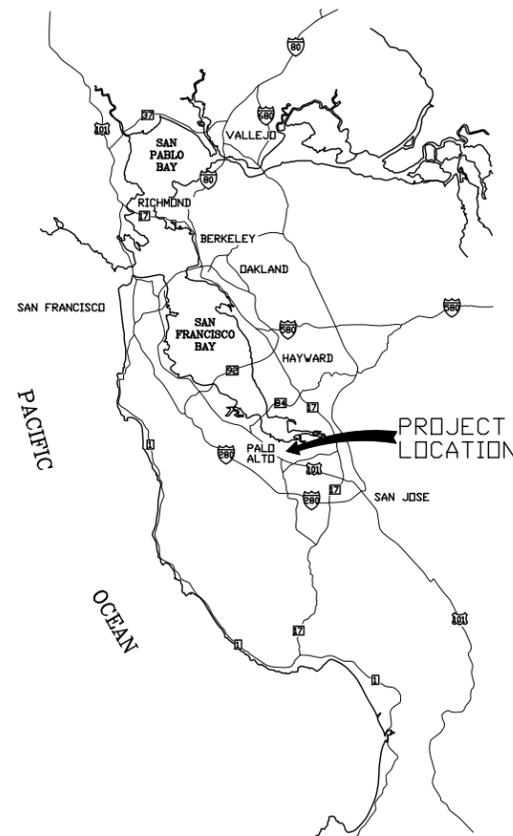


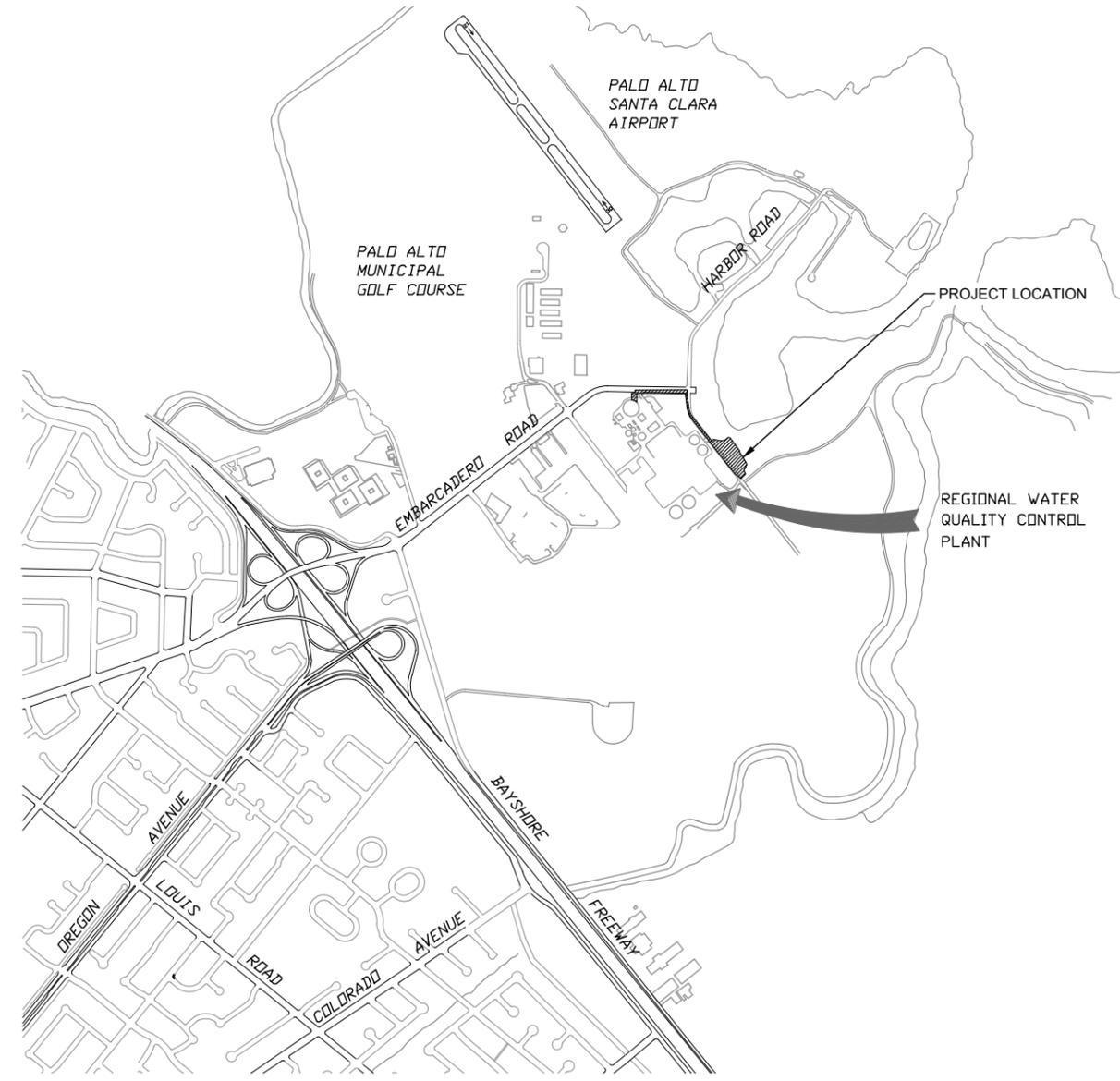
ASSOCIATION OF BAY AREA GOVERNMENTS PALO ALTO HORIZONTAL LEVEE PROJECT

PALO ALTO, CALIFORNIA
JANUARY 7, 2025

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LOCATION MAP
CITY OF PALO ALTO



VICINITY MAP



REV	DATE	BY	DESCRIPTION

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DRAWN DPH/AGHC
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ASSOCIATION OF BAY AREA GOVERNMENTS
PALO ALTO HORIZONTAL LEVEE PROJECT

TITLE SHEET

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DATE JANUARY 7, 2025 DRAWING NO. G01 SHEET NO. 1 OF 47
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GENERAL LEGEND

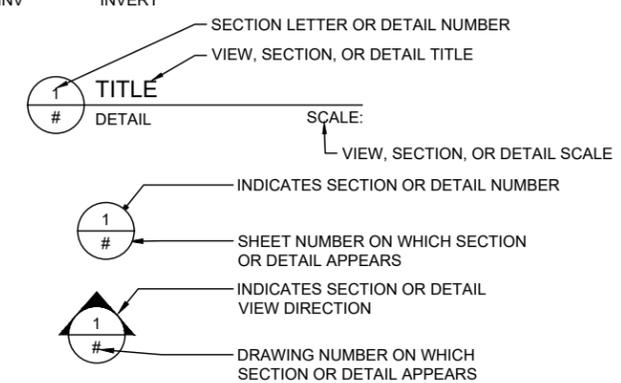
	EXISTING	PROPOSED		EXISTING	PROPOSED
WORK LIMIT	N/A	---	STAGING AREA	N/A	
GRADING LIMIT	N/A	---	LEVEE AREA	N/A	
PROPERTY BOUNDARY	---	N/A	SUBGRADE (PROFILE AND SECTION)	N/A	---
ALIGNMENT	---	---	CUT MATERIAL (PROFILE AND SECTION)	N/A	
EDGE OF PAVEMENT	---	N/A	FILL MATERIAL (PROFILE AND SECTION)	N/A	
EDGE OF TRAIL	---	N/A	NATIVE MATERIAL	N/A	
BUILDING		N/A	NATIVE FINE MATERIAL	N/A	
SURVEY CONTROL POINT		N/A	NATIVE COARSE MATERIAL	N/A	
VEGETATION		N/A	TREATMENT ZONE FINE MATERIAL	N/A	
BCDC BAY JURISDICTION	BCDC	N/A	TREATMENT ZONE COARSE MATERIAL	N/A	
BCDC 100-FT SHORELINE BAND	100FT	N/A	SUBSURFACE TREATMENT MATERIAL	N/A	
TREE		N/A	LEVEE BERM MATERIAL	N/A	
TREE PROTECTION	N/A		SAND FILTER	N/A	
FIBER ROLL	N/A		ROADWAY WORK AREA	N/A	
EROSION CONTROL FABRIC	N/A		TRAIL SURFACE	N/A	
TEMPORARY ACOUSTIC BARRIER FENCE	N/A	AB	TREATMENT ZONE	N/A	
TEMPORARY ENVIRONMENTAL PROTECTION FENCE	N/A	X	BIORETENTION SOIL	N/A	
SMHM VEGETATION REMOVAL AREA	N/A		EFFLUENT DISTRIBUTION BOX	N/A	
MAJOR CONTOUR	2.0	2.0	SIGN	---	---
MINOR CONTOUR	0.5	0.5	WOOD FENCE	N/A	
GRADE BREAK	N/A	---	EXISTING GRADE (PROFILE AND SECTION)	---	N/A
FLOWLINE	---	---	DESIGN GRADE (PROFILE AND SECTION)	N/A	---

UTILITIES LEGEND

	EXISTING	PROPOSED
GAS LINE	G—G	N/A
OVERHEAD POWER LINE	OH—OH	N/A
OVERHEAD UTILITY POLE	○	N/A
UTILITY BOX	□	N/A
POTABLE WATER LINE	W—W	N/A
STORM DRAIN LINE	SD—SD	
STORM DRAIN INLET		N/A
CLEANOUT		N/A
TELECOM LINE	T—T	N/A
SANITARY SEWER LINE	SS—SS	N/A
UNDERGROUND POWER LINE	E—E	N/A
RECYCLED WATER LINE	RW—RW	N/A
RECYCLED WATER BOX		N/A
RECYCLED WATER VALVE	○	N/A
RECYCLED WATER HYDRANT		N/A
HORIZONTAL LEVEE EFFLUENT SUPPLY LINE	N/A	EFF
INFILTRATOR UNITS	N/A	
PIEZOMETER	N/A	

ABBREVIATIONS

AC	ASPHALTIC CONCRETE	JP	JOINT SERVICE POLE
ADMIN	ADMINISTRATION	(N)	NEW
BCDC	BAY CONSERVATION AND DEVELOPMENT COMMISSION	NIC	NOT IN CONTRACT
BLDG	BUILDING	PCC	PLAIN CEMENT CONCRETE
CONC	CONCRETE	OVHD / OH	OVERHEAD UTILITIES
CLSM	CONTROLLED LOW-STRENGTH MATERIAL	PIP	PROTECT IN PLACE
DBH	DIAMETER AT BREAST HEIGHT	RCP	REINFORCED CONCRETE PIPE
DG	DESIGN GRADE	RW	RECLAIMED WATER
D/S	DOWNSTREAM	RWQCP	REGIONAL WATER QUALITY CONTROL PLANT
(E)	EXISTING	CP	SURVEY CONTROL POINT
EG	EXISTING GRADE	SD	STORM DRAIN
EL	ELEVATION	SS	SANITARY SEWER
EFF	EFFLUENT	TYP	TYPICAL
F/L	FLOWLINE	U/S	UPSTREAM
G	GAS	W	WATER
HDPE	HIGH-DENSITY POLYETHYLENE	WM	WATER METER
INV	INVERT		



GENERAL NOTES

- GENERAL**
- THESE NOTES HIGHLIGHT SOME OF THE KEY REQUIREMENTS FROM THE SPECIFICATIONS AND PROVIDE ADDITIONAL PROJECT INFORMATION. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS CONTAINED IN THE PLANS, SPECIFICATIONS, PERMITS, AND OTHER CONTRACT DOCUMENTS.
 - THE LOCATION OF EXISTING UTILITIES KNOWN TO THE OWNER ARE SHOWN IN THEIR APPROXIMATE LOCATION BASED ON INFORMATION AVAILABLE AT THE TIME THE DRAWINGS WERE PREPARED. THE ACTUAL LOCATION, SIZE, TYPE, AND NUMBER OF UTILITIES MAY DIFFER FROM THAT SHOWN, AND UTILITIES OR UNDERGROUND FACILITIES MAY BE PRESENT THAT ARE NOT SHOWN.
 - PROTECT ALL EXISTING UTILITIES WHETHER SHOWN OR NOT SHOWN ON THE DRAWINGS.
 - THE CONTRACTOR SHALL EXPOSE ALL UNDERGROUND FACILITIES THAT ARE TO BE CONNECTED TO OR THAT ARE IN THE PATH OF THE PROPOSED IMPROVEMENTS PRIOR TO THE COMMENCEMENT OF WORK IN THE VICINITY OF EACH UNDERGROUND UTILITY. CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY UPON DISCOVERY OF DISCREPANCIES BETWEEN EXISTING CONDITIONS IN THE FIELD AND INFORMATION SHOWN ON THESE PLANS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER OF ANY DIFFERENCES IN LOCATIONS OF EXISTING UTILITIES SHOWN, OR ANY CONFLICTS WITH THE DESIGN THAT BECOME APPARENT DURING CONSTRUCTION, BEFORE CONTINUING WORK IN THAT AREA.
 - IF ANY DAMAGE TO EXISTING UTILITIES OCCURS, THE CONTRACTOR SHALL NOTIFY THE OWNER AND SHALL REPAIR THE DAMAGE AS DIRECTED BY THE OWNER AT NO ADDITIONAL COMPENSATION.
 - THE SITE INCLUDES OVERHEAD POWER LINES. EXERCISE CAUTION WHEN WORKING AROUND EXISTING ELECTRICAL LINES. COMPLY WITH ALL SAFETY REGULATIONS AND REQUIREMENTS.
 - THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT (800-227-2600) FOR BURIED UTILITY INFORMATION AT LEAST 48 HOURS IN ADVANCE OF BEGINNING WORK.
 - RWQCP SHUTDOWNS SHALL BE COORDINATED WITH THE CITY PER SPECIFICATIONS SECTION 01 14 00 - WORK RESTRICTIONS.
 - THE CONTRACTOR SHALL PREPARE AND SUBMIT FAA FORM 7460-1, NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION, TO THE FAA FOR ANY EQUIPMENT TALLER THAN 25 FEET. SEE SPECIFICATIONS SECTION 01 14 00 - WORK RESTRICTIONS.
- SITE ACCESS**
- THE FOLLOWING PROJECTS WILL BE OCCURRING WITHIN THE RWQCP AT THE SAME TIME AS THE PROJECT CONSTRUCTION: SECONDARY TREATMENT UPGRADES PROJECT AND LOCAL ADVANCED WATER PURIFICATION FACILITY. COORDINATE WITH THE RESIDENT ENGINEER ONE WEEK PRIOR TO ANY OVERLAPPING WORK WITH THE ABOVE DEFINED PROJECTS.
 - COORDINATE WITH THE RESIDENT ENGINEER FOR ACCESS TO RWQCP.
 - CONTRACTOR SHALL MAINTAIN MINIMUM ONE LANE OPEN ON EMBARCADERO ROAD AND HARBOR ROAD AT ALL TIMES DURING CONSTRUCTION.
- TOPOGRAPHIC DATA**
- ELEVATIONS ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88). HORIZONTAL CONTROL IS CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 3, NORTH AMERICAN DATUM 1983 (NAD83, 2011), U.S. SURVEY FEET.
 - ALL ELEVATIONS AND HORIZONTAL COORDINATES ARE IN FEET. ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.
 - THE AERIAL PHOTO IS BASED ON USGS EARTH EXPLORER DATABASE, PREPARED BY NORTHROP GRUMMAN, DATED FEBRUARY 20 TO 24, 2015.
 - EXISTING TOPOGRAPHY IS SANTA CLARA COUNTY 2020 LIDAR, CAPTURED BY THE SANBORN MAP COMPANY, INC. IN APRIL 2020. SUPPLEMENTAL TOPOGRAPHIC DATA PROVIDED BY ESA (JUNE 2021).
 - ELEVATIONS ARE APPROXIMATE AND PROVIDED FOR GENERAL REFERENCE ONLY. THE ACCURACY OF THE ELEVATION CONTOURS IS LIMITED BY DISTORTION DUE TO EXISTING VEGETATION.
- ENVIRONMENTAL PROTECTION**
- EXISTING GRADES MAY HAVE CHANGED SINCE TIME OF SURVEY, FOR EXAMPLE DUE TO SUBSIDENCE AND CONSOLIDATION.
 - THE CONTRACTOR SHALL PERFORM PRE-CONSTRUCTION SURVEYS, SITE INVESTIGATIONS, ESTIMATE QUANTITIES AND INCLUDE SUFFICIENT CONTINGENCY IN ITS BID TO COVER TOPOGRAPHIC AND BATHYMETRIC VARIABILITY.
 - REGULATORY PERMITS: OWNER HAS OBTAINED PERMITS FROM RESOURCE AGENCIES FOR THIS PROJECT. COMPLY WITH ALL PERMIT REQUIREMENTS FOR THE PROTECTION OF WATER QUALITY, WILDLIFE AND VEGETATION. SEE SPECIFICATIONS.
 - CONTRACTOR SHALL OBTAIN ALL OTHER PERMITS NOT PROVIDED BY OWNER. SEE SPECIFICATIONS.
 - COMPLY WITH ALL SCHEDULE RESTRICTIONS INCLUDED IN PROJECT PERMITS, INCLUDING REQUIREMENTS FOR THE PROTECTION OF NESTING BIRDS, PROTECTED FISH, AND OTHER WILDLIFE. SEE SHEET G07 AND SPECIFICATIONS SECTION 01 57 19 - TEMPORARY ENVIRONMENTAL CONTROLS AND PROJECT PERMITS FOR COMPLETE REQUIREMENTS.
 - CONTRACTOR SHALL PREPARE AND IMPLEMENT A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AS REQUIRED BY THE STATE WATER RESOURCES CONTROL BOARD. INCORPORATE SEDIMENT CONTROL AND EROSION CONTROL MEASURES TO PREVENT EROSION, SEDIMENT, AND HAZARDOUS MATERIALS RUNOFF FROM THE CONSTRUCTION SITE. SEE SHEET C17 AND SPECIFICATIONS SECTION 01 57 19 - TEMPORARY ENVIRONMENTAL CONTROLS FOR COMPLETE REQUIREMENTS.
 - ELIMINATE OR MINIMIZE NON-STORM DISCHARGE FROM THE CONSTRUCTION SITE TO THE BAY AND ALL OTHER WATER BODIES, INCLUDING GROUNDWATER.
 - STORE AND USE ALL MATERIALS THAT COULD CAUSE WATER POLLUTION (I.E. MOTOR OIL, FUELS, PAINTS, ETC.) IN A CONTAINED AREA THAT WILL NOT CAUSE ANY POLLUTION. REMOVE ALL DISCARDED MATERIAL AND ANY ACCIDENTAL SPILLS AND DISPOSE AT AN APPROVED DISPOSAL SITE.
- EARTHWORK AND WATER MANAGEMENT**
- CONSTRUCTION EQUIPMENT SHALL BE STORED, REFUELED, AND MAINTAINED IN DESIGNATED STAGING AREAS.
 - DUST FROM GRADING OPERATIONS SHALL BE CONTROLLED. AT MINIMUM, WATER ACTIVE WORK AREAS TO PREVENT VISIBLE DUST FROM LEAVING THE SITE.
 - THE PROJECT INVOLVES EXCAVATION, TRANSPORT, AND PLACEMENT OF MATERIAL BELOW GROUNDWATER LEVELS AND/OR WITHIN TIDAL WATERS.
 - ACCESS WITH CONVENTIONAL EQUIPMENT INCLUDING WHEELED SCRAPERS MAY BE DIFFICULT OR IMPOSSIBLE, PARTICULARLY IN AREAS EXCAVATED BELOW EXISTING GROUND SURFACE. PORTIONS OF THE WORK MAY REQUIRE USE OF LOW GROUND PRESSURE EQUIPMENT AND/OR USE OF CRANE MATS. THE CONTRACTOR SHALL DEVELOP EARTHWORK PLANS AND UTILIZE EQUIPMENT APPROPRIATE FOR SOFT, DIFFICULT CONDITIONS.
 - CONTRACTOR IS RESPONSIBLE FOR ESTIMATING ALL EARTHWORK QUANTITIES. APPROXIMATE EARTHWORK QUANTITIES ARE PROVIDED FOR CONTRACTOR'S REFERENCE ONLY. [
 - THE CONTRACTOR IS RESPONSIBLE FOR ALL WATER MANAGEMENT THROUGHOUT CONSTRUCTION, INCLUDING ISOLATING WORK FROM TIDAL WATERS. DEWATER AS REQUIRED FOR LEVEE SUBGRADE CONSTRUCTION AND OTHERWISE DEEMED NECESSARY TO SAFELY AND EFFICIENTLY PERFORM AND CONTROL THE WORK. SEE SHEET G05 FOR CONSTRUCTION PHASING.

FILENAME: C02 LEGEND, ABBREVIATIONS, AND NOTES 12-30-24 02:36pm L:\water X-TELK-PaloAlto-Border K-

REV	DATE	BY	DESCRIPTION

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ASSOCIATION OF BAY AREA GOVERNMENTS
PALO ALTO HORIZONTAL LEVEE PROJECT

LEGEND, ABBREVIATIONS, AND NOTES

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	SHEET NO.
	2 OF 47

DESIGN NOTES

OVERALL DESIGN OBJECTIVES

1. IMPROVE HABITAT ALONG THE PERIMETER OF HARBOR MARSH
2. ADAPT TO SEA LEVEL RISE BY PROVIDING A TRANSITIONAL SLOPE THAT PROVIDES TRANSGRESSION SPACE FOR UP TO THREE FEET OF SEA LEVEL RISE
3. REDUCE FLOOD RISK BY INTEGRATING A HORIZONTAL LEVEE ON THE OUTBOARD SIDE OF A TRADITIONAL FLOOD CONTROL LEVEE PROVIDING WIND-WAVE ATTENUATION AND VEGETATIVE EROSION PROTECTION FOR THE FLOOD CONTROL LEVEE CORE.
4. PROVIDE POLISHING TREATMENT TO DISCHARGED TREATED WASTEWATER.
5. MAINTAIN PUBLIC ACCESS TO THE EXISTING TRAIL SYSTEM.

3. CONTROL AT HORIZONTAL LEVEE TREATMENT ZONE
 - a. FLOWS TO EACH ZONE ADJUSTED MANUALLY AT A MONTHLY BASIS
 - b. NUMBER OF ZONES = 4

HORIZONTAL LEVEE EFFLUENT PIPELINE

1. DESIGN FLOW
 - a. MAXIMUM FLOW = 59,500 GPD
 - b. MINIMUM FLOW = 5,000 GPD
2. FUTURE FLOW
 - a. MAXIMUM FULL BUILD OUT FLOW = 249,500 GPD

HORIZONTAL LEVEE FLOW OPERATION

1. CONTROL SCHEDULE:

SETPPOINT	VALUE	UNIT
FLOW	100	GPM
VALVE MINIMUM OPEN	10	%
VALVE MAXIMUM OPEN	100	%

2. DAILY RUNTIME SCHEDULE

MONTH	MIN DAILY FLOW	MIN DAILY VALVE OPEN*	EST MAX DAILY FLOW	EST MAX DAILY VALVE OPEN*	EST MAX DAILY FLOW INTERVAL
	GPD	HOURS	GPD	HOURS	(EVERY X DAYS)
OCTOBER	6,700	1.1	7,900	1.3	6
NOVEMBER	5,000	0.8	29,700	5	5
DECEMBER	8,400	1.4	51,600	8.6	4
JANUARY	11,700	2	56,400	9.4	3
FEBRUARY	15,000	2.5	59,800	10	3
MARCH	16,700	2.8	52,200	8.7	4
APRIL	16,700	2.8	32,100	5.4	5
MAY	15,000	2.5	19,700	3.3	6
JUNE	13,400	2.2	14,900	2.5	7
JULY	11,700	2	11,700	2	7
AUGUST	10,000	1.7	11,600	1.9	7
SEPTEMBER	8,400	1.4	9,900	1.7	7

*ASSUMES VALVE OPENS TO 100 GPM

RENZEL MARSH PUMP

1. MAXIMUM FLOW = 3 MGD
2. TYPICAL OPERATION FLOW = 1.0 TO 1.5 MGD
3. PUMP OPERATION CHARACTERISTICS

PARAMETER	VALUE
Primary Point at Full Speed (gpm @ TDH)	1,200 @ 19.3 ft
NPSHa at Primary Point	36 feet
Maximum Capacity at Full Speed (gpm @ TDH)	1,600 @ 8 ft
Minimum Capacity at Full Speed (gpm @ TDH)	200 @ 42 ft
Secondary Point at Reduced Speed (gpm @ TDH @ rpm)	650 gpm @ 12.5 ft @ 1,150 rpm
NPSHa at Secondary Point	30 feet
Minimum Shutoff Head	55 ft
Maximum Synchronous Speed	1,800 rpm
Pump Drive Type	Adjustable Speed
Minimum Operating Speed	1,100 rpm
Motor Horsepower	10 HP
Required minimum efficiency at Primary Point	54% (Wire-to-Water Efficiency)
Minimum Solids sphere passage	3 inches
Minimum Size Suction x Discharge (inches)	6 x 6
Discharge pressure gauge range	0 to 30 psig

TIDAL DATUM	FEET (NAVD 88)
100-YEAR	11.11
50-YEAR	10.58
1-YEAR	8.63
MHHW	7.50
MHW	6.91
MTL	3.37
MLW	-0.17
MLLW	-1.35

SOURCE: COYOTE CREEK TIDAL GAUGE (NOAA) AND SAN FRANCISCO BAY EXTREME TIDES STUDY (AECOM)

FILENAME: CO3 BASIS OF DESIGN 12-30-24 02:23pm L:\Users\XREPS\X-TALK-PaloAlto-Border\K-...

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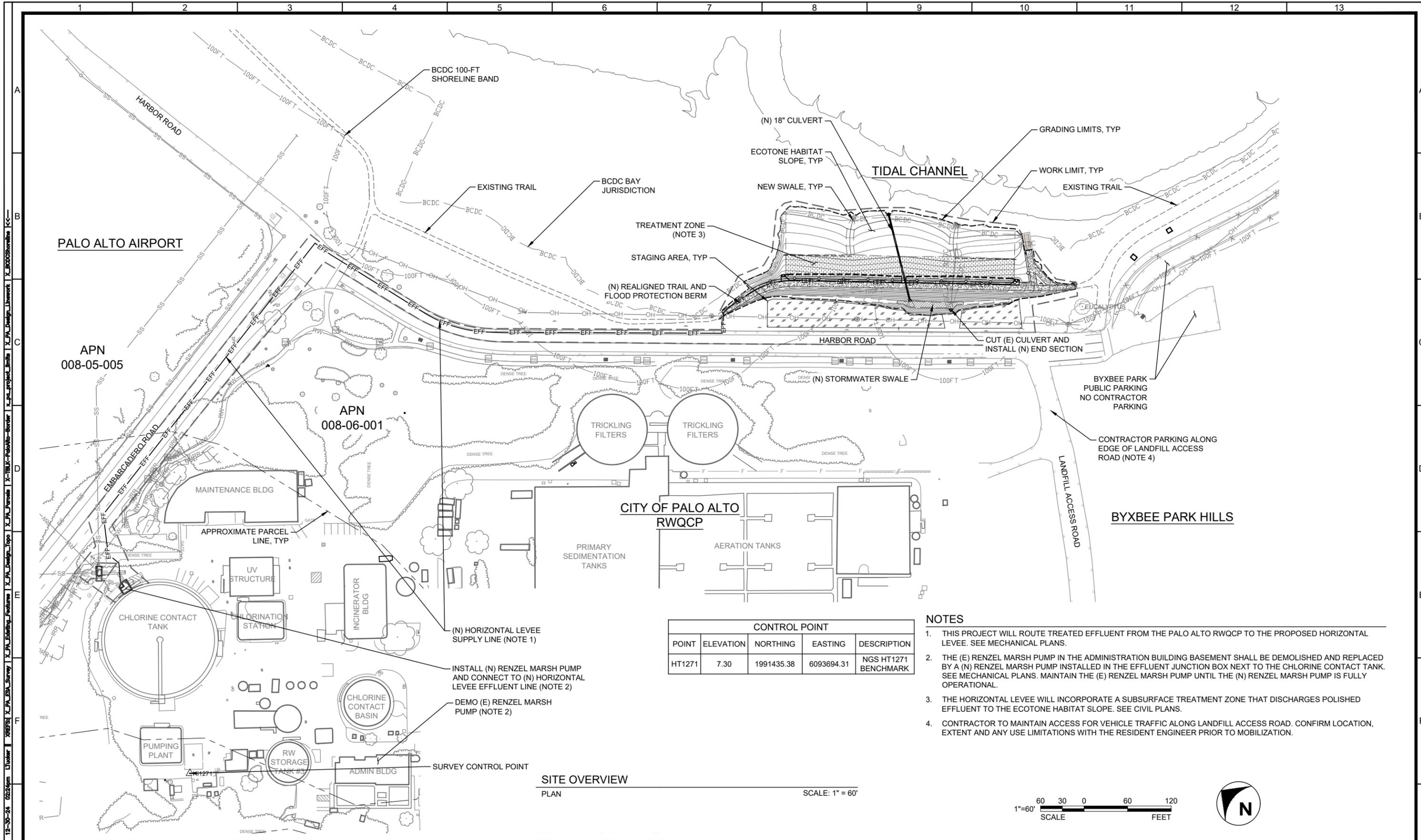


ASSOCIATION OF BAY AREA GOVERNMENTS
PALO ALTO HORIZONTAL LEVEE PROJECT

BASIS OF DESIGN

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3 OF 47



PALO ALTO AIRPORT

APN 008-05-005

APN 008-06-001

CITY OF PALO ALTO
RWQCP

BYXBEE PARK HILLS

CONTROL POINT				
POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION
HT1271	7.30	1991435.38	6093694.31	NGS HT1271 BENCHMARK

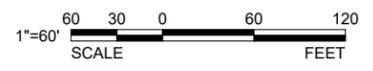
NOTES

1. THIS PROJECT WILL ROUTE TREATED EFFLUENT FROM THE PALO ALTO RWQCP TO THE PROPOSED HORIZONTAL LEVEE. SEE MECHANICAL PLANS.
2. THE (E) RENZEL MARSH PUMP IN THE ADMINISTRATION BUILDING BASEMENT SHALL BE DEMOLISHED AND REPLACED BY A (N) RENZEL MARSH PUMP INSTALLED IN THE EFFLUENT JUNCTION BOX NEXT TO THE CHLORINE CONTACT TANK. SEE MECHANICAL PLANS. MAINTAIN THE (E) RENZEL MARSH PUMP UNTIL THE (N) RENZEL MARSH PUMP IS FULLY OPERATIONAL.
3. THE HORIZONTAL LEVEE WILL INCORPORATE A SUBSURFACE TREATMENT ZONE THAT DISCHARGES POLISHED EFFLUENT TO THE ECOTONE HABITAT SLOPE. SEE CIVIL PLANS.
4. CONTRACTOR TO MAINTAIN ACCESS FOR VEHICLE TRAFFIC ALONG LANDFILL ACCESS ROAD. CONFIRM LOCATION, EXTENT AND ANY USE LIMITATIONS WITH THE RESIDENT ENGINEER PRIOR TO MOBILIZATION.

SITE OVERVIEW

PLAN

SCALE: 1" = 60'



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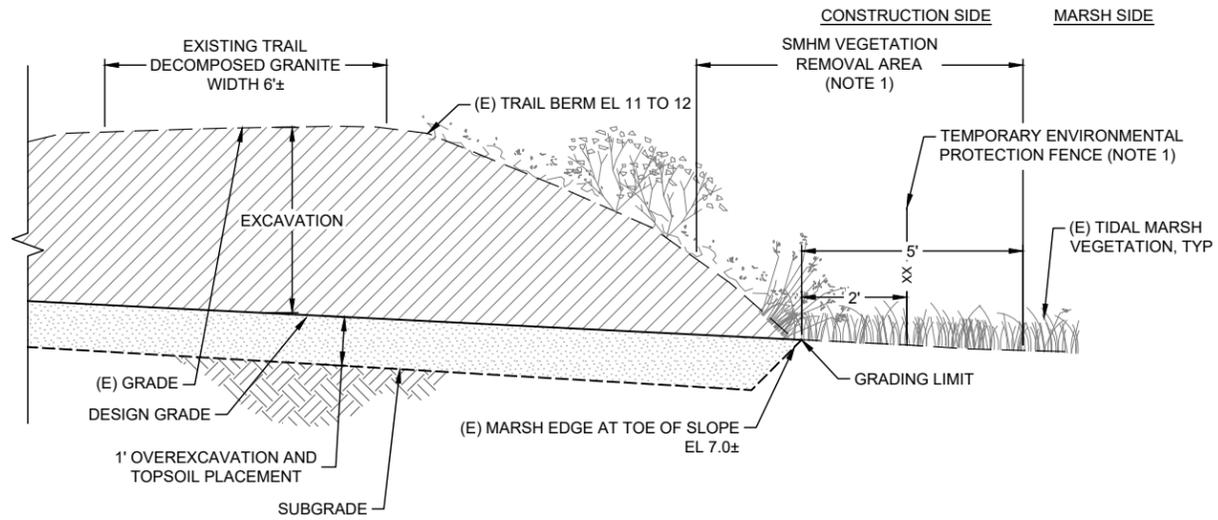


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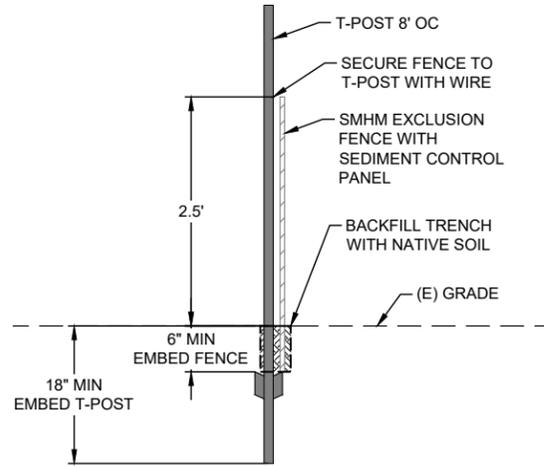
SITE OVERVIEW

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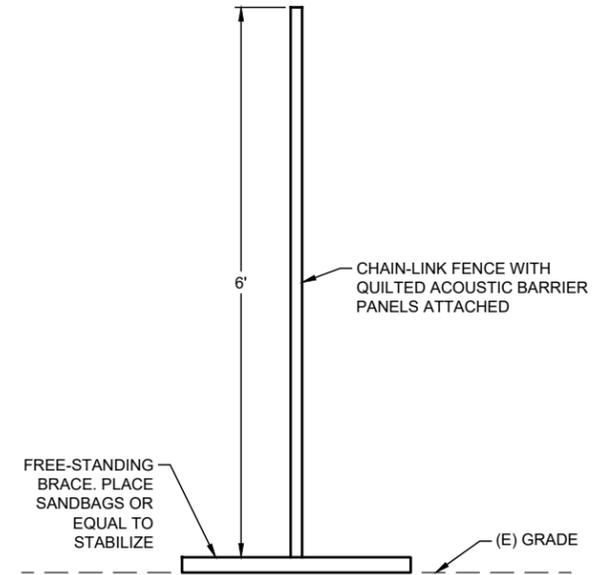
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G04
SHEET NO.
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1 CLEARING AND GRUBBING
TYPICAL SECTION



2 TEMPORARY ENVIRONMENTAL PROTECTION FENCE
TYPICAL SECTION



3 TEMPORARY ACOUSTIC BARRIER FENCE
TYPICAL SECTION



NOTE

- SMHM VEGETATION REMOVAL AREA AND TEMPORARY ENVIRONMENTAL FENCE PLACEMENT TO BE CONFIRMED PRIOR TO COMMENCING WORK.

FILENAME: C:\ENVIRONMENTAL\PROTECTION\DETAILS\12-30-24\02:25pm LVucher X-TELK-PaloAlto-Border X_PA_DTL_CIVIL <<<

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PALO ALTO HORIZONTAL LEVEE PROJECT

ENVIRONMENTAL PROTECTION DETAILS

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8 OF 47

City of Palo Alto Tree Protection - It's Part of the Plan!

Make sure your crews and subs do the job right!

Fenced enclosures around trees are essential to protect them by keeping the foliage canopy and branching structure clear from contact by equipment, materials and activities, preserving roots and soil conditions in an intact and non-compacted state, and identifying the Tree Protection Zone (TPZ) in which no soil disturbance is permitted and activities are restricted, unless otherwise approved. An approved tree protection report must be added to this sheet when project activity occurs within the TPZ of a regulated tree.

For detailed information on Palo Alto's regulated trees and protection during development, review the City Tree Technical Manual (TTM) found at www.cityofpaloalto.org/trees/.

NOTE

- SEE SPECIFICATIONS SECTION 01 56 39 - TEMPORARY TREE PROTECTION FOR COMPLETE REQUIREMENTS ON TREE PROTECTION.

TREE DISCLOSURE STATEMENT

CITY OF PALO ALTO
Planning Division, 250 Hamilton Avenue
Palo Alto, CA 94301
(650) 329-2441
<http://www.cityofpaloalto.org>

Palo Alto Municipal Code, Chapter 8.10.040, requires disclosure and protection of certain trees located on private and public property, and that they be shown on approved site plans. A completed disclosure statement must accompany all building permit applications that include exterior work, all demolition or grading permit applications, or other development activity.

PROPERTY ADDRESS: 2375 Embarcadero Road, Palo Alto, CA

Are there Regulated trees on or adjacent to the property? YES NO (If no, proceed to Section 4)

(Sections 1-4 MUST be completed by the applicant. Please circle and/or check where applicable.)

1. Where are the trees? Check those that apply. (Plans must be submitted showing over 4" diameter trees)

On the property
 On adjacent property overhanging the project site
 In the City planter strip or right-of-way statement within 30' of property line (Street Trees)*

*Street trees require special protection by a fenced enclosure, per the attached instructions. Prior to receiving any permit, you must provide an enclosed Street Tree Protection Verification Form by calling Public Works Operations at 650-953 for inspection of approved type I, II or III fencing (see attached Detail 0605).

2. Are there any Protected or Designated Trees? YES (Check where applicable) NO

Protected Tree (s)
 Designated Tree (s)
On or overhanging the property

3. Is there activity or grading within the dripline? (radius 10 times the trunk diameter) of these trees? YES NO

If Yes, a Tree Preservation Report must be prepared by an ISA certified arborist and submitted for staff review (see TTM, Section 6.25). Attach this report to Street Tree Protection, or the Plan.

4. Are the Site Plan Requirements** completed? YES NO

**Provisions of Regulated trees during development require the following: (1) Plans must show the measured trunk diameter and canopy dripline; (2) Plans must show, as a bold double line, a fenced enclosure area next to the dripline, per Sheet T-1 and Detail 0605 - <http://www.cityofpaloalto.org/technical-manual> (See also TTM, Section 2.15 for area to be fenced)

I, the undersigned, agree to the conditions of this disclosure. I understand that knowingly or negligently providing false or misleading information in response to this disclosure requirement constitutes a violation of the Palo Alto Municipal Code Section 8.10.040, which can lead to criminal and/or civil legal action.

Signature: _____ Print: _____ Date: _____

FOR STAFF USE:

Protective Fencing
Sections 5-6 must be completed by staff for the issuance of any development permit (demolition, grading or building permit).

5. Protected Trees: The specified tree fencing is in place. A written statement is attached verifying that protective fencing is correctly in place around protected and/or designated trees. YES NO
(N/A if there are no protected trees, check here)

6. Street Trees: A signed Public Works Street Tree Protection Verification form is attached. YES NO
(N/A if there are no street trees, check here)

Regulated Trees - (a) Street trees - trees on public property; (b) Protected trees - Coast Live Oak or Valley Oak which are 11.5" in diameter or larger, Coast Redwood which are 10" in diameter or larger, when measured 4" above natural grade, and Heritage trees (see trees designated by City Council); (c) Designated trees - commercial or residential property trees, which are not of approved landscape plan.

Palo Alto Tree Technical Manual (TTM) contains instructions for all requirements on this form, available at <http://www.cityofpaloalto.org/technical-manual>

S:\Plan\Prod\Arbor\Tree Protection Info\Tree Disclosure Statement Revised 06/06

Tree Protection During Construction

City of Palo Alto Standard
Scale: NTS

Approved by: Dave Dockett
RE No.:
Date: 2006
DWG No.: 605

For written specifications associated with illustrations below, see Public Works Specifications Section 31. Detailed specifications are found in the Palo Alto Tree Technical Manual (TTM) (www.cityofpaloalto.org/trees/)

Tree Protection Zone (TPZ) shown in gray (radius of TPZ equals 10 times the diameter of the tree or 10 ft, whichever is greater).

- Regulated activity area - see Tree Technical Manual Sec 2.1.5(1)
- Regulated tree area - see Tree Technical Manual Sec 2.1.5(1)(D), any proposed rock or form work within TPZ of a protected tree requires approval from Public Works Operations. Call 650-496-5953.

Type I Tree Protection: For all Protected and Designated Trees, the TPZ shall be enclosed by a fence that meets the following criteria: (1) The fence shall be constructed of 2x4 inch lumber, 4 feet high, with 1/2 inch mesh screening. (2) The fence shall be constructed of 2x4 inch lumber, 4 feet high, with 1/2 inch mesh screening. (3) The fence shall be constructed of 2x4 inch lumber, 4 feet high, with 1/2 inch mesh screening.

Type II Tree Protection: For all Regulated Trees, the TPZ shall be enclosed by a fence that meets the following criteria: (1) The fence shall be constructed of 2x4 inch lumber, 4 feet high, with 1/2 inch mesh screening. (2) The fence shall be constructed of 2x4 inch lumber, 4 feet high, with 1/2 inch mesh screening. (3) The fence shall be constructed of 2x4 inch lumber, 4 feet high, with 1/2 inch mesh screening.

Type III Tree Protection: For all Street Trees, the TPZ shall be enclosed by a fence that meets the following criteria: (1) The fence shall be constructed of 2x4 inch lumber, 4 feet high, with 1/2 inch mesh screening. (2) The fence shall be constructed of 2x4 inch lumber, 4 feet high, with 1/2 inch mesh screening. (3) The fence shall be constructed of 2x4 inch lumber, 4 feet high, with 1/2 inch mesh screening.

Note: Street Trees: Issuance of a permit requires a permit for the TPZ. The TPZ shall be enclosed by a fence that meets the following criteria: (1) The fence shall be constructed of 2x4 inch lumber, 4 feet high, with 1/2 inch mesh screening. (2) The fence shall be constructed of 2x4 inch lumber, 4 feet high, with 1/2 inch mesh screening. (3) The fence shall be constructed of 2x4 inch lumber, 4 feet high, with 1/2 inch mesh screening.

Tree fencing is required and shall be erected before demolition, grading or construction begins.

Table 2-2 Palo Alto Tree Technical Manual

CONTRACTOR & ARBORIST INSPECTION SCHEDULE

Reference: the Palo Alto Tree Technical Manual is available at www.cityofpaloalto.org/trees/

ALL CHECKED ITEMS APPLY TO THIS PROJECT:

- Inspection of Protective Tree Fencing:** For Protected Trees, the Street Tree Verification Form shall be signed by the City Arborist. For Protected Trees, the project site arborist shall provide an initial Monthly Tree Activity Report form with a photograph verifying that he has conducted a field inspection of the trees and that the correct type of protective fencing is in place around the designated tree protection zone (TPZ) prior to issuance of a demolition, grading, or building permit. (See TTM, Verification of Tree Protection, Section 1.39).
- Pre-Construction Meeting:** Prior to commencement of construction, the applicant or contractor shall conduct a pre-construction meeting to discuss tree protection with the job site superintendent, grading operators, project site arborist, City Arborist, and, if a city maintained irrigation system is involved, the Parks Manager (Contact 650-496-6962).
- Inspection of Rough Grading or Trenching:** Contractor shall ensure the project site arborist performs an inspection during the course of rough grading or trenching adjacent to or within the TPZ to ensure trees will not be injured by compaction, cut or fill, drainage and trenching, and if required, impact sensor systems, new wells, drains and special paving. The contractor shall provide the project arborist at least 24 hours advance notice of such activity.
- Monthly Tree Activity Report Inspections:** The project site arborist shall perform a minimum monthly activity inspection to monitor and advise on conditions, tree health and retention or, immediately if there are any revisions to the approved plans or protection measures. The Tree Technical Manual Monthly Tree Activity Report form shall be used and sent to the Planning Dept. Landscape review staff no later than 14 days after issuance of building permit date. Fax to (650) 329-2154. (See TTM Monthly Tree Activity Inspection Report, Addendum 11 & section 1.17).
- Special activity within the Tree Protection Zone:** Work in the TPZ area (see also #7 below) requires the direct onsite supervision of the project arborist (see TTM, Trenching, Excavation & Equipment, Section 2.29 C).
- Landscape Architect Inspection:** For discretionary development projects, prior to temporary or final occupancy the applicant or contractor shall arrange for the Landscape Architect to perform an on site inspection of all plant stock, quality of the materials and planting (see TTM, Planting Quality, Section 3.20.1 A) and that the irrigation is functioning consistent with the approved construction plans. The Planning Dept. Landscape review staff shall be in receipt of written verification of Landscape Architect approval prior to scheduling the final inspection, unless otherwise approved.
- Lot Other:** (please describe as called out in the site Tree Preservation Report, Sheet T-1, T-2, etc.)

Monthly Tree Activity Report- Construction Site

City of Palo Alto Tree Technical Manual ADDENDUM 11
Arborist Firm Data Here
Contractor & Arborist Inspection Schedule
BCLATA Certified Arborist #525,000
Contract #684

Inspection Date: _____ Site address: _____
Inspection #: _____ Palo Alto, CA

Contractor/Main Site Contact Information
Contractor Name: _____
Company: _____
Job site superintendent: _____
Office: _____
Cell: _____
Mail: _____

Also present:
1. City of Palo Alto: _____
2. Others: _____

Attn: Dave Dockett
Email: dave.dockett@cityofpaloalto.org
Phone: 650-329-2440

Distribution: 1. City of Palo Alto
2. Others: _____

Provide the requested information with each report, consistent as necessary. To be completed by project site arborist. Send monthly to city arborist at above address until project completion. Use additional sheets if needed.

- Assignment Activity (Demolition/grading/trenching/foundation) list relevant visits:
 - Pre-construction meeting requirement with sub-contractors
 - Inspect to verify that tree protection measures are in place
 - Determine if field adjustments, watering or plan revisions may be needed
- Field Observations (general site-wide and list by individual tree number):
 - Tree Protection Fences (TPF) are ...
 - Trenching/havill occur ...
- Action Items (list site-wide, by tree number and date to be satisfied) and Date Due:
 - Tree Protection Fence (TPF) needs adjusting (tree #, s, N)
 - Root zone buffer material (wood chips) can be installed next
 - Schedule severer trench, foundation dig with ...
- Photographs (see notes)
- Tree Location Map (mandatory 8.5 x 11 sheet)
- Recommendations, notes or monitor items for project/staff/schedule
- Past visits (list carry-over items satisfied/still outstanding)

Respectfully submitted,
Project site arborist
Consistent contact information (include email, cell#, and mailing)
Cc: _____
Enter Date: CPA Monthly Tree Activity Report: Type site address here Page #1 of 1

City of Palo Alto
250 Hamilton Avenue, Palo Alto, CA 94301

Search: Advanced Browse by Topic

Home > Planning & Community Environment

Tree Technical Manual

To purchase the Tree Technical Manual
June, 2001 First Edition

View by section:

- Table of Contents (PDF, 479kb)
- Intent and Purpose (PDF, 1.05MB)
- Introduction - Use of Manual (PDF, 1.05MB)
- Section 1.0 - Definitions (PDF, 96kb)
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- Section 3.0 - Removal, Replacement, & Planting of Trees (PDF, 117kb)
- Section 4.0 - Hazardous Trees (PDF, 125kb)
- Section 5.0 - Tree Maintenance Guidelines (PDF, 110kb)
- Section 6.0 - Tree Reports (PDF, 84kb)

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APPENDICES

- Palo Alto Municipal Code Chapter 8.10, Tree Preservation & Management Regulations
- Tree City - USA
- ISA Hazard Evaluation Form
- ISA Hazard Evaluation Patterns for Selected Species (Reference source)
- ISA Tree Pruning Guidelines (PDF, 1.89MB)
- Tree Care Safety Standards, ANSI Z39.1-1994 (Reference source)
- Pruning Performance Standards, ANSI A300-1995 (Reference source)
- Tree Planting Details, Diagram 504 & 505
- Tree Disclosure Statement
- Palo Alto Standard Tree Protection Instructions

APPENDIX J

PALO ALTO STREET TREE PROTECTION INSTRUCTIONS - SECTION 31-

- General:** Tree protection has three primary functions: (1) to keep the foliage canopy and branching structure clear from contact by equipment, materials and activities; (2) to preserve trees and soil conditions in an intact and non-compacted state; and (3) to identify the Tree Protection Zone (TPZ) in which no soil disturbance is permitted and activities are restricted, unless otherwise approved.
- Tree Protection Zone (TPZ):** is a restricted area around the base of the tree with a radius of ten times the diameter of the tree trunk or ten feet, whichever is greater, enclosed by fencing.
- Reference Documents:**
 - Illustrations of designs described below.
 - Tree Technical Manual (TTM) Form (www.cityofpaloalto.org/trees/)
 - Trenching Restrictions Form (TTM, Section 2.29C)
 - Arborist Supervision Form (TTM, Section 5.0)
 - Site Plan Requirements (TTM, Section 6.19)
 - Tree Disclosure Statement (TTM, Section 6)
- Excavation:**
 - Type I Tree Protection:** The fence shall enclose the entire TPZ of the tree to be protected throughout the life of the construction project. In some existing areas, if fencing is located on existing concrete that will not be demolished, then the fence may be supported by an appropriate grade level concrete base, as approved by Public Works Operations.
 - Type II Tree Protection:** For trees situated within a planting strip, only the planting strip and yard side of the TPZ shall be enclosed with the required clear fence protective fencing to enter to keep the sidewalk and street open for public use.
 - Type III Tree Protection:** To be used only with approval of Public Works Operations. Trees situated in a row well or adjacent to a gutter pit, shall be wrapped with 5-inch by 8-inch energy absorbing fence from the ground in the front and overlaid with 2x4 inch lumber board secured by chain link that will not be allowed to dig into the back. During installation of the plastic fencing, caution shall be given to avoid damaging any trenches. Where trees may also require plastic fencing as directed by the City Arborist.
 - Site, type and area in the fence:** All trees to be protected shall be protected with a 6' high clear chain link fence. Fences are to be constructed of two-inch diameter galvanized steel pipe, driven into the ground to a depth of at least 2-0 feet at more than 10-foot spacing. Fencing shall extend to the outer trenching, unless specifically approved on the STV Form.
 - Warning signs:** A warning sign shall be visible from the street and positioned at each fence at 20-foot intervals. The sign shall be minimum 14 inches x 11 inches and clearly visible at all times. "WARNING - Tree Protection Zone - This fence shall not be removed and is subject to a fine according to PAMC Section 8.10.117"
 - Duration:** Tree fencing shall be erected before demolition, grading or construction begins and remain in place until final inspection of the project, except for work specifically allowed in the TPZ. Work or soil disturbance in the TPZ requires approval by the project arborist or City Arborist in the case of work around Street Trees. Excavations within the public right of way require a Street Work Permit from Public Works.
- During construction:**
 - All activities from the erecting the project site shall be protected from impact of any kind.
 - The applicant shall be responsible for the repair or replacement (at their own expense) of any publicly owned trees that are damaged during the course of construction, pursuant to Section 8.10.040 of the Palo Alto Municipal Code.
 - The following tree preservation measures apply to all trees to be retained:
 - No storage of material, equipment, vehicles or equipment shall be permitted within the TPZ.
 - The ground under and around the protected tree shall not be altered.
 - Trees to be retained shall be irrigated, watered and maintained as necessary to ensure survival.

END OF SECTION
City of Palo Alto 2004 Standard Drawings and Specifications
Street Tree Verification of Protection, P&E, Section 31
Revised 06/06

City of Palo Alto Tree Department

Public Works Operations
PO Box 10250 Palo Alto, CA 94303
650-862-0923 FAX: 650-862-0209
treeprotection@cityofpaloalto.org

Verification of Street Tree Protection

Applicant Instructions: Complete upper portion of this form. Mail or FAX this form along with signed Tree Disclosure Statement to Public Works Dept., Public Works, Tree Staff (mail stamped and ready to mail)

APPLICATION DATE: _____
ADDRESS/LOCATION OF STREET TREES TO BE PROTECTED: _____
APPLICANT'S NAME: _____
APPLICANT'S ADDRESS: _____
APPLICANT'S TELEPHONE & FAX NUMBERS: _____

This section to be filled out by City Tree Staff

1. The Street Trees at the above address(es) are adequately protected. The type of protection used is: YES NO If NO, go to #2 below

Inspected by: _____
Date of inspection: _____

2. The Street Trees at the above address(es) are NOT adequately protected. The following modifications are required: _____
Indicate how the required modifications were communicated to the applicant: _____

Subsequent inspection
Street trees at above address were found to be adequately protected: YES NO If NO, indicate in "Notes" before the disposition of case.

Inspected by: _____
Date of inspection: _____

Notes: List City street trees by species, site, condition and type of tree protection installed. Also note if special measures taken. Use back of sheet if necessary.

Return approved sheet to Applicant for demolition or building permit issuance.
5/19/07 07/14/05/06/07/08/09

---WARNING---

Tree Protection Zone

This fencing shall not be removed without City Arborist approval (650-496-5953)

Removal without permission is subject to a \$500 fine per day*

*Palo Alto Municipal Code Section 8.10.110

City of Palo Alto Tree Protection Instructions are located at <http://www.cityofpaloalto.org/trees/technical-manual.html>

SPECIAL INSPECTIONS PLANNING DEPARTMENT
TREE PROTECTION INSPECTIONS MANDATORY

PAMC 8.10 PROTECTED TREES: CONTRACTOR SHALL ENSURE PROJECT SITE ARBORIST IS PERFORMING REQUIRED TREE INSPECTION AND SITE MONITORING. PROVIDE WRITTEN MONTHLY TREE ACTIVITY REPORTS TO THE PLANNING DEPARTMENT LANDSCAPE REVIEW STAFF BEGINNING 14 DAYS AFTER BUILDING PERMIT ISSUANCE.

BUILDING PERMIT DATE: _____
DATE OF 1ST TREE ACTIVITY REPORT: _____
CITY STAFF: _____

REPORTING DETAILS OF THE MONTHLY TREE ACTIVITY REPORT SHALL CONFORM TO SHEET T-1 FORM. VERIFY THAT ALL TREE PROTECTION MEASURES ARE IMPLEMENTED AND WILL INCLUDE ALL CONTRACTOR ACTIVITY, SCHEDULED OR UNSCHEDULED, WITHIN A TREE PROTECTION ZONE. NON-COMPLIANCE IS SUBJECT TO VIOLATION OF PAMC 8.10.040. REFERENCED: PALO ALTO TREE TECHNICAL MANUAL, SECTION 2.00 AND ADDENDUM 11.

Project Data

Apply Tree Protection Report on sheet(s) T-2
Use additional "T" sheets as needed

T-1

All other tree-related reports shall be added to the space provided on this sheet (adding as needed). Include this sheet(s) on Project Sheet Index or Legend Page. A copy of T-1 can be downloaded at <http://www.cityofpaloalto.org/civica/filebank/blobload.asp?BlobID=6460>

Special Tree Protection Instruction Sheet
City of Palo Alto

T-1

REV	DATE	BY	DESCRIPTION

DESIGNED MRL
DRAWN DPH/AGHC
CHECKED MRL/MMC

REGISTERED PROFESSIONAL ENGINEER
MARK R. LINDLEY
C 66701
EXP. 9/30/26
CIVIL
STATE OF CALIFORNIA

ESA

575 MARKET STREET
SUITE 3700
SAN FRANCISCO, CA 94105
T 415.896.5900
WWW.ESASSOC.COM

ASSOCIATION OF BAY AREA GOVERNMENTS

ASSOCIATION OF BAY AREA GOVERNMENTS

ASSOCIATION OF BAY AREA GOVERNMENTS
PALO ALTO HORIZONTAL LEVEE PROJECT

SPECIAL TREE PROTECTION INSTRUCTION

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DATE JANUARY 7, 2025
DRAWING NO. G09
SHEET NO. 9 OF 47

POLLUTION PREVENTION — IT'S PART OF THE PLAN

Construction projects are required to implement year-round stormwater BMPs, as they apply to your project.

Runoff from streets and other paved areas is a major source of pollution to San Francisco Bay. Construction activities can directly affect the health of the Bay unless contractors and crews plan ahead to keep construction dirt, debris, and other pollutants out of storm drains and local creeks. Following these guidelines will ensure your compliance with City of Palo Alto Ordinance requirements.



MATERIALS & WASTE MANAGEMENT

Non-Hazardous Materials

- Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or when they are not in use.
- Use (but don't overuse) reclaimed water for dust control.
- Ensure dust control water doesn't leave site or discharge to storm drains.

Hazardous Materials

- Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state and federal regulations.
- Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecast.
- Follow manufacturer's application instructions for hazardous materials and do not use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.
- Arrange for appropriate disposal of all hazardous wastes.

Waste Management

- Cover and maintain dumpsters. Check frequently for leaks. Place dumpsters under roofs or cover with tarps or plastic sheeting secured around the outside of the dumpster. A plastic liner is recommended to prevent leaks. Never clean out a dumpster by hosing it down on the construction site.
- Place portable toilets away from storm drains. Make sure they are in good working order. Check frequently for leaks.
- Dispose of all wastes and demolition debris properly. Recycle materials and wastes that can be recycled, including solvents, water-based paints, vehicle fluids, broken asphalt and concrete, wood, and cleared vegetation.
- Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous waste.
- Keep site clear of litter (e.g. lunch items, cigarette butts).
- Prevent litter from uncovered loads by covering loads that are being transported to and from site.

Construction Entrances and Perimeter

- Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking. Never hose down streets to clean up tracking.



EQUIPMENT MANAGEMENT & SPILL CONTROL

Maintenance and Parking

- Designate an area of the construction site, well away from streams or storm drain inlets and fitted with appropriate BMPs, for auto and equipment parking, and storage.
- Perform major maintenance, repair jobs, and vehicle and equipment washing off site.
- If refueling or vehicle maintenance must be done onsite, work in a bermed area away from storm drains and over a drip pan or drop cloths big enough to collect fluids. Recycle or dispose of fluids as hazardous waste.
- If vehicle or equipment cleaning must be done onsite, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or surface waters.
- Do not clean vehicle or equipment onsite using soaps, solvents, degreasers, or steam cleaning equipment, and do not use diesel oil to lubricate equipment or parts onsite.

Spill Prevention and Control

- Keep spill cleanup materials (e.g., rags, absorbents and cat litter) available at the construction site at all times.
- Maintain all vehicles and heavy equipment. Inspect frequently for and repair leaks. Use drip pans to catch leaks until repairs are made.
- Clean up leaks, drips and other spills immediately and dispose of cleanup materials properly.
- Use dry cleanup methods whenever possible (absorbent materials, cat litter and/or rags).
- Sweep up spilled dry materials immediately. Never attempt to "wash them away" with water, or bury them.
- Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
- Report any hazardous materials spills immediately! Call City of Palo Alto Communications, (650) 329-2413. If the spill poses a significant hazard to human health and safety, properly or the environment, you must report it to the State Office of Emergency Services. (800) 852-7550 (24 hours).



EARTHMOVING

Grading and Earthwork

- Schedule grading and excavation work during dry weather.
- Stabilize all denuded areas, install and maintain temporary erosion controls (such as erosion control fabric or bonded fiber matrix) until vegetation is established.
- Remove existing vegetation only when absolutely necessary, plant temporary vegetation for erosion control on slopes or where construction is not immediately planned.
- Prevent sediment from migrating offsite and protect storm drain inlets, drainage courses and streams by installing and maintaining appropriate BMPs (e.g., silt fences, gravel bags, fiber rolls, temporary swales, etc.).
- Keep excavated soil on site and transfer it to dump trucks on site, not in the streets.

Contaminated Soils

- If any of the following conditions are observed, test for contamination and contact the Regional Water Quality Control Board:
 - Unusual soil conditions, discoloration, or odor.
 - Abandoned underground tanks.
 - Abandoned wells.
 - Buried barrels, debris, or trash.
- If the above conditions are observed, document any signs of potential contamination and clearly mark them so they are not disturbed by construction activities.

Landscaping

- Protect stockpiled landscaping materials from wind and rain by storing them under tarps all year-round.
- Stack bagged material on pallets and under cover.
- Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet weather.



CONCRETE MANAGEMENT & DEWATERING

Concrete Management

- Store both dry and wet materials under cover, protected from rainfall and runoff and away from storm drains or waterways. Store materials off the ground, on pallets. Protect dry materials from wind.
- Wash down exposed aggregate concrete only when the wash water can (1) flow onto a dirt area; (2) drain onto a bermed surface from which it can be pumped and disposed of properly; or (3) block any storm drain inlets and vacuum washwater from the gutter. If possible, sweep first.
- Wash out concrete equipment/trucks offsite or in a designated washout area, where the water will flow into a temporary waste pit, and make sure wash water does not leach into the underlying soil. (See CASQA Construction BMP Handbook for properly designed concrete washouts.)

Dewatering

- Reuse water for dust control, irrigation or another on-site purpose to the greatest extent possible.
- Be sure to obtain a Permit for Construction in the Public Street from Public Works Engineering before discharging water to a street, gutter, or storm drain. Call the Regional Water Quality Control Plant (RWQCP) at (650) 329-2598 for an inspection prior to commencing discharge. Use filtration or diversion through a basin, tank, or sediment trap as required by the approved dewatering plan. Dewatering is not permitted from October to April.
- In areas of known contamination, testing is required prior to reuse or discharge of groundwater. Consult with the City inspector to determine what testing to do and to interpret results. Contaminated groundwater must be treated or hauled off-site for proper disposal.



PAVING/ASPHALT WORK

Paving

- Avoid paving and seal coating in wet weather or when rain is forecast, to prevent materials that have not cured from contacting stormwater runoff.
- Cover storm drain inlets and manholes when applying seal coat, slurry seal, fog seal, or similar materials.
- Collect and recycle or appropriately dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into gutters.

Sawcutting & Asphalt/Concrete Removal

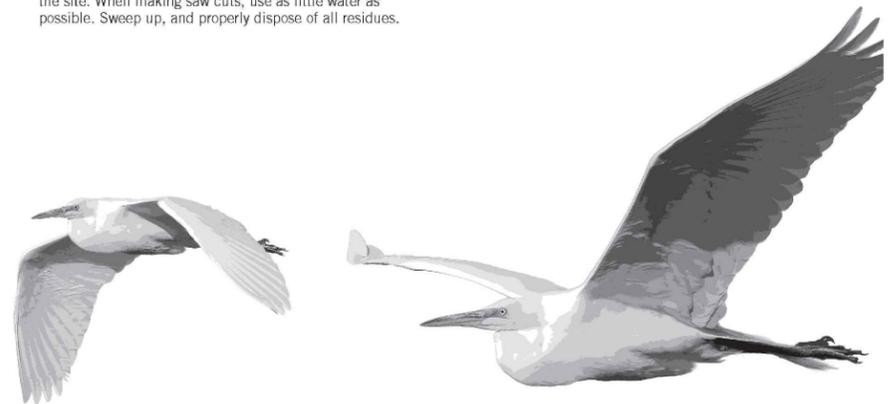
- Protect storm drain inlets during saw cutting.
- If saw cut slurry enters a catch basin, clean it up immediately.
- Shovel or vacuum saw cut slurry deposits and remove from the site. When making saw cuts, use as little water as possible. Sweep up, and properly dispose of all residues.



PAINTING & PAINT REMOVAL

Painting Cleanup and Removal

- Never clean brushes or rinse paint containers into a street, gutter, storm drain, or stream.
- For water-based paints, paint out brushes to the extent possible, and rinse into a drain that goes to the sanitary sewer. Never pour paint down a storm drain.
- For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of excess liquids as hazardous waste.
- Sweep up or collect paint chips and dust from non-hazardous dry stripping and sand blasting into plastic drop cloths and dispose of as trash.
- Chemical paint stripping residue and chips and dust from marine paints or paints containing lead, mercury, or tributyltin must be disposed of as hazardous waste. Lead based paint removal requires a state certified contractor.



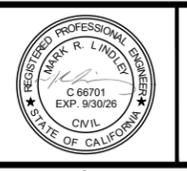
STORM DRAIN POLLUTERS MAY BE LIABLE FOR FINES OF UP TO \$10,000 PER DAY!

250 Hamilton Avenue
Palo Alto, CA 94301
650.329.2211
cityofpaloalto.org

FILENAME: C:\P\011 POLLUTION PREVENTION 12-30-24 02:28pm L:\lucifer X:\BILLY-Pedraza-Border KK-

REV	DATE	BY	DESCRIPTION

DESIGNED MRL
DRAWN DPH/AGHC
CHECKED MRL/MMC



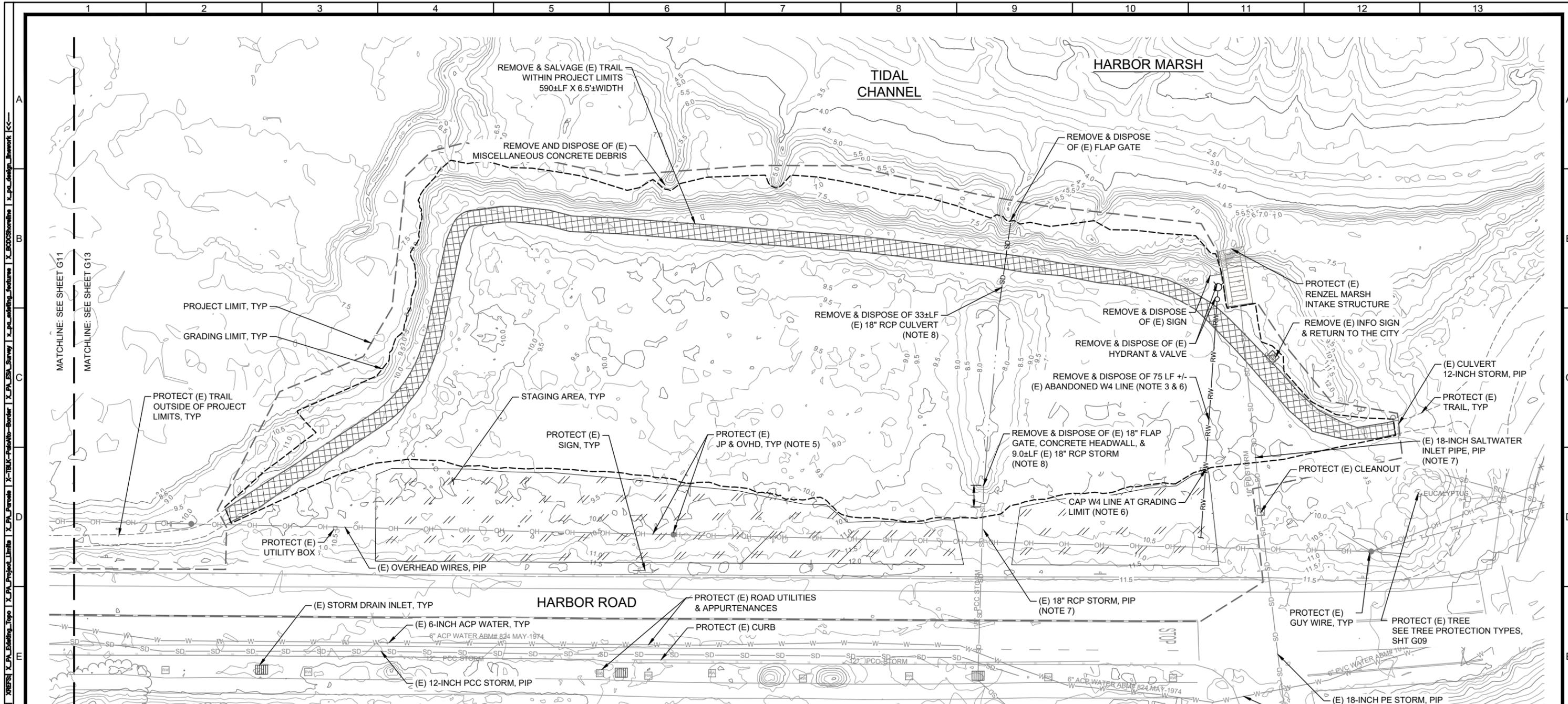
575 MARKET STREET
SUITE 3700
SAN FRANCISCO, CA 94105
T 415.896.5900
WWW.ESASOC.COM



ASSOCIATION OF BAY AREA GOVERNMENTS
PALO ALTO HORIZONTAL LEVEE PROJECT

POLLUTION PREVENTION

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DATE JANUARY 7, 2025 DRAWING NO. G10 SHEET NO. 10 OF 47
-----------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------



- NOTES**
1. THE CONTRACTOR SHALL IDENTIFY, LOCATE, AND PROTECT ALL EXISTING UTILITIES WITHIN THE LIMITS OF WORK, INCLUDING ONSITE AND OFFSITE ACCESS ROUTES.
 2. THE LOCATION OF EXISTING UTILITIES AND UNDERGROUND FACILITIES KNOWN TO THE CITY ARE SHOWN IN THEIR APPROXIMATE LOCATION BASED ON INFORMATION AVAILABLE AT THE TIME THE DRAWINGS WERE PREPARED. THE ACTUAL LOCATION, SIZE, TYPE AND NUMBER OF UTILITIES AND UNDERGROUND FACILITIES MAY DIFFER FROM THAT SHOWN, AND UTILITIES OR UNDERGROUND FACILITIES MAY BE PRESENT THAT ARE NOT SHOWN.
 3. OBTAIN BEST AVAILABLE CURRENT INFORMATION ON LOCATION, IDENTIFICATION AND MARKING OF EXISTING UTILITIES, PIPING AND CONDUITS AND OTHER UNDERGROUND FACILITIES BEFORE BEGINNING ANY EXCAVATION. CALL UNDERGROUND SERVICE ALERT FOR INFORMATION AT LEAST 48 HOURS IN ADVANCE OF BEGINNING WORK.
 4. CONTRACTOR SHALL DISPOSE OF ALL TRASH AND DEMOLITION DEBRIS AT APPROPRIATE LOCATION, SEE SPECIFICATIONS.
 5. PROTECT (E) OVERHEAD POWER LINES. CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING AROUND AND TRAVERSING UNDER THE OVERHEAD POWER LINES.
 6. REMOVE (E) ABANDONED W4 LINE FROM WITHIN THE LIMITS OF WORK. CAP (E) LINE AT END OF REMAINING LINE AS APPROVED BY THE RESIDENT ENGINEER. BACKFILL REMOVED W4 LINE WITH NATIVE OR LEVEE FILL MATERIAL PER MATERIAL PLACEMENT PLAN SHEET C06. PLACE IN 6-8 INCH THICK LOOSE LIFTS, MOISTURE CONDITION AND COMPACT TO 90% RELATIVE COMPACTION MIN.
 7. CONTRACTOR SHALL CCTV CONDITION OF EXISTING PIPE PRE- AND POST-CONSTRUCTION TO VERIFY THE CONDITION DOES NOT DETERIORATE DUE TO PROPOSED CONSTRUCTION AND NEW MATERIAL LOADS. SEE SPECIFICATIONS.
 8. CONTRACTOR SHALL MANAGE STORM DRAIN FLOWS DURING EARTHWORK UNTIL (N) STORMWATER SWALE AND (N) CULVERTS ARE INSTALLED AND OPERATIONAL. MAINTAIN PUMP AND PIPING AS NEEDED TO CONTROL WATER DURING WORK. BACKFILL REMOVED STORM DRAINS WITH NATIVE OR LEVEE FILL MATERIAL PER MATERIAL PLACEMENT PLAN SHEET C06. SEE SHEET C13 FOR PROFILE OF (E) 18-INCH RCP STORM DRAIN.

EXISTING CONDITIONS AND DEMOLITION - LEVEE AREA
PLAN



REV	DATE	BY	DESCRIPTION

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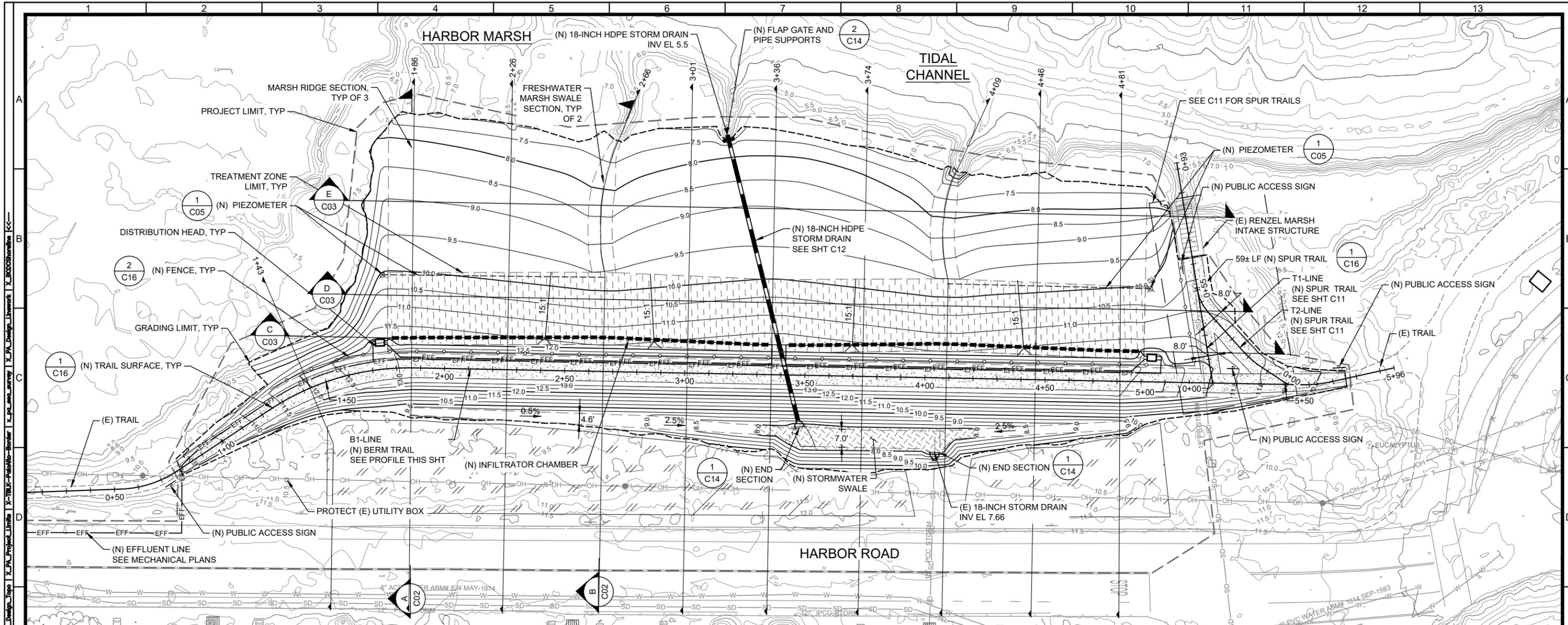
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PALO ALTO HORIZONTAL LEVEE PROJECT
EXISTING CONDITIONS AND DEMOLITION - LEVEE AREA

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

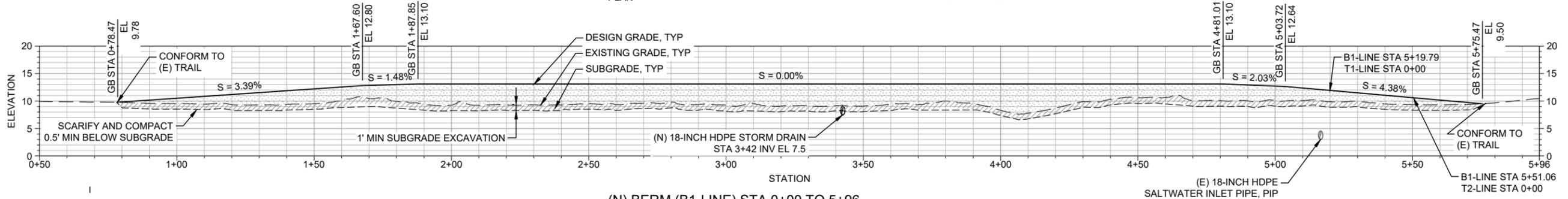
DATE
JANUARY 7, 2025
DRAWING NO.
G13
SHEET NO.
13 OF 47



GRADING PLAN

PLAN

SCALE: 1" = 20'

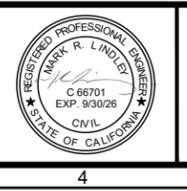


- NOTES**
1. GRADING SECTIONS SHOWN ON SHEETS C07 TO C10.

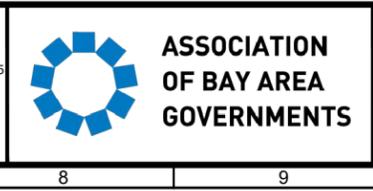


REV	DATE	BY	DESCRIPTION
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DESIGNED MRL
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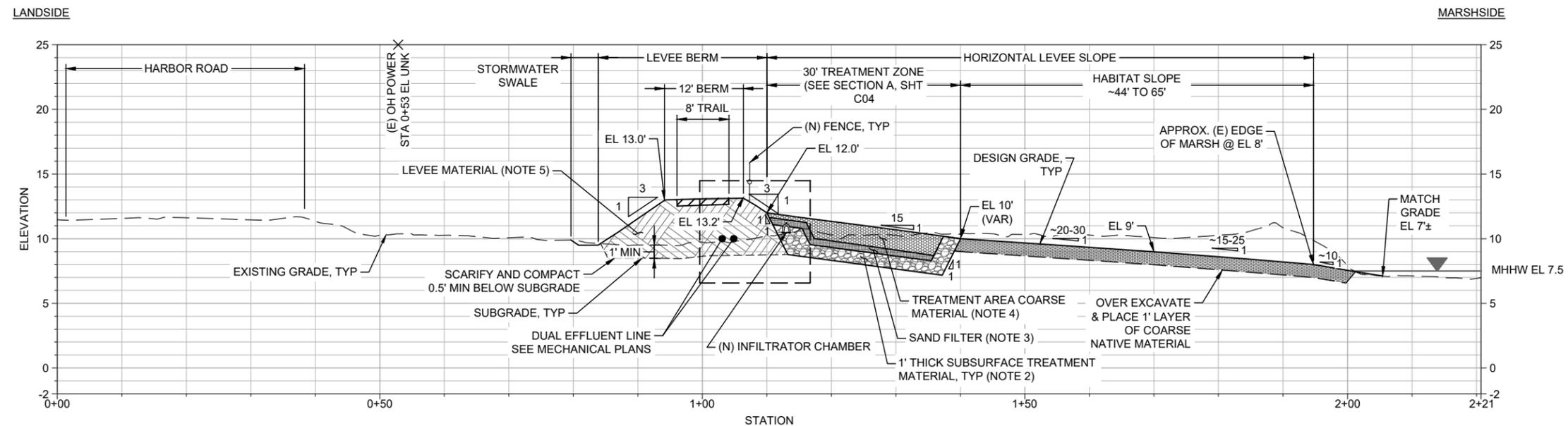
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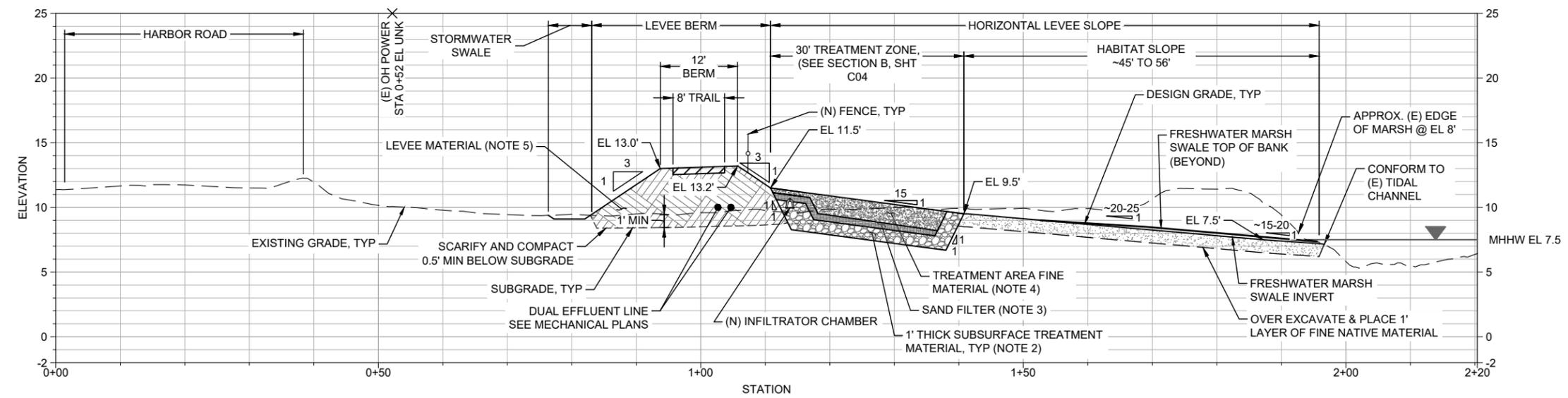
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GRADING PLAN

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING	DATE JANUARY 7, 2025
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. C01
	SHEET NO. 14 OF 47



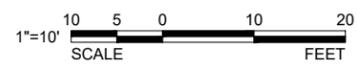
A TYPICAL SECTION - RIDGES/HIGH & WIDE
SECTION SCALE: 1" = 10' H
1" = 5' V



B TYPICAL SECTION - SWALES
SECTION SCALE: 1" = 10' H
1" = 5' V

NOTES

1. SEGREGATE LEVEE, FINE AND COARSE MATERIAL ENCOUNTERED DURING EXCAVATION OF SITE TO SUBGRADE. DURING FILL OPERATIONS, PRIORITIZE PLACEMENT OF LEVEE MATERIAL FOR LEVEE CORE, AND PLACE COARSE MATERIAL ON THE RIDGES AND FINE MATERIALS IN THE SWALES. TRANSITION FROM COARSE MATERIAL TO FINE MATERIAL BETWEEN RIDGES AND SWALES.
2. SUBSURFACE TREATMENT MATERIAL COMPRISED OF A BLEND OF PERMEABLE MATERIAL AND COMPOSTED WOOD CHIPS.
3. SAND FILTER COMPRISED OF A BLEND OF SAND AND WOOD FINES.
4. TREATMENT AREA COARSE AND FINE MATERIAL INCLUDES A BLEND OF NATIVE MATERIAL WITH SAND AND COMPOSTED WOOD FINES.
5. PLACE LEVEE MATERIAL IN 6-8 INCH THICK LOOSE LIFTS AND MOISTURE CONDITION AND COMPACT TO 95% RELATIVE COMPACTION MIN.
6. ALL ELEVATIONS ARE ON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).



FILENAME: C:\DRAWING\SECTIONS 4_12-30-24_0227pm.Ltucker X:\BIBK-PaloAlto-Border\1-1-25\

REV	DATE	BY	DESCRIPTION

DESIGNED MRL
DRAWN DPH/AGHC
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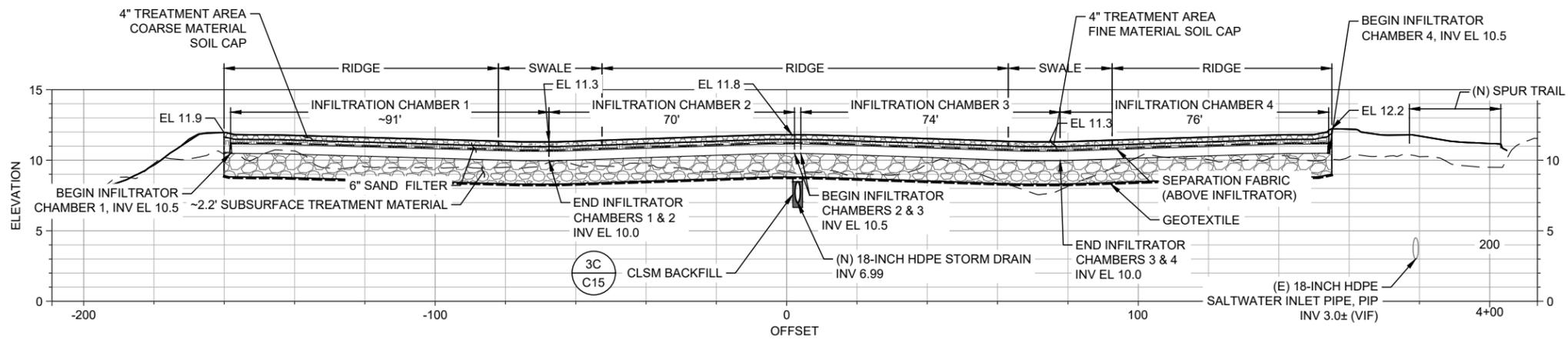
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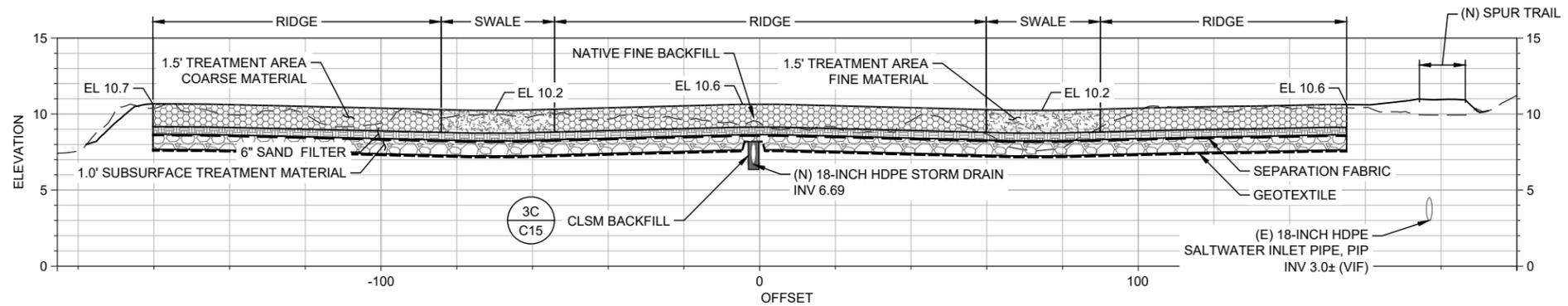
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PALO ALTO HORIZONTAL LEVEE PROJECT

TYPICAL GRADING SECTIONS

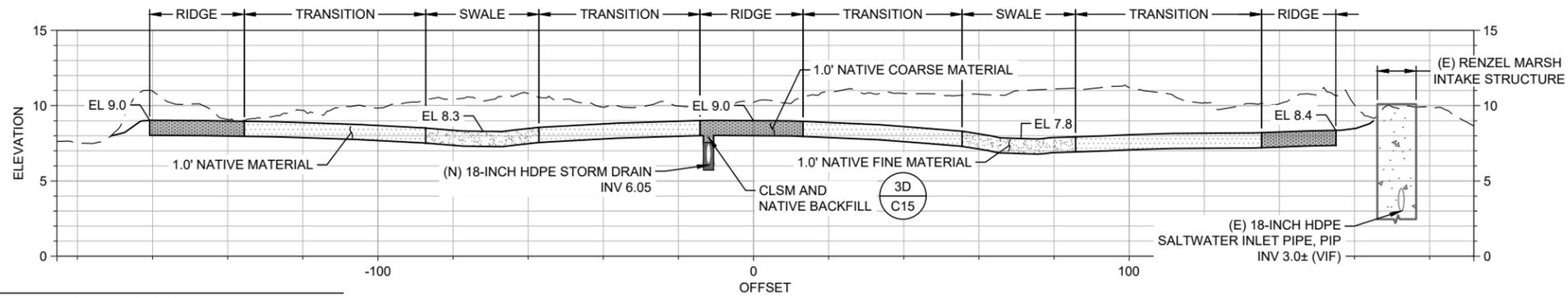
VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING	DATE JANUARY 7, 2025
0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. C02
	SHEET NO. 15 OF 47



C INFILTRATOR
 C01 SECTION SCALE: 1" = 20' H
 1" = 5' V



D TREATMENT ZONE
 C01 SECTION SCALE: 1" = 20' H
 1" = 5' V



E ECOTONE HABITAT SLOPE
 C01 SECTION SCALE: 1" = 20' H
 1" = 5' V



NOTES

1. SECTIONS ON THIS SHT ARE CENTERED ON B1-LINE (N) BERM TRAIL STA 3+36 SECTION.
2. SEE SHT C04 FOR TREATMENT ZONE LAYER DETAILS.
3. SEE SHT C06 FOR MATERIAL PLACEMENT PLAN VIEW DETAILS.
4. IN THE INFILTRATOR CHAMBER AREA: ALONG RIDGES PLACE 4-INCH TREATMENT AREA COARSE MATERIAL SOIL CAP ABOVE SAND FILTER AND ALONG SWALES, PLACE 4-INCH TREATMENT AREA FINE MATERIAL SOIL CAP ABOVE SAND FILTER.
5. IN THE TREATMENT ZONE: ALONG RIDGES, PLACE 1.5-FT TREATMENT AREA COARSE MATERIAL ABOVE SAND FILTER AND ALONG SWALES, PLACE 1.5-FT TREATMENT AREA FINE MATERIAL ABOVE SAND FILTER.
6. ALONG THE HABITAT SLOPES, PLACE COARSE AND FINE NATIVE MATERIAL AT RIDGES AND SWALES; TRANSITION FROM COARSE TO FINE MATERIAL BETWEEN THE RIDGES AND SLOPES.

FILENAME: C03_HORIZONTAL_LEVEL_SECTIONS_12-30-24_02:28pm User: X:\BTL\FedA\B-Border_X_P\Profiles_Horizontal_KC-

REV	DATE	BY	DESCRIPTION
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MRL/MMC

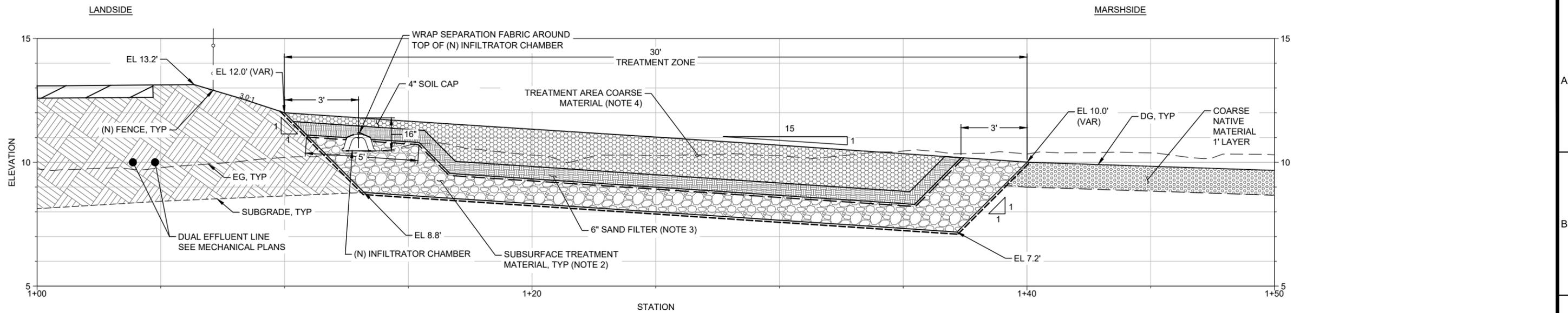


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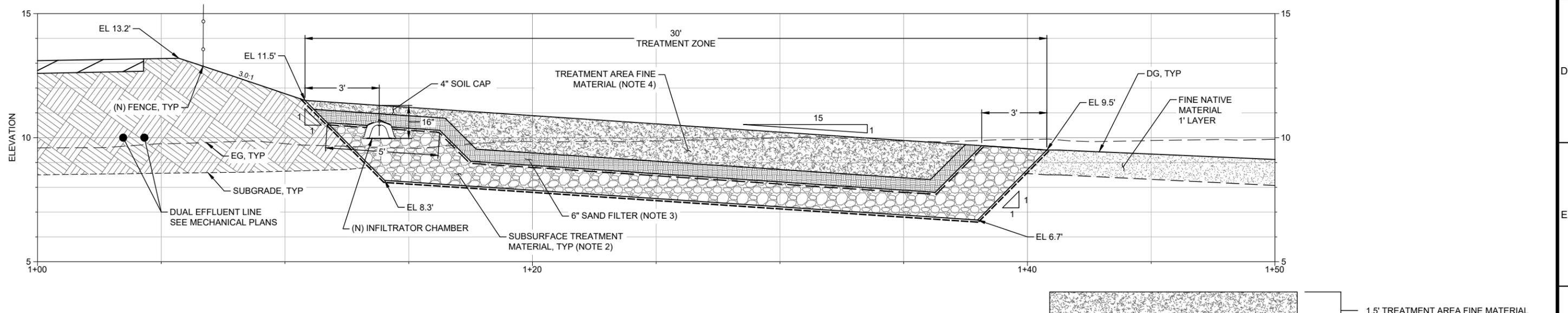
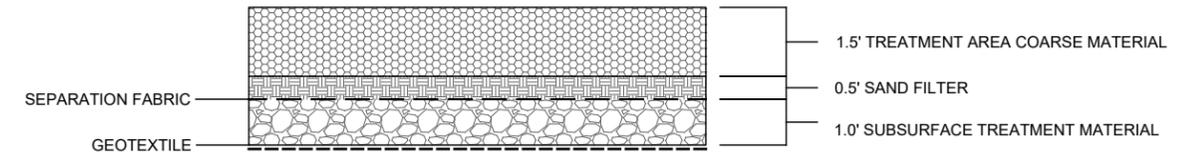


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HORIZONTAL LEVEL SECTIONS

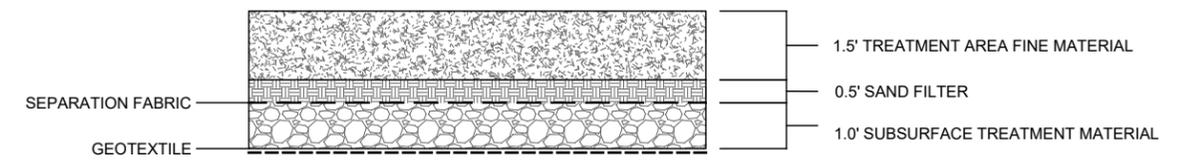
VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING	DATE JANUARY 7, 2025
0 1" SCALE	DRAWING NO. C03
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	SHEET NO. 16 OF 47



A TYPICAL TREATMENT ZONE SECTION - RIDGES/HIGH & WIDE
SECTION SCALE: 1" = 2' H
1" = 2' V



B TYPICAL TREATMENT ZONE SECTION - SWALES
SECTION SCALE: 1" = 2' H
1" = 2' V

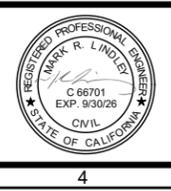


NOTES

1. SEGREGATE FINE AND COARSE MATERIAL ENCOUNTERED DURING EXCAVATION OF SITE TO SUBGRADE. DURING FILL OPERATIONS, PLACE COARSE MATERIAL ON THE RIDGES AND FINE MATERIALS IN THE SWALES.
2. SUBSURFACE TREATMENT MATERIAL COMPRISED OF A BLEND OF PERMEABLE MATERIAL AND COMPOSTED WOOD CHIPS.
3. SAND FILTER COMPRISED OF A BLEND OF SAND AND WOOD CHIPS.
4. TREATMENT AREA COARSE AND FINE MATERIAL INCLUDES A BLEND OF NATIVE MATERIAL WITH SAND AND COMPOSTED WOOD FINES.
5. ALL ELEVATIONS ARE ON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).

REV	DATE	BY	DESCRIPTION

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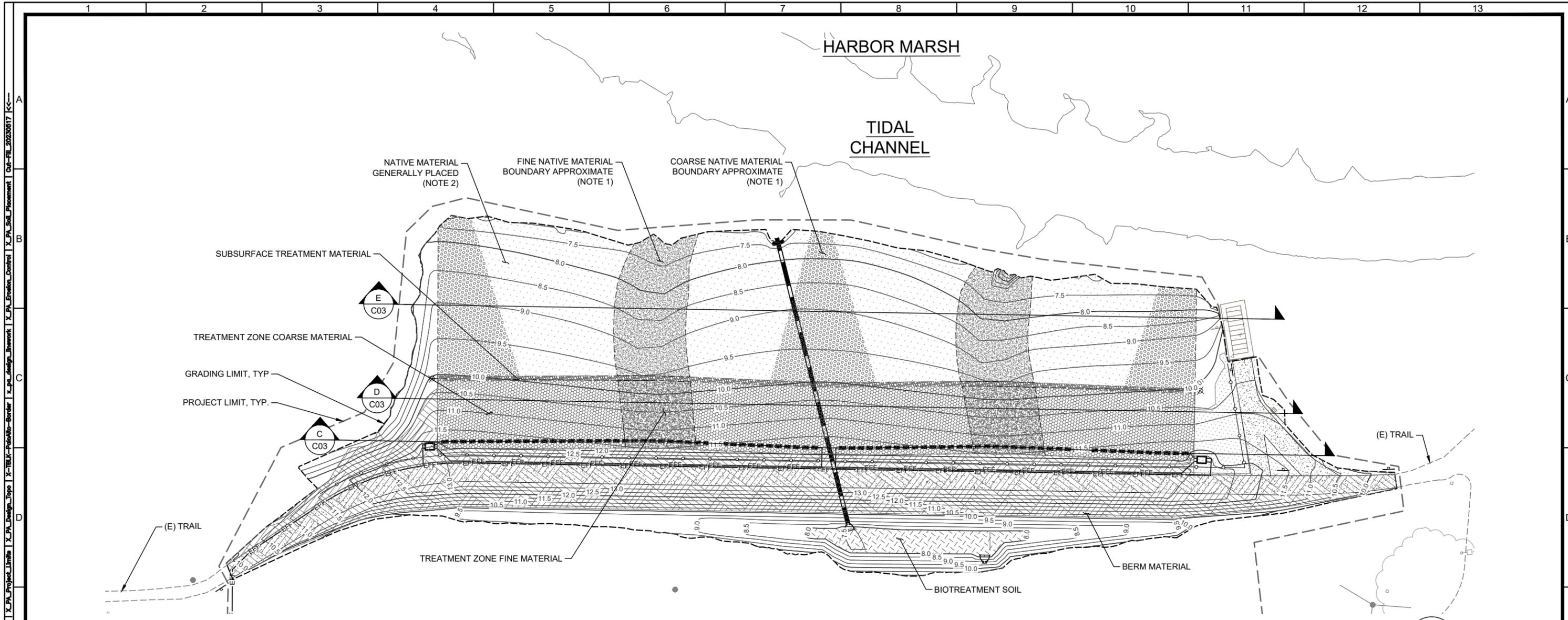
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TYPICAL TREATMENT ZONE SECTIONS

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DATE JANUARY 7, 2025 DRAWING NO. C04 SHEET NO. 17 OF 47
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MATERIAL LEGEND

NATIVE MATERIAL	
NATIVE FINE MATERIAL	
NATIVE COARSE MATERIAL	
TREATMENT ZONE FINE MATERIAL	
TREATMENT ZONE COARSE MATERIAL	
SUBSURFACE TREATMENT MATERIAL	
BERM MATERIAL	
BIOTREATMENT SOIL	

EXCAVATION	MATERIAL TYPE	QUANTITY	UNIT
STRIP TOP 3-INCHES WITHIN GRADING FOOTPRINT	DISPOSAL	420	BCY
TOP 4 TO 12-INCHES LANDWARD SIDE OF LEVEE	NATIVE MATERIAL	930	BCY
ALL OTHER EXCAVATION	BERM MATERIAL	1620	BCY

NOTES

- BOUNDARY OF FINE AND COARSE GRAINED NATIVE MATERIAL IS APPROXIMATE. THE CONTRACTOR SHALL PRIORITIZE THE COARSEST NATIVE MATERIAL FOR PLACEMENT IN THE HIGHEST RIDGE ZONES AND THE FINEST NATIVE MATERIAL FOR PLACEMENT IN THE LOWEST PORTIONS OF THE SWALES.
- IN BETWEEN RIDGES AND SWALES, MATERIAL SHALL BE GENERALLY CLASSIFIED AS COARSE TRANSITIONING TO FINE TO FILL OUT THE REMAINING HIGHER TO LOWER GRADES ALONG THE ECOTONE.
- ESTIMATED VOLUMES ARE BASED ON BANK CUBIC YARDS, AS CALCULATED AS THE DIFFERENCE BETWEEN EXISTING AND DESIGN GRADES (INCLUDING SUBGRADES).
- CONTRACTOR RESPONSIBLE FOR ESTIMATING ACTUAL VOLUMES AND SHALL ACCOUNT FOR VOLUME ADJUSTMENTS (SHRINKAGE, DRYING, BULKING, LOSSES, ETC.)

MATERIAL PLACEMENT PLAN

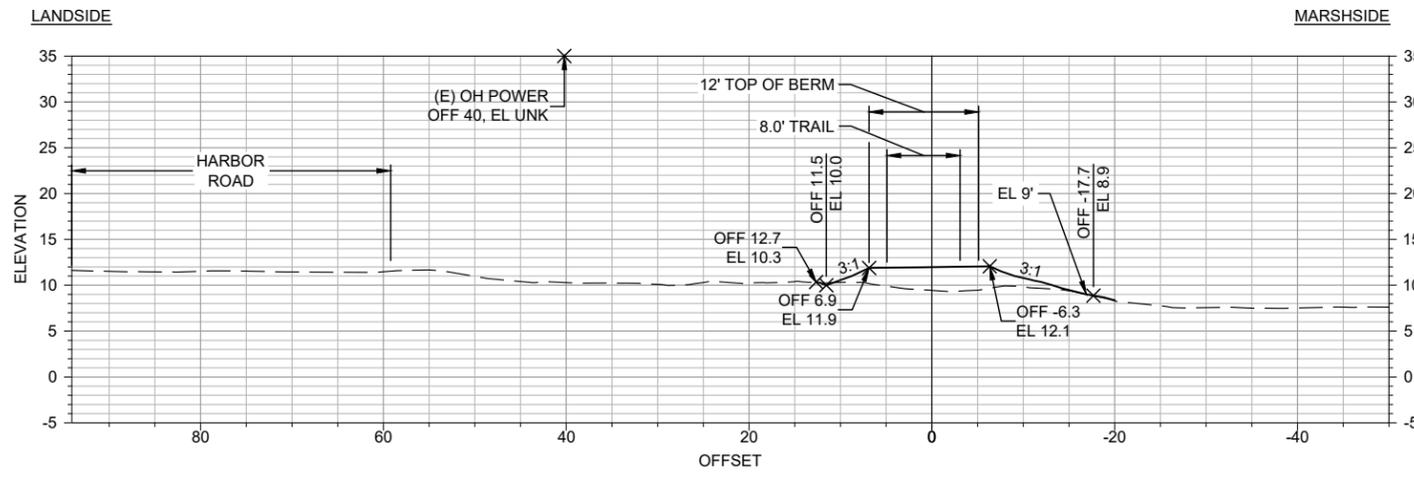
PLAN SCALE: 1" = 20'



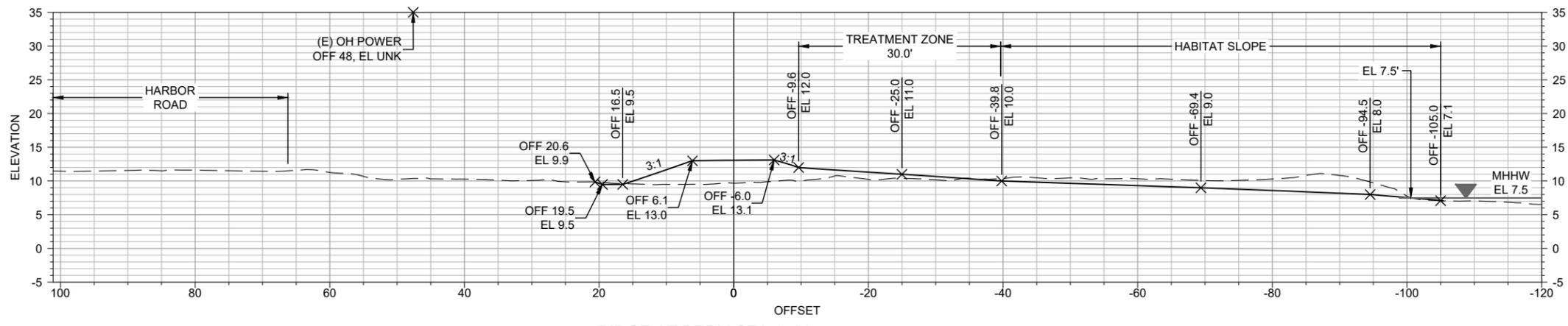
MATERIAL PLACEMENT

FILL PLACEMENT LOCATOR	MATERIAL TYPE	QUANTITY	UNIT	PRIMARY COMPONENTS																					
				BERM MATERIAL		NATIVE MATERIAL		CLASS II AGGREGATE 1-1/2 INCH		CLASS II AGGREGATE 3/4 INCH		PERMEABLE MATERIAL		SAND		WOOD CHIPS		COMPOSTED WOOD FINES		BIOTREATMENT SOIL					
				% VOL	BCY	% VOL	BCY	% VOL	BCY	% VOL	BCY	% VOL	BCY	% VOL	BCY	% VOL	BCY	% VOL	BCY	% VOL	BCY				
LEVEE BERM	BERM MATERIAL (ON-SITE)	1,020	BCY	100	1,020																				
	BERM MATERIAL (IMPORTED)	370	BCY	100	370																				
	TRAIL BASE COURSE	80	BCY			100	80																		
SPUR TRAIL	TRAIL SURFACE COURSE	70	BCY					80	56																
	NATIVE MATERIAL	110	BCY																						
	TRAIL SURFACE COURSE	20	BCY																						
HABITAT SLOPE	GENERAL NATIVE MATERIAL	380	BCY																						
	FINE NATIVE MATERIAL	110	BCY									30	33												
	COARSE NATIVE MATERIAL	150	BCY									50	75												
TREATMENT ZONE	TREATMENT AREA FINE MATERIAL	70	BCY									30	21			10	7								
	TREATMENT AREA COARSE MATERIAL	320	BCY									50	160			10	32								
	SAND FILTER	150	BCY									70	105			30	45								
	SUBSURFACE TREATMENT MATERIAL	410	BCY									70	287			30	123								
STORMWATER SWALE	BIOTREATMENT SOIL	50	BCY																100	50					
TOTAL		3,330						100				287			394			123			84			100	50

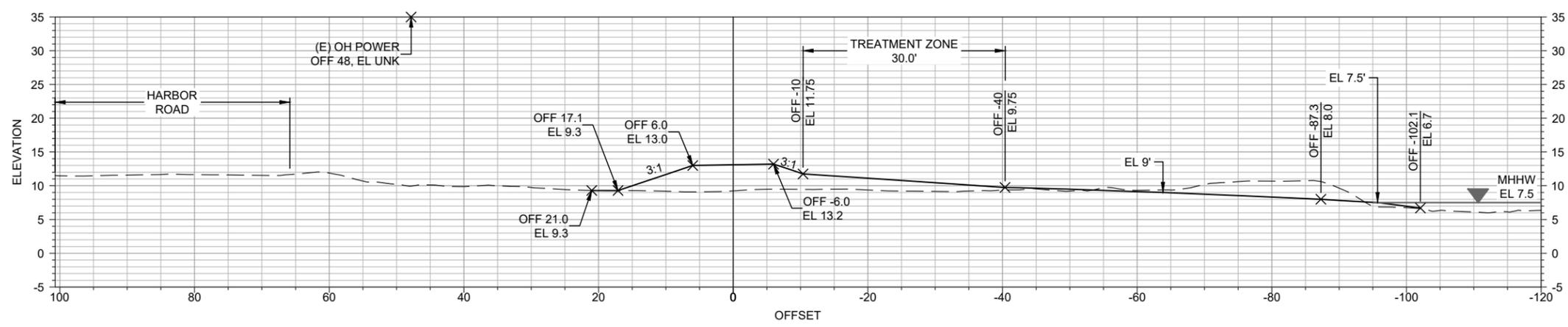
DESIGNED MRL DRAWN DPH/AGHC CHECKED MRL/MMC			575 MARKET STREET SUITE 3700 SAN FRANCISCO, CA 94105 T 415.896.5900 WWW.ESASSOC.COM	ASSOCIATION OF BAY AREA GOVERNMENTS	ASSOCIATION OF BAY AREA GOVERNMENTS PALO ALTO HORIZONTAL LEVEE PROJECT	MATERIAL PLACEMENT PLAN	VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	DATE JANUARY 7, 2025 DRAWING NO. C06 SHEET NO. 19 OF 47
REV	DATE	BY	DESCRIPTION					



TRANSITION AT BERM STA 1+43
GRADING SECTION SCALE: 1" = 10' H
1" = 10' V



RIDGE AT BERM STA 1+86
GRADING SECTION SCALE: 1" = 10' H
1" = 10' V



TRANSITION AT BERM STA 2+26
GRADING SECTION SCALE: 1" = 10' H
1" = 10' V

NOTES
1. GRADING SECTIONS SHOWN IN PLAN VIEW ON SHEET C01.



REV	DATE	BY	DESCRIPTION
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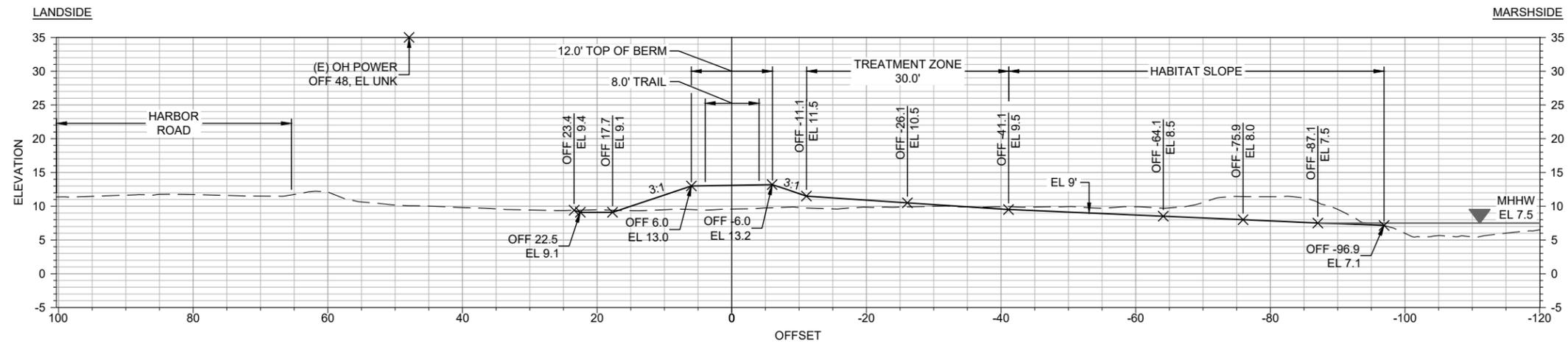
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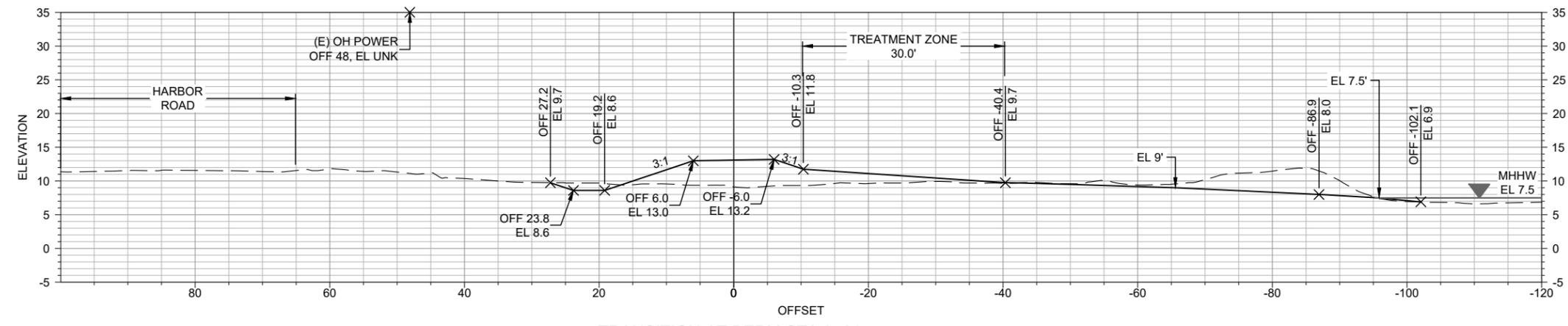
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GRADING SECTIONS 1

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DATE JANUARY 7, 2025 DRAWING NO. C07 SHEET NO. 20 OF 47
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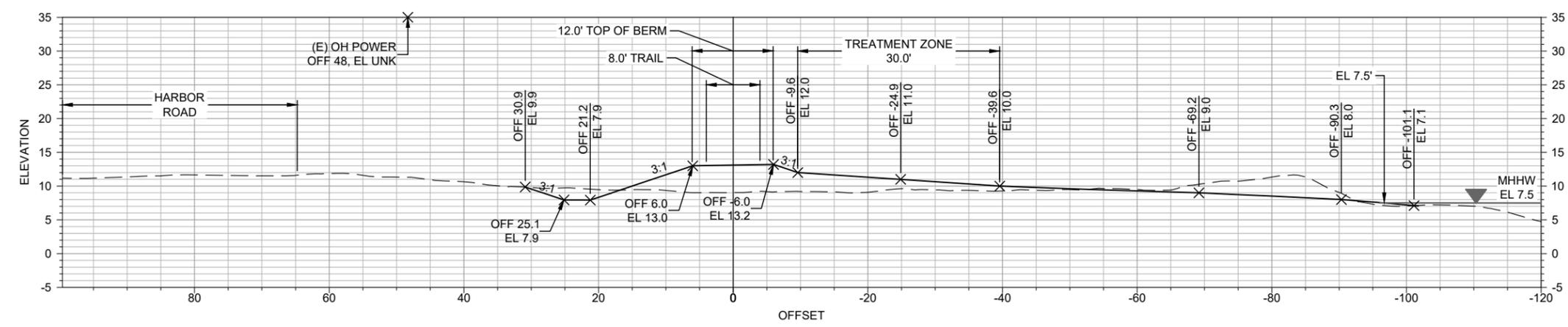
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SWALE AT BERM STA 2+66
GRADING SECTION SCALE: 1" = 10' H
1" = 10' V



TRANSITION AT BERM STA 3+01
GRADING SECTION SCALE: 1" = 10' H
1" = 10' V



RIDGE AT BERM STA 3+36
GRADING SECTION SCALE: 1" = 10' H
1" = 10' V



NOTES
1. GRADING SECTIONS SHOWN IN PLAN VIEW ON SHEET C01.

REV	DATE	BY	DESCRIPTION

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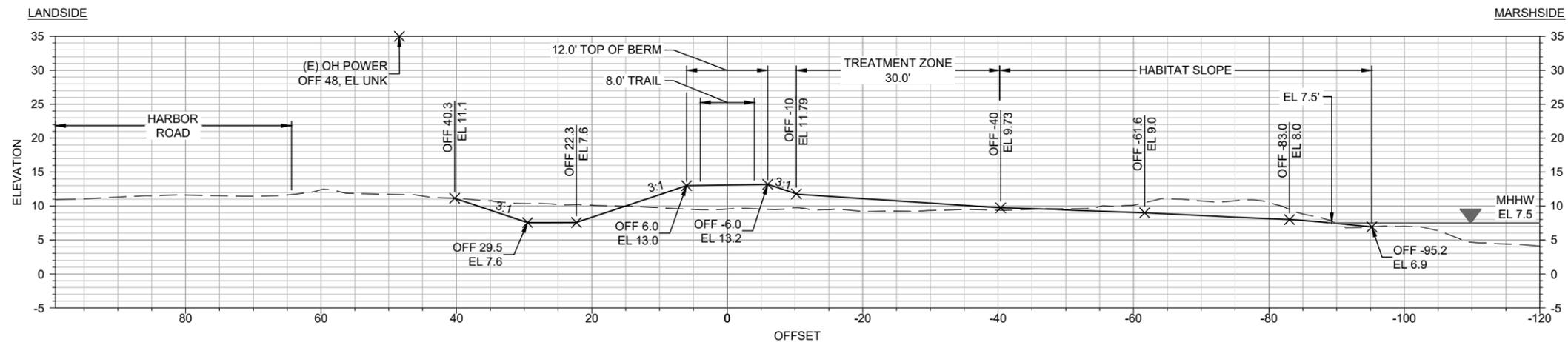


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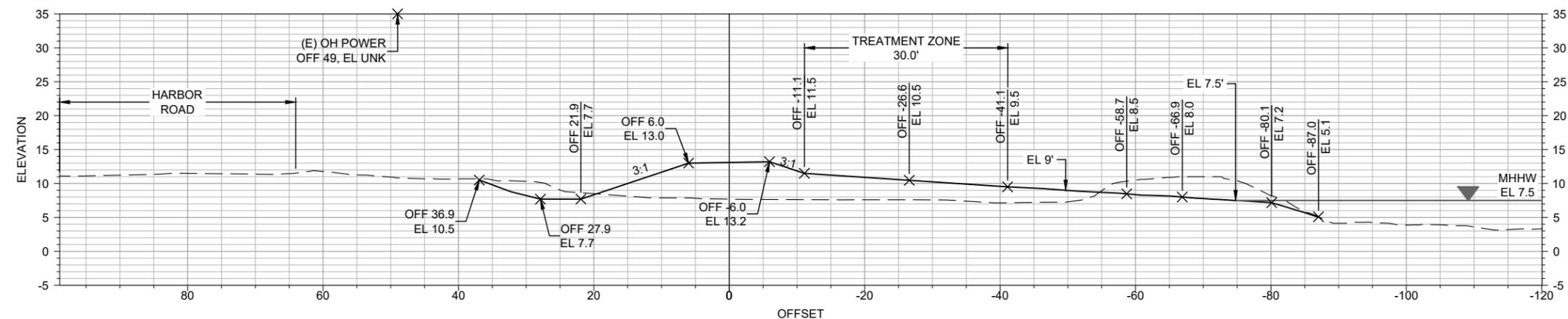


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GRADING SECTIONS 2

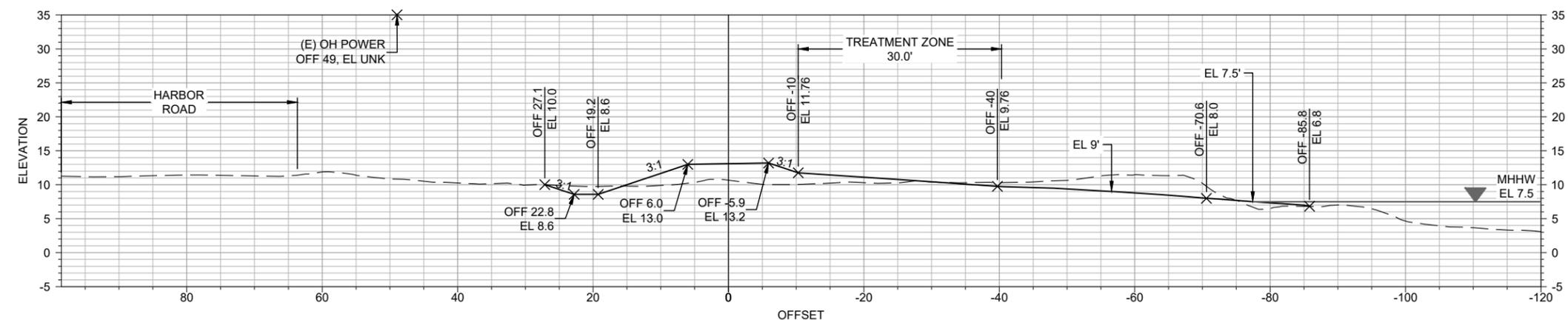
VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING	DATE JANUARY 7, 2025
0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. C08
	SHEET NO. 21 OF 47



TRANSITION AT BERM STA 3+74
GRADING SECTION SCALE: 1" = 10' H
1" = 10' V

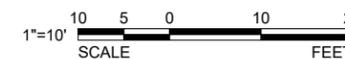


SWALE AT BERM STA 4+09
GRADING SECTION SCALE: 1" = 10' H
1" = 10' V



TRANSITION AT BERM STA 4+46
GRADING SECTION SCALE: 1" = 10' H
1" = 10' V

NOTES
1. GRADING SECTIONS SHOWN IN PLAN VIEW ON SHEET C01.



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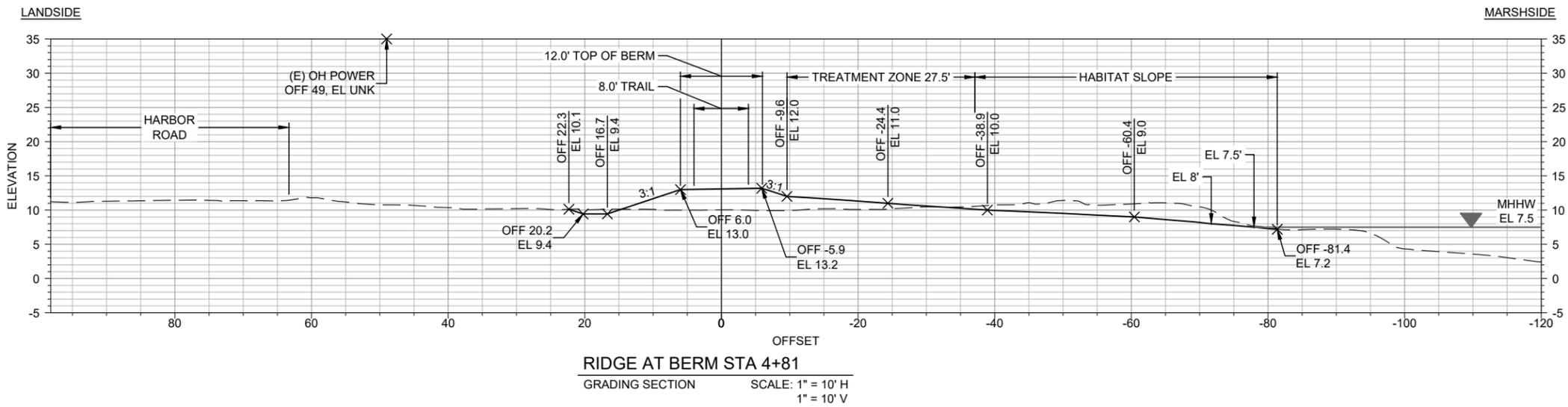
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GRADING SECTIONS 3

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DATE
JANUARY 7, 2025
DRAWING NO.
C09
SHEET NO.
22 OF 47

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NOTES
 1. GRADING SECTIONS SHOWN IN PLAN VIEW ON SHEET C01.



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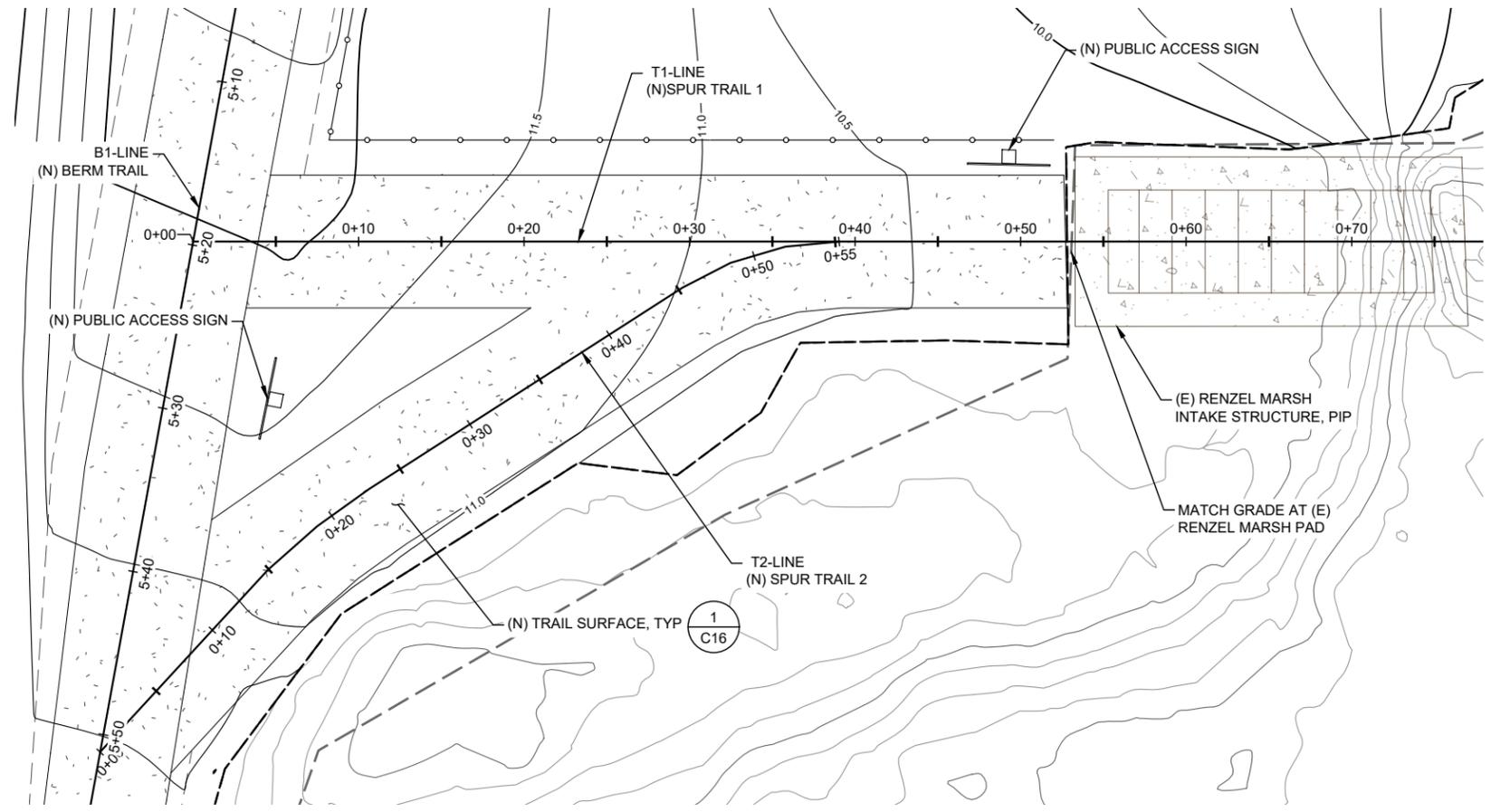


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 OF BAY AREA
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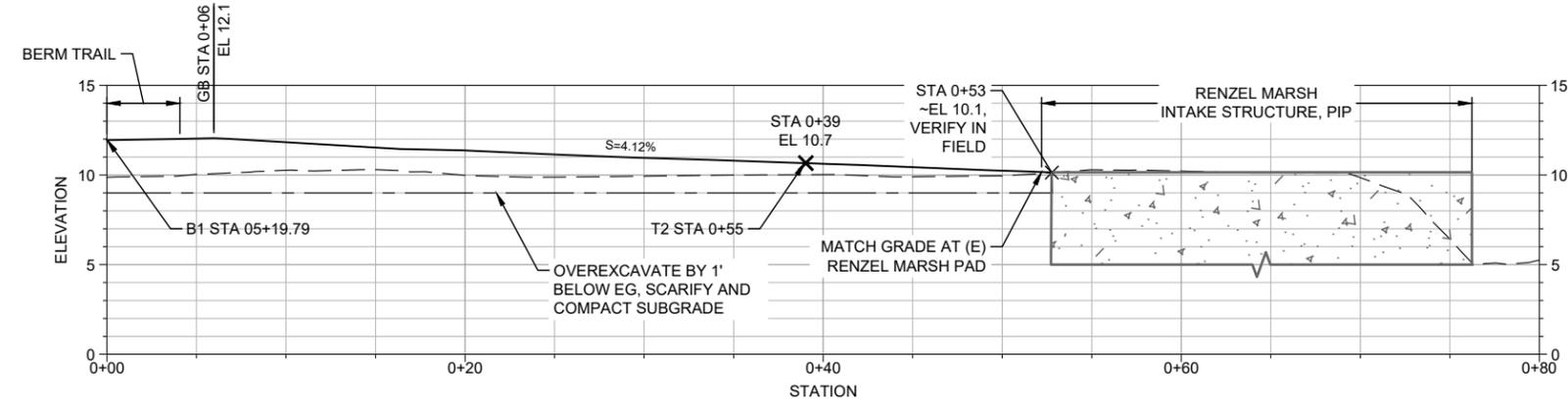
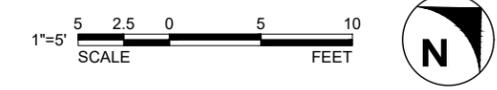
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 PALO ALTO HORIZONTAL LEVEE PROJECT
GRADING SECTIONS 4

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1" 20
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

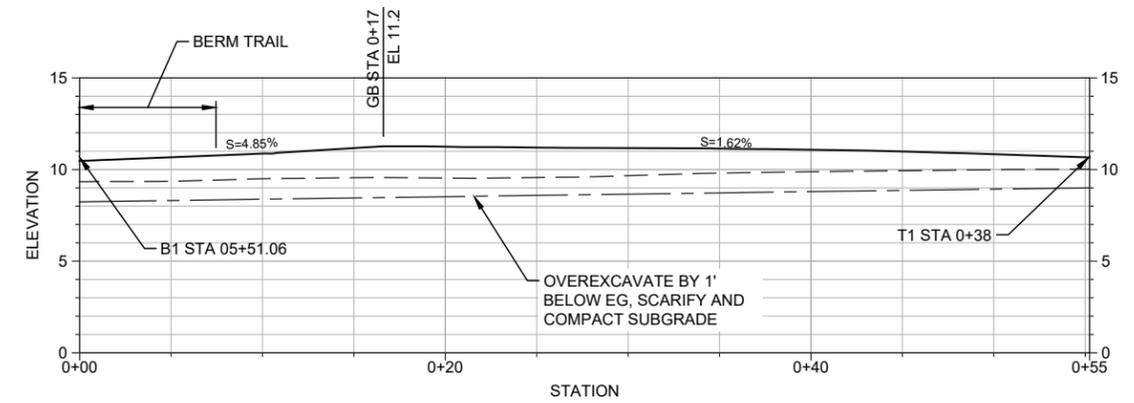
DATE
JANUARY 7, 2025
 DRAWING NO.
C10
 SHEET NO.
23 OF 47



SPUR TRAIL 1 AND 2
PLAN SCALE: 1" = 5'



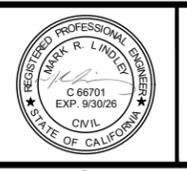
SPUR TRAIL 1 (T1-LINE) STA 0+00 TO 0+52
GRADING PROFILE SCALE: 1" = 5' H
1" = 5' V



SPUR TRAIL 2 (T2-LINE) STA 0+00 TO 0+54
GRADING PROFILE SCALE: 1" = 5' H
1" = 5' V

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SPUR TRAILS PLAN AND PROFILE

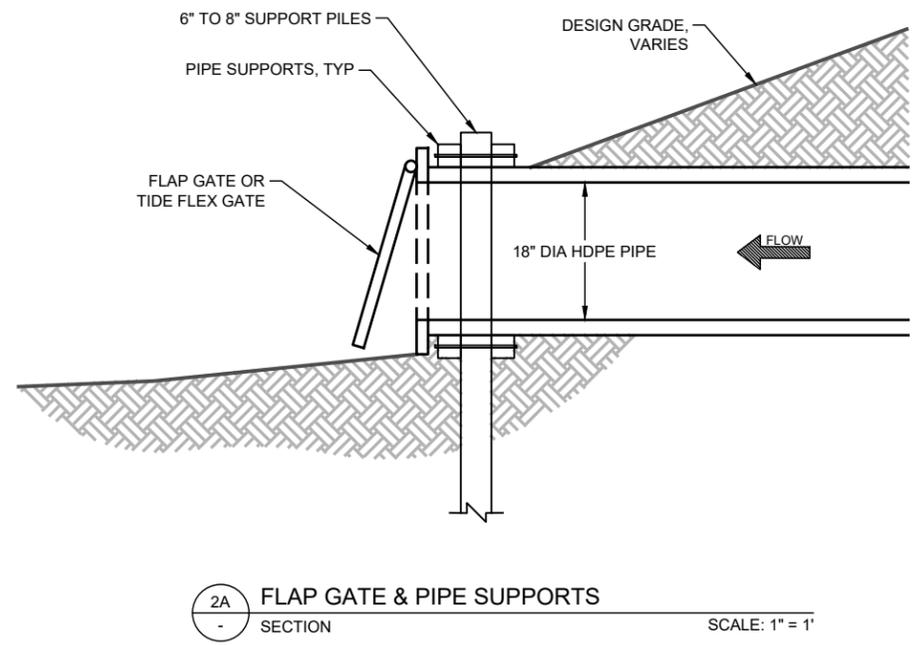
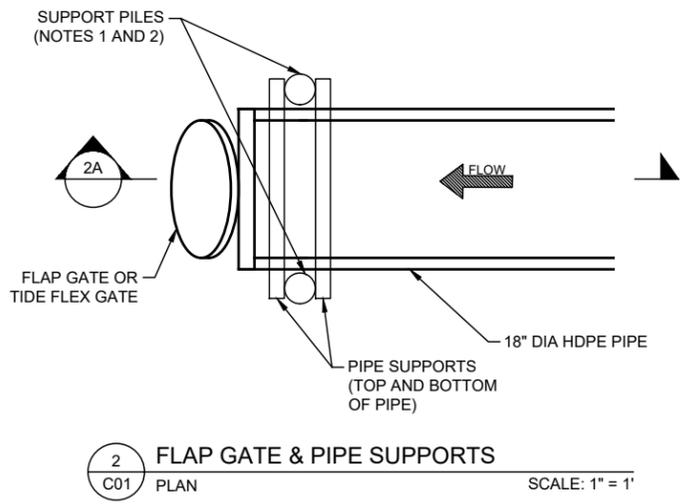
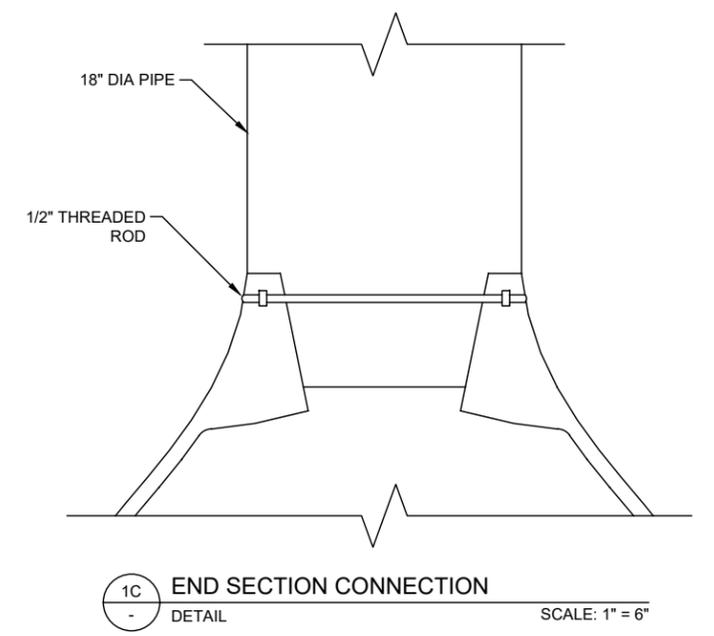
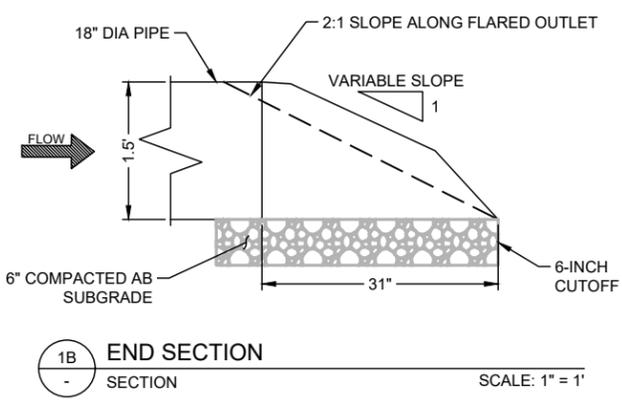
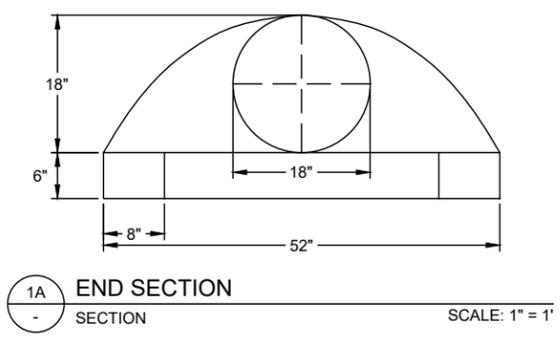
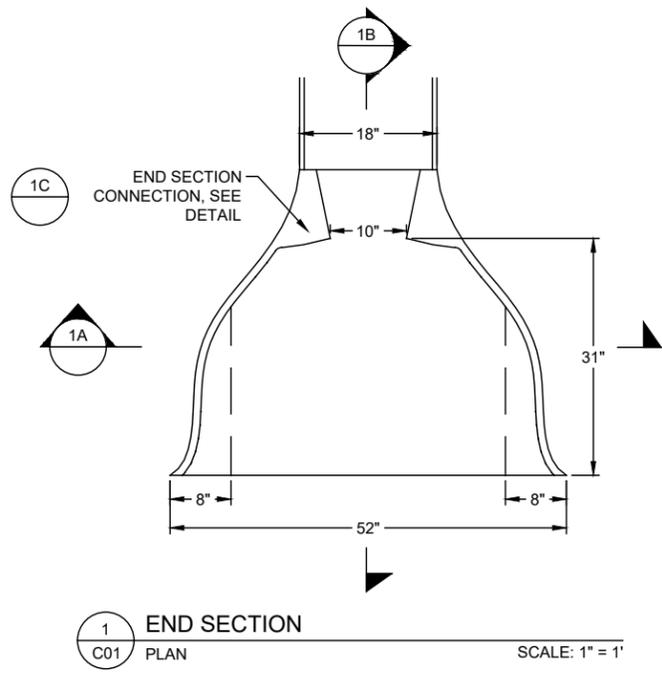
VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
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JANUARY 7, 2025
DRAWING NO.
C11
SHEET NO.
24 OF 47

The following page in this document, 003 - Final Plans - IFB for Palo Alto Horizontal Levee, Drawing No. C16, Detail 1 – Trail Surface, Sheet 29 of 47, has been revised in accordance with Addendum 1 to the IFB as shown below:

The call-out “HEADER BOARD BOTH SIDES, TYP” is removed from the plan sheet.

A new plan sheet will not be issued.

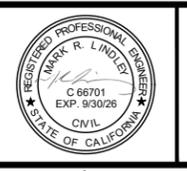


- NOTES**
- STORM DRAIN OUTFALL WITH FLAP GATE SHALL BE SUPPORTED BY PIPE SUPPORTS. PILES AND PIPE SUPPORT MEMBERS SHALL BE 8-INCH DIA STEEL PIPE PILE OR 6X6-INCH H-PILE. STEEL SHALL BE EPOXY COATED, SEE SPECS OR OWNER-APPROVED EQUAL.
 - SUPPORT PILES SHALL BE DRIVEN TO REFUSAL OR 8 FEET MIN BELOW FINISHED GRADE
 - APPROXIMATE DIMENSIONS OF END SECTION SHOWN. CONTRACTOR SHALL VERIFY WITH MANUFACTURER PRIOR TO INSTALLATION.

FILENAME: C14_STORM DRAIN DETAILS 12-30-24 02:53pm L:\water\XREFS\X-TBLK-PaloAlto-Border\X_PA_Design_Linework\K-

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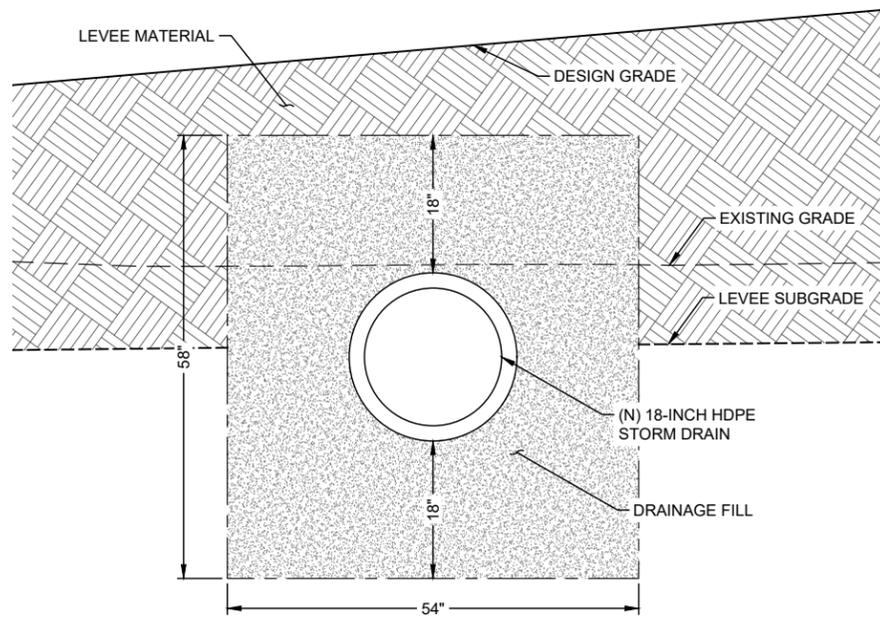


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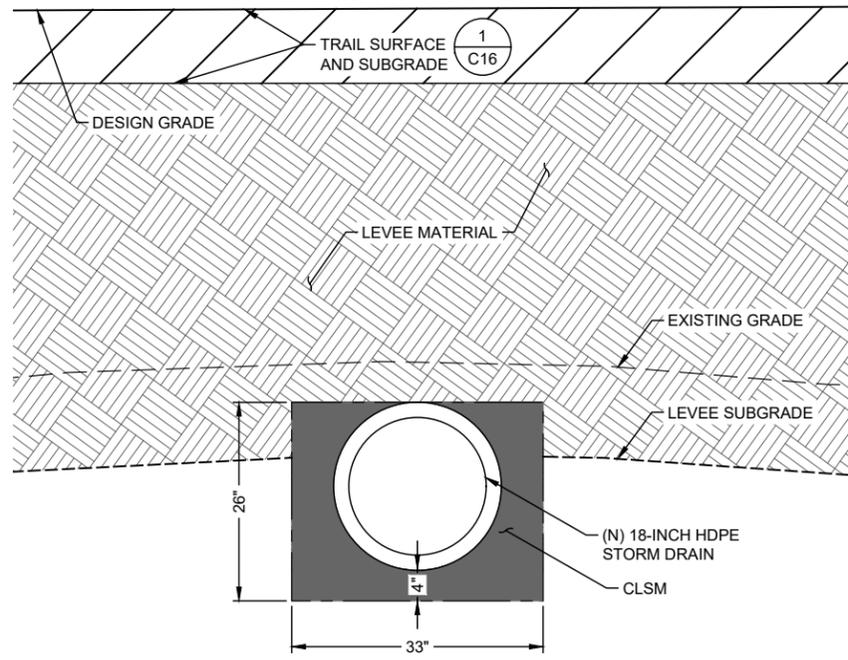
ASSOCIATION OF BAY AREA GOVERNMENTS
 PALO ALTO HORIZONTAL LEVEE PROJECT
STORM DRAIN DETAILS (1 OF 2)

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1"

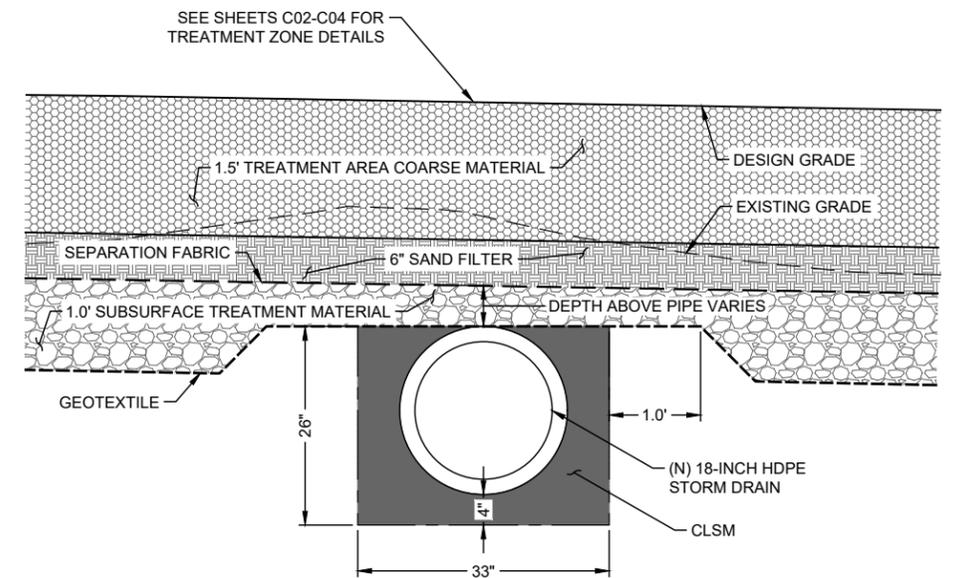
DATE
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C14
 SHEET NO.
27 OF 47



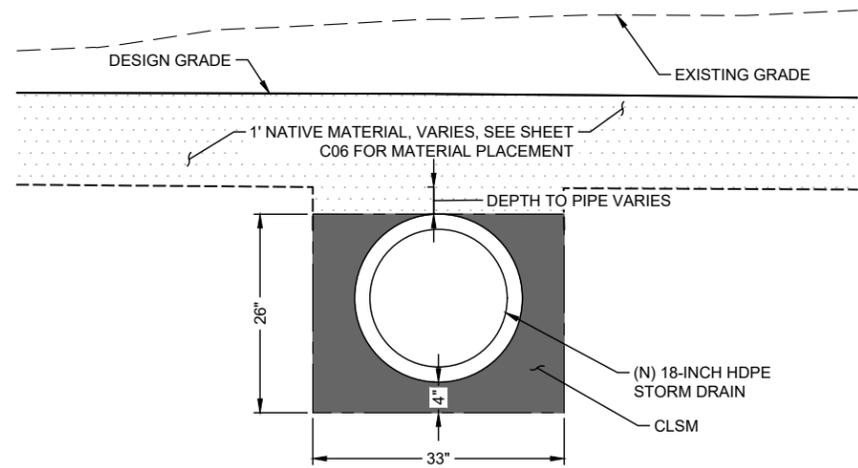
3A (N) 18-INCH STORM DRAIN BACKFILL W/ DRAINAGE FILL
DETAIL (STA 0+74.2 TO 0+87.3) SCALE: 1" = 1'



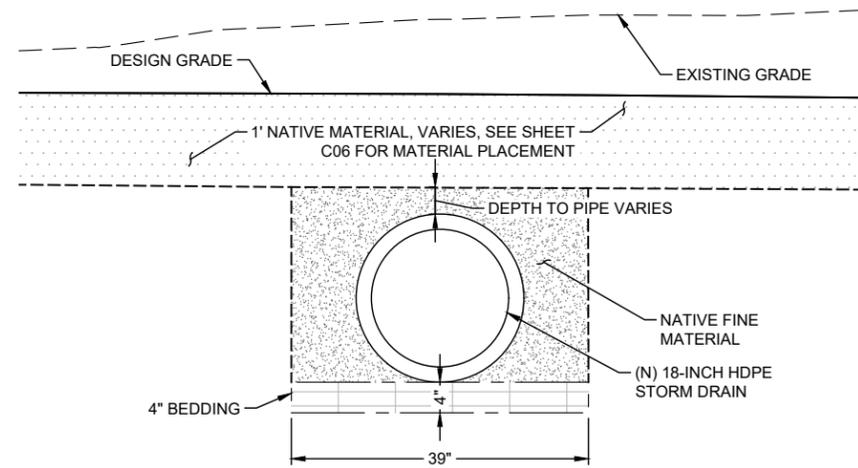
3B (N) 18-INCH STORM DRAIN BACKFILL THROUGH BERM
DETAIL (STA 0+87.3 TO 1+04.3) SCALE: 1" = 1'



3C (N) 18-INCH STORM DRAIN BACKFILL THROUGH TREATMENT ZONE
DETAIL (STA 1+04.3 TO 1+40.3) SCALE: 1" = 1'



3D (N) 18-INCH STORM DRAIN BACKFILL THROUGH HABITAT SLOPE
DETAIL (STA 1+40.3 TO 1+96.8) SCALE: 1" = 1'



3D ALT (N) 18-INCH STORM DRAIN BACKFILL THROUGH HABITAT SLOPE
DETAIL (STA 1+40.3 TO 1+96.8) SCALE: 1" = 1'

FILENAME: C14_STORM DRAIN DETAILS 12-30-24 02:33pm User: XREFS X-TBLK-Pascal-Border X-PA-Design-Linkwork K

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STORM DRAIN DETAILS (2 OF 2)

VERIFY SCALES
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0 1" 1"
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DATE
JANUARY 7, 2025
DRAWING NO.
C15
SHEET NO.
28 OF 47

YARD PIPING LEGEND

NOTES:
SYMBOLGY SHOWN IS FOR SINGLE LINE PIPING.
DOUBLE LINE PIPING SYMBOLS ARE SIMILAR.

- VALVES**
- GATE VALVE
 - GLOBE VALVE
 - BALL VALVE
 - CHECK VALVE
 - BUTTERFLY VALVE
 - DIAPHRAGM VALVE
 - OR PRESSURE RELIEF VALVE
 - PLUG VALVE
 - NEEDLE VALVE
 - PRESSURE REDUCING VALVE
 - AIR RELIEF / VACUUM VALVE
A = AIR RELIEF
V = VACUUM
 - PRESSURE REGULATING VALVE

YARD PIPING LEGEND (CONT'D)

- MISCELLANEOUS**
- VARIABLE AREA METER
 - ROTAMETER
 - UNION
 - WYE-STRAINER
 - FLEXIBLE HOSE OR TUBING
 - FLEXIBLE PIPING CONNECTION
 - LINE SIZE CHANGE (CONCENTRIC REDUCER)
 - LINE SIZE CHANGE (ECCENTRIC REDUCER)
 - LINE TURNING DOWN
 - LINE TURNING UP
 - BLIND FLANGE
 - PIPE JOINT (SEE SPECS FOR REQUIREMENTS)
 - SLEEVE TYPE COUPLING
 - FLANGED COUPLING ADAPTER (FCA)
 - FLEXIBLE CONNECTION
 - HARNESSED MECHANICAL COUPLING
 - PRESSURE GAGE (W/COCK)
 - TRAP
 - QUICK DISCONNECT
CAM & GROOVE COUPLING
 - CAP or PLUG
 - INTERIOR CLEANOUT
 - HOSE VALVE, HOSE BIBB OR
FLUSHING CONNECTION
 - HOSE RACK
X = TYPE DESIGNATED
IN SPECIFICATIONS
 - FLOOR DRAIN
 - PIPE IN SECTION
 - BELL UP (PLAN)
 - BELL UP (SECTION OR SCHEMATIC)

GENERAL CIVIL NOTES

- GENERAL NOTES**
- TYPES, LOCATIONS, SIZES, AND DEPTHS OF EXISTING UNDERGROUND UTILITIES AND FACILITIES AS SHOWN ON THESE IMPROVEMENT PLANS WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL KNOWN UNDERGROUND FACILITIES. OWNER AND ENGINEER ASSUME NO RESPONSIBILITY FOR COMPLETENESS OR ACCURACY OF DELINEATION OF SUCH UNDERGROUND FACILITIES, NOR FOR EXISTENCE OF OTHER BURIED OBJECTS OR FACILITIES WHICH ARE ENCOUNTERED BUT WHICH ARE NOT SHOWN ON THESE PLANS. CONTRACTOR SHALL EXPOSE ALL UNDERGROUND FACILITIES THAT ARE TO BE CONNECTED TO FOR VERIFICATION OF LOCATION AND ELEVATION.
 - LOCATION SHOWN FOR ALL PIPING BETWEEN NEW AND EXISTING FACILITIES IS APPROXIMATE AND DEPENDS ON LOCATION OF EXISTING PIPING AND OTHER IMPROVEMENTS. CONTRACTOR IS REQUIRED TO FOLLOW ALIGNMENT SHOWN AS CLOSELY AS POSSIBLE AFTER DETERMINING EXACT LOCATION OF EXISTING FACILITIES.
 - COORDINATE ALL PIPING WITH SITE ELECTRICAL WORK IN EXISTING PLANT. DO NOT START PIPING UNTIL ELECTRICAL CONDUITS AND DUCT BANKS ARE LOCATED.
 - SMALL DIAMETER (LESS THAN 4") WATER AND OTHER MISCELLANEOUS PIPING EXISTS THROUGHOUT SITE AREA. CONTRACTOR IS REQUIRED TO REPAIR PIPING DAMAGED BY CONSTRUCTION AND/OR REALIGN PIPING AS REQUIRED TO CONSTRUCT IMPROVEMENTS UNDER THIS CONTRACT.
 - ALL PAVING, LANDSCAPING, PIPING, AND OTHER EXISTING FACILITIES NOT DESIGNATED FOR REMOVAL/DEMOLITION DURING CONSTRUCTION OF NEW FACILITIES TO BE PROTECTED IN PLACE OR REPLACED IN KIND.
 - SELECT MECHANICAL EQUIPMENT TO MINIMIZE DAMAGE TO EXISTING PAVEMENT AT PROJECT SITE AND AT ALL ROADS USED TO MOVE MATERIAL AND EQUIPMENT TO AND FROM PROJECT. REPLACE ALL DAMAGED ASPHALT CONCRETE PAVEMENT IN ACCORDANCE WITH CONTRACT DOCUMENTS.
 - COMPLY WITH ALL STATE AND COUNTY LAWS AND ORDINANCES RELATING TO SAFETY AND CHARACTER OF WORK, EQUIPMENT AND LABOR. THIS SHALL INCLUDE, BUT NOT LIMITED TO, SHORING OF TRENCHES, VENTILATION OF CONFINED SPACES, CONFORMANCE TO TRAFFIC CONTROL REQUIREMENTS, INCLUDING PROVISION AND MAINTENANCE OF BARRICADES AND PREPARATION AND IMPLEMENTATION OF TRAFFIC CONTROL PLANS AS REQUIRED.
 - ARRANGE FOR ALL REQUIRED INSPECTION. PRESENCE OR ABSENCE OF AN INSPECTOR WILL NOT RELIEVE CONTRACTOR OF FULL RESPONSIBILITY FOR PROPER PERFORMANCE OF WORK.
 - WORK TO BE RESTRICTED TO LIMITS OF OWNERS PROPERTY, TEMPORARY CONSTRUCTION EASEMENTS, PERMANENT EASEMENTS, AND RIGHTS-OF-WAYS.
 - CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING MATERIAL.
 - WHEN EXCAVATION IS REQUIRED AROUND EXISTING UTILITIES THOSE UTILITIES SHALL BE SUPPORTED USING STEEL BEAMS OR OTHER SUITABLE SUPPORTS.
 - PIPE SLOPES SHOWN ON PIPING PROFILES ARE APPROXIMATE. PIPES SHALL BE CONSTRUCTED TO INVERT ELEVATIONS SHOWN ON THESE DRAWINGS.

FILENAME: M01_11-14-24_03:22pm SLARI XREFS: X-TBLK-Padlock-Border <<--

REV	DATE	BY	DESCRIPTION

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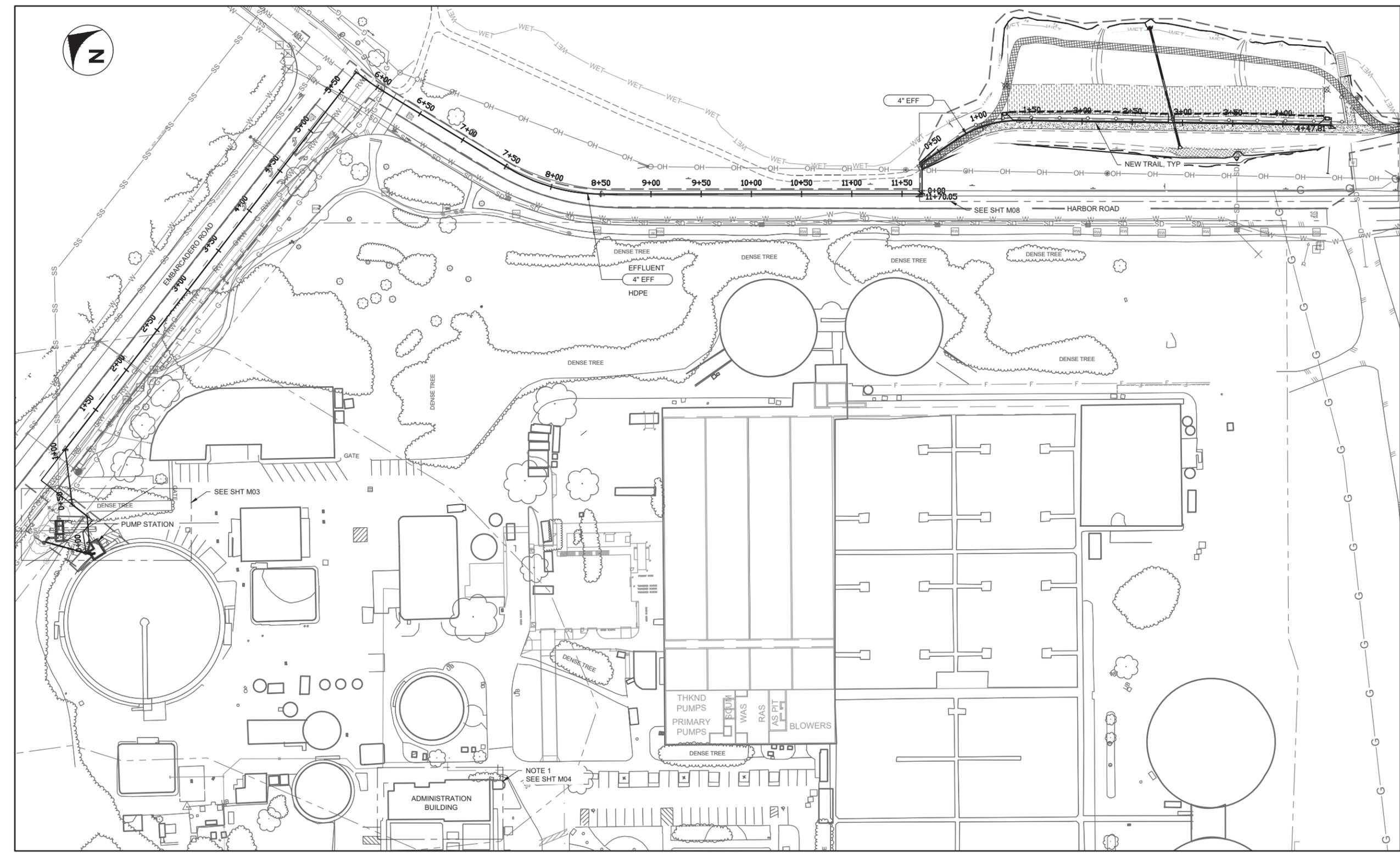
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PALO ALTO HORIZONTAL LEVEE PROJECT

CIVIL LEGEND

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	DATE JANUARY 7, 2025
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. M01
	SHEET NO. 31 OF 47

FILENAME: M02_11-14-24_03:25pm SLARI XREFS: X-TBLK-Palolo-Border... X_PA_editing_features... X_PA_Boundary X_PA_Survey X_PA_ESA_Survey X_PA_Project_Limits X_PA_Permits X_PA_Building_Topo | EQ_USGS-2020(1) X_PA_Design_Topo X_PA_Design_Utilities | Elevation | Palolo_LandFill_2015.PLA



- NOTES**
- ACCESS TO EXISTING RENZEL MARSH PUMP IN BASEMENT OF ADMINISTRATION BUILDING. ACCESS THROUGH SINGLE DOOR AND STAIRWAY.

OVERALL SITE PLAN
SCALE: 1" = 50'

REV	DATE	BY	DESCRIPTION

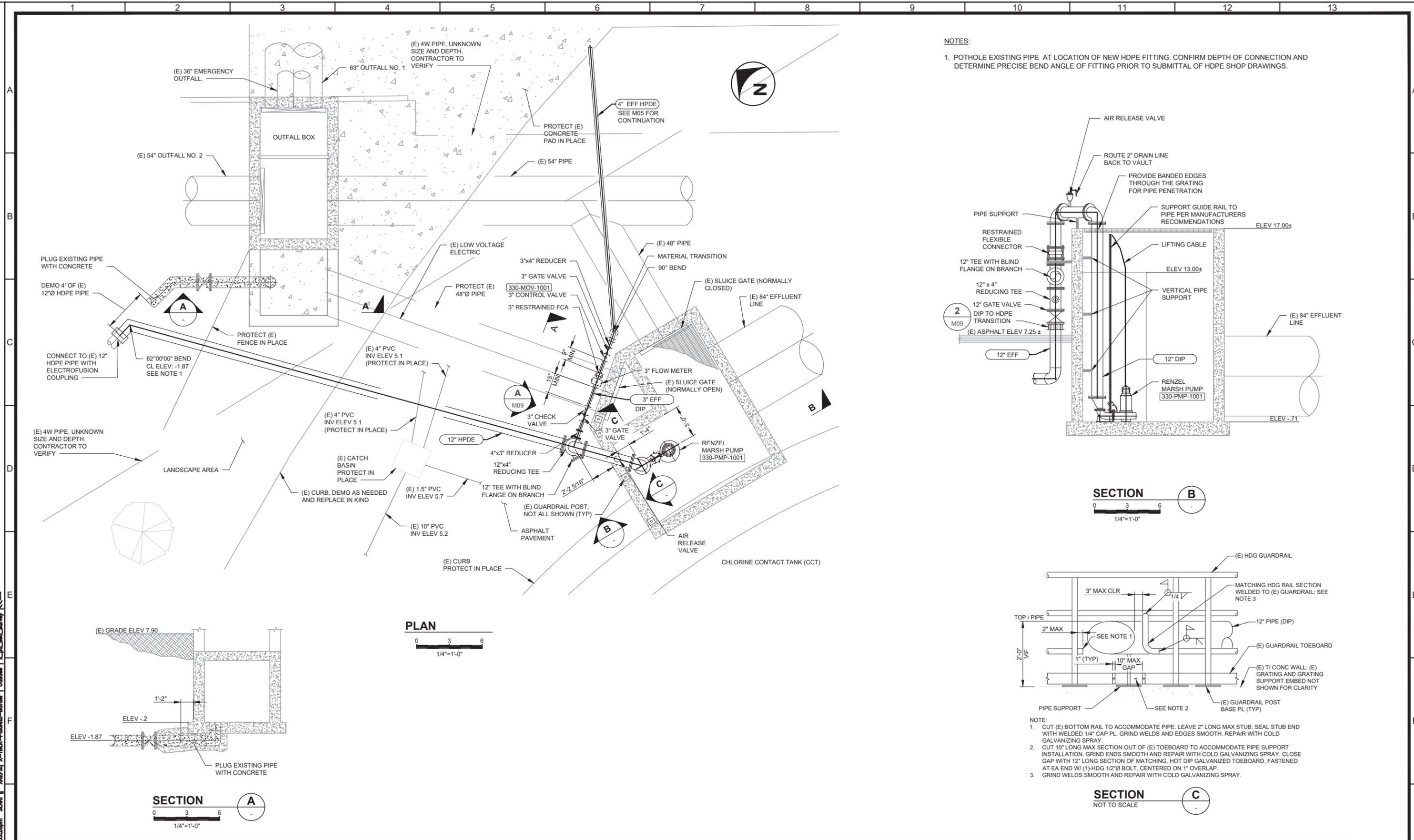
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S. LARI
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T. KONTONICKAS



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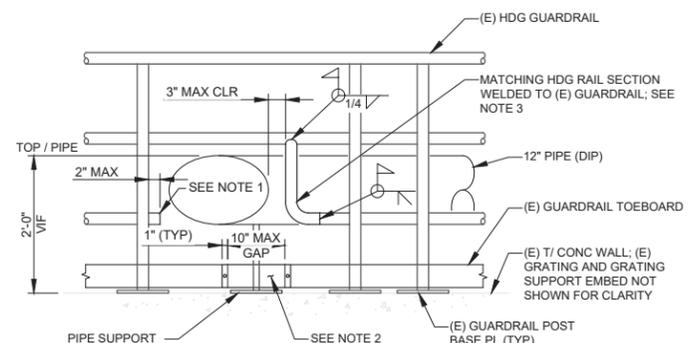
OVERALL PLAN AND KEY NOTES

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	DATE JANUARY 7, 2025
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. M02
	SHEET NO. 32 OF 47



NOTES:
 1. POT HOLE EXISTING PIPE AT LOCATION OF NEW HDPE FITTING. CONFIRM DEPTH OF CONNECTION AND DETERMINE PRECISE BEND ANGLE OF FITTING PRIOR TO SUBMITTAL OF HDPE SHOP DRAWINGS.

SECTION B
 0 3 6
 1/4"=1'-0"



NOTE:
 1. CUT (E) BOTTOM RAIL TO ACCOMMODATE PIPE. LEAVE 2" LONG MAX STUB. SEAL STUB END WITH WELDED 1/4" CAP PL. GRIND WELDS AND EDGES SMOOTH. REPAIR WITH COLD GALVANIZING SPRAY.
 2. CUT 10" LONG MAX SECTION OUT OF (E) TOEBOARD TO ACCOMMODATE PIPE SUPPORT INSTALLATION. GRIND ENDS SMOOTH AND REPAIR WITH COLD GALVANIZING SPRAY. CLOSE GAP WITH 12" LONG SECTION OF MATCHING, HOT DIP GALVANIZED TOEBOARD, FASTENED AT EA END W/ (1) HDG 1/2" Ø BOLT, CENTERED ON 1" OVERLAP.
 3. GRIND WELDS SMOOTH AND REPAIR WITH COLD GALVANIZING SPRAY.

SECTION C
 NOT TO SCALE

REV	DATE	BY	DESCRIPTION
1			
2			
3			

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S. LARI
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T. KONTONICKAS



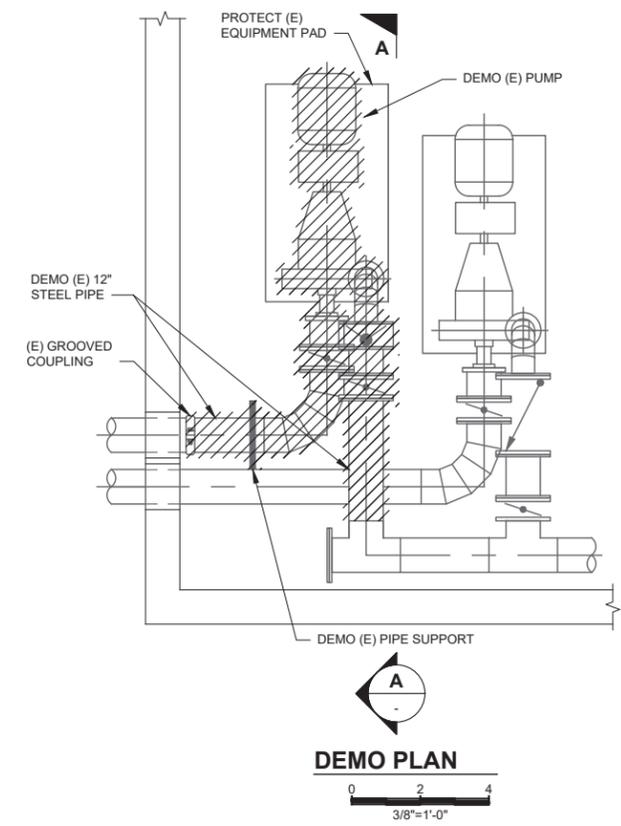
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 PALO ALTO HORIZONTAL LEVEE PROJECT
PUMPING PLAN AND SECTIONS

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DATE JANUARY 7, 2025 DRAWING NO. M03 SHEET NO. 33 OF 47
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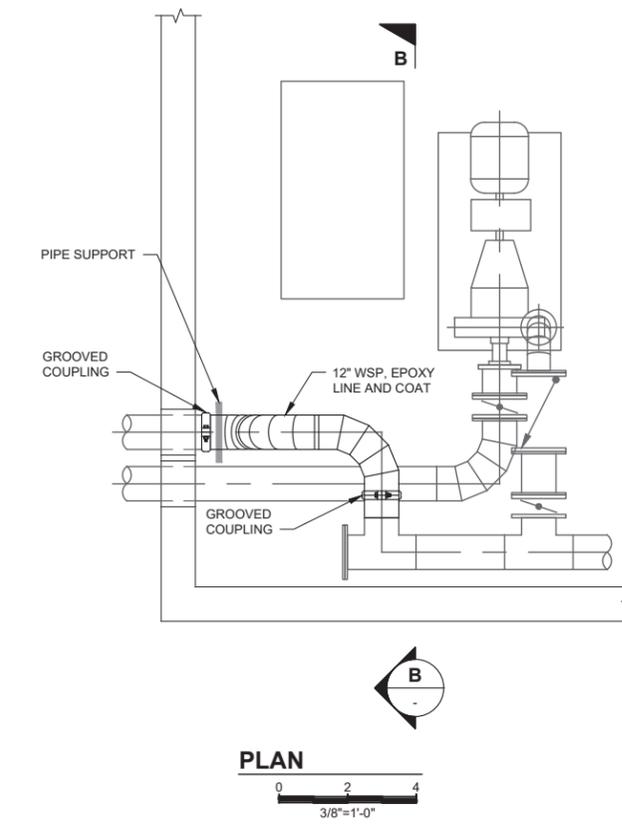
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NOTES:

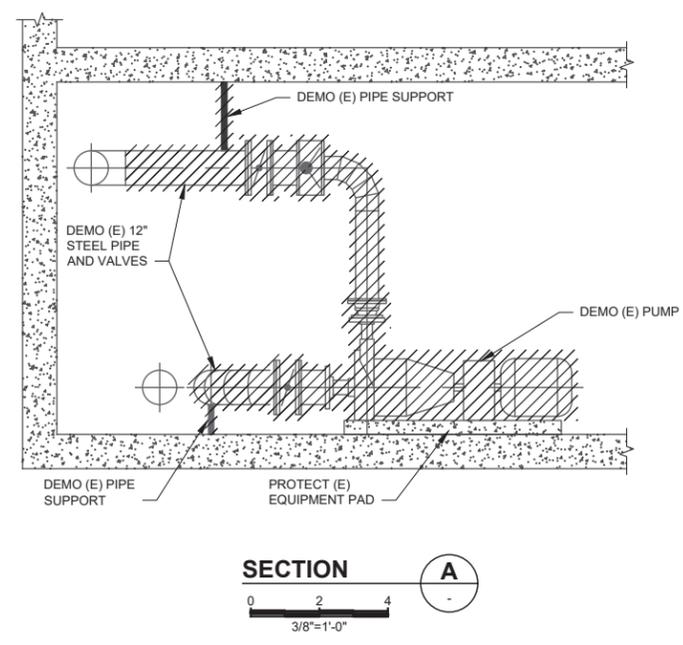
1. PIPING AND EQUIPMENT THAT IS REMOVED AND WHICH IS NOT SHOWN TO BE RELOCATED OR SALVAGED SHALL BE DISPOSED OF BY THE CONTRACTOR.
2. CONTRACTOR SHALL ASSUME (E) SUPPORTS TO BE DEMOLISHED ARE SIMILAR TO THE SUPPORTS REPLACING THEM.
3. ALL NEW PIPING ON THIS SHEET SHALL BE 12"Ø WELDED STEEL.



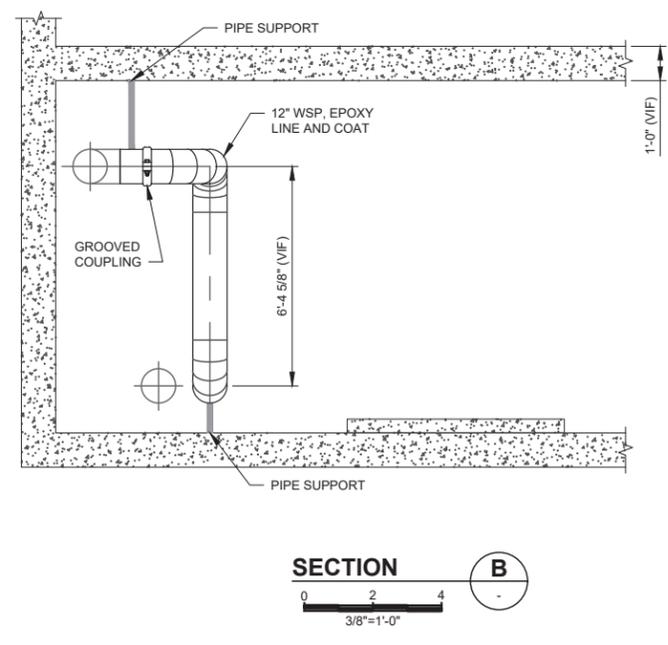
DEMO PLAN
0 2 4
3/8"=1'-0"



PLAN
0 2 4
3/8"=1'-0"



SECTION A
0 2 4
3/8"=1'-0"



SECTION B
0 2 4
3/8"=1'-0"

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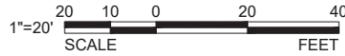
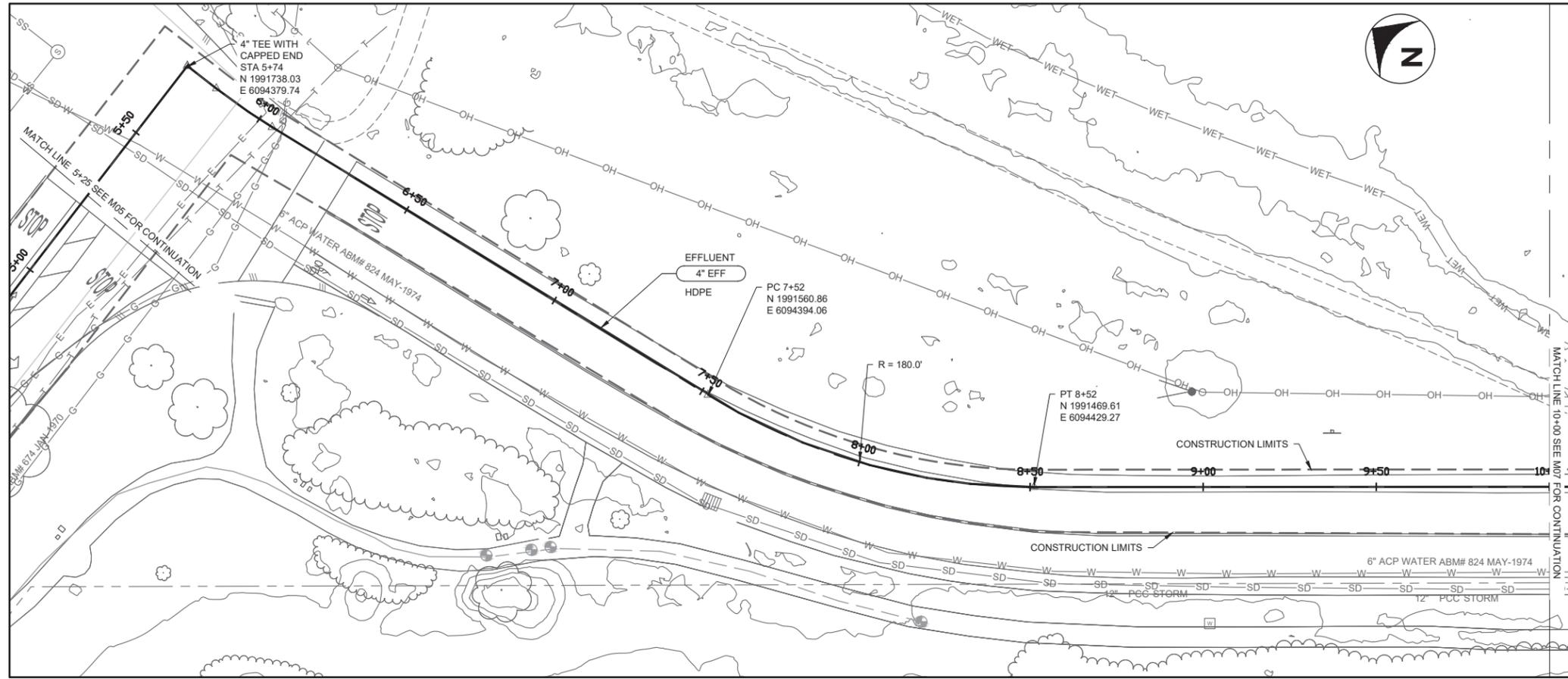
REV	DATE	BY	DESCRIPTION

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DRAWN
S. LARI
CHECKED
T. KONTONICKAS



ASSOCIATION OF BAY AREA GOVERNMENTS
PALO ALTO HORIZONTAL LEVEE PROJECT
**RENZEL MARSH PUMP
BYPASS UPGRADE (ADMIN BLDG)**

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DATE JANUARY 7, 2025 DRAWING NO. M04 SHEET NO. 34 OF 47
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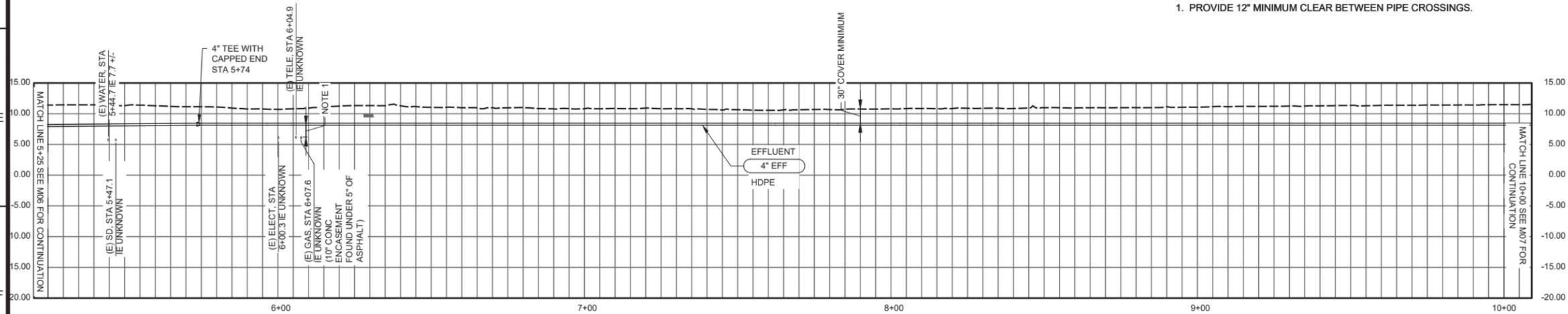


EFFLUENT PIPE
PLAN

SCALE: 1" = 20'

NOTES:

- 1. PROVIDE 12" MINIMUM CLEAR BETWEEN PIPE CROSSINGS.



EFFLUENT PIPE
PROFILE

SCALE: 1" = 20'

REV	DATE	BY	DESCRIPTION

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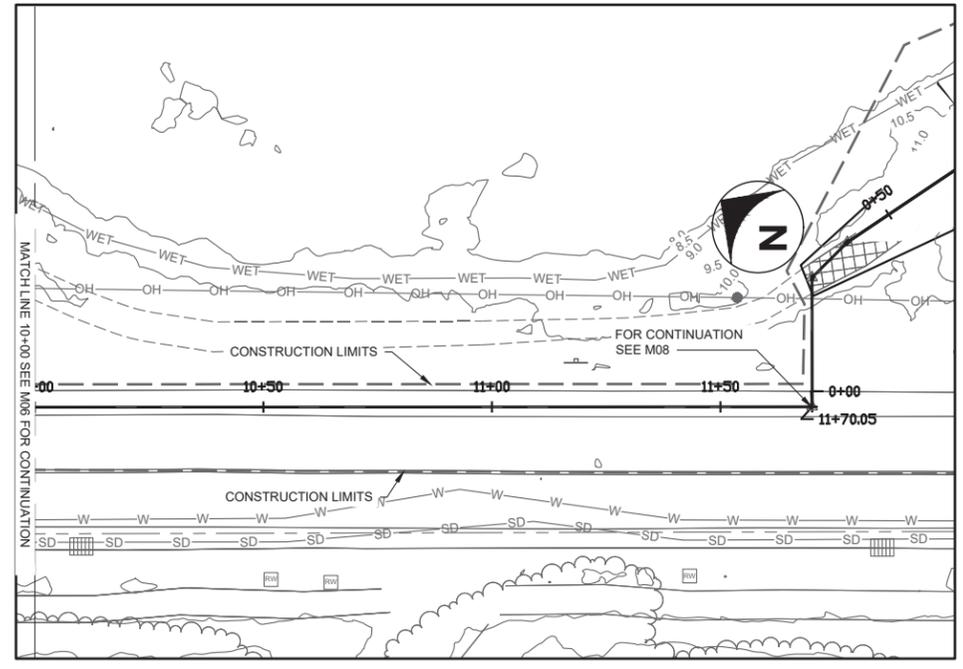


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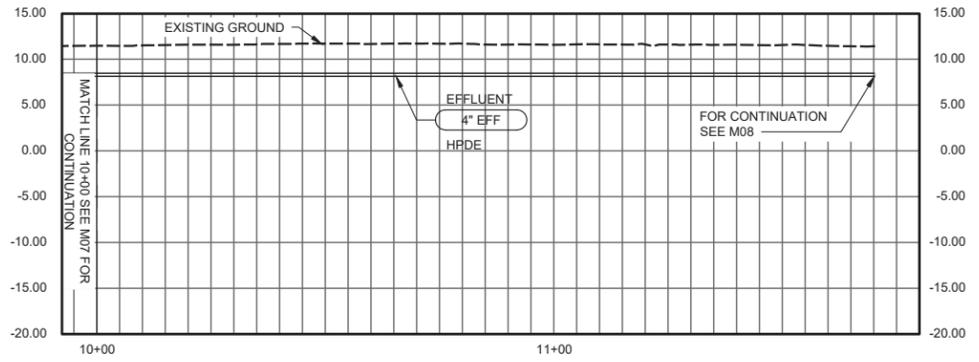
EFFLUENT PIPE PLAN AND PROFILE 2

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	DATE JANUARY 7, 2025 DRAWING NO. M06 SHEET NO. 36 OF 47
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FILENAME: M07 11-14-24 03:27pm SLARI XREFS: X-TBLK-Polallo-Border... X_Plan_Boundary... X_Plan_Survey... X_Plan_Project_Limits... X_Plan_Permits... X_Plan_Existing_Topo... ED_USGS-2020(1) Utilities... Boremap... atpalm... PalloNo_Landfill_2015_PLAN atpalm_06-february2015



EFFLUENT PIPE
PLAN SCALE: 1" = 20'



EFFLUENT PIPE
PROFILE SCALE: 1" = 20'

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S. LARI
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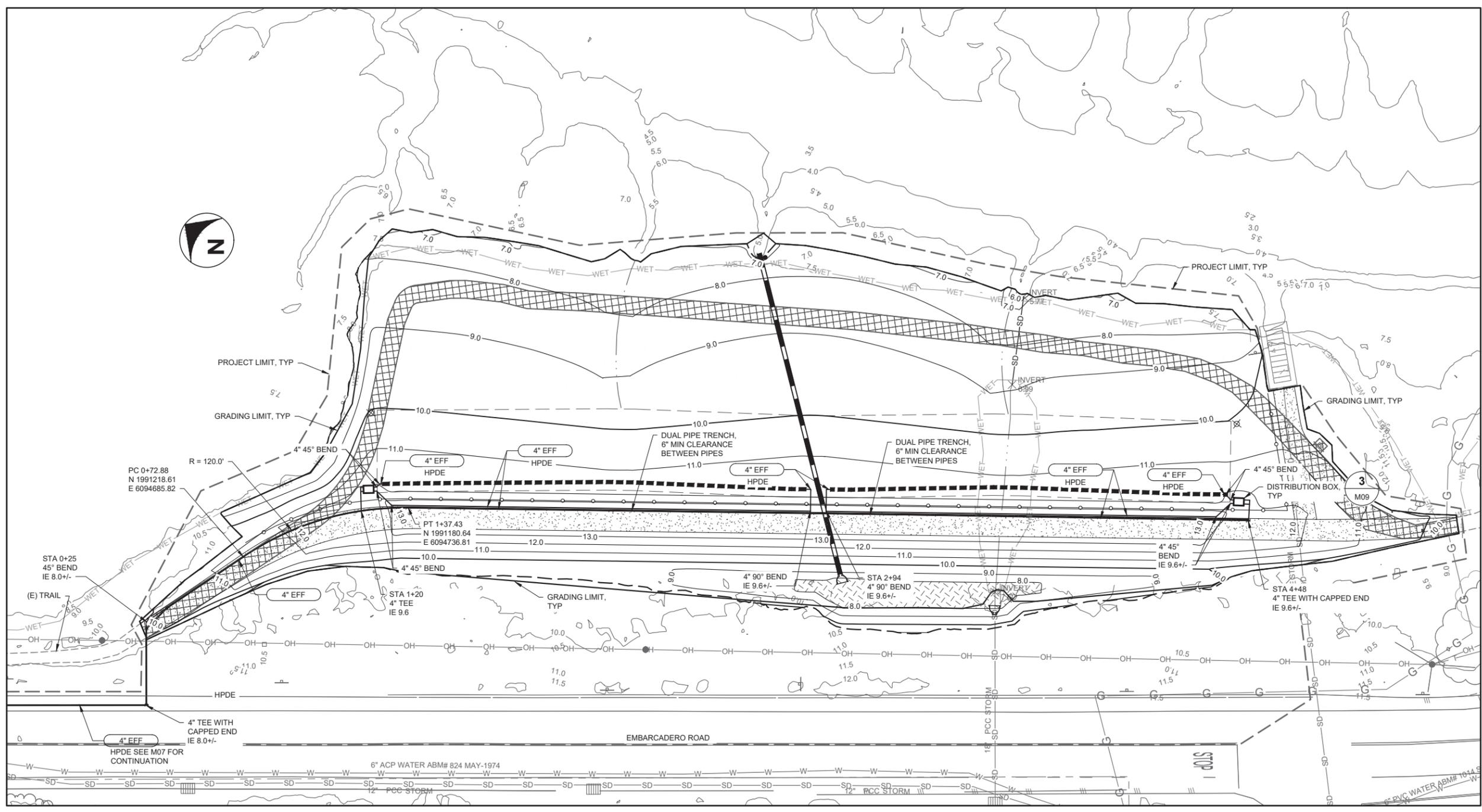
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CONVEYANCE PIPE PLAN AND PROFILE 3

VERIFY SCALES
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0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DATE
JANUARY 7, 2025
DRAWING NO.
M07
SHEET NO.
37 OF 47



- NOTES**
1. REFER TO CIVIL PLANS FOR GRADING OF LEVEE.
 2. PROVIDE CONSISTENT SLOPE BETWEEN IDENTIFIED INVERT ELEVATIONS WITHOUT LOCAL HIGH OR LOW POINTS.
 3. BEDDING AND BACKFILL MATERIAL FOR SINGLE AND DUAL PIPE TRENCH WITHIN LEVEE TO BE CLSM, STA 0+50 TO STA 4+48 THIS SHEET.



HORIZONTAL LEVEL EFFLUENT PIPE PLAN
SCALE: 1" = 20'

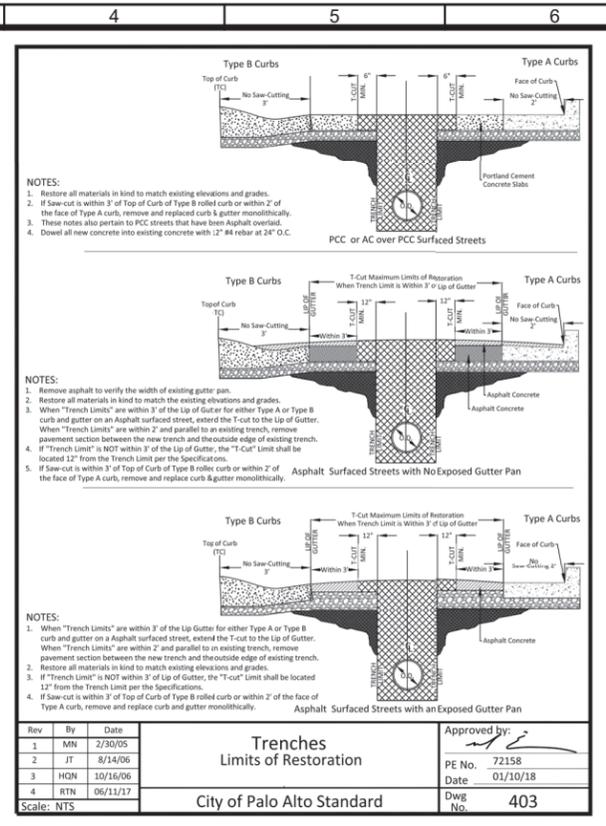
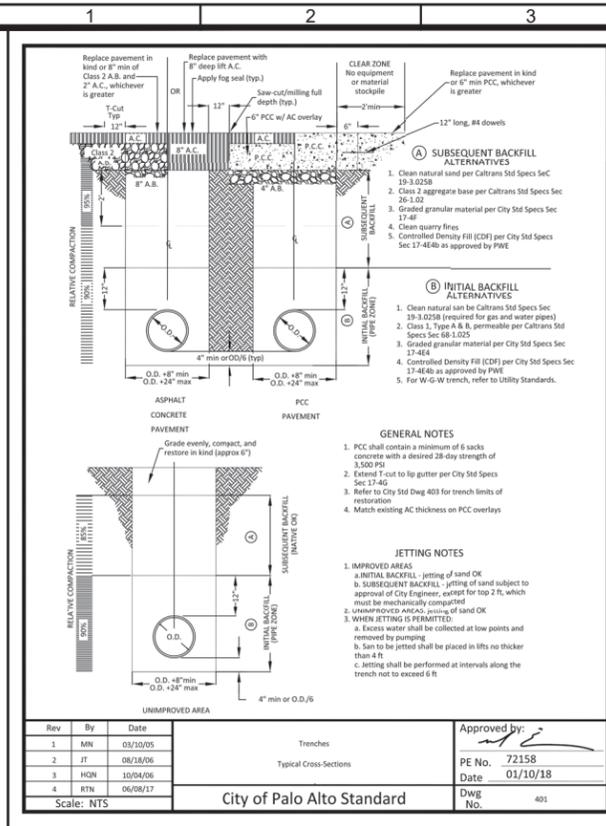
REV	DATE	BY	DESCRIPTION

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T. KONTONICKAS

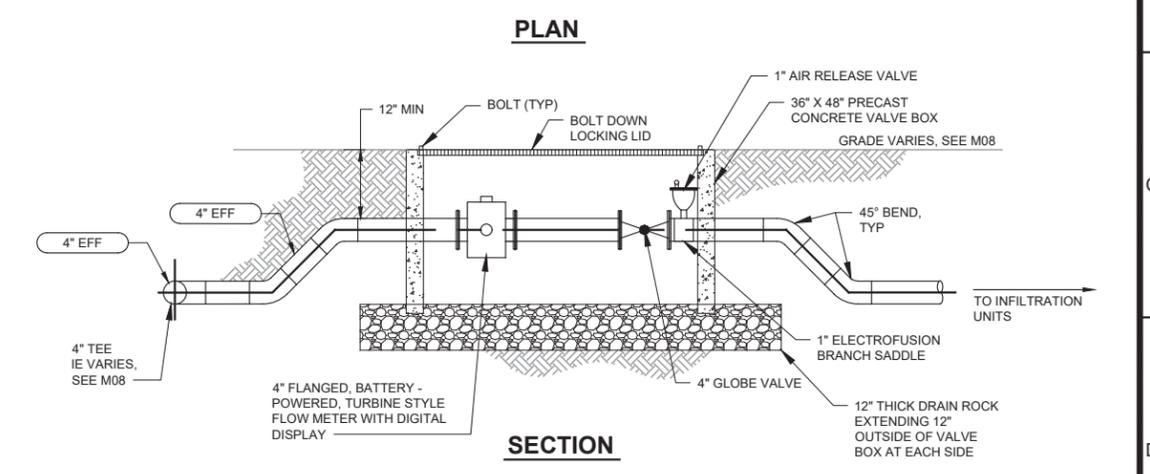
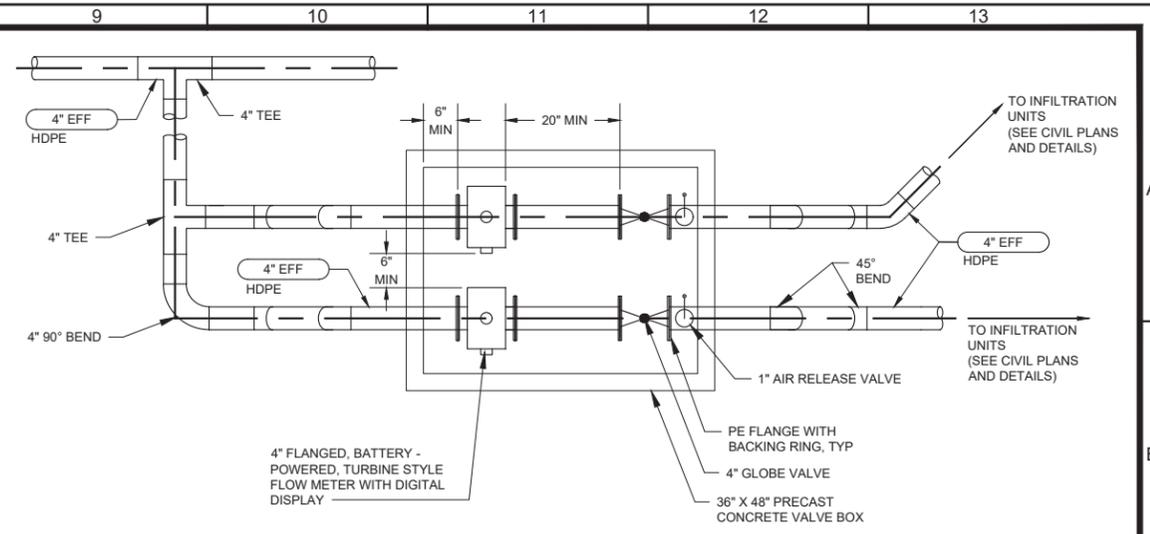


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PALO ALTO HORIZONTAL LEVEE PROJECT
HORIZONTAL LEVEE SUPPLY PIPE PLAN

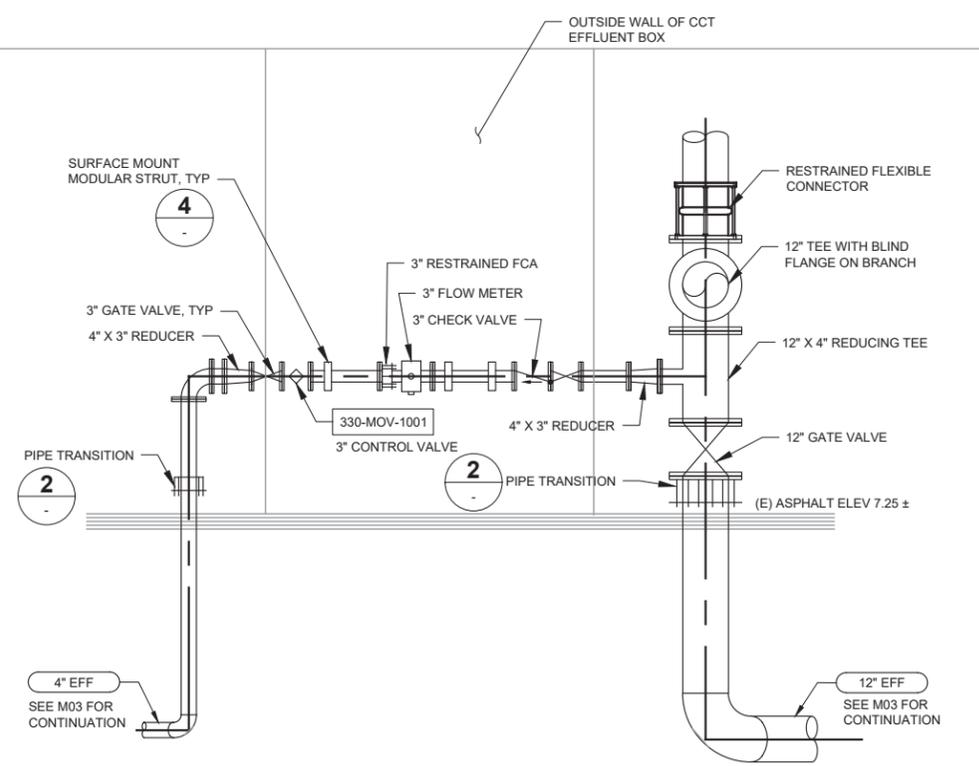
VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DATE JANUARY 7, 2025 DRAWING NO. M08 SHEET NO. 38 OF 47
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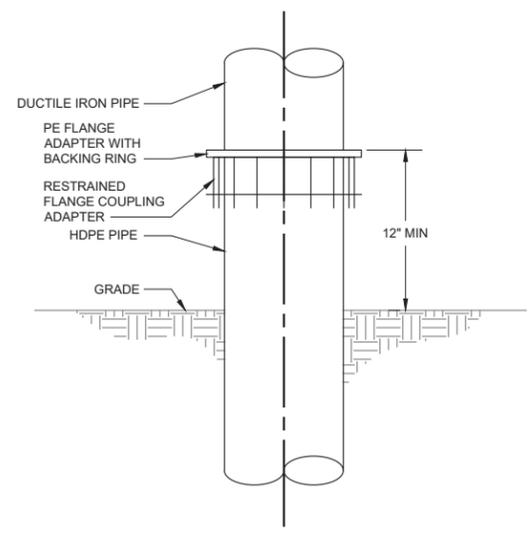
TRENCH DETAIL 1
NOT TO SCALE



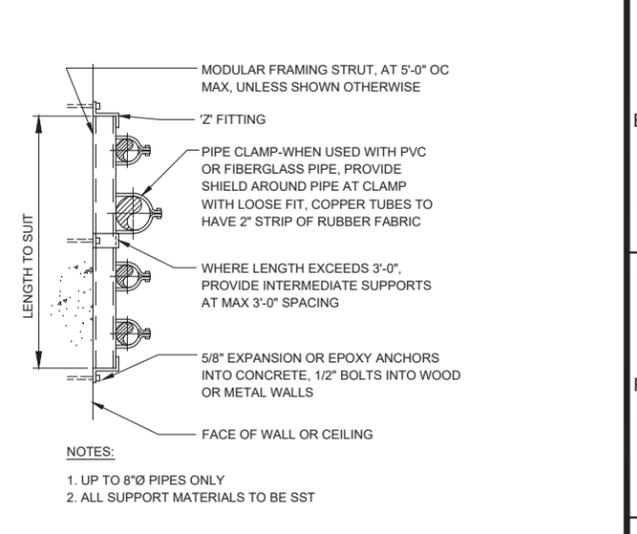
DISTRIBUTION BOX 3
3/4" = 1'-0"



SECTION FLOW METER ASSEMBLY A
1/2" = 1'-0"



PIPE TRANSITION 2
NOT TO SCALE



SURFACE MOUNT MODULAR STRUT 4
NOT TO SCALE

REV	DATE	BY	DESCRIPTION

DESIGNED
T. HOFFMAN
DRAWN
S. LARI
CHECKED
T. KONTONICKAS



ASSOCIATION OF BAY AREA GOVERNMENTS
PALO ALTO HORIZONTAL LEVEE PROJECT
MECHANICAL DETAILS 1

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	DATE JANUARY 7, 2025
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. M09
	SHEET NO. 39 OF 47

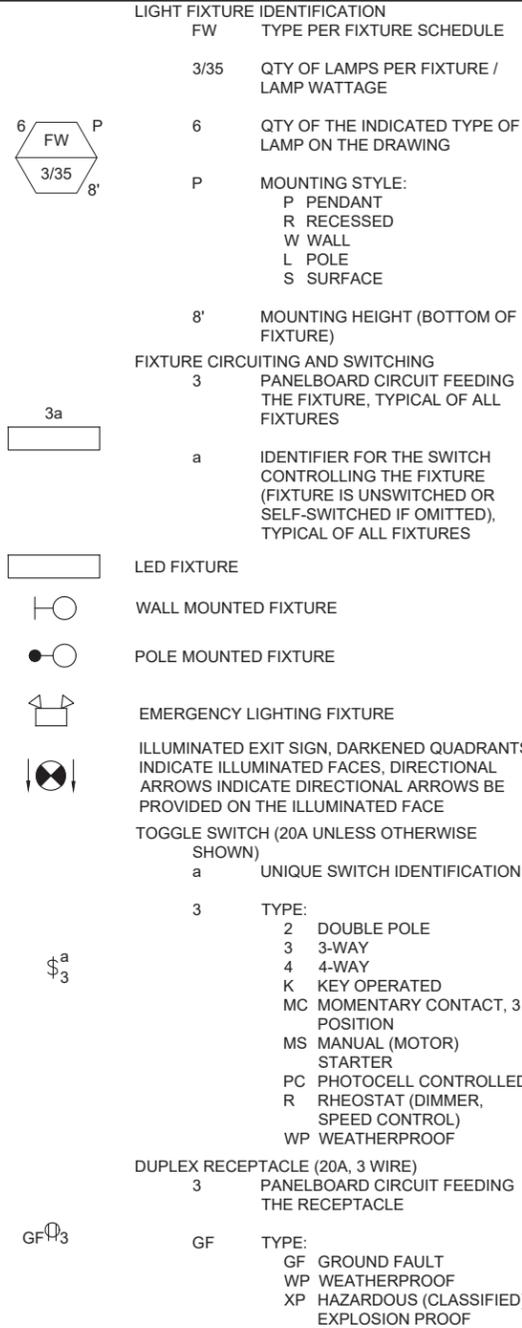
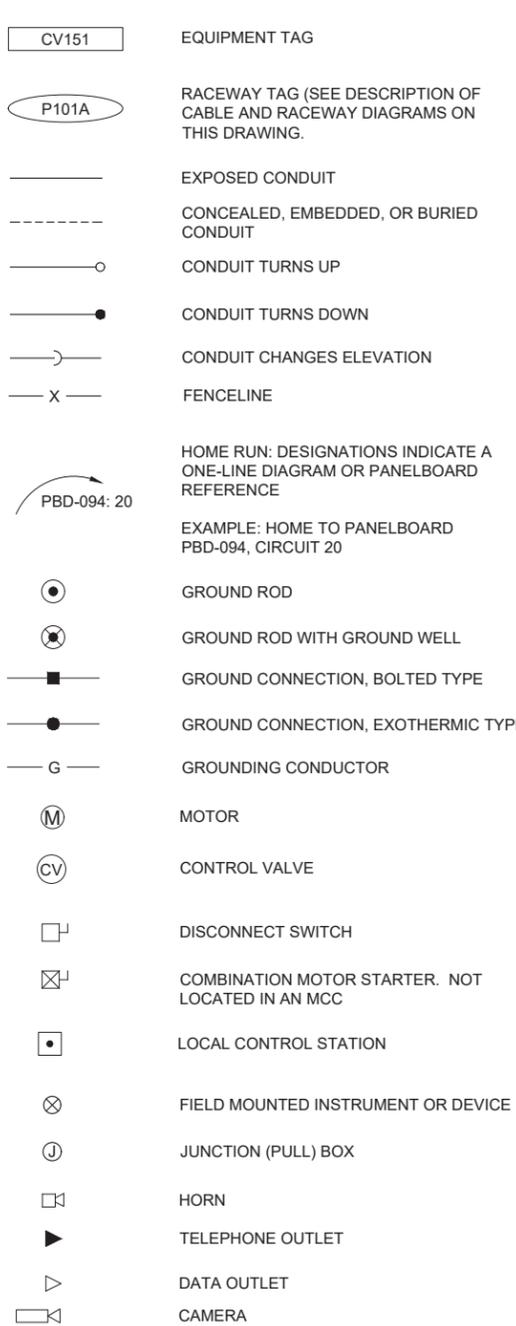
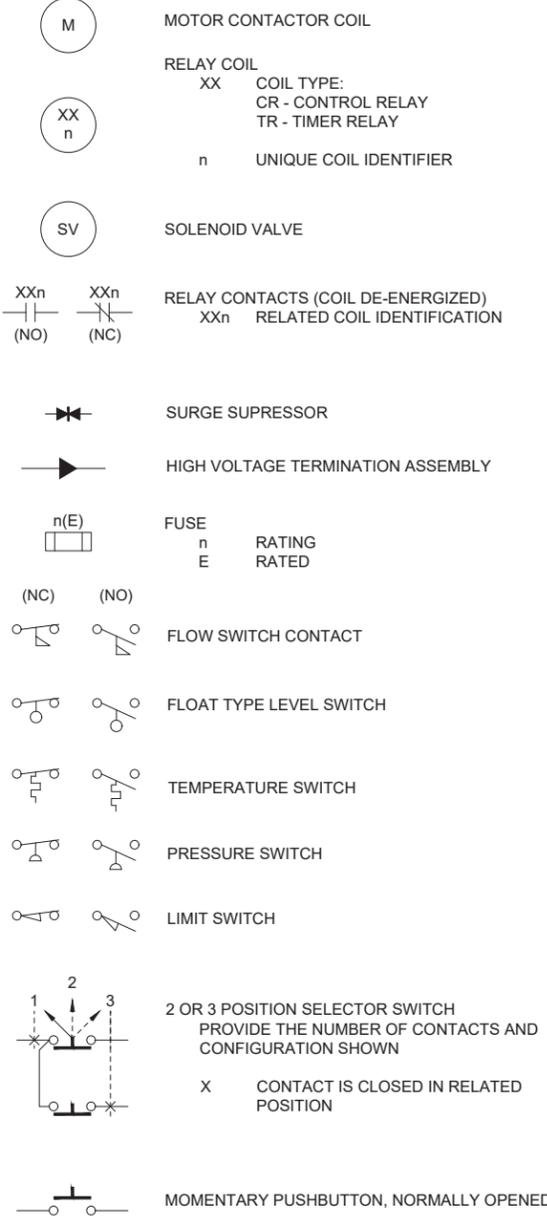
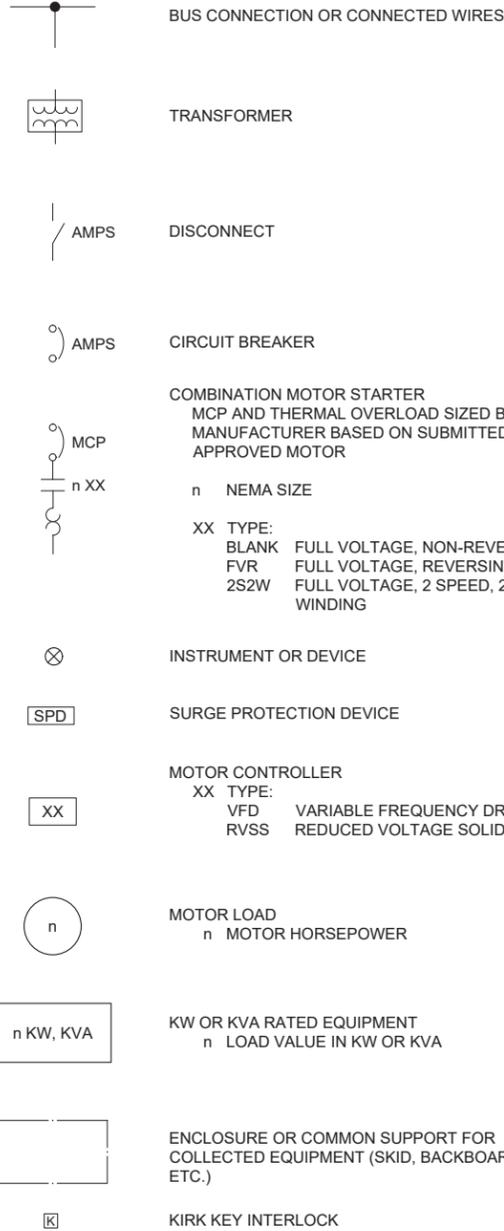
ONE LINE DIAGRAMS

CONTROL DIAGRAMS

PLAN DRAWINGS

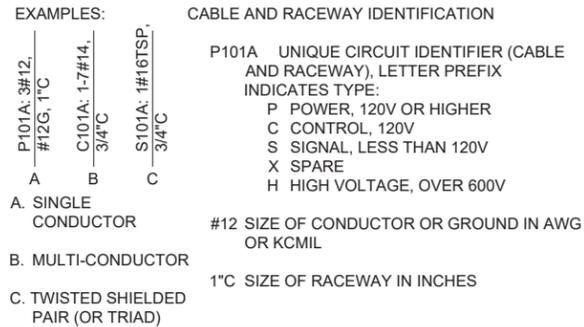
PLAN DRAWINGS (CONTINUED)

GENERAL NOTES:



- THIS DRAWING IS GENERAL IN NATURE. SOME SYMBOLS SHOWN HEREON MAY NOT BE USED ON THE CONTRACT DRAWINGS.
- IDENTIFICATIONS (ID), SIZES, RATINGS, LOCATIONS AND SIMILAR INFORMATION SHOWN ASSOCIATED WITH SYMBOLS ARE OPTIONAL; EXAMPLES OF SUCH INFORMATION ARE SHOWN WITH SOME SYMBOLS FOR CLARITY.
- THE ELECTRICAL DRAWINGS USE THE ONE LINE DIAGRAMS AND PANEL SCHEDULES IN CONJUNCTION WITH SHOWING THE LOCATION OF THE ELECTRICAL/ INSTRUMENTATION SOURCES AND LOADS/DEVICES ON THE PLAN DRAWINGS TO DEPICT THE WORK. THE CONTRACTOR SHALL USE THESE DOCUMENTS TO DETERMINE AND PROVIDE THE NECESSARY RACEWAY AND WIRING SYSTEM FOR EACH CIRCUIT. ALL INDOOR RACEWAY SHALL BE RUN EXPOSED, AND ROUTED BY THE CONTRACTOR, UNLESS OTHERWISE NOTED. THE TYPE OF RACEWAY AND WIRE USED SHALL BE AS SPECIFIED.
- IF EQUIPMENT SUPPLIED BY MANUFACTURER HAS A LARGER LOAD THAN INDICATED ON THE SINGLE LINE DIAGRAM, THE CONSTRUCTION MANAGER SHALL BE NOTIFIED. THE CABLE, CONDUIT AND ELECTRICAL EQUIPMENT SHALL BE SIZED AS REQUIRED, TO ACCOMMODATE THE HIGHER VALUE.
- IN AREAS WHERE THERE ARE OVERHEAD BRIDGE CRANES, HOISTS, ETC., OR WHERE EQUIPMENT IS LIFTED AND MOVED FOR MAINTENANCE OR REPLACEMENT, NO CONDUITS SHALL BE RUN OVERHEAD THAT WILL INTERFERE WITH THE OPERATION OF THE EQUIPMENT OR ACCESS TO EQUIPMENT.
- THE LOCATION OF THE CONTROL STATIONS SHOWN ON THE PLAN DRAWINGS ARE DIAGRAMMATIC AND THE ACTUAL LOCATION SHALL BE COORDINATED IN THE FIELD WITH THE CONSTRUCTION MANAGER. THE EXACT LOCATION OF THE MOTORS AND ACCESSORIES ARE NOT SHOWN.
- THE CONTRACTOR SHALL COORDINATE WITH THE STRUCTURAL AND MECHANICAL DRAWINGS FOR CONDUIT STUB UP AND TERMINATION LOCATIONS.
- THE STANDARD DETAILS SHALL BE USED WHERE APPLICABLE.
- ALL EQUIPMENT SHALL BE LABELED WITH NAMEPLATES. PROVIDE A DESCRIPTION OF THE EQUIPMENT AND THE EQUIPMENT NUMBER ON NAMEPLATES.
- FOR WIRING AND CABLE INSTALLATION REQUIREMENTS, SEE PROJECT SPECIFICATION SECTION 16000. SINCE LIGHTING AND RECEPTACLE CONDUITS AND CABLES ARE NOT SHOWN, THE CONTRACTOR SHALL USE PANELBOARD CIRCUIT SCHEDULES FOR PROVIDING CONDUIT AND CABLE INSTALLATION, SIZE PER NEC.

CABLE AND RACEWAY DIAGRAMS



ABBREVIATIONS:
THIS LIST APPLIES TO THE ELECTRICAL DRAWINGS AND MAY NOT INCLUDE ALL OF THE ABBREVIATIONS USED. OTHER ABBREVIATIONS ARE PER ANSI OR IEEE STANDARDS, OR COMMON USAGE.

AFF (K)AIC	ABOVE FINISHED FLOOR (1000) AMPERE INTERRUPTING CAPACITY	DWG (E), EXIST	DRAWING EXISTING	PB	PULLBOX	SWBD	SWITCHBOARD
BC	BARE COPPER	HH, MH	HANDHOLE, MANHOLE	PBD	PANELBOARD	TB	TERMINAL BOX
CKT	CIRCUIT CONTINUED	MCC	MOTOR CONTROL CENTER	PHF	PASSIVE HARMONIC FILTER	TYP	TYPICAL
CONT	CONTROL POWER	MCP	MOTOR CIRCUIT PROTECTOR	PLC	PROGRAMMABLE LOGIC CONTROLLER	VC	VENDOR CABLE
CPT	TRANSFORMER	NEC	NATIONAL ELECTRICAL CODE	PNL	PANEL		
		NP	NAMEPLATE	RECP	RECEPTACLE		
				REQ'D	REQUIRED		

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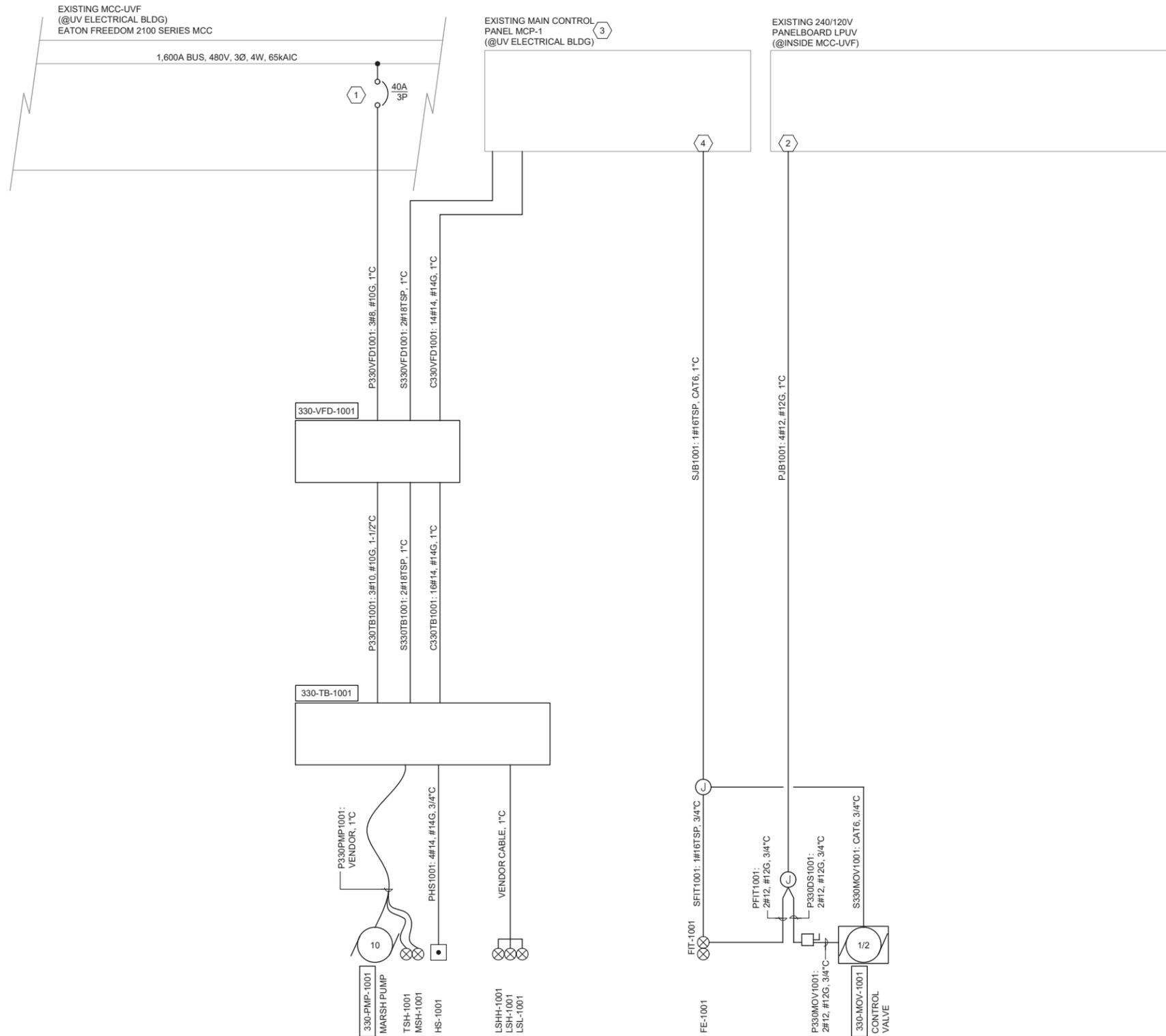
ASSOCIATION OF BAY AREA GOVERNMENTS
PALO ALTO HORIZONTAL LEVEE PROJECT

LEGEND AND SYMBOLS

VERIFY SCALES	DATE
BAR IS ONE INCH ON ORIGINAL DRAWING	JANUARY 7, 2025
0 1"	DRAWING NO.
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	E01
	SHEET NO.
	40 OF 47

KEYNOTES

- ① INSTALL 40A CIRCUIT BREAKER IN EXISTING MCC, REFER TO KEYNOTE 1 ON DWG E4.
- ② PROVIDE 20A CIRCUIT BREAKERS TO MATCH EXISTING AND INSTALL IN EXISTING PANELBOARD. PROVIDE NAMEPLATE OR LABELS FOR EACH CIRCUIT.
- ③ LOCATE EXISTING SPARE I/O CARD SPACE FOR EACH CONTROL WIRE. COORDINATE WITH DWG P2 FOR I/O REQUIRED FOR THE ADDED EQUIPMENT.
- ④ ROUTE CAT6 CABLE WITH PLUG TO THE EXISTING ETHERNET SWITCH LOCATED IN THE EXISTING PLC PANEL.



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REV	DATE	BY	DESCRIPTION

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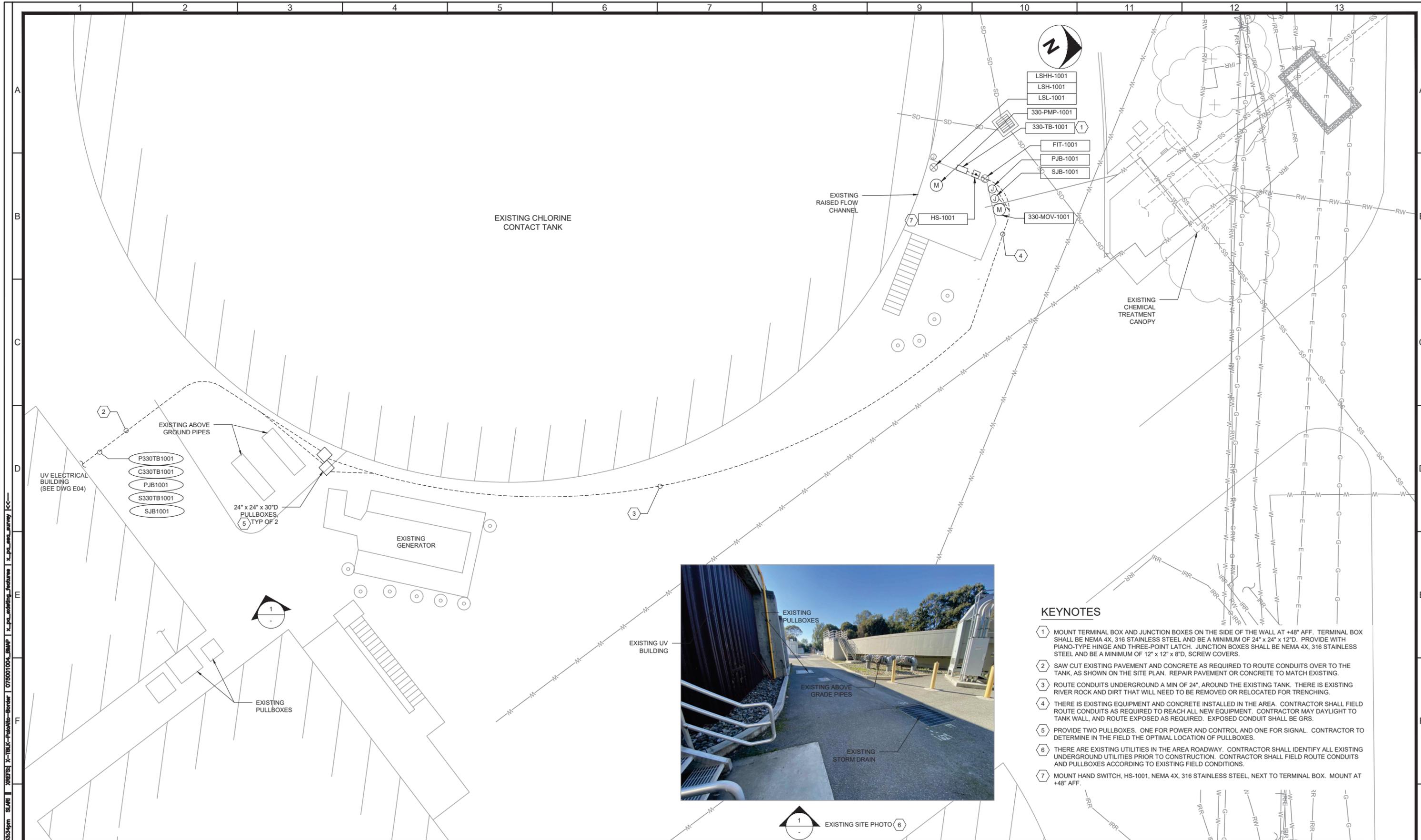
ASSOCIATION OF BAY AREA GOVERNMENTS

ASSOCIATION OF BAY AREA GOVERNMENTS
PALO ALTO HORIZONTAL LEVEE PROJECT

ONE LINE DIAGRAM

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"

DATE
JANUARY 7, 2025
DRAWING NO.
E02
SHEET NO.
41 OF 47



KEYNOTES

- 1 MOUNT TERMINAL BOX AND JUNCTION BOXES ON THE SIDE OF THE WALL AT +48" AFF. TERMINAL BOX SHALL BE NEMA 4X, 316 STAINLESS STEEL AND BE A MINIMUM OF 24" x 24" x 12"D. PROVIDE WITH PIANO-TYPE HINGE AND THREE-POINT LATCH. JUNCTION BOXES SHALL BE NEMA 4X, 316 STAINLESS STEEL AND BE A MINIMUM OF 12" x 12" x 8"D, SCREW COVERS.
- 2 SAW CUT EXISTING PAVEMENT AND CONCRETE AS REQUIRED TO ROUTE CONDUITS OVER TO THE TANK, AS SHOWN ON THE SITE PLAN. REPAIR PAVEMENT OR CONCRETE TO MATCH EXISTING.
- 3 ROUTE CONDUITS UNDERGROUND A MIN OF 24", AROUND THE EXISTING TANK. THERE IS EXISTING RIVER ROCK AND DIRT THAT WILL NEED TO BE REMOVED OR RELOCATED FOR TRENCHING.
- 4 THERE IS EXISTING EQUIPMENT AND CONCRETE INSTALLED IN THE AREA. CONTRACTOR SHALL FIELD ROUTE CONDUITS AS REQUIRED TO REACH ALL NEW EQUIPMENT. CONTRACTOR MAY DAYLIGHT TO TANK WALL, AND ROUTE EXPOSED AS REQUIRED. EXPOSED CONDUIT SHALL BE GRS.
- 5 PROVIDE TWO PULLBOXES. ONE FOR POWER AND CONTROL AND ONE FOR SIGNAL. CONTRACTOR TO DETERMINE IN THE FIELD THE OPTIMAL LOCATION OF PULLBOXES.
- 6 THERE ARE EXISTING UTILITIES IN THE AREA ROADWAY. CONTRACTOR SHALL IDENTIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL FIELD ROUTE CONDUITS AND PULLBOXES ACCORDING TO EXISTING FIELD CONDITIONS.
- 7 MOUNT HAND SWITCH, HS-1001, NEMA 4X, 316 STAINLESS STEEL, NEXT TO TERMINAL BOX. MOUNT AT +48" AFF.

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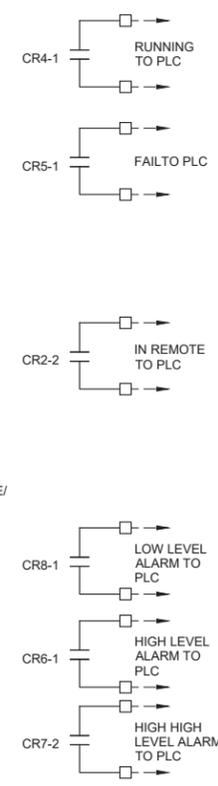
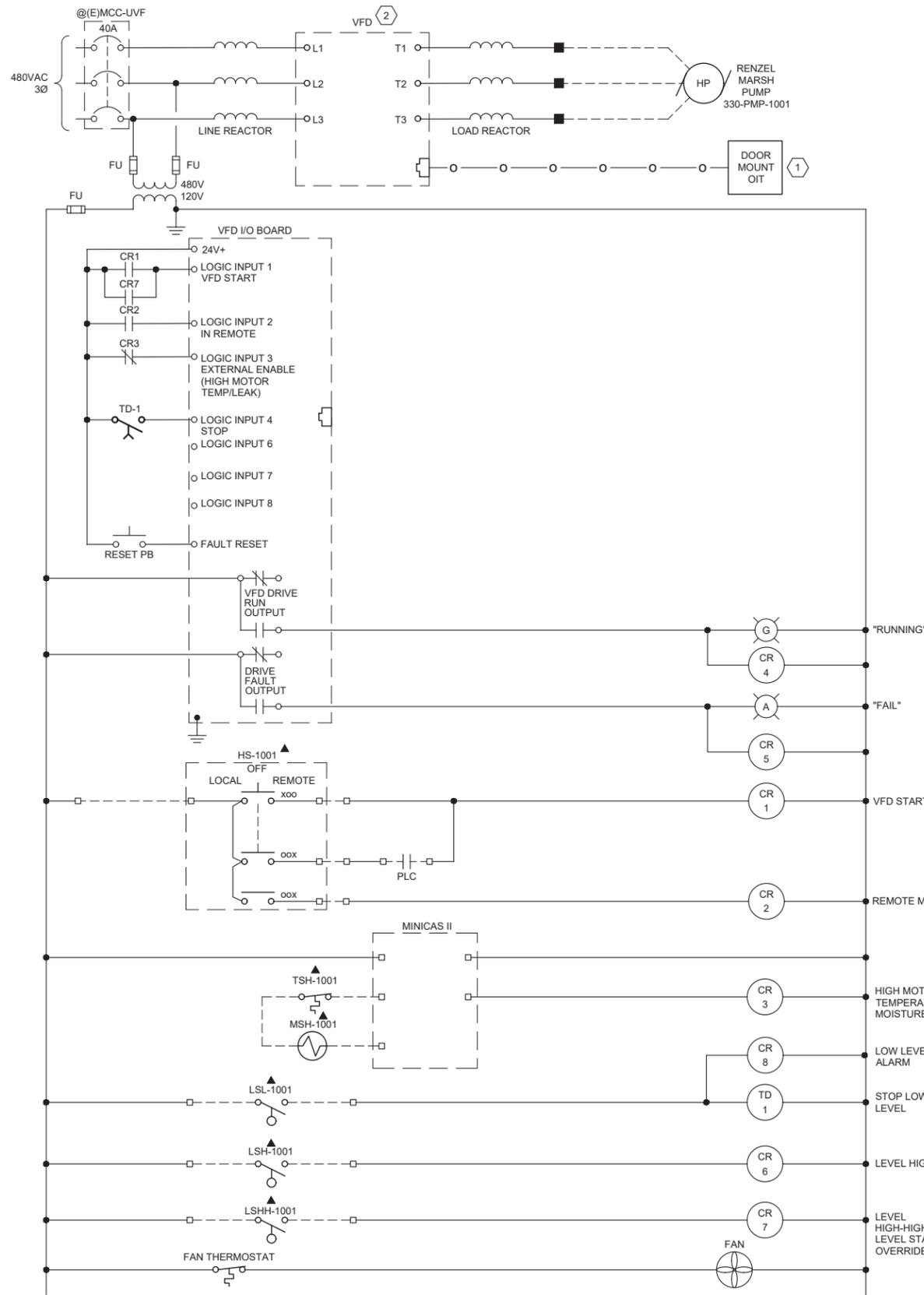


ASSOCIATION OF BAY AREA GOVERNMENTS
PALO ALTO HORIZONTAL LEVEE PROJECT

OVERALL SITE PLAN

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DATE
JANUARY 7, 2025
DRAWING NO.
E03
SHEET NO.
42 OF 47



GENERAL NOTES

1. PROVIDE ALL COMPONENTS/INTERLOCKS NECESSARY FOR A COMPLETE AND FUNCTIONING SYSTEM AS OUTLINED IN THE CONTROL LOOP DESCRIPTIONS, SPECIFICATION SECTION 40.90.05.XX
2. ALL DEVICES ARE LOCATED IN THE VFD ENCLOSURE UNLESS OTHERWISE NOTED.
3. ALL EQUIPMENT SHALL BE INSTALLED TO THEIR MANUFACTURERS LITERATURE AND DATA SHEETS AND THEIR RECOMMENDATIONS SHALL BE ADHERED TO.
4. CONTACTS SHOWN IN DE-ENERGIZED STATE.

KEYNOTES

1. PROVIDE ON VFD ENCLOSURE DOOR.
2. PROVIDE VFD AS SPECIFIED. PROVIDE WITH STANDARD EQUIPMENT AND FILTERS.

LEGEND

- INDICATES TERMINAL CONNECTION IN VFD
- - - INDICATES FIELD WIRING
- ▲ INDICATES EQUIPMENT LOCATED IN FIELD/REMOTE FROM VFD

CD1 RENZEL MARSH PUMP CONTROL DIAGRAM

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REV	DATE BY DESCRIPTION
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ASSOCIATION OF BAY AREA GOVERNMENTS
PALO ALTO HORIZONTAL LEVEE PROJECT
RENZEL MARSH PUMP CONTROL DIAGRAM

VERIFY SCALES	DATE
BAR IS ONE INCH ON ORIGINAL DRAWING	JANUARY 7, 2025
0 1"	DRAWING NO. E05
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	SHEET NO. 44 OF 47

INSTRUMENT SYMBOLOGY

	LOCALLY MOUNTED FIELD INSTRUMENTATION
	MOUNTED ON PANEL FRONT
	MOUNTED INSIDE PANEL
	FRONT PANEL MOUNTED ON AUXILIARY PANEL (SUBSCRIPT INDICATES PANEL)
	MOUNTED INSIDE AUXILIARY PANEL
	PILOT LIGHT
	INSTRUMENT FUNCTIONS SHARING COMMON HOUSING
	COMPLEX INTERLOCK AS DEFINED IN CONTROL DIAGRAM OR IN SPECIFICATIONS
	SHARED DISPLAY, SHARED CONTROL, FIELD MOUNTED
	SHARED DISPLAY, SHARED CONTROL AT PRIMARY LOCATION - NORMALLY ACCESSIBLE TO OPERATOR (SCADA WORKSTATION)
	SHARED DISPLAY, SHARED CONTROL AT AUXILIARY LOCATION - NORMALLY ACCESSIBLE TO OPERATOR (IPC, HMI)
	PROGRAMMABLE LOGIC CONTROL, PRIMARY LOCATION - NORMALLY INACCESSIBLE TO OPERATOR

INSTRUMENT IDENTIFICATION LETTERS

FIRST LETTER	SUCCEEDING LETTERS			
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION
A	ANALYSIS		ALARM	
B	BURNER, COMBUSTION			
C				CONTROL
D		DIFFERENTIAL		CLOSED
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)	
F	FLOW RATE	RATIO (FRACTION)		
G			GLASS, VIEWING DEVICE	
H	HAND			HIGH
I	CURRENT (ELECTRICAL)		INDICATE	
J	POWER	SCAN		
K	TIME, TIME SCHEDULE	TIME; RATE OF CHANGE		CONTROL STATION
L	LEVEL		LIGHT	LOW
M		MOMENTARY		MIDDLE, INTERMEDIATE
N				
O			ORIFICE, RESTRICTION	
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION	
Q	QUANTITY	INTEGRATE, TOTALIZE		
R	RADIATION		RECORD	
S	SPEED, FREQUENCY	SAFETY		SWITCH
T	TEMPERATURE			TRANSMIT
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECH. ANALYSIS			VALVE DAMPER, LOUVER
W	WEIGHT, FORCE		WELL	
X		X-AXIS		
Y	EVENT, STATE OR PRESENCE	Y-AXIS		RELAY, COMPUTE, CONVERT
Z	POSITION, DIMENSION	Z-AXIS		DRIVER, ACTUATOR UNCLASSIFIED FINAL CONTROL ELEMENT

CONTROL SWITCH NOTATION ABBREVIATIONS

	ACK	ACKNOWLEDGE
	ESTOP	EMERGENCY STOP
	FAIL	FAILURE
	FOR	FORWARD-OFF-REVERSE
	FR	FORWARD-REVERSE
	FS	FAST-SLOW
	HA	HAND-AUTO
	HOA	HAND-OFF-AUTO
	HOR	HAND-OFF-REMOTE
	HSE	EMERGENCY STOP
	LL	LEAD-LAG
	LLS	LEAD-LAG-STANDBY
	LOR	LOCAL-OFF-REMOTE
	LR	LOCAL-REMOTE
	LS	LEAD-STANDBY
	MA	MANUAL-AUTO
	OAC	OPEN-AUTO-CLOSE
	OC	OPEN-CLOSE
	OO	ON-OFF
	OSC	OPEN-STOP-CLOSE
	RJ	RUN-JOG
	RJR	RUN-JOG-REVERSE
	SIL	SILENCE

PROCESS AND INSTRUMENTATION ABBREVIATIONS

3W	CHLORINATED PLANT WATER	OF	OVERFLOW
4W	NON-CHLORINATED PLANT WATER	OG	OFF GAS
ABI	AERATION BASIN INFLUENT	OI	OPERATOR INTERFACE
AI	ANALOG INPUT	P&ID	PROCESS AND INSTRUMENTATION DIAGRAM
AO	ANALOG OUTPUT	PD	PLANT DRAIN
BNR	BIOLOGICAL NITROGEN REMOVAL	PE	PRIMARY EFFLUENT
BSCR	BANDSCREEN	PERM	PERMEATE
BYP	BYPASS	PI	PRIMARY INFLUENT
CA	COMPRESSED AIR	PSC	PRIMARY SCUM
CHEMD	CHEMICAL DRAIN	PMP	PUMP
CL2	CHLORINE (ANALYZER MODIFIER)	POL	POLYMER
CLS	CHLORINE SOLUTION	POTW	POTABLE WATER
CMP	COMPACTOR	PS	PRIMARY SLUDGE
CND	CONDENSER	PW	PLANT WATER
COND	CONDUCTIVITY (ANALYZER MODIFIER)	RAS	RETURN ACTIVATED SLUDGE
CS	CONTACT STABILIZATION	REC	RECIRCULATION
CSL	CAUSTIC SOLUTION	RS	RAW SEWAGE
CW	CITY WATER	RW	RECLAIMED WATER
D	DRAIN	SAM	SAMPLE
DEN	DENSITY	SBS	SODIUM BISULFATE
DG	DIGESTER GAS	SC	SCUM
DI	DIGITAL INPUT	SCR	SCREENINGS
DO	DIGITAL OUTPUT	SD	SANITARY DRAIN
DO	DISSOLVED OXYGEN (ANALYZER MODIFIER)	SE	SECONDARY EFFLUENT
DS	DIGESTED SLUDGE	SEW	SEWER
E/P	VOLTAGE TO PNEUMATIC	SHC	SODIUM HYPOCHLORITE
FA	FOUL AIR	SI	SECONDARY INFLUENT
FD	FLOOR DRAIN	SLG	SLIDE GATE, SLUICE GATE
FECL3	FERRIC CHLORIDE	SN	SUPERNATANT
FE	FILTER EFFLUENT	SO	SLOPE OIL
FF	FILTER FEED	SOD	SLOPE OIL DRAIN
FO	FUEL OIL	SS	SUSPENDED SOLIDS (ANALYZER MODIFIER)
FW	FEED WATER	SWR	SOFTENED WATER
GR	GRIT	T	TANK
GTSL	GRAVITY THICKENED SLUDGE	TS	THICKENED SLUDGE
HPA	HIGH PRESSURE AIR	TURB	TURBIDITY (ANALYZER MODIFIER)
HW	HOT WATER	TWAS	THICKENED WASTE ACTIVATED SLUDGE
HWR	HOT WATER RETURN	V	VENT
HWS	HOT WATER SUPPLY	WAS	WASTE ACTIVATED SLUDGE
I/O	INPUT/OUTPUT	WW	WASH WATER
IP	CURRENT TO PNEUMATIC		
IA	INSTRUMENT AIR		
LCP	LOCAL CONTROL PANEL		
LO	LUBE OIL		
LOX	LIQUID OXYGEN		
LPA	LOW PRESSURE AIR		
LPDG	LOW PRESSURE DIGESTER AIR		
LSG	LOW PRESSURE SLUDGE GAS		
MA	MURIATIC ACID		
ML	MIXED LIQUOR		
MXR	MIXER		
N2	NITROGEN GAS		
NC	NORMALLY CLOSE		
NG	NATURAL GAS		
NO	NORMALLY OPEN		
OF	OVERFLOW		

VALVE AND GATE SYMBOLOGY

	AIR-RELEASE VACUUM VALVE ARV = AIR RELEASE VALVE VAC = VACUUM
	BV - BALL VALVE
	BFV - BUTTERFLY VALVE
	CNV - CONE VALVE
	CV - CHECK VALVE
	DDCV - DOUBLE-DISK CHECK VALVE
	BCV - BALL CHECK VALVE
	DV - DIAPHRAGM VALVE
	GV - GATE VALVE
	GLV - GLOBE VALVE
	KGV - KNIFE GATE VALVE
	NV - NEEDLE VALVE
	PNV - PINCH VALVE
	PV - PLUG VALVE
	PRV - PRESSURE-REDUCING VALVE
	PRV - PRESSURE-REGULATING VALVE
	PRV - PRESSURE-RELIEF VALVE
	Y-STRAINER
	FLEX COUPLING
	DRAIN
	SOLENOID VALVE
	MOTOR OPERATOR OPEN/CLOSE
	MOTOR OPERATOR MODULATING
	ANTI SIPHON VALVE
	REDUCER

LINE TYPES

	MAIN PROCESS LINE
	SECONDARY PROCESS LINE
	AUXILIARY PROCESS LINE
	DIRECTION OF FLOW
	PNEUMATIC SIGNAL
	ELECTRICAL SIGNAL
	480V POWER
	HYDRAULIC SIGNAL
	SOFTWARE OR DATA LINK
	SIGNAL CONNECTION
	CROSSOVER - NO CONNECTION
	CAPILLARY
	MECHANICAL LINK
	ETHERNET I/O DATA LINK
	DEVICENET DATA LINK
	SERIAL RS232 LINK
	FIBER OPTIC

CROSS REFERENCE SYMBOLOGY

	CONTINUATION FROM DRAWING P1
	CONTINUATION TO DRAWING P2

GENERAL NOTES

- THIS IS A STANDARD INSTRUMENTATION SYMBOLOGY AND ABBREVIATIONS SHEET. LISTING OF SYMBOLS AND ABBREVIATIONS DOES NOT IMPLY ALL SYMBOLS AND ABBREVIATIONS HAVE BEEN USED ON THIS PROJECT.
- SEE PROCESS, MECHANICAL AND PLUMBING LEGEND DRAWINGS FOR MISCELLANEOUS PIPING SYMBOLS.
- SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH DRAWING FOR USAGE.
- VALVE SYMBOLS SHOWN HERE ARE APPLICABLE ONLY TO INSTRUMENTATION DIAGRAMS. SEE PROCESS, MECHANICAL AND PLUMBING LEGEND SHEET FOR VALVE SYMBOLS USED ELSEWHERE ON THE DRAWINGS.

PRIMARY ELEMENT SYMBOLOGY

	MAGNETIC FLOWMETER
	PROPELLER TYPE FLOWMETER
	FLUME
	SIGHT FLOW GLASS
	CHEMICAL SEAL
	SUBMERSIBLE PUMP
	PROGRESSIVE CAVITY PUMP
	CENTRIFUGAL PUMP
	VERTICAL TURBINE PUMP
	BALL LEVEL FLOAT
	MOTOR
	HYDROSTATIC LEVEL PROBE
	GATE

ACTUATOR SYMBOLOGY

	OPERATOR ABBREVIATIONS: M = MOTOR P = PNEUMATIC S = SOLENOID
	FLOAT OPERATOR
	SPRING-OPPosed SINGLE-ACTING PNEUMATIC CYLINDER
	DOUBLE-ACTING PNEUMATIC CYLINDER
	PNEUMATIC DIAPHRAGM
	PNEUMATIC DIAPHRAGM WITH POSITIONER

TYPES OF POWER SUPPLY

A	PLANT COMPRESSED AIR
IA	INSTRUMENT AIR
ES	ELECTRICAL SUPPLY
NG	NATURAL GAS
HYD	HYDRAULIC
AC	120VAC POWER
480	480VAC POWER
DC	24VDC POWER

PLC INTERFACES

	ANALOG INPUT (4-20mA DC)
	ANALOG OUTPUT (4-20mA DC)
	DISCRETE INPUT (24VDC)
	DISCRETE OUTPUT (DRY CONTACT 120VAC)

DESIGNED
DRAWN
CHECKED



ASSOCIATION OF BAY AREA GOVERNMENTS
PALO ALTO HORIZONTAL LEVEE PROJECT

SYMBOLS AND LEGEND

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DATE

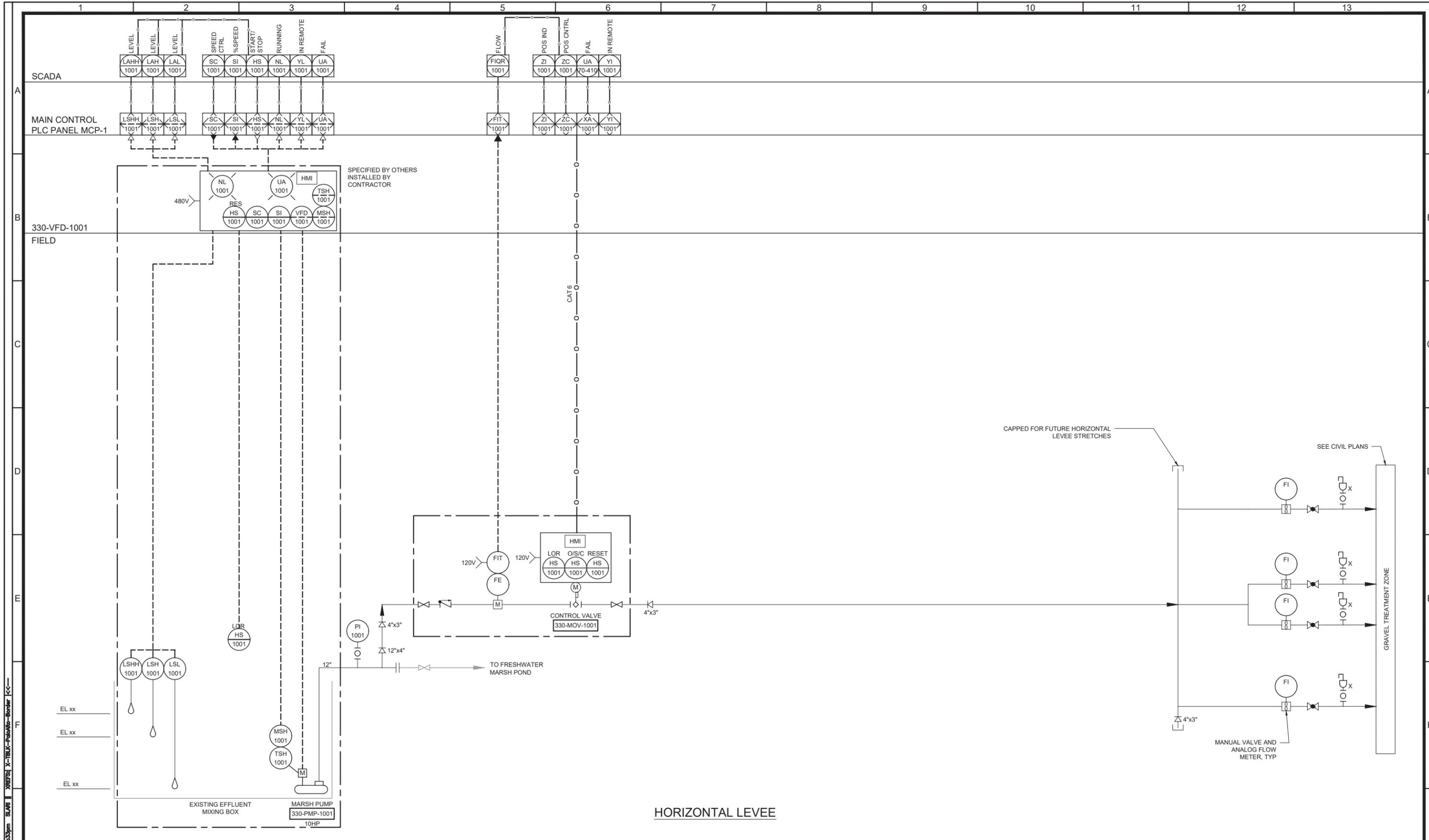
JANUARY 7, 2025

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P01

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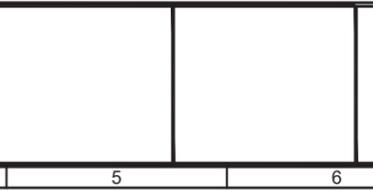
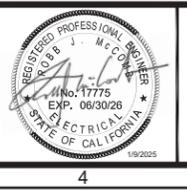
45 OF 47



HORIZONTAL LEVELVEE

REV	DATE	BY	DESCRIPTION
1			
2			
3			

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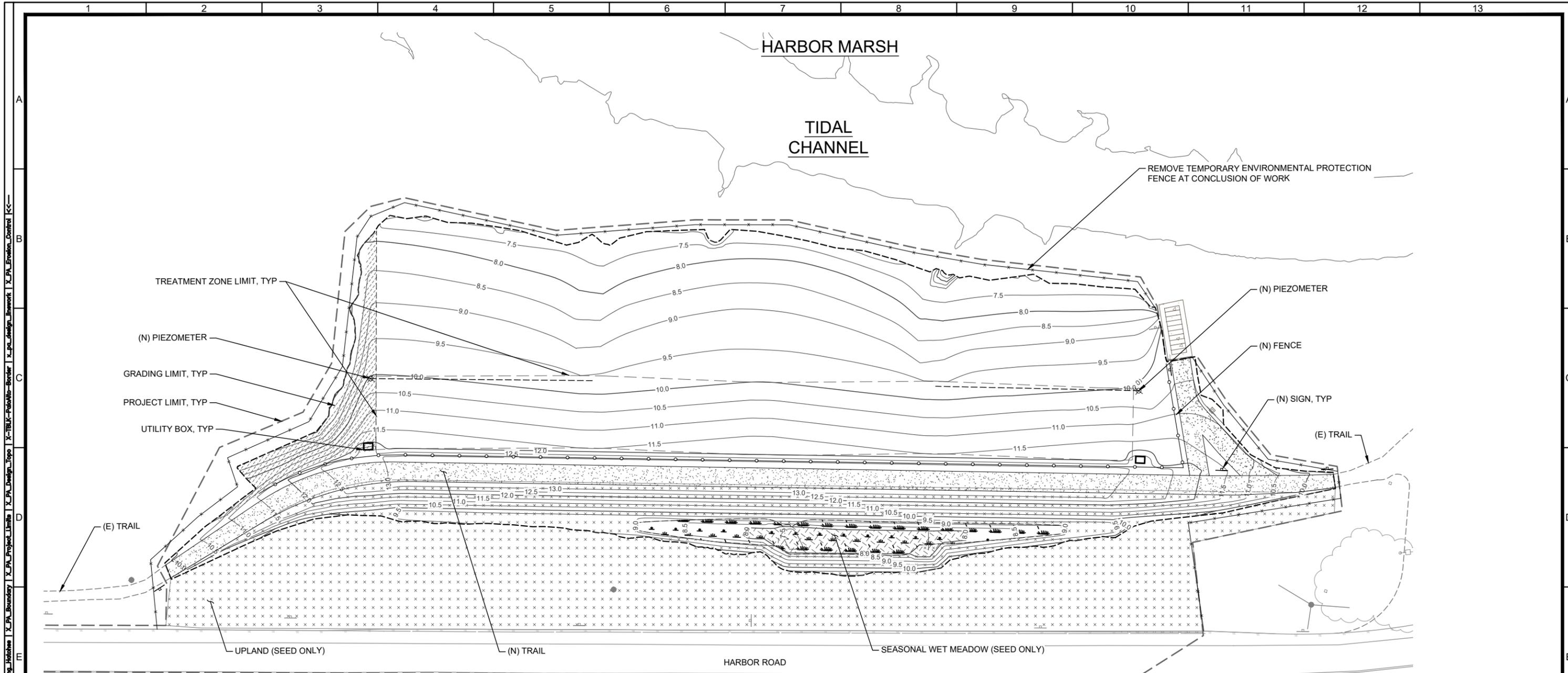


ASSOCIATION OF BAY AREA GOVERNMENTS

ASSOCIATION OF BAY AREA GOVERNMENTS
PALO ALTO HORIZONTAL LEVELVEE PROJECT

HORIZONTAL LEVELVEE FEED

VERIFY SCALES	DATE
BAR IS ONE INCH ON ORIGINAL DRAWING	JANUARY 7, 2025
0 1" (Scale bar)	DRAWING NO.
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	P02
	SHEET NO.
	46 OF 47



SEEDING PLAN

PLAN

SCALE: 1" = 20'



SEEDING LEGEND

- SEASONAL WET MEADOW SEEDING AREA
- RIPARIAN SEEDING AREA
- UPLAND SEEDING AREA

Seasonal Wet Meadow & Riparian Seed Mix		0.07	acres
Botanical Name	Common Name	PLS Lbs/Ac	Total PLS lb
<i>Amsinckia intermedia</i>	fiddleneck	6.5	0.5
<i>Centromadia pungens</i>	spikeweed	6	0.4
<i>Hemizonia congesta</i> spp. <i>luzulifolia</i>	hayfield tarweed	6.5	0.5
<i>Helenium puberulum</i>	sneezeweed	1	0.1
<i>Madia sativa</i>	coast tarweed	6.5	0.5
<i>Hordeum brachyantherum</i>	meadow barley	8	0.6
Total		26.5	2.4

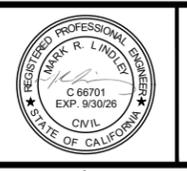
Upland Erosion Control Seed Mix		0.54	acres
Botanical Name	Common Name	PLS lb/ac	Total PLS lb
<i>Bromus carinatus</i>	California brome	10	5.4
<i>Elymus glaucus</i>	blue wildrye	10	5.4
<i>Festuca (Vulpia) microstachys</i>	small fescue	10	5.4
<i>Festuca rubra</i> Molate	red fescue	6	3.3
<i>Stipa pulchra</i>	purple needle grass	8	4.3
<i>Achillea millefolium</i>	yarrow	0.25	0.1
<i>Eschscholzia californica</i>	California poppy	1.5	0.8
Total		45.75	24.7

NOTE

1. INCORPORATE SEED INTO SOIL WITH A SHEEPSFOOT ROLLER. SEE SPECS.

REV	DATE	BY	DESCRIPTION

DESIGNED
MRL
DRAWN
DPH/AGHC
CHECKED
MRL/MMC



575 MARKET STREET
SUITE 3700
SAN FRANCISCO, CA 94105
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ASSOCIATION OF BAY AREA GOVERNMENTS
PALO ALTO HORIZONTAL LEVEE PROJECT

SEEDING PLAN

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DATE JANUARY 7, 2025 DRAWING NO. L01 SHEET NO. 47 OF 47
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