



TRANS TECH CONSULTANTS

Engineering and Environmental Compliance Services
License # 697833 (A-Haz)

Cover Letter

Subject: Site Management Contingency Plan
3884 - 3998 Depot Road, Hayward
Site Cleanup Program Case RO0002499

PERJURY STATEMENT

ACEH File name: RO 2499_SITE_MANAGE_R_2017-05-24

In accordance with the following Alameda County Environmental Health (ACEH):

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: I declare, under penalty of perjury, that the information and/or recommendations contained in the Site Management Contingency Plan, dated May 24, 2017, ACEH File name: RO 2499_SITE_Manage_R_2016-05-24 is true and correct to the Best of my knowledge.

Trans Tech Consultants legally authorized representative

Legally authorized representative of S&A Investment Holdings LLC, the property owner.



RECEIVED

By Alameda County Environmental Health 11:03 am, Aug 10, 2017

Print Name: Bill C. Wiggins, P.E.

Title: President

Date: May 29, 2017



TRANS TECH CONSULTANTS

*Engineering and Environmental Compliance Services
License # 697833 (A-Haz)*

May 24, 2017
TTC Job No. 2548.01

Mr. Mark E. Detterman, PG, CEG
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Subject: Site Management Contingency Plan
Bay Area Concrete Recycling
3884-3998 Depot Road, Hayward, CA

Dear Mr. Detterman,

This Site Management Contingency Plan (SMCP) has been prepared by Trans Tech Consultants (TTC) for the site located at 3884-3998 Depot Road, Hayward, California. The site is further defined as Hayward County Assessor's Parcel Numbers (APN) 439-0070-013-01 (about 2.54 acres), the easterly parcel and 439-0070-014 (about 4.05 acres), the westerly parcel. The purpose of this document is to discuss the proposed use of the site for a concrete recycling facility in consideration of known near surface soil sample analytical results and to address the proposed excavation in select areas of the parcel to support the proposed development, including an access road, a building pad, a retaining wall, and various utilities. Details of the proposed project including removal of select structures are shown in the Milani and Associates April 2017 Bay Area Concrete Improvement Plans, Review Copy Only, Not Final (Milani Plans), attached in Appendix A.

The site is approximately located as shown on the Assessor's Parcel Map, Plate 1. The site is in an industrial/commercial area. Soil and groundwater impact within expected levels for the area and known historical uses have been documented. The easterly portion of the site APN 439-0070-013 (3884 Depot Road) has been assigned Alameda County Environmental Health Case Number RO2499. As you are aware, background information about the site has been uploaded to the ACEH FTP Site relevant to the case. A summary of known site soil and groundwater sampling data is presented in the TTC Work Plan dated October 10, 2015 (Work Plan).

The proposed excavation areas are shown on the attached Site Plan, Plate 2. The available soil sample analysis results are shown on the Site Plan with Soil Sample Results, Plate 3. The units are milligrams per kilogram. We previously transmitted plates that more clearly presented the data. The plates are discussed in the background section and are attached in Appendix B.

Trenching Details are shown on the Typical Trench Section, Plate 4, and the footing details for the retaining wall are shown on Plate 5. The Milani Plans were relied upon as the base for the TTC plates.

Background Information

Previous correspondence judged to be most relevant to the SMCP includes the Phase 1 Environmental Site Assessment (Phase 1) dated October 23, 2013 by Chemical Data Management Systems (CDMS) of Dublin, California for APN 439-0070-014 (westerly parcel), the Work Plan prepared by TTC dated October 20, 2015, the Phase 1 prepared by TTC dated July 27, 2016 for APN 439-0070-013-01 (easterly parcel), and the TTC e-mails with attachments, dated January 31 and February 10, 2017. The majority of the documents have been uploaded to the FTP Site for RO2499 and/or are presented in this SMCP.

On February 2, 2016 a meeting was held between you, Dilan Roe, PE, LEED, AP and Kevin Singh, Kimberly Douglas and Kevin Olivero and me regarding Case Number RO2499. The purpose of the meeting was to determine information needed to consider the site for development as a concrete recycling facility and to development a path leading the case closure. A follow-up e-mail was sent by ACEH after the meeting. The e-mail outlined a general format for the data needed, including cross sections, maps and spreadsheets. On January 31, 2017, we sent you a set of plates and spreadsheets. The plates were subsequently revised to fix a couple typos and retransmitted to your office on February 10, 2017. The revised plates and spreadsheets are attached in Appendix B. Please note the grading plans have changed since the plates in Appendix B were produced. Please refer to the current Plates 2 and 3 and the Milani Plans in Appendix A. The attached data presentation includes a plan view of historic borings and current bores, a plan view of proposed redevelopment related to historic and current, multiple cross sections across the site, tables with historic and more current analytical data, all ND are tabulated analytical listed by individual chemical detection limit (<x), and highlighting / bolding of detects over ESLs.

Geology and Hydrogeology

Soils reports dated May 16, 2014 and August 11, 2016 have been prepared for the site by Stevens, Ferrone and Bailey (SFB). The SFB Report dated August 11, 2016 is attached in Appendix C.

Excerpts from the TTC Work Plan are provided below. The site is in the east-central alluvial plain of the San Francisco Bay physiographic subregion and is underlain by a thick layer of Quaternary alluvium. The nearest surface water is a slough about 400-feet west of the site that flows to the northwest about a mile to the San Francisco Bay.

The boring log for well MW-1 indicates groundwater was encountered near the surface, and the boring logs for wells MW-2 and MW-3 indicate that groundwater was encountered at 9 and 8 feet, respectively, below ground surface (fbg). During monitoring events, depth to water was found to be in the range of 4 to 5 fbg. A review of the 2016 SFB Report indicates groundwater in the range of 5 fbg or shallower.



The USGS topographic map indicates that the native ground in the area slopes down westerly. A nearby ACEH site, 3152 Depot Road, indicates groundwater flows westerly to southwesterly. We infer that groundwater flows westerly to southwesterly at the subject site.

Offsite well MW-3 was abandoned prior to 2015.

Proposed Excavation

Approximately 2 feet of soil is proposed to be excavated from the selected areas designated on Plate 2. The depth of the trenches varies. The elevation of the invert of the piping relevant to the surface is shown on Plate 2, as well as the approximate volumes of material being removed.

Material judged to be potentially free of constituents of concern will be segregated from material suspected to be impacted based on historical test data and field observations. The below field screening procedure is proposed for all the excavated soils onsite. While excavation activities are occurring, an independent contractor will visually observe and field screen soil samples from the extent of the excavation (sidewalls of trenches) at a rate of one sample per 10 lineal feet along select transects using a handheld PID. Areas will be targeted for additional screening if contamination appears different than the site characterization and/or unusual in any respect (e.g., stained, different in appearance or odor).

The following procedure will be completed to field screen soil samples:

Immediately place the soil sample in a plastic bag (~1 quart), filling the bag one-quarter full. Secure and seal the bag tightly; while the sample is secure in the bag, knead any lumps of soil by hand within the closed bag to break them up; allow the soil sample to equilibrate for a minimum of 15 minutes and until it reaches a minimum temperature of 10°C. Complete all headspace measurements within two hours of sample collection; insert the instrument probe into the headspace above the soil sample, taking care to minimize potential vapor loss; agitate/manipulate the sample by hand as the measurement is taken. Record on the field form or log the peak reading registered by the instrument during the first 15 seconds of measurement; identify the type of instrument used and units of measurement; include documentation of calibration and calibration checks in the field file.

The PID will be fitted with a 10.6 eV lamp and calibrated using an isobutylene standard calibration gas with known concentration of 100 ppm before use each day. The PID responds to many volatile organic gases and cannot differentiate between compounds. For example, a measured concentration may be attributable to petroleum compounds (TPH), chlorinated solvents, or a mixture of both. Therefore, the recorded concentration is not an absolute concentration, but rather it is a combination of the volatiles present relative to the standard used for calibration.

Contamination “hot spots” will be further investigated if PID headspace screening levels are noted above 200 parts per million by volume (ppmv), and the soil excavated will be segregated in separate impacted soil stockpiles and characterized as identified below so the impacted soil materials can be disposed of at a State licensed facility appropriate for the



constituents of concern detected. The frequency of sampling the impacted material stockpile will be determined based upon the selected landfill requirements. At a minimum, the samples would be analyze select samples for TPHg, TPHd, and TPHmo by EPA Method 8015M. Analyze select samples for BTEX and MTBE by EPA Method 8021B. Analyze samples for zinc by EPA Method 6010B. Analytical testing may be modified based upon conditions observed in the field and/or after consultation with ACEH. The depth of the trenches will likely be in the range of 6-inches deeper than the invert of the respective utility pipes, as shown on Plate 4.

If groundwater needs to be removed from the excavation trenches, the water will be properly characterized, and appropriately disposed at an approved facility.

Closure

All work will be performed in accordance with the Grading Permit requirements of the City of Hayward by a State Licensed General Engineering Contractor in accordance with a site specific health and safety plan. We look forward to your comments and respectfully request the opportunity to discuss project details, including the work scope separate from the proposed grading relevant to resolving Case RO2499.

We appreciate the opportunity to work with you on this project. Please do not hesitate to contact us if you have any questions, or need additional information.

Very truly yours,
Trans Tech Consultants



Bill C. Wiggins, P.E.
Registered Civil Engineer

Plate 1 – Assessor's Parcel Map
Plate 2 – Site Plan
Plate 3 - Site Plan with Soil Sample Results
Plate 4 – Typical Trench Section
Plate 5 – Ultra Block Wall

Appendix A – Milani Plans
Appendix B – Spreadsheets and ESL Research from TTC e-mail of January 31, 2017
and Plates from e-mail of February 10, 2017
Appendix C – SFB Geotechnical Report, dated August 11, 2016



Distribution
(Via e-mail)

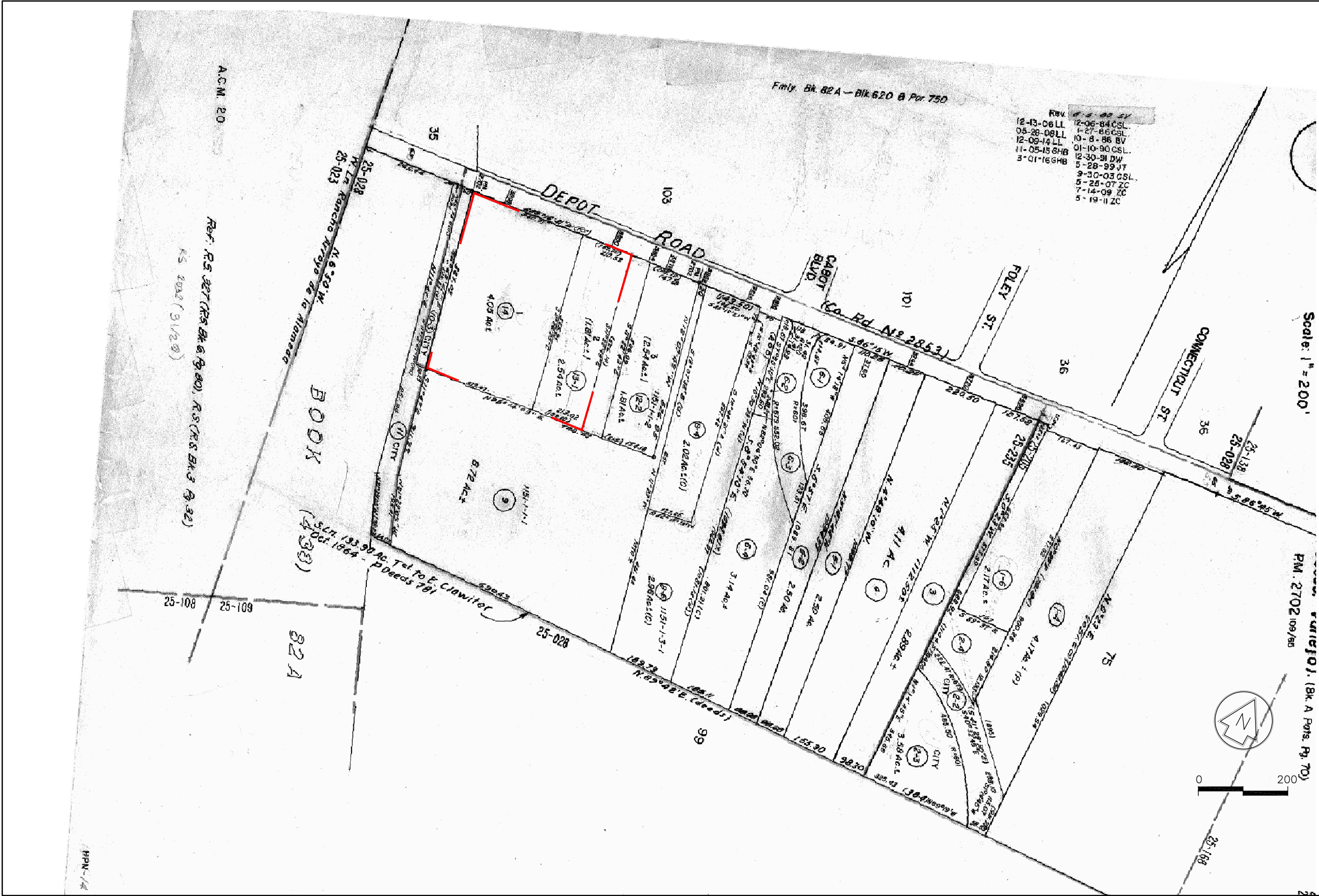
Ms. Kimberly Douglas - kimberly@baconcrete.net

Mr. Kevin Olivero - kevino@economytrucking.net

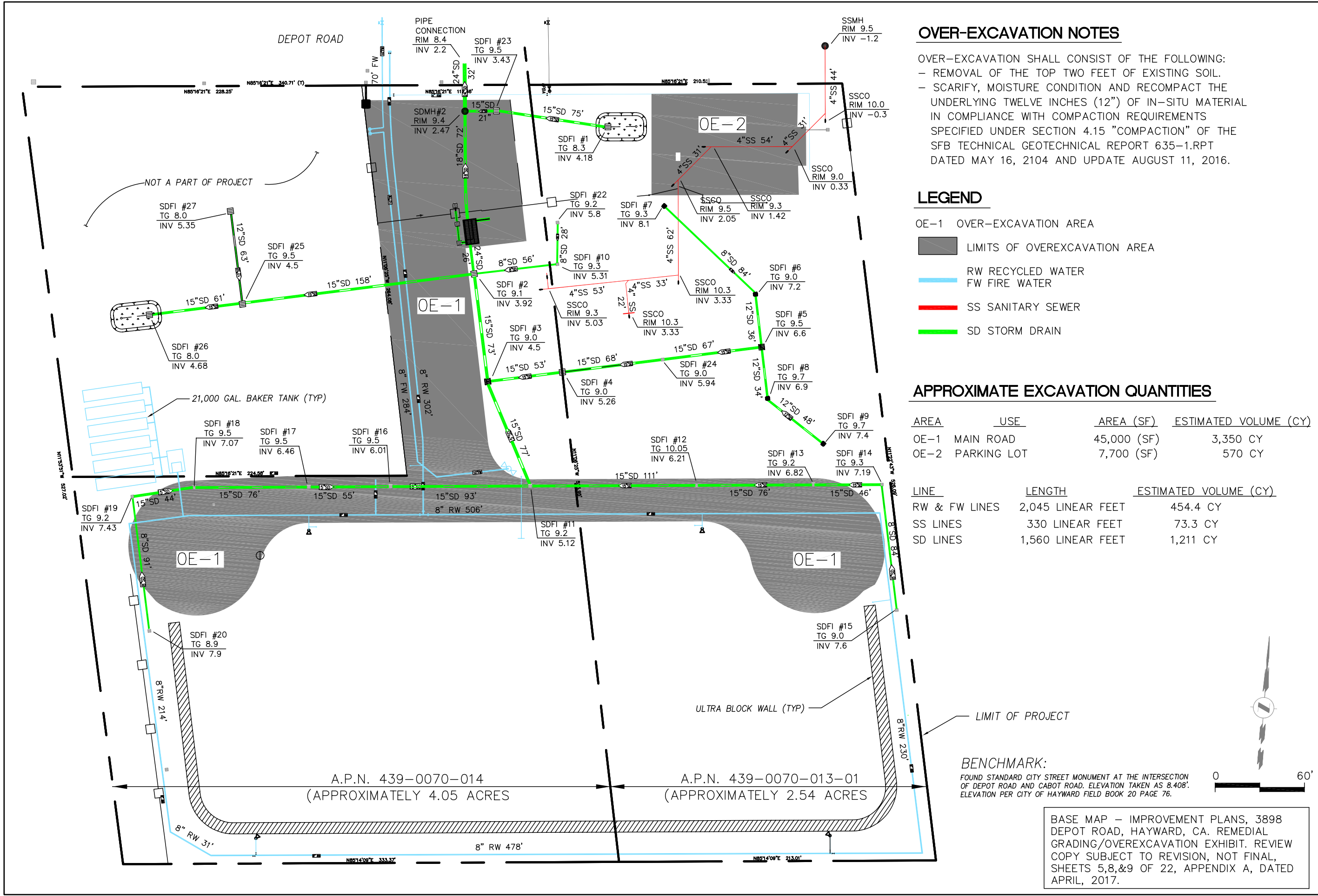
Mr. Tim Bauters, PhD, PE, QSD, ToR (CGP & IGP), CPESC, Tim_Bauters@golder.com

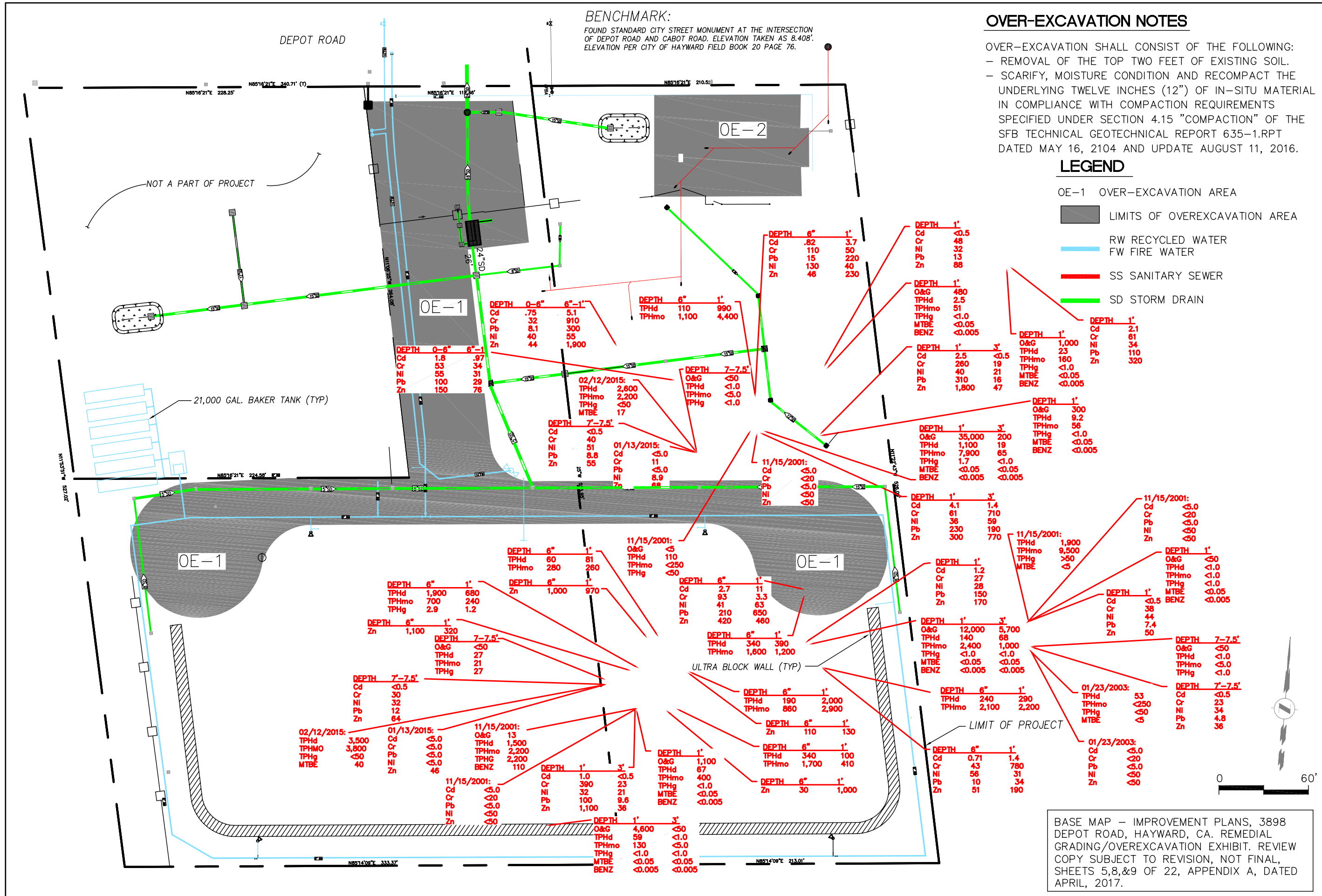
Mr. Mike Milani, P.E. mmilani@milani-eng.com





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OVER-EXCAVATION NOTES

OVER-EXCAVATION SHALL CONSIST OF THE FOLLOWING:

- REMOVAL OF THE TOP TWO FEET OF EXISTING SOIL.
- SCARIFY, MOISTURE CONDITION AND RECOMPACT THE UNDERLYING TWELVE INCHES (12”) OF IN-SITU MATERIAL IN COMPLIANCE WITH COMPACTION REQUIREMENTS SPECIFIED UNDER SECTION 4.15 “COMPACTION” OF THE SFB TECHNICAL GEOTECHNICAL REPORT 635-1.RPT DATED MAY 16, 2104 AND UPDATE AUGUST 11, 2016.

LEGEND

OE-1 OVER-EXCAVATION AREA

LIMITS OF OVEREXCAVATION AREA

■ RW RECYCLED WATER
■ FW FIRE WATER

SS SANITARY SEWER

SD STORM DRAIN

PLATE

3

SITE PLAN WITH SOIL SAMPLE RESULTS

PROPOSED IMPROVEMENT PLANS BAY AREA CONCRETE RECYCLING

3884-3898 DEPOT ROAD

HAYWARD, CA 94545

APN 439-0070-014 & APN 439-0070-013-01

APPROVED BY: BCW

APPROVED BY: BCW

JOB #: 2548.01

DATE: 05/22/2017

WGR



TRANS TECH CONSULTANTS

930 SHILOH RD., BLDG. 44, SUITE J
WINDSOR, CA 95492

PHONE: 707-837-8408 FAX: 707-837-7334

Z:\projects\2548.01_3884 Depot Road, Hayward\dwg\Work Plan 2017\SAMPLING PLAN-A 2548.01 20170329.dwg, 5/22/2017 4:51:41 PM

AC OR PCC PAVEMENT SECTION

UPPER 6 INCHES OF
SUBSEQUENT BACKFILL
MATERIAL COMPACTED
TO 95% RELATIVE
COMPACTION

NATIVE OR APPROVED
BACKFILL MATERIAL

WARNING TAPE
PER SPECS

UTILITY PER PLAN

NATIVE MATERIAL
SCARIFIED & COMPACTED
TO PROVIDE A STABLE
BASE

12 GAUGE TRACE WIRE
ATTACHED TO PIPE

CALTRANS CLASS 2 A.B.
(90% R.C.)

8" @ 95%
90% MIN COMPACTION

90% MIN COMPACTION

6" MIN

6" MIN

8" MIN
(TYP)

DETAILS - IMPROVEMENT PLANS, 3898
DEPOT ROAD, HAYWARD, CA. REMEDIAL
GRADING/OVEREXCAVATION EXHIBIT. REVIEW
COPY SUBJECT TO REVISION, NOT FINAL,
SHEETS 1/22 THROUGH 22/22. DATE
VARIES - SEPTEMBER TO OCTOBER, 2016.



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TYPICAL TRENCH SECTION

PROPOSED IMPROVEMENT PLANS
BAY AREA CONCRETE RECYCLING
3884-3898 DEPOT ROAD
HAYWARD, CA 94545

APN 439-0070-014 & APN 439-0070-013-01

PLATE

4

DRAWN BY:

DWG NAME:

APPR. BY:

JOB NUMBER:

DATE:

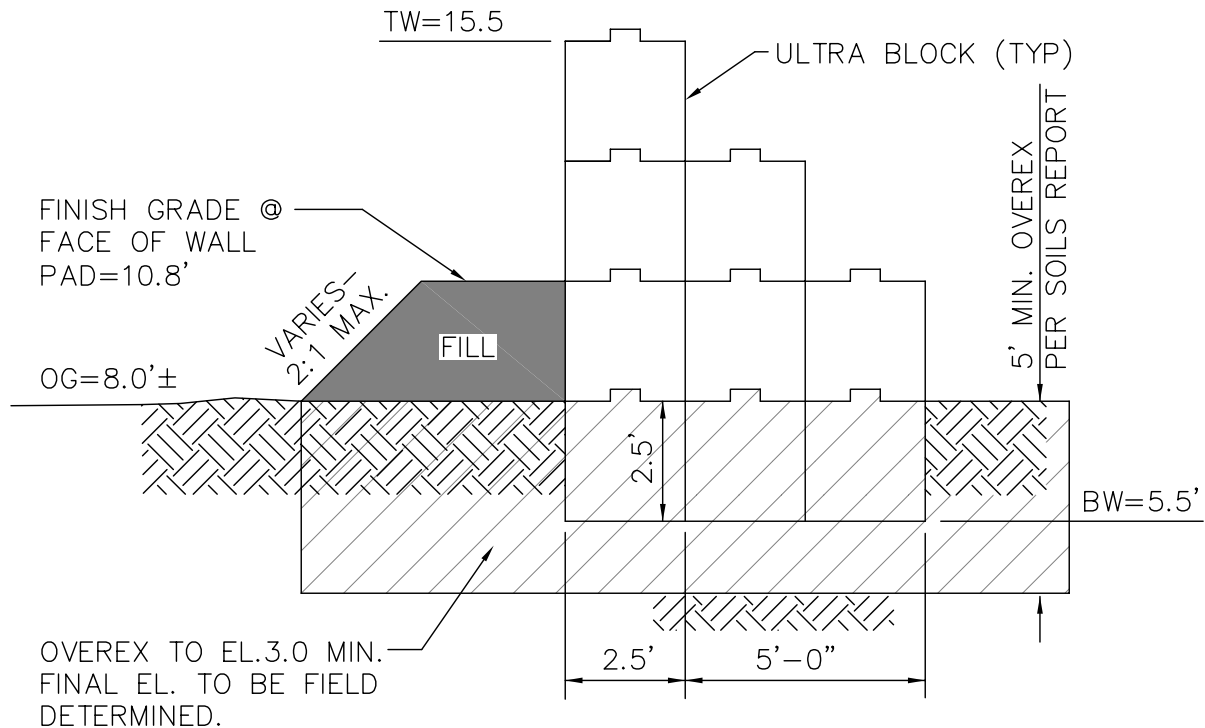
WGR

BASE 2548

BCW

2548.01

05/22/2017



NOTES:

1. SEE FINAL ULTRA WALL DESIGN BY MANUFACTURER.
2. MINIMUM LOWER COURSE EMBEDMENT 2.5' (ONE COURSE).
3. FINAL OVEREX AT ULTRA BLOCK LOCATION TO BE DETERMINED IN THE FIELD BY OBSERVING GEOTECHNICAL ENGINEER.

ULTRA BLOCK WALL SECTION

N.T.S.

BASE MAP – IMPROVEMENT PLANS, 3898 DEPOT ROAD, HAYWARD, CA. REMEDIAL GRADING/OVEREXCAVATION EXHIBIT. REVIEW COPY SUBJECT TO REVISION, NOT FINAL, SHEET 5 OF 22, APPENDIX A, DATED APRIL, 2017.



TRANS TECH CONSULTANTS

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ULTRA BLOCK WALL
PROPOSED IMPROVEMENT PLANS
BAY AREA CONCRETE RECYCLING
3884-3898 DEPOT ROAD
HAYWARD, CA 94545

APN 439-0070-014 & APN 439-0070-013-01

PLATE

5

DRAWN BY:	DWG NAME:	APPR. BY:	JOB NUMBER:	DATE:
WGR	BASE 2548	BCW	2548.01	05/22/2017

APPENDIX A

PROJECT TEAM:

OWNER/DEVELOPER: BAY AREA CONCRETE RECYCLING
24701 CLAWITER ROAD
HAYWARD, CA 94545
PHONE: (510) 733-9100
CONTACT: KEVIN SINGH/KEVIN OLIVERA

CIVIL ENGINEER: MILANI AND ASSOCIATES
2855 STANWELL DRIVE, SUITE #105
CONCORD, CA 94520
PHONE: (925) 674-9082
CONTACT: MICHAEL MILANI

SOILS ENGINEER: STEVENS, FERRONE & BAILEY ENGINEERING COMPANY, INC.
1600 WILLOW PASS COURT
CONCORD, CA 94520
PHONE: (925)688-1001
CONTACT: KEN FERRONE

LANDSCAPE ARCHITECT: THOMAS BAAK & ASSOCIATES
1620 N MAIN STREET SUITE #4
WALNUT CREEK, CA 94596
PHONE: (925) 933-2583
CONTACT: ANDREA SWANSON

ENVIRONMENTAL ENGINEER: GOLDER ASSOCIATES
425 LAKESIDE DRIVE
SUNNYSIDE, CA 94085
PHONE: (408) 220-9223
CONTACT: TIM BAUTERS

BENCHMARK:

STANDARD CITY OF HAYWARD STREET MONUMENT AT THE INTERSECTION OF
DEPOT ROAD AND CABOT ROAD. DISC ELEVATION TAKEN AS 8.408. ELEVATION
PER CITY OF HAYWARD FIELD BOOK 20 PAGE 79. **NOV 29 2016**

PAVEMENT DESIGN TABLE				
TRAFFIC INDEX	ASPHALT CONCRETE	CLASS II BASE	AGGREGATE SUBBASE	PAVEMENT SECTION
12.0	7.5 INCHES	20.0 INCHES	---	27.5 INCHES
12.0	7.5 INCHES	12.0 INCHES	10.0 INCHES	29.5 INCHES

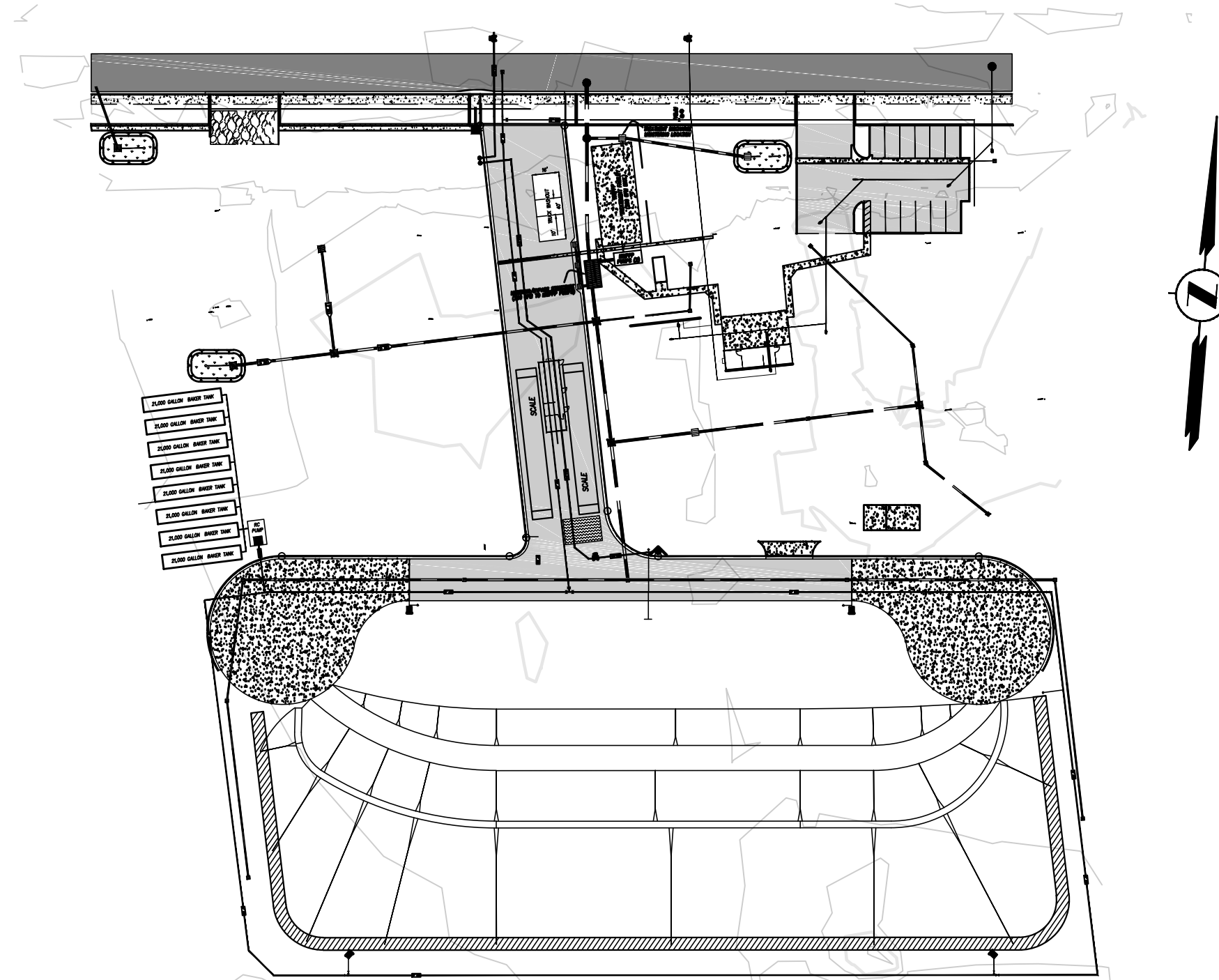
-DESIGN VALUES BASED ON AN R-VALUE = 25
- GEOTEXTILE FABRIC, MIRAFI 500 X, OR APPROVED
EQUAL, SHALL BE PLACED BETWEEN ALL BASE ROCK
AND FINAL PREPARED SOIL SUBGRADE.

CONCRETE PAVEMENT STRUCTURAL SECTIONS	
TYPE	THICKNESS
DRIVEWAYS & ROADS	8" CONC/12" A/B

-DESIGN VALUES BASED ON AN R-VALUE = 25
-AGGREGATE BASE ROCK SHALL BE CLASS 2, PER CALTRANS SPECS.
- GEOTEXTILE FABRIC, MIRAFI 500 X, OR APPROVED
EQUAL, SHALL BE PLACED BETWEEN ALL BASE ROCK
AND FINAL PREPARED SOIL SUBGRADE.

IMPROVEMENT PLANS BAY AREA CONCRETE RECYCLING

CITY OF HAYWARD, ALAMEDA COUNTY, CALIFORNIA



AVAILABLE FIRE FLOW:

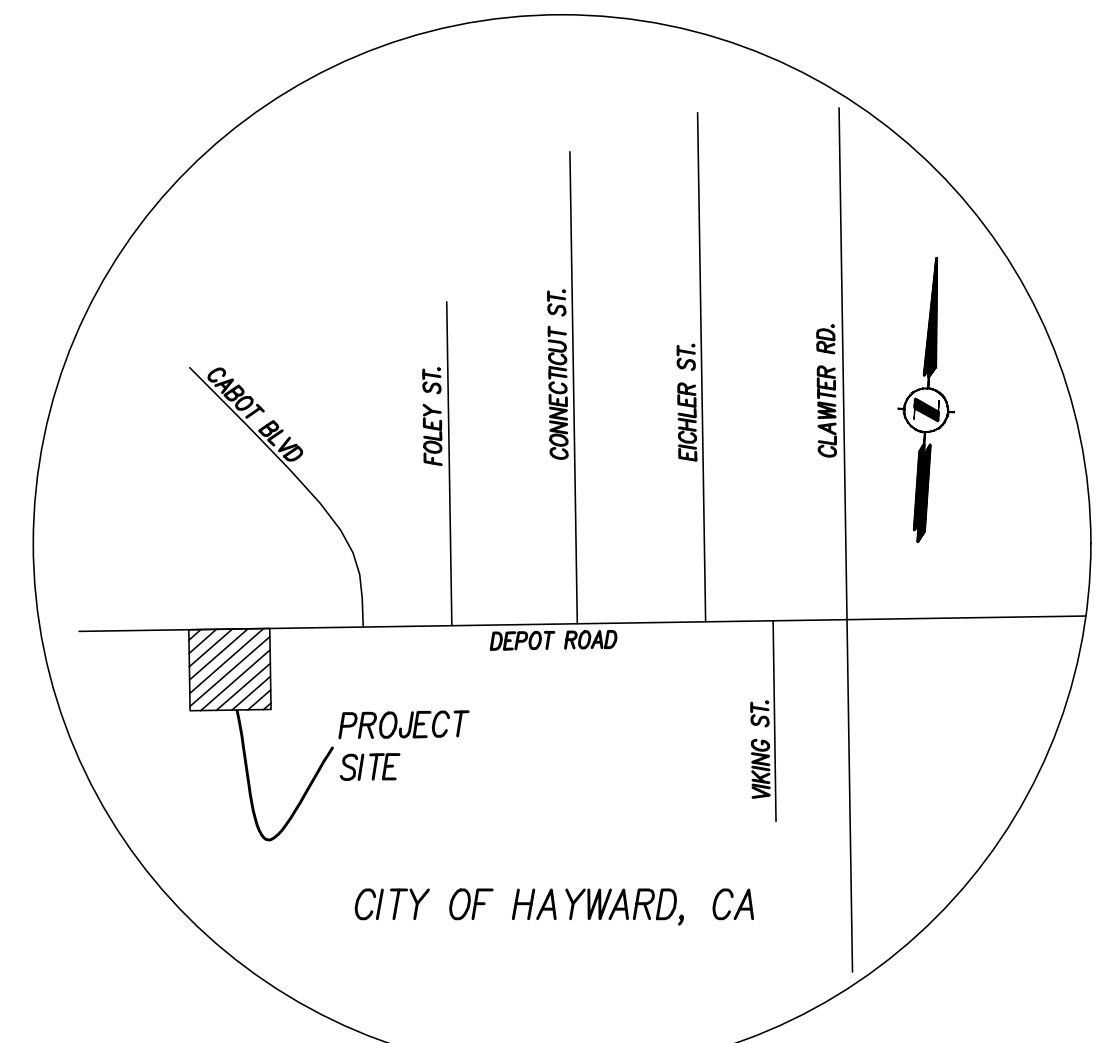
AVAILABLE FIRE FLOW WAS DETERMINED FROM A
PRIOR HYDRANT FLOW TEST NO. 347 TAKEN ON
MAY 22, 2013 AT HYDRANT NO. 2719-1
LOCATED AT 23762 FOLEY STREET.

AVAILABLE FLOW IS 4,644 GPM WITH A
RESIDUAL PRESSURE OF 20 PSIG.

FIRE SERVICE REQUIREMENTS:

AN EXISTING 12" WATER DISTRIBUTION MAIN
WITHIN DEPOT ROAD. WILL PROVIDE FIRE
WATER TO THE PROJECT SITE.

FIRE FLOW REQUIREMENTS HAVE BEEN
DETERMINED AND SET AT _____ GPM
FLOWING FROM _____ () HYDRANTS. ONE
EXISTING HYDRANT ON DEPOT ROAD WILL
BE INCLUDED AS ONE OF THE
REQUIRED HYDRANTS. THE SINGLE
PRIVATE ONSITE HYDRANT WILL BE SERVED
BY A NEW 10" PRIVATE FIRE LINE.
PROPOSED FIRE SERVICE LINES ARE
REFLECTED ON THIS PLAN SET.



VICINITY MAP
N.T.S.

ALAMEDA COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT

STORM DRAIN SYSTEM REVIEWED:

WILLIAM LEPERE, DEPUTY DIRECTOR
CONSERVATION AND DEVELOPMENT SERVICES DEPARTMENT
ALAMEDA COUNTY PUBLIC WORKS AGENCY

DATE

GEOTECHNICAL ENGINEER'S STATEMENT

GEOTECHNICAL ASPECTS OF THE IMPROVEMENT PLANS HAVE BEEN
REVIEWED FOR SUBSTANTIAL CONFORMANCE WITH THE INTENT OF THE
RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL EXPLORATION
REPORT DATED MAY 161, 2014 AND SUPPLEMENTAL REPORT DATED
AUGUST 11, 2016, PROJECT NO. 635-1.

BY: KEN FERRONE GE
STEVENS, FERRONE & BAILEY

DATE

CITY OF HAYWARD FIRE DEPARTMENT

MILES MASSONE
FIRE MARSHAL

DATE

CITY OF HAYWARD UTILITIES

ALEX AMERI
DIRECTOR OF UTILITIES & ENVIRONMENTAL SERVICES

DATE

CITY OF HAYWARD PUBLIC WORKS

MORAD FAKHRAI
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER

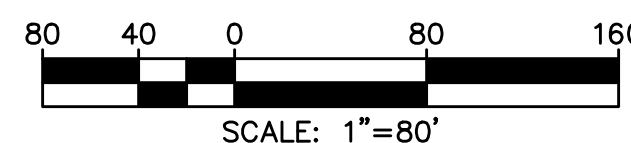
DATE

LEGEND

EXISTING	DESCRIPTION	PROPOSED
420	MAJOR CONTOUR	420
419	MINOR CONTOUR	419
---	BOUNDARY LINE	---
---	CENTERLINE	---
---	EASEMENT LINE	---
---	CONCRETE CURB & GUTTER	---
---	GOOD NEIGHBOR FENCE	---
X X X	CHAINLINK FENCE	X X X
---	CONCRETE SIDEWALK	---
GAS	GAS LINE	GAS
U.U. O.H.U.	UNDERGROUND/OVERHEAD UTILITY	N/A
PERF	PERFORATED PIPE	PERF
SS	SANITARY SEWER	SS
SD	STORM DRAIN	SD
W	WATER LINE	W
N/A	CURVE NUMBER	2%
N/A	GRADE PERCENT	2%
N/A	RIP RAP	2%
*	STREET LIGHT	N/A
●	TREE	N/A
---	STORM DRAIN AREA DRAIN	---
---	BLOW OFF	---
---	FIRE HYDRANT	---
---	GATE VALVE	---
---	MANHOLE	---
---	SANITARY SEWER CLEANOUT	---
---	STORM DRAIN INLET	---
---	WATER METER	---
---	TOWER MOUNTED DUST BOSS	---

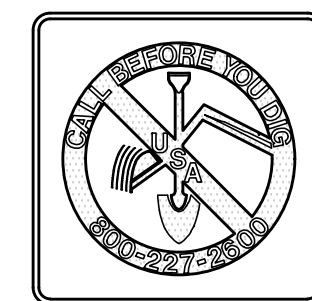
SITE PLAN & SHEET INDEX MAP

SCALE: 1"=80'



ABBREVIATIONS

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
ACP	ASBESTOS CEMENT PIPE	MIN	MINIMUM
AD	AREA DRAIN	N/A	NOT APPLICABLE
AP	ANGLE POINT	OG	ORIGINAL GROUND
BC	BEGIN CURVE	O.H.U.	OVERHEAD UTILITY
BF	BOTTOM OF FOOTING	OHS	OVERHEAD SPRAY UNIT
BVC	BLOW OFF	PAV	PAVEMENT
BW	BEGIN VERTICAL CURVE	POC	POINT OF COMPOUND CURVE
CL	CENTERLINE	PERF	PERFORATED PIPE
DG	DECOMPOSED GRANITE	POC	POINT ON CURVE
DWY	DRIVEWAY	PRC	POINT OF REVERSE CURVATURE
EC	END OF CURVE	PVC	POLYVINYL CHLORIDE
ELEV	ELEVATION	PVI	POINT OF VERTICAL INTERSECTION
EVC	END OF VERTICAL CURVE	R	RADIUS
EW	END WALL	RC	RECYCLED WATER
EX	EXISTING	RCP	REINFORCED CONCRETE PIPE
FF	FINISH FLOOR	RET	RETURN (CURB)
FG	FINISH GRADE	RI	RODDING INLET
FL	FIRE HYDRANT	RSR	RISER
FLSO	FLOW LINE SIDE OPENING	RT	RIGHT
FW	FIRE WATER MAIN	RW	RIGHT OF WAY
GB	GRADE BREAK	S	SLOPE
GFF	GARAGE FINISH FLOOR	SD	STORM DRAIN
GL	GARAGE LIP	SO	SIDE OPENING
GR	GRATE	SS	SANITARY SEWER
HB	HOSE BIB	SSCO	SANITARY SEWER CLEAN OUT
HDPE	HIGH-DENSITY POLYETHYLENE	SSMH	SANITARY SEWER MANHOLE
HP	HIGH POINT	SWK	SIDEWALK
INV	INVERT	TC	TOP OF CURB
LAT	LATERAL	TDC	TOP OF DEPRESSIONED CURB
LT	LEFT	TRC	TOP OF REINFORCED CURB
		TW	TOP OF WATER MAIN PRIOR TO INSTALLATION
		VF	VERTICAL
		VCP	VITRIFIED CLAY PIPE
		U.U.	UNDERGROUND UTILITY
		W	WITH WATER MAIN OR WATER SERVICE
		WM	WATER METER



REVIEW COPY
SUBJECT TO REVISION
NOT FINAL
THIS NOTICE TO BE REMOVED UPON
COMPLETION OF MAP AND UPON
AGENCY/CLIENT APPROVAL OF MAP

WDID#

Planning
Surveying & Mapping
Land Development Engineering
Municipal Engineering
Construction Staking
Construction Management
SWPPP Monitoring & Reporting

MILANI
& Associates

2655 Stanwell Drive, Suite 105
Concord, CA 94520
Phone: (925) 674-9082
Fax: (925) 674-9279
Web: www.milaniassociates.com

APN 439-0070-013 & 014

3898 DEPOT ROAD BAY AREA CONCRETE RECYCLING

IMPROVEMENT PLANS COVER SHEET & NOTES

CITY OF HAYWARD

ALAMEDA COUNTY

CALIFORNIA

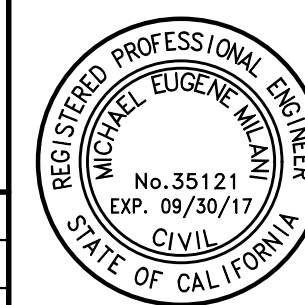
DESIGNED UNDER THE DIRECTION OF:

MICHAEL E. MILANI
R.C.E. No. 35121 REGISTRATION EXPIRES 9-30-17

DESIGN: KRA JOB NO: 666

DRAWN: KRA DATE: APRIL 2017

CHECKED: MEM SCALE: AS SHOWN



NO.	REVISIONS	BY	APP	DATE	SHEET
					1
					22
					OF SHEETS

GENERAL NOTES

1. CITY OF HAYWARD STANDARD DRAWINGS AND SPECIFICATIONS, SPECIFIC NOTES AND DETAIL DRAWINGS HEREON , TAKE PRECEDENCE OVER GENERAL DRAWINGS AND PLANS UNLESS OTHERWISE DIRECTED BY ENGINEER. ANY DEVIATION FROM APPROVED PLANS DURING CONSTRUCTION WILL REQUIRE 48 HOURS PRIOR NOTICE TO THE ENGINEER AND APPROVAL OF THE CITY ENGINEER. AT LEAST ONE SET OF PLANS SHALL BE ON THE SITE AT ALL TIMES FOR INSPECTION.
2. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONNEL, CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.
3. EXCAVATIONS SHALL BE ADEQUATELY SHORED, BRACED AND SHEETED SO THAT THE EARTH WILL NOT SLIDE OR SETTLE AND SO THAT ALL EXISTING IMPROVEMENTS OF ANY KIND WILL BE FULLY PROTECTED FROM DAMAGE. ANY DAMAGE RESULTING FROM LACK OF ADEQUATE SHORING, BRACING AND SHEETING, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND HE SHALL EFFECT NECESSARY REPAIRS OR RECONSTRUCTION AT HIS SOLE EXPENSE. WHERE THE EXCAVATION FOR A CONDUIT TRENCH, STRUCTURE AND/OR BORING OR JACKING PIT IS FIVE FEET OR MORE IN DEPTH THE CONTRACTOR SHALL CONFORM TO THE APPLICABLE CONSTRUCTION SAFETY ORDERS OF THE DIVISION OF INDUSTRIAL SAFETY OF THE STATE OF CALIFORNIA. THE CONTRACTOR SHALL ALWAYS COMPLY WITH O.S.H.A. REQUIREMENTS.
4. CONTRACTOR SHALL COMPLY WITH ALL STATE, COUNTY AND CITY LAWS AND ORDINANCES, AND REGULATIONS OF THE DEPARTMENT OF INDUSTRIAL RELATIONS, O.S.H.A., AND INDUSTRIAL ACCIDENT COMMISSION RELATING TO THE SAFETY AND CHARACTER OF WORK, EQUIPMENT, AND LABOR PERSONNEL.
5. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST CITY OF HAYWARD STANDARD PLANS AND SPECIFICATIONS, AND SHALL BE SUBJECT TO INSPECTION BY THE CITY OF PLEASANT HILL ENGINEERING DIVISION.
6. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE REQUIREMENTS OF THE DIVISION OF INDUSTRIAL SAFETY PERTAINING TO "CONFINED SPACES." ANY MANHOLE, CULVERT, DROP INLET OR TRENCH (WHICH COULD CONTAIN AIR), THAT IS NOT READILY VENTILATED, MAY BE CONSIDERED A "CONFINED SPACE."
7. CONTRACTOR SHALL POST EMERGENCY TELEPHONE NUMBERS FOR PUBLIC WORKS, AMBULANCE, POLICE DEPARTMENT AND FIRE DISTRICT AT THE JOB SITE.
8. NOISE-PRODUCING CONSTRUCTION AND GRADING OPERATIONS SHALL BE LIMITED TO WEEKDAYS (MONDAY THROUGH FRIDAY) EXCEPT CITY HOLIDAYS AND FROM 7:30 A.M. TO 6:00 P.M. ALL EQUIPMENT SHALL BE ADEQUATELY MUFFLED AND MAINTAINED. NO CHANGES SHALL BE ALLOWED WITHOUT PRIOR WRITTEN CONSENT OF THE CITY. ALL REQUESTS FOR CHANGES MUST BE MADE A MINIMUM OF 72 HOURS PRIOR TO THE REQUESTED CHANGE.
9. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAG MEN, OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY AND TO MAINTAIN TRAFFIC CONTROL AT ALL TIMES. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE CITY FOR APPROVAL BEFORE ANY WORK IS PERFORMED IN THE STREET.
10. IT SHALL BE UNDERSTOOD THAT THE TERM "CITY ENGINEER" AS USED HEREIN IS THE CITY ENGINEER OF THE CITY OF HAYWARD OR HIS AUTHORIZED REPRESENTATIVE.
11. ENCROACHMENT PERMITS ARE REQUIRED FOR WORK WITHIN PUBLIC RIGHTS OF WAY AND SHALL BE OBTAINED BY THE CONTRACTOR.
12. OBSTRUCTIONS INDICATED ARE FOR INFORMATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND DEPTH OF ALL OBSTRUCTIONS WITH THE APPROPRIATE AGENCIES. NEITHER THE OWNER NOR THE ENGINEER ASSUMES RESPONSIBILITY THAT THE OBSTRUCTIONS INDICATED WILL BE THE OBSTRUCTIONS ENCOUNTERED.
13. THE CONTRACTOR SHALL NOT DISTURB OR DESTROY ANY PERMANENT SURVEY POINTS WITHOUT THE CONSENT OF THE ENGINEER. ANY PERMANENT MONUMENT OR POINTS DESTROYED SHALL BE RESTORED BY A REGISTERED ENGINEER OR LICENSED SURVEYOR AT THE CONTRACTOR'S SOLE EXPENSE.
14. FENCE LINES, POLES, PROPERTY LINES, AND PROPERTY IMPROVEMENT, ADJACENT TO THE PROPOSED CONSTRUCTION OPERATION SHALL BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION OPERATION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY THESE AREAS WITH THE ENGINEER AND OWNER PRIOR TO BEGINNING CONSTRUCTION.
15. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN CONTROL OF THE ENTIRE CONSTRUCTION OPERATION AND TO MINIMIZE EROSION.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ARRANGING REQUIRED INSPECTIONS AND SHALL GIVE NOTICE TO THE CITY ENGINEER, GEOTECHNICAL ENGINEER, PROJECT ENGINEER, OR OTHER REQUIRED INDIVIDUALS OR AGENCIES A MINIMUM OF 48 HOURS PRIOR TO, BUT NOT LIMITED TO, THE FOLLOWING: 1) BEGINNING OF ANY GRADING ACTIVITY; 2) COMPLETION OF ROUGH GRADING; 3) COMPLETION OF FINAL GRADING; 4) COMPLETION OF ALL EROSION CONTROL MEASURES; AND 5) READINESS OF SITE FOR FINAL SITE INSPECTION.
17. THE CONTRACTOR SHALL CONTROL DUST BY WATERING EXPOSED SURFACES AS NEEDED. INCREASED WATERING SHALL BE REQUIRED WHEN WIND SPEEDS EXCEED 10 MPH OR WHEN DIRECTED BY THE CITY.
18. NO PERSON SHALL, WHEN HAULING ANY EARTH, SAND, GRAVEL, STONE, DEBRIS, PAPER, OR ANY OTHER SUBSTANCE OVER ANY PUBLIC STREET, ALLEY OR OTHER PUBLIC PLACE, ALLOW MATERIAL TO BLOW OR SPILL OVER AND UPON SAID PUBLIC OR ADJACENT PRIVATE PROPERTY. ALL LOADS LEAVING THE SITE SHALL BE COVERED.
19. THE CONTRACTOR SHALL PROVIDE ADEQUATE CONSTRUCTION MEASURES TO PREVENT THE TRACKING OF SOIL, DUST, OR CONSTRUCTION DEBRIS ON PUBLIC STREETS.
20. ALL CONSTRUCTION STAKING SHALL BE DONE BY A REGISTERED CIVIL ENGINEER OR LICENSED LAND SURVEYOR. THE NUMBER AND LOCATION OF STAKES REQUIRED SHALL BE DETERMINED BEFORE CONSTRUCTION BEGINS. ALL STAKING REQUESTS SHALL BE DIRECTED TO THE ENGINEER A MINIMUM OF 48 HOURS PRIOR TO ACTUAL NEED. ANY ADDITIONAL STAKING OR RESTAKING WILL ONLY BE DONE AS DIRECTED AND AUTHORIZED BY THE OWNER OR HIS AUTHORIZED AGENT. THE CITY ENGINEER HAS THE AUTHORITY TO REQUIRE THE OWNER OR HIS AUTHORIZED AGENT TO PLACE ADDITIONAL STAKES OR RESTAKES AS HE DEEMS NECESSARY FOR PROPER CONSTRUCTION OR TO AVOID CONFLICTS.
21. ALL EXISTING ELEVATIONS SHOWN ARE AS MEASURED IN THE FIELD, UNLESS OTHERWISE NOTED.
22. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL NECESSARY UTILITY RELOCATIONS WITH THE APPROPRIATE UTILITY COMPANIES.
23. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT IN PLACE (BY ANY MEANS NECESSARY) ALL EXISTING UTILITIES UNLESS OTHERWISE SPECIFIED ON THESE PLANS OR AS DIRECTED BY THE ENGINEER.
24. THE CONTRACTOR SHALL REMOVE ALL TREES INCLUDING MAJOR ROOT SYSTEMS AND OTHER OBSTRUCTIONS NECESSARY FOR PUBLIC IMPROVEMENTS OR FOR PUBLIC SAFETY AS DIRECTED BY THE CITY ENGINEER AND THE PROJECT ARBORIST.
25. ALL EXISTING WELLS, SEPTIC TANKS, OR HOLDING TANKS LOCATED ON THE PROPERTY SHALL BE SEALED, FILLED AND ABANDONED PRIOR TO THE START OF GRADING OPERATIONS, AS DIRECTED BY THE CITY ENGINEER. CONTRACTOR SHALL OBTAIN APPROPRIATE COUNTY PERMITS AND INSPECTIONS AND SUBMIT COPIES TO ENGINEERING DIVISION.
26. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THE EXISTENCE OF ANY AND ALL UNDERGROUND FACILITIES, WHICH MAY BE SUBJECT TO DAMAGE BY REASON OF HIS OPERATIONS. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA) AT 811, 48 HOURS PRIOR TO ANY EXCAVATION. WORK SHALL START WITHIN 5 DAYS AFTER THE ISSUANCE OF A USA INQUIRY IDENTIFICATION NUMBER. COMPLETE REMOVAL OF THE USA MARKINGS SHALL BE WITHIN 2 WORKING DAYS AFTER COMPLETION OF THE EXCAVATION, BACKFILL AND SURFACE REPLACEMENT OR FOURTEEN (14) CALENDAR DAYS FOLLOWING THE ISSUANCE OF THE INQUIRY IDENTIFICATION NUMBER WHICHEVER IS EARLIER.
27. IF ARCHAEOLOGICAL MATERIALS ARE UNCOVERED DURING GRADING, TRENCHING OR OTHER EXCAVATION, EARTHWORK WITHIN 100 FEET OF THESE MATERIALS SHALL BE STOPPED UNTIL A PROFESSIONAL ARCHAEOLOGIST WHO IS CERTIFIED BY THE SOCIETY OF CALIFORNIA ARCHAEOLOGY OR S.O.P.A. HAS HAD AN OPPORTUNITY TO EVALUATE THE SIGNIFICANCE OF THE FIND AND SUGGEST APPROPRIATE MITIGATION MEASURES, IF THEY ARE DEEMED NECESSARY.
28. THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF ALL GRADING OPERATIONS AND RECEIVE APPROVAL OF SAID SCHEDULE FROM THE CITY ENGINEER PRIOR TO OR THE DAY OF THE PRE-CONSTRUCTION CONFERENCE.

GENERAL NOTES CONTINUED

29. NO GRADING OR RELATED WORK SHALL BE DONE PRIOR TO THE ISSUANCE OF A GRADING PERMIT.
30. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REMOVE FROM THE SITE ALL MATERIALS RESULTING FROM CLEARING, GRUBBING AND DEMOLITION OPERATIONS.
31. A PRECONSTRUCTION CONFERENCE SHALL BE SCHEDULED AT LEAST TWO WORKING DAYS IN ADVANCE OF COMMENCEMENT OF ANY CONSTRUCTION WORK FOR THE IMPROVEMENTS DELINEATED WITHIN THIS SET OF PLANS. THE FOLLOWING INDIVIDUALS SHALL BE IN ATTENDANCE: OWNER, LANDSCAPE ARCHITECT, CONTRACTORS, CITY ENGINEER, CONSTRUCTION INSPECTOR OR THEIR AUTHORIZED REPRESENTATIVES.
32. BEST MANAGEMENT PRACTICES SHALL BE UTILIZED AT ALL TIMES TO COMPLY WITH THE CITY OF PLEASANT HILL STORM WATER MANAGEMENT AND DISCHARGE CENTRAL ORDINANCE.
33. STOCKPILED TOPSOIL SHALL BE UTILIZED FOR ONSITE REVEGETATION ONLY.
34. REFUELING OF VEHICLES AND EQUIPMENT SHALL BE PROHIBITED WITHIN 100 FEET OF ALL DRAINAGES.
35. ALL EQUIPMENT AND VEHICLES SHALL BE CLEAN AND FREE OF GREASE AND/OR HYDRAULIC LEAKS.
36. ALL TRENCH BACKFILL SHALL CONFORM TO CITY OF HAYWARD STANDARD PLANS. (PUBLIC AND PRIVATE)
37. STOCKPILES OF SOIL, TOPSOIL, CONSTRUCTION DEBRIS, OR ANY OTHER MATERIALS WHICH MAY BE A POTENTIAL SOURCE OF WINDBLOWN PARTICULATES SHALL BE COVERED DURING SITE PREPARATION AND CONSTRUCTION ACTIVITIES, AS NECESSARY OR AS DIRECTED BY THE CITY.
38. THE PROJECT APPLICANT SHALL SWEEP STREETS DAILY, OR AS NECESSARY, WITH WATER SWEEPERS IF VISIBLE SOIL MATERIAL IS CARRIED ONTO ADJACENT PUBLIC STREETS.
39. THE CONTRACTOR SHALL SUBMIT A NOISE CONTROL PLAN AND A DUST CONTROL PLAN TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF WORK.
40. THE PERMITTEE/CONTRACTOR SHALL NOTIFY THE CITY OF HAYWARD ENGINEERING DIVISION TWO (2) BUSINESS DAYS PRIOR TO THE START OF ANY WORK.
41. CONTACTING USA DOES NOT RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITY TO DETERMINE LOCATION AND DEPTH OF BURIED UTILITIES OR REPAIR OF BURIED UTILITIES DAMAGED BY HIS OPERATION.
42. THE CONTRACTOR IS RESPONSIBLE FOR MATCHING EXISTING STREETS, SURROUNDING LANDSCAPE AND OTHER IMPROVEMENTS, SURROUNDING LANDSCAPE AND OTHER IMPROVEMENTS WITH A SMOOTH TRANSITION IN GRADE AVOIDING ANY ABRUPT OR APPARENT CHANGES IN GRADE OR CROSS SLOPE, LOW SPOTS OR HAZARDOUS CONDITIONS.
43. MUD TRACKED ONTO STREETS OR ADJACENT PROPERTIES SHALL BE REMOVED IMMEDIATELY, STREET SHALL BE SWEEPED WITH A POWER SWEEPER (NOT PRESSURE WASHED) AS DIRECTED BY THE CITY.
44. A DISPOSAL SITE FOR ANY OFF-SITE HAUL OF DIRT MATERIALS SHALL BE APPROVED BY THE CITY PRIOR TO APPROVAL OF THE SITE DEVELOPMENT PLAN. THE OFF-SITE HAUL ROUTE FOR EXCESS DIRT OR CONSTRUCTION DEBRIS IS SUBJECT TO APPROVAL OF THE CITY ENGINEER.
45. THE CONTRACTOR SHALL SUBMIT HIS ANNUAL O.S.H.A. PERMIT AT THE PRE-CONSTRUCTION MEETING.

TRAFFIC CONTROL NOTES

1. TRAFFIC CONTROL DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF "TRAFFIC CONTROLS IN CONSTRUCTION AND MAINTENANCE WORK ZONES" BY THE U.S. DEPARTMENT OF TRANSPORTATION.
2. THE CONTRACTOR SHALL PROVIDE, AT ALL TIMES, LIGHTS, SIGNS, BARRICADES, CONES, FLAG MEN OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY AND TO MAINTAIN TRAFFIC CONTROLS.
3. THE CONTRACTOR SHALL LIMIT ANY LANE CLOSURES TO ONE LANE AT A TIME AND TO ONE SIDE OF THE ROADWAY ON ANY UNDIVIDED STREET UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY OF PLEASANT HILL ENGINEERING DEPARTMENT.
4. THE PERMITTEE SHALL NOTIFY, IN WRITING, ANY PROPERTY/BUSINESS OWNERS OF IMPENDING DETOURS OR LANE CLOSURES THAT MAY IMPACT THEIR PROPERTY AND/OR BUSINESS. THE WRITTEN NOTICE WILL BE HAND DELIVERED THREE (3) BUSINESS DAYS PRIOR TO IMPLEMENTING THE DETOUR AND/OR LANE CLOSURE. THE PERMITTEE SHALL SUBMIT TO THE CITY PROOF THAT NOTICE WAS GIVEN AT LEAST TWO (2) BUSINESS DAYS PRIOR TO THE START OF WORK.
5. OVERNIGHT STORAGE OF CONSTRUCTION MATERIALS AND/OR EQUIPMENT IS NOT PERMITTED IN THE PUBLIC RIGHT-OF-WAY UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY OF HAYWARD. NO STORAGE OF MATERIAL SHALL BE ALLOWED, AT ANY TIME, WITHIN 40 FOOT OF AN INTERSECTION OR DRIVEWAY.

FIRE DISTRICT NOTES:

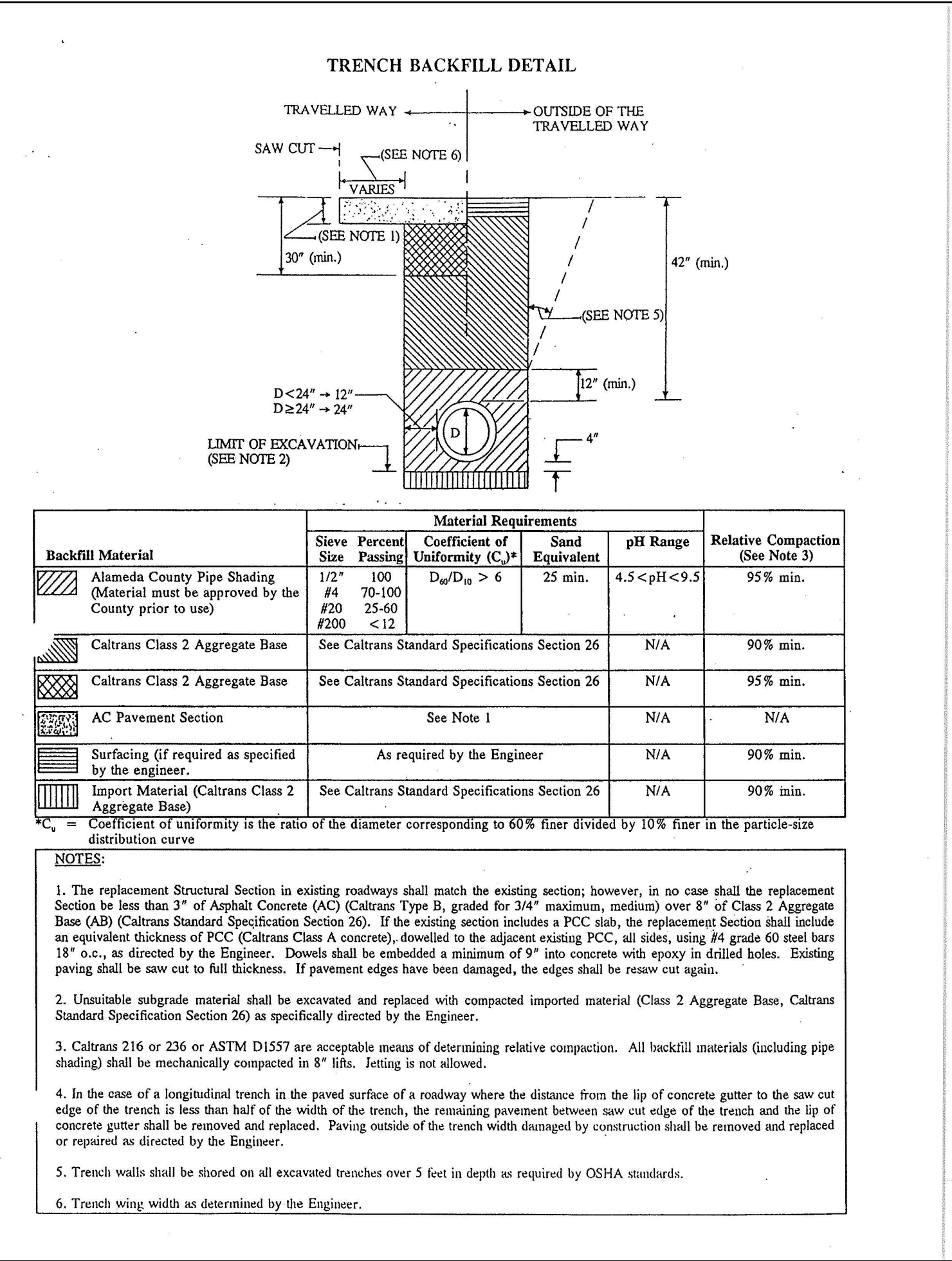
1. FIRE APPARATUS ROADWAYS MUST BE INSTALLED AND FIRE HYDRANT IN SERVICE PER CONSTRUCTION STAGING PLAN PRIOR TO THE COMMENCEMENT OF ANY COMBUSTIBLE MATERIAL. (2" OF ASPHALT IS REQUIRED TO BE INSTALLED.) FINAL LIFT OF ASPHALT TO BE INSTALLED WITHIN 30 DAYS OF SUBSTANTIAL COMPLETION.
2. PRIOR TO COMMENCEMENT OF FRAMING, CONTRACTOR TO CONTACT CITY OF HAYWARD FIRE DEPARTMENT TO SCHEDULE AN INSPECTION OF ROADWAYS AND FIRE
3. ALL DOMESTIC WATER PIPE TO BE SCHEDULE 80 PVC ~ W/ SOLVENT WELD FITTINGS
4. ALL FIRE WATER PIPE TO BE C900 PVC CLASS 305. ALL FIRE LINES SHALL BE INSTALLED IN CONFORMANCE WITH CURRENT NFPA STANDARDS. ALL VALVE AND FITTINGS SHALL BE UL AN FM APPROVED. FIRE WATER LINES WILL BE SUBJECT TO THE PREPARATION OF SHOP DRAWINGS TO BE SUBMITTED BY THE OWNERS FIRE WATER UNDERGROUND CONTRACTOR FOR FIRE DEPARTMENT PERMIT INSPECTION PURPOSES.
5. BACKFLOW PREVENTOR TO BE APPROVED AND TO BE INSTALLED PER CITY OF HAYWARD REQUIREMENTS.
6. ALL FIRE LINE EQUIPMENT TO BE UL LISTED AND/OR FM APPROVED AS APPROVED BY THE CITY OF HAYWARD FIRE DEPARTMENT.
7. FIRE LINE INSTALLATION TO INCLUDE THRUST RESTRAINT AT ALL BENDS, ELBOWS, AND/OR AS REQUIRED BY NFPA AND THE CITY OF HAYWARD FIRE DEPARTMENT.

STORM DRAIN NOTES:

1. ON-SITE STORM DRAIN PIPE 12" & 15" SHALL BE "ADS N-12 WT IB" REFER TO ADS FOR INSTALLATION REQUIREMENTS.
2. ON-SITE STORM DRAIN PIPE 6" SOLID & PERFORATED SHALL BE SDR-35.
3. ALL OVER FLOW INLETS WITH BIO-RETENSION AREAS SHALL BE INSTALLED WITH A "REM TOP HAT FILTER"

PRIVATE SANITARY SEWER FACILITIES

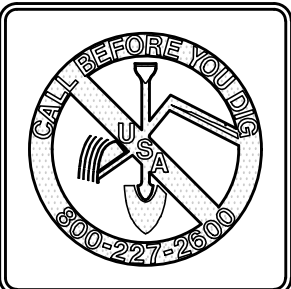
1. ON-SITE PRIVATE SANITARY SEWER PIPE AND FITTINGS SHALL BE PVC PIPE IN CONFORMANCE WITH ASTM D 3034, SDR 26 OR AWWA C900, CLASS 200.



ALAMEDA COUNTY TRENCH BACKFILL REQUIREMENTS

FOR STORM DRAIN CONNECTION TO EXISTING 60" SD LINE - DEPOT ROAD (NTS)

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APN 439-0070-013 & 014

3898 DEPOT ROAD BAY AREA CONCRETE RECYCLING

IMPROVEMENT PLANS
GENERAL NOTES

CITY OF HAYWARD

ALAMEDA COUNTY

CALIFORNIA

DESIGNED UNDER THE DIRECTION OF:

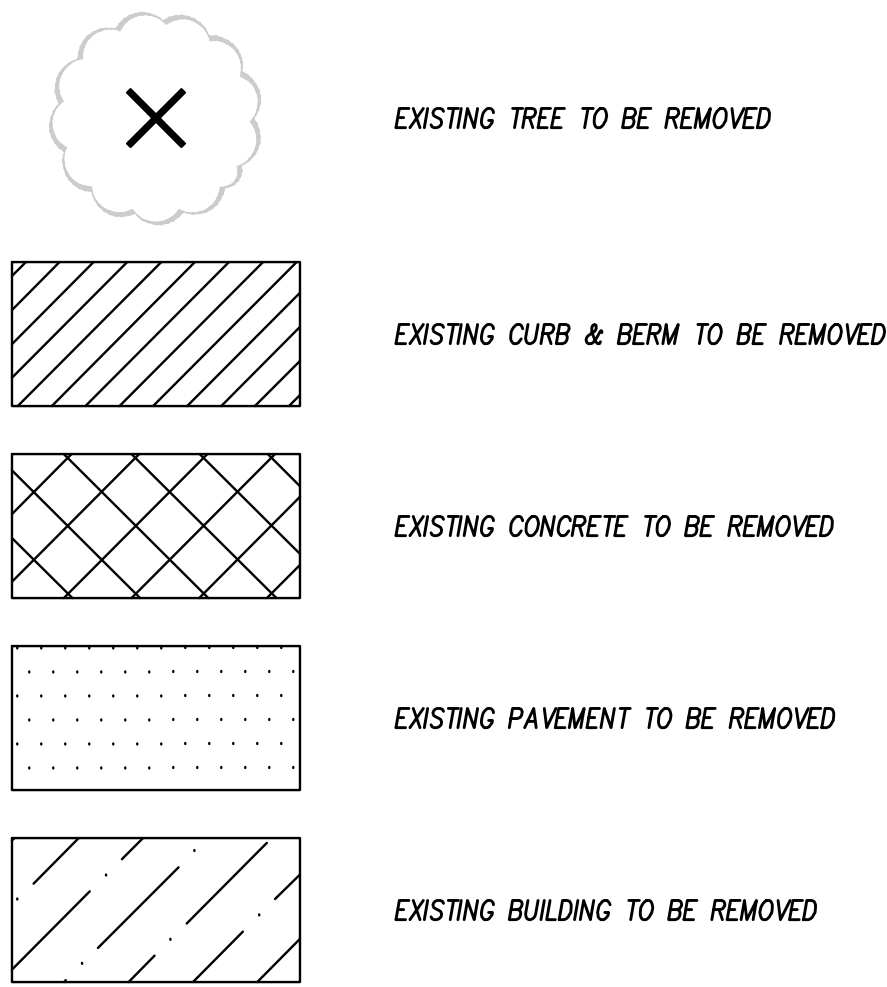
MICHAEL E. MILANI R.C.E. No. 35121 REGISTRATION EXPIRES 9-30-17		DATE	
DESIGN: KRA		JOB NO: 666	
DRAWN: KRA		DATE: APRIL 2017	
CHECKED: MEM		SCALE: AS SHOWN	



NO.	REVISIONS	BY	APP	DATE

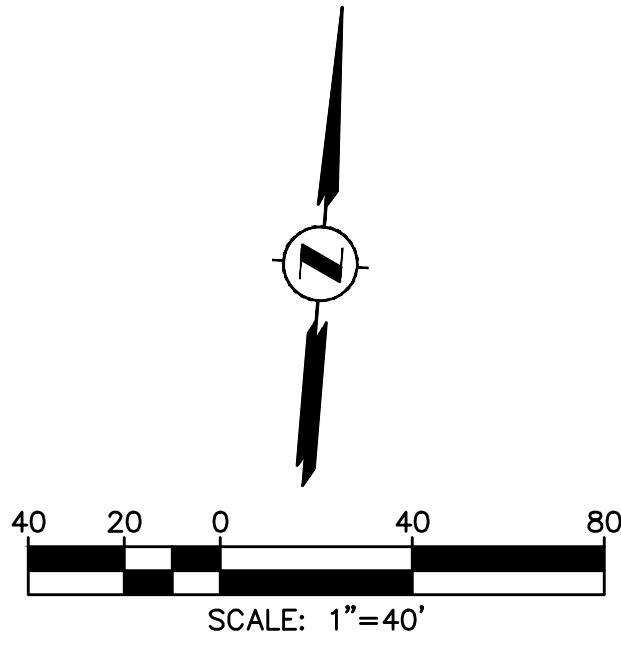
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OF	22 SHEETS

DEMOLITION LEGEND



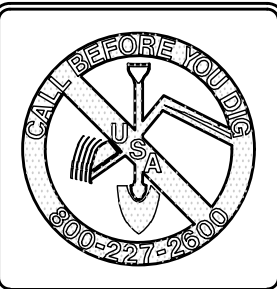
DEMOLITION QUANTITIES

PORTABLE BUILDING REMOVAL	1,115 SF
CONCRETE REMOVAL	9,980 SF
AC PAVEMENT REMOVAL	20,700 SF
CONCRETE CURB REMOVAL	1,015 LF
CHAINLINK/METAL FENCE REMOVAL	1,370 LF
AC BERM REMOVAL	275 LF
TREE REMOVAL	4 TOTAL



PARCEL 1
PARCEL MAP 2702
BOOK 109 PAGE 65
APN-439-0070-014

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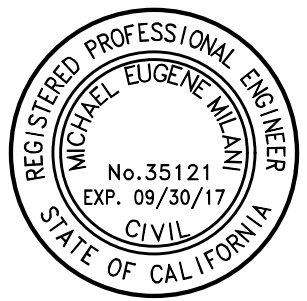
APN 439-0070-013 & 014 3898 DEPOT ROAD BAY AREA CONCRETE RECYCLING

IMPROVEMENT PLANS
DEMOLITION PLAN

CITY OF HAYWARD ALAMEDA COUNTY CALIFORNIA

DESIGNED UNDER THE DIRECTION OF:

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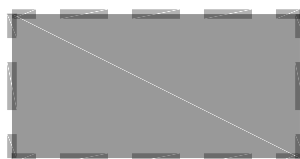
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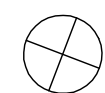
LEGEND

OE-1

OVER-EXCAVATION AREA



LIMITS OF OVER-EXCAVATION AREA



SFB-1

SOIL BORING LOCATION - REFER TO SFB SOILS REPORT

OVEREXCAVATION QUANTITIES

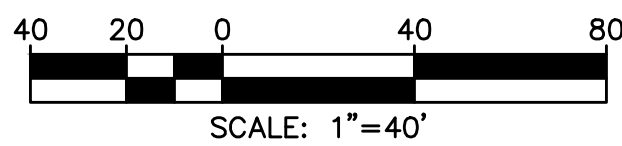
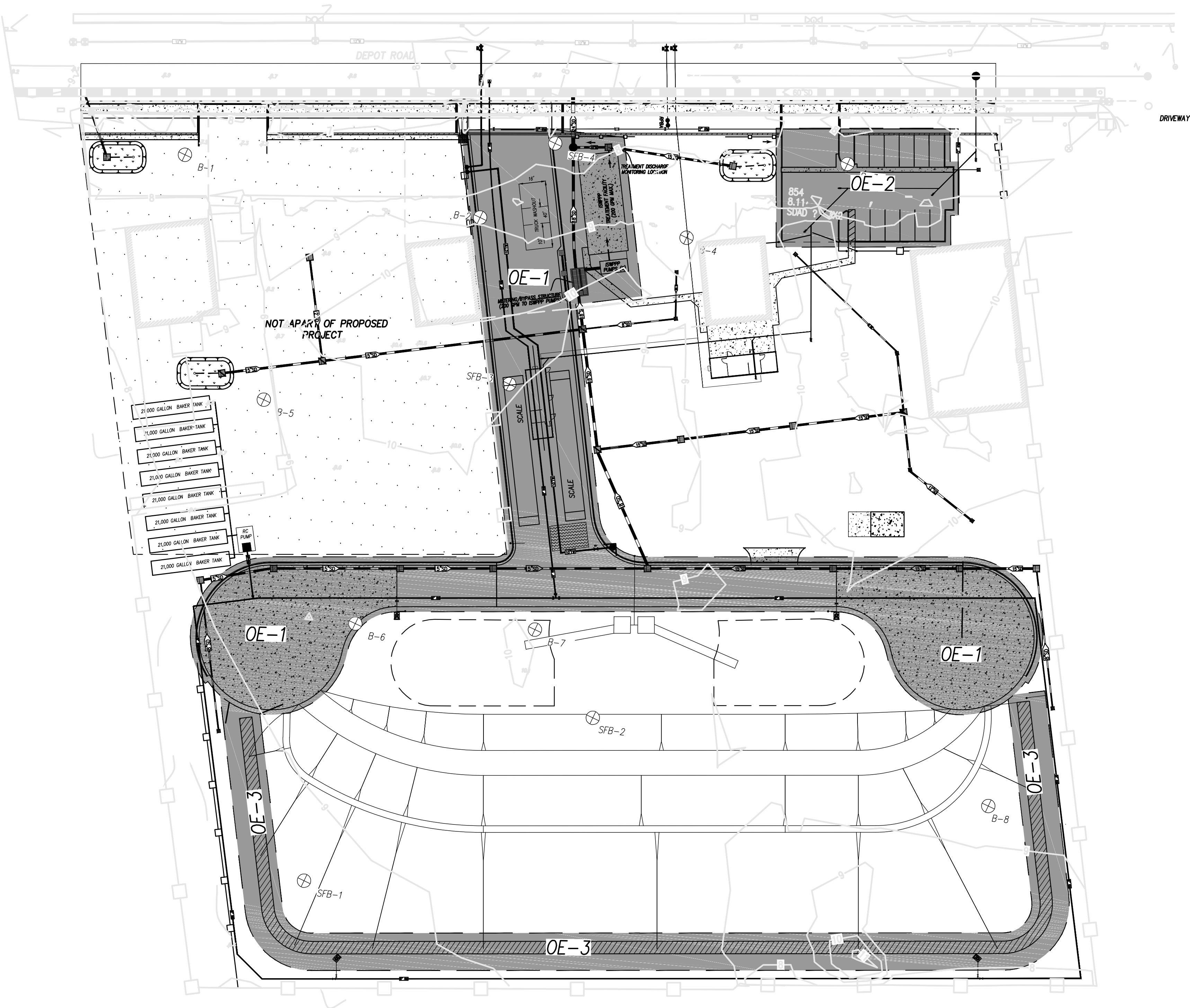
AREA	USE	AREA (SF)	ESTIMATED VOLUME (CY)
OE-1	MAIN ROAD	45,000 SF	3,350 CY
OE-2	PARKING LOT	7,700 SF	600 CY
OE-3	ULTRA BLOCK WALL	17,000 SF	1,300 CY

OVEREXCAVATION NOTES

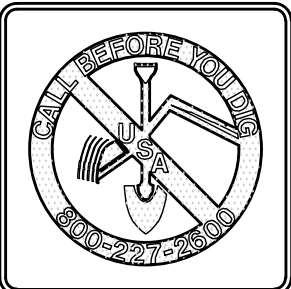
ALL OVER-EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH THE SOILS REPORTS PREPARED BY STEVES FERRONE & BAILEY (SFB). ALL WORK SHALL BE PERFORMED UNDER THE OBSERVATION OF STEVENS FERRONE AND BAILEY OR THEIR AUTHORIZED REPRESENTATIVE.

OVER-EXCAVATION SHALL CONSIST OF THE FOLLOWING:

- REMOVAL OF THE TOP TWO FEET (24") OF EXISTING SOIL.
- SCARIFY, MOISTURE CONDITION AND RECOMPACT THE UNDERLYING TWELVE INCHES (12") OF IN-SITU MATERIAL IN COMPLIANCE WITH COMPACTION REQUIREMENTS SPECIFIED UNDER SECTION 4.15 "COMPACTION" OF THE THE SFB GEOTECHNICAL REPORT 635-1.RPT DATED MAY 16, 2014 AND UPDATE AUGUST 11, 2016.



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IMPROVEMENT PLANS
REMEDIATION GRADING - OVEREXCAVATION EXHIBIT
CITY OF HAYWARD ALAMEDA COUNTY CALIFORNIA

DESIGNED UNDER THE DIRECTION OF:

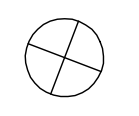
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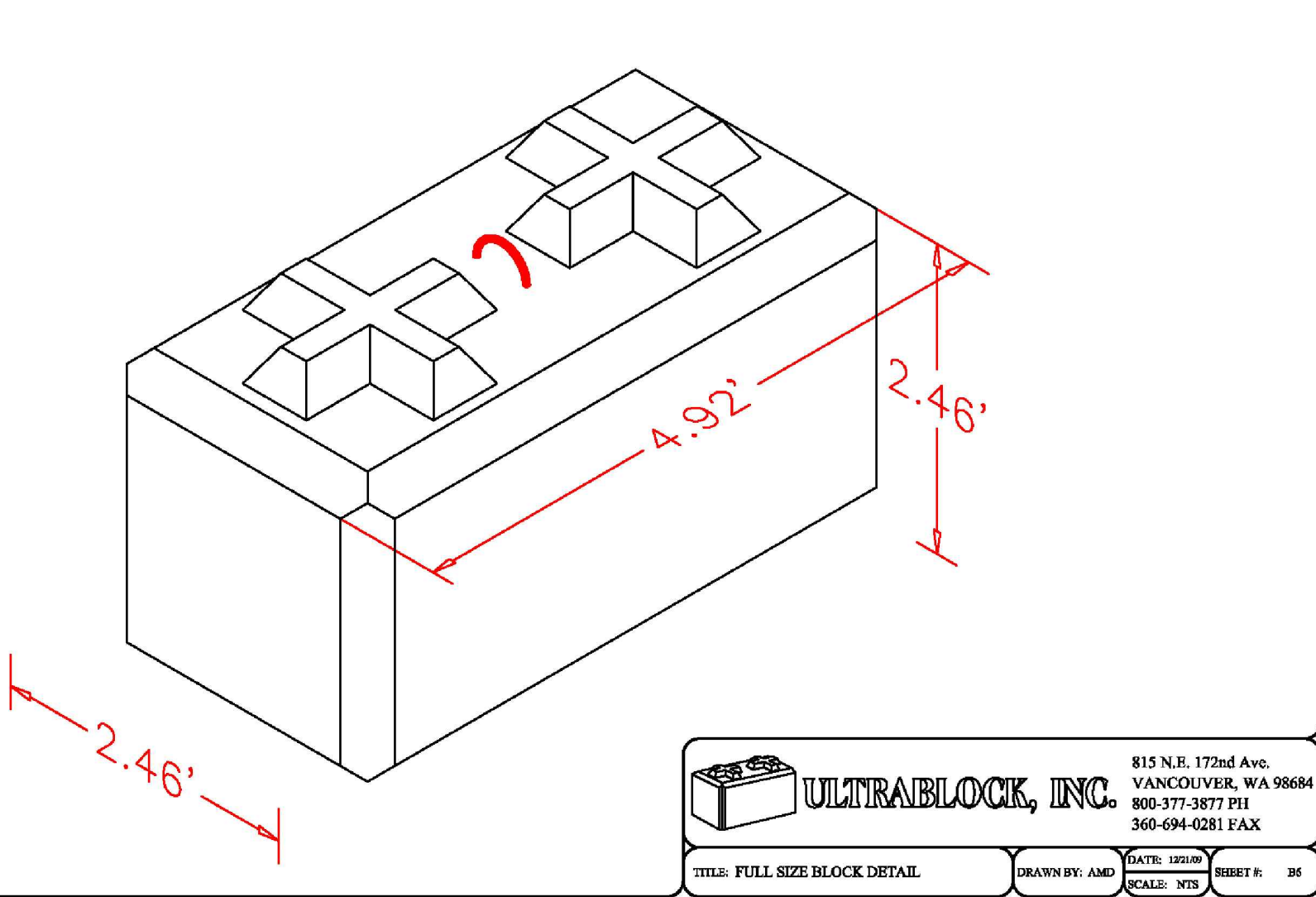


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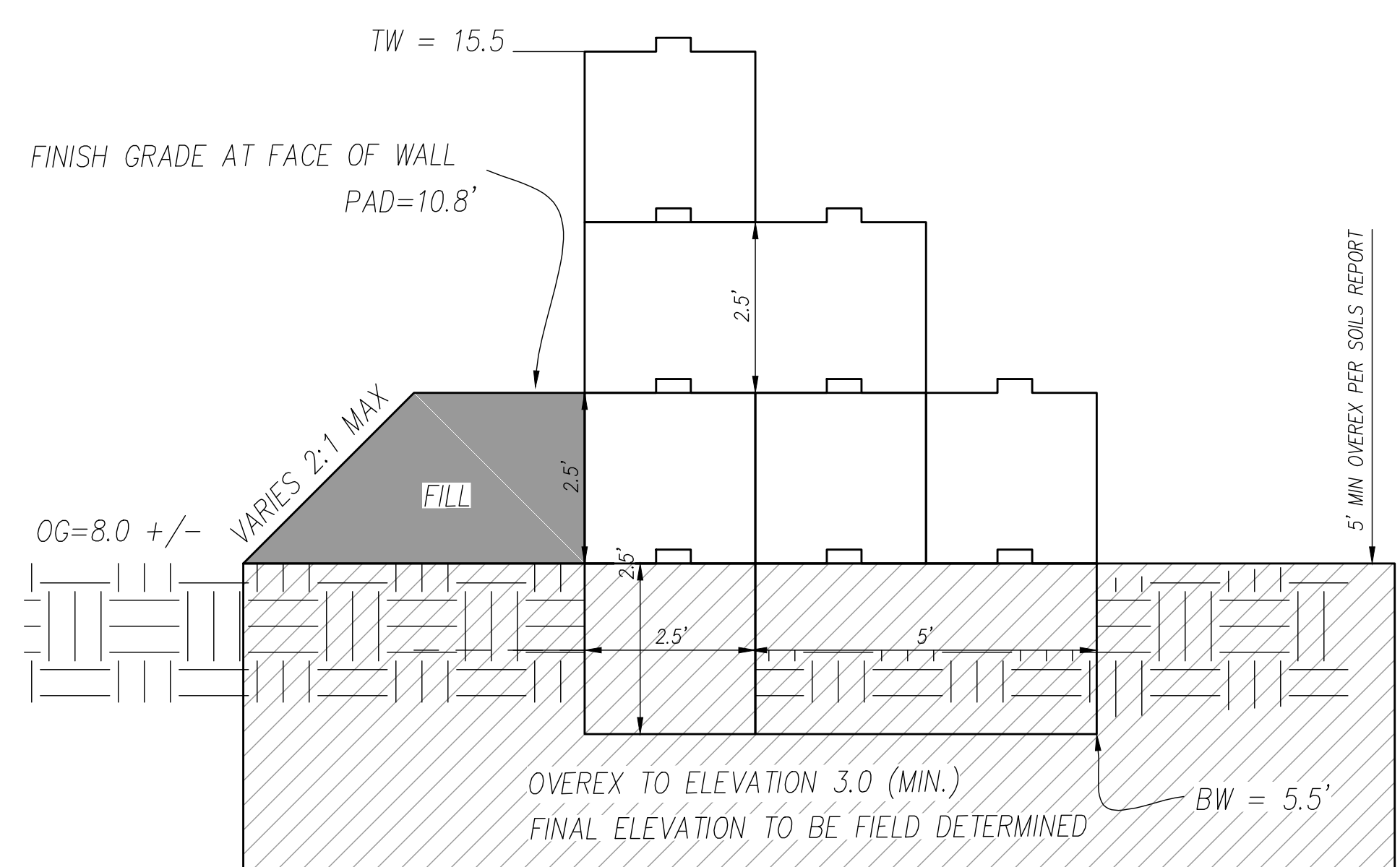
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OF SHEETS

LEGEND

 SFB-1 SOIL BORING LOCATION – REFER TO SFB SOILS REPORT



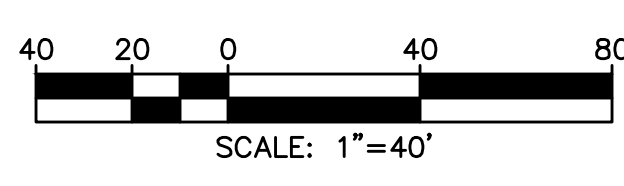
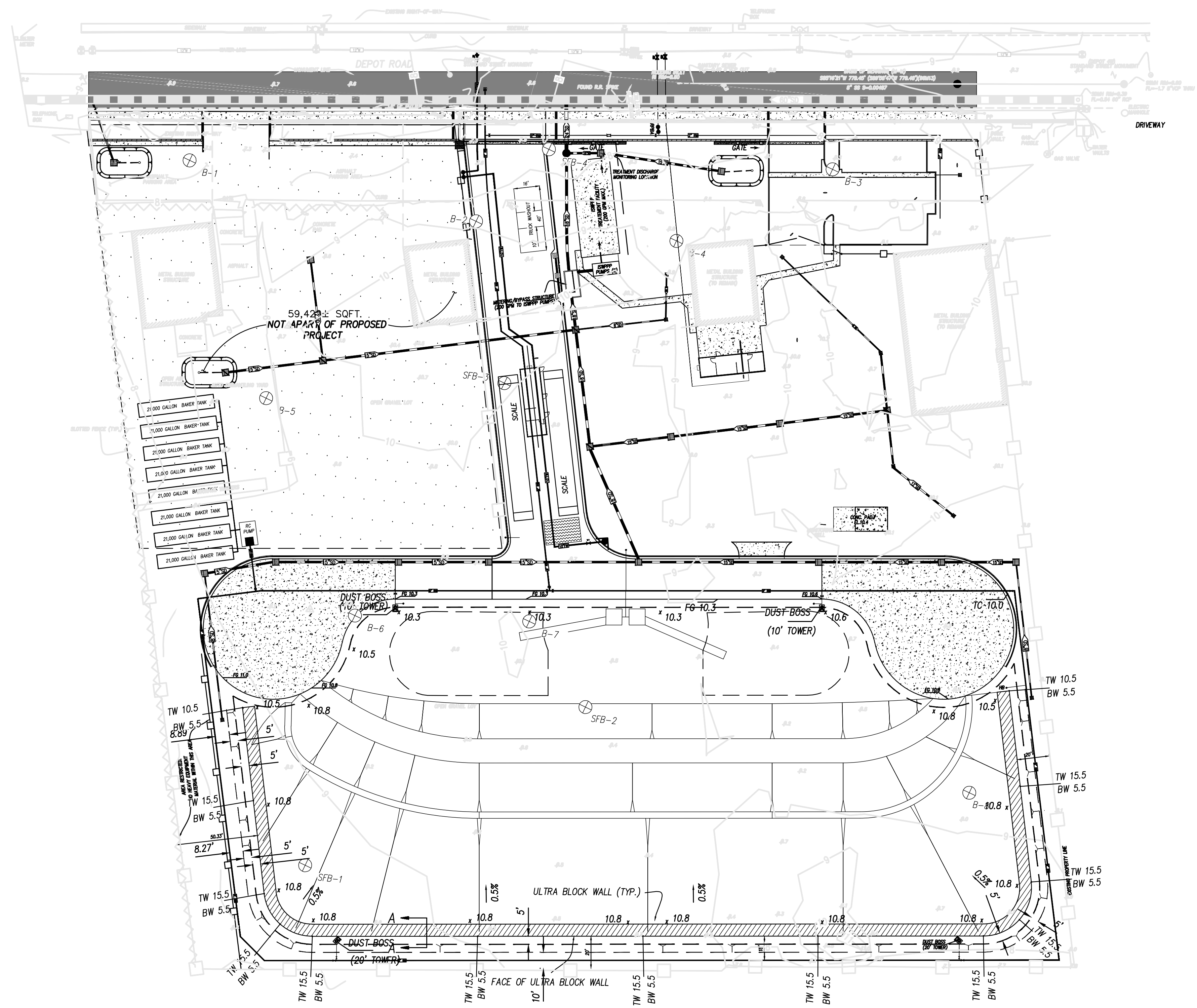
ULTRA BLOCK DETAIL



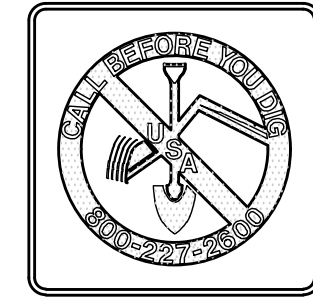
SECTION A-A (NTS)

- NOTES:
1. SEE FINAL ULTRA WALL DESIGN BY MANUFACTURER.
 2. MINIMUM LOWER COURSE IMBEDMENT 2.5' (ONE COURSE).
 3. FINAL OVEREX AT ULTRA BLOCK LOCATION TO BE DETERMINED IN THE FIELD BY OBSERVING GEOTECHNICAL ENGINEER

ULTRA BLOCK DETAIL



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IMPROVEMENT PLANS

ROUGH GRADING PLAN & ULTRA BLOCK RETAINING WALL

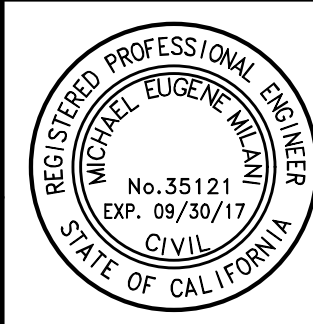
CITY OF HAYWARD ALAMEDA COUNTY CALIFORNIA

DESIGNED UNDER THE DIRECTION OF:

MICHAEL E. MILANI
R.C.E. No. 35121 REGISTRATION EXPIRES 9-30-17

DATE

DESIGN: KRA JOB NO: 666
DRAWN: KRA DATE: APRIL 2017
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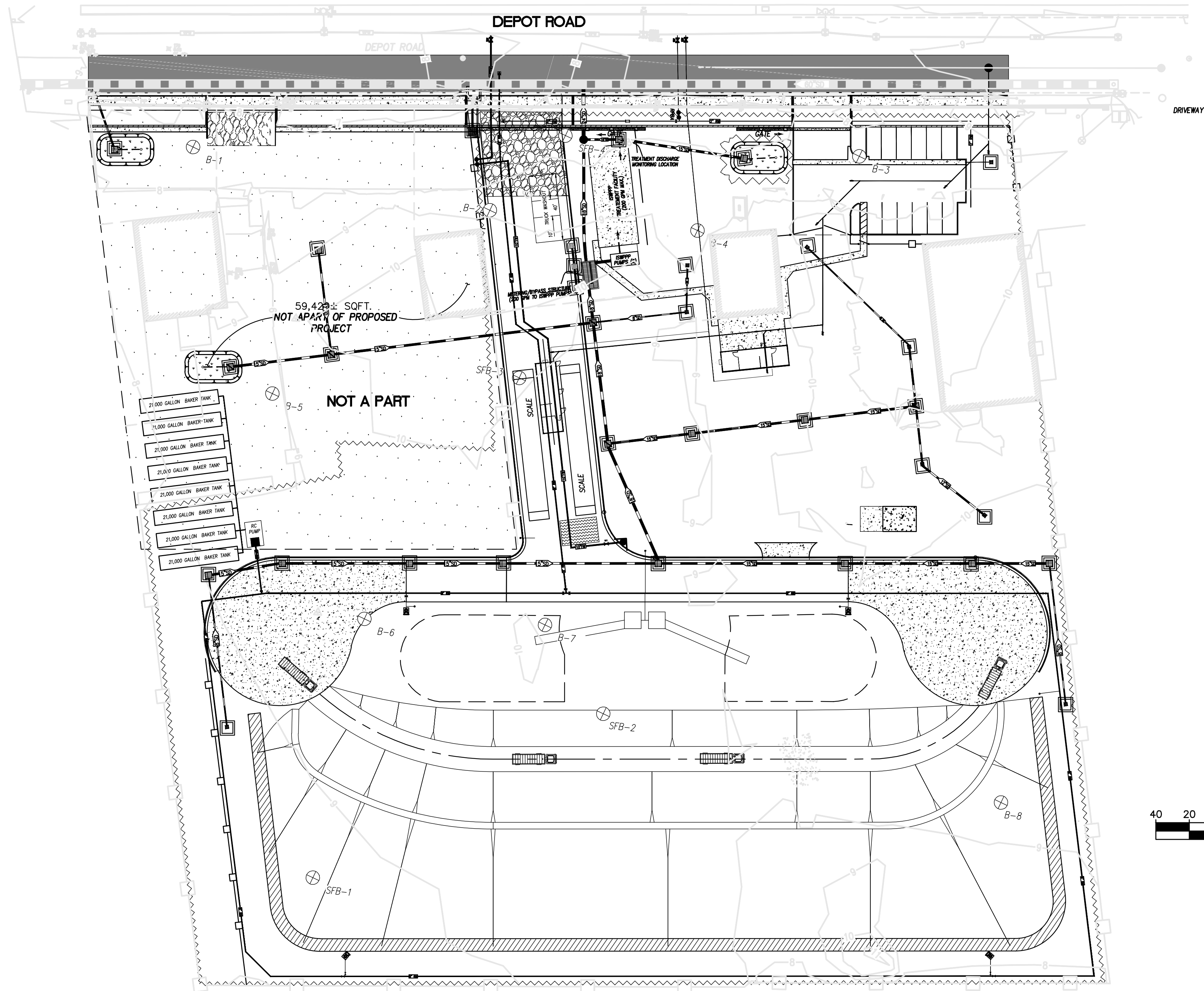
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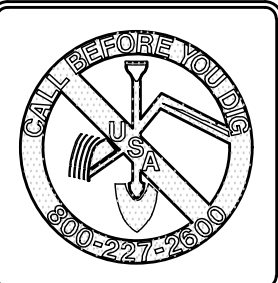
LEGEND

- BOUNDARY LINE
- TEMPORARY CONSTRUCTION FENCING
- RIP RAP / STABILIZED CONSTRUCTION ENTRANCE/EXIT (TC-1)
- FIBER ROLLS (SC-5)
- STORM DRAIN
- STORM DRAIN INLET PROTECTION (SC-10)
- NON-STORM WATER MANAGEMENT BMPs
- TEMPORARY SEDIMENT CONTROL BMPs
- TEMPORARY SOIL STABILIZATION BMPs
- TRACKING CONTROL BMPs
- WIND EROSION CONTROL BMPs
- WASTE MANAGEMENT AND POLLUTION CONTROL BMP

CONSTRUCTION SITE BMP	
BMP NO.	DESCRIPTION
SS - 1	SCHEDULING
SS - 2	PRESERVATION OF EXISTING VEGETATION
SS - 8	WOOD MULCHING
SC - 5	FIBER ROLLS
SC - 7	STREET SWEEPING AND VACUUMING
SC - 10	STORM DRAIN INLET PROTECTION
WE - 1	WIND EROSION CONTROL
TC - 1	STABILIZED CONSTRUCTION ENTRANCE / EXIT
NS - 3	PAVING AND GRINDING OPERATIONS
NS - 6	ILLEGIT CONNECTION / ILLEGAL DISCHARGE DETECTION AND REPORTING
NS - 9	VEHICLE EQUIPMENT FUELING
NS - 10	VEHICLE EQUIPMENT MAINTENANCE
WM - 3	STOCKPILE MANAGEMENT
WM - 5	SOLID WASTE MANAGEMENT
WM - 9	SANITARY / SEPTIC WASTE MANAGEMENT

PER CALTRANS "STORM WATER QUALITY HANDBOOK" DATED MARCH 1, 2003

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APN 439-0070-013 & 014 3898 DEPOT ROAD BAY AREA CONCRETE RECYCLING
IMPROVEMENT PLANS
EROSION CONTROL PLAN
CITY OF HAYWARD ALAMEDA COUNTY CALIFORNIA

DESIGNED UNDER THE DIRECTION OF:

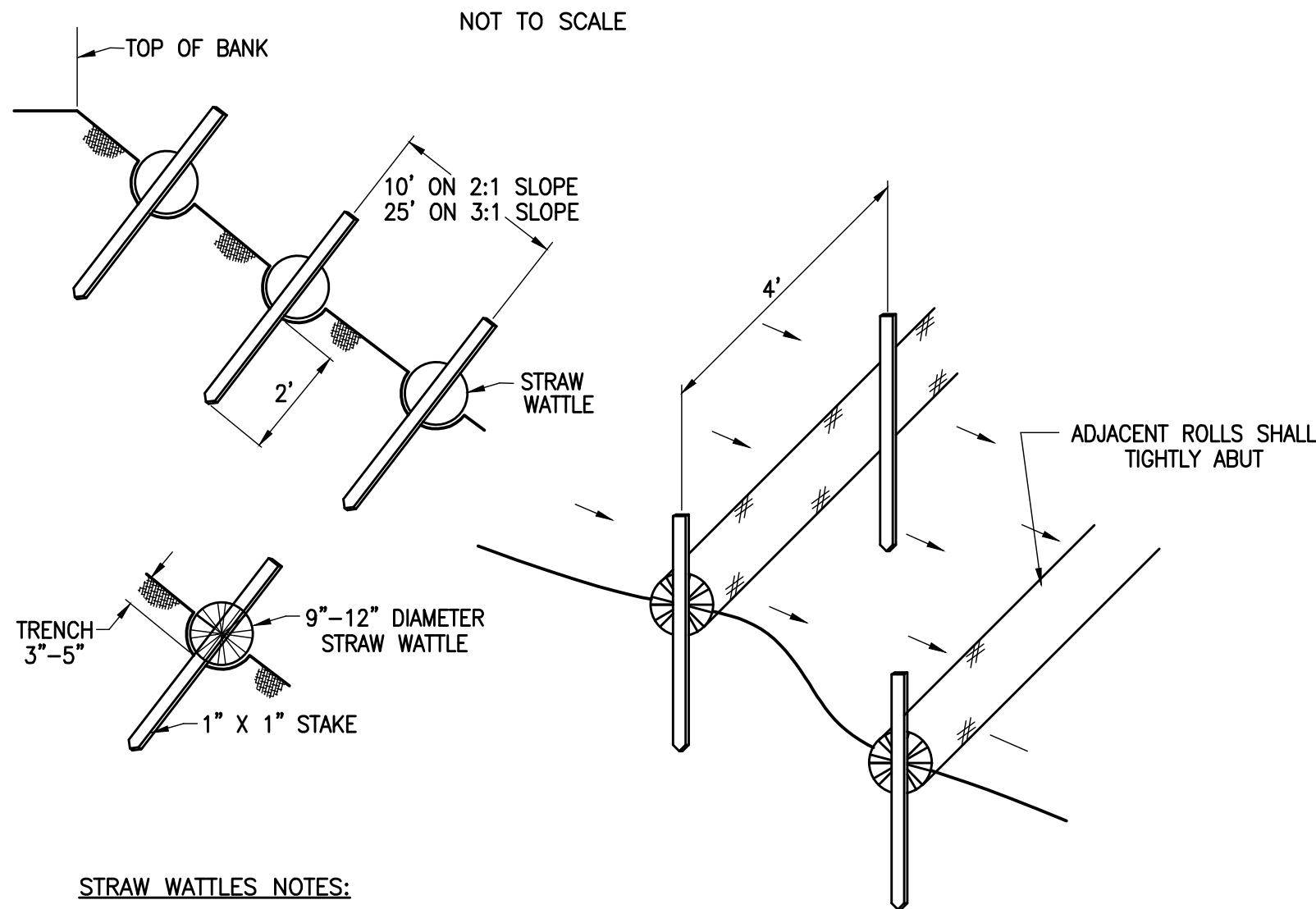
MICHAEL E. MILANI R.C.E. No. 35121 REGISTRATION EXPIRES 9-30-17		DATE
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STRAW WATTLE/FIBER ROLL INSTALLATION DETAIL



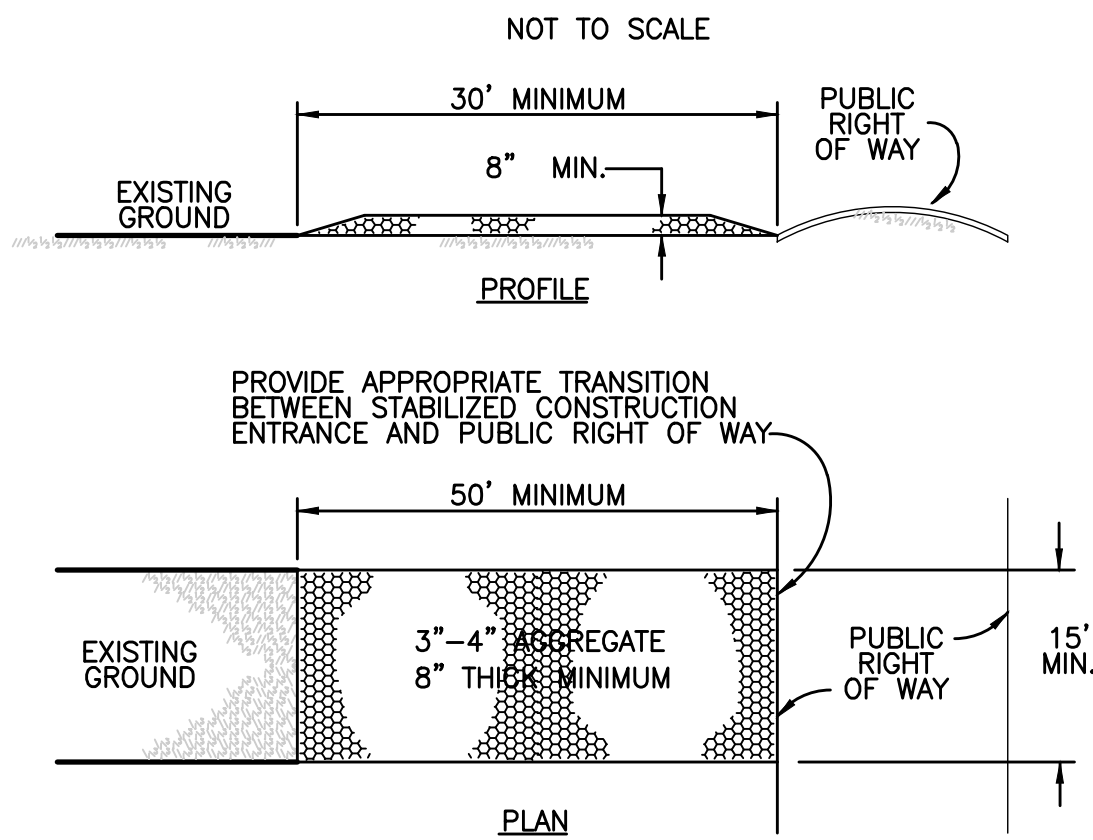
STRAW WATTLES NOTES:

1. STRAW WATTLES SHALL BE MANUFACTURED FROM RICE STRAW AND SHALL BE WRAPPED IN TUBULAR BLACK PLASTIC NETTING. THE NETTING SHALL HAVE A STRAND THICKNESS OF 0.03 INCHES, A KNOT THICKNESS OF 0.055, AND A WEIGHT OF 0.35 OUNCES PER FOOT (EACH +/- 10%) AND SHALL BE MADE FROM 85% HIGH DENSITY POLYETHYLENE, 14% ETHYL VINYL ACETATE AND 1% COLOR FOR UV INHIBITION.
2. STRAW WATTLES SHALL BE 9 INCHES IN DIAMETER ±, 25 FEET IN LENGTH ± AND WEIGH 35 LBS ±.
3. STRAW WATTLES SHALL BE PLACED IN TRENCHES, ON CONTOUR, AND STAKED WITH 1"x 1" X 24" WOOD STAKES AT FOUR FOOT CENTER.
4. THE ENDS OF ADJACENT STRAW WATTLES SHALL BE ABUTTED.

TEMPORARY EROSION CONTROL MEASURES EFFECTIVE DURING RAINY SEASON
OCTOBER 1 TO APRIL 15

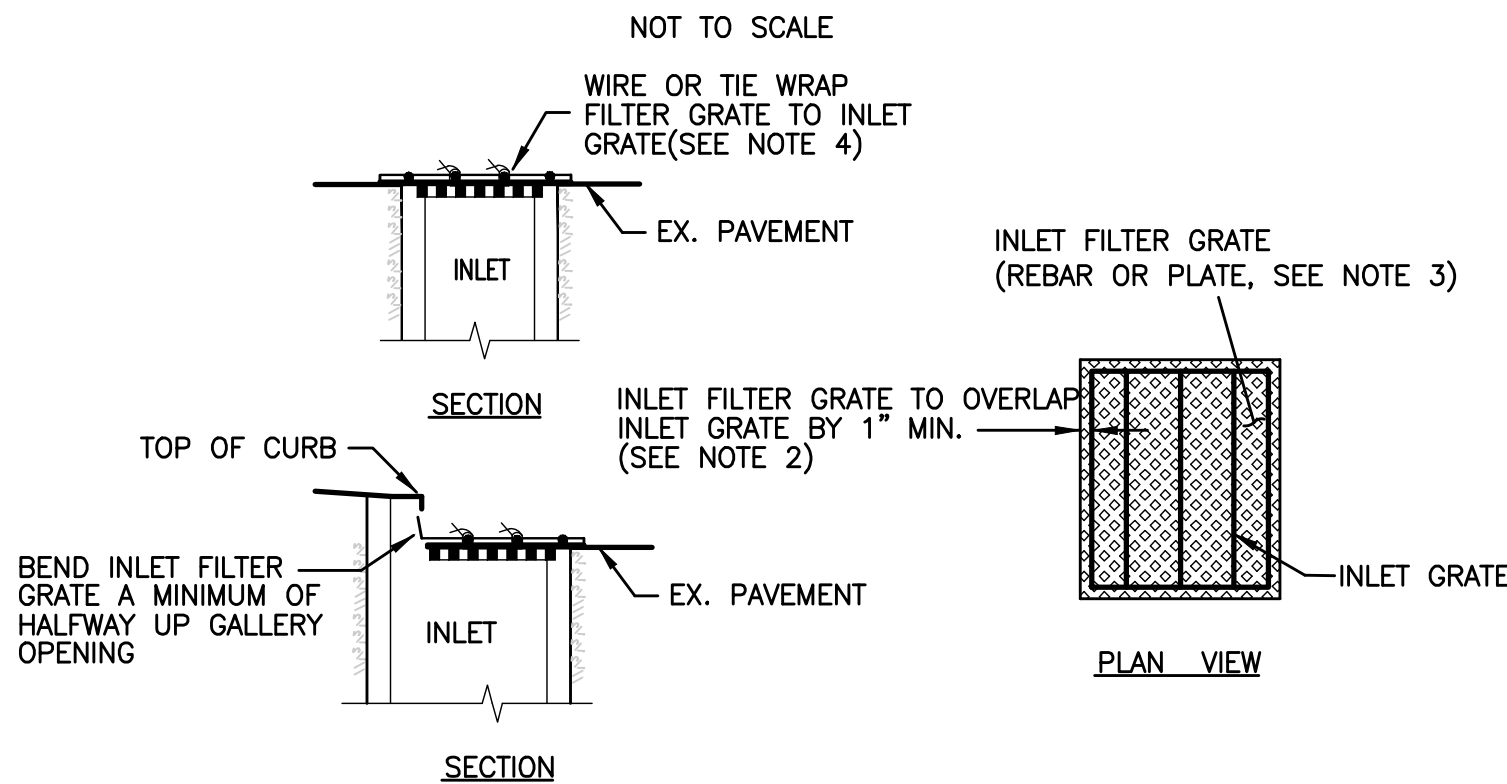
1. TEMPORARY EROSION CONTROL DEVICES SHOWN ON GRADING PLAN WHICH INTERFERE WITH THE WORK SHALL BE RELOCATED OR MODIFIED WHEN THE INSPECTOR SO DIRECTS AS THE WORK PROGRESSES.
2. EXCEPT AS OTHERWISE DIRECTED BY THE INSPECTOR, ALL DEVICES SHOWN ON THE EROSION CONTROL PLAN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY. ALL EROSION CONTROL FACILITIES MUST BE INSPECTED AND REPAIRED AT THE END OF EACH WORKING DAY DURING THE RAINY SEASON AND MAINTAINED DURING THE RAINY SEASON (OCTOBER 1 TO APRIL 15).
3. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PROVISIONS OF THE ASSOCIATION OF BAY AREA GOVERNMENTS (ABAG) "MANUAL OF STANDARDS FOR EROSION AND SEDIMENT CONTROL MEASURES" UNLESS OTHERWISE STATED WITHIN THESE GENERAL NOTES. CONTROL MEASURES ARE SUBJECT TO THE INSPECTION AND APPROVAL OF THE ENGINEERING DIVISION OF THE PUBLIC SERVICES DEPARTMENT. SCHEDULE AN ENGINEERING INSPECTION BY CALLING 925-943-5839 AT LEAST 48 HOURS PRIOR TO THE START OF ANY WORK.
4. ALL LOOSE SOIL AND DEBRIS SHALL BE REMOVED FROM THE STREET AREAS UPON STARTING OPERATIONS AND PERIODICALLY THEREAFTER AS DIRECTED BY THE INSPECTOR. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT LADEN RUNOFF TO ANY STORM DRAIN SYSTEM.
5. THE CONTRACTOR SHALL PLACE 3"-4" FRACTURED STONE AGGREGATE AS A GRAVEL ROADWAY (6" MINIMUM THICKNESS FOR THE FULL WIDTH AND 50 FEET LONG) AT EACH ROAD ENTRANCE TO THE SITE. ANY MUD THAT IS TRACKED ONTO PUBLIC STREETS SHALL BE REMOVED THE SAME DAY AS REQUIRED BY THE CITY ENGINEER. MINIMUM WIDTH OF GRAVEL ROADWAY IS 10 FEET.
6. A CONCRETE WASHOUT IS REQUIRED FOR ALL CONCRETE WORK. THE WASHOUT SHALL CONSIST OF A CONTAINMENT AREA ENCLOSED BY AN EARTHEN DIKE. PLASTIC TARP, COVERING THE CONTAINMENT AREA AND EARTHEN DIKE, SHALL BE STAKED IN AT OUTSIDE EDGE OF EARTHEN DIKE.
7. ADDITIONAL CONTAINMENT METHODS MUST BE PROVIDED FOR ANY WASTE STORAGE AREA, STOCKPILE/MATERIAL STORAGE AREA AND/OR CONSTRUCTION TOILET AREA.
8. IF THE PROJECT REQUIRES A STORMWATER POLLUTION PREVENTION PLAN (SWPPP), PROVIDE THE FOLLOWING:
WASTE DISCHARGE IDENTIFICATION NUMBER (WDIS) _____
CONTACT PERSON'S NAME: _____
ADDRESS: _____
TELEPHONE NUMBER: _____
9. STAND-BY CREWS SHALL BE ALERTED BY THE PERMITTEE OR CONTRACTOR FOR EMERGENCY WORK DURING RAINSTORMS.
10. AFTER OCTOBER 1, ALL EROSION CONTROL MEASURES WILL BE INSPECTED DAILY AND AFTER EACH STORM. AFTER OCTOBER 1, BREACHES IN DIKES AND SWALES WILL BE REPAIRED AT THE CLOSE OF EACH DAY AND WHENEVER RAIN IS FORECAST.
11. AS A PART OF THE EROSION CONTROL MEASURES, UNDERGROUND STORM DRAIN FACILITIES AND CONCRETE SHALL BE INSTALLED COMPLETE AS SHOWN ON THE IMPROVEMENT PLANS.
12. ALL STORM DRAIN INLET STRUCTURES GREATER THAN FOUR FEET IN DEPTH SHALL HAVE STEPS INSTALLED PER THE LATEST ACCEPTED SAFETY STANDARDS. A 6" CONCRETE COVER SLAB SHALL BE INSTALLED OVER PIPE WITH LESS THAN 2.5 FEET OF COVER TO SUBGRADE. ALL PIPE TO BE CLASS III UNLESS OTHERWISE NOTED.
13. ALL GRADED AREAS, INCLUDING, BUT NOT LIMITED TO, CUT AND FILL SLOPES, STREETS, PARKING AREAS, AND BUILDING PADS SHALL BE HYDROSEEDDED PER ABAG. IN ADDITION TO HYDROSEEDING, APPLICATION OF STRAW WITH A TACKIFIER OR MULCH MAY BE REQUIRED BY THE CITY ENGINEER.
14. IF ANY GRADING OPERATIONS, OTHER THAN LOT FINISH GRADING, ARE TO BE PERFORMED DURING THE RAINY SEASON, OCTOBER 1 THROUGH APRIL 15, AN EROSION CONTROL PLAN MUST BE SUBMITTED BY SEPTEMBER 1 AND THE PLAN MUST BE APPROVED BY THE TOWN OF DANVILLE PRIOR TO THE COMMENCEMENT OF ANY SUCH GRADING OPERATIONS.
- 15.
16. TO MINIMIZE EROSION OF GRADED BANKS, ALL GRADED BANKS STEEPER THAN 2% AND HIGHER THAN 3 FEET, SHALL BE HYDROSEEDDED, LANDSCAPED, OR SEALED. IN ADDITION TO HYDROSEEDING, APPLICATION OF STRAW WITH A TACKIFIER OR MULCH MAY BE REQUIRED BY THE CITY ENGINEER. IF THE PERMANENT STORM DRAIN SYSTEM IS NOT INSTALLED BY OCTOBER 1, TEMPORARY DITCHES SHALL BE CONSTRUCTED TO CONTAIN THE STORM WATER AND DIRECT IT, IN A MANNER THAT AVOIDS EROSION OF THE BANKS, TO THE EROSION AND SEDIMENT CONTROL FACILITIES.
17. ALL CUT AND FILL SLOPES ARE TO BE PROTECTED TO PREVENT OVERBANK FLOW USING 4" EARTH BERMS OR SILT FENCES.

CONSTRUCTION ENTRANCE DETAIL



1. ENTRANCE SHALL SPAN THE FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
2. WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO LEAVING THE SITE. SEDIMENT SHALL DRAIN INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE.
3. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH PREVENTS TRACKING OR FLOWING OF SEDIMENT ONTO THE PUBLIC RIGHT OF WAY. THIS MAY REQUIRE TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND. ALL SEDIMENT SPILLED, DROPPED OR TRACKED ONTO PUBLIC RIGHT OF WAY MUST BE REMOVED IMMEDIATELY.

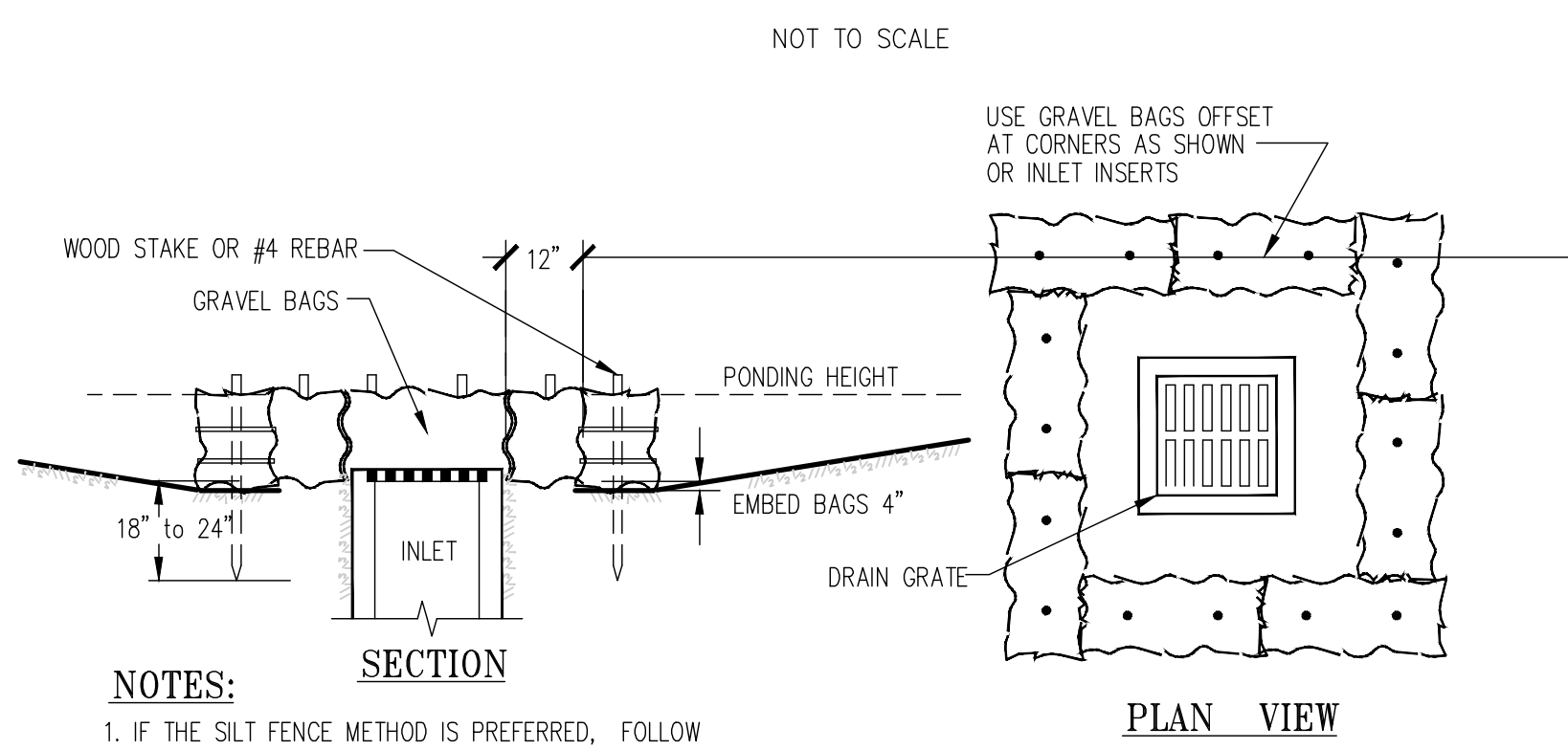
INLET PROTECTION DETAIL
(PAVED AREAS)



INLET PROTECTION NOTES:

1. FILTER FABRIC SHALL MEET CAL-TRANS OR A.B.A.G. SPECIFICATIONS
2. FILTER MATERIAL AND GRATE SHALL OVERLAP INLET ON ALL SIDES BY A MINIMUM OF 1"
3. INLET FILTER GRATE SHALL BE MADE OF #3 RE-BARS, CRISS CROSSED AT 6"(WELDED OR TIED TOGETHER WITH WIRE) OR A PLATE WITH A MINIMUM OF 75% OPEN AREA, BOTH OF SUFFICIENT STRENGTH TO PREVENT BENDING WHEN DRIVEN OVER BY A VEHICLE.
4. INLET FILTER GRATE SHALL BE SECURELY ATTACHED TO DRAIN INLET BY WIRE OR TIE-WRAP(S)(BEND OVER).
5. FILTERS SHALL BE INSPECTED WEEKLY AND AFTER EACH RAINFALL. REPAIRS, SEDIMENT/DEBRIS REMOVAL SHALL BE MADE TO ASSURE EFFICIENCY OF FILTER SYSTEM.

INLET PROTECTION DETAIL
(UN-PAVED AREAS)



NOTES:

1. IF THE SILT FENCE METHOD IS PREFERRED, FOLLOW THE A.B.A.G. DETAIL CHAPTER 7.94, 1995 EDITION.

INLET PROTECTION NOTES:

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4. INLET FILTER GRATE SHALL BE SECURELY ATTACHED TO DRAIN INLET BY WIRE OR TIE-WRAP(S)(BEND OVER).
5. FILTERS SHALL BE INSPECTED WEEKLY AND AFTER EACH RAINFALL. REPAIRS, SEDIMENT/DEBRIS REMOVAL SHALL BE MADE TO ASSURE EFFICIENCY OF FILTER SYSTEM.

18. ALL GRADED AREAS, INCLUDING, BUT NOT LIMITED TO, CUT AND FILL SLOPES, STREETS, PARKING AREAS, AND BUILDING PADS SHALL BE HYDROSEEDDED PER CITY'S REQUIREMENT. SUGGESTED MIX DESIGN FOLLOWS:

'BLANDO' BROME	40 LBS/ACRE
ZORRO FESCUE	10 LBS/ACRE
HYKON ROSE CLOVER	9 LBS/ACRE
SUB CLOVER	5 LBS/ACRE
CALIFORNIA NATIVE WILDFLOWER	8 LBS/ACRE
FERTILIZER	300 LBS/ACRE
ORGANIC BINDER	100 LBS/ACRE
STRAW MULCH	4000 LBS/ACRE

19. BORROW AREAS AND TEMPORARY STOCKPILES SHALL BE PROTECTED WITH APPROPRIATE EROSION CONTROL MEASURES TO THE SATISFACTION OF THE CITY ENGINEER.

20. SANDBAGS, STRAW WATTLES AND/OR STRAW BALES SHALL BE STOCKPILED ON SITE AND PLACED AT INTERVALS SHOWN ON EROSION CONTROL PLANS, WHEN THE RAIN FORECAST IS 40% OR GREATER, OR WHEN DIRECTED BY THE INSPECTOR.

21. SANDBAGS REFERRED TO IN THE PRECEDING ITEMS MUST BE FULL. APPROVED SANDBAG FILL MATERIALS ARE DECOMPOSED GRANITE AND/OR GRAVEL, OR OTHER MATERIALS APPROVED BY THE INSPECTOR.

22. WHEN DIRECTED BY THE INSPECTOR, A 12-INCH BERM SHALL BE MAINTAINED ALONG THE TOP OF THE SLOPE OF THOSE FILLS ON WHICH GRADING IS NOT IN PROGRESS.

23. WHEN PAD ELEVATIONS OF ADJACENT LOTS OR ELEVATIONS BETWEEN THE STREET AND THE LOT ARE SEPARATED BY MORE THAN 6 FEET, A MINIMUM 12" BERM SHALL BE MAINTAINED ALONG THE PROPERTY LINE SEPARATING THE LOTS, AND THE BERM SHALL DIRECT THE WATER TO THE OUTLET. VELOCITY CHECK DAMS SHALL BE INSTALLED BETWEEN THE OUTLET ON THE LOT AND THE STREET.

24. PROVIDE VELOCITY CHECK DAMS IN ALL UNPAVED STREETS AT THE INTERVALS INDICATED BELOW IN NOTE #21. VELOCITY CHECK DAMS MAY BE CONSTRUCTED OF STRAW BALES, SANDBAGS OR OTHER EROSION RESISTANT MATERIALS APPROVED BY THE INSPECTOR, AND SHALL EXTEND COMPLETELY ACROSS THE STREET OR CHANNEL AT RIGHT ANGLES TO THE CENTERLINE. EARTH DIKES MAY NOT BE USED AS VELOCITY CHECK DAMS.

25. PROVIDE VELOCITY CHECK DAMS IN ALL UNPAVED GRADED CHANNELS AT THE INTERVALS INDICATED BELOW:

GRADE OF CHANNEL	INTERVAL
LESS THAN 3%	100 FEET
3% TO 6%	50 FEET
OVER 6%	25 FEET

26. SEWER OR STORM DRAIN TRENCHES THAT ARE OUT THROUGH BASIN DIKES OR BASIN INLET DIKES, SHALL BE PLUGGED WITH SANDBAGS FROM TOP OF PIPE TO TOP OF DIKE. SEWER LINES SHALL FIRST BE ENCASED IN CONCRETE BEFORE SANDBAGS ARE PLACED.

27. ALL OPEN UTILITY TRENCHES SHALL BE BLOCKED AT THE PRESCRIBED INTERVALS FROM THE BOTTOM TO TOP WITH A DOUBLE ROW OF SANDBAGS PRIOR TO BACKFILL. SEWER TRENCHES SHALL BE BLOCKED AT THE PRESCRIBED INTERVALS WITH A DOUBLE ROW OF SANDBAGS EXTENDING DOWNWARD, TWO SANDBAGS FROM THE GRADED SURFACE OF THE STREET. SANDBAGS ARE TO BE PLACED WITH ALTERNATE HEADER AND STRETCHER COURSES. THE INTERVALS PRESCRIBED BETWEEN SANDBAG LOCKING SHALL DEPEND ON THE SLOPE OF THE GROUND SURFACE, BUT NOT EXCEED THE FOLLOWING:

GRADE OF THE STREET	INTERVAL
LESS THAN 2%	AS REQUIRED
2% TO 4%	100 FEET
4% TO 10%	50 FEET
OVER 10%	25 FEET

28. AFTER STORM DRAIN, SANITARY SEWER AND UTILITY TRENCHES ARE BACKFILLED AND COMPACTED, THE SURFACES OVER SUCH TRENCHES SHALL BE MOUNDED SLIGHTLY TO PREVENT CHANNELING OF WATER IN THE TRENCH AREA. CARE SHOULD BE EXERCISED TO PROVIDE FOR CROSS FLOW AT FREQUENT INTERVALS WHERE TRENCHES ARE NOT ON THE CENTER LINE OF A CROWNED STREET.

29. SEDIMENT TRAPS SHALL BE CLEANED OUT WHENEVER SEDIMENT REACHES THE SEDIMENT CLEANOUT LEVEL INDICATED ON THE DETAIL ON THIS SHEET. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN THE DESILTING BASINS AND THE SEDIMENT TRAPS.

30. THIS PLAN MAY NOT COVER ALL THE SITUATIONS THAT ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. VARIATIONS MAY BE MADE TO THESE PLANS IN THE FIELD, SUBJECT TO APPROVAL OF THE CITY ENGINEER.

31. EROSION CONTROL STRUCTURES SHALL BE ADJUSTED BY THE CONTRACTOR TO REFLECT ALL CHANGES IN DRAINAGE AS STREETS AND BUILDING PADS ARE BEING INSTALLED.

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APN 439-0070-013 & 014

3898 DEPOT ROAD BAY AREA CONCRETE RECYCLING

IMPROVEMENT PLANS
EROSION CONTROL NOTES & DETAILS

CITY OF HAYWARD

ALAMEDA COUNTY

CALIFORNIA

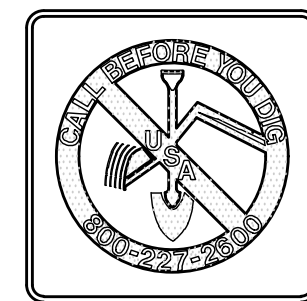
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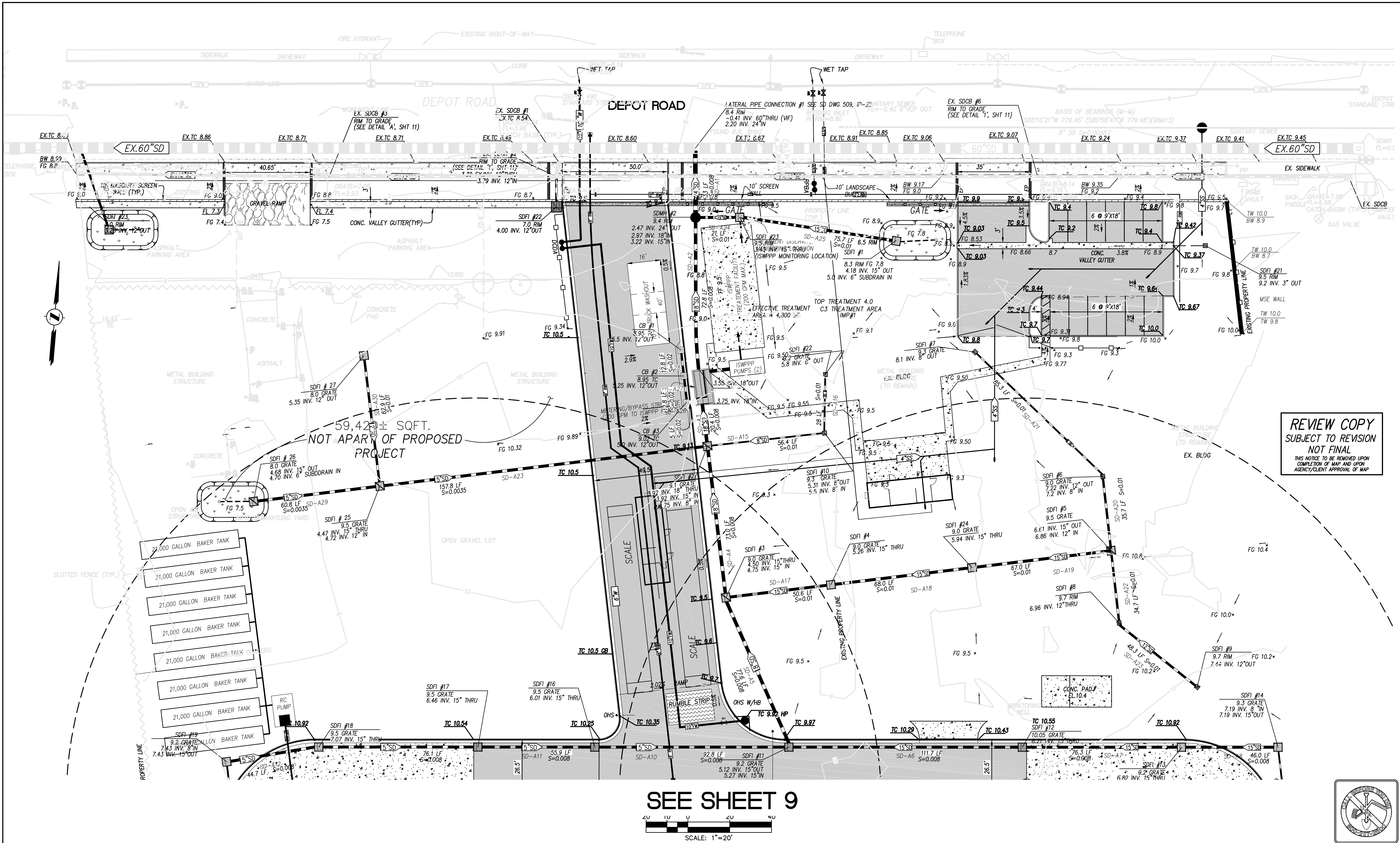


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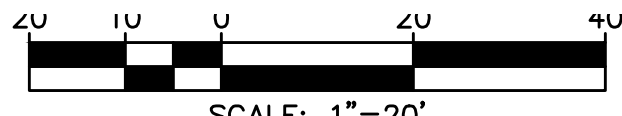
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SCALE: 1"=20'

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APN 439-0070-013 & 014 3898 DEPOT ROAD BAY AREA CONCRETE RECYCLING

IMPROVEMENT PLANS
FINE GRADING & UTILITY PLAN

CITY OF HAYWARD ALAMEDA COUNTY CALIFORNIA

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REGISTERED PROFESSIONAL ENGINEER
MICHAEL E. MILANI
No. 35121
EXP. 09/30/17
CIVIL
STATE OF CALIFORNIA

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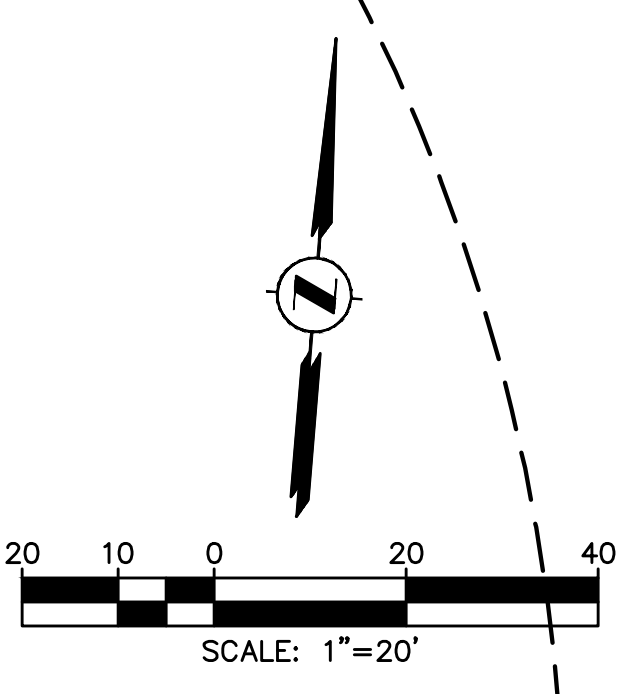
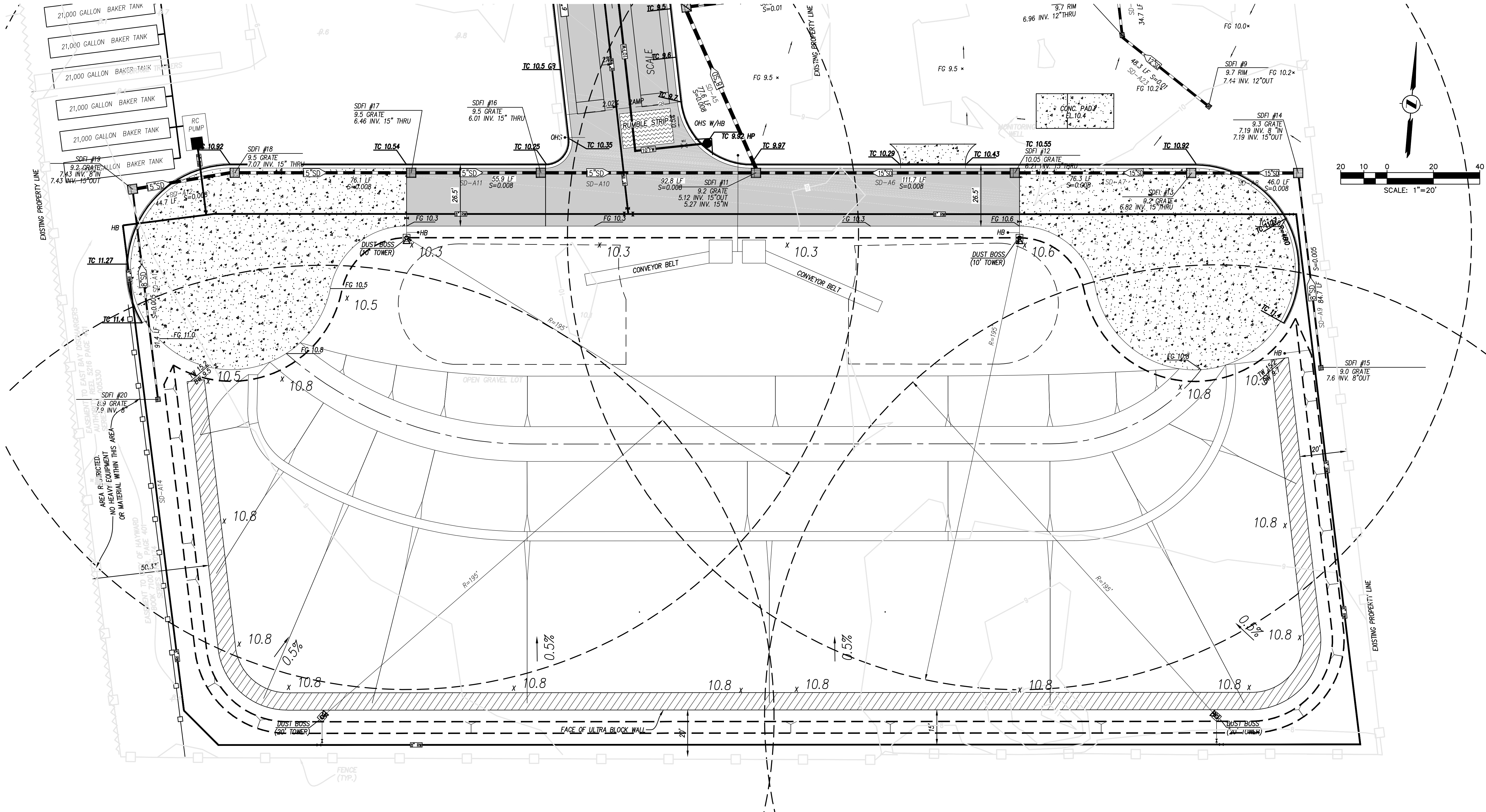
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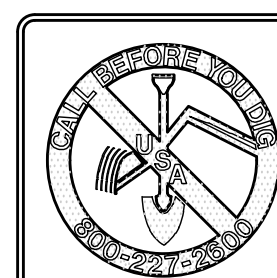
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E:\Dropbox (MEM)\cadd\666\IMPROVEMENT PLANS\POB -16 FG & UTILITY.dwg IP 8 - FG & UTILS 4-24-17 11:56:43 BAY AREA CONCRETE RECYCLING ~ IMPROVEMENT PLANS

SEE SHEET 8



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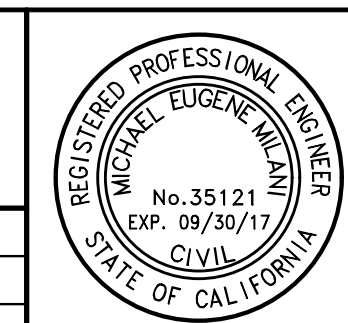
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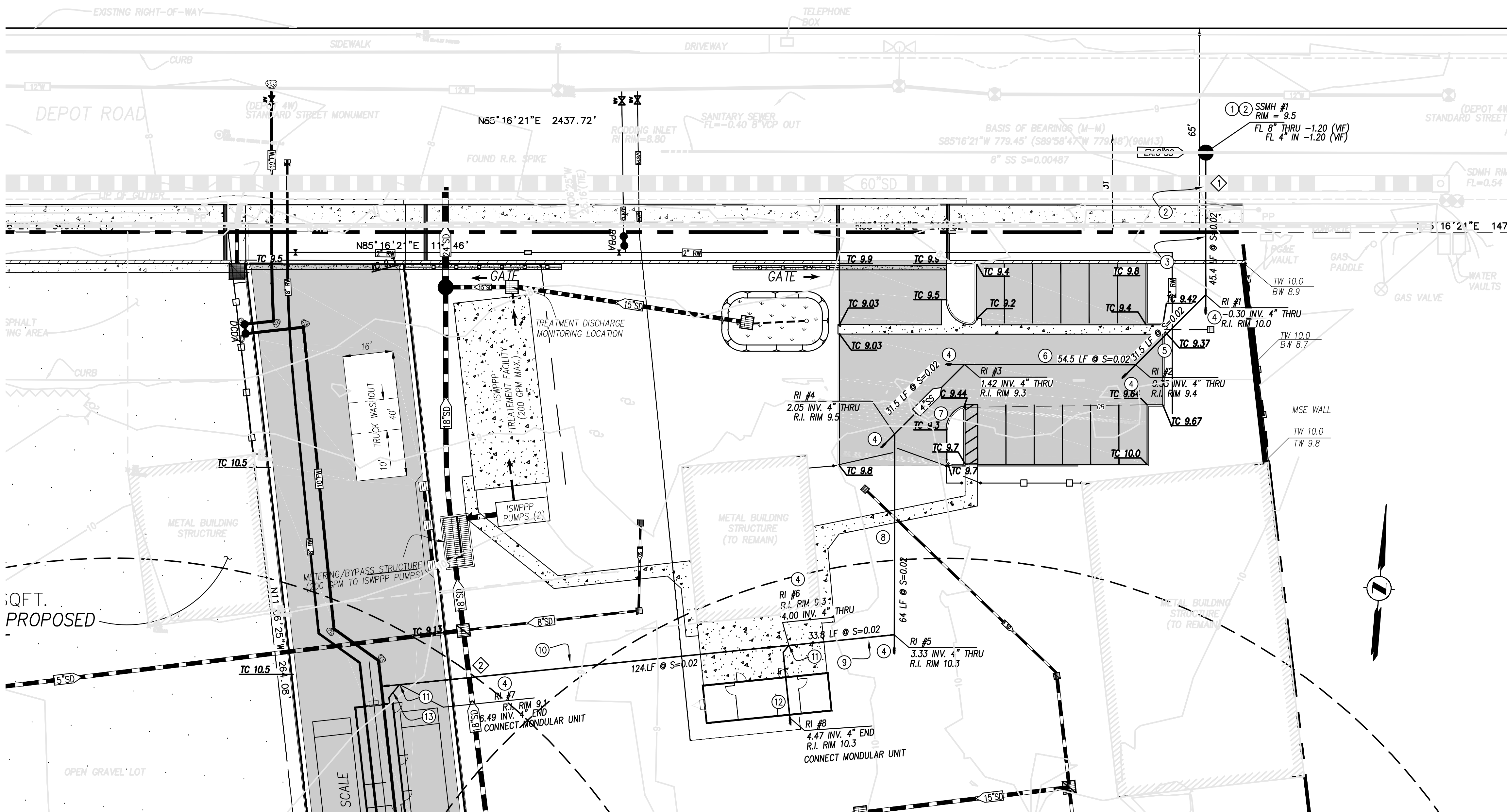
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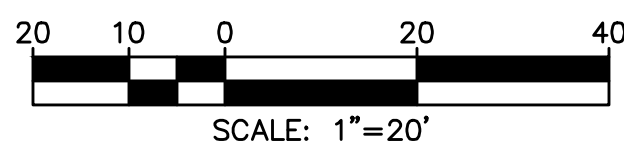


CROSSING TABLE

1	4" SS LAT: FL = -1.0'; TP= -0.62'
	60" RCP FL= 0.32'; BP= -0.20
	CLEARANCE +0.4
2	4" SS LAT: FL = 6.05; BP= 6.0
	18" RCP FL= 4.03; TP= 5.78
	CLEARANCE +0.2

SANITARY SEWER CONSTRUCTION NOTES:

- 1 PRIOR TO START OF EXCAVATION, CONTRACTOR TO OBTAIN AN ENCROACHMENT PERMIT FROM THE CITY OF HAYWARD FOR ALL CONSTRUCTION WORK TO BE CONDUCTED WITHIN THE PUBLIC RIGHT OF WAY OF DEPOT ROAD.
- 2 SAW CUT EXISTING PAVEMENT, EXPOSE AND VERIFY LOCATION AND ELEVATION OF EXISTING 60" STORM DRAIN LINE. CONFIRM CLEARANCE PRIOR TO ANY SEWER TRENCHING OPERATIONS. PATCH PAVE EXISTING PAVEMENT CUT, MATCH EXISTING PAVEMENT SECTION.
- 3 INSTALL 45.4 LF OF 4" SEWER MAIN.
- 4 INSTALL 45' WYE. INSTALL RODDING INLET, SET RIM TO FINISH GRADE. SEE PLAN FOR RIM ELEVATION.
- 5 INSTALL 31.5 LF OF 4" SEWER MAIN.
- 6 INSTALL 54.5 LF OF 4" SEWER MAIN.
- 7 INSTALL 31.5 LF OF 4" SEWER MAIN.
- 8 INSTALL 64 LF OF 4" SEWER MAIN.
- 9 INSTALL 33.8 LF OF 4" SEWER MAIN.
- 10 INSTALL 124.7 LF OF 4" SEWER MAIN.
- 11 INSTALL 4" WYE TO MODULAR UNIT
- 12 INSTALL 24 LF OF 4" SEWER MAIN WITH RI TO MODULAR UNIT, CONNECT MODULAR.
- 13 INSTALL 8 LF OF 4" SEWER MAIN WITH RI TO MODULAR UNIT, CONNECT MODULAR



PRIVATE SANITARY SEWER MAIN

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ALAMEDA COUNTY

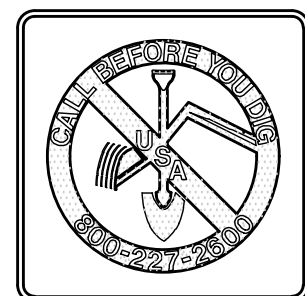
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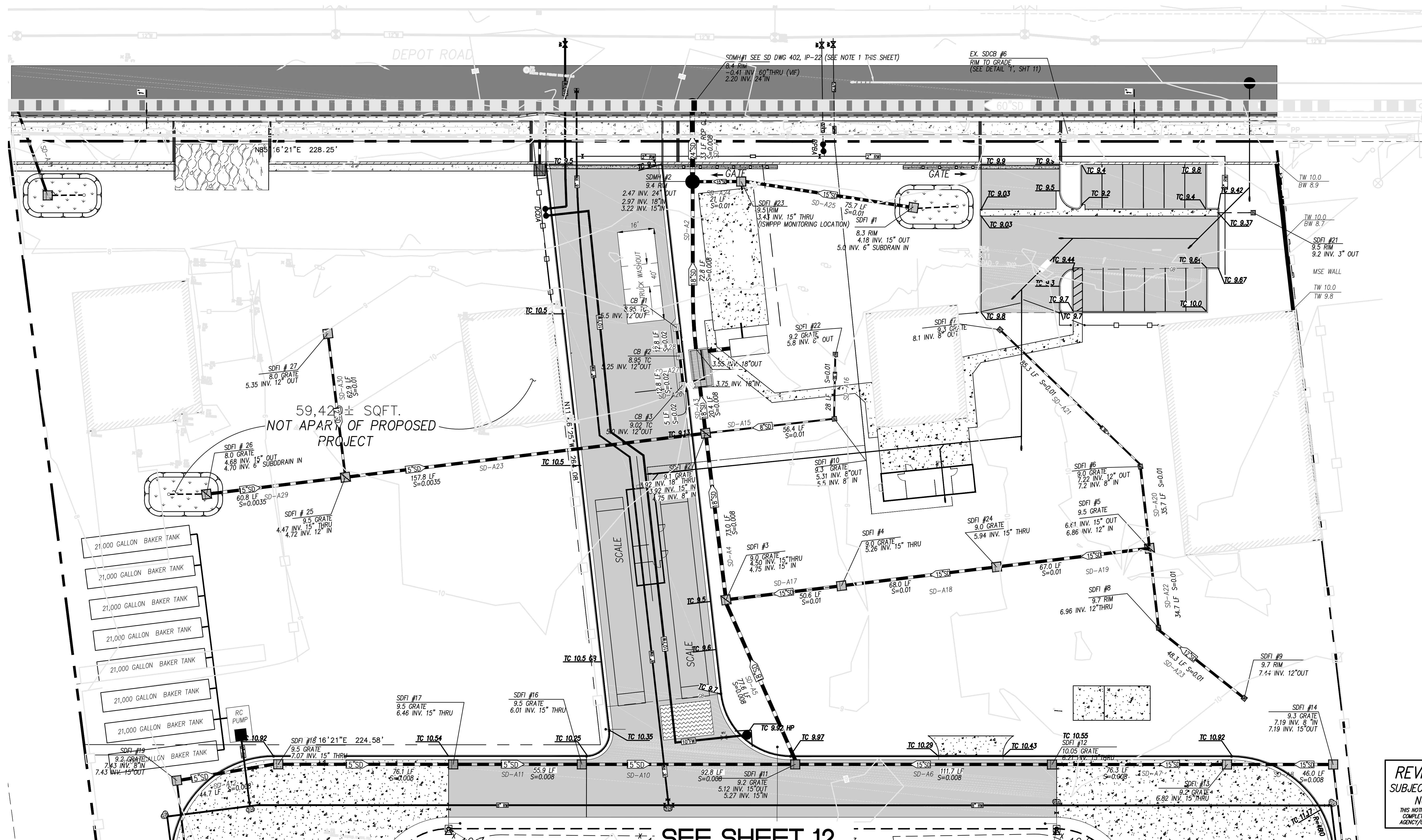
MICHAEL E. MILANI R.C.E. No. 35121 REGISTRATION EXPIRES 9-30-17	DATE
DESIGN: KRA	JOB NO: 666
DRAWN: KRA	DATE: APRIL 2017
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Municipal Engineering
Construction Staking
Construction Management
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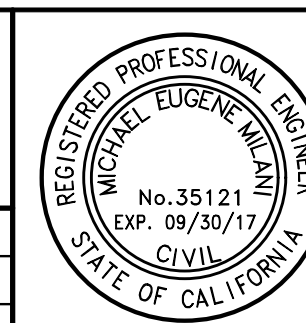


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Phone: (925) 674-9082
Fax: (925) 674-9279
Web: www.milaniassociates.com

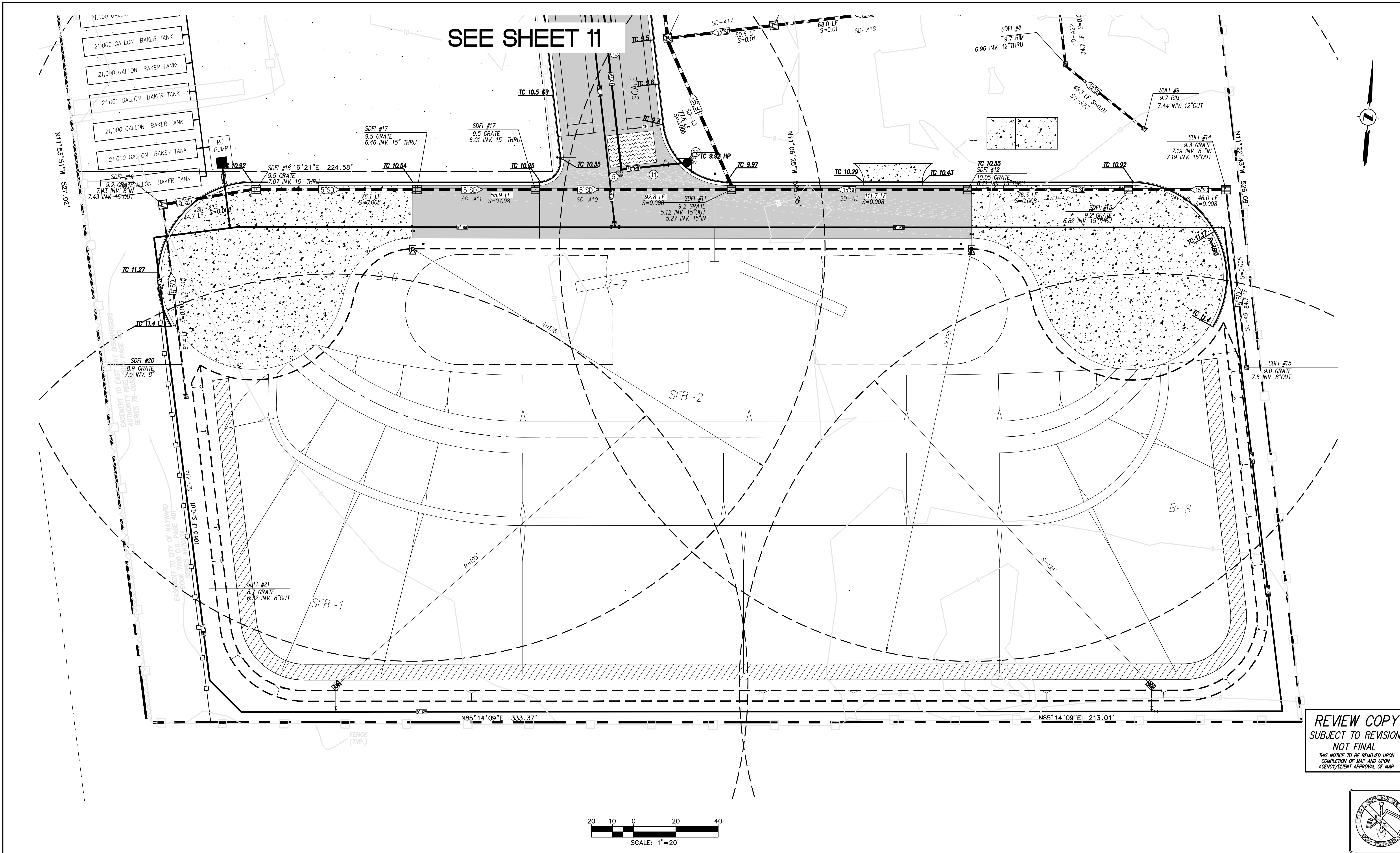
APN 439-0070-013 & 014 3898 DEPOT ROAD BAY AREA CONCRETE RECYCLING
IMPROVEMENT PLANS
PRIVATE STORM DRAIN
ALAMEDA COUNTY
CITY OF HAYWARD CALIFORNIA

DESIGNED UNDER THE DIRECTION OF:

MICHAEL E. MILANI
R.C.E. No. 35121 REGISTRATION EXPIRES 9-30-17
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MILANI & Associates

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Web: www.milaniasociates.com

APN 439-0070-013 & 014 3898 DEPOT ROAD BAY AREA CONCRETE RECYCLING

IMPROVEMENT PLANS
PRIVATE STORM DRAIN
ALAMEDA COUNTY CALIFORNIA

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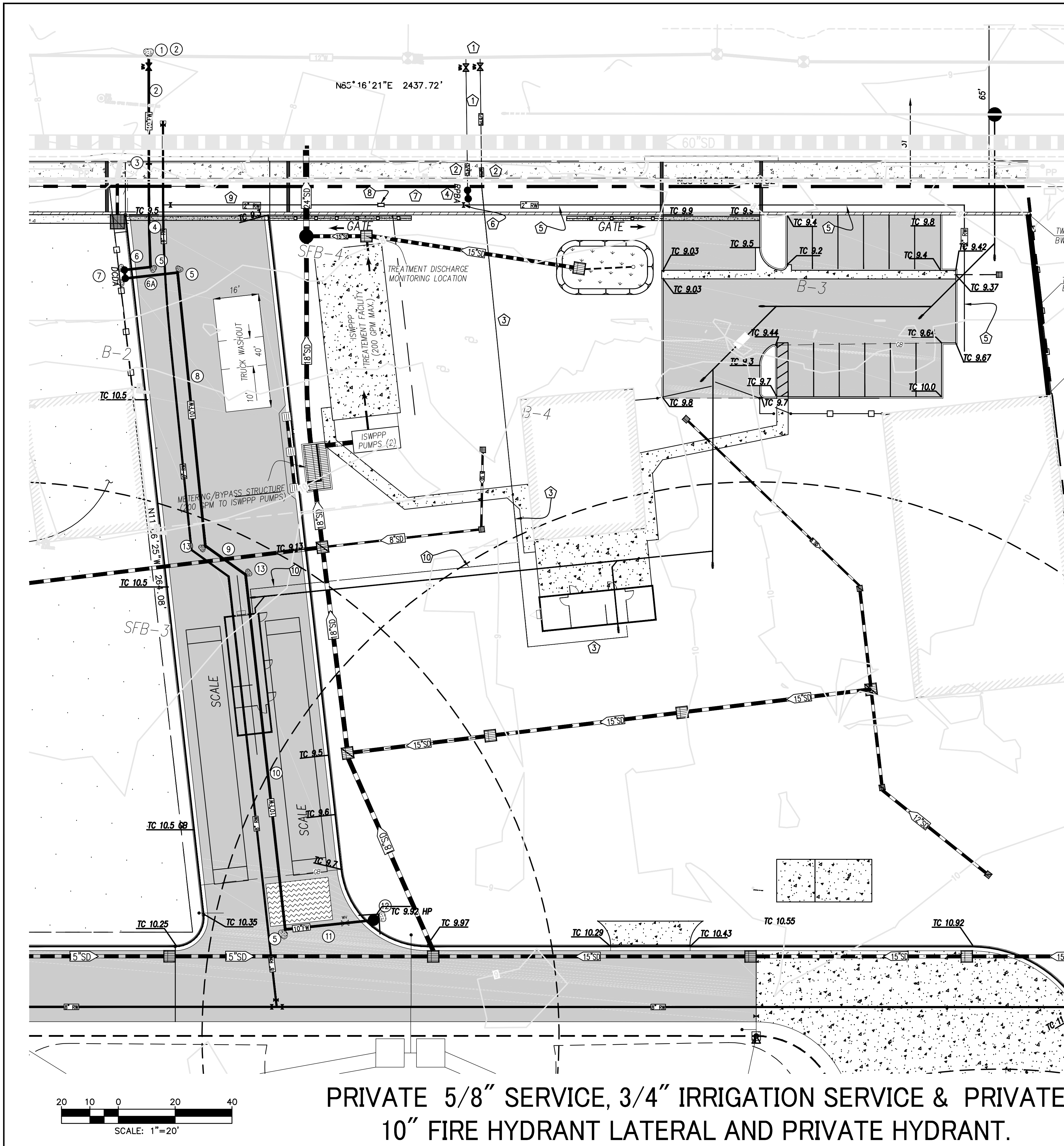
REGISTERED PROFESSIONAL ENGINEER
MICHAEL EUGENE MILANI
No. 35121
EXP. 09/30/17
CIVIL
STATE OF CALIFORNIA

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E:\Dropbox (MEM)\cadd\jobs\666\IMPROVEMENT PLANS\POB -16 FG & UTILITY.dwg IP12 - Private SD 4-24-17 09:50:32 BAY AREA CONCRETE RECYCLING ~ IMPROVEMENT PLANS



10" FIRE HYDRANT LATERAL AND MAIN LINE CONSTRUCTION NOTES:

GENERAL NOTES:

ALL PIPE MATERIAL, FITTINGS, VALVES AND PIPE COVER SHALL CONFORM WITH CURRENT NFPA REQUIREMENTS AND CURRENT CITY OF HAYWARD FIRE DEPARTMENT REQUIREMENTS. ALL FITTINGS SHALL BE UL RATED.

ALL WORK ASSOCIATED WITH THE INSTALLATION OF THE 10" FIRE SERVICE LATERAL WITHIN THE PUBLIC PORTION OF DEPOT ROAD. SHALL BE CONDUCTED BY CITY OF HAYWARD WATER DEPARTMENT PERSONNEL. ALL CITY APPLICATIONS AND FEES MUST BE PAID BY OWNER PRIOR TO ANY WORK PERFORMED BY CITY FORCES. THE CITY SUPPLIED SERVICES INCLUDE THE FOLLOWING:

- ① SAW CUT EXISTING PAVEMENT, EXPOSE AND VERIFY LOCATION AND ELEVATION OF EXISTING 12" MAIN. PATCH PAVE EXISTING PAVEMENT CUT, MATCH EXISTING PAVEMENT SECTION AT COMPLETION OF WET TAPPING OPERATIONS.
- ② INSTALL 10" X 12" TAPPING TEE AND VALVE. WET TAP AND TAPPING TEE TO BE INSTALLED BY CITY WATER DEPARTMENT PERSONNEL.
- ③ CITY FORCES TO STUB 10" FIRE SPRINKLER LINE TO A POINT ONE FOOT BEHIND EXISTING CURB AND GUTTER CITY STANDARD DETAIL SD-204..

THE FOLLOWING WORK SHALL BE PROVIDED BY THE OWNER'S CONTRACTOR:

- ④ INSTALL APPROXIMATELY 36 LF OF 10" CL 305 C900 PVC PIPE.
- ⑤ INSTALL 90° DIP ELL MJX MJ FITTING WITH THRUST RESTRAINT.
- ⑥ INSTALL APPROXIMATELY 9 LF OF 10" CL 305 C900 PVC PIPE.
- ⑥A INSTALL APPROXIMATELY 19 LF OF 10" CL 305 C900 PVC PIPE.
- ⑦ INSTALL CONFIGURABLE 10" DODA. DODA TO BE INSTALLED PER STANDARD DETAIL SD-204 INCLUDING CONCRETE PAD.
- ⑧ INSTALL APPROXIMATELY 96 LF OF 10" CL 305 C900 PVC PIPE.
- ⑨ INSTALL APPROXIMATELY 17 LF OF 10" CL 305 C900 PVC PIPE.
- ⑩ INSTALL APPROXIMATELY 126 LF OF 10" CL 305 C900 PVC PIPE.
- ⑪ INSTALL APPROXIMATELY 31 LF OF 10" CL 305 C900 PVC PIPE.
- ⑫ INSTALL 10" x 6" REDUCER, GATE VALVE AND INSTALL FIRE HYDRANT PER CITY STANDARD DETAIL 206. NOTE, ALL FITTINGS SHALL BE FL X FL FOR THRUST RESTRAINT.
- ⑬ INSTALL 45° DIP MJX MJ FITTING WITH THRUST RESTRAINT.

NEW 5/8" WATER SERVICE AND NEW TEMPORARY 3/4" IRRIGATION SERVICE CONSTRUCTION NOTES:

GENERAL NOTE:

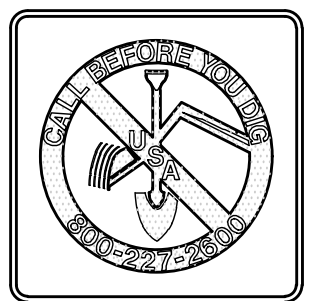
ALL WORK ASSOCIATED WITH THE INSTALLATION OF THE NEW 5/8" DOMESTIC AND NEW TEMPORARY 3/4" IRRIGATION LATERAL WITHIN THE PUBLIC PORTION OF DEPOT ROAD SHALL BE PERFORMED BY CITY OF HAYWARD WATER DEPARTMENT PERSONNEL. ALL CITY APPLICATIONS AND FEES MUST BE COMPLETED BY OWNER PRIOR TO CITY PERFORMING ANY WORK. CITY SUPPLIED WORK WILL CONSIST OF THE FOLLOWING:

- ① SAW CUT EXISTING PAVEMENT, EXPOSE AND VERIFY LOCATION AND ELEVATION OF EXISTING 12" MAIN. PATCH PAVE EXISTING PAVEMENT CUT, MATCH EXISTING PAVEMENT SECTION AT COMPLETION OF WET TAPPING OPERATIONS.
- ② INSTALL 5/8" AND 3/4" SERVICE SADDLES AND SERVICE LATERALS PER CITY STANDARD DETAILS SD-214 AND SD-213. SERVICE LATERALS TO TERMINATE APPROXIMATELY 0.67 FEET FROM FACE OF CURB.

THE FOLLOWING WORK SHALL BE PROVIDED BY THE OWNER'S CONTRACTOR:

- ③ INSTALL APPROXIMATELY 207 LF OF 1" SCHEDULE 80 PVC SOLVENT WELD CONDUIT WITH ALL NECESSARY FITTINGS. PROVIDE ALL FITTINGS TO TRANSITION FROM METER HOOKUP TO SCHEDULE 80 PVC PIPE. STUB AND CAP SERVICE 1' FROM MOBILE MODULAR OFFICE UNIT. PROVIDE ALL NECESSARY FITTINGS.
- ④ INSTALL RPBFA PER CITY OF HAYWARD DETAIL SD-202 INCLUDING PROTECTIVE ENCLOSURE AND CONCRETE PAD.
- ⑤ INSTALL APPROXIMATELY 275 LF OF 2" SCHEDULE 80 PVC SOLVENT WELD CONDUIT. STUB AND PLUG FOR FUTURE EXTENSION BY LANDSCAPE. REFER TO LANDSCAPE PLANS FOR CONNECTION POINT.
- ⑥ INSTALL 2" PVC TEE WITH 2" SOLVENT WELD PVC GLOBE VALVE.
- ⑦ INSTALL APPROXIMATELY 30 LF OF 2" SCHEDULE 80 PVC SOLVENT WELD CONDUIT. TERMINATE AND CAP IN CHRISTY B24 BOX.
- ⑧ INSTALL CHRISTY B24 BOX OR APPROVED EQUAL. ADJUST TO FINISH GRADE. 2" PVC CONDUITS TO TERMINATE WITHIN BOX FOR FUTURE CONNECTION WHEN 4" RC LINE IS CONNECTED TO THE CITY OF HAYWARD RECYCLE MAIN.
- ⑨ INSTALL APPROXIMATELY 75 LF OF 2" SCHEDULE 80 PVC SOLVENT WELD CONDUIT. CONNECT TO 2" GLOBE VALVE INSTALLED WITH 4" RECYCLED WATER LINE.
- ⑩ INSTALL APPROXIMATELY 104 LF OF 1" SCHEDULE 80 PVC SOLVENT WELD CONDUIT WITH ALL NECESSARY FITTINGS INCLUDING TEE. STUB AND CAP SERVICE 1' FROM MOBILE MODULAR UNIT AT WEIGHT SCALES.

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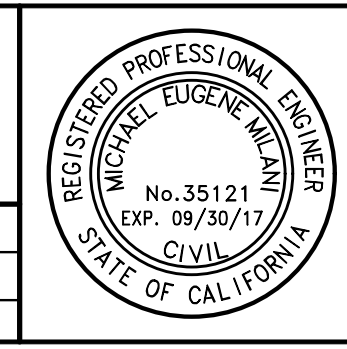
APN 439-0070-013 & 014 3898 DEPOT ROAD BAY AREA CONCRETE RECYCLING

IMPROVEMENT PLANS
PRIVATE WATER SERVICE, IRRIGATION SERVICE AND FIRE LINE
CITY OF HAYWARD ALAMEDA COUNTY CALIFORNIA

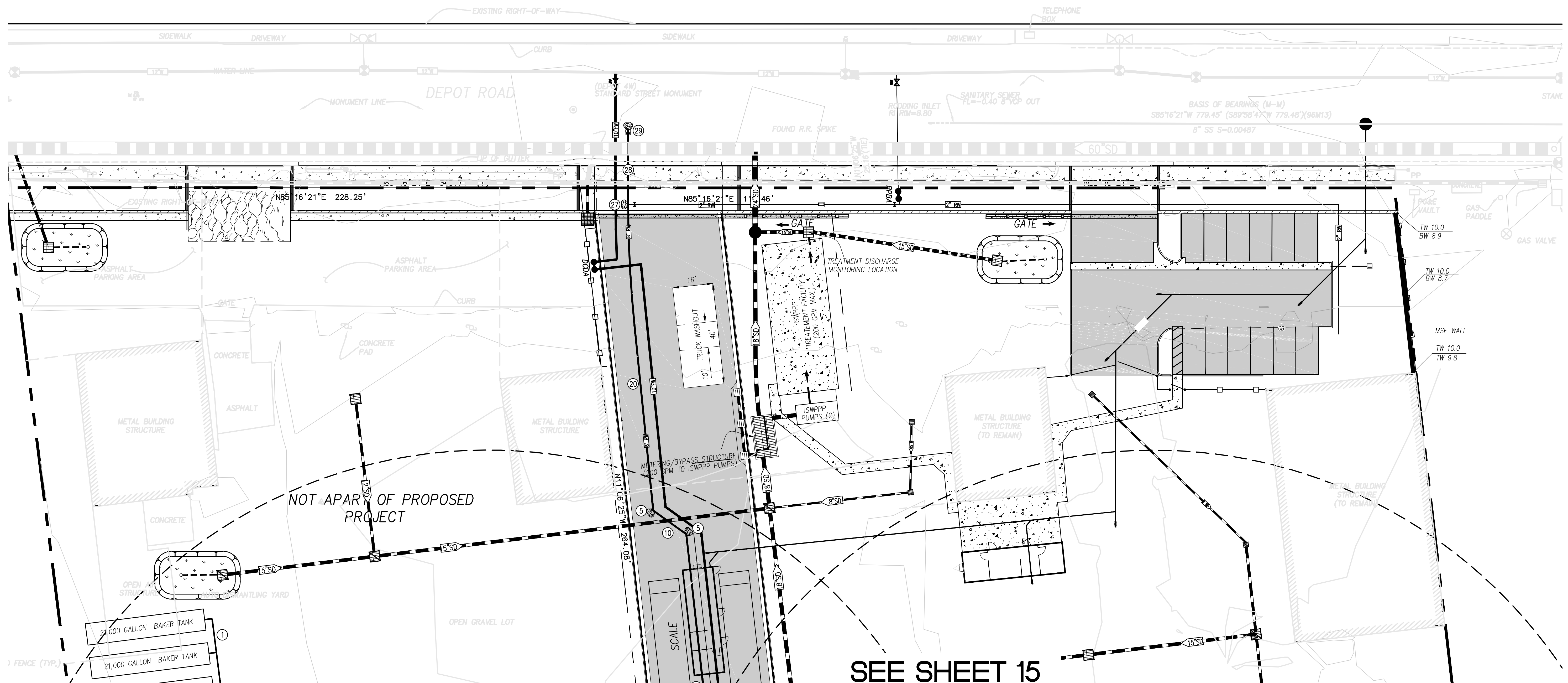
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MICHAEL E. MILANI
R.C.E. No. 35121 REGISTRATION EXPIRES 9-30-17 DATE

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SEE SHEET 15

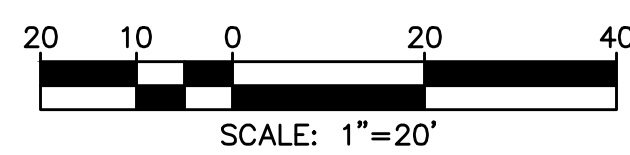
8" RECLAIMED WATER - DUSTBOSS AND DUST CONTROL DELIVERY SYSTEM:

GENERAL NOTES:

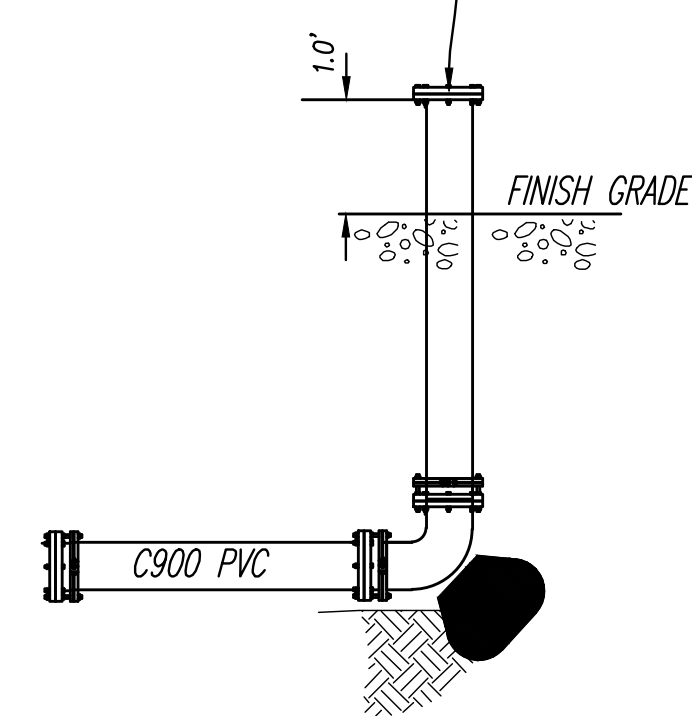
ALL PIPE MATERIAL, FITTINGS, VALVES SHALL CONFORM WITH C900 SPECIFICATIONS. ALL FITTINGS SHALL DUCTILE IRON.

THE FOLLOWING WORK SHALL BE PROVIDED BY THE OWNER'S CONTRACTOR:

- ⑤ INSTALL 45° DIP FITTING MJX MJ WITH THRUST RESTRAINT.
- ⑩ INSTALL APPROXIMATELY 16 LF OF 8" CL 200 C900 PVC PIPE.
- ②① INSTALL APPROXIMATELY 122 LF OF 8" CL 200 C900 PVC PIPE.
- ②⑥ INSTALL APPROXIMATELY 236 LF OF 8" CL 200 C900 PVC PIPE.
- ②⑦ INSTALL 8"x8" WITH BLIND FLANGE DRILLED WITH 2" TAP AND VALVE, FL X MJ FITTING WITH THRUST RESTRAINT.
- ②⑧ INSTALL APPROXIMATELY 28 LF OF 8" CL 200 C900 PVC PIPE.
- ②⑨ TERMINATE 8" RC LINE WITH 8" GATE VALVE FLX MJ WITH MEGALUG. INSTALL BLIND FLANGE ON OPEN END OF GATE. INSTALL TEMPORARY THRUST RESTRAINT.



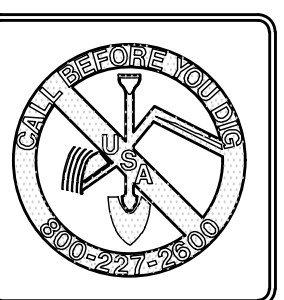
DUSS BOSS RISER TERMINATION



8" DUSS BOSS PIPE LATERAL TERMINATION DETAIL

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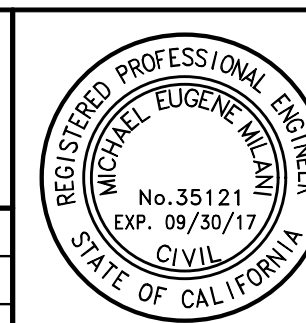


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APN 439-0070-013 & 014 **3898 DEPOT ROAD** **BAY AREA CONCRETE RECYCLING**
IMPROVEMENT PLANS
PRIVATE RECYCLED WATER LINE
CITY OF HAYWARD **ALAMEDA COUNTY** **CALIFORNIA**

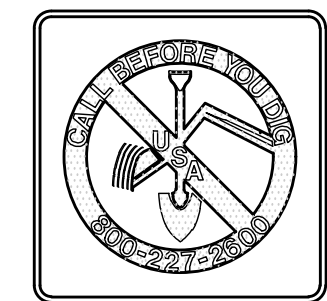
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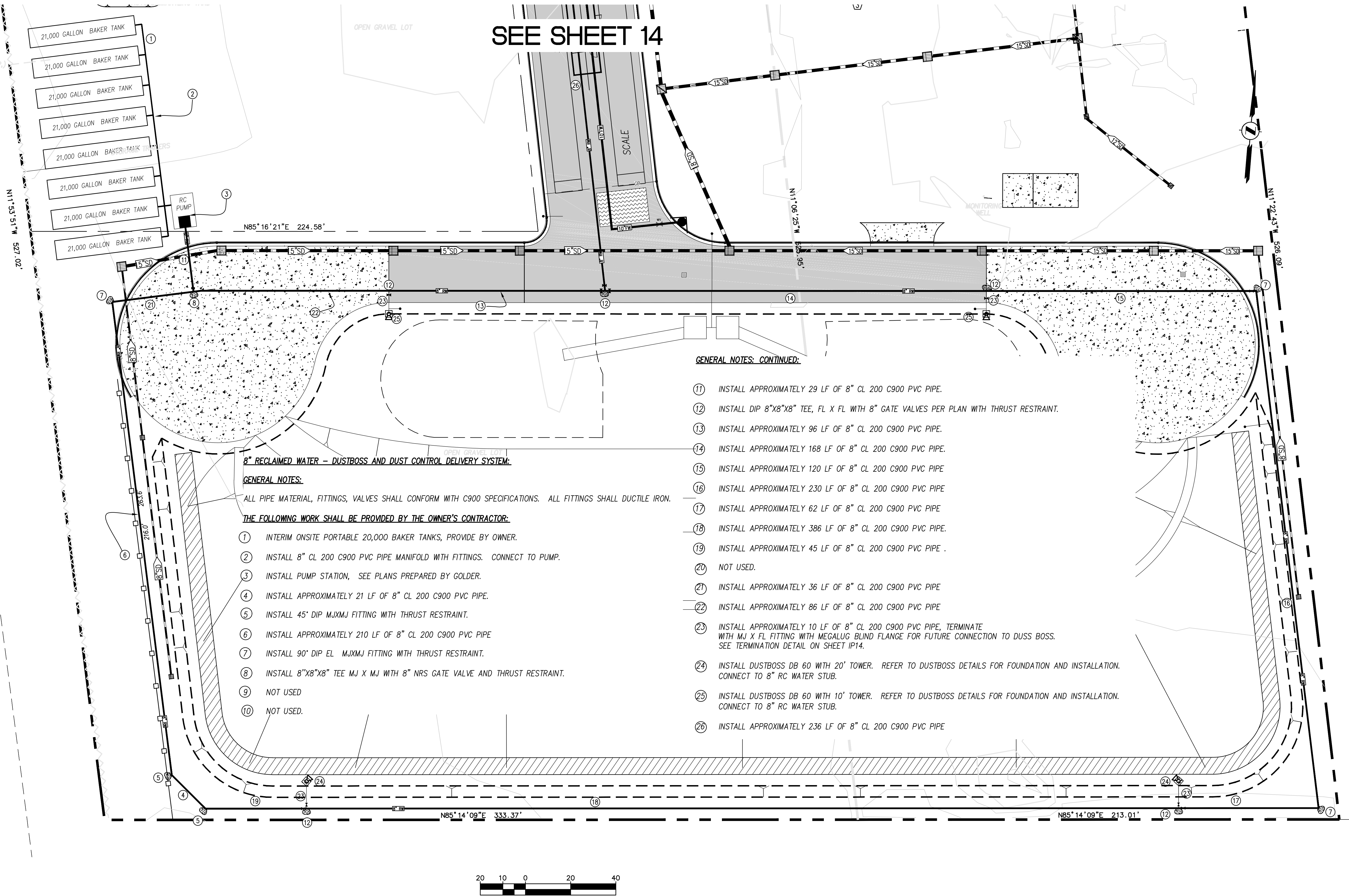


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GENERAL NOTES:

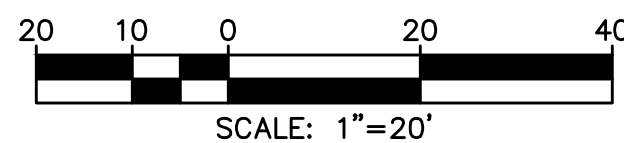
ALL PIPE MATERIAL, FITTINGS, VALVES SHALL CONFORM WITH C900 SPECIFICATIONS. ALL FITTINGS SHALL DUCTILE IRON.

THE FOLLOWING WORK SHALL BE PROVIDED BY THE OWNER'S CONTRACTOR:

- ① INTERIM ONSITE PORTABLE 20,000 BAKER TANKS, PROVIDE BY OWNER.
- ② INSTALL 8" CL 200 C900 PVC PIPE MANIFOLD WITH FITTINGS. CONNECT TO PUMP.
- ③ INSTALL PUMP STATION, SEE PLANS PREPARED BY GOLDER.
- ④ INSTALL APPROXIMATELY 21 LF OF 8" CL 200 C900 PVC PIPE.
- ⑤ INSTALL 45° DIP MJX MJ FITTING WITH THRUST RESTRAINT.
- ⑥ INSTALL APPROXIMATELY 210 LF OF 8" CL 200 C900 PVC PIPE
- ⑦ INSTALL 90° DIP EL MJX MJ FITTING WITH THRUST RESTRAINT.
- ⑧ INSTALL 8"x8"x8" TEE MJ X MJ WITH 8" NRS GATE VALVE AND THRUST RESTRAINT.
- ⑨ NOT USED
- ⑩ NOT USED.

GENERAL NOTES: CONTINUED:

- ⑪ INSTALL APPROXIMATELY 29 LF OF 8" CL 200 C900 PVC PIPE.
- ⑫ INSTALL DIP 8"x8"x8" TEE, FL X FL WITH 8" GATE VALVES PER PLAN WITH THRUST RESTRAINT.
- ⑬ INSTALL APPROXIMATELY 96 LF OF 8" CL 200 C900 PVC PIPE.
- ⑭ INSTALL APPROXIMATELY 168 LF OF 8" CL 200 C900 PVC PIPE.
- ⑮ INSTALL APPROXIMATELY 120 LF OF 8" CL 200 C900 PVC PIPE
- ⑯ INSTALL APPROXIMATELY 230 LF OF 8" CL 200 C900 PVC PIPE
- ⑰ INSTALL APPROXIMATELY 62 LF OF 8" CL 200 C900 PVC PIPE
- ⑱ INSTALL APPROXIMATELY 386 LF OF 8" CL 200 C900 PVC PIPE.
- ⑲ INSTALL APPROXIMATELY 45 LF OF 8" CL 200 C900 PVC PIPE .
- ⑳ NOT USED.
- ㉑ INSTALL APPROXIMATELY 36 LF OF 8" CL 200 C900 PVC PIPE
- ㉒ INSTALL APPROXIMATELY 86 LF OF 8" CL 200 C900 PVC PIPE
- ㉓ INSTALL APPROXIMATELY 10 LF OF 8" CL 200 C900 PVC PIPE, TERMINATE WITH MJ X FL FITTING WITH MEGALUG BLIND FLANGE FOR FUTURE CONNECTION TO DUSS BOSS. SEE TERMINATION DETAIL ON SHEET IP14.
- ㉔ INSTALL DUSTBOSS DB 60 WITH 20' TOWER. REFER TO DUSTBOSS DETAILS FOR FOUNDATION AND INSTALLATION. CONNECT TO 8" RC WATER STUB.
- ㉕ INSTALL DUSTBOSS DB 60 WITH 10' TOWER. REFER TO DUSTBOSS DETAILS FOR FOUNDATION AND INSTALLATION. CONNECT TO 8" RC WATER STUB.
- ㉖ INSTALL APPROXIMATELY 236 LF OF 8" CL 200 C900 PVC PIPE



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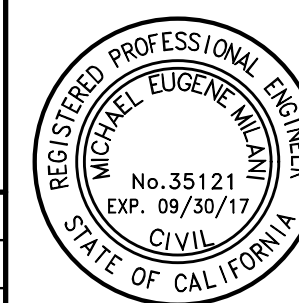


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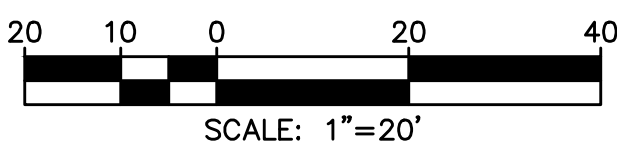
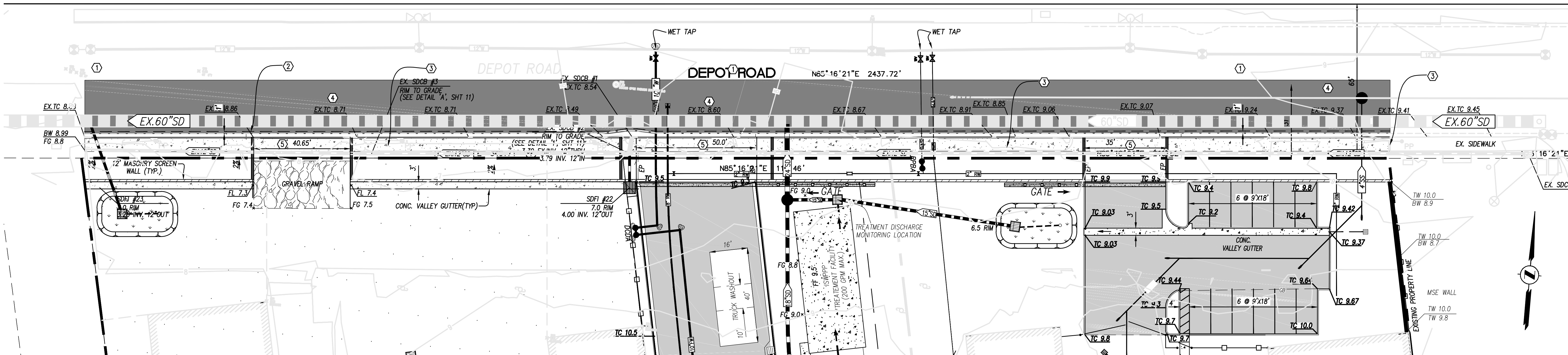
APN 439-0070-013 & 014 3898 DEPOT ROAD BAY AREA CONCRETE RECYCLING
IMPROVEMENT PLANS
PRIVATE RECYCLED WATER LINE
CITY OF HAYWARD ALAMEDA COUNTY CALIFORNIA

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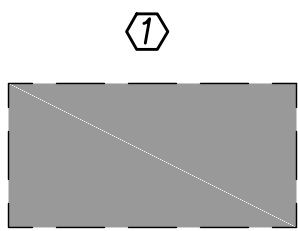
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CONSTRUCTION NOTE

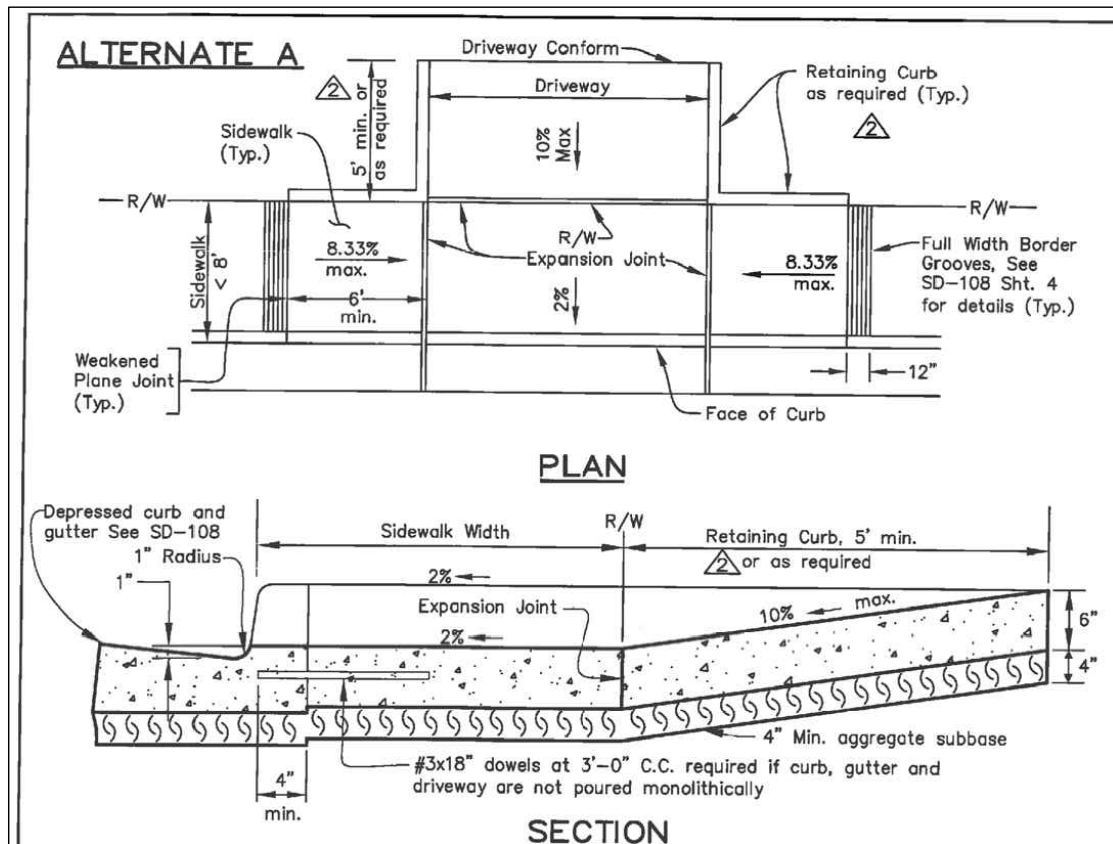
LIMITS OF 2" HMA GRIND AND OVERLAY

DEPOT ROAD FRONTAGE IMPROVEMENTS CONSTRUCTION NOTES:

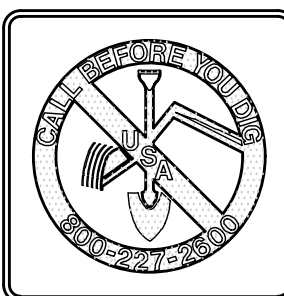
- ① PRIOR TO START OF AND DEMOLITION, EXCAVATION OR TRENCHING, OBTAIN ENCROACHMENT PERMIT FOR ALL WORK TO BE PERFORMED WITHIN THE PUBLIC RIGHT-OF-WAY OF DEPOT ROAD.
- ② SAW CUT EXISTING PAVEMENT.
- ③ REMOVE AND REPLACE APPROXIMATELY 550 LF OF EXISTING CURB, GUTTER WITH NEW CURB, GUTTER AND 5.5' SIDEWALK ALONG THE COMPLETE PROJECT FRONTAGE OF DEPOT ROAD. IMPROVEMENT TO CONFORM WITH STANDARD DETAIL SD#108.
- ④ GRIND ONE-HALF OF DEPOT ROAD AND OVERLAY WITH A MINIMUM OF 2" HMA. PRIOR TO OVERLAY COMPLETE DIG OUTS OF ALL DAMAGED AC PAVING. ADJUST ALL IRON TO FINISH GRADE.
- ⑤ INSTALL STANDARD INDUSTRIAL DRIVEWAY. SEE DETAIL THIS SHEET.

THE FOLLOWING STANDARD DETAIL FOR THE CITY OF HAYWARD ARE INCORPORATED BY REFERENCE:

- SD-110 DRIVEWAY - ARTERIAL STREETS
- SD-108A SIDEWALK, CURB AND GUTTER, ISLAND CURB AND CURB RAMP SECTIONS
- SD-112 STANDARD GUTTER FLARE AT INLET
- SD-118 STANDARD AREA DRAIN
- SD-125 STANDARD PERMIT AND SUBDIVISION TRENCH SECTIONS
- SD-201 STANDARD DOUBLE CHECK VALVE ASSEMBLIES
- SD-202 STANDARD REDUCED PRESSURE PRINCIPAL BACKFLOW PREVENTION ASSEMBLY
- SD-203 STANDARD TAPPING TEE AND VALVE ASSEMBLY
- SD-204 STANDARD FIRE SERVICE 3" AND LARGER
- SD-205 STANDARD VALVE ASSEMBLY
- SD-206 STANDARD HYDRANT INSTALLATION
- SD-207 THRUST BLOCKS FOR HORIZONTAL AND SAG BENDS - 22-1/2" OR MORE
- SD-208 THRUST BLOCKS - CREST VERTICAL BENDS
- SD-209 THRUST BLOCKS - DIP CREST VERTICAL BEND
- SD-210 THRUST BLOCKS FOR TEES AND CROSSES
- SD-211 BLOW OFF FOR DEAD ENDS
- SD-213 STANDARD COPPER 3/4" & 1" SINGLE WATER SERVICE CONNECTION
- SD-217 STANDARD WATER SERVICE CONNECTION 1-1/2" AND 2" COPPER
- SD-224 STANDARD DUCTILE IRON DROP
- SD-226 STANDARD AIR VALVE
- SD-228 TRACER WIRE INSTALLATION
- SD-301 STANDARD BUILDING COURT MAIN SEWER
- SD-304 STANDARD PRECAST CONCENTRIC SANITARY SEWER MANHOLE.
- SD-307 STANDARD MANHOLE FRAME, COVER AND PAN
- SD-308 STANDARD SANITARY SEWER RISER AND MINIMUM GRADES
- SD-311 STANDARD TEST FOR SANITARY SEWER
- SD-401 STANDARD WATER INLET ANCHOR, FRAME AND GRATE
- SD-401A STORM WATER INLET MARKING
- SD-402 STANDARD TYPE "A" STORM WATER INLET
- SD-411 STANDARD SIDE CONNECTION



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DEPOT ROAD DRIVEWAY DETAIL - SD108A - OPTION "A"

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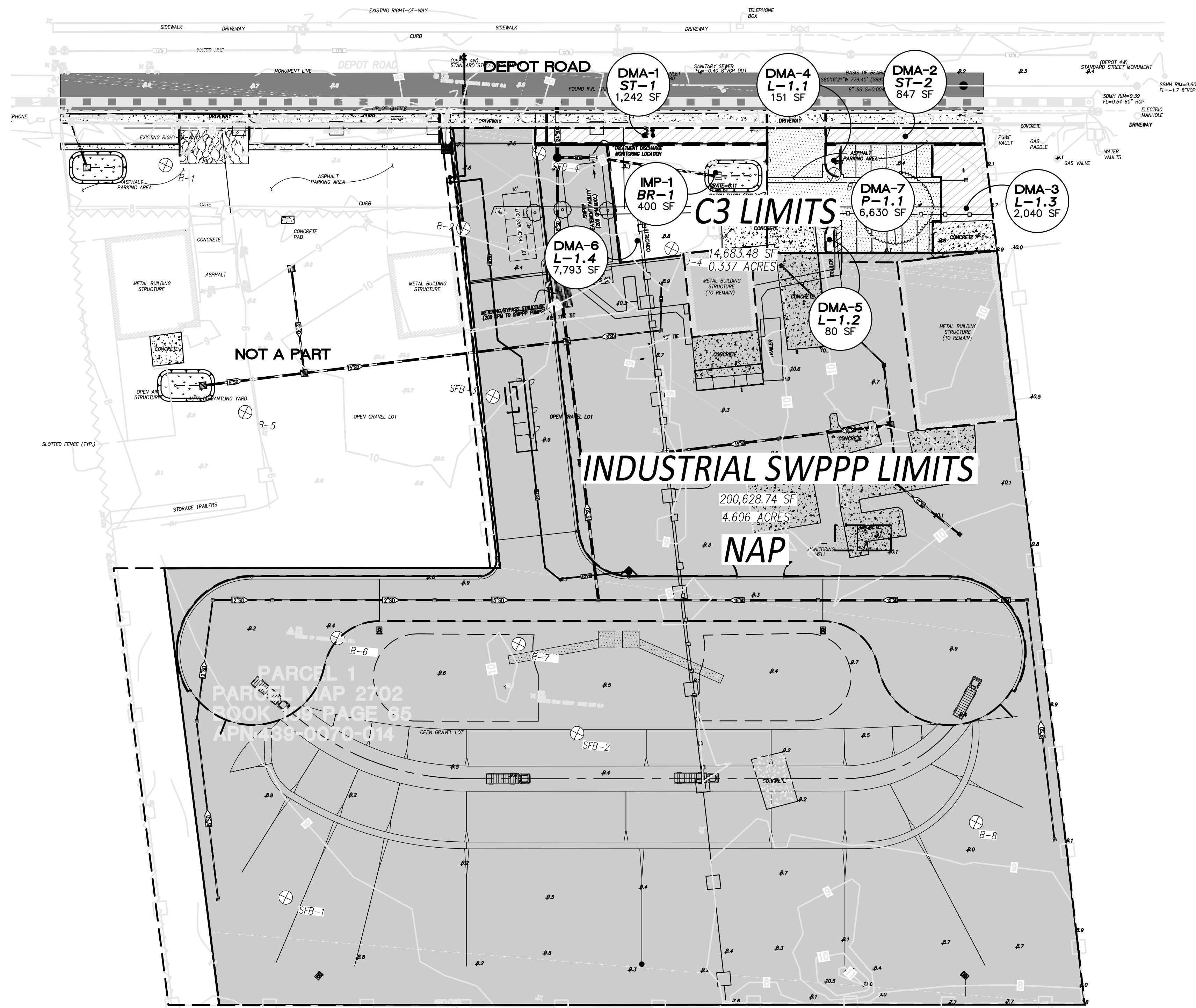
APN 439-0070-013 & 014 3898 DEPOT ROAD BAY AREA CONCRETE RECYCLING
IMPROVEMENT PLANS
DEPOT ROAD FRONTAGE IMPROVEMENTS
CITY OF HAYWARD ALAMEDA COUNTY CALIFORNIA

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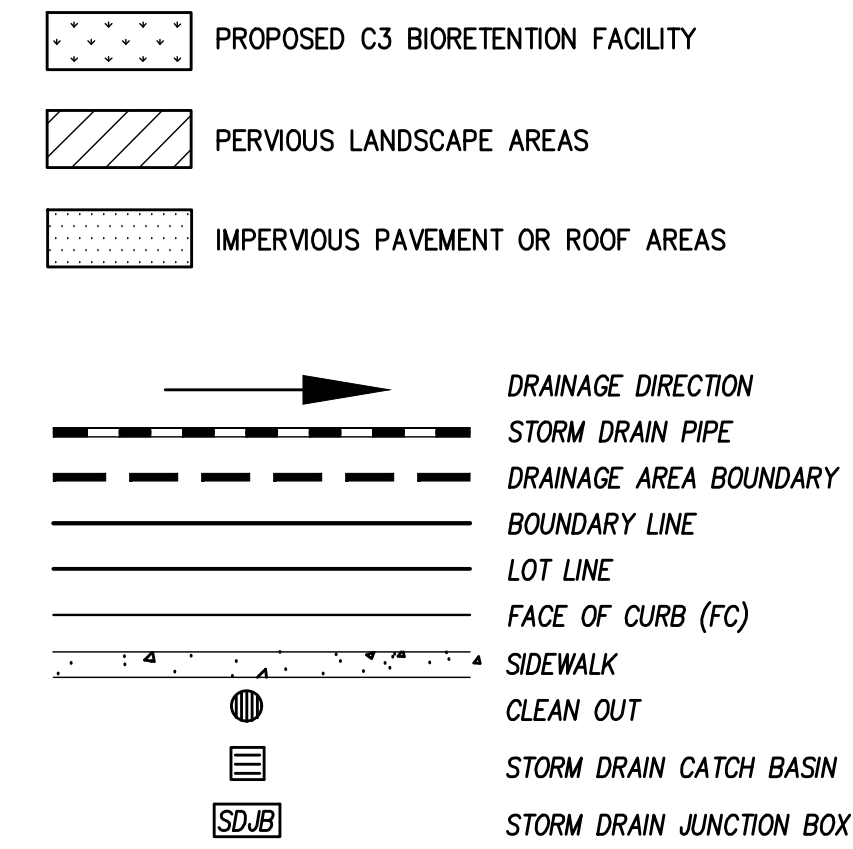
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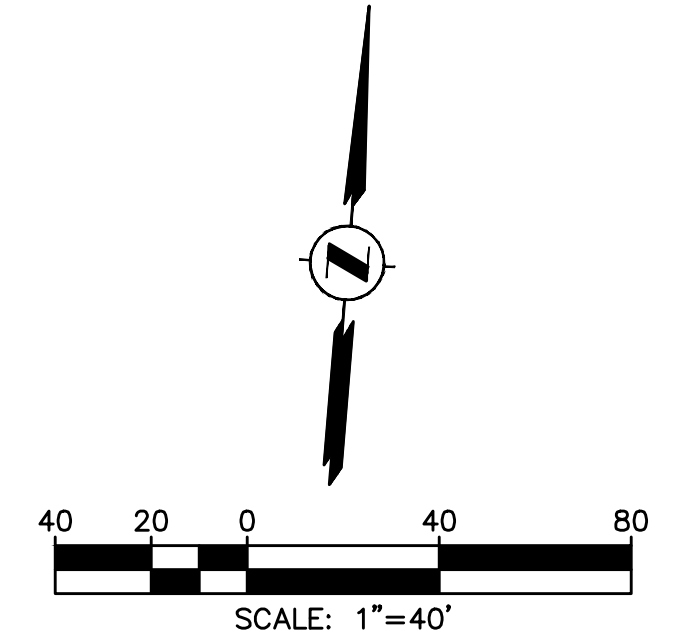
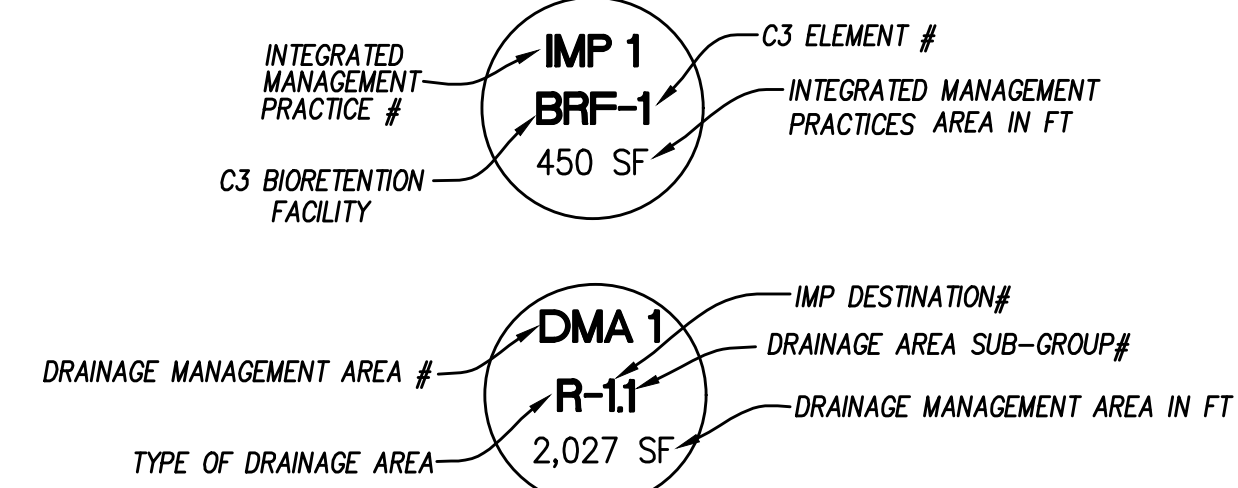


LEGEND:



ABBREVIATIONS:

BRF	BIORETENTION FACILITY
CAP.	CAPACITY
EX.	EXISTING
DMA	DRAINAGE MANAGEMENT AREA
F/C	FACE OF CURB
IMP	INTEGRATED MANAGEMENT PRACTICES
L	LANDSCAPE
NAP	NOT A PART, AREA EXCLUDED FROM C.3 REQUIREMENTS
P	PAVEMENT
PL	PLANTER
R	ROOF
RR	RIP RAP
R/W	RIGHT OF WAY
S	SELF TREATING
SF	SQUARE FEET
SR	SELF RETAINING
ST	SELF TREATING
S/W	SIDEWALK
U	UNTREATED



Project Name: Depot Road
Project Type: Treatment Only
APN: 439-0070-014
Drainage Area: 14,680
Mean Annual Precipitation: 20.0

Self-Treating DMAs

DMA Name	Area (sq ft)
DMA1	1,242.0
DMA2	847.0

IV. Areas Draining to IMPs

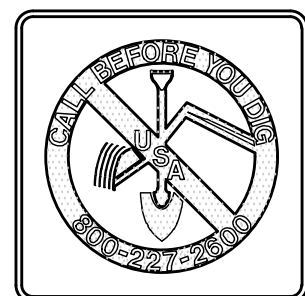
IMP Name: IMP1
IMP Type: Bioretention Facility
Soil Group: IMP1

DMA Name	Area (sq ft)	Post Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing Factor	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume
DMA3	2,040	Landscape	0.10	204				
DMA4	151	Landscape	0.10	15				
DMA5	80	Landscape	0.10	8				
DMA6	5,610	Landscape	0.10	561				
DMA7	6,630	Concrete or Asphalt	1.00	6,630				
Total	7,418							
Area					0.040	1.000	297	400

Report generated on 1/30/2016 12:00:00 AM by the Contra Costa Clean Water Program IMP Sizing Tool software (version 1.3.1.0).

DMA-IMP SIZING COMPUTATION

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Planning
Surveying & Mapping
Land Development Engineering
Municipal Engineering
Construction Staking
Construction Management
SWPPP Monitoring & Reporting

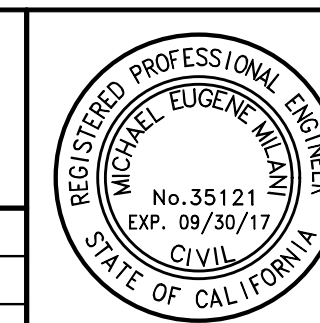
& Associates
MILANI

2655 Stanwell Drive, Suite 105
Concord, CA 94520
Phone: (925) 674-9082
Fax: (925) 674-9279
Web: www.milaniasociates.com

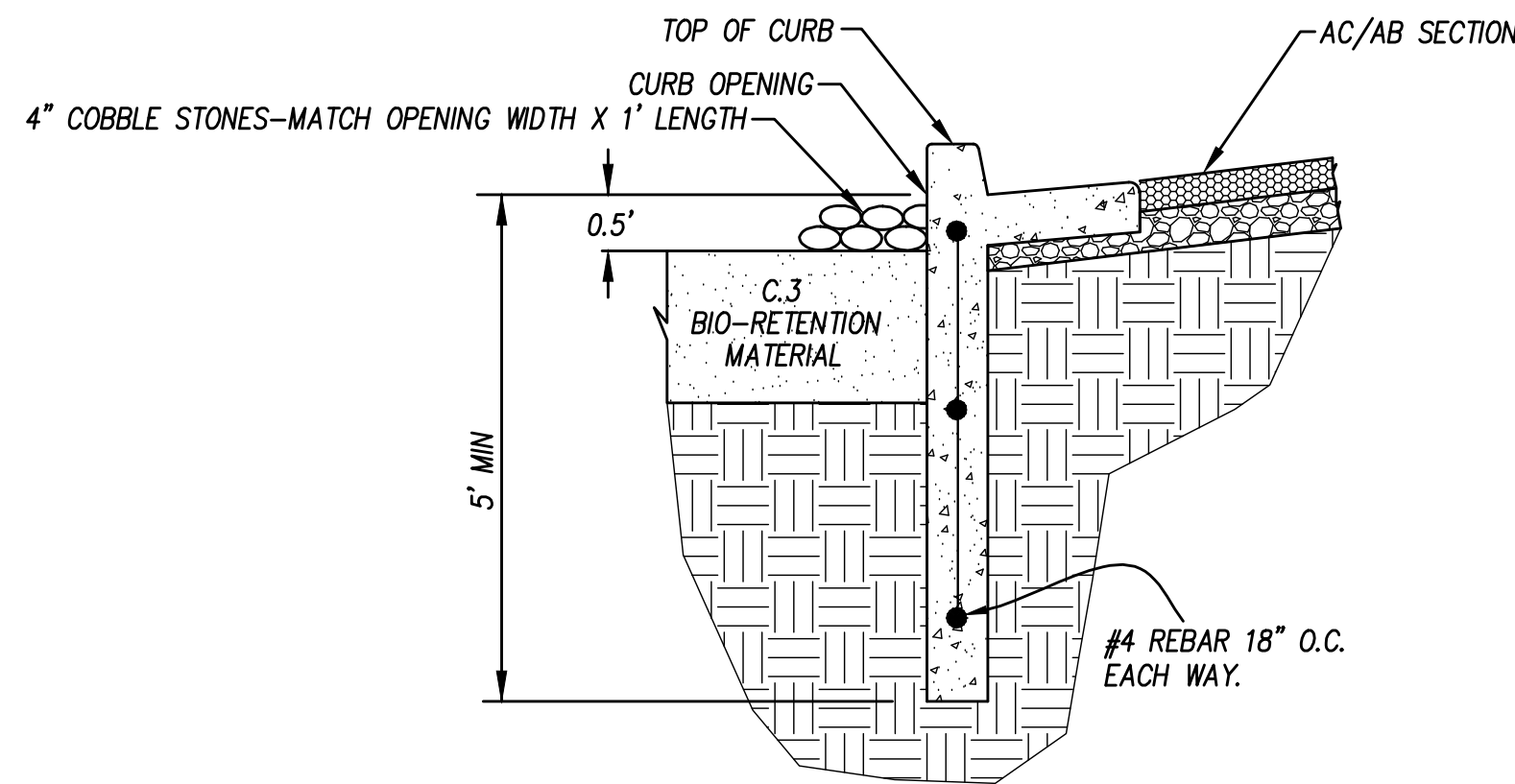
APN 439-0070-013 & 014 3898 DEPOT ROAD BAY AREA CONCRETE RECYCLING
IMPROVEMENT PLANS
C.3 TREATMENT PLAN
CITY OF HAYWARD ALAMEDA COUNTY CALIFORNIA

DESIGNED UNDER THE DIRECTION OF:

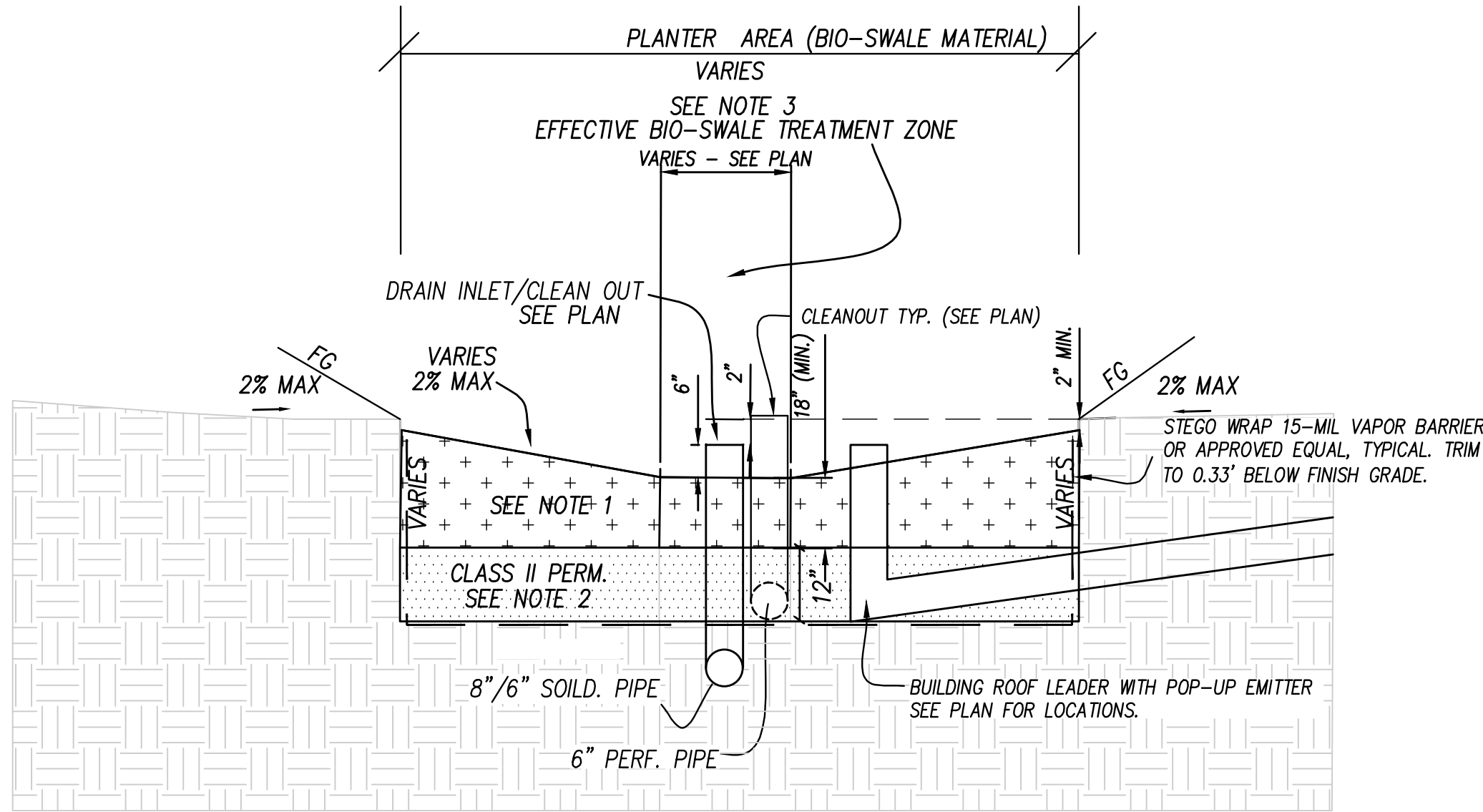
MICHAEL E. MILANI
R.C.E. No. 35121 REGISTRATION EXPIRES 9-30-17
DATE
DESIGN: KRA JOB NO: 666
DRAWN: KRA DATE: APRIL 2017
CHECKED: MEM SCALE: AS SHOWN



NO.	REVISIONS	BY	APP	DATE	SHEET
					17
					22
					OF SHEETS



DEEPEND CURB AT C3 BIO-RETENTION BASINS

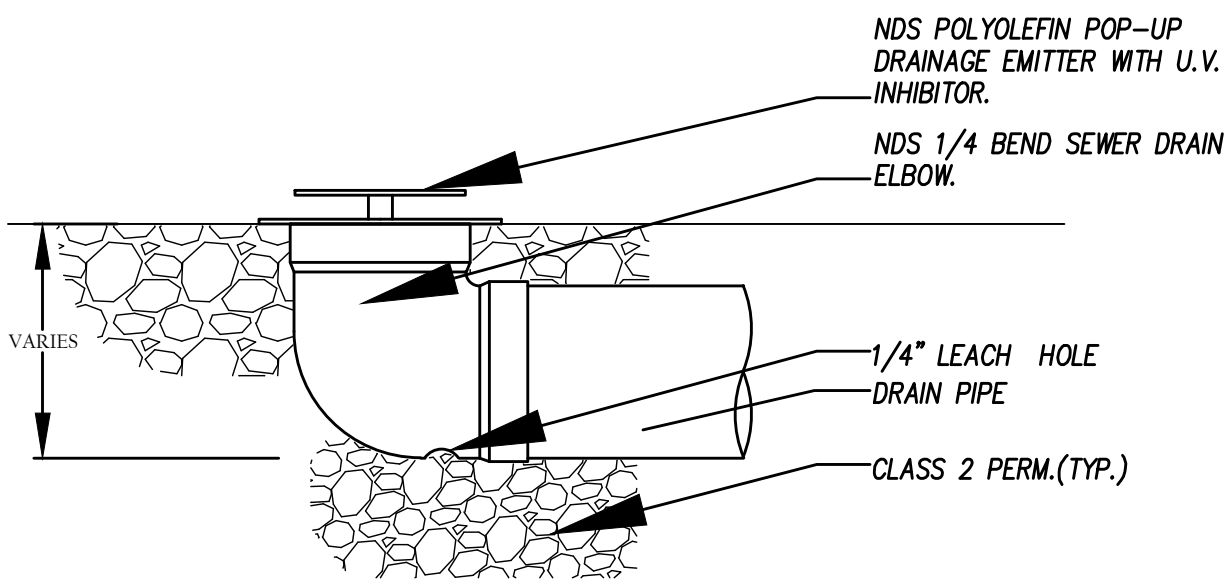


TYPICAL C.3 PLANTER SECTION

N.T.S.

NOTES:

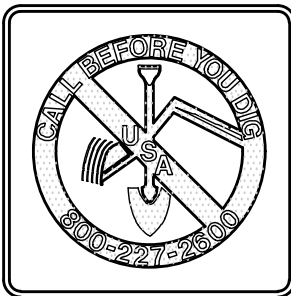
1. SOIL MIX SHALL MEET REQUIREMENTS OF THE ALAMEDA COUNTY CLEAN WATER PROGRAM.
2. CLASS II PERM SHALL CONFORM WITH CURRENT CALTRANS SPECIFICATIONS.
3. FOR EFFECTIVE C.3 TREATMENT ZONES SEE PLAN.
4. ALL 6" SUBDRAINS SHALL TERMINATE WITH A CLEANOUT SET FIVE INCHES (5") ABOVE FINISH GRADE WITH CAP END. CLEANOUTS TO BE PROVIDED AT 50' INTERVALS FOR RUNS EXCEEDING 100' IN LENGTH.



POP-UP DRAIN EMITTER

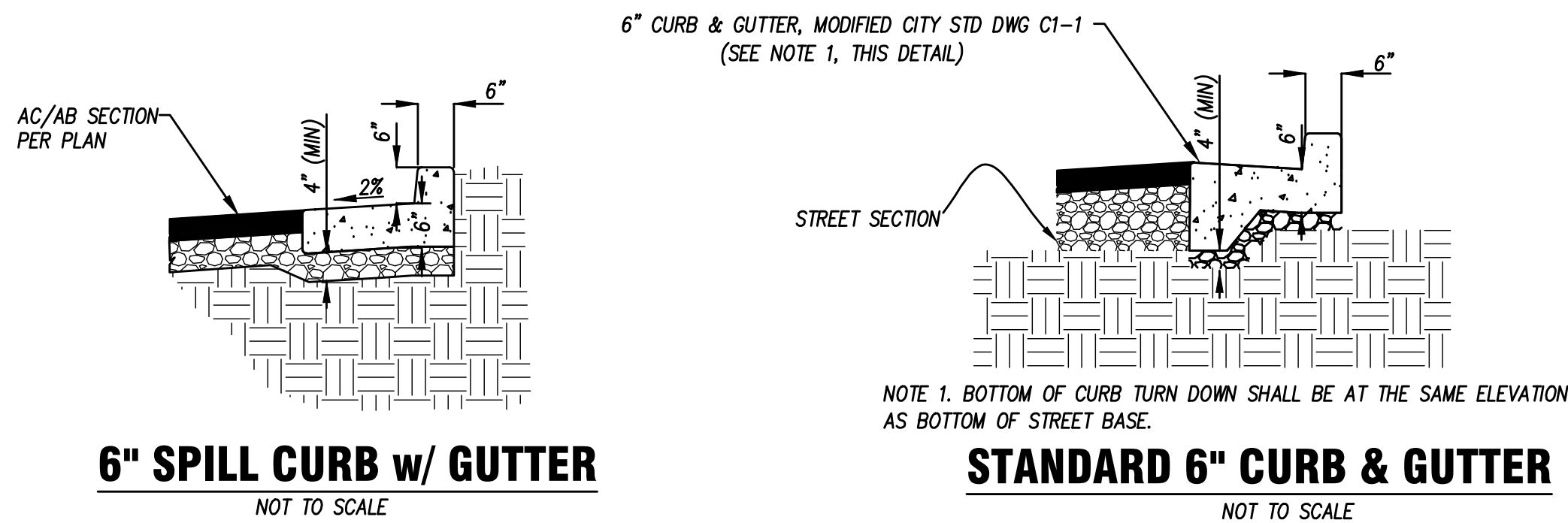
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AGENCY/CLIENT APPROVAL OF MAP

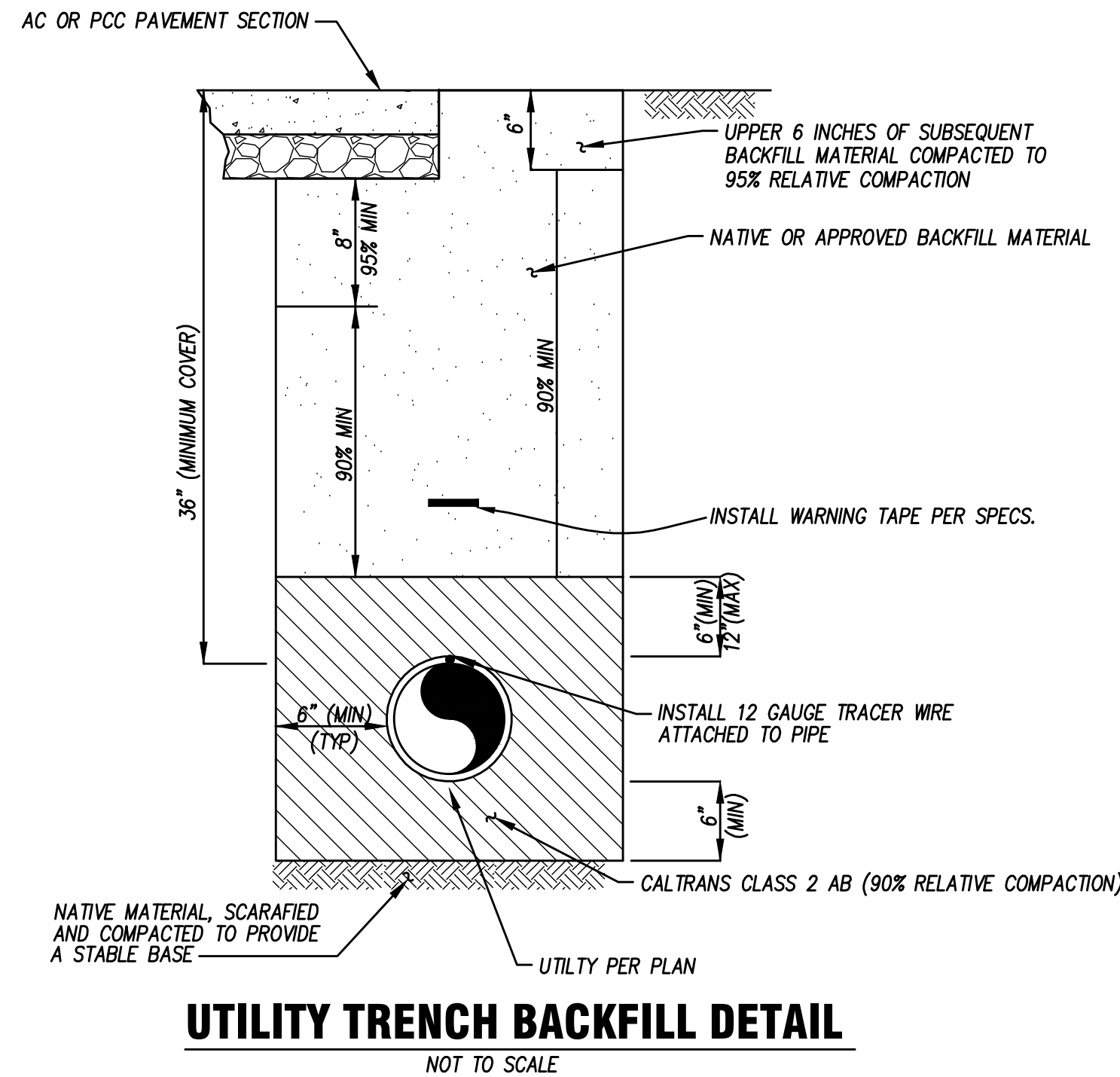
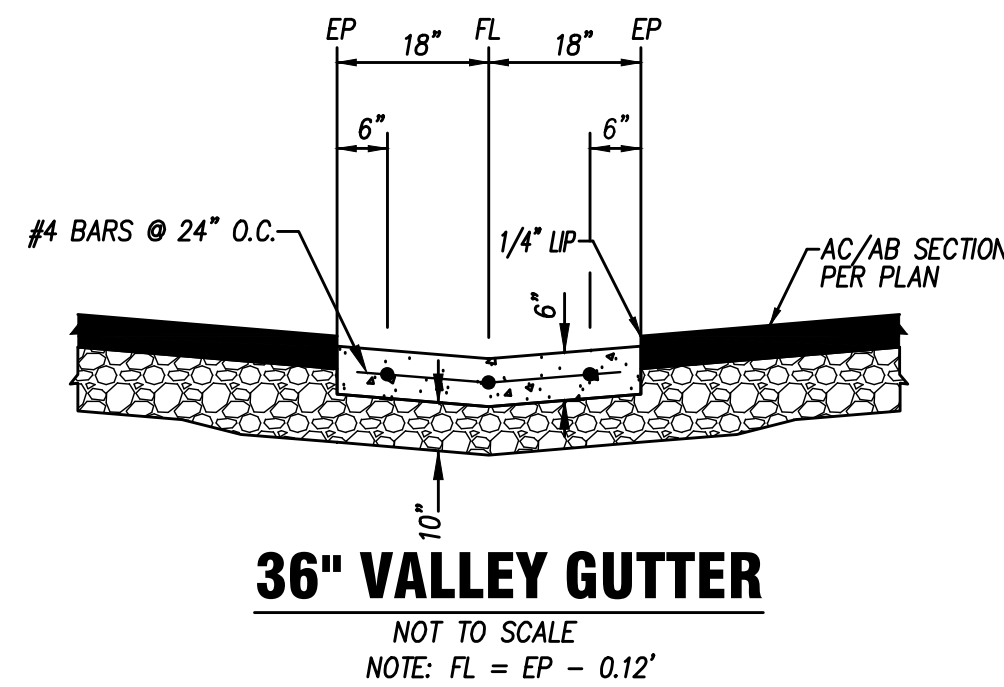




- SD-110 DRIVEWAY – ARTERIAL STREETS
- SD-108 SIDEWALK, CURB AND GUTTER, ISLAND CURB AND CURB RAMP SECTIONS
- SD-112 STANDARD GUTTER FLARE AT INLET
- SD-118 STANDARD AREA DRAIN
- SD-125 STANDARD PERMIT AND SUBDIVISION TRENCH SECTIONS
- SD-201 STANDARD DOUBLE CHECK VALVE ASSEMBLIES
- SD-202 STANDARD REDUCED PRESSURE PRINCIPAL BACKFLOW PREVENTION ASSEMBLY
- SD-203 STANDARD TAPPING TEES AND VALVE ASSEMBLY
- SD-204 STANDARD FIRE SERVICE 3" AND LARGER
- SD-205 STANDARD VALVE ASSEMBLY
- SD-206 STANDARD HYDRANT INSTALLATION
- SD-207 THRUST BLOCKS FOR HORIZONTAL AND SAG BENDS – 22-1/2" OR MORE
- SD-208 THRUST BLOCKS – CREST VERTICAL BENDS
- SD-209 THRUST BLOCKS – DIP CREST VERTICAL BEND
- SD-210 THRUST BLOCKS FOR TEES AND CROSSES
- SD-211 BLOW OFF FOR DEAD ENDS
- SD-213 STANDARD COPPER 3/4" & 1" SINGLE WATER SERVICE CONNECTION
- SD-217 STANDARD WATER SERVICE CONNECTION 1-1/2" AND 2" COPPER
- SD-224 STANDARD DUCTILE IRON DROP
- SD-226 STANDARD AIR VALVE
- SD-228 TRACER WIRE INSTALLATION
- SD-301 STANDARD BUILDING COURT MAIN SEWER
- SD-304 STANDARD PRECAST CONCRETE MANHOLE SANITARY SEWER MANHOLE.
- SD-307 STANDARD MANHOLE FRAME, COVER AND PAN
- SD-308 STANDARD SANITARY SEWER RISER AND MINIMUM GRADES
- SD-311 STANDARD TEST FOR SANITARY SEWER
- SD-401 STANDARD WATER INLET ANCHOR, FRAME AND GRATE
- SD-401A STORM WATER INLET MARKING
- SD-402 STANDARD TYPE "A" STORM WATER INLET
- SD-411 STANDARD SIDE CONNECTION



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ADA RAMP GROOVING DETAIL
NOT TO SCALE

CROSS SLOPE NOT TO EXCEED 2%

MATCH AT NEAREST SCORE MARK

EX SWK

3" CLASS II AB

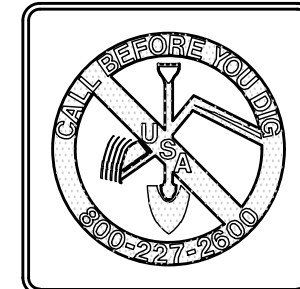
8.33% MAX.

PER PLAN

EX CURB PROJECTION

DRIVEWAY ENTRY

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BAY AREA CONCRETE RECYCLING

IMPROVEMENT PLANS DETAILS

CITY OF HAYWARD

ALAMEDA COUNTY

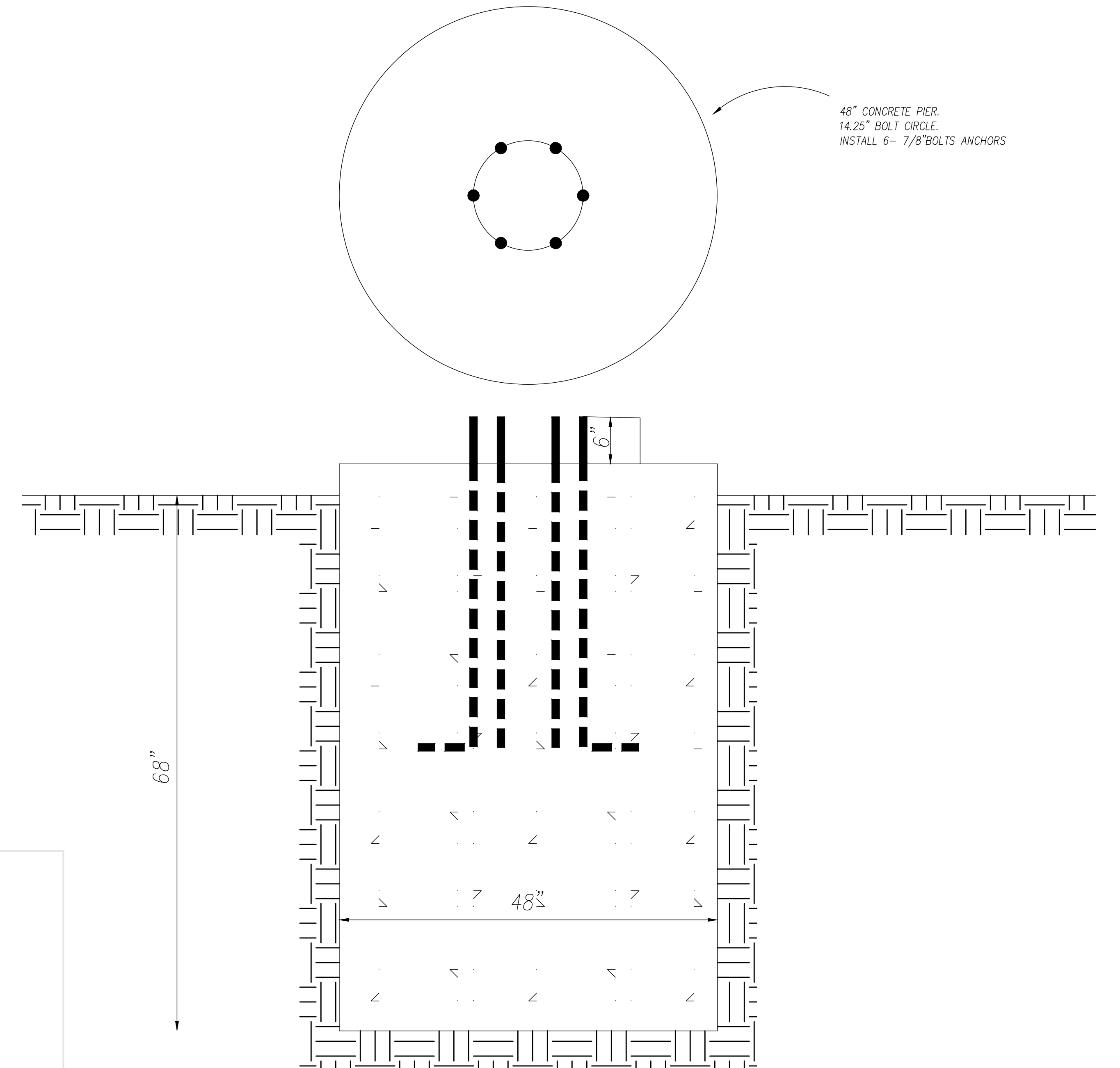
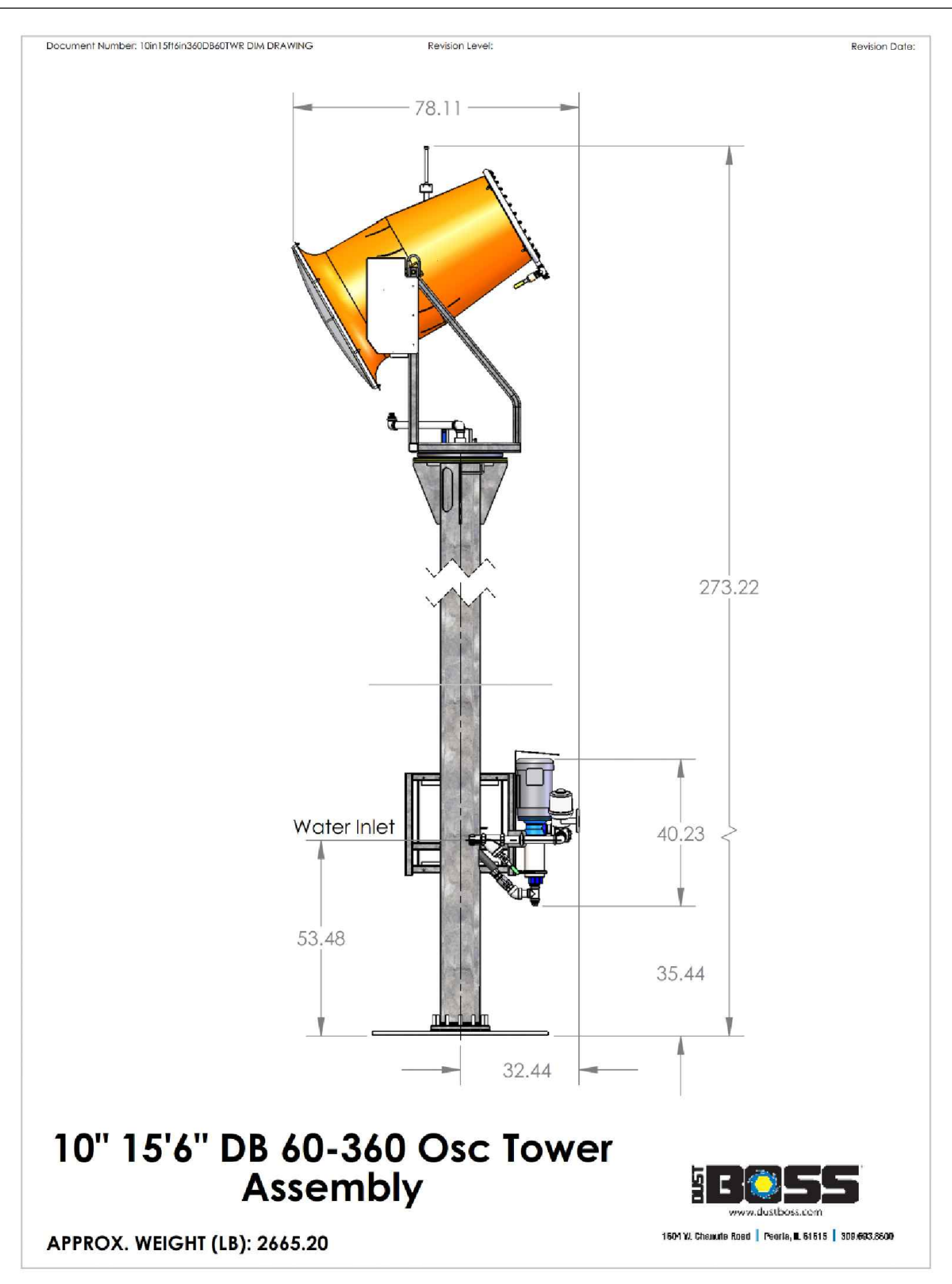
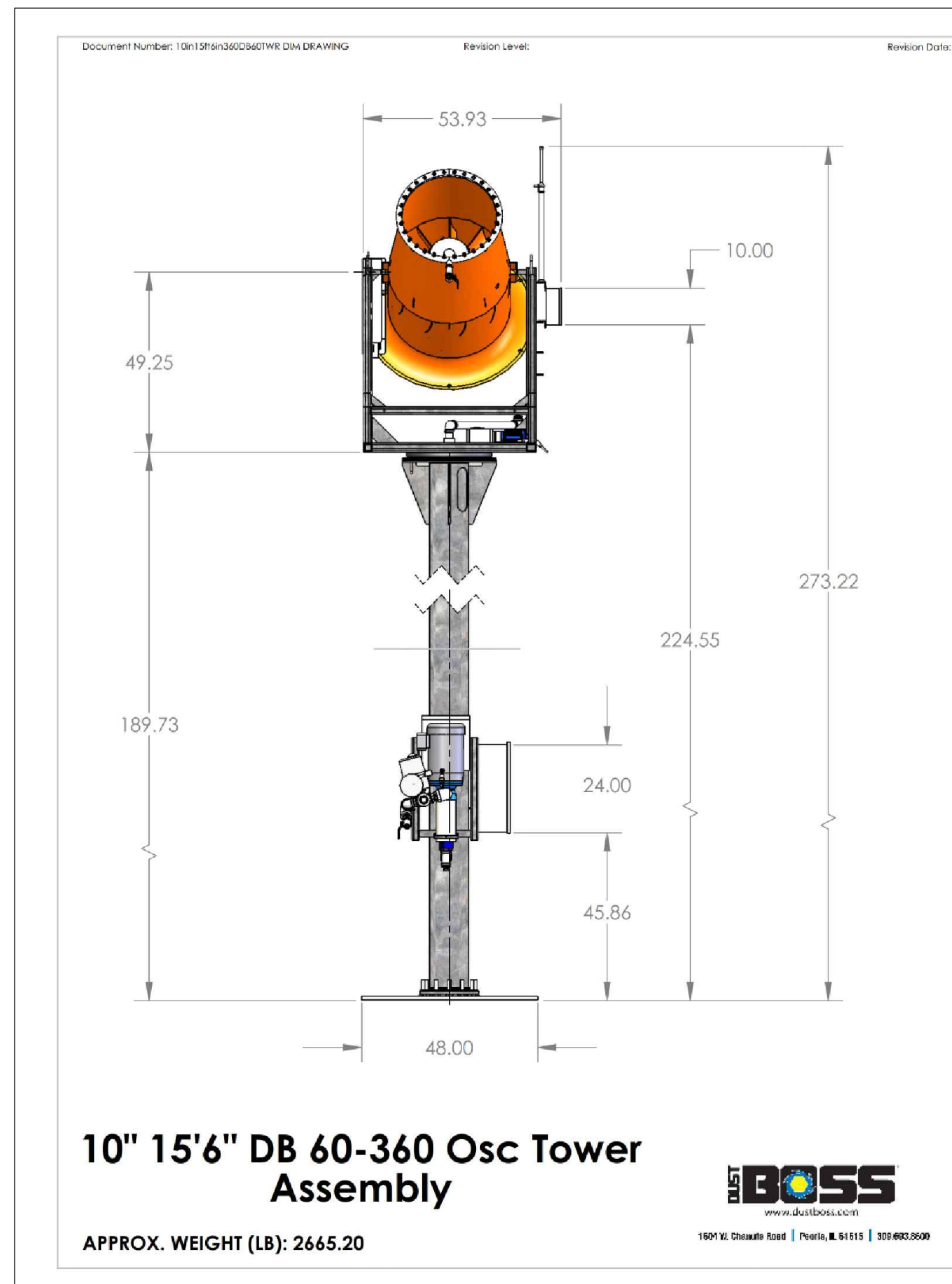
CALIFORNIA

MICHAEL E. MILANI
R.C.E. No. 35121 REGISTRATION EXPIRES 9-30-17

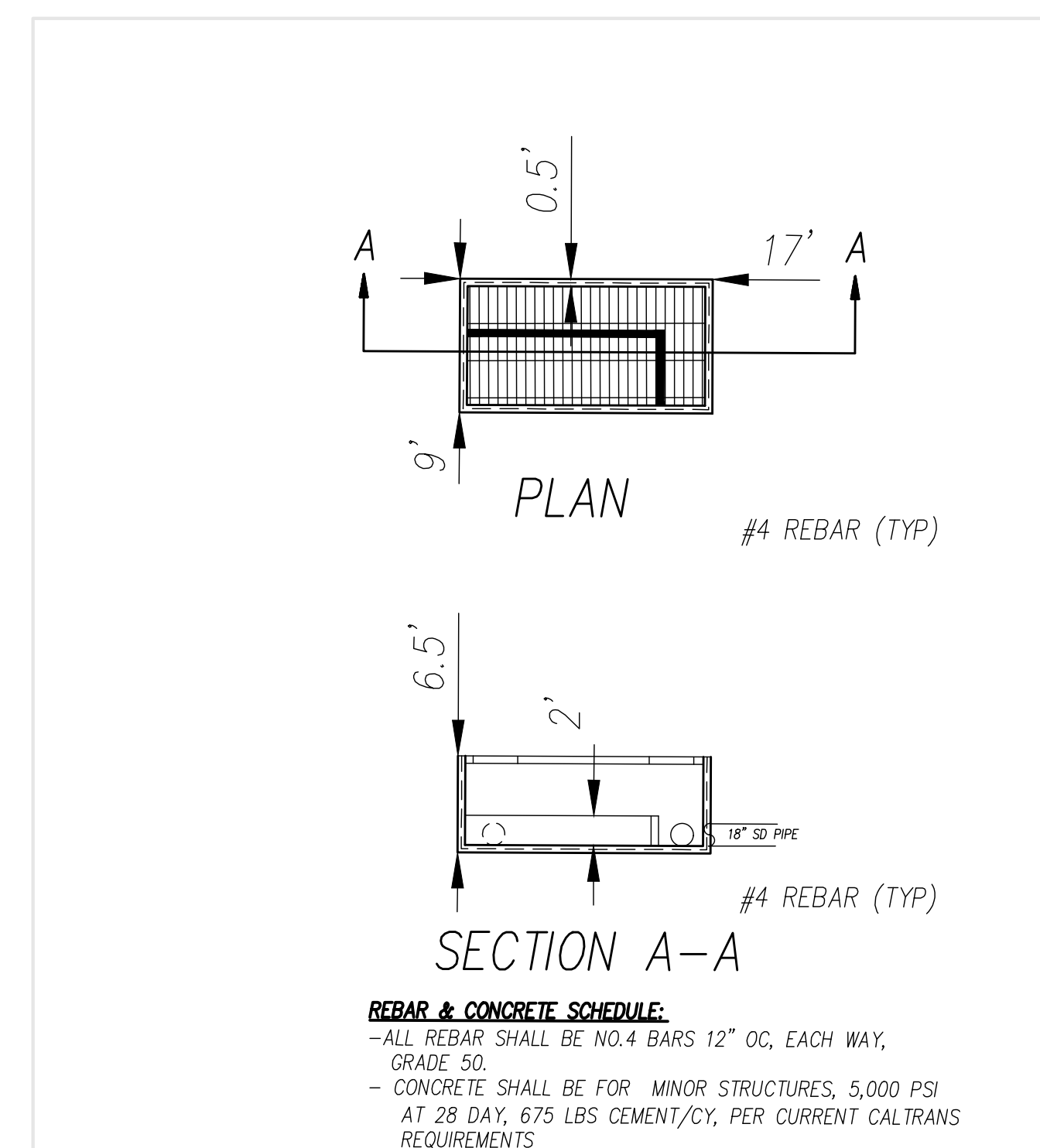
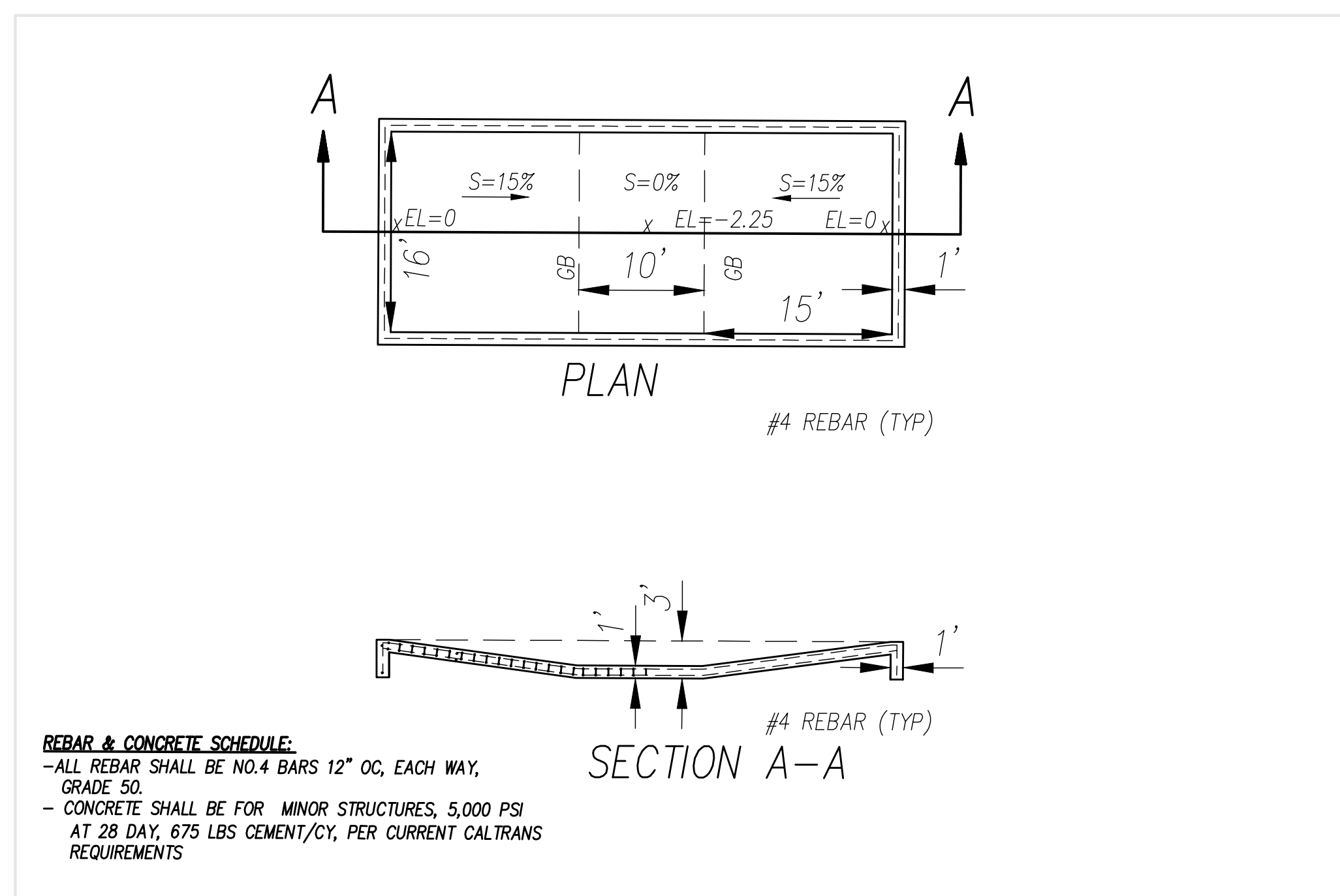
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CHECKED: MEM	SCALE: AS SHOWN



NO.	REVISIONS	BY	APP	DATE	SHEET
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					OF SHEETS



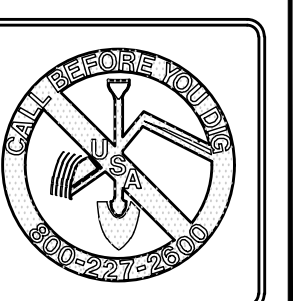
DUSTBOSS-DB 60 -360 OSC TOWER ASSEMBLY (NTS)

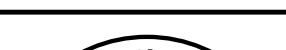


DUSTBOSS-DB 60 -360 OSC TOWER FOUNDATION DETAIL (NTS)

CONSTRUCTION NOTES:
1. REFER TO DUSTBOSS CONSTRUCTION SPECIFICATIONS FOR ALL INSTALLATIONS.

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	NO.	REVISIONS	BY	APP	DATE	SHEET 20 OF 22 SHEETS

- Planning
- Surveying & Mapping
- Land Development Engineering
- Municipal Engineering
- Construction Staking
- Construction Management
- SWPPP Monitoring & Reporting



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APN 439-0070-013 & 014 3898 DEPOT ROAD BAY AREA CONCRETE RECYCLING

IMPROVEMENT PLANS

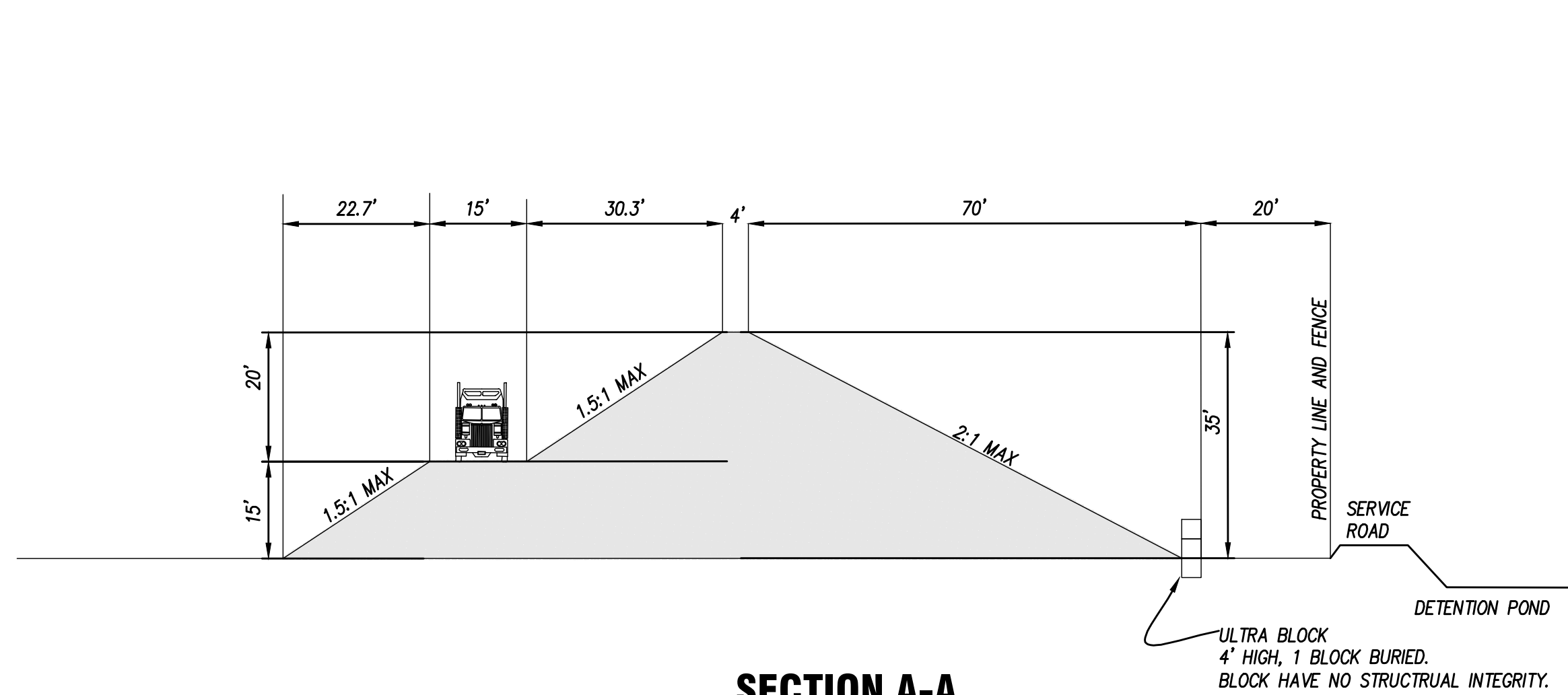
DETAILS - DUSTBOSS-60 UNITS & TRUCK TIRE WASHOUT

CITY OF HAYWARD ALAMEDA COUNTY CALIFORNIA

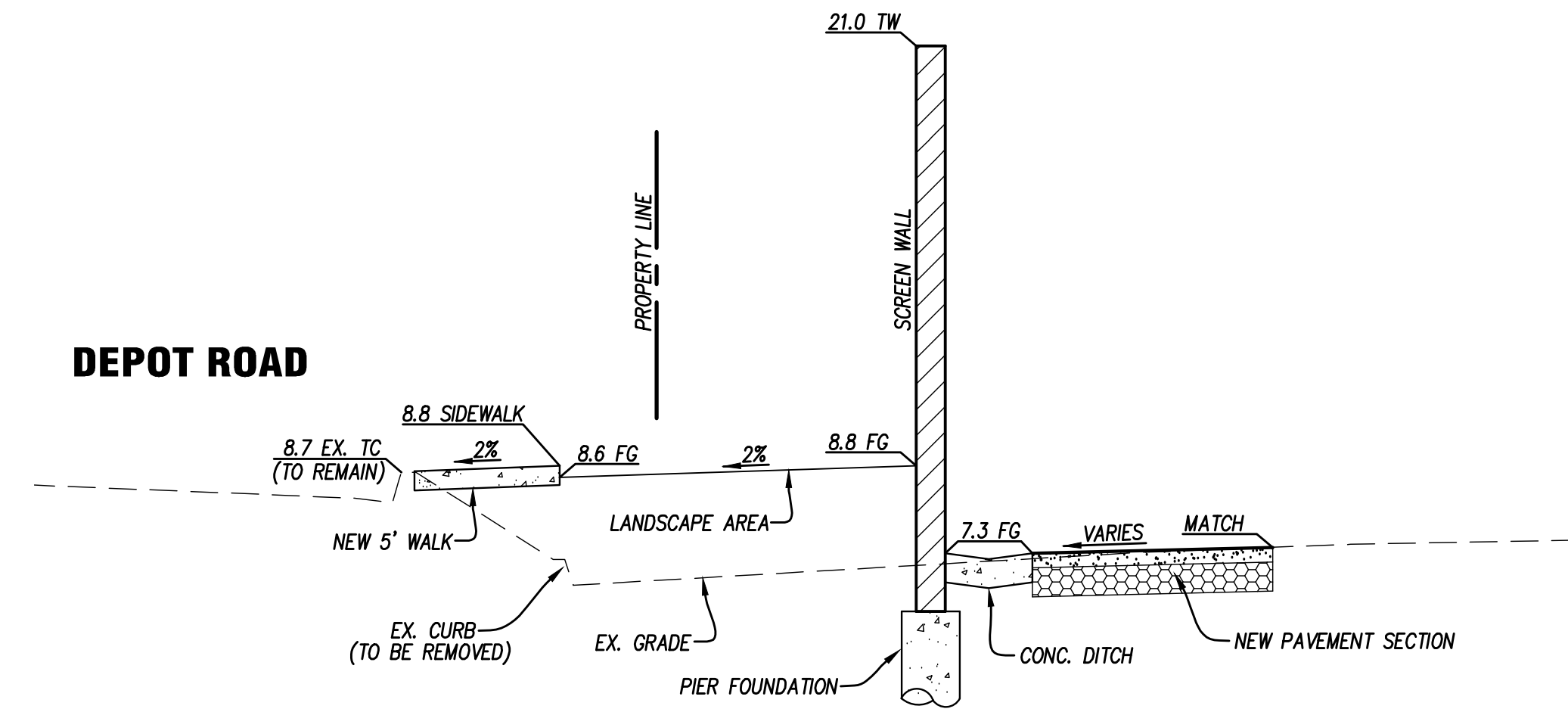
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MICHAEL E. MILANI
B.C.F. No. 35121 REGISTRATION EXPIRES 9-30-17

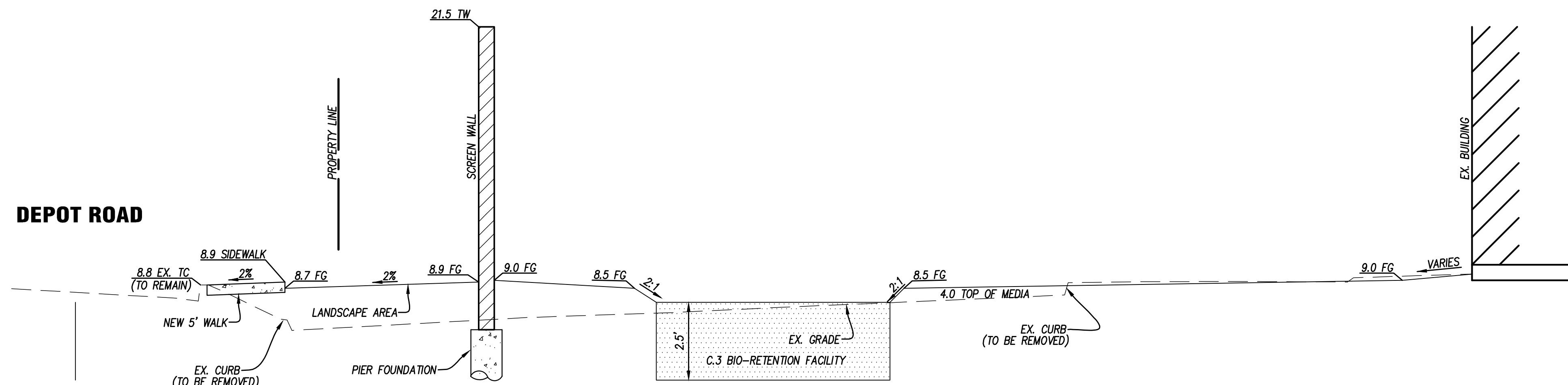
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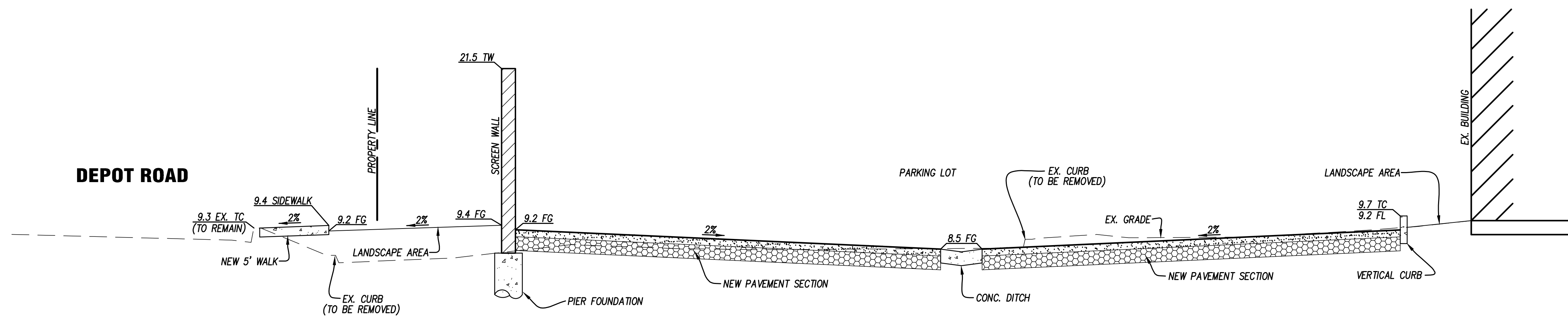
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SECTION B-B
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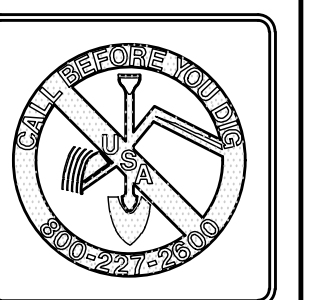


SECTION C-C
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SECTION D-D
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Planning
Surveying & Mapping
Land Development Engineering
Municipal Engineering
Construction Staking
Construction Management
SWPPP Monitoring & Reporting

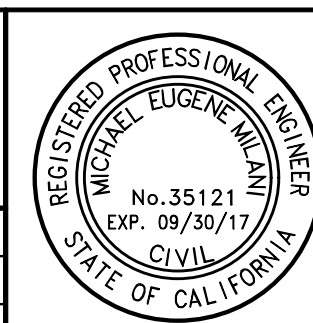


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APN 439-0070-013 & 014 **3898 DEPOT ROAD** **BAY AREA CONCRETE RECYCLING**
IMPROVEMENT PLANS
TYPICAL SECTIONS
CITY OF HAYWARD **ALAMEDA COUNTY** **CALIFORNIA**

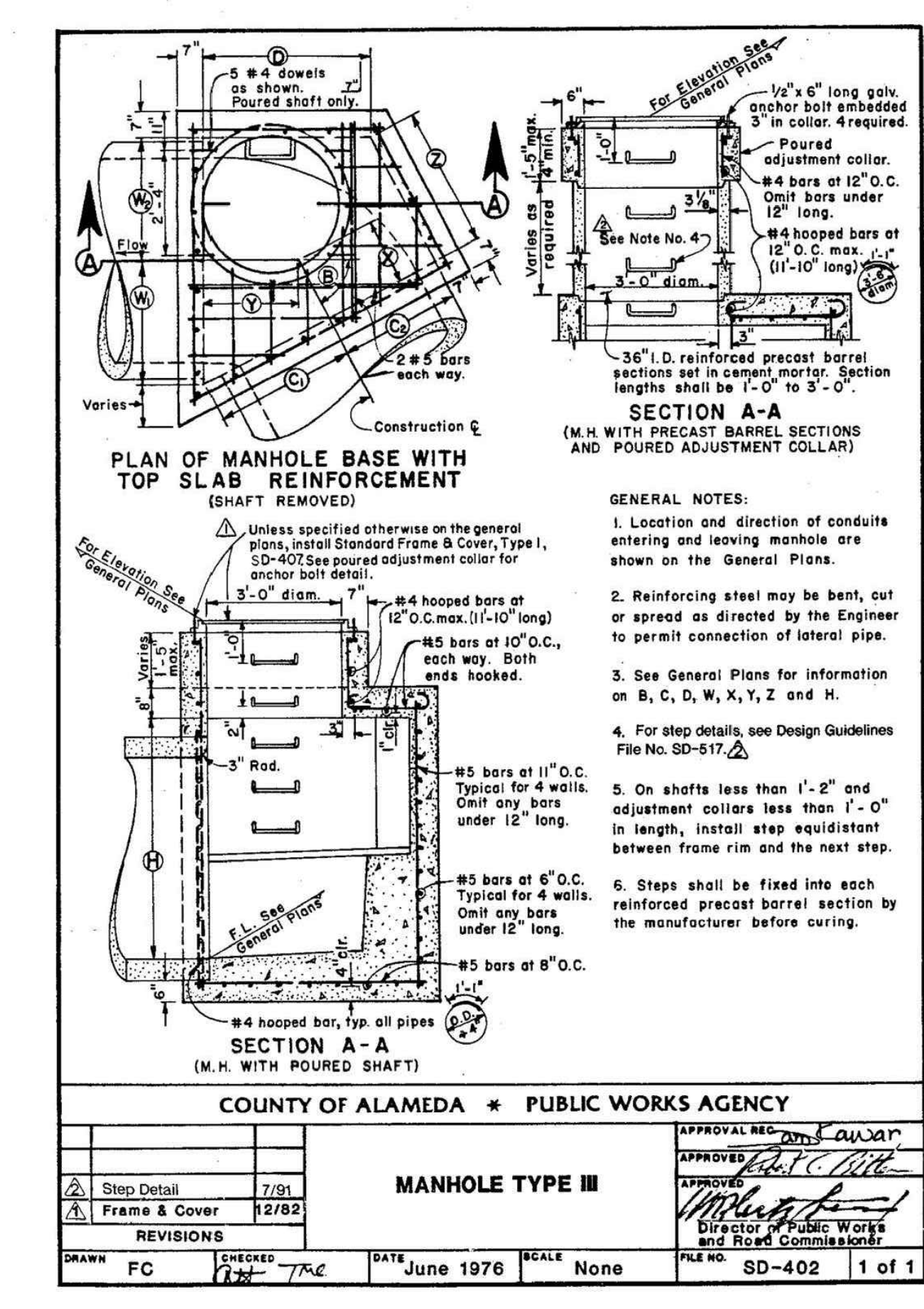
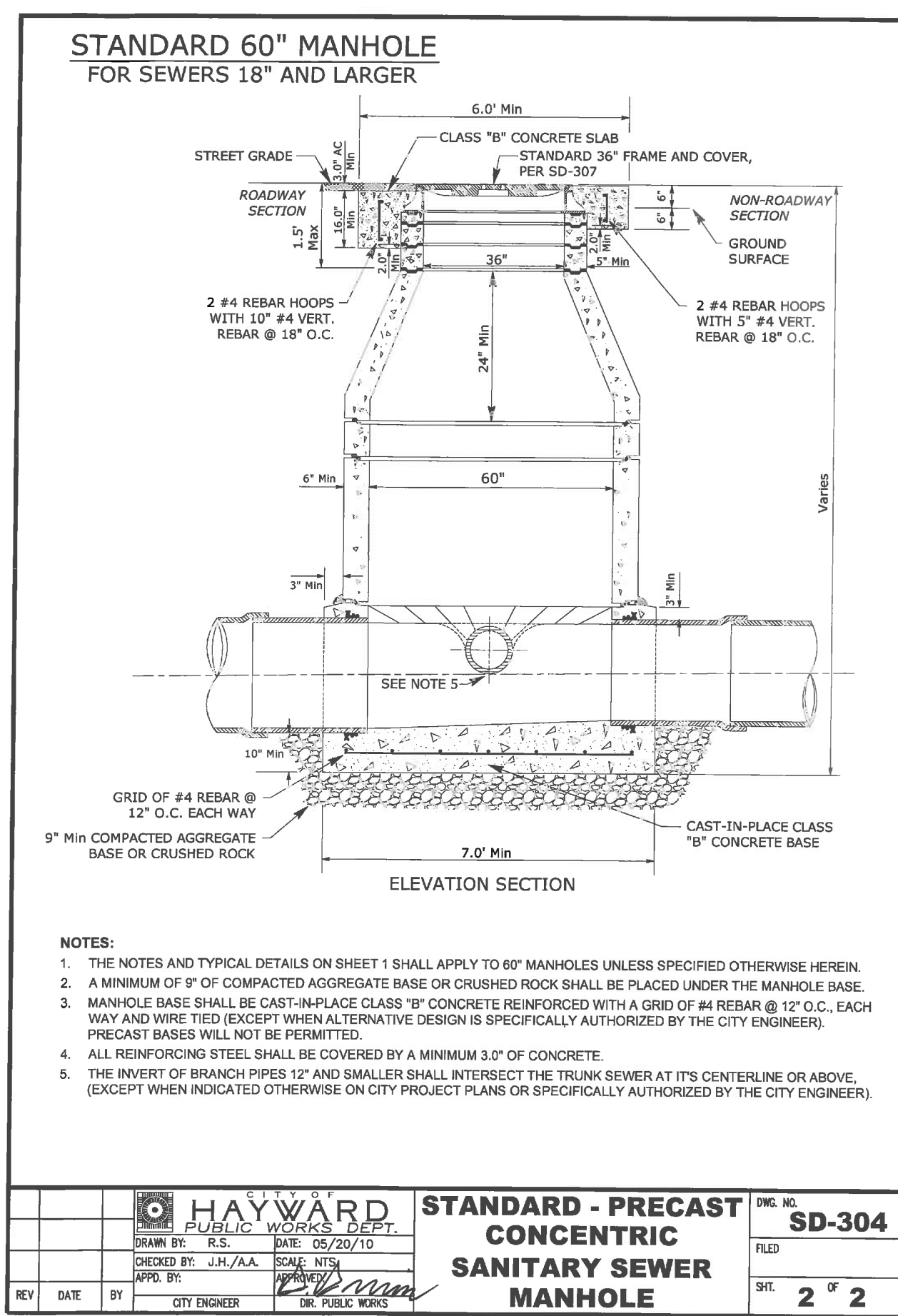
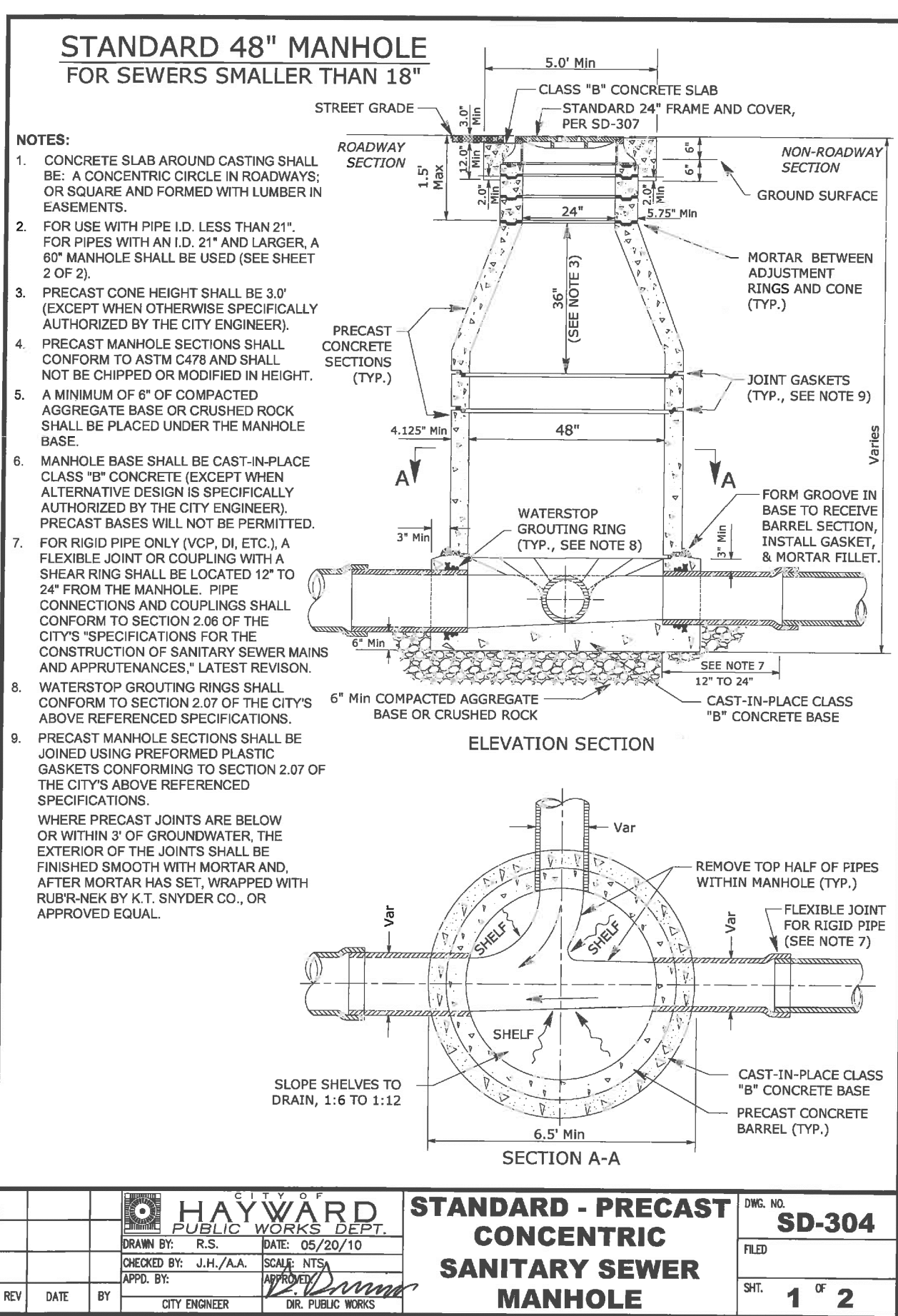
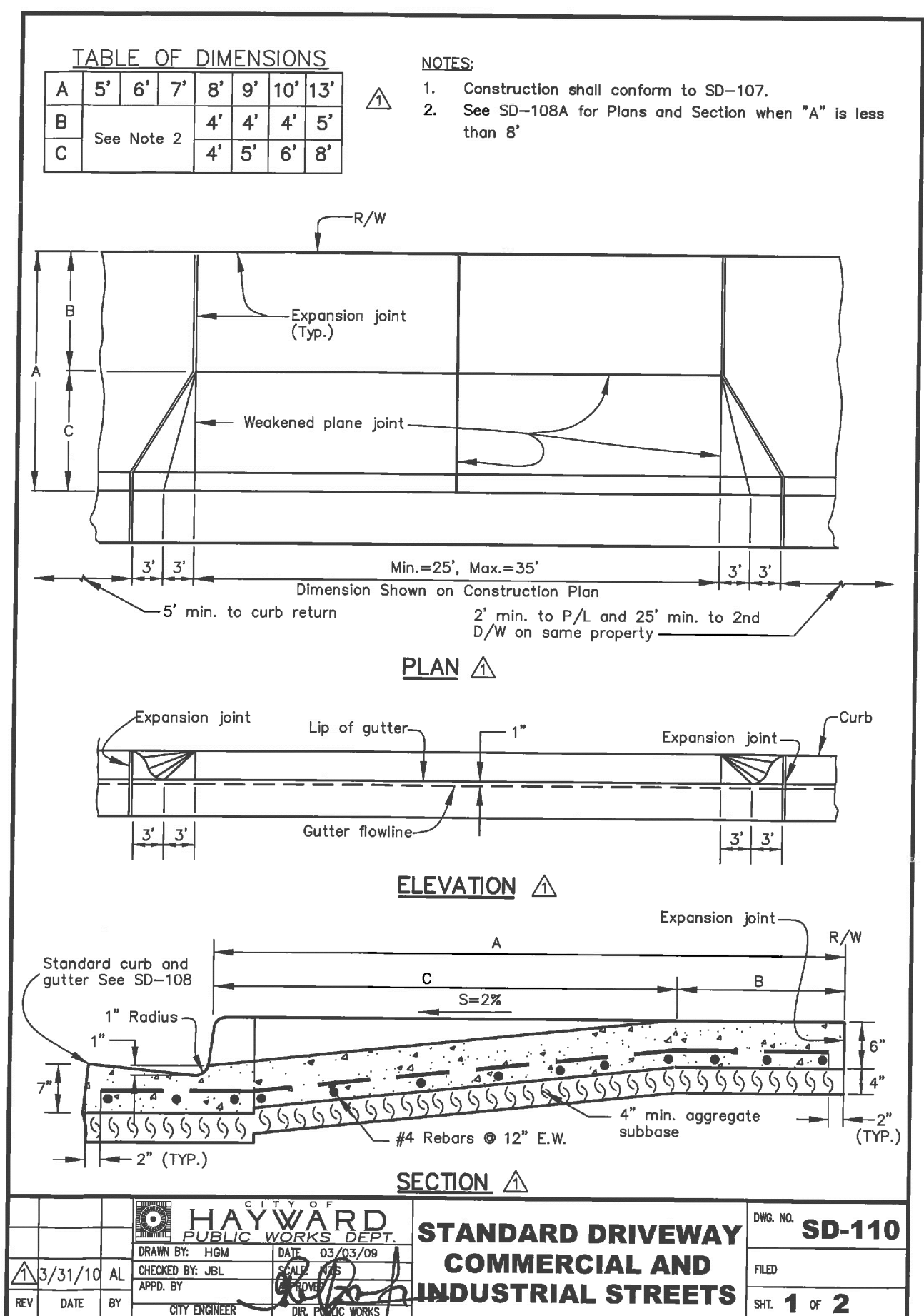
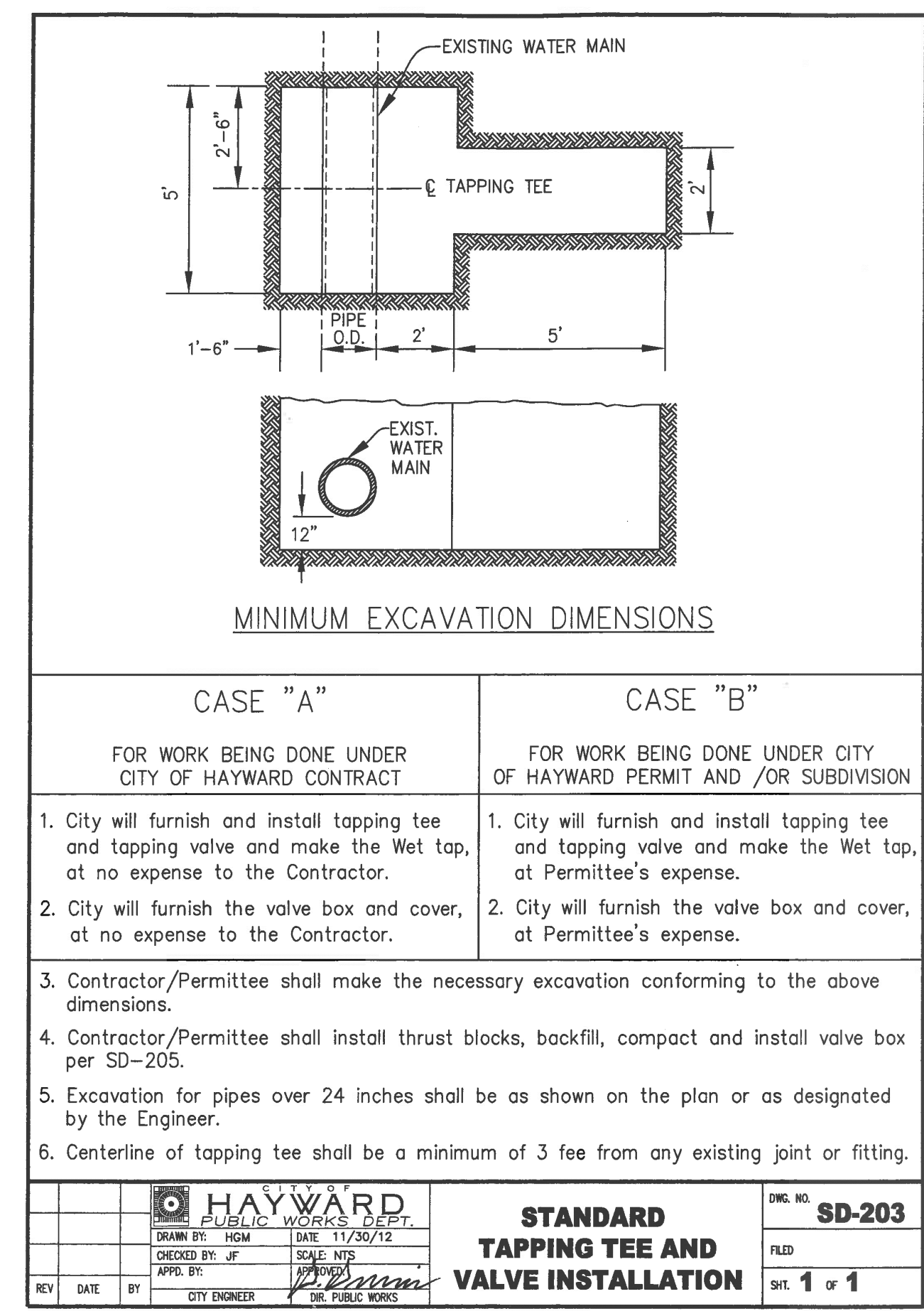
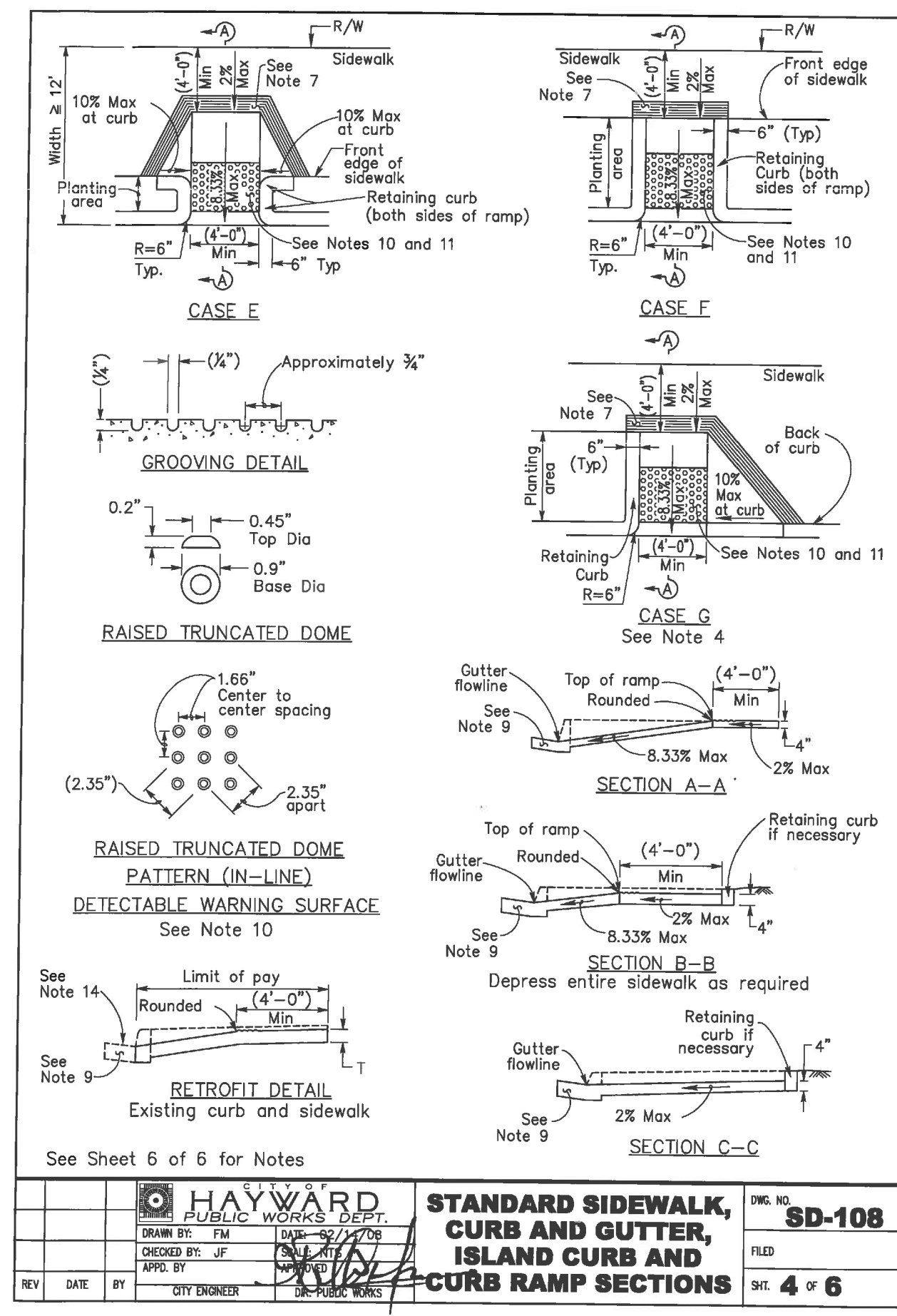
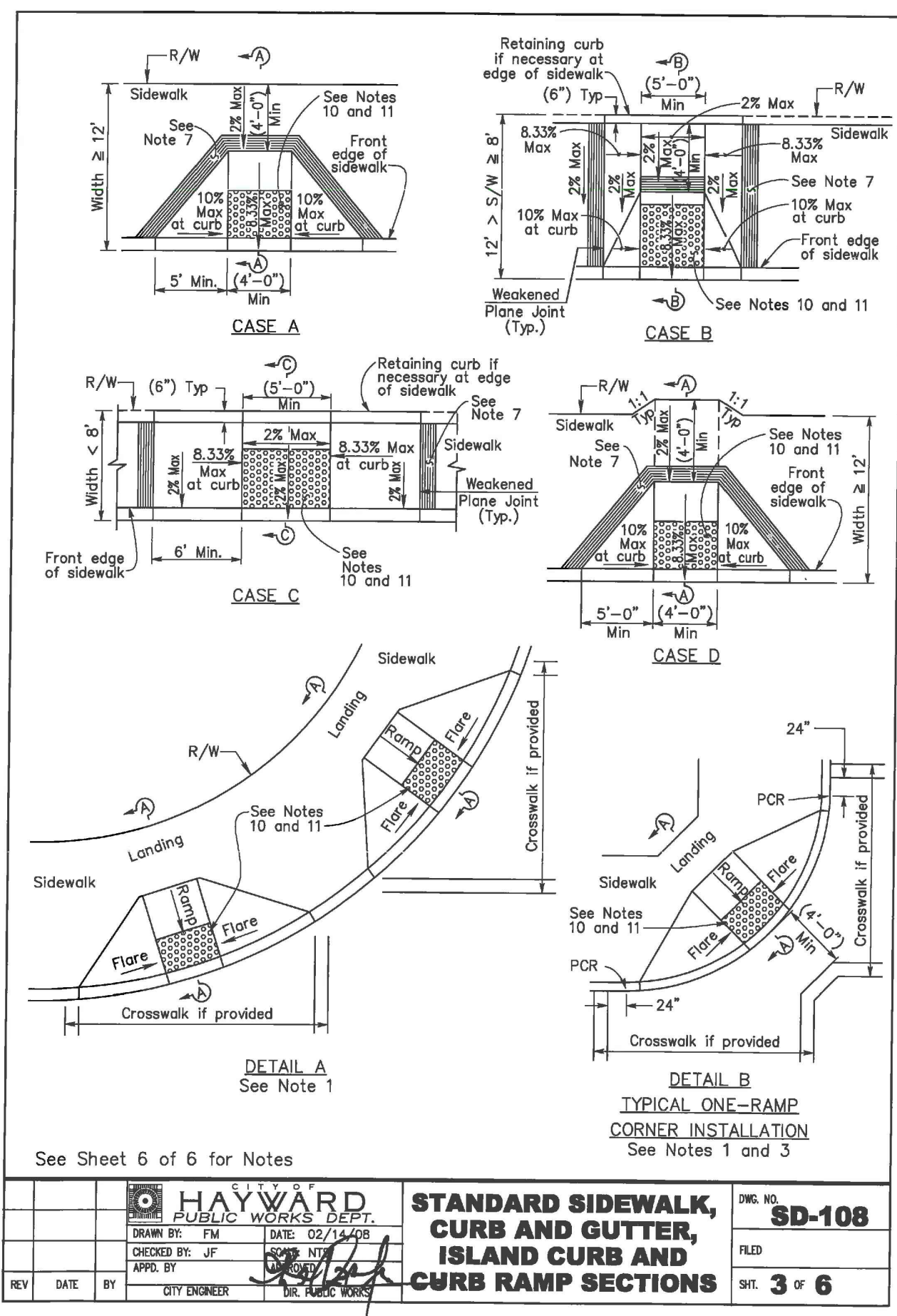
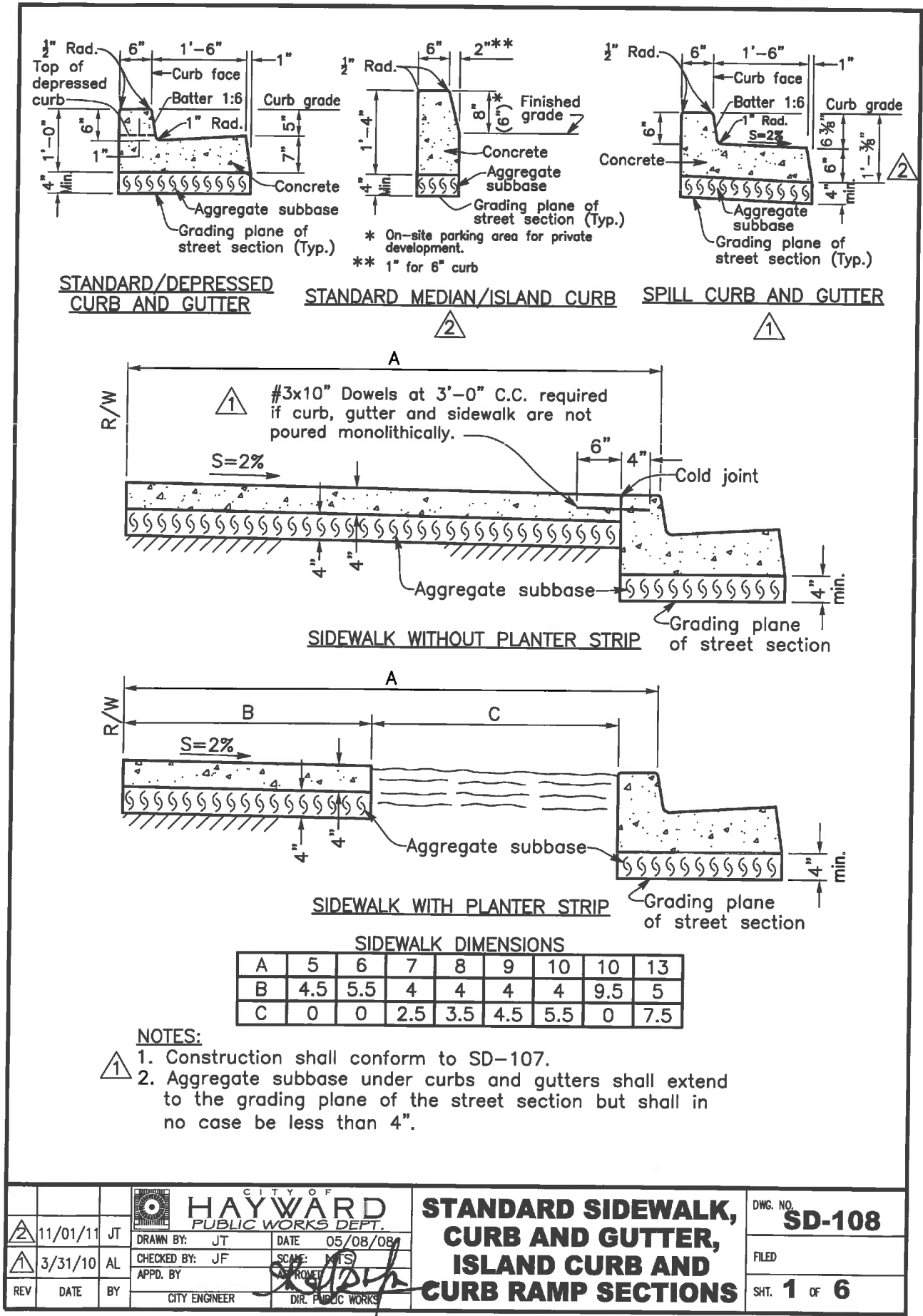
DESIGNED UNDER THE DIRECTION OF:

MICHAEL E. MILANI
R.C.E. No. 35121 REGISTRATION EXPIRES 9-30-17
DATE
DESIGN: KRA
JOB NO: 666
DRAWN: KRA
DATE: APRIL 2017
CHECKED: MEM
SCALE: AS SHOWN



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21
OF
22
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Municipal Engineering
Construction Staking
Construction Management
SWPPP Monitoring & Reporting



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APN 439-0070-013 & 014 3898 DEPOT ROAD BAY AREA CONCRETE RECYCLING

IMPROVEMENT PLANS

CITY OF HAYWARD & ALAMEDA COUNTY STANDARD PLANS

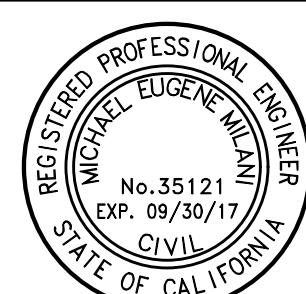
CITY OF HAYWARD ALAMEDA COUNTY CALIFORNIA

DESIGNED UNDER THE DIRECTION OF:

MICHAEL E. MILANI
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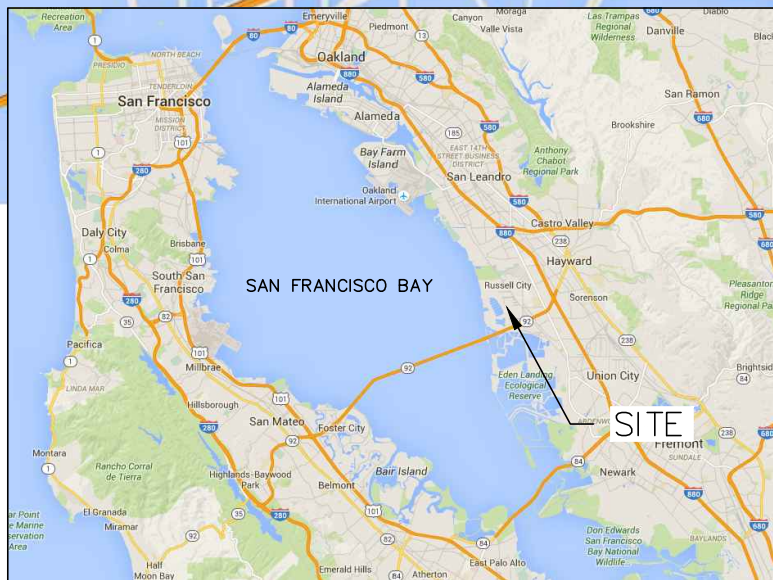
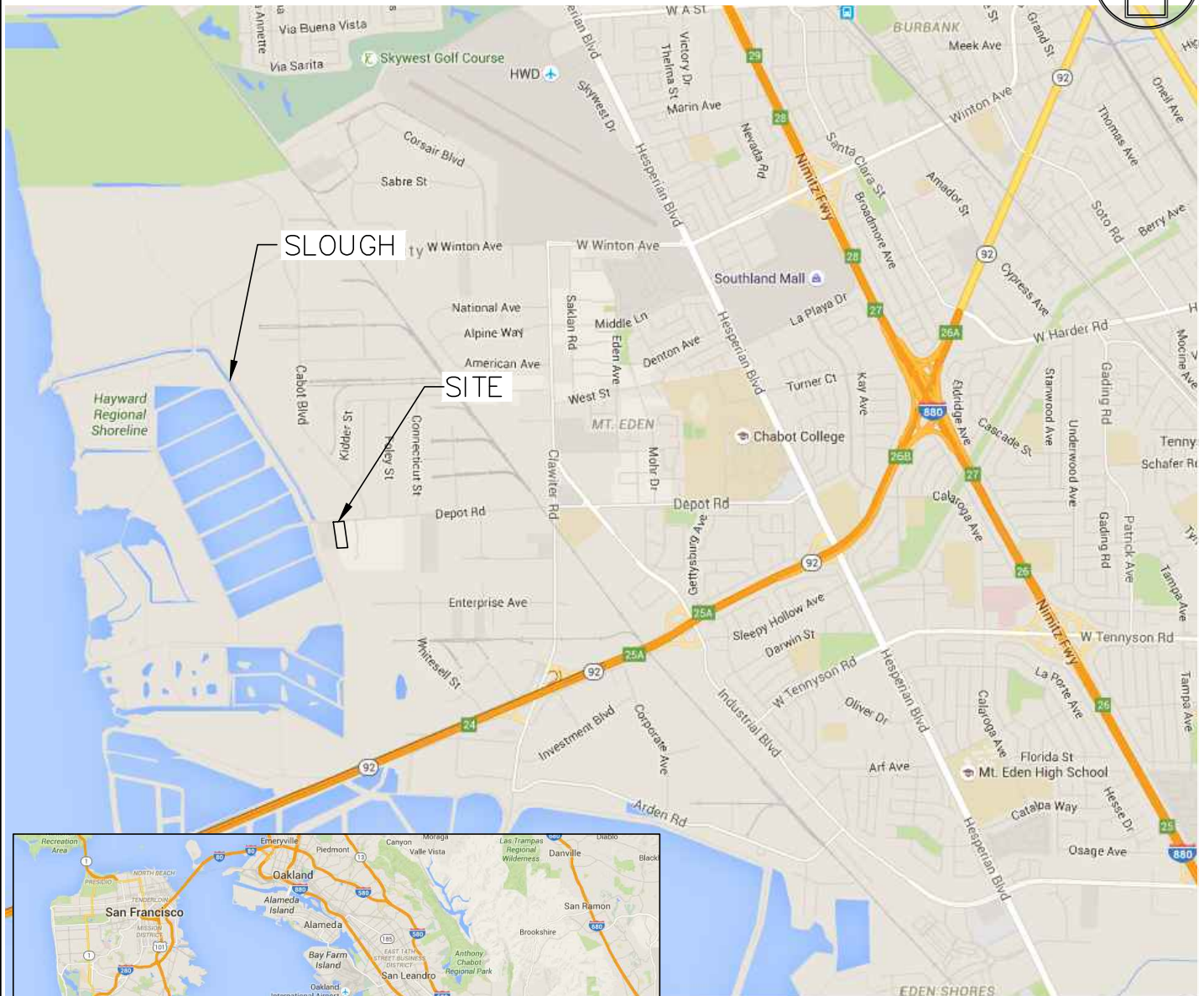
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NO.	REVISIONS	BY	APP	DATE	SHEET
					22
					22
					OF SHEETS

APPENDIX B



TRANS TECH CONSULTANTS

930 SHILOH RD., BLDG. 44, SUITE J
WINDSOR, CA 95492

PHONE: 707-837-8408 FAX: 707-837-7334

SITE LOCATION MAP

FORMER AAA TRUCK PARTS
3884 DEPOT ROAD
HAYWARD, CA

PLATE

SLM

DRAWN BY:	DWG NAME:	APPR. BY:	JOB NUMBER:	DATE:
MED	BASE 2548	BCW	2548.01	10/16/2015

BASE MAP – IMPROVEMENT PLANS, 3898
DEPOT ROAD, HAYWARD, CA, DEMOLITION
PLAN. REVIEW COPY SUBJECT TO REVISION,
NOT FINAL, SEPTEMBER 2016.

PHONE: 707-837-8408 FAX: 707-837-7334

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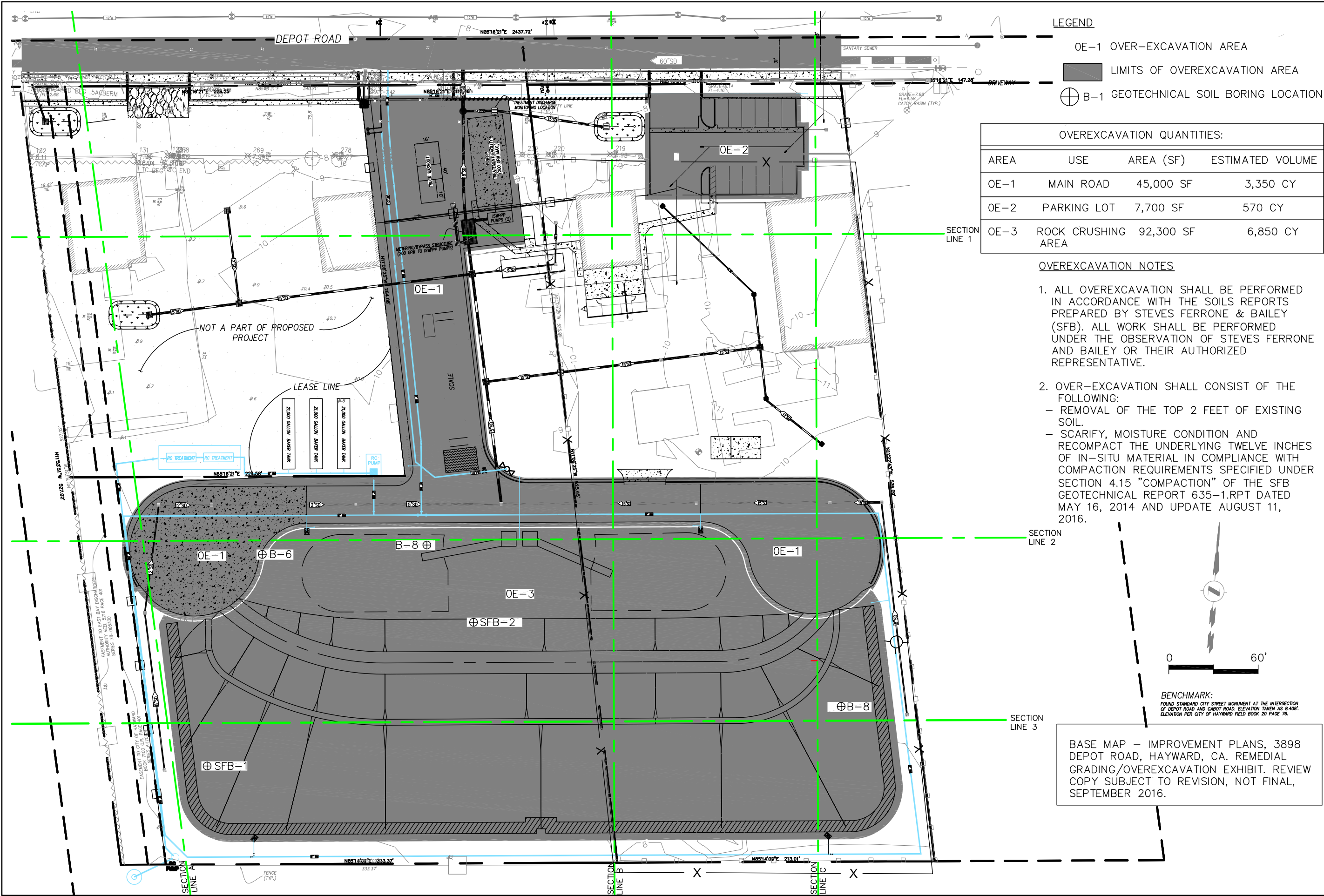


PLATE
1B

OVEREXCAVATION EXHIBIT

FORMER AAA TRUCK PARTS
3884 DEPOT ROAD, HAYWARD, CA

JOB #: 2548.01
DATE: 01/26/2017
DRAWN: WGR

TRANS TECH CONSULTANTS

930 SHILOH RD., BLDG. 44, SUITE J
WINDSOR, CA 95492
PHONE: 707-837-8408 FAX: 707-837-7334

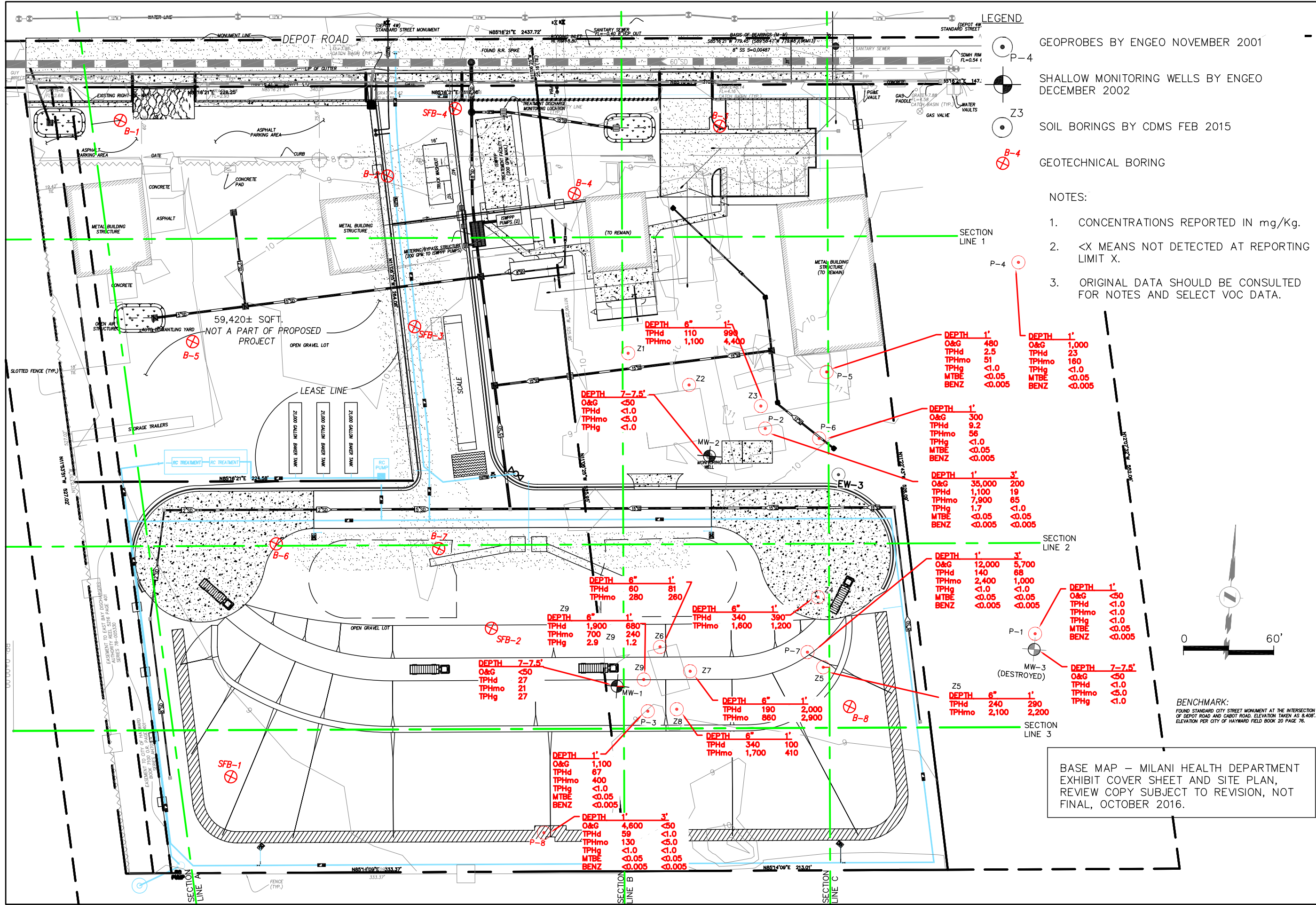


PLATE
2A

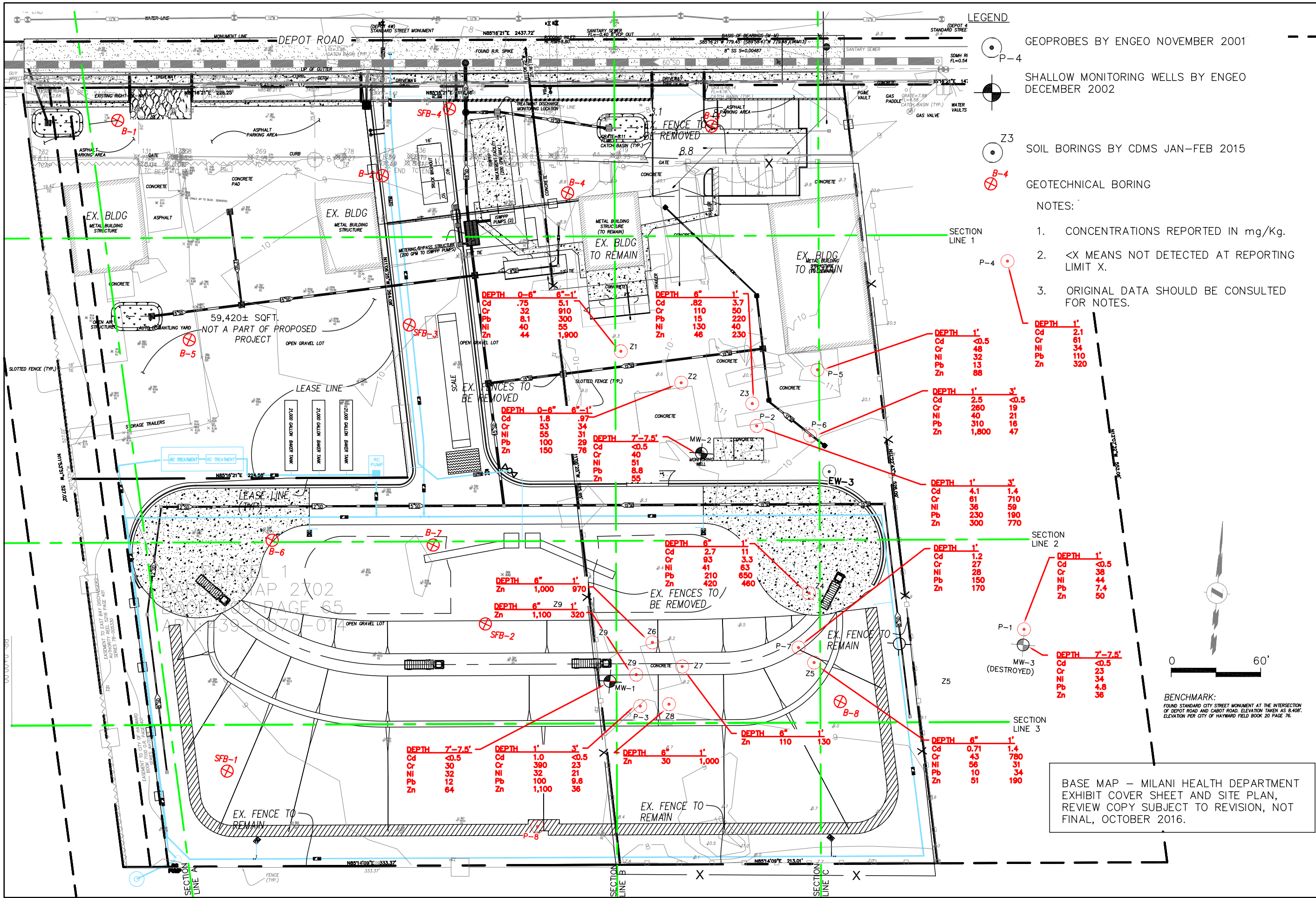
SOIL MAP OF ORGANIC COMPOUNDS

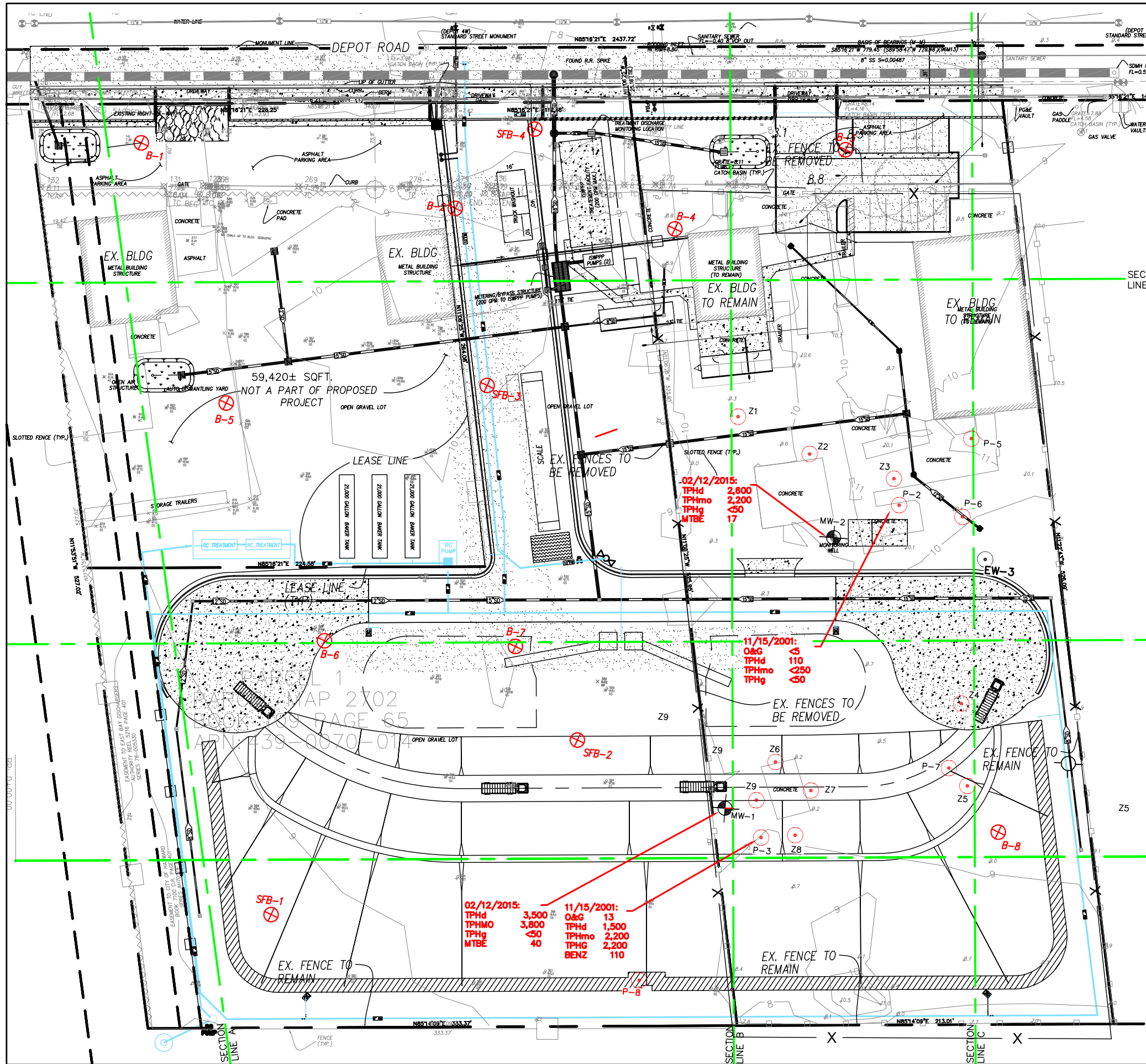
FORMER AAA TRUCK PARTS
3884 DEPOT ROAD, HAYWARD, CA

JOB #: 2548.01 DATE: 01/26/2017 DRAWN: WGR

TRANS TECH CONSULTANTS

930 SHILOH RD., BLDG. 44, SUITE J
WINDSOR, CA 95492
PHONE: 707-837-8408 FAX: 707-837-7334





LEGEND

- GEOPROBES BY ENGO NOVEMBER 2001
- SHALLOW MONITORING WELLS BY ENGO DECEMBER 2002
- Z3 SOIL BORINGS BY CDMS JAN-FEB 2015
- GEOTECHNICAL BORING

NOTES:

- THE MOST RECENT DATA IS PLOTTED FOR EACH GROUNDWATER SAMPLING POINT.
- CONCENTRATIONS REPORTED IN $\mu\text{g/L}$.
- <X MEANS NOT DETECTED AT REPORTING LIMIT X.
- ORIGINAL DATA SHOULD BE CONSULTED FOR NOTES AND SELECT VOC DATA.

SECTION LINE 1

SECTION LINE 2

SECTION LINE 3

BASE MAP - MILANI HEALTH DEPARTMENT EXHIBIT COVER SHEET AND SITE PLAN, REVIEW COPY SUBJECT TO REVISION, NOT FINAL, OCTOBER 2016.

BENCHMARK:
FOUND STANDARD CITY STREET MONUMENT AT THE INTERSECTION OF DEPOT ROAD AND CABOT ROAD. ELEVATION TAKEN AS 8.408'. ELEVATION PER CITY OF HAYWARD FIELD BOOK 20 PAGE 76.

GROUNDWATER MAP OF ORGANIC COMPOUNDS

FORMER AAA TRUCK PARTS
3884 DEPOT ROAD, HAYWARD, CA

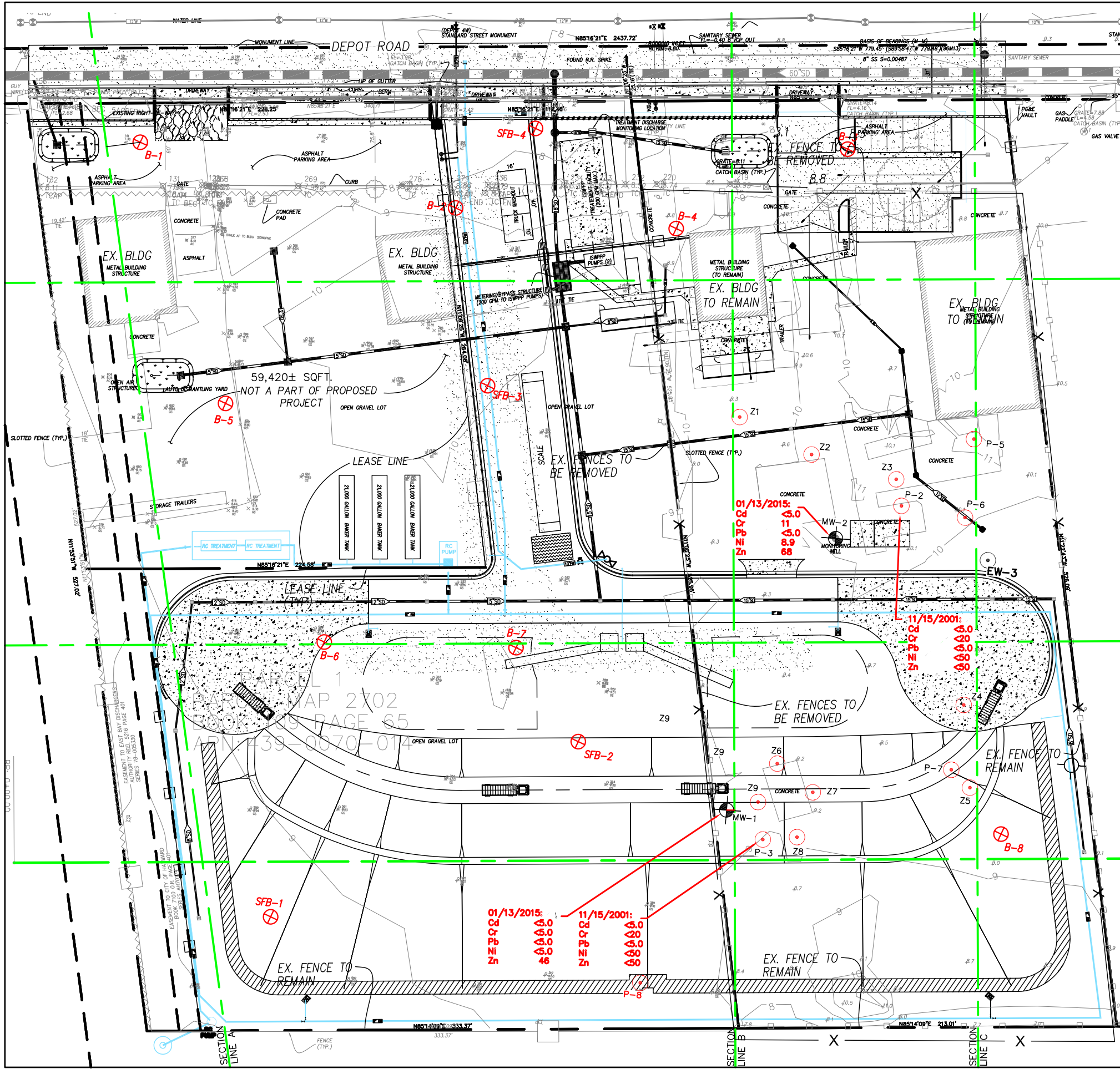
JOB #: 2548.01 DATE: 01/26/2017 DRAWN: BCW

TRANS TECH CONSULTANTS

930 SHILOH RD., BLDG. 44, SUITE J
WINDSOR, CA 95492
PHONE: 707-837-8408 FAX: 707-837-7334

PLATE 20

GROUNDWATER MAP OF ORGANIC COMPOUNDS



LEGEND

- GEOPROBES BY ENGeo NOVEMBER 2001
- SHALLOW MONITORING WELLS BY ENGeo DECEMBER 2002
- SOIL BORINGS BY CDMS JAN-FEB 2015
- GEOTECHNICAL BORING

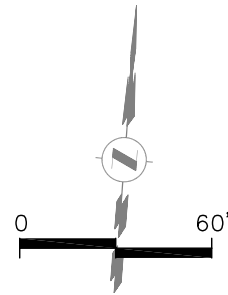
NOTES:

- HIGHEST CONCENTRATIONS EVER FOUND AT SITE SHOWN AT EACH SAMPLING LOCATION.
- CONCENTRATIONS REPORTED IN $\mu\text{g/L}$.
- <X MEANS NOT DETECTED AT REPORTING LIMIT X.
- ORIGINAL DATA SHOULD BE CONSULTED FOR NOTES.

SECTION LINE 1

SECTION LINE 2

SECTION LINE 3



BENCHMARK:
FOUND STANDARD CITY STREET MONUMENT AT THE INTERSECTION
OF DEPOT ROAD AND CABOT ROAD. ELEVATION TAKEN AS 8.408'.
ELEVATION PER CITY OF HAYWARD FIELD BOOK 20 PAGE 76.

BASE MAP - MILANI HEALTH DEPARTMENT
EXHIBIT COVER SHEET AND SITE PLAN,
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PLATE

2D

GROUNDWATER MAP OF METALS

FORMER AAA TRUCK PARTS
3884 DEPOT ROAD, HAYWARD, CA

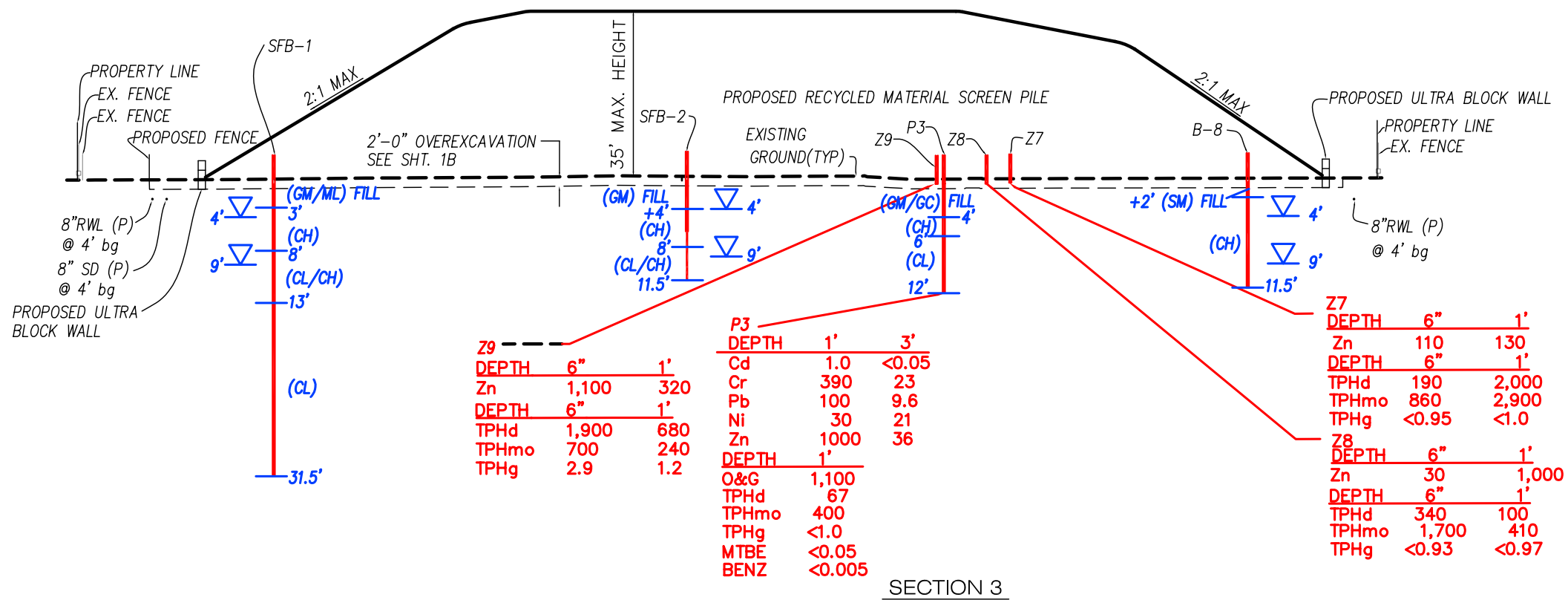
JOB #: 2548.01 DATE: 01/26/2017 DRAWN: BCW

TRANS TECH CONSULTANTS

930 SHILOH RD., BLDG. 44, SUITE J
WINDSOR, CA 95492

PHONE: 707-837-8408 FAX: 707-837-7334

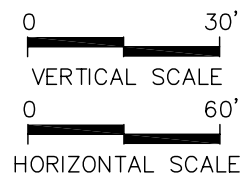
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NOTES:

- CONCENTRATIONS REPORTED IN mg/Kg.
- <X MEANS NOT DETECTED AT REPORTING LIMIT X.
- ORIGINAL DATA SHOULD BE CONSULTED FOR NOTES AND SELECT VOC DATA.

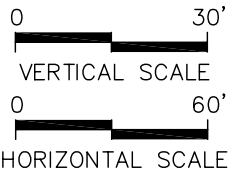
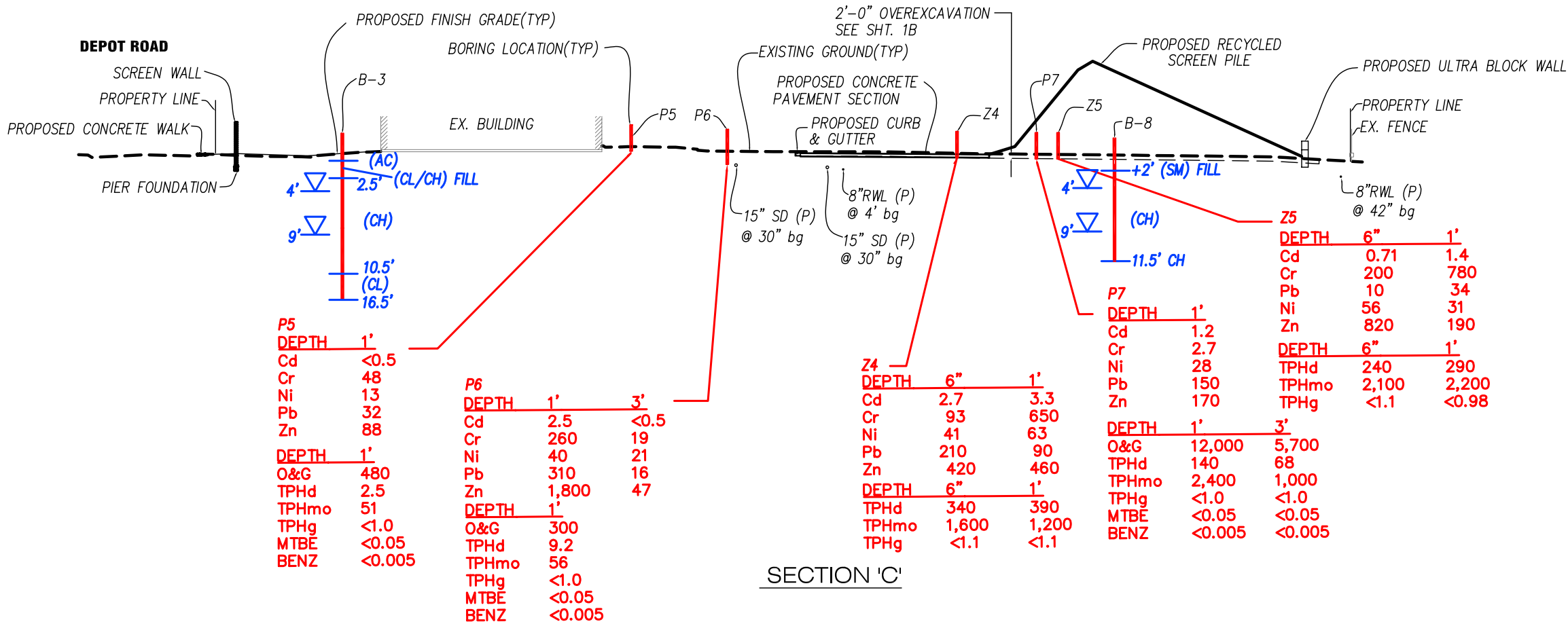
BASE MAP - MILANI HEALTH DEPARTMENT
EXHIBIT, SECTIONS, REVIEW COPY SUBJECT
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Z:\projects\2548.01_3884 Depot Road, Hayward\dwg\BASE-3 2548.dwg, 2/7/2017 4:03:36 PM

- NOTES:
1. CONCENTRATIONS REPORTED IN mg/Kg.
 2. <X MEANS NOT DETECTED AT REPORTING LIMIT X.
 3. ORIGINAL DATA SHOULD BE CONSULTED FOR NOTES AND SELECT VOC DATA.

LEGEND	
GM-GC	SILTY & CLAYEY GRAVEL
GP-GC	CLAYEY, SANDY GRAVEL
GP-SM	SILTY, SANDY GRAVEL
CL	SILTY CLAY, VERY MOIST
CL-CH	SILTY CLAY VERY STIFF
CH	SILTY CLAY, STIFF
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
MH	ORGANIC SILT
SM	SILTY SAND
	EXPECTED APPROXIMATE RANGE OF GROUNDWATER LEVELS
+ SCALE OF BORING DEPTH EXAGGERATED FOR CLARITY	



BASE MAP - MILANI HEALTH DEPARTMENT
EXHIBIT, SECTIONS, REVIEW COPY SUBJECT
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TRANS TECH CONSULTANTS

930 SHILOH RD., BLDG. 44, SUITE J
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SITE CROSS SECTION C

SOIL ANALYSIS
(METALS AND ORGANIC COMPOUNDS)
FORMER AAA TRUCK PARTS
3884 DEPOT ROAD, HAYWARD, CA

PLATE 3D

JOB #: 2548.01

DATE: 02/01/2017

DRAWN: WGR

Table 1
Soil Analytical Data
3884 Depot Road, Hayward, CA

Sample ID	Sample Date	Top of Sample Depth (feet)	Sample Interval from Top of Sample (ft.)	Existing Ground Elev.	Top of Sample Elev. (feet aMSL)	Future Ground Elev.	Future Top of Sample Elev. (feet aMSL)	LUFT METALS (mg/kg)					Oil and Grease	8015/8020 (mg/kg)								8260 (ug/kg)													
								Cd	Cr	Pb	Ni	Zn		TPHg	TPHd	TPHmo	MTBE	Benzene	Toluene	Ethyl-Benzene	Xylenes	n-Butyl benzene	sec-Butyl benzene	Ethyl-Benzene	Isopropyl benzene	MTBE	Napthale ne	Methyl Ethyl Keytone	Methyl Isobutyl Keytone	n-Propyl benzene	Toluene	1,2,4-Trimethyl Benzene	1,3,5-Trimethyl Benzene	Xylenes	
ESL								43	530000	160	86	110000		500	880	5100	0.84	0.049	9.3	1.4	11	1400				840	3900	13000	3900	9300			11000		
LTCP														8.2				89				89000				45000									
1-1	11/15/01	1	0.5	10	9			<0.5	38	7.4	44	50	<50	<1.0	<1.0	<5.0	<0.05	<0.005	<0.005	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0		<25	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
2-1	11/15/01	1	0.5	10	9			4.1	61	230	36	300	35000	1.7	1100	7900	<0.05	<0.005	0.12	0.017	0.11	<5.0	<5.0	6.7	<5.0		<25	26	55	<5.0	76	15	8.2	40	
2-2	11/15/01	3	0.5	10	7			1.4	710	190	59	770	200	<1.0	19	65	<0.05	<0.005	0.018	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0		<25	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
3-1	11/15/01	1	0.5	9	8			1.0	390	100	32	1100	1100	<1.0	67	400	<0.05	<0.005	<0.005	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0		<25	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
3-2	11/15/01	3	0.5	9	6			<0.5	23	9.6	21	36																							
4-1	11/15/01	1	0.5	10	9			2.1	61	110	34	320	1000	<1.0	23	160	<0.05	<0.005	<0.005	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0		<25	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
5-1	11/15/01	1	0.5	10	9			<0.5	48	13	32	88	480	<1.0	2.5	51	<0.05	<0.005	<0.005	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0		<25	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
6-1	11/15/01	1	0.5	10	9			2.5	260	310	40	1800	300	<1.0	9.2	56	<0.05	<0.005	<0.005	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0		<25	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
6-2	11/15/01	3	0.5	10	7			<0.5	19	16	21	47																							
7-1	11/15/01	1	0.5	9	8			1.2	27	150	28	170	12000	<1.0	140	2400	<0.05	<0.005	<0.005	<0.005	0.0083	<5.0	<5.0	<5.0	<5.0		<25	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
7-2	11/15/01	3	0.5	9	6								5700	<1.0	68	1000	<0.05	<0.005	<0.005	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0		<25	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
8-1	11/15/01	1	0.5	8	7			0.74	220	60	51	500	4600	<1.0	59	130	<0.05	<0.005	<0.005	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0		<25	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
8-2	11/15/01	3	0.5	8	5			<50					<50	<1.0	<1.0	<5.0	<0.05	<0.005	<0.005	<0.005	<0.005	<5.0	<5.0	<5.0	<5.0		<25	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
1-2	12/16/02	7	0.5	10.22	3.22			<0.5	30	12	32	64	<50	27	27	21						61	20	25	13	10	150	<10	<5.0	55	12	74	30	41	
2-2	12/16/02	7	0.5	9.25	2.25			<0.5	40	8.8	51	55	<50	<1.0	<1.0	<5.0						<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	
3-2	12/30/02	7	0.5	9.78	2.78			<0.5	23	4.8	34	36	<50	<1.0	<1.0	<5.0						<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<10	
Z1	1/13/15	0	0.5	10	10			0.64	44	28	46	87																							
Z1-1	2/12/15	0	0.5	10	10			0.75	32	8.1	40	44																							
Z1-2	2/12/15	0.5	0.5	10	10			5.1	910	300	55	1900																							
Z2-1	2/12/15	0	0.5	10	10			1.8	53	100	55	150																							
Z2-2	2/12/15	0.5	0.5	10	10			0.97	34	29	31	76																							
Z3	1/13/15	0	0.5	10	10			0.60	63	19	77	59																							
Z3-1	2/12/15	0	0.5	10	10			0.82	110	15	130	46		<1.1	110	1100																			
Z3-2	2/12/15	0.5	0.5	10	10			3.7	50	220	40	230		<1.1	990	4400																			
Z4	1/13/15	0	0.5	9	9			5.2	490	190	66	870																							
Z4-1	2/12/15	0	0.5	9	9			2.7	93	210	41	420		<1.1	340	1600																			
Z4-2	2/12/15	0.5	0.5	9	9			3.3	650	90	63	460		<1.1	390	1200																			
Z5	1/13/15	0	0.5	9	9			4.1	200	350	44	820																							
Z5-1	2/12/15	0	0.5	9	9			0.71	43	10	56	51		<1.1	240	2100																			
Z5-2	2/12/15	0.5	0.5	9	9			1.4	780	34	31	190		<0.98	290	2200																			
Z6	1/13/15	0	0.5	9	9			2.0	440	100	34	920																							
Z6-1	2/12/15	0.5	0.5	9	9							1000		<0.94	60	280																			
Z6-2	2/12/15	1	0.5	9	8							970		<1.1	81	260																			
Z7	1/13/15	0	0.5	9	9			1.6	110	120	61	180																							
Z7.2	1/13/15	0	0.5	9	9			0.70	48	49	79	84																							
Z7-1	2/12/15	0	0.5	9	9							110		<0.95	190	860																			
Z7-2	2/12/15	0.5	0.5	9	9							130		<1.0	2000	2900																			
Z8	1/13/15	0.5	0.5	9	9			5.1	160	340	52	640																							
Z8-1	2/12/15	0	0.5	9	9							30		<0.93	340	1700																			
Z8-2	2/12/15	0.5	0.5	9	8.5</																														

Notes:
Large Text - Found Exceedance of ESL or LTCP
Empty cell - not analyzed
<x - not detected at reporting limit x

aMSL - above Mean Sean Level
Cd - Cadmium
Cr - Chromium
d - quantified as diesel
ESL - SF Bay RWQCB Environmental Screening Level for Commercial or Industrial
g - quantified as gasoline
kg - kilogram
l - liter
LTCP - May 2012 Low Threat Closure Policy for Underground Storage Tanks by SWRCB for Commercial/Industrial
mo - quantified as motor oil
MTBE - Methyl tert-Butyl Ether
mg - milligram
Ni - Nickel
Pb - Lead
TPH - Total Petroleum Hydrocarbons
ug - microgram
Zn - Zinc

Table 2
Groundwater Analytical Data
3884 Depot Rd., Hayward, CA

DATE	SAMPLE ID	LUFT Metals (ug/l)					Hexane Oil and Grease (mg/l)	8015 (ug/l)			8260 (ug/l)									
		Cd	Cr	Pb	Ni	Zn		TPHg	TPHd	TPHmo	BENZENE	Ethylbenzene	Isopropyl Benzene	MTBE	Napthalene	(n-) Propylbenzene	Toluene	1,2,4-Trimethyl Benzene	1,3,5-Trimethyl Benzene	Xylenes
ESL		0.25	180	2.5	8.2	81		440	640	50000	9.7	43		180	24		130			100
LTCP											100									
11/15/01	GW-1 (P-1)	<5.0	<20	<5.0	<50	<50	74	<50	1900	9500	<1.0	<1.0	<1.0		<5.0	<1.0	<1.0	<1.0	<1.0	<1.0
11/15/01	GW-2 (P-2)	<5.0	<20	<5.0	<50	<50	<5	<50	110	<250	<1.0	<1.0	<1.0		<5.0	<1.0	<1.0	<1.0	<1.0	<1.0
11/15/01	GW-3 (P-3)	<5.0	<20	<5.0	<50	<50	13	2200	1500	2200	110	120	6.5		110	16	14	99	23	230
1/23/03	MW1	<5.0	<20	<5.0	<50	<50	<5.0	<50	76	<250	<1.7	<1.7	<1.7	71	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7
1/12/15	MW1	<5.0	<5.0	<5.0	<5.0	46		<50	2400	4300	<0.5	<0.5	<0.5	42	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5
2/12/15	MW1				<5.0	<20		<50	3500	3800	<0.5	<0.5	<0.5	40	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5
1/23/03	MW2	<5.0	<20	<5.0	<50	<50	<5.0	<50	<50	<250	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1/12/15	MW2	<5.0	11	<5.0	8.9	68		<50	3100	3400	<0.5	<0.5	<0.5	9.3	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5
2/12/15	MW2				<5.0	<20		<50	2600	2200	<0.5	<0.5	<0.5	17	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5
1/23/03	MW3	<5.0	<20	<5.0	<50	<50	<5.0	<50	53	<250	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:

Large Text - Found Exceedance of ESL or LTCP

Empty cell - not analyzed

<x - not detected at reporting limit x

Cd - Cadmium

Cr - Chromium

d - quantified as diesel

ESL - SF Bay RWQCB Environmental Screening Level for Commercial or Industrial

g - quantified as gasoline

l - liter

LTCP - May 2012 Low Threat Closure Policy for Underground Storage Tanks by SWRCB for Commercial/Industrial, Appendix 3, Fig. A

mo - quantified as motor oil

MTBE - Methyl tert-Butyl Ether

mg - milligram

Ni - Nickel

Pb - Lead

TPH - Total Petroleum Hydrocarbons

ug - microgram

Zn - Zinc



Environmental Screening Levels
San Francisco Bay Regional Water Quality Control Board



EDMUND G. BROWN JR.
GOVERNOR



MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Table T2-1: Tier 2 ESL Input and Output

Click in cell and use pull-down boxes to make selection. Outputs in gray box below.

Tier 2 Scenario Toggles	
Contaminant:	Cadmium (soil)
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based Levels:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Contamination Depth: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Soil

Enter site data (Optional; Date used for Specific Concerns Table T2-3)	
Soil Concentration (mg/kg) - dry weight:	5.20
Groundwater Concentration ($\mu\text{g/L}$):	
Subslab/ Soil Gas Concentration ($\mu\text{g/m}^3$):	
Indoor Air Concentration ($\mu\text{g/m}^3$):	

Output Tier 2 ESLs:	
Soil (mg/kg):	4.3E+01
Groundwater ($\mu\text{g/L}$):	#N/A
Subslab/ Soil Gas ($\mu\text{g/m}^3$):	No ESL*
Indoor Air ($\mu\text{g/m}^3$):	--

***Un-Intact or Unknown Slab Condition.
See ESL Users Guide Appendix B**

Table T2-2: ESL Details

Selected Site Scenario	
Selected Chemical:	Cadmium (soil)
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI:	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Type for Direct Exposure:	Shallow Soil

Groundwater Screening Levels (µg/L)		
Table GW-1	Drinking Water MCL:	#N/A
	Tapwater-Direct Exposure Human Health Risk:	#N/A
	Nondrinking Water Exposure Risk:	--
	Groundwater Direct Exposure Level:	--
Table GW-2	Freshwater Ecotoxicity:	#N/A
	Saltwater Ecotoxicity:	#N/A
	Bioaccumulation for Seafood Ingestion Concerns:	#N/A
	Ecological Aquatic Habitat Goal Level:	#N/A
Table GW-3	Residential GW VI - Shallow Groundwater - Sand:	#N/A
	Com/Ind GW VI - Shallow Groundwater - Sand:	#N/A
	Residential GW VI - Deep Groundwater - Sand:	#N/A
	Residential GW VI - Deep Groundwater- Fine-Coarse:	#N/A
	Com/Ind GW VI - Deep Groundwater - Sand:	#N/A
	Com/Ind GW VI - Deep Groundwater - Fine-Coarse:	#N/A
	Groundwater Vapor Intrusion Level:	#N/A
Table GW-4	Groundwater Gross Contamination Level:	#N/A
Table GW-5	Drinking Water Taste and Odor Nuisance Value:	#N/A
	Nondrinking Odor Nuisance Value:	#N/A
	Groundwater Odor Nuisance Level:	#N/A
Final Groundwater ESL:		#N/A

Soil Screening Levels (mg/kg)		
Table S-1	Residential Shallow Soil Exposure Risk:	3.9E+01
	Commercial or Industrial Shallow Soil Exposure Risk:	5.8E+02
	Construction Worker Any Soil Depth Exposure Risk:	4.3E+01
	Soil Direct Exposure Level:	4.3E+01
Table S-2	Leaching - Drinking Water Resource:	--
	Leaching - Nondrinking Water Resource:	--
	Soil Leaching Level:	--
Table S-3	Soil Gross Contamination Level:	--
Table S-4	Residential - Shallow Soil Exposure:	--
	Commercial/Industrial - Shallow Soil Exposure:	--
	Any Land Use - Deep Soil Exposure:	--
	Soil Odor Nuisance Level:	--
Final Soil ESL		4.3E+01

Subslab/Soil Gas Screening Levels (µg/m ³)		
Table SG-1	Residential VI Exposure Risk:	--
	Commercial or Industrial VI Exposure Risk:	--
	Subslab/Soil Gas Vapor Intrusion Level:	No ESL*
Table SG-2	Residential VI Odor Nuisance:	--
	Commercial/Industrial VI Odor Nuisance:	--
	Subslab/Soil Gas VI Odor Nuisance Level:	No ESL*
Final Subslab/Soil Gas ESL:		No ESL*

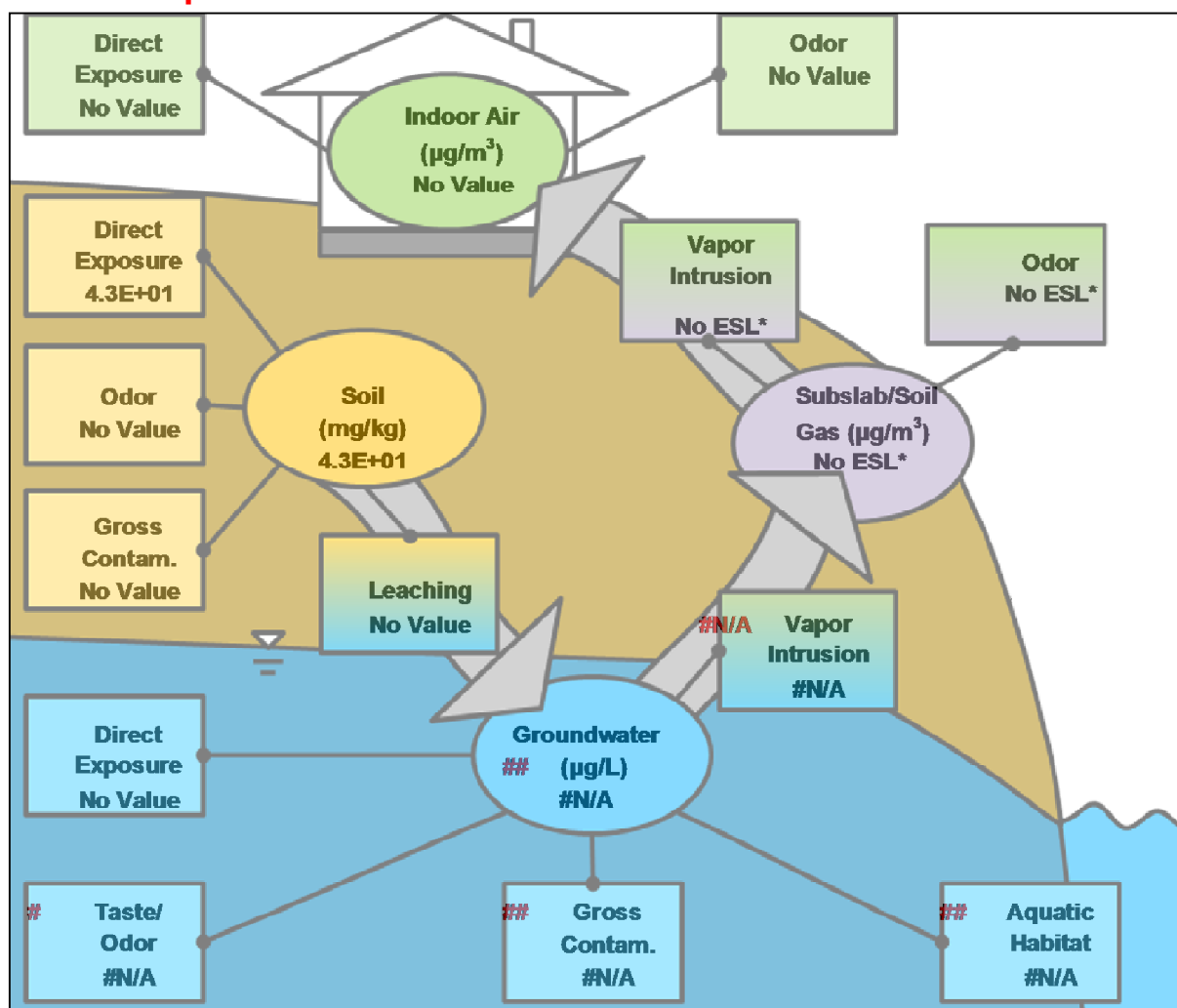
***Un-intact or Unknown Slab Condition - See ESL Users Guide Appendix B**

Indoor Air Screening Levels (µg/m ³)		
Table IA-1	Residential Direct Exposure Risk:	--
	Commercial or Industrial Direct Exposure Risk:	--
	Indoor Air Direct Exposure Level:	--
Table IA-2	Indoor Air Odor Nuisance Level:	--
Final Indoor Air ESL:		--

Environmental Screening Levels for Specific Concerns

Caused by Site Specific Levels of Cadmium (soil)

Input site contaminant concentrations on Table T2-1.



Scenario Assumptions:

Commercial or Industrial
Shallow Soil
Nondrinking Water Resource
Fine to Coarse Scenario

Site Concentrations (Entered on Table T2-1):

Soil (mg/kg): 5.20



Environmental Screening Levels
San Francisco Bay Regional Water Quality Control Board



Table T2-1: Tier 2 ESL Input and Output

Click in cell and use pull-down boxes to make selection. Outputs in gray box below.

Tier 2 Scenario Toggles	
Contaminant:	Cadmium (water)
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based Levels:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Contamination Depth: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Soil

Enter site data (Optional; Date used for Specific Concerns Table T2-3)	
Soil Concentration (mg/kg) - dry weight:	5.20
Groundwater Concentration ($\mu\text{g/L}$):	
Subslab/ Soil Gas Concentration ($\mu\text{g/m}^3$):	
Indoor Air Concentration ($\mu\text{g/m}^3$):	

Output Tier 2 ESLs:	
Soil (mg/kg):	#N/A
Groundwater ($\mu\text{g/L}$):	2.5E-01
Subslab/ Soil Gas ($\mu\text{g/m}^3$):	No ESL*
Indoor Air ($\mu\text{g/m}^3$):	--

***Un-Intact or Unknown Slab Condition.
See ESL Users Guide Appendix B**

Table T2-2: ESL Details

Selected Site Scenario	
Selected Chemical:	Cadmium (water)
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI:	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Type for Direct Exposure:	Shallow Soil

Groundwater Screening Levels (µg/L)	
Table GW-1	Drinking Water MCL: 5.0E+00
	Tapwater-Direct Exposure Human Health Risk: 4.0E-02
	Nondrinking Water Exposure Risk: --
	Groundwater Direct Exposure Level: --
Table GW-2	Freshwater Ecotoxicity: 2.5E-01
	Saltwater Ecotoxicity: 9.3E+00
	Bioaccumulation for Seafood Ingestion Concerns: --
	Ecological Aquatic Habitat Goal Level: 2.5E-01
Table GW-3	Residential GW VI - Shallow Groundwater - Sand: --
	Com/Ind GW VI - Shallow Groundwater - Sand: --
	Residential GW VI - Deep Groundwater - Sand: --
	Residential GW VI - Deep Groundwater- Fine-Coarse: --
	Com/Ind GW VI - Deep Groundwater - Sand: --
	Com/Ind GW VI - Deep Groundwater - Fine-Coarse: --
	Groundwater Vapor Intrusion Level: --
Table GW-4	Groundwater Gross Contamination Level: 5.0E+04
Table GW-5	Drinking Water Taste and Odor Nuisance Value: --
	Nondrinking Odor Nuisance Value: --
	Groundwater Odor Nuisance Level: --
Final Groundwater ESL: 2.5E-01	

Soil Screening Levels (mg/kg)		
Table S-1	Residential Shallow Soil Exposure Risk:	#N/A
	Commercial or Industrial Shallow Soil Exposure Risk:	#N/A
	Construction Worker Any Soil Depth Exposure Risk:	#N/A
	Soil Direct Exposure Level:	#N/A
Table S-2	Leaching - Drinking Water Resource:	#N/A
	Leaching - Nondrinking Water Resource:	#N/A
	Soil Leaching Level:	#N/A
Table S-3	Soil Gross Contamination Level:	#N/A
Table S-4	Residential - Shallow Soil Exposure:	#N/A
	Commercial/Industrial - Shallow Soil Exposure:	#N/A
	Any Land Use - Deep Soil Exposure:	#N/A
	Soil Odor Nuisance Level:	#N/A
Final Soil ESL		#N/A

Subslab/Soil Gas Screening Levels (µg/m ³)		
Table SG-1	Residential VI Exposure Risk:	--
	Commercial or Industrial VI Exposure Risk:	--
	Subslab/Soil Gas Vapor Intrusion Level:	No ESL*
Table SG-2	Residential VI Odor Nuisance:	--
	Commercial/Industrial VI Odor Nuisance:	--
	Subslab/Soil Gas VI Odor Nuisance Level:	No ESL*
Final Subslab/Soil Gas ESL:		No ESL*

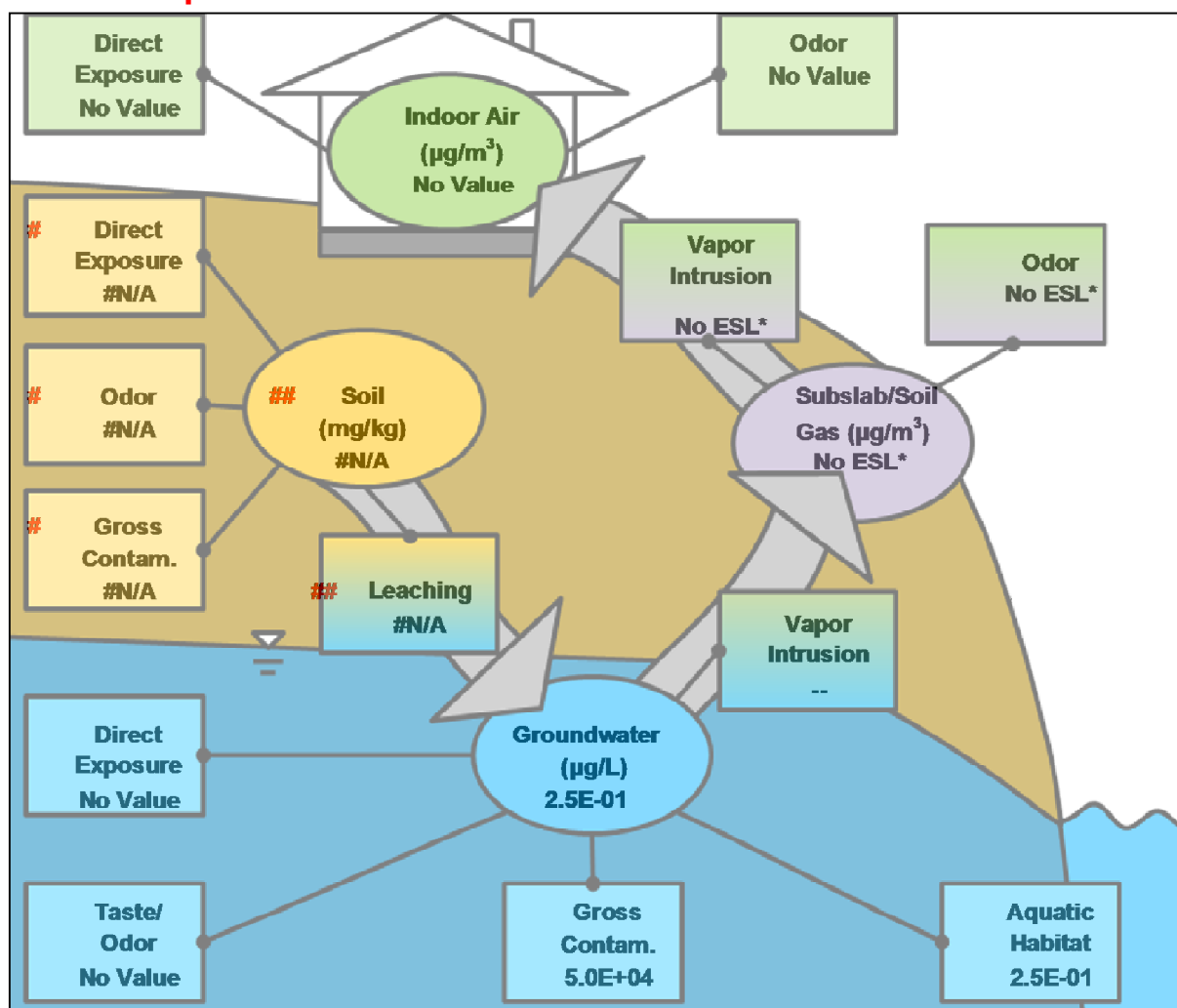
***Un-intact or Unknown Slab Condition - See ESL Users Guide Appendix B**

Indoor Air Screening Levels (µg/m ³)		
Table IA-1	Residential Direct Exposure Risk:	--
	Commercial or Industrial Direct Exposure Risk:	--
	Indoor Air Direct Exposure Level:	--
Table IA-2	Indoor Air Odor Nuisance Level:	--
Final Indoor Air ESL:		--

Environmental Screening Levels for Specific Concerns

Caused by Site Specific Levels of Cadmium (water)

Input site contaminant concentrations on Table T2-1.



Scenario Assumptions:

Commercial or Industrial
Shallow Soil
Nondrinking Water Resource
Fine to Coarse Scenario

Site Concentrations (Entered on Table T2-1):

Soil (mg/kg): 5.20



Environmental Screening Levels
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Table T2-1: Tier 2 ESL Input and Output

Click in cell and use pull-down boxes to make selection. Outputs in gray box below.

Tier 2 Scenario Toggles	
Contaminant:	Chromium III
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based Levels:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Contamination Depth: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Soil

Enter site data (Optional; Date used for Specific Concerns Table T2-3)	
Soil Concentration (mg/kg) - dry weight:	910.00
Groundwater Concentration ($\mu\text{g/L}$):	11.00
Subslab/ Soil Gas Concentration ($\mu\text{g/m}^3$):	
Indoor Air Concentration ($\mu\text{g/m}^3$):	

Output Tier 2 ESLs:	
Soil (mg/kg):	5.3E+05
Groundwater ($\mu\text{g/L}$):	1.8E+02
Subslab/ Soil Gas ($\mu\text{g/m}^3$):	No ESL*
Indoor Air ($\mu\text{g/m}^3$):	--

***Un-Intact or Unknown Slab Condition.
See ESL Users Guide Appendix B**

Table T2-2: ESL Details

Selected Site Scenario	
Selected Chemical:	Chromium III
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI:	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Type for Direct Exposure:	Shallow Soil

Groundwater Screening Levels (µg/L)	
Table GW-1	Drinking Water MCL: 2.2E+04
	Tapwater-Direct Exposure Human Health Risk: 2.2E+04
	Nondrinking Water Exposure Risk: --
	Groundwater Direct Exposure Level: --
Table GW-2	Freshwater Ecotoxicity: 1.8E+02
	Saltwater Ecotoxicity: 1.0E+03
	Bioaccumulation for Seafood Ingestion Concerns: --
	Ecological Aquatic Habitat Goal Level: 1.8E+02
Table GW-3	Residential GW VI - Shallow Groundwater - Sand: --
	Com/Ind GW VI - Shallow Groundwater - Sand: --
	Residential GW VI - Deep Groundwater - Sand: --
	Residential GW VI - Deep Groundwater- Fine-Coarse: --
	Com/Ind GW VI - Deep Groundwater - Sand: --
	Com/Ind GW VI - Deep Groundwater - Fine-Coarse: --
	Groundwater Vapor Intrusion Level: --
Table GW-4	Groundwater Gross Contamination Level: 5.0E+04
Table GW-5	Drinking Water Taste and Odor Nuisance Value: --
	Nondrinking Odor Nuisance Value: --
	Groundwater Odor Nuisance Level: --
Final Groundwater ESL: 1.8E+02	

Soil Screening Levels (mg/kg)	
Table S-1	Residential Shallow Soil Exposure Risk: 1.2E+05
	Commercial or Industrial Shallow Soil Exposure Risk: 1.8E+06
	Construction Worker Any Soil Depth Exposure Risk: 5.3E+05
	Soil Direct Exposure Level: 5.3E+05
Table S-2	Leaching - Drinking Water Resource: --
	Leaching - Nondrinking Water Resource: --
	Soil Leaching Level: --
Table S-3	Soil Gross Contamination Level: --
Table S-4	Residential - Shallow Soil Exposure: --
	Commercial/Industrial - Shallow Soil Exposure: --
	Any Land Use - Deep Soil Exposure: --
	Soil Odor Nuisance Level: --
Final Soil ESL 5.3E+05	

Subslab/Soil Gas Screening Levels (µg/m ³)	
Table SG-1	Residential VI Exposure Risk: --
	Commercial or Industrial VI Exposure Risk: --
	Subslab/Soil Gas Vapor Intrusion Level: No ESL*
Table SG-2	Residential VI Odor Nuisance: --
	Commercial/Industrial VI Odor Nuisance: --
	Subslab/Soil Gas VI Odor Nuisance Level: No ESL*
Final Subslab/Soil Gas ESL: No ESL*	

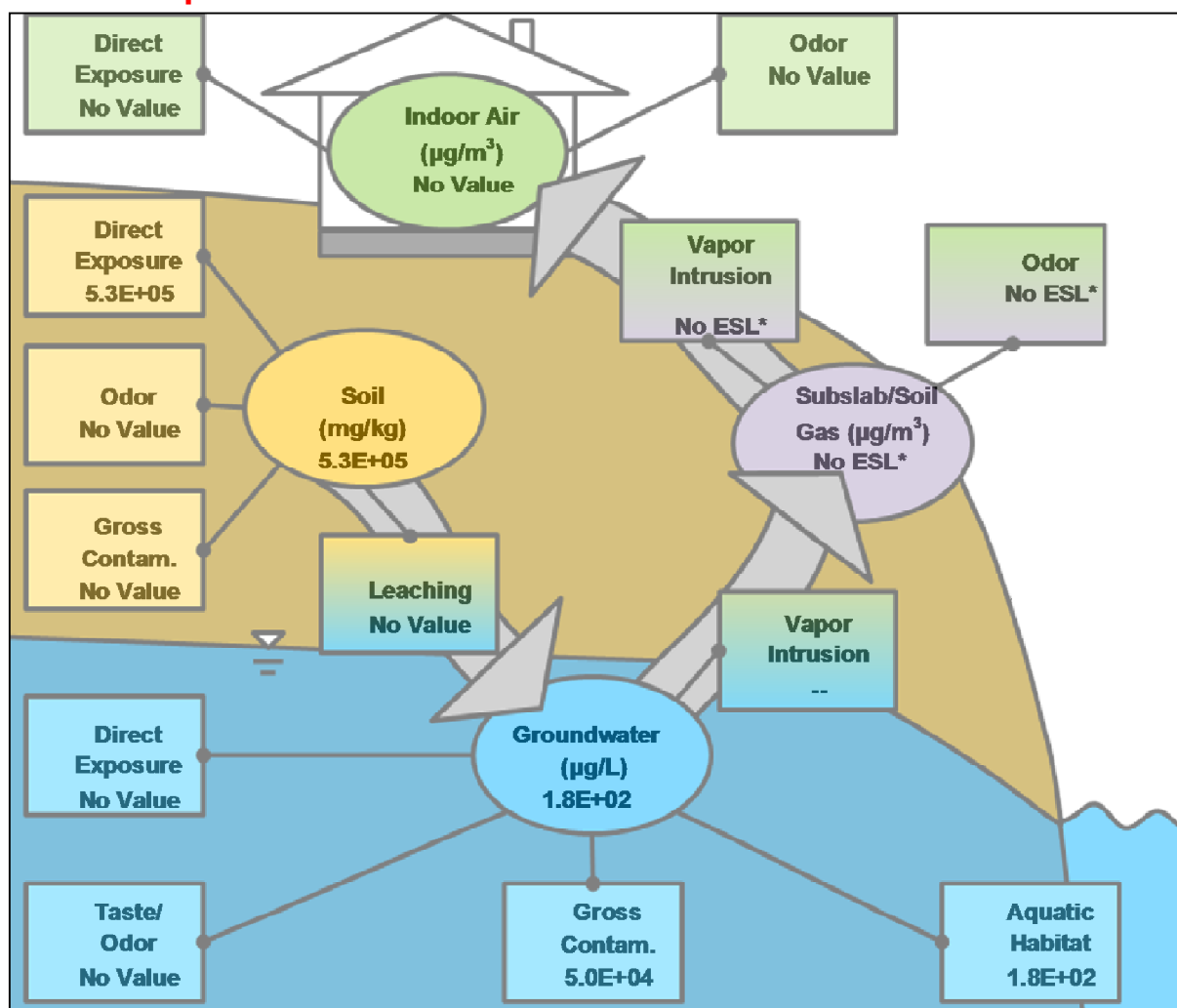
***Un-intact or Unknown Slab Condition - See ESL Users Guide Appendix B**

Indoor Air Screening Levels (µg/m ³)	
Table IA-1	Residential Direct Exposure Risk: --
	Commercial or Industrial Direct Exposure Risk: --
	Indoor Air Direct Exposure Level: --
Table IA-2	Indoor Air Odor Nuisance Level: --
Final Indoor Air ESL: --	

Environmental Screening Levels for Specific Concerns

Caused by Site Specific Levels of Chromium III

Input site contaminant concentrations on Table T2-1.



Scenario Assumptions:

Commercial or Industrial
Shallow Soil
Nondrinking Water Resource
Fine to Coarse Scenario

Site Concentrations (Entered on Table T2-1):

Soil (mg/kg): 910.00
Groundwater ($\mu\text{g}/\text{L}$): 11.00



Environmental Screening Levels
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Table T2-1: Tier 2 ESL Input and Output

Click in cell and use pull-down boxes to make selection. Outputs in gray box below.

Tier 2 Scenario Toggles	
Contaminant:	Lead
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based Levels:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Contamination Depth: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Soil

Enter site data (Optional; Date used for Specific Concerns Table T2-3)	
Soil Concentration (mg/kg) - dry weight:	350.00
Groundwater Concentration ($\mu\text{g/L}$):	0.00
Subslab/ Soil Gas Concentration ($\mu\text{g/m}^3$):	
Indoor Air Concentration ($\mu\text{g/m}^3$):	

Output Tier 2 ESLs:	
Soil (mg/kg):	1.6E+02
Groundwater ($\mu\text{g/L}$):	2.5E+00
Subslab/ Soil Gas ($\mu\text{g/m}^3$):	No ESL*
Indoor Air ($\mu\text{g/m}^3$):	--

***Un-Intact or Unknown Slab Condition.
See ESL Users Guide Appendix B**

Table T2-2: ESL Details

Selected Site Scenario	
Selected Chemical:	Lead
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI:	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Type for Direct Exposure:	Shallow Soil

Groundwater Screening Levels (µg/L)	
Table GW-1	Drinking Water MCL: 1.5E+01
	Tapwater-Direct Exposure Human Health Risk: 2.0E-01
	Nondrinking Water Exposure Risk: --
	Groundwater Direct Exposure Level: --
Table GW-2	Freshwater Ecotoxicity: 2.5E+00
	Saltwater Ecotoxicity: 8.1E+00
	Bioaccumulation for Seafood Ingestion Concerns: --
	Ecological Aquatic Habitat Goal Level: 2.5E+00
Table GW-3	Residential GW VI - Shallow Groundwater - Sand: --
	Com/Ind GW VI - Shallow Groundwater - Sand: --
	Residential GW VI - Deep Groundwater - Sand: --
	Residential GW VI - Deep Groundwater- Fine-Coarse: --
	Com/Ind GW VI - Deep Groundwater - Sand: --
	Com/Ind GW VI - Deep Groundwater - Fine-Coarse: --
	Groundwater Vapor Intrusion Level: --
Table GW-4	Groundwater Gross Contamination Level: 5.0E+04
Table GW-5	Drinking Water Taste and Odor Nuisance Value: --
	Nondrinking Odor Nuisance Value: --
	Groundwater Odor Nuisance Level: --
Final Groundwater ESL: 2.5E+00	

Soil Screening Levels (mg/kg)	
Table S-1	Residential Shallow Soil Exposure Risk: 8.0E+01
	Commercial or Industrial Shallow Soil Exposure Risk: 3.2E+02
	Construction Worker Any Soil Depth Exposure Risk: 1.6E+02
	Soil Direct Exposure Level: 1.6E+02
Table S-2	Leaching - Drinking Water Resource: --
	Leaching - Nondrinking Water Resource: --
	Soil Leaching Level: --
Table S-3	Soil Gross Contamination Level: --
Table S-4	Residential - Shallow Soil Exposure: --
	Commercial/Industrial - Shallow Soil Exposure: --
	Any Land Use - Deep Soil Exposure: --
	Soil Odor Nuisance Level: --
Final Soil ESL 1.6E+02	

Subslab/Soil Gas Screening Levels (µg/m ³)	
Table SG-1	Residential VI Exposure Risk: --
	Commercial or Industrial VI Exposure Risk: --
	Subslab/Soil Gas Vapor Intrusion Level: No ESL*
Table SG-2	Residential VI Odor Nuisance: --
	Commercial/Industrial VI Odor Nuisance: --
	Subslab/Soil Gas VI Odor Nuisance Level: No ESL*
Final Subslab/Soil Gas ESL: No ESL*	

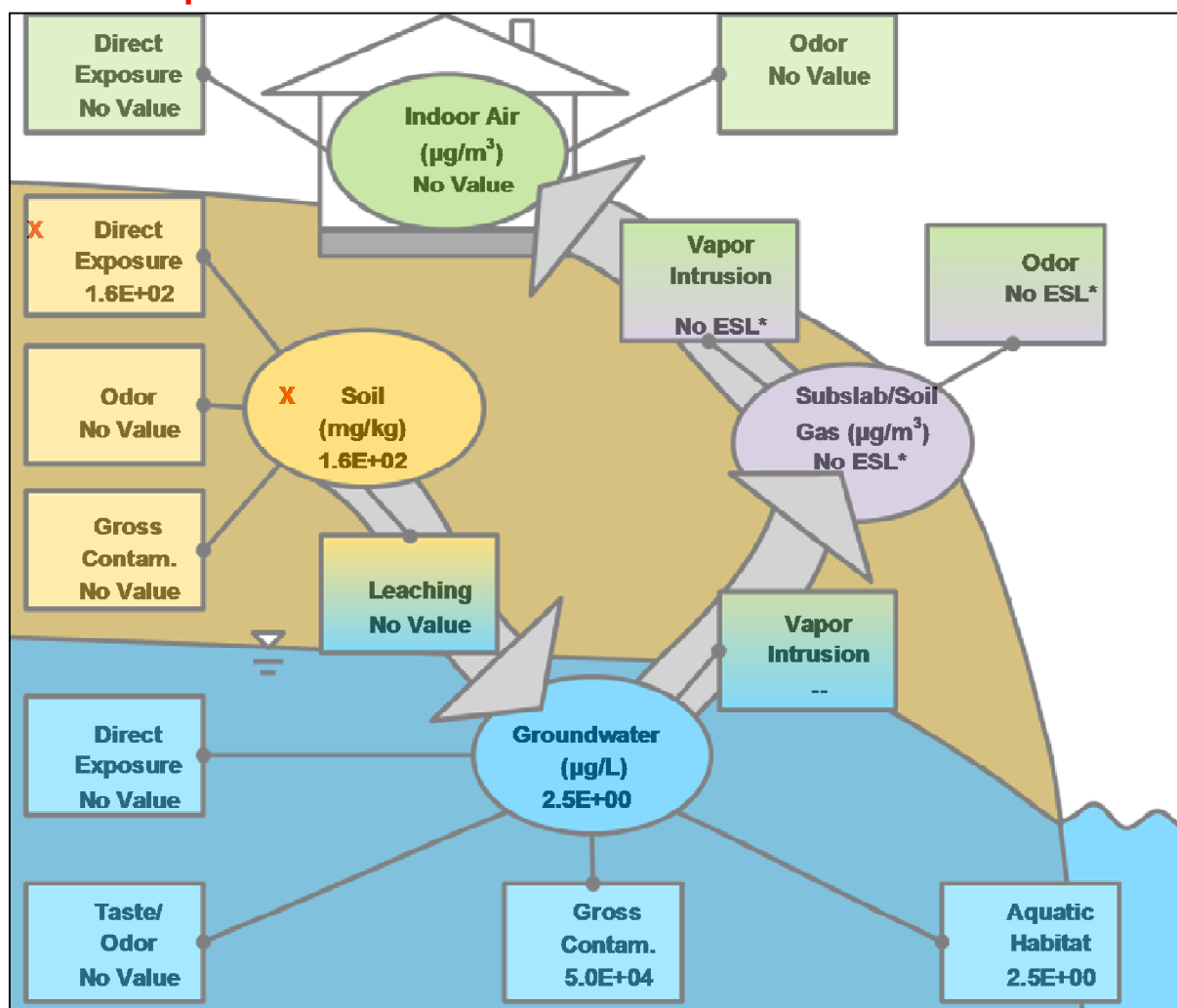
***Un-intact or Unknown Slab Condition - See ESL Users Guide Appendix B**

Indoor Air Screening Levels (µg/m ³)	
Table IA-1	Residential Direct Exposure Risk: --
	Commercial or Industrial Direct Exposure Risk: --
	Indoor Air Direct Exposure Level: --
Table IA-2	Indoor Air Odor Nuisance Level: --
Final Indoor Air ESL: --	

Environmental Screening Levels for Specific Concerns

Caused by Site Specific Levels of Lead

Input site contaminant concentrations on Table T2-1.



Scenario Assumptions:

Commercial or Industrial
Shallow Soil
Nondrinking Water Resource
Fine to Coarse Scenario

Site Concentrations (Entered on Table T2-1):

Soil (mg/kg): 350.00



Environmental Screening Levels
San Francisco Bay Regional Water Quality Control Board



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Table T2-1: Tier 2 ESL Input and Output

Click in cell and use pull-down boxes to make selection. Outputs in gray box below.

Tier 2 Scenario Toggles	
Contaminant:	Nickel
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based Levels:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Contamination Depth: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Soil

Enter site data (Optional; Date used for Specific Concerns Table T2-3)	
Soil Concentration (mg/kg) - dry weight:	130.00
Groundwater Concentration ($\mu\text{g/L}$):	8.90
Subslab/ Soil Gas Concentration ($\mu\text{g/m}^3$):	
Indoor Air Concentration ($\mu\text{g/m}^3$):	

Output Tier 2 ESLs:	
Soil (mg/kg):	8.6E+01
Groundwater ($\mu\text{g/L}$):	8.2E+00
Subslab/ Soil Gas ($\mu\text{g/m}^3$):	No ESL*
Indoor Air ($\mu\text{g/m}^3$):	--

***Un-Intact or Unknown Slab Condition.
See ESL Users Guide Appendix B**

Table T2-2: ESL Details

Selected Site Scenario	
Selected Chemical:	Nickel
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI:	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Type for Direct Exposure:	Shallow Soil

Groundwater Screening Levels (µg/L)	
Table GW-1	Drinking Water MCL: 1.0E+02
	Tapwater-Direct Exposure Human Health Risk: 1.2E+01
	Nondrinking Water Exposure Risk: --
	Groundwater Direct Exposure Level: --
Table GW-2	Freshwater Ecotoxicity: 5.2E+01
	Saltwater Ecotoxicity: 8.2E+00
	Bioaccumulation for Seafood Ingestion Concerns: 4.6E+03
	Ecological Aquatic Habitat Goal Level: 8.2E+00
Table GW-3	Residential GW VI - Shallow Groundwater - Sand: --
	Com/Ind GW VI - Shallow Groundwater - Sand: --
	Residential GW VI - Deep Groundwater - Sand: --
	Residential GW VI - Deep Groundwater- Fine-Coarse: --
	Com/Ind GW VI - Deep Groundwater - Sand: --
	Com/Ind GW VI - Deep Groundwater - Fine-Coarse: --
	Groundwater Vapor Intrusion Level: --
Table GW-4	Groundwater Gross Contamination Level: 5.0E+04
Table GW-5	Drinking Water Taste and Odor Nuisance Value: --
	Nondrinking Odor Nuisance Value: --
	Groundwater Odor Nuisance Level: --
Final Groundwater ESL: 8.2E+00	

Soil Screening Levels (mg/kg)	
Table S-1	Residential Shallow Soil Exposure Risk: 8.2E+02
	Commercial or Industrial Shallow Soil Exposure Risk: 1.1E+04
	Construction Worker Any Soil Depth Exposure Risk: 8.6E+01
	Soil Direct Exposure Level: 8.6E+01
Table S-2	Leaching - Drinking Water Resource: --
	Leaching - Nondrinking Water Resource: --
	Soil Leaching Level: --
Table S-3	Soil Gross Contamination Level: --
Table S-4	Residential - Shallow Soil Exposure: --
	Commercial/Industrial - Shallow Soil Exposure: --
	Any Land Use - Deep Soil Exposure: --
	Soil Odor Nuisance Level: --
Final Soil ESL 8.6E+01	

Subslab/Soil Gas Screening Levels (µg/m ³)	
Table SG-1	Residential VI Exposure Risk: --
	Commercial or Industrial VI Exposure Risk: --
	Subslab/Soil Gas Vapor Intrusion Level: No ESL*
Table SG-2	Residential VI Odor Nuisance: --
	Commercial/Industrial VI Odor Nuisance: --
	Subslab/Soil Gas VI Odor Nuisance Level: No ESL*
Final Subslab/Soil Gas ESL: No ESL*	

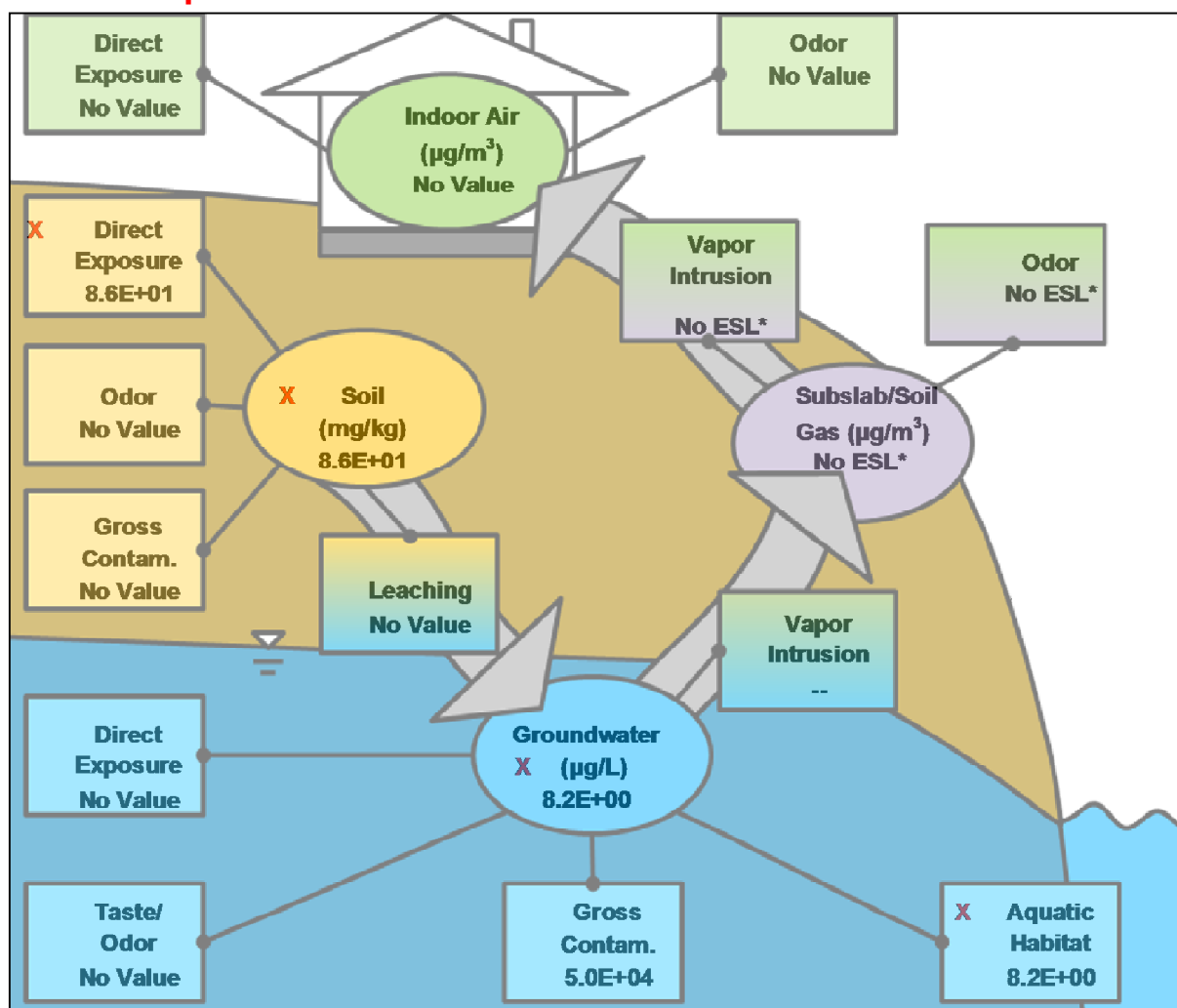
***Un-intact or Unknown Slab Condition - See ESL Users Guide Appendix B**

Indoor Air Screening Levels (µg/m ³)	
Table IA-1	Residential Direct Exposure Risk: --
	Commercial or Industrial Direct Exposure Risk: --
	Indoor Air Direct Exposure Level: --
Table IA-2	Indoor Air Odor Nuisance Level: --
Final Indoor Air ESL: --	

Environmental Screening Levels for Specific Concerns

Caused by Site Specific Levels of Nickel

Input site contaminant concentrations on Table T2-1.



Scenario Assumptions:

Commercial or Industrial
Shallow Soil
Nondrinking Water Resource
Fine to Coarse Scenario

Site Concentrations (Entered on Table T2-1):

Soil (mg/kg): 130.00
Groundwater (µg/L): 8.90



Environmental Screening Levels
San Francisco Bay Regional Water Quality Control Board



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Table T2-1: Tier 2 ESL Input and Output

Click in cell and use pull-down boxes to make selection. Outputs in gray box below.

Tier 2 Scenario Toggles	
Contaminant:	Zinc
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based Levels:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Contamination Depth: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Soil

Enter site data (Optional; Date used for Specific Concerns Table T2-3)	
Soil Concentration (mg/kg) - dry weight:	1,900.00
Groundwater Concentration ($\mu\text{g/L}$):	68.00
Subslab/ Soil Gas Concentration ($\mu\text{g/m}^3$):	
Indoor Air Concentration ($\mu\text{g/m}^3$):	

Output Tier 2 ESLs:	
Soil (mg/kg):	1.1E+05
Groundwater ($\mu\text{g/L}$):	8.1E+01
Subslab/ Soil Gas ($\mu\text{g/m}^3$):	No ESL*
Indoor Air ($\mu\text{g/m}^3$):	--

***Un-Intact or Unknown Slab Condition.
See ESL Users Guide Appendix B**

Table T2-2: ESL Details

Selected Site Scenario	
Selected Chemical:	Zinc
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI:	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Type for Direct Exposure:	Shallow Soil

Groundwater Screening Levels (µg/L)	
Table GW-1	Drinking Water MCL: 5.0E+03
	Tapwater-Direct Exposure Human Health Risk: 6.0E+03
	Nondrinking Water Exposure Risk: --
	Groundwater Direct Exposure Level: --
Table GW-2	Freshwater Ecotoxicity: 1.2E+02
	Saltwater Ecotoxicity: 8.1E+01
	Bioaccumulation for Seafood Ingestion Concerns: --
	Ecological Aquatic Habitat Goal Level: 8.1E+01
Table GW-3	Residential GW VI - Shallow Groundwater - Sand: --
	Com/Ind GW VI - Shallow Groundwater - Sand: --
	Residential GW VI - Deep Groundwater - Sand: --
	Residential GW VI - Deep Groundwater- Fine-Coarse: --
	Com/Ind GW VI - Deep Groundwater - Sand: --
	Com/Ind GW VI - Deep Groundwater - Fine-Coarse: --
	Groundwater Vapor Intrusion Level: --
Table GW-4	Groundwater Gross Contamination Level: 5.0E+04
Table GW-5	Drinking Water Taste and Odor Nuisance Value: 5.0E+03
	Nondrinking Odor Nuisance Value: --
	Groundwater Odor Nuisance Level: --
Final Groundwater ESL: 8.1E+01	

Soil Screening Levels (mg/kg)	
Table S-1	Residential Shallow Soil Exposure Risk: 2.3E+04
	Commercial or Industrial Shallow Soil Exposure Risk: 3.5E+05
	Construction Worker Any Soil Depth Exposure Risk: 1.1E+05
	Soil Direct Exposure Level: 1.1E+05
Table S-2	Leaching - Drinking Water Resource: --
	Leaching - Nondrinking Water Resource: --
	Soil Leaching Level: --
Table S-3	Soil Gross Contamination Level: --
Table S-4	Residential - Shallow Soil Exposure: --
	Commercial/Industrial - Shallow Soil Exposure: --
	Any Land Use - Deep Soil Exposure: --
	Soil Odor Nuisance Level: --
Final Soil ESL 1.1E+05	

Subslab/Soil Gas Screening Levels (µg/m ³)	
Table SG-1	Residential VI Exposure Risk: --
	Commercial or Industrial VI Exposure Risk: --
	Subslab/Soil Gas Vapor Intrusion Level: No ESL*
Table SG-2	Residential VI Odor Nuisance: --
	Commercial/Industrial VI Odor Nuisance: --
	Subslab/Soil Gas VI Odor Nuisance Level: No ESL*
Final Subslab/Soil Gas ESL: No ESL*	

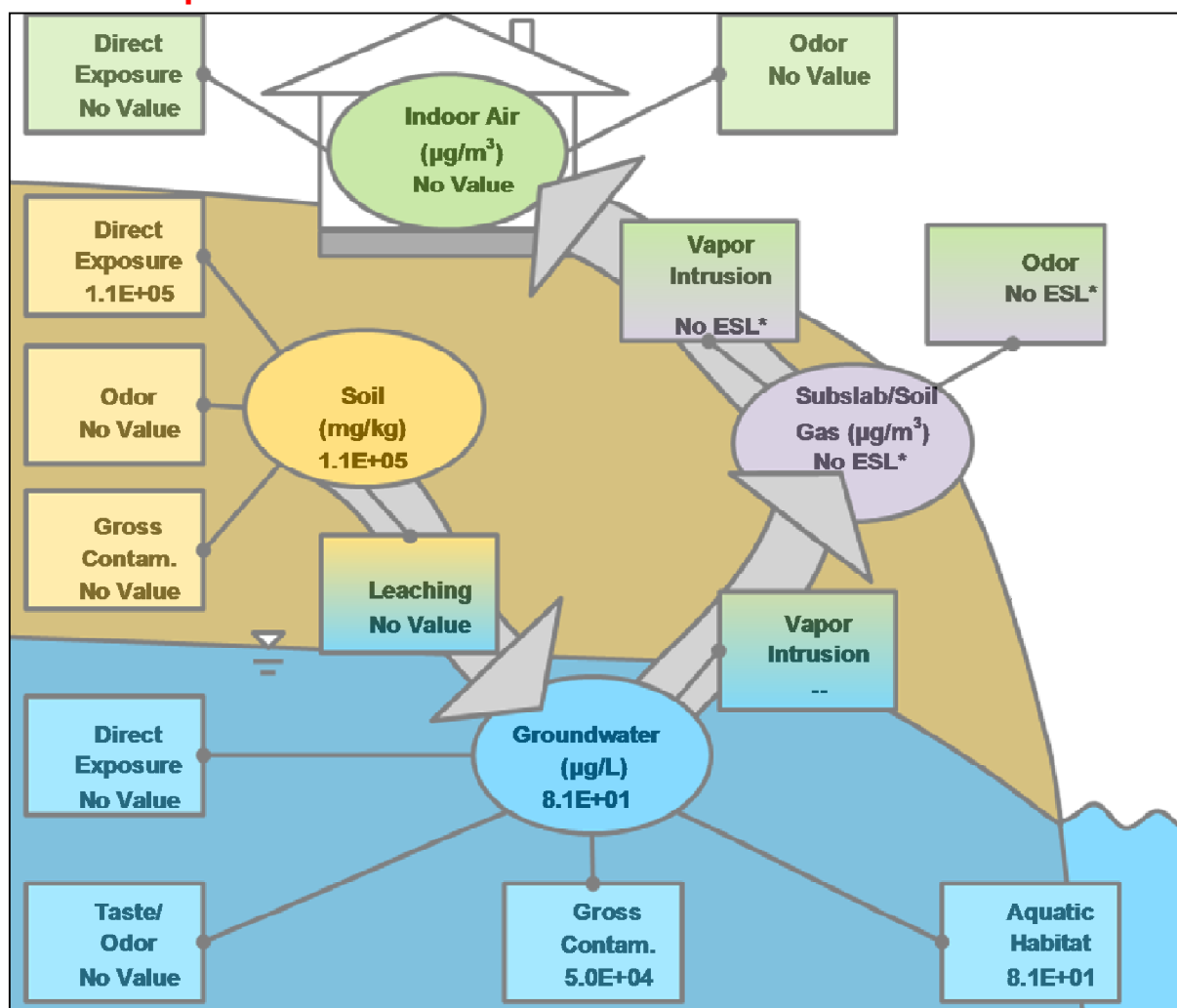
***Un-intact or Unknown Slab Condition - See ESL Users Guide Appendix B**

Indoor Air Screening Levels (µg/m ³)	
Table IA-1	Residential Direct Exposure Risk: --
	Commercial or Industrial Direct Exposure Risk: --
	Indoor Air Direct Exposure Level: --
Table IA-2	Indoor Air Odor Nuisance Level: --
Final Indoor Air ESL: --	

Environmental Screening Levels for Specific Concerns

Caused by Site Specific Levels of Zinc

Input site contaminant concentrations on Table T2-1.



Scenario Assumptions:

Commercial or Industrial
Shallow Soil
Nondrinking Water Resource
Fine to Coarse Scenario

Site Concentrations (Entered on Table T2-1):

Soil (mg/kg): 1,900.00
Groundwater ($\mu\text{g}/\text{L}$): 68.00



Environmental Screening Levels
San Francisco Bay Regional Water Quality Control Board



Table T2-1: Tier 2 ESL Input and Output

Click in cell and use pull-down boxes to make selection. Outputs in gray box below.

Tier 2 Scenario Toggles	
Contaminant:	TPH gasoline
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based Levels:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Contamination Depth: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Soil

Enter site data (Optional; Date used for Specific Concerns Table T2-3)	
Soil Concentration (mg/kg) - dry weight:	27.00
Groundwater Concentration ($\mu\text{g/L}$):	2,200.00
Subslab/ Soil Gas Concentration ($\mu\text{g/m}^3$):	
Indoor Air Concentration ($\mu\text{g/m}^3$):	

Output Tier 2 ESLs:	
Soil (mg/kg):	5.0E+02
Groundwater ($\mu\text{g/L}$):	4.4E+02
Subslab/ Soil Gas ($\mu\text{g/m}^3$):	No ESL*
Indoor Air ($\mu\text{g/m}^3$):	1.0E+02

***Un-Intact or Unknown Slab Condition.
See ESL Users Guide Appendix B**

Table T2-2: ESL Details

Selected Site Scenario	
Selected Chemical:	TPH gasoline
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI:	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Type for Direct Exposure:	Shallow Soil

Groundwater Screening Levels (µg/L)	
Table GW-1	Drinking Water MCL: 2.2E+02
	Tapwater-Direct Exposure Human Health Risk: 2.2E+02
	Nondrinking Water Exposure Risk: --
	Groundwater Direct Exposure Level: --
Table GW-2	Freshwater Ecotoxicity: 4.4E+02
	Saltwater Ecotoxicity: 3.7E+03
	Bioaccumulation for Seafood Ingestion Concerns: --
	Ecological Aquatic Habitat Goal Level: 4.4E+02
Table GW-3	Residential GW VI - Shallow Groundwater - Sand: --
	Com/Ind GW VI - Shallow Groundwater - Sand: --
	Residential GW VI - Deep Groundwater - Sand: --
	Residential GW VI - Deep Groundwater- Fine-Coarse: --
	Com/Ind GW VI - Deep Groundwater - Sand: --
	Com/Ind GW VI - Deep Groundwater - Fine-Coarse: --
	Groundwater Vapor Intrusion Level: --
Table GW-4	Groundwater Gross Contamination Level: 5.0E+04
Table GW-5	Drinking Water Taste and Odor Nuisance Value: 1.0E+02
	Nondrinking Odor Nuisance Value: 5.0E+03
	Groundwater Odor Nuisance Level: 5.0E+03
Final Groundwater ESL: 4.4E+02	

Soil Screening Levels (mg/kg)	
Table S-1	Residential Shallow Soil Exposure Risk: 7.4E+02
	Commercial or Industrial Shallow Soil Exposure Risk: 3.9E+03
	Construction Worker Any Soil Depth Exposure Risk: 2.8E+03
	Soil Direct Exposure Level: 2.8E+03
Table S-2	Leaching - Drinking Water Resource: 7.7E+02
	Leaching - Nondrinking Water Resource: 3.4E+03
	Soil Leaching Level: 3.4E+03
Table S-3	Soil Gross Contamination Level: 1.0E+03
Table S-4	Residential - Shallow Soil Exposure: 1.0E+02
	Commercial/Industrial - Shallow Soil Exposure: 5.0E+02
	Any Land Use - Deep Soil Exposure: 5.0E+02
	Soil Odor Nuisance Level: 5.0E+02
Final Soil ESL 5.0E+02	

Subslab/Soil Gas Screening Levels (µg/m ³)	
Table SG-1	Residential VI Exposure Risk: 3.0E+05
	Commercial or Industrial VI Exposure Risk: 2.5E+06
	Subslab/Soil Gas Vapor Intrusion Level: No ESL*
Table SG-2	Residential VI Odor Nuisance: 5.0E+04
	Commercial/Industrial VI Odor Nuisance: 1.0E+05
	Subslab/Soil Gas VI Odor Nuisance Level: No ESL*
Final Subslab/Soil Gas ESL: No ESL*	

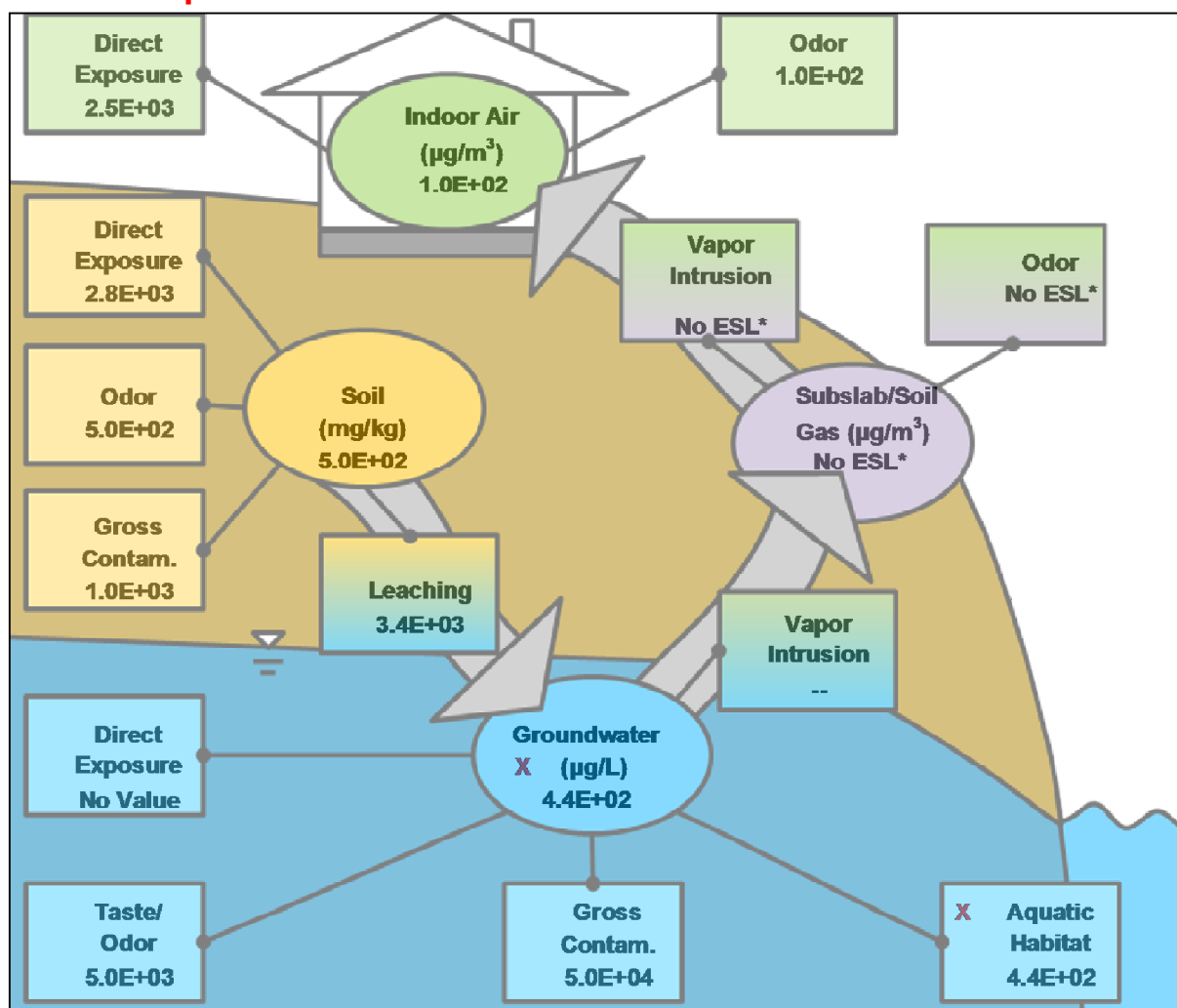
***Un-intact or Unknown Slab Condition - See ESL Users Guide Appendix B**

Indoor Air Screening Levels (µg/m ³)	
Table IA-1	Residential Direct Exposure Risk: 5.9E+02
	Commercial or Industrial Direct Exposure Risk: 2.5E+03
	Indoor Air Direct Exposure Level: 2.5E+03
Table IA-2	Indoor Air Odor Nuisance Level: 1.0E+02
Final Indoor Air ESL: 1.0E+02	

Environmental Screening Levels for Specific Concerns

Caused by Site Specific Levels of TPH gasoline

Input site contaminant concentrations on Table T2-1.



Scenario Assumptions:

Commercial or Industrial
Shallow Soil
Nondrinking Water Resource
Fine to Coarse Scenario

Site Concentrations (Entered on Table T2-1):

Soil (mg/kg): 27.00
Groundwater ($\mu\text{g}/\text{L}$): 2,200.00



Environmental Screening Levels
San Francisco Bay Regional Water Quality Control Board



Table T2-1: Tier 2 ESL Input and Output

Click in cell and use pull-down boxes to make selection. Outputs in gray box below.

Tier 2 Scenario Toggles	
Contaminant:	TPH diesel
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based Levels:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Contamination Depth: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Soil

Enter site data (Optional; Date used for Specific Concerns Table T2-3)	
Soil Concentration (mg/kg) - dry weight:	2,000.00
Groundwater Concentration ($\mu\text{g/L}$):	3,500.00
Subslab/ Soil Gas Concentration ($\mu\text{g/m}^3$):	
Indoor Air Concentration ($\mu\text{g/m}^3$):	

Output Tier 2 ESLs:	
Soil (mg/kg):	8.8E+02
Groundwater ($\mu\text{g/L}$):	6.4E+02
Subslab/ Soil Gas ($\mu\text{g/m}^3$):	No ESL*
Indoor Air ($\mu\text{g/m}^3$):	5.7E+02

***Un-Intact or Unknown Slab Condition.
See ESL Users Guide Appendix B**

Table T2-2: ESL Details

Selected Site Scenario	
Selected Chemical:	TPH diesel
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI:	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Type for Direct Exposure:	Shallow Soil

Groundwater Screening Levels (µg/L)		
Table GW-1	Drinking Water MCL:	1.5E+02
	Tapwater-Direct Exposure Human Health Risk:	1.5E+02
	Nondrinking Water Exposure Risk:	--
	Groundwater Direct Exposure Level:	--
Table GW-2	Freshwater Ecotoxicity:	6.4E+02
	Saltwater Ecotoxicity:	6.4E+02
	Bioaccumulation for Seafood Ingestion Concerns:	--
	Ecological Aquatic Habitat Goal Level:	6.4E+02
Table GW-3	Residential GW VI - Shallow Groundwater - Sand:	--
	Com/Ind GW VI - Shallow Groundwater - Sand:	--
	Residential GW VI - Deep Groundwater - Sand:	--
	Residential GW VI - Deep Groundwater- Fine-Coarse:	--
	Com/Ind GW VI - Deep Groundwater - Sand:	--
	Com/Ind GW VI - Deep Groundwater - Fine-Coarse:	--
	Groundwater Vapor Intrusion Level:	--
Table GW-4	Groundwater Gross Contamination Level:	2.5E+03
Table GW-5	Drinking Water Taste and Odor Nuisance Value:	1.0E+02
	Nondrinking Odor Nuisance Value:	5.0E+03
	Groundwater Odor Nuisance Level:	5.0E+03
Final Groundwater ESL:		6.4E+02

Soil Screening Levels (mg/kg)		
Table S-1	Residential Shallow Soil Exposure Risk:	2.3E+02
	Commercial or Industrial Shallow Soil Exposure Risk:	1.1E+03
	Construction Worker Any Soil Depth Exposure Risk:	8.8E+02
	Soil Direct Exposure Level:	8.8E+02
Table S-2	Leaching - Drinking Water Resource:	5.7E+02
	Leaching - Nondrinking Water Resource:	3.6E+03
	Soil Leaching Level:	3.6E+03
Table S-3	Soil Gross Contamination Level:	2.3E+03
Table S-4	Residential - Shallow Soil Exposure:	5.0E+02
	Commercial/Industrial - Shallow Soil Exposure:	1.0E+03
	Any Land Use - Deep Soil Exposure:	1.0E+03
	Soil Odor Nuisance Level:	1.0E+03
Final Soil ESL		8.8E+02

Subslab/Soil Gas Screening Levels (µg/m ³)		
Table SG-1	Residential VI Exposure Risk:	6.8E+04
	Commercial or Industrial VI Exposure Risk:	5.7E+05
	Subslab/Soil Gas Vapor Intrusion Level:	No ESL*
Table SG-2	Residential VI Odor Nuisance:	5.0E+05
	Commercial/Industrial VI Odor Nuisance:	1.0E+06
	Subslab/Soil Gas VI Odor Nuisance Level:	No ESL*
Final Subslab/Soil Gas ESL:		No ESL*

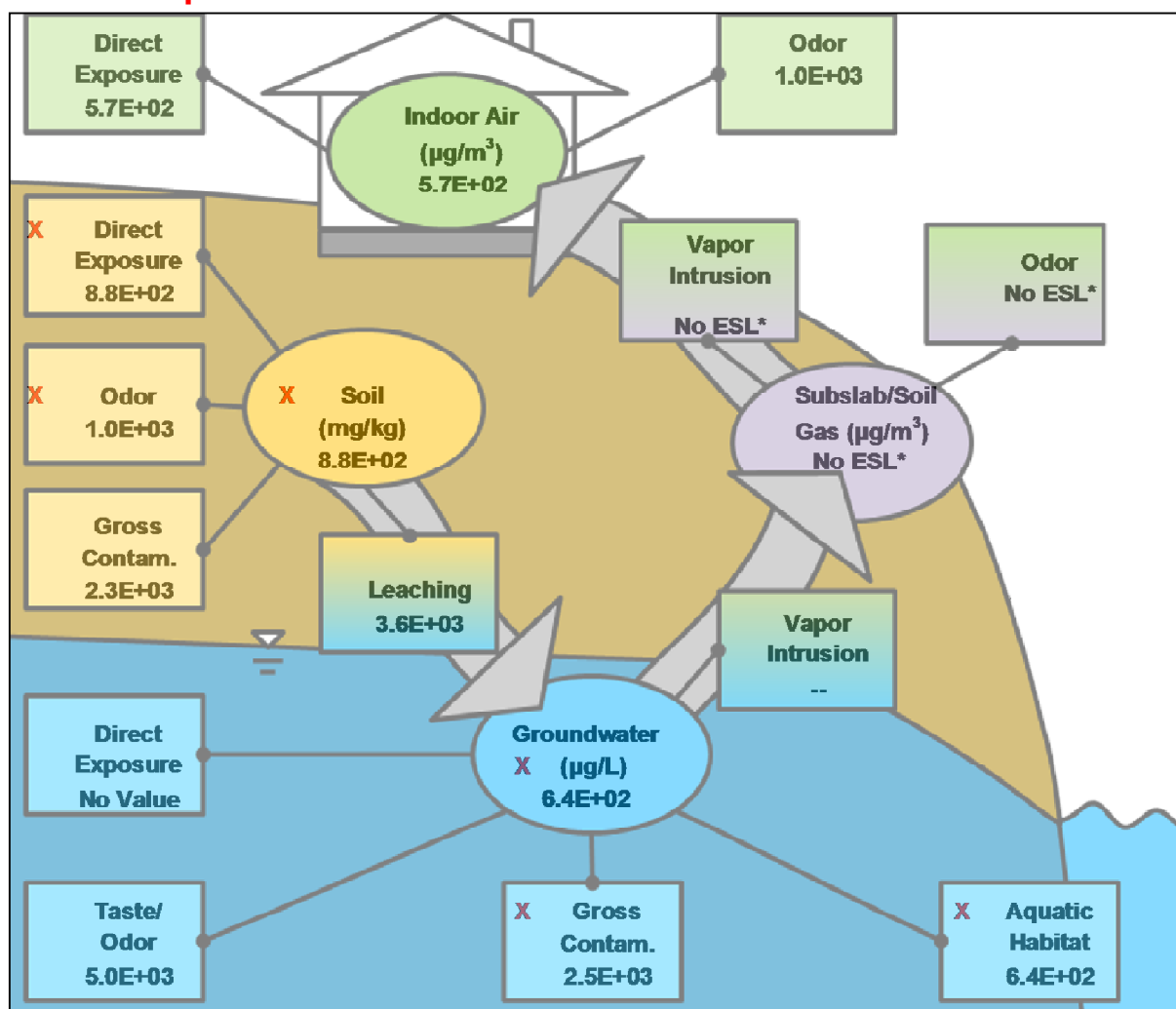
***Un-intact or Unknown Slab Condition - See ESL Users Guide Appendix B**

Indoor Air Screening Levels (µg/m ³)		
Table IA-1	Residential Direct Exposure Risk:	1.4E+02
	Commercial or Industrial Direct Exposure Risk:	5.7E+02
	Indoor Air Direct Exposure Level:	5.7E+02
Table IA-2	Indoor Air Odor Nuisance Level:	1.0E+03
Final Indoor Air ESL:		5.7E+02

Environmental Screening Levels for Specific Concerns

Caused by Site Specific Levels of TPH diesel

Input site contaminant concentrations on Table T2-1.



Scenario Assumptions:

Commercial or Industrial
Shallow Soil
Nondrinking Water Resource
Fine to Coarse Scenario

Site Concentrations (Entered on Table T2-1):

Soil (mg/kg): 2,000.00
Groundwater ($\mu\text{g}/\text{L}$): 3,500.00



Environmental Screening Levels
San Francisco Bay Regional Water Quality Control Board



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Table T2-1: Tier 2 ESL Input and Output

Click in cell and use pull-down boxes to make selection. Outputs in gray box below.

Tier 2 Scenario Toggles	
Contaminant:	TPH motor oil
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based Levels:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Contamination Depth: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Soil

Enter site data (Optional; Date used for Specific Concerns Table T2-3)	
Soil Concentration (mg/kg) - dry weight:	7,900.00
Groundwater Concentration ($\mu\text{g/L}$):	9,500.00
Subslab/ Soil Gas Concentration ($\mu\text{g/m}^3$):	
Indoor Air Concentration ($\mu\text{g/m}^3$):	

Output Tier 2 ESLs:	
Soil (mg/kg):	5.1E+03
Groundwater ($\mu\text{g/L}$):	5.0E+04
Subslab/ Soil Gas ($\mu\text{g/m}^3$):	No ESL*
Indoor Air ($\mu\text{g/m}^3$):	--

***Un-Intact or Unknown Slab Condition.
See ESL Users Guide Appendix B**

Table T2-2: ESL Details

Selected Site Scenario	
Selected Chemical:	TPH motor oil
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI:	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Type for Direct Exposure:	Shallow Soil

Groundwater Screening Levels (µg/L)		
Table GW-1	Drinking Water MCL:	Note 1
	Tapwater-Direct Exposure Human Health Risk:	Note 1
	Nondrinking Water Exposure Risk:	--
	Groundwater Direct Exposure Level:	--
Table GW-2	Freshwater Ecotoxicity:	Note 1
	Saltwater Ecotoxicity:	--
	Bioaccumulation for Seafood Ingestion Concerns:	--
	Ecological Aquatic Habitat Goal Level:	Note 1
Table GW-3	Residential GW VI - Shallow Groundwater - Sand:	--
	Com/Ind GW VI - Shallow Groundwater - Sand:	--
	Residential GW VI - Deep Groundwater - Sand:	--
	Residential GW VI - Deep Groundwater- Fine-Coarse:	--
	Com/Ind GW VI - Deep Groundwater - Sand:	--
	Com/Ind GW VI - Deep Groundwater - Fine-Coarse:	--
	Groundwater Vapor Intrusion Level:	--
Table GW-4	Groundwater Gross Contamination Level:	5.0E+04
Table GW-5	Drinking Water Taste and Odor Nuisance Value:	Note 1
	Nondrinking Odor Nuisance Value:	Note 1
	Groundwater Odor Nuisance Level:	Note 1
Final Groundwater ESL:		5.0E+04

Soil Screening Levels (mg/kg)		
Table S-1	Residential Shallow Soil Exposure Risk:	1.1E+04
	Commercial or Industrial Shallow Soil Exposure Risk:	1.4E+05
	Construction Worker Any Soil Depth Exposure Risk:	3.2E+04
	Soil Direct Exposure Level:	3.2E+04
Table S-2	Leaching - Drinking Water Resource:	--
	Leaching - Nondrinking Water Resource:	--
	Soil Leaching Level:	--
Table S-3	Soil Gross Contamination Level:	5.1E+03
Table S-4	Residential - Shallow Soil Exposure:	--
	Commercial/Industrial - Shallow Soil Exposure:	--
	Any Land Use - Deep Soil Exposure:	--
	Soil Odor Nuisance Level:	--
Final Soil ESL		5.1E+03

Subslab/Soil Gas Screening Levels (µg/m ³)		
Table SG-1	Residential VI Exposure Risk:	--
	Commercial or Industrial VI Exposure Risk:	--
	Subslab/Soil Gas Vapor Intrusion Level:	No ESL*
Table SG-2	Residential VI Odor Nuisance:	--
	Commercial/Industrial VI Odor Nuisance:	--
	Subslab/Soil Gas VI Odor Nuisance Level:	No ESL*
Final Subslab/Soil Gas ESL:		No ESL*

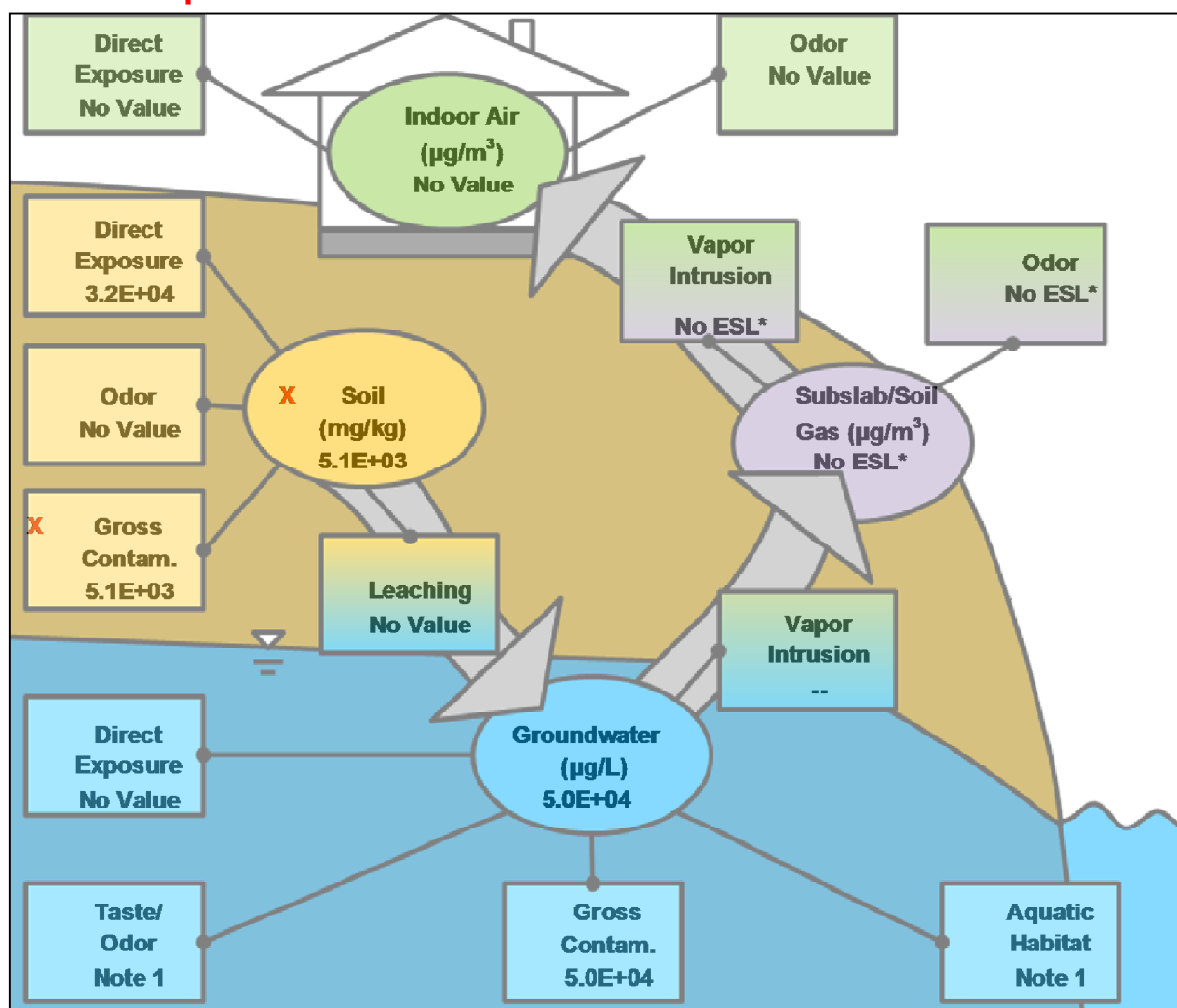
***Un-intact or Unknown Slab Condition - See ESL Users Guide Appendix B**

Indoor Air Screening Levels (µg/m ³)		
Table IA-1	Residential Direct Exposure Risk:	--
	Commercial or Industrial Direct Exposure Risk:	--
	Indoor Air Direct Exposure Level:	--
Table IA-2	Indoor Air Odor Nuisance Level:	--
Final Indoor Air ESL:		--

Environmental Screening Levels for Specific Concerns

Caused by Site Specific Levels of TPH motor oil

Input site contaminant concentrations on Table T2-1.



Scenario Assumptions:

Commercial or Industrial
Shallow Soil
Nondrinking Water Resource
Fine to Coarse Scenario

Site Concentrations (Entered on Table T2-1):

Soil (mg/kg): 7,900.00
Groundwater (µg/L): 9,500.00



Environmental Screening Levels
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Table T2-1: Tier 2 ESL Input and Output

Click in cell and use pull-down boxes to make selection. Outputs in gray box below.

Tier 2 Scenario Toggles	
Contaminant:	Methyl tertiary butyl ether (MTBE)
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based Levels:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Contamination Depth: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Soil

Enter site data (Optional; Date used for Specific Concerns Table T2-3)	
Soil Concentration (mg/kg) - dry weight:	0.01
Groundwater Concentration ($\mu\text{g/L}$):	71.00
Subslab/ Soil Gas Concentration ($\mu\text{g/m}^3$):	
Indoor Air Concentration ($\mu\text{g/m}^3$):	

Output Tier 2 ESLs:	
Soil (mg/kg):	8.4E-01
Groundwater ($\mu\text{g/L}$):	1.8E+02
Subslab/ Soil Gas ($\mu\text{g/m}^3$):	No ESL*
Indoor Air ($\mu\text{g/m}^3$):	4.7E+01

***Un-Intact or Unknown Slab Condition.
See ESL Users Guide Appendix B**

Table T2-2: ESL Details

Selected Site Scenario	
Selected Chemical:	Methyl tertiary butyl ether (MTBE)
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI:	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Type for Direct Exposure:	Shallow Soil

Groundwater Screening Levels (µg/L)	
Table GW-1	Drinking Water MCL: 5.0E+00
	Tapwater-Direct Exposure Human Health Risk: 1.3E+01
	Nondrinking Water Exposure Risk: --
	Groundwater Direct Exposure Level: --
Table GW-2	Freshwater Ecotoxicity: 6.6E+04
	Saltwater Ecotoxicity: 8.0E+03
	Bioaccumulation for Seafood Ingestion Concerns: --
	Ecological Aquatic Habitat Goal Level: 8.0E+03
Table GW-3	Residential GW VI - Shallow Groundwater - Sand: 1.2E+03
	Com/Ind GW VI - Shallow Groundwater - Sand: 1.1E+04
	Residential GW VI - Deep Groundwater - Sand: 1.5E+03
	Residential GW VI - Deep Groundwater- Fine-Coarse: 1.5E+04
	Com/Ind GW VI - Deep Groundwater - Sand: 1.3E+04
	Com/Ind GW VI - Deep Groundwater - Fine-Coarse: 1.3E+05
	Groundwater Vapor Intrusion Level: 1.1E+04
Table GW-4	Groundwater Gross Contamination Level: 5.0E+04
Table GW-5	Drinking Water Taste and Odor Nuisance Value: 5.0E+00
	Nondrinking Odor Nuisance Value: 1.8E+02
	Groundwater Odor Nuisance Level: 1.8E+02
Final Groundwater ESL: 1.8E+02	

Soil Screening Levels (mg/kg)	
Table S-1	Residential Shallow Soil Exposure Risk: 4.2E+01
	Commercial or Industrial Shallow Soil Exposure Risk: 1.8E+02
	Construction Worker Any Soil Depth Exposure Risk: 3.7E+03
	Soil Direct Exposure Level: 1.8E+02
Table S-2	Leaching - Drinking Water Resource: 2.3E-02
	Leaching - Nondrinking Water Resource: 8.4E-01
	Soil Leaching Level: 8.4E-01
Table S-3	Soil Gross Contamination Level: 2.1E+04
Table S-4	Residential - Shallow Soil Exposure: 1.0E+02
	Commercial/Industrial - Shallow Soil Exposure: 5.0E+02
	Any Land Use - Deep Soil Exposure: 5.0E+02
	Soil Odor Nuisance Level: 5.0E+02
Final Soil ESL 8.4E-01	

Subslab/Soil Gas Screening Levels (µg/m ³)	
Table SG-1	Residential VI Exposure Risk: 5.4E+03
	Commercial or Industrial VI Exposure Risk: 4.7E+04
	Subslab/Soil Gas Vapor Intrusion Level: No ESL*
Table SG-2	Residential VI Odor Nuisance: 2.7E+05
	Commercial/Industrial VI Odor Nuisance: 5.3E+05
	Subslab/Soil Gas VI Odor Nuisance Level: No ESL*
Final Subslab/Soil Gas ESL: No ESL*	

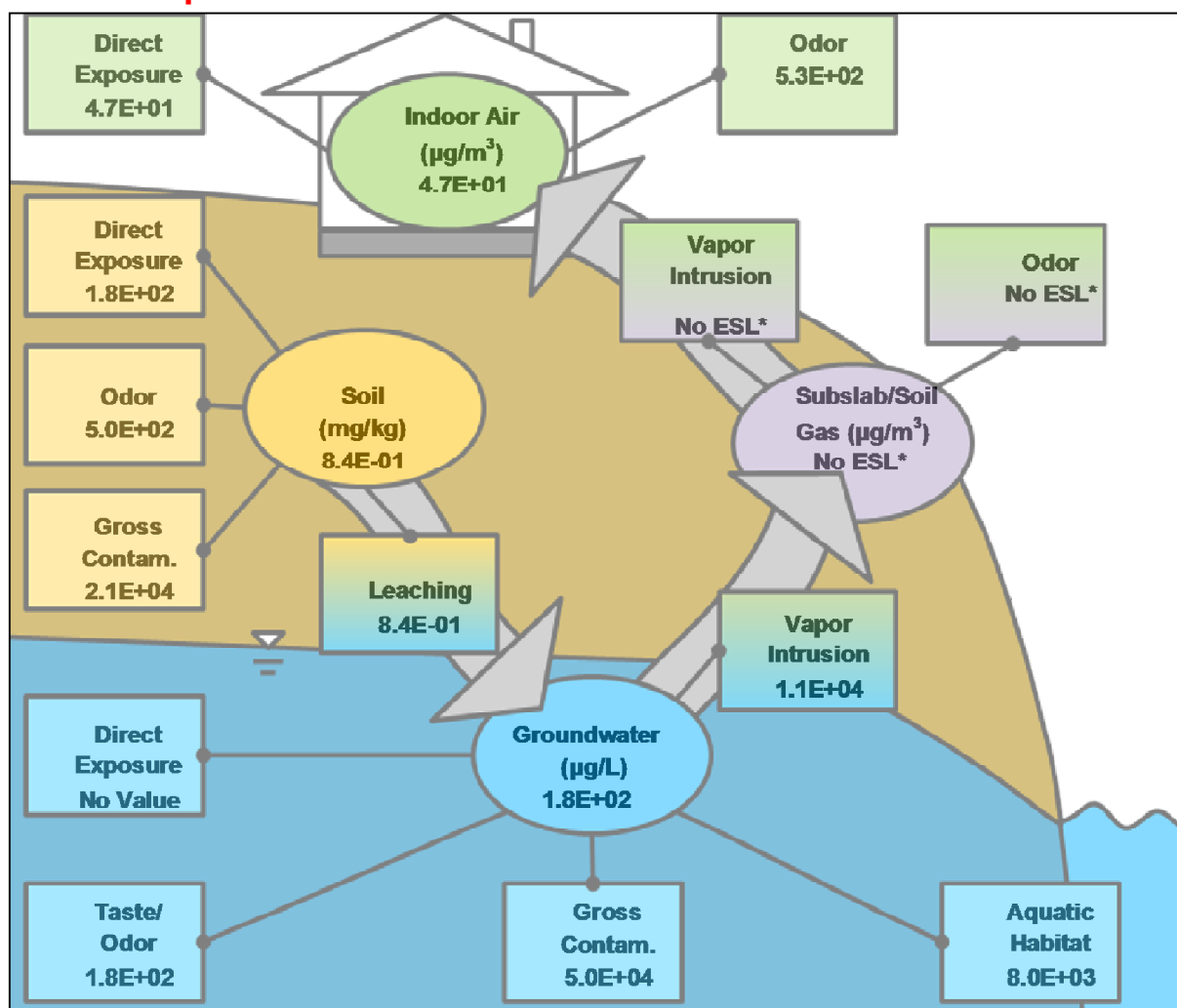
***Un-intact or Unknown Slab Condition - See ESL Users Guide Appendix B**

Indoor Air Screening Levels (µg/m ³)	
Table IA-1	Residential Direct Exposure Risk: 1.1E+01
	Commercial or Industrial Direct Exposure Risk: 4.7E+01
	Indoor Air Direct Exposure Level: 4.7E+01
Table IA-2	Indoor Air Odor Nuisance Level: 5.3E+02
Final Indoor Air ESL: 4.7E+01	

Environmental Screening Levels for Specific Concerns

Caused by Site Specific Levels of Methyl tertiary butyl ether (MTBE)

Input site contaminant concentrations on Table T2-1.



Scenario Assumptions:

Commercial or Industrial
Shallow Soil
Nondrinking Water Resource
Fine to Coarse Scenario

Site Concentrations (Entered on Table T2-1):

Soil (mg/kg): 0.01
Groundwater ($\mu\text{g/L}$): 71.00



Environmental Screening Levels
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Table T2-1: Tier 2 ESL Input and Output

Click in cell and use pull-down boxes to make selection. Outputs in gray box below.

Tier 2 Scenario Toggles	
Contaminant:	Benzene
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based Levels:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Contamination Depth: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Soil

Enter site data (Optional; Date used for Specific Concerns Table T2-3)	
Soil Concentration (mg/kg) - dry weight:	0.00
Groundwater Concentration ($\mu\text{g/L}$):	110.00
Subslab/ Soil Gas Concentration ($\mu\text{g/m}^3$):	
Indoor Air Concentration ($\mu\text{g/m}^3$):	

Output Tier 2 ESLs:	
Soil (mg/kg):	4.9E-02
Groundwater ($\mu\text{g/L}$):	9.7E+00
Subslab/ Soil Gas ($\mu\text{g/m}^3$):	No ESL*
Indoor Air ($\mu\text{g/m}^3$):	4.2E-01

***Un-Intact or Unknown Slab Condition.
See ESL Users Guide Appendix B**

Table T2-2: ESL Details

Selected Site Scenario	
Selected Chemical:	Benzene
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI:	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Type for Direct Exposure:	Shallow Soil

Groundwater Screening Levels (µg/L)	
Table GW-1	Drinking Water MCL: 1.0E+00
	Tapwater-Direct Exposure Human Health Risk: 1.5E-01
	Nondrinking Water Exposure Risk: --
	Groundwater Direct Exposure Level: --
Table GW-2	Freshwater Ecotoxicity: 4.6E+01
	Saltwater Ecotoxicity: 3.5E+02
	Bioaccumulation for Seafood Ingestion Concerns: 7.1E+01
	Ecological Aquatic Habitat Goal Level: 4.6E+01
Table GW-3	Residential GW VI - Shallow Groundwater - Sand: 1.1E+00
	Com/Ind GW VI - Shallow Groundwater - Sand: 9.7E+00
	Residential GW VI - Deep Groundwater - Sand: 1.4E+00
	Residential GW VI - Deep Groundwater- Fine-Coarse: 3.0E+01
	Com/Ind GW VI - Deep Groundwater - Sand: 1.2E+01
	Com/Ind GW VI - Deep Groundwater - Fine-Coarse: 2.6E+02
	Groundwater Vapor Intrusion Level: 9.7E+00
Table GW-4	Groundwater Gross Contamination Level: 5.0E+04
Table GW-5	Drinking Water Taste and Odor Nuisance Value: 1.7E+02
	Nondrinking Odor Nuisance Value: 2.0E+04
	Groundwater Odor Nuisance Level: 2.0E+04
Final Groundwater ESL: 9.7E+00	

Soil Screening Levels (mg/kg)	
Table S-1	Residential Shallow Soil Exposure Risk: 2.3E-01
	Commercial or Industrial Shallow Soil Exposure Risk: 1.0E+00
	Construction Worker Any Soil Depth Exposure Risk: 2.4E+01
	Soil Direct Exposure Level: 1.0E+00
Table S-2	Leaching - Drinking Water Resource: 4.4E-02
	Leaching - Nondrinking Water Resource: 4.9E-02
	Soil Leaching Level: 4.9E-02
Table S-3	Soil Gross Contamination Level: 8.7E+02
Table S-4	Residential - Shallow Soil Exposure: 5.0E+02
	Commercial/Industrial - Shallow Soil Exposure: 1.0E+03
	Any Land Use - Deep Soil Exposure: 1.0E+03
	Soil Odor Nuisance Level: 1.0E+03
Final Soil ESL: 4.9E-02	

Subslab/Soil Gas Screening Levels (µg/m ³)	
Table SG-1	Residential VI Exposure Risk: 4.8E+01
	Commercial or Industrial VI Exposure Risk: 4.2E+02
	Subslab/Soil Gas Vapor Intrusion Level: No ESL*
Table SG-2	Residential VI Odor Nuisance: 2.4E+06
	Commercial/Industrial VI Odor Nuisance: 4.9E+06
	Subslab/Soil Gas VI Odor Nuisance Level: No ESL*
Final Subslab/Soil Gas ESL: No ESL*	

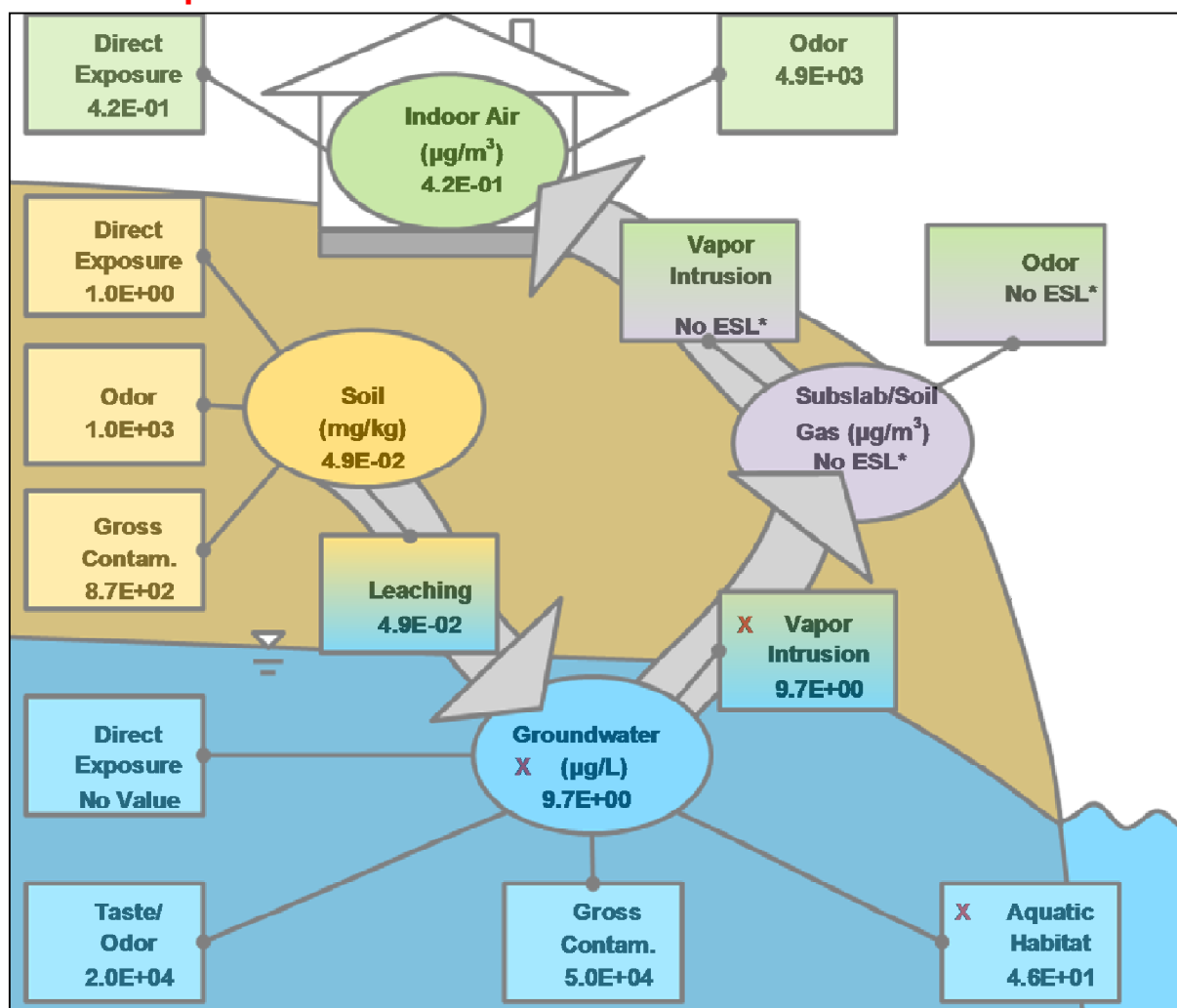
***Un-intact or Unknown Slab Condition - See ESL Users Guide Appendix B**

Indoor Air Screening Levels (µg/m ³)	
Table IA-1	Residential Direct Exposure Risk: 9.7E-02
	Commercial or Industrial Direct Exposure Risk: 4.2E-01
	Indoor Air Direct Exposure Level: 4.2E-01
Table IA-2	Indoor Air Odor Nuisance Level: 4.9E+03
Final Indoor Air ESL: 4.2E-01	

Environmental Screening Levels for Specific Concerns

Caused by Site Specific Levels of Benzene

Input site contaminant concentrations on Table T2-1.



Scenario Assumptions:

Commercial or Industrial
Shallow Soil
Nondrinking Water Resource
Fine to Coarse Scenario

Site Concentrations (Entered on Table T2-1):

Groundwater ($\mu\text{g}/\text{L}$): 110.00



Environmental Screening Levels
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Table T2-1: Tier 2 ESL Input and Output

Click in cell and use pull-down boxes to make selection. Outputs in gray box below.

Tier 2 Scenario Toggles	
Contaminant:	Toluene
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based Levels:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Contamination Depth: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Soil

Enter site data (Optional; Date used for Specific Concerns Table T2-3)	
Soil Concentration (mg/kg) - dry weight:	0.01
Groundwater Concentration ($\mu\text{g/L}$):	14.00
Subslab/ Soil Gas Concentration ($\mu\text{g/m}^3$):	
Indoor Air Concentration ($\mu\text{g/m}^3$):	

Output Tier 2 ESLs:	
Soil (mg/kg):	9.3E+00
Groundwater ($\mu\text{g/L}$):	1.3E+02
Subslab/ Soil Gas ($\mu\text{g/m}^3$):	No ESL*
Indoor Air ($\mu\text{g/m}^3$):	1.3E+03

***Un-Intact or Unknown Slab Condition.
See ESL Users Guide Appendix B**

Table T2-2: ESL Details

Selected Site Scenario	
Selected Chemical:	Toluene
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI:	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Type for Direct Exposure:	Shallow Soil

Groundwater Screening Levels (µg/L)	
Table GW-1	Drinking Water MCL: 4.0E+01
	Tapwater-Direct Exposure Human Health Risk: 1.5E+02
	Nondrinking Water Exposure Risk: --
	Groundwater Direct Exposure Level: --
Table GW-2	Freshwater Ecotoxicity: 1.3E+02
	Saltwater Ecotoxicity: 2.5E+03
	Bioaccumulation for Seafood Ingestion Concerns: 2.0E+05
	Ecological Aquatic Habitat Goal Level: 1.3E+02
Table GW-3	Residential GW VI - Shallow Groundwater - Sand: 3.6E+03
	Com/Ind GW VI - Shallow Groundwater - Sand: 3.0E+04
	Residential GW VI - Deep Groundwater - Sand: 4.3E+03
	Residential GW VI - Deep Groundwater- Fine-Coarse: 1.0E+05
	Com/Ind GW VI - Deep Groundwater - Sand: 3.7E+04
	Com/Ind GW VI - Deep Groundwater - Fine-Coarse: --
	Groundwater Vapor Intrusion Level: 3.0E+04
Table GW-4	Groundwater Gross Contamination Level: 5.0E+04
Table GW-5	Drinking Water Taste and Odor Nuisance Value: 4.0E+01
	Nondrinking Odor Nuisance Value: 4.0E+02
	Groundwater Odor Nuisance Level: 4.0E+02
Final Groundwater ESL: 1.3E+02	

Soil Screening Levels (mg/kg)	
Table S-1	Residential Shallow Soil Exposure Risk: 9.7E+02
	Commercial or Industrial Shallow Soil Exposure Risk: 4.6E+03
	Construction Worker Any Soil Depth Exposure Risk: 4.1E+03
	Soil Direct Exposure Level: 4.1E+03
Table S-2	Leaching - Drinking Water Resource: 2.9E+00
	Leaching - Nondrinking Water Resource: 9.3E+00
	Soil Leaching Level: 9.3E+00
Table S-3	Soil Gross Contamination Level: 6.5E+02
Table S-4	Residential - Shallow Soil Exposure: 5.0E+02
	Commercial/Industrial - Shallow Soil Exposure: 1.0E+03
	Any Land Use - Deep Soil Exposure: 1.0E+03
	Soil Odor Nuisance Level: 1.0E+03
Final Soil ESL 9.3E+00	

Subslab/Soil Gas Screening Levels (µg/m ³)	
Table SG-1	Residential VI Exposure Risk: 1.6E+05
	Commercial or Industrial VI Exposure Risk: 1.3E+06
	Subslab/Soil Gas Vapor Intrusion Level: No ESL*
Table SG-2	Residential VI Odor Nuisance: 1.5E+07
	Commercial/Industrial VI Odor Nuisance: 3.0E+07
	Subslab/Soil Gas VI Odor Nuisance Level: No ESL*
Final Subslab/Soil Gas ESL: No ESL*	

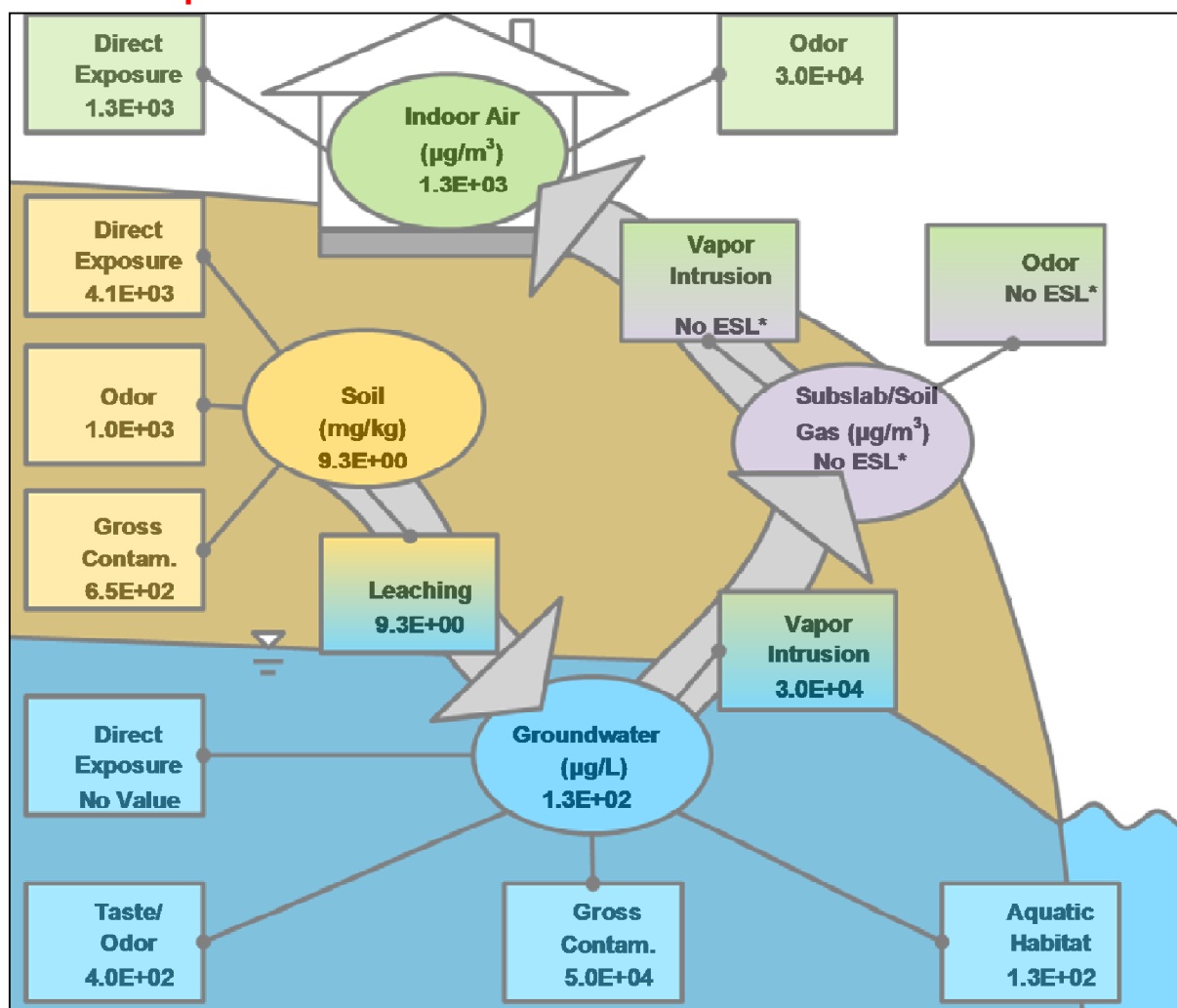
***Un-intact or Unknown Slab Condition - See ESL Users Guide Appendix B**

Indoor Air Screening Levels (µg/m ³)	
Table IA-1	Residential Direct Exposure Risk: 3.1E+02
	Commercial or Industrial Direct Exposure Risk: 1.3E+03
	Indoor Air Direct Exposure Level: 1.3E+03
Table IA-2	Indoor Air Odor Nuisance Level: 3.0E+04
Final Indoor Air ESL: 1.3E+03	

Environmental Screening Levels for Specific Concerns

Caused by Site Specific Levels of Toluene

Input site contaminant concentrations on Table T2-1.



Scenario Assumptions:

Commercial or Industrial
Shallow Soil
Nondrinking Water Resource
Fine to Coarse Scenario

Site Concentrations (Entered on Table T2-1):

Soil (mg/kg): 0.01
Groundwater ($\mu\text{g}/\text{L}$): 14.00



Environmental Screening Levels
San Francisco Bay Regional Water Quality Control Board



Table T2-1: Tier 2 ESL Input and Output

Click in cell and use pull-down boxes to make selection. Outputs in gray box below.

Tier 2 Scenario Toggles	
Contaminant:	Ethylbenzene
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based Levels:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Contamination Depth: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Soil

Enter site data (Optional; Date used for Specific Concerns Table T2-3)	
Soil Concentration (mg/kg) - dry weight:	0.03
Groundwater Concentration ($\mu\text{g/L}$):	120.00
Subslab/ Soil Gas Concentration ($\mu\text{g/m}^3$):	
Indoor Air Concentration ($\mu\text{g/m}^3$):	

Output Tier 2 ESLs:	
Soil (mg/kg):	1.4E+00
Groundwater ($\mu\text{g/L}$):	4.3E+01
Subslab/ Soil Gas ($\mu\text{g/m}^3$):	No ESL*
Indoor Air ($\mu\text{g/m}^3$):	4.9E+00

***Un-Intact or Unknown Slab Condition.
See ESL Users Guide Appendix B**

Table T2-2: ESL Details

Selected Site Scenario	
Selected Chemical:	Ethylbenzene
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI:	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Type for Direct Exposure:	Shallow Soil

Groundwater Screening Levels (µg/L)	
Table GW-1	Drinking Water MCL: 3.0E+01
	Tapwater-Direct Exposure Human Health Risk: 1.5E+00
	Nondrinking Water Exposure Risk: --
	Groundwater Direct Exposure Level: --
Table GW-2	Freshwater Ecotoxicity: 2.9E+02
	Saltwater Ecotoxicity: 4.3E+01
	Bioaccumulation for Seafood Ingestion Concerns: 2.9E+04
	Ecological Aquatic Habitat Goal Level: 4.3E+01
Table GW-3	Residential GW VI - Shallow Groundwater - Sand: 1.3E+01
	Com/Ind GW VI - Shallow Groundwater - Sand: 1.1E+02
	Residential GW VI - Deep Groundwater - Sand: 1.6E+01
	Residential GW VI - Deep Groundwater- Fine-Coarse: 3.7E+02
	Com/Ind GW VI - Deep Groundwater - Sand: 1.4E+02
	Com/Ind GW VI - Deep Groundwater - Fine-Coarse: 3.3E+03
	Groundwater Vapor Intrusion Level: 1.1E+02
Table GW-4	Groundwater Gross Contamination Level: 5.0E+04
Table GW-5	Drinking Water Taste and Odor Nuisance Value: 3.0E+01
	Nondrinking Odor Nuisance Value: 3.0E+02
	Groundwater Odor Nuisance Level: 3.0E+02
Final Groundwater ESL: 4.3E+01	

Soil Screening Levels (mg/kg)	
Table S-1	Residential Shallow Soil Exposure Risk: 5.1E+00
	Commercial or Industrial Shallow Soil Exposure Risk: 2.2E+01
	Construction Worker Any Soil Depth Exposure Risk: 4.8E+02
	Soil Direct Exposure Level: 2.2E+01
Table S-2	Leaching - Drinking Water Resource: 1.4E+00
	Leaching - Nondrinking Water Resource: 1.4E+00
	Soil Leaching Level: 1.4E+00
Table S-3	Soil Gross Contamination Level: 4.0E+02
Table S-4	Residential - Shallow Soil Exposure: 5.0E+02
	Commercial/Industrial - Shallow Soil Exposure: 1.0E+03
	Any Land Use - Deep Soil Exposure: 1.0E+03
	Soil Odor Nuisance Level: 1.0E+03
Final Soil ESL 1.4E+00	

Subslab/Soil Gas Screening Levels (µg/m ³)	
Table SG-1	Residential VI Exposure Risk: 5.6E+02
	Commercial or Industrial VI Exposure Risk: 4.9E+03
	Subslab/Soil Gas Vapor Intrusion Level: No ESL*
Table SG-2	Residential VI Odor Nuisance: 1.0E+06
	Commercial/Industrial VI Odor Nuisance: 2.0E+06
	Subslab/Soil Gas VI Odor Nuisance Level: No ESL*
Final Subslab/Soil Gas ESL: No ESL*	

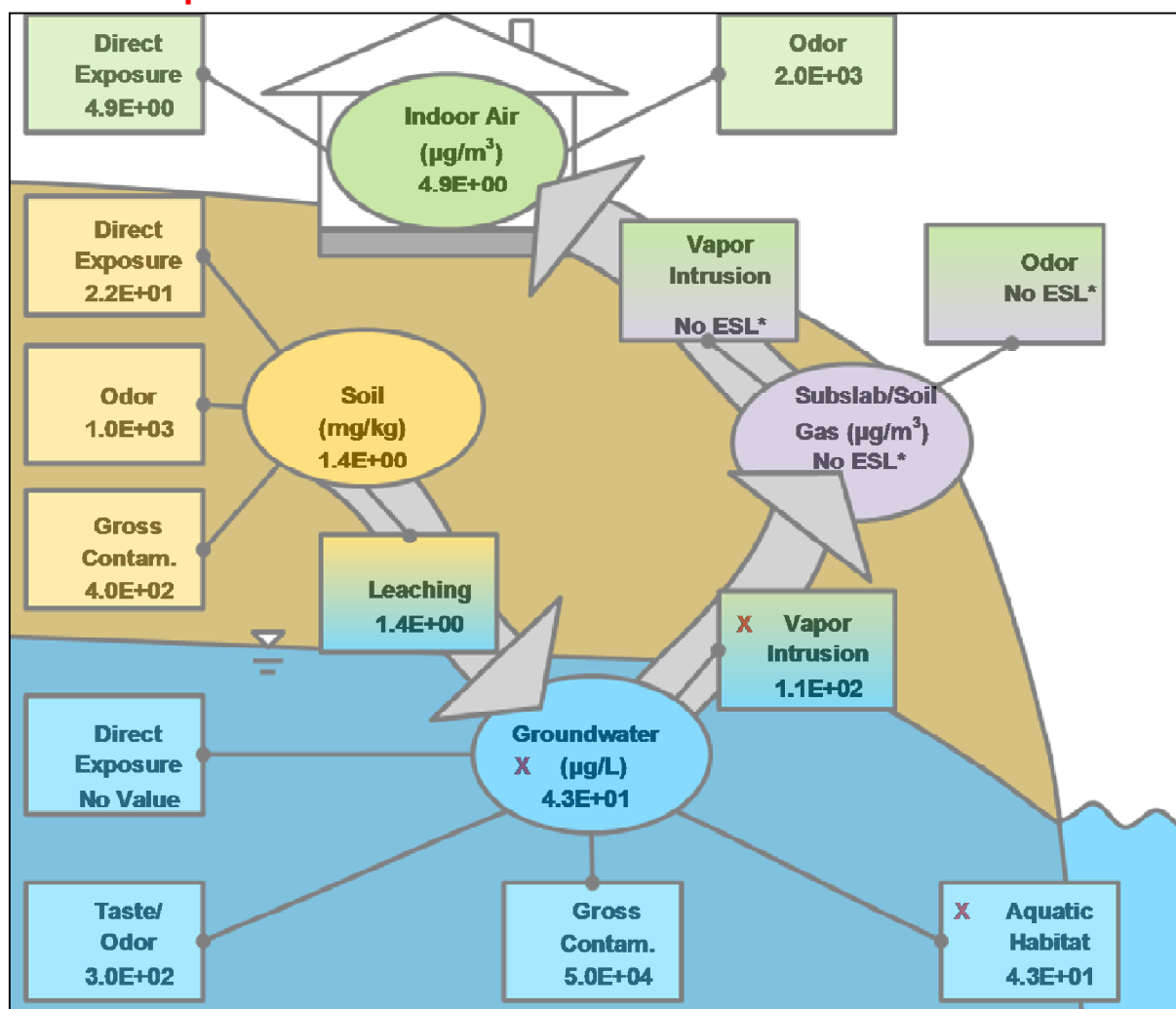
***Un-intact or Unknown Slab Condition - See ESL Users Guide Appendix B**

Indoor Air Screening Levels (µg/m ³)	
Table IA-1	Residential Direct Exposure Risk: 1.1E+00
	Commercial or Industrial Direct Exposure Risk: 4.9E+00
	Indoor Air Direct Exposure Level: 4.9E+00
Table IA-2	Indoor Air Odor Nuisance Level: 2.0E+03
Final Indoor Air ESL: 4.9E+00	

Environmental Screening Levels for Specific Concerns

Caused by Site Specific Levels of Ethylbenzene

Input site contaminant concentrations on Table T2-1.



Scenario Assumptions:

Commercial or Industrial
Shallow Soil
Nondrinking Water Resource
Fine to Coarse Scenario

Site Concentrations (Entered on Table T2-1):

Soil (mg/kg): 0.03
Groundwater ($\mu\text{g}/\text{L}$): 120.00



Environmental Screening Levels
San Francisco Bay Regional Water Quality Control Board



EDMUND G. BROWN JR.
GOVERNOR



MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Table T2-1: Tier 2 ESL Input and Output

Click in cell and use pull-down boxes to make selection. Outputs in gray box below.

Tier 2 Scenario Toggles	
Contaminant:	Xylenes
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based Levels:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Contamination Depth: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Soil

Enter site data (Optional; Date used for Specific Concerns Table T2-3)	
Soil Concentration (mg/kg) - dry weight:	0.11
Groundwater Concentration ($\mu\text{g/L}$):	230.00
Subslab/ Soil Gas Concentration ($\mu\text{g/m}^3$):	
Indoor Air Concentration ($\mu\text{g/m}^3$):	

Output Tier 2 ESLs:	
Soil (mg/kg):	1.1E+01
Groundwater ($\mu\text{g/L}$):	1.0E+02
Subslab/ Soil Gas ($\mu\text{g/m}^3$):	No ESL*
Indoor Air ($\mu\text{g/m}^3$):	4.4E+02

***Un-Intact or Unknown Slab Condition.
See ESL Users Guide Appendix B**

Table T2-2: ESL Details

Selected Site Scenario	
Selected Chemical:	Xylenes
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI:	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Type for Direct Exposure:	Shallow Soil

Groundwater Screening Levels (µg/L)	
Table GW-1	Drinking Water MCL: 2.0E+01
	Tapwater-Direct Exposure Human Health Risk: 1.9E+02
	Nondrinking Water Exposure Risk: --
	Groundwater Direct Exposure Level: --
Table GW-2	Freshwater Ecotoxicity: --
	Saltwater Ecotoxicity: 1.0E+02
	Bioaccumulation for Seafood Ingestion Concerns: --
	Ecological Aquatic Habitat Goal Level: 1.0E+02
Table GW-3	Residential GW VI - Shallow Groundwater - Sand: 1.3E+03
	Com/Ind GW VI - Shallow Groundwater - Sand: 1.1E+04
	Residential GW VI - Deep Groundwater - Sand: 1.6E+03
	Residential GW VI - Deep Groundwater- Fine-Coarse: 3.8E+04
	Com/Ind GW VI - Deep Groundwater - Sand: 1.3E+04
	Com/Ind GW VI - Deep Groundwater - Fine-Coarse: --
	Groundwater Vapor Intrusion Level: 1.1E+04
Table GW-4	Groundwater Gross Contamination Level: 5.0E+04
Table GW-5	Drinking Water Taste and Odor Nuisance Value: 2.0E+01
	Nondrinking Odor Nuisance Value: 5.3E+03
	Groundwater Odor Nuisance Level: 5.3E+03
Final Groundwater ESL: 1.0E+02	

Soil Screening Levels (mg/kg)	
Table S-1	Residential Shallow Soil Exposure Risk: 5.6E+02
	Commercial or Industrial Shallow Soil Exposure Risk: 2.4E+03
	Construction Worker Any Soil Depth Exposure Risk: 2.4E+03
	Soil Direct Exposure Level: 2.4E+03
Table S-2	Leaching - Drinking Water Resource: 2.3E+00
	Leaching - Nondrinking Water Resource: 1.1E+01
	Soil Leaching Level: 1.1E+01
Table S-3	Soil Gross Contamination Level: 4.2E+02
Table S-4	Residential - Shallow Soil Exposure: 5.0E+02
	Commercial/Industrial - Shallow Soil Exposure: 1.0E+03
	Any Land Use - Deep Soil Exposure: 1.0E+03
	Soil Odor Nuisance Level: 1.0E+03
Final Soil ESL 1.1E+01	

Subslab/Soil Gas Screening Levels (µg/m ³)	
Table SG-1	Residential VI Exposure Risk: 5.2E+04
	Commercial or Industrial VI Exposure Risk: 4.4E+05
	Subslab/Soil Gas Vapor Intrusion Level: No ESL*
Table SG-2	Residential VI Odor Nuisance: 2.2E+05
	Commercial/Industrial VI Odor Nuisance: 4.4E+05
	Subslab/Soil Gas VI Odor Nuisance Level: No ESL*
Final Subslab/Soil Gas ESL: No ESL*	

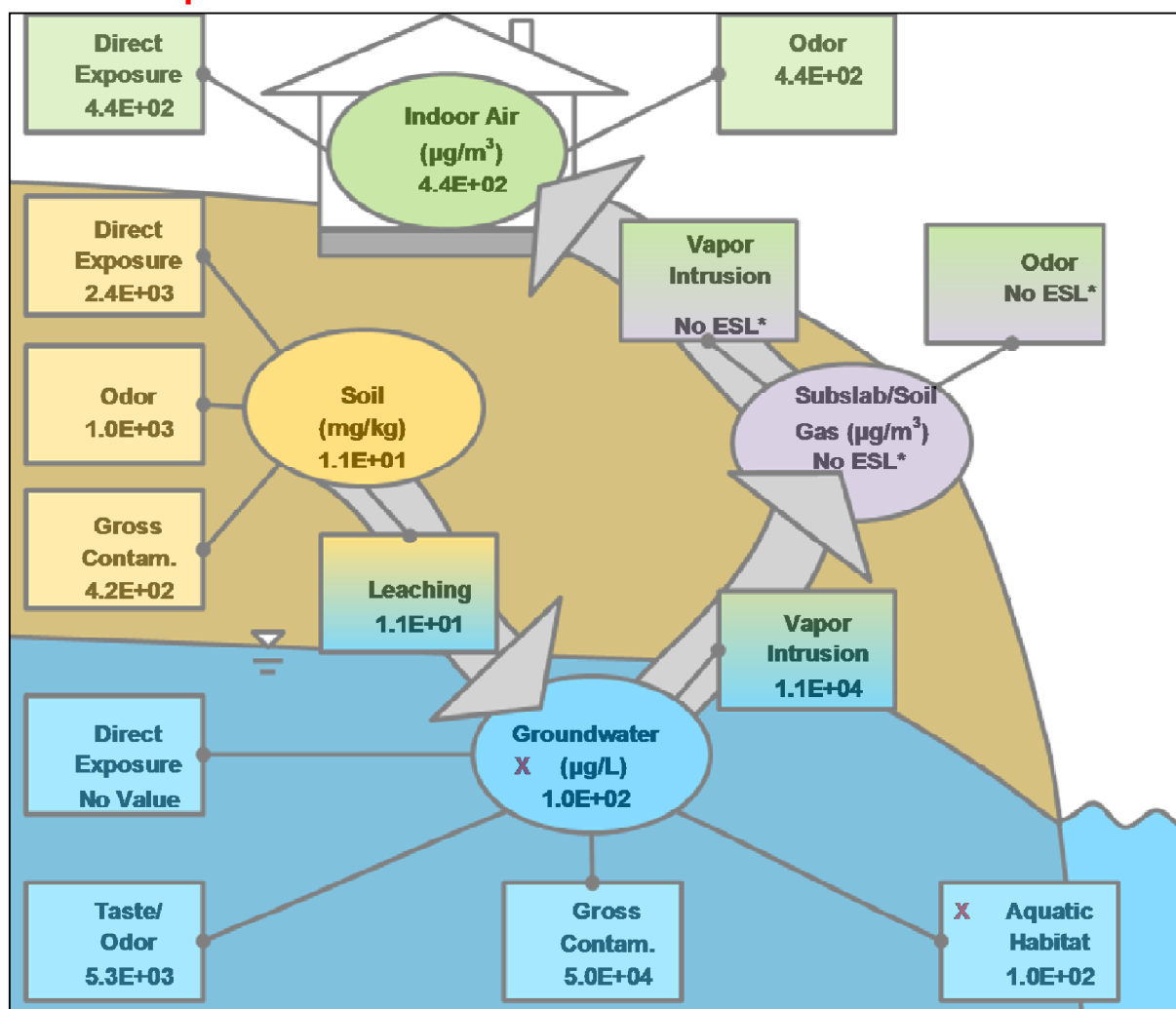
***Un-intact or Unknown Slab Condition - See ESL Users Guide Appendix B**

Indoor Air Screening Levels (µg/m ³)	
Table IA-1	Residential Direct Exposure Risk: 1.0E+02
	Commercial or Industrial Direct Exposure Risk: 4.4E+02
	Indoor Air Direct Exposure Level: 4.4E+02
Table IA-2	Indoor Air Odor Nuisance Level: 4.4E+02
Final Indoor Air ESL: 4.4E+02	

Environmental Screening Levels for Specific Concerns

Caused by Site Specific Levels of Xylenes

Input site contaminant concentrations on Table T2-1.



Scenario Assumptions:

Commercial or Industrial
Shallow Soil
Nondrinking Water Resource
Fine to Coarse Scenario

Site Concentrations (Entered on Table T2-1):

Soil (mg/kg): 0.11
Groundwater ($\mu\text{g}/\text{L}$): 230.00



Environmental Screening Levels
San Francisco Bay Regional Water Quality Control Board



Table T2-1: Tier 2 ESL Input and Output

Click in cell and use pull-down boxes to make selection. Outputs in gray box below.

Tier 2 Scenario Toggles	
Contaminant:	Naphthalene
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based Levels:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Contamination Depth: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Soil

Enter site data (Optional; Date used for Specific Concerns Table T2-3)	
Soil Concentration (mg/kg) - dry weight:	0.15
Groundwater Concentration ($\mu\text{g/L}$):	110.00
Subslab/ Soil Gas Concentration ($\mu\text{g/m}^3$):	
Indoor Air Concentration ($\mu\text{g/m}^3$):	

Output Tier 2 ESLs:	
Soil (mg/kg):	3.9E+00
Groundwater ($\mu\text{g/L}$):	2.4E+01
Subslab/ Soil Gas ($\mu\text{g/m}^3$):	No ESL*
Indoor Air ($\mu\text{g/m}^3$):	3.6E-01

***Un-Intact or Unknown Slab Condition.
See ESL Users Guide Appendix B**

Table T2-2: ESL Details

Selected Site Scenario	
Selected Chemical:	Naphthalene
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI:	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Type for Direct Exposure:	Shallow Soil

Groundwater Screening Levels (µg/L)		
Table GW-1	Drinking Water MCL:	1.7E-01
	Tapwater-Direct Exposure Human Health Risk:	1.7E-01
	Nondrinking Water Exposure Risk:	--
	Groundwater Direct Exposure Level:	--
Table GW-2	Freshwater Ecotoxicity:	2.4E+01
	Saltwater Ecotoxicity:	2.4E+02
	Bioaccumulation for Seafood Ingestion Concerns:	--
	Ecological Aquatic Habitat Goal Level:	2.4E+01
Table GW-3	Residential GW VI - Shallow Groundwater - Sand:	2.0E+01
	Com/Ind GW VI - Shallow Groundwater - Sand:	1.7E+02
	Residential GW VI - Deep Groundwater - Sand:	2.5E+01
	Residential GW VI - Deep Groundwater- Fine-Coarse:	1.8E+02
	Com/Ind GW VI - Deep Groundwater - Sand:	2.2E+02
	Com/Ind GW VI - Deep Groundwater - Fine-Coarse:	1.6E+03
	Groundwater Vapor Intrusion Level:	1.7E+02
Table GW-4	Groundwater Gross Contamination Level:	1.6E+04
Table GW-5	Drinking Water Taste and Odor Nuisance Value:	2.1E+01
	Nondrinking Odor Nuisance Value:	2.1E+02
	Groundwater Odor Nuisance Level:	2.1E+02
Final Groundwater ESL:		2.4E+01

Soil Screening Levels (mg/kg)		
Table S-1	Residential Shallow Soil Exposure Risk:	3.3E+00
	Commercial or Industrial Shallow Soil Exposure Risk:	1.4E+01
	Construction Worker Any Soil Depth Exposure Risk:	3.5E+02
	Soil Direct Exposure Level:	1.4E+01
Table S-2	Leaching - Drinking Water Resource:	3.3E-02
	Leaching - Nondrinking Water Resource:	3.9E+00
	Soil Leaching Level:	3.9E+00
Table S-3	Soil Gross Contamination Level:	2.2E+02
Table S-4	Residential - Shallow Soil Exposure:	5.0E+02
	Commercial/Industrial - Shallow Soil Exposure:	1.0E+03
	Any Land Use - Deep Soil Exposure:	1.0E+03
	Soil Odor Nuisance Level:	1.0E+03
Final Soil ESL		3.9E+00

Subslab/Soil Gas Screening Levels (µg/m ³)		
Table SG-1	Residential VI Exposure Risk:	4.1E+01
	Commercial or Industrial VI Exposure Risk:	3.6E+02
	Subslab/Soil Gas Vapor Intrusion Level:	No ESL*
Table SG-2	Residential VI Odor Nuisance:	2.2E+05
	Commercial/Industrial VI Odor Nuisance:	4.4E+05
	Subslab/Soil Gas VI Odor Nuisance Level:	No ESL*
Final Subslab/Soil Gas ESL:		No ESL*

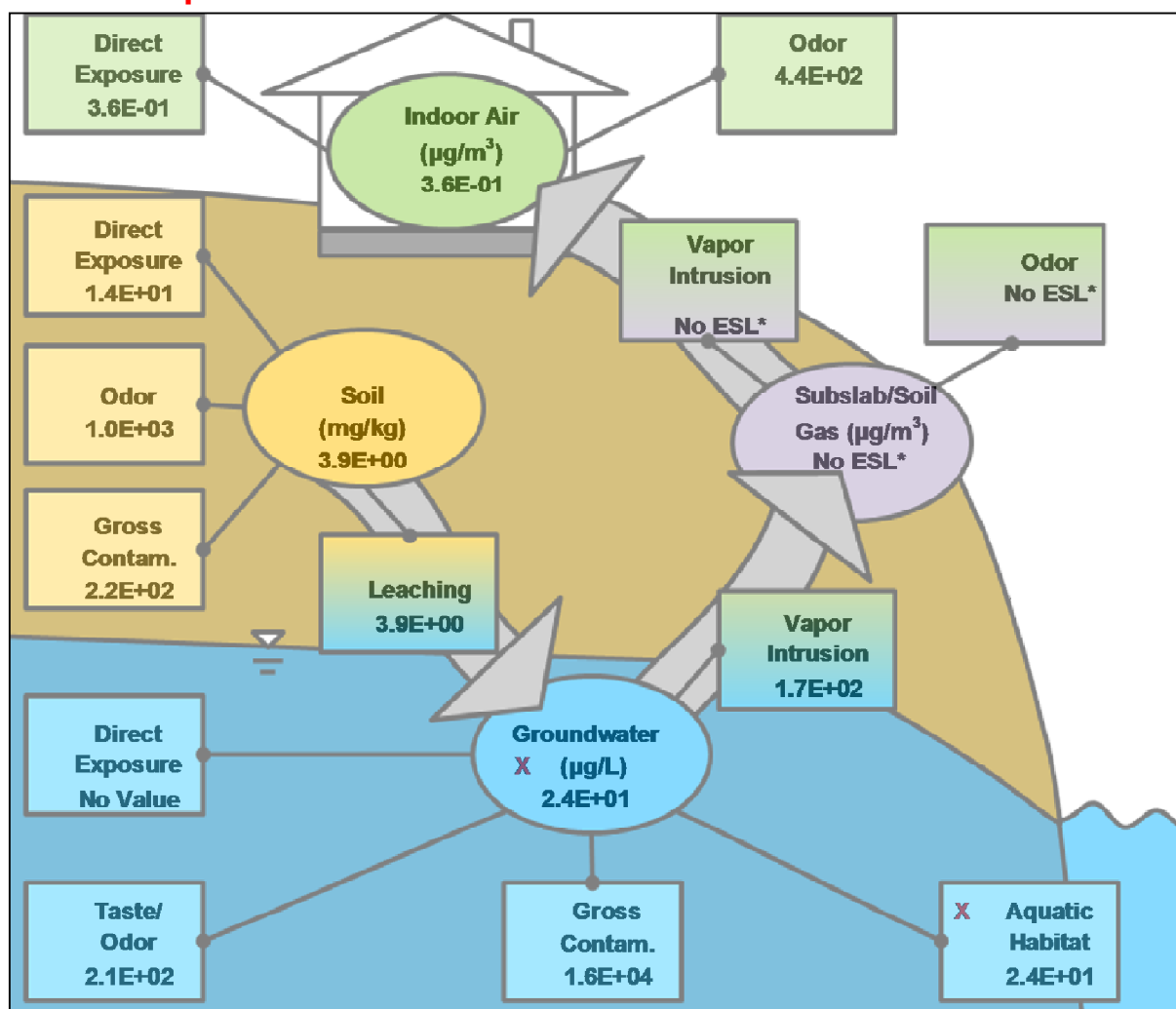
***Un-intact or Unknown Slab Condition - See ESL Users Guide Appendix B**

Indoor Air Screening Levels (µg/m ³)		
Table IA-1	Residential Direct Exposure Risk:	8.3E-02
	Commercial or Industrial Direct Exposure Risk:	3.6E-01
	Indoor Air Direct Exposure Level:	3.6E-01
Table IA-2	Indoor Air Odor Nuisance Level:	4.4E+02
Final Indoor Air ESL:		3.6E-01

Environmental Screening Levels for Specific Concerns

Caused by Site Specific Levels of Naphthalene

Input site contaminant concentrations on Table T2-1.



Scenario Assumptions:

Commercial or Industrial
Shallow Soil
Nondrinking Water Resource
Fine to Coarse Scenario

Site Concentrations (Entered on Table T2-1):

Soil (mg/kg): 0.15
Groundwater ($\mu\text{g}/\text{L}$): 110.00



Environmental Screening Levels
San Francisco Bay Regional Water Quality Control Board



Table T2-1: Tier 2 ESL Input and Output

Click in cell and use pull-down boxes to make selection. Outputs in gray box below.

Tier 2 Scenario Toggles	
Contaminant:	Methyl ethyl ketone
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based Levels:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Contamination Depth: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Soil

Enter site data (Optional; Date used for Specific Concerns Table T2-3)	
Soil Concentration (mg/kg) - dry weight:	0.03
Groundwater Concentration ($\mu\text{g/L}$):	0.00
Subslab/ Soil Gas Concentration ($\mu\text{g/m}^3$):	
Indoor Air Concentration ($\mu\text{g/m}^3$):	

Output Tier 2 ESLs:	
Soil (mg/kg):	1.3E+01
Groundwater ($\mu\text{g/L}$):	1.4E+04
Subslab/ Soil Gas ($\mu\text{g/m}^3$):	No ESL*
Indoor Air ($\mu\text{g/m}^3$):	2.2E+04

***Un-Intact or Unknown Slab Condition.
See ESL Users Guide Appendix B**

Table T2-2: ESL Details

Selected Site Scenario	
Selected Chemical:	Methyl ethyl ketone
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI:	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Type for Direct Exposure:	Shallow Soil

Groundwater Screening Levels (µg/L)	
Table GW-1	Drinking Water MCL: 5.6E+03
	Tapwater-Direct Exposure Human Health Risk: 5.6E+03
	Nondrinking Water Exposure Risk: --
	Groundwater Direct Exposure Level: --
Table GW-2	Freshwater Ecotoxicity: 1.4E+04
	Saltwater Ecotoxicity: --
	Bioaccumulation for Seafood Ingestion Concerns: --
	Ecological Aquatic Habitat Goal Level: 1.4E+04
Table GW-3	Residential GW VI - Shallow Groundwater - Sand: 4.3E+06
	Com/Ind GW VI - Shallow Groundwater - Sand: 3.6E+07
	Residential GW VI - Deep Groundwater - Sand: 5.5E+06
	Residential GW VI - Deep Groundwater- Fine-Coarse: 2.2E+07
	Com/Ind GW VI - Deep Groundwater - Sand: 4.6E+07
	Com/Ind GW VI - Deep Groundwater - Fine-Coarse: 1.8E+08
	Groundwater Vapor Intrusion Level: 3.6E+07
Table GW-4	Groundwater Gross Contamination Level: 5.0E+04
Table GW-5	Drinking Water Taste and Odor Nuisance Value: 8.4E+03
	Nondrinking Odor Nuisance Value: 8.4E+04
	Groundwater Odor Nuisance Level: 8.4E+04
Final Groundwater ESL: 1.4E+04	

Soil Screening Levels (mg/kg)	
Table S-1	Residential Shallow Soil Exposure Risk: 3.1E+04
	Commercial or Industrial Shallow Soil Exposure Risk: 2.5E+05
	Construction Worker Any Soil Depth Exposure Risk: 1.4E+05
	Soil Direct Exposure Level: 1.4E+05
Table S-2	Leaching - Drinking Water Resource: 5.1E+00
	Leaching - Nondrinking Water Resource: 1.3E+01
	Soil Leaching Level: 1.3E+01
Table S-3	Soil Gross Contamination Level: 3.4E+04
Table S-4	Residential - Shallow Soil Exposure: 5.0E+02
	Commercial/Industrial - Shallow Soil Exposure: 1.0E+03
	Any Land Use - Deep Soil Exposure: 1.0E+03
	Soil Odor Nuisance Level: 1.0E+03
Final Soil ESL: 1.3E+01	

Subslab/Soil Gas Screening Levels (µg/m ³)	
Table SG-1	Residential VI Exposure Risk: 2.6E+06
	Commercial or Industrial VI Exposure Risk: 2.2E+07
	Subslab/Soil Gas Vapor Intrusion Level: No ESL*
Table SG-2	Residential VI Odor Nuisance: 1.6E+07
	Commercial/Industrial VI Odor Nuisance: 3.2E+07
	Subslab/Soil Gas VI Odor Nuisance Level: No ESL*
Final Subslab/Soil Gas ESL: No ESL*	

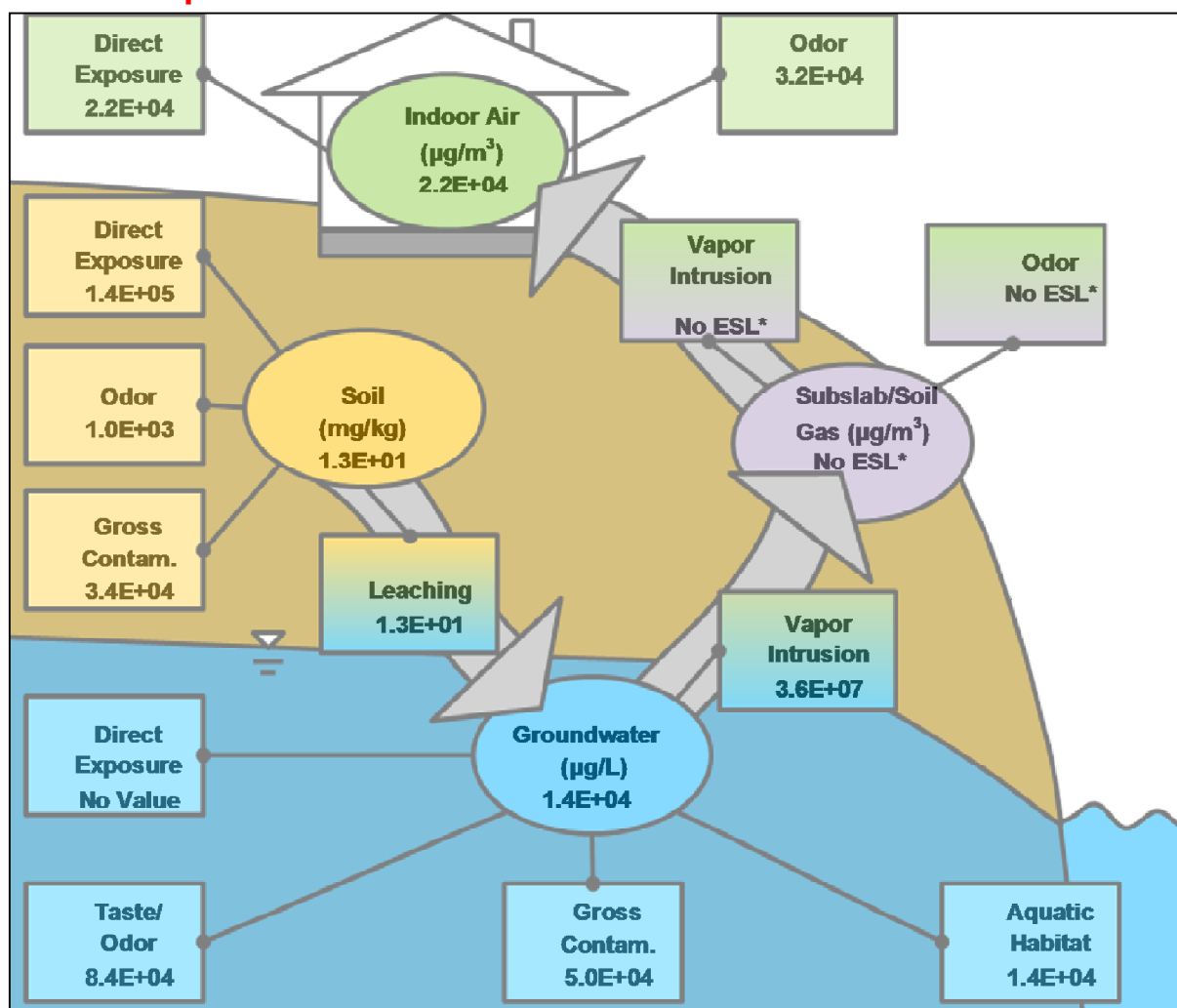
***Un-intact or Unknown Slab Condition - See ESL Users Guide Appendix B**

Indoor Air Screening Levels (µg/m ³)	
Table IA-1	Residential Direct Exposure Risk: 5.2E+03
	Commercial or Industrial Direct Exposure Risk: 2.2E+04
	Indoor Air Direct Exposure Level: 2.2E+04
Table IA-2	Indoor Air Odor Nuisance Level: 3.2E+04
Final Indoor Air ESL: 2.2E+04	

Environmental Screening Levels for Specific Concerns

Caused by Site Specific Levels of Methyl ethyl ketone

Input site contaminant concentrations on Table T2-1.



Scenario Assumptions:

Commercial or Industrial
Shallow Soil
Nondrinking Water Resource
Fine to Coarse Scenario

Site Concentrations (Entered on Table T2-1):

Soil (mg/kg): 0.03



Environmental Screening Levels
San Francisco Bay Regional Water Quality Control Board



Table T2-1: Tier 2 ESL Input and Output

Click in cell and use pull-down boxes to make selection. Outputs in gray box below.

Tier 2 Scenario Toggles	
Contaminant:	Methyl isobutyl ketone
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority over Risk-Based Levels:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Contamination Depth: (Shallow $\leq$ 10ft bgs < Deep)	Shallow Soil

Enter site data (Optional; Date used for Specific Concerns Table T2-3)	
Soil Concentration (mg/kg) - dry weight:	0.06
Groundwater Concentration ($\mu\text{g/L}$):	0.00
Subslab/ Soil Gas Concentration ($\mu\text{g/m}^3$):	
Indoor Air Concentration ($\mu\text{g/m}^3$):	

Output Tier 2 ESLs:	
Soil (mg/kg):	3.9E+00
Groundwater ($\mu\text{g/L}$):	1.7E+02
Subslab/ Soil Gas ($\mu\text{g/m}^3$):	No ESL*
Indoor Air ($\mu\text{g/m}^3$):	4.2E+02

***Un-Intact or Unknown Slab Condition.
See ESL Users Guide Appendix B**

Table T2-2: ESL Details

Selected Site Scenario	
Selected Chemical:	Methyl isobutyl ketone
Land Use:	Commercial or Industrial
Groundwater Use:	Nondrinking Water Resource
MCL Priority vs Risk-Based:	Yes
Intact Building Slab:	No -or- Unknown
Groundwater Depth for GW VI:	Shallow Groundwater
Soil Type for GW VI:	Fine to Coarse Scenario
Soil Type for Direct Exposure:	Shallow Soil

Groundwater Screening Levels (µg/L)	
Table GW-1	Drinking Water MCL: 1.2E+02
	Tapwater-Direct Exposure Human Health Risk: 1.2E+02
	Nondrinking Water Exposure Risk: --
	Groundwater Direct Exposure Level: --
Table GW-2	Freshwater Ecotoxicity: 1.7E+02
	Saltwater Ecotoxicity: --
	Bioaccumulation for Seafood Ingestion Concerns: --
	Ecological Aquatic Habitat Goal Level: 1.7E+02
Table GW-3	Residential GW VI - Shallow Groundwater - Sand: 1.6E+06
	Com/Ind GW VI - Shallow Groundwater - Sand: 1.3E+07
	Residential GW VI - Deep Groundwater - Sand: 2.0E+06
	Residential GW VI - Deep Groundwater- Fine-Coarse: 1.1E+07
	Com/Ind GW VI - Deep Groundwater - Sand: 1.7E+07
	Com/Ind GW VI - Deep Groundwater - Fine-Coarse: --
	Groundwater Vapor Intrusion Level: 1.3E+07
Table GW-4	Groundwater Gross Contamination Level: 5.0E+04
Table GW-5	Drinking Water Taste and Odor Nuisance Value: 1.3E+03
	Nondrinking Odor Nuisance Value: 1.3E+04
	Groundwater Odor Nuisance Level: 1.3E+04
Final Groundwater ESL: 1.7E+02	

Soil Screening Levels (mg/kg)	
Table S-1	Residential Shallow Soil Exposure Risk: 5.8E+03
	Commercial or Industrial Shallow Soil Exposure Risk: 7.1E+04
	Construction Worker Any Soil Depth Exposure Risk: 2.6E+04
	Soil Direct Exposure Level: 2.6E+04
Table S-2	Leaching - Drinking Water Resource: 2.8E+00
	Leaching - Nondrinking Water Resource: 3.9E+00
	Soil Leaching Level: 3.9E+00
Table S-3	Soil Gross Contamination Level: 1.7E+04
Table S-4	Residential - Shallow Soil Exposure: 1.0E+02
	Commercial/Industrial - Shallow Soil Exposure: 5.0E+02
	Any Land Use - Deep Soil Exposure: 5.0E+02
	Soil Odor Nuisance Level: 5.0E+02
Final Soil ESL 3.9E+00	

Subslab/Soil Gas Screening Levels (µg/m ³)	
Table SG-1	Residential VI Exposure Risk: 1.6E+06
	Commercial or Industrial VI Exposure Risk: 1.3E+07
	Subslab/Soil Gas Vapor Intrusion Level: No ESL*
Table SG-2	Residential VI Odor Nuisance: 2.1E+05
	Commercial/Industrial VI Odor Nuisance: 4.2E+05
	Subslab/Soil Gas VI Odor Nuisance Level: No ESL*
Final Subslab/Soil Gas ESL: No ESL*	

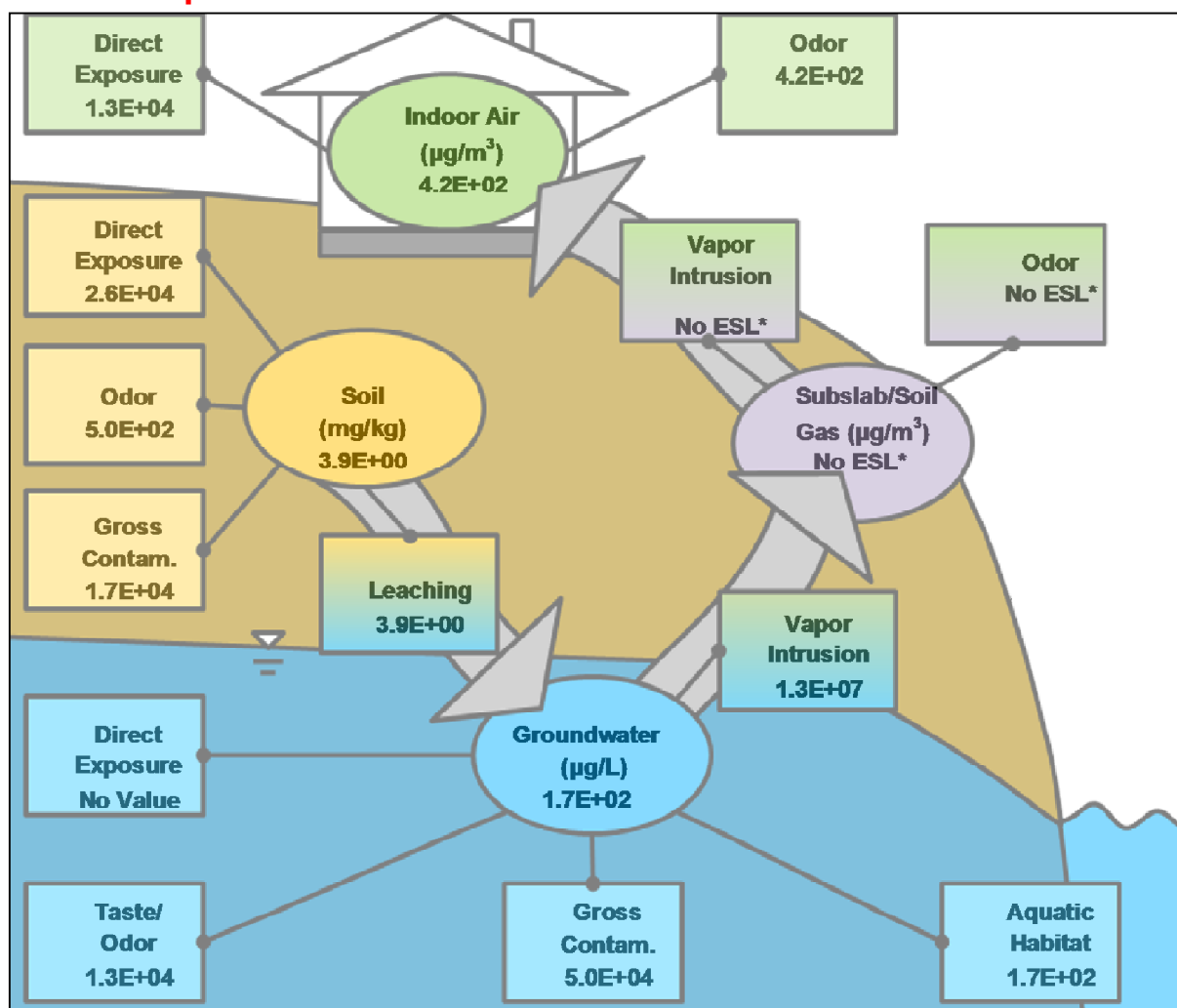
***Un-intact or Unknown Slab Condition - See ESL Users Guide Appendix B**

Indoor Air Screening Levels (µg/m ³)	
Table IA-1	Residential Direct Exposure Risk: 3.1E+03
	Commercial or Industrial Direct Exposure Risk: 1.3E+04
	Indoor Air Direct Exposure Level: 1.3E+04
Table IA-2	Indoor Air Odor Nuisance Level: 4.2E+02
Final Indoor Air ESL: 4.2E+02	

Environmental Screening Levels for Specific Concerns

Caused by Site Specific Levels of Methyl isobutyl ketone

Input site contaminant concentrations on Table T2-1.



Scenario Assumptions:

Commercial or Industrial
Shallow Soil
Nondrinking Water Resource
Fine to Coarse Scenario

Site Concentrations (Entered on Table T2-1):

Soil (mg/kg): 0.06

APPENDIX C

August 11, 2016

Mr. Kevin Singh
Bay Area Concrete Recycling
P.O. Box 23424
Oakland, CA 94623

Re: Supplemental Geotechnical Investigating and Recommendations
Bay Area Concrete Recycling Facility, Hayward, California
SFB Proposal No.: 635-1

Mr. Singh:

In accordance with your request, Stevens, Ferrone & Bailey Engineering Company, Inc. (SFB) has performed a supplemental geotechnical investigation for the Bay Area Recycling Facility project in Hayward, California. Previously, SFB performed a geotechnical investigation for the site and the results were presented in our report dated May 16, 2014.

According to the project plans (dated November 14, 2014) and information provided by Milani & Associates, it is our understanding that two additional parcels to the east and northwest of our previously investigated area will be added to the project. In addition, 12-foot high masonry screen walls and associated improvements (fills, roadways, and sidewalks) are proposed along the site northern boundary bordering Depot Road. The proposed retaining wall locations are shown on the attached Figure 1. Portions of the wall will retain new soil fill and other improvements. New roadways and sidewalks will be included in the project. The permeability of the subsurface materials also needs to be assessed to evaluate the potential for contaminant migration.

1.0 Supplemental Geotechnical Investigation

On July 19, 2016, SFB performed supplemental field reconnaissance and subsurface exploration at the site and the proposed screen wall locations. At the time of our investigation and as shown on Figure 1, the site was bounded by Depot Road on the north, a drainage channel on the west, a stormwater detention pond of the Russell City Energy Center power plant on the south, and the power plant entry on the east. The site was parallelogram in shape, generally level, and had a plan area of about 6.6 acres with maximum dimensions of about 550 feet by 520 feet.

Most of the site surface was covered with gravel except for an asphalt concrete paved parking lot located to the north end of the site. Some large diameter trees were located to the south of the parking lot.

The northwestern quadrant of the site was used as an auto dismantler yard and the eastern one-third of the site was used as a wooden pallet stockpiling and recycling area. The rest of the site was used for truck parking. Several metal shed buildings were located on site. A large pile of concrete debris was observed at the southeastern corner of the site.

It is our understanding that a 30-foot wide East Bay Dischargers Authority (EBDA) easement exists within and along the western site boundary. According to Mr. David Stoops of EBDA, a 60-inch diameter pipe is located within the easement and the invert is at a depth of about 15 feet below ground surface.

Eight supplemental exploratory borings (B-1 through B-8) were drilled on July 19, 2016 to a maximum depth of about 16-1/2 feet. Soil samples were retrieved from the borings for laboratory testing and engineering evaluations. Previously, four borings were drilled on May 5, 2014 to a maximum depth of about 31-1/2 feet. The approximate locations of all the borings are shown on the Site Plan, Figure 1. Logs of SFB's borings and details regarding SFB's field investigation are included in Appendix A. The results of SFB's laboratory tests are discussed in Appendix B. It should be noted that changes in the surface and subsurface conditions can occur over time as a result of either natural processes or human activity and may affect the validity of the conclusions and recommendations in this report. Our attached boring logs and related information depict location specific subsurface conditions encountered during our field investigation. The approximate location of our boring was determined by using landmark references and should be considered accurate only to the degree implied by the method used.

The results of our borings generally indicate the site is underlain by gravels and clayey or sandy fills that extend to depths of about 2 to 4 feet below the ground surface. These fills are heterogeneous, and potentially weak and compressible if they were not placed and compacted in accordance with acceptable engineering standards. Debris and garbage was also found within the fills in some areas. Below the surficial fills, stiff to very stiff, over-consolidated, native clays (bay deposits) were encountered that extended to depths of about 8 to 13 feet. Underlying this clay layer, stiff to very stiff alluvial clays were encountered that extended to the maximum depth explored of about 31-1/2 feet. The surface gravel fills are generally non-expansive. The underlying more clayey surface fills and soils have a high to very high plasticity and high to critical expansion potential.

Groundwater was encountered in some of our borings at depths of about 7 to 9 feet (estimated elevations of about 0 to 2 feet; datum unknown) during exploration. SFB's borings were

backfilled with lean cement grout in accordance with Alameda County Public Work Agency requirements prior to leaving the site. Historically, ground water in the vicinity of the site has been measured at a depth less than 5 feet¹. It should be noted that our borings might not have been left open for a sufficient period of time to establish equilibrium ground water conditions. In addition, fluctuations in the ground water level could occur due to change in seasons, variations in rainfall, and other factors.

2.0 Supplemental Recommendations

Based on the results of our supplemental investigation at the site, we conclude that the drainage, earthwork, foundation, and pavement recommendations provided in our May 16, 2014 report are applicable to the added parcels. Our additional recommendations for screen wall designs, storm water runoff structures, and site subsurface material permeability calculations are presented below.

2.1 Screen Walls

Where walls retain soil, they must be designed to resist both lateral earth pressures and any additional lateral loads caused by surcharging such as building and roadway loads. Where concrete or masonry walls are used to retain soil, we recommend unrestrained walls (walls free to deflect and disconnected from other structures) be designed to resist an equivalent fluid pressure of 50 pounds per cubic foot (pcf). This assumes a level backfill. Restrained walls (walls restrained from deflection) should be designed to resist an equivalent fluid pressure of 50 pounds per cubic foot plus a uniform pressure of $10H$ pounds per square foot, where H is the height of the wall in feet. Walls with inclined backfill should be designed for an additional equivalent fluid pressure of 1 pound per cubic foot for every 1 degree of slope inclination. Walls subjected to surcharge loads should be designed for an additional uniform lateral pressure equal to one-third and one-half the anticipated surcharge load for unrestrained and restrained walls, respectively. These lateral pressures depend upon the moisture content of the retained soils to be constant over time; if the moisture content of the retained soils will fluctuate or increase compared to the moisture content at time of construction, then SFB should be consulted and provide written modifications to this design criteria.

For retaining walls that need to resist earthquake induced lateral loads from nearby foundations, walls that are to be designed to resist earthquake loads, and any retaining walls that are higher than 6 feet, we recommend the walls also be designed to resist a triangular pressure distribution equal to an equivalent fluid pressure of 50 pounds per cubic foot based on the ground

¹State of California, 2003, *Seismic Hazard Zone Report of the San Leandro 7.5-Minute Quadrangle, Alameda County, California*, CGS Seismic Hazard Zone Report 078.

acceleration from a design basis earthquake. This seismic induced earth pressure is in addition to the pressures noted above. Due to the transient nature of the seismic loading, a factor of safety of at least 1.1 can be used in the design of the walls when they resist seismic lateral loads. Some movement of the walls may occur during moderate to strong earthquake shaking and may result in distress as is typical for all structures subjected to earthquake shaking.

The recommended lateral pressures assume walls are fully-back drained to prevent the build-up of hydrostatic pressures. This can be accomplished by using $\frac{1}{2}$ to $\frac{3}{4}$ inch crushed, uniformly graded gravel entirely wrapped in filter fabric such as Mirafi 140N or equal (an overlap of at least 12 inches should be provided at all fabric joints). The gravel and fabric should be at least 8 inches wide and extend from the base of the wall to within 12 inches of the finished grade at the top (Caltrans Class 2 permeable material (Section 68) may be used in lieu of gravel and filter fabric). A 4-inch diameter, perforated pipe should be installed at the base and centered within the gravel. The perforated pipe should be connected to a solid collector pipe that transmits the water directly to a storm drain, drainage inlet, or onto pavement. If weep holes are used in the wall, the perforated pipe within the gravel is not necessary provided the weep holes are kept free of animals and debris, are located no higher than approximately 6 inches from the lowest adjacent grade, and are able to function properly. As an alternative to using gravel, drainage panels (such as AWD SITEDRAIN Sheet 94 for walls or equal) may be used behind the walls in conjunction with perforated pipe (connected to solid collector pipe), weep holes, or strip drains (such as SITEDRAIN Strip 6000 or equal). If used, the drainage panels can be spaced on-center at approximately 2 times the panel width.

If heavy compaction equipment is used behind the walls, the walls should be appropriately designed to withstand loads exerted by the heavy equipment and/or temporarily braced. Fill placed behind walls should conform to the recommendations provided in **Section 4.1.4, Fill Material** and **Section 4.1.5, Compaction** of our previous May 16, 2014 report.

Screen walls can be supported on drilled, cast-in-place, straight shaft friction piers that develop their load carrying capacity in the materials underlying the site. The piers should have a minimum diameter of 12 inches and a center-to-center spacing of at least three times the shaft diameter. We recommend that piers be at least 8 feet long. The pier reinforcing should be based on structural requirements but in no case should less than two #4 bars for the entire length of the piers be used.

The actual design depth of the piers should be determined using an allowable skin friction of 500 pounds per square foot (psf) for dead plus live loads, with a one-third increase for all loads including wind or seismic. Seventy percent of the skin friction value can be used to resist uplift. Lateral load resistance can be developed in passive resistance for pier foundations. A passive

resistance equal to an equivalent fluid weighing 350 pounds per cubic foot acting against twice the projected diameter of pier shafts can be used. The upper three feet of pier embedment should be neglected in the vertical and passive resistance design as measured from finished grade. The portion of the pier shaft located within 10 feet (as measured laterally) of the nearest slope face (or bio-swale side wall) should also be ignored in the design.

We recommend the pier foundations be located outside of (or beyond) a 1:1 (horizontal to vertical) plane projected upward from the base of any wall or utility trench, or the portion of a pier located within this zone should be ignored in the design of the pier.

The bottoms of the pier excavations should be relatively dry and free of all loose cuttings or slough prior to placing reinforcing steel and concrete. Any accumulated water in pier excavations should be removed prior to placing concrete. We recommend that the excavation of all piers be performed under the direct observation of SFB to confirm that the pier foundations are founded in suitable materials and constructed in accordance with the recommendations presented herein. Preliminarily, we recommend concrete pours of pier excavations be performed within 24 hours of excavation and prior to any rainstorms. Where caving or high groundwater conditions exist, additional measures such as using casing, tremie methods, and pouring concrete immediately after excavating may be necessary. SFB should be consulted on the need for additional measures for pier construction as needed during construction.

2.2 Storm Water Runoff Structures

To satisfy local and state permit requirements, most new development projects must control pollutant sources and reduce, detain, retain, and treat specified amounts of storm water runoff. The types of improvements that are designed to accomplish these goals are known as Post-Construction Requirements (PCR's) and/or Low Impact Development (LID's). The intent of these types of improvements is to conserve and incorporate on-site natural features, together with constructed hydrologic controls, to more closely mimic pre-development hydrology and watershed processes.

To aid in the Civil Engineering design and analyses of appropriate treatment facilities, we recommend the onsite soils be categorized as Hydrologic Soil Group D². Groundwater was encountered in some of our borings at depths of about 7 to 9 feet (Estimated elevations of about 0 to 2 feet; datum unknown) during subsurface exploration.

²U.S. Department of Agriculture, Natural Resources Conservation Service, *National Engineering Handbook Part 630, Chapter 7, Hydrologic Soil Groups*, updated January 2009.

We recommend PCR/LID improvements that are designed to detain or retain water such as bio-swales, porous pavement structures, and water detention basins, be lined with a relatively impermeable membrane in order to reduce water seepage and the potential for damage to other infrastructure improvements (such as pavements, foundations, and walkways) due to soil heave. We recommend a relatively impermeable membrane such as STEGO Wrap 15-mil or equivalent be installed below and along the sides of these facilities that direct the collected water into subdrain pipes. The membrane should be lapped and sealed in accordance with the manufacture's specifications, including taping joints where pipes penetrate the membrane.

The soil filter materials within basins and swales will consolidate over time causing long-term ground surface settlement. Additional filling within the basins and swales over time may be needed to maintain design surface elevations. The soil filter materials and associated compaction requirements should be specified by the Civil Engineer and shown in detail on the grading and improvement plans.

Sidewalls of earthen swales and basins steeper than 2:1 (horizontal to vertical) will experience downward and lateral movements that can cause significant ground surface movements. The magnitude and rate of movement depends upon the swale and basin backfill material type and compaction. To reduce the potential for damaging movements, we recommend 2:1 sidewall slopes be used or the slopes be appropriately restrained. SFB should be consulted to evaluate the need for sidewall restraint when swales or basins are planned.

Where swales and basins are located adjacent to improvements (such as foundations, pavements, curbs, driveways, and sidewalks), the improvements will be susceptible to settlement and lateral movements. To reduce the potential for vertical and lateral movement of the improvements, we recommend either the improvements be setback beyond a 1:1 (horizontal to vertical) plane projected upward from the bottom of the swale/basin or lateral restraint (such as deepened curbs or walls) be provided that is designed to resist the soil's lateral pressures. In order to resist the lateral pressures, the lateral restraint will need to extend below the bottom of the swale/basin and should be engineered. Where foundations are located near swales or basins, we recommend the foundations be extended below the projected 1:1 plane projected upward from the bottom of the swale or basin.

2.3 Permeability of Subsurface Materials

The results of our field explorations generally indicate the site is underlain by gravels and clayey or sandy fills that extend to depths of about 2 to 4 feet below ground surface. These fills are heterogeneous and have various degrees of compaction and composition. We estimate the coefficient of permeability of these in-situ fill materials may vary from 1×10^{-3} to 1×10^{-7} cm/sec.

Below the surficial fills, stiff to very stiff, the over-consolidated bay deposited clays and alluvial clays are estimated to have a coefficient of permeability of less than 1×10^{-7} cm/sec, and are generally considered as practically impervious.

Opinions, conclusions and recommendations provided in this letter are meant to supplement our previous reports; all previous conditions and limitations apply. If you have any questions or need additional information, please call our office.

Sincerely,

Stevens, Ferrone & Bailey Engineering Company, Inc.



Taiming Chen, P.E., G.E.
Civil/Geotechnical Engineer



Ken Ferrone, P.E., G.E., C.E.G.
Civil/Geotechnical Engineer
Certified Engineering Geologist

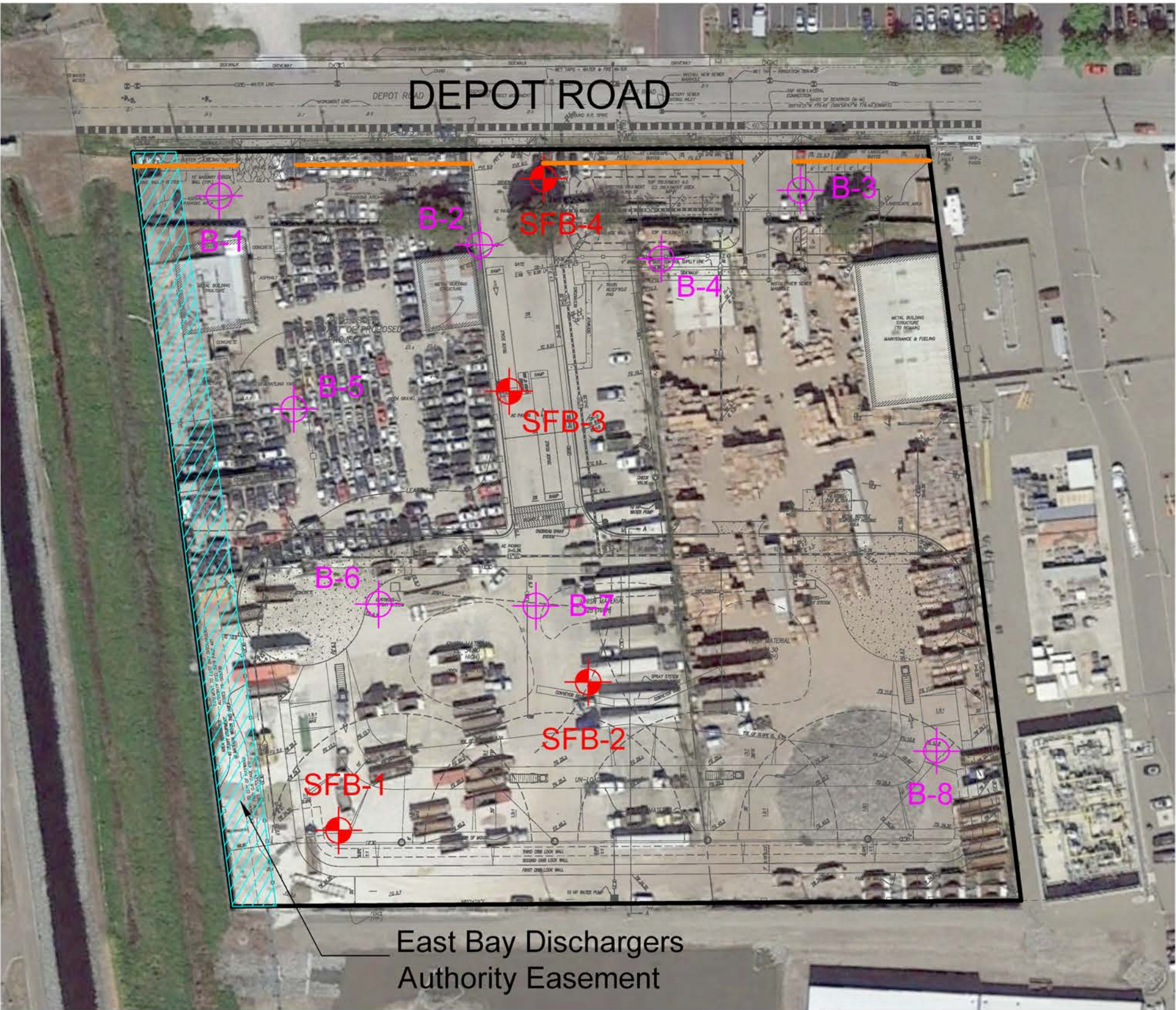


TC/KCF:lc

Attachments: Figure 1 & Appendices A & B

Copies: Addressee (1 by email)

FIGURE



KEY

- B-8 APPROXIMATE LOCATION OF SFB EXPLORATORY BORING (7/19/16)
- SFB-4 APPROXIMATE LOCATION OF SFB EXPLORATORY BORING (5/5/14)
- APPROXIMATE LOCATION OF PROPOSED SCREEN WALL
- APPROXIMATE PROJECT LIMIT

NOTE: Base map was created by overlaying the project plan Sheets 2 & 3 prepared by Milani & Associates and dated 11/14/14 on Google Earth Image dated 4/5/16.

APPROXIMATE SCALE: 1" = 80' 080'160' 	DATE	Stevens Serrone & Bailey Engineering Company, Inc	1600 Willow Pass Court Concord, CA 94520 Tel 925.688.1001 Fax 925.688.1005 www.SFandB.com	SITE PLAN		FIGURE
	August 2016			3898 DEPOT ROAD Hayward, California		1
	PROJECT NO.					
	635-1					

APPENDIX A
Field Investigation

APPENDIX A

Field Investigation

Our supplemental field investigation for the proposed Bay Area Recycling Facility project in Hayward, California, consisted of surface reconnaissance and a subsurface exploration program. Geotechnical reconnaissance of the site and surrounding area was performed on July 19, 2016. Subsurface exploration was performed using a truck-mounted drill rig equipped with 4-inch diameter, continuous flight, solid stem augers. Eight exploratory borings were drilled on July 19, 2016. Our representative continuously logged the soils encountered in the borings in the field. The soils are described in general accordance with the Unified Soil Classification System (ASTM D2487). The logs of the borings as well as a key for the classification of the soil (Figure A-1) are included as part of this appendix. The logs of our previous borings at the site on May 5, 2014 are also included in this appendix for reference.

Representative samples were obtained from our exploratory borings at selected depths appropriate to the investigation. Relatively undisturbed samples were obtained using a 3-inch O.D. split barrel sampler with liners, and disturbed samples were obtained using the 2-inch O.D. split spoon sampler. All samples were transmitted to our offices for evaluation and appropriate testing. Both sampler types are indicated in the "Sampler" column of the boring logs as designated in Figure A-1.

Resistance blow counts were obtained in our borings with the samplers by dropping a 140-pound safety hammer through a 30-inch free fall. The sampler was driven 18 inches and the number of blows were recorded for each 6 inches of penetration. The blows per foot recorded on the boring logs represent the accumulated number of converted blows that were required to drive the last 12 inches, or the number of inches indicated where hard resistance was encountered. The blow counts recorded on the boring logs have been converted to equivalent SPT field blowcounts, but have not been corrected for overburden, silt content, or other factors. The elevations discussed in this report and shown on the boring logs in this appendix were obtained from the base map shown on Figure 1; datum unknown.

The attached boring logs and related information show our interpretation of the subsurface conditions at the dates and locations indicated, and it is not warranted that they are representative of subsurface conditions at other locations and times.

UNIFIED SOIL CLASSIFICATION SYSTEM

Major Divisions		grf	ltr	Description	Major Divisions		grf	ltr	Description
Coarse Grained Soils	Gravel		GW	Well-graded gravels or gravel sand mixtures, little or no fines	Soils	Sils And Clays LL < 50		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
			GP	Poorly-graded gravels or gravel sand mixture, little or no fines				CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
			GM	Silty gravels, gravel-sand-silt mixtures				OL	Organic silts and organic silt-clays of low plasticity
			GC	Clayey gravels, gravel-sand-clay mixtures					
	Sand And Sandy Soils		SW	Well-graded sands or gravelly sands, little or no fines		Sils And Clays LL > 50	MH	Inorganic silts, micaceous or diatomaceous fine or silty soils, elastic silts	
			SP	Poorly-graded sands or gravelly sands, little or no fines			CH	Inorganic clays of high plasticity, fat clays	
			SM	Silty sands, sand-silt mixtures			OH	Organic clays of medium to high plasticity	
			SC	Clayey sands, and-clay mixtures					
				Highly Organic Soils			PT	Peat and other highly organic soils	

GRAIN SIZES

U.S. STANDARD SERIES SIEVE

CLEAR SQUARE SIEVE OPENINGS

200

40

10

4

3/4"

3"

12"

Sils and Clays	Sand			Gravel		Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Coarse		

RELATIVE DENSITY

Sands and Gravels	Blows/Foot*
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	Over 50

CONSISTENCY

Sils and Clays	Blows/Foot*	Strength (tsf)**
Very Soft	0 - 2	0 - 1/4
Soft	2 - 4	1/4 - 1/2
Firm	4 - 8	1/2 - 1
Stiff	8 - 16	1 - 2
Very Stiff	16 - 32	2 - 4
Hard	Over 32	Over 4

*Number of Blows for a 140-pound hammer falling 30 inches, driving a 2-inch O.D. (1-3/8" I.D.) split spoon sampler.
**Unconfined compressive strength.

SYMBOLS & NOTES

	Standard Penetration sampler (2" OD Split Barrel)		Shelby Tube
	Modified California sampler (3" OD Split Barrel)		Pitcher Barrel
	California Sampler (2.5" OD Split Barrel)		HQ Core
	Ground Water level initially encountered		
	Ground Water level at end of drilling		

Increasing Visual Moisture Content

↑ Saturated
Wet
Moist
Damp
Dry

Constituent Percentage

PI = Plasticity Index
LL = Liquid Limit
R = R-Value

trace <5%
some 5-15%
with 16-30%
-y 31-49%

**Stevens,
Ferrone &
Bailey**
Engineering Company, Inc.

1600 Willow Pass Court
Concord, CA 94520
Tel: (925) 688-1001

KEY TO EXPLORATORY BORING LOGS

**3898 DEPOT ROAD
Hayward, CA**

PROJECT NO.

DATE

FIGURE NO.

635-1

August 2016

A-1

DRILL RIG Mobile B-24 CFA	SURFACE ELEVATION 9 feet	LOGGED BY RAC
DEPTH TO GROUND WATER 7 feet	BORING DIAMETER 4-inch	DATE DRILLED 07/19/16

DESCRIPTION AND CLASSIFICATION			DEPTH (FEET) ELEVATION	SAMPLER	SPT N-VALUE	WATER CONTENT (%)	DRY DENSITY (PCF)	UNC. COMP. (KSF)	OTHER TESTS
DESCRIPTION AND REMARKS	CONSIST	SOIL TYPE							
Pavement.			0						
FILL: GRAVEL (GC), mottled brownish gray, fine to coarse, subrounded to subangular, sandy(fine- to coarse-grained), with clay & silt, some asphalt fragments, dry.	medium dense				10	27	92	1.6	
CLAY (CH), dark gray, silty, damp.	stiff				13				
Change color to mottled brownish gray, silty, damp.	very stiff		5		16	26	95	3.1	
CLAY (CL), mottled gray brown, silty, some sand(fine- to coarse-grained), damp.	very stiff		0		22				
With to sandy(fine- to coarse-grained), moist.	stiff		15		8				
Bottom of Boring = 16.5 feet Notes: Stratification is approximate, variations must be expected. Blowcounts converted to SPT N-values. See Report for additional details.			-25						

EXPLORATORY BORING LOG 635-1.GPJ STEVENS FERRONE BAILEY.GDT 8/11/16

**Stevens,
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Bailey**
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Concord, CA 94520
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EXPLORATORY BORING LOG

**3898 DEPOT ROAD
Hayward, CA**

PROJECT NO.

635-1

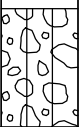
DATE

August 2016

BORING NO.

B-1

DRILL RIG	Mobile B-24 CFA	SURFACE ELEVATION	9 feet	LOGGED BY	RAC
DEPTH TO GROUND WATER	Not Encountered	BORING DIAMETER	4-inch	DATE DRILLED	07/19/16

DESCRIPTION AND CLASSIFICATION			DEPTH (FEET) ELEVATION	SAMPLER	SPT N-VALUE	WATER CONTENT (%)	DRY DENSITY (PCF)	UNC. COMP. (KSF)	OTHER TESTS
DESCRIPTION AND REMARKS	CONSIST	SOIL TYPE							
FILL: GRAVEL (GM), mottled orangish gray brown, fine to coarse, angular to subangular, sandy(fine- to coarse-grained), with clay & silt, some asphalt fragments, dry to damp.	medium dense		0		33				
CLAY (CH), dark gray, silty, trace sand(fine- to medium-grained), dry to damp. Change color to mottled brownish gray, damp.	very stiff		5		17				
			5		18				
CLAY (CL), mottled brown gray, silty, some to with sand(fine- to medium-grained), damp.	stiff		0						
			10		14				
Bottom of Boring = 11.5 feet Notes: Stratification is approximate, variations must be expected. Blowcounts converted to SPT N-values. See Report for additional details.			-5						
			15						
			-10						
			20						
			-15						
			25						
			-20						
			30						
			-25						

EXPLORATORY BORING LOG 635-1.GPJ STEVENS FERRONE BAILEY.GDT 8/1/16

**Stevens,
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Bailey**
Engineering Company, Inc.

1600 Willow Pass Court
Concord, CA 94520
Tel: (925) 688-1001

EXPLORATORY BORING LOG

**3898 DEPOT ROAD
Hayward, CA**

PROJECT NO.

635-1

DATE

August 2016

BORING NO.

B-2

DRILL RIG Mobile B-24 CFA	SURFACE ELEVATION 8 feet	LOGGED BY RAC
DEPTH TO GROUND WATER 8.5 feet	BORING DIAMETER 4-inch	DATE DRILLED 07/19/16

DESCRIPTION AND CLASSIFICATION			DEPTH (FEET) ELEVATION	SAMPLER	SPT N-VALUE	WATER CONTENT (%)	DRY DENSITY (PCF)	UNC. COMP. (KSF)	OTHER TESTS
DESCRIPTION AND REMARKS	CONSIST	SOIL TYPE							
Pavement.			0						
FILL: CLAY (CL/CH), dark gray, silty, with gravel(fine to coarse, rounded to subangular), some sand(fine- to coarse-grained), dry to damp.	very stiff				25	23	99	2.3	
CLAY (CH), dark gray, silty, damp.	stiff		5		13				
Change color to mottled brownish gray, silty, some gravel(fine, subangular), trace to some sand(fine- to medium-grained), damp.	very stiff		5		23	23	99	1.7	
Some gravel(fine, subangular).	stiff		0		14				
CLAY (CL), yellowish brown, silty, some sand(fine- to coarse-grained), trace gravel(fine, subangular), moist to wet.	firm		-5						
Bottom of Boring = 16.5 feet Notes: Stratification is approximate, variations must be expected. Blowcounts converted to SPT N-values. See Report for additional details.			15		7				
			-10						
			20						
			-15						
			25						
			-20						
			30						
			-25						

EXPLORATORY BORING LOG 635-1.GPJ STEVENS FERRONE BAILEY.GDT 8/11/16

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Ferrone &
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EXPLORATORY BORING LOG

**3898 DEPOT ROAD
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PROJECT NO.

635-1

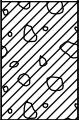
DATE

August 2016

BORING NO.

B-3

DRILL RIG Mobile B-24 CFA	SURFACE ELEVATION 10 feet	LOGGED BY RAC
DEPTH TO GROUND WATER 8 feet	BORING DIAMETER 4-inch	DATE DRILLED 07/19/16

DESCRIPTION AND CLASSIFICATION			DEPTH (FEET) ELEVATION	SAMPLER	SPT N-VALUE	WATER CONTENT (%)	DRY DENSITY (PCF)	UNC. COMP. (KSF)	OTHER TESTS
DESCRIPTION AND REMARKS	CONSIST	SOIL TYPE							
FILL: CLAY(CL)/GRAVEL(GC) mottled gray brown, gravelly(fine to coarse, subrounded to subangular), with sand(fine- to coarse-grained), with rock & asphalt fragments, dry to damp.	stiff		0 10		12				
CLAY (CH), dark gray, silty, damp.	stiff				11				
Change color to mottled brownish gray, silty, trace sand(fine- to medium-grained), damp.	very stiff		5 5		20				
CLAY (CL/CH), mottled brownish gray, silty, with sand(fine- to coarse-grained), damp.	very stiff		10 0		20	22	101	3.0	
CLAY (CL), mottled gray yellowish brown, silty, with sand(fine- to coarse-grained), moist.	stiff		15 -5		8	23	103	1.2	
Bottom of Boring = 16.5 feet Notes: Stratification is approximate, variations must be expected. Blowcounts converted to SPT N-values. See Report for additional details.			20 -10						
			25 -15						
			30 -20						

EXPLORATORY BORING LOG 635-1.GPJ STEVENS FERRONE BAILEY.GDT 8/11/16

	EXPLORATORY BORING LOG		
	3898 DEPOT ROAD Hayward, CA		
	PROJECT NO.	DATE	BORING NO.
	635-1	August 2016	B-4

1600 Willow Pass Court
Concord, CA 94520
Tel: (925) 688-1001

DRILL RIG	Mobile B-24 CFA	SURFACE ELEVATION	9 feet	LOGGED BY	RAC
DEPTH TO GROUND WATER	Not Encountered	BORING DIAMETER	4-inch	DATE DRILLED	07/19/16

DESCRIPTION AND CLASSIFICATION			DEPTH (FEET) ELEVATION	SAMPLER	SPT N-VALUE	WATER CONTENT (%)	DRY DENSITY (PCF)	UNC. COMP. (KSF)	OTHER TESTS
DESCRIPTION AND REMARKS	CONSIST	SOIL TYPE							
FILL: CLAY (CL), mottled green brownish dark gray, silty, with sand(fine- to coarse-grained), with gravel(fine to coarse, angular to subrounded), some rock & asphalt fragments, dry to damp.	stiff		0		14				
					14				
CLAY (CH), dark gray, silty, damp.	stiff		5		16				
									
CLAY (CL/CH), mottled brownish gray, silty, some sand(fine- to coarse-grained), damp.	stiff		0		14				
			10						
Bottom of Boring = 11.5 feet Notes: Stratification is approximate, variations must be expected. Blowcounts converted to SPT N-values. See Report for additional details.									
			-5						
			15						
			-10						
			20						
			-15						
			25						
			-20						
			30						
			-25						

EXPLORATORY BORING LOG 635-1.GPJ STEVENS FERRONE BAILEY.GDT 8/1/16

**Stevens,
Ferrone &
Bailey**
Engineering Company, Inc.

1600 Willow Pass Court
Concord, CA 94520
Tel: (925) 688-1001

EXPLORATORY BORING LOG

**3898 DEPOT ROAD
Hayward, CA**

PROJECT NO.

635-1

DATE

August 2016

BORING NO.

B-5

DRILL RIG	Mobile B-24 CFA	SURFACE ELEVATION	9.5 feet	LOGGED BY	RAC
DEPTH TO GROUND WATER	Not Encountered	BORING DIAMETER	4-inch	DATE DRILLED	07/19/16

DESCRIPTION AND CLASSIFICATION			DEPTH (FEET) ELEVATION	SAMPLER	SPT N-VALUE	WATER CONTENT (%)	DRY DENSITY (PCF)	UNC. COMP. (KSF)	OTHER TESTS
DESCRIPTION AND REMARKS	CONSIST	SOIL TYPE							
FILL: SAND (SM), grayish brown, fine- to coarse-grained, silty, with gravel(fine to coarse, subrounded to subangular), damp.	medium dense		0						
FILL: CLAY (CL/CH), mottled green dark gray, silty, some sand(fine- to coarse-grained), some to with gravel(fine to coarse, subrounded to angular), damp.	stiff				10				
					13				
CLAY (CH), dark gray, silty, trace sand(fine-grained), damp.	stiff		5		23				
	very stiff								
CLAY (CL/CH), mottled brownish gray, silty, trace to some sand(fine- to medium-grained), damp.	very stiff		10		19				
Bottom of Boring = 11.5 feet Notes: Stratification is approximate, variations must be expected. Blowcounts converted to SPT N-values. See Report for additional details.			15						
			20						
			25						
			30						
			-25						

EXPLORATORY BORING LOG 635-1.GPJ STEVENS FERRONE BAILEY.GDT 8/1/16

 1600 Willow Pass Court Concord, CA 94520 Tel: (925) 688-1001	EXPLORATORY BORING LOG		
	3898 DEPOT ROAD Hayward, CA		
	PROJECT NO.	DATE	BORING NO.
	635-1	August 2016	B-6

DRILL RIG Mobile B-24 CFA	SURFACE ELEVATION 10 feet	LOGGED BY RAC
DEPTH TO GROUND WATER 9 feet	BORING DIAMETER 4-inch	DATE DRILLED 07/19/16

DESCRIPTION AND CLASSIFICATION			DEPTH (FEET) ELEVATION	SAMPLER	SPT N-VALUE	WATER CONTENT (%)	DRY DENSITY (PCF)	UNC. COMP. (KSF)	OTHER TESTS
DESCRIPTION AND REMARKS	CONSIST	SOIL TYPE							
FILL: GRAVEL (GM), mottle gray brown, fine to coarse, subangular to subrounded, sandy(fine-to coarse-grained), with clay & silt, dry. With concrete, asphalt, glass & plastic fragments. Clays at 1.5' to 2.5'.	dense		0 10		41/8"				At 11': Liquid Limit = 62 Plasticity Index = 46 Fine Sand = 5% Silt = 30% Clay = 65%
CLAY (CH), dark gray, silty, trace sand(fine-grained), damp.	stiff		5 5		11				
					15				
Change color to mottled brownish gray.	very stiff		10 0		20	27	94	4.2	
CLAY (CL), yellowish brown, silty, some to with sand(fine- to coarse-grained), moist.	stiff		15 -5		12				
Bottom of Boring = 16.5 feet Notes: Stratification is approximate, variations must be expected. Blowcounts converted to SPT N-values. See Report for additional details.			20 -10						
			25 -15						
			30 -20						

EXPLORATORY BORING LOG 635-1.GPJ STEVENS FERRONE BAILEY.GDT 8/11/16

**Stevens,
Ferrone &
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Engineering Company, Inc.

1600 Willow Pass Court
Concord, CA 94520
Tel: (925) 688-1001

EXPLORATORY BORING LOG

**3898 DEPOT ROAD
Hayward, CA**

PROJECT NO.

635-1

DATE

August 2016

BORING NO.

B-7

DRILL RIG	Mobile B-24 CFA	SURFACE ELEVATION	9 feet	LOGGED BY	RAC
DEPTH TO GROUND WATER	Not Encountered	BORING DIAMETER	4-inch	DATE DRILLED	07/19/16

DESCRIPTION AND CLASSIFICATION			DEPTH (FEET) ELEVATION	SAMPLER	SPT N-VALUE	WATER CONTENT (%)	DRY DENSITY (PCF)	UNC. COMP. (KSF)	OTHER TESTS
DESCRIPTION AND REMARKS	CONSIST	SOIL TYPE							
FILL: SAND (SM), dark brown, fine- to coarse-grained, gravelly(fine to coarse, subrounded to subangular), with clay & silt, dry to damp.	medium dense		0		16				
CLAY (CH), dark brown, silty, damp.	stiff		5		13				
Change color to mottled brownish gray, with sand(fine- to coarse-grained), trace gravel(fine, subangular).			5		15				
Trace sand(fine- to medium-grained).	very stiff		10		21				
Bottom of Boring = 11.5 feet Notes: Stratification is approximate, variations must be expected. Blowcounts converted to SPT N-values. See Report for additional details.			-5						
			15						
			-10						
			20						
			-15						
			25						
			-20						
			30						
			-25						

EXPLORATORY BORING LOG 635-1.GPJ STEVENS FERRONE BAILEY.GDT 8/1/16

 1600 Willow Pass Court Concord, CA 94520 Tel: (925) 688-1001	EXPLORATORY BORING LOG		
	3898 DEPOT ROAD Hayward, CA		
	PROJECT NO.	DATE	BORING NO.
	635-1	August 2016	B-8

DRILL RIG Mobile B-24 CFA	SURFACE ELEVATION 9.0 feet	LOGGED BY TC
DEPTH TO GROUND WATER 7 feet	BORING DIAMETER 4-inch	DATE DRILLED 05/05/14

DESCRIPTION AND CLASSIFICATION			DEPTH (FEET) ELEVATION	SAMPLER	SPT N-VALUE	WATER CONTENT (%)	DRY DENSITY (PCF)	UNC. COMP. (KSF)	OTHER TESTS
DESCRIPTION AND REMARKS	CONSIST	SOIL TYPE							
FILL: GRAVEL (GM), gray, fine to coarse, angular to subrounded, sandy(fine- to coarse-grained), with silt, dry.	dense		0						At 6': Liquid Limit = 63 Plasticity Index = 47 Medium Sand = 1% Fine Sand = 3% Silt = 30% Clay = 66%
FILL: SILT (ML), light gray, sandy(fine-grained), clayey, moist to damp.	stiff				16				
CLAY (CH), dark gray to black, silty, some organics, dry to damp.	stiff		5		10				
			5		12	29	93	3.4	
CLAY (CL/CH), mottled brown gray, silty, dry to damp.	very stiff		0						
			10		16	25	103	4.7	
CLAY (CL), yellowish brown, silty, with to sandy(fine- to coarse-grained), moist.	very stiff		-5						
			15		17				
Some sand(fine-grained), damp.			-10						
			20		19	23	106	4.5	
No recovery.			-15						
Trace gravel(fine, angular).			25		19				
			-20						
Damp to moist.	stiff		30		9				
Bottom of Boring = 31.5 feet Notes: Stratification is approximate, variations must be expected. Blowcounts converted to SPT N-values. See Report for additional details.			-25						

EXPLORATORY BORING LOG 635-1.GPJ STEVENS FERRONE BAILEY GDT 5/16/14

**Stevens,
Ferrone &
Bailey**
Engineering Company, Inc.

1600 Willow Pass Court
Concord, CA 94523
Tel: 925-688-1001

EXPLORATORY BORING LOG

**3898 DEPOT ROAD
Hayward, CA**

PROJECT NO.

635-1

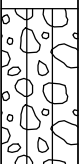
DATE

May 2014

BORING NO.

SFB-1

DRILL RIG Mobile B-24 CFA	SURFACE ELEVATION 9.5 feet	LOGGED BY TC
DEPTH TO GROUND WATER 7 feet	BORING DIAMETER 4-inch	DATE DRILLED 05/05/14

DESCRIPTION AND CLASSIFICATION			DEPTH (FEET) ELEVATION	SAMPLER	SPT N-VALUE	WATER CONTENT (%)	DRY DENSITY (PCF)	UNC. COMP. (KSF)	OTHER TESTS
DESCRIPTION AND REMARKS	CONSIST	SOIL TYPE							
FILL: GRAVEL (GM), mottled red gray, fine to coarse, subangular to subrounded, sandy(fine-to coarse-grained), with silt, dry. Wet at 2'.	dense		0						
	medium dense				11				
					9				
CLAY (CH), dark gray to black, silty, trace organics, dry to damp.	stiff		5						
					13	30	93	3.3	
									
CLAY (CL/CH), mottled brown gray, silty, damp.	very stiff		0						
			10						
					16				
Bottom of Boring = 11.5 feet Notes: Stratification is approximate, variations must be expected. Blowcounts converted to SPT N-values. See Report for additional details.			15						
			-5						
			20						
			-10						
			25						
			-15						
			30						
			-20						
			-25						

EXPLORATORY BORING LOG 635-1.GPJ STEVENS FERRONE BAILEY.GDT 5/16/14

 1600 Willow Pass Court Concord, CA 94523 Tel: 925-688-1001	EXPLORATORY BORING LOG		
	3898 DEPOT ROAD Hayward, CA		
	PROJECT NO.	DATE	BORING NO.
	635-1	May 2014	SFB-2

DRILL RIG Mobile B-24 CFA	SURFACE ELEVATION 10.0 feet	LOGGED BY TC
DEPTH TO GROUND WATER 9 feet	BORING DIAMETER 4-inch	DATE DRILLED 05/05/14

DESCRIPTION AND CLASSIFICATION			DEPTH (FEET) ELEVATION	SAMPLER	SPT N-VALUE	WATER CONTENT (%)	DRY DENSITY (PCF)	UNC. COMP. (KSF)	OTHER TESTS
DESCRIPTION AND REMARKS	CONSIST	SOIL TYPE							
FILL: GRAVEL (GM), gray, fine to coarse, subangular to subrounded, sandy(fine- to coarse-grained), with silt, dry.	medium dense		0 10						
FILL: SAND (SM), brown, fine- to coarse-grained, gravelly(fine, subangular to subrounded), dry.	loose				8				
FILL: CLAY (CH), mottled brown dark gray, silty, some sand clasts(fine- to coarse-grained), dry to damp.	stiff				9				
CLAY (CH), dark gray to black, silty, dry to damp.	stiff		5 5		14				
CLAY (CL/CH), mottled brown gray, silty, damp.	stiff		10 0		11				
CLAY (CL), mottled gray yellowish brown, silty, with sand(fine- to coarse-grained), damp to moist.	very stiff		15 -5		20				
Bottom of Boring = 16.5 feet Notes: Stratification is approximate, variations must be expected. Blowcounts converted to SPT N-values. See Report for additional details.			20 -10						
			25 -15						
			30 -20						

EXPLORATORY BORING LOG 635-1.GPJ STEVENS FERRONE BAILEY.GDT 5/16/14

 1600 Willow Pass Court Concord, CA 94523 Tel: 925-688-1001		EXPLORATORY BORING LOG		
		3898 DEPOT ROAD Hayward, CA		
		PROJECT NO.	DATE	BORING NO.
		635-1	May 2014	SFB-3

DRILL RIG	Mobile B-24 CFA	SURFACE ELEVATION	7.5 feet	LOGGED BY	TC
DEPTH TO GROUND WATER	Not Encountered	BORING DIAMETER	4-inch	DATE DRILLED	05/05/14

DESCRIPTION AND CLASSIFICATION			DEPTH (FEET) ELEVATION	SAMPLER	SPT N-VALUE	WATER CONTENT (%)	DRY DENSITY (PCF)	UNC. COMP. (KSF)	OTHER TESTS
DESCRIPTION AND REMARKS	CONSIST	SOIL TYPE							
Asphalt concrete (AC) 2" thick.			0						
FILL: CLAY (CL), yellowish brown, gravelly(fine to coarse, angular to subrounded), with sand(fine- to coarse-grained), with silt, dry to damp.	stiff		5		8				
CLAY (CH), dark gray to black, silty, trace organics, damp.	stiff				13				
CLAY (CL), grayish brown, silty, with sand clasts(fine- to coarse-grained), dry to damp.	very stiff		5		19				
Bottom of Boring = 6.5 feet Notes: Stratification is approximate, variations must be expected. Blowcounts converted to SPT N-values. See Report for additional details.			0						
			10						
			-5						
			15						
			-10						
			20						
			-15						
			25						
			-20						
			30						
			-25						

EXPLORATORY BORING LOG 635-1.GPJ STEVENS FERRONE BAILEY.GDT 5/16/14



1600 Willow Pass Court
Concord, CA 94523
Tel: 925-688-1001

EXPLORATORY BORING LOG

**3898 DEPOT ROAD
Hayward, CA**

PROJECT NO.

635-1

DATE

May 2014

BORING NO.

SFB-4

APPENDIX B
Laboratory Investigation

APPENDIX B

Laboratory Investigation

Our supplemental laboratory testing program for the proposed Bay Area Recycling Facility project in Hayward, California was directed toward a quantitative and qualitative evaluation of the physical and mechanical properties of the soils underlying the site.

The natural water contents were determined on seven samples of the subsurface soils. The water contents are recorded on the boring logs at the appropriate sample depths.

Dry density determination was performed on seven samples of the subsurface soils to evaluate their physical properties. The results of the tests are shown on the boring logs at the appropriate sample depths.

Unconfined compression test was performed on seven relatively undisturbed samples of the subsurface soils to evaluate the undrained shear strengths of these materials. Failure was taken as the peak normal stress. The results of the tests are presented on the boring logs at the appropriate sample depths and are also attached to this appendix.

Atterberg Limit determinations were performed on one sample of the subsurface soils to determine the range of water content over which these materials exhibit plasticity. These values are used to classify the soil in accordance with the Unified Soil Classification System and to indicate the soil's compressibility and expansion potentials. The results of the tests are presented on the boring log at the appropriate sample depth and are also attached to this appendix.

Gradation and hydrometer tests were performed on one sample of the subsurface soils. These tests were performed to assist in the classification of the soils and to determine their grain size distribution. The results of the tests are presented on the boring log at the appropriate sample depth and are also attached to this appendix.

Atterberg Limits Test – ASTM D4318

Project Number: 635-1

Project Name: 3898 Depot Road

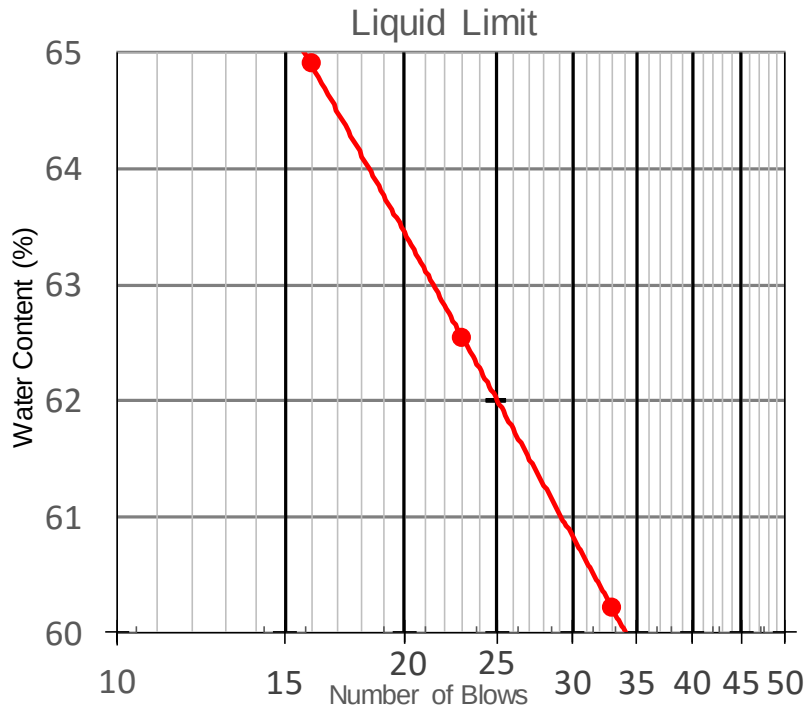
Boring/Sample No: B-7

Depth: 11

Date: 07-25-16

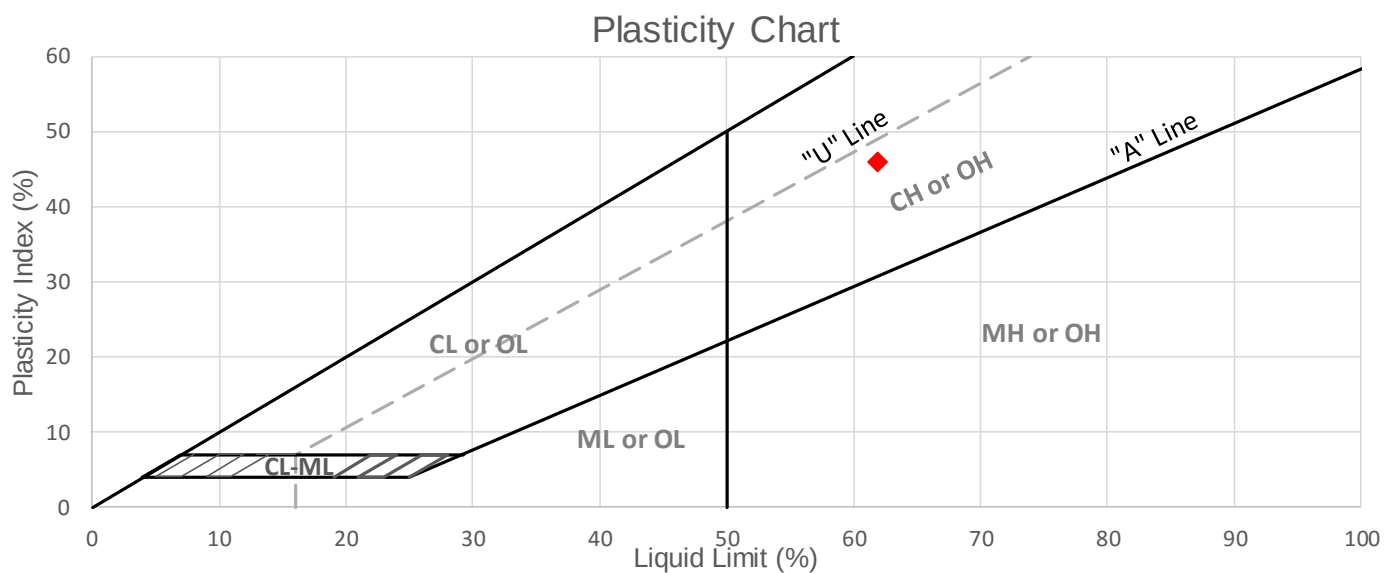
Description of Sample: Gray brown silty CLAY some sand (CH)

Tested By R



Plastic Limit Data			
Trial	1	2	Ave
Water Content (%)	16.0	15.9	16

Data Summary	
Liquid Limit	62
Plastic Limit	16
Plasticity Index	46
Natural Water Content	27.2
Liquidity Index	0.243
% Passing #200	94.8



Hydrometer Analysis – ASTM D422

Project Number: 635-1

Project Name: 3898 Depot Road

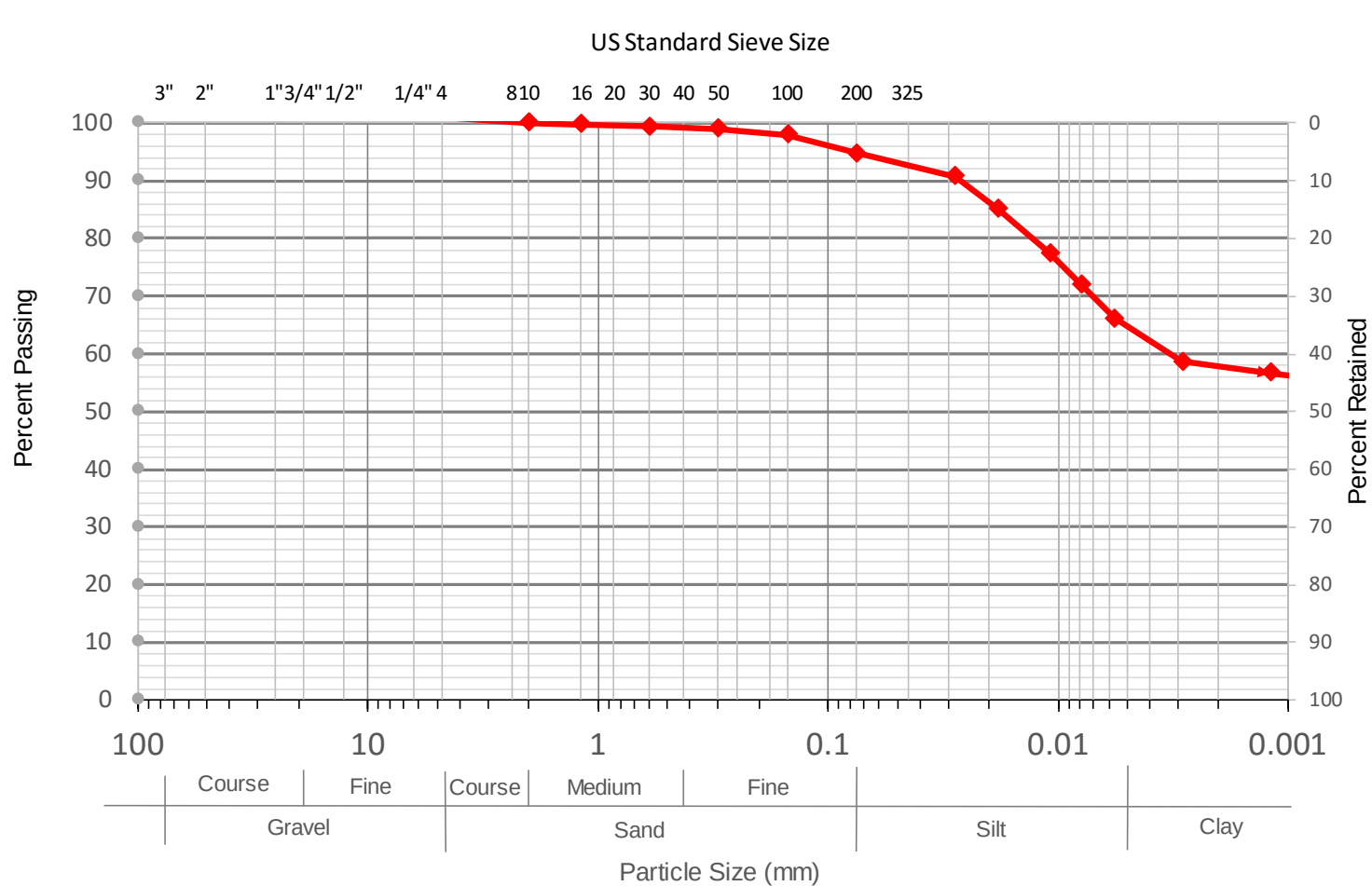
Sample Number: B-7

Description: Gray brown silty CLAY some sand (CH)

Depth: 11

Test Date: 07-26-16

Tested By: R



Composite Sieve Data	
Standard Sieve Size	Percent Passing
3"	
1.5"	
3/4"	
3/8"	
#4	
#10	100
#16	99.8
#30	99.4
#50	99.0
#100	98.0
#200	94.8

Particle Diameter (mm)	Percent Soil in Suspension
0.0280	90.8
0.0182	85.1
0.0109	77.5
0.0079	71.9
0.0057	66.2
0.0029	58.6
0.0012	56.7

Project Number: 635-1

Boring #: B-1

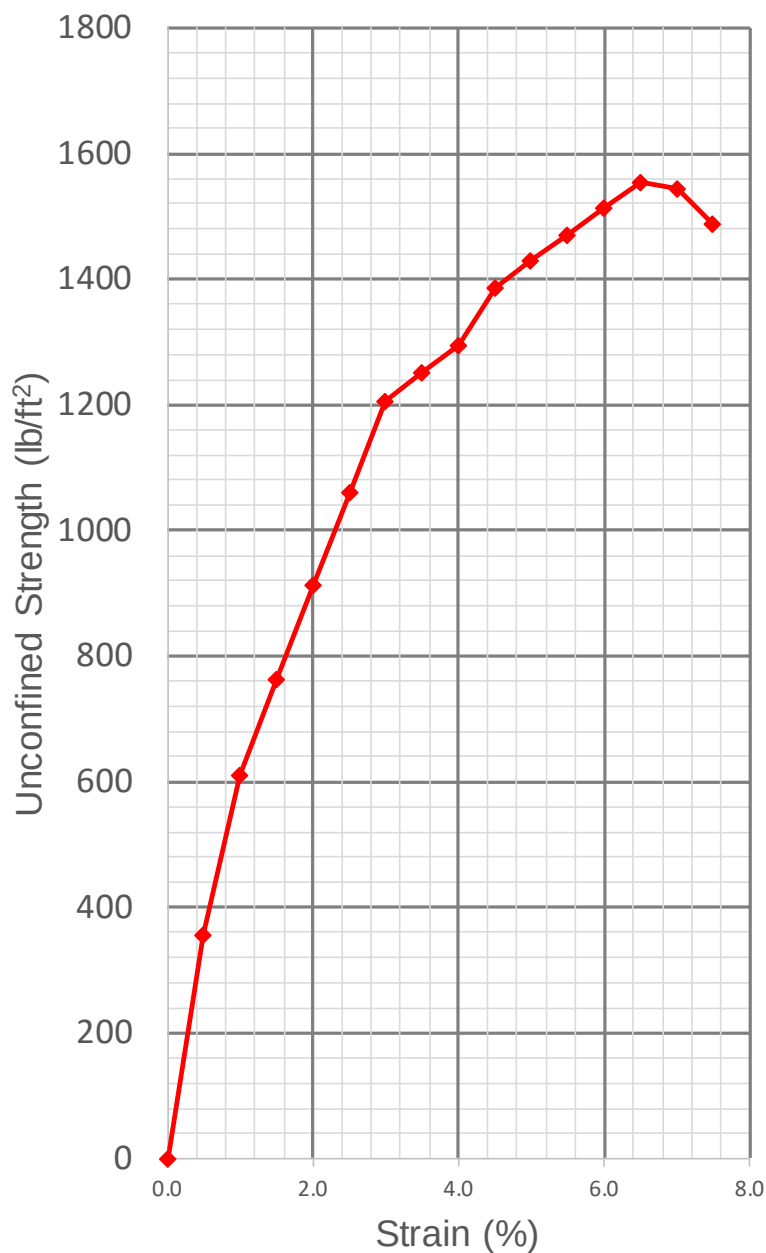
Depth: 2

Project Name: 3898 Depot Road

Date: 7/22/2016

Description: Black silty CLAY some sand (CH)

Tested By: R



Soil Specimen Initial Measurements

Diameter	2.42 in
Initial Area	4.60 in ²
Initial Length	5 in
Volume	0.01331 ft ³
Water Content	27.3
Wet Density	116.9 pcf
Dry Density	91.8 pcf

Max Unconfined Compressive Strength

Elapsed Time	6.5 min
Vertical Dial	0.325 in
Strain	6.5 %
Area	0.03417 ft ²
Axial Load	53.1 lbs
Compressive Strength	1,554 psf

Project Number: 635-1

Boring #: B-1

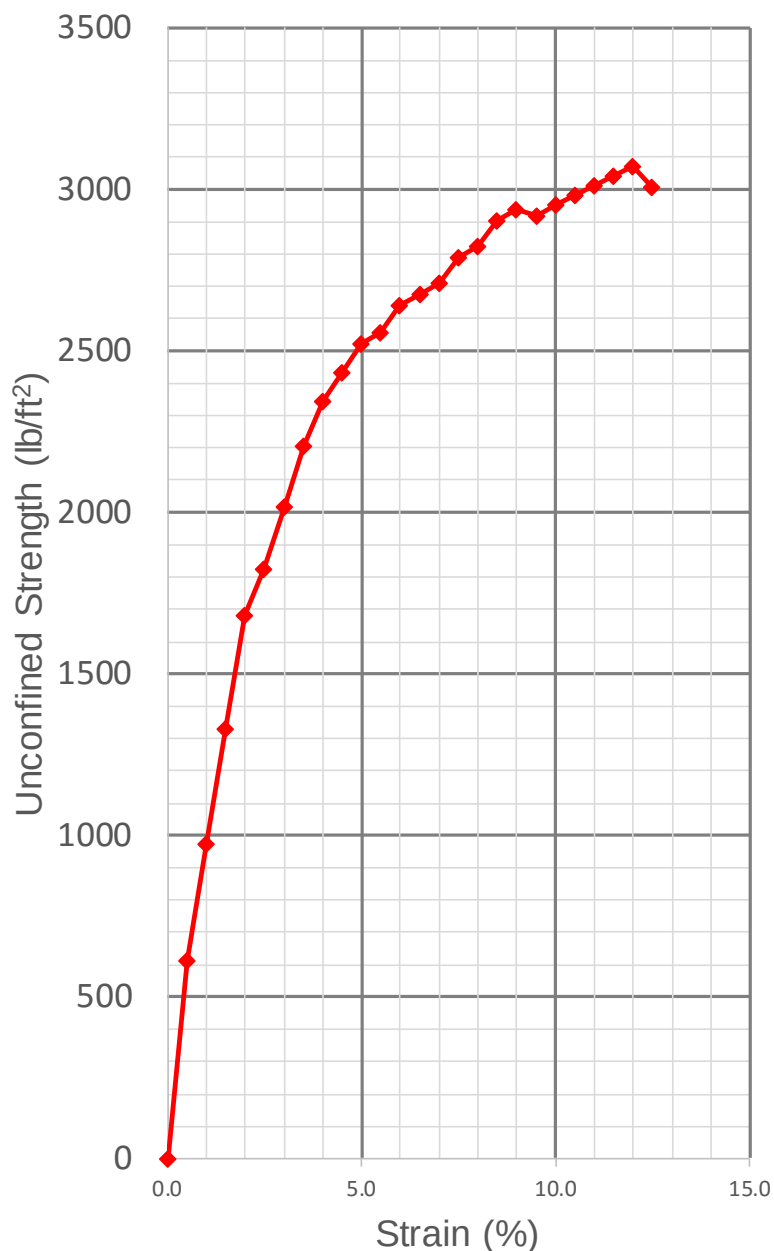
Depth: 6

Project Name: 3898 Depot Road

Date: 7/22/2016

Description: Gray brown silty CLAY some sand (CH)

Tested By: R



Soil Specimen Initial
Measurements

Diameter	2.42 in
Initial Area	4.60 in ²
Initial Length	5 in
Volume	0.01331 ft ³
Water Content	25.8
Wet Density	120.0 pcf
Dry Density	95.4 pcf

Max Unconfined
Compressive Strength

Elapsed Time	12 min
Vertical Dial	0.6 in
Strain	12.0 %
Area	0.03630 ft ²
Axial Load	111.4 lbs
Compressive Strength	3,069 psf

Project Number: 635-1

Boring #: B-3

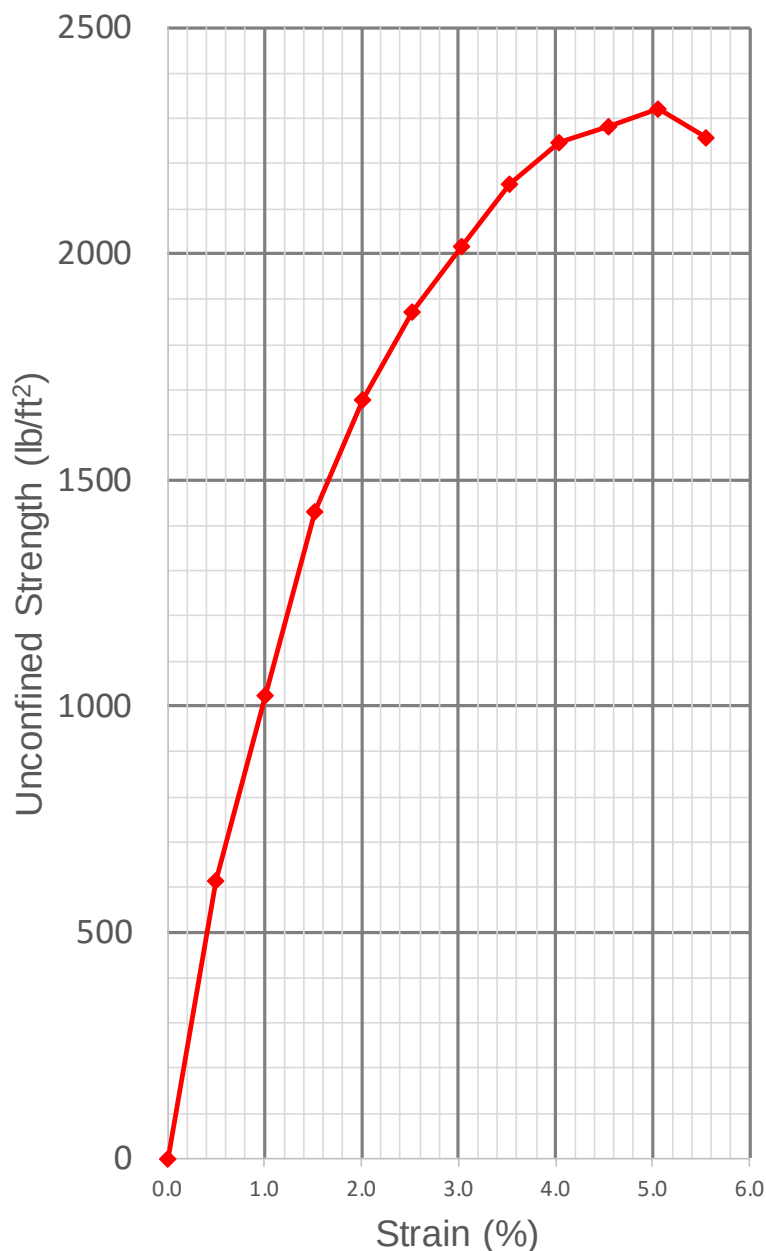
Depth: 2

Project Name: 3898 Depot Road

Date: 7/25/2016

Description: Black silty CLAY some gravel and sand (CH)

Tested By: R



Soil Specimen Initial Measurements

Diameter	2.42 in
Initial Area	4.60 in ²
Initial Length	4.95 in
Volume	0.01318 ft ³
Water Content	22.7
Wet Density	121.3 pcf
Dry Density	98.9 pcf

Max Unconfined Compressive Strength

Elapsed Time	5 min
Vertical Dial	0.25 in
Strain	5.1 %
Area	0.03364 ft ²
Axial Load	78.1 lbs
Compressive Strength	2,321 psf

Project Number: 635-1

Boring #: B-3

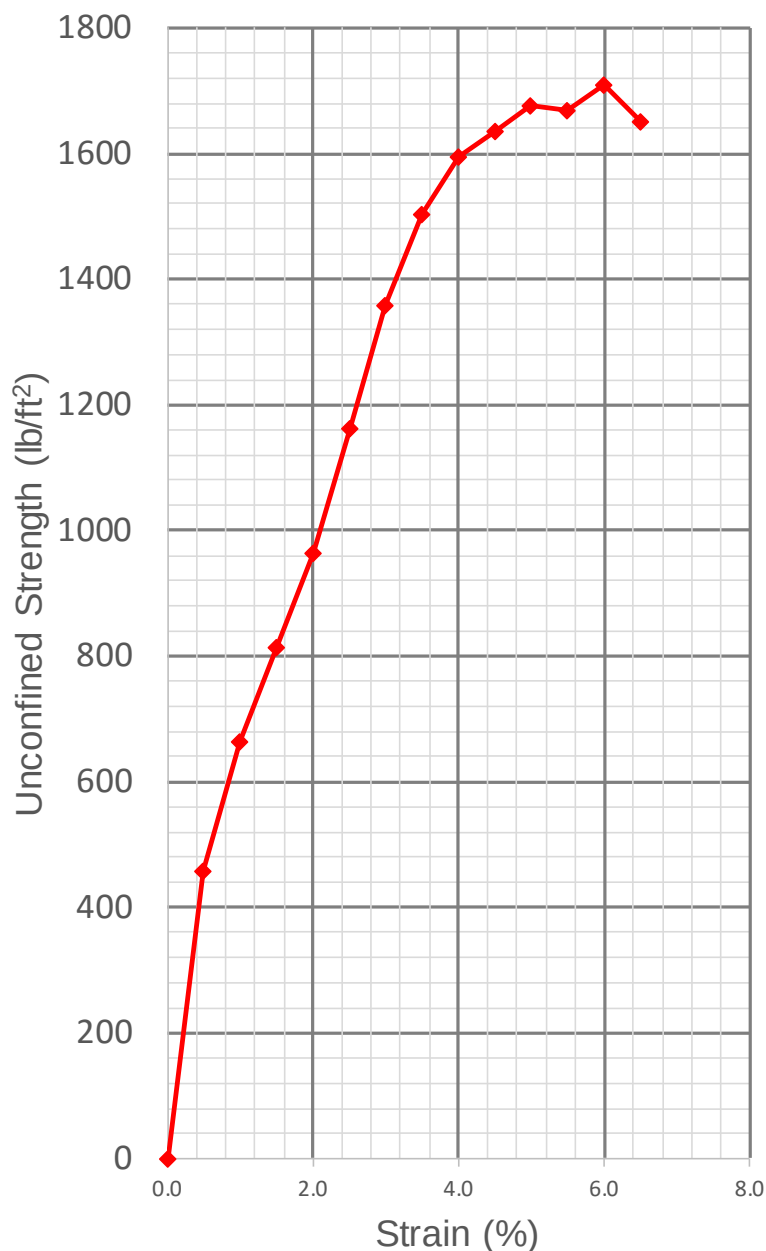
Depth: 6

Project Name: 3898 Depot Road

Date: 7/25/2016

Description: Gray brown silty CLAY with sand and gravel (CH)

Tested By: R



Soil Specimen Initial Measurements

Diameter	2.42 in
Initial Area	4.60 in ²
Initial Length	5 in
Volume	0.01331 ft ³
Water Content	22.6
Wet Density	121.6 pcf
Dry Density	99.2 pcf

Max Unconfined Compressive Strength

Elapsed Time	6 min
Vertical Dial	0.3 in
Strain	6.0 %
Area	0.03398 ft ²
Axial Load	58.1 lbs
Compressive Strength	1,710 psf

Project Number: 635-1

Boring #: B-4

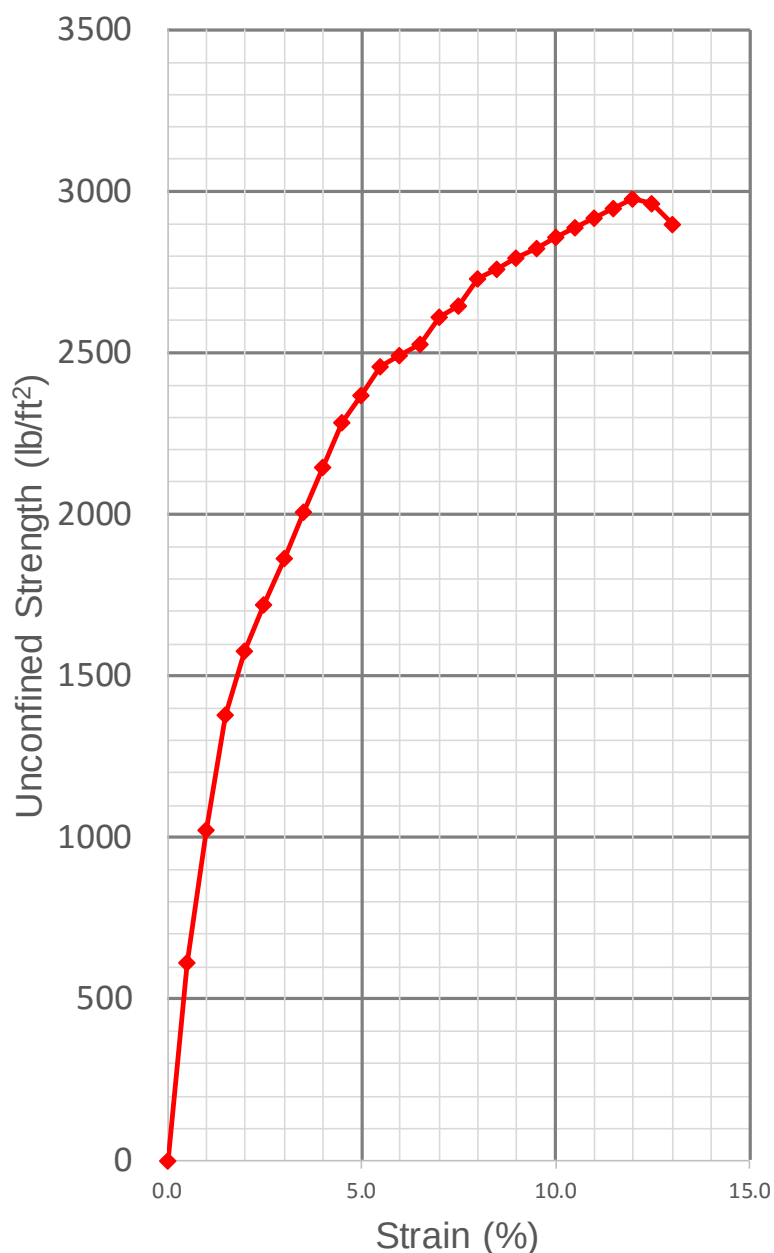
Depth: 11

Project Name: 3898 Depot Road

Date: 7/25/2016

Description: Gray brown silty CLAY some sand trace gravel (CL/CH)

Tested By: R



Soil Specimen Initial
Measurements

Diameter	2.42 in
Initial Area	4.60 in ²
Initial Length	5 in
Volume	0.01331 ft ³
Water Content	21.8
Wet Density	122.7 pcf
Dry Density	100.7 pcf

Max Unconfined
Compressive Strength

Elapsed Time	12 min
Vertical Dial	0.6 in
Strain	12.0 %
Area	0.03630 ft ²
Axial Load	108.1 lbs
Compressive Strength	2,978 psf

Project Number: 635-1

Boring #: B-4

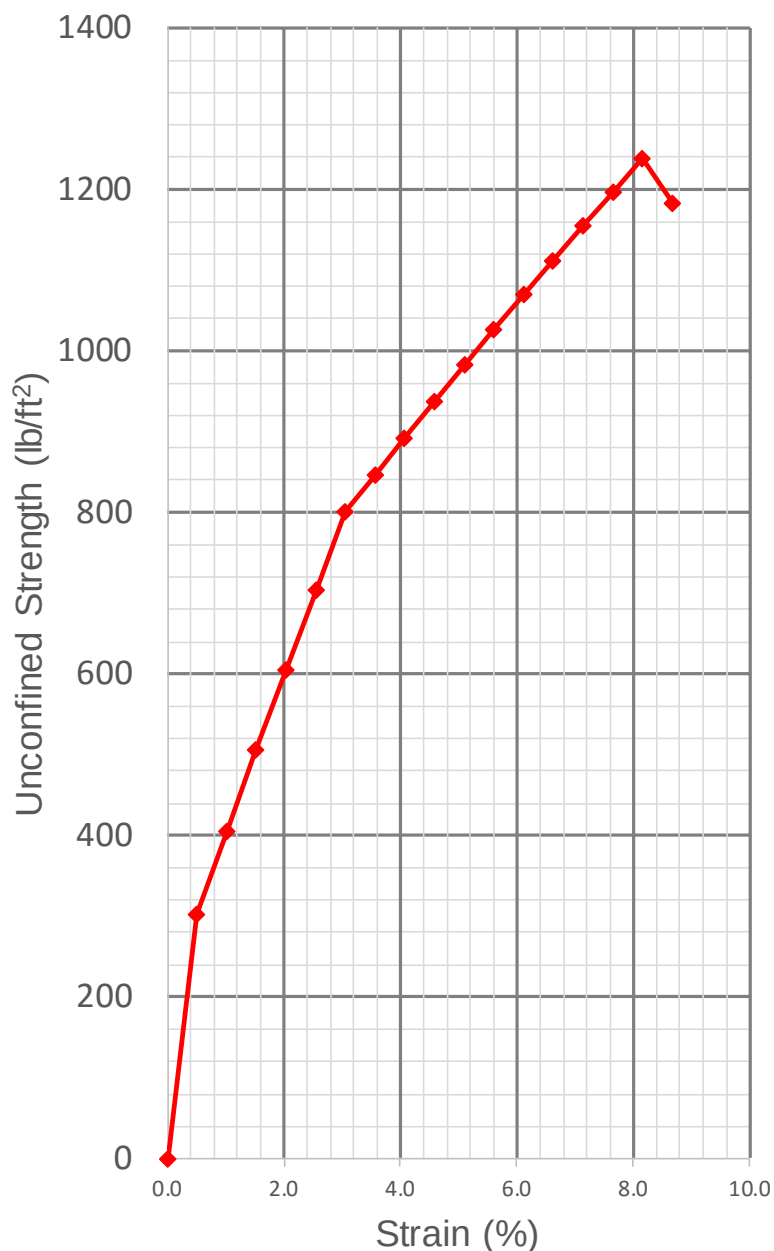
Depth: 16

Project Name: 3898 Depot Road

Date: 7/25/2016

Description: Light brown silty CLAY with sand (CL)

Tested By: R



Soil Specimen Initial
Measurements

Diameter	2.42 in
Initial Area	4.60 in ²
Initial Length	4.9 in
Volume	0.01304 ft ³
Water Content	23.1
Wet Density	126.7 pcf
Dry Density	102.9 pcf

Max Unconfined
Compressive Strength

Elapsed Time	8 min
Vertical Dial	0.4 in
Strain	8.2 %
Area	0.03478 ft ²
Axial Load	43.1 lbs
Compressive Strength	1,239 psf

Project Number: 635-1

Boring #: B-7

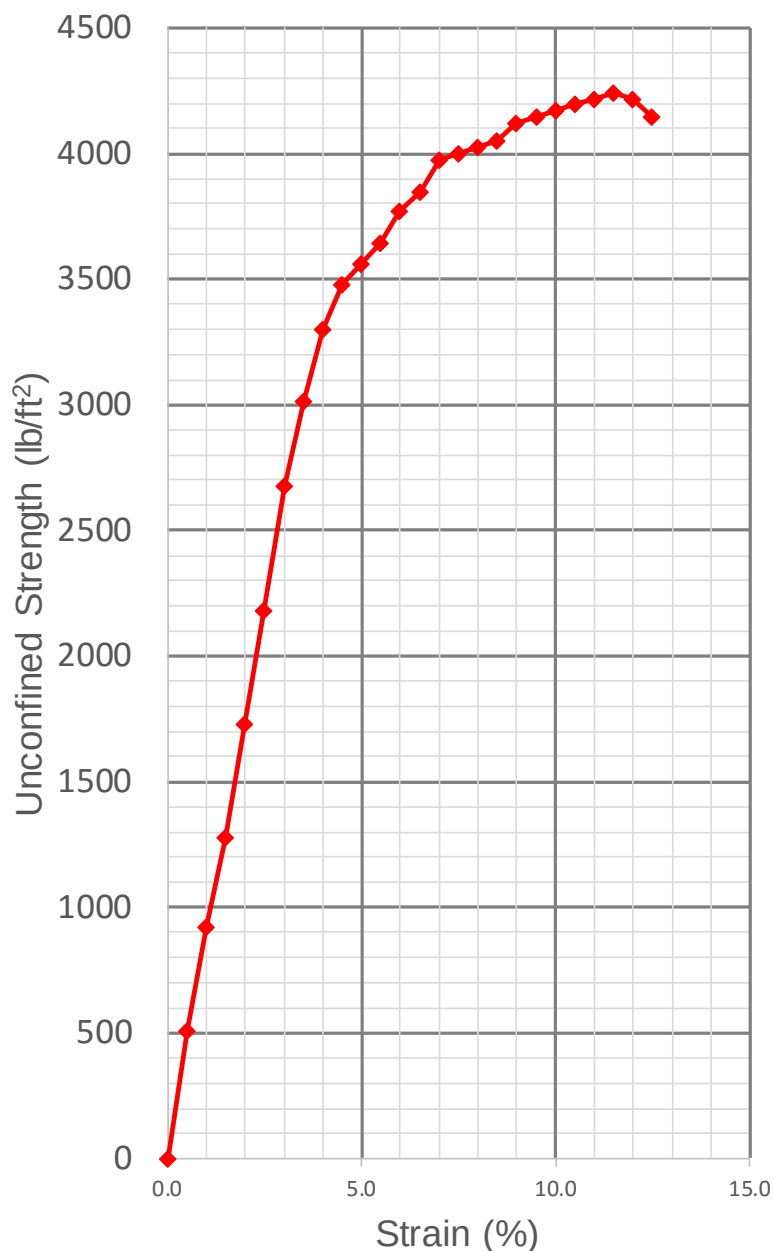
Depth: 11

Project Name: 3898 Depot Road

Date: 7/22/2016

Description: Gray brown silty CLAY some sand (CH)

Tested By: R



Soil Specimen Initial
Measurements

Diameter	2.42 in
Initial Area	4.60 in ²
Initial Length	5 in
Volume	0.01331 ft ³
Water Content	27.2
Wet Density	119.7 pcf
Dry Density	94.1 pcf

Max Unconfined
Compressive Strength

Elapsed Time	11.5 min
Vertical Dial	0.575 in
Strain	11.5 %
Area	0.03610 ft ²
Axial Load	153.1 lbs
Compressive Strength	4,242 psf