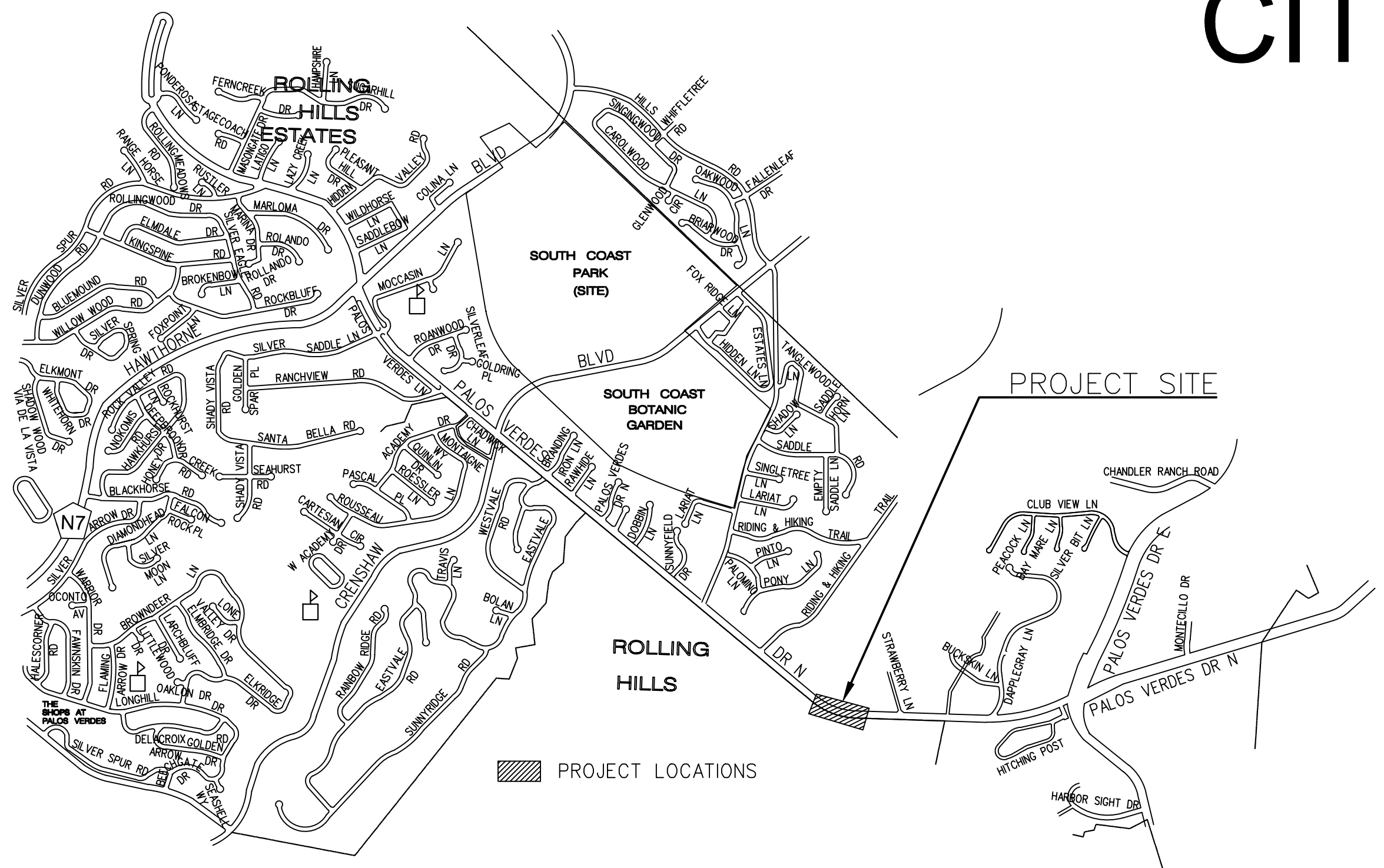


CITY OF ROLLING HILLS ESTATES CALIFORNIA CONSTRUCTION PLANS

FOR
**INTERSECTION CAPACITY IMPROVEMENTS
 AT PALOS VERDES DRIVE NORTH AND
 DAPPLEGRAY SCHOOL ENTRANCE
 FY 2020-2021**



VICINITY MAP
 N.T.S.

SHEET INDEX
SHEET NO.

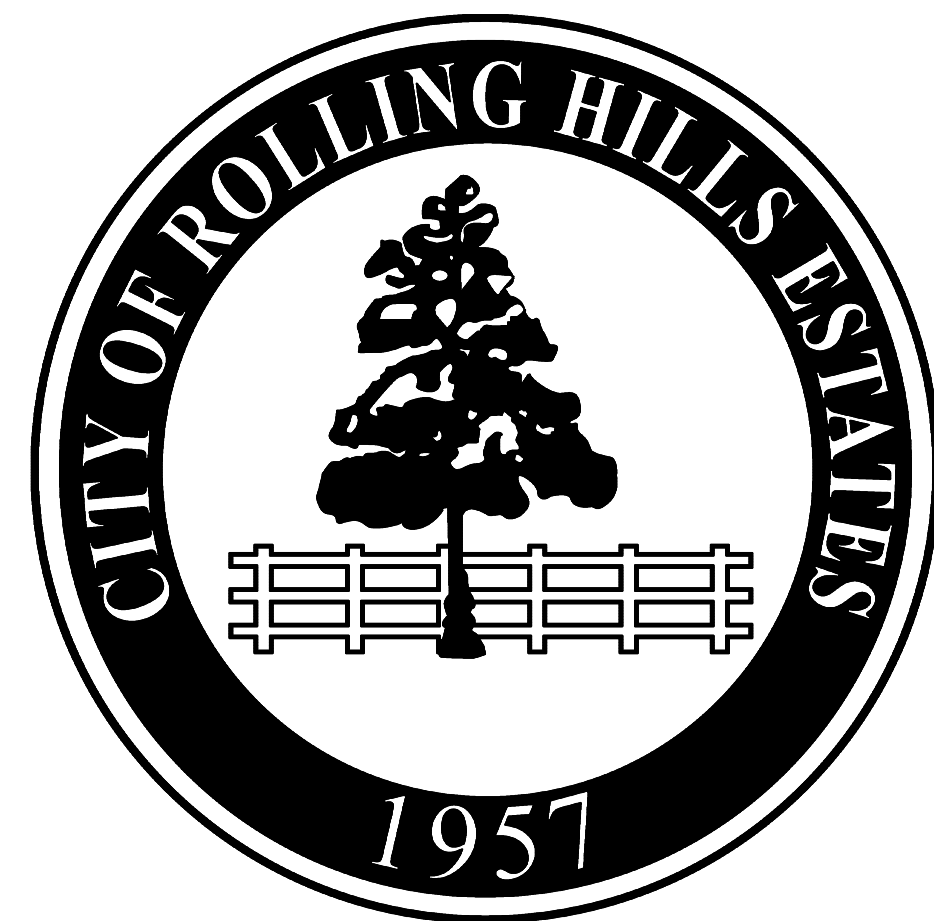
SHEET NO. 1
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DESCRIPTION

TITLE SHEET
TYPICAL SECTIONS AND DETAIL
STREET IMPROVEMENT PLAN AND PROFILE
STREET IMPROVEMENT PLAN AND PROFILE
STREET IMPROVEMENT PLAN AND PROFILE
RETAINING WALL PLAN AND PROFILE
RETAINING WALL PLAN AND PROFILE
RETAINING WALL PLAN AND PROFILE
RETAINING WALL PLAN AND PROFILE
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TRAFFIC SIGNAL MODIFICATION PLAN
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STREET MEDIAN & PARKWAY LANDSCAPE CONSTRUCTION PLAN
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STREET MEDIAN & PARKWAY PLANTING PLAN
BUS SHELTER DETAILS
BUS SHELTER LAYOUT AND CONSTRUCTION NOTES
IRRIGATION DETAILS
LANDSCAPE CONSTRUCTION DETAILS

UTILITY CONTACT

CALIFORNIA WATER SERVICE CO. ATTN: BRETT OMMEN, DISTRICT SUPERINTENDENT (310)377-5528 PLANNER: CARDINAL FERNANDEZEEES (310)377-5528 EMAIL: CFERNANDEZEEES@CALWATER.COM
COUNTY SANITATION DISTRICT OF LOS ANGELES COUNTY ATTN: DOUG WALTON (310)638-1161
COX COMMUNICATIONS ATTN: SUSAN SCHUTZMAN (619)266-5605 EMAIL: SUSAN.SCHUTZMAN@COX.COM
LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS ATTN: DARYLL CHENOWETH (626)459-9109 EMAIL: DCHENOWETH@DPW.LACOUNTY.COV
SOUTHERN CALIFORNIA EDISON ATTN: TAYLOR RUIZE/LOCAL PLANNER (310)783-9426 EMAIL: FRANCISCO.M.MARTINEZ@SCE.COM
THE GAS COMPANY ATTN: FAVIOLA OCHOA (213)808-7857 EMAIL: FAVIOCHOA@SEMPRAUTILITES.COM



CONSTRUCTION NOTES

- 1 REMOVE EXISTING ASPHALT CONCRETE, P.C.C., BASE MATERIAL, AND SUBGRADE
 - 2 CONSTRUCT 6-INCH THICK AC OVER 10-INCH THICK CAB , SEE TYPICAL SECTION ON SHEET 2.
 - 3 COLDMILL EXISTING AC PAVEMENT 2-INCH DEPTH
 - 4 CONSTRUCT 2-INCH THICK ASPHALT RUBBER HOT MIX (ARHM) OVERLAY.
 - 5 CONSTRUCT ROLLED CURB TYPE R-2 PER DETAIL A ON SHEET 2.
 - 6 CONSTRUCT ROLLED CURB TRANSITION PER DETAIL ON SHEET 2.
 - 7 CONSTRUCT CURB AND GUTTER PER SPPCW STD PLAN 120-3, TYPE A2-6
 - 8 CONSTRUCT CURB PER SPPWC STD PLAN NO. 120-3, TYPE A1-6
 - 9 CONSTRUCT 4-INCH AC OVER 4-INCH AB MULTI-USE PATH
 - 10 CONSTRUCT CURB RAMP PER SPPWC STD PLAN 111-5, CASE AND TYPE PER PLAN
 - 11 CONSTRUCT CROSS AND LONGITUDINAL GUTTER PER SPPWC STD PLAN NO. 122-3
 - 12 CONSTRUCT 4-INCH THICK P.C.C. RESIDENTIAL DRIVEWAY PER SPPWC STD PLAN NO. 110-2
 - 13 CONSTRUCT 4-INCH THICK PCC SIDEWALK PER SPPWC STD PLAN NO. 110-2, OVER 6-INCH CAB
 - 14 CONSTRUCT CURB AND GUTTER PER SPPCW STD PLAN 120-3, TYPE A2-6, W=1'
 - 15 CONSTRUCT RETAINING WALL PER DETAIL B ON SHEET 9
 - 16 CONSTRUCT CONCRETE DRAINAGE SWALE BEHIND RETAINING WALL PER SPPWC STD PLAN NO. 621-3
 - 17 CONSTRUCT RETAINING WALL, TYPE 7A, PER SPPWC STD PLAN NO. 616-3
 - 18 CONSTRUCT RETAINING WALL, TYPE 5, PER SPPWC STD PLAN NO. 614-3. CASE PER PLAN
 - 19 CONSTRUCT RETAINING WALL, TYPE 5, MODIFIED PER DETAIL HEREON SPPWC STD PLAN NO. 614-3. CASE PER PLAN
 - 20 CONSTRUCT 1-INCH THICK PCC BUS PAD INCLUDING 6-INCH MONOLITHIC CURB, 3,250 PSI OVER 6-INCH CAB
 - 21 COMPACTED NATIVE BACKFILL AT 90% RELATIVE COMPACTION TO A DEPTH OF 12"
 - 22 CONSTRUCT WALL GUTTER OUTLET TO FACE OF WALL PER SPPWC STD PLAN NO. 617-3
 - 23 CONSTRUCT WALL GUTTER OUTLET TO CURB PER SPPWC STD PLAN NO. 617-3 AND PLAN No. 150-4
 - 24 CONSTRUCT CABLE RAILING PER CALTRANS STD B11-47, PER SECTION C-C
- (P) PROTECT IN PLACE.
 (RL) RELOCATE TYPE AS SHOWN.
 (R) RELOCATE BY OTHERS.
 (R) REMOVE TYPE AS SHOWN.
 (AG) ADJUST TO GRADE TYPE AS SHOWN.
 (AO) ADJUST TO GRADE BY OTHERS.
 (LS) SEE LANDSCAPE PLANS
 (SS) SEE SIGNING AND STRIPING PLANS.
 (TS) SEE TRAFFIC SIGNAL PLANS.
 (MFL) INDICATES MEDIAN FLARE PER SPPWC STD PLAN NO. 141-2

GENERAL CONSTRUCTION NOTES:

1. ALL WORK SHOWN HEREON SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, CURRENT EDITION.
2. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES OR SUBSTRUCTURES FOUND AT THE SITE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNERS OF THE UTILITIES OR SUBSTRUCTURES CONCERNED BEFORE STARTING WORK (72-HOURS NOTICE REQUIRED.) PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) TOLL FREE AT 1-800-227-2600.
3. PRIOR TO BEGINNING OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR DISRUPTIVE STREET WORK, INCLUDING CONSTRUCTION SCHEDULE - SUBJECT TO APPROVAL BY THE ENGINEER. MINIMUM REQUIREMENTS ARE STATED IN THE SPECIFICATIONS. CONSTRUCTION WARNING DEVICES, SIGNS, ETC., SHALL CONFORM WITH CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
4. CONTRACTOR SHALL PROTECT ALL EXISTING PROPERTIES FROM DAMAGE IN ACCORDANCE WITH PROJECT SPECIFICATIONS



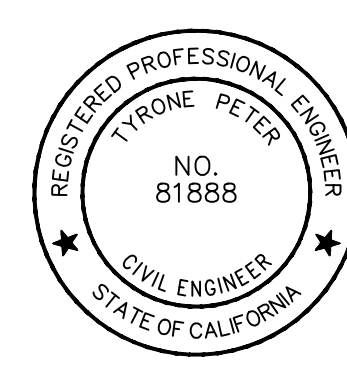
CITY OF ROLLING HILLS ESTATES

TITLE SHEET

INTERSECTION CAPACITY IMPROVEMENTS
 AT PALOS VERDES DRIVE NORTH AND DAPPLEGRAY SCHOOL ENTRANCE

DRAWN BY: BR	SHT. 1 OF 22 SHTS.
DESIGNED BY: BR	
CHECKED BY: FW	

PLANS PREPARED BY:
WILLDAN Engineering Comprehensive Innovative Trusted
 13191 CROSSROADS PARKWAY NORTH
 SUITE 405 INDUSTRY, CA 91746-3497
 (562) 908-6200
 UNDER THE SUPERVISION OF
 TYRONE PETER RCE No. 81888 DATE _____

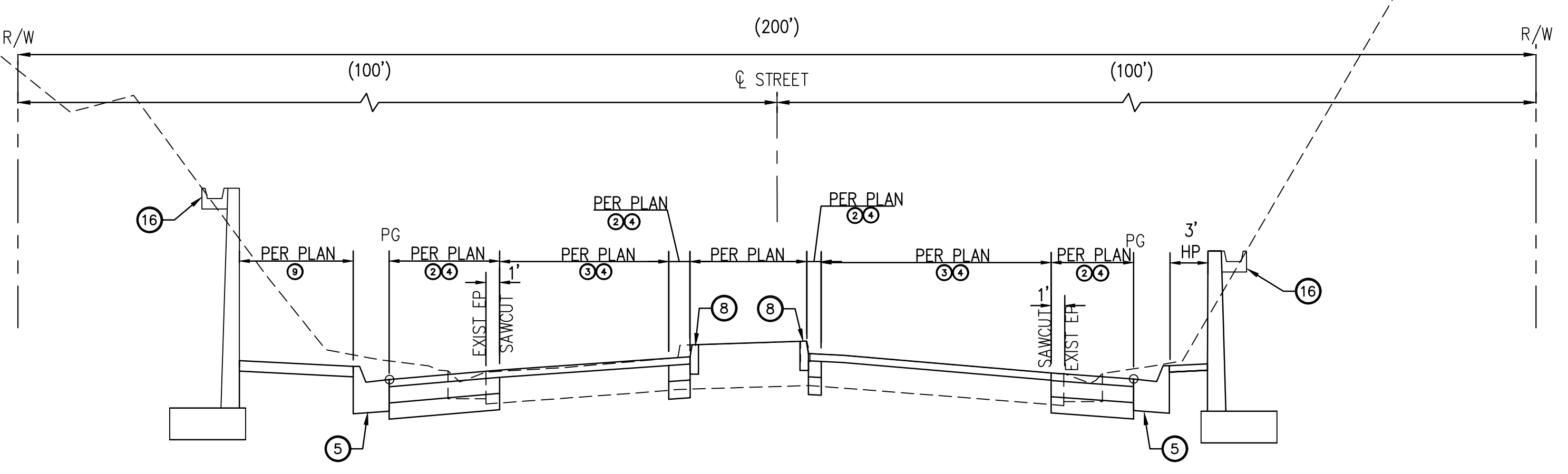


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NO. _____	ELEV. _____	NO. _____	DESCRIPTION
DATE ADJ. _____	QUAD. _____	APP. _____	DATE _____
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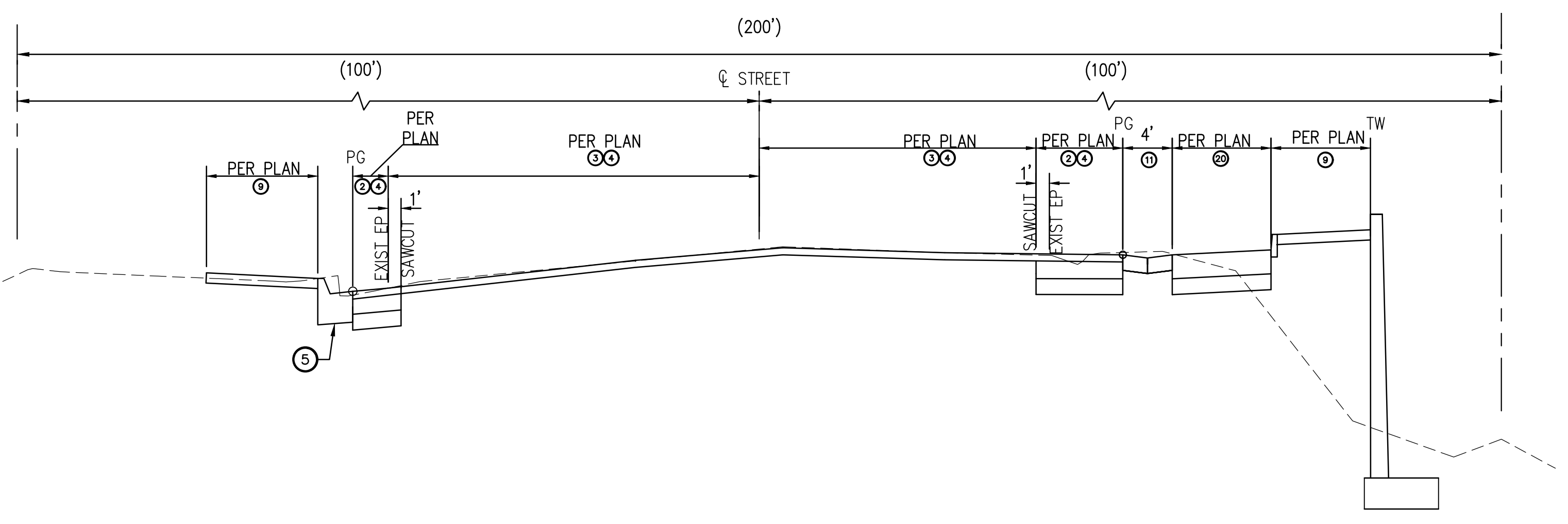
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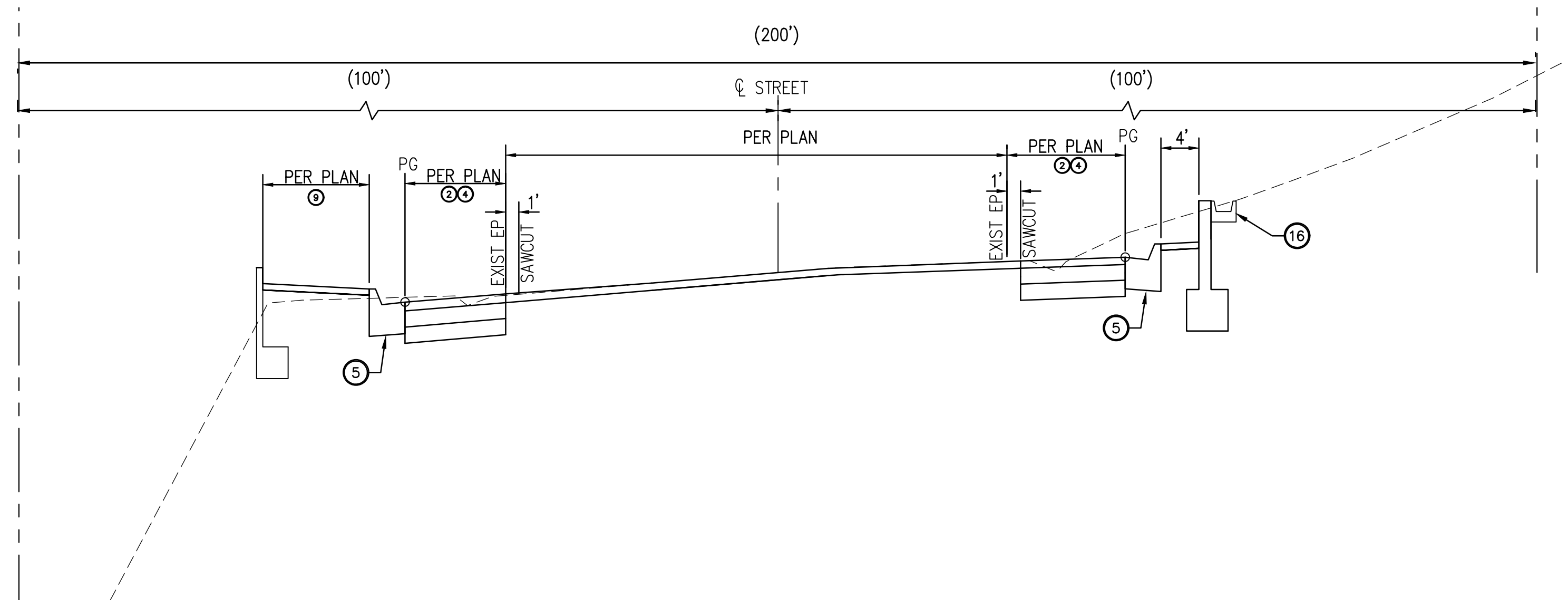
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TYPICAL STREET SECTION FOR PALOS VERDES DRIVE NORTH
N.T.S.



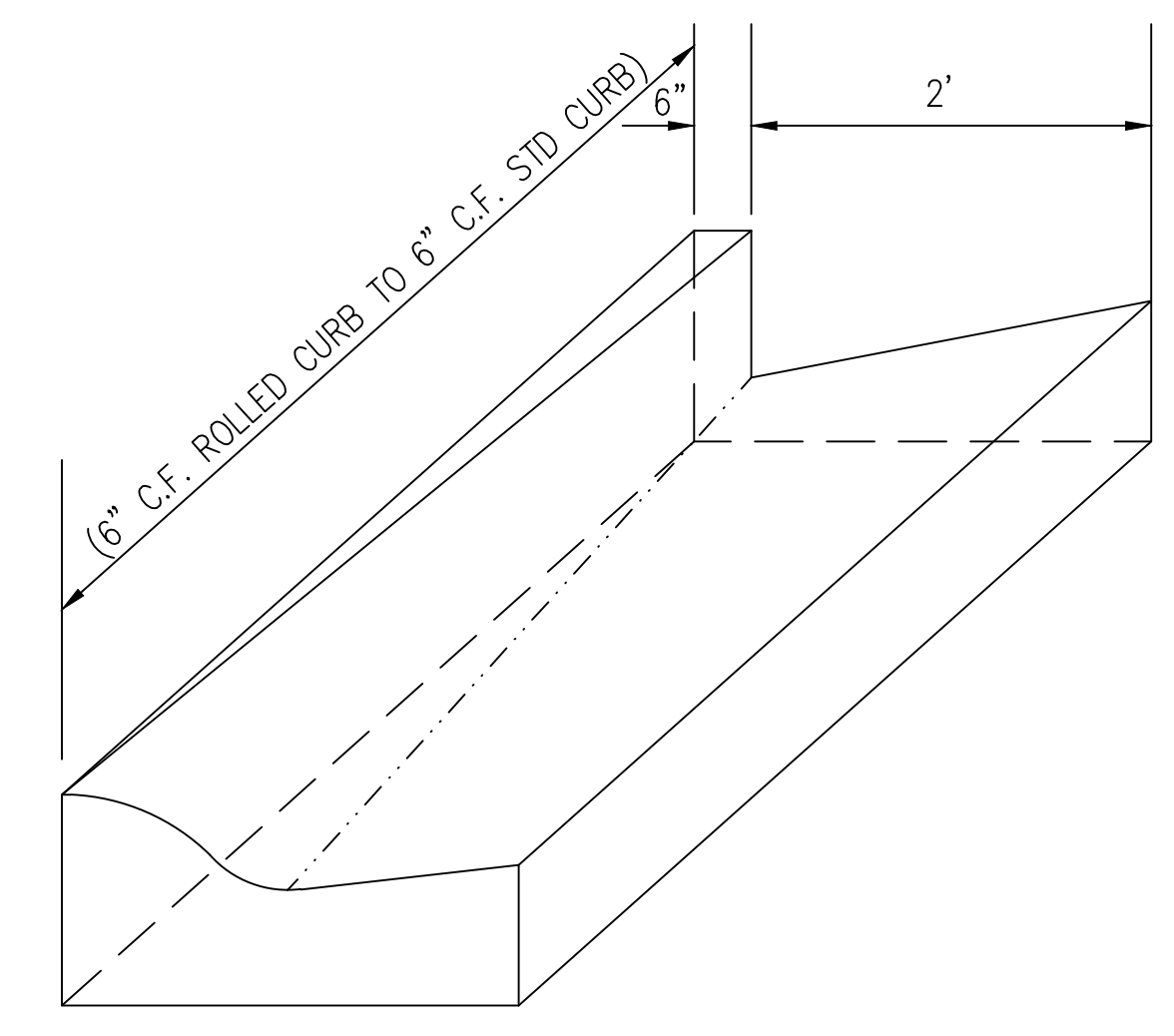
TYPICAL STREET SECTION FOR PALOS VERDES DRIVE NORTH
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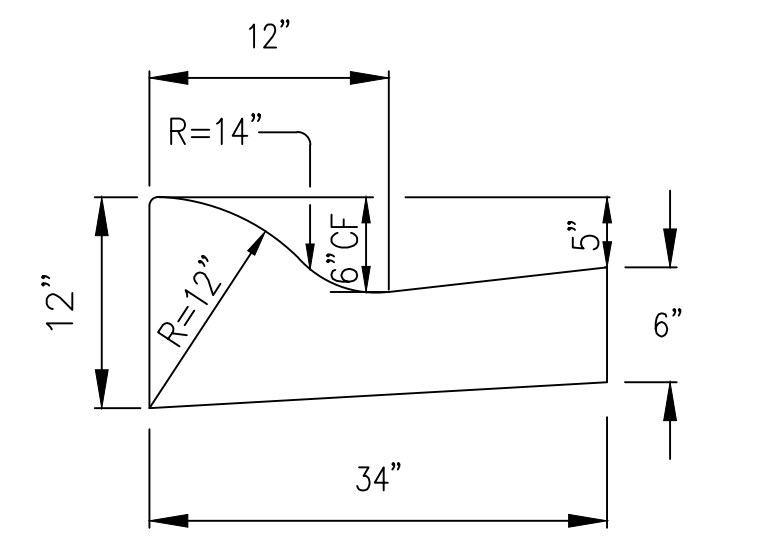
TYPICAL STREET SECTION FOR PALOS VERDES DRIVE NORTH
N.T.S.

CONSTRUCTION NOTES:

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- ② CONSTRUCT 6-INCH THICK AC OVER 10-INCH THICK CAB, SEE TYPICAL SECTION ON SHEET 2.
- ③ COLDMILL EXISTING AC PAVEMENT 2-INCH DEPTH
- ④ CONSTRUCT 2-INCH THICK ASPHALT RUBBER HOT MIX (ARHM) OVERLAY.
- ⑤ CONSTRUCT ROLLED CURB TYPE R-2 PER DETAIL A ON SHEET 2.
- ⑥ CONSTRUCT ROLLED CURB TRANSITION PER DETAIL ON SHEET 2.
- ⑦ CONSTRUCT CURB AND GUTTER PER SPPCW STD PLAN 120-3, TYPE A2-6
- ⑧ CONSTRUCT CURB PER SPPWC STD PLAN NO. 120-3, TYPE A1-6
- ⑨ CONSTRUCT 4-INCH AC OVER 4-INCH AB MULTI-USE PATH



ROLLED CURB TRANSITION DETAIL
NTS



TYPE R-2
ROLLED CURB DETAIL "A"
NTS



PLANS PREPARED BY:
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SUITE 405 INDUSTRY, CA 91746-3497
(562) 908-6200
UNDER THE SUPERVISION OF
TYRONE PETER RCE No. 81888 DATE

BENCH MARK:
NO. _____ ELEV. _____
DATE ADJ. _____ QUAD. _____
NONE

REVISIONS		
NO.	DESCRIPTION	APP. DATE

CITY OF ROLLING HILLS ESTATES

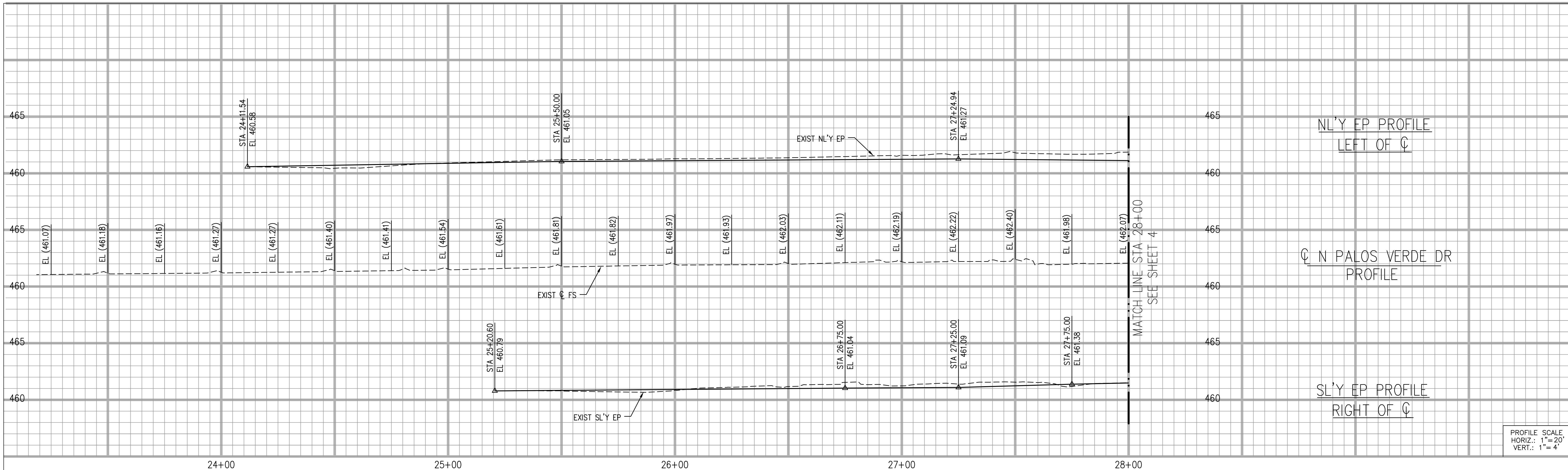
TYPICAL SECTIONS AND DETAIL

INTERSECTION CAPACITY IMPROVEMENTS
AT PALOS VERDES DRIVE NORTH AND DAPPLEGRAY SCHOOL ENTRANCE

DRAWN BY: BR	SHT. 2 OF 22 SHTS.
DESIGNED BY: BR	
CHECKED BY: FW	

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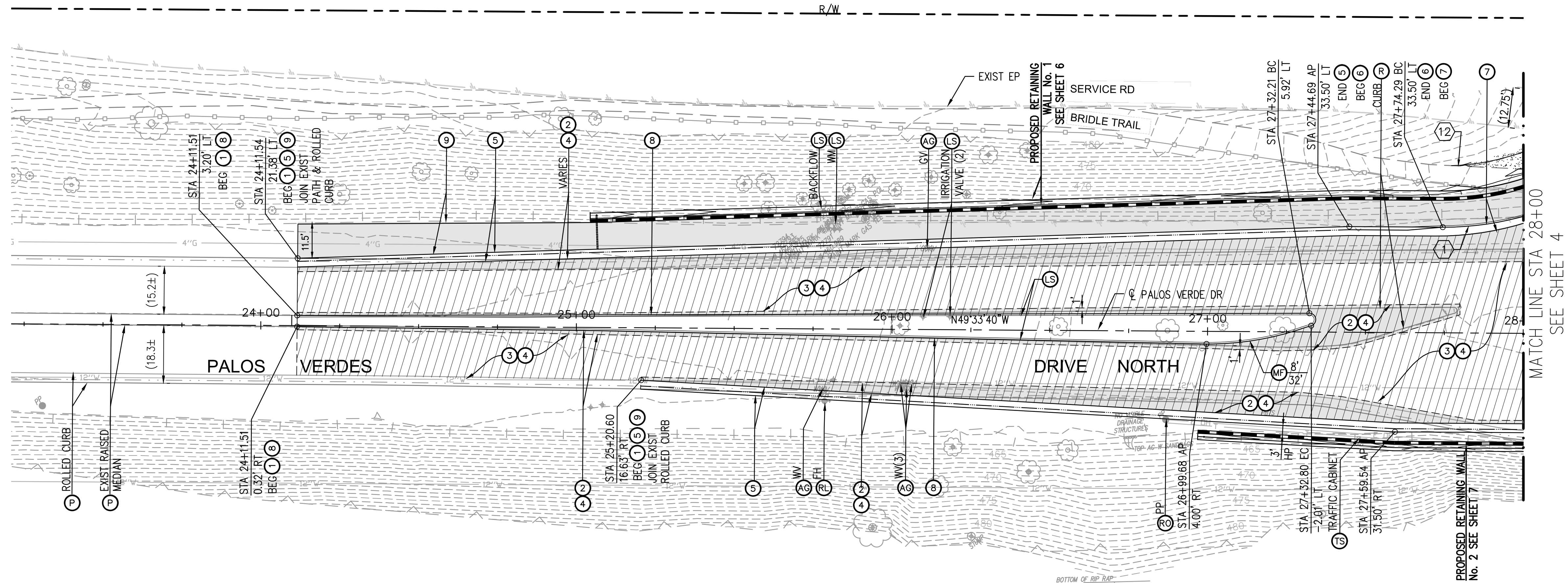
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PROFILE SCALE
HORIZ.: 1" = 20'
VERT.: 1" = 4'

CONSTRUCTION NOTES:

- ① REMOVE EXISTING ASPHALT CONCRETE, P.C.C., BASE MATERIAL, AND SUBGRADE
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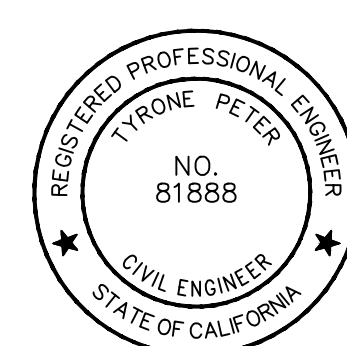


- Ⓟ PROTECT IN PLACE.
- Ⓡ RELOCATE TYPE AS SHOWN.
- Ⓡ RELOCATE BY OTHERS.
- Ⓡ REMOVE TYPE AS SHOWN.
- Ⓐ ADJUST TO GRADE TYPE AS SHOWN.
- Ⓐ ADJUST TO GRADE BY OTHERS.
- Ⓛ SEE LANDSCAPE PLANS
- Ⓢ SEE SIGNING AND STRIPING PLANS.
- Ⓢ SEE TRAFFIC SIGNAL PLANS.
- Ⓜ INDICATES MEDIAN FLARE PER SPPWC STD PLAN NO. 141-2

LEGEND

	PROPOSED AC PAVEMENT AND OVERLAY
	PROPOSED PCC
	PROPOSED COLD MILL AND OVERLAY
	PROPOSED AC

- NOTE:**
1. SEE LANDSCAPE PLANS FOR VINYL RAIL FENCE INSTALLATION AND TREE REMOVAL LOCATIONS
 2. FOR CURVE DATA TABLE SEE SHEET 5
 3. FOR RETAINING WALLS SEE RETAINING WALL PLAN AND PROFILE



PLANS PREPARED BY:
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TYRONE PETER RCE No. 81888 DATE

BENCH MARK:
NO. _____ ELEV. _____
DATE ADJ. _____ QUAD. _____
NONE

REVISIONS		
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CITY OF ROLLING HILLS ESTATES

STREET IMPROVEMENT PLAN AND PROFILE

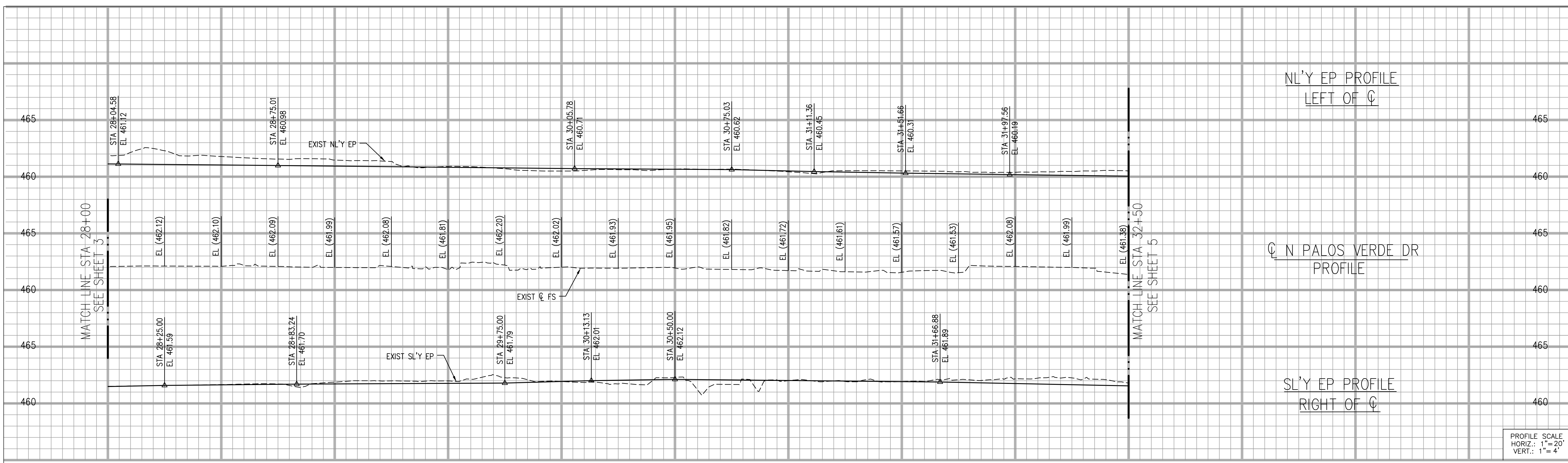
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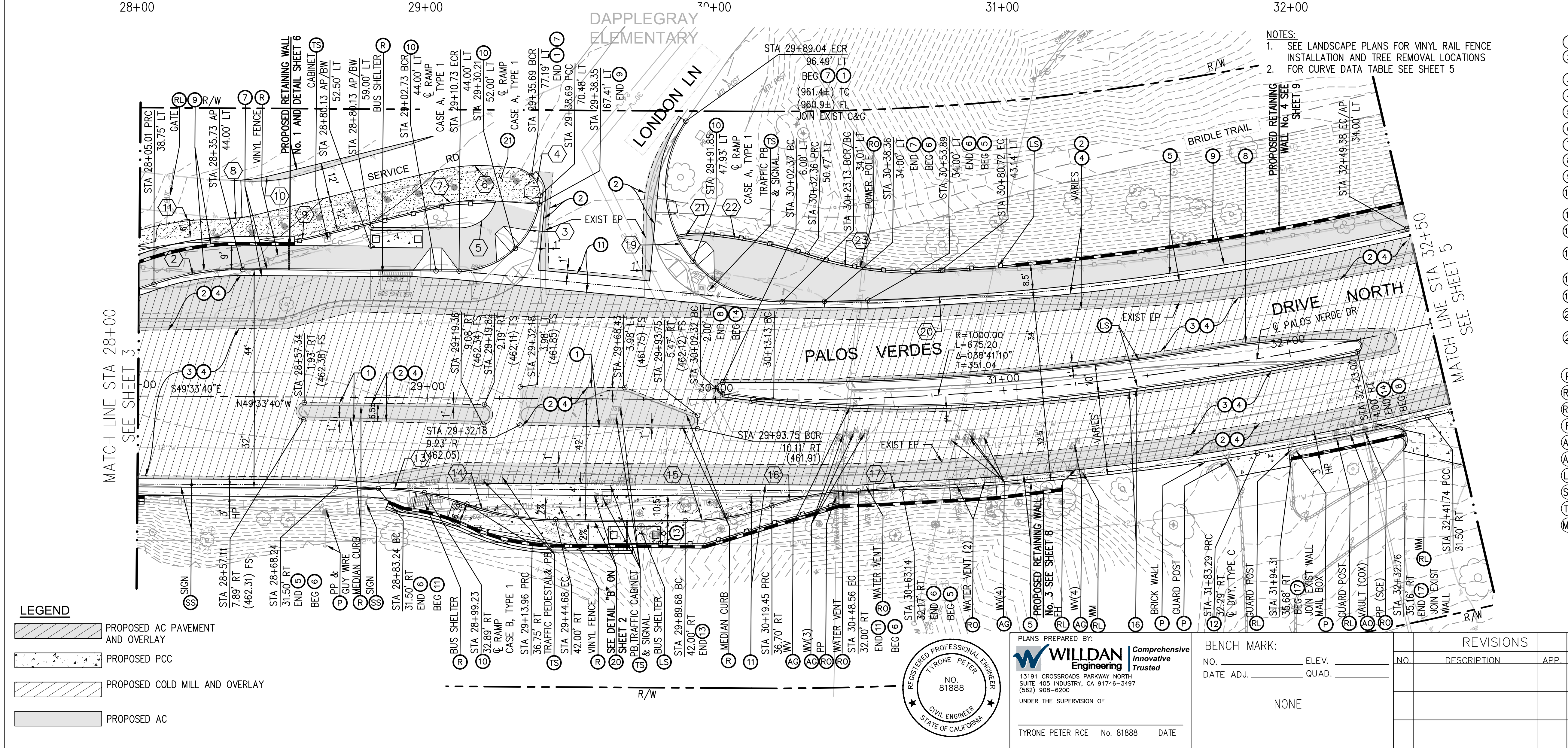
SHT. 3 OF 22 SHTS.

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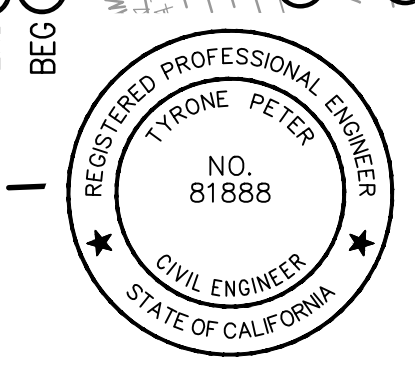


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 - CONSTRUCT 4-INCH THICK PCC SIDEWALK PER SPPWC STD PLAN NO. 110-2, OVER 6-INCH CAB
 - CONSTRUCT CURB AND GUTTER PER SPPCW STD PLAN 120-3, TYPE A2-6, W=1'
 - CONSTRUCT RETAINING WALL, TYPE 7A, PER SPPWC STD PLAN NO. 616-3
 - CONSTRUCT 1-INCH THICK PCC BUS PAD INCLUDING 6-INCH MONOLITHIC CURB, 3,250 PSI OVER 6-INCH CAB
 - COMPACTED NATIVE BACKFILL AT 90% RELATIVE COMPACTION TO A DEPTH OF 12"
- LEGEND:
- (P) PROTECT IN PLACE.
 - (RL) RELOCATE TYPE AS SHOWN.
 - (RO) RELOCATE BY OTHERS.
 - (R) REMOVE TYPE AS SHOWN.
 - (AG) ADJUST TO GRADE TYPE AS SHOWN.
 - (AO) ADJUST TO GRADE BY OTHERS.
 - (LS) SEE LANDSCAPE PLANS
 - (SS) SEE SIGNING AND STRIPING PLANS.
 - (TS) SEE TRAFFIC SIGNAL PLANS.
 - (MF) INDICATES MEDIAN FLARE PER SPPWC STD PLAN NO. 141-2

- LEGEND**
- PROPOSED AC PAVEMENT AND OVERLAY
 - PROPOSED PCC
 - PROPOSED COLD MILL AND OVERLAY
 - PROPOSED AC



PLANS PREPARED BY:
WILLDAN Engineering Comprehensive Innovative Trusted
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UNDER THE SUPERVISION OF
TYRONE PETER RCE No. 81888 DATE

BENCH MARK:
NO. _____ ELEV. _____
DATE ADJ. _____ QUAD. _____
NONE

REVISIONS		
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CITY OF ROLLING HILLS ESTATES

STREET IMPROVEMENT PLAN AND PROFILE

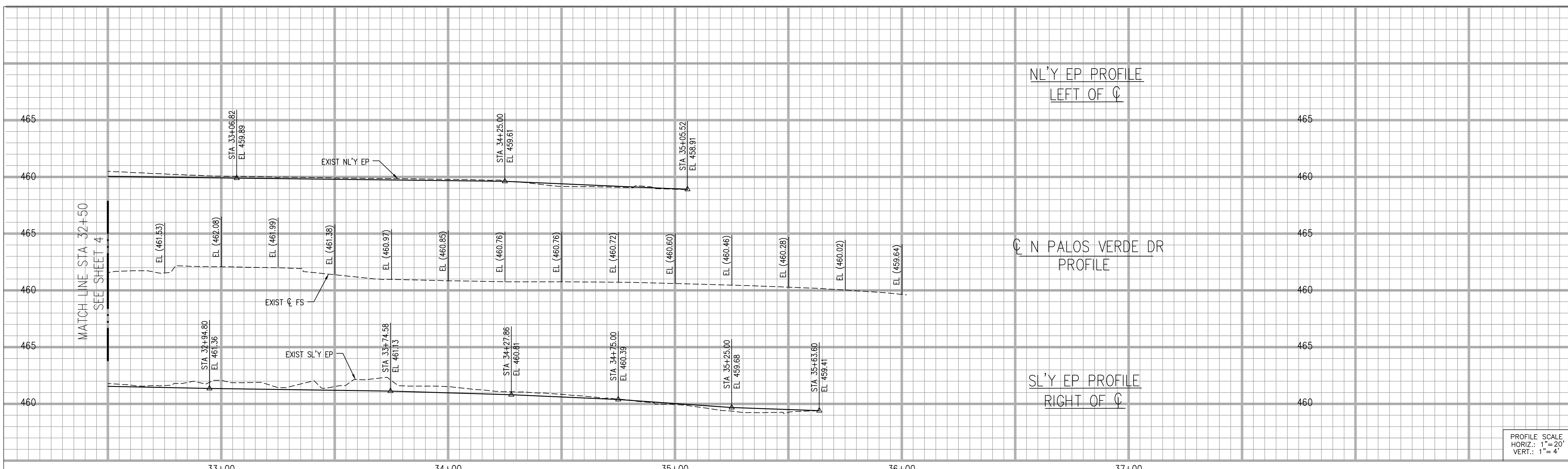
INTERSECTION CAPACITY IMPROVEMENTS
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DRAWN BY: BR
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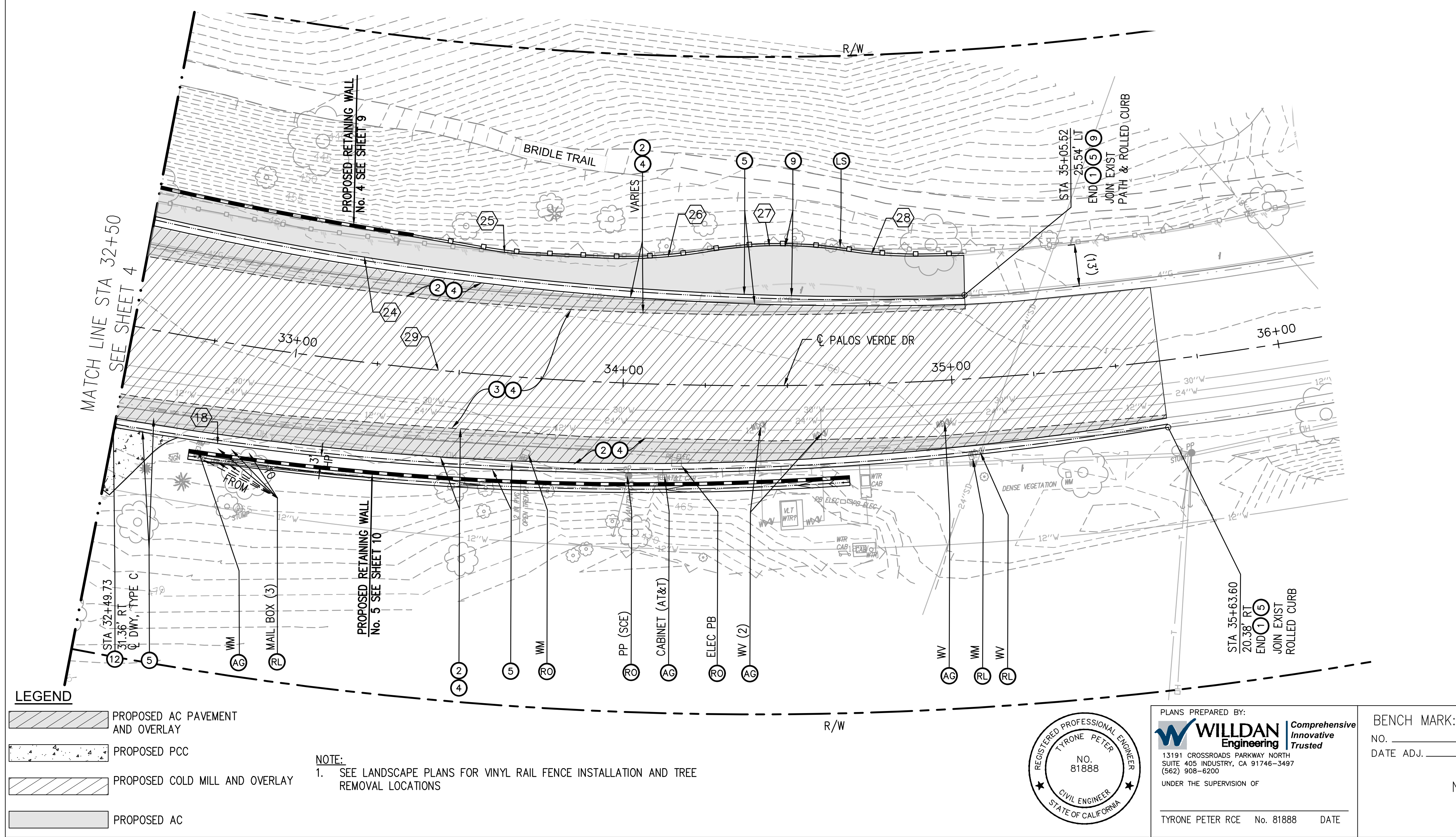
SHT. 4 OF 22 SHTS.

100% SUBMITTAL NOT FOR CONSTRUCTION

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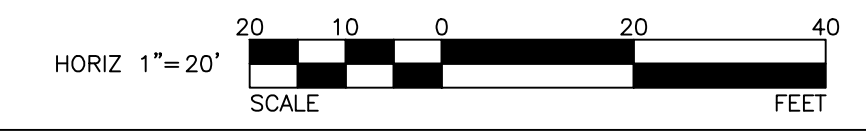
PROFILE SCALE
HORIZ.: 1" = 20'
VERT.: 1" = 4'



CURVE DATA				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
1	31.314'	92.50'	19°23'47"	15.81'
2	31.314'	92.50'	19°23'47"	15.81'
3	42.459'	28.00'	86°53'01"	26.52'
4	14.624'	10.00'	83°47'18"	8.97'
5	16.759'	13.00'	73°51'41"	9.77'
6	19.191'	62.00'	17°44'07"	9.67'
7	15.477'	50.00'	17°44'07"	7.80'
8	14.314'	55.00'	14°54'42"	7.20'
9	19.615'	80.00'	14°02'53"	9.86'
10	9.247'	45.00'	11°46'24"	4.64'
11	37.744'	109.00'	19°50'24"	19.06'
12	1.235'	5.00'	14°09'15"	0.62'
13	31.314'	92.50'	19°23'47"	15.81'
14	31.314'	92.50'	19°23'47"	15.81'
15	30.626'	87.19'	20°07'33"	15.47'
16	30.626'	87.19'	20°07'33"	15.47'
17	199.408'	893.50'	12°47'13"	100.12'
18	330.692'	935.00'	20°15'52"	167.09'
19	87.051'	40.00'	124°41'27"	76.34'
20	218.811'	966.00'	12°58'42"	109.88'
21	11.276'	31.25'	20°40'26"	5.70'
22	34.380'	154.35'	12°45'44"	17.26'
23	47.235'	120.00'	22°33'11"	23.93'
24	248.679'	966.00'	14°44'59"	125.03'
25	12.568'	100.00'	7°12'03"	6.29'
26	31.899'	150.00'	12°11'04"	16.01'
27	42.564'	131.50'	18°32'43"	21.47'
28	22.565'	130.00'	9°56'43"	11.31'
29	675.200'	1000.00'	38°41'10"	351.04'

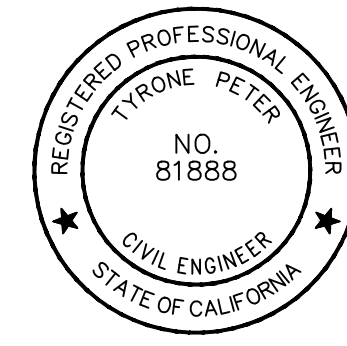
- CONSTRUCTION NOTES:**
- 1 REMOVE EXISTING ASPHALT CONCRETE, P.C.C., BASE MATERIAL, AND SUBGRADE
 - 2 CONSTRUCT 6-INCH THICK AC OVER 10-INCH THICK CAB, SEE TYPICAL SECTION ON SHEET 2.
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- (P) PROTECT IN PLACE.
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- (MFL) INDICATES MEDIAN FLARE PER SPPCW STD PLAN NO. 141-2



- LEGEND**
- PROPOSED AC PAVEMENT AND OVERLAY
 - PROPOSED PCC
 - PROPOSED COLD MILL AND OVERLAY
 - PROPOSED AC

NOTE:
1. SEE LANDSCAPE PLANS FOR VINYL RAIL FENCE INSTALLATION AND TREE REMOVAL LOCATIONS



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NONE

REVISIONS		
NO.	DESCRIPTION	APP. DATE

CITY OF ROLLING HILLS ESTATES

STREET IMPROVEMENT PLAN AND PROFILE

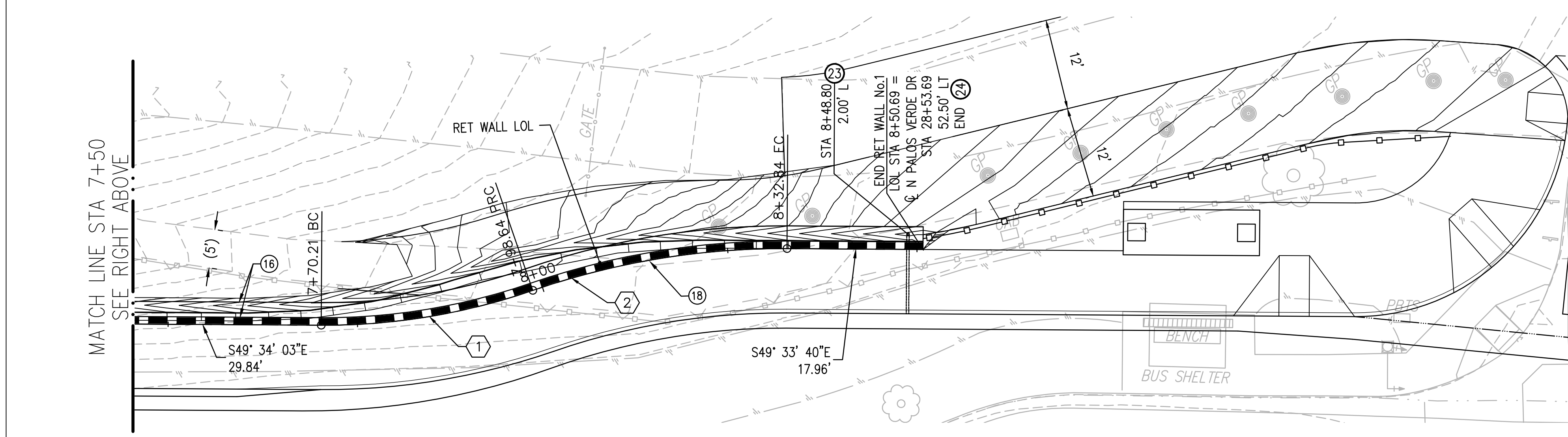
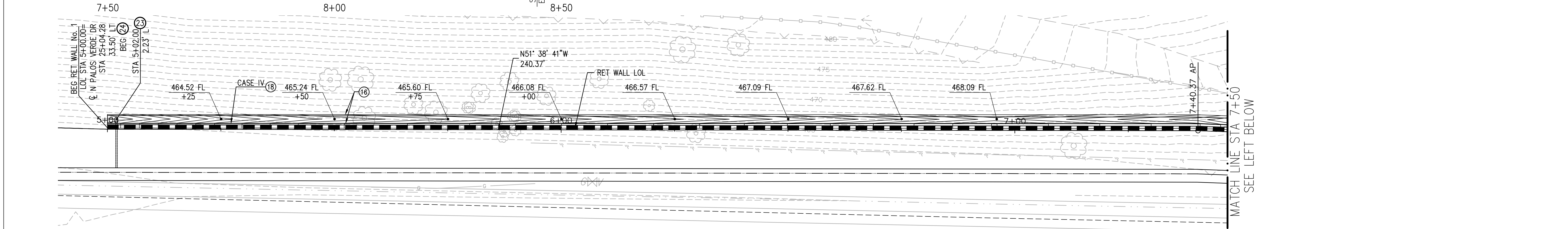
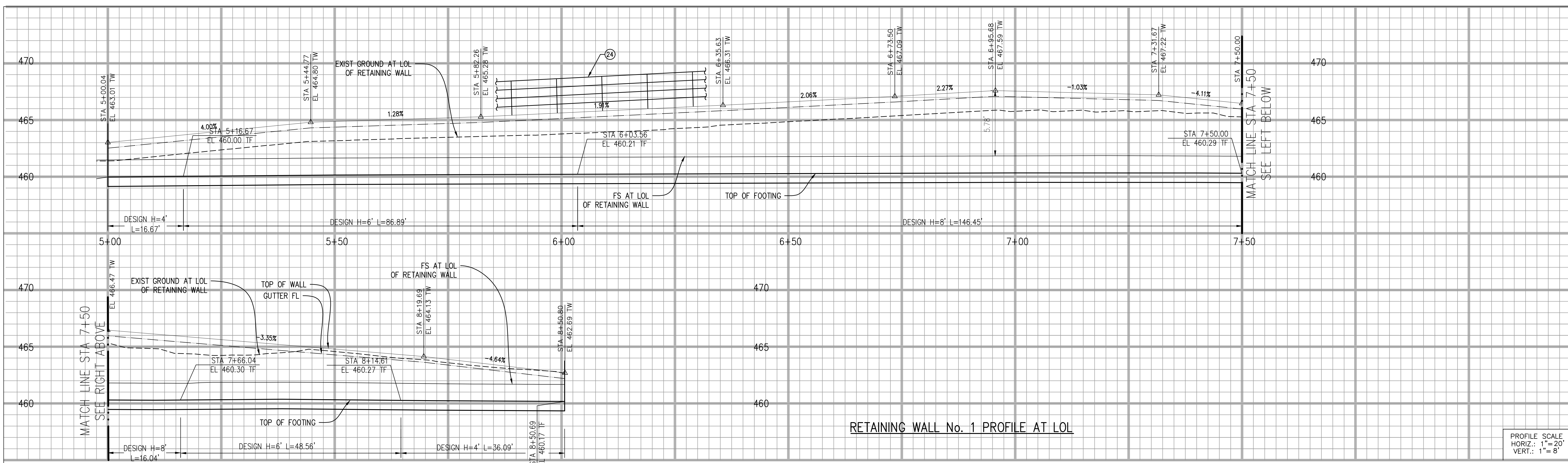
INTERSECTION CAPACITY IMPROVEMENTS
AT PALOS VERDES DRIVE NORTH AND DAPPLEGRAY SCHOOL ENTRANCE

DRAWN BY: BR
DESIGNED BY: BR
CHECKED BY: FW

SHT. 5 OF 22 SHTS.

100% SUBMITTAL NOT FOR CONSTRUCTION

U:\110176 - RHE PVDN@DAPPLEGRAY ELM SCHOOL\900-PS&E\901-Plans\PL-RWAL-01.dwg Apr 05, 23 - 10:07am

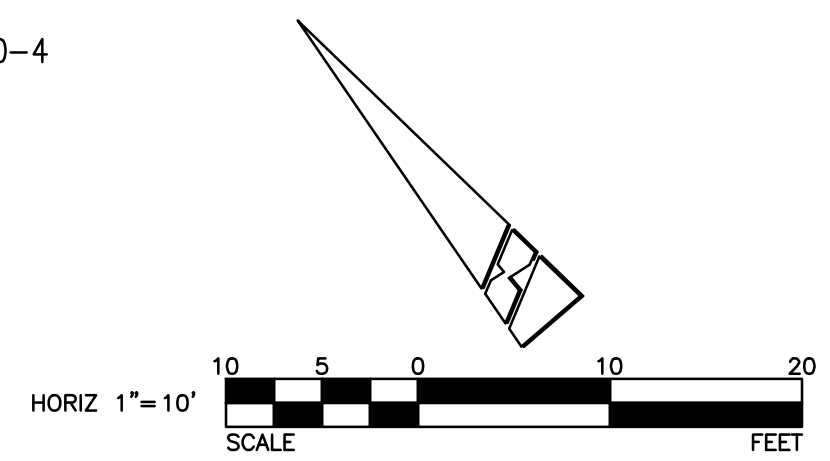


CONSTRUCTION NOTES:

- 16 CONSTRUCT CONCRETE DRAINAGE SWALE BEHIND RETAINING WALL PER SPPWC STD PLAN NO. 621-3
- 17 CONSTRUCT RETAINING WALL, TYPE 7A, PER SPPWC STD PLAN NO. 616-3
- 18 CONSTRUCT RETAINING WALL, TYPE 5, PER SPPWC STD PLAN NO. 614-3. CASE PER PLAN
- 23 CONSTRUCT WALL GUTTER OUTLET TO CURB PER SPPWC STD PLAN NO. 617-3 AND PLAN No. 150-4
- 24 CONSTRUCT CABLE RAILING PER CALTRANS STD B11-47, PER SECTION C-C

CURVE TABLE			
CURVE	LENGTH	RADIUS	TANGENT
1	28.440	84.00	19°23'54"
2	34.192	100.84	19°25'39"

LEGEND
 RETAINING WALL



RETAINING No.1 WALL PLAN

PLANS PREPARED BY:
WILLDAN Engineering Comprehensive Innovative Trusted
 13191 CROSSROADS PARKWAY NORTH
 SUITE 405 INDUSTRY, CA 91746-3497
 (562) 908-6200
 UNDER THE SUPERVISION OF _____

BENCH MARK:
 NO. _____ ELEV. _____
 DATE ADJ. _____ QUAD. _____

NONE

REVISIONS		
NO.	DESCRIPTION	APP. DATE

CITY OF ROLLING HILLS ESTATES

RETAINING WALL PLAN AND PROFILE

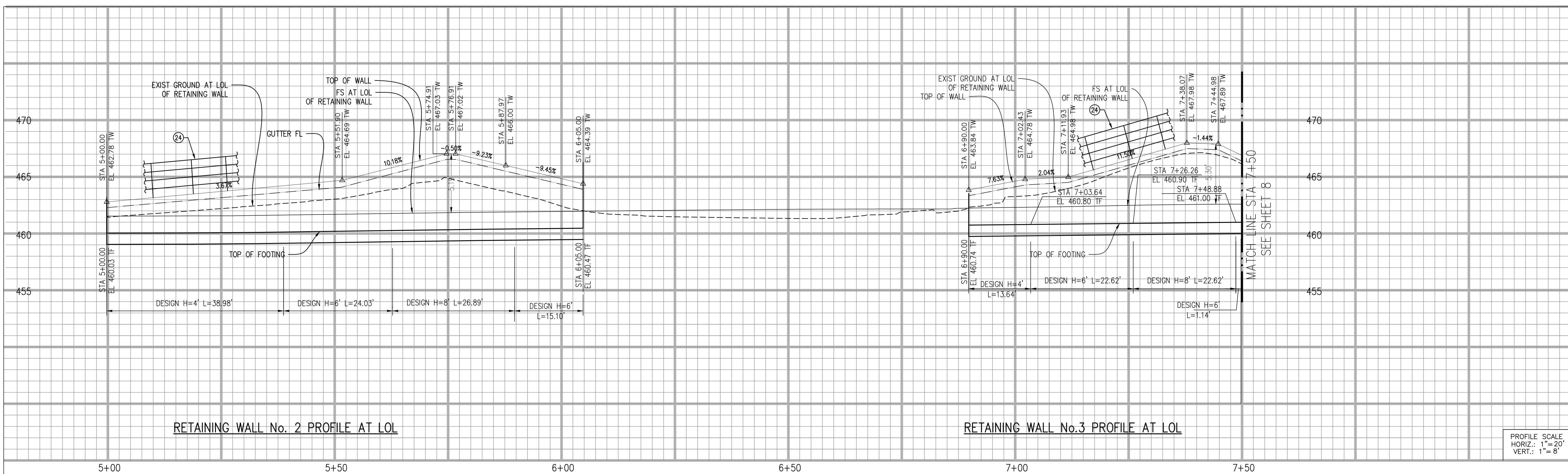
INTERSECTION CAPACITY IMPROVEMENTS
 AT PALOS VERDES DRIVE NORTH AND DAPPLEGRAY SCHOOL ENTRANCE

DRAWN BY: BR
 DESIGNED BY: BR
 CHECKED BY: FW

SHT. 6 OF 22 SHTS.

100% SUBMITTAL NOT FOR CONSTRUCTION

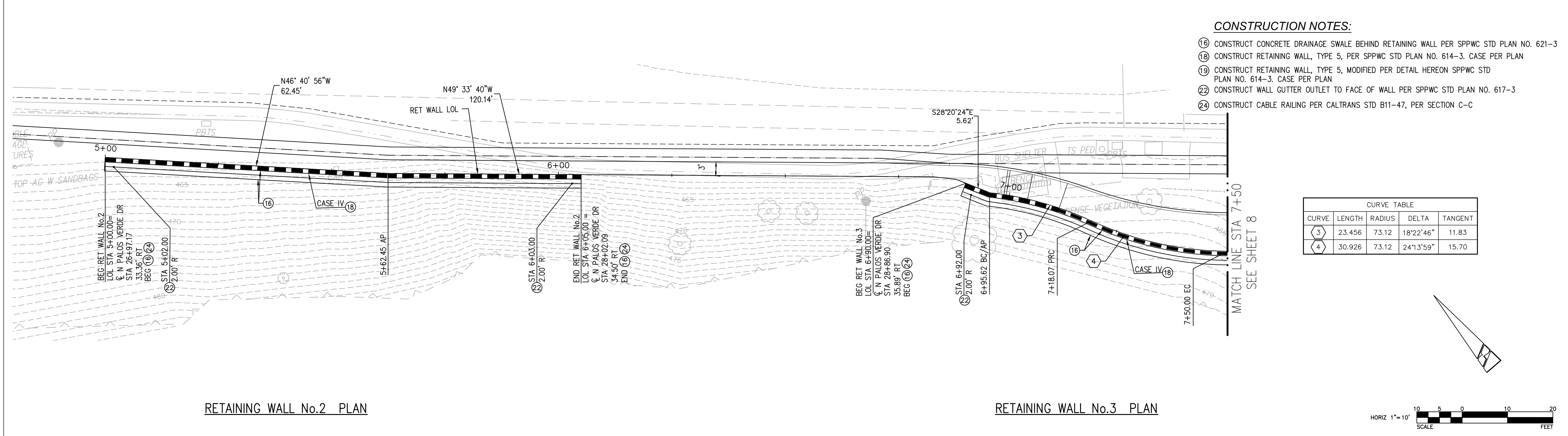
U:\110176 - RHE PVDN@DAPPLEGRAY ELM SCHOOL\900-PS&E\901-Plans\PL-RWAL-01.dwg Apr 05, 23 - 10:08am



RETAINING WALL No. 2 PROFILE AT LOL

RETAINING WALL No.3 PROFILE AT LOL

PROFILE SCALE
HORIZ.: 1" = 20'
VERT.: 1" = 8'



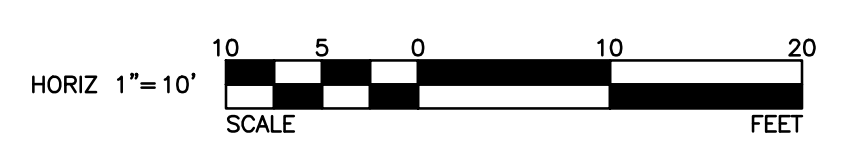
RETAINING WALL No.2 PLAN

RETAINING WALL No.3 PLAN

CONSTRUCTION NOTES:

- (16) CONSTRUCT CONCRETE DRAINAGE SWALE BEHIND RETAINING WALL PER SPPWC STD PLAN NO. 621-3
- (18) CONSTRUCT RETAINING WALL, TYPE 5, PER SPPWC STD PLAN NO. 614-3. CASE PER PLAN
- (19) CONSTRUCT RETAINING WALL, TYPE 5, MODIFIED PER DETAIL HEREON SPPWC STD PLAN NO. 614-3. CASE PER PLAN
- (22) CONSTRUCT WALL GUTTER OUTLET TO FACE OF WALL PER SPPWC STD PLAN NO. 617-3
- (24) CONSTRUCT CABLE RAILING PER CALTRANS STD B11-47, PER SECTION C-C

CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
(3)	23.456	73.12	18°22'46"	11.83
(4)	30.926	73.12	24°13'59"	15.70



LEGEND
 RETAINING WALL

PLANS PREPARED BY:
WILLDAN Engineering Comprehensive Innovative Trusted
 13191 CROSSROADS PARKWAY NORTH
 SUITE 405 INDUSTRY, CA 91746-3497
 (562) 908-6200
 UNDER THE SUPERVISION OF

BENCH MARK:
 NO. _____ ELEV. _____
 DATE ADJ. _____ QUAD. _____
 NONE

REVISIONS		
NO.	DESCRIPTION	APP. DATE

CITY OF ROLLING HILLS ESTATES

RETAINING WALL PLAN AND PROFILE

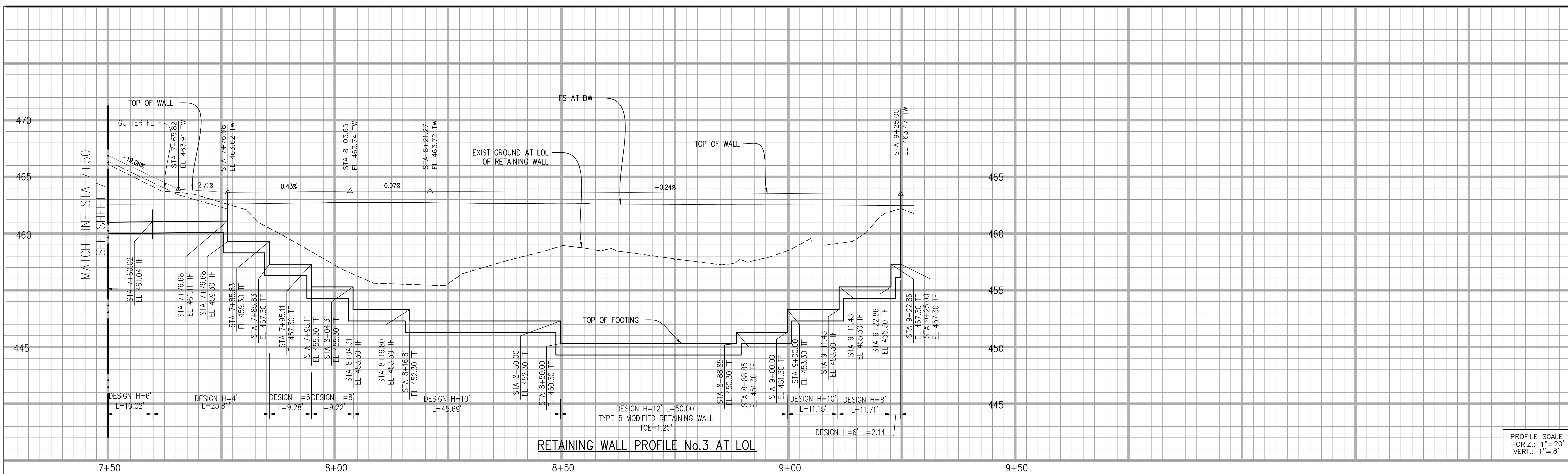
INTERSECTION CAPACITY IMPROVEMENTS
 AT PALOS VERDES DRIVE NORTH AND DAPPLEGRAY SCHOOL ENTRANCE

DRAWN BY: BR
 DESIGNED BY: BR
 CHECKED BY: FW

SHT. 7 OF 22 SHTS.

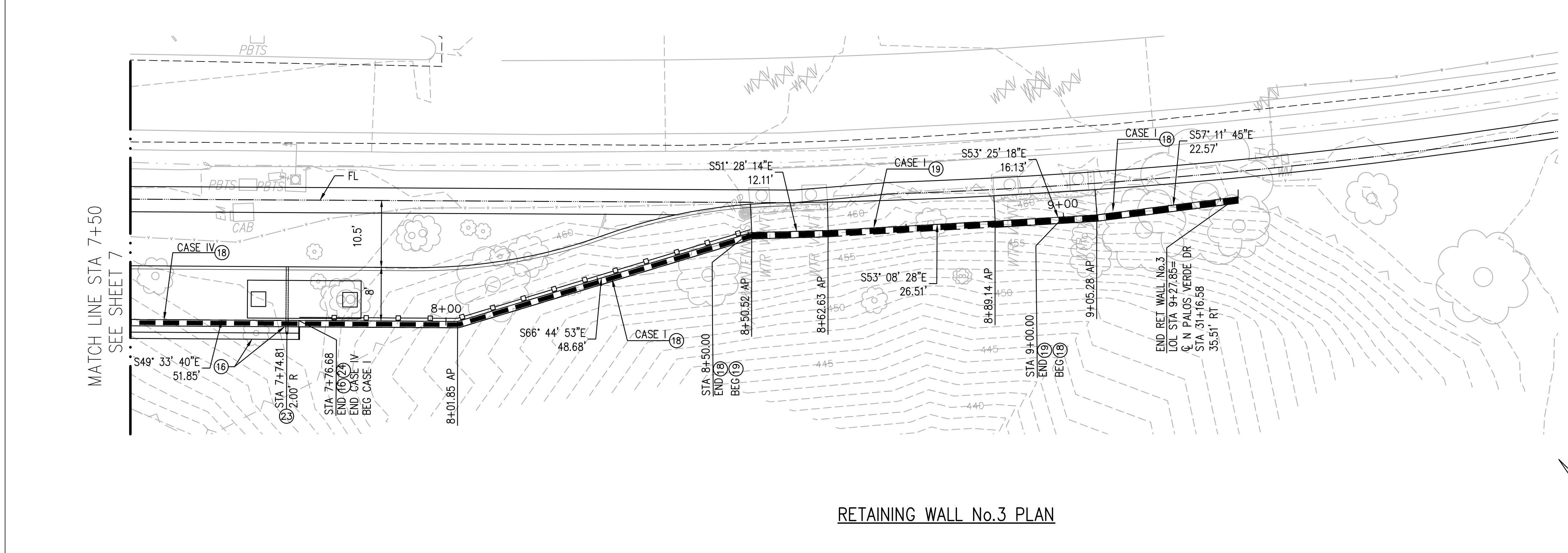
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PROFILE SCALE:
HORIZ.: 1" = 20'
VERT.: 1" = 8'

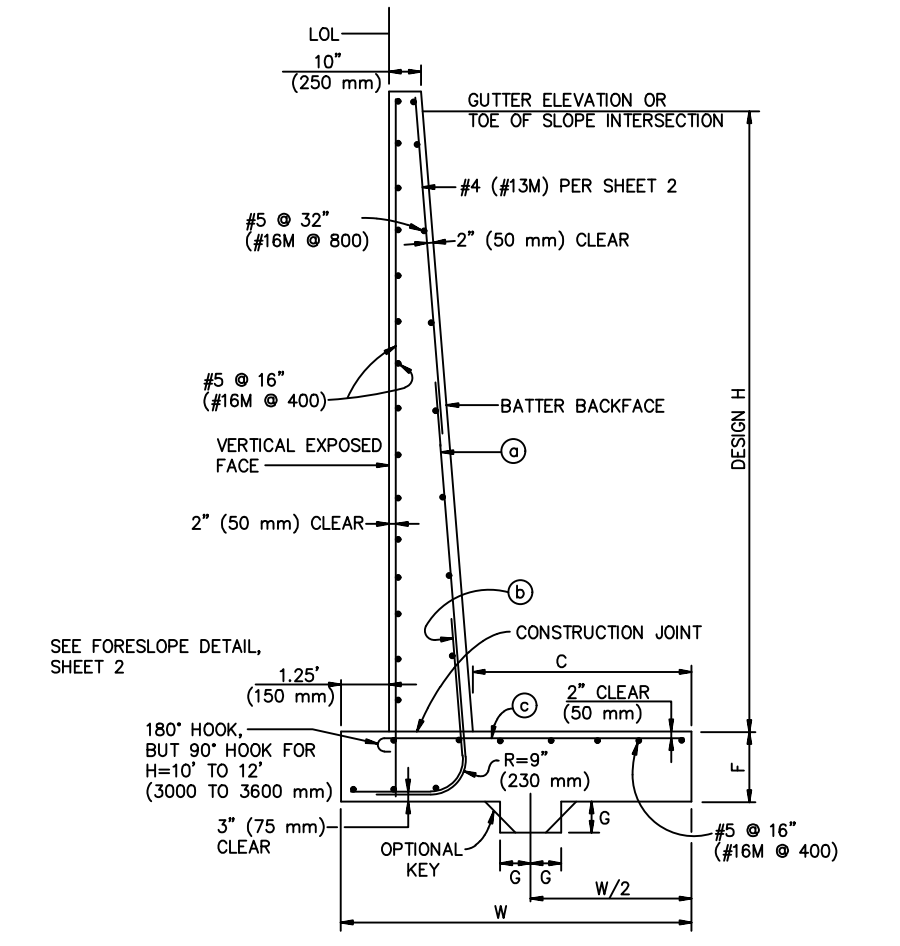
7+50 8+00 8+50 9+00 9+50



RETAINING WALL No.3 PLAN

CONSTRUCTION NOTES:

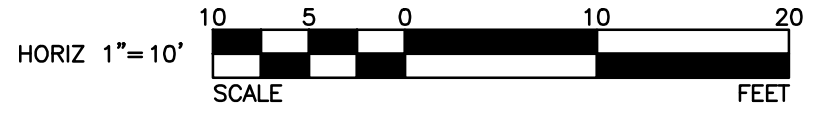
- 16 CONSTRUCT CONCRETE DRAINAGE SWALE BEHIND RETAINING WALL PER SPPWC STD PLAN NO. 621-3
- 18 CONSTRUCT RETAINING WALL, TYPE 5, PER SPPWC STD PLAN NO. 614-3. CASE PER PLAN
- 19 CONSTRUCT RETAINING WALL, TYPE 5, MODIFIED PER DETAIL HEREON SPPWC STD PLAN NO. 614-3. CASE PER PLAN
- 23 CONSTRUCT WALL GUTTER OUTLET TO CURB PER SPPWC STD PLAN NO. 617-3 AND PLAN No. 150-4
- 24 CONSTRUCT CABLE RAILING PER CALTRANS STD B11-47, PER SECTION C-C



TYPE 5 MODIFIED RETAINING WALL

LEGEND

--- RETAINING WALL



PLANS PREPARED BY:
WILLDAN Engineering Comprehensive Innovative Trusted
13191 CROSSROADS PARKWAY NORTH
SUITE 405 INDUSTRY, CA 91746-3497
(562) 908-6200
UNDER THE SUPERVISION OF _____

BENCH MARK:
NO. _____ ELEV. _____
DATE ADJ. _____ QUAD. _____
NONE

REVISIONS		
NO.	DESCRIPTION	APP. DATE

CITY OF ROLLING HILLS ESTATES

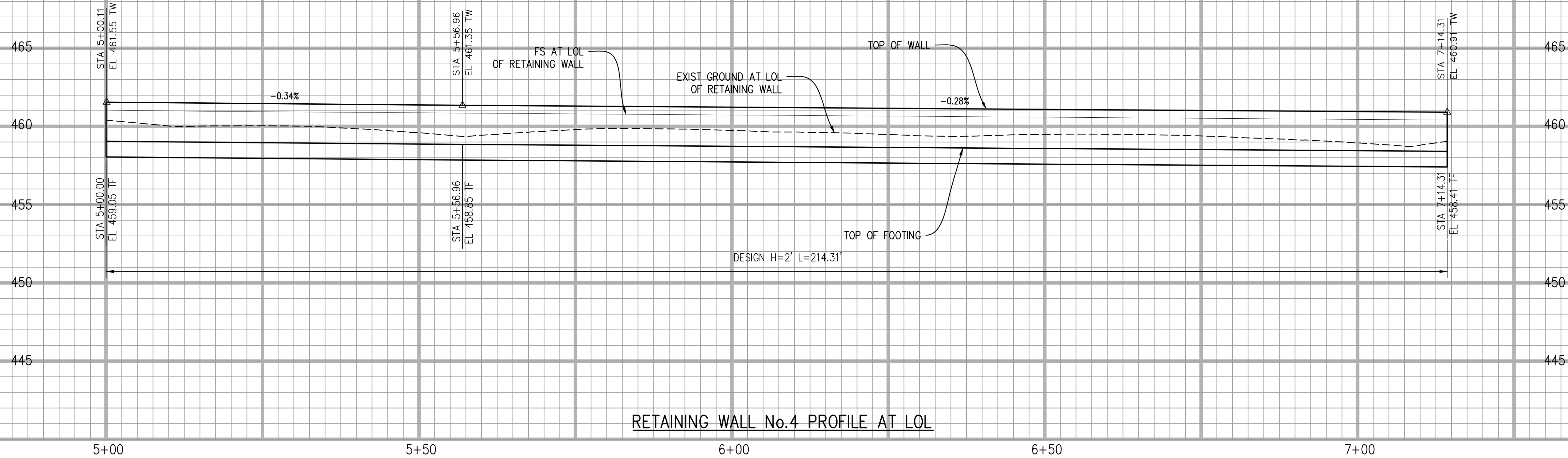
RETAINING WALL PLAN AND PROFILE

INTERSECTION CAPACITY IMPROVEMENTS
AT PALOS VERDES DRIVE NORTH AND DAPPLEGRAY SCHOOL ENTRANCE

DRAWN BY: BR
DESIGNED BY: BR
CHECKED BY: FW

SHT. 8 OF 22 SHTS.

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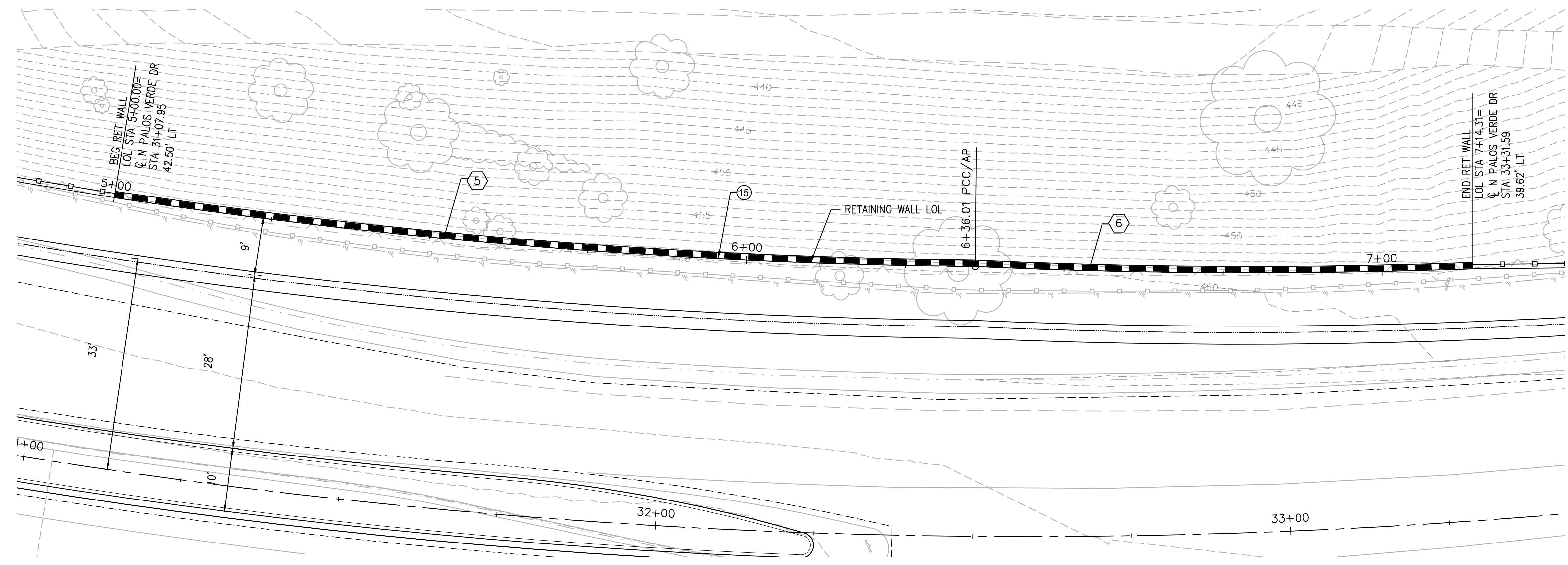
RETAINING WALL No.4 PROFILE AT LOL

PROFILE SCALE:
HORIZ.: 1"=20'
VERT.: 1"=8'

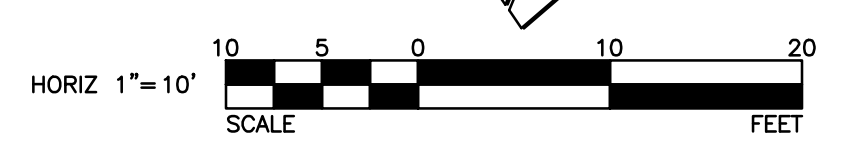
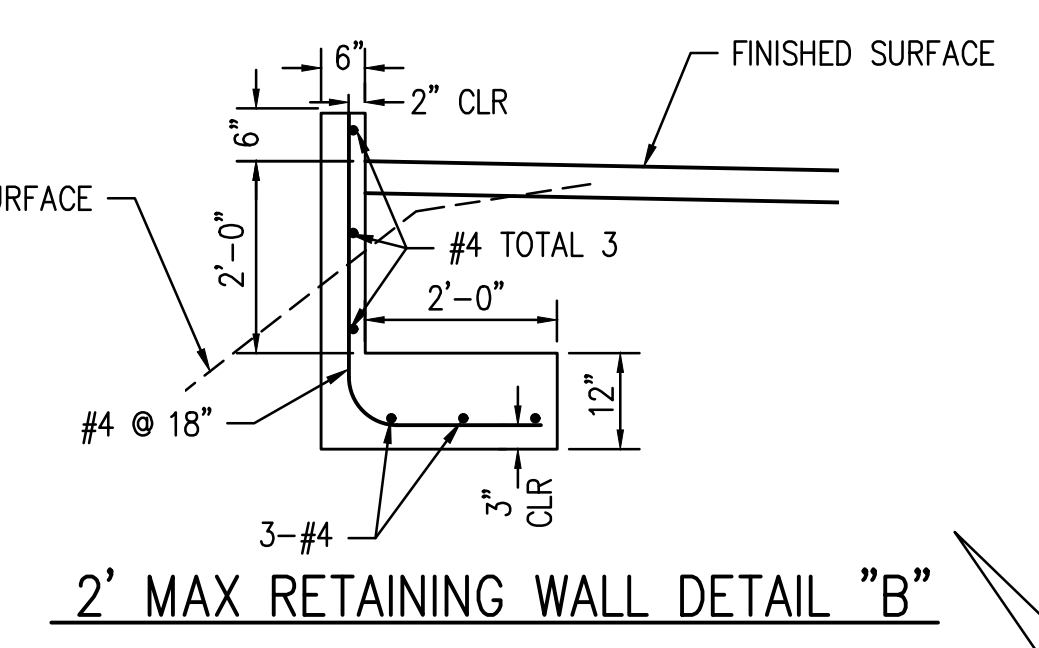
CONSTRUCTION NOTES:

- ⑤ CONSTRUCT RETAINING WALL PER DETAIL B ON SHEET 9

CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
⑤	136.009	959.61	8°07'15"	68.12
⑥	78.297	957.50	4°41'07"	39.17



RETAINING WALL No.4 PLAN



LEGEND

■■■■■ RETAINING WALL

PLANS PREPARED BY: WILLDAN Engineering 13191 CROSSROADS PARKWAY NORTH SUITE 405 INDUSTRY, CA 91746-3497 (562) 908-6200 UNDER THE SUPERVISION OF _____	BENCH MARK: NO. _____ ELEV. _____ DATE ADJ. _____ QUAD. _____ NONE	REVISIONS NO. DESCRIPTION APP. DATE
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CITY OF ROLLING HILLS ESTATES

RETAINING WALL PLAN AND PROFILE

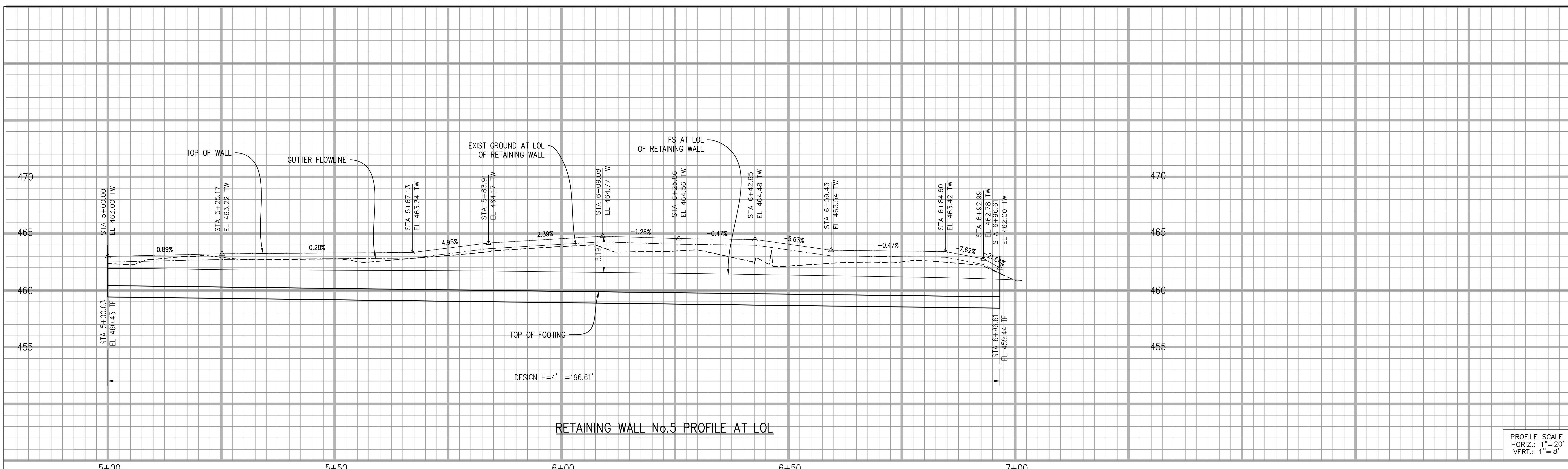
INTERSECTION CAPACITY IMPROVEMENTS
AT PALOS VERDES DRIVE NORTH AND DAPPLEGRAY SCHOOL ENTRANCE

DRAWN BY: BR
DESIGNED BY: BR
CHECKED BY: FW

SHT. 9 OF 22 SHTS.

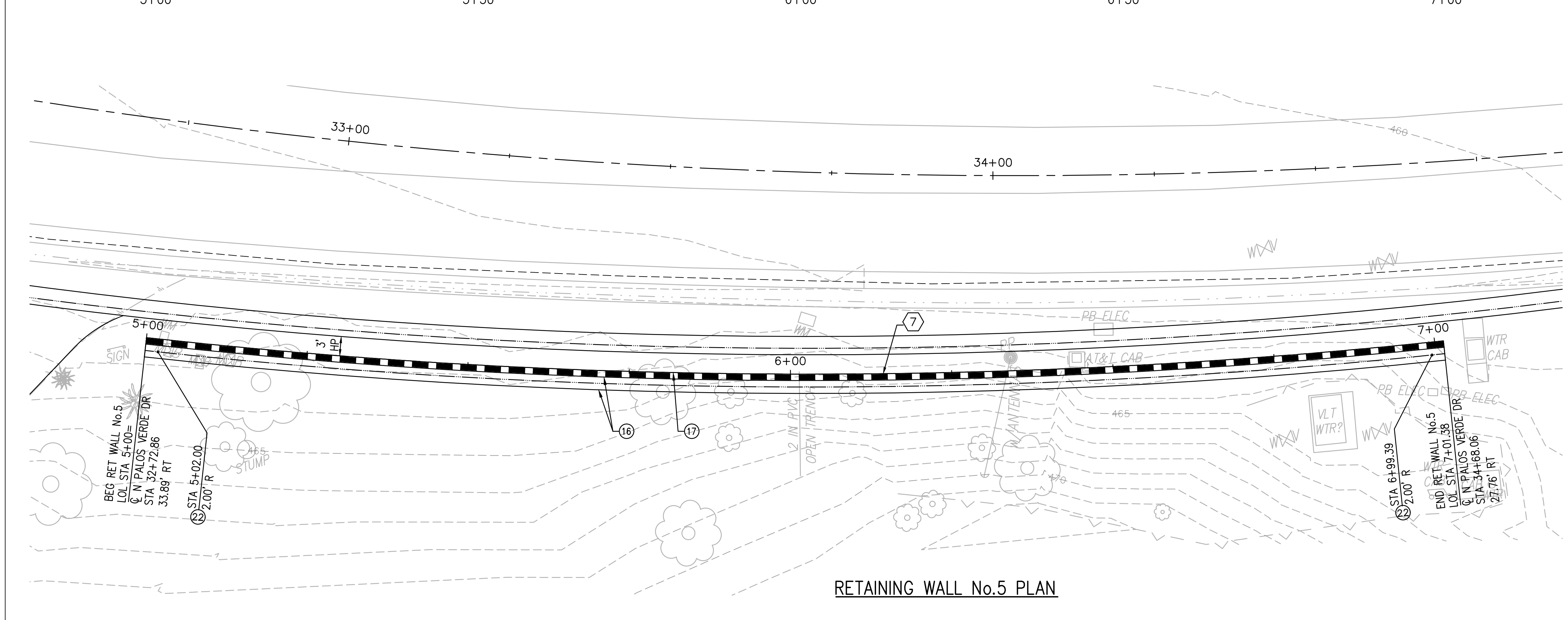
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RETAINING WALL No.5 PROFILE AT LOL

PROFILE SCALE:
HORIZ.: 1"=20'
VERT.: 1"=8'

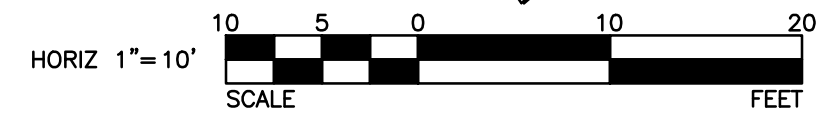


RETAINING WALL No.5 PLAN

CONSTRUCTION NOTES:

- ⑩ CONSTRUCT CONCRETE DRAINAGE SWALE BEHIND RETAINING WALL PER SPPWC STD PLAN NO. 621-3
- ⑪ CONSTRUCT RETAINING WALL, TYPE 7A, PER SPPWC STD PLAN NO. 616-3
- ⑫ CONSTRUCT WALL GUTTER OUTLET TO FACE OF WALL PER SPPWC STD PLAN NO. 617-3

LEGEND
 RETAINING WALL



CITY OF ROLLING HILLS ESTATES

RETAINING WALL PLAN AND PROFILE

INTERSECTION CAPACITY IMPROVEMENTS
 AT PALOS VERDES DRIVE NORTH AND DAPPLEGRAY SCHOOL ENTRANCE

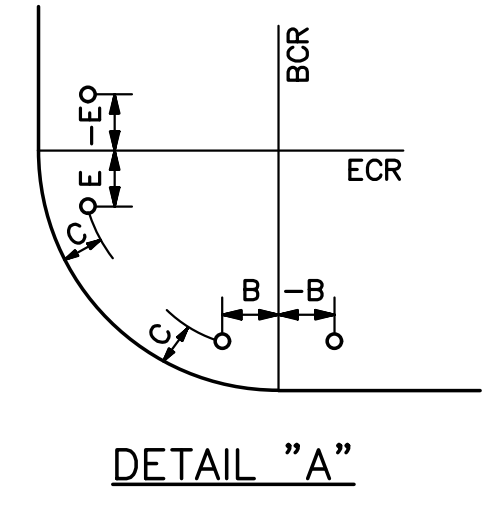
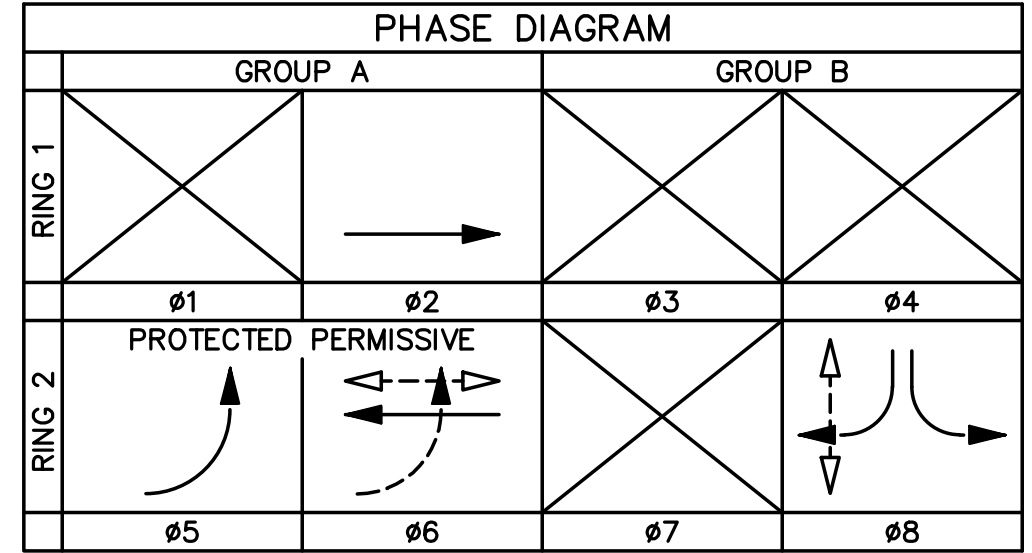
DRAWN BY: BR	SHT. 10 OF 22 SHTS.
DESIGNED BY: BR	
CHECKED BY: FW	

PLANS PREPARED BY: WILLDAN Engineering Comprehensive Innovative Trusted	BENCH MARK: NO. _____ ELEV. _____ DATE ADJ. _____ QUAD. _____	NONE	
13191 CROSSROADS PARKWAY NORTH SUITE 405 INDUSTRY, CA 91746-3497 (562) 908-6200 UNDER THE SUPERVISION OF _____			

100% SUBMITTAL NOT FOR CONSTRUCTION

POLE SCHEDULE																	
No.	STANDARD			LUMINAIRE	VEHICLE SIGNAL MOUNTING		PED SIGNAL	PPB		EPB*			POLE LOCATION (SEE DETAIL "A")	REMARKS			
	TYPE	LUM. M.A.	SIG. M.A.		HPS	MAST ARM		POLE	MTG.	Ø	QUAD	ARROW			Ø	QUAD	ARROW
(A)	SIGNAL STRUCTURE A	2'	45'	250W	MAS-5A, MAS	SV-3-TB	-	-	-	-	-	-	-	-	-	-	1., 2.
(B)	SIGNAL STRUCTURE B	-	-	-	-	SV-1-T	-	-	-	-	-	-	-	-	-	-	1., 2.
(C)	SIGNAL STRUCTURE C	2'	-	250W	-	SV-3-TB	SP-1-T	8	E	→	-	-	-	-	-	-	1., 2.
(D)	SIGNAL STRUCTURE D	2'	30'	250W	MAS	SV-2-TD	SP-2-T	8	W	→	-	-	-	-	-	-	1., 2.
(E)	SIGNAL STRUCTURE B	-	-	-	-	SV-3-TB	-	6	S	→	6	N	←	-	-	-	1., 2.
(F)	SIGNAL STRUCTURE C	2'	-	250W	-	-	-	6	S	→	6	N	←	-	-	-	1., 2.
(G)	SIGNAL STRUCTURE C	2'	-	250W	-	SV-1-T	SP-1-T	-	-	-	-	-	-	-	-	-	1., 2.

■ ALL EQUIPMENT IS NEW

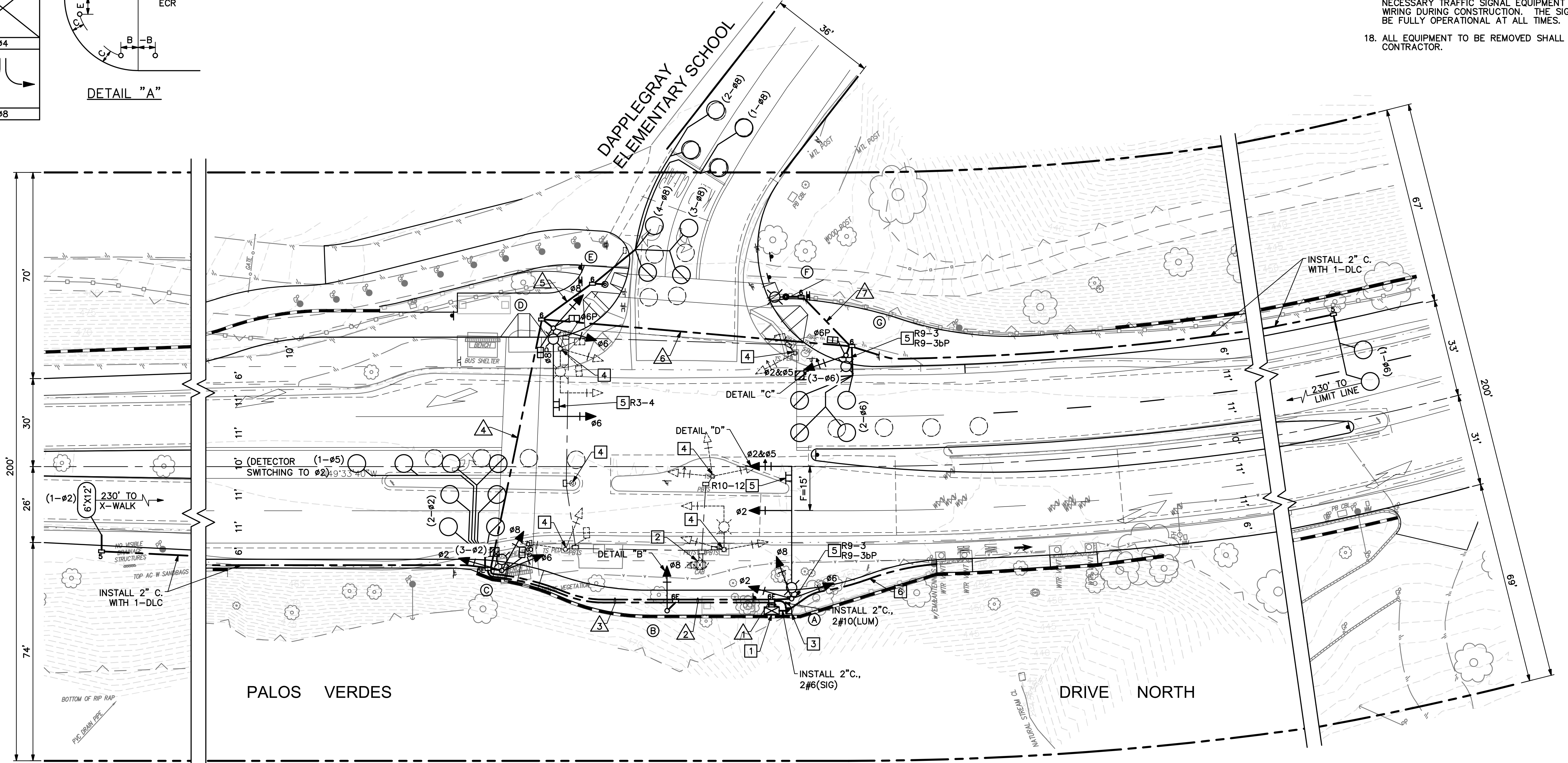


Ø5 SHALL NOT BE RE-SERVICED UNTIL SUCH TIME
Ø2 AND Ø6 HAVE TERMINATED SIMULTANEOUSLY

1. MODIFIED FOUNDATION, SEE DETAILS ON SHEET 13.
2. TRAFFIC SIGNAL POLES ARE SQUARE DECORATIVE SIGNAL STRUCTURES, SEE DETAILS ON SHEET 12.

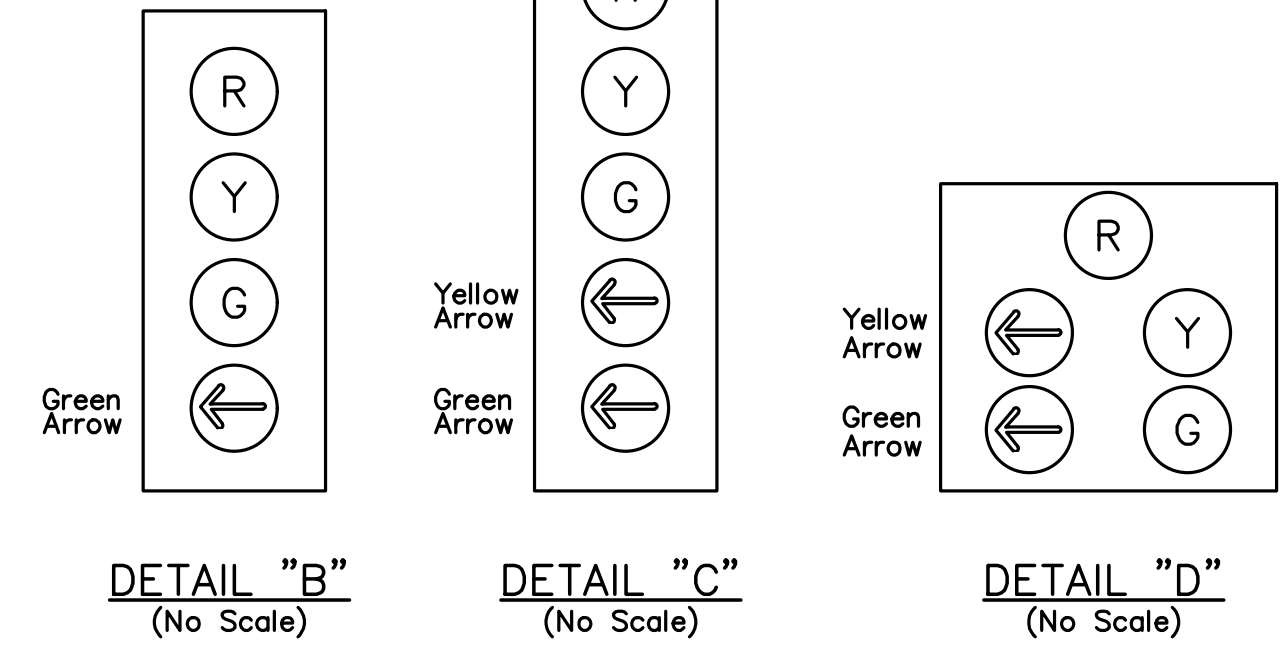
TRAFFIC SIGNAL GENERAL NOTES:

1. TRAFFIC SIGNAL AND HIGHWAY LIGHTING EQUIPMENT, SIGNING, AND THE INSTALLATION THEREOF SHALL CONFORM TO CALTRANS STANDARD PLANS AND SPECIFICATIONS, DATED 2018, THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CALIFORNIA MUTCD), DATED 2014, THIS PLAN AND THE SPECIAL PROVISIONS.
2. NEW VEHICLE INDICATIONS SHALL BE 12" LED RED, LED AMBER AND LED GREEN PER CALTRANS APPROVED SPECIFICATIONS.
3. NEW SIGNAL HEADS SHALL BE METAL.
4. NEW CONDUIT SHALL BE MIN. SIZE 2" RIGID STEEL AND NEW PULL BOXES SHALL BE #5, UNLESS SHOWN OTHERWISE.
5. ALL PEDESTRIAN INDICATIONS SHALL BE LED COUNT-DOWN PEDESTRIAN HEADS (SEE SPECIAL PROVISIONS).
6. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL OVERHEAD AND UNDERGROUND FACILITIES, AND TO PROTECT THEM FROM DAMAGE THE CONTRACTOR SHALL BEAR THE TOTAL EXPENSE OF REPAIR OR REPLACEMENT OF ANY OVERHEAD AND UNDERGROUND FACILITIES DAMAGED DURING CONSTRUCTION.
7. CONDUCTOR SCHEDULE IS PROVIDED AS AN INSTALLATION GUIDELINE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS REQUIRED FOR THE INTENDED OPERATION.
8. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE CITY ENGINEER FOR EXACT EQUIPMENT LOCATION PRIOR TO FINAL PLACEMENT.
9. LOCATION OF UNDERGROUND FACILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL POthOLE TO DETERMINE THE EXACT LOCATION AND VERIFY ALL CONDITIONS ON THE JOBSITE. HAND DIG FOUNDATIONS UNTIL CLEAR OF OBSTRUCTION. COORDINATE POLE INSTALLATION WITH OVERHEAD UTILITY AND SUBSTRUCTURE OWNERS. CONTACT UNDERGROUND SERVICE ALERT AT 811 OR (800) 227-2600, TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.
10. ANY MODIFICATION OF OR CHANGES TO APPROVED PLANS MUST BE APPROVED BY THE CITY ENGINEER.
11. CONTRACTOR SHALL REPLACE IN-KIND ANY PRIVATE FENCES, WALLS, LAWNS, SHRUBBERY, IRRIGATION, ETC. REMOVED OR DAMAGED TO FACILITATE TRAFFIC SIGNAL INSTALLATION, SIDEWALK, AND CURB CONSTRUCTION. CONTRACTOR SHALL MODIFY AND REPLACE IN-KIND ANY IRRIGATION DAMAGED OR REMOVED BY CONSTRUCTION TO MAINTAIN OPERATION.
12. COORDINATE ELECTRICAL SERVICE DETAILS AND SCHEDULING WITH SOUTHERN CALIFORNIA EDISON. CONTACT MR. RYAN KERBY AT (310) 783-9305.
13. ALL UNUSED AND/OR ABANDONED PULL BOXES AND FOUNDATIONS SHALL BE REMOVED AND THE AFFECTED AREA REPAIRED OR RESTORED TO MATCH SURROUNDING.
14. INDUCTIVE DETECTOR LOOPS SHALL BE 6' DIAMETER TYPE "E" AND CENTERED IN TRAVEL LANE WITH 10' SPACING BETWEEN LOOPS IN THE DIRECTION OF TRAVEL. LIMIT LINE LOOPS SHALL BE MODIFIED TYPE "D" BICYCLE DETECTOR LOOPS PER LOS ANGELES COUNTY STANDARDS. PLACE LIMIT LINE LOOPS 2' INTO CROSSWALK OR LIMIT LINE.
15. CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY EQUIPMENT NECESSARY TO MAINTAIN CURRENT SIGNAL OPERATION, INCLUDING BUT NOT LIMITED TO CONTROLLER ASSEMBLIES AND SIGNAL POLES.
16. EXISTING CONDUIT NOT SHOWN FOR REUSE SHALL BE ABANDONED AND CONDUCTORS REMOVED.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ANY TEMPORARY TRAFFIC SIGNAL INSTALLATION OF CABINETS, POLES, OR CONDUITS WITH ALL NECESSARY TRAFFIC SIGNAL EQUIPMENT INCLUDING TEMPORARY OVERHEAD WIRING DURING CONSTRUCTION. THE SIGNALIZED TRAFFIC INTERSECTION SHALL BE FULLY OPERATIONAL AT ALL TIMES.
18. ALL EQUIPMENT TO BE REMOVED SHALL BE DISPOSED OF BY THE CONTRACTOR.



CONDUCTOR SCHEDULE							
AWG	CIRCUIT	RUN					
		1	2	3	4	5	6
1/2 CONDUCTOR CABLE	POLE (A)	2	1	1	1	1	1
	POLE (B)	1	1	1	1	1	1
	POLE (C)	2	2	2	2	2	2
	POLE (D)	2	2	2	2	2	2
	POLE (E)	2	2	2	2	2	2
	POLE (F)	2	2	2	2	2	2
	POLE (G)	1	1	1	1	1	1
TOTAL		8	6	6	6	6	6
#10	LUMINAIRE	-	2	2	2	-	2
	Ø2 DETECTOR	3	3	3	-	-	-
	Ø5 DETECTOR	1	1	1	-	-	-
	Ø6 DETECTOR	3	3	3	3	-	3
TYPE B DLC	Ø8 DETECTOR	4	4	4	4	-	-
	TOTAL	10	10	10	7	4	3
CONDUIT SIZE		2-4"	2-4"	2-4"	4"	2"	4"
% FILL		18	16	14	19	17	8

▲ ALL CONDUCTORS AND CONDUIT ARE NEW. SEE GENERAL NOTE NO. 7



CONSTRUCTION NOTES:

1. INSTALL NEW ECONOLITE TS2 TYPE P CABINET COMPLETE WITH ECONOLITE ASC/3-2100 CONTROLLER ASSEMBLY, BATTERY BACKUP SYSTEM, GPS ANTENNA, GPS UNIT, AND ALL AUXILIARY EQUIPMENT NECESSARY TO PROVIDE THE OPERATION SHOWN. CONSTRUCT NEW FOUNDATION. TOP OF FOUNDATION SHALL BE 18" ABOVE FINISHED GRADE.
2. REMOVE EXISTING TYPE P CONTROLLER CABINET COMPLETE, BATTERY BACKUP AND TYPE II SERVICE CABINET
3. INSTALL 120/240V TYPE III-BF ELECTRICAL SERVICE ENCLOSURE WITH 1-100 AMP METER, PROVIDE 1-50 AMP BREAKER FOR METERED SIGNAL, AND 1-30AMP BREAKER FOR UNMETERED LUMINAIRES. LOCATE ENCLOSURE A MINIMUM OF 6' FROM THE CONTROLLER CABINET AND POWER POLE.
4. REMOVE EXISTING POLE COMPLETE.
5. INSTALL SIGN(S) AS SHOWN.
6. INSTALL 3" SCHEDULE 80 PVC CONDUIT WITH PULL ROPE AND REUSE EXISTING SERVICE RISER PER SCE REQUIREMENTS. COORDINATE INSTALLATION WITH EDISON SERVICE PLANNER RYAN KERBY AT (310) 783-9305 48 HOURS PRIOR TO CONSTRUCTION.



PLANS PREPARED BY:
WILLDAN Engineering Comprehensive Innovative Trusted
13191 CROSSROADS PARKWAY NORTH
SUITE 405 INDUSTRY, CA 91746-3497
(562) 908-6200
UNDER THE SUPERVISION OF
JEFFREY LAU, RCE No. 83887 DATE

BENCH MARK:	NONE		
NO. _____ ELEV. _____			
DATE ADJ. _____ QUAD. _____			
	NO.	DESCRIPTION	APP. DATE

CITY OF ROLLING HILLS ESTATES

TRAFFIC SIGNAL MODIFICATION PLAN

INTERSECTION CAPACITY IMPROVEMENTS
AT PALOS VERDES DRIVE NORTH AND DAPPLEGRAY SCHOOL ENTRANCE

DRAWN BY: RG/KC
DESIGNED BY: RG/KC
CHECKED BY: JL

SHT. 11 OF 22 SHTS.

U:\110176 - RHE PVD\DAPPLEGRAY ELM SCHOOL\900-PS&E\901-Plans\PL-SIGNAL-01.dwg Apr 03, 23 - 1:22pm

100% SUBMITTAL NOT FOR CONSTRUCTION

SCALE: 1"=20'

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DETAIL "A" & DETAIL "D" TRAFFIC SIGNAL STRUCTURE A TRAFFIC SIGNAL STRUCTURE D

DETAIL 1 - POLE TOP
HOOK FOR WIRING & HANDLING 0.38" DIA. COMMERCIAL GRADE HOT ROLLED BAR

DETAIL 2 - LUMINAIRE ARM END CAP
SQUARE, 0.50" THICK COMMERCIAL QUALITY HOT ROLLED MILD STEEL ARM END CAP

DETAIL 3 - LUMINAIRE ARM END
3.00" x 0.50" x 0.25"

DETAIL 4 - MAST ARM END CAP
SQUARE, 0.50" THICK COMMERCIAL QUALITY HOT ROLLED MILD STEEL ARM END CAP

DETAIL 5 - MAST ARM END
3.38" O.D. X 0.154" WALL X 5.00" LONG-PIPE SIZE TUBING

DETAIL 6 - MAST ARM END CAP
SQUARE, 0.50" THICK COMMERCIAL QUALITY HOT ROLLED MILD STEEL ARM END CAP

DETAIL 7 - SIGNAL ARM TENON
ARM TUBE 4.00" x 1.75"

DETAIL 8 - SCROLL
1.00" HEX HEAD BOLT AND NUT (2 REQ'D)

DETAIL 9
18.00"

DETAIL 10
18.00"

DETAIL 11 - POLE BASE
2 PIECE FULL BASE COVER ASSEMBLY WITH (4) - 0.25" SCREWS

DETAIL 12 - ANCHOR BOLT
(4) ANCHOR BOLTS WITH (4) HEX NUTS AND (4) WASHERS PER BOLT FULLY GALVANIZED

DETAIL 13 - ANCHOR BEARING PLATE
ANCHOR BOLT DIAMETER + 0.06

MATERIAL DATA

COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)
POLE SHAFT	A572 GR. 65	65
PLATES	A572	50
ARMS	A500	45
ARM CONNECTING BOLTS	A325	55
ANCHOR BOLTS	F1554 GR. 55	55
GALVANIZING-HARDWARE	A153	

FINISH DATA

SYSTEM: HOT-DIP GALVANIZED TO ASTM A153
 BASE COAT: HIGH BUILD EPOXY POWDER
 FINISH COAT: TGIC POWDER
 COLOR: WHITE
 SPEC: F-540A

VIBRATION DISCLAIMER
ALTHOUGH RARE, VIBRATIONS SEVERE ENOUGH TO CAUSE DAMAGE CAN OCCASIONALLY OCCUR IN STRUCTURES OF ALL TYPES. BECAUSE THEY ARE INFLUENCED BY MANY INTERACTING VARIABLES, VIBRATIONS ARE GENERALLY UNPREDICTABLE. THE USER'S MAINTENANCE PROGRAM SHOULD INCLUDE OBSERVATION FOR EXCESSIVE VIBRATION AND EXAMINATION FOR ANY STRUCTURAL DAMAGE OR BOLT LOOSENING. THE VALMONT WARRANTY SPECIFICALLY EXCLUDES FATIGUE FAILURE OR SIMILAR PHENOMENA RESULTING FROM INDUCED VIBRATION, HARMONIC OSCILLATION OR RESONANCE ASSOCIATED WITH MOVEMENT OF AIR CURRENTS AROUND THE PRODUCT.

ITEM	QTY.	POLE TUBE		POLE BASE		ANCHOR BOLT		SIGNAL ARM TUBE				SIGNAL ARM ATTACHMENT DATA - 4 BOLT													
		BASE SQ. (IN)	TOP SQ. (IN)	LENGTH (FT)	GAUGE OR THK. (IN)	SQUARE "S" (IN)	BOLT CIRCLE "Y" (IN)	THK. "M" (IN)	HOLE "Z" (IN)	DIA. "K" (IN)	LENGTH "L" (IN)	THREAD LENGTH "U" (IN)	FIXED END SQ. (IN)	FREE END SQ. (IN)	GAUGE OR THK. (IN)	SPAN (FT)	"P" (FT)	MAST ARM SPAN (FT)	"A" (IN)	"B" (IN)	"C" (IN)	"D" (IN)	"E" (IN)	"F" (IN)	
1	1	14.00	9.80	30.00	0.375	24.00	22.00	2.00	2.00	1.75	84.00	9.00	4.00	10.00	10.00	0.250	45.00	15.00	30.00	11.00	12.00	7.75	1.75	1.25	3.50
2	1	12.00	7.80	30.00	0.375	22.00	20.00	2.00	1.75	1.50	54.00	8.00	4.00	8.00	8.00	0.188	6.00	15.00	18.50	15.00	12.00	2.00	1.25	4.00	

DETAIL "B" TRAFFIC SIGNAL STRUCTURE B

DETAIL 1 - POLE TOP
HOOK FOR WIRING & HANDLING 0.38" DIA. COMMERCIAL GRADE HOT ROLLED BAR

DETAIL 2 - 3"x5" HANDHOLE
COVER ATTACHMENT LUB = 7 GA. X 1" H.R.M.S. BAR

DETAIL 3 - POLE BASE
2 PIECE FULL BASE COVER ASSEMBLY WITH (4) - 0.25" SCREWS

DETAIL 4 - ANCHOR BOLT
(4) ANCHOR BOLTS WITH (4) HEX NUTS AND (4) WASHERS PER BOLT FULLY GALVANIZED

DETAIL 5 - ANCHOR BEARING PLATE
ANCHOR BOLT DIAMETER + 0.06

DETAIL 6 - ANCHOR BOLT
(4) ANCHOR BOLTS WITH (4) HEX NUTS AND (4) WASHERS PER BOLT FULLY GALVANIZED

DETAIL 7 - ANCHOR BEARING PLATE
ANCHOR BOLT DIAMETER + 0.06

MATERIAL DATA

COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)
POLE SHAFT	A572	65
BASE PLATES	A572	50
ANCHOR BOLTS	F1554 GR. 55	55
GALVANIZING-HARDWARE	A153	

FINISH DATA

SYSTEM: HOT-DIP GALVANIZED TO ASTM A153
 BASE COAT: HIGH BUILD EPOXY POWDER
 FINISH COAT: TGIC POWDER
 COLOR: WHITE
 SPEC: F-540A

VIBRATION DISCLAIMER
ALTHOUGH RARE, VIBRATIONS SEVERE ENOUGH TO CAUSE DAMAGE CAN OCCASIONALLY OCCUR IN STRUCTURES OF ALL TYPES. BECAUSE THEY ARE INFLUENCED BY MANY INTERACTING VARIABLES, VIBRATIONS ARE GENERALLY UNPREDICTABLE. THE USER'S MAINTENANCE PROGRAM SHOULD INCLUDE OBSERVATION FOR EXCESSIVE VIBRATION AND EXAMINATION FOR ANY STRUCTURAL DAMAGE OR BOLT LOOSENING. THE VALMONT WARRANTY SPECIFICALLY EXCLUDES FATIGUE FAILURE OR SIMILAR PHENOMENA RESULTING FROM INDUCED VIBRATION, HARMONIC OSCILLATION OR RESONANCE ASSOCIATED WITH MOVEMENT OF AIR CURRENTS AROUND THE PRODUCT.

ITEM DESCRIPTION	QTY.	POLE TUBE		POLE BASE		ANCHOR BOLT						
		BASE SQ. (IN)	TOP SQ. (IN)	LENGTH (FT)	GAUGE OR THK. (IN)	SQUARE "S" (IN)	BOLT CIRCLE "Y" (IN)	THK. "M" (IN)	HOLE / SLOT "Z" (IN)	DIA. "K" (IN)	LENGTH "L" (IN)	THREAD LENGTH "U" (IN)
CUSTOM SQUARE TYPE 1-14"	1	6.00	6.00	14.00	0.179	12.00	12.50	1.00	1.25	1.00	36.00	6.00

DETAIL "A" & DETAIL "D" TRAFFIC SIGNAL STRUCTURE A TRAFFIC SIGNAL STRUCTURE D

DETAIL 1 - POLE TOP
HOOK FOR WIRING & HANDLING 0.38" DIA. COMMERCIAL GRADE HOT ROLLED BAR

DETAIL 2 - LUMINAIRE ARM END CAP
SQUARE, 0.50" THICK COMMERCIAL QUALITY HOT ROLLED MILD STEEL ARM END CAP

DETAIL 3 - LUMINAIRE ARM END
3.00" x 0.50" x 0.25"

DETAIL 4 - MAST ARM END CAP
SQUARE, 0.50" THICK COMMERCIAL QUALITY HOT ROLLED MILD STEEL ARM END CAP

DETAIL 5 - MAST ARM END
3.38" O.D. X 0.154" WALL X 5.00" LONG-PIPE SIZE TUBING

DETAIL 6 - MAST ARM END CAP
SQUARE, 0.50" THICK COMMERCIAL QUALITY HOT ROLLED MILD STEEL ARM END CAP

DETAIL 7 - SIGNAL ARM TENON
ARM TUBE 4.00" x 1.75"

DETAIL 8 - SCROLL
1.00" HEX HEAD BOLT AND NUT (2 REQ'D)

DETAIL 9
18.00"

DETAIL 10
18.00"

DETAIL 11 - POLE BASE
2 PIECE FULL BASE COVER ASSEMBLY WITH (4) - 0.25" SCREWS

DETAIL 12 - ANCHOR BOLT
(4) ANCHOR BOLTS WITH (4) HEX NUTS AND (4) WASHERS PER BOLT FULLY GALVANIZED

DETAIL 13 - ANCHOR BEARING PLATE
ANCHOR BOLT DIAMETER + 0.06

MATERIAL DATA

COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)
POLE SHAFT	A572 GR. 65	65
PLATES	A572	50
ARMS	A500	45
ARM CONNECTING BOLTS	A325	55
ANCHOR BOLTS	F1554 GR. 55	55
GALVANIZING-HARDWARE	A153	

FINISH DATA

SYSTEM: HOT-DIP GALVANIZED TO ASTM A153
 BASE COAT: HIGH BUILD EPOXY POWDER
 FINISH COAT: TGIC POWDER
 COLOR: WHITE
 SPEC: F-540A

VIBRATION DISCLAIMER
ALTHOUGH RARE, VIBRATIONS SEVERE ENOUGH TO CAUSE DAMAGE CAN OCCASIONALLY OCCUR IN STRUCTURES OF ALL TYPES. BECAUSE THEY ARE INFLUENCED BY MANY INTERACTING VARIABLES, VIBRATIONS ARE GENERALLY UNPREDICTABLE. THE USER'S MAINTENANCE PROGRAM SHOULD INCLUDE OBSERVATION FOR EXCESSIVE VIBRATION AND EXAMINATION FOR ANY STRUCTURAL DAMAGE OR BOLT LOOSENING. THE VALMONT WARRANTY SPECIFICALLY EXCLUDES FATIGUE FAILURE OR SIMILAR PHENOMENA RESULTING FROM INDUCED VIBRATION, HARMONIC OSCILLATION OR RESONANCE ASSOCIATED WITH MOVEMENT OF AIR CURRENTS AROUND THE PRODUCT.

ITEM DESCRIPTION	QTY.	POLE TUBE		POLE BASE		ANCHOR BOLT		SIGNAL ARM TUBE				SIGNAL ARM ATTACHMENT DATA - 4 BOLT													
		BASE SQ. (IN)	TOP SQ. (IN)	LENGTH (FT)	GAUGE OR THK. (IN)	SQUARE "S" (IN)	BOLT CIRCLE "Y" (IN)	THK. "M" (IN)	HOLE "Z" (IN)	DIA. "K" (IN)	LENGTH "L" (IN)	THREAD LENGTH "U" (IN)	FIXED END SQ. (IN)	FREE END SQ. (IN)	GAUGE OR THK. (IN)	SPAN (FT)	"P" (FT)	MAST ARM SPAN (FT)	"A" (IN)	"B" (IN)	"C" (IN)	"D" (IN)	"E" (IN)	"F" (IN)	
1	1	14.00	9.80	30.00	0.375	24.00	22.00	2.00	2.00	1.75	84.00	9.00	4.00	10.00	10.00	0.250	45.00	15.00	30.00	11.00	12.00	7.75	1.75	1.25	3.50
2	1	12.00	7.80	30.00	0.375	22.00	20.00	2.00	1.75	1.50	54.00	8.00	4.00	8.00	8.00	0.188	6.00	15.00	18.50	15.00	12.00	2.00	1.25	4.00	

DETAIL "C" TRAFFIC SIGNAL STRUCTURE C

DETAIL 1 - POLE TOP
HOOK FOR WIRING & HANDLING 0.38" DIA. COMMERCIAL GRADE HOT ROLLED BAR

DETAIL 2 - 3"x5" HANDHOLE
COVER ATTACHMENT LUB = 7 GA. X 1" H.R.M.S. BAR

DETAIL 3 - POLE BASE
2 PIECE FULL BASE COVER ASSEMBLY WITH (4) - 0.25" SCREWS

DETAIL 4 - ANCHOR BOLT
(4) ANCHOR BOLTS WITH (4) HEX NUTS AND (4) WASHERS PER BOLT FULLY GALVANIZED

DETAIL 5 - ANCHOR BEARING PLATE
ANCHOR BOLT DIAMETER + 0.06

DETAIL 6 - ANCHOR BOLT
(4) ANCHOR BOLTS WITH (4) HEX NUTS AND (4) WASHERS PER BOLT FULLY GALVANIZED

DETAIL 7 - ANCHOR BEARING PLATE
ANCHOR BOLT DIAMETER + 0.06

MATERIAL DATA

COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)
POLE SHAFT	A572	65
BASE PLATES	A572	50
ANCHOR BOLTS	F1554 GR. 55	55
GALVANIZING-HARDWARE	A153	

FINISH DATA

SYSTEM: HOT-DIP GALVANIZED TO ASTM A153
 BASE COAT: HIGH BUILD EPOXY POWDER
 FINISH COAT: TGIC POWDER
 COLOR: WHITE
 SPEC: F-540A

VIBRATION DISCLAIMER
ALTHOUGH RARE, VIBRATIONS SEVERE ENOUGH TO CAUSE DAMAGE CAN OCCASIONALLY OCCUR IN STRUCTURES OF ALL TYPES. BECAUSE THEY ARE INFLUENCED BY MANY INTERACTING VARIABLES, VIBRATIONS ARE GENERALLY UNPREDICTABLE. THE USER'S MAINTENANCE PROGRAM SHOULD INCLUDE OBSERVATION FOR EXCESSIVE VIBRATION AND EXAMINATION FOR ANY STRUCTURAL DAMAGE OR BOLT LOOSENING. THE VALMONT WARRANTY SPECIFICALLY EXCLUDES FATIGUE FAILURE OR SIMILAR PHENOMENA RESULTING FROM INDUCED VIBRATION, HARMONIC OSCILLATION OR RESONANCE ASSOCIATED WITH MOVEMENT OF AIR CURRENTS AROUND THE PRODUCT.

ITEM DESCRIPTION	QTY.	POLE TUBE		POLE BASE		ANCHOR BOLT						
		BASE SQ. (IN)	TOP SQ. (IN)	LENGTH (FT)	GAUGE OR THK. (IN)	SQUARE "S" (IN)	BOLT CIRCLE "Y" (IN)	THK. "M" (IN)	HOLE / SLOT "Z" (IN)	DIA. "K" (IN)	LENGTH "L" (IN)	THREAD LENGTH "U" (IN)
CUSTOM SQUARE NON-TAPERED TYPE 15TS-2" ARM	1	6.00	6.00	30.00	0.188	15.00	14.50	1.50	1.25	1.00	36.00	6.00

CITY OF ROLLING HILLS ESTATES

TRAFFIC SIGNAL DECORATIVE POLE DETAILS

INTERSECTION CAPACITY IMPROVEMENTS
AT PALOS VERDES DRIVE NORTH AND DAPPLEGRAY SCHOOL ENTRANCE

BENCH MARK:		REVISIONS	
NO. _____	ELEV. _____	NO. _____	DESCRIPTION _____
DATE ADJ. _____	QUAD. _____	APP. _____	DATE _____
NONE			

DRAWN BY: BR
DESIGNED BY: BR
CHECKED BY: FW

SHT. 12 OF 22 SHTS.



PLANS PREPARED BY:

WILLDAN Engineering *Comprehensive Innovative Trusted*

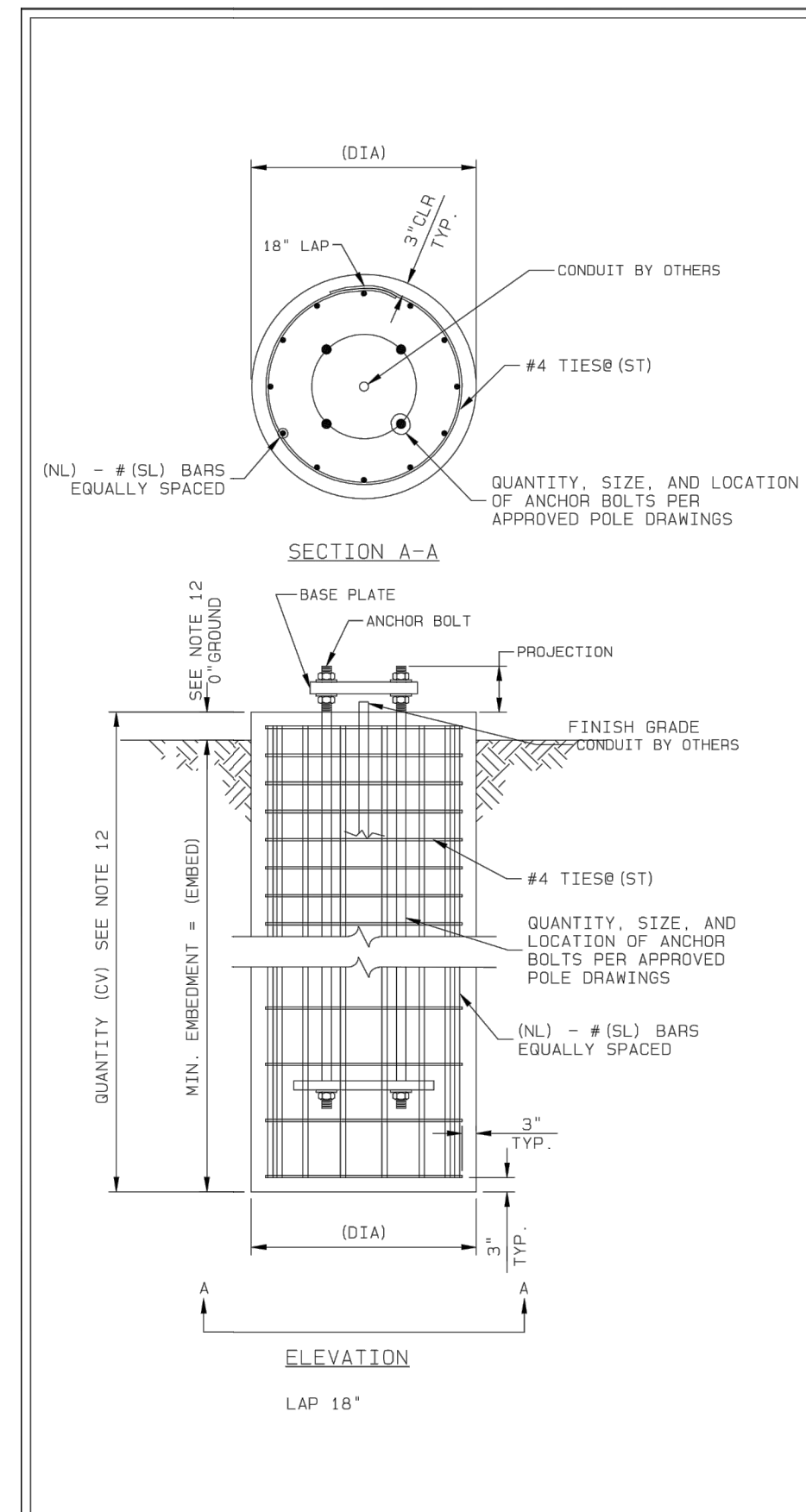
13191 CROSSROADS PARKWAY NORTH
SUITE 405 INDUSTRY, CA 91746-3497
(925) 908-6200

UNDER THE SUPERVISION OF

JEFFREY LAU, RCE No. 83887 DATE _____

100% SUBMITTAL NOT FOR CONSTRUCTION

U:\110176 - RHE PVD\04DAPPLEGRAY ELM SCHOOL\900-PS&E\901-Plans\PL-SIGNAL-03.dwg Apr 03, 23 1:23pm



- FOUNDATION HOLE SHALL BE AUGERED AND FILLED WITH CONCRETE. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 3000 PSI MINIMUM AT 28 DAYS. CONCRETE SHALL HAVE A MAXIMUM SLUMP OF 4" AS DETERMINED BY ASTM C143.
- REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A615 GRADE 60 OR EQUAL.
- GEOTECHNICAL REPORT WAS NOT MADE. FOUNDATION IS DESIGNED ASSUMING A NON-COHESIVE SOIL. SOIL HAS A POSSIBILITY OF BEING HEAVILY SENSITIVE TO MOISTURE CONTENT AND MAY HAVE POOR SHRINKAGE AND SWELLING CHARACTERISTICS. CONTRACTOR SHALL CONTACT GEOTECHNICAL ENGINEER WITH SOIL CONDITIONS.
- IF SOIL CONDITIONS DURING CONSTRUCTION DO NOT MEET THE DESCRIPTION GIVEN ABOVE OR IF SOLID BEDROCK IS REACHED BEFORE REACHING THE SPECIFIED EMBEDMENT DEPTH CONTACT VALMONT ENGINEERING BEFORE CONTINUING EXCAVATION.
- FOUNDATION TO BE CAST AGAINST UNDISTURBED SOIL. IF CASINGS ARE REQUIRED TO PREVENT CAVING OF THE PIER THE CASING SHALL BE PULLED AFTER USE.
- FOUNDATION TO BE POURED MONOLITHICALLY. DUE TO THE POSSIBILITY OF EXISTING SENSITIVE SOILS THE CONCRETE SHALL BE POURED THE SAME DAY AS THE EXCAVATION.
- FOUNDATION DESIGN IS BASED ON WATER TABLE BEING BELOW THE BOTTOM OF THE PIER. CONSTRUCTION BELOW THE WATER TABLE MAY REQUIRE SPECIAL CONSTRUCTION TECHNIQUES TO PREVENT RUPTURING DUE TO HYDROSTATIC PRESSURE.
- SITE GRADE IS 7H TO 1V OR FLATTER.
- NO CONDUIT. LAYOUT IS SHOWN. CONDUIT BY OTHERS.
- CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH OSHA REQUIREMENTS WITH REGARDS TO WORKER ACCESS TO THE EXCAVATION.
- PROVIDE 3" MINIMUM CONCRETE COVER ON ALL FACES.
- SITE REQUIREMENTS MAY ADJUST TOP OF FOOTING ABOVE GRADE. CONTRACTOR SHALL FOLLOW PROJECT REQUIREMENTS. CONTRACTOR SHALL DETERMINE TOP OF FOOTING AND ADJUST CONCRETE AND REINFORCING STEEL QUANTITIES. SITE SPECIFIC REQUIREMENTS MUST BE REVIEWED.
- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST ACT SPECIFICATIONS. LATEST DESIGN CODES, AND LOCAL CODES.
- CONDUIT SHALL PROJECT A MINIMUM OF 2" ABOVE THE FOUNDATION. MAXIMUM PROJECTION SHALL BE 4".
- ALL METHODS OF CONSTRUCTION AND INSTALLATION ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- NO OTHER LOADING CONDITIONS WERE CONSIDERED AND DESIGN IS BASED ON WIND LOADS ONLY.
- CONTRACTOR SHALL FOLLOW STATE AND LOCAL SPECIFICATIONS.

NON-COHESIVE LOOSE/MEDIUM SOIL LAYER
 $\phi = 30^\circ$ ASSUMED
 $\gamma = 90$ PCF ASSUMED
 $u = 0.25$ (FRICTION FACTOR)

SOIL DATA IS BASED UPON STANDARD SOIL PARAMETERS USED. CONTRACTOR TO CONFIRM SOIL CONDITIONS ON SITE. UPPER 1'-0" PROVIDES NO PASSIVE RESISTANCE.

SOIL DATA

AXIAL = 4794 LB
 SHEAR = 4094 LB
 SHEAR = 0 LB
 MOMENT = 0 FT-LB
 MOMENT = 71,440 FT-LB
 TORSION = 42,860 FT-LB (NOMINAL FOR DESIGN)

FOUNDATION LOADS

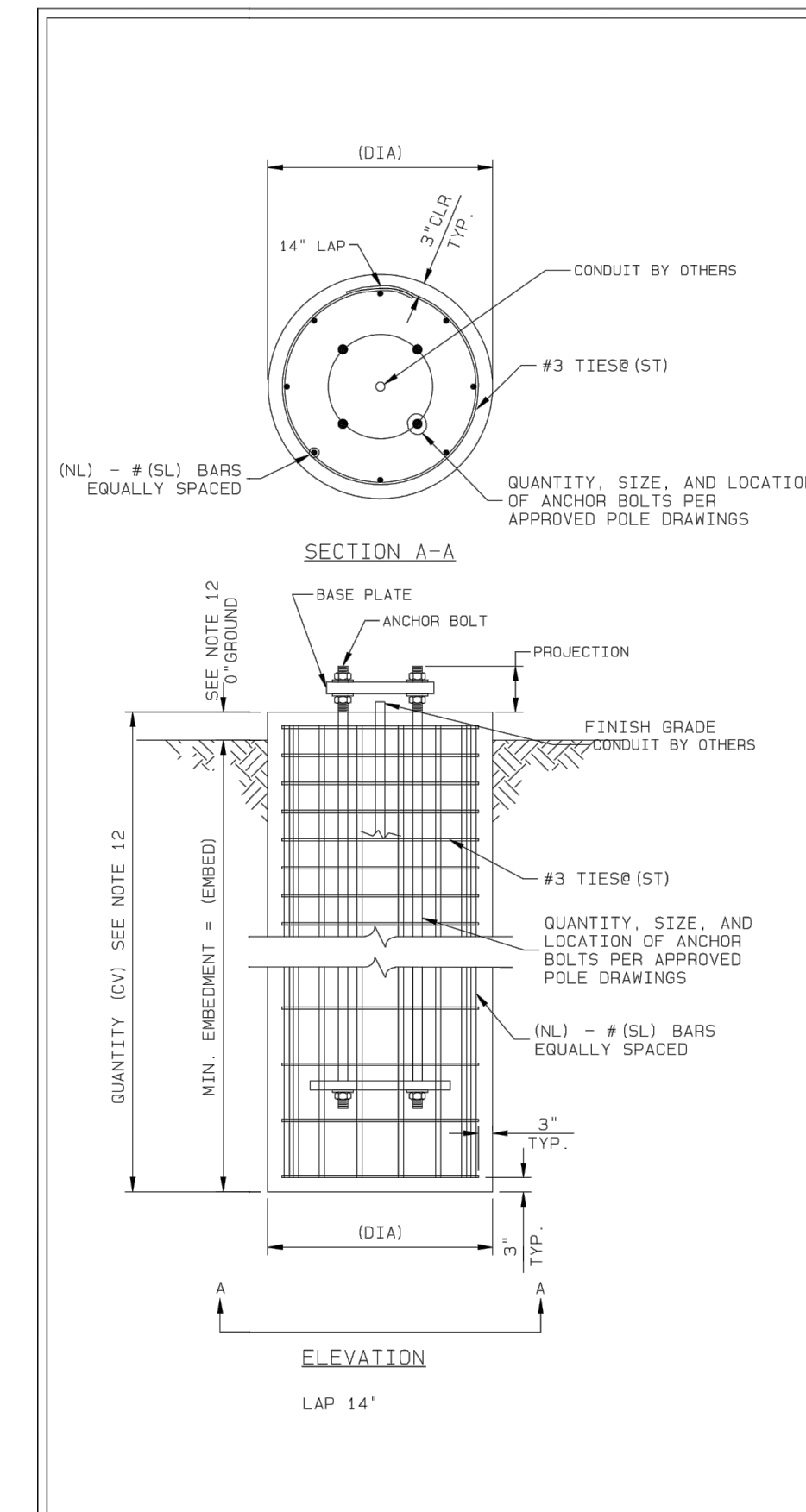
POLE	CAISSON DATA (EA)	LONGITUDINAL BARS (EA)	TRANSVERSE BARS (EA)
MA	3.5	11.5	12

GENERAL NOTES
 FOUNDATION LOADS HAVE BEEN CALCULATED BASED ON AN ASSUMED 100 MPH WIND. AN OVERTURNING (FS = 2.0) AND TORSIONAL (FS = 1.1) WERE USED IN DESIGN.
 CONTRACTOR TO VERIFY NUMBER OF ANCHOR BOLTS, SIZE AND BOLT CIRCLE.

SPECIAL SQ TRAFFIC POLES

DETAIL "A" & DETAIL "D"
 FOUNDATION DESIGN FOR
 TRAFFIC SIGNAL STRUCTURE A
 TRAFFIC SIGNAL STRUCTURE D

JOB	ROLLING HILLS ESTATES DECO TRAFFIC	VALMONT INDUSTRIES, INC. RESERVES THE RIGHT TO INSTALL VARIOUS ENGINEER APPROVED, MATERIAL HANGING ACCOMMODATIONS TO FACILITATE THE MANUFACTURING PROCESS.	valmont Valley, NE 68064 (402) 359-2201	ORDER NUMBER: 291602-P1 PAGE NUMBER: 3 OF 5 DRAWING NUMBER: CA291602P1 REV: A
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- FOUNDATION HOLE SHALL BE AUGERED AND FILLED WITH CONCRETE. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 3000 PSI MINIMUM AT 28 DAYS. CONCRETE SHALL HAVE A MAXIMUM SLUMP OF 4" AS DETERMINED BY ASTM C143.
- REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A615 GRADE 60 OR EQUAL.
- GEOTECHNICAL REPORT WAS NOT MADE. FOUNDATION IS DESIGNED ASSUMING A NON-COHESIVE SOIL. SOIL HAS A POSSIBILITY OF BEING HEAVILY SENSITIVE TO MOISTURE CONTENT AND MAY HAVE POOR SHRINKAGE AND SWELLING CHARACTERISTICS. CONTRACTOR SHALL CONTACT GEOTECHNICAL ENGINEER WITH SOIL CONDITIONS.
- IF SOIL CONDITIONS DURING CONSTRUCTION DO NOT MEET THE DESCRIPTION GIVEN ABOVE OR IF SOLID BEDROCK IS REACHED BEFORE REACHING THE SPECIFIED EMBEDMENT DEPTH CONTACT VALMONT ENGINEERING BEFORE CONTINUING EXCAVATION.
- FOUNDATION TO BE CAST AGAINST UNDISTURBED SOIL. IF CASINGS ARE REQUIRED TO PREVENT CAVING OF THE PIER THE CASING SHALL BE PULLED AFTER USE.
- FOUNDATION TO BE POURED MONOLITHICALLY. DUE TO THE POSSIBILITY OF EXISTING SENSITIVE SOILS THE CONCRETE SHALL BE POURED THE SAME DAY AS THE EXCAVATION.
- FOUNDATION DESIGN IS BASED ON WATER TABLE BEING BELOW THE BOTTOM OF THE PIER. CONSTRUCTION BELOW THE WATER TABLE MAY REQUIRE SPECIAL CONSTRUCTION TECHNIQUES TO PREVENT RUPTURING DUE TO HYDROSTATIC PRESSURE.
- SITE GRADE IS 7H TO 1V OR FLATTER.
- NO CONDUIT. LAYOUT IS SHOWN. CONDUIT BY OTHERS.
- CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH OSHA REQUIREMENTS WITH REGARDS TO WORKER ACCESS TO THE EXCAVATION.
- PROVIDE 3" MINIMUM CONCRETE COVER ON ALL FACES.
- SITE REQUIREMENTS MAY ADJUST TOP OF FOOTING ABOVE GRADE. CONTRACTOR SHALL FOLLOW PROJECT REQUIREMENTS. CONTRACTOR SHALL DETERMINE TOP OF FOOTING AND ADJUST CONCRETE AND REINFORCING STEEL QUANTITIES. SITE SPECIFIC REQUIREMENTS MUST BE REVIEWED.
- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST ACT SPECIFICATIONS. LATEST DESIGN CODES, AND LOCAL CODES.
- CONDUIT SHALL PROJECT A MINIMUM OF 2" ABOVE THE FOUNDATION. MAXIMUM PROJECTION SHALL BE 4".
- ALL METHODS OF CONSTRUCTION AND INSTALLATION ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- NO OTHER LOADING CONDITIONS WERE CONSIDERED AND DESIGN IS BASED ON WIND LOADS ONLY.
- CONTRACTOR SHALL FOLLOW STATE AND LOCAL SPECIFICATIONS.

NON-COHESIVE LOOSE/MEDIUM SOIL LAYER
 $\phi = 30^\circ$ ASSUMED
 $\gamma = 90$ PCF ASSUMED
 $u = 0.25$ (FRICTION FACTOR)

SOIL DATA IS BASED UPON STANDARD SOIL PARAMETERS USED. CONTRACTOR TO CONFIRM SOIL CONDITIONS ON SITE. UPPER 1'-0" PROVIDES NO PASSIVE RESISTANCE.

SOIL DATA

AXIAL = 973 LB
 SHEAR = 1,383 LB
 SHEAR = 0 LB
 MOMENT = 0 FT-LB
 MOMENT = 14,616 FT-LB
 TORSION = 1,725 FT-LB (NOMINAL FOR DESIGN)

FOUNDATION LOADS

POLE	CAISSON DATA (EA)	LONGITUDINAL BARS (EA)	TRANSVERSE BARS (EA)
TS	2.5	7.5	8

GENERAL NOTES
 FOUNDATION LOADS HAVE BEEN CALCULATED BASED ON AN ASSUMED 100 MPH WIND. AN OVERTURNING (FS = 2.0) AND TORSIONAL (FS = 1.1) WERE USED IN DESIGN.
 CONTRACTOR TO VERIFY NUMBER OF ANCHOR BOLTS, SIZE AND BOLT CIRCLE.

SPECIAL SQ TS POLES

DETAIL "B"
 FOUNDATION DESIGN FOR
 TRAFFIC SIGNAL STRUCTURE B

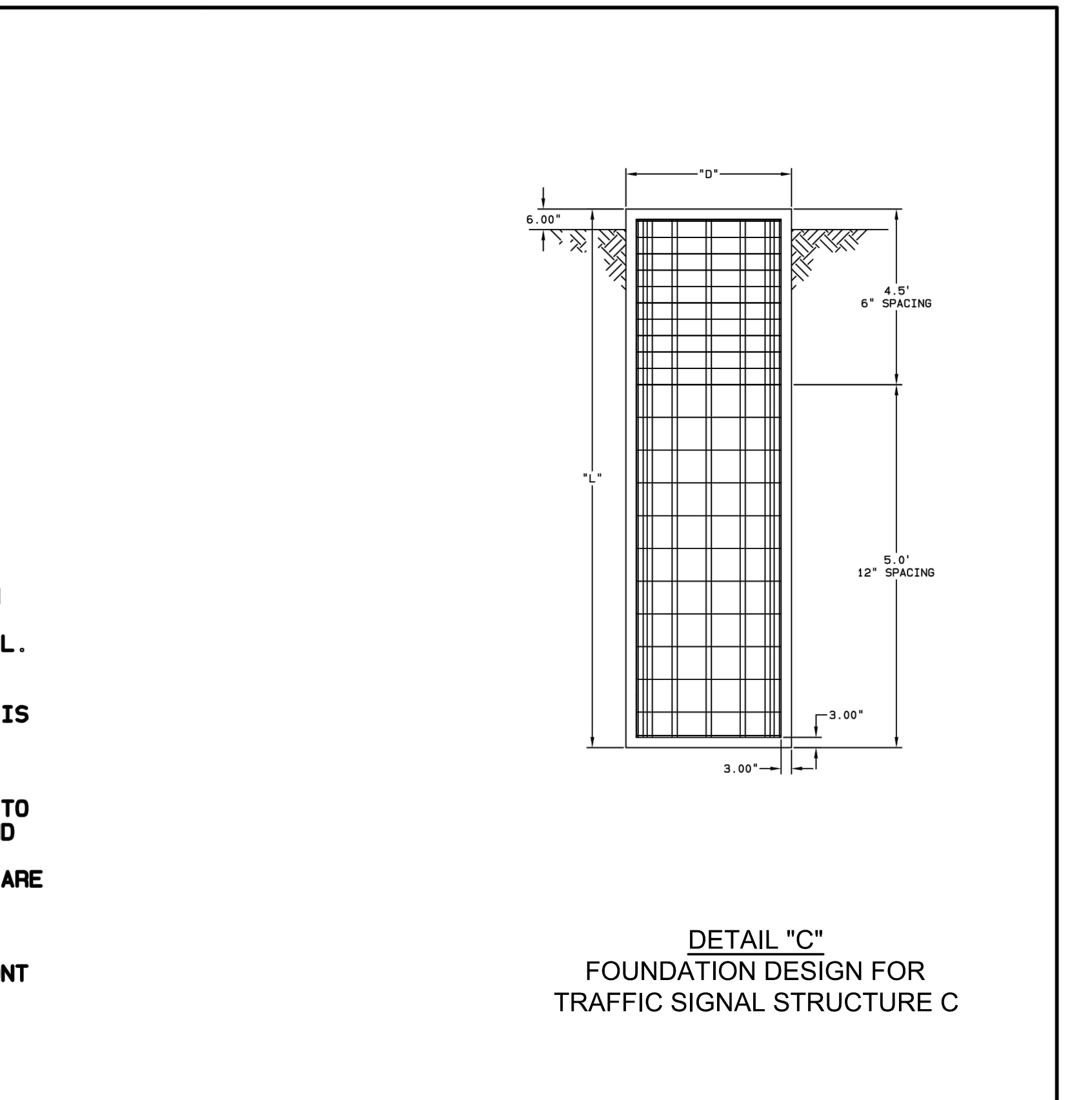
JOB	ROLLING HILLS ESTATES DECO TRAFFIC	VALMONT INDUSTRIES, INC. RESERVES THE RIGHT TO INSTALL VARIOUS ENGINEER APPROVED, MATERIAL HANGING ACCOMMODATIONS TO FACILITATE THE MANUFACTURING PROCESS.	valmont Valley, NE 68064 (402) 359-2201	ORDER NUMBER: 291602-P1 PAGE NUMBER: 5 OF 5 DRAWING NUMBER: CA291602P1 REV: A
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FOUNDATION SIZE (S)

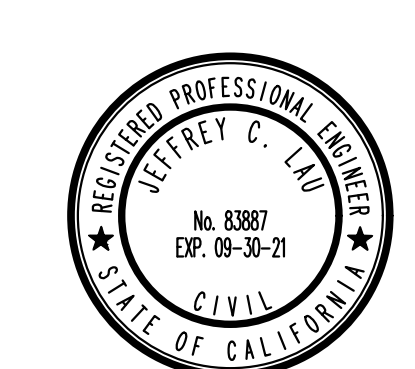
POLE NO.	CAISSON DATA (EA)		CONCRETE STRENGTH (PSI)	LONGITUDINAL BARS (EA)		TRANSVERSE BARS (EA)	
	DIAMETER (FT)	LENGTH (FT)		QUANTITY	SIZE	SIZE	SIZE
30 TS Poles	2.5	9.5	4000	10	#6	#3	

GENERAL NOTES:

- REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A615 GRADE 60 OR EQUAL.
- FOUNDATION TO BE CAST AGAINST UNDISTURBED SOIL.
- FOUNDATION TO BE POURED MONOLITHICALLY.
- FOUNDATION DESIGN BASED ON WATER TABLE BEING BELOW THE BOTTOM OF THE PIER. IF WATER TABLE IS ENCOUNTERED AT TIME OF EXCAVATION, CONSULT A GEOTECH ENGINEER.
- SITE GRADE IS 7H TO 1V OR FLATTER.
- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST ACI, LOCAL, AND STATE CODES.
- ALL METHODS OF CONSTRUCTION AND INSTALLATION ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- DESIGN BASED ON A LOOSE SANDY SOIL USING STANDARD SOIL PARAMETERS
- ANCHOR BOLT INFORMATION CAN BE FOUND IN VALMONT CALCULATIONS DATED 09/13/2021.



JOB	ROLLING HILLS ESTATES 30' SPCL TS POLE	VALMONT INDUSTRIES, INC. RESERVES THE RIGHT TO INSTALL VARIOUS ENGINEER APPROVED, MATERIAL HANGING ACCOMMODATIONS TO FACILITATE THE MANUFACTURING PROCESS.	valmont Valley, NE 68064 (402) 359-2201	ORDER NUMBER: 517241-P1 PAGE NUMBER: 5 OF 5 DRAWING NUMBER: CA517241P1 REV: A
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PLANS PREPARED BY:
WILLDAN Engineering
 Comprehensive Innovative Trusted
 13191 CROSSROADS PARKWAY NORTH
 SUITE 405 INDUSTRY, CA 91746-3487
 (562) 908-6200
 UNDER THE SUPERVISION OF
 JEFFREY LAU, RCE No. 83887 DATE

BENCH MARK:
 NO. _____ ELEV. _____
 DATE ADJ. _____ QUAD. _____

NONE

REVISIONS			
NO.	DESCRIPTION	APP.	DATE

CITY OF ROLLING HILLS ESTATES

TRAFFIC SIGNAL FOUNDATION DETAILS

INTERSECTION CAPACITY IMPROVEMENTS
 AT PALOS VERDES DRIVE NORTH AND DAPPLEGRAY SCHOOL ENTRANCE

DRAWN BY: BR
 DESIGNED BY: BR
 CHECKED BY: FW

SHT. 13 OF 22 SHTS.

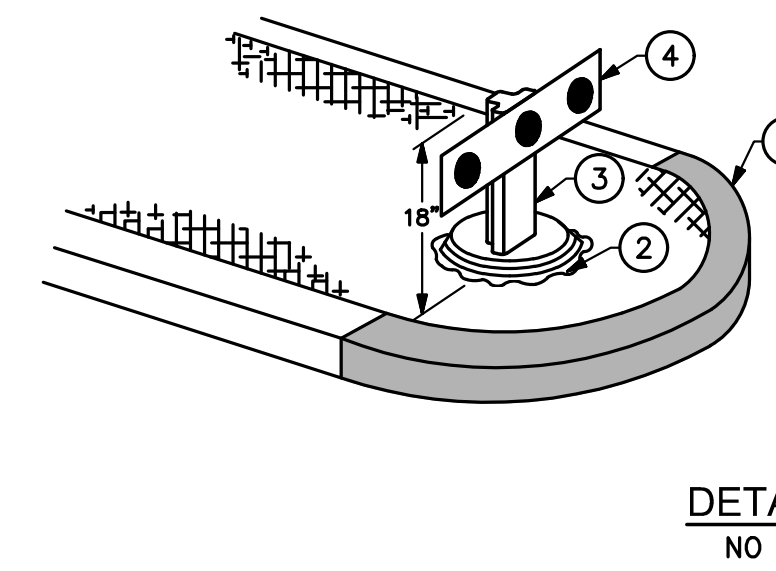
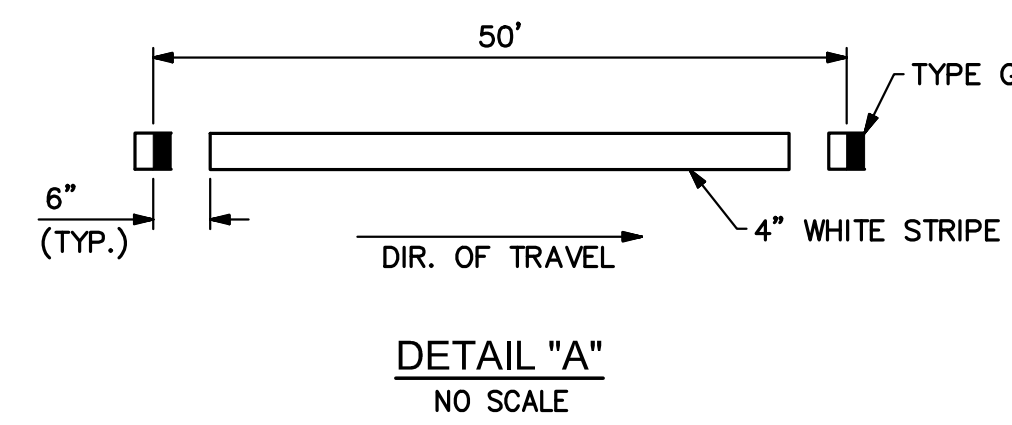
100% SUBMITTAL NOT FOR CONSTRUCTION

SIGNING AND STRIPING GENERAL NOTES:

1. TRAFFIC SIGNING AND STRIPING, LOOP REPLACEMENT, AND THE INSTALLATION THEREOF SHALL CONFORM TO CALTRANS REVISED STANDARD PLANS AND SPECIFICATIONS, DATED 2018, THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CALIFORNIA MUTCD), LATEST EDITION, THIS PLAN AND THE SPECIAL PROVISIONS.
2. ALL STRIPING DETAILS SHALL BE PER CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CALIFORNIA MUTCD), LATEST EDITION.
3. ALL STRIPING DETAILS AND PAVEMENT LEGENDS SHALL BE PAINT, THREE COATS, UNLESS OTHERWISE SHOWN.
4. INSTALL TWO-WAY BLUE REFLECTIVE MARKERS AT EVERY FIRE HYDRANT.
5. ALL SCHOOL SIGNS MUST BE FLUORESCENT YELLOW-GREEN (FYG).
6. SIGN POSTS FOR STREET NAME SIGNS, TRAIL SIGNS, AND MULTI-USE PATH SIGNS SHALL BE BROWN.
7. UNLESS OTHERWISE SHOWN, BIKE LANE STRIPE SHALL BE 4' FROM EDGE OF GUTTER. SEE DETAIL "C."
8. PAVEMENT MARKINGS AND TRAFFIC LINE DETAILS SHALL BE PER THE 2010 CALTRANS STANDARD PLAN DETAILS.

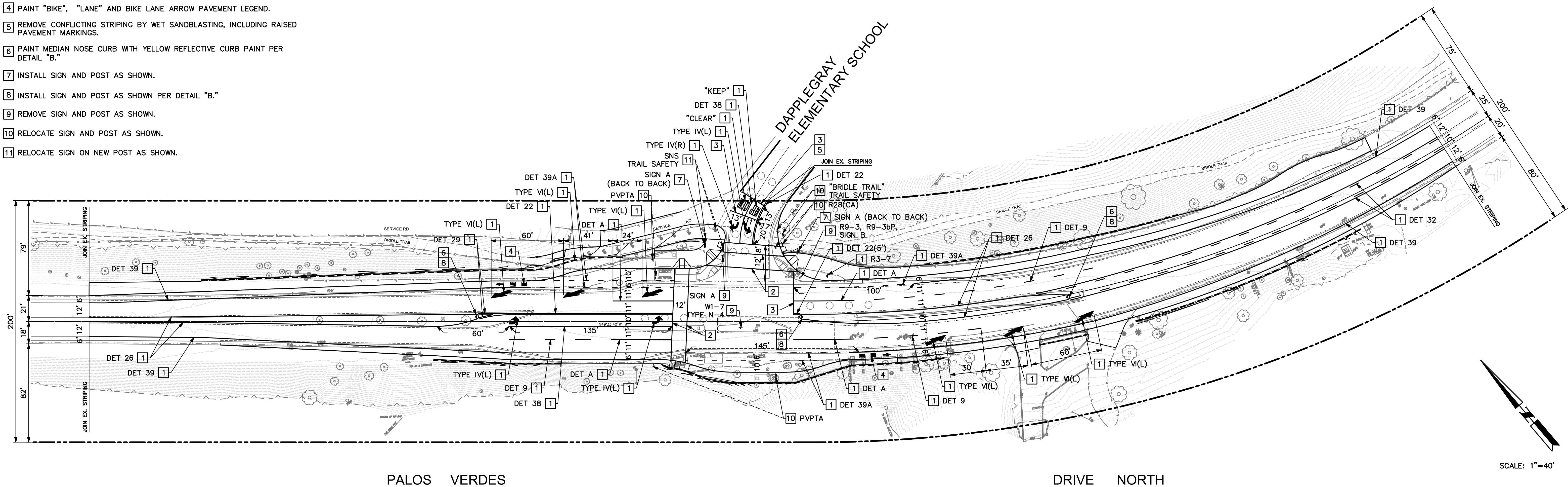
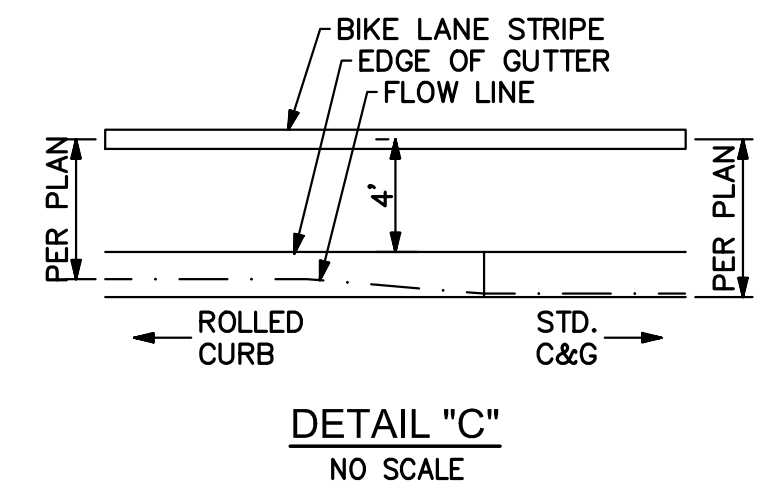
SIGNING AND STRIPING CONSTRUCTION NOTES:

- 1 PAINT STRIPING DETAIL OR PAVEMENT MARKING AS SHOWN.
- 2 PAINT 12" YELLOW CROSSWALK. CROSSWALK SHALL BE 12' IN WIDTH (INSIDE TO INSIDE) UNLESS OTHERWISE SHOWN.
- 3 PAINT 12" WHITE LIMIT LINE.
- 4 PAINT "BIKE", "LANE" AND BIKE LANE ARROW PAVEMENT LEGEND.
- 5 REMOVE CONFLICTING STRIPING BY WET SANDBLASTING, INCLUDING RAISED PAVEMENT MARKINGS.
- 6 PAINT MEDIAN NOSE CURB WITH YELLOW REFLECTIVE CURB PAINT PER DETAIL "B."
- 7 INSTALL SIGN AND POST AS SHOWN.
- 8 INSTALL SIGN AND POST AS SHOWN PER DETAIL "B."
- 9 REMOVE SIGN AND POST AS SHOWN.
- 10 RELOCATE SIGN AND POST AS SHOWN.
- 11 RELOCATE SIGN ON NEW POST AS SHOWN.



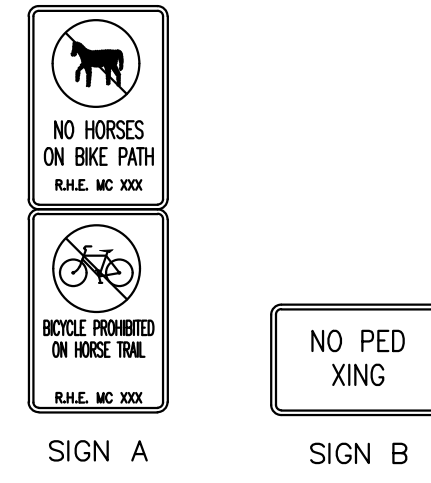
NOTES:

- 1 INSTALL HIGH REFLECTIVITY PAINT TO MATCH EXISTING COLOR ON CURB FACE. EXTEND PAINT ON TOP OF CURB AND CURB FACE TO BC, EC, OR END OF FLARE.
- 2 EPOXY
- 3 SERIES 400 REPO POST.(18")
- 4 TYPE K MARKER.



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 13191 CROSSROADS PARKWAY NORTH
 SUITE 405 INDUSTRY, CA 91746-3497
 (562) 908-6200
 UNDER THE SUPERVISION OF
 JEFFREY LAU, RCE No. 83887 DATE

BENCH MARK:
 NO. _____ ELEV. _____
 DATE ADJ. _____ QUAD. _____
 NONE

REVISIONS		
NO.	DESCRIPTION	APP. DATE

CITY OF ROLLING HILLS ESTATES

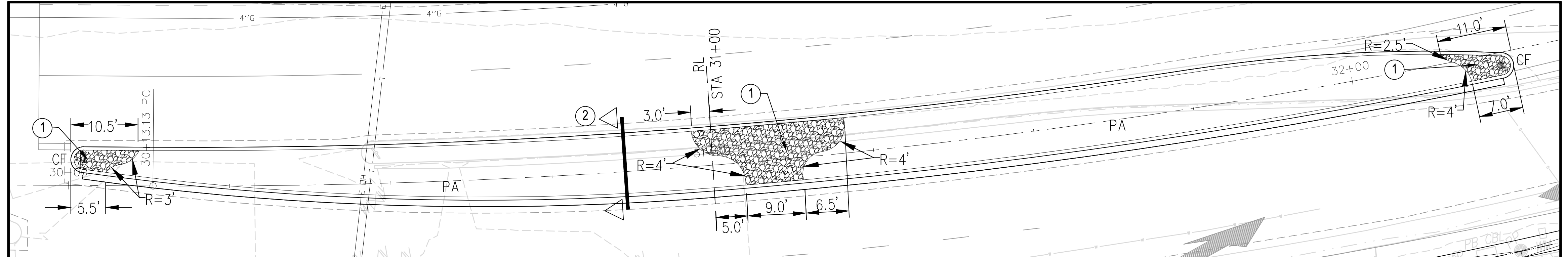
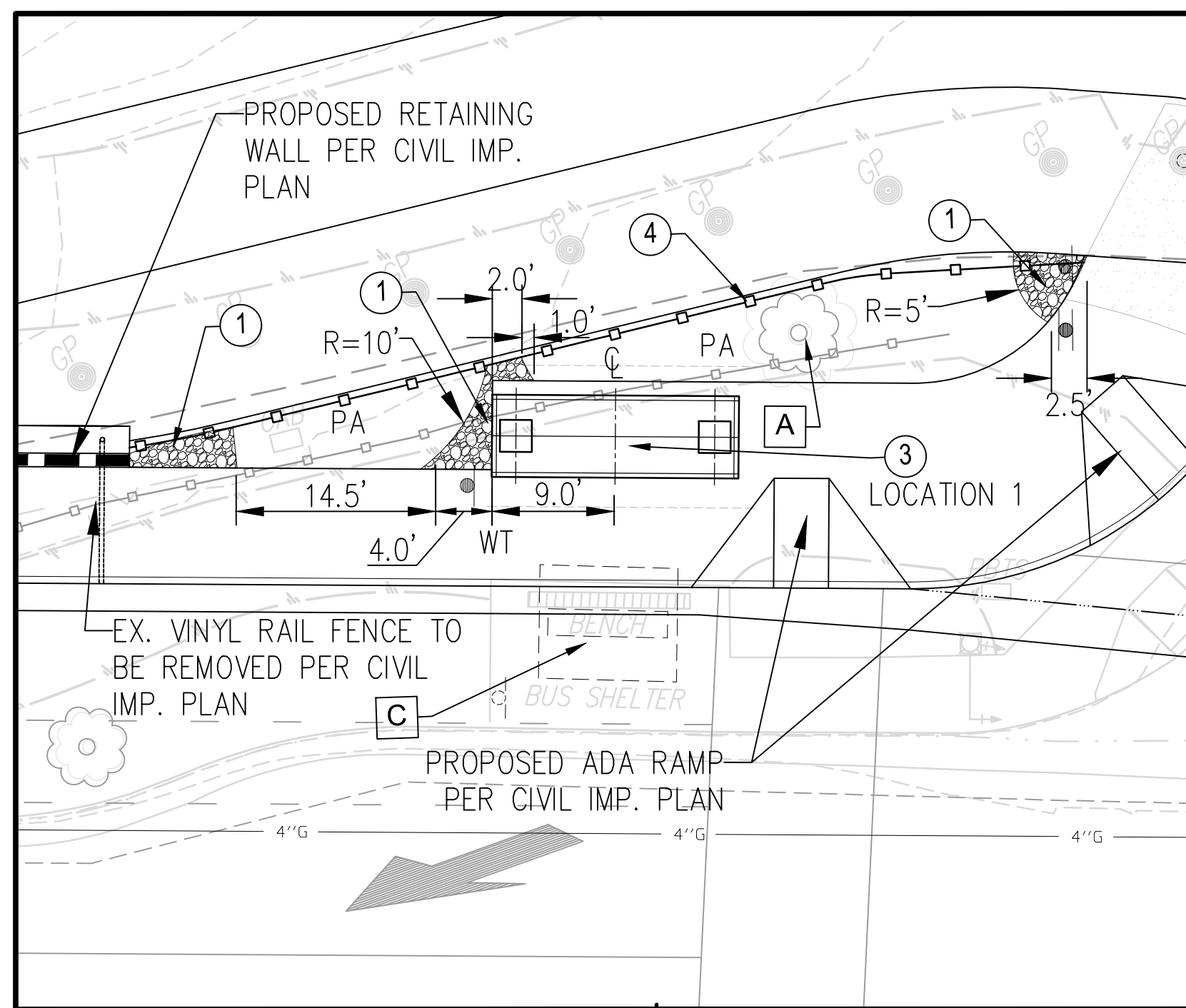
SIGNING AND STRIPING PLAN

INTERSECTION CAPACITY IMPROVEMENTS
 AT PALOS VERDES DRIVE NORTH AND DAPPLEGRAY SCHOOL ENTRANCE

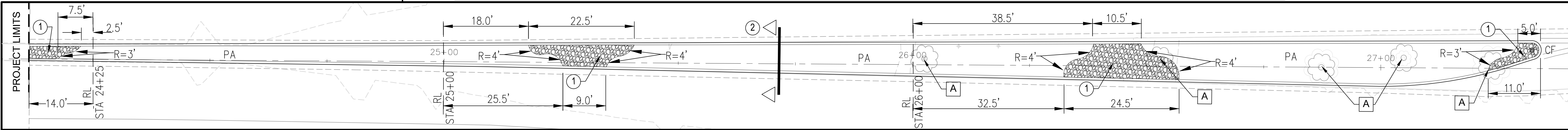
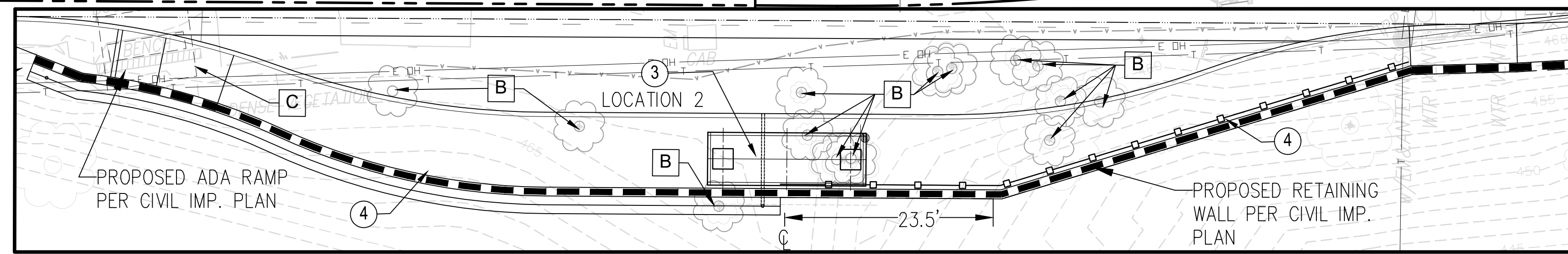
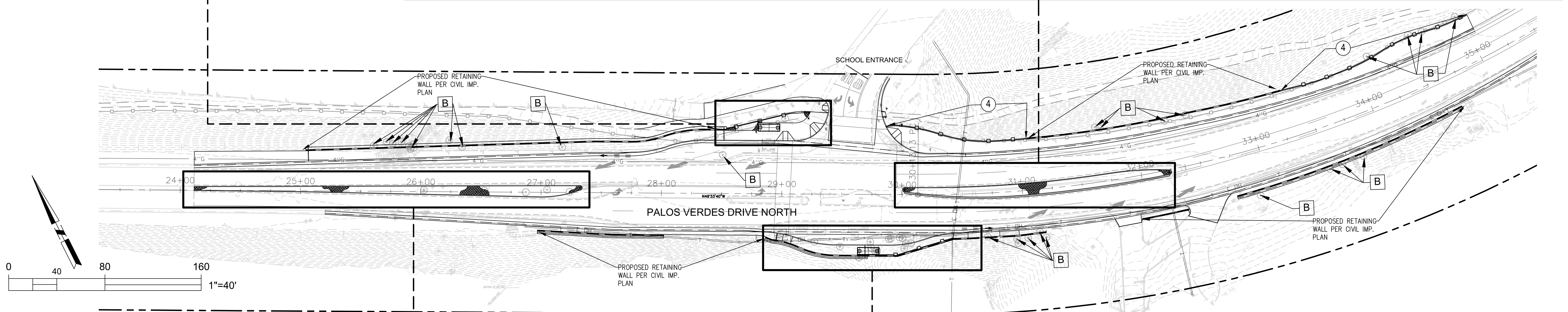
DRAWN BY: RG/KC
 DESIGNED BY: RG/KC
 CHECKED BY: JL

SHT. 14 OF 22 SHTS.

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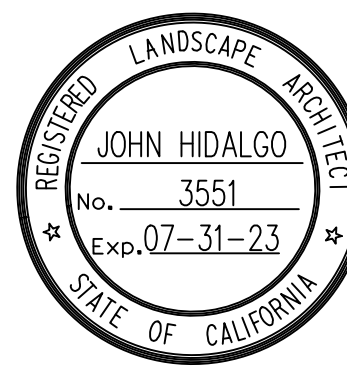


- CONSTRUCTION NOTES:**
1. CONSTRUCT COBBLESTONE PAVING. SEE DETAIL 5, PLAN NO. L-8.
 2. SEE TYPICAL CROSS SECTION, SEE DETAIL 6, PLAN NO. L-8.
 3. CONSTRUCT BUS SHELTER. SEE DETAILS, PLAN NO. L-5 & L-6.
 4. FURNISH AND INSTALL PVC VINYL RAIL FENCE. SEE DETAIL 7, PLAN NO. L-8.
- DEMOLITION/REMOVAL NOTES:**
- A. REMOVE AND PROPERLY DISPOSE EXISTING TREE, COMPLETE INCLUDING ROOTS TO 24" DEPTH.
 - B. EXISTING TREE TO BE REMOVED AS PART OF THE CIVIL IMPROVEMENT AND CONSTRUCTION PLAN.
 - C. EXISTING BUS SHELTER TO BE REMOVED AND PROPERLY DISPOSED AS PART OF THE CIVIL IMPROVEMENT AND CONSTRUCTION PLAN. COORDINATE WITH CIVIL STREET IMPROVEMENT PLAN FOR ADDITIONAL DIRECTIONS FOR TREES AND BUS SHELTER REMOVAL.



- GENERAL CONSTRUCTION NOTES:**
1. VERIFY EXACT LOCATION OF NEW BUS SHELTER WITH ENGINEER PRIOR TO CONSTRUCTION.
 2. VERIFY EXACT LOCATION OF PVC VINYL RAIL FENCE WITH ENGINEER PRIOR TO INSTALLATION.
 3. VERIFY ALL LOCATIONS AND QUANTITY OF EXISTING TREES INDICATED "TO BE REMOVED" WITH ENGINEER PRIOR TO REMOVAL.

ABBREVIATIONS:
 CF CURB FACE
 EQ. EQUAL
 PA PLANTING AREA
 RL REF. LINE
 WT WALL TERMINUS
 TYP. TYPICAL



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 (562) 908-6200
 UNDER THE SUPERVISION OF
 JOHN HIDALGO R.L.A. 3551 DATE

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CITY OF ROLLING HILLS ESTATES

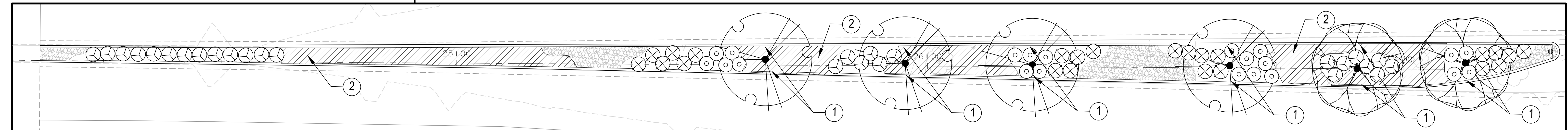
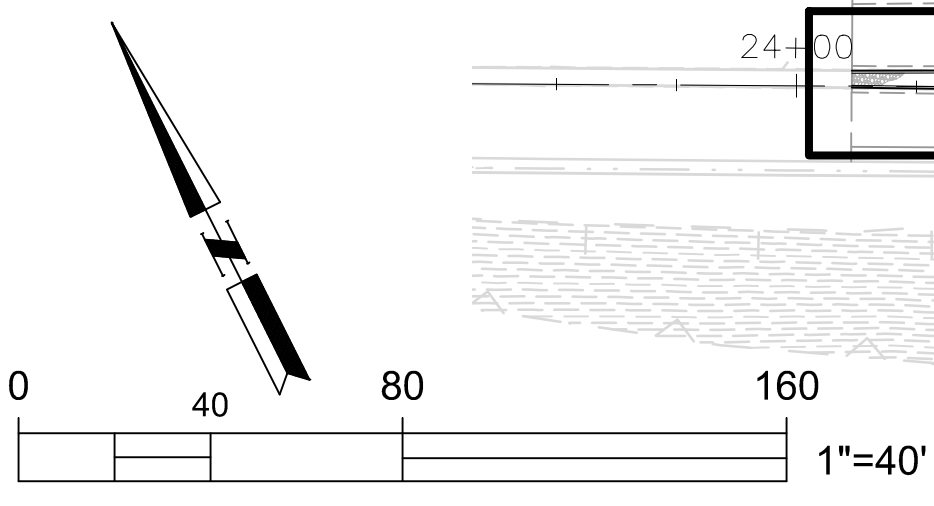
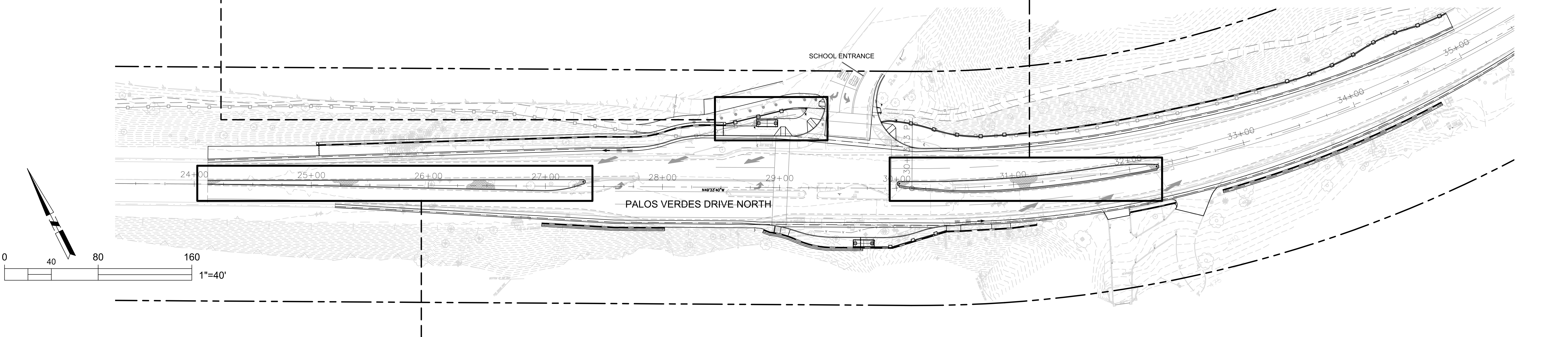
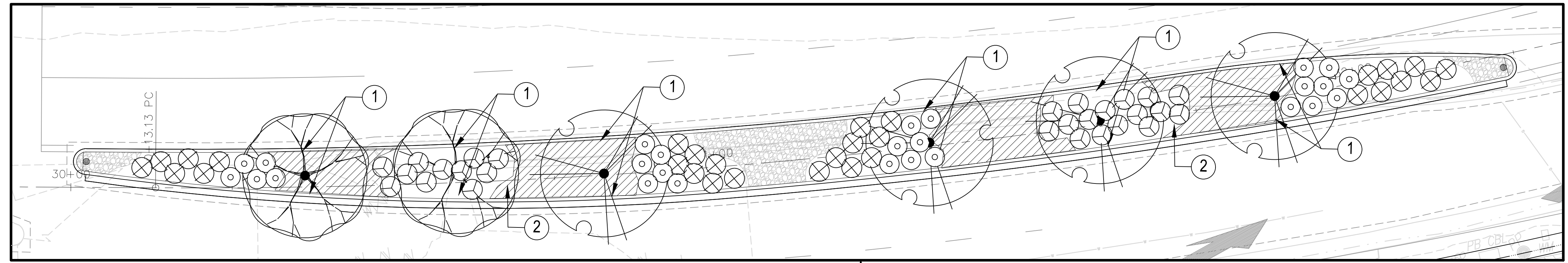
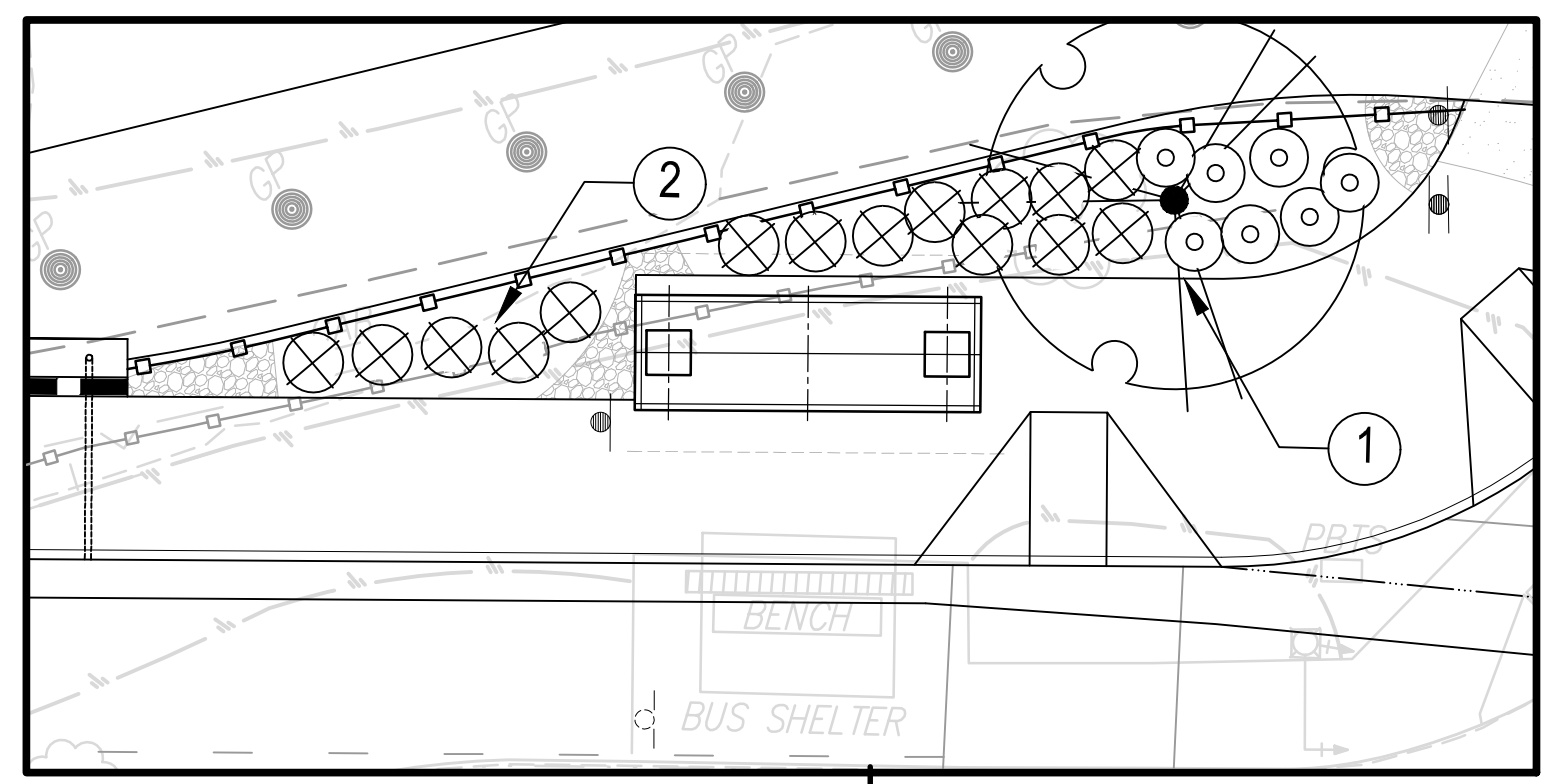
STREET MEDIAN & PARKWAY LANDSCAPE CONSTRUCTION PLAN

INTERSECTION CAPACITY IMPROVEMENTS
 AT PALOS VERDES DRIVE NORTH AND DAPPLEGRAY SCHOOL ENTRANCE

DRAWN BY: BN	PLAN NO.
DESIGNED BY: BN	L-1
CHECKED BY: JH	SHT. 15 OF 22 SHTS.

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PLANTING LEGEND

TREES

SYM	BOTANICAL NAME	COMMON NAME	SIZE	QTY	REMARKS	DET.	SHT.	HT. SP.	WUCOLS
	CERCIS OCCIDENTALIS	WESTERN RED BUD	24 GAL.	4	STANDARD	1 & 2	L-8	20' 15'-20'	L
	SCHINUS MOLLE	CALIFORNIA PEPPER	24 GAL.	9	STANDARD	1 & 2	L-8	25'-50' 25'-40'	L

SHRUBS

SYM	BOTANICAL NAME	COMMON NAME	SIZE	QTY	REMARKS	DET.	SHT.	HT. SP.	WUCOLS
	AGAVE DESMETTIANA	SMOOTH AGAVE	5 GAL.	54	SPACING PER PLAN	3	L-8	3' 3'	L
	SALVIA LEUCANTHA 'SANTA BARBARA'	SANTA BARBARA SAGE	5 GAL.	67	SPACING PER PLAN	3		3' 3'	L
	MUHLENBERGIA CAPILLARIS 'REGAL MIST'	PINK MUHLY	5 GAL.	54	SPACING PER PLAN	3		3' 3'	L

GROUNDCOVERS

	ARTOSTRAPHYLUS UVA-URSI 'POINT REYES'	BEARBERRY	1 GAL.	148	SPACING @ 36" O.C.	3	L-8	12" 15'	L
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WUCOLS: WATER USE CLASSIFICATIONS OF LANDSCAPE SPECIES
H: HIGH M: MODERATE L: LOW

PLANTING NOTES:

- VERIFY EXACT TREE LOCATIONS WITH ENGINEER PRIOR TO INSTALLATION.
- CONTRACTOR SHALL CHALK LAYOUT SHRUB MASSES AND GROUNDCOVERS WITHIN THE PLANTING AREAS AND VERIFY WITH ENGINEER PRIOR TO INSTALLATION.
- CONTRACTOR SHALL FURNISH AND INSTALL 3-INCH LAYER OF SHREDDED REDWOOD CHIPS, LARGE GRIND, AS TOP DRESS IN ALL SHRUB & GROUNDCOVER AREAS. REDWOOD CHIPS AVAILABLE THROUGH RECYCLED WOOD PRODUCTS. (877)GROW RWP hank@wpmulch.com
- ALL PLANTING BACKFILL AMENDMENTS SHALL BE SUPPLEMENTED WITH "TRI-C HUMATE PLUS" & "MYCO PAK" MANUFACTURED BY TRI-C (909) 590-1790 <https://www.tri-corganics.com/> BACKFILL MIXTURE SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS.
- KEEP REDWOOD CHIPS 6 INCHES CLEAR FROM SHRUB STEM.
- QUANTITIES SHOWN ON LEGEND ARE FOR CONVENIENCE ONLY, CONTRACTOR SHALL VERIFY EXACT QUANTITY OF EACH SHRUB & GROUNDCOVER SPECIES WITH ENGINEER PRIOR TO COMMENCING PLANTING.

TREES, SHRUBS AND GROUNDCOVER PROCUREMENT

CONTRACTOR SHALL BE RESPONSIBLE FOR CONTRACT GROW, AT THE CONTRACTOR'S EXPENSE, ALL THE PLANTS LISTED ON THE PLANTING LEGEND. CONTRACTOR SHALL PROVIDE TO THE CITY AN INVOICE OF ALL THE LISTED PLANTS THAT WILL BE CONTRACT GROWN AND/OR RESERVED. THE PROCUREMENT INVOICE STATEMENT SHALL BE SUBMITTED TO THE CITY ENGINEER FOR REVIEW AND APPROVAL WITHIN 15 DAYS OF AWARD OF CONTRACT.

TREES & SHRUBS AVAILABLE THROUGH LANDSCAPE RESOURCE INC. (760)798-9810 aj@landscaperesourcesinc.com, Tvega722@gmail.com

PLANTING CONSTRUCTION NOTE:

- FURNISH AND INSTALL ROOT CONTROL BARRIER. SEE DETAIL 1, PLAN NO L-8.
- FURNISH AND INSTALL 3" LAYER OF REDWOOD CHIPS PER GENERAL NOTE NO. 3.



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(562) 908-6200
UNDER THE SUPERVISION OF
JOHN HIDALGO R.L.A. 3551 DATE

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NONE

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NO.	DESCRIPTION	APP. DATE

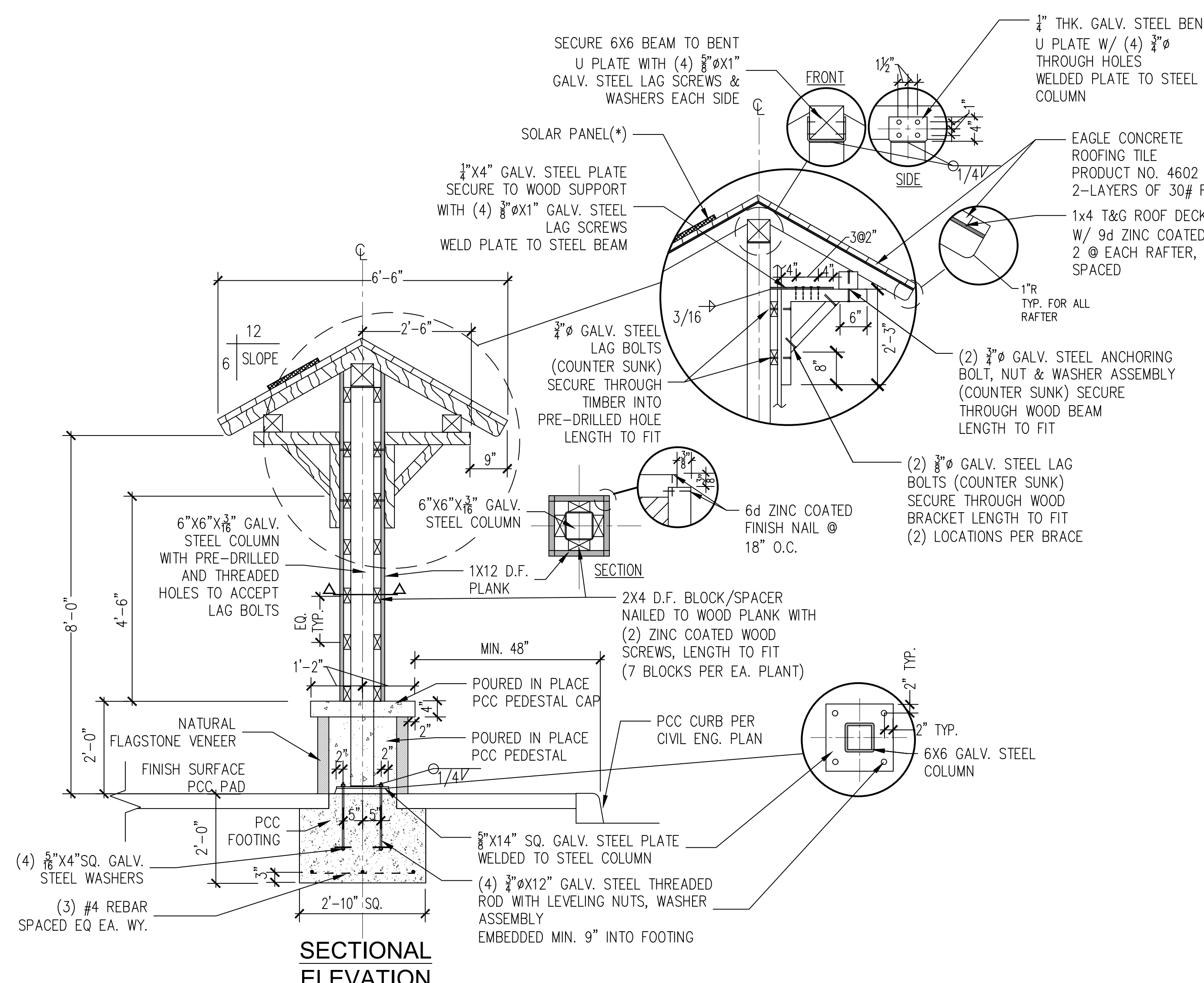
CITY OF ROLLING HILLS ESTATES
STREET MEDIAN & PARKWAY PLANTING PLAN

INTERSECTION CAPACITY IMPROVEMENTS
AT PALOS VERDES DRIVE NORTH AND DAPPLEGRAY SCHOOL ENTRANCE

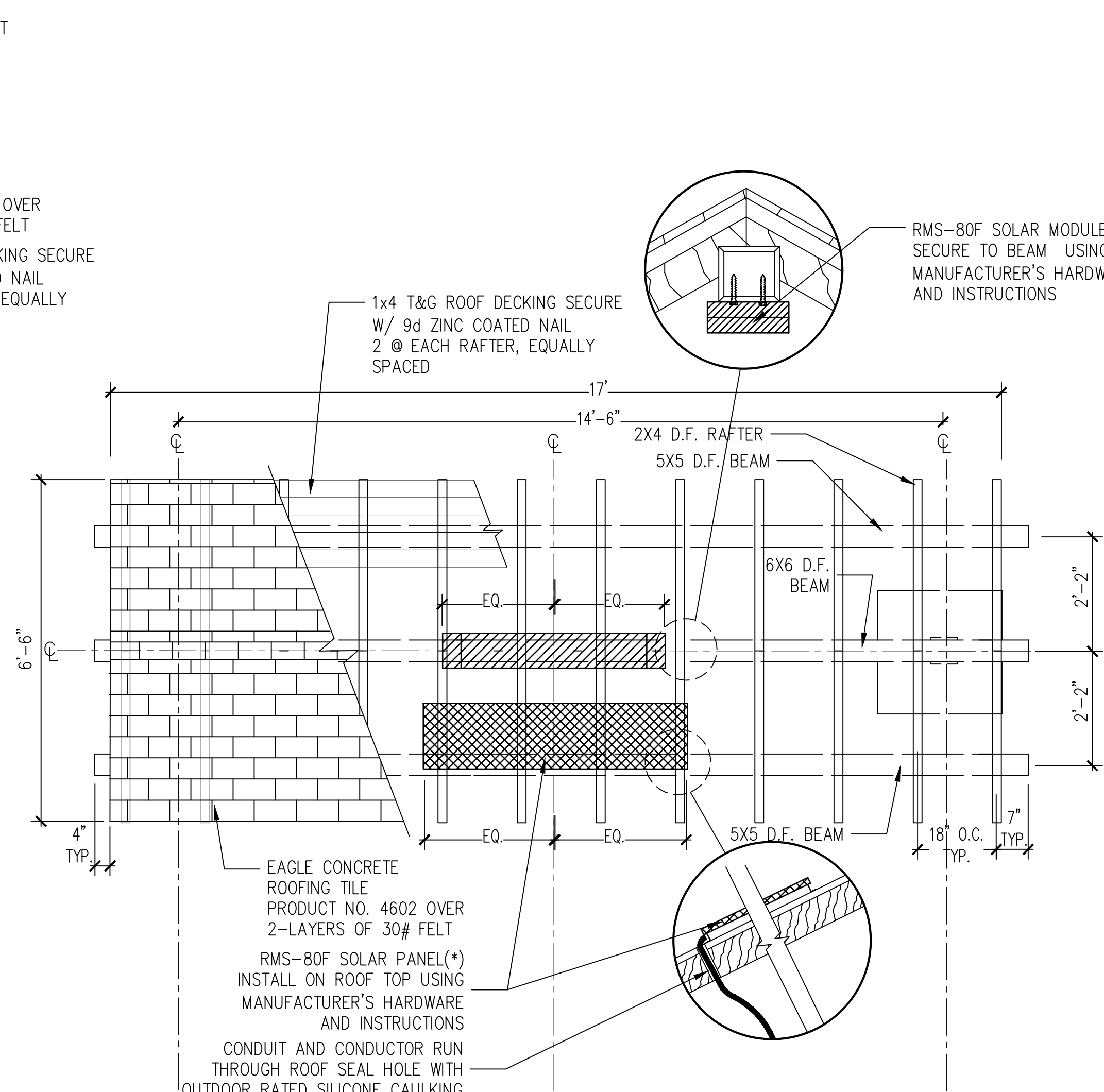
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DESIGNED BY: BN	SHT. 18 OF 22 SHTS.
CHECKED BY: JH	L-4

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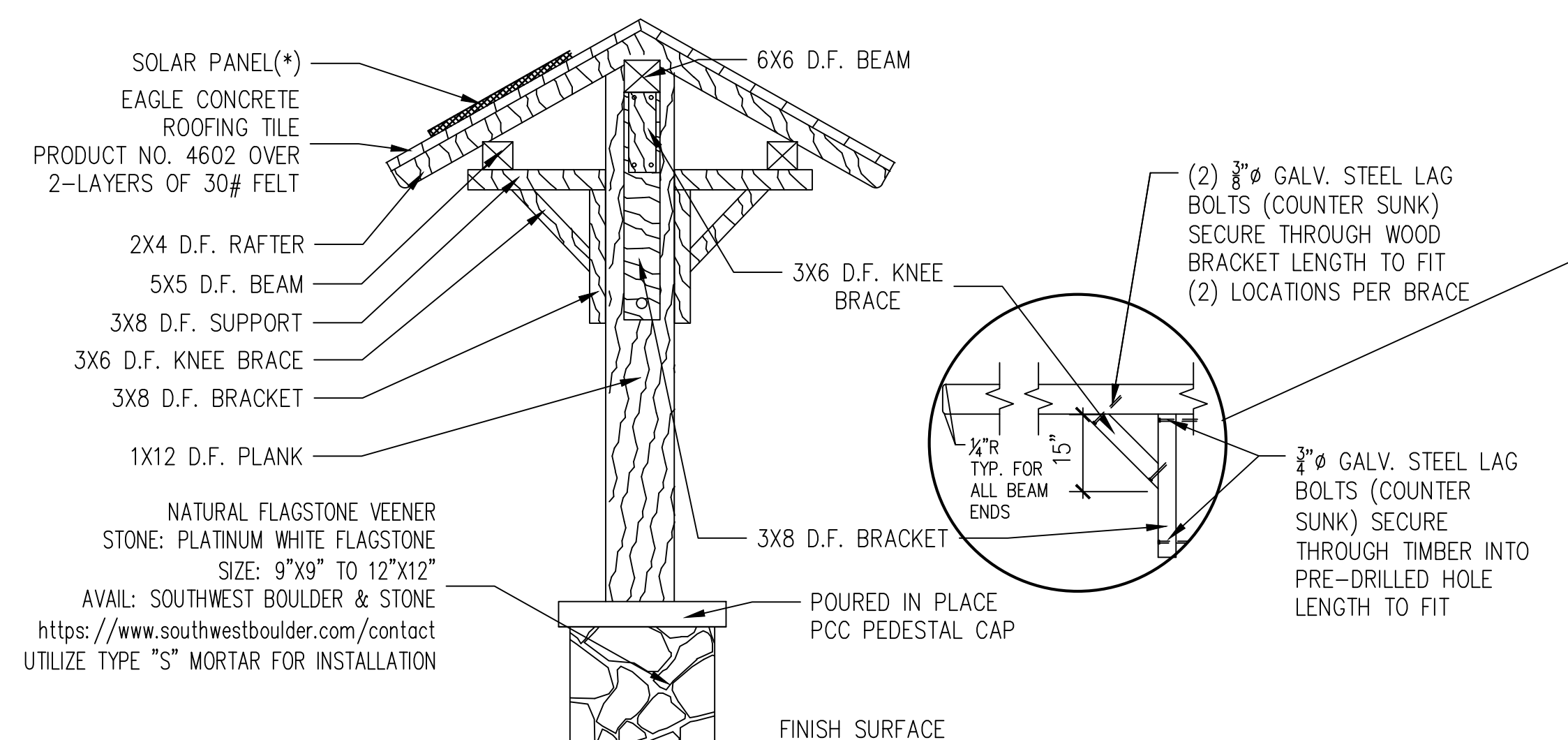
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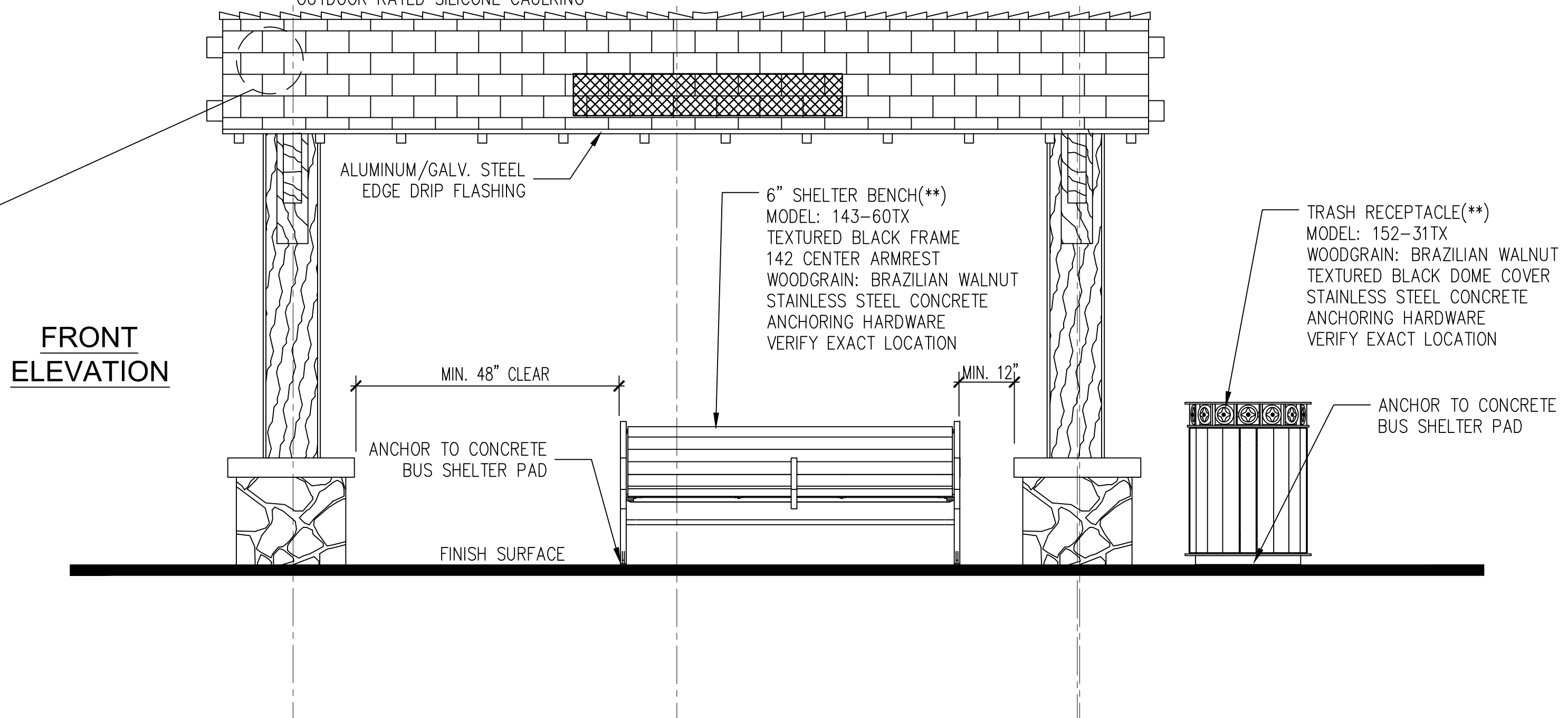
SECTIONAL ELEVATION



PLAN VIEW



SIDE ELEVATION



FRONT ELEVATION

SEE PLAN NO. L-6 FOR SITE LAYOUT AND CONSTRUCTION NOTES

CITY OF ROLLING HILLS ESTATES			
BUS SHELTER DETAILS			
INTERSECTION CAPACITY IMPROVEMENTS AT PALOS VERDES DRIVE NORTH AND DAPPLEGRAY SCHOOL ENTRANCE			
DRAWN BY: BN	DESIGNED BY: BN	CHECKED BY: JH	PLAN NO. L-5
SHT. 19 OF 22 SHTS.			

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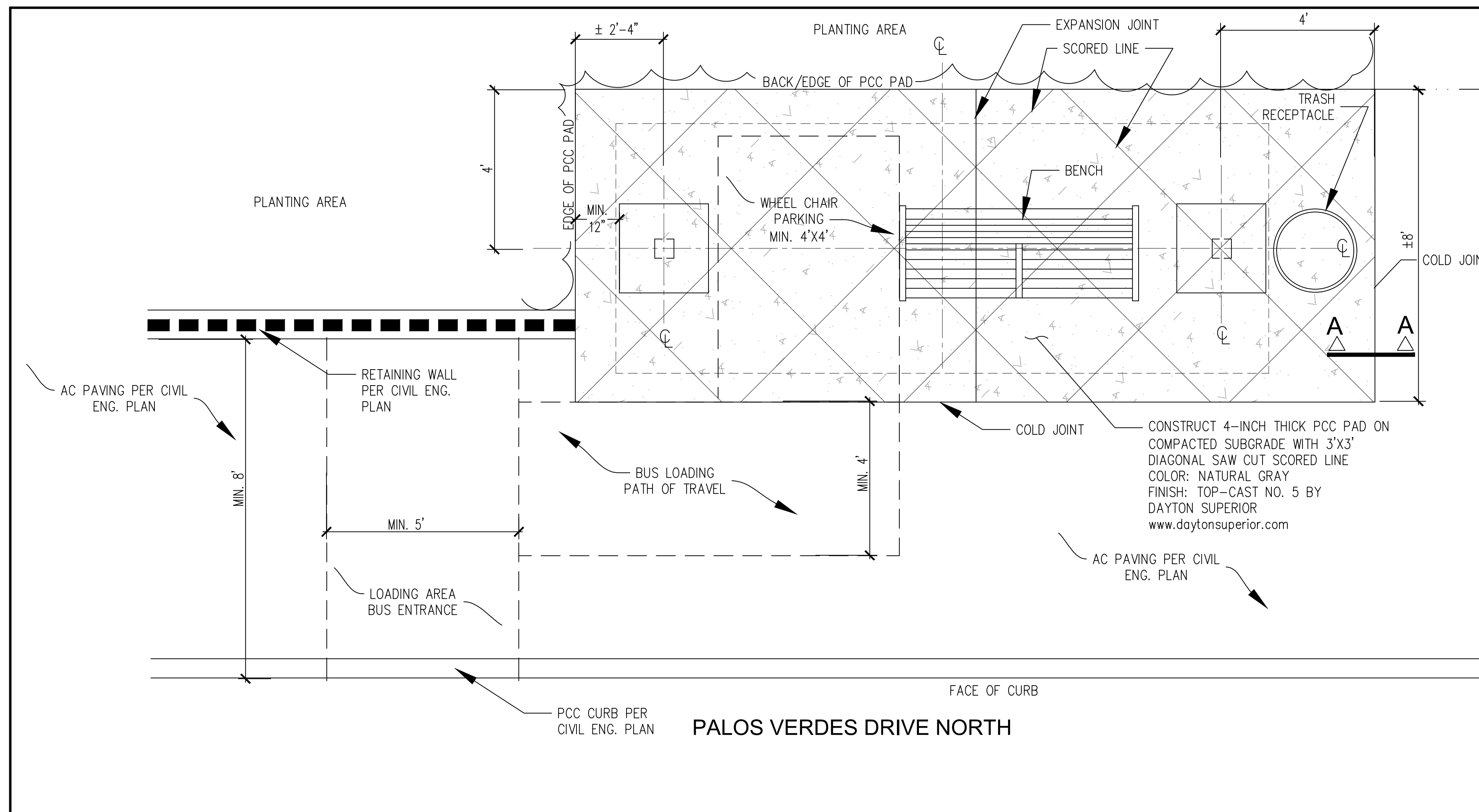
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LOCATION 1

GENERAL NOTES:

1. VERIFY EXACT LOCATION OF BUS SHELTER, BENCH AND TRASH RECEPTACLE WITH ENGINEER PRIOR TO CONSTRUCTION AND INSTALLATION.
2. DETAILS AND PLANS SHOWN ARE TO ILLUSTRATE THE DESIGN INTENT ONLY. THE CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS AND CONSTRUCTION MATERIAL SUBMITTALS TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
3. SHOP DRAWING SHALL INCLUDE ALL SPECIFICATION CALL-OUTS AND DIMENSIONS AS SHOWN INCLUDING ANY NEEDED DIMENSIONS AND CALL-OUTS NOT SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING FOOTING CALCULATIONS FROM A CALIFORNIA REGISTERED ENGINEER TO THE CITY AS PART OF THE BUILDING PERMIT PLAN CHECK SUBMITTAL FOR REVIEW AND APPROVAL.
4. BUS SHELTER COLOR SCHEDULE, BUILDING MATERIAL, AND SITE FURNISHING COLOR SHALL BE AS INDICATED ON THE DRAWINGS.
5. CONTRACTOR SHALL COORDINATE VERIFY ALL EXISTING UTILITY STRUCTURES WITH CIVIL IMPROVEMENT PLANS WITHIN AND SURROUNDING THE PROPOSED BUS SHELTER LOCATIONS AS SHOWN ON PLAN WITH ENGINEER PRIOR TO INSTALLATION.

CONTRACTOR'S RESPONSIBILITIES:

1. CONSTRUCT BUS SHELTER, FURNISH AND INSTALL SOLAR POWERED LIGHTING ASSEMBLY, FURNISH AND INSTALL SITE FURNISHING, COMPLETE PER PLAN.
2. CONTRACTOR SHALL COORDINATE WITH MANUFACTURERS TO OBTAIN SHOP DRAWINGS OF BUS BENCH, TRASH RECEPTACLE, SOLAR LIGHT ASSEMBLY AND CUT SHEETS/SAMPLES OF ROOFING MATERIAL AND STONE VENEER FOR CITY REVIEW SUBMITTAL, INCLUDING SHIPPING AND DELIVERY SCHEDULING PRIOR TO PLACING ORDER.
3. CONTRACTOR SHALL FURNISH SHOP DRAWINGS OF A COMPLETE BUS SHELTER ASSEMBLY PER GENERAL NOTE NO. 2 & 3 TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CITY BUILDING PERMIT APPLICATION, STRUCTURAL PLAN CHECK SUBMITTAL AND FEE, IF REQUIRED, FOR THE INSTALLATION OF SHELTER.
5. CONTRACTOR SHALL VERIFY EXACT COLORS OF TRASH RECEPTACLE AND BENCH WITH THE CITY PRIOR TO ORDERING.
6. CONTRACTOR SHALL:
 - FURNISH ALL NEEDED GALVANIZED STEEL HARDWARE THAT WAS NOT PROVIDED BY THE MANUFACTURERS FOR THE ANCHORING OF BENCH, TRASH RECEPTACLE AND SOLAR POWERED LIGHTING ASSEMBLY AT LOCATIONS SHOWN ON PLAN. ALL INSTALLATION AND ANCHORING SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS/INSTRUCTIONS.
 - APPLY CLEAR ANTI-GRAFFITI COATING ON ALL EXPOSED SURFACES OF SHELTER. ANTI-GRAFFITI COATING SHALL BE PER SPECIFICATIONS. COATING APPLICATION SHALL BE PER MANUFACTURER'S SPECIFICATIONS/Written INSTRUCTIONS.
 - ALL INSTALLATION AND SITE FURNISHING ANCHORING SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS/INSTRUCTIONS.

LUMBER NOTE: ALL WOOD TO BE ROUGH SAWN DOUGLAS FIR (D.F.) NO.1 GRADE OR BETTER.

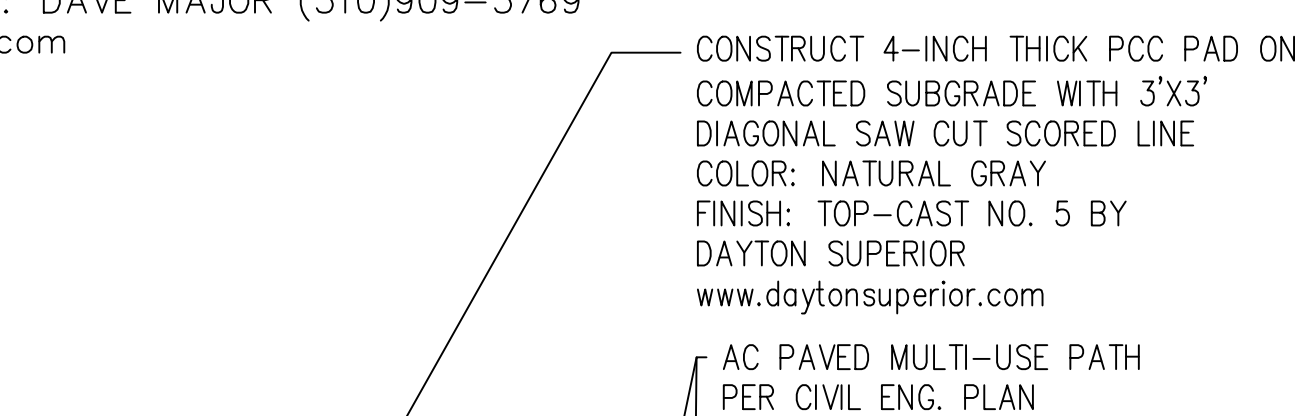
PAINT NOTE:

- PRIME AND PAINT ALL EXTERIOR SURFACE OF WOOD MEMBERS AND METAL HARDWARE(a) WITH 1 COAT PRIMER, 2 COATS ENAMEL COLOR: WARM WHITE-DEW380 BY DUNN-EDWARDS CO.
- PROVIDE CITY ENGINEER W/ COLOR SAMPLE PRIOR TO CONSTRUCTION. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

(a) FOR GALV. STEEL HARDWARE, USE ULGMOO AS PRIMER.

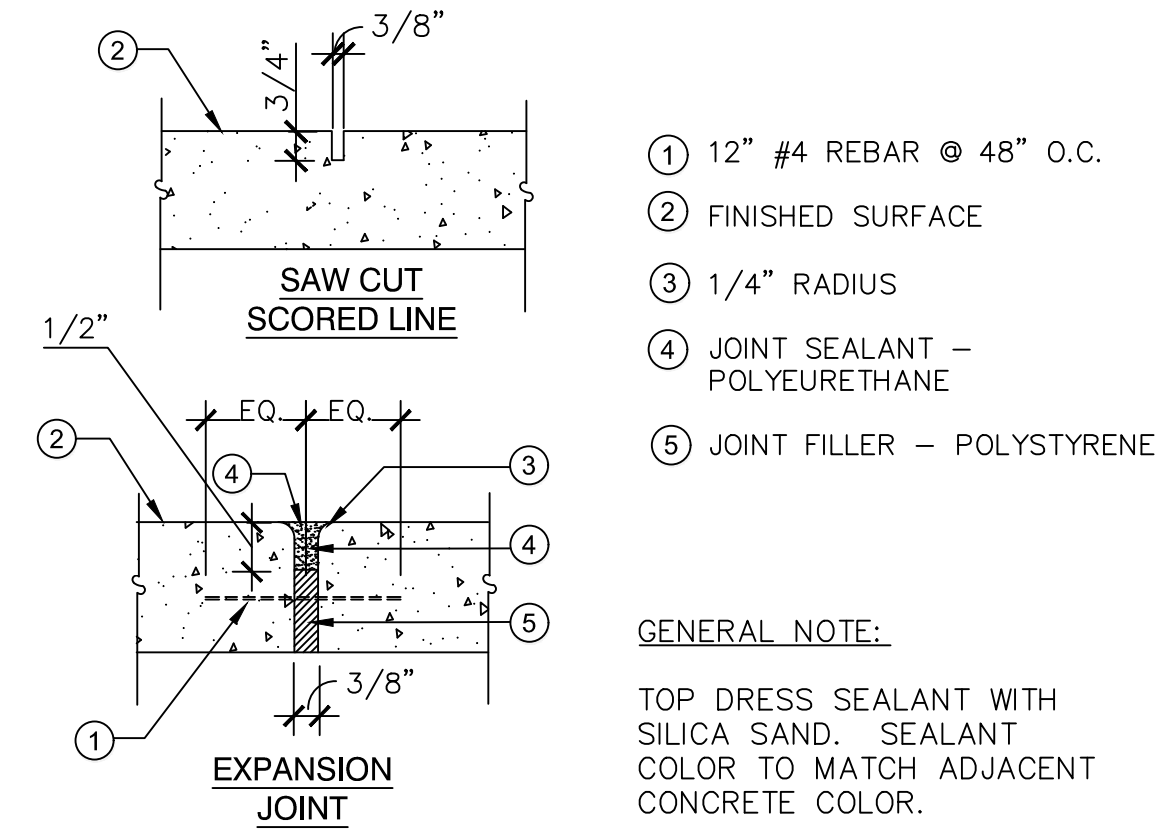
MANUFACTURER CONTACTS:

- * SOLAR POWERED SHELTER LIGHTING ASSEMBLY
URBAN SOLAR (503)356-5516 info@urbansolarcorp.com
- ** BENCH AND TRASH RECEPTACLE
DUMOR (800)598-4018 sales@dumor.com
- EAGLE ROOFING PRODUCT (800)300-3245 www.eagleroofting.com
- DUNN EDWARDS CONTACT: DAVE MAJOR (310)909-3769 dave.major@dunndwards.com



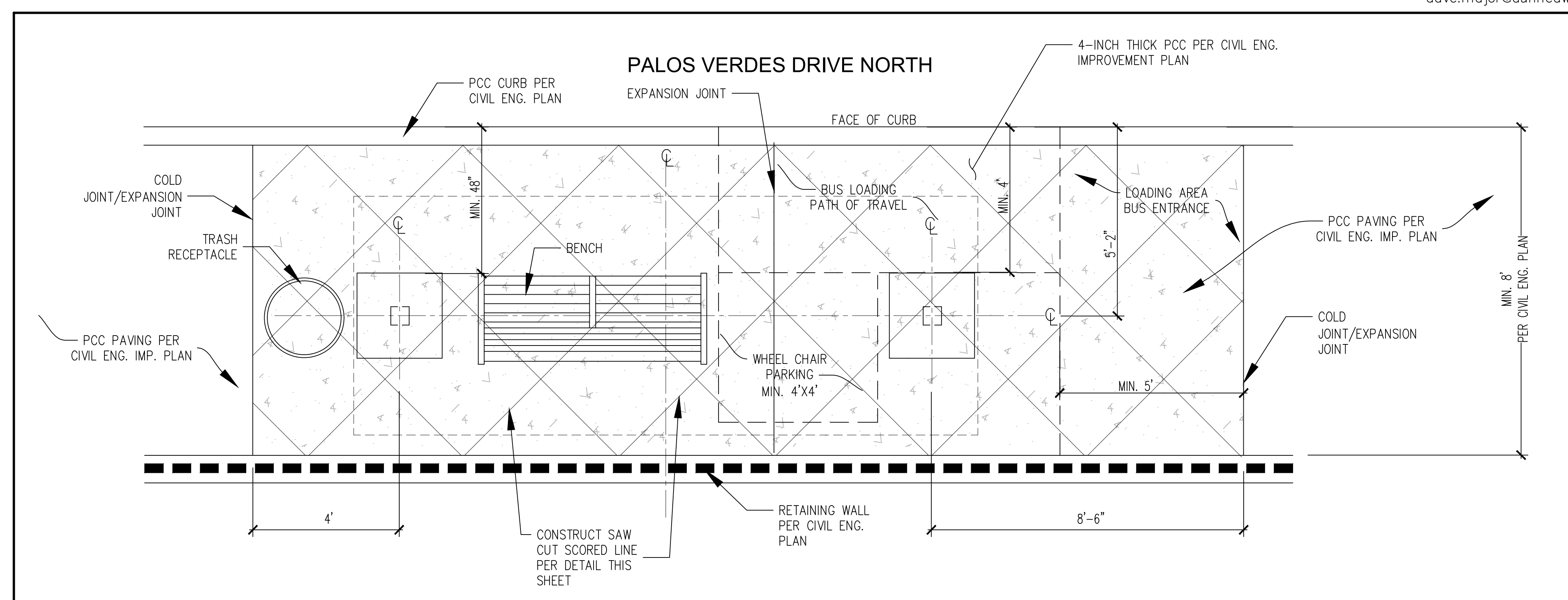
NOTES:

1. APPLY NON-GLOSS CONCRETE SEALER COATING ON PCC PAD MANUFACTURED BY DAVIS COLORS OR APPROVED EQUAL. APPLICATION SHALL BE PER MANUFACTURER'S INSTRUCTIONS.
2. SUBMIT CUT SHEET OF CONCRETE SEALER TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO APPLICATION.
3. CONTRACTOR SHALL SUBMIT 2'X2' MOCKED-UP SAMPLE OF TOP-CAST FINISH PCC PAVING TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.



GENERAL NOTE:

TOP DRESS SEALANT WITH SILICA SAND. SEALANT COLOR TO MATCH ADJACENT CONCRETE COLOR.



LOCATION 2

CITY OF ROLLING HILLS ESTATES

BUS SHELTER LAYOUT AND CONSTRUCTION NOTES

INTERSECTION CAPACITY IMPROVEMENTS
AT PALOS VERDES DRIVE NORTH AND DAPPLEGRAY SCHOOL ENTRANCE

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DESIGNED BY: BN	SHT. 20 OF 22 SHTS.
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SUITE 405 INDUSTRY, CA 91746-3497
(942) 908-6200
UNDER THE SUPERVISION OF
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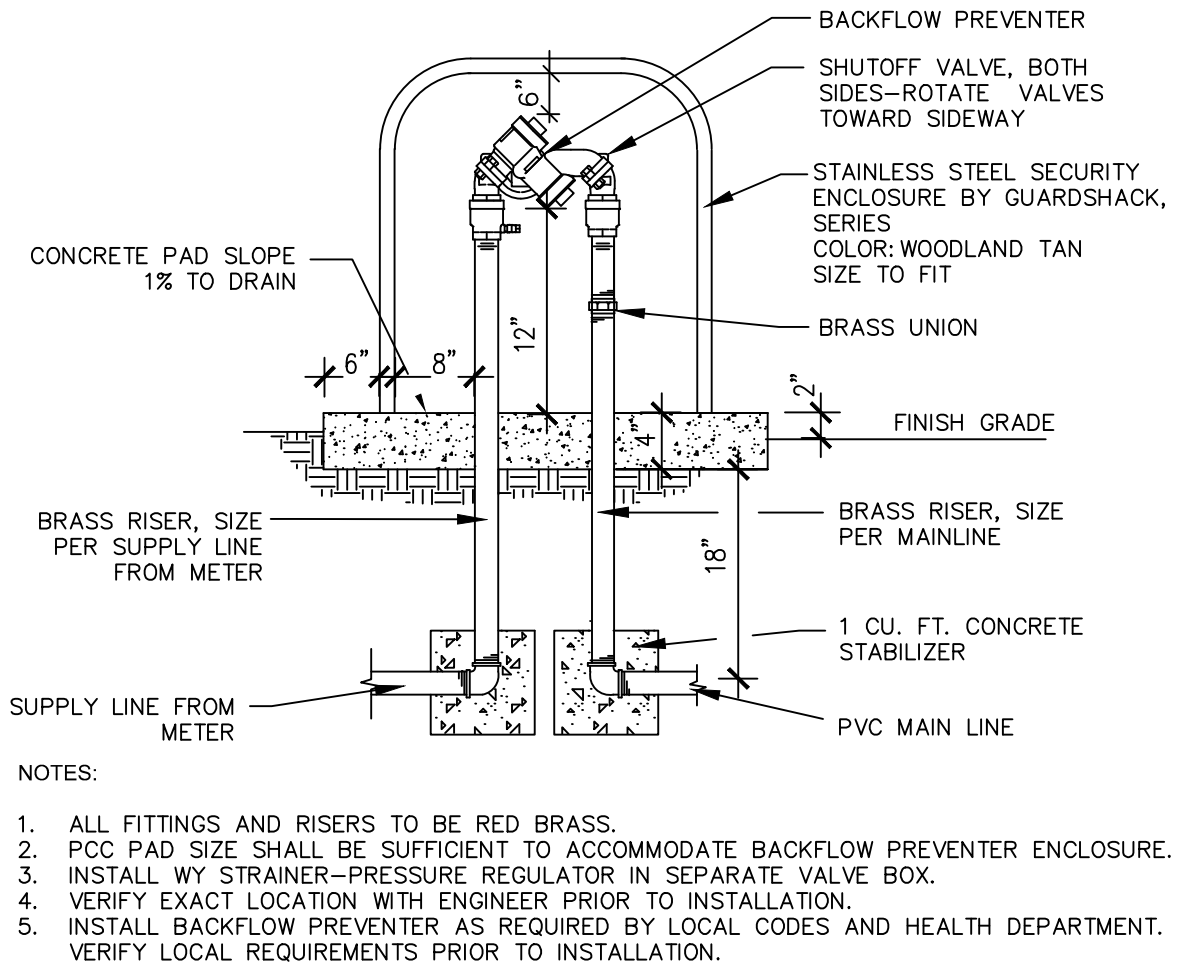
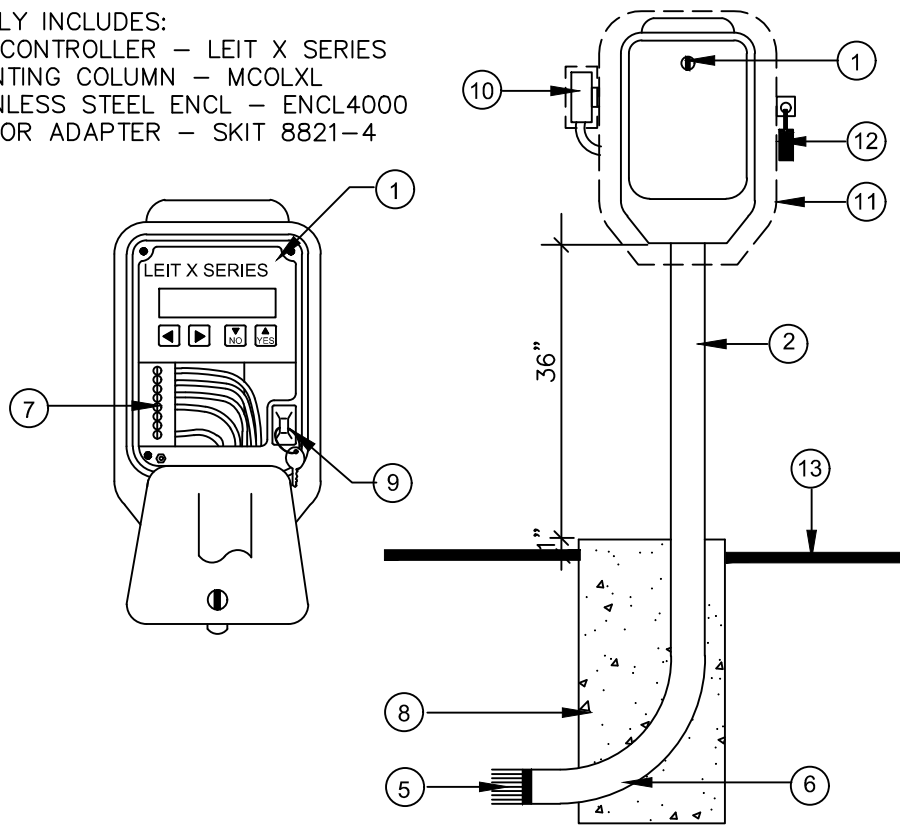
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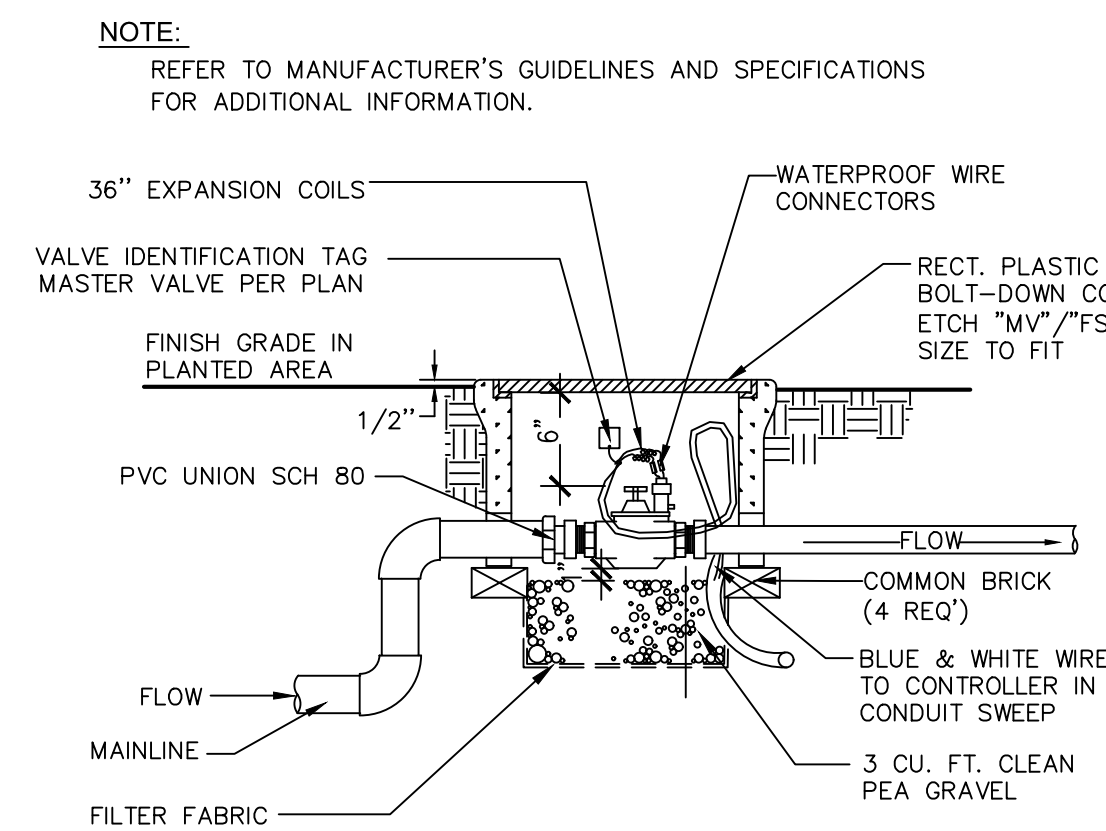
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- 1 LEIT X SERIES IRRIGATION CONTROLLER*
- 2 MOUNTING COLUMN
- 3 SUB-GRADE
- 4 FINISHED GRADE / SURFACE
- 5 DIRECT BURIAL CONTROL WIRES TO CONTROL VALVES
- 6 90° SWEEP ELL
- 7 TERMINAL STRIP
- 8 12" DIA. X 18" CONCRETE FOOTING
- 9 ACCESS KEY
- 10 RAIN SENSOR INSTALLED IN STAINLESS STEEL VANDAL-PROOF ENCLOSURE MOUNTED ON IRRIGATION CONTROLLER ENCLOSURE. INSTALLATION SHALL BE PER MANUFACTURER'S SPECIFICATIONS
- 11 STAINLESS STEEL ENCLOSURE
- 12 PADLOCK FURNISH AND PROVIDE TO CITY'S REPRESENTATIVE (2) KEYS FOR PADLOCK @ EACH CONTROLLER
- 13 FINISH GRADE

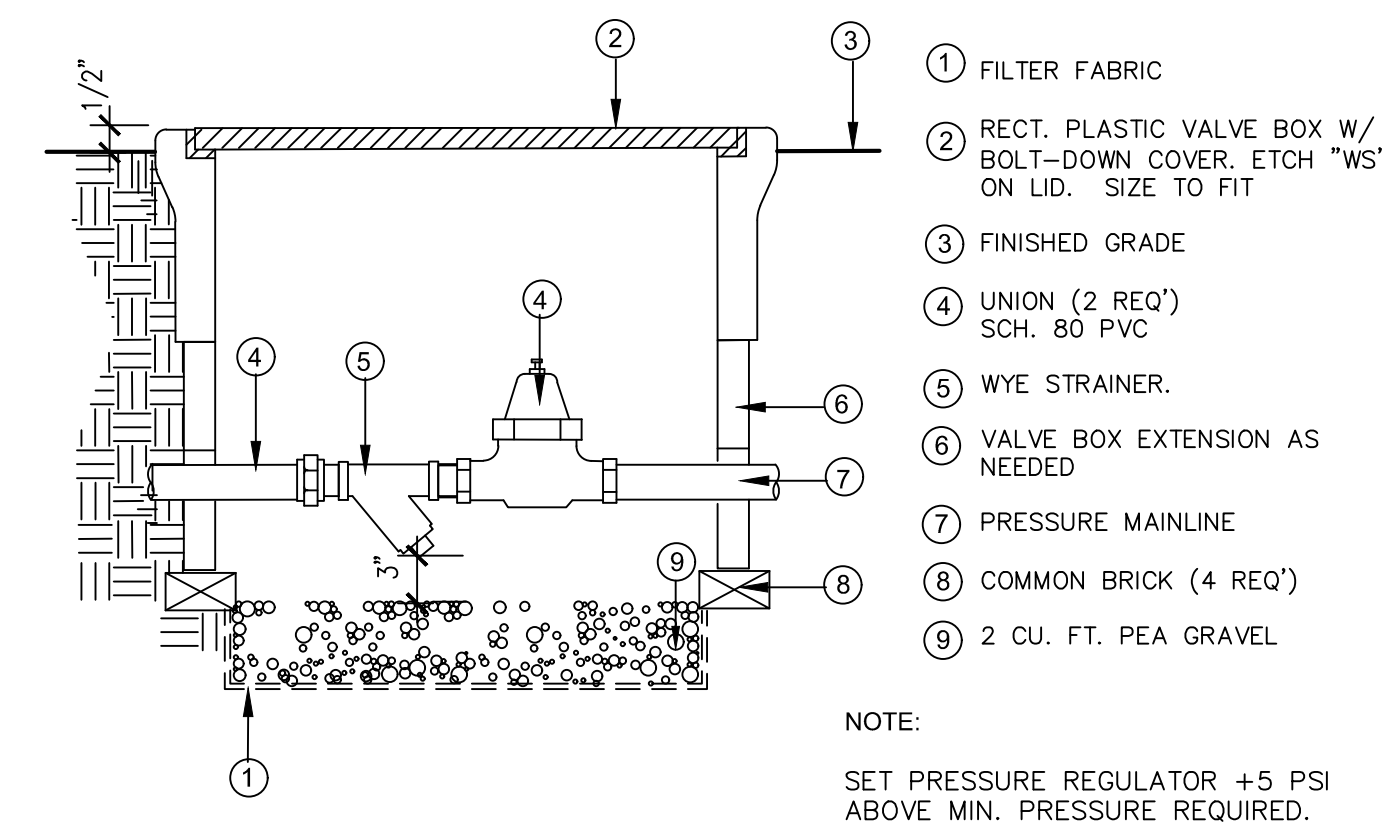
*ASSEMBLY INCLUDES:
 1. LEIT X SERIES CONTROLLER - LEIT X SERIES
 2. MOUNTING COLUMN - MCOLXL
 3. STAINLESS STEEL ENCL - ENCL4000
 4. SENSOR ADAPTER - SKIT 8821-4



- NOTES:
 1. ALL FITTINGS AND RISERS TO BE RED BRASS.
 2. PCC PAD SIZE SHALL BE SUFFICIENT TO ACCOMMODATE BACKFLOW PREVENTER ENCLOSURE.
 3. INSTALL WY STRAINER-PRESSURE REGULATOR IN SEPARATE VALVE BOX.
 4. VERIFY EXACT LOCATION WITH ENGINEER PRIOR TO INSTALLATION.
 5. INSTALL BACKFLOW PREVENTER AS REQUIRED BY LOCAL CODES AND HEALTH DEPARTMENT. VERIFY LOCAL REQUIREMENTS PRIOR TO INSTALLATION.

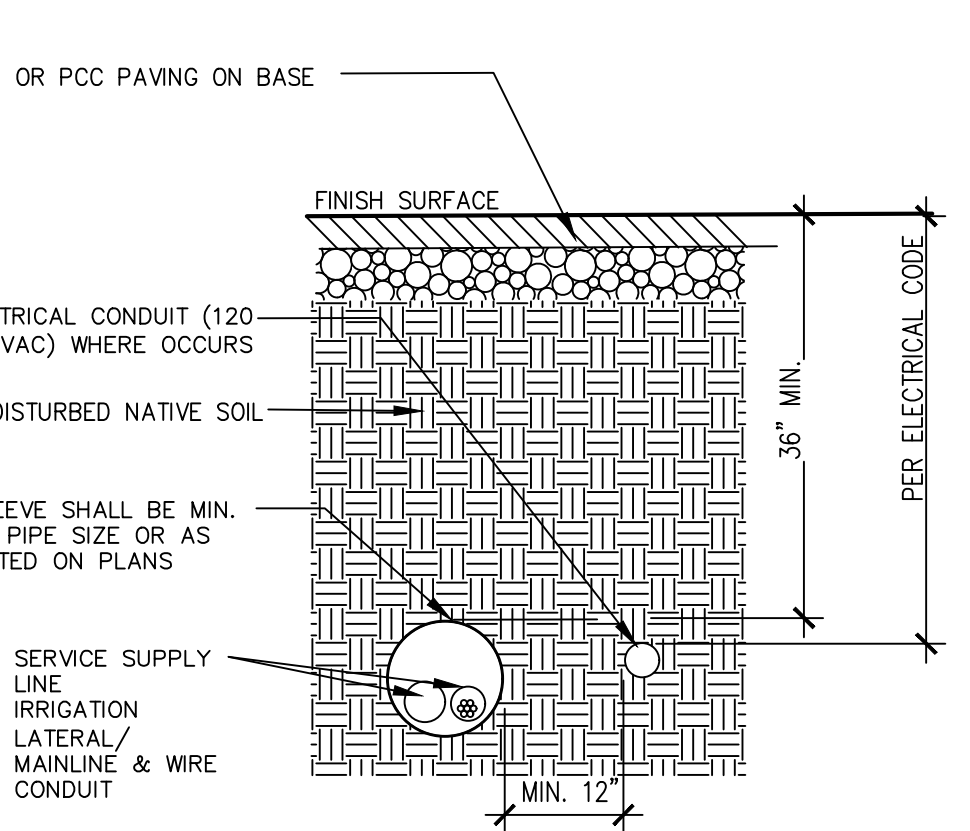
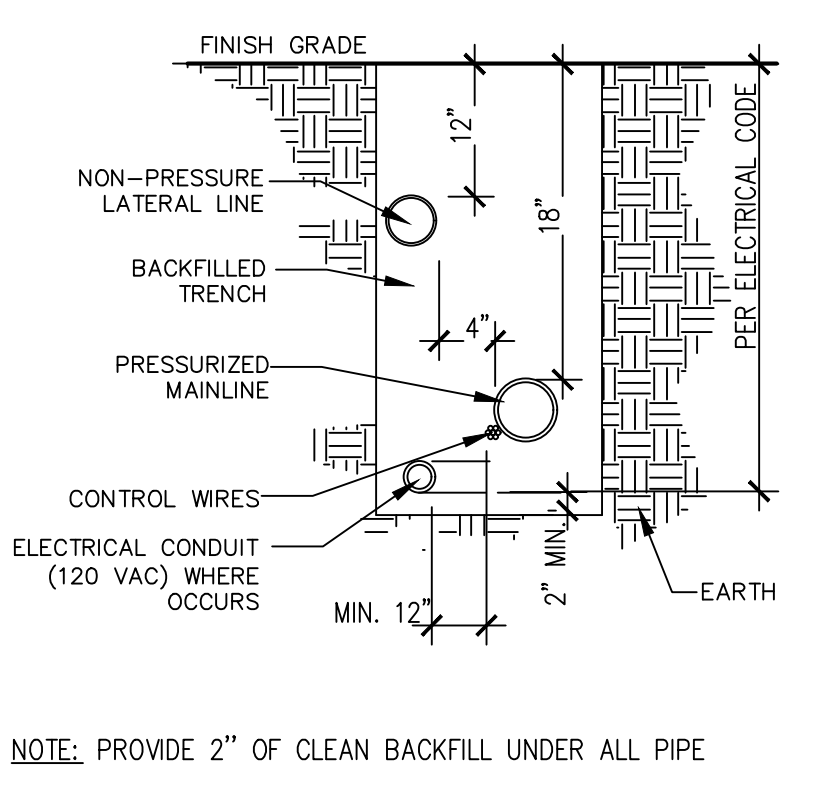
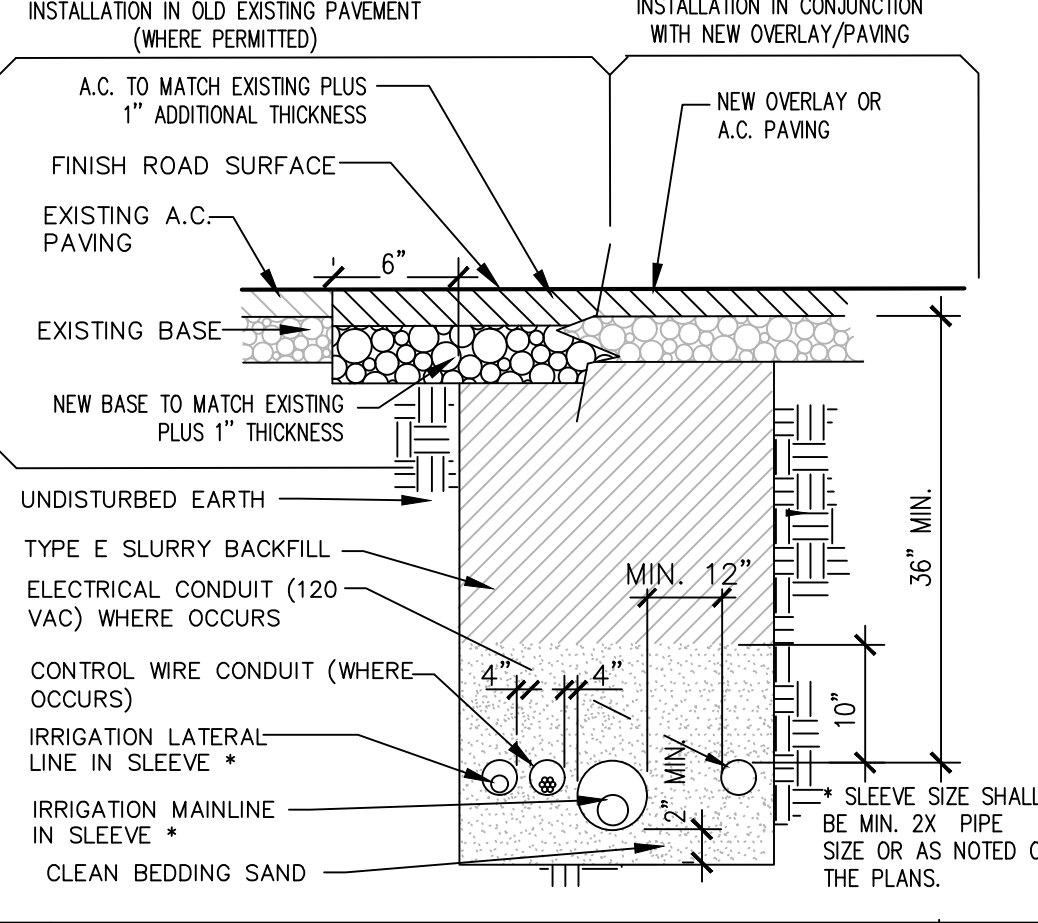
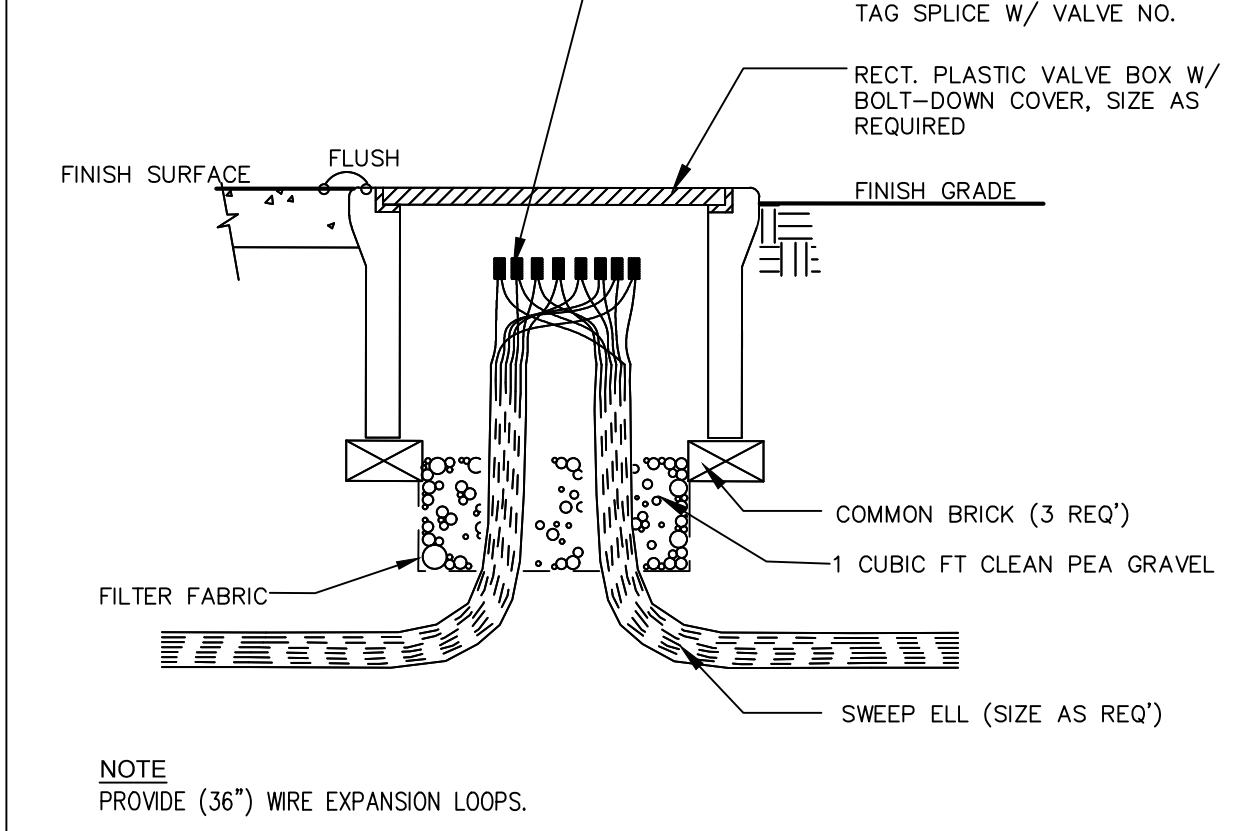
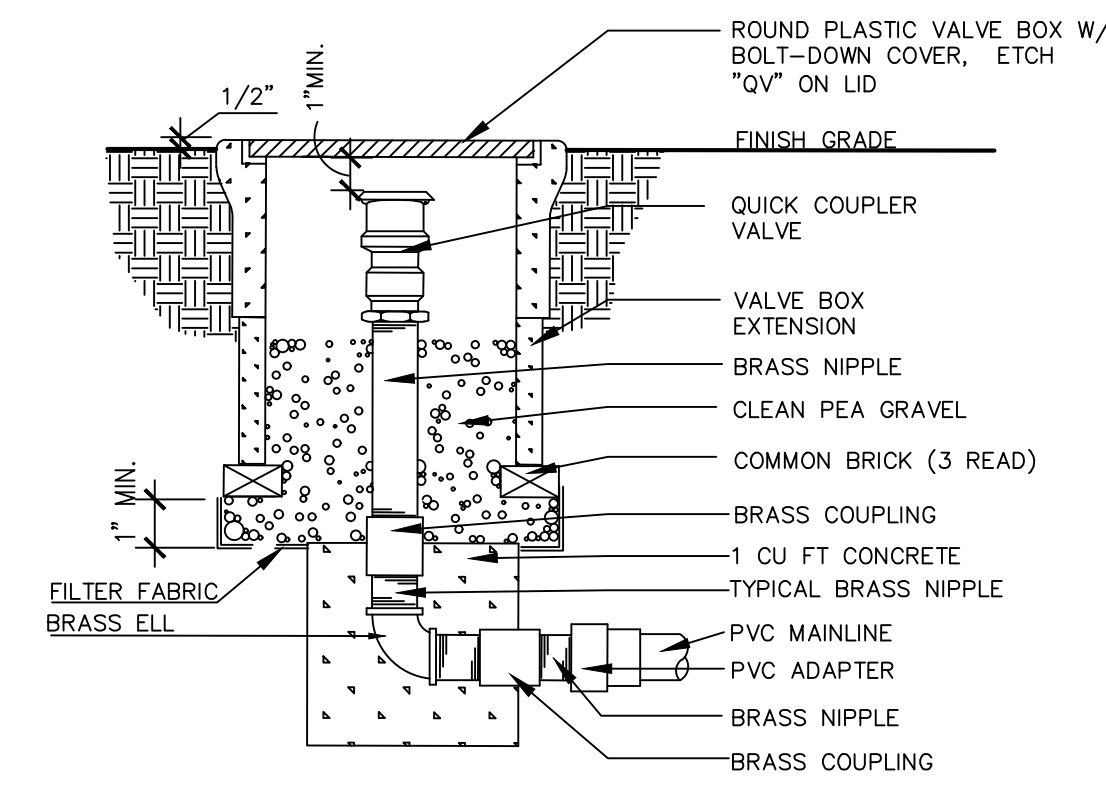
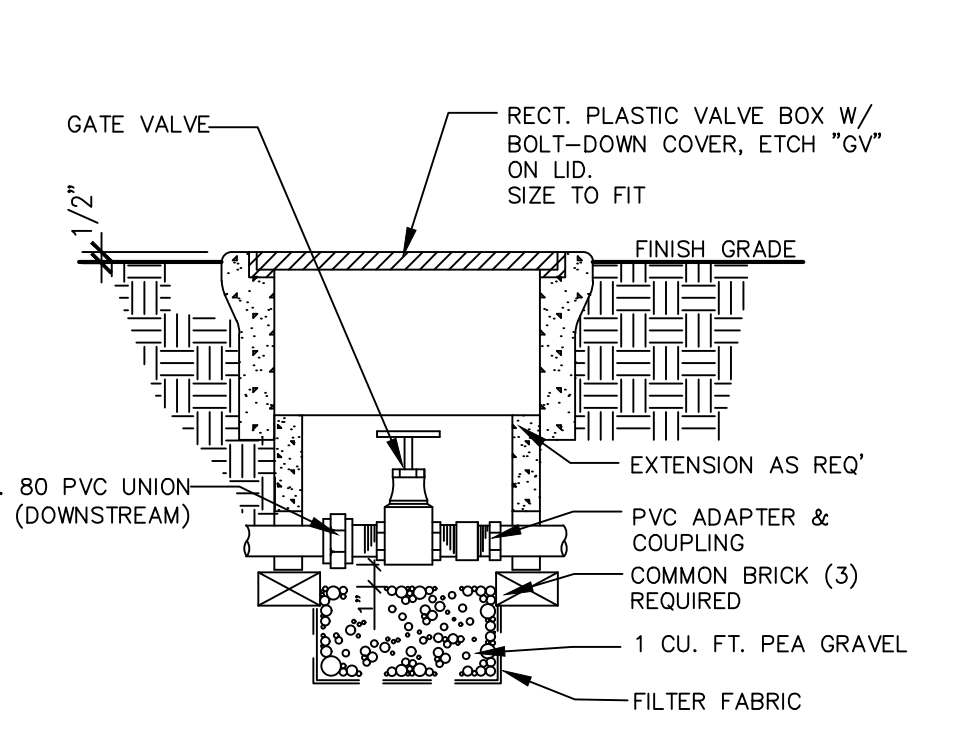


NOTE:
 REFER TO MANUFACTURER'S GUIDELINES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

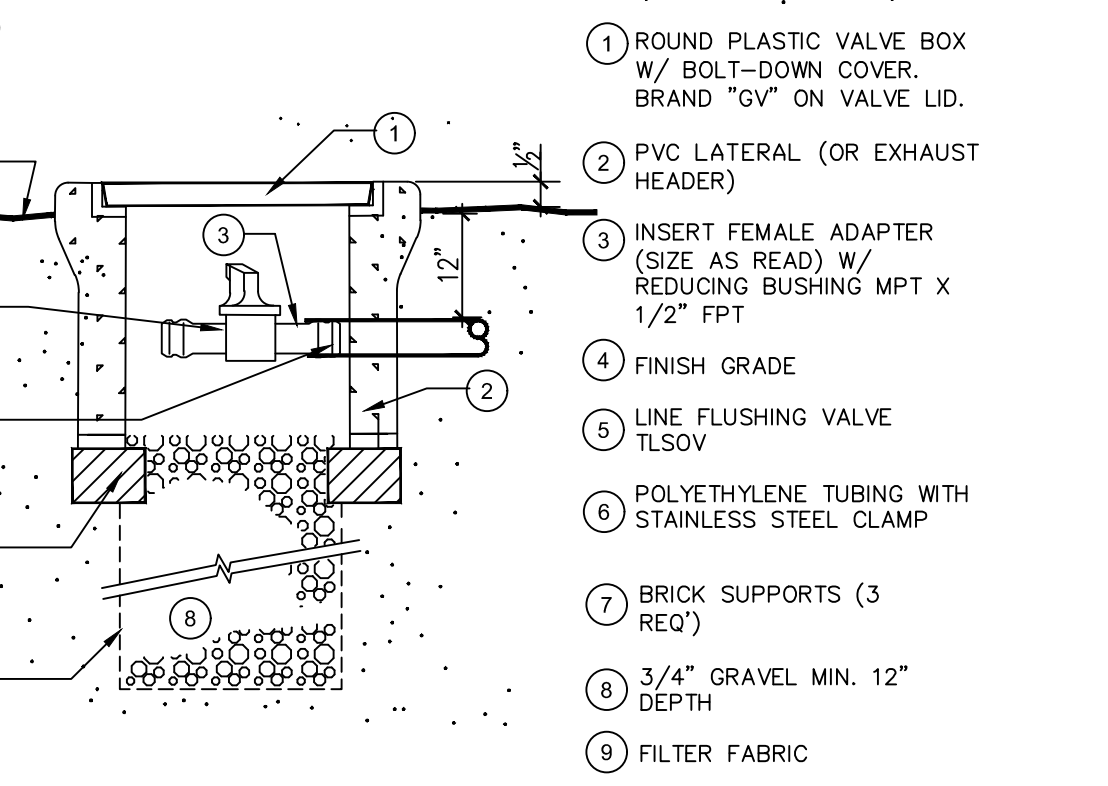
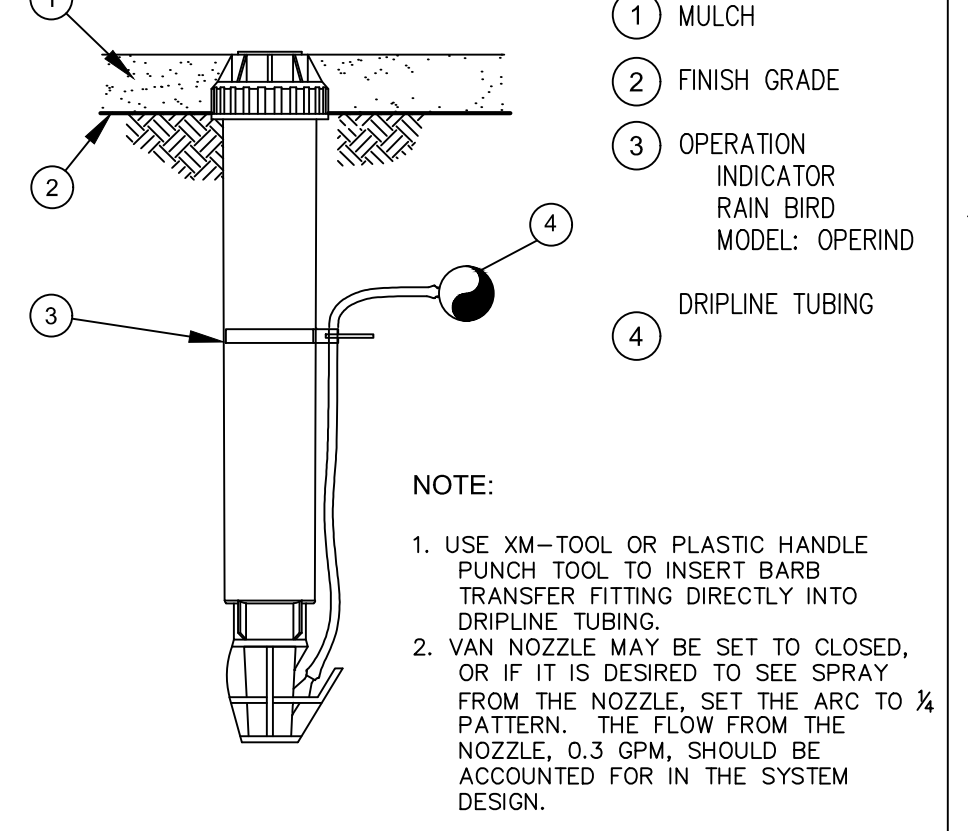
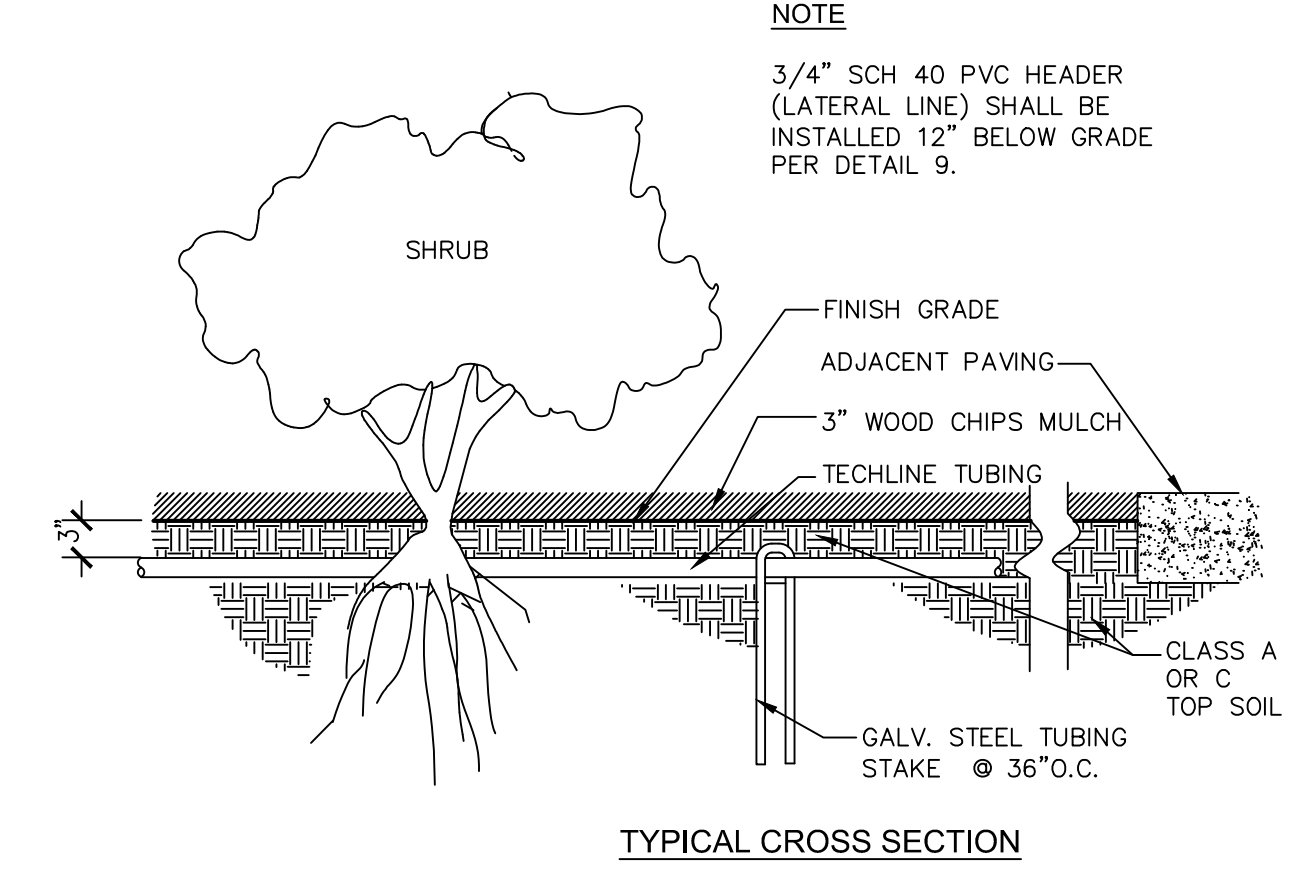
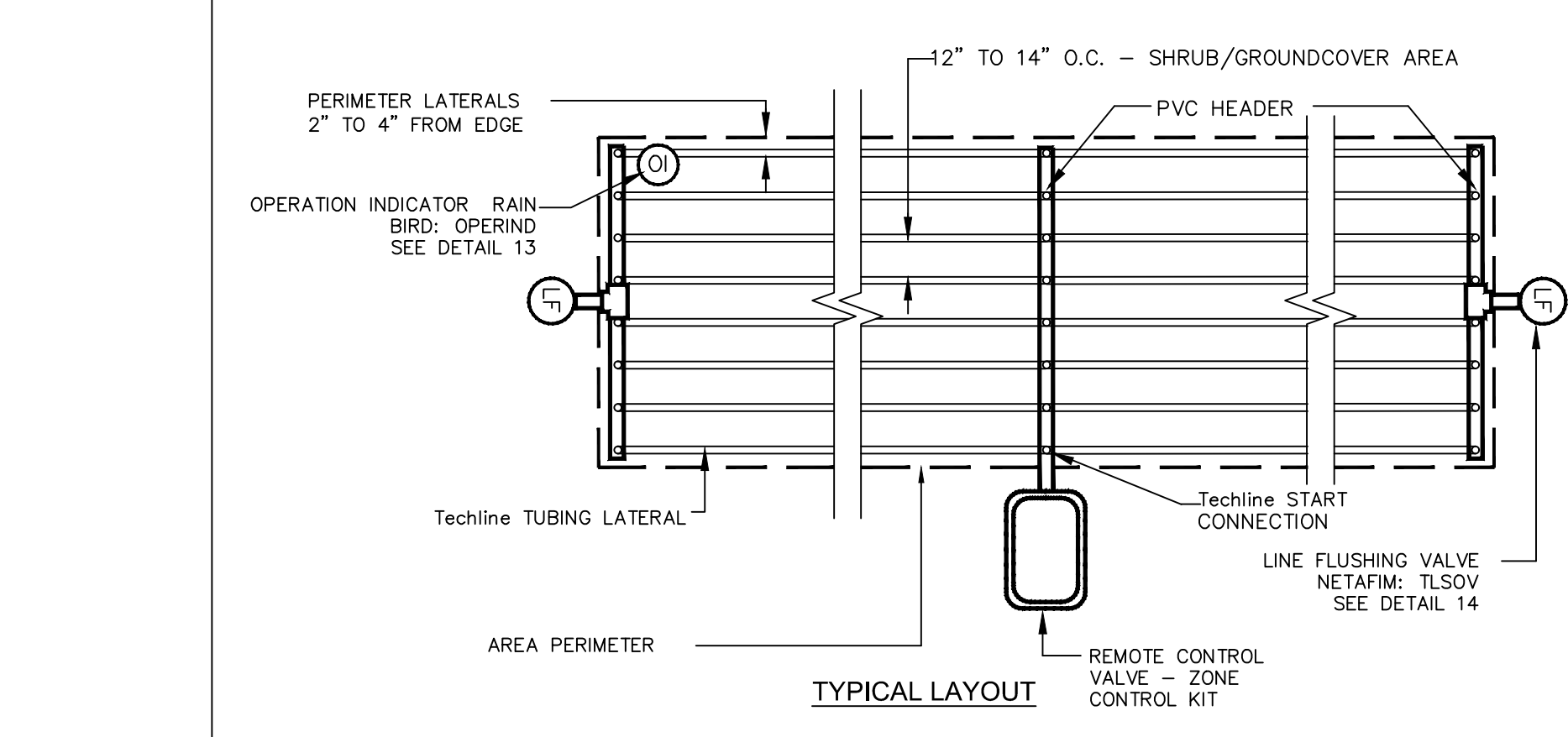
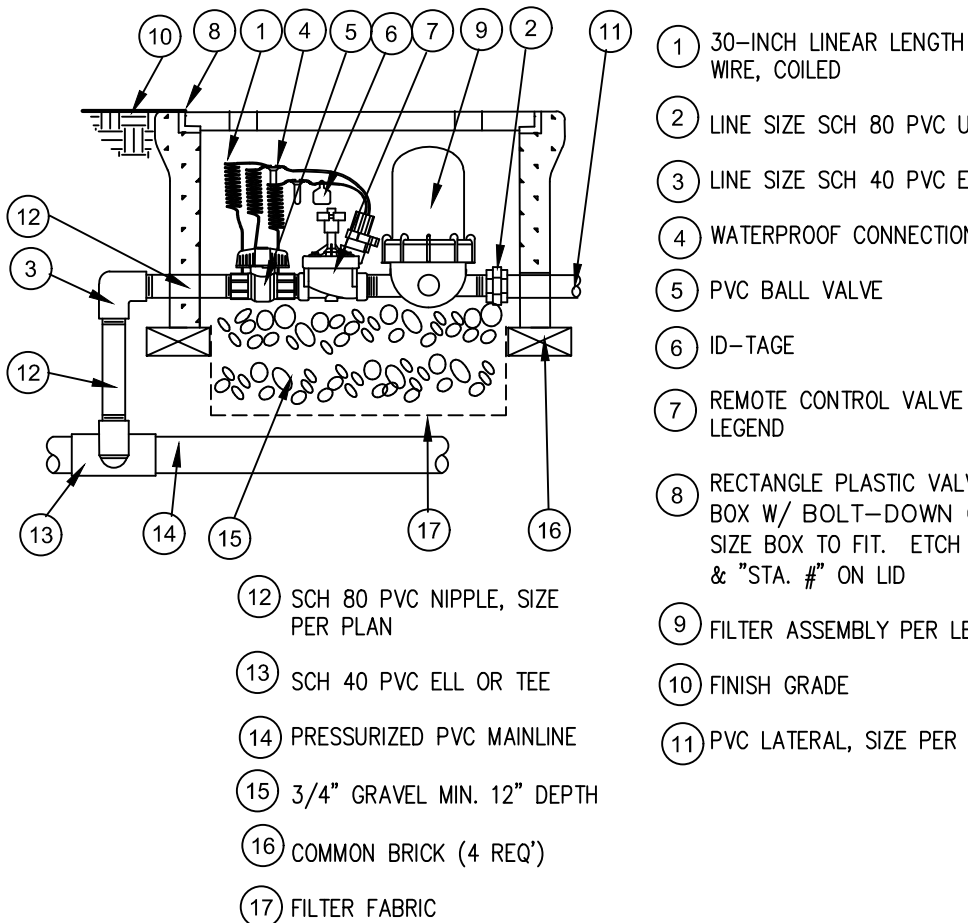


- 1 FILTER FABRIC
 - 2 RECT. PLASTIC VALVE BOX W/ BOLT-DOWN COVER, ETCH "WS" ON LID. SIZE TO FIT
 - 3 FINISHED GRADE
 - 4 UNION (2 REQ') SCH. 80 PVC
 - 5 WYE STRAINER
 - 6 VALVE BOX EXTENSION AS NEEDED
 - 7 PRESSURE MAINLINE
 - 8 COMMON BRICK (4 REQ')
 - 9 2 CU. FT. PEA GRAVEL
- NOTE:
 SET PRESSURE REGULATOR +5 PSI ABOVE MIN. PRESSURE REQUIRED.

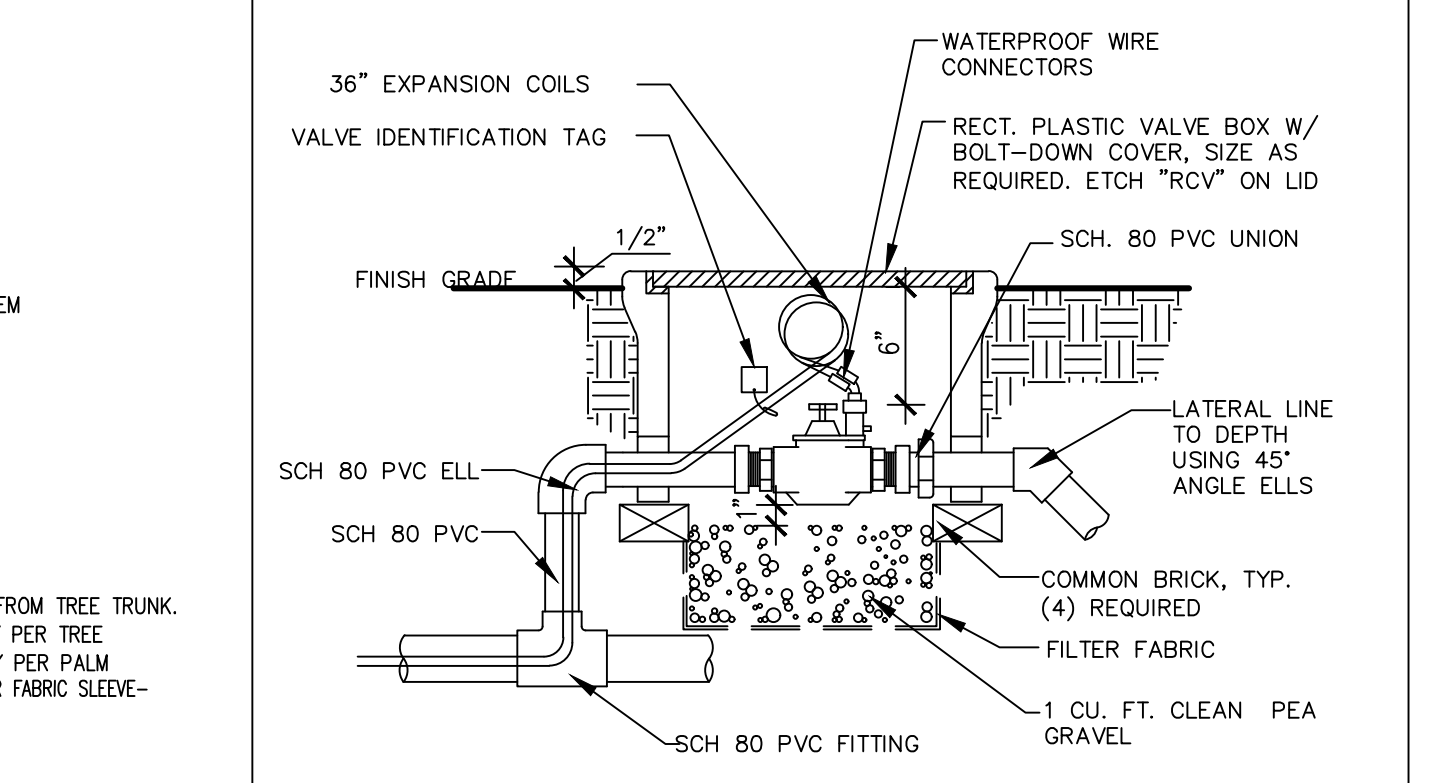
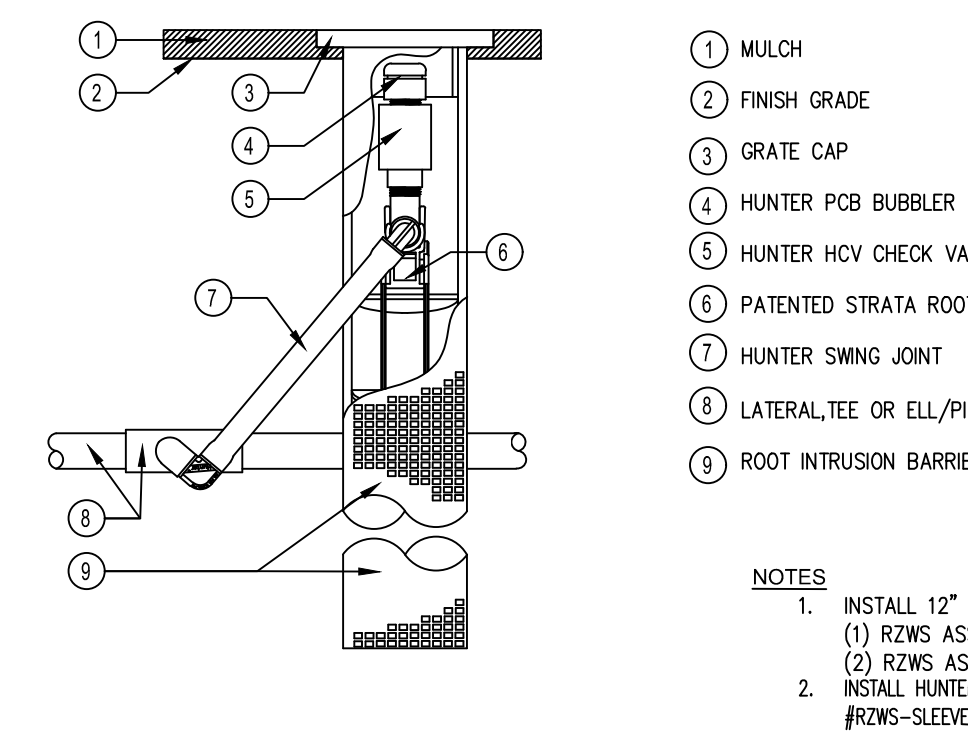
1 IRRIGATION CONTROLLER ASSEMBLY NTS 2 BACKFLOW PREVENTER DEVICE NTS 3 MASTER VALVE NTS 4 WYE STRAINER /PRESSURE REGULATOR NTS



5 GATE VALVE NTS 6 QUICK COUPLER VALVE NTS 7 CONTROL WIRE SPLICE BOX NTS 8 TRENCHING UNDER ROADWAY NTS 9 TRENCHING IN PLANTING AREA NTS 10 BORING UNDER ROADWAY NTS



11 DRIP ZONE CONTROL KIT NTS 12 TYPICAL DRIP IRRIGATION LAYOUT NTS 13 OPERATION INDICATOR NTS 14 LINE FLUSHING VALVE NTS



15 RZWS NTS 16 REMOTE CONTROL VALVE NTS

- 1 MULCH
 - 2 FINISH GRADE
 - 3 GRATE CAP
 - 4 HUNTER PCB BUBBLER
 - 5 HUNTER HCV CHECK VALVE
 - 6 PATENTED STRATA ROOT SYSTEM
 - 7 HUNTER SWING JOINT
 - 8 LATERAL,TEE OR ELL/PIPE
 - 9 ROOT INTRUSION BARRIER
- NOTES:
 1. INSTALL 12" FROM TREE TRUNK.
 (1) RZWS ASSEMBLY PER TREE
 (2) RZWS ASSEMBLY PER PALM
 INSTALL HUNTER FILTER FABRIC SLEEVE-RZWS-SLEEVE



PLANS PREPARED BY:
WILLDAN Engineering Comprehensive Innovative Trusted
 13191 CROSSROADS PARKWAY NORTH
 SUITE 405 INDUSTRIAL, CA 91746-3497
 (962) 908-6200
 UNDER THE SUPERVISION OF
 JOHN HIDALGO R.L.A. 3551 DATE

BENCH MARK: NONE

REVISIONS		NO.	DESCRIPTION	APP.	DATE

CITY OF ROLLING HILLS ESTATES

IRRIGATION DETAILS

INTERSECTION CAPACITY IMPROVEMENTS
 AT PALOS VERDES DRIVE NORTH AND DAPPLEGRAY SCHOOL ENTRANCE

DRAWN BY: BN
 DESIGNED BY: BN
 CHECKED BY: JH

PLAN NO.
L-7

SHT. 21 OF 22 SHTS.

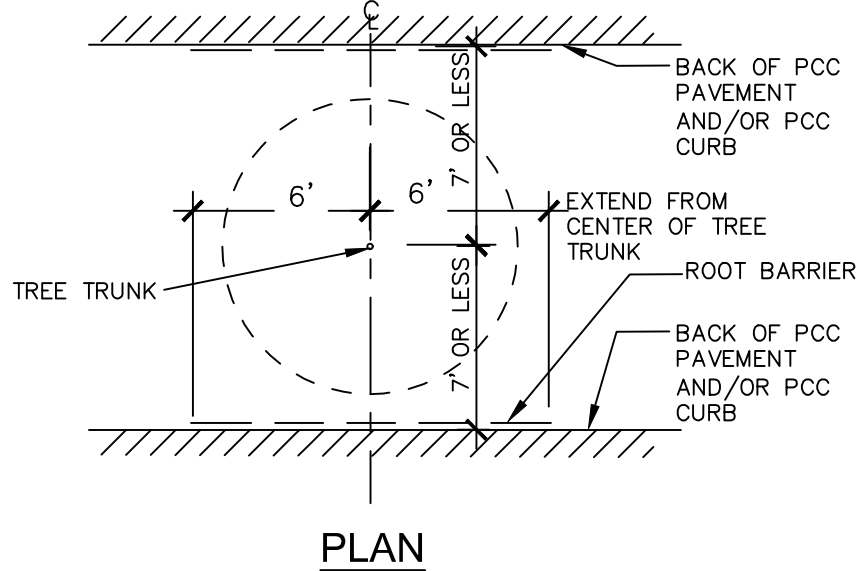
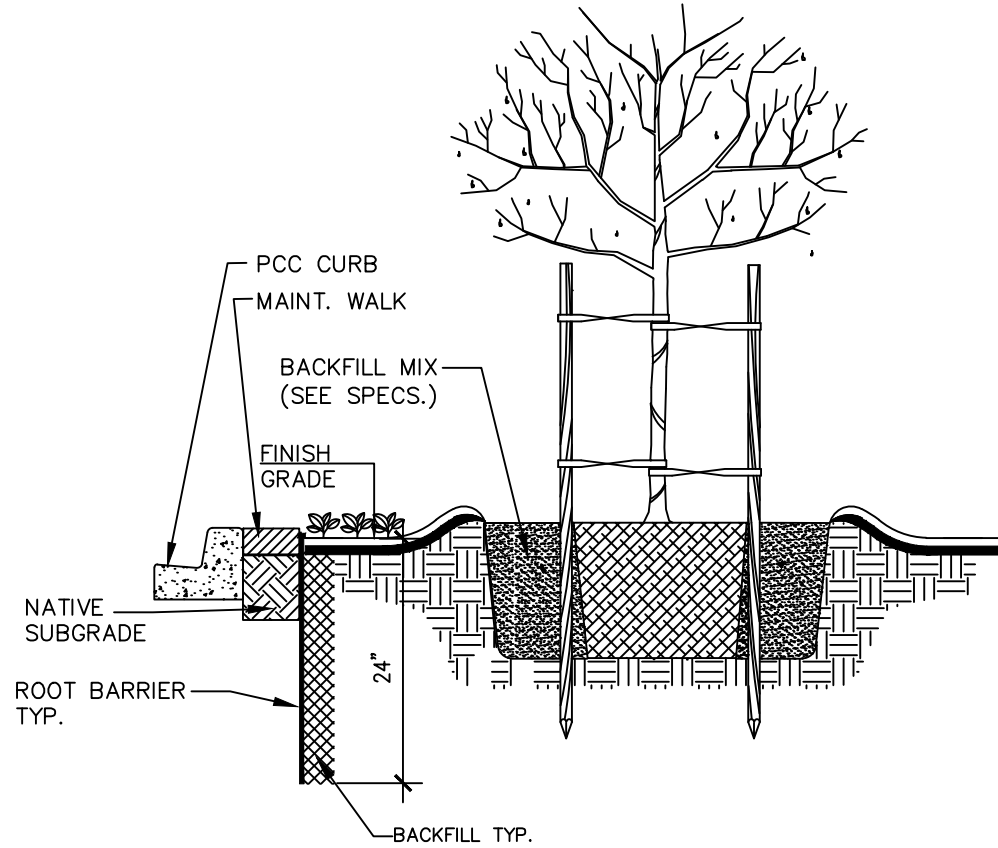
100% SUBMITTAL NOT FOR CONSTRUCTION

NOTES

THIS DETAIL IS FOR INSTALLATION OF ROOT BARRIER. REFER TO TREE INSTALLATION DETAILS FOR TREE INSTALLATION.

ROOT BARRIER NOTES

1. TOP OF ROOT CONTROL BARRIER MUST BE AT GRADE.
2. POSITION ROOT CONTROL BARRIER ADJACENT TO STRUCTURE.
3. RAISED ROOT DEFLECTORS MUST BE FACING PLANTED AREA.
4. PROVIDE A MIN. OF 12 FEET OF ROOT BARRIER PER TREE.
5. ROOT BARRIER SHALL BE A MIN. OF 24" BELOW GRADE.
6. ROOT BARRIER SHALL BE MANUFACTURED BY "NDS" OR "DEEP ROOT".

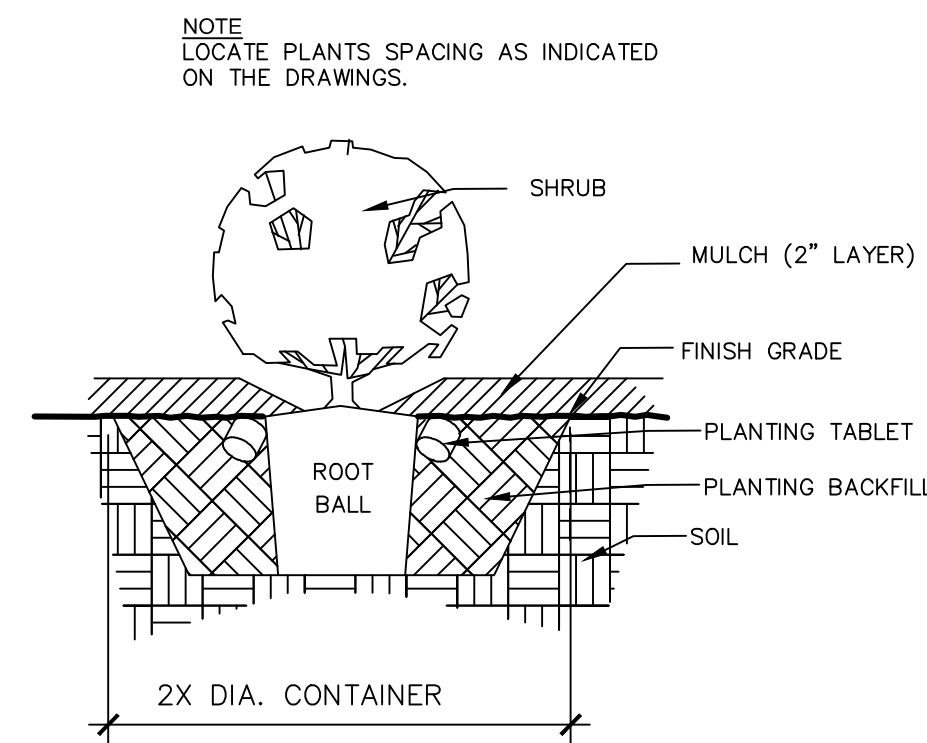
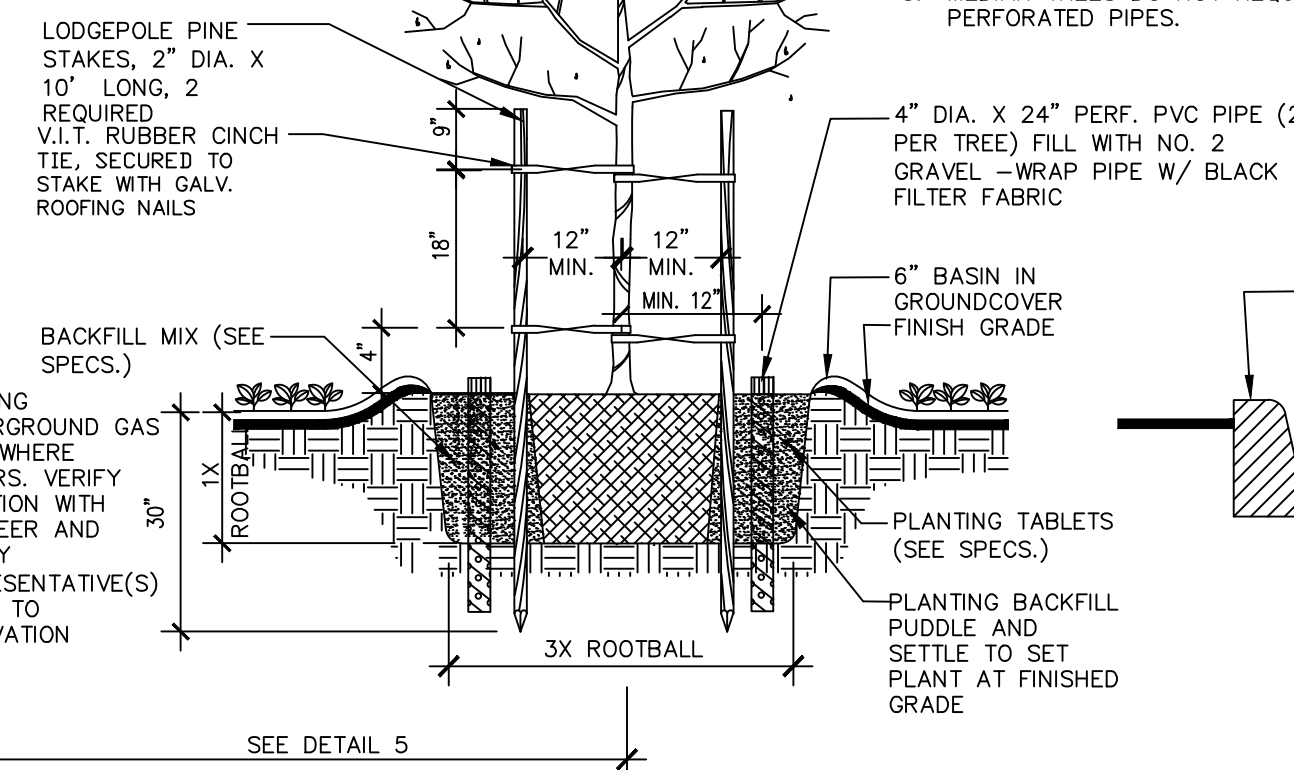
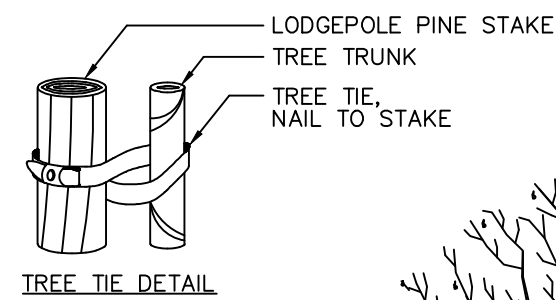


1 ROOT CONTROL BARRIER

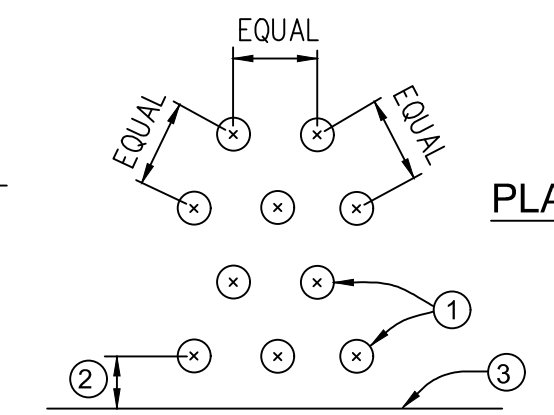
NTS

NOTES

1. IF TREE LOCATION SHOULD BE WITHIN 5 FT. OF MARKED LOCATION FOR POSSIBLE UNDERGROUND UTILITY STRUCTURE BY DIGALERT, CONTRACTOR SHALL MANUALLY EXCAVATE PLANTING HOLE USING HAND SHOVEL. DO NOT USE MECHANICAL DIGGER.
2. INSTALL PERFORATED PVC PIPES FOR TREES PLANTED IN STREET PARKWAY ONLY.
3. MEDIAN TREES DO NOT REQUIRE PERFORATED PIPES.



1. LOCATE PLANTS WITH AN EQUAL ON-CENTER SPACING AS INDICATED ON THE DRAWINGS.
 2. FULL ON-CENTER SPACING ALONG WALK, PAVING EDGE AND CURB.
 3. PAVING OR R/W SHOWING PLANTING AREA LIMIT.
- NOTES**
1. ALIGN PLANT SPACING ROW LAYOUT PARALLEL TO WALK OR FENCE.
 2. DO NOT APPLY PLANTING TABLET TO AGAVE SPECIES.
 3. SEE DETAIL 9 FOR SHRUB PLANTING AT TREE UPLIGHT FIXTURE

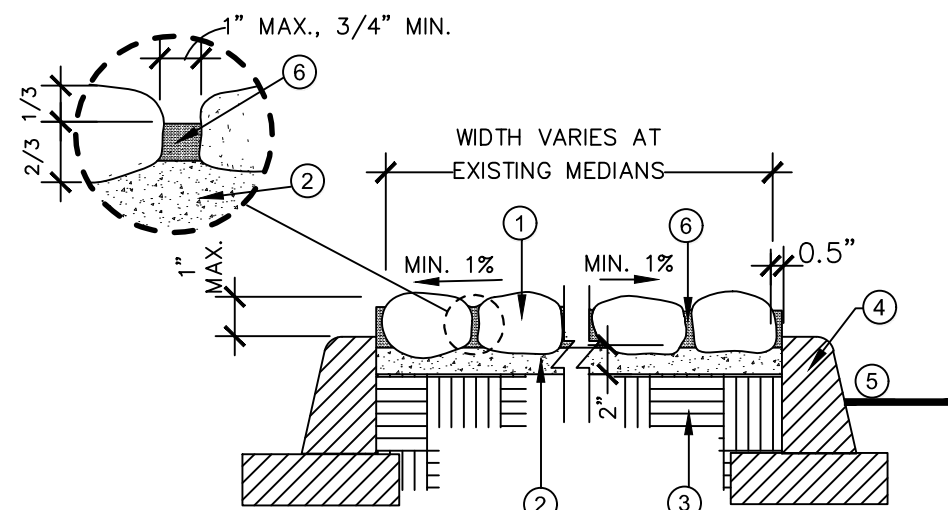


3 SHRUB & GROUNDCOVER PLANTING

NTS

4 NOT USED

NTS

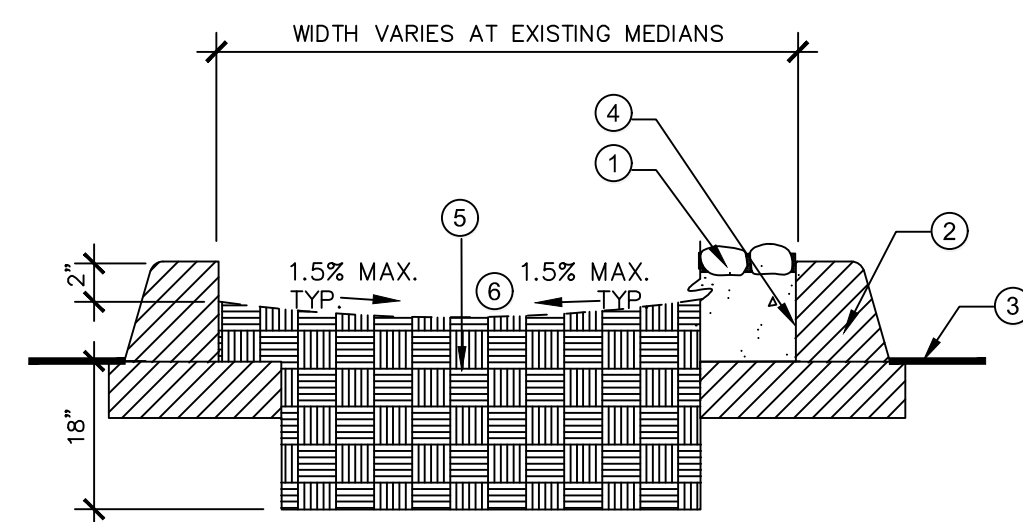


NOTES

1. CONTRACTOR SHALL VERIFY SIZES AND TYPE OF COBBLESTONES WITH CITY ENGINEER PRIOR TO PURCHASING.
2. CONTRACTOR SHALL VERIFY LOCATION OF COBBLESTONE PAVING WITH CITY ENGINEER PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL CONSTRUCT & SUBMIT AN APPROX. 16 S.F. SAMPLE OF COBBLESTONES PAVING TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
4. CONCRETE SHALL BE CLASS 560-E-3250, 4" MAX. SLUMP, CURED @ 28 DAYS. (PEA GRAVEL MIX).
5. WIRE BRUSH ALL JOINTS AFTER INSTALLATION OF THE ROCKS. AFTER CONCRETE HAS SET, CLEAN RESIDUE FROM SURFACES OF ROCKS WITH WATER BLASTING.
6. GAP BETWEEN COBBLESTONES SHALL NOT EXCEED 1" MAX. FILL GAP.

TYPICAL SECTION

1. ROUND COBBLESTONE, "MISSION COBBLE" FROM SOUTHWEST BOULDER & STONE, SIZE: 4" - 8" DIA. & HT.
 - NO MORE 50% OF ANY ONE SIZE
 - NO BROKEN PIECES ALLOWED
 - PRESS COBBLESTONES INTO CONCRETE BED AND TIGHTLY SPACE TOGETHER. PLACE COBBLESTONES WITH FLAT SIZE UP.
2. 2" LAYER OF CONCRETE BED. SEE NOTE NO. 4.
3. 95% COMPACTED SUBGRADE.
4. PCC CURB PER CIVIL ENG. IMP. PLAN
5. ROADWAY SURFACE
6. MORTAR WITH INTEGRAL COLOR MIX TO MATCH GENERAL COLOR OF COBBLESTONE

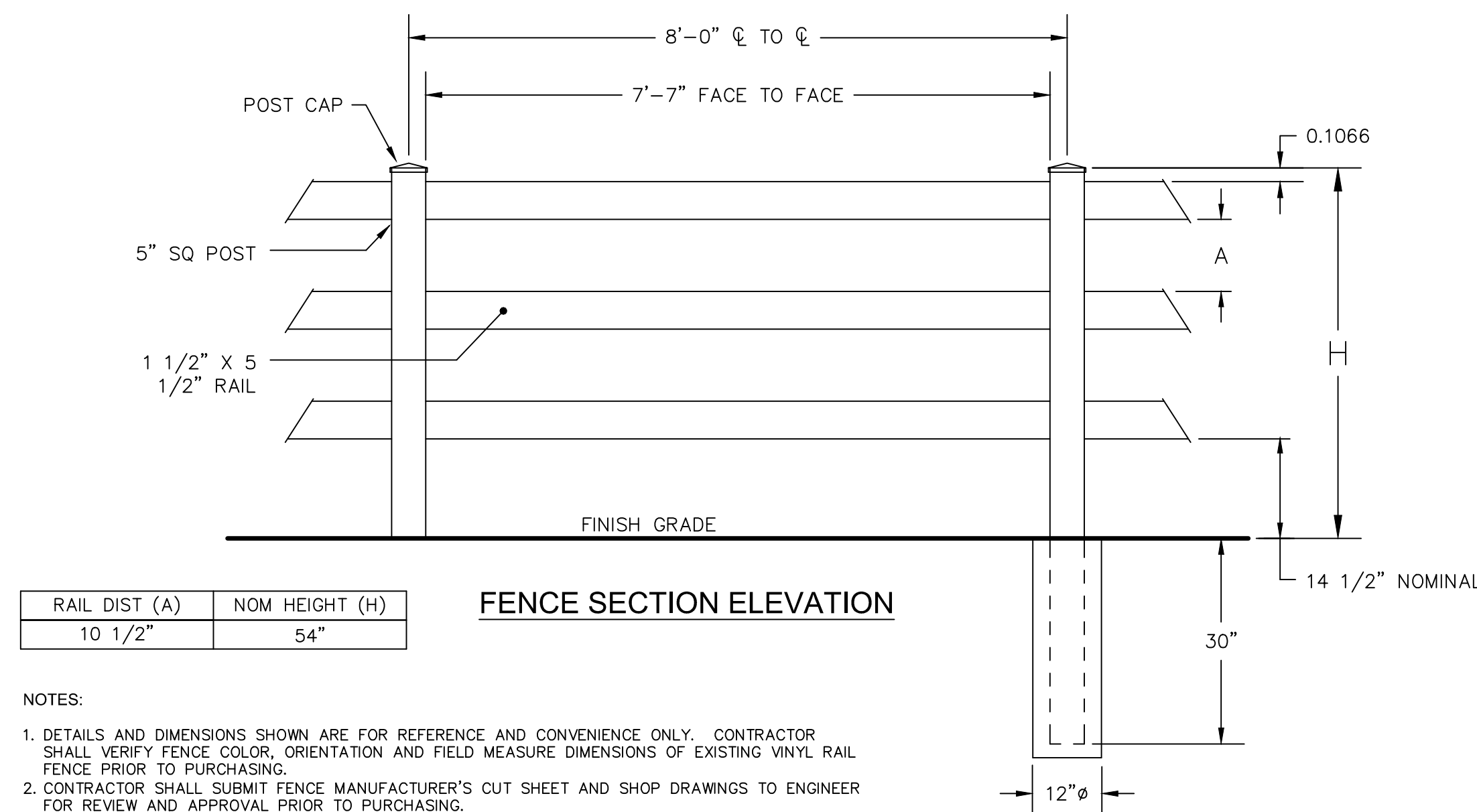


TYPICAL MEDIAN CROSS SECTION

LEGEND

1. COBBLESTONE PAVING WHERE OCCURS
2. PCC CURB PER CIVIL ENG. PLAN
3. FINISH SURFACE OF ROADWAY
4. COLD JOINT
5. EXISTING AND/OR IMPORTED CLASS A/C TOP SOIL
6. FINISH GRADE

6 TYPICAL MEDIAN CROSS SECTION



FENCE SECTION ELEVATION

RAIL DIST (A)	NOM HEIGHT (H)
TO 1/2"	54"

NOTES

1. DETAILS AND DIMENSIONS SHOWN ARE FOR REFERENCE AND CONVENIENCE ONLY. CONTRACTOR SHALL VERIFY FENCE COLOR, ORIENTATION AND FIELD MEASURE DIMENSIONS OF EXISTING VINYL RAIL FENCE PRIOR TO PURCHASING.
2. CONTRACTOR SHALL SUBMIT FENCE MANUFACTURER'S CUT SHEET AND SHOP DRAWINGS TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO PURCHASING.
3. THE DESIGN INTENT IS TO MATCH EXISTING VINYL RAIL FENCE DESIGNATED TO BE REMOVED PER CIVIL IMPROVEMENT PLANS.

7 PVC VINYL RAIL FENCE

NTS

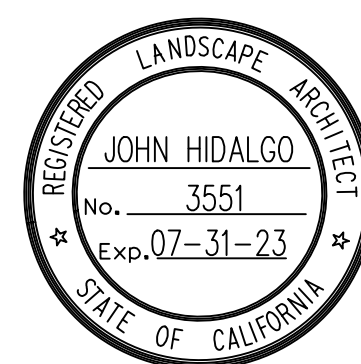
5 COBBLESTONE PAVING

NTS

8 NOT USED

NTS

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PLANS PREPARED BY:
WILLDAN Engineering Comprehensive Innovative Trusted
 13191 CROSSROADS PARKWAY NORTH
 SUITE 405 INDUSTRY, CA 91746-3497
 (562) 908-6200
 UNDER THE SUPERVISION OF
 JOHN HIDALGO R.L.A. 3551 DATE

BENCH MARK:
 NO. _____ ELEV. _____
 DATE ADJ. _____ QUAD. _____
 NONE

REVISIONS		
NO.	DESCRIPTION	APP. DATE

CITY OF ROLLING HILLS ESTATES

LANDSCAPE CONSTRUCTION DETAILS

INTERSECTION CAPACITY IMPROVEMENTS
 AT PALOS VERDES DRIVE NORTH AND DAPPLEGRAY SCHOOL ENTRANCE

DRAWN BY: BN	PLAN NO.
DESIGNED BY: BN	SHT. 22 OF 22 SHTS.
CHECKED BY: JH	L-8

100% SUBMITTAL NOT FOR CONSTRUCTION

PALOS VERDES DRIVE NORTH - WESTBOUND RETAINING WALL # 1



EXISTING CONDITIONS

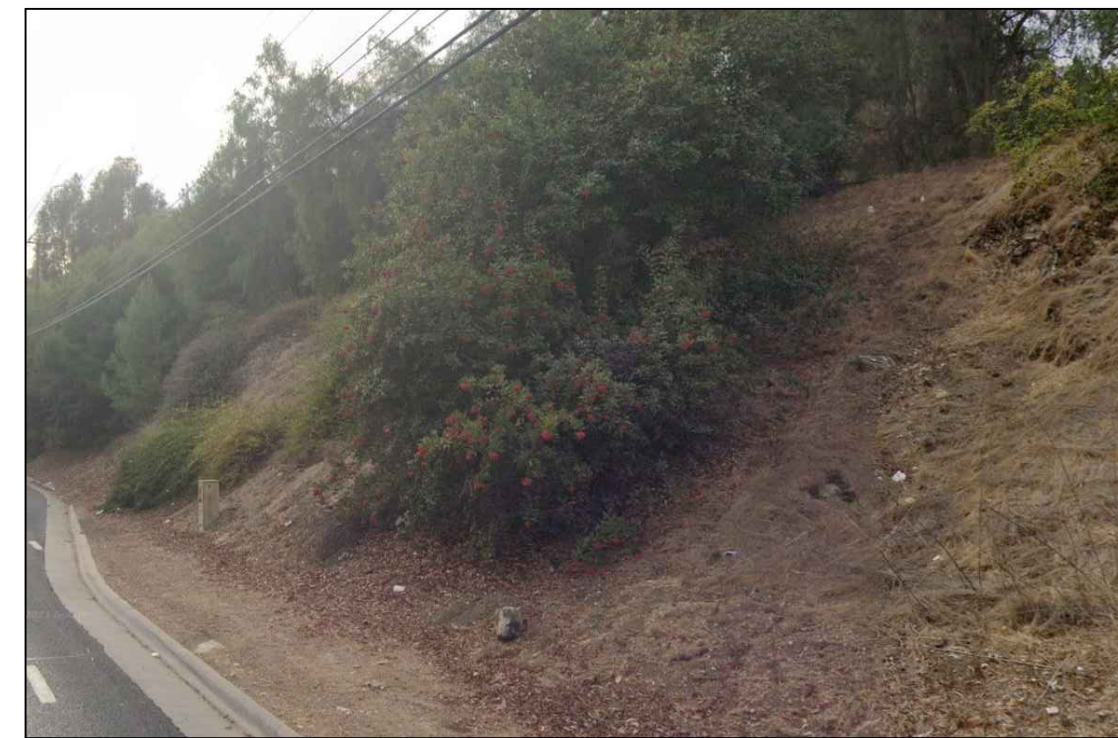


PROPOSED IMPROVEMENTS

PROPOSED CAST IN PLACE CONCRETE RETAINING WALL

NOTE: The proposed wall color is a dark tan, darker in color and value than the illustrations indicate.

PALOS VERDES DRIVE NORTH - EASTBOUND RETAINING WALL # 2

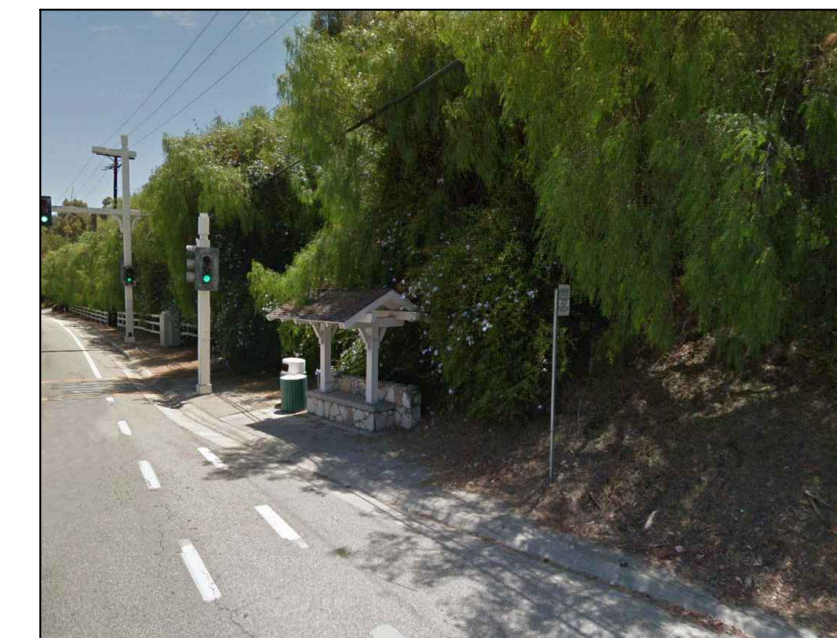


EXISTING CONDITIONS



PROPOSED IMPROVEMENTS

PALOS VERDES DRIVE NORTH - EASTBOUND RETAINING WALL # 3

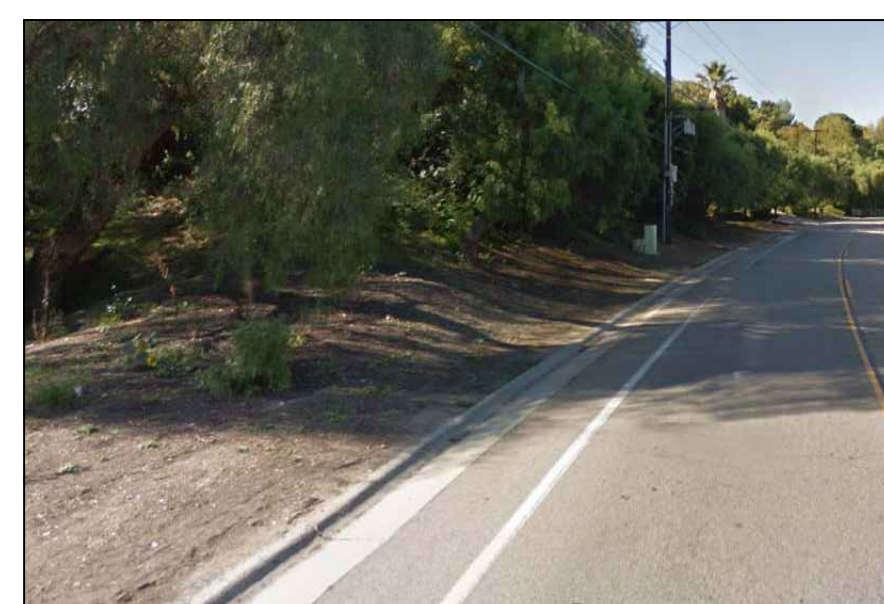


EXISTING CONDITIONS



PROPOSED IMPROVEMENTS

PALOS VERDES DRIVE NORTH - EASTBOUND RETAINING WALL # 4



EXISTING CONDITIONS



PROPOSED IMPROVEMENTS

Note
Planting of climbing vines on wall to prevent graffiti requires regular scheduled maintenance and installation of automatic irrigation sprinkler system to promote growth and maintain vines longevity.