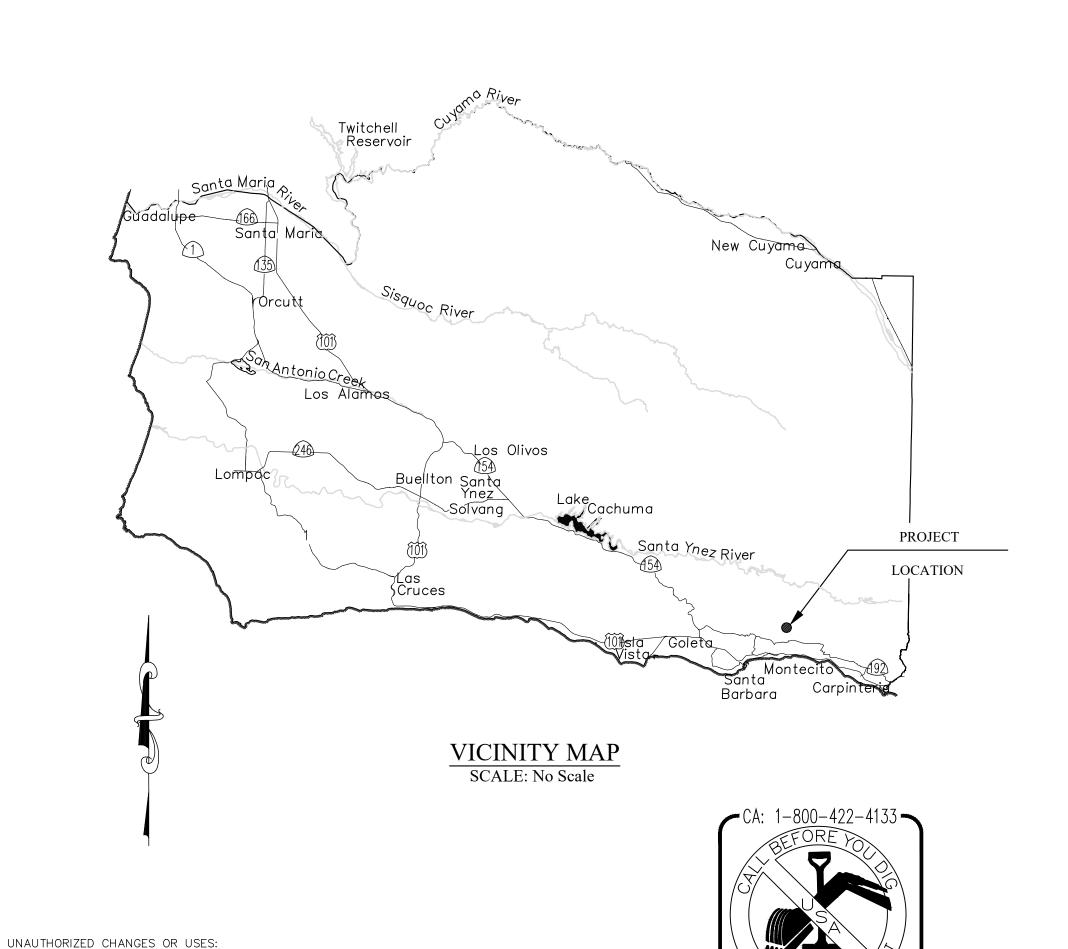
# SANTA BARBARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

# SAN YSIDRO DEBRIS BASIN IMPROVEMENT PROJECT

SC8356

IN THE MONTECITO AREA SANTA BARBARA COUNTY, CALIFORNIA



## DISTRICT BOARD OF DIRECTORS

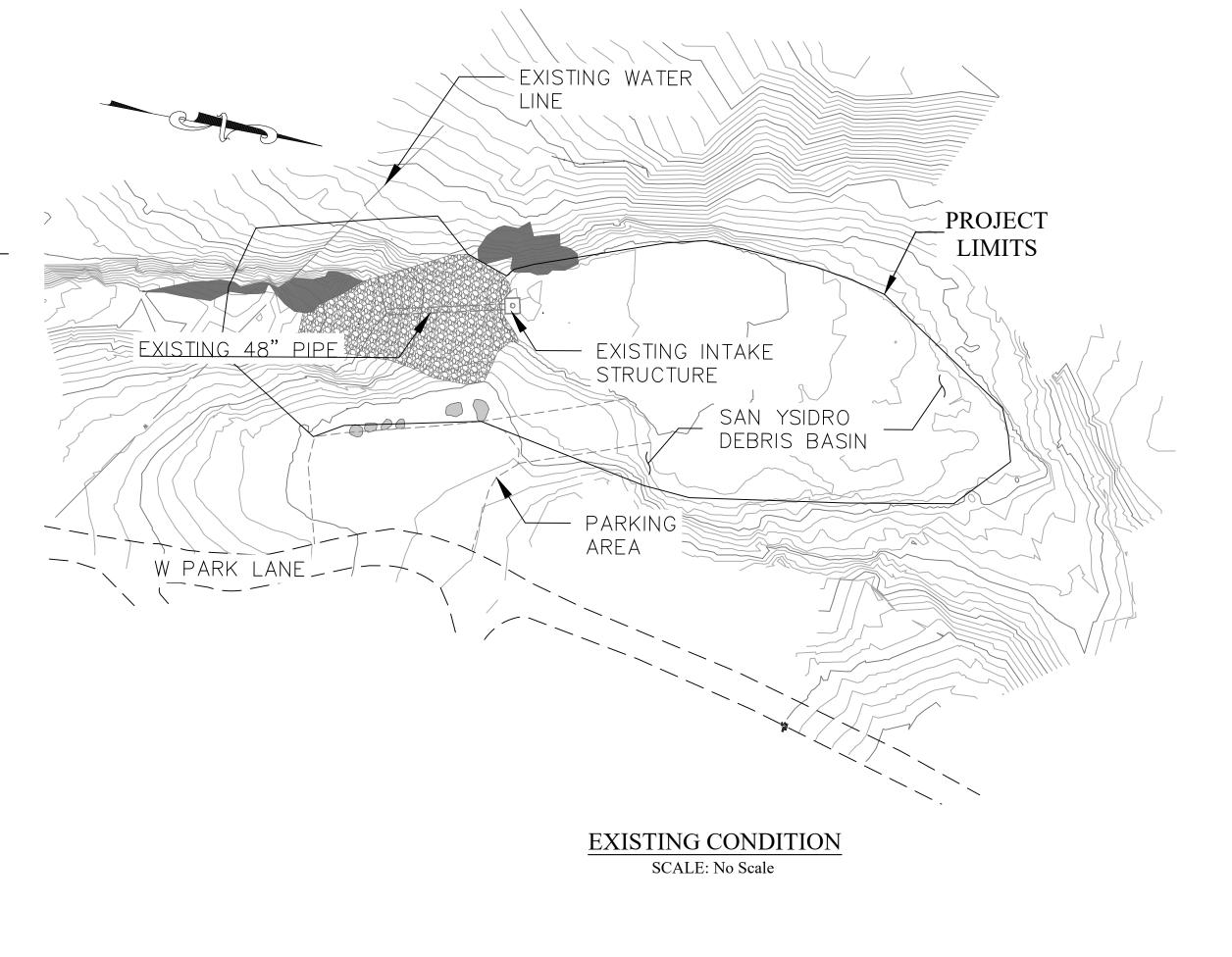
FIRST DISTRICT Das Williams Laura Capps SECOND DISTRICT, VICE CHAIR Joan Hartmann THIRD DISTRICT FOURTH DISTRICT Bob Nelson Steve Lavagnino FIFTH DISTRICT, CHAIR

Original to be signed CHAIR BOARD OF DIRECTORS

Steve Lavagnino

#### INDEX TO SHEETS

SHEET NO.
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
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IN THE "NOTICE" ADVERTISING FOR BIDS.

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> DESIGNED BY: Matt Griffin LOOD CONTROL ENGINEERING MANAGER REVIEWED BY\_\_\_\_\_\_Docusigned by:

> > Walter Rubalcava

CALL TWO WORKING

DAYS BEFORE YOU DIG

SANTA BARBARA COUNTY FLOOD CONTROL AND 3/17/2024 | 9:23 AM PDT Floyd Holmus 51 WATER CONSERVATION DISTRICT 3/18/2024 | 130 E. VICTORIA STREET DATE MAINTENANCE SUPERINTENDENT SANTA BARBARA, CA 93101 3/17/2024 | 9:15 PM PDT | Am 3/18/2024 | \$:21 AM PDT (805) 568-3440 DATE ENVIRONMENTAL SERVICES MANAGER FLOOD CONTROL TO DEPUTY DIRECTOR



SAN YSIDRO DEBRIS BASIN IMPROVEMENT PROJECT

AREA OF MONTECITO SANTA BARBARA COUNTY, CALIFORNIA

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EX. CABLE TV VAULT	CTV VAULT	EX. SEWER MANHOLE	S	EX. TREE — LEMON	
EX. ELECTRIC BOX	EBOX	EX. SIGNAGE	-	EX. TREE — PALM	
EX. ELECTRIC GUY WIRE	- <b>⊕</b> GWE	EX. STORM DRAIN GRATE		EX. TREE — PINE	
EX. ELECTRIC MANHOLE	E	EX. STORM DRAIN MANHOLE		EX. TREE — STUMP	
EX. ELECTRIC METER	EM	EX. STRUCTURE BENCH	**	EX. TREE — SYCAMORE	E
EX. FIRE HYDRANT	**************************************	EX. STRUCTURE BOLLARD/PO	<i>057</i> °	EX. TREE — WILLOW	
EX. GAS METER	GM	EX. TELEPHONE BOX	TBOX	EX. TREE — YUCCA	
EX. GAS VALVE	G∨ ⋈	EX. TELEPHONE MANHOLE	$\bigcirc$	EX. WATER METER	WM
EX. IRRIGATION SPRINKLER	$\oplus$	EX. TELEPHONE POLE	TP	EX. WATER SPIGOT	====
EX. LUMINARY *	o or 🔆	EX. TELEPHONE VAULT	TELE VAULT	EX. WATER VALVE	WV
EX. MAILBOX	MB	EX. BUSH/HEDGE		EX. WATER WELL	
EX. MONUMENT	•	EX. CACTUS			
EX. PEDESTAL	PED	EX. SHRUB			
EX. POWER & TELEPHONE PO	P+TP				
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BOUNDARY PROPERTY LINE	——————————————————————————————————————	0000000000	
CENTERLINE			GROUTED ROCK SLOPE PROTECTION
CONTOUR LINE-MAJOR	520		
CONTOUR LINE-MINOR			EXISTING GROUTED RIPRAP
EX. BARBED WIRE FENCE	xxxxxx		
EX. BRUSH			SBM
EX. CHAINLINK FENCE			
EX. DRAINAGE			
EX. STORM DRAIN	— — SD— — — —	A STATE OF THE STA	ROCK BAND
GRADING LIMITS			
EX. WATER LINE	w		
EX. EDGE OF PAVEMENT			EXISTING BEDROCK OUTCROPPING
STAGING AREA			
			GROUTED RIPRAP REMOVAL LIMITS
		(///////	
			EXISITNG SBM

#### STANDARD DETAILS AND PLANS LIST

STANDARD

M/N

MON

DESCRIPTION ...

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS (2018)
The Standard Plan sheets applicable to this contract include, but are not limited to those indicated below. The Revised Standard Plans (RSP) and New Standard Plans (NSP) which apply are attached to the contract.

A62B LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE SURCHARGE AND WALL

#### **ABBREVIATIONS**

APN ASSESSORS PARCEL NUMBER APWA AMERICAN PUBLIC WORKS ASSOC. BW BOTH WAYS CFS CUBIC FEET PER SECOND CL or C/L CENTER LINE CLR CLEAR CALTRANS STATE OF CALIFORNIA COUNTY COUNTY OF SANTA BARBARA CP CONTROL POINT E EAST OR EASTING EG EXISTING GROUND ELEVATION ELL ELEVATION ESM ENGINEERED STREAMBED MATERIAL FG FINISHED GRADE FT FEET G GAS LINE GB GRADE BREAK HDPE HIGH DENSITY POLYETHYLENE IN INCH L, LT LEFT LOL LAYOUT LINE MAX MAXIMUM MJ MECHANICAL JOINT	R, RT RC RCP REINF RW OR RETWALL S SBM SDMH STA T.R. TW or tw TCE T&B TBM TYP WF	RIGHT RELATIVE COMPACTION REINFORCED CONCRETE PIPE REINFORCEMENT RETAINING WALL SEWER OR SLOPE OR SOUTH STREAMBED MATERIAL STORM DRAIN MANHOLE STATION THREADED ROD TOP OF WALL TEMPORARY CONSTRUCTION EASEMENT TOP AND BOTTOM TEMPORARY BENCH MARK TYPICAL WALL FACE
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#### EXISTING UTILITY INFORMATION

NORTH OR NORTHING

MINIMUM

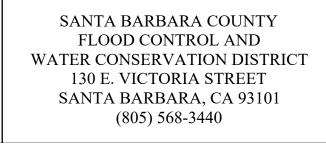
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ALL UNDERGROUND UTILITIES SHOWN ARE PLOTTED BASED ON INFORMATION PROVIDED BY OTHERS, AND ARE APPROXIMATE. OVERHEAD UTILITIES ARE NOT SHOWN. NOTE THAT INDIVIDUAL SERVICE LATERALS AND CONNECTIONS ARE NOT PLOTTED ON THE PROFILE.

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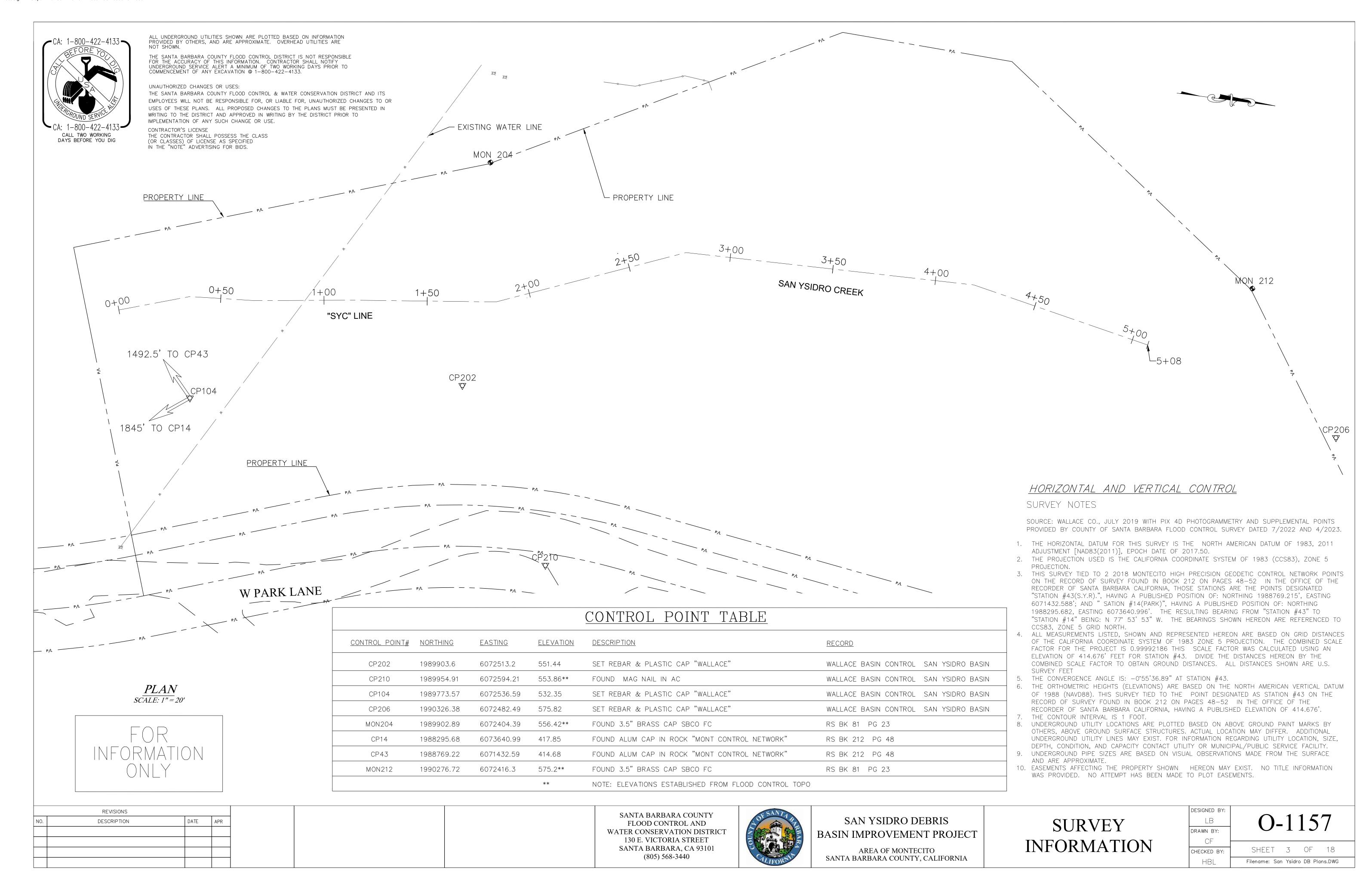


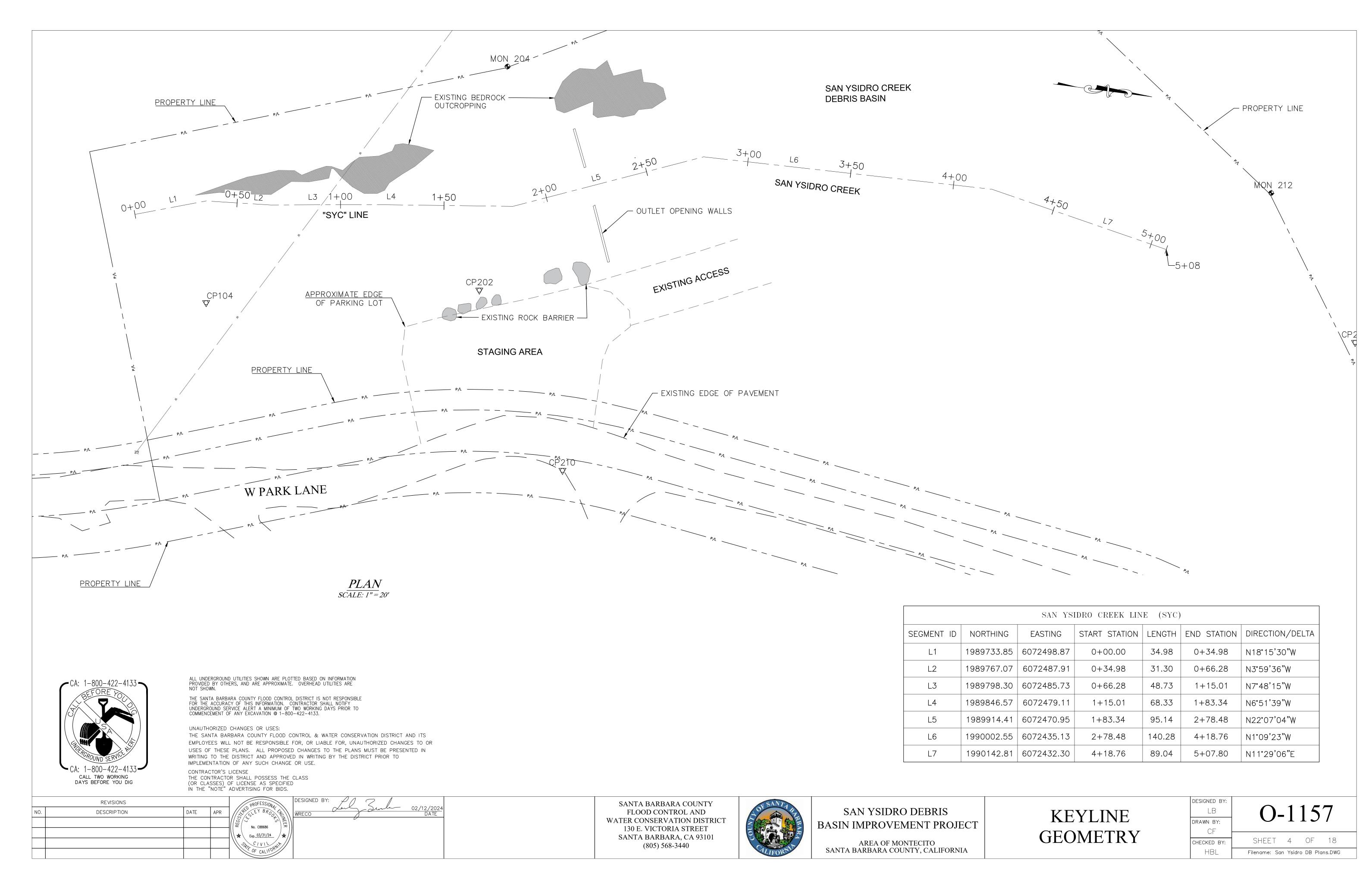


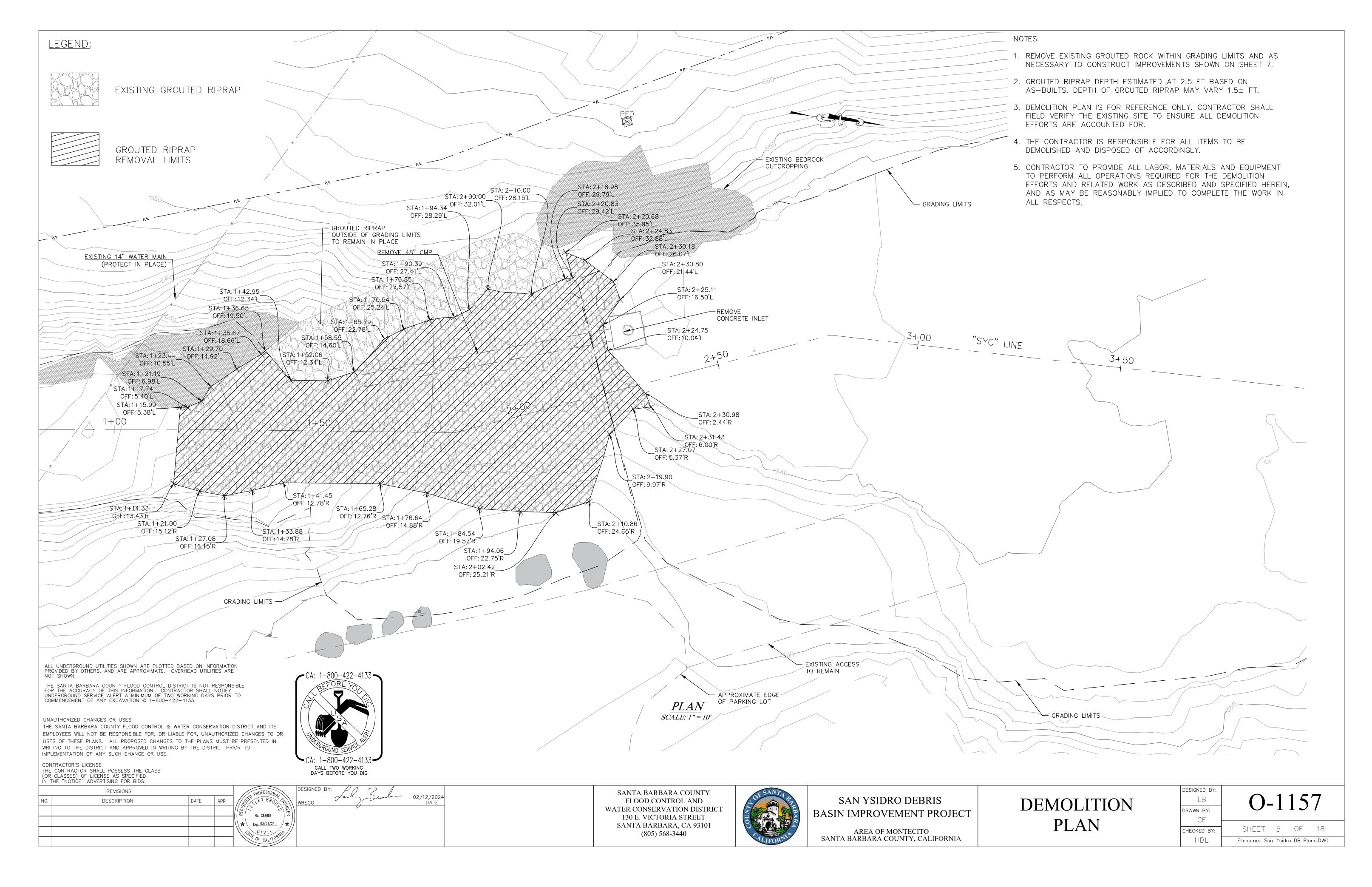
AREA OF MONTECITO SANTA BARBARA COUNTY, CALIFORNIA

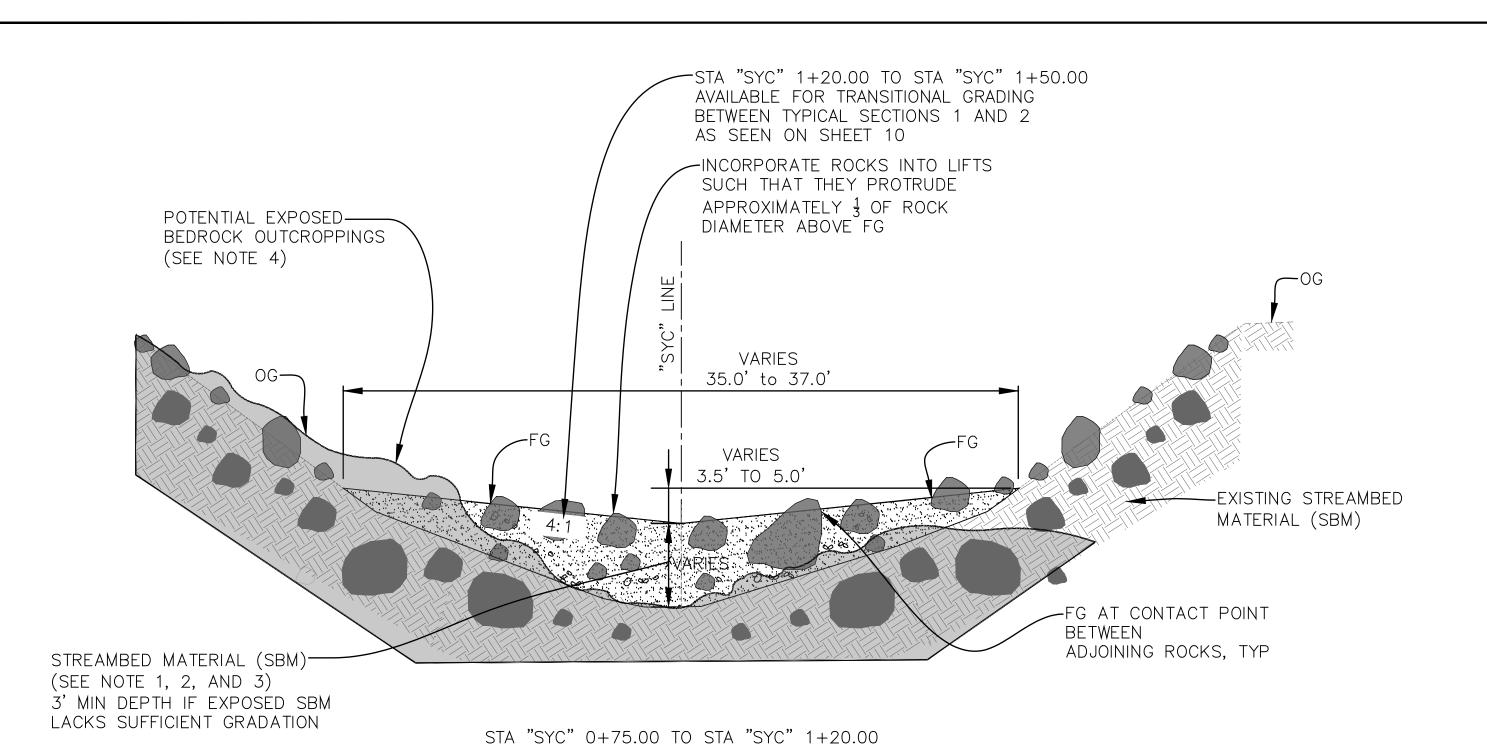
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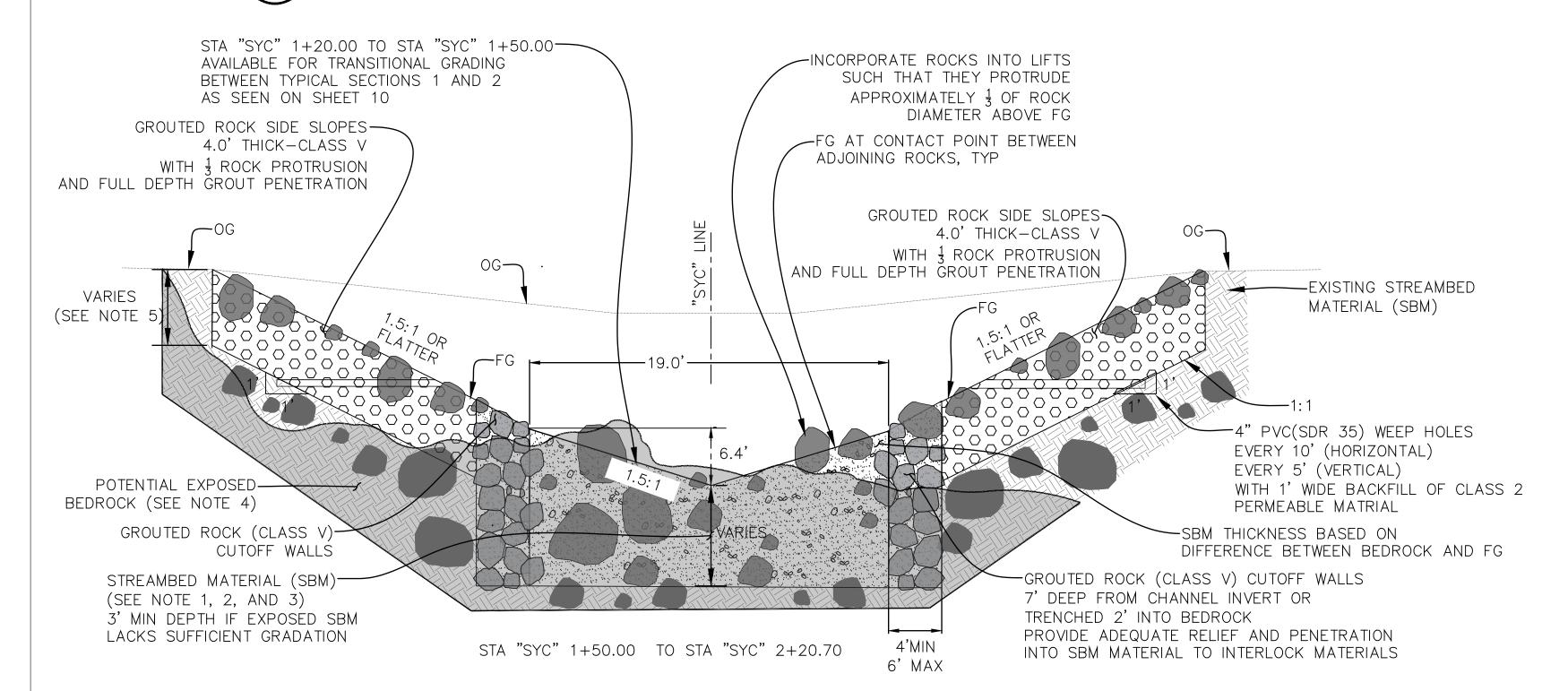








# CHANNEL TYPICAL SECTION 1 (DOWNSTREAM OF GROUTED ROCK SIDE SLOPES) NOT TO SCALE



# CHANNEL TYPICAL SECTION 2 (BETWEEN GROUTED ROCK SIDE SLOPES) NOT TO SCALE

DESIGNED BY: REVISIONS DESCRIPTION DATE No. C88686 Exp. 03/31/24

SANTA BARBARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT 130 E. VICTORIA STREET SANTA BARBARA, CA 93101 (805) 568-3440

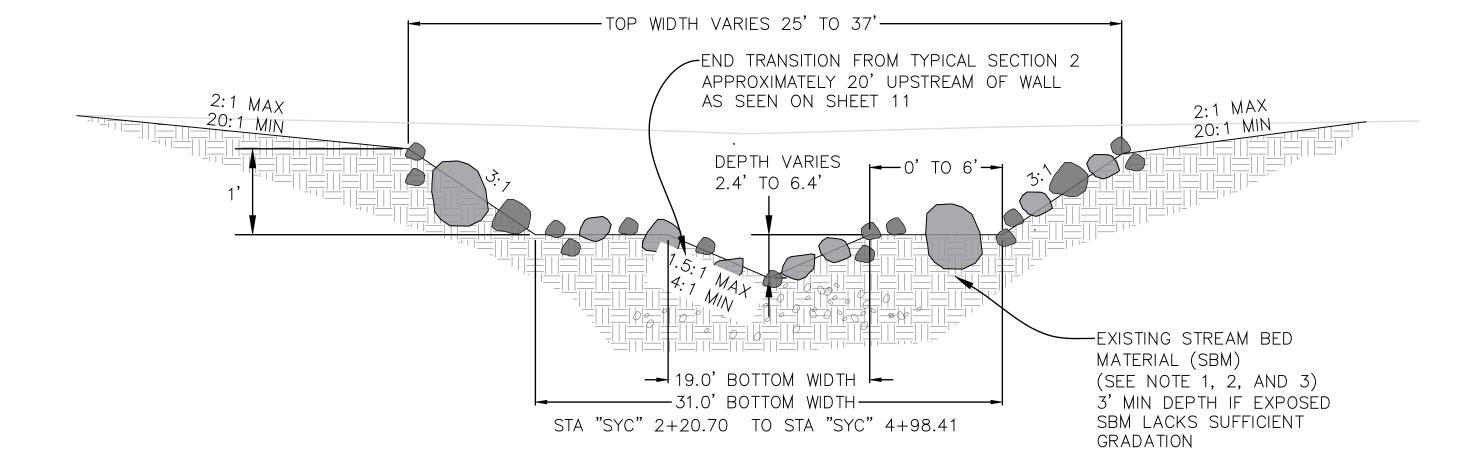


## SAN YSIDRO DEBRIS BASIN IMPROVEMENT PROJECT AREA OF MONTECITO

SANTA BARBARA COUNTY, CALIFORNIA

# TYPICAL SECTIONS

#### DESIGNED BY: O-1157LB DRAWN BY: CF SHEET 6 OF 18 CHECKED BY: Filename: San Ysidro DB Plans.DWG



# CHANNEL TYPICAL SECTION 3 (UPSTREAM OF THE WALL) NOT TO SCALE

#### NOTES:

STREAMBED MATERIAL AND BEDROCK:

1. DEPTH OF SBM VARIES AND WILL BE DETERMINED BY THE DIFFERENCE BETWEEN OG AND FG FLOWLINE ELEVATIONS AND EXPOSED BEDROCK ELEVATIONS. SEE SBM ROCK PLACEMENT DETAIL FOR ADDITIONAL INFORMATION ON SBM GRADATIONS.

2. AT LOCATIONS WHERE FG IS LOWER THAN OG, EXISTING EXPOSED STREAMBED MATERIAL TO BE EVALUATED IN THE FIELD FOR SUFFICIENT GRADATION AND ROUGHNESS BASED ON FINDINGS DURING EXCAVATION AND WITH COUNTY FIELD ENGINEER CONCURRENCE. IN AREAS WHERE EXISTING STREAMBED MATERIAL DOES NOT PROVIDE SUFFICIENT GRADATION AND ROUGHNESS, EXISTING SURFACE TO BE REPLACED IN LIFTS TO A MINIMUM DEPTH OF 3.0' WITH SORTED SBM. DEEPER REPLACEMENTS FOR 6.0' TO 8.0' ROCK WHEN BEDROCK IS LESS THAN 14% OF MATERIAL EXPOSED AT FG WILL BE FIELD

3. FORCING FEATURES TO BE INCLUDED IN CHANNEL SECTIONS PER SBM ROCK

4. SEE SBM ROCK PLACEMENT DETAIL FOR NOTES ON EXPOSED BEDROCK AND SBM.

GROUTED ROCK SLOPE AND BEDROCK:

5. AT LOCATIONS WHERE BEDROCK IS ENCOUNTERED BEFORE FULL DEPTH OF GROUTED ROCK IS ACHIEVED, BENCH AND ROUGHEN EXPOSED ROCK SURFACES THAT DIP TOWARD THE CHANNEL. FORM BENCHES AND PEAKS TO A MINIMUM HEIGHT OF 1.0' TO PROVIDE AN IRREGULAR SURFACE FOR THE ROCK TO BEAR ON, THEN CLEAR OFF LOOSE AND FRIABLE ROCK MATERIAL BEFORE PLACING AND GROUTING ROCK.

LIFT PLACEMENT:

6. USE THE FIELD MANUAL AND SBM ROCK PLACEMENT DETAIL TO VERIFY THE GRADATION OF EXISTING SBM AT FG AND FOR ADDITIONAL INSTRUCTIONS ON PLACING SBM.

7. WHEN EXISTING SBM DOES NOT PROVIDE SUFFICIENT ROUGHNESS, REPLACE MATERIAL IN ONE OR MORE LIFTS, EACH NOT EXCEEDING 1.0' IN DEPTH.

8. FILL VOIDS IN LIFTS WITH FILLER MATERIAL CONSISTING OF 2" SBM AND FINER BEFORE PLACING THE NEXT LAYER.

9. COMPACT EACH LIFT TO OBTAIN A UNIFORMLY DENSE, COMPACT, LOW-PERMEABILITY BED WITH A SURFACE MATCHING THE REFERENCE REACH ACCORDING TO THE FIELD MANUAL.

10. DISTRIBUTE ROCKS LARGER THAN THE D84 THROUGHOUT THE UPPER LIFTS TO MATCH REFERENCE REACH ACCORDING TO FIELD MANUAL.



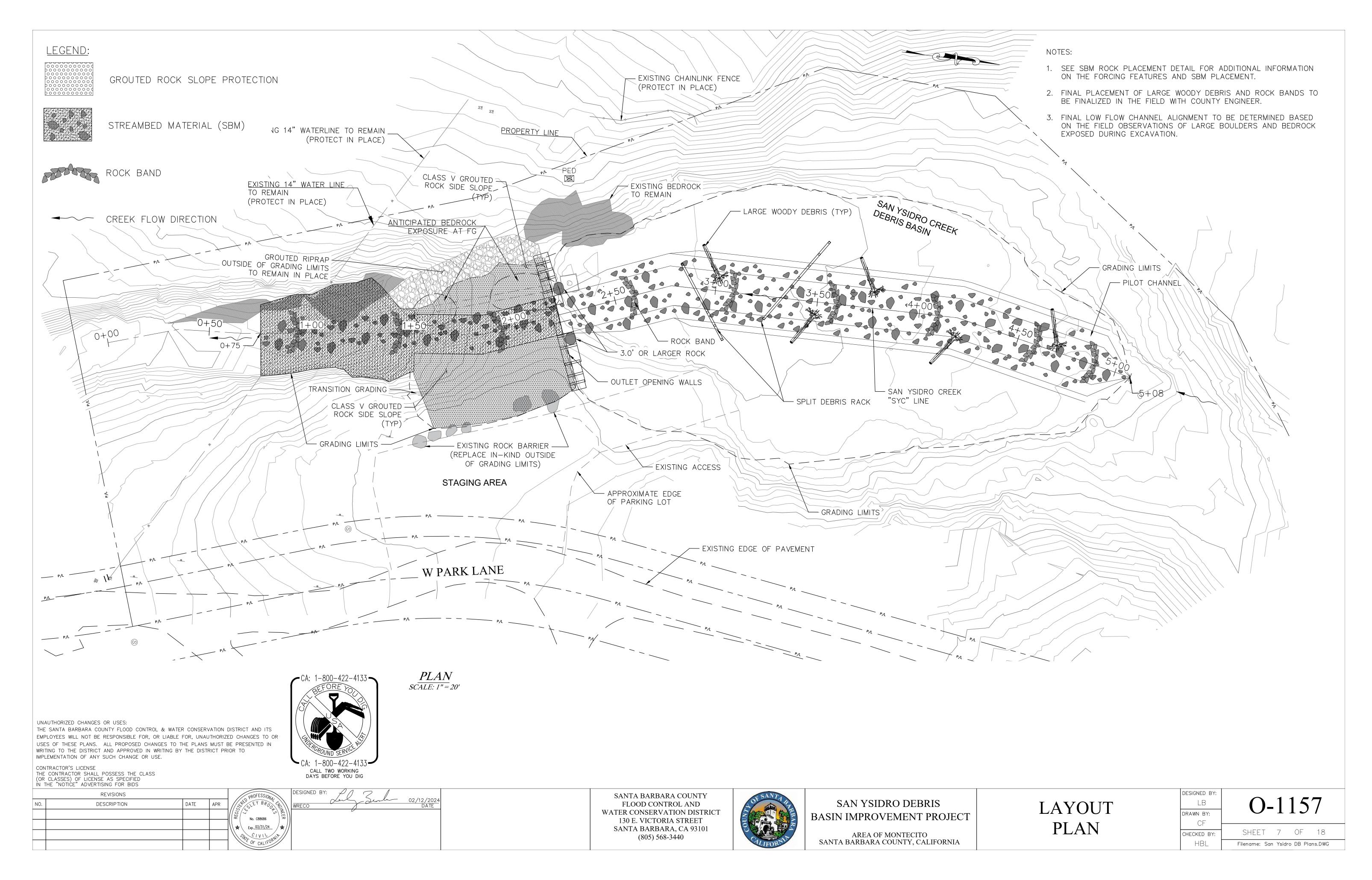
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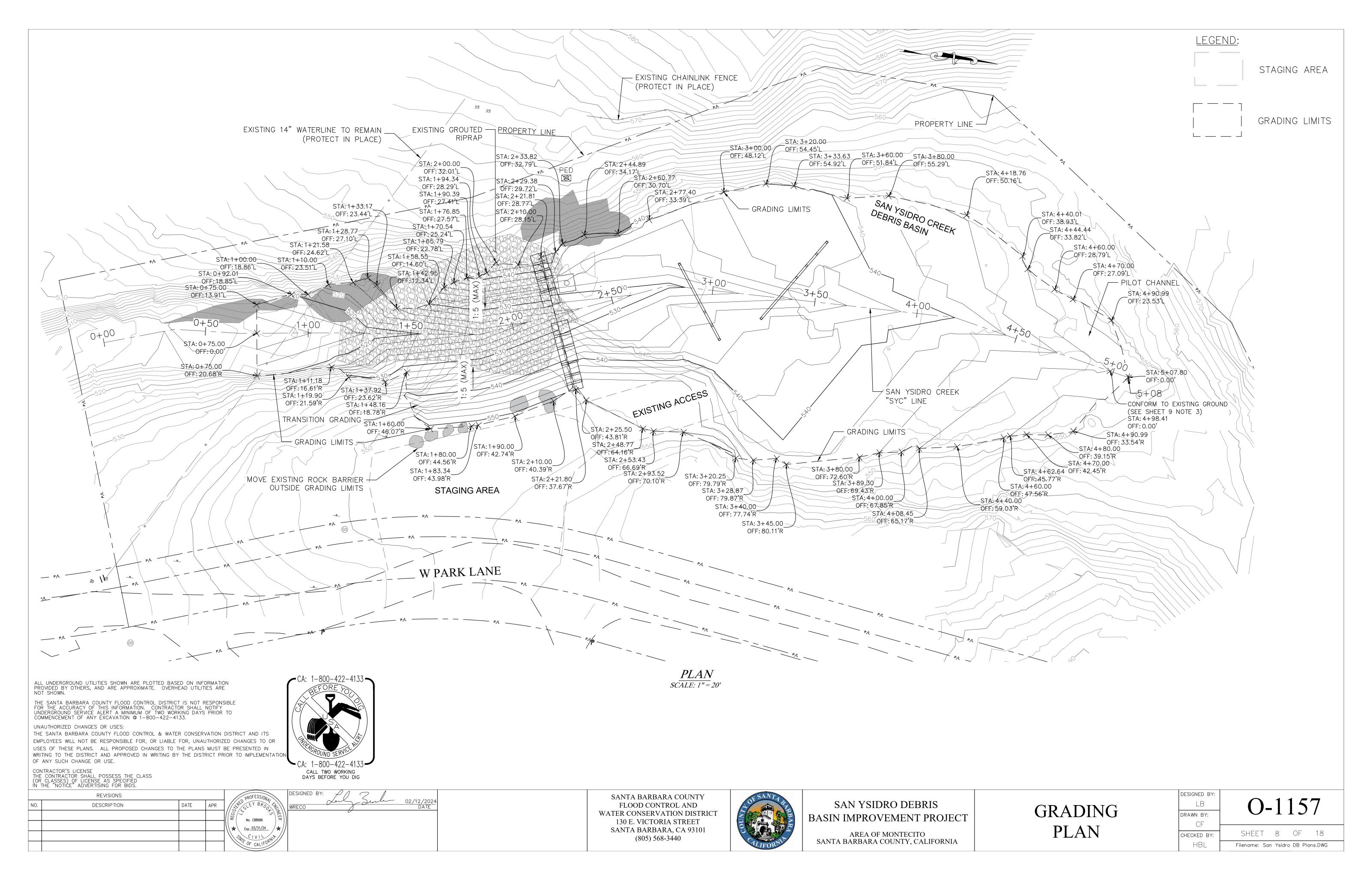
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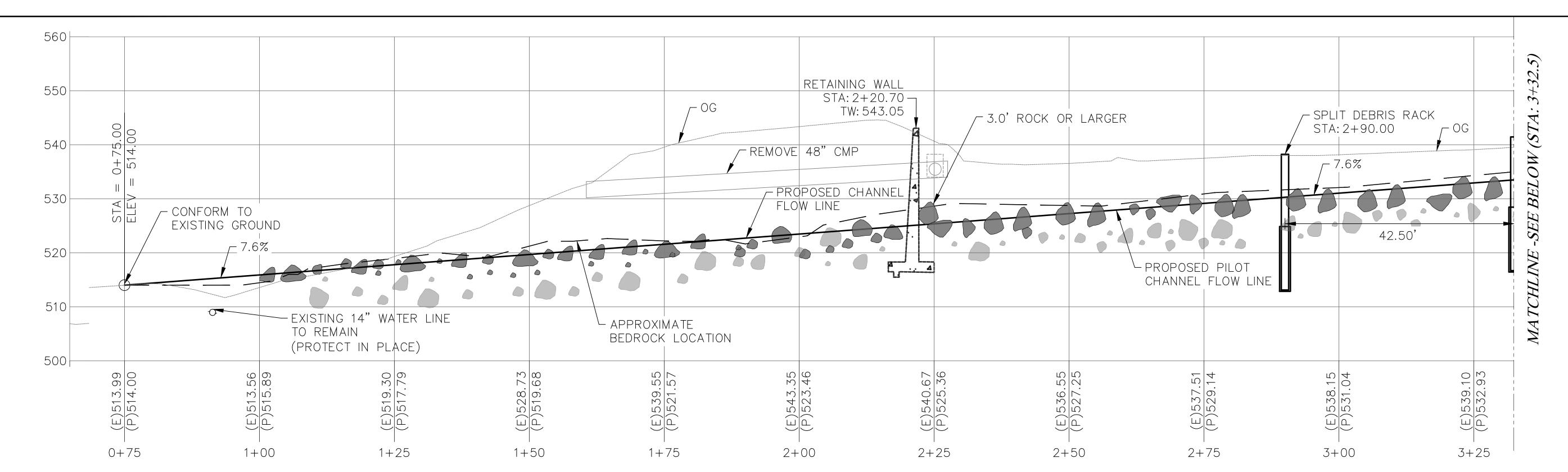
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- 3. ADDITIONAL CONFORM GRADING MAY BE REQUIRED BEYOND THE CONFORM POINT TO TRANSITION FROM CHANNEL TYPICAL SECTION 3 TO THE EXISTING CHANNEL

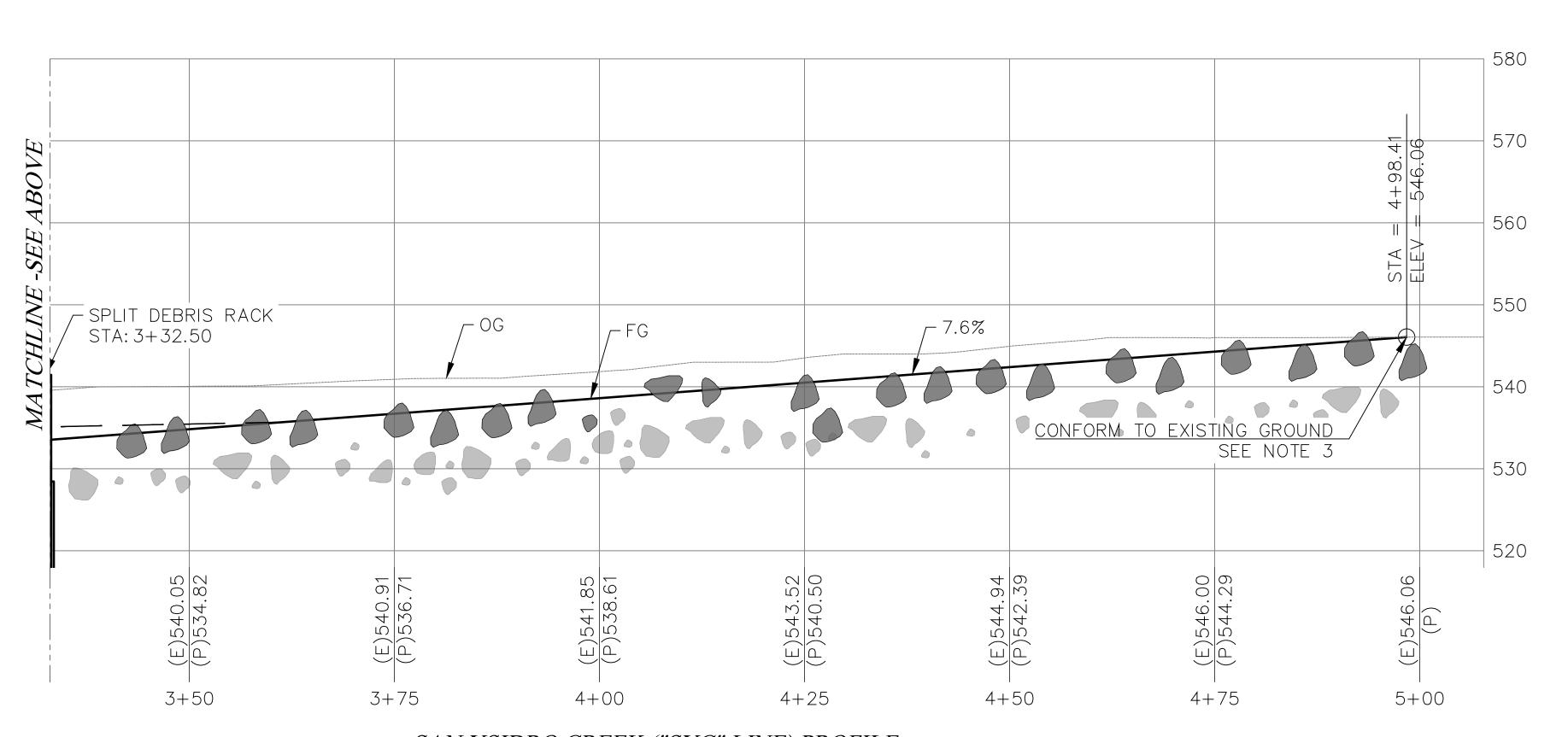


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REVISIONS



# SAN YSIDRO CREEK ("SYC" LINE) PROFILE SCALE: 1" = 10' HORIZONTAL 1" = 10' VERTICAL

SANTA BARBARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT 130 E. VICTORIA STREET SANTA BARBARA, CA 93101



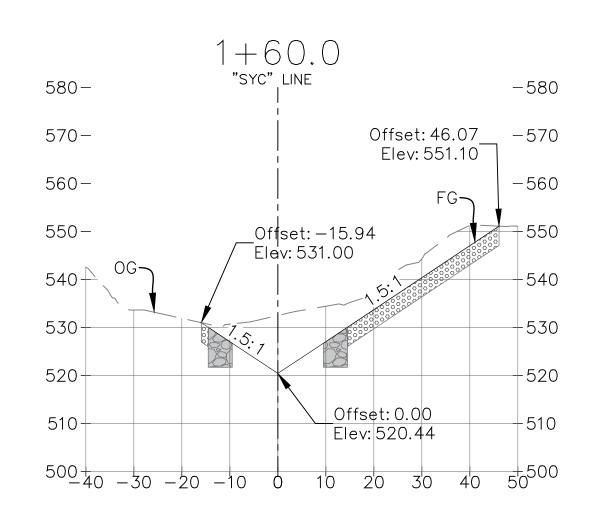
SAN YSIDRO DEBRIS BASIN IMPROVEMENT PROJECT AREA OF MONTECITO SANTA BARBARA COUNTY, CALIFORNIA

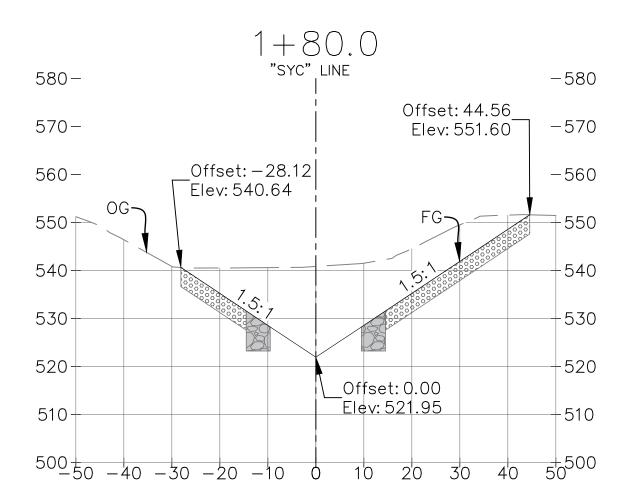
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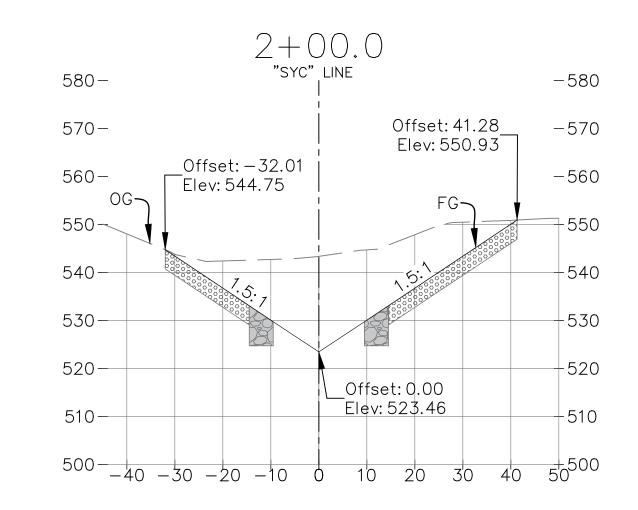
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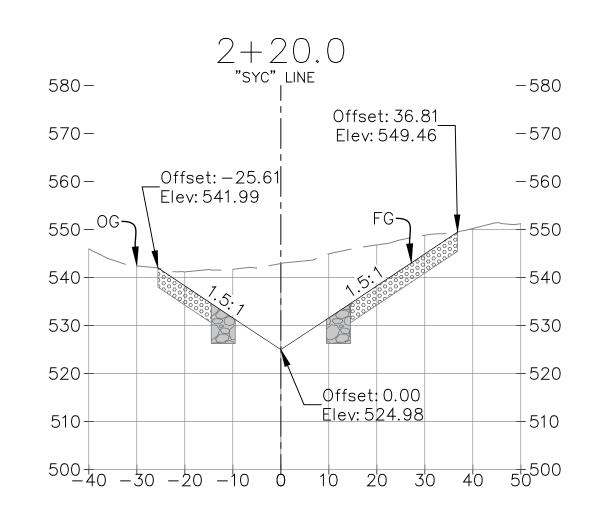
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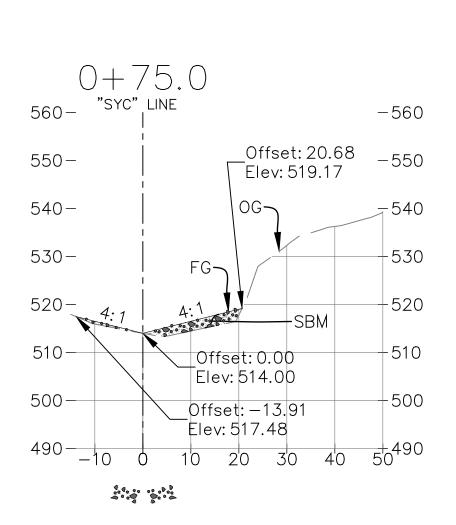
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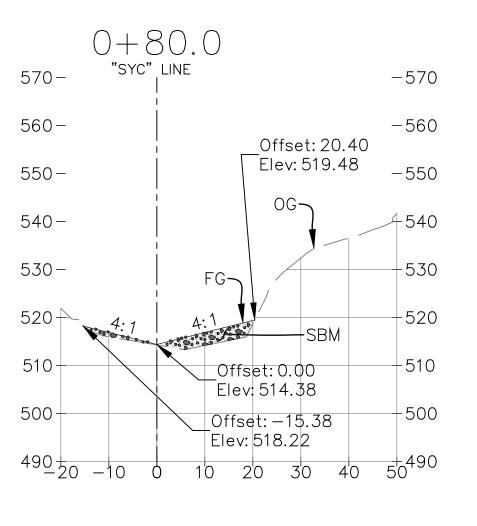


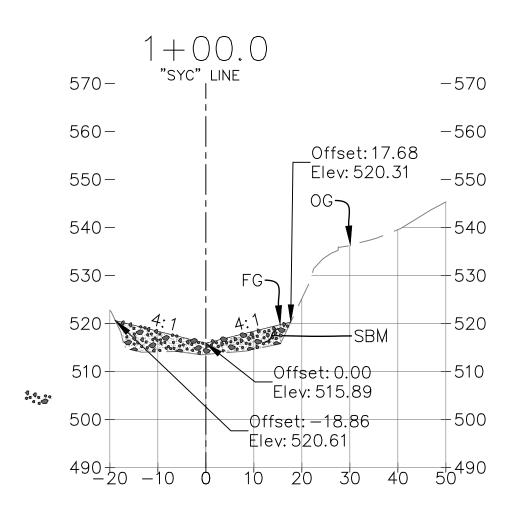


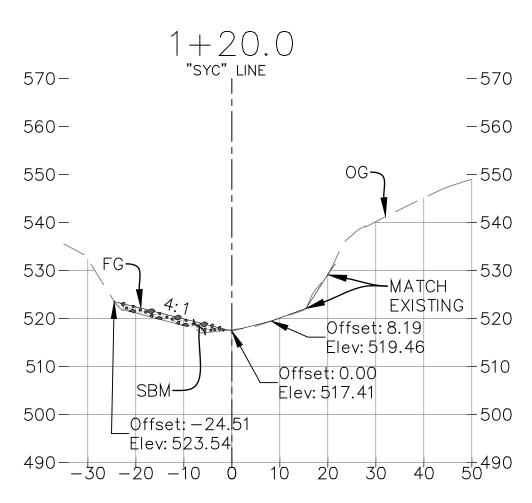


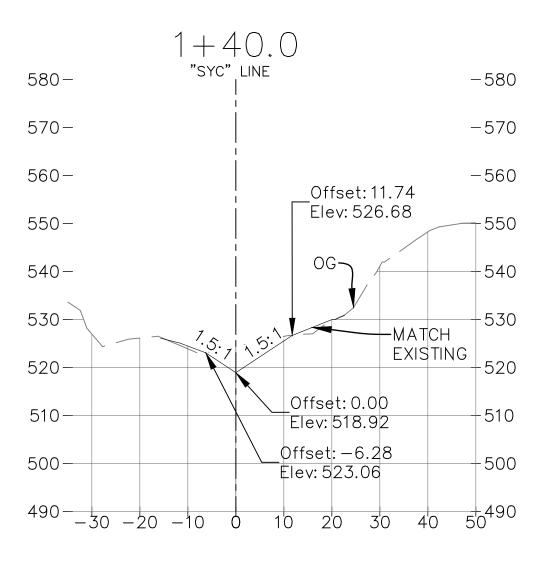














# SECTIONS 0+75 TO 2+20 SCALE: 1" = 20'

NOTES:

1. STA "SYC" 1+20.00 TO STA "SYC" 1+50.00 AVAILABLE FOR TRANSITIONAL GRADING BETWEEN TYPICAL SECTIONS 1 AND 2. ALL UNDERGROUND UTILITIES SHOWN ARE PLOTTED BASED ON INFORMATION PROVIDED BY OTHERS, AND ARE APPROXIMATE. OVERHEAD UTILITIES ARE

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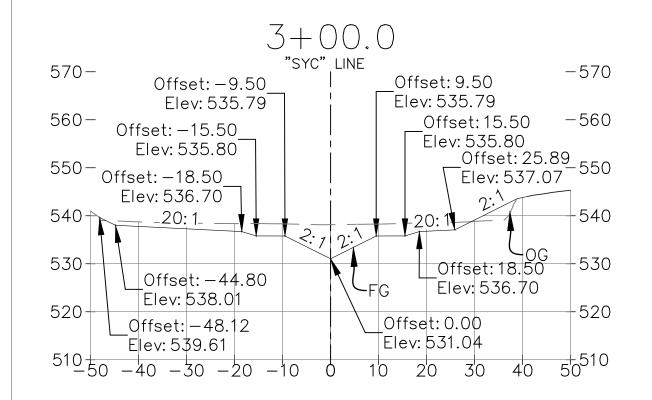
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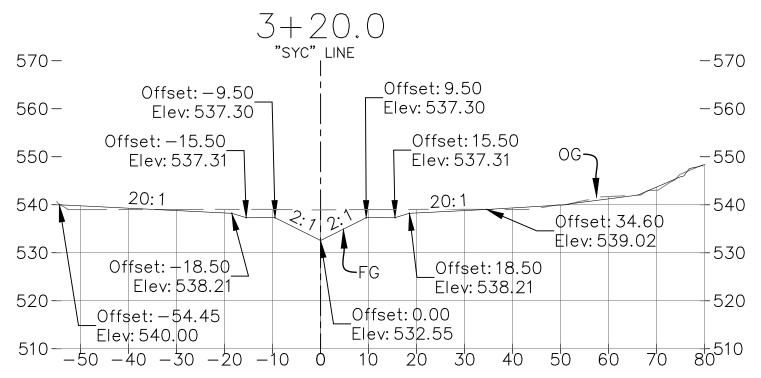
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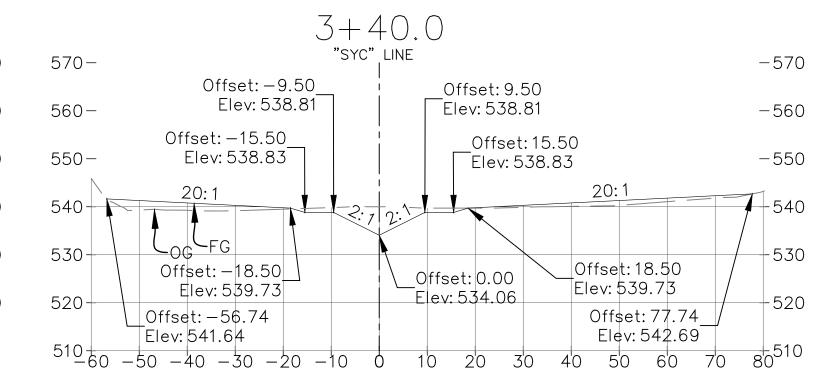
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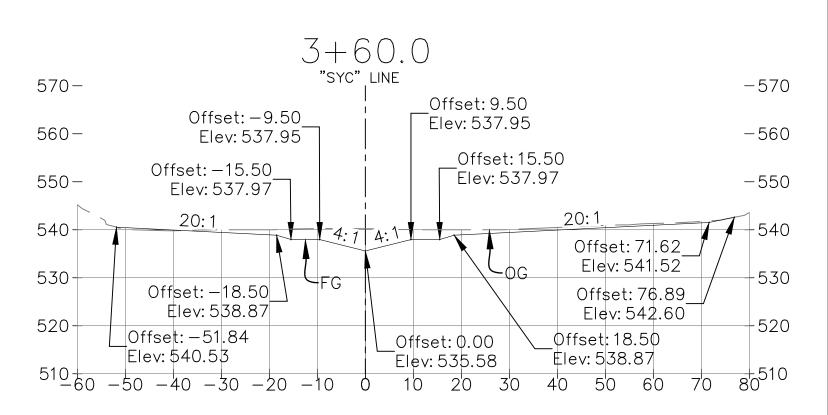
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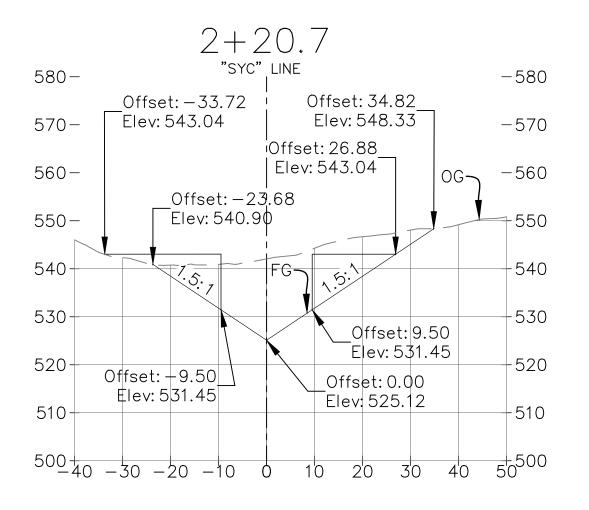
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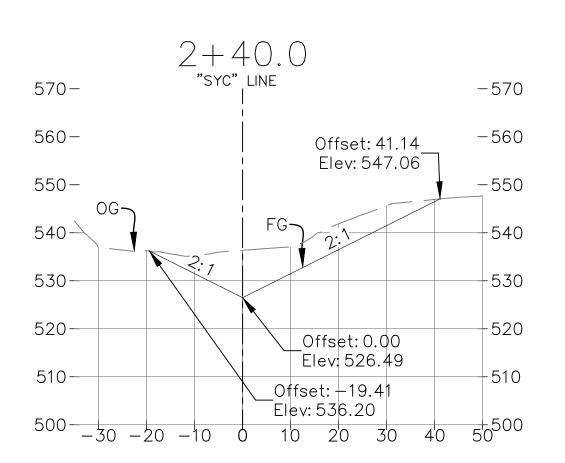


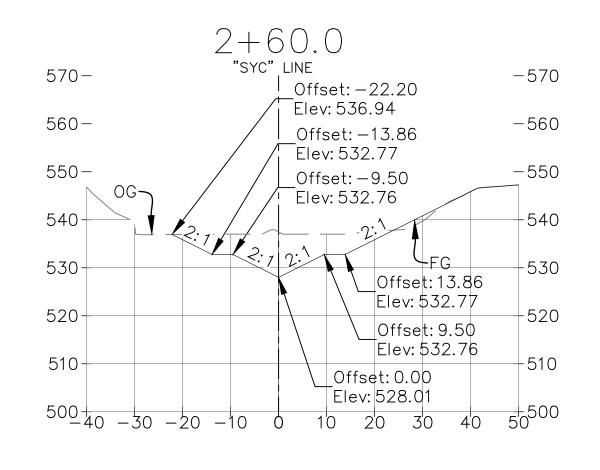


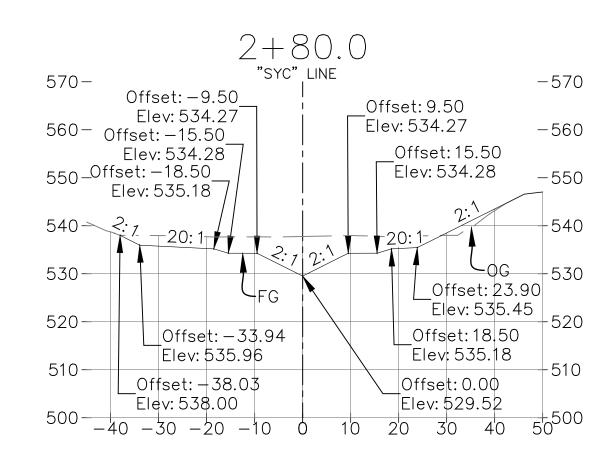














## <u>SECTIONS 2+20.7 TO 3+60</u> SCALE: 1" = 20'

#### NOTES:

1. END TRANSITION FROM TYPICAL SECTION 2
APPROXIMATELY 20' UPSTREAM OF WALL
BETWEEN STATION "SYC" 2+20.0 AND
"SYC" 2+40.0.

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130 E. VICTORIA STREET
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(805) 568-3440



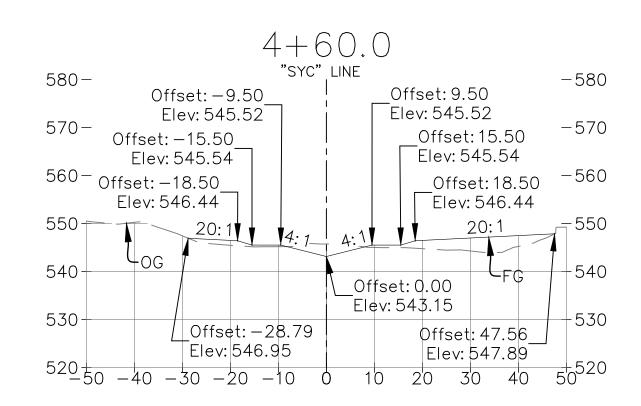
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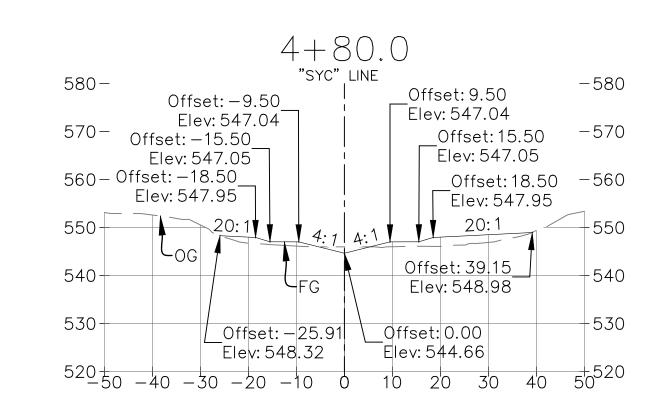
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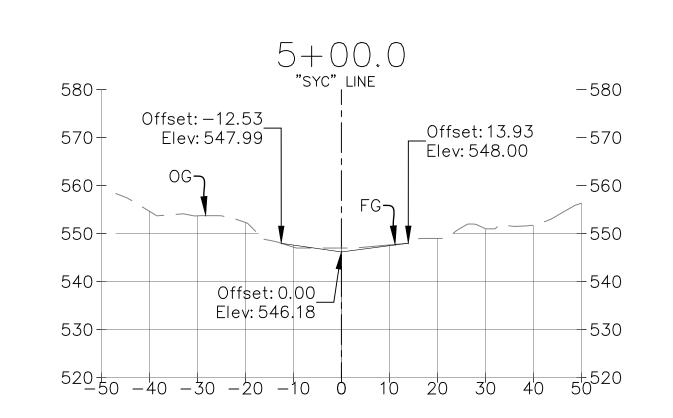
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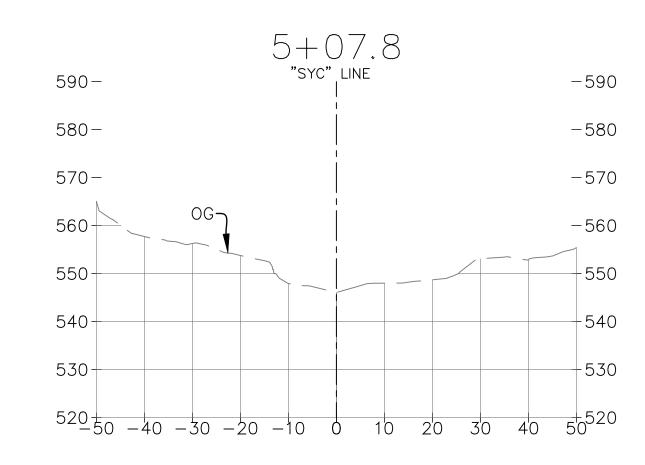
SECTIONS 2

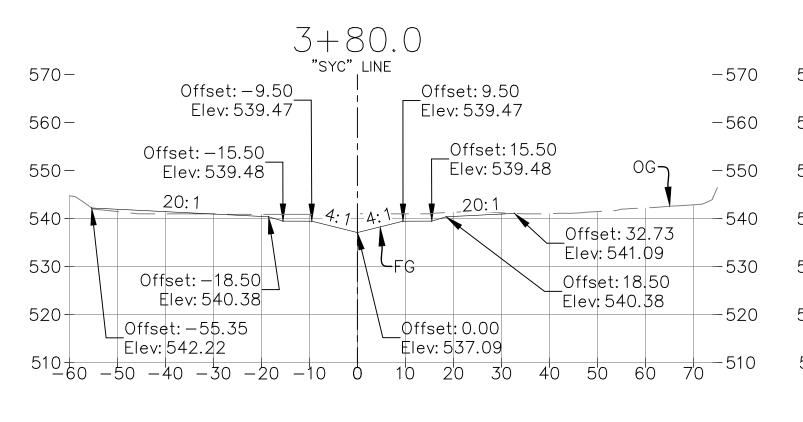
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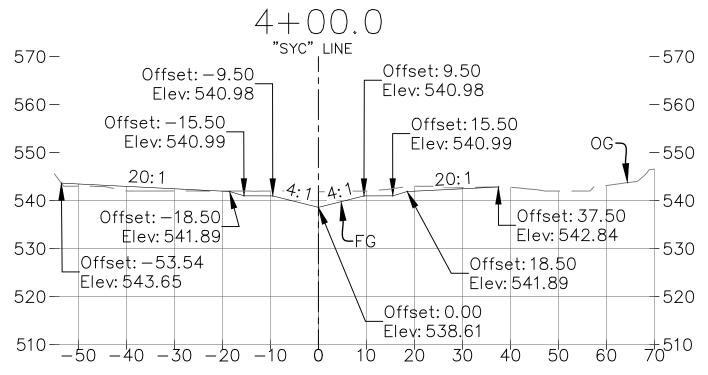


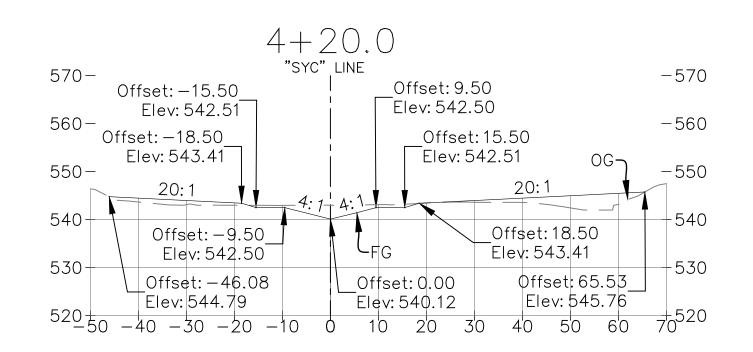


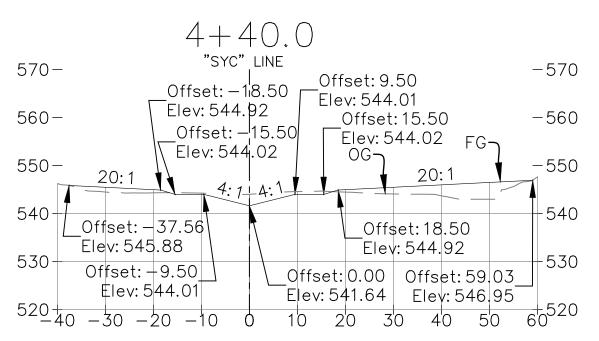












<u>SECTIONS 3+80 TO 5+07.8</u> SCALE: 1" = 20'



ALL UNDERGROUND UTILITIES SHOWN ARE PLOTTED BASED ON INFORMATION PROVIDED BY OTHERS, AND ARE APPROXIMATE. OVERHEAD UTILITIES ARE NOT SHOWN.

THE SANTA BARBARA COUNTY FLOOD CONTROL DISTRICT IS NOT RESPONSIBLE FOR THE ACCURACY OF THIS INFORMATION. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT A MINIMUM OF TWO WORKING DAYS PRIOR TO COMMENCEMENT OF ANY EXCAVATION @ 1-800-422-4133.

UNAUTHORIZED CHANGES OR USES:
THE SANTA BARBARA COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT AND ITS
EMPLOYEES WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR
USES OF THESE PLANS. ALL PROPOSED CHANGES TO THE PLANS MUST BE PRESENTED IN
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IMPLEMENTATION OF ANY SUCH CHANGE OR USE.

CONTRACTOR'S LICENSE
THE CONTRACTOR SHALL POSSESS THE CLASS
(OR CLASSES) OF LICENSE AS SPECIFIED
IN THE "NOTICE" ADVERTISING FOR BIDS.

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				OF CALIFOR

SANTA BARBARA COUNTY
FLOOD CONTROL AND
WATER CONSERVATION DISTRICT
130 E. VICTORIA STREET
SANTA BARBARA, CA 93101
(805) 568-3440



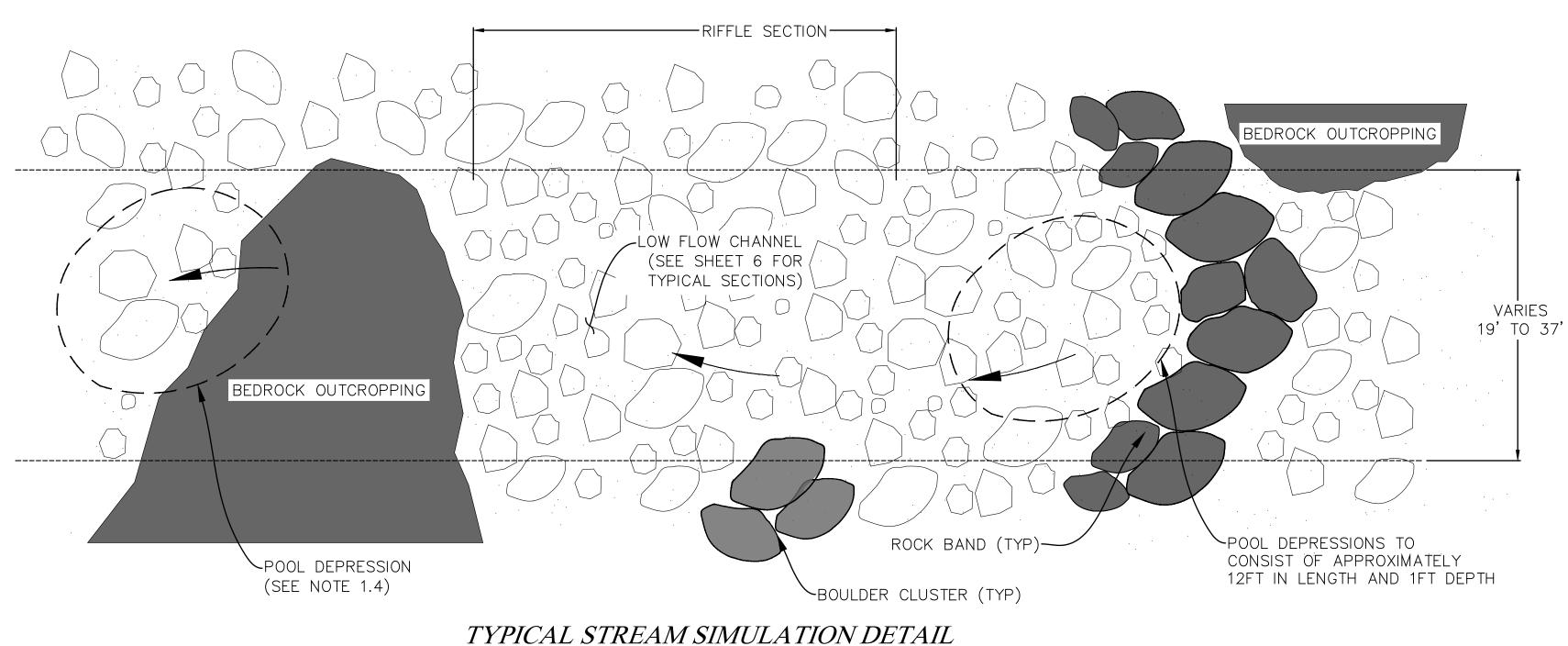
SAN YSIDRO DEBRIS
BASIN IMPROVEMENT PROJECT

AREA OF MONTECITO

SANTA BARBARA COUNTY, CALIFORNIA

SECTIONS 3

FOK B	IDS.		
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	LB	O-1157	,
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NOT TO SCALE

D84 OR LARGER ROCK WITH-

A MINIMUM OF 10% 6.0' to

EXISTING CHANNEL BED

8.0' ROCK OR BEDROCK

6' MIN ∠

#### NOTES:

#### 1. BEDROCK OUTCROPPINGS

- 1.1. BEDROCK EXPOSURE DURING GRADING ACTIVITIES IS ANTICIPATED THROUGHOUT THE PROJECT LIMITS. APPROXIMATE LOCATIONS OF KNOWN AND EXPECTED BEDROCK OUTCROPPINGS ARE PROVIDED ON THE LAYOUT PLAN BUT DO NOT ENCOMPASS ALL POTENTIAL BEDROCK LOCATIONS.
- 1.2. EVALUATE THE QUANTITY OF BEDROCK EXPOSED AT FG EVERY 50 LF ALONG THE SAN YSIDRO PROFILE USING PEBBLE COUNTS BEFORE PLACING SBM. IF MORE THAN 14% OF EXPOSED MATERIAL AT FG IS BEDROCK, PLACE A WEIGHTED DISTRIBUTION OF SBM D84 OR SMALLER WITH AT LEAST 2% BOULDERS LARGER THAN 3.0' IN DIAMETER. IF LESS THAN 14% IS BEDROCK, PLACE ADDITIONAL 6.0' TO 8.0' DIAMETER BOULDERS WITH ADDITIONAL REPLACEMENT BEYOND 3.0' DEPTH AS FIELD DIRECTED
- VARIES 1.3. EXCAVATION ACTIVITIES SHALL NOT REMOVE EXPOSED BEDROCK WITHIN 18 INCHES OF FG BUT SHALL GRADE AROUND EXPOSED BEDROCK TO THE APPROXIMATE FLOWLINE PROVIDED IN THE SAN YSIDRO PROFILE AND PER THE DISCRETION OF THE COUNTY FIELD ENGINEER.
  - EXPOSED BEDROCK SHALL BE EVALUATED FOR ROUGHNESS BY COUNTY FIELD ENGINEER FOR EQUIVALENCY TO REFERENCE REACH BEDROCK ROUGHNESS. IF NECESSARY, BREAKING AND/OR CHIPPING OF THE BEDROCK MAY BE REQUIRED TO PROVIDE ADEQUATE ROUGHNESS OR POOL FEATURES AS DESCRIBED IN THE FIELD MANUAL
  - 1.5. BOULDERS FROM SBM D84 OR LARGER SHALL BE PLACED ADJACENT TO THE BEDROCK OUTCROPPINGS AND ALONG CHANNEL EDGES AS FIELD DIRECTED
  - BEDROCK OUTCROPPINGS THAT SPAN THE THALWEG WIDTH OR EXTEND GREATER THAN 75% OF THE BANKFULL WIDTH WILL REQUIRE BEDROCK EXCAVATION TO PROVIDE A LOW FLOW CHANNEL, ALONG WITH SUPPLEMENTAL BOULDERS ALONG THE EDGES TO HELP SHAPE THE CHANNEL SIMILAR TO THE REFERENCE REACH AS PROVIDED IN THE FIELD MANUAL.

A: 1-800-422-4133

CALL TWO WORKING

DAYS BEFORE YOU DIG

-EXISTING CHANNEL BED

#### NOTES (CONTINUED):

#### 2. CHANNEL FORCING FEATURES

- 2.1. FORCING FEATURES TO CONSIST OF CHANNEL SPANNING ROCK BANDS OR BOULDER CLUSTERS CONSISTING OF 3.0' DIAMETER ROCK TO 6.0' DIAMETER ROCK. PURPOSE OF FORCING FEATURES IS TO PROPAGATE POOL FORMATION OVER TIME.
- 2.2. FORCING FEATURES SHALL BE PROVIDED AT THE UPSTREAM CONFORM LIMITS, NEAR THE RETAINING WALL OPENING, AND AT A MINIMUM SPACING OF 40 LF TO 50 LF ALONG THE SAN
- 2.3. PLACEMENT OF FORCING FEATURES DOWNSTREAM OF THE WALL STRUCTURE TO BE LIMITED TO SECTIONS WITH FILL BETWEEN OG AND FG.
- 2.4. FORCING FEATURE LOCATION AND ROCK SELECTION TO BE FIELD DIRECTED AND APPROVED BY COUNTY ENGINEER.
- 2.5. BOULDER CLUSTERS MADE UP OF D84 OR LARGER AND TO BE PLACED WITHIN 6-FEET OF THE CHANNEL FLOWLINE AND FIELD DIRECTED.
- ROCK BANDS TO SPAN THE BANKFULL WIDTH.
- 2.7. ROCK BANDS TO BE ROUGHLY ANGLED IN THE UPSTREAM DIRECTION WITH SPACE PROVIDED FOR A CONTINUOUS LOW FLOW CHANNEL THROUGH THE ROCK BAND
  - WHERE APPROPRIATE, ROCK BANDS MAY BE CONSTRUCTED OF A COMBINATION OF EXPOSED BEDROCK OUTCROPPINGS, INTERLOCKED BOULDERS OF 6.0' TO 8.0' IN DIAMETER, EMBEDDED BOULDERS OF 6.0' TO 8.0' IN DIAMETER (IF LESS THAN 14% BEDROCK), AND 3.0' OR LARGER SBM MATERIAL.
- 2.9. IF BEDROCK IS EXPOSED AT A DEPTH SHALLOWER THAN THE EMBEDMENT DEPTH OF THE ROCK BAND, THEN PLACE 6.0' OR LARGER MATERIAL TO FORM THE ROCK BAND.
- 2.10. WHERE BEDROCK IS EXPOSED AT ROCK BAND FEATURE LOCATIONS, ROCK BANDS WILL BE FORMED OF THE EXPOSED BEDROCK AND ADDITIONAL LARGE BOULDERS 6.0' TO 8.0' IN DIAMETER. EXTENSIVE TRENCHING INTO BEDROCK TO INSTALL LARGE BOULDERS WILL NOT BE REQUIRED IF THE FOLLOWING CONDITIONS ARE MET:
  - 1) BEDROCK ROUGHENED AND BEARING SURFACE PREPARED, THROUGH CHIPPING AND BREAKING, FOR MAXIMUM CONTACT WITH LARGE BOULDERS.
  - 2) LARGE BOULDERS ARE PLACED WITH 3 POINTS OF CONTACT.

#### POINTS OF CONTACT ARE:

- \* CHANNEL BOTTOM IF BEDROCK IS THE BEARING
- SURFACE, ROUGHEN BEFORE PLACING BOULDERS. \* ROCK/BEDROCK — BUTT THE BOULDERS AGAINST
- EXPOSED BEDROCK OR A SECOND BOULDER CHANNEL SIDES - IF BEDROCK IS EXPOSED, BUTT THE BOULDERS AGAINST IT. IF SBM IS EXPOSED, EMBED THE BOULDER 1/3 ITS DIAMETER OR UNTIL IT TOUCHES BEDROCK.

#### 3. LOW FLOW CHANNEL

- 3.1. CONFIRM ELEVATIONS MATCH THE SECTION SHEETS 10 THROUGH 12 WHEN CONSTRUCTING THE LOW FLOW CHANNEL.
- 3.2. ELEVATIONS MAY DEVIATE BY UP TO 18 INCHES TO ACCOMMODATE BEDROCK EXPOSED IN THE CHANNEL AND PROVIDE A STREAM SIMULATION CHANNEL AS DESCRIBED IN THE FIELD MANUAL.
- 3.3. DEVIATIONS IN ELEVATION MUST NOT BE CUMILATIVE AND CONSTRUCTED GRADE MUST MEET FG ONCE EVERY 40' TO 50'. IT IS ACCEPTABLE TO CUT DOWN TO MEET GRADE. CONFIRM WITH THE FIELD ENGINEER IF ROCK BANDS WILL BE PLACED IN THESE LOCATIONS. CONSULT THE FIELD MANUAL FOR ALTERNATIVE HABITAT TYPES.
- 3.4. PROVIDE ADDITIONAL ROUGHNESS AND POOLS THROUGH BREAKING AND/OR CHIPPING.

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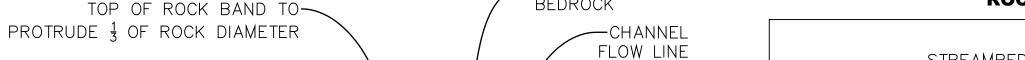
CONTRACTOR'S LICENSE THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE" ADVERTISING FOR BIDS.

#### SAN YSIDRO DEBRIS BASIN IMPROVEMENT PROJECT

AREA OF MONTECITO SANTA BARBARA COUNTY, CALIFORNIA

SBM ROCK	
PLACEMENT DETAIL	ار

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	DESIGNED BY:	
	LB	O-1157
	DRAWN BY:	0 1157
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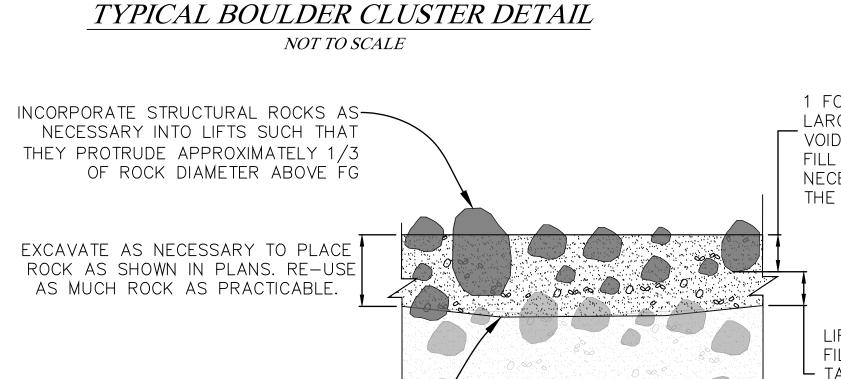
BEDROCK

-POTENTIAL EXPOSED

FLOW LINE	STREAMBED MAT	ERIAL (SBM)
-SBM FILL	B-AXIS SIZE RANGE	VOLUME PERCENT OF MIX
VARIES SEE NOTES 2.9 AND 2.10	*6.0-8.0 FT 3.0-6.0 FT 1.8-3.0 FT 0.6-1.8 FT 0.2-0.6 FT 0.084-2 IN <0.084 IN (NO. 8 SIEVE)	14 2 14 20 25 16 9

\*GREATER THAN 6.0' INCLUDES EXPOSED BEDROCK OUTCROPPINGS

**ROCK SIZING** 



A MINIMUM OF 3 BOULDERS-

APPROXIMATE

ROUGH GRADE

GREATER THAN 3.0' IN DIAMETER

PLACED IN A BUTTRESSED FORMATION

TOP OF BOULDER CLUSTER TO-

PROTRUDE  $\frac{1}{3}$  OF ROCK DIAMETER

CHANNEL FLOW LINE-

EXISTING CHANNEL BED

1 FOOT LIFT WITH D84 MATERIAL AND LARGER PLACED AS FIELD DIRECTED. FILL VOIDS WITH REMAINING MATERIAL. TAMP TO FILL VOIDS. SEAL TOP WITH FINES AS NECESSARY SO WATER REMAINS FLOWING ON THE SURFACE.

ROCK BAND DETAIL

NOT TO SCALE

LIFT WITH D84 AND LARGER MATERIAL. FILL VOIDS WITH REMAINING MATERIAL. - TAMP TO FILL VOIDS. SEAL TOP WITH FINES AS NECESSARY SO WATER REMAINS FLOWING ON THE SURFACE.

# TYPICAL SBM LIFT PLACEMENT DETAIL

NOT TO SCALE

∕SBM FILL

(SEE SHEET 6 FOR ADDITIONAL NOTES ON SBM PLACEMENT)

VARIES 4' TO 6' FG AT CONTACT POINT BETWEEN ADJOINING ROCKS, TYP D84 OR LARGER ROCK WITI -ROCK BAND SEE NOTES 2.6 TO 2.8 A MINIMUM OF 10% 6.0' to

TYPICAL ROCK BAND DETAIL

NOT TO SCALE

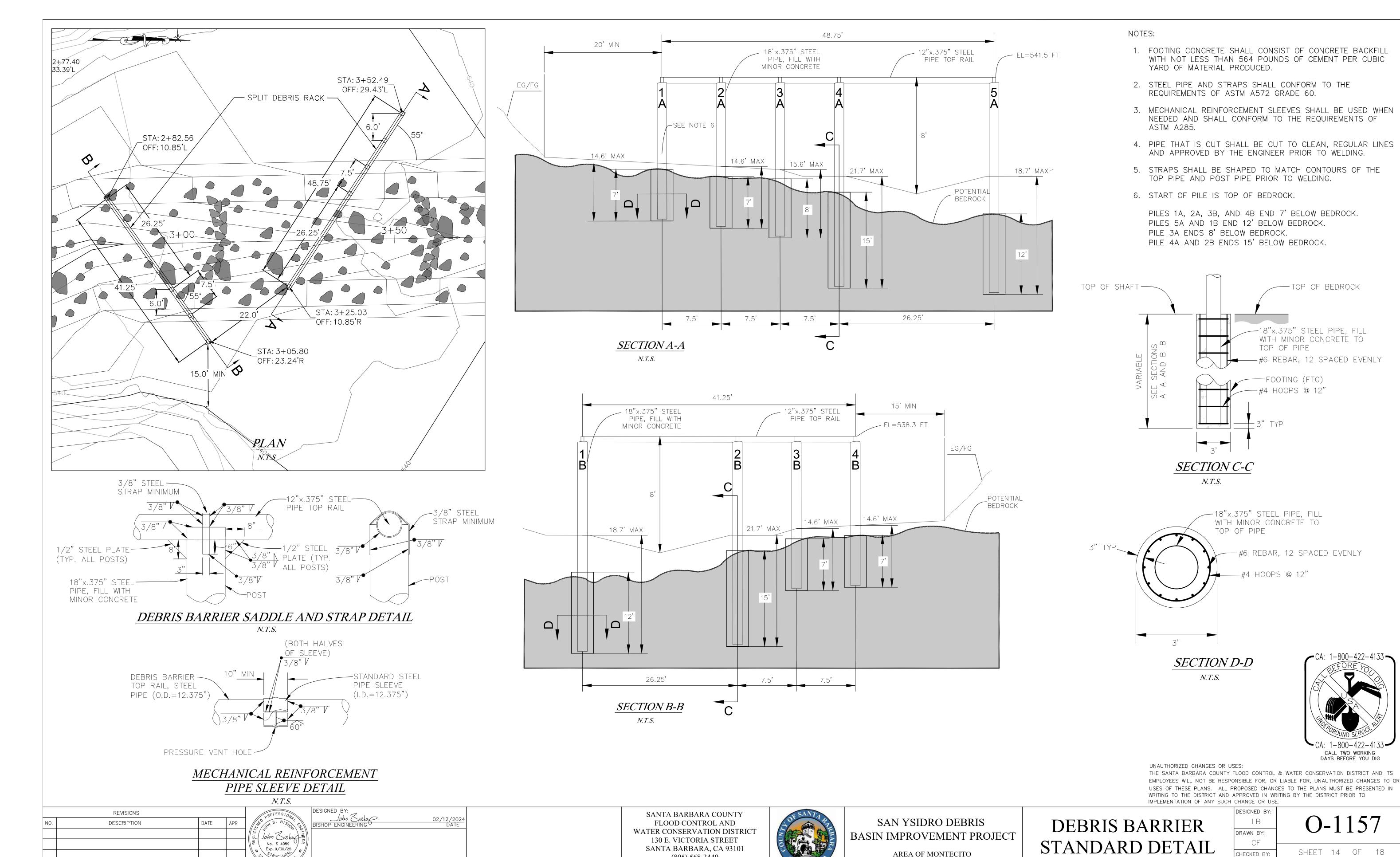
"SYC" LINE

REVISIONS DESCRIPTION DATE No. C88686 Exp. 03/31/24

SANTA BARBARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT 130 E. VICTORIA STREET SANTA BARBARA, CA 93101

(805) 568-3440

8.0' ROCK OR BEDROCK



(805) 568-3440

AREA OF MONTECITO

SANTA BARBARA COUNTY, CALIFORNIA

Filename: San Ysidro DB Plans.DWG

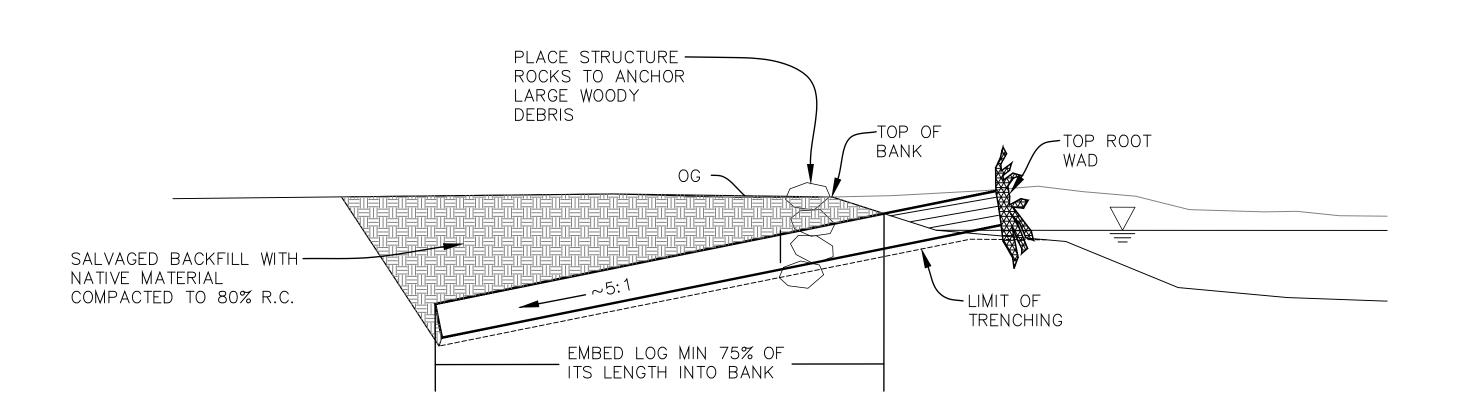
# PLACE STRUCTURE ROCKS TO ANCHOR LARGE WOODY DEBRIS PLOW 1.5-2 FT MAX DIAMETER ROOT WAD CHANNEL BOTTOM TOP OF BANK





#### NOTES:

- 1. LARGE WOODY DEBRIS TREES TO BE PROVIDED BY AND CONVEYED TO THE PROJECT SITE BY THE COUNTY.
- 2. LARGE WOODY DEBRIS FINAL PLACEMENT AND LOCATION TO BE FIELD DIRECTED BY COUNTY ENGINEER
- 3. STRUCTURE ROCKS TO BE GREATER THAN 4.0 FT IN DIAMETER AND SHALL BE SELECTED AND PLACED AS DIRECTED BY THE FIELD ENGINEER.





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(OR CLASSES) OF LICENSE AS SPECIFIED
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SANTA BARBARA COUNTY
FLOOD CONTROL AND
WATER CONSERVATION DISTRICT
130 E. VICTORIA STREET
SANTA BARBARA, CA 93101
(805) 568-3440

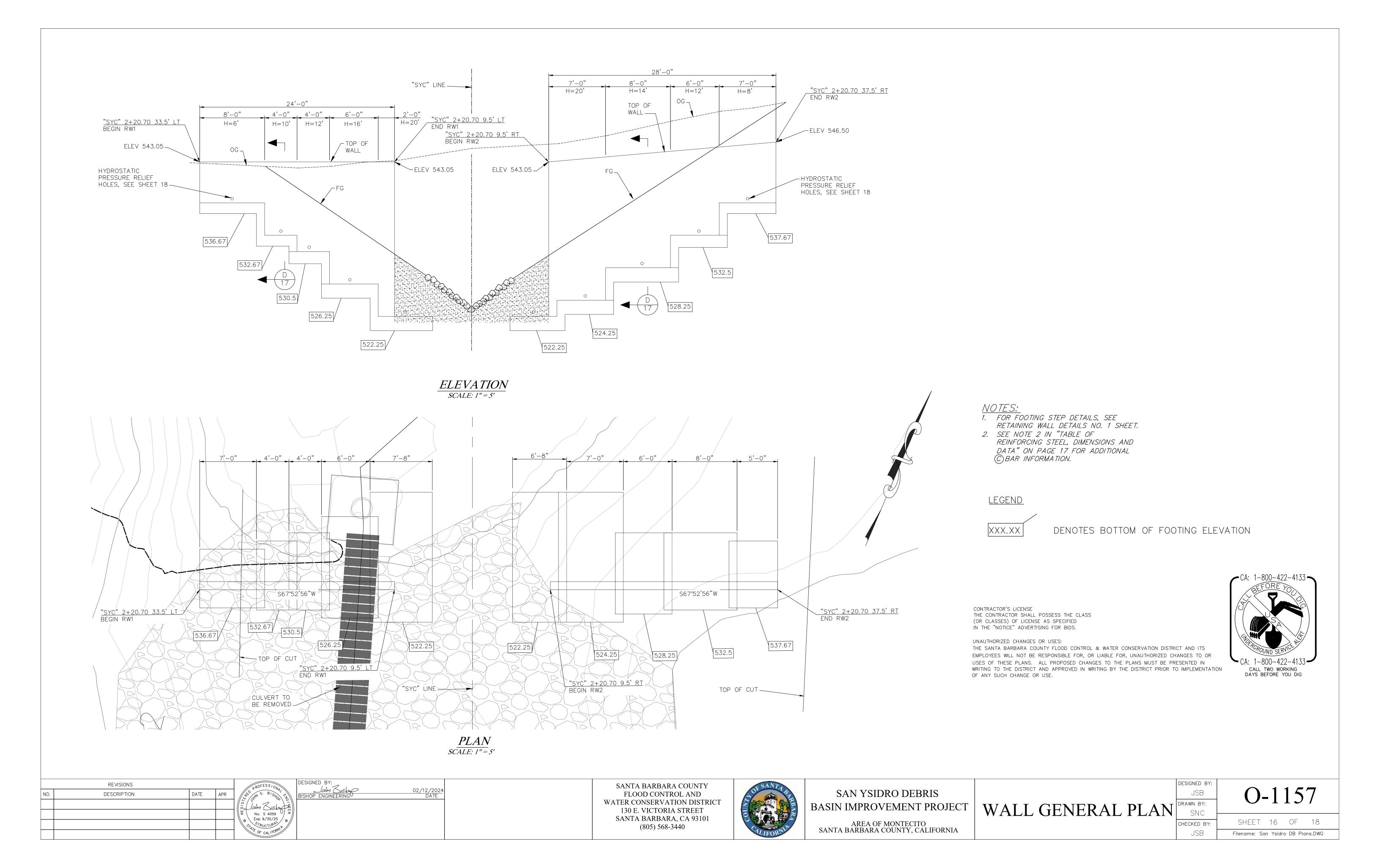


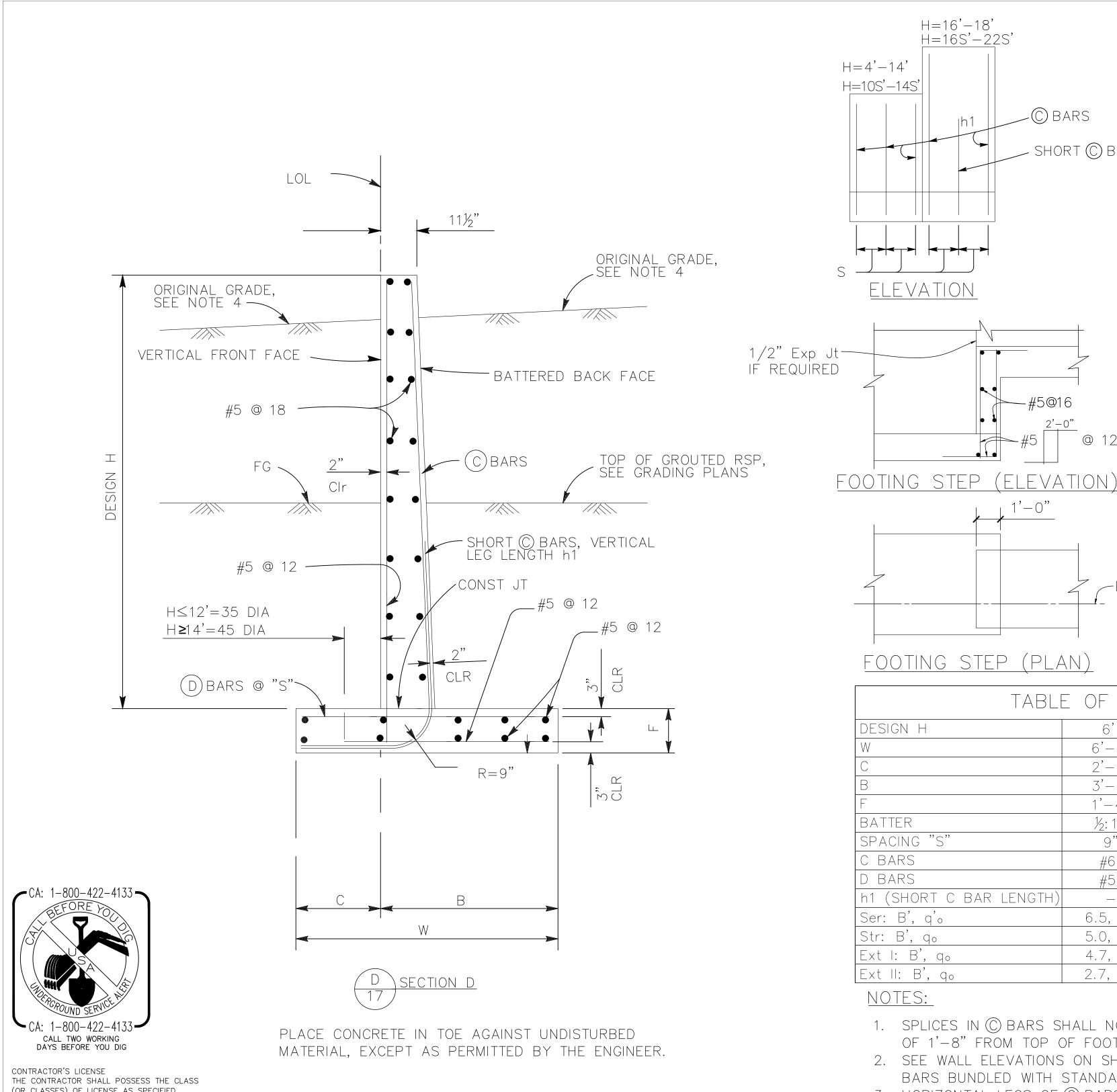
SAN YSIDRO DEBRIS BASIN IMPROVEMENT PROJECT

AREA OF MONTECITO SANTA BARBARA COUNTY, CALIFORNIA

LARGE	WOODY
<b>DEBRIS</b>	DETAIL

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	DESIGNED BY:	
	LB	$\bigcirc$ 1157
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(OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE" ADVERTISING FOR BIDS.

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- (C) BARS - SHORT © BARS

FG ~

A. INSTALL EXPANDED POLYSTYRENE FOAM OVER HORIZONTAL BEDROCK SURFACES, COMPACTED AB AND AS DIRECTED BY THE ENGINEER.

B. PLACE AB IN VOIDS CREATED BY ROCK REMOVAL, NATURAL ROCK SURFACE IRREGULARITIES, WHERE UNSUITABLE MATERIAL IS ENCOUNTERED, AND AS DIRECTED BY THE ENGINEER.

CLASS II AB COMPACTED

DENSITY, SEE NOTE B

TO 95% RELATIVE

C. ANTICIPATED BEDROCK REMOVAL. POUR NEAT AGAINST ROCK.

2" THICK EXPANDED POLYSTYRENE FOAM (40 PSI MIN DENSITY), LEVEL 1' MIN SEE NÔTE A SEE NOTE C

NOTES:

RETAINING WALL OVEREXCAVATION LIMITS

TABLE OF REINFORCING STEEL, DIMENSIONS AND DATA								
DESIGN H	6'	8'	10'	12'	14'	16'	20'	
W	6'-0"	7'-3"	8'-0"	9'-6"	10'-0"	12'-6"	16'-0"	
С	2'-3"	2'-3"	2'-4"	2'-6"	3'-0"	3'-6"	4'-0"	
В	3'-9"	5'-0"	5'-8"	7'-0"	7'-0"	9'-0"	12'-0"	
F	1'-4"	1'-4"	1'-4"	1'-6"	1'-8"	1'-9"	1'-9"	
BATTER	½:12	½:12	½:12	1/2:12	1/2:12	1/2:12	½: 12	
SPACING "S"	9"	9"	9"	9"	7"	6"	6"	
C BARS	#6	#6	#6	#7	#7	#8	#10	
D BARS	#5	#6	#6	#7	#7	#8	#10	
h1 (SHORT C BAR LENGTH)	_	_	_	_	_	5'-9"	8'-0"	
Ser: B', q'o	6.5, 1.0	6.2, 1.3	6.0, 1.6	6.3, 2.0	7.5, 2.1	8.6, 2.2	9.8, 2.3	
Str: B', qo	5.0, 1.8	3.6, 2.3	3.0, 3.3	3.2, 4.0	4.3, 3.8	5.3, 3.7	6.4, 3.7	
Ext I: B', qo	4.7, 1.5	3.9, 2.2	3.1, 3.4	2.8, 4.8	3.2, 5.3	3.6, 5.7	4.1, 6.1	
Ext II: B', qo	2.7, 2.6	2.8, 3.1	2.9, 3.6	3.7, 3.6	5.2, 3.3	6.7, 3.1	8.3, 3.0	

#### NOTES:

SANTA BARBARA COUNTY

FLOOD CONTROL AND

130 E. VICTORIA STREET SANTA BARBARA, CA 93101

(805) 568-3440

H=16'-18' H=16S'-22S'

ELEVATION

- 1. SPLICES IN © BARS SHALL NOT BE ALLOWED IN THE WALL STEM WITHIN A DISTANCE OF H/4 OR MINIMUM OF 1'-8" FROM TOP OF FOOTING.
- 2. SEE WALL ELEVATIONS ON SHEET 16 FOR LIMITS OF ADDITIONAL © BARS CONSISTING OF FULL HEIGHT #6 L BARS BUNDLED WITH STANDARD (C) BARS IN TABLE ABOVE.
- 3. HORIZONTAL LEGS OF © BARS IN STEM WALLS FOUNDED ON STRUCTURAL SLAB SHALL BE 4'-0" LONG AND PLACED PARALLEL WITH TRANSVERSE #9 @ 16 IN STRUCTURAL SLAB.
- 4. SEE CALTRANS STANDARD PLAN A62B FOR PAY LIMITS OF STRUCTURE EXCAVATION AND STRUCTURE BACKFILL FOR RETAINING WALL. SEE "RETAINING WALL OVEREXCAVATION LIMITS" DETAIL ON THIS SHEET FOR PAY LIMITS OF STRUCTURE EXCAVATION AND STRUCTURE BACKFILL WHERE ROCK REMOVAL IS REQUIRED.

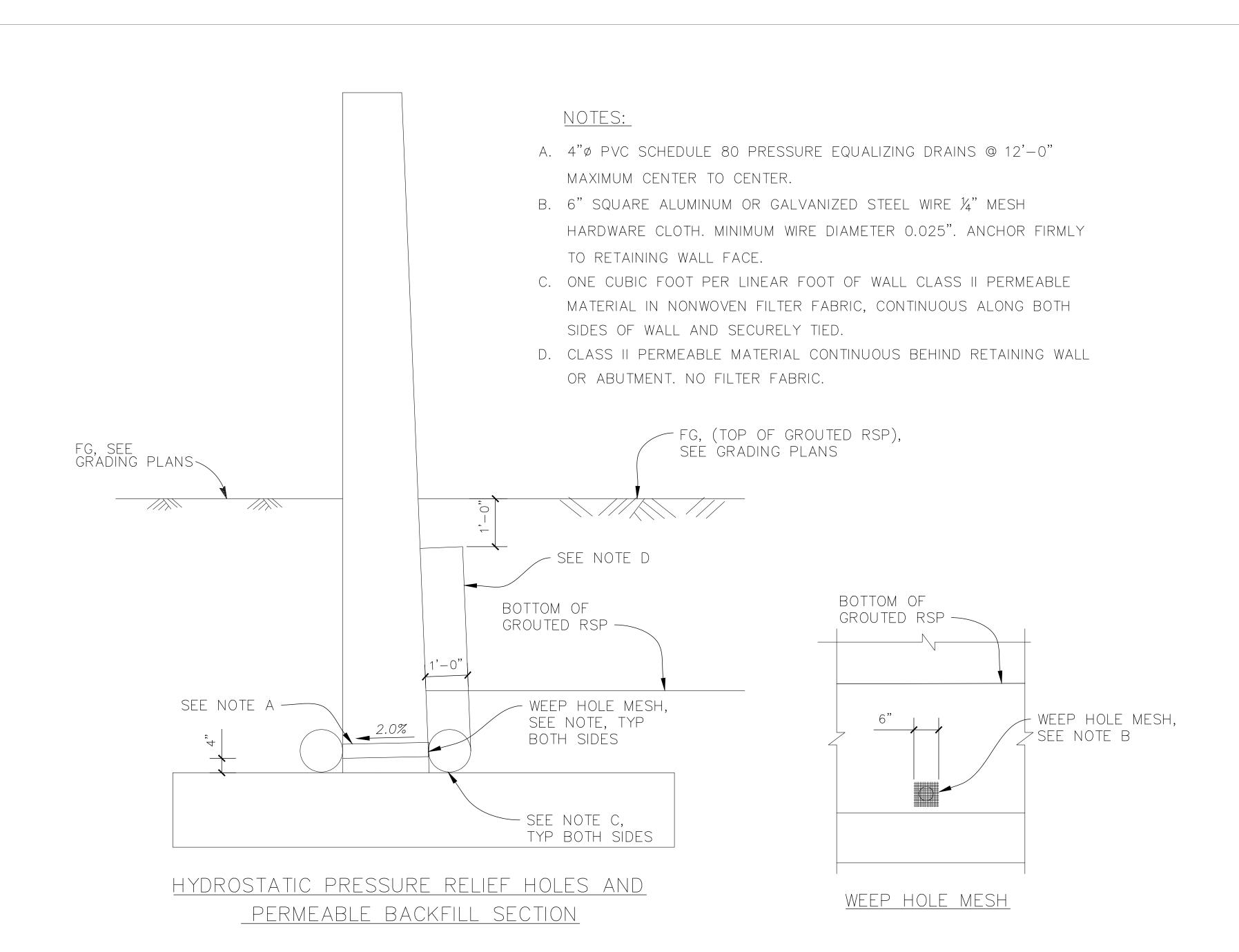
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SAN YSIDRO DEBRIS BASIN IMPROVEMENT PROJECT AREA OF MONTECITO SANTA BARBARA COUNTY, CALIFORNIA

WALL DETAILS 1

DESIGNED BY:	
JSB	O-1157
DRAWN BY:	$O^{-1}IJI$
SNC	
CHECKED BY:	SHEET 17 OF 18
JSB	Filename: San Ysidro DB Plans.DWG



# GENERAL DESIGN NOTES

#### SYMBOLS:

Ser - SERVICE LIMIT STATE I Str - STRENGTH LIMIT STATE I Ext I — EXTREME EVENT LIMIT STATE I Ext II — EXTREME EVENT LIMIT STATE II B' - EFFECTIVE FOOTING WIDTH (ft) q'o - NET BEARING STRESS (ksf), OG ASSUMED TO BE FG AT TOE qo - GROSS UNIFORM BEARING STRESS (ksf)

#### DESIGN CONDITIONS:

DESIGN H MAY BE EXCEEDED BY 6" BEFORE GOING TO THE NEXT SIZE. SPECIAL FOOTING DESIGN IS REQUIRED WHERE FOUNDATION MATERIAL IS INCAPABLE OF SUPPORTING BEARING STRESS LISTED IN THE TABLE.

#### DESIGN NOTES:

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, DESIGN:

4TH EDITION WITH CALIFORNIA AMENDMENTS

400PSF LATERAL FLOW PRESSURE ON EXPOSED WALL SURFACE WA:

 $\phi = 34^{\circ}$ SOIL:  $\gamma = 120 \text{ pcf}$ 

REINFORCED

f'c = 3,600 psiCONCRETE:  $fy = 60,000 \, psi$ 

LOAD COMBINATIONS AND LIMIT STATES:

Q = 1.00(DC+EH+EV)+1.00WAService I  $Q = \alpha DC + \alpha EH + \alpha EV + 1.00WA$ Strength I

Q = 1.00DC+1.00EH+1.00EV+1.00WAExtreme I

 $Q = \alpha DC + \alpha EH + \alpha EV + 1.00WA$ Extreme II

Where:

FORCE EFFECTS

1.25 OR 0.90, WHICHEVER CONTROLS DESIGN  $\alpha$ :

DEAD LOAD OF STRUCTURE COMPONENTS HORIZONTAL EARTH PRESSURE EH:

VERTICAL EARTH PRESSURE

WATER PRESSURE

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			No. S 4059 Exp. 9/30/25		
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			OF CALIFORN		

SANTA BARBARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT 130 E. VICTORIA STREET SANTA BARBARA, CA 93101 (805) 568-3440



SAN YSIDRO DEBRIS BASIN IMPROVEMENT PROJECT

AREA OF MONTECITO SANTA BARBARA COUNTY, CALIFORNIA

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JSB	$\bigcirc$ .	-1157		
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