

CONSTRUCTION PLANS

STREET AND DRAINAGE CONSTRUCTION PLANS

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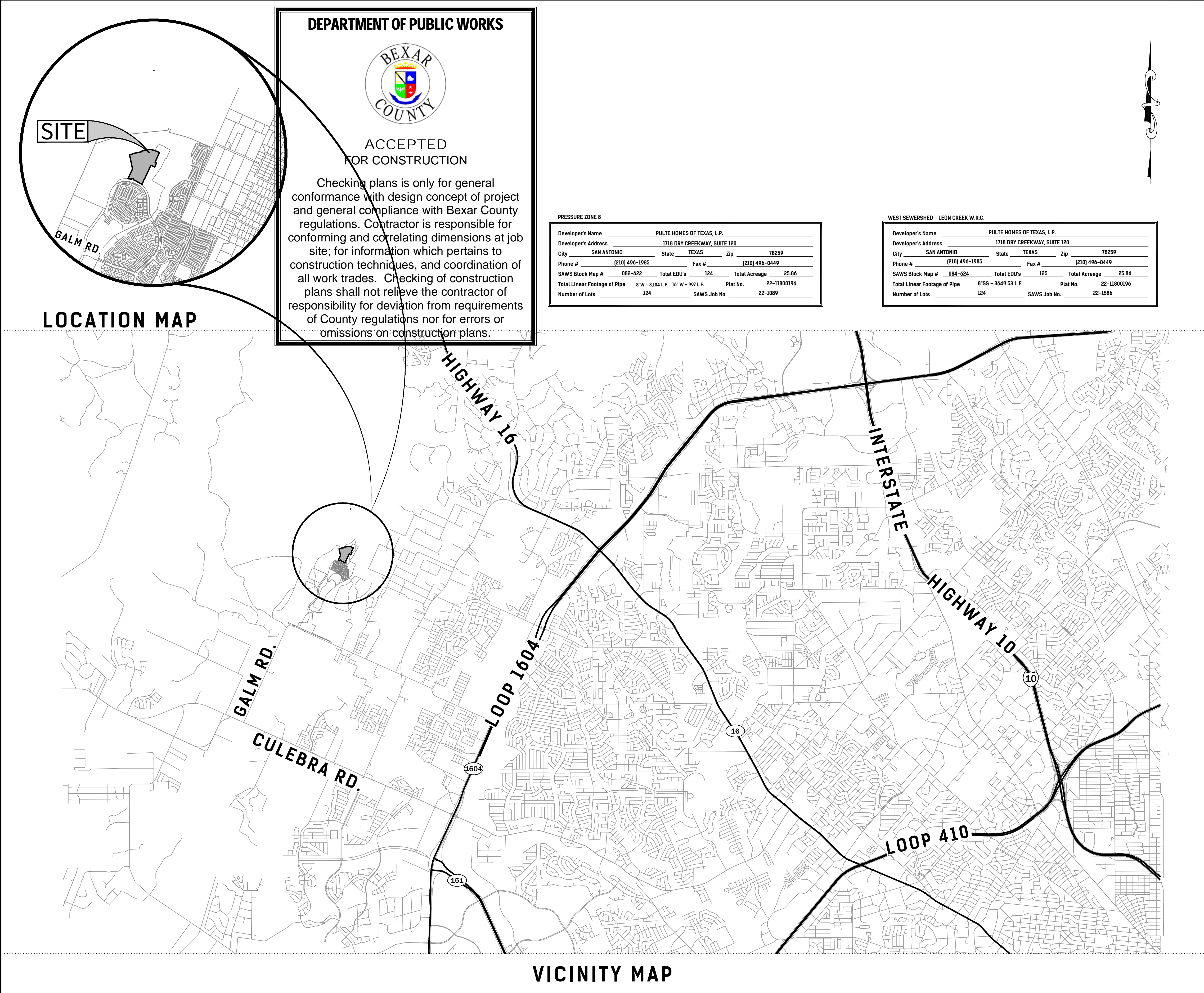
WATER DISTRIBUTION CONSTRUCTION PLANS

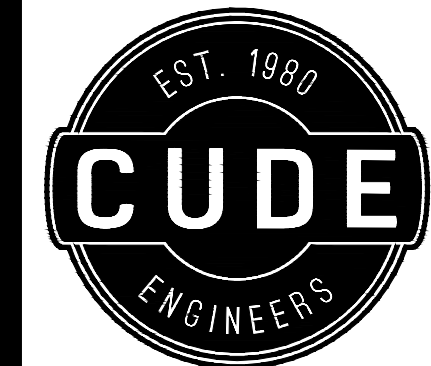
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- * C43 - STORM WATER POLLUTION PREVENTION PLAN

* STANDARD DETAILS ADOPTED FOR THIS CONSTRUCTION SET.





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McCrary Tract
Unit 14
CITY OF SAN ANTONIO GENERAL NOTES

GENERAL NOTES

- ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION JUNE 2008, OR LATEST.
- NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS, BUT NOT INCLUDED IN THE BID PROPOSAL. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED IN THE PAY ITEM TO WHICH IT RELATES.
- THE CONTRACTOR SHALL PROVIDE ACCESS FOR THE DELIVERY OF MAIL BY THE U.S. POSTAL SERVICE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION ANY DAMAGE DONE TO EXISTING FENCES, CONCRETE ISLANDS, STREET PAVING, CURBS, SHRUBS, BUSHES OR DRIVEWAYS. (NO SEPARATE PAY ITEM).
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL SIGNS AND BARRICADES ARE PROPERLY INSTALLED AND MAINTAINED. ALL LOCATIONS AND DISTANCES WILL BE DECIDED UPON IN THE FIELD BY THE CONTRACTOR, USING THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". THE CITY'S CONSTRUCTION INSPECTOR AND TRAFFIC ENGINEERING REPRESENTATIVE WILL ONLY BE RESPONSIBLE TO INSPECT BARRICADES AND SIGNS. IF, IN THE OPINION OF THE TRAFFIC ENGINEERING REPRESENTATIVE AND THE CONSTRUCTION INSPECTOR, THE BARRICADES AND SIGNS DO NOT CONFORM TO ESTABLISHED STANDARDS OR ARE INCORRECTLY PLACED OR ARE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC, THE CONSTRUCTION INSPECTOR SHALL HAVE THE OPTION TO STOP OPERATIONS UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED.
- IF THE NEED ARISES, ADDITIONAL BARRICADES AND DIRECTIONAL DEVICES MAY BE ORDERED BY THE TRAFFIC ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
- DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.171 C.P.S. MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
- CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR TWENTY FOUR (24) HOURS PRIOR TO BACKFILL OF ANY UTILITY TRENCHES TO SCHEDULE FOR DENSITY TEST AS REQUIRED.
- CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES, MARKS, ETC. IF ANY ARE DESTROYED OR REMOVED BY THE CONTRACTOR OR HIS EMPLOYEES, THEY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION TO DETERMINE THE LOCATION OF EXISTING UTILITIES. CONTRACTOR SHALL NOTIFY THE FOLLOWING AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO EXCAVATION OPERATION:

SAN ANTONIO WATER SYSTEM (SAWS)233-2010

BEXAR METROPOLITAN WATER DISTRICT (BEXAR MET)354-6538 /357-5741

COSA DRAINAGE207-8048

COSA SIGNAL OPERATIONS207-7720 /207-7765

TEXAS STATE WIDE ONE CALL LOCATOR1-800-344-8377

- CITY PUBLIC SERVICE ENERGY

- TIME WARNER

- AT&T

- MCI
- THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED, BUT SHALL BE INVESTIGATED AND VERIFIED BY THE CONTRACTOR BEFORE STARTING WORK. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR THE MAINTENANCE AND PROTECTION OF THE EXISTING UTILITIES EVEN IF THEY ARE NOT SHOWN ON THE PLANS. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HERE ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND HE SHALL BE RESPONSIBLE FOR PROTECTION OF SAME DURING CONSTRUCTION.
- ALL WASTE MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE PROJECT. NO WASTE MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING ARTIFICIAL OR NATURAL DRAINAGE.
- THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.
- THE CONTRACTOR SHALL MAINTAIN ALL ADJOINING STREETS AND TRAVELED ROUTES FREE FROM SPILLED AND /OR TRACKED CONSTRUCTION MATERIALS AND /OR DEBRIS.
- IF THE CONTRACTOR ENCOUNTERS ANY ARCHAEOLOGICAL DEPOSITS DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR MUST STOP EXCAVATION IMMEDIATELY, CONTACT THE CITY INSPECTOR, AND CALL THE CITY HISTORIC PRESERVATION OFFICE AT 207-7306 OR 207-3327 FOR AN ARCHAEOLOGICAL INVESTIGATION. THE CONTRACTOR CANNOT BEGIN EXCAVATION AGAIN WITHOUT WRITTEN PERMISSION FROM THE CITY.

IF MORE THAN THREE (3) DAYS ARE REQUIRED FOR INVESTIGATION (NOT INCLUDING HOLIDAY AND WEEKENDS) AND IF THE CONTRACTOR IS UNABLE TO WORK IN OTHER AREAS, THEN THE CONTRACTOR WILL BE ALLOWED TO NEGOTIATE FOR ADDITIONAL CONSTRUCTION TIME UPON WRITTEN REQUEST WITHIN TEN (10) DAYS AFTER THE FIRST NOTICE TO THE CITY OF ARCHAEOLOGICAL INVESTIGATION FOR EACH EVENT.

IF THE TIME REQUIRED FOR INVESTIGATION IS LESS THAN OR EQUAL TO THREE (3) DAYS FOR EACH EVENT, CONTRACT DURATION WILL NOT BE EXTENDED.
- IF SUSPECTED CONTAMINATION IS ENCOUNTERED DURING CONSTRUCTION OPERATIONS, C.O.S.A. SHALL BE NOTIFIED IMMEDIATELY WHEN CONTAMINATED SOILS AND /OR GROUNDWATER ARE ENCOUNTERED AT LOCATIONS NOT IDENTIFIED IN THE PLANS. THE NOTIFICATION SHOULD INCLUDE THE STATION NUMBER, TYPE OF CONTAMINATED MEDIA, EVIDENCE OF CONTAMINATION AND MEASURES TAKEN TO CONTAIN THE CONTAMINATED MEDIA AND PREVENT PUBLIC ACCESS. THE CONTAMINATED SOIL AND /OR GROUNDWATER SHALL NOT BE REMOVED FROM THE LOCATION WITHOUT PRIOR C.O.S.A. APPROVAL.

THE CONTRACTOR MUST STOP THE EXCAVATION IMMEDIATELY AND CONTACT THE C.O.S.A. INSPECTOR. THE CONTRACTOR CANNOT BEGIN EXCAVATION ACTIVITIES WITHOUT WRITTEN PERMISSION FROM THE CITY.
- CONTRACTOR IS TO INCLUDE A MAILBOX POST BLOCKOUT FOR VACANT LOTS AND ALL RESIDENCES WHICH DO NOT HAVE MAILBOXES AT THE CURB. BLOCKOUTS ARE PROVIDED FOR FUTURE USE BY THE POST OFFICE.

- CONTRACTOR SHALL NOT REMOVE OR ADJUST ANY VIA FACILITIES. THE CONTRACTOR MUST CONTACT VIA FOURTEEN DAYS PRIOR, FOR THE REMOVAL OF BENCHES, STOP POLES OR ANY OTHER VIA FACILITIES THAT MAY BE PRESENT. PLEASE PROVIDE THIRTY DAYS PRIOR NOTICE FOR SHELTER REMOVAL (TELEPHONE NOS: (210) 362-2155 OR (210) 362-2096). THE CONTRACTOR WILL BE LIABLE FOR ANY DAMAGES TO VIA FACILITIES NOT REMOVED BY VIA. THE CONTRACTOR IS REQUIRED TO REPLACE ALL FLATWORK REMOVED OR DAMAGED IN THE COURSE OF EXECUTING THE CONTRACT UNLESS OTHERWISE NOTED BY VIA. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING VIA FACILITIES IF ADJACENT TO WORK AREA.

TREE PROTECTION AND PRESERVATION GENERAL NOTES

- NO UTILITY OR STREET EXCAVATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND APPROVED.
- TREE PROTECTION FENCING SHALL BE REQUIRED. TREE PROTECTION FENCING SHALL BE INSTALLED, MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION. DURING CONSTRUCTION ACTIVITY, AT LEAST A SIX-INCH LAYER OF COARSE MULCH SHALL BE PLACED AND MAINTAINED OVER THE ROOT PROTECTION ZONE (NO SEPARATE PAY ITEM).
- THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN THE VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR FOR GUIDANCE.
- ROOTS WILL BE CUT WITH A ROCK SAW OR BY HAND, NOT BY AN EXCAVATOR OR OTHER ROAD CONSTRUCTION EQUIPMENT.
- ALL CURB AND SIDEWALK WORK SHALL USE ALTERNATIVE CONSTRUCTION METHODS TO MINIMIZE EXTENSIVE ROOT DAMAGE TO TREES (REFER TO DETAILS).
- EXPOSED ROOTS SHALL BE COVERED AT THE END OF THE DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH, OR WET BURLAP.
- NO EQUIPMENT, VEHICLES OR MATERIALS SHALL OPERATE OR BE STORED WITHIN THE ROOT PROTECTION ZONE OF ANY TREE NEAR THE PROJECT. ROOT PROTECTION ZONE IS 1 FOOT OF RADIUS PER INCH OF TREE'S DIAMETER. A 10-INCH DIAMETER TREE WOULD HAVE A 10 FOOT RADIUS ROOT PROTECTION ZONE AROUND THE TREE. ROOTS OR BRANCHES IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. OAK WOUNDS SHALL BE PAINTED OVER WITHIN 30 MINUTES TO PREVENT OAK WILT.
- SAPLINGS, SHRUBS OR BUSHES TO BE CLEARED FROM THE PROTECTED ROOT ZONE AREA OF A LARGE TREE SHALL BE REMOVED BY HAND AS DESIGNATED BY THE INSPECTOR.
- NO WIRES, NAILS OR OTHER MATERIAL MAY BE ATTACHED TO PROTECTED TREES.
- TREES, TREE LIMBS, BUSHES AND SHRUBS LOCATED IN THE CITY STREET OR ALLEY RIGHT-OF-WAY OR PERMANENT EASEMENTS WHICH INTERFERE WITH PROPOSED CONSTRUCTION ACTIVITIES SHALL BE PROPERLY PRUNED FOLLOWING THE ANSI A-300 STANDARDS FOR PRUNING. ALL TREE PRUNING SHALL BE COMPLETED BY A CITY OF SAN ANTONIO TREE MAINTENANCE LICENSED CONTRACTOR (ARTICLE 21-171, CITY CODE) ONLY AFTER APPROVAL FROM THE CAPITAL PROJECTS MANAGEMENT THROUGH THE INSPECTOR.
- NO EXCESSIVE TREE TRIMMING WILL BE PERMITTED.
- ALL DEBRIS GENERATED BY THE PRUNING AND TRIMMING OF THE TREES AND /OR BUSHES SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF PROPERLY (NO SEPARATE PAY ITEM).
- TREES MUST BE MAINTAINED IN GOOD HEALTH THROUGHOUT THE CONSTRUCTION PROCESS. MAINTENANCE MAY INCLUDE, BUT NOT LIMITED TO: WATERING THE ROOT PROTECTION ZONE, WASHING FOLIAGE, FERTILIZATION, PRUNING, ADDITIONAL MULCH APPLICATIONS AND OTHER MAINTENANCE AS NEEDED ON THE PROJECT.
- ANY TREE REMOVAL SHALL BE APPROVED BY THE CITY ARBORIST. (207-8053)
- TREES WHICH ARE DAMAGED OR LOST DUE TO THE CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED TO THE CITY'S SATISFACTION.
- TREE PLANTING FOR MITIGATION OR ENHANCEMENT: ALL PLANTED TREES SHALL BE MAINTAINED IN A HEALTHY CONDITION AT ALL TIMES. THIS INCLUDES IRRIGATION, FERTILIZING, PRUNING AND OTHER MAINTENANCE AS NEEDED ON THE PROJECT. TREES THAT DIE WITHIN TWELVE (12) MONTHS SHALL BE REPLACED WITH A TREE OF EQUAL SIZE AND SPECIES.

ACCESSIBILITY REQUIREMENTS

- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN VEHICULAR AND PEDESTRIAN ACCESS AT ALL TIMES TO LOCAL RESIDENCES AND BUSINESSES.
- WHEN THE WORK REQUIRES THE EXCAVATION OF THE STREET AND THE REMOVAL OF THE EXISTING DRIVEWAY APPROACHES AND SIDEWALKS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY ALL-WEATHER ACCESS TO THE BUSINESSES AND RESIDENCES. THE TEMPORARY DRIVEWAY APPROACHES SHALL BE CONSTRUCTED WITH FLEXIBLE BASE OR GRAVEL MATERIAL AT NO SEPARATE COST TO THE CITY.
- PRIOR TO INITIATING THE CONSTRUCTION OF NEW DRIVEWAY APPROACHES, THE CONTRACTOR SHALL GIVE ADVANCE WARNING IN PERSON, OR IN WRITING, OF AT LEAST 48 HOURS TO EACH RESIDENCE THAT WILL BE IMMEDIATELY AFFECTED, SO THAT ALTERNATE PLANS MAY BE MADE BY THE RESIDENTS.
- FOR BUSINESSES WITH MORE THAN ONE DRIVEWAY, AT LEAST ONE DRIVEWAY SHALL REMAIN OPEN WHILE THE OTHER NEW DRIVEWAY APPROACHES ARE CONSTRUCTED. FOR BUSINESSES WITH ONLY ONE DRIVEWAY, THE NEW DRIVEWAY APPROACH SHALL BE CONSTRUCTED IN HALF WIDTHS, UNLESS A TEMPORARY ASPHALT DRIVEWAY IS FIRST INSTALLED AT NO SEPARATE COST TO THE CITY.

NOTE TO CONSULTANT

DO NOT MODIFY, DELETE OR ADD TO THE CITY OF SAN ANTONIO'S GENERAL NOTES STANDARD SHEET. IF MODIFICATIONS ARE REQUIRED, FOLLOW THE INSTRUCTIONS ON THE "SUPPLEMENTAL GENERAL NOTES" SHEET.

DECEMBER 2009

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

CITY OF SAN ANTONIO
GENERAL NOTES

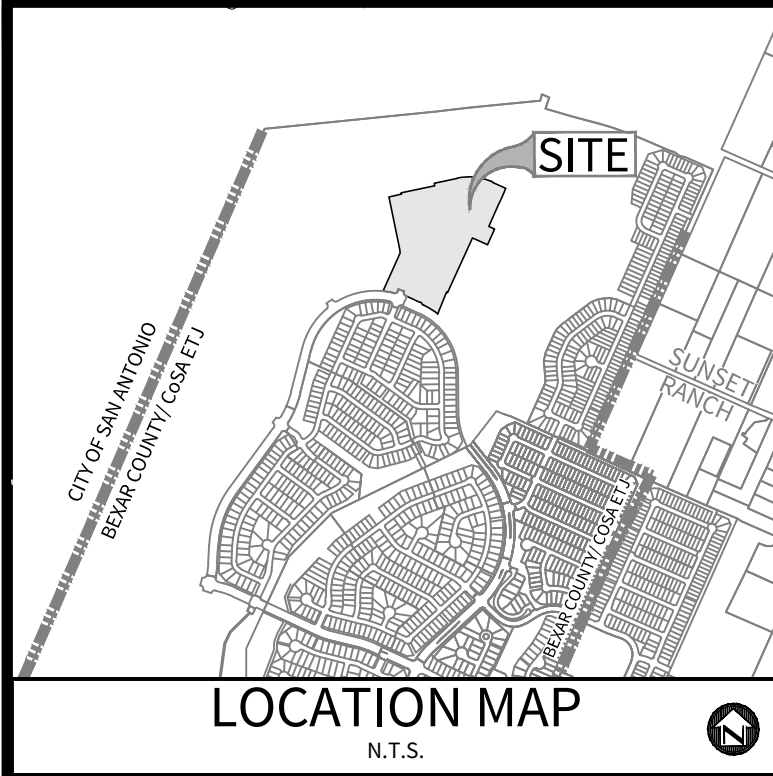
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REVISIONS							
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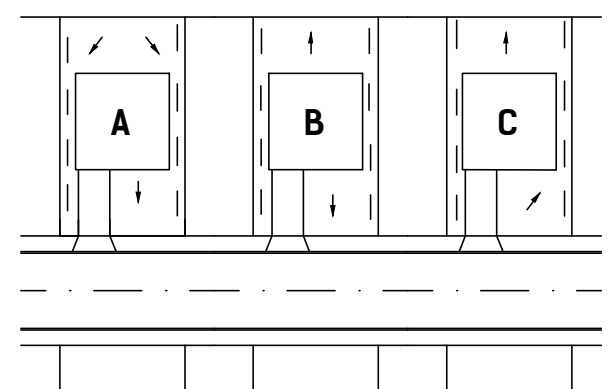
CUDE ENGINEERS
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PLAT NO.
22-11800196

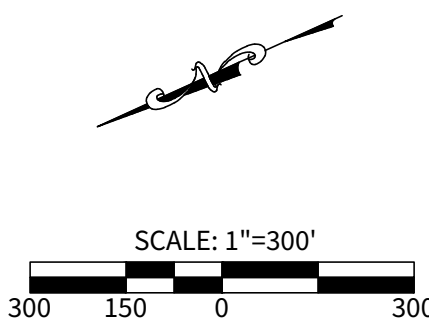
C1



LEGEND
SITE BOUNDARY
DRAINAGE AREA
To FLOW PATH
ACCUMULATION POINT
JUNCTION POINT



TYPICAL LOT SITE PLAN
N.T.S.



Project Name: McCrary Tract Subdivision Calculation Summary for Time of Concentrations & Ultimate Flow															PA3											
HYDROLOGY															PRECIPITATION											
Sheet Flow To Computations															Shallow Conc. To Computations											
Concentrated To Computations															Overall											
INTENSITY															Q FLOW											
Drainage Shed															Drainage Shed											
Drainage Shed	Shed Area (Ac.)	c	Length, <600'	Paved (Y or N)	Upstream Elev.	Downstream Elev.	Slope	Time of Concentration	Length, <600'	Paved (Y or N)	Downstream Elev.	Slope	Time of Concentration	Length	Velocity (fps)	Time of Concentration	Time of Concentration (min)	m	ft	ft	ft	ft	ft	ft		
B1	23.60	=B1B5A	0.67	236.02	N	1008.11	1002.29	1.90%	10.20					1202.95	6	4.52	24.11	4.13	5.70	7.06	65.30	90.13	111.63	B1		
B2	3.32	=B2	0.67	236.03	N	1004.00	1003.00	1.90%	10.30					1001.50	6	2.87	21.57	4.57	6.04	7.49	9.72	13.44	16.66	B2		
B3	9.60	=B3	0.55	300.00	N	1000.50	1144.43	8.93%	15.05	600.00	N	1007.94	90.22%	2.10	1001.50	6	2.87	19.97	4.55	6.28	7.80	24.02	33.16	41.18	B3	
B3A	20.90	=B3+B3A	0.55	300.00	N	1000.50	1144.43	8.93%	15.05	600.00	N	1007.94	90.22%	2.10	1001.50	6	4.46	21.56	4.37	6.04	7.49	50.23	69.43	86.10	B3A	
B3B	25.30	=B3+B3A+B3B	0.55	300.00	N	1000.50	1144.43	8.93%	15.05	600.00	N	1007.94	90.22%	2.10	2392.76	6	7.20	24.30	4.12	5.68	7.04	57.33	79.94	97.96	B3B	
B4	11.17	=B4(BA-CO)	0.67	236.00	N	1003.15	1001.95	1.90%	15.40					1040.71	6	4.38	19.68	4.58	6.33	7.86	34.28	33.12	38.36	B4		
B4-CO																										
B4A	5.69	=B4A(BA-CO)	0.67	236.02	N	1004.04	1042.02	1.90%	10.30					601.99	6	1.87	19.92	4.55	6.29	7.81	17.35	37.63	50.23	B4A		
B5	17.90	=B5-B12+A	0.67	236.02	N	1006.51	1003.29	1.90%	10.20					1350.29	6	1.66	22.95	4.24	5.85	7.25	50.85	70.16	86.95	B5		
B	21.22	=B2+B5	0.67	236.02	N	1006.51	1003.29	1.90%	10.20					1350.29	6	1.66	22.95	4.24	5.85	7.25	60.28	83.17	103.08	B		
B5A	2.38	=B5A	0.67	100.00	N	1028.05	1028.75	1.90%	14.40					459.81	6	1.32	15.72	5.15	7.14	8.88	8.21	11.39	14.16	B5A		
B6	7.08	=B6	0.67	200.00	N	1003.07	1004.81	1.90%	22.30					20.97	6	1.38	20.97	4.44	6.12	7.60	21.06	29.03	36.05	B6		
B7	4.14	=B7	0.67	220.00	N	1042.12	1040.90	1.90%	10.20					76.40	6	2.12	17.52	4.87	6.73	8.37	13.51	18.67	23.22	B7		
B9	8.94	=B9	0.67	230.00	N	1040.47	1037.40	2.55%	17.95					60.32	6	1.84	19.74	4.57	6.32	7.84	21.57	37.86	46.96	B9		
B10	3.97	=B10	0.67	121.40	N	1028.58	1027.11	1.90%	15.08					609.17	6	1.91	17.00	4.94	6.84	8.50	13.14	18.19	22.61	B10		
B11	10.05	=B11	0.67	207.20	N	1027.04	1034.85	1.15%	19.20					120.10	6	6.33	22.62	4.27	5.89	7.30	28.75	39.66	49.15	B11		
B12	4.00	=B12	0.67	216.62	N	1006.11	1003.29	1.90%	10.20					458.08	6	1.21	20.51	4.49	6.20	7.69	12.03	16.62	20.61	B12		
B13	4.11	=B13	0.67	240.00	N	1043.38	1037.45	2.49%	18.00					656.86	6	1.92	19.92	4.55	6.29	7.81	12.53	17.32	21.51	B13		
B14	5.12	=B7+B14	0.67	220.00	N	1042.12	1040.90	1.90%	10.20					1248.09	6	3.19	18.59	4.72	6.52	8.10	16.19	22.37	27.79	B14		
A	9.23	=B7+B13+B14	0.67	240.00	N	1043.38	1037.45	2.49%	18.00					1248.09	6	1.92	19.92	4.55	6.29	7.81	28.14	38.90	48.30	A		
C2	119.31	=C2+C2A+C7+C8+B9+B11	0.60	300.00	N	1223.55	1223.88	4.98%	17.64	600.00	N	1159.76	7.86%	3.38	4391.27	6	11.85	31.69	3.60	4.96	6.14	257.71	355.07	439.54	C2	
C2A	8.54	=C2A	0.52	200.00	N	1223.55	1230.03	3.15%	18.65	600.00	N	1159.76	7.86%	3.38	4391.27	6	4.38	21.42	4.38	6.06	7.51	18.50	26.81	33.25	C2A	
C3	122.88	=C2+D5D5A	0.60	300.00	N	1223.55	1223.88	4.98%	17.64	600.00	N	1159.76	7.86%	3.38	4391.27	6	11.85	31.69	3.60	4.96	6.14	265.42	365.69	452.69	C3	
C5	180.30	=C5+C9A+C13-(C13-CO)	0.67	300.00	N	1223.55	1223.88	4.98%	17.64	600.00	N	1159.76	7.86%	3.38	6086.52	6	18.94	36.96	3.31	4.57	5.66	399.85	550.24	679.18	C5	
C5A	181.10	=C5+C5A	0.67	300.00	N	1223.55	1223.88	4.98%	17.64	600.00	N	1159.76	7.86%	3.38	6301.44	6	17.45	37.47	3.29	4.54	5.62	399.20	549.05	677.36	C5A	
C6	7.72	=C6	0.67	125.87	N	1028.59	1022.00	2.89%	14.62					1409.88	6	4.14	18.16	4.77	6.60	8.20	24.67	34.14	42.41	C6		
C7	56.04	=C7+C2A	0.53	200.00	N	1223.55	1223.88	4.98%	17.64	600.00	N	1159.76	7.86%	3.38	2003.81	6	1.87	27.90	3.84	5.29	6.35	114.05	157.12	194.54	C7	
C8	68.34	=B9+C2A+C7+C8	0.66	300.00	N	1223.55	1223.88	4.98%	17.64	600.00	N	1159.76	7.86%	3.38	3481.51	6	6.56	29.61	3.73	5.13	6.35	168.24	231.39	286.86	C8	
C9	161.90	=C9+H3	0.62	300.00	N	1223.55	1223.88	4.98%	17.64	600.00	N	1159.76	7.86%	3.38	5571.95	6	15.47	35.50	3.39	4.67	5.79	340.28	468.77	581.19	C9	
C9A	169.74	=C9+C10	0.67	300.00	N	1223.55	1223.88	4.98%	17.64	600.00	N	1159.76	7.86%	3.38	5593.95	6	15.47	35.50	3.39	4.67	5.79	385.53	531.10	658.47	C9A	
C10	7.84	=C10	0.67	122.04	N	1020.56	1023.18	1.57%	24.51					159.64	6	4.11	19.02	4.65	6.44	8.00	24.48	33.83	42.02	C10		
C13	7.95	=C13	0.67	240.00	N	1008.11	1003.15	1.90%	18.31					565.42	6	1.40	19.74	4.57	6.32	7.84	24.34	31.84	37.21	C13		
C13-CO																										
D2	0.44	=D2	0.67	15.42	N	1027.38	1027.02	1.80%	33.31					6.96	6	0.86	14.17	5.44	7.55	9.42	1.60	1.82	4.55	D2		
D5	1.15	=D5	0.67	11.00	N	1026.21	1023.88	2.94%	14.00					88.06	6	2.47	15.58	5.18	7.17	8.93	3.99	5.52	6.88	D5		
D5A	2.42	=D5A	0.67	153.12	N	1026.49	1022.98	2.94%	14.07					89.69	6	2.50	16.57	5.01	6.94	8.63	8.12	11.25	13.99	D5A		
D7	2.71	=D7-(D7-CO)	0.67	10.62	N	1026.20	1023.95	2.89%	12.48					35.06	6	1.00	14.08	5.45	7.58	9.45	9.90	12.34	14.22	D7		
D7-CO																										
D8	1.25	=D8-(D7-CO)	0.67	120.00	N	1026.49	1025.94	1.44%	15.15					121.38	6	0.86	16.01	5.10	7.06	8.79	4.27	7.33	10.30	D8		
D9	8.12	=D9	0.67	240.00	N	1001.56	1007.50	2.00%	18.00					66.06	6	2.34	20.34	4.51	6.22	7.72	24.54	33.84	42.00	D9		
D9A	14.86	=D9+H6	0.67	240.00	N	1001.56	1007.50	2.00%	18.00					66.06	6	2.34	20.34	4.51	6.22	7.72	44.90	61.93	76.86	D9A		
D10	5.65	=D10	0.67	221.40	N	1003.86	1003.88	1.39%	164.84					238.84	6	2.36	21.78	4.35	6.01	7.45	16.47	22.75	28.20	D10		
D11	8.37	=D11	0.67	240.00	N	1006.67	1003.30	1.90%	20.00					565.40	6	2.37	22.57	4.27	5.90	7.31	23.95	33.09	40.99	D11		
E1	5.98	=E1	0.52	200.00	N	1138.00	1133.40	5.55%	16.47	600.00	N	1008.56	9.98%	2.00	402.02	6	1.28	19.75	4.57	6.32	7.84	14.21	19.65	24.38	E1	
E2	20.75	=E1+E2	0.52	200.00	N	1138.00	1133.40	5.55%	16.47	600.00	N	1008.56	9.98%	2.00	4402.03	6	6.87	26.69	3.93	5.41	6.71	42.40	58.37	72.40	E2	
H1	139.35	=H1+C3+D9A	0.67	300.00	N	1223.55	1223.88	4.98%	17.64	600.00	N	1159.76	7.86%	3.38	4376.44	6	12.71	32.74	3.54	4.87	6.04	330.51	454.69	563.92	H1	
H2	149.32	=H1+H2+H7	0.67	300.00	N	1223.55	1223.88	4.98%	17.64	600.00	N	1159.76	7.86%	3.38	4715.13	6	13.26	33.29	3.51	4.83	5.98	351.16	483.21	598.27	H2	
H3	160.33	=H1+H2+H3+H8	0.67	300.00	N	1223.55	1223.88	4.98%	17.64	600.00	N	1159.76	7.86%	3.38	5076.95	6	14.10	34.13	3							
H4	0.68	=H4	0.67	15.00	N	1025.97	1025.08	1.55%	23.95					58.54	6	1.97	15.52	5.19	7.19	8.95	2.36	3.28	4.08	H4		
H6	6.74	=H6	0.67	240.00	N	1007.89	1002.80	2.00%	18.00					60.23	6	2.27	20.27	4.51	6.23	7.74	20.13	28.13	34.95	H6		
H7	0.64	=H4+D7-D10	0.67	221.40	N	1021.46	1024.98	1.90%	19.48					133.69	6	2.22	22.36	4.29	5.93	7.31	28.98	35.92	44.52	H7		
H8	18.06	=D2+D5+D11+(D7-CO)	0.67	212.40	N	1003.86	1003.88	1.39%	164.84					238.84	6	2.36	22.59	4.27	5.90	7.31	29.76	41.59	52.21	H8		
CO DENOTES CARRYOVER FLOW FROM INLET ON GRADE																										

ELEVATIONS:

XXXXXX PROPOSED TOP OF CONCRETE CURB ELEVATION

XXXXXX PROPOSED ASPHALT PAVEMENT ELEVATION

KEYNOTES:

- CONTRACTOR TO INSTALL 5' X 5' SIDEWALK PASSING SPACE WITH HOMEBUILDING
- CONTRACTOR TO CONSTRUCT ADA RAMP AT THE TIME OF HOMEBUILDING
- CONTRACTOR TO INSTALL SIDEWALK WITH INFRASTRUCTURE
- BEGIN WASHOUT STA. 1+20.01
- END WASHOUT STA. 1+52.43
- BEGIN STREET TRANSITION FROM LOCAL B TO LOCAL A (SEE POINT AND LINE TABLE) STA. 4+63.72
- A 5'X5' ADA COMPLIANT WHEELCHAIR TURNAROUND TO BE CONSTRUCTED AT SIDEWALK TERMINUS AT THE TIME OF HOMEBUILDING

LEGEND:

PIPE CULVERT

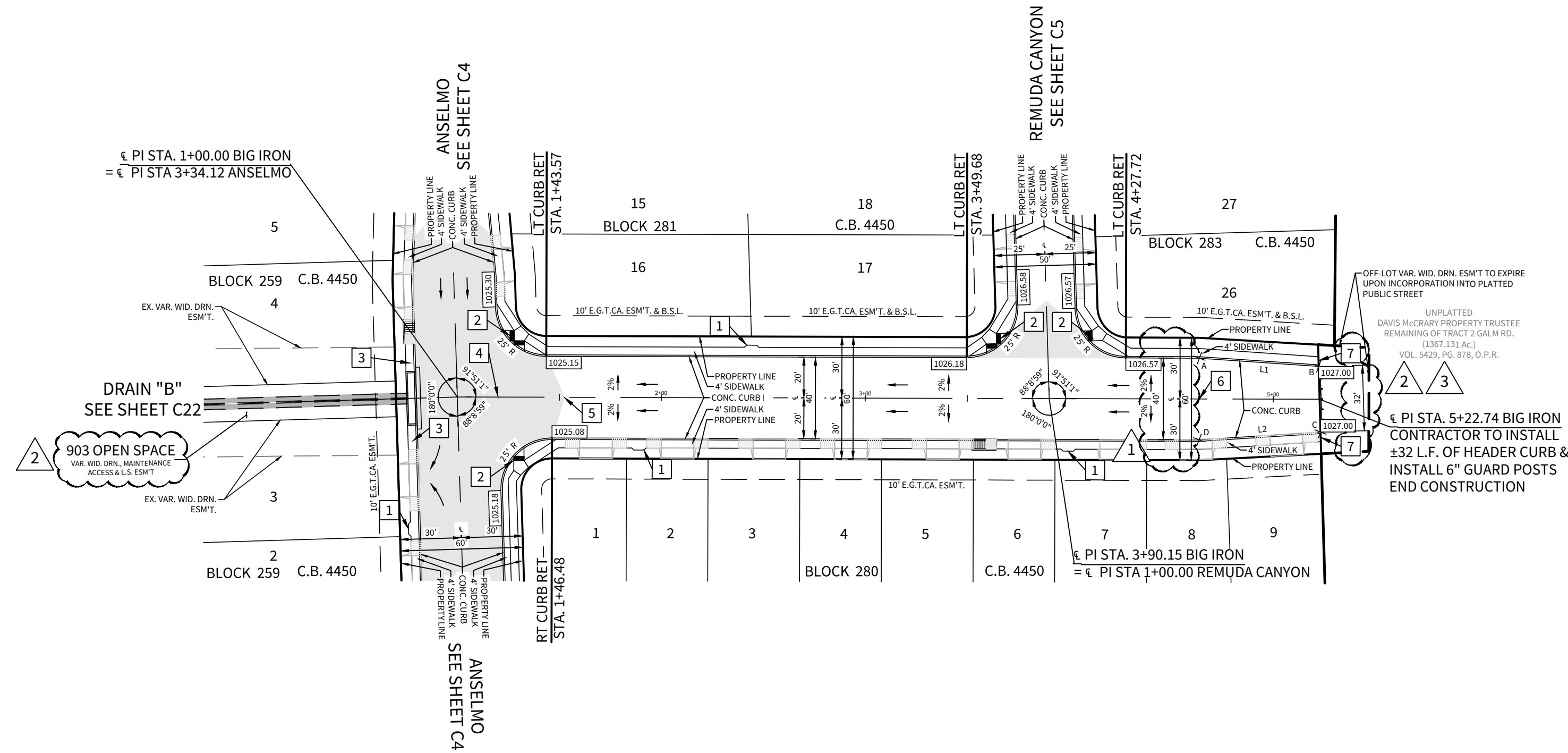
PROPOSED DRIVEWAY LOCATION

STREET WASHOUT

SIDEWALK TO BE CONSTRUCTED WITH INFRASTRUCTURE

TxDOT TYPE "2" WHEEL CHAIR RAMPS ARE INDICATED THUS " " OR " " UNLESS OTHERWISE NOTED. (SHEET C15)
FOR ADA RAMPS AT SIDEWALK INTERSECTIONS
TYPE "10" DIRECTIONAL WHEEL CHAIR RAMPS ARE INDICATED THUS " " OR " " UNLESS OTHERWISE NOTED.

FOR ADA RAMPS AT SIDEWALK INTERSECTIONS.
DETECTABLE WARNING PAVEMENT WITH TRUNCATED DOMES ONLY. ADA RAMPS TO BE CONSTRUCTED WITH INFRASTRUCTURE (SEE DETAIL SHEET C9).



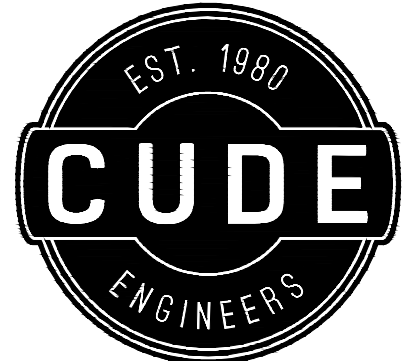
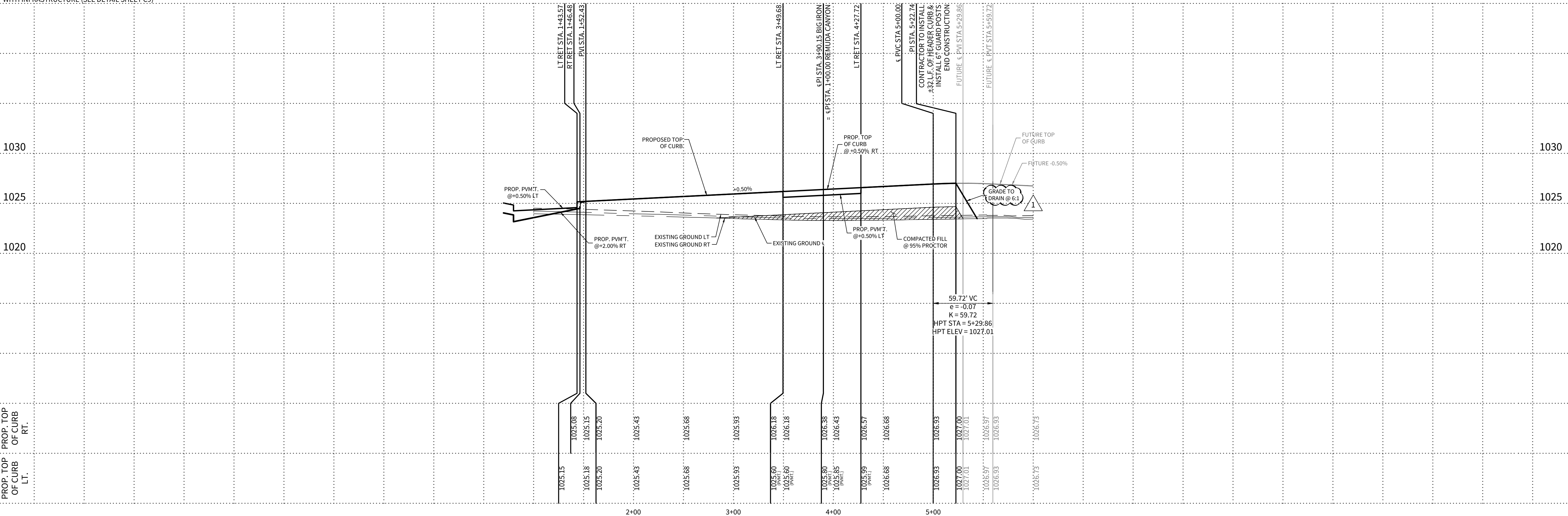
LINE TABLE			
LINE	BEARING	LENGTH	
L1	S61°48'50"E	58.64'	
L2	S69°26'32"E	59.65'	

Point	Station	Offset	Elevation	Description
A	4+63.72	-20.00'	1026.75	TOC ELEV.
B	5+22.23	-16.10'	1,027.00'	TOC ELEV.
C	5+23.24	16.03'	1,027.00'	TOC ELEV.
D	4+63.72	20.00'	1,026.75'	TOC ELEV.

BIG IRON

STA. 1+00.00 TO STA. 5+22.74

NOTE: A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY RIGHT OF WAY.
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



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McCrary Tract UNIT 14

STREET PLAN & PROFILE - BIG IRON

DATE

02/02/2023

PROJECT NO.
02142.051

DRAWN BY
JR

CHECKED BY
TCD/JC/DDC

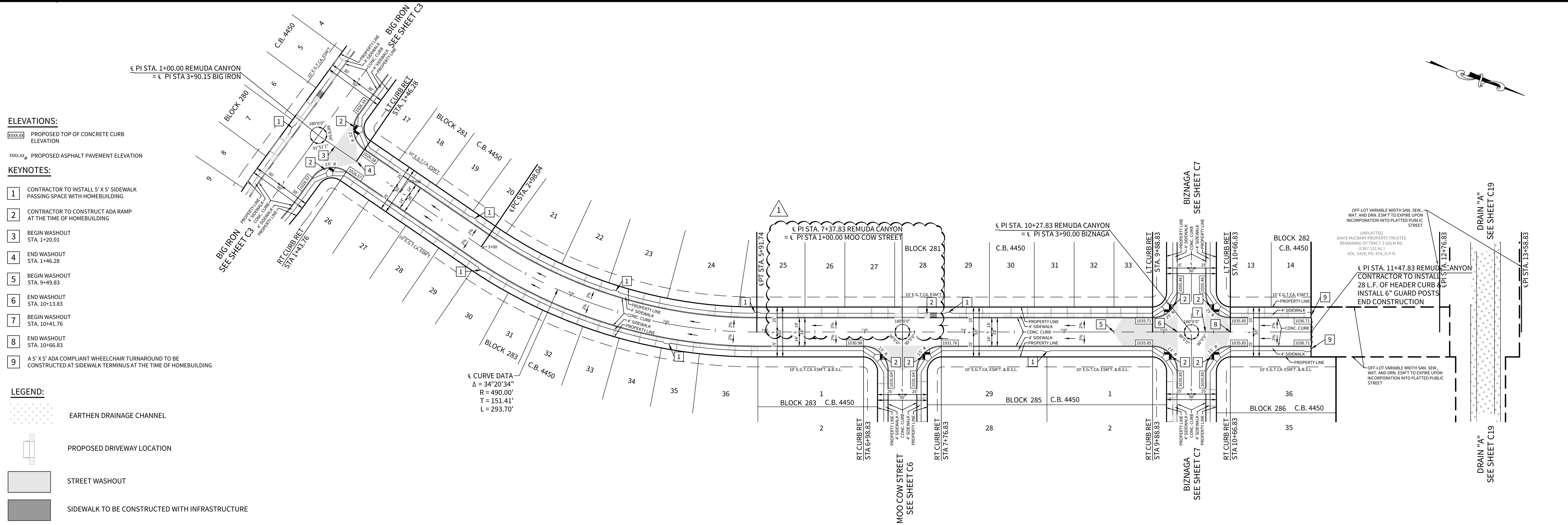
REVISIONS							
1	ADDED PLAN NO. REV. 1	ADDED BEAR COUNTY NOTE	1	ADDED PLAN NO. REV. 1	ADDED BEAR COUNTY NOTE	1	ADDED PLAN NO. REV. 1
2	20230228	REVISED LOT NUMBERS TO MATCH PLAT AND IDENTIFY	2	20230228	REVISED LOT NUMBERS TO MATCH PLAT AND IDENTIFY	2	20230228
3	202310	REVISED KEYNOTES	3	202310	REVISED KEYNOTES	3	202310
4			4			4	
5			5			5	
6			6			6	
7			7			7	
8			8			8	



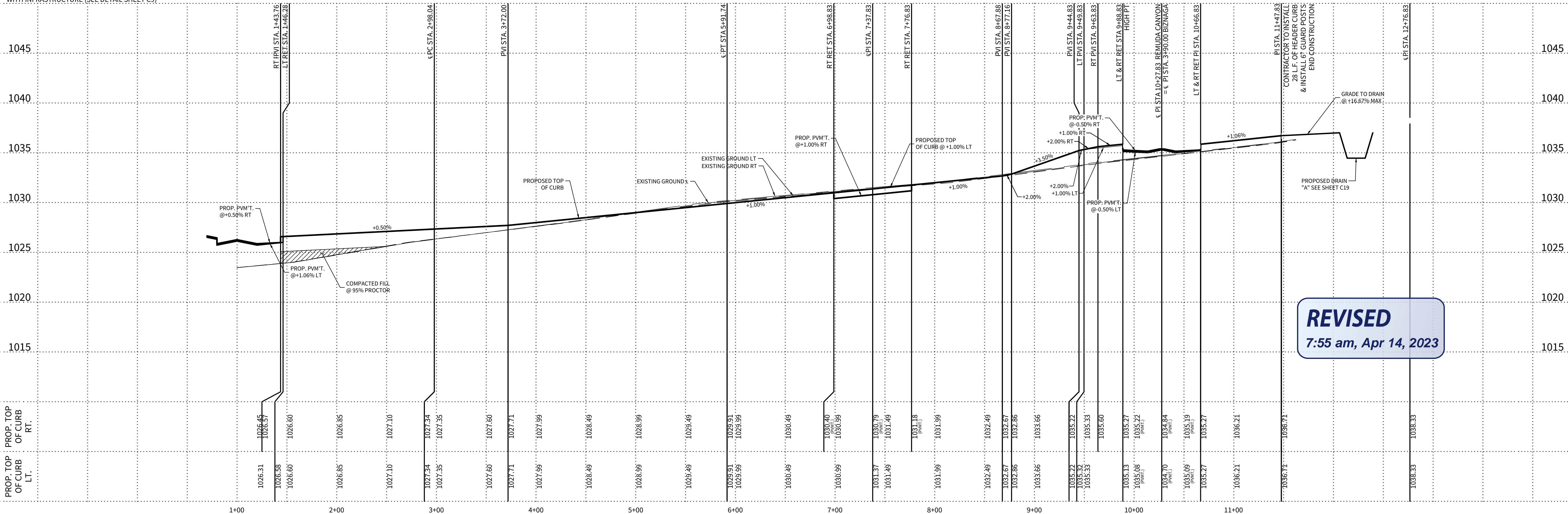
CUDE ENGINEERS
TBPELS No. 10048500

PLAT NO.
22-11800196

C3



TDOT TYPE "2" WHEEL CHAIR RAMPS ARE INDICATED THUS " " OR " " UNLESS OTHERWISE NOTED. (SHEET C15)
FOR ADA RAMPS AT SIDEWALK INTERSECTIONS
TYPE "10" DIRECTIONAL WHEEL CHAIR RAMPS ARE INDICATED THUS " " OR " " UNLESS OTHERWISE NOTED.
FOR ADA RAMPS AT SIDEWALK INTERSECTIONS.
DETECTABLE WARNING PAVEMENT WITH TRUNCATED DOMES ONLY. ADA RAMPS TO BE CONSTRUCTED WITH INFRASTRUCTURE (SEE DETAIL SHEET C9).



ELEVATIONS:

PROPOSED TOP OF CONCRETE CURB
ELEVATION

PROPOSED ASPHALT PAVEMENT ELEVATION

KEYNOTES:

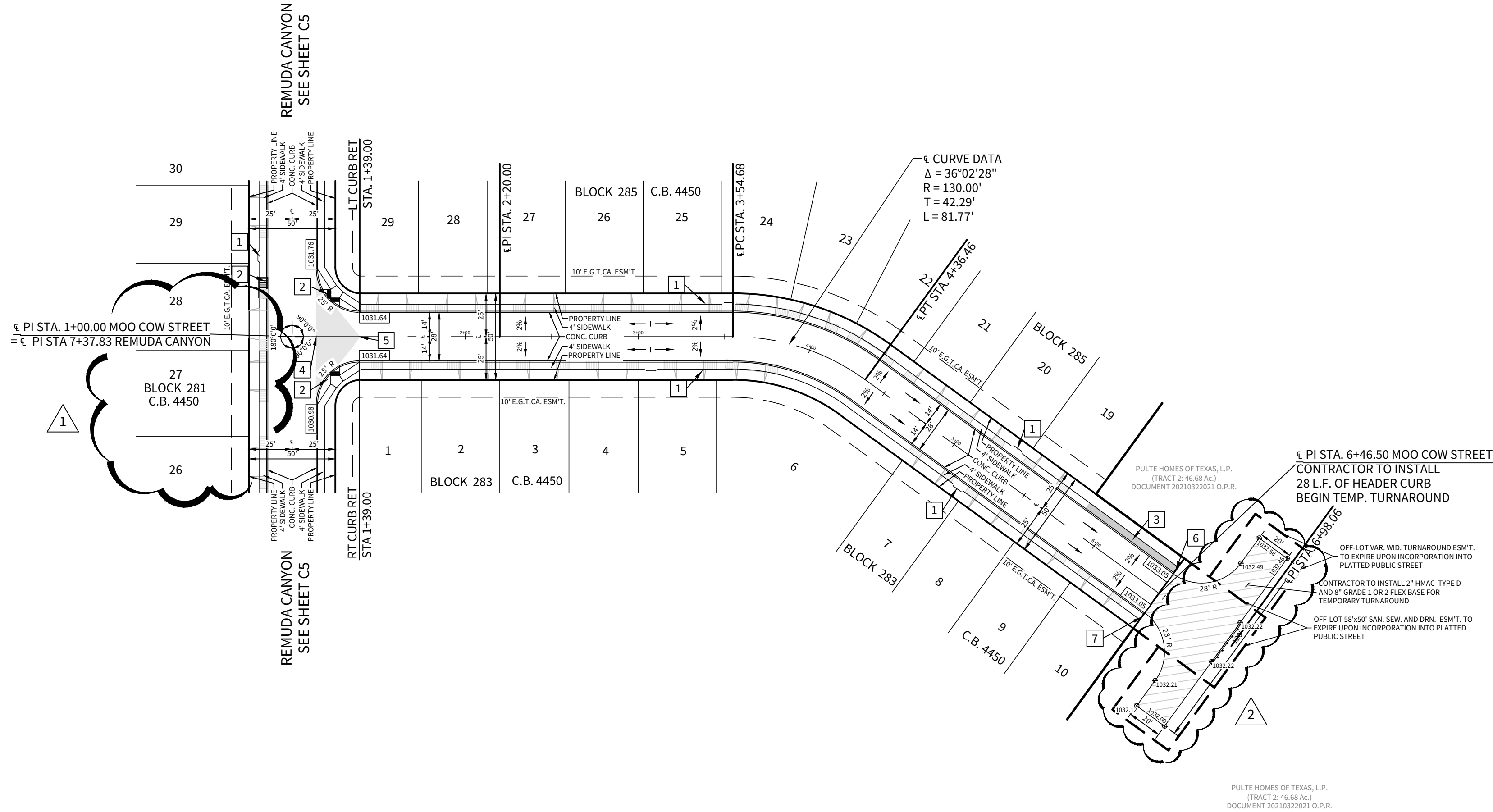
- CONTRACTOR TO INSTALL 5' X 5' SIDEWALK PASSING SPACE WITH HOMEBUILDING
- CONTRACTOR TO CONSTRUCT ADA RAMP AT THE TIME OF HOMEBUILDING
- CONTRACTOR TO INSTALL SIDEWALK WITH INFRASTRUCTURE
- BEGIN WASHOUT STA. 1+14.00
- END WASHOUT STA. 1+39.00
- A 5' X 5' ADA COMPLIANT WHEELCHAIR TURNAROUND TO BE CONSTRUCTED AT SIDEWALK TERMINUS AT THE TIME OF INFRASTRUCTURE CONSTRUCTION
- A 5' X 5' ADA COMPLIANT WHEELCHAIR TURNAROUND TO BE CONSTRUCTED AT SIDEWALK TERMINUS AT THE TIME OF HOMEBUILDING

LEGEND:

- TEMPORARY TURNAROUND
- PROPOSED DRIVEWAY LOCATION
- STREET WASHOUT
- SIDEWALK TO BE CONSTRUCTED WITH INFRASTRUCTURE

TxDOT TYPE "2" WHEEL CHAIR RAMPS ARE INDICATED THUS " " OR " " UNLESS OTHERWISE NOTED. (SHEET C15)
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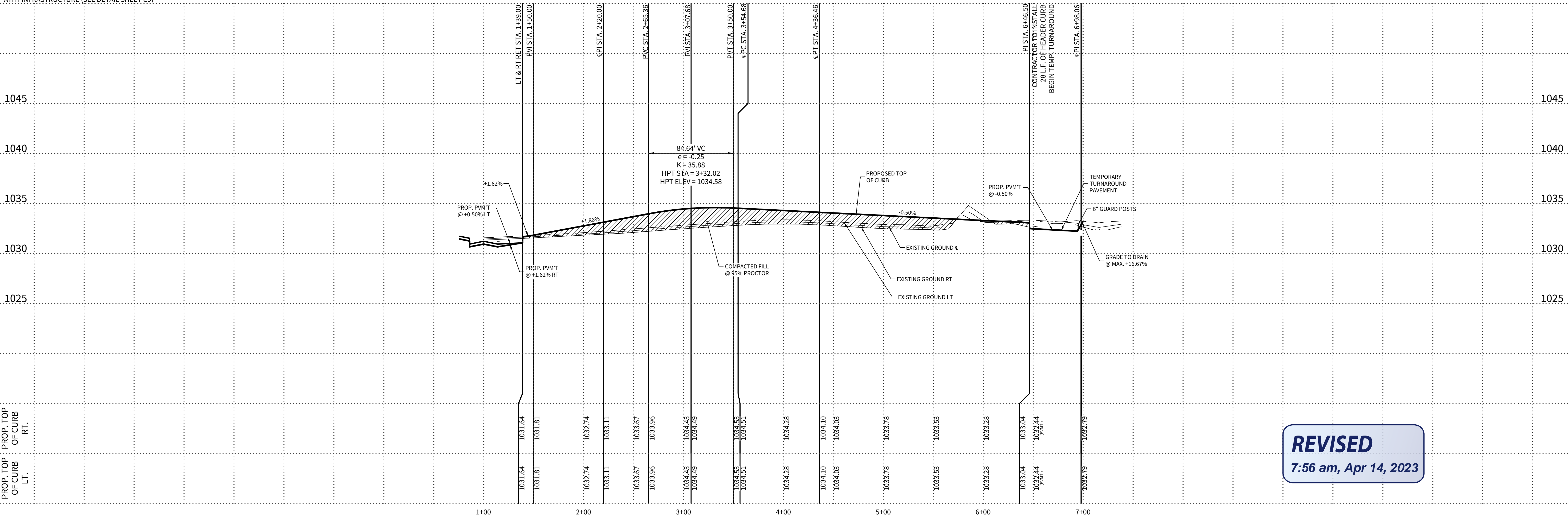
FOR ADA RAMPS AT SIDEWALK INTERSECTIONS.
DETECTABLE WARNING PAVEMENT WITH TRUNCATED DOMES ONLY. ADA RAMPS TO BE CONSTRUCTED WITH INFRASTRUCTURE (SEE DETAIL SHEET C9).



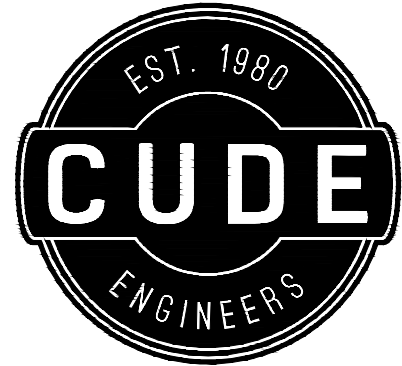
MOO COW STREET

STA. 1+00.00 TO STA. 6+94.27

NOTE: A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY RIGHT OF WAY
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



REVISED
7:56 am, Apr 14, 2023



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McCrary Tract
Unit 14

STREET PLAN & PROFILE - MOO COW STREET

DATE

04/12/2023

PROJECT NO.

02142.051

DRAWN BY

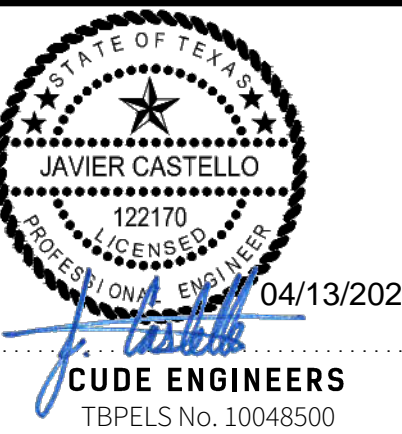
JR

CHECKED BY

TCD/JC/DDC

REVISIONS

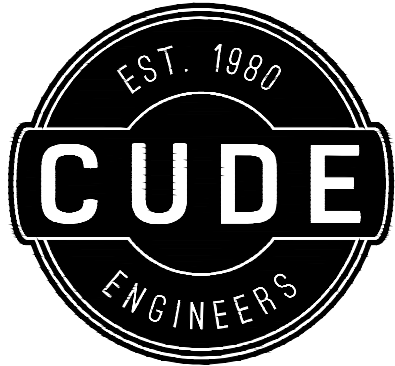
- 20230406 - REVISED REMUDA CANYON LOTS 26-28 & DRIVEWAYS
- 20230411 - REVISED TEMPORARY TURNAROUND LINEWORK



PLAT NO.

22-11800196

C6

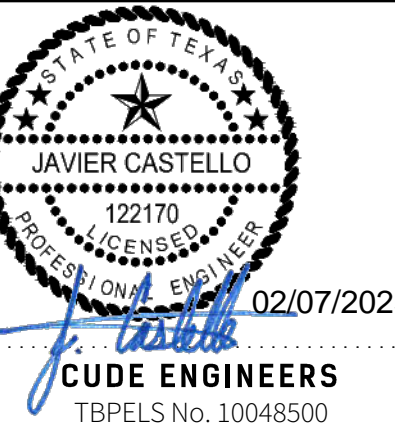


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MCCRARY TRACT
UNIT 14
STREET PLAN & PROFILE - BIZNAGA

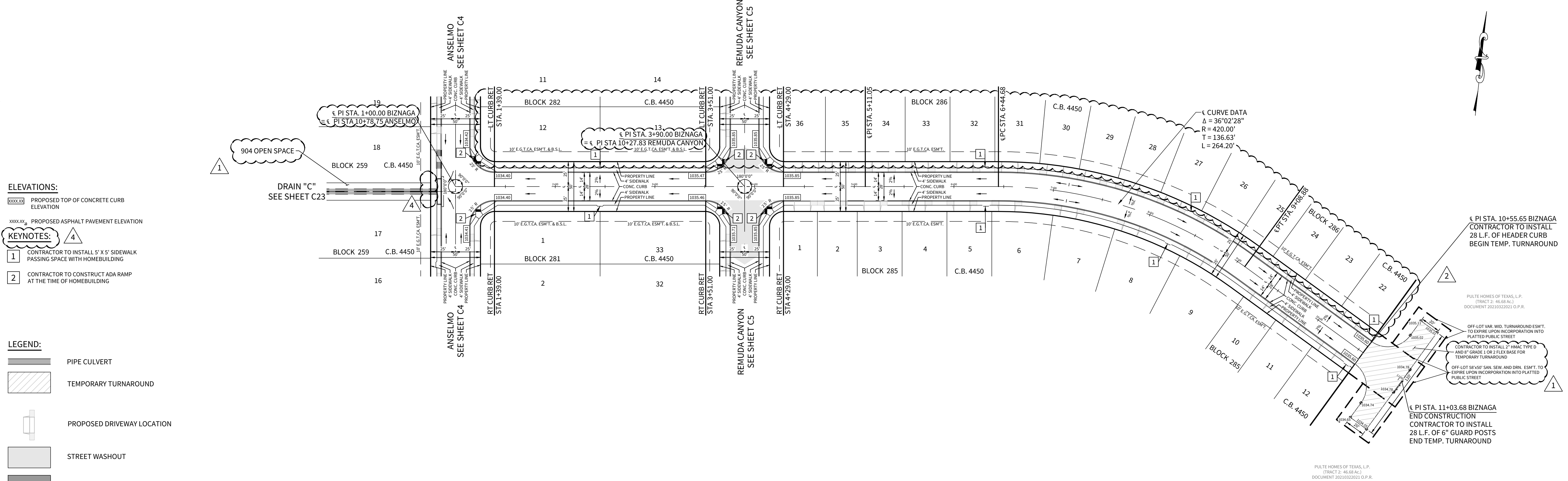
DATE
02/06/2023
PROJECT NO.
02142.051
DRAWN BY
JR
CHECKED BY
TCD/JC/DDC

REVISIONS	
1	NOTE: ADDED PLAT NO. LABEL, ADDED BEAR COUNTY
2	20220922 - REVISED UNIT BOUNDARY, UPDATE LOTS SHOWN
3	202310 - ADDED INTERSECTION CALL-OUTS
4	202306 - ADDED PERCENT GRADE, REVISED REMARKS
5	
6	
7	
8	



CUDE ENGINEERS
TBPELS No. 10048500
PLAT NO.
22-11800196

C7

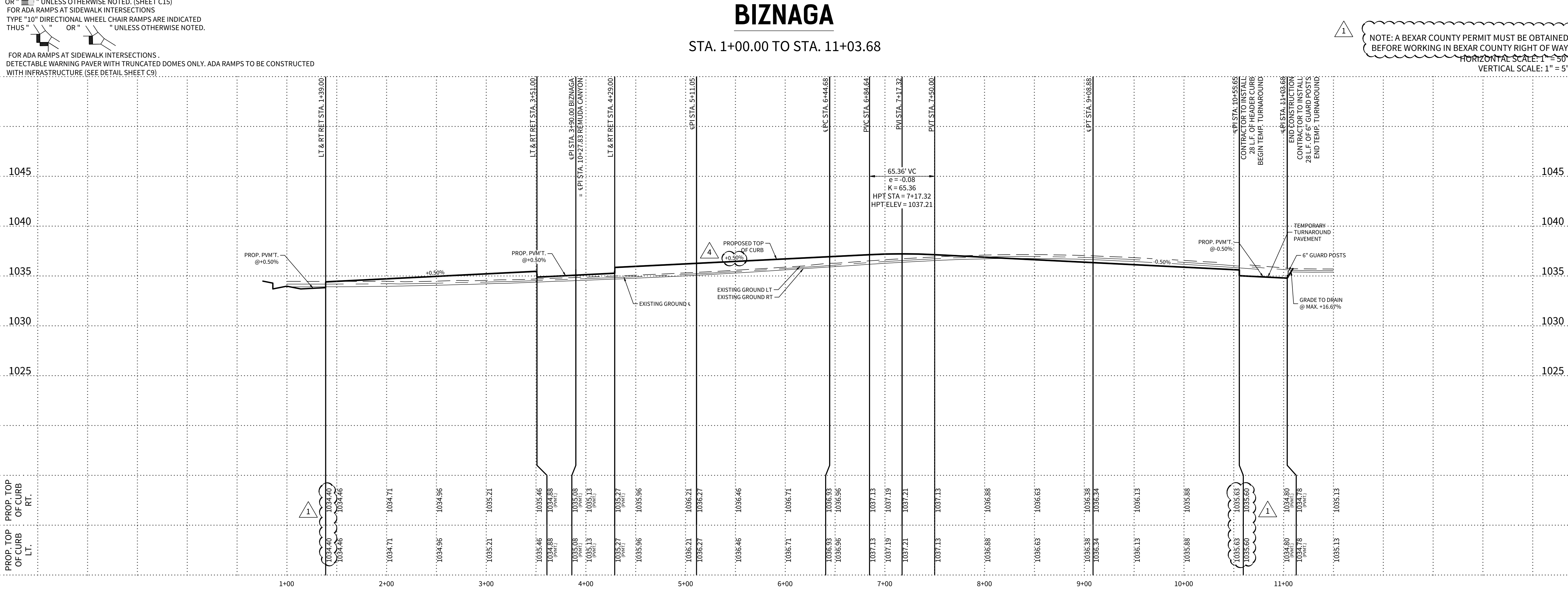


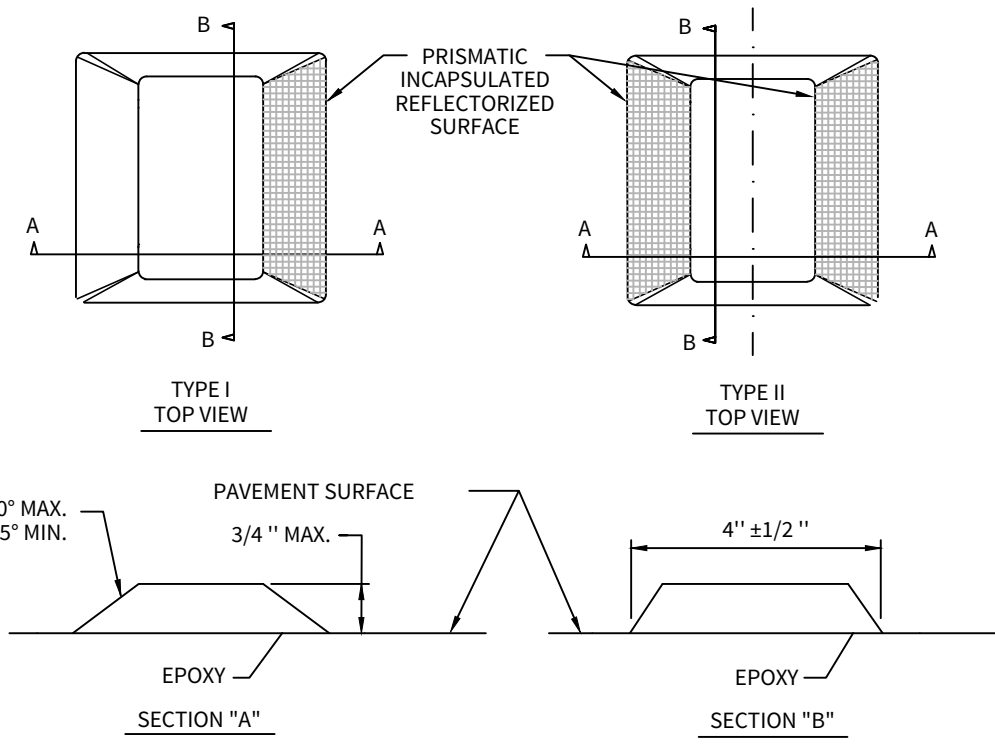
- ELEVATIONS:**
XXXX.XX PROPOSED TOP OF CONCRETE CURB ELEVATION
XXXX.XX PROPOSED ASPHALT PAVEMENT ELEVATION
- KEYNOTES:**
- CONTRACTOR TO INSTALL 5' X 5' SIDEWALK PASSING SPACE WITH HOMEBUILDING
 - CONTRACTOR TO CONSTRUCT ADA RAMP AT THE TIME OF HOMEBUILDING

- LEGEND:**
- PIPE CULVERT
 - TEMPORARY TURNAROUND
 - PROPOSED DRIVEWAY LOCATION
 - STREET WASHOUT
 - SIDEWALK TO BE CONSTRUCTED WITH INFRASTRUCTURE

TxDOT TYPE "2" WHEEL CHAIR RAMPS ARE INDICATED THUS " " OR " " UNLESS OTHERWISE NOTED. (SHEET C15)
FOR ADA RAMPS AT SIDEWALK INTERSECTIONS
TYPE "10" DIRECTIONAL WHEEL CHAIR RAMPS ARE INDICATED THUS " " OR " " UNLESS OTHERWISE NOTED.

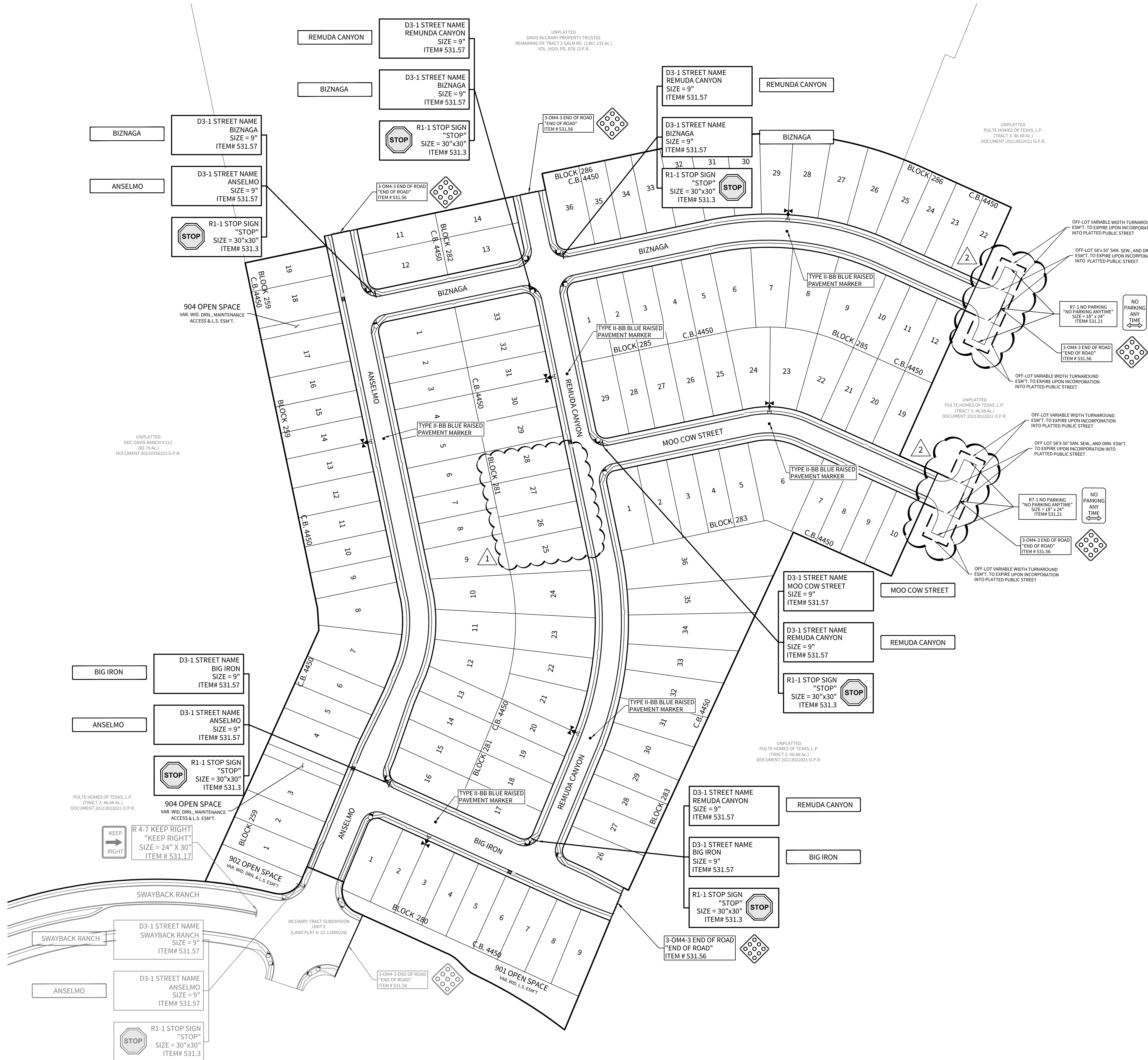
FOR ADA RAMPS AT SIDEWALK INTERSECTIONS.
DETECTABLE WARNING PAVER WITH TRUNCATED DOMES ONLY. ADA RAMPS TO BE CONSTRUCTED WITH INFRASTRUCTURE (SEE DETAIL SHEET C9).



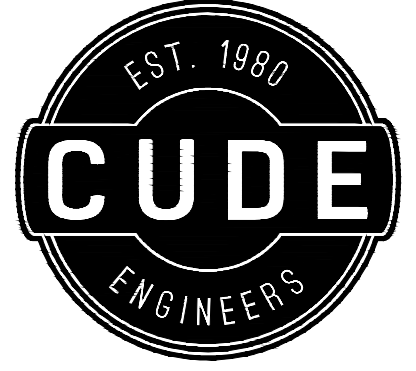


PAVEMENT REFLECTORS DETAIL
N.T.S.

- 1) REFLECTORIZED BLUE - FIRE HYDRANT
- 2) ADHESIVE SHALL BE APPLIED IN SUFFICIENT TO ENSURE THE FOLLOWING:
 - a) 100 PERCENT OF THE BONDING AREA OF RAISED PAVEMENT MARKERS SHALL BE IN CONTACT WITH THE ADHESIVE.
 - b) RAISED PAVEMENT MARKERS SHALL NOT BE IN CONTACT WITH THE PAVEMENT SURFACE, BUT SHALL BE SEATED ON A CONTINUOUS LAYER OF ADHESIVE.
 - c) BITUMINOUS ADHESIVE FOR MARKERS ON BITUMINOUS PAVEMENTS. EPOXY ADHESIVE FOR MARKERS ON PORTLAND CEMENT CONCRETE PAVEMENTS. EPOXY ADHESIVE SHALL BE MACHINE MIXED.
- 3) RAISED PAVEMENT MARKERS SHALL BE FREE OF RUST, SCALE, DIRT, OIL, GREASE, MOISTURE, OR CONTAMINANTS WHICH MIGHT ADVERSELY AFFECT THE ADHESIVE BOND. ADHESIVE OR ANY OTHER MATERIAL THAT IMPAIRS THE FUNCTIONAL REFLECTIVITY WILL NOT BE ACCEPTABLE.
- 4) PLACEMENT OF RAISED PAVEMENT MARKERS SHALL BE 4 FEET OFF STREET CENTELINE TOWARD ITEM MARKED.



REVISED
7:57 am, Apr 14, 2023

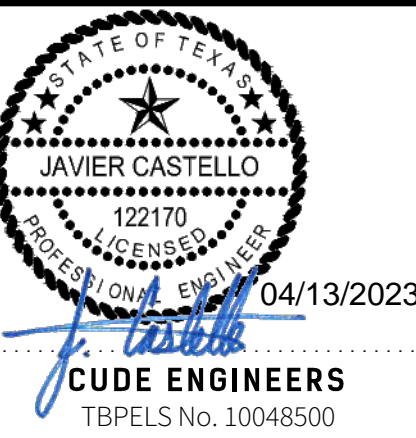


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McCrary Tract
Unit 14
TRAFFIC SIGNAGE PLAN

DATE
04/12/2023
PROJECT NO.
02142.051
DRAWN BY
JR
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TCD/JC/DDC

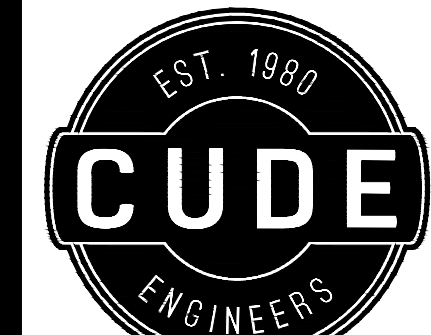
REVISIONS							
1.	20230406	REVISED REMUDA CANYON LOTS 25-28	2	20230411	REVISED TEMPORARY TURNAROUND LAYOUT	3	
2.	20230411	REVISED TEMPORARY TURNAROUND LAYOUT	3		4		
3			4		5		
4			5		6		
5			6		7		
6			7		8		



PLAT NO.
22-11800196

C8

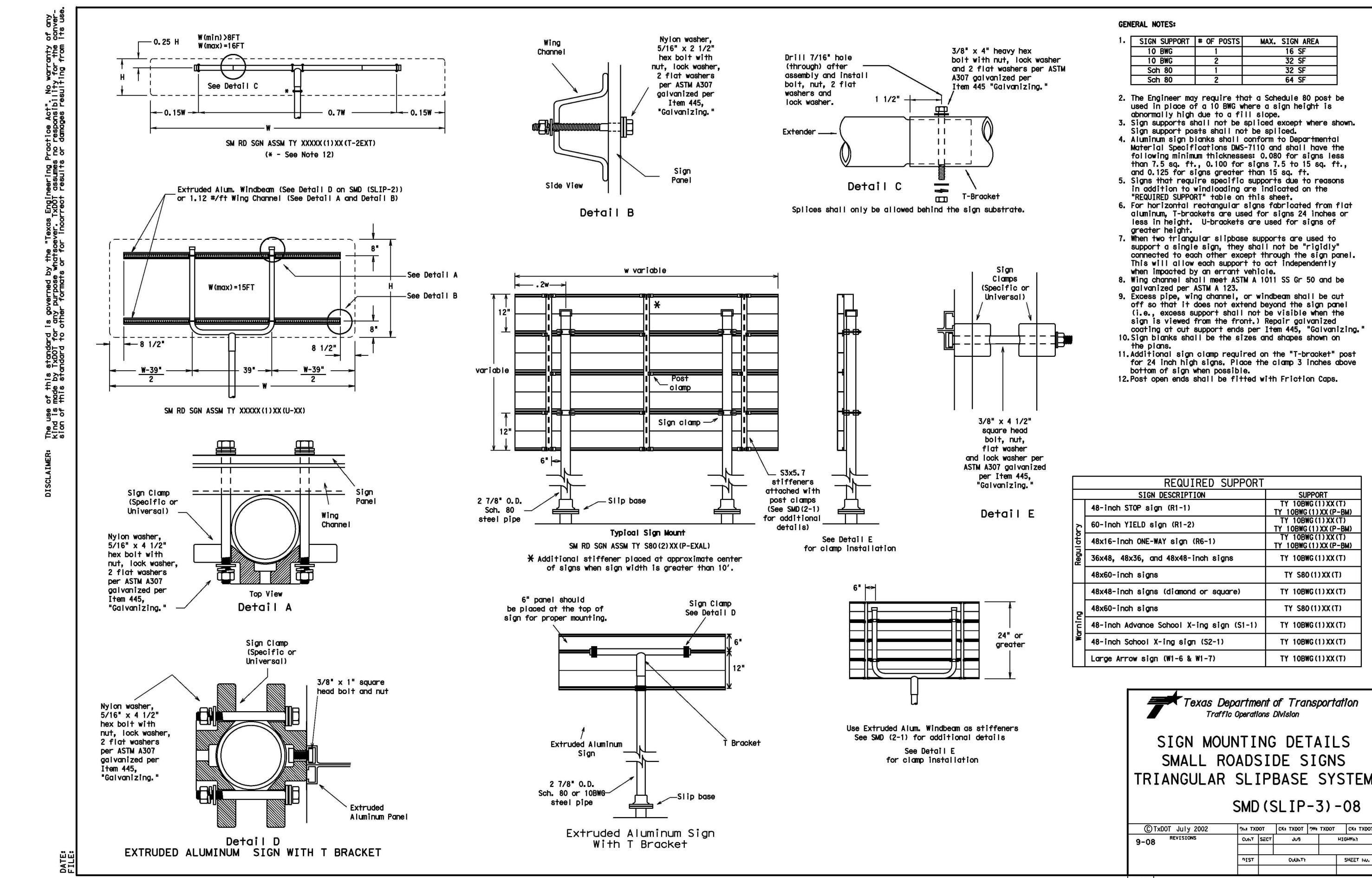
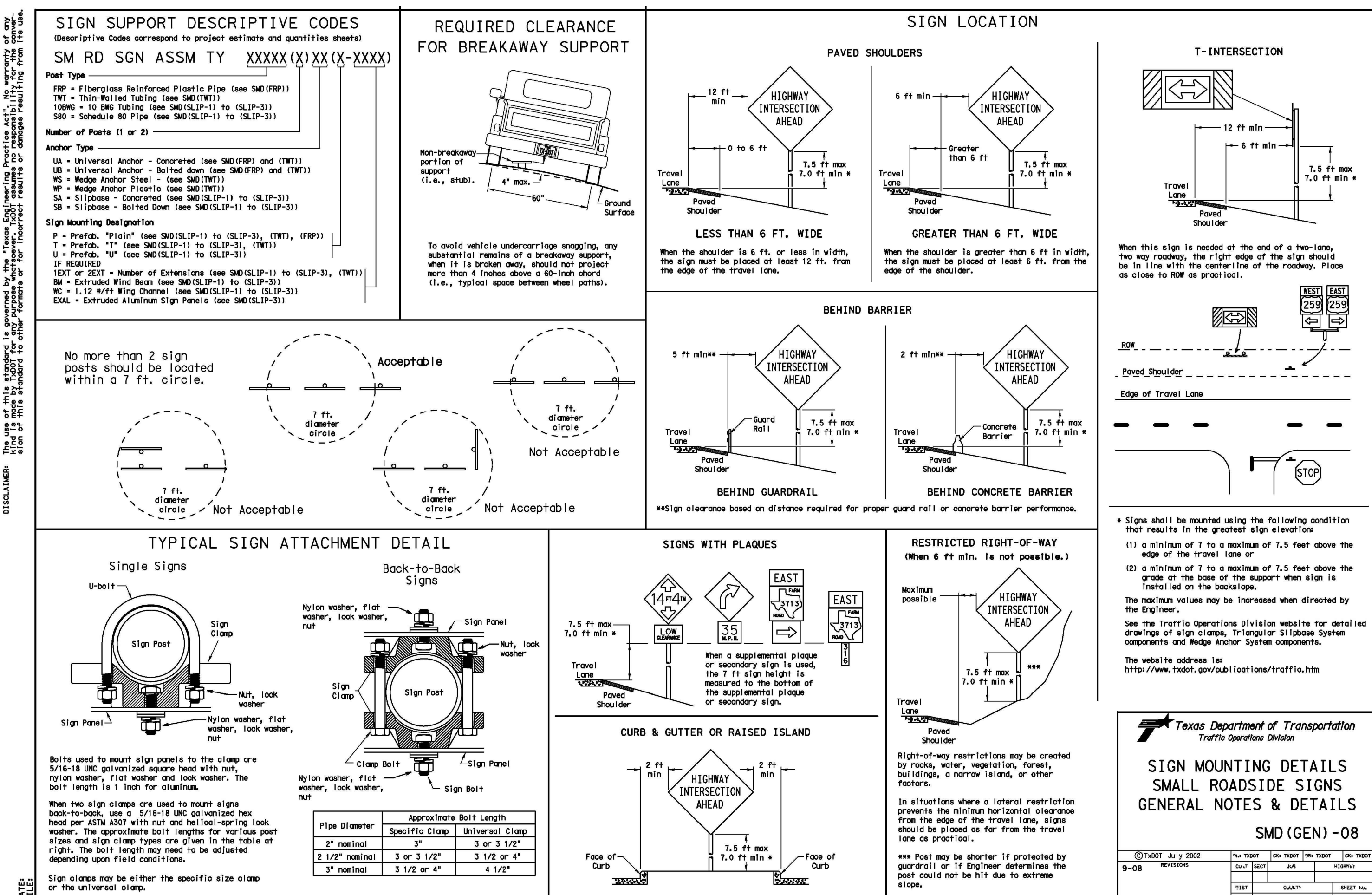
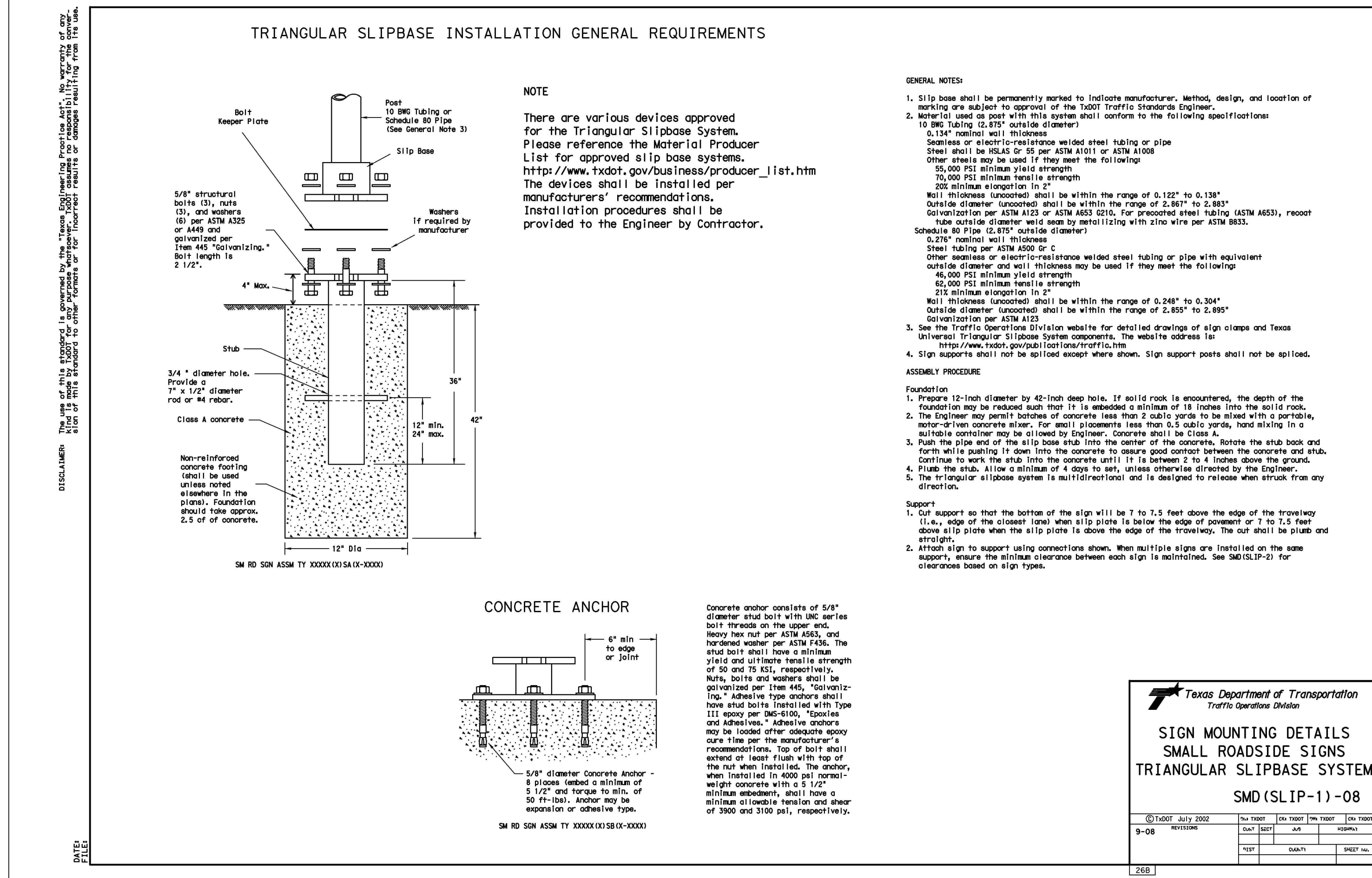
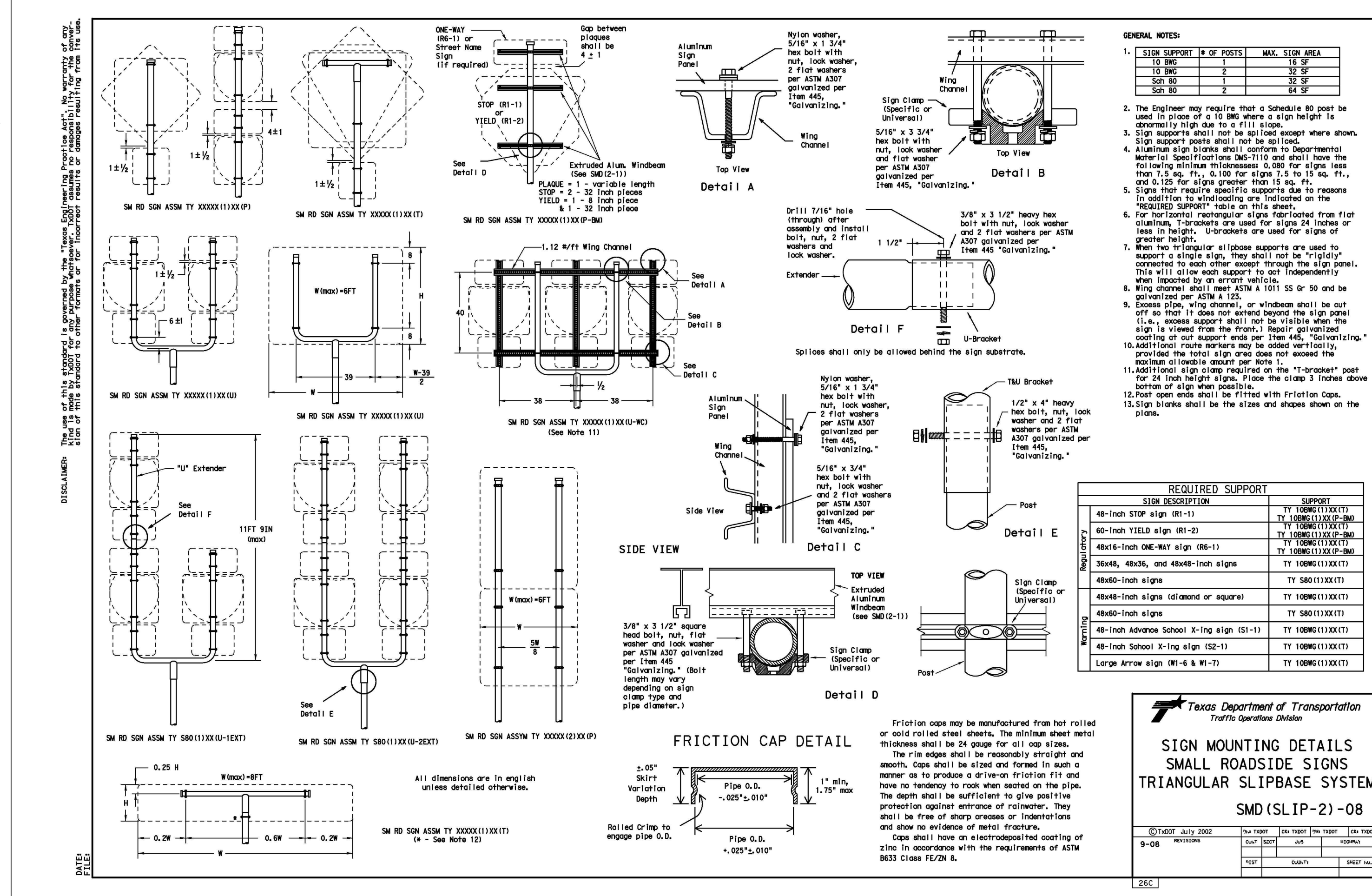
NOTE: A BEXAR COUNTY PERMIT MUST BE OBTAINED
BEFORE WORKING IN BEXAR COUNTY RIGHT OF WAY



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McCRARY TRACT UNIT 14

SMALL ROADSIDE SIGNS GENERAL NOTES & DETAILS



DATE
04/01/2022

PROJECT NO.
02142.051

DRAWN BY
JR

CHECKED BY
TCD/JC/JDC

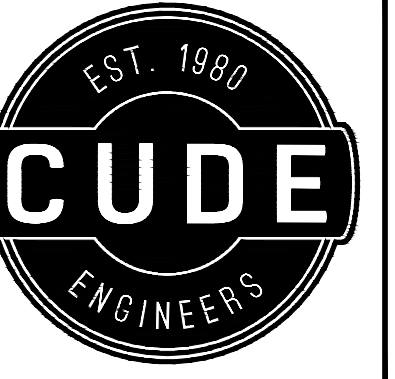
REVISIONS

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		
8		

CUDE ENGINEERS
TBPCLS No. 10048500

PLAT NO.
22-11800196

C10



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**MCCRARY TRACT
UNIT 14**

TXDOT PAVEMENT MARKING DETAILS

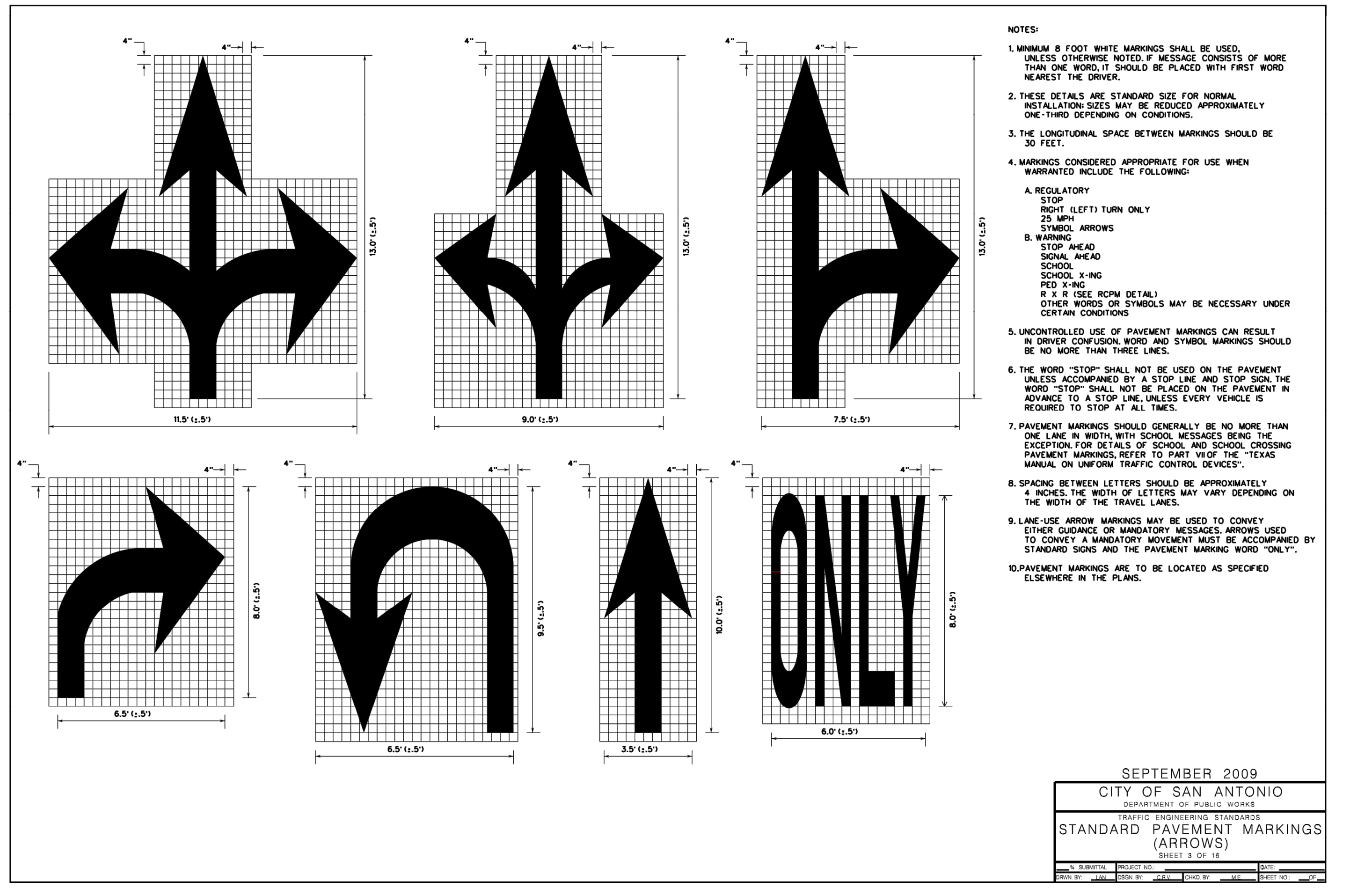
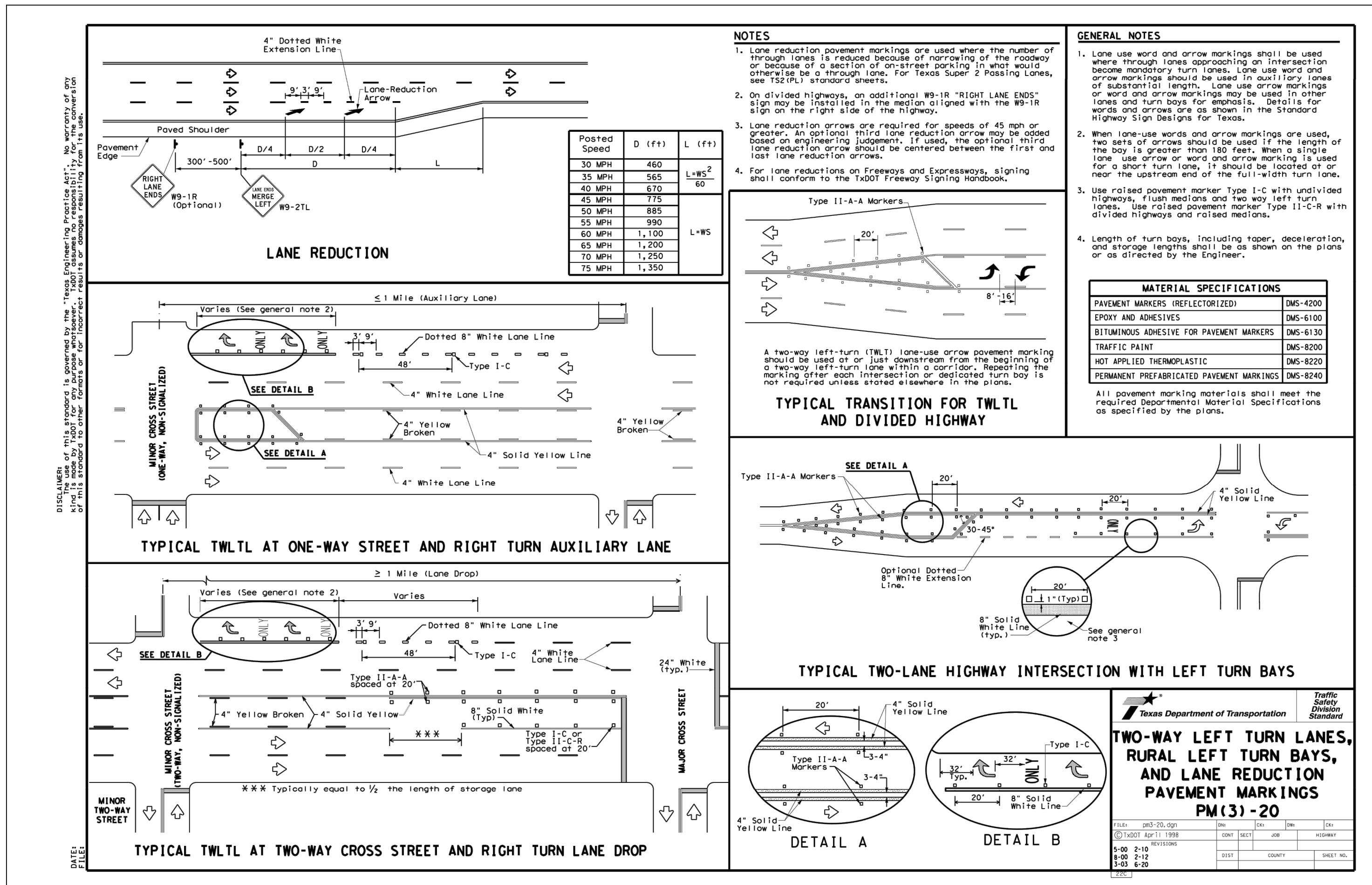
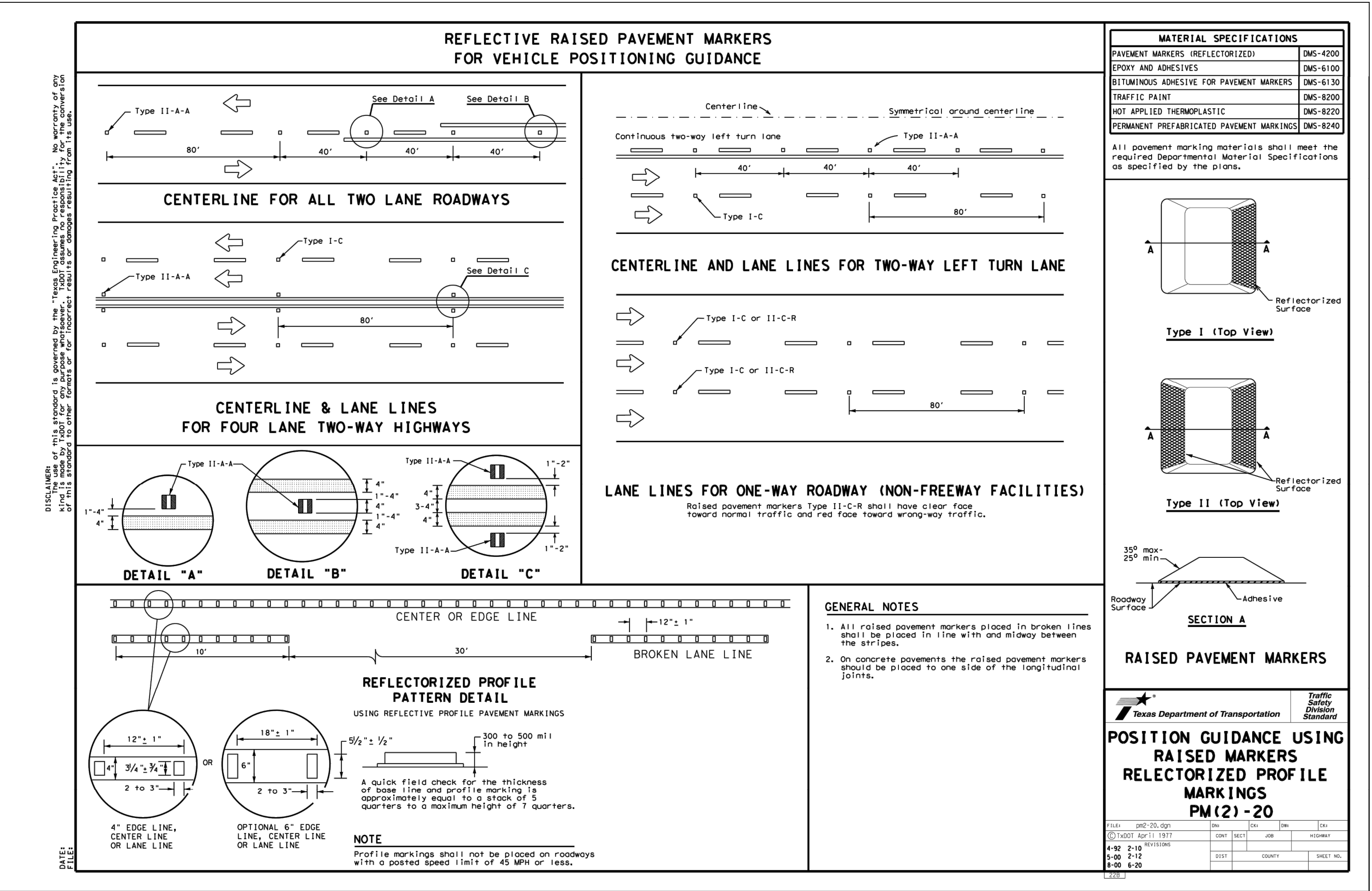
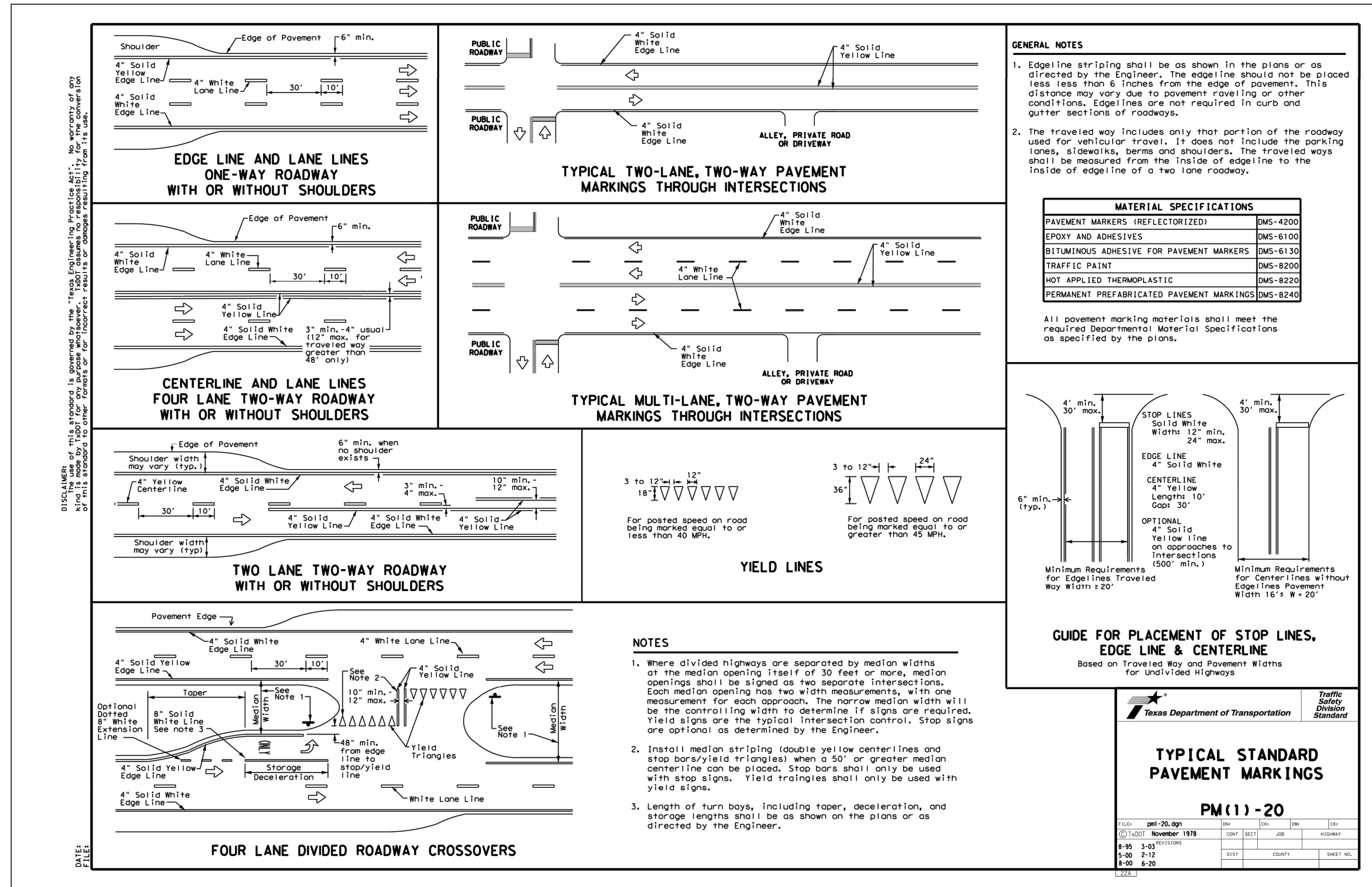
DATE
04/01/2022
PROJECT NO.
02142.051
DRAWN BY
JR
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TCD/JC/DDC

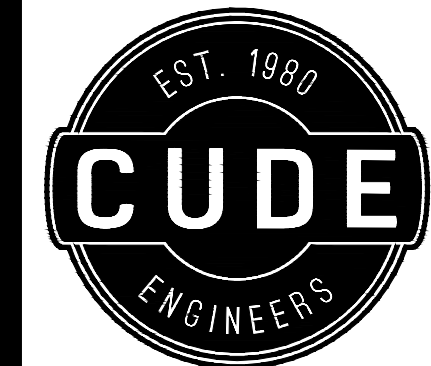
REVISIONS
1. 2. 3. 4. 5. 6. 7. 8.

CUDE ENGINEERS
TBPES No. 10048500

PLAT NO.
22-11800196

C12





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San Antonio, Texas 78231
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McCrary Tract
UNIT 14

TYPICAL CONCRETE DRIVEWAY DETAILS

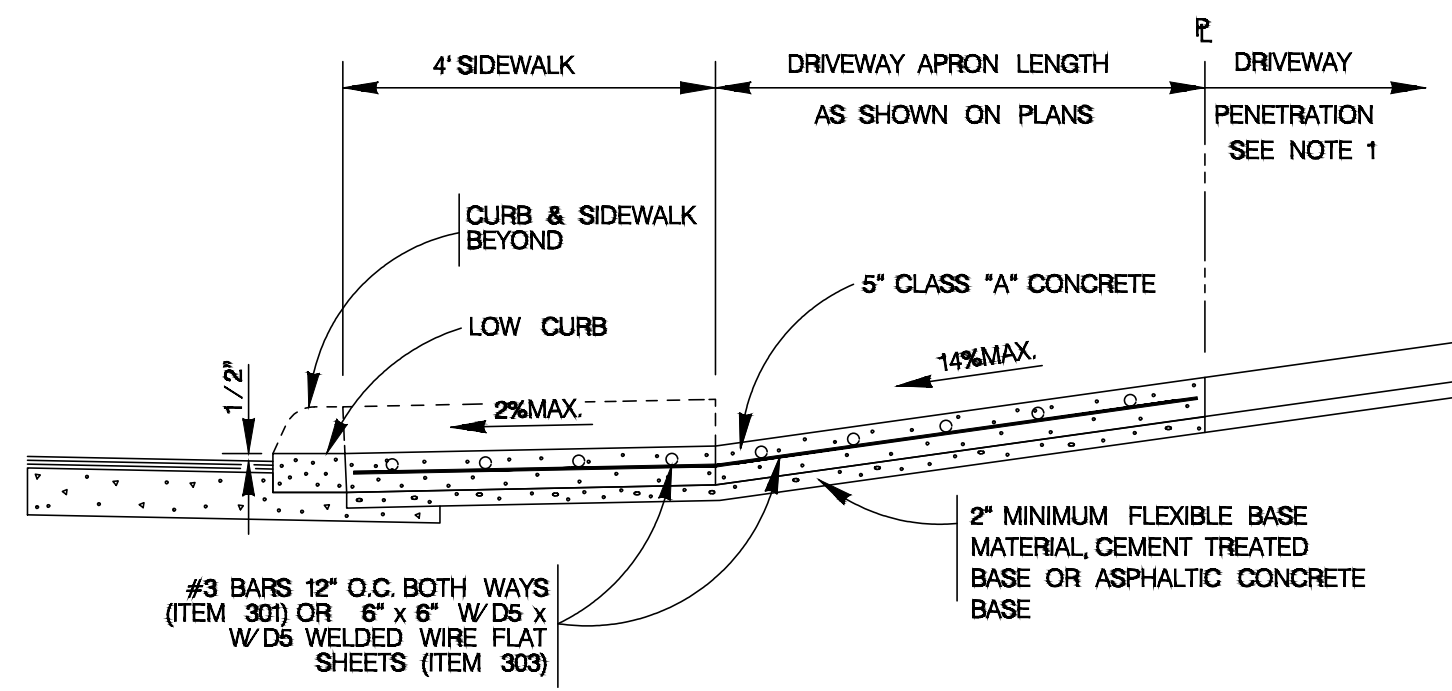
DATE
04/01/2022
PROJECT NO.
02142.051
DRAWN BY
JR
CHECKED BY
TCD/JC/DDC

REVISIONS	1.	2.	3.	4.	5.	6.	7.	8.

CUDE ENGINEERS
TBP/ELS No. 10048500

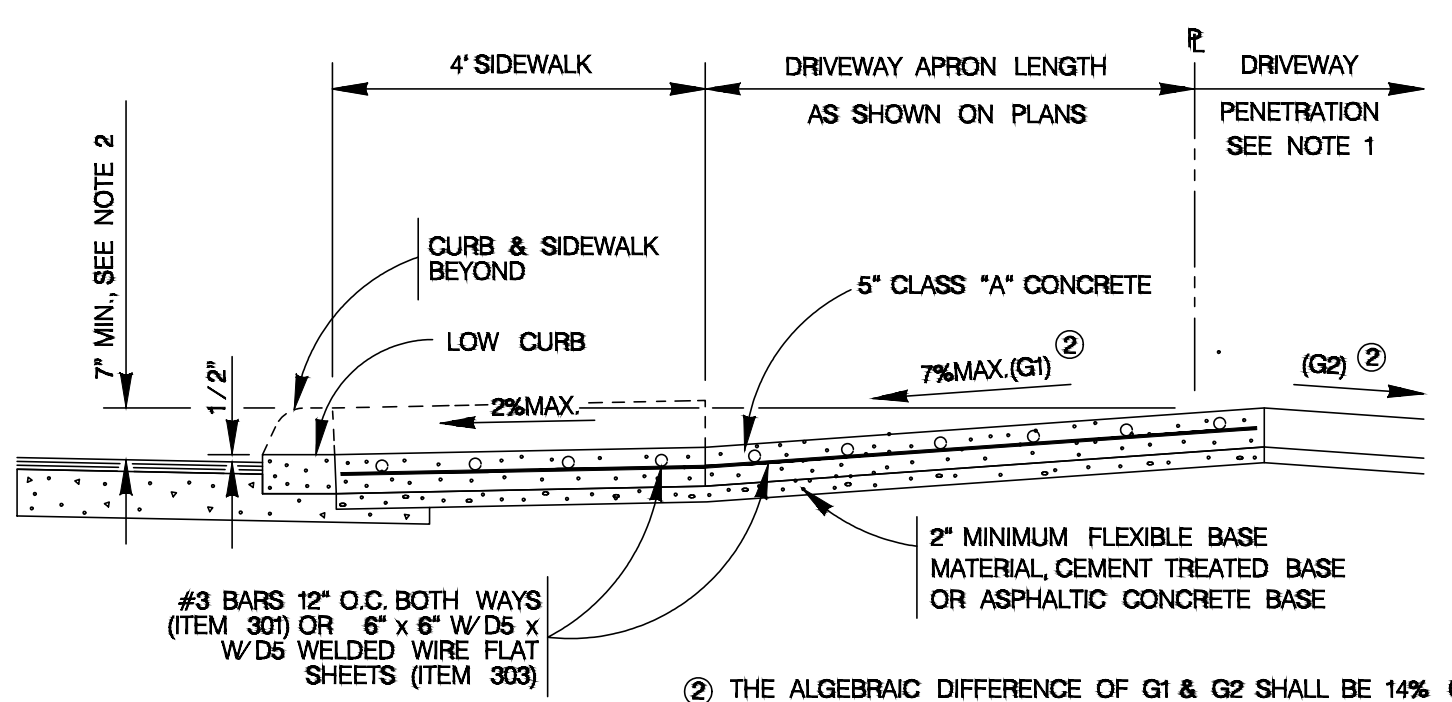
PLAT NO.
22-11800196

C13



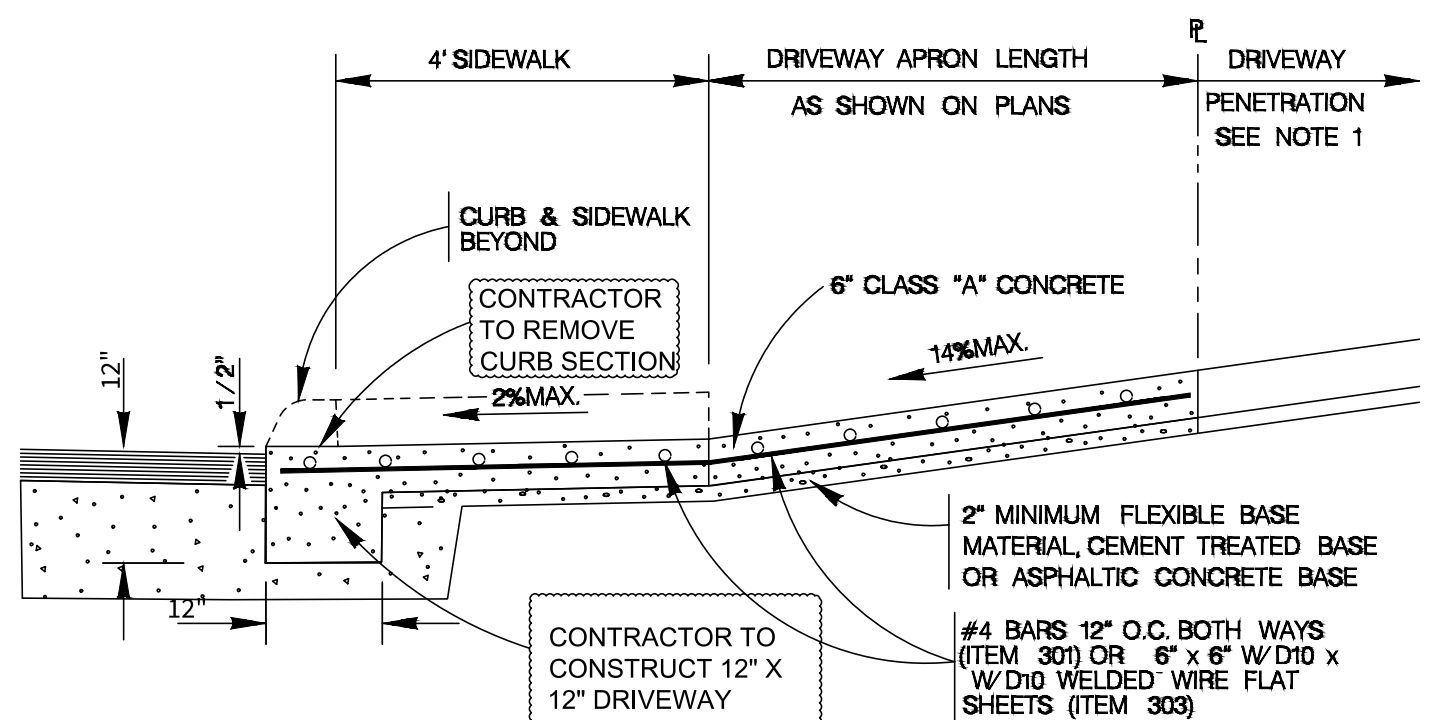
TYPICAL RESIDENTIAL DRIVEWAY SECTION

WITH SIDEWALK ABUTTING CURB
ITEM 503.1



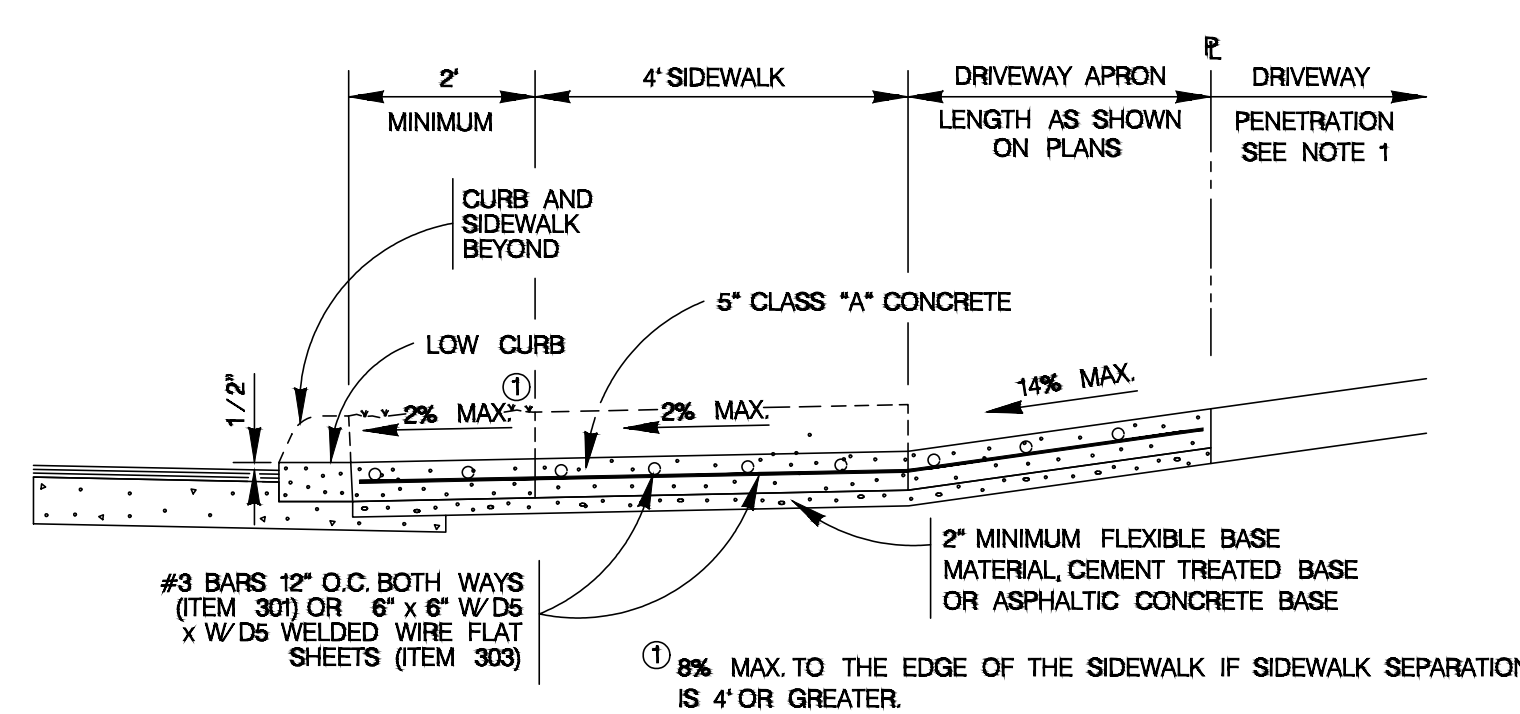
TYPICAL RESIDENTIAL DRIVEWAY SECTION

WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS ABUTTING CURB
ITEM 503.1



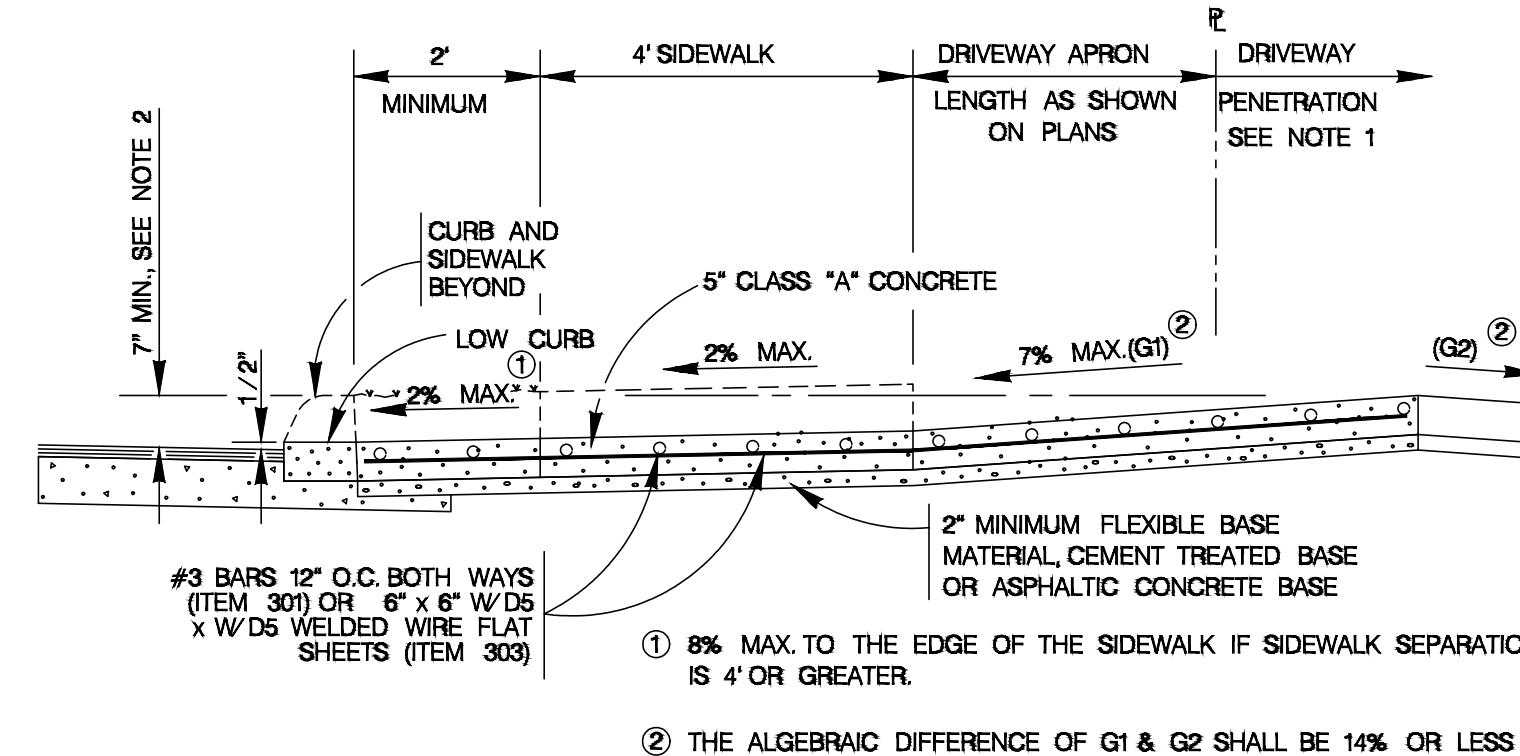
TYPICAL COMMERCIAL DRIVEWAY SECTION

WITH SIDEWALK ABUTTING CURB
ITEM 503.2



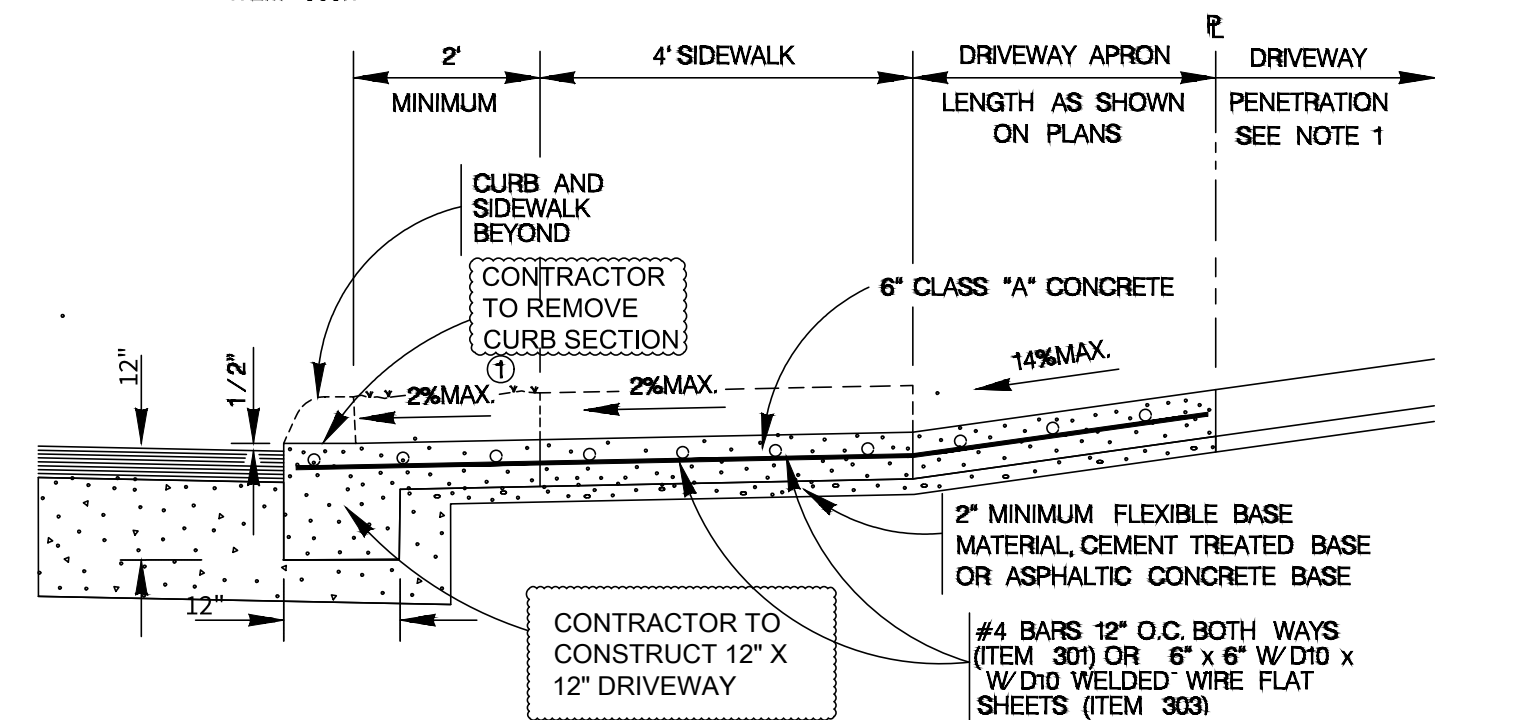
TYPICAL RESIDENTIAL DRIVEWAY SECTION

WITH SIDEWALK SEPARATED FROM CURB
ITEM 503.1



TYPICAL RESIDENTIAL DRIVEWAY SECTION

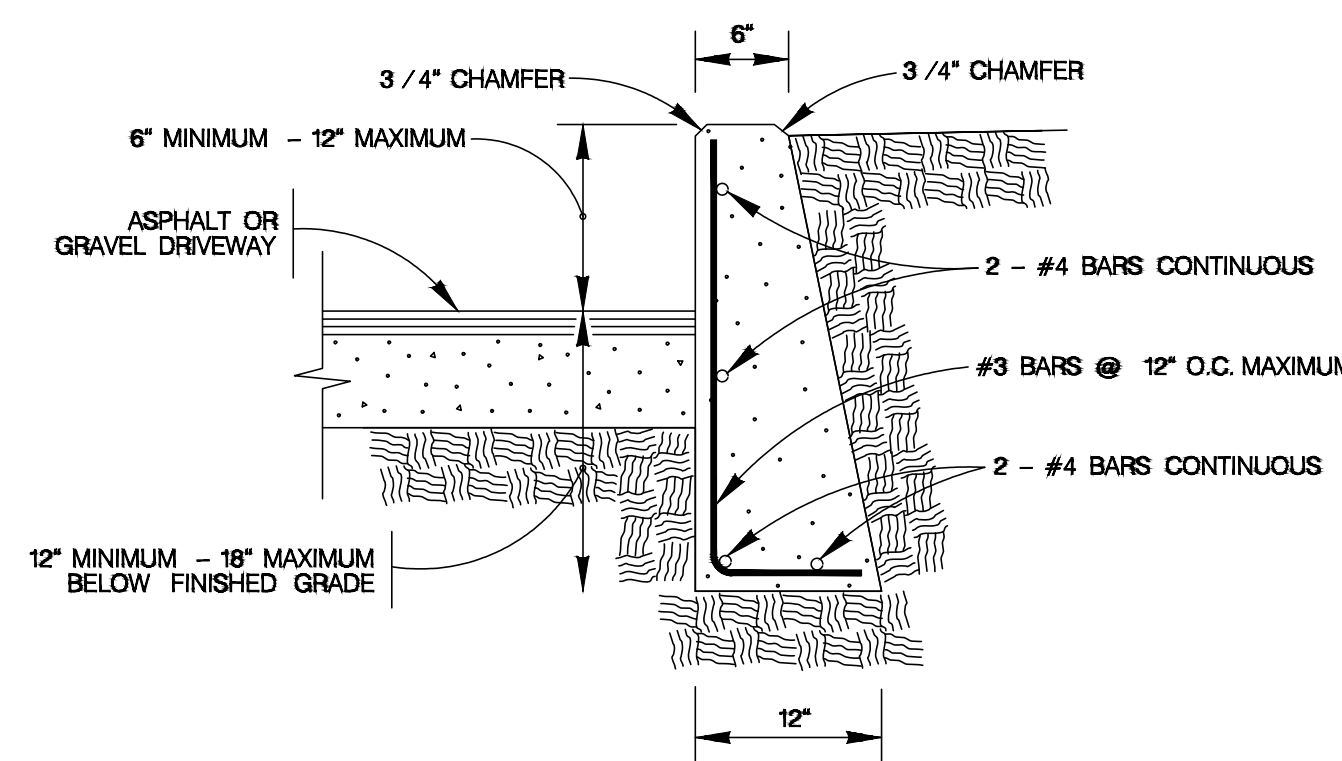
WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS SEPARATED FROM CURB
ITEM 503.1



TYPICAL COMMERCIAL DRIVEWAY SECTION

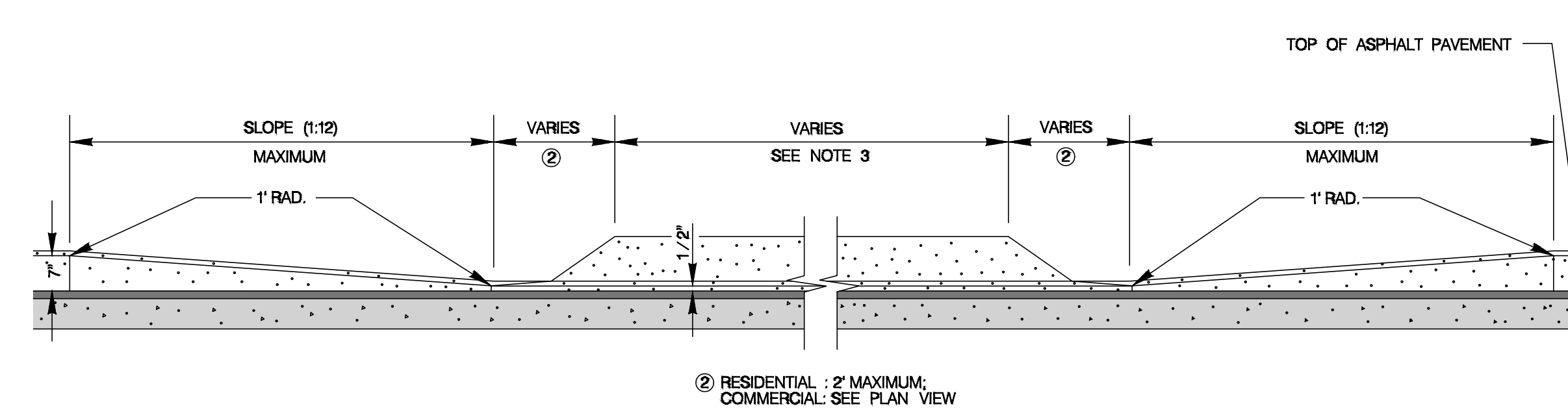
WITH SIDEWALK SEPARATED FROM CURB
ITEM 503.2

- CONCRETE DRIVEWAY NOTES**
- DRIVEWAY PENETRATION REFERS TO A PORTION OF THE DRIVEWAY THAT MAY BE NECESSARY TO RECONSTRUCT WITHIN PRIVATE PROPERTY TO COMPLY WITH A MAXIMUM DRIVEWAY SLOPE. THIS PORTION OF THE DRIVEWAY SHALL BE PAID FOR UNDER THE FOLLOWING ITEMS AS MAY APPLY:
A) CONCRETE DRIVEWAY PAID FOR UNDER ITEM NO. 503.1 OR 503.2.
B) ASPHALTIC CONCRETE DRIVEWAY PAID FOR UNDER ITEM NO. 503.4 AND SHALL INCLUDE A MINIMUM OF 1" ASPHALT TYPE 10' & 6" FLEXIBLE BASE
C) GRAVEL DRIVEWAY PAID FOR UNDER ITEM NO. 503.5 AND SHALL INCLUDE A MINIMUM OF 6" FLEXIBLE BASE
 - 7" MINIMUM HEIGHT WILL NOT NECESSARILY OCCUR AT THE PROPERTY LINE. IT MAY OCCUR WITHIN THE RIGHT OF WAY OR WITHIN THE DRIVEWAY PENETRATION ON PRIVATE PROPERTY.
 - THE PROPOSED DRIVEWAY SHOULD MATCH THE EXISTING WIDTH AT THE PROPERTY LINE BUT UNLESS AUTHORIZED BY THE CITY TRAFFIC ENGINEER, THE WIDTH SHALL BE WITHIN THE FOLLOWING VALUES:
- | TYPE | MINIMUM | MAXIMUM |
|----------------------|---------|---------|
| RESIDENTIAL | 10' | 20' |
| COMMERCIAL - ONE WAY | 12' | 20' |
| COMMERCIAL - TWO WAY | 24' | 30' |
- FOR LOCAL TYPE "A" STREETS, SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 3' FROM THE BACK OF CURB.
 - FOR OTHER THAN LOCAL TYPE "A" STREETS, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND SEPARATED A MINIMUM OF 3' FROM THE BACK OF CURB OR, AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.
 - DUMMY JOINTS PARALLEL TO THE CURB SHALL BE PLACED WHERE THE SIDEWALK MEETS THE DRIVEWAY. DUMMY JOINTS PERPENDICULAR TO THE CURB, AND WITHIN THE BOUNDARIES OF THE PARALLEL, DUMMY JOINTS, SHALL BE PLACED AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK.
 - A MINIMUM OF TWO ROUND AND SMOOTH DOWEL BARS 3/8" IN DIAMETER AND 18" IN LENGTH SHALL BE SPACED 18" APART AT EACH EXPANSION JOINT.
 - SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE. WHERE SIDEWALKS CROSS DRIVEWAYS, SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
 - SIDEWALK RAMP SURFACE SHALL BE BRUSH FINISHED.



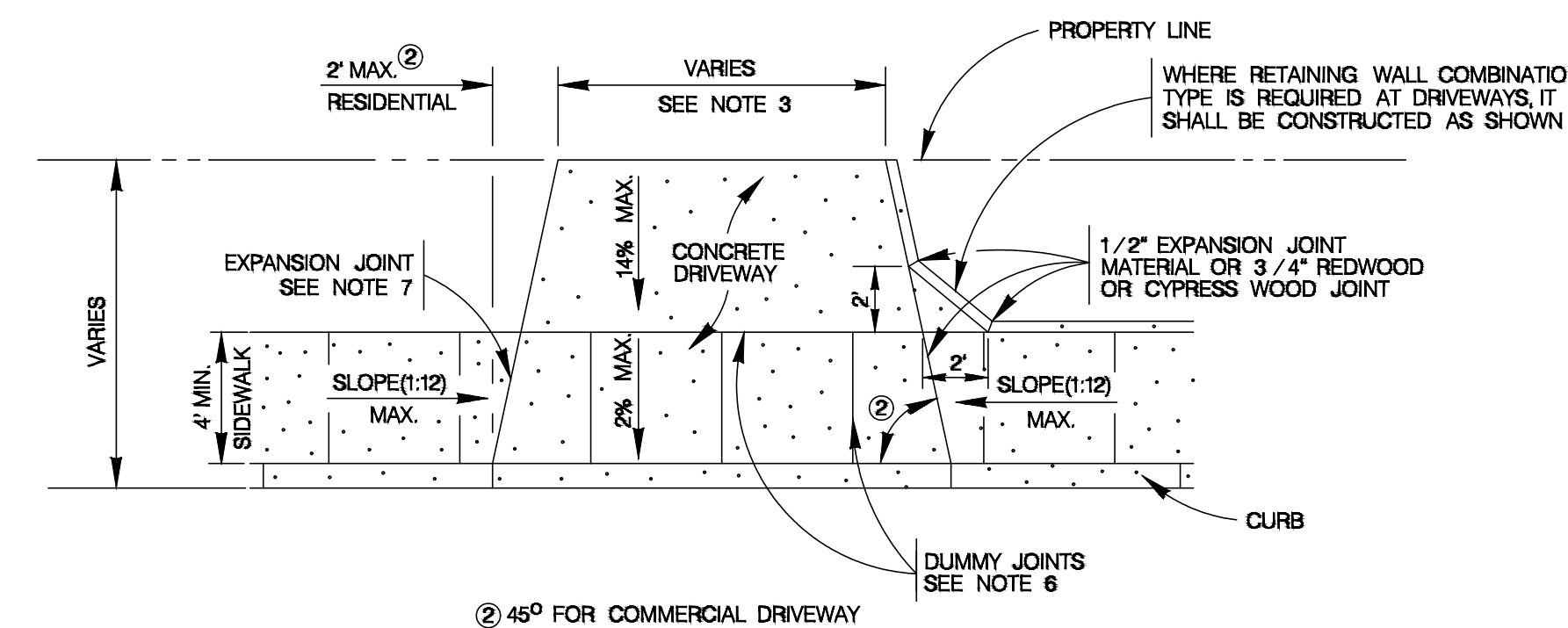
NOTE:
1. COST OF REINFORCEMENT TO BE INCLUDED IN UNIT COST OF ITEM 307.1.
2. CONCRETE RETAINING WALL COMBINATION TYPE SHALL BE USED FOR CONCRETE DRIVEWAYS.

DRIVEWAY - CONCRETE RETAINING WALL
ON COMPACTED SUBGRADE
ITEM 307.1



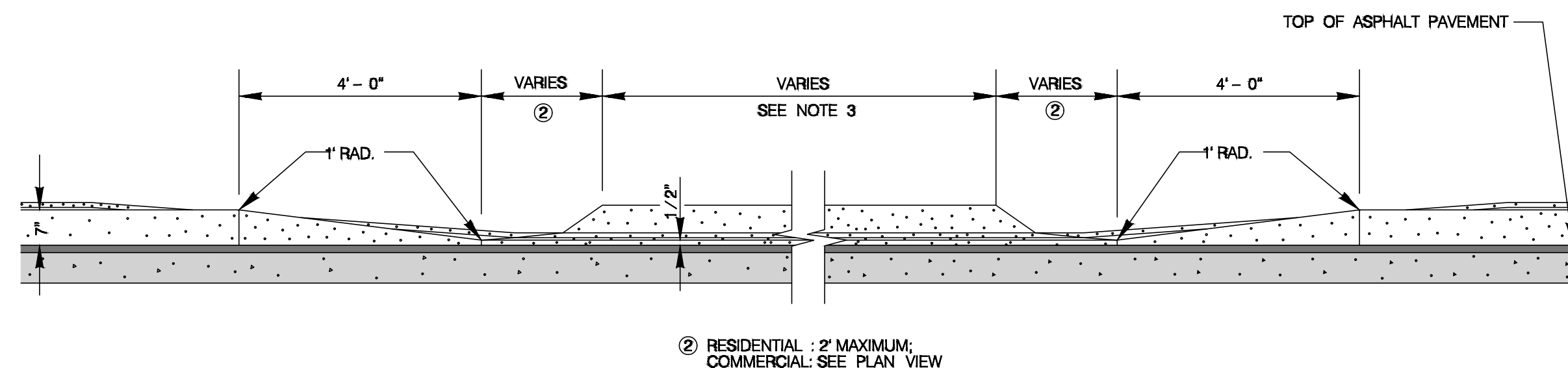
CURB PROFILE AT DRIVEWAY

WITH SIDEWALK ABUTTING CURB



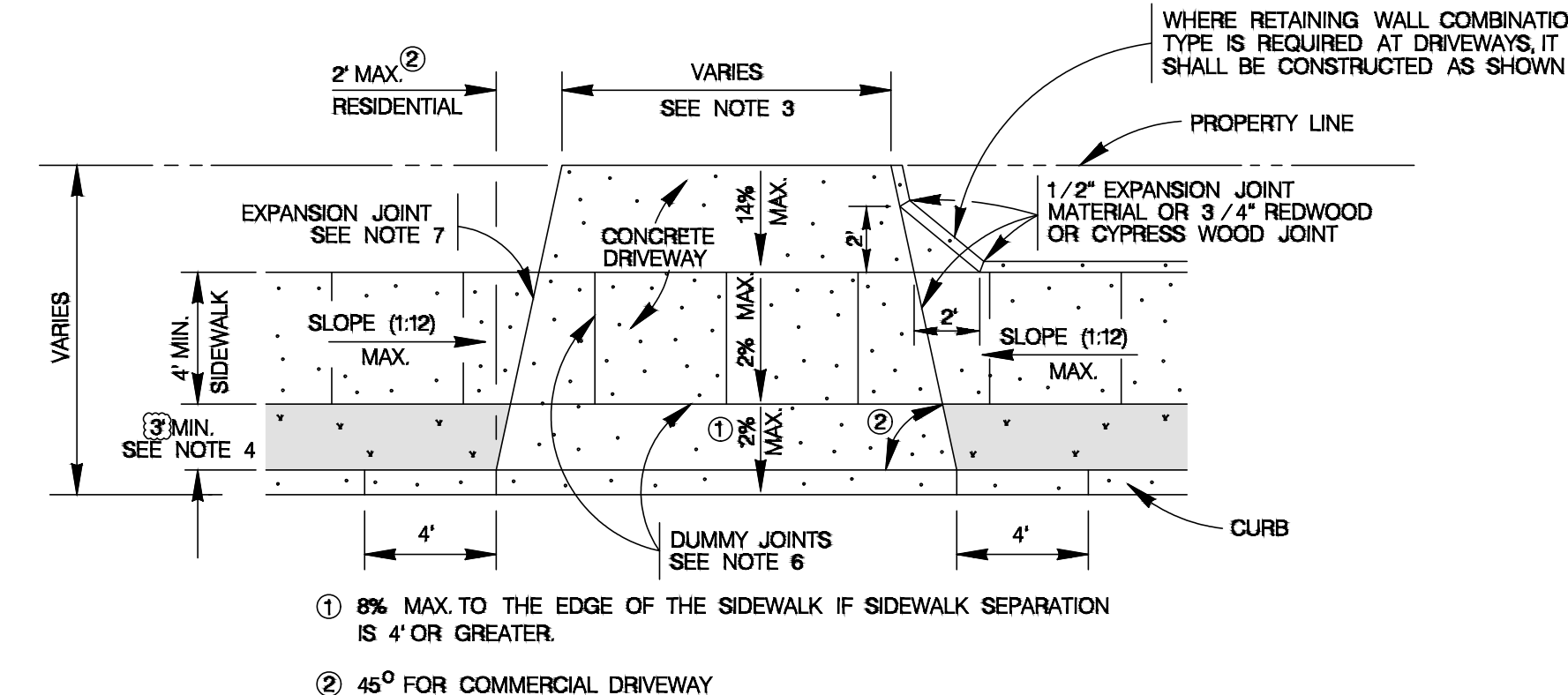
TYPICAL DRIVEWAY PLAN VIEW

WITH SIDEWALK ABUTTING CURB



CURB PROFILE AT DRIVEWAY

WITH SIDEWALK SEPARATED FROM CURB



TYPICAL DRIVEWAY PLAN VIEW

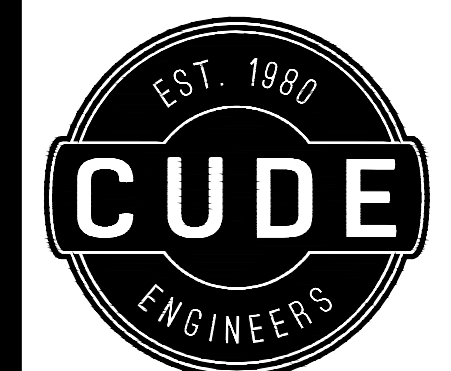
WITH SIDEWALK SEPARATED FROM CURB

MAY 2009

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

CONCRETE DRIVEWAY STANDARDS

% SUBMITTAL PROJECT NO.: DATE:
DRWN. BY: V. VASQUEZ DSGN. BY: CHKD. BY: R.S. HOSSEINI, P.E. SHEET NO.: OF:



4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F: (210) 523.7112

McCrary Tract
UNIT 14

WHEELCHAIR RAMPS STANDARDS

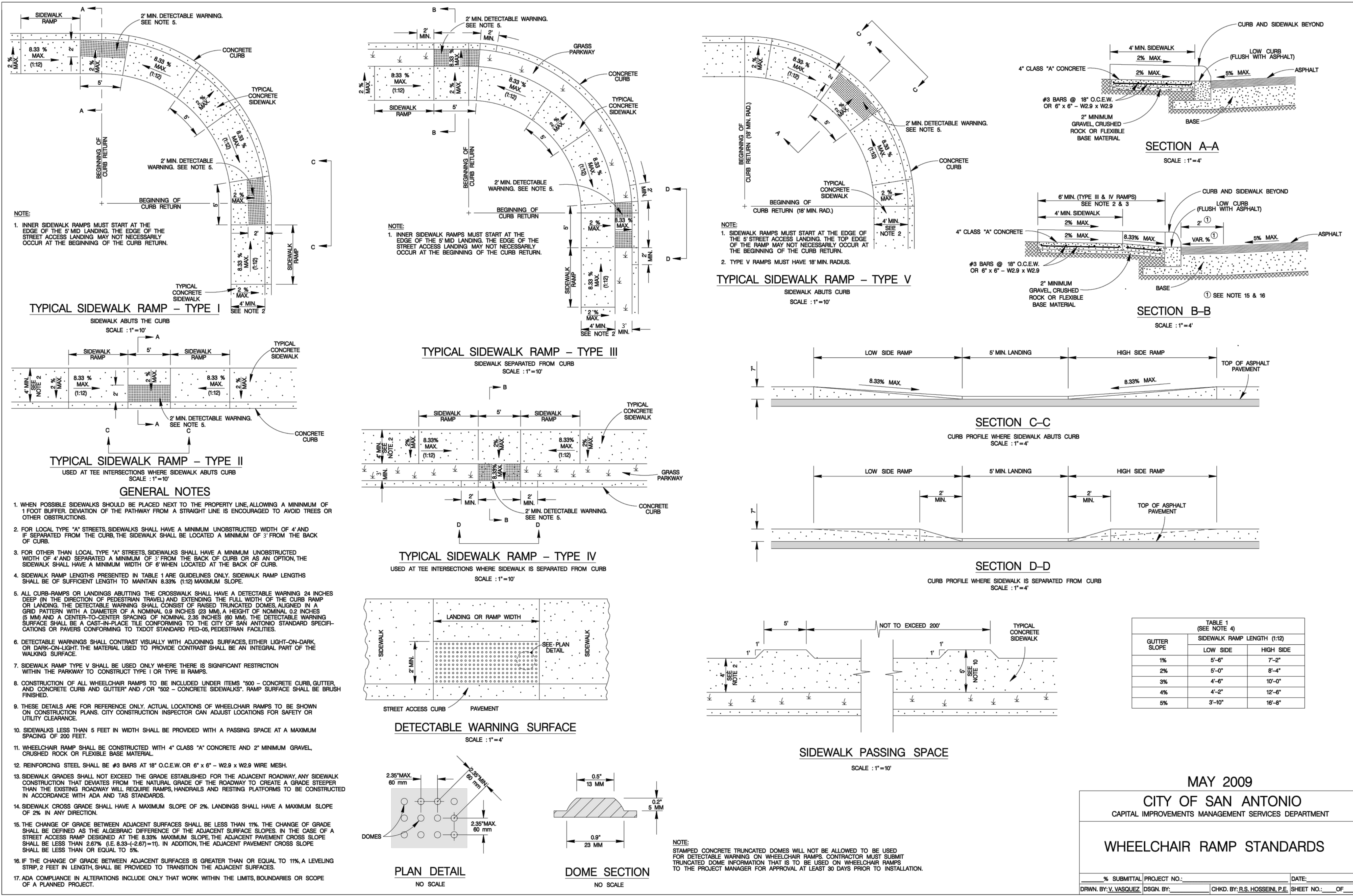
DATE
04/01/2022
PROJECT NO.
02142.051
DRAWN BY
JR
CHECKED BY
TCD/JC/DDC

REVISIONS							
1.	2.	3.	4.	5.	6.	7.	8.

CUDE ENGINEERS
TBPELS No. 10048500

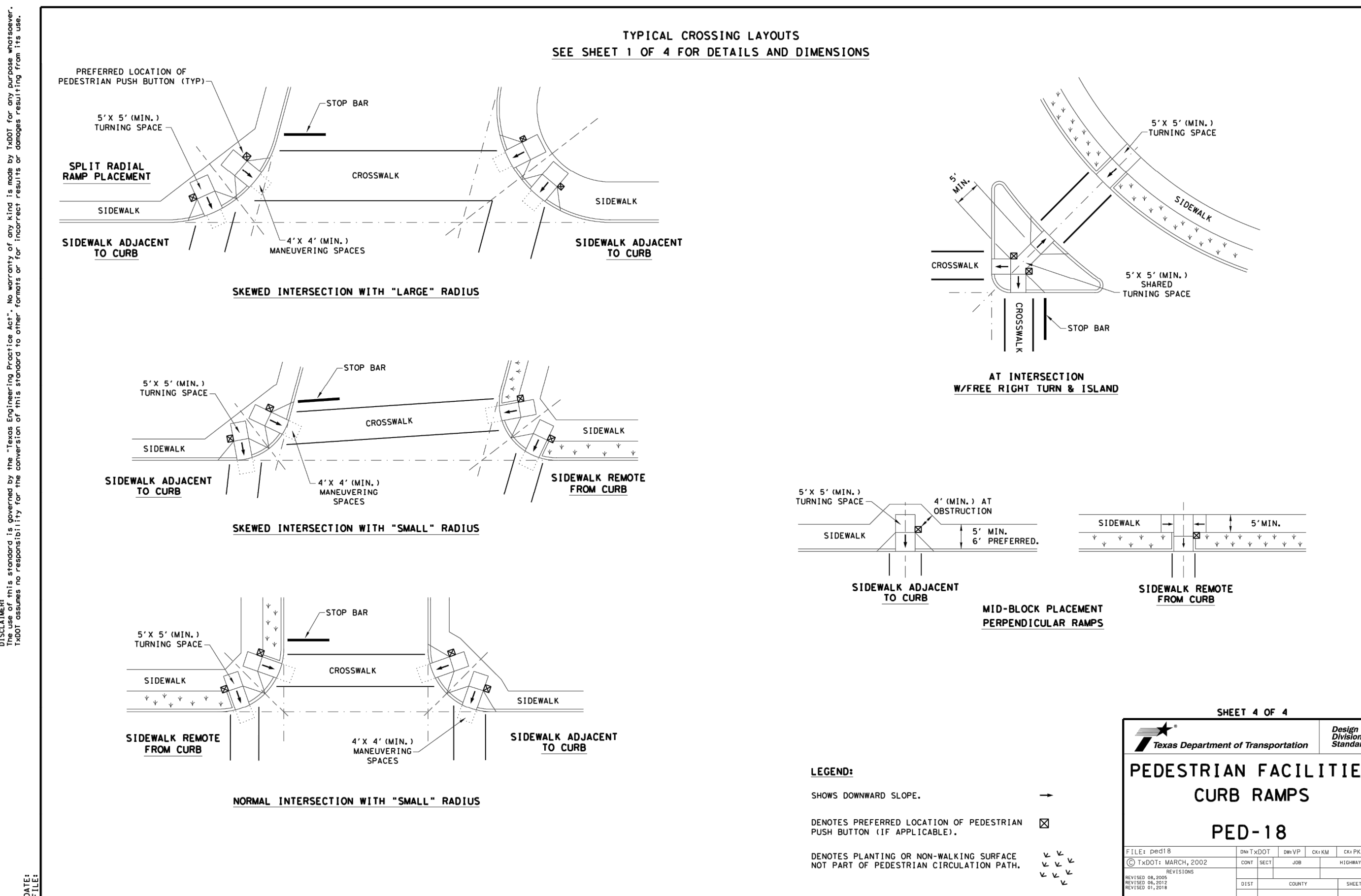
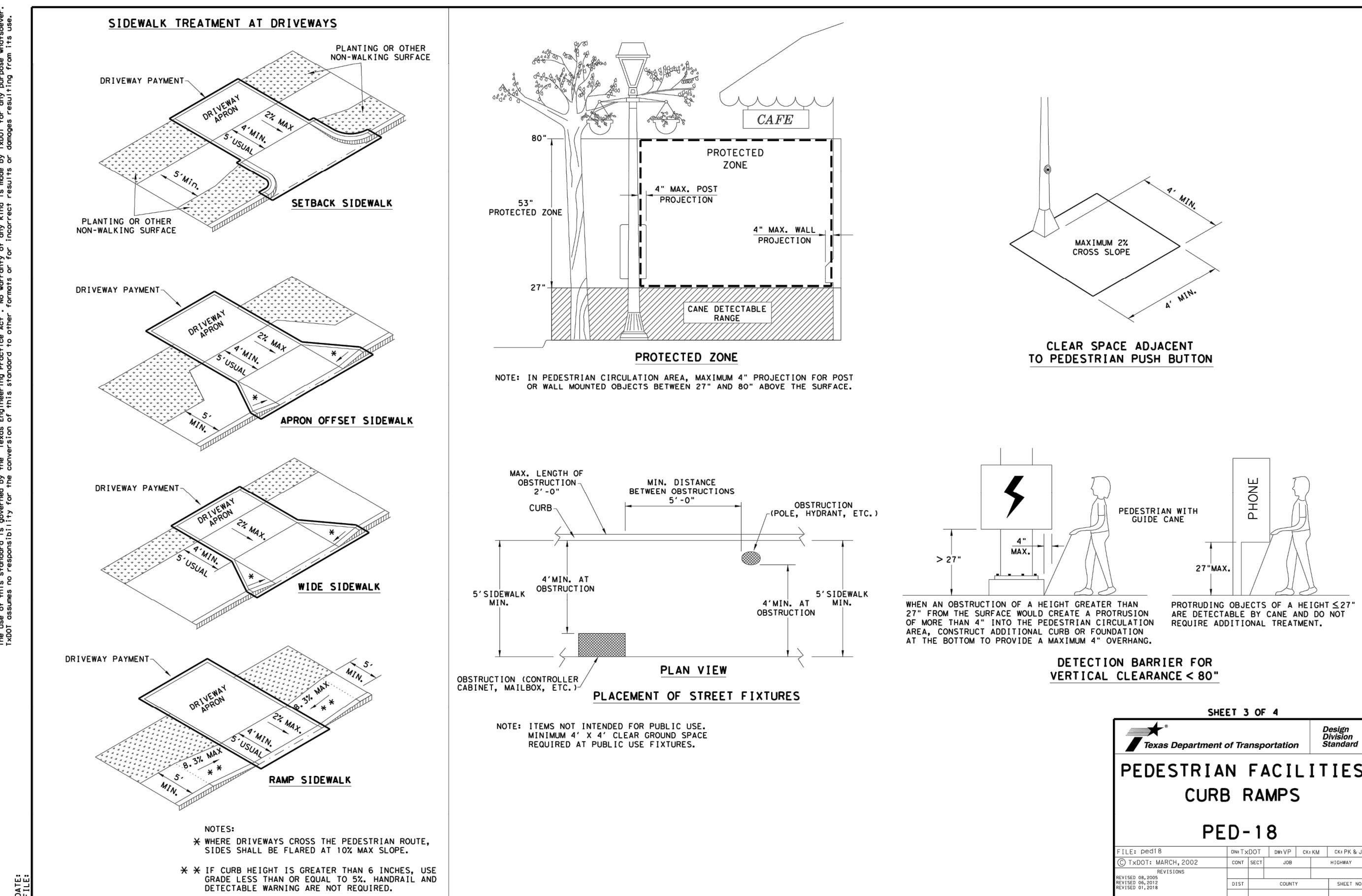
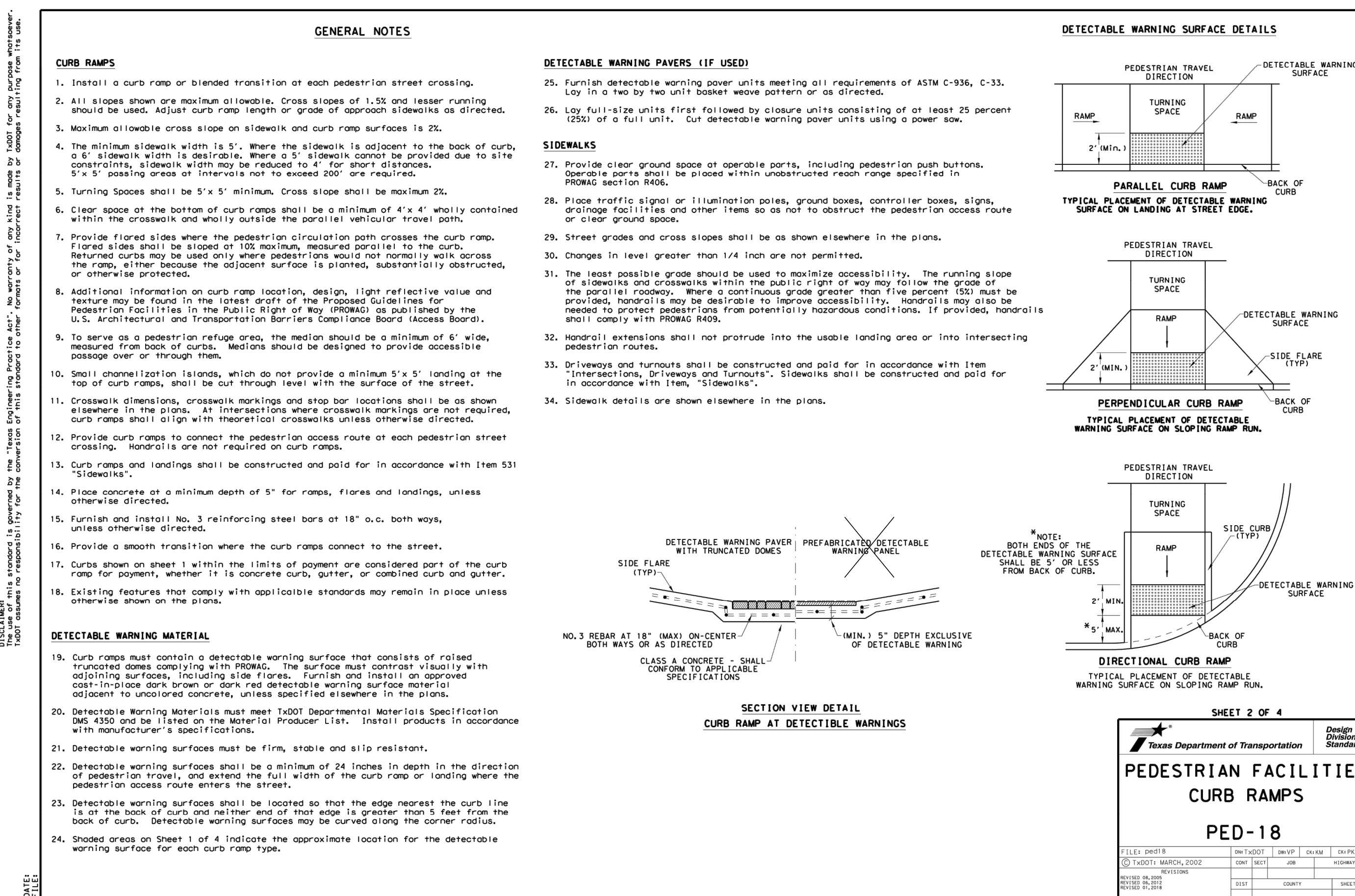
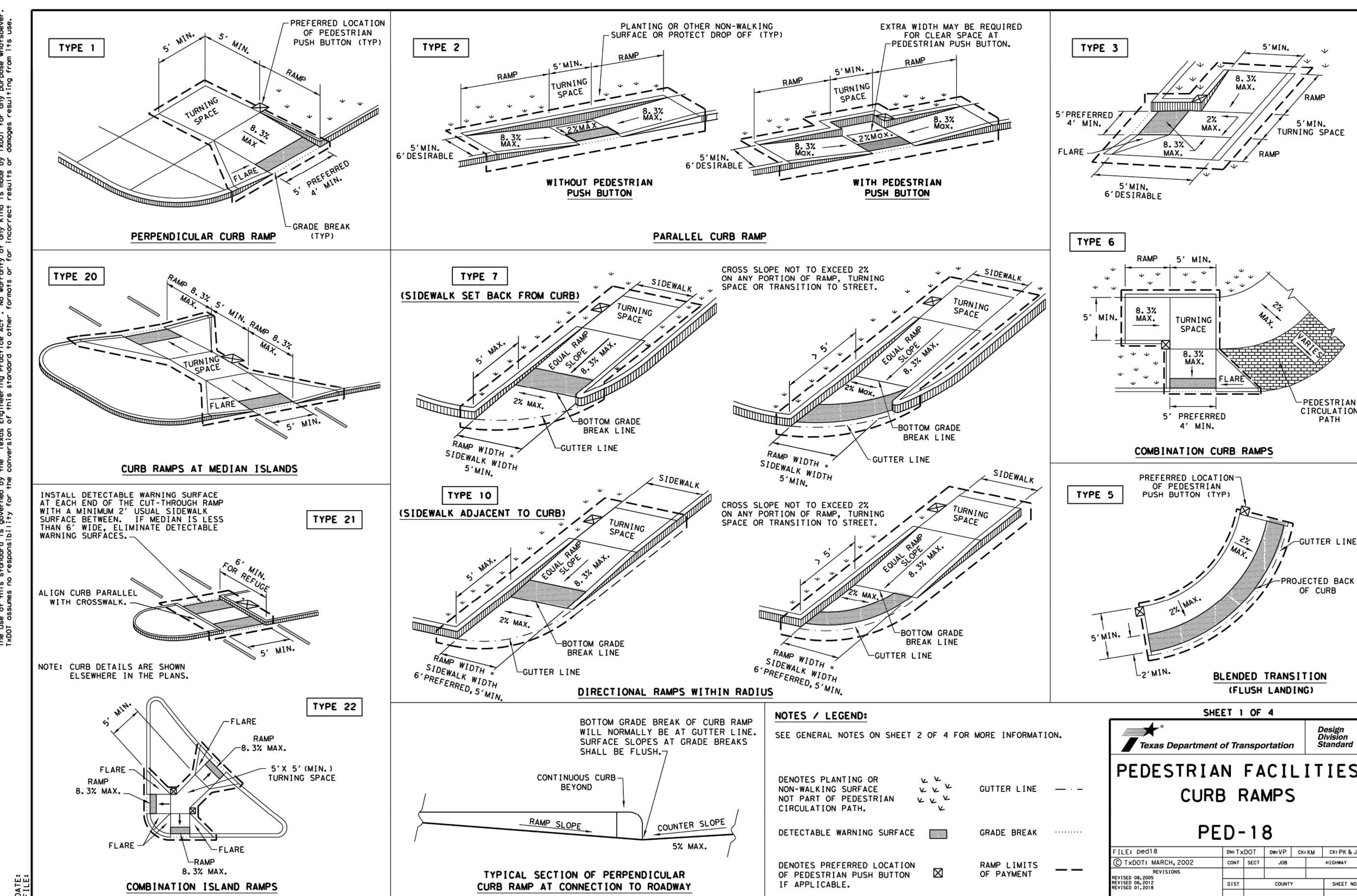
PLAT NO.
22-11800196

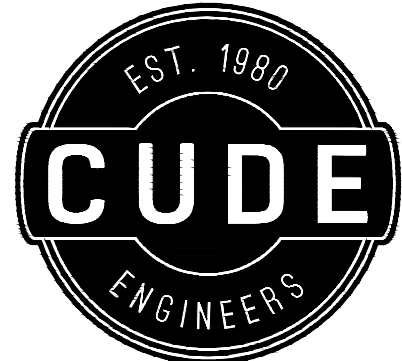
C14



MAY 2009
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
WHEELCHAIR RAMP STANDARDS

% SUBMITTAL	PROJECT NO.:	DATE:
DRWN. BY: V. VASQUEZ	DSGN. BY:	CHKD. BY: R.S. HOSSEINI, P.E.
		SHEET NO.: OF





4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P: (210) 681.2951 F: (210) 523.7112

McCrary Tract

Unit 14

DRAINAGE PLAN & PROFILE DRAIN "A"

DATE

01/31/2023

PROJECT NO.
02142.051

DRAWN BY
JR

CHECKED BY
TCD/JC/DDC

REVISIONS

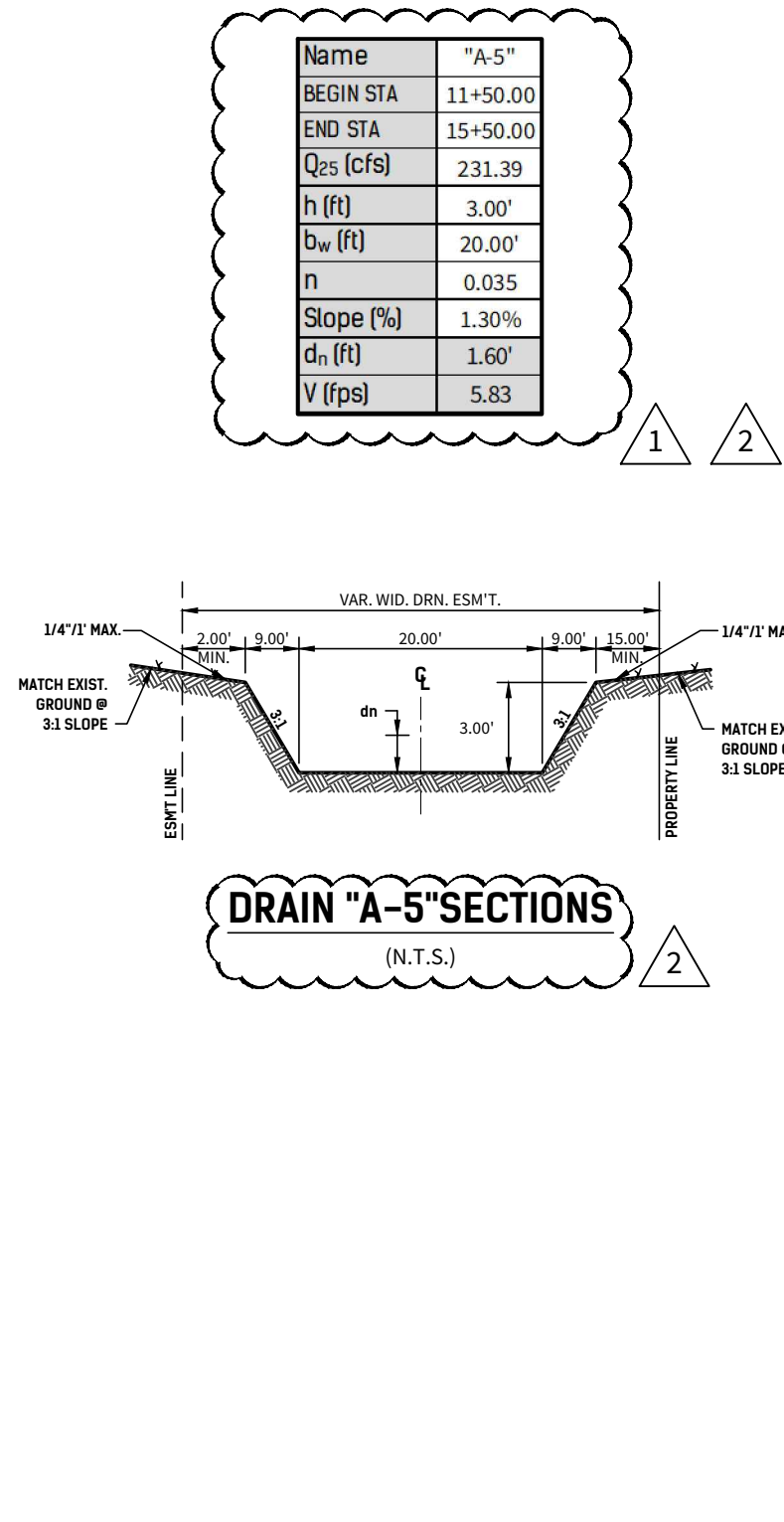
1. LAYOUTS
2. 2023 - DRAINAGE DESIGN REVISED, UPDATED BASED ON DESIGN REVISIONS



CUDE ENGINEERS
TBPELS No. 10048500

PLAT NO.
22-11800196

C17



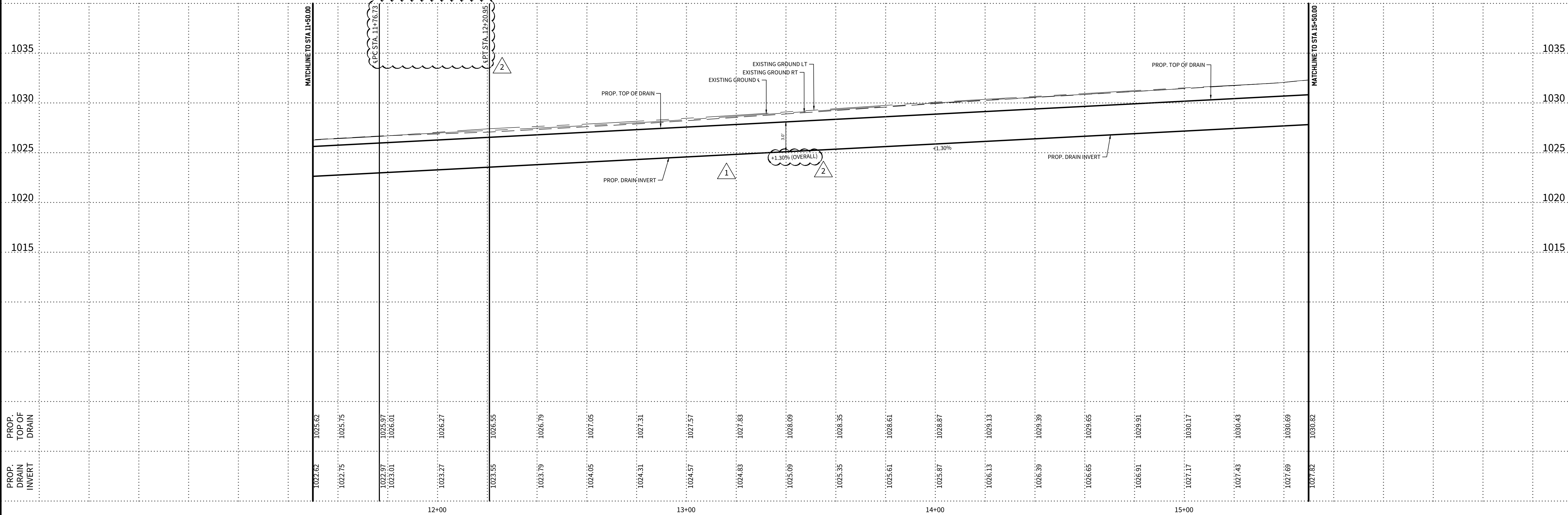
GENERAL NOTES

- 85% OF CHANNEL SURFACE MUST HAVE ESTABLISHED VEGETATION PRIOR TO ACCEPTANCE OF THE CHANNEL BY THE CITY OF SAN ANTONIO & BEXAR COUNTY. HYDROMULCH PAY ITEM TO INCLUDE SOIL, SEEDING, OR SODDING & WATERING FOR THE TIME PERIOD NEEDED TO ACHIEVE 85% VEGETATION.
- TURF REINFORCEMENT MAT (TRM) TO BE INSTALLED THROUGHOUT THE EARTHEN CHANNELS AS DENOTED WHERE VELOCITY OF STORM WATER RUNOFF IS GREATER THAN 6 FPS. TRM TO BE INSTALLED PER CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION ITEM 554. IF ROCK SUBGRADE IS ENCOUNTERED DURING CONSTRUCTION, THEN ENGINEER SHALL DETERMINE IF VEGETATION CAN BE ESTABLISHED. IF IT IS DETERMINED BY THE ENGINEER THAT VEGETATION CAN NOT BE ESTABLISHED AND SUBGRADE MATERIAL IS SUITABLE TO CONVEY STORM WATER FLOWS WITHOUT EROSION OR SCOUR, THEN TRM WILL NOT BE INSTALLED.
- AT THE PRE-FINAL INSPECTION: THE ENGINEER MUST ISSUE CERTIFICATION TO THE CITY INSPECTOR THAT THE TURF REINFORCEMENT MAT (TRM) WAS INSTALLED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE CERTIFICATION MUST ALSO NOTE THAT THE MATERIAL AND INSTALLATION HAS MET CITY AND MANUFACTURER SPECIFICATIONS.

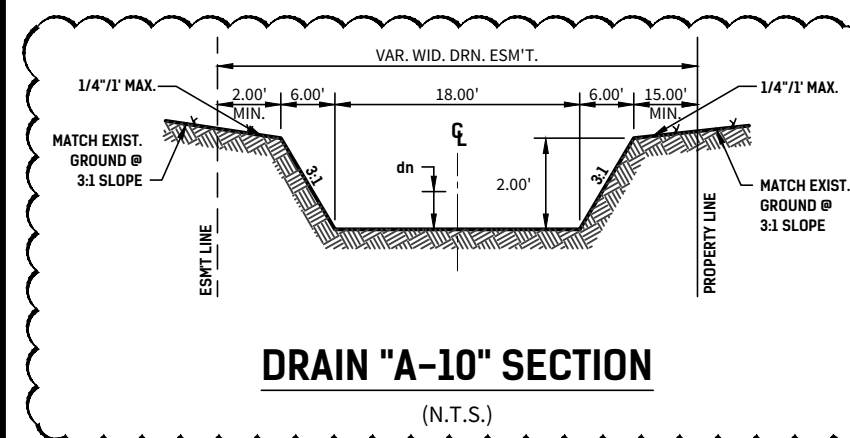
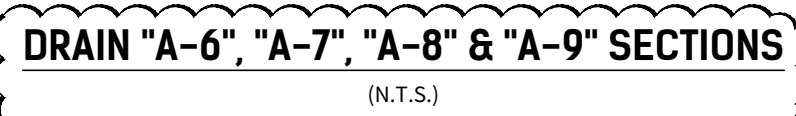
DRAIN A

STA. 11+50.00 TO STA. 15+50.00

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'

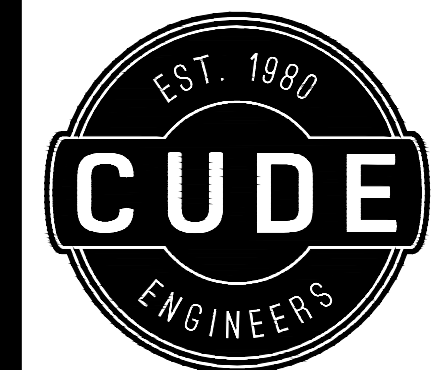
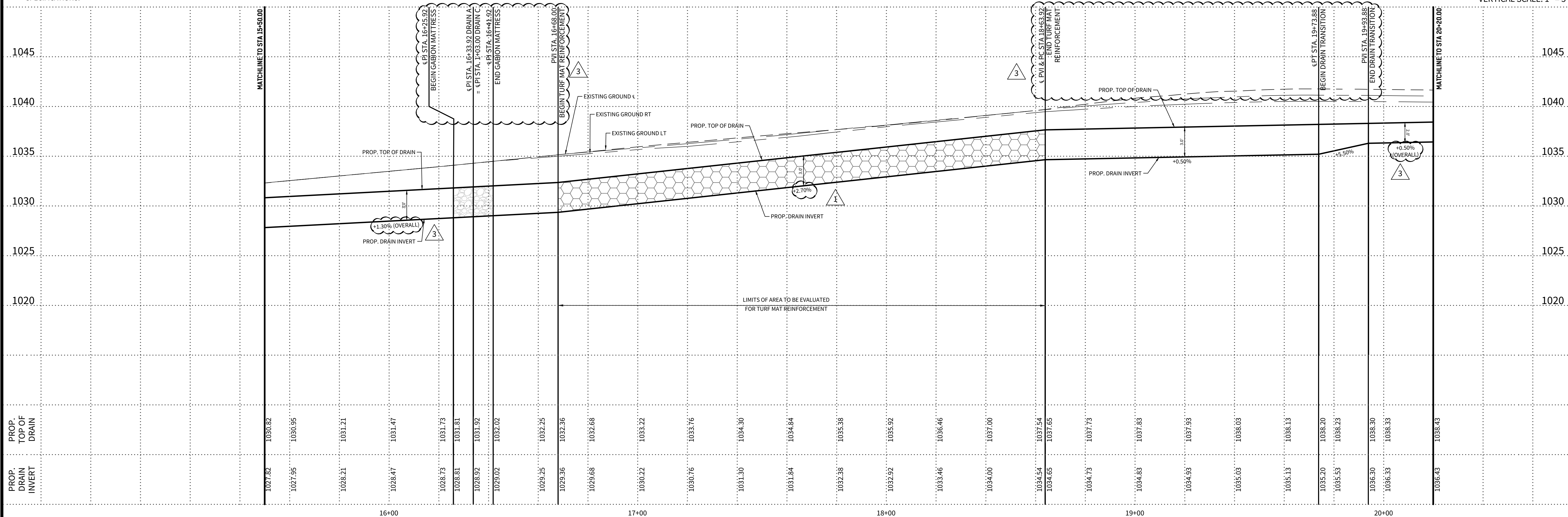


*NOTE:
FLOW FOR CROSS SECTION A-10 BASED ON
Q25 ON EXHIBIT ETA FOR THE PROPOSED
SHED CONDITIONS. PLEASE REFERENCE
STORM WATER REPORT FOR DETAILS.



GENERAL NOTES

1. 85% OF CHANNEL SURFACE MUST HAVE ESTABLISHED VEGETATION PRIOR TO ACCEPTANCE OF THE CHANNEL BY THE CITY OF SAN ANTONIO & BEXAR COUNTY. HYDROMULCH PAY ITEM TO INCLUDE SOIL, SEEDING, OR SODDING & WATERING FOR THE TIME PERIOD NEEDED TO ACHIEVE 85% VEGETATION.
2. TURF REINFORCEMENT MAT (TRM) TO BE INSTALLED THROUGHOUT THE EARTHEN CHANNELS AS DENOTED WHERE VELOCITY OF STORM WATER RUNOFF IS GREATER THAN 6 FPS. TRM TO BE INSTALLED PER CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION ITEM 554. IF ROCK SUBGRADE IS ENCOUNTERED DURING CONSTRUCTION, THEN ENGINEER SHALL DETERMINE IF VEGETATION CAN BE ESTABLISHED. IF IT IS DETERMINED BY THE ENGINEER THAT VEGETATION CAN NOT BE ESTABLISHED AND SUBGRADE MATERIAL IS SUITABLE TO CONVEY STORM FLOW FLOODS WITHOUT EROSION OR SCOUR, THEN TRM WILL NOT BE INSTALLED.
3. AT THE PRE-FINAL INSPECTION, THE ENGINEER MUST ISSUE CERTIFICATION TO THE CITY INSPECTOR THAT THE TURF REINFORCEMENT MAT (TRM) WAS INSTALLED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE CERTIFICATION MUST ALSO NOTE THAT THE MATERIAL AND INSTALLATION HAS MET CITY AND MANUFACTURER SPECIFICATIONS.



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**McCrary Tract
Unit 14**

DRAINAGE PLAN & PROFILE DRAIN "A"

DATE _____

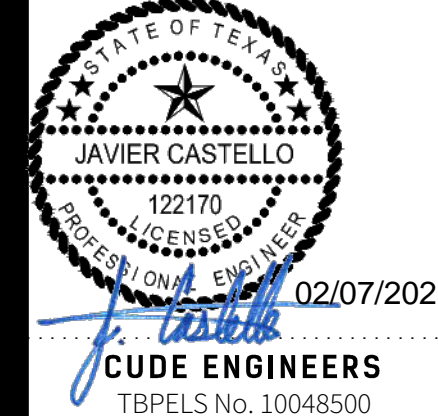
02/06/2023
.....

PROJECT NO.
02142.051

DRAWN BY
JR

CHECKED BY

1. 20200501 - REVISED SOUTH LABEL, REVISED DRINK LABEL, ADDED SPORT LABEL, REVISED DRINK LABEL, ADDED PLAT NO. LABEL, REVISED CHAIRFIRE, REVISED DRAIN CALCS
2. 20200602 - REVISED UNIT BOUNDARY, UPDATED DAMAGE DESIGN
3. 20200613 - REVISED 20200406 REVISED, UPDATED BASIN DESIGN AND NOTES
4. 20200614 - ADDED CURVE DATA
- 5.
- 6.
- 7.
- 8.



PLAT NO.
22-11800196

C18

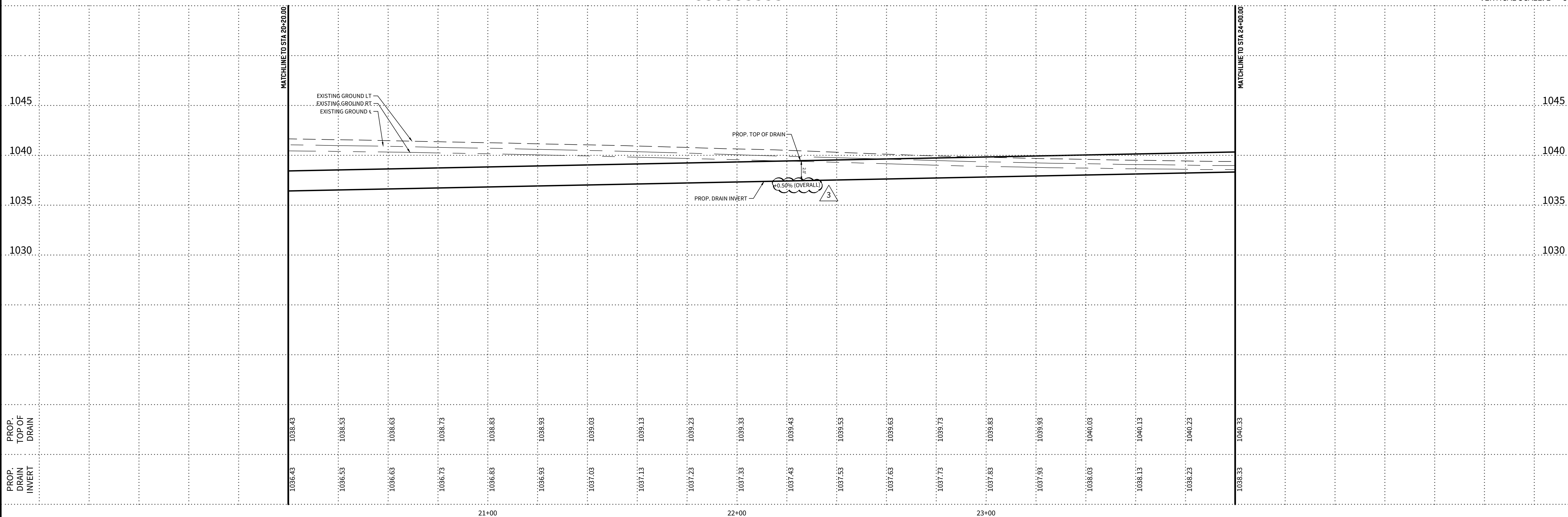
*NOTE:
FLOW FOR CROSS SECTION A-11 IS BASED ON EXHIBIT E7A FOR
THE PROPOSED SHED CONDITIONS. PLEASE REFERENCE
STORM WATER REPORT FOR DETAILS.



STA. 20+20.00 TO STA. 24+00.00

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'

1. 85% OF CHANNEL SURFACE MUST HAVE ESTABLISHED VEGETATION PRIOR TO ACCEPTANCE OF THE CHANNEL BY THE CITY OF SAN ANTONIO & BEXAR COUNTY. HYDROMULCH PAY ITEM TO INCLUDE SOIL, SEEDING, OR SODDING & WATERING FOR THE TIME PERIOD NEEDED TO ACHIEVE 85% VEGETATION.



DATE
01/31/2023

PROJECT NO.
02142.051

DRAWN BY
JR

CHECKED BY
TCD/JC/DBC

REVISIONS

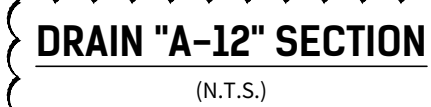
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2.	2022/06/02	REVISED EXHIBIT REF, ADDED PLATING LABEL, REVISED DRAWING CALCS.
3.	2022/06/02	REVISED INT DOCUMENT, UPDATED DRAWING DESIGN
4.	2023/04/10	RE-DESIGN EXHIBIT REF, ADDED PLATING LABEL, REVISED DRAWING CALCS.
5.	2023/04/10	REVISED EXHIBIT REF, ADDED PLATING LABEL, REVISED DRAWING CALCS.
6.	2023/04/10	REVISED EXHIBIT REF, ADDED PLATING LABEL, REVISED DRAWING CALCS.
7.	2023/04/10	REVISED EXHIBIT REF, ADDED PLATING LABEL, REVISED DRAWING CALCS.
8.	2023/04/10	REVISED EXHIBIT REF, ADDED PLATING LABEL, REVISED DRAWING CALCS.
9.	2023/04/10	REVISED EXHIBIT REF, ADDED PLATING LABEL, REVISED DRAWING CALCS.



PLAT NO.
22-11800196

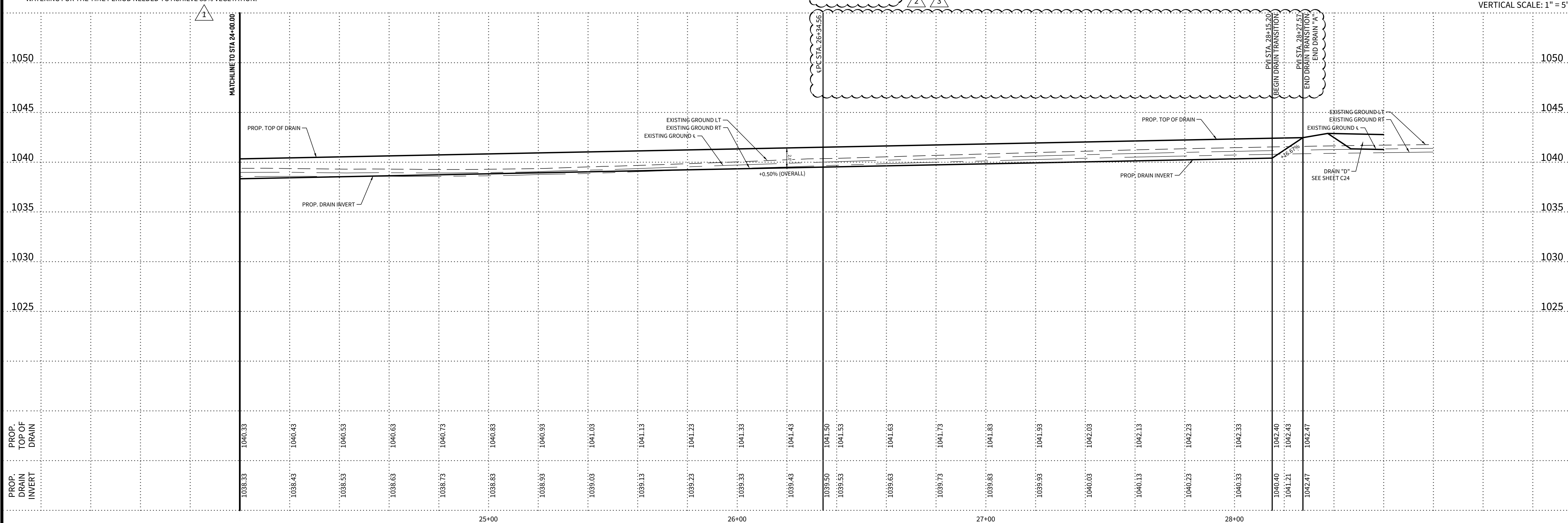
C19

*NOTE:
FLOW FOR CROSS SECTION A-12 IS BASED ON EXHIBIT E7A FOR
THE PROPOSED SHED CONDITIONS. PLEASE REFERENCE
STORM WATER REPORT FOR DETAILS.



HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'

1. 85% OF CHANNEL SURFACE MUST HAVE ESTABLISHED VEGETATION PRIOR TO ACCEPTANCE OF THE CHANNEL BY THE CITY OF SAN ANTONIO & BEXAR COUNTY. HYDROMULCH PAY ITEM TO INCLUDE SOIL, SEEDING, OR SODDING & WATERING FOR THE TIME PERIOD NEEDED TO ACHIEVE 85% VEGETATION.



DATE
01/31/2023

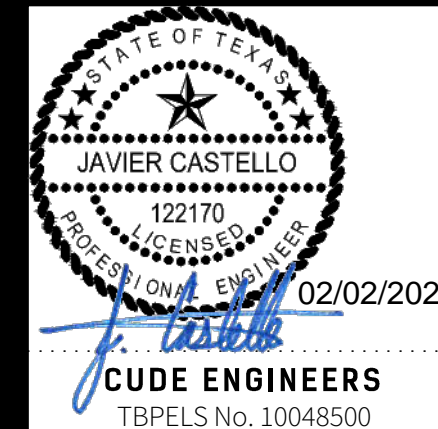
PROJECT NO.
02142.051

DRAWN BY
JR

CHECKED BY
TCD/JC/DDC

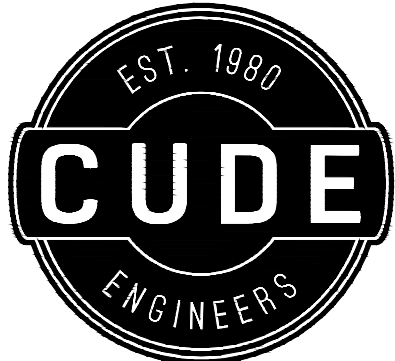
REVISIONS

1. **REVIEW** - REVIEWER COMMENTS, REVISIONS, REVISIONS REVIEWED, REVISIONS REVIEWED DATE, REVISIONS REVIEWED BY, REVISIONS REVIEWED STATUS, REVISIONS REVIEWED TYPE, REVISIONS REVIEWED USER, REVISIONS REVIEWED VERSION
2. **REVISION** - REVISIONS REVIEWED, REVISIONS REVIEWED DATE, REVISIONS REVIEWED BY, REVISIONS REVIEWED STATUS, REVISIONS REVIEWED TYPE, REVISIONS REVIEWED USER, REVISIONS REVIEWED VERSION
3. **REVISION** - REVISIONS REVIEWED, REVISIONS REVIEWED DATE, REVISIONS REVIEWED BY, REVISIONS REVIEWED STATUS, REVISIONS REVIEWED TYPE, REVISIONS REVIEWED USER, REVISIONS REVIEWED VERSION
4. **REVISION** - REVISIONS REVIEWED, REVISIONS REVIEWED DATE, REVISIONS REVIEWED BY, REVISIONS REVIEWED STATUS, REVISIONS REVIEWED TYPE, REVISIONS REVIEWED USER, REVISIONS REVIEWED VERSION
5. **REVISION** - REVISIONS REVIEWED, REVISIONS REVIEWED DATE, REVISIONS REVIEWED BY, REVISIONS REVIEWED STATUS, REVISIONS REVIEWED TYPE, REVISIONS REVIEWED USER, REVISIONS REVIEWED VERSION
6. **REVISION** - REVISIONS REVIEWED, REVISIONS REVIEWED DATE, REVISIONS REVIEWED BY, REVISIONS REVIEWED STATUS, REVISIONS REVIEWED TYPE, REVISIONS REVIEWED USER, REVISIONS REVIEWED VERSION
7. **REVISION** - REVISIONS REVIEWED, REVISIONS REVIEWED DATE, REVISIONS REVIEWED BY, REVISIONS REVIEWED STATUS, REVISIONS REVIEWED TYPE, REVISIONS REVIEWED USER, REVISIONS REVIEWED VERSION
8. **REVISION** - REVISIONS REVIEWED, REVISIONS REVIEWED DATE, REVISIONS REVIEWED BY, REVISIONS REVIEWED STATUS, REVISIONS REVIEWED TYPE, REVISIONS REVIEWED USER, REVISIONS REVIEWED VERSION
9. **REVISION** - REVISIONS REVIEWED, REVISIONS REVIEWED DATE, REVISIONS REVIEWED BY, REVISIONS REVIEWED STATUS, REVISIONS REVIEWED TYPE, REVISIONS REVIEWED USER, REVISIONS REVIEWED VERSION



PLAT NO.
22-11800196

C20



4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
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MCCRARY TRACT
UNIT 14

DRAINAGE PLAN & PROFILE DRAIN "B"

DATE

02/06/2023

PROJECT NO.
02142.051

DRAWN BY
JR

CHECKED BY
TCD/JC/DDC

REVISIONS

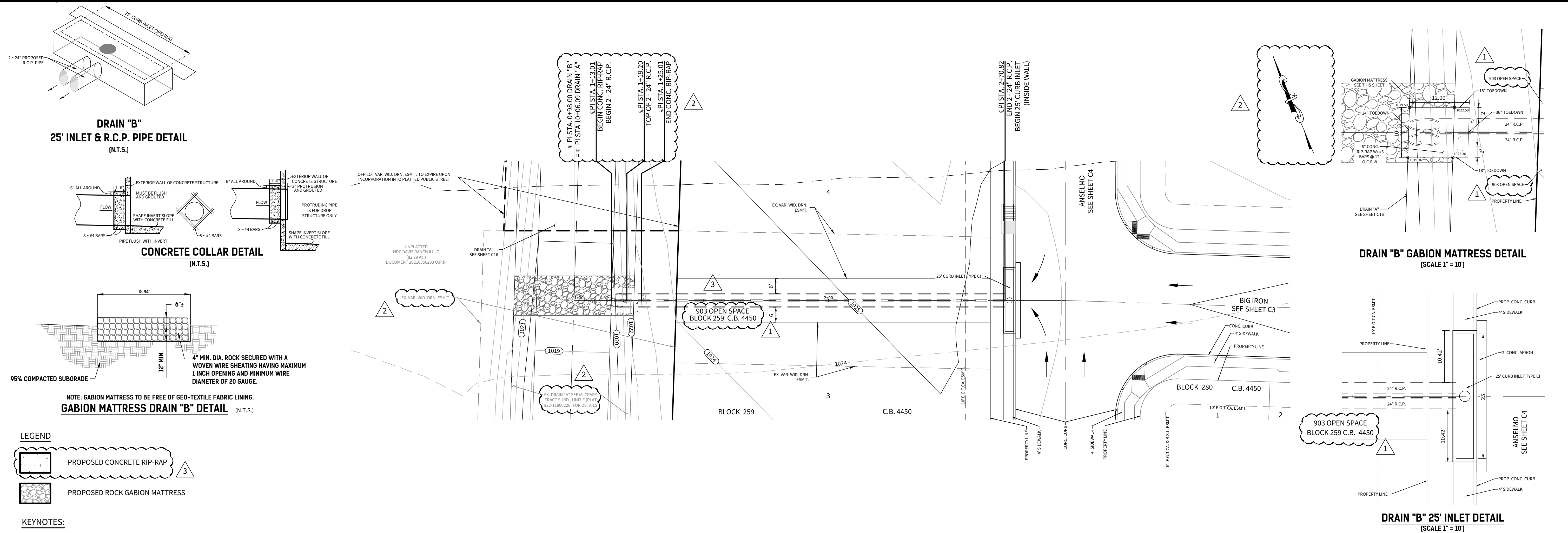
NO.	DESCRIPTION	DATE
1	ISSUE DRAINAGE PLAN & PROFILE DRAIN "B"	02/06/2023
2	ISSUE DRAINAGE PLAN & PROFILE DRAIN "B"	02/06/2023
3	ISSUE DRAINAGE PLAN & PROFILE DRAIN "B"	02/06/2023
4	ISSUE DRAINAGE PLAN & PROFILE DRAIN "B"	02/06/2023
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6	ISSUE DRAINAGE PLAN & PROFILE DRAIN "B"	02/06/2023
7	ISSUE DRAINAGE PLAN & PROFILE DRAIN "B"	02/06/2023
8	ISSUE DRAINAGE PLAN & PROFILE DRAIN "B"	02/06/2023



02/07/2023
CUDE ENGINEERS
TBPELS No. 10048500

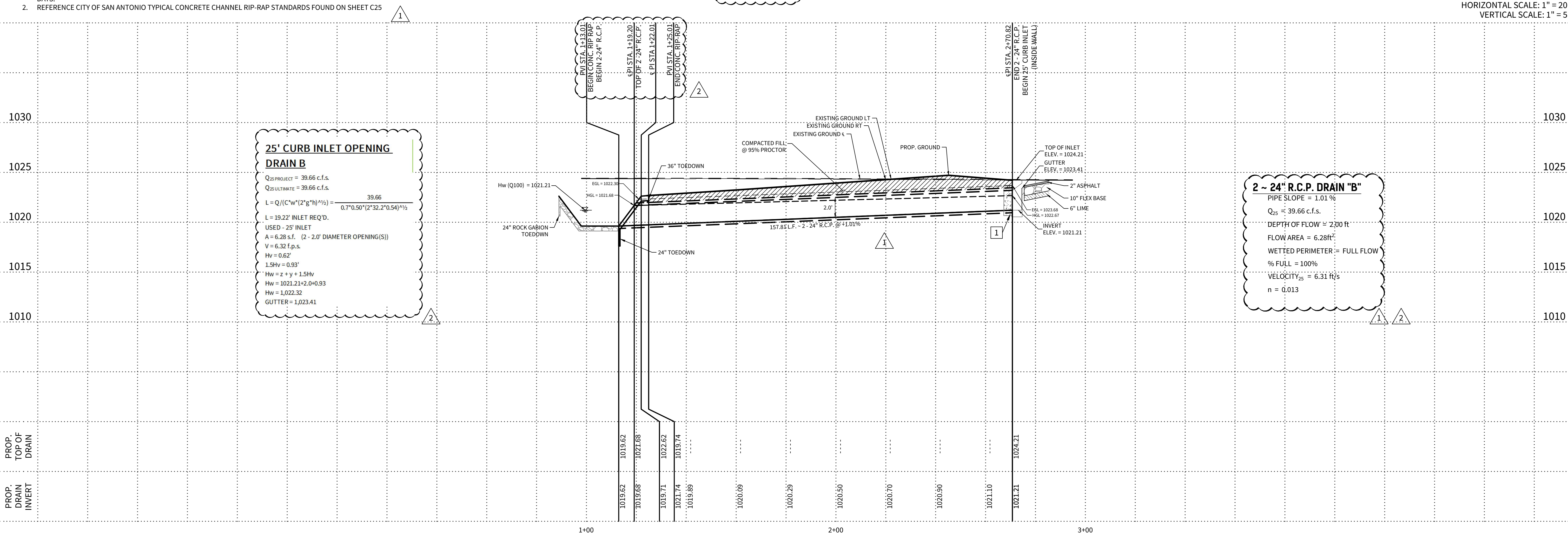
PLAT NO.
22-11800196

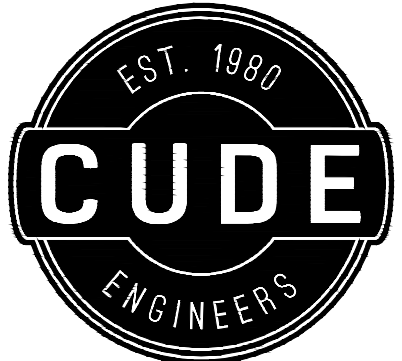
C22



DRAIN B

STA. 0+98.00 TO STA. 2+70.82





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San Antonio, Texas 78231
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MCCRARY TRACT
UNIT 14

DRAINAGE PLAN & PROFILE DRAIN "C"

DATE

02/06/2023

PROJECT NO.
02142.051

DRAWN BY
JR

CHECKED BY
TCD/JC/DDC

REVISIONS

NO.	DESCRIPTION	DATE
1	CONSTRUCTION TABLE	
2	REVISION: REVISIONS TO DRAINAGE PLAN AND PROFILE	
3	REVISION: REVISIONS TO DRAINAGE PLAN AND PROFILE	
4	REVISION: REVISIONS TO DRAINAGE PLAN AND PROFILE	
5	REVISION: REVISIONS TO DRAINAGE PLAN AND PROFILE	
6	REVISION: REVISIONS TO DRAINAGE PLAN AND PROFILE	
7	REVISION: REVISIONS TO DRAINAGE PLAN AND PROFILE	
8	REVISION: REVISIONS TO DRAINAGE PLAN AND PROFILE	

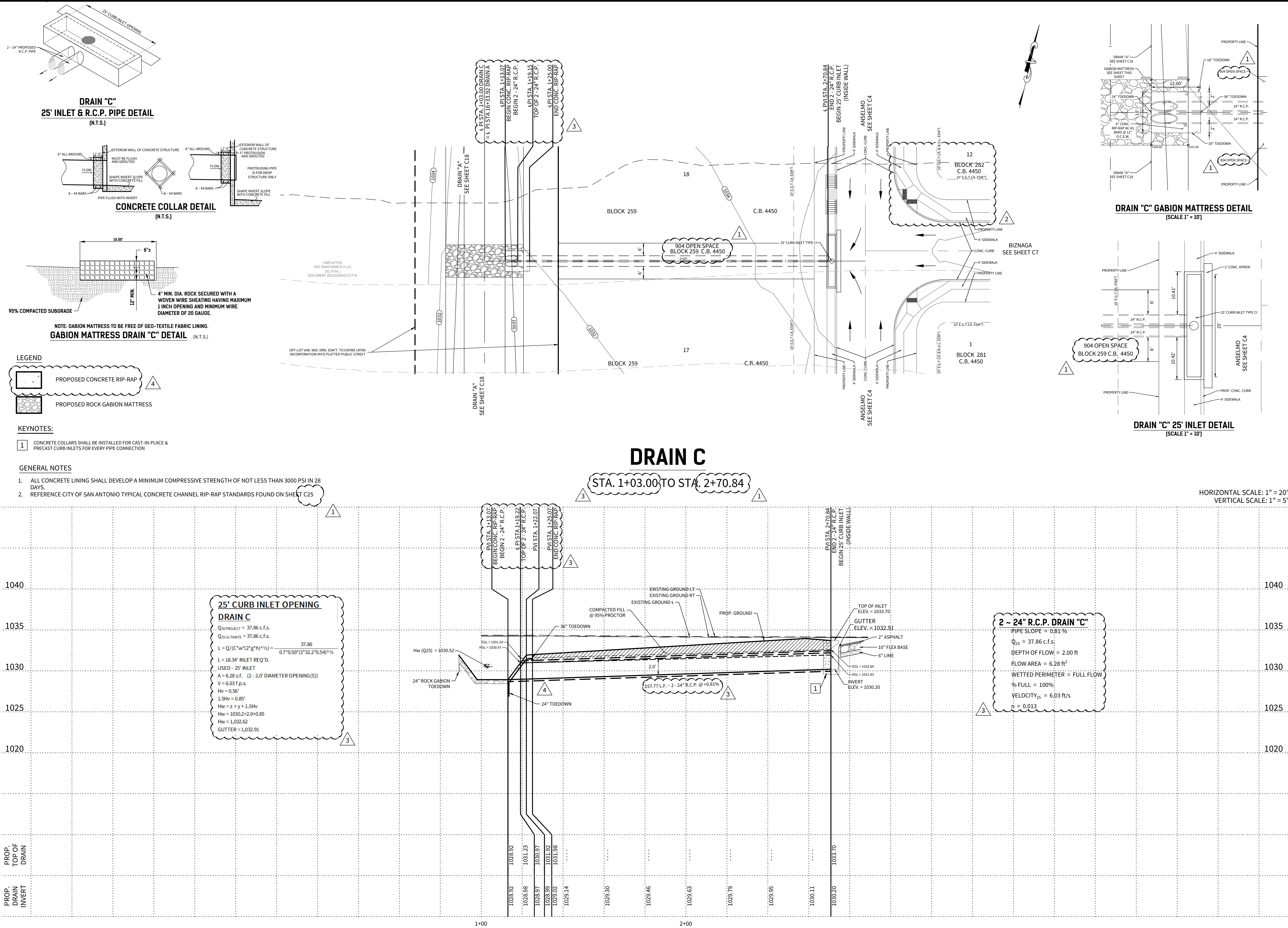


02/07/2023

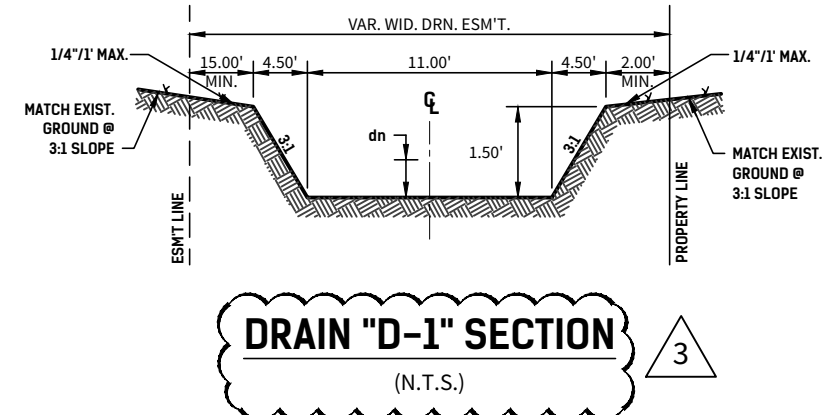
CUDE ENGINEERS
TBPELS No. 10048500

PLAT NO.
22-11800196

C23



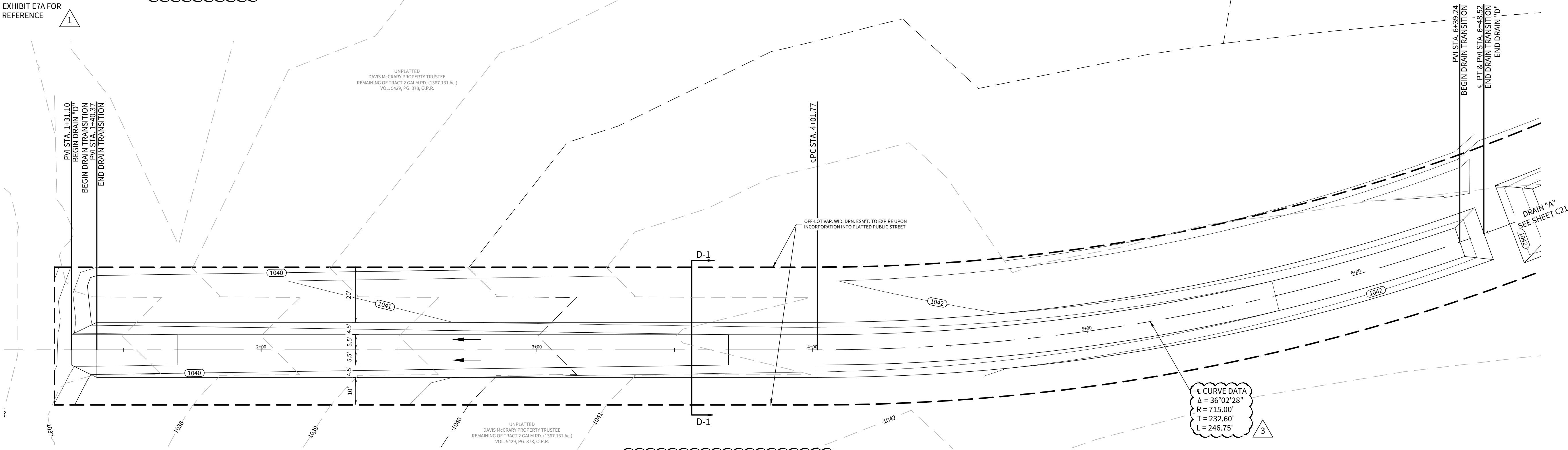
Name	"D-1"
BEGIN STA	1+40.37
END STA	6+39.24
Q ₂₅ (cfs)	35.02
h (ft)	1.50'
b _w (ft)	11.00'
n	0.035
Slope (%)	0.50%
d _s (ft)	0.98'
V (fps)	2.58



*NOTE:
FLOW FOR CROSS SECTION D-1 IS BASED ON EXHIBIT E7A FOR
THE PROPOSED SHED CONDITIONS. PLEASE REFERENCE
STORM WATER REPORT FOR DETAILS.

1 3

3



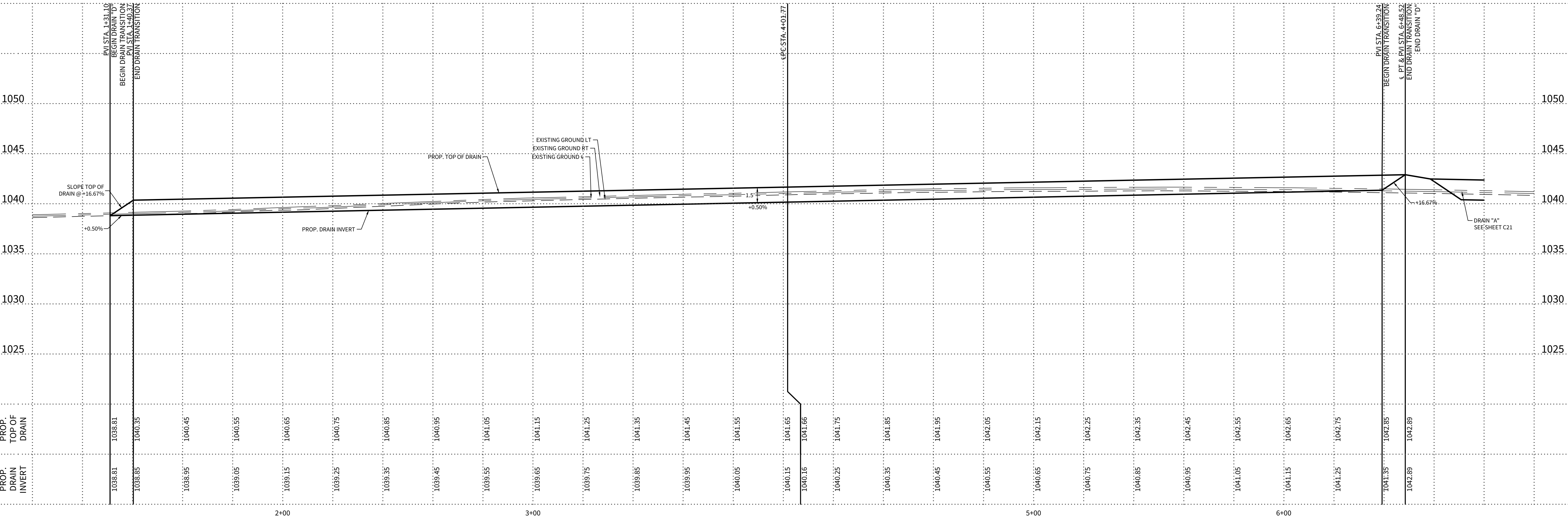
DRAIN D

STA. 1+31.10 TO STA. 6+48.52

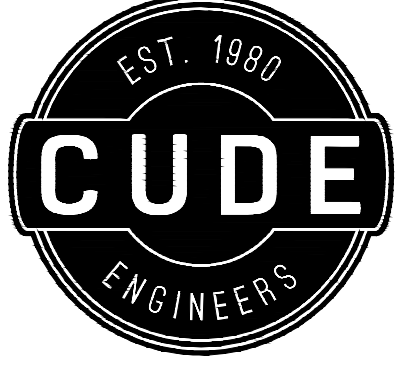
GENERAL NOTES

- 85% OF CHANNEL SURFACE MUST HAVE ESTABLISHED VEGETATION PRIOR TO ACCEPTANCE OF THE CHANNEL BY THE CITY OF SAN ANTONIO & BEXAR COUNTY. HYDROMULCH PAY ITEM TO INCLUDE SOIL, SEEDING, OR SODDING & WATERING FOR THE TIME PERIOD NEEDED TO ACHIEVE 85% VEGETATION.

HORIZONTAL SCALE: 1\" = 20'
VERTICAL SCALE: 1\" = 5'



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4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

MCCRARY TRACT UNIT 14


DRAINAGE PLAN & PROFILE DRAIN "D"

DATE	02/06/2023
PROJECT NO.	02142.051
DRAWN BY	JR
CHECKED BY	TCD/JC/DDC

REVISIONS	1.	2.	3.	4.	5.	6.	7.	8.
	1.	2.	3.	4.	5.	6.	7.	8.



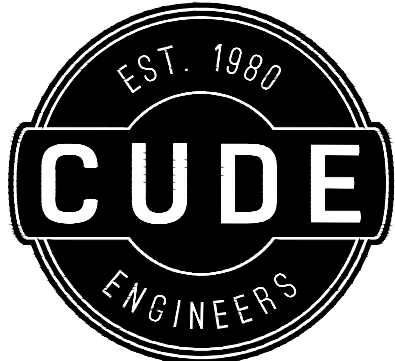
JAVIER CASTELLO
122170
PROFESSIONAL ENGINEER
02/07/2023



CUDE ENGINEERS
TBPELS No. 10048500

PLAT NO.
22-11800196

C24



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San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

MCCRARY TRACT
UNIT 14
DRDP - RIP-RAP PIPE BEDDING & MISC DRAINAGE DETAILS

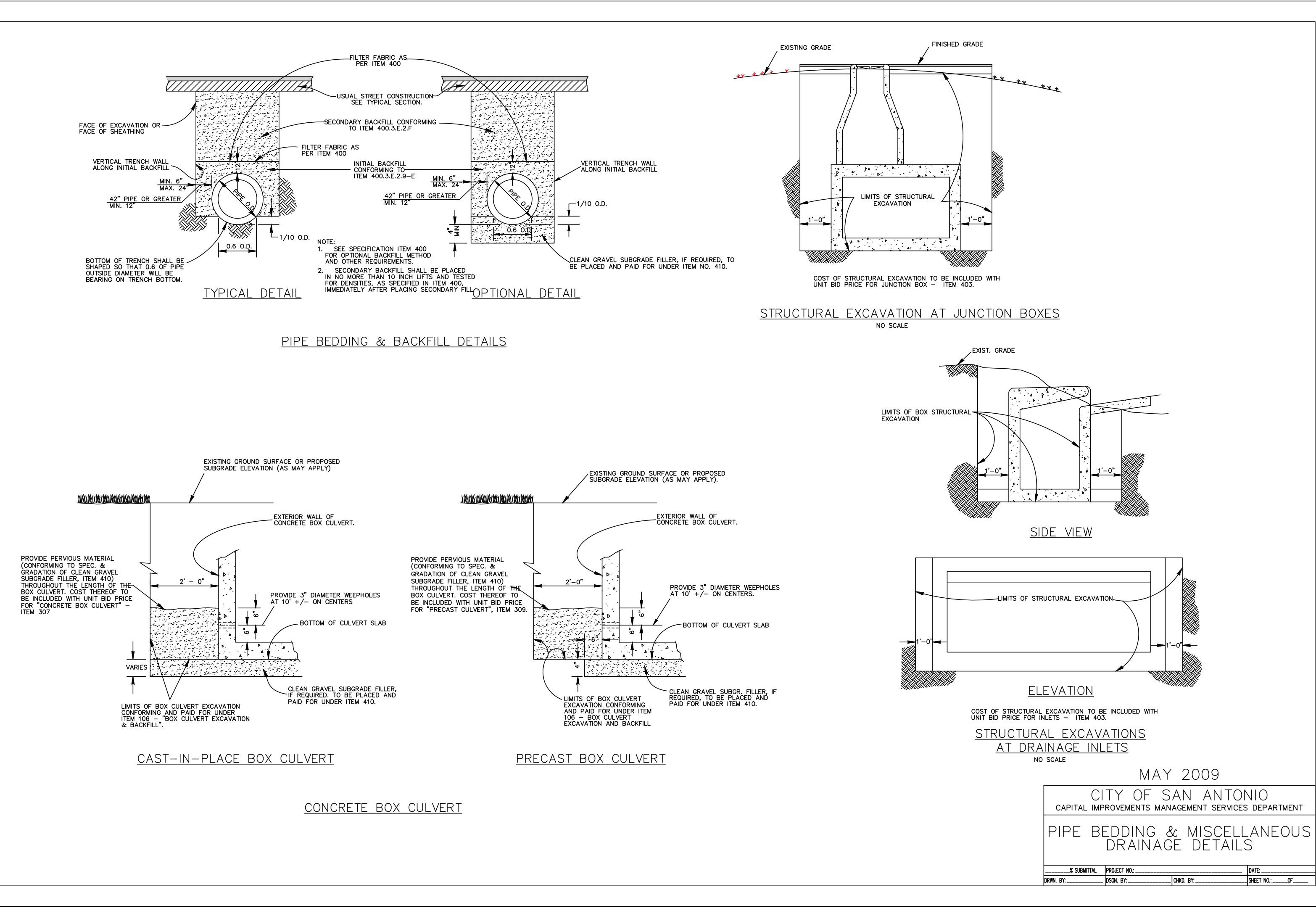
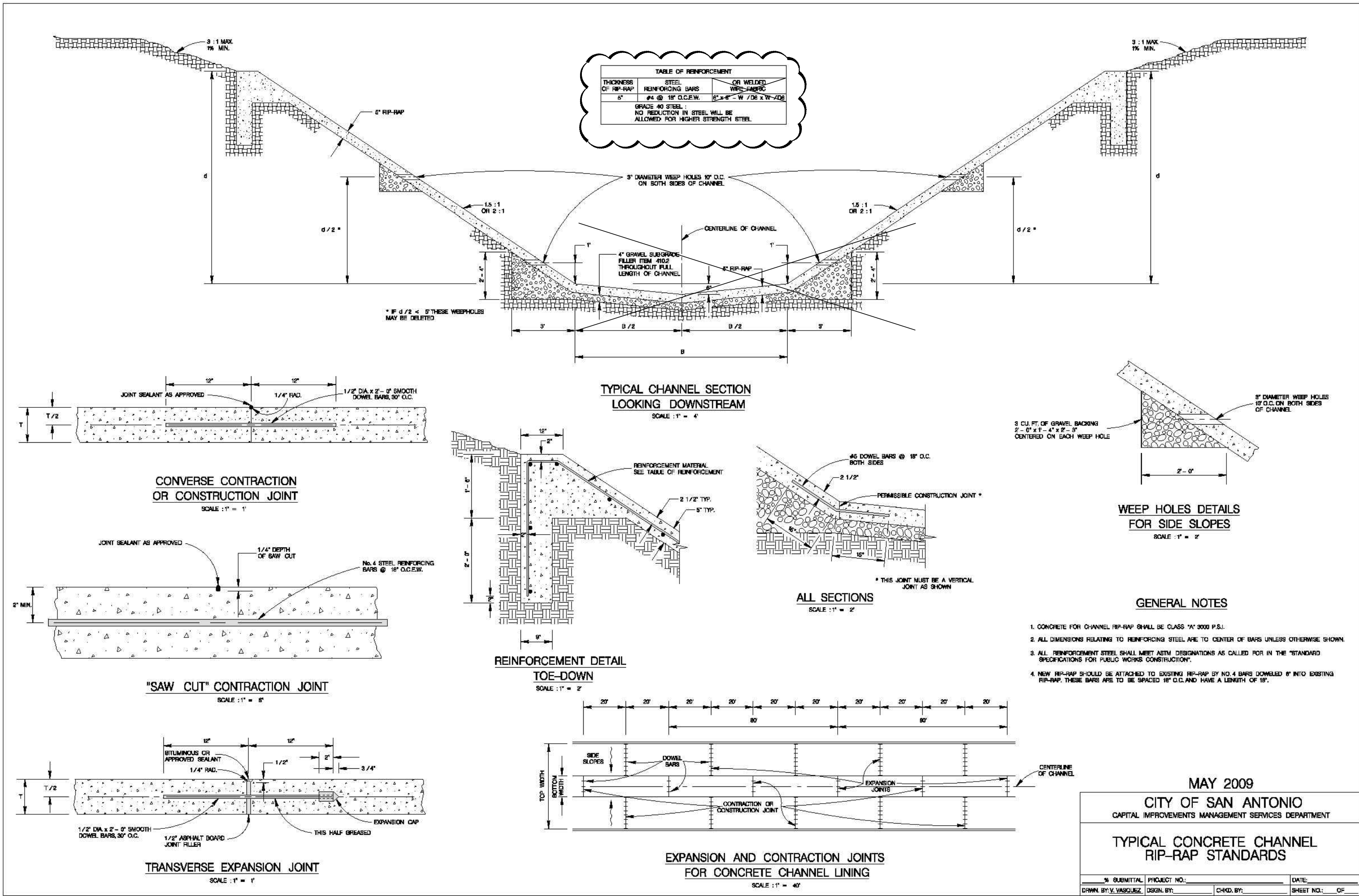
DATE
04/01/2022
PROJECT NO.
02142.051
DRAWN BY
JR
CHECKED BY
TCD/JC/DDC

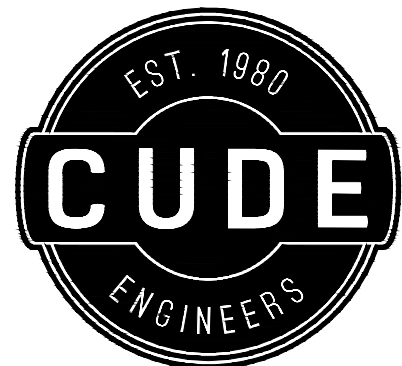
REVISIONS							
1.	2.	3.	4.	5.	6.	7.	8.

CUDE ENGINEERS
TBPELS No. 10048500

PLAT NO.
22-11800196

C25





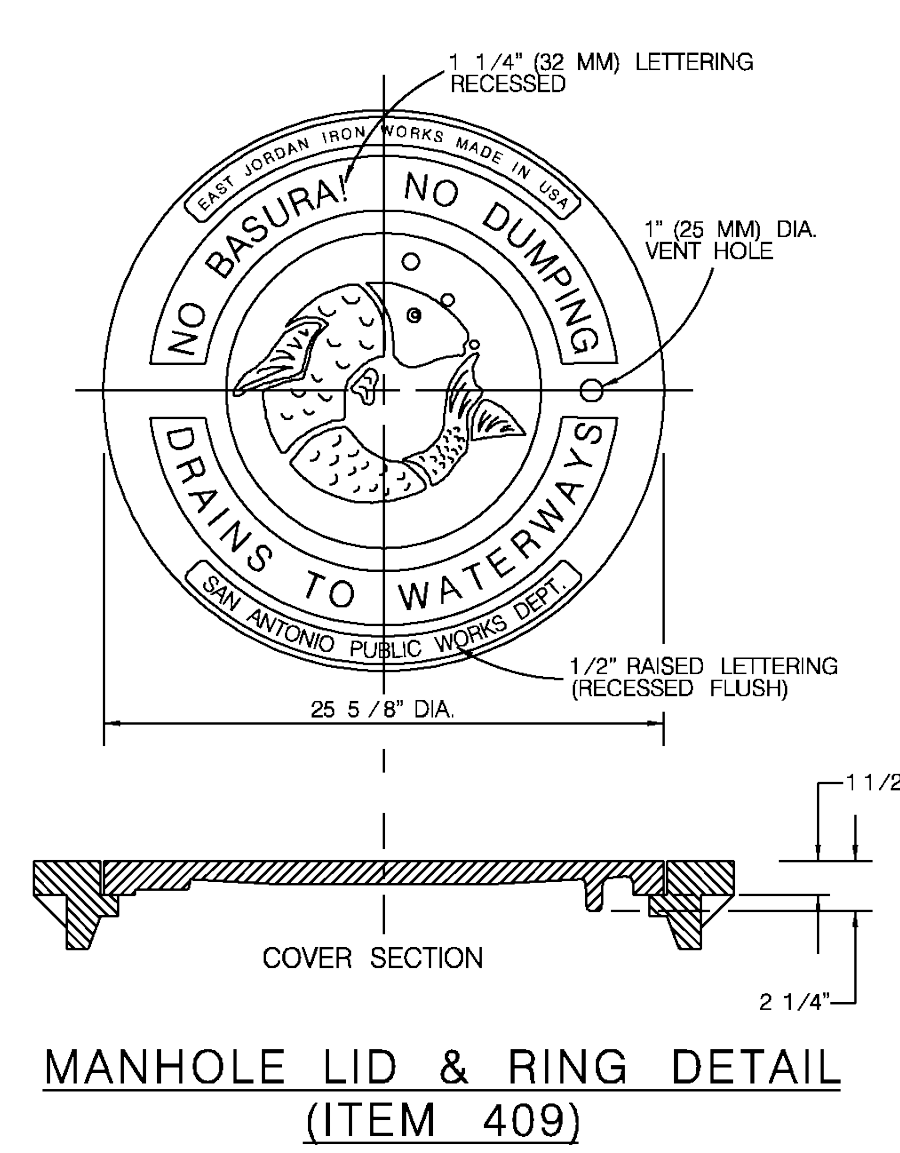
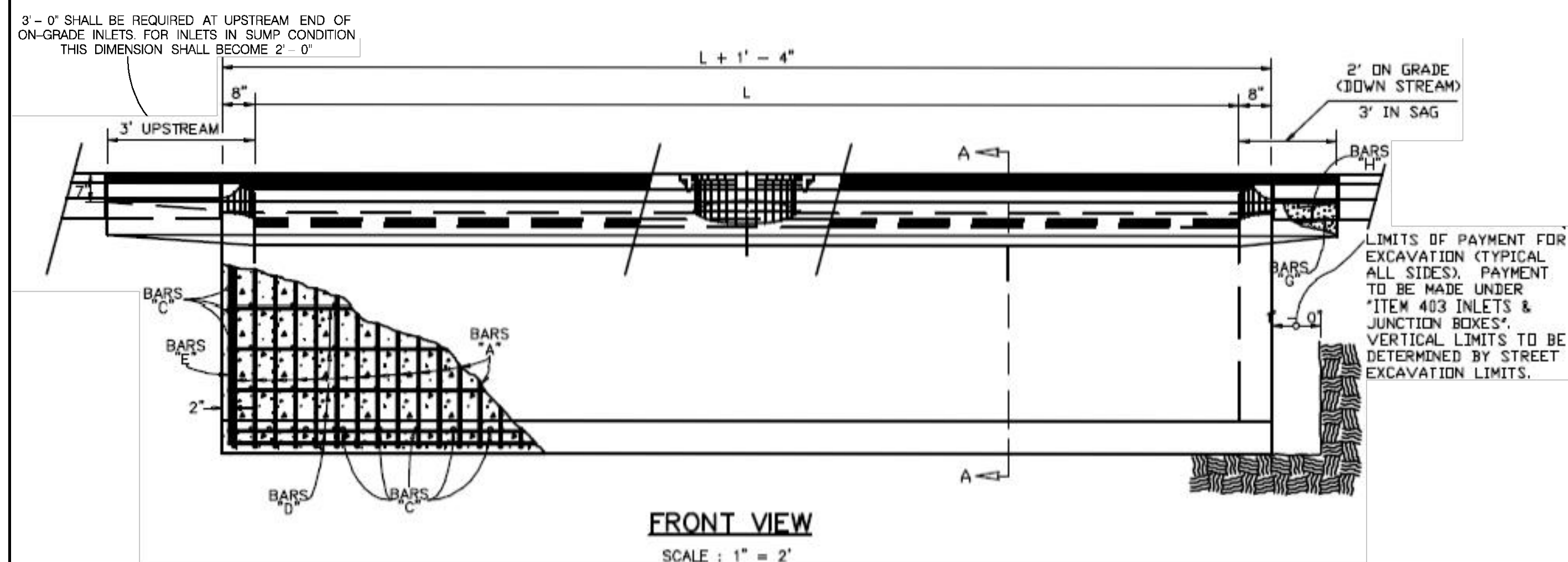
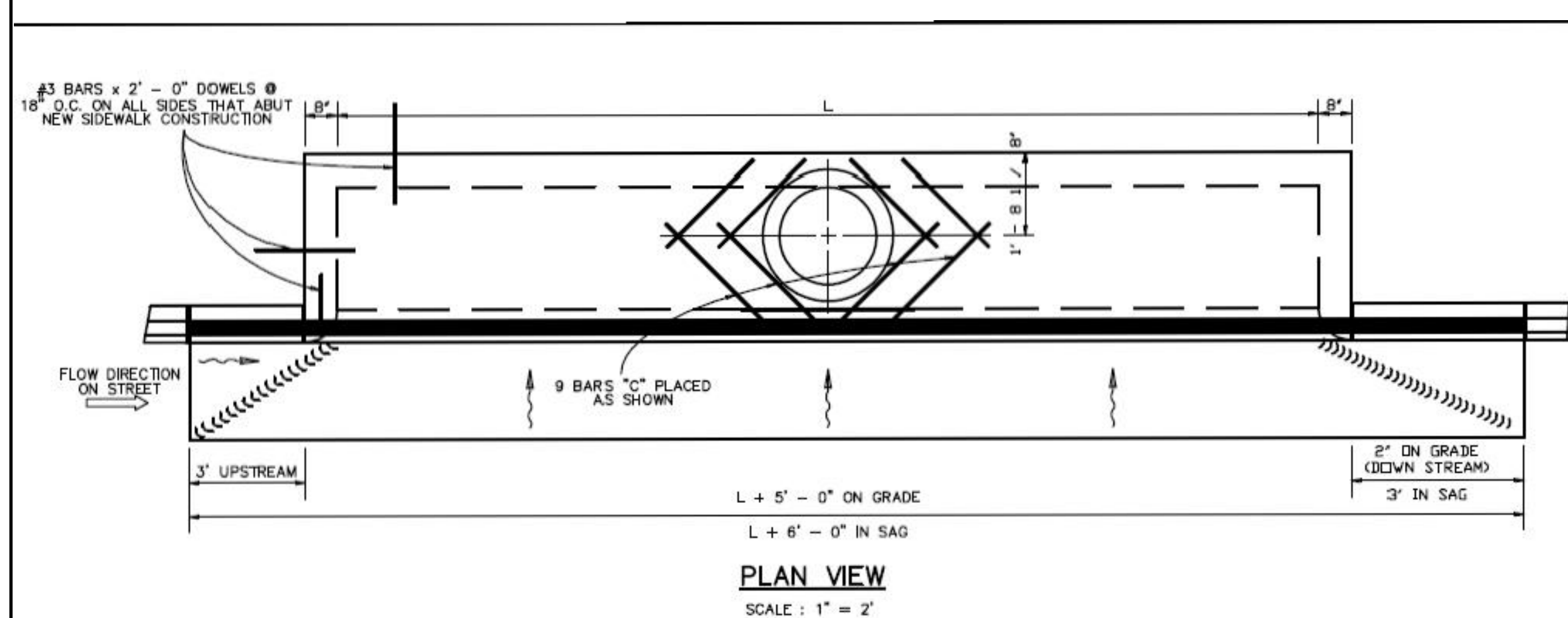
4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

McCrary Tract UNIT 14

COSA DRAIN INLET DETAILS TYPE "C" - CAST-IN-PLACE

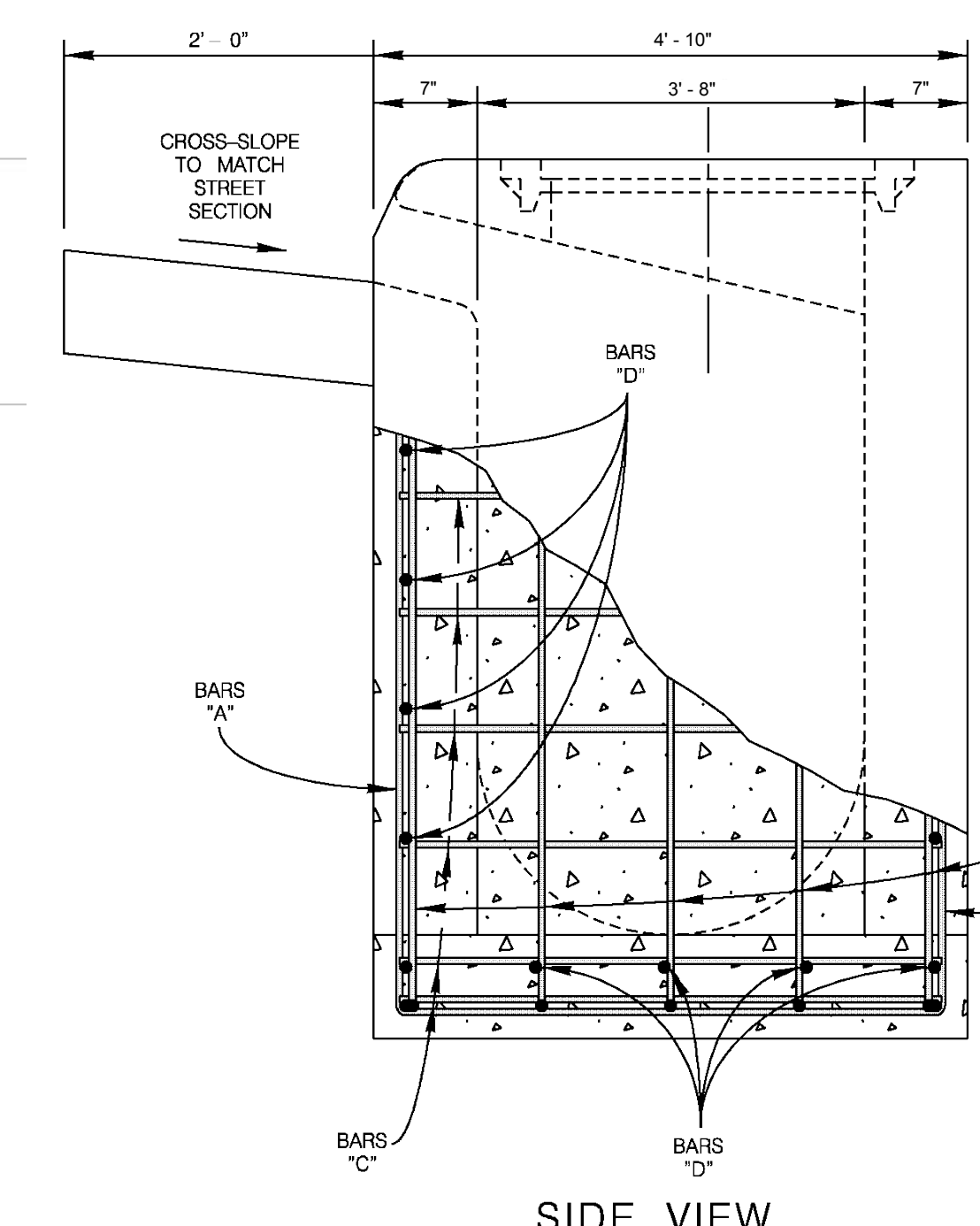
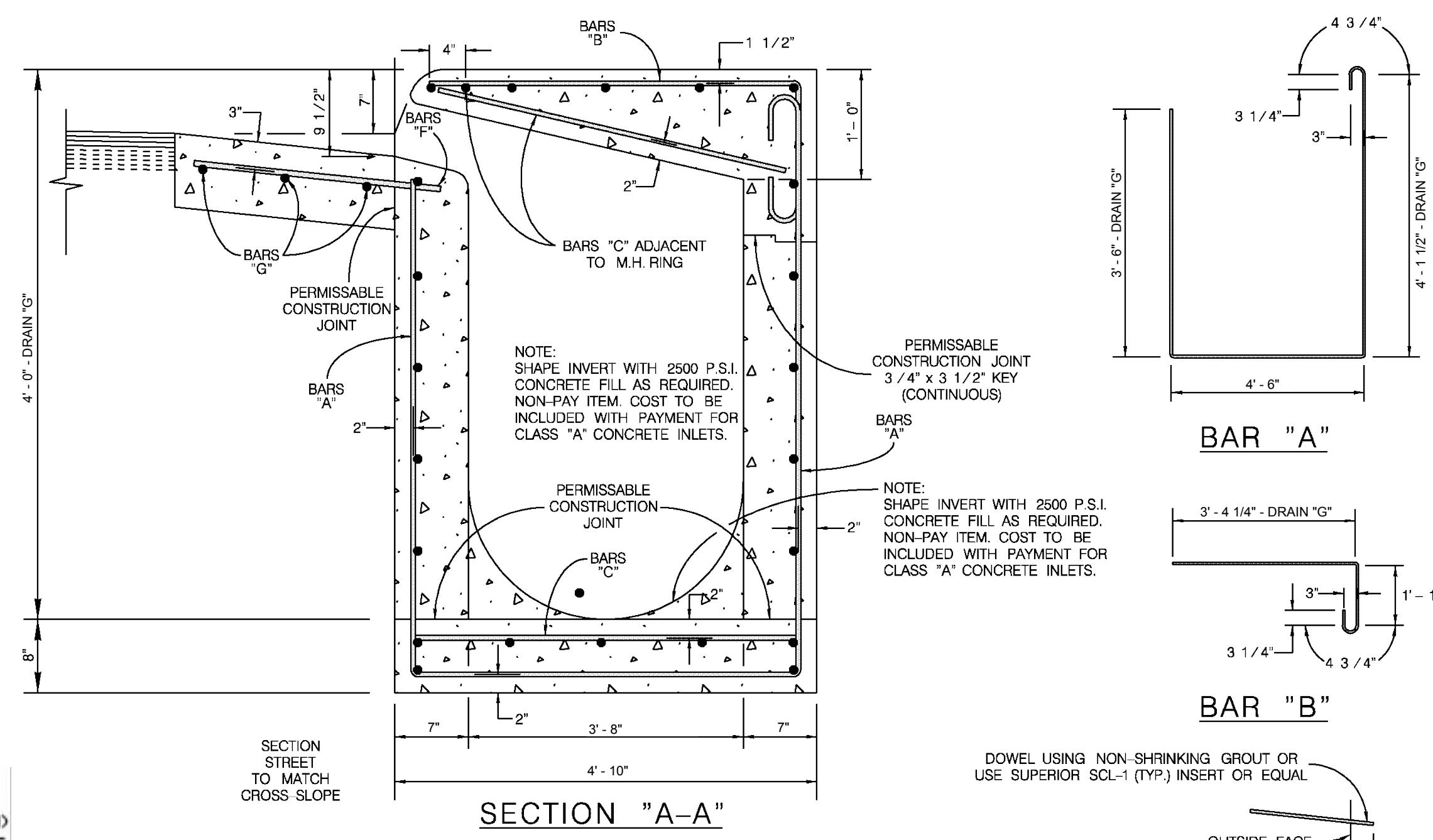
REINFORCING STEEL SCHEDULE					
INLET LENGTH	BAR	No.	Size	Spa.	Length
DRAIN "B" L= 25' DEPTH= 3'	A	63	4	5' o.c.	10' 9 1/2"
	B	63	4	5'	4' 13/4"
	C	53	4	9"	4' 6"
	D	20	4	10"	26' 1"
	E	12	4	10 1/2"	4' 10"
	F	27	5	12"	2' 3"
	G	3	4	12"	29' 8"
	H	5	5	12"	1' 8"
*Concrete Total = 10.66 C.Y. Manhole Casting = 260 lbs.					Steel Total = 1566.67 lbs.

REINFORCING STEEL SCHEDULE					
INLET LENGTH	BAR	No.	Size	Spa.	Length
DRAIN "C" L= 25' DEPTH= 3.5'	A	63	4	5' o.c.	11' 9 1/2"
	B	63	4	5'	4' 7 3/4"
	C	54	4	9"	4' 6"
	D	21	4	10"	26' 1"
	E	12	4	10 1/2"	5' 4"
	F	27	5	12"	2' 3"
	G	3	4	12"	29' 8"
	H	5	5	12"	1' 8"
*Concrete Total = 11.4 C.Y. Manhole Casting = 260 lbs.					Steel Total = 1654.23 lbs.

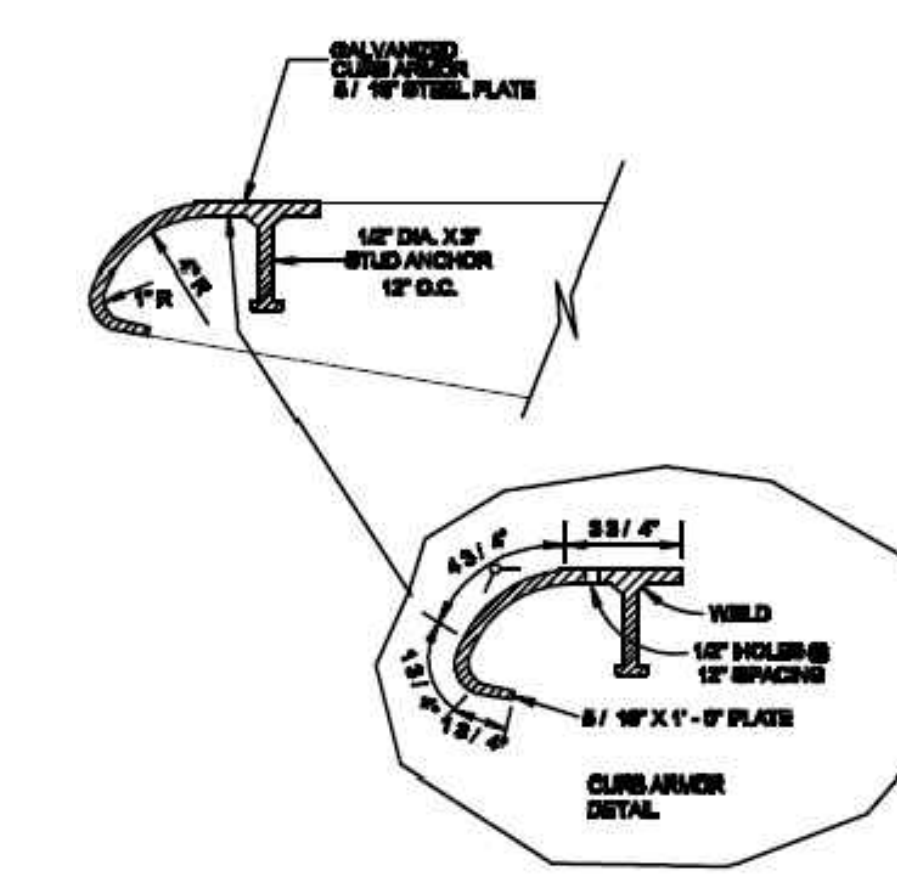
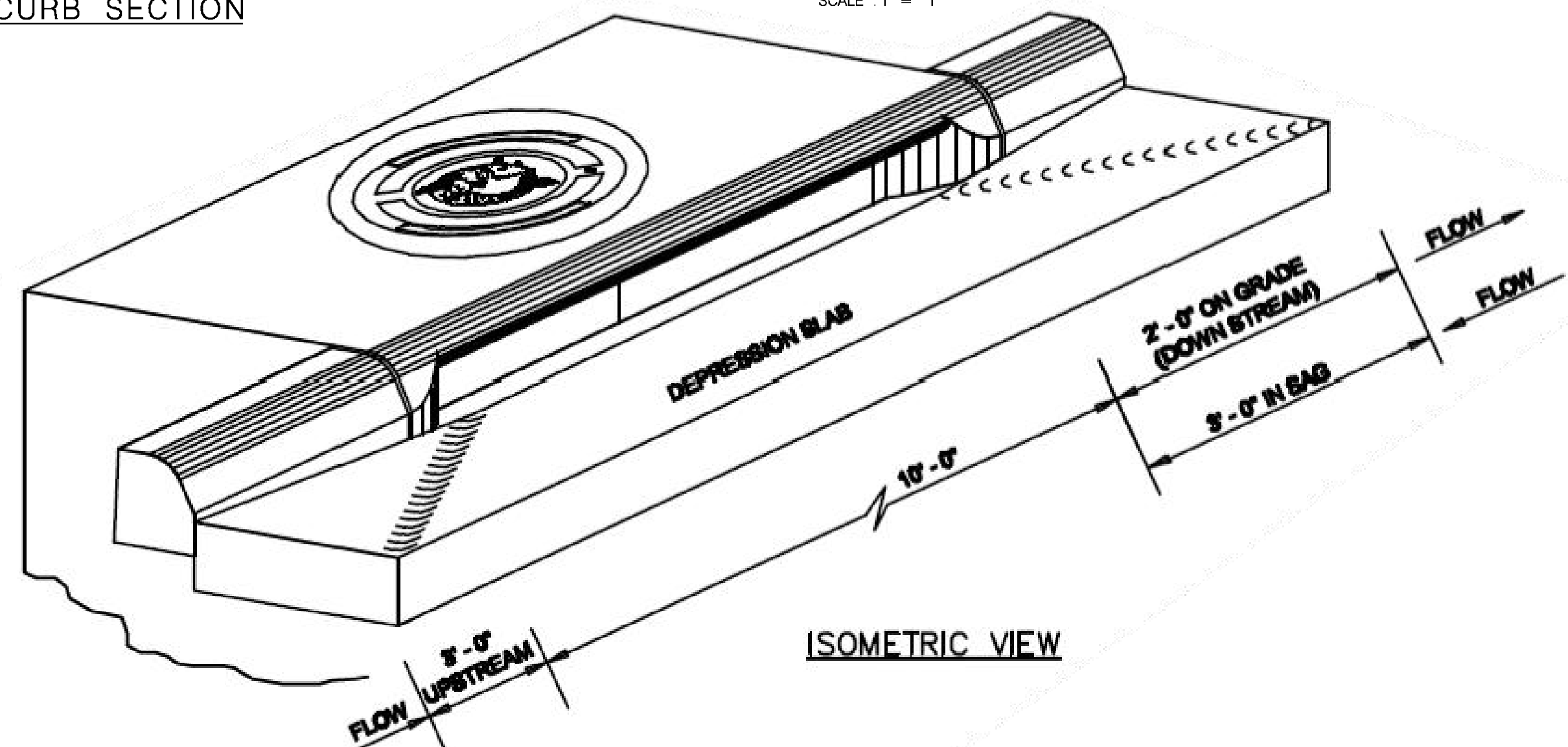
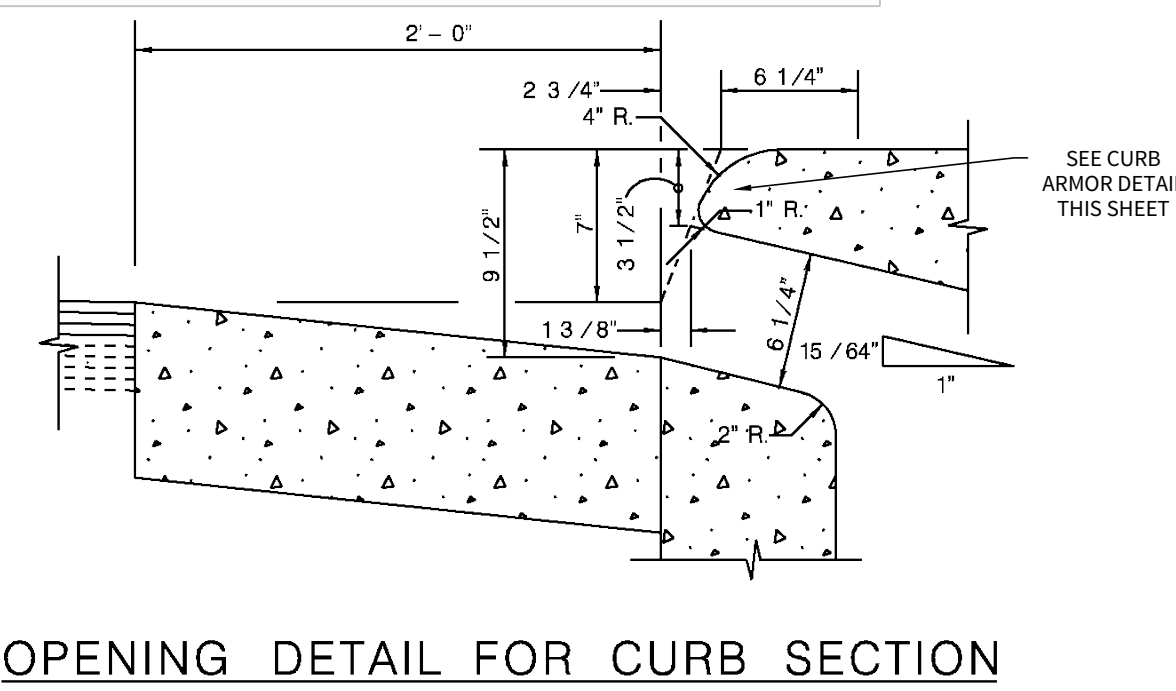


NOTES FOR MANHOLE LID AND RING

- FOR LID DESIGN OUTSIDE OF CITY OF SAN ANTONIO, DELETE "SAN ANTONIO PUBLIC WORKS DEPT.".
- CASTING NUMBER AND MANUFACTURER'S I.D. ON LID AND RING.
- LOAD BEARING CAPABILITY OF HS-20 MINIMUM.
- THE LOAD BEARING SURFACES SHALL BE MACHINE GROUND.
- THE COMBINED WEIGHT OF THE MANHOLE RING AND COVER MUST BE AT LEAST 260 LBS.



OPENING DETAIL FOR CURB SECTION



* THESE FIGURES DO NOT INCLUDE CONCRETE & STEEL INTERCEPTED BY MANHOLE AND REINFORCED CONC PIPE.
* INCLUDES CONCRETE GUTTER FOR ON GRADE INLET. REDUCE BY .06 C.Y. FOR INLETS IN SUMP.

GENERAL NOTES

- ALL BARS INTERCEPTING MANHOLE RING & REINFORCING CONCRETE PIPE SHALL BE FIELD CUT.
- CONCRETE FOR STRUCTURES SHALL BE CLASS "A", 3000 PSI IN 28 DAYS.
- ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER BARS.
- ALL EXPOSED CORNERS SHALL BE CHAMFERED TO 3/4"
- CONSTRUCTION JOINT SHOWN AT FLOWLINE MAY BE RAISED A MAXIMUM OF 6" AT THE CONTRACTOR'S DISCRETION. ADJUST LENGTH OF VERTICAL STEEL AS REQUIRED.
- ALL REINFORCING STEEL SHALL CONFORM TO A.S.T.M. A-615, GRADE 60 REQUIREMENTS.
- INVERT OF DROP INLET TO BE SHAPED WITH CONCRETE FILL TO AFFECT DRAINAGE TO OUTLET PIPE.
- DELETE 4 "C" BARS FROM SCHEDULE QUANTITIES IF MANHOLE RING AND COVER ARE PLACED AT END OF INLET.
- CAST IRON MANHOLE RING AND COVER TO BE PLACED NEXT TO OUTLET PIPE, EXCEPT FOR VERTICAL OUTLET PIPE IN WHICH CASE MANHOLE RING AND COVER WILL BE OFFSET.
- PAYMENT FOR ALL EXCAVATION, BACK FILLING, CONCRETE, REINFORCING STEEL RING AND COVER SHALL BE INCLUDED IN THE UNIT COST OF ITEM 403 "STORM SEWER JUNCTION BOXES AND INLETS".

JANUARY 2005

STANDARD PLANS
CITY OF SAN ANTONIO, TEXAS
DEPARTMENT OF PUBLIC WORKS

TYPE "C" INLET DETAILS

DRAWN BY: V. VASQUEZ	DATE:	REVISIONS:	SCALE: SEE ABOVE
CHECKED BY: NAT HARDY, P.E.			DATE:
			SHEET: OF

DATE
04/01/2022
PROJECT NO.
02142.051

DRAWN BY
JR

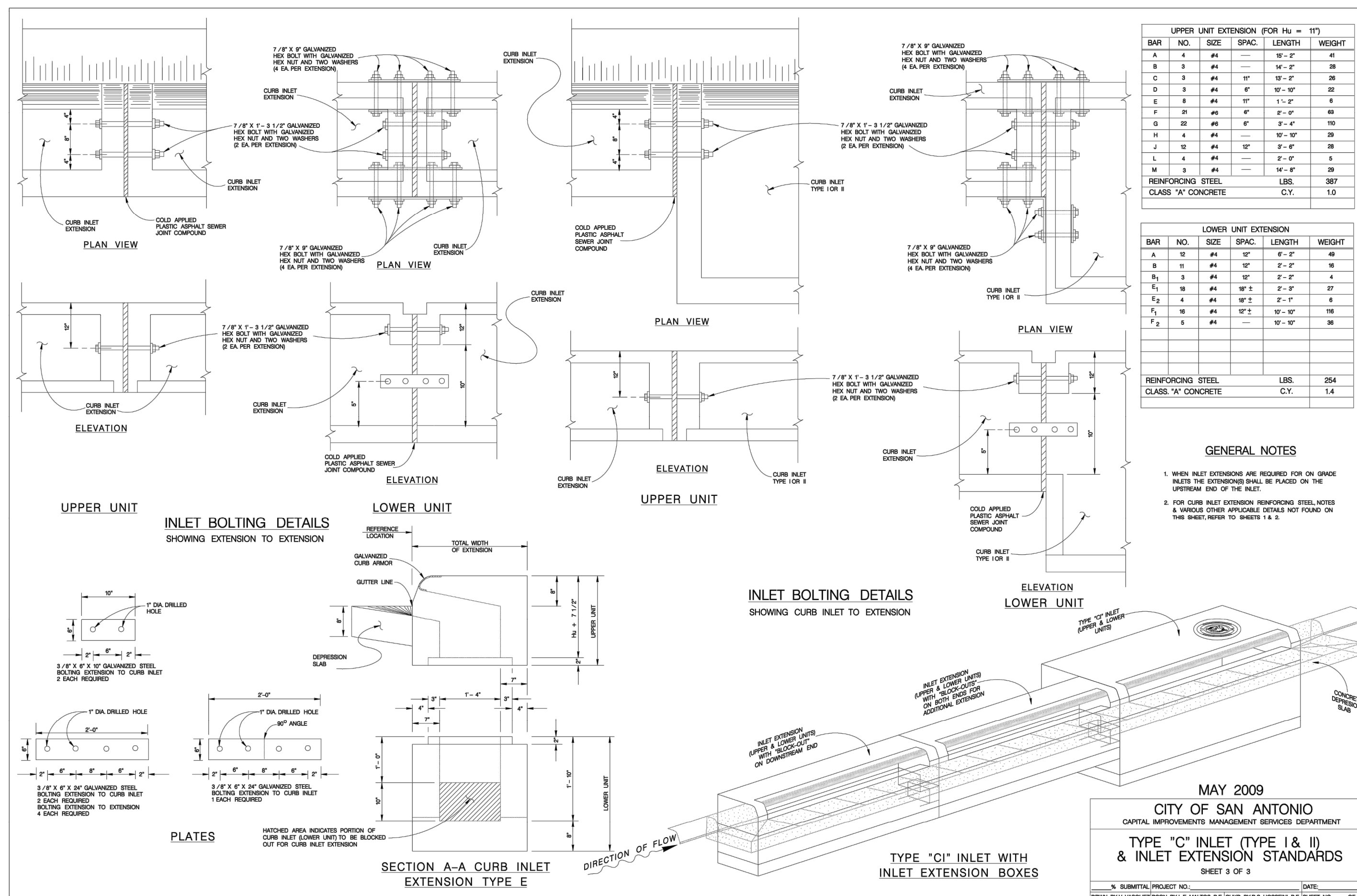
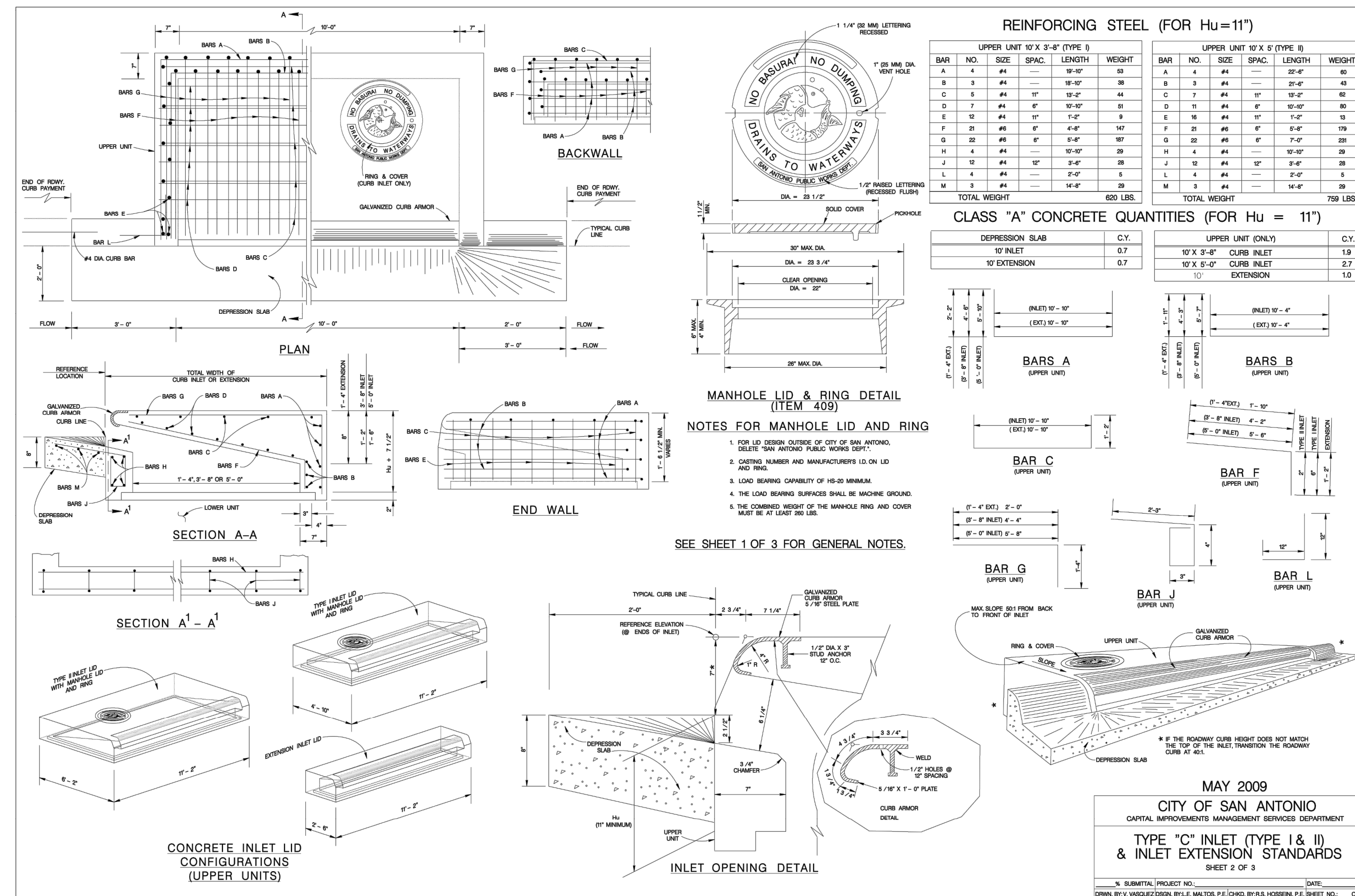
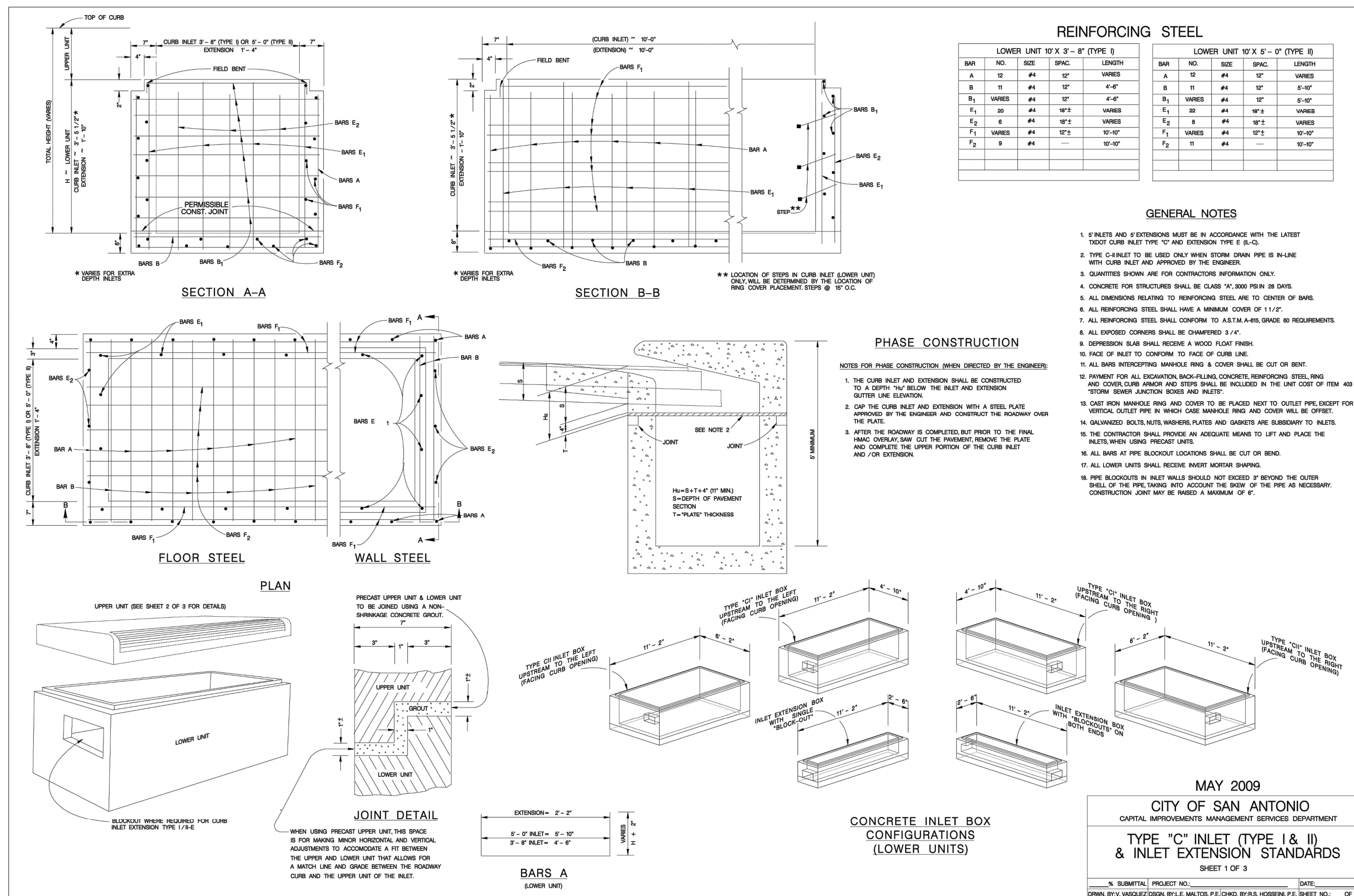
CHECKED BY
TCD/JC/DDC

REVISIONS	1.	2.	3.	4.	5.	6.	7.	8.

CUDE ENGINEERS
TBPCLS No. 10048500

PLAT NO.
22-11800196

C26



LEGEND

- = PROPOSED WATER MAIN
- = EXISTING WATER MAIN
- = EXISTING SEWER LINE AND MANHOLE
- = PROPOSED SEWER LINE AND MANHOLE
- = PROPOSED HYDRANT

SEWER/WATER LINE CROSSINGS	
LINE	STATION
LINE "A"	1+90.43
LINE "A"	9+76.55
LINE "B"	3+71.14
LINE "C"	7+55.65
LINE "C"	10+45.65

SCALE: 1"=80'



BENCHMARK BM-1

BENCHMARK TO BE SET BY ENGINEER PRIOR TO CONSTRUCTION.

NOTE: ALL LATERALS TO BE INSTALLED @ MIN. 2.0% SLOPE. UNLESS OTHERWISE NOTED, ALL SANITARY SEWER PIPE SHALL BE P.V.C. THAT MEETS ASTM SPECIFICATION D-3034, SDR-26.

NOTES:

- ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE UPGRADE SIDE OF THE SEWER TRENCH THUS ALLOWING THE TRENCH TO INTERCEPT ANY SILT CONTAMINATED RUNOFF.
- ALL SANITARY SEWER PIPE SHALL BE P.V.C. THAT MEETS ASTM SPECIFICATION D-3034, SDR-26 UNLESS OTHERWISE NOTED.
- ALL LATERALS TO BE INSTALLED @ MIN. 2.0% SLOPE. UNLESS OTHERWISE NOTED.
- LATERALS TO BE BUILT TO FRONT UTILITY EASEMENT LINE OR SANITARY SEWER EASEMENT LINE.
- THE LOCATIONS AND DEPTHS OF ALL EXISTING UTILITIES, INCLUDING SERVICE LATERALS AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.
- FOR WASTEWATER IN THE FIVE-YEAR FLOODPLAIN OF A DRAINAGE-WAY. MANHOLES MUST BE SHALLOW PROFILE, MONOLITHIC STRUCTURED AND ANCHORED TO SUBGRADE.
- WASTEWATER MAINS SHOULD BE LAID WITH THE TOP OF THE PIPE AT A MINIMUM OF THREE FEET BELOW SURFACE OF THE GROUND, WHERE THIS MINIMUM COVER IS NOT POSSIBLE OR WHERE THE WASTEWATER MAIN IS LOCATED WITHIN OR CROSSING THE FIVE-YEAR FLOODPLAIN OF A DRAINAGE-WAY THE WASTEWATER MAIN MUST BE ENCASED WITH 2000 PSI CONCRETE WITH A MINIMUM THICKNESS OF SIX INCHES.

SAN ANTONIO WATER SYSTEM	233-2010
COSA DRAINAGE	207-2800
CITY SIDEWALK AND TRENCHING DIVISION	821-3240
COSA TRAFFIC SIGNAL OPERATIONS	207-7765
TEXAS STATE WIDE ONE CALL LOCATOR	1-800-545-6005
CITY PUBLIC SERVICE	
AT&T	
SPECTRUM CABLE	
VALERO ENERGY CO.	
GREY FOREST UTILITIES	

NOTE:

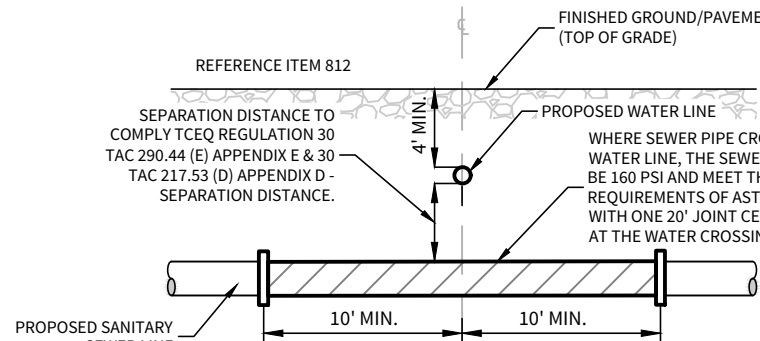
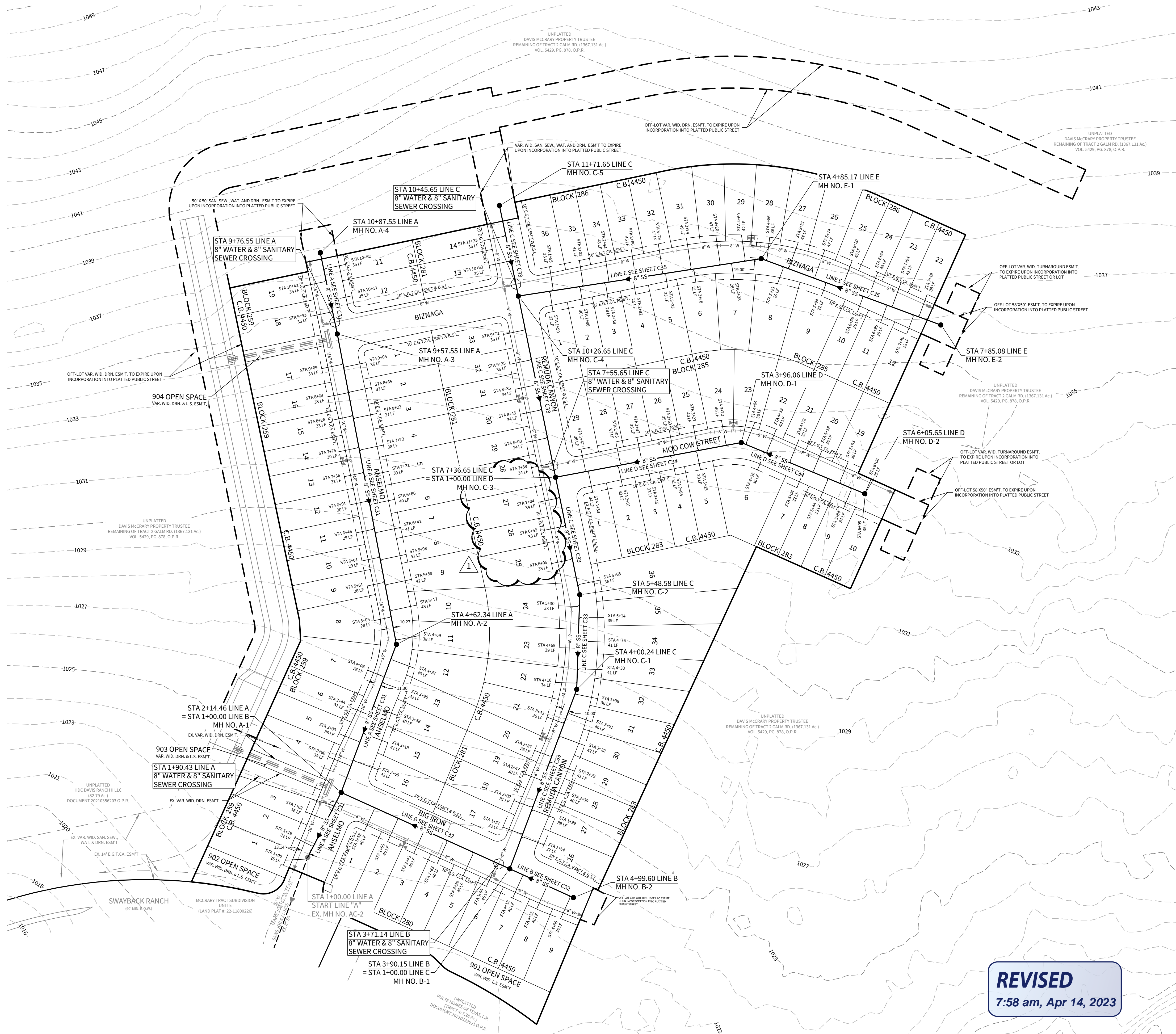
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TEST WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12-INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

CAUTION NOTE:

THE CONTRACTOR SHALL BE AWARE THAT AN 8" SANITARY SEWER MAIN AND 16" WATER MAIN EXIST ALONG THE INTERSECTION OF SWAYBACK RANCH AND ANSELMO. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE THESE UTILITIES LOCATED PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING IN THIS AREA. ANY DAMAGE DONE TO THESE EXISTING FACILITIES WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR.

TRENCH EXCAVATION PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.



N.T.S.

TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL

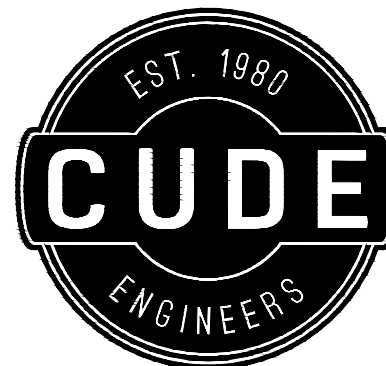
REVISED

7:58 am, Apr 14, 2023

WEST SEWERSHED - LEON CREEK W.R.C.

Developer's Name	PULTE HOMES OF TEXAS, L.P.
Developer's Address	1718 DRY CREEKWAY, SUITE 120
City	SAN ANTONIO
State	TEXAS
Zip	78259
Phone #	(210) 496-1985
Fax #	(210) 496-0449
SAWS Block Map #	084-624
Total EDU's	125
Total Acreage	25.86
Total Linear Footage of Pipe	8"SS - 3649.53 L.F.
Plot No.	22-11800196
Number of Lots	124
SAWS Job No.	22-1586

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San Antonio, Texas 78231
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McCrary Tract Unit 14

OVERALL SANITARY SEWER PLAN

DATE

04/12/2023

PROJECT NO.
02142.051

DRAWN BY
JR

CHECKED BY
TCD/JC/DDC

REVISIONS

1. 2023-04-12: REVISED McCrary Tract Unit 14 SANITARY SEWER PLAN

2.

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SAWS CONSTRUCTION NOTES
COUNTER PERMIT AND GENERAL CONSTRUCTION PERMIT REVISED JULY 2017

GENERAL SECTION

- All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable:
 - Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System", Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water", TAC Title 30 Part 1 Chapter 290.
 - Current TxDOT "Standard Specifications for Construction of Highways, Streets and Drainage".
 - Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction".
 - Current City of San Antonio "Standard Specifications for Public Works Construction".
 - Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).

The contractor shall not proceed with any pipe installation work until they obtain a copy of the approved Counter Permit or General Construction Permit (GCP) from the consultant and has been notified by SAWS Construction Inspection Division to proceed with the work and has arranged a meeting with the inspector and consultant for the consultant requirements. Work completed by the contractor without an approved Counter Permit and/or a GCP will be subject to removal and replacement at the expense of the contractors and/or the developer.

The Contractor shall obtain the SAWS Standard Details from the SAWS website, http://www.saws.org/business_center/specs. Unless otherwise noted within the design plans.

The Contractor is to make arrangements with the SAWS Construction Inspection Division at 233-2973, on notification procedures that will be used to notify affected home residents and/or property owners 48 hours prior to beginning any work.

Location and depth of existing utilities and service laterals shown on the plans are understood to be approximate. Actual locations and depths must be field verified by the Contractor at least 1 week prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction at no cost to SAWS.

The Contractor shall verify the exact location of underground utilities and drainage structures at least 1-2 weeks prior to construction whether shown on plans or not. Please allow up to 7 business days for locates requesting pipe location markers on SAWS facilities. The following contact information are supplied for verification purposes:

- SAWS Utility Locates: <http://www.saws.org/Service/Locates>
- COSA Drainage (210) 207-0724 or (210) 207-6026
- COSA Traffic Signal Operations (210) 206-8480
- COSA Traffic Signal Damages (210) 207-3951

Texas State Wide One Call Locator 1-800-545-6005 or 811

The Contractor shall be responsible for restoring existing fences, curbs, streets, driveways, sidewalks, landscaping and structures to its original or better condition if damages are made as a result of the project's construction.

All work in Texas Department of Transportation (TxDOT) and/or Bexar County right-of-way shall be done in accordance with respective construction specifications and permit requirements.

The Contractor shall comply with City of San Antonio or other governing municipality's tree ordinances when excavating near trees.

The Contractor shall not place any waste materials in the 100-year Flood Plain without first obtaining an approved Flood Plain Permit.

Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays. Request should be sent to constworkreq@saws.org.

Weekend Work: Contractors are required to notify the SAWS Inspection Construction Department 48 hours in advance to request weekend work. Request should be sent to constworkreq@saws.org.

Any and all SAWS utility work installed without holiday/weekend approval will be subject to be uncovered for proper inspection.

Compaction note (Item 804): The contractor shall be responsible for meeting the compaction requirements on all trench backfill and for paying for the tests performed by a third party. Compaction tests will be done at one location point randomly selected, or as indicated by the SAWS Inspector and/or the test administrator, per each 12-inch loose lift per 400 linear feet at a minimum. This project will not be accepted and finalized by SAWS without this requirement being met and verified by providing all necessary documentation test results.

A copy of all testing reports shall be forwarded to SAWS Construction Inspection Division. Water Section

SEWER NOTES

The Contractor is responsible for ensuring that no Sanitary Sewer Overflow (SSO) occurs as a result of their work. All contractor personnel responsible for SSO prevention and control shall be trained on proper response. Should an SSO occur, the contractor shall:

- Identify the source of the SSO and notify SAWS Emergency Operations Center (EOC) immediately at (210) 233-2014. Provide the address of the spill and an estimated volume or flow.
- Attempt to eliminate the source of the SSO.
- Contain sewage from the SSO to the extent of preventing a possible contamination of waterways.
- Clean up spill site (return contained sewage to the collection system if possible) and properly dispose of contaminated soil/materials.
- Clean the affected sewer mains and remove any debris.
- Meet all post-SSO requirements as per the EPA Consent Decree, including line cleaning and televising the affected sewer mains (at SAWS direction) within 24 hours.

Should the Contractor fail to address an SSO immediately and to SAWS satisfaction, they will be responsible for all costs incurred by SAWS, including any fines from EPA, TCEQ and/or any other Federal, State or Local Agencies. No separate measurement or payment shall be made for this work. All work shall be done according to guidelines set by the TCEQ and SAWS.

If bypass pumping is required, the Contractor shall perform such work in accordance with SAWS Standard Specification for Water and Sanitary Sewer Construction, Item No. 864, "Bypass Pumping".

Prior to tie-ins, any shutdowns of existing force mains of any size must be coordinated with the SAWS Construction Inspection Division at (210) 233-2973 at least one week in advance of the shutdown. The Contractor must also provide a sequence of work as related to the tie-ins; this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor to sequence the work accordingly.

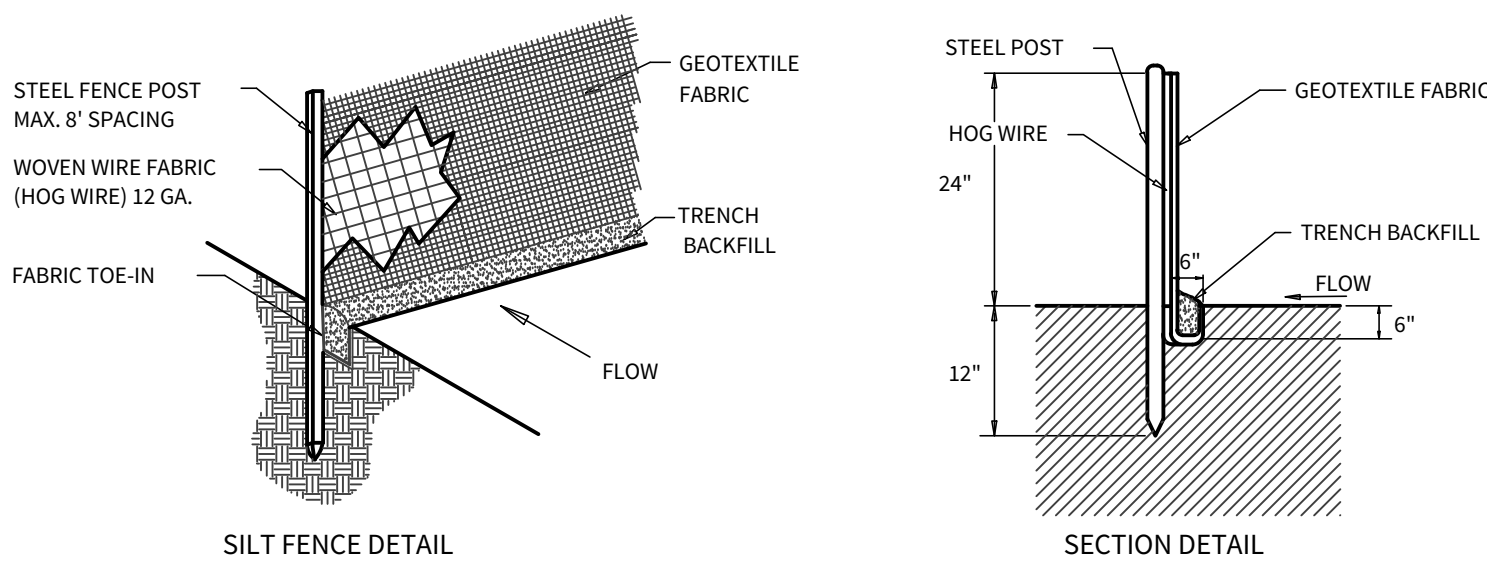
Sewer pipe where water line crosses shall be 160 psi and meet the requirements of ASTM D2241, TAC 217.53 and TCEQ 290.44(e)(4)(B). Contractor shall center a 20" joint of 160 psi pressure rated PVC at the proposed water crossing.

ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY: It shall be the responsibility of the Contractor to make allowances and adjustments for top of manholes to match the finished grade of the project's improvements. (NSPI)

Spills, Overflows, or Discharges of Wastewater: All spills, overflows, or discharges of wastewater, recycled water, petroleum products, or chemicals must be reported immediately to the SAWS Inspector assigned to the Counter Permit or General Construction Permit (GCP). This requirement applies to every spill, overflow, or discharge regardless of size.

Manhole and all pipe testing (including the TV inspection) must be performed and passed prior to Final Field Acceptance by SAWS Construction Inspection Division, as per the SAWS Specifications For Water and Sanitary Sewer Construction.

All PVC pipe over 14 feet of cover shall be extra strength with minimum pipe stiffness of 115 psi

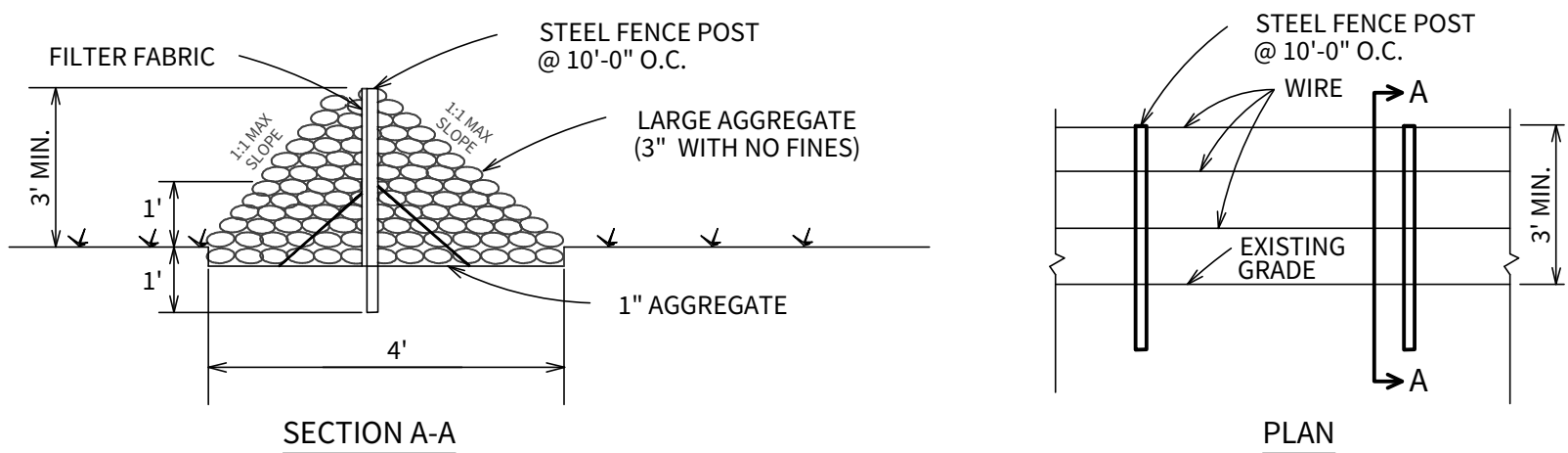


General Notes

- Steel posts which support the silt fence shall be installed on a slight angle toward the anticipated runoff source. Post must be embedded a minimum of one foot.
- The top of the silt fence shall be trenched in with a spade or mechanical trencher, so that the downslope face of the trench is flat and perpendicular to the line of flow. Where fence cannot be trenched in (e.g. pavement) weight fabric flap with washed gravel on uphill side to prevent flow under fence.
- The trench must be a minimum of 6 inches deep and 6 inches wide to allow for the silt fence fabric to be laid in the ground and backfilled with compacted material.
- Silt fence should be securely fastened to each steel support posts or to woven wire, which is in turn attached to the steel fence post.
- Inspection shall be made weekly or after each rainfall event and repair or replacement shall be made promptly as needed.
- Silt fence shall be removed when the site is completely stabilized so as not to block or impede storm flow or drainage.
- Accumulated silt shall be removed when it reaches a depth of 6 inches. The silt shall be disposed of in an approved site and in such a manner as to not contribute to additional siltation.

SILT FENCE DETAIL

N.T.S.

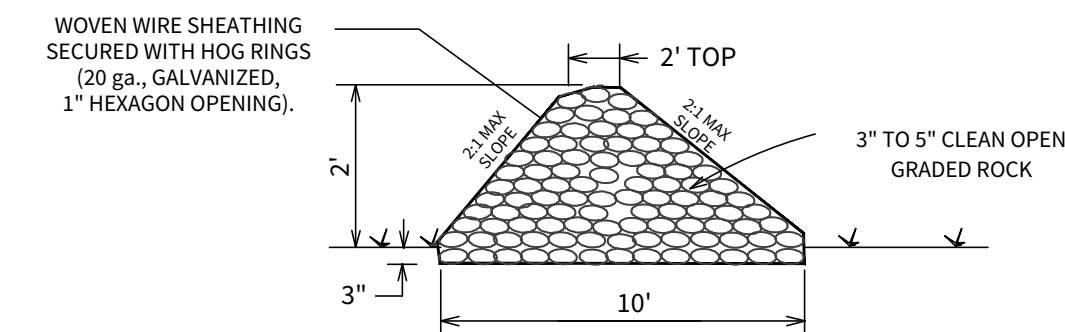


General Notes

- The rock berm shall be inspected weekly or after each rain and the stone shall be replaced when the structure ceases to function as intended due to silt accumulation, washout, etc.
- When silt reaches a depth of 12", the silt shall be removed and disposed of at an approved site.

ROCK BERM W/ SILT FENCE DETAIL

N.T.S.

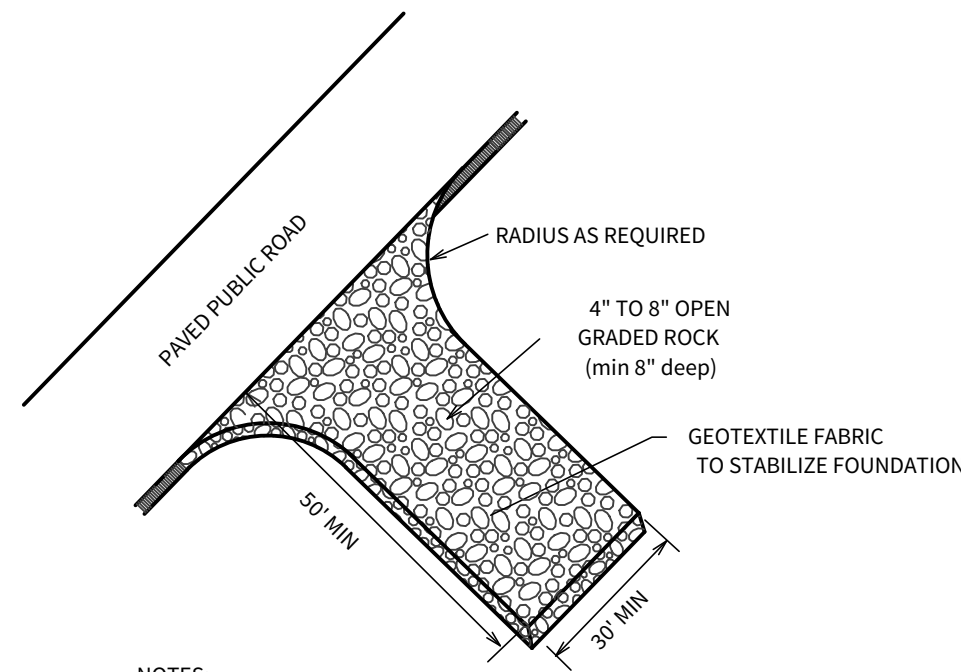


General Notes

- The rock berm shall be secured with a woven wire sheathing having maximum 1 inch opening and minimum wire diameter of 20 gauge.
- The rock berm shall be inspected weekly or after each rain, and the stone and/or fabric core woven wire sheathing shall be replaced when the structure ceases to function as intended, due to silt accumulation among the rocks, washout, construction traffic damage, etc.
- When silt reaches a depth equal to 6", it shall be removed and disposed of at an approved site and in a manner as to not create a siltation problem.
- When the site is completely stabilized, the berm and accumulated silt shall be removed and disposed of in an approved manner.

ROCK BERM DETAIL

N.T.S.



NOTES:

- When necessary, wheels shall be cleaned to remove sediment prior to entrance on public roadway.
- The exit shall be maintained in a condition which will prevent tracking or flowing of sediment onto public roadways. This may require periodic top dressing with additional stone as conditions demand, and repair and/or cleaned of any measures used to trap sediment. All sediment spilled, dropped, washed, or tracked onto public roadways must be removed immediately.

TEMPORARY CONSTRUCTION
ENTRANCE/EXIT DETAIL

N.T.S.

SUPPLEMENTARY

No extra-payment shall be allowed for work called for on the plans but not included on the bid schedule. This incidental work will be required and shall be included under the pay item to which it relates.

The Developer dedicates the sanitary sewer mains upon completion by the Developer and acceptance by the San Antonio Water System. The San Antonio Water System will own and maintain said sanitary sewer mains which are located within this particular subdivision. (As applicable)

The Developer will be responsible for the lift station maintenance fee in effect at the time of certification. The current maintenance fee per lift station will be collected prior to plat recordation.

All PVC Sewer Pipe with over 14 feet of cover shall be extra strength pipe, Minimum Stiffness of 115 PSI.

WORK COMPLETED BY THE CONTRACTOR WHICH HAS NOT RECEIVED A WORK ORDER OR THE NOTICE TO PROCEED WITH THE SAN ANTONIO WATER SYSTEM CONSTRUCTION INSPECTION DIVISION WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.

The Contractor is responsible to ensure that no overflows of sewage occurs. Should this occur the Contractor shall:

- Identify the source of the spill and attempt to eliminate any additional spillage. Notify SAWS Construction Inspections Division at 233-3500.
- Contain the spill in place and prevent contamination of streams.
- Clean up the spill and dispose of contaminated materials.
- Disinfect the area of the spill with a mixture of HTH chlorine and water.
- Identify and train personnel responsible for spillage prevention and control.

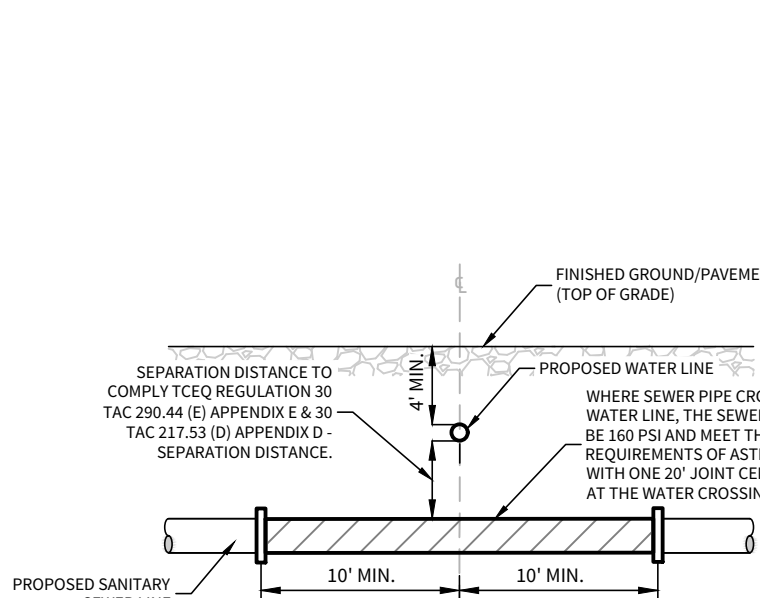
No separate measurement or payment shall be made for this work. All work shall be done in according to guidelines set by the Texas Natural Resource Contamination Commission (TRNCC) and the San Antonio Water System.

Service Lateral Connections:

- The exact location and elevation of the service laterals and manholes shall be field verified by the Contractor (NSPI).
- A minimum of 3 feet of cover is to be maintained over the sanitary sewer laterals or subgrade.
- All sewer lateral services for future connections as identified on plan and profiles, shall be capped and sealed.
- The Contractor shall be responsible for disconnecting each existing service line from the existing water main and re-connecting the service to the new service main. The Contractor shall be responsible for maintaining continuous service (NSPI).
- Laterals shall be constructed to serve all existing houses and vacant lots.

The Contractor shall provide by-pass pumping of sewage around each segment of pipe to be replaced, in accordance with SAWS special specification "Sanitary Sewer". Payment for such work will be made under the bid item "Sanitary Sewer (By-Pass Pumping)" as per SAWS special specification "Sanitary Sewer".

Prior to tie-ins, any shutdowns of existing force mains of any size must be coordinated with the SAWS inspection and/or SAWS production groups at least one week or more in advance of the shutdown. The Contractor must also provide a sequence of work as related to the tie-ins; this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor to sequence the work accordingly.



TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL

N.T.S.

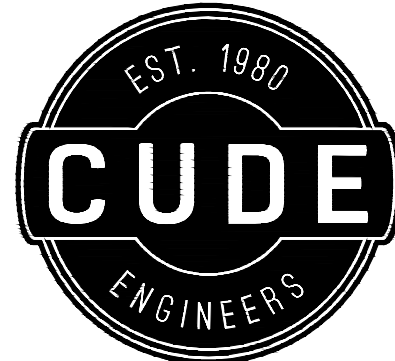
TRENCH EXCAVATION PROTECTION

CONTRACTOR AND/OR CONTRACTORS INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTORS INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

WEST SEWERSHEAD - LEON CREEK W.R.C.

Developer's Name	PULTE HOMES OF TEXAS, L.P.
Developer's Address	1718 DRY CREEKWAY, SUITE 120
City	SAN ANTONIO
State	TEXAS
Zip	78259
Phone #	(210) 496-1985
Fax #	(210) 496-0449
SAWS Block Map #	084-624
Total EDU's	125
Total Acreage	21.95
Total Linear Footage of Pipe	8"SS - 3649.53 L.F.
Plat No.	22-11800196
Number of Lots	124
SAWS Job No.	22-1586

1



4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

McCRARY TRACT

UNIT 14

SANITARY SEWER GENERAL NOTES

DATE

08/26/2022

PROJECT NO.

02142.051

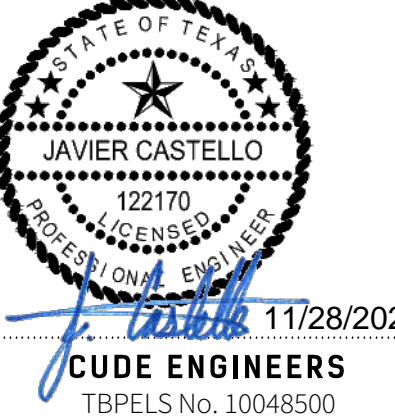
DRAWN BY

JR

CHECKED BY

TCD/JC/DDC

REVISIONS	1	2	3	4	5	6	7	8
1	Added additional notes to the plans.							



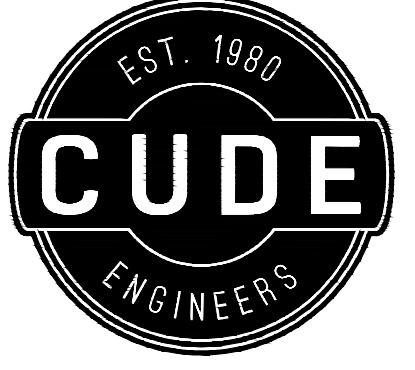
PLAT NO.

22-11800196

SAWS JOB NO.

22-1586

C30



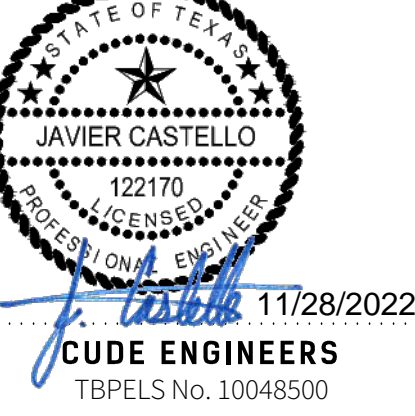
4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

MCCRARY TRACT
UNIT 14

SANITARY SEWER PLAN & PROFILE LINE "A"

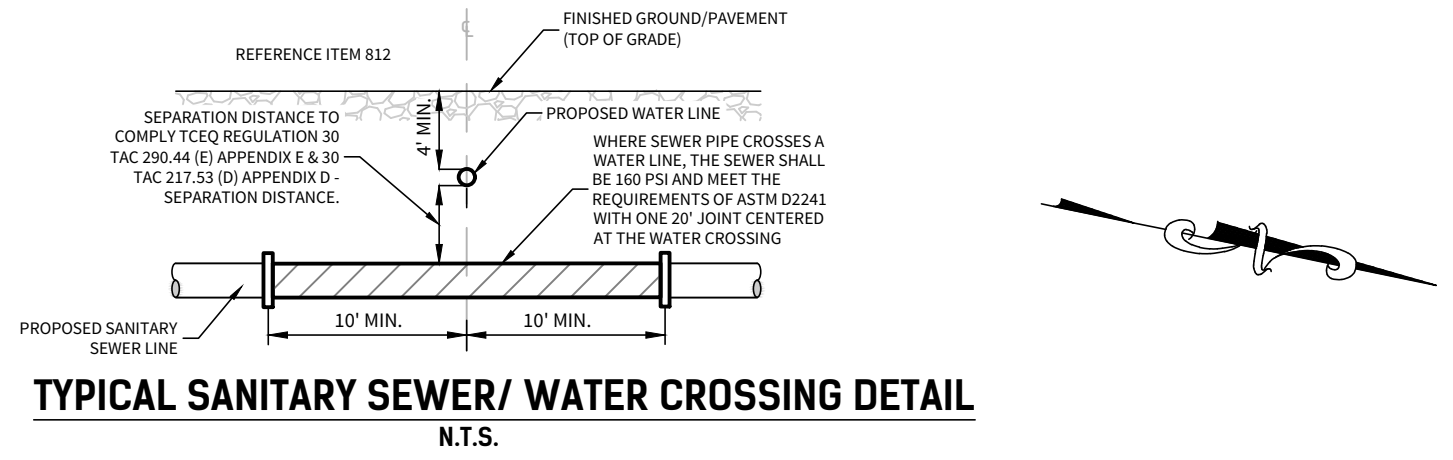
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PROJECT NO.	02142.051
DRAWN BY	JR
CHECKED BY	TCD/JC/DDC

REVISIONS	1	2	3	4	5	6	7	8
1. Initial								



PLAT NO.
22-11800196
SAWS JOB NO.
22-1586

C31

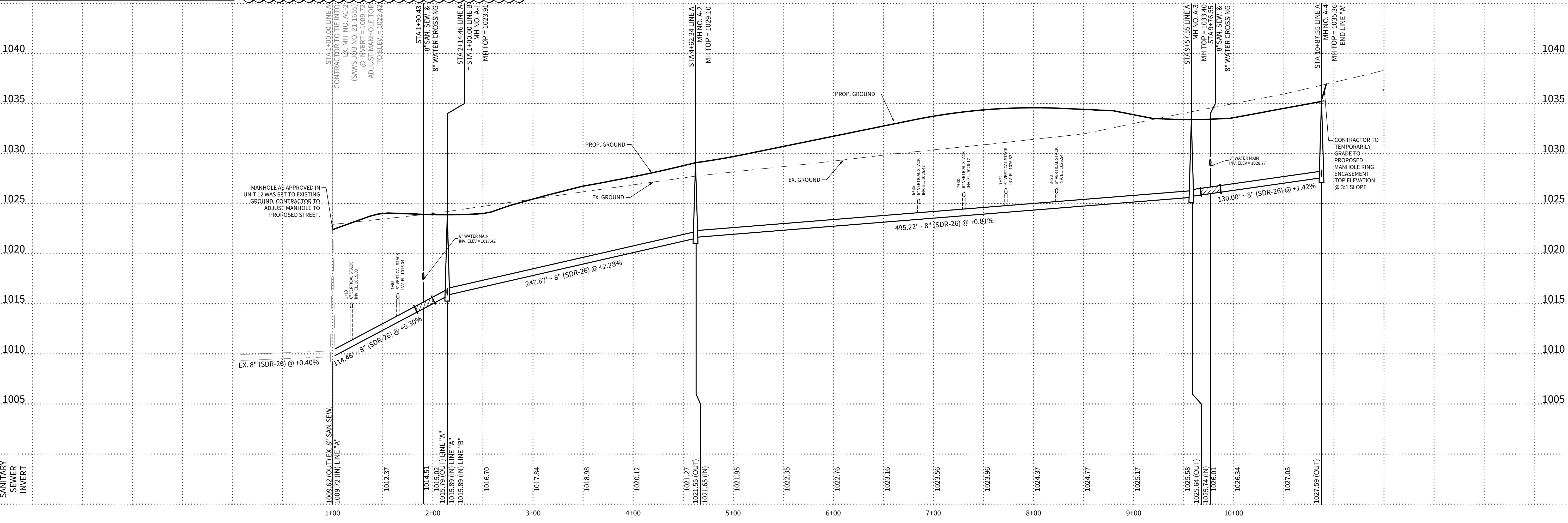


- NOTES:
- CONTRACTOR TO MAINTAIN A MINIMUM 2' VERTICAL SEPARATION DISTANCE BETWEEN OF THE BOTTOM EXISTING WATER MAIN AND TOP OF PROPOSED SANITARY SEWER MAIN AT WATER AND SANITARY SEWER CROSSINGS.
 - ALL LATERALS SHALL BE INSTALLED AT A MINIMUM 2.0% SLOPE UNLESS OTHERWISE NOTED.

TRENCH EXCAVATION PROTECTION
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

WEST SEWERSHED - LEON CREEK W.R.C.

Developer's Name	PULTE HOMES OF TEXAS, L.P.		
Developer's Address	1718 DRY CREEKWAY, SUITE 120		
City	SAN ANTONIO	State	TEXAS
Phone #	(210) 496-1985	Fax #	(210) 496-0449
SAWS Block Map #	084-624	Total EDU's	125
Total Linear Footage of Pipe	8"SS - 3649.53 L.F.	Plat No.	22-11800196
Number of Lots	124	SAWS Job No.	22-1586





1. CONTRACTOR TO MAINTAIN A MINIMUM 2' VERTICAL SEPARATION DISTANCE BETWEEN OF THE BOTTOM EXISTING WATER MAIN AND TOP OF PROPOSED SANITARY SEWER MAIN AT WATER AND SANITARY SEWER CROSSINGS.
2. ALL LATERALS SHALL BE INSTALLED AT A MINIMUM 2.0% SLOPE UNLESS OTHERWISE NOTED.

TRENCH EXCAVATION PROTECTION

CONTRACTOR AND/OR CONTRACTORS INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL ANALYSIS DESIGNER/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS, SPECIFICATIONS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES/INSTALLATION METHODS PRIOR TO THE PROCEEDING AND BE RESPONSIBLE FOR CONDUCTING NECESSARY INVESTIGATIONS AND ANALYSES OF SAFETY AND PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED HEREIN. IN THE CONTRACT DOCUMENTS, THE CONTRACTOR'S IMPLEMENTATION OF THESE SAFETY SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY SYSTEMS, PROGRAMS AND/OR PROCEDURES THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS AND PROTECT THE PUBLIC. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL ANALYSIS CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS AND BE RESPONSIBLE FOR THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND THE TRENCH EXCAVATION.

WEST SEWERSHED – LEON CREEK W.R.C.

Developer's Name PULTE HOMES OF TEXAS, L.P.

Developer's Address 1718 DRY CREEKWAY, SUITE 120

City SAN ANTONIO State TEXAS Zip 78259

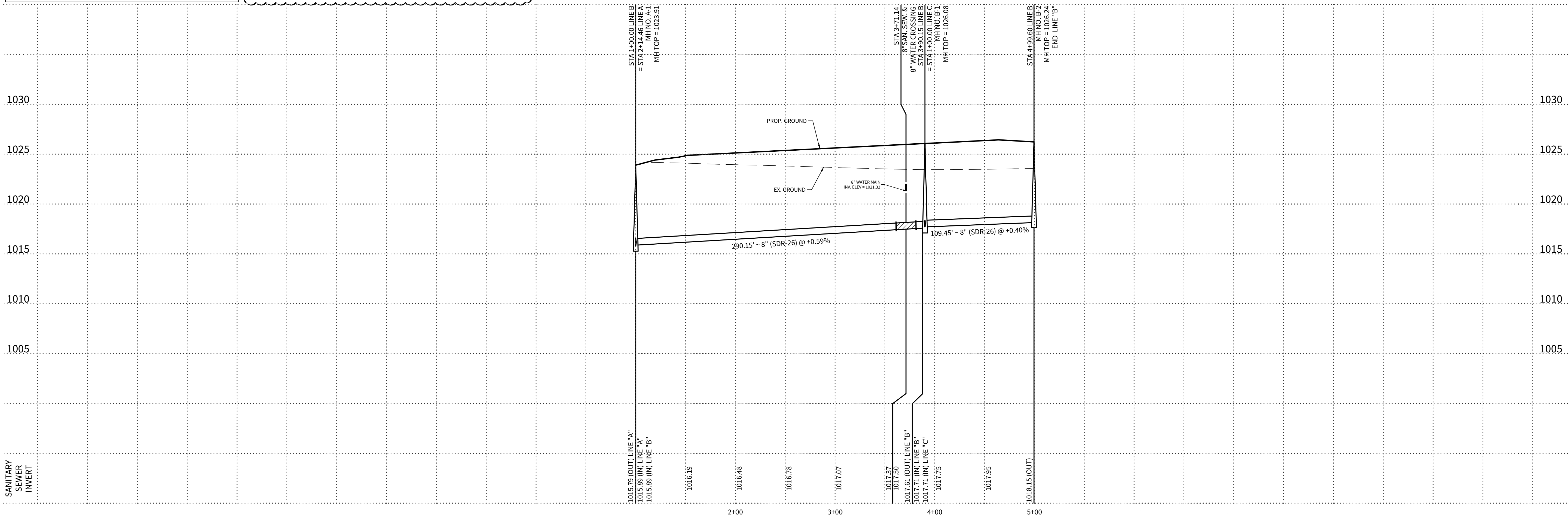
Phone # (210) 496-1985 Fax # (210) 496-0449

SAWS Block Map # 084-624 Total EDU's 125 Total Acreage 21.95

Total Linear Footage of Pipe 8"SS - 3649.53 L.F. Plat No. 22-11800106

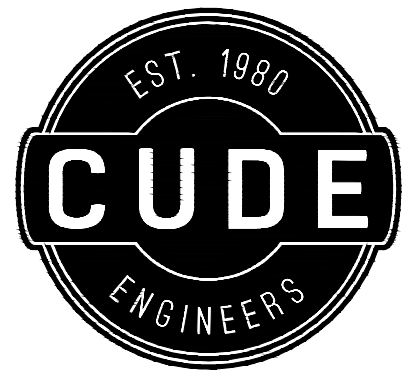
Number of Lots 124 SAWS Job No. 22-1586

STA. 1+00.00 TO STA. 4+99.60



HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

CUDEENGINEERS.COM



4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F: (210) 523.7112

McCrary Tract
Unit 14

SANITARY SEWER PLAN & PROFILE LINE "B"

DATE _____

08/26/2022
.....

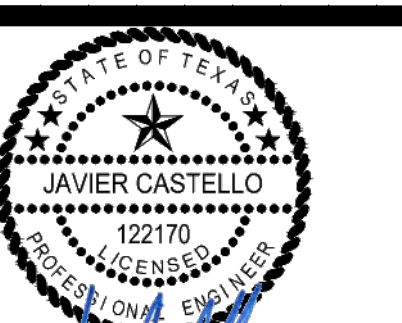
PROJECT NO
02142.051

DRAWN BY
JR

CHECKED BY
TCD/JC/DDC

REVISIONS

REVISIONS



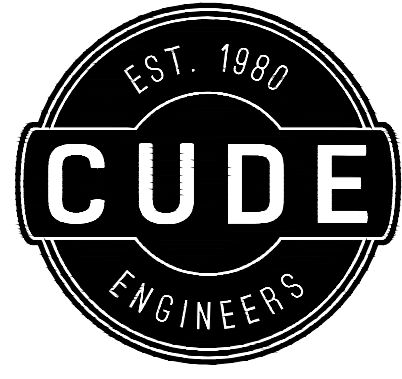
CUDE ENGINEERS
TBPELS No. 10048500

PLAT NO.
22-11800196

SAWS JOB N
22-1586

C32

REPRODUCTION OF THE ORIGINAL SIGNED AND SEALED PLAN AND/OR ELECTRONIC MEDIA MAY HAVE BEEN INADVERTENTLY ALTERED. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE SCALE OF THE DOCUMENT AND CONTACTING CUDE ENGINEERS TO VERIFY DISCREPANCIES PRIOR TO CONSTRUCTION.



4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

MCCRARY TRACT

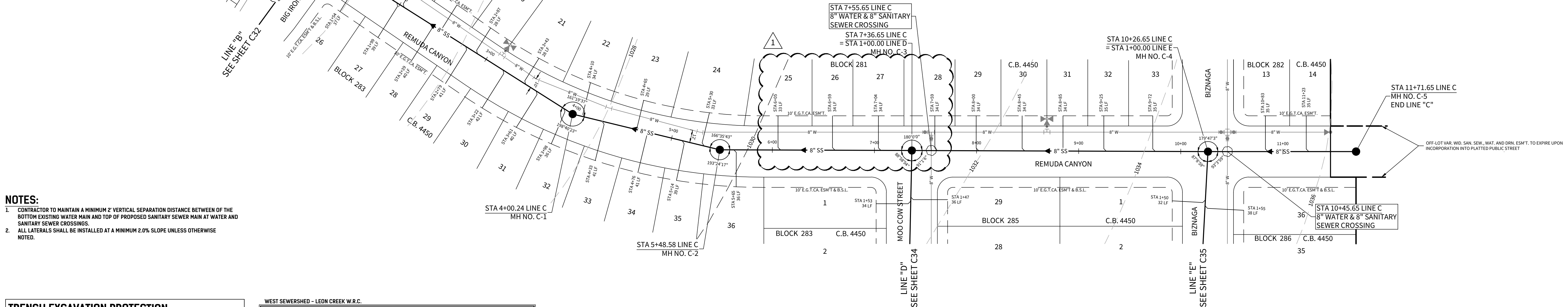
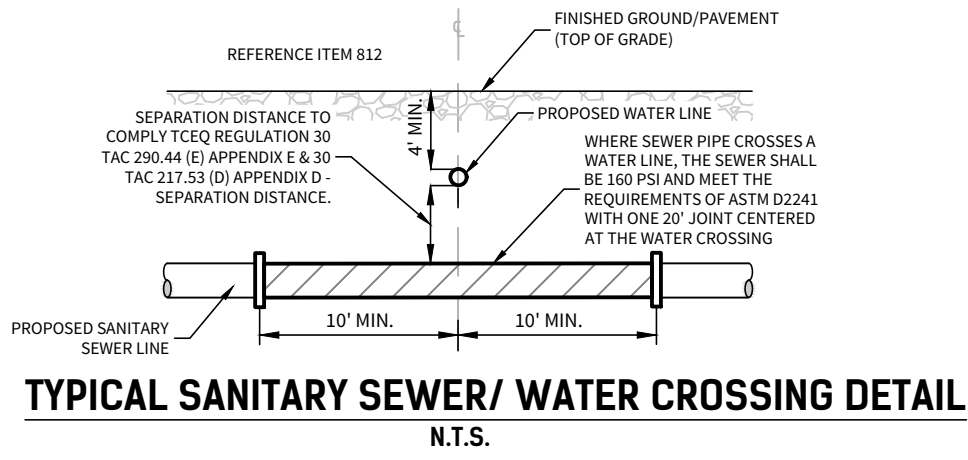
UNIT 14

SANITARY SEWER PLAN & PROFILE LINE "C"

- NOTES:**
- CONTRACTOR TO MAINTAIN A MINIMUM 2' VERTICAL SEPARATION DISTANCE BETWEEN THE BOTTOM EXISTING WATER MAIN AND TOP OF PROPOSED SANITARY SEWER MAIN AT WATER AND SANITARY SEWER CROSSINGS.
 - ALL LATERALS SHALL BE INSTALLED AT A MINIMUM 2.0% SLOPE UNLESS OTHERWISE NOTED.

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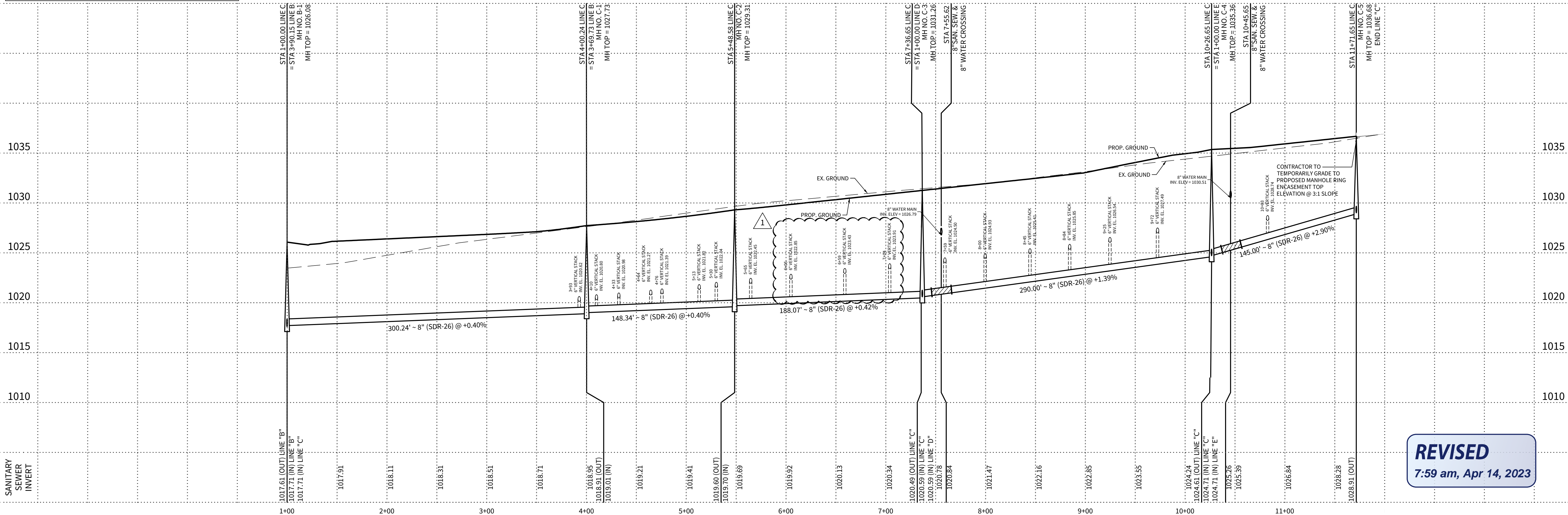
WEST SEWERSHED - LEON CREEK W.R.C.			
Developer's Name	PULTE HOMES OF TEXAS, L.P.		
Developer's Address	1718 DRY CREEKWAY, SUITE 120		
City	SAN ANTONIO	State	TEXAS
Phone #	(210) 496-1985	Fax #	(210) 496-0449
SAWS Block Map #	084-624	Total EDU's	125
Total Linear Footage of Pipe	8"SS - 3649.53 L.F.	Total Acreage	25.86
Number of Lots	124	Plat No.	22-11800196
		SAWS Job No.	22-1586



LINE C

STA. 1+00.00 TO STA. 11+71.65

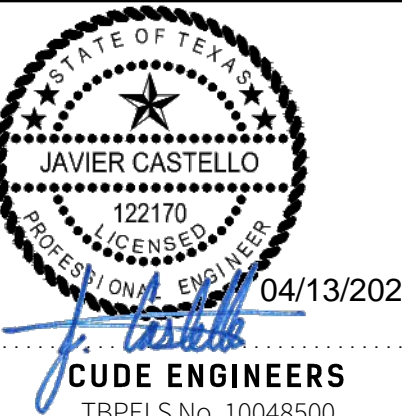
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VERTICAL SCALE: 1" = 5'



REVISED
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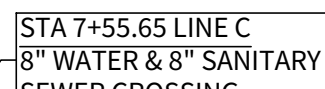
DATE
04/12/2023
PROJECT NO.
02142.051
DRAWN BY
JR
CHECKED BY
TCD/JC/DDC

REVISIONS	1.	2.	3.	4.	5.	6.	7.	8.
	1.	2.	3.	4.	5.	6.	7.	8.



PLAT NO.
22-11800196
SAWS JOB NO.
22-1586

C33



1. CONTRACTOR TO MAINTAIN A MINIMUM 2' VERTICAL SEPARATION DISTANCE BETWEEN OF THE BOTTOM EXISTING WATER MAIN AND TOP OF PROPOSED SANITARY SEWER MAIN AT WATER AND SANITARY SEWER CROSSINGS.
2. ALL LATERALS SHALL BE INSTALLED AT A MINIMUM 2.0% SLOPE UNLESS OTHERWISE NOTED.

CONTRACTOR AND/OR CONTRACTORS INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES AND SOILS TO DETERMINE THE NECESSITY AND SCOPE OF THE CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTORS INDEPENDENTLY RETAINED EMPLOYEE OR CONSULTANT SHALL ENFORCE AND ENFORCEMENT SHALL BE MADE TO ALL PERSONNEL ON THE STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

Developer's Name		PULTE HOMES OF TEXAS, L.P.	
Developer's Address		1718 DRY CREEKWAY, SUITE 120	
City	SAKS ANTONIO	State	TEXAS
		Zip	78259
Phone #	(210) 496-1985	Fax #	(210) 496-0449
SAWS Block Map #		2084-624	Total EDU's
		125	Total Acreage
Total Linear Footage of Pipe		8'55" - 3649.53 L.F.	Plat No.
			22-11800196
Number of Lots	124	SAWS Job No.	22-1586

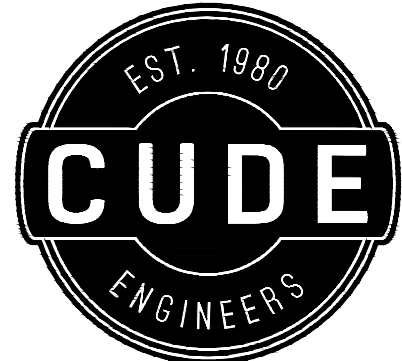
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8:00 am, Apr 14, 2023

4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F: (210) 523.7112

SANITARY SEWER PLAN & PROFILE LINE "D"

C34



4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

**McCRARY TRACT
UNIT 14**

SANITARY SEWER PLAN & PROFILE LINE "E"

DATE

08/28/2022

PROJECT NO.

02142.051

DRAWN BY

JR

CHECKED BY

TCD/JC/DDC

REVISIONS

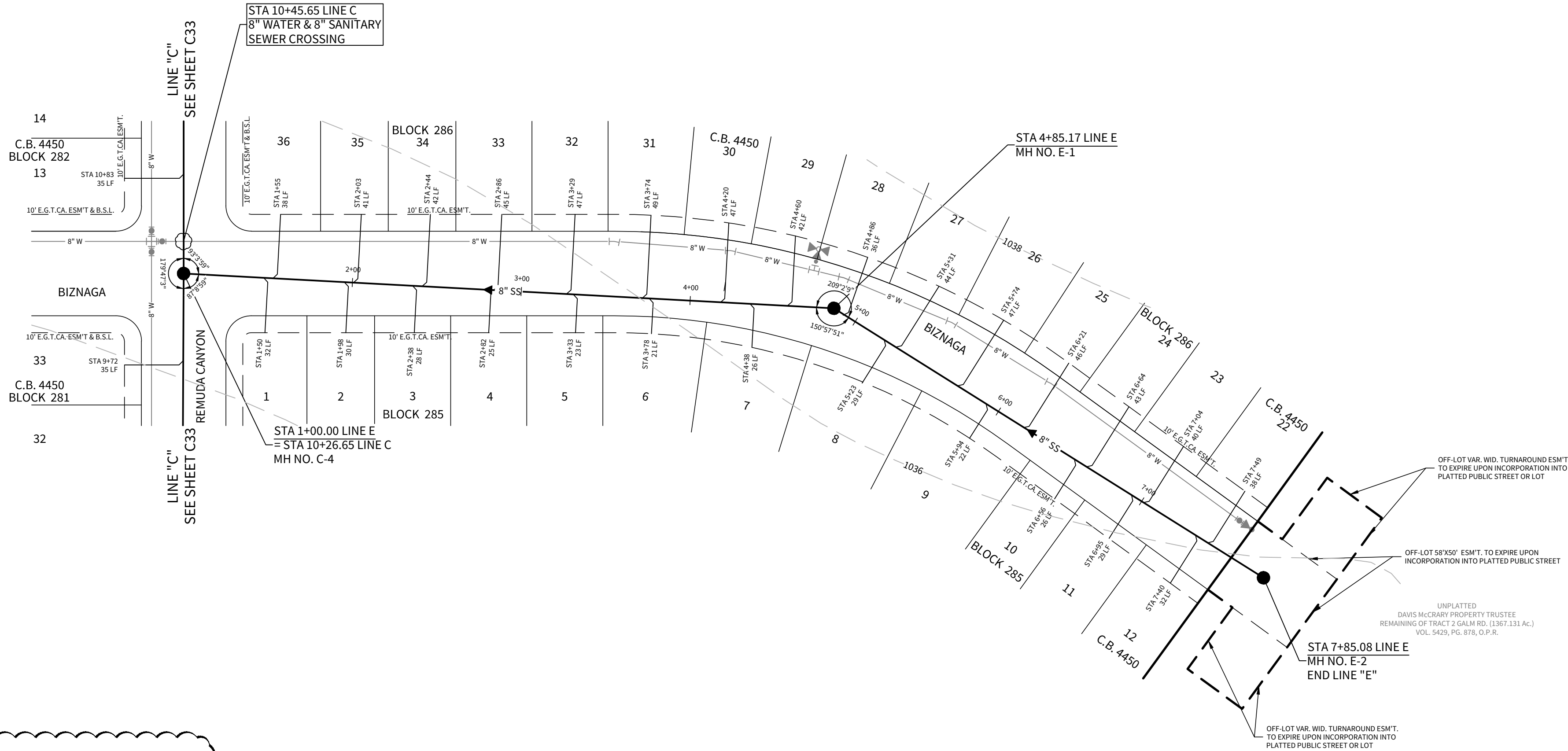
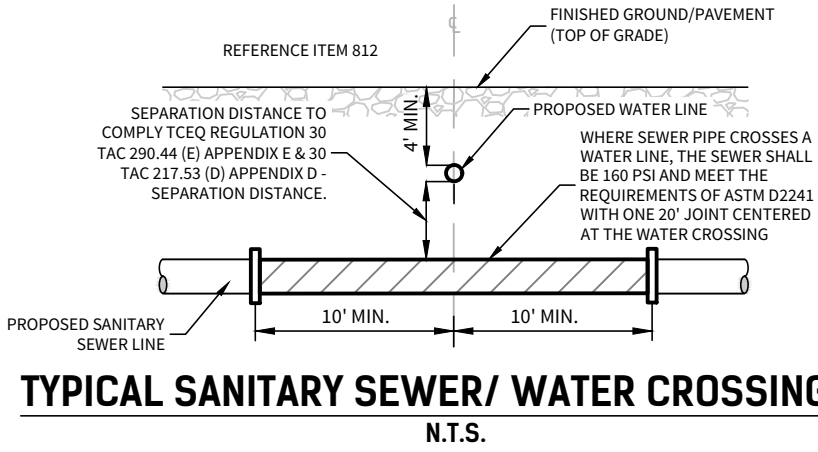
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CUDE ENGINEERS
TBPELS No. 10048500

PLAT NO.
22-11800196
SAWS JOB NO.
22-1586

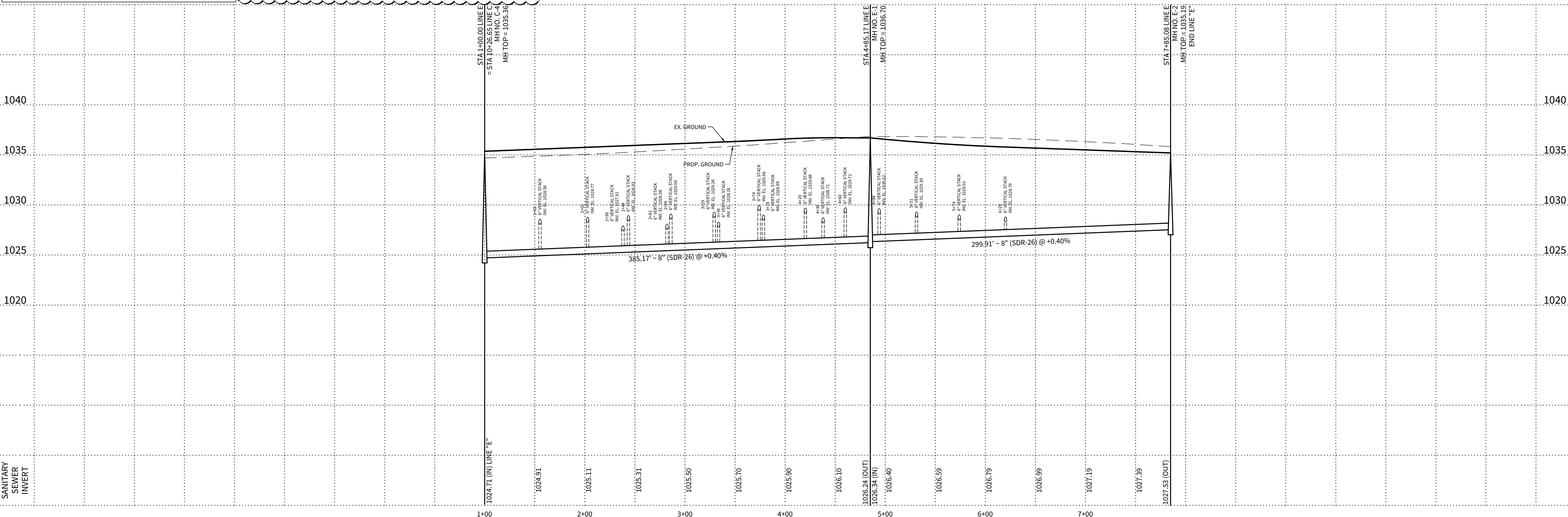
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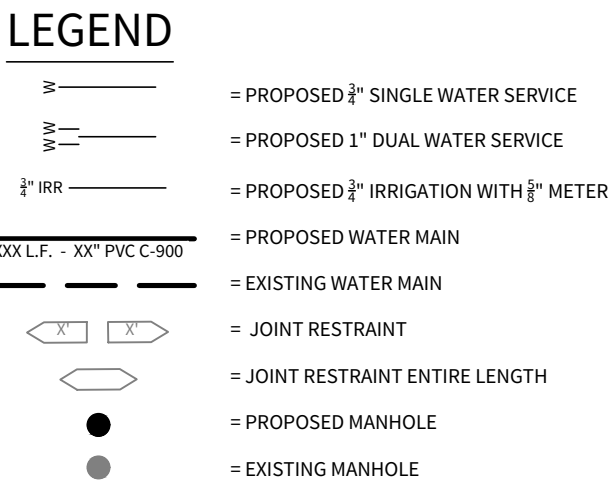
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HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



TRENCH EXCAVATION PROTECTION
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WEST SEWERSHED - LEON CREEK W.R.C.			
Developer's Name	PULTE HOMES OF TEXAS, L.P.		
Developer's Address	1718 DRY CREEKWAY, SUITE 120		
City	SAN ANTONIO	State	TEXAS
Phone #	(210) 496-1985	Fax #	(210) 496-0449
SAWS Block Map #	084-624	Total EDU's	125
Total Linear Footage of Pipe	8"SS - 3649.53 L.F.		
Number of Lots	124	SAWS Job No.	22-1586



SAWS CONSTRUCTION NOTES
COUNTER PERMIT AND GENERAL CONSTRUCTION PERMIT REVISED JULY 2017

GENERAL SECTION

- All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable:
 - Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System", Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water", TAC Title 30 Part 1 Chapter 290.
 - Current TxDOT "Standard Specifications for Construction of Highways, Streets and Drainage".
 - Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction".
 - Current City of San Antonio "Standard Specifications for Public Works Construction".
 - Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).
- The contractor shall not proceed with any pipe installation work until they obtain a copy of the approved Counter Permit or General Construction Permit (GCP) from the consultant and has been notified by SAWS Construction Inspection Division to proceed with the work and has arranged a meeting with the inspector and consultant for the work requirements. Work completed by the contractor without an approved Counter Permit and/or a GCP will be subject to removal and replacement at the expense of the contractors and/or the developer.
- The Contractor shall obtain the SAWS Standard Details from the SAWS website, http://www.saws.org/business_center/specs. Unless otherwise noted within the design plans.
- The Contractor is to make arrangements with the SAWS Construction Inspection Division at 233-2973, on notification procedures that will be used to notify affected home residents and/or property owners 48 hours prior to beginning any work.
- Location and depth of existing utilities and service laterals shown on the plans are understood to be approximate. Actual locations and depths must be field verified by the Contractor at least 1 week prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction at no cost to SAWS.
- The Contractor shall verify the exact location of underground utilities and drainage structures at least 1-2 weeks prior to construction whether shown on plans or not. Please allow up to 7 business days for locates requesting pipe location markers on SAWS facilities. The following contact information are supplied for verification purposes:
 - SAWS Utility Locates: <http://www.saws.org/Service/Locates>
 - COSA Drainage (210) 207-0724 or (210) 207-6026
 - COSA Traffic Signal Operations (210) 206-8480
 - COSA Traffic Signal Damages (210) 207-3951
- Texas State Wide One Call Locator 1-800-545-6005 or 811
- The Contractor shall be responsible for restoring existing fences, curbs, streets, driveways, sidewalks, landscaping and structures to its original or better condition if damages are made as a result of the project's construction.
- All work in Texas Department of Transportation (TxDOT) and/or Bexar County right-of-way shall be done in accordance with respective construction specifications and permit requirements.
- The Contractor shall comply with City of San Antonio or other governing municipality's tree ordinances when excavating near trees.
- The Contractor shall not place any waste materials in the 100-year Flood Plain without first obtaining an approved Flood Plain Permit.

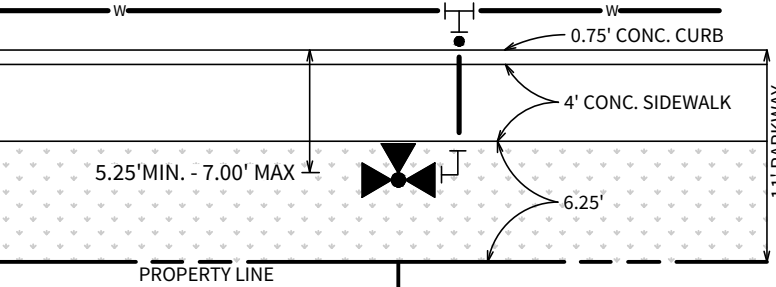
TRENCH EXCAVATION PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

SHEET NOTES:

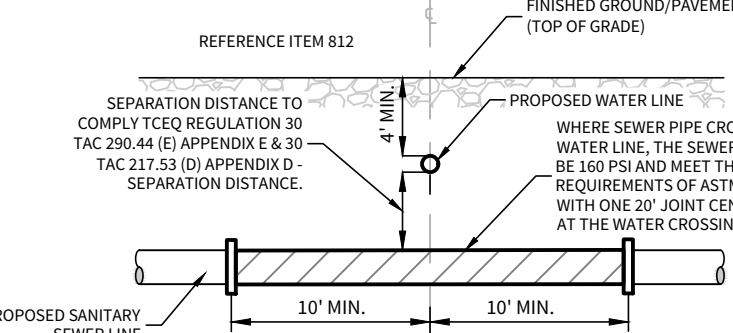
- ALL 8" & 16" PVC SHALL BE C-900 CLASS 235 DR 18.
- SAWS SHALL MACHINE CHLORINATE ALL NEW WATER MAINS.
- CONTRACTOR SHALL NOTIFY ENGINEER AND CITY OF SAN ANTONIO TREE INSPECTIONS DEPARTMENT PRIOR TO THE REMOVAL OF ANY TREES. DAMAGE TO ANY PROTECTED TREES WILL BE MITIGATED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL MAINTAIN A MINIMUM DEPTH OF 4 FEET ON ALL 8" AND 5 FEET ON ALL 16" MAINS

- Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays. Request should be sent to costworkreq@saws.org.
 - Weekend Work: Contractors are required to notify the SAWS Inspection Construction Department 48 hours in advance to request weekend work. Request should be sent to costworkreq@saws.org. Any and all SAWS utility work installed without holiday/weekend approval will be subject to be uncovered for proper inspection.
 - Compaction note [Item 804]: The contractor shall be responsible for meeting the compaction requirements on all trench backfill and for paying for the tests performed by a third party. Compaction tests will be done at one location point randomly selected, or as indicated by the SAWS Inspector and/or the test administrator, per each 12-inch loose lift per 400 linear feet at a minimum. This project will not be accepted and finalized by SAWS without this requirement being met and verified by providing all necessary documented test results.
 - A copy of all testing reports shall be forwarded to SAWS Construction Inspection Division.
- Water Section**
- Prior to tie-ins, any shutdowns of existing mains of any size must be coordinated with the SAWS Construction Inspection Division at least one week in advance of the shutdown. The Contractor must also provide a sequence of work as related to the tie-ins; this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor to sequence the work accordingly. For water mains 12" or higher, SAWS Emergency Operations Center (210) 233-2014.
 - Asbestos Cement (AC) pipe, also known as transite pipe which is known to contain asbestoscontaining material (ACM), may be located within the project limits. Special waste management procedures and health and safety requirements will be applicable when removal and/or disturbance of this pipe occurs. Such work is to be made under Special Specification Item No. 3000, "Special Specification for Handling Asbestos Cement Pipe".
 - Valve removal: Where the contractor is to abandon a water main, the control valve located on the abandoning branch will be removed and replaced with a cap/plug (NSP).
 - Suitable anchorage/trust blocking or joint restraint shall be provided at all of the following main locations: dead ends, plugs, caps, tees, crosses, valves, and bends, in accordance with the Standard Drawings DD-839 Series and Item No. 839, in the SAWS Standard Specifications for Construction.
 - All valves shall read "open right".
 - PRVs Required: Contractor to verify that no portion of the tract is below ground elevation of 925 feet where the static pressure will normally exceed 80 PSI. At all such locations where the ground level is below 925 feet, the Developer or Builder shall install at each lot, on the customer's side of the meter, an approved type pressure regulator in conformance with the Plumbing Code of the City of San Antonio. No dual services allowed for any lot(s) if "PRV is/are required for such lot(s)" only single service connections shall be allowed. *Note: A pressure regulator is also known as a pressure reducing valve (PRV).
 - Pipe Disinfection with Dry HTH for Projects less than 800 linear feet. [Item No. 847.3]: Mains shall be disinfected with dry HTH where shown in the contract documents or as directed by the Inspector, and shall not exceed a total length of 800 feet. This method of disinfection will also be followed for main repairs. The Contractor shall utilize all appropriate safety measure to protect his personnel during disinfection operations.
 - Backflow Prevention Devices:
 - All irrigation services within residential areas are required to have backflow prevention devices.
 - All commercial backflow prevention devices must be approved by SAWS prior to installation.
 - Final connection to the existing water main shall not be made until the water main has been pressure tested, chlorinated, and SAWS has released the main for tie-in and use.
 - All meters shall be 5/8", unless otherwise noted.
 - All pipes shall be C-900 Class 235 DR 18, unless otherwise noted.

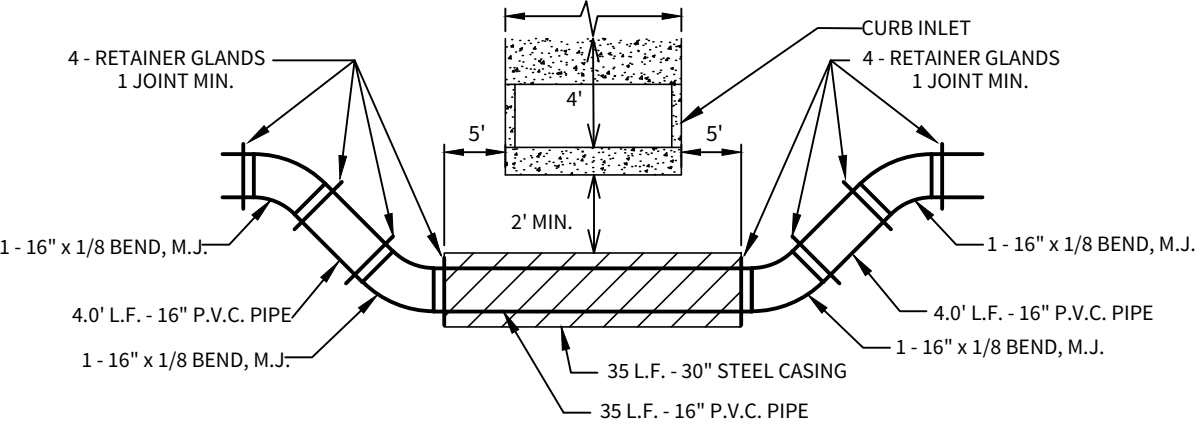


- NOTE:
- EXCLUSIVE OF THE TEE, PAYMENT FOR THE FIRE HYDRANT SHALL INCLUDE ALL FITTINGS, 8" D.I. PIPE AND 6" GATE VALVE & BOX.
 - FIRE HYDRANT TO BE INSTALLED OUTSIDE OF THE LIMITS OF ALL PROPOSED SIDEWALKS.

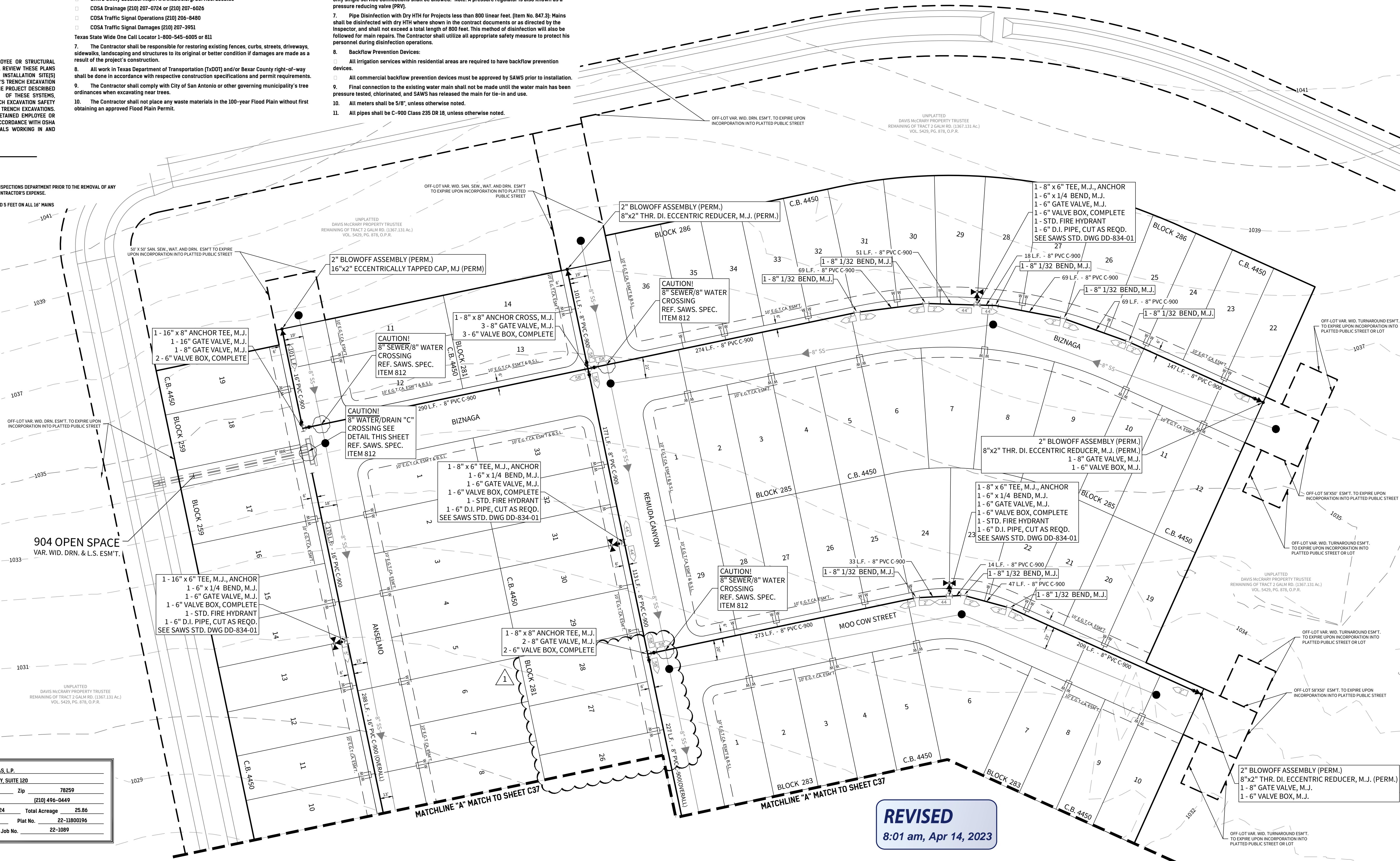
TYPICAL FIRE HYDRANT DETAIL [4' SIDEWALK / 50' R.O.W.]
N.T.S.



TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL
N.T.S.



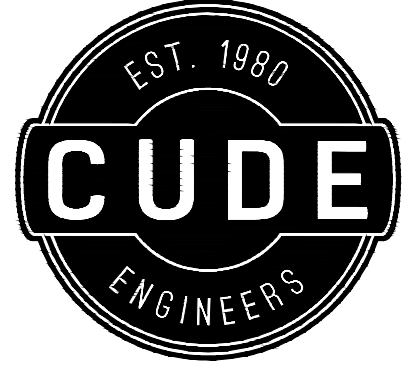
WATER / DRAIN "C" CURB INLET CROSSING DETAIL
SIDE VIEW [THIS DETAIL IS VERTICAL ONLY, NOT HORIZONTAL.] (N.T.S.)



PRESSURE ZONE 8

Developer's Name	PULTE HOMES OF TEXAS, L.P.		
Developer's Address	1718 DRY CREEKWAY, SUITE 120		
City	SAN ANTONIO	State	TEXAS
Zip	78259		
Phone #	(210) 496-1985	Fax #	(210) 496-0449
SAWS Block Map #	082-622	Total EDU's	124
Total Linear Footage of Pipe	8\"W - 3,104 L.F., 16\"W - 997 L.F.	Plat No.	22-11800196
Number of Lots	124	SAWS Job No.	22-1089

REVISED
8:01 am, Apr 14, 2023



4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

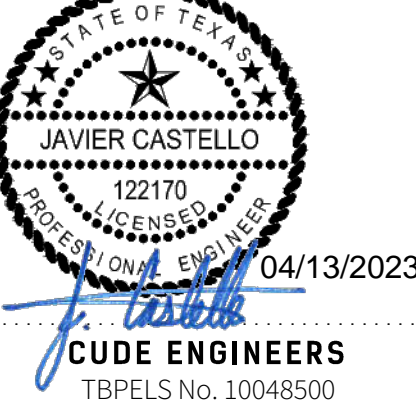
McCrary Tract
UNIT 14

WATER DISTRIBUTION PLAN

DATE
04/12/2023
PROJECT NO.
02142.051
DRAWN BY
JR
CHECKED BY
TCD/JC/DDC

REVISIONS

1.	DESIGNER: JAVIER CASTELLO	2.	DESIGNER: JAVIER CASTELLO	3.	DESIGNER: JAVIER CASTELLO	4.	DESIGNER: JAVIER CASTELLO	5.	DESIGNER: JAVIER CASTELLO	6.	DESIGNER: JAVIER CASTELLO	7.	DESIGNER: JAVIER CASTELLO	8.	DESIGNER: JAVIER CASTELLO
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PLAT NO.
22-11800196
SAWS JOB NO.
22-1089

C38

LEGEND

XXX L.F. - XX" PVC C-900 = PROPOSED WATER MAIN
--- = EXISTING WATER MAIN

KEYNOTE ①

AFTER RELEASE FOR SERVICE,
CONTRACTOR TO TIE NEW 8" MAIN
INTO EX. 8" WATER MAIN WITH
±5 L.F. OF 8" WATER MAIN, CUT AS REQUIRED.

8" VALVE TO REMAIN CLOSED UNTIL AFTER
DISINFECTION & ACCEPTANCE BY SAWS

CONTRACTOR SHALL FIELD LOCATE & VERIFY
DEPTH OF EXISTING 8" MAIN & FITTINGS PRIOR
TO COMMENCING CONSTRUCTION

1 - 8" SOLID SLEEVE
1 - 2" BLOWOFF ASSEMBLY (TEMP.)
1 - 8"x2" THR. DI. ECCENTRICALLY
TAPPED CAP, M.J. (TEMP.)
SEE SAWS STD DETAIL DWG DD-844-01

KEYNOTE ②

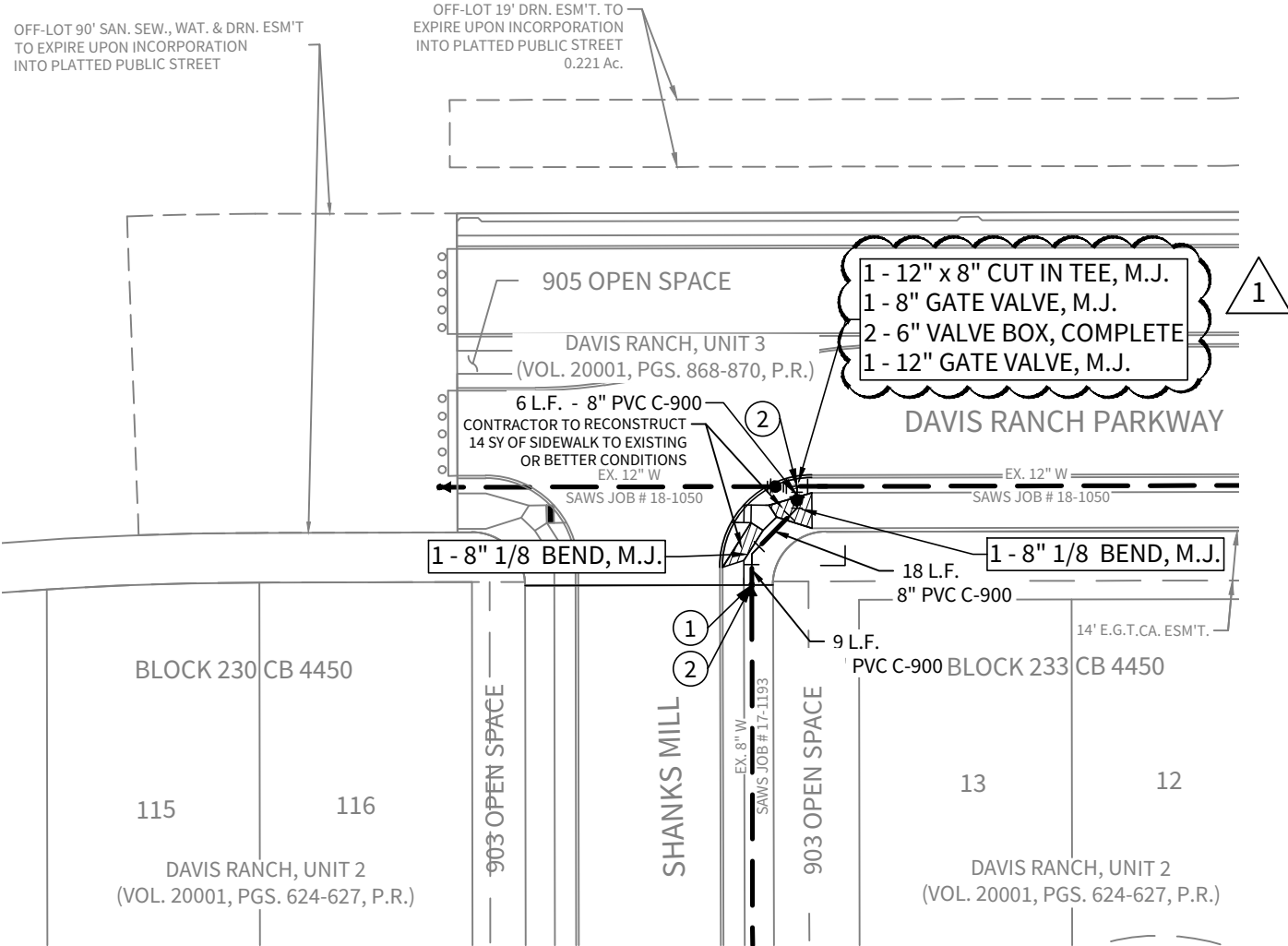
CONTRACTOR SHALL CHLORINATE WITH HTH
(SAWS SPEC. ITEM NO. 847)
CONTRACTOR SHALL PROVIDE A 2"
JUMPER CONNECTION TO LOAD NEW MAIN

SAWS CONSTRUCTION NOTES
COUNTER PERMIT AND GENERAL CONSTRUCTION PERMIT REVISED JULY 2017

GENERAL SECTION

- All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable:
 - Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System", Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water", TAC Title 30 Part 1 Chapter 290.
 - Current TxDOT "Standard Specifications for Construction of Highways, Streets and Drainage".
 - Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction".
 - Current City of San Antonio "Standard Specifications for Public Works Construction".
 - Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).
- The contractor shall not proceed with any pipe installation work until they obtain a copy of the approved Counter Permit or General Construction Permit (GCP) from the consultant and has been notified by SAWS Construction Inspection Division to proceed with the work and has arranged a meeting with the inspector and consultant for the work requirements. Work completed by the contractor without an approved Counter Permit and/or a GCP will be subject to removal and replacement at the expense of the contractors and/or the developer.
- The Contractor shall obtain the SAWS Standard Details from the SAWS website, http://www.saws.org/business_center/specs. Unless otherwise noted within the design plans.
 - The Contractor is to make arrangements with the SAWS Construction Inspection Division at 233-2973, on notification procedures that will be used to notify affected home residents and/or property owners 48 hours prior to beginning any work.
 - Location and depth of existing utilities and service laterals shown on the plans are understood to be approximate. Actual locations and depths must be field verified by the Contractor at least 1 week prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction at no cost to SAWS.
 - The Contractor shall verify the exact location of underground utilities and drainage structures at least 1-2 weeks prior to construction whether shown on plans or not. Please allow up to 7 business days for locates requesting pipe location markers on SAWS facilities. The following contact information are supplied for verification purposes:
 - SAWS Utility Locates: <http://www.saws.org/Service/Locates>
 - CSOA Drainage (210) 207-0724 or (210) 207-6026
 - CSOA Traffic Signal Operations (210) 206-9480
 - CSOA Traffic Signal Damages (210) 207-3961
- SAWS State Wide One Call Locator 1-800-545-6005 or 811
- The Contractor shall be responsible for restoring existing fences, curbs, streets, driveways, sidewalks, landscaping and structures to its original or better condition if damages are made as a result of the project's construction.
- All work in Texas Department of Transportation (TxDOT) and/or Bexar County right-of-way shall be done in accordance with respective construction specifications and permit requirements.
- The Contractor shall comply with City of San Antonio or other governing municipality's tree ordinances when excavating near trees.
- The Contractor shall not place any waste materials in the 100-year Flood Plain without first obtaining an approved Flood Plain Permit.

- Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays. Request should be sent to costworkreq@saws.org.
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- WATER SECTION
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 - All valves shall read "open right".
 - PRVs Required: Contractor to verify that no portion of the tract is below ground elevation of 985 feet where the static pressure will normally exceed 80 PSI. At all such locations where the ground level is below 985 feet, the Developer or Builder shall install at each lot, on the customer's side of the meter, an approved type pressure regulator in conformance with the Plumbing Code of the City of San Antonio. No dual services allowed for any lot(s) if "PRV Is/are required for such lot(s), only single service connections shall be allowed." Note: A pressure regulator is also known as a pressure reducing valve (PRV).
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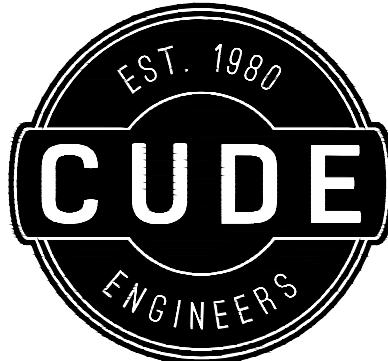
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SHEET NOTES:

- ALL 8" 6 1/8" PVC SHALL BE C-900 CLASS 235 DR 18.
- SAWS SHALL MACHINE CHLORINATE ALL NEW WATER MAINS.
- CONTRACTOR SHALL NOTIFY ENGINEER AND CITY OF SAN ANTONIO TREE INSPECTIONS DEPARTMENT PRIOR TO THE REMOVAL OF ANY TREES. DAMAGE TO ANY PROTECTED TREES WILL BE MITIGATED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL MAINTAIN A MINIMUM DEPTH OF 4 FEET ON ALL 8" AND 5 FEET ON ALL 16" MAINS

CUDEENGINEERS.COM



4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

McCRARY TRACT

UNIT 14

WATER DISTRIBUTION PLAN

DATE

08/26/2022

PROJECT NO.
02142.051

DRAWN BY
JR

CHECKED BY
TCD/JC/DDC

REVISIONS

1. 2. 3. 4. 5. 6. 7. 8.



11/28/2022
CUDE ENGINEERS
TBPELS No. 10048500

PLAT NO.

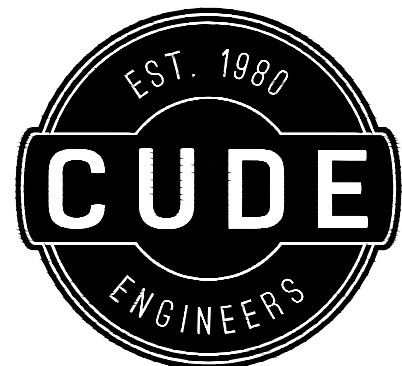
22-11800196

SAWS JOB NO.
22-1089

C39

PRESSURE ZONE 8

Developer's Name	PULTE HOMES OF TEXAS, L.P.		
Developer's Address	1718 DRY CREEKWAY, SUITE 120		
City	SAN ANTONIO	State	TEXAS
		Zip	78259
Phone #	(210) 496-1985	Fax #	(210) 496-0449
SAWS Block Map #	082-622	Total EDU's	126
		Total Acreage	21.95
Total Linear Footage of Pipe	8"W - 3,104 L.F., 16"W - 997 L.F.	Plat No.	22-11800196
Number of Lots	124	SAWS Job No.	22-1089



4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

**McCrary Tract
UNIT 14**

WATER DISTRIBUTION STANDARD DETAILS

DATE

08/26/2022

PROJECT NO.
02142.051

DRAWN BY
JR

CHECKED BY
TCD/JC/DDC

REVISIONS

1. 2022-07-20 SUPPORT DETAIL SHEETS

2. 2022-07-20 REMOVED OLD DETAILS

3.

4.

5.

6.

7.

8.

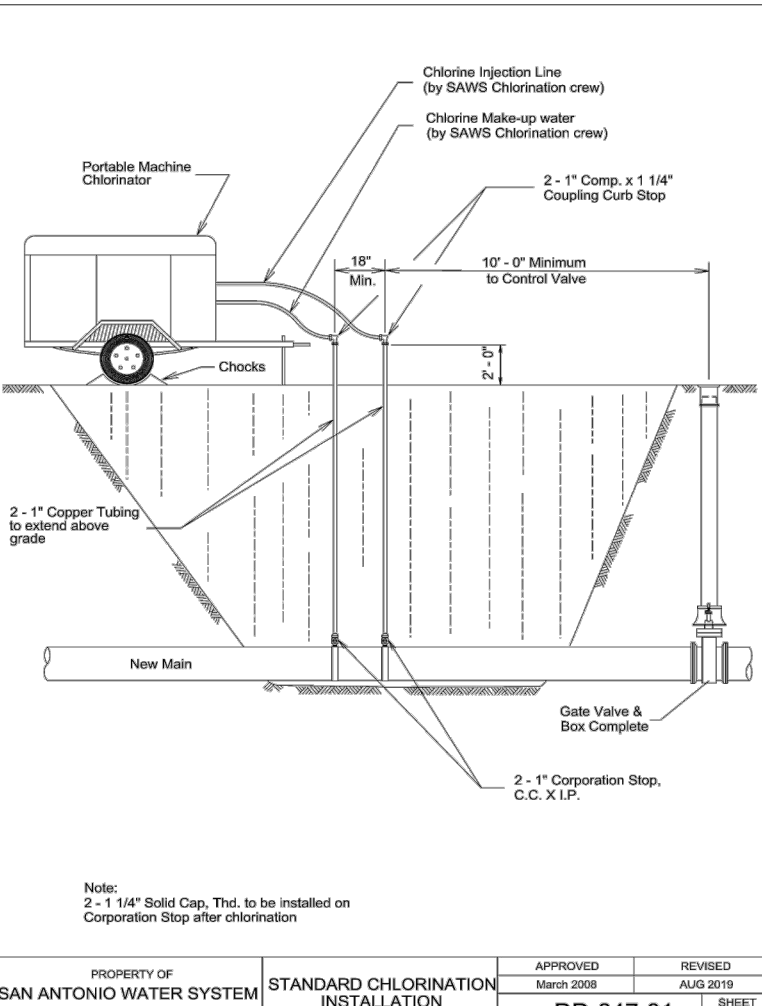
CUDE ENGINEERS
TBPELS No. 10048500

PLAT NO.
22-11800196
SAWS JOB NO.
22-1089

C40

PRESSURE ZONE 8

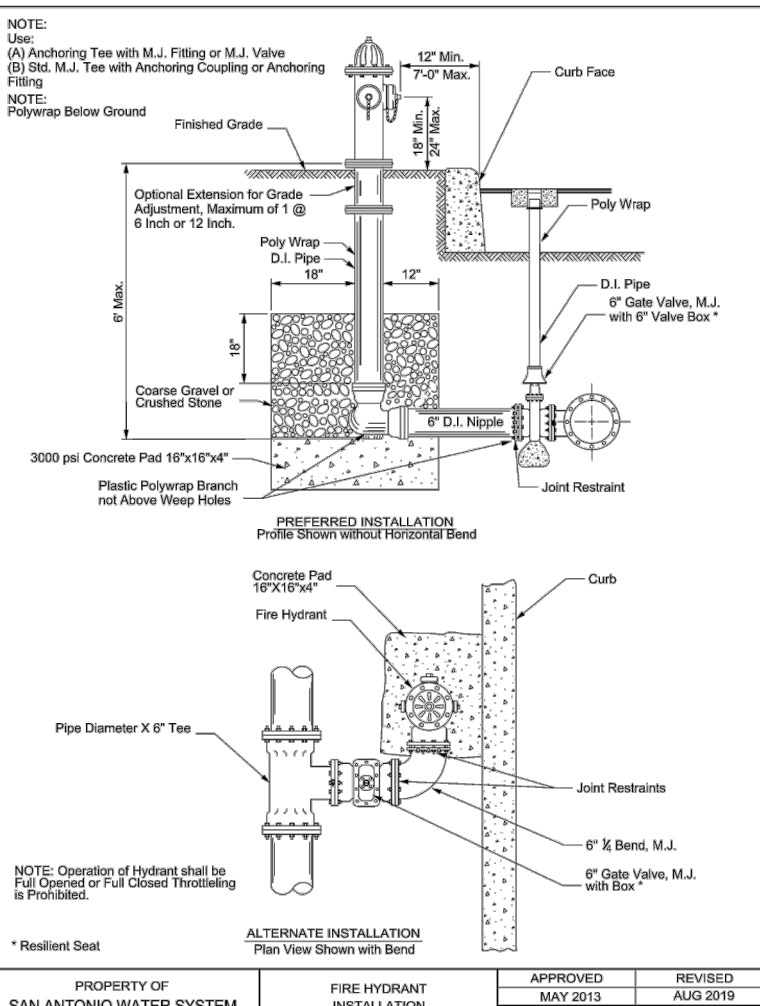
Developer's Name **PULTE HOMES OF TEXAS, L.P.**
Developer's Address **1718 DRY CREEKWAY, SUITE 120**
City **SAN ANTONIO** State **TEXAS** Zip **78259**
Phone # **(210) 490-1985** Fax # **(210) 496-0449**
SAWS Block Map # **082-022** Total EDU's **126** Total Acreage **21.95**
Total Linear Footage of Pipe **87'W - 3104 L.F. - 10'W - 997 L.F.** Plat No. **22-11800196**
Number of Lots **124** SAWS Job No. **22-1089**



PROPERTY OF
SAN ANTONIO WATER SYSTEM
SAN ANTONIO, TEXAS

TYPICAL
STANDARD CHLORINATION
SERVICE ARRANGEMENT

APPROVED
March 2020
REVIEWED
August 2019
SHEET
1 OF 1



PROPERTY OF
SAN ANTONIO WATER SYSTEM
SAN ANTONIO, TEXAS

TYPICAL
FIRE HYDRANT
INSTALLATION (JOINT RESTRAINT)

APPROVED
March 2020
REVIEWED
August 2019
SHEET
1 OF 1

RESTRAINED LENGTH DESIGN

Restrained length calculations are for P.V.C. pipe bedded in compacted granular material extending to the top of the pipe. The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

Note: These calculations are provided for reference. The restrained length shall be designed based upon the conditions encountered during the installation.

PIPE SIZE (in.)	RESTRAINED LENGTH (ft.)	RESTRAINED LENGTH (ft.)
TEST PRESSURE = 200 psi	TEST PRESSURE = 100 psi	TEST PRESSURE = 100 psi
6	10	10
8	10	10
10	10	10
12	10	10

RESTRAINED LENGTH FOR TEES

Restrained length calculations are for P.V.C. pipe bedded in compacted granular material extending to the top of the pipe. The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

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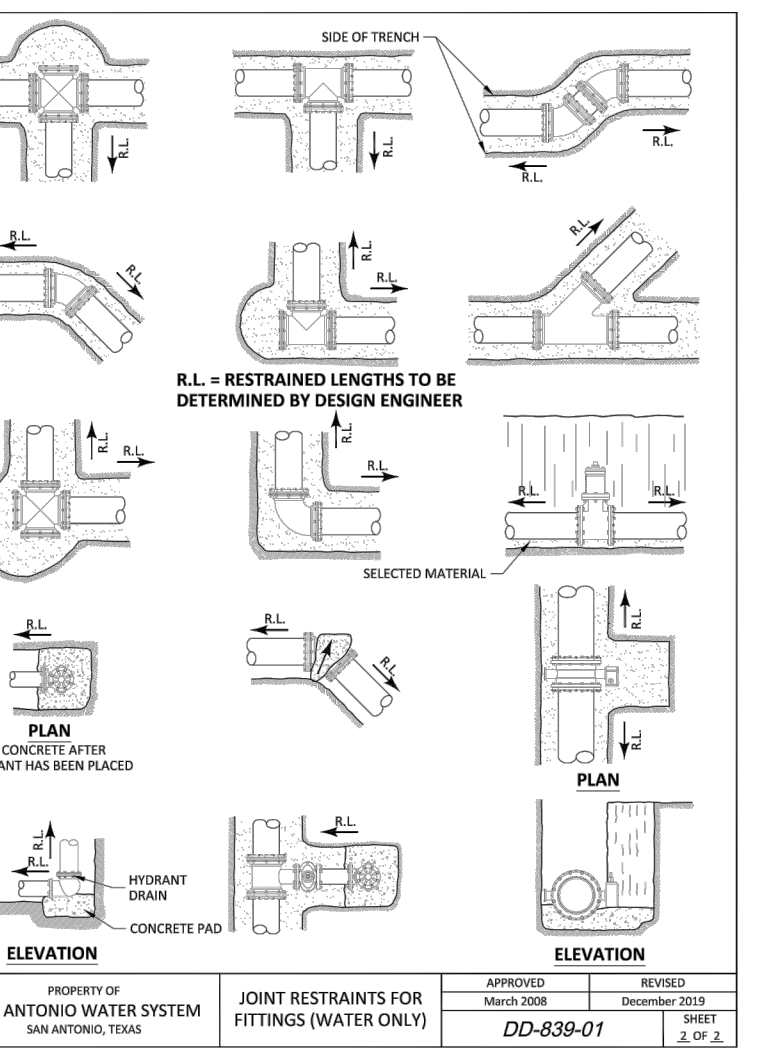
PIPE SIZE (in.)	LENGTH OF RUN (ft.)	RESTRAINED LENGTH (ft.)	RESTRAINED LENGTH (ft.)
TEST PRESSURE = 200 psi	TEST PRESSURE = 100 psi	TEST PRESSURE = 200 psi	TEST PRESSURE = 100 psi
6	10	10	10
8	10	10	10
10	10	10	10
12	10	10	10

RESTRAINED LENGTH FOR TEES

Restrained length calculations are for P.V.C. pipe bedded in compacted granular material extending to the top of the pipe. The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

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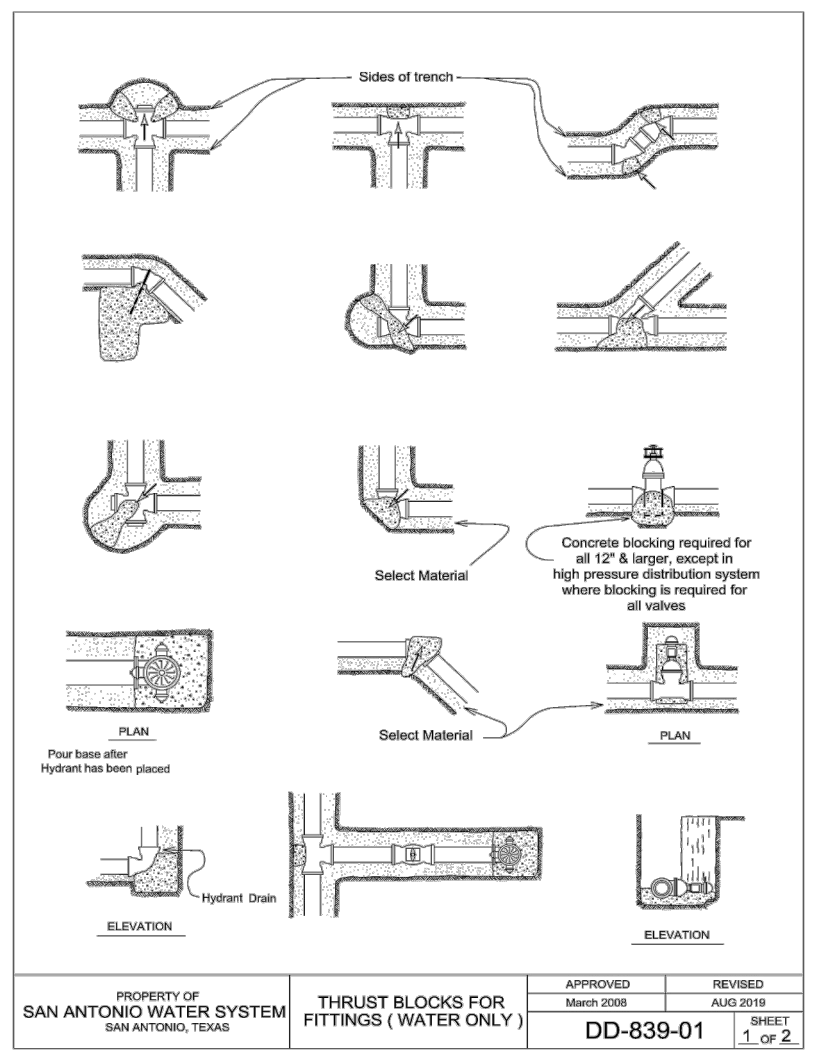
PIPE SIZE (in.)	LENGTH OF RUN (ft.)	RESTRAINED LENGTH (ft.)	RESTRAINED LENGTH (ft.)
TEST PRESSURE = 200 psi	TEST PRESSURE = 100 psi	TEST PRESSURE = 200 psi	TEST PRESSURE = 100 psi
6	10	10	10
8	10	10	10
10	10	10	10
12	10	10	10



PROPERTY OF
SAN ANTONIO WATER SYSTEM
SAN ANTONIO, TEXAS

TYPICAL
JOINT RESTRAINTS FOR
FITTINGS (WATER ONLY)

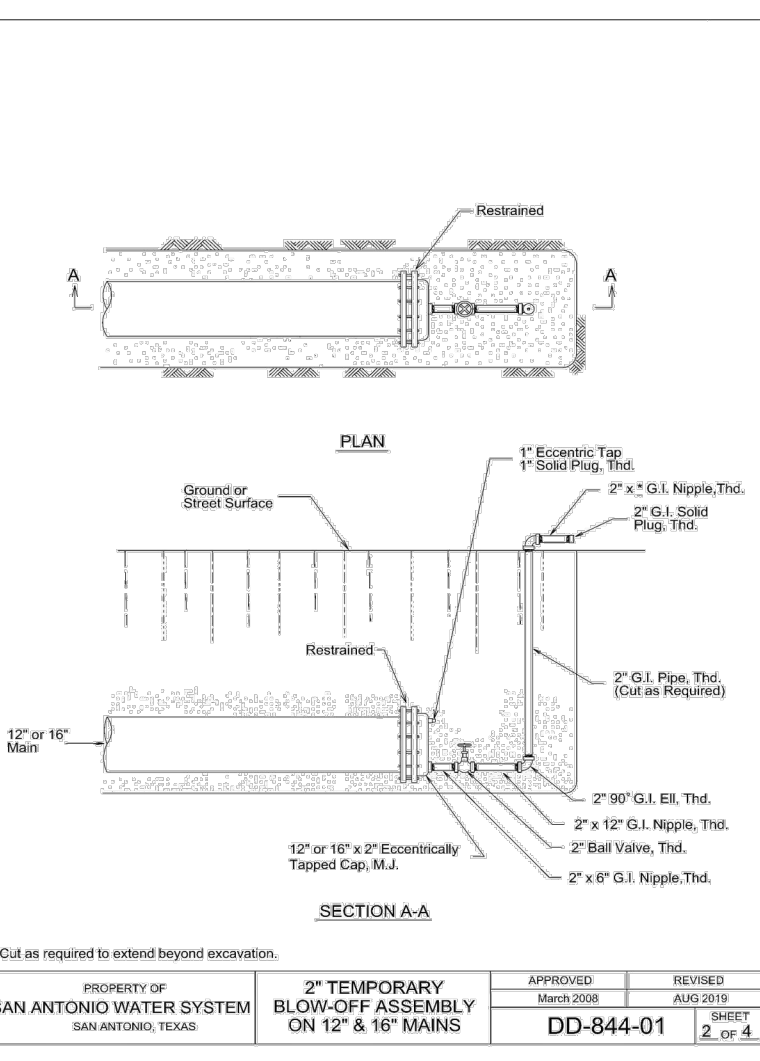
APPROVED
March 2020
REVIEWED
August 2019
SHEET
1 OF 1



PROPERTY OF
SAN ANTONIO WATER SYSTEM
SAN ANTONIO, TEXAS

TYPICAL
THRUST BLOCKS FOR
FITTINGS (WATER ONLY)

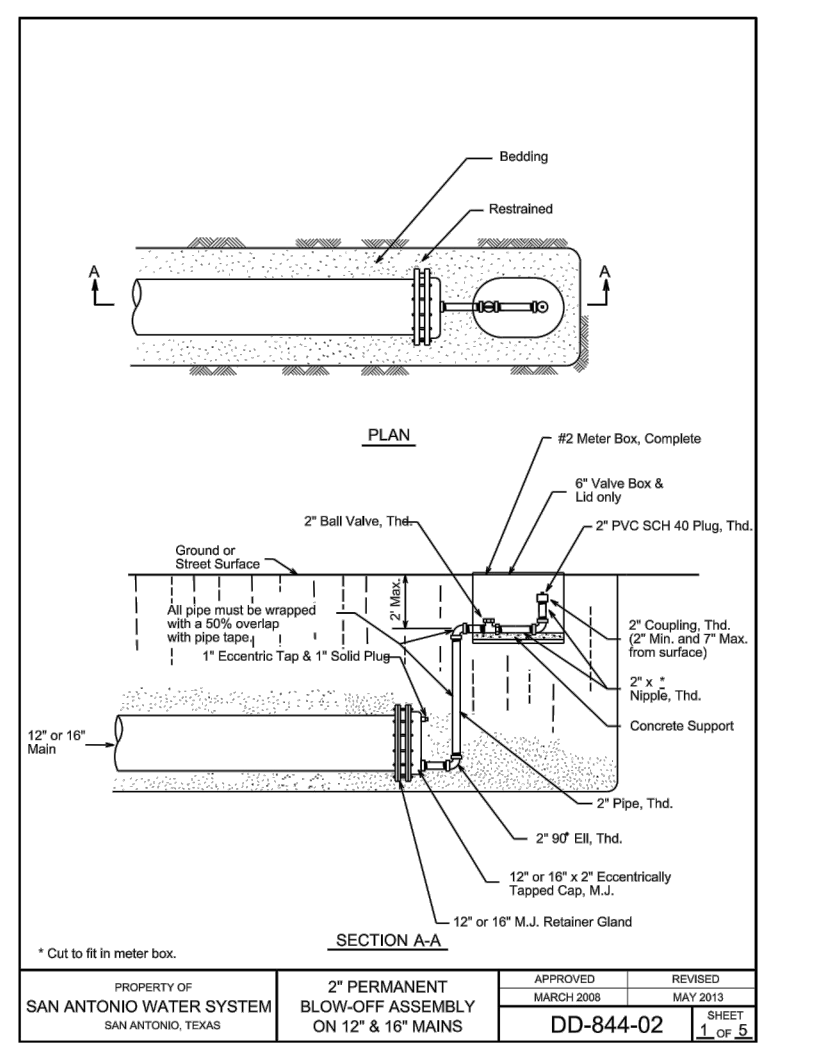
APPROVED
March 2020
REVIEWED
August 2019
SHEET
1 OF 1



PROPERTY OF
SAN ANTONIO WATER SYSTEM
SAN ANTONIO, TEXAS

TYPICAL
RESTRAINED LENGTHS FOR
VERTICAL OFFSETS

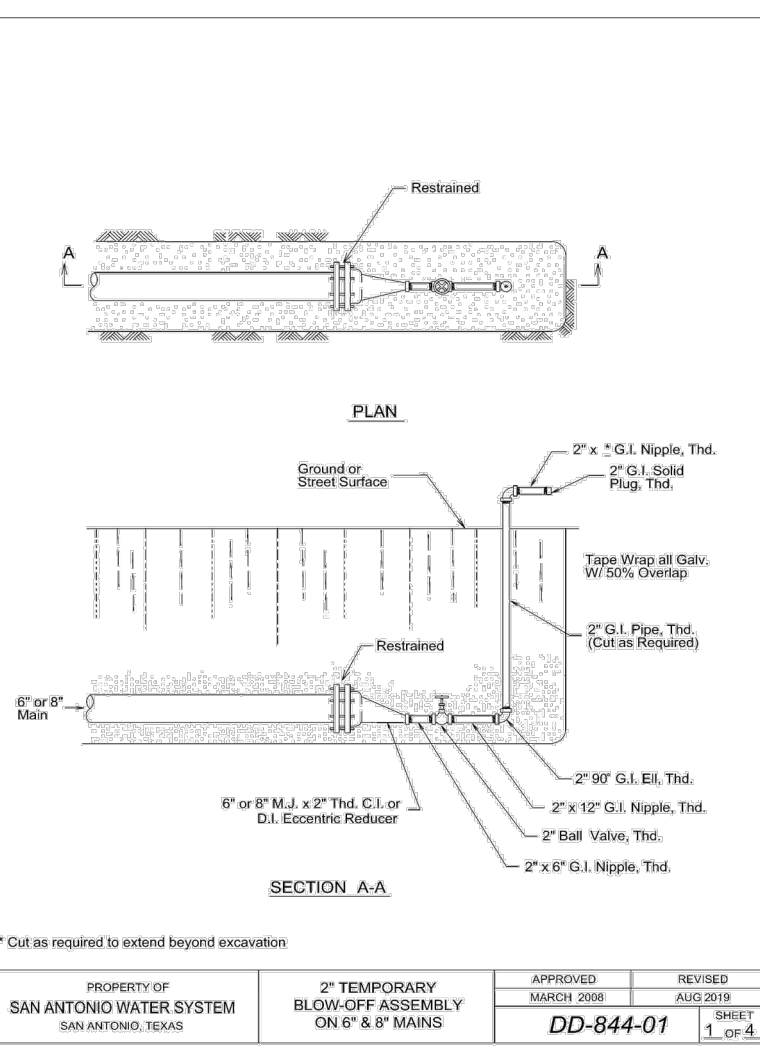
APPROVED
March 2020
REVIEWED
August 2019
SHEET
1 OF 1



PROPERTY OF
SAN ANTONIO WATER SYSTEM
SAN ANTONIO, TEXAS

TYPICAL
RESTRAINED LENGTHS FOR
DEAD ENDS / INLINE VALVES

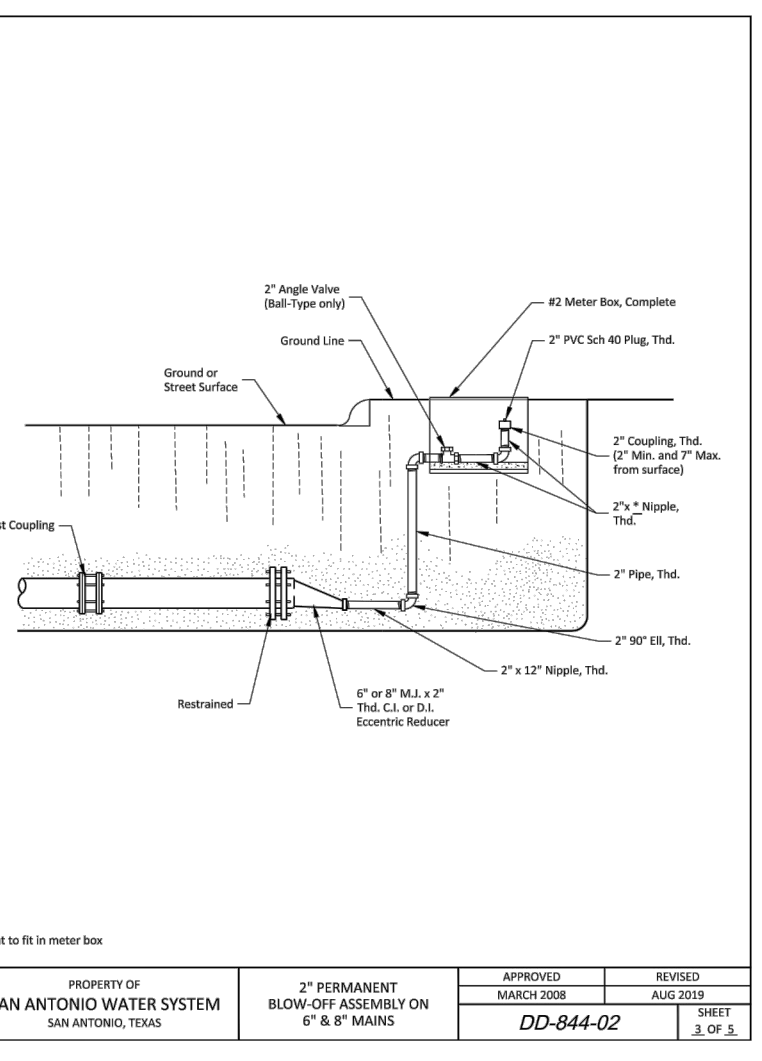
APPROVED
March 2020
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SHEET
1 OF 1



PROPERTY OF
SAN ANTONIO WATER SYSTEM
SAN ANTONIO, TEXAS

TYPICAL
2\"/>

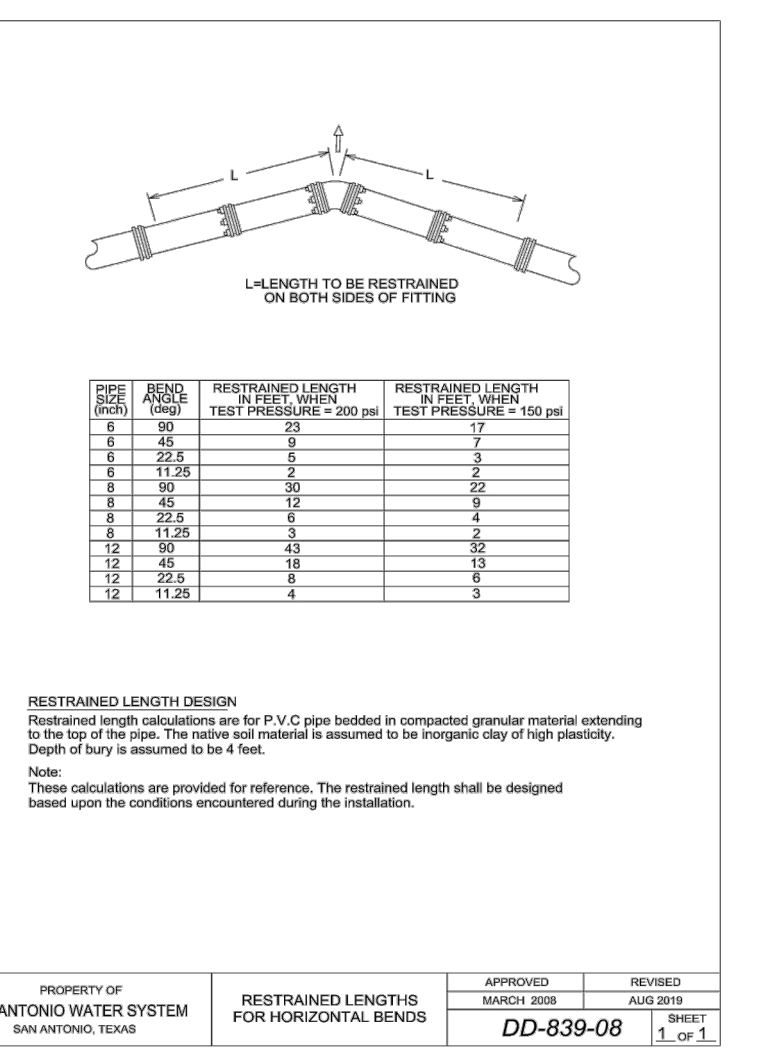
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1 OF 1



PROPERTY OF
SAN ANTONIO WATER SYSTEM
SAN ANTONIO, TEXAS

TYPICAL
2\"/>

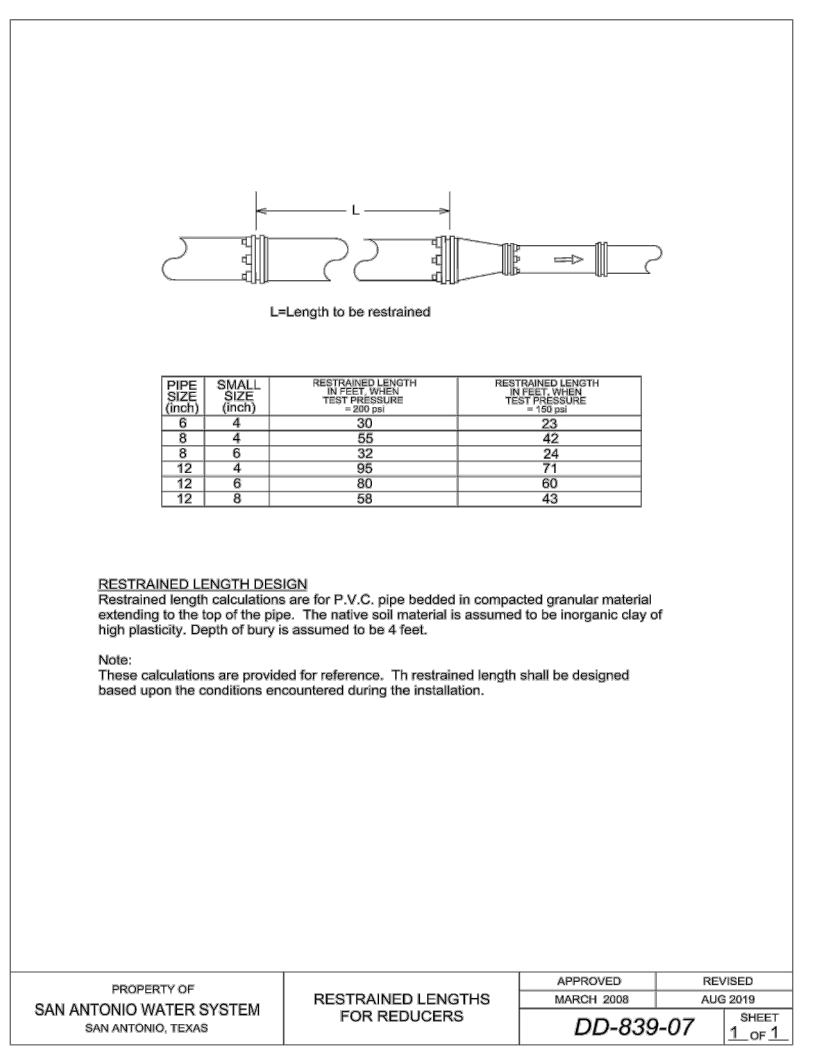
APPROVED
March 2020
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SHEET
1 OF 1



PROPERTY OF
SAN ANTONIO WATER SYSTEM
SAN ANTONIO, TEXAS

TYPICAL
RESTRAINED LENGTHS FOR
HORIZONTAL BENDS

APPROVED
March 2020
REVIEWED
August 2019
SHEET
1 OF 1



PROPERTY OF
SAN ANTONIO WATER SYSTEM
SAN ANTONIO, TEXAS

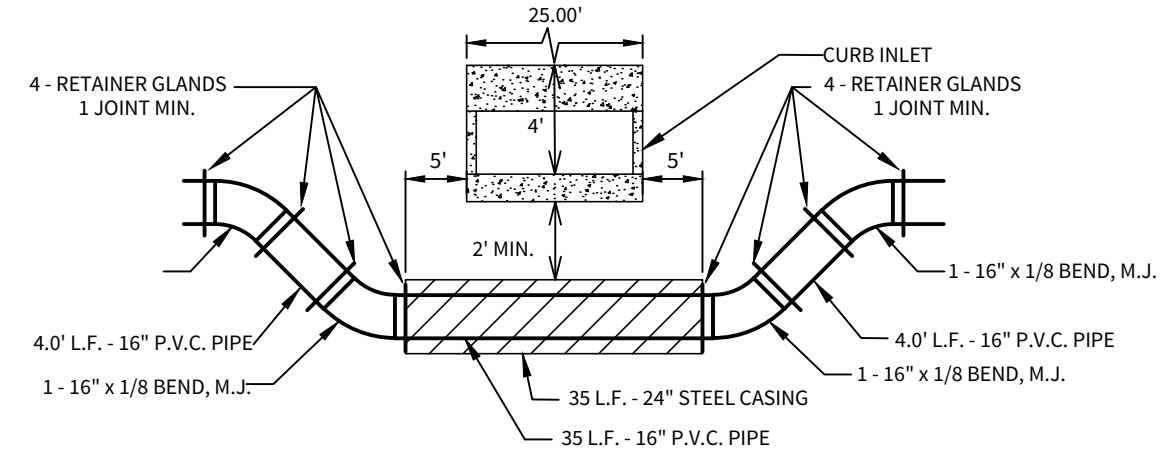
TYPICAL
RESTRAINED LENGTHS FOR
REDUCERS

APPROVED
March 2020
REVIEWED
August 2019
SHEET
1 OF 1

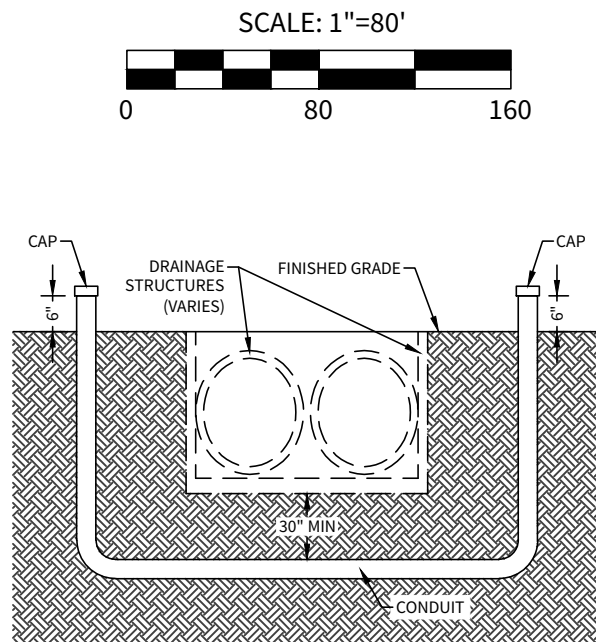
NOTE:
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

LEGEND

EXISTING SANITARY SEWER	— EXFSS —
PROPOSED SANITARY SEWER	— 8"SS —
EXISTING SANITARY SEWER MANHOLE	— EXFWM —
PROPOSED SANITARY SEWER MANHOLE	— 8"FW —
EXISTING WATER MAIN	— EXFWM —
PROPOSED WATER MAIN	— 8"FW —
PROPOSED STANDARD FIRE HYDRANT	— 4" CONC. SIDEWALK —
PROPOSED STANDARD GATE VALVE	— 6" D.I. PIPE —
ELECTRIC, GAS, TELEPHONE, & CABLE T.V.	— E.G.T.C.A. ESM.T. —
EASEMENT	— 10' —
PROPOSED LIGHT POLE	— 10' —



WATER / DRAIN "C" CURB INLET CROSSING DETAIL
SIDE VIEW (THIS DETAIL IS VERTICAL ONLY, NOT HORIZONTAL.) [N.T.S.]



TYPICAL CONDUIT/ DRAIN CROSSING DETAIL
N.T.S.

TRENCH EXCAVATION PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

NOTES

THE LOCATIONS AND DEPTHS OF ALL EXISTING UTILITIES, INCLUDING SERVICE LATERALS AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT AND TO PROTECT THE SAME DURING CONSTRUCTION.

SAN ANTONIO WATER SYSTEM	233-2010
COSA DRAINAGE	207-2800
CITY SIDEWALK AND TRENCHING DIVISION	821-3240
COSA TRAFFIC SIGNAL OPERATIONS	207-7765
TEXAS STATE WIDE ONE CALL LOCATOR	1-800-545-6005
C.P.S. ENERGY	.

SPECTRUM CABLE	.
VALERO ENERGY CO.	.
NOTE	.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TEST WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTER, PER EACH 12-INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

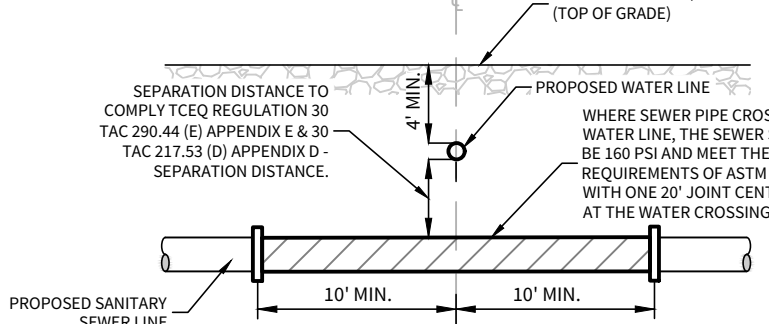
BENCHMARK BM-1

BENCHMARK TO BE SET BY ENGINEER PRIOR TO CONSTRUCTION.

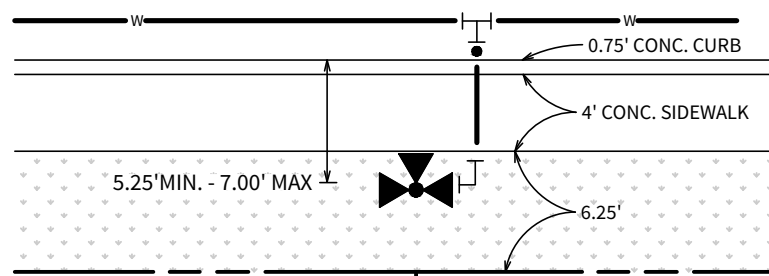
NOTE: ALL LATERALS TO BE INSTALLED @ MIN. 2.0% SLOPE, UNLESS OTHERWISE NOTED. ALL SANITARY SEWER PIPE SHALL BE P.V.C. THAT MEETS ASTM SPECIFICATION D-3034, SDR-26.

CAUTION!!

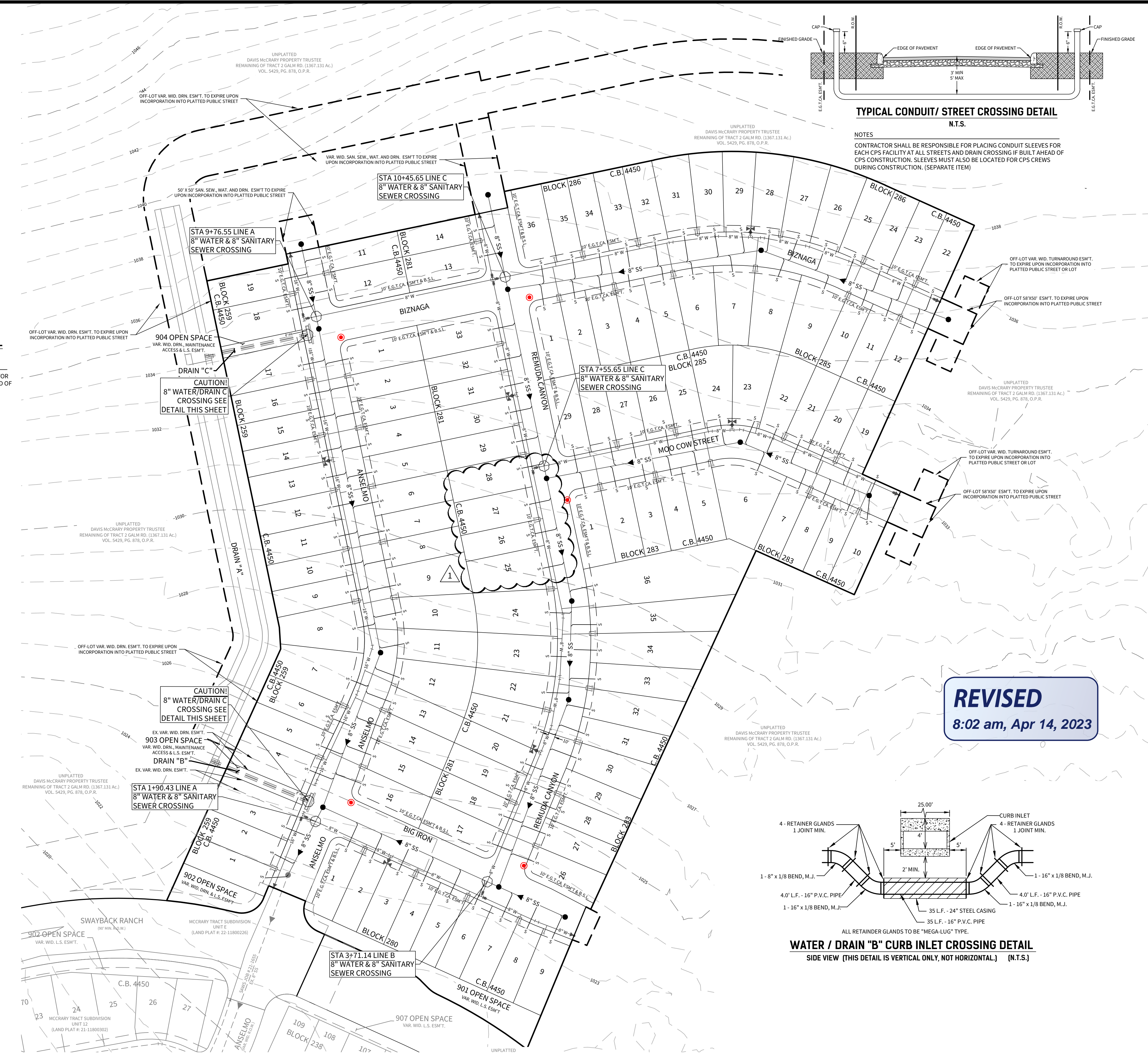
THE CONTRACTOR SHALL BE AWARE THAT A 8" WATER MAIN AND 8" SANITARY SEWER LINE EXIST ALONG LONE RANGER & JEREMIAH ROAD AND A 16" WATER MAIN LINE EXISTS ALONG SWAYBACK RANCH. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE THESE UTILITIES LOCATED PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING IN THIS AREA. ANY DAMAGE DONE TO THESE EXISTING FACILITIES WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR.



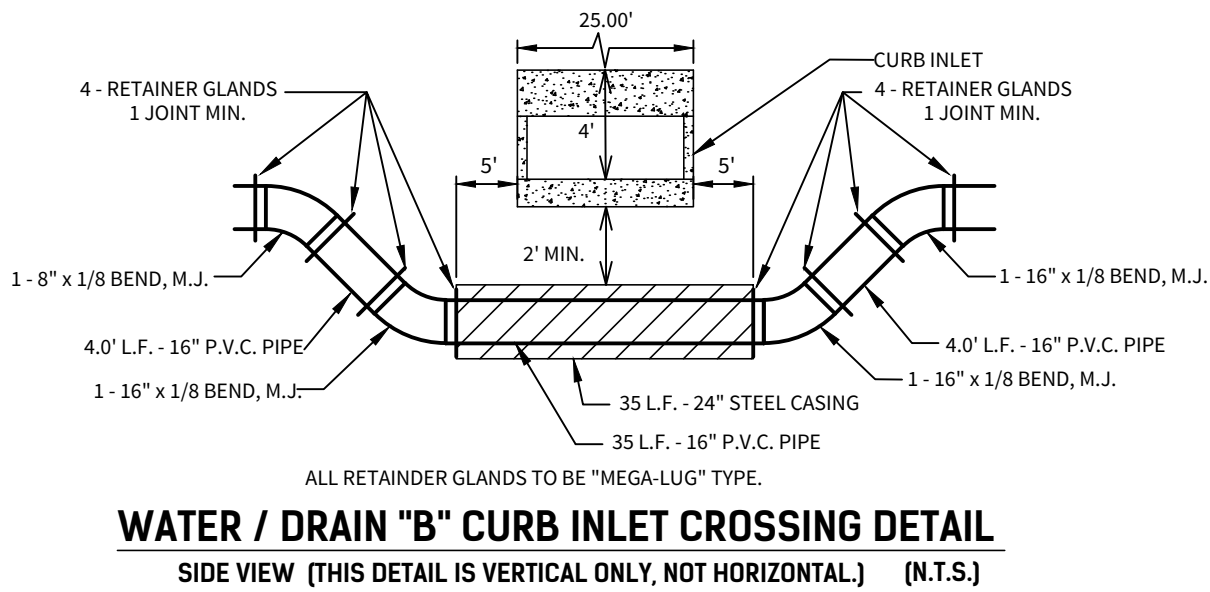
TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL
N.T.S.



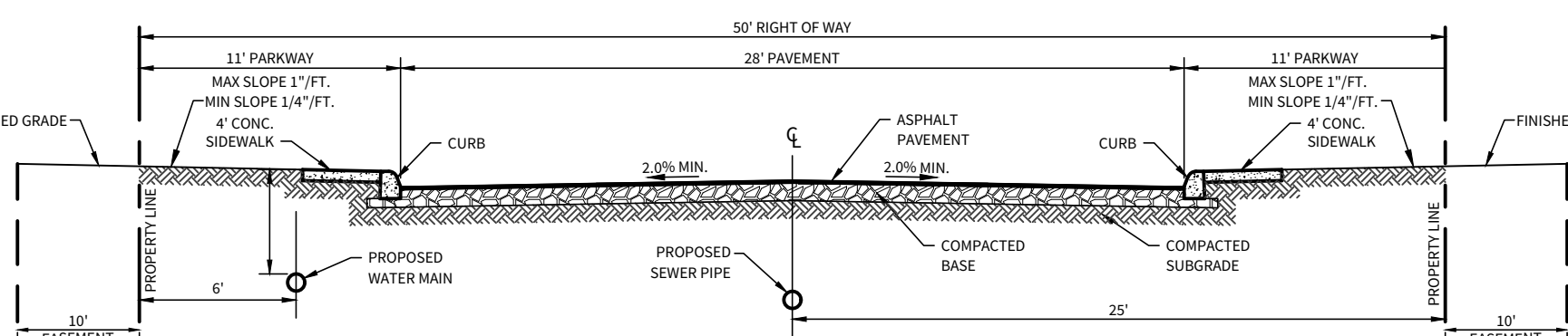
TYPICAL FIRE HYDRANT DETAIL [4' SIDEWALK / 50' R.O.W.]
N.T.S.



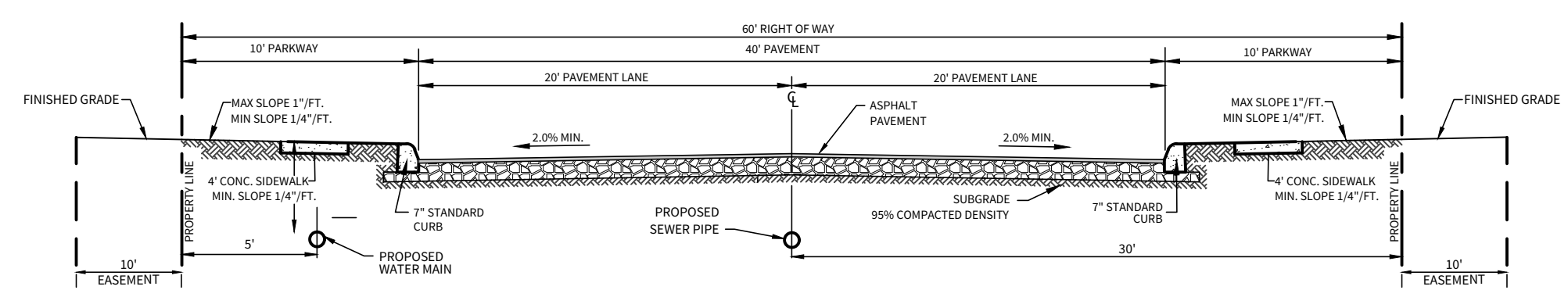
REVISED
8:02 am, Apr 14, 2023



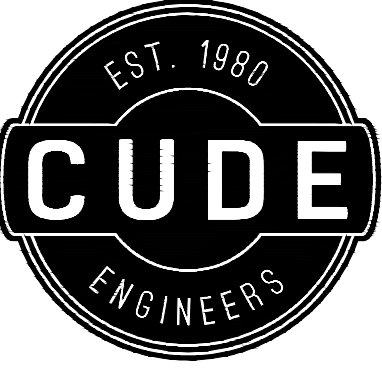
WATER / DRAIN "B" CURB INLET CROSSING DETAIL
SIDE VIEW (THIS DETAIL IS VERTICAL ONLY, NOT HORIZONTAL.) [N.T.S.]



LOCAL "A" STREET CROSS-SECTION
N.T.S.



LOCAL "B" STREET CROSS-SECTION
N.T.S.



4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

McCrary Tract

UNIT 14

UTILITY LAYOUT PLAN

DATE

04/12/2023

PROJECT NO.

02142.051

DRAWN BY

JR

CHECKED BY

TCD/JC/DDC

REVISIONS

1.	ISSUED - REVISIONS	DATE
2.		
3.		
4.		
5.		
6.		
7.		
8.		

JAVIER CASTELLO
122170
04/13/2023
CUDE ENGINEERS
TBP. No. 10048500

PLAT NO.

22-11800196

SAWS JOB NO.

22-1586

C41

LEGEND	
PROPERTY LINE	— 930 —
EXISTING CONTOURS	— 930 —
BMP ITEM NUMBER	1
TEMPORARY CONSTRUCTION ENTRANCE/EXIT	1
ROCK BERM	1
SILT FENCE	2
FLOW ARROW	→
STAGING AREA	4
CONCRETE WASHOUT PIT	3
LIMITS OF DISTURBANCE	1

NOTE:

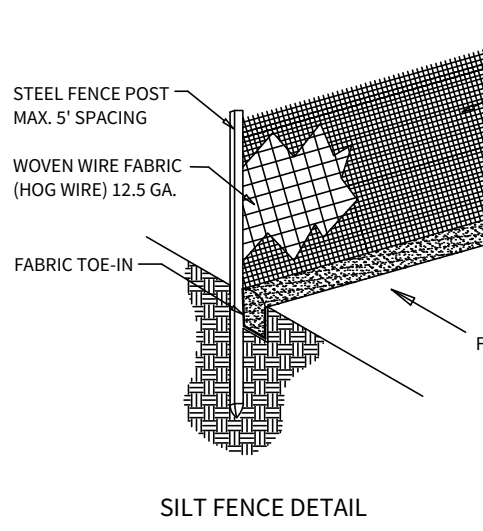
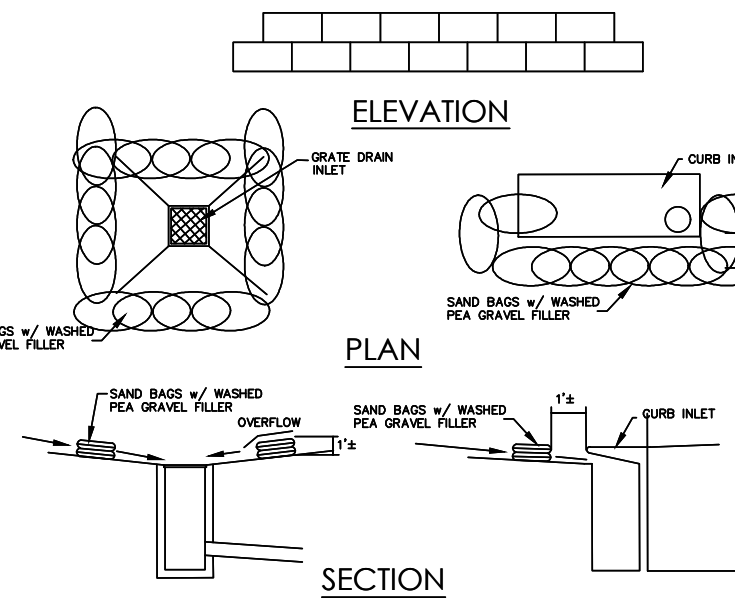
- ALL SILT FENCES AND/OR ROCK BERMS AND TEMPORARY CONSTRUCTION ENTRANCES/EXITS SHALL BE PLACED AT THE MOST DOWN-GRADIENT POINT OF CONSTRUCTION AS SHOWN ON THIS SITE PLAN. CONTRACTOR SHALL TAKE INTO CONSIDERATION ANY PROPOSED CONSTRUCTION THAT MAY TAKE PLACE AT THESE LOCATIONS. ANY RELOCATION OF THE SILT FENCE, ROCK BERMS AND/OR TEMPORARY CONSTRUCTION ENTRANCES/EXITS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- AREA OF SOIL DISTURBANCES INCLUDE STREET RIGHT-OF-WAYS, EASEMENTS AND LOTS.
- THERE WILL BE NO STORMWATER DISCHARGES INTO THE FEMA FLOOD PLAIN.
- THE CONTRACTOR IS REQUIRED TO MAINTAIN EROSION CONTROLS THROUGHOUT THE DURATION OF THE PROJECT.
- THE CITY AND/OR COUNTY INSPECTOR HAS THE AUTHORITY TO HAVE THE CONTRACTOR MODIFY THE EROSION CONTROLS AT THE DEVELOPER'S EXPENSE. THE DEVELOPER SHALL BE NOTIFIED OF THESE MODIFICATIONS PRIOR TO COMMENCEMENT OF MODIFICATIONS.
- A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY RIGHT OF WAY.

BAGGED GRAVEL INLET FILTER NOTES

- THE GRAVEL BAG MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, POLYAMIDE OR COTTON BURLAP WOVEN FABRIC, MINIMUM UNIT WEIGHT 4 OZ/YD², MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70 PERCENT.
- THE BAG LENGTH SHOULD BE 24 INCHES, WIDTH SHOULD BE 18 INCHES AND THICKNESS SHOULD BE 6 INCHES.
- THE GRAVEL BAGS SHOULD BE FILLED WITH 3/4" GRAVEL.
- WHEN A GRAVEL BAG IS FILLED WITH GRAVEL, THE OPEN END OF THE GRAVEL BAG SHOULD BE STAPLED OR TIED WITH NYLON OR POLY CORD.
- THE GRAVEL BAGS SHOULD BE PLACED AS SHOWN ON THE DETAIL. THE GRAVEL BAGS SHALL BE STACKED TO FORM A CONTINUOUS BARRIER AROUND THE INLETS. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.
- INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
- CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.
- REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
- STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

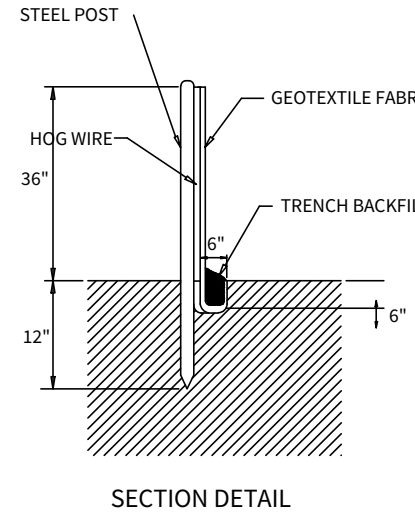
6 BAGGED GRAVEL INLET FILTER NOTES

N.T.S.



2 STANDARD SILT FENCE

N.T.S.



SCALE: 1"=50'

0 50 100

MCCRARY TRACT UNIT 14 STORM WATER POLLUTION PREVENTION PLAN

DATE
04/12/2023

PROJECT NO.
02142.051

DRAWN BY
JR

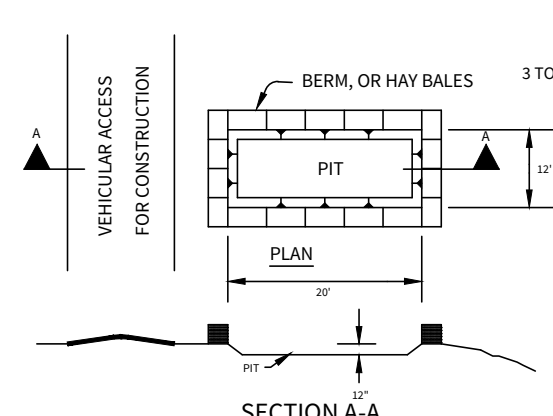
CHECKED BY
TCD/JC/DDC

REVISIONS	
1	ISSUED: REVISED BEXAR COUNTY LOT 28 & 29
2	
3	
4	
5	
6	
7	
8	

STATE OF TEXAS
JAVIER CASTELLO
122170
Professional Engineer
04/13/2023
CUDE ENGINEERS
TBPELS No. 10048500

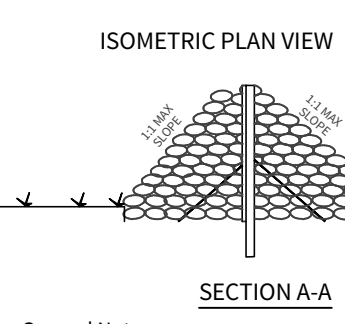
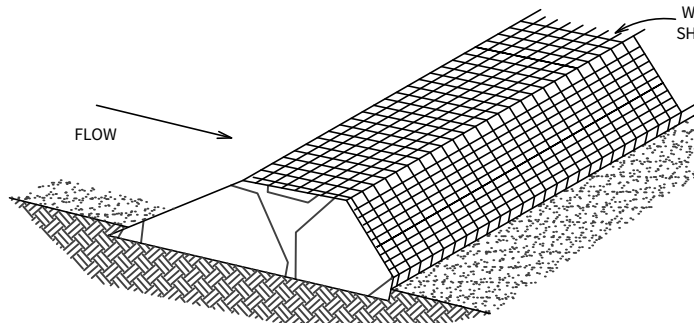
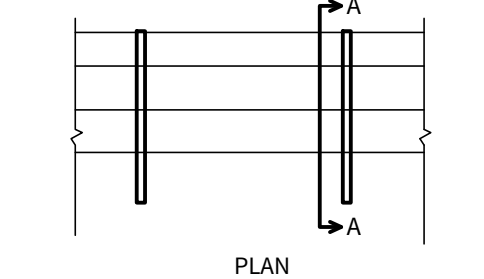
PLAT NO.
22-11800196

C42



5 ROCK BERM W/ SILT FENCE DETAIL

N.T.S.



GENERAL NOTES

- The rock berm shall be inspected weekly or after each rain and the stone shall be replaced when the structure ceases to function as intended due to silt accumulation, washout, etc.
- When silt reaches a depth of 12", the silt shall be removed and disposed of at an approved site.

GENERAL NOTES

- Detail above illustrates minimum dimensions. Pit can be increased in size depending on expected frequency of use.
- If hay bales are used, they shall be placed in accordance with details shown on Exhibit for hay bales.
- Washout pit shall be located in an area easily accessible to construction traffic.
- Washout pit shall not be located in areas subject to inundation from storm water runoff.
- Washout pit shall be lined with a 10-mil thick polyethylene sheeting free of holes, tears and other defects.

3 CONCRETE TRUCK WASHOUT PIT

N.T.S.

REVISED
8:02 am, Apr 14, 2023

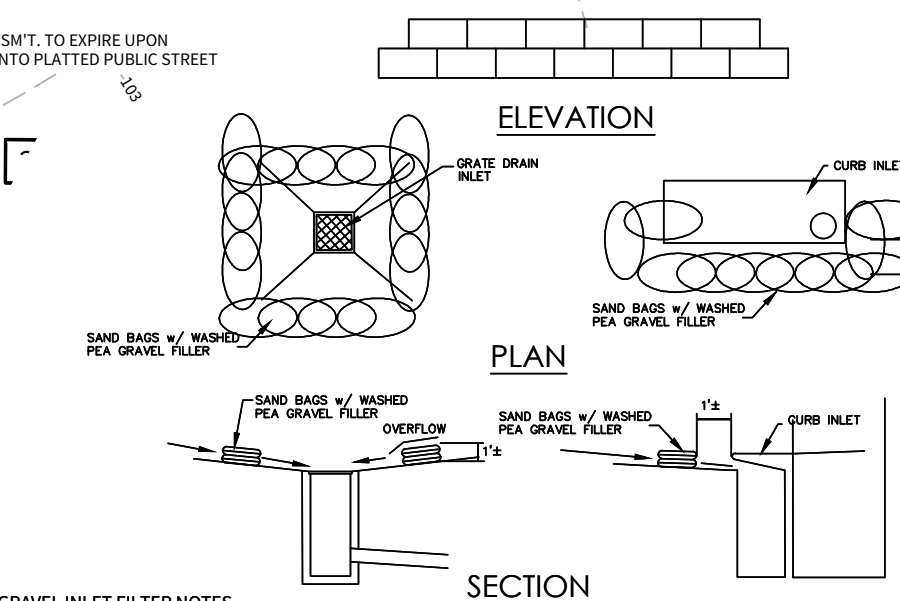
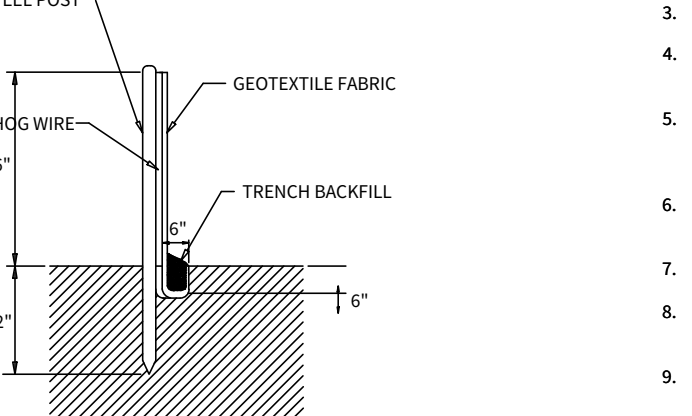
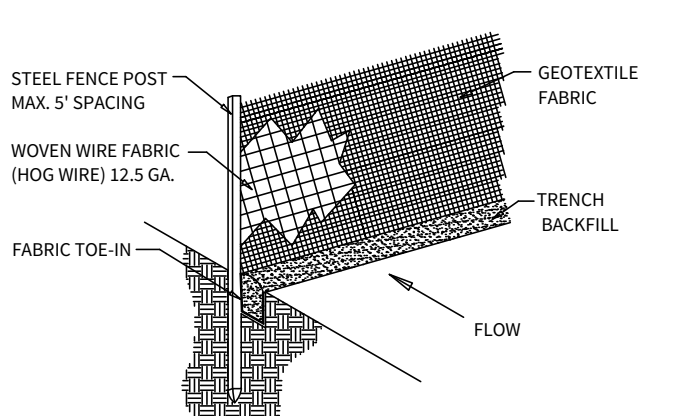
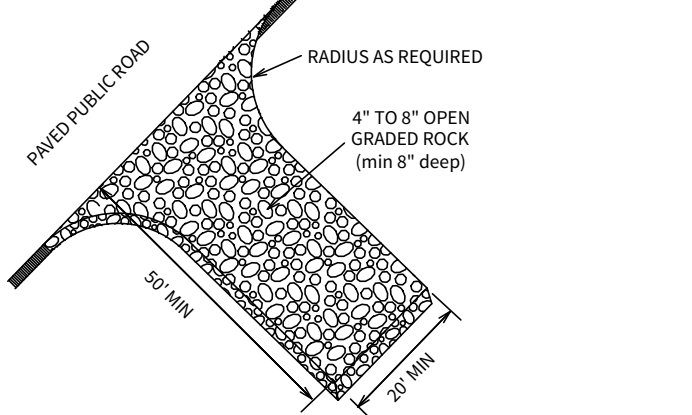
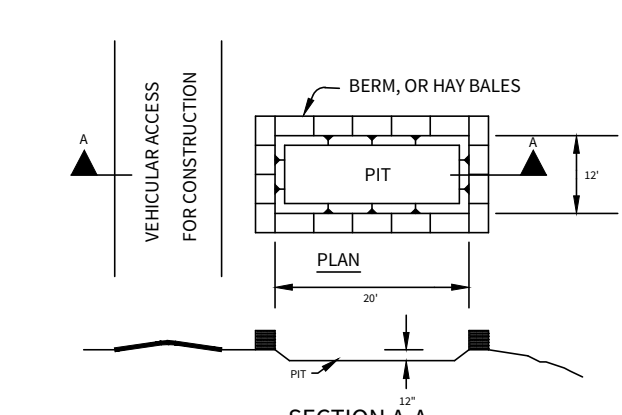
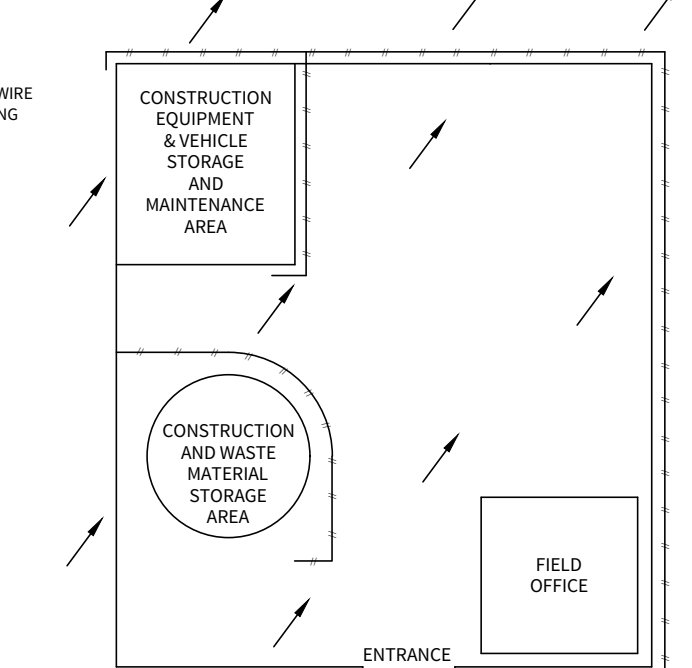
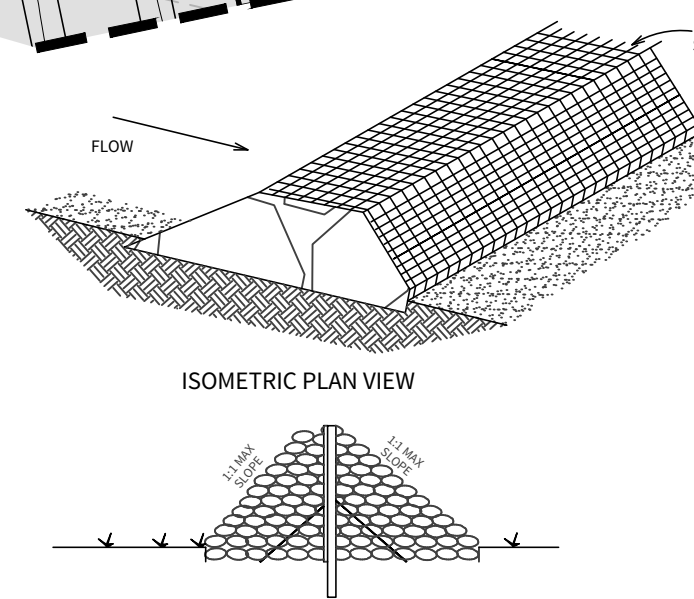
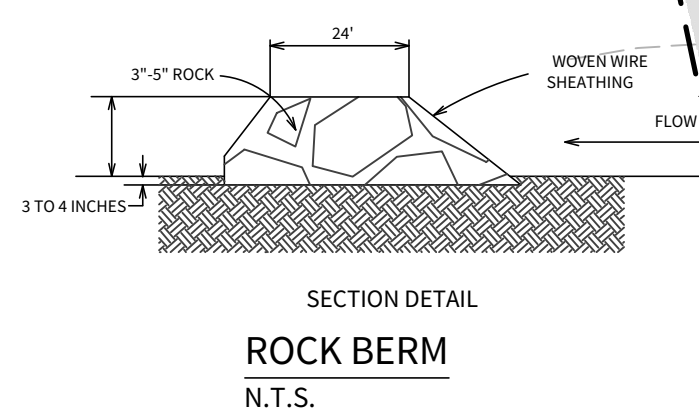
- LEGEND**
- PROPERTY LINE
- EXISTING CONTOURS
- BMP ITEM NUMBER
- TEMPORARY CONSTRUCTION ENTRANCE/EXIT
- ROCK BERM
- SILT FENCE
- FLOW ARROW
- STAGING AREA
- CONCRETE WASHOUT PIT
- LIMITS OF DISTURBANCE

NOTE:

1. ALL SILT FENCES AND/OR ROCK BERMS AND TEMPORARY CONSTRUCTION ENTRANCES/EXITS SHALL BE PLACED AT THE MOST DOWN-GRADE POINT OF CONSTRUCTION AS SHOWN ON THIS SITE PLAN. CONTRACTOR SHALL TAKE INTO CONSIDERATION ANY PROPOSED CONSTRUCTION THAT MAY TAKE PLACE AT THESE LOCATIONS. ANY RELOCATION OF THE SILT FENCE, ROCK BERMS AND/OR TEMPORARY CONSTRUCTION ENTRANCES/EXITS SHALL BE AT THE CONTRACTOR'S EXPENSE.
2. AREA OF SOIL DISTURBANCES INCLUDE STREET RIGHT-OF-WAYS, EASEMENTS AND LOTS.
3. THERE WILL BE NO STORMWATER DISCHARGES INTO THE FEMA FLOOD PLAIN.
4. THE CONTRACTOR IS REQUIRED TO MAINTAIN EROSION CONTROLS THROUGHOUT THE DURATION OF THE PROJECT.
5. THE CITY AND/OR COUNTY INSPECTOR HAS THE AUTHORITY TO HAVE THE CONTRACTOR MODIFY THE EROSION CONTROLS AT THE DEVELOPER'S EXPENSE. THE DEVELOPER SHALL BE NOTIFIED OF THESE MODIFICATIONS PRIOR TO COMMENCEMENT OF MODIFICATIONS.
6. A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY RIGHT OF WAY.



REVISED
8:03 am, Apr 14, 2023



5 ROCK BERM W/ SILT FENCE DETAIL
N.T.S.

General Notes
1. The rock berm shall be inspected weekly or after each rain and the stone shall be replaced when the structure ceases to function as intended due to silt accumulation, washout, etc.
2. When silt reaches a depth of 12\", the silt shall be removed and disposed of at an approved site.

4 TYP. CONSTRUCTION STAGING AREA
N.T.S.

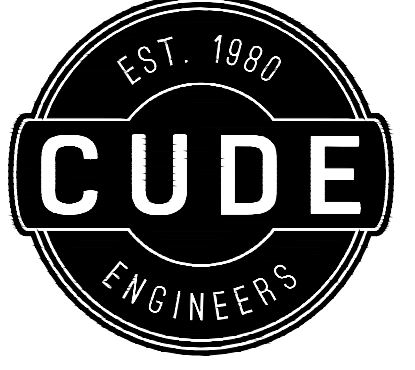
3 CONCRETE TRUCK WASHOUT PIT
N.T.S.

TEMPORARY CONSTRUCTION ENTRANCE/EXIT
N.T.S.

2 STANDARD SILT FENCE
N.T.S.

6 BAGGED GRAVEL INLET FILTER NOTES
N.T.S.

- BAGGED GRAVEL INLET FILTER NOTES**
1. THE GRAVEL BAG MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, POLYAMIDE OR COTTON BURLAP WOVEN FABRIC, MINIMUM UNIT WEIGHT 4 OZ/YD², ULTRAVIOLET STABILITY EXCEEDING 70 PERCENT.
 2. THE BAG LENGTH SHOULD BE 24 INCHES, WIDTH SHOULD BE 18 INCHES AND THICKNESS SHOULD BE 6 INCHES.
 3. THE GRAVEL BAGS SHOULD BE FILLED WITH #4 GRAVEL.
 4. WHEN A GRAVEL BAG IS FILLED WITH GRAVEL, THE OPEN END OF THE GRAVEL BAG SHOULD BE STAPLED OR TIED WITH NYLON OR POLY CORD.
 5. THE GRAVEL BAGS SHOULD BE PLACED AS SHOWN ON THE DETAIL. THE GRAVEL BAGS SHALL BE STACKED TO FORM A CONTINUOUS BARRIER AROUND THE INLETS. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.
 6. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
 7. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.
 8. REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
 9. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

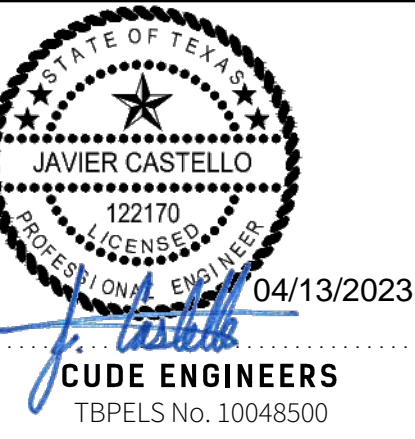


4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

**McCrary Tract
UNIT 14**
STORM WATER POLLUTION
PREVENTION PLAN

DATE
04/12/2023
PROJECT NO.
02142.051
DRAWN BY
JR
CHECKED BY
TCD/JC/DDC

REVISIONS	1	2	3	4	5	6	7	8
1. 02/28/2023 - REVISIONS: BEXAR COUNTY LOT 28								
2.								
3.								
4.								
5.								
6.								
7.								
8.								



PLAT NO.
22-11800196

C43