.

Limitations

- Effectiveness depends on soil, temperature, humidity, and wind velocity.
- Chemically treated subgrades could cause soil to become water repellant, preventing infiltration or the long-term re-vegetation of the site.

Standards and Specifications

Standard Specification Section 10-5 contains general requirements for dust control.

- Effective dust control is accomplished by applying dust palliatives, temporary soil stabilization BMPs, and/or tracking controls, and by managing stockpiles.
- Dust palliatives are covered under Section 18 of the Standard Specifications. Acceptable dust palliatives include water, dust-control binders, and dust suppressants. Dust-control binders must comply with specifications for tackifier. Dust suppressants include petroleum-based organic

product, nonpetroleum-based organic product, hygroscopic product, and synthetic polymer emulsion.

- If a dust suppressant or tackifier is used, submit a Dust Treatment Plan. Submit a Certificate of Compliance for dust suppressants, tackifiers, and fibers.
- Identify and stabilize key access points with the use of tracking control BMPs.
- Minimize the impact of dust by anticipating the direction of prevailing winds.
- Temporary soil stabilization BMPs, such as SS-3, “Temporary Hydraulic Mulch;” SS-4, “Temporary Hydroseed;” SS-5, and “Temporary Soil Binder” also provide wind erosion control benefits.
- Ensure proper implementation of BMPs WM-3, “Stockpile Management,” and SC-7, “Street Sweeping,” as these BMPs provide wind erosion control benefits.
- Ensure that water is applied by means of pressure-type distributors or pipelines equipped with a spray system or hoses and nozzles to ensure even distribution.
- All distribution equipment should be equipped with a positive means of shutoff.
- Chemical dust suppression products could have environmental water quality impacts. Depending on the product and the time of application, water quality sampling for non-visible pollutants should be assessed when a storm event is forecasted.
- Many products are available for chemical or petroleum-based organics stabilization. These products should not create any adverse effects on stormwater, plant life, or groundwater and should meet all applicable regulatory requirements, including inspection, documentation, monitoring, and reporting.
- Unless water is applied by means of pipelines, at least one mobile unit should be available at all times to apply water or dust palliative to the project.
- If reclaimed water is used, the sources and discharge must meet California Department of Health Services water reclamation criteria and the RWQCB requirements. Non-potable water must not be conveyed in tanks or drainpipes that will be used to convey potable water, and there must be no connection between potable and non-potable supplies. Non-potable tanks, pipes, and other conveyances must be marked “NON-POTABLE WATER - DO NOT DRINK.”
- Appendix B of this Manual includes additional information on selecting temporary soil stabilization products that could be used for wind erosion control.

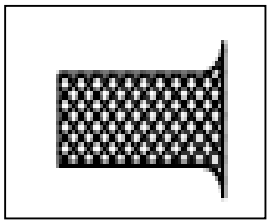
Maintenance and Inspection

- Check areas daily for erosion and visible dust.
- Most water-based dust-control measures require frequent application. Obtain vendor or independent information on longevity of chemical dust suppression.

SWPPP or WPCP

- Wind erosion control must be discussed in Sections 300 and 600.1.5 of the SWPPP or Section 30.2.4 of the WPCP

Temporary Construction Entrance



Standard Symbol

BMP Objectives	
Soil Stabilization	☑
Sediment Control	☐
Tracking Control	☑
Wind Erosion Control	☑
Non-Stormwater Management	☐
Materials and Waste Management	☐

Definition and Purpose

A temporary construction entrance is defined as a point of entrance to a construction site that is stabilized to reduce the tracking of mud and sediment onto public roads by construction vehicles.

Appropriate Applications

- Where dirt or mud can be tracked onto public roads.
- Adjacent to water bodies.
- Where poor soils are encountered.
- Where dust is a problem during dry weather conditions.

Limitations

- Site conditions will dictate design and need.
- Limit the points of entrance/exit to the construction site.
- Limit speed of vehicles to control dust.

Standards and Specifications

General Requirements

- Temporary construction entrance must comply with Standard Specification Section 13-7.03 – “Temporary Construction Roadways and Entrances.”
- Corrugated steel panels must be pressed or shop welded. They should have a slot or hook for coupling the panels together.

- Class 8 RSP fabric shall be used to line a temporary construction entrance/exit. Do not drive on the fabric until the rock is spread. Repair damaged fabric by placing new fabric over the damaged area with at least an 18-inch overlap on all edges.
- Type A rock should be used for a Type 1 temporary construction entrance. Type A rock must comply with Section 13-7.03B (2) of the Standard Specifications.
- Type B rock should be used for a Type 2 temporary construction entrance. Type B rock must comply with Section 13-7.03B (2) of the Standard Specifications.
- Submit details for alternative construction entrances at least 5 business days before installation. This may include alternatives for the sump and corrugated steel panels or to eliminate the sump.

Installation

- Prepare the location for the temporary construction entrance/exit by:
  - Removing vegetation and clearing debris.
  - Grading the ground to a uniform plane.
  - Removing sharp objects that could damage the fabric.
  - Compacting the top 1.5 feet of soil to at least 90 percent relative compaction.
- Construct the temporary construction entrance by (standard plans attached below):
  - Placing the fabric along the length of the construction entrance/exit.
  - Overlapping fabric ends by at least 12 inches.
  - Covering the fabric with rock within 24 hours.
  - Spreading rock over the fabric in the direction of traffic.
  - Keeping a 6-inch layer of rock over the fabric to prevent damage from the spreading equipment.
- For a Type 2 temporary construction entrance, place rock under the corrugated steel panels. Use at least six corrugated steel panels for each entrance. Couple the panels together to prevent movement.
- If a sump is used, install it within 20 feet of the temporary construction entrance.

Other Considerations

- Implement BMP SC-7, “Street Sweeping” as required under Section 13-4.03F and 13-7 of the Standard Specifications.
- Require all employees, subcontractors, and suppliers to use the temporary construction entrance. If the construction entrance has metal plates as part of the BMP, all vehicles must be required to use them.
- Route runoff from temporary construction entrances through a sediment-trapping device before discharge.
- Design a temporary construction entrance to support the heaviest vehicles and equipment that will use it.

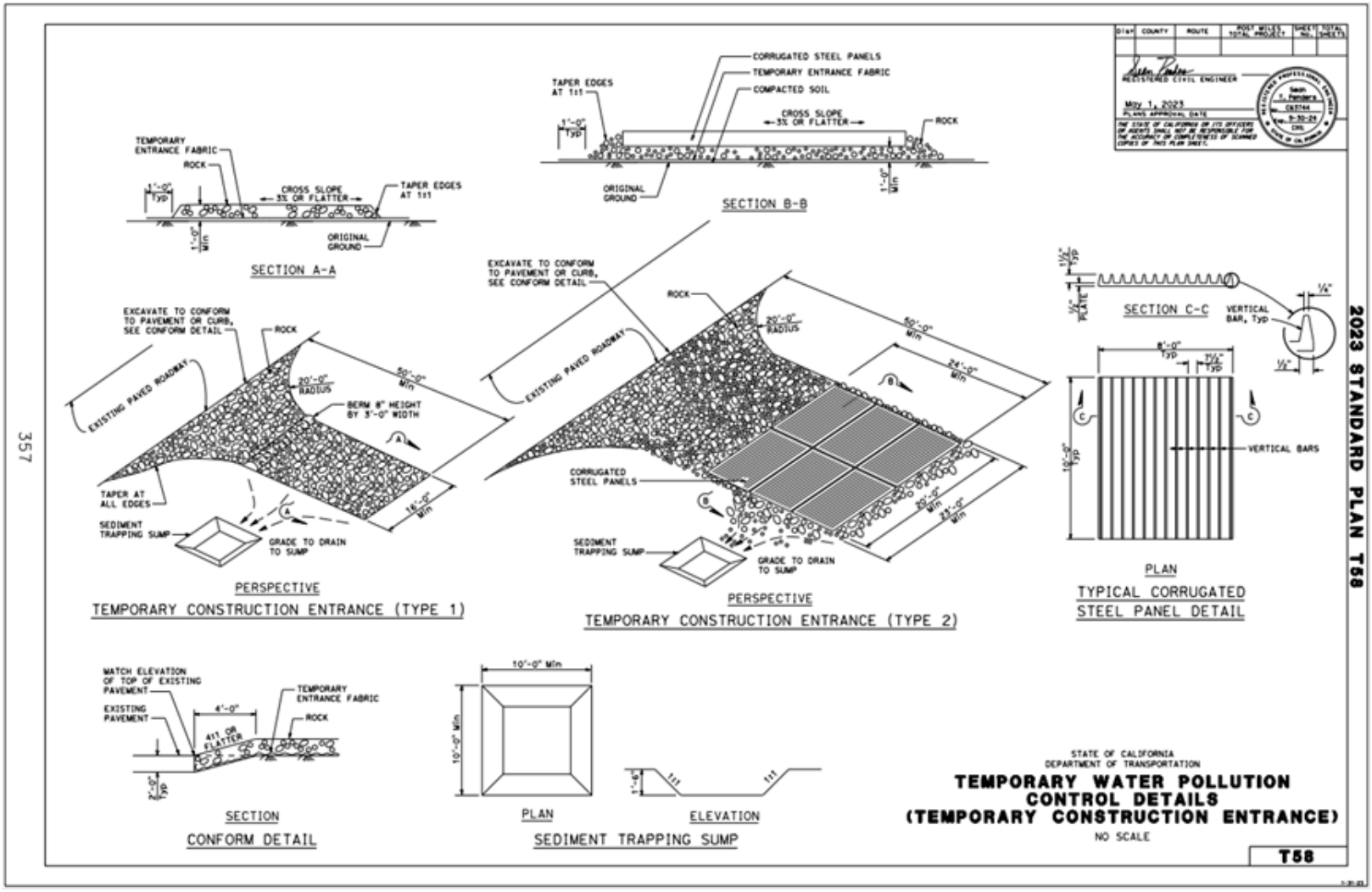
- The use of asphalt concrete grindings is not allowed (high potential for leaching hydrocarbons) unless it complies with the Caltrans SWMP. Designate combination or single purpose entrances and exits to the construction site to maintain smooth flow of traffic.

Maintenance and Inspection

- Inspect before, during and after each rainfall event, and weekly year-round.
- Inspect immediate site access roads daily; implement SC-7, “Street Sweeping” as needed.
- Remove aggregate, separate it, and dispose of sediment if temporary construction entrance is clogged with sediment.
- Keep all temporary construction entrance ditches clear.

SWPPP or WPCP

Tracking control BMPs are to be included and discussed in Section 600.1.4 for the SWPPP and Section 30.2.3 of the WPCP.


357
2023 STANDARD PLAN T58
SECTION A-A
TEMPORARY ENTRANCE FABRIC
ROCK
CROSS SLOPE 5% OR FLATTER
TAPER EDGES AT 1:1
ORIGINAL GROUND
SECTION B-B
CORRUGATED STEEL PANELS
TEMPORARY ENTRANCE FABRIC
COMPACTED SOIL
TAPER EDGES AT 1:1
CROSS SLOPE 5% OR FLATTER
ROCK
ORIGINAL GROUND
PERSPECTIVE
TEMPORARY CONSTRUCTION ENTRANCE (TYPE 1)
EXCAVATE TO CONFORM TO PAVEMENT OR CURB, SEE CONFORM DETAIL
EXISTING PAVED ROADWAY
ROCK
20'-0" RADIUS
50'-0" Min
BERM 8" HEIGHT BY 3'-0" WIDTH
TAPER AT ALL EDGES
SEDIMENT TRAPPING SUMP
GRADE TO DRAIN TO SUMP
PERSPECTIVE
TEMPORARY CONSTRUCTION ENTRANCE (TYPE 2)
CORRUGATED STEEL PANELS
24'-0" Min
SECTION C-C
VERTICAL BAR, Typ
VERTICAL BARS
PLAN
TYPICAL CORRUGATED STEEL PANEL DETAIL
SECTION
CONFORM DETAIL
MATCH ELEVATION OF TOP OF EXISTING PAVEMENT
EXISTING PAVEMENT
4'-0"
TEMPORARY ENTRANCE FABRIC
ROCK
PLAN
ELEVATION
SEDIMENT TRAPPING SUMP
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS
(TEMPORARY CONSTRUCTION ENTRANCE)
NO SCALE
T58

Water Conservation Practices

Standard Symbol

BMP Objectives

Soil Stabilization	☐
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☑
Materials and Waste Management	☐

Definition and Purpose

Water conservation practices are construction methods that minimize the use of water on site or use water in a manner that avoids causing runoff, erosion, and/or the discharge of pollutants to the storm drain system or receiving waters. Proper use of this BMP reduces or prevents non-stormwater discharges.

Appropriate Applications

Water conservation practices are implemented on all construction sites wherever water is used.

Limitations

- If not implemented correctly, discharges may trigger reporting and monitoring requirements and delay construction work.

Standards and Specifications

- Keep water equipment in good working condition.
- Ensure tracking controls are implemented in, near, and around water truck filling areas.
- Repair water leaks promptly.
- Authorization is required for activities that could potentially discharge water into a storm drain system or receiving waters.
- Avoid using water to clean construction areas. Do not wash paved areas with water. Paved areas and roadways should be swept and vacuumed in accordance with SC-7, “Street Sweeping.”
- Apply water for dust control in accordance with Standard Specifications Section 10-4 – Water Usage and BMP WE-1, “Wind Erosion Control.”

- Direct construction water runoff to areas where it can infiltrate into the ground or be collected and reused.
- Manage run-on to minimize contact with job site.
- Retain water spilled while filling water trucks within the designated water truck filling areas. Prevent tracking from water trucks and other equipment.
- Report discharges to the Resident Engineer immediately.

Maintenance and Inspection

- Inspect water equipment areas at least weekly, prior to a forecasted rain event, daily during extended rain events, and post storm events.
- Inspect non-stormwater BMPs daily when non-stormwater operations are ongoing.
- Repair water equipment as needed.

SWPPP or WPCP

Water Conservation Practices must be discussed in Section 600.1.4 of the SWPPP or Section 30.3.1 of the WPCP.

Paving, Sealing, Sawcutting, Grooving, and Grinding Activities

Standard Symbol

BMP Objectives	
Soil Stabilization	☐
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☑
Materials and Waste Management	☑

Definition and Purpose

Procedures and practices for conducting paving, sealing, sawcutting, and grinding activities to minimize the transport of pollutants to the storm drain system or receiving water body.

Appropriate Applications

These procedures are implemented where operations such as paving, surfacing, resurfacing, grinding, coring, grooving, sealing, or saw cutting generate spoils, residue, or process water that may pollute storm water runoff or discharge to the storm drain system or receiving water body.

Limitations

- Activities related to paving, sealing, sawcutting, grooving, and grinding operations should be limited when precipitation is forecasted to prevent the triggering for visible and non-visible pollutant monitoring.
- Discharges of freshly paved surfaces can raise pH and trigger permit violations.

Standards and Specifications

General Requirements

- Refer to Standard Specifications Section 13-4.03E(7) – “Paving, Sealing, Sawcutting, Grooving, and Grinding Activities.”
- Do not allow the following materials to enter the storm drain system or receiving waters: cementitious material, asphaltic material, aggregate or screenings, sawcutting, grooving,

grinding residue, pavement chunks, shoulder backing, methacrylate resin, and sandblasting residue. This list is not exhaustive.

- Drainage inlets shall be protected, and linear sediment barriers (such as silt fences, gravel bag berms, or fiber rolls) shall be used to protect receiving waters during operations related to paving, sealing, sawcutting, grooving, or grinding.
- Drainage inlets and manholes shall be protected during application of seal coat, tack coat, slurry seal, and/or fog seal. Refer to SC-10, “Temporary Drainage Inlet Protection.”
- Whenever precipitation is forecasted, limit paving, sawcutting, and grinding to places where runoff can be captured. Grinding or grooving of pavement shall not be conducted when precipitation is forecasted unless runoff can be captured.
- Seal coat, tack coat, slurry seal, or fog seal shall not be applied when precipitation is forecasted during the application or curing period.
- Slurry shall be removed with a vacuum immediately after it is produced and shall be prevented from running off the pavement or into lanes open to traffic.
- The residue from grooving and grinding activities shall be collected with a vacuum attachment on the grinding machine and shall be prevented from flowing across the pavement. See also WM-8, “Concrete Waste Management,” and WM-10, “Liquid Waste Management.”
- Material removed from existing roadways may be stockpiled, if allowed, away from drainage inlets and receiving waters in accordance with BMP WM-3, “Stockpile Management” and Standard Specifications Section 13-4.03C(3) –“Stockpile Management.”. No materials should be stockpiled or used in a manner that may result in an unauthorized discharge.
- Drip pans or absorbent materials shall be placed under paving equipment when not in use. Refer to WM-4, “Spill Prevention and Control.” Equipment shall be cleaned in accordance with NS-8, “Vehicle and Equipment Cleaning.”
- Do not coat asphalt trucks and equipment with substances that contain soap, foaming agents, or toxic chemicals.

Asphalt Concrete and Concrete Pavement Handling

- Prevent sand and gravel from entering streets, storm drains, and receiving waters.
- Substances used to coat asphalt transport trucks, asphalt trucks, and asphalt spreading equipment shall not contain soap, foaming agents, or toxic chemicals.
- Asphalt spoils must be recycled or disposed in accordance with WM-5, “Solid Waste Management,” and/or WM-6, “Hazardous Waste Management.”
- AC and CC grindings, pieces, or chunks approved by the RE for reuse in embankments or shoulder backing shall not be at risk of entering storm drain systems or receiving waters.
- Temporarily protect inlets and receiving waters until the structure is stabilized or permanent controls are in place.
- The reuse of AC or PCC grindings, pieces, or chunks as road base must be placed at least 5 feet above the seasonal high groundwater elevation, with the approval of the Resident Engineer (RE). Shoulder backing containing recycled asphalt pavement shall not be placed within 100

feet measured horizontally from a culvert, watercourse, or bridge and must comply with the SWMP.

- During chip seal application and sweeping operations, petroleum or petroleum-covered aggregate must not be allowed to enter storm drains or receiving waters. Temporarily protect inlets and receiving waters until stabilized.
- Clean asphalt-coated equipment off site whenever possible. When cleaning dry, hardened asphalt from equipment, manage hardened asphalt debris in accordance with WM-5, “Solid Waste Management,” and/or WM-6, “Hazardous Waste Management” and NS-8 “Vehicle and Equipment Cleaning,” whichever is applicable.
- Allow aggregate rinse to settle. Then, either allow rinse water to dry in a temporary pit as described in WM-8, “Concrete Waste Management” or dispose in accordance with WM-5, “Solid Waste Management.”

Thermoplastic Striping and Pavement Markers

- Contractor shall not pre-heat, transfer, or load thermoplastic within 50 feet of drainage inlets or receiving waters.
- Do not unload, transfer, or load bituminous material for pavement markers within 50 feet of drainage inlets or receiving waters.
- All thermoplastic striper and pre-heater equipment shutoff valves shall be inspected to ensure that they are working properly to prevent thermoplastic from leaking.
- The pre-heater shall be filled carefully to prevent splashing or spilling of hot thermoplastic. Leave 6 inches of space at the top of the pre-heater container when filling thermoplastic to allow room for material to move when the vehicle is deadheaded.
- Melting tanks shall be loaded with care, with a minimum of 6 inches of freeboard in case of splashing when vehicle is deadheaded. When servicing or filling melting tanks, ensure all pressure is released before removing lids to avoid spills.
- Immediately remove drips, overspray, improper markings, paint, and thermoplastic tracked by traffic with an authorized method.
- Collect and dispose bituminous material from the roadway after removal of markers in accordance with WM-5, “Solid Waste Management.”
- Clean truck beds daily of loose debris and melted thermoplastic. When possible, recycle thermoplastic material. Thermoplastic waste shall be disposed in accordance with BMP WM-5, “Solid Waste Management” and/or WM-6, “Hazardous Waste Management,” as applicable.

Maintenance and Inspection

- Inspect and maintain machinery and BMPs regularly to minimize leaks and drips.
- Ensure that employees and subcontractors are implementing appropriate measures during paving operations.
- If project operations trigger the Industrial General Permit (IGP) (industrial operations located within project limits regardless of whether the facility is within or outside Caltrans’ right-of-way and outside Caltrans’ right-of-way but within project limits), ensure that any run-on or runoff from

IGP activities does not have potential to create pollution onto Caltrans right-of-way. Refer to SWMP for additional guidance.

SWPPP or WPCP

Paving, Sealing, Sawcutting, Grooving and Grinding operations must be discussed in Section 600.2.1 of the SWPPP or Section 30.3.1 of the WPCP.

- Inspect embankments and diversion channels before and after significant storms, and at least once per week while in service for damage to the linings, accumulating debris, sediment buildup, and adequacy of the slope protection. Remove debris, and repair linings and slope protection as required. Repair holes, gaps, or scour.
- Upon completion of work, the diversion or isolation structure should be removed and flow should be re-directed through the new culvert or back into the original stream channel. Recycle or re-use if applicable.

SWPPP or WPCP

Clear Water Diversion must be discussed in Section 600.2.1 of the SWPPP or Section 30.3 of the WPCP.

Illegal Connection and Illicit Discharge Detection and Reporting

Standard Symbol

BMP Objectives

Soil Stabilization	☐
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☑
Materials and Waste Management	☐

Definition and Purpose

Procedures and practices designed for construction contractors to recognize illegal connections, illicit discharges, or illegally dumped or discharged materials on a construction site, and for reporting incidents to the Resident Engineer (RE).

Appropriate Applications

- Illegal connection and illicit discharge detection and reporting is applicable anytime an illegal connection or illicit discharge is discovered or illegally dumped material is found on the construction site.
- This BMP applies to all construction projects.

Limitations

- Illegal connections and illicit discharges or dumping, for the purposes of this BMP, refer to discharges and dumping caused by parties other than the Contractor.
- Procedures and practices presented in this BMP are general. Contractor shall use extreme caution, immediately notify the RE when illegal connections or illicit dumping or discharges are discovered, and take no further action unless directed by the RE.
- If pre existing hazardous materials or wastes are known to exist on site, the Contractor's responsibility will be detailed in separate special provisions. The on-site area should be clearly marked and described in the SWPPP or WPCP.

Standards and Specifications

Inspection

- Inspect site before beginning the job for evidence of illegal connections or illicit dumping or discharges.

Illegal Connection and Illicit Discharge Detection and Reporting

- Solids – Look for debris or trash piles. Solid waste dumping often occurs on roadways with light traffic loads or in areas not easily visible from the traveled way.
- Liquids – Signs of illegal liquid dumping or discharge can include:
  - Visible signs of staining or unusual colors to the pavement or surrounding adjacent soils.
  - Pungent odors coming from the drainage systems.
  - Discoloration or oily substances in the water, or stains and residues detained within ditches, channels, or drain boxes.
  - Abnormal water flow during the dry weather season.
- Urban Areas – Evidence of illegal connections or illicit discharges is typically detected at storm drain outfall locations or manholes. Signs of an illegal connection or illicit discharge can include:
  - Abnormal water flow during the dry weather season.
  - Unusual flows in subdrain systems used for dewatering.
  - Pungent odors coming from the drainage systems.
  - Discoloration or oily substances in the water, or stains and residues detained within ditches, channels, or drain boxes.
  - Excessive sediment deposits, particularly adjacent to or near active off-site construction projects.
- Rural Areas – Illegal connections or illicit discharges involving irrigation drainage ditches are detected by visual inspections. Signs of an illicit discharge can include:
  - Abnormal water flow during the dry weather season.
  - Non-standard drainage junction structures.
  - Broken concrete or other disturbances at or near junction structures.

Reporting

- Notify the RE of any illegal connections or illicit dumping or discharge incidents at the time of discovery. Do not take further action unless ordered.
- The RE will notify the District Construction Stormwater Coordinator, who should coordinate with the NPDES Coordinator for reporting. Form MTCE-07 is used to document the initial investigation.

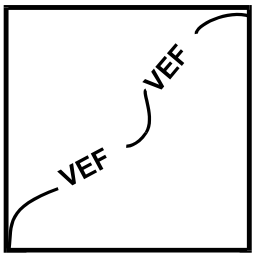
Inspection, Cleanup and Removal

- The Contractor is not responsible for investigation and cleanup of illegal connections or illicit discharges or dumping not generated by the Contractor. Caltrans may direct the Contractor to clean up non hazardous dumped or discharged material on the construction site. Assume that unlabeled or unidentifiable material is hazardous.
- Inspect the entire project site at least weekly to check for illegal connections or illicit discharges.

SWPPP or WPCP

Illegal Connection and Illicit Discharge Detection and Reporting must be discussed in Section 600.2.1 of the SWPPP or Section 30.3.1 of the WPCP.

Vehicle and Equipment Fueling



Standard Symbol

BMP Objectives

Soil Stabilization	☐
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☑
Materials and Waste Management	☐

Definition and Purpose

Vehicle and equipment fueling procedures and practices are designed to minimize or eliminate the discharge of fuel spills and leaks into storm drain systems or to receiving waters.

Appropriate Applications

These procedures are applied on all construction sites where vehicle and equipment fueling takes place.

Limitations

- This BMP may be limited or disallowed under regulatory agency permits, particularly near environmentally sensitive areas.
- On-site vehicle and equipment fueling should only be used where it is impractical to send vehicles and equipment off-site for fueling.

Standards and Specifications

- When fueling must occur on site, the contractor shall select and designate an area or areas to be used, subject to approval of the Resident Engineer.
- Dedicated fueling areas shall be protected from stormwater run-on and runoff, and shall be located at least 50 feet from downstream drainage facilities and watercourses. Fueling must be performed on level-grade areas.
- Protect fueling areas with berms or dikes to prevent run-on, runoff, and to contain spills.
- For long-term projects, consider constructing roofs or using portable tents over maintenance and fueling areas.

- Absorbent spill clean-up materials and spill kits shall be available in fueling areas and on fueling trucks. These materials should be used on small spills instead of hosing down or burying techniques. Affected absorbent material and spill kits should be removed promptly and disposed properly after use.
- Drip pans or absorbent pads shall be readily available during vehicle and equipment fueling.
- Vehicle and equipment fueling areas shall not be left unattended during fueling activities.
- Nozzles used in vehicle and equipment fueling shall be equipped with an automatic shutoff to control drips.
- Use vapor recovery nozzles to help control drips, as well as air pollution where required by the air quality management districts.
- Ensure the nozzle is secured upright when not in use.
- Fuel tanks shall not be “topped off.”
- Federal, state, and local requirements shall be observed for any stationary above-ground storage tanks. Refer to WM-1, “Material Delivery and Storage” for specifics as to what needs to be included for BMP protection.
- Portable fuel canisters should be kept in a flammable cabinet when not in use.

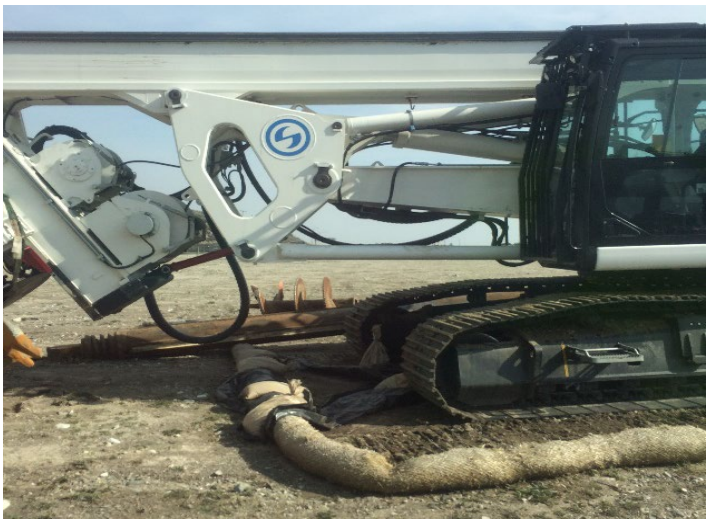
Maintenance and Inspection

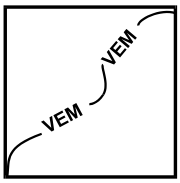
- Vehicles and equipment shall be inspected on each day of use for leaks. Leaks shall be repaired immediately, or problem vehicles or equipment shall be removed from the project site.
- Fueling areas and storage tanks shall be inspected at least weekly, prior to a forecasted rain event, daily during extended rain events, and post-storm events.
- Immediately clean up spills and properly dispose contaminated soil and cleanup materials.

SWPPP or WPCP

- Vehicle and equipment fueling must be discussed in Section 600.2.1 of the SWPPP or Section 30.3.1 of the WPCP.

Vehicle and Equipment Maintenance





Standard Symbol

BMP Objectives

Soil Stabilization	☐
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☑
Materials and Waste Management	☐

Definition and Purpose

Procedures and practices to minimize or eliminate the discharge of pollutants to the storm drain systems or to receiving waters from vehicle and equipment maintenance activities.

Appropriate Applications

- These procedures apply on all construction projects where an on-site uncovered yard area is necessary for storage and maintenance of heavy equipment and vehicles.

Limitations

- This BMP may be limited or disallowed under regulatory agency permits, particularly near environmentally sensitive areas.
- On-site vehicle and equipment maintenance should only be used where it is impractical to send vehicles and equipment off site for fueling.

Standards and Specifications

- When maintenance must occur on site, the contractor shall select and designate an area to be used, subject to approval of the Resident Engineer and implement appropriate controls for the activities to be performed.
- Dedicated maintenance areas shall be on level ground and protected from storm water run-on and runoff, and shall be located at least 50 feet from downstream drainage facilities and receiving waters.
- Protect maintenance areas with berms or dikes to prevent run-on, runoff, and to contain spills.
- For long-term projects, consider constructing roofs or using portable tents over maintenance areas.

- Absorbent spill cleanup materials and spill kits shall be available in maintenance areas. They should be used on small spills instead of hosing down or burying techniques. Affected absorbent material and spill kits should be removed promptly and disposed properly after use.
- Drip pans or absorbent pads shall be placed under vehicles and equipment when performing maintenance work that involves fluids. Vehicles and equipment maintenance areas shall not be left unattended during maintenance activities.
- Drip pans or plastic sheeting shall be placed under all vehicles and equipment placed on docks, barges, or other structures over water bodies when the vehicle or equipment is planned to be idle for more than 1-hour.
- Properly dispose or recycle used batteries and tires, as well as any other vehicle or equipment parts.
- Substances used to coat asphalt transport trucks and asphalt-spreading equipment shall be non-toxic.
- Properly dispose of used oils, fluids, lubricants, and spill cleanup materials.
- Do not dump fuels and lubricants onto the ground.
- Do not place used oil in a dumpster or pour into a storm drain or watercourse.
- Do not bury used tires.
- Repair fluid and oil leaks immediately.
- Provide spill containment dikes or secondary containment around stored oil and chemical drums. Refer to WM-1, “Material Delivery and Storage” for details.

Maintenance and Inspection

- Vehicles and equipment shall be inspected on each day of use for leaks. Leaks shall be repaired immediately or removed from the project site.
- Maintenance areas and storage tanks shall be inspected regularly.
- Maintain waste fluid containers in leak-proof condition.
- Inspect equipment for damaged hoses and leaky gaskets routinely. Repair or replace as needed.
- Inspection and maintenance of vehicle and equipment maintenance areas must be properly documented, and the WPC manager must ensure no potential for discharges occur from these areas as part of the non-visible monitoring requirements.

SWPPP or WPCP

- Vehicle and equipment maintenance must be discussed in Section 600.2.1 of the SWPPP or Section 30.3 of the WPCP.

Structure Demolition/Removal Over or Adjacent to Water

Standard Symbol

BMP Objectives	
Soil Stabilization	☐
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☑
Materials and Waste Management	☑

Definition and Purpose

Procedures to protect water bodies from debris and wastes associated with structure demolition or removal over or adjacent receiving waters.

Appropriate Applications

- Full bridge demolition and removal projects.
- Partial bridge removal (e.g., barrier rail, edge of deck) associated with bridge widening projects.
- Projects that involve concrete channel removal.
- Any other project with structure removal that could potentially affect water quality.

Limitations

- Specific requirements may be included in the contract documents and permit documents associated with regulatory agencies such as the Regional Water Quality Control Board, U.S. Army Corps of Engineers, and California Department of Fish and Wildlife.

Standards and Specifications

General Requirements

- A plan summarizing material containment, collection, and handling may be required to be submitted and fully implemented with the SWPPP.

- Do not allow demolished material to enter storm drain systems and receiving waters. Use covers and platforms authorized by the Resident Engineer (RE) to collect debris.
- Collect and contain all demolished material within the containment system, including process water and visible dust produced during demolition and cleaning operations daily. Handle debris according to Standard Specifications Section 13-4.03D.
- Implement in combination with NS-13, “Material and Equipment Use Over Water” and WM-04 “Spill Prevention and Control” for handling of materials and equipment.
- Routinely sweep and vacuum work area to remove excess dust and debris in accordance with SC-07, “Street Sweeping.”
- Use inlet protection in accordance with SC-10, “Temporary Drainage Inlet Protection” to protect storm drain inlets.
- Refer to NS-5, “Clear Water Diversion” to direct water away from work areas.
- Stockpile accumulated debris and waste generated during demolition away from drainage inlets and receiving waters and in accordance with WM-3, “Stockpile Management.”
- For structures containing hazardous materials (e.g., lead paint or asbestos) refer to WM-6, “Hazardous Waste Management.” For demolition work involving soil excavation around lead-painted structures, refer to WM 7, “Contaminated Soil Management.”
- Discharges to drainage inlets and receiving waters shall be reported to the RE immediately upon discovery. A written discharge notification must follow.
- Keep adequate spill kit material on site in accordance with a spill response plan, if applicable. Ensure that staff are trained regarding the deployment of the spill response plan.
- Ensure safe passage of wildlife; refer to Standard Specifications Section 83-3 – “Concrete Barriers.”

Other Considerations

- Use attachments on construction equipment, such as backhoes and debris baskets, or barges to catch debris from demolition operations. Use plastic bibs to prevent hydraulic fuel leaks.
- Install perimeter controls and secondary containment to prevent leaks and spills from entering receiving waters. Perimeter controls and secondary containment may include sealed plywood and/or plastic sheeting, plastic liners and/or tarps, netting, silt fences, drip pans, containment booms and berms, and absorbent material.

Maintenance and Inspection

- Contractor must inspect demolition areas and containment systems over or adjacent receiving waters daily when operations are ongoing.
- Any debris-catching devices and containment systems shall be emptied daily. Collected debris shall be removed and stored away from the drainage inlets and receiving waters and protected from run-on and runoff.
- Inspect demolition and containment systems over or adjacent to waterbody for leaks and spills at least weekly (some operations require daily inspection), prior to a forecasted storm event, daily during extended rain events, and post qualifying precipitation events.

- Inspection and maintenance of these areas must be properly documented and ensure no potential for discharges from these areas as part of the non-visible monitoring requirements.

SWPPP or WPCP

Structure Demolition/Removal Over or Adjacent to Water must be discussed in Section 600.2.1 of the SWPPP or Section 30.3.1 of the WPCP.

Section 8
Waste Management and Materials Pollution Control BMPs

8.1 Waste Management and Materials Pollution Control

Like non-stormwater management, waste management and materials pollution control BMPs are source control BMPs that prevent pollution by limiting or reducing potential pollutants at their source before they come in contact with stormwater. These BMPs also involve day-to-day operations of the construction site and are under the control of the Contractor, and are additional "good housekeeping practices" that involve keeping a clean, orderly construction site. These controls must be implemented for all applicable activities, material usage, and site conditions.

8.1.1 Waste Management BMPs

Waste management consists of implementing procedural and structural BMPs for handling, storing, and disposing of wastes generated by a construction project to prevent the release of waste materials into stormwater discharges.

8.1.2 Materials Pollution Control BMPs

Materials pollution control (also called materials handling) consists of implementing procedural and structural BMPs for handling, storing, and using construction materials to prevent the release of those materials into stormwater discharges. The objective is to reduce the opportunity for rainfall to come in contact with these materials.

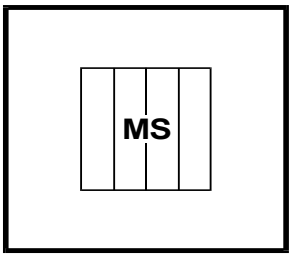
Table 8-1 lists the waste management and materials pollution control BMPs.

Table 8-1. Waste Management and Materials Pollution Control BMPs

ID	BMP Name
WM-1	Material Delivery and Storage
WM-2	Material Management
WM-3	Stockpile Management
WM-4	Spill Prevention and Control
WM-5	Solid Waste Management
WM-6	Hazardous Waste Management
WM-7	Contaminated Soil Management
WM-8	Concrete Residuals and Washout Wastes
WM-9	Sanitary and Septic Waste Management
WM-10	Liquid Waste Management

The remainder of this section shows the working details for each of the waste management and materials pollution control BMPs.

Material Delivery and Storage



Standard Symbol

BMP Objectives	
Soil Stabilization	☐
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☐
Materials and Waste Management	☑

Definition and Purpose

Procedures and practices for the proper handling and storage of materials in a manner that minimizes or eliminates the discharge of these materials to the storm drain system or to receiving waters.

Appropriate Applications

These procedures are implemented at all construction sites with delivery and storage of the following:

- Hazardous chemicals such as:
  - acids
  - lime
  - glues
  - adhesives
  - paints
  - solvents
  - curing compounds
- Soil stabilizers and binders
- Fertilizers
- Detergents
- Plaster

- Polymers
- Petroleum products such as fuel, oil, and grease
- Asphalt and concrete components
- Pesticides and herbicides
- Other materials that may be detrimental if released to the environment.

Limitations

- Space limitation may preclude indoor storage.
- Storage sheds must meet building and fire code requirements and be leak free.

Standards and Specifications

General

- Train employees and subcontractors on the proper material delivery and storage practices.
- Temporary storage area shall be located away from vehicular traffic.
- Safety Data Sheets shall be supplied to the Resident Engineer for all materials stored. This can be done at any time but at least 5 days prior to material being used or stored on site.
- Must comply with Caltrans Standard Specifications Section 13-4, “Job Site Management,” and 14-11, “Hazardous Waste and Contamination.”

Material Storage Areas and Practices

- Liquids, petroleum products, and substances listed in 40 CFR Parts 110, 117, or 302 shall be stored in approved containers and drums and shall be placed in temporary containment facilities for proper storage.
- Each temporary containment facility shall have a permanent cover and side wind protection, or be covered during non-working days and whenever a storm event is forecasted.
- A temporary containment facility shall provide for a spill containment volume able to contain precipitation from a 24-hour, 25-year storm event, plus the greater of 10 percent of the aggregate volume of all containers or 100 percent of the capacity of the largest container within its boundary.
- A temporary containment facility shall be impervious to the materials stored therein for a minimum contact time of 72 hours.
- A temporary containment facility shall be maintained free of accumulated rainwater and spills. In the event of spills or leaks, accumulated rainwater and spills shall be collected and placed into drums. These liquids shall be handled as a hazardous waste unless testing determines them to be non-hazardous. All collected liquids or non-hazardous liquids shall be sent to an approved disposal site.
- Sufficient separation shall be provided between stored containers to allow for spill cleanup and emergency response access.

- Incompatible materials, such as chlorine and ammonia, shall not be stored in the same temporary containment facility.
- Materials shall be stored in their original containers. The original product labels shall be maintained in place in a legible condition. Damaged or otherwise illegible labels shall be replaced immediately.
- Bagged and boxed materials shall be stored on pallets and shall not be allowed to accumulate on the ground. To provide protection from wind and rain, bagged and boxed materials shall be covered during non-working days and prior to rain events.
- Stockpiles shall be protected in accordance with WM-3, “Stockpile Management.”
- Have proper storage instructions posted at all times in an open and conspicuous location and include it as an informal training component of the tailgates and ongoing WPC training.
- Do not store hazardous chemicals, drums, or bagged materials directly on the ground. Place these items on a pallet, under cover, and in secondary containment.
- Keep ample supply of appropriate spill clean-up material near storage areas.
- Also, see WM-6, “Hazardous Waste Management” for storing of hazardous materials.

Material Delivery Practices

- Keep an accurate, up-to-date inventory of material delivered and stored on site.
- Employees trained in emergency spill clean-up procedures shall be present when dangerous materials or liquid chemicals are unloaded.

Spill Cleanup

- Contain and clean up any spill immediately.
- If significant residual materials remain on the ground after construction is complete, properly remove and dispose any hazardous materials or contaminated soil.

Maintenance and Inspection

- Storage areas shall be kept clean, well organized, and equipped with ample clean-up supplies as appropriate for the materials being stored.
- Perimeter controls, containment structures, covers, and liners shall be repaired or replaced as needed to maintain proper function.
- Inspect storage areas before, during, and after rainfall events, and at least weekly during other times. Collect and place into drums any spills or accumulated rainwater and dispose properly.
- Material delivery and storage areas must be shown on the WPCDs and reflect current site conditions.

SWPPP or WPCP

Material delivery and storage must be discussed in Section 600.2.2 of the SWPPP or Section 30.3.2 of the WPCP.

Material Management

Standard Symbol

BMP Objectives	
Soil Stabilization	☐
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☐
Materials and Waste Management	☑

Definition and Purpose

These are procedures and practices for use of construction materials in a manner that minimizes or eliminates the discharge of these materials to the storm drain system or to receiving waters.

Appropriate Applications

This BMP applies to all construction projects. These procedures apply when the following materials are used or prepared on site:

- Hazardous chemicals such as:
  - acids
  - lime
  - glues
  - adhesives
  - paints
  - solvents
  - curing compounds
- Soil stabilizers and binders
- Fertilizers
- Detergents
- Plaster
- Petroleum products such as fuel, oil, and grease

- Asphalt and concrete components
- Pesticides and herbicides
- Other materials that may be detrimental if released to the environment

Limitations

- Safer alternative building and construction products may not be available or suitable in every instance.

Standards and Specifications

- Safety Data Sheets shall be supplied to the Resident Engineer for all materials.
- Latex paint and paint cans, used brushes, rags, absorbent materials, and drop cloths, when thoroughly dry, and are no longer hazardous and may be disposed with other construction debris.
- Do not remove the original product label as it contains important safety and disposal information. Use the entire product before disposing the container.
- Mix paint indoors or in a containment area. Never clean paint brushes or rinse paint containers into a street, gutter, or storm drain, or near a water body. Dispose any paint thinners, residue, and sludge(s) that cannot be recycled as hazardous waste.
- For water based paint, clean brushes to the extent practical and rinse to a drain leading to a sanitary sewer where permitted, or into a concrete washout pit. For oil-based paints, clean brushes to the extent practical and filter and reuse thinners and solvents.
- Use recycled and less-hazardous products when practical. Recycle residual paints, solvents, non-treated lumber, and other materials.
- Use materials only where and when needed to complete the construction activity. Use safer alternative materials as much as possible.
- Do not over-apply fertilizers and pesticides. Prepare only the amount needed. Strictly follow the recommended usage instructions.
- Application of herbicides and pesticides shall be performed by a licensed applicator. Document the location, chemicals applied, and applicant’s name and qualifications.
- Contractors are required to complete the “Report of Chemical Spray Forms” when spraying herbicides and pesticides.
- Keep an ample supply of spill clean-up material near use areas. Train employees in spill clean up procedures.
- Avoid exposing applied materials to rainfall and runoff unless sufficient time has been allowed for them to dry.

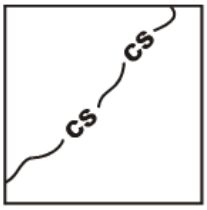
Maintenance and Inspections

- Inspect storage areas before, during, and after rainfall events, and at least weekly during other times. Collect and place into drums any spills or accumulated rainwater and dispose properly.
- Spot-check employees and subcontractors throughout the job; include appropriate practices as part of the informal tailgate training.

SWPPP or WPCP

Material Management must be discussed in Section 600.2.2 of the SWPPP or Section 30.3.2 of the WPCP. Material storage areas should be included in the WPCDs.

Stockpile Management



Standard Symbol

BMP Objectives	
Soil Stabilization	☐
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☐
Materials and Waste Management	☑

Definition and Purpose

Stockpile management procedures and practices are designed to reduce or eliminate air and stormwater pollution from stockpiles of soil, and paving materials such as portland cement concrete (PCC) rubble, asphalt concrete (AC), AC rubble, aggregate base, aggregate subbase or pre-mixed aggregate, asphalt binder (so called “cold mix” asphalt) and pressure-treated wood.

Appropriate Applications

Implemented in all projects that stockpile soil and other materials.

Limitations

Use of plastic cover might be restricted depending on the location of the site and regulatory permits.

Standards and Specifications

Stockpiles must comply with Standard Specifications Section 13-4.03C(3) – “Stockpile Management.”

- Stockpile protection is a year-round requirement.
- Locate stockpiles a minimum of 50 feet from concentrated flows of storm water, drainage courses, and inlets.
- Use run-on and runoff BMPs to ensure stockpile materials are protected and do not have the potential to discharge material.
- Implement wind erosion control practices as appropriate on all stockpiled material. For specific information, see WE-1, “Wind Erosion Control.”

- Stockpiles of contaminated soil shall be managed in accordance with WM-7, “Contaminated Soil Management.”
- Bagged materials should be placed on pallets and under cover.

Protection of Inactive Stockpiles

Inactive stockpiles of the identified materials shall be protected further as follows:

- Soil stockpiles:
  - shall be covered or protected with soil stabilization measures and a temporary perimeter sediment barrier at all times. If no longer needed, they should be removed and disposed properly.
- Stockpiles of PCC rubble, AC, AC rubble, aggregate base, or aggregate subbase:
  - shall be covered or protected with a temporary perimeter sediment barrier at all times. If no longer needed, they should be removed and disposed properly.
- Stockpiles of “cold mix”:
  - shall be placed on and covered with plastic or comparable material at all times and surround by a berm.
- Stockpiles/Storage of pressure-treated wood with copper, chromium, and arsenic or ammoniacal, copper, zinc, and arsenate:
  - shall be covered with plastic or comparable material and placed on pallets.

Protection of Active Stockpiles

Active stockpiles shall be protected further as follows:

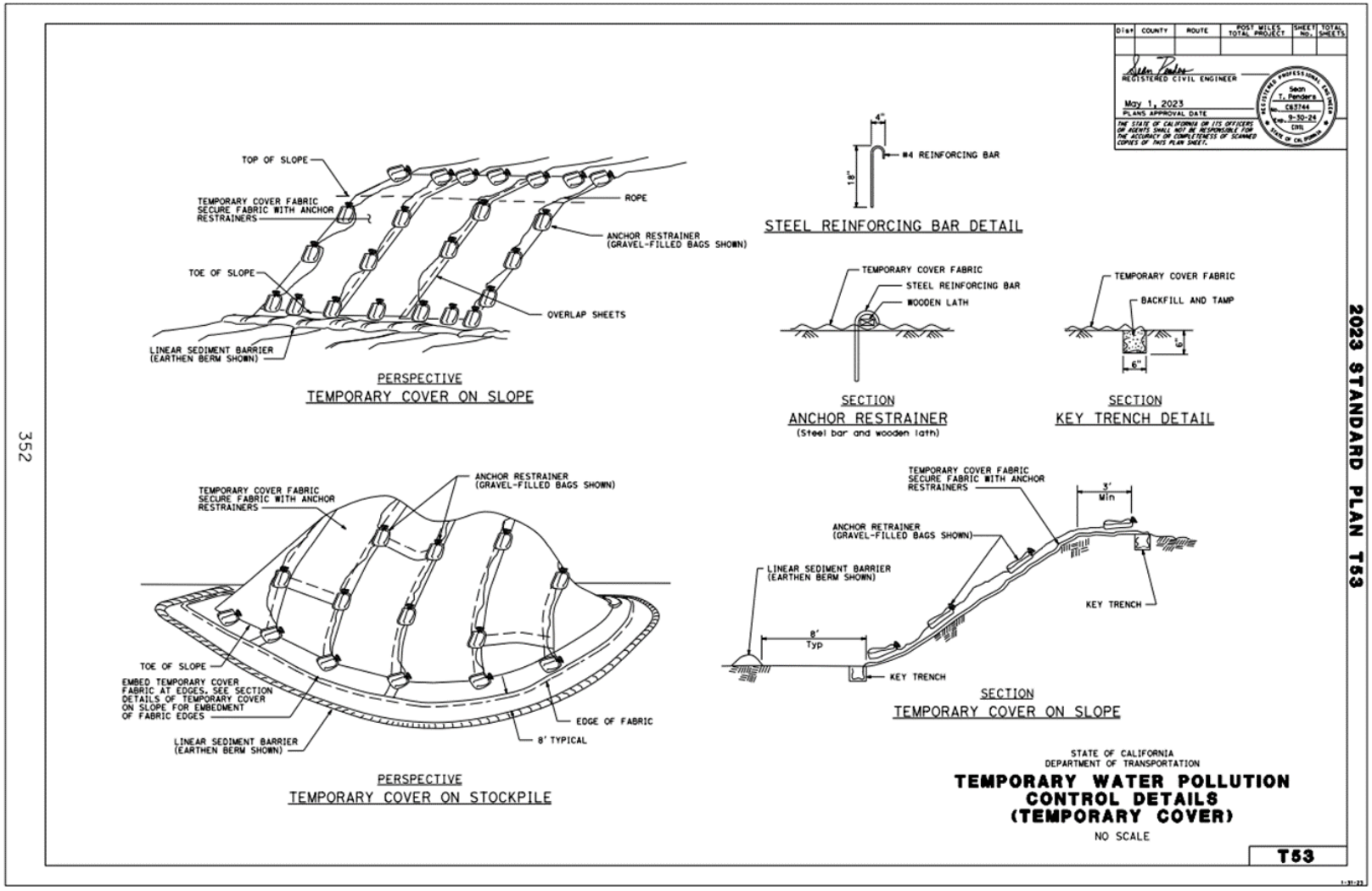
- All stockpiles shall be covered, stabilized, or protected with a temporary linear sediment barrier prior to the onset of precipitation.
- Stockpiles of “cold mix” shall be placed on and covered with plastic or comparable material prior to the onset of precipitation.
- All stockpiles should be removed from the site and disposed properly.
- At no time should stockpiles be allowed to commingle with stormwater run-on or runoff.

Maintenance and Inspections

- Inspect stockpile management areas before, during, and after rainfall events, and at least weekly during other times.
- Repair and/or replace perimeter controls and covers to keep stockpile management functioning properly.
- Stockpile management areas must be shown on the WPCDs and reflect site conditions.

SWPPP or WPCP

Stockpile management must be discussed in Section 600.2.2 of the SWPPP or Section 30.3.2 of the WPCP.


352
2023 STANDARD PLAN T53
TOP OF SLOPE
TEMPORARY COVER FABRIC SECURE FABRIC WITH ANCHOR RESTRAINERS
ROPE
ANCHOR RESTRAINER (GRAVEL-FILLED BAGS SHOWN)
TOE OF SLOPE
OVERLAP SHEETS
LINEAR SEDIMENT BARRIER (EARTHEN BERM SHOWN)
PERSPECTIVE
TEMPORARY COVER ON SLOPE
4"
18"
#4 REINFORCING BAR
STEEL REINFORCING BAR DETAIL
TEMPORARY COVER FABRIC
STEEL REINFORCING BAR
WOODEN LATH
SECTION
ANCHOR RESTRAINER
(Steel bar and wooden lath)
TEMPORARY COVER FABRIC
BACKFILL AND TAMP
6"
SECTION
KEY TRENCH DETAIL
ANCHOR RESTRAINER (GRAVEL-FILLED BAGS SHOWN)
TEMPORARY COVER FABRIC SECURE FABRIC WITH ANCHOR RESTRAINERS
TOE OF SLOPE
EMBED TEMPORARY COVER FABRIC AT EDGES, SEE SECTION DETAILS OF TEMPORARY COVER ON SLOPE FOR EMBEDMENT OF FABRIC EDGES
EDGE OF FABRIC
8' TYPICAL
LINEAR SEDIMENT BARRIER (EARTHEN BERM SHOWN)
PERSPECTIVE
TEMPORARY COVER ON STOCKPILE
TEMPORARY COVER FABRIC SECURE FABRIC WITH ANCHOR RESTRAINERS
3' Min
ANCHOR RETRAINER (GRAVEL-FILLED BAGS SHOWN)
LINEAR SEDIMENT BARRIER (EARTHEN BERM SHOWN)
KEY TRENCH
8' Typ
KEY TRENCH
SECTION
TEMPORARY COVER ON SLOPE
DIST
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET NO.
TOTAL SHEETS
REGISTERED CIVIL ENGINEER
May 1, 2023
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.
Sean T. Penders
C63744
9-30-24
CIVIL
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY COVER)
NO SCALE
T53
1-31-23

Spill Prevention and Control

Standard Symbol

BMP Objectives

Soil Stabilization	☐
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☐
Materials and Waste Management	☑

Definition and Purpose

These procedures and practices are implemented to prevent and control spills in a manner that minimizes or prevents the discharge of spilled material to the drainage system or watercourses.

Appropriate Application

- This BMP applies to all construction projects. Spill control procedures are implemented any time chemicals and/or hazardous substances are stored. Substances may include, but are not limited to:
  - Soil stabilizers/binders
  - Dust palliatives
  - Herbicides
  - Growth inhibitors
  - Fertilizers
  - Deicing/anti-icing chemicals
  - Fuels
  - Lubricant
  - Other petroleum distillates
- To the extent that the work can be accomplished safely, spills of oil; petroleum products; substances listed under 40 CFR parts 110, 117, and 302; and sanitary and septic wastes shall be contained and cleaned up immediately.

Limitations

- This BMP only applies to spills caused by the Contractor. Other spills or discharges observed or discovered must be reported to the RE.
- Procedures and practices presented in this BMP are general. Contractor shall identify appropriate practices for the specific materials used or stored on site and follow the appropriate Safety Data Sheet(s).

Standards and Specifications

- Must comply with Caltrans Standard Specifications Section 13-4.03B – “Spill Prevention and Control.”
- To the extent that it doesn’t compromise clean -activities, spills shall be covered and protected from stormwater run-on.
- Spills shall not be buried or washed with water. Potable water has chlorine, and therefore should not be allowed to be discharged off the project site.
- Used clean-up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose shall be stored and properly disposed.
- Water used for cleaning and decontamination shall not be allowed to enter storm drains or watercourses and shall be collected and disposed in accordance with WM-10, “Liquid Waste Management.”
- Water overflow or minor water spillage shall be contained and shall not be allowed to discharge into drainage facilities or watercourses.
- Proper storage, clean-up, and spill reporting instruction for hazardous materials stored or used on the project site shall be posted at all times in an open, conspicuous, and accessible location.
- Waste storage areas shall be kept clean, well-organized, and equipped with ample clean-up supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners shall be repaired or replaced as needed to maintain proper function.

Education

- Educate employees and subcontractors on what a “significant spill” is for each material they use, and what the appropriate response is for “significant” and “insignificant” spills.
- Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.
- Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).
- Establish a continuing education program to indoctrinate new employees.
- The WPC Manager shall oversee and enforce proper identification of stormwater pollution potential, spill prevention, response, control measures and spill reporting.
- The list of reportable quantities can be found at https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-117/subpart-A/section-117.3.

Clean-up and Storage Procedures

- Minor Spills:
  - Minor spills typically involve small quantities of oil, gasoline, paint, etc., which can be controlled by the first responder at the discovery of the spill.
  - Use absorbent materials on small spills rather than hosing down or burying the spill.
  - Remove the absorbent materials promptly and dispose properly.
  - The practice commonly followed for a minor spill is:
  - Contain the spread of the spill.
  - Recover spilled materials.
  - Clean the area and/or properly dispose contaminated materials.
- Semi-significant Spills:
  - Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities.
  - Clean up spills immediately:
  - Notify the WPC Manager immediately. The WPC Manager shall notify the RE and prepare the proper notifications as required.
  - Contain spread of the spill.
  - If the spill occurs on paved or impermeable surfaces, clean up using “dry” methods (absorbent materials, cat litter, and/or rags). Contain the spill by encircling with absorbent materials.
  - If the spill occurs in dirt areas, immediately contain the spill. Dig up and properly dispose contaminated soil.
  - If the spill occurs during rain, cover spill with tarps to prevent contaminating runoff.
- Significant/Hazardous Spills:
  - For significant or hazardous spills that cannot be controlled by personnel in the immediate vicinity, the following steps shall be taken:
  - Notify the RE immediately and follow up with a written report.
  - Notify the local emergency response by dialing 911. In addition to 911, the Contractor will notify the proper county officials. It is the Contractor’s responsibility to have all emergency phone numbers at the construction site.
  - Notify the Governor's Office of Emergency Services Warning Center, (800) 852-7550 or 1-(916) 845-8911.
  - For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the Contractor shall notify the National Response Center at (800) 424-8802.

- Notification shall first be made by telephone and followed up with a written report. The reporting form is located at: https://www.caloes.ca.gov/wp-content/uploads/Fire-Rescue/Documents/304-Written-Report-Form.pdf
- The services of a spill contractor or a Haz-Mat team shall be obtained immediately. Construction personnel shall not attempt to clean up the spill until the appropriate and qualified staff have arrived at the job site.
- Other agencies that may need to be consulted include, but are not limited to, the Fire Department, Public Works Department, the Coast Guard, Highway Patrol, the City/County Police Department, Department of Toxic Substances, California Division of Oil and Gas, Cal/OSHA, RWQCB, etc.

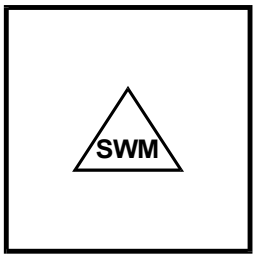
Maintenance and Inspection

- Verify weekly that spill control clean-up materials are located near material storage, unloading, and use areas.
- Update spill prevention and control plans and stock appropriate clean-up materials when changes occur in the types of chemicals used or stored onsite.
- Improper cleanup might trigger the need for water quality or soil testing. The WPC manager should be proactive in ensuring controls are in place and adequate to contain and prevent further issues.

SWPPP or WPCP

Spill Prevention and Control must be discussed in Section 600.2.2 of the SWPPP or Section 30.3.2 of the WPCP.

Solid Waste Management



Standard Symbol

BMP Objectives	
Soil Stabilization	☐
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☐
Materials and Waste Management	☑

Definition and Purpose

Solid waste management procedures and practices are designed to minimize or eliminate the discharge of pollutants to the drainage system or to water bodies as a result of the creation, stockpiling, or removal of construction site wastes.

Appropriate Applications

Solid waste management procedures and practices are implemented on all construction projects that generate solid wastes.

Solid wastes include but are not limited to:

- Construction wastes, including brick, mortar, timber, steel and metal scraps, sawdust, pipe and electrical cuttings, non-hazardous equipment parts, and Styrofoam and other materials used to transport and package construction materials.
- Highway planting wastes, including vegetative material, plant containers, and packaging materials.
- Litter, including food containers, beverage cans, coffee cups, paper bags, plastic wrappers, and smoking materials, including litter generated by the public.

Limitations

None identified.

Standards and Specifications

Education

- The WPC Manager shall oversee and enforce proper solid waste procedures and practices.
- Instruct employees and subcontractors on identification of solid waste and hazardous waste.
- Educate employees and subcontractors on solid waste storage and disposal procedures.
- Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings and tailgate sessions).
- Require that employees and subcontractors follow solid waste handling and storage procedures.
- Prevent debris or trash from being transported by wind or runoff.
- Prohibit littering by employees, subcontractors, and visitors.
- Wherever possible, minimize production of solid waste materials.
- Must comply with Standard Specifications Section 14-10 – “Solid Waste Disposal and Recycling” and 13-4 – “Job Site .”Management.

Collection, Storage, and Disposal

- Dumpsters of sufficient size and number shall be provided to contain the solid waste generated by the project, and be properly serviced. Must ensure that containers are watertight and have a cover.
- Littering on the project site shall be prohibited.
- To prevent clogging of the storm drainage system, litter and debris removal from drainage grates, trash racks, and ditch lines shall be a priority.
- Trash receptacles shall be provided in the Contractor’s yard, field trailer areas, and at locations where workers congregate for lunch and break periods.
- Construction debris and litter from work areas within the construction limits of the project site shall be collected and placed in watertight dumpsters at least weekly regardless of whether the litter was generated by the Contractor, the public, or others. Collected litter and debris shall not be placed in or next to drain inlets, storm water drainage systems, or watercourses.
- Full dumpsters shall be removed from the project site and the contents shall be disposed outside the highway right-of-way in conformance with the provisions in Standard Specifications Section 14-10 – “Solid Waste Disposal and Recycling.”
- Litter stored in collection areas and containers shall be handled and disposed by trash hauling contractors.
- Stormwater run-on shall be prevented from contacting stored solid waste by berms, dikes, or other temporary diversion structures, or through the use of measures to elevate waste from site surfaces.
- Solid waste storage areas shall be located at least 50 feet from drainage facilities and watercourses and shall not be located in areas prone to flooding or ponding.

- Except during fair weather, construction and highway planting waste not stored in watertight dumpsters shall be securely covered from wind and rain by covering the waste with tarps or plastic sheeting.
- Dumpster wash on the project site is not allowed.
- Notify trash hauling contractors that only watertight dumpsters are acceptable for use on site.
- Plan for additional containers during the demolition phase of construction.
- Plan for more frequent pickup during the demolition phase of construction.
- Construction waste shall be stored in a designated area and shown in the WPCDs.
- Segregate potentially hazardous waste from non-hazardous construction site waste.
- Keep the site clean of litter debris.
- Make sure that toxic liquid wastes (e.g., used oils, solvents, and paints) and chemicals (e.g., acids, pesticides, additives, curing compounds) are not disposed in dumpsters designated for construction debris.
- Dispose non-hazardous waste in accordance with Standard Specifications Section 14-10 – “Solid Waste Disposal and Recycling.”
- For disposal of hazardous waste, see BMP WM-6, “Hazardous Waste Management.” Have hazardous waste hauled to an appropriate disposal and/or recycling facility.
- Salvage or recycle useful vegetation debris, packaging, and/or surplus building materials when practical. For example, trees and shrubs from land clearing can be converted into wood chips, then used as mulch on graded areas. Wood pallets, cardboard boxes, and construction scraps can also be recycled.

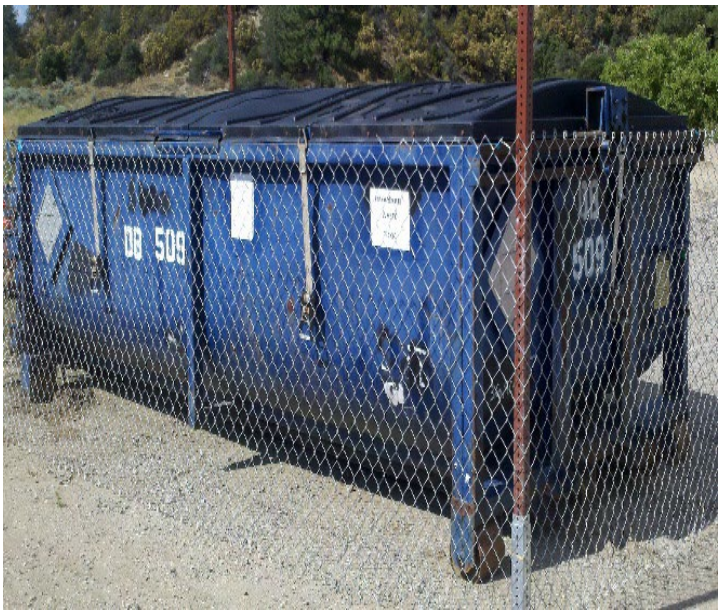
Maintenance and Inspection

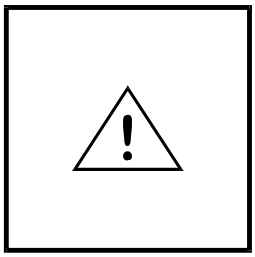
- The WPC Manager shall monitor on-site solid waste storage and disposal procedures.
- Specific locations for solid waste storage or containment must be shown in the WPCDs and must be inspected and maintained regularly.
- Cover waste disposal containers at the end of every business day and during a precipitation event for SWPPP projects.

SWPPP or WPCP

- Solid Waste Management must be discussed in Section 600.2.2 of the SWPPP or Section 30.3.2 of the WPCP.

Hazardous Waste Management





Standard Symbol

BMP Objectives	
Soil Stabilization	☐
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☐
Materials and Waste Management	☑

Definition and Purpose

These are procedures and practices to minimize or eliminate the discharge of pollutants from construction site hazardous waste to the storm drain systems or to watercourses.

Appropriate Applications

- This BMP applies to all construction projects.
- Hazardous waste management practices are implemented on construction projects that generate waste from the use of:
  - Petroleum products
  - Asphalt products
  - Concrete curing compounds
  - Pesticides
  - Palliatives
  - Acids
  - Paints
  - Stains
  - Solvents
  - Septic wastes
  - Wood preservatives

- Roofing tar
- Any materials deemed a hazardous waste in California, Title 22 Division 4.5, or listed in 40 CFR Parts 110, 117, 261, or 302.

Limitations

- Nothing in this BMP relieves the Contractor from responsibility for compliance with federal, state, and local laws regarding storage, handling, transportation, and disposal of hazardous wastes.
- This BMP does not cover aerially deposited lead (ADL) soils. For ADL soils, refer to WM-7, “Contaminated Soil Management” and the project special provisions.

Standards and Specifications

Education

- Educate employees and subcontractors on hazardous waste storage and disposal procedures.
- Educate employees and subcontractors on potential dangers to humans and the environment from hazardous wastes.
- Instruct employees and subcontractors on safety procedures for common construction site hazardous wastes.
- Instruct employees and subcontractors in identification of hazardous and solid waste.
- Hold regular meetings to discuss and reinforce hazardous waste management procedures (incorporate into regular safety meetings and tailgate sessions).
- The WPC Manager must oversee and enforce proper hazardous waste management procedures and practices.
- Make sure that hazardous waste is collected, removed, and disposed only at authorized disposal areas.

Storage Procedures

- Wastes shall be stored in sealed containers constructed of a suitable material and shall be labeled as required by Title 22 CCR, Division 4.5 and 49 CFR Parts 172,173, 177 and 178, 179.
- All hazardous waste shall be stored, transported, and disposed as required in Title 22 CCR, Division 4.5 and 49 CFR 261-263.
- Waste containers shall be stored in temporary containment facilities that shall comply with the following requirements:
  - Temporary containment facility shall provide for a spill containment volume able to contain precipitation from a 24-hour, 25-year storm event, plus the greater of 10 percent of the aggregate volume of all containers or 100 percent of the capacity of the largest tank within its boundary.
  - Temporary containment facility shall be impervious to the materials stored there for a minimum contact time of 72 hours.

  - Temporary containment facilities shall be maintained free of accumulated rainwater and spills. In the event of spills or leaks, accumulated rainwater and spills shall be placed into drums after each rainfall. These liquids shall be handled as a hazardous waste unless testing determines them to be non-hazardous. Non-hazardous liquids shall be sent to an approved disposal site.
  - Sufficient separation shall be provided between stored containers to allow for spill cleanup and emergency response access.
  - Incompatible materials, such as chlorine and ammonia, shall not be stored in the same temporary containment facility.
  - Temporary containment facilities shall be covered during non-working days and prior to rain events. Covered facilities may include use of plastic tarps for small facilities or constructed roofs with overhangs. A storage facility having a solid cover and sides is preferred to a temporary tarp. Storage facilities shall be equipped with adequate ventilation.
- Drums shall not be overfilled and wastes shall not be mixed.
- Unless watertight, containers of dry waste shall be stored on pallets.
- Paint brushes and equipment for water and oil-based paints shall be cleaned within a contained area and shall not be allowed to contaminate site soils, watercourses, or drainage systems. Waste paints, thinners, solvents, residues, and sludges that cannot be recycled or reused shall be disposed as hazardous waste. When thoroughly dry, latex paint and paint cans, used brushes, rags, absorbent materials, and drop cloths shall be disposed as solid waste.
- Ensure that adequate hazardous waste storage volume is available.
- Ensure that hazardous waste collection containers are conveniently located.
- To prevent accidental spills, designate hazardous waste storage areas on site away from storm drains or watercourses and away from moving vehicles and equipment.
- Minimize production or generation of hazardous materials and hazardous waste on the job site.
- Use containment berms in fueling and maintenance areas and where the potential for spills is high.
- Segregate potentially hazardous waste from non-hazardous construction site debris.
- Keep liquid or semi-liquid hazardous waste in appropriate containers (closed drums or similar) and under cover.
- Clearly label all hazardous waste containers with the waste being stored and the date of accumulation.
- Place hazardous waste containers in secondary containment.
- Do not allow potentially hazardous waste materials to accumulate on the ground.
- Do not mix wastes.

Disposal Procedures

- Waste shall be disposed outside the highway right of way within 90 days of being generated, or as directed by the Resident Engineer. In no case shall hazardous waste storage exceed requirements in Title 22 CCR, Section 66262.34.
- Waste shall be disposed by a licensed hazardous waste transporter at an authorized and licensed disposal facility or recycling facility using properly completed Uniform Hazardous Waste Manifest forms.
- An Environmental Laboratory Accreditation Program (ELAP)-accredited laboratory shall sample waste and analyze it to determine the appropriate disposal facility.
- Make sure that toxic liquid wastes (e.g., used oils, solvents, paints) and chemicals (e.g., acids, pesticides, additives, curing compounds) are not disposed in dumpsters designated for solid waste construction debris.
- Properly dispose of rainwater that may have mixed with hazardous waste in secondary containment.
- Recycle any useful material such as used oil or water-based paint when practical.
- Attention is directed to “Hazardous Material,” “Contaminated Material,” and “Aerially Deposited Lead” of the Contract documents regarding the handling and disposal of hazardous materials.

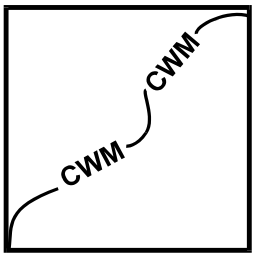
Maintenance and Inspection

- The WPC Manager or QSP shall monitor on-site hazardous waste storage and disposal procedures.
- Waste storage areas shall be kept clean, well-organized, and equipped with ample clean up supplies as appropriate for the materials being stored.
- Storage areas shall be inspected in conformance with the provisions in the Contract Documents. At a minimum, storage areas must be inspected before, daily during extended storm events, after every storm event, and weekly year-round. Perimeter controls, containment structures, covers, and liners shall be repaired or replaced as needed to maintain proper function.
- Hazardous spills shall be cleaned up and reported in conformance with the applicable Safety Data Sheet and the instructions posted at the project site.
- The National Response Center, at (800) 424-8802, shall be notified of spills of federal reportable quantities in conformance with the requirements in 40 CFR parts 110, 117, and 302.
- Copies of the hazardous waste manifests shall be provided.

SWPPP or WPCP

- Hazardous Waste Management must be discussed in Section 600.2.2 of the SWPPP or Section 30.3.2 of the WPCP.

Concrete Waste Management



Standard Symbol

BMP Objectives

Soil Stabilization	☐
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☐
Materials and Waste Management	☑

Definition and Purpose

These are procedures and practices that are designed to minimize or eliminate the discharge of concrete waste materials to the storm drain systems or watercourses.

Appropriate Applications

- Where concrete is used as a construction material or where concrete dust and debris result from demolition activities.
- Where slurries containing portland cement concrete (PCC) or asphalt concrete (AC) are generated, such as from saw cutting, coring, grinding, grooving, and hydro-concrete demolition.
- Where concrete trucks and other concrete-coated equipment are washed on site, when approved by the Resident Engineer (RE). See also NS-8, “Vehicle and Equipment Cleaning.”
- Where mortar-mixing stations exist.

Limitations

- None identified.

Standards and Specifications

Education

- Educate employees, subcontractors, and suppliers on the concrete waste management techniques described herein.
- The WPC Manager shall oversee and enforce concrete waste management procedures.

Concrete Demolition Wastes

- Stockpile concrete demolition wastes in accordance with BMP WM-3, “Stockpile Management.”
- Disposal of hardened PCC and AC waste shall be in conformance with Standard Specifications Section 14-10 – “Solid Waste Disposal and Recycling.”

Concrete Slurry Waste Management and Disposal

- PCC and AC waste shall not be allowed to enter storm drainage systems or watercourses.
- A sign shall be installed adjacent to each temporary concrete washout facility to inform concrete equipment operators to use the proper facilities.
- The WPC manager must ensure that on-site concrete working tasks are being monitored, such as saw cutting, coring, grinding, and grooving to ensure proper methods are implemented.
- Residue from saw cutting, coring, and grinding operations shall be picked up by means of a vacuum device. Residue shall not be allowed to flow across the pavement and shall not be left on the pavement surface. See also NS-3, “Paving, Sealing, Saw Cutting, Grooving, and Grinding Operations.”
- Vacuumed slurry residue shall be disposed in accordance with WM-5, “Solid Waste Management” and Standard Specifications Section 13-4.03D – “Waste Management.” Slurry residue shall be temporarily stored in a facility as described below in “On-site Temporary Concrete Washout Facility, Concrete Transit Truck Washout Procedures,” or within an impermeable containment vessel or bin.
- Collect and dispose all residues from grooving and grinding operations in accordance with Standard Specifications Section 14-10, – “Solid Waste Disposal and Recycling” and 14-11, “Hazardous Waste and Contamination.”

On-site Temporary Concrete Washout Facility, Concrete Transit Truck Washout Procedures

- Temporary concrete washout facilities shall be located a minimum of 50 feet from storm drain inlets, open drainage facilities, and watercourses unless determined infeasible by the RE. Each facility shall be located away from construction traffic or access areas to prevent disturbance or tracking.
- A sign shall be installed adjacent to each washout facility to inform concrete equipment operators to use the proper facilities. The sign shall be installed as shown on the plans and in conformance with the provisions in Standard Specifications Section 56 2 – “Overhead Sign Structures.”
- Temporary concrete washout facilities shall be constructed above grade or below grade at the option of the Contractor. Temporary concrete washout facilities shall be constructed and maintained in sufficient quantity and size to contain all liquid and concrete waste generated by washout operations.
- Temporary washout facilities shall have a temporary pit or bermed areas of sufficient volume to completely contain all liquid and waste concrete materials generated during washout procedures.
- Perform washout of concrete mixers, delivery trucks, and other delivery systems in designated areas only.

- Wash concrete only from mixer chutes into approved concrete washout facility. Washout may be collected in an impermeable bag or other impermeable containment devices for disposal.
- Pump excess concrete in concrete pump bin back into concrete mixer truck.
- Concrete washout from concrete pumper bins can be washed into concrete pumper trucks and discharged into designated washout area, or properly disposed offsite.
- Once concrete wastes are washed into the designated area and allowed to harden, the concrete shall be broken up, removed, and disposed in conformance with the provisions in Standard Specifications Section 13-4.03D(3), ") Concrete Waste;" 13-9, " Temporary Concrete Washouts;" 15-1.03B, "Removing Concrete;" and 14-10, "Solid Waste Disposal & Recycling."

Temporary Concrete Washout Facility Type "Above Grade"

- Temporary concrete washout facility type "Above Grade" shall be constructed as shown on Page 6, with a recommended minimum length and width of 10 feet, but with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations. The length and width of a facility may be increased, at the Contractor's expense, upon approval from the RE.
- Straw bales, wood stakes, and sandbag materials shall conform to the provisions in SC-9, "Temporary Straw Bale Barrier."
- Plastic lining material shall be a minimum of 10-mil polyethylene sheeting and shall be free of holes, tears, or other defects that compromise the impermeability of the material. Liner seams shall be installed in accordance with manufacturers' recommendations.
- Portable delineators shall conform to the provisions in Standard Specifications Section 12 3.04 – "Portable Delineators." The delineator bases shall be cemented to the pavement in the same manner as provided for cementing pavement markers to pavement. Portable delineators shall be applied only to a clean, dry surface.

Temporary Concrete Washout Facility Type "Below Grade"

- Temporary concrete washout facility type "Below Grade" shall be constructed as shown on page 6, with a recommended minimum length and width of 10 feet. The quantity and volume shall be sufficient to contain all liquid and concrete waste generated by washout operations. The length and width of a facility may be increased, at the Contractor's expense, upon approval of the RE. Lath and flagging shall be commercial type.
- Plastic lining material shall be a minimum of 10-mil polyethylene sheeting and shall be free of holes, tears, or other defects that compromise the impermeability of the material. Liner seams shall be installed in accordance with manufacturers' recommendations.
- The soil base shall be prepared free of rocks or other debris that may cause tears or holes in the plastic lining material.
- Temporary washout facilities shall implement BMPs to prevent run-on and runoff from the facility.

Removal of Temporary Concrete Washout Facilities

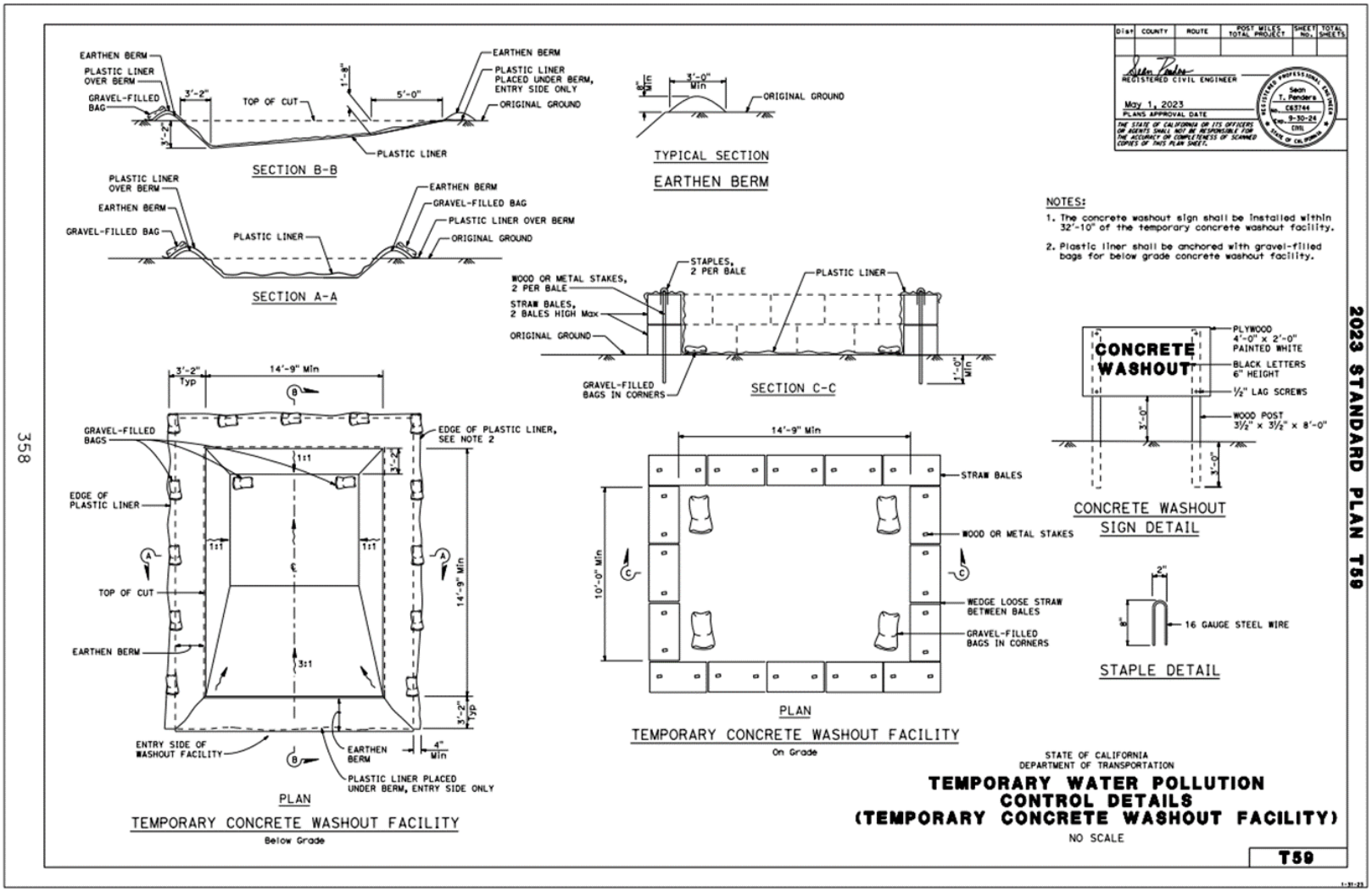
- When temporary concrete washout facilities are no longer required for the work, as determined by the RE, the hardened concrete shall be removed and disposed. Disposal of PCC dried residues, slurries, or liquid waste shall be disposed outside the highway right-of-way in conformance with provisions of Standard Specifications Section 14-10. Materials used to construct temporary concrete washout facilities shall become the property of the Contractor, shall be removed from the work site, and be disposed outside the highway right-of-way.
- Holes, depressions, or other ground disturbance caused by the removal of the temporary concrete washout facilities shall be backfilled and repaired in conformance with the provisions in Standard Specifications Section 5 –"Control of Work."

Maintenance and Inspection

- Inspect concrete waste management areas before, during, and after rainfall events, and at least weekly during other times.
- The WPC manager shall monitor concrete working tasks, such as saw cutting, coring, grinding and grooving daily to ensure proper methods are employed or as directed by the RE.
- Temporary concrete washout facilities shall be maintained to provide adequate holding capacity with a minimum freeboard of 4 inches for above-grade facilities and 12 inches for below-grade facilities.
- Maintaining temporary concrete washout facilities shall include removing and disposing hardened concrete and returning the facilities to a functional condition.
- Hardened concrete materials shall be removed and disposed in conformance with the provisions in Standard Specifications Section 13-4 and 14-10.
- Existing facilities must be cleaned, or new facilities must be constructed and ready for use, once the washout is 75% full.
- Temporary concrete washout facilities shall be inspected for damage (e.g., tears in polyethylene liner, missing sandbags, etc.).
- Inspection and maintenance of these areas must be properly documented and ensure no potential for discharges from these areas occur as part of the non-visible monitoring requirements.

SWPPP or WPCP

Concrete waste management must be discussed in Section 600.2.2 of the SWPPP or Section 30.3.2 of the WPCP.



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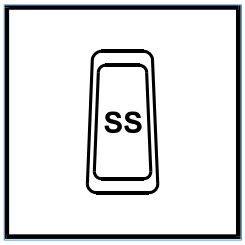
Sanitary and Septic Waste Management



Standard Symbol

BMP Objectives

Soil Stabilization	☐
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☐
Materials and Waste Management	☑

Definition and Purpose

Procedures and practices to minimize or eliminate the discharge of construction site sanitary and septic waste materials to the storm drain system or to receiving waters.

Appropriate Application

Sanitary/septic waste management practices are implemented on all construction sites that use temporary or portable sanitary and septic waste systems.

Limitations

None identified.

Standards and Specifications

Education

- Educate employees, subcontractors, and suppliers on sanitary and septic waste storage and disposal procedures.
- Educate employees, subcontractors, and suppliers of potential dangers to humans and the environment from sanitary/septic wastes.
- Instruct employees, subcontractors, and suppliers in identification of sanitary/septic waste.
- Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings and tailgates).
- Establish a continuing education program to indoctrinate new employees.

Storage and Disposal Procedures

- Temporary sanitary facilities shall be located away from drainage facilities, receiving waters, and traffic circulation.
- When subjected to high winds or risk for overtopping, temporary systems must be properly secured.
- Wastewater shall not be discharged or buried within the highway right of way.
- Sanitary facilities require secondary containment to prevent discharges of pollutants to the stormwater drainage system or receiving water.
- Sanitary and septic systems that discharge directly into sanitary sewer systems, where permissible, shall comply with the local health agency, city, county, and sewer district requirements.
- If using an on-site disposal system, such as a septic system, comply with local health agency requirements.
- Properly connect temporary sanitary facilities that discharge to the sanitary sewer system to avoid illicit discharges.
- Ensure that sanitary and septic facilities are maintained in good working order by a licensed service.
- Use only reputable, licensed sanitary/septic waste haulers.

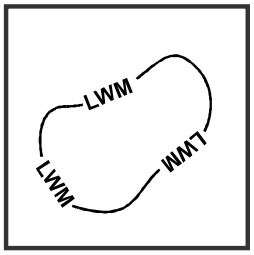
Maintenance and Inspection

- Inspect on-site sanitary and septic waste storage and disposal procedures at least weekly, prior to a forecasted rain event, daily during extended rain events, and post storm events.
- Locations for portable sanitary systems must be shown on the WPCDs and reflect current site conditions.

SWPPP or WPCP

Sanitary and Septic Waste Management must be discussed in Section 600.2.2 of the SWPPP or Section 30.3.2 of the WPCP.

Liquid Waste Management



Standard Symbol

BMP Objectives

Soil Stabilization	☐
Sediment Control	☐
Tracking Control	☐
Wind Erosion Control	☐
Non-Stormwater Management	☐
Materials and Waste Management	☑

Definition and Purpose

Procedures and practices to prevent discharge of pollutants to the storm drain system or to receiving waters as a result of the creation, collection, and disposal of non-hazardous liquid wastes.

Appropriate Applications

Liquid waste management is applicable to construction projects that generate any of the following non-hazardous by-products, residuals, or wastes:

- Drilling slurries and drilling fluids
- Grease-free and oil-free wastewater and rinse water
- Dredgings
- Other non-storm water liquid discharges not permitted by separate permits

Limitations

- Disposal of some liquid wastes may be subject to specific laws and regulations, or to requirements of other permits secured for the construction project (e.g., NPDES permits, Army Corps permits, Coastal Commission permits, etc.).
- Does not apply to dewatering operations (see NS-2, “Dewatering”), solid waste management (see WM-5, “Solid Waste Management”), hazardous wastes (see WM-6, “Hazardous Waste Management”), or concrete slurry residue (see WM-8, “Concrete Waste Management”).

- Does not apply to non-stormwater discharges permitted by any NPDES permit held by the pertinent Caltrans District unless the discharge is determined by Caltrans to be a source of pollutants. Typical permitted non-stormwater discharges can include water-line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, flows from riparian habitats and wetlands, and discharges or flows from emergency firefighting activities. See SWMP for a complete list of permitted non-stormwater discharges.

Standards and Specification

General Practices

- Must comply with Standard Specifications Section 13-4.03B – “Spill Prevention and Control.”
- Instruct employees and subcontractors on how to safely differentiate between non-hazardous liquid waste and potential or known hazardous liquid waste.
- Instruct employees, subcontractors, and suppliers that it is unacceptable for any liquid waste to enter any storm drainage structure, waterway, or receiving water.
- Educate employees and subcontractors on liquid-waste-generating activities, and liquid waste storage and disposal procedures.
- Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings and tailgates).
- Verify which non-stormwater discharges are permitted by the Caltrans NPDES permit; different regions might have different requirements not outlined in this permit. Some listed discharges may be prohibited if Caltrans determines the discharge to be a source of pollutants.
- Apply the NS-8, “Vehicle and Equipment Cleaning” BMP for managing wash water and rinse water from vehicle and equipment cleaning operations.

Containing Liquid Wastes

- Drilling residue and drilling fluids shall not be allowed to enter storm drains and receiving waters and shall be disposed outside the highway right of way in conformance with the provisions in the Standard Specifications.
- If an appropriate location is available, as determined by the Resident Engineer, drilling residue and drilling fluids that are exempt under California Code of Regulations (CCR) Title 23 §2511(g) may be dried by infiltration and evaporation in a containment facility constructed in conformance with the provisions concerning the temporary concrete washout facilities detailed in WM-08, “Concrete Waste Management.”
- Liquid wastes generated as part of an operational procedure, such as water-laden dredged material and drilling mud, shall be contained and not allowed to flow into drainage channels or receiving waters prior to treatment.
- Contain liquid wastes in a controlled area, such as a holding pit, sediment basin, roll-off bin, or portable tank.
- Containment devices must be structurally sound and leak free.

- Containment devices must be of sufficient quantity or volume to completely contain the liquid wastes generated.
- Take precautions to avoid spills or accidental releases of contained liquid wastes. Apply the education measures and spill response procedures outlined in WM-4, “Spill Prevention and Control.”
- Do not locate containment areas or devices where accidental release of the contained liquid can threaten health or safety, or discharge to water bodies, channels, or storm drains.

Capturing Liquid Wastes

- Capture all liquid wastes running off a surface, which has the potential to affect the storm drainage system, such as wash water and rinse water from cleaning walls or pavement.
- Do not allow liquid wastes to flow or discharge uncontrolled. Use temporary dikes or berms to intercept flows and direct them to a containment area or device for capture.
- If the liquid waste is sediment laden, use a sediment trap (see SC-3, “Sediment Trap/Curb Cutback”) for capturing and treating the liquid waste stream, or capture in a containment device and allow sediment to settle.

Disposing of Liquid Wastes

- Typical method is to dewater the contained liquid waste using procedures such as described in NS-2, “Dewatering Operations” and SC-2, “Sediment/Desilting Basin.” Dispose resulting solids per WM-5, “Solid Waste Management.”
- Method of disposal for some liquid wastes may be prescribed in water quality reports, NPDES permits, Environmental Impact Reports, 401 Water Quality Certifications or 404 permits, local agency discharge permits, etc., and may be defined elsewhere in the special provisions.
- Liquid wastes, such as from dredged material, may require testing and certification, whether it is hazardous or not, before a disposal method can be determined.
- For disposal of hazardous waste, see WM-6, “Hazardous Waste Management.”
- If necessary, further treat liquid wastes prior to disposal. Treatment may include, though is not limited to, sedimentation, filtration, and chemical neutralization.

Maintenance and Inspection

- Spot-check employees and subcontractors at least monthly throughout the job to ensure appropriate practices are being employed. At a minimum, liquid waste containment areas must be inspected before, during, and after rain events. Findings must be properly documented, and any deficiencies timely corrected.
- Remove deposited solids in containment areas and capturing devices as needed, and at the completion of the task. Dispose any solids as described in WM-5, “Solid Waste Management.”
- Inspect containment areas and capturing devices frequently for damage and repair as needed.
- Improper storage, containment, or disposal might trigger sampling requirements per section 1000 of the SWPPP.
- Locations for liquid waste management must be shown on the WPCDs and reflect current site conditions.

SWPPP or WPCP

Liquid Waste Management must be discussed in Section 600.2.2 of the SWPPP or Section 30.3.2 of the WPCP.

Appendix I: BMP Inspection Form

BMP INSPECTION REPORT

Date and Time of Inspection:			Date Report Written:		
Inspection Type: (Circle one)	Weekly *Complete Parts I,II,III and VII*	Pre-Qualifying Precipitation Event (QPE) *Complete Parts I,II,III,IV and VII*	During QPE *Complete Parts I, II, III, V, and VII*	Post-QPE *Complete Parts I,II,III,VI and VII*	*Inactive Project Complete Parts I,II,III and VII*

Part I. General Information

Site Information

Construction Site Name:			
Construction stage and completed activities:			Approximate area of site that is exposed:
Photos Taken: (Circle one)	Yes	No	Photo Reference IDs:

Weather

Estimate storm beginning: (date and time)	Estimate storm duration: (hours)
Estimate time since last storm: (days or hours)	Rain gauge reading and location: (in)

Is a “Qualifying Precipitation Event” predicted or did one occur (i.e., any weather pattern with a 50% chance of 0.5” or more within a 24-hr period when 0.5” has been forecast and continues on subsequent 24-hour periods when 0.25” of precipitation or more is forecast)? (Y/N)
If yes, summarize forecast:

Exception Documentation (explanation required if inspection could not be conducted). Visual inspections are not required outside of business hours or during dangerous weather conditions such as electrical storms, flooding, and high winds above 40 miles per hour.

Inspector Information

Inspector Name:	Inspector Title:
Inspector Certification:	Date:

Part II. BMP Observations. Describe deficiencies in Part III.			
Minimum BMPs for Risk Level_____Sites	Adequately designed, implemented and effective (yes, no, N/A)	Action Required (yes/no)	Action Implemented (Date)
Good Housekeeping for Construction Materials			
Inventory of products (excluding materials designed to be outdoors)			
Stockpiled construction materials not actively in use are covered and bermed			
All chemicals are stored in watertight containers with appropriate secondary containment, or in a completely enclosed storage shed			
Construction materials are minimally exposed to precipitation			
BMPs preventing the off-site tracking of materials are implemented and properly effective			
Good Housekeeping for Waste Management			
Wash/rinse water and materials are prevented from being disposed into the storm drain system			
Portable toilets are contained to prevent discharges of waste			
Sanitation facilities are clean and with no apparent for leaks and spills			
Equipment is in place to cover waste disposal containers at the end of business day and during rain events			
Discharges from waste disposal containers are prevented from discharging to the storm drain system / receiving water			
Stockpiled waste material is securely protected from wind and rain if not actively in use			
Procedures are in place for addressing hazardous and non-hazardous spills			
Appropriate spill response personnel are assigned and trained			
Equipment and materials for cleanup of spills is available onsite			
Washout areas (e.g., concrete) are contained appropriately to prevent discharge or infiltration into the underlying soil			
Good Housekeeping for Vehicle Storage and Maintenance			
Measures are in place to prevent oil, grease, or fuel from leaking into the ground, storm drains, or surface waters			
All equipment or vehicles are fueled, maintained, and stored in a designated area with appropriate BMPs			
Vehicle and equipment leaks are cleaned immediately and disposed of properly			

Part II. BMP Observations Continued. Describe deficiencies in Part III.			
Minimum BMPs for Risk Level_____Sites	Adequately designed, implemented and effective (yes, no, N/A)	Action Required (yes/no)	Action Implemented (Date)
Good Housekeeping for Landscape Materials			
Stockpiled landscape materials such as mulches and topsoil are contained and covered when not actively in use			
Erodible landscape material has not been applied 2 days before a forecasted rain event or during an event			
Erodible landscape materials are applied at quantities and rates in accordance with manufacturer recommendations			
Bagged erodible landscape materials are stored on pallets and covered			
Good Housekeeping for Air Deposition of Site Materials			
Good housekeeping measures are implemented onsite to control the air deposition of site materials and from site operations			
Non-Stormwater Management			
Non-Stormwater discharges are properly controlled			
Vehicles are washed in a manner to prevent non-stormwater discharges to surface waters or drainage systems			
Streets are cleaned in a manner to prevent unauthorized non-stormwater discharges to surface waters or drainage systems.			
Erosion Controls			
Wind erosion controls are effectively implemented			
Effective soil cover is provided for disturbed areas inactive (i.e., not scheduled to be disturbed for 14 days) as well as finished slopes, open space, utility backfill, and completed lots			
The use of plastic materials is limited in cases when a more sustainable, environmentally friendly alternative exists.			
Sediment Controls			
Perimeter controls are established and effective at controlling erosion and sediment discharges from the site			
Entrances and exits are stabilized to control erosion and sediment discharges from the site			
Sediment basins are properly maintained			
Inspect immediate access roads prior to forecasted precipitation			
Linear sediment control along toe of slope, face of slope an at			

grade breaks (Risk Level 2 & 3 Only)			
Limit construction activity to and from site to entrances and exits that employ effective controls to prevent offsite tracking (Risk Level 2 & 3 Only)			
Ensure all storm, drain inlets and perimeter controls, runoff control BMPs and pollutants controls at entrances and exits are maintained and protected from activities the reduce their effectiveness (Risk Level 2 & 3 Only)			
Run-On and Run-Off Controls			
Run-on to the site is effectively managed and directed away from all disturbed areas.			
Other			
Are the project SWPPP and BMP plan up to date, available onsite and being properly implemented?			
Is the posting of the project's unique WDID number, waiver identification number, and site and project contact information publicly accessible?			

Part III. Descriptions of BMP Deficiencies

Deficiency	Repairs Implemented: Note - Repairs must begin within 72 hours of identification and, complete repairs as soon as possible.	
	Start Date	Action
1.		
2.		
3.		
4.		

Part IV. Additional Pre-QPE Observations. Note the presence or absence of floating and suspended materials, sheen, discoloration, turbidity, odors, and source(s) of pollutants(s).

	Yes, No, N/A
Do stormwater storage and containment areas have adequate freeboard? If no, complete Part III.	
Are drainage areas free of spills, leaks, or uncontrolled pollutant sources? If no, complete Part VII and describe below.	
Notes:	

Are stormwater storage and containment areas free of leaks? If no, complete Parts III and/or VII and describe below.	
Notes:	

Part V. Additional During-QPE Observations. If BMPs cannot be inspected during inclement weather, list the results of visual inspections at all relevant outfalls, discharge points, and downstream locations. Note odors or visible sheen on the surface of discharges. Complete Part VII (Corrective Actions) as needed.	
Outfall, Discharge Point, or Other Downstream Location	
Location	Description
Location	Description
Location	Description
Location	Description

Part VI. Additional Post-QPE Observations. Visually observe (inspect) stormwater discharges at all discharge locations within 96 hours after each qualifying precipitation event, and observe (inspect) the discharge of stored or contained stormwater that is derived from and discharged subsequent to a qualifying precipitation event producing precipitation of ½ inch or more at the time of discharge. Complete Part VII (Corrective Actions) as needed.	
Discharge Location, Storage or Containment Area	**Visual Observation**

Part VII. Additional Corrective Actions Required. **Identify additional corrective actions not included with BMP Deficiencies (Part III) above. Note if SWPPP change is required.**	
Required Actions	**Implementation Date**

Appendix J: Weather Reports

The discharger must obtain the precipitation forecast information from the National Weather Service Forecast Office (http://forecast.weather.gov). A printed copy with the date and time of printing should be retained in this Appendix.

Appendix K: Training Forms

CERTIFICATE OF TRAINING

COMPLETION OF THE STATE WATER BOARD

CBPELSG LICENSEE QSD/QSP SELF-CERTIFICATION TRAINING FOR THE

2009 AND 2022 CONSTRUCTION STORMWATER GENERAL PERMITS

C38905

QSD/P Certificate #

Alan Waldman

Name

A. Mark Waldman

Signature

09/05/2023

Date

CALIFORNIA Water Boards

CGP TRAINING TEAM

CERTIFICATE OF TRAINING

CALIFORNIA CONSTRUCTION GENERAL PERMIT

Qualified SWPPP Practitioner (QSP)

Alan Mark Waldman

September 29, 2023 - December 28, 2025

Certificate #22075

CASQA
CALIFORNIA STORMWATER QUALITY ASSOCIATION®

California Stormwater Quality Association and
California Construction General Permit Training Team

Attachment B
Dust Management Plan/ Air Monitoring Plan

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Figure 2 - Location Map

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Acronyms and Abbreviations

µg/m^3	micrograms per cubic meter
ATCM	Airborne Toxic Control Measure
BRAC	Base Realignment and Closure
BAAD	Bay Area Air District
CCR	California Code of Regulations
CFR	Code of Federal Regulations
COC	Contaminants of Concern
CSAAQS	California State ambient air quality standard
DMAMP	Dust Management and Air Monitoring Plan
DTSC	Department of Toxic Substances Control
DO	Delivery Order
ECC	Environmental Chemical Corporation
HPNS	Hunters Point Naval Shipyard
ID	identification
LBP	lead-based paint
mph	miles per hour
Navy	United States Department of the Navy
NIOSH	National Institute for Occupational Safety and Health
PM10	particulate matter smaller than 10 microns in diameter
QC	quality control
ROC	Radionuclides of Concern
SSHO	Site Safety and Health Officer
TSP	total suspended particulate
USEPA	United States Environmental Protection Agency

History of Revisions

DCN #	Date	Notes
ECC-1205-4397-0003g.00	July-2025	Original Submission (Draft; R0-D1)
ECC-1205-4397-0003g.01	Aug-2025	Ver R0-D2 / RTC's from NAVFAC Review / 05-Aug-2025
ECC-1205-4397-0003g.02	Aug-2025	Ver R0-D3 / 2nd round of NAVFAC Review / 26-Aug-2025
ECC-1205-4397-0003g.03	Jan-2026	Ver R0-D4 / • Update from 2 stations to 3 stations, • Sept-2025 review comments • COCs: Addition of Mercury and PCBs • ROCs added
ECC-1205-4397-0003g.04	Mar-2026	Ver: R0-D5 • Section Updates: 6.2.3.2, 6.3.6, Table 6.2 removed highlights, confirmed monitoring period for ROCS.

1.0 INTRODUCTION

This RAWP was prepared by ECC Infrastructure, LLC (ECC) on behalf of the United States Department of the Navy (Navy), Naval Facilities Engineering Systems Command Southwest for the Navy Base Realignment and Closure Program Management Office (BRAC PMO) West, to guide protection of the environment during activities associated with abatement, demolition, waste staging, and transportation and disposal during the Parcel G Building Demolition project at Hunters Point Naval Shipyard (HPNS) in San Francisco, California (**Figure 1**).

ECC has been contracted to perform this work by the United States Department of the Navy, Naval Facilities Engineering Systems Command Southwest in San Diego, California. under Contract No. N6247321D1205, Delivery Order N6247325F4397. The work under this delivery order will be completed in compliance with the contract plans and specifications, and local, State, and Federal regulations.

All site work will be performed in coordination with the Navy's Remedial Project Manager (RPM) and the Resident Officer in Charge of Construction (ROICC) representative, as stated in section 1.0 of the Work Plan.

The Site Supervisor, as supported by the Quality Control (QC) Manager and Site Safety and Health Officer (SSHO), will be responsible for implementing and monitoring compliance with this DMAMP.

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2.0 SCOPE OF WORK

The objective of this project is to complete:

- The abatement and demolition for Buildings 351, 411, 366, 351A, 439, and 401;
- The removal of the concrete slab associated with building 408;
- Transportation and disposal of debris; and
- Site restoration for each former building site with durable cover.

The pre-work setup includes:

- Submission of required notifications to BAAD (10-day notice) and California/ Occupational Safety and Health Administration (Cal/OSHA) (24-hour notice).
- Utility Clearance - notify Underground Service Alert North (811), a minimum of 72 hours prior to field activities;
- Set up environmental controls including placement of fences, air monitoring stations, and stormwater Best Management Practices in accordance with the Environmental Protection Plan;
- Confirm the locations of Building asbestos-containing material (ACM) and lead-based paint (LBP); and
- Mark or designate areas for ACM abatement removal or LBP removal.

The Work Plan (WP) provides a more detailed scope of work.

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3.0 REGULATORY

Activities at HPNS are being conducted in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act. Regulatory oversight and guidance are provided by USEPA, California Environmental Protection Agency, Regional Water Quality Control Board, San Francisco Bay Region, and California Department of Public Health.

The project areas are located within the jurisdiction of the Bay Area Air District (BAAD. However, as the project is being implemented under the Comprehensive Environmental Response, Compensation, and Liability Act, it is not required to have a permit from the BAAD. Nevertheless, the project will meet the substantive aspects of BAAQ air quality requirements.

Consistent with the *Final, Revision 1, DMAMP, Radiological Investigation, Surveying, and Reporting, Parcel G, HPNS* (APTIM, 2020), this DMAMP specifically identifies the steps that will be taken to reduce fugitive dust emissions during demolition activities. The plan describes measures to address the substantive requirements of the following applicable regulations:

- *BAAD Regulation 6, Rule 1: General Requirements - Particulate Matter ; 6-1-301 Ringelmann No. 1 Limitation; 6-2-302 Opacity Limitation; and 6-1-305 Visible Particles* (*BAAQMD.gov, 05-Dec-2007; Revised 24-Apr-2018*).
- BAAD, Regulation 11, Rule 2: Asbestos Demolition, Renovation, & Manufacturing, *Sections to include: 11-2-303 / Demolition, Renovation & Removal; 11-2-304 / Waste Disposal; 11-2-401 / Reporting, Demolition, & Renovation; 11-2-502 / Waste Shipment Records; and 11-2-601 / Waste Disposal Warning Labels. (BAAQMD.gov, 07-Oct-1998, Revised 24-Apr-2018)*

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4.0 POTENTIAL SOURCES OF FUGITIVE DUST

Activities to be performed as part of the HPNS, Parcel G Building Demolition have the potential to generate air emissions in the form of fugitive dust. Possible sources of emissions include the following activities:

- ***Demolition*** – Fugitive dust generation during demolition of the buildings.
- ***Abatement*** – Fugitive dust may be generated during abatement of the open air abatement of Buildings 401 and 411. Fugitive abatement for the remainder of the buildings is not applicable as the abatement will be performed prior to the demolition.
- ***Construction Traffic*** – Movement of construction equipment around the work areas can create emissions.
    - All applicable equipment and vehicles that are either operated on-site or transporting waste out of state and within CA State limits, will be confirmed they adhere to: https://ww2.arb.ca.gov/truck-bus-regulation-basics-exemptions-truckstop
- ***Management of Borrow/Fill Material Soil*** – Soils delivered for this phase will be stockpiled. The handling and management of these soil could result in fugitive dust emissions.
- ***Demolition Material Stockpiles*** – These materials will be stockpiled during the demolition process and are destined for disposal facilities, and will be loaded into trucks for final disposal. Fugitive dust emissions could occur during stockpiling and truck loading.
- ***Site Restoration*** – Backfilling and restoration of the excavated areas may produce fugitive dust emissions.

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5.0 DUST CONTROL METHODS

Methods for controlling fugitive dust are described for the following emissions generated from the demolition activities at the project site:

- Dust entrained during onsite travel on paved and unpaved surfaces;
- Dust entrained during travel to/from HPNS;
- Dust entrained during site preparation, building demolition, materials processing, and placement of clean fill;
- Dust entrained during debris stockpiling and loading and unloading operations;
- Vehicle emissions associated with construction equipment; and
- Water applied as needed to control visible dust.

5.1 Traffic Control

If unpaved surfaces are used for construction traffic the following mitigation methods:

- They will be watered at a frequency sufficient to maintain adequate moisture. The frequency of watering will depend on climate conditions (i.e., precipitation, dry period, windy conditions).
- Roadways within the site will be swept using a wet sweeper or washed down to remove debris. Soil generated from the job site is not a concern on this project.
- No vehicle will exceed 15 miles per hour (mph) within the construction site and 5 mph in work areas.
- The truck route is presented in the Traffic Control Plan.

The following mitigation measures will be followed for fugitive dust emissions from construction traffic traveling on paved streets:

- Bulk-loaded trucks used for transportation of debris and other heavy earth-moving equipment will not be allowed to exit the construction sites, except through one of the track-out prevention control points.
- Construction areas adjacent to paved roadways will be treated with best management practices, as specified in the Stormwater Pollution Prevention Plan.
- Roadways within the site will be swept with a wet sweeper or washed down or by any other practical method to remove soil. Accumulated debris will be routinely removed from non-traffic areas such as gutters and curbs.
- If the preceding mitigation methods fail to control fugitive dust emissions, then one or more of the following reasonably available control measures will be applied:
    - Unpaved active portions of the construction areas will be watered or treated with dust control solutions to minimize windblown dust and dust generated by vehicle traffic.

- Paved portions of the construction sites will be cleaned more frequently to control windblown dust and dust generated by vehicle traffic. Water may also be applied to the paved roads, if necessary.

5.2 Site Preparation

Fugitive dust emissions from site preparation will be controlled using the following methods:

- Following clearing and grubbing, exposed surfaces will be wetted to sufficiently maintain soil moisture content to minimize fugitive dust creation.
- Unpaved, inactive portions of the work area under construction will be watered, or a chemical soil stabilizer will be applied to minimize fugitive dust creation.

5.3 Demolition, Abatement, and Loading Activities

Fugitive dust emissions from demolition, abatement, and loading activities will be controlled using the following methods:

- Material will be wetted, if required, prior to excavation activities to reduce dust emissions. Water will be sprayed during active demolition, material handling, and loading, as needed.
- Active areas will be wetted during periods of dry weather and/or windy conditions. A water truck or water equivalent water source will be available during excavation and removal operations.
- The height that material is dropped into trucks, stockpiles, or pads will be minimized, to the extent possible.
- Trucks will be equipped with tarping systems to cover loads during soil transport off site.
- Truck traffic will be minimized to the shortest allowable haul routes from the work areas and stockpile areas.
- Chemical soil stabilizer will be applied in sufficient quantities to disturbed areas to create a stabilized surface.
- Backfill materials will be wetted as needed to maintain moisture. Loader buckets will be emptied slowly and drop heights will be minimized, to the extent possible.
- Water, a temporary cover, or chemical soil stabilizer may be applied to control fugitive dust emissions from backfill material that is not being actively handled.

5.4 Stockpiles

Fugitive dust emissions from storage piles will be controlled by using the following methods:

- Water, a temporary cover, or chemical soil stabilizer may be applied to soil storage piles.

- During periods of no work (including evenings, weekends, and holidays), high winds, or heavy rainfall, the contaminated debris stockpiles will either be covered with 10-mil plastic sheeting weighed down with sandbags or will be sprayed with magnesium chloride, as appropriate, to prevent erosion by wind and/or water.

5.5 Solid Bulk Material Transport

Fugitive dust emissions from bulk-material transport vehicles will be controlled by using the following methods:

- Trucks that are used to transport solid bulk material will be covered/tarped prior to leaving the site.
- Vehicles will be checked to ensure that tarps are securely in place and to remove excess material on the shelf or exterior surfaces of the cargo compartment.
- Bulk-loaded trucks will exit the work site via an established exit point.
- Truck tires will be inspected and dry brushed to remove dirt prior to leaving the exclusion zones. Wet sweeping will be implemented, as needed, if track-out of debris is observed.

Trucks will be cleaned of dirt that accumulates on flat surfaces (e.g., bumpers, fenders, ledges, etc.) as well as tires and wheels at the truck decontamination facility before leaving the site. All exiting trucks will pass through the decontamination facility consisting of a pressure washer with decontamination water collection.

5.6 Backfill Activities

Fugitive dust emissions from backfill activities (cutting, filling, and grading material) will be controlled using the following methods:

- The height from which soil is dropped onto the ground, trucks, or stockpiles will be minimized.
- Trucks will be equipped with tarping systems to cover loads during soil transport.
- Truck traffic will be minimized to the shortest allowable haul routes from the work areas and stockpile areas.
- Chemical soil stabilizer will be applied in sufficient quantities to disturbed areas, to create a stabilized surface.
- Backfill materials will be wetted on an as-needed basis to maintain moisture. Loader buckets will be emptied slowly and drop heights from loader buckets will be minimized. A water truck or water buffalo will be dedicated to backfilling operations.
- Water, a temporary cover, or chemical soil stabilizer will be applied to control fugitive dust emissions from stored stockpiled material.

5.7 Wind Speed Monitoring and Response

Because wind speed and direction have a direct influence on the potential for dust generation and downwind offsite dispersion, wind speed and direction will be monitored throughout the day via an onsite meteorological station. The onsite meteorological station will be in the vicinity of Parcel G. The predominant wind direction at HPNS is from the west or west-northwest.

Dust control measures will be evaluated and implemented in response to the potential for specific wind speed conditions that may exacerbate dust generation. Wind speed will be monitored throughout the day while demolition, abatement, and loading activities are occurring. Wind speeds will be continuously monitored and recorded.

The exceedance of a threshold wind speed is defined as the point at which the threshold wind speed is exceeded during two consecutive 10-minute time-weighted intervals.

In addition, a windsock, designed to fully respond to a 15-mph wind speed will be installed at the site. The windsock will be monitored during demolition, abatement, and loading activities and will serve as an indicator of real-time wind speed and direction. An anemometer may also be used to record wind speed at site specific locations.

Response actions will be taken based on ranges of wind speed conditions.

- ***0 and 15 mph***: standard best management dust control practices will be implemented.
- ***15 and 20 mph***: Two consecutive 10-minute time-weighted intervals, the construction foreman will conduct a sitewide survey on 60-minute intervals for evidence of wind-generated dust. If wind-generated dust is observed, the foreman will increase the frequency of watering unpaved haul roads, wetting and/or stabilizing disturbed soil and street sweeping as needed. Truck traffic may also be reduced.
- ***20 and 25 mph***: for two consecutive 10-minute, time-weighted intervals, the construction foreman will immediately increase the frequency of watering unpaved haul roads, wetting and/or stabilizing disturbed soil, and street sweeping as needed. Truck traffic may also be reduced. The foreman will conduct a sitewide survey on 30-minute intervals for evidence of wind-generated dust. If wind-generated dust is observed despite the application of the increased dust control measures, the foreman will discontinue the work producing the dust until the wind speed is recorded below 20 mph for two consecutive 10-minute, time-weighted intervals.
- ***Exceeds 25 mph***: For two consecutive 10-minute, time-weighted intervals, dust-generating work will stop until the wind speed drops below 25 mph for two consecutive 10-minute, time-weighted intervals.

The meteorological station will be programmed to send out a notification wind speed alarms.

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6.0 AIR MONITORING

Air monitoring provides reasonable assurance of worker protection safety and the public receptors in accordance with air sampling methodology approved by the National Institute for Occupational Safety and Health (NIOSH).

Due to safety concerns and equipment integrity issues and at the discretion of the onsite air monitoring personnel, the air monitoring equipment may need to be shut down and protected during precipitation events.

The air monitoring for this work will include portable ambient air quality monitoring stations that will be established to perform monitoring during field activities. Air samples collected at the monitoring stations will be analyzed for the airborne chemicals of concern. The air quality sampling results will be used to assess the air quality compliance and evaluate needed modifications to project activities in the event of compliance concerns. Representative meteorological data for the general project areas, specifically wind speed and direction, will be used to identify the most appropriate locations for the air monitoring stations.

Air Monitoring Stations

Contaminants of Concern (COC) and Radionuclides of Concern ROCs:
The monitoring stations for will be triangulated (3-stations total) around the work site, referencing the wind direction with one upwind (UW) and two downwind (DW).

Analytical results will be compared to the air monitoring threshold criteria listed in **Table 6-1**. Total suspended particulate (TSP) is expected to be further controlled based on the limit employed for particulate matter smaller than 10 microns in diameter (PM_{10}) per guidance provided by the BAAD, which estimates that PM_{10} makes up approximately 55 percent (%) of TSPs.

Table 6-1. Air Sampling and Dust Monitoring Threshold Criteria

COC	Action Level	Units	Basis	Reporting Limits[1]
TSPs	0.5	mg/m3	Basewide HPNS level: Chosen to minimize overall permissible dust release from sites	TBD
Lead (Pb)	50	µg/m3	Cal/OSHA PEL	TBD
Manganese (Mn)	200	µg/m3	Cal/OSHA PEL	TBD
PM10	7,500	µg/m3	Cal/OSHA PEL[2]	TBD
Asbestos	0.1	Fibers per cm^3	Cal/OSHA PEL	TBD
Dust PM_{10} (real time dust monitoring	50	µg/m3	DTSC HERO developed action level [3]	TBD
Mercury	25	µg/m3	CalOSHA PEL	TBD
PCBs [7]	1000	µg/m3	Cal/OSHA PEL	0.05 ug
ROC	**Action Level**	**Units**	**Basis**	**Reporting Limits1**
Cesium-137	4.0×10^{-11}	µCi/mL	Basewide HPNS level	TBD
Plutonium-239/240	4.0×10^{-15}	µCi/mL	Basewide HPNS level	TBD
Radium-226	1.8×10^{-13}	µCi/mL	Basewide HPNS level	TBD
Strontium-90	1.2x10-12	µCi/mL	Basewide HPNS level	TBD
Thorium-232	1.2x10-15	µCi/mL	Basewide HPNS level	TBD
Uranium-235	6.0x10-13	µCi/mL	Basewide HPNS level	TBD

Notes:

1. Reporting limit is based on volume of air collected, and will vary, reporting limit shown is typical for normal operation day.
2. California Occupational Safety and Health Administration (Cal/OSHA) Permissible Exposure Level (PEL) for particulates not otherwise regulated (respiratory) used for particulate matter smaller than 10 microns in diameter (PM_{10}).
3. Action level for dust (PM_{10}) was developed by Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) and is protective for all Parcel G non-radiological contaminants of concern (COC) (DTSC, 2019).
4. CAL/OSHA, Section 5155, Table AC-1, Permissible Exposure Limits For Chemical Contaminants (05-May-2016). /
   - https://www.dir.ca.gov/title8/5155.html
5. PCBs / see chlorodiphenyl [4] (CAS: 53469219)
6. Mercury and PCB analyses only monitored during open air demolition/abatement at Buildings 411 (est 45-Days) & 401 (Est 15-Days).
7. PCB Aroclors to include: 1016, 1221, 1232, 1242, 1248, 1254, 1260, & 1268.

Abbreviations and Acronyms:

µg/m^3 – micrograms per cubic meter
Cal/OSHA – State of California, Department of Industrial Relations
HPNS – Hunters Point Naval Shipyard
mg/m^3 – milligrams per cubic meter / TSP – total suspended particulate

If exceedances are observed or recorded at real-time monitoring locations or in the laboratory analyses, the Navy will be informed. The data analysis will utilize: the results; upwind/downwind subtraction criteria; and references to meteorological data.

BAAD implements the California State ambient air quality standard (CSAAQS) for the Bay Area. The CSAAQS is designed to protect the general public from airborne particulates generated in urban, suburban, and rural environments. The CSAAQS is not meant to be applied to general project-specific construction actions and related air quality. Rather, the standard is used to attain city- or regional-wide ambient air quality goals for the benefit of the general public. The current CSAAQS for PM_{10} is 50 micrograms per cubic meter (µg/m3) average per 24-hour day. The City and County of San Francisco is currently a non-attainment area for the CSAAQS for PM_{10}. Dust control measures will be implemented if real-time air monitoring data has sustained exceedances of 50 µg/m3 over a 15-minute interval. The dust monitors will enable emissions to be considered in the 50 $\mu g/m^3$ average per 24- hour day action level comparison, when wind speeds are greater than 5 mph and wind direction is constant over the sampling period.

There will be situations, like stagnant conditions or when the wind direction varies during the data collection interval, where consideration of wind direction in relation to station is not clearly defined. Reporting will include wind data and description of how the stations have been used to exclude off-site emissions in air quality monitoring reports.

6.1 Weather

Air monitoring units will not be operated during prolonged precipitation events (more than 8 hours of precipitation in a 24-hour period). An air monitoring station or individual units being inoperable will not preclude construction activities at the associated work site.

6.2 Monitoring Site Locations

6.2.1 COCs & ROCs

A maximum of three air monitoring locations will be used at Parcel G, triangulated around the active work site(s), to collect air samples to assess the impact of field activities. The locations at the site will be determined based on the location of building(s) work being performed on, the existing structures, and the prevailing wind direction. Estimated locations where the air stations may be placed have been included in Figure 2, but are not limited to the ones that are shown.

The air monitoring team will be on-site during the abatement (excluding negative air operations) and demolition operations. Their task will include (but are not limited to): Daily operation of the air monitoring stations; On-site observation for the generation of fugitive dust and implementing response procedures outlined in Section 6.5.

Locations may be:

- Adjusted to avoid traffic paths and areas where non-project site conditions could affect the data.
- Evaluated Daily. If re-location is warranted, it will primarily be performed in the non-work hours due to the effort required to move and re-calibrate the equipment. If re-location is requested during normal hours of operation, the NAVFAC construction manager will be informed and provide final approval.

6.2.2 Negative Air Abatement Operations

If the only site operations conducted are negative air abatement, the air monitoring stations will not be utilized as the negative air machine with a HEPA filter will be utilized. The abatement operations team will document the effectiveness to ensure the equipment is operating per the requirements.

6.2.3 Operating Hours

6.2.3.1 COCs:

The sampling equipment will be in operation during the demolition operations. If no demolition operations are occurring, the COC air monitoring stations will not be utilized. Inclement weather may also adjust the operating hours with the primary concern for the safety of the COC monitoring crew.

6.2.3.2 ROCs

The sampling equipment will be in operation 24-hours, starting 07:00 Mon and ending at 17:00 on Thursday. This may be adjusted for weekends, holidays, with approval from the ROICC. Inclement weather may also adjust the operating hours with the primary concern for the safety of the ROC monitoring crew.

Sampling frequency and monitoring methods are listed in **Table 6-2**.

Table 6-2. Air Sampling and Dust Monitoring Frequency and Sample Collection Methods

Operations Type	Type of Analysis	Sampling Method	Frequency
Site preparation, Building demolition, Abatement soil handling and loading, stockpiling, and movement of construction equipment	TSP	40 CFR, Part 50, Appendix B	One sample per workday
	Metals: Manganese, (Mn) Lead (Pb)	40 CFR, Part 50, Appendix B	One sample per workday
	PM_{10} / Total Dust	NIOSH 0500	One sample per workday
	Asbestos	NIOSH Method 7400	One sample per workday
	Real-time dust monitoring	DustTrak™ II or equivalent	Continuous daily during work
Open Air Demolition at Building 401 and 411 [A]	Mercury (Hg)	Niosh 6009	One sample per workday
	Poly-Chlorinated Biphenyls (PCBs)	NIOSH 5503	One sample per workday
Site preparation, Building demolition, Abatement soil handling and loading, stockpiling, and movement of construction equipment	ROCs	▪ HASL 300 A-01-R/SOP57921 ▪ HASL 300 GA-01-R/SOP57920 ▪ HASL 300 SR-03-RC/SOP57919	▪One per work week during Operating Hours: ▪ Monday @ 07:00 through Thursday @ 17:00

A – PCBs and Mercury will only be analyzed during the open air demolition occurring at buildings 401 and 411.

Notes:
Table was adapted from the Aptim Dust Management and Air Monitoring Plan (Aptim, 2020)
CFR – Code of Federal Regulations
NIOSH - National Institute for Occupational Safety and Health
PM_{10} - particulate matter smaller than 10 microns in diameter
TSP – total suspended particulates

6.3 Laboratory Analyses

6.3.1 Total Suspended Particulates and Metals

The TSP and Metals (Manganese and Lead) will be sampled with a high-volume (39 to 60 cubic feet per minute) air sampler in accordance with the USEPA reference sampling method for TSPs and described in Title 40 Code of Federal Regulations (CFR), Part 50, Subpart B. Each sample will be collected on a filter in accordance with the USEPA sampling method; the filter will then be weighed to determine the amount of TSPs collected. After the filter weight has been determined, the sample will be analyzed for TSPs, lead, and manganese in accordance with *Chapter IO-3 in the Compendium of Methods for the Determination of Inorganic Compounds in Ambient Air* (USEPA, 1999). The equipment and sampling procedures will comply with the specifications provided in the regulations for the sampler, filter, accuracy, calibration, and quality assurances.

The flow of the high-volume air sampler will be properly calibrated to establish traceability of the field measurement. Calibrations will follow the guidelines specified in Title 40 CFR, Part 50, Appendix B and Appendix J and Section 2.6 of the *Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Ambient Air Specific Methods* (USEPA, 1998).

6.3.1.1 Sample Collection Procedures

The general procedures for sample collection are as follows:

- Flow Rate: 39 cubic ft/min to 60 cubic ft/min
- Max Sampling time per Filter: 24-hours
- Obtain pre-weighed prepared filters from laboratory.
- Inspect/clean the unit for accumulated dirt/dust or insects.
- Don clean disposable sample gloves and open the filter cassette. Inspect the filter for pinholes, tears, abrasions, loose material, discoloration, and other non-uniformity. Discard any defective or damaged filters. Place new filter (Identification [ID] # down) on the filter cassette. Record the filter ID number on the sample collection log.
- Verify enough power supply/fuel for high-volume sampler for full day operation.
- Turn on the air sampler motor and allow the flow controller to stabilize (approximately five minutes).
- Verify flow rate (39 to 60 cubic feet per minute), record starting flow rate and time on sample collection log.
- At the end of day, put on a new clean pair of disposable gloves, stop the sampler and record time on sample collection log.
- Carefully remove filter (care must be taken to not lose any particulate matter from the filter).
- Fold the filter inward in half (take care not to tear corners).

- Verify that filter ID matches the ID on envelope and what is recorded on sample collection logs and place inside filter envelope.
- Label and prepare samples for shipment to the laboratory.
- Pertinent field data, such as date, time, sample identification, calibration data, sample location, ambient temperature and pressure, and additional information or observations that could influence analyses of the results will be entered on the field logs.

6.3.2 PM_{10} / Total Dust

PM_{10} (i.e., Total Dust) will be sampled in accordance with NIOSH 0500. Each sample will be collected on a laboratory prepared, pre-weighed filter over the course of the work day via a low volume air sampler (Gillian GilAir® air sampling pump, or equivalent). The filter will be returned to the laboratory and weighed to determine the amount of PM_{10} collected.

- Flow rate: 1 to 2 Liters per minute [L/min])
- Volume: 7L to 133L
- Obtain pre-weighted (*ie, match-weight / tared*) 25-millimeter (mm) filter from the laboratory.
- clean, disposable sample gloves and connect the out-put side of the filter to the pump hose inlet.
- Place the cassette in the breathing zone height (between four to six feet from the ground) with the face pointed down (so the face of the cassette points to the ground).
- Verify enough power supply/fuel for sample pump for full day operation.
- Turn on the motor and allow the flow controller to stabilize (approximately five minutes).
- Record starting flow rate and time on sample collection log.
- At the end of sampling, don on a new, clean pair of disposable gloves, stop the sampler, and record the end time on sample collection log.
- Label and prepare samples for shipment to the laboratory. One filter field blank is submitted to the laboratory for every day of sample collection.

6.3.3 Asbestos

Asbestos will be sampled and analyzed in accordance with NIOSH Method 7400, from the *NIOSH Manual of Analytical Methods* (NIOSH, 1994). Asbestos will be sampled using a low-volume air sampler (Gillian GilAir® air sampling pump, or equivalent). NIOSH Method 7400 requires samples to be collected on three-piece cellulose ester filters fitted with conductive cowlings. Each sample will be collected over a period not to exceed 24 hours. The general procedures for sample collection are as follows:

- Flow Rate: 0.5 to 16L/Min
- Min Sample Volume: 400L
    - Optimal flow rate: 2L to 4L per minute
- Obtain 25-mm mixed cellulose ester filters from laboratory.
- Don clean, disposable sample gloves and connect the suction side of the filter to the pump inlet.
- Place the cassette in the breathing zone height (between 4 to 6 feet from the ground) with the face pointed down (so the face of the cassette points to the ground).
- Verify enough power supply/fuel for sample pump for full day operation.
- Record starting flow rate and time on sample collection log.

  NOTE: The asbestos phased contrast microscopy method analysis is adversely affected by accumulations of dust on the filter. The filter will be inspected every through out the workday. If the buildup of dust is observed on the filter, the cassette will be changed, and the times recorded. Both filters will be submitted for analysis.

    - *Flow rates may be adjusted to avoid overloading the filter which voids the PCM analysis.*
- At the end of sampling, don on a new, clean pair of disposable gloves, stop the sampler, and record the end time on sample collection log.
- Label and prepare samples for shipment to the laboratory. One filter field blank is submitted to the laboratory for every day of sample collection.

6.3.4 Mercury (Hg)

Mercury will be sampled in accordance with NIOSH 6009 via solid sorbent tube. over the course of the work day. The sample filter, will be returned to the laboratory for analysis.

- Method Flow rates: 0.15 to 0.25 L/min
    - Note these are collected via low flow sampling
- Volume: 2L to 100L
- Obtain sorbent tube from the laboratory.

- Remove end caps from both ends
    - *Save these for sample return;*
- Break both ends of sorbent tube with breaker provided
- Ensure flow rate is going in the direction – Attach sorbent tube to air pump hose with rubber adapter on end
    - Install tube cover
    - Use tube covers to prevent cuts
- Place the sorbent tube at the breathing zone height.
- Start pump and record the start time.
- At the end of sampling period, turn pump off, and record the end time on sample collection log.
- Place tube covers on both ends of the sorbent tube

6.3.5 Poly-Chlorinated Bi-Phenyls (PCB's)

PCBs will be sampled in accordance with NIOSH 5506. PCBs will include the following arocolors: 1016, 1221, 1232, 1242, 1248, 1254, 1260, and 1268. Each sample will be collected on a sorbent tube and laboratory prepared filter over the course of the work day via a low volume air sampler (Gillian GilAir® air sampling pump, or equivalent). The sample, consisting of bot the sorbent tube and the filter, will be returned to the laboratory for analysis.

- Flow Rate: 2 L/min
- Volume: 200L to 1000L
    - Obtain Sorbent Tube and Filter from laboratory
    - Obtain clean, disposable sample gloves
    - Remove end caps from both ends
        - Save these for sample return;
    - Break both ends of sorbent tube with breaker provided
    - Ensure flow rate is going in the direction – Attach tube to air pump
    - Insert sorbent tube to into rubber sleave attached to the air hose coming from the pump.
    - Prepare a short air hose (1-3") with luer on one end
    - Attach open end of hose to other end of sorbent tube.
    - Prepare 37-mm filter, attach to Leur.

• Place the cassette in the breathing zone height (between four to six feet from the ground) with the face pointed down (so the face of the cassette points to the ground).

- Verify enough power supply/fuel for sample pump for full day operation.
- Turn on the motor and allow the flow controller to stabilize (approximately five minutes).
- Record starting flow rate and time on sample collection log.
- At the end of sampling, don on a new, clean pair of disposable gloves, stop the sampler, add caps onto sorbent tube and nibs to filter, and record the end time on sample collection log.
- Label and prepare samples for shipment to the laboratory. One filter field blank is submitted to the laboratory for every day of sample collection.

6.3.6 Radionuclides of Concern

This section addresses the six (6) Radionuclides of Concern:

1. Cesium-137;
2. Plutonium-239/240;
3. Radium-226
4. Strontium-90
5. Thorium-232; and
6. Uranium-235

The ROCS will be sampled in accordance with Permfix SOPs RP-110 and RP-107. Three samples in total, co-located with the TSP Hi-volume sampler, will be collected on a sampling train (collection media, sampling pump, tubing and flow rate measuring device).

Equipment will include:

- Low volume sampling pump: F&J Model LV-1 Sampling Pump or similar.
- Electronic mass flowmeter, such as F&J Model D-812
- Tygon tubing, filter holder, and appropriate sampling media
- Small tool kit for pump adjustments

Upon completion of sampling, the filter will be screened by the Radiation Protection Technician (RPT)/Radiation / Radiation Safety Officer (RSO). If the results are acceptable, the sample filter will shipped to the laboratory for analysis.

- Analytical Method(s): TBD
- Flow rate: TBD
- Acceptable Volume Range: TBD

Calibration: The process of adjusting and recording flow rates of the sampling pump using a primary flow calibrator. Flow calibrations using a primary standard shall be performed annually. Pump calibrations expire one year from date of last calibration.

1. Obtain a “Calibration Certificate and Data Sheet for the Low Volume Air Sampler,” an F & J LV-1 air sampler, and an electronic mass flowmeter.

2. Record general site and pump information in the top section of the form.

3. Connect the dual-head calibration filter holder assembly to the LV-1 in place of the regular filter holder. Verify that an intact 47mm glass fiber filter is properly positioned in the holder assembly.

4. Turn on power to the LV-1 and to the mass flowmeter.

5. Perform a physical inspection of the pump. Check SAT/UNSAT.

6. Adjust the LV-1 rotameter to 50 lpm. Use the widest point (middle) of the float as an adjustment guide.

7. Record the electronic mass flowmeter reading. Ensure this value is within 20% of the rotameter setting. Take instrument out of service if not within this range.

8. Perform 3 reproducibility measurements at 50 lpm. These three readings should be within 10% of their average.

9. Adjust the LV-1 rotameter to 30 lpm. Record the electronic mass flowmeter value. Calculate the error and record on form.

10. Repeat the above step for 40, 50, 60, and 70 lpm.

11. If any calibration check point has an error greater than 10%, then affix a chart of actual versus indicated flow data to the LV-1.

12. Affix calibration sticker with date due for next calibration and initials to LV-1.

13. Submit calibration certificate to the Radiation Safety Officer for review.

14. Maintain completed documentation in RPP Records until transmitted to Project Document Control.

Instrument Use

1. Consult with the RSO before initial deployment of work area or perimeter air samplers to verify locations and flow rates.
2. Ensure low-volume samplers are positioned between 4 and 6 feet above ground level and that they are protected from inclement weather.
3. Before pump activation, place the appropriate sampling media 47 mm glass fiber filter into the filter holder and screw down tightly.
4. Document pump location, serial number, date, time on, and starting flow rate on pre-stamped manila envelope. Record applicable HWP and covered workers on envelope as well.

Note: General work area air samplers are typically set to 60 lpm on the rotameter scale. Only actual flow rates (as opposed to rotameter readings) shall be recorded on the envelope.

5. Turn on pump. Adjust the flow to desired rate using the flow adjust knob. Use the middle (widest) point of the rotameter float as a guide.
6. Perform periodic “checkups” on activated low-volume air samplers to confirm their proper operation.
7. Upon completion of the sampling event, note final flow rate and off time. Turn off pump and secure for the next sampling event.
8. Collect the filter from the holder. Place filter into glassine sleeve, then place glassine sleeve into the same manila envelope used to record initial start data. Record the time off, final flow rate, and initial the manila envelope.
9. Filters collected for radiological particulate monitoring (except radon) should be allowed to decay for a period of at least 4 days prior to counting, unless directed otherwise by the RSO or SSHO.

Documentation:

1. Record the annual flow calibration data onto the “Calibration Certificate and Data Sheet for the Low Volume Air Sampler.”
2. Record daily sampling event information onto manila envelopes.

Instrument Maintenance:

The oil-less pump motor requires no lubrication to maintain optimal efficiency during its service life.
• Corrosion
• The outer end plate, body, rotor and mounting bracket are all cast iron and will tend to corrode when exposed to moisture. Therefore, precautions should be taken to shelter or protect sampling pumps from water exposure.

• Remove excessive dirt or foreign particles from inside motor housing using long tweezers. If this is not possible, loosen and remove the six bolts which connect the end plate and body housing to expose internal components for inspection.
• Fuses may blow from time to time due to line voltage fluctuations. Should a fuse blow and require replacement, first, disconnect power cord. Then open the fuse compartment door at the rear of the pump next to the on / off switch, remove blown fuse, and replace with new fuse (6 ¼ or 7 amp). Re latch fuse cover.

• Carbon rotor vanes should have a useful service life between 5,000 and 10,000 hours depending on usage conditions. When vanes become worn, they should be replaced. Loosen and remove the six bolts which connect the end plate and body housing to expose the rotor vanes.
• A list of replacement parts can be found on page15 of the F&J Technical Manual for the LV-1. Refer to the exploded view drawing of the LV-1 pump on page 15 for parts identification.

Example Form

PermaFix environmental services
A Nuclear Services and Waste Management Company

Attachment 1, Calibration Certificate and Data Sheet for the Low Volume Air Sampler (Typical)

CALIBRATION CERTIFICATE AND DATA SHEET FOR THE LOW VOLUME AIR SAMPLER					
SECTION 1: GENERAL INFORMATION					
DATE:	LOCATION: *FMSS*	TECHNICIAN:			
MANUFACTURER:	MODEL:				
SERIAL #:	DATE LAST CAL. EXPIRES:				
REASON FOR CALIBRATION: Due For Calibration ☐ Repair (see remarks) ☐ Other (see remarks) ☐					
EQUIPMENT USED:					
TYPE:	IDENTIFICATION:	CAL. DUE DATE			
FILTER HEAD AND FILTER TYPE USED:					
SECTION 2: AS-FOUND DATA					
PHYSICAL CONDITION: SAT / UNSAT	LO-VOL SET @ 50 LPM Y / N	ACTUAL:			
IS THE ACTUAL READING WITHIN 20% OF THE INDICATED VOLUME ON THE AIR SAMPLER? Y / N					
REPRODUCIBILITY: 1	2	3	AVG:		
REPRODUCIBILITY: IS REPRODUCIBILITY WITHIN 10% OF THE AVERAGE? Y / N					
SECTION 3: CALIBRATION DATA					
				IS ERROR WITHIN 10%	
TARGET VALUE	ACTUAL AIR FLOW (CAL. READING)	INDICATED AIR FLOW (ROTOMETER)	ERROR	YES	NO
30 LPM					
40 LPM					
50 LPM					
60 LPM					
70 LPM					
IF ERROR IS GREATER THAN 10%, POST THE INSTRUMENT WITH A CHART OR GRAPH OF ACTUAL VERSUS INDICATED					
REMARKS:					
NEXT CALIBRATION DUE:	CALIBRATION STICKER ATTACHED? Y / N				
PERFORMED BY:	REVIEWED BY: DATE:				

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Air Sample Collection

- Select a calibrated low / high volume sampler with the appropriate glass fiber air filter

and place the sample head into position. The fuzzy side of the filter should face outwards.

- Turn the sampler ON. At a minimum, document the following information on the air

filter envelope or log sheet:

  - Sampling station identifier (as determined by the RSO)
  - Sampler model
  - Serial number
  - Date / time on
  - Flow rate
  - On by (individual starting sampler)

- When air monitoring is complete, observe the sampler flow rate and turn the sampler

off. At a minimum, document the following information on the air filter envelope or logsheet:

  - Date / time off
  - Flow rate
  - Off by (individual terminating sample)

- Store the filter in a protective container to minimize the loss of collected material.

- Submit sample to on-site counting lab for analysis prior to shipment.

6.4 Real Time Monitoring

6.4.1 Real Time Dust Monitoring / PM_{10}

In addition to the laboratory analyses, real-time dust monitoring for PM_{10} will be performed using a DustTrak™ II DRX (or equivalent) with heated inlet. The units will be performed at the at 3 locations, co-located with the Tisch Air Monitoring Stations.

The real-time dust-monitoring data will be compared to the DTSC Human and Ecological Risk Office calculated dust action level of 50 micrograms per cubic meter (µg/m3) for total PM_{10}, which is based on the BAAD regulatory limit.

Prior to beginning construction activities, background real-time PM_{10} data may be collected to establish baseline concentrations. During demolition, real-time PM_{10} (e.g., DustTrack™ II DRX with heated inlet or similar) dust monitoring for the work day to ensure that the dust action levels are not exceeded, and/or additional dust suppression methods will be used if the dust action levels are exceeded. If project activities are the cause of exceedances, additional dust control measures will be implemented. The real-time PM_{10} dust-monitoring data will be summarized and provided to the Navy on a weekly basis.

The general procedures for DustTrak operation are as follows:

- Obtain desktop Dust Track II DRX™ aerosol monitor equipped with; a heated inlet; data logging functions; and cloud-based remote telemetry capabilities. This allows for wireless setup, monitoring, and programming directly from a computer.
- Install the monitor in the environmental protection and tamper-proof security enclosure, which protects the instrument within a waterproof, lockable case.
- The monitor inlet will be set at an approximate height of 3 to 6 feet from the ground.
- Verify there is enough power supply/fuel for sample pump for full day operation.
- The DustTrack II DRX™ is manufacturer-calibrated and requires no additional setup procedures. The instrument self-zero’s.
- The DustTrack II DRX™ has built-in instantaneous alarm settings with visual, audible, and cloud-based warnings for exceedances, flow rate control, zero control, and filter condition that may indicate maintenance is required. If needed, maintenance or unit replacement is conducted by the air monitoring team or the equipment provider.

6.5 Exceedance Notifications

This section addresses the procedures and guidelines that will be implemented for exceedances and alerts during the demolition operations.

6.5.1 Real Time Data

The on-site air monitoring team (AMT) will receive text/email notifications at (or above) ½ the Action Limits (AL) posted in table 6-1. Upon notification, a member of the AMT will dispatch to the monitoring station location with the exceedance, observe and record the conditions, and report details of the exceedance notification to the ECC Site team. Primary contacts will include the Site Supervisor & SSHO. Dispatch time will be minimal as the a member will always be onsite.

Alert: *Greater than ½ the Action Limits posted on Table 6-1*
Exceedance*: Value Greater than the Action Limit posted on Table 6-1*

- If the **alert is due to the demolition operations**, the SS or SSHO will work with the demolition subcontractor to mitigate the problem. This could include additional dust suppression up to the suspension of field operations.

- If the case of an **exceedance of the action limit** is based demolition operations, all demolition operations will be immediately suspended. The NAVFAC Construction Manager will be notified ASAP by either the ECC Site Supervisor or the SSHO.

- If the exceedance of the AL or alert at ½ AL is due to non-ECC operations or off-site conditions outside of Parcel G, the NAVFAC Construction Manager will be notified ASAP.

6.5.1.1 Reporting

The Daily QC report will include the summary of air monitoring results, alerts and exceedances, in addition to the daily record keeping which documents the continuous observation notes by the AMT personnel.

6.5.2 Laboratory Data

Upon receipt of the laboratory data, the Electronic Data Deliverable will be loaded to the database and queried against the applicable AL's listed in Table 6-1. An initial table will be produced to identify if any results were above the AL's. If any results were greater than AL's were identified:

1. The NAVFAC Construction Manager and ECC Project Manager will be notified immediately via phone call (or verbally if present), followed by an email.
2. The database manager will review the data to determine the validity of the results.

3. The NAVFAC Construction Manager and ECC Project Manager will determine if work should be suspended or can continue based on the initial notification (Step 1).
4. The Air Monitoring Team manager will investigate the results, which will include:
    - A review the daily air monitoring summary notes for the results in question.
    - Confirming the reported results are valid.
    - Determining the Root Cause.
    - Suggesting Corrective Actions.
5. The Daily QC report, and associated air monitoring report, will report the details.

If the laboratory data did not report any exceedances, the standard air monitoring report will be prepared.

7.0 QUALITY CONTROL PROCEDURES

The QC process will evaluate whether collected data are accurate and precise to characterize both the magnitude and variations in ambient conditions at the monitoring stations. Complete documentation of the results of routine operations and QC aspects of the project, including log notes, calibration records, and certifications, will be maintained on file. **Table 7-1** presents the frequency and type of field QC samples. Routine field QC will include the following:

- Routine visits to each sampling location over the sampling period to check sampler pump flow rates, verify operation and sample conditions, and note ambient conditions that could affect the accuracy or representativeness of the sampling.
- Calibration of the sampling pumps and flow devices.
- Routine preventive maintenance of equipment components.

Table 7-1. Field and Laboratory Quality Control Samples

Parameter	Blank (Bias Contamination)	Laboratory /Field Control Sample (Accuracy)	Field/Laboratory Duplicate (Precision)	SOP Reference[1]	Laboratory/ Organization
Asbestos PCM 7400/ NIOSH 7400	Field filter blanks submitted with each sample group; Results < reporting limit; see SOP if fibers detected in blank	Field Blank	-	-	SGS Galson
PM 10	Laboratory Field Blank Blank - Daily per analytical batch results < reporting limit	Field Blank	-		
Mercury	Laboratory Field Blank Blank - Daily per analytical batch results < reporting limit	Field Blank	'-		
PCB's	Laboratory Field Blank Blank - Daily per analytical batch results < reporting limit	Field Blank	'-		
TSP	Weekly Field Filter Blank—Difference in initial and final concentration ± 5 µg/m^3	Analytical balance accuracy check per SOP	-		Eurofins
Metals (Lead/ Manganese) on TSP filter	Laboratory Filter Blank Daily per analytical batch Results < reporting limit	Daily per analytical batch; Lead Percent Recovery: 80% – 120%; Manganese Percent Recovery: 80% – 120%	Laboratory Duplicate Daily per analytical batch RPD ≤ 20%		
ROC's	Yes – 1x per Field Blank per week	TBD	TBD	-	Eurofins

Notes:
± – plus or minus
< – less than
≤ – less than or equal to
% – percent
µg/m^3 – microgram per cubic meter
CFR – Code of Federal Regulations
EMSL – EMSL Analytical, Inc. Management
MDC – minimum detected concentration
NIOSH – National Institute for Occupational Safety and Health
PCM – phased contrast microscopy
PM_{10} – particulate matter smaller than 10 microns in diameter
RPD – relative percent difference
SOP – standard operating procedure
TSP – total suspended particulate
USEPA – United States Environmental Protection Agency

The analytical laboratory performing the sample analyses will have an established QC program that evaluates the accuracy of the data as the data are being analyzed. Key elements of the routine QC procedures implemented during the sample analyses includes analysis of laboratory blanks.

Dust control activities will be documented during applicable construction activities and included in the Daily Contractor Production Reports.

[1] SOPs are provided in the Sampling and Analysis (SAP).

8.0 CALIBRATION FLOW RATES AND MAINTENANCE

The flow rate of the air samplers will be calibrated to establish traceability of the field measurement. Calibrations will follow the guidelines specified in 40 CFR, Part 50, Section 9.3 and Section 2.6 of *USEPA Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Ambient Air Specific Methods* (USEPA, 1998). Calibration procedures will follow manufacturer's instructions and will utilize manufacture calibration kits as applicable. **Table 8-1** describes field sampler calibration, monitoring, and maintenance.

Table 8-1. Air Sampling Unit Flow Checks and Controls

Units/Flow Rate	Flow Rate	Drift	Unit taken out of service
High-volume Air Sampler (TSP / Metals) (39 to 60 cubic feet per minute)	Set/check integrated flow meter at start of day and end of day. Flow rates recorded on sample collection log	Verified quarterly or any time the unit is moved, or for each unit using manufacturer's calibration kits. Calibration recorded in the Calibration Logbook	When drift cannot be corrected, or calibration fails or expires PM_{10} sampler taken out of service quarterly for cleaning the PM_{10} size selective sampling device
Low-volume Air Samplers	Set/checked at start and end of each day. Flow rates recorded on sample collection log	Verified quarterly or any time the unit memory is full, using manufacture calibration kits Calibration recorded in the Calibration Logbook	When it fails calibration
Passive Cassettes	N/A	N/A	N/A
DustTrak ™ II PM10 Real- time Dust Monitor	Manufacture calibration flow rates. Daily flow rates are recorded using the online data system.	Manufacturer calibration	Check power supply When zero control cannot be maintained or Per manufactures guidelines
ROCs	TBD	TBD	TBD

Notes:
PM_{10} – particulate matter smaller than 10 microns in diameter
TSP – total suspended particulate

Air sampling and dust-monitoring equipment will be inspected daily (workdays) before operation; water vapor, insects, or other accumulated debris that may affect monitoring will be removed. If necessary and at the discretion of the onsite air monitoring personnel, the air sampling and dust-monitoring equipment may be shut down and protected during precipitation events. These events are deemed necessary due to safety concerns and equipment integrity issues. To protect against adverse weather, the high-volume air samplers used for collecting PM_{10} and TSP are housed in rugged all-weather shelters. Real-time dust monitors (DustTrak ™ II or equivalent) are housed in environmental enclosures to protect against the elements. Low volume samplers are also housed in all weather materials; however, the water pulled in during rainstorms can cause damage to the interior of the pumps. If equipment shutdowns are performed, they will be noted in the daily production report. Shutdowns of air sampling stations, real-time dust monitoring, or individual units being inoperable will not preclude removal activities at the associated work site.

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9.0 SAMPLE DOCUMENTATION, CUSTODY AND FIELD LOGS

Field logs will be used to properly record information after collecting the samples. Appropriate field data, such as date, time, sample identification, calibration data, sample location, ambient temperature and pressure, and additional information or observations that could influence the analyses of the results will be entered on the field logs. Field forms are provided in **Attachment 1**. Samples shipped off site for analysis will be documented on a chain-of-custody form.

9.1 Laboratory Sample Identifications

Laboratory samples IDs will be assigned using the following format:

- ***Site:*** Hunters Point Naval Shipyard, Parcel G = HP-PG
- ***Analysis***:
    - Total Suspended Particulates / Metals = TSP/MT
    - Pm10 = TD
        - *[TD = Total Dust]*
    - Asbestos = ACM
    - Mercury = HG
    - Polychlorinated Bi-Phenyls = PCB
    - Radionuclides = ROC
- ***Date***: DDMMMYY (01-January-2026 = 01JAN26)
- ***Location***:
    - Station 1 = S1
    - Station 2 = S2
    - Station 3 = S3
- ***Example***:
    - HP-PG-ACM-01JAN26-S1
    - HP-PG-TSP/MT-01JAN26-S1
    - HP-PG-HG-01Jan26-S1
    - HP-PG-PCB-01Jan26-S1
    - HP-PG-ROC-01Jan26-S1

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10.0 DATA REVIEW AND REPORTING

Data review and reporting will be conducted and follows:

- Realtime air monitoring data produced will be reviewed, evaluated, and reported on a weekly basis.
    - This includes upwind/downwind subtraction criteria previously established for HPNS.
    - Background data will also be taken into consideration during the evaluation process. The results will used to create a baseline of existing conditions in the assessment of results. The application of the baseline data against the results will be covered in the report.
- The dust control activities and weather wind data will also be provided to the Navy for weekly reporting to the DTSC.
- Dust control activities, wind data, air monitoring equipment shutdowns will be documented in the Daily Contractor Production Reports.
- Air sampling reports will be prepared as analytical results are received from the laboratory and electronically submitted biweekly (depending on the receipt of analytical data) to the Navy.

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11.0 REFERENCES

APTIM. 2020. Final, Revision 1, DMAMP, Radiological Investigation, Surveying, and Reporting, Parcel G, Hunters Point Naval Shipyard, San Francisco, California.

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California Code of Regulations (CCR). July-2002. *Title 17, Section 93105(e), ATCM for Construction Grading, Quarrying, and Surface Mining Operations –Requirements for Construction and Grading Operations –Areas Greater Than One Acre*.

National Institute for Occupational Safety and Health (NIOSH). Aug-1994. *NIOSH Manual of Analytical Methods, Method 7400*. August.

United States Environmental Protection Agency. 1998. Title 40 CFR, Part 50, Appendix B and Appendix J and Section 2.6 of the Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Ambient Air Specific *Methods*.

USEPA. 1999. *Chapter IO-3 in the Compendium of Methods for the Determination of Inorganic Compounds in Ambient Air*.

State of California:

https://ww2.arb.ca.gov/truck-bus-regulation-basics-exemptions-truckstop

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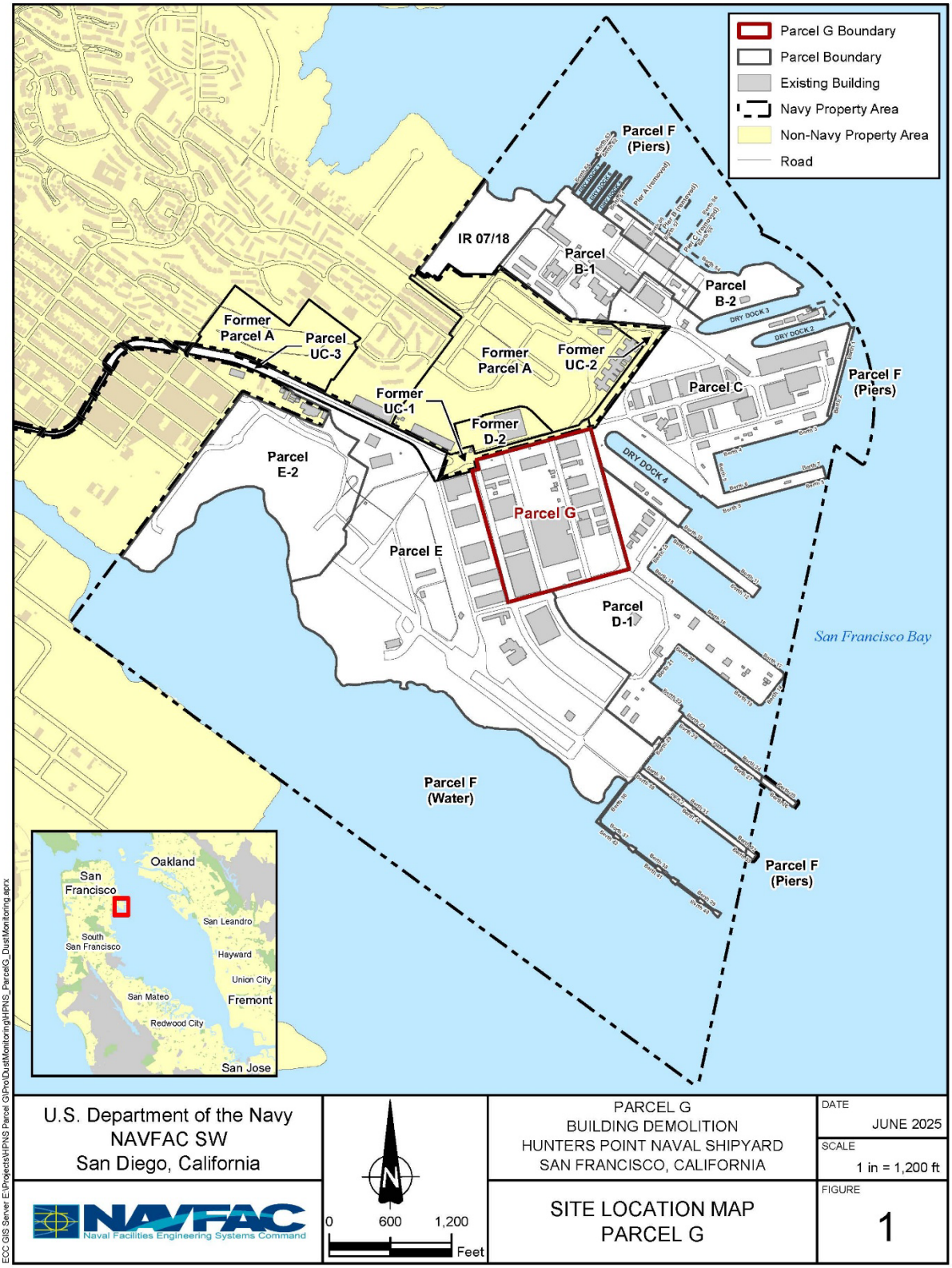
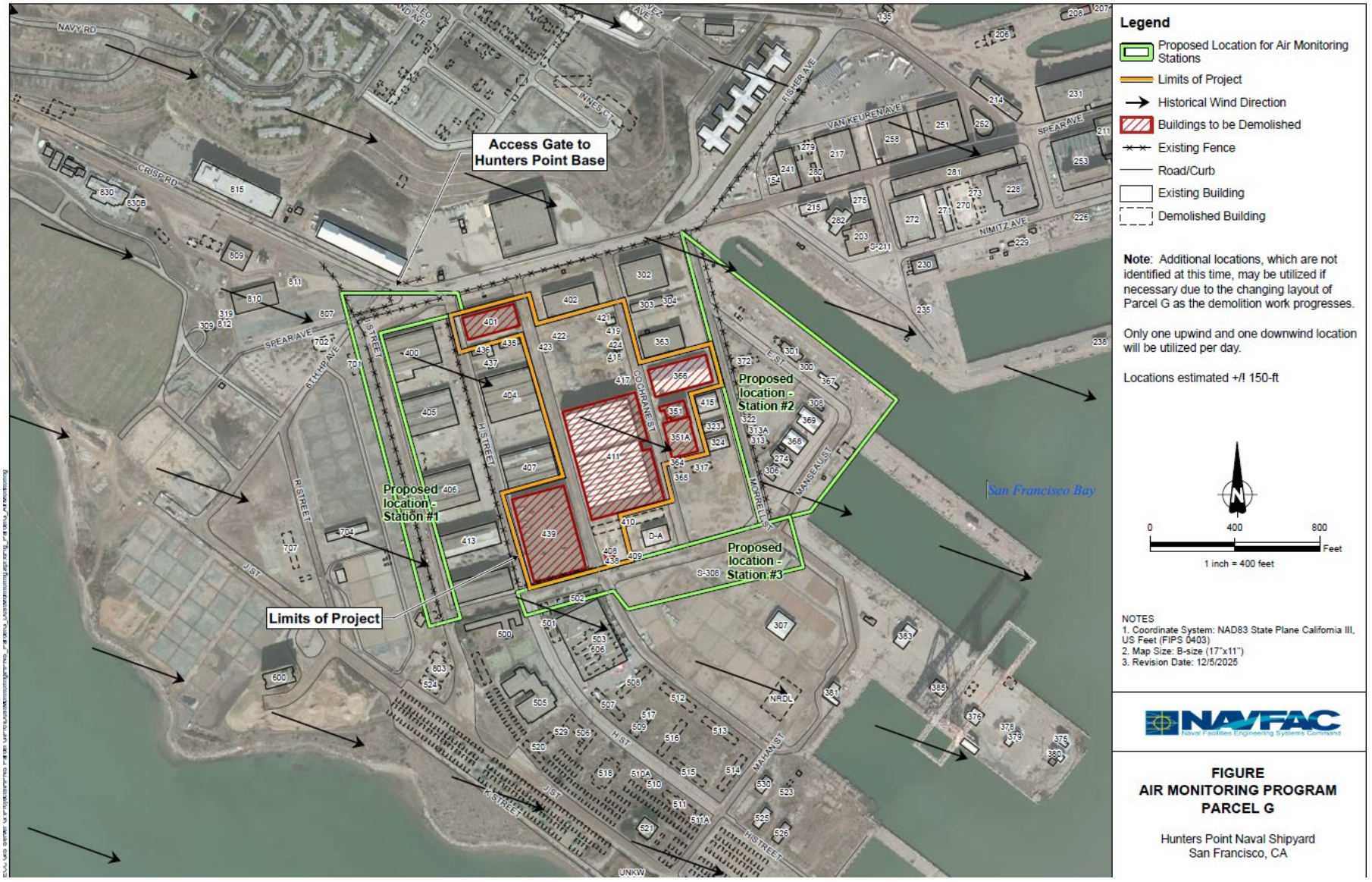
FIGURES


Parcel G Boundary
Parcel Boundary
Existing Building
Navy Property Area
Non-Navy Property Area
Road
Parcel F (Piers)
IR 07/18
Parcel B-1
Parcel B-2
Former Parcel A
Parcel UC-3
Former Parcel A
Former UC-2
Former UC-1
Former D-2
Parcel C
Parcel F (Piers)
Parcel E-2
Parcel G
Parcel E
Parcel D-1
San Francisco Bay
Parcel F (Water)
Parcel F (Piers)
Oakland
San Francisco
San Leandro
South San Francisco
Hayward
Union City
San Mateo
Fremont
Redwood City
San Jose
U.S. Department of the Navy
NAVFAC SW
San Diego, California
NAVFAC
Naval Facilities Engineering Systems Command
N
0 600 1,200
Feet
PARCEL G
BUILDING DEMOLITION
HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CALIFORNIA
SITE LOCATION MAP
PARCEL G
DATE
JUNE 2025
SCALE
1 in = 1,200 ft
FIGURE
1
ECC GIS Server E:\Projects\HPNS Parcel G\Pro\DustMonitoring\HPNS_ParcelG_DustMonitoring.aprx


Access Gate to Hunters Point Base
Proposed location - Station #1
Proposed location - Station #2
Proposed location - Station #3
Limits of Project
San Francisco Bay
NAVY RD
CRISP RD
SPEAR AVE
NIMITZ AVE
VAN KEUREN AVE
FISHER AVE
INNES CT
6TH AVE
H STREET
I STREET
J ST
K STREET
COCHRANE ST
MANSEAU ST
MORRELL ST
MAHAN ST
NRDL
UNKW
Legend
Proposed Location for Air Monitoring Stations
Limits of Project
Historical Wind Direction
Buildings to be Demolished
Existing Fence
Road/Curb
Existing Building
Demolished Building
Note: Additional locations, which are not identified at this time, may be utilized if necessary due to the changing layout of Parcel G as the demolition work progresses.
Only one upwind and one downwind location will be utilized per day.
Locations estimated +/l 150-ft
N
0
400
800
Feet
1 inch = 400 feet
NOTES
1. Coordinate System: NAD83 State Plane California III, US Feet (FIPS 0403)
2. Map Size: B-size (17"x11")
3. Revision Date: 12/5/2025
NAVFAC
Naval Facilities Engineering Systems Command
FIGURE
AIR MONITORING PROGRAM
PARCEL G
Hunters Point Naval Shipyard
San Francisco, CA

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ATTACHMENT 1: Forms

1. Chain of Custody
2. Field Notes

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APPENDIX B
Waste Management Plan

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Naval Facilities Engineering Systems Command Southwest
Travis ROICC/CODE ROPWT
Travis Air Force Base, CA

Draft Final

Waste Management Plan
Parcel G Building Demolition

Hunters Point Naval Shipyard,
San Francisco, California

March 2026 (R0-D3)

Distribution Statement A: Approved for public release; distribution unlimited.

Naval Facilities Engineering Systems Command Southwest
Travis ROICC/CODE ROPWT
Travis Air Force Base, CA

Draft Final (R0-D4)

Waste Management Plan
Parcel G Building Demolition

Hunters Point Naval Shipyard,
San Francisco, California

March 2026

DCN: ECC-1205-4397-0003d.02

Prepared for:

Naval Facilities Engineering Systems Command Southwest
Travis ROICC/CODE ROPWT
Travis Air Force Base
191 W ST
Travis AFB, CA 94535

Prepared by:

ECC Infrastructure LLC
700 Airport Blvd, Suite 250
Burlingame, CA 94010

Contract Number: N62473-21-D-1205
Delivery Order: N6247325F4397

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Acronyms and Abbreviations

ACM	asbestos-containing material
BRAC	Base Realignment and Closure
CCR	California Code of Regulations
CFR	Code of Federal Regulations
CSO	Caretaker Site Office
DTSC	Department of Toxic Substances Control
ECC	Environmental Chemical Corporation Infrastructure LLC
HPNS	Hunters Point Naval Shipyard
IDW	investigation-derived waste
IR	Installation Restoration
LBP	lead-based paint
Navy	United States Department of the Navy
PFAS	polyfluoroalkyl substances
PMO	Program Management Office
PPE	personal protective equipment
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act
SDS	Safety Data Sheet
TCLP	Toxicity Characteristic Leaching Procedure
TSDF	treatment, storage, and disposal facility
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
WET	Waste Extraction Test
WMP	Waste Management Plan

History of Revisions

DCN #	Date	Notes
ECC-1205-4397-0003d.00	July-2025	Ver R0-D1 / Original Submission (Internal Navy Draft) / 03-July-2025
ECC-1205-4397-0003d.01	Dec-2025	Ver R0-D2 / 1st round Regulatory Review / 11-Dec-2025
ECC-1205-4397-0003d.02	Mar-2026	Ver R0-D3 / Removed highlighted text from section 3.3

1.0 INTRODUCTION AND REGULATIONS

This Waste Management Plan (WMP) prepared by ECC infrastructure, LLC (ECC) describes project-specific information for waste management and transportation and disposal for wastes generated during activities associated with building and foundation demolition, backfill and compacting of soil at Parcel G at Hunters Point Naval Shipyard (HPNS) in San Francisco, California (**Figures 1** and **2**). The objective of this project is to complete the demolition of six buildings: 351, 351A, 366, 401, 411, and 439 and the removal of Building Pad 408.

ECC has been contracted to perform this work for the, United States Department of the Navy (Navy), Naval Facilities Engineering Systems Command Southwest under Contract Number: N62473-21-D-1205 and Delivery Order: N6247325F4397. The work under this task order will be completed in compliance with the contract plans and specifications, and local, State, and Federal regulations.

1.1 Background

Parcel G is roughly 40 acres central inland portion of HPNS and does not border the San Francisco Bay. The parcel was constructed in the 1940s with borrowed fill material from various sources. Most of Parcel G was formerly part of the industrial support area and was used for shipping, ship repair, offices, and commercial activities and is nearly all covered with buildings or pavement

Parcel G is undergoing remediation in accordance with a Federal Facility Agreement (FFA) between the Navy, United States Environmental Protection Agency (USEPA), and the State of California through the California Environmental Protection Agency Department of Toxic Substances Control (DTSC) and California Regional Water Quality Control Board, San Francisco Bay Region (Water Board), collectively referred to as the FFA Signatories.

1.2 Scope of Work

The purpose of the building demolition is to complete the Remedial Action for “structures” as outlined in the Record of Decision (ROD). Buildings were to be surveyed and, if possible, cleared for unrestricted reuse. If clearance was not achievable, the ROD planned for further remediation, including dismantling. The scope of work includes the following:

1. HPNS Federal Facility Agreement (FFA) Regulatory Agencies concurrence on this Work Plan. FFA parties include USEPA, DTSC and the San Francisco RWQCB.
2. Utility Clearance - Notify Underground Service Alert North (811), a minimum of 72 hours prior to field activities; conduct a geophysical survey to ensure no utilities or obstructions exist in the intrusive work areas.
3. Set up environmental controls including placement of fences, air monitoring stations, and stormwater Best Management Practices (BMPs) in accordance with the Environmental Protection Plan (EPP) (**Appendix A**) in the Remedial Action Work Plan (RAWP).

4. Establish investigation derived waste (IDW) staging areas and signage in accordance with the Waste Management Plan (WMP) (**Appendix B**).
5. Buildings 351, 351A, 366, 401, 411, and 439 and building pad 408 abatement, demolition, and partial slab/foundation removal. Manage and transport building debris per the WMP (**Appendix B**).
6. Stage approved imported soil and/or excavated soil designated for re-use for backfilling of excavation in the equipment laydown area and IDW storage area.
7. Manage remaining IDW per the WMP (**Appendix B**).
8. Document the site activities at Parcel G in a Remedial Action Completion Report (RACR).

The full scope of work is listed in the Remedial Action Work Plan (RAWP) (ECC, 2025b).

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2.0 WASTE STORAGE, HANDLING, AND CHARACTERIZATION

Building demolition debris and other wastes (e.g., construction debris, trash) will be generated during the onsite field activities at Parcel G Building Demolition. Attempts will be made to minimize the waste generated during field activities. Waste will be separated based upon the activity that generated it. The anticipated types of wastes are debris from building demolition, excavated soil, stagnant water, general refuse, and decontamination water.

The substantive requirements of State and Federal hazardous waste generation, characterization treatment, and management of California Code of Regulations (CCR), Title 22, Sections 66261, 66262, 66264, and 66265 and 40 Code of Federal Regulations (CFR) Parts 260, 261, 262, 264, 265, and 268 and are applicable to the management of wastes generated during project activities. Field staff will follow the procedures described in this WMP to maintain compliance with the applicable State and Federal regulations.

2.1 Waste Generating Activities

The types of waste that will be generated during the Parcel G Building Demolition remedial activities are:

- Debris generated during clearing of workspace and soil stockpile areas (including rock, concrete, metal/rebar, asphalt, brick).
- Debris from building demolition and soil from excavations.
- Lead-based paint (LBP) removal from slabs and loose paint from exterior and interior of buildings.
- Asbestos-containing material (ACM) from building materials.
- Scrap steel and metal for recycling
- General refuse (such as packaging materials) generated during demolition and field activities.
- Miscellaneous material and other disposable materials are generated during demolition and field activities.
- Sorbent material used in potential spill response.
- Stagnant water from vaults/pits in Building 411
- Used personal protective equipment (PPE).
- IDW management will be performed as IDW is generated.

A binder of Safety Data Sheets (SDSs) for the hazardous materials stored or used shall be maintained at the site during field work, and hazardous materials will be appropriately stored and labeled. If additional or alternative hazardous materials are brought to the project site, the SDS binder will be updated with the appropriate SDS. Ideally, nonhazardous materials will be substituted for hazardous materials over the

course of the project to reduce the generation of hazardous waste. After completion of the project, all remaining hazardous materials will be removed from the work sites, and hazardous and nonhazardous waste generated from field activities will be disposed of in accordance with all applicable laws and regulations.

2.2 Field Waste Segregation

The solid waste generated during excavation will be characterized as Resource Conservation and Recovery Act (RCRA)-hazardous or non-RCRA hazardous waste (**Table 1**).

Non-friable ACM is present in some of the demolition material. Please refer to Section 2.3 of the RAWP. The ACM material will be separated for proper landfill disposal (**Table 1**).

2.3 Waste Minimization

Waste generation will be minimized by planning activities to ensure efficient use of supplies, only generating the minimal amount of soil during well decommissioning, preventing the mixing of contaminated and clean materials, onsite treatment, and injection of extracted groundwater. Noncontaminated materials will be recycled when possible.

The following waste minimization techniques will be observed during field activities to reduce the volume of wastes generated:

- Verify that waste containers are solidly packed to minimize the number of containers.
- Reuse water in frac tanks for dust mitigation

2.4 Waste Handling and Storage

Waste will be stored based upon the activity that generated the waste, composition of the waste, quantity of waste, and anticipated classification. General refuse and construction debris will be placed in a general refuse dumpster. Cardboard and other readily recyclable materials will be recycled off site. Other waste will be handled as described in this WMP.

Lead paint waste and chemical stripper residue placed into United States Department of Transportation (USDOT)-approved 55-gallon drums. ACMs will be double-bagged and labeled with Occupational Safety and Health Administration (OSHA)/USEPA/DOT-compliant warnings. Friable debris packaged in sealed drums or super sacks. Bulk loading permitted for non-friable roofing and transite. Universal waste sorted and packed: tubes in cartons, ballasts in drums, batteries shrink-wrapped on pallets. Freon are captured in recovery cylinders for offsite processing.

The Accident Prevention Plan (ECC, 2025a) contains emergency information for the Parcel G Building Demolition activities. This information includes the names and telephone numbers of emergency coordinators, and the fire department. Fire equipment and a spill kit will be maintained at the site for use in case of a fire or spill. The following

subsections describe the waste streams and the containers that will be used to store the waste streams.

Groundwater purged from excavation areas and decontamination will be placed in appropriate 55-gallon steel drums or a polyethylene tank and stored within secondary containment. Aqueous waste will be stored within a secured fenced area or within a building that is secured at the end of each workday. The 55-gallon drum lids will be closed and secured at the end of each workday. Containers will be labeled according to the procedures described in Section 2.11.

Secondary containment will be monitored for the accumulation of precipitation or will be covered to prevent the accumulation of precipitation.

2.4.1 Abatement Waste Handling and Packaging

1. ACMs will be double-bagged and labeled with OSHA/EPA/DOT-compliant warnings labels.
2. Friable debris packaged in sealed drums or super sacks, bulk loading into a double lined waste container is permitted. Bulk loading will be the method for non-friable roofing and transite panels and other non-friable asbestos waste.
3. Lead paint waste and chemical stripper residue placed into DOT-approved 55-gallon drums.
4. Universal waste sorted and packed: light tubes will be packaged in cartons, PCB light ballasts will be placed into 55 gal DOT approved drums, batteries will be palletized and shrink wrapped.
5. Freon coolant will be recovered into cylinders for offsite processing.
6. Windows with PCB caulk will be bulk loaded into a double lined waste container.

2.4.2 Abatement Disposal and Hauling

All abated hazardous materials and demolished building materials will be transported to licensed out-of-state disposal facilities for proper disposal and recycling. Hazardous materials will be transported in compliance with all regulations using permitted and licensed trucking subcontractors.

All asbestos containing materials will be placed into 40-yard closed top waste containers. The waste containers will be lined with two layers of 6-mil poly or with a manufactured bin liner. The waste containers will be closed and locked when not in use. Two types of asbestos waste will be generated from this project:

1. Friable regulated materials: shall be disposed of as hazardous asbestos waste on a Uniform Hazardous Waste Manifest.
2. Non-friable asbestos waste: will be disposed of as a non-hazardous asbestos waste and will be manifest as such on a non-hazardous manifest.

Lead waste and chemical paint remover shall be manifested as a RCRA Hazardous waste.

2.4.3 Building and Slab/Foundation Handling

Utilizing a 100,000-pound class excavator equipped with a thumb and bucket attachment, the debris will be loaded into lined containers or trucks for offsite disposal. All waste will be properly packaged and transported to a licensed accepting disposal facility.

Prior to the start of transport activities, signage will be used to establish the designated haul routes. Vehicular traffic will comply with the HPNS speed limits.

2.4.4 Building and Slab/Foundation Loading Activities

Dust control measures, including spraying demolition debris with water, will be implemented during removal, and loading activities to minimize fugitive dust emissions.

2.4.5 Demolition Waste and Debris

Site activities will generate waste and debris including building materials, concrete, PPE, decontamination fluids, wastewater, and possible soil from the excavation.

Soil wastes generated during excavation activities will be placed in a 55-gallon steel drum or placed in a steel roll-off bin and be properly labeled. Roll-off bins will be lined with plastic sheeting prior to placing soil in the waste bins. Drummed or binned soil will be stored and secured at the end of each workday. All 55-gallon drum lids will be closed and secured at the end of each workday. Drums and roll-off bins will be labeled according to the procedures described in Section 2.11.

2.5 Transportation and Disposal of Waste and Debris

As material is demolished, it may be transported to predetermined staging areas. The anticipated staging areas and traffic map are shown in **Figure 3** . Prior to the start of transport activities, signage will be used to establish the designated haul route shown in Figure 4 and Appendix B. The designated haul route may have to be adjusted to minimally impact other ongoing site activities. Vehicular traffic will comply with the HPNS 15 mile per hour (mph) speed limit (**Appendix B**). Waste will be transported to an approved offsite location (**Table 1).**

All trucks used to off-haul waste will be screened through the Radiation Portal before exiting HPNS.

Waste and debris will be generated from all the field activities and will consist of:

1. Building demolition material including concrete
2. Excavation dewatering water
3. General construction debris
4. Scrap steel and metal for recycling

All waste and debris will be staged within Parcel G and profiled in accordance with the California Code of Regulations (CCR) Title 22 Limits for Hazardous Waste and the receiving facility's Waste Acceptance Guidelines (CCR, 2018) and per the WMP (**Appendix B**). The profiles and manifests will be submitted in draft to the CSO for review prior to transport to the offsite disposal facility.

Waste will be segregated by type (solid/liquid) and anticipated hazard profile. Pending satisfactory profiling and manifesting, waste and debris will be loaded, covered, and inspected on site by ECC's Field QCM before being transported for disposal to an appropriate offsite out-of-state facility. A general refuse bin will be used to handle daily operations and construction waste.

All waste will be properly packaged and transported to an out of state licensed accepting disposal facility.

2.6 Decontamination

The work activities will require the use of various types of heavy equipment, including drill rigs, excavation equipment, haul trucks, and forklifts, in addition to support vehicles and trucks transporting contaminated soils and other waste streams for offsite disposal, and various hand tools. Truck routes within HPNS are presented in **Figures 3** and **4**. Heavy equipment, vehicles and hand tools that meet suspected contaminated soil, liquids, and/or infrastructure will be decontaminated before demobilization from any individual work site to prevent contaminants from being transferred out of work zones.

Dry brushing or wiping will be the primary decontamination methods used for equipment and vehicles to minimize the volume of decontamination rinsate water requiring treatment and/or disposal. If necessary, due to heavy contamination or wet conditions, equipment, and vehicles (especially tires) will be washed with a low-volume pressure washer. Decontamination will proceed until the soil and residues are removed. Rinsing activities will be performed at a suitably constructed vehicle wash station or decontamination pad within the contaminant reduction zones. Rinsate water generated during these activities will be captured and stored as waste in drums or aboveground storage tanks.

If reusable, non-dedicated equipment used, it will be decontaminated before initial use and after each use by washing with a non-phosphate detergent (e.g., Liquinox™ or equivalent) and rinsed with fresh potable water, followed by a deionized water rinse. The rinsed equipment will be placed on clean plastic sheeting and allowed to air dry. If equipment will not be reused immediately, it will be placed in plastic bags or covered in clean plastic sheeting until used.

Tools and items for which decontamination is difficult or impossible to verify will remain on site until completion of the work for subsequent packing and offsite disposal at an approved disposal facility.

Temporary decontamination facilities located within the project support zone will be limited to exterior cleaning, as necessary.

Residual solids or liquids will be collected, properly contained (i.e., in USDOT-approved 55-gallon drums), transported and placed in a temporary staging area pending characterization and disposal. Waste liquids may be consolidated with other project waste liquids in the aboveground wastewater storage tanks at the temporary staging area and residual decontamination solids may be consolidated with other soil.

2.7 Personal Protective Equipment

Work at the site is anticipated to be conducted in level C or D (activity dependent) personal protective equipment (PPE.) Used disposable PPE will be placed in 55-gallon drums or roll-off containers for disposal.

2.8 Empty Containers

Empty containers that are not used to transport waste off site but previously contained wastes (excluding general refuse and recyclable materials) will be decontaminated before disposal.

After decontamination, the containers will be inspected to ensure material has been removed from the container.

2.9 Training

Personnel who work with or handle hazardous wastes or potentially hazardous wastes will have completed OSHA 40-hour HAZWOPPER training. Training certificates and applicable refresher documentation will be maintained onsite.

2.10 Waste Labeling Procedures

Waste will be contained in 55-gallon steel drums, roll-off bins, polyethylene storage tanks, or steel aboveground storage tanks. Containers will be labeled according to the determination of the class of waste at the time of generation. Indelible ink will be used to label containers of potentially hazardous waste with a detailed description, including accumulation start date, and the words:

"**INVESTIGATION-DERIVED WASTE/REMEDIAL WASTE SAMPLED – PENDING ANALYSIS**."

Container labels will be revised based upon waste characterization. IDW generated from sampling activities, decontamination of equipment, and PPE, will be labeled as "**Investigation Derived Waste**" and will list the Navy as the generator, location, where the wastes were generated, description of the contents and date of generation. Each IDW container will be assigned a number. Logbook entries describing sampling and decontamination activities will include the container number that the waste is stored in. In addition to the waste descriptions in the logbook, a container inventory log will be maintained in the waste storage area. Analytical results from sampling activities will be used to characterize the wastes. If containers are determined to contain hazardous waste, they will be immediately labeled with a completed "**Hazardous Waste**" label that will include:

- USEPA identification number of the generator
- Name and address of the generator
- USEPA waste code
- USDOT shipping name (before offsite shipment)
- Description of contents

- Date of generation

In addition, weekly inspections of containment storage areas will be conducted and logged, while wastes remain in these areas, to ensure the integrity of the containers and secondary containment, check for leaks or spills, and ensure the labels and markings are in good condition.

2.11 Stockpile Management

Import fill, if needed, or clean excavated soil for backfill purposes will be placed at the site; care will be taken to ensure that cross-contamination does not occur between the impacted material and backfill soil. Soil stockpiles will be routinely inspected to evaluate the effectiveness of the soil stabilizer as a best management practice for preventing offsite migration, and the containment method will be adjusted, as necessary. will be conducted in accordance with the Stormwater Pollution Prevention Plan (**Appendix A** of the Environmental Protection Plan).

2.12 Waste Characterization

The Terracon Hazardous Materials Survey dated March 13, 2024, characterized hazardous materials within the buildings. Characterization was necessary to determine if waste will be managed as hazardous or nonhazardous waste and if the wastes are subject to other laws and regulations. Waste characterization determines the proper storage, treatment, and disposal options.

For the stagnant water found in the pits/vaults of Building 411 and other sampling that may arise, additional sampling and analysis may be conducted using but not limited to the Toxicity Characteristic Leaching Procedure (TCLP) or the Waste Extraction Test (WET) to meet waste TSDF requirements. TCLP analysis is not required when total concentrations are less than 20 times the TCLP regulatory level. Additionally, WET analysis is not required when total concentrations are less than 10 times the Soluble Threshold Limit Concentration regulatory level. Results from the analyses discussed above will be used to classify waste as RCRA hazardous waste, California hazardous waste, or non-hazardous waste. Solid waste excluded from the definition of hazardous waste is listed under California regulations (CCR, Title 22, Section 66261.20). Soil will be classified as RCRA hazardous waste if concentrations exceed TCLP regulatory limits. Soil will be classified as California hazardous waste if concentrations exceed Total Threshold Limit Concentration or Soluble Threshold Limit Concentration regulatory limits based on WET results.

3.0 HAZARDOUS AND NON-HAZARDOUS WASTE TRANSPORTATION AND DISPOSAL

Transportation of hazardous and non-hazardous waste is regulated by CCR, Title 22, Section 66262 and USDOT requirements.

3.1 Documentation and Reporting

Hazardous and non-hazardous waste being transported off site will be accompanied by the appropriate bill of lading or hazardous waste manifest. The Navy's Caretaker Site Office (CSO) will be allowed sufficient time to review and sign the bill of lading or hazardous waste manifest. The bill of lading or hazardous waste manifest will accompany the waste during transport. When the solid waste material is transferred from the custody of the TSDF, the new party must sign the manifest and take custody of the waste material in accordance with RCRA, State of California, and USDOT requirements. The waste TSDF will mail copies of the bill of lading or hazardous waste manifest back to the Navy, who will provide copies to the project team. Copies of the bill of lading or hazardous waste manifest will be maintained in the project file.

Hazardous waste manifests will be completed in accordance with CCR, Title 22, Sections 66262.2 through CCR, Title 22, Section 66268.7. The manifest will use the Navy's USEPA identification number: CA0001019694. Manifests and bills of lading will be acquired from disposal facilities for actual waste hauled off site.

3.2 Subcontractor Requirements

ECC will subcontract a waste loading, hauling, and disposal contractor to handle waste generated during site activities. The waste disposal contractor will supply labor, equipment, material, and trucks necessary to load, transport, and dispose of solid and aqueous waste materials from the site. The waste disposal contractor will supply the appropriate means for loading the solid and aqueous waste materials into the transport vehicles. The waste disposal contractor will be responsible for ensuring sufficient spill containment equipment is on site during the transfer process. Spill equipment will be verified by the field team leader.

The waste disposal contractor will have appropriate licenses, insurance, medical certifications, permits, and registrations (including but not limited to a California DTSC hazardous waste transporter registration and a USEPA identification number: CA0001019694 to haul waste). The waste disposal contractor shall have a written USDOT Hazardous Material Security Plan in effect, and personnel will have been trained in its requirements.

The waste disposal contractor workers, operators, and drivers will adhere to site health and safety requirements, as well as to the Site Health and Safety Plan. PPE including (at a minimum) hard hats, steel-toed boots, safety glasses, and high visibility vests with reflective stripes, are required during transportation and disposal activities.

3.3 Waste Transportation and Disposal

Decontamination liquids and solids have been characterized as discussed in **Section 2.13** and will be disposed of appropriately. Waste profile forms and waste manifests will be provided to the CSO for approval and signature. Waste manifests may include (1) a Uniform Hazardous Waste Manifest if the waste is either RCRA or California hazardous waste or (2) a bill of lading or non-hazardous waste manifest, if the waste is a non-hazardous waste.

Waste will be transported off site to an approved out of state licensed waste TSDF shown in **Table 1**. The quantity of waste materials transported off site, signed certificates of disposal, and weight tickets will be obtained. Trucks leaving the site will be decontaminated through a wash station and screened through the HPNS radiation detection portal, operated by a radiological monitor.

General refuse (such as packaging materials) typically is managed as non-hazardous waste and transferred to an onsite industrial dumpster, and the contents will be routinely disposed of in a municipal landfill. PPE will also be managed as non-hazardous waste and disposed of in a municipal landfill.

Waste materials will be recycled whenever possible. Waste concrete for example, will be transported off site to an out-of-state recycler and disposed of as construction debris in a Class III landfill. Additionally, general construction debris will be disposed of out-of-state at a Class III landfill.

In accordance with requirements at 40 CFR 262.34, waste identified as hazardous will not be stored on site for more than 90 days after it was generated.

3.3.1 Radiation Detection Portal (Gate Portal)

The radiation detection portal will utilize a Ludlom 3500-1000 gate portal or similar.

The instrument, once installed in its location, will undergo an the initial instrument check as required by the manufacturers guidelines. This will entail the detectors and vehicle sensors are operating properly. Once the check source, provided by the manufacturer, is in place the vehicle sensor and alarm function will be checked.

- The 3500-l000 unit utilizes two (2) chanels [480 cubic inch each] for use at a weight scale entry point.
- Speed Limit during scanning is 2-3 MPH
- Continuous background (BG) monitoring is performed until the infrared vehicle sensor is activated.
    - Alarm point will be automatically adjusted taking into consideration the BG. The BG is constantly influx due to “cosmic events, weather, and other influences.”
- Annual Calibration required, at 5Kcps and 20Kcps for each detector.

- Daily Calibration: Start of each day, prior to first use.
    - The unit will not be utilized, and trucks queued up, until the unit passes the daily calibration.
- Sensitivity is at 4 mV. It is not adjusted for matrix/material types.
- Accepted clean release from the portal is less than 6 standard deviations above the background. Example:
    - BG=2 kcps,
    - Standard deviation is 10% of BG kcps [0.2 kcps],
    - Alarm point set for 3.2 kcps.
- Health Physicist performs weekly QC review of data.
- Trouble Shooting is outlined in Section of the manufacturer's plans (M3500-1000_Electronics)

Further detailed instructions of the operating procedures for the Ludlom 3500-1000 are provided as Attachment A.

4.0 REFERENCES

Code of Federal Regulations (CFR) Title 40, Parts 173, 260, 261, 262, 264, 265, and 268.

California Code of Regulations (CFR) Title 22, Sections 66261, 66262, 66264, and 66265.

Environmental Chemical Corporation Infrastructure, LLC. 2025a. *Accident Prevention Plan. Parcel G, Hunters Point Naval Shipyard San Francisco,* California. July.

2025b. *Remedial Action Work Plan, Parcel G, Hunters Point Naval Shipyard San Francisco, California*. July.

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TABLES

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Table 1 Waste Streams

Waste Type	Transportation Mode	Out-Of-State Disposal or Recycling Facilities, Location –
ACM Waste	Truck/Container/Liner	US Ecology Nevada, Beatty Facility, Beatty, Nevada, La Paz Landfill, Republic Services, Parker, Arizona
Hazardous Material (ACM, PCB, Lead Paint, Mercury Waste, Refrigerant, Universal Waste, PPE)	Truck/Container	
Demolition Debris	Truck/Container	Lockwood Landfill, Sparks, Nevada
Salvageable Structural Steel and Scrap Metal	High Side Truck	SA Recycling Reno – Port of Richmond transload
Recyclable Concrete	High Side Truck	Rilite Aggregate, Sparks, Nevada
Non-Hazardous/Hazardous Water	Tanker Truck/container	Waste Management, Arlington, Oregon

Notes:
RACM – regulated asbestos containing material
PCB – polychlorinated biphenyl
PPE – personal protective equipment

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FIGURES

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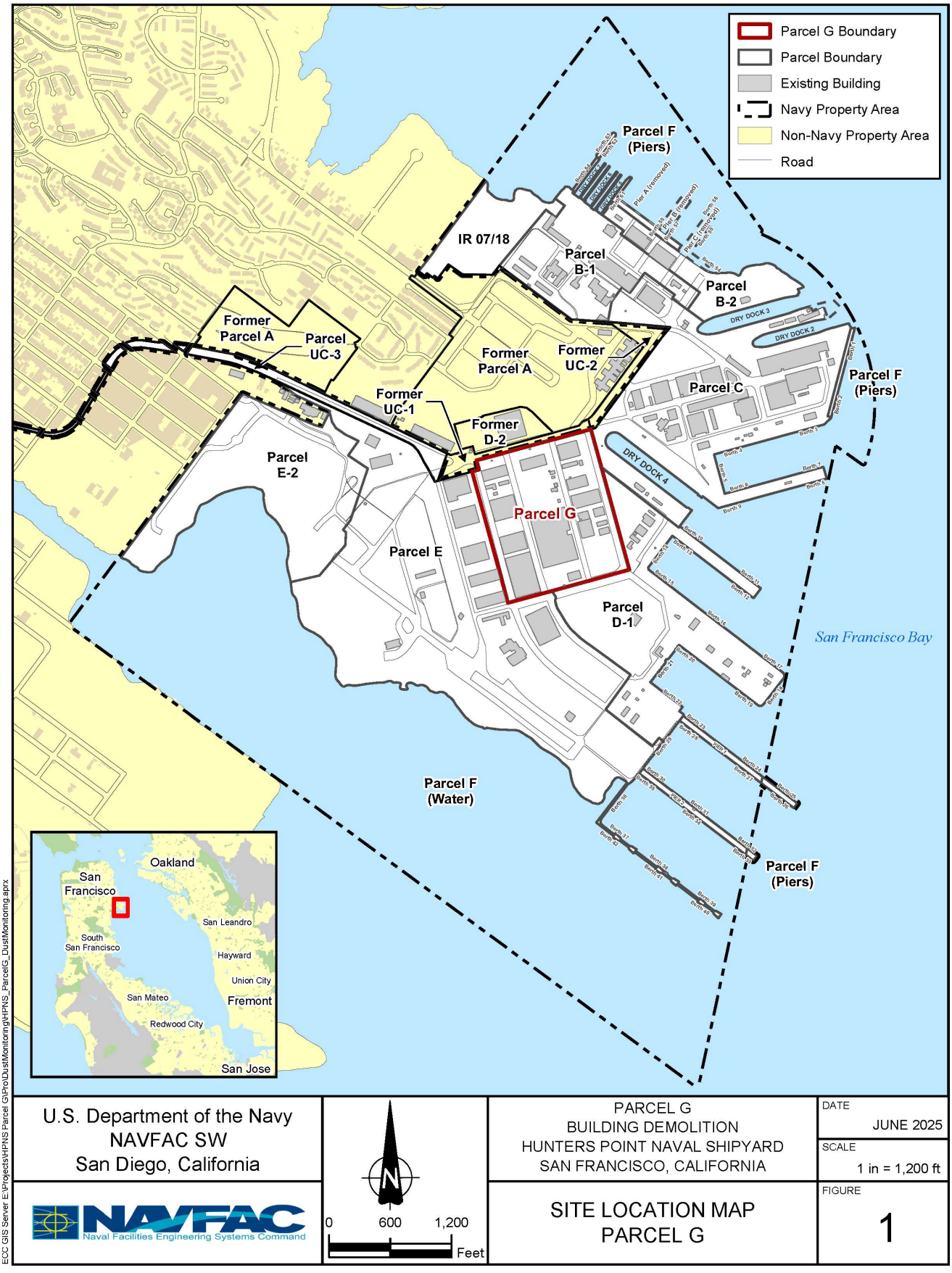
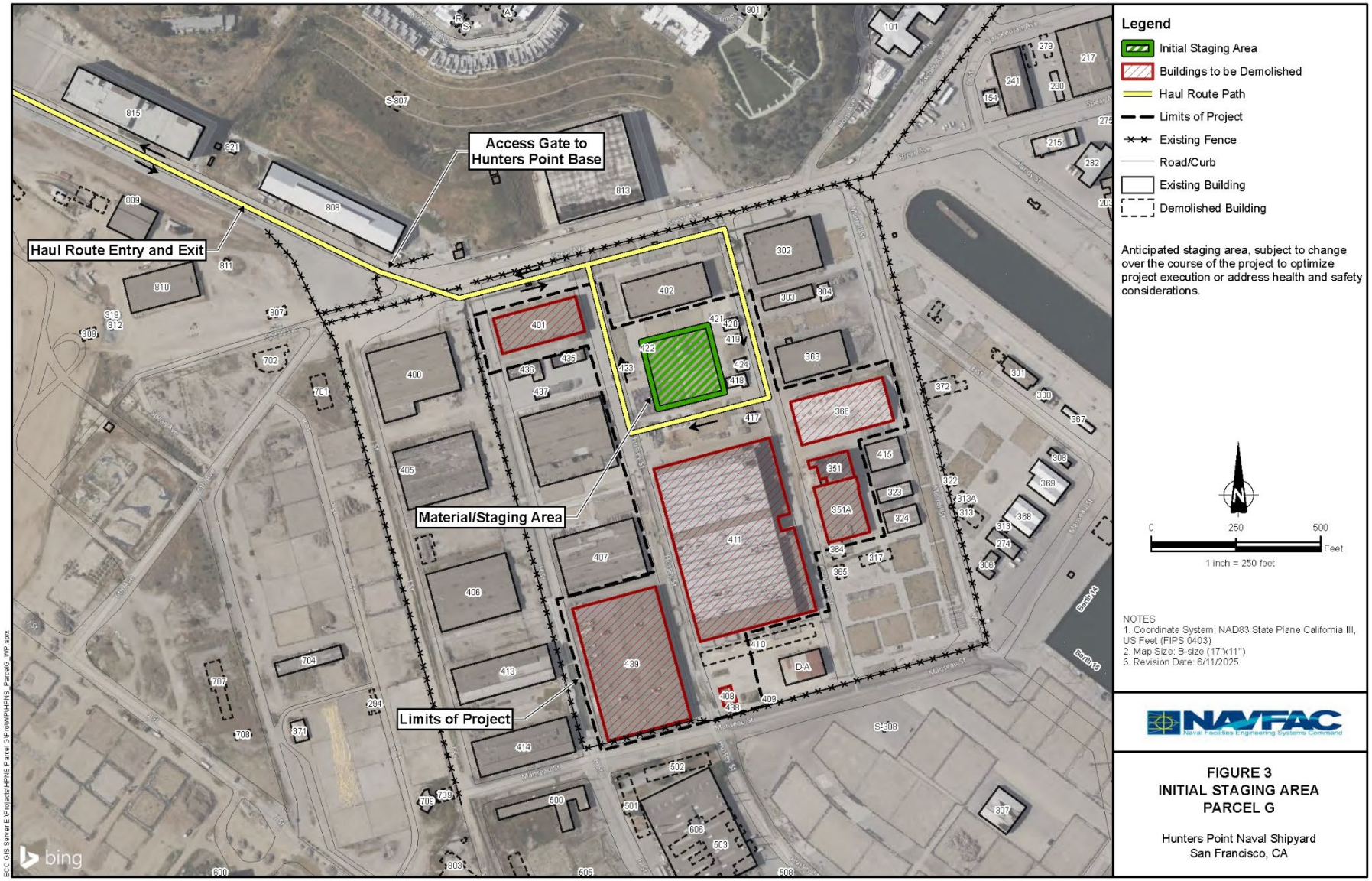

Parcel G Boundary
Parcel Boundary
Existing Building
Navy Property Area
Non-Navy Property Area
Road
Parcel F (Piers)
IR 07/18
Parcel B-1
Parcel B-2
DRY DOCK 3
DRY DOCK 2
Former Parcel A
Parcel UC-3
Former Parcel A
Former UC-2
Former UC-1
Former D-2
Parcel C
Parcel F (Piers)
Parcel E-2
DRY DOCK 4
Parcel G
Parcel E
Parcel D-1
San Francisco Bay
Parcel F (Water)
Parcel F (Piers)
Oakland
San Francisco
South San Francisco
San Leandro
Hayward
Union City
Fremont
San Mateo
Redwood City
San Jose
U.S. Department of the Navy
NAVFAC SW
San Diego, California
Naval Facilities Engineering Systems Command
N
0
600
1,200
Feet
PARCEL G
BUILDING DEMOLITION
HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CALIFORNIA
DATE
JUNE 2025
SCALE
1 in = 1,200 ft
SITE LOCATION MAP
PARCEL G
FIGURE
1
ECC GIS Server E:\Projects\HPNS Parcel G\Prof\Dust\Monitoring\HPNS_ParcelG_DustMonitoring.aprx

Legend
Buildings to be Demolished
Existing Building
Demolished Building
Parcel G Boundary
Railroad Line
Road/Curb
N
0
200
400
Feet
1 inch = 200 feet
NOTES
1. Coordinate System: NAD83 State Plane California III, US Feet (FIPS 0403)
2. Map Size: B-size (17"x11")
3. Revision Date: 6/11/2025
NAVFAC
Naval Facilities Engineering Systems Command
FIGURE 2
SITE PLAN
PARCEL G
Hunters Point Naval Shipyard
San Francisco, CA
ECC GIS Server:E:\Projects\HPNS Parcel G\PrjWP\HPNS_ParcelG_WP.aprx


Access Gate to Hunters Point Base
Haul Route Entry and Exit
Material/Staging Area
Limits of Project
Legend
Initial Staging Area
Buildings to be Demolished
Haul Route Path
Limits of Project
Existing Fence
Road/Curb
Existing Building
Demolished Building
Anticipated staging area, subject to change over the course of the project to optimize project execution or address health and safety considerations.
0
250
500
Feet
1 inch = 250 feet
NOTES
1. Coordinate System: NAD83 State Plane California III, US Feet (FIPS 0403)
2. Map Size: B-size (17"x11")
3. Revision Date: 6/11/2025
NAVFAC
Naval Facilities Engineering Systems Command
FIGURE 3
INITIAL STAGING AREA
PARCEL G
Hunters Point Naval Shipyard
San Francisco, CA
bing

Haul Route Entry and Exit
Access Gate to Hunters Point Base
Material/Staging Area
Limits of Project
Highway 101
Quesada Ave
Palou Ave
Underwood Ave
Thomas Ave
Revere Ave
Shafter Ave
Keith St
Crisp Rd
Griffith St
Carroll Ave
Ingalls St
Jennings St
Hollister Ave
Gilman Ave
Ingerson Ave
South Basin
Gilman Park
Candlestick Point State Recreation Area
Legend
Truck Route from HPNS Crisp Rd to Highway 101
OK Vehicles
NO Truck Traffic Allowed
Initial Staging Area
Buildings to be Demolished
Limits of Project
Existing Fence
Road/Curb
Existing Building
Demolished Building
N
0
800
1,600
Feet
1 inch = 800 feet
NOTES
1. Coordinate System: NAD83 State Plane California III, US Feet (FIPS 0403)
2. Map Size: B-size (17"x11")
3. Revision Date: 6/16/2025
NAVFAC
Naval Facilities Engineering Systems Command
FIGURE 4
HAUL ROAD
PARCEL G
Hunters Point Naval Shipyard
San Francisco, CA

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APPENDIX C
Sampling and Analysis Plan

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Naval Facilities Engineering Systems Command Southwest
Travis ROICC/CODE ROPWT
Travis Air Force Base, CA

Draft-Final (R0-D5)

Sampling and Analysis Plan (SAP)

Parcel G Building Demolition

Hunters Point Naval Shipyard,
San Francisco, California

February 2026

DCN: ECC-1205-4397-0007.04

Distribution Statement A: Approved for public release; distribution unlimited.

Naval Facilities Engineering Systems Command Southwest
Travis ROICC/CODE ROPWT
Travis Air Force Base, CA

Draft-Final (R0-D5)

Sampling and Analysis Plan (SAP)

Parcel G Building Demolition

Hunters Point Naval Shipyard, San Francisco, California

February 2026

DCN: ECC-1205-4397-0007.04

Prepared for:

Naval Facilities Engineering Systems Command Southwest
Travis ROICC/CODE ROPWT
Travis Air Force Base
191 W ST
Travis AFB, CA 94535

Prepared by:

ECC Infrastructure LLC
700 Airport Blvd, Suite 250
Burlingame, CA 94010

Contract Number: N62473-21-D-1205
Delivery Order: N6247325F4397

EXECUTIVE SUMMARY

This Sampling and Analysis Plan (SAP) is intended to support demolition activities for the Parcel G Building Demolitions at Hunters Point Naval Shipyard (HPNS), San Francisco, California (Figures 1 and 2). This SAP was prepared by ECC under contract N6247321D1205 / delivery order N6247325F4397.

Demolition activities will be conducted on the following buildings/area:

- Bldg. 351
- Bldg. 351A
- Bldg. 366
- Bldg. 401
- Bldg. 408 - Concrete Pad
- Bldg. 411
- Bldg. 439

History of Revisions

DCN #	Date	Notes
ECC-1205-4397-007.00	July-2025	R0-D1 / Original Submission (Draft)
ECC-1205-4397-007.01	Sept-2025	R0-D2 / Second Submission (Draft)
ECC-1205-4397-007.02	Oct-2025	R0-D3 / Third Submission (Draft)
ECC-1205-4397-007.03	Jan-2026	R0-D4 / Fourth Submission • *Added Mercury and PCBs* • *ROCs* • *Updated Org Chart*
ECC-1205-4397-007.04	Feb- 2026	R0-D5 / Update to ROC Sections

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History of Revisions ES-3

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- SOPs
- Accreditations

Attachment 2 - Eurofins

- SOPs – COCs
- SOPs - ROCs
- Accreditations

-

ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius
%v/v	percent by volume
AOC	Area of Concern
BRAC	Base Realignment and Closure
CAP	Corrective Action Plan
CAS No.	Chemical Abstract Service Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	chemical of concern
COPC	contaminant of potential concern
DoD	[United States] Department of Defense
DoN	[United States] Department of Navy
DQI	Data Quality Indicator
DQO	data quality objective
DTSC	Department of Toxic Substances Control
ECC	Environmental Chemical Corporation
ELAP	Environmental Laboratory Accreditation Program
EPA	Environmental Protection Agency
EWI	Environmental Work Instruction
°F	degrees Fahrenheit
GRO	gasoline range organics
HCl	hydrochloric acid
HPNS	Hunters Point Naval Shipyard
IDW	investigation-derived waste
IS	internal standard
LCS/LCSD	laboratory control sample/laboratory control sample duplicate
LOD	limit of detection
LOQ	limit of quantitation
MB	method blank
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
mm	millimeter
MS/MSD	matrix spike/matrix spike duplicate
N/A	not applicable
NAVFAC-SW	Naval Facilities Engineering Command - Southwest
NEDD	Naval electronic data deliverable
NFA	No Further Action
NIRIS	Naval Installation Restoration Information System
OSHA	Occupational Safety and Health Administration
PAL	Project Action Limit

pCi/g	picocuries per gram
pCi/L	picocuries per liter
PM	Project Manager
PMO	Project Management Office
PQL	project quantitation limit
PQO	project quality objective
QA	quality assurance
QAM	Quality Assurance Manager
QAO	Quality Assurance Officer
QC	Quality Control
QCM	Quality Control Manager
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyls
ROC	Radionuclide of Concern
ROICC	Resident Officer-in-Charge of Construction
RPD	relative percent difference
RPM	Remedial Project Manager
RSO	Radiological Safety Officer
SAP	Sampling and Analysis Plan
SOP	Standard Operating Procedure
SSHO	Site Safety and Health Officer
TBD	to be determined
US EPA	United States Environmental Protection Agency
WMP	Waste Management Plan
WP	Work Plan

Worksheet #1: Title and Approval Page

(UFP-QAPP Manual Section 2.1)

Version: Draft, R0-D4

COMBINED WORK PLAN/SAMPLING AND ANALYSIS PLAN

Date: Jan-2026

Parcel G – Building Demolition
Hunters Point Naval Shipyard, San Francisco, CA

Prepared for:
Department of the Navy
Naval Facilities Engineering Command
Southwest ROICC Travis AFB
510 Hickam Ave, Bldg. 250, Fairfield, CA

Prepared by:
ECC Infrastructure, LLC
700 Airport Blvd, Suite 250
Burlingame, CA 94010
650-347-1555

Prepared under:
Contract No: N6247321D1205
Delivery Order: N6247325F4397

ECC – Prepared by: _____
Kane McNeill, QC Manager Date

ECC - Approval Signature: _____
Kaiulani Watson, Project Manager Date

Other Approval Signature: _____
Signature / Name / Title Date

NAVFAC Approval Signature: _____
Signature / Name / **Navy QAO** Date

Worksheet #2: Identifying Information & Crosswalk

(UFP-QAPP Manual Section 2.2.4)

Site Name/Number: Hunters Point Naval Shipyard, Parcel G – Building Demolition

Contractor Name: ECC Infrastructure, LLC

Contract Number: N6247321D1205
Delivery Order: N6247325F4397

Contract Title: Parcel G Building Demolition at BRAC Former Hunters Point Naval Shipyard, San Francisco, CA.

Work Assignment Number (optional): N/A

1. This Sampling and Analysis Plan was prepared in accordance with the requirements of the Intergovernmental Data Quality Task Force (IDQTF) *Uniform Federal Policy for Quality Assurance Project Plans (UFP-QAPP)* (IDQTF 2005); *Uniform Federal Policy for Quality Assurance Project Plans Optimized UFP-QAPP Worksheets* (IDQTF, 2012); the United States Environmental Protection Agency (EPA) *Guidance on Systematic Planning Using The Data Quality Objectives Process, EPA QA/G-4* (EPA 2006); & *NAVFAC SW EW#1 EV (Rev 2, 3-May-2022)*.

2. **Identify regulatory program:**

   - CERCLA

3. This is a **project specific** SAP.

4. **List organizational partners (stakeholders) and identify the connection with lead organization:**

Organization Partners/Stakeholders		Connection
Stakeholder	San Francisco Regional Water Quality Board	Regulatory Agency
Stakeholder	State of California – Dept. of Toxic Substances Control	Regulatory Agency
Stakeholder	US Environmental Protection Agency	Regulatory Agency

5. **Lead Organization:**
   - Department of the Navy, Naval Facilities Engineering Systems Command Southwest

6. **Not Applicable Elements:**
   - If any WP/SAP elements and required information are not applicable to the project or provided elsewhere, then note the WP/SAP elements and provide an explanation for their exclusion or new location in the table below.

Worksheet #2: Identifying Information (continued)
Cross-Walk to Related Information

WP/SAP Worksheet #	Required Information (Applicable UFP-QAPP Manual sections cited at the top of each worksheet.)	Crosswalk to Related Information
A. Project Management and Organization		
Documentation		
1	Title and Approval Page	
2	Identifying Information	
3	Project Organization and Distribution	UFP-QAPP Worksheets #3 and 5
4	Project Personnel Sign-Off Sheet	
Project Organization		
5	Communication Pathways	UFP-QAPP Worksheet #6
6	Personnel Responsibilities	UFP-QAPP Worksheet #7
7	Special Personnel Training Requirements	UFP-QAPP Worksheet #8
Project Planning/Problem Definition		
8	Project Scoping Session Participants	UFP-QAPP Worksheet #9
9	Conceptual Site Model	UFP-QAPP Worksheet #10
10	Secondary Data, Criteria and Limitations	UFP-QAPP Worksheet #13
11	Problem Definition, Project Quality Objectives/Systematic Planning Process	Not Applicable
12	Sampling Design and Rationale	UFP-QAPP Worksheet #17
13	Summary of Project Tasks	UFP-QAPP Worksheet #14
14	Project Schedule/Timeline	UFP-QAPP Worksheet #16
B. Measurement/Data Acquisition		
15	Reference Limits and Evaluation	
16	Field quality Control Samples	UFP-QAPP Worksheet #12
17	Blank	
18	Location-Specific Sampling Methods/ SOP Requirements	

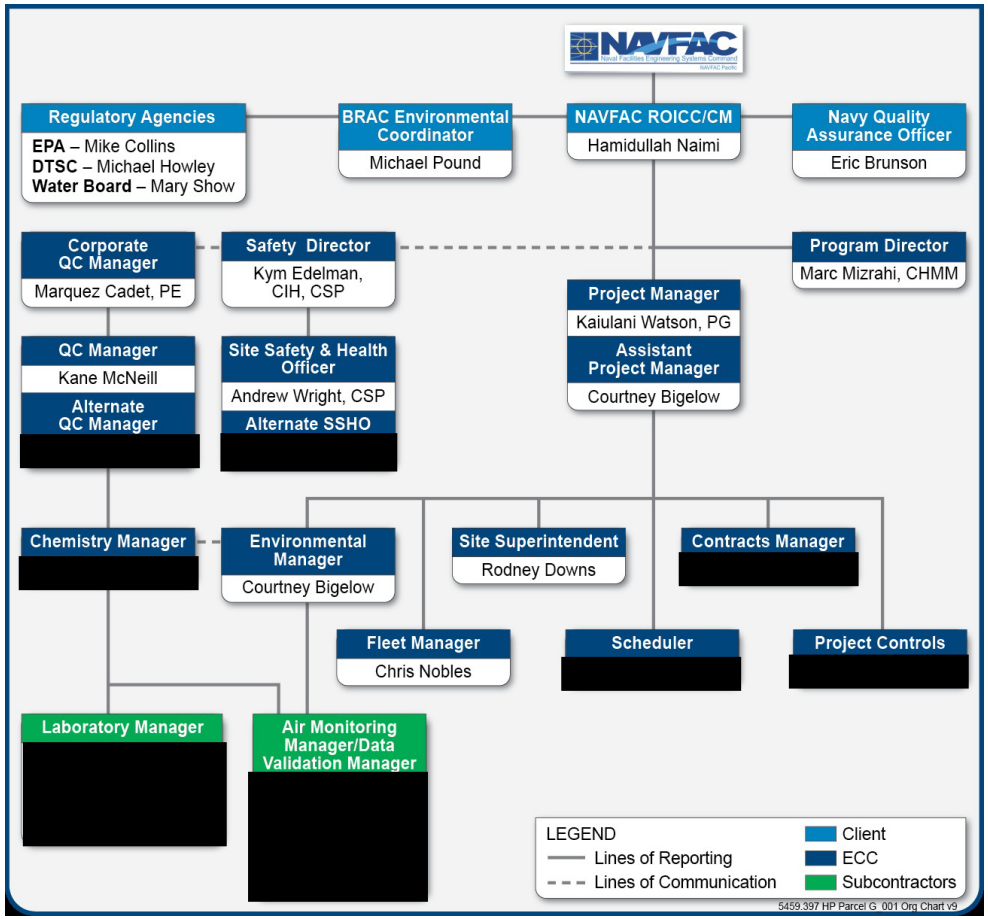
WP/SAP Worksheet #2: Identifying Information (continued)

WP/SAP Worksheet #	Required Information	Crosswalk to Related Information
19	Field Sampling Requirements	
20	Field QC Sample Summary	
21	Project Sampling SOP References	
22	Field Equipment Calibration, Maintenance, Testing, and Inspection	
Analytical Tasks		
23	Analytical SOP References	
24	Analytical Instrument Calibration	
25	Analytical Instrument and Equipment Maintenance, Testing, and Inspection	
Sample Collection		
26	Sample Handling, Custody and Disposal	UFP-QAPP Worksheets #26 and 27
27	Blank	
Quality Control Samples		
28	Laboratory QC Samples	
Data Management Tasks		
29	Project Documents and Records	
30	Analytical Services	
C. Assessment Oversight		
31	Assessments and Corrective Action	UFP-QAPP Worksheets #31 and 32
32	Blank	
33	QA Management Reports	
D. Data Review		
34-36	Data Verification and Validation (Steps I and IIa/Iib) Process	UFP-QAPP Worksheets #34 – 36
37	Usability Assessment	

Notes: [1]QA quality assurance
[2]QC quality control
[3]SOP standard operating procedure
[4]UFP-QAPP Uniform Federal Policy for Quality Assurance Project Plans

Worksheets #3: Project Organization and SAP Distribution

(UFP-QAPP Manual Section 2.3 and 2.4)



Worksheet #4: Project Personnel Sign-Off Sheet

(UFP-QAPP Manual Section 2.3.2)

Name of SAP Recipients	Title/Role	Organization	Telephone Number	E-mail Address or Mailing Address	Signature
Rebecca Rivera	Project Manager	NAVFAC SW ROICC	(619) 705-4590	rebeca.rivera.civ@us.navy.mil	
Hamid Naimi	Construction Manager (CM)	NAVFAC SW ROICC	(510) 387-6129	hamidullah.naimi.civ@us.navy.mil	
Ivan Rodriquez	Alt Construction Manager	NAVFAC SW ROICC	(707) 424-9043	ivan.o.rodriguez.civ@us.navy.mil	
Michael Pound	BRAC Environmental Coordinator	NAVFAC BRAC	(619) 524-6026	michael.j.pound@us.navy.mil	
Patricia McFadden	CSO Manager	NAVFAC SW BRAC CSO	(415) 743-4720	patricia.mcfadden.civ@us.navy.mil	
Eric Brunson	QAO	NAVFAC SW	(619) 705-5485	eric.j.brunson@us.navy.mil	
Doug DeLong	Facility / Environmental Compliance and Waste Management	NAVFAC SW BRAC CSO	(415) 743-4713	douglas.delong.ctr@navy.mil	
Kaiulani Watson	Project Manager (PM)	ECC	808-386-6119	kwatson@ecc.net	
Courtney Bigelow	Environmental Manager	ECC	415-404-5374	cbigelow@ecc.net	
[redacted]	Chemistry Manager	ECC	[redacted]	[redacted]	
Kane McNeill	Quality Control Manager	ECC	650-228-6950	kmcneill@ecc.net	

Name of SAP Recipients	Title/Role	Organization	Telephone Number	E-mail Address or Mailing Address	Signature
Andrew Wright, CSP	Site Safety and Health Officer (SSHO)	ECC	252-503-9954	awright@ecc.net	
Rodney Downs	Site Supervisor	ECC	650-464-6071	rdowns@ecc.net	
[redacted]	Air Monitoring Manager - COCs	[redacted]	[redacted]	[redacted]	
[redacted]	Laboratory Project Manager - COCs	[redacted]	[redacted]	[redacted]	
[redacted]	Laboratory Project Manager - COCs	[redacted]	[redacted]	[redacted]	
[redacted]	Air Monitoring Manager - ROCs	[redacted]	[redacted]	[redacted]	
[redacted]	Laboratory Project Manager - ROCs	[redacted]	[redacted]	[redacted]	
[redacted]	Data Validation	[redacted]	-	-	

Worksheet #5: Communication Pathways

(UFP-QAPP Manual Section 2.4.2)

Describe the communication pathways and modes of communication that will be used during the project, after the WP/SAP has been approved. The worksheet needs to promote an understanding of how project team members are exchanging key information. Twelve standard communication drivers are listed that must be addressed; additional drivers may be added as needed. Describe the procedures for soliciting and/or obtaining approval between project personnel, between different contractors, and between samplers and laboratory staff. Timing is the maximum amount of time allowed for the communication event to take place. Pathways describe the type of communication such as e-mail, phone, etc. A text format is acceptable in lieu of the table as long as the twelve key communication drivers and all criteria in the column headings are included.

The communication pathways for the WP are shown below.

Communication Drivers	Responsible Entity	Name	Phone Number	Procedure 1. Timing 2. Pathway 3. To/From 4. etc.
Regulatory Agency Interface	NAVFAC BRAC	Michael Pound	See WS#4	1. As Required
NAVFAC BRAC Interface	NAVFAC SW	Hamid Naimi	See WS#4	1. As Required
Field Progress Reports	ECC	Kane McNeill, Rodney Downs	See WS#4	1. Daily 2. Client, Project Team
Stop Work due to Safety Issues	NAVFAC, ECC, Subcontractors	Multiple	N/A	1. As Required 2.Client, Project Team
SAP Changes prior to Field/ Laboratory work	ECC	Kane McNeill, Jackson Kiker	See WS#4	1. As Required 2.Client, Project Team
SAP Changes in the Field	ECC	Courtney Bigelow	See WS#4	1. As Required 2.Client, Project Team
Field Corrective Actions	ECC	Kane McNeill	See WS#4	1. As Required 2.Client, Project Team
Sample Receipt Variances	ECC	Jackson Kiker / Courtney Bigelow	See WS#4	1. As Required 2.Client, Project Team
Reporting Lab Quality Variances	ECC	Jackson Kiker / Courtney Bigelow	See WS#4	1. As Required 2.Client, Project Team
Analytical Corrective Actions	ECC	Jackson Kiker / Courtney Bigelow	See WS#4	1. As Required 2.Client, Project Team
Reporting Data Validation Issues	ECC	Jackson Kiker / Courtney Bigelow	See WS#4	1. As Required 2.Client, Project Team
Data Validation Corrective Actions	ECC	Jackson Kiker / Courtney Bigelow	See WS#4	1. As Required 2.Client, Project Team
SAP Addendums and Field Change Requests (FCRs)	ECC	SAP Add: Jackson Kiker FCR: Kane McNeill	See WS#4	1. As Required 2.Client, Project Team

Worksheet #6: Personnel Responsibilities

(UFP-QAPP Manual Section 2.4.3)

Name	Title/Role	Organizational Affiliation	Responsibilities
Jackson Kiker	Chemistry Manager	ECC	Lab Data Oversight, SAP Changes, Lab QC
[redacted]	Air Monitoring Manager / Data Manager- COCs	[redacted]	COCs: Field and Lab Data Management Data Review Management
[redacted]	Air Monitoring Manager / Data Manager - ROCs	[redacted]	ROCs: Field and Lab Data Management, Data Review Management
TBD	Data Validation	TBD	Laboratory Data Validation
Courtney Bigelow	Environmental Manager	ECC	Environmental Compliance (Fed, State, Local), Maintain Env Records, Lab QC, Field QC, Field SAP Changes
Kane McNeill	QC Manager	ECC	Overall Project QC
Kaiulani Watson	Project Manager	ECC	Overall Project Management
Michael Pound	BRAC Environmental Coordinator	NAVFAC BRAC	Regulatory Interface
Hamid Naimi	CM	NAVFAC SW	Client & NAVFAC BRAC Interface
Eric Brunson	QAO	NAVFAC SW	Quality Assurance
Andrew Wright	SSHO	ECC	Safety

Worksheet #7: Special Personnel Training Requirements

(UFP-QAPP Manual Section 2.4.4)

Project Function	Specialized Training By Title or Description of Course	Training Provider	Training Date	Personnel/Groups Receiving Training	Personnel Titles/ Organizational Affiliation	Location of Training Records/Certificates
Air Monitoring	Tisch Equipment Use	Aurora Environmental / Field Environmental	TBD	Field Staff	Aurora Environmental / ECC	Project Files
Air Monitoring	COC Air Sampling P	Aurora Environmental	TBD	Field Staff	Aurora Environmental / ECC	Project Files
Air Monitoring	ROC Air Monitoring	Permafix	TBD	Field Staff	Permafix	Project Files

Worksheet #8: Project Scoping Session Participants

(UFP-QAPP Manual Section 2.5.1)

Project Name:
- **Hunters Point Naval Shipyard Parcel G Building Demolition**

Projected Date(s) of Sampling:
- Feb-2026 thru July-2027

Site Name:
- Parcel G

Project Manager:
- Kaiulani Watson, ECC

Site Location:
- Hunters Point Naval Shipyard, San Francisco, CA

Date of Session:
- 08 Jul-2025

Scoping Session Purpose:
- Alignment and Coordination

Name	Title	Affiliation	Phone #	E-mail Address	Project Role
Kaiulani Watson	See WS #3 &4 *if applicable	ECC	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable
Tony Nolen	See WS #3 &4 *if applicable	ECC	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable
Kane McNeill	See WS #3 &4 *if applicable	ECC	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable
Courtney Bigelow	See WS #3 &4 *if applicable	ECC	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable
Kelly Trilk	See WS #3 &4 *if applicable	ECC	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable
Elizabeth Webb	See WS #3 &4 *if applicable	ECC	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable
Matthew Amoh	See WS #3 &4 *if applicable	NAVFAC SW	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable
Tony Tambadan	See WS #3 &4 *if applicable	NAVFAC SW	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable
Bryan Armstrong	See WS #3 &4 *if applicable	NAVFAC SW	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable
Gina Hossman	See WS #3 &4 *if applicable	NAVFAC SW	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable
Rebeca Rivera	See WS #3 &4 *if applicable	NAVFAC SW	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable
Michael Pound	See WS #3 &4 *if applicable	NAVFAC BRAC	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable

Project Name:

- **Hunters Point Naval Shipyard Parcel G Building Demolition**

Projected Date(s) of Sampling:

- Feb-2026 thru July-2027

Site Name:

- Parcel G

Project Manager:

- Kaiulani Watson, ECC

Site Location:

- Hunters Point Naval Shipyard, San Francisco, CA

Date of Session:

- 08 Jul-2025

Scoping Session Purpose:

- Alignment and Coordination

Doug Delong	See WS #3 &4 *if applicable	NAVFAC BRAC	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable
Patricia McFadden	See WS #3 &4 *if applicable	NAVFAC BRAC CSO	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable
Danielle Jand	See WS #3 &4 *if applicable	NAVFAC BRAC	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable
Bong Lee	See WS #3 &4 *if applicable	NAVFAC ROICC	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable
Don Stweart	See WS #3 &4 *if applicable	NAVFAC ROICC	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable
Hamid Nalmi	See WS #3 &4 *if applicable	NAVFAC ROICC	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable
Stacy Ferrer	See WS #3 &4 *if applicable	NAVFAC ROICC	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable
Henry Wistad	See WS #3 &4 *if applicable	NAVFAC ROICC	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable
Ivan Rodriguez	See WS #3 &4 *if applicable	NAVFAC ROICC	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable
Brad Moss	See WS #3 &4 *if applicable	Michael Baker Intl.	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable
Dave David	See WS #3 &4 *if applicable	Bayview Environmental	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable
Rick Gusman	See WS #3 &4 *if applicable	Silverado Contractor	See WS #4 *if applicable	See WS #4 *if applicable	See WS #3 &4 *if applicable

Comments/Decisions: None
Action Items: ECC to set up weekly coordination meeting.
Consensus Decisions: Weekly coordination meetings between all parties.

Worksheet #9: Conceptual Site Model

(UFP-QAPP Manual Section 2.5.2)

The conceptual site model is based on the information presented in the Dust Management Plan[1].

The potential sources of dust, as identified on Section 4.0, are:

- *Demolition*
- *Abatement*
  - *Negative Air abatements are not included in this category*
- *Construction Traffic*
- *Management of Borrow/Fill Material Soil*
- *Demolition Material Stockpiles*
- *Site Restoration*

The locations utilized to monitor the conditions on site are outlined in Section 6.2 (shown below):

6.2 Monitoring Site Locations

6.2.1 COCs & ROCs

A maximum of three air monitoring locations will be used at Parcel G, triangulated around the active work site(s), to collect air samples to assess the impact of field activities. The locations at the site will be determined based on the location of building(s) work being performed on, the existing structures, and the prevailing wind direction. Estimated locations where the air stations may be placed have been included in Figure 2, but are not limited to the ones that are shown.

The air monitoring team will be on-site during the abatement (excluding negative air operations) and demolition operations. Their task will include (but are not limited to): Daily operation of the air monitoring stations; On-site observation for the generation of fugitive dust and implementing response procedures outlined in Section 6.5.

Locations may be:

- Adjusted to avoid traffic paths and areas where non-project site conditions could affect the data.
- Evaluated Daily. If re-location is warranted, it will primarily be performed in the non-work hours due to the effort required to move and re-calibrate the equipment. If re-location is requested during normal hours of operation, the NAVFAC construction manager will be informed and provide final approval.

[1] Dust Management and Air Monitoring Plan, R0-D4, Jan-2026 [DCN: ECC-1205-4397-0003g.03]

Worksheet #10: Secondary Data, Criteria and Limitations

(UFP-QAPP Manual Section 2.7)

Secondary Data, Criteria and Limitations

Secondary Data	Data Source (originating organization, report title and date)	Data Generator(s) (originating organization, data types, data generation / collection dates)	How Data Will Be Used	Limitations on Data Use
Air Reporting	Raw Air Data	Lab Data, Real Time Dust Monitors	Reporting Requirements outlined in Dust Management Plan	-
Raw Air Data Review	Laboratory Analyses	Laboratory	Reporting Requirements outlined in Dust Management Plan	-

Worksheet #11: Project Quality Objectives

(UFP-QAPP Manual Section 2.6.1)

The project quality objectives for the data obtained in this plan include:

1. Ensure dust management operations are performed on a routine basis during demolition and abatement, except but not limited to days with precipitation or high humidity when equipment cannot operate and dust generation is naturally minimized. Weather delays may occur which prevent the use the monitoring equipment; therefore, the objective would be to monitor ≥90% of the days of demolition and abatement operations.

2. Data quality is subjective to many variables from day to day. Objectives would be for ≥90% of the data to be retained once submitted to laboratory for analysis.

Worksheet #12: Sampling Design and Rationale

(UFP-QAPP Manual Section 3.1.1)

The air sampling rational is listed below, as stated in the Dust Management Plan (DMP) (*RAWP, Appendix A - Attachment B, DCN: ECC-1205-4397-0003g.03):*

See Worksheet #9

Worksheet #13: Summary of Project Tasks

(UFP-QAPP Manual Section 2.8.1)

Summary of project task associated with this project:

- Building Abatement
- Building Demolition
- Air Monitoring
- Waste Management & Hauling
- Equipment decontamination
- Documentation
- Data Management and Review
- Data Validation

Worksheet #14: Project Schedule/Timeline

(UFP-QAPP Manual Section 2.8.2)

Activity	Duration	Dates
Mobilization	4 - Days	02-Feb-2026 thru 05-Feb-2026
Demolition & Abatement	303 - Days	09-Feb-2026 thru 05-Aug-2027
Demobilization	4 – Days	02-Aug-2027 thru 05-Aug-2027

Notes: Based on Schedule Version: 03-Feb-2026 / DCN: ECC-1205-4397.0006.03

Worksheet #15: Reference Limits and Evaluation

(UFP-QAPP Manual Section 2.8.1)

Matrix: Air

Analytical Group:
Contaminants of Concern

Analyte	CAS No.	PAL (applicable limits)	PAL Reference	Project QL Goal (as applicable)	Laboratory Specific Limits		
					LOQs	LODs	DLs
Total Suspended Particulates [3]	STL00563	500 ug/m3	Basewide HPNS Level	N/A	N/A	N/A	10 ug/m3 @ 500L
Asbestos	N/A	0.1 Fibers per Cubic Centimeter	Cal/OSHA PEL	N/A	5.5 Fibers / 100 fields	N/A	N/A
Lead (Pb)	7439-92-1	50 ug/m3	Cal/OSHA PEL	N/A	-	1.2	2.3 ug/m3
Manganese (Mn)	7439-96-5	200 ug/m^3	Cal/OSHA PEL	N/A	-	1.2	3.4 ug/m3
Mercury (particulate) [1]	7439-97-6	25 ug/m3	Cal/OSHA PEL	N/A	0.020 ug	TBD	TBD
Polychlorinated Biphenyls (PCBs) [2]	53469-21-9	1000 ug/m^3	Cal/OSHA PEL	N/A	0.05 ug	TBD	TBD
Particulate Matter 10 ug (PM-10)	N/A	5000 ug/m3	Cal/OSHA PEL	N/A	N/A *	N/A	N/A
		50 ug/m3	DTSC Hero / Avg over 24-hr period				

3 =

Worksheet #15: Reference Limits and Evaluation

(UFP-QAPP Manual Section 2.8.1)

Matrix: Air

Analytical Group: Radionuclides of Concern (ROCs)

Analyte	CAS No.	PAL (applicable limits)	PAL Reference	**Project QL Goal** (as applicable)	Laboratory Specific Limits		
					Target LC (uCi/mL)	LODs (pCi/g)	MDLs (pCi/g)
Cesium-137	10045-97-3	4.0 x 10-11 uCI/mL	10 CFR, Part 20, Appendix B, Table 2 Column 1 adjusted from 50 mrem per year to a maximum annual exposure of 10 mrem per year at the receptor (public receptor) c	-	2.04E-16	N/A	N/A
Plutonium-239/240	239: 15117-48-3	4.0x10-15 uCI/mL		-	1.02E-15	N/A	N/A
Radium-226	13982-63-3	1.8x10-13 uCI/mL		-	1.14E-14	N/A	N/A
Strontium-90	10098-97-2	1.2x10-12 uCI/mL		-	1.20E-14	N/A	N/A
Thorium-232	7440-29-1	1.2x10-15 uCI/mL		-	8.17E-16	N/A	N/A
Uranium-235	15117-96-1	6.0x10-13 uCI/mL		-	8.17E-16	N/A	N/A

Notes:

- PAL = Project Action Limit
- PEL = Permissible Exposure Level
- Verified yearly (per SOP, section 12.5) for each media type. Demonstration of Capabilities performed Bi-Annually.

1 Mercury: California Code Regulations (CCR) / Title 8. [https://www.dir.ca.gov/title8/5155.html]
2 Polychlorinated Biphenyls (PCB's)
   a. https://www.dir.ca.gov/title8/5155.html
   b. See Chlorodiphenyl
3 TSP Detection Limit: 5000 ug/m3 based on 1L /
   a. Volume = Avg flow rate (m3 per minute) x time (min)
   b. Example: To achieve DL of 10 ug/m3, a volume of 500 Liters is required (5000 / 500 = 10 ug/m3)

Worksheet #16: Field Quality Control Samples

(UFP-QAPP Manual Section 2.6.2)

Measurement Performance Criteria Table – Field QC Samples

QC Sample	Analytical Group	Frequency [2]	Data Quality Indicators (DQIs)	Measurement Performance Criteria
Field Blank	Total Suspended Particulates	1x Day	N/A	N/A
Field Blank	Particulate Matter 10 ug (PM-10)	1x Day	N/A	N/A
Field Blank	Asbestos	1x Day	N/A	N/A
Field Blank	Lead (Pb)	1x Day	N/A	N/A
Field Blank	Manganese (Mn)	1x Day	N/A	N/A
Field Blank	Mercury [1]	1x Day [1]	N/A	N/A
Field Blank	PCBs [1]	1x Day [1]	N/A	N/A
Field Blank	ROCs [3]	1x Week	N/A	N/A

Notes:
1 – FB only required when collected in support of field operations for Building 401 and 411
2 – 1x day will be during the working hours only.
3 – ROC Monitoring hours: Monday 07:00 through 17:00 Thursday.

Worksheet #17: BLANK

This Worksheet has been intentionally left blank.

Worksheet #18: Location-Specific Sampling Methods/SOP Requirements

(UFP-QAPP Manual Section 3.1.1)

Sampling Location/ID Number	Matrix	Analytical Group/ Analytical Method	Number of Samples	Sampling SOP Reference[1]
Station 1	Air	See WS#15	1	Dust Management Plan
Station 2	Air	See WS#15	1	Dust Management Plan
Station 3	Air	See WS#15	1	Dust Management Plan

Notes: [1]Standard Operating Procedure (SOP) or worksheet that describes the sample collection procedures.

Worksheet #19: Field Sampling Requirements

(UFP-QAPP Manual Section 3.1.1)

Matrix	Analytical Group	Analytical and Preparation Method / SOP Reference	Containers (number / size, and type)	Sample Volume (L)	Preservation Requirements (chemical, temperature, light protected)	Maximum Holding Time[1] (preparation/ analysis)
Air	Total Suspended Particulates (TSP)	40-CFR Part 50, Appendix B	1, Grade A, Glass Fiber Filter, pore size 1.6 um.	TBD	N/A	N/A
Air	Metals • Lead (Pb) • Manganese (Mn)	6010C / MT-SOP73511 R19		TBD	N/A	N/A
Air	Particulate Matter 10 ug (PM-10)	NIOSH 0500	1, MCE UW Match Weight (pre-weighed), 25MM	TBD	N/A	N/A
Air	Asbestos	NIOSH 7400	1, MCE 25mm	Min: 400L	N/A	N/A
Air	Mercury (particulate)	NIOSH 6009	1, Soild Sorbet Tube	Min: 2L Max: 100 L	N/A	N/A
Air	PCB's	NIOSH 5503	1 / Sorbent Tube & 25mm filter	TBD	N/A	N/A
Air	ROCs	HASL 300 A-01-R/SOP57921 HASL 300 GA-01-R/SOP57920 HASL 300 SR-03-RC/SOP57919	1 x 47mm filter	None	None	None

Notes: H/T is not applicable to the samples in this SAP.

PCBs = Aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260, 1268
Radionuclides of Concern (ROCs) = Cesium-137; Plutonium-239/240; Radiium-226; Strontium-90; Thorium-232; & Uranium-235

Worksheet #20: Field Quality Control Sample Summary

(UFP-QAPP Manual Section 3.1.1)

Matrix	Analytical Group	No. of Samples	No. of Field Duplicates	No. of MS/MSDs	No. of Field Blanks	No. of Equip. Blanks	No. of Trip Blanks	No. of PT Samples	Total No. of Samples to Lab
Air	Total Suspended Particulates; Lead (Pb); Manganese (Mn)	1200	0	0	390	0	0	0	1590
Air	Particulate Matter 10 ug (PM-10)	1200	0	0	390	0	0	0	1590
Air	Asbestos	1200	0	0	390	0	0	0	1590
Air	Mercury	900	0	0	300	0	0	0	1200
Air	PCB's	900	0	0	300	0	0	0	1200
Air	ROCs [1]	240	0	0	80	0	0	0	320

Notes:
MS matrix spike
MSD matrix spike duplicate
No. Number
PT Proficiency Testing

1: 3 Samples per week + blank

- Sample Frequency: 1 per work day during working hours only.
- COCS: Est: 18 months of work, 5-Day work week (M-Th; 07:00 am thru 17:00 for 4 days)
- ROCs: Est 18-Months, 1 sample per work week per station (Monday 07:00 through 17:00 Thursday). No monitoring on the Days off (est, Thursday 17:00 through Monday 07:00)

Worksheet #21: Project Field Sampling SOP References

(UFP-QAPP Manual Section 3.1.2)

SOP-ID	Title, Revision Date, and/or Number	Originating Organization of Sampling SOP	Equipment Type	Modified for Project Work? (Y/N)	Comments
COCs					
N/A	Dust Monitoring Plan	ECC	All	Yes	Submitted as separate document
ROCS					
N/A	Dust Monitoring Plan	ECC	All	Yes	Submitted as separate document

Worksheet #22: Field Equipment Calibration, Maintenance, Testing, and Inspection

(UFP-QAPP Manual Section 3.1.2.4)

Field Equipment	Activity	Frequency	Acceptance Criteria	Corrective Action	Resp. Person	SOP Reference	Comments
COCs & ROCs							
Low Flow Pumps	Calibration	Daily During Field Ops	Asbestos: 400-1000 L min Total Dust 400-1000 L per minute	Adjust Flow rate	Air Sampling Technician	Dust Management Plan	-
Hi Volume Pumps	Calibration	Weekly or Equipment Relocation	39-60 Cubic Ft per minute	Adjust Flow rate	Air Sampling Technician	Dust Management Plan / Manufacturer's Instructions	-
Low Flow Pumps	Inspection	Daily	Operating within accepted parameters	Dependent if outlier item identified	Air Sampling Technician	Dust Management Plan	-
Hi Volume Pumps	Inspection	Daily	Operating within accepted parameters	Dependent if outlier item identified	Air Sampling Technician	Dust Management Plan	-
Low Flow Pumps	Maintenance	Bi-Annually or as identified in inspections	-	TBD / Dependent upon issue	Equipment Provider	Manufacturer's Instructions	-
Hi Volume Pumps	Maintenance	As Required or as identified in inspections	-	TBD / Dependent upon issue	Equipment Provider	Manufacturer's Instructions	-

Worksheet #23: Analytical SOP References

(UFP-QAPP Manual Section 3.2.1)

Lab SOP Number	Title, Revision Date, and/or Number	Definitive or Screening Data	Matrix and Analytical Group	Instrument	Variance to QSM	Modified for Project Work? (Y/N)
SGS-Galson, NY						
GRAV-SOP-22-v9	CALIBRATION, CLEANING, AND CALBIRATION CONTROL LIMITS OF METTLER BALANCES, v9, March-2023	Definitive	PM-10 / Total Dust	Mettler Balance	No	No
GRAV-SOP-23-v10	GRAVIMETRICS PEM CLEANING, PRE-WEIGHING AND POST-WEIGHING, v10, Jan-2025	Definitive	PM-10 / Total Dust	Mettler Balance	No	No
ia-airqc	ASBESTOS AIR ANALYSIS – QUALITY CONTROL, v31, Jul-2023	Definitive	Asbestos	None	No	No
ia-asb3b	OPERATION AND MAINTENANCE OF ASBESTOS LABORATORY EQUIPMENT, v26,	Definitive	Asbestos	Stereoscope: Binocular microscope, 10-45x (approximate). Microscope	No	No
Ia-pcm	ASBESTOS AIR ANALYSIS, v36, Jun-2025	Definitive	Asbestos	Microscope - Positive phase contrast	No	No

Lab SOP Number	Title, Revision Date, and/or Number	Definitive or Screening Data	Matrix and Analytical Group	Instrument	Variance to QSM	Modified for Project Work? (Y/N)
Eurofins						
66	PM10/TSP – Particulate Matter	Definitive	TSP	Analytical Scale	No	No
MT-SOP73511 R19	Inductively Coupled Plasma-Atomic Emission Spectroscopy, Spectrometric Method for Trace Element Analyses, Method 6010B and 6010C	Definitive	Water and Soil/Sediment- Metals	ThermoFisher iCAP6000 ICP Spectrometer, or equivalent	No	No
Im-hgair-V33	PREPARATION OF MERCURY TUBES, FILTERS, BADGES AND WIPE SAMPLES BY MODIFIED NIOSH 6009	-	Mercury (particulate)	None	No	No
MT-SOP-31-V0	MERCURY ANALYSIS USING THE TELEDYNE LEEMAN LABS QUICKTRACE M-7600	Definitive	Mercury (particulate)	Teledyne Leeman Quicktrace M-7600	No	No
MT-SOP-20	MERCURY ANALYSIS USING THE TELEDYNE LEEMAN LABS HYDRA II AA	Definitive	Mercury (particulate)	Teledyne Hydra II AA	No	Nol
GC-SOP-12	INDUSTRIAL HYGIENE SEQUENCING INSTRUMENTS FOR GAS CHROMATOGRAPHY, v23	Definitive	PCBs	Gas Chromatograph	No	No
GC-SOP-18	INDUSTRIAL HYGIENE POLYCHLORINATED BIPHENYLS (PCBs), v27	Definitive	PCBs	None	No	No
KNOX-IP-0003	Digestion of Total Metals in Ambient Air Samples, Rev 10	Eurofins	Metals	Digestions Block, NIST traceable thermometer	None	

Lab SOP Number	Title, Revision Date, and/or Number	Definitive or Screening Data	Matrix and Analytical Group	Instrument	Variance to QSM	Modified for Project Work? (Y/N)
KNOX-WC-0028	Determination of Particulate Mattr as PM-10 and Total Suspended Particulate Matter in Hi-Vol Filters and Nuisance Dust by NIOSH Method 0500, Rev 12	-	Metals	Metler HL32 Analytical Balance	None	No
ROCs Lab: Eurofins, St Louis						
SOP57920	GammaVision Analysis, Revision 26, 07/29/2025	Definitive	Cesium-137	Gamma Spec	No	No
SOP57921	Alpha Spectroscopy Analysis, Revision 23, 05/13/2025	Definitive	Pu-239/240, Th-232, U-235	Alpha Spec	No	No
SOP57919	Low Background Gas Flow Proportional Counting System Analysis, Revision 27, 03/13/2025	Definitive	Sr-90, Ra-226	GFPC	No	No

Worksheet #24: Analytical Instrument Calibration

(UFP-QAPP Manual Section 3.2.2)

This worksheet should be completed for all analytical instruments, whether used in the field or the laboratory.

A list of analytical instrument calibration procedures shall be provided in this worksheet. Initial calibration, continuing calibration verifications, and continuing calibration blanks (ICAL, CCV and CCB, respectively) entries should be provided. In addition, document the frequency, acceptance criteria, and corrective action requirements on the worksheet. All instruments must be calibrated according to the schedule specified by the method and instrument manual or SOPs. The name and title of responsible person should be specified. Do not include laboratory QC samples analyses (laboratory control sample [LCS], MS/MSDs, etc.) in this worksheet. Laboratory QC sample information is to be included in WS #28.

Lab	Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
COCs							
SGS-Galson	Mettler Balance	Section 9.2, 9.4	Daily, annually	Observed value (balance Reading) vs Tru Value (national Standard)	Section 13	Supervisor	GRAV-SOP-22
SGS-Galson	Microscope - positive phase contrast	Section 9: HSE/NPL Test Slide	Prior to Count	NIOSH Method 7400 are such that the microscope optics must resolve the grooved lines in Set three completely and that the grooved lines in Sets 6 and 7 must be invisible.	Section 13	Supervisor	Ia-asb3b
SGS-Galson	Microscope - positive phase contrast	Section 9: Walton-Beckett graticule	Monthly	The acceptance range for the graticule field area is 0.00754 - 0.00817 mm2. Graticule verification results are recorded on the monthly graticule verification sheet (Form IA6).	Report deviations from previously measurement to Supervisor	Supervisor	Ia-asb3b
SGS-Galson	Mettler Balance	Section 12.5 / LOQ Verification	Bi-Annually	70-130%	-	Analyst	GRAV-SOP-23
SGS-Galson	GC	9.1.2.3	Daily, Annual	R2 = ≥0.994	Re-Calibration	Analyst	GC-SOP-12
SGS-Galson	Quicktrace M-7600	9.4.3.2	initiation of analysis only. ICV, CCV	R2 = ≥0.997	Re-Calibration	Analyst	MT-SOP-31

Lab	Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
Eurofins	Analytical Balance	66 / Table 2	Bracket open (3g) and closing (5g) of weighed filter	Accuracy limits of 3.00 g weight: 2.997 g – 3.003 g Accuracy limits of 5.00 g weight: 4.995 g - 5.005 g	Correct problem then repeat calibration	Analyst	66
Eurofins	ThermoFisher iCAP6000 ICP Spectrometer, or equivalent	MT-SOP73511 R19	Daily	MT-SOP73511 R19	Do maintenance and recalibrate.	Analyst, Department Manager	MT-SOP73511 R19

ROCs							
Lab	**Instrument**	**Calibration Procedure**	**Frequency of Calibration**	**Acceptance Criteria**	**Corrective Action**	**Person Responsible**	**Lab**
Eurofins – St Louis	Gamma Spectrometer	Initial Calibration Verification (ICAL) for Energy, Efficiency, and FWHM peak resolution	Prior to initial use, following repair or loss of control and upon incorporation of new or changed instrument settings	Minimum of 10,000 net counts in each reference peak for at least six calibration peaks that bracket the range of use. Peak energy difference is within 0.05% or 0.2 keV of reference energy for all points. Peak Full Width at Half Maximum (FWHM) < 2.5 keV at 1332 keV. Energy vs. channel slope equation shall be linear and accurate to 0.5 keV or less.	Correct problem, then repeat ICAL.	Lab Manager / Analyst	SOP57920
Eurofins – St Louis	Gamma Spectrometer	Initial Calibration Verification (ICV)	After ICAL for energy/efficiency and prior to analysis of samples.	Minimum of 5000 counts. Observed peaks of second source standard fall within ± 10% of initial calibration value.	Verify second source standard and repeat ICV to check for errors. If that fails, identify and correct problem and repeat ICV or ICAL and ICV as appropriate.	Lab Manager / Analyst	SOP57920

ROCs							
Lab	**Instrument**	**Calibration Procedure**	**Frequency of Calibration**	**Acceptance Criteria**	**Corrective Action**	**Person Responsible**	**Lab**
Eurofins – St Louis	Gamma Spectrometer	Continuing Calibration Verification (CCV) (Daily Check)	Daily or prior to use. When working with long count times or batch sequences that run more than a day, CCV is performed at the beginning and end of each analytical batch as long as it not longer than a week.	Peak Energy: low energy ± 0.50keV, high energy ± 0.75 keV; FWHM: ± 10% of value established following calibration. Efficiency: ± 5% of value established following calibration.	Correct problem and analyze passing CCV. If that fails, then repeat ICAL. Reanalyze all samples since the last successful calibration verification.	Lab Manager / Analyst	SOP57920
Eurofins – St Louis	Gamma Spectrometer	Background Subtraction Count Measurement (BSC) (Long count for subtracting background from blanks or test sources)	Immediately after ICAL and then performed on at least a monthly basis.	Statistical test of successful counts and count rates for identified background peaks show no significant difference.	Recount and check control chart for trends. Determine cause, correct problem, re-establish BSC. If background activity has changed, re-establish BSC and reanalyze or qualify all impacted samples since last acceptable BSC.	Lab Manager / Analyst	SOP57920

ROCs							
Lab	**Instrument**	**Calibration Procedure**	**Frequency of Calibration**	**Acceptance Criteria**	**Corrective Action**	**Person Responsible**	**Lab**
Eurofins – St Louis	Gamma Spectrometer	Instrument Contamination Check (ICC) (Short count for controlling gross contamination)	Daily or when working with long count times before and after each analytical batch. Check after counting high activity samples.	No extraneous peaks identified (i.e., no new peaks in the short background spectrum compared to previous spectra); Background count rate of the entire spectrum with ±3σ of the average.	Recount the background. If still out of control, locate and correct problem; reanalyze or qualify all impacted samples since last acceptable ICC. If background activity has changed, re-establish BSC and reanalyze samples.	Lab Manager / Analyst	SOP57920
Eurofins – St Louis	Alpha Spectrometer	Initial Calibration (ICAL) (Energy, efficiency and FWHM peak resolution)	Prior to initial use, following repair or loss of control and upon incorporation of new or changed instrument settings.	Energy3 isotopes within energy range of 3-6 MeV. Energy vs. channel slope equation <15 keV per channel. Full Width –Half Maximum (FWHM) <100 keV for each peak used for calibration. Final peak energy within 20 keV of reference energy. Efficiency:Minimum of 3,000 net counts in each peak.Calibrated efficiency should fall between 20% and 32%	Correct problem, then repeat ICAL.	Lab Manager / Analyst	SOP57921

ROCs							
Lab	**Instrument**	**Calibration Procedure**	**Frequency of Calibration**	**Acceptance Criteria**	**Corrective Action**	**Person Responsible**	**Lab**
Eurofins – St Louis	Alpha Spectrometer	Initial Calibration Verification (ICV)	After initial calibration.	Minimum 2000 net counts. Efficiency within 95% - 105% of initial calibration value. Full Width Half Maximum (FWHM) ≤100 keV for each peak. Each peak within ±20 keV of corresponding calibration peaks in initial energy calibration.	Repeat ICV to check for error. If that fails, identify and correct problem and repeat ICV or ICAL and ICV, as appropriate.	Lab Manager / Analyst	SOP57921
Eurofins – St Louis	Alpha Spectrometer	Continuing Calibration Verification (CCV) (Pulser check or Check source)	Pulser verification daily, prior to analysis of samples.	Energy response check shall have a tolerance limit set at ± 3% or control chart set at ±3σ. Minimum 2000 net counts. Efficiency within 95% - 105% of initial calibration value. Full Width Half Maximum (FWHM) ≤100 keV for each peak. Each peak within ±40 keV of corresponding calibration peaks in initial energy calibration.	Recount and check control chart for trends. Determine cause, correct problem, and repeat CCV and all associated samples since last successful CCV.	Lab Manager / Analyst	SOP57921

ROCs							
Lab	**Instrument**	**Calibration Procedure**	**Frequency of Calibration**	**Acceptance Criteria**	**Corrective Action**	**Person Responsible**	**Lab**
Eurofins – St Louis	Alpha Spectrometer	Background Subtraction Count (BSC) Measurement	Prior to initial use or after initial calibration and monthly.	Backgrounds are reestablished each month based on ROI counts. The background is processed by the software and assigned per laboratory SOP.	Check control chart for trends and recount. Determine cause, correct problem, re-establish BSC. If background activity has changed, re-establish BSC and reanalyze all impacted samples since last acceptable BSC.	Lab Manager / Analyst	SOP57921
Eurofins – St Louis	Alpha Spectrometer	Instrument Contamination Check (ICC)	Performed weekly, at minimum, and after counting high activity samples.	ICC counts are compared to BSC/ICB on week one. Subsequent week counts are compared to previous week until new BSC/ICB is established.or Within ± 3σ of mean activity of recent ICCs for total ROI for all isotopes of interest	Check control chart for trends and recount. Determine cause and correct problem. background activity has changed, re-establish BSC and reanalyze all infected samples.	Lab Manager / Analyst	SOP57921

ROCs							
Lab	**Instrument**	**Calibration Procedure**	**Frequency of Calibration**	**Acceptance Criteria**	**Corrective Action**	**Person Responsible**	**Lab**
Eurofins – St Louis	Gas Flow Proportional Counter	Initial Calibration - Voltage Plateau (ICALV) (separate plateaus determined for alpha and beta activity)	Prior to initial use, after loss of control, and upon incorporation of new or changed instrument settings.	Acquire 40 data points in 30V increments beginning at 705V and ending at 1875V. Slope of the plateau less than 5% over 100V change.	Correct problem, then repeat ICALV.	Lab Manager / Analyst	SOP57919
Eurofins – St Louis	Gas Flow Proportional Counter	Initial Calibration - Efficiency (ICALE)	Prior to initial use, after loss of control, and upon incorporation of new or changed instrument settings.	Detector's counting efficiency, using traceable calibration sources, shall be determined for each radionuclide used to analyze test sources. Verify manufacturer's specifications for detector efficiency for both alpha and beta counting modes using electroplated sources. Count the prepared efficiency standards until at least 10,000 total counts greater than background have been accumulated. Background should be less than 1-2% of total counts above background.	Correct problem, then repeat ICALE.	Lab Manager / Analyst	SOP57919
Eurofins – St Louis	Gas Flow Proportional Counter	Initial Calibration – Cross-talk Factors (ICALCT)	Prior to initial use, after loss of control, and upon incorporation of new or changed instrument settings.	Determine cross-talk factors for each nuclide using a traceable calibration source per matrix and method. Verify manufacturer's specifications for cross talk in alpha and beta channels.	Correct problem, then repeat ICALCT.	Lab Manager / Analyst	SOP57919

ROCs							
Lab	**Instrument**	**Calibration Procedure**	**Frequency of Calibration**	**Acceptance Criteria**	**Corrective Action**	**Person Responsible**	**Lab**
Eurofins – St Louis	Gas Flow Proportional Counter	Initial Calibration – Self-Absorption Curve (ICALSA)	Prior to initial use, after loss of control, and upon incorporation of new or changed instrument settings.	Using traceable calibration sources, establish a mass attenuation curve with a minimum of seven mass-attenuated standards. For each radionuclide of interest, establish mathematical function (curve) of detector efficiency vs. source mass loading. 95% confidence limit of the fitted function (curve) over the calibration range to ≤ 10% and ≤ 5% uncertainty for alpha and beta, respectively.	Correct problem, then repeat ICALSA.	Lab Manager / Analyst	SOP57919
Eurofins – St Louis	Gas Flow Proportional Counter	Efficiency Calibration Verification (ICV)	After ICALE for alpha and beta and prior to analysis of samples.	Prepare 3 verification sources varying in expected mass (low, medium and high) within the calibration range of the curve, unless a single point source is to be determined. Individual points are within 30% of true value. The mean result of all masses across all detectors is within 10 of true value.	Correct problem and verify second source standard. Rerun IECV. If that fails, correct problem and repeat ICALE.	Lab Manager / Analyst	SOP57919
Eurofins – St Louis	Gas Flow Proportional Counter	Continuing Calibration Verification (CCV)	After a counting gas change and daily for short test-source counting intervals.	Minimum of 2,000 net counts for each energy type (Alpha, Beta). Within tolerance or control chart limits ± 3% or 3σ of the mean.	Correct problem, rerun calibration verification. If that fails, then repeat ICALE. Reanalyze all samples since the last successful calibration verification.	Lab Manager / Analyst	SOP57919

ROCs							
Lab	**Instrument**	**Calibration Procedure**	**Frequency of Calibration**	**Acceptance Criteria**	**Corrective Action**	**Person Responsible**	**Lab**
Eurofins – St Louis	Gas Flow Proportional Counter	Background Subtraction Count (BSC) Measurement	Performed at least monthly for each detector.	Within ± 3σ of mean activity of recent BSCs for total ROI for all isotopes of interest (minimum of 3 BSC values).	Correct problem, reestablish BSC. Reanalyze all samples since the last successful BSC.	Lab Manager / Analyst	SOP57919
Eurofins – St Louis	Gas Flow Proportional Counter	Instrument Contamination Check (ICC)	Performed daily and after counting high activity samples.	Use a statistical test to determine a change in the background count rate value.	Check control chart for trends and recount. Determine cause and correct problem. background activity has changed, re-establish BSC and reanalyze all infected samples.	Lab Manager / Analyst	SOP57919

Worksheet #25: Analytical Instrument and Equipment Maintenance, Testing, and Inspection

(UFP-QAPP Manual Section 3.2.3)

Instrument and equipment maintenance logs must be kept to document analytical instrumentation and equipment maintenance, testing, and inspection activities. If this information is already part of the WP/SAP, provide a reference on this worksheet where the information is located. Otherwise, use this worksheet to identify all analytical instrumentation that requires maintenance, testing, or inspection and provide the SOP reference number for each. In addition, document the frequency, acceptance criteria, and corrective action requirements on the worksheet. The name and title of the responsible person should be specified.

25.1 COCs

Instrument/ Equipment	Maintenance Activity	Testing Activity	Inspection Activity	Frequency	Acceptance Criteria	Corrective Action	Responsible Person	SOP Reference
Mettler Balance	Deep Cleaning	N/A	-	Monthly	N/A	N/A	SGS Staff	GRAV-SOP-22
Microscope - positive phase contrast	Optical	Resolution, Image Quality	As required	As required	Pass calibration	Section 9.2.1.7.1	SGS Staff	Ia-asb3b
Microscope - positive phase contras	Manipulation	Viewing, movement	As required	As required	Pass calibration	Section 9.2.1.7.1	SGS Staff	Ia-asb3b
GC	SOP- IG-INSMT	Blank Spike Test run after CCV / Used as Indicator for Maintenance	Review of BST	9.10.2 /	Pass / Fail	SOP- IG-INSMT	SGS Staff	GC-SOP-12-V23

Instrument/ Equipment	Maintenance Activity	Testing Activity	Inspection Activity	Frequency	Acceptance Criteria	Corrective Action	Responsible Person	SOP Reference
Quicktrace M-7600	Section 9.2	1. Tubing, 2. Gas-Liquid Separator, 3. Dryer Cartridge, 4. Sample Cells/Windows, 5. Potassium Permanganate Trap, & 6. Lamp	Section 9.2	1.Daily, 2.Monthly, 3. 3-6 Months, 4. Weekly, 5. Once a year, 6.Over Range	See Section 9.2	See Section 9.2	SGS Staff	MT-SOP-31-V0
Analytical Balance	Annual Calibration/ Verification	Daily Check with Class 1 weights	Visual inspection	Annual Calibration/ Daily Check	The reading must be ±0.1% or ±0.5mg, whichever is greater.	1) verify cleanliness of weights 2) remove balance from service and place a call to service firm 3) management must evaluate data generated since last acceptable reading to determine any potential impacts to data quality	Outside vendor for calibration/Analyst for daily checks	66
ThermoFisher iCAP6000 ICP Spectrometer, or equivalent	See Appendix E of MT-SOP73511	Refer to Worksheet #24	Refer to Worksheet #24	Maintenance as needed	Refer to Worksheet #24	Refer to Worksheet #24	Eurofins Analyst	MT-SOP73511 R19

25.2 ROCs

Analytical Instrument and Equipment Maintenance, Testing, and Inspection Table								
Instrument/ Equipment	**Maintenance Activity**	**Testing Activity**	**Inspection Activity**	**Frequency**	**Acceptance Criteria**	**Corrective Action**	**Responsible Person**	**SOP Reference**
Gamma Spectrometer	Clean cave; fill dewar with N2	Physical check	Physical check	Weekly	Acceptable background	Recalibrate	Eurofins Analyst	SOP57920
Gamma Spectrometer	QA check	Background and source check	Check deviation	Daily	Within 3 sigma of measured population	Instrument maintenance and consult with Technical director	Eurofins Analyst	SOP57920
Alpha Spectrometer	Clean planchette holders	Physical check	Physical check	Monthly	Acceptable background and calibration efficiencies	Recalibrate	Eurofins Analyst	SOP57921
Alpha Spectrometer	Pulser check and background checks	Background and source check	Check deviation	Daily	Pulser energy, centroid peak, resolution area peak, calibration and background must pass statistical boundary out-of-range test.	Instrument maintenance and consult with Technical director	Eurofins Analyst	SOP57921
Gas Flow Proportional Counter	Clean instrument	Physical check	Daily	Daily	None applicable	Recalibrate	Eurofins Analyst	SOP57919
Gas Flow Proportional Counter	Inspect windows	Physical check	High counts and/or background	High counts and/or background	No physical defects	Instrument maintenance	Eurofins Analyst	SOP57919
Gas Flow Proportional Counter	QA check	Background and source count	Daily	Daily	Within 3 sigma of 20 day population	Consult with Technical Director	Eurofins Analyst	SOP57919

Worksheet #26: Sample Handling, Custody, and Disposal

(UFP-QAPP Manual Appendix A and UFP-QAPP Manual Section 3.3.3)

Use the table below to identify components of the project-specific sample handling and custody system as well as document disposal procedures. Record personnel (and their organizational affiliations) who are primarily responsible for ensuring proper handling, custody, and storage of field samples from the time of collection to laboratory delivery, to final sample disposal. Details on project-specific custody transfer procedures for shipment and how sample custody and integrity will be maintained and documented can be referenced to the appropriate SOPs included in the WP/SAP. Any electronic or software custody procedures must be documented. Include examples of chain-of-custody forms, sample identification conventions, custody seals, laboratory sample receipt forms, and laboratory sample transfer forms:

	COCs	ROCs
SAMPLE COLLECTION, PACKAGING, AND SHIPMENT / SOP#:	Dust Management Plan	
Sample Collection (Personnel/Organization):	Aurora Environmental	Permafix
Sample Packaging (Personnel/Organization):	Aurora Environmental	Permafix
Coordination of Shipment (Personnel/Organization):	Aurora Environmental	Permafix
Type of Shipment/Carrier:	FEDEX	FEDEX
SAMPLE RECEIPT AND ANALYSIS / SOP #:	Dust Management Plan	
Sample Receipt (Personnel/Organization): SGS-Galson / Eurofins	SGS-Galson / Eurofins	Eurofins
Sample Custody and Storage (Personnel/Organization):	SGS-Galson / Eurofins	Eurofins
Sample Preparation (Personnel/Organization):	SGS-Galson / Eurofins	Eurofins
Sample Determinative Analysis (Personnel/Organization):	SGS-Galson / Eurofins	Eurofins
SAMPLE ARCHIVING / SOP # :	N/A	
Field Sample Storage (No. of days from sample collection):	N/A	TBD
Sample Extract/Digestate Storage (No. of days from extraction/digestion):	N/A	TBD
Biological Sample Storage (No. of days from sample collection):	N/A	TBD
SAMPLE DISPOSAL / SOP #:	TBD	
Personnel/Organization:	SGS-Galson / Eurofins	TBD
Number of Days from Analysis:	Performed by the Lab.	TBD

Worksheet #27: BLANK

This Worksheet has been intentionally left blank.

Worksheet #28: Laboratory QC Samples

(UFP-QAPP Manual Section 3.4)

This worksheet is used to document the laboratory QC samples and their respective acceptance limits to demonstrate that the selected analytical methods are capable of meeting project-specific requirements. If method/SOP QC acceptance limits exceed the measurement performance criteria established for the project, the data obtained may be deemed unusable for making project decisions. Therefore, it is important to select analytical methods that can support project DQOs.

Complete a separate worksheet for each sampling technique, analytical method/SOP, matrix, and analytical group. Screening analyses should include a decision tree or logic diagram to describe how samples will be selected for subsequent definitive data analysis.

The list of QC samples in this example is incomplete. Refer to Part 2B of the UFP-QAPP QA/QC Compendium-Minimum QA/QC Activities for further guidance.

Lab: SGS-Galson

Matrix: Air

Analytical Group: Total Dust / PM-10

Analytical Method/ SOP Reference: GRAV-SOP-23 Ver:10

QC Sample:	Frequency & Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	Data Quality Indicator (DQI)	Measurement Performance Criteria
Blank Spike	1 set	Section 9.5	Section 13	Lab Analyst	N/A	N/A
Blank Spike Duplicate						
LCS	N/A	-	-	-	-	-
MS	N/A	-	-	-	-	-

Notes:
LCS laboratory control sample
MS matrix spike

Lab: SGS-Galson

Matrix: Air
Analytical Group: Asbestos
Analytical Method/ SOP Reference: Ia-pcm / NIOSH 7400

QC Sample:	Frequency & Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	Data Quality Indicator (DQI)	Measurement Performance Criteria
Blank	N/A	7 fibers per 100 graticule fields	Report contamination of samples	Lab Analyst	-	-
LCS	N/A	-	-	-	-	-
MS	N/A	-	-	-	-	-

Notes:
LCS laboratory control sample
MS matrix spike

Lab: SGS-Galson

Matrix: Air
Analytical Group: Mercury (Particulate)
Analytical Method/ SOP Reference: MT-SOP-31-V0

QC Sample:	Frequency & Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	Data Quality Indicator (DQI)	Measurement Performance Criteria
Blank	ICB: 1 per run CCB: 1 per 10 samples Prep Blank Field Blank: One provided by the field samplers	Less than 0.2 PPG or lowest detection limit. - -	Outside Control Limits: Recalibrate Instrument & Samples Reanalyzed - - -	Analyst	-	-
LCS / Blank Spike	Blank Spike	80 - 120%	Outside Control Limits: Recalibrate Instrument & Samples Reanalyzed	Analyst	-	-
MS	N/A	-	-	-	-	-

Lab: SGS-Galson

Matrix: Air
Analytical Group: PCBs
Analytical Method/ SOP Reference: GC-SOP-18

QC Sample:	Frequency & Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	Data Quality Indicator (DQI)	Measurement Performance Criteria
Blank	1 per run	Less than LOQ;	If detect > LOQ, concentration must be footnoted on the final report along with a statement as to whether or not the sample results were corrected for the blank result.	Analyst	-	-
Blank Spike (BS) & Blank spike Duplicate (BSD)	1 per batch of 50 or less samples	Recovery: 75-125%: RPD: 20%	-	-	-	-

Lab: Eurofins

Matrix: Air
Analytical Group: Total Suspended Particulate's (TSP)
Analytical Method/ SOP Reference: 66

QC Sample:	Frequency & Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	Data Quality Indicator (DQI)	Measurement Performance Criteria
Lab Duplicate	1 per work order	≤ 25% RPD and weights must be within ±0.005 g	Re-condition the filter and re-weigh.	Analyst	-	-
Lab Blank	Immediately after the calibration checks	Post-weight of Lab Blank is less than pre-weight and the difference is < 0.0028 g.	Confirm the weight difference and narrate	Analyst		
LCS	N/A	-	-	-	-	-
MS	N/A	-	-	-	-	-

Notes:
LCS laboratory control sample
MS matrix spike

Lab: Eurofins

Matrix: Air
Analytical Group: Metals
(Lead, Manganese)
Analytical Method/ SOP Reference: EPA 6010C /MT-SOP73511 R19

QC Sample:	Frequency & Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	Data Quality Indicator (DQI)	Measurement Performance Criteria
Lab Duplicate	1 per 20 sample	20 % RPD	Flagged, Narrate	Analyst	-	-
Lab Blank	1 per 20 samples	Contaminants in the method blank must be less than RL.	Narrate	Analyst		
LCS	N/A	-	-	-	-	-
MS	N/A	-	-	-	-	-

Notes:
LCS laboratory control sample
MS matrix spike

Lab: Eurofins – St Louis

Matrix: Air
Analytical Group: ROCs / Gamma Spec
Analytical Method/ SOP Reference: 901.1 / SOP 57920

QC Sample:	Frequency & Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	Data Quality Indicator (DQI)	Measurement Performance Criteria
Method blank	One per preparation batch	|ZBlank | ≤ 3	Recount to confirm results. Inspect control chart for indication of significant bias. If required, re-prepare and reanalyze MB and all samples processed with the contaminated blank.	Analyst, Supervisor	Accuracy/Bias/ Contamination	Acceptable results per stated QC Acceptance Limits
LCS	One per preparation batch	Recovery limits: 75-125% for Cs-137, Co-60, and Am-241	Recount to confirm results. Inspect control chart for indication of significant bias. If required, re-prepare and reanalyze the LCS and all samples in the associated preparatory batch for failed analytes, if sufficient sample material is available.	Analyst, Supervisor	Accuracy/Bias	Acceptable QC Acceptance Limits
Duplicate	One per preparation batch	RPD limit of 25% or DER < 3	Check for lab error. Examine the project-specific requirements. Contact the client as to additional measures to be taken.	Analyst, Supervisor	Precision/ Accuracy/Bias	Acceptable QC Acceptance Limits

Lab: Eurofins – St Louis

Matrix: Air

Analytical Group: ROCs / Uranium

Analytical Method/ SOP Reference: HASL 300 / SOP57921

QC Sample:	Frequency & Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	Data Quality Indicator (DQI)	Measurement Performance Criteria
Method blank	One per preparation batch	|ZBlank | ≤ 3	Recount to confirm results. Inspect control chart for indication of significant bias. If required, re-prepare and reanalyze MB and all samples processed with the contaminated blank.	Analyst, Supervisor	Accuracy/Bias/ Contamination	Acceptable results per stated QC Acceptance Limits
LCS and LCS Duplicate	One per preparation batch	Recovery limits: 75-125% for U-234 and U-238; RPD limit of 25% or DER < 3	Recount to confirm results. Inspect control chart for indication of significant bias. If required, re-prepare and reanalyze the LCS and all samples in the associated preparatory batch for failed analytes, if sufficient sample material is available.	Analyst, Supervisor	Accuracy/Bias	Acceptable QC Acceptance Limits
U-232 Tracer	Every Sample	Recovery limits of 30-110%	Truncate tracers above 100% recovery to eliminate low biased results. Reprep and reanalyze sample if carrier is low (indicating high biased results) if there is activity in the sample above the reporting limit. No reanalysis if matrix interference is noticed during sample preparation.	Analyst, Supervisor	Accuracy/Bias	Acceptable QC Acceptance Limits

Lab: Eurofins – St Louis

Matrix: Air

Analytical Group: ROCs / Thorium

Analytical Method/ SOP Reference: HASL 300 / SOP57921

QC Sample:	Frequency & Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	Data Quality Indicator (DQI)	Measurement Performance Criteria
Method blank	One per preparation batch	|ZBlank | ≤ 3	Recount to confirm results. Inspect control chart for indication of significant bias. If required, re-prepare and reanalyze MB and all samples processed with the contaminated blank.	Analyst, Supervisor	Accuracy/Bias/ Contamination	Acceptable results per stated QC Acceptance Limits
LCS and LCS Duplicate	One per preparation batch	Recovery limits: 75-125% for Th-230; RPD limit of 25% or DER < 3	Recount to confirm results. Inspect control chart for indication of significant bias. If required, re-prepare and reanalyze the LCS and all samples in the associated preparatory batch for failed analytes, if sufficient sample material is available.	Analyst, Supervisor	Accuracy/Bias	Acceptable QC Acceptance Limits
Th-229 Tracer	Every Sample	Recovery limits of 30-110%	Truncate tracers above 100% recovery to eliminate low biased results. Reprep and reanalyze sample if carrier is low (indicating high biased results) if there is activity in the sample above the reporting limit. No reanalysis if matrix interference is noticed during sample preparation.	Analyst, Supervisor	Accuracy/Bias	Acceptable QC Acceptance Limits

Lab: Eurofins – St Louis

Matrix: Air
Analytical Group: ROCs / Plutonium
Analytical Method/ SOP Reference: HASL 300 / SOP57921

QC Sample:	Frequency & Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	Data Quality Indicator (DQI)	Measurement Performance Criteria
Method blank	One per preparation batch	|ZBlank | ≤ 3	Recount to confirm results. Inspect control chart for indication of significant bias. If required, re-prepare and reanalyze MB and all samples processed with the contaminated blank.	Analyst, Supervisor	Accuracy/Bias/ Contamination	Acceptable results per stated QC Acceptance Limits
LCS and LCS Duplicate	One per preparation batch	Recovery limits: 75-125% for Pu-239/240; RPD limit of 25% or DER < 3	Recount to confirm results. Inspect control chart for indication of significant bias. If required, re-prepare and reanalyze the LCS and all samples in the associated preparatory batch for failed analytes, if sufficient sample material is available.	Analyst, Supervisor	Accuracy/Bias	Acceptable QC Acceptance Limits
Pu-236 or Pu-242 Tracer	Every Sample	Recovery limits of 30-110%	Truncate tracers above 100% recovery to eliminate low biased results. Reprep and reanalyze sample if carrier is low (indicating high biased results) if there is activity in the sample above the reporting limit. No reanalysis if matrix interference is noticed during sample preparation.	Analyst, Supervisor	Accuracy/Bias	Acceptable QC Acceptance Limits

Lab: Eurofins – St Louis

Matrix: Air

Analytical Group: ROCs / Radium

Analytical Method/ SOP Reference: HASL 300 / SOP57919

QC Sample:	Frequency & Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	Data Quality Indicator (DQI)	Measurement Performance Criteria
Method blank	One per preparation batch	|ZBlank | ≤ 3	Recount to confirm results. Inspect control chart for indication of significant bias. If required, re-prepare and reanalyze MB and all samples processed with the contaminated blank.	Analyst, Supervisor	Accuracy/Bias/ Contamination	Acceptable results per stated QC Acceptance Limits
LCS and LCS Duplicate	One per preparation batch	Recovery limits: 75-125% for Ra-226; RPD limit of 25% or DER < 3	Recount to confirm results. Inspect control chart for indication of significant bias. If required, re-prepare and reanalyze the LCS and all samples in the associated preparatory batch for failed analytes, if sufficient sample material is available.	Analyst, Supervisor	Accuracy/Bias	Acceptable QC Acceptance Limits
Barium Carrier	Every Sample	Recovery limits of 30-110%	Truncate carriers above 100% recovery to eliminate low biased results. Reprep and reanalyze sample if carrier is low (indicating high biased results) if there is activity in the sample above the reporting limit. No reanalysis if matrix interference is noticed during sample preparation.	Analyst, Supervisor	Accuracy/Bias	Acceptable QC Acceptance Limits

Lab: Eurofins – St Louis

Matrix: Air

Analytical Group: ROCs / Strontium

Analytical Method/ SOP Reference: HASL 300 / SOP57919

QC Sample:	Frequency & Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	Data Quality Indicator (DQI)	Measurement Performance Criteria
Method blank	One per preparation batch	|ZBlank | ≤ 3	Recount to confirm results. Inspect control chart for indication of significant bias. If required, re-prepare and reanalyze MB and all samples processed with the contaminated blank.	Analyst, Supervisor	Accuracy/Bias/ Contamination	Acceptable results per stated QC Acceptance Limits
LCS and LCS Duplicate	One per preparation batch	Recovery limits: 75-125% for Sr-90; RPD limit of 25% or DER < 3	Recount to confirm results. Inspect control chart for indication of significant bias. If required, re-prepare and reanalyze the LCS and all samples in the associated preparatory batch for failed analytes, if sufficient sample material is available.	Analyst, Supervisor	Accuracy/Bias	Acceptable QC Acceptance Limits
Strontium and Yttrium Carrier	Every Sample	Recovery limits of 30-110%	Truncate carriers above 100% recovery to eliminate low biased results. Reprep and reanalyze sample if carrier is low (indicating high biased results) if there is activity in the sample above the reporting limit. No reanalysis if matrix interference is noticed during sample preparation.	Analyst, Supervisor	Accuracy/Bias	Acceptable QC Acceptance Limits

Worksheet #29: Project Documents and Records

(UFP-QAPP Manual Section 3.5.1)

Document	Where Maintained: ECC Microsoft Teams Project Directory
Chain of Custody's	5459.397 - HPNS Parcel G Demo Hunters Point - Documents\General\A - Data\01_Air Monitoring\01_Chain of Custodys
Lab Reports and EDD's	5459.397 - HPNS Parcel G Demo Hunters Point - Documents\General\A - Data\01_Air Monitoring\02_Lab Reports and EDD's
Data Validation Reports	5459.397 - HPNS Parcel G Demo Hunters Point - Documents\General\A - Data\01_Air Monitoring\03_Data Validation Reports
Weekly PM10 Air Reports	5459.397 - HPNS Parcel G Demo Hunters Point - Documents\General\A - Data\01_Air Monitoring\04_Weekly PM-10 Air Reports
Bi-Weekly Air Reports	5459.397 - HPNS Parcel G Demo Hunters Point - Documents\General\A - Data\01_Air Monitoring\05_Bi-Weekly Air Reports
6-Week Radiological Air Reports	5459.397 - HPNS Parcel G Demo Hunters Point - Documents\General\A - Data\01_Air Monitoring\07_6-Week Radiological Air Monitoring Reports
Quarterly Air Monitoring Report	5459.397 - HPNS Parcel G Demo Hunters Point - Documents\General\A - Data\01_Air Monitoring\06_Quarterly Air Monitoring Reports

Worksheet #30: Analytical Services

(UFP-QAPP Manual Section 3.5.2.3)

Matrix	Analytical Group(s)	Analytical SOP(s)	Data Package Turnaround Time [2]	Laboratory/Organization[1] (name and address, contact person and telephone number)	Backup Laboratory/Organization (name and address, contact person and telephone number)
Air	- Total Suspended Particulates; - Metals: • Lead (Pb); • Manganese (Mn)	See WS#23	5-Days	Eurofins	TBD
Air	Particulate Matter 10 ug (PM-10)	See WS#23	5-Days	SGS-Galson	TBD
Air	Asbestos	See WS#23	5-Days	SGS-Galson	TBD
Air	Mercury	See WS#23	5-Days	SGS-Galson	TBD
Air	PCB's	See WS#23	5-Days	SGS-Galson	TBD
Air	ROCs	See WS#23	30-Days	Eurofins	GEL

Notes:
[1]Laboratory meets accreditation requirements to support project needs.
[2] – Denotes "Work Days (M-F) / Samples shipped out following work day, overnight shipment

Worksheet #31: Assessments and Corrective Actions

(UFP-QAPP Manual Sections 4.1.1 and 4.1.2)

Assessments:

Assessment Type	Number and Frequency	Internal or External	Organization Performing Assessment	Person(s) Responsible for Performing Assessment	Assessment Deliverable
COC / ROC Data Review	Each package	Internal	Aurora Environmental / LDC / EDS	Data Review Team	Data Validation Report / EDD with Qualifiers

Assessment Findings and Corrective Actions:

Assessment Type	Individual(s) Notified of the Findings	Assessment/ Deficiency Documentation	Individual(s) Responsible for Implementing Corrective Action	Corrective Action Documentation	Individual (s) Responsible for monitoring Corrective Action Implementation	Timeframe for Corrective Action Implementation
COC DV Review	Chemistry Manager Env./ ROC Manager	DV Report	Chemistry Manager / Env Manager	Corrective Action Form	QC Manager	Identified in Corrective Action Documentation
ROC Data Review	Chemistry Manager / ROC Manager	DV Report	Chemistry Manager/ RSO	Corrective Action Form	QC Manager	Identified in Corrective Action Documentation

Worksheet #32: BLANK

This Worksheet has been intentionally left blank.

Worksheet #33: Quality Assurance Management Reports

(UFP QAPP Manual Section 4.2)

Type of Report	Frequency (daily, weekly, monthly, quarterly, annually, etc.)	Projected Delivery Date(s)	Person(s) Responsible for Report Preparation (title and organizational affiliation)	Report Recipient(s) (title and organizational affiliation)
QC Reports	As Required	As Required	QC Manager	Client

Worksheets #34-36: Data Verification and Validation (Steps I and IIa/IIb) Process

(UFP-QAPP Manual Section 5.2.1 and Section 5.2.2)

Data Review Input	Description	Responsible for Verification (name, organization)	Step I/IIa/IIb [1]	Internal/ External
Lab Reports / EDD's	ROC / COC - Data Validation	Aurora Environmental / LDC / EDS	Step IIa: 80% of packages Step IV: 20% of packages -	Internal

Notes[1]: [1]IIa=compliance with methods, procedures, and contracts [see Table 10, page 117, UFP-QAPP manual, V.1, March 2005.]

Worksheet #37: Data Usability Assessment (DUA)

(UFP-QAPP Manual Section 5.2.3)

The data useability goals are only related the laboratory data addressed in this plan. Data usability will be assessed upon completion of data validation of the lab reports.

- Overall goals would be to accept 80% of the laboratory data collected from the field dust management program (laboratory data only).

REFERENCES

Intergovernmental Data Quality Task Force:

- Uniform Federal Policy for Quality Assurance Project Plans Evaluating, Assessing, and Documenting Environmental Data Collection and Use Programs Part 1: UFP-QAPP Manual Final Version 1, March-2005.

- Uniform Federal Policy for Quality Assurance Project Plans Optimized UFP-QAPP Worksheets, March (reference within, 2106-G-05 QAPP Guidance, was later retracted by the Task Force). 2012

- Guidance on Systematic Planning Using the Data Quality Objectives Process, EPA QA/G-4, February-2006**.**

Naval Facilities Engineering Systems Command (NAVFAC):

- Environmental Restoration Program Recordkeeping Manual*,* February-2017.

Naval Facilities Engineering Systems Command – Southwest ((NAVFAC-SW):

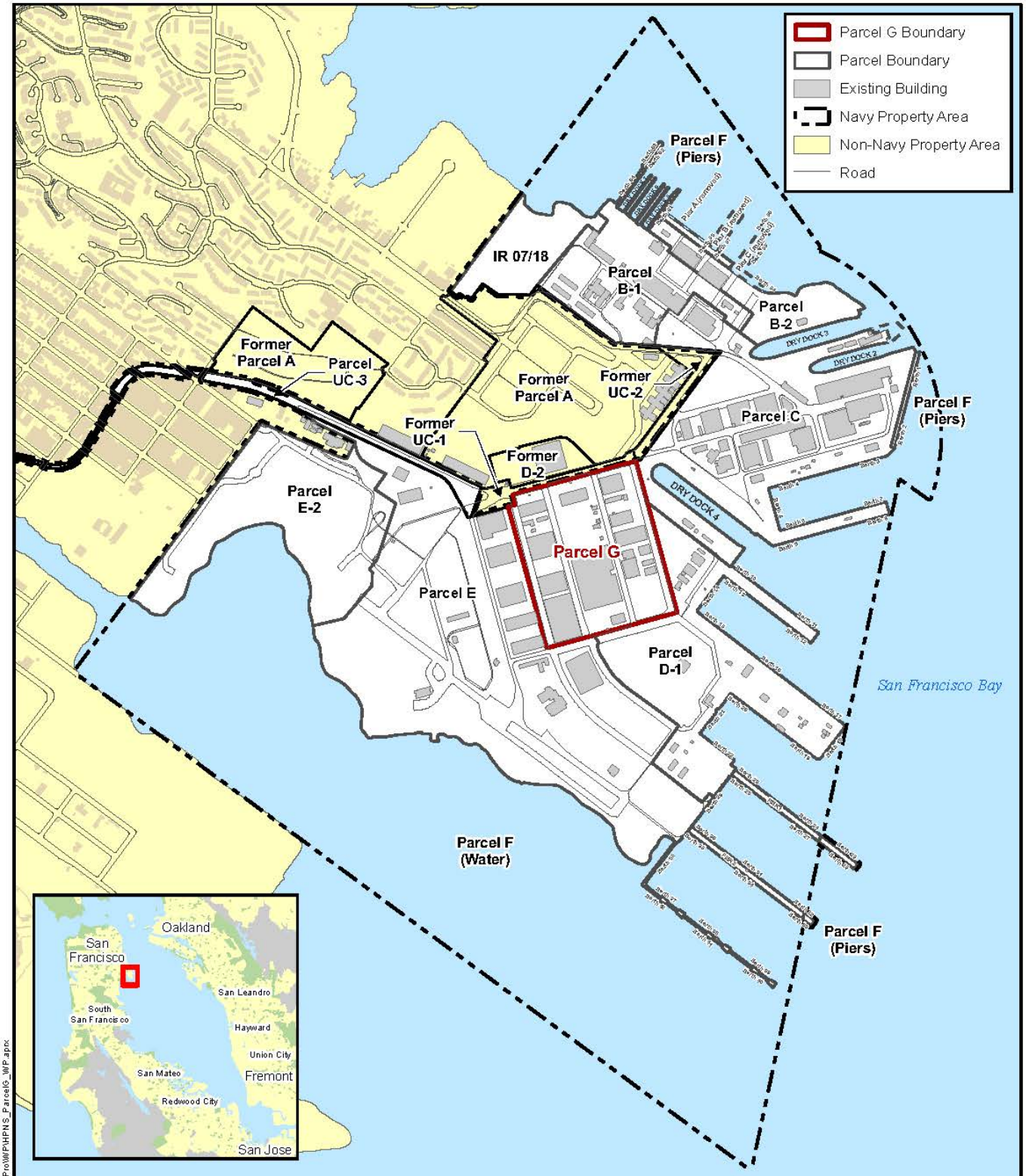
- Environmental Work Instructions – Chemical Data Validation, Rev 2, May-2022.

Attachments

- Figures
  - Figure 1 – Site Location
  - Figure 2 – Air Monitoring Zones

- Attachment 1 - SGS-Galson
  - SOPs
  - Accreditations
- Attachment 2 - Eurofins
  - SOPs – COCs
  - SOPS - ROCs
  - Accreditations

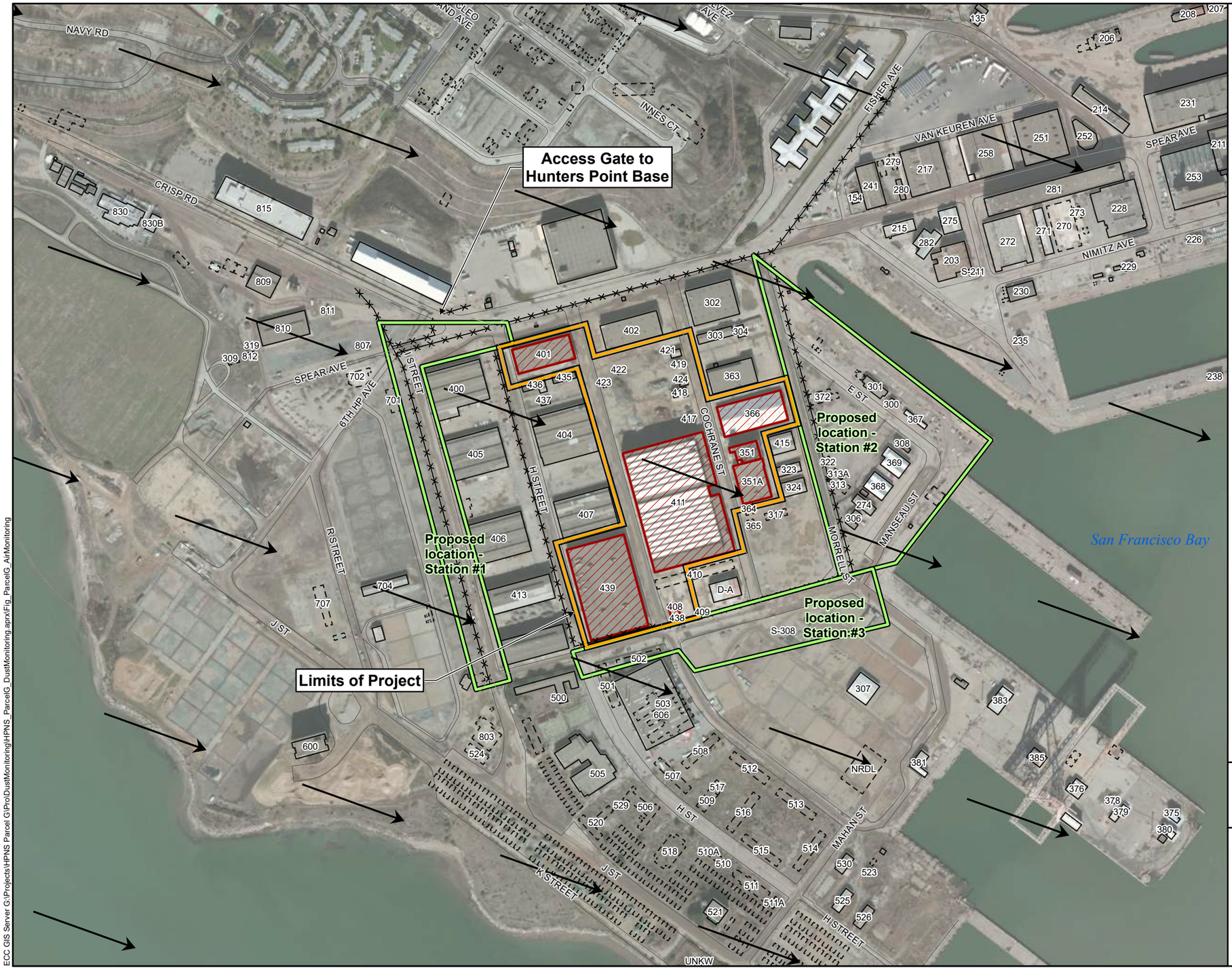
Figures



U.S. Department of the Navy NAVFAC SW San Diego, California	N 0 600 1,200 Feet	PARCEL G BUILDING DEMOLITION HUNTERS POINT NAVAL SHIPYARD SAN FRANCISCO, CALIFORNIA	DATE JUNE 2025 SCALE 1 in = 1,200 ft
NAVFAC Naval Facilities Engineering Systems Command		SITE LOCATION MAP PARCEL G	FIGURE 1

ECC GIS Server E:\Projects\HPNS Parcel G\ProW\PHPNS_ParcelG_WP.aprx

DCN: ECC-1205-4397-0007.04



Legend

- Proposed Location for Air Monitoring Stations
- Limits of Project
- Historical Wind Direction
- Buildings to be Demolished
- Existing Fence
- Road/Curb
- Existing Building
- Demolished Building

Note: Additional locations, which are not identified at this time, may be utilized if necessary due to the changing layout of Parcel G as the demolition work progresses.

Only one upwind and one downwind location will be utilized per day.

Locations estimated +/! 150-ft

N

0 400 800 Feet

1 inch = 400 feet

NOTES
1. Coordinate System: NAD83 State Plane California III, US Feet (FIPS 0403)
2. Map Size: B-size (17"x11")
3. Revision Date: 12/5/2025

NAVFAC Naval Facilities Engineering Systems Command

FIGURE
AIR MONITORING PROGRAM
PARCEL G

Hunters Point Naval Shipyard
San Francisco, CA

ECC GIS Server G:\Projects\HPNS Parcel G\Pro\DustMonitoring\HPNS_ParcelG_DustMonitoring.aprx\Fig_ParcelG_AirMonitoring

DCN: ECC-1205-4397-0007.04

SGS-Galson

Redacted: Confidential Business Information

Eurofins

Redacted: Confidential Business Information

APPENDIX D
Subcontractor Plans

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Attachment A
Abatement Plans

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ASBESTOS AND HAZARDOUS MATERIALS ABATEMENT WORK PLAN

Project:
Hunters Point Naval Shipyard, Parcel G
Buildings: 351, 351A, 366, 401, 411

Prepared by:
Bayview Industrial Services, Inc.
6925 San Leandro Street
Oakland, CA 94621

June 12, 2025
Revision 1 – November 4, 2025

1. PURPOSE

This comprehensive work plan outlines the methods, safety protocols, and regulatory compliance measures to be followed by Bayview Industrial Services, Inc. (BIS) during the hazardous materials abatement project at Hunters Point Naval Shipyard Parcel G. The scope includes asbestos abatement, lead paint stabilization, universal waste removal, and limited PCB and refrigerant recovery across six buildings (351, 351A, 366, 401, 411, 439), in compliance with all applicable federal, state, and local regulations.

2. SCOPE OF WORK BY BUILDING (INCLUDING EXECUTION DETAILS)

BUILDING 351

Remove asbestos containing materials (ACM's) including roofing mastics and felts, asbestos glue on metal panels, black acm mastic on sheet metal HVAC, ACM rope gasket, ACM drywall residue on columns, asbestos debris, Oakum pipe seal.

Removal of loose and flaky lead paint including stabilization by application of a commercial primer in areas where lead paint was abated.

Establish negative pressure containments where friable materials are present; erect regulated areas for non-friable materials.

Temporary power via portable generators will be used for containment and lighting.

Submit required notifications to BAAQMD (10-day notice) and Cal/OSHA (24-hour notice).

BUILDING 351A

Removal of the asbestos materials including asbestos pipe insulation, various roof mastics and roof field, floor tile and mastic, HVAC sealant, pipe flange gaskets.

Collect and double bag any loose debris using HEPA vacuums and wet cleanup techniques.

Stabilize deteriorating lead-based paint through wet scraping and primer application.

Access to crawl space will be controlled with barriers, warning signage, and PPE protocols.

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BUILDING 366

Remove asbestos containing materials including roof penetration mastic, TSI pipe runs and fittings, flange gaskets, drywall joint compound, window putty and sealant, transite panels, fire doors, door frame putty, HVAC vibration cloth,

Remove fluorescent tubes and ballasts; package appropriately.

Clean slab post-demolition.

Stabilize deteriorating lead-based paint through wet scraping and primer application.

BUILDING 401

Stabilize exterior deteriorating lead-based paint through wet scraping and primer application.

Remove accessible PCB-laden window sealant.

Remove 8 exterior HID fixtures.

Clean slab post-demolition.

BUILDING 411

The scope of work includes removal, packaging, and off-haul of the asbestos-containing materials identified/quantified in the North & South Office Structure, concrete structures along the East side of the main building. Remove exterior transite panels where accessible and excluding hazardous areas where building is deteriorated.

Use boom lifts to reach exterior panels.

Stabilize lead paint on accessible exterior and office areas.

Remove 10 exterior HID bulbs.

Exclude work in unsafe interior areas.

Clean slab post-demolition

BUILDING 439

The scope of work includes removal, packaging, and off-haul of the asbestos-containing materials identified from the survey report (Drywall joint compound, cove base mastic, floor tiles and associated mastics, roofing mastic materials, HVAC coating on ducts).

Includes stabilization of loose & flaking lead-containing paint from interior and exterior walls/ceilings.

Includes removal of universal wastes as identified (fluorescent light tubes, HID light tubes, exit sign batteries, mercury switches and HVAC coolant evacuation).

3. WORK AREA PREPARATION

Since the scope covers a variety of hazardous materials abatement, various means of containment and control measures will be used to identify the work areas and protect workers and others from potential hazards.

Asbestos abatement related activities:

Where full containment measures (Class I Containment) are implemented for the control of friable regulated asbestos containing materials (RACM), BIS will construct critical barriers, which will ensure the workspace is isolated and contained, by erecting impermeable barriers at all exits or openings, including doorways, windows, duct chases, mechanical shafts, floor openings, drains, and the like, so that all possible exit or entrance routes are effectively barricaded and sealed with 2 layers of fire retardant 6 mil polyethylene sheeting and duct tape.
BIS will utilize tape 2” or wider capable of sealing joints of adjacent sheets of polyethylene and attaching polyethylene sheets to finished or unfinished surfaces of similar materials.

Bayview Industrial Services, Inc. (LIC 1019537)
6925 San Leandro Street, Oakland, CA 94621
T 510.562.6181 F 510.562.6182

15535 Garfield Ave., Paramount, CA 90723
T 213.419.5431 F 213.419.5439

Negative pressure will be established and maintained at .02 W/C of pressure by installing an appropriate number of 2000 CFM HEPA filtered negative air machines within the containment and exhausting the filtered exhaust to the exterior of the building.

Non-friable asbestos containing materials such as gaskets, caulking/sealants, mastics/glue, transite pipe and transite panels, window glazing and/or putty, and various roofing materials will be performed within a regulated and controlled work area. The work area barriers will consist of red “Danger” tape or flagging with appropriate signage identifying the associated hazard (Asbestos, overhead hazards, etc.). No persons will be allowed beyond the designated barriers without proper training, PPE, and respiratory protection. Only authorized personnel will be allowed into a containment or regulated work area.

Asbestos containing materials will be removed within the controlled environment using wet methods to reduce the release of asbestos fibers. Workers performing asbestos abatement work will be required to decontaminate through the provided decontamination facilities prior to leaving the work area for any reason.

Lead abatement activities:
Where loose and flaky lead paint removal activities are being performed or where lead paint is being stripped using a chemical paint remover, these tasks will be performed within a regulated work area. The regulated work area will be identified and controlled using red “Danger” tape and appropriate signage that identifies the task being performed and the hazards associated with this task. No persons will be allowed beyond the designated barriers without first donning the proper PPE. Only authorized personnel will be allowed into a containment or regulated work area.

A wash station will be provided which shall include clean running water, soap, and clean towels for the workers to use when exiting the regulated area. All workers will be required to remove contaminated clothing prior to exiting the regulated area and decontaminate upon exiting the work area.

Other hazardous materials handling activities (PCB’s, universal wastes, electronic waste, chemical waste, and household hazardous waste:

These tasks will also be performed inside a controlled environment or regulated work area identified with barrier tape, chain or flagging, and appropriate signage which will identify the hazards associated with these tasks. These materials will be segregated by waste classification, properly packaged, labeled and made ready for shipment.

4. ABATEMENT METHODOLOGY

- Construct containments using 6-mil fire-retardant polyethylene for friable ACMs;
- Maintain -0.02 WC pressure using HEPA-filtered negative air machines for regulated class I containments.
- Post danger signs and red barrier tape around work zones for non-friable or exterior work.
- Wet methods shall be used to minimize dust and fiber release. Airless sprayers, surfactants, and manual tools will be used. Water usage will be limited to wetting and dust control to avoid run off and also to avoid the creation of additional waste streams.
- Workers to decontaminate using the three-stage decontamination shower system that will be set up at each regulated class I containment.

5. REGULATORY COMPLIANCE

U.S. DEPARTMENT OF LABOR, (FED OSHA)
Asbestos, General Industry - 29 CFR 1910.1001
Asbestos, Construction Industry - 29 CFR 1926.1101
Respiratory Protection -29 CFR 1910.134, 1926.103
Access to Employee Exposure & Medical Records - 29 CFR 1910.20, 1926.33

Hazard Communication - 29 CFR 1910.1200, 1926.59
Specifications for Accident Prevention Signs & Tags -29 CFR 1910.145, 1926.200
Title 8 CCR 5208, Asbestos
Title 8 CCR 1529, Asbestos
Title 8 CCR 1532.1, Lead
Title 17 CCR, Division 1, Chapter 8 Lead
Fed OSHA Section 1926.62 Lead

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)
Asbestos Abatement Projects: Worker Protection - 40 CFR 763.120-126
Asbestos-Containing Materials in Schools: (AHERA)- 40 CFR 763 Amended
National Emission Standards For Hazardous Air Pollutants (NESHAP) - 40 CFR 61-Sub-part A, General Provisions and Sub-part M, National Emission Standard for Asbestos
8 CCR 1529 – Cal/OSHA Asbestos Standard
BAAQMD Regulation 11, Rule 2 – Asbestos Airborne Toxic Control Measure
DOT 49 CFR for hazardous waste labeling and shipping

6. NOTIFICATION REQUIREMENTS
As required, Bayview Environmental will notify, in writing, the Bay Area Air Quality Management District (BAAQMD) 10 days in advance of any Regulated Asbestos Removal, Cal / OSHA at least 24 hours prior to the removal of any asbestos per CCR Title 8 1529 (r) (1) and Title 17 CCR, Division 1, Chapter 8 Lead.

7. ACCIDENT REPORTING
In accordance with our Injury Illness Prevention Plan and CCR Title 8 342, 330, BIS will prepare and document reports of significant accidents at the job site and will forward copies of all accident reports to all related parties. For this purpose, a significant accident is defined to include those injuries and illnesses deemed recordable on the OSHA 200/300/ 300a form, or where a property loss of substance is sustained.

8. COMPETENT PERSON
The BIS Superintendent and the Project Foreman assigned to this project will be Bayview's Competent Persons and will have the necessary training, competency, and authority to maintain this position. All supervisory personnel will have completed, and passed by written examination, an EPA / AHERA course in Supervision of Asbestos Abatement Procedures and California Department of Public Health (CDPH) certification for Lead Abatement, in addition a 40 - hour HAZWOPER (29CFR 1910.120) training certification will be required of all workers and working foremen.

The Operations Manager or Project Manager and Superintendent will also be the representatives responsible for compliance with all applicable local, state and federal codes and regulations, particularly those relating to asbestos-containing materials and lead related hazards.

The competent person's duties shall include:

29 CFR 1926.1101 (o)(3)(i).
On all worksites where employees are engaged in Class I or Class II asbestos work, the competent person designated in accordance with paragraph (e)(6) of this section shall perform or supervise the following duties, as applicable:

1926.1101(o)(3)(i)(A)
Set up the regulated area, enclosure, or other containment;1926.1101(o)(3)(i)(B)
Ensure (by on-site inspection) the integrity of the enclosure or containment;

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1926.1101(o)(3)(i)(C)
Set up procedures to control entry to and exit from the enclosure and/or area;

1926.1101(o)(3)(i)(D)
Supervise all employee exposure monitoring required by this section and ensure that it is conducted as required by paragraph (f) of this section;
1926.1101(o)(3)(i)(E)
Ensure that employees working within the enclosure and/or using glove bags wear respirators and protective clothing as required by paragraphs (h) and (i) of this section;

1926.1101(o)(3)(i)(F)
Ensure through on-site supervision, that employees set up, use and remove engineering controls, use work practices and personal protective equipment in compliance with all requirements;

1926.1101(o)(3)(i)(G)
Ensure that employees use the hygiene facilities and observe the decontamination procedures specified in paragraph (j) of this section;

1926.1101(o)(3)(i)(H)
Ensure that through on-site inspection, engineering controls are functioning properly and employees are using proper work practices; and,

1926.1101(o)(3)(i)(I)
Ensure that notification requirement in paragraph (k) of this section are met.

All BIS supervisors and foreman have been trained and certified in the following:

- First Aid, CCR Title 8 1512
- CPR, CCR Title 8 1504
- Fire Extinguisher, CCR Title 8 1920
- Power actuated tools, CCR Title 8 1685

In addition to this training all equipment operators will hold the required certifications for the appropriate equipment.

9. SAFETY COORDINATOR
Bayview has designated John Trenev (BIS Corporate Safety officer) as the individual having the responsibility for ensuring workers compliance with all aspects of the Corporate Safety Program. This individual, in addition to having successfully completed all EPA Training Center courses in asbestos abatement procedures and the proper procedures for lead abatement, have also received specialized training in construction safety practices. The Safety Coordinator and the project Superintendent will conduct periodic safety audits and worker training at each job site.

10. WORKER TRAINING
All employees who will be working on this project will be trained and certified as an EPA / AHERA asbestos worker. They will be trained and made aware of the dangers inherent in handling asbestos, in the proper work procedures, and in the use of protective measures as outlined in 29 CFR 1926.1101, 8 CCR 1529. HAZWOPER training will be required of all workers. On site radiation awareness training, will be provided by others (if necessary) prior to beginning work. Workers assigned to lead related tasks will also carry the California Department of Public Health Lead Related Construction Certification.
11. MEDICAL EXAMINATIONS
All personnel entering the work areas where respiratory protection is required, will have received a medical examination in compliance with the medical examination requirements of CCR Title 8 1529 standards within the past

twelve (12) months. For all personnel entering the work area, Bayview will provide onsite a copy of a written certificate from the physician attesting to his opinion that the individual may enter an atmosphere in which asbestos fibers are present and is allow the use a respiratory device.

All BIS personnel will be trained in the proper use and cleaning of the respiratory device, they will also be fit-tested for the respiratory device, the fit-test will be documented, and a copy of the fit-test will be on site for all personnel that will enter into the work area or is required to wear respiratory protection.

Fit test shall be current within the past 12 months. Blood testing for lead workers will be performed before and after the project as required.

12. PROTECTIVE EQUIPMENT

RESPIRATORS: All employees that will be engaging in the removal of hazardous materials shall be provided and required to wear the appropriate respirators and filters all times per CCR Title 8 1529 (g) 1531. The type of respirator and filter to be used shall be determined by the respiratory hazard present, the degree of exposure, and the work environment in which it is to be utilized. The project manager and project superintendent as well as the competent person (BIS foreman) will be responsible for determining the appropriate respirator for each related hazardous material abatement task. Bayview will rely upon our written "Respiratory Protection Plan" (Attached) and jobsite data to determine the proper respiratory protection to be worn by task.

Respirators will be equipped with HEPA filters P-100 for particulate. A Powered Air Purifying Respirator (PAPR) will be required for removing friable asbestos containing materials when the exposure limit is expected to exceed .5 fiber per cc or exceed the protection factor of a full-face negative pressure respirator. Full-face or half-face negative pressure respirators may be used for non-friable asbestos containing materials. Bayview may downgrade the personal protective equipment based upon analytical sampling results.

COVERALLS: BIS will provide disposable coveralls, including head covers and will require that all persons entering the work area wear them. Bayview will provide a sufficient amount of protective clothing for the required number of changes for all workers in the work area.

RUBBER or Leather BOOTS: Rubber boots will be required to be worn in the work area, they will be required to remain in the work area until the completion of the project, at which time they must be thoroughly cleaned and decontaminated, both inside and out, and put into a plastic bag before removal from the area. Foot protection to conform with ANSI Z41.1-1983, class75.

HARD HATS: BIS will provide hard hats and require that they be worn at all times when work is in progress that has the potential for causing head injuries per CCR Title 8 1515. Contaminated hard hats must remain in the work area until they can be thoroughly cleaned, decontaminated, and placed into a plastic bag before removal from the work area at the end of the project. Hard hats shall conform with ANSI Z89.1-1981, Class A or B.

SAFETY GLASSES/GOGGLES: Where required per CCR Title 8 1516, BIS will provide eye protection in the form of safety glasses and/or goggles for all employees in the work area when full-facepiece respirators are not being used. The safety glasses and/or goggles will remain in the work area and will be appropriately cleaned or disposed of at the completion of the project. Eye protection shall conform with ANSI Z87.1-1979.

WORK GLOVES: BIS will provide appropriate work gloves per CCR Title 8 1520, to all personnel in the work area. The gloves must remain in the work area until the completion of the project, at which time they will be disposed of.

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13. MATERIALS AND EQUIPMENT

BIS will provide either new or used materials and equipment that is undamaged and in serviceable condition, and only that equipment that is recognized as being suitable for the intended use and in compliance with the appropriate standards.

All HEPA filtered equipment including vacuums and exhaust systems will be DOP challenge tested on site by an independent third party. Certification of these units will be provided at the completion of the testing.

14. UTILITIES

ELECTRICAL SERVICE: Electrical service for this project will be provided via a 25 KW or larger generator which will be located at ground level. Bayview will run 50-amp power cords from the generator to the appropriate floor where work will be performed. Temporary power distribution boxes will be attached to the 50-amp cords. These distribution boxes are GFCI 125/250 volt and are UL Listed for outdoor use. The boxes come with 6 – 20-amp straight blade GFCI protected receptacles. Bayview will use a 12-amp extension cord with manufactured ends to connect equipment to the power distribution boxes. Extension cords are inspected prior to being sent out to the job site but will be inspected again prior to placing in service and on each day of service. Cords which are damaged or worn to the extent that could become unsafe or deemed a potential hazard will be pulled from the work area, labeled as damaged and sent back to our warehouse facilities.

WATER SERVICE: Only heavy-duty abrasion-resistant hoses with a pressure rating greater than the maximum pressure of the water distribution system will be used to provide water to the work area or the decontamination facilities. The water source will be from an existing fire hydrant on site and will be delivered either by a portable water buffalo (water tank & trailer) or by direct connection to the hydrant and delivered to the work area via fire hose.

HOT WATER HEATER: In the absence of hot water, Bayview will provide a UL rated electric hot water heater for the decontamination unit shower. The hot water heater comes with a manufactured 110 volt 20 amp power cord which will plug directly into the power distribution box.

GROUND FAULT CIRCUIT INTERRUPTER: Employees will not be permitted to work, in any asbestos containment area, in proximity to any part of an electric power circuit in which they may come in contact during the course of this work, unless the employee is protected against electric shock by use of a Ground Fault Circuit Interrupter (GFCI) per CCR Title 8 2405.4. Power for this project will be provided by generators and temporary power cords which will be dispersed through the various work areas. The Bayview foreman assigned to a floor or work area will be responsible for inspecting the GFCI prior to the shift to ensure that they are working properly. If a GFCI should fail it will be replaced with another spider box and the malfunctioning unit will be tagged and removed from the project.

LIGHTING: BIS will provide sufficient temporary lighting to ensure proper workmanship throughout the work area. This will include the use of daylight, general lighting, or portable plug-in lighting, or any combination of these.

FIRE EXTINGUISHERS: BIS will comply with CCR Title 8 1922 and recognized recommendations within the construction industry for providing portable fire extinguishers at the abatement site. The fire extinguishers will be located where they will be most convenient and effective for their intended purpose, with at least one (1) extinguisher for every 3,000 square feet of work area and one (I) outside the work area. A fire extinguisher rated not less than 2A, shall be provided for not less than 3,000 square feet of the floor area or fraction thereof. Where the floor area is less than 3,000 square feet at least one extinguisher will be provided. Travel distance between any point of the protected area to the nearest fire extinguisher shall not exceed 75 feet.

Personnel will be cautioned to use fire extinguishers to combat fires which are in the incipient or beginning stages only, and that if the fire becomes life threatening, they are to evacuate the area immediately and sound the alarm.

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15. JOB SITE POSTINGS: BIS will comply with all CAL-OSHA regulations in regard to job site posting requirements, every job site will have the required job site postings as well as:

- a copy of the company Injury and Illness Prevention Program (CCR Title 8 1509)
- Prop 65 signage
- Emergency Action Plan (29 CFR 1926.35)
- Current Material Safety Data Sheets for all chemicals that will be brought on site
- Emergency eye wash
- First aid kit (CCR Title 8 1512)

16. DECONTAMINATION FACILITIES

A 3-stage decontamination facility with a clean room, shower and dirty room will be provided at the entrance to the Class I containment/s. Hot and cold running water will be provided along with an ample supply of soap and clean towels will be available for personnel to utilize for decontamination. All personnel entering the contaminated work zone shall be required to decontaminate prior to exiting the work area. For abatement of non-friable Class II asbestos containing materials, Bayview will provide a two-stage air lock at the entrance to each containment. Clean water, soap and towels will be available outside the containment area for personnel to decontaminate.

One shower will be provided for every 10 workers or shifts/breaks will be staggered to minimize overloading of the shower facilities. Waste-water will be run through a series of filters and the water will be filtered down to 5-micron before being discharged down the sanitary sewer.

ACCESS CONTROL

Access to the work area will be permitted only through a personnel decontamination unit, air lock or other designated work area entrance. All other means of access will be closed off and sealed, and warning signs will be displayed on the clean side of the closed access. No one will be allowed to enter the work area that does not have a direct need to do so.

Persons entering the work area must follow all entry procedures, including the removal of street clothing, donning protective clothing, using the appropriate respiratory protective device, and complying with the requirements of the company's respiratory protection program.

WARNING SIGNS

BIS will post a sufficient number of appropriately worded warning signs per OSHA regulations to adequately notify all persons in the vicinity of the work area of the dangers involved. The signs will normally be posted directly onto the clean side of the work area isolation barrier and at each entrance to the work area and the decontamination units, signs will be visible from 20’ away.
Warning signs, which are 20 inches high by 14 inches wide, comply with the requirements of the Occupational Safety and Health Administration's standard on warning signs, each sign has the following legend and is red, white and black in color:

DANGER

ASBESTOS

MAY CAUSE CANCER

CAUSES DAMAGE TO LUNGS

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AUTHORIZED PERSONNEL ONLY
WEAR RESPIRATORY PROTECTION
AND PROTECTIVE CLOTHING IN THIS AREA

DOP TESTING
All HEPA filtered equipment will be DOP (dioctyl phthalate) challenge tested on site prior to being placed into service. Bayview shall provide manufactures Material Safety Data Sheets (MSDS) for this product to prior to the start of the work and a copy of the SDS book will be on site for review. All testing and results of testing will be documented by Bayview.

17. AIR MONITORING

Bayview will conduct all personal air sampling. These samples will be taken each shift, and for each distinctive crew operation, and shall be used to verify adequacy of fiber control and respiratory protection. Personal breathing zone air sampling shall be in accordance with the FED-OSHA asbestos standards. A minimum of 25% of the work force shall be monitored during each shift. All sample results shall be available on site within 24 hours of sample collection. This procedure will be applied to each containment. The competent person for conducting air samples will the competent foreman that are assigned to the project. Air monitoring will be conducted daily in all locations that abatement in taking place.

The competent person will perform the required air sampling in accordance with all regulations to accurately determine the airborne concentrations of asbestos fibers in the work area to ensure that the proper work procedures and engineering controls are adequate. Bayview will post the results of the air monitoring on site where it may be reviewed. Lead air samples will be conducted daily when lead activities are being performed.

18. WASTE HANDLING & PACKAGING

ACMs will be double-bagged and labeled with OSHA/EPA/DOT-compliant warnings labels.
Friable debris packaged in sealed drums or super sacks, bulk loading into a double lined waste container is permitted. Bulk loading will be the method for non-friable roofing and transite panels and other non-friable asbestos waste.
Lead paint waste and chemical stripper residue placed into DOT-approved 55-gallon drums.
Universal waste sorted and packed: light tubes will be packaged in cartons, PCB light ballasts will be placed into 55 gal DOT approved drums, batteries will be palletized and shrink wrapped.
Freon coolant will be recovered into cylinders for offsite processing.
Windows with PCB caulk will be bulk loaded into a double lined waste container.

DISPOSAL/WASTE HAULING
All asbestos containing materials will be placed into 40-yard closed top waste containers. The waste containers will be lined with two layers of 6-mil poly or with a manufactured bin liner. The waste containers will be closed and locked when not in use. Two types of asbestos waste will be generated from this project; Friable regulated materials shall be disposed of as a hazardous asbestos waste on a Uniform Hazardous Waste Manifest. Non-friable asbestos waste will be disposed of as a non-hazardous asbestos waste and will be manifest as such on a non-hazardous manifest.

Lead waste and chemical paint remover shall be manifested as a RCRA Hazardous waste.

WARNING LABLES
In compliance with the OSHA's Hazard Communication Standard, which requires each employer to ensure that all

containers of hazardous chemicals in the workplace are labeled, tagged, or marked with the identity of the hazardous chemical contained therein, and an appropriate warning of the hazards of the chemical, all asbestos waste disposal bags utilized by the company will be appropriately marked as follows:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD
BREATHING AIRBORNE ASBESTOS FIBERS IS HAZARDOUS TO YOUR HEALTH

These labels are three (3) inches high by five (5) inches wide and conform to the requirements.

In addition to the warning label required by both OSHA and EPA, the United States Department of Transportation (DOT) also requires a warning label on each bag of asbestos-containing waste that is transported away from the removal site. This label must read as follows:

RQ HAZARDOUS SUBSTANCE
SOLID, N.O.S. (ASBESTOS)
ORM-E, NA-2212

All waste generated will be properly packaged and labeled with the appropriate hazardous waste label with the generator information and the date the waste was generated (see example below).

19. DEMOBILIZATION AND CLOSEOUT

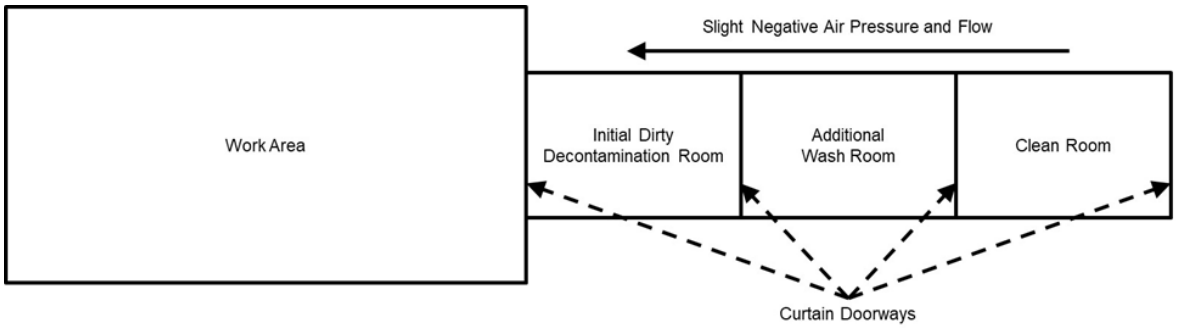
Once abatement and air clearance (if required) are achieved, BES will dismantle containments, power systems, and decon units.
Final walkthroughs will be performed with the client.
Closeout package to include waste manifests, air monitoring logs, and daily reports.
All equipment and personnel will be demobilized upon acceptance of final conditions.

Prepared by:
Dave Davis
Project Executive
Bayview Industrial Services, Inc.
Dated: Revision 1 – November 4, 2025

Attachments:
"A" – Decon diagram
"B" – Containment diagrams

EXHIBIT "A"

To minimize the potential spread of ACM, a 3-stage decontamination unit will be constructed adjacent to the asbestos abatement area (Exhibit 1). The decontamination unit will include an initial dirty room, a washroom or shower, and a clean room. The decontamination unit will be constructed using six-mil fire-retardant polyethylene sheeting and construction materials which may include a combination of lumber, PVC pipe, and/or scaffolding.



(Exhibit 1) 3-Stage Decontamination Unit

A worker decontamination enclosure system (Exhibit 1) will be provided to all authorized personnel that enter or exit the regulated work areas. At the entrance to the clean room area of the worker decontamination enclosure, a clip board will be posted with the names of the individuals entering the containment as well as the entrance and exit times of all persons entering the containment. This is used to keep track of anyone that may have entered the containment in case of an emergency, and it is also used to track exposure times related to air sampling data collected within the containment. A clean room will be provided to all workers to don PPE (Protective clothing, gloves, work boots and respirators, etc.) and store street clothes and personal items. The washroom or shower room will be where personnel will decontaminate prior to exiting the containment. The dirty room or tool room is the entrance from the containment side of the decontamination unit where workers will remove their outer protective clothing prior to entering the shower room. Please note that the respirator should be removed in the shower after the worker has rinsed off to avoid air borne contaminates from being inhaled.

EXHIBIT "B"

BUILDING CONTAINMENT DIAGRAMS

BUILDING 351 FIRST LEVEL WILL BE A REGULATED WORK AREA, CONTAINED BY WARNING SIGNS, DELINEATORS AND BARRIER TAPE OR PLASTIC COLOREDBARRIER CHAIN. WORK ON THIS FLOOR WILL CONSISTOF NON-REGULATED ACM AND DEBRIS AS WELL AS LOOSE LEAD PAINT.

A CLEAN AREA WILL BE SET UP OUTSIDE THE WORK AREA WITH LOCKERS TO STORE PERSONAL ITEMS, CLEAN WATER, SOAP AND

3-STAGE DECONTAMINATION UNIT WITH SHOWER. SERVICING THE

BUILDING 351A SUBFLOOR WILL BE A NEGATIVE PRESSURE ENCLOSURE (CLASS I CONTAINMENT) FOR THE REMOVAL OF THE REGULATED ASBESTOS

DECONTAMINATION UNIT LOCATION AS WELL AS THE LOCATION OF THE NEGATIVE AIR MACHINES DIPICTED ARE APPROXIMATE AND THE ACTUAL LOCATION WILL BE DETERMINED IN THE FIELD

REGULATED WORK AREA

APPROXIMATE LOCATION OF HEPA FILTERED

BUILDING 351

BUILDING 351A

BUILDING 351A SUB FLOOR CRAWL SPACE

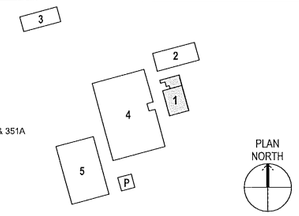
A2 FIRST FLOOR PLAN - 351/351A
SCALE: 1/16" = 1'-0"

SEE SHEET G-002 FOR GENERAL NOTES

KEYNOTES

02 01	EXTERIOR CONCRETE WALL - UNO, TYPICAL THIS BUILDING
02 02	CONCRETE COLUMN
02 03	HALF-ROUND / QUARTER-ROUND CONCRETE COLUMNS AT PERIMETER- TYPICAL THIS BUILDING
02 04	STEEL FRAME WINDOW - TYPICAL THIS BUILDING
02 05	CONCRETE FLOOR SLAB ON GRADE
02 06	WINDOW OPENING RECONFIGURED TO BE COILING OVERHEAD DOOR
02 08	ELEVATOR
02 09	CONCRETE STAIR/LANDING
02 10	INTERIOR CONCRETE WALL
02 11	CONCRETE LANDING/LOADING DOCK
02 13	CONCRETE STAIR/LANDING WITH STEEL RAILS
02 14	CONCRETE RAMP WITH STEEL RAILS
02 15	WOOD STAIR
02 16	EXPOSED 2"x6" (APPROXIMATE) WOOD FURRING - TYPICAL THIS BUILDING.
02 17	STEEL COLUMN- TYPICAL THIS BUILDING
02 18	UNO EXPOSED WOOD WALL FRAMING - TYPICAL THIS BUILDING
02 40	WOODEN SHED STRUCTURE

KEY PLAN



1 = BUILDING 351 & 351A
2 = BUILDING 366
3 = BUILDING 401
4 = BUILDING 411
5 = BUILDING 439
P = PAD 408

PLAN NORTH

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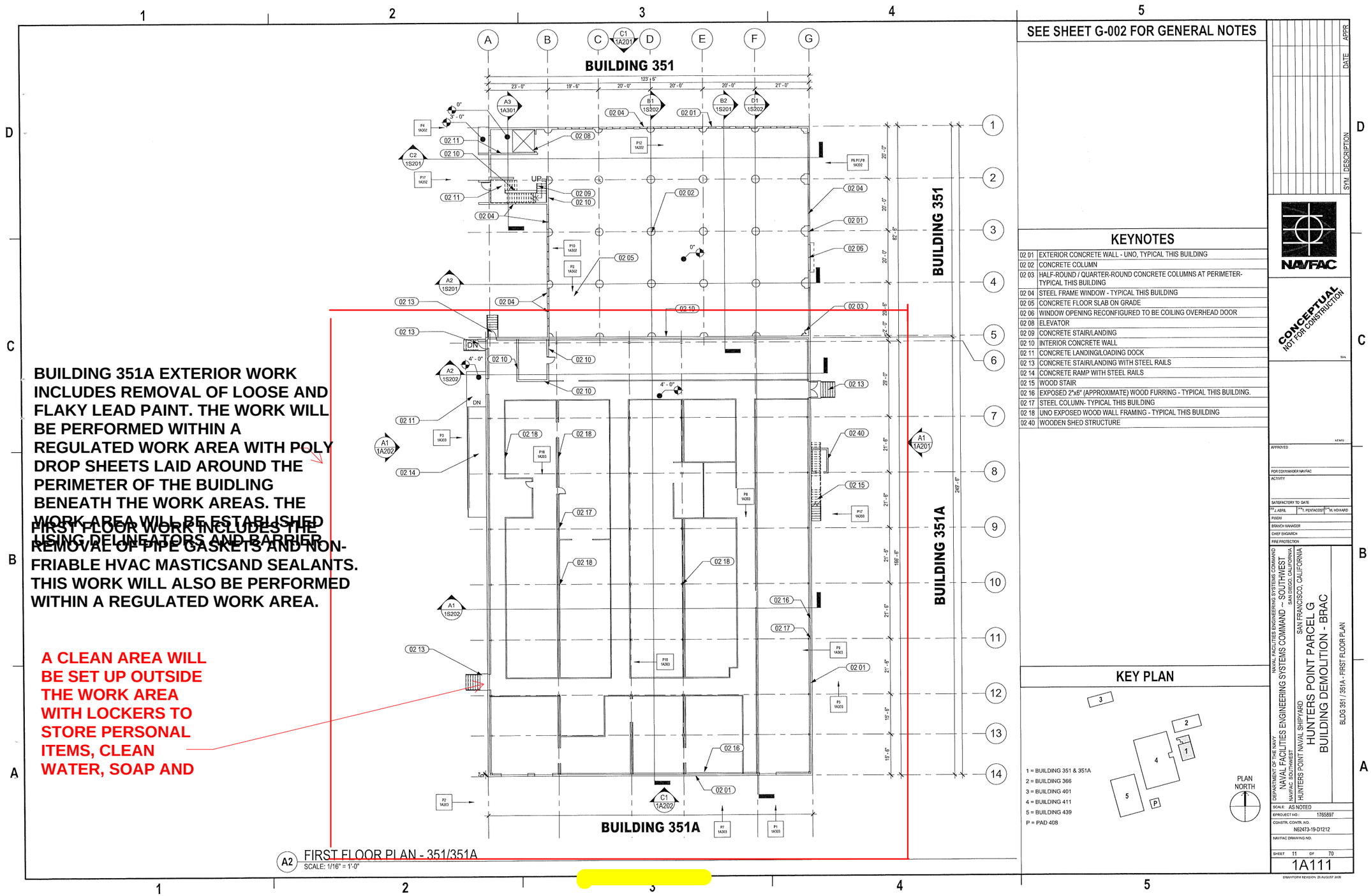
FSGN
BRANCH MANAGER
CHIEF ENGINRCH
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND – SOUTHWEST
NAVFAC SOUTHWEST
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND – SOUTHWEST
SAN DIEGO, CALIFORNIA
HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CALIFORNIA
HUNTERS POINT PARCEL G
BUILDING DEMOLITION - BRAC
BLDG 351 / 351A - FIRST FLOOR PLAN

SCALE: AS NOTED
EPROJECT NO.: 1765897
CONSTR. CONTR. NO. N62473-19-D1212
NAVFAC DRAWING NO.
SHEET 11 OF 70
1A111



SEE SHEET G-002 FOR GENERAL NOTES

KEYNOTES

02 01	EXTERIOR CONCRETE WALL - UNO, TYPICAL THIS BUILDING
02 02	CONCRETE COLUMN
02 03	HALF-ROUND / QUARTER-ROUND CONCRETE COLUMNS AT PERIMETER-TYPICAL THIS BUILDING
02 04	STEEL FRAME WINDOW - TYPICAL THIS BUILDING
02 05	CONCRETE FLOOR SLAB ON GRADE
02 06	WINDOW OPENING RECONFIGURED TO BE COILING OVERHEAD DOOR
02 08	ELEVATOR
02 09	CONCRETE STAIR/LANDING
02 10	INTERIOR CONCRETE WALL
02 11	CONCRETE LANDING/LOADING DOCK
02 13	CONCRETE STAIR/LANDING WITH STEEL RAILS
02 14	CONCRETE RAMP WITH STEEL RAILS
02 15	WOOD STAIR
02 16	EXPOSED 2"x6" (APPROXIMATE) WOOD FURRING - TYPICAL THIS BUILDING.
02 17	STEEL COLUMN- TYPICAL THIS BUILDING
02 18	UNO EXPOSED WOOD WALL FRAMING - TYPICAL THIS BUILDING
02 40	WOODEN SHED STRUCTURE

KEY PLAN

SYM	DESCRIPTION	DATE	APPR

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ACTIVITY
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[ ] J. ABRIL [ ] T. PENTACOST [ ] M. HOWARD
PWDH
BRANCH MANAGER
CHIEF ENGINEER
FIRE PROTECTION

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HUNTERS POINT PARCEL G
BUILDING DEMOLITION - BRAC
BLDG 351 / 351A - FIRST FLOOR PLAN

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SHEET 11 OF 70
1A111

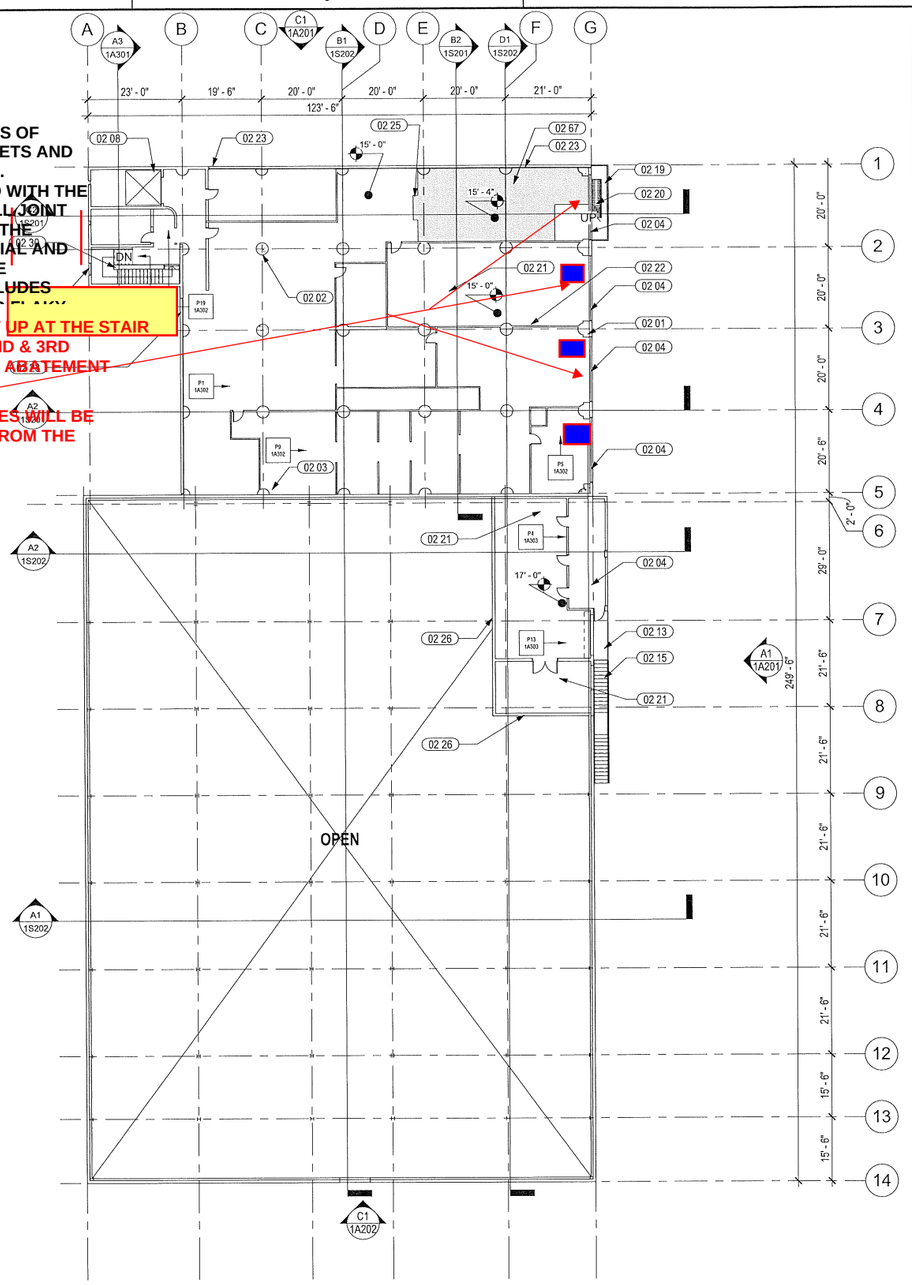
DRAWFORM REVISION: 25 AUGUST 2020

BUILDING 351 2ND & 3RD FLOORS

THE SCOPE OF WORK FOR THE 2ND & 3RD FLOORS OF BLDG 351INCLUDES THE REMOVAL OF PIPE GASKETS AND SEALANTS ASSOCIATED WITH THE DOWNSPOUTS. ABATEMENT OF THE ROPEGASKETS ASSOCIATED WITH THE KILN DOORS, AS WELL AS THERESIDUAL DRYWALL JOINT COMPOUND FOUND ON THE COLUMN SUPPORTS. THE DRYWALL JC IS A REGULATED ASBESTOS MATERIAL AND WILL BE ABATED WITHIN A REGULATED NEGATIVE PRESSURE CONTAINMENT. THE SCOPE ALSO INCLUDES

A 3-STAGE DECONTAMINATION UNIT WILL BE SET UP AT THE STAIR WELL AT A LOCATIONTHAT WILL SERVICE THE 2ND & 3RD FLOORSAND WILL ALSO BE USED FOR THE ROOF ABATEMENT SCOPE.

2000 CFM HEPA FILTERED NEGATIVE AIR MACHINES WILL BE PLACED ON THE FAR ENDOF THE FLOOR AWAY FROM THE DECON UNIT



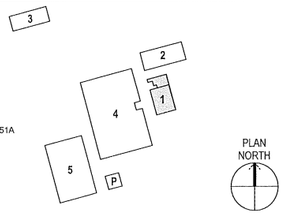
A2 SECOND FLOOR PLAN - 351/351A
SCALE: 1/16" = 1'-0"

GENERAL NOTES

KEYNOTES

02 01	EXTERIOR CONCRETE WALL - UNO, TYPICAL THIS BUILDING
02 02	CONCRETE COLUMN
02 03	HALF-ROUND / QUARTER-ROUND CONCRETE COLUMNS AT PERIMETER-TYPICAL THIS BUILDING
02 04	STEEL FRAME WINDOW - TYPICAL THIS BUILDING
02 08	ELEVATOR
02 13	CONCRETE STAIR/LANDING WITH STEEL RAILS
02 15	WOOD STAIR
02 19	FIRE ESCAPE WITH CONCRETE FLOOR AND STEEL RAILING
02 20	STEEL STAIR
02 21	UNO, CONCRETE FLOOR
02 22	EXPOSED METAL WALL FRAMING - TYPICAL THIS FLOOR
02 23	STEEL FRAME RIBBON WINDOW
02 25	CONCRETE RAMP
02 26	CONCRETE WALL
02 30	INTERIOR CONCRETE STAIR WITH CONCRETE BANISTER WALLS
02 67	CONCRETE RAISED FLOOR

KEY PLAN



1 = BUILDING 351 & 351A
2 = BUILDING 366
3 = BUILDING 401
4 = BUILDING 411
5 = BUILDING 439
P = PAD 408

SYM	DESCRIPTION	DATE	APPR

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PWDU
BRANCH MANAGER
CHIEF ENGINEER
FIRE PROTECTION

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HUNTERS POINT PARCEL G
BUILDING DEMOLITION - BRAC
BLDG 351 / 351A - SECOND FLOOR PLAN

SCALE: AS NOTED
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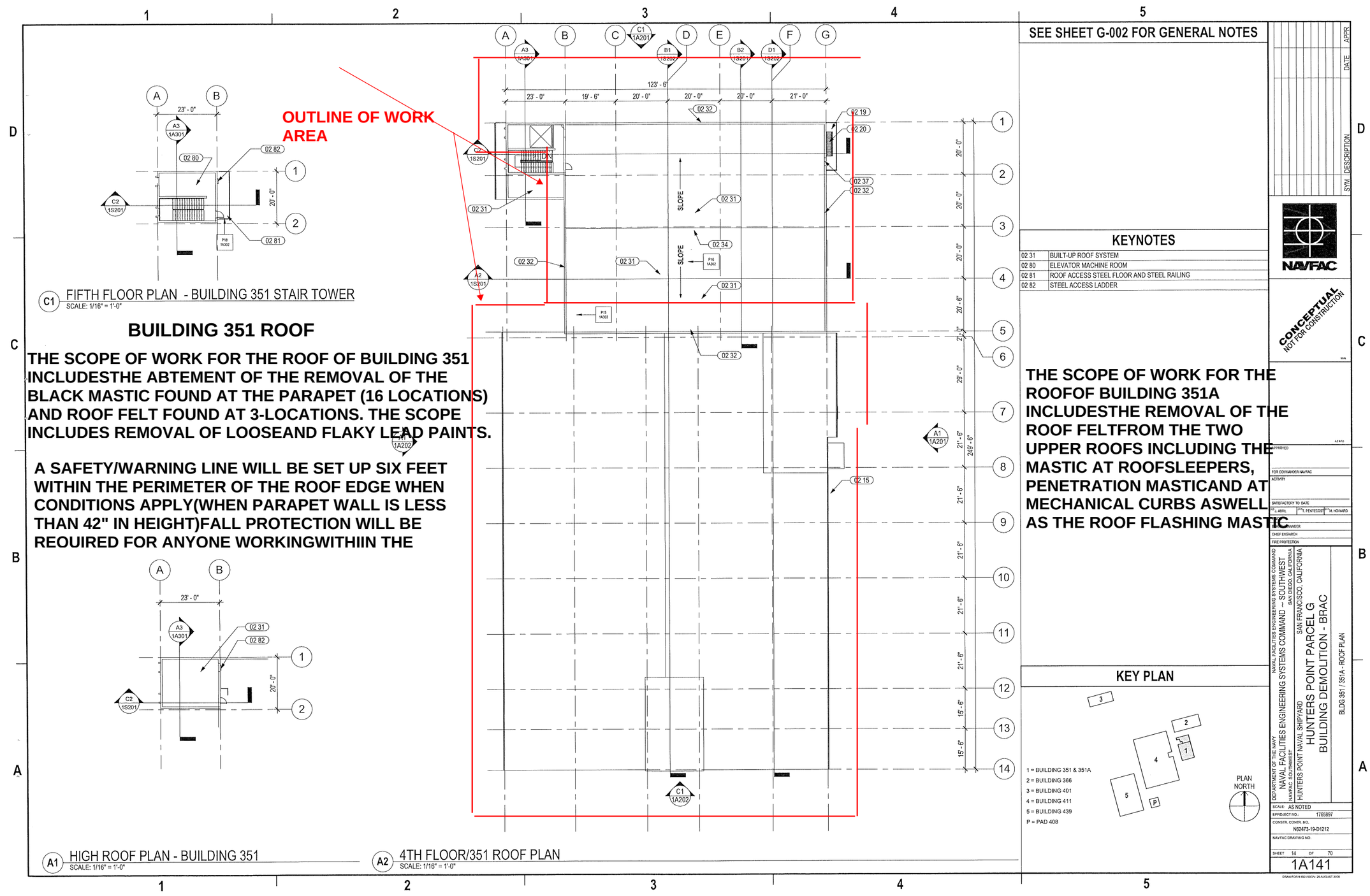
CONSTR. CONTR. NO.: N62473-19-D1212
NAVFAC DRAWING NO.
SHEET 12 OF 70
1A121

DRAWFORM REVISION: 25 AUGUST 2020


SEE SHEET G-002 FOR GENERAL NOTES
OUTLINE OF WORK AREA
C1 FIFTH FLOOR PLAN - BUILDING 351 STAIR TOWER
SCALE: 1/16" = 1'-0"
BUILDING 351 ROOF
THE SCOPE OF WORK FOR THE ROOF OF BUILDING 351 INCLUDESTHE ABTEMENT OF THE REMOVAL OF THE BLACK MASTIC FOUND AT THE PARAPET (16 LOCATIONS) AND ROOF FELT FOUND AT 3-LOCATIONS. THE SCOPE INCLUDES REMOVAL OF LOOSEAND FLAKY LEAD PAINTS.
A SAFETY/WARNING LINE WILL BE SET UP SIX FEET WITHIN THE PERIMETER OF THE ROOF EDGE WHEN CONDITIONS APPLY(WHEN PARAPET WALL IS LESS THAN 42" IN HEIGHT)FALL PROTECTION WILL BE REOUIRED FOR ANYONE WORKINGWITHIIN THE
KEYNOTES
02 31 BUILT-UP ROOF SYSTEM
02 80 ELEVATOR MACHINE ROOM
02 81 ROOF ACCESS STEEL FLOOR AND STEEL RAILING
02 82 STEEL ACCESS LADDER
THE SCOPE OF WORK FOR THE ROOFOF BUILDING 351A INCLUDESTHE REMOVAL OF THE ROOF FELTFROM THE TWO UPPER ROOFS INCLUDING THE MASTIC AT ROOFSLEEPERS, PENETRATION MASTICAND AT MECHANICAL CURBS ASWELL AS THE ROOF FLASHING MASTIC.
KEY PLAN
1 = BUILDING 351 & 351A
2 = BUILDING 366
3 = BUILDING 401
4 = BUILDING 411
5 = BUILDING 439
P = PAD 408
PLAN NORTH
A1 HIGH ROOF PLAN - BUILDING 351
SCALE: 1/16" = 1'-0"
A2 4TH FLOOR/351 ROOF PLAN
SCALE: 1/16" = 1'-0"
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T. PENTECOST
N. HOWARD
COMMANDER
CHIEF ENGARCH
FIRE PROTECTION
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HUNTERS POINT NAVAL SHIPYARD
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ SOUTHWEST
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HUNTERS POINT PARCEL G
BUILDING DEMOLITION - BRAC
BLDG 351 / 351A - ROOF PLAN
SCALE: AS NOTED
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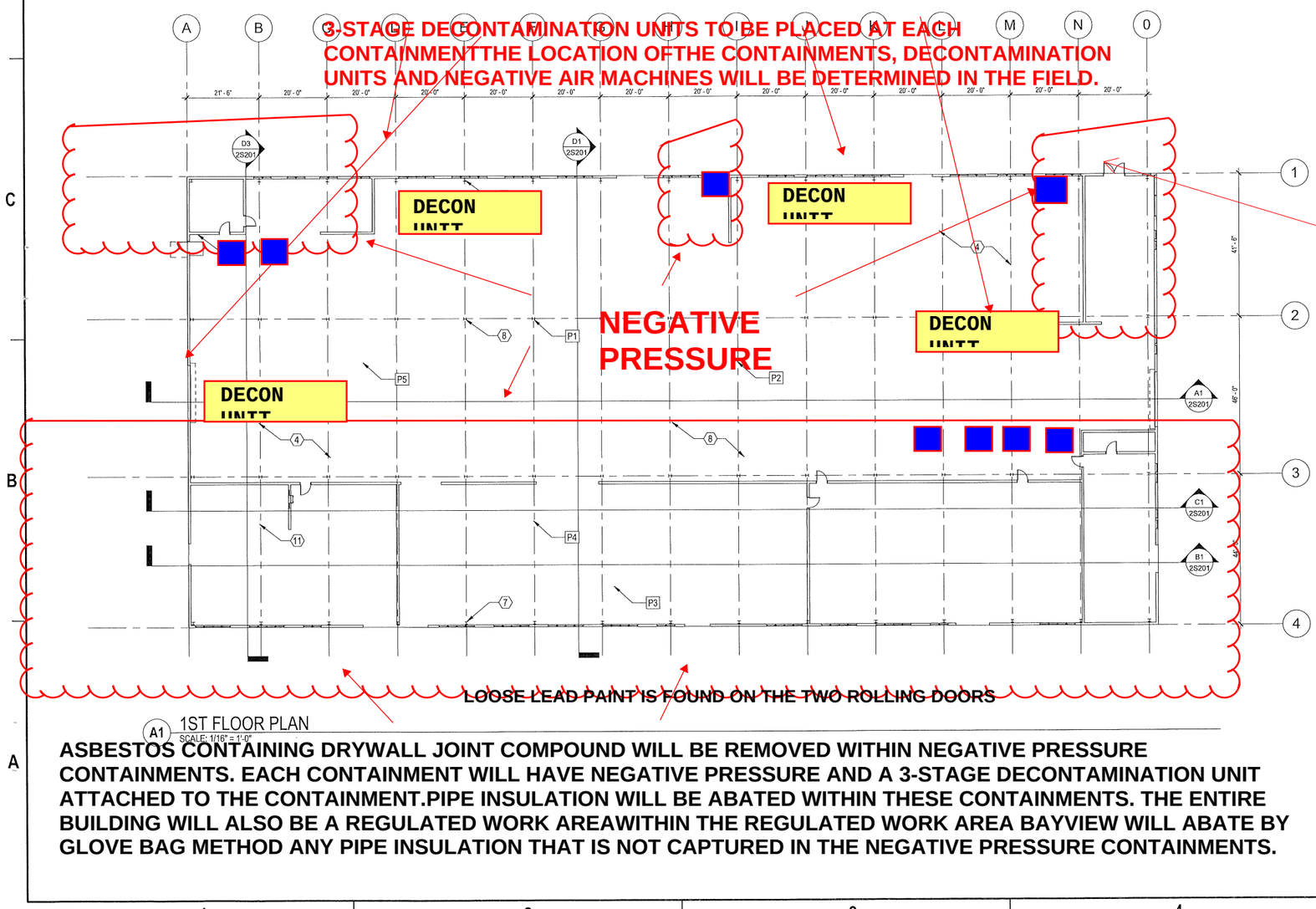
CONSTR. CONTR. NO.
N62473-19-D1212
NAVFAC DRAWING NO.
SHEET 14 OF 70
1A141
DRAWFORM REVISION: 25 AUGUST 2020

BUILDING 366 INTERIOR FIRST FLOOR

THE SCOPE OF WORK FOR THE INTERIOR OF BUILDING 366 INCLUDES ABATEMENT OF THE ~~DRYWALL, ASBESTOS~~ PIPE INSULATION, ASBESTOS PIPE FLANGES, TRANSITE WALL PANELS, ACM FIRE DOORS, HVAC VIBRATION CLOTH, DOOR FRAME PUTTY AND ACM AT WINDOW FRAMES AND ACM MASTIC ON ROOF PANELS.



A1 1ST FLOOR PLAN
SCALE: 1/16" = 1'-0"

ASBESTOS CONTAINING DRYWALL JOINT COMPOUND WILL BE REMOVED WITHIN NEGATIVE PRESSURE CONTAINMENTS. EACH CONTAINMENT WILL HAVE NEGATIVE PRESSURE AND A 3-STAGE DECONTAMINATION UNIT ATTACHED TO THE CONTAINMENT.PIPE INSULATION WILL BE ABATED WITHIN THESE CONTAINMENTS. THE ENTIRE BUILDING WILL ALSO BE A REGULATED WORK AREAWITHIN THE REGULATED WORK AREA BAYVIEW WILL ABATE BY GLOVE BAG METHOD ANY PIPE INSULATION THAT IS NOT CAPTURED IN THE NEGATIVE PRESSURE CONTAINMENTS.

STRUCTURAL GENERAL NOTES

1. ALL DIMENSIONS ARE +/-. CONTRACTOR FIELD VERIFY ALL DIMENSIONS.
2. FINISHED FLOOR ELEVATION = 0'-0" UON.
3. SECTIONS REPRESENT TYPICAL CONDITIONS IN EACH BUILDING.
4. SEE S-001 FOR TYPICAL SLAB REMOVAL DETAILS.
5. BLDG 366 STRUCTURAL SYSTEM CONSISTS OF WELDED AND RIVETED STRUCTURAL STEEL WITH CONC SLAB-ON-GRADE.
6. NOT ALL KEYNOTES INDICATED BELOW MAY BE USED ON THIS DRAWING.

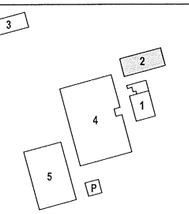
KEYNOTES

1. TYP COL AND BM CONN
2. GENERAL FRAMING ARRANGEMENT
3. TYP EXT COL AND TRUSS
4. TYP PULINS AND METAL DECK
5. TYP BRACED BAY
6. TYP TRUSS BRIDGING
7. WOOD FRAMED MEZZANINE
8. 5" THICK CONC SLAB-ON-GRADE

P# PHOTOGRAPH NOTES

1. STL TRUSS (TYP)
2. WOOD FRAME MEZZANINE (TYP)
3. CONC VAULT (TYP)
4. 5" THICK SLAB-ON-GRADE (TYP)
5. W12 STL BM (TYP)
6. W10 STL CRANE RAIL BM (TYP)
7. W6 EXT STL COL (TYP)
8. (2) W10 INT STL COL (TYP)
9. L6" X 6" STL ANGLE TOP AND BOTT CHORD TYP)
10. L4" X 4" STL ANGLE (TYP)
11. WOOD MEZZANINE
12. 12" SQ WOOD COL (TYP)

KEY PLAN



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P = PAD 408

SYM	DESCRIPTION	DATE	APPR

NAVFAC

CONCEPTUAL NOT FOR CONSTRUCTION

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
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PWSH
BRANCH MANAGER
CHIEF ENGINEER
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
NAVFAC SOUTHWEST
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ SOUTHWEST
SAN DIEGO, CALIFORNIA
HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CALIFORNIA
HUNTERS POINT PARCEL G
BUILDING DEMOLITION - BRAC
BLDG 366 - FIRST FLOOR PLAN

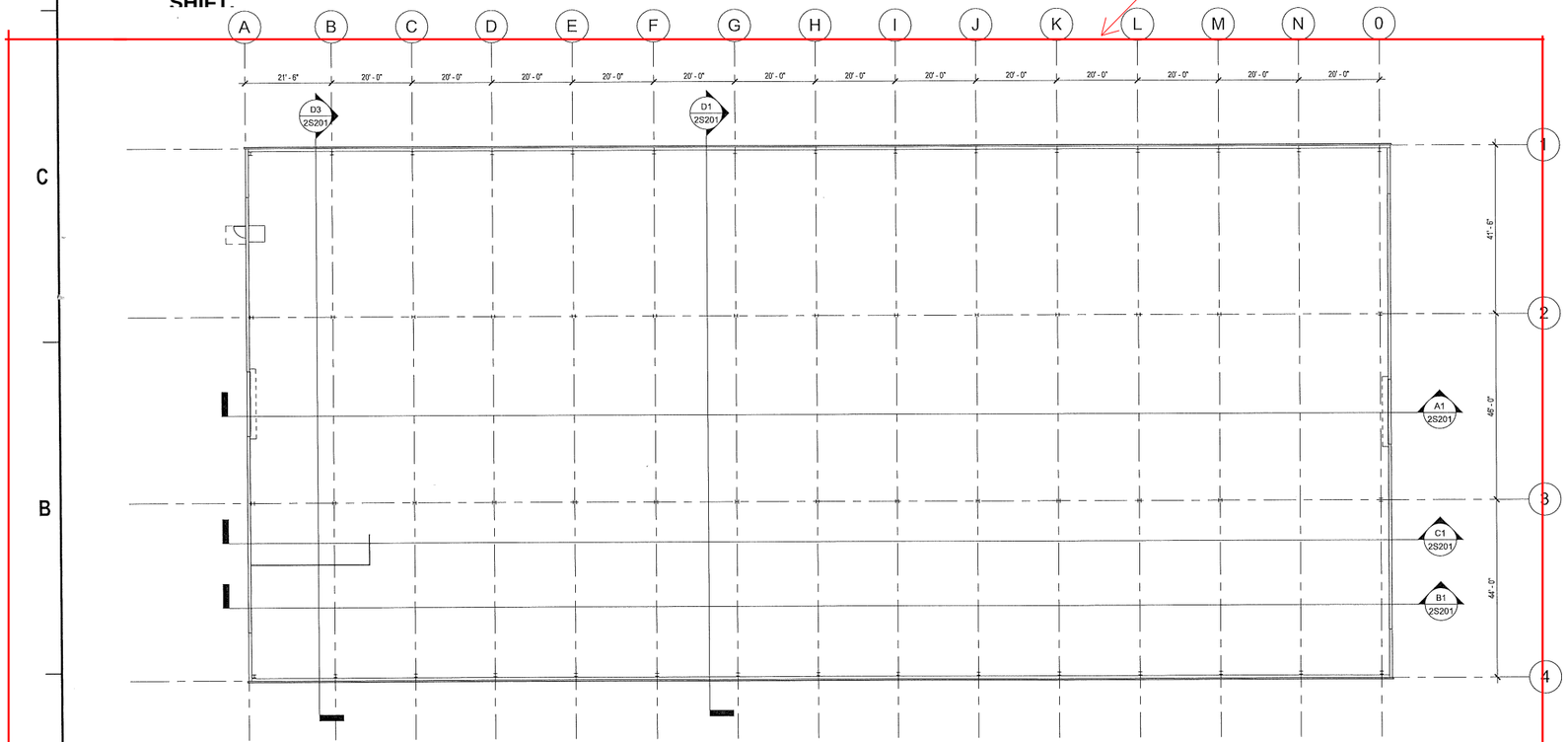
SCALE: AS NOTED
EPROJECT NO.: 1765897
CONSTR. CNTR. NO.: N62473-19-D1212
NAVFAC DRAWING NO.
SHEET 20 OF 70
2S101
DRAWING REVISION: 25 AUGUST 2020

BUILDING 366
ROOF LEVEL

THE SCOPE OF WORK FOR THE ROOF INCLUDES THE REMOVAL OF THE ROOF PANELS WHICH ARE COATED WITH AN ASBESTOSSILVER PAINT AS WELL AS AN ASBESTOS PENETRATION MASTIC. THE PANELS WILL BE REMOVED IN THEIR ENTIRETY ANDPACKAGED FOR DISPOSAL AS AN ASBESTOS WASTE.

THE WORK WILL BE PERFORMED WITHIN A REGULATED WORK AREA. THE WORK AREA WILL BE DEFINED BYINSTALLING DELINEATORS AND BARRIER CHAIN AND SIGNAGE. A CLEAN AREA WILL BE DESIGNATED FORWORKERS TO DECONTAMINATE AND CHANGE INTO THEIR STREET CLOTHES AT THE END OF THE WORK SHIFT.

BOUNDRIES OF THE REGULATED



A1 ROOF PLAN
SCALE: 1/16" = 1'-0"

STRUCTURAL GENERAL NOTES

1. ALL DIMENSIONS ARE +/-. CONTRACTOR FIELD VERIFY ALL DIMENSIONS.
2. FINISHED FLOOR ELEVATION = 0'-0" UON.
3. SECTIONS REPRESENT TYPICAL CONDITIONS IN EACH BUILDING.
4. SEE S-001 FOR TYPICAL SLAB REMOVAL DETAILS.
5. BLDG 366 STRUCTURAL SYSTEM CONSISTS OF WELDED AND RIVETED STRUCTURAL STEEL WITH CONC SLAB-ON-GRADE.
6. NOT ALL KEYNOTES INDICATED BELOW MAY BE USED ON THIS DRAWING.

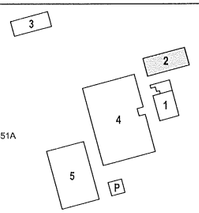
KEYNOTES

1. TYP COL AND BM CONN
2. GENERAL FRAMING ARRANGEMENT
3. TYP EXT COL AND TRUSS
4. TYP PULINS AND METAL DECK
5. TYP BRACED BAY
6. TYP TRUSS BRIDGING
7. WOOD FRAMED MEZZANINE
8. 5" THICK CONC SLAB-ON-GRADE

PHOTOGRAPH NOTES

1. STL TRUSS (TYP)
2. WOOD FRAME MEZZANINE (TYP)
3. CONC VAULT (TYP)
4. 5" THICK SLAB-ON-GRADE (TYP)
5. W12 STL BM (TYP)
6. W10 STL CRANE RAIL BM (TYP)
7. W6 EXT STL COL (TYP)
8. (2) W10 INT STL COL (TYP)
9. L6" X 6" STL ANGLE TOP AND BOTT CHORD TYP)
10. L4" X 4" STL ANGLE (TYP)
11. WOOD MEZZANINE
12. 12" SQ WOOD COL (TYP)

KEY PLAN



1 = BUILDING 351 & 351A
2 = BUILDING 366
3 = BUILDING 401
4 = BUILDING 411
5 = BUILDING 439
P = PAD 408

PLAN NORTH

APPR | DATE | SYM | DESCRIPTION

NAVFAC

CONCEPTUAL NOT FOR CONSTRUCTION

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
J. ABRIL | D. KNUDSEN | D. STEPHENS
PWDR
BRANCH MANAGER
CHIEF ENGINEER
FIRE PROTECTION

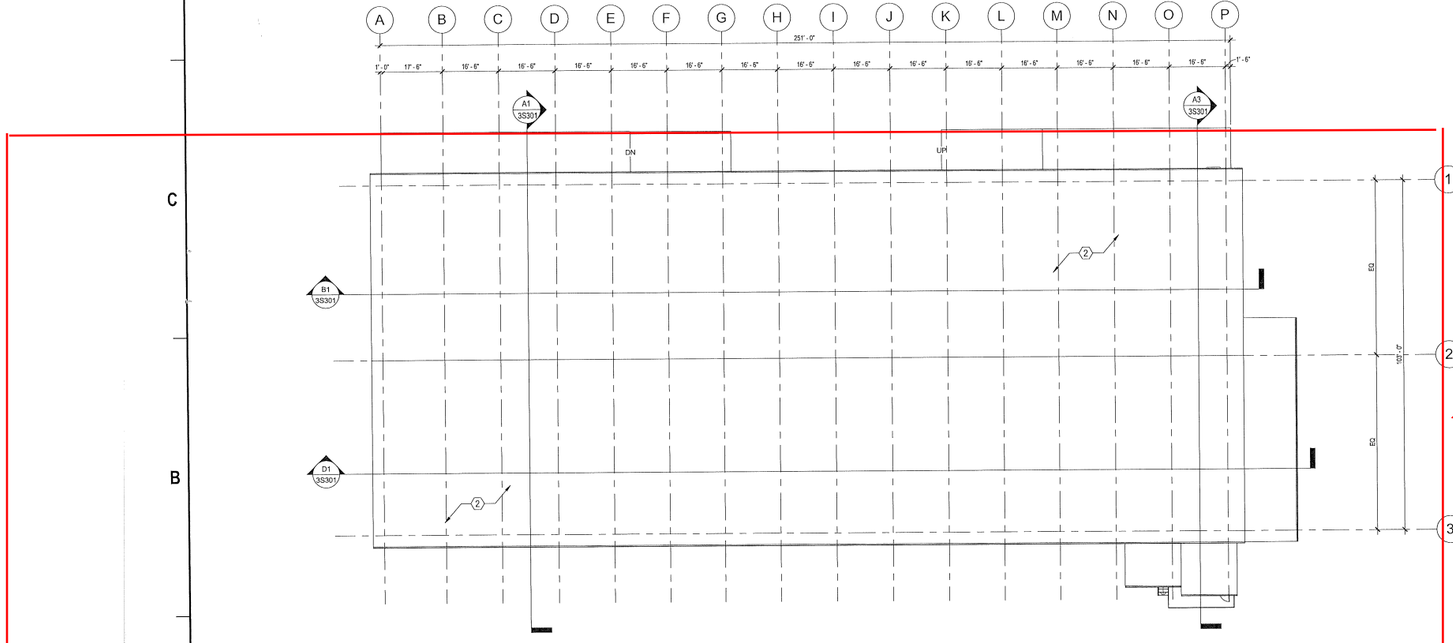
DEPARTMENT OF THE NAVY
NAVFAC SOUTHWEST
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND – SOUTHWEST
SAN DIEGO, CALIFORNIA
HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CALIFORNIA
HUNTERS POINT PARCEL G
BUILDING DEMOLITION - BRAC
BLDG 366: ROOF PLAN

SCALE: AS NOTED
EFPROJECT NO.: 1765897
CONSTR. CONTR. NO.: N62473-19-D1212
NAVFAC DRAWING NO.
SHEET 21 OF 70
2S121

DRAWFORM REVISION: 25 AUGUST 2020

BUILDING 401

THE SCOPE OF WORK FOR BUILDING 401 INCLUDES THE REMOVAL OF THE PCB WINDOW CAULK/SEALANT FROM THE PERIMETERWINDOWS. ALSO THE REMOVAL OF THE LOOSE & FLAKY LEAD PAINT. THE ROOF OF BUILDING 401 IS ASBESTOS CONTAININGHOWEVER THE ROOF IS IN POOR CONDITION AND UNSAFE FOR WORKERS SO THE ROOF WILL BE TAKEN DOWN WITH THE DEMOLITIONBY SILVERADO. THE ABATEMENT SCOPE WILL BE PERFORMED WITHIN A REGULATED WORK AREA. THE WORK AREA WILL BE DEFINED BY DELINEATORSAND BARRIER CHAIN AND SIGNAGE. WINDOWS CONTAINING PCB SEALANT WILL BE REMOVED IN THEIR ENTIRETY AND PACKAGED FOR DISPOSAL AS A PCB WASTE. LOOSE LEAD PAINT WILL BE BRUSHED AND SCRAPED OFF AND A COMMERCIAL PRIMER WILL BE APPLIED TO STABILIZE THE REMAINING PAINTED SURFACES.



A1 ROOF PLAN - BUILDING 401
SCALE: 1/16" = 1'-0"

THE ASBESTOS ROOFING MATERIALS WILL BE MANAGED DURING THE DEMOLITIONOF THE BUILDING. BAYVIEW WILL CLEAN THE CONCRETE SLAB AFTER THE DEMOLITIONIS COMPLETED. BAYVIEW WILL USE SQUEEGIES AND WATER TO PUSH THE DEBRIS INTOPILES WHERE IT CAN BE SHOVELED UP AND PACKAGED FOR DISPOSAL AS ASBESTOSWASTE. A FINAL HEPA VACUUM AND WET MOP IF NECESSARY WIL LBE PERFORMED TOCLEAN THE SLAB.

A CLEAN AREA WILL BE SET UP OUTSIDE THE WORK AREA WITH LOCKERS TO

PERIMET

STRUCTURAL GENERAL NOTES

1. ALL DIMENSIONS ARE +/- CONTRACTOR FIELD VERIFY ALL DIMENSIONS.
2. FINISHED FLOOR ELEVATION = 0'-0" UON.
3. SECTIONS REPRESENT TYPICAL CONDITIONS IN EACH BUILDING.
4. BLDG 401 INCLUDES A CONC SLAB-ON-GRADE.
5. SEE S-001 FOR TYPICAL SLAB REMOVAL DETAILS.
6. BLDG 401 STRUCTURAL SYSTEM CONSISTS OF WOOD FRAMING WITH CONC SLAB-ON-GRADE.
7. NOT ALL KEYNOTES INDICATED BELOW MAY BE USED ON THIS DRAWING.

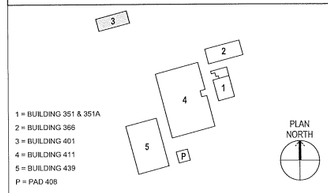
(#) KEYNOTES

1. WOOD TRUSS (TYP)
2. NON-LOADBEARING WOOD WALL (TYP)
3. WOOD COL (TYP)
4. 18" SQ WOOD COL (TYP)
5. 12" SQ WOOD COL (TYP)
6. (2) 3" X 8" WOOD CHORD MEMBER (TYP)
7. 3" X 8" WOOD DIAGONAL (TYP)
8. 2" X 8" KICKERS (TYP)
9. 2" X 8" WOOD PURLINS (TYP)
10. 2" X 12" WOOD JOIST (TYP)
11. 2" WOOD DECKING (TYP)
12. 1" STL PLATE (TYP)
13. 10" THICK CONC SLAB-ON-GRADE (TYP)
14. 2" X 6" WOOD STUDS @ 12" OC (TYP)
15. RIDGE (TYP)

P# PHOTOGRAPH NOTES

1. GENERAL FRAMING LAYOUT
2. TYP INT COL LINE
3. TYP INT COL
4. TYP 1ST FLOOR COL
5. TYP ROOF TRUSS AND BRIDGING
6. TYP COL AND TRUSS CONN
7. TYP EXT COL AND TRUSS CONN
8. TYP 2ND LEVEL FRAMING
9. TYP EXT BLDG ENVELOPE

KEY PLAN



1 = BUILDING 351 & 351A
2 = BUILDING 366
3 = BUILDING 401
4 = BUILDING 411
5 = BUILDING 439
P = PAD 408

APPR. | DATE | STM | DESCRIPTION

NAVFAC

CONCEPTUAL NOT FOR CONSTRUCTION

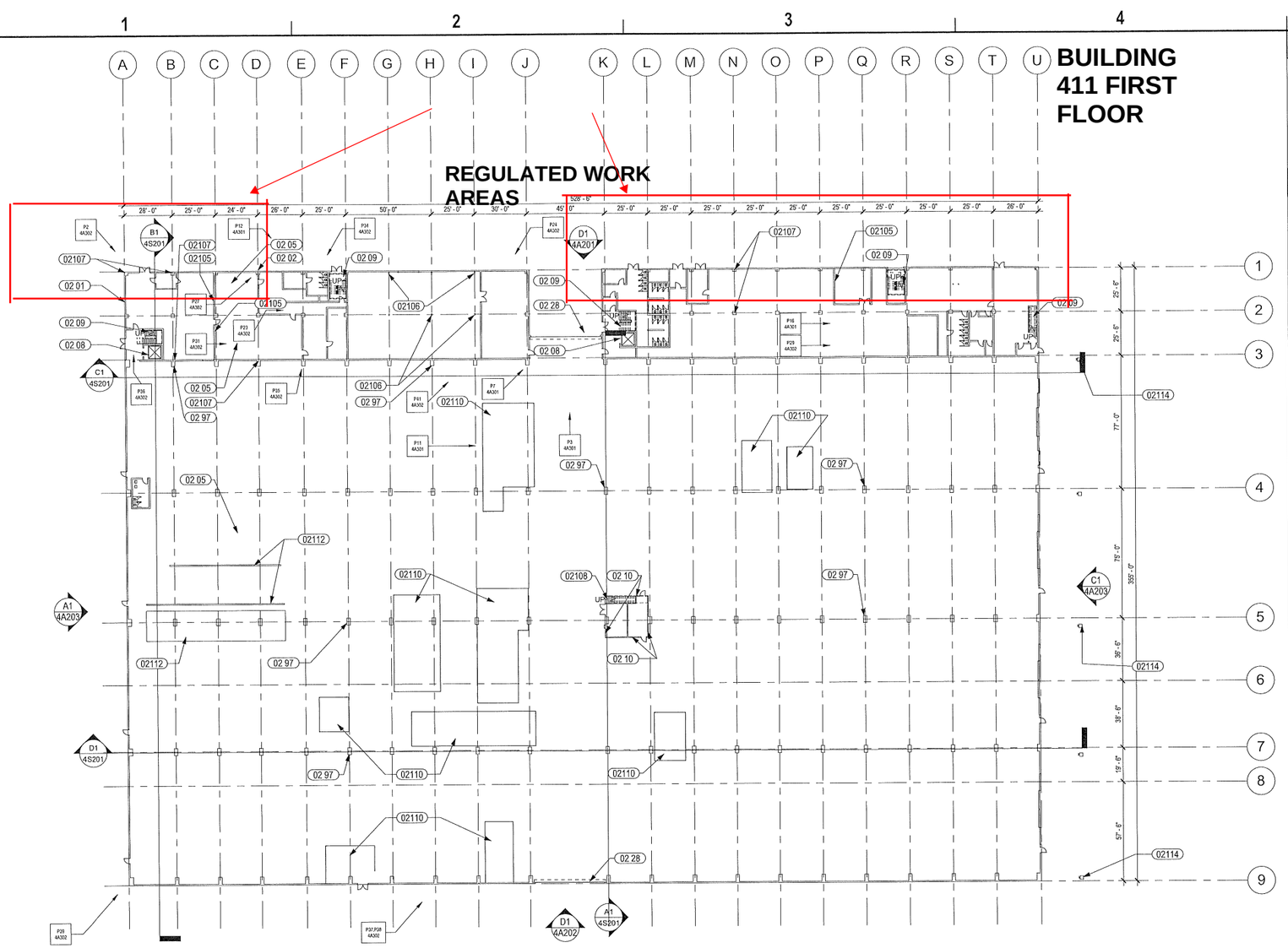
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
A. ABRIL | T. HULQUEEN | D. STEPHENS
FIXED
BRANCH ENGINEER
CHIEF ENGINEER
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND – SOUTHWEST
1220 PACIFIC HIGHWAY, SAN DIEGO, CA 92132-5190
HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CALIFORNIA
HUNTERS POINT PARCEL G
BUILDING DEMOLITION - BRAC
BLDG 401 - ROOF PLAN

SCALE: AS NOTED
E/PRODJECT NO.: 1765897
CONSTR. CONTR. NO.
N62473-19-D1212
NAVFAC DRAWING NO.
SHEET 31 OF 70
3S131
DRAWFORV REVISION: 25 AUGUST 2020

BUILDING 411 FIRST FLOOR

REGULATED WORK AREAS



THE TWO CONCRETE STRUCTURES (TWO STORY) LOCATED ON THE NORTH END WILL BE CONTAINED AND ABATED. THE FIRST FLOORS OFTHE TWO STRUCTURES WILL BE REGULATED WORK AREAS TO CLEAN UP ASBESTOS DEBRIS AND LOOSE & FLAKY LEAD PAINTS. THE SECOND FLOORS WILL BE CLASS I NEGATIVE PRESSURE CONTAINMENTS TO REMOVE DRYWALL JOINT COMPOUND, FIREPROOFING, ANDACM FLOORING.

LOOSE & FLAKY LEAD PAINT WILL BE REMOVED FROM THE EXTERIOR OF THE TWO STRUCTURES AS WELL AS ALL INTERIOR

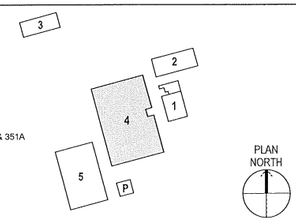
A1 FIRST FLOOR PLAN
SCALE: 1/32" = 1'-0"

SEE SHEET G-002 FOR GENERAL NOTES

KEYNOTES

02 01	EXTERIOR CONCRETE WALL - UNO, TYPICAL THIS BUILDING
02 02	CONCRETE COLUMN
02 05	CONCRETE FLOOR SLAB ON GRADE
02 08	ELEVATOR
02 09	CONCRETE STAIR/LANDING
02 10	INTERIOR CONCRETE WALL
02 28	COILING OVERHEAD DOOR
02 97	INTERIOR STITCHED COLUMN
02105	INTERIOR FRAMED WALLS WITH PLASTER FINISH - TYPICAL ON THE EAST PORTION OF BUILDING (4) 411.
02106	STEEL COLUMNS AT OPEN TO AIR STRUCTURE
02107	CONCRETE COLUMN - TYPICAL ON FIRST FLOOR OF THE EAST PORTION OF BUILDING (4) 411.
02108	STEEL STAIR AND CONCRETE UPPER LANDING
02110	UNCOVERED FLOOR RECESS. FIELD VERIFY LOCATION OF UNCOVERED FLOOR RECESSES.
02112	RAISED CONCRETE PAD APPROX. 3 FEET TALL. FIELD VERIFY CONFIGURATIONS
02114	EXTERIOR BUTTRESS COLUMN

KEY PLAN



1 = BUILDING 351 & 351A
2 = BUILDING 366
3 = BUILDING 401
4 = BUILDING 411
5 = BUILDING 439
P = PAD 408

PLAN NORTH

NAVFAC

CONCEPTUAL NOT FOR CONSTRUCTION

SYM | DESCRIPTION | DATE | APPR

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
BY J. ABRIL | BY T. PENTECOST | BY H. HOWARD
FINISH
BRANCH MANAGER
CHIEF ENGINRCH
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
NAVFAC SOUTHWEST

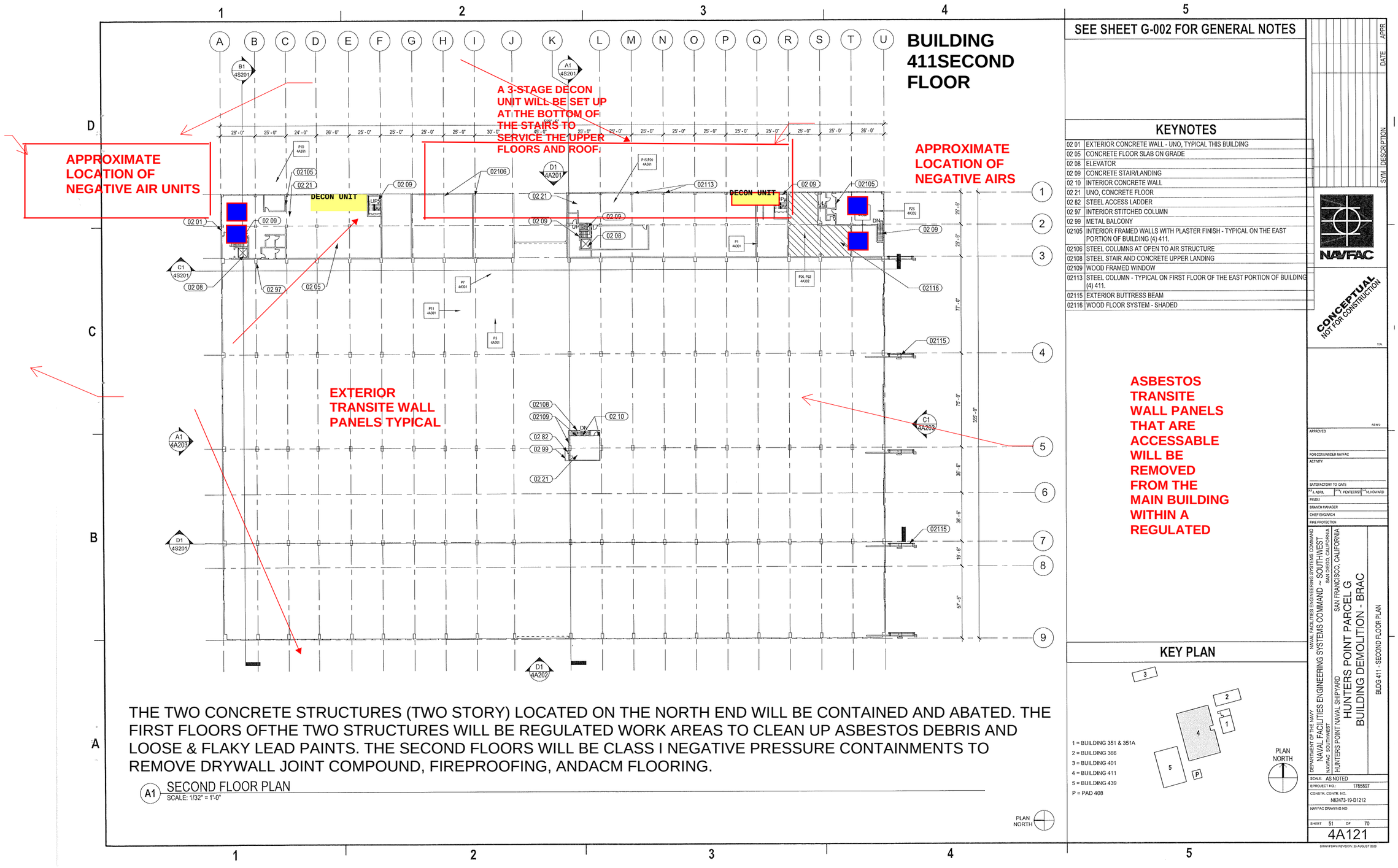
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ SOUTHWEST
SAN DIEGO, CALIFORNIA

HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CALIFORNIA

HUNTERS POINT PARCEL G
BUILDING DEMOLITION - BRAC

BLDG 411 - FIRST FLOOR PLAN

SCALE: AS NOTED
EFROJECT NO.: 1765897
CONSTR. CONTR. NO.: N62473-19-D1212
NAVFAC DRAWING NO.
SHEET 50 OF 70
4A111
DRAWFORM REVISION: 25 AUGUST 2020


APPROXIMATE LOCATION OF NEGATIVE AIR UNITS
A 3-STAGE DECON UNIT WILL BE SET UP AT THE BOTTOM OF THE STAIRS TO SERVICE THE UPPER FLOORS AND ROOF.
APPROXIMATE LOCATION OF NEGATIVE AIRS
DECON UNIT
DECON UNIT
EXTERIOR TRANSITE WALL PANELS TYPICAL
ASBESTOS TRANSITE WALL PANELS THAT ARE ACCESSABLE WILL BE REMOVED FROM THE MAIN BUILDING WITHIN A REGULATED
BUILDING 411SECOND FLOOR
SEE SHEET G-002 FOR GENERAL NOTES
KEYNOTES
02 01 EXTERIOR CONCRETE WALL - UNO, TYPICAL THIS BUILDING
02 05 CONCRETE FLOOR SLAB ON GRADE
02 08 ELEVATOR
02 09 CONCRETE STAIR/LANDING
02 10 INTERIOR CONCRETE WALL
02 21 UNO, CONCRETE FLOOR
02 82 STEEL ACCESS LADDER
02 97 INTERIOR STITCHED COLUMN
02 99 METAL BALCONY
02105 INTERIOR FRAMED WALLS WITH PLASTER FINISH - TYPICAL ON THE EAST PORTION OF BUILDING (4) 411.
02106 STEEL COLUMNS AT OPEN TO AIR STRUCTURE
02108 STEEL STAIR AND CONCRETE UPPER LANDING
02109 WOOD FRAMED WINDOW
02113 STEEL COLUMN - TYPICAL ON FIRST FLOOR OF THE EAST PORTION OF BUILDING (4) 411.
02115 EXTERIOR BUTTRESS BEAM
02116 WOOD FLOOR SYSTEM - SHADED
KEY PLAN
1 = BUILDING 351 & 351A
2 = BUILDING 366
3 = BUILDING 401
4 = BUILDING 411
5 = BUILDING 439
P = PAD 408
PLAN NORTH
CONCEPTUAL NOT FOR CONSTRUCTION
NAVFAC
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND SOUTHWEST
NAVFAC SOUTHWEST
HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CALIFORNIA
HUNTERS POINT PARCEL G
BUILDING DEMOLITION - BRAC
BLDG 411 - SECOND FLOOR PLAN
SCALE: AS NOTED
EPROJECT NO: 1765897
CONSTR. CONTR. NO. N52473-19-D1212
NAVFAC DRAWING NO.
SHEET 51 OF 70
4A121
DRAWFORM REVISION: 25 AUGUST 2020
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
FIS101
BRANCH MANAGER
CHIEF ENGARCH
FIRE PROTECTION
SYM DESCRIPTION DATE APPR
THE TWO CONCRETE STRUCTURES (TWO STORY) LOCATED ON THE NORTH END WILL BE CONTAINED AND ABATED. THE FIRST FLOORS OFTHE TWO STRUCTURES WILL BE REGULATED WORK AREAS TO CLEAN UP ASBESTOS DEBRIS AND LOOSE & FLAKY LEAD PAINTS. THE SECOND FLOORS WILL BE CLASS I NEGATIVE PRESSURE CONTAINMENTS TO REMOVE DRYWALL JOINT COMPOUND, FIREPROOFING, ANDACM FLOORING.
A1 SECOND FLOOR PLAN
SCALE: 1/32" = 1'-0"

BUILDING 411ROOF

TAR AND GRAVEL ROOF/ACM PERIMETER ROOF MASTIC/ACM

TAR AND GRAVEL ROOF/ACM

OPEN

AFTER DEMOLITION IS COMPLETE BAYVIEW WILL CLEAN THE CONCRETE SLABBAYVIEW WILL USE SQUEEGIES AND WATER TO PUSH THE DEBRIS INTO PILES.AFTER THE BULK DEBRIS IS REMOVED A HEPA VACUUM AND WET MOP WILL BE PERFORMED TO CLEAN THE SLAB. WASTE GENERATED WILL BE PACKAGED AND DISPOSED OF AS AN ASBESTOS HAZARDOUS WASTE MATERIAL.

THE ROOF STRUCTURES OF THE TWO NORTH OFFICE STRUCTURES HAVE ASBESTOS ROOFING AND MASTICS. THESE WILLBE ABATED WITHIN A REGULATED WORK AREA. THE WORK AREA WILL BE CONTROLLED AT THE STAIRS USING DANGER SIGNS.THE DECON WILL BE LOCATED AT THE BASE OF THE STAIRS ON THE FIRST

A1 THIRD FLOOR PLAN (LOWER ROOF PLAN)
SCALE: 1/32" = 1'-0"

SEE SHEET G-002 FOR GENERAL NOTES

KEYNOTES

02 08	ELEVATOR
02 09	CONCRETE STAIR/LANDING
02 31	BUILT-UP ROOF SYSTEM
02 32	CONCRETE PARAPET
02117	PLYWOOD "BOXES" PROTRUDE APPROXIMATELY 2 FEET VERTICALLY FROM ROOF SURFACE AT INTERIOR COLUMN LOCATIONS TYPICAL
02118	ROOF BELOW

KEY PLAN

1 = BUILDING 351 & 351A
2 = BUILDING 366
3 = BUILDING 401
4 = BUILDING 411
5 = BUILDING 439
P = PAD 408

PLAN NORTH

SYM	DESCRIPTION	DATE	APPR

NAVFAC

CONCEPTUAL NOT FOR CONSTRUCTION

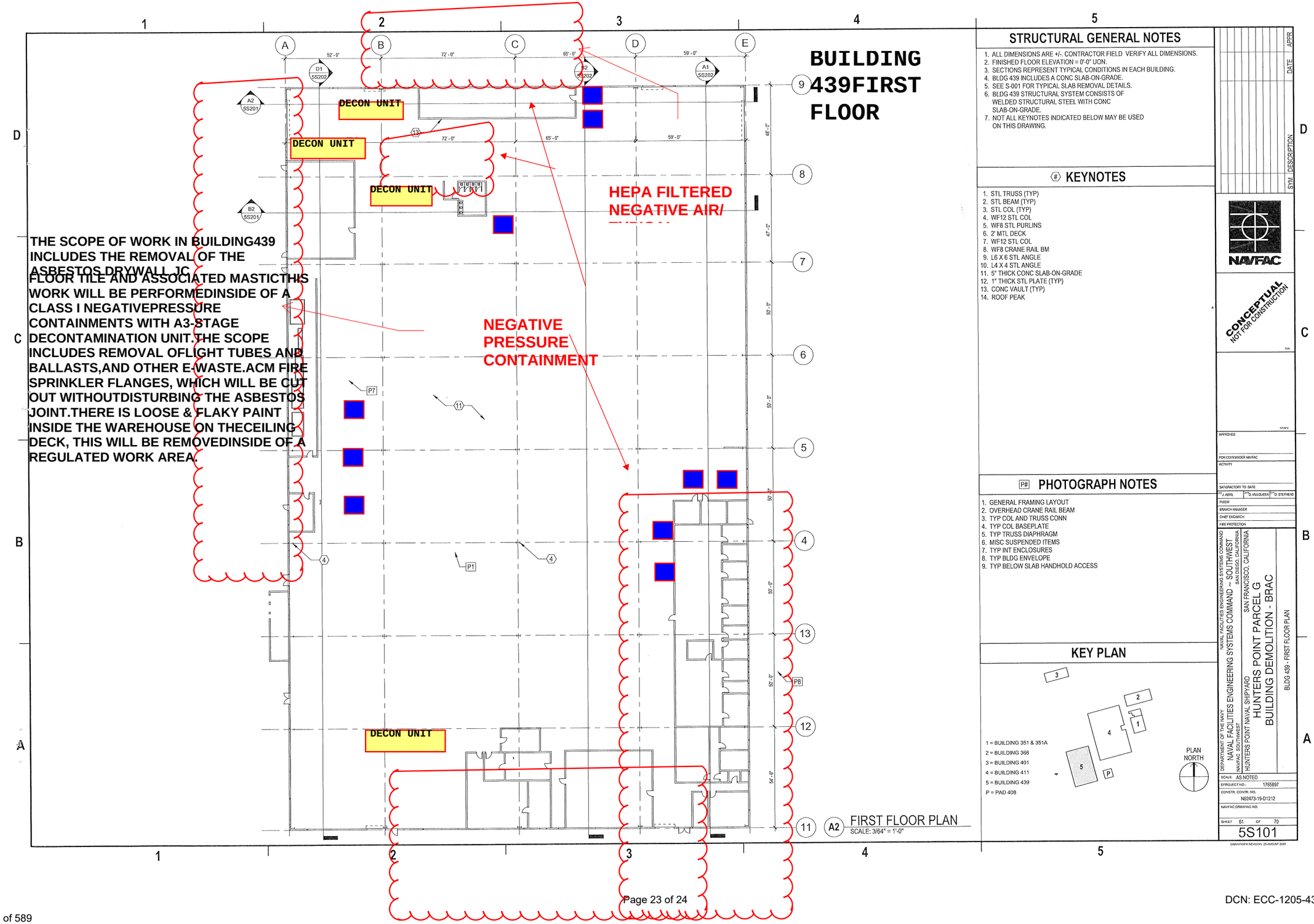
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
J. ABRIL T. PENTECOST H. HOVARD
PWDSI
BRANCH MANAGER
CHIEF ENGWRCH
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ SOUTHWEST
SAN DIEGO, CALIFORNIA
NAVFAC SOUTHWEST
HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CALIFORNIA
HUNTERS POINT PARCEL G
BUILDING DEMOLITION - BRAC
BLDG 411 - THIRD FLOOR PLAN (LOWER ROOF PLAN)

SCALE	AS NOTED
EFROJECT NO.:	1765897
CONSTR. CONTR. NO.	N62473-19-D1212
NAVFAC DRAWING NO.	
SHEET	52 OF 70

4A131

DRAWFORM REVISION: 25 AUGUST 2020



STRUCTURAL GENERAL NOTES

1. ALL DIMENSIONS ARE +/- CONTRACTOR FIELD VERIFY ALL DIMENSIONS.
2. FINISHED FLOOR ELEVATION = 0'-0" UON.
3. SECTIONS REPRESENT TYPICAL CONDITIONS IN EACH BUILDING.
4. BLDG 439 INCLUDES A CONC SLAB-ON-GRADE.
5. SEE S-001 FOR TYPICAL SLAB REMOVAL DETAILS.
6. BLDG 439 STRUCTURAL SYSTEM CONSISTS OF WELDED STRUCTURAL STEEL WITH CONC SLAB-ON-GRADE.
7. NOT ALL KEYNOTES INDICATED BELOW MAY BE USED ON THIS DRAWING.

KEYNOTES

1. STL TRUSS (TYP)
2. STL BEAM (TYP)
3. STL COL (TYP)
4. WF12 STL COL
5. WF8 STL PURLINS
6. 2" MTL DECK
7. WF12 STL COL
8. WF8 CRANE RAIL BM
9. L6 X 6 STL ANGLE
10. L4 X 4 STL ANGLE
11. 5" THICK CONC SLAB-ON-GRADE
12. 1" THICK STL PLATE (TYP)
13. CONC VAULT (TYP)
14. ROOF PEAK

PHOTOGRAPH NOTES

1. GENERAL FRAMING LAYOUT
2. OVERHEAD CRANE RAIL BEAM
3. TYP COL AND TRUSS CONN
4. TYP COL BASEPLATE
5. TYP TRUSS DIAPHRAGM
6. MISC SUSPENDED ITEMS
7. TYP INT ENCLOSURES
8. TYP BLDG ENVELOPE
9. TYP BELOW SLAB HANDHOLD ACCESS

KEY PLAN

NAVFAC

CONCEPTUAL NOT FOR CONSTRUCTION

SYM	DESCRIPTION	DATE	APPR

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
J. ABRIL | D. VILLQUIER | D. STEPHENS
PWDM
BRANCH MANAGER
CHIEF ENGARCH
FIRE PROTECTION

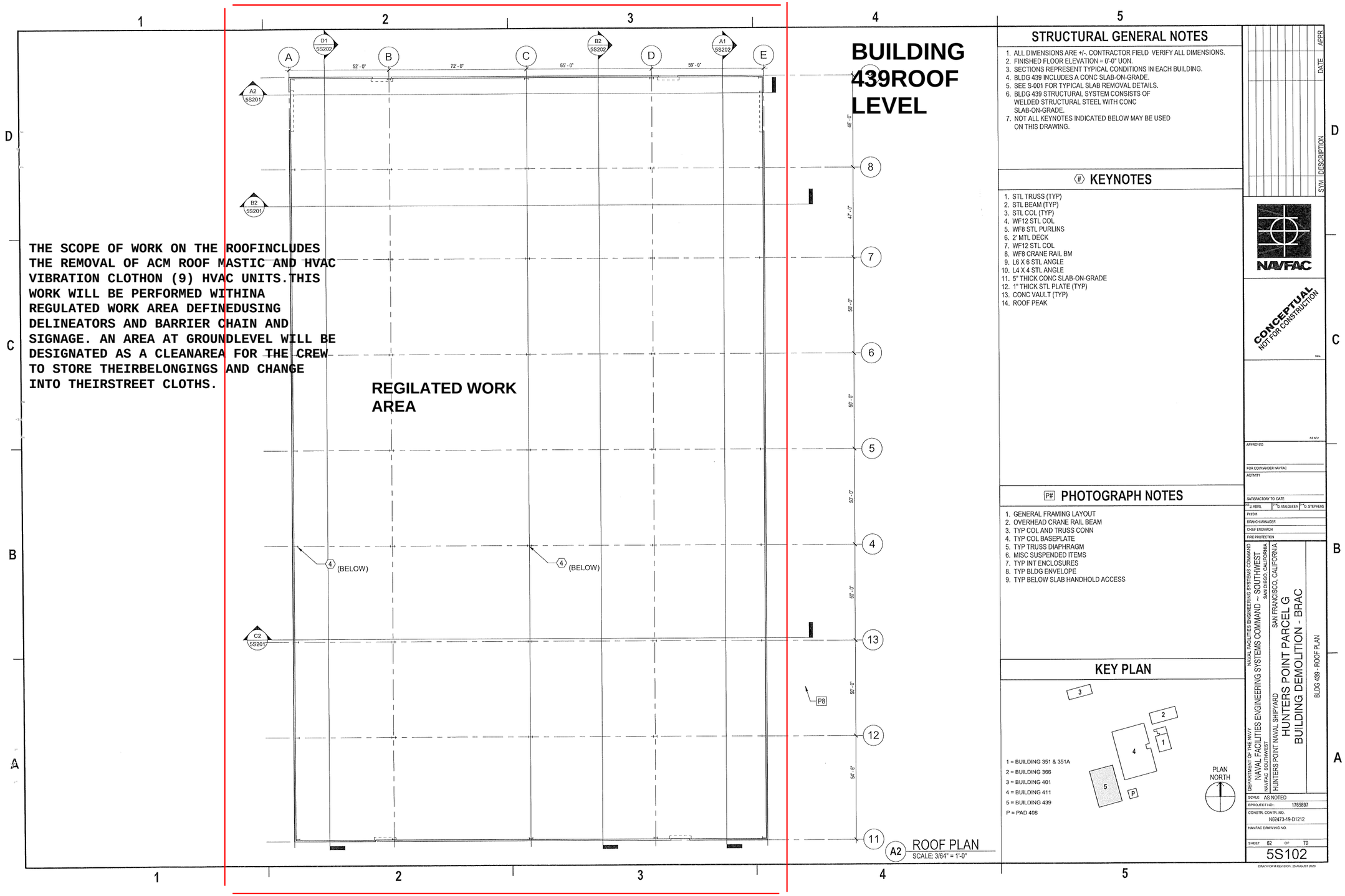
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
NAVFAC SOUTHWEST
HUNTERS POINT NAVAL SHIPYARD

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND – SOUTHWEST
SAN DIEGO, CALIFORNIA

SAN FRANCISCO, CALIFORNIA
HUNTERS POINT PARCEL G
BUILDING DEMOLITION - BRAC
BLDG 439 - FIRST FLOOR PLAN

SCALE: AS NOTED
EFD/LEJFT NO.: 1765897
CONSTR. CONTR. NO.: N62473-19-D1212
NAVFAC DRAWING NO.
SHEET 61 OF 70
5S101

DAWN FORM REVISED: 25 AUGUST 2020



STRUCTURAL GENERAL NOTES

1. ALL DIMENSIONS ARE +/-. CONTRACTOR FIELD VERIFY ALL DIMENSIONS.
2. FINISHED FLOOR ELEVATION = 0'-0" UON.
3. SECTIONS REPRESENT TYPICAL CONDITIONS IN EACH BUILDING.
4. BLDG 439 INCLUDES A CONC SLAB-ON-GRADE.
5. SEE S-001 FOR TYPICAL SLAB REMOVAL DETAILS.
6. BLDG 439 STRUCTURAL SYSTEM CONSISTS OF WELDED STRUCTURAL STEEL WITH CONC SLAB-ON-GRADE.
7. NOT ALL KEYNOTES INDICATED BELOW MAY BE USED ON THIS DRAWING.

KEYNOTES

1. STL TRUSS (TYP)
2. STL BEAM (TYP)
3. STL COL (TYP)
4. WF12 STL COL
5. WF8 STL PURLINS
6. 2" MTL DECK
7. WF12 STL COL
8. WF8 CRANE RAIL BM
9. L6 X 6 STL ANGLE
10. L4 X 4 STL ANGLE
11. 5" THICK CONC SLAB-ON-GRADE
12. 1" THICK STL PLATE (TYP)
13. CONC VAULT (TYP)
14. ROOF PEAK

PHOTOGRAPH NOTES

1. GENERAL FRAMING LAYOUT
2. OVERHEAD CRANE RAIL BEAM
3. TYP COL AND TRUSS CONN
4. TYP COL BASEPLATE
5. TYP TRUSS DIAPHRAGM
6. MISC SUSPENDED ITEMS
7. TYP INT ENCLOSURES
8. TYP BLDG ENVELOPE
9. TYP BELOW SLAB HANDHOLD ACCESS

KEY PLAN

1 = BUILDING 351 & 351A
2 = BUILDING 366
3 = BUILDING 401
4 = BUILDING 411
5 = BUILDING 439
P = PAD 408

NAVFAC

CONCEPTUAL NOT FOR CONSTRUCTION

SYM	DESCRIPTION	DATE	APPR

AS NO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

CO J. ABRIL	PWDM D. ESUGUEN	CE D. STEPHENS

PWDM

BRANCH MANAGER

CHIEF ENGINEER

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
NAVFAC SOUTHWEST

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND – SOUTHWEST
SAN DIEGO, CALIFORNIA

HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CALIFORNIA

HUNTERS POINT PARCEL G
BUILDING DEMOLITION - BRAC

BLDG 439 - ROOF PLAN

SCALE:	AS NOTED
EPROJECT NO.:	1765897
CONSTR. CONTR. NO.	N62473-19-D1212
NAVFAC DRAWING NO.	
SHEET	62 OF 70

5S102

DRAWFORM REVISION: 25 AUGUST 2020

Attachment B
Structural Engineering Plans

FBA INC
STRUCTURAL ENGINEERS

1675 Sabre Street
Hayward, CA 94545
510-265-1828

June 3, 2025

Ms. Kaiulani Watson
ECC
700 Airport Blvd, Suite 250
Burlingame, CA 94010
KWatson@ecc.net

ECC Project No. **5459.397**

Re: Hunters Point, Parcel G Building Demolition – Buildings 401 & 411

Sub: Structural Inspection Summary and Demolition Recommendation

Dear Ms. Watson,

On May 20, 2025, FBA conducted a structural inspection as part of the Pre-Demolition Structural Survey for five buildings included in NAVFAC Contract No. N62473-19-D-1212. Representatives from Silverado (demolition contractor), Bay View (abatement contractor), and ECC were present during the inspection.

Based on our Pre-Demolition Survey and the reports submitted on June 2, 2025, we recommend that the following two buildings be demolished primarily using the **Open-Air Wet Method** due to their deteriorated conditions and structural instability. Please refer to the attached Pre-Demolition Survey for further details.

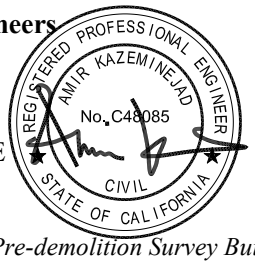
Building 401:
The entire structure is deemed structurally unsafe for entry, making it unsuitable for interior abatement or other demolition-related activities.

Building 411:
Except for the North and South Office annexes, the remainder of the building is structurally unsafe and unsuitable for abatement or demolition work from within.

Should you have questions regarding our findings or conclusion, please do not hesitate to contact us.

Sincerely,

FBA, Inc.,
Structural Engineers



Amir Kazemi, PE
Principal

Attachments: *Pre-demolition Survey Buildings 401 & 411*

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510-265-1828

Limitations:

The evaluation and conclusion provided in this letter are based on documents supplied, the best information currently available, and our experience of projects with similar conditions. If additional data becomes available or is generated, indicating conditions different than those observed and described by this report, our firm should be notified so that any necessary modifications may be made to our conclusion.

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Pre Demolition Structural Survey

As the engineer of record for demolition work, FBA has performed a pre-demolition visual survey to determine if the existing condition of the framing, walls and floors are satisfactory for the anticipated abatement and structural demolition. The following reports are based on our structural inspection carried out on 5/20/25 by Amir Kazemi and Martin Wu, with FBA Inc.

DESCRIPTION OF STRUCTURE(S) TO BE REMOVED.

Name of Structure **Building 401**

Location on Site: See Cover sheet and project plans

Description: Building 401 is a wood-frame structure featuring a partial second floor and a mezzanine level. The exterior consists primarily of horizontal wood siding, with some areas clad in metal. The roof system is constructed using heavy timber members mechanically fastened to form trusses. Wood planks span over wood joists, which are supported by deep wood trusses. The entire roof structure shows significant weathering and has been structurally compromised due to prolonged exposure to the elements and water intrusion. The floors on the 2nd level (mezzanine) are also structurally compromised and not safe for abatement work.

Foundation Construction and Material: Concrete footings and slab.

Roof Construction and Material: Wood joists, planks and deep trusses

Wall Construction and Material: Wood

Estimated Floor loading Design PSF: 2nd floor not suitable for abatement without shoring.

STRUCTURAL CONDITIONS

Structural Alterations Yes ___ No _____ Unknown __X__

Unusual Structural Conditions Yes __X____ No __ __Locations: Roof and 2nd floor structurally compromised

Pre-Stressed Concrete Yes ___ No __X__Locations_____

KNOWN STRUCTURAL HAZARDS

Physical Damage Yes __X___ No ____Locations Roof & floor damages

Structural Failures Yes __X___ No _ ___Locations: _Large holes through roof and 2nd floor. Cracking and deflection of wood truss frames__ __

Fire Damage Yes ____ No _X___Locations _____

ADJACENT STRUCTURES

Describe Structure & Conditions __N/A

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Pre Demolition Structural Survey - Cont'd

Temporary Structural Stabilization Required Yes_____ No_X_____

Comments: _**Recommend all required abatement be performed after the demolition of the structure. The interior of this structure is not structurally sound for abatement prior to demolition work.**

Structural Failure Prevention Plan ___Refer to the submitted safety plan and engineered demolition plan. Structural demolition will be conducted on top down, bay-by-bay approach.

Floor and Roof Shoring Plan _See recommendation above

Wall Shoring or Bracing Plan: N/A

Overhead Protective Structures or Scaffold Locations Plan ___N/A

Engineering Survey Complete By

FBA Inc. Structural Engineers, Amir Kazemi, PE

Date: 05/23/2025

The evaluation and conclusion provided in this letter are based on documents supplied, the best information currently available, and our demolition experience on concrete projects with similar conditions. If additional data becomes available or is generated, indicating conditions different than those observed and described by this report, our firm should be notified so that any necessary modifications may be made to our conclusion.

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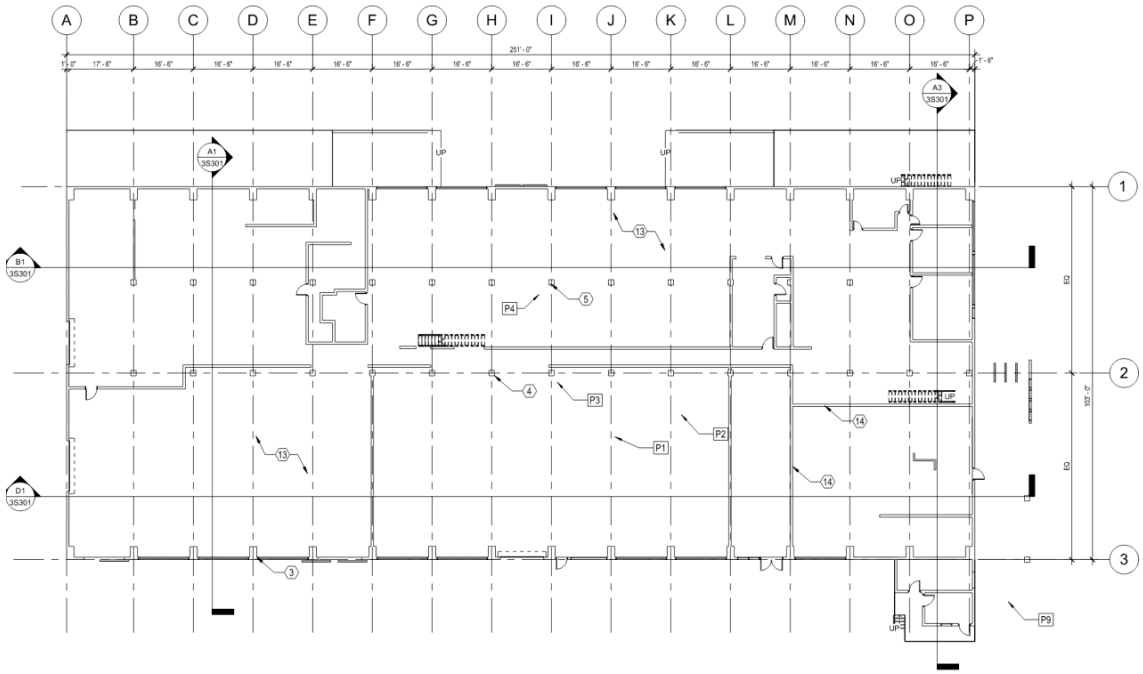
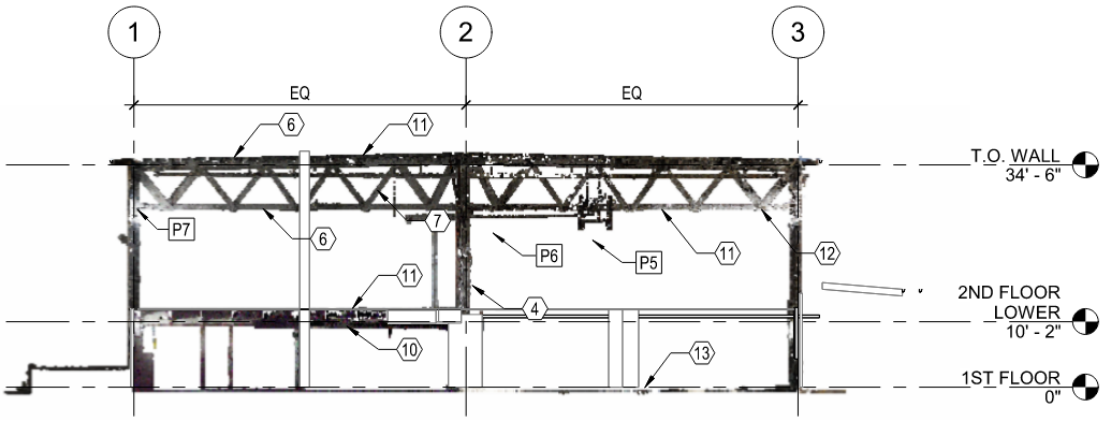


Building 401 - Floor plan



A1 BUILDING 401 SECTION
SCALE: 1/16" = 1'-0"

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1 – Building 401 – Exterior East face

2 – Building 401 – Exterior South face

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3 – Roof steel trusses and mezzanine

4 – Roof Trusses and mezzanine

5 – weathered roof condition

6 – Roof area with holes. Wood truss members with excessive deflections

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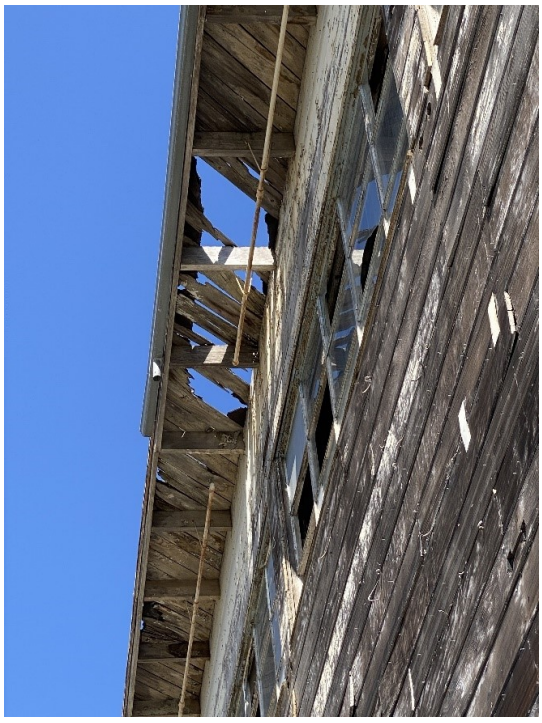
7 – Weathered roof planks

8 – Weathered roof planks



9 – Weathered roof eves

10 – Weathered roof planks

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11 – 2nd floor- ceiling collapse

12 – exterior wall leaning inward with inadequate bracing

13 – Typical timber columns with excessive cracking

14 – 2nd floor exposed to water, rotted

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Pre Demolition Structural Survey

As the engineer of record for demolition work, FBA has performed a pre-demolition visual survey to determine if the existing condition of the framing, walls and floors are satisfactory for the anticipated abatement and structural demolition. The following reports are based on our structural inspection carried out on 5/20/25 by Amir Kazemi and Martin Wu, with FBA Inc.

DESCRIPTION OF STRUCTURE(S) TO BE REMOVED.

Name of Structure **Building 411**

Location on Site: See Cover sheet and project plans

Description: Building 411 is a steel-framed and concrete structure. Two-floor office areas, referenced as the north and south office wings, exist on the east side of the main building. A crawl space with exposed soil exists under the east office area. The exterior of the east office area is concrete, and the roof has built-up asphalt roofing system. The main building is composed of a north and south section. The north section of the main building has a second floor and a mezzanine level. The south section of the building is open from the ground floor to the roof deck. The main building is a steel frame and partially clad with corrugated asbestos cement panels. The roof and upper floors have corrugated steel pan decks. The main building has a section of tar and gravel asphalt roofing with a Sawtooth center roofing design that incorporates north facing clerestory windows. The sawtooth roof sections have built-up asphalt roofing. Most interior finishes have been removed from the east office areas and ground floor of the main building. Exterior cladding and window systems have been partially removed.

Significant sections of the roof structure and 2nd floor of the main buildings are deteriorated with associated debris falling within the structure

Foundation Construction and Material: Concrete footings and slab.

Roof Construction and Material: Main Building: Steel trusses with corrugated steel panels.

North and south office buildings: Concrete slabs and areas with metal decking

Wall Construction and Material: concrete / metal cladding

Estimated Floor loading Design PSF: Main Building: unsafe to work on the elevated floors. North and south office building: 40 psf , small equipment & bobcats (5,000 lbs) allowed on concrete and roof floors. See plan

STRUCTURAL CONDITIONS

Structural Alterations Yes ___ No _____ Unknown __X__

Unusual Structural Conditions Yes __X____ No __ __Locations: Roof and Elevated floors of the main building are structurally compromised

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Pre Demolition Structural Survey - Cont'd

Pre-Stressed Concrete Yes ___ No __X__Locations_____

KNOWN STRUCTURAL HAZARDS
Physical Damage Yes _X___ No ____Locations Roof & elevated floors (main building)

Structural Failures Yes __X_ __ No _ ___Locations: _Large holes through roof and other elevated floors

Fire Damage Yes ____ No _X___Locations _____

ADJACENT STRUCTURES
Describe Structure & Conditions __N/A

Temporary Structural Stabilization Required Yes_____ No_X_____

Comments:

Main Building: Recommend all required abatement be carried out after the demolition of the structure. The interior of this structure is not structurally sound for abatement prior to demolition work.

North and South office wings: small equipment, bobcats up to 5,000 lbs may be placed on the elevated concrete slabs including the roofs. See plan

Structural Failure Prevention Plan ___Refer to the submitted safety plan and engineered demolition plan. Structural demolition will be conducted on top down, bay-by-bay approach.

Floor and Roof Shoring Plan _See recommendation above

Wall Shoring or Bracing Plan: N/A

Overhead Protective Structures or Scaffold Locations Plan ___N/A

Engineering Survey Complete By

FBA Inc. Structural Engineers, Amir Kazemi, PE

Date: 05/27/2025

The evaluation and conclusion provided in this letter are based on documents supplied, the best information currently available, and our demolition experience on concrete projects with similar conditions. If additional data becomes available or is generated, indicating conditions different than those

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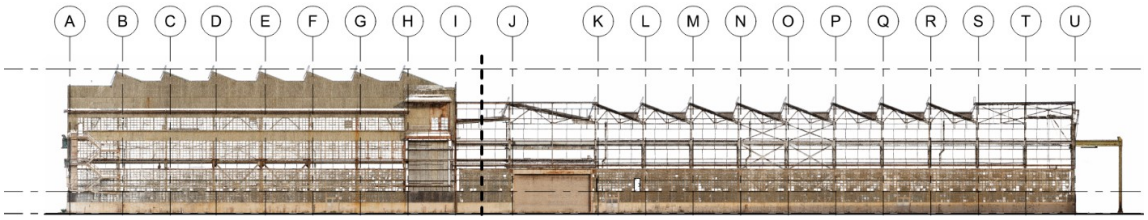
observed and described by this report, our firm should be notified so that any necessary modifications may be made to our conclusion.

Building 411 - Floor plan



OVERALL WEST BUILDING ELEVATION

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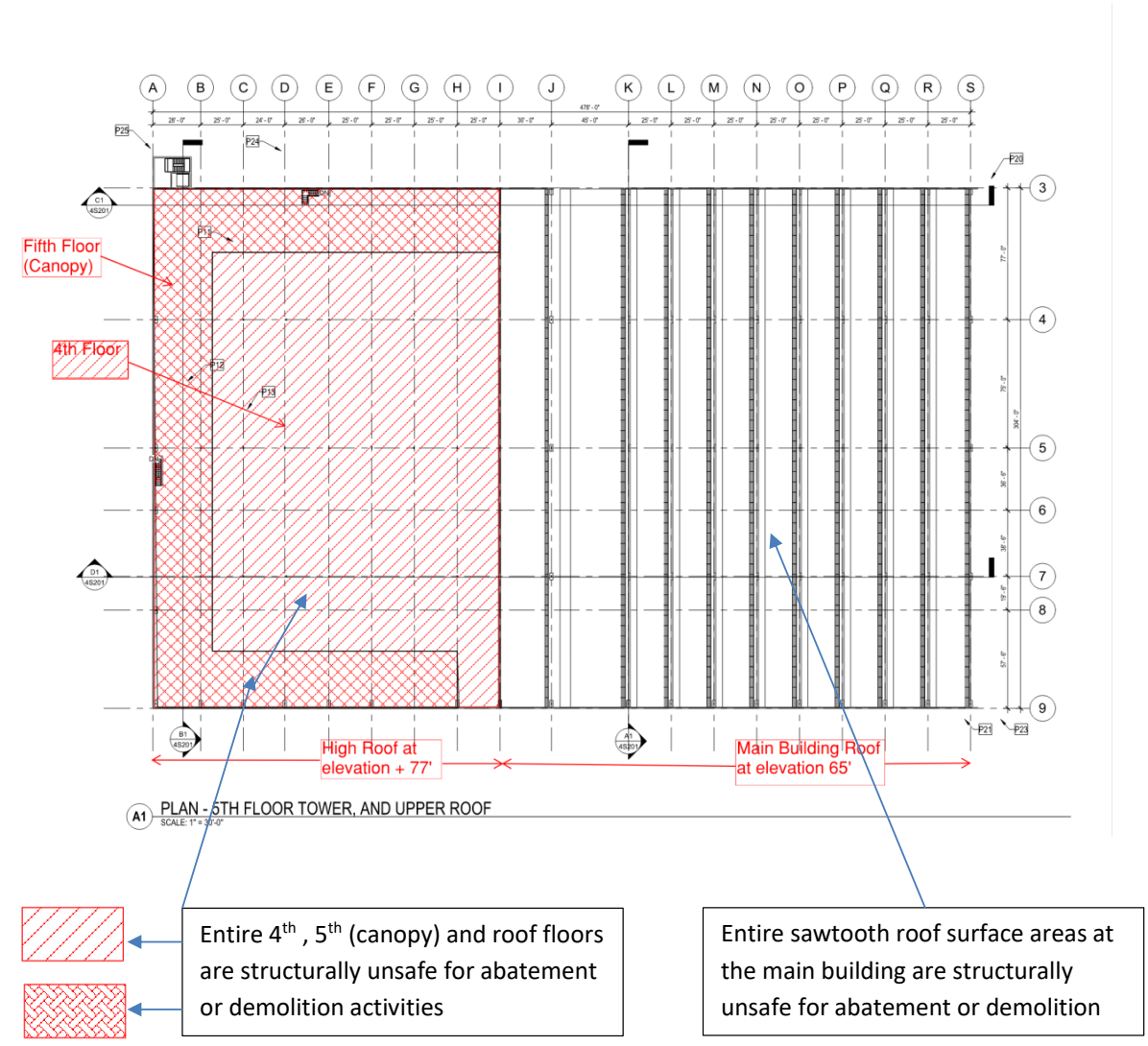

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1 – Building 411 – South and West elevations

2 – Main Building

3 –Building 411 – East and North elevation

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4

5

6

7

8

9

4 to 9 – 4th floor – severely damaged floor – Not suitable for any abatement or demolition access

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10

11

12

13

14

10 to 14 – 5th floor (canopy) - severely damaged floor – Not suitable for any abatement or demolition access.

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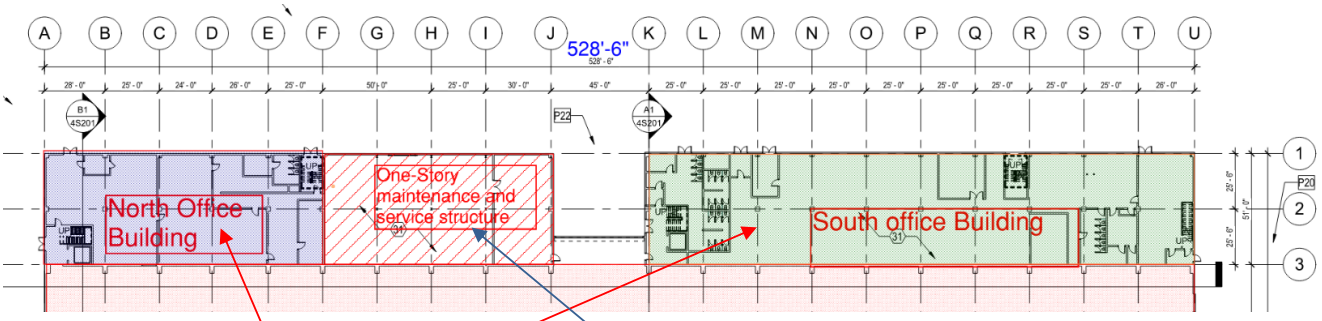

North and South Office Buildings:

1st and 2nd Floors:
Abatement or soft demolition activities with equipment weighing up to 5,000 lbs. are acceptable.

Roof Levels:
The floor system comprises metal pan decking supported by steel joists; however, the composition and integrity of the topping are currently unknown. Access for personnel with light equipment (up to 500 lbs.) is acceptable. If heavier equipment is required for abatement activities, additional inspection will be necessary to assess the roof's load-bearing capacity. **To be determined (TBD).**

One-Story Maintenance and Service Structure:

The roof system consists of metal decking that has been significantly damaged by weathering and corrosion. Personnel access to the roof is prohibited unless proper shoring is in place.

1

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2

3

2 & 3 – One story Maintenance & Service structure

4

5

6

7

4 & 7 – One story Maintenance & Service Roof deck with significant corrosions

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8 - S. Office Building -2nd floor

9 - S. Office Building -3rd floor

10 – S. Office Building – Roof

11 – stair tower @ S. Office Bldg.
Accessible for abatement

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12 – S. Office building staircase and elevator machine room

13 -S. Office Bldg. Machine room

14- S. Office Bldg. Top roof over machine room – Accessible for abatement

15 – S. Office Bldg. staircase intermediate roof level – Accessible for abatement

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16- North Office Bldg. – 2nd floor

17- North Office Bldg. – Roof level – Accessible for abatement

18- North Office Bldg. – Staircase above roof

19- North Office Bldg. – Concrete ceiling of the staircase

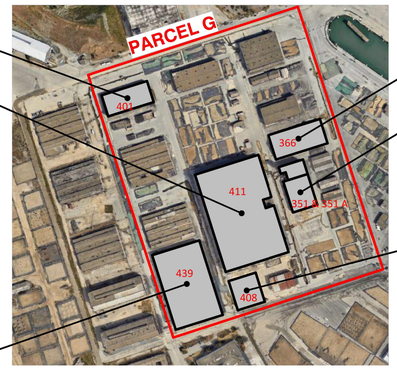
ENGINEERED DEMOLITION

of

HUNTERS POINT PARCEL G BUILDING DEMOLITION - BRAC

FORMER HUNTERS POINT NAVAL SHIPYARD - SAN FRANCISCO, CALIFORNIA

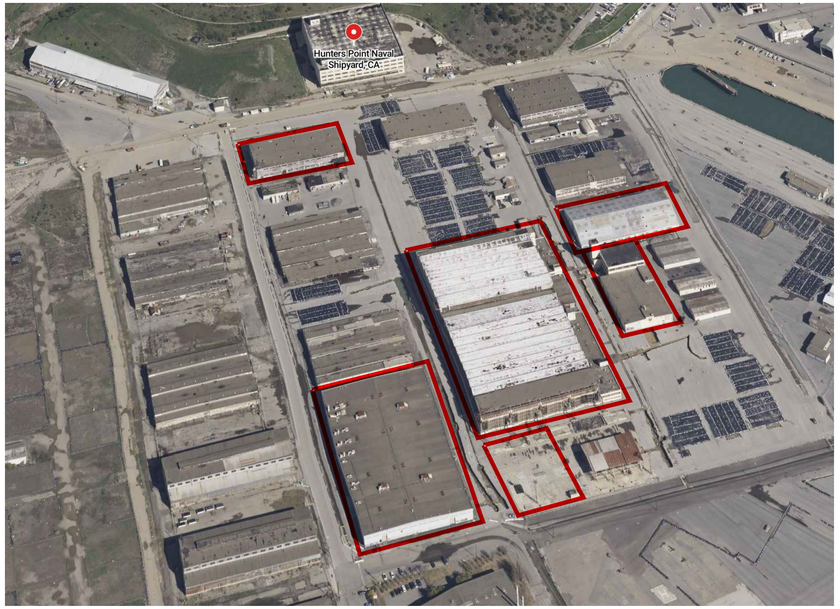
VICINITY MAP:



APPROXIMATE BUILDING GROSS SQUARE FOOTAGE

BLDG #/NAME		GROSS SF
	351	~10,146 SF
	351A	~21,021 SF
1	351/351A	~31,167 SF
2	366	~37,380 SF
3	401	~30,305 SF
4	411	~188,030 SF
5	439	~99,076 SF
6	408	~ 414 SF

3D SITE VIEW:



NAVFAC SOUTHWEST CONSTRUCTION CONTRACT NO. N62473-19-D-1212

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No.	Description	Date
	100% CD SET	6/27/25

Client:
ECC
700 Airport Blvd. Suite 250
Burlingame, CA 94010

Hunters Point Parcel G Building Demolition
San Francisco, California

Stamp
REGISTERED PROFESSIONAL ENGINEER
AMIR KAZEMI MEHDI
No. C48385
CIVIL
STATE OF CALIFORNIA

FBA Job No.	2025-39
Drawn	B.SCHOLL
Checked	A.KAZEMI

Title
COVER SHEET

Sheet
D-1

CALIFORNIA CODE OF REGULATIONS: TITLE 8, SECTION 1735

A. UTILITY COMPANIES SHALL BE NOTIFIED AND ALL UTILITY SERVICE SHUT OFF, CAPPED, OR OTHERWISE CONTROLLED, AT THE BUILDING OR CURB LINE BEFORE STARTING DEMOLITION, UNLESS IT IS NECESSARY TO USE ELECTRICITY OR WATER LINES DURING DEMOLITION. IF USE IS NECESSARY, THE UTILITY SERVICES SHALL BE RELOCATED OR REARRANGED AS NECESSARY AND PROTECTED FROM PHYSICAL DAMAGE.

B. IT SHALL ALSO BE DETERMINED IF ANY TYPE OF HAZARDOUS CHEMICALS, GASES, EXPLOSIVES, FLAMMABLE MATERIALS, OR SIMILARLY DANGEROUS SUBSTANCES HAVE BEEN USED IN ANY PIPES, TANKS, OR OTHER EQUIPMENT ON THE PROPERTY. WHEN THE PRESENCE OF ANY SUCH SUBSTANCES IS APPARENT OR SUSPECTED, TESTING AND PURGING SHALL BE PERFORMED AND THE HAZARD ELIMINATED BEFORE DEMOLITION IS STARTED.

C. PIPE-COVERING INSULATION, STEEL BEAM AND COLUMN FIRE PROTECTION, AND HEATING, VENTILATING AND AIR-CONDITIONING DUCT WORK SHALL BE SURVEYED FOR ASBESTOS. IF ASBESTOS IS PRESENT, THE EMPLOYER SHALL COMPLY WITH SECTION 1529.

D.

1. PRIOR TO STARTING DEMOLITION OPERATIONS, ALL STRUCTURAL OR OTHER HAZARDOUS DEFICIENCIES NOTED DURING THE SURVEY REQUIRED BY SECTION 1734(B)(1) SHALL BE SHORED, BRACED OR OTHERWISE CORRECTED AS RECOMMENDED IN THE SURVEY.
2. WALLS, WHICH SERVE AS RETAINING WALLS TO SUPPORT EARTH OR ADJOINING STRUCTURES, SHALL NOT BE DEMOLISHED UNTIL THE HAZARD FROM MOVING GROUND HAS BEEN ELIMINATED BY SLOPING, SHORING OR STOCKPILING BUILDING DEBRIS BERMS WHERE NECESSARY AGAINST ADJOINING STRUCTURES, SIDEWALKS AND/OR STREETS.
3. WALLS, WHICH ARE TO SERVE AS RETAINING WALLS AGAINST WHICH DEBRIS WILL BE PILED, SHALL NOT BE SO USED UNLESS DETERMINED TO BE CAPABLE OF SAFELY SUPPORTING THE IMPOSED LOAD.
4. DURING DEMOLITION, CONTINUING INSPECTIONS SHALL BE MADE AS THE WORK PROGRESSES TO DETECT HAZARDS RESULTING FROM WEAKENED OR DETERIORATED FLOORS OR WALLS, OR LOOSENED MATERIAL. EMPLOYEES SHALL NOT BE PERMITTED TO WORK WHERE SUCH HAZARDS EXIST UNTIL THEY ARE CORRECTED BY SHORING, BRACING, OR OTHER EFFECTIVE MEANS.

E. IN DEMOLISHING ANY BUILDING OR STRUCTURE OR ALTERATION INVOLVING PARTIAL DEMOLITION THEREOF, ALL MATERIAL DISPLACED, UNLESS REQUIRED FOR RECONSTRUCTION, SHALL BE DEPOSITED TO THE GROUND. THE AMOUNT OF MATERIAL STORED UPON ANY STRUCTURE OR ANY PORTION OF SUCH STRUCTURE SHALL NOT EXCEED ITS SAFE CARRYING CAPACITY.

F.

1. EXCEPT FOR THE CUTTING OF HOLES IN FLOORS FOR CHUTES, HOLES THROUGH WHICH TO DROP MATERIALS, PREPARATION OF STORAGE SPACE, AND SIMILAR NECESSARY PREPARATORY WORK, THE DEMOLITION OF EXTERIOR WALLS AND FLOOR CONSTRUCTION SHALL BEGIN AT THE TOP OF THE STRUCTURE AND PROCEED DOWNWARD AND EACH STORY OF EXTERIOR WALL AND FLOOR CONSTRUCTION SHALL BE REMOVED AND DROPPED INTO THE STORAGE SPACE BEFORE COMMENCING THE REMOVAL OF EXTERIOR WALLS AND FLOORS IN THE STORY NEXT BELOW.
2. ANY OPENINGS CUT IN A FLOOR FOR THE DISPOSAL OF MATERIALS SHALL BE NO LARGER IN SIZE THAN 25 PERCENT OF THE AGGREGATE OF THE TOTAL FLOOR AREA, UNLESS THE LATERAL SUPPORTS OF THE REMOVED FLOORING REMAIN IN PLACE. FLOORS WEAKENED OR OTHERWISE MADE UNSAFE BY DEMOLITION OPERATIONS SHALL BE SHORED TO SAFELY SUPPORT THE INTENDED IMPOSED LOAD FROM DEMOLITION OPERATIONS.
3. FLOORING BOARDS MAY BE REMOVED FROM NOT MORE THAN ONE FLOOR ABOVE GRADE TO PROVIDE STORAGE SPACE FOR DEBRIS, PROVIDED FALLING MATERIAL IS NOT PERMITTED TO ENDANGER STRUCTURAL STABILITY.
4. WHEN WOOD FLOOR BEAMS SERVE TO BRACE INTERIOR WALLS OR FREE-STANDING EXTERIOR WALLS, SUCH BEAMS SHALL BE LEFT IN PLACE UNTIL OTHER EQUIVALENT SUPPORT CAN BE INSTALLED TO REPLACE THEM.

   NOTE: FOR SELECTIVE DEMOLITION BY EXPLOSIVES OF BUILDINGS AND STRUCTURES, REFER TO APPROPRIATE ARTICLES OF GROUP 18, EXPLOSIVES AND PYROTECHNICS OF THE GENERAL SAFETY ORDERS AND THIS PLAN.

G. SECTIONS OF WALLS SHALL NOT BE ALLOWED TO FALL UPON FLOORS SUPPORTED BY WOOD JOISTS OR OTHER FLOORS UNABLE TO WITHSTAND SUCH IMPACT.

H. WALKWAYS THAT MEET THE REQUIREMENTS OF SECTION 1624 SHALL BE PROVIDED WHERE NECESSARY FOR ACCESS.

I. WALKING ACROSS EXPOSED FLOOR JOISTS, STEEL BEAMS, OR GIRDERS IS PROHIBITED.

J. ALL PERSONS ON DEMOLITION PROJECTS SHALL BE PROTECTED FROM FALLING MATERIAL AT EMPLOYEE ENTRANCES TO MULTI-STORY STRUCTURES BEING DEMOLISHED, BY SIDEWALK SHEDS OR CANOPIES OR BOTH, PROVIDING PROTECTION EXTENDING FROM THE FACE OF THE BUILDING FOR A MINIMUM OF 8 FEET. ALL SUCH CANOPIES SHALL BE AT LEAST TWO FEET WIDER THAN THE BUILDING ENTRANCES OR OPENINGS (ONE FOOT WIDER ON EACH SIDE THEREOF) AND SHALL BE CAPABLE OF SUSTAINING A LOAD OF 150 POUNDS PER SQUARE FOOT.

K. EXTERIOR WALL OPENINGS ON ALL FLOORS SHALL BE PROTECTED TO A HEIGHT OF NOT LESS THAN 42 INCHES, EXCEPT ON THE GROUND FLOOR AND THE FLOOR BEING DEMOLISHED.

L. WHERE A HAZARD EXISTS FROM FRAGMENTATION OF GLASS, ALL GLAZED OPENINGS SHALL BE REMOVED AT LEAST ONE FLOOR BELOW THE WORKING LEVEL. PROVIDE PLATING OVER STAIRWELL GLASS TO PREVENT GLASS FROM BREAKING INTO STREET/SIDEWALK BELOW.

M.

1. NO WALL SECTION, WHICH IS MORE THAN ONE STORY OR 12 FEET IN HEIGHT, SHALL BE PERMITTED TO STAND ALONE WITHOUT LATERAL BRACING, UNLESS A CIVIL ENGINEER, CURRENTLY REGISTERED IN CALIFORNIA, HAS SUBMITTED ENGINEERING DATA TO THE DIVISION SUBSTANTIATING THE CAPABILITY OF THE WALL TO STAND WITHOUT LATERAL SUPPORT.
2. ALL WALLS SHALL BE LEFT IN A STABLE CONDITION AT THE END OF EACH WORK DAY.

N. FLOOR x FLOOR STEEL CONSTRUCTION SHALL BE DISMANTLED IN SECTIONS IN PLACE FROM TOP TO BOTTOM. MASS DEMOLITION OF STEEL COLUMNS WILL BE FROM TOP TO BOTTOM USING HEAVY CONVENTIONAL DEMOLITION EQUIPMENT. ANY STRUCTURAL UNIT BEING DISMANTLED SHALL NOT BE OVERSTRESSED DURING FLOOR BY FLOOR DEMOLITION OPERATION UNLESS IT'S ADEQUATELY SHORED. PLANKS SPANNING THE DISTANCE BETWEEN ADEQUATE BEAMS SHALL BE USED WHERE NECESSARY AS A SUBSTITUTE FOR WEAKENED FLOORS AND AS ACCESS WALKWAYS OVER WEAKENED AREAS.

O.

1. STAIRWAYS DESIGNATED AS MEANS OF ACCESS SHALL BE MAINTAINED CLEAR FOR USE WITHIN TWO FLOORS OR TWENTY-FOUR FEET OF THE DEMOLITION WORK ABOVE.
2. LADDERS SHALL BE PROVIDED FOR THESE REMAINING TWO FLOORS AND SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH ARTICLE 25, LADDERS. OTHER ACCESS WAYS SHALL BE ENTIRELY CLOSED OFF AT ALL TIMES.
3. WALKWAYS OR LADDERS SHALL BE PROVIDED TO ENABLE EMPLOYEES TO SAFELY REACH OR LEAVE ANY SCAFFOLD OR WALL.

P. IN A MULTI-STORY BUILDING, WHEN A STAIRWELL IS BEING USED FOR ACCESS OR EGRESS, IT SHALL BE PROPERLY ILLUMINATED BY EITHER NATURAL OR ARTIFICIAL MEANS, AND COMPLETELY AND SUBSTANTIALLY COVERED OVER AT A POINT NOT LESS THAN TWO FLOORS BELOW THE FLOOR ON WHICH WORK IS BEING PERFORMED, AND ACCESS TO THE FLOOR WHERE THE WORK IS IN PROGRESS SHALL BE THROUGH A PROPERLY LIGHTED, PROTECTED, AND SEPARATE PASSAGEWAY.

Q.

1. CONSTRUCTION PASSENGER ELEVATORS FOR HOISTING EMPLOYEES SHALL BE PROVIDED ON DEMOLITION PROJECTS ON MULTI-STORY BUILDINGS SEVEN OR MORE FLOORS OR SEVENTY-TWO FEET OR MORE IN HEIGHT.
2. LANDINGS SHALL BE PROVIDED FOR THE PASSENGER ELEVATORS ON OR IN BUILDINGS AT INTERVALS NOT TO EXCEED FOUR FLOORS OR FORTY-EIGHT FEET.
3. WHERE THERE IS DOUBT CONCERNING STRUCTURAL INTEGRITY OR ENGINEERING DATA INDICATES ATTACHMENT OF AN ELEVATOR MAY JEOPARDIZE THE STRENGTH OF THE BUILDING OR STRUCTURE, THE DIVISION MAY PERMIT ALTERNATE METHODS OF INSTALLATION. OTHER MEANS OF EMPLOYEE ACCESS MAY ALSO BE ALLOWED BY THE DIVISION WHERE THE ABOVE IS CLEARLY IMPRACTICAL.

R. IF THE METHOD OF DEMOLITION LEAVES THE STRUCTURAL STEEL FRAME IN PLACE, THEN THE TIER OF BEAMS NEXT BELOW THE TIER FROM WHICH BEAMS AND COLUMNS ARE BEING REMOVED SHALL BE PLANKED OVER, UNLESS SAFETY NETS ARE USED OR THE FLOOR OF SUCH TIER HAS NOT BEEN REMOVED. NECESSARY OPENINGS FOR MATERIAL HANDLING ARE ALLOWED. ALL LOOSE MATERIAL SHALL BE REMOVED FROM THE STEEL FRAME AS DEMOLITION PROGRESSES DOWNWARD.

S. PROVISIONS FOR DUST CONTROL SHALL INCLUDE THE USE OF WATER TO KEEP MATERIAL OR DEBRIS SUFFICIENTLY WET OR OTHER EQUIVALENT STEPS TAKEN TO PREVENT DUST FROM RISING.

T. MECHANICAL EQUIPMENT SHALL NOT BE USED ON FLOORS OR WORKING SURFACES UNLESS A QUALIFIED PERSON HAS DETERMINED THAT SUCH FLOORS OR SURFACES ARE OF SUFFICIENT STRENGTH TO SUPPORT THE IMPOSED LOAD.

U. WHERE MECHANICAL EQUIPMENT IS USED FOR DEMOLITION WORK, FLOOR OPENINGS SHALL HAVE CURBS OR STOP-LOGS TO PREVENT EQUIPMENT FROM RUNNING OVER THE EDGE.

V. NO SALVAGE OF MATERIALS SHALL BE PERMITTED DURING DEMOLITION OPERATIONS ON ANY BUILDING, STRUCTURE, FALSEWORK OR SCAFFOLD MORE THAN THREE STORIES HIGH OR THE EQUIVALENT HEIGHT FOR WHICH A PERMIT IS REQUIRED.

SILVERADO WILL COMPLY WITH THE 2013 CALIFORNIA FIRE CODE CHAPTER 33 - FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION SUCH AS, BUT NOT LIMITED TO:

- PROVIDE VEHICLE ACCESS FOR FIREFIGHTING.
- STANDPIPES. WHERE A BUILDING IS BEING DEMOLISHED AND A STANDPIPE IS EXISTING WITHIN SUCH A BUILDING, SUCH STANDPIPE SHALL BE MAINTAINED IN OPERABLE CONDITION SO AS TO BE AVAILABLE FOR USE BY THE FIRE DEPARTMENT. SUCH STANDPIPE SHALL BE DEMOLISHED WITH THE BUILDING BUT SHALL NOT BE DEMOLISHED MORE THAN ONE FLOOR BELOW THE FLOOR BEING DEMOLISHED.
- MAINTAIN THE MEANS OF EGRESS FOR ALL POSSIBLE OCCUPANTS (INCLUDING CONSTRUCTION WORKERS AND ENGINEERS).

FBA, INC
STRUCTURAL ENGINEERS
1675 Sabre St.
Hayward, CA 94545
Tel 510.265.1888

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No.	Description	Date
	100% CD SET	6/27/25

Client:

700 Airport Blvd. Suite 250
Burlingame, CA 94010

Hunters Point Parcel G
Building Demolition
San Francisco, California

Stamp

REGISTERED PROFESSIONAL ENGINEER
AMIR KAZEMINEZAD
No. C42085
CIVIL
STATE OF CALIFORNIA

FBA Job No.	2025-39
Drawn	B.SCHOLL
Checked	A.KAZEMI

Title

CALIFORNIA CODE TITLE 8

Sheet

D-2

DEMOLITION NARRATIVE

General Notes:

- Refer to Existing Building Project Plans for additional information for the scope, building description, floor plans, building elevations, and photos.
- All the demolition work required is not limited to that indicated on these plans. the intent is to remove all mechanical, electrical, plumbing, communications, and architectural items as indicated and as necessary to facilitate future development.
- All demolition work is to be done in compliance with all applicable codes, laws and regulations.
- Contractor to protect adjacent areas from dust, excessive noise or disruption of operation.

Limitations:

The evaluation and conclusions provided in this report are based on the documents supplied, the best information currently available, and our experience on projects with similar conditions. If additional data becomes available or are generated, indicating conditions different than those observed and described by this report, our firm shall be notified so that any necessary modifications may be made to our conclusions.

In the event field conditions differ from the existing conditions shown on these plans, stop demolition work and contact our office to review the discrepancy and provide direction.

Special note to the demolition contractor: This engineered demolition plan is intended to address the engineering aspects of the building removal. The engineered demolition provided herin is strictly limited to the stability of the structure during demolition only. The sequence and procedures presented herin are not prepared to either manage or address safety issues. This work excluded any and all safety related directives. An independent safety officer shall be assigned by the contractor with his/her own independent safety plan, as this is not a heal and safety plan.

1. Demolition Description of Work:

A. The demolition activities include the demolition of Buildings No. 351, 351A, 366, 401, 411, and 439, and the demolition of a concrete Pad numbered 408. The building subgrade demolition is limited to one foot below the adjacent pavement grades.

2. Pre - Demolition Activities:

A. Preparation and submittal of an Engineered Demolition Work Plan.
B. Building Engineering Survey and Reporting.
C. Safety Orientation.
D. MEP Investigation and Safe - Offs to be performed by ECC.

3. Asbestos Abatement and Removal of Other Hazardous Materials:

A. Terracon Consultants has performed a Pre- Demolition Hazardous Materials Survey of the buildings dated March 13, 2024.
B. Unless the buildings are deemed unsafe for workers access, by a Structural Engineer licensed in the State of California, to perform the abatement activities prior to starting the building demolition work. The asbestos and other identified hazardous materials will be removed prior to starting the building demolition work.
C. If a building is deemed unsafe for workers to perform the removal of asbestos containing materials and other hazardous materials, then an "Open - Air" Demolition Work Plan will be prepared and submitted to the BAAQMD and the NAVFAC Southwest BRAC PMO before commencing work.

4. Dust Control:

A. The demolition project superintendent shall ensure that proper dust control activities are being implemented
B. The workforce will be trained to ensure that dust will be kept to an absolute minimum. This training will be documented in the pre-task JHA's.
C. Skilled workers handling a 1.5 "water hose, utilizing water trucks or working from boom lifts will be engaged to suppress generating demolition dusty operations during work. D. Cover or moisten all haul trucks that transport debris, concrete, and asphalt.
E. Haul trucks will be covered to prevent dust emissions.
F. If wind speed is higher than 15 mph water quantity will be increased, at 25mph work will be stopped.
G. Traffic speed onsite is limited to 10 mph.
H. Minimize sources of emissions. Keep work areas neat so dust is not allowed to accumulate.
I. Dust control water will be used at a level that does not produce any accumulation of water that would result in runoff or puddling.

5. Equipment:

A. The equipment to be used on the project is listed below. Equipment of similar size and weight by an alternate manufacturer will be substituted or added if necessary, during the project.
B. All equipment will comply with environmental protection agency emissions standards for all off - road diesel powered equipment used during construction, except for specialized construction equipment for which it is not available.
C. Although the pieces of some equipment are listed with specific types of concrete breakers, they may be interchanged as required to meet the specific requirements of the structure they are utilized on. Also, each excavator may attach a bucket and/or bucket with thumb unit in place of the breaker hammer for purposes of loading debris onto trucks for off - loading removal of building material, and or removal of structural members where applicable.

D. The following is a list of the proposed demolition equipment:
1. Hitachi ZX850/870 LC-3 185,000 Pound Class Pound Hi - Reach Excavator.
2. Link Belt 750 LX 160,000 Pound Class Excavator.
3. Hitachi ZX670LC-5 150,000 Pound Class Excavator.
4. Link Belt 490 113,000 Pound Class Excavator.
5. Link Belt 350X3-4 80,000 Pound Class Excavator.
6. CAT 973 66,000 Pound Class Track Front End Loader.
7. 2,500 Gallon Water Truck.
8. Xtreme XR1270 12,000 Pound Telehandler.
9. S750 9,000- Pound Class Bobcat Skid Steer Loader
10. S450 5,370 Pound Class Bobcat Skid Steer Loader.
11. Hyundai Hl770 51,810 Pound Class Wheel Loader.
12. Excavator Atlas Copco Hammer Attachments: HB 3000 6,613 (6,613 Lbs.), HB 3600 (7,900 Lbs.), HB 4700 (10,361 Lbs.) Hammer HB 5800 (12,780 Lbs.)
13. Excavator Shear Attachments: Allied Gator MT40 (7,000 Lbs.), MT70 (12,500 Lbs.), MT90 (20,000 Lbs.), MT 100 (28,000 Lbs.)
14. Excavator LaBounty Pulverize attachments: CP 80 (4,475 Lbs.), CP100 (6,500 Lbs.)
15. Excavator LaBounty Pulverize/Shear Attachments: UP30 (7,800 Lbs.), UP 75 (12,650 Lbs.)

6. Method of Demolition:

A. Building Demolition Methodology:

The building demolition methodology is based on the site visits and demolition plans as provided by the NAVFAC Southwest RFP No. N62473 - 19 - D - 1212. The demolition methodology may be modified to conform to Safety concerns, weather, equipment limitations and other factors, and professional judgment on the part of Supervisors, Safety Officers or Crew members at the time of performance. The demolition methodology is presented not as an "instruction manual", but as a general indicator of means-andmethods that may be employed for the demolition scope of work.

1. Building 351A

a. Using a 100,000-pound class excavator equipped with a hydraulic Hammer attachment and a supporting 5,370-pound class skid steer bobcat, with supporting ground crew laborers. Demolish sixty feet of the exterior south wall to create an access point into the building. Stockpile the concrete materials onsite.
b. Starting from the south and working towards the north. A 100,000 Pound Class excavator equipped with a thumb and bucket attachment, and a 5,370- pound skid steer bobcat Loader, with supporting site workers, remove the wood frame roof, the interior building steel framing, and the interior wood framing studs.
c. Using 100,000-pound class excavators, one equipped with a hydraulic hammer and one equipped with a thumb bucket attachment, demolish the concrete super structure and concrete mezzanine down to the top of the building concrete dock level slab in a south to north direction.
d. Using 100,000-pound excavators, one equipped with a hydraulic hammer and one equipped with a thumb bucket attachment, demolish the concrete dock loading slab and foundations down to one foot below the surrounding adjacent grade.
e. 100,000-pound class excavators equipped with a thumb bucket attachment, sort separate and stockpile the demolished debris for truck loading operations
f. 100,000-pound class excavators with a thumb bucket attachment will be used to load trucks for offsite disposal during work

2. Building 351

a. Using skilled laborers and a 5,370-skid steer bobcat, remove the building's main roofing materials.
b. Skilled laborers will remove a window at the east side of the building for equipment access into the 2nd and 3rd floors of the building.
c. Using an Xtreme XR1270 Telehandler Forklift capable of lifting 12,000 Lbs. at 70 feet above the ground. Rig and place a 5,370-pound class skid steer bobcat into 2nd and 3rd Floors and remove the interior building combustible materials.
d. Using a 160,000-pound class excavator equipped with a hydraulic hammer attachment, and a supporting 100,000-pound class excavator equipped with a thumb and bucker attachment, demolished the building from the top down to the slab on grade in a south to north direction. Leaving the concrete stair/elevator tower in place.
e. Using a 200,000-pound class Hi - Reach excavator equipped with a hydraulic hammer and a supporting 100,000-pound class excavator equipped with a thumb and bucket attachment to manage the demolition debris, demolished the concrete stair/elevator tower from the top down to grade level.
f. Using 100,000-pound class excavators, one equipped with hydraulic hammer and one equipped with a thumb bucket attachment, demolish the concrete slab and foundations down to one foot below the surrounding adjacent grade.
g. 100,000-pound class excavators equipped with a thumb bucket attachment, sort separate and stockpile the demolished debris for truck loading operations
h. 100,000-pound class excavators with a thumb bucket attachment will be used to load trucks for offsite disposal during work

3. Building 366

a. Using 5,370-pound class skid steers bobcats and skilled laborer crews, remove the interior building combustible debris prior to starting the structural building demolition work.
b. Using 100,000-pound class excavators, one equipped with a hydraulic shear and one equipped with a thumb bucket attachment, remove the super structure from top down to the slab on grade level in an east to west direction.
c. Using 100,000-pound excavators, one equipped with hydraulic hammer and one equipped with a thumb bucket attachment, demolish the concrete slab and foundations down to one foot below the surrounding adjacent grade.
d. 100,000-pound class excavators equipped with a thumb bucket attachment, sort separate and stockpile the demolished debris for truck loading operations.
e. 100,000-pound class excavators with a thumb bucket attachment will be used to load trucks for offsite disposal during work.

4. Building 401

a. FBA Engineers Inc has surveyed this weather damage building and has deemed that the building is unsafe for workers to remove the asbestos containing roof materials and other hazardous materials located inside the building prior to the building demolition work. (See Attached FBA Engineer Survey Letter dated June 3rd 2025.
b. Silverado Contractors, a California DOSH Certified Registered Contractor, and Bay View Environmental, the Environmental Abatement Contractor, has designed an "Open - Air" Regulated Demolition Work Plan to demolish the building with the remaining asbestos containing materials in place that cannot be removed safely.
c. The "Open - Air" Demolition work plan has been submitted under separate cover.
d. Once the "Open - Air" regulated work area and engineering controls are in place, the building structural demolition work will start from the east and work to the west direction. A 100, 000-pound excavator equipped with a thumb bucket attachment will demolish the building from the top down to the slab on grade in a bay-by-bay approach. During the building demolition, a crane supporting a debris screen will be used to enhance the protection to the adjacent neighborhood to the north from any escaping demolition debris.
e. 100,000-pound excavators equipped with a thumb bucket attachment will be used to manage and stockpile the demolished debris.
f. Using 100,000-pound excavators, one equipped with hydraulic hammer and one equipped with a thumb bucket attachment, demolish the concrete slab and foundations down to one foot below the surrounding adjacent grade.
g. 100,000-pound class excavators equipped with a thumb bucket attachment, sort separate and stockpile the demolished debris for truck loading operations.
h. 100,000 pound class excavators with a thumb bucket attachment will be used to load trucks for offsite disposal during work.

5. Building 439

a. Using 5,370 pound class skid steer bobcats and skilled laborer crews, remove the interior building combustible debris prior to starting the structural building demolition work.
b. Using 100,000-pound class excavators, one equipped with a hydraulic shear and one equipped with a thumb bucket attachment, remove the super structure from top down to the slab on grade in a south to north direction.
c. Using 100,000-pound excavators, one equipped with hydraulic hammer and one equipped with a thumb bucket attachment, demolish the concrete slab and foundations down to one foot below the surrounding adjacent grade.
d. 100,000-pound class excavators equipped with a thumb bucket attachment, sort separate and stockpile the demolished debris for truck loading operations.
e. 100,000-pound class excavators with a thumb bucket attachment will be used to load trucks for offsite disposal during work.

6. Building 411

a. Administration Building

1. Using 5,370-pound class skid steer bobcats and skilled laborer crews, remove the interior building combustible debris prior to starting the structural building demolition work.
2. Using 100,000-pound excavators, two equipped with hydraulic hammers and one equipped with a thumb bucket attachment, demolish the concrete and steel super structure from the top to the bottom is a south to north direction.
3. Using 100,000-pound excavators, two equipped with hydraulic hammers and one equipped with a thumb bucket attachment, demolish the concrete slab and foundations down to one below the surrounding adjacent grade.
4. Using 100,000-pound class excavators equipped with a thumb bucket attachment, sort separate and stockpile the demolished debris for truck loading operations.
5. 100,000-pound class excavators with a thumb bucket attachment will be used to load trucks for offsite disposal during work.

b. Repair/Service Area Warehouse Building

1. FBA Engineers Inc has surveyed this building and has deemed that the "Repair/Service" roof area and interior mezzanine/balcony has been severely damage by weather and neglect and is unsafe for workers to remove the asbestos containing roof materials and other hazardous materials located inside the building prior to the building demolition work. (See Attached FBA Engineer Survey Letter dated June 3rd. 2025.
2. Silverado Contractors, a California DOSH Certified Registered Contractor, and Bay View Environmental, the Environmental Abatement Contractor, has designed an "Open - Air" Regulated Demolition Work Plan to demolish the building with the remaining asbestos containing materials in place that cannot be removed safely.
3. The "Open - Air" Demolition work plan has been submitted under separate cover.
4. Prior to starting the building demolition work, 51,000-pound class wheel loaders and 9,000-pound class skid steer bobcats will be used to place the demolished concrete rubble from the demolished administration building work into the existing Service/Repair warehouse area pits to create a safe working surface for the super structure demolition scope of work.
5. Starting from the south and working towards the northern direction, 187,000pound class Hi - Reach excavators equipped with shear attachments, and 100,000 pound class excavators equipped with thumb and buckets attachments will be used to demolish the building from the top down to the slab on grade in a bayby-bay approach, including the mezzanine. The top/down building demolition will be sequenced to isolate and expose the six each 100-foot-long trusses at Grid Lines A - I/4 - 6 and supporting columns for the crane access demolition approach.
6. Each of the six one-hundred-foot-long trusses and supporting columns will be demolished by the following approach:

a. Using a 145-ton crane and skilled torch cutting crews working from 100-to-120foot boom lifts. The 145 Ton Crane will be rigged (NON - Critical Crane Pick) to the truss and once the truss is secure by the crane, two torch cutting crews will commence the simultaneous torch cutting the truss at the supporting steel column connections. Once the truss is torch cut free, the 145 Ton Crane will lower the truss to the ground level. A 150,000-pound excavator with a shear attachment will shear apart the steel truss at grade level. A 150,000-pound Class excavator equipped with a shear attachment will remove the remaining truss columns. Repeat this sequence to demolish the remaining 100-foot-long trusses and supporting columns.
c. Using 150,000 to 100,000-pound class excavators, equipped with hydraulic hammers and thumb bucket attachment, remove the pit and vault temporary concrete backfill and demolish the concrete slab and foundations down to one foot below the surrounding adjacent grade.
d. Using 100,000-pound class excavators equipped with a thumb bucket attachment, sort separate and stockpile the demolished debris for truck loading operations.
e. 100,000 - pound class excavators with a thumb bucket attachment will be used to load trucks for offsite disposal during work.

7. Pad 408

a. Using a 100,000-pound class excavator equipped with a hydraulic hammer, demolish the concrete pad to one foot below the adjacent grade.
b. Using a 100,000-pound class excavator equipped with a thumb bucket attachment, load the concrete debris into trucks for offsite disposal.

1 Demolition Notes:

The FBA-engineered demolition plans specify a controlled, top-down, bay-by-bay demolition sequence based on pre-engineered evaluations of the demolition means and methods, including sequencing, designated cut points, and procedures for lifting structural elements when required. A copy of the FBA demolition plans will be maintained on site for use by all project personnel and for governmental review and verification. The on-site demolition superintendent is responsible for ensuring that all demolition activities are performed in accordance with the FBA-engineered plans and that the structures remain safe and stable at the end of each workday. FBA personnel will be on site to monitor and verify that work progresses in accordance with the contract specifications.

The building pre-demolition inspection will be performed by FBA's Licensed Structural Engineer to determine if any special conditions exist.

No structural member in any story shall be demolished or removed until the story above is completely removed.

No Free standing wall shall be allowed at the end of demolition shifts without the approval of FB A's licensed engineer.

Roof and floor diaphragms shall be removed only to the extent needed to free the walls below for immediate demolition.

When any unsafe conditions are encountered, work shall be halted, the structure secured, and the NAVFAC and Structural Engineer of Record (FBA) shall be notified.

FBA .INC
STRUCTURAL ENGINEERS
22551 2ND STREET, SUITE 242
HAYWARD, CA 94541
Tel 510.265.1888

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No.	Description	Date
	100% CD SET	6/27/25
1	MICHAEL BAKER INC. PC RESPONSE	11/28/25

Client:

ECC
700 Airport Blvd. Suite 250
Burlingame, CA 94010

Hunters Point Parcel G
Building Demolition
San Francisco, California

Stamp

REGISTERED PROFESSIONAL ENGINEER
AMIR KAZEMINEJAD
No. C48085
CIVIL
STATE OF CALIFORNIA

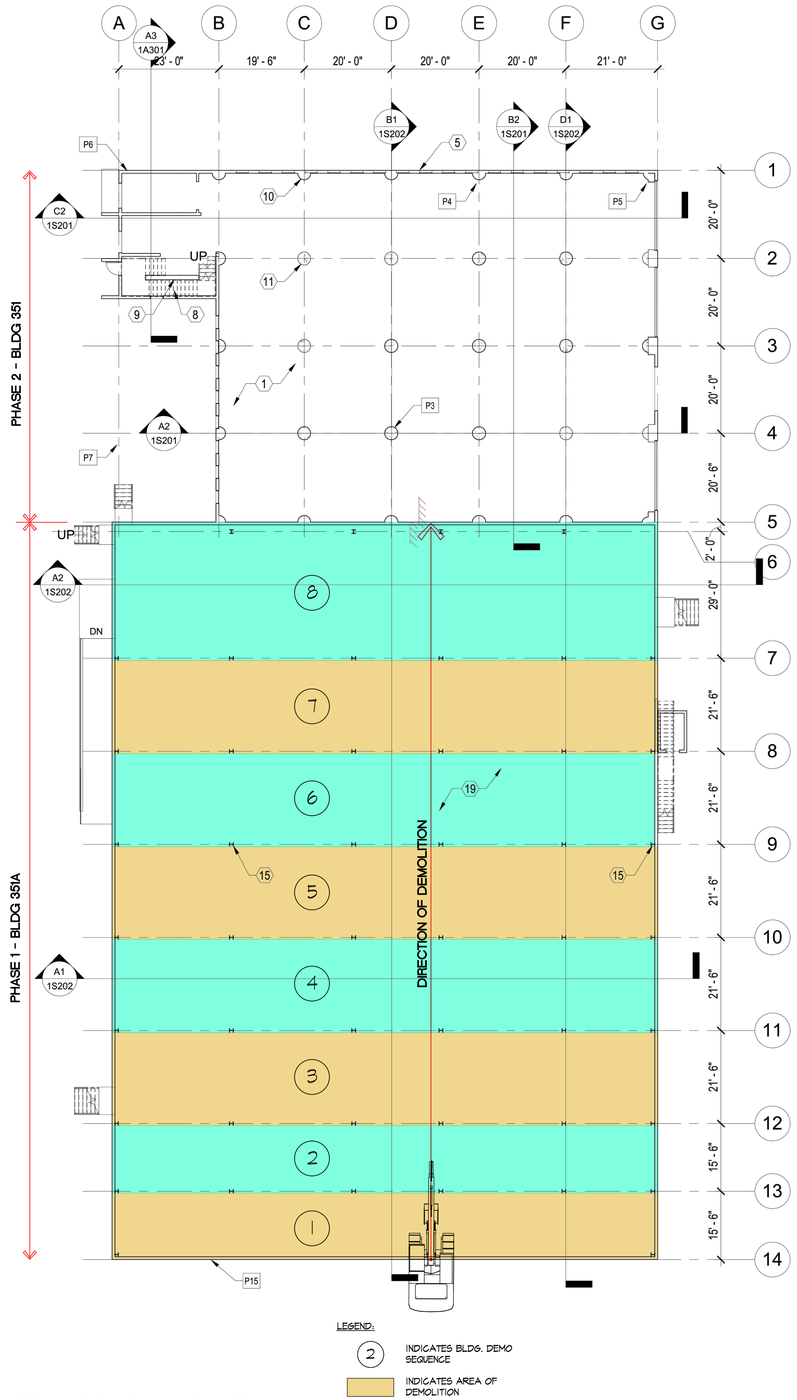
FBA Job No.	2025-39
Drawn	B.SCHOLL
Checked	A.KAZEMI

Title

DEMOLITION NARRATIVE

Sheet

D-2.1



1 BUILDING 351A DEMOLITION PLAN - PHASE 1
SCALE: 1/8"=1'-0"

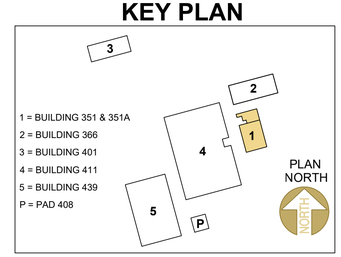
General Notes:

- Refer to Existing Building Project Plans for additional information for the scope, building description, floor plans, building elevations, and photos.
- See sheet D-2.1 for Demolition Scope and sequence of demolition work.
- All the demolition work required is not limited to that indicated on these plans. the intent is to remove all mechanical, electrical, plumbing, communications, and architectural items as indicated and as necessary to facilitate future development.
- All demolition work is to be done in compliance with all applicable codes, laws and regulations.
- Contractor to protect adjacent areas from dust, excessive noise or disruption of operation.

Building 351A

a. Using a 100,000-pound class excavator equipped with a hydraulic Hammer attachment and a supporting 5,370-pound class skid steer bobcat, with supporting ground crew laborers. Demolish sixty feet of the exterior south wall to create an access point into the building. Stockpile the concrete materials onsite.
b. Starting from the south and working towards the north. A 100,000 Pound Class excavator equipped with a thumb and bucket attachment, and a 5,370- pound skid steer bobcat Loader, with supporting site workers, remove the wood frame roof, the interior building steel framing, and the interior wood framing studs.
c. Using 100,000-pound class excavators, one equipped with a hydraulic hammer and one equipped with a thumb bucket attachment, demolish the concrete super structure and concrete mezzanine down to the top of the building concrete dock level slab in a south to north direction.
d. Using 100,000-pound excavators, one equipped with a hydraulic hammer and one equipped with a thumb bucket attachment, demolish the concrete dock loading slab and foundations down to one foot below the surrounding adjacent grade.
e. 100,000-pound class excavators equipped with a thumb bucket attachment, sort separate and stockpile the demolished debris for truck loading operations
f. 100,000-pound class excavators with a thumb bucket attachment will be used to load trucks for offsite disposal during work

KEY PLAN



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Tel 510.265.1888

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No.	Description	Date
	100% CD SET	6/27/25

Client:
ECC
700 Airport Blvd. Suite 250
Burlingame, CA 94010

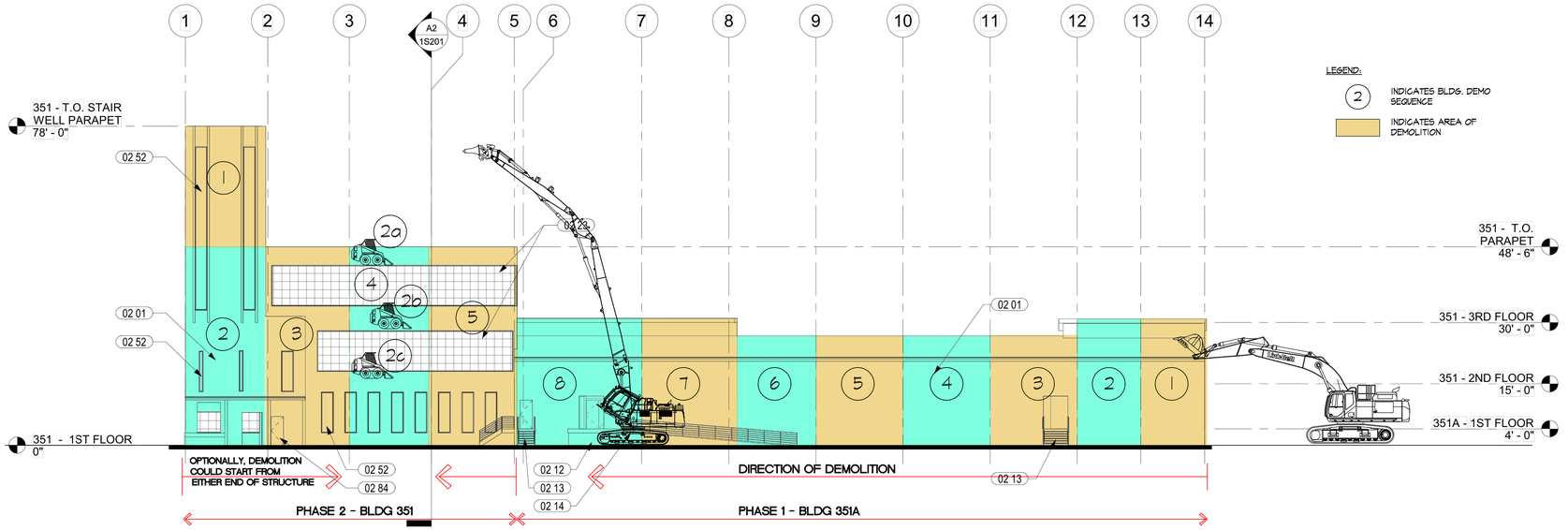
Hunters Point Parcel G
Building Demolition
San Francisco, California

Stamp
REGISTERED PROFESSIONAL ENGINEER
AMIR KAZEMI HEAD
No. C48085
CIVIL
STATE OF CALIFORNIA

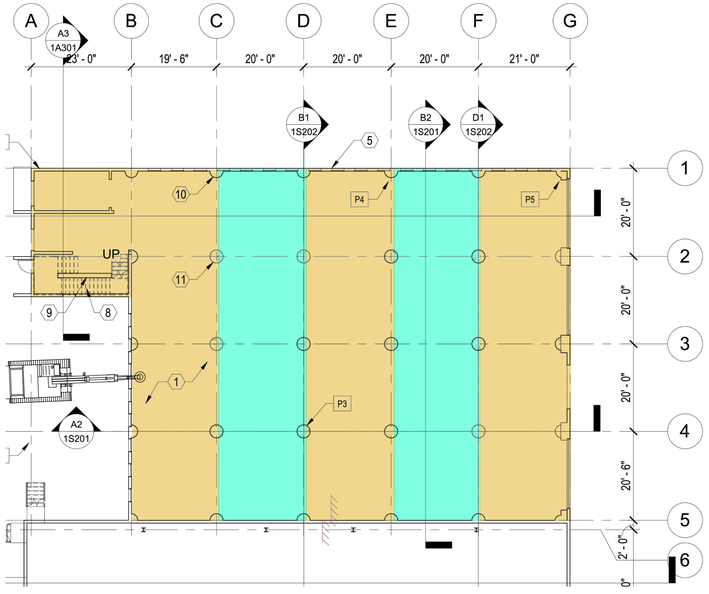
FBA Job No.	2025-39
Drawn	B.SCHOLL
Checked	A.KAZEMI

Title
BLDG 351A DEMOLITION PLAN

Sheet
D-3



1 BUILDING 351/351A WEST ELEVATION
SCALE: 1/16"=1'-0"



2 BUILDING 351 DEMOLITION PLAN - PHASE 2
SCALE: 1/8"=1'-0"

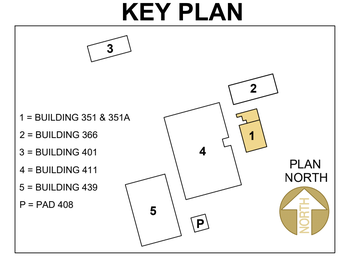
General Notes:

- Refer to Existing Building Project Plans for additional information for the scope, building description, floor plans, building elevations, and photos.
- See sheet D-2.1 for Demolition Scope and sequence of demolition work.
- All the demolition work required is not limited to that indicated on these plans. the intent is to remove all mechanical, electrical, plumbing, communications, and architectural items as indicated and as necessary to facilitate future development.
- All demolition work is to be done in compliance with all applicable codes, laws and regulations.
- Contractor to protect adjacent areas from dust, excessive noise or disruption of operation.

Building 351

a. Using skilled laborers and a 5,370-skid steer bobcat, remove the building's main roofing materials.
b. Skilled laborers will remove a window at the east side of the building for equipment access into the 2nd and 3rd floors of the building.
c. Using an Xtreme XR1270 Telehandler Forklift capable of lifting 12,000 Lbs. at 70 feet above the ground. Rig and place a 5,370-pound class skid steer bobcat into 2nd and 3rd Floors and remove the interior building combustible materials.
d. Using a 160,000-pound class excavator equipped with a hydraulic hammer attachment, and a supporting 100,000-pound class excavator equipped with a thumb and bucker attachment, demolished the building from the top down to the slab on grade in a south to north direction. Leaving the concrete stair/elevator tower in place.
e. Using a 200,000-pound class Hi - Reach excavator equipped with a hydraulic hammer and a supporting 100,000-pound class excavator equipped with a thumb and bucket attachment to manage the demolition debris, demolished the concrete stair/elevator tower from the top down to grade level.
f. Using 100,000-pound class excavators, one equipped with hydraulic hammer and one equipped with a thumb bucket attachment, demolish the concrete slab and foundations down to one foot below the surrounding adjacent grade.
g. 100,000-pound class excavators equipped with a thumb bucket attachment, sort separate and stockpile the demolished debris for truck loading operations
h. 100,000-pound class excavators with a thumb bucket attachment will be used to load trucks for offsite disposal during work

KEY PLAN



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No.	Description	Date
	100% CD SET	6/27/25

Client:
ECC
700 Airport Blvd. Suite 250
Burlingame, CA 94010

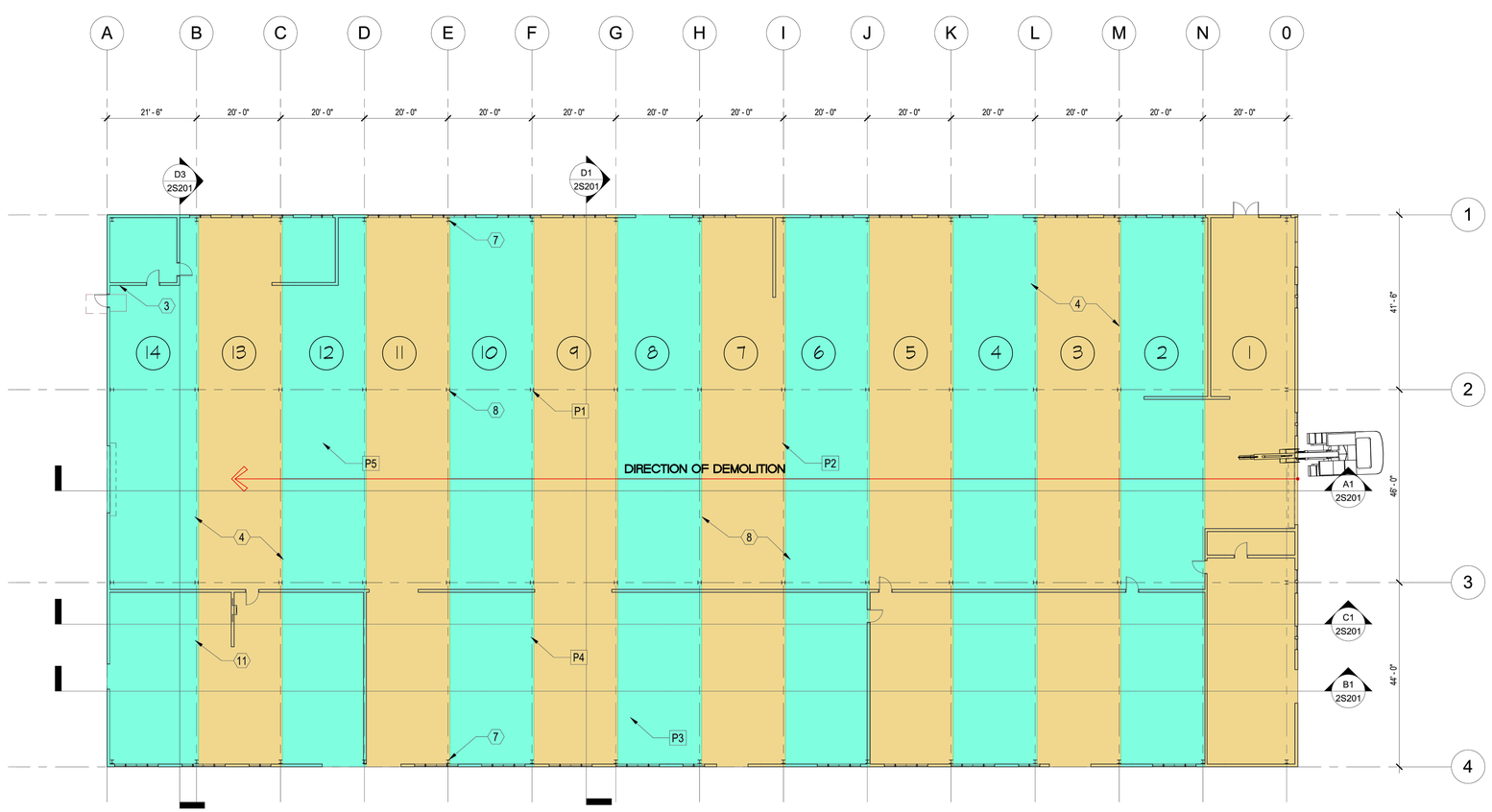
Hunters Point Parcel G
Building Demolition
San Francisco, California

Stamp
REGISTERED PROFESSIONAL ENGINEER AMIR KAZEMI HEAD No. C48085 CIVIL STATE OF CALIFORNIA

FBA Job No.	2025-39
Drawn	B.SCHOLL
Checked	A.KAZEMI

Title
BLDG 351 DEMO PLAN AND ELEVATION

Sheet
D-3.1



LEGEND:

(2) INDICATES BLDG. DEMO SEQUENCE

INDICATES AREA OF DEMOLITION

1 BUILDING 366 DEMOLITION PLAN

SCALE: 1/16"=1'-0"

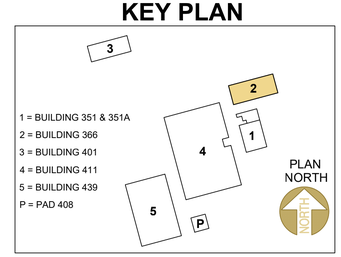
General Notes:

- Refer to Existing Building Project Plans for additional information for the scope, building description, floor plans, building elevations, and photos.
- See sheet D-2.1 for Demolition Scope and sequence of demolition work.
- All the demolition work required is not limited to that indicated on these plans. the intent is to remove all mechanical, electrical, plumbing, communications, and architectural items as indicated and as necessary to facilitate future development.
- All demolition work is to be done in compliance with all applicable codes, laws and regulations.
- Contractor to protect adjacent areas from dust, excessive noise or disruption of operation.

Building 366

a. Using 5,370-pound class skid steers bobcats and skilled laborer crews, remove the interior building combustible debris prior to starting the structural building demolition work.
b. Using 100,000-pound class excavators, one equipped with a hydraulic shear and one equipped with a thumb bucket attachment, remove the super structure from top down to the slab on grade level in an east to west direction.
c. Using 100,000-pound excavators, one equipped with hydraulic hammer and one equipped with a thumb bucket attachment, demolish the concrete slab and foundations down to one foot below the surrounding adjacent grade.
d. 100,000-pound class excavators equipped with a thumb bucket attachment, sort separate and stockpile the demolished debris for truck loading operations.
e. 100,000-pound class excavators with a thumb bucket attachment will be used to load trucks for offsite disposal during work.

KEY PLAN



1 = BUILDING 351 & 351A
2 = BUILDING 366
3 = BUILDING 401
4 = BUILDING 411
5 = BUILDING 439
P = PAD 408

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ECC
700 Airport Blvd. Suite 250
Burlingame, CA 94010

Hunters Point Parcel G
Building Demolition
San Francisco, California

Stamp

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AMIR KAZEMINEJAD
No. C48085
CIVIL
STATE OF CALIFORNIA

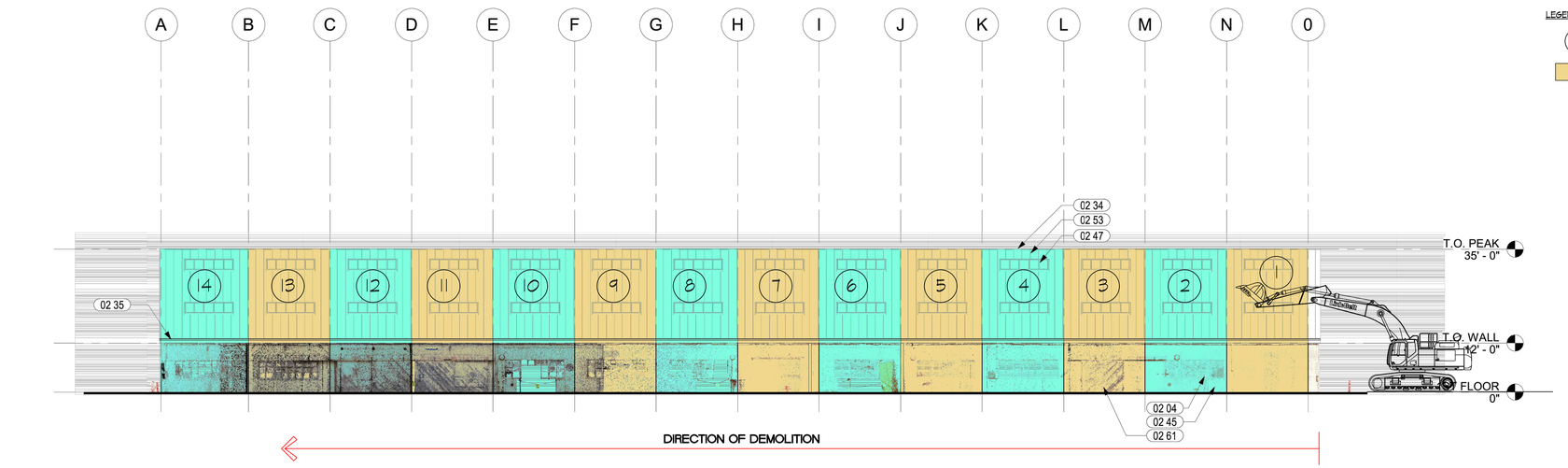
FBA Job No.	2025-39
Drawn	B.SCHOLL
Checked	A.KAZEMI

Title

BLDG 366 DEMOLITION PLAN

Sheet

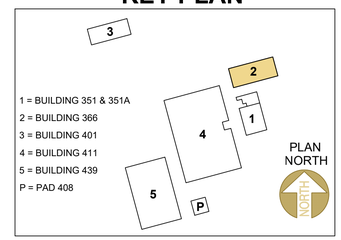
D-4



1 BUILDING 366 SOUTH ELEVATION
SCALE: 1/8"=1'-0"

LEGEND:
2 INDICATES BLDG. DEMO SEQUENCE
INDICATES AREA OF DEMOLITION

KEY PLAN



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San Francisco, California

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FBA Job No.	2025-39
Drawn	B.SCHOLL
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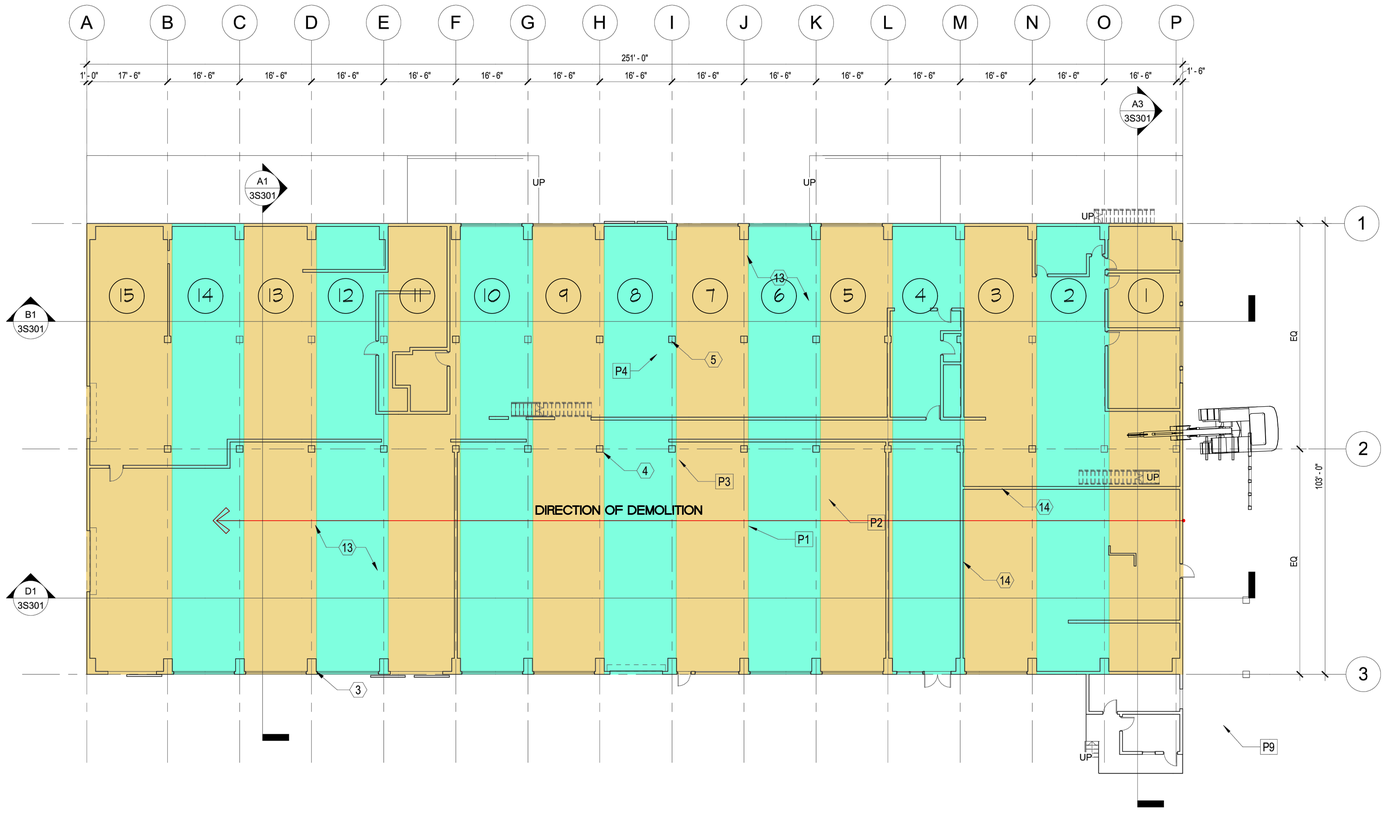
Title
BLDG 366
SOUTH
ELEVATION

Sheet
D-4.1



LEGEND:

2 INDICATES BLDG. DEMO SEQUENCE

INDICATES AREA OF DEMOLITION

1 BUILDING 401 DEMOLITION PLAN

SCALE: 1/16"=1'-0"

General Notes:

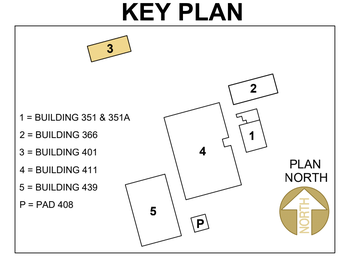
- Refer to Existing Building Project Plans for additional information for the scope, building description, floor plans, building elevations, and photos.
- See sheet D-2.1 for Demolition Scope and sequence of demolition work.
- All the demolition work required is not limited to that indicated on these plans. the intent is to remove all mechanical, electrical, plumbing, communications, and architectural items as indicated and as necessary to facilitate future development.
- All demolition work is to be done in compliance with all applicable codes, laws and regulations.
- Contractor to protect adjacent areas from dust, excessive noise or disruption of operation.

Building 401

a. FBA Engineers Inc has surveyed this weather damage building and has deemed that the building is unsafe for workers to remove the asbestos containing roof materials and other hazardous materials located inside the building prior to the building demolition work. (See Attached FBA Engineer Survey Letter dated June 3rd, 2025.
b. Silverado Contractors, a California DOSH Certified Registered Contractor, and Bay View Environmental, the Environmental Abatement Contractor, has designed an "Open - Air" Regulated Demolition Work Plan to demolish the building with the remaining asbestos containing materials in place that cannot be removed safely.
c. The "Open - Air" Demolition work plan has been submitted under separate cover.
d. Once the "Open - Air" regulated work area and engineering controls are in place, the building structural demolition work will start from the east and work to the west direction.

A 100, 000-pound excavator equipped with a thumb bucket attachment will demolish the building from the top down to the slab on grade in a bay-by-bay approach. During the building demolition, a crane supporting a debris screen will be used to enhance the protection to the adjacent neighborhood to the north from any escaping demolition debris.
e. 100,000-pound excavators equipped with a thumb bucket attachment will be used to manage and stockpile the demolished debris.
f. Using 100,000-pound excavators, one equipped with hydraulic hammer and one equipped with a thumb bucket attachment, demolish the concrete slab and foundations down to one foot below the surrounding adjacent grade.
g. 100,000-pound class excavators equipped with a thumb bucket attachment, sort separate and stockpile the demolished debris for truck loading operations.
h. 100,000 pound class excavators with a thumb bucket attachment will be used to load trucks for offsite disposal during work.

KEY PLAN



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San Francisco, California

Stamp

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STATE OF CALIFORNIA

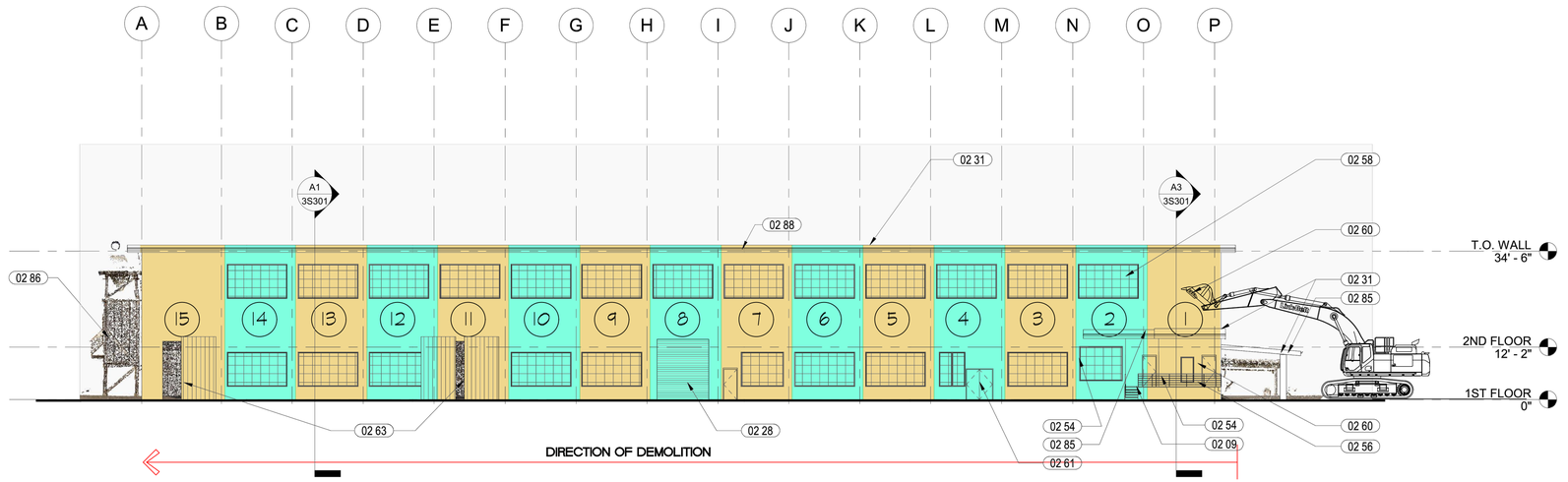
FBA Job No.	2025-39
Drawn	B.SCHOLL
Checked	A.KAZEMI

Title

BLDG 401 DEMOLITION PLAN

Sheet

D-5



LEGEND:

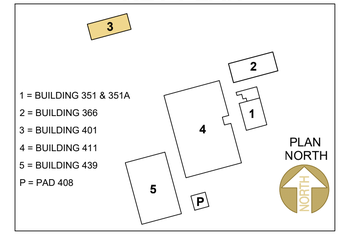
2 INDICATES BLDG. DEMO SEQUENCE

INDICATES AREA OF DEMOLITION

1 BUILDING 401 SOUTH ELEVATION

SCALE: 1/8"=1'-0"

KEY PLAN



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San Francisco, California

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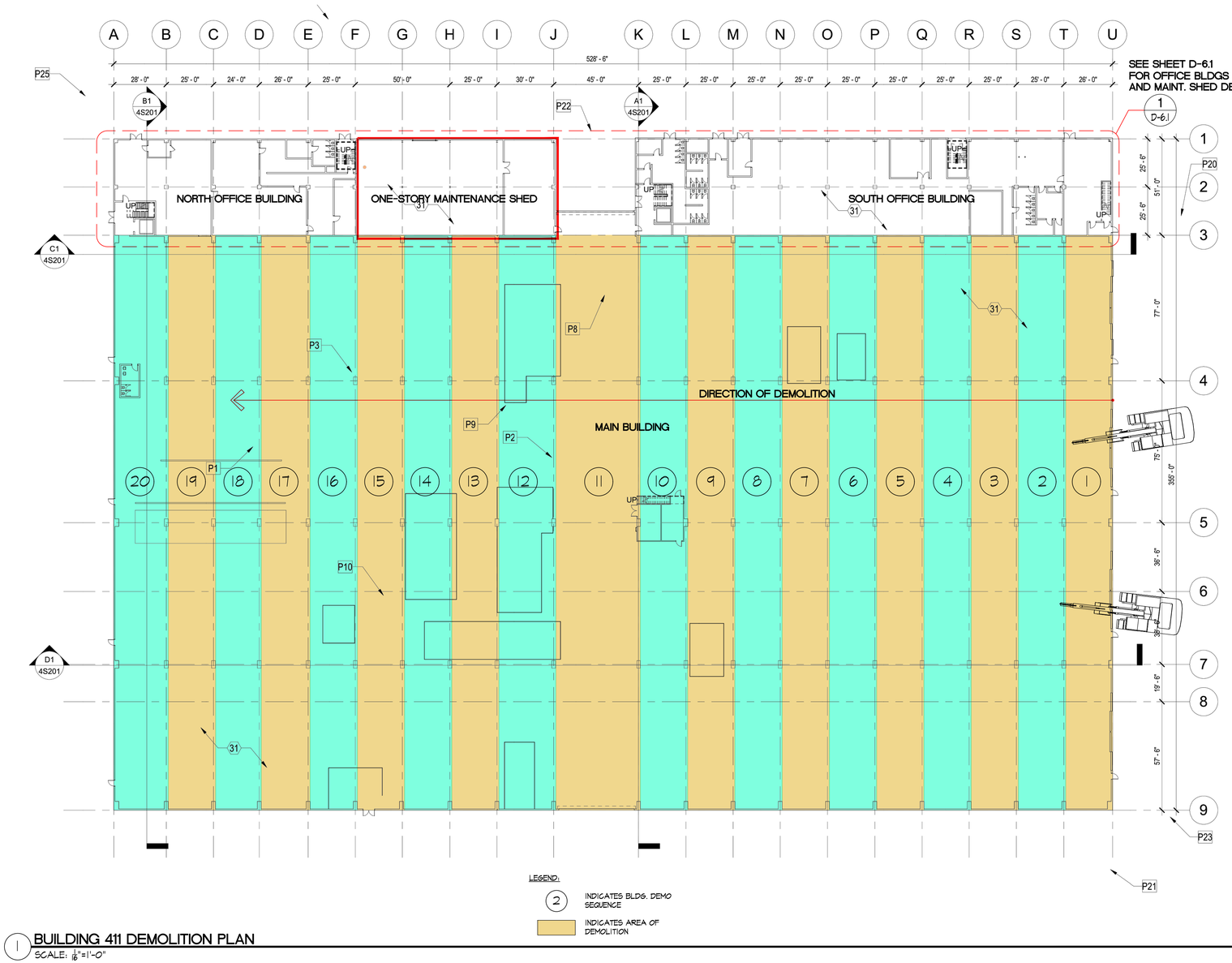
FBA Job No.	2025-39
Drawn	B.SCHOLL
Checked	A.KAZEMI

Title

BLDG 401
SOUTH
ELEVATION

Sheet

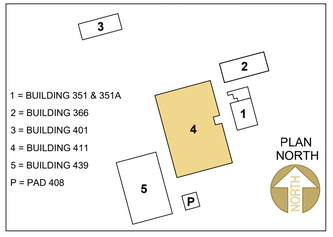
D-5.1



1 BUILDING 411 DEMOLITION PLAN

SCALE: 1/16"=1'-0"

KEY PLAN



General Notes:

- Refer to Existing Building Project Plans for additional information for the scope, building description, floor plans, building elevations, and photos.
- See sheet D-2.1 for Demolition Scope and sequence of demolition work.
- All the demolition work required is not limited to that indicated on these plans. the intent is to remove all mechanical, electrical, plumbing, communications, and architectural items as indicated and as necessary to facilitate future development.
- All demolition work is to be done in compliance with all applicable codes, laws and regulations.
- Contractor to protect adjacent areas from dust, excessive noise or disruption of operation.

Building 411

Repair/Service Area Warehouse Building

1. FBA Engineers Inc has surveyed this building and has deemed that the "Repair/Service" roof area and interior mezzanine/balcony has been severely damage by weather and neglect and is unsafe for workers to remove the asbestos containing roof materials and other hazardous materials located inside the building prior to the building demolition work. (See Attached FBA Engineer Survey Letter dated June 3rd, 2025.
2. Silverado Contractors, a California DOSH Certified Registered Contractor, and Bay View Environmental, the Environmental Abatement Contractor, has designed an "Open - Air" Regulated Demolition Work Plan to demolish the building with the remaining asbestos containing materials in place that cannot be removed safely.
3. The "Open - Air" Demolition work plan has been submitted under separate cover.
4. Prior to starting the building demolition work, 51,000-pound class wheel loaders and 9,000-pound class skid steer bobcats will be used to place the demolished concrete rubble from the demolished administration building work into the existing Service/Repair warehouse area pits to create a safe working surface for the super structure demolition scope of work.
5. Starting from the south and working towards the northern direction, 187,000pound class Hi - Reach excavators equipped with shear attachments, and 100,000 pound class excavators equipped with thumb and buckets attachments will be used to demolish the building from the top down to the slab on grade in a bayby-bay approach, including the mezzanine. The top/down building demolition will be sequenced to isolate and expose the six each 100-foot-long trusses at Grid Lines A - I/4 - 6 and supporting columns for the crane access demolition approach.
6. Each of the six one-hundred-foot-long trusses and supporting columns will be demolished by the following approach:

   b. Using a 145-ton crane and skilled torch cutting crews working from 100-to-120foot boom lifts. The 145 Ton Crane will be rigged (NON - Critical Crane Pick) to the truss and once the truss is secure by the crane, two torch cutting crews will commence the simultaneous torch cutting the truss at the supporting steel column connections. Once the truss is torch cut free, the 145 Ton Crane will lower the truss to the ground level. A 150,000-pound excavator with a shear attachment will shear apart the steel truss at grade level. A 150,000-pound Class excavator equipped with a shear attachment will remove the remaining truss columns. Repeat this sequence to demolish the remaining 100-foot-long trusses and supporting columns.

   c. Using 150,000 to 100,000-pound class excavators, equipped with hydraulic hammers and thumb bucket attachment, remove the pit and vault temporary concrete backfill and demolish the concrete slab and foundations down to one foot below the surrounding adjacent grade.

   d. Using 100,000-pound class excavators equipped with a thumb bucket attachment, sort separate and stockpile the demolished debris for truck loading operations.

   e. 100,000 - pound class excavators with a thumb bucket attachment will be used to load trucks for offsite disposal during work.

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No.	Description	Date
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Burlingame, CA 94010

Hunters Point Parcel G
Building Demolition
San Francisco, California

Stamp

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STATE OF CALIFORNIA

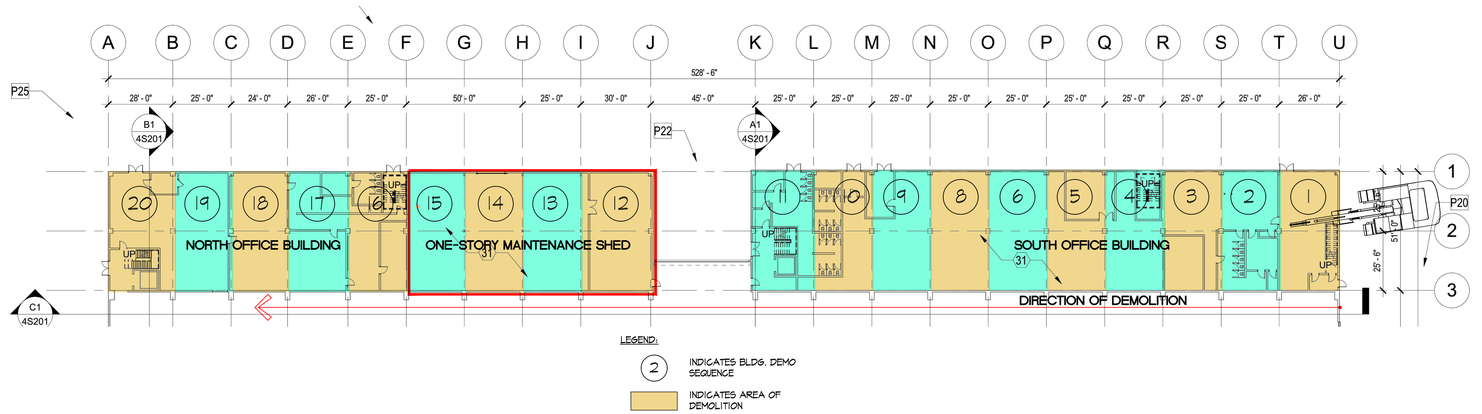
FBA Job No.	2025-39
Drawn	B.SCHOLL
Checked	A.KAZEMI

Title

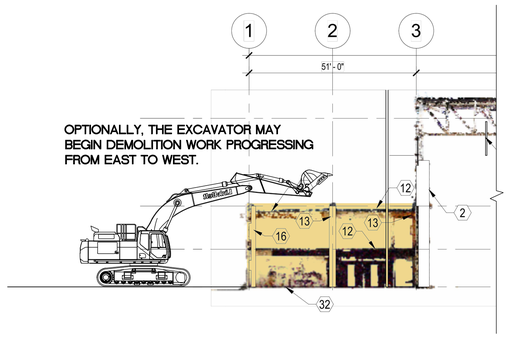
BLDG 411 DEMOLITION PLAN

Sheet

D-6



1 BUILDING 411 OFFICE BUILDINGS AND MAINTENANCE SHED DEMOLITION PLAN
SCALE: 1/16"=1'-0"



2 BUILDING 411 NORTH AND SOUTH ADMINISTRATION STRUCTURES - TWO STORY CONCRETE FRAME
SCALE: 1/16"=1'-0"

General Notes:

- Refer to Existing Building Project Plans for additional information for the scope, building description, floor plans, building elevations, and photos.
- See sheet D-2.1 for Demolition Scope and sequence of demolition work.
- All the demolition work required is not limited to that indicated on these plans. the intent is to remove all mechanical, electrical, plumbing, communications, and architectural items as indicated and as necessary to facilitate future development.
- All demolition work is to be done in compliance with all applicable codes, laws and regulations.
- Contractor to protect adjacent areas from dust, excessive noise or disruption of operation.

Building 411

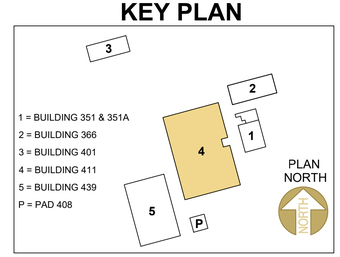
Administration Building :

1. Using 5,370-pound class skid steer bobcats and skilled laborer crews, remove the interior building combustible debris prior to starting the structural building demolition work.
2. Using 100,000-pound excavators, two equipped with hydraulic hammers and one equipped with a thumb bucket attachment, demolish the concrete and steel super structure from the top to the bottom is a south to north direction.
3. Using 100,000-pound excavators, two equipped with hydraulic hammers and one equipped with a thumb bucket attachment, demolish the concrete slab and foundations down to one below the surrounding adjacent grade.
4. Using 100,000-pound class excavators equipped with a thumb bucket attachment, sort separate and stockpile the demolished debris for truck loading operations.
5. 100,000-pound class excavators with a thumb bucket attachment will be used to load trucks for offsite disposal during work.

One-story Maintenance Shed:

1. Using a 100,000-pound excavator equipped with a hydraulic shear, demolish the one-story maintenance shed systematically from top to bottom.

KEY PLAN



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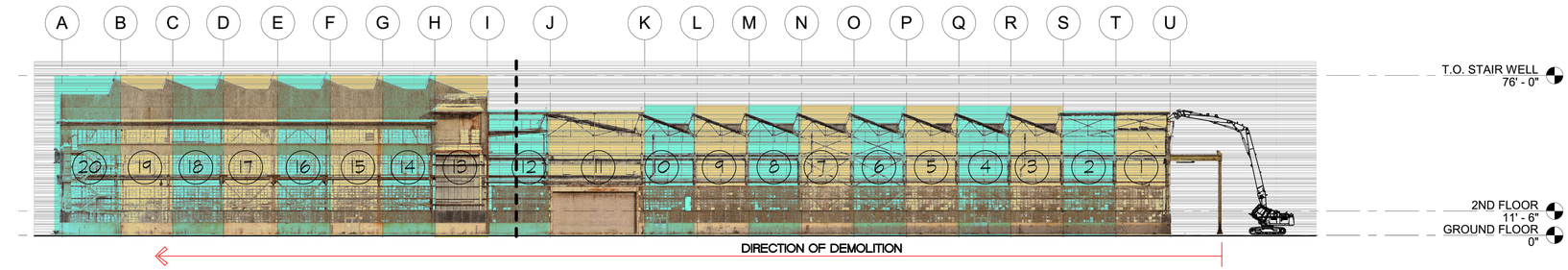
FBA Job No.	2025-39
Drawn	B.SCHOLL
Checked	A.KAZEMI

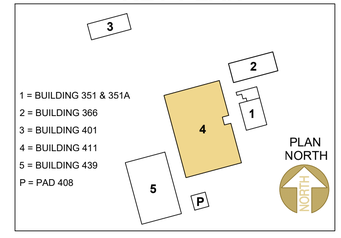
Title
BLDG 411
ADMIN BLDG.
DEMOLITION
PLAN

Sheet
D-6.1



1 BUILDING 411 WEST ELEVATION
SCALE: 1/32"=1'-0"

KEY PLAN



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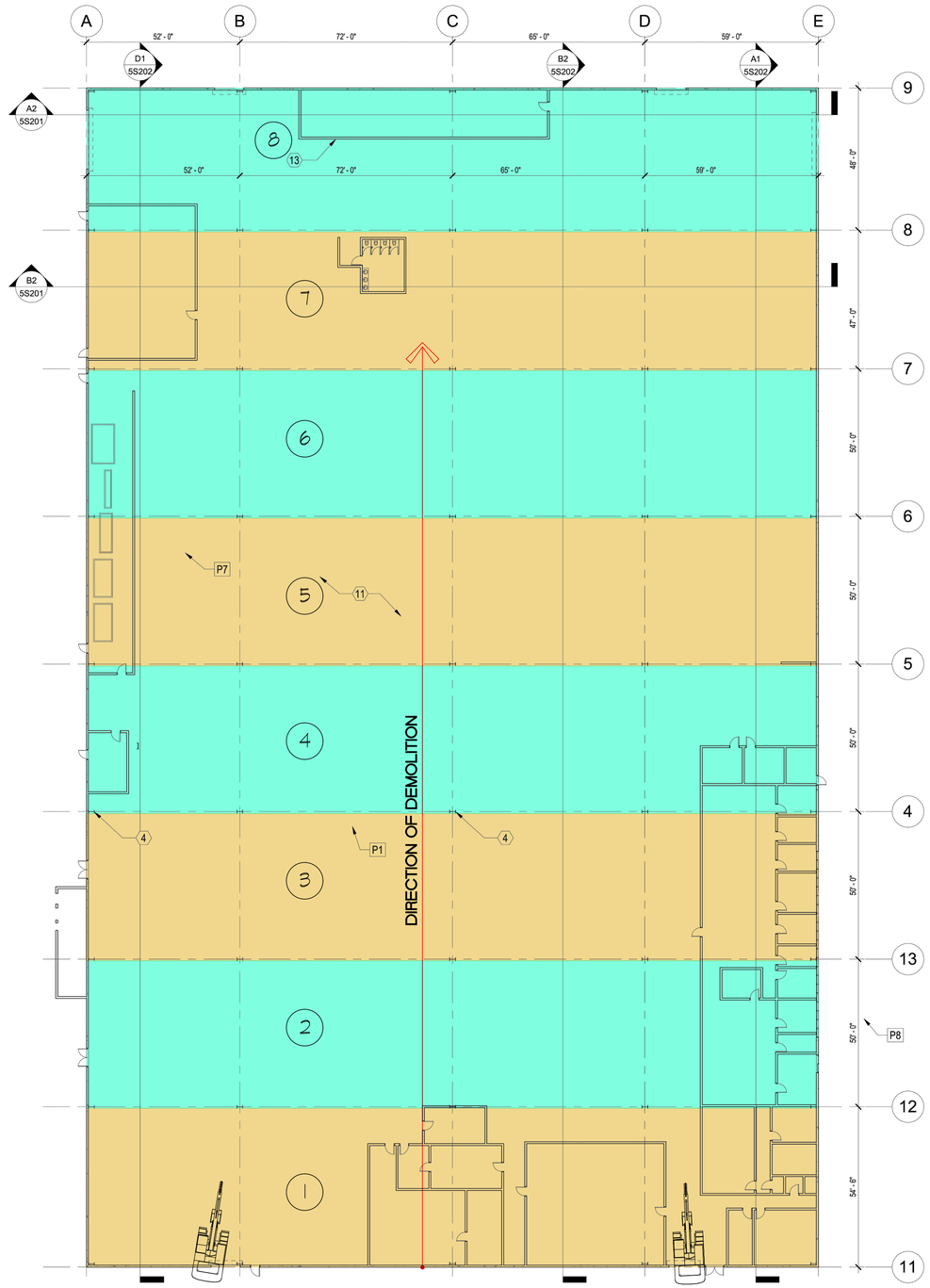
Drawn	B.SCHOLL
Checked	A.KAZEMI

Title

BLDG 411
WEST
ELEVATION

Sheet

D-6.2



1 BUILDING 439 DEMOLITION PLAN
SCALE: N.T.S.

General Notes:

- Refer to Existing Building Project Plans for additional information for the scope, building description, floor plans, building elevations, and photos.
- See sheet D-2.1 for Demolition Scope and sequence of demolition work.
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- Contractor to protect adjacent areas from dust, excessive noise or disruption of operation.

Building 439

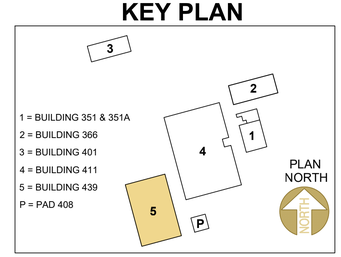
a. Using 5,370 pound class skid steer bobcats and skilled laborer crews, remove the interior building combustible debris prior to starting the structural building demolition work.
b. Using 100,000-pound class excavators, one equipped with a hydraulic shear and one equipped with a thumb bucket attachment, remove the super structure from top down to the slab on grade in a south to north direction.
c. Using 100,000-pound excavators, one equipped with hydraulic hammer and one equipped with a thumb bucket attachment, demolish the concrete slab and foundations down to one foot below the surrounding adjacent grade.
d. 100,000-pound class excavators equipped with a thumb bucket attachment, sort separate and stockpile the demolished debris for truck loading operations.
e. 100,000-pound class excavators with a thumb bucket attachment will be used to load trucks for offsite disposal during work.

LEGEND:

2 INDICATES BLDG. DEMO SEQUENCE

INDICATES AREA OF DEMOLITION

KEY PLAN



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P = PAD 408

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San Francisco, California

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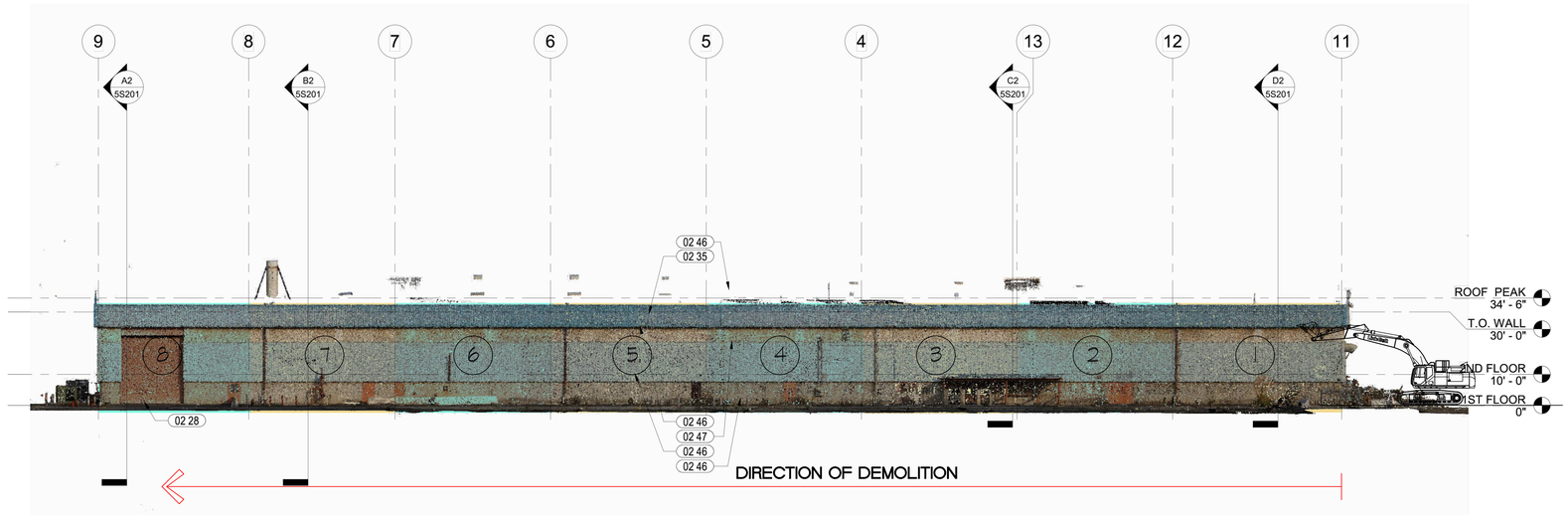
FBA Job No.	2025-39
Drawn	B.SCHOLL
Checked	A.KAZEMI

Title
BLDG 439
DEMOLITION
PLAN

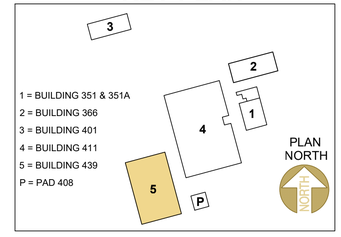
Sheet
D-1



1 BUILDING 439 WEST ELEVATION
SCALE: N.T.S.

LEGEND:
2 INDICATES BLDG. DEMO SEQUENCE
INDICATES AREA OF DEMOLITION

KEY PLAN



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STATE OF CALIFORNIA

FBA Job No.	2025-39
Drawn	B.SCHOLL
Checked	A.KAZEMI

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BLDG 439
WEST
ELEVATION

Sheet
D-7.1

APPENDIX E
Response to Comments

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REGION 9
SAN FRANCISCO, CA 94105

October 21, 2025

Via email only

Department of the Navy
Naval Facilities Engineering Systems Command (NAVFAC)
Base Realignment and Closure (BRAC)
Program Management Office West
Attn: Michael Pound, BRAC Environmental Coordinator
33000 Nixie Way, Building 50, Second Floor
San Diego, CA, 92147
michael.j.pound.civ@us.navy.mil

Re: U.S. EPA interim review of the Draft Remedial Action Work Plan – Parcel G Building Demolition, August 2025.

Dear Mr. Pound,

The U.S. Environmental Protection Agency (EPA) has reviewed the above referenced Remedial Action Work Plan – Parcel G Building Demolition document submitted by the Navy on August 28, 2025. EPA offers the following comments on various aspects of the work plan. Generally, EPA finds the document to be technically complete and a through plan for the demolishing of the six radiologically impacted buildings located within Parcel G. This memo outlines comments the portions of the portions of the work plan as submitted on August 28, 2025. There are some outstanding issues with the review of the Parcel G Building Demolition RAWP Air Monitoring SAP, which was submitted on October 2, 2025, to complete this Remedial Action Work Plan. The review of the SAP is not yet complete and will be transmitted in a subsequent memorandum.

EPA offers the following comments of various aspects of the work plan:

Overall, EPA finds the document to be a technically complete and thorough plan for demolishing the six Parcel G buildings. This memo outlines comments to the portions of the work plan submitted on August 28, 2025. There remain some outstanding issues with the review

of the Parcel G Building Demolition RAWP Air Monitoring SAP, which was submitted October 2, 2025, to complete the Remedial Action Work Plan. The review of the SAP is not yet complete and will be transmitted in a subsequent document.

EPA comments for the Navy's consideration are presented below:

GENERAL COMMENTS

1. Section 2.0 Background and Site History states that:

   > "The six buildings to be demolished under this contract (Building 351, 351A, 366, 401, 411, and 439 and Building Pad 408), have been reinvestigated and radiologically remediated."

   Please provide within the RAWP the information and documentation that supports the above reference statement.

2. The RAWP assumes that all hazardous materials identified in prior surveys represent all potential waste streams. However, this may not be the case. The RAMP should provide contingency protocols if unexpected hazardous materials are discovered. Please revise the RAWP to add adaptive management provisions to address any potential discovery of uncharacterized hazardous waste.

3. The RAWP does not contain all components of a Uniform Federal Policy – Quality Assurance Project Plan (UFP-QAPP). Please revise the RAWP to include the full set of UFP-QAPP worksheets for any verification sampling that may occur.

4. The RAWP should clarify whether there are any obstructions are anticipated that might cause building access issues during demolition and, if so, discuss within the RAWP how access issues will potentially affect the proposed demolition. The text describes in Section 2.1.3 (Building 366) and Section 2.1.6 (Building 439) that trenches are obstructing building access. However, EPA understood that all trenches have been backfilled and repaved as of September 2025. Please resolve the contradiction.

5. The SWPPP does not clearly identify how contaminated demolition runoff (e.g.., water used for dust suppression contacting debris) will be segregated from clean storm water. The SWPPP also only discusses analysis of total dissolved solids (TDS) and does not include any provisions for the collection, treatment, or disposal potentially contaminated water from demolition activities. Please revise the RAWP to include procedures for

stormwater/wash water segregation, containment, and sampling for both chemical and/or radiological constituents to ensure potentially contaminated water is not released.

6. The RAWP state that monitoring data will be summarized in weekly field reports and in a Remedial Action Completion Report (RACR) that will be drafted in the future. These weekly reports should include the following, at a minimum:

    a. Monitoring results by parameter (PM_{10}, asbestos fibers, lead dust, radiological data, etc.)
    b. Comparisons of monitoring results against project-specific action levels and all exceedances identified.
    c. Any mitigation measures taken in response to any exceedances (e.g., misting, work stoppage, expanded containment, etc.)
    d. Maps and/or figures identifying monitoring station locations in relation to active demolition area or prevailing wind direction.
    e. Waste stream segregation/abatement progress updates
    f. Stormwater management observations, including any runoff and/or erosion issues.

    Please revise the RAWP to include these weekly monitoring elements.

7. The RAWP does not state that EPA Region 9's off-site rule coordinator will be consulted about the selected disposal facilities being used for wastes generated from an NPL site. Please revise the RAWP to require consultation with the Region 9 Off-Site Rule Coordinator or provide evidence the consultation was conducted.

8. The text of the work plan needs to be reviewed and undergo further technical editing to repair many inconsistencies and incomplete statements within the text. This Remedial Action Work Plan does not always reference the history and conditions found at Hunters Point using the same language as present in previous Navy documents. Examples of these issues are listed below:

    - Work Plan Main Document:
        - Navy acquired annexed Hunters Point in 1941, not 1940.
        - Navy operated Hunters Point as a shipyard into the 1970s, not 1960s
        - With the Radiological Rework nearing completing, it is not clear that the access to Building 366 has access issued due to trenches.
        - The work plan calls for removing the slab of buildings down to one-foot below grade but also lists slabs that are only 10-inches

thick. It is not clear what will happen to the exposed soil if the entire pad is removed.

- Environmental Protection Plan:
  - 1.0 Introduction: EPA does not believe that the statement that "Activities conducted under this task order will be under the purview of The San Francisco Bay Regional Water Quality Control Board as the lead agency…" is a correct statement. Please respond.

- Draft – Stormwater Pollution Prevention Plan – Parcel G Building Demolition:
  - Title page lists document prepared for "...Travis ROICC/CODE ROPWT Travis Air Force Base…". The Title pages for the Draft – Dust Management & Air Monitoring Plan and the Draft – Waste Management Plan, are titled in a similar way. EPA understands from the conversation had with you October 20th that this is a component how the contracts are being managed by the Navy. To avoid confusion, please add a revision to the text that explains the relationship of this contract with Travis AFB, so it is clear these plans have been created for HPNS.

- Waste Management Plan – 1.1 Background: The statement "The purpose of the building demolition is in response to the City of San Francisco's request that before transferring the Navy owned property at the former HNPS, the Navy must demolish all remaining building…" This does not conform to EPA understanding of the decision process related to demolishing the six buildings, especially as stated in the Parcel G ROD Explanation of Significant Differences (ESD) signed earlier this year. Please provide clarification.

- Appendix H: Stormwater BMP Construction Fact Sheets: It is not clear if this document is generic information or specific to the site. Please confirm.

SPECIFIC COMMENTS

Section 2.1 – Project Location, Description and Site History:

- The RAWP is unclear as to how unexpected ground and stormwater will be managed during demolition efforts. The RAWP should discuss how unexpected water accumulation will be addressed and whether dewatering and characterization effort may be required. Please revise the RAWP to include contingency procedures for how unexpected infiltrations of groundwater will be addressed.

Section 3.7 – Utility Clearance and Geophysical Survey

- Please revise the RAWP to include how the sampling and inspections of utilities will be verified and documented to ensure that there are no residual hazardous liquids and/or oils associated remaining with any utilities (e.g., refrigerants in HVAC, oils in transformers, and/or PCBs in panels).

Section 3.8 – Hazardous Material Survey

- The RAWP Hazardous Material Survey (HMS) does not contain a discussion of the quality control (QC) supporting documentation such as Chain-of-Custody, field duplicates, data validation, etc., that will be used to confirm the HMS's results. Please revise the RAWP to include the supporting documentation for the HMS.

Section 4.0 - Demolition Activities

- The RAWP does not specify how clearances of abatement activities (e.g., containment, negative pressure, decontamination units, etc.) will be verified prior to demolition begins. Please revise the RAWP to demonstrate how clearances will be documented prior to beginning demolition activities.

Section 4.3.1 – Abatement

- The RAWP states that slabs will be pressure washed (Building 366 and 401) but does not describe how wash water will be captured, contained and characterized. Please revise the RAWP to detail how wash water will be contained and characterized.

Section 4.4.2. Demolition

- The RAWP proposes "Open-Air" demolition of Building 401 and areas of Building 411 with ACM and other hazardous materials left in place because the structures are unsafe for worker entry; however, the plan does not clearly address how the release of friable ACM, LBP dust, and other hazardous materials will be prevented, monitored, and documented. Please revise the RAWP to include defined protocols for ensuring the

Open-Air demolitions prevent the release of airborne hazardous material and discuss how hazardous materials will be segregated post-demolition.

Section 4.5.5.2 – Demolition

- The text discusses removal of any liquids from the Building 411 vaults and pits but does not discuss whether the vaults and pits will be subsequently cleaned (e.g., decontaminated, pressure washed), demolished in place, or partially removed (e.g., one foot of concrete removed from floors). It is also unclear whether the vaults and pits will be backfilled to grade following these actions. Please revise the RAWP to clarify the planned end-state of these structures, including cleaning/decontamination, demolition or partial removal, and backfilling requirements.

Section 5.4 – Demolition Waste and Debris

- The RAWP discusses demolition debris, concrete, personal protective equipment (PPE), decontamination fluids, wastewater, and excavation soil but does not discuss whether the potential for contaminated soils beneath building slabs and foundations will be verified as clean by confirmation sampling, including radiological screening. Historical operations at Parcel G may have resulted in impacts to shallow subsurface soils that would only be encountered once slabs are removed (e.g., from leaking floor drains or piping). Please revise the RAWP to include procedures for identifying, characterizing, and managing potentially contaminated soils beneath slabs that are removed.

Section 6.0 – Air Monitoring

- Section 6.0 states, “If exceedances are observed or recorded at real-time monitoring locations or in the laboratory analyses, the Navy will be informed;” however, there is no commitment to provide this information to EPA. Section 10 states, “The dust control activities and weather wind data will also be provided to the Navy for weekly reporting to the DTSC.” EPA and the other regulatory agencies should be informed of exceedances and mitigation efforts within a short period (e.g., 48 hours) of being informed of the exceedance. Please revise the RAWP to clarify whether EPA will receive weekly reports and require that regulatory agencies will be notified of exceedances and mitigation efforts within a specified notification period.

Appendix A: SWPPP

- It is not clear what measures will be taken to ensure that run off from the partially demolished buildings will be appropriately contained. Specifically, if a building is in the

process of being demolished, with the potential for exposed hazardous material, and there is a heavy rainfall event, will stormwater protection measures be taken to ensure that hazardous materials won't be washed from the buildings to the surrounding portions of Parcel G before they are moved to the stockpiles. Steps to address potential runoff from wetting the buildings during demolition and runoff from the stockpiles do not seem to be adequately addressed. Please address this comment by pointing out in the existing plan where the issue is addressed or adding to the Work Plan the steps that will be taken to ensure there is no runoff of hazardous materials from the sites of the demolished buildings.

Appendix A – Draft Environmental Protection Plan, Wildlife Resources

- The text contains an internal inconsistency. It first states that there is no vegetation at the project site but then states that "prudent steps will be taken to protect trees and vegetation." Please revise the section to clarify whether vegetation is present and, if so, identify what protective measures will be implemented. If vegetation is not present, the latter statement should be removed to avoid confusion.

Appendix A – Draft Environmental Protection Plan, Attachment A SWPPP

- The text indicates that inspections will be conducted weekly and after a qualifying rain event; however, a qualifying rain event is not defined. Please define a qualifying rain event.

Appendix A - Attachment B: Dust Management and Air Monitoring Plan

- The Dust Management and Air Monitoring Plan is missing essential monitoring elements found in the Parcel G Radiological Re-work Parcel G Air Monitoring and Dust Control Plan, which covers standard air monitoring requirements at the site, and the recent Parcel B Building 123 Asbestos Abatement Work Plan, which covers substantive compliance with BAAQMD Regulation 11. Missing or incomplete elements include but are not limited to the following:
    - Requirements for removal of asbestos-containing materials.
    - Asbestos-impacted work area cleanup procedures.
    - Detailed information about air monitoring siting, sample duration, or when air monitoring will occur.
    - Public action levels for COCs and ROCs.
    - Does not include upwind/downwind subtraction criteria already established for HPNS.
    - QA/QC practices consistent with previous Parcel G workplans.
    - Field forms and SOPs.

  - Reporting requirements for regulatory agencies, including weekly asbestos reporting during the demolition of buildings containing asbestos.

- Attachment B of this Work Plan should, to the maximum extent possible, incorporate the elements of these two plans to ensure consistency with past actions taken on HPNS to provide comparable levels of protection to workers and public living close to the site.

- The RAWP specifies collection of upwind and downwind air monitoring data but does not define a comparison method or decision logic in order to determine whether exceedances represent project related impact or background interference. In addition, a tiered mitigation matrix should be provided (e.g., if an exceedance is observed, first increase watering, second, pause dust-generating work if exceedances persist for a defined duration). Please revise the RAWP to specify the calculation approach for comparing upwind and downwind results and define what differential constitutes an onsite impact. Additionally, please specify tiered mitigation efforts to implement in the event of an exceedance.

- The text states, "Prior to beginning construction activities, background real-time PM10 data may be collected to establish baseline concentrations;" however, it is unclear how background real-time PM10 data will be utilized as a measure against site impacts. For example, it is unclear whether background data will be used to determine threshold exceedances by net increase/net decrease (i.e., subtraction of background data). Please clarify how background data will be used to evaluate real-time PM10 data.

- Please revise the RAWP to discuss whether two monitoring stations are sufficient to maintain downwind coverage and require dust-generating work be paused if downwind coverage cannot be maintained. Additionally, please clarify whether the upwind and downwind monitoring stations will require dynamic repositioning when wind direction shifts more than a specified threshold or consider adding downwind sector monitoring stations to maintain downwind coverage over a large area.

- Please revise the RAWP to require same-day exceedance notifications and immediate mitigation efforts. In addition, please ensure that wind data, notification timestamps and response actions are included in the daily logs.

- While the Work Plan specifically mentions air and dust monitoring for the protections of workers onsite, there are no provisions for monitoring for fugitive dust leaving the site and potentially impacting members of the public receptors living and working just beyond the boundary of the site. Attachment B/Section 6.0 states "Air monitoring provides reasonable assurance of worker protection safety…" but fails to account for

protection of the nearby public. Parcel G is an active component of the current NPL Hunters Point site and monitoring for unwanted offsite migration of contaminants of concern listed in the 2009 ROD and 2025 ESD needs to be included to demonstrate continued protectiveness of the Parcel G remedies.

- Monitoring activities need to be expanded to address potential emissions to public receptors immediately adjacent to Parcel G and should include all relevant COCs (including PCBs) and ROCs and previously agreed upon public action levels where applicable. Please revise the Air Monitoring and Dust Plan to include these air monitoring requirements.

- To ensure the public living around HPNS are fully informed of the proposed scope of the Air Monitoring and Dust Control Plan included in the proposed Parcel G Building Demolition Work Plan, the EPA requests that the Navy prepare a full briefing to be added to the agenda of the future Community Action Council (CAC) meeting to be held in November. This will give the public living around HPNS the opportunity to be fully informed about the Air Monitoring plan's scope for the proposed Building Demolition plan and to be able to comment directly to the Navy their questions and concerns about the plan. Please confirm that this will be an agenda item for the upcoming CAC meeting.

- Given public interest and public concern related to air quality impacts during the building demolition, the Navy should consider frequent website updates and/or public meetings to review the air monitoring data with the community.

Appendix B – Waste Management Plan – Section 3.3

- The text states that all trucks will be screened at Hunters Point Naval Shipyard (HPNS) Radiation Portals prior to exiting the site; however, the sensitivity criteria, detection limits, and calibration/QC procedures for these portal monitors are not provided. Please revise this section to specify the portal monitor sensitivity criteria, detection limits for relevant isotopes, calibration frequency, and QA/QC procedures. In addition, please clarify how exceedances or notifications will be verified, documented, and communicated with regulatory agencies.

If you have any questions about any of the EPA's comments on the Work Plan, please feel free to contact me directly at collins.mike@epa.gov or (415) 972-3183

Sincerely,

Mike Collins
Remedial Project Manager
Northern California Federal Facilities Section
Superfund and Emergency Response Division

Cc: Electronic only

Mary Snow, San Francisco Bay Regional Water Quality Control Board
mary.snow@waterboards.ca.gov

Michael Howley, California Department of Toxic Substances Control
Michael.Howley@dtsc.ca.gov

Department of Toxic Substances Control

Yana Garcia
Secretary for
Environmental Protection

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Gavin Newsom
Governor

https://dtsc.ca.gov/

November 24, 2025

U.S. Department of the Navy
Attn: Michael Pound, BRAC Environmental Coordinator
NAVFAC BRAC PMO West
3300 Nixie Way, Bld. 50, 2nd Floor
San Diego, California 92147
Michael.j.pound.civ@us.navy.mil

COMMENTS ON PARCEL G BUILDING DEMOLITON WORK PLAN
HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO, CALIFORNIA
(SITE CODE: 200050)

Dear Michael Pound:

The Department of Toxic Substances Control (DTSC) has reviewed the Draft *Remedial Action Work Plan for Parcel G Building Demolition* (draft Work Plan), dated August 2025. The draft Work Plan describes the activities related to the abatement, demolition, and removal of seven buildings at Parcel G of the Hunters Point Naval Shipyard (HPNS) in San Francisco, California, that have been previously investigated for radiological contamination. The demolition and removal of these buildings is pursuant to the Explanation of Significant Differences to the Parcel G Record of Decision (ROD-ESD) prepared by the Navy in August 2025, with concurrence from the regulatory agencies.

While DTSC typically relies on the California Department of Public Health (CDPH) for oversight of radiological program activities at HPNS, DTSC and CDPH determined that this Work Plan does not require CDPH review as it does not include radiological activities. DTSC understands that the United States Nuclear Regulatory Commission (NRC) has determined that the seven Parcel G buildings included in this Work Plan have met the federal criteria for unrestricted release and that as a result the Navy no

longer considers these buildings to be radiologically impacted. CDPH has issued Radiological Unrestricted Release Recommendation (RURR) letters for all or portions of six of the buildings; the crawl space under building 351A and all of Building 351 are not considered released by CDPH. CDPH does not object to the demolition and removal of these buildings. DTSC notes here that additional documentation may be required for the release of the building footprints or building material left onsite. See comments one and two below for more information.

DTSC has reviewed the letters already submitted by the United States Environmental Protection Agency (USEPA) and the San Francisco Department of Public Health (SFDPH) and generally concurs with their comments. DTSC's comments on the draft Work Plan are below.

DTSC Comments:

1. General comment: Each of the buildings included in the draft Work Plan has been investigated for potential radiological contamination. CDPH has reviewed the Final Status Survey Reports (FSSRs) for each building and issued Radiological Unrestricted Release Recommendation (RURR) letters for five buildings and portions of a sixth. The crawl space below Building 351A and all of building 351 have not been released by CDPH, primarily due to the inaccessibility of specific survey units. This does not preclude the demolition and removal of these buildings. The United States Nuclear Regulatory Commission has also reviewed the FSSRs and concluded that all of the buildings meet the federal criteria for unrestricted release. Please revise the Work Plan to describe the radiological release status of each building and note what if any restrictions or safety measures might apply to the buildings or portions of buildings that have not been released by CDPH.

2. General comment: DTSC notes that while the demolition and removal of the buildings not released by CDPH is not prohibited by CDPH, CDPH may still require additional documentation or survey post-demolition for the unrestricted release of the remaining building footprints or material left onsite. If such activities or documentation are not part of the scope of this Work Plan, DTSC and CDPH will revisit this comment prior to finalization of the Parcel G Remedial Action Completion Report.

3. General comment: Prior to beginning abatement work, the abatement contractor should prepare an Abatement Work Plan consistent with the one prepared for Building 123 (see attached).

4. Section 3.6, Dust Control and Air Monitoring: Please revise the last paragraph of this section to state that all air monitoring data and reports will also be provided to DTSC and USEPA within two weeks of report generation. Also note that asbestos monitoring data must be sent directly to the Bay Area Air District Air Pollution Control Officer.

5. Section 3.6, Dust Control and Air Monitoring: In light of recent disclosures by the Navy of a November 2024 exceedance of Plutonium-239 in a Parcel C air sample, DTSC requests that upwind and downwind air sampling for radiological contamination be included in the Work Plan.

6. Section 3.6, Dust Control and Air Monitoring: During demolition of buildings where abatement cannot be performed due to accessibility or safety concerns, air sampling should also include analysis for abatement materials such as mercury and polychlorinated biphenyls (PCBs). DTSC also recommends such sampling during demolition of abated buildings given the high degree of public interest.

7. Section 3.6, Dust Control and Air Monitoring: Given the public interest in this demolition activity DTSC urges the Navy and contractors to establish clear methods of communicating air monitoring data to nearby residents, workers, and other interested parties. This should include regular distribution of air monitoring data, alerts for exceedances or stop-work orders, and points of contact for questions or concerns. DTSC understands that some of this request may be beyond the scope of this specific Work Plan and intends to continue related discussions with the Navy at large.

8. Section 7.0, Quality Control Procedures and Reporting: the referenced Contractor Quality control Plan does not appear to be included in the Work Plan. Please provide this document for regulatory agency review.

9. Section 7.0, Quality Control Procedures and Reporting: This section should include a description of any post-demolition construction summary report or other completion report that will be prepared for the Navy and regulatory agencies. That report should include, at minimum:
    a. Descriptions of work completed
    b. Descriptions of deviations from the final approved Work Plan
    c. Reports generated during the work period, such as construction daily reports, stormwater inspection reports, and air monitoring and sampling reports
    d. Summaries of waste disposal, including truckload counts, material volumes, destinations of waste, and hazardous waste manifests
    e. Photographs of work areas before, during, and after mobilization

10. Appendix A, Attachment B, Dust Management and Air Monitoring Plan, Section 6.2, Monitoring Site Locations: To be consistent with Bay Area Air District requirements for the Building 123 demolition there should be three air monitoring locations, one upwind and two downwind. Monitoring locations should be selected based on wind direction and adjacent to the active work areas.

Please incorporate responses to the above comments in a revised draft final Work Plan. If you have any questions, please contact me by phone at (51)-540-3840 or email at Michael.Howley@dtsc.ca.gov.

Sincerely,

Michael Howley

Michael Howley
Project Manager
Site Mitigation and Restoration Program
Michael.Howley@dtsc.ca.gov

Attachments: Hunters Point Building 123 Demolition Project Work Plan (Abatement Work Plan)

cc:

Brandon Mills, Navy, Brandon.S.Mills13.civ@us.navy.mil
Mike Collins, USEPA, Collins.Mike@epa.gov
Terry Han, CDPH, Terry.Han@cdph.ca.gov>
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Mary Snow, Regional Water Board, Mary.Snow@Waterboards.ca.gov
Ryan Casey, SFDPH, Ryan.Casey@sfdph.org
Lila Hussain, OCII, Lila.Hussain@sfgov.org
Jamie Egan, Jacobs, Jamie.Egan@jacobs.com

Hunter's Point Building 123 Demolition
451 Galvez Ave San Francisco, CA 94124

The purpose of this work plan is to establish a safe working environment for the employees of Ferma Corporation as well as to ensure the completion of the project within compliance of all Federal, State, Local regulations as well as the project specifications while conducting Asbestos Abatement at the location listed above.

SCOPE

The scope of work on this project will consist of the removal of the following items:

- Silver paint and tar: 2%- 20% Chrysotile Asbestos Containing Materials adhered to Roof and Level 1 of Building 123.
- 19 Lead paint detected samples ranging from 1,600 ppm to 180,000 ppm throughout Building 123.

APPLICABLE CODES AND REGULATIONS

Code of Federal Regulations (CFR)
California Code of Regulations (CCR)

U.S. DEPARTMENT OF LABOR, (OSHA)

- Asbestos, General Industry - 29 CFR 1910.1001
- Asbestos, Construction Industry - 29 CFR 1926.1101
- Respiratory Protection -29 CFR 1910.134, 1926.103
- Access to Employee Exposure & Medical Records - 29 CFR 1910.20, 1926.33
- Hazard Communication - 29 CFR 1910.1200, 1926.59
- Specifications for Accident Prevention Signs & Tags -29 CFR 1910.145,
- 1926.200
- Title 8 CCR 5208, Asbestos
- Title 8 CCR 1529, Asbestos

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

- Asbestos Abatement Projects: Worker Protection - 40 CFR 763.120-126
- Asbestos-Containing Materials in Schools: (AHERA)- 40 CFR 763 Amended
- National Emission Standards for Hazardous Air Pollutants (NESHAP) - 40 CFR 61-Sub-part A, General Provisions and Sub-part M, National Emission Standard for Asbestos

NOTIFICATION REQUIREMENTS

As required, Ferma Corporation will notify, in writing, the Local Office of the Cal/ OSHA of the planned asbestos abatement operation, 24 hours prior to the start of the operation. BAAQMD 10 day notification.

RESPONSIBILITIES

Management
The project Superintendent (**Anthony Banchero**) and the project foreman will be responsible to ensure that all employees will have the proper medical and training certifications, monitoring employee exposure, and ensuring that proper protective measures are implemented.

A certified asbestos Supervisor will supervise the project. This individual shall serve as the Competent Person and has authority to take corrective actions to eliminate existing and predictable hazards, including fall protection.

Employees are responsible for the following:

- Wearing the appropriate protective clothing and respiratory protection that will be supplied.
- Respiratory protection, eye protection and hearing protection
- Using appropriate work practices to reduce the exposure to asbestos or other hazardous materials.
- Following the guidelines of this program, as well as the Direction of the Competent person
- Their own personal hygiene, which includes proper decontamination after the end of the work shift and breaks. This will help assure that exposures are contained at the containment.

GENERAL PROGRAM ACTIVITIES

The competent person will ensure that employee's exposure is minimal and that all employees are following all appropriate worker protection and proper procedures and shall perform exposure assessments daily.

- Caution tape and Danger signs will be used to designate the work area
- Employees shall wear at a minimum a north half face respirator with H.E.P.A. filters and protective coveralls during all abatement activities.
- Engineering and administrative controls will be implemented to lower employee exposure by use of wet methods
- Notifications to all the required Regulatory agencies will be submitted and will be posted on site. As well as being provided to the Project Consultant.
- Materials and equipment will be inspected regularly to verify the correct use and appropriate protection for all employees.

ACCIDENT REPORTING
In accordance with our IIPP and CCR Title 8 342, 330, Ferma will prepare and document reports of significant accidents at the job site and will forward copies of all accident reports to all related parties.

For this purpose, a significant accident is defined to include those injuries and illnesses deemed recordable on the OSHA 200/300/ 300a form, or where a property loss of substance is sustained.

COMPETENT PERSON

The Superintendent and Foreman assigned to this project will be Ferma Corporation's Competent Person and will have the necessary training, competency, and authority to maintain this position. All supervisory personnel will have completed, and passed by written examination, an EPA / AHERA course in Supervision of Asbestos Abatement Procedures.

The Operations Manager or Project Manager will also be Ferma's representative for compliance with all applicable local, state and federal codes and regulations, particularly those relating to asbestos containing materials.

All supervisors have been trained and certified in the following:

- First Aid CCR Title 8 1512
- CPR CCR Title 8 1504
- Fire Extinguisher CCR Title 8 1920
- Power actuated tools CCR Title 8 1685

SAFETY COORDINATOR

Ferma has designated **Everardo Alcazar** as the individual having the responsibility for ensuring workers compliance with all aspects of the Corporate Safety Program. These individuals, in addition to having successfully completed all EPA Training Center courses in asbestos abatement procedures and the proper procedures for asbestos related activities, have also received specialized training in construction safety practices. The Safety Coordinator and the project Superintendent will conduct periodic safety audits and worker training at each job site.

WORKER TRAINING

All employees who will be working with asbestos containing materials on this project will be trained and certified as an EPA / AHERA asbestos worker. They will be trained and made aware of the dangers inherent in handling asbestos, in the proper work procedures, and in the use of protective measures as outlined in 29 CFR 1926.110. Asbestos Superintendent will be on site at all times.

MEDICAL EXAMINATIONS

All personnel entering the work areas where respiratory protection is required, will have received a medical examination in compliance with the medical examination requirements of CCR Title 8 1529 standards within the past twelve (12) months. For all personnel entering the work area, Ferma will provide a copy of a written certificate from the physician attesting to his opinion that the individual may enter an atmosphere in which asbestos fibers may be present and is allowed the use of a respiratory device.

All Ferma personnel will be trained in the proper use and cleaning of the respiratory device, they will also be fit-tested for the respiratory device, the fittest will be documented and a copy of the fit-test will be on site for all personnel that will enter into the work area or is required to wear respiratory protection. Fit-test shall be current within the past 12 months.

PROTECTIVE EQUIPMENT

RESPIRATORS: All Ferma employees that will be engaging in the removal of asbestos containing materials required to wear the appropriate respirators and filters all times per CCR Title 8 1529 (g) 1531.

COVERALLS: Ferma will provide disposable coveralls and head covers, and require that all persons entering the work area wear them. Ferma will provide a sufficient amount of protective clothing for the required number of changes for all workers in the work area.

RUBBER or Leather BOOTS: Rubber boots will be required to be worn in the work area, they will be required to remain in the work area until the completion of the project, at which time they must be thoroughly cleaned and decontaminated, both inside and out, and put into a plastic bag before removal from the area. Foot protection to conform with ANSI Z41.1-1983, class 75.

HARD HATS: Ferma will provide hard hats and require that they be worn at all times when work is in progress that has the potential for causing head injuries per CCR Title 8 1515. Contaminated hard hats must remain in the work area until they can be thoroughly cleaned and decontaminated, and placed into a plastic bag before removal from the work area at the end of the project. Hard hats shall conform with ANSI Z89.1-1981, Class A or B.

SAFETY GLASSES/GOGGLES: Where required per CCR Title 8 1516, Ferma will provide eye protection in the form of safety glasses and/or goggles for all employees in the work area when full-face piece respirators are not being used. The safety glasses and/or goggles will remain in the work area and will be appropriately cleaned or disposed of at the completion of the project. Eye protection shall conform with ANSI Z87.1-1979.

WORK GLOVES: Ferma will provide appropriate work gloves per CCR Title 8 1520, to all personnel in the work area. The gloves must remain in the work area until the completion of the project, at which time they will be disposed of.

WATER SERVICE: Only heavy-duty abrasion-resistant hoses with a pressure rating greater than the maximum pressure of the water distribution system will be used to provide water to the work area or the decontamination facilities.

JOB SITE POSTINGS: Ferma will comply with all CAL-OSHA regulations in regards to job site posting requirements, every job site will have the required job site postings as well as:

- A copy of the company Injury and Illness Prevention Program (CCR Title 8 1509)
- Prop 65 signage
- Emergency Action Plan (29 CFR 1926.35)
- Current Material Safety Data Sheets for all chemicals that will be brought on site
- Emergency eye wash
- First aid kit (CCR Title 8 1512)

DECONTAMINATION FACILITIES

A clean area will be set up outside the work zone where workers can don their PPE and store their personal belongings. This area will be equipped with clean water, soap and towels so that the workers can decontaminate after exiting the work area.

WORK AREA PREPARATION

The work area will be identified by installing barrier tape (RED DANGER TAPE) proper signage and asbestos signage and delineators 20 feet (when possible) from the work area. No persons will be allowed beyond the designated barriers without first donning the proper PPE. Only authorized personnel will be allowed into regulated work area.

ACCESS CONTROL

Access to the work area will be permitted only through a designated work area entrance. All other means of access will be closed off and identified using warning signs which will be displayed on the clean side of the closed access. No one will be allowed to enter the work area that does not have a direct need to do so. Persons entering the work area must follow all entry procedures, including the donning of protective clothing, using the appropriate respiratory protective device, and complying with the requirements of the company's respiratory protection program.

WARNING SIGNS

A sufficient number of appropriately worded warning signs per OSHA regulations to adequately notify all persons in the vicinity of the work area of the dangers involved. The signs will normally be posted

directly onto the clean side of the work area isolation barrier and at each entrance to the work area and the decontamination units, signs will be visible from 20’ away.

Warning signs, which are 20 inches high by 14 inches wide, comply with the requirements of the Occupational Safety and Health Administration's standard on warning signs; each sign has the following legend and is red, white and black in color:

DANGER

ASBESTOS

MAY CAUSE CANCER

CAUSES DAMAGE TO LUNGS

AUTHORIZED PERSONNEL ONLY

DOP TESTING

All HEPA filtered equipment will be DOP challenge tested by a third party prior to being placed into service.

REMOVAL OF ASBESTOS-CONTAINING MATERIALS

1. On days during which demolition activities are conducted that may expose or release RACM, if wind speeds exceed 25 miles per hour (mph), or if gusts exceed 30 mph, FERMA shall pause demolition activities that may expose or release RACM until wind speeds have declined to below 25 mph and gusts have declined to below 30 mph. Continuous real-time wind speed and direction measurements are being measured with a weather station on site per the Insight-ESI Final Remedial Action Work Plan. The weather station is located in close proximity to Building 123 and is continuously measuring wind speed and direction along with other meteorological data. The weather station is set up to alert the team and field supervisor if wind gusts exceed 15 mph, 20 mph, and 25 mph. Per BAAQMD requirements and the Insight-ESI (2023) work plan, work will be paused when wind speeds reach 25 mph.

2. FERMA shall not commence demolition-related activities that may expose or release RACM until contracted with an independent third party to conduct perimeter air monitoring for asbestos throughout the entire term.

   FERMA shall ensure perimeter air monitoring for asbestos is conducted for at least eight hours every work day, including at all times when personnel are present at the active demolition site conducting demolition-related activities that may expose or release RACM, unless and until the

APCO approves an alteration to the project's perimeter air monitoring schedule or procedures pursuant to Condition 2.b below.

FERMA shall ensure that at least three perimeter air monitoring stations for asbestos are installed: one upwind and two downwind mobile stations shall be positioned at the discretion of a third-party certified asbestos consultant or certified site surveillance technician. Perimeter air monitoring stations shall include both PM10 monitors and asbestos sampling pumps.

a. FERMA shall send all Phase Contrast Microscopy (PCM) and Transmission Electron Microscopy (TEM) laboratory results to the APCO on the same business day it receives the results. Results shall be sent via email to srueda@baaqmd.gov and kpham@baaqmd.gov. If a PCM sample exceeds the clearance criteria of 0.01 fibers per cubic centimeter (f/cc) it shall be reanalyzed via TEM using a modified Yamate or equivalent method. If a TEM analytical result exceeds 70 structures per square millimeter (s/mm2), the APCO may require, in its sole discretion, that FERMA halt any activities that involve manipulating or demolishing the structure unless and until FERMA receives the APCO's consent, in writing, to continue such activities. FERMA shall ensure that it generally receives any PCM and TEM analytical results no more than 3 business days after the end of the sample collection period at issue. It shall not be a violation of these Conditions, however, if FERMA receives a test result later due to unexpected exigencies beyond FERMA's reasonable control, such as a delay in laboratory processing, so long as FERMA receives the test result within 5 business days after the end of the sample collection period.

b. FERMA shall ensure any alteration of the perimeter air monitoring schedule or procedures for asbestos takes place only to the extent explicitly approved in writing by the APCO. FERMA may request that the APCO approve alterations to the perimeter air monitoring schedule or procedures for asbestos, including decreases in the number of monitors or the frequency of monitoring. Any such requests shall be submitted to the APCO via email at srueda@baaqmd.gov, kpham@baaqmd.gov, and gdhawanmuren@baaqmd.gov. The APCO may, in its sole discretion, approve or deny such requests.

3. Continuously during any activities that involve manipulating or demolishing Building 123, FERMA shall ensure that the truss bay that is being manipulated or demolished and the immediately adjacent truss bay, as well as the air and ground underneath the truss bays, is sprayed by water at a level sufficient, in the APCO's sole discretion, to ensure that any RACM that is not covered by other materials will be immediately adequately wetted if either truss bay collapses.

4. At all times throughout the term, FERMA shall ensure that all RACM that is not adequately wetted or being sprayed with water is encapsulated with material. If exposed RACM is not adequately wetted during off hours, it shall be encapsulated with material.

5. At or before the end of each work day, FERMA shall capture all water run-off, pump it to Baker tanks, and filter it prior to disposal. The following Demolition Water Spray Containment Procedures will be used: Temporary spray water catch basins will be constructed along the perimeter of the building as needed to contain spray water. A layer of 10 mil plastic will be laid down with a perimeter berm constructed with sandbags or straw wattles. The plastic will be wrapped over the top of the berm to keep water contained within the berm area. For any observable breaches, bentonite chips will be laid along the perimeter and hydrated to expand and create an exterior seal. Typical containment pad diameter size can vary depending on the

location of the demolition activities, but will typically encompass approximately 50 feet. The water within the containment pad will be suctioned into a transfer tank and treated by passing it through a 3 stage filtration system. The filtered water will be held in a large capacity holding tank, profiled and discharged per San Francisco Water Power Sewer (San Francisco Public Utilities Commission) Discharge Permit.

6. During the entire term, FERMA shall continuously maintain a secure perimeter around the worksite to ensure there is no public access. To maintain this secure perimeter, FERMA shall, without limitation, ensure the site is surrounded by fencing that is not reasonably capable of being climbed or otherwise easily penetrated, and shall ensure that all points of entry are either locked or actively monitored at all times such that only authorized individuals have access.

7. Building 123 will be demolished one bay at a time in a top down sequence using excavators. Any debris that does not get loaded into a truck will be covered with plastic until next day where it can be loaded and hauled off to Landfill. Ferma asbestos workers will don Level PPE and use misted water to control dust that will be generated during this activity.

8. At the end of each work day, FERMA shall walk the perimeter of the worksite to look for, collect, and dispose of any asbestos debris. The collection and disposal of any asbestos debris shall be carried out in accordance with all applicable laws.

9. FERMA shall pressure wash all equipment used in demolition-related activities, before the equipment is removed from the premises for any reason or extent of time.

10. FERMA shall provide the APCO with access to the worksite during any workday to observe any demolition-related activities associated with the project.

11. When the project is complete, FERMA shall notify the APCO, via email to srueda@baaqmd.gov, kpham@baaqmd.gov, and gdhawanmuren@baaqmd.gov. The APCO shall then conduct a visual inspection to determine whether, in the APCO's sole discretion, to approve the cessation of oversight over the project under Regulation 11-2, and may, in the APCO's sole discretion, require FERMA to perform additional clean-up activities.

12. FERMA shall handle all friable asbestos-containing waste material or made friable by means of mechanical demolition, including pre-existing debris, in accordance with these Conditions and Regulations 11-2-303 and 11-2-304, except Regulations 11-2-303.1, 303.3, 303.4, 303.5, 303.6, 303.7, 303.10, and 304.1.

13. FERMA shall fully comply with Regulations 11-2-303.10 and 11-2-304.1.1, except to the extent that it is infeasible to place Building 123 into containment pursuant to Regulation 11-2-303.6.

WORK AREA CLEANUP PROCEDURES

After the removal of all-visible asbestos material and debris, all surfaces in the work area and all tools and equipment remaining in the work area and the decontamination units will be thoroughly cleaned

AIR MONITORING

A Third Party certified asbestos consultant (Van Brunt Associates Inc.) has been contracted to conduct the BAAQMD air monitoring requirements and submit the results directly to the BAAQMD APCO as directed in the conditions.

TRANSPORTATION AND DISPOSAL

Using wet-methods, Ferma will load the end-dump trailers with the on-site excavator ensuring to limit the drop-height to the lowest extent possible. A Ferma AHERA-trained worker will be misting the end-dump trailer to the extent to where water does not run off or out of the trailer but also prevents visible emissions during the process. Once the load is determined to be full, the Ferma AHERA-trained crew will inspect the trailer rails, fenders and tailgate for debris; if any is found, it will be promptly placed into clear asbestos bags and included with the load going to the landfill. Ferma will then tarp the trailer using 10-mil polyethylene (poly) sheeting, securing the poly to the trailer top rails and tailgates. For this project, the waste will be categorized as a friable asbestos waste, shipped using a hazardous manifest, to Kettleman Hills Landfill. This waste will be buried in the appropriate landfill cell within the confines of the Landfill.

The work will continue in this manner until all of the concrete has been removed.

PREPARED BY:
Alvaro Torres
Project Manager
FERMA CORPORATION
DATED: 5 March 2024

California Water Boards
Gavin Newsom
Governor
Yana Garcia
Secretary for
Environmental Protection

San Francisco Bay Regional Water Quality Control Board

November 25, 2025

U.S. Department of the Navy
Attn: Michael Pound, BRAC Environmental Coordinator
NAVFAC BRAC PMO West
33000 Nixie Way, Bldg. 50, 2nd Floor
San Diego, CA 92147

Sent Via E-mail Only to Michael.J.Pound.civ@us.navy.mil

Subject: Review of the Draft Remedial Action Work Plan, Parcel G Building Demolition, Hunters Point Naval Shipyard, San Francisco, CA, August 2025

Dear Michael Pound:

The San Francisco Bay Regional Water Quality Control Board (Regional Water Board) has reviewed the Draft Remedial Action Work Plan, Parcel G Building Demolition, hereafter referred to as the Draft RAWP. Our review focused on Appendix A, Environmental Protection Plan (EPP) and Attachment A, Stormwater Pollution Prevention Plan (SWPPP). Our comments are attached to this letter.

We defer to Department of Toxic Substances (DTSC) and California Department of Health (CDPH) with respect to the main text and remaining portions of the Draft RAWP.

If you have questions, please contact me at Mary.Snow@waterboards.ca.gov or (510) 622-2338.

Sincerely,

Mary K. Snow P.G.
Remedial Project Manager

Attachment: Regional Water Board Comments

cc: Sent Via E-mail
Brandon Mills, Navy, Brandon.S.Mills13.civ@us.navy.mil
Michael Howley, DTSC, Michael.Howley@dtsc.ca.gov

Alexis Strauss Hacker, chair | Eileen M. White, executive officer

Ryan Casey, SFDPH, Ryan.Casey@sfdph.org
Nadia Hollan Burke, USEPA, Burke.NadiaHollan@epa.gov
Mike Collins, USEPA, Collins.Mike@epa.gov

Regional Water Board Comments

1. **Section 3.2 Erosion/Sediment Control** of the EPP (pdf page 83) discusses the handling of “contaminated soil stockpiles,” but Table 3.5 Temporary Materials Management BMPs (i.e., Best Management Practices) of the SWPPP (pdf page 139) shows that *BMP WM-07 Contaminated Soil Management* will not be used and states that (contaminated soil) is “not anticipated for this project”

   Comment 1: To resolve the contradictions with respect to contaminated soil in the EPP and SWPPP, *BMP WM-07 Contaminated Soil Management* should be added to the SWPPP, even if it is only a possibility that contaminated soil will be encountered. Please note contaminated soil is mentioned throughout the document, in some cases referencing it as a possibility of being encountered but other references imply that contaminated soil **will be** encountered. e.g., Section 8.0 Decontamination and Post Demolition Clean-Up of the EPP (pdf page 93) and Section 2.6 Potential Construction Activity and Pollutant Sources of the SWPPP (pdf page 127).

2. **Section 3 Best Management Practices and Table 3.1 BMP Implementation Schedule of the SWPPP** (pdf pages128 and 129) provides a list and schedule of the BMPs to be implemented.

   Comment 2: The BMPs listed below were not included in the SWPPP and should be considered for the work planned under the Draft RAWP for Parcel G. If the Navy chooses not to include the specified BMPs, additional rationale should be provided to demonstrate why they are unnecessary.

   - Erosion and Sediment Control BMPs
     - *BMP EC-5 Soil Binders*
     - *BMP SE-1 Silt Fence*
     - *BMP SE-8 Sandbag Barrier*
   - Tracking Control
     - *BMP TC-2 Stabilized Construction Roadway*
     - *BMP TC-3 Entrance/Outlet Tire Wash*
   - Non-Stormwater BMPs
     - *BMP NS-8 Vehicle and Equipment Cleaning*
   - Materials Management and Waste Management
     - *BMP WM-7 Contaminated Soil Managemen*t

3. **Section 7.7.1.4 Analytical Constituents and Table 7.2 Potential Non-Visible Pollutants and Water Quality Indicator Constituents** (pdf pages 153 and 154) discusses and lists ”…the specific sources and types of potential non-visible pollutants based on the project pollutant source assessment and the water quality indicator constituent(s) for that pollutant.”

   Comment 3: Site specific chemicals of concern (COCs) and radionuclides of concern (ROCs) for Parcel G should be included on the analyte list as shown in

Table 7-2. For Parcel G the following COCs and ROCs should be analyzed: Manganese, Arsenic, Benzo(a)pyrene, Benzo(b)fluoranthene, Lead, Cesium-137, Cobalt-60, Plutonium-239, Radium-226, Strontium-90, Thorium-232, Hydrogen-3, and Uranium-235.

City and County of San Francisco
DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

Daniel Lurie, Mayor
Daniel Tsai, Director of Health
Jennifer Callewaert, MS, REHS
Acting Director of Environmental Health

November 21, 2025

Michael Pound
BRAC Environmental Coordinator, Hunters Point Shipyard
Base Realignment and Closure
Program Management Office West
33000 Nixie Way, Bldg 50, Suite 207
San Diego, CA 92147

Subject: **SFDPH Comments on the Draft Remedial Action Work Plan, Parcel G Building Demolition, Hunters Point Naval Shipyard, San Francisco, California, Dated August 2025.**

Dear Michael:

General Comments:

1. **Dittrichia Viscosa:** Revise the work plan to address the presence of Dittrichia Viscosa in and around the planned work areas, particularly Buildings 408, 411, and 439. The San Francisco Department of Public Health has been coordinating with the Navy to prevent the spread of this potentially invasive species in California. The proposed work has the potential to contribute to the propagation of seeds both on- and off-site. Revise the work plan to include the following elements:

    - A pre-work survey to identify existing Dittrichia Viscosa populations,
    - A summary of mitigation measures to prevent seeds from spreading during demolition activities, and
    - Coordination with SFDPH staff regarding control and monitoring efforts.

    Additionally, the work plan should describe the proper disposal methods for the culled material currently stored in Building 439 to prevent further dissemination of seeds.

2. **PCBs in Buildings:** Residual PCBs may be present in caulking used to seal windowsills and other brick, masonry, and stone joints. Identify buildings and specific areas where PCBs were used to support future drip-line analysis and abatement activities, if necessary.

3. **Radionuclide Air Monitoring:** Revise the work plan to include air monitoring for radionuclides of concern (ROCs) during all phases of building demolition and associated debris handling. At a minimum, the ROC air-monitoring procedures should be consistent with the protocols outlined in the *Dust Management and Air Monitoring Plan* (Appendix E) of the *Parcel G Removal Site Evaluation Work Plan Addendum* (July 2020).

4. **Action Level Exceedance Response:** Revise the work plan to include a standalone "Action Level Exceedance Response" section that clearly outlines the actions the Navy and its contractors will take in the event of exceedances of any air-monitoring action levels. This section should, at a minimum, specify required work stoppage or mitigation steps, escalation procedures, and the

notification process for regulatory agencies, SFDPH, and the community, including notification timeframes to be followed.

5. **Auto-Wetting Dust Suppression:** Revise the work plan to incorporate the use of auto-wetting dust-suppression systems, where feasible, during all demolition activities to ensure effective and continuous dust control. Examples of acceptable systems include high-pressure or automated misting units that provide consistent application of water throughout demolition and debris handling.
6. **Stockpile Management:** Revise the work plan to specify that all demolition-generated stockpiles will be covered at the end of each workday to minimize dust generation. The work plan should describe the type of cover material to be used and the procedures for maintaining covers during windy conditions.

Specific Comments:

1. **Land Surveys (Section 3.9)**: Revise this section to include the surveys of the former building perimeters to support future drip-line analysis and abatement activities, if necessary.
2. **Site Restoration (Section 6.2):** Please clarify whether the planned durable cover will be consistent with the existing durable cover materials used elsewhere on the parcel. If the materials or extents differ, please describe the specific differences and the rationale for using them.
3. **Dust Management Plan and Air Monitoring Plan (Attachment B)**: Based on our conversation on September 25, 2025, please revise Attachment B to make it clear that up- and down-wind monitoring locations will be placed closer to the specific building being demolished, rather than at the parcel perimeter. Additionally, please include a third crosswind monitoring location for each building demolition site.
4. **Community Reporting (Attachment B):** Expand Section 10.0 – *Data Review and Reporting* to include recurring public reporting of air-monitoring data and associated field activities. At a minimum, community-facing report-outs should summarize field activities, present air-monitoring results, identify any action level exceedances, and describe the associated response actions taken by the Navy and their contractors. The work plan should also specify the reporting frequency and method of dissemination to ensure timely and accessible communication with the community.

Minor Comments:

1. **Figure 8b**: Review and correct the title of Figure 8b, which is currently labeled as Figure 7b.

Sincerely,

DocuSigned by:
3BD2BDDC0E36492...

Ryan Casey, P.E.
Administrative Engineer

CC: Danielle Janda, Navy
Jamie Egan, Jacobs
Mike Collins, EPA
Michael Howley, DTSC
Mary Snow, RWQCB
Lila Hussain, OCII
Christina Rain, Langan
Randy Brandt, Geosyntec

Response to Regulator Comments on

Draft Remedial Action Work Plan Parcel G Building Demolition
Hunters Point Naval Shipyard, San Francisco, CA - December 2025

The following comments were made by the Environmental Protection Agency (EPA)

	Comment		**Response**
1.	Section 2.0 Background and Site History	"The six buildings to be demolished under this contract (Building 351, 351A, 366, 401, 411, and 439 and Building Pad 408), have been reinvestigated and radiologically remediated." Please provide within the RAWP the information and documentation that supports the above reference statement.	CDPH's RURR letters and NRC's TDR letter are now referenced in the Section 2.0 of work plan. Additionally, the HPNS website will also have the letters posted.
2.	General Comment: Hazardous Materials	The RAWP assumes that all hazardous materials identified in prior surveys represent all potential waste streams. However, this may not be the case. The RAMP should provide contingency protocols if unexpected hazardous materials are discovered. Please revise the RAWP to add adaptive management provisions to address any potential discovery of uncharacterized hazardous waste.	The following text has been included in Section 3.8: *While unlikely, if any uncharacterized hazardous waste is discovered, work will stop and the ROICC will be notified. An evaluation will then be conducted, followed by coordination with BRAC to determine how to proceed.*
3.	UFP-QAPP	The RAWP does not contain all components of a Uniform Federal Policy – Quality Assurance Project Plan (UFP-QAPP). Please revise the RAWP to include the full set of UFP-QAPP worksheets for any verification sampling that may occur.	The combined work plan/QAPP format was used which includes a crosswalk. This QAPP only covers air monitoring and verification samples are not applicable. No changes to the work plan will be made.

Response to Regulator Comments on

Draft Remedial Action Work Plan Parcel G Building Demolition
Hunters Point Naval Shipyard, San Francisco, CA - December 2025

	Comment		Response
4.	Section 2.1.3, and Section 2.1.6	The RAWP should clarify whether there are any obstructions are anticipated that might cause building access issues during demolition and, if so, discuss within the RAWP how access issues will potentially affect the proposed demolition. The text describes in Section 2.1.3 (Building 366) and Section 2.1.6 (Building 439) that trenches are obstructing building access. However, EPA understood that all trenches have been backfilled and repaved as of September 2025. Please resolve the contradiction.	Text revised in Section 2.1.3 (Building 366) and Section 2.1.6 (Building 439) removing language that trenches are obstructing building access.

Response to Regulator Comments on

Draft Remedial Action Work Plan Parcel G Building Demolition
Hunters Point Naval Shipyard, San Francisco, CA - December 2025

	Comment		**Response**
5.	Appendix A, Attachment A SWPPP	The SWPPP does not clearly identify how contaminated demolition runoff (e.g.., water used for dust suppression contacting debris) will be segregated from clean storm water. The SWPPP also only discusses analysis of total dissolved solids (TDS) and does not include any provisions for the collection, treatment, or disposal potentially contaminated water from demolition activities. Please revise the RAWP to include procedures for stormwater/wash water segregation, containment, and sampling for both chemical and/or radiological constituents to ensure potentially contaminated water is not released.	Text added to Section 3.6 and 5.3 of the RAWP: **3.6** Dust control measures will be implemented beginning with site mobilization and continuing during all phases of the construction activities. Residual dust control water will be contained within the limits of the demolition work. At the exterior demolition limits of work, the CERCLA Storm Water Plan BMPs to contain the stormwater/dust control water will be by installing Eco block and or hay bale berms that are fully wrapped with poly, the trap water will be vacuumed up and deposited into a frac tank. If required, the remaining stormwater/dust control water will be tested, and if necessary either treated prior to discharge into the existing site sanitary sewers and/or deposited offsite to a public owned treatment works plant (POTW). **5.3** Added “See Section 3.6 for dust control measures.”

Response to Regulator Comments on

Draft Remedial Action Work Plan Parcel G Building Demolition
Hunters Point Naval Shipyard, San Francisco, CA - December 2025

	Comment		**Response**
6.	General Comment: Weekly field reports /Remedial Action Completion Report (RACR)	The RAWP state that monitoring data will be summarized in weekly field reports and in a Remedial Action Completion Report (RACR) that will be drafted in the future. These weekly reports should include the following, at a minimum: a. Monitoring results by parameter (PM10, asbestos fibers, lead dust, radiological data, etc.) b. Comparisons of monitoring results against project-specific action levels and all exceedances identified. c. Any mitigation measures taken in response to any exceedances (e.g., misting, work stoppage, expanded containment, etc.) d. Maps and/or figures identifying monitoring station locations in relation to active demolition area or prevailing wind direction. e. Waste stream segregation/abatement progress updates f. Stormwater management observations, including any runoff and/or erosion issues. Please revise the RAWP to include these weekly monitoring elements.	Added the following text to Section 1.1, item #8 "*Air Monitoring and QC Reports will routinely document site activities for the Navy. Air Monitoring Reports will include, but are not limited to, air monitoring results by parameter; comparisons of monitoring results against project specific action levels with any exceedances identified; mitigation measures implemented in response to potential exceedances; and maps and figures showing monitoring station locations in relation to active demolition areas and prevailing wind direction. QC Reports will include waste stream segregation and abatement progress updates, as well as stormwater management observations.*"

Response to Regulator Comments on

Draft Remedial Action Work Plan Parcel G Building Demolition
Hunters Point Naval Shipyard, San Francisco, CA - December 2025

	Comment		Response
7.	General Comment: Disposal Facilities	The RAWP does not state that EPA Region 9's off-site rule coordinator will be consulted about the selected disposal facilities being used for wastes generated from an NPL site. Please revise the RAWP to require consultation with the Region 9 Off-Site Rule Coordinator or provide evidence the consultation was conducted.	Acknowledged, clarified text in 1.2 to say: "*EPA Region 9's Off-Site Rule"* instead of "*Off-site Rule".* Updated text shown below: *The applicable or relevant and appropriate requirements (ARARs) identified in the ROD will be followed, as they pertain to building demolition.* ECC will consult with the EPA's OSR Coordinator prior to the start of T&D operations and when the facilities for all waste are finalized. *Additional rules and ARARs include but are not limited to: the EPA Region 9's Off-Site Rule…* Additionally, text was updated in 5.1.1 to say "*ECC will consult with the EPA's OSR Coordinator and Region 9's off-site rule coordinator prior to the start of T&D operations and when the facilities for all waste are finalized."*
8.	General Comments	The text of the work plan needs to be reviewed and undergo further technical editing to repair many inconsistencies and incomplete statements within the text. This Remedial Action Work Plan does not always reference the history and conditions found at Hunters Point using the same language as present in previous Navy documents. Examples of these issues are listed below:	

Response to Regulator Comments on

Draft Remedial Action Work Plan Parcel G Building Demolition
Hunters Point Naval Shipyard, San Francisco, CA - December 2025

	Comment		Response
		Work Plan Main Document: . • Navy acquired annexed Hunters Point in 1941, not 1940 • Navy operated Hunters Point as a shipyard into the 1970s, not 1960s • With the Radiological Rework nearing completing, it is not clear that the access to Building 366 has access issued due to trenches. • The work plan calls for removing the slab of buildings down to one-foot below grade but also lists slabs that are only 10-inches thick. It is not clear what will happen to the exposed soil if the entire pad is removed. **Environmental Protection Plan:** • Introduction: EPA does not believe that the statement that "Activities conducted under this task order will be under the purview of The San Francisco Bay Regional Water Quality Control Board as the lead agency…" is a correct statement. Please respond.	Work Plan Main Document: 1. Kept as 1941 per meeting with stakeholders and Navy. 2. Updated 3. See comment #4 4. Edited text in Section 4 to say "*Slabs or foundations will be removed until soil is encountered or to a depth of 12 inches, whichever occurs first."* EPP 1. Revised document. Revised document to say: All site work will be performed in coordination with the Navy Remedial Project Manager (RPM), Navy Caretaker Site Office (CSO), and the Resident Officer in Charge of Construction (ROICC) representative. This document was developed in accordance with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments

Response to Regulator Comments on

Draft Remedial Action Work Plan Parcel G Building Demolition
Hunters Point Naval Shipyard, San Francisco, CA - December 2025

	Comment		Response
			and Reauthorization Act of 1986 and the National Oil and Hazardous Substances Pollution Contingency Plan (Title 40 Code of Federal Regulations [CFR], Part 300). Regulatory oversight and guidance are provided by USEPA, California Environmental Protection Agency, Regional Water Quality Control Board, San Francisco Bay Region, and California Department of Public Health. The applicable or relevant and appropriate requirements (ARARs) identified in the ROD will be followed, as they pertain to building demolition. Additional ARARs include but are not limited to: the EPA Region 9's Off-Site Rule, Resource Conservation and Recovery Act [(RCRA) (Title 42 U.S.C., Chapter 82, §§ 6901-6991[i])]; , Clean Air Act (Title 42 U.S.C. §§ 7401-7671), Clean Water Act (Title 33 U.S.C., Chapter 26, §§ 1251-1387), Migratory Bird Treaty Act (MBTA), Endangered Species Act (ESA)/California Endangered Species Act (CESA). Parcel G is undergoing remediation in accordance with a Federal Facility Agreement (FFA) between the Navy, United States Environmental Protection Agency (USEPA), and the State of California through the California Environmental Protection Agency Department of Toxic Substances Control and San Francisco Bay Regional Water Quality Control Board (Water Board), collectively referred to as the

Response to Regulator Comments on

Draft Remedial Action Work Plan Parcel G Building Demolition
Hunters Point Naval Shipyard, San Francisco, CA - December 2025

	Comment		Response
			FFA Signatories.
		Draft – Stormwater Pollution Prevention Plan – Parcel G Building Demolition: • Title page lists document prepared for "...Travis ROICC/CODE ROPWT Travis Air Force Base…". The Title pages for the Draft – Dust Management & Air Monitoring Plan and the Draft – Waste Management Plan, are titled in a similar way. EPA understands from the conversation had with you October 20th that this is a component how the contracts are being managed by the Navy. To avoid confusion, please add a revision to the text that explains the relationship of this contract with Travis AFB, so it is clear these plans have been created for HPNS.	Draft – Stormwater Pollution Prevention Plan – Parcel G Building Demolition: 1. Title page: Travis ROICC/CODE ROPWT is our client. Navy will discuss with Administrative Records regarding clarity.

Response to Regulator Comments on

Draft Remedial Action Work Plan Parcel G Building Demolition
Hunters Point Naval Shipyard, San Francisco, CA - December 2025

	Comment		Response
		Waste Management Plan – 1.1 Background: • The statement "The purpose of the building demolition is in response to the City of San Francisco's request that before transferring the Navy owned property at the former HNPS, the Navy must demolish all remaining building…" This does not conform to EPA understanding of the decision process related to demolishing the six buildings, especially as stated in the Parcel G ROD Explanation of Significant Differences (ESD) signed earlier this year. Please provide clarification.	Waste Management Plan – 1.1 Background: Removed 3rd paragraph of 1.1 and added the following text to 1.2: *The purpose of the building demolition is to complete the Remedial Action for "structures" as outlined in the Record of Decision (ROD). Buildings were to be surveyed and, if possible, cleared for unrestricted reuse. If clearance was not achievable, the ROD planned for further remediation, including dismantling. The scope of work includes the following:* 1. *HPNS Federal Facility Agreement (FFA) Regulatory Agencies concurrence on this Work Plan. FFA parties include USEPA, DTSC and the San Francisco RWQCB.* 2. *Utility Clearance - Notify Underground Service Alert North (811), a minimum of 72 hours prior to field activities; conduct a geophysical survey to ensure no utilities or obstructions exist in the intrusive work areas.* 3. *Set up environmental controls including placement of fences, air monitoring stations, and stormwater Best Management Practices (BMPs) in accordance with the Environmental Protection Plan (EPP) (**Appendix A**) in the*

Response to Regulator Comments on

Draft Remedial Action Work Plan Parcel G Building Demolition
Hunters Point Naval Shipyard, San Francisco, CA - December 2025

	Comment		Response
			Remedial Action Work Plan (RAWP). 4. *Establish investigation derived waste (IDW) staging areas and signage in accordance with the Waste Management Plan (WMP) (**Appendix B**).* 5. *Buildings 351, 351A, 366, 401, 411, and 439 and building pad 408 abatement, demolition, and partial slab/foundation removal. Manage and transport building debris per the WMP (**Appendix B**).* 6. *Stage approved imported soil and/or excavated soil designated for re-use for backfilling of excavation in the equipment laydown area and IDW storage area.* 7. *Manage remaining IDW per the WMP (**Appendix B**).* 8. *Document the site activities at Parcel G in a Remedial Action Completion Report (RACR).* *The full scope of work is listed in the Remedial Action Work Plan (RAWP) (ECC, 2025b).*

Response to Regulator Comments on

Draft Remedial Action Work Plan Parcel G Building Demolition
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	Comment		Response
		Appendix H SWPPP: Stormwater BMP Construction Fact Sheets: • It is not clear if this document is generic information or specific to the site. Please confirm.	Appendix H SWPPP: Stormwater BMP Construction Fact Sheets: 1. The fact sheets that are included in the SWPPP are included in all SWPPP documents in accordance with the California Construction General Permit. The BMP fact sheets are considered typical details for BMP's that the QSD/QSP may employ as "best practices" during the course of the project. Since the SWPPP is a "living document", the QSD/QSP can then choose the most appropriate BMP's that may be better suited for the construction activities as they arise. If additional BMP's are selected that were not originally specified, then the QSP would note that modification during the weekly or QPE inspection and then notify the QSD who would then issue a change to the SWPPP.

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	Comment		**Response**
9.	Section 2.1 – Project Location, Description and Site History:	The RAWP is unclear as to how unexpected ground and stormwater will be managed during demolition efforts. The RAWP should discuss how unexpected water accumulation will be addressed and whether dewatering and characterization effort may be required. Please revise the RAWP to include contingency procedures for how unexpected infiltrations of groundwater will be addressed.	The SWPPP has undergone significant edits since the initial submissions and requested information is now present in the document.
10.	Section 3.7 – Utility Clearance and Geophysical Survey	Please revise the RAWP to include how the sampling and inspections of utilities will be verified and documented to ensure that there are no residual hazardous liquids and/or oils associated remaining with any utilities (e.g., refrigerants in HVAC, oils in transformers, and/or PCBs in panels).	Please see Appendix D, Attachment A for the Abatement Plan. The hazardous waste was been identified in the Terracon report and noted building 439 to contain HVAC coolant. #18 of Abatement Plan: Freon coolant will be recovered into cylinders for offsite processing.
11.	Section 3.8 – Hazardous Material Survey	The RAWP Hazardous Material Survey (HMS) does not contain a discussion of the quality control (QC) supporting documentation such as Chain-of-Custody, field duplicates, data validation, etc., that will be used to confirm the HMS's results. Please revise the RAWP to include the supporting documentation for the HMS.	No confirmation samples will be collected, as this would duplicate efforts previously completed and documented in the Terracon report. The QC Plan requires third party confirmation prior to the start of demolition activities.
12.	Section 4.0 - Demolition Activities	The RAWP does not specify how clearances of abatement activities (e.g., containment, negative pressure, decontamination units, etc.) will be verified prior to demolition begins. Please revise the RAWP to demonstrate how clearances will be documented prior to beginning demolition activities.	Text has been updated in Section 4.0, paragraph 2 to say: *A third party PQP will conduct the abatement clearances.*

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	Comment		Response
13.	Section 4.3.1 – Abatement	The RAWP states that slabs will be pressure washed (Building 366 and 401) but does not describe how wash water will be captured, contained and characterized. Please revise the RAWP to detail how wash water will be contained and characterized.	Text has been added to section 4.3.1 and section 4.4.1: "*Please see Section 3.6 for dust control measures and Appendix D, Attachment A for the Abatement Plan*." The Abatement Plan contains the following text: #4 in abatement plan: *Water usage will be limited to wetting and dust control to avoid run off and also to avoid the creation of additional waste streams.* *16: Decon facilities: Waste-water will be run through a series of filters and the water will be filtered down to 5-micron before being discharged down the sanitary sewer* Building 401/411 diagram note: "*BAYVIEW WILL CLEAN THE CONCRETE SLAB AFTER THE DEMOLITION IS COMPLETED. BAYVIEW WILL USE SQUEEGIES AND WATER TO PUSH THE DEBRIS INTO PILES WHERE IT CAN BE SHOVELED UP AND PACKAGED FOR DISPOSAL AS ASBESTOS WASTE. A FINAL HEPA VACUUM AND WET MOP IF NECESSARY WIL LBE PERFORMED TO CLEAN THE SLAB."*
14.	Section 4.4.2. Demolition	The RAWP proposes "Open-Air" demolition of Building 401 and areas of Building 411 with ACM and other hazardous materials left in place because the structures are unsafe for worker entry; however,	Please see updated Stormwater Plan and demo plan notes.

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	Comment		Response
		the plan does not clearly address how the release of friable ACM, LBP dust, and other hazardous materials will be prevented, monitored, and documented. Please revise the RAWP to include defined protocols for ensuring the Open-Air demolitions prevent the release of airborne hazardous material and discuss how hazardous materials will be segregated post-demolition.	Text added to Section 4.4.2. "*Dust control water generated during demolition operations will be applied appropriately and absorbed within the demolition debris. Any residual dust control water will be contained within the limits of the demolition work. Regular inspections by the QSDs of record will be conducted, and approval from the air district will be obtained prior to the start of work."* The SWPPP BMP plan to ensure that water runoff from partially demolished buildings will be contained by one of the following site perimeter berm protection measures: A. Furnishing and installing Hay Bales wrapped in poly and placing a fiber roll at the ground level inboard of the Hay Bale protection berm. B. Furnishing and installing Eco Blocks wrapped in poly and placing a fiber roll at the ground level inboard of the Eco Block protection berm. C. Furnish and installing a 3-foot-tall Geo fabric impermeable berm fastened to the concrete deck with metal straps and placing a fiber roll at the ground level inboard of the protection berm.

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	Comment		**Response**
15.	Section 4.5.5.2 – Demolition	The text discusses removal of any liquids from the Building 411 vaults and pits but does not discuss whether the vaults and pits will be subsequently cleaned (e.g., decontaminated, pressure washed), demolished in place, or partially removed (e.g., one foot of concrete removed from floors). It is also unclear whether the vaults and pits will be backfilled to grade following these actions. Please revise the RAWP to clarify the planned end-state of these structures, including cleaning/decontamination, demolition or partial removal, and backfilling requirements.	The text will be updated to reflect that the vaults/pits will be fractured to the 12-inch below ground surface reflecting the overall project's requirement. Any water found at the time of the demo will be removed and pits will be cleaned. The demoed vaults/pits will be backfilled in the same manner as the rest of the building's footprint.
16.	Section 5.4 – Demolition Waste and Debris	The RAWP discusses demolition debris, concrete, personal protective equipment (PPE), decontamination fluids, wastewater, and excavation soil but does not discuss whether the potential for contaminated soils beneath building slabs and foundations will be verified as clean by confirmation sampling, including radiological screening. Historical operations at Parcel G may have resulted in impacts to shallow subsurface soils that would only be encountered once slabs are removed (e.g., from leaking floor drains or piping). Please revise the RAWP to include procedures for identifying, characterizing, and managing potentially contaminated soils beneath slabs that are removed.	The building slabs are not being removed. No confirmation sampling or radiological screening will be conducted for soil beneath building slabs.

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	Comment		Response
17.	Section 6.0 – Air Monitoring	Section 6.0 states, “If exceedances are observed or recorded at real-time monitoring locations or in the laboratory analyses, the Navy will be informed;” however, there is no commitment to provide this information to EPA. Section 10 states, “The dust control activities and weather wind data will also be provided to the Navy for weekly reporting to the DTSC.” EPA and the other regulatory agencies should be informed of exceedances and mitigation efforts within a short period (e.g., 48 hours) of being informed of the exceedance. Please revise the RAWP to clarify whether EPA will receive weekly reports and require that regulatory agencies will be notified of exceedances and mitigation efforts within a specified notification period.	The Navy is responsible for sharing this information with the regulatory agencies.

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	Comment		**Response**
18.	Appendix A, Attachment A: SWPPP	It is not clear what measures will be taken to ensure that runoff from the partially demolished buildings will be appropriately contained. Specifically, if a building is in the process of being demolished, with the potential for exposed hazardous material, and there is a heavy rainfall event, will stormwater protection measures be taken to ensure that hazardous materials won't be washed from the buildings to the surrounding portions of Parcel G before they are moved to the stockpiles. Steps to address potential runoff from wetting the buildings during demolition and runoff from the stockpiles do not seem to be adequately addressed. Please address this comment by pointing out in the existing plan where the issue is addressed or adding to the Work Plan the steps that will be taken to ensure there is no runoff of hazardous materials from the sites of the demolished buildings.	See comment #5
19.	Appendix A – Draft Environmental Protection Plan, Wildlife Resources	The text contains an internal inconsistency. It first states that there is no vegetation at the project site but then states that "prudent steps will be taken to protect trees and vegetation." Please revise the section to clarify whether vegetation is present and, if so, identify what protective measures will be implemented. If vegetation is not present, the latter statement should be removed to avoid confusion.	Added the following text to Section 2.0 and 5.0 of the EPP: "*Parcel G is located within a developed former industrial area with limited vegetation. Existing vegetation consists of Dittrichia viscosa, an invasive species that is removed on an as needed basis by the NAVFAC Base Closure Caretakers Office. A survey will be conducted prior to fieldwork to determine whether plant removal is necessary.*"

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	Comment		Response
20.	Appendix A, Attachment A SWPPP	The text indicates that inspections will be conducted weekly and after a qualifying rain event; however, a qualifying rain event is not defined. Please define a qualifying rain event.	The updated SWPPP notes specific qualifying rain event. See the Attached document titled "Qualifying Precipitation Event Guidance For the 2022 Construction Stormwater General Permit (2022 CGP) (Order WQ 2022-0057-DWQ)
21.	Appendix B – Waste Management Plan – Section 3.3	The text states that all trucks will be screened at Hunters Point Naval Shipyard (HPNS) Radiation Portals prior to exiting the site; however, the sensitivity criteria, detection limits, and calibration/QC procedures for these portal monitors are not provided. Please revise this section to specify the portal monitor sensitivity criteria, detection limits for relevant isotopes, calibration frequency, and QA/QC procedures. In addition, please clarify how exceedances or notifications will be verified, documented, and communicated with regulatory agencies.	The WMP was revised to version R0-D2, to include Section 3.3.1 (Radiation Detection Portal) which addresses these comments.
22.	Appendix A - Attachment B: Dust Management and Air Monitoring Plan	The Dust Management and Air Monitoring Plan is missing essential monitoring elements found in the Parcel G Radiological Re-work Parcel G Air Monitoring and Dust Control Plan, which covers standard air monitoring requirements at the site, and the recent Parcel B Building 123 Asbestos Abatement Work Plan, which covers substantive compliance with BAAQMD Regulation 11. Missing or incomplete elements include but are not limited to the following:	1) These items are addressed in the RAWP. Asbestos Abatement details can in Appendix D – Attachment A. 2) See response to #1. 3) The next iteration of the DMP (R0-D4) has added a monitoring location third location to "triangulate" the work area's. Section 6.2 was updated. The locations will have GPS locations and will be plotted on site maps for quick reference.

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	Comment		Response
		1. Requirements for removal of asbestos-containing materials. 2. Asbestos-impacted work area cleanup procedures. 3. Detailed information about air monitoring siting, sample duration, or when air monitoring will occur. 4. Public action levels for COCs and ROCs. 5. Does not include upwind/downwind subtraction criteria already established for HPNS. 6. QA/QC practices consistent with previous Parcel G workplans. 7. Field forms and SOPs. 8. Reporting requirements for regulatory agencies, including weekly asbestos reporting during the demolition of buildings containing asbestos.	- Section 6.2.1 (Operating Hours) was added in to address the last portion of the comment. 4) Action levels are listed in table 6-1 for the COCS and ROCs. *5)* Section 10.0, bullet #1, was revised to include: "*This includes upwind/downwind subtraction criteria previously established for HPNS. "* 6) QA/QC practices are consistent with previously submitted demolition operations. 7) - Field Forms were included DCN version ECC-1205-4397-0003g.02. - Standard Operating Procedures details were incorporated in the relevant sections (Section 6.3). Section 10 addresses the data reporting procedures to the Navy by ECC.
23.	Appendix A - Attachment B: Dust Management and Air Monitoring Plan	Attachment B of this Work Plan should, to the maximum extent possible, incorporate the elements of these two plans to ensure consistency with past actions taken on HPNS to provide comparable levels of protection to workers and public living close to the site.	The plans were written with the previously approved documents of similar scope provided by the navy (bldg. 123) during the RFP process.

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	Comment		Response
24.	Appendix A - Attachment B: Dust Management and Air Monitoring Plan	The RAWP specifies collection of upwind and downwind air monitoring data but does not define a comparison method or decision logic in order to determine whether exceedances represent project related impact or background interference. In addition, a tiered mitigation matrix should be provided (e.g., if an exceedance is observed, first increase watering, second, pause dust-generating work if exceedances persist for a defined duration). Please revise the RAWP to specify the calculation approach for comparing upwind and downwind results and define what differential constitutes an onsite impact. Additionally, please specify tiered mitigation efforts to implement in the event of an exceedance.	1) Section 10 (*Data Review and Reporting*) was amended to include: "*This includes upwind/downwind subtraction criteria previously established for HPNS."* 2) Mitigation efforts are outlined in: ❖ Section 6.4, Paragraph 3; and ❖ Section 6.5 (new section)
25.	Appendix A - Attachment B: Dust Management and Air Monitoring Plan	The text states, "Prior to beginning construction activities, background real-time PM10 data may be collected to establish baseline concentrations;" however, it is unclear how background real-time PM10 data will be utilized as a measure against site impacts. For example, it is unclear whether background data will be used to determine threshold exceedances by net increase/net decrease (i.e., subtraction of background data). Please clarify how background data will be used to evaluate real-time PM10 data.	Section 10 (*Data Review and Reporting*) was amended to include: "*Background data will also be taken into consideration during the evaluation process. The results will used to create a baseline of existing conditions in the assessment of results. The application of the baseline data against the results will be covered in the report.*"

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	Comment		Response
26.	Appendix A - Attachment B: Dust Management and Air Monitoring Plan	Please revise the RAWP to discuss whether two monitoring stations are sufficient to maintain downwind coverage and require dust-generating work be paused if downwind coverage cannot be maintained. Additionally, please clarify whether the upwind and downwind monitoring stations will require dynamic repositioning when wind direction shifts more than a specified threshold or consider adding downwind sector monitoring stations to maintain downwind coverage over a large area.	The DMP has been revised to include three monitoring stations. Section 6 has been updated to address this comment.
27.	Appendix A - Attachment B: Dust Management and Air Monitoring Plan	Please revise the RAWP to require same-day exceedance notifications and immediate mitigation efforts. In addition, please ensure that wind data, notification timestamps and response actions are included in the daily logs.	The DMP has added Section 6.5 to address notification and mitigation efforts.
28.	Appendix A - Attachment B: Dust Management and Air Monitoring Plan	While the Work Plan specifically mentions air and dust monitoring for the protections of workers onsite, there are no provisions for monitoring for fugitive dust leaving the site and potentially impacting members of the public receptors living and working just beyond the boundary of the site. Attachment B/Section 6.0 states “Air monitoring provides reasonable assurance of worker protection safety…” but fails to account for protection of the nearby public. Parcel G is an active component of the current NPL Hunters Point site and monitoring for unwanted offsite migration of contaminants of concern listed in the 2009 ROD and 2025 ESD needs to be included to demonstrate continued protectiveness of the Parcel G remedies.	The opening sentence for Section 6 was revised to include public receptors. Section 6.2 was revised to include: “*The air monitoring team will be on-site during all abatement and demolition operations. Their task will include (but are not limited too): Daily operation of the air monitoring stations; On-site observation for the generation of fugitive dust and implementing response procedures outlined in Section 6.5.”*

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	Comment		Response
29.	Appendix A - Attachment B: Dust Management and Air Monitoring Plan	Monitoring activities need to be expanded to address potential emissions to public receptors immediately adjacent to Parcel G and should include all relevant COCs (including PCBs) and ROCs and previously agreed upon public action levels where applicable. Please revise the Air Monitoring and Dust Plan to include these air monitoring requirements.	PCBs and Mercury have been included in the open-air abatement of Buildings 401 and 411. The remaining buildings will be abated prior to the demolition process. While not in the original scope, ROCs are now a component of this project; therefore, they will be added and included in the dust monitoring program.
30.	Appendix A - Attachment B: Dust Management and Air Monitoring Plan	To ensure the public living around HPNS are fully informed of the proposed scope of the Air Monitoring and Dust Control Plan included in the proposed Parcel G Building Demolition Work Plan, the EPA requests that the Navy prepare a full briefing to be added to the agenda of the future Community Action Council (CAC) meeting to be held in November. This will give the public living around HPNS the opportunity to be fully informed about the Air Monitoring plan's scope for the proposed Building Demolition plan and to be able to comment directly to the Navy their questions and concerns about the plan. Please confirm that this will be an agenda item for the upcoming CAC meeting.	The draft final work plan will be posted to the Navy's HPNS website to give the public an opportunity to review it. The building demolition and air monitoring plans will be discussed at the January 2026 CAC meetings.
31.	Appendix A - Attachment B: Dust Management and Air Monitoring Plan	Given public interest and public concern related to air quality impacts during the building demolition, the Navy should consider frequent website updates and/or public meetings to review the air monitoring data with the community.	Currently, posts to the Navy's HPNS website, the real time PM10 results approximately every two weeks. The Parcel G demolition real time air monitoring will be included. Additionally, the weekly progress reports that discuss the work completed for the current week, and a look ahead to the work to accomplished in the next week will be will be posted to the HPNS website.

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End of EPA’s Comments

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The following comments were made by the Department of Toxic Substances (DTSC)

	Comment		Response
32.	General comment	Each of the buildings included in the draft Work Plan has been investigated for potential radiological contamination. CDPH has reviewed the Final Status Survey Reports (FSSRs) for each building and issued Radiological Unrestricted Release Recommendation (RURR) letters for five buildings and portions of a sixth. The crawl space below Building 351A and all of building 351 have not been released by CDPH, primarily due to the inaccessibility of specific survey units. This does not preclude the demolition and removal of these buildings. The United States Nuclear Regulatory Commission has also reviewed the FSSRs and concluded that all of the buildings meet the federal criteria for unrestricted release. Please revise the Work Plan to describe the radiological release status of each building and note what if any restrictions or safety measures might apply to the buildings or portions of buildings that have not been released by CDPH.	The building FSSRs demonstrated the Record of Decisions remedial goals for unrestricted use have been met. CDPH has issued RURR letters for Buildings 306, 351 (excluding the crawl space), 401, 408, 411, and 439 and the NCR concluded all buildings meet the federal unrestricted release criteria. The CDPH's and NRC's evaluation are being used to determine whether the building demolition debris has to be disposed in or out of the State of California. Due to the ROD remedial goals for unrestricted use having been met, no radiological restrictions or safety measures are required.

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33.	General comment:	DTSC notes that while the demolition and removal of the buildings not released by CDPH is not prohibited by CDPH, CDPH may still require additional documentation or survey post-demolition for the unrestricted release of the remaining building footprints or material left onsite. If such activities or documentation are not part of the scope of this Work Plan, DTSC and CDPH will revisit this comment prior to finalization of the Parcel G Remedial Action Completion Report.	Acknowledged.
34.	General comment	Prior to beginning abatement work, the abatement contractor should prepare an Abatement Work Plan consistent with the one prepared for Building 123 (see attached).	Abatement Work Plan has been added to the RAWP.
35.	Section 3.6, Dust Control and Air Monitoring:	Please revise the last paragraph of this section to state that all air monitoring data and reports will also be provided to DTSC and USEPA within two weeks of report generation. Also note that asbestos monitoring data must be sent directly to the Bay Area Air District Air Pollution Control Officer.	Per ECC's contract, All air monitoring reports to be directly provided to the ROICC. For copies of the air monitoring reports, the DTSC and EPA will need to coordinate distribution through the ROICC's regulatory contact.

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36.	Section 3.6, Dust Control and Air Monitoring:	In light of recent disclosures by the Navy of a November 2024 exceedance of Plutonium-239 in a Parcel C air sample, DTSC requests that upwind and downwind air sampling for radiological contamination be included in the Work Plan.	ROCs air monitoring has been added to the work plans.
37.	Section 3.6, Dust Control and Air Monitoring:	During demolition of buildings where abatement cannot be performed due to accessibility or safety concerns, air sampling should also include analysis for abatement materials such as mercury and polychlorinated biphenyls (PCBs). DTSC also recommends such sampling during demolition of abated buildings given the high degree of public interest.	Mercury and PCBs have been added to the Dust Management Plan. Note – these analyses will only be monitored during the open-air abatement performed on buildings 401 and 411, as the mercury and PCBs materials will have been abated prior to demolition on all other buildings.
38.	Section 3.6, Dust Control and Air Monitoring:	Given the public interest in this demolition activity DTSC urges the Navy and contractors to establish clear methods of communicating air monitoring data to nearby residents, workers, and other interested parties. This should include regular distribution of air monitoring data, alerts for exceedances or stop-work orders, and points of contact for questions or concerns. DTSC understands that some of this request may be beyond the scope of this specific Work Plan and intends to continue related discussions with the Navy at large.	See response for comment #35.

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39.	Section 7.0, Quality Control Procedures and Reporting:	The referenced Contractor Quality Control Plan does not appear to be included in the Work Plan. Please provide this document for regulatory agency review. •	Per the Navy, they will facilitate the distribution of any additional documents to the regulatory agencies as an FIO.
40.	Section 7.0, Quality Control Procedures and Reporting:	This section should include a description of any post-demolition construction summary report or other completion report that will be prepared for the Navy and regulatory agencies. That report should include, at minimum: a. Descriptions of work completed b. Descriptions of deviations from the final approved Work Plan c. Reports generated during the work period, such as construction daily reports, stormwater inspection reports, and air monitoring and sampling reports d. Summaries of waste disposal, including truckload counts, material volumes, destinations of waste, and hazardous waste manifests e. Photographs of work areas before, during, and after mobilization	The RACR, once awarded by the Navy will include this information.

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41.	Appendix A, Attachment B, Dust Management and Air Monitoring Plan, Section 6.2, Monitoring Site Locations:	To be consistent with Bay Area Air District requirements for the Building 123 demolition there should be three air monitoring locations, one upwind and two downwind. Monitoring locations should be selected based on wind direction and adjacent to the active work areas.	Figure revised.

End of DTSC's Comments

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The following comments were made by the San Francisco Bay Regional Water Quality Control Board (Water Board)

	Comment		Response
42.	3.2 Erosion/Sediment Control	**Section 3.2 Erosion/Sediment Control** of the EPP (pdf page 83) discusses the handling of "contaminated soil stockpiles," but Table 3.5 Temporary Materials Management BMPs (i.e., Best Management Practices) of the SWPPP (pdf page 139) shows that *BMP WM-07 Contaminated Soil Management* will not be used and states that (contaminated soil) is "not anticipated for this project" **Comment 1:** To resolve the contradictions with respect to contaminated soil in the EPP and SWPPP, *BMP WM-07 Contaminated Soil Management* should be added to the SWPPP, even if it is only a possibility that contaminated soil will be encountered. Please note contaminated soil is mentioned throughout the document, in some cases referencing it as a possibility of being encountered but other references imply that contaminated soil **will be** encountered. e.g., Section 8.0 Decontamination and Post Demolition Clean-Up of the EPP (pdf page 93) and Section 2.6 Potential Construction Activity and Pollutant Sources of the SWPPP (pdf page 127).	We do not expect to encounter any soil within our scope. Slab depth >12inches. EPP has been updated.

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43.	Section 3 Best Management Practices and Table 3.1 BMP Implementation Schedule of the SWPPP (pdf pages128 and 129)	**Section 3 Best Management Practices and Table 3.1 BMP Implementation Schedule of the SWPPP** (pdf pages128 and 129) provides a list and schedule of the BMPs to be implemented.
		
		Comment 2: The BMPs listed below were not included in the SWPPP and should be considered for the work planned under the Draft RAWP for Parcel G. If the Navy chooses not to include the specified BMPs, additional rationale should be provided to demonstrate why they are unnecessary.
		• Erosion and Sediment Control BMPs
		  ○ *BMP EC-5 Soil Binders*
		  ○ *BMP SE-1 Silt Fence*
		  ○ *BMP SE-8 Sandbag Barrier*
		• Tracking Control
		  ○ *BMP TC-2 Stabilized Construction Roadway*
		  ○ *BMP TC-3 Entrance/Outlet Tire Wash*
		• Non-Stormwater BMPs
		  ○ *BMP NS-8 Vehicle and Equipment Cleaning*
		• Materials Management and Waste Management
		  ○ *BMP WM-7 Contaminated Soil Management*
			SWPPP has been updated.

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44.	Section 7.7.1.4 Analytical Constituents and Table 7.2 Potential Non-Visible Pollutants and Water Quality Indicator Constituents (pdf pages 153 and 154)	**Section 7.7.1.4 Analytical Constituents and Table 7.2 Potential Non-Visible Pollutants and Water Quality Indicator Constituents** (pdf pages 153 and 154) discusses and lists "…the specific sources and types of potential non-visible pollutants based on the project pollutant source assessment and the water quality indicator constituent(s) for that pollutant." **Comment 3:** Site specific chemicals of concern (COCs) and radionuclides of concern (ROCs) for Parcel G should be included on the analyte list as shown in Table 7-2. For Parcel G the following COCs and ROCs should be analyzed: Manganese, Arsenic, Benzo(a)pyrene, Benzo(b)fluoranthene, Lead, Cesium-137, Cobalt-60, Plutonium-239, Radium-226, Strontium-90, Thorium-232, Hydrogen-3, and Uranium-235.	See comment #36.

End of Water Boards's Comments

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The following comments were made by City and County of San Francisco Department of Public Health

45.	General Comments	**Dittrichia Viscosa:** Revise the work plan to address the presence of Dittrichia Viscosa in and around the planned work areas, particularly Buildings 408, 411, and 439. The San Francisco Department of Public Health has been coordinating with the Navy to prevent the spread of this potentially invasive species in California. The proposed work has the potential to contribute to the propagation of seeds both on- and off-site. Revise the work plan to include the following elements: • A pre-work survey to identify existing Dittrichia Viscosa populations, • A summary of mitigation measures to prevent seeds from spreading during demolition activities, and • Coordination with SFDPH staff regarding control and monitoring efforts. Additionally, the work plan should describe the proper disposal methods for the culled material currently stored in Building 439 to prevent further dissemination of seeds.	Added the following text to Section 2.0 and 5.0 of the EPP: "*Parcel G is located within a developed former industrial area with limited vegetation. Existing vegetation consists of Dittrichia viscosa, an invasive species that is removed on an as needed basis by the NAVFAC Base Closure Caretakers Office. A survey will be conducted prior to fieldwork to determine whether plant removal is necessary.*"
46.	PCBs in Buildings	Residual PCBs may be present in caulking used to seal window sills and other brick, masonry, and stone joints. Identify buildings and specific areas where PCBs were used to support future drip-line analysis and abatement activities, if necessary.	The Haz material survey identified all materials (Terracon).

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47.	Radionuclide Air Monitoring	Revise the work plan to include air monitoring for radionuclides of concern (ROCs) during all phases of building demolition and associated debris handling. At a minimum, the ROC air-monitoring procedures should be consistent with the protocols outlined in the Dust Management and Air Monitoring Plan (Appendix E) of the Parcel G Removal Site Evaluation Work Plan Addendum (July 2020).	ROCs have been added to the work plan and the Dust Management Plan.
48.	Action Level Exceedance Response	Revise the work plan to include a standalone "Action Level Exceedance Response" section that clearly outlines the actions the Navy and its contractors will take in the event of exceedances of any air-monitoring action levels. This section should, at a minimum, specify required work stoppage or mitigation steps, escalation procedures, and the including notification timeframes to be followed.	The details of the Exceedance Response Procedures are addressed in Section 6.7 of Dust Monitoring Plan.
49.	Auto-Wetting Dust Suppression	Revise the work plan to incorporate the use of auto-wetting dust-suppression systems, where feasible, during all demolition activities to ensure effective and continuous dust control. Examples of acceptable systems include high-pressure or automated misting units that provide consistent application of water throughout demolition and debris handling.	ECC will have personnel on-site dedicated to dust suppression activities, automated systems are not required.
50.	Stockpile Management	Revise the work plan to specify that all demolition-generated stockpiles will be covered at the end of each workday to minimize dust generation. The work plan should describe the type of cover material to be used and the procedures for maintaining covers during windy conditions.	Section 3.6 and 5.3 updated with the following text: *Although not expected, all demolition-generated stockpiles will be covered at the end of each workday to minimize dust generation.*

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51.	Land Surveys (Section 3.9):	Revise this section to include the surveys of the former building perimeters to support future drip-line analysis and abatement activities, if necessary.	Not required
52.	Site Restoration (Section 6.2):	Please clarify whether the planned durable cover will be consistent with the existing durable cover materials used elsewhere on the parcel. If the materials or extents differ, please describe the specific differences and the rationale for using them.	Revised the text for clarity. Please see below. **Former:** *Surface restoration will be conducted to meet durable cover specifications per the Design Basis Report (ChaduxTt, 2010 and 2012).* **Revised:** *Surface restoration will be conducted to meet durable cover specifications per the Design Basis Report (ChaduxTt, 2010 and 2012), consistent with the existing durable cover materials used elsewhere on the parcel.*
53.	Dust Management Plan and Air Monitoring Plan (Attachment B):	Based on our conversation on September 25, 2025, please revise Attachment B to make it clear that up- and down-wind monitoring locations will be placed closer to the specific building being demolished, rather than at the parcel perimeter. Additionally, please include a third crosswind monitoring location for each building demolition site.	Revised air monitoring figure.

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54.	Dust Management Plan and Air Monitoring Plan Community Reporting (Attachment B):	Expand Section 10.0 – Data Review and Reporting to include recurring public reporting of air-monitoring data and associated field activities. At a minimum, community-facing report-outs should summarize field activities, present air-monitoring results, identify any action level exceedances, and describe the associated response actions taken by the Navy and their contractors. The work plan should also specify the reporting frequency and method of dissemination to ensure timely and accessible communication with the community.	ECC is required to submit all air monitoring data to the Navy on a scheduled basis. The results from Parcel G will be released to the regulators and the public using the same protocols and systems already in place for work in all parcels.
55.	Figure 8b:	Review and correct the title of Figure 8b, which is currently labeled as Figure 7b.	Figure revised.
56.	General	Will detailed abatement plans be submitted before work start that includes worker certifications, detailed procedures and schedule, worker personal air monitoring schedule, neg air placement, etc.? Or is this the only work plan?	Please see Appendix D, Attachment A for the Abatement Plan.