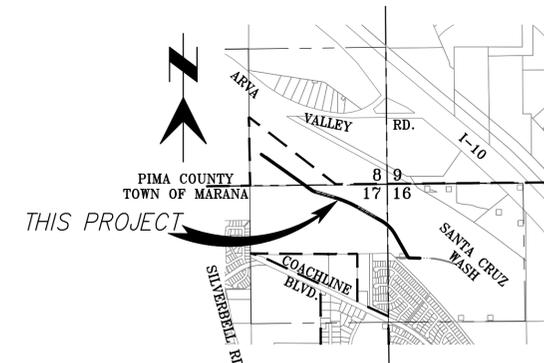


VICINITY PLAN

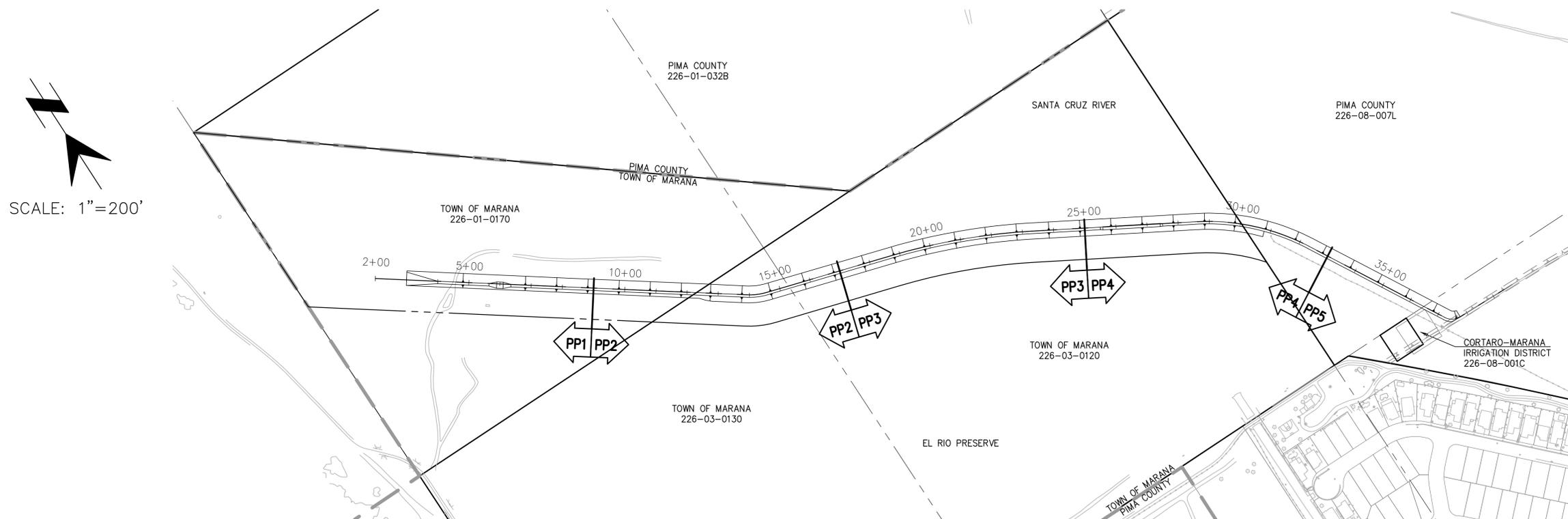
EL RIO PRESERVE BANK PROTECTION PCRFC D PROJECT No. 5LKMNA 50% PLANS

GENERAL DESCRIPTION OF PROJECT
THIS PROJECT WILL INCLUDE GRADING AND CONSTRUCTION
OF 3,475 L.F. OF SOIL CEMENT BANK PROTECTION



LOCATION MAP

Portion of Sections 8, 16 & 17
T-12-S, R-12-E, G & S R M
City of Marana, Pima County, Arizona
Scale: 3"=1 Mile



PROJECT INDEX MAP

SHEET INDEX

SHEET NO.	PAGE NO.	SHEET DESCRIPTION
CS1	1	COVER SHEET
GN1-GN2	2-3	GENERAL NOTES
NR1-NR2	4-5	NEW RIGHT-OF-WAY SHEET
TS1	6	TYPICAL SECTIONS
CD1-CD2	7-8	CIVIL DETAILS
PP1-PP5	9-13	PLAN AND PROFILE SHEET
GN1-GN2	14-15	GRADING PLANS
XS1-XS3	1-3	CROSS-SECTIONS (N.I.C.)



PIMA COUNTY BOARD OF DIRECTORS

RICHARD ELIAS	CHAIR	DISTRICT 5
ALLY MILLER	MEMBER	DISTRICT 1
RAMON VALADEZ	MEMBER	DISTRICT 2
SHARON BRONSON	MEMBER	DISTRICT 3
STEVE CHRISTY	MEMBER	DISTRICT 4

THIS PROJECT IS LOCATED IN SUPERVISOR DISTRICT 3

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT
201 N. STONE AVE., 9th FLOOR TUCSON, ARIZONA 85701
SUZANNE SHIELDS, P.E., DIRECTOR



PSOMAS
333 E. Wetmore Road, Suite 450
Tucson, AZ 85705
(520) 292-2300 (520) 292-1290 fax
www.psomas.com

NO.	REVIEWED BY	ENGINEER	DATE
NO.	AS BUILT	ENGINEER	DATE

50% SUBMITTAL
NOT FOR
CONSTRUCTION

REVIEWED BY	ENGINEER	DATE	APPROVED
MGR. DESIGN ENGR.			
MGR. FIELD ENGR.			

SCALES: HORIZ.: AS SHOWN VERT.: N/A SHEET CS1 OF CS1 PAGE 1 OF 15

GENERAL NOTES:

- ALL CONSTRUCTION AND TEST METHODS SHALL BE IN CONFORMANCE WITH PIMA ASSOCIATION OF GOVERNMENTS (PAG) STANDARD SPECIFICATIONS AND DRAWINGS, 2015 EDITION, EXCEPT AS MODIFIED BY THE CONTRACT.
- UTILITY LOCATIONS SHOWN ON PLANS WERE COMPILED BASED ON RECORD DRAWINGS FROM THE TUCSON WATER DEPARTMENT AND THE PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT. ADDITIONAL SYSTEM MAPS WERE USED FOR THE LOCATION OF DRY UTILITIES. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES WITH THE APPROPRIATE ORGANIZATIONS. CONTACT "BLUE STAKE" AT 1-800-STAKE-IT TWO FULL WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY PIMA COUNTY IN WRITING OF ANY UTILITY LOCATIONS DISCOVERED DIFFERING FROM THE PLAN INFORMATION IN A TIMELY MANNER.
- RIGHT OF WAY ENCROACHMENTS SHALL BE REMOVED ONLY BY THE ORDER OF PIMA COUNTY, UNLESS OTHERWISE NOTED.
- REMOVAL OF ALL CACTI AND NATIVE PLANTS SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THE "ARIZONA NATIVE PLANT LAW", A.R.S., CHAPTER 7. (ARS SECTION 3-901, ET. SEQ.) AND THE PIMA COUNTY NATIVE PLANT PRESERVATION ORDINANCE.
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, IN PARTICULAR SHORING OF TRENCHES.
- THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED BY ALL GOVERNMENTAL AGENCIES. SINCE THIS PROJECT IS IN CITY OF TUCSON, THE CONTRACTOR WILL BE REQUIRED TO OBTAIN A GRADING PERMIT, FLOODPLAIN USE PERMIT AND TRAFFIC CONTROL PERMIT FROM THE CITY PRIOR TO CONSTRUCTION. FOR WORK BEYOND THE SCOPE OF THESE PROJECT LIMITS, PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL OBTAIN A SEPARATE FLOODPLAIN AND/OR GRADING PERMIT PRIOR TO COMMENCING SUCH WORK.
- SOILS INFORMATION WILL BE MADE AVAILABLE TO PROSPECTIVE BIDDERS. SOILS INFORMATION SO PROVIDED SHALL BE FOR INFORMATION PURPOSES ONLY AND IS NOT TO BE CONSIDERED A PART OF THE CONTRACT DOCUMENTS. THIS INFORMATION WAS DEVELOPED AS ACCURATELY AS POSSIBLE BY UTILIZING STANDARD METHODS. PIMA COUNTY ACCEPTS NO RESPONSIBILITY FOR ANY CONDITIONS ENCOUNTERED WHICH VARY FROM INFORMATION PROVIDED.
- CONTOUR LINES ON THE GRADING PLAN ARE TO USED FOR ROUGH GRADING. SPECIFIC SPOT ELEVATIONS ARE TO BE USED FOR FINAL GRADING AND CONSTRUCTION.
- THE CONTRACTOR SHALL PRESERVE ALL STAKES SET FOR THE LINES, LEVELS OR MEASUREMENTS OF THE WORK IN THEIR PROPER PLACES UNTIL AUTHORIZED TO REMOVE THEM BY THE OWNER OR HIS REPRESENTATIVE. ANY EXPENSE INCURRED IN REPLACING ANY STAKES WHICH THE CONTRACTOR OR HIS SUBORDINATES MAY HAVE FAILED TO PRESERVE SHALL BE CHARGED TO THE CONTRACTOR.
- EXISTING VEGETATION BEYOND THE LIMITS OF GRADING WILL BE PRESERVED IN PLACE. PRIOR TO GRADING, THE CONTRACTOR SHALL STAKE THE GRADING LIMITS AND CONDUCT A FIELD VISIT WITH THE ENGINEER AT WHICH TIME EXISTING VEGETATION THAT IS TO BE PRESERVED IN PLACE SHALL BE AGREED UPON AND CLEARLY MARKED. EXISTING VEGETATION OUTSIDE THE LIMITS OF GRADING THAT IS DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER. DAMAGED VEGETATION SHALL BE REPLACED WITH THE SAME SPECIES AND AT THE SAME SIZE OR LARGER. ADDITIONALLY, VEGETATION WITHIN THE GRADING LIMITS WHICH CAN BE PROTECTED IN PLACE WITH REASONABLE EFFORT, IS NOT IN CONFLICT WITH PROPOSED IMPROVEMENTS, AND DOES NOT POSE A SIGNIFICANT IMPEDIMENT TO CONSTRUCTION ACTIVITIES SHALL BE IDENTIFIED PRIOR TO COMMENCEMENT OF GRADING ACTIVITIES AND MARKED ACCORDINGLY.

HORIZONTAL CONTROL

THIS PROJECT UTILIZES THE ARIZONA COORDINATE SYSTEM, 1983 (ACS 83), NAD83 (HARN 92), INTERNATIONAL FEET, AND IS LOCATED IN THE CENTRAL ZONE. THE CONTROL NETWORK WAS SURVEYED IN MAY, 2018 USING TRIMBLE GPS UNITS UTILIZING RTK METHODS AND INCORPORATED THE FOLLOWING CONTROL POINTS:

STATION (REFERENCE)

J09 (PIMA CTY. OPUS CTRL.) * PRIMARY CONTROL POINT
 G05 (PIMA CTY. OPUS CTRL.)
 NN 121 CZ2524 (NGS)
 H 140 CZ0522 (NGS)

SURFACE COORDINATES AND/OR DISTANCES WERE COMPUTED FROM THE ACS 83 COORDINATES BY APPLYING A PROJECT SPECIFIC GRID TO A SURFACE COMBINED ELEVATION AND SCALE FACTOR (CF) AT A CENTRAL POINT (NCP/ECP); COORDINATES WERE NOT TRUNCATED:

$NP\ LOC = (NP\ ACS83 - NCP\ ACS83) * CF + NCP\ ACS83$

$EP\ LOC = (EP\ ACS83 - ECP\ ACS83) * CF + ECP\ ACS83$

WHERE: NP LOC = LOCAL NORTH NP ACS83 = ACS 83 NORTH
 NCP ACS83 = ACS 83 AT CENTRAL POINT
 EP LOC = LOCAL EAST EP ACS83 = ACS 83 EAST
 ECP ACS83 = ACS 83 AT CENTRAL POINT

COMBINED FACTOR (CF) = 1.0001278096

N 508803.790 (ACS83) E 942315.108 (ACS83) *CENTRAL POINT

VERTICAL CONTROL

The vertical datum for this project is the North American Vertical Datum, 1988 (NAVD88). The bench marks used for this project were:

Station	Reference	Elevation	
H 140	CZ0522 (NGS)	2089.95	
B 424	CZ1431 (NGS)	2073.34	* Project Benchmark

Note: Orthometric heights (elevations) were derived from GPS ellipsoid height measurements and the application of a high-resolution hybrid geoid model, Geoid 12A.

SUZANNE SHIELDS, P.E., DIRECTOR

DESIGNED:	DATE
CR	4/2019
DRAWN:	DATE
CR/KL	4/2019
CHECKED:	DATE
KL	4/2019
PROJ. ENG.:	DATE
CR	4/2019

NO.	REVISION DESCRIPTION	DATE	DIV. ENGINEER

50% SUBMITTAL NOT FOR CONSTRUCTION

P S O M A S
 333 E. Wilmore Road, Suite 450
 (520) 382-2300 (520) 382-1290 (FAX)

GENERAL NOTES FOR EL RIO PRESERVE BANK PROTECTION

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT

PIMA COUNTY W.O. SIKMUNA



T:\PFC\8101\ENGR\SHEETS\PHASE 1 PLANS\Cover Sheet And Notes\NT1-2.dwg GNT Last Saved: Sun, 09 Jun 2019 10:08:17 AM By: Kikendra Plotter: Sunday, June 9, 2019 2:08:17 PM

EARTHWORK QUANTITIES

APPROXIMATE EARTHWORK QUANTITIES*	
<i>SOIL CEMENT QUANTITIES</i>	
SOIL CEMENT (IN-PLACE)	52498
SHRINKAGE AND SCREENING ADJUSTMENT (15%)	7875
NEAT LINE AND TRIMMING ADJUSTMENT (7%)	3675
REQUIRED AGGREGATE FOR SOIL CEMENT	64048
<i>BACKFILL QUANTITIES</i>	
EMBANKMENT AND GENERAL BACKFILL (IN-PLACE)	700
SHRINKAGE AND SCREENING ADJUSTMENT (10%)	70
REQUIRED AGGREGATE FOR BACKFILL	770
TOTAL REQUIRED AGGREGATE	64818
<i>AGGREGATE SOURCES</i>	
DRAINAGE EXCAVATION	36262
STRUCTURAL EXCAVATION	38341
TOTAL AVAILABLE AGGREGATE	74603

*ALL QUANTITIES IN CUBIC YARDS IN PLACE

NOTE: THE QUANTITIES ABOVE ARE APPROXIMATE AND MAY VARY SIGNIFICANTLY DEPENDING ON FIELD CONDITIONS AND THE PRECISE NATURE OF THE MATERIAL ENCOUNTERED DURING CONSTRUCTION. GEOTECHNICAL ANALYSIS WAS COMPLETED ON MATERIALS WITHIN THE PROJECT LIMITS. HOWEVER, THE RESULTS OF THE ANALYSIS AS WELL AS FIELD OBSERVATIONS INDICATE CONDITIONS VARY WIDELY OVER THE PROJECT EXTENTS.

LEGEND

NEW	EXISTING	FEATURE
	— 8" S —	SANITARY SEWER
	— OHE —	OVERHEAD ELECTRIC LINE
	— BSE —	UNDERGROUND ELECTRIC LINE (BLUESTAKE)
	— W ⊗ —	WATER MAIN & VALVE
	— BSG —	GAS MAIN (BLUESTAKE)
	IV ⊗	IRRIGATION CONTROL VALVE
	ECB □	ELECTRICAL BOX
	EM □	ELECTRIC METER
	TS ○	TRAFFIC SIGNAL
	SL ○ ⊗	SIGNAL LIGHT
	⊗	LIGHT POLE
	□	WATER METER BOX
• 100		HORIZ./VERT. CONTROL POINT
←		FLOW ARROW
	211 11112	SECTION CORNERS
FG		FINISHED GRADE
2965	2965	CONTOUR LINE
x	x	Barricade Railing
○	○	Post & Cable
←		Direction of Slope
	○	Utility Pole
	⊕	Sign
	⊕	Survey Monument
	★	Benchmark
	⊗	Section Line & Corner
— C —		Cut Limits
— F —		Fill Limits
////		Preservation Fencing
	100 Year WSE
	— R —	Property Line
	— — —	Survey Control Line
	-----	Existing Ground Profile
	-----	Finished Flowline
	-----	Temp. Construction Esmt. (TCE)
	-----	R/W Line
	• xx.xx	Finished Grade Elevation



SUZANNE SHIELDS, P.E., DIRECTOR

NO.	REVISION DESCRIPTION	DIV. ENGINEER	DATE

50% SUBMITTAL NOT FOR CONSTRUCTION

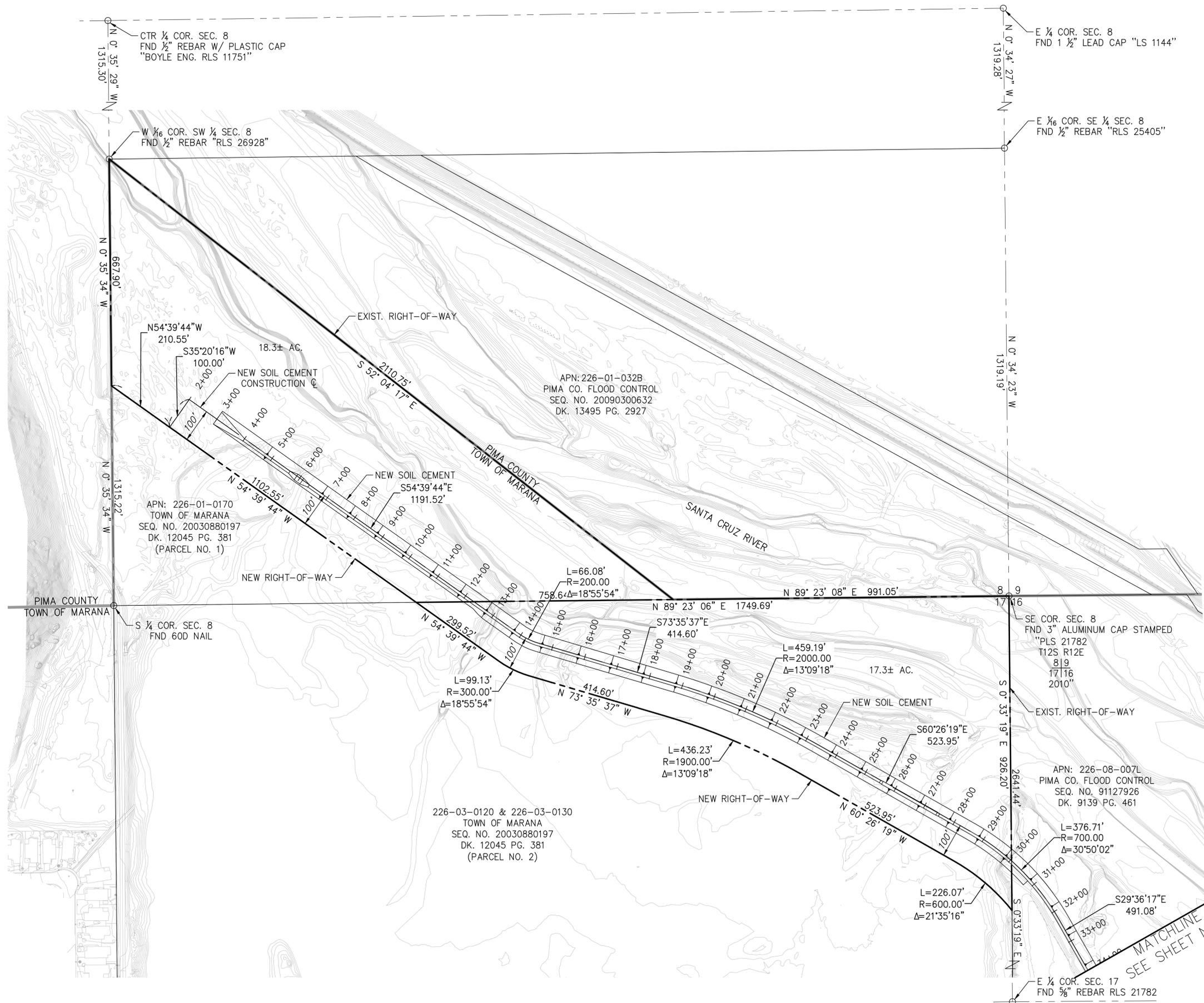
P S O M A S
333 E. Wilmore Road, Suite 450
Tucson, AZ 85710
(520) 282-2300 (520) 282-1290 (FAX)

GENERAL NOTES
FOR
EL RIO PRESERVE
BANK PROTECTION

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT

PIMA COUNTY W.O. 5LKMNA

T:\7FC180101\ENGR\SHEETS\PHASE 1 PLANS (Right-of-Way)\R1.dwg RWT Last Saved: Sun 09 Jun 2019 10:09:57 AM Plotted: Sunday, June 9, 2019 2:09:57 PM



DESIGNED:	CR	DATE	4/2019
DRAWN:	CR/KL	CHECKED:	KL
PROJ. ENG.:	CR		4/2019

NO.	REVISION DESCRIPTION	DIV. ENGINEER	DATE

50% SUBMITTAL
NOT FOR
CONSTRUCTION

P S O M A S
333 E. Wilmore Road, Suite 450
Tucson, AZ 85712
(520) 382-2300 (520) 382-1290 (FAX)

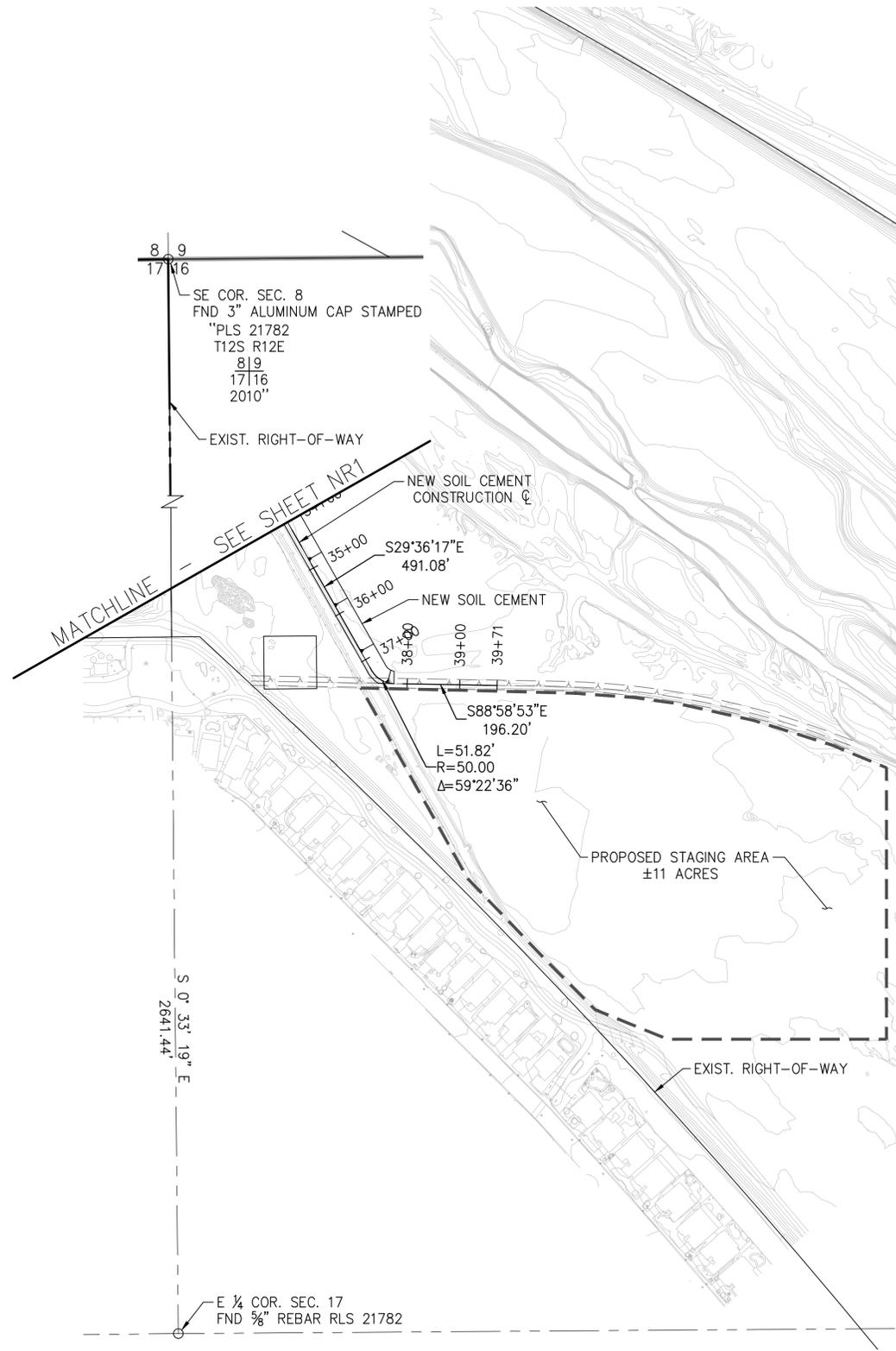
PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT
NEW RIGHT-OF-WAY SHEET
FOR
EL RIO PRESERVE
BANK PROTECTION

SUZANNE SHIELDS, P.E., DIRECTOR

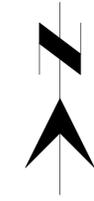
PIMA COUNTY W.O. 5LKMNA



T:\PFC\80101\ENGR\SHETS\PHASE 1 PLANS\Right-of-Way\RW2 - Lost Sewer - Sun_09 Jun 2019 By: Kleandra Pilted - Sunday, June 9, 2019 2:10:15 PM



NOTE:
CONTRACTOR TO COORDINATION WITH CMID FOR CONSTRUCTION WATER.



SCALES:	HORIZ. 1"=150'	SHEET NR2 OF NR2	PAGE 5 OF 15
	VERT. N/A		

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT

NEW RIGHT-OF-WAY SHEET
FOR
EL RIO PRESERVE
BANK PROTECTION

P S O M A S
333 E. Wilmore Road, Suite 450
Tucson, AZ 85710
(520) 282-2300 (520) 282-1290 (FAX)

50% SUBMITTAL
NOT FOR
CONSTRUCTION

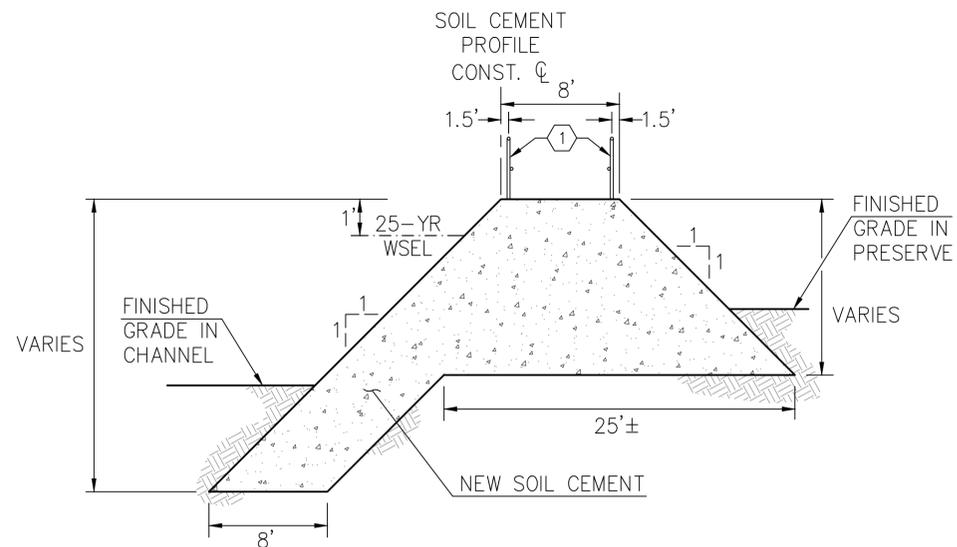
PIMA COUNTY W.O. 5LKMNA

NO.	REVISION DESCRIPTION	DIV. ENGINEER	DATE

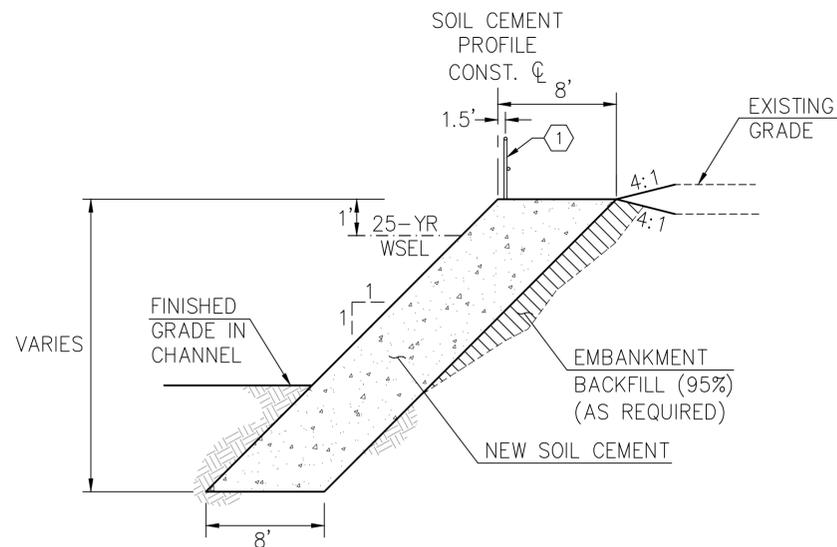
DESIGNED:	DATE
CR	4/2019
DRAWN:	DATE
CR/KL	4/2019
CHECKED:	DATE
KL	4/2019
PROJ. ENG.:	DATE
CR	4/2019

SUZANNE SHIELDS, P.E., DIRECTOR

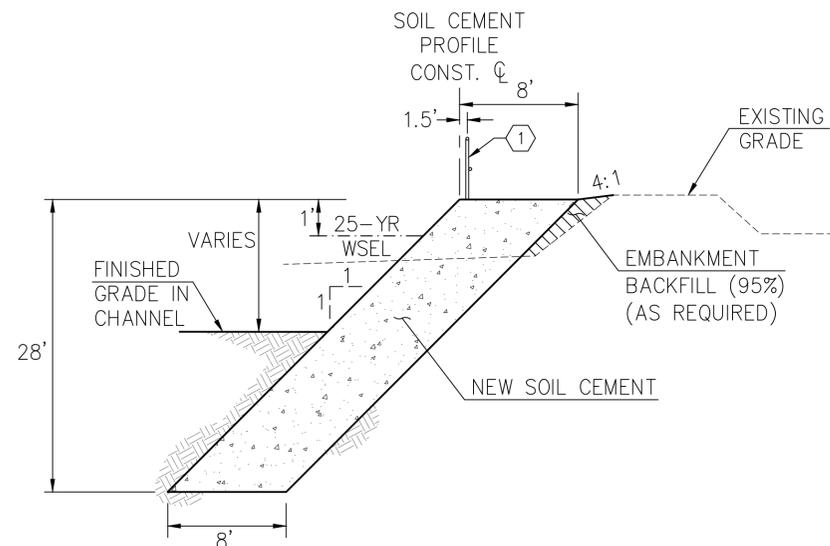
T:\PFC080101\ENGR\SHEETS\PHASE 1 PLANS\Typical Sections\TS1.dwg TSI Last Saved: Sun, 09 Jun 2019 10:22:22 AM By: Richenda Plotted: Sunday, June 9, 2019 2:10:22 PM



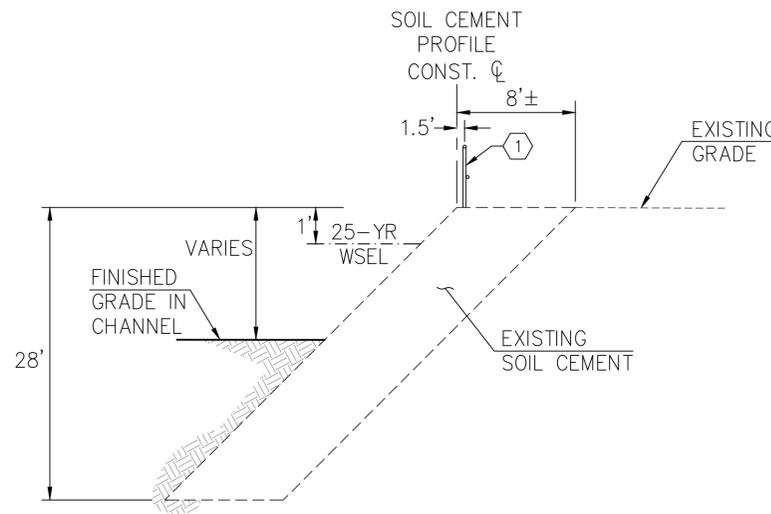
(A) TYPICAL SOIL CEMENT SECTION
STA 3+00 TO STA 30+80 NTS



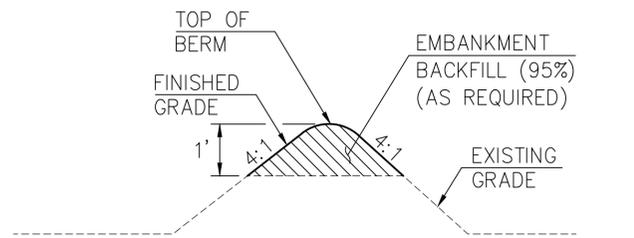
(B) TYPICAL SOIL CEMENT SECTION
STA 30+80 TO STA 37+75 NTS



(C) TYPICAL SOIL CEMENT SECTION NTS



(D) TYPICAL SOIL CEMENT SECTION NTS



(E) TYPICAL SOIL CEMENT SECTION NTS

KEYNOTES:

(1) NEW BARRICADE RAILING PER PC/COT STD. DTL. 105

NOTE: DUE TO VARYING CONDITIONS, TYPICAL SECTION STATIONING AND DIMENSIONING ARE APPROXIMATE AND ALL CONDITIONS ARE NOT REPRESENTED. SEE PLAN AND PROFILE, AND DETAIL SHEETS FOR SPECIFIC DESIGN INFORMATION.

NO.	REVISION DESCRIPTION	DIV. ENGINEER	DATE
DESIGNED:	CR		4/2019
DRAWN:	CR/KL		4/2019
CHECKED:	KL		4/2019
PROJ. ENG.:	CR		4/2019

50% SUBMITTAL
NOT FOR
CONSTRUCTION

P S O M A S
333 E. Wilmore Rd., Suite 450
Tucson, AZ 85710
(520) 382-2300 (520) 382-1290 (FAX)

TYPICAL SECTIONS
FOR
EL RIO PRESERVE
BANK PROTECTION

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT

SUZANNE SHIELDS, P.E., DIRECTOR

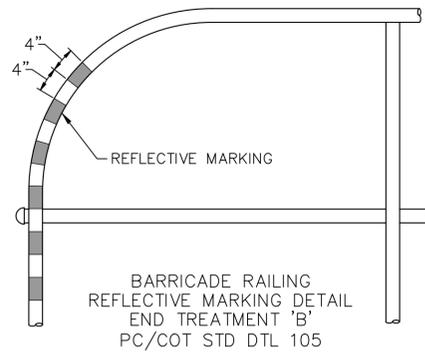
PIMA COUNTY W.O. SIKMUNA



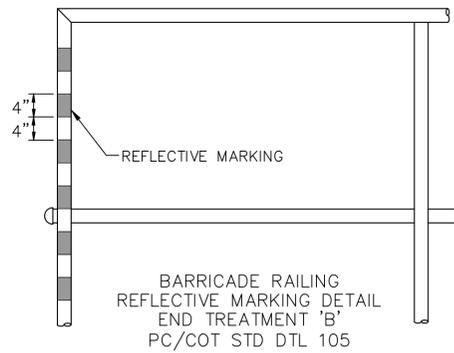
SCALES: HORIZ. N/A
VERT. N/A

SHEET TS1 OF TS1

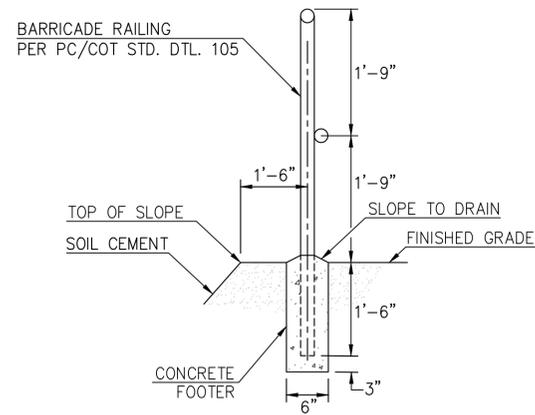
PAGE 6 OF 15



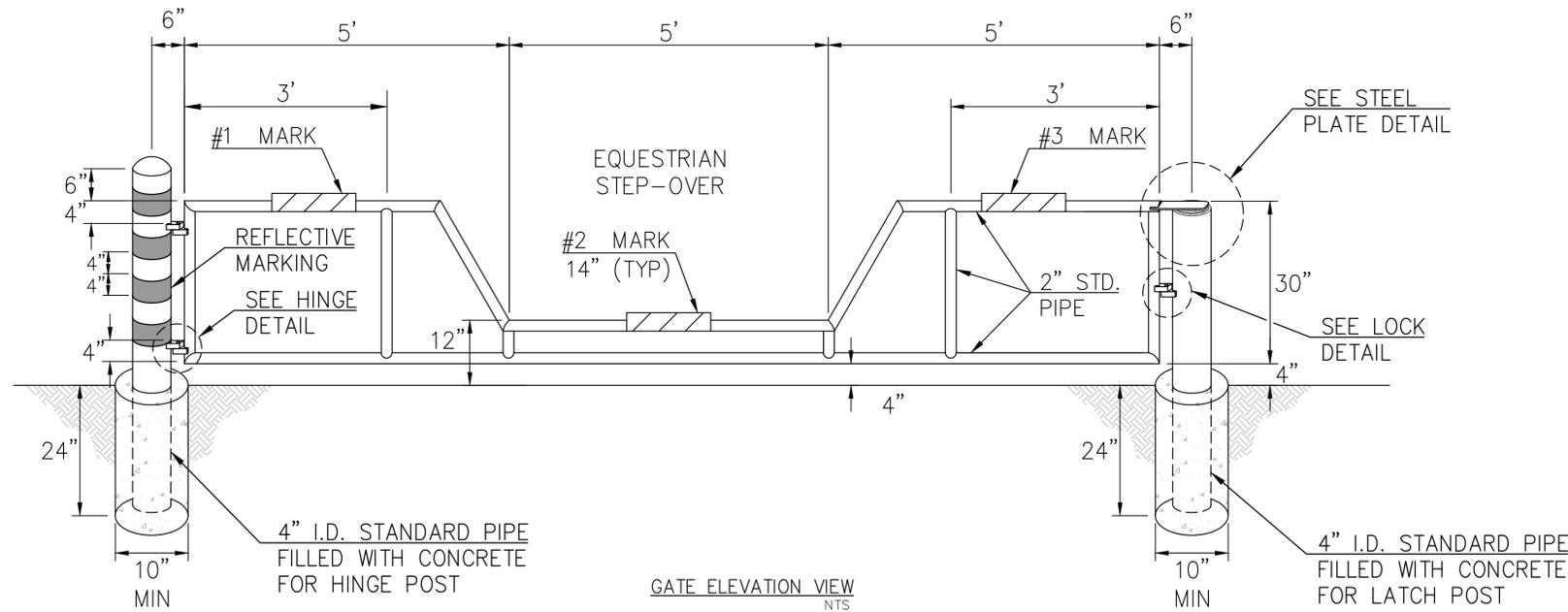
A BARRICADE END TREATMENT AND MARKINGS
END TREATMENT 'A' - PC/COT STD DTL 105



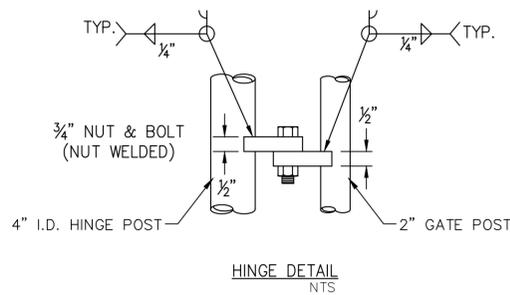
B BARRICADE END TREATMENT AND MARKINGS
END TREATMENT 'B' - PC/COT STD DTL 105



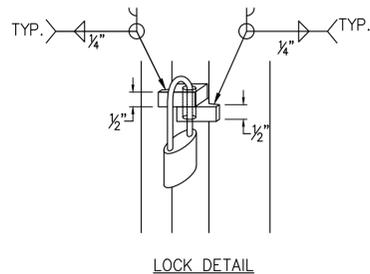
C BARRICADE RAILING IN SOIL CEMENT
MODIFIED PC/COT STD DTL 105



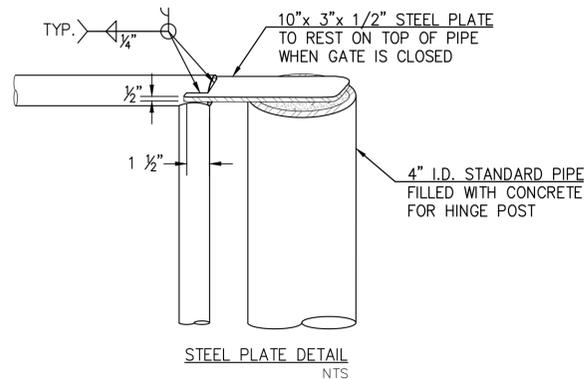
GATE ELEVATION VIEW
NTS



HINGE DETAIL
NTS



LOCK DETAIL
NTS



STEEL PLATE DETAIL
NTS

D TYPICAL ACCESS GATE AND EQUESTRIAN STEP-OVER

DESIGNED:	CR	DATE:	4/2019
DRAWN:	CR/KL	CHECKED:	KL
PROJ. ENG.:	CR		

NO.	REVISION DESCRIPTION	DIV. ENGINEER	DATE

50% SUBMITTAL
NOT FOR
CONSTRUCTION

P S O M A S
333 E. Wilmore Road, Suite 450
Tucson, AZ 85710
(520) 282-2300 (520) 282-1290 (FAX)

CIVIL DETAILS
FOR
EL RIO PRESERVE
BANK PROTECTION

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT

SUZANNE SHIELDS, P.E., DIRECTOR

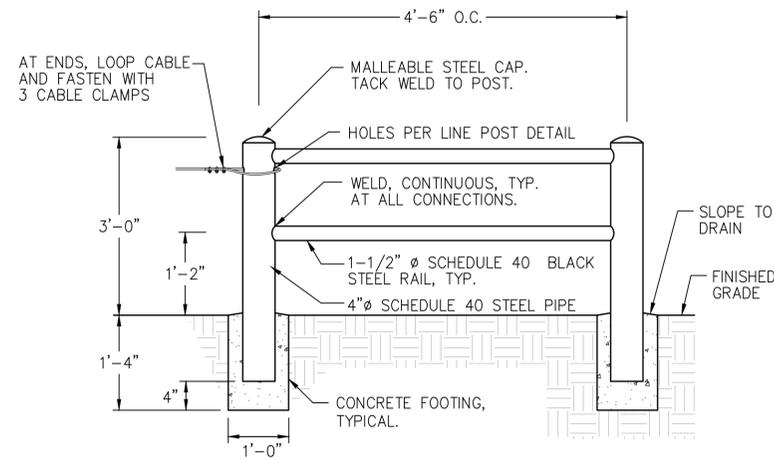


T:\PFC\8101\ENGR\SHIELDS\PHASE 1 PLANS\Civil Details\CD1.dwg CD1 Last Saved: Sun, 09 Jun 2019 2:10:26 PM Plotted: Sunday, June 9, 2019 2:10:26 PM

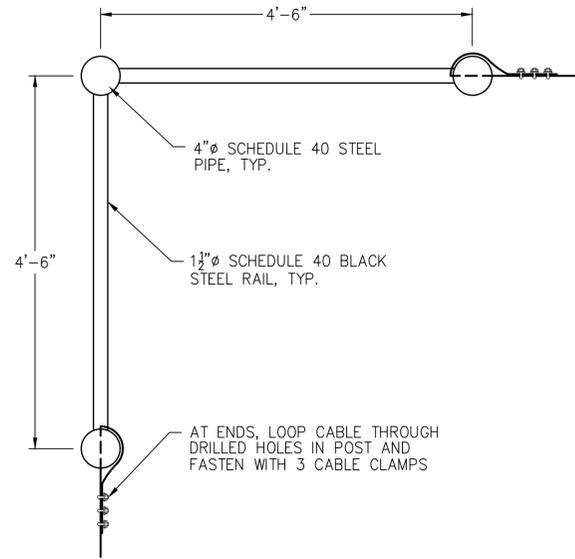
PIMA COUNTY W.O. SIKMUNA

NOTES:

1. GRIND SMOOTH ALL WELDS. PAINT ALL POSTS AND RAILS WITH RUST INHIBITING PAINT AS SPECIFIED. COLOR TO BE AS SPECIFIED, NOTED, OR SELECTED BY OWNER.
2. AT CORNERS, PROVIDE SECOND 'END CONDITION' PANEL AT RIGHT ANGLE TO FIRST.



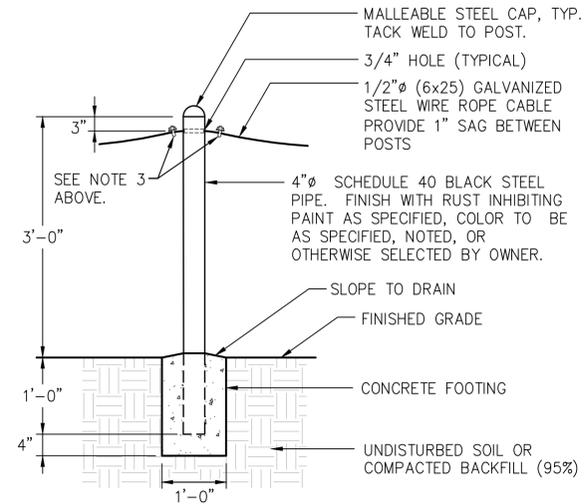
END & CORNER PANEL – ELEVATION
NTS



END & CORNER POST – PLAN VIEW
NTS

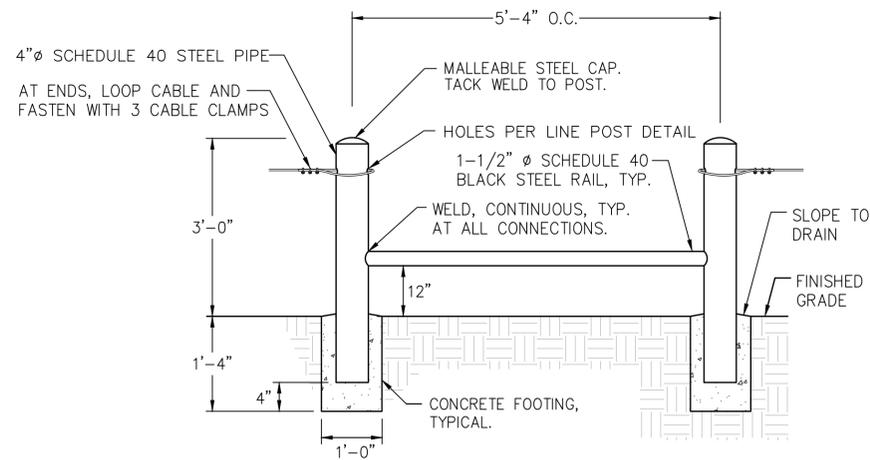
NOTES:

1. CABLE TO BE TERMINATED AT END/CORNER PANELS ONLY. SPLICING OF CABLE BETWEEN END/CORNER PANELS IS PROHIBITED.
2. DISTANCE BETWEEN POSTS SHALL BE 12'-0".
3. PLACE CABLE CLAMPS ON BOTH SIDES OF POST (8" FROM CENTER) EVERY FOURTH POST TO PREVENT REMOVAL OF CABLE. CUT CABLE EVERY 250', OVERLAP AND SPLICE WITH THREE CABLE CLAMPS.



LINE POST – ELEVATION
NTS

A POST AND CABLE BARRIER DETAILS



B EQUESTRIAN STEP OVER IN POST AND CABLE
NTS

DESIGNED:		DATE	
OR	OR/KL	4/2019	4/2019
DRAWN:		DATE	
KL	OR	4/2019	4/2019
CHECKED:		DATE	
OR	OR	4/2019	4/2019
PROJ. ENG.:		DATE	

50% SUBMITTAL
NOT FOR
CONSTRUCTION

P S O M A S
333 E. Wilmore Rd., Suite 450
Tucson, AZ 85710
(520) 282-2300 (520) 282-1290 (FAX)

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT
CIVIL DETAILS
FOR
EL RIO PRESERVE
BANK PROTECTION

SUZANNE SHIELDS, P.E., DIRECTOR

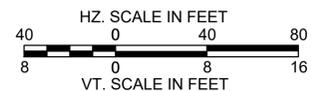
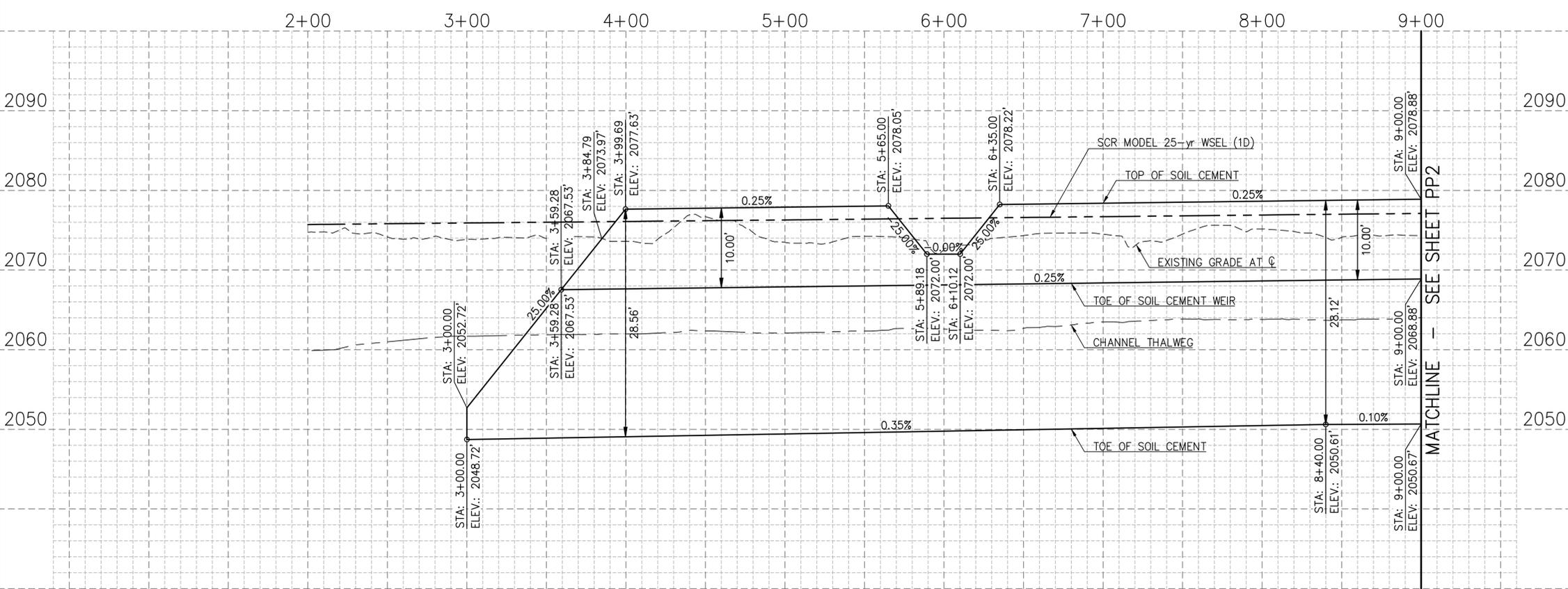
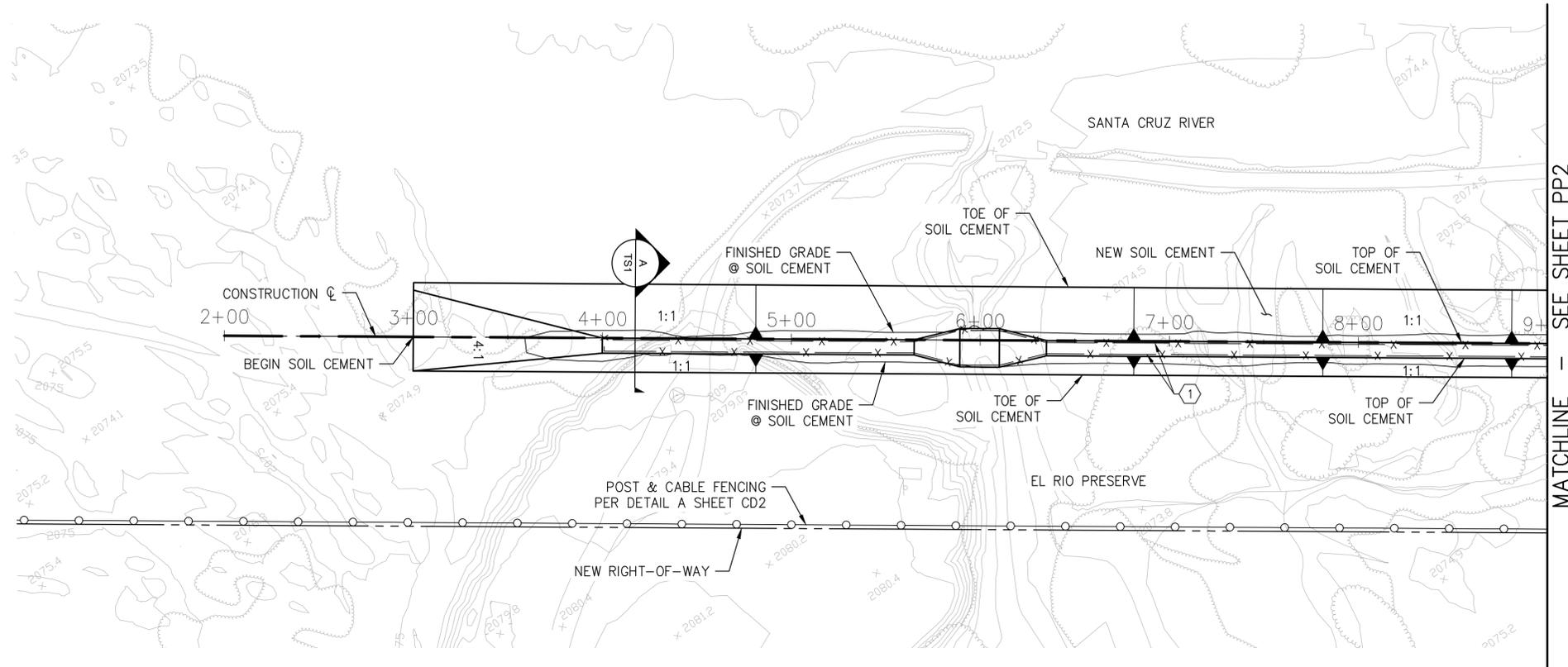
PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT

PIMA COUNTY W.O. SLKMNA



T:\PFC\8101\ENGR\SHEETS\PHASE 1 PLANS\Civil Details\CD1.dwg CD2 Civil Sewer Sun 09 Jun 2019 By Kletandre Plotted: Sunday, June 9, 2019 2:10:30 PM

T:\PROJECTS\01\VENGRY\SHEETS\PHASE 1\PLANS\Plan And Profile\PP1-PP5.dwg, PP1, Last Saved: Sun, 09 Jun 2019 09:53:53 AM, Plotter: Sunday, June 9, 2019 2:10:53 PM



KEYNOTES: NEW BARRICADE RAILING PER PC/COT STD. DTL. 105. SEE DETAL SHEET CD1.

NO.	REVISION DESCRIPTION	DIV. ENGINEER	DATE
DESIGNED:	CR		4/2019
DRAWN:	CR/KL		4/2019
CHECKED:	KL		4/2019
PROJ. ENG.:	CR		4/2019

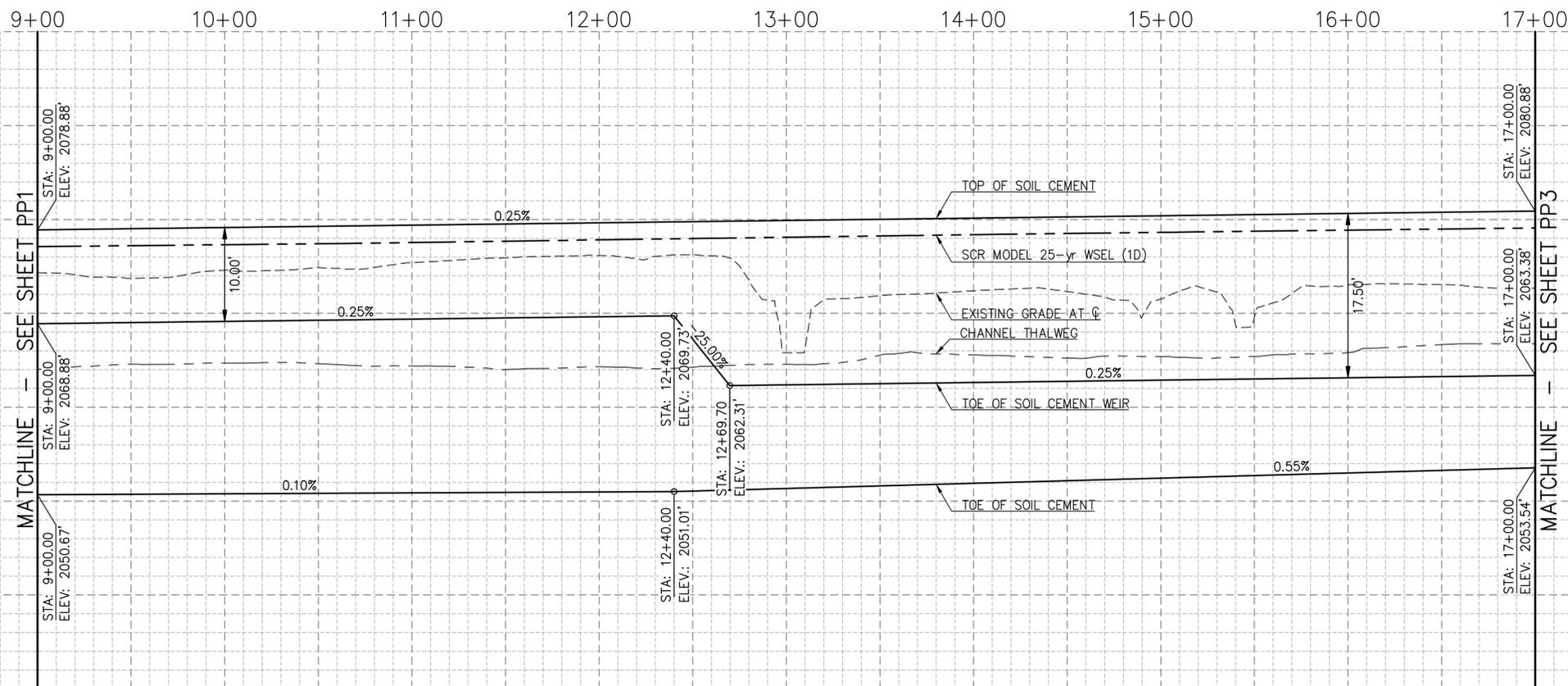
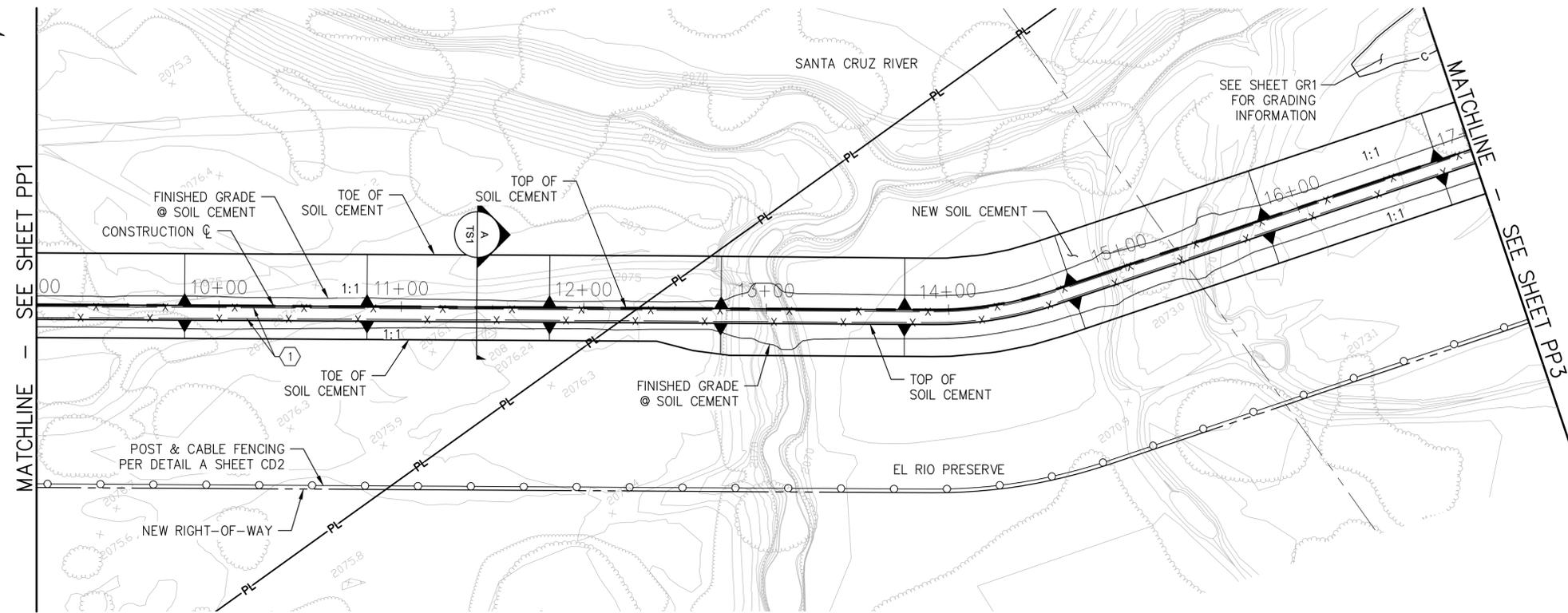
50% SUBMITTAL
NOT FOR
CONSTRUCTION

PSOMAS
333 E. Wetmore Road, Suite 450
Tucson, Arizona 85705
(520) 292-2300 (520) 292-1290 (Fax)

PLAN AND PROFILE
FOR
EL RIO PRESERVE
BANK PROTECTION
STA 3+00 TO STA 9+00

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT

SUZANNE SHIELDS, P.E., DIRECTOR



KEYNOTES: NEW BARRICADE RAILING PER PC/COT STD. DTL. 105. SEE DETAL SHEET CD1.

DESIGNED:	CR	DATE	4/2019
DRAWN:	CR/KL	CHECKED:	KL
PROJ. ENG.:	CR		4/2019

NO.	REVISION DESCRIPTION	DIV. ENGINEER	DATE

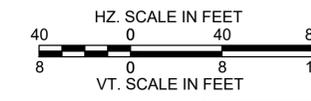
50% SUBMITTAL
NOT FOR
CONSTRUCTION

PSOMAS
333 E. Wilshire Road, Suite 450
Tucson, Arizona 85705
(520) 292-2300 (520) 292-1290 (Fax)

PLAN AND PROFILE
FOR
EL RIO PRESERVE
BANK PROTECTION
STA 9+00 TO STA 17+00

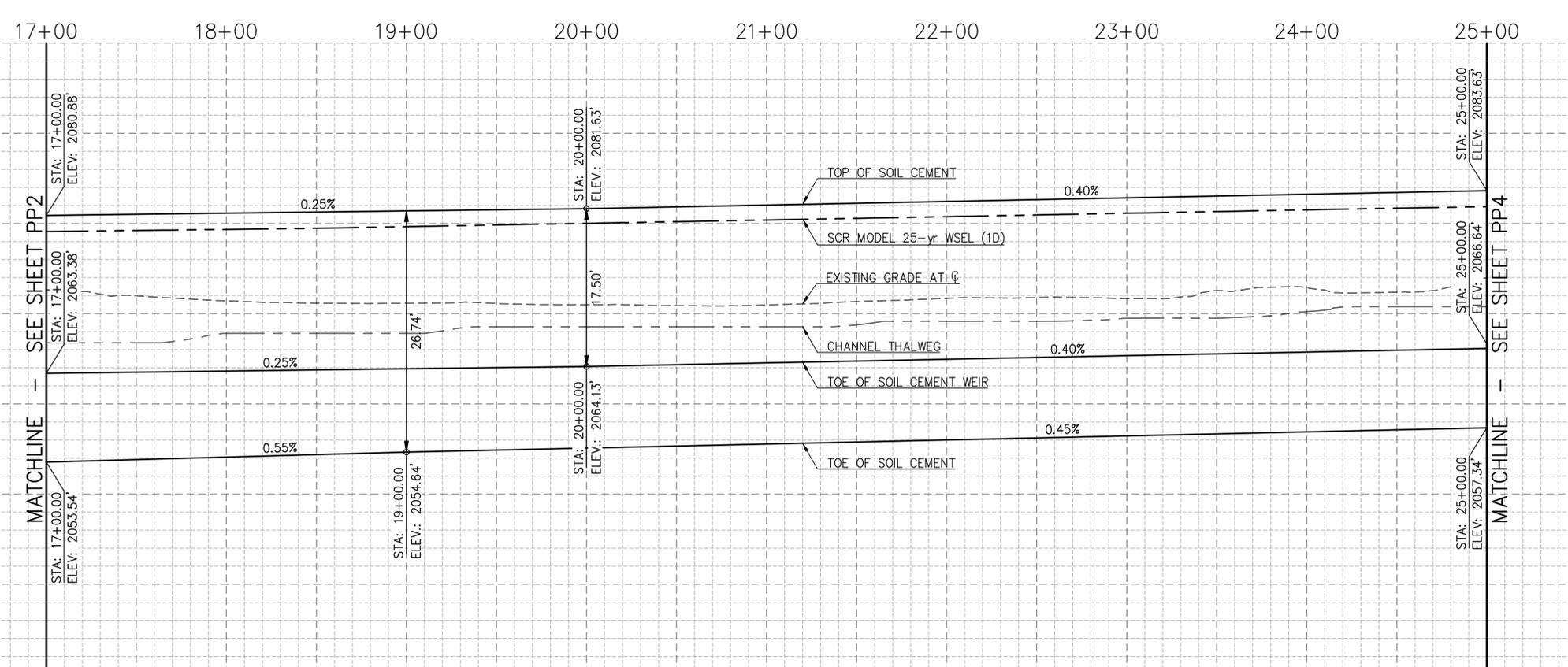
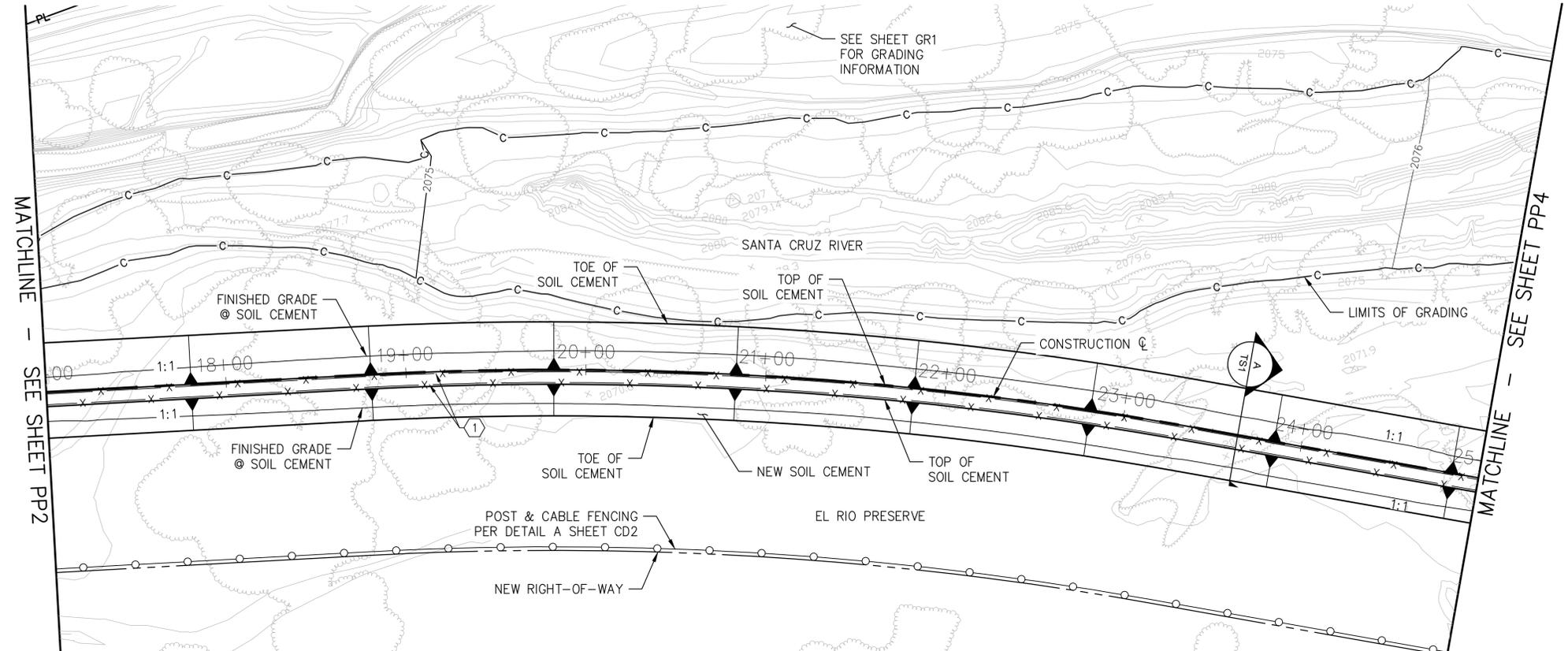
PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT

SUZANNE SHIELDS, P.E., DIRECTOR



T:\PROJECTS\811\ENGR\PP2\PP2_Plan And Profile\PP1-PP5.dwg, PP2, Last Saved: Sun, 09 Jun 2019 8:11:09 PM, Plotted: Sunday, June 9, 2019 2:11:09 PM

T:\PROJECTS\01\VENGRY\SHEETS\PHASE 1\PLANS\Plan And Profile\PP1-PP5.dwg, PP3, Last Saved: Sun, 09 Jun 2019 8:11:24 PM, Kietendre Plotted: Sunday, June 9, 2019 2:11:24 PM



KEYNOTES: NEW BARRICADE RAILING PER PC/COT STD. DTL. 105. SEE DETAL SHEET CD1.

DESIGNED:	CR	DATE	4/2019
DRAWN:	CR/KL	CHECKED:	KL
PROJ. ENG.:	CR		

NO.	REVISION DESCRIPTION	DIV. ENGINEER	DATE

50% SUBMITTAL
NOT FOR
CONSTRUCTION

PSOMAS
333 E. Wilshire Road, Suite 450
Tucson, Arizona 85705
(520) 292-2300 (520) 292-1290 (FAX)

PLAN AND PROFILE
FOR
EL RIO PRESERVE
BANK PROTECTION
STA 17+00 TO STA 25+00

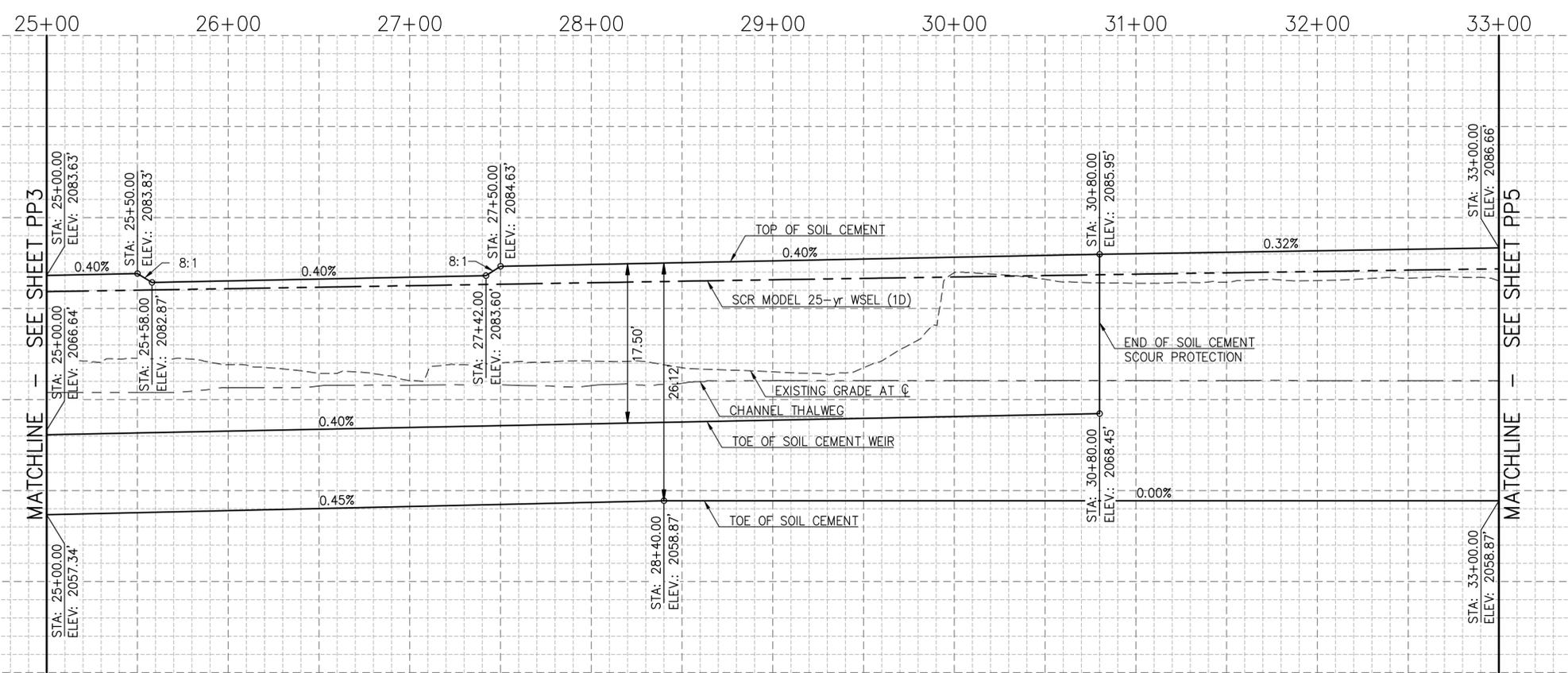
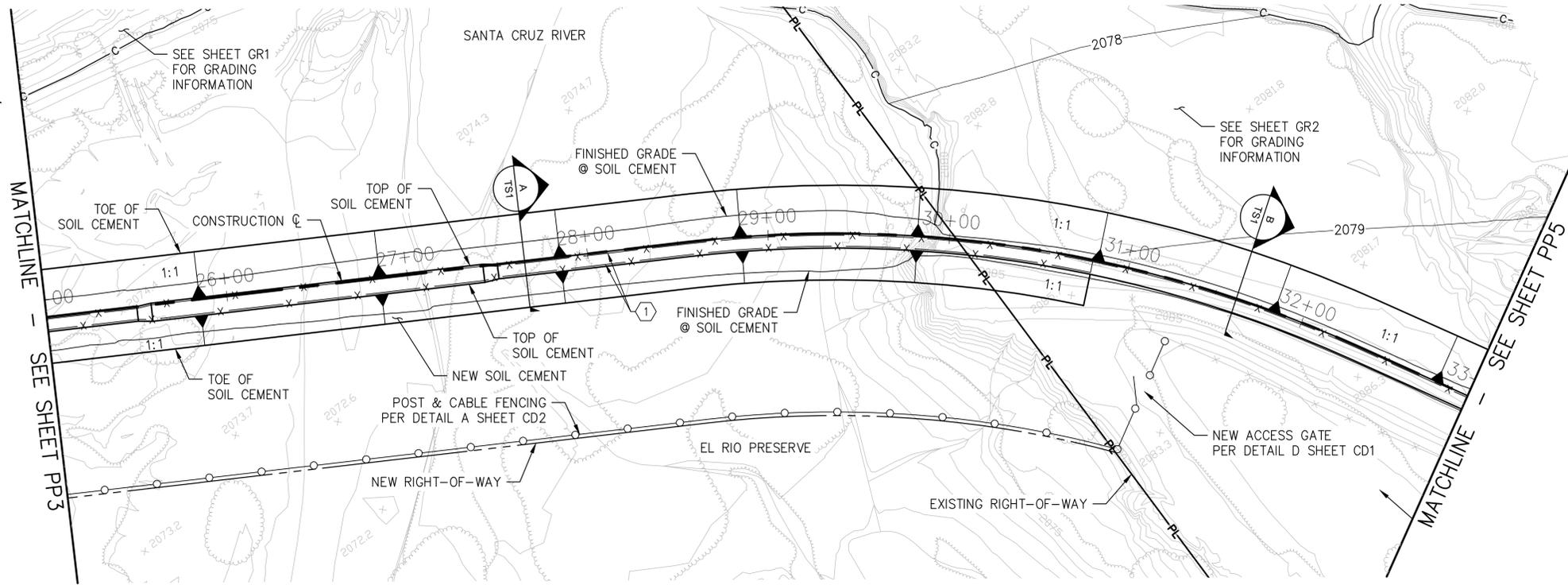
SUZANNE SHIELDS, P.E., DIRECTOR

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT

PIMA COUNTY W.O. 51KMNA



T:\PROJECTS\01\VENGRY\SHEETS\PHASE 1\PLANS\Plan And Profile\PP1-PP5.dwg, PPA, Last Saved: Sun, 09 Jun 2019 8:41:44 AM, Plotted: Sunday, June 9, 2019 2:11:44 PM



KEYNOTES: NEW BARRICADE RAILING PER PC/COT STD. DTL. 105. SEE DETAIL SHEET CD1.

DESIGNED:	CR	DATE	4/2019
DRAWN:	CR/KL	CHECKED:	KL
PROJ. ENG.:	CR		

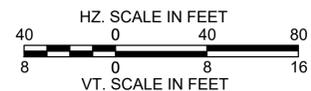
NO.	REVISION DESCRIPTION	DIV. ENGINEER	DATE

50% SUBMITTAL
NOT FOR
CONSTRUCTION

PSOMAS
333 E. Wetmore Road, Suite 450
Tucson, Arizona 85705
(520) 292-2300 (520) 292-7290 (FAX)

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT

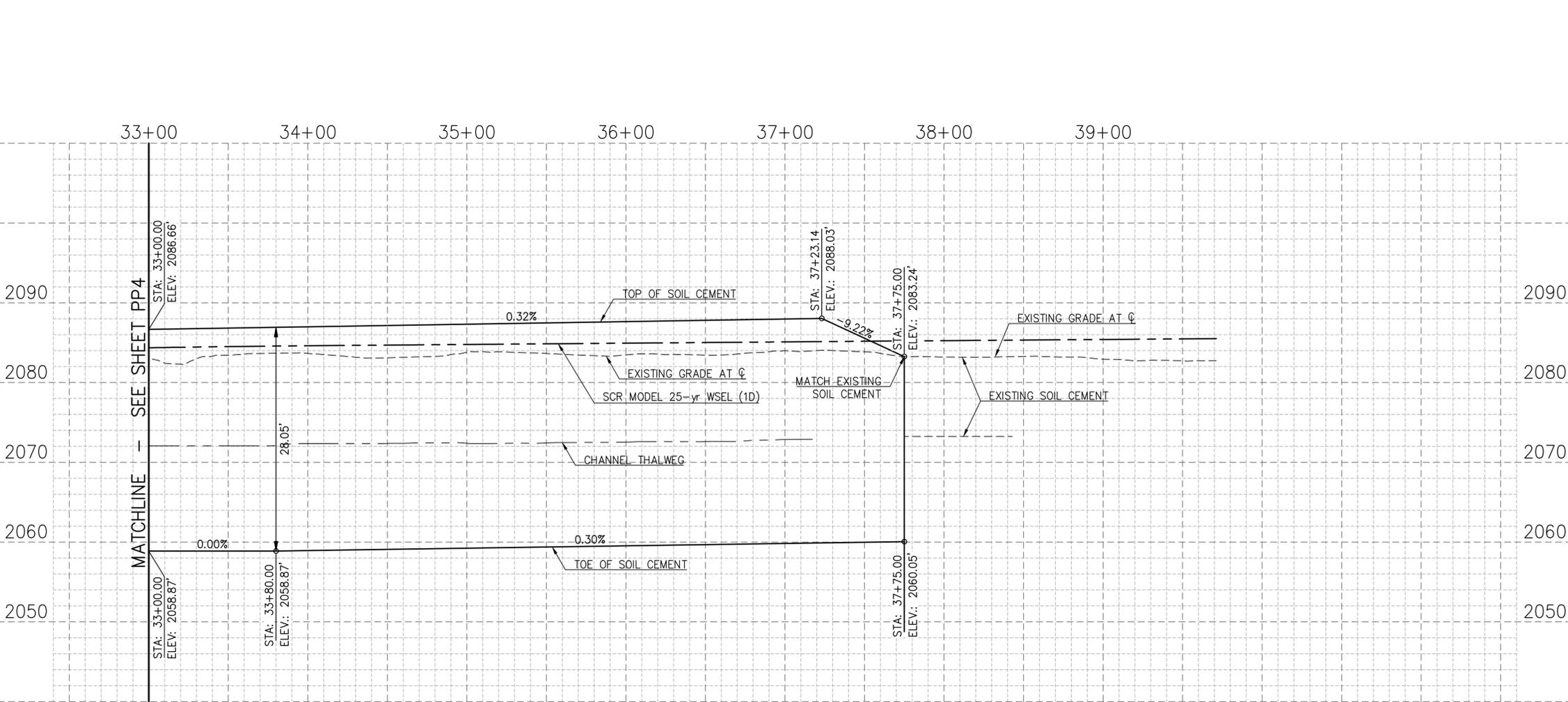
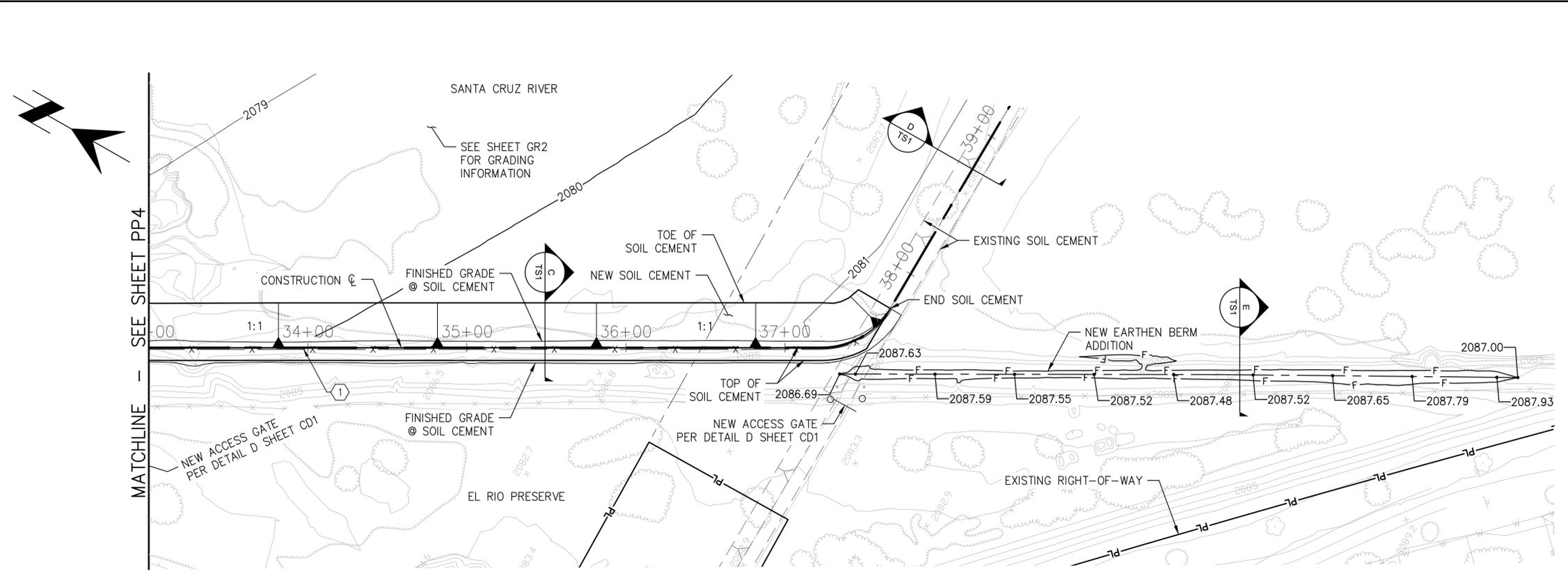
PLAN AND PROFILE
FOR
EL RIO PRESERVE
BANK PROTECTION
STA 25+00 TO STA 33+00



SUZANNE SHIELDS, P.E., DIRECTOR

PIMA COUNTY W.O. 51KMNA

T:\PROJECTS\01\VENGRY\SHEETS\PHASE 1\PLANS\Plan And Profile\PP1-PP5.dwg, PP5, Last Saved: Sun, 09 Jun 2019 8:41:59 AM, Plotted: Sunday, June 9, 2019 2:11:59 PM



KEYNOTES: NEW BARRICADE RAILING PER PC/COT STD. DTL. 105. SEE DETAIL SHEET CD1.



SCALES: HORIZ. 1"=40'
VERT. 1"=8'

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT

SUZANNE SHIELDS, P.E., DIRECTOR

NO.	REVISION DESCRIPTION	DIV. ENGINEER	DATE

50% SUBMITTAL
NOT FOR CONSTRUCTION

PSOMAS
333 E. Wilcox Road, Suite 450
Tucson, Arizona 85705
(520) 292-2300 (520) 292-7290 (FAX)

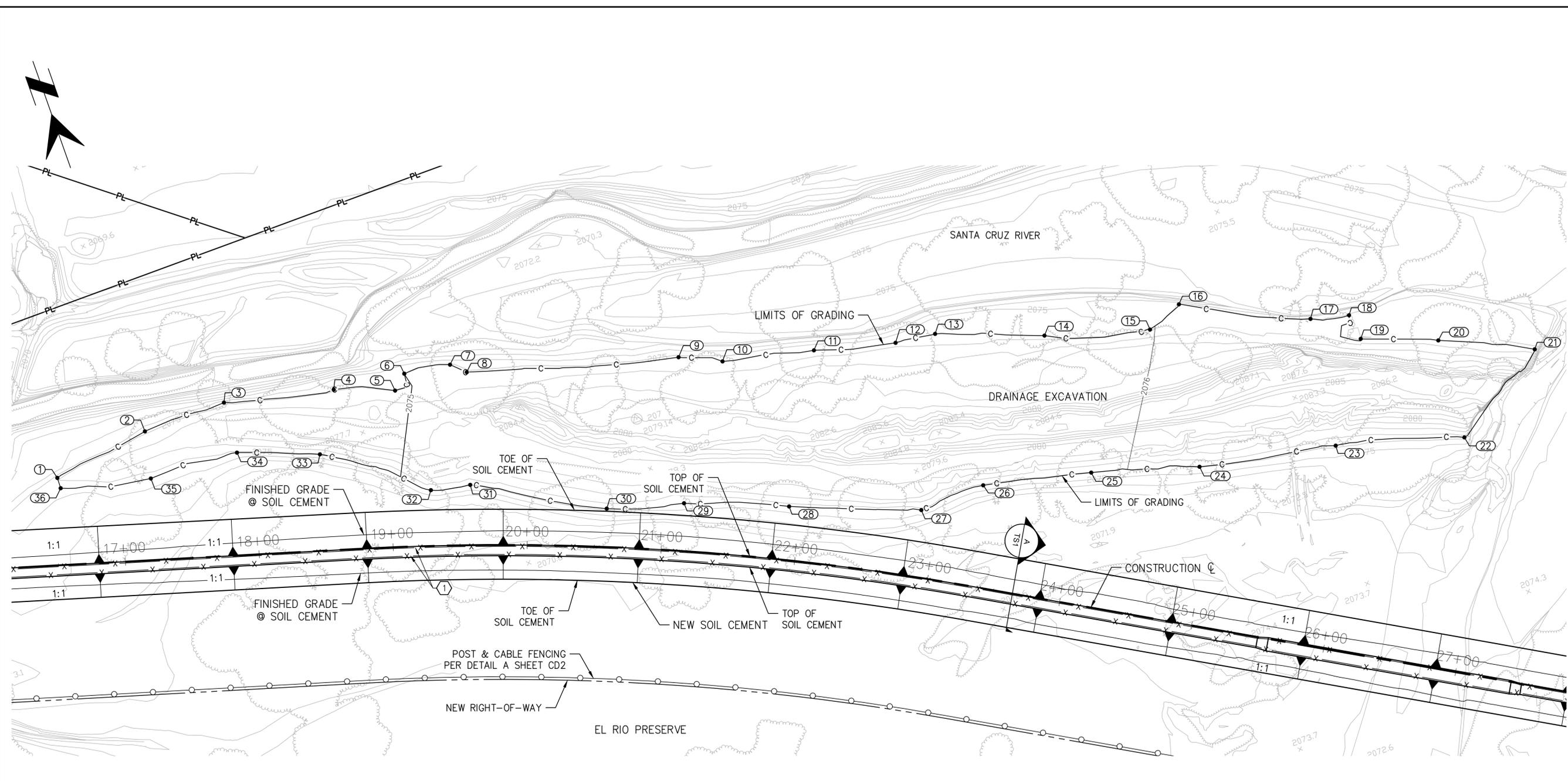
PLAN AND PROFILE FOR
EL RIO PRESERVE
BANK PROTECTION
STA 33+00 TO STA 39+00

PIMA COUNTY W.O. 51KMNA

PAGE 13 OF 15



T:\PROJECTS\2019\GR1\PLANS\Grading\GR1.dwg GR1 - Last Saved: Sun, 09 Jun 2019 10:23:23 AM By: Klerendire - Plotted: Sunday, June 9, 2019 2:12:23 PM



NOTE:
ALL DISTURBED AREAS AND SLOPES SHALL BE HYDROSEEDING.

Point Table		
Point #	Northing	Easting
1	508386.31	941132.81
2	508397.04	941205.97
3	508397.48	941268.64
4	508379.20	941349.06
5	508363.22	941391.97
6	508372.79	941402.61
7	508367.67	941437.03
8	508358.25	941446.89
9	508315.87	941599.53
10	508301.98	941629.38
11	508286.94	941696.40
12	508271.80	941755.63

Point Table		
Point #	Northing	Easting
13	508268.21	941785.65
14	508239.71	941862.12
15	508217.64	941937.82
16	508228.10	941964.42
17	508185.06	942053.27
18	508177.99	942081.28
19	508158.52	942083.63
20	508138.09	942137.75
21	508107.81	942203.33
22	508063.60	942131.94
23	508089.92	942039.45
24	508109.08	941938.47

Point Table		
Point #	Northing	Easting
25	508132.04	941860.90
26	508150.09	941781.82
27	508148.15	941732.13
28	508183.71	941640.09
29	508212.14	941567.04
30	508227.67	941511.34
31	508278.39	941421.34
32	508284.50	941392.35
33	508337.27	941323.26
34	508359.20	941265.36
35	508362.55	941198.40
36	508378.22	941132.57



PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT

SUZANNE SHIELDS, P.E., DIRECTOR

50% SUBMITTAL
NOT FOR
CONSTRUCTION

PSOMAS
333 E. Wetmore Road, Suite 450
Tucson, Arizona 85705
(520) 292-2300 (520) 292-1290 (FAX)

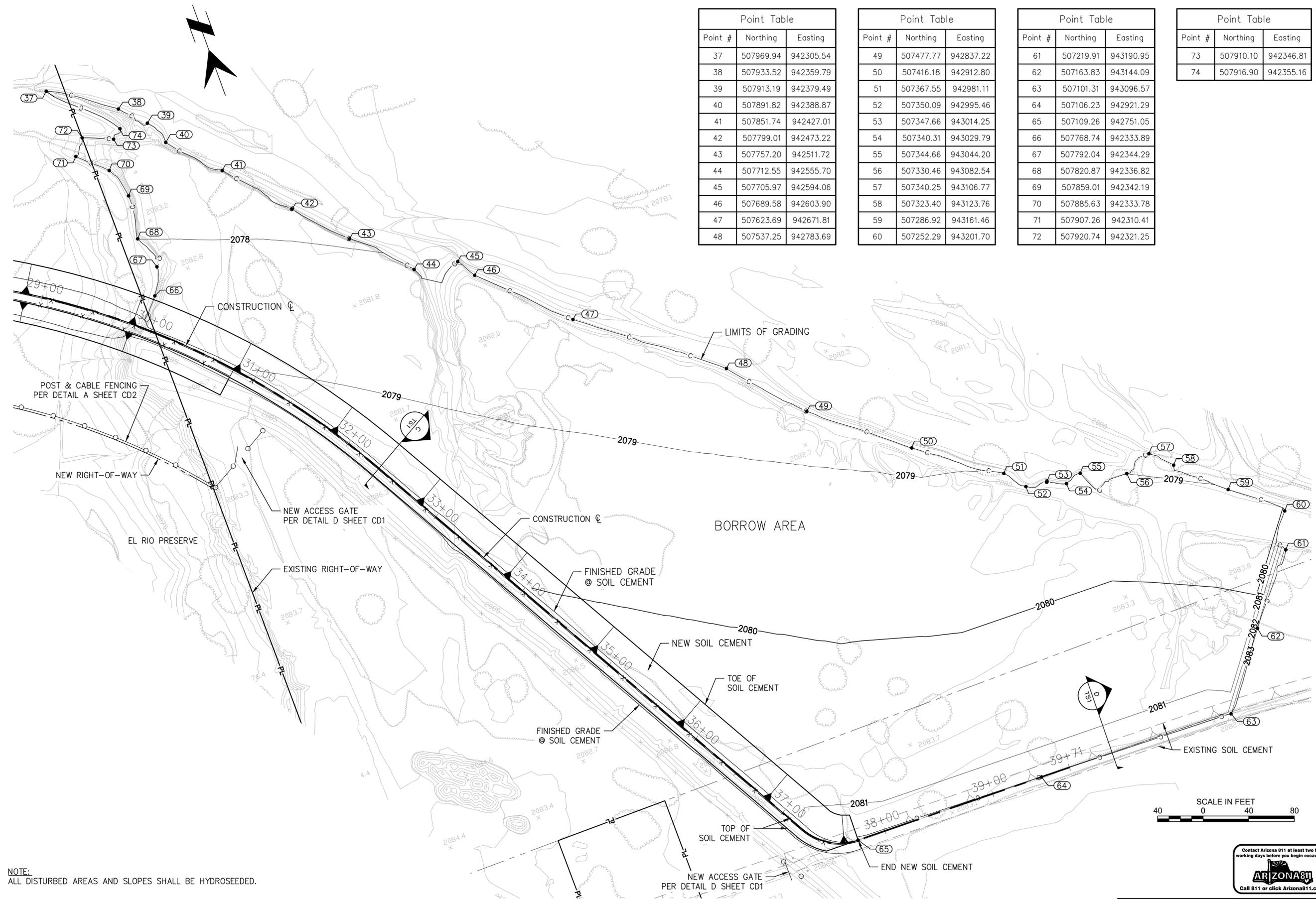
GRADING PLAN
FOR
EL RIO PRESERVE
BANK PROTECTION
CHANNEL GRADING

DESIGNED:	CR	DATE
DRAWN: <td>CR/KL <td>4/2019</td> </td>	CR/KL <td>4/2019</td>	4/2019
CHECKED: <td>KL <td>4/2019</td> </td>	KL <td>4/2019</td>	4/2019
PROJ. ENG.: <td>CR <td>4/2019</td> </td>	CR <td>4/2019</td>	4/2019

NO.	REVISION DESCRIPTION	DIV. ENGINEER	DATE

PIMA COUNTY W.O. 51KMA

T:\PROJECTS\15\GRADING\PHASE 1\PLANS\Grading\GR1.dwg GR2 - Last Saved: Sun, 09 Jun 2019 2:12:42 PM



NOTE:
ALL DISTURBED AREAS AND SLOPES SHALL BE HYDROSEEDDED.

Point Table		
Point #	Northing	Easting
37	507969.94	942305.54
38	507933.52	942359.79
39	507913.19	942379.49
40	507891.82	942388.87
41	507851.74	942427.01
42	507799.01	942473.22
43	507757.20	942511.72
44	507712.55	942555.70
45	507705.97	942594.06
46	507689.58	942603.90
47	507623.69	942671.81
48	507537.25	942783.69

Point Table		
Point #	Northing	Easting
49	507477.77	942837.22
50	507416.18	942912.80
51	507367.55	942981.11
52	507350.09	942995.46
53	507347.66	943014.25
54	507340.31	943029.79
55	507344.66	943044.20
56	507330.46	943082.54
57	507340.25	943106.77
58	507323.40	943123.76
59	507286.92	943161.46
60	507252.29	943201.70

Point Table		
Point #	Northing	Easting
61	507219.91	943190.95
62	507163.83	943144.09
63	507101.31	943096.57
64	507106.23	942921.29
65	507109.26	942751.05
66	507768.74	942333.89
67	507792.04	942344.29
68	507820.87	942336.82
69	507859.01	942342.19
70	507885.63	942333.78
71	507907.26	942310.41
72	507920.74	942321.25

Point Table		
Point #	Northing	Easting
73	507910.10	942346.81
74	507916.90	942355.16

PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT

SUZANNE SHIELDS, P.E., DIRECTOR

50% SUBMITTAL
NOT FOR
CONSTRUCTION

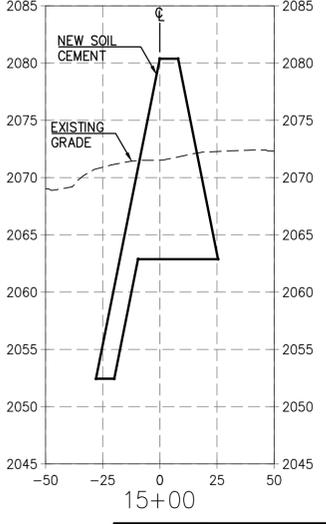
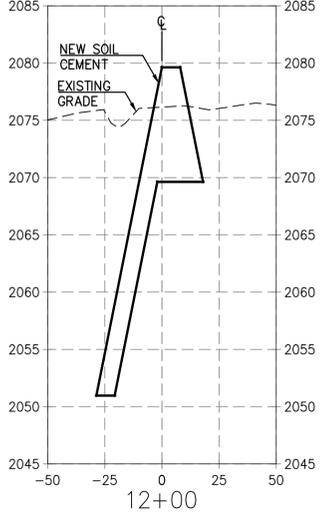
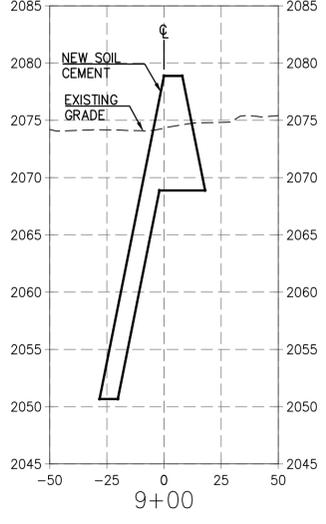
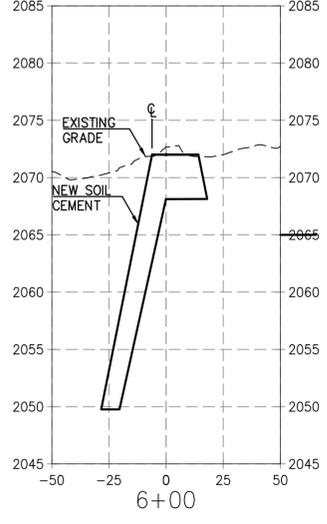
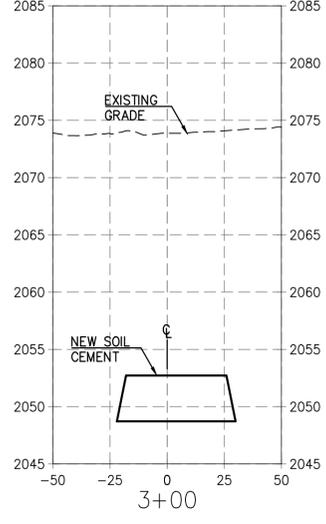
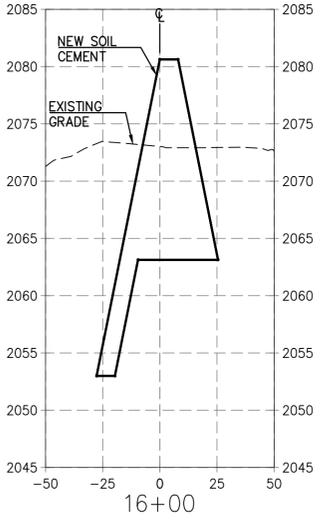
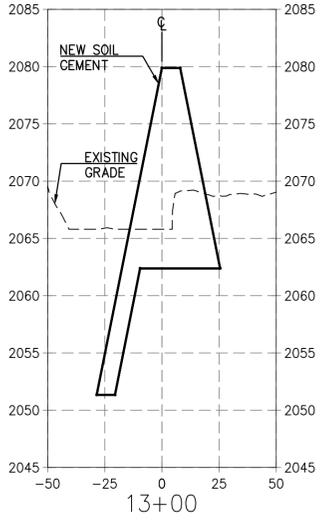
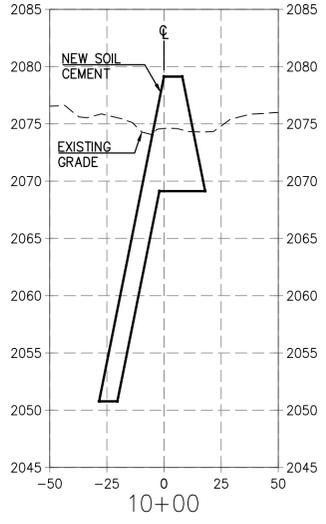
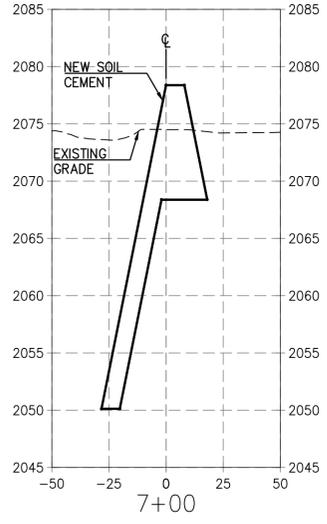
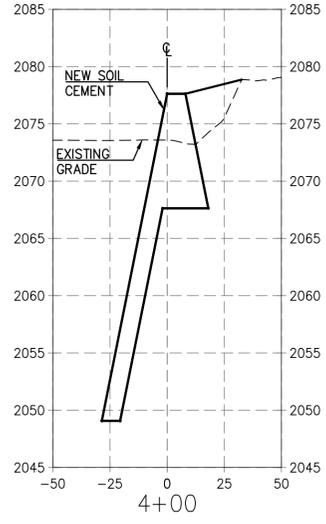
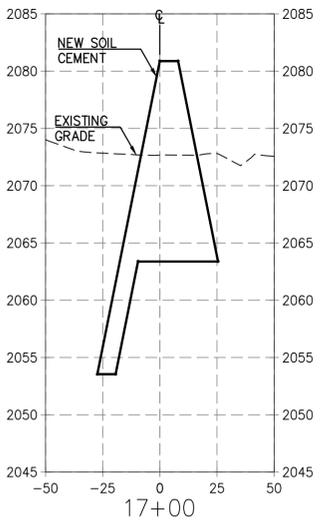
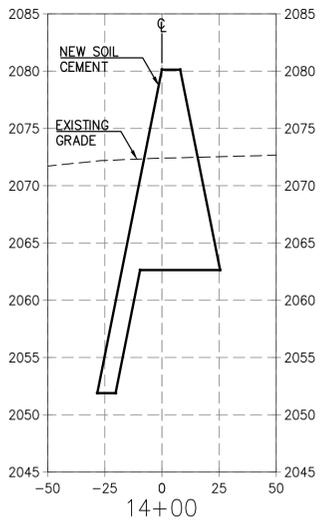
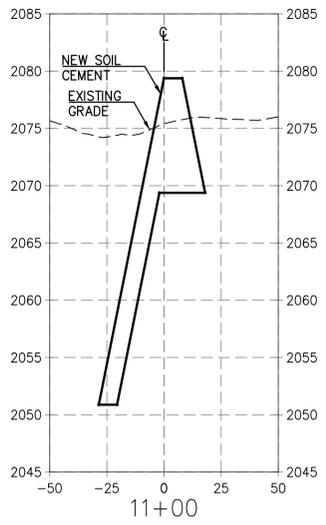
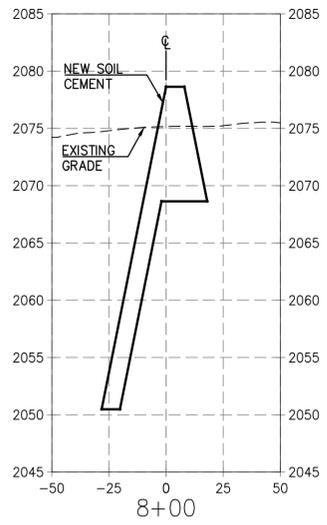
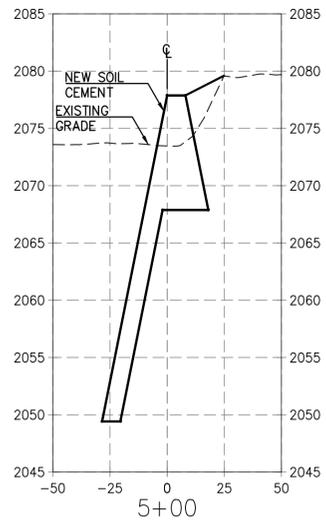
PSOMAS
333 E. Wetmore Road, Suite 450
Tucson, Arizona 85705
(520) 292-2300 (520) 292-1290 (FAX)

GRADING PLAN
FOR
EL RIO PRESERVE
BANK PROTECTION
CHANNEL GRADING



PIMA COUNTY W.O. 51KMA

T:\PROJECTS\01\ENGR\SHEETS\PHASE 1 PLANS\Cross-Sections\XS1-XS5.dwg XS1 Last Saved: Sun, 09 Jun 2019 2:13:08 PM By: Kelenore Plotter: Sundry, June 9, 2019 2:13:08 PM



PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT

SUZANNE SHIELDS, P.E., DIRECTOR

DESIGNED:	CR	DATE	4/2019
DRAWN:	CR/KL	CHECKED:	KL
CHECKED:	KL	PROJ. ENG.:	CR
DATE	4/2019	DATE	4/2019

NO.	REVISION DESCRIPTION	DIV. ENGINEER	DATE

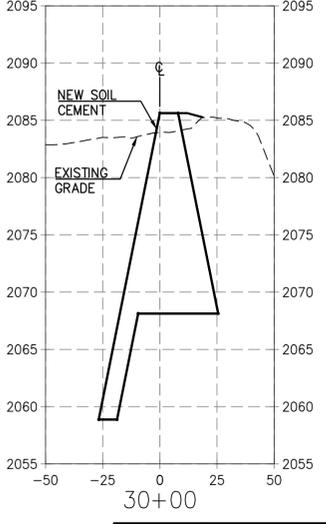
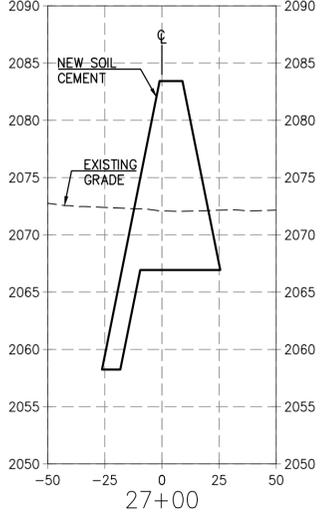
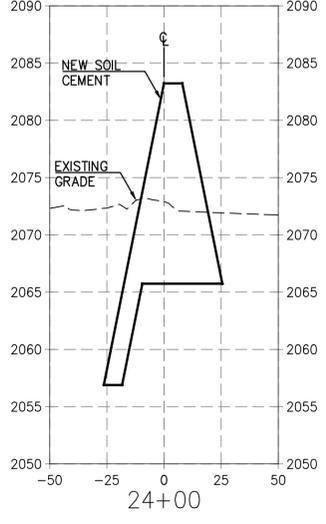
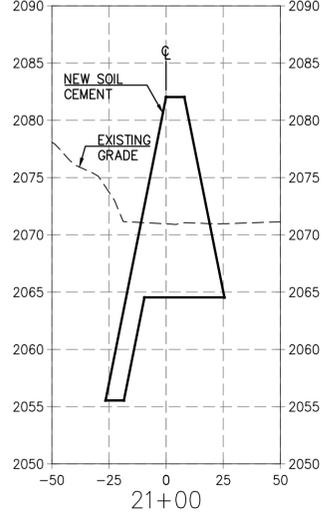
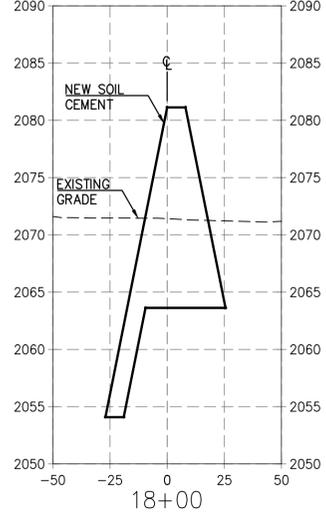
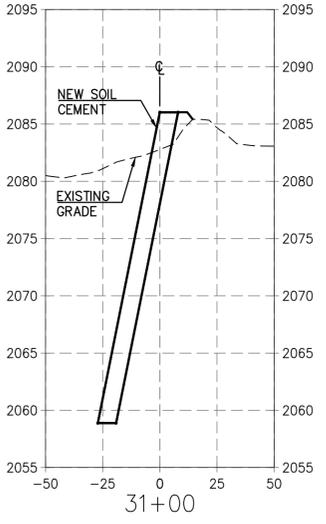
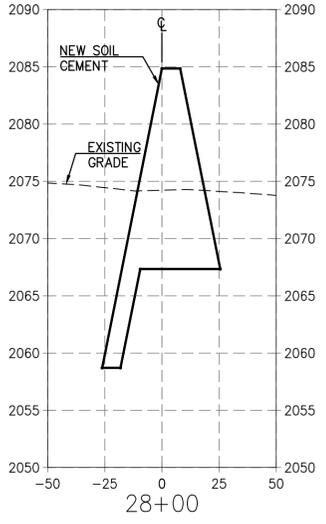
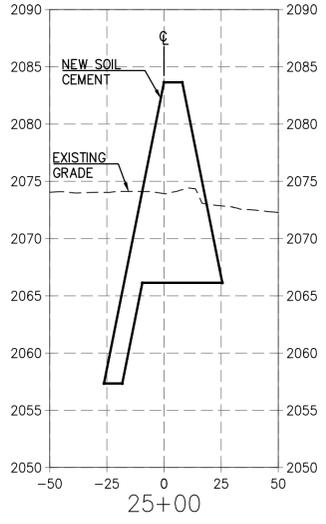
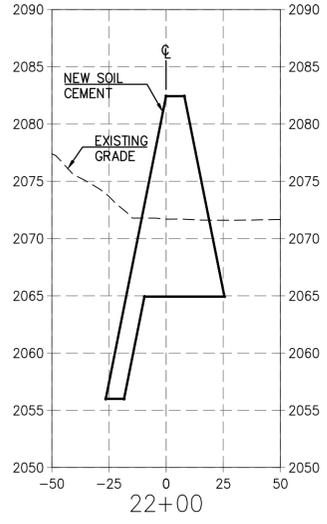
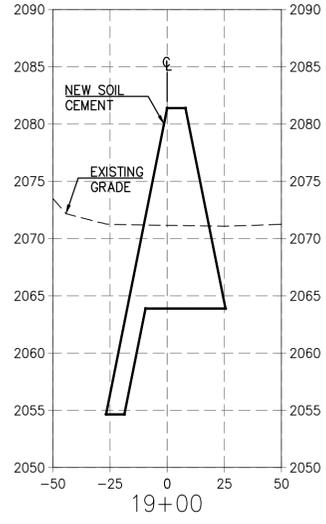
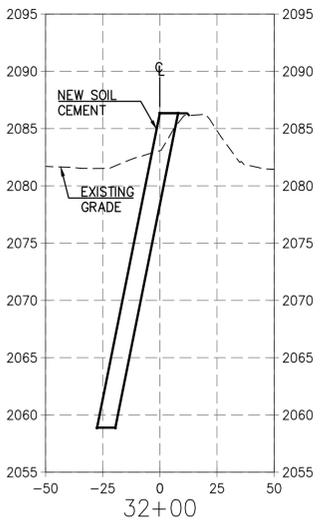
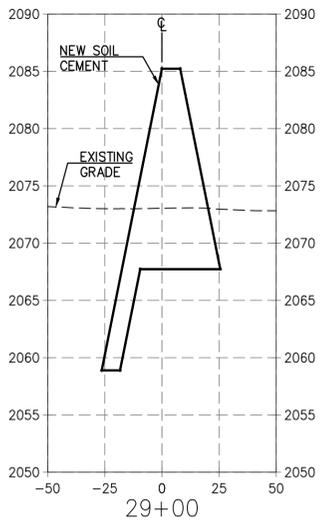
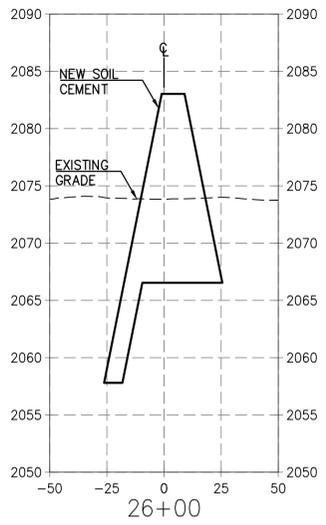
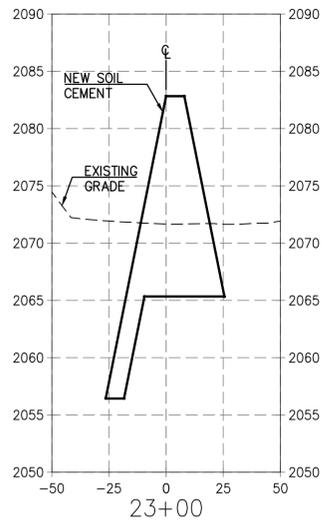
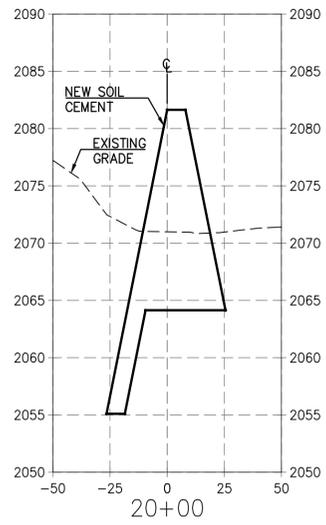
50% SUBMITTAL
NOT FOR
CONSTRUCTION

PSOMAS
333 E. Wilcox Road, Suite 450
Tucson, Arizona 85705
(520) 292-2300 (520) 292-1290 (FAX)

CROSS SECTIONS
FOR
EL RIO PRESERVE
BANK PROTECTION

PIMA COUNTY W.O. 51KMA

T:\PROJECTS\01\ENGR\SHEETS\PHASE 1 PLANS\Cross-Sections\XS1-XS5.dwg XS2_Last Saved: Sun, 09 Jun 2019 2:13:12 PM By: Kikendra Plotter: Sunday, June 9, 2019 2:13:12 PM



SCALES: HORIZ. 1"=40'
VERT. 1"=8'



PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT SUZANNE SHIELDS, P.E., DIRECTOR

DESIGNED:	CR	DATE	4/2019
DRAWN:	CR/KL	DATE	4/2019
CHECKED:	KL	DATE	4/2019
PROJ. ENG.:	CR	DATE	4/2019

NO.	REVISION DESCRIPTION	DIV. ENGINEER	DATE

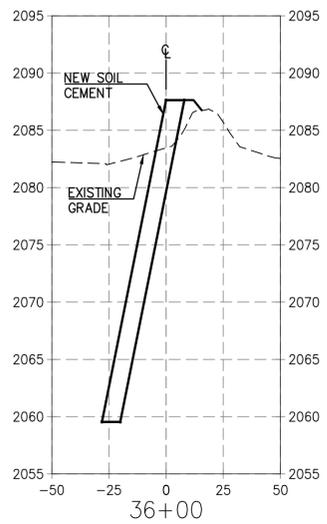
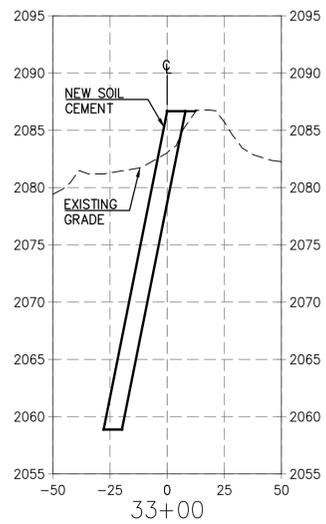
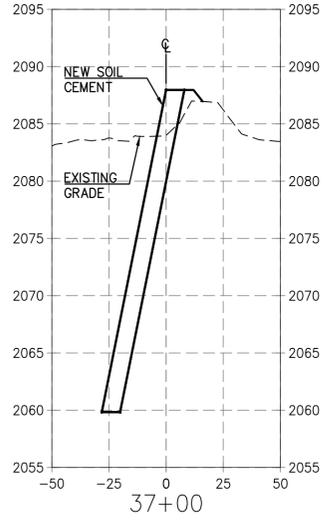
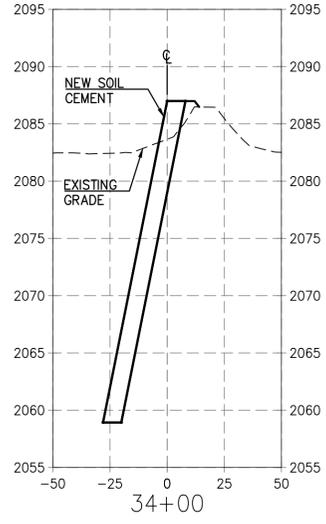
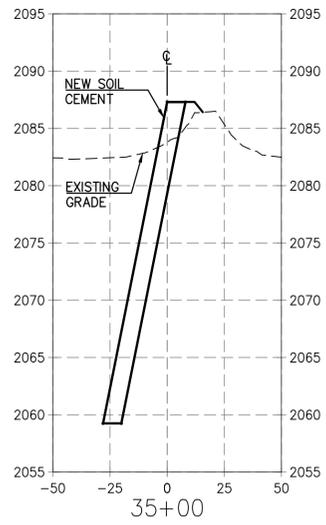
50% SUBMITTAL
NOT FOR
CONSTRUCTION

PSOMAS
333 E. Wilshire Road, Suite 450
Tucson, Arizona 85705
(520) 292-2300 (520) 292-1290 (FAX)

CROSS SECTIONS
FOR
EL RIO PRESERVE
BANK PROTECTION

PIMA COUNTY W.O. 51KMNA

T:\PROJECTS\01\ENGR\WORKSHEETS\PHASE 1 PLANS\Cross-Sections\XS3-XS5.dwg XS3_Last Saved: Sun, 09 Jun 2019 10:09:17 AM By: Kikendra Plotted: Sunday, June 9, 2019 2:13:17 PM



PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT

SUZANNE SHIELDS, P.E., DIRECTOR

50% SUBMITTAL
NOT FOR
CONSTRUCTION

PSOMAS
333 E. Wilcox Road, Suite 400
Tucson, Arizona 85705
(520) 292-2300 (520) 292-1290 (FAX)

CROSS SECTIONS
FOR
EL RIO PRESERVE
BANK PROTECTION

DESIGNED:	CR	DATE	4/2019
DRAWN:	CR/KL <td></td> <td>4/2019</td>		4/2019
CHECKED:	KL <td></td> <td>4/2019</td>		4/2019
PROJ. ENG.:	CR <td></td> <td>4/2019</td>		4/2019

NO.	REVISION DESCRIPTION	DIV. ENGINEER	DATE

PIMA COUNTY W.O. 51KMNA