

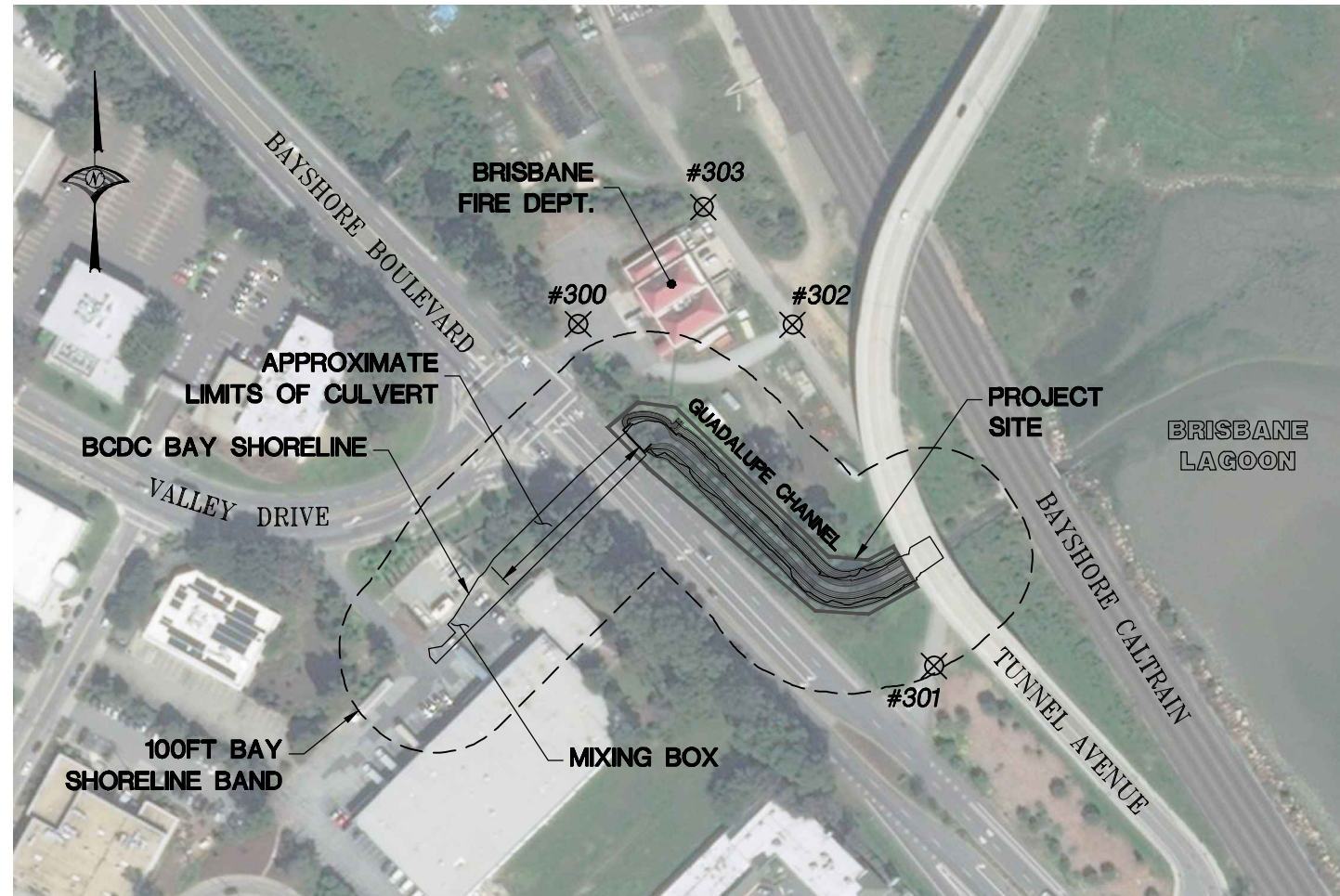
# CITY OF BRISBANE

## GUADALUPE CHANNEL EROSION CONTROL PROJECT

### PROJECT NO. 9018

#### GENERAL NOTES

1. ALL WORK SHALL BE DONE IN CONFORMANCE WITH THE APPROVED PLANS.
2. CONTRACTOR SHALL NOTIFY PUBLICS WORKS DEPARTMENT AT LEAST 24 HOURS IN ADVANCE OF ANY REQUIRED INSPECTIONS.
3. NO WORK SHALL BE PERFORMED DURING HOURS OTHER THAN NORMAL WORKING HOURS WHICH ARE MONDAY THROUGH FRIDAY 8:00 AM TO 5:00 PM, AND SATURDAY AND SUNDAY 9:00 AM TO 7:00 PM. FOR WORKING HOURS OTHER THAN SPECIFIED, A SPECIAL REQUEST IN WRITING MUST BE SUBMITTED FOR APPROVAL AND FEES COLLECTED.
4. NO WORK, TRAFFIC CONTROL, OR TRAFFIC DETOURS WILL BE ALLOWED WITHIN TRAFFIC LANES OF BAYSHORE BLVD. BEFORE 9:00 AM OR AFTER 4:00 PM MONDAY THROUGH FRIDAY.
5. CONSTRUCTION NOISE LIMITATIONS SHALL BE AS SPECIFIED IN BRISBANE MUNICIPAL CODE (BMC) 8.28.60 A AND 8.26.60 B.
6. ALL WORK SHALL BE PERFORMED IN ACCORDANCE TO THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE STREAMBED ALTERATION AGREEMENT, UNITED STATES ARMY CORPS OF ENGINEERS NATIONWIDE PERMIT NUMBER 13, REGIONAL WATER QUALITY CONTROL BOARD 401 CERTIFICATION/WASTE DISCHARGE REQUIREMENTS, AND SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION PERMIT.
7. STAGING, INCLUDING THE STORAGE OF EQUIPMENT AND STOCK PILING OF MATERIALS, SHALL NOT BE ALLOWED WITHIN THE PUBLIC RIGHT-OF-WAY. UPON DEMAND OF CITY, PERMITEE SHALL PROVIDE WRITTEN PROOF OF PERMISSION TO UTILIZE PRIVATE PROPERTY WITHIN CITY LIMITS FOR STAGING OR OTHER WORK ON THE PROJECT. STAGING AND STOCK PILING WITH THE IDENTIFIED LIMITS OF WORK SHALL BE COORDINATED WITH THE PUBLIC WORKS DEPT.
8. TRUCKS DELIVERING MATERIALS TO, OR REMOVING MATERIALS FROM, THE JOB SITE SHALL NOT BLOCK PUBLIC TRAFFIC ACCESS NOR THE FIRE STATION INGRESS AND EGRESS AT 3445 BAYSHORE BLVD AT VALLEY DRIVE AT ANYTIME. APPROVALS MUST BE OBTAINED PRIOR TO PLANNING FOR ANY IMPACTS TO ACCESS TO 125 VALLEY DRIVE.
9. DUST CREATED BY THE GRADING OPERATION SHALL BE CONTROLLED PER SECTION 15.01.330 OF THE BMC, AND PER THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT'S STANDARD DUST CONTROL MEASURES FOR ALL CONSTRUCTION SITES (BAAQMD CEQA GUIDELINES, TABLE 2) AND TO THE SATISFACTION OF THE CITY.
10. UNDERGROUND SERVICE ALERT SHALL BE CONTACTED 48 HOURS PRIOR TO COMMENCEMENT OF WORK, AND ALL EXCAVATION WORK SHALL FULLY BE IN COMPLIANCE WITH SECTION 4216 ET. SEQ OF THE CALIFORNIA GOVERNMENT CODE.
11. UNLESS OTHERWISE SPECIFIED, ALL WORK SHALL BE PERFORMED PER CALTRANS STANDARD SPECIFICATIONS, 2018.
12. GEOWEB BRAND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
13. ALL EXCESS MATERIALS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY AT THE EXPENSE OF THE CONTRACTOR.
14. LOW FLOW DIVERSION PLAN SHALL BE PREPARED BY THE CONTRACTOR AND APPROVED BY THE CITY.
15. ALL AREAS CLEARED OF VEGETATION WITHIN THE LIMITS OF WORK SHALL BE HYDROSEEDDED, UNLESS OTHERWISE INDICATED ON THE LANDSCAPE PLANS. THE NATIVE HYDROSEED MIX LISTED IN TABLE 1 (SHEET 1), OR AN APPROVED ALTERNATIVE, SHALL BE APPLIED PRIOR TO OCTOBER 15TH. SOIL SHALL BE AMENDED AS NECESSARY TO PROMOTE ESTABLISHMENT OF THE SPECIFIED VEGETATION. THE HYDROSEED SLURRY MIX SHALL CONSIST OF A COMPOST/WOOD FIBER AT 800 LBS PER ACRE, NON-ASPHALTIC TACKIFIER AT 130 LBS PER ACRE, SEED AND WATER. FOR SLOPES GREATER THAN 3:1, A LAYER OF STRAW ON TOP OF THE APPLIED SLURRY SHALL BE APPLIED.
16. APPROXIMATE LOCATION OF CULVERT AND MIXING BOX SHOWN. CONTRACTOR TO REMOVE SEDIMENT FROM CULVERT AND MIXING BOX. SEE RECORD DRAWINGS FOR DIMENSIONS OF THE 3 CULVERT BOXES AND THE MIXING BOX.



**VICINITY MAP**  
SCALE: 1"=100'

TABLE 1		
BOTANICAL NAME (COMMON NAME)	PERCENT GERMINATION (MINIMUM)	POUNDS PER LIVE SEED PER ACRE
BROMUS CARINATUS (CALIFORNIA BROME)	80	20
ELYMUS GLAUCUS (BLUE WILD RYE)	80	15
ESCHSCHOLZIA CALIFORNICA (CALIFORNIA POPPY)	75	3
FESTUCA RUBRA (PT. MOLATE FESCUE)	75	8
HORDEUM BRACHYANTHERUM (MEADOW BARLEY)	70	20
VULPIA MICROSTACHYS (THREE WEEK FESCUE)	80	8

CONTACT REPRESENTATIVES		
CLIENT/ CONSULTANT	REPRESENTATIVES	PHONE
U.S.A.		1-800-227-2600
OWNER	CITY OF BRISBANE	JERRY FLANAGAN (415) 508-2130
DESIGN ENGINEER	WOOD RODGERS, INC.	HARVEY OSCLICK (916) 326-5297
IRRIGATION		
BASIN DRAINAGE		
GAS		
ELECTRICITY		
TELEPHONE		
SEWER/WATER/DRAINAGE	SAN MATEO COUNTY	
TRANSPORTATION	SAN MATEO COUNTY	

#### SHEET INDEX

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#### ABBREVIATIONS

AC	ASPHALT CONCRETE
BDCD	BAY CONSERVATION AND DEVELOPMENT COMMISSION
BMC	BRISBANE MUNICIPAL CODE
CL	CENTERLINE
DWG	DRAWING
EL, ELEV	ELEVATION
EXIST, EX	EXISTING
FG	FINISHED GRADE
FL	FLOW LINE
GFRP	GLASS FIBER REINFORCED POLYMER
R/W	RIGHT-OF-WAY
STA	STATION

#### CONTROL NOTES

BASIS OF BEARINGS	THE BEARING NORTH N50°44'49"W WEST BETWEEN FOUND MONUMENTS 107 AND 117 AS ON THE ROS#8080 FILLED APRIL 4, 2014 IN BOOK EE OF MAPS AT PAGES 147-157, COUNTY OF SAN FRANCISCO WAS USED AS THE BASIS OF BEARINGS
BENCHMARK	THE BENCHMARK FOR THIS PROJECT IS A NGS 2.5" DOMED ALUMINUM DISK MONUMENT AB7679 STAMPED "CALIF DEPT OF TRANSPORTATION 1994 STA 04 GF" ON TOP OF A RETAINING WALL @ EASTERLY (BAY) SIDE OF AN ASPHALT PATH WHICH RUNS PARALLEL (EASTERLY) OF HARNEY WAY, 136' NLY OF AN IRON ACCESS GATE LEADING TO THE ASPHALT PATH, 5' NLY OF WHERE THE CONCRETE AREA NORTH OF THE GATE ENDS AND THE ASPHALT PATH BEGINS ELEVATION 12.133 DATUM NAVD88 CITY OF SAN FRANCISCO HIATUS PT#107
HORIZONTAL COORDINATES	THE HORIZONTAL COORDINATES ARE APPROXIMATE STATE PLANE ZONE III US SURVEY FEET, GROUND DISTANCES

#### BENCH MARK

POINT	NORTHING / EASTING	ELEV	DESCRIPTION
107	2085130.26, 6013910.28	12.13	FD CALIF DOT BM 107
117	2089533.73, 6008521.28	384.39	FD CCSF BM 117

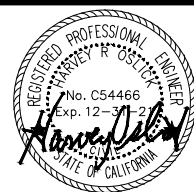
#### SURVEY CONTROL POINTS

THE COORDINATES AND ELEVATIONS SHOWN HEREON ARE BASED LOCALLY UPON THE FOLLOWING CONTROL POINTS:

POINT	NORTHING	EASTING	ELEV	DESCRIPTION
300	2078398.93	6011805.50	14.84	MAG + SHINER
301	2078015.53	6012204.69	14.82	MAG + SHINER
302	2078398.25	6012045.89	13.33	MAG + SHINER
303	2078530.39	6011945.89	13.51	MAG + SHINER

⊗ SURVEY CONTROL POINT

CONTRACTOR SHALL PRESERVE AND PROTECT ALL CONTROL POINTS. WHERE CONTROL POINTS CONFLICT WITH OR WILL BE REMOVED BY CONSTRUCTION ACTIVITIES, CONTRACTOR SHALL REMOVE AND REPLACE THE CONTROL POINTS AT CONTRACTOR'S EXPENSE.



TITLE SHEET & VICINITY MAP  
GUADALUPE CHANNEL EROSION  
CONTROL PROJECT  
BRISBANE CALIFORNIA

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PRIVATE DEVELOPMENT \_\_\_\_\_  
STREETS AND TRAFFIC (SEWER SERVICES) \_\_\_\_\_  
STREETS AND TRAFFIC (TRAFFIC OPERATIONS) \_\_\_\_\_  
PARKS AND RECREATION \_\_\_\_\_

TRANSPORTATION \_\_\_\_\_  
SANITARY \_\_\_\_\_  
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ELECTRICAL \_\_\_\_\_  
CONSTRUCTION \_\_\_\_\_  
SURVEYS \_\_\_\_\_



#### DEPARTMENT OF PUBLIC WORKS BRISBANE, CALIFORNIA

DRAWN BY: **J. PRIEST** MR. RANDY L. BREULT  
CHECKED BY: **J. KORS** DIRECTOR OF PUBLIC WORKS  
PROJ. ENGR.: **H. OSCLICK**  
DATE: **05/12/2020**  
SCALE: **AS SHOWN**  
SHEET NO: **1** OF **13** SHEETS FILE NO.

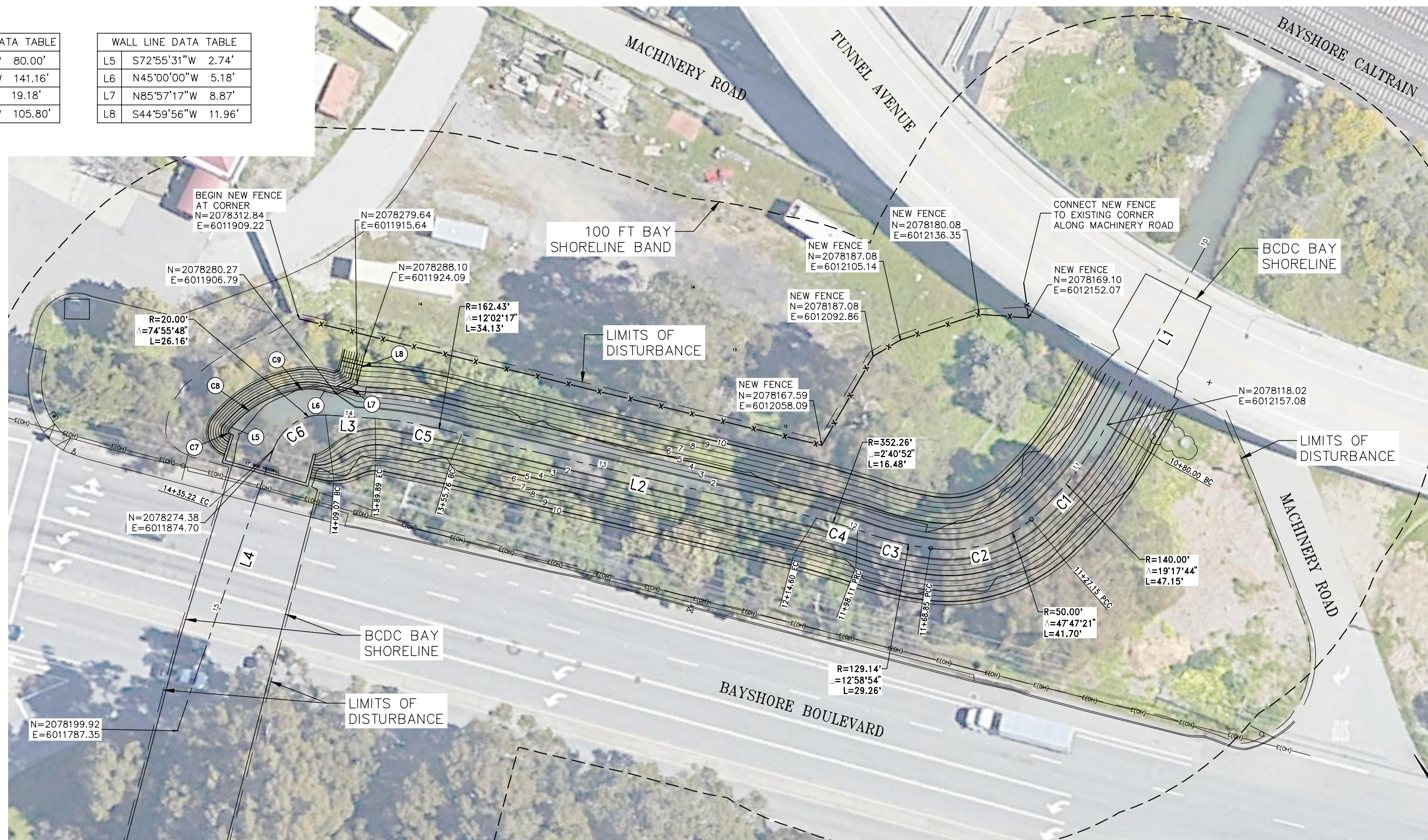


CHANNEL LINE DATA TABLE

L1	S59°42'00"W	80.00'
L2	N46°03'33"W	141.16'
L3	N55°31'12"W	19.18'
L4	S49°33'00"W	105.80'

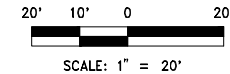
WALL LINE DATA TABLE

L5	S72°55'31"W	2.74'
L6	N45°00'00"W	5.18'
L7	N85°57'17"W	8.87'
L8	S44°59'56"W	11.96'



**CONSTRUCTION NOTES**

1. CURVES C7, C8, C9 AND LINE L6 APPLY TO 1.8' ELEVATION. FIELD ADJUST AT CURVE C7 AS NEEDED TO MATCH EXISTING WALL.



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**HORIZONTAL CONTROL PLAN**  
**GUADALUPE CHANNEL EROSION**  
**CONTROL PROJECT**  
 BRISBANE CALIFORNIA

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**DEPARTMENT OF PUBLIC WORKS**  
**BRISBANE, CALIFORNIA**

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MR RANDY L BREULT  
 DIRECTOR OF PUBLIC WORKS

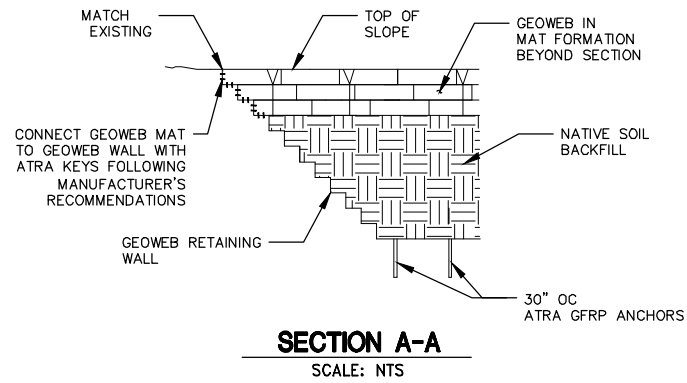
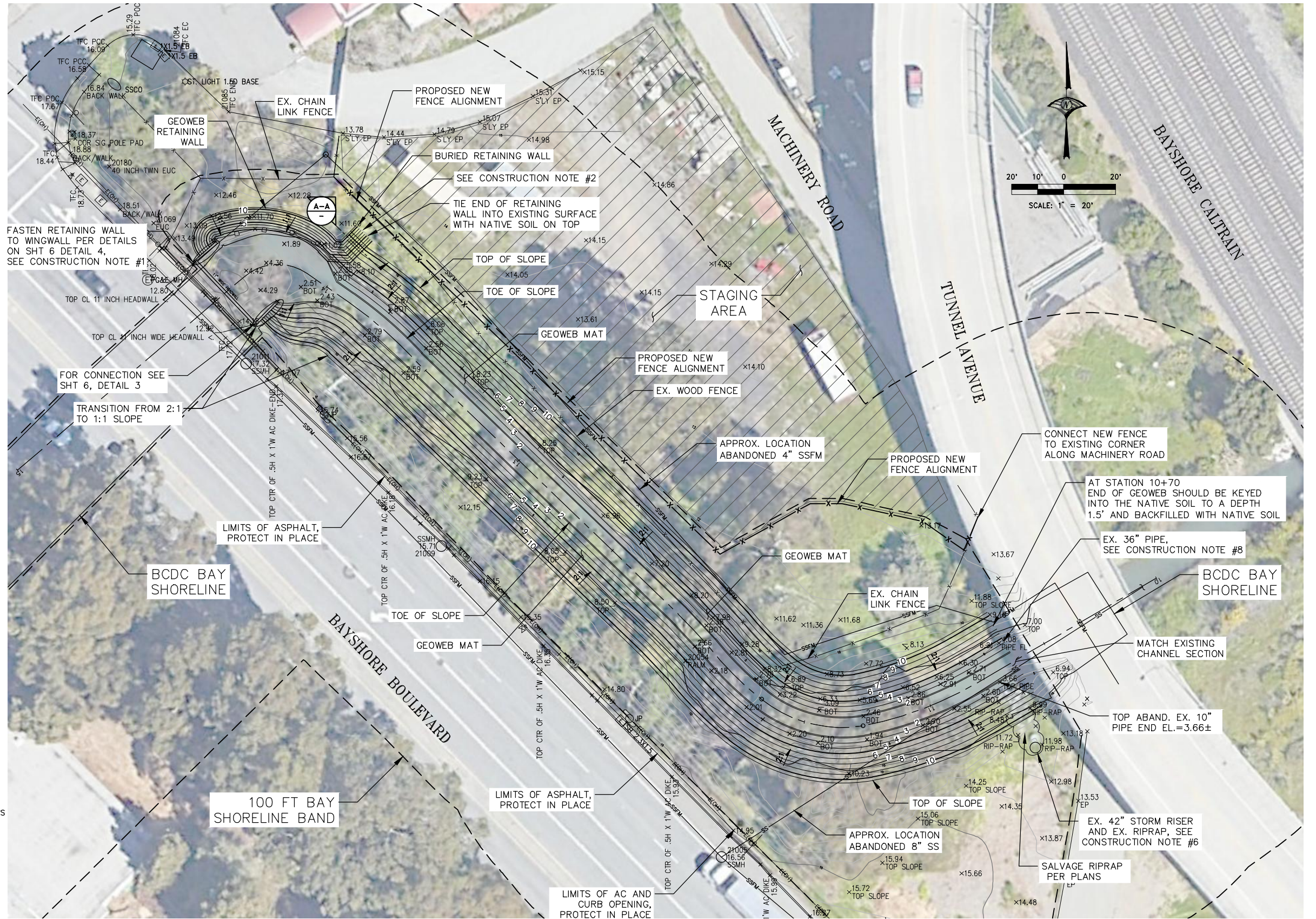
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**CONSTRUCTION NOTES**

- WESTERN END OF 1H: 1V GEOWEB RETAINING WALL SHALL BE ANCHORED TO THE EXISTING WING WALL USING BOLTS SECURED TO THE WING WALL. THE RETAINING WALL SHALL BE ANCHORED TO THE BOLTS USING TP31 TENDONS BEND AND ANCHORING CONFIGURATION SHALL BE CONSTRUCTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- EASTERN EDGE OF RETAINING WALL SHALL END 2' BEYOND THE 9' FINISHED GRADE CONTOUR. AN ATRA GFRP ANCHOR SHALL BE USED IN EACH SECTION TO ANCHOR IT SECURELY. THE END OF THE RETAINING WALL WILL BE COVERED WITH NATIVE SOIL. AND CARE SHALL BE TAKEN DURING THE BACKFILL PROCESS NOT TO DAMAGE THE RETAINING WALL.
- EXISTING SHEET PILE WALL ON OUTSIDE CURVE FROM APPROXIMATE STATIONS 16+40 TO 16+70 AND ABOVE THE BASE OF THE GEOWEB RETAINING WALL SHALL BE REMOVED BY THE CONTRACTOR. EXISTING WOOD FENCE WITHIN LIMITS OF CHANNEL WORK SHALL BE REMOVED BY THE CONTRACTOR.
- CONTRACTOR TO CONSTRUCT NEW CHAIN LINK FENCE IN CONFIGURATION SIMILAR TO EXISTING FENCE. ALIGNMENT OF NEW FENCE TO BE APPROVED BY CITY AND AS DIRECTED BY ENGINEER.
- REMOVE EXISTING RIPRAP AND PLACE RIPRAP AT GRADE BETWEEN EXISTING RISER AND CHANNEL SLOPE AND ON TOP OF GEOWEB.
- A PORTION OF THE INDICATED STAGING AREA WILL BE AVAILABLE FOR THE CONTRACTOR'S USE. THE CONTRACTOR SHALL COMPLY WITH RESTRICTIONS ON THEIR USE OF THE STAGING AREA AS IDENTIFIED THE ENGINEER.
- PROTECT EXISTING PIPE. INSTALL GEOWEB NEATLY AROUND EXISTING PIPE.



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**PLAN VIEW SHEET**  
**GUADALUPE CHANNEL EROSION CONTROL PROJECT**  
 BRISBANE CALIFORNIA

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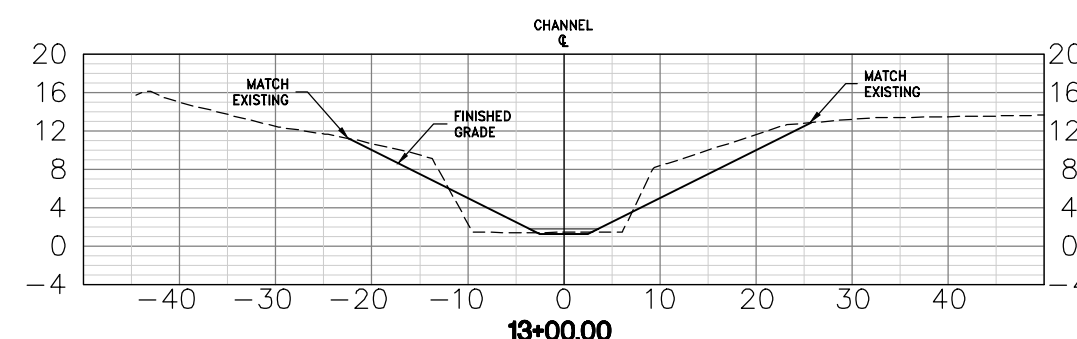
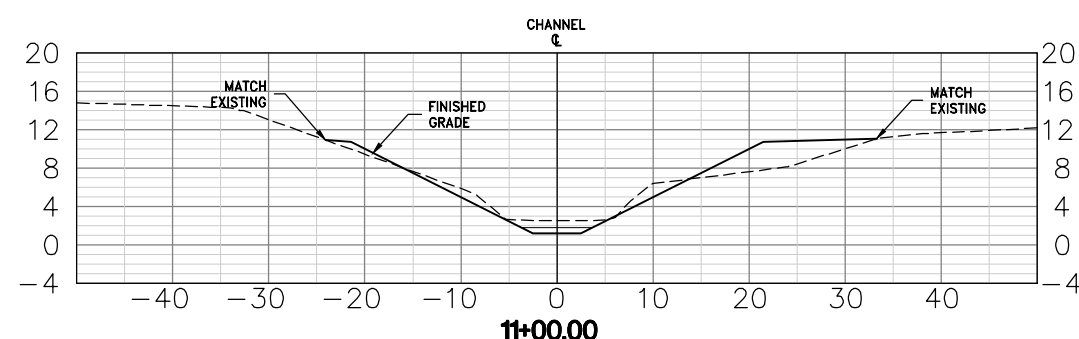
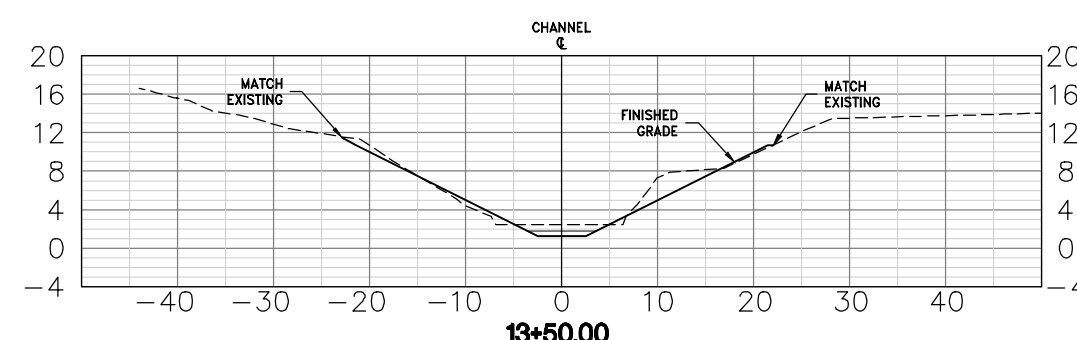
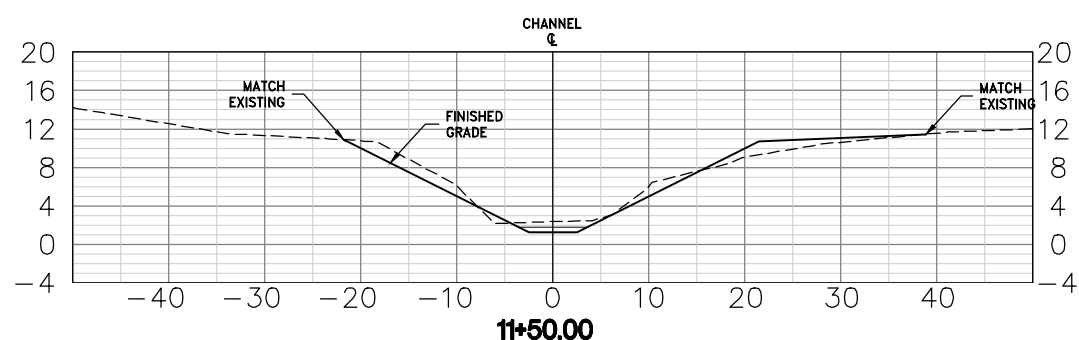
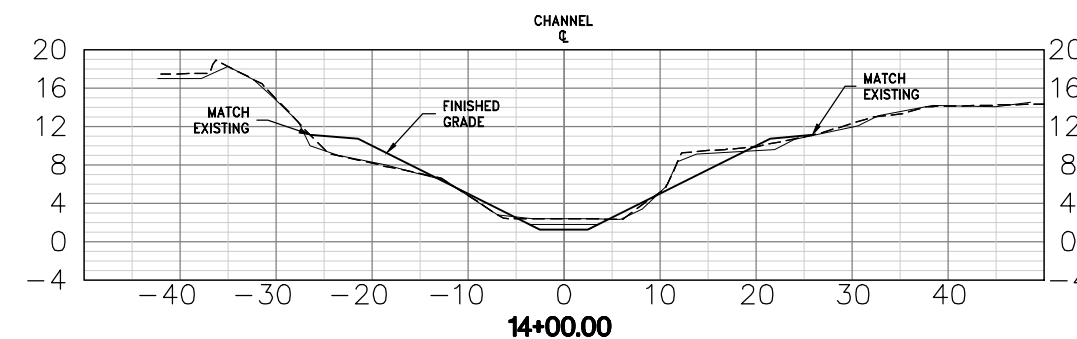
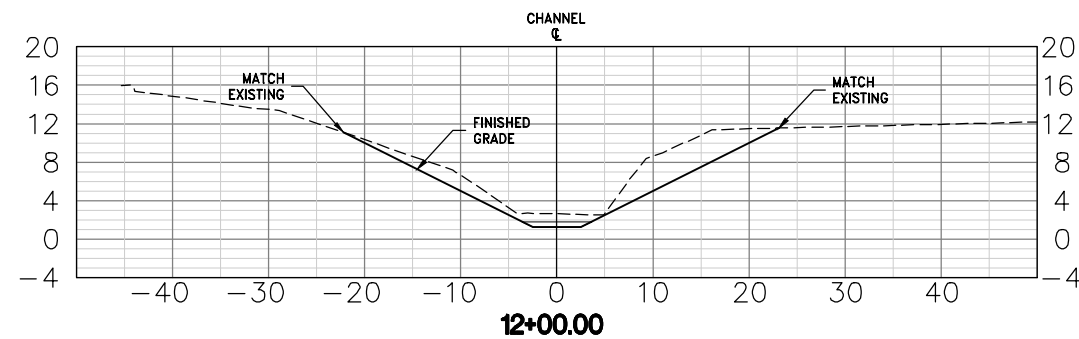
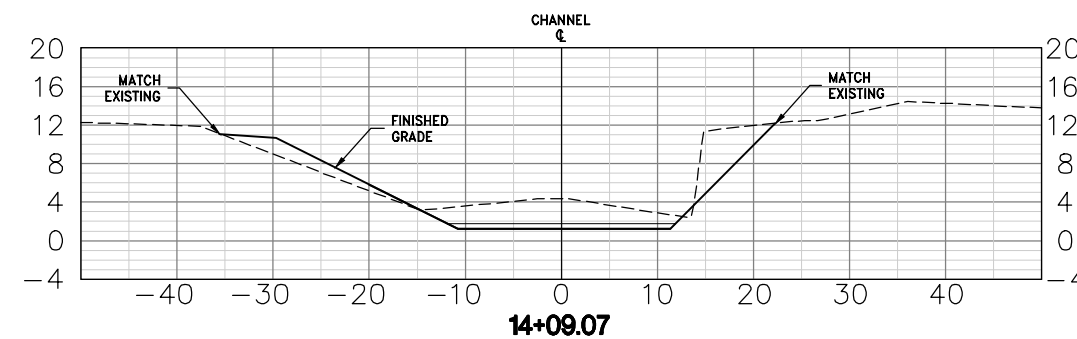
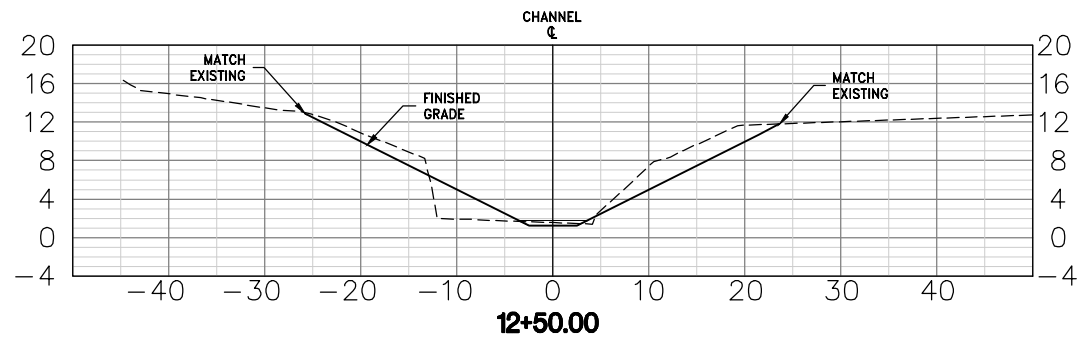


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 DIRECTOR OF PUBLIC WORKS  
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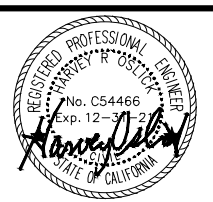
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R2 Breault

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**CROSS SECTIONS**  
**GUADALUPE CHANNEL EROSION**  
**CONTROL PROJECT**  
BRISBANE CALIFORNIA

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- PRIVATE DEVELOPMENT \_\_\_\_\_
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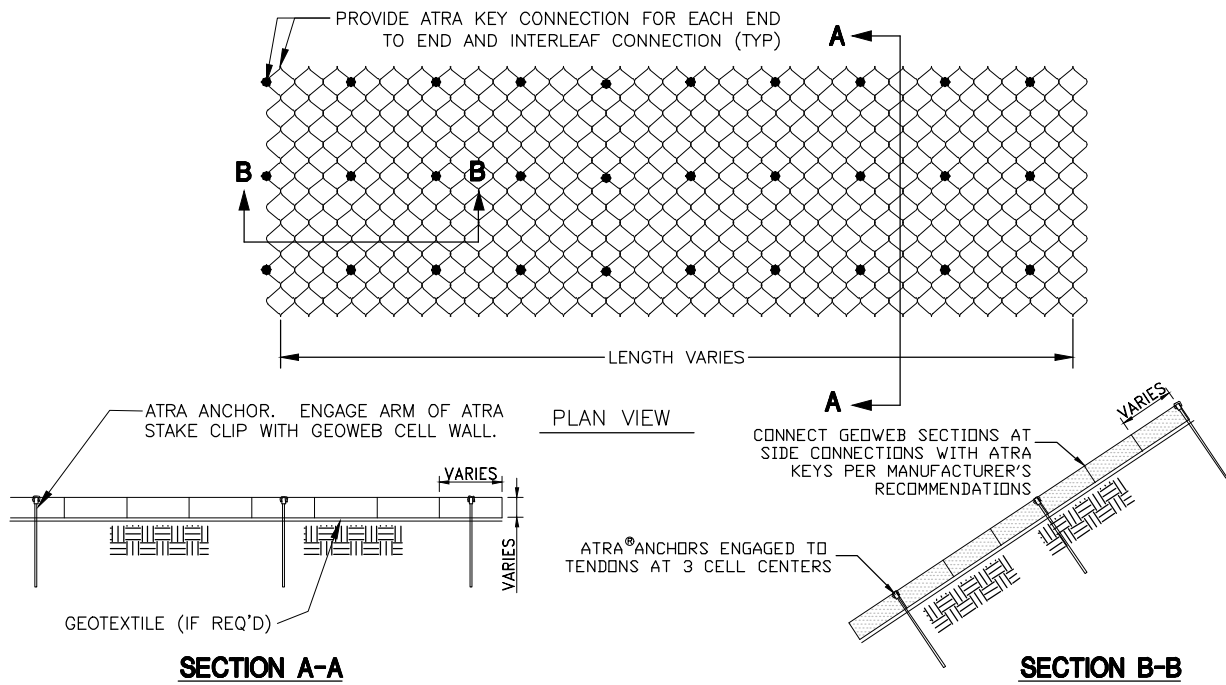
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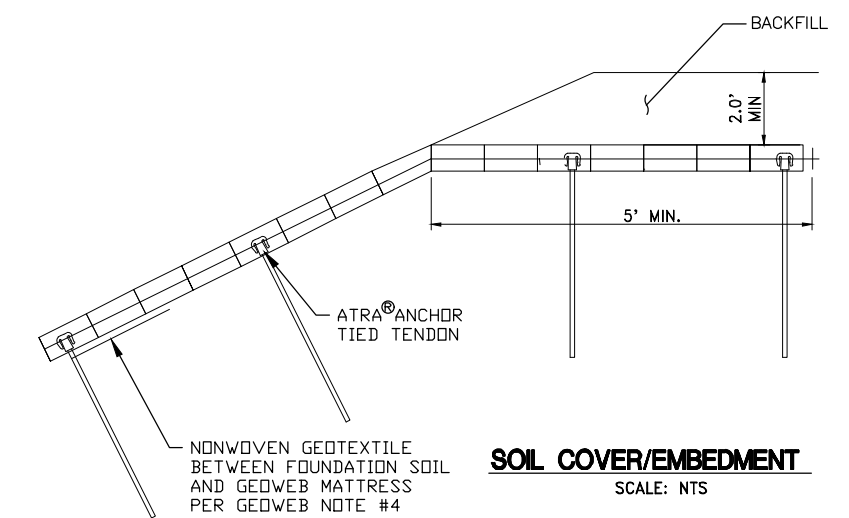
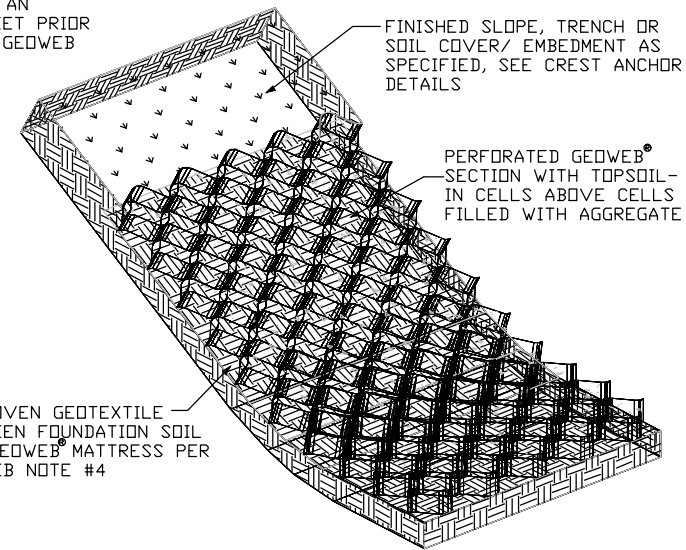
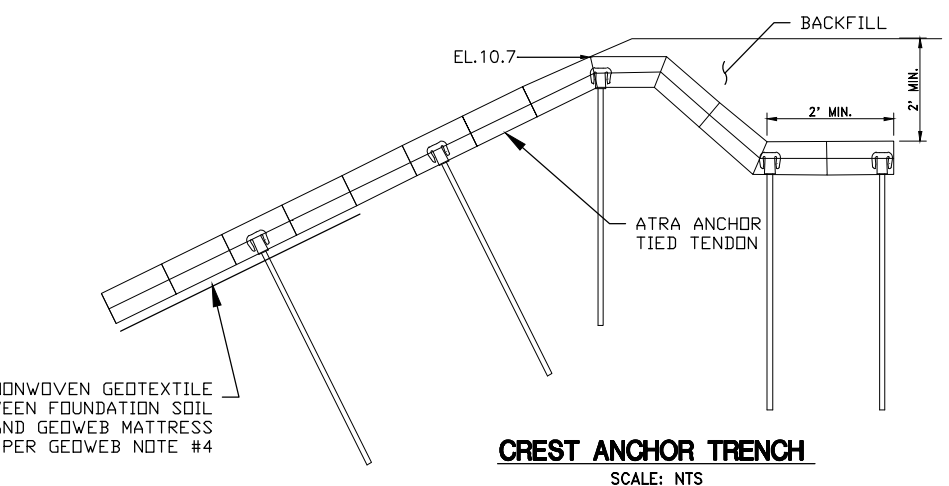
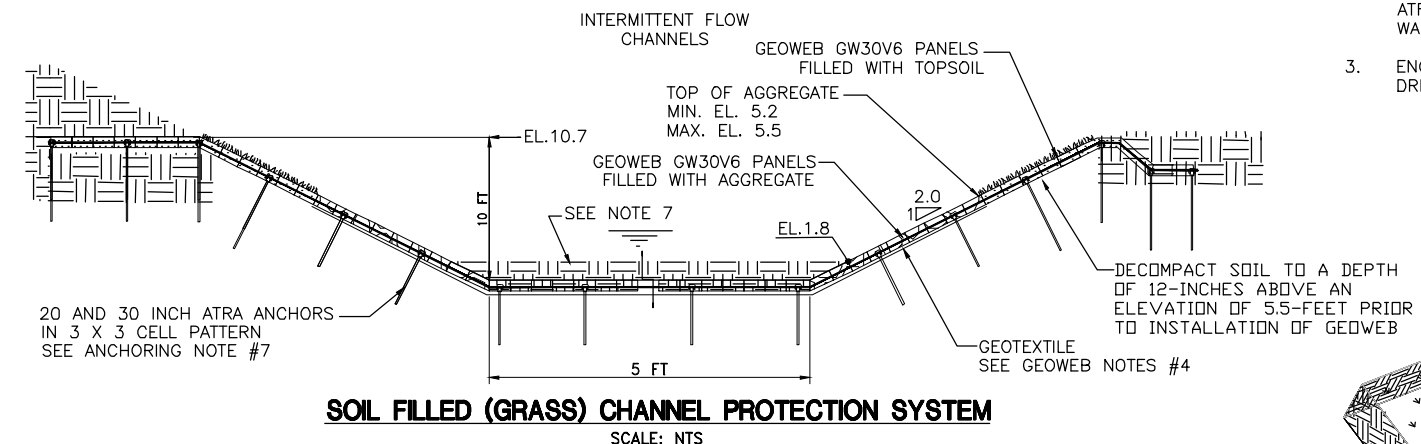
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**TYPICAL ATRA® ANCHOR AND TENDON SYSTEM**  
SCALE: NTS



**ANCHORING NOTES:**

1. ATRA ANCHORS SHALL CONSIST OF 20-INCH ATRA SPEED STAKES OR 30-INCH ATRA GFRP ANCHORS. LENGTH OF THE ATRA ANCHORS SHALL BE AS SPECIFIED.
2. PRE-ASSEMBLED ATRA GFRP (ANCHOR) ARE AVAILABLE FROM PRESTO GEOSYSTEMS.
3. THE GEOWEB SECTIONS SHALL BE ANCHORED TO RESIST SLIDING.
4. THE GEOWEB PANELS SHALL BE CONNECTED WITH ATRA KEYS AT EACH INTERLEAF AND END TO END CONNECTION.
5. GEOWEB SHALL BE ANCHORED WITH A ATRA ANCHOR EVERY 3RD CELL IN THE DOWN SLOPE DIRECTION, AND EVERY 3RD CELL PARALLEL TO THE CHANNEL. THIS IS ILLUSTRATED IN THE DETAIL TITLED "TYPICAL ATRA ANCHOR AND TENDON SYSTEM."
6. THE TENDON MATERIAL USED FOR ANCHORING SHALL BE POLYESTER TP31 OR APPROVED EQUAL. THE TENDON MATERIAL SHOULD BE SECURELY FASTENED TO EACH ATRA ANCHOR AS ILLUSTRATED IN THE DETAIL TITLED "TYPICAL ATRA ANCHOR AND TENDON SYSTEM."
7. 20" ANCHORS MAY BE USED IN AREAS WHERE UNDERLYING SOILS HAVE NOT BEEN SIGNIFICANTLY DISTURBED. 30" ANCHORS SHALL BE USED WHERE THE UNDERLYING SOIL HAS BEEN DECOMPACTED.

**ANCHORING STEPS:**

1. POSITION THE ATRA ANCHOR NEXT TO THE UP-SLOPE CELL WALL.
2. DRIVE ATRA ANCHOR INTO THE GROUND UNTIL ARM OF ATRA STAKE CLIP IS LOCATED ABOVE GEOWEB CELL WALL.
3. ENGAGE ARM OF ATRA STAKE CLIP TO CELL WALL AND DRIVE UNTIL TIGHT.

**GEOWEB NOTES:**

1. THIS EVALUATION IS COPYRIGHTED AND IS BASED ON THE USE OF PRODUCTS MANUFACTURED BY PRESTO PRODUCTS COMPANY. ANY USE OF THIS EVALUATION FOR ANY PRODUCT OTHER THAN THAT MANUFACTURED BY PRESTO MAKES THIS EVALUATION INVALID.
2. THE EVALUATION ASSUMES THAT THE SLOPE IS GLOBALLY STABLE.
3. GEOWEB SECTIONS SHALL BE FILLED WITH SPECIFIED IN-FILL MATERIAL. AGGREGATE SHALL BE 1.5" TO 2.0" ROCK. FILL CELLS ON CHANNEL SLOPES WITH AGGREGATE UP TO AN ELEVATION BETWEEN 5.2 AND 5.5 FEET.
4. PROVIDE A NON-WOVEN GEOTEXTILE SEPARATION LAYER BELOW AGGREGATE FILL AND INSTALL ACCORDING TO MANUFACTURER'S INSTRUCTIONS INCLUDING OVERLAPS.
5. GEOTEXTILE MATERIAL SHALL BE OF THE NON-WOVEN TYPE. USE RG80NC NONWOVEN GEOTEXTILE OR APPROVED EQUAL.
6. LIMIT THE DROP OF INFILL TO PREVENT DISTORTION OF THE CELL WALLS.
7. FILL MATERIAL IN GEOWEB ON CHANNEL BOTTOM AND BACKFILL ABOVE GEOWEB ALONG THE CHANNEL BOTTOM SHALL BE DERIVED FROM SOILS EXCAVATED ALONG THE CHANNEL BELOW AN ELEVATION OF 5.5 FEET.
8. TOPSOIL IN GEOWEB ALONG CHANNEL SLOPES ABOVE AGGREGATE FILL ELEVATION BETWEEN 5.2 AND 5.5 FEET SHALL BE PER APPROVED SOIL HANDLING PLAN.
9. PROVIDE SURFACE PROTECTION (HYDROSEED, ECB, OR TRM) SIZED FOR HYDRAULIC CONDITIONS TO PREVENT CELL WASH-OUT PRIOR TO ESTABLISHMENT OF VEGETATION.

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REGISTERED PROFESSIONAL ENGINEER  
No. C54466  
Exp. 12-31-21  
Harvey R. Oslick  
STATE OF CALIFORNIA

**DETAILS & NOTES - 1 OF 2**  
**GUADALUPE CHANNEL EROSION CONTROL PROJECT**  
BRISBANE CALIFORNIA

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PRIVATE DEVELOPMENT _____	TRANSPORTATION _____
STREETS AND TRAFFIC (SEWER SERVICES) _____	SANITARY _____
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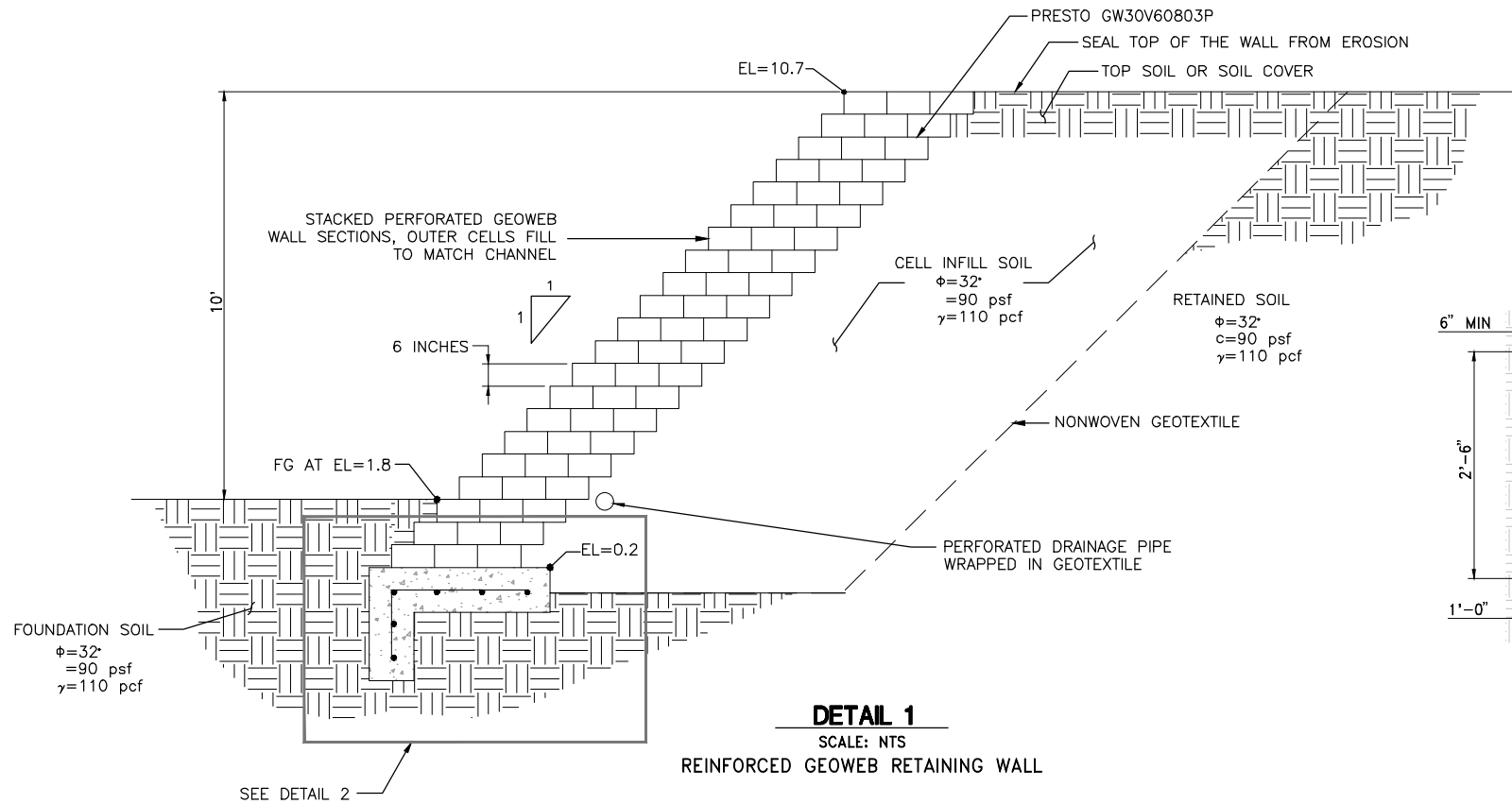
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MR RANDY L BREault  
DIRECTOR OF PUBLIC WORKS  
R. L. Breault

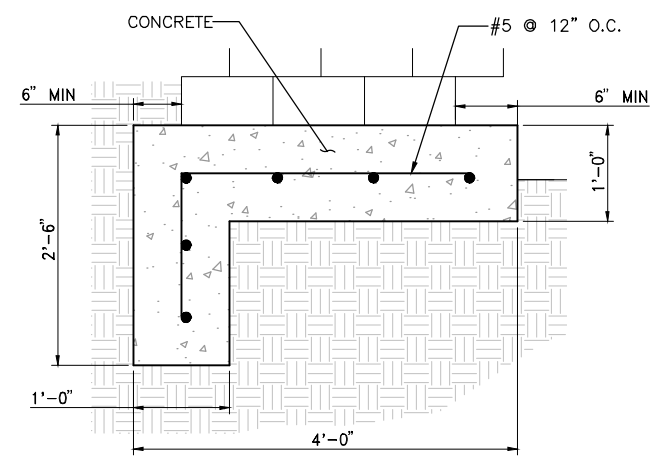
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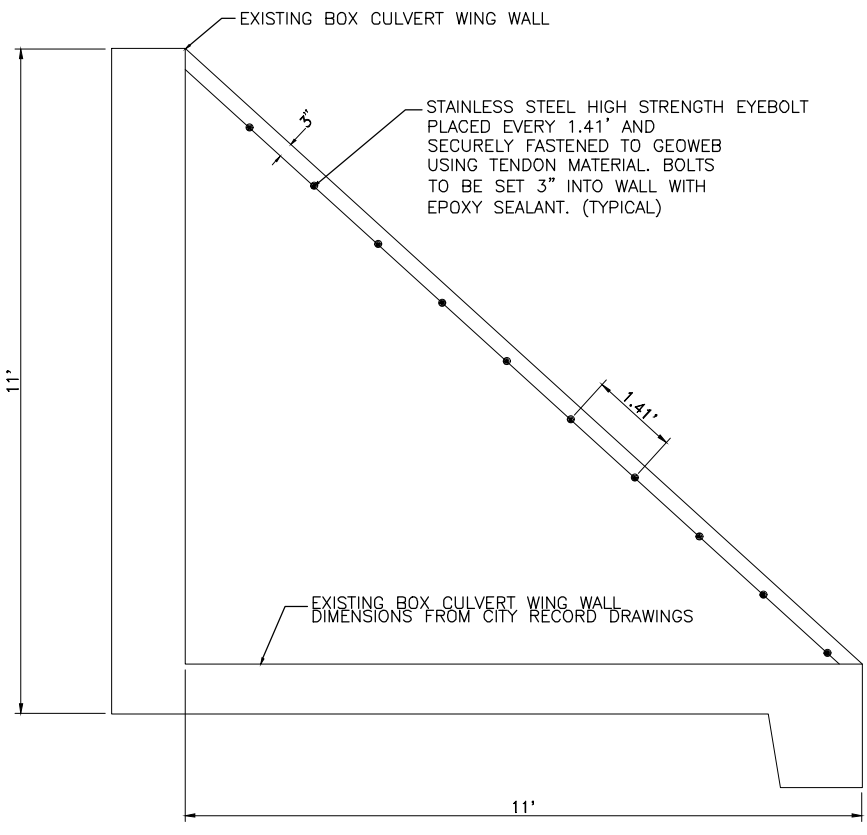




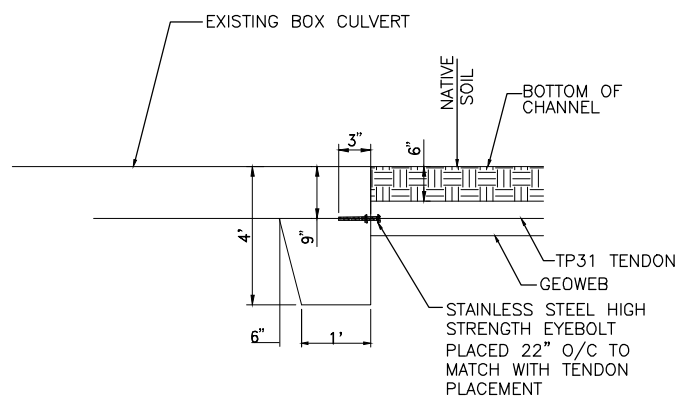
**DETAIL 1**  
SCALE: NTS  
REINFORCED GEOWEB RETAINING WALL



**DETAIL 2**  
SCALE: NTS  
GEOWEB RETAINING WALL FOOTING



**DETAIL 3**  
SCALE: NTS  
BOLT LOCATIONS ALONG EXISTING WALLS  
FOR SCORING GEOWEB



**DETAIL 4**  
SCALE: NTS  
SECURING THE HORIZONTAL GEOWEB  
TO THE BOX CULVERT

- REINFORCED WALL SYSTEMS NOTES:**
1. CONNECT THE GEOWEB SECTIONS WITH ATRA® KEYS AT EACH INTERLEAVE CONNECTION.
  2. LIMIT THE DROP INFILL TO PREVENT DAMAGE TO THE CELLS.
  3. PLACE BACKFILL MATERIAL WITHIN REINFORCED SOIL ZONE IN 10" INCH LIFTS AND COMPACT TO A MINIMUM 95% OF STANDARD PROCTOR DRY DENSITY.
  4. DAYLIGHT DRAINAGE PIPE INTO CHANNEL AT BEND IN WALL NEAR EASTERN END OF WALL.

**WOOD RODGERS**  
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME  
3301 C St, Bldg. 100-B Tel 916.341.7760  
Sacramento, CA 95816 Fax 916.341.7767



**DETAILS & NOTES - 2 OF 2**  
**GUADALUPE CHANNEL EROSION CONTROL PROJECT**  
BRISBANE CALIFORNIA

NO.	REVISIONS	DATE
6		
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PRIVATE DEVELOPMENT	TRANSPORTATION
STREETS AND TRAFFIC (SEWER SERVICES)	SANITARY
STREETS AND TRAFFIC (TRAFFIC OPERATIONS)	STORM
PARKS AND RECREATION	ELECTRICAL
	CONSTRUCTION
	SURVEYS



**DEPARTMENT OF PUBLIC WORKS**  
**BRISBANE, CALIFORNIA**

DRAWN BY: J. PRIEST  
CHECKED BY: H. OSICK  
PROJ. ENGR.: H. OSICK  
DATE: 05/01/2020  
SCALE: AS SHOWN  
SHEET NO: 6 OF 13 SHEETS

MR RANDY L BREULT  
DIRECTOR OF PUBLIC WORKS  
FILE NO.

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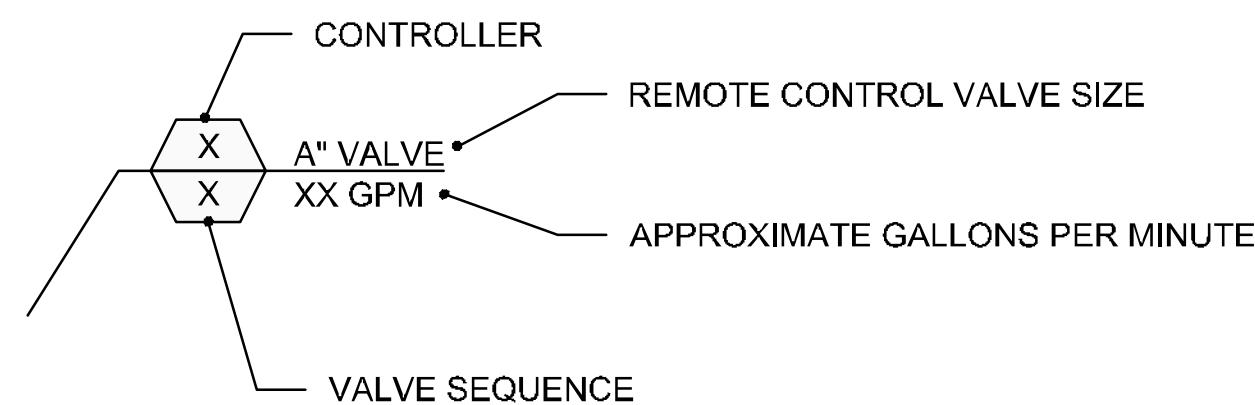


**PRODUCTS BREAKDOWN:**

FOR THE PURPOSE OF BIDDING, THE FOLLOWING ITEM AND QUANTITY TABLE IS PROVIDED FOR THE IRRIGATION SYSTEM. THE QUANTITIES PROVIDED ARE ESTIMATES AND CONTRACTOR REMAINS RESPONSIBLE FOR CONFIRMING ACTUAL QUANTITIES REQUIRED BASED ON DRAWINGS. ANY QUANTITY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT BIOLOGIST.

UNIT DESCRIPTION	UNIT	QUANTITY
BUBBLER NOZZLE	EA	241
FLEX HOSE AND FITTINGS	LF	1970
SCHEDULE 40 PLASTIC PIPE RIGID PVC AND FITTINGS (TRENCHED)	LF	800
SCHEDULE 40 PLASTIC PIPE RIGID PVC AND FITTINGS (ON GRADE)	LF	660
PRESSURE REGULATOR (3-INCH)	EA	1
VALVE BOX (18-INCH)	EA	6

**VALVE CALLOUT DESCRIPTION:**



IRRIGATION MAINLINE SIZING CHART*		
SIZE	MATERIAL	GPM
1"	SCH 40 PVC	8-12
1-1/4"	SCH 40 PVC	12-22
1-1/2"	CLASS 315	22-30
2"	CLASS 315	30-48

LATERAL LINE SIZING CHART*		
SIZE	MATERIAL	GPM
1/2"	IPS FLEX HOSE **	0-3
3/4"	IPS FLEX HOSE **	3-6
1"	SCH 40 PVC	6-12
1-1/4"	SCH 40 PVC	12-22
1-1/2"	SCH 40 PVC	22-30

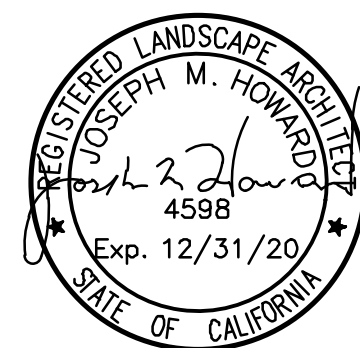
\* UNLESS OTHERWISE NOTED ON PLANS

**LEGEND**

- POINT OF CONNECTION
- BACKFLOW PREVENTION DEVICE
- PRESSURE REGULATOR *RD Smith*
- IN-LINE FLOW METER
- GATE VALVE
- REMOTE CONTROL VALVE ASSEMBLY
- IRRIGATION ZONE
- TRENCHED IRRIGATION MAINLINE
- TRENCHED IRRIGATION LATERAL LINE
- ON-GRADE IRRIGATION LATERAL LINE
- FENCE PER CIVIL SHEETS
- EX CHAIN LINK FENCE
- BCDC BAY SHORELINE
- 100 FT BAY SHORELINE BAND

**NOTES:**

- THESE PLANS ARE SCHEMATIC. THE LOCATION OF THE POINT OF CONNECTION, EXISTING WATER MAIN LINE, ALL PIPING, VALVES, ETC. ARE DIAGRAMMATIC. EQUIPMENT IS SHOWN WITHIN ROADS OR PAVED AREAS FOR DESIGN CLARIFICATION ONLY. CONTRACTOR SHALL AVOID ANY CONFLICT AMONG THE IRRIGATION SYSTEM, PLANTING, AND ARCHITECTURAL OR ENGINEERING FEATURES. CONTRACTOR SHALL AVOID INSTALLATION OF IRRIGATION SYSTEM ELEMENTS WITHIN THE DRIP LINE OF EXISTING TREES.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATION OF EXISTING UTILITIES TO REMAIN AND COORDINATING IRRIGATION WORK TO AVOID CONFLICTS WITH EXISTING UTILITIES TO REMAIN AND NEW UTILITIES.
- DUE TO THE SCALE OF THE PLANS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, ETC. THAT MAY BE REQUIRED. THE CONTRACTOR SHALL CAREFULLY INVESTIGATE THE STRUCTURAL AND FINISHED CONDITIONS AFFECTING ALL OF THE WORK AND PLAN ACCORDINGLY, AND SHALL FURNISH MATERIAL REQUIRED TO MEET SUCH CONDITIONS.
- SEE SPECIFICATIONS REGARDING SYSTEM OPERATING PRESSURE.
- IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE THEMSELVES WITH ALL GRADE DIFFERENCES, LOCATIONS OF WALLS, RETAINING WALLS, CULVERTS, ETC. CONTRACTOR SHALL COORDINATE WORK TO BE DONE WITH THE GENERAL CONTRACTOR AND OTHER SUBCONTRACTORS FOR THE LOCATION AND INSTALLATION OF SLEEVES THROUGH WALLS, UNDER PAVING, STRUCTURES, CULVERTS, ETC.
- CONTRACTOR SHALL NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES, OR DIFFERENCES IN THE AREA DIMENSIONS EXIST. SUCH OBSTRUCTIONS OR DIFFERENCES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
- FURNISH AND INSTALL ALL FITTINGS NECESSARY TO COMPLETE THE WORK.
- WORK SHALL CONFORM TO EXISTING REGULATIONS INCLUDING, BUT NOT LIMITED TO, THE CITY'S RULES AND REGULATIONS, CALIFORNIA DEPARTMENT OF PUBLIC HEALTH REGULATIONS, AND THE CALIFORNIA PLUMBING CODE.
- CONTRACTOR SHALL COORDINATE WITH THE UNDERGROUND SERVICE ALERT (USA) (1-800-227-2600) TO LOCATE UTILITY CROSSINGS AND TO EXCAVATE WITH CAUTION TO AVOID UTILITY DAMAGE.



**IRRIGATION NOTES**  
**GUADALUPE CHANNEL EROSION CONTROL PROJECT**  
 BRISBANE CALIFORNIA

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	REVISIONS	DATE

- PRIVATE DEVELOPMENT \_\_\_\_\_
- STREETS AND TRAFFIC (SEWER SERVICES) \_\_\_\_\_
- STREETS AND TRAFFIC (TRAFFIC OPERATIONS) \_\_\_\_\_
- PARKS AND RECREATION \_\_\_\_\_

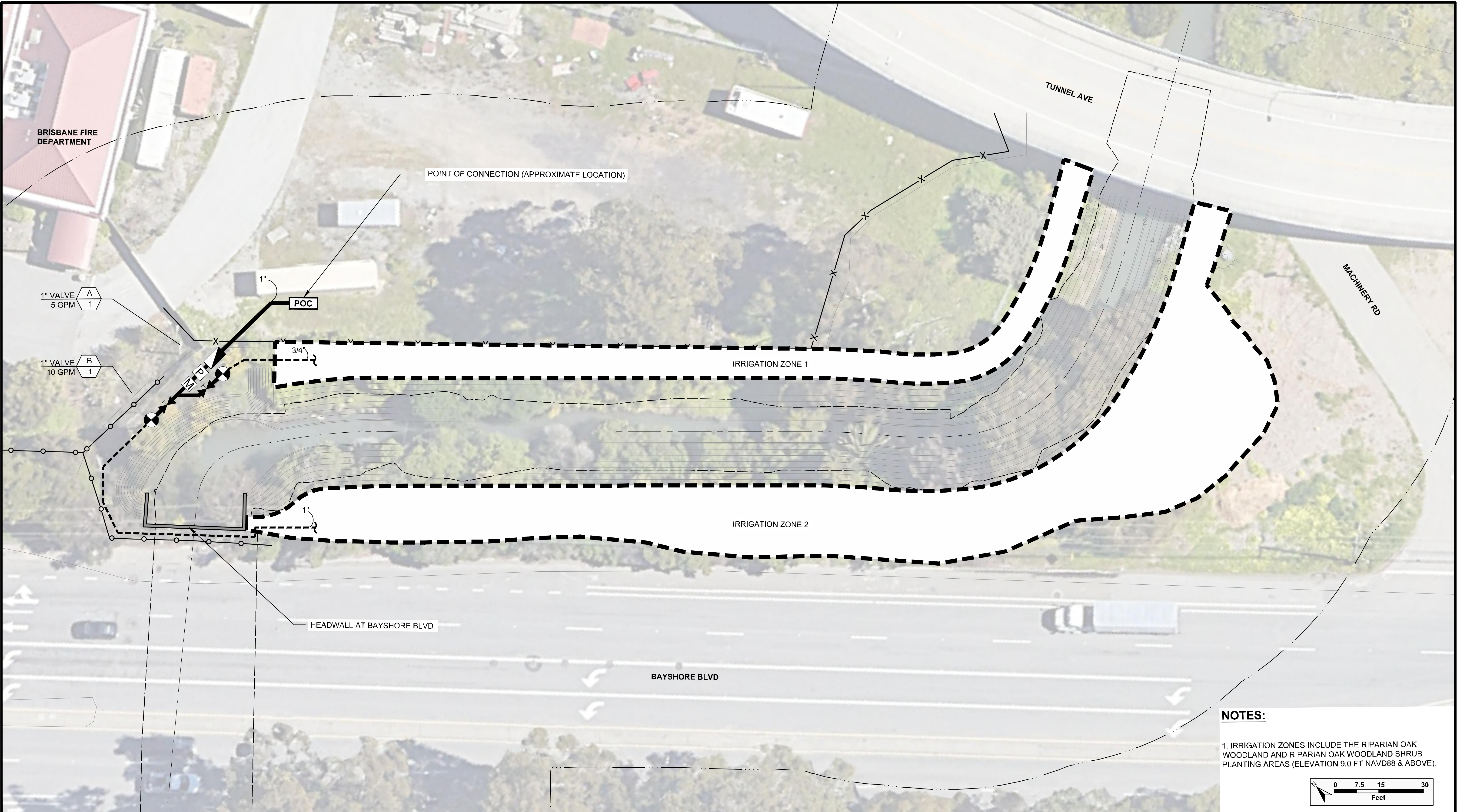
- TRANSPORTATION \_\_\_\_\_
- SANITARY \_\_\_\_\_
- STORM \_\_\_\_\_
- ELECTRICAL \_\_\_\_\_
- CONSTRUCTION \_\_\_\_\_
- SURVEYS \_\_\_\_\_



**DEPARTMENT OF PUBLIC WORKS**  
**BRISBANE, CALIFORNIA**

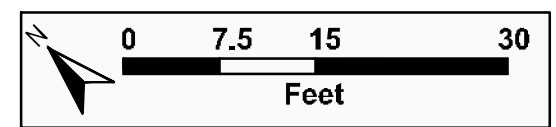
DRAWN BY: CG MR. RANDY L BREault  
 CHECKED BY: KV, JMH, GA, MB DIRECTOR OF PUBLIC WORKS  
 PROJ. ENGR.: HARVEY OSLUICK  
 DATE: 05/01/2020  
 SCALE: AS SHOWN  
 SHEET NO: 7 OF 13 SHEETS FILE NO.





**NOTES:**

1. IRRIGATION ZONES INCLUDE THE RIPARIAN OAK WOODLAND AND RIPARIAN OAK WOODLAND SHRUB PLANTING AREAS (ELEVATION 9.0 FT NAVD88 & ABOVE).



# IRRIGATION PLAN

## GUADALUPE CHANNEL EROSION CONTROL PROJECT

BRISBANE CALIFORNIA

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	REVISIONS	DATE

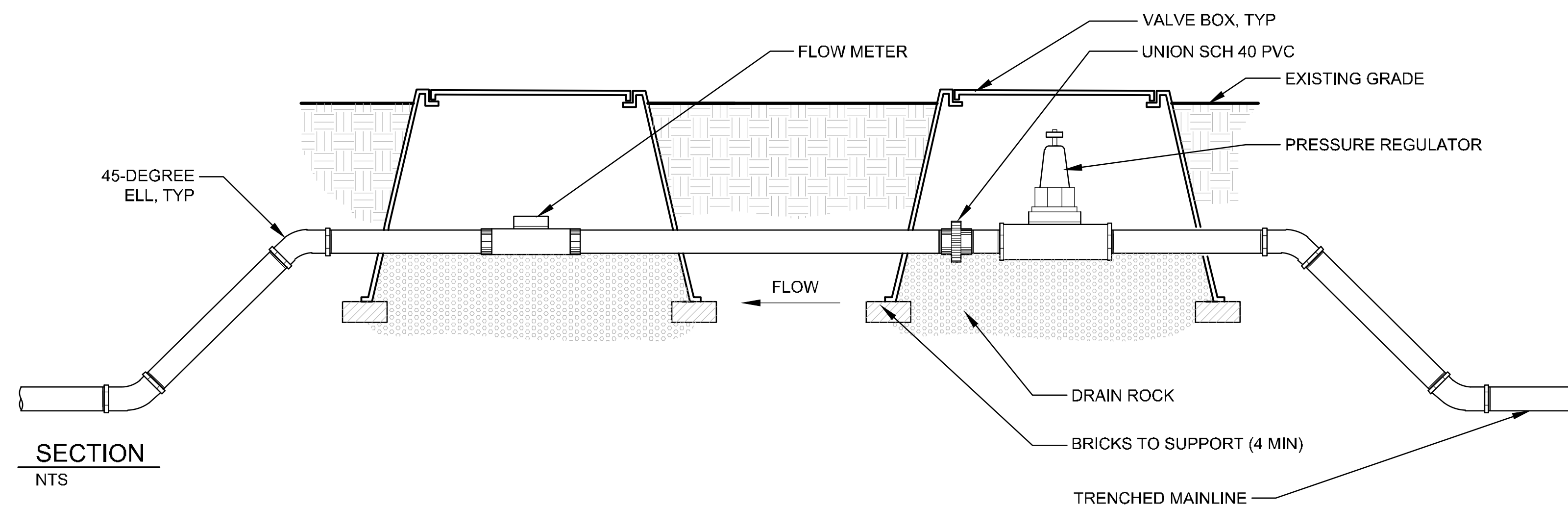
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STREETS AND TRAFFIC (SEWER SERVICES)	_____	SANITARY	_____
STREETS AND TRAFFIC (TRAFFIC OPERATIONS)	_____	STORM	_____
PARKS AND RECREATION	_____	ELECTRICAL	_____
		CONSTRUCTION	_____
		SURVEYS	_____



**DEPARTMENT OF PUBLIC WORKS  
BRISBANE, CALIFORNIA**

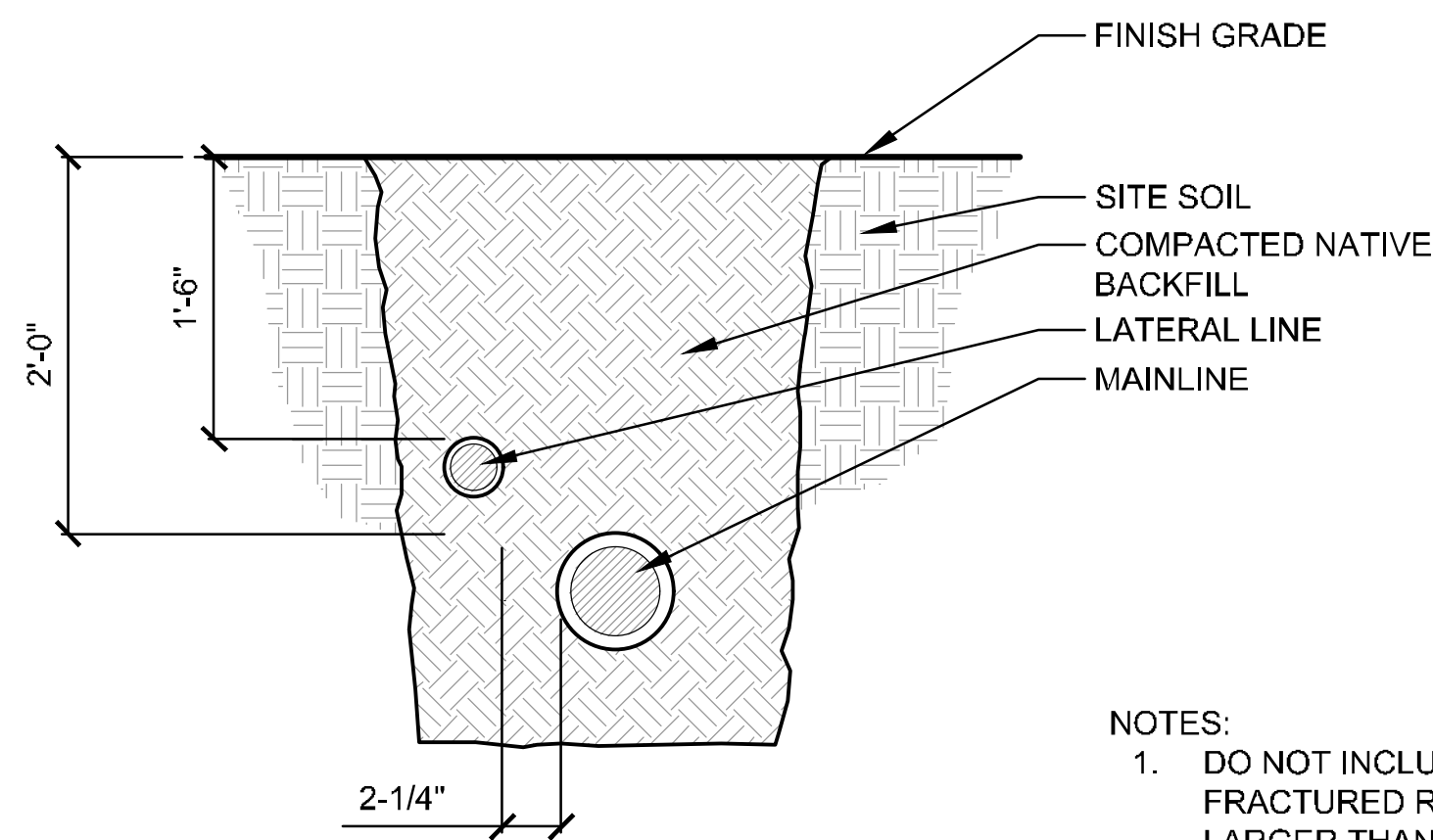
DRAWN BY: CG	MR. RANDY L BREULT DIRECTOR OF PUBLIC WORKS
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PROJ. ENGR.: HARVEY OSLUICK	
DATE: 05/01/2020	
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SECTION  
NTS

**2** DIGITAL FLOW METER AND PRESSURE REGULATOR

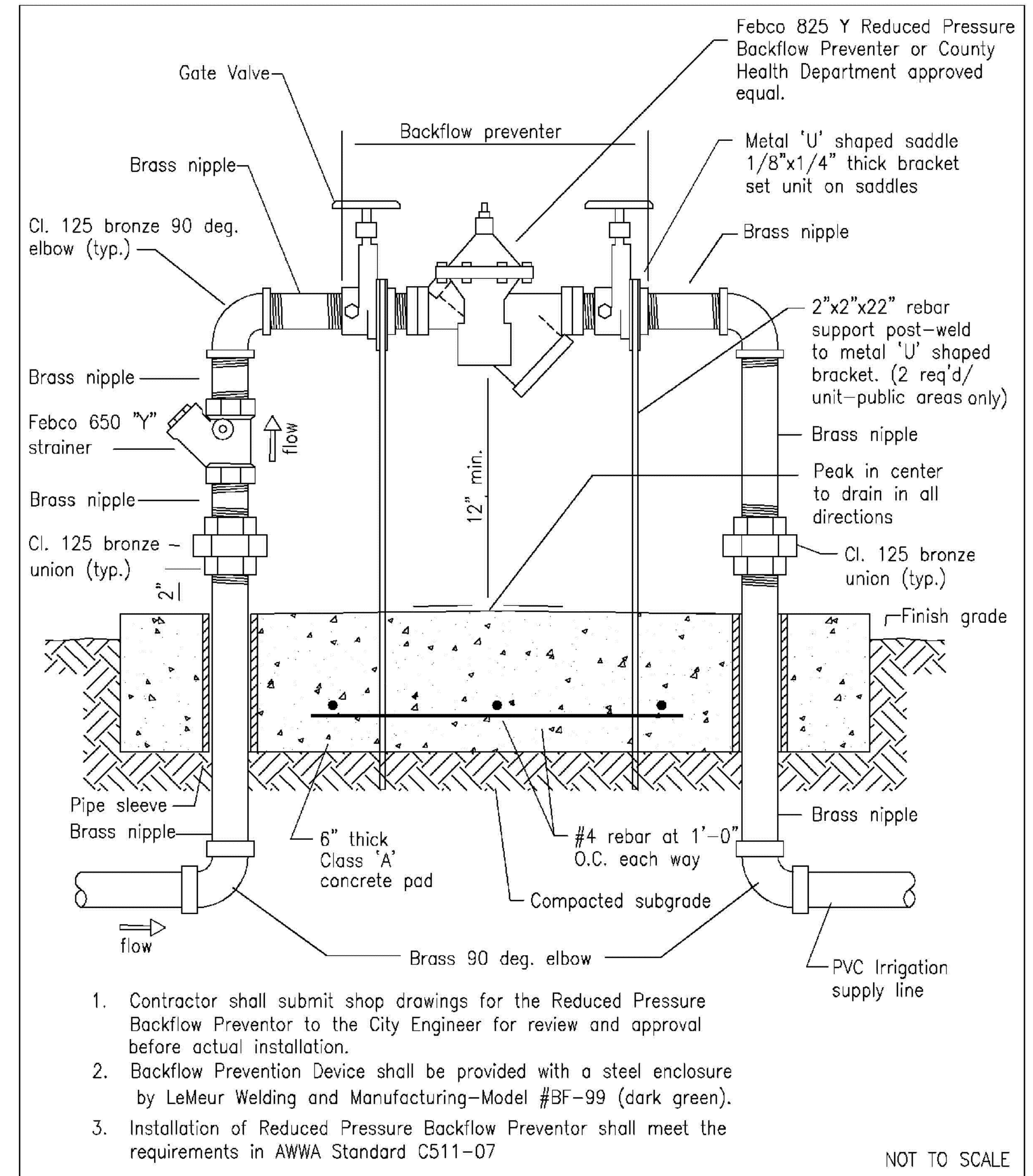


NOTES:  
1. DO NOT INCLUDE SHARP OR FRACTURED ROCK OR ROCK LARGER THAN 3" IN BACKFILL.

SECTION  
NTS

**3** IRRIGATION TRENCHING

IRRIGATION TRENCHING\_MAINLINE WITH CONTROL WIRES AND LATERAL\_8

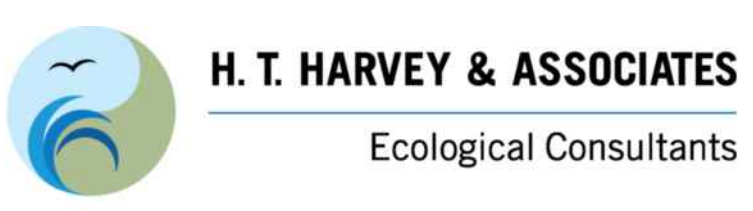


1. Contractor shall submit shop drawings for the Reduced Pressure Backflow Preventor to the City Engineer for review and approval before actual installation.
2. Backflow Prevention Device shall be provided with a steel enclosure by LeMour Welding and Manufacturing—Model #BF-99 (dark green).
3. Installation of Reduced Pressure Backflow Preventor shall meet the requirements in AWWA Standard C511-07

NOT TO SCALE

STANDARD DETAIL	CITY OF BRISBANE DEPARTMENT OF PUBLIC WORKS	
	BACKFLOW PREVENTION DEVICE ( TYPICAL FOR ALL IRRIGATION SERVICES AND OTHER HIGH RISK SERVICES )	W-8B
DATE: 06/25/07		

**1** REDUCED PRESSURE BACKFLOW ASSEMBLY



**IRRIGATION DETAILS (1)**  
GUADALUPE CHANNEL EROSION  
CONTROL PROJECT  
BRISBANE CALIFORNIA

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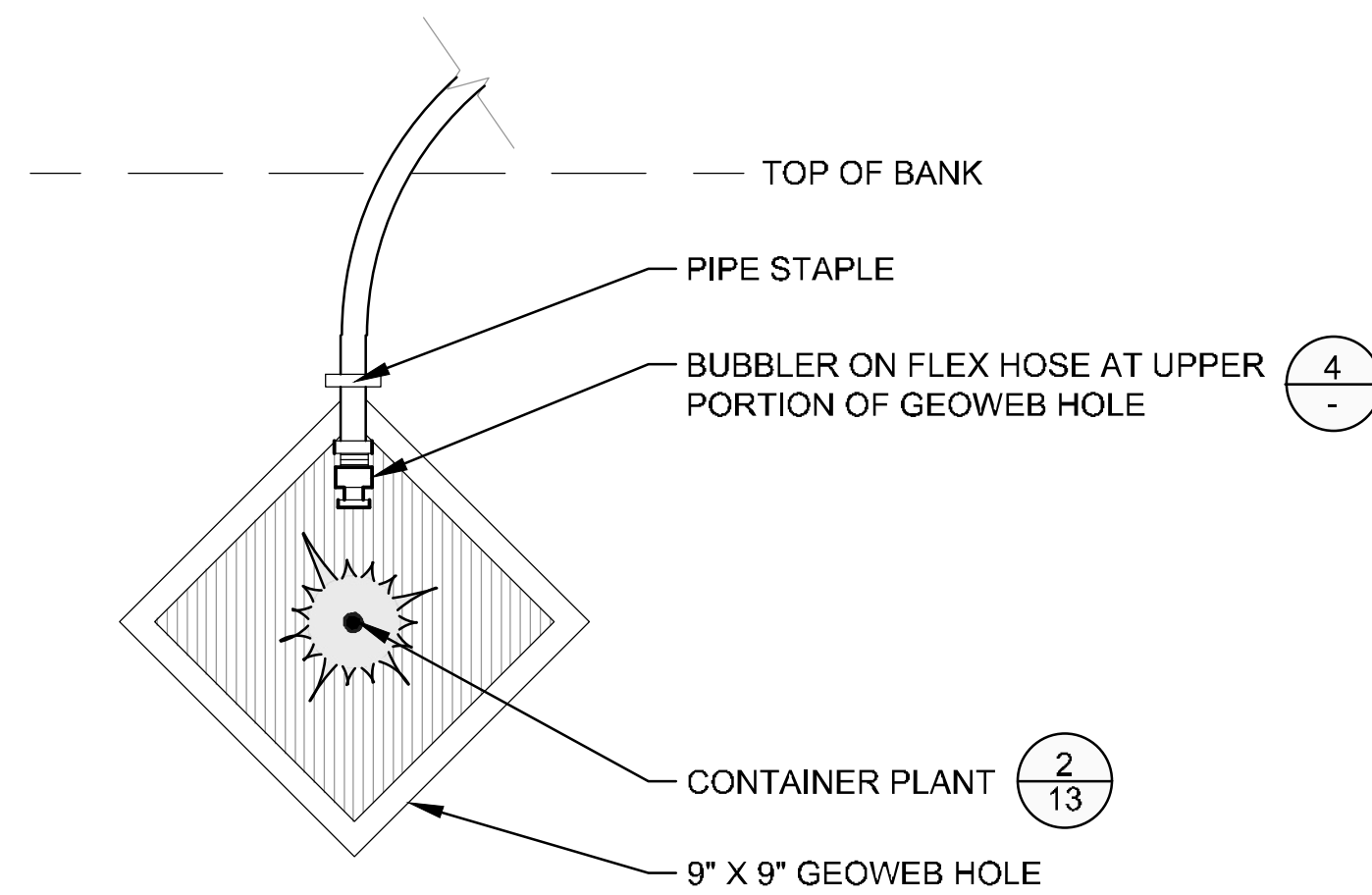
PRIVATE DEVELOPMENT  
STREETS AND TRAFFIC  
(SEWER SERVICES)  
STREETS AND TRAFFIC  
(TRAFFIC OPERATIONS)  
PARKS AND RECREATION

TRANSPORTATION  
SANITARY  
STORM  
ELECTRICAL  
CONSTRUCTION  
SURVEYS



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BRISBANE, CALIFORNIA**  
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MR. RANDY L BREULT  
DIRECTOR OF PUBLIC WORKS  
FILE NO.

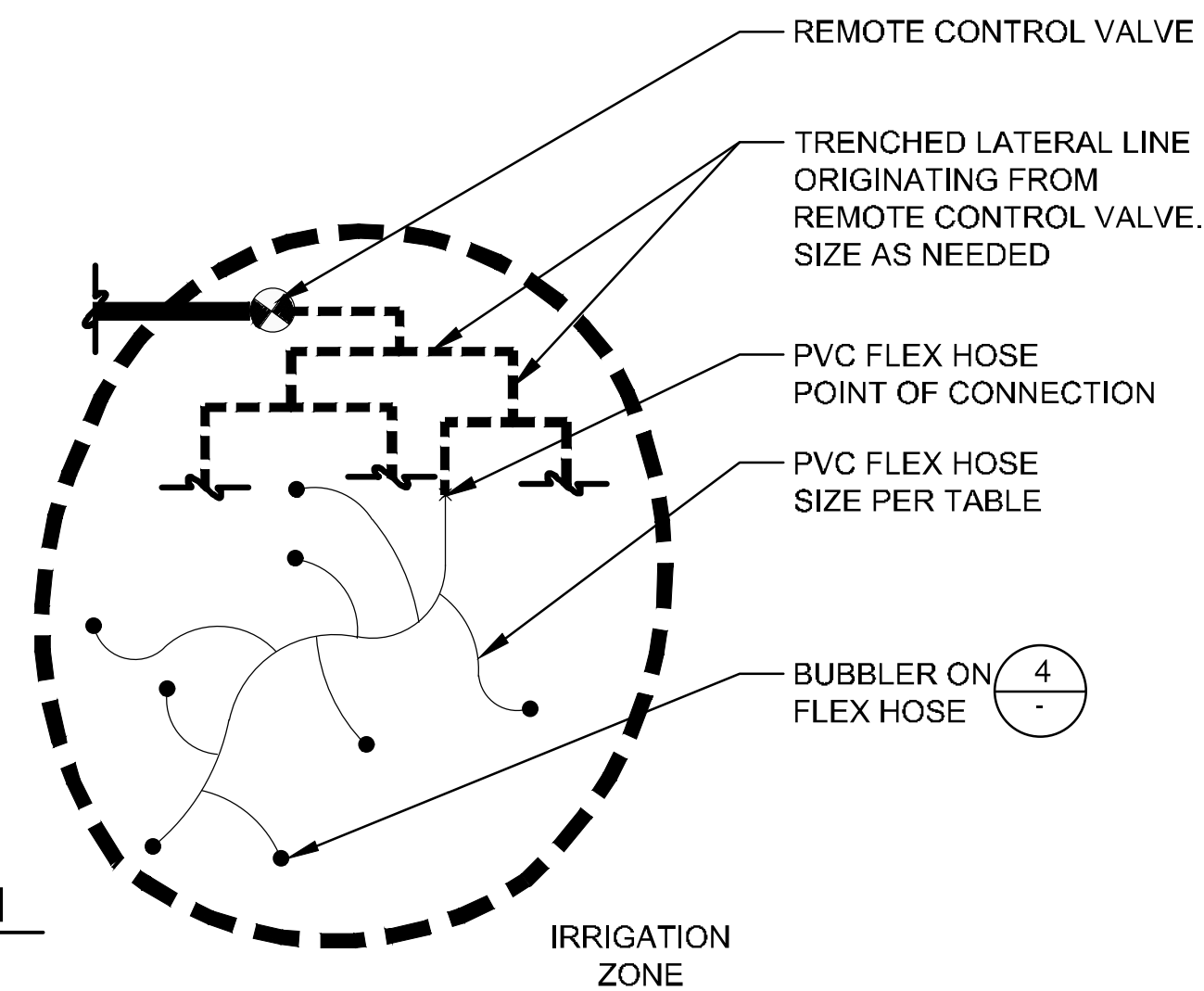




PLAN  
SCALE: NTS

**5 BUBBLER ON FLEX HOSE IN GEOWEB**

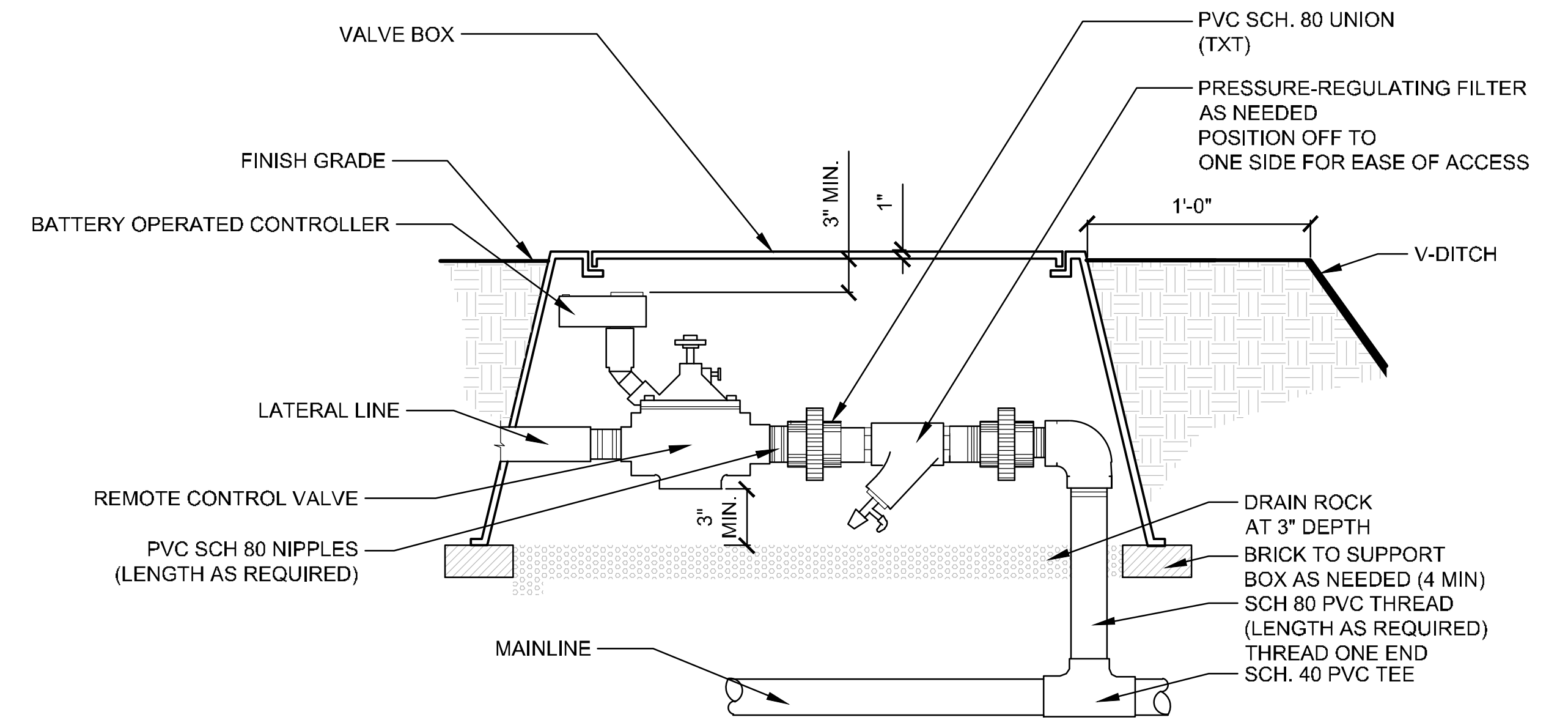
BUBBLER ON FLEX HOSE IN GEOWEB\_PLAN VIEW\_8



PLAN  
NTS

**3 BUBBLER IRRIGATION SYSTEM, TYP**

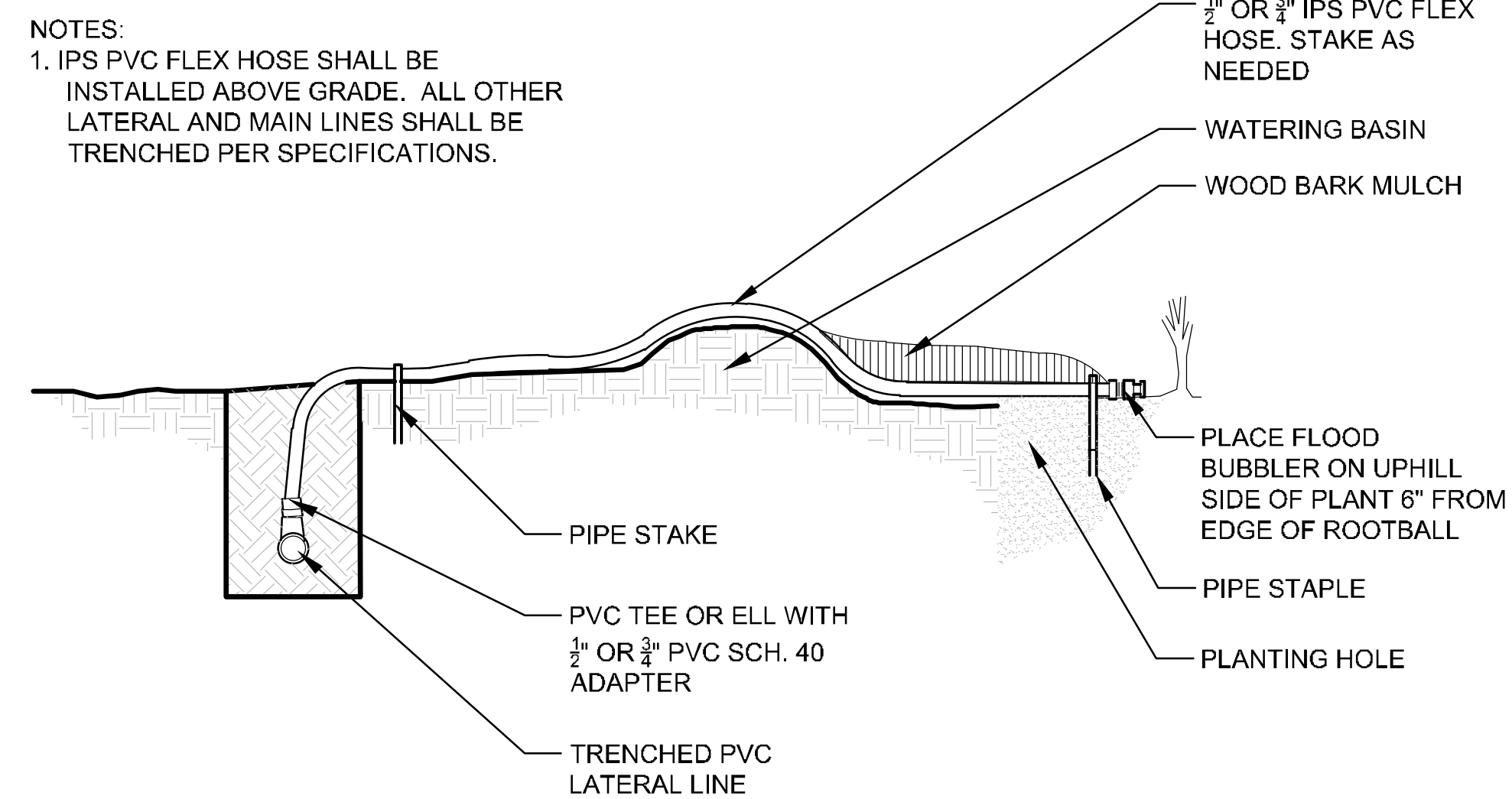
LAYOUT\_CONCEPTUAL\_BUBBLER\_SYSTEM\_3\_12



SECTION  
NTS

**1 REMOTE CONTROL VALVE WITH PRESSURE-REGULATING FILTER**

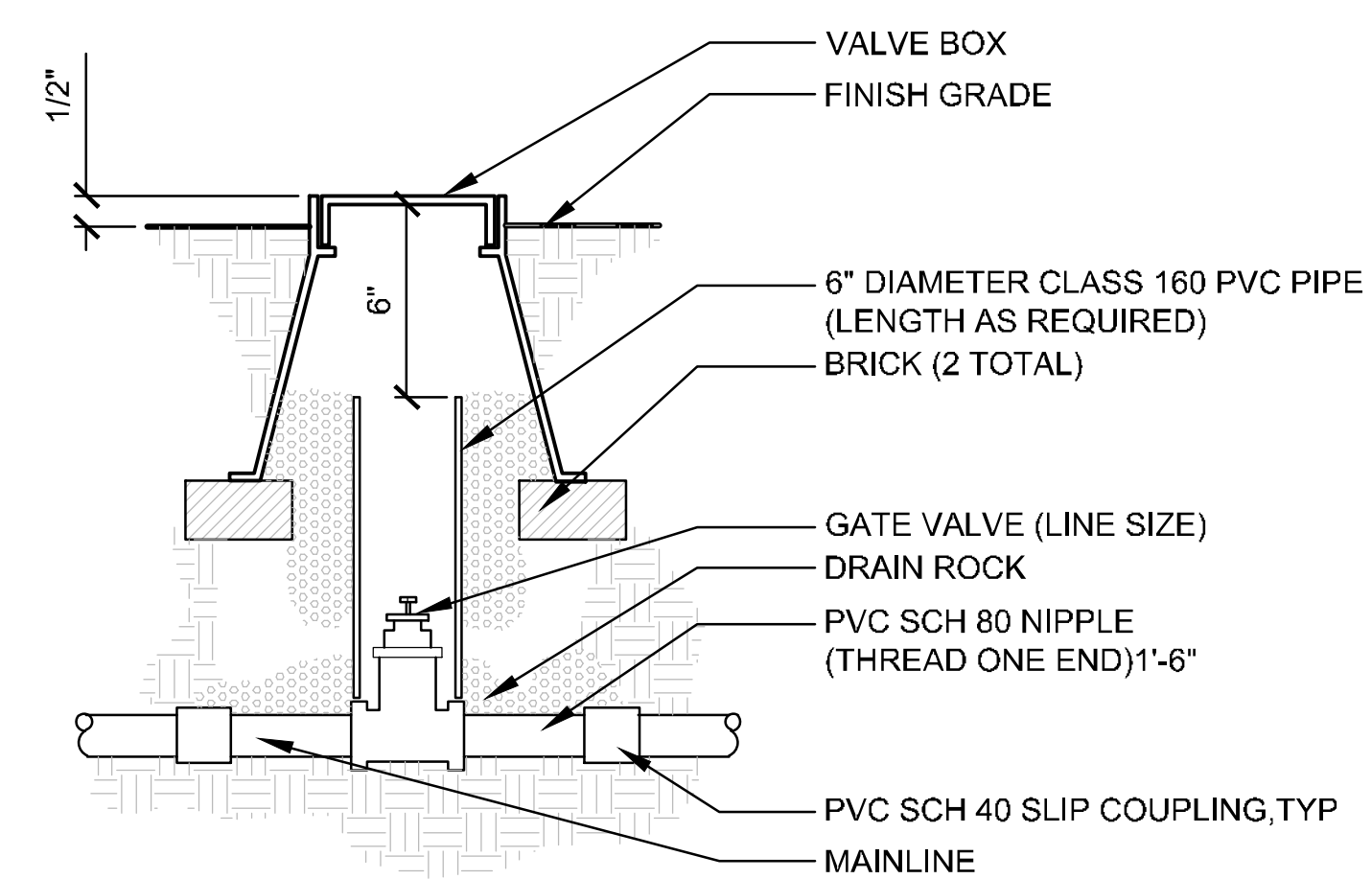
REMOTE\_CONTROL\_VALVE\_Y\_FILTER\_32



SECTION  
NTS

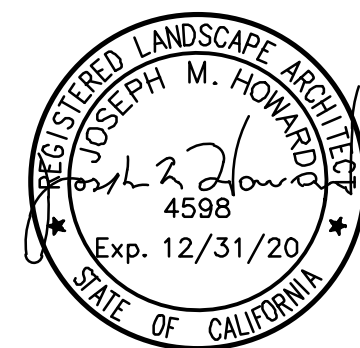
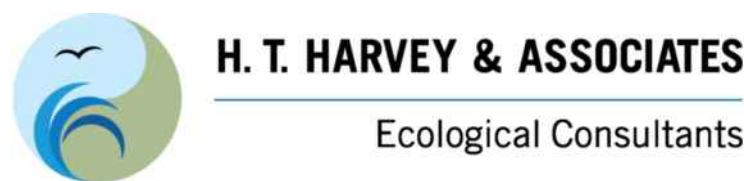
**4 BUBBLER ON FLEX HOSE**

bubbl er on flex hose\_trenched main\_8



SECTION  
NTS

**2 GATE VALVE**



**IRRIGATION DETAILS (2)**  
GUADALUPE CHANNEL EROSION  
CONTROL PROJECT  
BRISBANE CALIFORNIA

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	REVISIONS	DATE

PRIVATE DEVELOPMENT	TRANSPORTATION
STREETS AND TRAFFIC (SEWER SERVICES)	SANITARY
STREETS AND TRAFFIC (TRAFFIC OPERATIONS)	STORM
PARKS AND RECREATION	ELECTRICAL
	CONSTRUCTION
	SURVEYS



<b>DEPARTMENT OF PUBLIC WORKS BRISBANE, CALIFORNIA</b>	
DRAWN BY: CG	MR. RANDY L BREault DIRECTOR OF PUBLIC WORKS
CHECKED BY: KV, JMH, GA, MB	
PROJ. ENGR.: HARVEY OSLUICK	
DATE: 05/01/2020	
SCALE: AS SHOWN	
SHEET NO: 10 OF 13 SHEETS	FILE NO.



**NATIVE HABITAT SEED MIX**

SYMBOL	BOTANICAL NAME	COMMON NAME	HYDROSEED APPLICATION RATE PLS1/ACRE (LBS)	ORIGIN
~ SEEDED ~	<i>ACHILLEA MILLEFOLIUM</i>	YARROW	0.2	WITHIN THE 9 BAY AREA COUNTIES
	<i>ARTEMISIA DOUGLASIANA</i>	MUGWORT	0.1	WITHIN THE 9 BAY AREA COUNTIES
	<i>BROMUS CARINATUS</i>	CALIFORNIA BROME	6	SANTA CLARA CO, ARASTRADERO PRESERVE
	<i>ELYMUS GLAUCUS</i>	BLUE WILDRIE	6	SANTA CLARA CO, ARASTRADERO PRESERVE
	<i>ELYMUS TRITICOIDES</i>	CREEPING WILDRIE	8	CONTRA COSTA CO, MARTINEZ MARSH
	<i>EUTHAMIA OCCIDENTALIS</i>	WESTERN GOLDENROD	0.15	CONTRA COSTA CO, MARTINEZ MARSH
	<i>FESTUCA MICROSTACHYS</i>	SMALL FESCUE	4	SAN MATEO CO, WOODSIDE
	<i>FESTUCA RUBRA VAR MOLATE</i>	RED MOLATE FESCUE	6	CONTRA COSTA CO, POINT MOLATE
	<i>GRINDELIA STRICTA</i>	GUMPLANT	1	NAPA COUNTY, NAPA/SONOMA MARSH
	<i>HORDEUM BRACHYANTHERUM VAR SALT</i>	MEADOW BARLEY	6	NAPA CO, NAPA SONOMA MARSH
	<i>LUPINUS BICOLOR</i>	MINIATURE LUPINE	3	NAPA CO, NAPA RIVER
	<i>STIPA PULCHRA</i>	PURPLE NEEDLEGRASS	5	NAPA CO, NAPA SONOMA MARSH

**NOTES:**

1. CONTAINER SIZES CORRESPOND TO THE FOLLOWING:

- D16 = 2" DIA X 7" DEEP
- D40 = 2.5" DIA X 10" DEEP
- TB2 (TREEBAND 2) = 2.38" SQ X 5" DEEP
- TB4 (TREEBAND 4) = 4" SQ X 10" DEEP
- TP4 (TREEPOT 4) = 4" SQ X 14" DEEP
- SUPERCELL = 1.5" DIA X 8.25" DEEP

2. ALL PLANT MATERIAL IS OWNER FURNISHED, CONTRACTOR INSTALLED. REFER TO SPECIFICATIONS FOR NOTICING, DELIVERY, AND HANDLING RESPONSIBILITIES.

3. PLANT LAYOUT SHALL BE PER DETAILS AND THE SPECIFICATIONS.

**RIPARIAN OAK WOODLAND PLANTING SCHEDULE**

SYMBOL	BOTANICAL NAME	COMMON NAME	CONTAINER TYPE	OC SPACING (FT) (TRIANGULAR SPACING)	PLANT QUANTITIES BY POLYGON ID		TOTAL
					ROW - 1	ROW - 2	
▽▽▽▽▽	<i>AESCULUS CALIFORNICA</i>	CALIFORNIA BUCKEYE	TP4	12	2	7	9
	<i>FREMONTODENDRON CALIFORNICUM</i>	FLANNEL BUSH	D40	12	2	7	9
	<i>HETEROMELES ARBUTIFOLIA</i>	TOYON	D40	12	2	7	9
	<i>QUERCUS AGRIFOLIA</i>	COAST LIVE OAK	D40	16	4	13	17
	<i>ROSA CALIFORNICA</i>	CALIFORNIA ROSE	D40	6	4	13	17
	<i>RUBUS PARVIFLORUS</i>	THIMBLEBERRY	TB4	6	4	13	17
	<i>RUBUS URSINUS</i>	CALIFORNIA BLACKBERRY	TB4	6	4	13	17
	<i>SAMBUCUS NIGRA</i>	BLUE ELDERBERRY	D16	12	3	10	13
	<i>SYMPHORICARPOS ALBUS</i>	SNOWBERRY	D40	6	4	13	17

**RIPARIAN OAK WOODLAND SHRUB PLANTING SCHEDULE**

SYMBOL	BOTANICAL NAME	COMMON NAME	CONTAINER TYPE	OC SPACING (FT) (LINEAR SPACING)	PLANT QUANTITIES BY POLYGON ID		TOTAL
					ROWS - 1	ROWS - 2	
▨	<i>ROSA CALIFORNICA</i>	CALIFORNIA ROSE	D40	6	13	16	29
	<i>RUBUS PARVIFLORUS</i>	THIMBLEBERRY	TB4	6	13	16	29
	<i>RUBUS URSINUS</i>	CALIFORNIA BLACKBERRY	TB4	6	13	16	29
	<i>SYMPHORICARPOS ALBUS</i>	SNOWBERRY	D40	6	13	16	29

**TRANSITION ZONE PLANTING SCHEDULE**

SYMBOL	BOTANICAL NAME	COMMON NAME	CONTAINER TYPE	OC SPACING (FT) (SQUARE SPACING)	PLANT QUANTITIES BY POLYGON ID		TOTAL
					TZ - 1	TZ - 2	
+++++	<i>AMBROSIA PSILOSTACHYA</i>	WESTERN RAGWEED	D16	AS SHOWN IN DETAIL 2/13	130	150	280
	<i>BACCHARIS GLUTINOSA</i>	MARSH BACCHARIS	D40	AS SHOWN IN DETAIL 2/13	130	150	280
	<i>DISTICHLIS SPICATA</i>	SALTGRASS	TB2	AS SHOWN IN DETAIL 2/13	260	300	560
	<i>ELYMUS TRITICOIDES</i>	CREEPING WILDRIE	SUPERCELL	AS SHOWN IN DETAIL 2/13	260	300	560
	<i>EUTHAMIA OCCIDENTALIS</i>	GOLDENROD	D16	AS SHOWN IN DETAIL 2/13	130	150	280
	<i>GRINDELIA STRICTA</i>	GUMPLANT	D40	AS SHOWN IN DETAIL 2/13	260	300	560
	<i>SYMPHYOTRICHUM CHILENSE</i>	PACIFIC ASTER	D16	AS SHOWN IN DETAIL 2/13	130	150	280

**SALT MARSH CREATION AREA PLANTING SCHEDULE**

SYMBOL	BOTANICAL NAME	COMMON NAME	CONTAINER TYPE	OC SPACING (FT) (SQUARE SPACING)	PLANT QUANTITIES BY POLYGON ID		TOTAL
					SM - 1	SM - 2	
▩	<i>DISTICHLIS SPICATA</i>	SALT GRASS	TB2	AS SHOWN IN DETAIL 2/13	133	141	274
	<i>FRANKENIA SALINA</i>	ALKALI HEATH	TB2	AS SHOWN IN DETAIL 2/13	133	141	274
	<i>GRINDELIA STRICTA</i>	MARSH GUMPLANT	D40	AS SHOWN IN DETAIL 2/13	133	141	274
	<i>JAUMEA CARNOSA</i>	MARSH JAUMEA	TB2	AS SHOWN IN DETAIL 2/13	66	71	137
	<i>LIMONIUM CALIFORNICUM</i>	MARSH ROSEMARY	TB2	AS SHOWN IN DETAIL 2/13	66	71	137
	<i>SALICORNIA PACIFICA</i>	PERENNIAL PICKLEWEED	D16	AS SHOWN IN DETAIL 2/13	797	846	1643

**PLANTING SCHEDULES & NOTES**  
**GUADALUPE CHANNEL EROSION CONTROL PROJECT**  
 BRISBANE CALIFORNIA

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	REVISIONS	DATE

PRIVATE DEVELOPMENT \_\_\_\_\_  
 STREETS AND TRAFFIC (SEWER SERVICES) \_\_\_\_\_  
 STREETS AND TRAFFIC (TRAFFIC OPERATIONS) \_\_\_\_\_  
 PARKS AND RECREATION \_\_\_\_\_

TRANSPORTATION \_\_\_\_\_  
 SANITARY \_\_\_\_\_  
 STORM \_\_\_\_\_  
 ELECTRICAL \_\_\_\_\_  
 CONSTRUCTION \_\_\_\_\_  
 SURVEYS \_\_\_\_\_

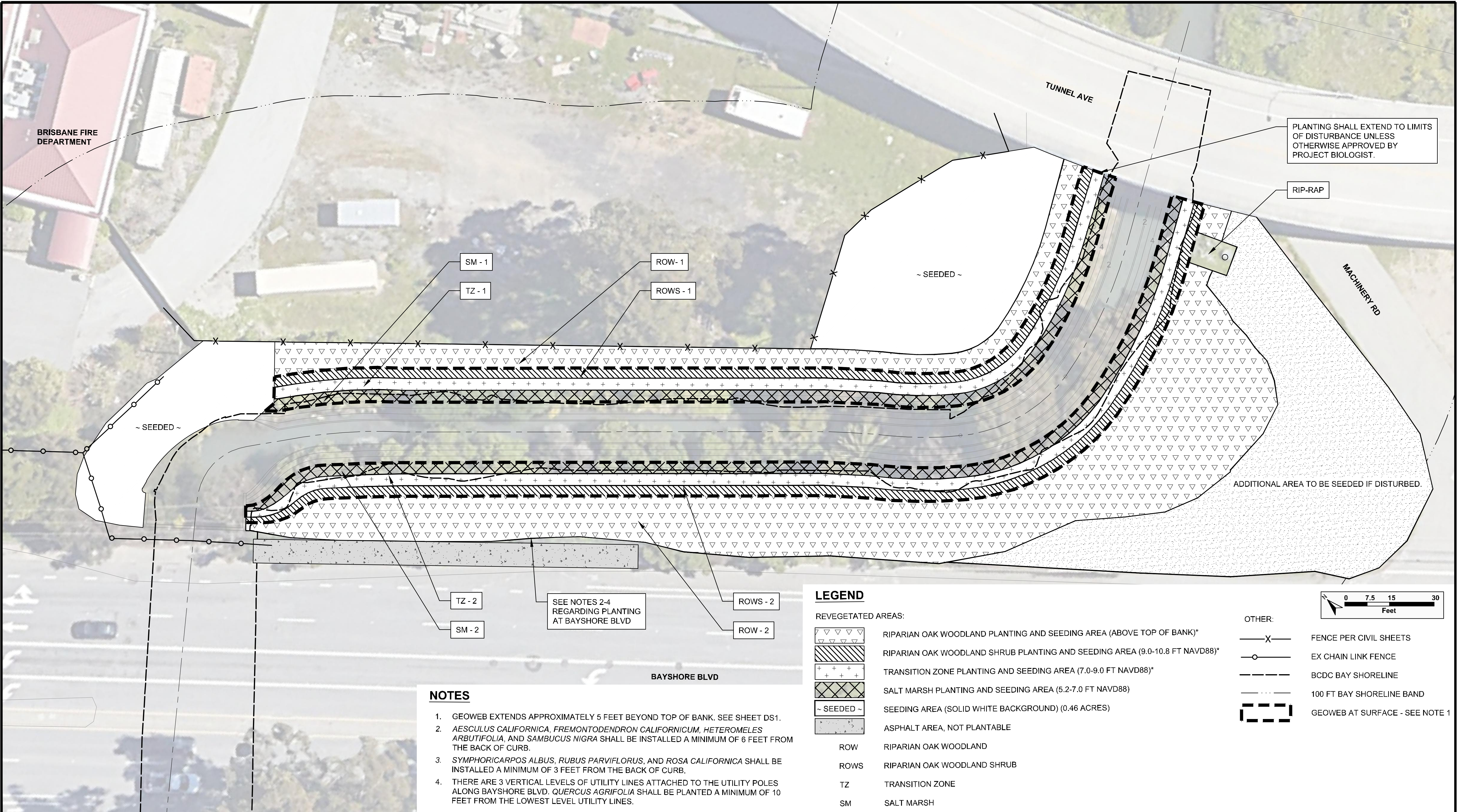


**DEPARTMENT OF PUBLIC WORKS**  
**BRISBANE, CALIFORNIA**

DRAWN BY: CG  
 CHECKED BY: KV, JMH, GA, MB  
 PROJ. ENGR.: HARVEY OSLUICK  
 DATE: 05/01/2020  
 SCALE: AS SHOWN  
 SHEET NO: 11 OF 13 SHEETS

MR RANDY L BREULT  
 DIRECTOR OF PUBLIC WORKS  
 FILE NO.





- NOTES**
1. GEOWEB EXTENDS APPROXIMATELY 5 FEET BEYOND TOP OF BANK. SEE SHEET DS1.
  2. *AESCLUS CALIFORNICA*, *FREMONTODENDRON CALIFORNICUM*, *HETEROMELES ARBUTIFOLIA*, AND *SAMBUCUS NIGRA* SHALL BE INSTALLED A MINIMUM OF 6 FEET FROM THE BACK OF CURB.
  3. *SYMPHORICARPOS ALBUS*, *RUBUS PARVIFLORUS*, AND *ROSA CALIFORNICA* SHALL BE INSTALLED A MINIMUM OF 3 FEET FROM THE BACK OF CURB.
  4. THERE ARE 3 VERTICAL LEVELS OF UTILITY LINES ATTACHED TO THE UTILITY POLES ALONG BAYSHORE BLVD. *QUERCUS AGRIFOLIA* SHALL BE PLANTED A MINIMUM OF 10 FEET FROM THE LOWEST LEVEL UTILITY LINES.

**LEGEND**

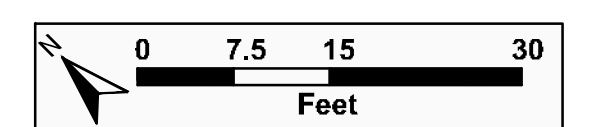
REVEGETATED AREAS:

- RIPARIAN OAK WOODLAND PLANTING AND SEEDING AREA (ABOVE TOP OF BANK)\*
- RIPARIAN OAK WOODLAND SHRUB PLANTING AND SEEDING AREA (9.0-10.8 FT NAVD88)\*
- TRANSITION ZONE PLANTING AND SEEDING AREA (7.0-9.0 FT NAVD88)\*
- SALT MARSH PLANTING AND SEEDING AREA (5.2-7.0 FT NAVD88)
- SEEDING AREA (SOLID WHITE BACKGROUND) (0.46 ACRES)
- ASPHALT AREA, NOT PLANTABLE

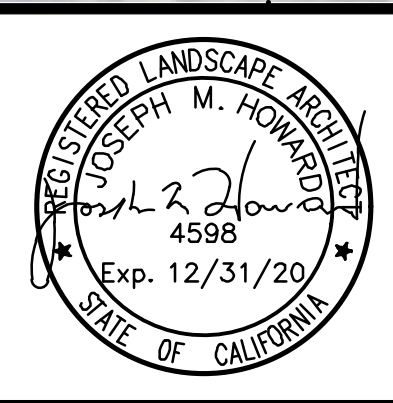
OTHER:

- FENCE PER CIVIL SHEETS
- EX CHAIN LINK FENCE
- BCDC BAY SHORELINE
- 100 FT BAY SHORELINE BAND
- GEOWEB AT SURFACE - SEE NOTE 1

ROW RIPARIAN OAK WOODLAND  
 ROWS RIPARIAN OAK WOODLAND SHRUB  
 TZ TRANSITION ZONE  
 SM SALT MARSH



**H. T. HARVEY & ASSOCIATES**  
Ecological Consultants



**PLANTING PLAN**  
GUADALUPE CHANNEL EROSION CONTROL PROJECT  
BRISBANE CALIFORNIA

6		
5		
4		
3		
2		
1		
	REVISIONS	DATE

PRIVATE DEVELOPMENT	TRANSPORTATION
STREETS AND TRAFFIC (SEWER SERVICES)	SANITARY
STREETS AND TRAFFIC (TRAFFIC OPERATIONS)	STORM
PARKS AND RECREATION	ELECTRICAL
	CONSTRUCTION
	SURVEYS

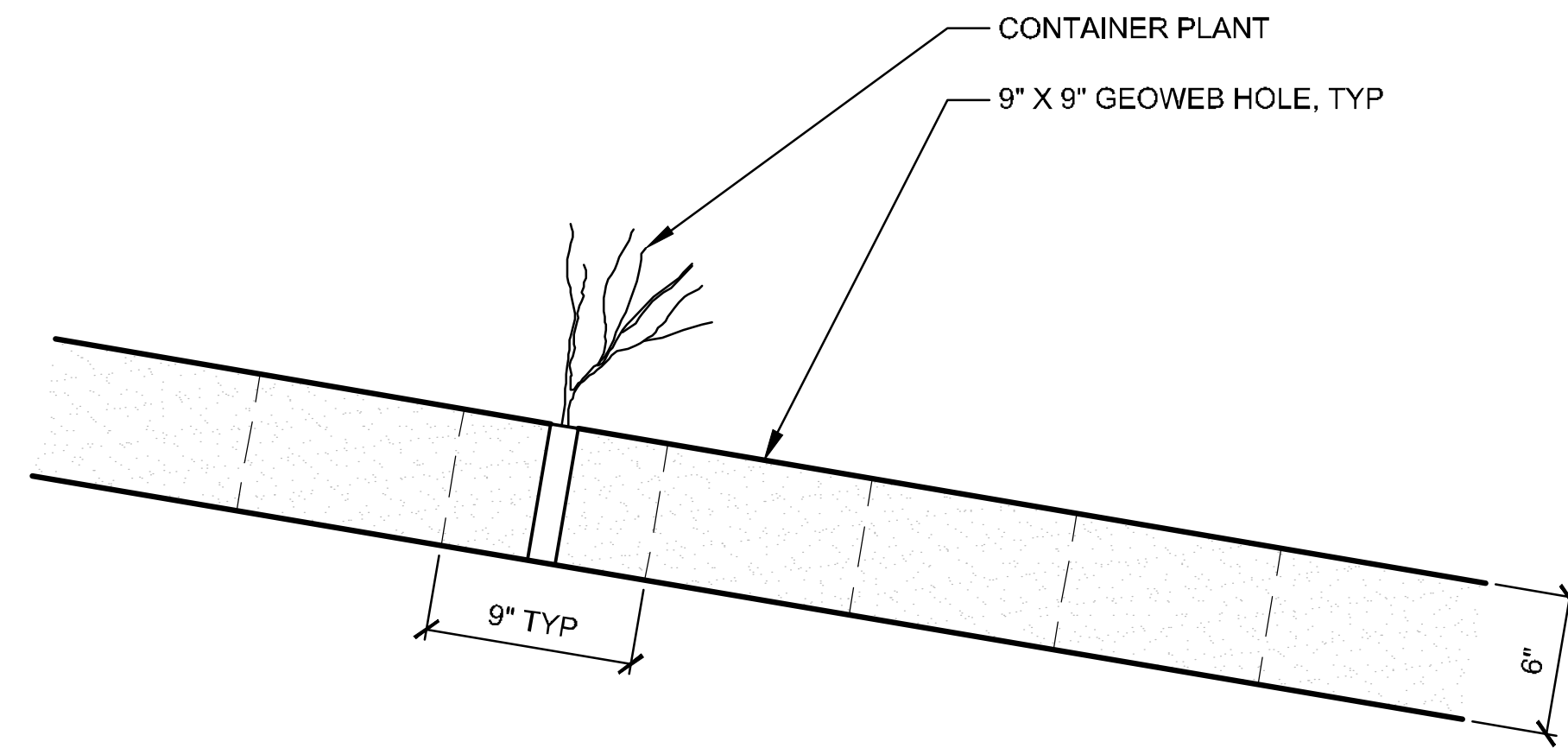


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**BRISBANE, CALIFORNIA**

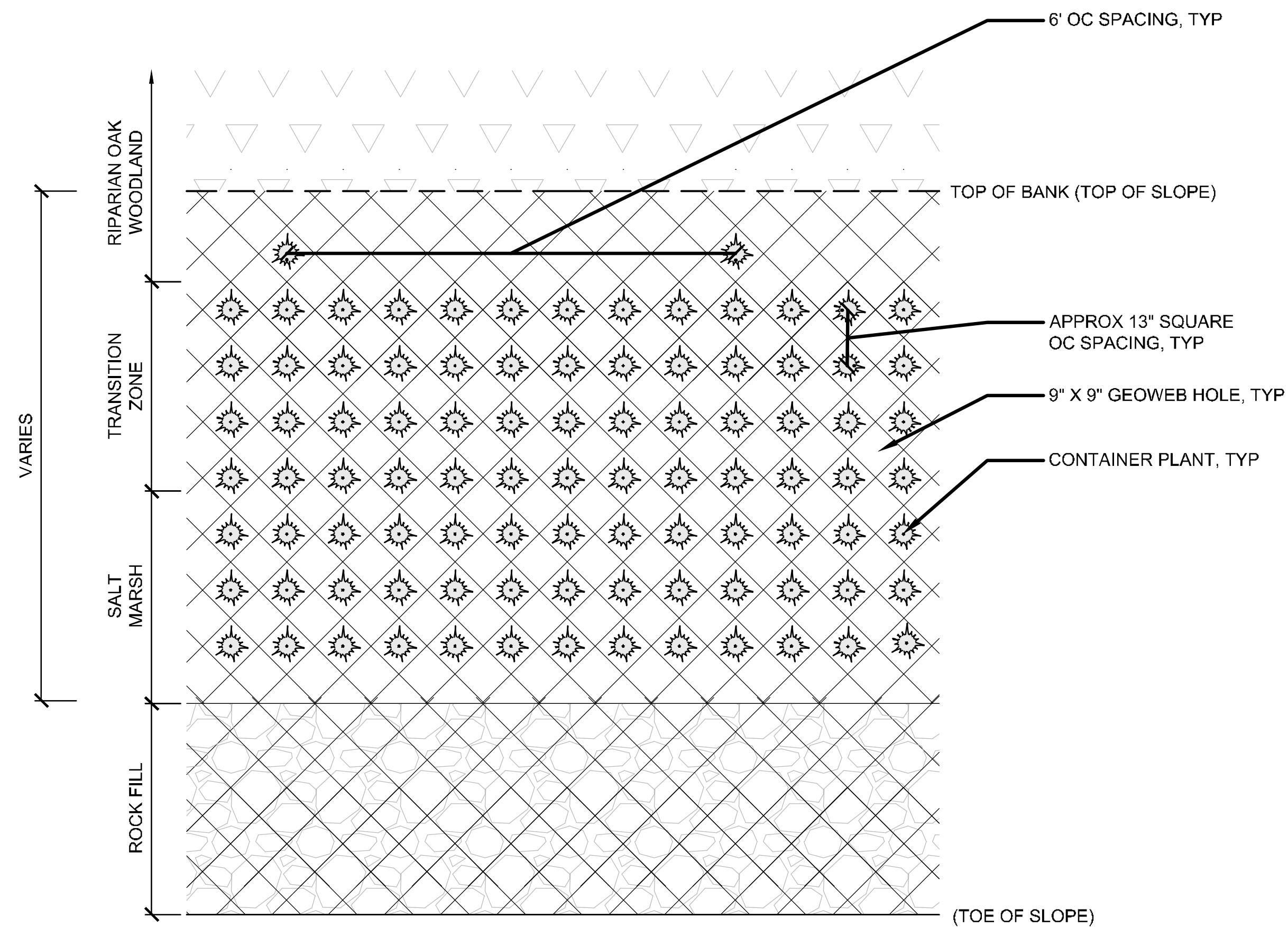
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 CHECKED BY: KV, JMH, GA, MB  
 PROJ. ENGR.: HARVEY OSLUK  
 DATE: 05/01/2020  
 SCALE: AS SHOWN  
 SHEET NO: 12 OF 13 SHEETS

MR. RANDY L BREault  
DIRECTOR OF PUBLIC WORKS  
*R. L. Breault*  
 FILE NO.





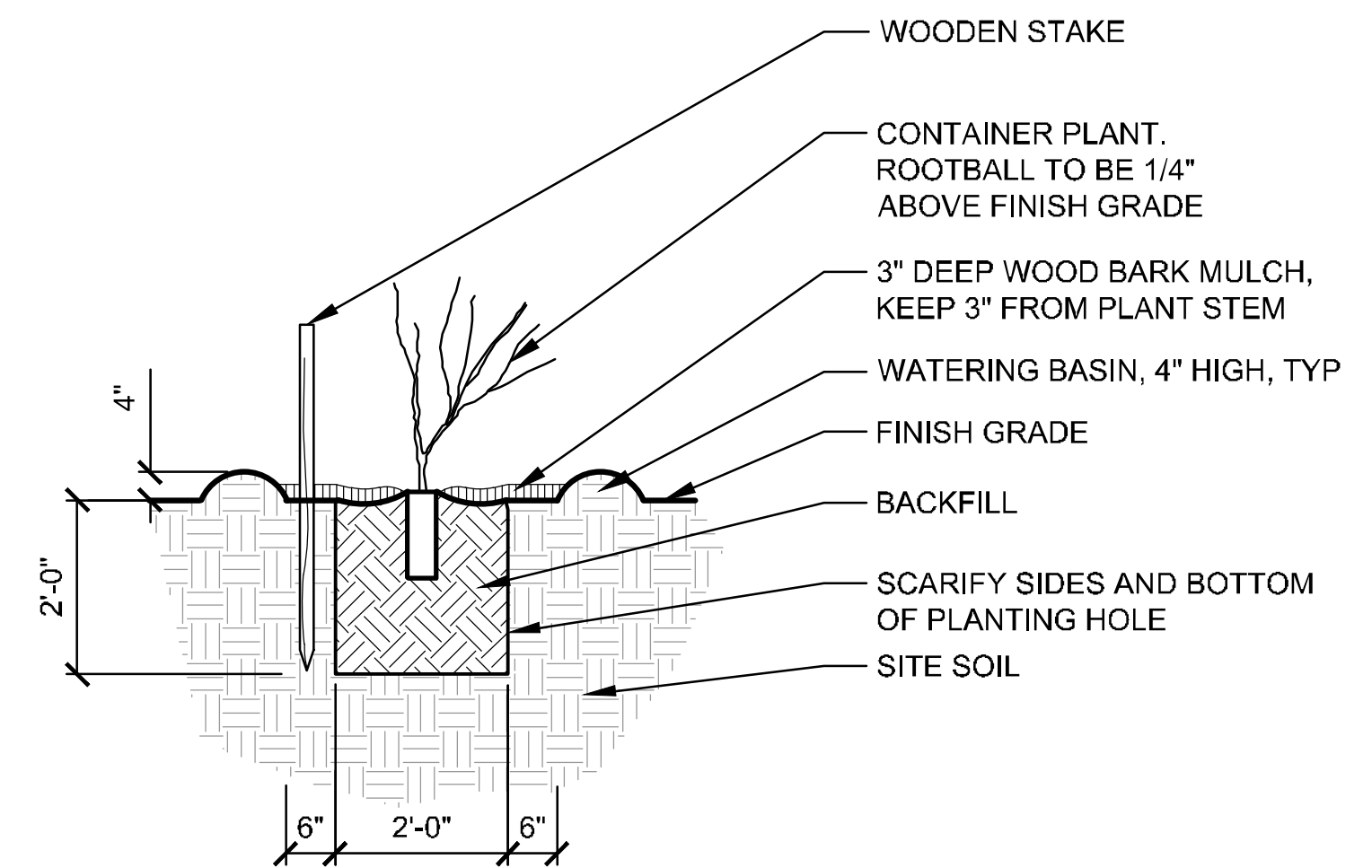
SECTION  
NTS



PLAN  
NTS

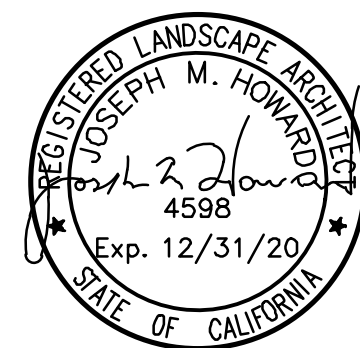
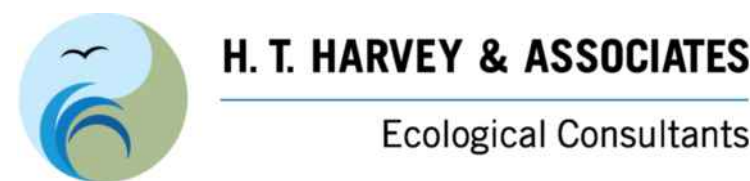
2 CONTAINER PLANT INSTALLATION IN GEOWEB

GEOWEB PLAN\_24



SECTION  
NTS

1 CONTAINER PLANT INSTALLATION NOT IN GEOWEB



**PLANTING DETAILS**  
**GUADALUPE CHANNEL EROSION**  
 BRISBANE CONTROL PROJECT CALIFORNIA

NO.	REVISIONS	DATE
6		
5		
4		
3		
2		
1		

PRIVATE DEVELOPMENT \_\_\_\_\_  
 STREETS AND TRAFFIC (SEWER SERVICES) \_\_\_\_\_  
 STREETS AND TRAFFIC (TRAFFIC OPERATIONS) \_\_\_\_\_  
 PARKS AND RECREATION \_\_\_\_\_

TRANSPORTATION \_\_\_\_\_  
 SANITARY \_\_\_\_\_  
 STORM \_\_\_\_\_  
 ELECTRICAL \_\_\_\_\_  
 CONSTRUCTION \_\_\_\_\_  
 SURVEYS \_\_\_\_\_



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