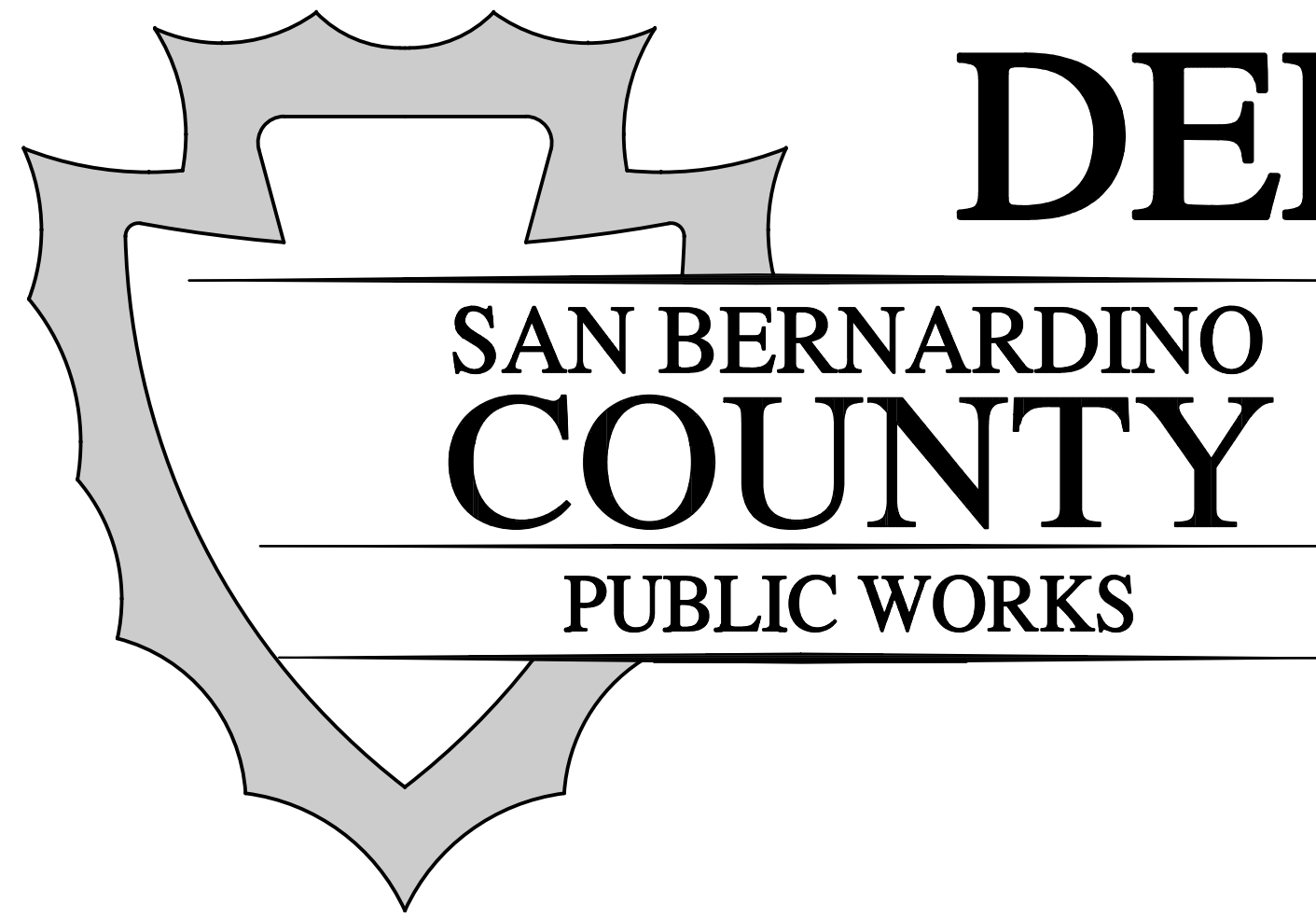


WARNING: ALL INDIVIDUALS INTERESTED IN BIDDING ON THIS PROJECT MUST OBTAIN THE FINAL PLANS AND SPECIFICATIONS FROM THE DEPARTMENT MANAGING THE PROJECT OR AS OTHERWISE STATED IN THE ADVERTISEMENT FOR BIDS FOR THE PROJECT. DO NOT USE THE PLANS AND SPECIFICATIONS POSTED ON THE CLERK OF THE BOARD'S WEBSITE FOR BIDDING ON THIS PROJECT.

SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS



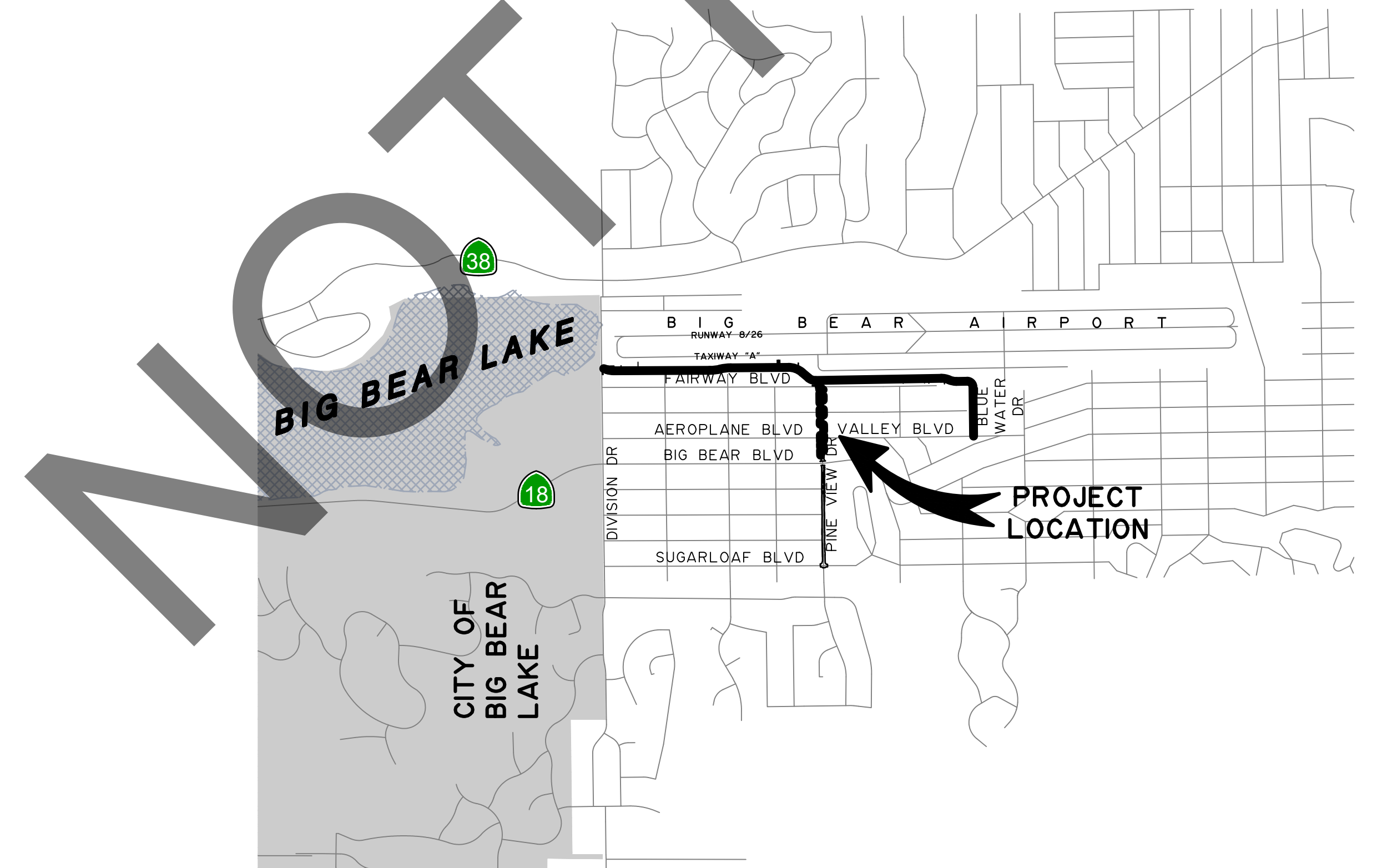
TRANSPORTATION PLANS FOR CONSTRUCTION ON PINE VIEW DRIVE AT BLUE WATER CHANNEL BIG BEAR AREA

CHANNEL PROJECT, DRAINAGE IMPROVEMENT, MILL & OVERLAY

WORK ORDER NO. H15190

ROAD NO. 657700-020,
933002-010

LENGTH = 1.08 MILES



SAN BERNARDINO COUNTY

APPROVED BY: NOEL CASTILLO
NOEL CASTILLO, P.E., DIRECTOR OF PUBLIC WORKS R.C.E. 78044

8/9/24
DATE

MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		
FIELD CHANGES		SHT. ID G-1	SHT. NO. 1 / 28

MARK	REVISIONS	APPR.	DATE
MARK	REVISIONS	APPR.	DATE

INDEX OF SHEETS

- 1 TITLE SHEET
2 GENERAL NOTES
3 TO 5 TYPICAL SECTIONS
6 TO 14 CHANNEL PLAN AND PROFILE
15 TO 22 CHANNEL CROSS SECTIONS
23 TO 25 STREET IMPROVEMENT PLAN
26 RETAINING WALL PLAN AND PROFILE
27 TO 28 CONSTRUCTION DETAILS

THE FOLLOWING SPECIAL DRAWINGS AND COUNTY STANDARDS ARE ATTACHED TO THE SPECIAL PROVISIONS:
303, 303A, 303B 305B

TO BE SUPPLEMENTED BY THE FOLLOWING STANDARD PLATS FOR SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT:
192E 200, 200A

TO BE SUPPLEMENTED BY THE FOLLOWING STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION DATED 2021:
600-3

TO BE SUPPLEMENTED BY THE FOLLOWING CALTRANS STANDARD PLANS DATED 2023:
A24D, A24G A62D, A62F A73B A87B 80-3, B3-1A
B11-47 D71 D75B H51 T9
T10 T13

TO BE SUPPLEMENTED BY THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. FIGURES: 2A-2(CA) 3B-10I(CA) 6H-28 6H-29
7B-102(CA) 7B-104(CA)
SECTIONS: 6D.01 6D.02

TO BE SUPPLEMENTED BY THE FEDERAL AVIATION ADMINISTRATION: ADVISORY CIRCULAR 150/5370-10 F-163

THIS PROJECT REQUIRES A CONTRACTOR'S LICENSE CLASS "A"

GENERAL NOTES

U. THE FACT THAT ANY UTILITY FACILITY IS SHOWN OR NOT SHOWN UPON THE PLANS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY UNDER SECTION 5-1.36 C "NON-HIGHWAY FACILITIES" OF THE CALTRANS STANDARD SPECIFICATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY, PURSUANT THERETO, TO ASCERTAIN THE LOCATION OF ANY UTILITY FACILITY WHICH MAY BE SUBJECT TO DAMAGE BY REASON OF THE CONTRACTOR'S OPERATIONS.

- 1. ALL STATIONING NOTES ON PLAN REFER TO THE CL SUR OR CL CONST.
2. DIMENSIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE CALTRANS STANDARD SPECIFICATIONS.
3. ALL PAVEMENT WIDTH DIMENSIONS SHOWN ON THE PLANS ARE TO THE EDGE OF PAVEMENT OR TO THE TOP OF CURB, UNLESS OTHERWISE NOTED.
4. TRANSITIONS AND WARPING SHALL BE AS SHOWN AND AS DETERMINED BY THE ENGINEER.
5. ASPHALT CONCRETE OVERLAYS SHALL BE FEATHERED TO MEET EXISTING AS SHOWN ON THE PLANS OR AS DETERMINED BY THE ENGINEER.
6. ALL TREES & VEGETATION OUTSIDE THE LIMITS OF EXCAVATION AND EMBANKMENT SLOPE LINES SHALL BE PROTECTED IN PLACE.

SURVEY MAPPING INFORMATION

SURVEY CONDUCTED JULY 6, 2022 BY SAN BERNARDINO COUNTY

BASIS OF BEARINGS:

ALL DISTANCES, BEARINGS, AND COORDINATES ARE BASED ON ZONE 5 OF THE CALIFORNIA COORDINATE SYSTEM (CCS), NAD83(2011) EPOCH 2010.0

DISTANCES AND COORDINATES ARE GROUND; COMBINATION FACTOR IS 0.99963991 TO CONVERT TO GRID, SCALE PROJECT AT PT. 2 (0.99963991)

BENCH MARK:

FD USC86S BRASS DISK IN HEADWALL AT THE SE CORNER OF HWY 18 & PINE VIEW DR PER CSFB 4088/2169
ELEVATION PER NGS DATA SHEET FOR R535 (EV0506) (PT #20)
NAVD-88 ELEVATION = 6772.30'

SB COUNTY TRAFFIC CONTROL GENERAL NOTES

- 1. ALL SIGNING, STRIPING, AND PAVEMENT MARKING SHALL BE IN CONFORMANCE WITH THE CALIFORNIA MUTCD LATEST EDITION.
2. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE PAINTED IN CONFORMANCE WITH THE CALTRANS 2022 STANDARD PLANS (DATED AUGUST 1, 2022).
3. ALL STRIPING (LONG LINE) AND PAVEMENT MARKINGS SHALL BE RETROREFLECTIVE PAINT.
4. ALL SIGNS SHALL BE OF HIGH INTENSITY (FHWA TYPE II/IV) RETROREFLECTIVE SHEETING EXCEPT:
A. STOP SIGNS SHALL BE DIAMOND GRADE (FHWA TYPE VII IN RURAL SETTINGS AND TYPE IX IN URBAN SETTINGS) RETROREFLECTIVE SHEETING.
B. "NO PARKING" SIGNS SHALL BE OF SUPER ENGINEERING GRADE (FHWA TYPE II) RETROREFLECTIVE SHEETING.
C. SCHOOL SIGNS SHALL BE OF DIAMOND GRADE (FHWA TYPE IX) FLUORESCENT YELLOW-GREEN (FYG) RETROREFLECTIVE SHEETING.
D. STREET NAME MARKERS SHALL BE OF DIAMOND GRADE (FHWA TYPE IX) RETROREFLECTIVE SHEETING AND CONFORM TO COUNTY STANDARD 303.
E. CONSTRUCTION SIGNS SHALL BE OF DIAMOND GRADE (FHWA TYPE IX) FLUORESCENT ORANGE RETROREFLECTIVE SHEETING.
5. ALL DELINEATORS, CHANNELIZERS, AND OBJECT MARKERS SHALL BE OF FHWA TYPE VII RETROREFLECTIVE SHEETING.
6. SIGNS SHALL BE MOUNTED ON METAL POSTS SIMILAR TO COUNTY STANDARDS 303(A) AND 303(B)
7. ALL CONFLICTING STRIPING AND PAVEMENT MARKINGS NOT SHOWN ON PLANS SHALL BE REMOVED BY THE CONTRACTOR. REMOVAL SHALL BE ACCOMPLISHED BY SANDBLASTING, GRINDING, OR AS DIRECTED BY COUNTY REPRESENTATIVE.
8. ALL CONFLICTING SIGNS SHALL BE REMOVED, RELOCATED, OR COVERED BY THE CONTRACTOR. RELOCATABLE SIGNS SHALL BE INSTALLED AS SPECIFIED ON THE PLANS OR AS DIRECTED BY COUNTY REPRESENTATIVE.
9. ALL UNPROTECTED LOCATIONS RESULTING IN ISOLATED ABRUPT DEPRESSIONS OR ELEVATED OBJECTS (IE. CATCH BASINS, HEADWALLS, POWER POLES, END TREATMENT OF ASPHALT DIKES AND CONCRETE CURBS) SHALL BE PROTECTED BY DELINEATORS OR BARRIERS PER THE CALIFORNIA MUTCD LATEST EDITION
10. ALL EXISTING SIGNING, STRIPING AND PAVEMENT MARKINGS (IE. CROSS STREET STOP, STOP LIMIT LINE, AND CROSSWALK PAVEMENT MARKINGS) NOT SHOWN ON PLANS, IF REMOVED/ABLITERATED, SHALL BE REPLACED/RESTORED OF SAME KIND, AND IN CONFORMANCE WITH THE CALIFORNIA MUTCD LATEST EDITION.
11. THE CONTRACTOR SHALL NOTIFY COUNTY REPRESENTATIVE TO SCHEDULE A FINAL REVIEW (WALK THROUGH) WITH TRAFFIC DIVISION PERSONNEL FOR APPROVAL OF TRAFFIC CONTROL DEVICES PRIOR TO PROJECT ACCEPTANCE.

Table with 5 columns: POINT ID, NORTHING, EASTING, ELEVATION, DESCRIPTION. Contains survey data points for the project.

Table with 6 columns: SEGMENT, LINE, STATION FROM, STATION TO, DESIGN STORM, DESIGN PEAK FLOW (cfs). Contains hydrologic summary data.

CONSTRUCTION & UNDERGROUND UTILITY LEGEND

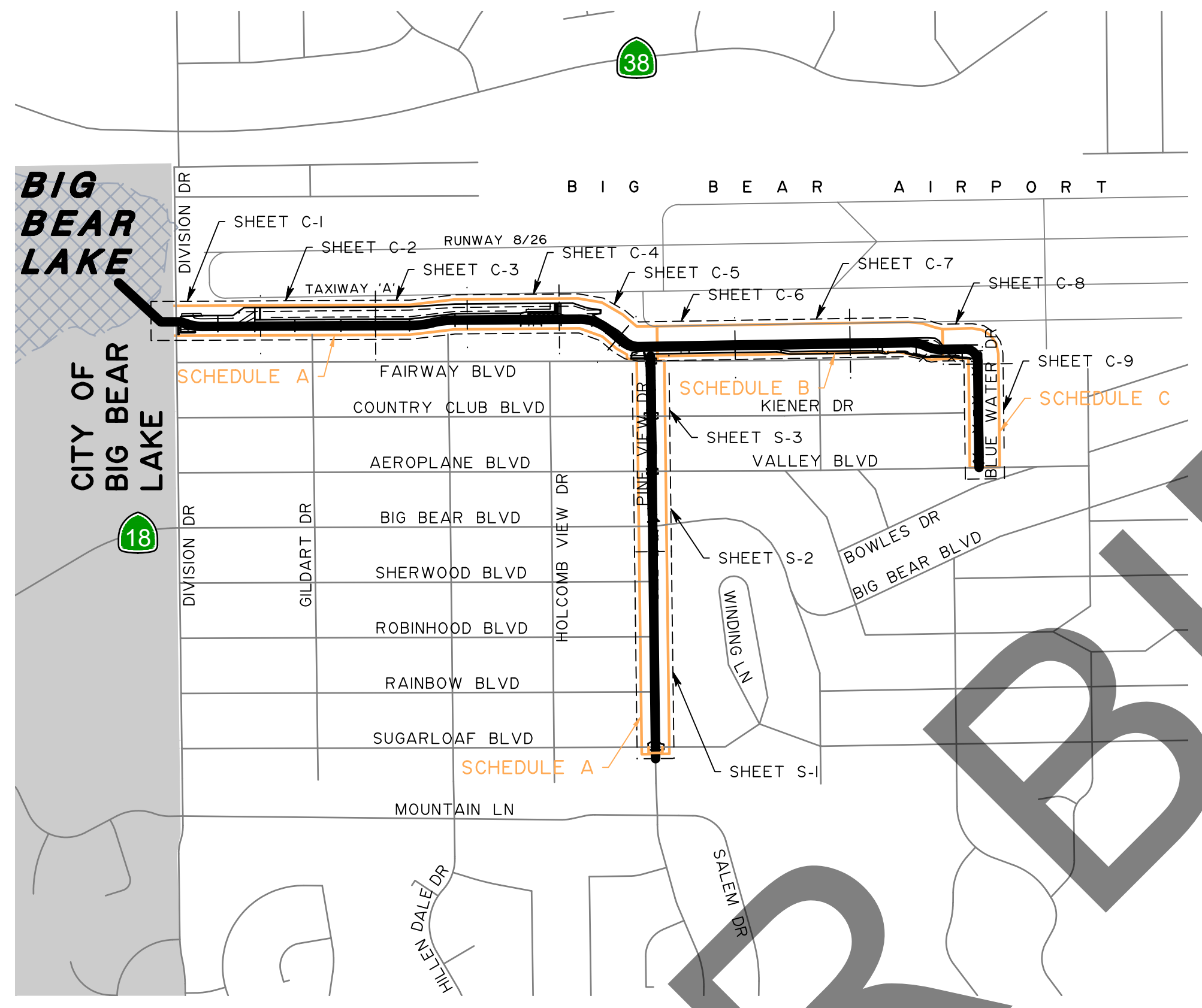
- ROCK SLOPE PROTECTION
ASPHALT CONCRETE HMA
COLD PLANE/MILL AND OVERLAY
PORTLAND CEMENT CONCRETE
PORTLAND CEMENT CONCRETE
INVERT ELEVATION AT PG
EARTHEN CHANNEL
EXIST GAS LINE
EXIST SEWER MAIN LINE
EXIST WATER FORCE MAIN LINE
EXIST WATER LINE
EXIST OVERHEAD ELECTRIC LINE
EXIST STORM DRAIN LINE
EXIST COMMUNICATIONS LINE

ABBREVIATIONS LEGEND:

- AC = ASPHALT CONCRETE/ADVISORY CIRCULAR
ADJ = ADJACENT
AL = AERIAL LIGHT
AP = ANGLE POINT
AVE = AVENUE
BEG = BEGIN, BEGINNING
BC = BEGIN HORIZONTAL CURVE
BCR = BEGIN CURB RETURN
BDR = BEGIN DIKE RETURN
BLVD = BOULEVARD
BVES = BEAR VALLEY ELECTRIC SERVICE
BWC = BLUE WATER CHANNEL
CL = CENTER LINE
CLF = CHAIN LINK FENCE
CSP = CORRUGATED STEEL PIPE CONSTRUCTION
DR = DRIVE
DWG = DRAWING
DWH = DRIVEWAY
EC = END HORIZONTAL CURVE
ECR = END CURB RETURN
EDR = END DIKE RETURN
EL = ELEVATION
EXIST = EXISTING
FAA = FEDERAL AVIATION ADMINISTRATION
FCD = FLOOD CONTROL DISTRICT
FG = FINISHED GRADE
FGB = FG AT BACK (OF WALL)
FGF = FG AT FRONT (OF WALL)
FH = FIRE HYDRANT
FL = FLOW LINE
GY = GUY WIRE
HMA = HOT MIX ASPHALT
HP = HINGE POINT
INT = INTERSECTION
INV = INVERT
LG = LONGITUDINAL GUTTER
LL = LIMIT LINE
LOL = LAYOUT LINE
LT = LEFT
MAX = MAXIMUM
MIN = MINIMUM
NTS = NOT TO SCALE
OD = OUTER DIAMETER
PB = PULLBOX
PEC = PERMIT TO ENTER AND CONSTRUCT
PG = PROFILE GRADE
PI = POINT OF INTERSECTION, POINT OF INFLECTION
P/L = PROPERTY LINE
PRC = POINT RETURN CURB
RSP = ROCK SLOPE PROTECTION
RT = RIGHT
R/W = RIGHT-OF-WAY
"RW" = RETAINING WALL
SBC = SAN BERNARDINO COUNTY
SC = SAWCUT
SHT = SHEET
S.N.M. = STREET NAME MARKER
SPPPWC = STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION
STA = STATION
STD = STANDARD
SUR = SURVEY
SWK = SIDEWALK
THK = THICK, THICKNESS
TW = TOP OF WALL
TWL = TAXIWAY LIGHT
TF = TOP OF FOOTING
WEJ = WALL EXPANSION JOINT
WEPJ = WEAKENED PLANE JOINT
WSE = WATER SURFACE ELEVATION
WV = WATER VALVE

CONSTRUCTION NOTES:

- P PROTECT IN PLACE
A ADJUST TO GRADE
R REMOVE EXISTING FENCE
T REMOVE EXISTING TREE
IA CONSTRUCT RETAINING WALL PER SHEET RT-1
WB CONSTRUCT CHANNEL PER TYPICAL SECTION IA
IB CONSTRUCT CHANNEL PER TYPICAL SECTION IB
IC CONSTRUCT CHANNEL PER TYPICAL SECTION IC
ID CONSTRUCT CHANNEL PER TYPICAL SECTION ID
IE CONSTRUCT CHANNEL PER TYPICAL SECTION IE
IF CONSTRUCT CHANNEL PER TYPICAL SECTION IF
IG CONSTRUCT CHANNEL PER TYPICAL SECTION IG
IH CONSTRUCT CHANNEL PER TYPICAL SECTION IH
2C CONSTRUCT REINFORCED CONCRETE CHANNEL LINING PER SBC FCD STANDARD PLAT 192E AND DETAILS ON SHEET CD-1
2E CONSTRUCT EARTHEN CHANNEL SECTION PER DETAILS ON SHEET CD-1
2X CONSTRUCT TRANSVERSE CUTOFF WALL PER SBC FCD STANDARD PLAT 192E, DOWNSTREAM STATION PER PLAN
3A CONSTRUCT RIPRAP AREA (CLASS III) PER DETAIL ON SHEET CD-1
4 PROTECT EXISTING RETAINING WALL PER DETAIL ON SHEET CD-1
5A CONSTRUCT ACCESS DRIVEWAY PER DETAILS ON SHEET CD-2, PLACE HMA 10.33" THICK 3/4" AGGREGATE GRADATION, PG 64-28) OVER AGGREGATE BASE (0.5" THICK, CLASS 2)
5C CONSTRUCT ACCESS DRIVEWAY PER DETAILS ON SHEET CD-2, PLACE PCC (6" THICK) OVER AGGREGATE BASE (8" THICK, CLASS 2)
6 CONSTRUCT CHAIN LINK FENCE PER SPPWC 600-3 (H=6' WITH BARBED WIRE TOP)
6A CONSTRUCT WILDLIFE DETERRENT FENCE SKIRT PER FAA AC 150/5370-10 DETAIL F-164
6B CONSTRUCT CHAIN LINK FENCE PER SPPWC 600-3 (H=4' WITH BARBED WIRE TOP)
6C CONSTRUCT CABLE RAILING PER CALTRANS STANDARD PLAN B11-47
6G CONSTRUCT CHAIN LINK FENCE GATE (DOUBLE-LEAF) PER SPPWC 600-3
6W CONSTRUCT CHAIN LINK WALK GATE (SINGLE-LEAF) PER SPPWC 600-3
8 CONSTRUCT CMP CONNECTION PER SBC FCD STANDARD PLAT 200
8A CONSTRUCT CONCRETE PIPE CONNECTION PER SBC FCD STANDARD PLAT 200A
9 SAWCUT AND REMOVE EXISTING AC
10 COLD PLANE EXISTING ASPHALT CONCRETE FOR A DEPTH OF 0.20" AND PLACE 0.20" THICK HMA - APPLY TACK COAT TO THE MILLED SURFACE
11 PLACE HMA (0.34" THICK, TYPE A, 3/4" AGGREGATE GRADATION, PG 64-28) OVER AGGREGATE BASE (0.75" THICK, CLASS 2)
12 CONSTRUCT DESILTING WALL, AND INSTALL PIPE RISER AND DEBRIS POST PER DETAILS ON SHEET CD-1
13 REMOVE EXISTING AC DIKE AND CONSTRUCT TRAVERSABLE DIKE PER COUNTY STD PLAN 117G
15 CONSTRUCT HMA OVERSIDE DRAIN PER DETAIL ON SHEET CD-2
16 REMOVE CONCRETE ROCK SLOPE PROTECTION
17 REMOVE EXISTING RETAINING WALL
18 REMOVE EXISTING CHAIN LINK FENCE
19 REMOVE EXISTING PIPE GATE
20 REMOVE EXISTING ROCK
21 CONSTRUCT HMA DRIVEWAY PER DETAIL ON SHEET CD-2
22 CONSTRUCT FOG SEAL AT AC DRIVEWAY PER DETAIL ON SHEET CD-2
22 INSTALL BIOSWALE WITH UNDERDRAIN PER DETAIL ON SHEET CD-2
23 INSTALL CONCRETE PIPE INLET PER DETAIL ON SHEET CD-2
24 INSTALL BIOSWALE CULVERT PER DETAIL ON SHEET CD-2
25 RECONSTRUCT SIDEWALK (PCC, 0.33" THICK)
MI REPAINT STOP PAVEMENT MARKING PER 2023 CALTRANS STANDARD PLAN A24D
MII REPAINT 12" WHITE LIMIT LINE PER 2023 CALTRANS STANDARD PLAN A24G
50 PROTECT IN PLACE EXISTING SIGN AND POST
51 INSTALL ROADSIDE SIGN PER CA MUTCD 2014 FIGURE 2A-2(CA) AND SAN BERNARDINO COUNTY STANDARD 303A AND 303B
52 INSTALL RURAL BARRICADE PER SBC STANDARD PLATE 305B
53 RELOCATE EXISTING SIGN AND POST
54 INSTALL METAL SNOW POLE PER CALTRANS STANDARD PLAN A73B (H=60" FROM GROUND) AND CA MUTCD FIGURE 2C-13 (CA). INSTALL BLUE RETROREFLECTIVE TAPE 3" FROM TOP OF POLE, AND WHITE RETROREFLECTIVE TAPE 48" FROM GROUND



Vertical table with columns for MARK, REVISIONS, DATE, APPR. containing project revision tracking information.

FILE NO. 657700-020, 933002-010



PRELIMINARY NOT FOR CONSTRUCTION 100% REVIEW

E. Thousand Oaks Blvd, Suite 105, Thousand Oaks, CA 91360



SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS. Includes fields for DESIGNED BY, DRAWN BY, CHECKED BY, RECOMMENDED BY, APPROVED BY, and dates.

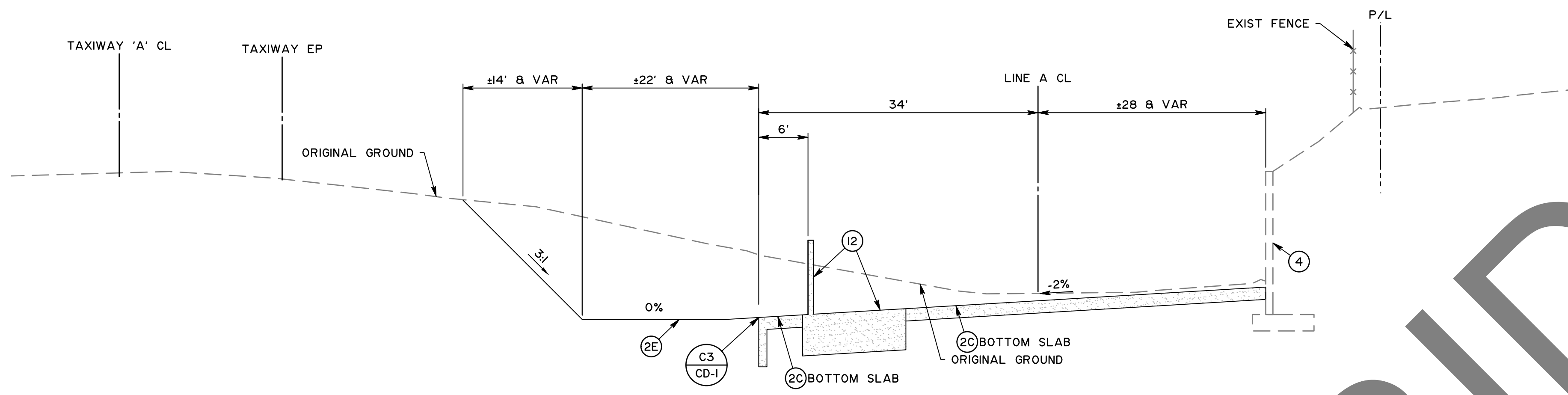
INDEX OF SHEETS, GENERAL NOTES, SURVEY MAPPING INFORMATION, INDEX MAP, ABBREVIATIONS, LEGENDS. Includes table for J.L. REF., W.O. NO., PLAN SCALE, SHT. ID, SHT. NO.

FILE NO. 657700-020, 933002-010

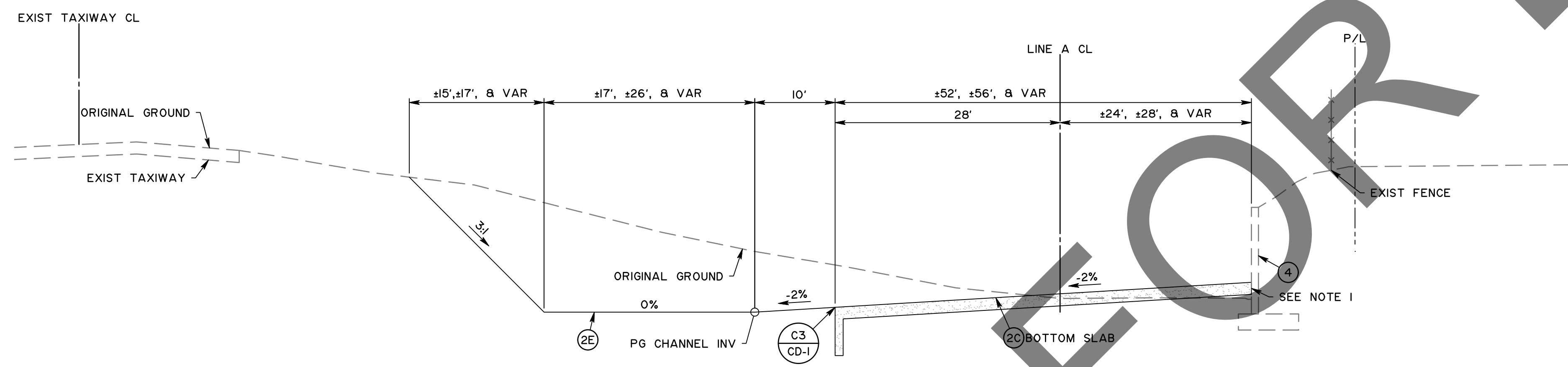
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NOTES
 I. DO NOT COVER EXISTING WEEP HOLES. INSTALL WEEP HOLE BUBBLER PER DETAIL ON SHEET CD-1 AS REQUIRED.

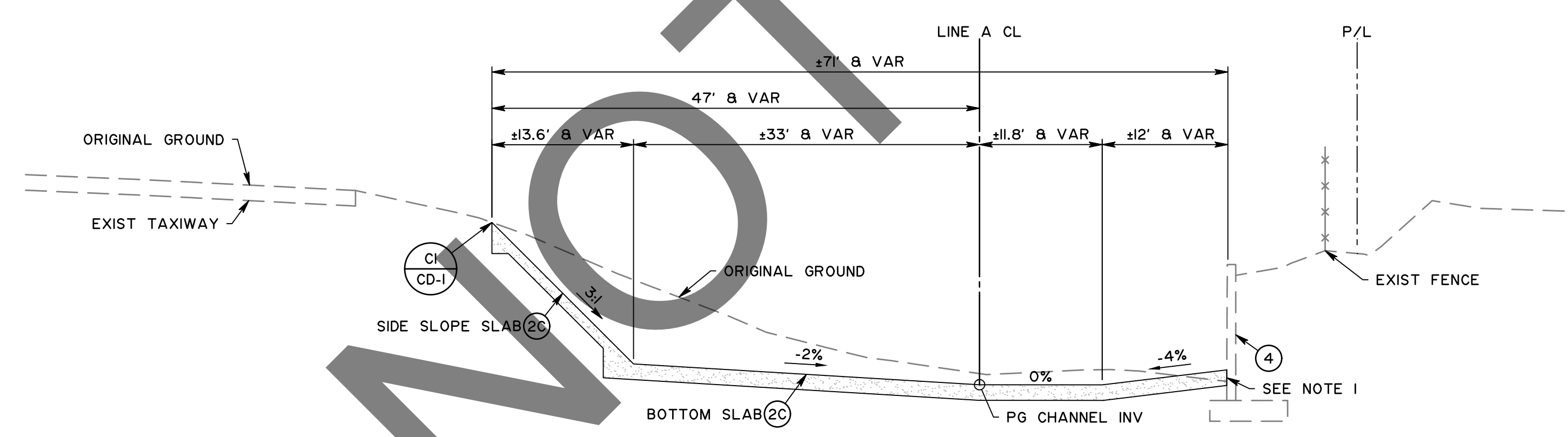
CONSTRUCTION NOTES:	
2C	CONSTRUCT REINFORCED CONCRETE CHANNEL LINING PER SBC FCD STANDARD PLAT 192E AND DETAILS ON SHEET CD-1
2E	CONSTRUCT EARTHEN CHANNEL SECTION PER DETAILS ON SHEET CD-1
4	PROTECT EXISTING RETAINING WALL PER DETAIL ON SHEET CD-1
12	CONSTRUCT DESILTING WALL, AND INSTALL PIPE RISER AND DEBRIS POST PER DETAILS ON SHEET CD-1



TYPICAL SECTION "IC" BLUE WATER CHANNEL
 NTS
 STA 25+16.71 TO 26+37.71



TYPICAL SECTION "IB" BLUE WATER CHANNEL
 NTS
 STA 13+25.64 TO STA 25+16.71



TYPICAL SECTION "IA" BLUE WATER CHANNEL
 NTS
 STA 10+00 TO 13+25.64

NOT FOR BID

MARK	REVISIONS	DATE

FILE NO. 657700-020, 933002-010



PRELIMINARY
 NOT FOR CONSTRUCTION
 100% REVIEW

E. Thousand Oaks Blvd, Suite 105, Thousand Oaks, CA 91360

MARK	CHANGES	RESIDENT ENGINEER	DATE



SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS			
DESIGNED BY:	DRAWN BY:	CHECKED BY:	RECOMMENDED BY:
SP	MY	MI	<i>Chris Nguyen</i>
			8/8/24 DATE
			CHRIS NGUYEN, P.E. TRANSPORTATION DESIGN ENGINEERING MANAGER
			APPROVED BY:
			<i>Michael Ip</i>
			8/9/24 DATE
			MICHAEL IP, P.E. MNS ENGINEERS, INC.
			MERVAT N. MIKHAIL, P.E. DEPUTY DIRECTOR

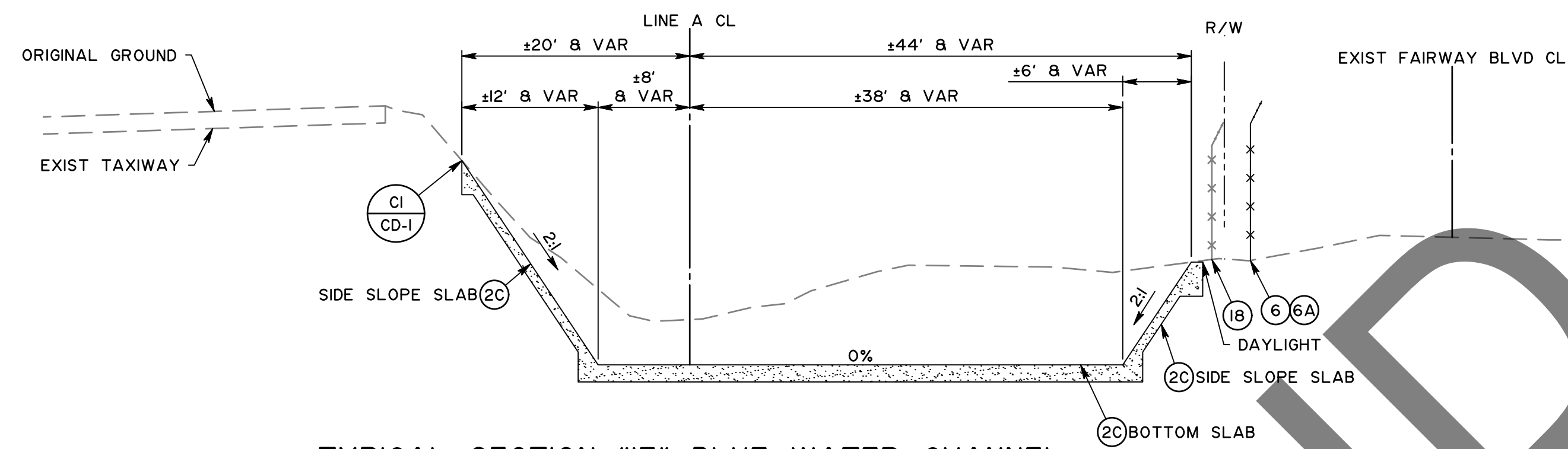
PINE VIEW DRIVE AND BLUE WATER CHANNEL				
TYPICAL SECTIONS BLUE WATER CHANNEL				
J.L. REF.	W.O. NO.	PLAN SCALE	SHT. ID	SHT. NO.
12091	H15190		X-1	3 / 28

FILE NO. 657700-020, 933002-010

NOTES

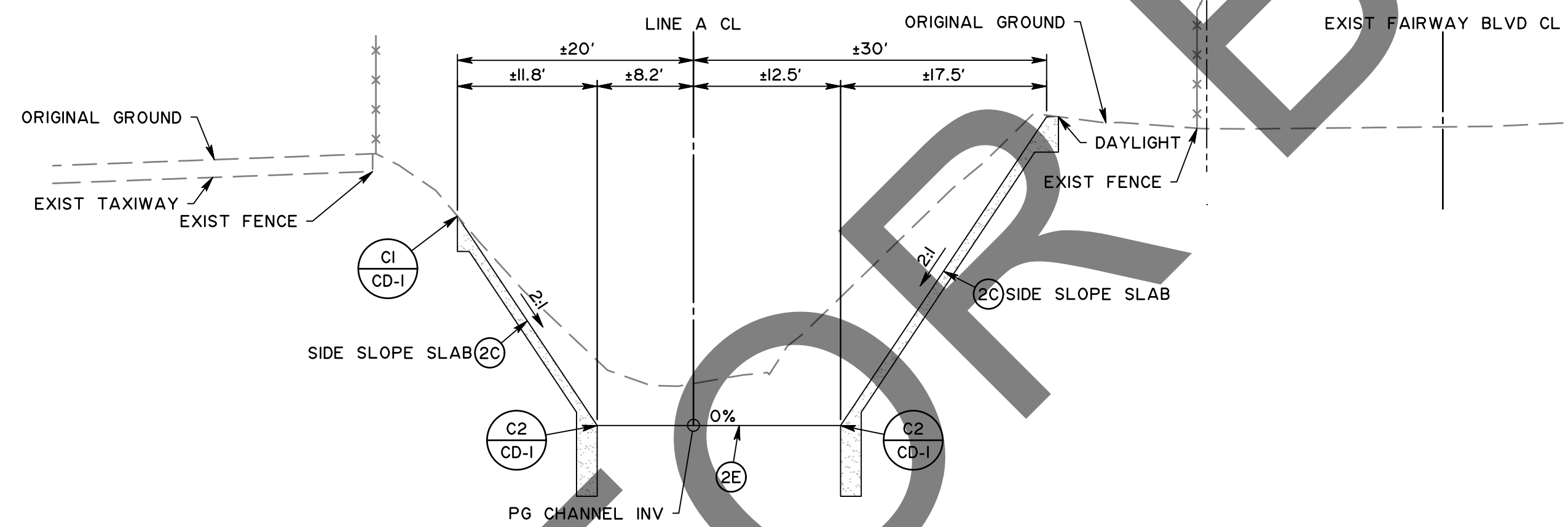
1. DO NOT COVER EXISTING WEEP HOLES. INSTALL WEEP HOLE BUBBLER PER DETAIL ON SHEET CD-1 AS REQUIRED.

CONSTRUCTION NOTES:	
2C	CONSTRUCT REINFORCED CONCRETE CHANNEL LINING PER SBC FCD STANDARD PLAT 192E AND DETAILS ON SHEET CD-1
2E	CONSTRUCT EARTHEN CHANNEL SECTION PER DETAILS ON SHEET CD-1
4	PROTECT EXISTING RETAINING WALL PER DETAIL ON SHEET CD-1
6	CONSTRUCT CHAIN LINK FENCE (H=6' WITH BARBED WIRE TOP) PER SPPWC 600-3
6A	CONSTRUCT WILDLIFE DETERRENT FENCE SKIRT PER FAA AC 150/5370-10 DETAIL F-164
1B	REMOVE EXISTING CHAIN LINK FENCE



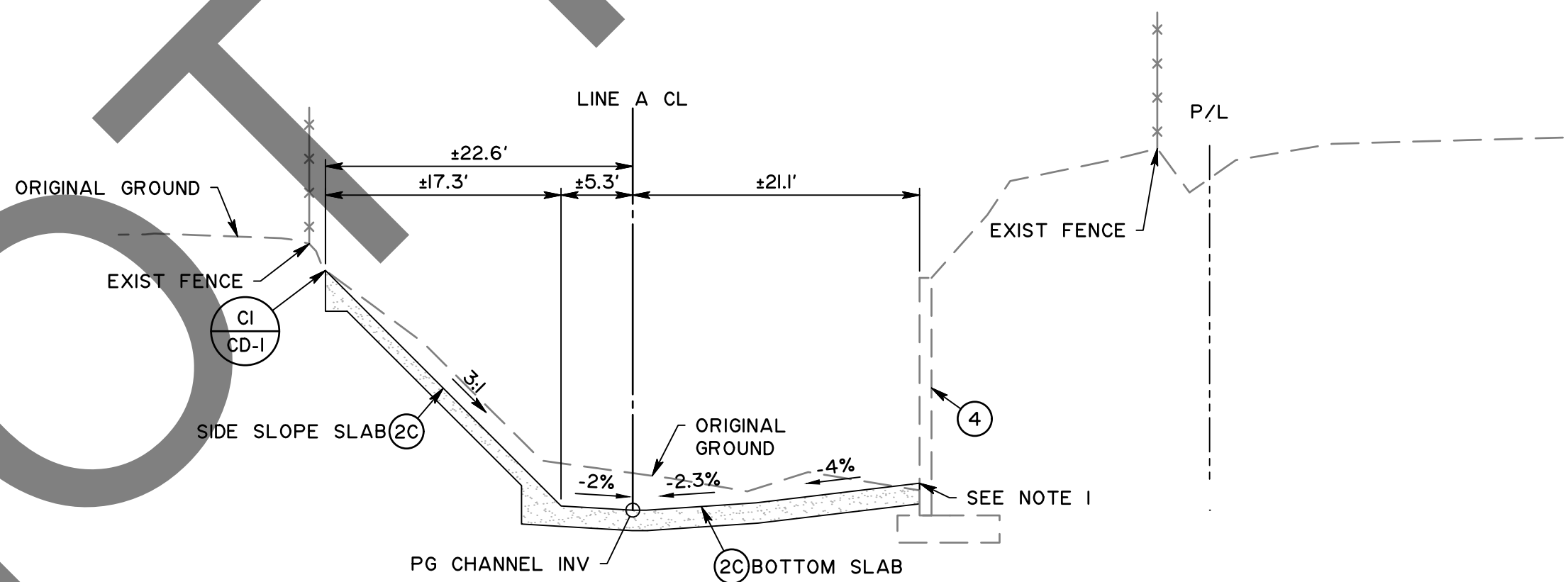
TYPICAL SECTION "IF" BLUE WATER CHANNEL

NTS
STA 40+90 TO STA 45+54.62



TYPICAL SECTION "IE" BLUE WATER CHANNEL

NTS
STA 30+81.81 TO STA 40+90



TYPICAL SECTION "ID" BLUE WATER CHANNEL

NTS
STA 26+37.71 TO STA 30+81.81

NOT FOR BLD

MARK	REVISIONS	DATE

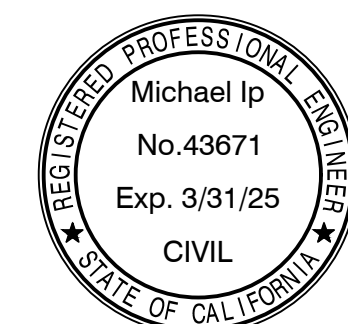
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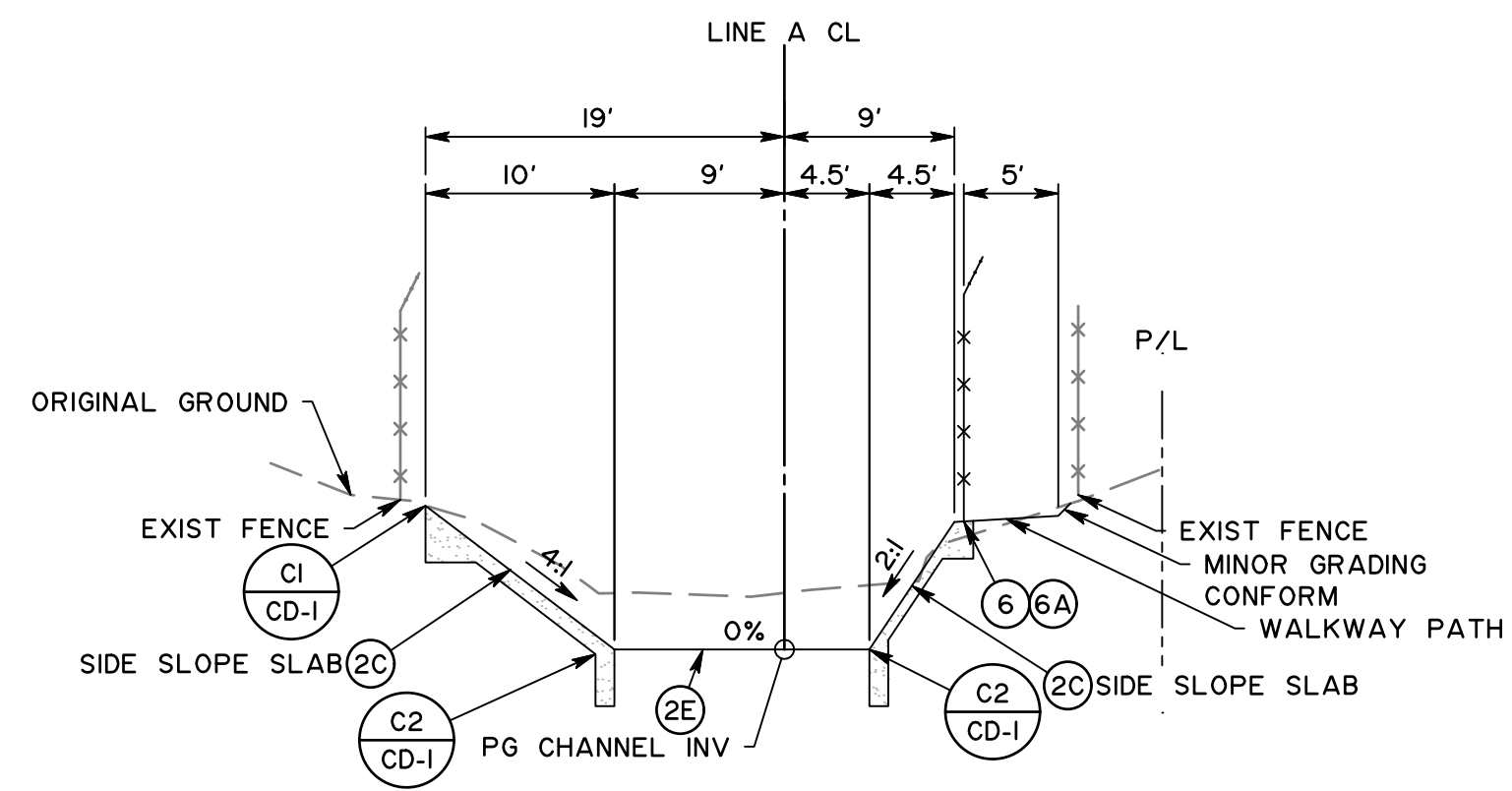
MARK	CHANGES	RESIDENT ENGINEER	DATE



SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS			
DESIGNED BY:	DRAWN BY:	CHECKED BY:	RECOMMENDED BY:
SP	MY	MI	Chris Nguyen
			8/8/24 DATE
APPROVED BY:			8/9/24 DATE
MICHAEL IP, P.E. MNS ENGINEERS, INC.			MERVAT N. MIKHAIL, P.E. DEPUTY DIRECTOR

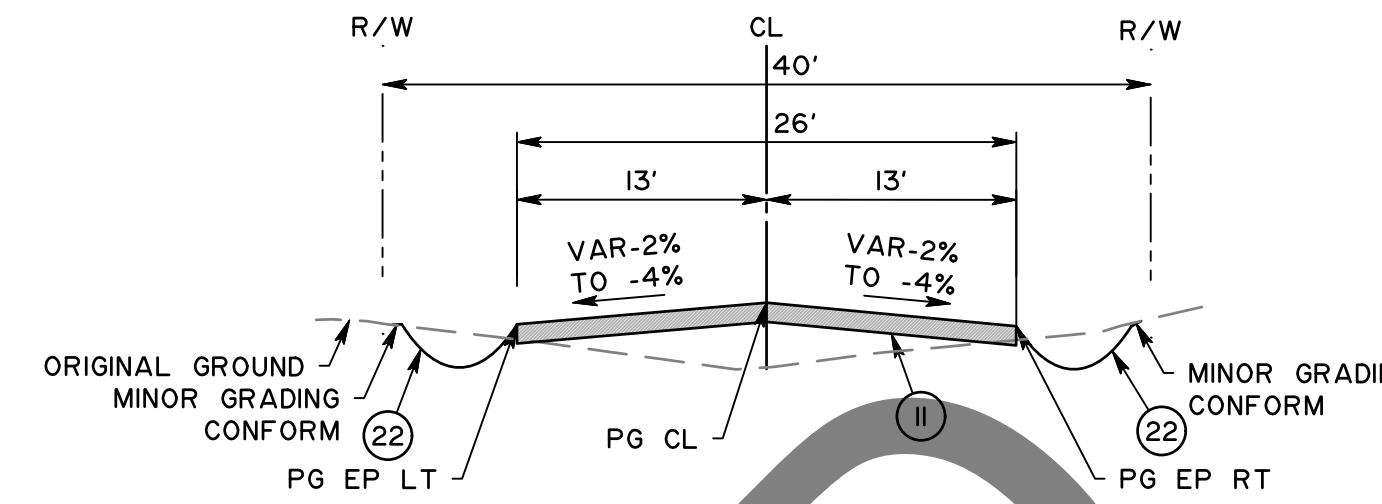
PINE VIEW DRIVE AND BLUE WATER CHANNEL				
TYPICAL SECTIONS BLUE WATER CHANNEL				
J.L. REF:	W.O. NO.:	PLAN SCALE:	SHT. ID:	SHT. NO.:
12091	H15190	X-2	4 / 28	

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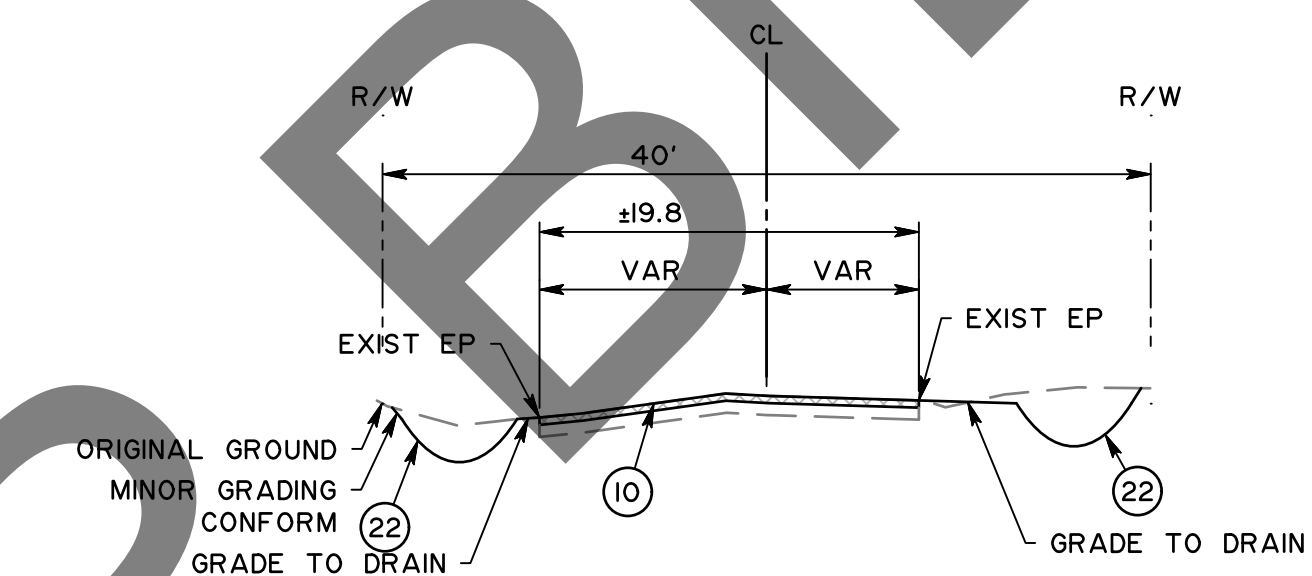
TYPICAL SECTION "IG" BLUE WATER CHANNEL

NTS
STA 45+54.62 TO STA 49+56.15
BLUE WATER DRIVE



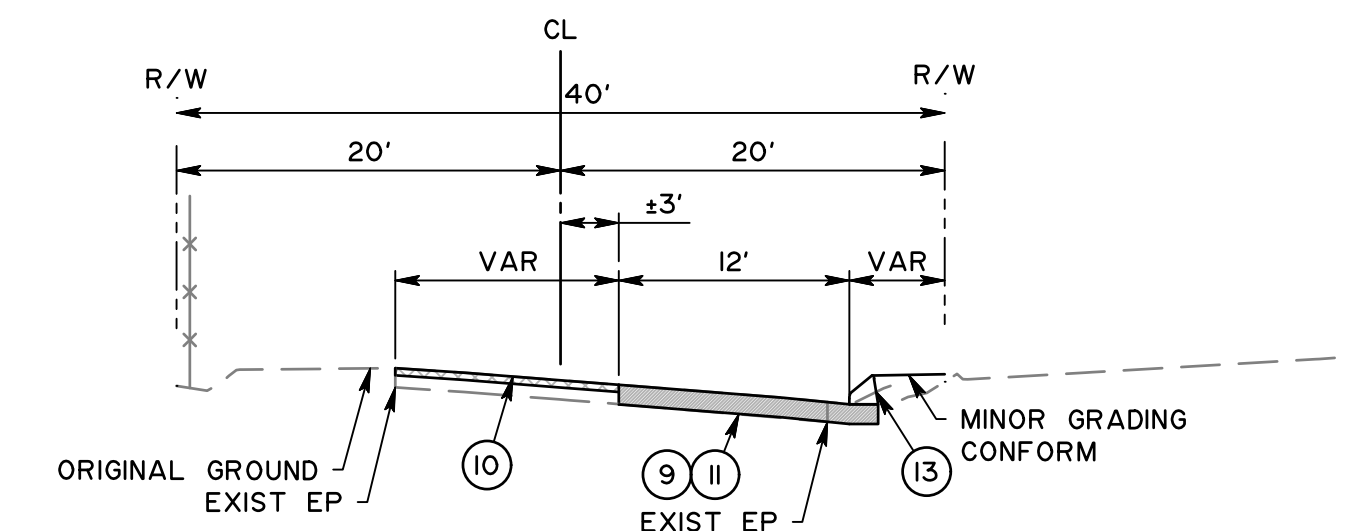
TYPICAL SECTION PINE VIEW DR

NTS
STA 22+10 TO STA 24+40



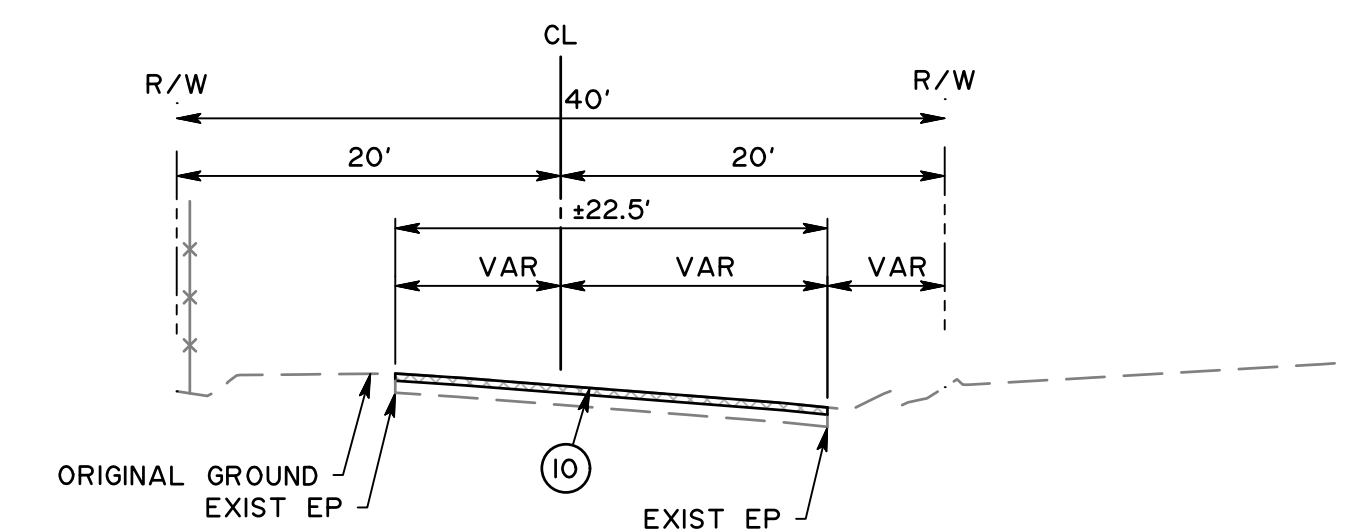
TYPICAL SECTION PINE VIEW DR

NTS
STA 19+80 TO STA 22+10
STA 24+40 TO STA 26+92



TYPICAL SECTION PINE VIEW DR

NTS
STA 15+92 TO STA 19+33



TYPICAL SECTION PINE VIEW DR

NTS
STA 9+80 TO STA 15+92
STA 19+33 TO STA 19+42

- CONSTRUCTION NOTES:**
- 2C CONSTRUCT REINFORCED CONCRETE CHANNEL LINING PER SBC FCD STANDARD PLAT 192E AND DETAILS ON SHEET CD-1
 - 2E CONSTRUCT EARTHEN CHANNEL SECTION PER DETAILS ON SHEET CD-1
 - 6 CONSTRUCT CHAIN LINK FENCE PER SPPWC 600-3 (H=6' WITH BARBED WIRE TOP)
 - 6A CONSTRUCT WILDLIFE DETERRENT FENCE SKIRT PER FAA AC 150/5370-10 DETAIL F-164
 - 9 SAWCUT AND REMOVE EXISTING AC
 - 10 COLD PLANE EXISTING ASPHALT CONCRETE FOR A DEPTH OF 0.20' AND PLACE 0.20' THICK HMA - APPLY TACK COAT TO THE MILLED SURFACE
 - 11 PLACE HMA (0.34" THICK, TYPE A, 3/4" AGGREGATE GRADATION, PG 64-2B) OVER AGGREGATE BASE (0.75" THICK, CLASS 2)
 - 13 REMOVE EXISTING AC DIKE AND CONSTRUCT TRAVERSABLE DIKE PER COUNTY STD PLAN 117g
 - 22 INSTALL BIOSWALE WITH UNDERDRAIN PER DETAIL ON SHEET CD-2

NOT FOR CONSTRUCTION

MARK	REVISIONS	DATE

FILE NO. 657700-020, 933002-010



PRELIMINARY
NOT FOR CONSTRUCTION
100% REVIEW

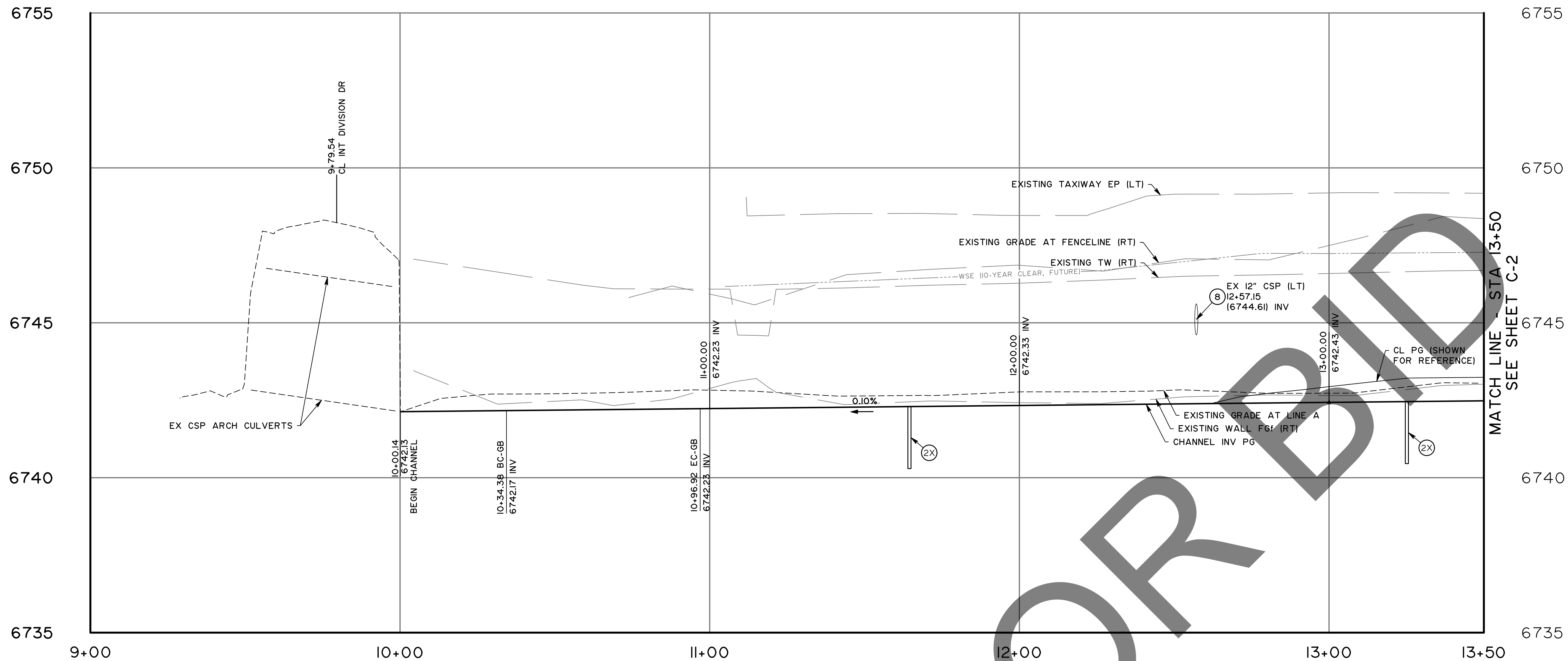
E. Thousand Oaks Blvd, Suite 105, Thousand Oaks, CA 91360

MARK	CHANGES	RESIDENT ENGINEER	DATE



SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS			
DESIGNED BY:	DRAWN BY:	CHECKED BY:	RECOMMENDED BY:
SP	MY	MI	Chris Nguyen
DATE	DATE	DATE	DATE
			8/8/24
APPROVED BY:			
Michael Ip, P.E.	07/15/24	Mervat N. Mikhail, P.E.	8/9/24
MNS ENGINEERS, INC.	DATE	DEPUTY DIRECTOR	DATE

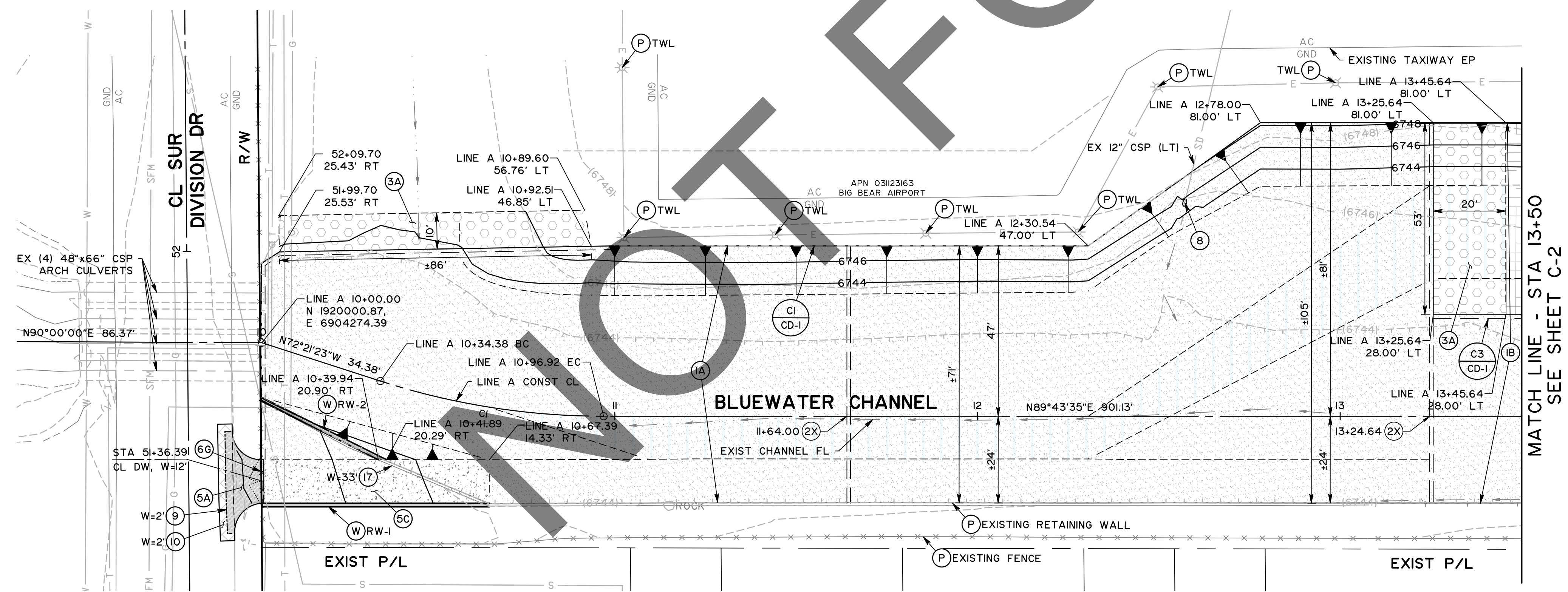
PINE VIEW DRIVE AND BLUE WATER CHANNEL				
TYPICAL SECTIONS BLUE WATER CHANNEL AND PINE VIEW DRIVE				
J.L. REF.	W.O. NO.	PLAN SCALE	SHT. ID	SHT. NO.
			X-3	5 / 28



- CONSTRUCTION NOTES:**
- P PROTECT IN PLACE
 - W CONSTRUCT RETAINING WALL PER SHEET RT-1
 - IA CONSTRUCT CHANNEL PER TYPICAL SECTION "IA"
 - IB CONSTRUCT CHANNEL PER TYPICAL SECTION "IB"
 - 2X CONSTRUCT TRANSVERSE CUTOFF WALL PER SBC FCD STANDARD PLAT 192E. DOWNSTREAM STATION PER PLAN
 - 3A CONSTRUCT RSP AREA (CLASS II) PER DETAIL ON SHEET CD-1
 - 5A CONSTRUCT ACCESS DRIVEWAY PER DETAILS ON SHEET CD-2. PLACE HMA (0.33" THICK 3/4" AGGREGATE GRADATION, PG 64-28) OVER AGGREGATE BASE (0.5" THICK, CLASS 2)
 - 5C CONSTRUCT ACCESS DRIVEWAY PER DETAILS ON SHEET CD-2. PLACE PCC (0.5" THICK) OVER AGGREGATE BASE (0.67" THICK, CLASS 2)
 - 6G CONSTRUCT CHAIN LINK FENCE GATE (DOUBLE-LEAF) PER SPPWC 600-3
 - 8 CONSTRUCT CMP CONNECTION PER SBC FCD STANDARD PLAT 200
 - 9 SAWCUT AND REMOVE EXISTING AC PAVEMENT
 - 10 COLD PLANE EXISTING ASPHALT CONCRETE FOR A DEPTH OF 0.20' AND PLACE 0.20' THICK HMA - APPLY TACK COAT TO THE MILLED SURFACE
 - 17 REMOVE EXISTING RETAINING WALL

- CONSTRUCTION LEGEND:**
- ROCK SLOPE PROTECTION
 - ASPHALT CONCRETE HMA
 - COLD PLANE AND OVERLAY
 - PORTLAND CEMENT CONCRETE (CHANNEL, DESILTING WALL)
 - PORTLAND CEMENT CONCRETE (DRIVEWAY)
 - INVERT ELEVATION AT PG
 - EARTHEN CHANNEL

CURVE DATA			
C	RADIUS	DELTA	LENGTH
CI	200.00'	17°55'02"	62.54'
			31.53'

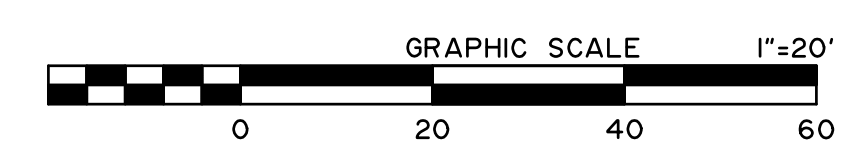


MARK	REVISIONS	DATE

FILE NO. 657700-020, 933002-010



PRELIMINARY
NOT FOR CONSTRUCTION
100% REVIEW



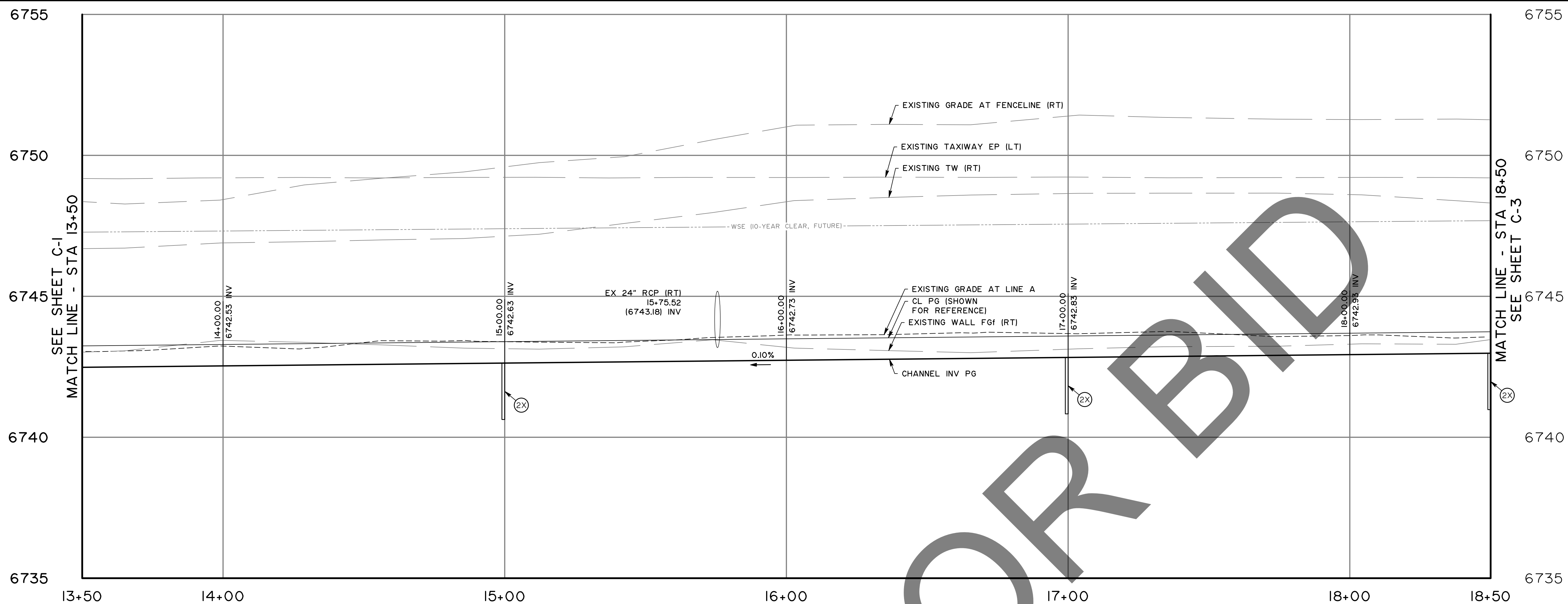
MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		



SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS			
DESIGNED BY: SP	DRAWN BY: MY	CHECKED BY: MI	RECOMMENDED BY: <i>[Signature]</i> 8/8/24
APPROVED BY: <i>[Signature]</i> 07/15/24			DATE: 8/9/24
MICHAEL IP, P.E. MNS ENGINEERS, INC.			MERVAT N. MIKHAIL, P.E. DEPUTY DIRECTOR

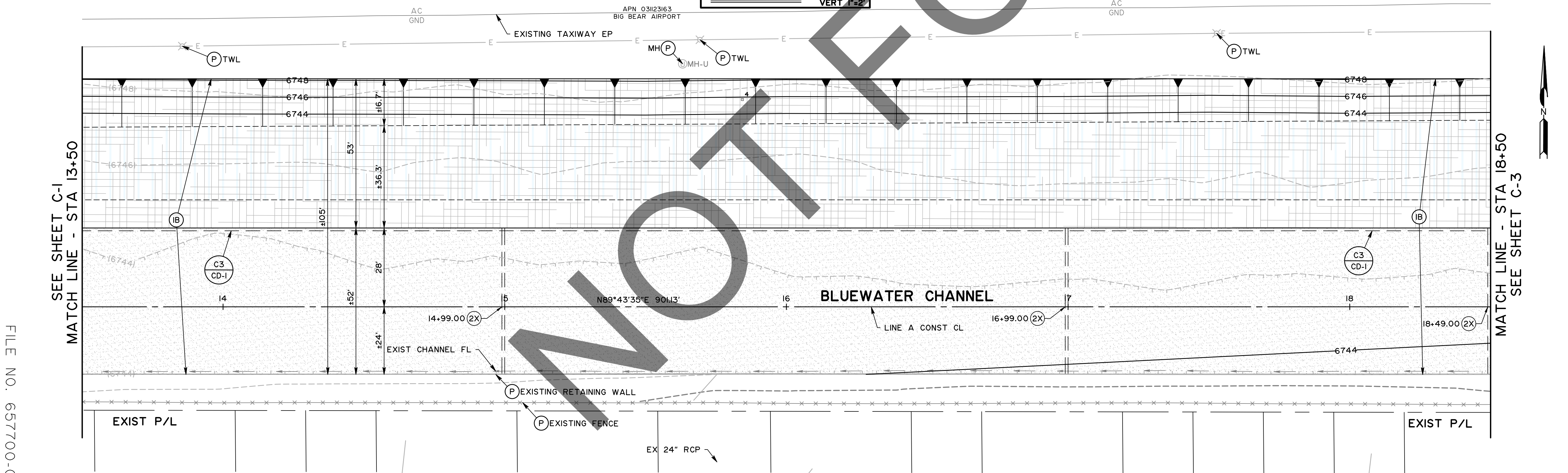
PINE VIEW DRIVE AND BLUE WATER CHANNEL				
CHANNEL PLAN AND PROFILE BLUEWATER CHANNEL LINE A STA 10+00 TO 13+50				
J.L. REF: 12091	W.O. NO: H15190	PLAN SCALE: 1"=20'	SHT. ID: C-1	SHT. NO: 6 / 28

FILE NO. 657700-020, 933002-010



- CONSTRUCTION NOTES:**
- P PROTECT IN PLACE
 - IB CONSTRUCT CHANNEL PER TYPICAL SECTION "IB"
 - 2X CONSTRUCT TRANSVERSE CUTOFF WALL PER SBC FCD STANDARD PLAT 192E. DOWNSTREAM STATION PER PLAN

- CONSTRUCTION LEGEND:**
- PORTLAND CEMENT CONCRETE (CHANNEL, DESILTING WALL)
 - INVERT ELEVATION AT PG
 - EARTHEN CHANNEL

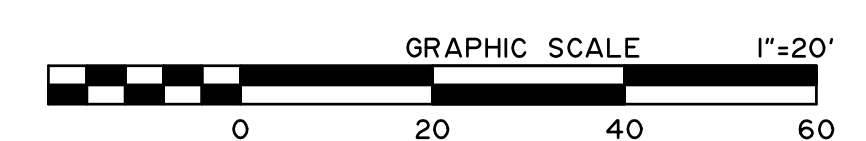


REVISIONS
MARK DATE
APPR DATE

FILE NO. 657700-020, 933002-010



PRELIMINARY
NOT FOR CONSTRUCTION
100% REVIEW



MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

FIELD CHANGES



SAN BERNARDINO COUNTY
DEPARTMENT OF PUBLIC WORKS

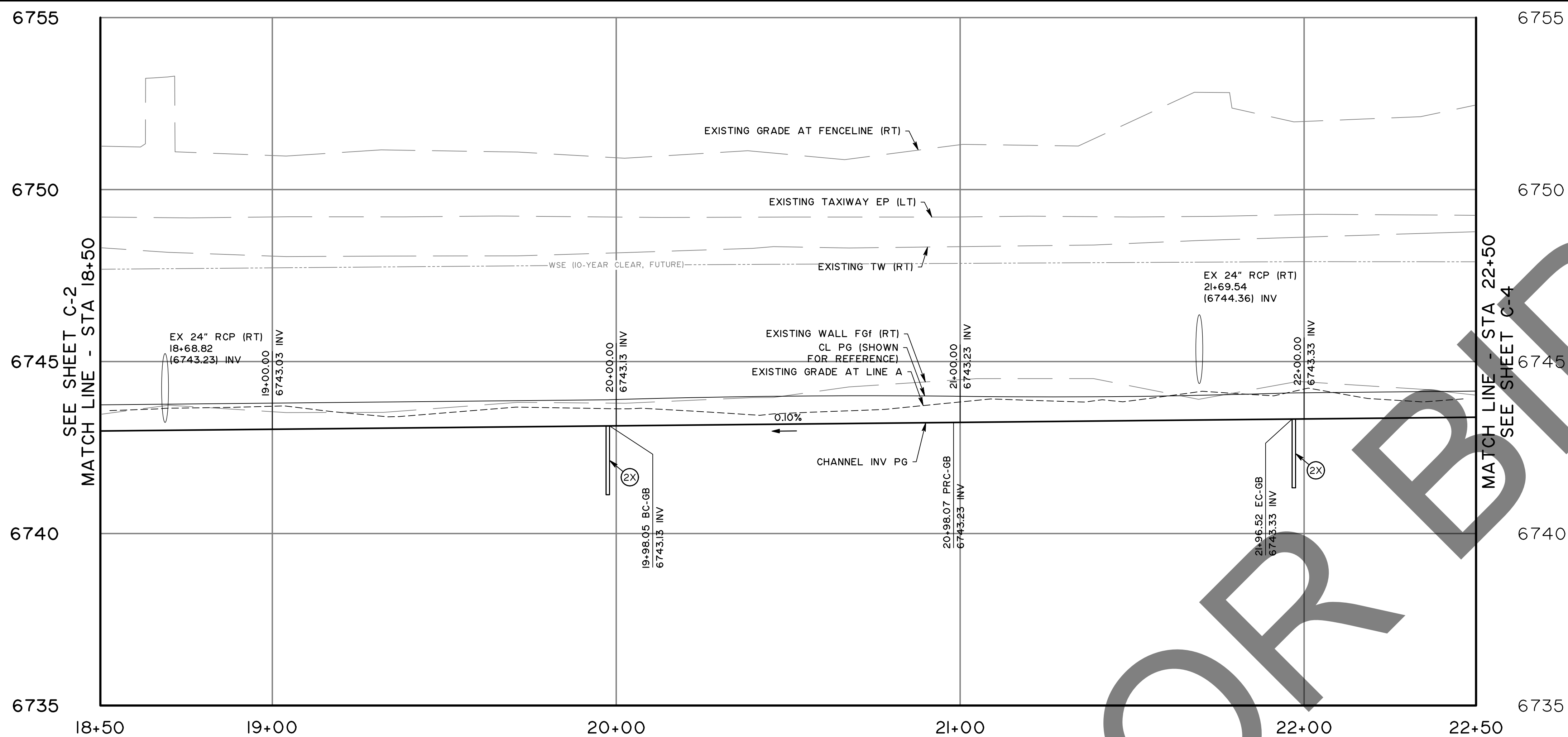
DESIGNED BY: SP	DRAWN BY: MY	CHECKED BY: MI	RECOMMENDED BY: <i>Chris Nguyen</i>	DATE: 8/8/24
APPROVED BY: <i>Michael Ip</i>			DATE: 07/15/24	DATE: 8/9/24

MICHAEL IP, P.E.
MNS ENGINEERS, INC.

MERVAT N. MIKHAIL, P.E.
DEPUTY DIRECTOR

PINE VIEW DRIVE AND BLUE WATER CHANNEL
CHANNEL PLAN AND PROFILE
BLUEWATER CHANNEL
LINE A STA 13+50 TO 18+50

J.L. REF: 12091	W.O. NO: H15190	PLAN SCALE: 1"=20'	SHT. ID: C-2	SHT. NO: 7 / 28
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PROFILE SCALE: HORIZ 1"=20' VERT 1"=2'

CONSTRUCTION NOTES:

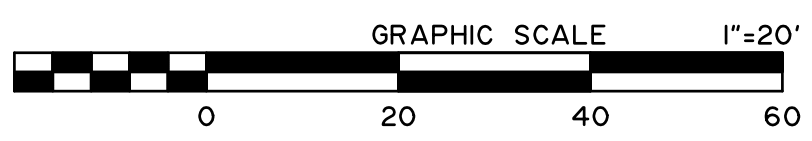
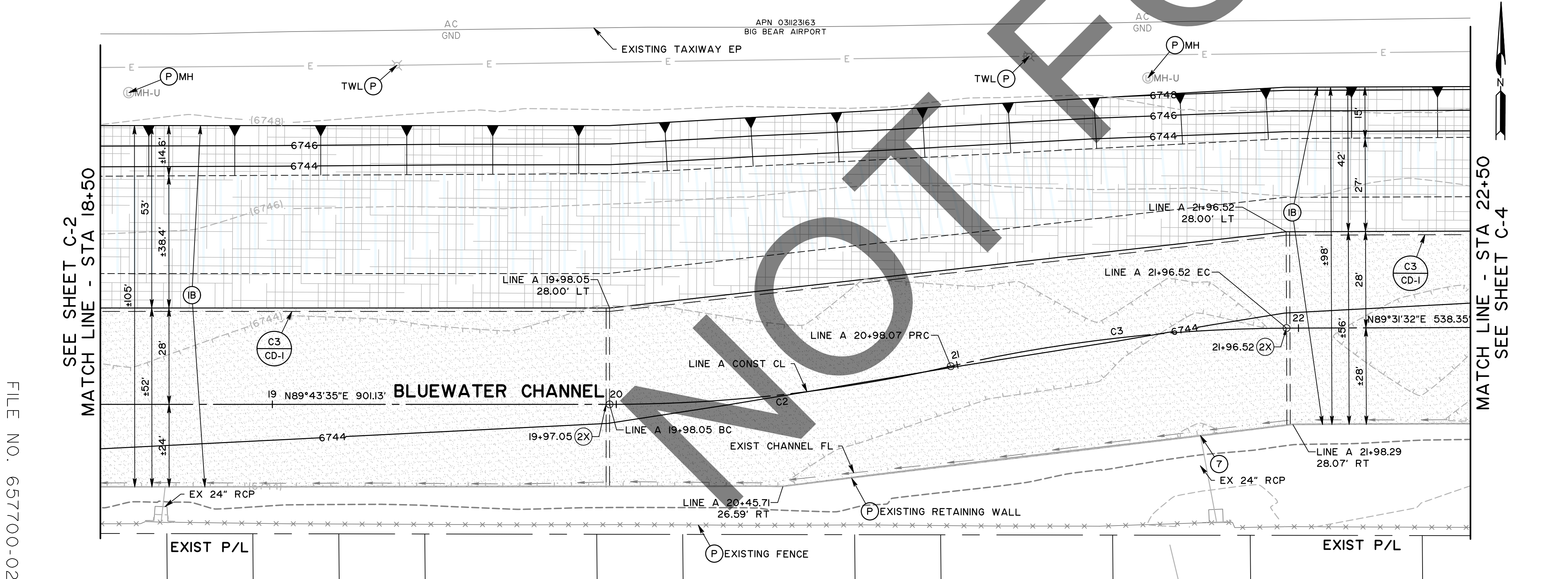
P	PROTECT IN PLACE
IB	CONSTRUCT CHANNEL PER TYPICAL SECTION "IB"
2X	CONSTRUCT TRANSVERSE CUTOFF WALL PER SBC FCD STANDARD PLAT 192E. DOWNSTREAM STATION PER PLAN

CONSTRUCTION LEGEND:

	PORTLAND CEMENT CONCRETE (CHANNEL, DESILTING WALL)
	INVERT ELEVATION AT PG
	EARTHEN CHANNEL

CURVE DATA

C	RADIUS	DELTA	LENGTH	TANGENT
C2	450.00'	12°44'07"	100.02'	50.22'
C3	450.00'	12°32'05"	98.45'	49.42'



MARK	REVISIONS	DATE



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E. Thousand Oaks Blvd, Suite 105, Thousand Oaks, CA 91360

FIELD CHANGES

MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		



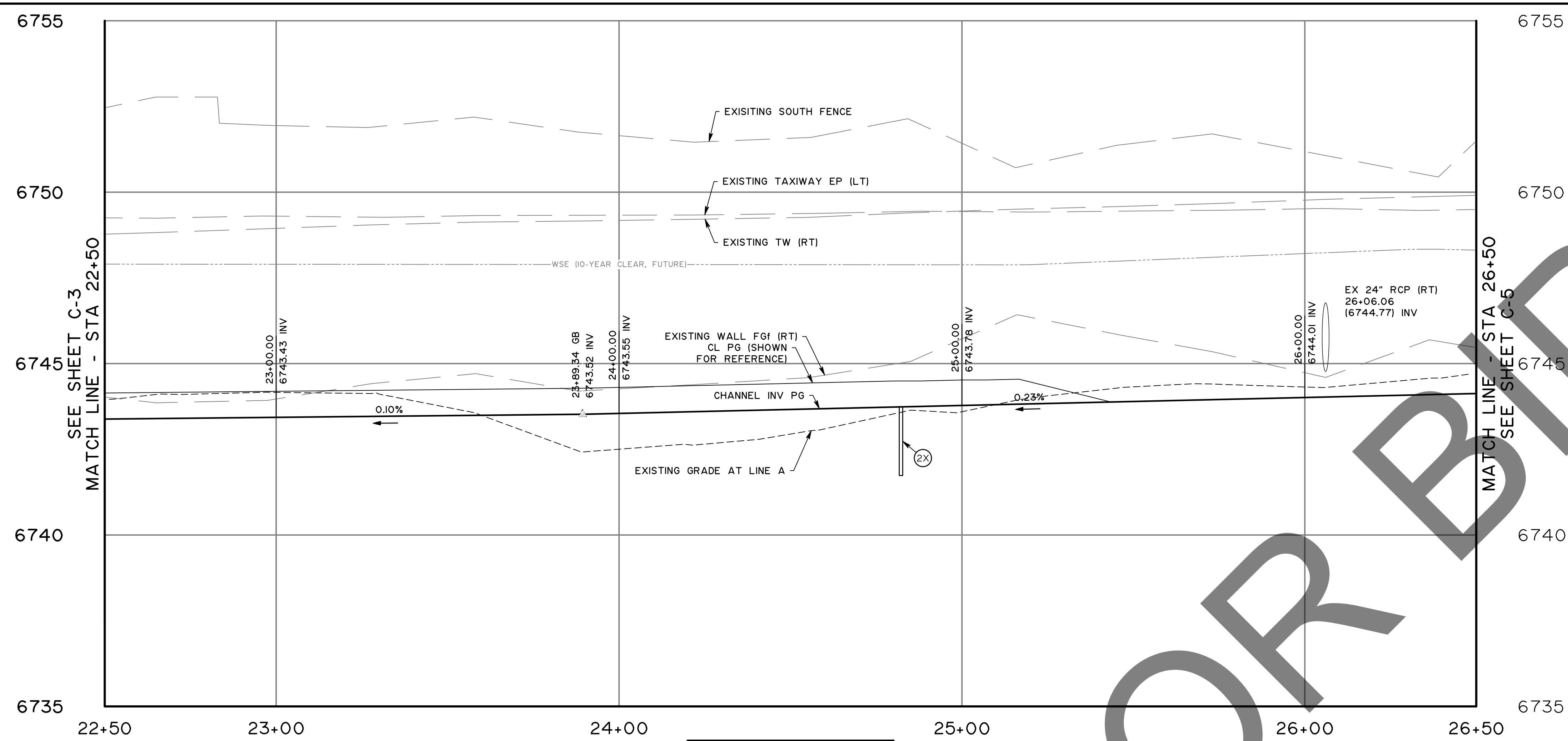
SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS

DESIGNED BY: SP	DRAWN BY: MY	CHECKED BY: MI	RECOMMENDED BY: <i>[Signature]</i> 8/8/24
APPROVED BY: <i>[Signature]</i> 07/15/24			DATE: 8/9/24

PINE VIEW DRIVE AND BLUE WATER CHANNEL

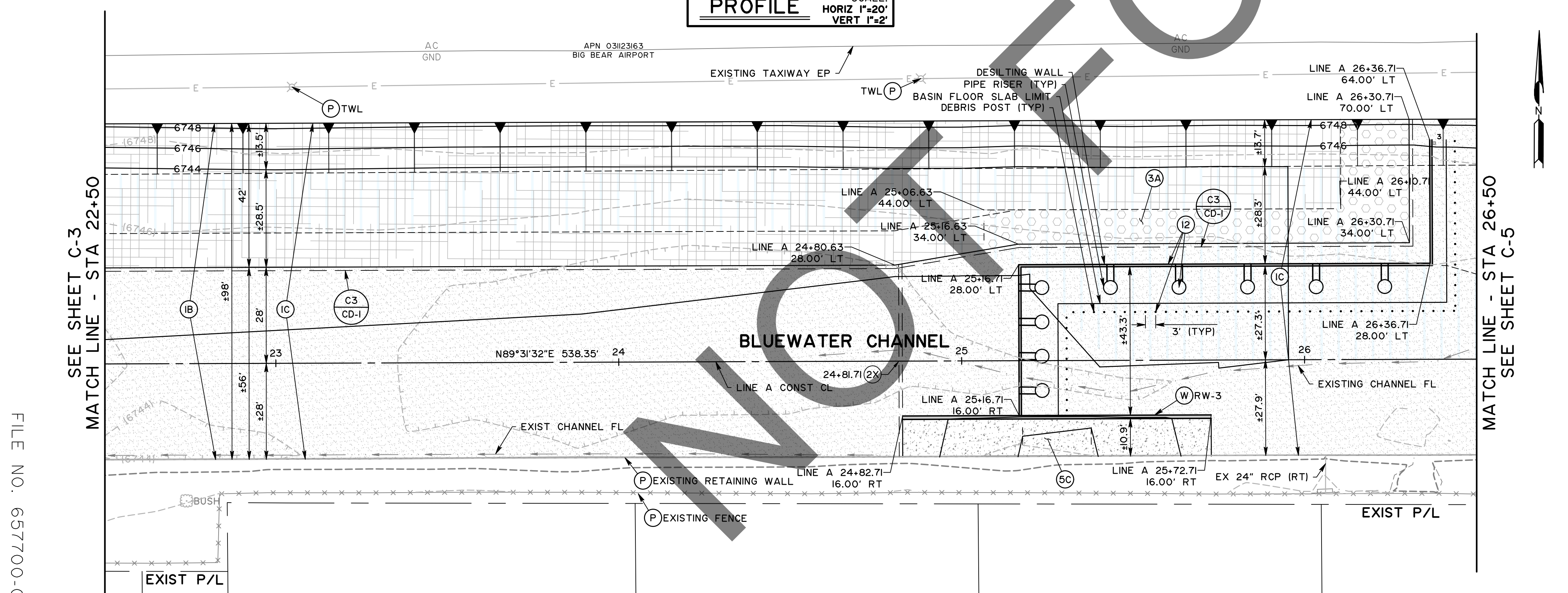
CHANNEL PLAN AND PROFILE
BLUEWATER CHANNEL
LINE A STA 18+50 TO 22+50

J.L. REF: 12091	W.O. NO: H15190	PLAN SCALE: 1"=20'	SHT. ID: C-3	SHT. NO: 8 / 28
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CONSTRUCTION NOTES:	
P	PROTECT IN PLACE
W	CONSTRUCT RETAINING WALL PER SHEET RT-1
IB	CONSTRUCT CHANNEL PER TYPICAL SECTION IB
IC	CONSTRUCT CHANNEL PER TYPICAL SECTION "IC"
2X	CONSTRUCT TRANSVERSE CUTOFF WALL PER SBC FCD STANDARD PLAT 192E. DOWNSTREAM STATION PER PLAN
3A	CONSTRUCT RIPRAP AREA (CLASS III) PER DETAIL ON SHEET CD-1
5C	CONSTRUCT ACCESS DRIVEWAY PER DETAILS ON SHEET CD-2. PLACE PCC (6" THICK) OVER AGGREGATE BASE (8" THICK, CLASS 2)
I2	CONSTRUCT DESILTING WALL, AND INSTALL PIPE RISER AND DEBRIS POST PER DETAILS ON SHEET CD-1

CONSTRUCTION LEGEND:	
	ROCK SLOPE PROTECTION
	PORTLAND CEMENT CONCRETE (CHANNEL, DESILTING WALL)
	PORTLAND CEMENT CONCRETE (DRIVEWAY)
	INVERT ELEVATION AT PG
	EARTHEN CHANNEL

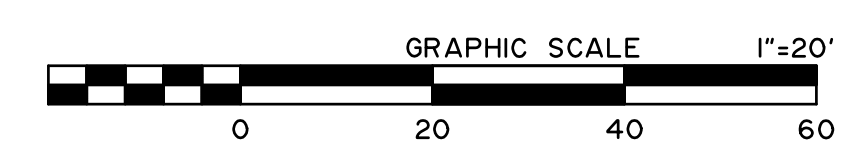


MARK	REVISIONS	DATE

FILE NO. 657700-020, 933002-010



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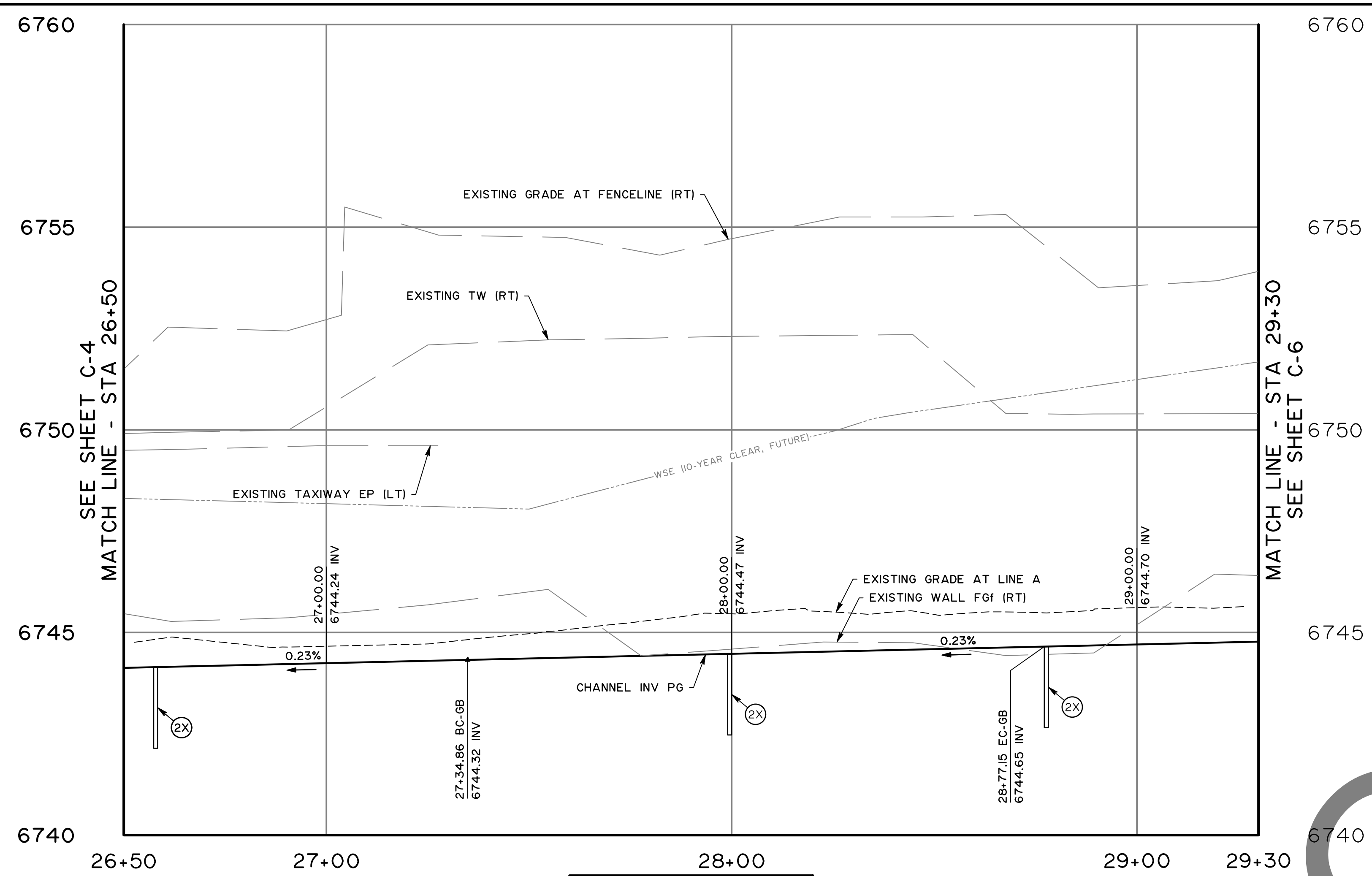
MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

FIELD CHANGES



SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS			
DESIGNED BY: SP	DRAWN BY: MY	CHECKED BY: MI	RECOMMENDED BY: 8/8/24 DATE
APPROVED BY: MICHAEL IP, P.E. MNS ENGINEERS, INC.			8/9/24 DATE

PINE VIEW DRIVE AND BLUE WATER CHANNEL				
CHANNEL PLAN AND PROFILE BLUEWATER CHANNEL LINE A STA 22+50 TO 26+50				
J.L. REF. I2091	W.O. NO. H15190	PLAN SCALE 1"=20'	SHT. ID C-4	SHT. NO. 9 / 28



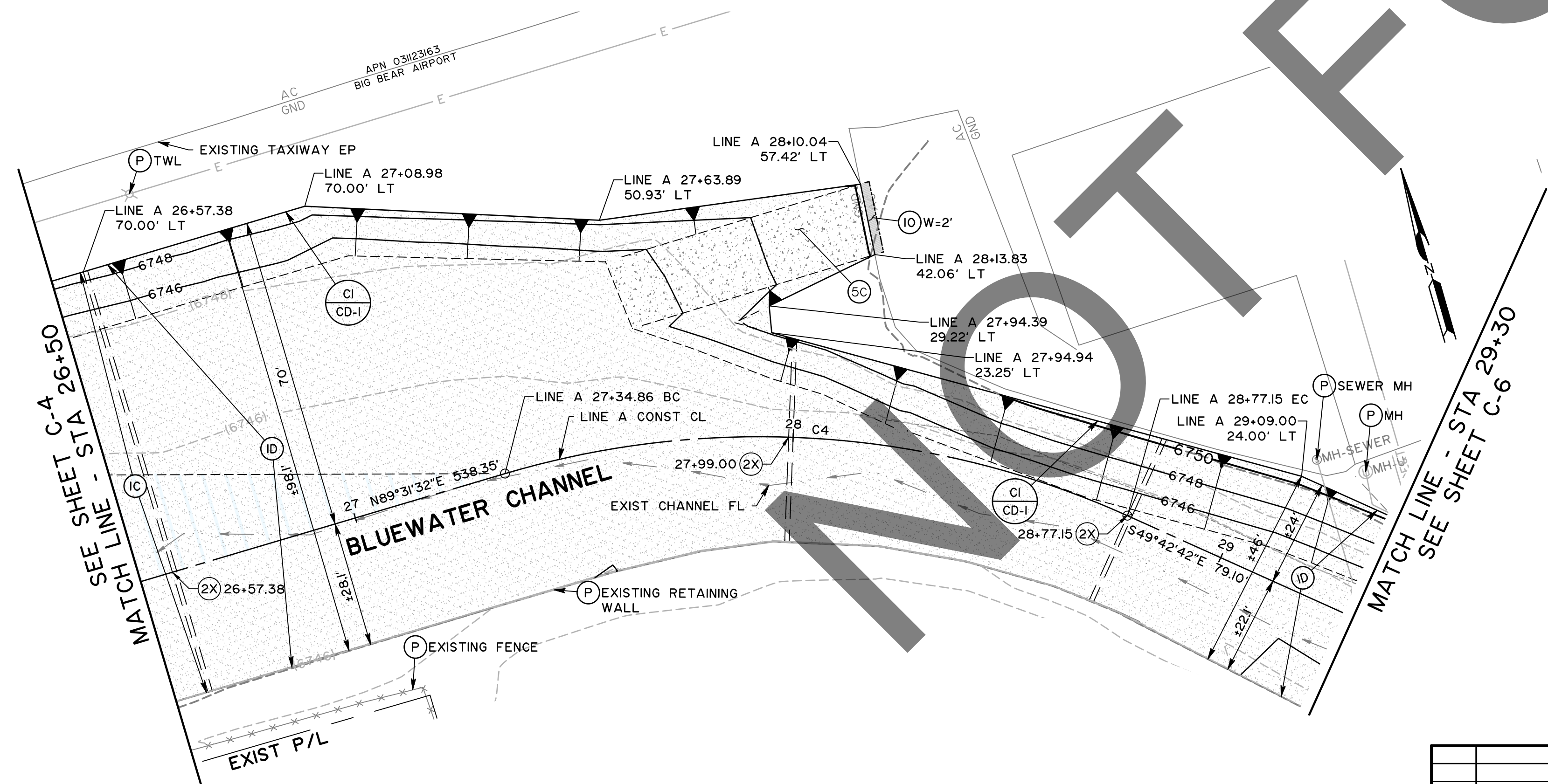
PROFILE
SCALE:
HORIZ 1"=20'
VERT 1"=2'

- CONSTRUCTION NOTES:**
- P PROTECT IN PLACE
 - IC CONSTRUCT CHANNEL PER TYPICAL SECTION "IC"
 - ID CONSTRUCT CHANNEL PER TYPICAL SECTION "ID"
 - 2X CONSTRUCT TRANSVERSE CUTOFF WALL PER SBC FCD STANDARD PLAT 192E. DOWNSTREAM STATION PER PLAN
 - CONSTRUCT ACCESS DRIVEWAY PER DETAILS ON SHEET CD-2. PLACE PCC (6" THICK) OVER AGGREGATE BASE (8" THICK, CLASS 2)
 - 5C COLD PLANE EXISTING ASPHALT CONCRETE FOR A DEPTH OF 0.20' AND PLACE 0.20' THICK HMA - APPLY TACK COAT TO THE MILLED SURFACE

- CONSTRUCTION LEGEND:**
- ASPHALT CONCRETE HMA
 - PORTLAND CEMENT CONCRETE (CHANNEL, DESILTING WALL)
 - PORTLAND CEMENT CONCRETE (DRIVEWAY)

CURVE DATA

C	RADIUS	DELTA	LENGTH	TANGENT
C4	200.00'	40°45'46"	142.29'	74.31'

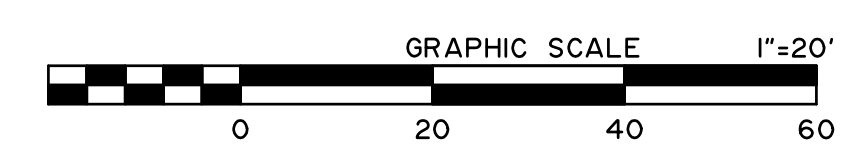


MARK	REVISIONS	DATE

FILE NO. 657700-020, 933002-010



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MARK	CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES

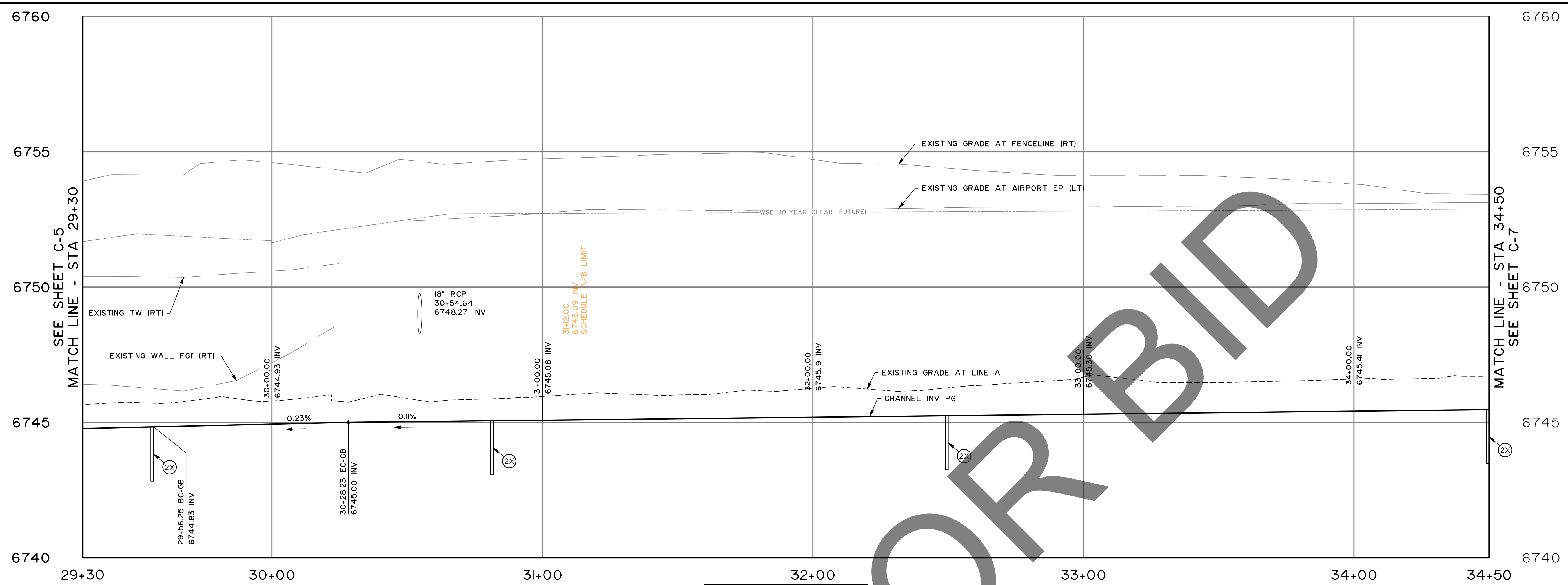


SAN BERNARDINO COUNTY
DEPARTMENT OF PUBLIC WORKS

DESIGNED BY: SP	DRAWN BY: MY	CHECKED BY: MI	RECOMMENDED BY: <i>[Signature]</i> 8/8/24
APPROVED BY: <i>[Signature]</i> 07/15/24			DATE: 8/9/24
MICHAEL IP, P.E. MNS ENGINEERS, INC.			MERVAT N. MIKHAIL, P.E. DEPUTY DIRECTOR

PINE VIEW DRIVE AND BLUE WATER CHANNEL
CHANNEL PLAN AND PROFILE
BLUEWATER CHANNEL
LINE A STA 26+50 TO 29+30

J.L. REF: 12091	W.O. NO: H15190	PLAN SCALE: 1"=20'	SHT. ID: C-5	SHT. NO: 10 / 28
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PROFILE SCALE: HORIZ 1"=20' VERT 1"=2'

CONSTRUCTION LEGEND:

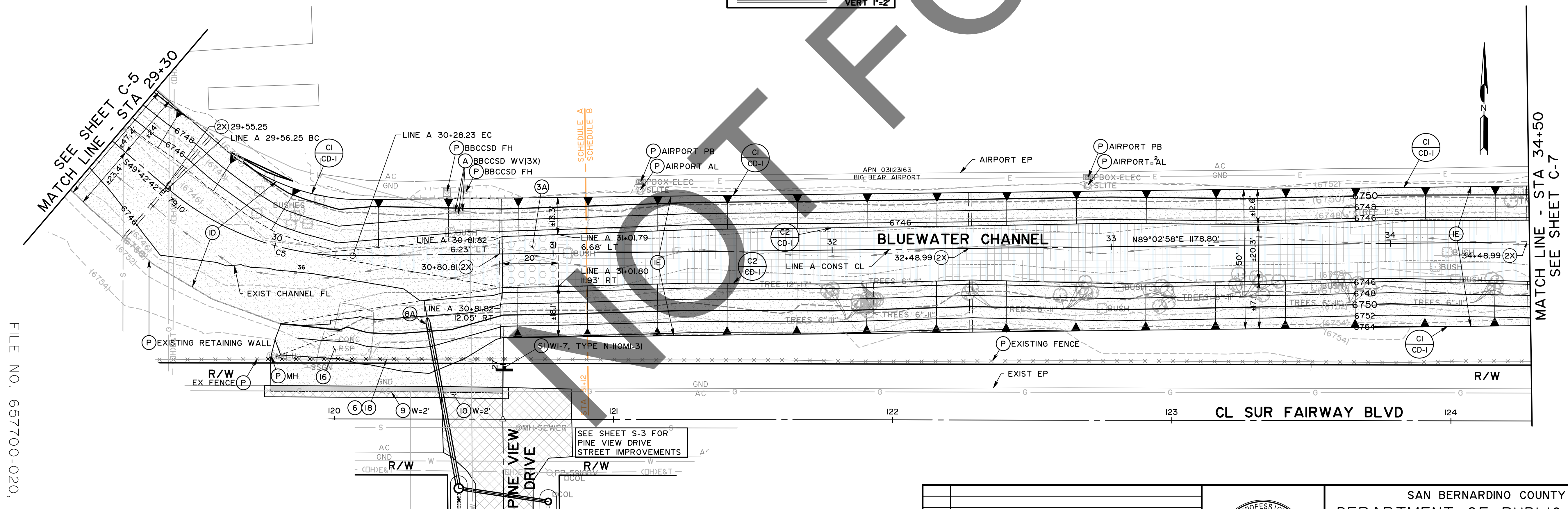
	ROCK SLOPE PROTECTION
	ASPHALT CONCRETE HMA
	COLD PLANE AND OVERLAY
	PORTLAND CEMENT CONCRETE (CHANNEL, DESILTING WALL)
	INVERT ELEVATION AT PG
	EARTHEN CHANNEL

CONSTRUCTION NOTES:

- P PROTECT IN PLACE
- A ADJUST TO GRADE
- ID CONSTRUCT CHANNEL PER TYPICAL SECTION "ID"
- IE CONSTRUCT CHANNEL PER TYPICAL SECTION "IE"
- CONSTRUCT TRANSVERSE CUTOFF WALL PER SBC FCD STANDARD PLAT 192E. DOWNSTREAM STATION PER PLAN
- 2X STANDARD PLAT 192E. DOWNSTREAM STATION PER PLAN
- 3A CONSTRUCT RIPRAP AREA (CLASS III) PER DETAIL ON SHEET CD-1
- 6 CONSTRUCT CHAIN LINK FENCE PER SPPWC 600-3 (H-6" WITH BARBED WIRE TOP)
- 8A CONSTRUCT CONCRETE PIPE CONNECTION PER SBC FCD STANDARD PLAT 200A
- 9 SAWCUT AND REMOVE EXISTING AC
- 10 COLD PLANE EXISTING ASPHALT CONCRETE FOR A DEPTH OF 0.20' AND PLACE 0.20' THICK HMA. APPLY TACK COAT TO THE MILLED SURFACE
- 16 REMOVE CONCRETED RSP
- 18 REMOVE EXISTING CHAIN LINK FENCE
- SI INSTALL ROADSIDE SIGN PER CA MUTCD 2014 FIGURE 2A-2(CA) AND SAN BERNARDINO COUNTY STANDARD 303A AND 303B

CURVE DATA

C	RADIUS	DELTA	LENGTH	TANGENT
C5	100.00'	41°14'21"	71.98'	37.63'



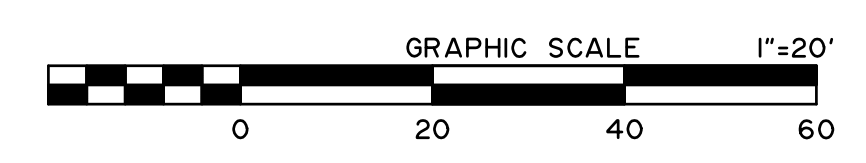
REVISIONS

MARK	REVISIONS	DATE

FILE NO. 657700-020, 933002-010



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FIELD CHANGES

MARK	CHANGES	RESIDENT ENGINEER	DATE



SAN BERNARDINO COUNTY
DEPARTMENT OF PUBLIC WORKS

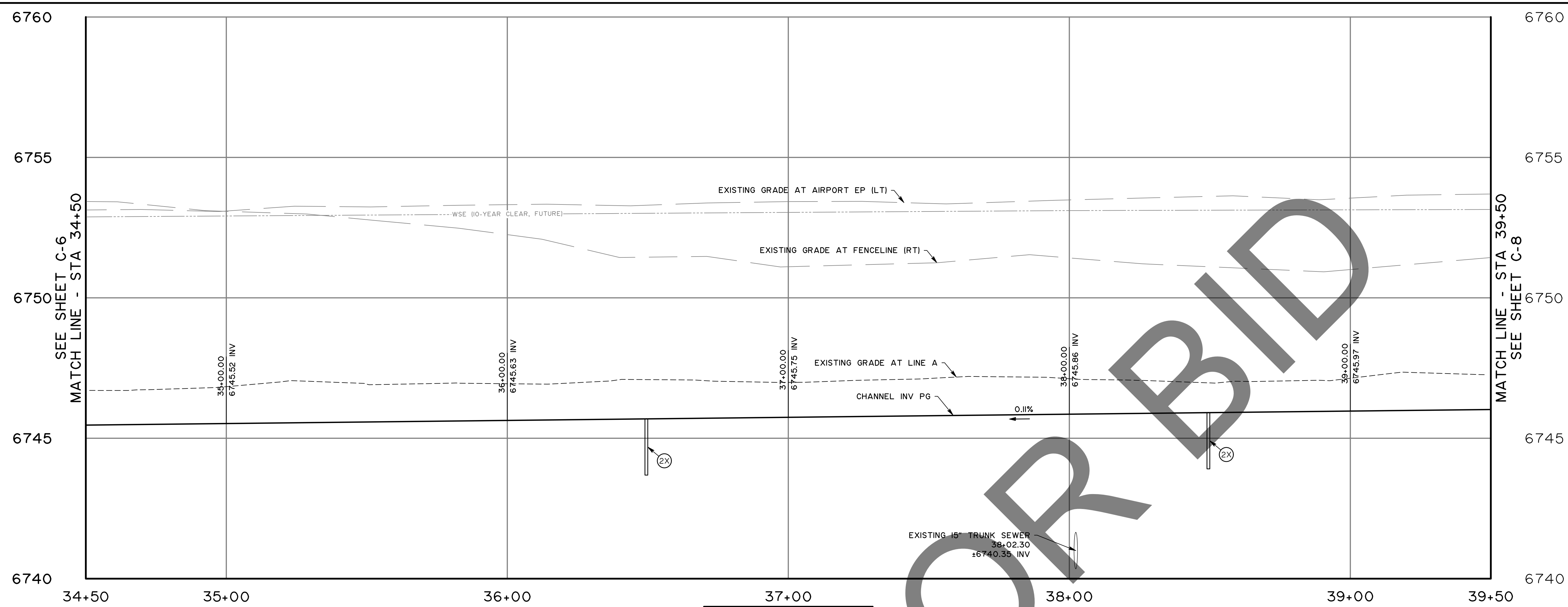
DESIGNED BY: SP	DRAWN BY: MY	CHECKED BY: MI	RECOMMENDED BY: CHRIS NGUYEN, P.E. TRANSPORTATION DESIGN ENGINEERING MANAGER
DATE: 07/15/24	DATE: 8/9/24	DATE: 8/9/24	DATE: 8/9/24

APPROVED BY: MERVAT N. MIKHAIL, P.E. DEPUTY DIRECTOR

PINE VIEW DRIVE AND BLUE WATER CHANNEL
CHANNEL PLAN AND PROFILE
BLUEWATER CHANNEL
LINE A STA 29+30 TO 34+50

J.L. REF: I2091	W.O. NO: H15190	PLAN SCALE: 1"=20'	SHT. ID: C-6	SHT. NO: 11 / 28
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E. Thousand Oaks Blvd, Suite 105, Thousand Oaks, CA 91360



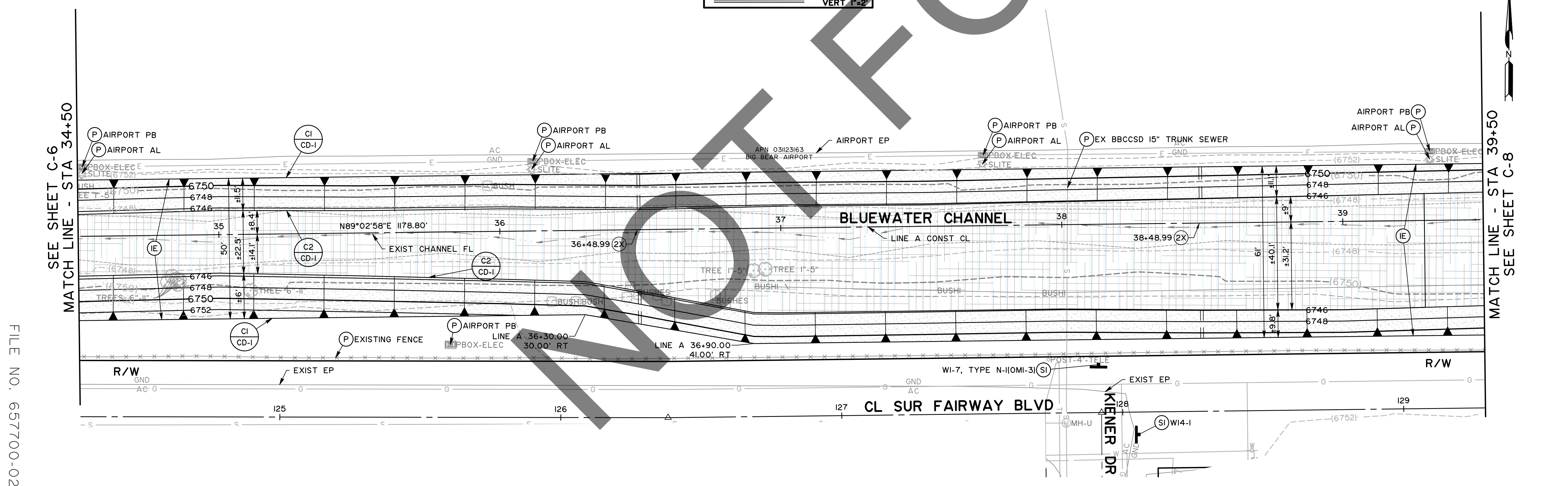
CONSTRUCTION NOTES:

- P PROTECT IN PLACE
- IE CONSTRUCT CHANNEL PER TYPICAL SECTION "IE"
- 2X CONSTRUCT TRANSVERSE CUTOFF WALL PER SBC FCD STANDARD PLAT 192E. DOWNSTREAM STATION PER PLAN
- SI INSTALL ROADSIDE SIGN PER CA MUTCD 2014 FIGURE 2A-2(CA) AND SAN BERNARDINO COUNTY STANDARD 303A AND 303B

CONSTRUCTION LEGEND:

- PORTLAND CEMENT CONCRETE (CHANNEL, DESILTING WALL)
- INVERT ELEVATION AT PG
- EARTHEN CHANNEL

PROFILE
SCALE:
HORIZ 1"=20'
VERT 1"=2'



REVISIONS

MARK	REVISIONS	DATE

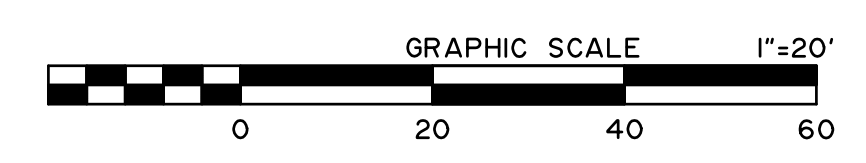
REVISIONS

MARK	REVISIONS	DATE

FILE NO. 657700-020, 933002-010



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NOT FOR CONSTRUCTION
100% REVIEW



FIELD CHANGES

MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

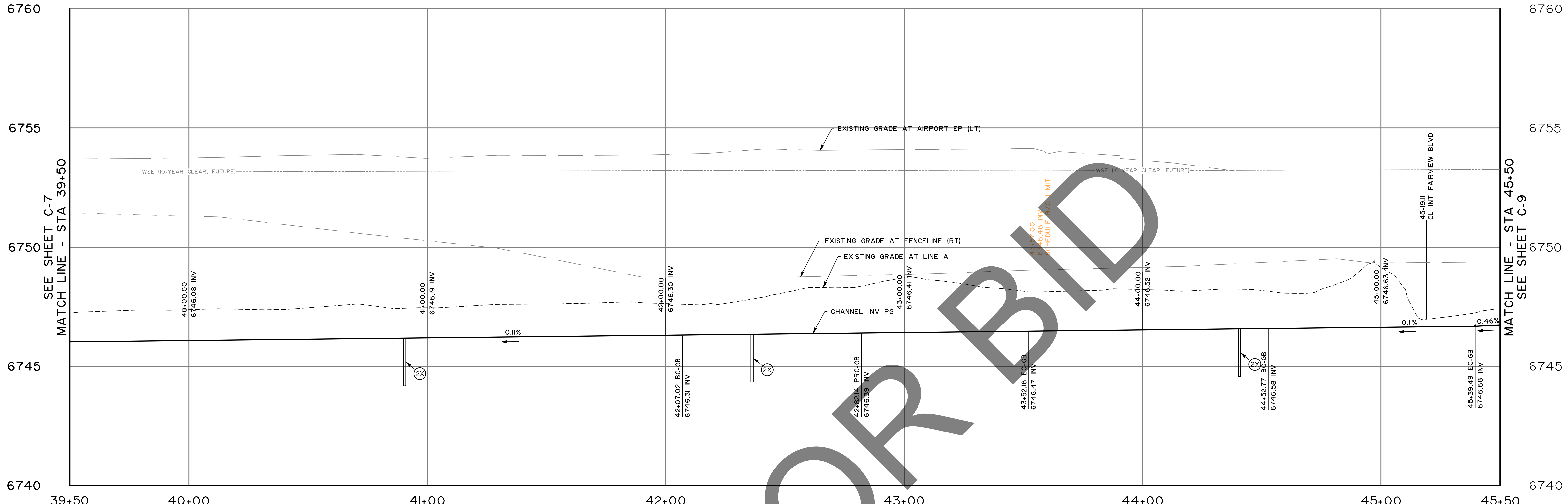


SAN BERNARDINO COUNTY
DEPARTMENT OF PUBLIC WORKS

DESIGNED BY: SP	DRAWN BY: MY	CHECKED BY: MI	RECOMMENDED BY: <i>[Signature]</i> 8/8/24 CHRIS NGUYEN, P.E. TRANSPORTATION DESIGN ENGINEERING MANAGER
APPROVED BY: <i>[Signature]</i> 07/15/24 MICHAEL IP, P.E. MNS ENGINEERS, INC.			DATE: 8/9/24 MERVAT N. MIKHAIL, P.E. DEPUTY DIRECTOR

PINE VIEW DRIVE AND BLUE WATER CHANNEL
CHANNEL PLAN AND PROFILE
BLUEWATER CHANNEL
LINE A STA 34+50 TO 39+50

J.L. REF: I2091	W.O. NO: H15190	PLAN SCALE: 1"=20'	SHT. ID: C-7	SHT NO: 12 / 28
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PROFILE
SCALE:
HORIZ 1"=20'
VERT 1"=2'

SEE SHEET C-7
MATCH LINE - STA 39+50

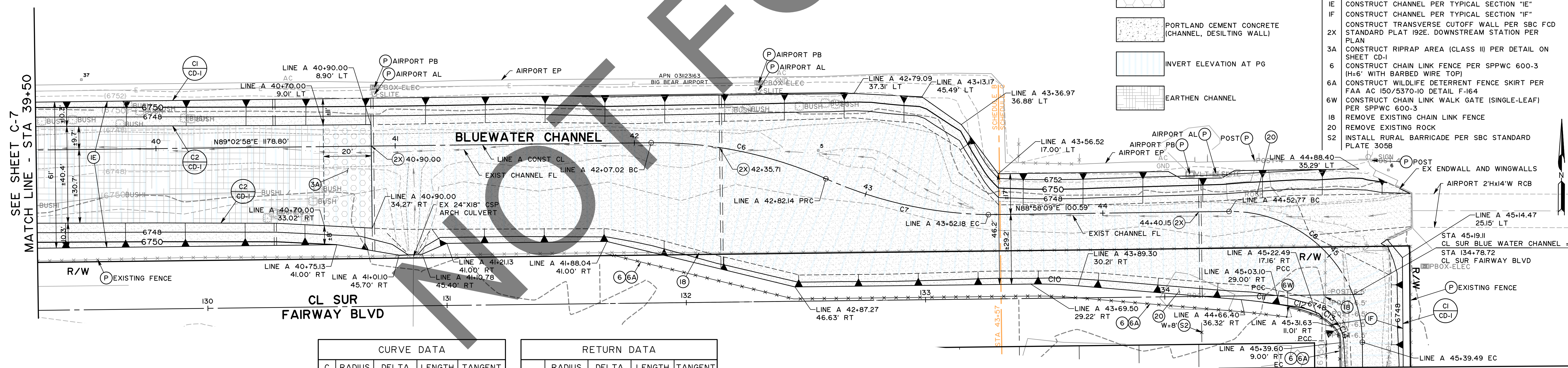
MATCH LINE - STA 45+50
SEE SHEET C-9

CONSTRUCTION LEGEND:

- ROCK SLOPE PROTECTION
- PORTLAND CEMENT CONCRETE (CHANNEL, DESILTING WALL)
- INVERT ELEVATION AT PG
- EARTHEN CHANNEL

CONSTRUCTION NOTES:

- P PROTECT IN PLACE
- A ADJUST TO GRADE
- IE CONSTRUCT CHANNEL PER TYPICAL SECTION "IE"
- IF CONSTRUCT CHANNEL PER TYPICAL SECTION "IF"
- 3A CONSTRUCT TRANSVERSE CUTOFF WALL PER SBC FCD STANDARD PLAT 192E. DOWNSTREAM STATION PER PLAN
- 2X CONSTRUCT RIPRAP AREA (CLASS III) PER DETAIL ON SHEET CD-1
- 6 CONSTRUCT CHAIN LINK FENCE PER SPPWC 600-3 (H=6' WITH BARBED WIRE TOP)
- 6A CONSTRUCT WILDLIFE DETERRENT FENCE SKIRT PER FAA AC 150/5370-10 DETAIL F-164
- 6W CONSTRUCT CHAIN LINK WALK GATE (SINGLE-LEAF) PER SPPWC 600-3
- 18 REMOVE EXISTING CHAIN LINK FENCE
- 20 REMOVE EXISTING ROCK
- S2 INSTALL RURAL BARRICADE PER SBC STANDARD PLATE 305B

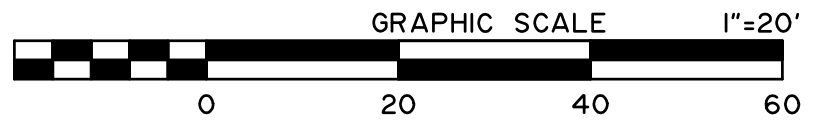


CURVE DATA

C	RADIUS	DELTA	LENGTH	TANGENT
C6	175.00'	24°35'33"	75.11'	38.14'
C7	175.00'	22°55'58"	70.04'	35.50'
C8	55.00'	90°20'16"	86.72'	55.33'

RETURN DATA

C	RADIUS	DELTA	LENGTH	TANGENT
C10	205.00'	005°32'33"	19.83'	9.92'
C11	195.00'	004°45'29"	16.19'	8.10'
C12	77.00'	012°02'54"	16.19'	8.13'
C13	20.50'	025°46'45"	9.22'	4.69'
C14	9.50'	042°08'22"	6.99'	3.66'



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FIELD CHANGES

MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		



SAN BERNARDINO COUNTY
DEPARTMENT OF PUBLIC WORKS

DESIGNED BY: SP DRAWN BY: MY CHECKED BY: MI RECOMMENDED BY: *Chris Nguyen* 8/8/24
DATE: 8/8/24
DATE: 8/9/24

APPROVED BY: *Michael Ip* 8/9/24
DATE: 8/9/24
DATE: 8/9/24

MICHAEL IP, P.E. MERVAT N. MIKHAIL, P.E.
MNS ENGINEERS, INC. DEPUTY DIRECTOR

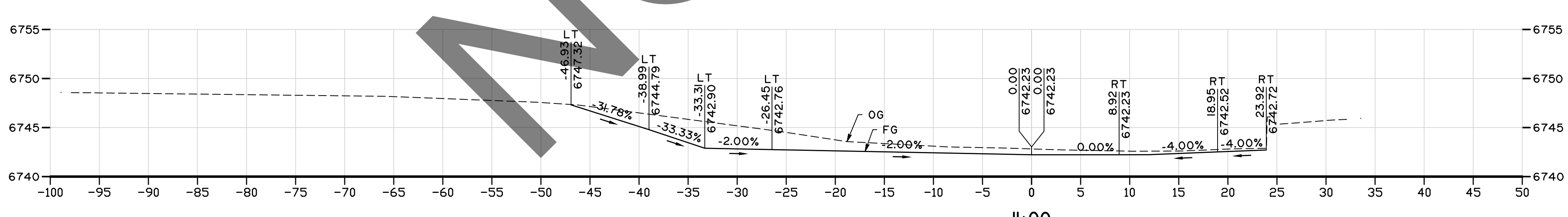
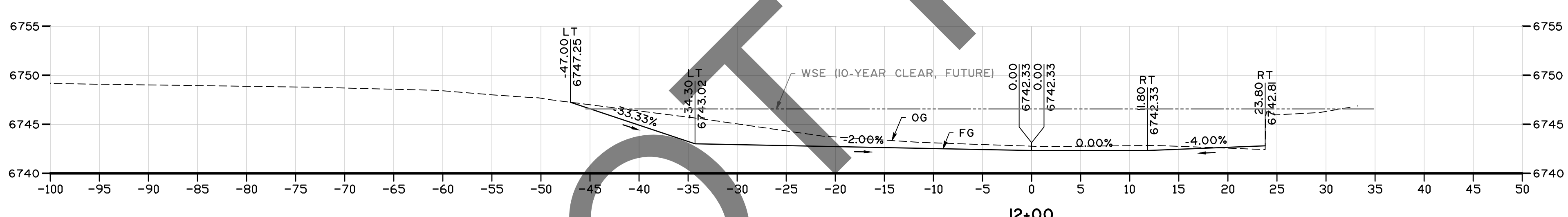
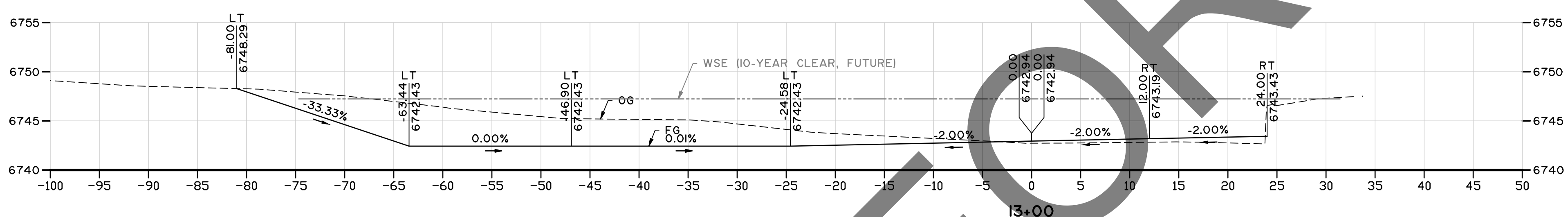
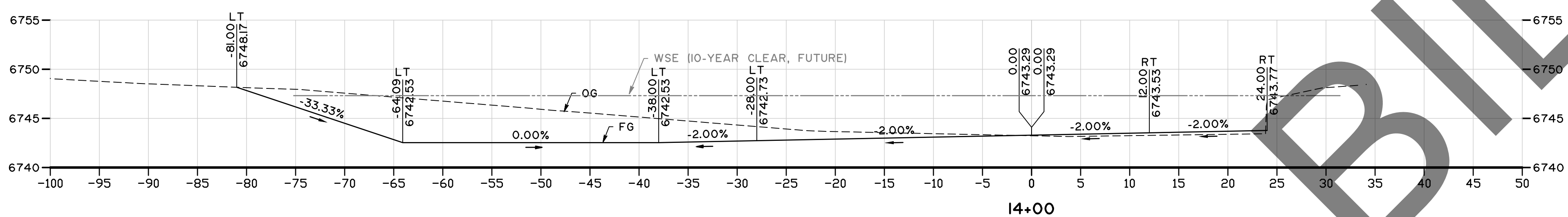
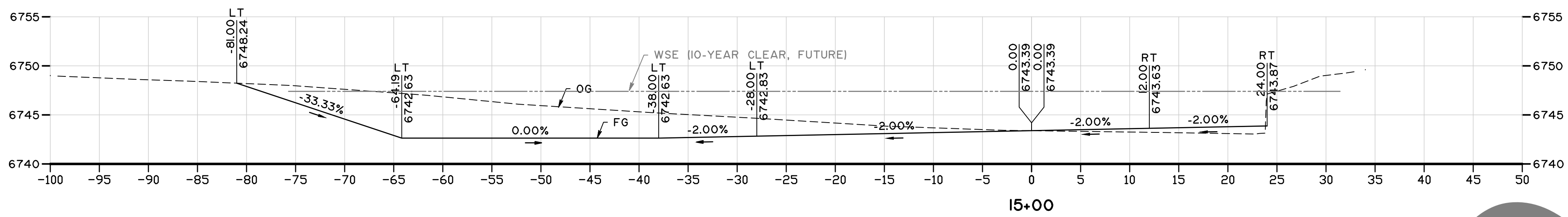
PINE VIEW DRIVE AND BLUE WATER CHANNEL

CHANNEL PLAN AND PROFILE
BLUEWATER CHANNEL
LINE A STA 39+50 TO 45+50

J.L. REF. W.O. NO. PLAN SCALE SHT. ID SHT. NO.
12091 H15190 1"=20' C-8 13 / 28

FILE NO. 657700-020, 933002-010

FILE NO. 657700-020, 933002-010



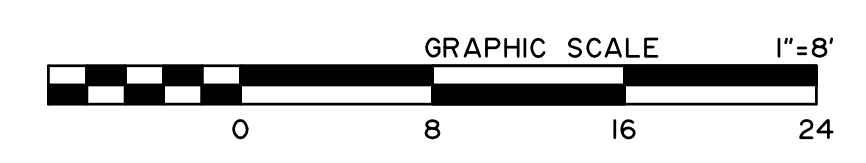
NOT FOR BIDD

MARK	REVISIONS	DATE

FILE NO. 657700-020, 933002-010



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100% REVIEW



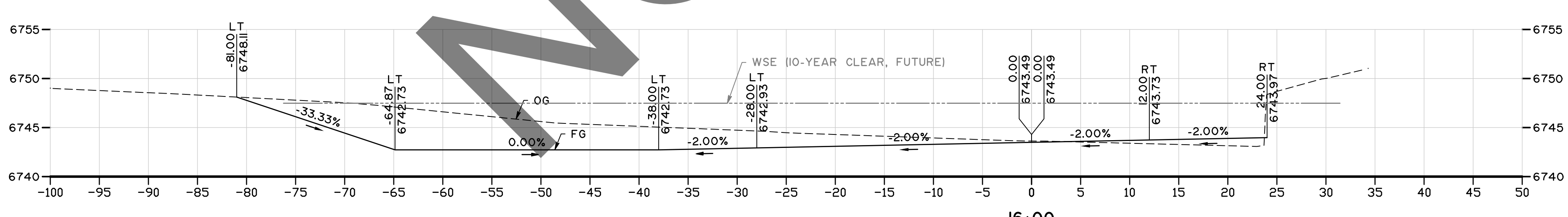
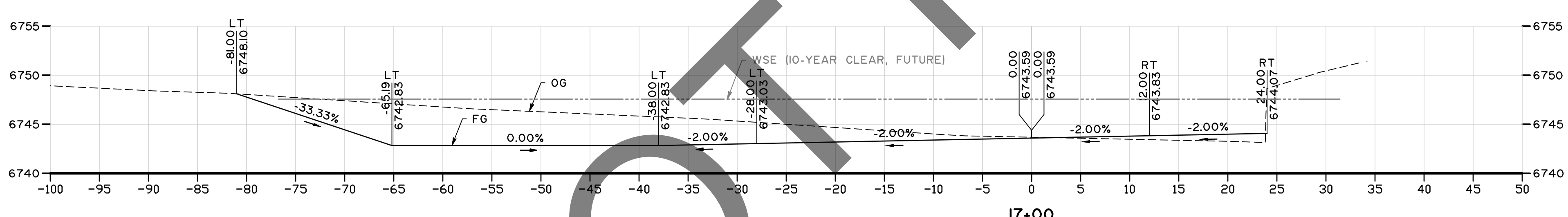
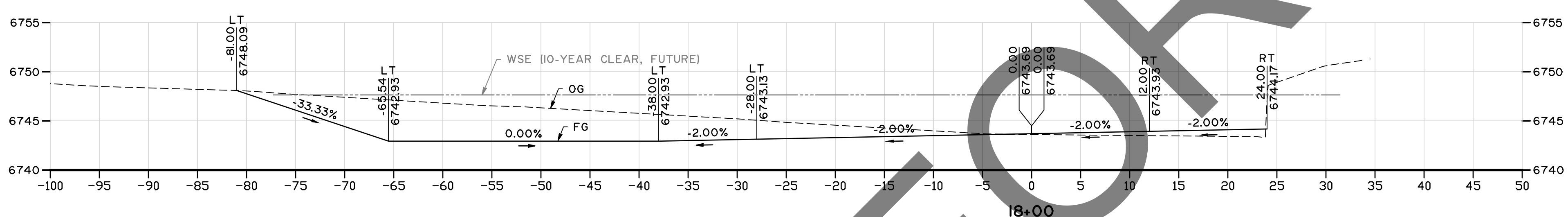
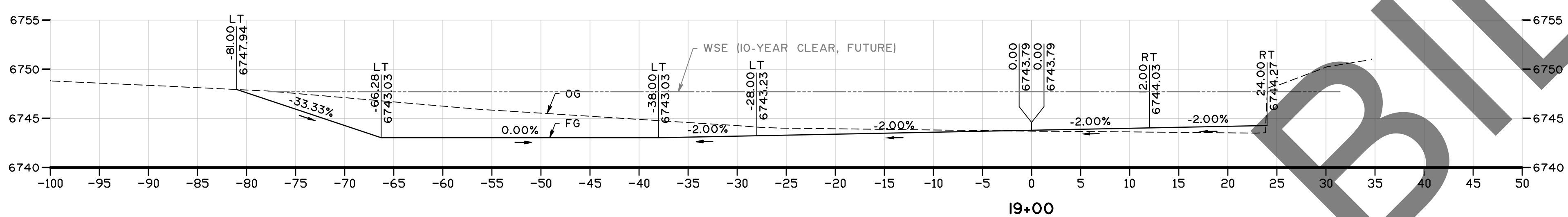
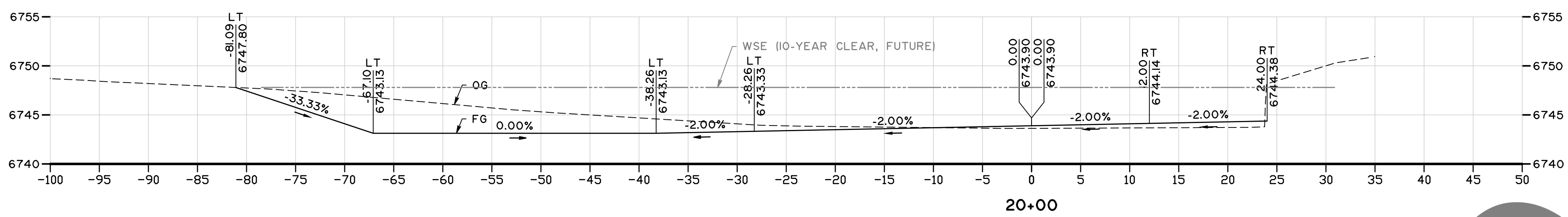
MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

FIELD CHANGES



SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS			
DESIGNED BY:	DRAWN BY:	CHECKED BY:	RECOMMENDED BY:
SP	MY	MI	Chris Nguyen
APPROVED BY:			DATE
Michael Ip, P.E.			8/9/24
MNS ENGINEERS, INC.			DEPUTY DIRECTOR

PINE VIEW DRIVE AND BLUE WATER CHANNEL CHANNEL CROSS SECTIONS BLUEWATER CHANNEL STA 11+00 TO 15+00				
J.L. REF.	W.O. NO.	PLAN SCALE	SHT. ID	SHT. NO.
I2091	H15190	1"=8'	XS-1	15 / 28



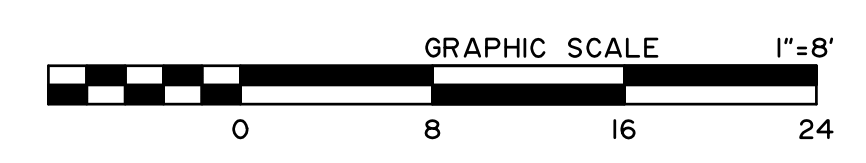
NOT FOR BIDD

FILE NO. 657700-020, 933002-010

MARK	REVISIONS	DATE



PRELIMINARY
NOT FOR CONSTRUCTION
100% REVIEW



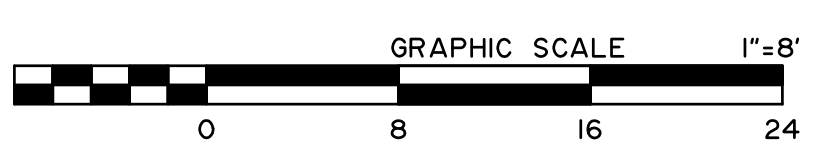
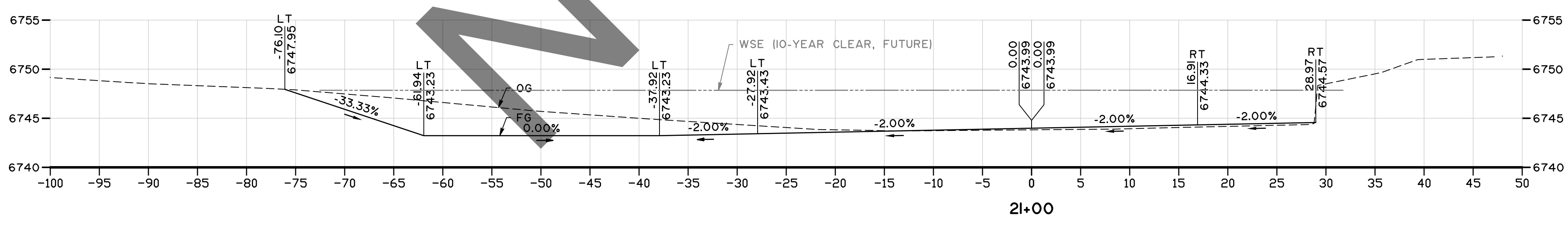
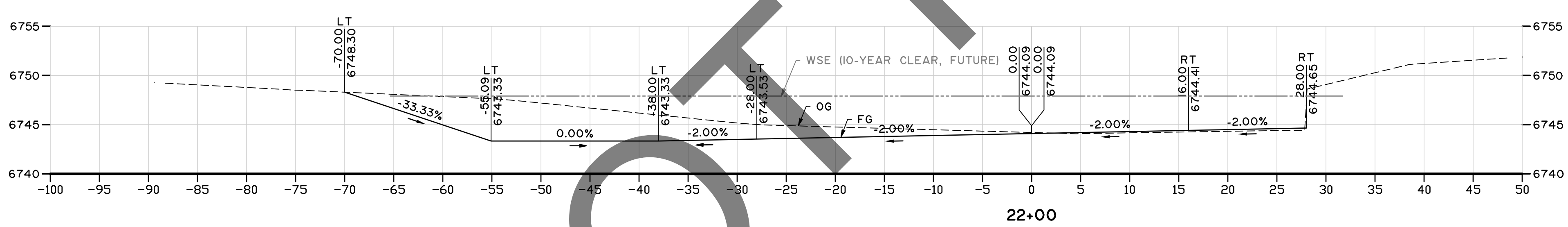
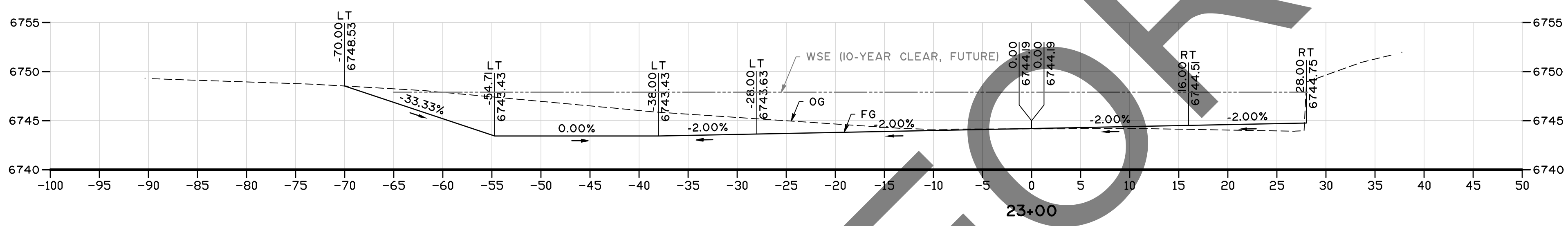
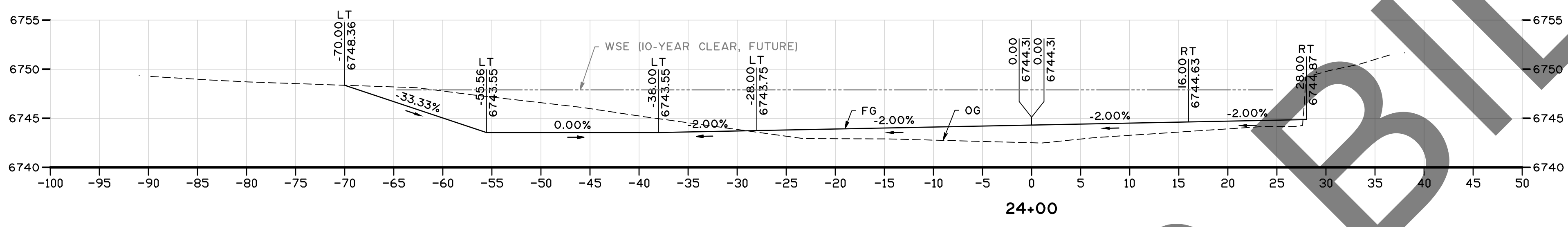
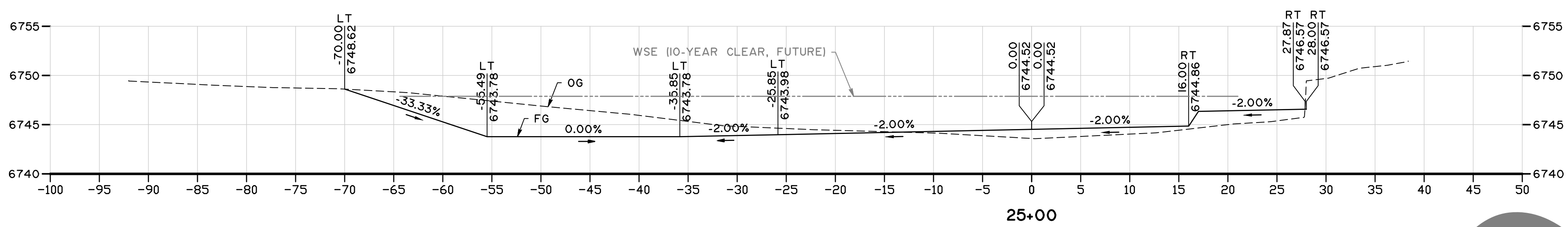
MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

FIELD CHANGES



SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS			
DESIGNED BY: SP	DRAWN BY: MY	CHECKED BY: MI	RECOMMENDED BY: <i>[Signature]</i> 8/8/24
APPROVED BY: <i>[Signature]</i> 8/9/24			DATE: 8/9/24
MICHAEL IP, P.E. MNS ENGINEERS, INC.		MERVAT N. MIKHAIL, P.E. DEPUTY DIRECTOR	

PINE VIEW DRIVE AND BLUE WATER CHANNEL				
CHANNEL CROSS SECTIONS BLUEWATER CHANNEL STA 16+50 TO 20+00				
J.L. REF. 12091	W.O. NO. H15190	PLAN SCALE 1"=8'	SHT. ID XS-2	SHT NO. 16 / 28



MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

FIELD CHANGES



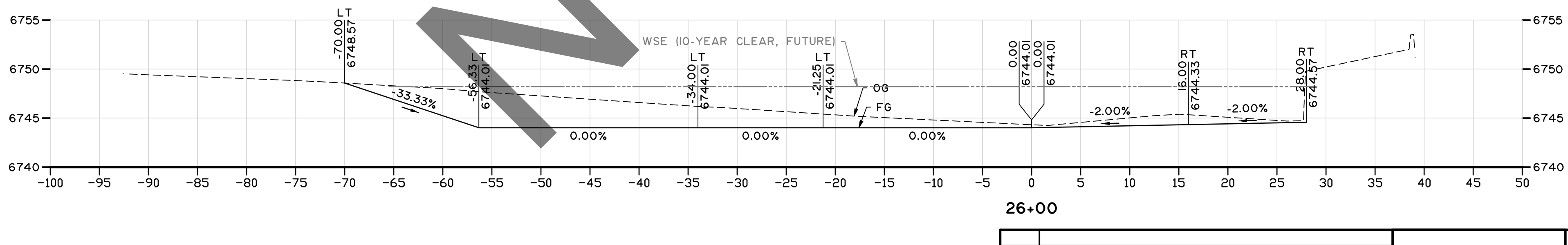
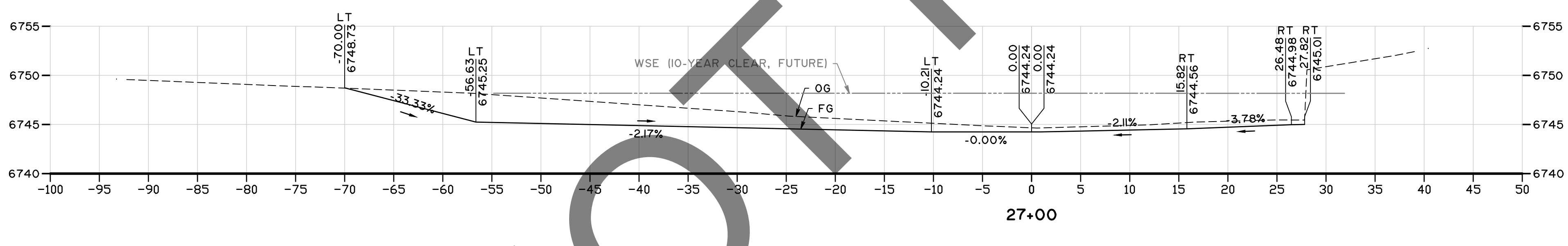
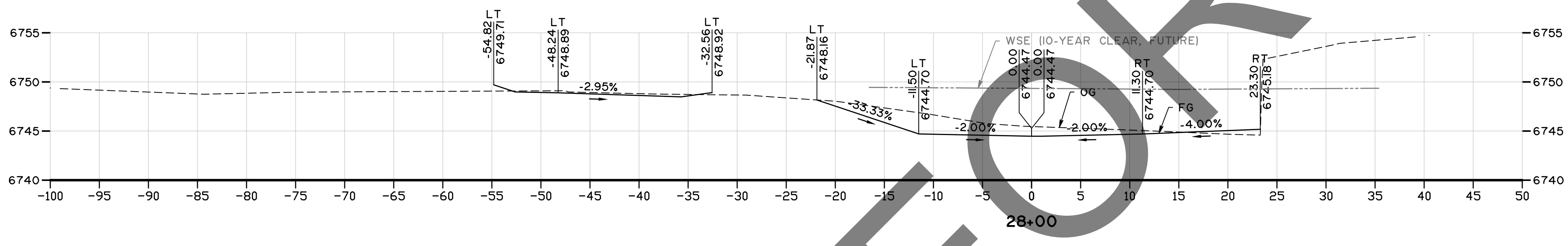
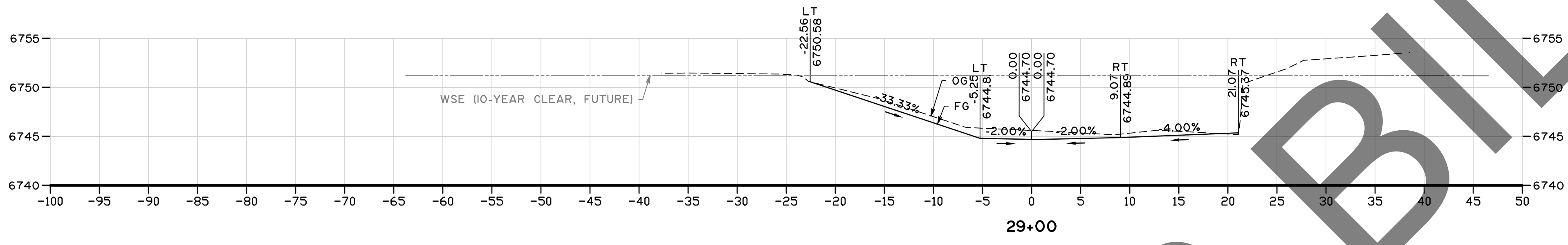
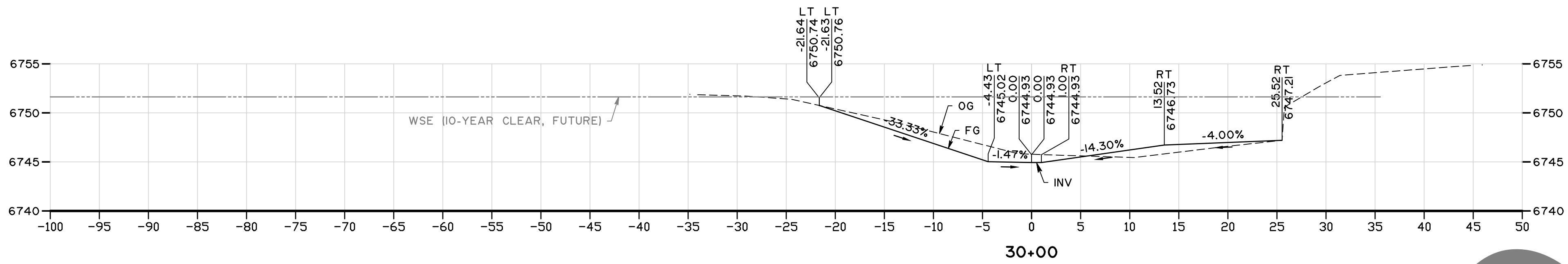
SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS			
DESIGNED BY: SP	DRAWN BY: MY	CHECKED BY: MI	RECOMMENDED BY: <i>[Signature]</i> 8/8/24
APPROVED BY: <i>[Signature]</i> 07/15/24			DATE: 8/9/24
MICHAEL IP, P.E. MNS ENGINEERS, INC.			MERVAT N. MIKHAIL, P.E. DEPUTY DIRECTOR

PINE VIEW DRIVE AND BLUE WATER CHANNEL				
CHANNEL CROSS SECTIONS BLUEWATER CHANNEL STA 21+50 TO 25+00				
J.L. REF: I2091	W.O. NO: H15190	PLAN SCALE: 1"=8'	SHT. ID: XS-3	SHT NO: 17 / 28

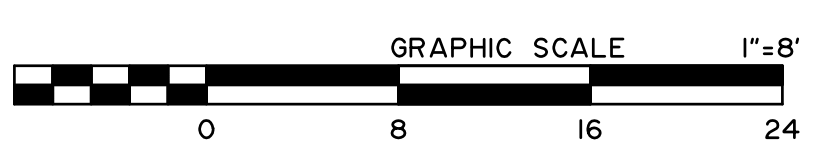
MARK	REVISIONS	DATE



PRELIMINARY
NOT FOR CONSTRUCTION
100% REVIEW



NOT FOR BIDD



MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

FIELD CHANGES



SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS			
DESIGNED BY:	DRAWN BY:	CHECKED BY:	RECOMMENDED BY:
SP	MY	MI	<i>Chris Nguyen</i> 8/8/24
APPROVED BY:			DATE
<i>Michael Ip</i> 07/15/24			8/9/24
MICHAEL IP, P.E. MNS ENGINEERS, INC.			MERVAT N. MIKHAIL, P.E. DEPUTY DIRECTOR

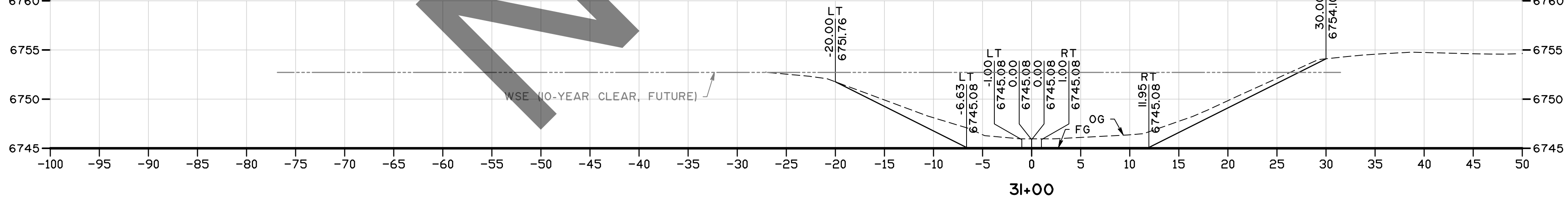
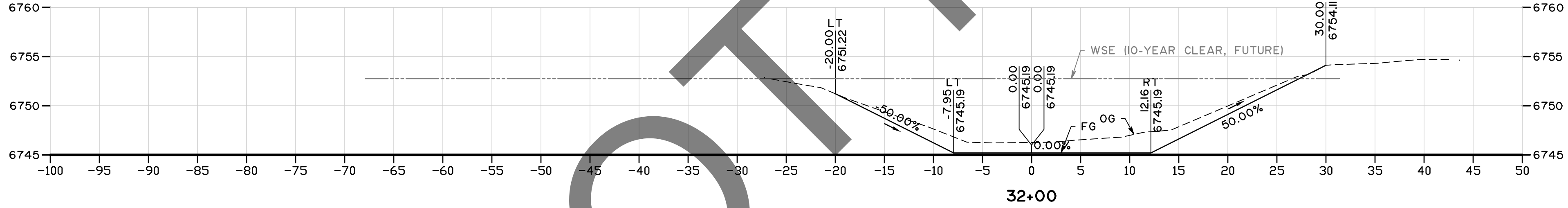
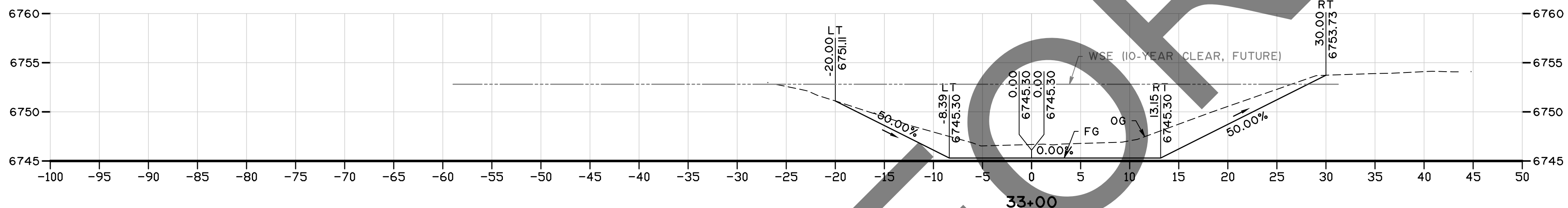
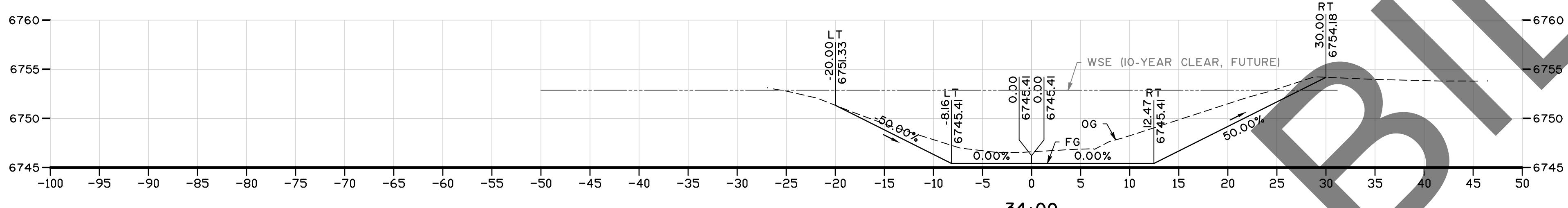
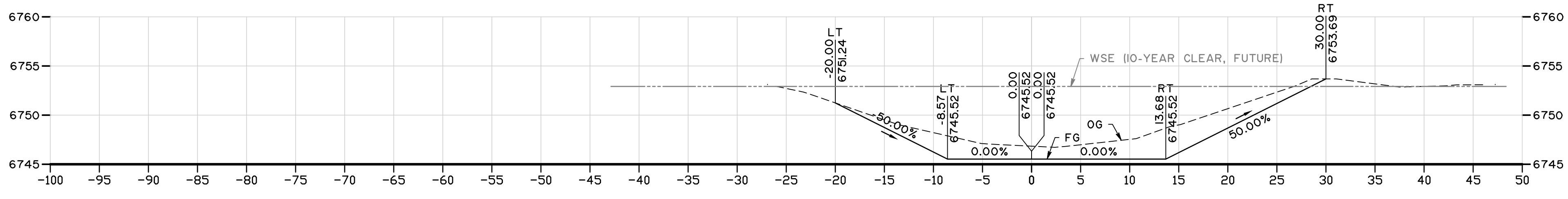
PINE VIEW DRIVE AND BLUE WATER CHANNEL				
CHANNEL CROSS SECTIONS BLUEWATER CHANNEL STA 26+00 TO 30+00				
J.L. REF.	W.O. NO.	PLAN SCALE	SHT. ID	SHT NO.
I2091	H15190	1"=8'	XS-4	18 / 28

MARK	REVISIONS	DATE



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E. Thousand Oaks Blvd, Suite 105, Thousand Oaks, CA 91360
805-492-1321 | www.mnsengineers.com



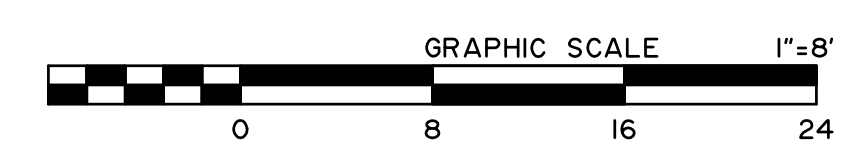
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MARK	REVISIONS	DATE

FILE NO. 657700-020, 933002-010



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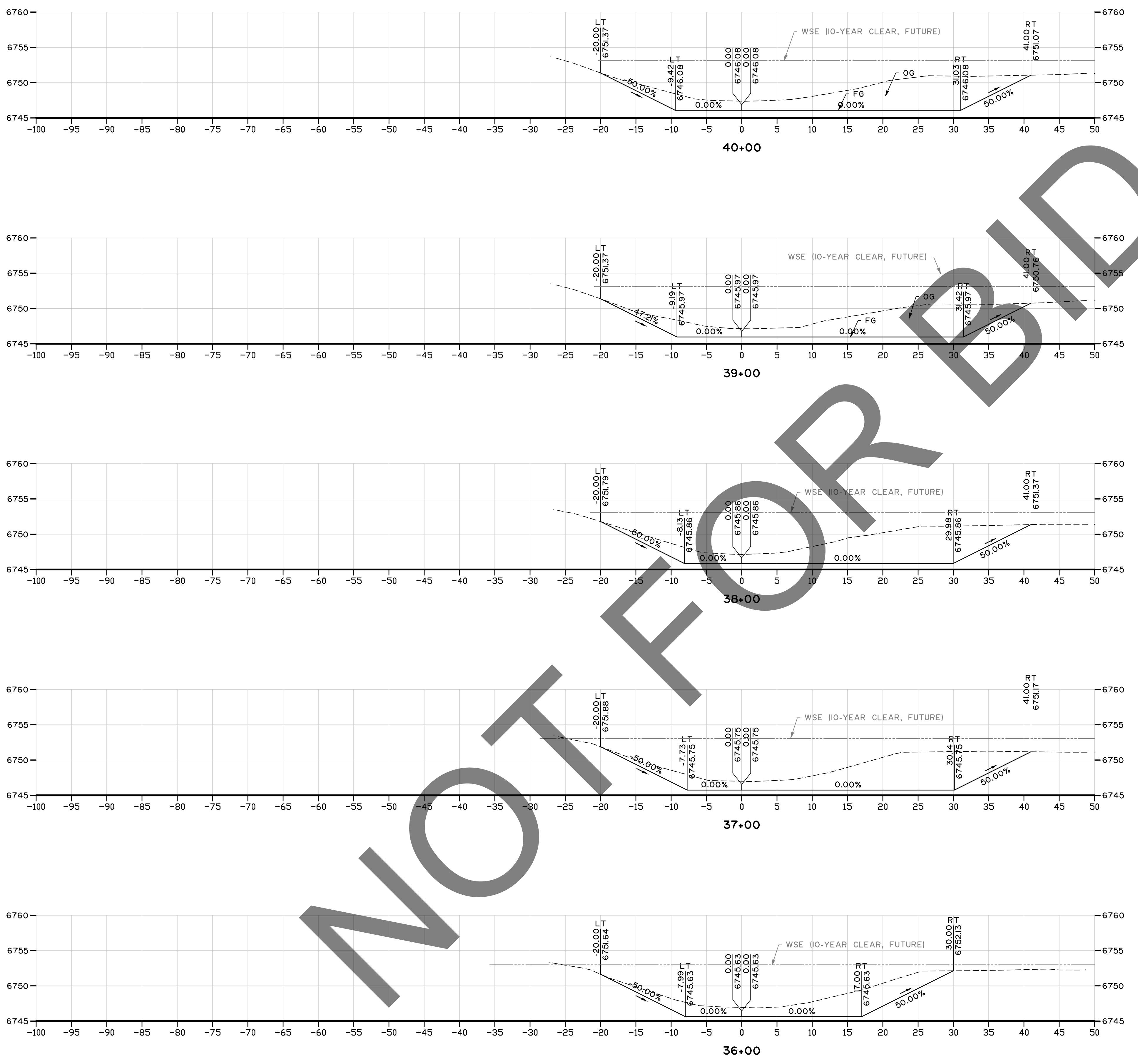
MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

FIELD CHANGES



SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS			
DESIGNED BY: SP	DRAWN BY: MY	CHECKED BY: MI	RECOMMENDED BY: <i>Chris Nguyen</i> 8/8/24
APPROVED BY: <i>Michael Ip</i> 07/15/24			DATE: 8/9/24
MICHAEL IP, P.E. MNS ENGINEERS, INC.			MERVAT N. MIKHAIL, P.E. DEPUTY DIRECTOR

PINE VIEW DRIVE AND BLUE WATER CHANNEL				
CHANNEL CROSS SECTIONS BLUEWATER CHANNEL STA 31+00 TO 35+00				
J.L. REF: 12091	W.O. NO: H15190	PLAN SCALE: 1"=8'	SHT. ID: XS-5	SHT NO: 19 / 28



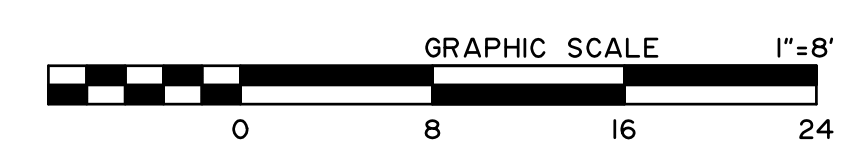
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MARK	REVISIONS	DATE

FILE NO. 657700-020, 933002-010



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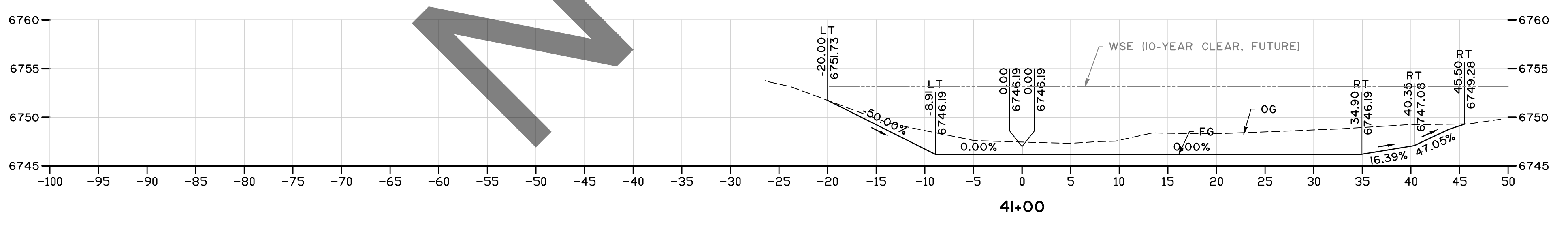
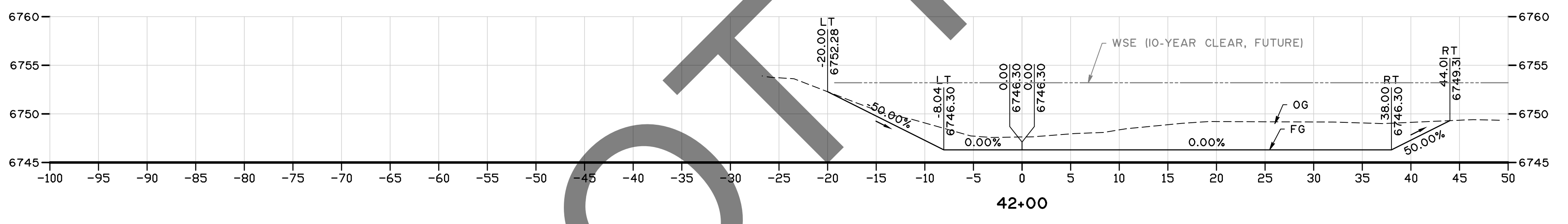
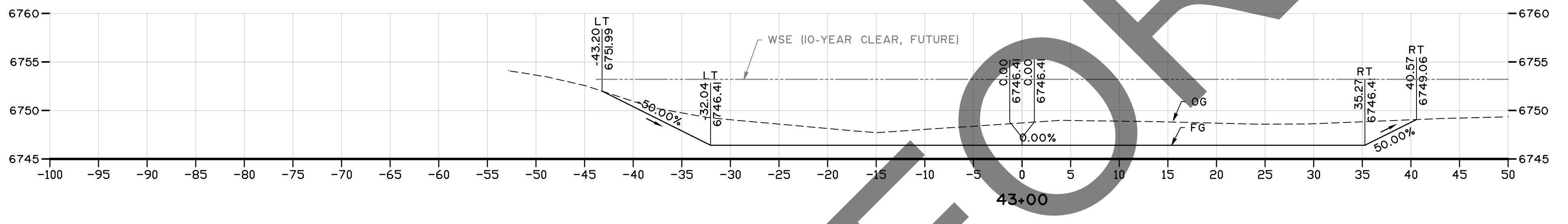
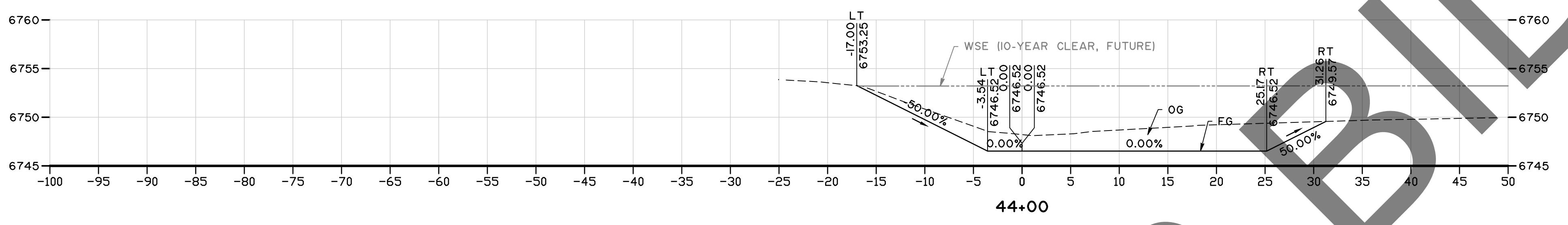
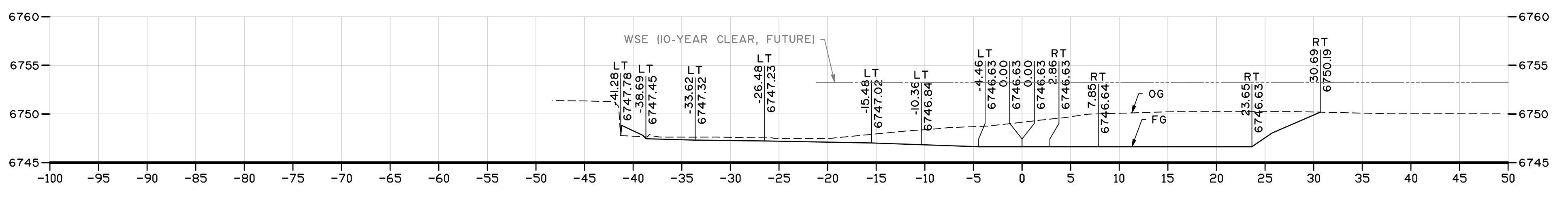
MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

FIELD CHANGES



SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS			
DESIGNED BY: SP	DRAWN BY: MY	CHECKED BY: MI	RECOMMENDED BY: <i>[Signature]</i> 8/8/24
APPROVED BY: <i>[Signature]</i> 07/15/24			DATE: 8/9/24
MICHAEL IP, P.E. MNS ENGINEERS, INC.			MERVAT N. MIKHAIL, P.E. DEPUTY DIRECTOR

PINE VIEW DRIVE AND BLUE WATER CHANNEL				
CHANNEL CROSS SECTIONS BLUEWATER CHANNEL STA 36+00 TO 40+00				
J.L. REF. 12091	W.O. NO. H15190	PLAN SCALE 1"=8'	SHT. ID XS-6	SHT NO. 20 / 28



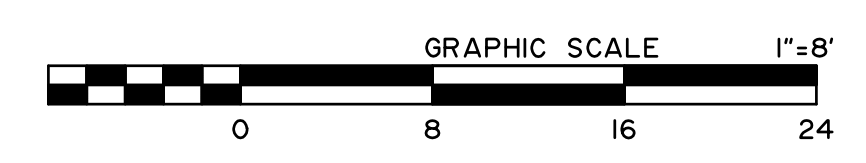
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MARK	REVISIONS	DATE

FILE NO. 657700-020, 933002-010



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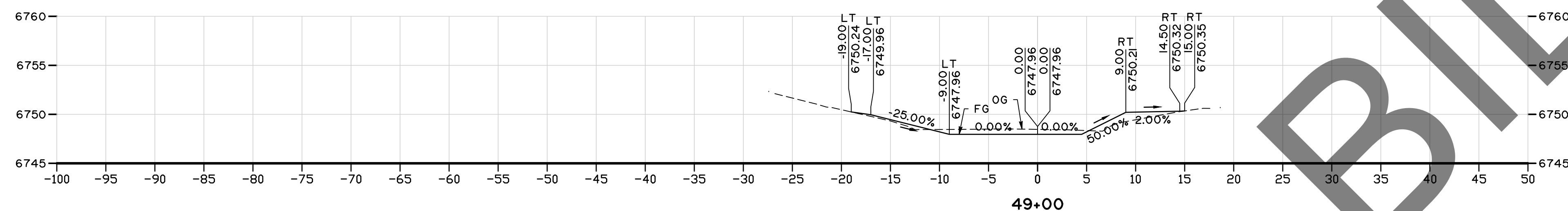
MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

FIELD CHANGES

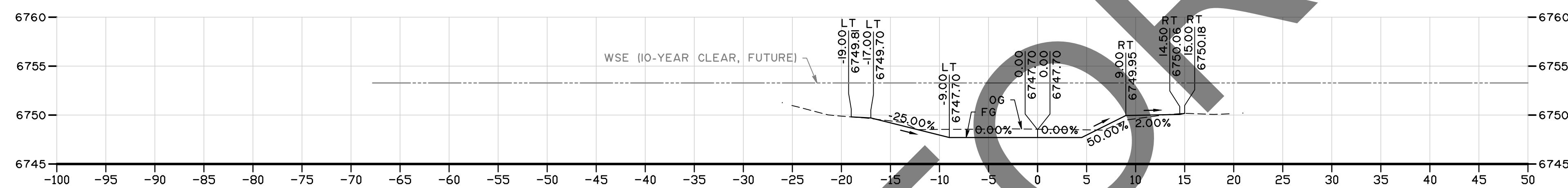


SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS			
DESIGNED BY: SP	DRAWN BY: MY	CHECKED BY: MI	RECOMMENDED BY: <i>Chris Nguyen</i>
			DATE: 8/8/24
			DATE: 8/9/24
APPROVED BY: <i>Michael Ip</i>			DATE: 8/9/24
MICHAEAL IP, P.E. MNS ENGINEERS, INC.			MERVAT N. MIKHAIL, P.E. DEPUTY DIRECTOR

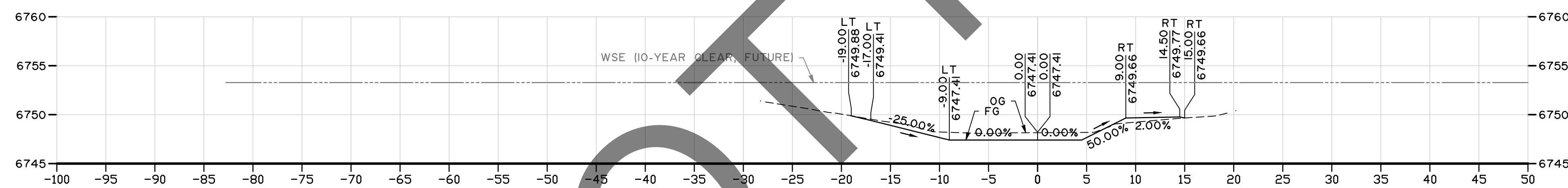
PINE VIEW DRIVE AND BLUE WATER CHANNEL				
CHANNEL CROSS SECTIONS BLUEWATER CHANNEL STA 41+00 TO 45+00				
J.L. REF. 12091	W.O. NO. H15190	PLAN SCALE 1"=8'	SHT. ID XS-7	SHT NO. 21 / 28



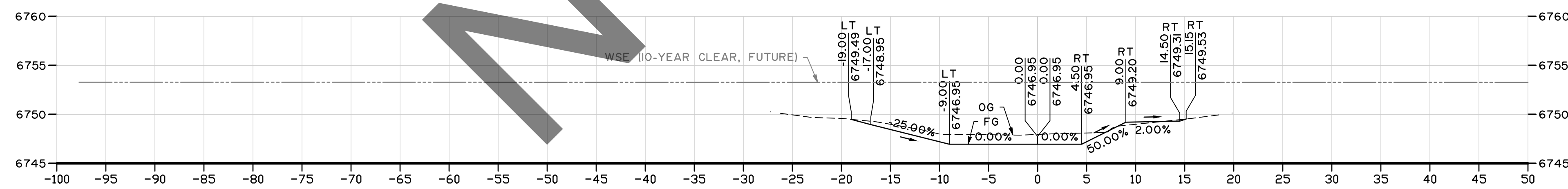
49+00



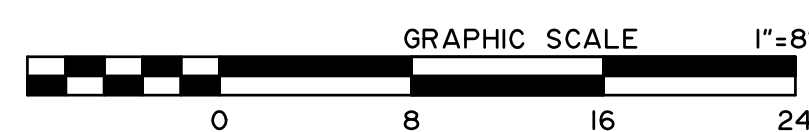
48+00



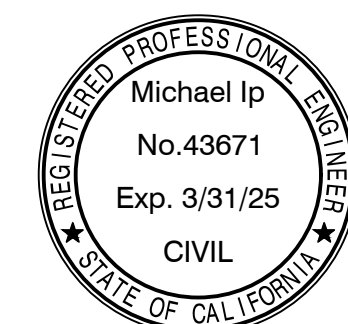
47+00



46+00



MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		
FIELD CHANGES			



**SAN BERNARDINO COUNTY
DEPARTMENT OF PUBLIC WORKS**

DESIGNED BY:	DRAWN BY:	CHECKED BY:	RECOMMENDED BY:	DATE
SP	MY	MI	<i>Chris Nguyen</i>	8/8/24
APPROVED BY:				DATE
<i>Michael Ip</i>				8/9/24
MICHAEL IP, P.E. MNS ENGINEERS, INC.		MERVAT N. MIKHAIL, P.E. DEPUTY DIRECTOR		

**PINE VIEW DRIVE AND BLUE
WATER CHANNEL**

CHANNEL CROSS SECTIONS
BLUEWATER CHANNEL
STA 41+00 TO 45+00

J.L. REF.	W.O. NO.	PLAN SCALE	SHT. ID	SHT. NO.
12091	H15190	1"=8'	XS-8	22 / 28

MARK	REVISIONS	APPR.	DATE



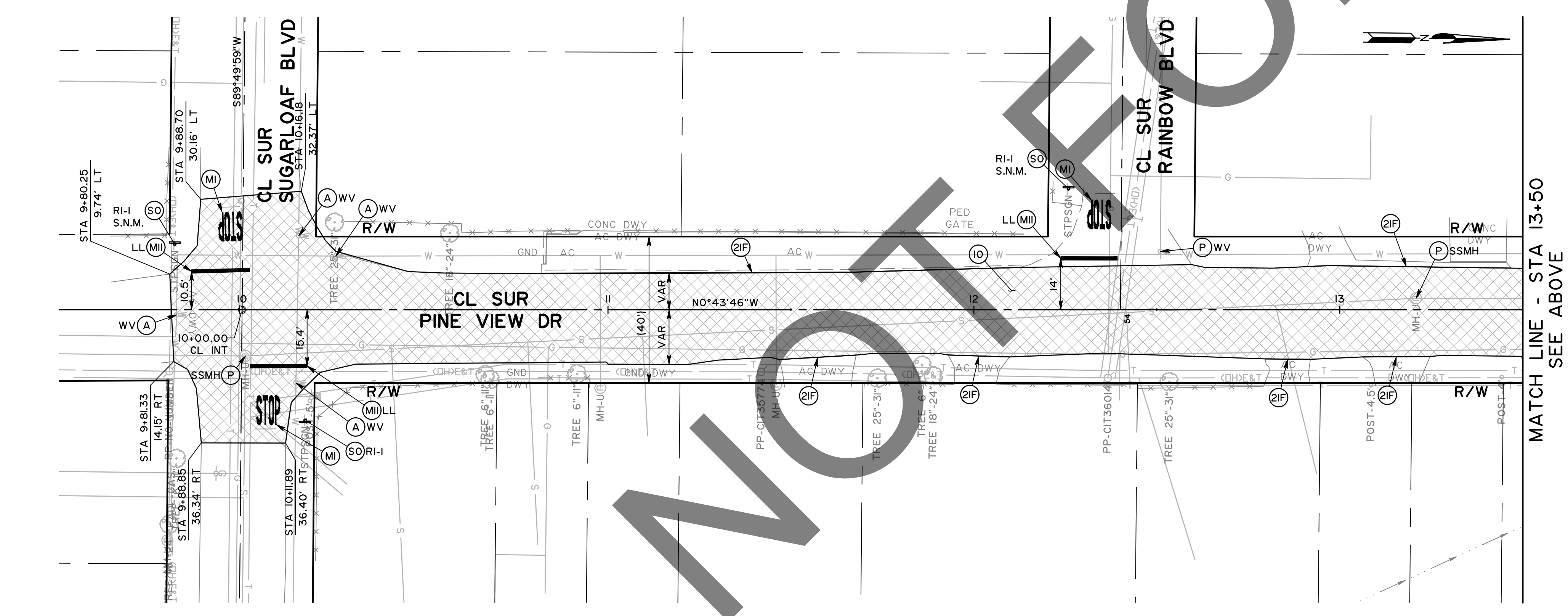
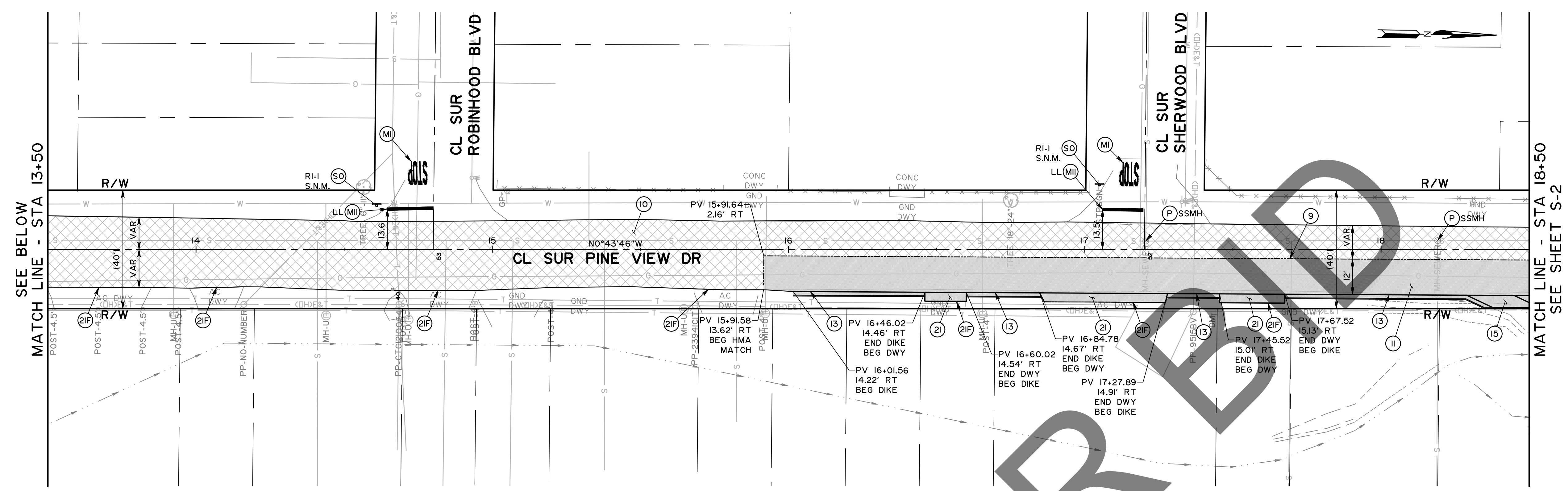
PRELIMINARY
NOT FOR CONSTRUCTION
100% REVIEW

E. Thousand Oaks Blvd, Suite 105, Thousand Oaks, CA 91360

CONSTRUCTION NOTES:	
P	PROTECT IN PLACE
A	ADJUST TO GRADE
9	SAWCUT AND REMOVE EXISTING AC
10	COLD PLANE EXISTING ASPHALT CONCRETE FOR A DEPTH OF 0.20' AND PLACE 0.20' THICK HMA - APPLY TACK COAT TO THE MILLED SURFACE
11	PLACE HMA (0.34' THICK, TYPE A, 3/4" AGGREGATE GRADATION, PG 64-28) OVER AGGREGATE BASE (0.75' THICK, CLASS 2)
13	REMOVE EXISTING AC DIKE AND CONSTRUCT TRAVERSABLE DIKE PER COUNTY STD PLAN 1176
15	CONSTRUCT HMA OVERSIDE DRAIN PER DETAIL ON SHEET CD-2
21	CONSTRUCT HMA DRIVEWAY PER DETAIL ON SHEET CD-2
21F	CONSTRUCT FOG SEAL AT AC DRIVEWAY PER DETAIL ON SHEET CD-2
MI	REPAINT STOP PAVEMENT MARKING PER 2023 CALTRANS STANDARD PLAN A24D
MII	REPAINT 12" WHITE LIMIT LINE PER 2023 CALTRANS STANDARD PLAN A24G
SO	PROTECT IN PLACE EXISTING SIGN AND POST OR MARKER

CONSTRUCTION LEGEND:	
	ASPHALT CONCRETE HMA
	COLD PLANE AND OVERLAY

SIGNING LEGEND:	
	EXISTING SIGN
	PROPOSED SIGN



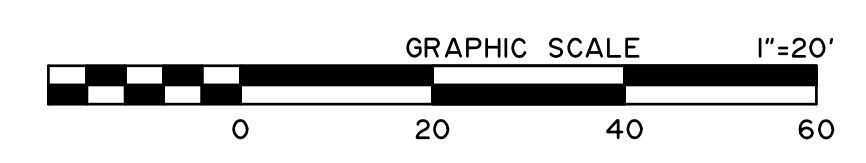
NOT FOR CONSTRUCTION

MARK	REVISIONS	DATE

FILE NO. 657700-020, 933002-010



PRELIMINARY
NOT FOR CONSTRUCTION
100% REVIEW



MARK	CHANGES	RESIDENT ENGINEER	DATE

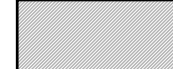



SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS			
DESIGNED BY: SP	DRAWN BY: MY	CHECKED BY: MI	RECOMMENDED BY: <i>[Signature]</i> 8/8/24
APPROVED BY: <i>[Signature]</i> 07/15/24			DATE: 8/9/24
MICHAEL IP, P.E. MNS ENGINEERS, INC.			MERVAT N. MIKHAIL, P.E. DEPUTY DIRECTOR



PINE VIEW DRIVE AND BLUE WATER CHANNEL				
STREET IMPROVEMENT PLAN				
PINE VIEW DRIVE				
STA 9+50 TO 18+50				
J.L. REF: 12091	W.O. NO: H15190	PLAN SCALE: 1"=20'	SHT. ID: S-1	SHT. NO: 23 / 28

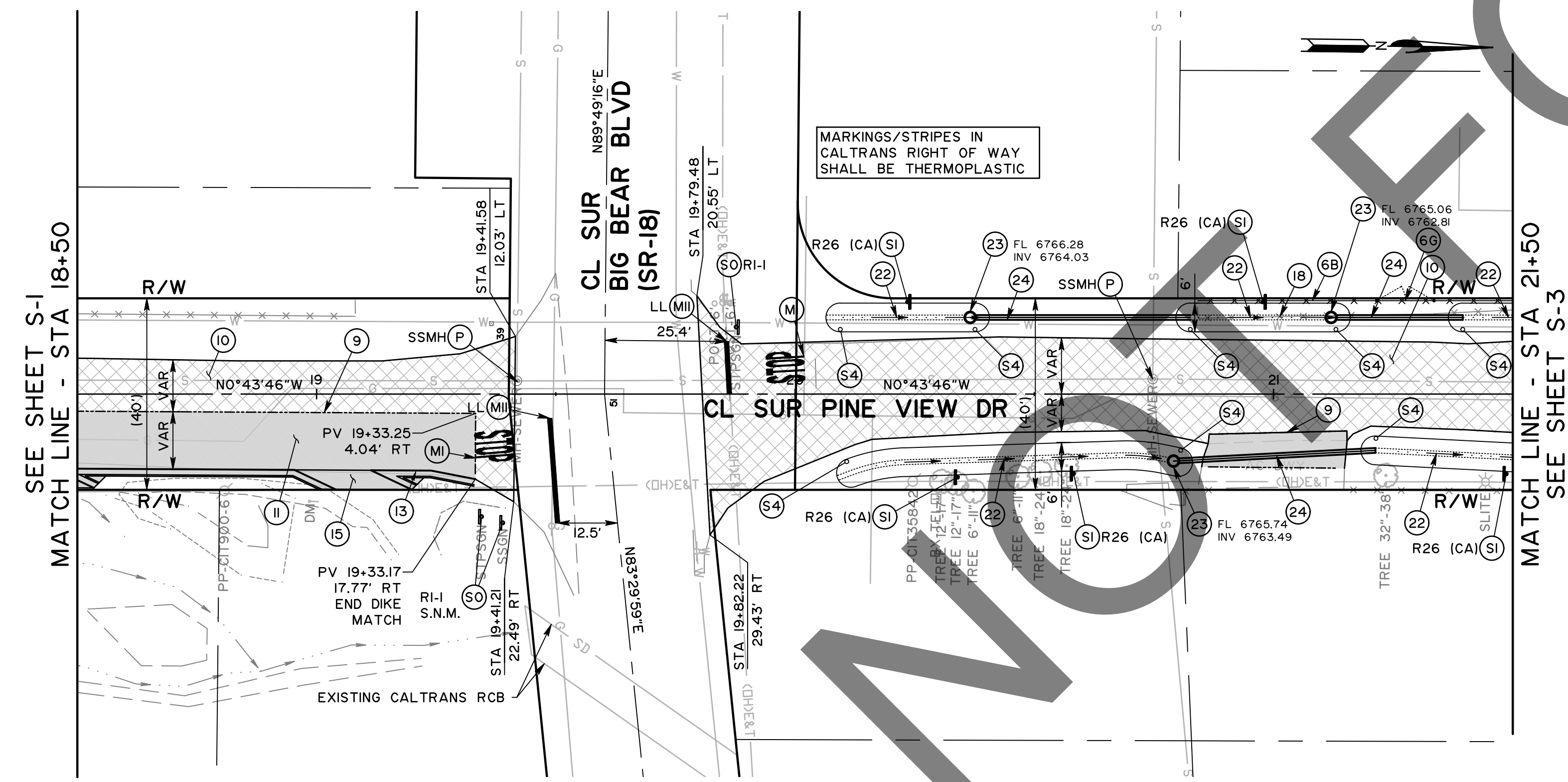
CONSTRUCTION NOTES:	
P	PROTECT IN PLACE
6B	CONSTRUCT CHAIN LINK FENCE PER SPPWC 600-3 (H=4' WITH BARBED WIRE TOP)
66	CONSTRUCT CHAIN LINK FENCE GATE (DOUBLE-LEAF) PER SPPWC 600-3
9	SAWCUT AND REMOVE EXISTING AC
10	COLD PLANE EXISTING ASPHALT CONCRETE FOR A DEPTH OF 0.20' AND PLACE 0.20' THICK HMA - APPLY TACK COAT TO THE MILLED SURFACE
11	PLACE HMA (0.34" THICK, TYPE A, 3/4" AGGREGATE GRADATION, PG. 64-28) OVER AGGREGATE BASE (0.75" THICK, CLASS 2)
13	REMOVE EXISTING AC DIKE AND CONSTRUCT TRAVERSABLE DIKE PER COUNTY STD PLAN 117a
15	CONSTRUCT HMA OVERSIDE DRAIN PER DETAIL ON SHEET CD-2
18	REMOVE EXISTING CHAIN LINK FENCE
22	INSTALL BIOSWALE WITH UNDERDRAIN PER DETAIL ON SHEET CD-2
23	INSTALL CONCRETE PIPE INLET PER DETAIL ON SHEET CD-2
24	INSTALL BIOSWALE CULVERT PER DETAIL ON SHEET CD-2
MI	REPAINT STOP PAVEMENT MARKING PER 2023 CALTRANS STANDARD PLAN A24D
MII	REPAINT 12" WHITE LIMIT LINE PER 2023 CALTRANS STANDARD PLAN A24G
S0	PROTECT IN PLACE EXISTING SIGN AND POST OR MARKER
S1	INSTALL ROADSIDE SIGN PER CA MUTCD 2014 FIGURE 2A-2(CA) AND SAN BERNARDINO COUNTY STANDARD 303A AND 303B
S4	INSTALL METAL SNOW POLE PER CALTRANS STANDARD PLAN A73B (H=60" FROM GROUND) AND CA MUTCD FIGURE 2C-13 (CA). INSTALL BLUE RETROREFLECTIVE TAPE 3" FROM TOP OF POLE, AND WHITE RETROREFLECTIVE TAPE 48" FROM GROUND

CONSTRUCTION LEGEND:

	ASPHALT CONCRETE HMA
	COLD PLANE AND OVERLAY

SIGNING LEGEND:

	EXISTING SIGN
	PROPOSED SIGN

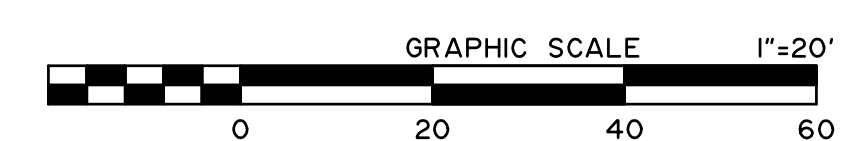


MARK	REVISIONS	DATE

FILE NO. 657700-020, 933002-010





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MARK	CHANGES	RESIDENT ENGINEER	DATE

FIELD CHANGES



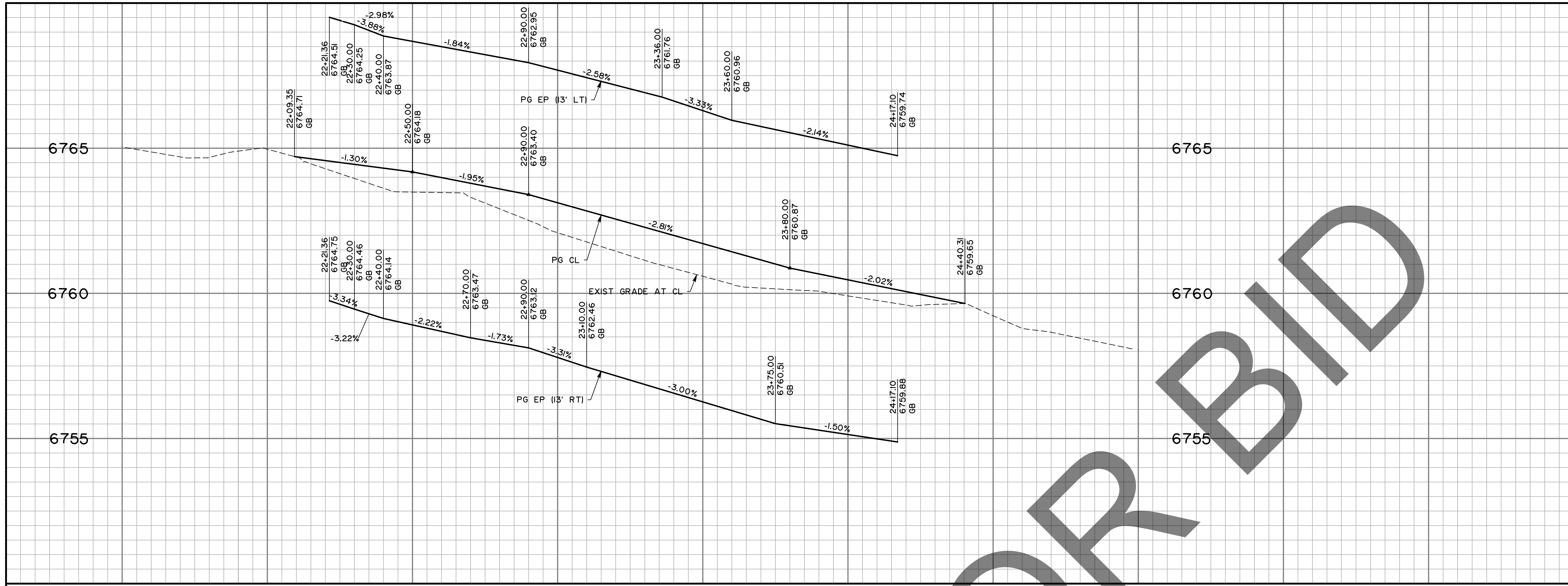
SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS			
DESIGNED BY:	DRAWN BY:	CHECKED BY:	RECOMMENDED BY:
SP	MY	MI	 8/8/24
APPROVED BY:			DATE
 07/15/24			8/9/24
MICHAEL IP, P.E. MNS ENGINEERS, INC.			MERVAT N. MIKHAIL, P.E. DEPUTY DIRECTOR

PINE VIEW DRIVE AND BLUE WATER CHANNEL				
STREET IMPROVEMENT PLAN				
PINE VIEW DRIVE				
STA 18+50 TO 21+50				
J.L. REF.	W.O. NO.	PLAN SCALE	SHT. ID	SHT. NO.
12091	H15190	1"=20'	S-2	24 / 28

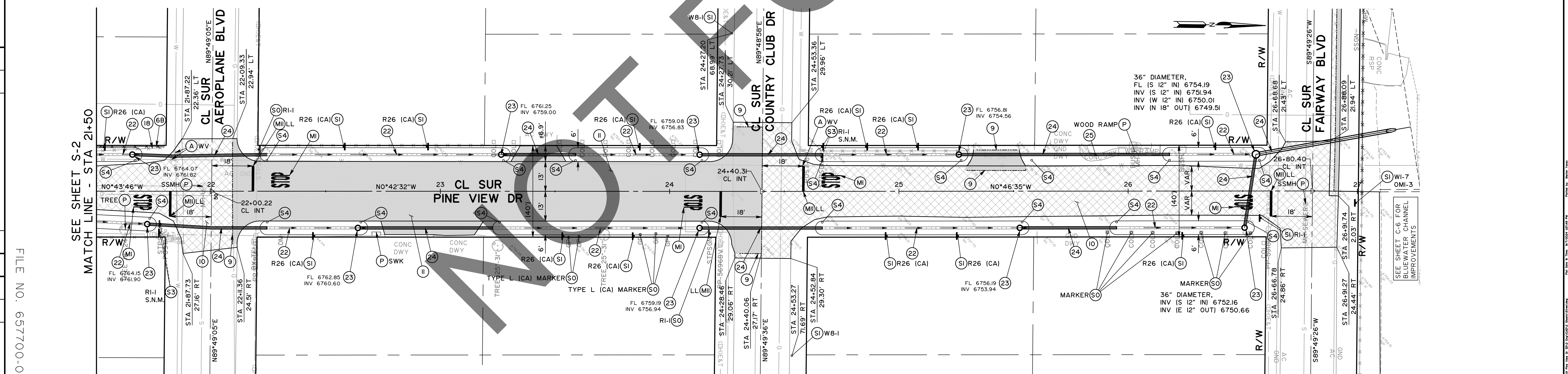
- CONSTRUCTION NOTES:**
- P PROTECT IN PLACE
 - A ADJUST TO GRADE
 - 6B CONSTRUCT CHAIN LINK FENCE PER SPPWC 600-3 (H=4' WITH BARBED WIRE TOP)
 - 9 SAWCUT AND REMOVE EXISTING AC
 - 10 COLD PLANE EXISTING ASPHALT CONCRETE FOR A DEPTH OF 0.20' AND PLACE 0.20' THICK HMA - APPLY TACK COAT TO THE MILLED SURFACE
 - II PLACE HMA (0.34" THICK, TYPE A, 3/4" AGGREGATE GRADATION, PG 64-28) OVER AGGREGATE BASE (0.75" THICK, CLASS 2)
 - 18 REMOVE EXISTING CHAIN LINK FENCE
 - 22 INSTALL BIOSWALE WITH UNDERDRAIN PER DETAIL ON SHEET CD-2
 - 23 INSTALL CONCRETE PIPE INLET PER DETAIL ON SHEET CD-2
 - 24 INSTALL BIOSWALE CULVERT PER DETAIL ON SHEET CD-2
 - 25 RECONSTRUCT SIDEWALK (PCC, 0.33' THICK)
 - MI REPAINT STOP PAVEMENT MARKING PER 2023 CALTRANS STANDARD PLAN A24D
 - MII REPAINT 12" WHITE LIMIT LINE PER 2023 CALTRANS STANDARD PLAN A24G
 - S0 PROTECT IN PLACE EXISTING SIGN AND POST OR MARKER
 - S1 INSTALL ROADSIDE SIGN PER CA MUTCD 2014 FIGURE 2A-2(CA) AND SAN BERNARDINO COUNTY STANDARD 303A AND 303B
 - S3 RELOCATE EXISTING SIGN AND POST
 - S4 INSTALL METAL SNOW POLE PER CALTRANS STANDARD PLAN A73B (H=60" FROM GROUND) AND CA MUTCD FIGURE 2C-13 (CA). INSTALL BLUE RETROREFLECTIVE TAPE 3" FROM TOP OF POLE, AND WHITE RETROREFLECTIVE TAPE 48" FROM GROUND

- CONSTRUCTION LEGEND:**
- ASPHALT CONCRETE HMA
 - COLD PLANE AND OVERLAY

- SIGNING LEGEND:**
- EXISTING SIGN
 - PROPOSED SIGN



21+50 22+00 23+00 24+00 25+00

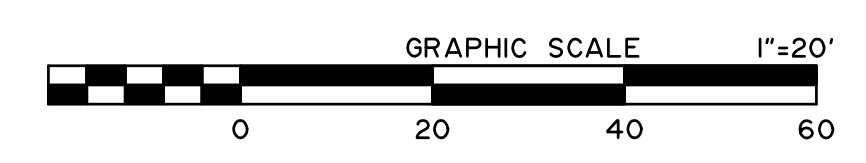


MARK	REVISIONS	DATE

FILE NO. 657700-020, 933002-010



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MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

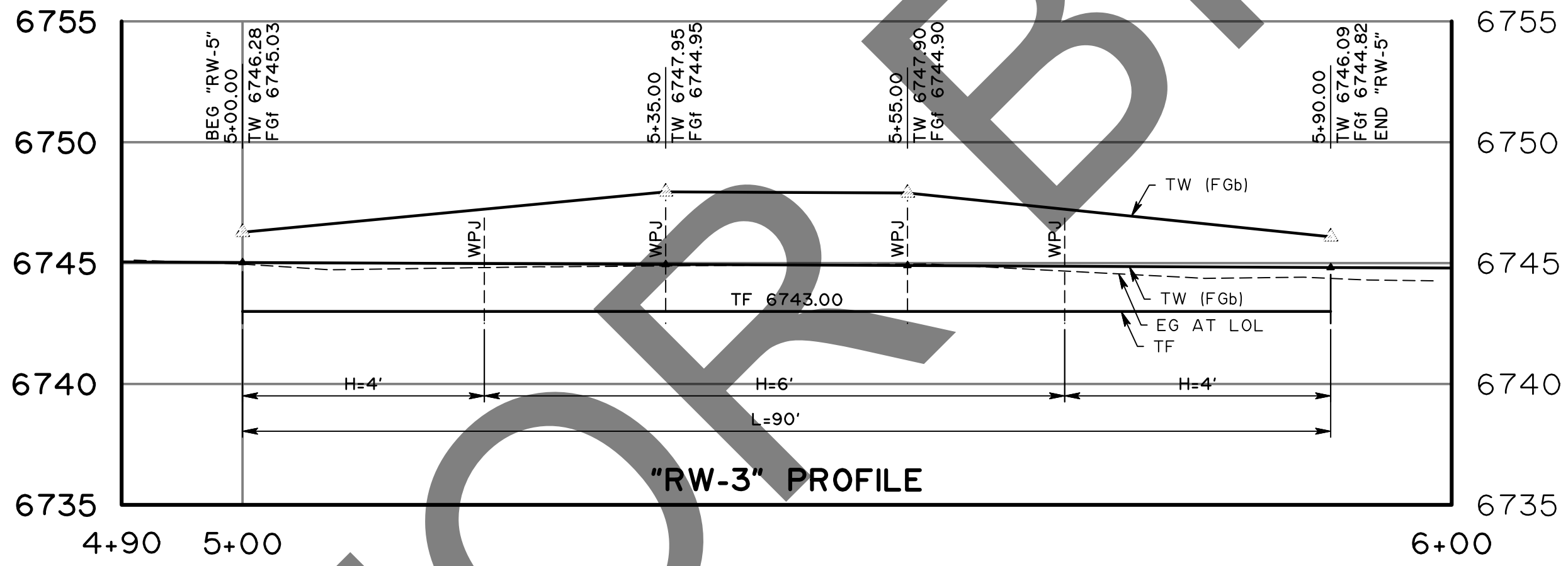
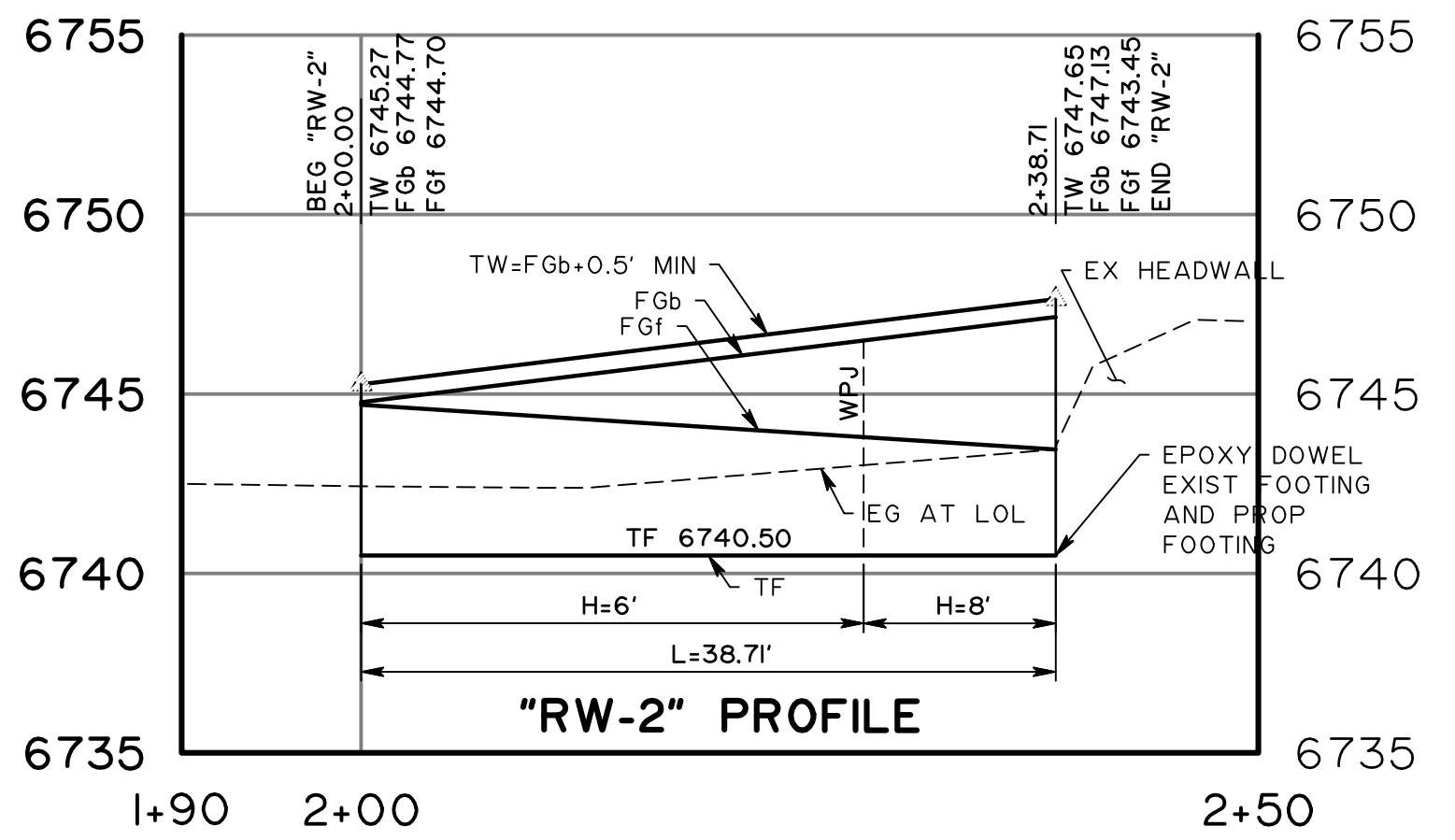
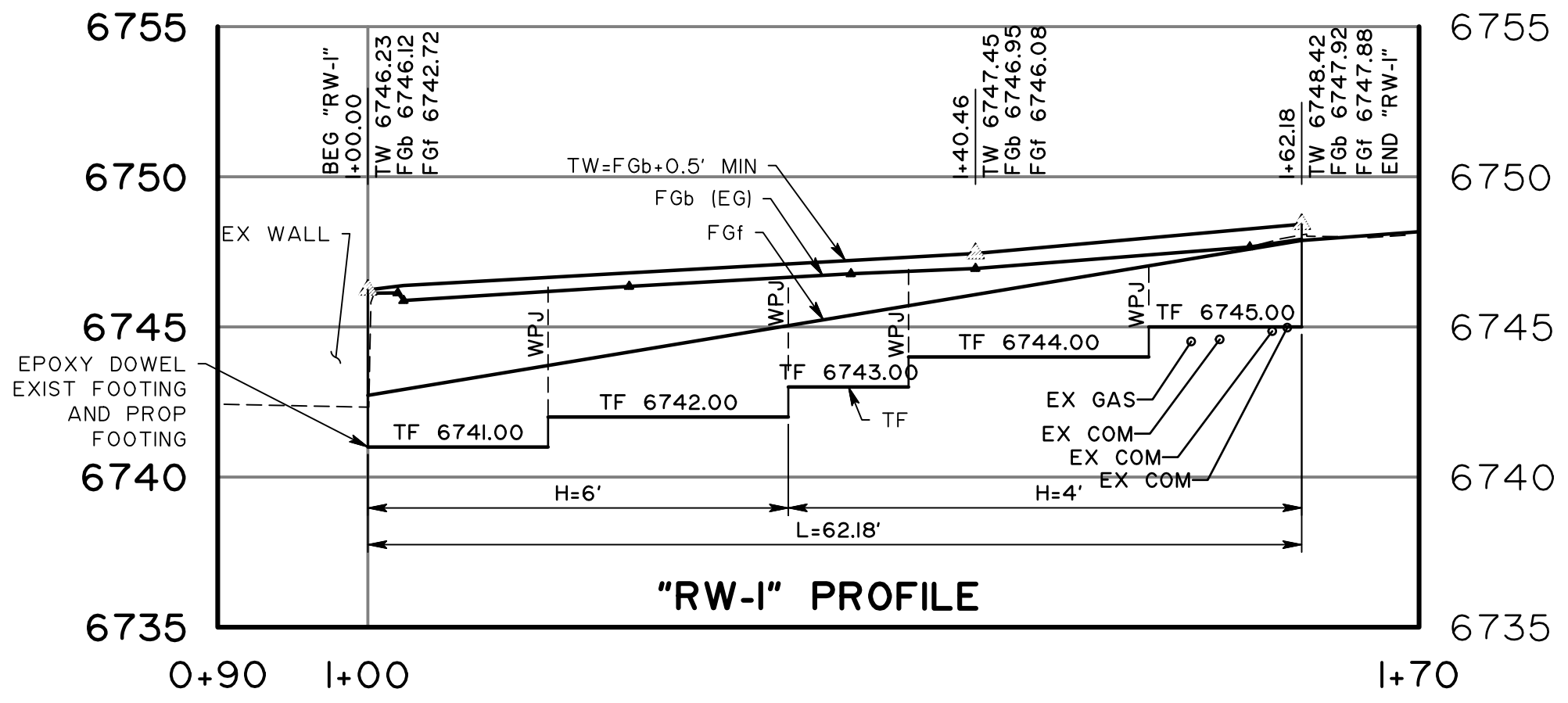
FIELD CHANGES



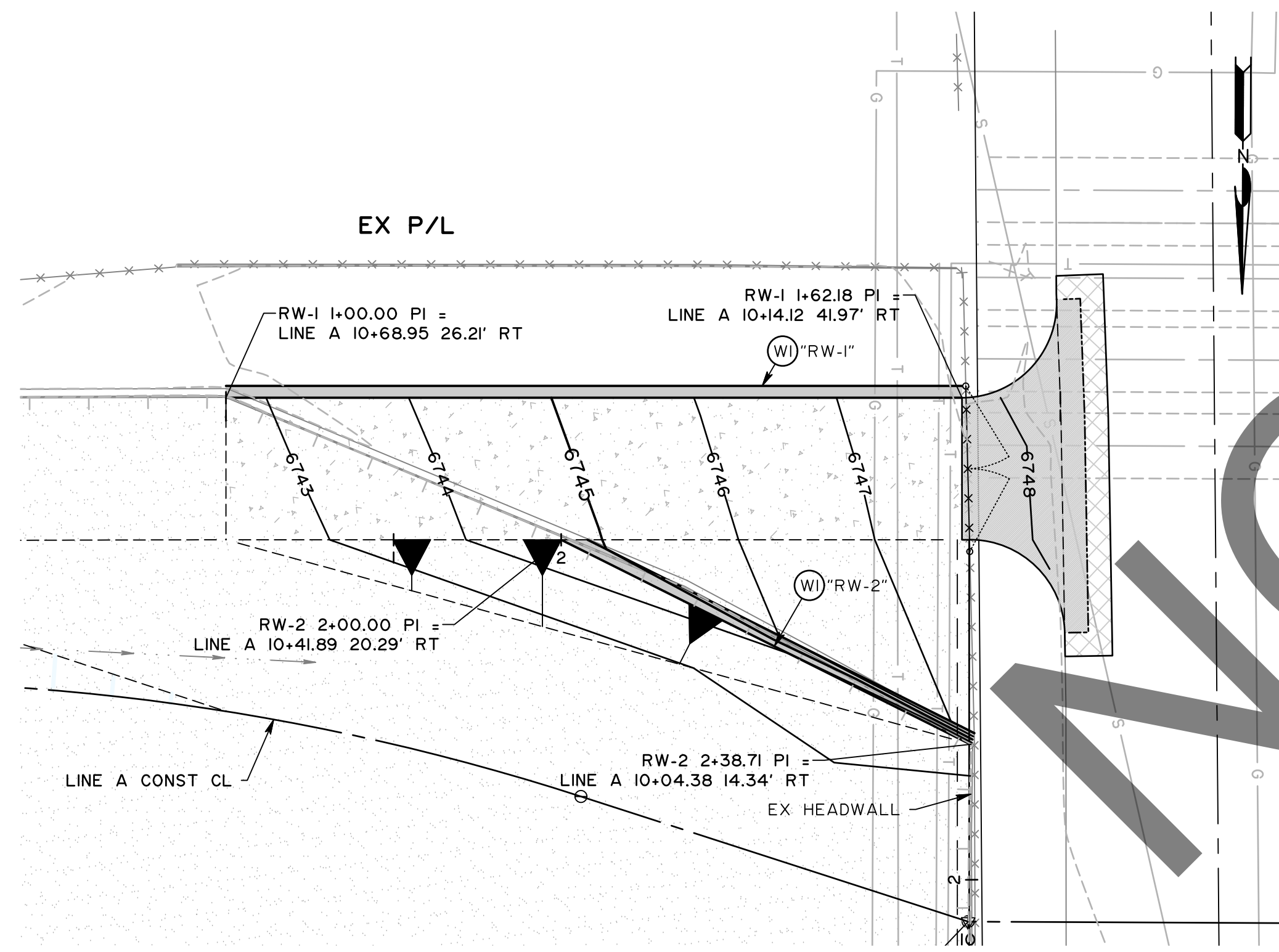
SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS			
DESIGNED BY:	DRAWN BY:	CHECKED BY:	RECOMMENDED BY:
SP	MY	MI	<i>Chris Nguyen</i> 8/8/24
APPROVED BY:			<i>Michael Ip</i> 8/9/24
MICHAEL IP, P.E. MNS ENGINEERS, INC.			MERVAT N. MIKHAIL, P.E. DEPUTY DIRECTOR

PINE VIEW DRIVE AND BLUE WATER CHANNEL STREET IMPROVEMENT PLAN				
PINE VIEW DRIVE STA 18+50 TO 27+00				
J.L. REF.	W.O. NO.	PLAN SCALE	SHT. ID	SHT. NO.
I2091	H15190	1"=20'	S-3	25 / 28

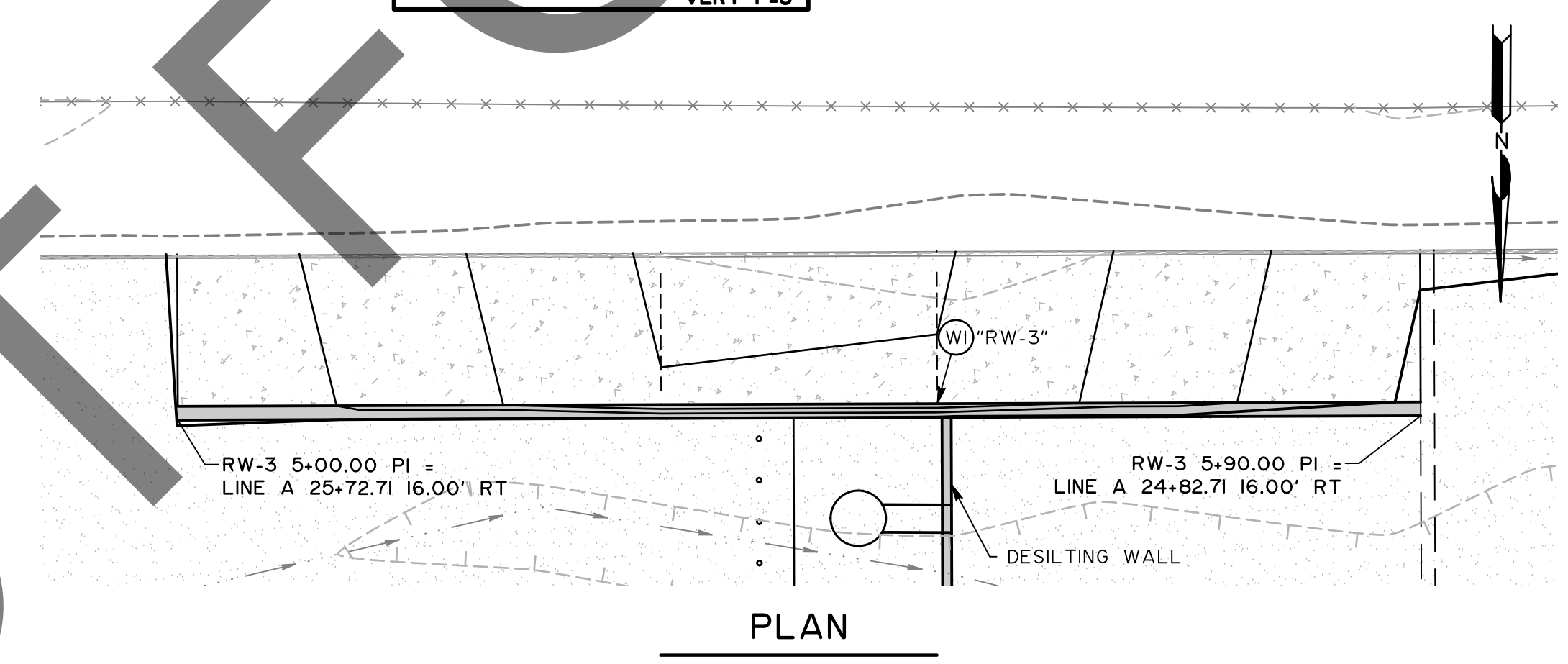
CONSTRUCTION NOTES:	
W1	CONSTRUCT REINFORCED CONCRETE RETAINING WALL (TYPE I, CASE II) PER CALTRANS STANDARD PLAN B3-1A
W3	INSTALL CABLE RAILING PER CALTRANS STANDARD PLAN BII-47
W4	CONSTRUCT UNDERDRAIN SYSTEM PER DETAIL ON SHEET CD-1
W5	CONSTRUCT AGGREGATE BASE (1.0' MIN THICK, CLASS 2) UNDER FOOTING AND 1.0' Laterally TO SIDES OF FOOTING



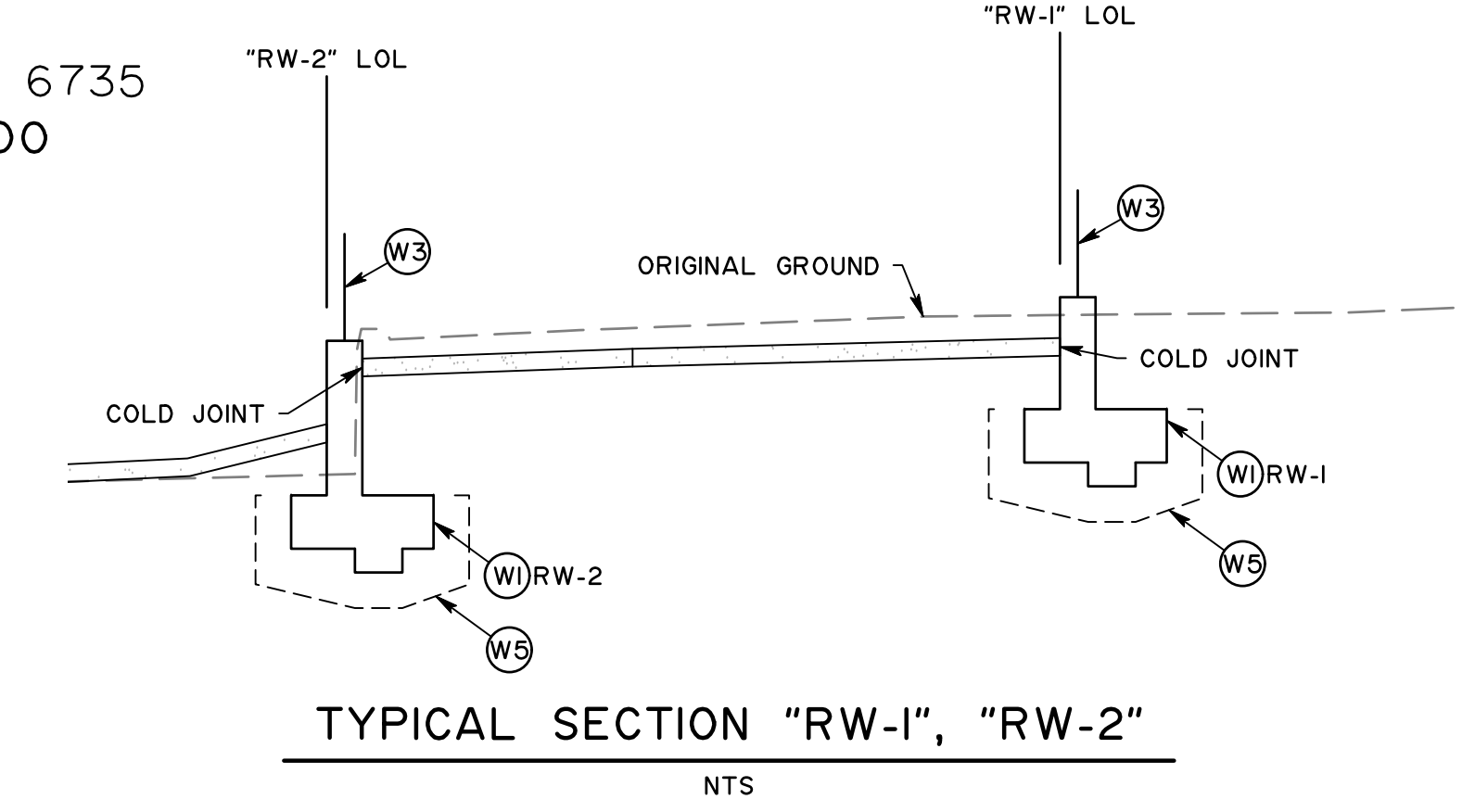
PROFILE SCALE: HORIZ 1"=10' VERT 1"=5'



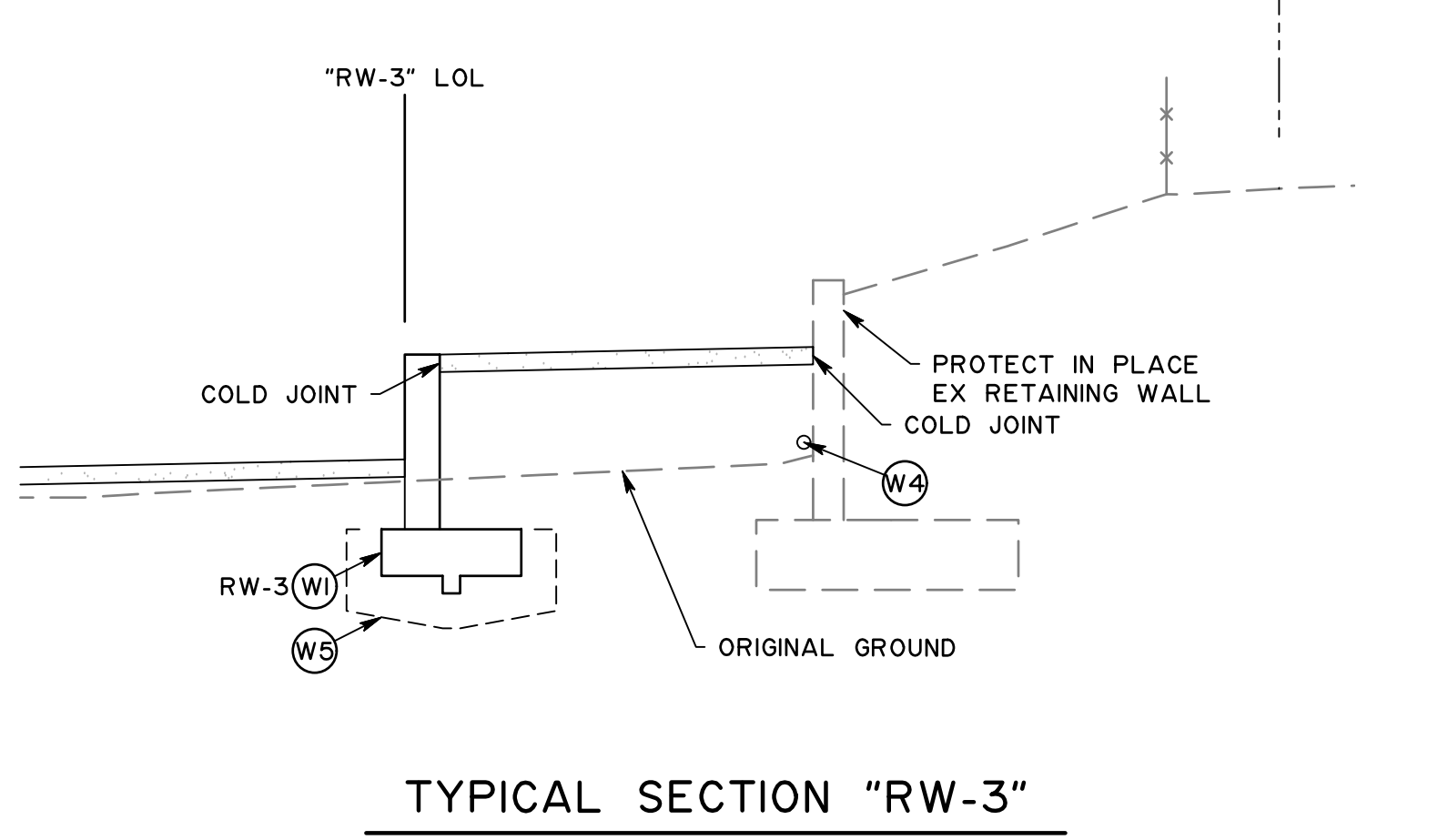
PLAN "RW-1", "RW-2"



PLAN "RW-3"



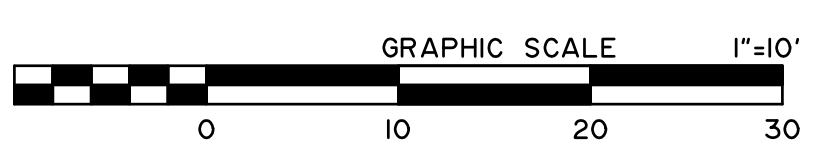
TYPICAL SECTION "RW-1", "RW-2" NTS



TYPICAL SECTION "RW-3" NTS



PRELIMINARY
NOT FOR CONSTRUCTION
100% REVIEW

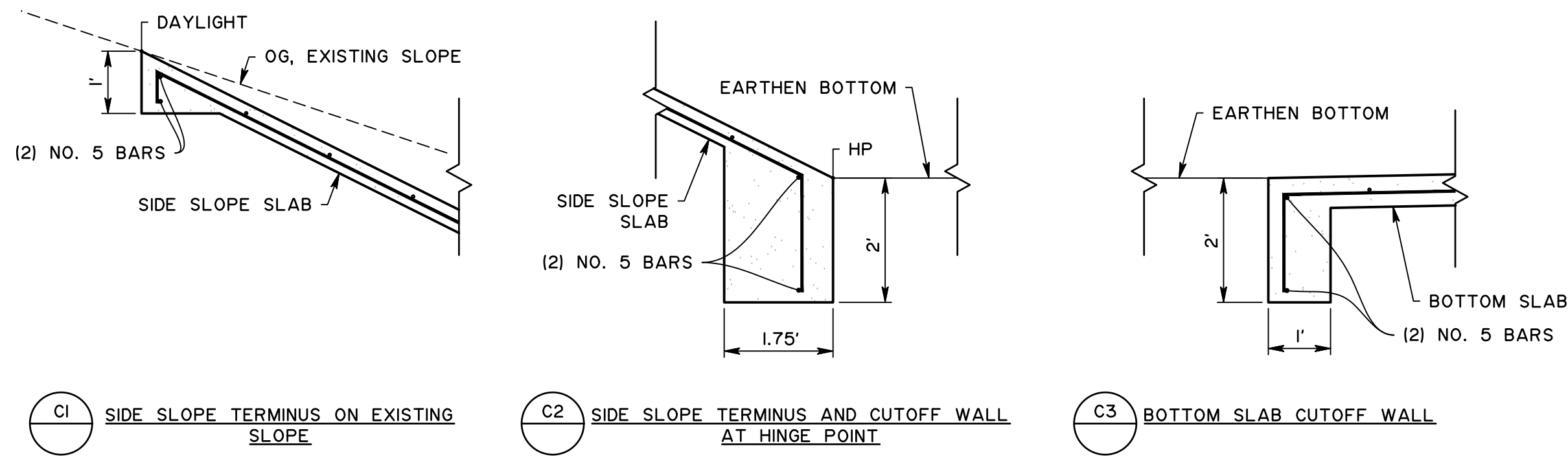


MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		



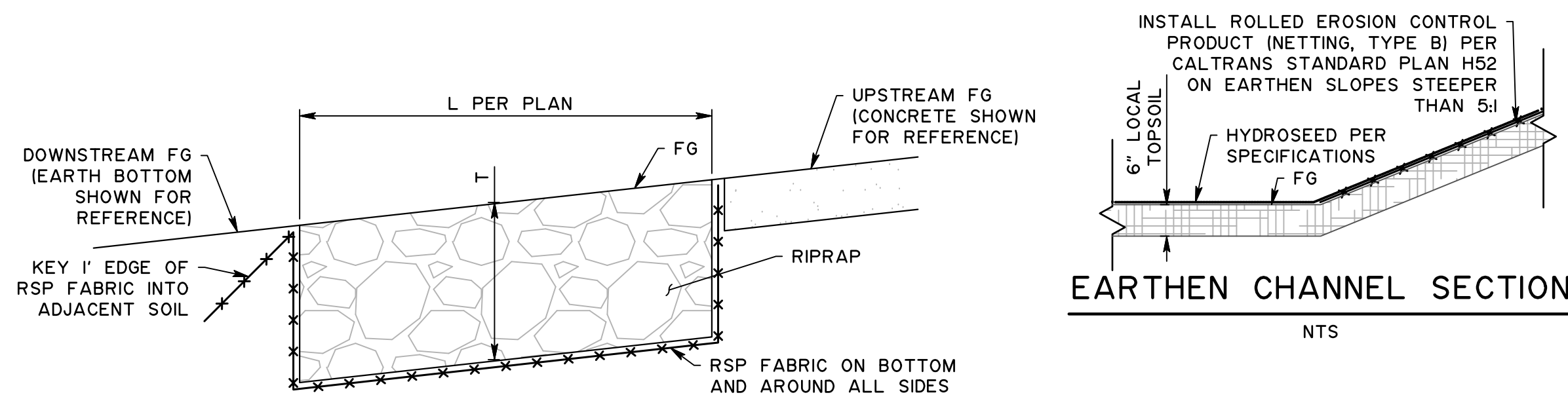
SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS			
DESIGNED BY: SP	DRAWN BY: MY	CHECKED BY: MI	RECOMMENDED BY: 8/8/24
APPROVED BY: 07/15/24			DATE: 8/9/24
MICHAEL IP, P.E. MNS ENGINEERS, INC.		MERVAT N. MIKHAIL, P.E. DEPUTY DIRECTOR	

PINE VIEW DRIVE AND BLUE WATER CHANNEL				
RETAINING WALL PLAN AND PROFILE				
"RW-1", "RW-2", "RW-3"				
J.L. REF: I2091	W.O. NO: H15190	PLAN SCALE: 1"=10'	SHT. ID: RT-1	SHT. NO: 26 / 28



CONCRETE CHANNEL LINING DETAILS
NOT TO SCALE

NOTE: SEE SBC FCD STANDARD PLAT 192E FOR DETAILS NOT SHOWN

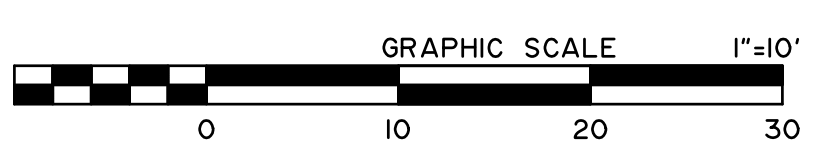
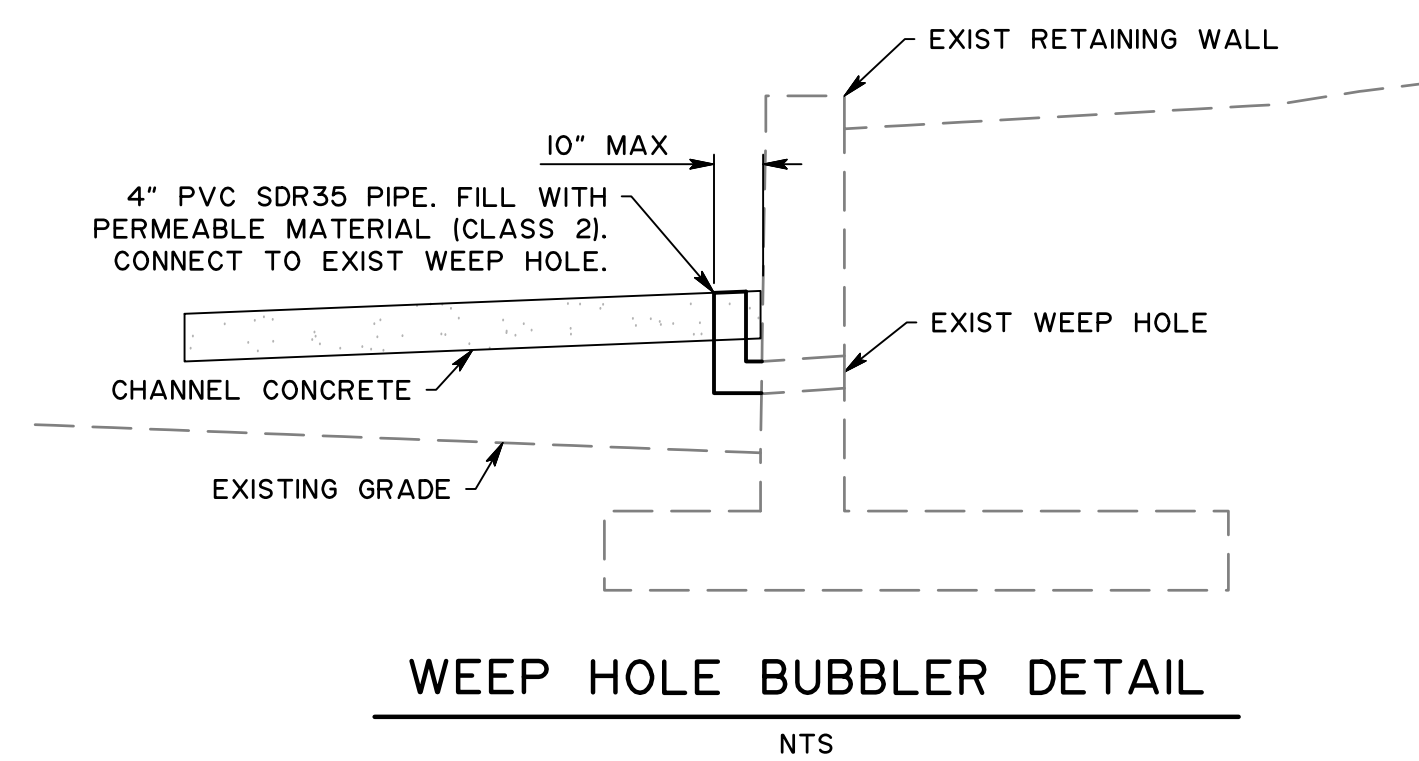
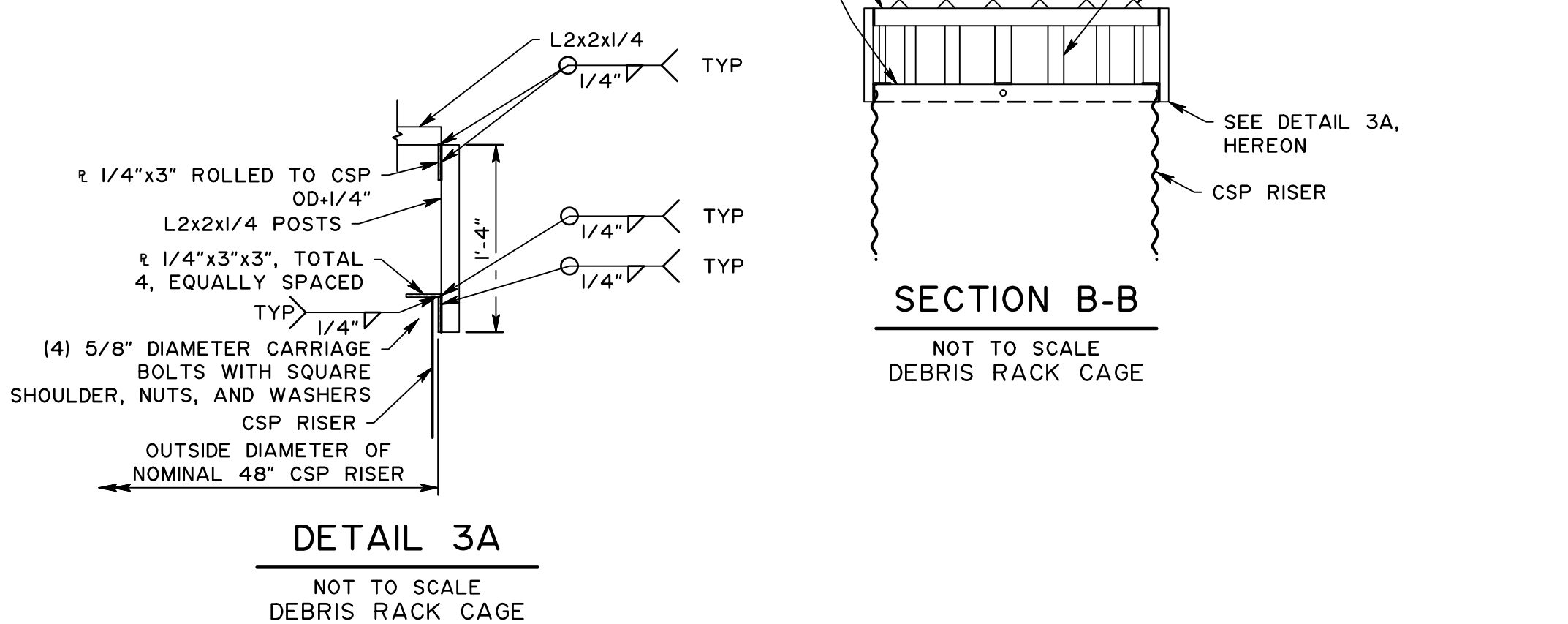
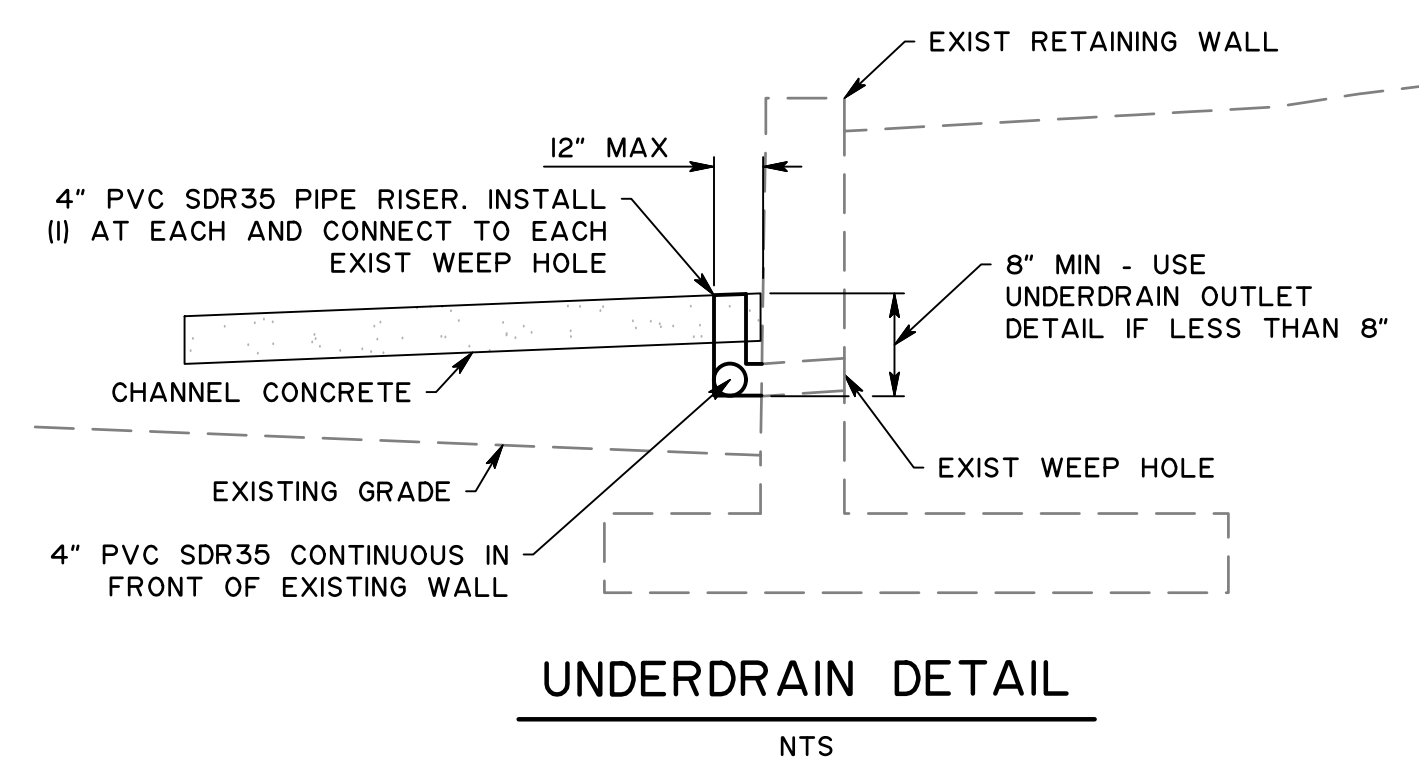
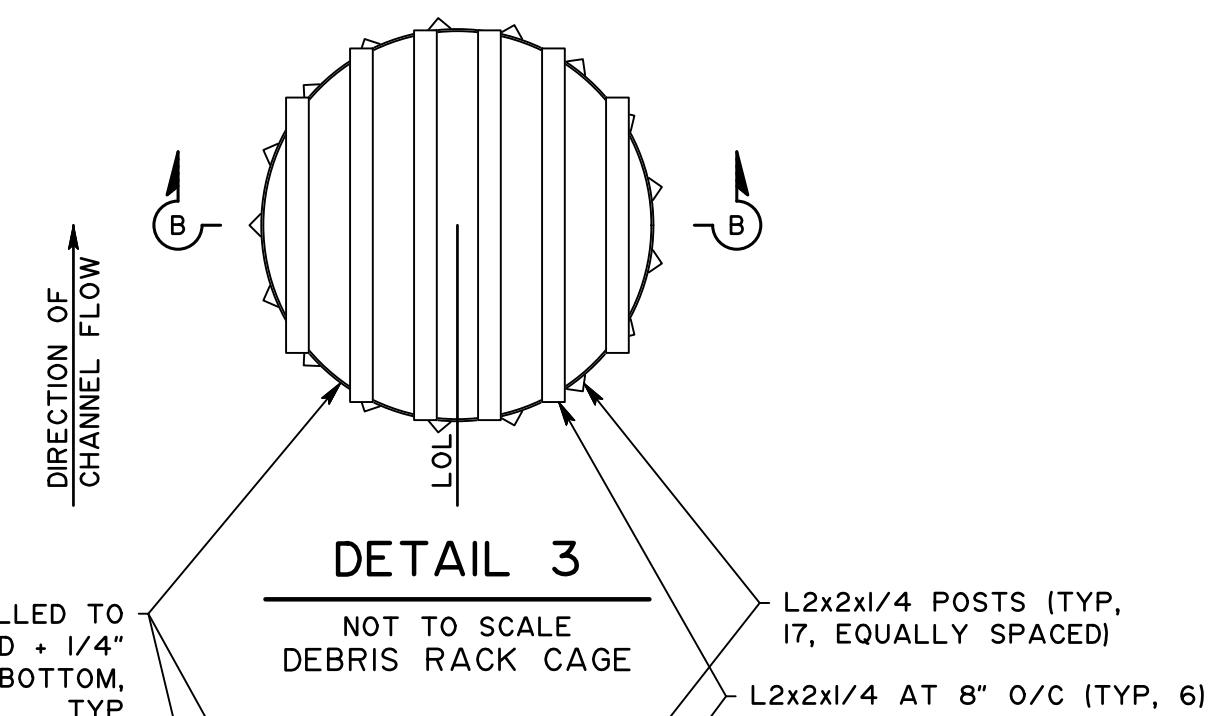
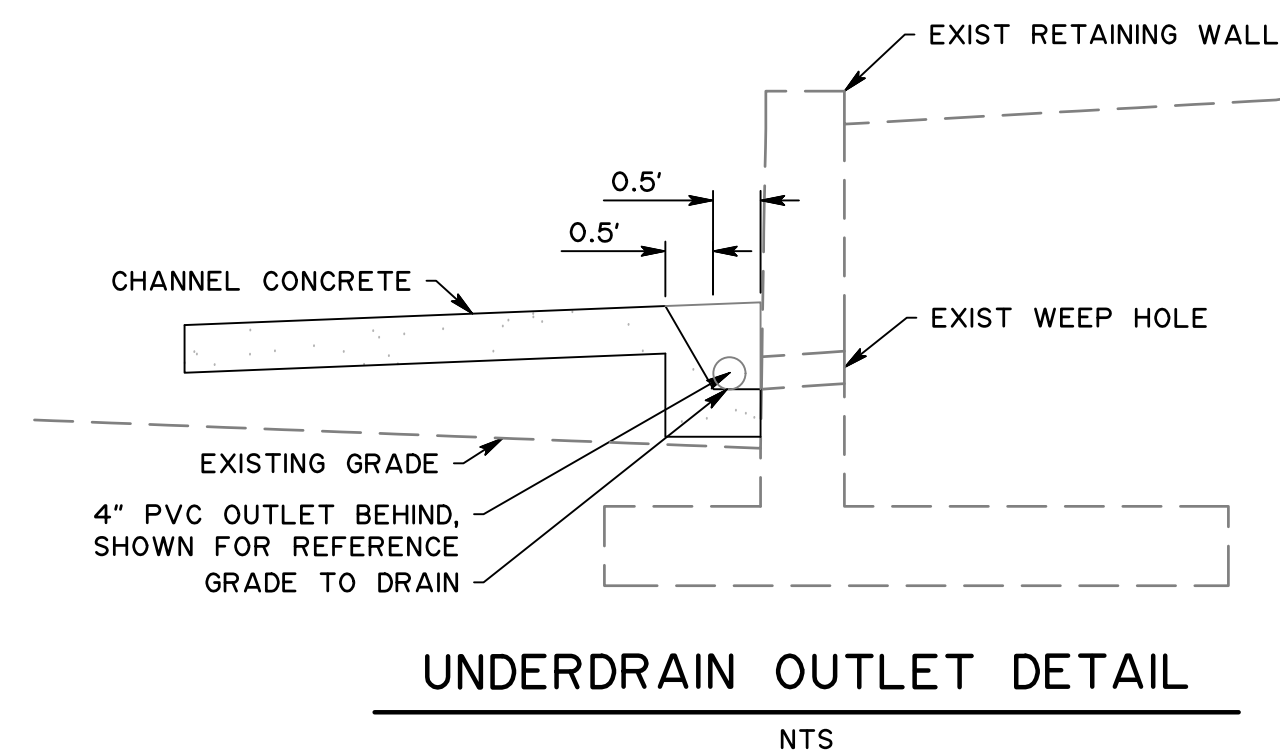
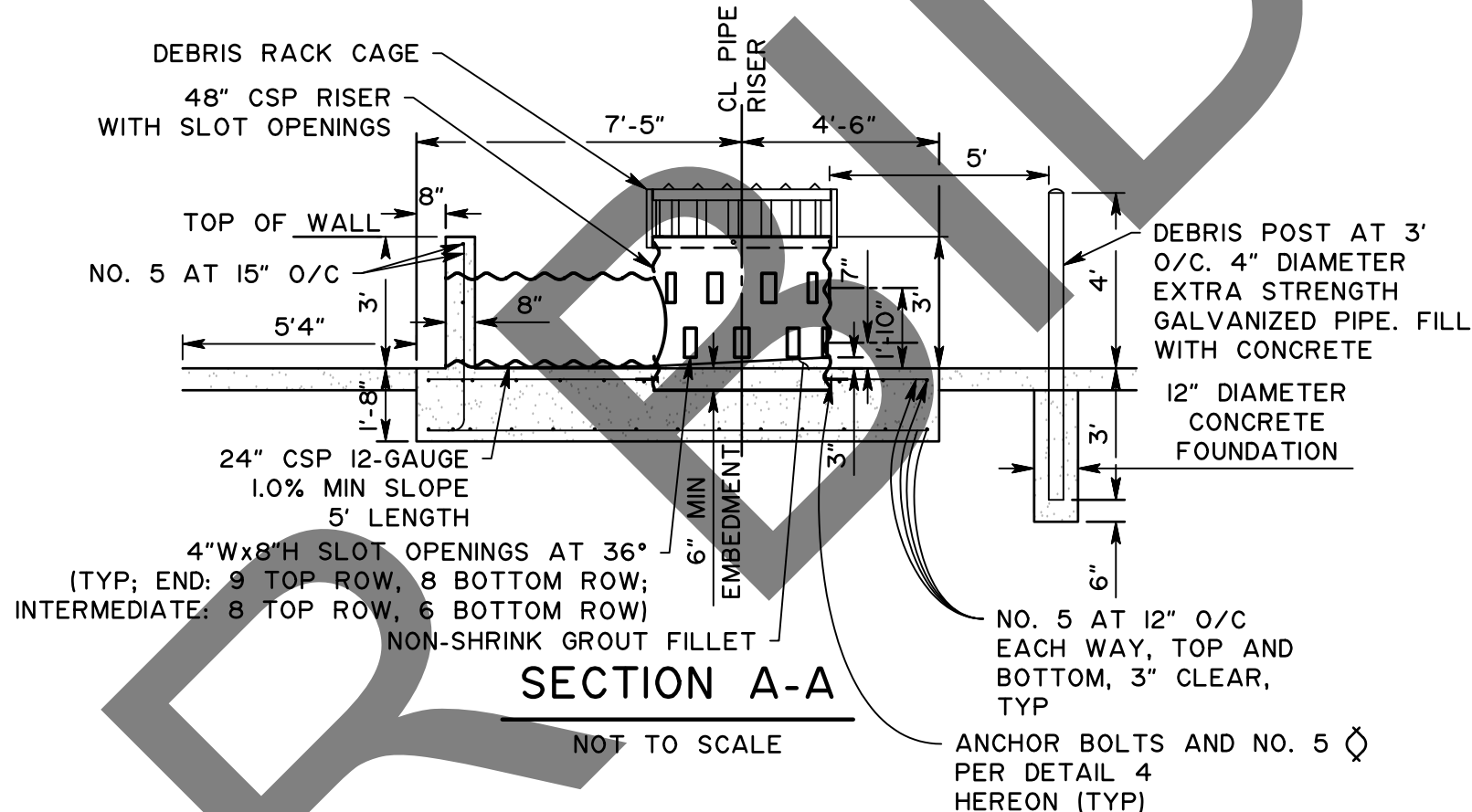
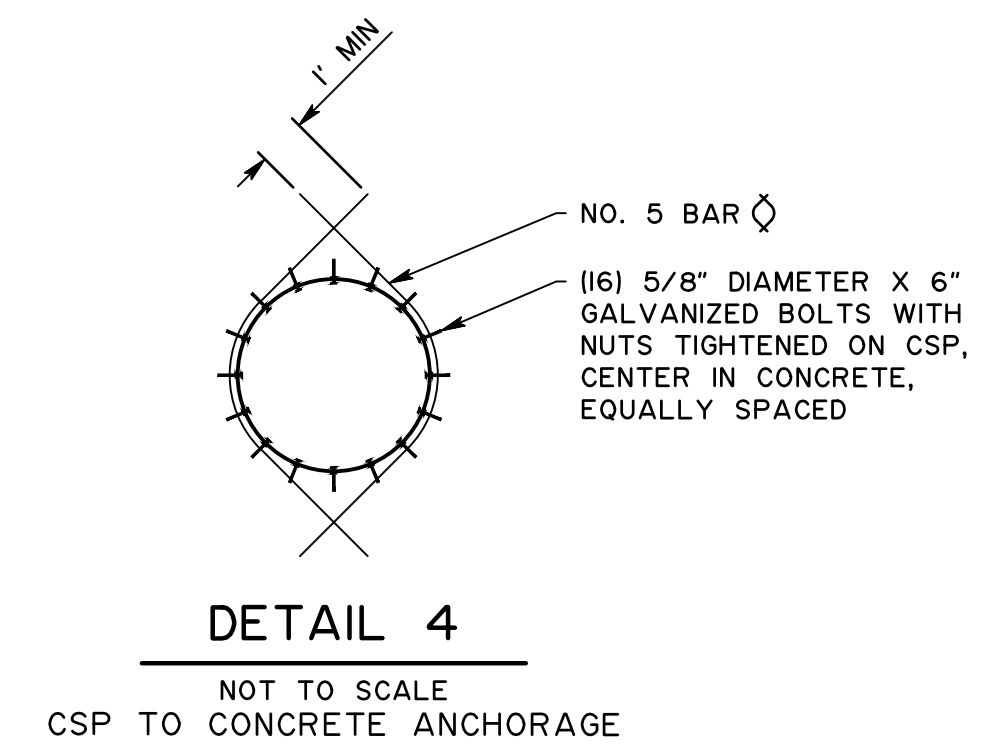
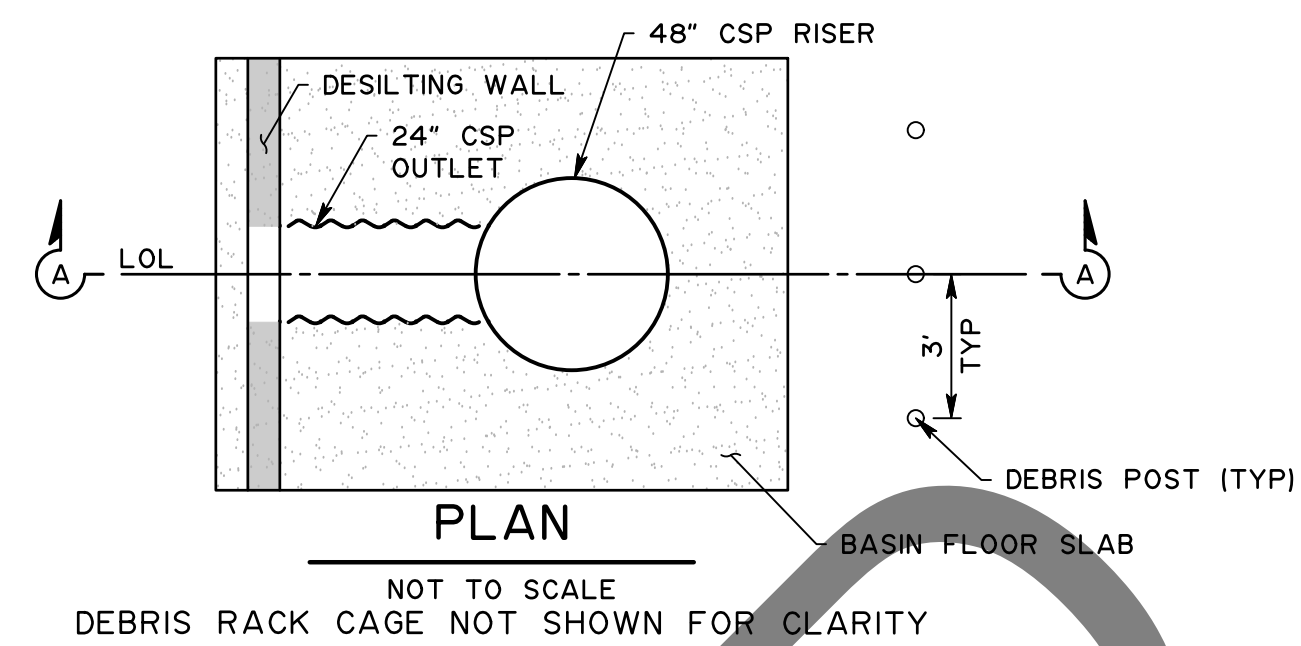
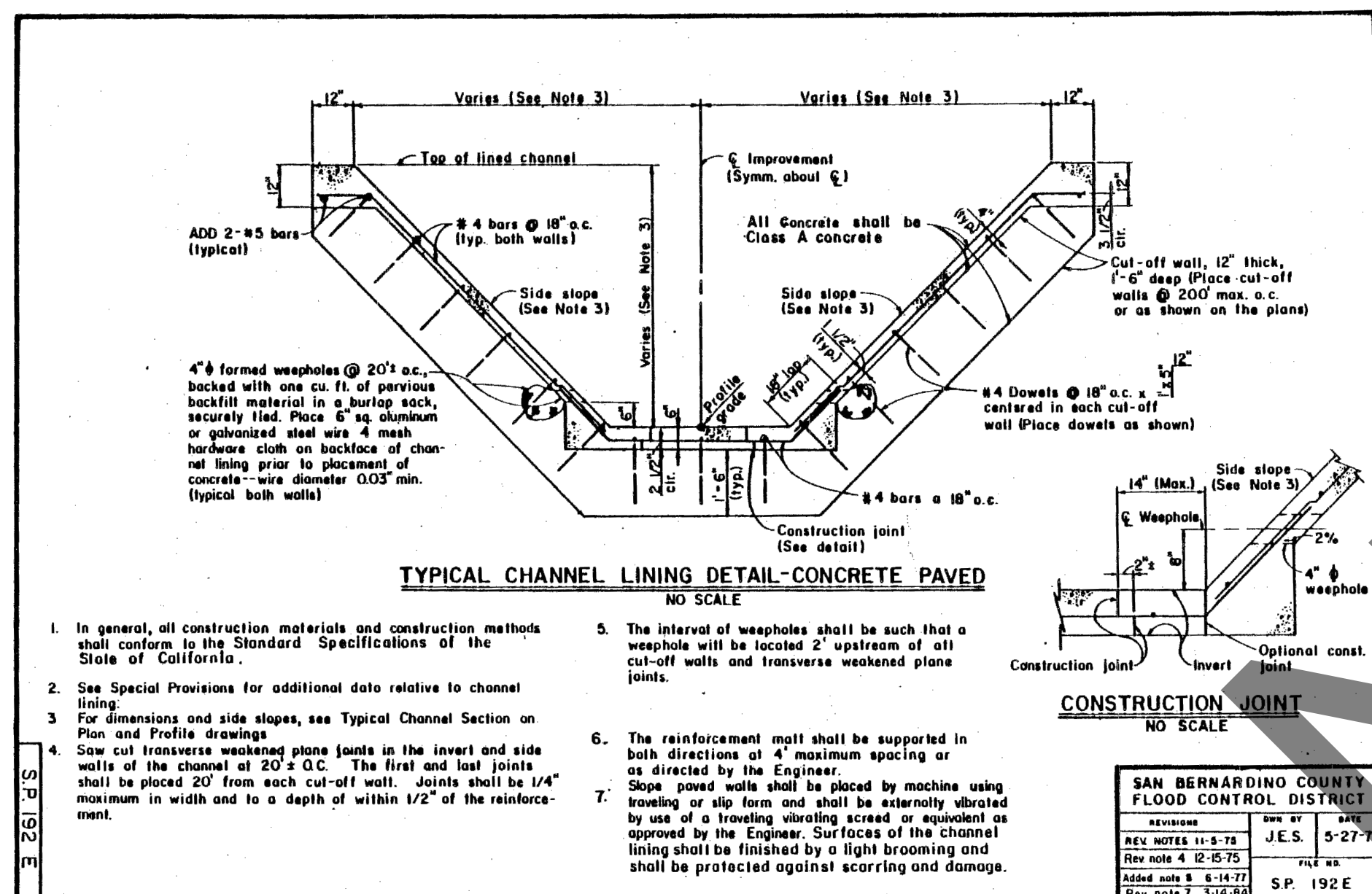


TYPICAL RIPRAP INSTALLATION
NTS

NOTE: TOP OF RIPRAP STONES SHALL NOT EXCEED 2" ABOVE FG

RIPRAP (RSP) DEPTH BY CLASS

RIPRAP CLASS	T
I	2.0'
II	3.0'
III	4.0'
IV	5.0'
V	6.0'



MARK	CHANGES	RESIDENT ENGINEER	DATE
	NO CHANGES		

FIELD CHANGES



SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS			
DESIGNED BY: SP	DRAWN BY: MY	CHECKED BY: MI	RECOMMENDED BY: 8/8/24
APPROVED BY: 07/15/24			DATE: 8/9/24
MICHAEL IP, P.E. MNS ENGINEERS, INC.		MERVAT N. MIKHAIL, P.E. DEPUTY DIRECTOR	

PINE VIEW DRIVE AND BLUE WATER CHANNEL				
CONSTRUCTION DETAILS CHANNEL, DESILTING WALL, PIPE RISER, AND DRIVEWAY DETAILS				
J.L. REF. I2091	W.O. NO. H15190	PLAN SCALE 1"=10'	SHT. ID CD-1	SHT. NO. 27 / 28



PRELIMINARY
NOT FOR CONSTRUCTION
100% REVIEW

E. Thousand Oaks Blvd, Suite 105, Thousand Oaks, CA 91360

FILE NO. 657700-020, 933002-010