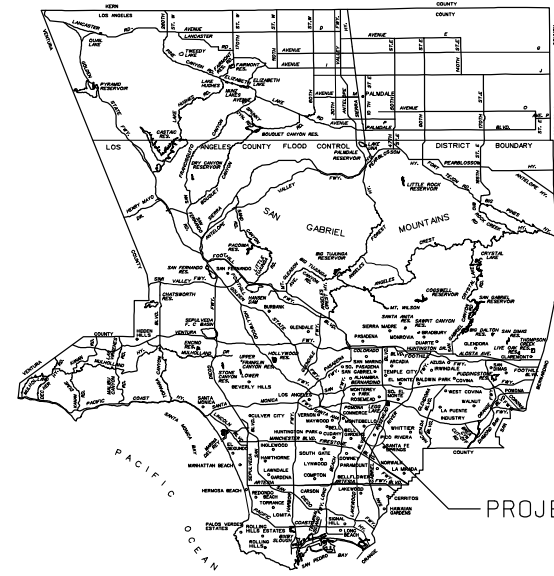


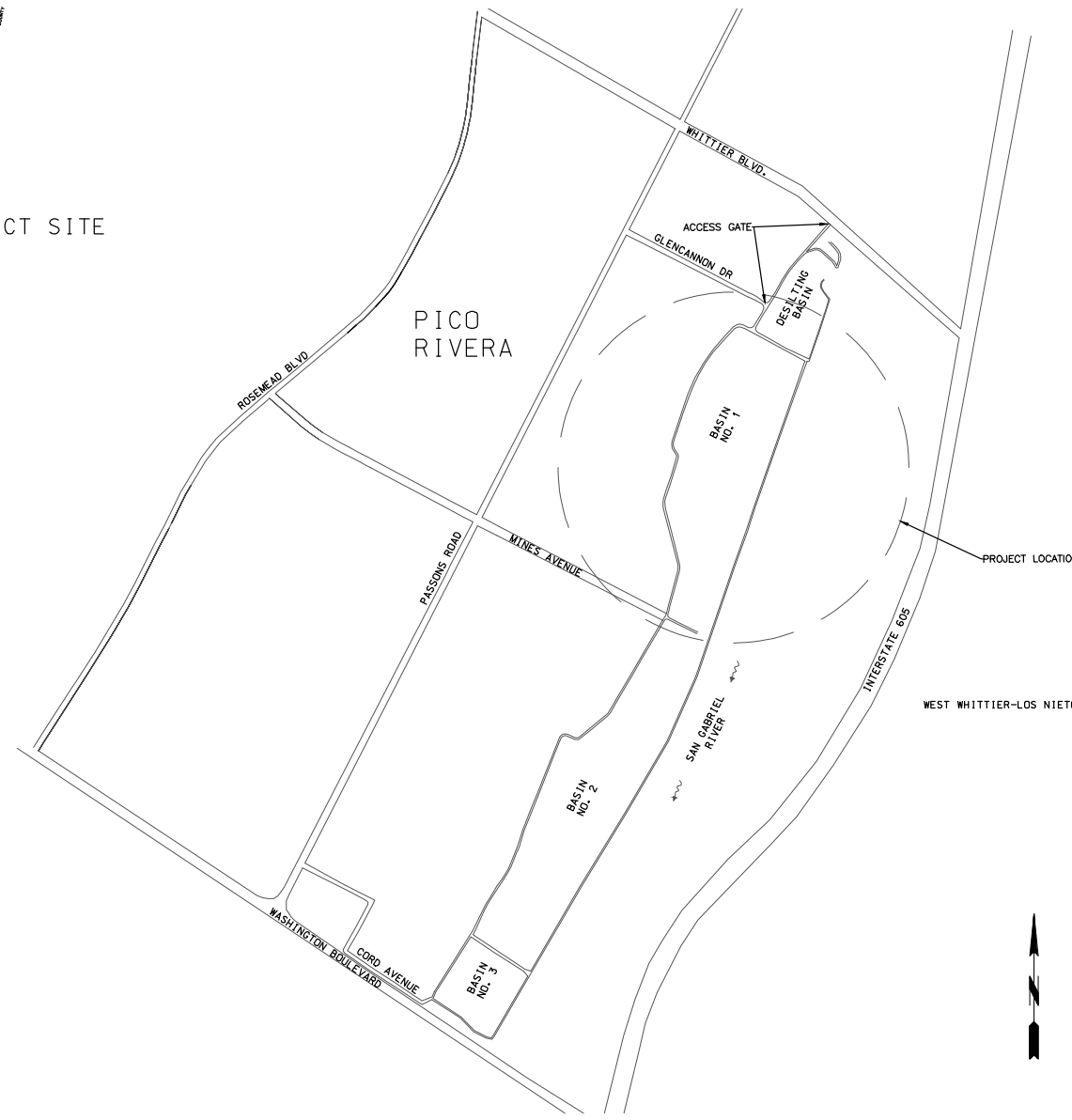
# COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

## SAN GABRIEL COASTAL SPREADING GROUNDS LEVEE RETROFIT PROJECT



LOCATION MAP

THOMAS BROS. PG. 676-H4, 5



VICINITY MAP  
NOT TO SCALE

### INDEX TO PROJECT DRAWINGS

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2	GENERAL NOTES, ABBREVIATIONS, AND LEGEND
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4	CONTROL LINE PLAN
5	CONTROL LINE, STEEL SHEET PILE CUTOFF WALL ALIGNMENT AND STAGING AREA TABLES
6	EXISTING UTILITIES, GENERAL PLAN AND CONSTRUCTION ACCESS AND STAGING
7	LEVEE PLAN AND PROFILE STA 48+00 TO 60+00
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10	CUTOFF WALL CONSTRUCTION SEQUENCE
11	CUTOFF WALL TYPICAL SECTIONS AND DETAILS
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18	PAVEMENT REMOVAL AND REPLACEMENT LIMITS
19	CONTROL LINE, STEEL SHEET PILE CUTOFF WALL DEPTH TABLE

DRAFTER I. RAWLINGS  
 DESIGNER L. SANSONE  
 CHECKER A. PUJOL  
 CADD PROJECT FILE NAME 01-G-1 DRAWING INDEX AND GENERAL NOTES.DWG  
 REVIEWED BY T. KELLER  
 DATE 06-01-18

TWO DAYS BEFORE YOU DIG  CALL USA TOLL FREE 1-800-227-2600	APPROVED MARK PESTRELLA DIRECTOR OF PUBLIC WORKS By <i>Mark Pestrella</i> 6-14-18 ASSISTANT DEPUTY DIRECTOR  RECOMMENDED By <i>Anthony Stone</i> 5-14-18 PRINCIPAL ENGINEER  SUBMITTED By <i>Am Behm</i> 6/14/18	Attention: 0 1" If this scale bar does not measure 1" then drawing is not original scale.	<table border="1"> <tr> <th>DATE</th> <th>MK</th> <th>DESCRIPTION</th> </tr> <tr> <td>12/17/2021</td> <td>■</td> <td>AS BUILT: NEW TABLE OF SHEET PILE DEPTHS PER CONSTRUCTION</td> </tr> <tr> <td colspan="3" style="text-align: center;">REVISIONS</td> </tr> </table>	DATE	MK	DESCRIPTION	12/17/2021	■	AS BUILT: NEW TABLE OF SHEET PILE DEPTHS PER CONSTRUCTION	REVISIONS				COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS  SAN GABRIEL COASTAL SPREADING GROUNDS LEVEE RETROFIT PROJECT  TITLE SHEET AND DRAWING INDEX
DATE	MK	DESCRIPTION												
12/17/2021	■	AS BUILT: NEW TABLE OF SHEET PILE DEPTHS PER CONSTRUCTION												
REVISIONS														
				ALBERTO PUJOL 06-01-18 PROJECT ENGINEER DATE	FCC0001292   EF11616002   DWG 6-D231.1-18   SHEET 1 OF 19									

**GENERAL NOTES**

1. THE VERTICAL DATUM IS NAVD88 IN FEET (AT THIS SITE NAVD88 IS APPROXIMATELY EQUAL TO NGVD29 + 2.4 FT)
2. THE HORIZONTAL COORDINATE SYSTEM IS BASED ON CA ZONE V, NAD 83.
3. THE PIPELINE AND CULVERT LOCATIONS SHOWN ARE BASED ON TRANSFER OF INFORMATION AVAILABLE FROM RECORD DRAWINGS, AND ARE APPROXIMATE ONLY.
4. STATIONS SHOWN ON THE PLANS ARE ALONG CENTERLINE OF CONSTRUCTION OR A LINE NORMAL TO THE CENTERLINE OF CONSTRUCTION.
5. SEE SHT 4 AND SHT 5 FOR CONTROL LINE PLAN AND COORDINATE TABLES.
6. THE WORK SHOWN ON THESE PLANS REQUIRES THE PRIME CONTRACTOR TO HAVE A VALID CLASS A LICENSE ISSUED BY THE STATE OF CALIFORNIA.
7. EXISTING UTILITIES SHOWN ON THE PLANS ARE THE PROPERTY OF THE AGENCIES LISTED ON THIS SHEET.
8. NOT ALL UTILITIES MAY BE SHOWN ON THE DRAWINGS.
9. CONTRACTOR IS RESPONSIBLE FOR CONTACTING UTILITY COMPANIES PRIOR TO STARTING WORK AND LOCATING ALL UTILITIES.
10. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, SIZES, AND LOCATIONS OF ALL EXISTING FACILITIES AND FEATURES BEFORE STARTING WORK AND SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING RECORD DRAWINGS FOR ALL WORK THROUGHOUT THE COURSE OF CONSTRUCTION. SUCH DRAWINGS SHALL RECORD THE LOCATION AND AS-BUILT CONDITION OF ALL PROJECT ELEMENTS. COPIES SHALL BE DELIVERED TO THE ENGINEER PRIOR TO THE ACCEPTANCE OF THE WORK AS INDICATED IN THE SPECIAL PROVISIONS.
12. ALL FACILITIES MAY NOT BE SHOWN ON PHOTOS AND SOME FACILITIES MAY HAVE CHANGED SINCE THE DATE OF THE PHOTOS. DRAWINGS SHOWN WITH AERIAL PHOTOS ARE DATED MARCH 8, 2014. CONTRACTORS SHALL SATISFY THEMSELVES AS TO THE LOCATION OF EXISTING FACILITIES THAT MAY BE AFFECTED BY CONSTRUCTION.
13. EXISTING FENCING AND GATES WITHIN THE RIGHT-OF-WAY SHALL BE REMOVED AS REQUIRED FOR CONSTRUCTION AND AS SHOWN ON THE DRAWINGS. SALVAGE OF FENCING ITEMS SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISIONS. WHERE EXISTING FENCING OR BARRIERS ARE REMOVED, TEMPORARY FENCING SHALL BE PROVIDED. FENCING AND GATE SIGNS SHALL BE REPLACED FOLLOWING CONSTRUCTION.
14. PROVISIONS SHALL BE MADE TO PREVENT DEBRIS FROM FALLING INTO THE DISTRIBUTION CANAL DURING CONSTRUCTION.
15. THE INDICATED "AS-BUILT" MODIFICATIONS TO THE DESIGN WERE MADE DURING CONSTRUCTION UNDER THE OVERSIGHT OF LACDPW. THE DESIGN ENGINEER, GEI, CANNOT INDEPENDENTLY VERIFY THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED FOR INCORPORATION IN THESE RECORD DRAWINGS.

**ABBREVIATIONS**

AASHTO	-	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
AC	-	ASPHALT CONCRETE
ALIGN	-	ALIGNMENT
APPROX	-	APPROXIMATE
BGS	-	BELOW GROUND SURFACE
BT	-	CPT TERMINATION
CA	-	CALIFORNIA
CFS	-	CUBIC FEET PER SECOND
CL	-	CENTERLINE
CLR	-	CLEAR
CMB	-	CRUSHED MISCELLANEOUS BASE
CMU	-	CONCRETE MASONRY UNIT
CONC	-	CONCRETE
CPT	-	CONE PENETRATION TEST
DIA	-	DIAMETER
E	-	EASTING, EAST
EL	-	ELEVATION
EW	-	EACH WAY
EXIST	-	EXISTING
FT	-	FEET
fs	-	SLEEVE STRESS IN TONS PER SQUARE FOOT (TSF)
GEI	-	GEI CONSULTANTS, INC.
GS	-	GROUND SURFACE
HOR	-	HORIZONTAL
ID	-	INSIDE DIAMETER
KV	-	KILOVOLT
LA	-	LOS ANGELES
LACDPW	-	LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
MAX	-	MAXIMUM
MH	-	MANHOLE
MIN	-	MINIMUM
N	-	NORTHING, NORTH
NAD	-	NORTH AMERICAN DATUM
NAVD	-	NORTH AMERICAN VERTICAL DATUM
NGVD	-	NATIONAL GEODETIC VERTICAL DATUM
NO	-	NUMBER
NTS	-	NOT TO SCALE
NW	-	NORTHWEST
OC	-	ON-CENTER
OD	-	OUTSIDE DIAMETER
OFF	-	OFFSET
QT	-	TIP RESISTANCE IN TONS PER SQUARE FOOT (TSF)
PSF	-	POUNDS PER SQUARE FOOT
PVC	-	POLYVINYL CHLORIDE
RCB	-	REINFORCED CONCRETE BOX
RCP	-	REINFORCED CONCRETE PIPE
SE	-	SOUTHEAST
SGCSG	-	SAN GABRIEL COASTAL SPREADING GROUNDS
SGR	-	SAN GABRIEL RIVER
SHT	-	SHEET
SJCWRP	-	SAN JOSE CREEK WATER RECLAMATION PLANT
SPPWC	-	STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION
SPECS	-	SPECIFICATIONS
SPT	-	STANDARD PENETRATION TEST
STA	-	STATION
STD	-	STANDARD
SW	-	SOUTHWEST
tsf	-	TONS PER SQUARE FOOT
TYP	-	TYPICAL
VAR	-	VARIES
VERT	-	VERTICAL
WSE	-	WATER SURFACE ELEVATION
WSP	-	WELDED STEEL PIPE

**UTILITIES**

WATER	-	SAN GABRIEL VALLEY WATER COMPANY (909) 201-7349
RECYCLED WATER	-	COUNTY SANITATION DISTRICT OF LA COUNTY (310) 830-8050
POWER	-	SOUTHERN CALIFORNIA EDISON (714) 796-9932
STORM DRAINS	-	LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS

**INDEX TO CONTROL LINE PLAN**

- (L-40) IDENTIFIES CONTROL LINE SEGMENT
- START AND END POINTS OF CONTROL LINE SEGMENTS SHOWN ON SHT 4

**INDEX TO STANDARD PLANS**

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS (LACDPW), STANDARD PLANS 2000 EDITION

**STD. PLAN TITLE**

3093-1	UNIFIED SOIL CLASSIFICATION SYSTEM
6008-1	MINIMUM PUBLIC SAFETY REQUIREMENTS FOR OPEN EXCAVATIONS

SPPWC STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION, 2012 EDITION

**STD. PLAN TITLE**

133-3	ASPHALT CONCRETE PAVEMENT REPLACEMENT
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**STRUCTURAL NOTES**

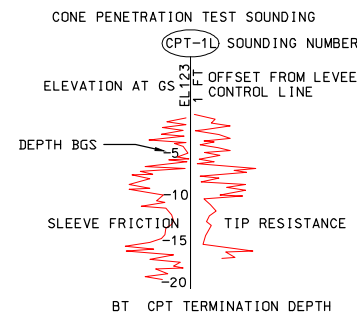
1. STEEL SHEET PILES SHALL BE AZ-26-700 OR EQUIVALENT SECTIONS.
2. STEEL SHEET PILING SHALL MEET THE REQUIREMENTS OF ASTM A328, (GRADE 50).

**STORM DRAINS REFERENCE PLANS**

1. LACFCD (LOS ANGELES COUNTY FLOOD CONTROL DISTRICT) (1963). 1958 STORM DRAIN BOND ISSUE, PICO RIVERA, PROJECT NO. 565. AS-BUILT DRAWINGS, NOVEMBER 12. (DWG NO. 275-565-D1.2)
2. LACFCD (LOS ANGELES COUNTY FLOOD CONTROL DISTRICT) (1966). 1964 STORM DRAIN BOND ISSUE, PICO RIVERA, PROJECT NO. 727. AS-BUILT DRAWINGS DATED FEBRUARY 3. (DWG NO. 364-727-D3.1)
3. LACFCD (LOS ANGELES COUNTY FLOOD CONTROL DISTRICT) (1972). 1970 STORM DRAIN BOND ISSUE, PICO RIVERA, PROJECT NO. 9010. AS-BUILT DRAWINGS DATED APRIL. (DWG NO. 470-9010-D2.1)

**LEGEND**

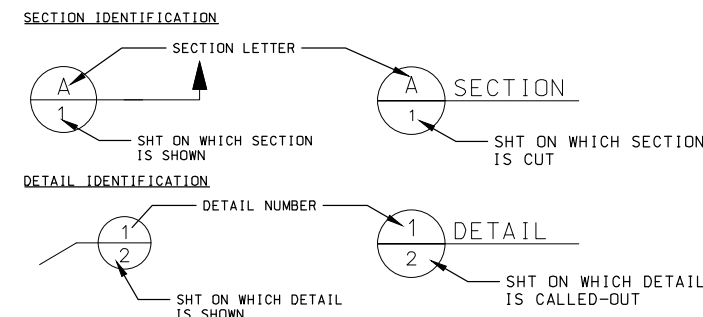
- 155— EXIST ELEVATION CONTOUR
- - - - - APPROXIMATE CENTERLINE ON MAIN LEVEE CREST
- - - - - APPROXIMATE EXTENT OF EXISTING DISTRIBUTION CANAL CONCRETE LINER
- - - - - APPROXIMATE LOCATION OF OVERHEAD POWER LINES
- EXISTING FENCE LINE
- MH EXIST MANHOLE
- - - - - APPROXIMATE CENTERLINE OF CUTOFF WALL
- EXIST 72"/69" DIAMETER SJCWRP RCP OUTFALL PIPELINE AND DISTRIBUTION FACILITIES
- EXIST PIPE OR CULVERT
- B-218 EXIST BORING
- ⊗ CPT-1L EXIST CONE PENETRATION TEST SOUNDING
- ⊗ 10 SPT SAMPLE, N-VALUE (QUERIED WITH A "2" WHERE BLOW COUNT CORRECTIONS ARE UNCERTAIN)
- ⊗ 10 MODIFIED CALIFORNIA SAMPLER, N-VALUE (0.6XUNCORRECTED FIELD N-VALUE)
- ▲ CONTROL POINT
- POWER POLE
- FLOW DIRECTION



**BOREHOLE MATERIAL GRAPHICS**

CL	LEAN CLAY OR SANDY LEAN CLAY
ML	SILT OR SANDY SILT
SC	CLAYEY SAND
SM	SILTY SAND, SILTY SAND WITH GRAVEL
SP	POORLY GRADED SAND, POORLY GRADED SAND WITH GRAVEL
SW	WELL GRADED SAND, WELL GRADED SAND WITH GRAVEL
GP	POORLY GRADED GRAVEL, POORLY GRADED GRAVEL WITH SAND
GW	WELL GRADED GRAVEL, WELL GRADED GRAVEL WITH SAND

**KEY TO SECTION CALL-OUTS**



Attention:

0 1"

If this scale bar does not measure 1" then drawing is not original scale.

DATE	12/17/2021	MK	AS BUILT: ADDED GENERAL NOTE 15
DESCRIPTION			
REVISIONS			

ALBERTO PUJOL  
PROJECT ENGINEER  
06-01-18

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

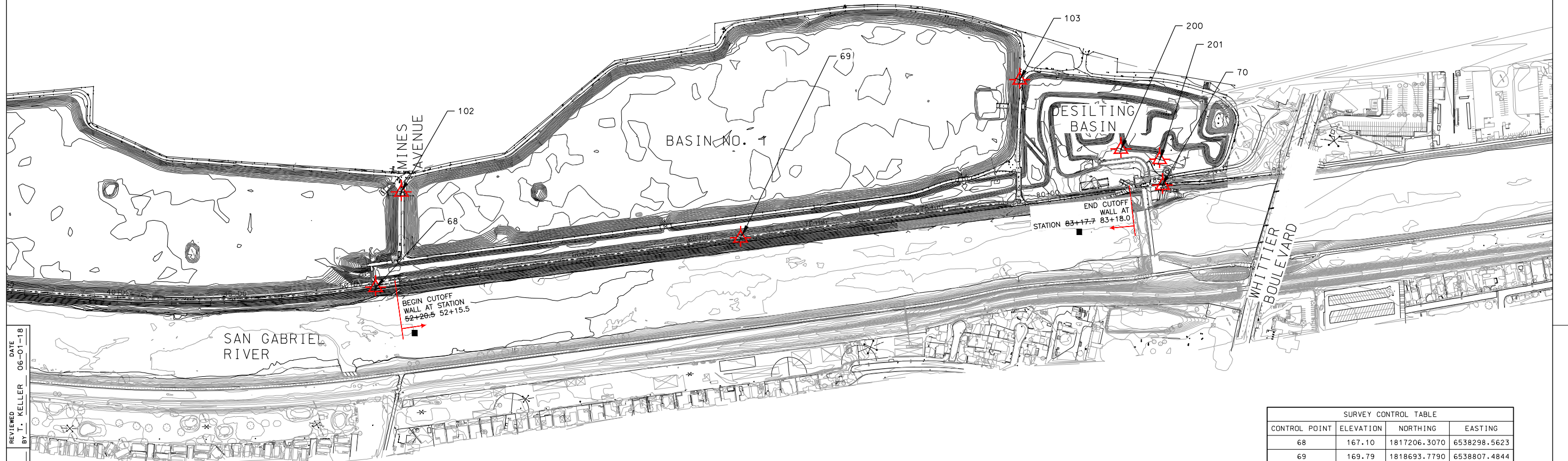
SAN GABRIEL COASTAL SPREADING GROUNDS  
LEVEE RETROFIT PROJECT

GENERAL NOTES, ABBREVIATIONS,  
AND LEGEND

FCC0001292	EF11616002	DWG 6-D231.1-18	SHEET 2 OF 19
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DATE 06-01-18  
REVIEWED BY T. KELLER  
CADD PROJECT FILE NAME 01-9-1 DRAWING INDEX AND GENERAL NOTES.DWG  
CHECKER A. PUJOL  
DESIGNER L. SANSONE  
DRAFTER I. RAWLINGS

PLAN  
SCALE: 1" = 200'



SURVEY CONTROL TABLE			
CONTROL POINT	ELEVATION	NORTHING	EASTING
68	167.10	1817206.3070	6538298.5623
69	169.79	1818693.7790	6538807.4844
70	175.74	1820405.2722	6539412.7385
102	170.32	1817486.3600	6537984.4990
103	173.28	1820061.2340	6538737.7390
200	173.76	1820315.1791	6539195.5309
201	173.74	1820443.1003	6539308.6490

**NOTES:**

1. ALL UNITS IN FEET.
2. STATION CONTROL POINTS WERE BASED ON THE MARCH 8, 2014 TOPOGRAPHY BASE MAP PROVIDED BY LACDPW.
3. BENCHMARKS ARE MAGNETIZED NAILS/SPIKES.

DATE: 06-01-18  
 REVIEWED BY: T. KELLER  
 CADD PROJECT FILE NAME:  
 CHECKER: A. PUJOL  
 DESIGNER: L. SANSONE  
 DRAFTER: I. RAWLINGS

Attention:

0 1" scale bar

If this scale bar does not measure 1" then drawing is not original scale.

DATE	MK	DESCRIPTION
12/17/2021	■	AS BUILT: CHANGE OF STATIONING AT BEGINNING AND ENDING OF CUTOFF WALL
REVISIONS		



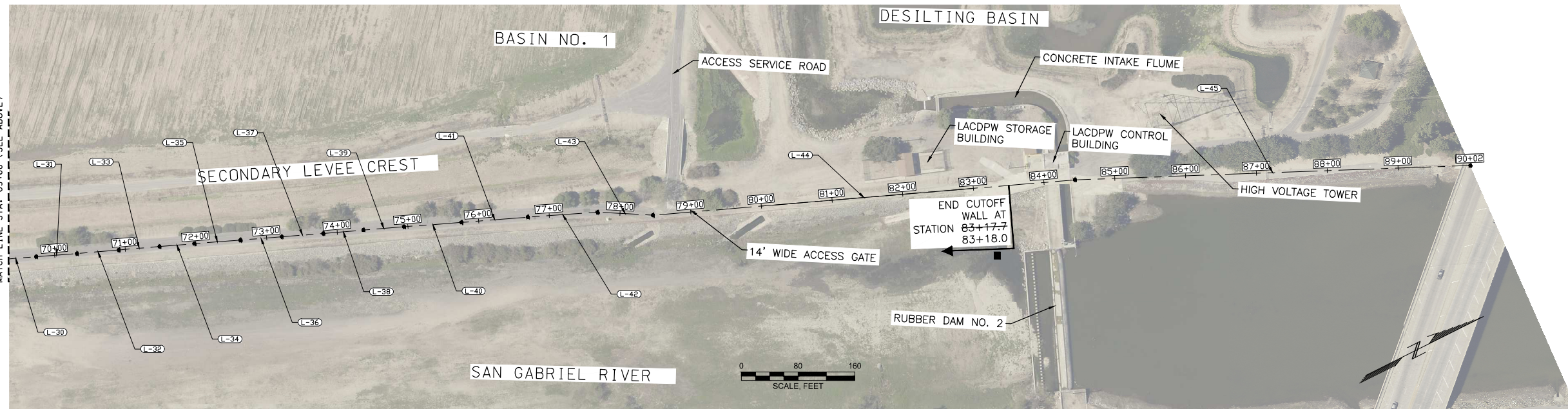
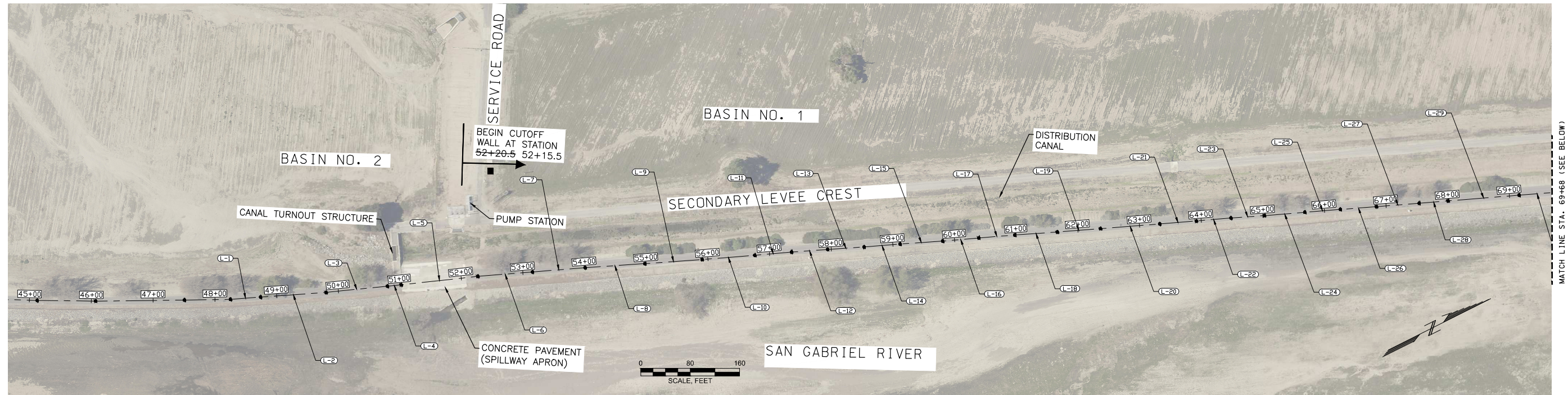
ALBERTO PUJOL  
PROJECT ENGINEER

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

SAN GABRIEL COASTAL SPREADING GROUNDS  
LEVEE RETROFIT PROJECT

SURVEY CONTROL LOCATION AND TABLE

FCC0001292 EF11616002 DWG 6-D231.1-18 SHEET 3 OF 19



DRAFTER I. RAWLINGS  
 DESIGNER L. SANSONE  
 CHECKER A. PUJOL  
 CADD PROJECT FILE NAME  
 REVIEWED BY T. KELLER  
 DATE 06-01-18

MATCH LINE STA. 69+68 (SEE ABOVE)

MATCH LINE STA. 69+68 (SEE BELOW)

Attention:

0 1"

If this scale bar does not measure 1" then drawing is not original scale.

12/17/2021	■	AS BUILT: CHANGE OF STATIONING BEGINNING AND ENDING OF CUTOFF WALL
DATE	MK	DESCRIPTION
REVISIONS		



ALBERTO PUJOL  
PROJECT ENGINEER  
06-01-18  
DATE

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

SAN GABRIEL COASTAL SPREADING GROUNDS  
LEVEE RETROFIT PROJECT  
CONTROL LINE PLAN

FCC0001292 EF11616002 DWG 6-D231.1-18 SHEET 4 OF 19

CONTROL LINE TABLE					
LINE NO.	LENGTH (FT)	DIRECTION	START POINT (N.E)	END POINT (N.E)	START STA, END STA
L-1	92.884	N20° 57' 46.01"E	(6538193.3138, 1816927.8928)	(6538226.5443, 1817014.6295)	48+05.44,48+98.33
L-2	81.784	N19° 43' 15.26"E	(6538226.5443, 1817014.6295)	(6538254.1414, 1817091.6167)	48+98.33,49+80.11
L-3	99.616	N17° 51' 12.33"E	(6538254.1414, 1817091.6167)	(6538284.6819, 1817186.4354)	49+80.11,50+79.73
L-4	22.419	N17° 55' 38.33"E	(6538284.6819, 1817186.4354)	(6538291.5827, 1817207.7660)	50+79.73,51+02.15
L-5	124.614	N17° 25' 27.98"E	(6538291.5827, 1817207.7660)	(6538328.8981, 1817326.6617)	51+02.15,52+26.76
L-6	88.782	N19° 05' 18.62"E	(6538328.8981, 1817326.6617)	(6538357.9324, 1817410.5622)	52+26.76,53+15.54
L-7	85.252	N18° 57' 39.35"E	(6538357.9324, 1817410.5622)	(6538385.6329, 1817491.1889)	53+15.54,54+00.79
L-8	96.813	N19° 49' 01.89"E	(6538385.6329, 1817491.1889)	(6538418.4546, 1817582.2690)	54+00.79,54+97.61
L-9	92.873	N19° 33' 20.32"E	(6538418.4546, 1817582.2690)	(6538449.5413, 1817669.7850)	54+97.61,55+90.48
L-10	85.394	N19° 05' 36.15"E	(6538449.5413, 1817669.7850)	(6538477.4745, 1817750.4813)	55+90.48,56+75.88
L-11	59.658	N18° 35' 48.12"E	(6538477.4745, 1817750.4813)	(6538496.4996, 1817807.0239)	56+75.88,57+35.53
L-12	58.520	N19° 36' 33.44"E	(6538496.4996, 1817807.0239)	(6538516.1390, 1817862.1497)	57+35.53,57+94.05
L-13	59.227	N19° 41' 40.98"E	(6538516.1390, 1817862.1497)	(6538536.0992, 1817917.9124)	57+94.05,58+53.28
L-14	58.145	N18° 58' 18.50"E	(6538536.0992, 1817917.9124)	(6538555.0022, 1817972.8987)	58+53.28,59+11.42
L-15	69.065	N19° 47' 34.14"E	(6538555.0022, 1817972.8987)	(6538578.3891, 1818037.8839)	59+11.42,59+80.49
L-16	58.774	N18° 38' 17.74"E	(6538578.3891, 1818037.8839)	(6538597.1730, 1818093.5758)	59+80.49,60+39.26
L-17	58.274	N19° 01' 59.27"E	(6538597.1730, 1818093.5758)	(6538616.1771, 1818148.6644)	60+39.26,60+97.54
L-18	69.003	N19° 41' 05.95"E	(6538616.1771, 1818148.6644)	(6538639.4208, 1818213.6351)	60+97.54,61+66.54
L-19	70.107	N19° 11' 40.41"E	(6538639.4208, 1818213.6351)	(6538662.4703, 1818279.8445)	61+66.54,62+36.65
L-20	96.003	N19° 06' 54.08"E	(6538662.4703, 1818279.8445)	(6538693.9080, 1818370.5544)	62+36.65,63+32.65
L-21	59.443	N19° 02' 17.45"E	(6538693.9080, 1818370.5544)	(6538713.2984, 1818426.7464)	63+32.65,63+92.10
L-22	56.131	N18° 45' 46.89"E	(6538713.2984, 1818426.7464)	(6538731.3532, 1818479.8945)	63+92.10,64+48.23
L-23	54.387	N19° 36' 19.56"E	(6538731.3532, 1818479.8945)	(6538749.6023, 1818531.1286)	64+48.23,65+02.61
L-24	65.323	N18° 57' 11.10"E	(6538749.6023, 1818531.1286)	(6538770.8188, 1818592.9100)	65+02.61,65+67.94
L-25	57.824	N19° 01' 38.23"E	(6538770.8188, 1818592.9100)	(6538789.6706, 1818647.5750)	65+67.94,66+25.76
L-26	58.441	N19° 15' 54.40"E	(6538789.6706, 1818647.5750)	(6538808.9525, 1818702.7432)	66+25.76,66+84.20
L-27	69.356	N19° 10' 46.99"E	(6538808.9525, 1818702.7432)	(6538831.7381, 1818768.2491)	66+84.20,67+53.56
L-28	46.798	N18° 56' 15.18"E	(6538831.7381, 1818768.2491)	(6538846.9259, 1818812.5145)	67+53.56,68+00.36
L-29	115.320	N19° 05' 11.15"E	(6538846.9259, 1818812.5145)	(6538884.6348, 1818921.4947)	68+00.36,69+15.68
L-30	58.120	N19° 08' 22.80"E	(6538884.6348, 1818921.4947)	(6538903.6909, 1818976.4023)	69+15.68,69+73.80
L-31	57.738	N19° 20' 14.36"E	(6538903.6909, 1818976.4023)	(6538922.8096, 1819030.8831)	69+73.80,70+31.53
L-32	59.323	N18° 39' 27.71"E	(6538922.8096, 1819030.8831)	(6538941.7878, 1819087.0884)	70+31.53,70+90.86
L-33	57.532	N18° 55' 04.30"E	(6538941.7878, 1819087.0884)	(6538960.4405, 1819141.5130)	70+90.86,71+48.39
L-34	49.207	N18° 58' 21.89"E	(6538960.4405, 1819141.5130)	(6538976.4386, 1819188.0468)	71+48.39,71+97.60
L-35	65.264	N19° 13' 10.03"E	(6538976.4386, 1819188.0468)	(6538997.9228, 1819249.6735)	71+97.60,72+62.86
L-36	58.459	N19° 03' 49.87"E	(6538997.9228, 1819249.6735)	(6539017.0166, 1819304.9260)	72+62.86,73+21.32
L-37	58.706	N19° 10' 32.02"E	(6539017.0166, 1819304.9260)	(6539036.2994, 1819360.3747)	73+21.32,73+80.03
L-38	56.789	N18° 49' 40.05"E	(6539036.2994, 1819360.3747)	(6539054.6266, 1819414.1250)	73+80.03,74+36.81
L-39	57.704	N18° 57' 45.81"E	(6539054.6266, 1819414.1250)	(6539073.3777, 1819468.6976)	74+36.81,74+94.52
L-40	81.231	N19° 21' 15.76"E	(6539073.3777, 1819468.6976)	(6539100.2984, 1819545.3379)	74+94.52,75+75.75
L-41	93.844	N19° 04' 57.73"E	(6539100.2984, 1819545.3379)	(6539130.9792, 1819634.0251)	75+75.75,76+69.59
L-42	98.625	N19° 40' 23.51"E	(6539130.9792, 1819634.0251)	(6539164.1819, 1819726.8935)	76+69.59,77+68.22
L-43	78.283	N26° 44' 02.51"E	(6539164.1819, 1819726.8935)	(6539199.3973, 1819796.8080)	77+68.22,78+46.50
L-44	597.286	N18° 52' 40.56"E	(6539199.3973, 1819796.8080)	(6539392.6508, 1820361.9657)	78+46.50,84+43.79
L-45	558.106	N21° 35' 07.60"E	(6539392.6508, 1820361.9657)	(6539597.9717, 1820880.9321)	84+43.79,90+01.89

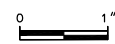
STEEL SHEET PILE CUTOFF WALL OFFSET (SEE NOTE 1)		
STATION	OFFSET (FT)	OFFSET SIDE
52+44.9	W 10.0	SGCSG
53+00	W 10.0	SGCSG
54+00	W 9.6	SGCSG
55+00	W 10.0	SGCSG
56+00	W 11.2	SGCSG
57+00	W 10.7	SGCSG
58+00	W 10.8	SGCSG
59+00	W 11.0	SGCSG
60+00	W 11.4	SGCSG
61+00	W 11.0	SGCSG
62+00	W 11.5	SGCSG
63+00	W 11.4	SGCSG
64+00	E 2.7	SGR
65+00	E 2.6	SGR
66+00	E 3.0	SGR
67+00	E 3.0	SGR
68+00	E 3.3	SGR
69+00	E 3.5	SGR
70+00	E 3.5	SGR
71+00	E 4.1	SGR
72+00	E 4.5	SGR
73+00	E 4.6	SGR
74+00	E 4.8	SGR
75+00	E 5.3	SGR
76+00	E 5.2	SGR
77+00	E 5.1	SGR
78+00	E 1.3	SGR
79+00	W 3.0	SGCSG
80+00	W 1.5	SGCSG
81+00	0.0	-
82+00	0.0	-
82+98	0.0	-

STAGING AREA (SEE NOTE 3)	POINT #	NORTHING	EASTING
A	1	1820382.85	6538773.96
	2	1820471.48	6538844.49
	3	1820438.22	6538904.56
	4	1820342.92	6538826.40
B	1	1819800.96	6539025.16
	2	1819881.96	6539047.88
	3	1819870.26	6539083.34
	4	1819791.36	6539062.13
C	1	1820031.68	6539036.34
	2	1820058.47	6539042.03
	3	1820018.91	6539191.63
	4	1819989.08	6539170.22
D	1	1819997.70	6539235.11
	2	1820096.41	6539250.56
	3	1820085.84	6539286.41
	4	1819980.95	6539249.79
E	1	1820545.82	6539338.81
	2	1820621.12	6539362.03
	3	1820600.48	6539437.84
	4	1820522.72	6539415.61

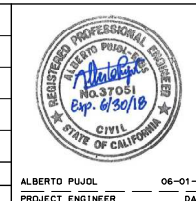
DATE 06-01-18  
 REVIEWED BY T. KELLER  
 CADD PROJECT FILE NAME  
 CHECKER A. PUJOL  
 DESIGNER L. SANSONE  
 DRAFTER I. RAWLINGS

**NOTES:**

- CUTOFF WALL OFFSET ESTABLISHED FROM CONTROL LINE TO CUTOFF WALL CENTERLINE.
- THE MINIMUM DISTANCE BETWEEN THE CUTOFF WALL CENTERLINE AND THE CENTERLINE OF THE SJWRRP RCP OUTFALL SHALL BE 9 FT ON THE SGCSG SIDE AND 12 FT ON THE SGR SIDE AS SHOWN ON SHEETS 15 TO 17. WHERE THERE IS A CONFLICT BETWEEN THE OFFSET AND MINIMUM CLEAR DISTANCE, THE MINIMUM CLEAR DISTANCE SHALL GOVERN EXCEPT NORTH OF STATION 79+00 OR UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- STAGING AREAS ARE SHOWN IN SHT 6 AND 9.

Attention:  
  
 If this scale bar does not measure 1" then drawing is not original scale.

DATE	MK	DESCRIPTION
REVISIONS		



COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

SAN GABRIEL COASTAL SPREADING GROUNDS  
 LEVEE RETROFIT PROJECT  
 CONTROL LINE, STEEL SHEET PILE  
 CUTOFF WALL ALIGNMENT AND STAGING AREA  
 TABLES

ALBERTO PUJOL PROJECT ENGINEER 06-01-18 DATE

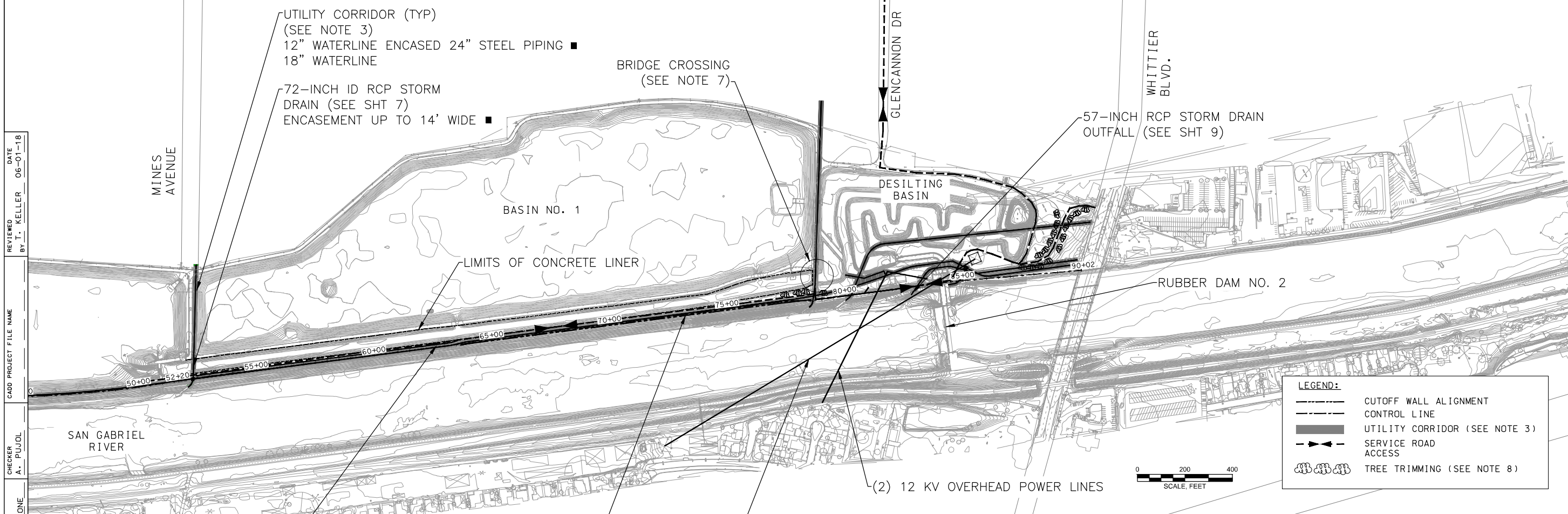
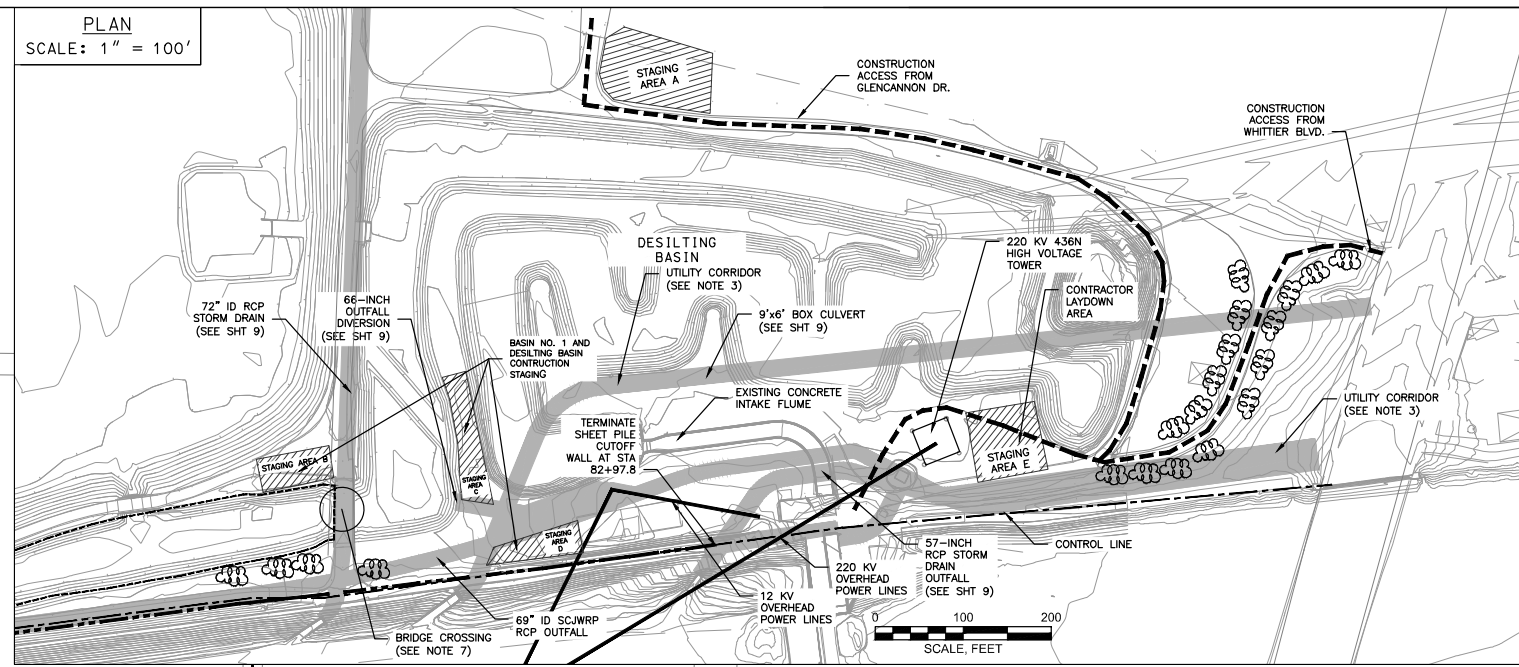
FCC0001292 | EF11616002 | DWG 6-D231.1-18 | SHEET 5 OF 19

PLAN  
SCALE: 1" = 200'

**NOTES:**

1. THE UTILITY LOCATIONS SHOWN ON THIS DRAWING ARE BASED ON TRANSFER OF INFORMATION FROM RECORD DRAWINGS, AND ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTHS OF THE SJCWRP RCP OUTFALL AND STORM DRAIN CROSSINGS AS SPECIFIED IN THE SPECIAL PROVISIONS.
2. PROTECT ALL UTILITIES.
3. EQUIPMENT WITHIN THE UTILITY CORRIDORS SHALL BE LIMITED TO ACHIEVE NO MORE THAN AASHTO H-20/HS-20 LOADING CONDITIONS AT THE DEPTH OF THE EXISTING UTILITIES.
4. THE CONTRACTOR SHALL PREPARE AN INFORMATION SUBMITTAL FOR REVIEW BY THE ENGINEER FOR ALL CONSTRUCTION EQUIPMENT TO BE USED WITHIN UTILITY CORRIDORS IN ACCORDANCE WITH SPECIAL PROVISION 6.
5. THE CONTRACTOR SHALL STAGE AND STORE MATERIALS ONLY IN THE DESIGNATED CONTRACTOR LAYDOWN AND STAGING AREAS.
6. NO STAGING OR ACCESS WILL BE PERMITTED IN THE SPREADING GROUND BASINS, DESILTING BASIN, SAN GABRIEL RIVER, RIPRAP SLOPE AREAS, AND SPREADING GROUND SLOPE AREAS.
7. VEHICLE AND EQUIPMENT LOADS ON THE BRIDGE CROSSING OVER THE DISTRIBUTION CANAL ARE NOT PERMITTED.
8. TREE TRIMMING IN UTILITY CORRIDOR AREAS WILL BE PERFORMED BY THE AGENCY.

PLAN  
SCALE: 1" = 100'



DATE 06-01-18  
REVIEWED BY T. KELLER  
CADD PROJECT FILE NAME  
CHECKER A. PUJOL  
DESIGNER L. SANSONE  
DRAFTER I. RAWLINGS

**LEGEND:**

- CUTOFF WALL ALIGNMENT
- CONTROL LINE
- UTILITY CORRIDOR (SEE NOTE 3)
- SERVICE ROAD ACCESS
- TREE TRIMMING (SEE NOTE 8)

Attention:

If this scale bar does not measure 1" then drawing is not original scale.

DATE	MK	DESCRIPTION
12/17/2021		AS BUILT LISTED PIPES ENCOUNTERED IN UTILITY CORRIDOR 1
		REVISIONS



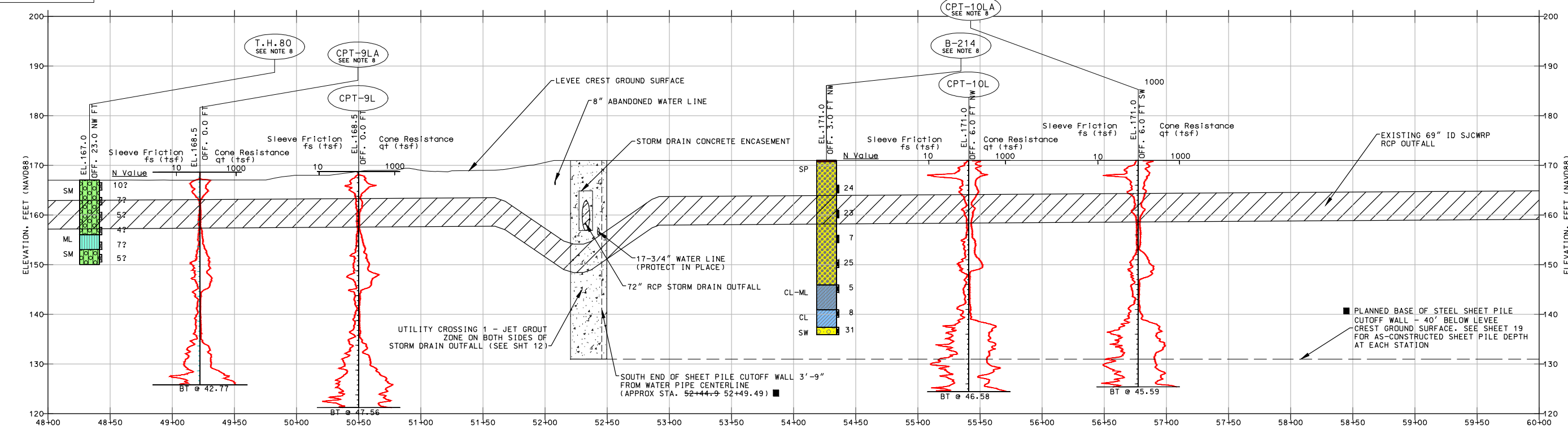
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

SAN GABRIEL COASTAL SPREADING GROUNDS  
LEVEE RETROFIT PROJECT

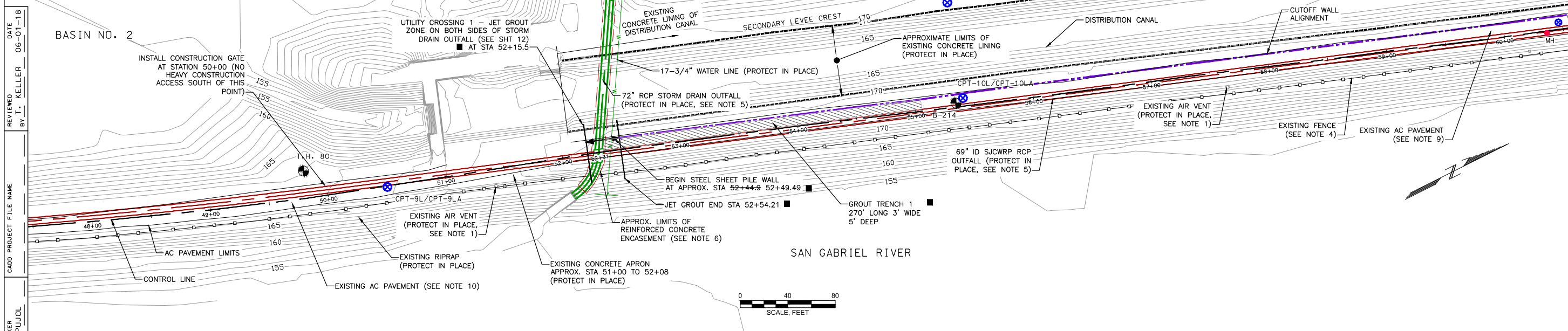
EXISTING UTILITIES, GENERAL PLAN AND  
CONSTRUCTION ACCESS AND STAGING

FCC0001292 EF11616002 DWG 6-D231.1-18 SHEET 6 OF 19

**PROFILE**  
 SCALE: HOR. 1" = 40'  
 VERT. 1" = 10'



**PLAN**  
 SCALE: 1" = 40'

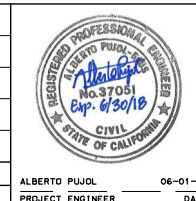


**NOTES:**

1. THE AIR VENT AND 15" PVC LATERAL CONNECTION TO THE SJCWRP RCP OUTFALL ARE TO BE PROTECTED IN PLACE.
2. EXPLORATION ELEVATIONS ARE ESTIMATED FROM EXISTING TOPOGRAPHIC DATA TO THE NEAREST 0.5 FT.
3. PROTECT TREES AND VEGETATION IN PLACE.
4. RESTORE FENCE ON RIVER SIDE OF LEVEE THAT REQUIRES TEMPORARY REMOVAL FOR CONSTRUCTION EQUIPMENT ACCESS DURING CONSTRUCTION.
5. REFER TO SHT 6, NOTE 3 FOR EQUIPMENT LOADING RESTRICTIONS WITHIN UTILITY CORRIDORS.
6. RECORD DRAWINGS INDICATE THAT THE CONCRETE ENCASEMENT IS 6" IN THICKNESS BELOW THE PIPE INVERT, A MINIMUM OF 10" COVER AROUND THE SIDES OF THE PIPE AND 1'-4" OF COVER ABOVE THE CROWN OF THE PIPE.
7. N-VALUES ARE QUERIED WITH A "?" WHERE BLOW COUNT CORRECTIONS ARE UNCERTAIN.
8. DUE TO DRAWING SPACE CONSTRAINTS THE LOCATION OF THE LOCATION WHERE THE EXPLORATION WAS PERFORMED IS GRAPHICALLY INDICATED BY THE CALLOUT ABOVE THE STICK LOG. THE APPROXIMATE EXPLORATION LOCATIONS ARE SHOWN ON THE PLAN VIEW.
9. SEE SHEETS 10-13 FOR AC PAVEMENT REMOVAL AND REPLACEMENT ALONG CUTOFF WALL ALIGNMENT
10. PROTECT EXISTING AC PAVEMENT IN PLACE OUTSIDE OF CUTOFF WALL ALIGNMENT AND OUTSIDE OF ACCESS ROAD AREAS DESIGNATED FOR PAVEMENT REMOVAL AND REPLACEMENT.
11. REFER TO SHEET 19 FOR AS-CONSTRUCTED SHEET PILE DEPTHS.

Attention:  
 0 1"  
 If this scale bar does not measure 1" then drawing is not original scale.

DATE	MK	DESCRIPTION
12/17/2021		AS BUILT: ADDITION OF STATION AND NOTE REVISIONS: GROUT TRENCH 1



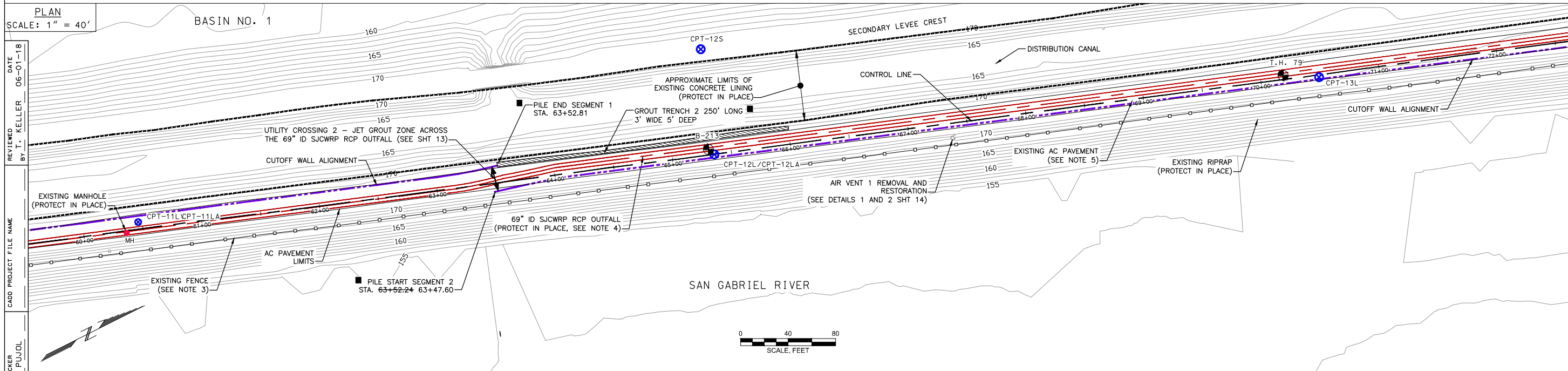
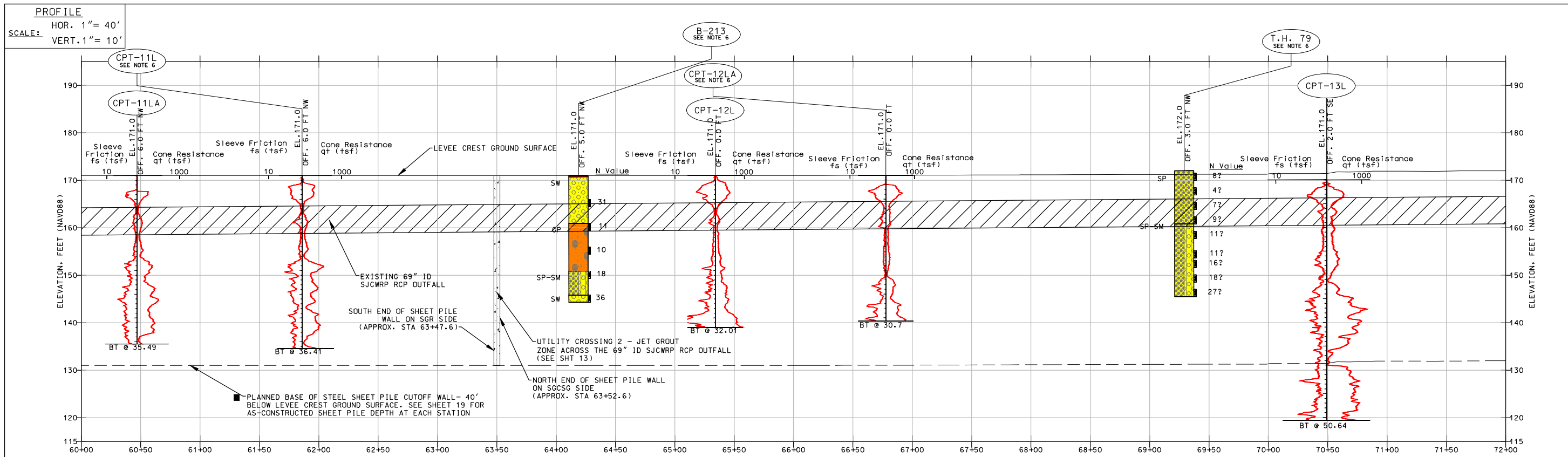
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

**SAN GABRIEL COASTAL SPREADING GROUNDS  
 LEVEE RETROFIT PROJECT**

LEVEE PLAN AND PROFILE  
 STA 48+00 TO 60+00

FCC0001292 | EF11616002 | DWG 6-D231.1-18 | SHEET 7 OF 19

DATE: 06-01-18  
 REVIEWED BY: T. KELLER  
 CADD PROJECT FILE NAME:  
 CHECKER: A. PUJOL  
 DESIGNER: L. SANSONE  
 DRAFTER: I. RAWLINGS



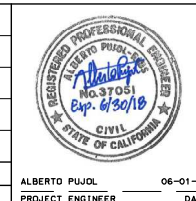
- NOTES:**
- EXPLORATION ELEVATIONS ARE ESTIMATED FROM EXISTING TOPOGRAPHIC DATA TO THE NEAREST 0.5 FT.
  - PROTECT TREES AND VEGETATION IN PLACE.
  - RESTORE FENCE ON RIVER SIDE OF LEVEE THAT REQUIRES TEMPORARY REMOVAL FOR CONSTRUCTION EQUIPMENT ACCESS DURING CONSTRUCTION.
  - REFER TO SHT 6, NOTE 3 FOR EQUIPMENT LOADING RESTRICTIONS WITHIN UTILITY CORRIDORS.
  - SEE SHEETS 10-13 FOR AC PAVEMENT REMOVAL AND REPLACEMENT ALONG CUTOFF WALL ALIGNMENT.
  - DUE TO DRAWING SPACE CONSTRAINTS THE STICK LOG IS OFFSET FROM THE LOCATION ON THE PROFILE WHERE THE EXPLORATION WAS PERFORMED. THE LOCATION WHERE THE EXPLORATION WAS PERFORMED IS GRAPHICALLY INDICATED BY THE CALLOUT ABOVE THE STICK LOG. THE APPROXIMATE EXPLORATION LOCATIONS ARE SHOWN ON THE PLAN VIEW.
  - REFER TO SHEET 19 FOR AS-CONSTRUCTED SHEET PILE DEPTHS

Attention:

0 1" SCALE

If this scale bar does not measure 1" then drawing is not original scale.

DATE	MK	DESCRIPTION
12/17/2021		AS BUILT: ADDITION OF STATIONS AND NOTE REVISIONS, GROUT TRENCH 2



COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

SAN GABRIEL COASTAL SPREADING GROUNDS LEVEE RETROFIT PROJECT

LEVEE PLAN AND PROFILE

STA 60+00 TO 72+00

FCC0001292 EF11616002 DWG 6-D231.1-18 SHEET 8 OF 19

REVIEWED DATE 06-01-18 BY T. KELLER

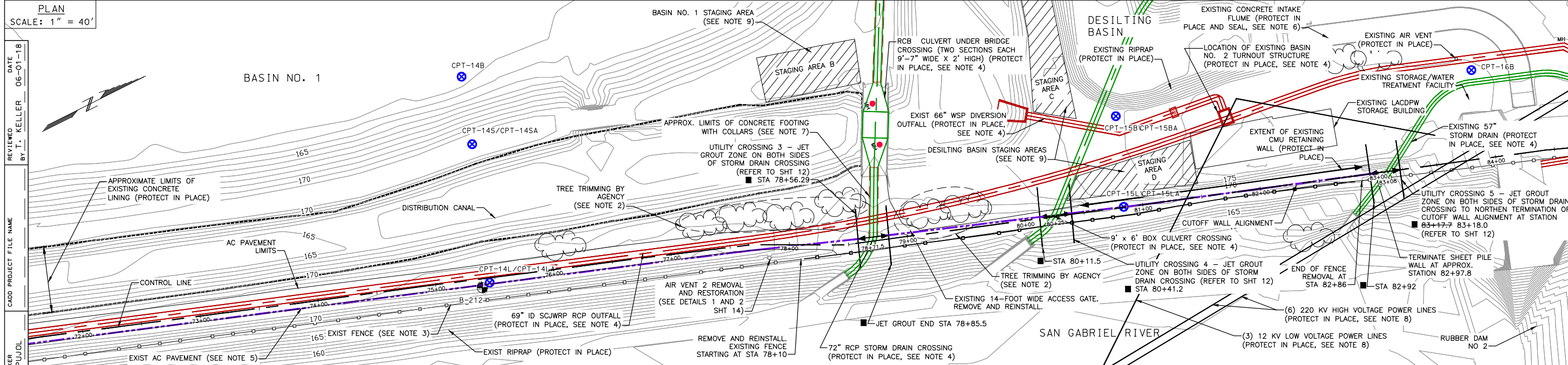
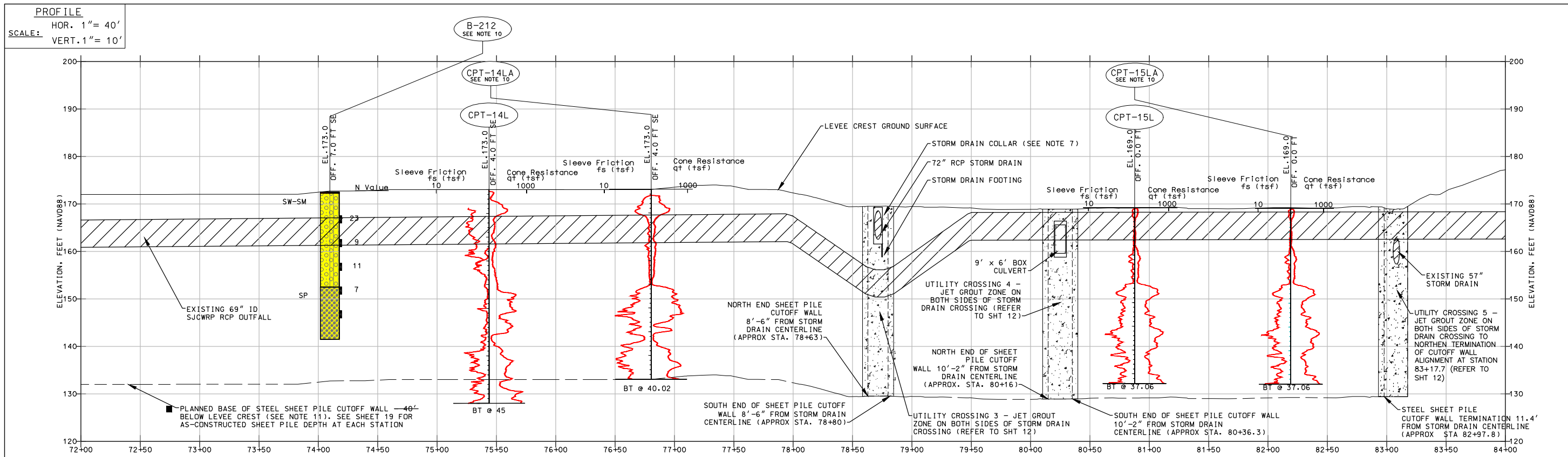
CADD PROJECT FILE NAME

CHECKER A. PUJOL

DESIGNER L. SANSONE

DRAFTER I. RAWLINGS





**NOTES:**

- EXPLORATION ELEVATIONS ARE ESTIMATED FROM EXISTING TOPOGRAPHIC DATA TO THE NEAREST 0.5 FT.
- PROTECT TREES AND VEGETATION IN PLACE.
- RESTORE FENCE ON RIVER SIDE OF LEVEE THAT REQUIRES TEMPORARY REMOVAL FOR CONSTRUCTION EQUIPMENT ACCESS DURING CONSTRUCTION.
- UTILITY CORRIDOR RESTRICTIONS PER NOTE 3 OF SHT 6 APPLY TO THE UNDERGROUND UTILITIES SHOWN ON THIS SHEET. HOWEVER, VEHICLE AND EQUIPMENT LOADS ON THE BRIDGE CROSSING OVER THE DISTRIBUTION CANAL SHALL NOT BE ALLOWED.
- SEE SHEETS 10-13 FOR AC PAVEMENT REMOVAL AND REPLACEMENT ALONG CUTOFF WALL ALIGNMENT. SEE SHEET 18 FOR AC PAVEMENT REMOVAL AND REPLACEMENT IN OTHER ACCESS ROAD AREAS.
- THE CONCRETE FLUME SHALL BE INSPECTED FOR CRACKS AND SEALED AS NEEDED. ALL CRACKS LARGER THAN 1/8-INCH IN WIDTH SHALL BE FILLED WITH ELASTOMERIC SEALANT, PER SECTION 201.3.4 TYPE "A" SEALANT OF THE STANDARD SPECIFICATIONS. THE SEALANT SHALL BE APPLIED PER SECTION 303-1.8.7, APPLICATION OF JOINT SEALANT OF THE STANDARD SPECIFICATIONS.
- RECORD DRAWING SHEET 14 FROM LACFD PROJECT NO. 565 INDICATES THAT THE 72" RCP STORM DRAIN IS UNDERLAIN BY A 12" THICK REINFORCED CONCRETE FOOTING AT APPROXIMATE LOCATIONS SHOWN. THERE IS A 4'-3" DEEP REINFORCED CONCRETE CUTOFF WALL ON THE NORTH SIDE OF THE FOOTING, AND THE PIPE IS ENCASED WITH 2' THICK REINFORCED CONCRETE COLLARS AT 16' CENTER TO CENTER SPACING.
- REFERENCE DRAWING DAC09-67-0025 FROM THE 1967 SAN GABRIEL RIVER IMPROVEMENT DRAWINGS INDICATES THE LOW WIRE ELEVATION OF THE 12 KV LOW VOLTAGE POWERLINES IS APPROXIMATELY AT EL. 211 FT (NAVD88 DATUM). THE LOW WIRE ELEVATION OF THE 220 KV POWERLINES IS APPROXIMATELY AT EL. 229 FT (NAVD88 DATUM). CONTRACTOR SHALL VERIFY THE HEIGHT OF POWERLINES WHERE THEY CROSS THE ACCESS ROUTES OF CONSTRUCTION EQUIPMENT. THE CONTRACTOR SHALL CONTACT SOUTHERN CALIFORNIA EDISON AT LEAST 40 DAYS PRIOR TO THE NEED FOR THE 12KV LOW VOLTAGE POWERLINES TO BE DE-ENERGIZED OR RELOCATED.
- REFER TO SHT 5 FOR STAGING AREA BOUNDARY COORDINATES TABLE.
- DUE TO DRAWING SPACE CONSTRAINTS THE STICK LOG IS OFFSET FROM THE LOCATION ON THE PROFILE WHERE THE EXPLORATION WAS PERFORMED. THE LOCATION WHERE THE EXPLORATION WAS PERFORMED IS GRAPHICALLY INDICATED BY THE CALLOUT ABOVE THE STICK LOG. THE APPROXIMATE EXPLORATION LOCATIONS ARE SHOWN ON THE PLAN VIEW.
- REFER TO SHEET 19 FOR AS-CONSTRUCTED SHEET PILE DEPTHS.

DATE: 06-01-18  
 REVIEWED BY: T. KELLER  
 CADD PROJECT FILE NAME:  
 CHECKER: A. PUJOL  
 DESIGNER: L. SANSONE  
 DRAFTER: I. RAWLINGS

Attention: If this scale bar does not measure 1" then drawing is not original scale.

DATE	MK	DESCRIPTION
12/17/2021		AS BUILT: STATION AND NOTE REVISIONS

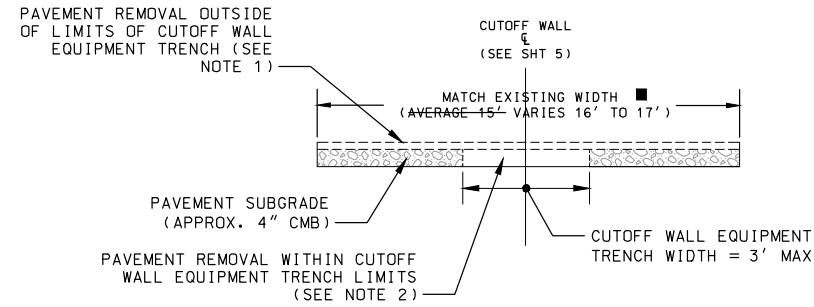
ALBERTO PUJOL  
 PROJECT ENGINEER  
 06-01-18  
 DATE

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

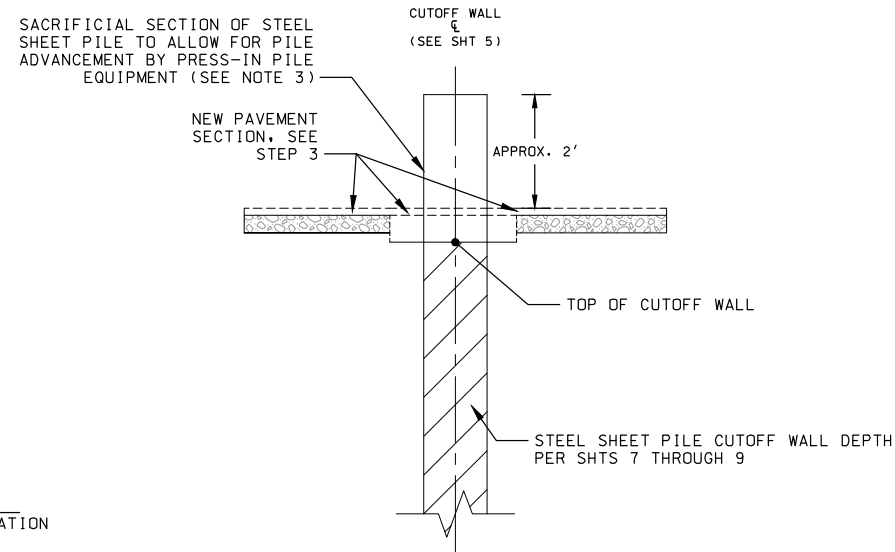
SAN GABRIEL COASTAL SPREADING GROUNDS  
 LEVEE RETROFIT PROJECT  
 LEVEE PLAN AND PROFILE  
 STA 72+00 TO 84+00

FCC0001292 EF11616002 DWG 6-D231.1-18 SHEET 9 OF 19

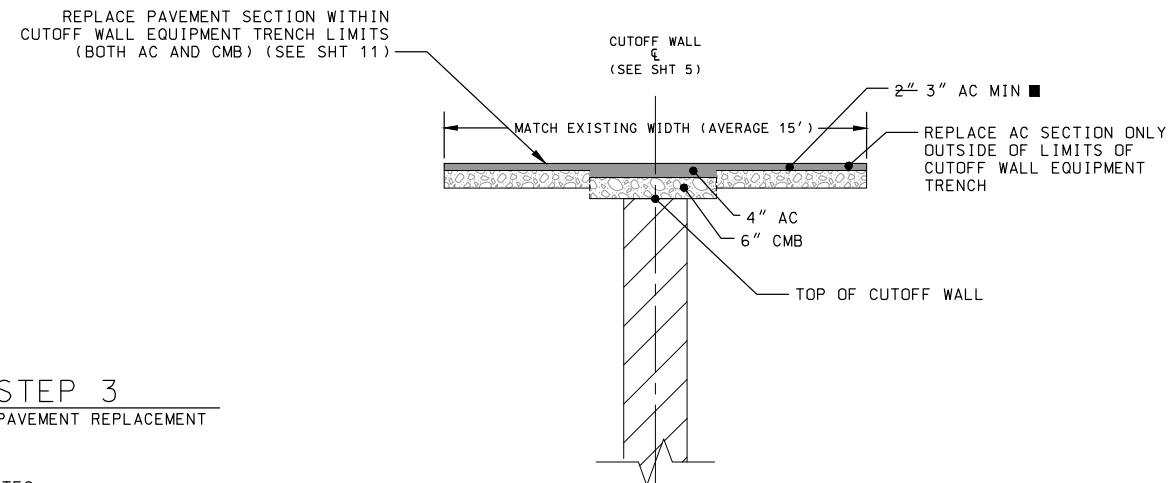
CUTOFF WALL CONSTRUCTION SEQUENCE SOUTH OF STATION 78+60



**STEP 1**  
PAVEMENT REMOVAL



**STEP 2**  
CUTOFF WALL INSTALLATION

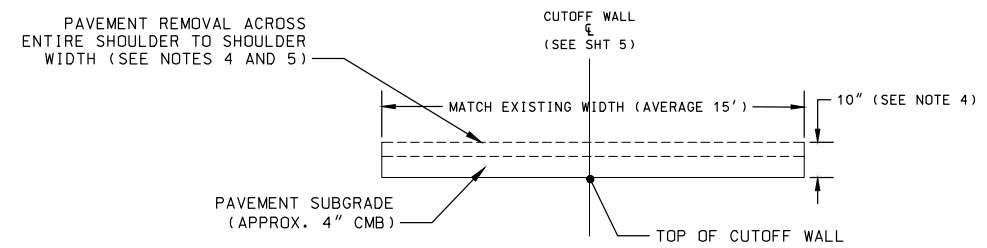


**STEP 3**  
PAVEMENT REPLACEMENT

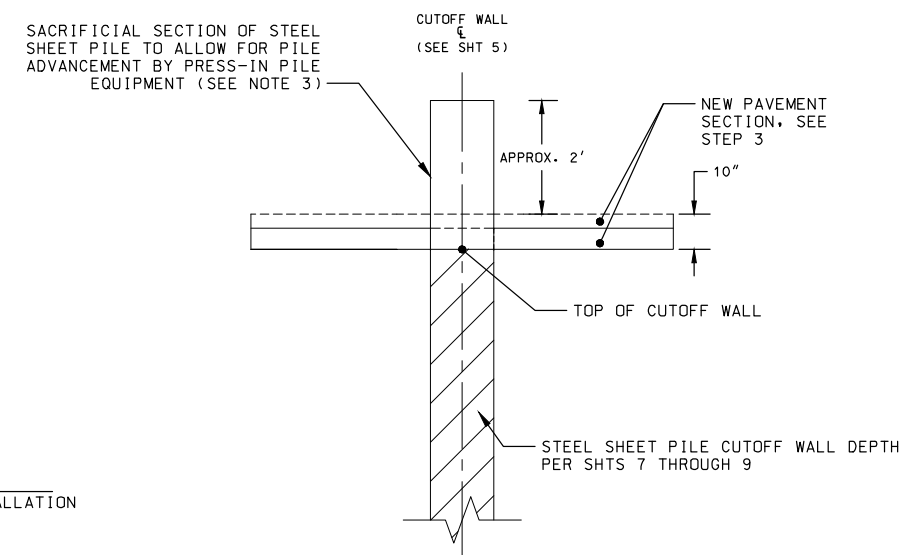
**NOTES:**

1. REMOVE AND DISPOSE OF EXISTING AC PAVEMENT SECTION FROM SHOULDER TO SHOULDER IN ACCORDANCE WITH SECTION AR, PART 3 OF THE SPECIAL PROVISIONS. REMOVE ONLY THE AC LAYER OF THE PAVEMENT IN ROADWAY AREAS OUTSIDE THE LIMITS OF THE CUTOFF WALL EQUIPMENT TRENCH.
2. REMOVE MATERIAL BELOW EXISTING PAVEMENT (AC, CMB, AND SUBGRADE) WITHIN EQUIPMENT TRENCH LIMITS SHOWN TO ALLOW FOR 10-INCH REPLACED PAVEMENT SECTION IN STEP 3.
3. REMOVE SACRIFICIAL SECTION OF CUTOFF WALL TO A MINIMUM OF 10" BELOW THE PAVEMENT SURFACE.
4. REMOVE EXISTING AC, CMB, AND SUBGRADE SHOWN TO ALLOW FOR 10" REPLACED PAVEMENT SECTION IN STEP 3.
5. SAW CUT AND REMOVE EXISTING 10" THICK CONCRETE SLAB SECTION WITHIN THE SHEET PILE EQUIPMENT TRENCH AND JET GROUT ZONE BETWEEN STATIONS 82+86 AND 83+17.7 TO ALLOW FOR AN 11" THICK REPLACEMENT CONCRETE SECTION. REFER TO SHEET 11, DETAIL 4. DISPOSE OF EXISTING CONCRETE SLAB IN ACCORDANCE WITH SECTION AR, PART 3 OF THE SPECIAL PROVISIONS.

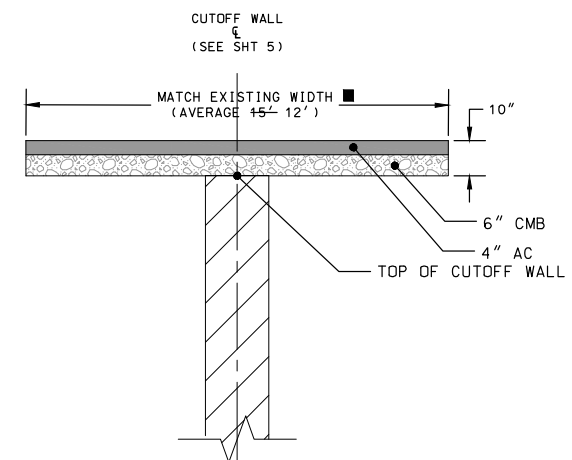
CUTOFF WALL CONSTRUCTION SEQUENCE NORTH OF STATION 78+60



**STEP 1**  
FULL DEPTH PAVEMENT AND SUBGRADE REMOVAL



**STEP 2**  
CUTOFF WALL INSTALLATION



**STEP 3**  
PAVEMENT REPLACEMENT ACROSS ENTIRE SHOULDER TO SHOULDER WIDTH  
■ IN BASIN AREA

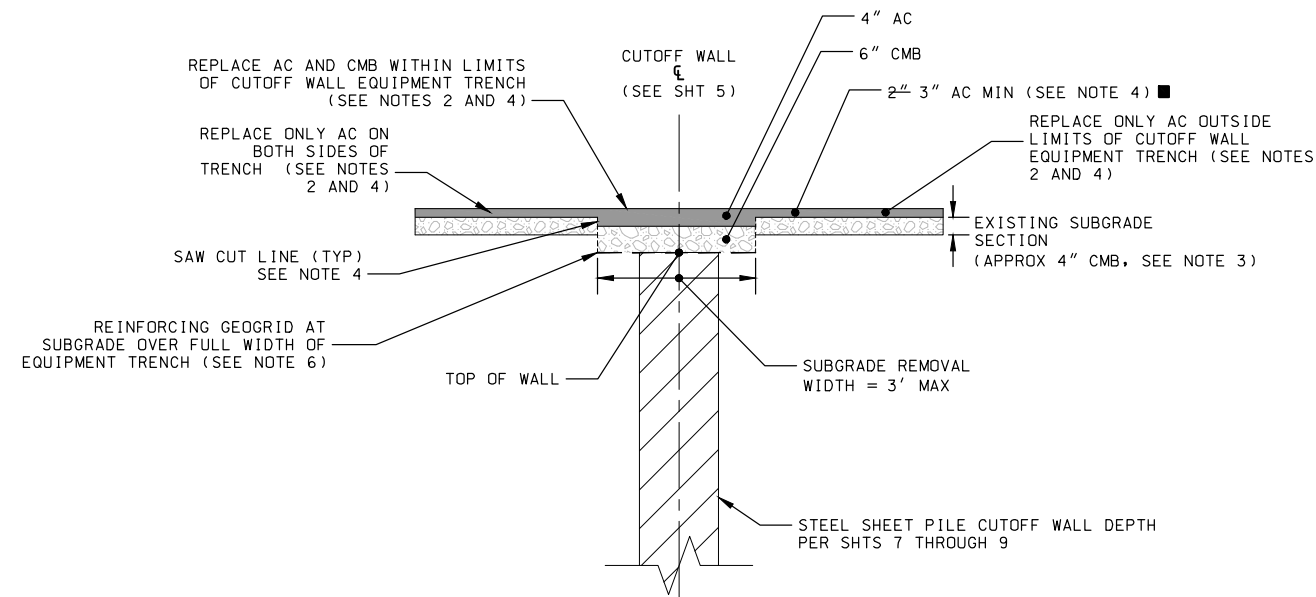
DATE 06-01-18  
REVIEWED BY T. KELLER  
CADD PROJECT FILE NAME  
CHECKER A. PUJOL  
DESIGNER L. SANSONE  
DRAFTER I. RAWLINGS

Attention:			
0 1"			
If this scale bar does not measure 1" then drawing is not original scale.			
DATE	MK	DESCRIPTION	
12/17/2021		AS BUILT PAVEMENT WIDTH AND THICKNESS	
REVISIONS			



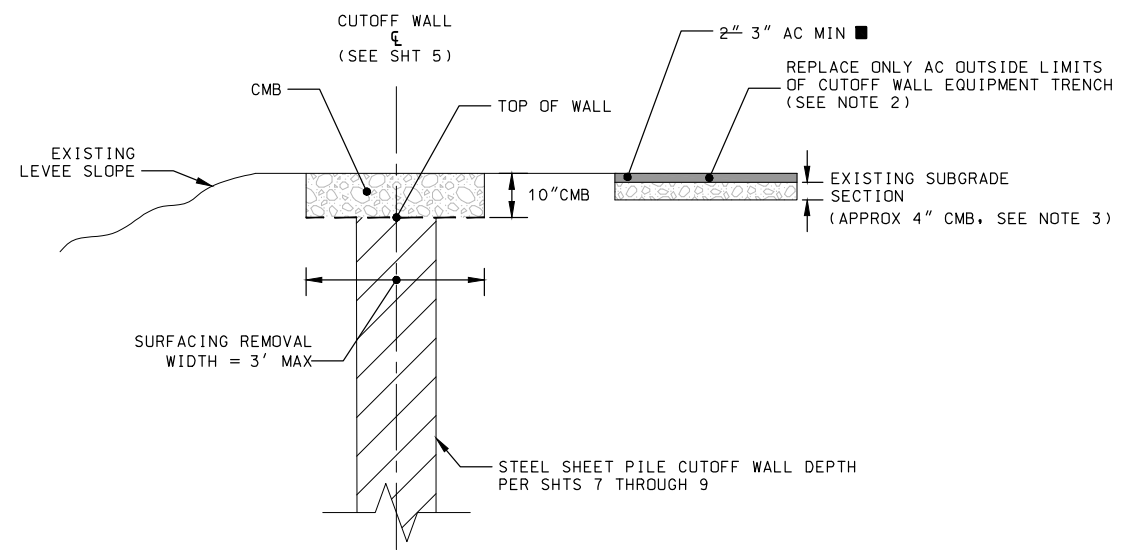
ALBERTO PUJOL PROJECT ENGINEER 06-01-18 DATE

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS			
SAN GABRIEL COASTAL SPREADING GROUNDS LEVEE RETROFIT PROJECT			
CUTOFF WALL CONSTRUCTION SEQUENCE			
FCC0001292	EF11616002	DWG 6-D231.1-18	SHEET 10 OF 19



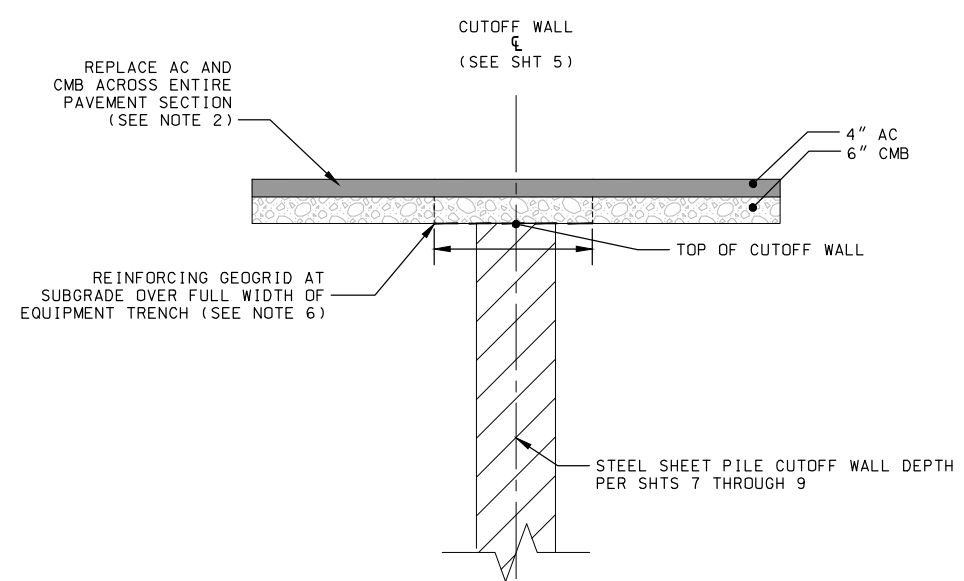
CUTOFF WALL IN AC PAVEMENT (FULL SECTION)-  
SOUTH OF STATION 78+60

**1** DETAIL  
SCALE: NTS



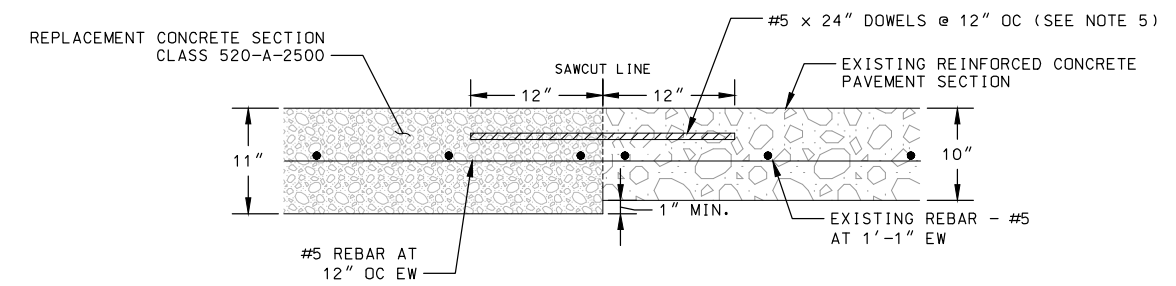
CUTOFF WALL IN UNPAVED AREA NEAR SHOULDER ON  
SGCSSG SIDE OF LEVEE - SOUTH OF STATION 78+60

**2** DETAIL  
SCALE: NTS



FULL DEPTH PAVEMENT SECTION REPLACEMENT - NORTH OF STA  
78+60 TO TERMINATION OF SHEET PILE WALL STA 82+98

**3** DETAIL  
SCALE: NTS



CONCRETE APRON REPLACEMENT-STA 82+86 TO 83+18

**4** DETAIL  
SCALE: NTS

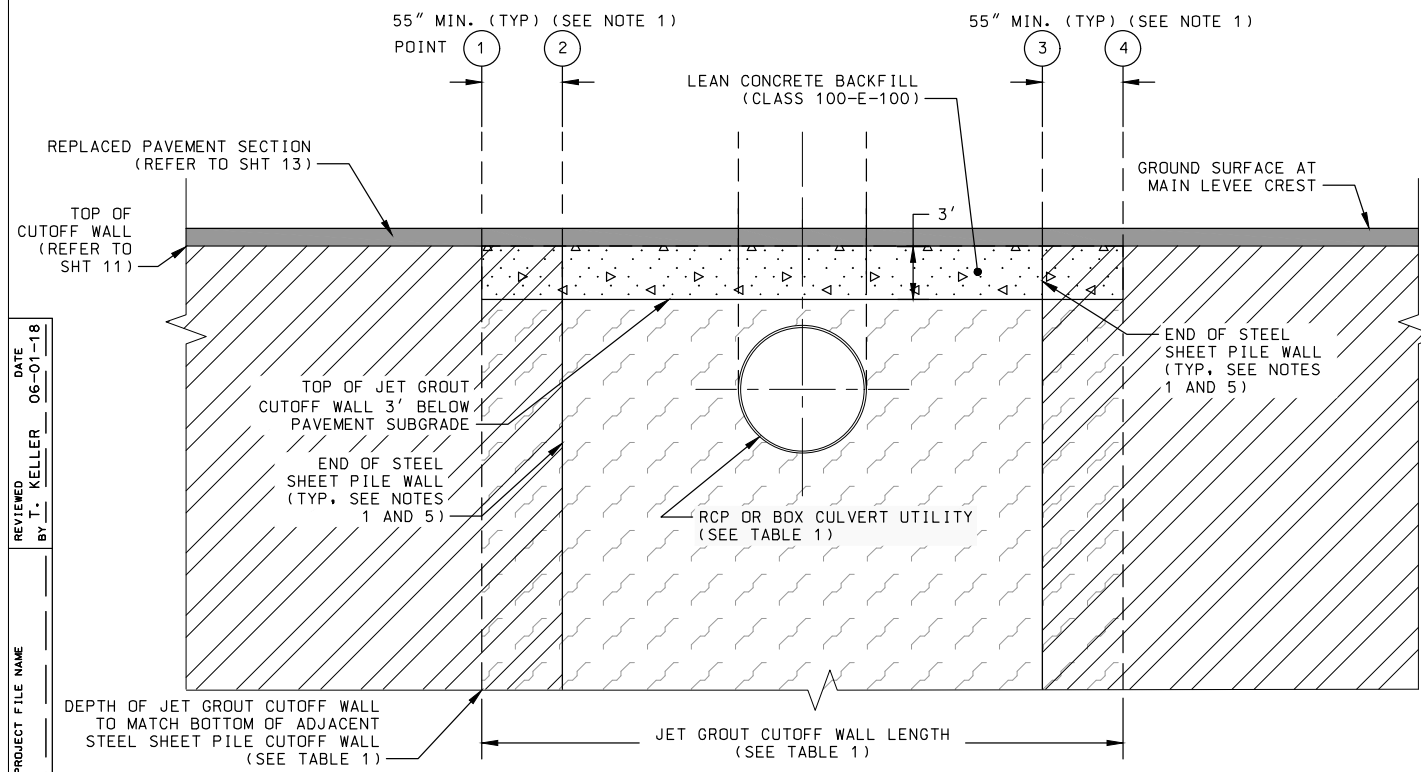
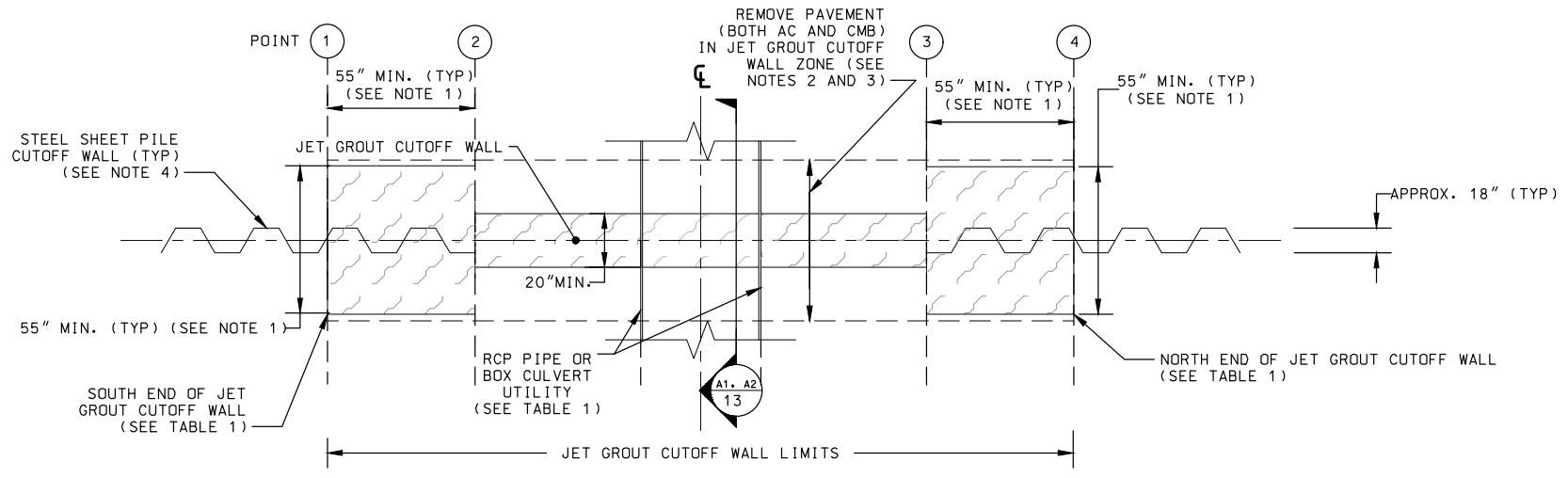
**NOTES:**

- SEE SHT 10 FOR CUTOFF WALL CONSTRUCTION SEQUENCING.
- RESTORATION OF PAVEMENT SURFACE AND SHOULDER AREAS SHALL BE IN ACCORDANCE WITH SPECIAL PROVISIONS SECTION AR, PART 3.
- PRESERVE THE EXISTING CMB SECTION OUTSIDE OF THE CUTOFF WALL EQUIPMENT TRENCH LIMITS.
- MATCH REMOVED PAVEMENT THICKNESS AS NOTED TO RESTORE EXISTING TOP OF PAVEMENT GRADES.
- A NON-SHRINK GROUT PER SECTION 201-7.2 OF THE STANDARD SPECIFICATIONS SHALL BE USED TO DOWEL THE REBAR INTO THE EXISTING CONCRETE.
- GEOGRID SHALL BE MULTI-AXIAL, TYPE R2 UNLESS OTHERWISE SHOWN ON PLANS.

DATE 06-01-18  
REVIEWED BY T. KELLER  
CADD PROJECT FILE NAME  
CHECKER A. PUJOL  
DESIGNER L. SANSONE  
DRAFTER I. RAWLINGS

Attention: 0 1" If this scale bar does not measure 1" then drawing is not original scale.	12/17/2021	AS BUILT+PAVEMENT THICKNESS		COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS				
	DATE	DESCRIPTION		SAN GABRIEL COASTAL SPREADING GROUNDS LEVEE RETROFIT PROJECT CUTOFF WALL TYPICAL SECTIONS AND DETAILS				
	REVISIONS		ALBERTO PUJOL PROJECT ENGINEER	06-01-18 DATE	FCC0001292	EF11616002	DWG 6-D231.1-18	SHEET 11 OF 19

1  
DETAIL  
SCALE: NTS



2  
DETAIL  
SCALE: NTS

- NOTES:
- MINIMUM OVERLAP WIDTH AND LENGTH OF JET GROUT IN TIE-IN ZONE TO STEEL SHEET PILE WALL BASED ON TWICE THE CHANNEL WIDTH OF AN INDIVIDUAL AZ-26 STEEL SHEET PILE SECTION. THE OVERLAP WIDTH AND LENGTH SHALL BE INCREASED IF A LARGER SHEET PILE SECTION IS USED FOR CONSTRUCTION.
  - REMOVE AND DISPOSE OF EXISTING AC AND CMB PAVEMENT SECTION AND SUBGRADE MATERIAL IN ACCORDANCE WITH SPECIAL PROVISIONS SECTION AR, PART 3.
  - REMOVE MATERIAL BELOW EXISTING PAVEMENT WITHIN JET GROUT CUTOFF WALL LIMITS TO ALLOW FOR A 3-FOOT THICK LEAN CONCRETE BACKFILL AND A 10-INCH REPLACED PAVEMENT SECTION PER SECTIONS A1 AND A2 ON SHEET 13.
  - JET GROUT CUTOFF WALL LENGTH INCLUDES A MINIMUM 55" OVERLAP WITH SHEET PILE WALL AT NORTH AND SOUTH ENDS.
  - INSTALL STEEL SHEET PILE CUTOFF WALL PRIOR TO PERFORMING JET-GROUTING.

TABLE 1 - JET GROUT DETAILS

UTILITY CROSSING NO.	UTILITY TYPE	UTILITY DEPTH APPROX. (FT. BGS)	JET GROUT WALL LIMITS AT CROSSING		PAVEMENT AND SUBGRADE RESTORATION	JET GROUT CUTOFF WALL LENGTH (FT.)	DEPTH OF JET GROUT CUTOFF WALL (FT. BGS)	REMARKS
			SOUTH END OF WALL	NORTH END OF WALL				
1	72" DIA. RCP AND 17-3/4" WATER LINE	6 TO THE TOP OF THE PIPE ENCASEMENT (SEE SHT 7)	52+20.5 52+15.5 POINT 2 DETAILS 1 AND 2	52+49.5 52+54.2 POINT 4 DETAILS 1 AND 2	SECTION A1 SHT 13	29+0 38.7	40	NORTH END OF JET GROUT CUTOFF WALL SHALL BE A MINIMUM OF 8'-4" FROM EDGE OF 17-3/4" WATER LINE. NO SHEET PILE TIE-IN AT SOUTH END OF JET GROUT WALL
2	69" DIA. SJCRWP RCP OUTFALL	6.2 TO THE TOP OF THE PIPE CROWN (SEE SHT 8)	63+47.6 63+25.2 SHT 13 DETAIL 1	63+52.2 63+52.8 SHT 13 DETAIL 1	SECTION B SHT 13	20+8 27.6	40	-
3	72" DIA. RCP	1 TO THE TOP OF THE CONCRETE COLLAR (SEE SHT 9)	78+58.4 78+56.3 POINT 1 DETAILS 1 AND 2	78+84.6 78+85.5 POINT 4 DETAILS 1 AND 2	SECTION A2 SHT 13	26+2 29.2	40	SEE NOTE 5
4	9' WIDE BY 6' HIGH BOX CULVERT	2.5 TO THE TOP OF THE RCB CULVERT (SEE SHT 9)	80+11.4 80+11.5 POINT 1 DETAILS 1 AND 2	80+40.9 80+41.2 POINT 4 DETAILS 1 AND 2	SECTION A2 SHT 13	29+5 29.7	40	SEE NOTE 5
5	57" DIA. RCP STORM DRAIN	5.5 TO THE TOP OF THE PIPE CROWN (SEE SHT 9)	82+93.1 82+92.0 POINT 1 DETAILS 1 AND 2	83+17.7 83+18.0 POINT 3 DETAILS 1 AND 2	SECTION A2 SHT 13	24+6 26.0	40	NO SHEET PILE TIE-IN AT NORTH END OF JET GROUT WALL

DATE 06-01-18  
REVIEWER T. KELLER  
BY T. KELLER  
CADD PROJECT FILE NAME  
CHECKER A. PUJOL  
DESIGNER L. SANSONE  
DRAFTER J. RAWLINGS

Attention:

0 1"

If this scale bar does not measure 1" then drawing is not original scale.

12/17/2021

AS BUILT: TABLE 1 - JET GROUT DETAILS STATIONS AND DIMENSIONS

DATE MK DESCRIPTION

REVISIONS



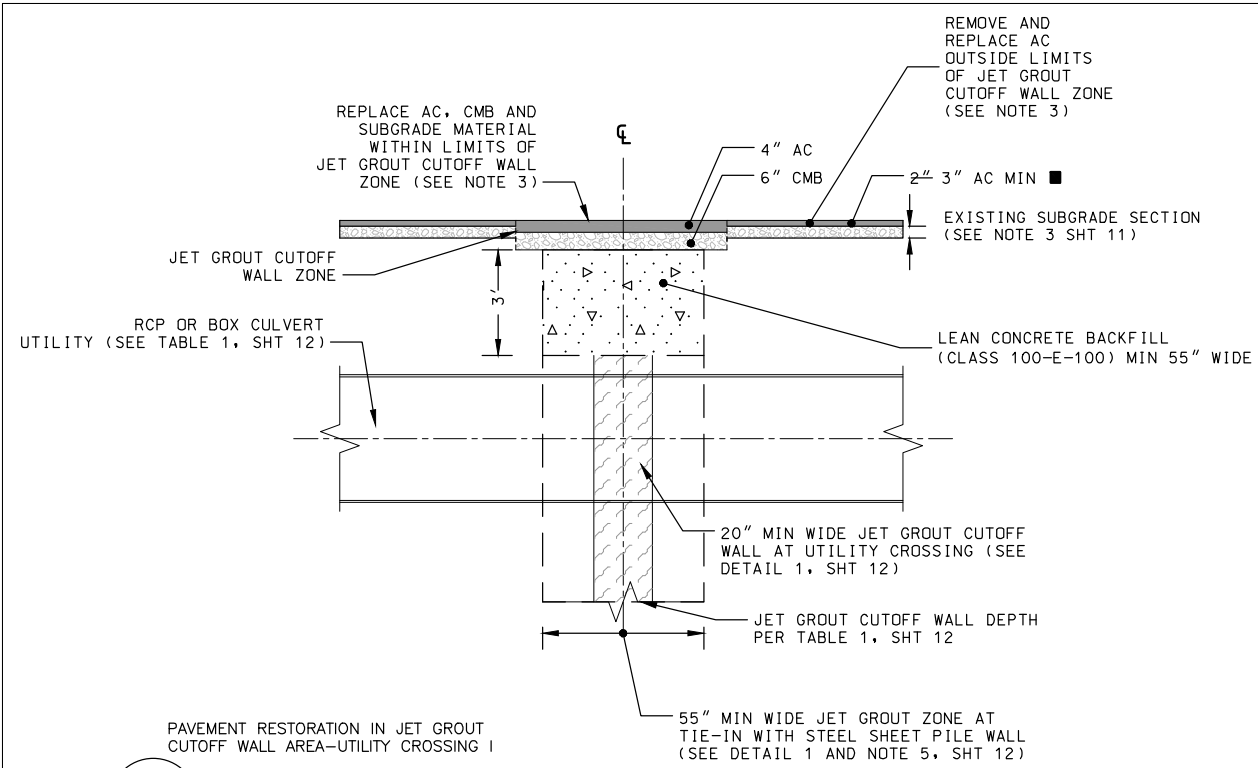
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

SAN GABRIEL COASTAL SPREADING GROUNDS  
LEVEE RETROFIT PROJECT  
PIPELINE/UTILITY CROSSING  
JET GROUTING DETAILS -  
STORM DRAIN CROSSINGS

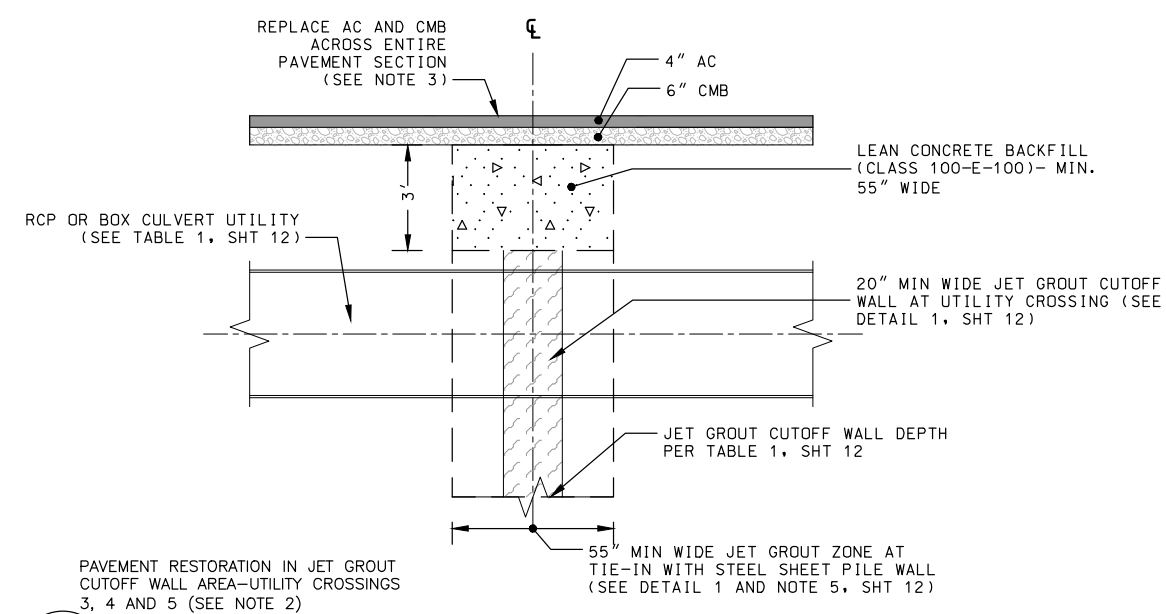
ALBERTO PUJOL PROJECT ENGINEER 06-01-18

FCC0001292 EF11616002 DWG 6-D231.1-18 SHEET 12 OF 19

DATE 06-01-18  
 REVIEWED BY T. KELLER  
 CADD PROJECT FILE NAME  
 CHECKER A. PUJOL  
 DESIGNER L. SANSONE  
 DRAFTER I. RAWLINGS

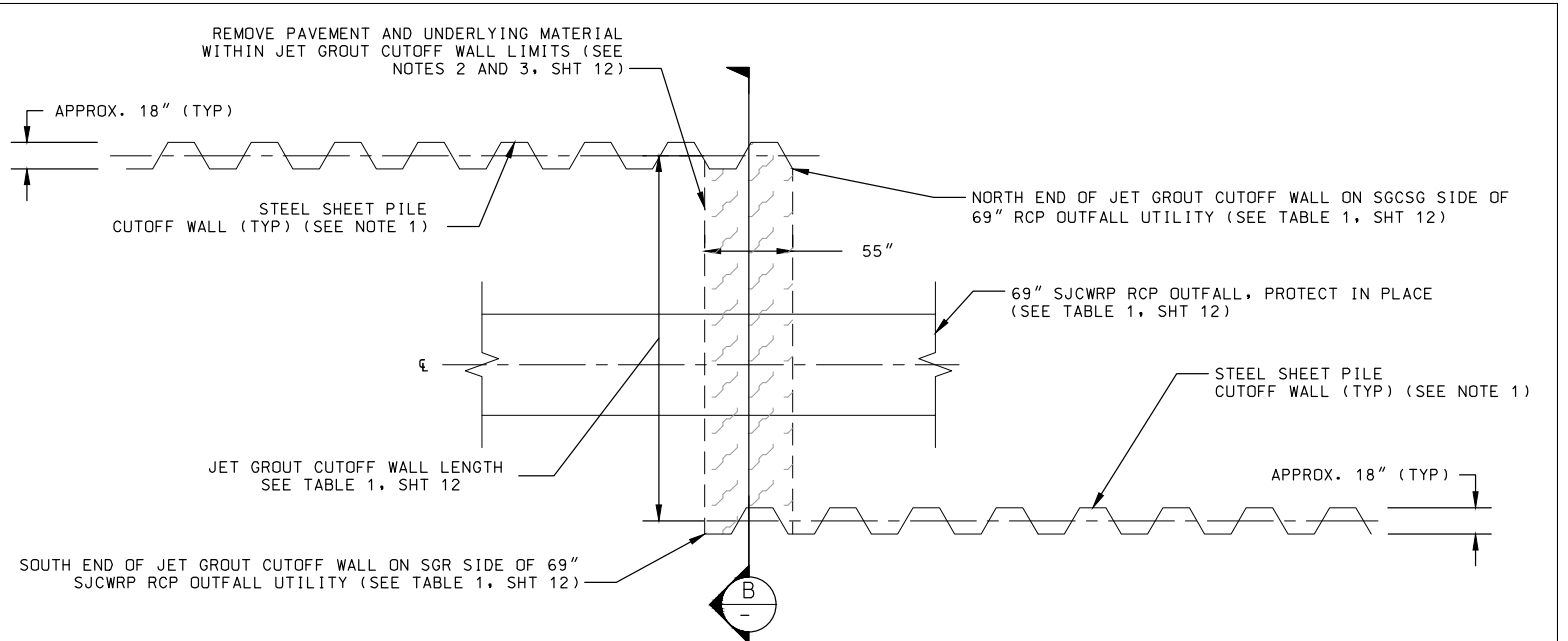


**A1** DETAIL  
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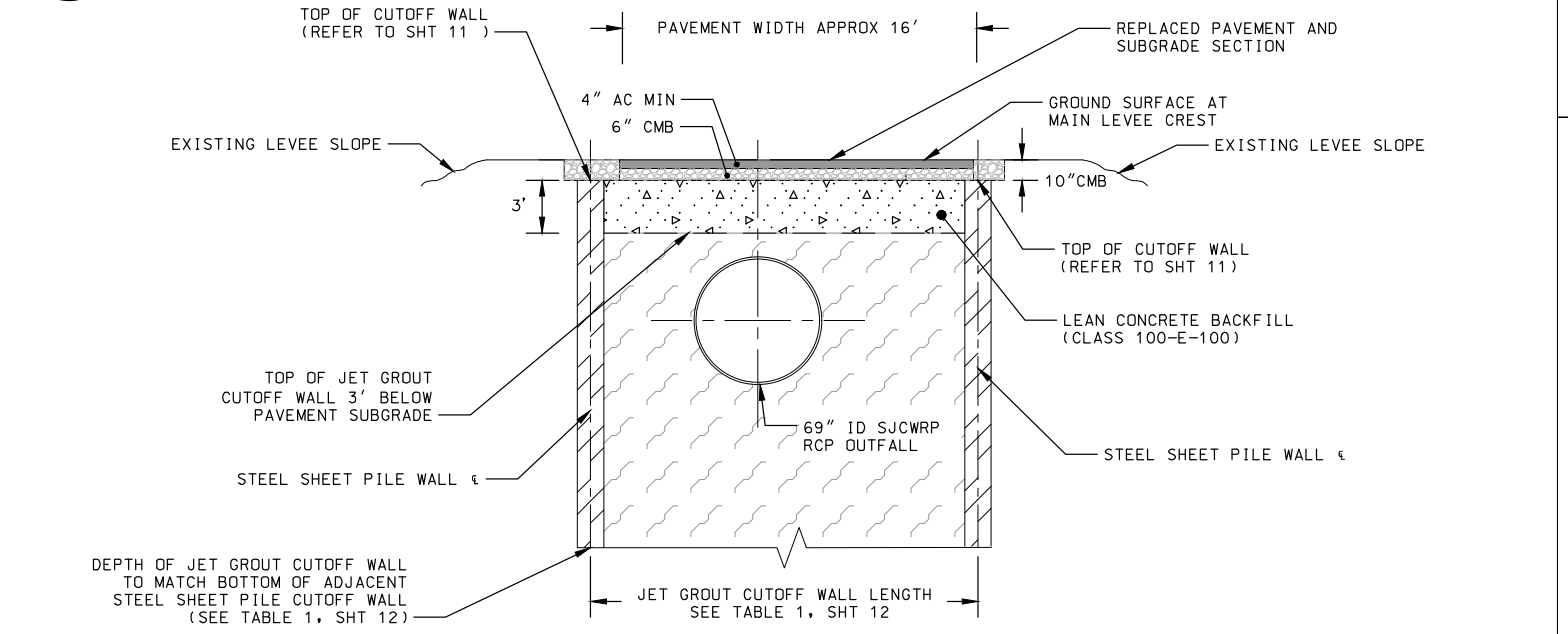


**A2** DETAIL  
 12 SCALE: NTS

- NOTES:**
1. INSTALL STEEL SHEET PILE CUTOFF WALL PRIOR TO PERFORMING JET-GROUTING.
  2. SAW CUT AND REMOVE EXISTING CONCRETE SLAB SECTION FOR CROSSING 5 BETWEEN STATIONS 82+93 AND 83+18 PRIOR TO JET GROUTING AND PAVEMENT RESTORATION. DISPOSE OF EXISTING CONCRETE SLAB IN ACCORDANCE WITH SECTION AR, PART 3 OF THE SPECIAL PROVISIONS.
  3. REPLACEMENT OF AC AND CMB SECTION SHALL BE MADE IN ACCORDANCE WITH SPECIAL PROVISIONS SECTION AR, PART 3.



**1** DETAIL  
 SCALE: NTS

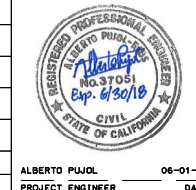


**B** SECTION  
 SCALE: NTS

**Attention:**

If this scale bar does not measure 1" then drawing is not original scale.

DATE	MK	DESCRIPTION
12/17/2021		AS BUILT+PAVEMENT THICKNESS
REVISIONS		

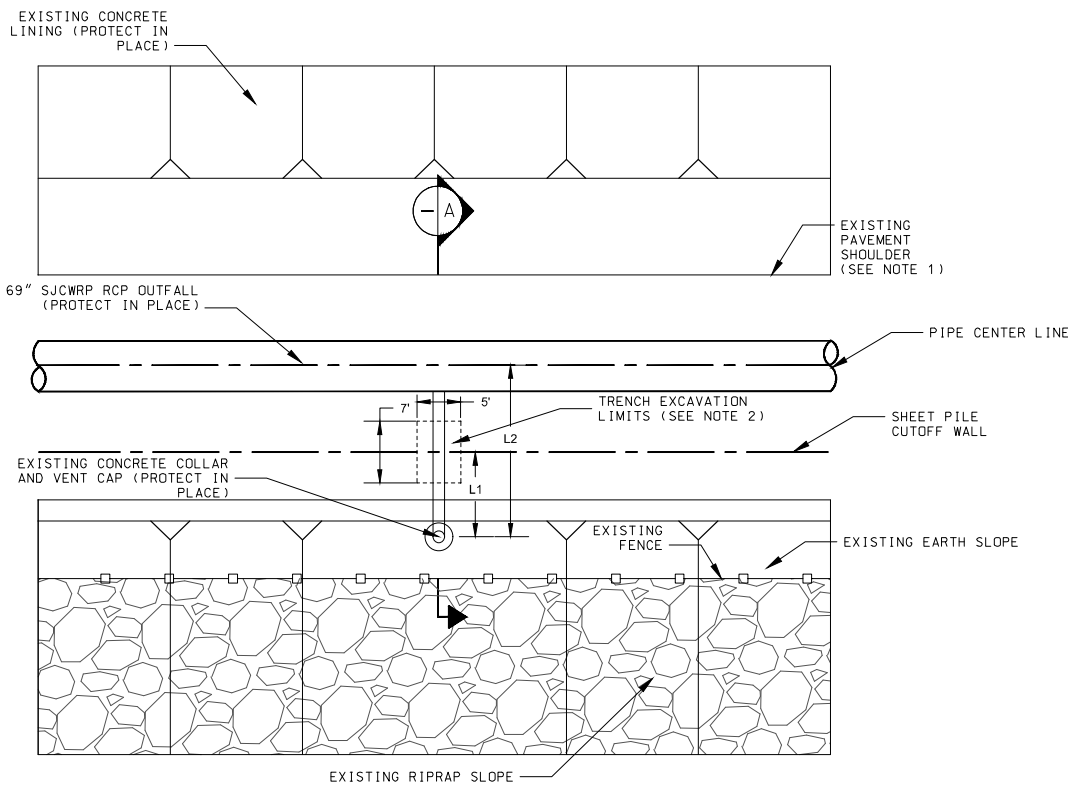


COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

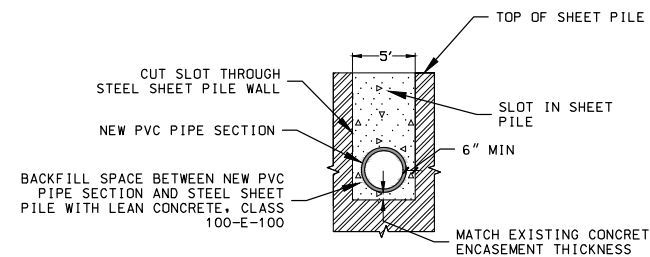
SAN GABRIEL COASTAL SPREADING GROUNDS  
 LEVEE RETROFIT PROJECT  
 PIPELINE/UTILITY CROSSING  
 JET GROUTING DETAILS -  
 SJCWRP OUTFALL CROSSING

ALBERTO PUJOL PROJECT ENGINEER 06-01-18 DATE

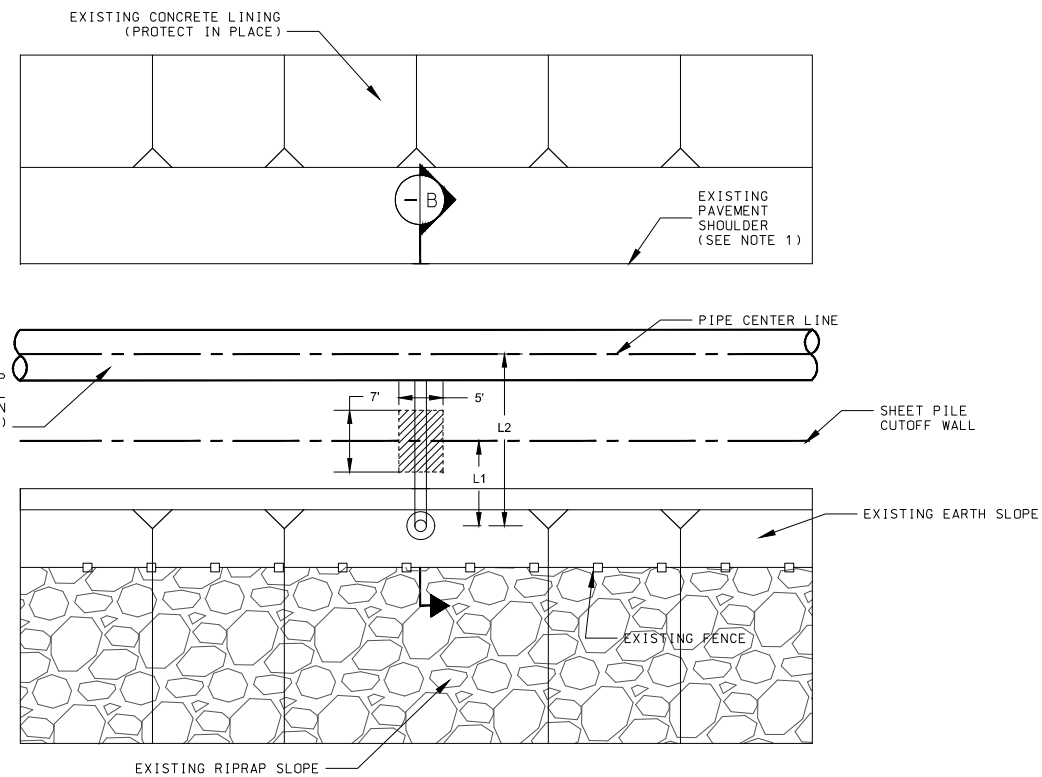
FCC0001292 EF11616002 DWG 6-D231.1-18 SHEET 13 OF 19



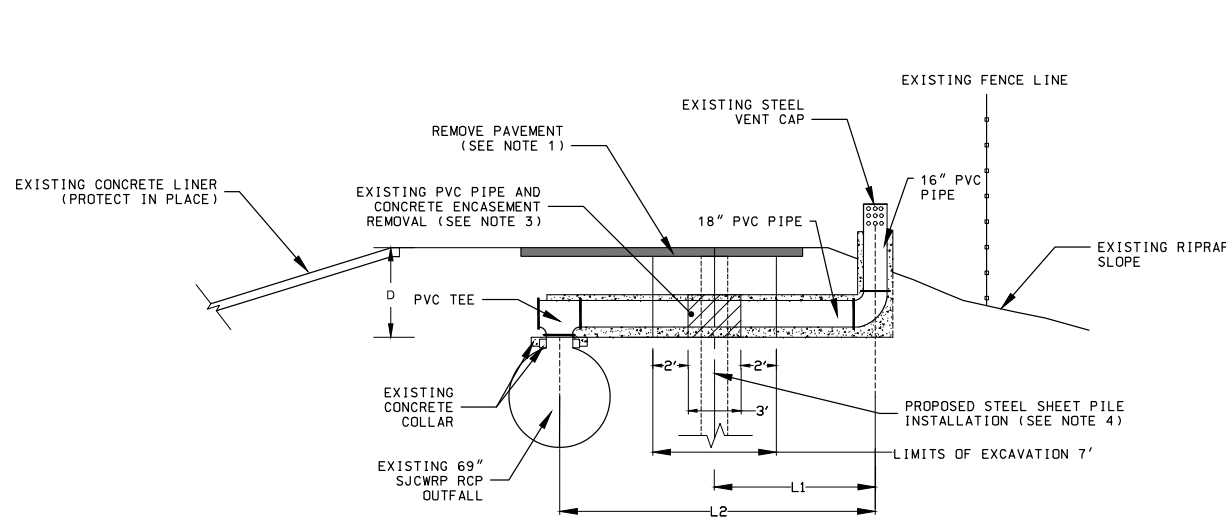
**1** DETAIL - EXISTING AIR VENT REMOVAL PLAN  
SCALE: NTS



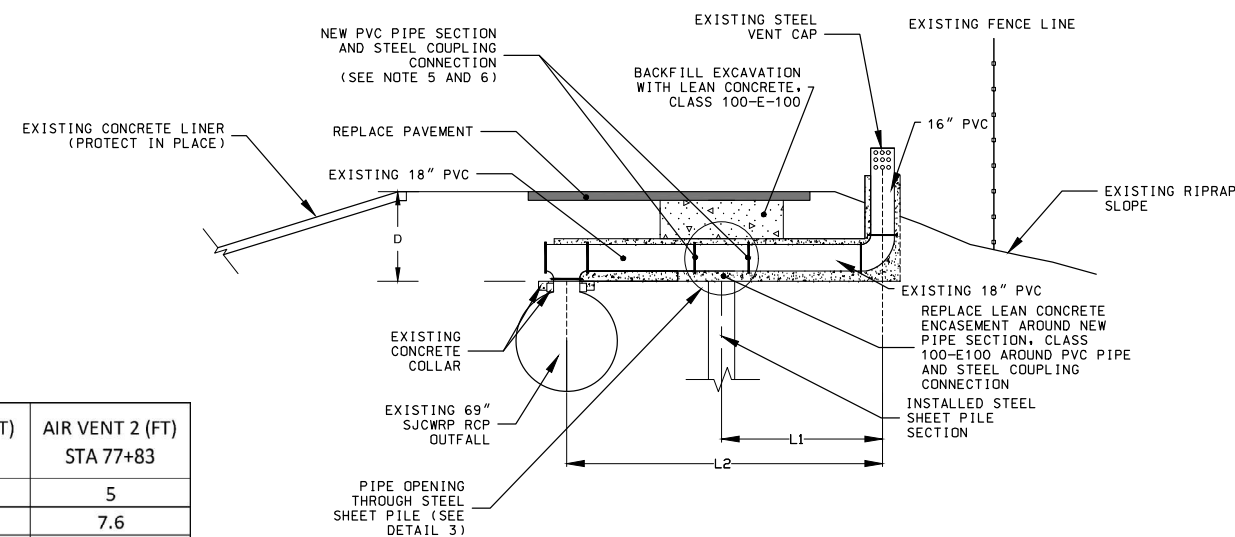
**3** DETAIL - STEEL SHEET PILE PERFORATION  
SCALE: NTS



**2** DETAIL - AIR VENT RESTORATION PLAN  
SCALE: NTS



**A** SECTION - EXISTING AIR VENT REMOVAL  
SCALE: NTS



**B** SECTION - AIR VENT RESTORATION  
SCALE: NTS

	AIR VENT 1 (FT) STA 67+40	AIR VENT 2 (FT) STA 77+83
D	5.5	5
L1	9.6	7.6
L2	18.6	17.3

DATE 06-01-18  
REVIEWED BY T. KELLER  
CADD PROJECT FILE NAME  
CHECKER A. PUJOL  
DESIGNER L. SANSONE  
DRAFTER J. RAWLINGS

**NOTES:**

1. REMOVE THE AC PAVEMENT FROM SHOULDER TO SHOULDER WIDTH. RECONSTRUCT PAVEMENT PER DETAILS ON SHEETS 10 AND 11.
2. TEMPORARY AND PERMANENT TRENCH EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 306-3 AND 306-4 OF THE STANDARD SPECIFICATIONS. PROVIDE SHORING PLAN IN ACCORDANCE WITH SECTION 3-8 OF THE STANDARD SPECIFICATIONS.
3. TEMPORARILY CAP IN-PLACE PVC PIPE ENDS ADJACENT TO PVC PIPE REMOVAL. CAPPING OF AIR VENT SHALL NOT BE PERFORMED UNTIL THE SHEET PILE WALL IS WITHIN 100 FEET OF THE AIR VENT. PROTECT ALL PORTIONS OF THE VENT STRUCTURE TO REMAIN IN PLACE.
4. TEMPORARILY BACKFILL AIR VENT EXCAVATION AS NECESSARY TO ALLOW FOR SHEET PILE INSTALLATION IN PVC PIPE REMOVAL ZONE. TEMPORARY BACKFILL SHALL CONFORM TO SECTION 217-2 AND SHALL BE PLACED ACCORDING TO SECTION 306-12 OF THE STANDARD SPECIFICATIONS. AFTER SHEET PILE INSTALLATION REMOVE ALL TEMPORARY BACKFILL AND INSTALL NEW PVC PIPE PER DETAIL 3.
5. REMOVE TEMPORARY CAPS AND JOIN NEW PVC PIPE TO EXISTING PVC PIPE END USING A ROMAC STYLE 400 BOLTED STEEL COUPLING, OR EQUIVALENT PRODUCT.
6. THOROUGHLY CLEAN ENTIRE VENT AFTER COMPLETION OF VENT RESTORATION AND PERFORM VIDEO SURVEY OF CLEANED VENT FOR SUBMITTAL WITH AS-BUILT RECORDS.
7. DETAILS OF THE EXISTING VENT ARE SHOWN ON RECORD DRAWING NO. 6-D208.10 OF THE SAN GABRIEL COASTAL BASIN, SPREADING GROUNDS BASIN MODIFICATION- PHASE II DRAWINGS, DATED JANUARY 1990.

**Attention:**

0 1"  
If this scale bar does not measure 1" then drawing is not original scale.

DATE	MK	DESCRIPTION
REVISIONS		

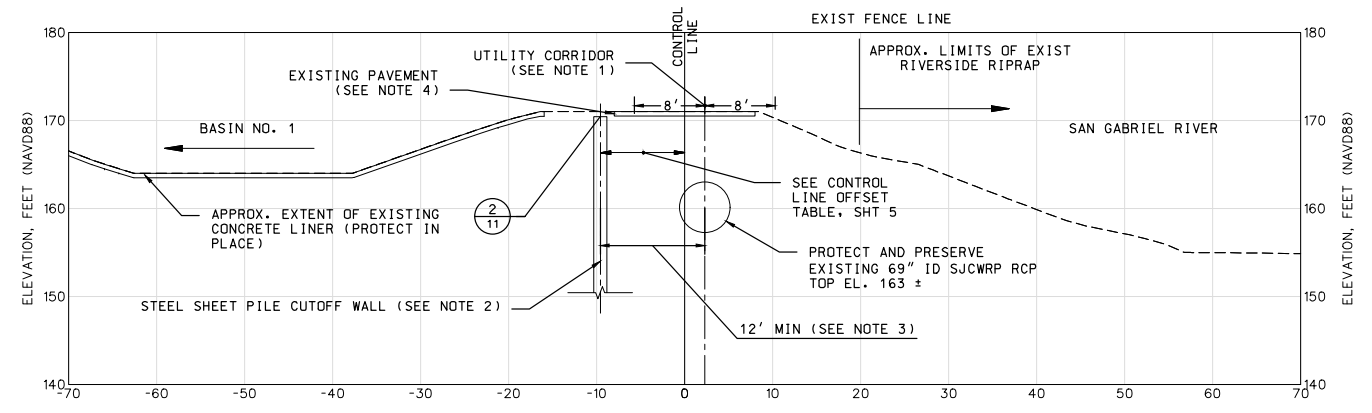


ALBERTO PUJOL PROJECT ENGINEER 06-01-18 DATE

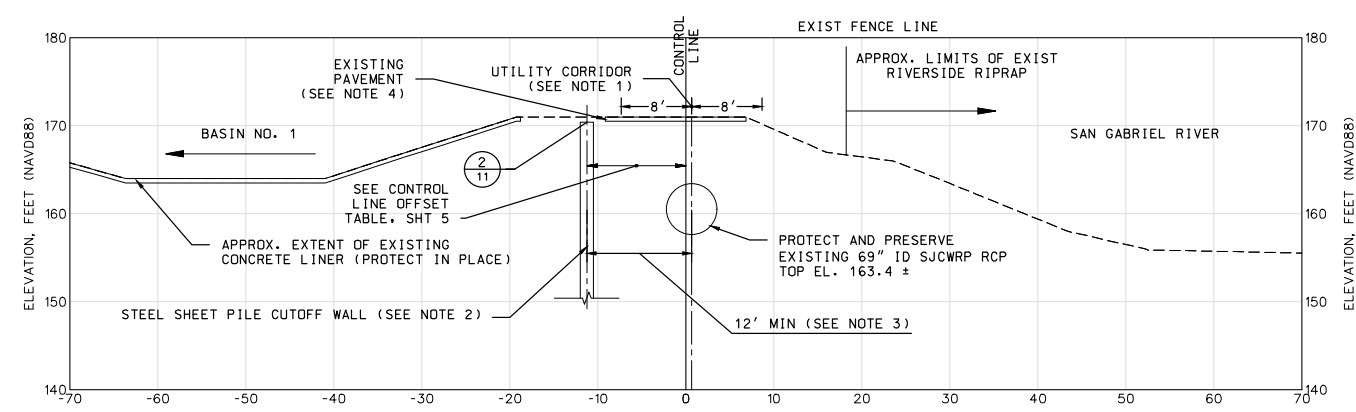
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

SAN GABRIEL COASTAL SPREADING GROUNDS  
LEVEE RETROFIT PROJECT  
SJCRWP OUTFALL VENT  
REMOVAL/REPLACEMENT DETAILS

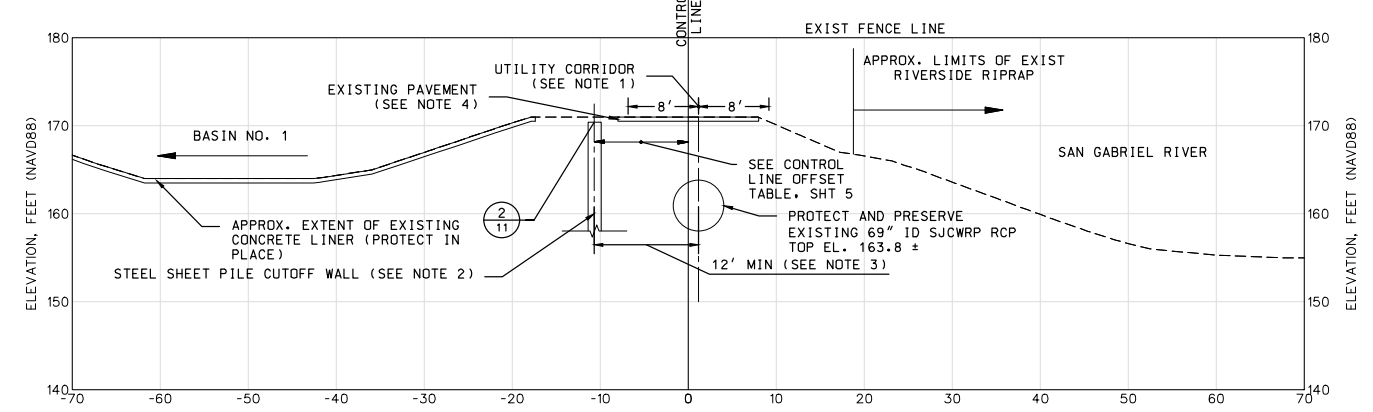
FCC0001292 EF11616002 DWG 6-D231.1-18 SHEET 14 OF 19



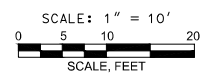
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BASIN NO. 1 - LOOKING NORTHWARD



STATION 56+00  
BASIN NO. 1 - LOOKING NORTHWARD



STATION 58+00  
BASIN NO. 1 - LOOKING NORTHWARD



NOTES:

1. 16-FOOT UTILITY CORRIDOR RESTRICTED TO EQUIPMENT LOADING SHOWN ON SHT 6, NOTE 3.
2. CUTOFF WALL TIP ELEVATION NOT SHOWN. SEE SHT 7 TO SHT 9 FOR DETAILS REFER TO SHEET 19 FOR AS-CONSTRUCTED SHEET PILE DEPTHS.
3. CUTOFF WALL CENTERLINE SHALL BE INSTALLED TO THE MINIMUM DISTANCE SHOWN IN THE CROSS SECTIONS FROM CENTERLINE OF THE EXISTING 72"/69" SJCWRP RCP OUTFALL PIPELINE WHERE NOTED ON THE PLANS.
4. SEE SHEETS 10 THROUGH 13 FOR AC PAVEMENT REMOVAL AND REPLACEMENT ALONG CUTOFF WALL ALIGNMENT. SEE SHEET 18 FOR AC PAVEMENT REMOVAL AND REPLACEMENT IN OTHER ACCESS ROAD AREAS.

DRAFTER I. RAWLINGS  
 DESIGNER L. SANSONE  
 CHECKER A. PUJOL  
 CADD PROJECT FILE NAME  
 REVIEWED BY T. KELLER  
 DATE 06-01-18

Attention:			
If this scale bar does not measure 1" then drawing is not original scale.			
12/17/2021		AS BUILT-NOTE OF CLARIFICATION FOR SHEET PILE DEPTHS	
DATE	MK	DESCRIPTION	
REVISIONS			

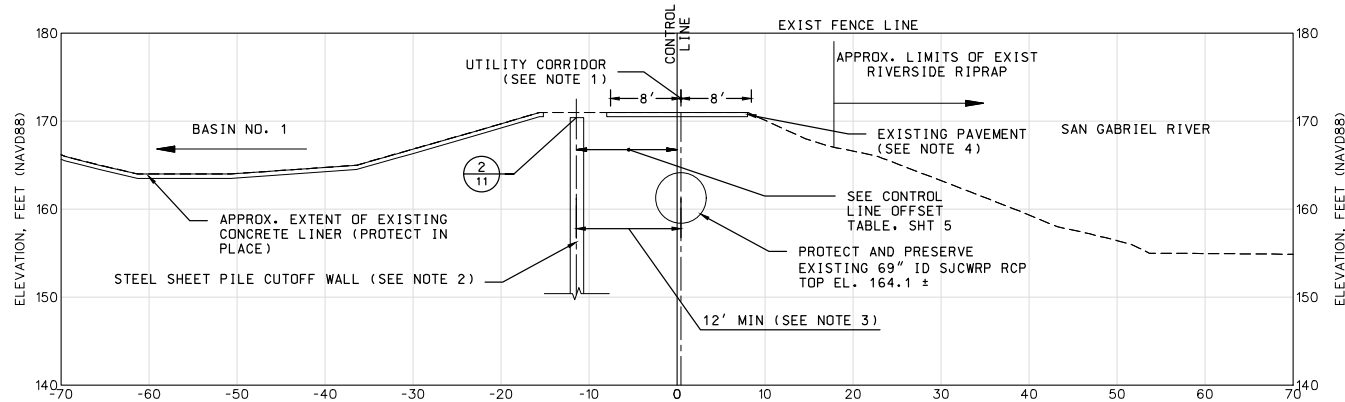
ALBERTO PUJOL  
PROJECT ENGINEER

06-01-18  
DATE

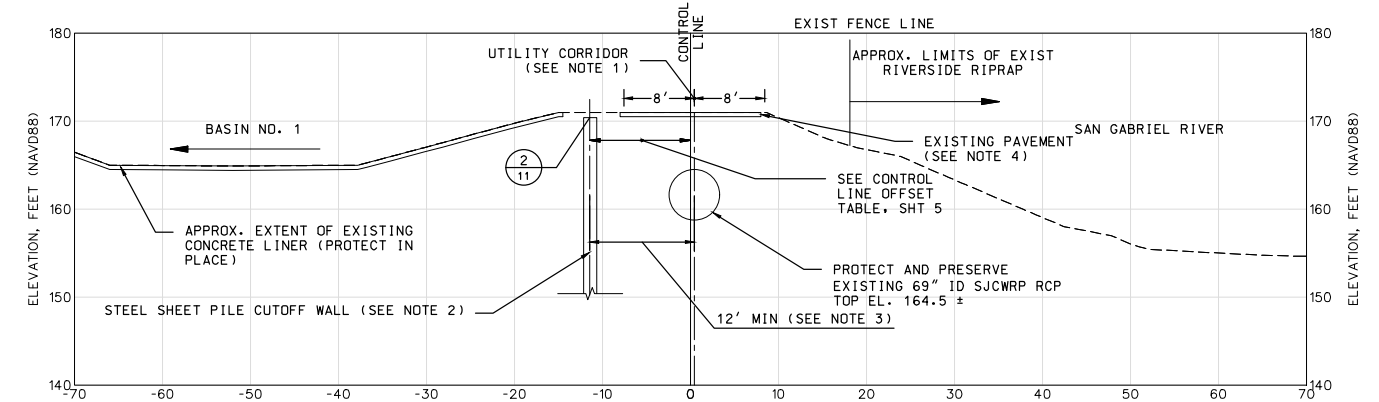
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

SAN GABRIEL COASTAL SPREADING GROUNDS  
LEVEE RETROFIT PROJECT  
LEVEE CROSS SECTIONS  
(SHEET 1 OF 3)

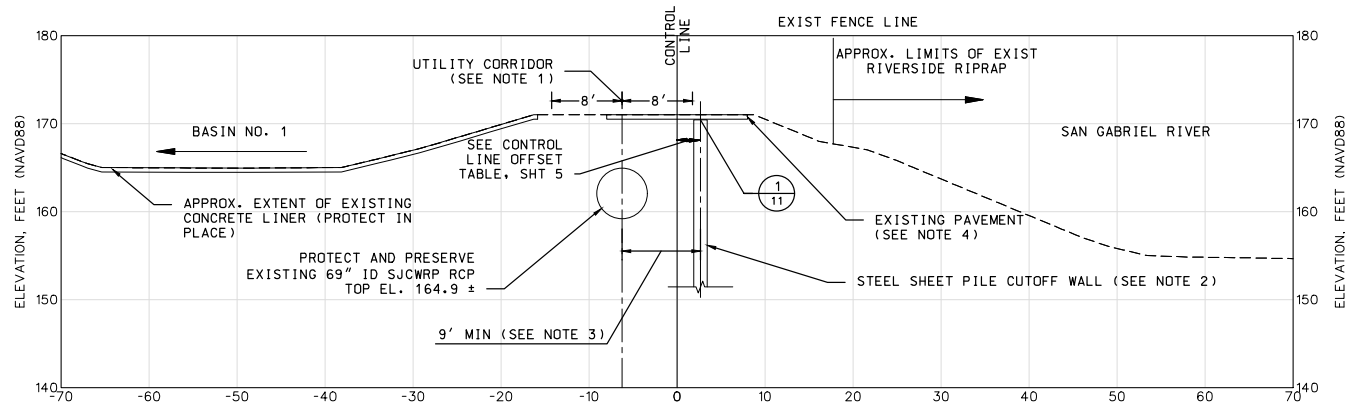
FCC0001292 EF11616002 DWG 6-D231.1-18 SHEET 15 OF 19



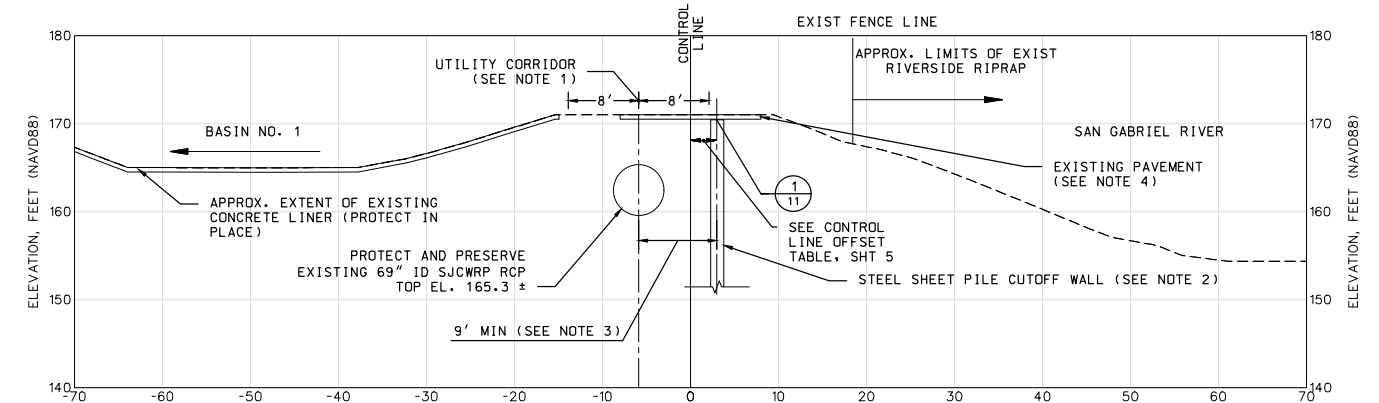
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BASIN NO. 1 - LOOKING NORTHWARD



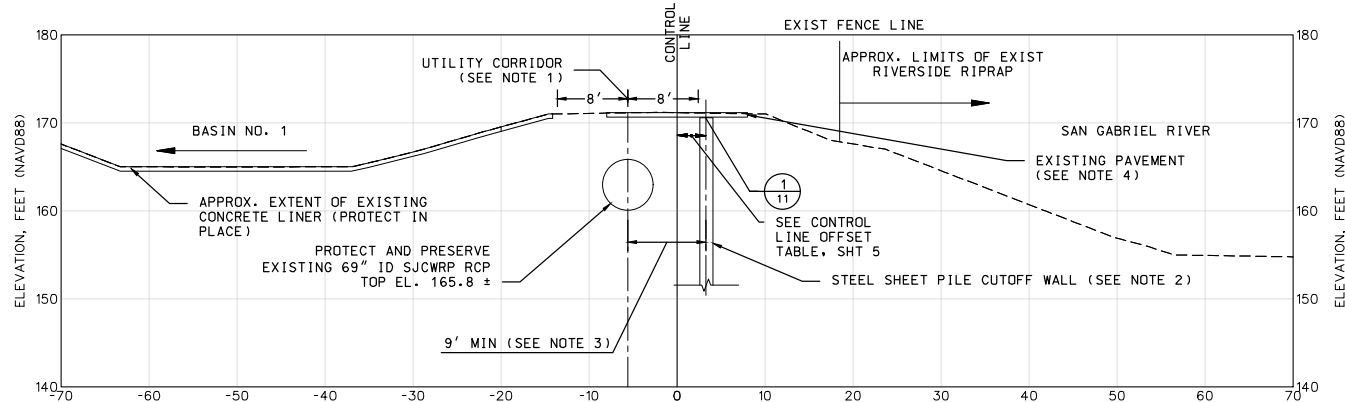
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BASIN NO. 1 - LOOKING NORTHWARD



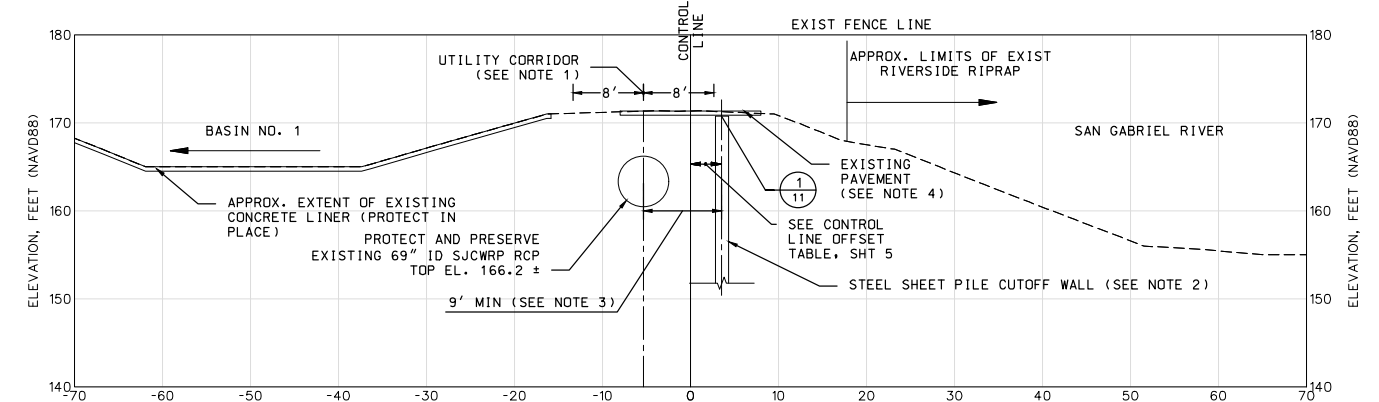
STATION 64+00  
BASIN NO. 1 - LOOKING NORTHWARD



STATION 66+00  
BASIN NO. 1 - LOOKING NORTHWARD



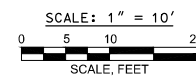
STATION 68+00  
BASIN NO. 1 - LOOKING NORTHWARD



STATION 70+00  
BASIN NO. 1 - LOOKING NORTHWARD

**NOTES:**

- 16-FOOT UTILITY CORRIDOR RESTRICTED TO EQUIPMENT LOADING SHOWN ON SHT 6, NOTE 3.
- CUTOFF WALL TIP ELEVATION NOT SHOWN. SEE DWG-SHT 7 TO SHT 9 FOR DETAILS REFER TO SHEET 19 FOR AS-CONSTRUCTED SHEET PILE DEPTHS.
- CUTOFF WALL CENTERLINE SHALL BE INSTALLED TO THE MINIMUM DISTANCE SHOWN IN THE CROSS SECTIONS FROM CENTERLINE OF THE EXISTING 72"/69" SJCRP RCP OUTFALL PIPELINE WHERE NOTED ON THE PLANS.
- SEE SHEETS 10 THROUGH 13 FOR AC PAVEMENT REMOVAL AND REPLACEMENT ALONG CUTOFF WALL ALIGNMENT. SEE SHEET 18 FOR AC PAVEMENT REMOVAL AND REPLACEMENT IN OTHER ACCESS ROAD AREAS.



DATE 06-01-18  
 REVIEWED BY T. KELLER  
 CADD PROJECT FILE NAME  
 CHECKER A. PUJOL  
 DESIGNER L. SANSONE  
 DRAFTER I. RAWLINGS

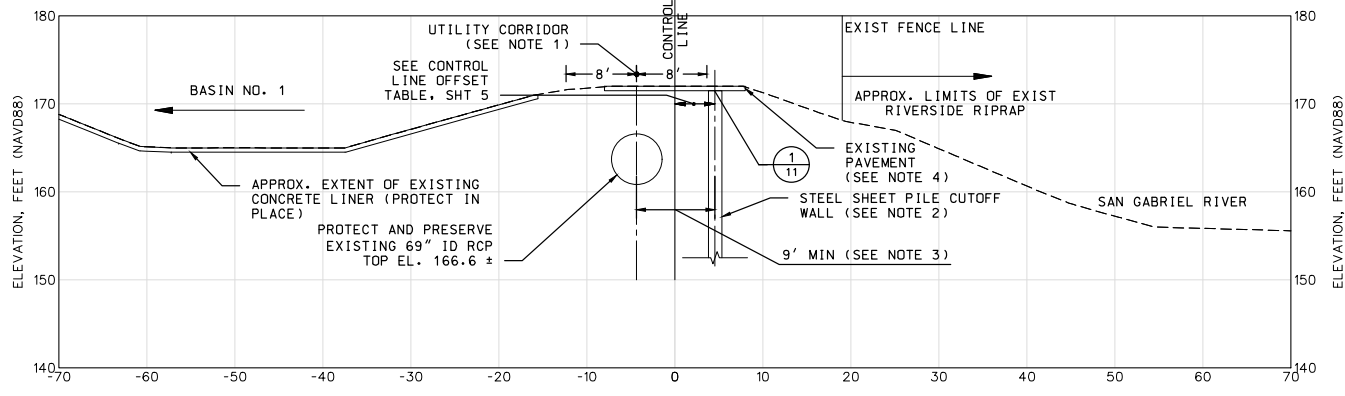
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12/17/2021	AS BUILT-NOTE OF CLARIFICATION FOR SHEET PILE DEPTHS
DATE	DESCRIPTION
REVISIONS	

ALBERTO PUJOL  
 PROJECT ENGINEER  
 06-01-18  
 DATE

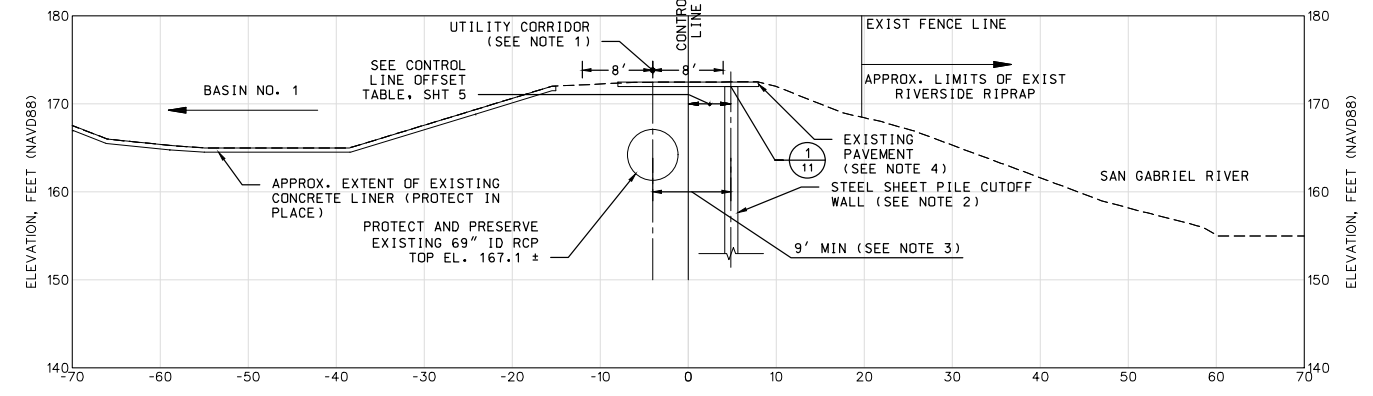
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS  
 SAN GABRIEL COASTAL SPREADING GROUNDS  
 LEVEE RETROFIT PROJECT  
 LEVEE CROSS SECTIONS  
 (SHEET 2 OF 3)

FCC0001292 | EF11616002 | DWG 6-D231.1-18 | SHEET 16 OF 19

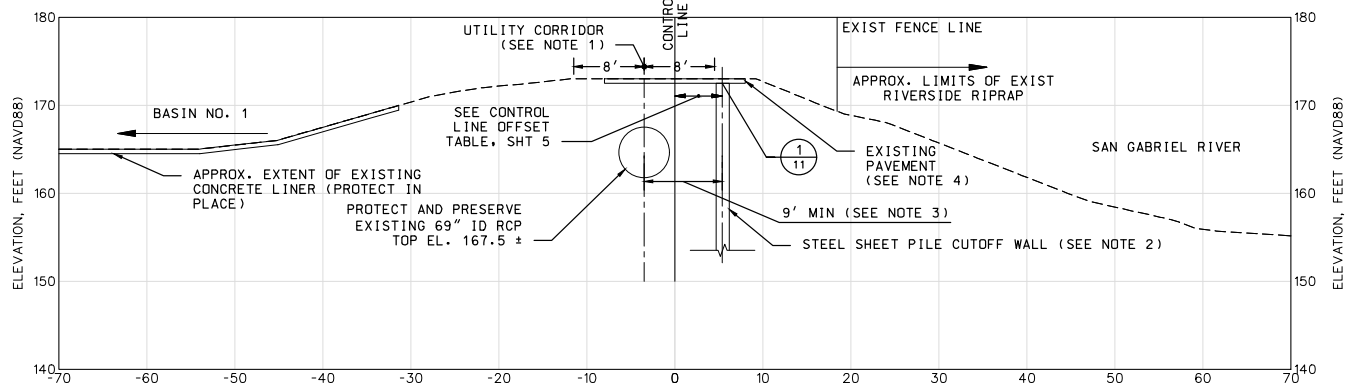




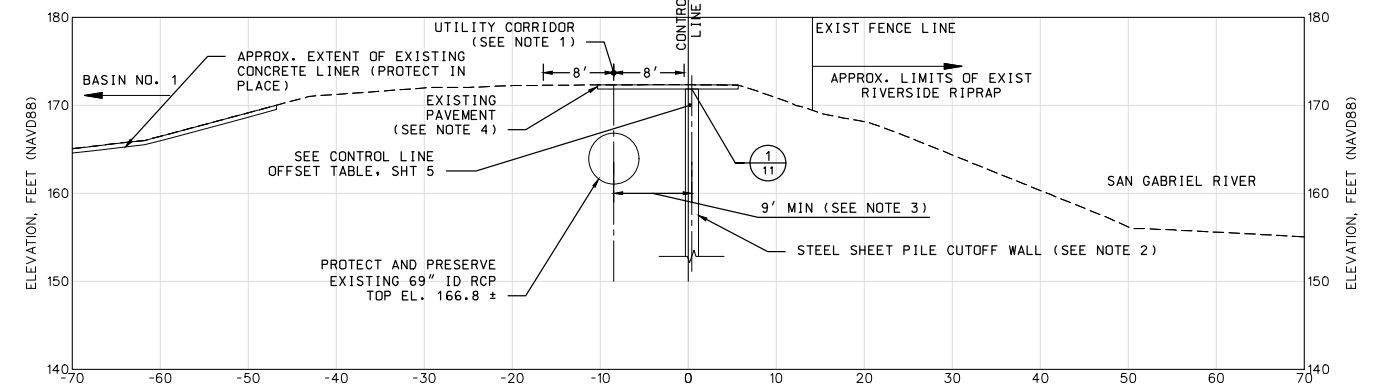
STATION 72+00  
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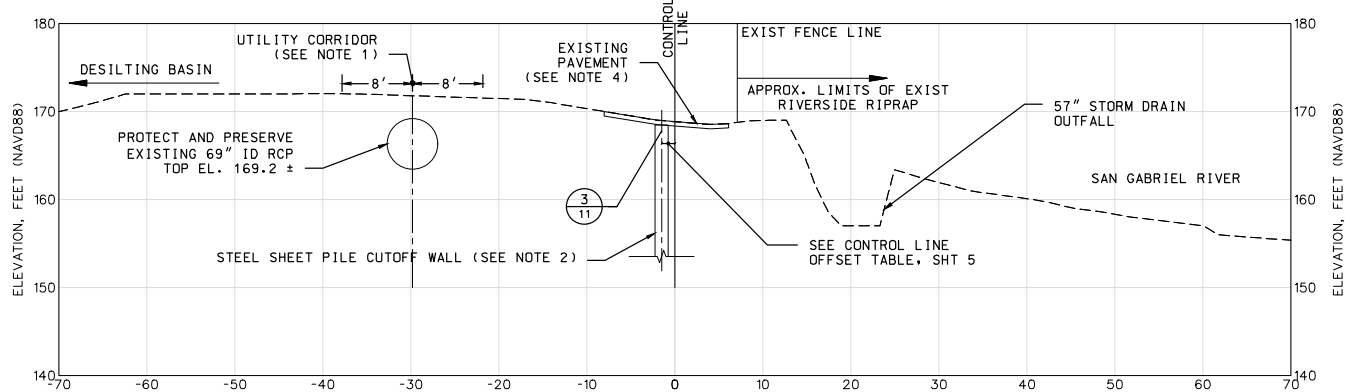
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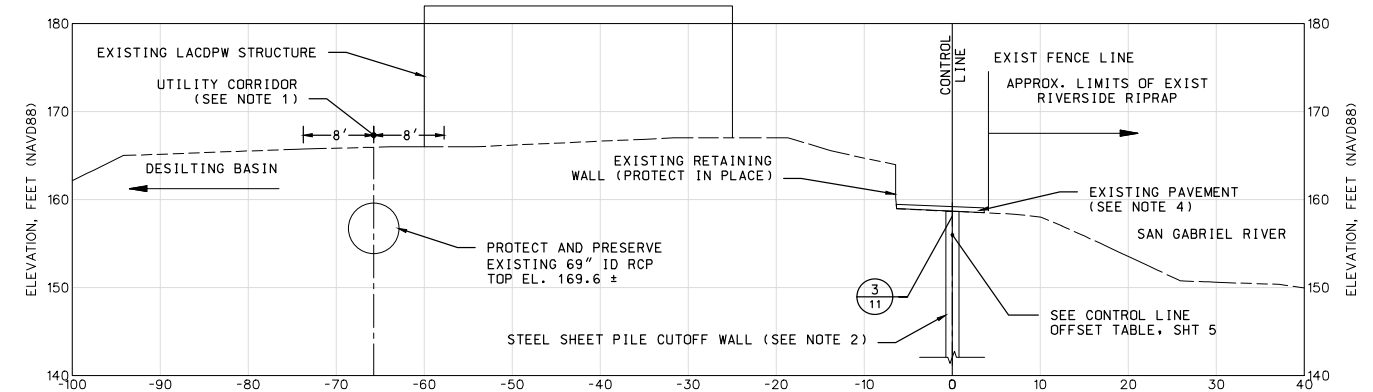
STATION 76+00  
BASIN NO. 1 - LOOKING NORTHWARD



STATION 78+00  
BASIN NO. 1 - LOOKING NORTHWARD



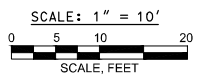
STATION 80+00  
DESILTING BASIN - LOOKING NORTHWARD



STATION 82+00  
DESILTING BASIN - LOOKING NORTHWARD

**NOTES:**

- 16-FOOT UTILITY CORRIDOR RESTRICTED TO EQUIPMENT LOADING SHOWN ON SHT 6, NOTE 3.
- CUTOFF WALL TIP ELEVATION NOT SHOWN. SEE SHT 7 TO SHT 9 FOR DETAILS REFER TO SHEET 19 FOR AS-CONSTRUCTED SHEET PILE DEPTH.
- CUTOFF WALL CENTERLINE SHALL BE INSTALLED TO THE MINIMUM DISTANCE SHOWN IN THE CROSS SECTIONS FROM CENTERLINE OF THE EXISTING 72"/69" RCP OUTFALL PIPELINE WHERE NOTED ON THE PLANS.
- SEE SHEETS 10 THROUGH 13 FOR AC PAVEMENT REMOVAL AND REPLACEMENT ALONG CUTOFF WALL ALIGNMENT. SEE SHEET 18 FOR AC PAVEMENT REMOVAL AND REPLACEMENT IN OTHER ACCESS ROAD AREAS.



DATE 06-01-18  
 REVIEWED BY T. KELLER  
 CADD PROJECT FILE NAME  
 CHECKER A. PUJOL  
 DESIGNER L. SANSONE  
 DRAFTER I. RAWLINGS

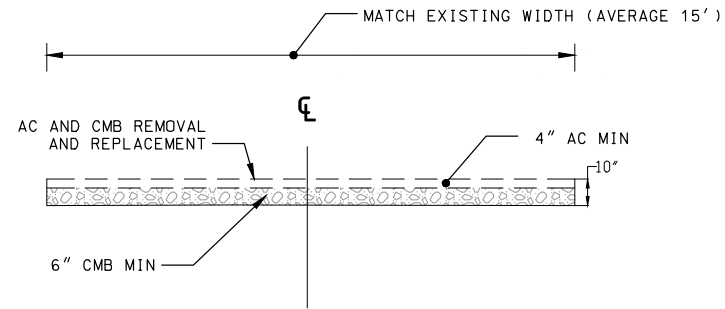
Attention:		
If this scale bar does not measure 1" then drawing is not original scale.		
DATE	MK	DESCRIPTION
12/17/2021		AS BUILT/NOTE OF CLARIFICATION FOR SHEET PILE DEPTHS
REVISIONS		

ALBERTO PUJOL  
 PROJECT ENGINEER  
 06-01-18  
 DATE

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS  
 SAN GABRIEL COASTAL SPREADING GROUNDS  
 LEVEE RETROFIT PROJECT  
 LEVEE CROSS SECTIONS  
 (SHEET 3 OF 3)

FCC0001292 | EF11616002 | DWG 6-D231.1-18 | SHEET 17 OF 19

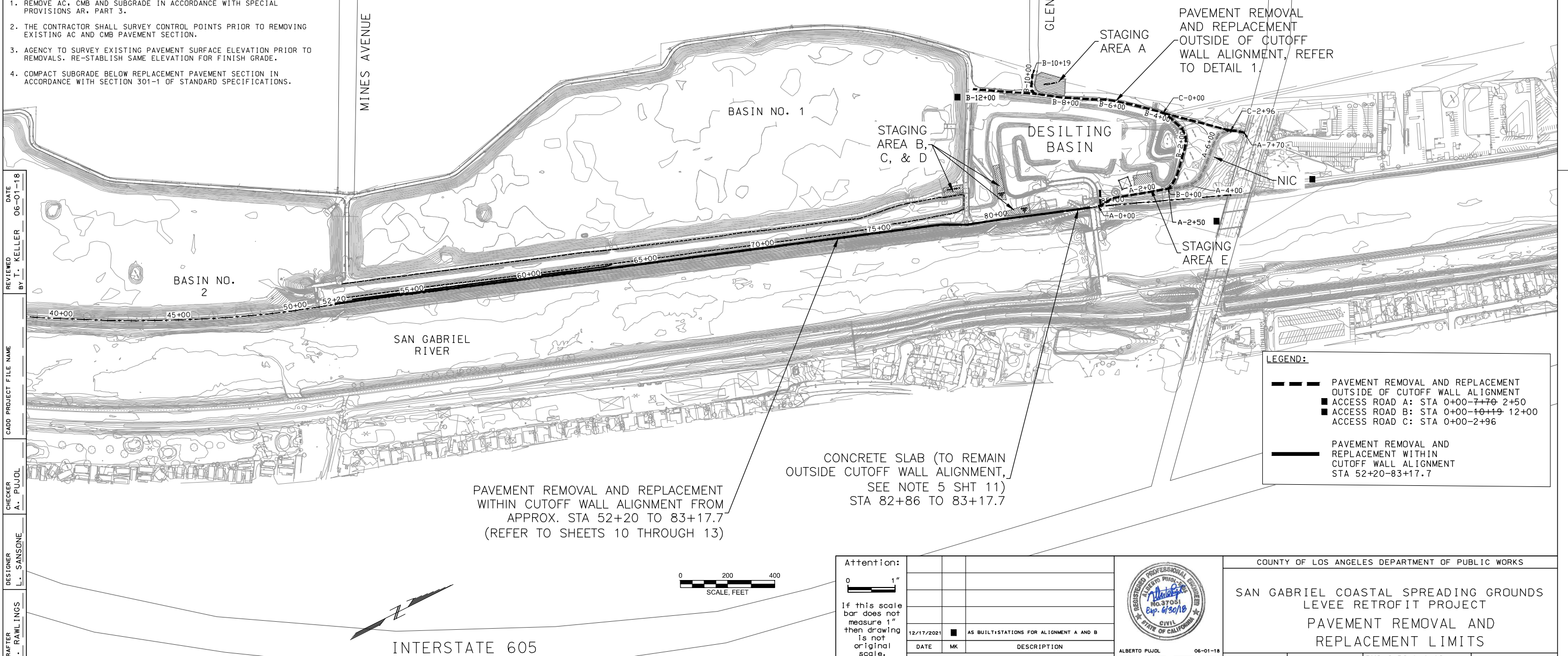
PLAN  
SCALE: 1" = 200'



**DETAIL 1**  
REPLACEMENT OF PAVEMENT SECTION FOR ACCESS ROADS AND AREAS OUTSIDE OF CUTOFF WALL ALIGNMENT

**NOTES:**

1. REMOVE AC, CMB AND SUBGRADE IN ACCORDANCE WITH SPECIAL PROVISIONS AR, PART 3.
2. THE CONTRACTOR SHALL SURVEY CONTROL POINTS PRIOR TO REMOVING EXISTING AC AND CMB PAVEMENT SECTION.
3. AGENCY TO SURVEY EXISTING PAVEMENT SURFACE ELEVATION PRIOR TO REMOVALS. RE-STABLISH SAME ELEVATION FOR FINISH GRADE.
4. COMPACT SUBGRADE BELOW REPLACEMENT PAVEMENT SECTION IN ACCORDANCE WITH SECTION 301-1 OF STANDARD SPECIFICATIONS.



PAVEMENT REMOVAL AND REPLACEMENT WITHIN CUTOFF WALL ALIGNMENT FROM APPROX. STA 52+20 TO 83+17.7 (REFER TO SHEETS 10 THROUGH 13)

CONCRETE SLAB (TO REMAIN OUTSIDE CUTOFF WALL ALIGNMENT, SEE NOTE 5 SHT 11) STA 82+86 TO 83+17.7

**LEGEND:**

- PAVEMENT REMOVAL AND REPLACEMENT OUTSIDE OF CUTOFF WALL ALIGNMENT
- ACCESS ROAD A: STA 0+00-7+70 2+50
- ACCESS ROAD B: STA 0+00-10+19 12+00
- ACCESS ROAD C: STA 0+00-2+96
- PAVEMENT REMOVAL AND REPLACEMENT WITHIN CUTOFF WALL ALIGNMENT STA 52+20-83+17.7

DATE 06-01-18  
REVIEWED BY T. KELLER  
CADD PROJECT FILE NAME  
CHECKER A. PUJOL  
DESIGNER L. SANSONE  
DRAFTER I. RAWLINGS

Attention: If this scale bar does not measure 1" then drawing is not original scale.

12/17/2021	AS BUILT STATIONS FOR ALIGNMENT A AND B
DATE	DESCRIPTION
REVISIONS	



COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

SAN GABRIEL COASTAL SPREADING GROUNDS  
LEVEE RETROFIT PROJECT  
PAVEMENT REMOVAL AND REPLACEMENT LIMITS

ALBERTO PUJOL PROJECT ENGINEER 06-01-18 DATE  
FCC0001292 EF11616002 DWG 6-D231.1-18 SHEET 18 OF 19

SEGMENT 1  
BETWEEN UTILITY CROSSING 1 AND 2

Table with 3 columns: STATION, PILE #, DEPTH. Contains data for Segment 1.

SEGMENT 2  
BETWEEN UTILITY CROSSING 2 AND 3

Table with 3 columns: STATION, PILE #, DEPTH. Contains data for Segment 2.

SEGMENT 3  
BETWEEN UTILITY  
CROSSING 3 AND 4

Table with 3 columns: STATION, PILE #, DEPTH. Contains data for Segment 3.

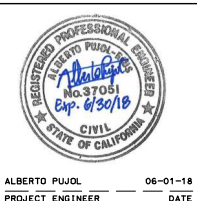
SEGMENT 4  
BETWEEN UTILITY  
CROSSING 4 AND 5

Table with 3 columns: STATION, PILE #, DEPTH. Contains data for Segment 4.

DRFTER I. RAWLINGS DESIGNER L. SANSONE CHECKER A. PUJOL REVIEWED BY T. KELLER DATE 06-01-18

Attention: 0 1" If this scale bar does not measure 1" then drawing is not original scale.

Table with 2 columns: DATE, DESCRIPTION. Includes date 12/17/2021 and description AS BUILT SHEET PILE DATA PROVIDED BY LACDPW.



COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS SAN GABRIEL COASTAL SPREADING GROUNDS LEVEE RETROFIT PROJECT STEEL SHEET PILE CUTOFF WALL DEPTH TABLE