

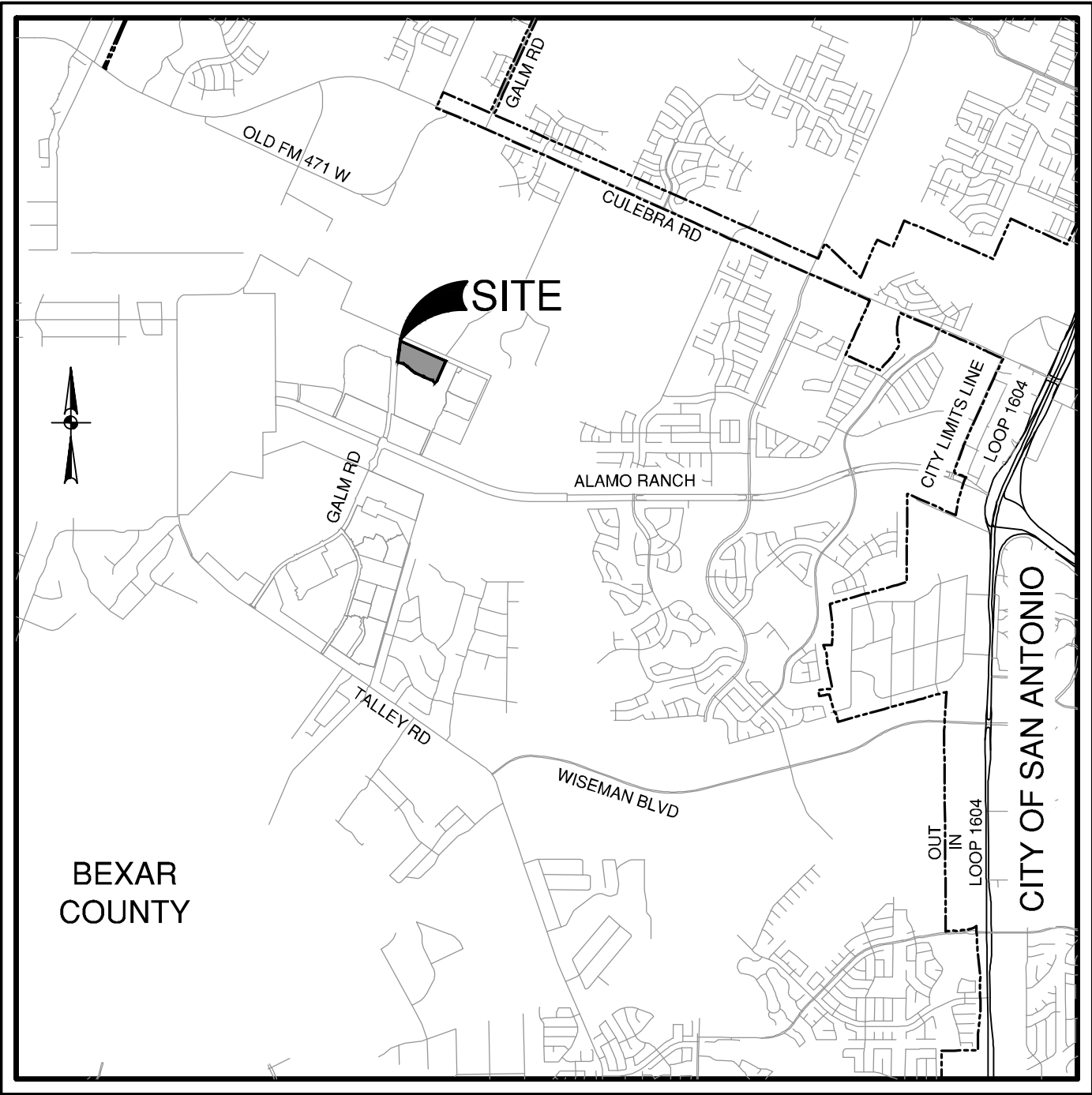
RIVERSTONE, UNIT F8 & F9

SAN ANTONIO, TEXAS

CIVIL CONSTRUCTION PLANS

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LOCATION MAP
NOT-TO-SCALE

PREPARED FOR:

CONTINENTAL HOMES OF TEXAS, L.P.
5419 N LOOP 1604 E
SAN ANTONIO, TEXAS 78218

AUGUST 2022



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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STORM WATER POLLUTION PREVENTION PLAN DETAILS	C8.10



Caleb M. Chance
3/31/23

WATER (SAWS PRESSURE ZONE 8)

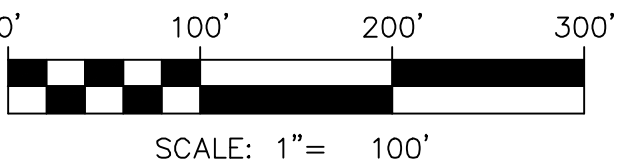
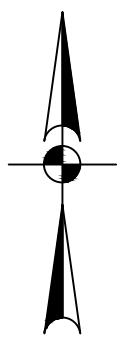
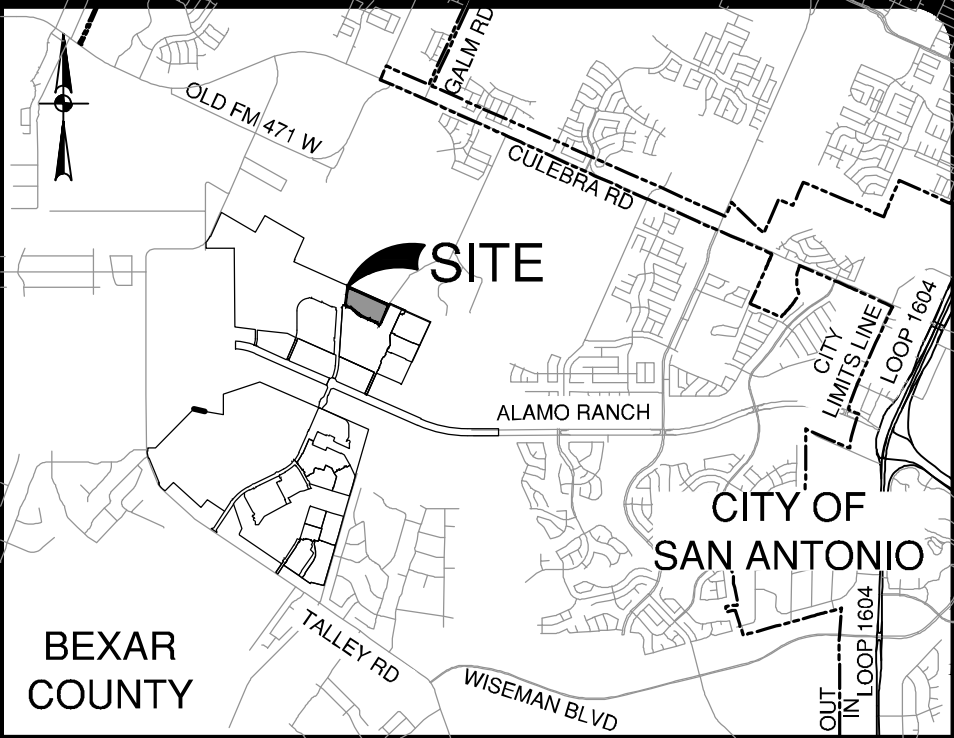
DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.	
ADDRESS: 5419 N LOOP 1604 E	
CITY: SAN ANTONIO	STATE: TEXAS ZIP: 78218
PHONE# (210)496-2668	FAX# (210)496-2668
SAWS BLOCK MAP# 082616 TOTAL EDU'S 140 TOTAL ACREAGE 25.004	
TOTAL LINEAR FOOTAGE OF PIPE: 4,161.77 LF PLAT NO. 22-11800470	
NUMBER OF LOTS 140	SAWS JOB NO. 22-1185

SEWER

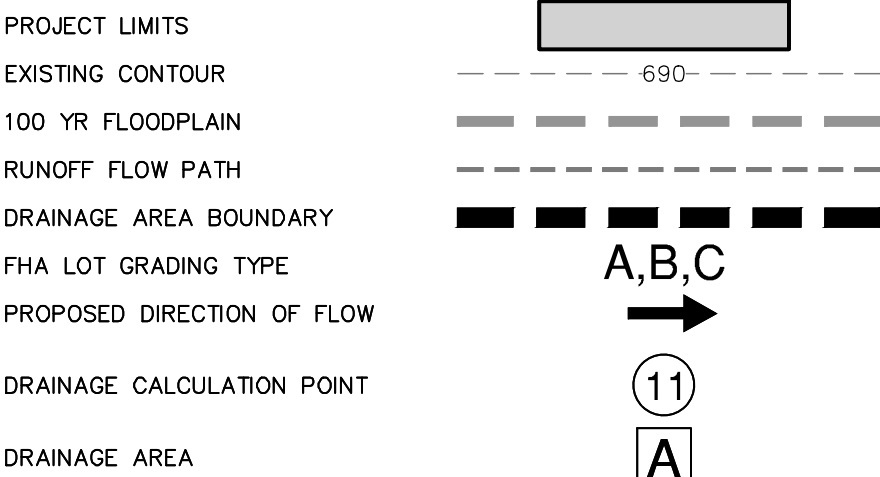
DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.	
ADDRESS: 5419 N LOOP 1604 E	
CITY: SAN ANTONIO	STATE: TEXAS ZIP: 78218
PHONE# (210)496-2668	FAX# (210)496-2668
SAWS BLOCK MAP# 082616 TOTAL EDU'S 140 TOTAL ACREAGE 25.004	
TOTAL LINEAR FOOTAGE OF PIPE: 8" 4,665.65 LF PLAT NO. 22-11800470	
NUMBER OF LOTS 140	SAWS JOB NO. 22-1679

SHEET C0.00

RIVERSTONE UNIT F8 & F9 - PROPOSED CONDITIONS DRAINAGE SUMMARY TABLE																						
Point	Structure	Area	Total Flow Length (ft)	Total Area (ac)	Character of Ground	Overland Flow			Shallow Concentrated			Channel Flow (6 fps)		Total					Total Q ₂₅ (Q+Intercept/Bypass)	Curb Inlet		
						Slope %	L (ft)	Tc (min)	Slope %	L (ft)	Surface	Tc (min)	L (ft)		Tc (min)	C	I	Q (cfs)		Frequency (yrs)	Intercept	Bypass
1	Drain A	A + B + C + D + E + F	2612	25.47	Avg. Grass	2.00%	90	12	0.00%	0	Unpaved	0.0	2522	7.0	19	0.72	4.66	85.5	5	Q = 81.8 - 34.84 = 46.96		
																	6.45	118.3	25			
																	8.00	146.7	100			
																	5.28	59.0	5			
2	Drain A-1 (Curb Inlet in Sump)	A + B + F	1427	15.53	Avg. Grass	2.00%	100	12	2.00%	10	Unpaved	0.1	1317	3.7	15	0.72	7.32	81.8	25			
																	9.12	102.0	100			
																	5.28	40.1	5			
																	7.32	55.6	25			
3	Drain A-2 (Curb Inlets on Grade)	B + F	1206	10.55	Avg. Grass	2.00%	100	12	2.00%	10	Unpaved	0.1	1096	3.0	15	0.72	9.12	69.3	100	34.84	20.76	
																	5.28	40.1	5			
																	7.32	55.6	25			
																	9.12	69.3	100			
4	Drain B-1 (Curb Inlets in Sump)	C	325	2.94	Avg. Grass	2.00%	100	12	2.00%	91	Unpaved	0.7	134	0.4	13	0.72	5.66	12.0	5			
																	7.89	16.7	25			
																	9.85	20.9	100			
																	4.94	35.4	5			
5	Drain A	C + D + E	2000	9.94	Avg. Grass	2.00%	90	12	0.00%	0	Unpaved	0.0	1910	5.3	17	0.72	6.84	49.0	25			
																	8.50	60.8	100			
																	4.80	70.8	5			
																	6.63	97.8	25			
6	Drain A	B + C + D + E + F	2394	20.49	Avg. Grass	2.00%	90	12	0.00%	0	Unpaved	0.0	2304	6.4	18	0.72	8.24	121.6	100			
																	5.47	27.6	5			
																	7.60	38.3	25			
																	9.48	47.8	100			
7	Existing Storm Drain	D + E	1147	7.00	Avg. Grass	2.00%	90	12	0.00%	0	Unpaved	0.0	1057	2.9	14	0.72	5.47	29.2	5			
																	7.60	40.6	25			
																	9.48	50.6	100			
																	5.47	29.2	5			
8	Street Capacity Check (Desert Rose Run)	F	847	7.42	Avg. Grass	2.00%	100	12	2.00%	10	Unpaved	0.1	737	2.0	14	0.72	7.60	40.6	25			
																	9.48	50.6	100			
																	5.47	29.2	5			
																	7.60	40.6	25			



MASTER DRAINAGE LEGEND



DATE	
NO. REVISION	

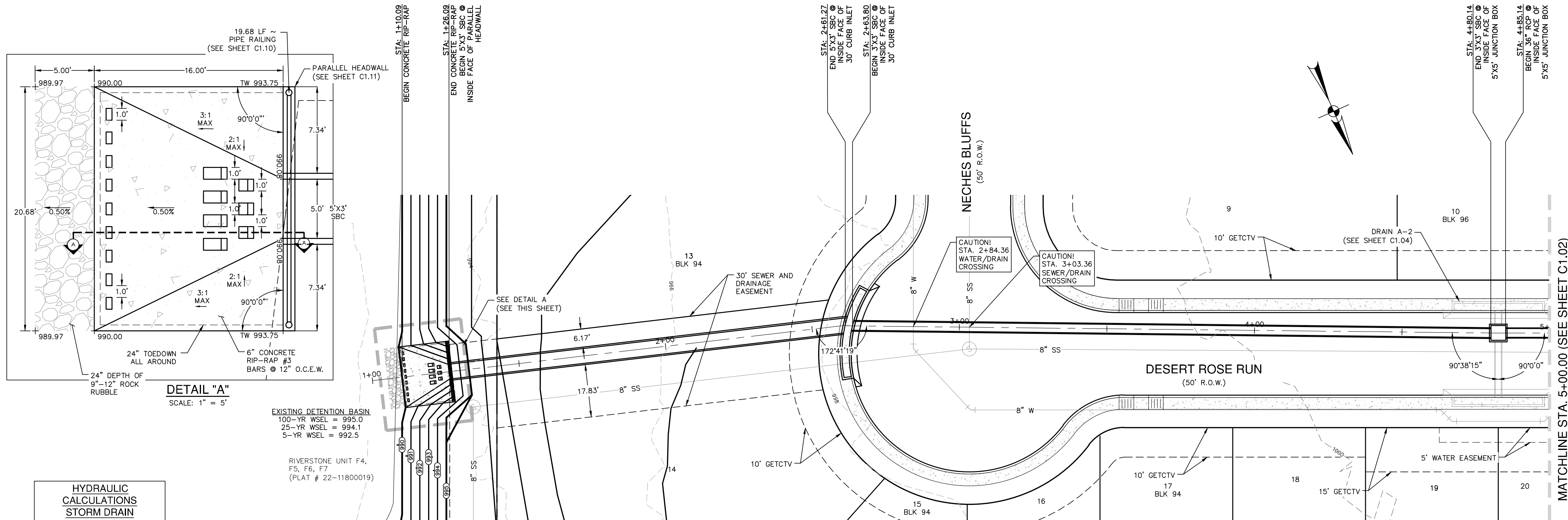
PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028890

RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS

MASTER DRAINAGE PLAN

PLAT NO.	22-11800470
JOB NO.	11680-55
DATE	AUGUST 2022
DESIGNER	CB
CHECKED	BL
DRAWN	CB
SHEET	C1.00



DETAIL "A"
SCALE: 1" = 5'

EXISTING DETENTION BASIN
100-YR WSEL = 995.0
25-YR WSEL = 994.1
5-YR WSEL = 992.5

RIVERSTONE UNIT F4,
F5, F6, F7
(PLAT # 22-11800019)

HYDRAULIC
CALCULATIONS
STORM DRAIN
STA. 1+26.09 TO 2+61.27

Q25 = 118.30 cfs
Sf = 0.52%
Vf = 7.89 fps
n = 0.013
D = 3.0'
S = 0.55%

*SEE STORM WATER MANAGEMENT
PLAN FOR ENERGY
DISSIPATION CALCULATIONS &
OUTLET VELOCITY
AND DEPTH

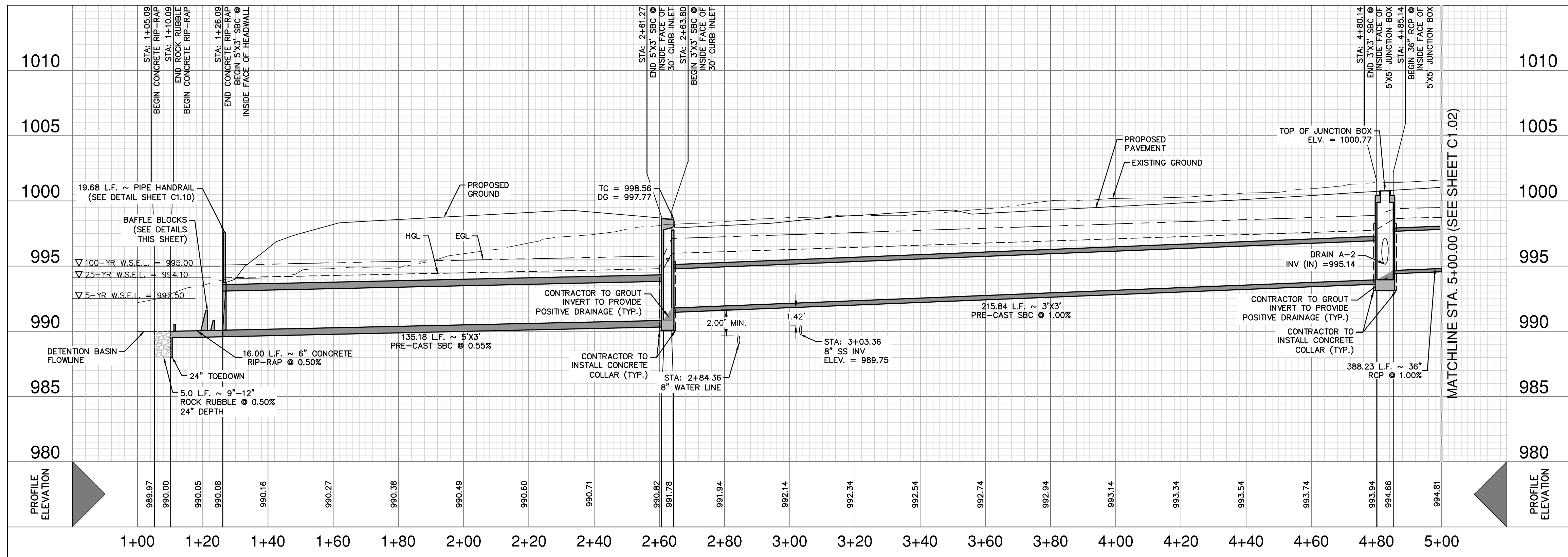
HYDRAULIC
CALCULATIONS
STORM DRAIN
STA. 2+63.80 TO 4+80.14

Q25 = 77.04 cfs
Sf = 0.82%
Vf = 8.56 fps
n = 0.013
D = 3.0'
S = 1.00%

HYDRAULIC
CALCULATIONS
STORM DRAIN
STA. 4+85.14 TO 8+73.87

Q25 = 49.00 cfs
Sf = 0.54%
Vf = 6.93 fps
n = 0.013
D = 3.0'
S = 1.00%

DRAIN "A"
STA. 1+10.09 TO 5+00.00



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

BAFFLE BLOCKS DETAIL
CROSS-SECTION "A-A"
NOT-TO-SCALE

DRAINAGE & GRADING NOTES:

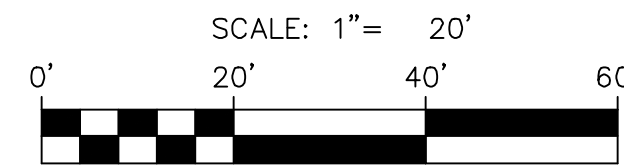
1. A BEAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
3. ALL CONCRETE FOR TxDOT DRAINAGE STRUCTURES SHALL MEET TxDOT SPECIFICATIONS. ALL OTHER CONCRETE SHALL BE CLASS "A" 3000 PSI CYLINDER STRENGTH IN 28 DAYS.
4. REFERENCE DRAINAGE DETAILS FOR PIPE TRENCH DETAILS, BOX CULVERT, HEADWALL, AND WINGWALL CONSTRUCTION DETAILS, AND BOX CULVERT BEDDING AND EXCAVATION LIMITS.
5. CONTRACTOR SHALL GROUT ALL CURB INLETS AND JUNCTION BOXES TO PROVIDE FOR POSITIVE DRAINAGE.
6. EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING. 85% OF THE CHANNEL SURFACE MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.
7. CONTRACTOR SHALL MATCH TOP OF CHANNEL TO NATURAL GROUND AND MAINTAIN A MINIMUM CHANNEL DEPTH OF "D" AS SHOWN IN THE PROFILE.

TRENCH EXCAVATION SAFETY PROTECTION:

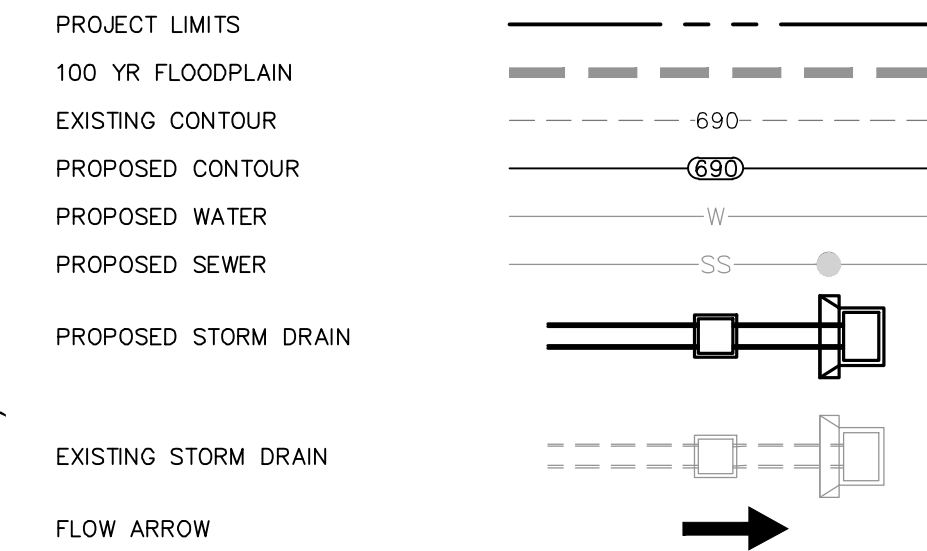
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S 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.

CAUTION!!

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

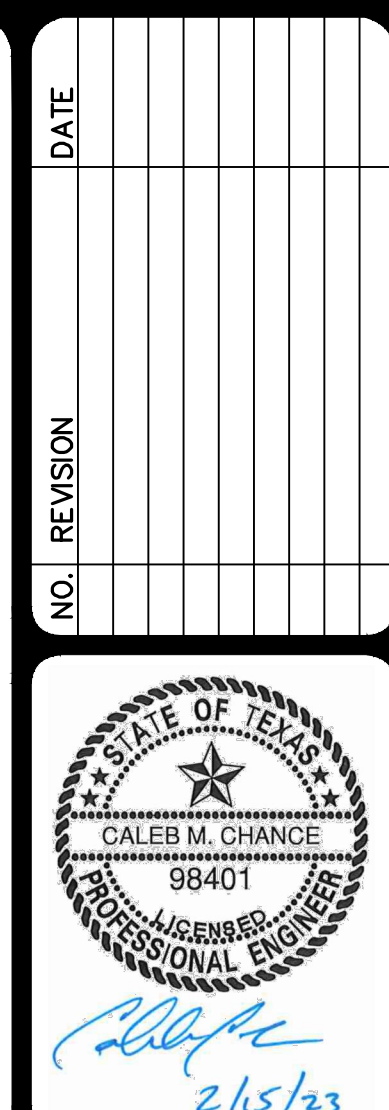


DRAINAGE LEGEND



HYDRAULIC CALCULATIONS-DRAIN "A-1"

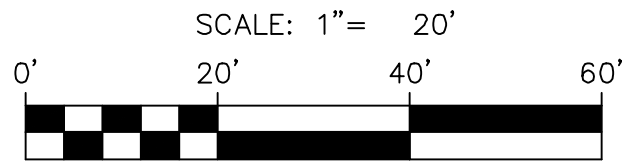
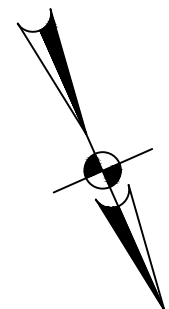
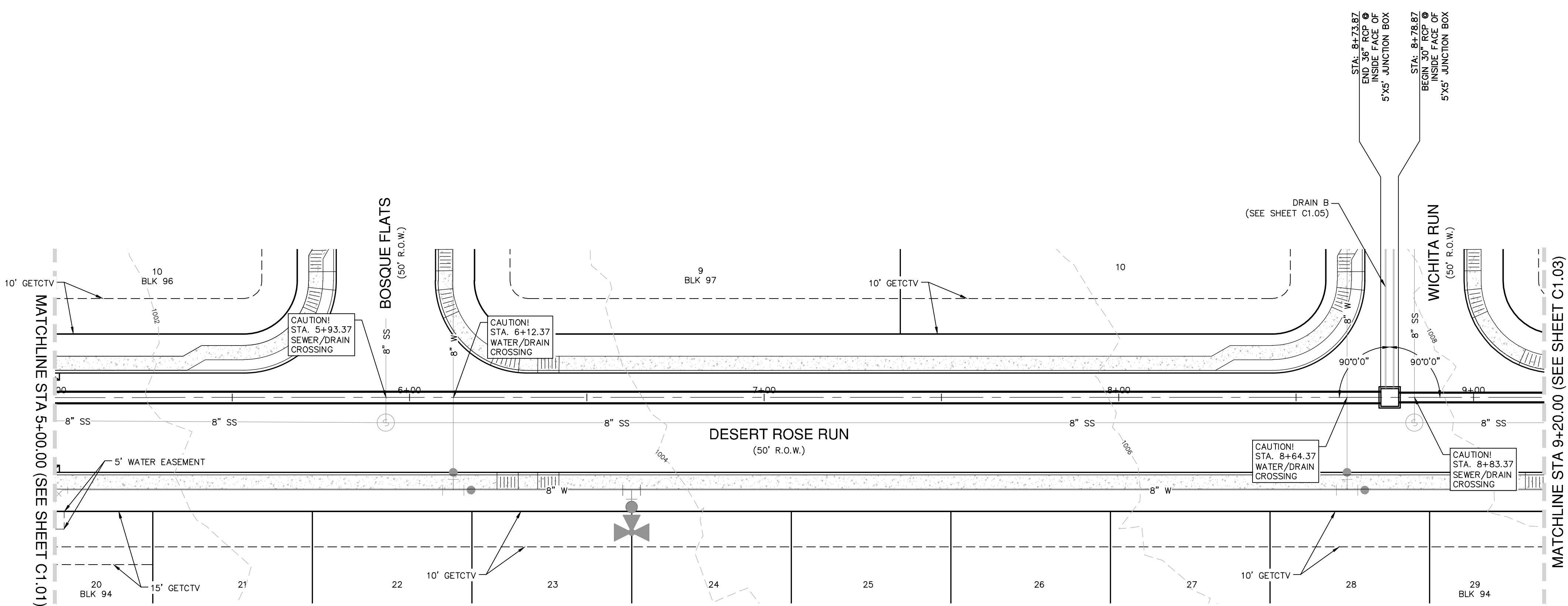
TOTAL Q25 = 46.96 CFS
Q25 = 46.96 CFS
Q25 = CA/2gn (ORIFICE FLOW EQN.)
A = L(0.52), h = 0.54, g = 32.2, c = 0.70
L = 46.96 CFS
(0.70) (0.52)/2 (32.2) (0.54)
L = 21.88 FT USE 1 ~ 30 FT CURB INLET
CHECK WITH WEIR FORMULA
h = (Q / (CL))^(2/3) = (46.96 / (3.087 (30)))^(2/3) = 0.64 FT.
h = 0.64 < 0.79 OK



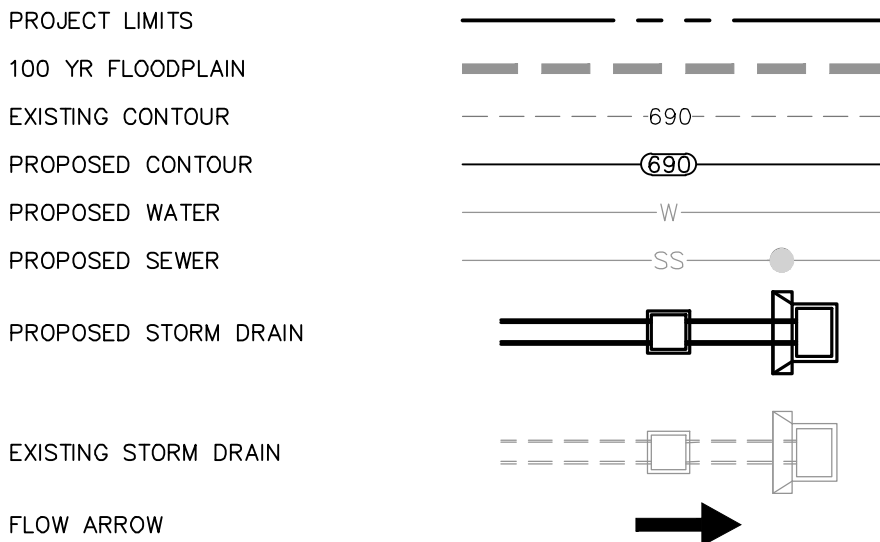
**PAPE-DAWSON
ENGINEERS**
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008860

RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS
DRAIN A PLAN & PROFILE
STA. 1+10.09 TO 5+00.00

PLAT NO. 22-11800470
JOB NO. 11680-55
DATE AUGUST 2022
DESIGNER CB
CHECKED BL DRAWN CB
SHEET C1.01



DRAINAGE LEGEND



HYDRAULIC CALCULATIONS STORM DRAIN

STA. 4+85.14 TO 8+73.87

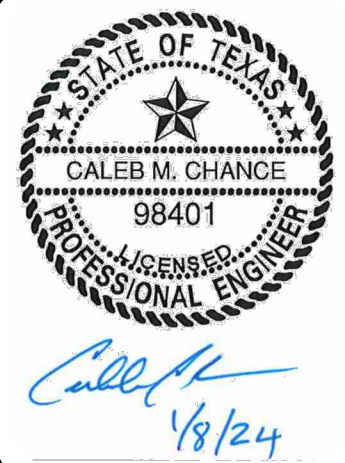
Q25 = 49.00 cfs
Sf = 0.54%
Vf = 6.93 fps
n = 0.013
D = 3.0'
S = 1.00%

HYDRAULIC CALCULATIONS STORM DRAIN

STA. 8+78.87 TO 12+07.66

Q25 = 38.30 cfs
Sf = 0.87%
Vf = 7.80 fps
n = 0.013
D = 2.5'
S = 1.00%

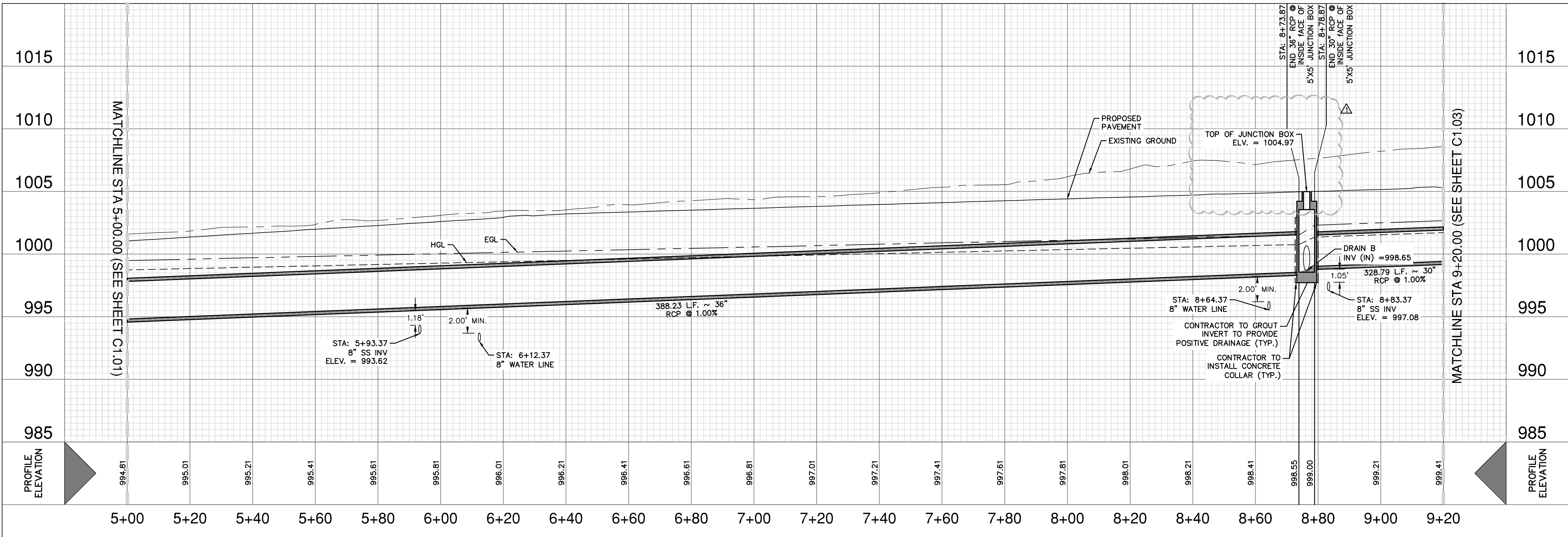
NO.	REVISION	DATE
1	REV STREET PROFILE	1-8-2024



**PAPE-DAWSON
ENGINEERS**
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

DRAIN "A"
STA. 5+00.00 TO 9+20.00

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



DRAINAGE & GRADING NOTES:

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TRENCH EXCAVATION SAFETY PROTECTION:

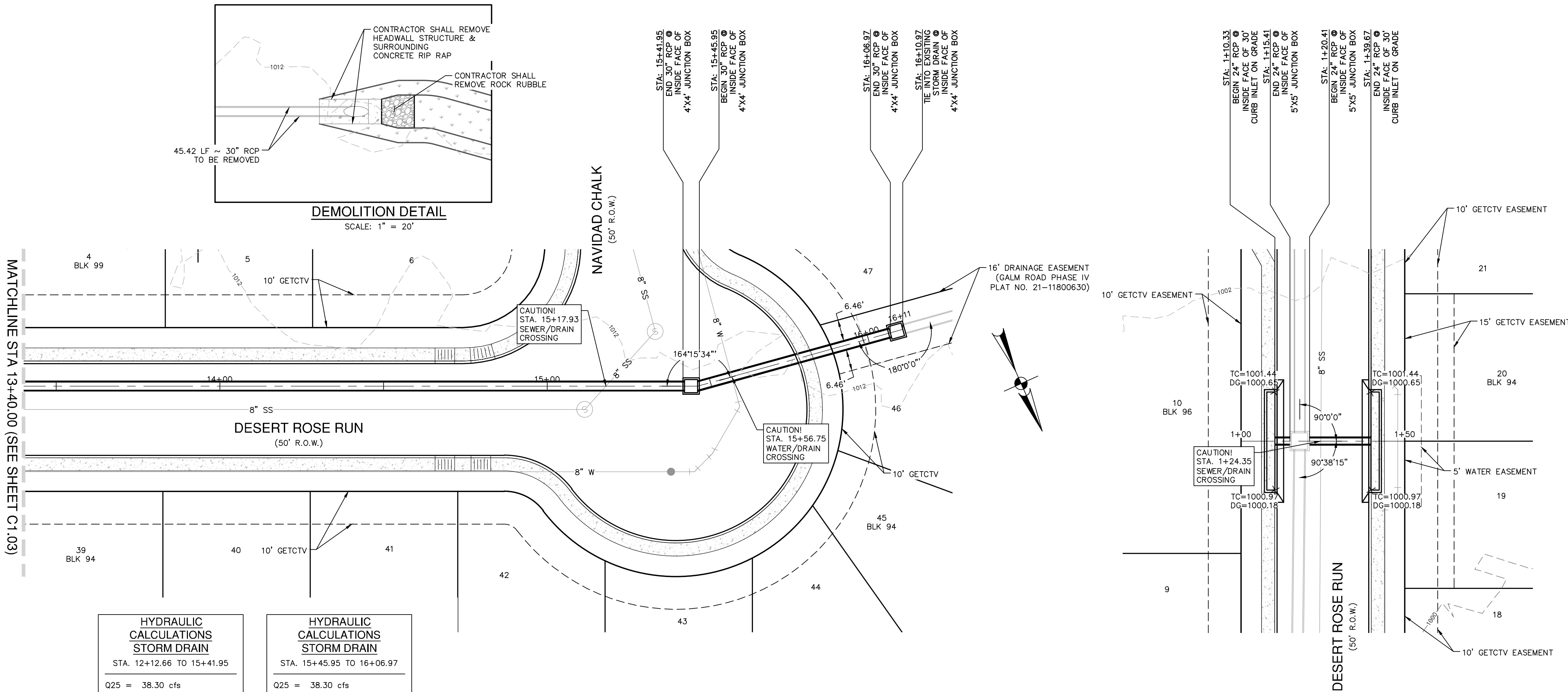
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CAUTION!!

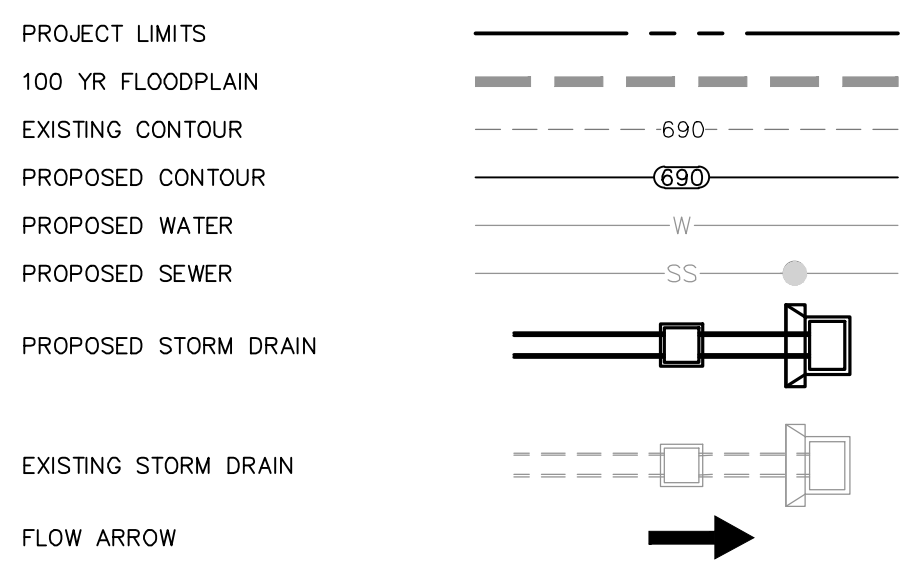
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RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS
DRAIN A PLAN & PROFILE
STA. 5+00.00 TO 9+20.00

PLAT NO.	22-11800470
JOB NO.	11680-55
DATE	AUGUST 2022
DRAWN	CB
CHECKED	BL
DRAWN	CB
SHEET	C1.02



DRAINAGE LEGEND

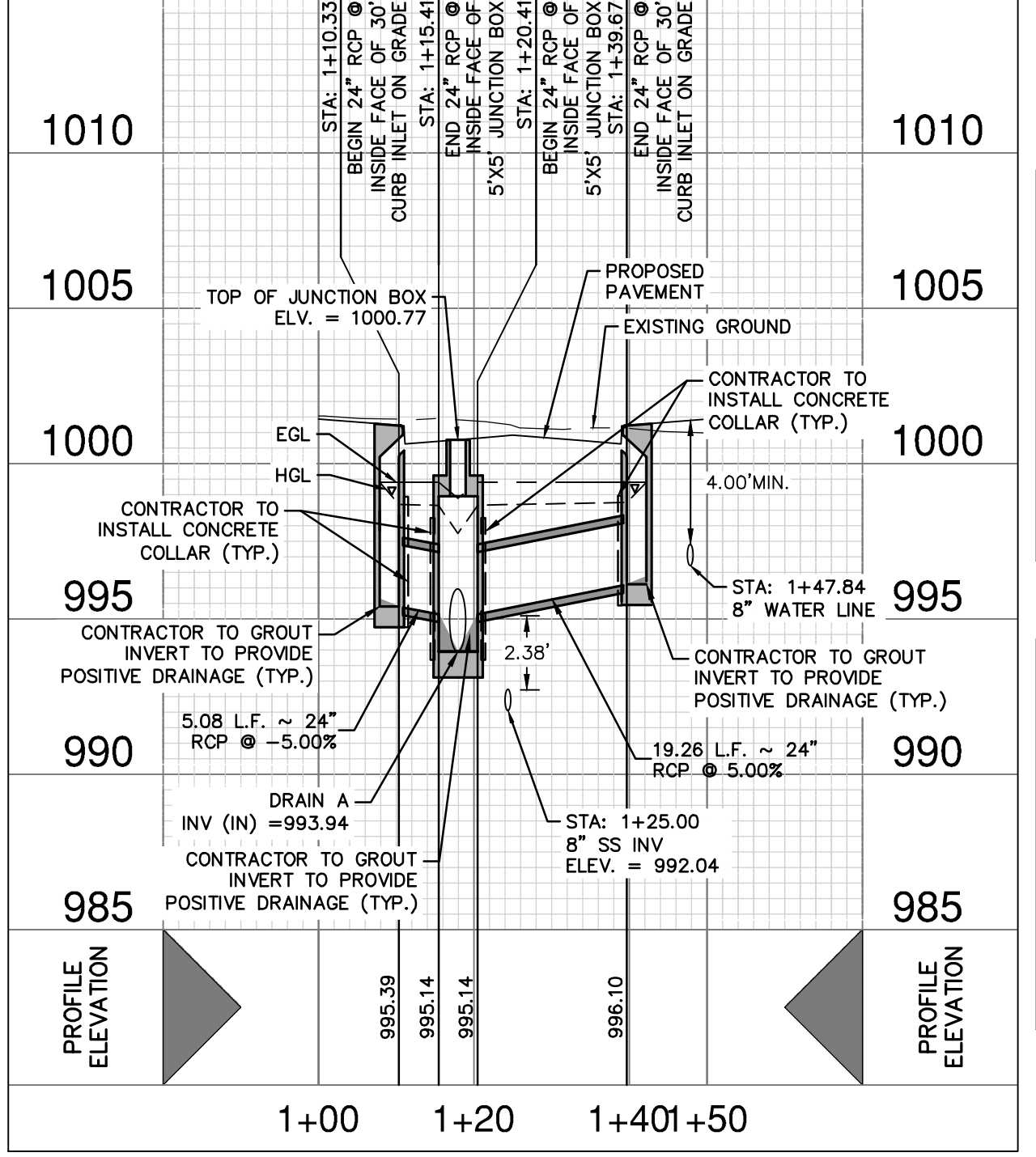
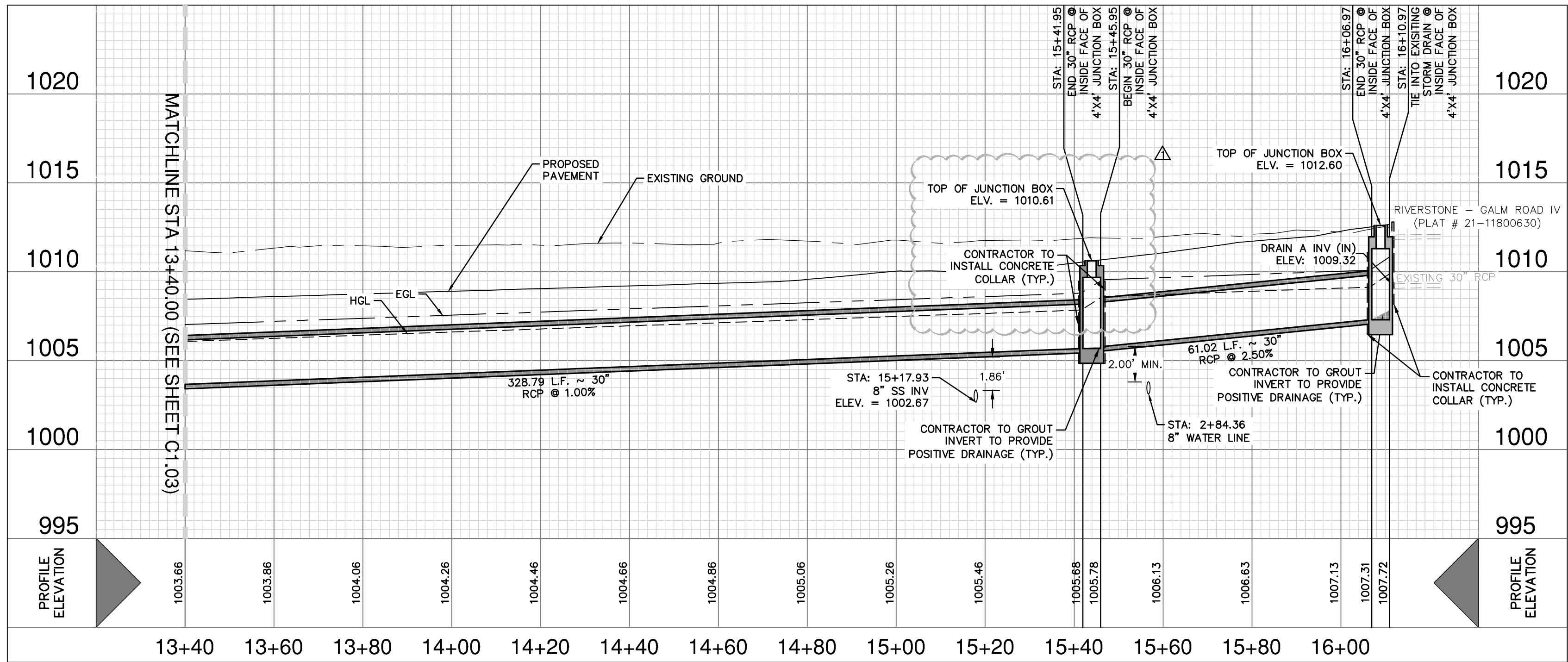


HYDRAULIC CALCULATIONS STORM DRAIN	HYDRAULIC CALCULATIONS STORM DRAIN
STA. 12+12.66 TO 15+41.95	STA. 15+45.95 TO 16+06.97
Q25 = 38.30 cfs	Q25 = 38.30 cfs
Sf = 0.87%	Sf = 0.87%
Vf = 7.80 fps	Vf = 7.80 fps
n = 0.013	n = 0.013
D = 2.5'	D = 2.5'
S = 1.00%	S = 1.65%

DRAIN "A"
STA. 13+40.00 TO END

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

DRAIN "A-2"
STA. 1+10.33 TO END
VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'



HYDRAULIC CALCULATIONS STORM DRAIN
STA. 1+10.33 TO 1+15.41
Q25 = 17.42 cfs
Sf = 0.59%
Vf = 5.54 fps
n = 0.013
D = 2.0'
S = 5.00%

HYDRAULIC CALCULATIONS STORM DRAIN
STA. 1+20.41 TO 1+39.67
Q25 = 17.42 cfs
Sf = 0.59%
Vf = 5.54 fps
n = 0.013
D = 2.0'
S = 5.00%

DRAINAGE & GRADING NOTES:

- A BEAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
- ALL CONCRETE FOR TxDOT DRAINAGE STRUCTURES SHALL MEET TxDOT SPECIFICATIONS. ALL OTHER CONCRETE SHALL BE CLASS "A" 3000 PSI CYLINDER STRENGTH IN 28 DAYS.
- REFERENCE DRAINAGE DETAILS FOR PIPE TRENCH DETAILS, BOX CULVERT, HEADWALL, AND WINGWALL CONSTRUCTION DETAILS, AND BOX CULVERT BEDDING AND EXCAVATION LIMITS.
- CONTRACTOR SHALL GROUT ALL CURB INLETS AND JUNCTION BOXES TO PROVIDE FOR POSITIVE DRAINAGE.
- EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING. 85% OF THE CHANNEL SURFACE MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.
- CONTRACTOR SHALL MATCH TOP OF CHANNEL TO NATURAL GROUND AND MAINTAIN A MINIMUM CHANNEL DEPTH OF "D" AS SHOWN IN THE PROFILE.

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY 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.

CAUTION!!

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

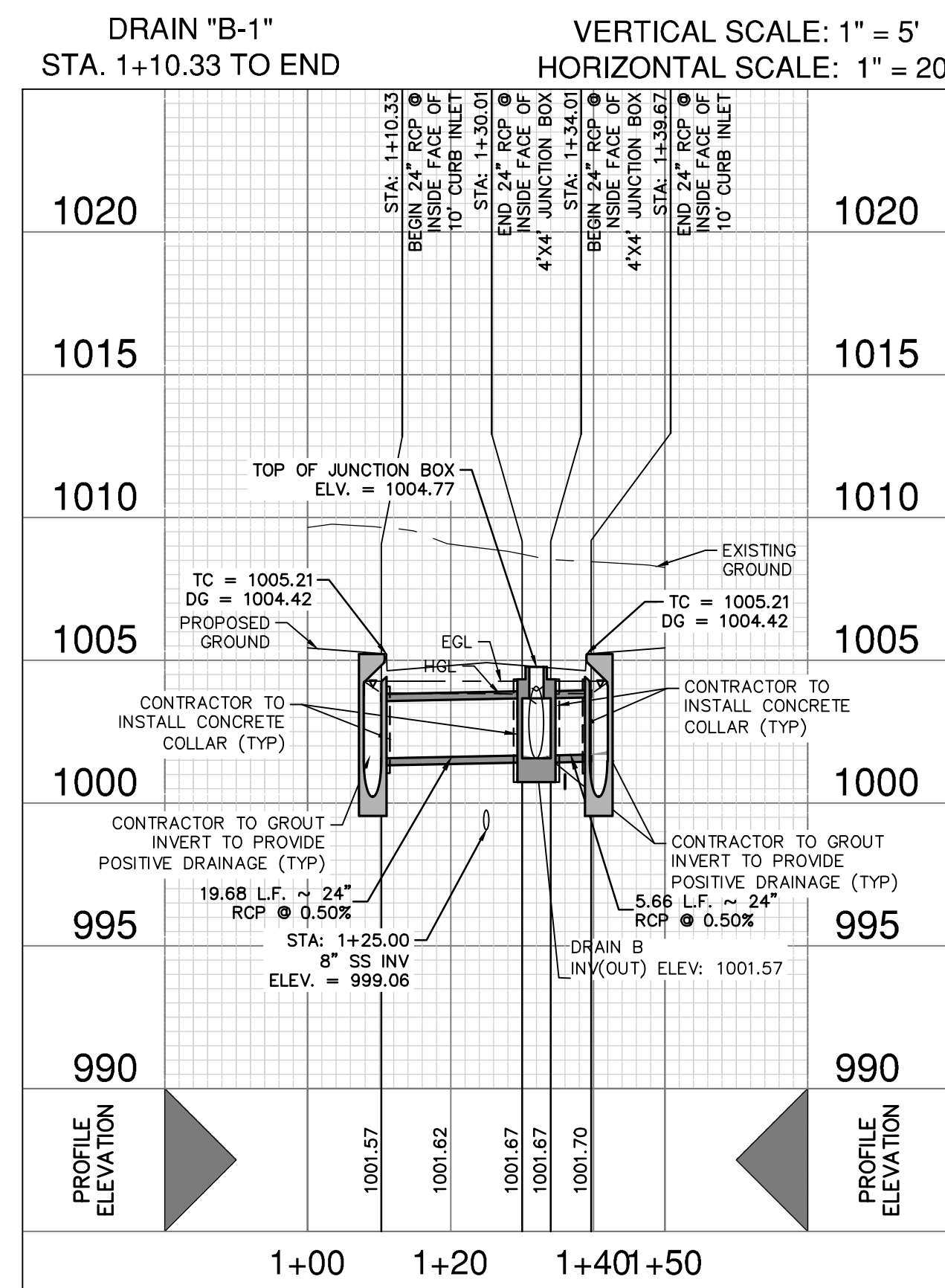
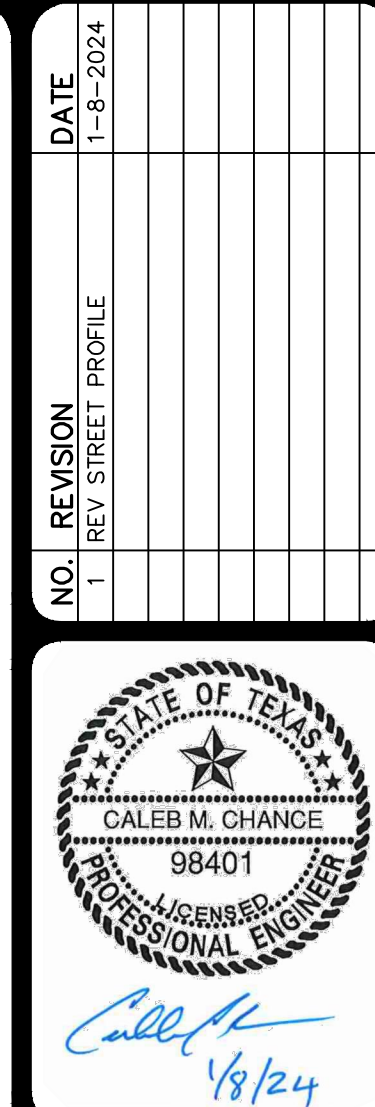
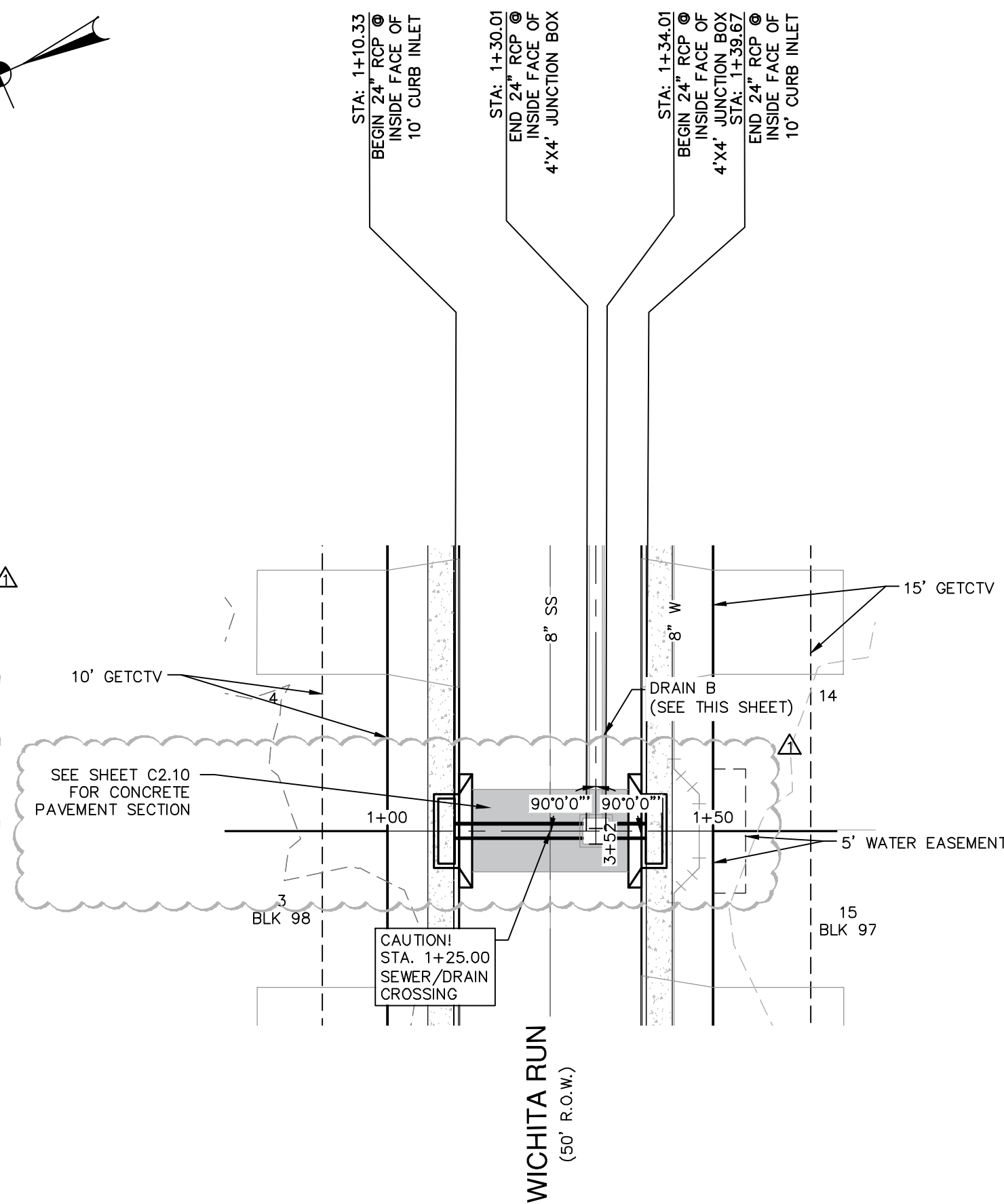
DATE 1-8-2024
NO. 1
REVISION 1
REV STREET PROFILE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
1/8/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS
DRAIN A & A-2 PLAN & PROFILE
DRAIN A (STA. 13+40.00 TO END)
DRAIN A-2 (STA. 1+10.33 TO END)

PLAT NO. 22-11800470
JOB NO. 11680-55
DATE AUGUST 2022
DESIGNER CB
CHECKED BL DRAWN CB
SHEET C1.04



**HYDRAULIC
CALCULATIONS
STORM DRAIN**

STA. 1+34.01 TO 1+39.67

Q25 = 8.35 cfs
 Sf = 0.14%
 Vf = 2.66 fps
 n = 0.013
 D = 2.0'
 S = 0.50%

1. A BEARX COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEARX COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXISTING LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ADDITIONALLY, THE CONTRACTOR SHALL BE RESPONSIBLE ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
3. ALL CONCRETE FOR TxDOT DRAINAGE STRUCTURES SHALL MEET TxDOT SPECIFICATIONS. ALL OTHER CONCRETE SHALL BE CLASS "A" 3000 PSI CYLINDER STRENGTH IN 28 DAYS.
4. REFERENCE DRAINAGE DETAILS FOR PIPE TRENCH DETAILS, BOX CULVERT, HEADWALL, AND WINGWALL CONSTRUCTION DETAILS, AND BOX CULVERT BEDDING AND EXCAVATION LIMITS.
5. CONTRACTOR SHALL GROUT ALL CURB INLETS AND JUNCTION BOXES TO PROVIDE FOR POSITIVE DRAINAGE.
6. EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING. 85% OF THE CHANNEL SURFACE MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.
7. CONTRACTOR SHALL MATCH TOP OF CHANNEL TO NATURAL GROUND AND MAINTAIN A MINIMUM CHANNEL DEPTH OF "D" AS SHOWN IN THE PROFILE.

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR
OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT.
IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL
INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE
PROJECT AREA TO DETERMINE THE PRESENCE OF ANY OF THE FOLLOWING:
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 EMPLOYED IN THE PROJECT AREA.
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 REGARDING THE PROTECTION OF
ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

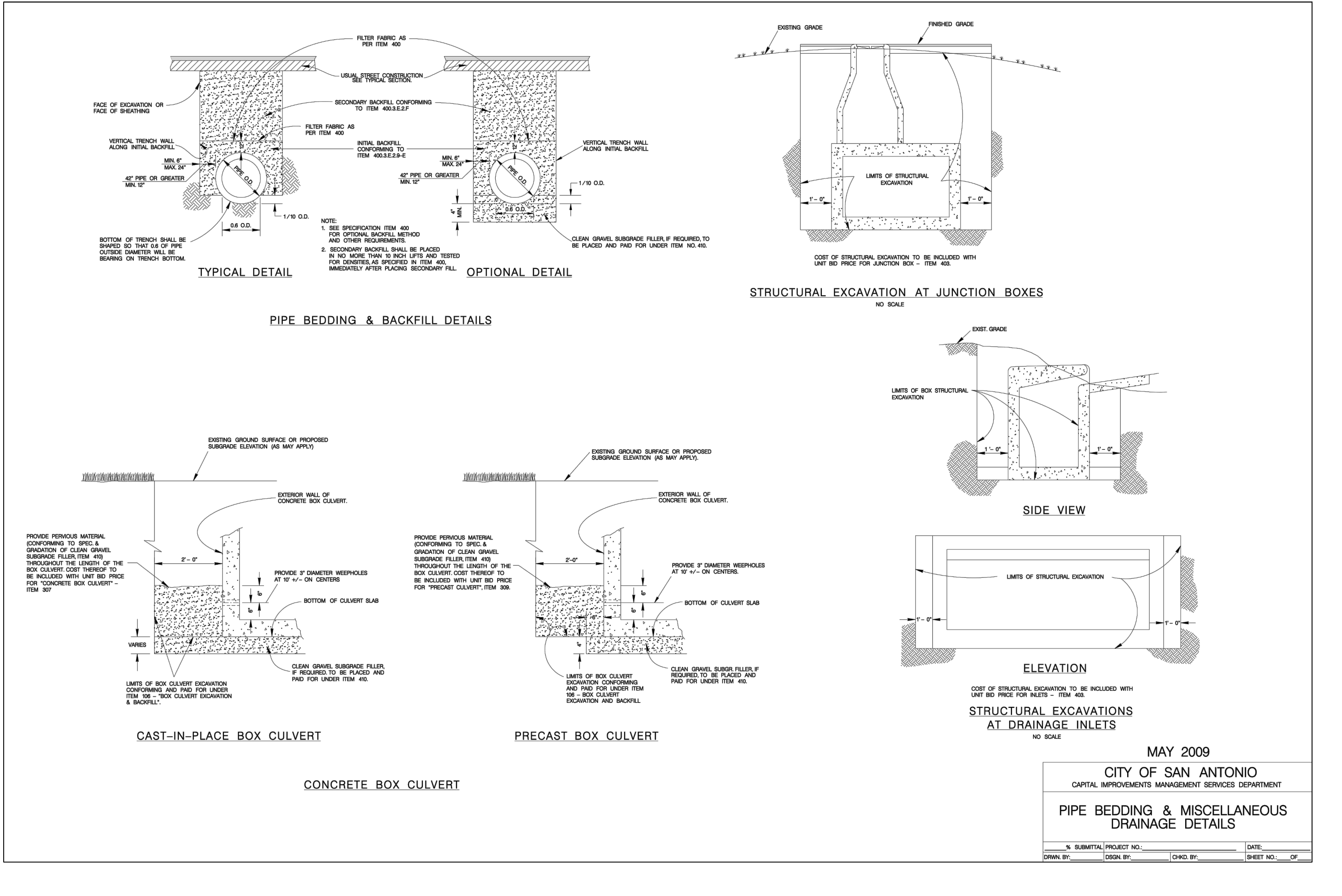
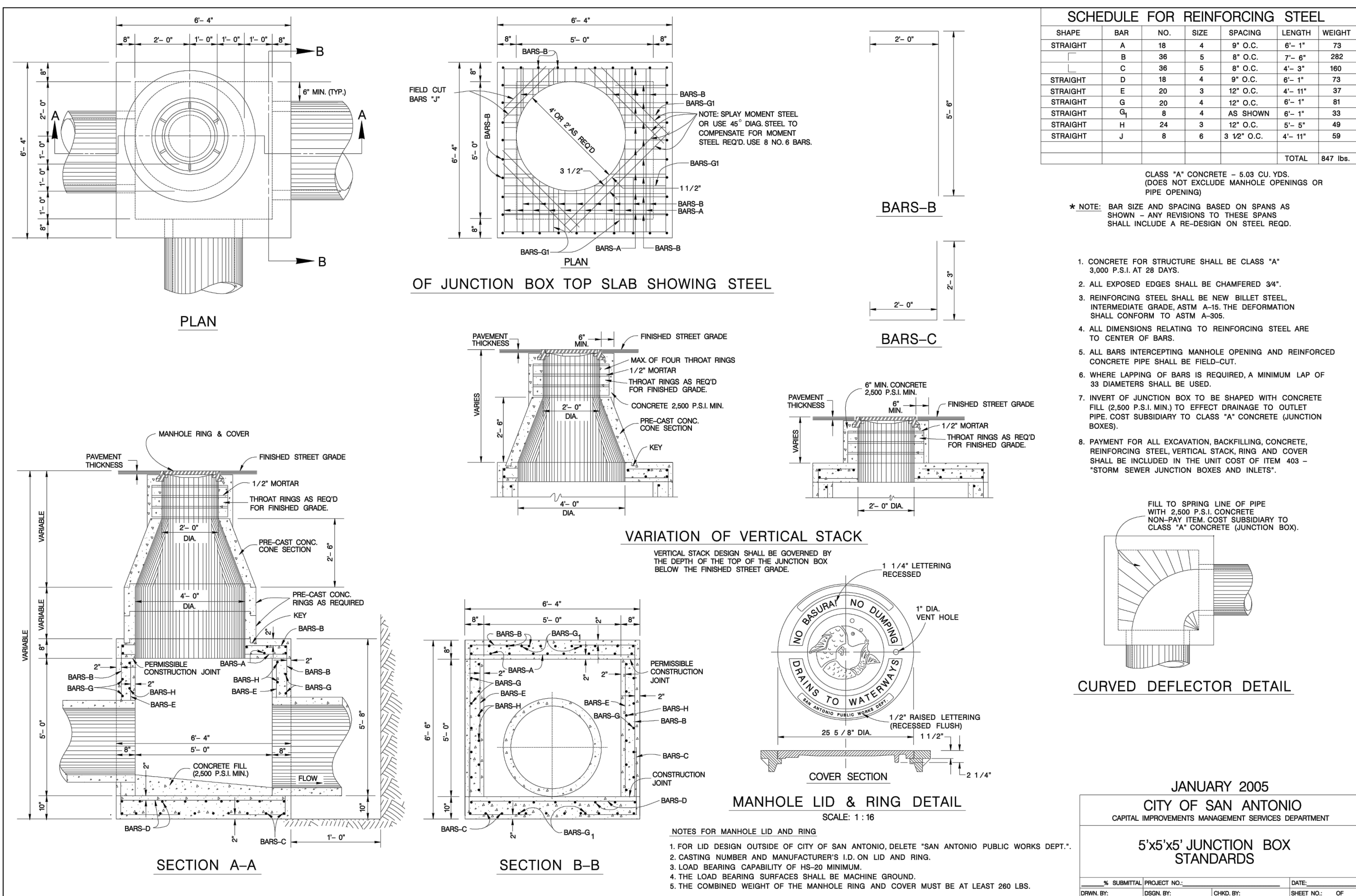
CAUTION!!

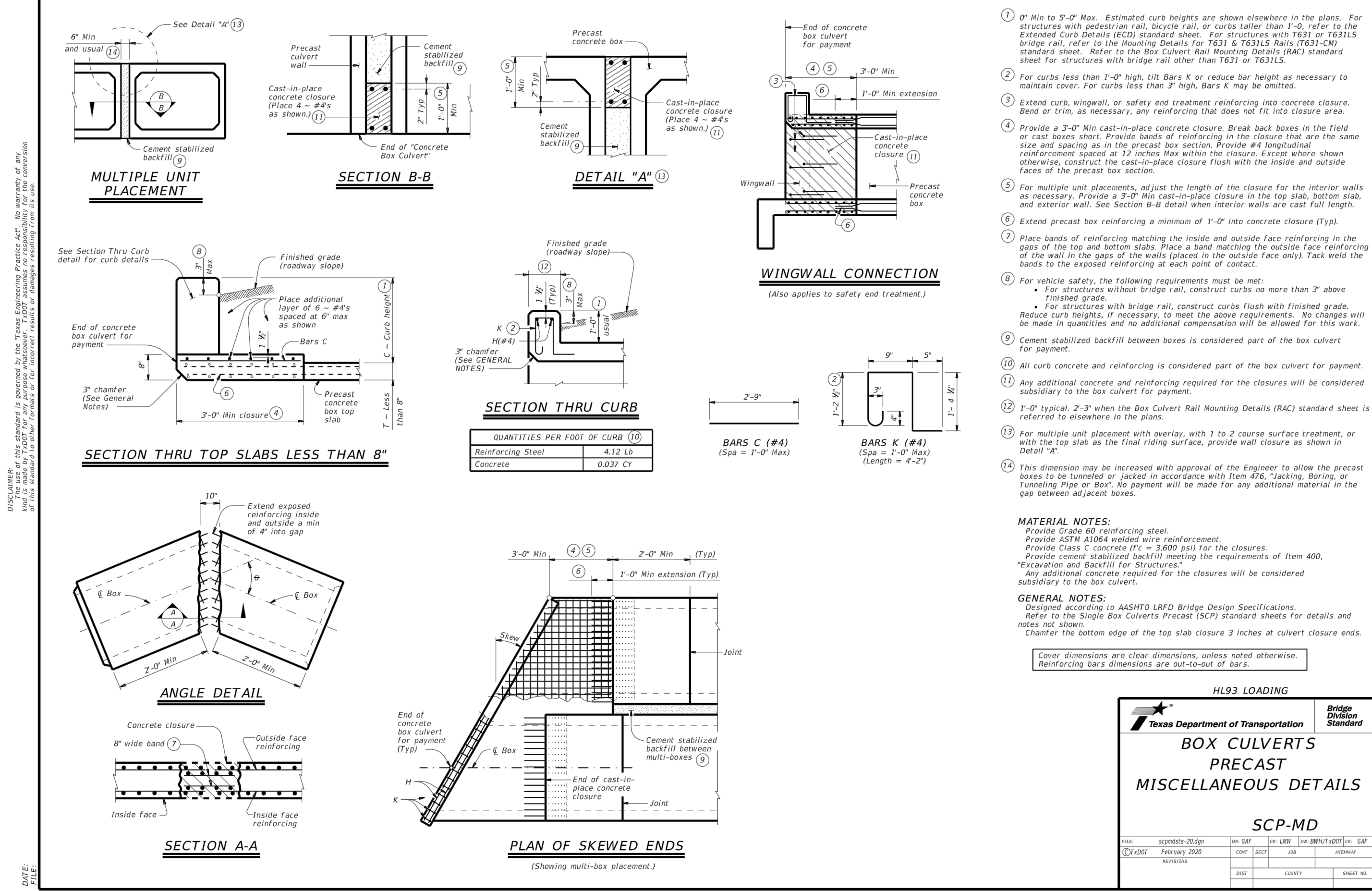
CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING, BUT NOT LIMITING TO, WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES.

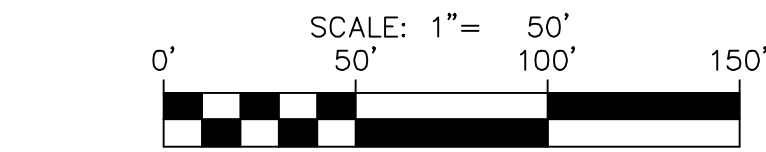
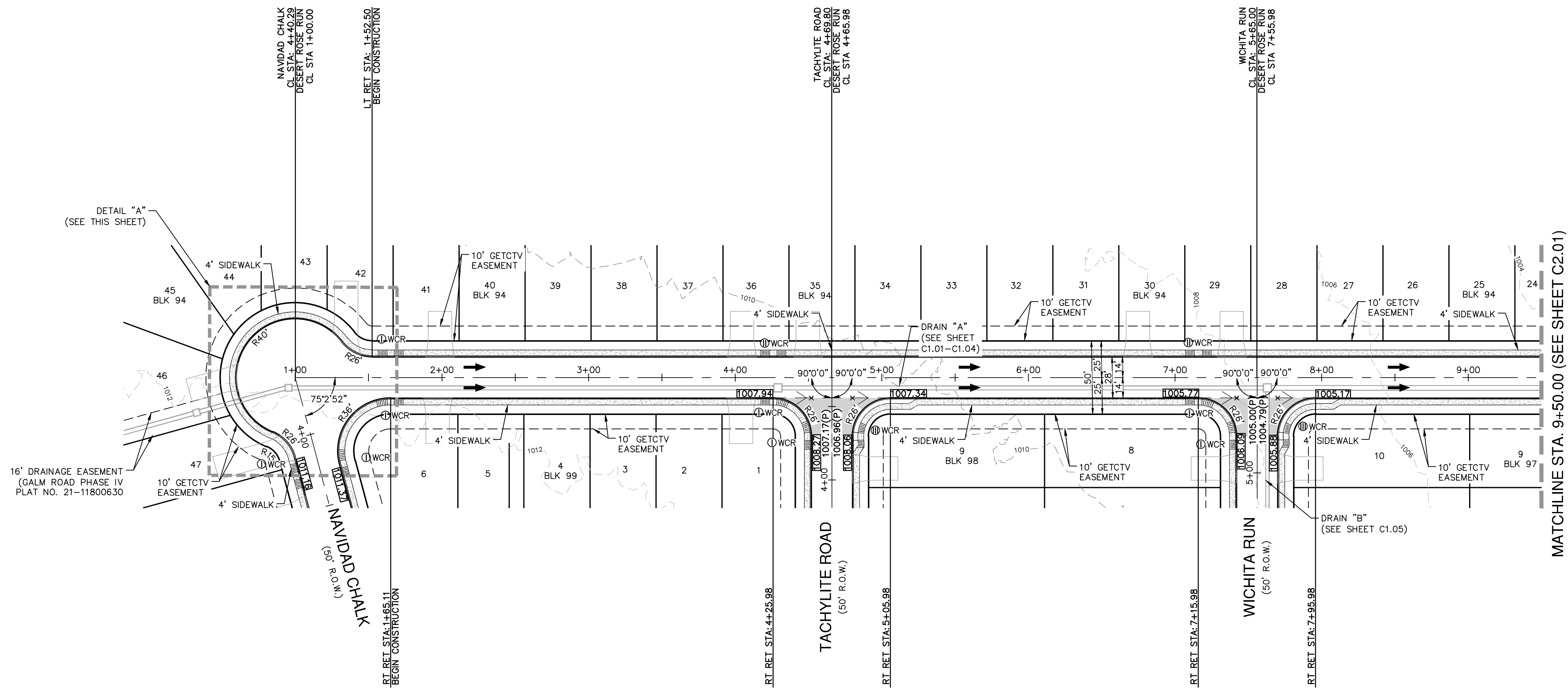
ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE OWNER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION, ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE THE CONTRACTOR'S WHOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

VERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS
DRAIN B & B-1 PLAN & PROFILE
DRAIN B (STA. 1+05.00 TO END)
DRAIN B-1 (STA. 1+10.33 TO END)

PLAT NO. 22-11800470
JOB NO. 11680-55
DATE AUGUST 2022
DESIGNER CB
CHECKED BL DRAWN CB
SHEET C1.05





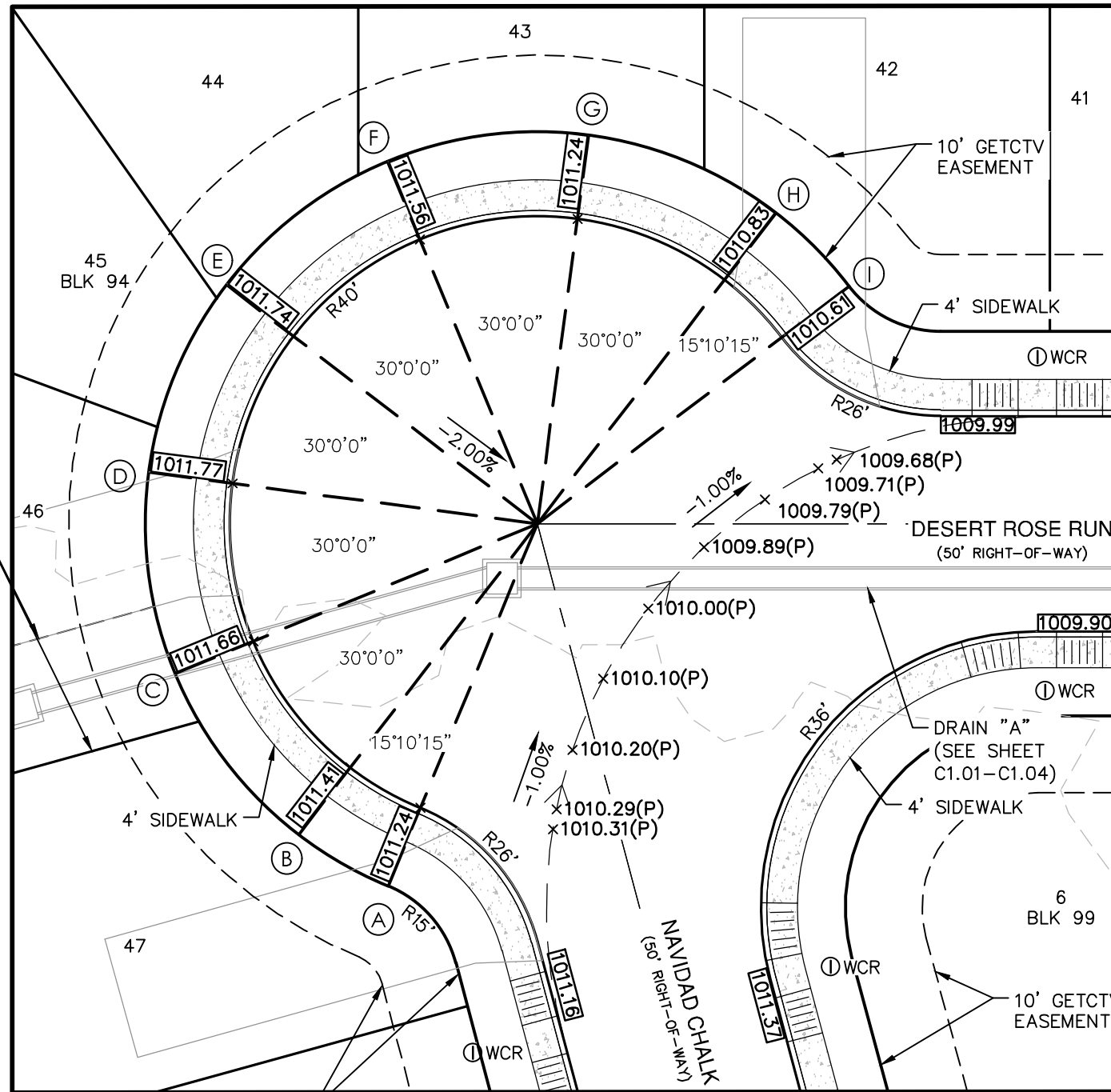
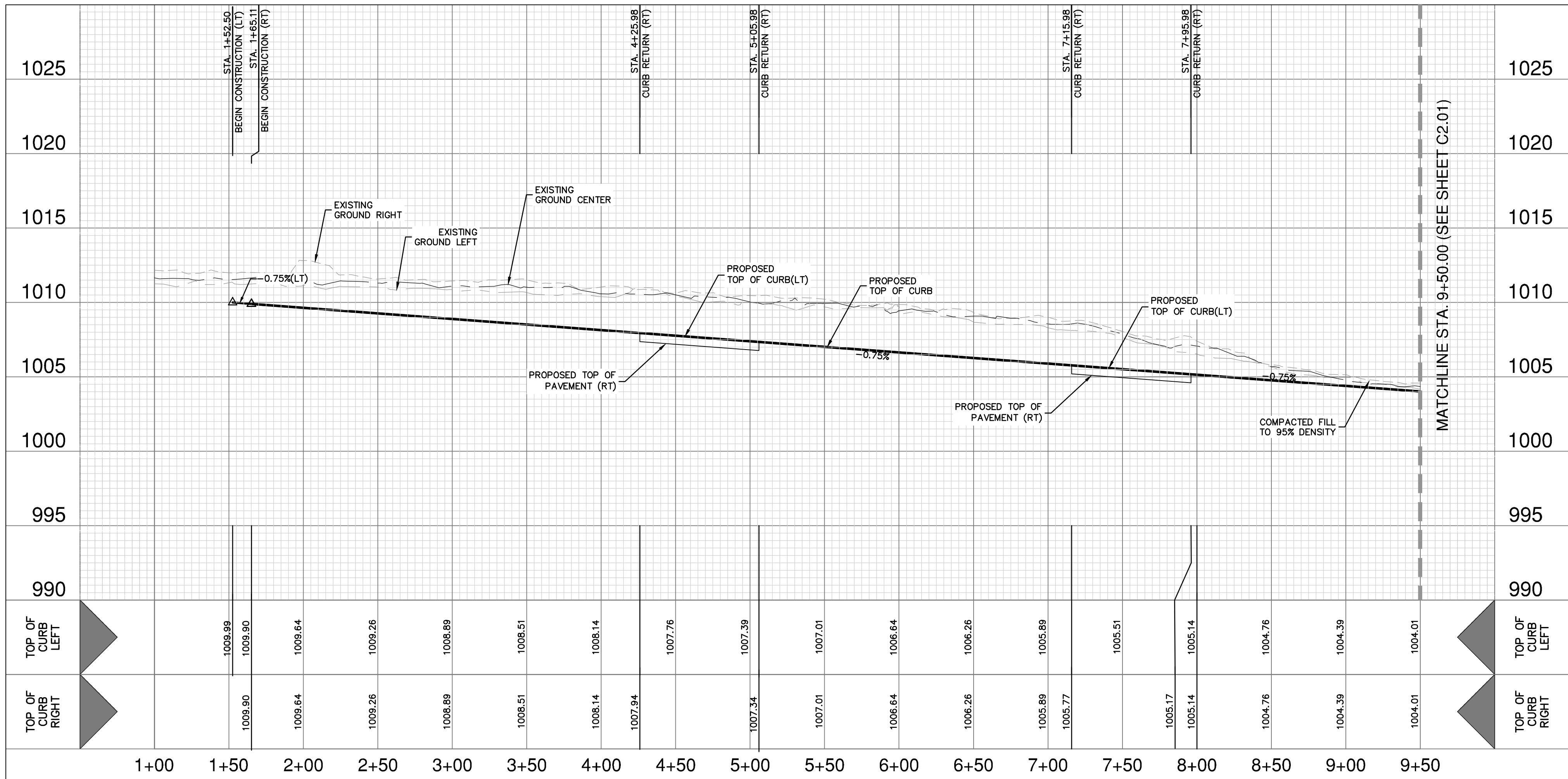


STREET LEGEND

PROJECT LIMITS	→
MAINTAIN GUTTER	→
EXISTING CONTOUR	970
WHEELCHAIR RAMP	⊕
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
DRAINAGE FLOW ARROW	→
TOP OF CURB SPOT ELEVATION	857.30
PAVEMENT ELEVATION	857.00(P) x
WASHOUT CROWN SECTION	
SIDEWALK (DEVELOPER'S RESPONSIBILITY)	
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	
DRIVEWAY	

16' DRAINAGE EASEMENT
(GALM ROAD PHASE IV
PLAT NO. 21-11800630)

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



DETAIL "A"
SCALE: 1" = 20'

STREET SELECT FILL NOTE:

IF FILL MATERIAL IS USED TO RAISE THE GRADE, FILL MATERIAL UNDERNEATH THE PAVEMENT SHOULD BE APPROVED FILL MATERIAL, FREE OF DEBRIS AND WITH A MINIMUM CBR VALUE OF 4.0 AND A PI MAXIMUM OF 20. THE GRAVEL SIZE SHOULD NOT EXCEED 3 INCHES IN DIAMETER. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES.

WHEEL CHAIR NOTE:

WHEEL CHAIR RAMPS (WCR) TO BE CENTERED ON STATION NOTED BELOW. ELEVATION SHOWN ARE TOP OF CURB AND NOT GUTTER

STREET NOTES:

- A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
- CONTRACTOR SHALL MATCH EXISTING PAVEMENT AT THE IN. IF EXISTING PAVEMENT ELEVATION DIFFERS SIGNIFICANTLY, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WORK.
- SIDEWALKS SHALL BE CONSTRUCTED 3'-FT FROM THE BACK OF CURB FOR ALL LOCATIONS WHERE THE SIDEWALK IS SHOWN OFFSET. REFER TO STREET DETAIL SHEET FOR SIDEWALK AND RAMP DETAILS.
- NO PERMANENT STRUCTURES HIGHER THAN 3 FEET, AND LOWER THAN 8 FEET ABOVE THE PAVEMENT, INCLUDING STRUCTURES, WALLS, FENCES, AND VEGETATION, SHALL BE CONSTRUCTED OR ALLOWED WITHIN THE CLEAR VISION EASEMENT. CONTRACTOR SHALL GRADE AREAS WITHIN CLEAR VISION EASEMENTS SUCH THAT THE ELEVATION WITHIN THE CLEAR VISION EASEMENT IS NOT HIGHER THAN 3 FEET ABOVE THE ADJACENT TOP OF PAVEMENT.
- DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.
- CHANGES IN THE SIDEWALK LOCATION FOR A MAXIMUM LINEAR DISTANCE OF TWO HUNDRED (200) FEET ARE PERMITTED. TO BE APPROVED BY THE FIELD INSPECTOR WITHOUT AMENDING THE STREET PLAN OR UTILITY LAYOUT PER UDC SECTION 35-506 (D)(6).

PAPE-DAWSON
ENGINEERS

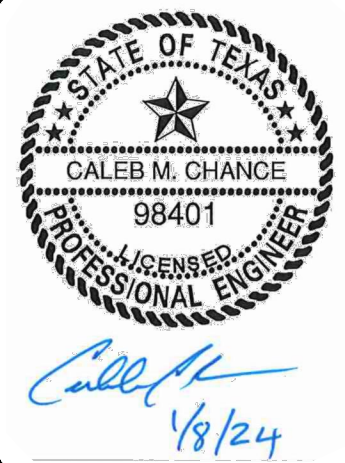
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

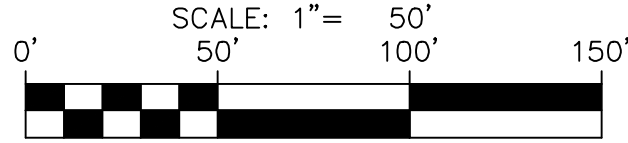
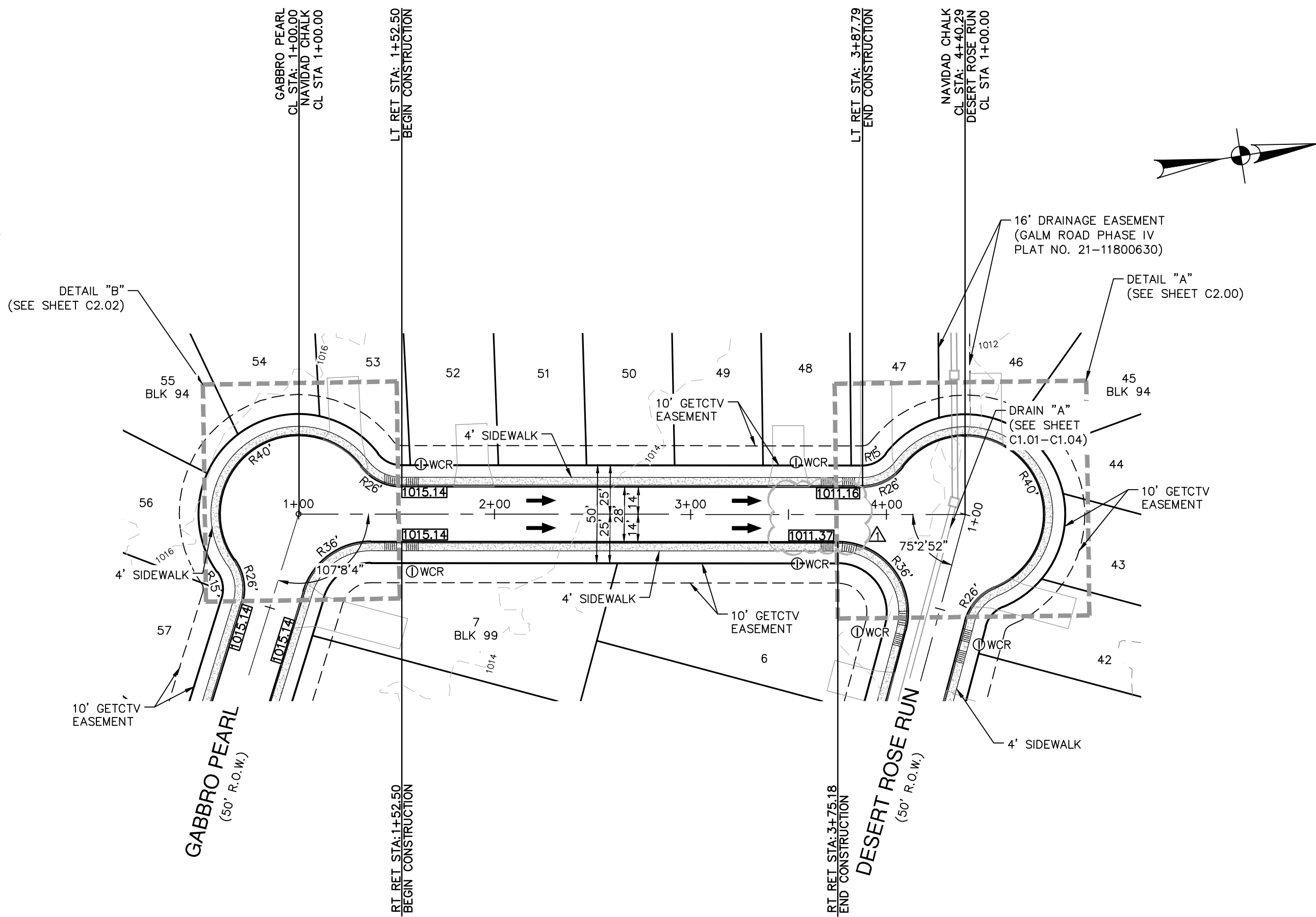
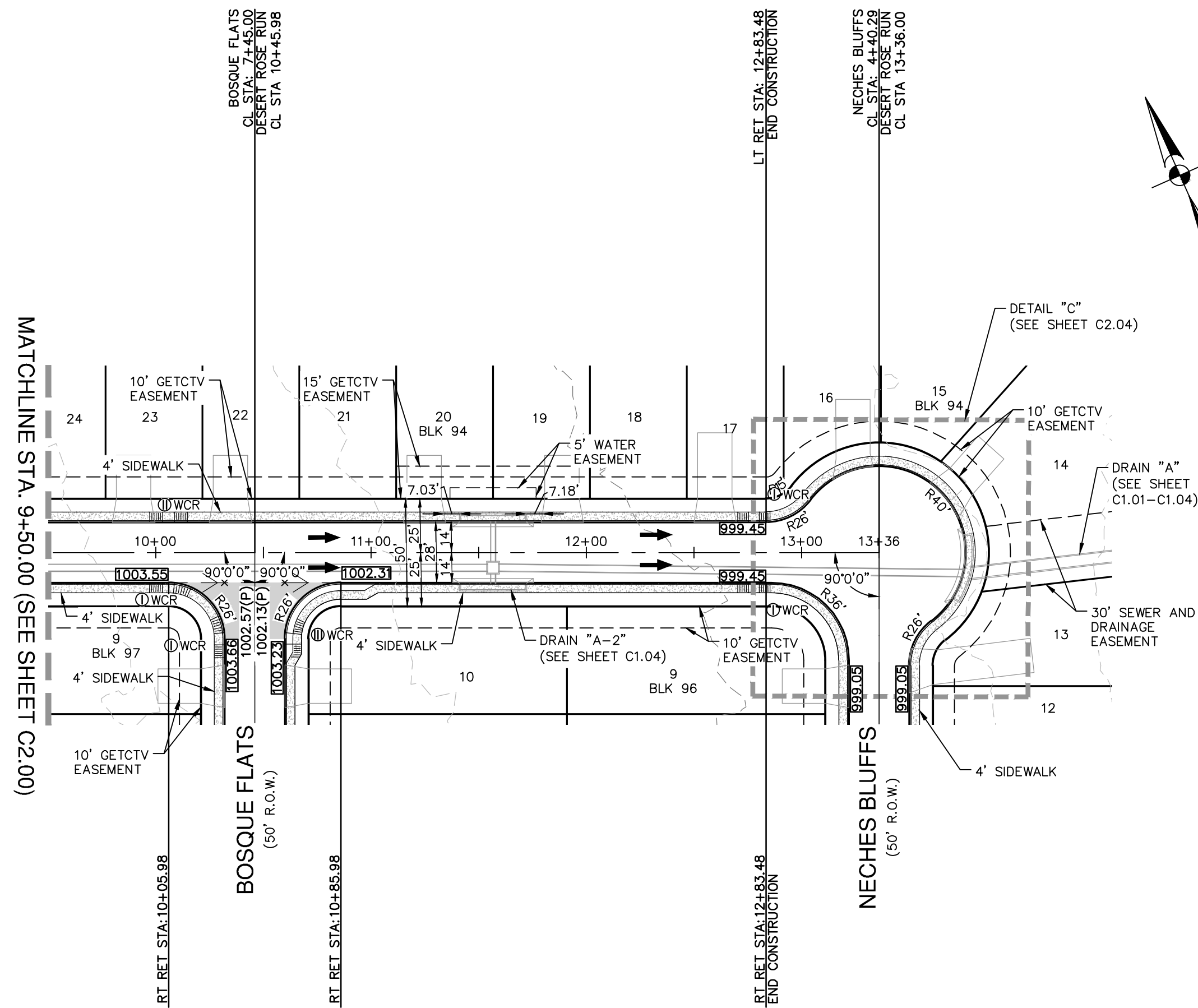
RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS

DESERT ROSE RUN PLAN & PROFILE
STA. 1+52.50 TO 9+50.00

PLAT NO. 22-11800470
JOB NO. 11680-55
DATE AUGUST 2022
DESIGNER CB
CHECKED BL DRAWN CB
SHEET C2.00

NO.	REVISION	DATE
1	REV STREET PROFILE	1-8-2024



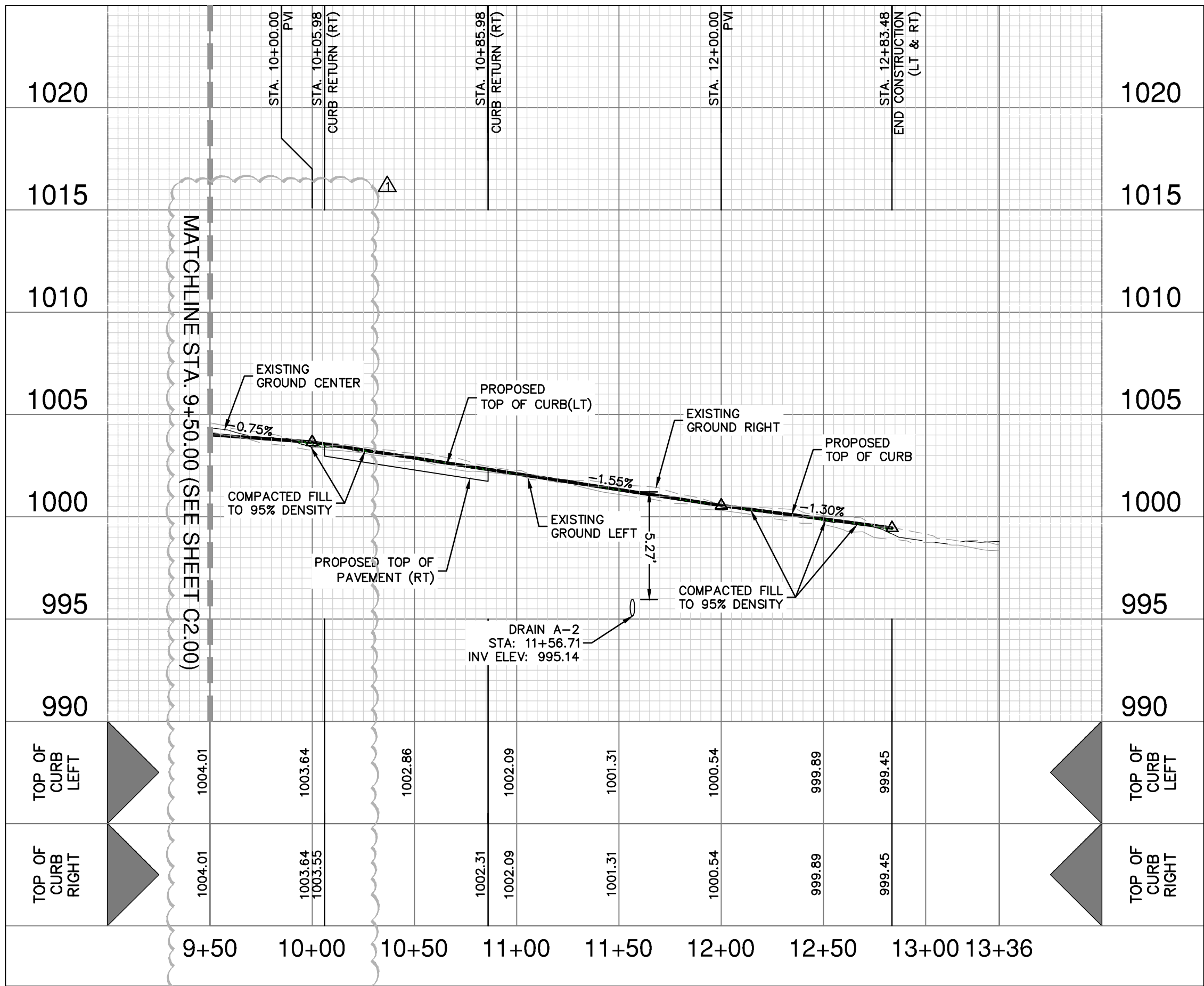


STREET LEGEND

PROJECT LIMITS	→
MAINTAIN GUTTER	→
EXISTING CONTOUR	970
WHEELCHAIR RAMP	⊕
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
DRAINAGE FLOW ARROW	→
TOP OF CURB SPOT ELEVATION	(857.30)
PAVEMENT ELEVATION	857.00(P) x
WASHOUT CROWN SECTION	
SIDEWALK (DEVELOPER'S RESPONSIBILITY)	
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	
DRIVEWAY	

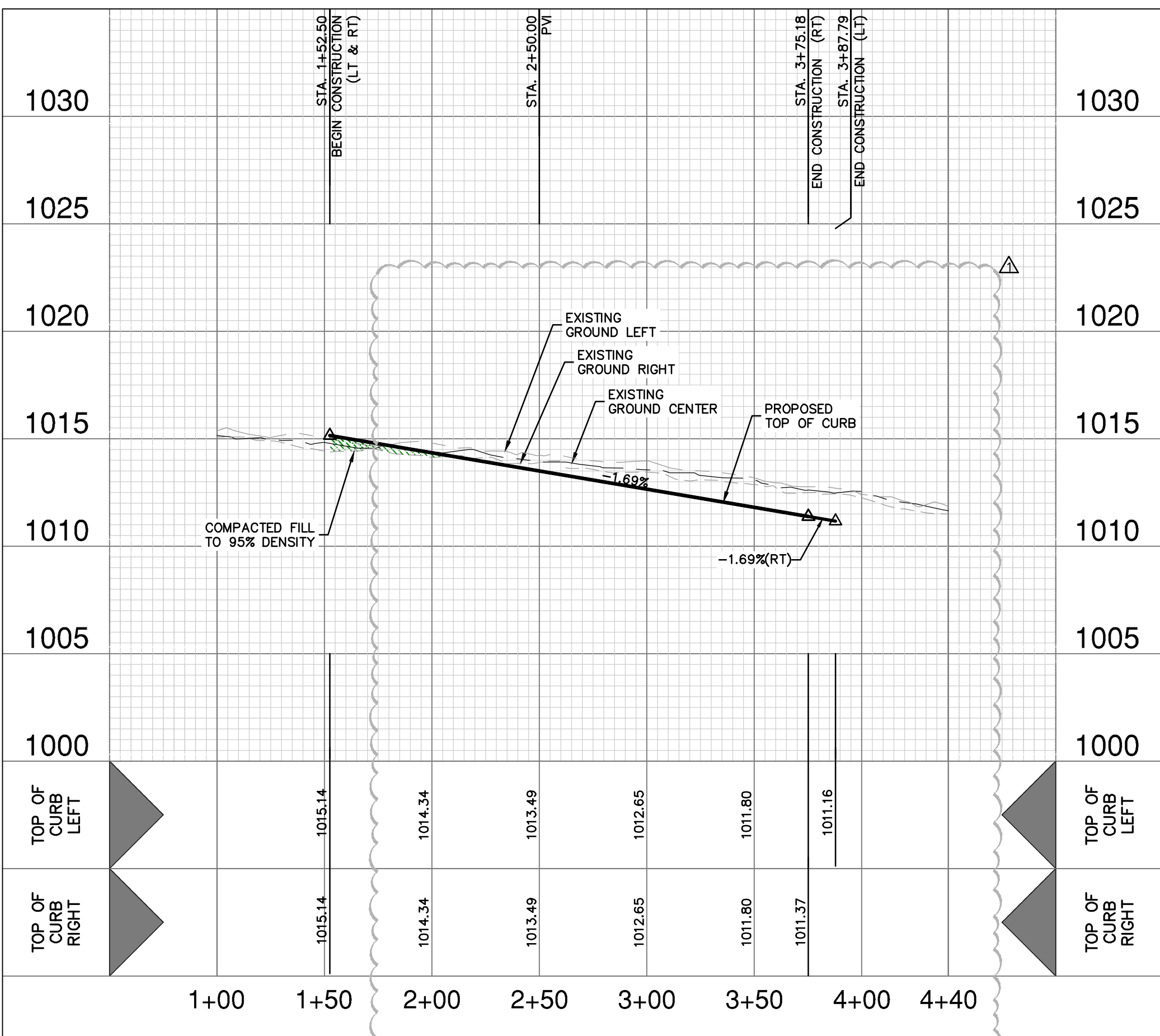
DESERT ROSE RUN
STA. 9+50.00 TO END

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



NAVIDAD CHALK
STA. 1+52.50 TO END

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



STREET SELECT FILL NOTE:

IF FILL MATERIAL IS USED TO RAISE THE GRADE, FILL MATERIAL UNDERNEATH THE PAVEMENT SHOULD BE APPROVED FILL MATERIAL, FREE OF DEBRISIOUS MATERIAL AND WITH A MINIMUM CBR VALUE OF 4.0 AND A PI MAXIMUM OF 20. THE GRAVEL SIZE SHOULD NOT EXCEED 3 INCHES IN DIAMETER. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES.

WHEEL CHAIR NOTE:

WHEEL CHAIR RAMPS (WCR) TO BE CENTERED ON STATION NOTED BELOW. ELEVATION SHOWN ARE TOP OF CURB AND NOT GUTTER

STREET NOTES:

- A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
- CONTRACTOR SHALL MATCH EXISTING PAVEMENT AT THE IN. IF EXISTING PAVEMENT ELEVATION DIFFERS SIGNIFICANTLY, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WORK.
- SIDEWALKS SHALL BE CONSTRUCTED 3'-FT FROM THE BACK OF CURB FOR ALL LOCATIONS WHERE THE SIDEWALK IS SHOWN OFFSET. REFER TO STREET DETAIL SHEET FOR SIDEWALK AND RAMP DETAILS.
- NO PERMANENT STRUCTURES HIGHER THAN 3 FEET, AND LOWER THAN 8 FEET ABOVE THE PAVEMENT, INCLUDING STRUCTURES, WALLS, FENCES, AND VEGETATION, SHALL BE CONSTRUCTED OR ALLOWED WITHIN THE CLEAR VISION EASEMENT. CONTRACTOR SHALL GRADE AREAS WITHIN CLEAR VISION EASEMENTS SUCH THAT THE ELEVATION WITHIN THE CLEAR VISION EASEMENT IS NOT HIGHER THAN 3 FEET ABOVE THE ADJACENT TOP OF PAVEMENT.
- DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.
- CHANGES IN THE SIDEWALK LOCATION FOR A MAXIMUM LINEAR DISTANCE OF TWO HUNDRED (200) FEET ARE PERMITTED TO BE APPROVED BY THE FIELD INSPECTOR WITHOUT AMENDING THE STREET PLAN OR UTILITY LAYOUT PER UDC SECTION 35-506 (d)(6).

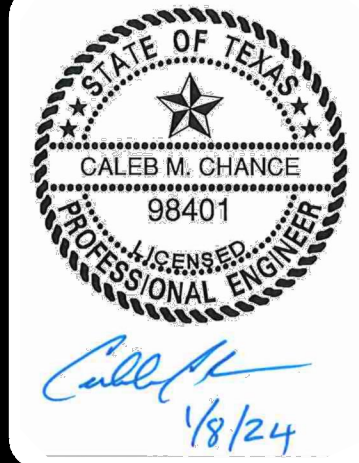
PAPE-DAWSON
ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008860

RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS
DESERT ROSE RUN & NAVIDAD CHALK PLAN & PROFILE
DESERT ROSE RUN (STA. 9+50.00 TO END)
NAVIDAD CHALK (STA. 1+52.50 TO END)

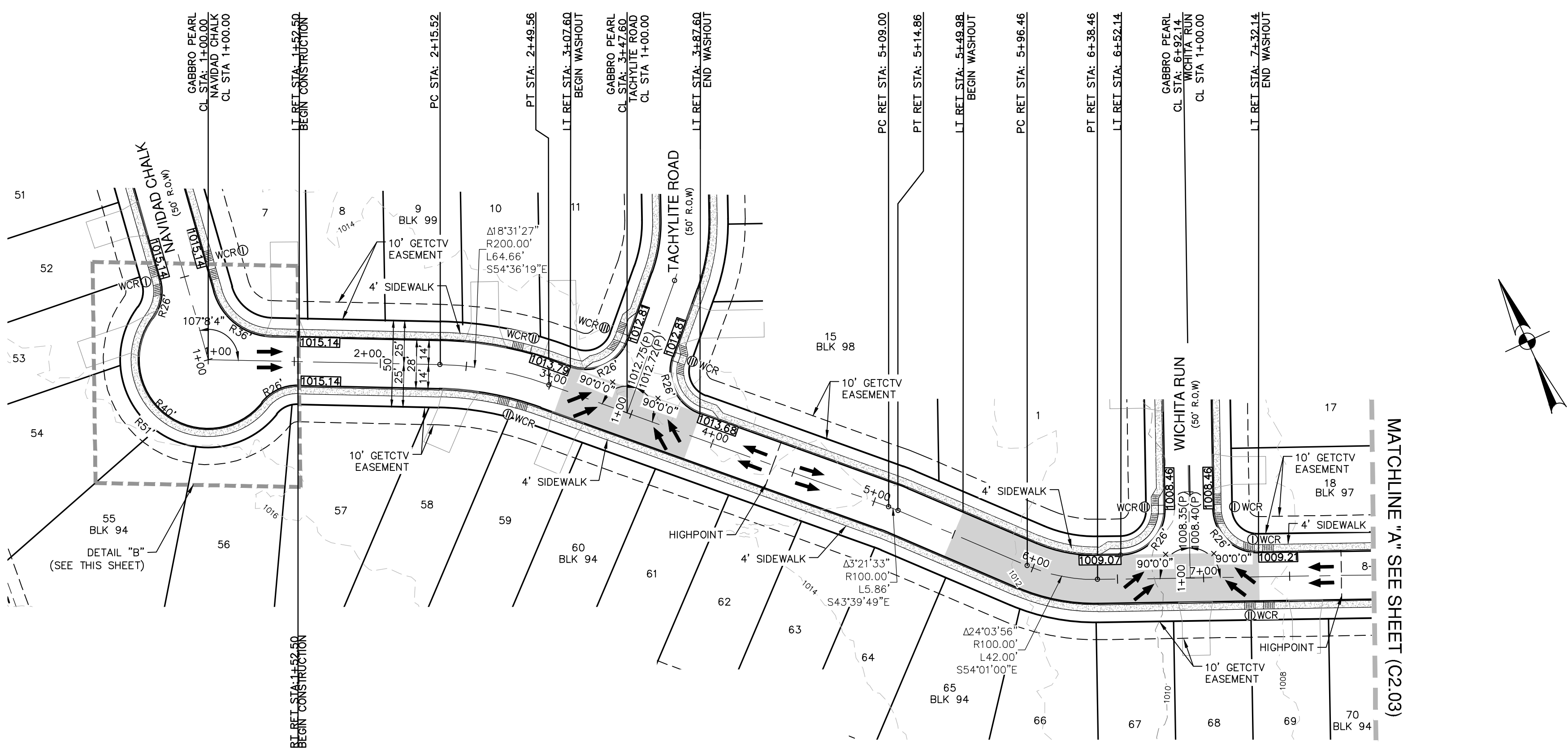
PLAT NO. 22-11800470
JOB NO. 11680-55
DATE AUGUST 2022
DESIGNER CB
CHECKED BL DRAWN CB
SHEET C2.01

NO.	REVISION	DATE
1	REV STREET PROFILE	1-8-2024



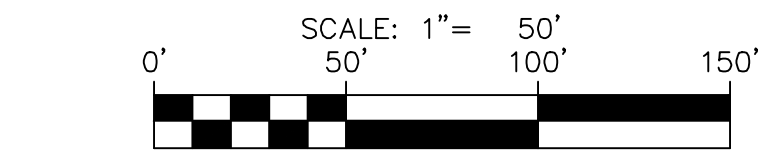
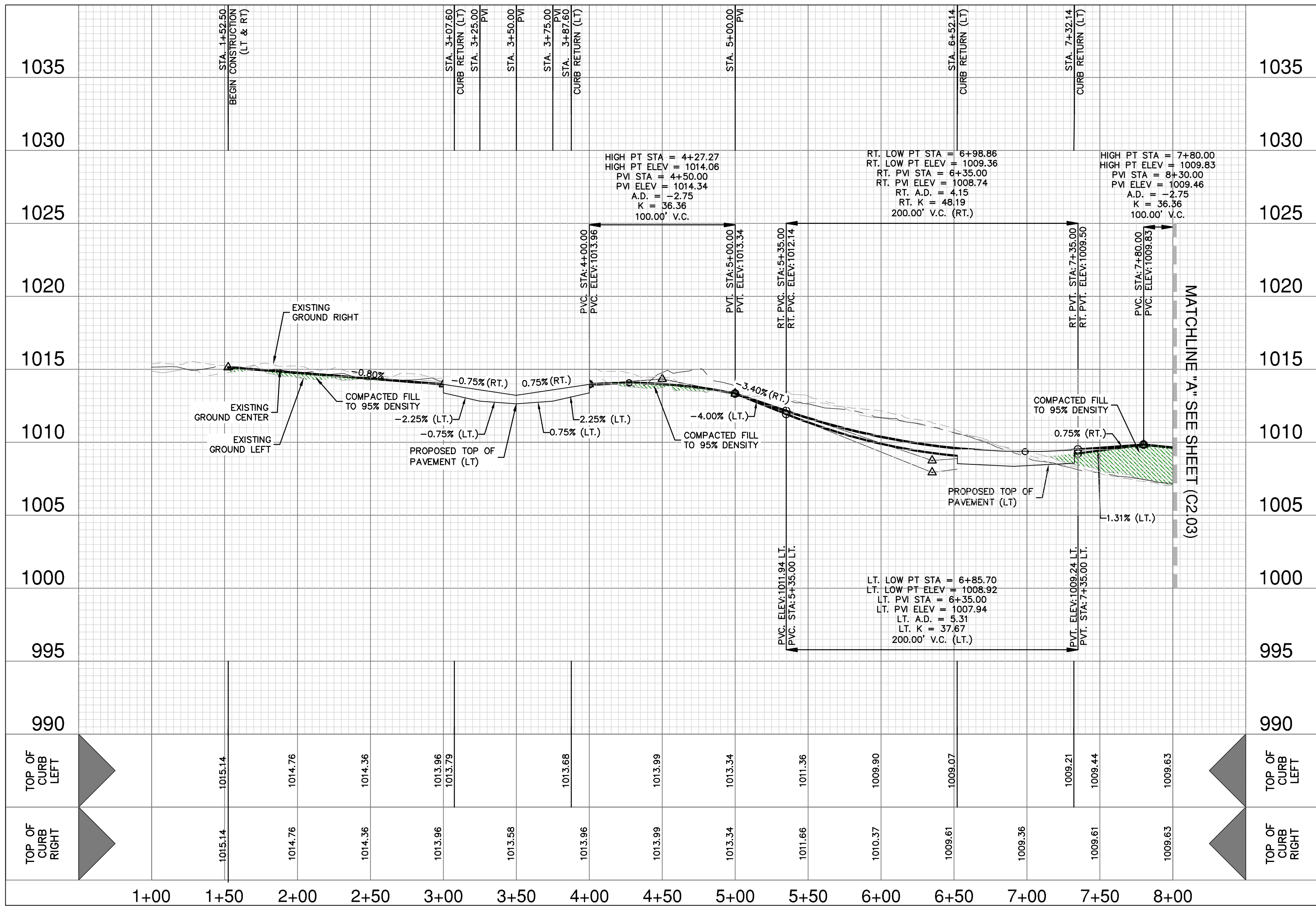
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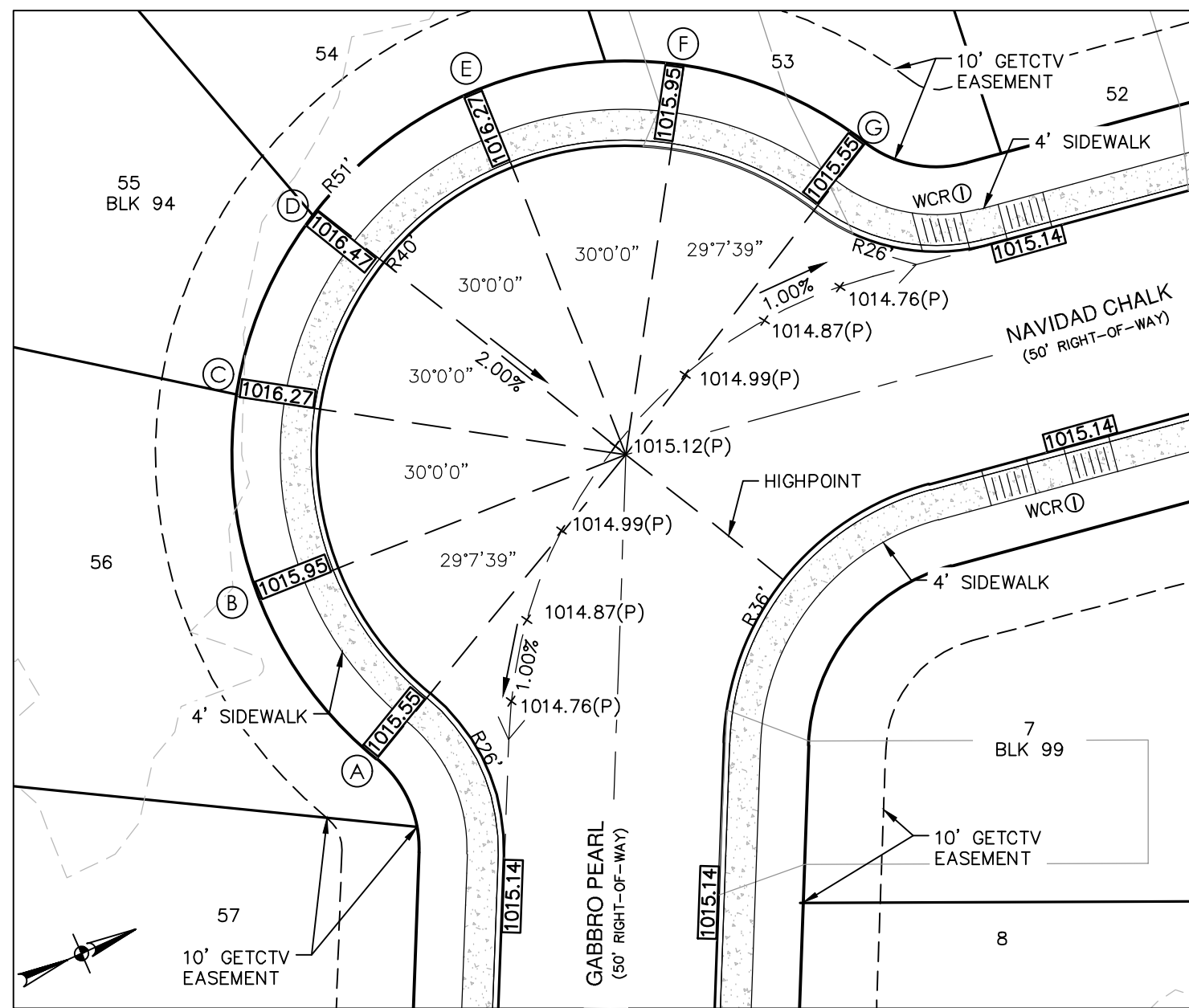
GABBRO PEARL
STA. 1+52.50 TO 8+00.00

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



STREET LEGEND

PROJECT LIMITS	→ — — — — →
MAINTAIN GUTTER	→ — — — — →
EXISTING CONTOUR	970' — — — — —
WHEELCHAIR RAMP	①
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
DRAINAGE FLOW ARROW	→
TOP OF CURB SPOT ELEVATION	857.00(P) x
PAVEMENT ELEVATION	857.00(P) x
WASHOUT CROWN SECTION	857.00(P) x
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	857.00(P) x
SIDEWALK (DEVELOPER'S RESPONSIBILITY)	857.00(P) x
DRIVEWAY	— — — — —



DETAIL "B"
SCALE: 1" = 20'

STREET SELECT FILL NOTE:

IF FILL MATERIAL IS USED TO RAISE THE GRADE, FILL MATERIAL UNDERNEATH THE PAVEMENT SHOULD BE APPROVED FILL MATERIAL, FREE OF DEBRIS AND WITH A MINIMUM CBR VALUE OF 4.0 AND A PI MAXIMUM OF 20. THE GRAVEL SIZE SHOULD NOT EXCEED 3 INCHES IN DIAMETER. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES.

WHEEL CHAIR NOTE:

WHEEL CHAIR RAMPS (WCR) TO BE CENTERED ON STATION NOTED BELOW. ELEVATION SHOWN ARE TOP OF CURB AND NOT GUTTER.

STREET NOTES:

- A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
- CONTRACTOR SHALL MATCH EXISTING PAVEMENT AT THE IN. IF EXISTING PAVEMENT ELEVATION DIFFERS SIGNIFICANTLY, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WORK.
- SIDEWALKS SHALL BE CONSTRUCTED 3'-FT FROM THE BACK OF CURB FOR ALL LOCATIONS WHERE THE SIDEWALK IS SHOWN OFFSET. REFER TO STREET DETAIL SHEET FOR SIDEWALK AND RAMP DETAILS.
- NO PERMANENT STRUCTURES HIGHER THAN 3 FEET, AND LOWER THAN 8 FEET ABOVE THE PAVEMENT, INCLUDING STRUCTURES, WALLS, FENCES, AND VEGETATION, SHALL BE CONSTRUCTED OR ALLOWED WITHIN THE CLEAR VISION EASEMENT. CONTRACTOR SHALL GRADE AREAS WITHIN CLEAR VISION EASEMENTS SUCH THAT THE ELEVATION WITHIN THE CLEAR VISION EASEMENT IS NOT HIGHER THAN 3 FEET ABOVE THE ADJACENT TOP OF PAVEMENT.
- DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.
- CHANGES IN THE SIDEWALK LOCATION FOR A MAXIMUM LINEAR DISTANCE OF TWO HUNDRED (200) FEET ARE PERMITTED TO BE APPROVED BY THE FIELD INSPECTOR WITHOUT AMENDING THE STREET PLAN OR UTILITY LAYOUT PER UDC SECTION 35-506 (d)(6).

PAPE-DAWSON
ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10088600

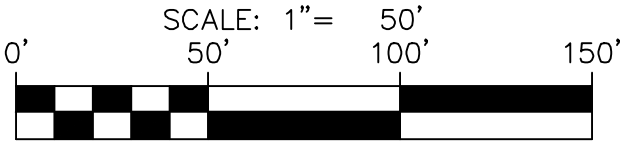
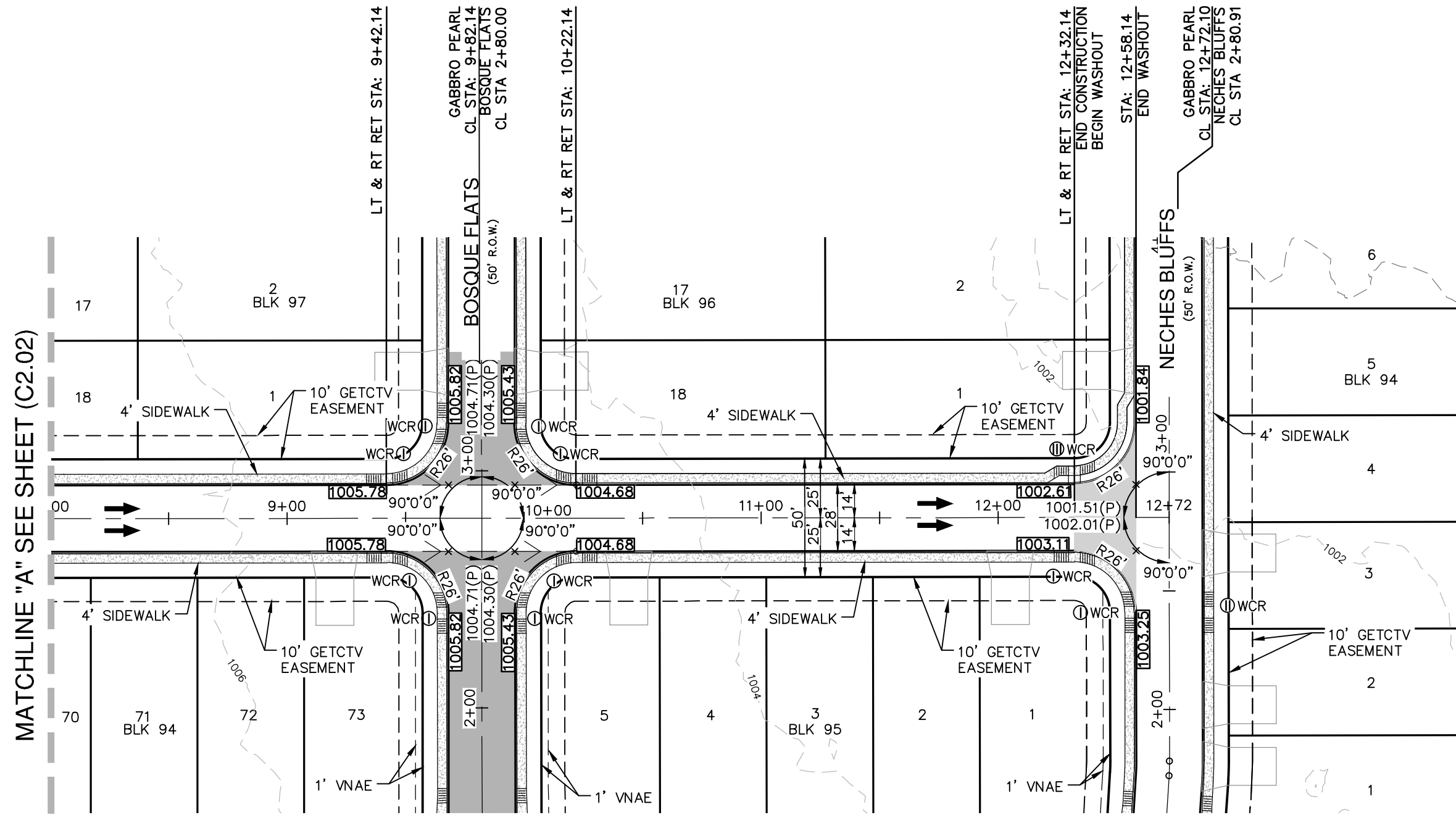
RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS

GABBRO PEARL PLAN & PROFILE
1+52.50 TO 8+00.00

PLAT NO. 22-11800470
JOB NO. 11680-55
DATE AUGUST 2022
DESIGNER CB
CHECKED BL DRAWN CB
SHEET C2.02

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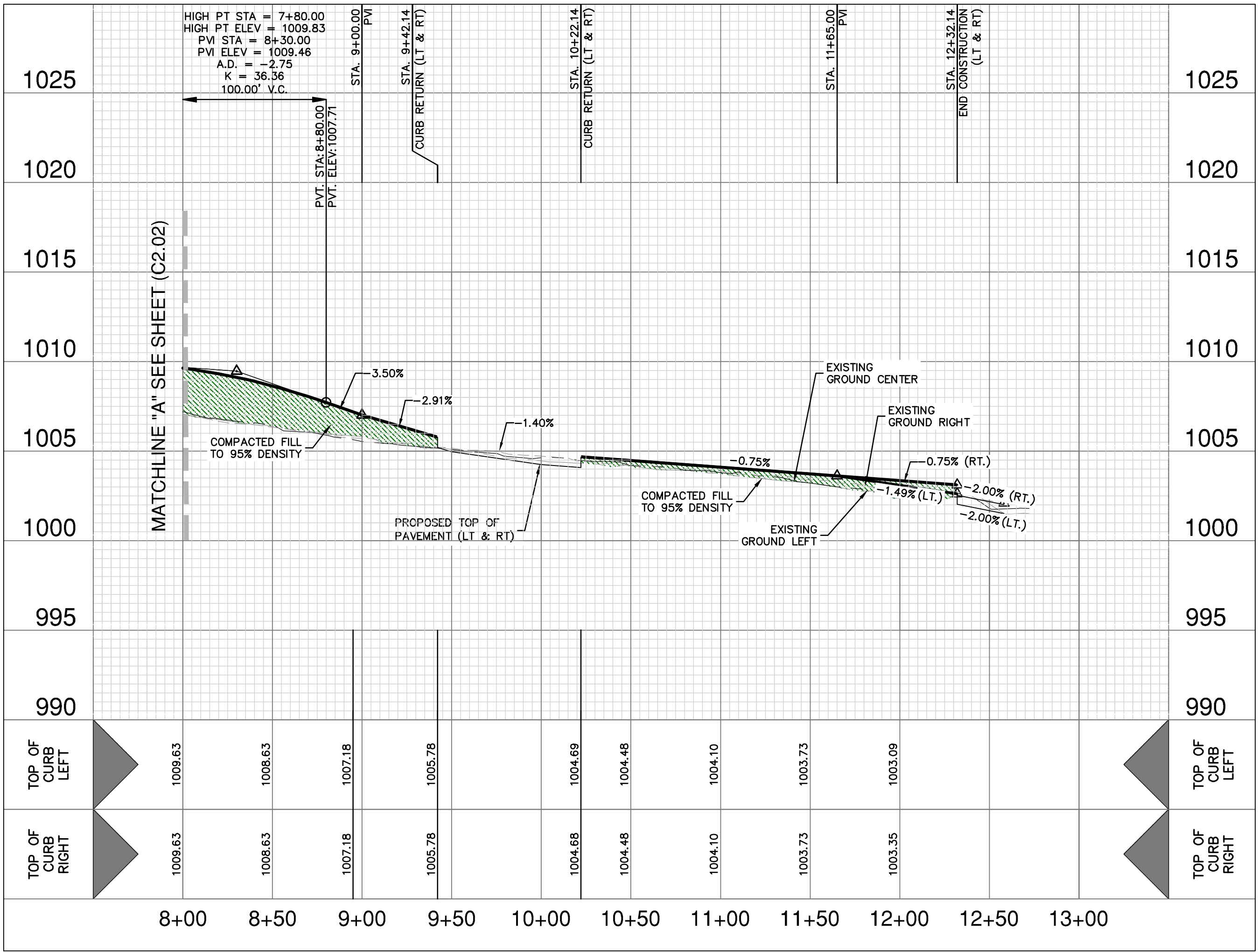


STREET LEGEND

PROJECT LIMITS	→ — — — →
MAINTAIN GUTTER	→ — — — →
EXISTING CONTOUR	970
WHEELCHAIR RAMP	⊙
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
DRAINAGE FLOW ARROW	→
TOP OF CURB SPOT ELEVATION	(857.30)
PAVEMENT ELEVATION	857.00(P) x
WASHOUT CROWN SECTION	WASHOUT
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	1' VNAE
SIDEWALK (DEVELOPER'S RESPONSIBILITY)	4' SIDEWALK
DRIVEWAY	— — — — —

GABBRO PEARL
STA. 8+00.00 TO END

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



STREET SELECT FILL NOTE:

IF FILL MATERIAL IS USED TO RAISE THE GRADE, FILL MATERIAL UNDERNEATH THE PAVEMENT SHOULD BE APPROVED FILL MATERIAL, FREE OF DEBRIS/STONES AND WITH A MINIMUM CBR VALUE OF 4.0 AND A PI MAXIMUM OF 20. THE GRAVEL SIZE SHOULD NOT EXCEED 3 INCHES IN DIAMETER. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES.

WHEEL CHAIR NOTE:

WHEEL CHAIR RAMPS (WCR) TO BE CENTERED ON STATION NOTED BELOW. ELEVATION SHOWN ARE TOP OF CURB AND NOT GUTTER

STREET NOTES:

- A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
- CONTRACTOR SHALL MATCH EXISTING PAVEMENT AT TIE-IN. IF EXISTING PAVEMENT ELEVATION DIFFERS SIGNIFICANTLY, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WORK.
- SIDEWALKS SHALL BE CONSTRUCTED 3'-FT FROM THE BACK OF CURB FOR ALL LOCATIONS WHERE THE SIDEWALK IS SHOWN OFFSET. REFER TO STREET DETAIL SHEET FOR SIDEWALK AND RAMP DETAILS.
- NO PERMANENT STRUCTURES HIGHER THAN 3 FEET, AND LOWER THAN 8 FEET ABOVE THE PAVEMENT, INCLUDING STRUCTURES, WALLS, FENCES, AND VEGETATION, SHALL BE CONSTRUCTED OR ALLOWED WITHIN THE CLEAR VISION EASEMENT. CONTRACTOR SHALL GRADE AREAS WITHIN CLEAR VISION EASEMENTS SUCH THAT THE ELEVATION WITHIN THE CLEAR VISION EASEMENT IS NOT HIGHER THAN 3 FEET ABOVE THE ADJACENT TOP OF PAVEMENT.
- DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.
- CHANGES IN THE SIDEWALK LOCATION FOR A MAXIMUM LINEAR DISTANCE OF TWO HUNDRED (200) FEET ARE PERMITTED. TO BE APPROVED BY THE FIELD INSPECTOR WITHOUT AMENDING THE STREET PLAN OR UTILITY LAYOUT PER UDC SECTION 35-506 (D)(6).

RIVERSTONE, UNIT F8 & F9

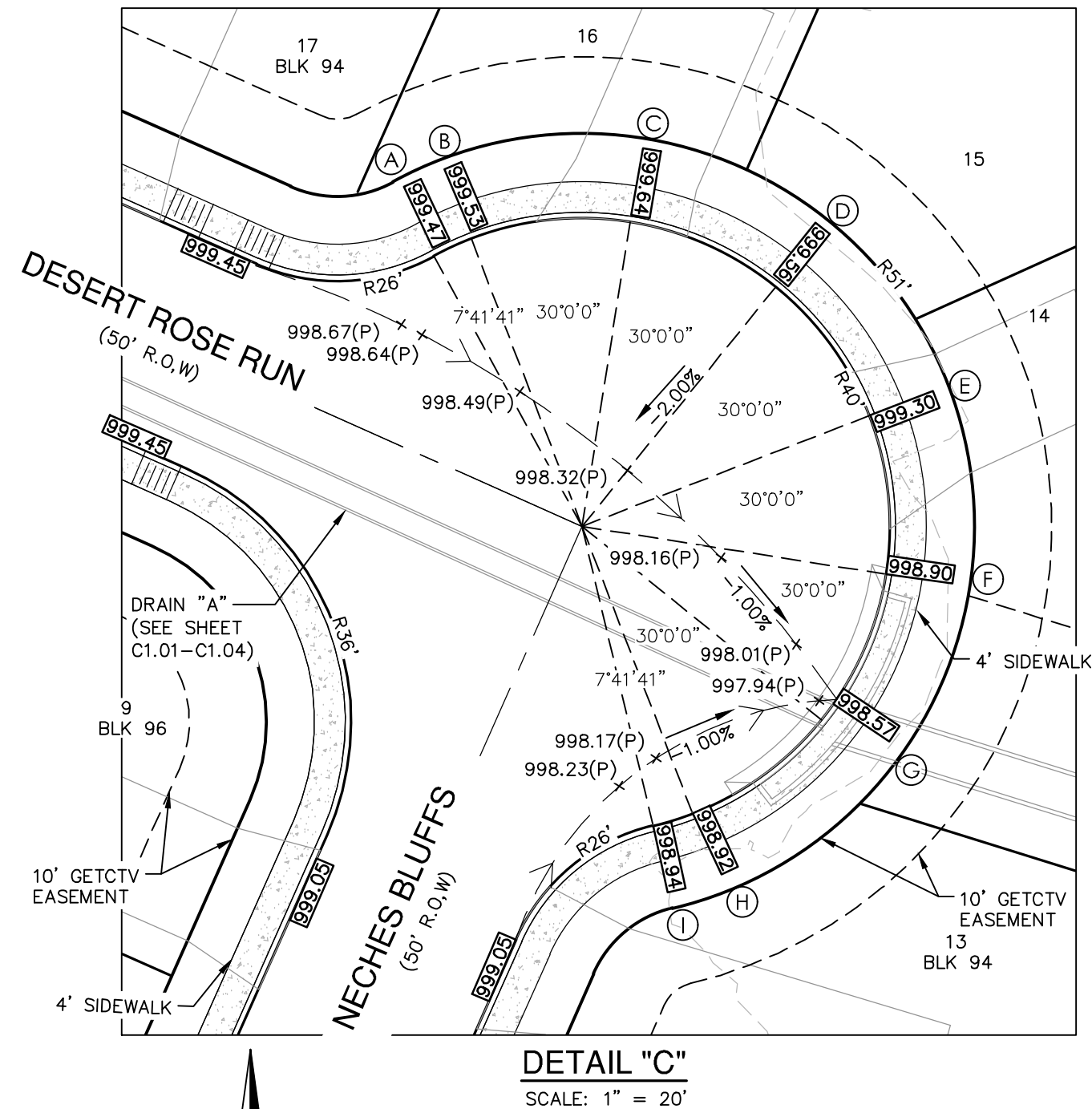
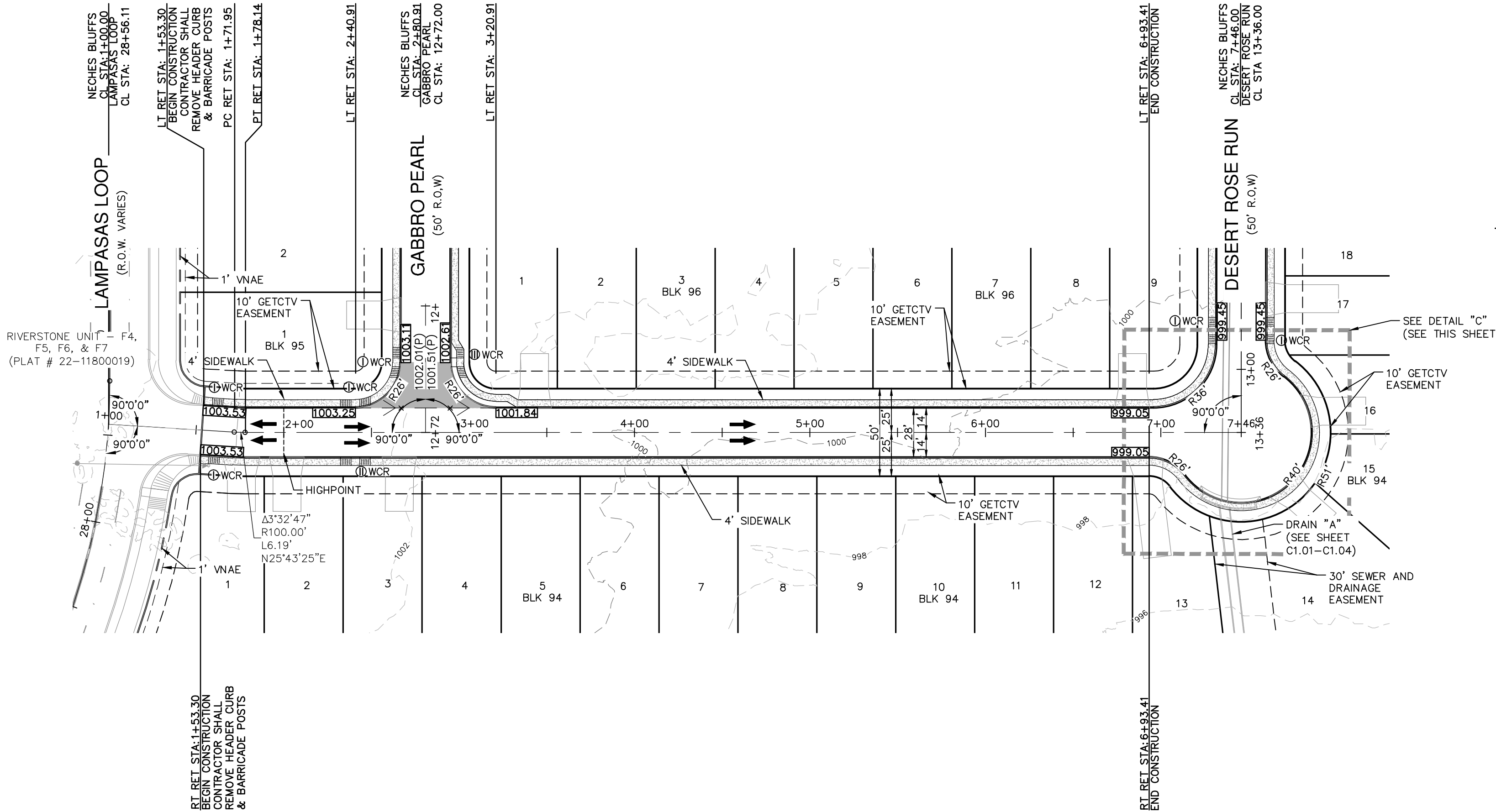
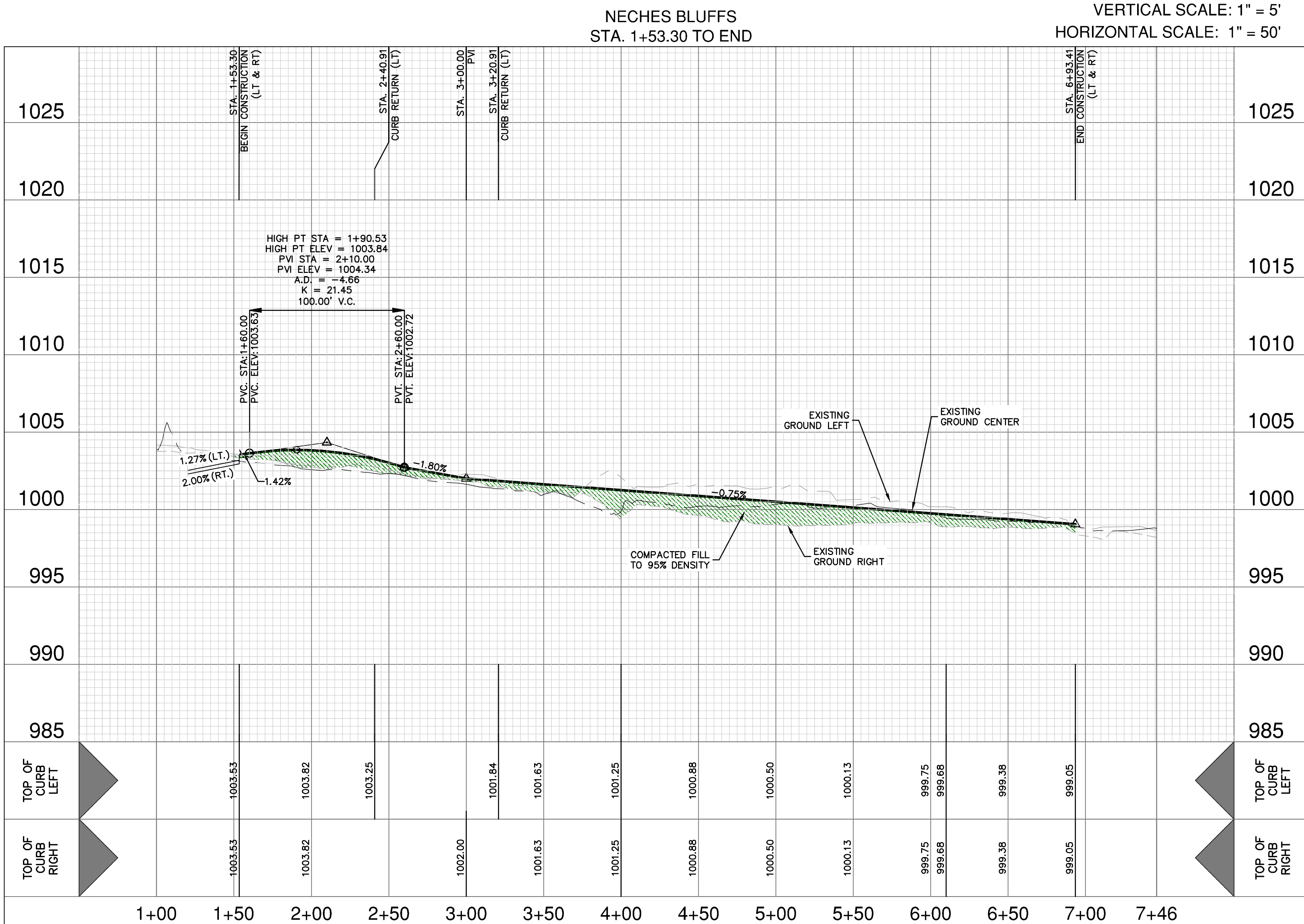
SAN ANTONIO, TEXAS

GABBRO PEARL PLAN & PROFILE
8+00 TO END

PLAT NO.	22-11800470
JOB NO.	11680-55
DATE	AUGUST 2022
DESIGNER	CB
CHECKED	BL DRAWN CB
SHEET	C2.03



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STREET SELECT FILL NOTE:

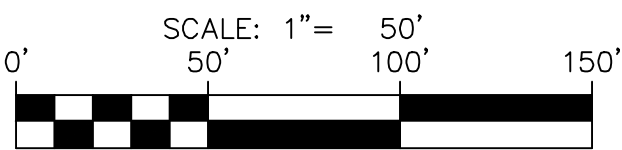
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WHEEL CHAIR NOTE:

WHEEL CHAIR RAMPS (WCR) TO BE CENTERED ON STATION NOTED BELOW. ELEVATION SHOWN ARE TOP OF CURB AND NOT GUTTER

STREET NOTES:

- A BEAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
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- CHANGES IN THE SIDEWALK LOCATION FOR A MAXIMUM LINEAR DISTANCE OF TWO HUNDRED (200) FEET ARE PERMITTED TO BE APPROVED BY THE FIELD INSPECTOR WITHOUT AMENDING THE STREET PLAN OR UTILITY LAYOUT PER UDC SECTION 35-506 (D)(6).

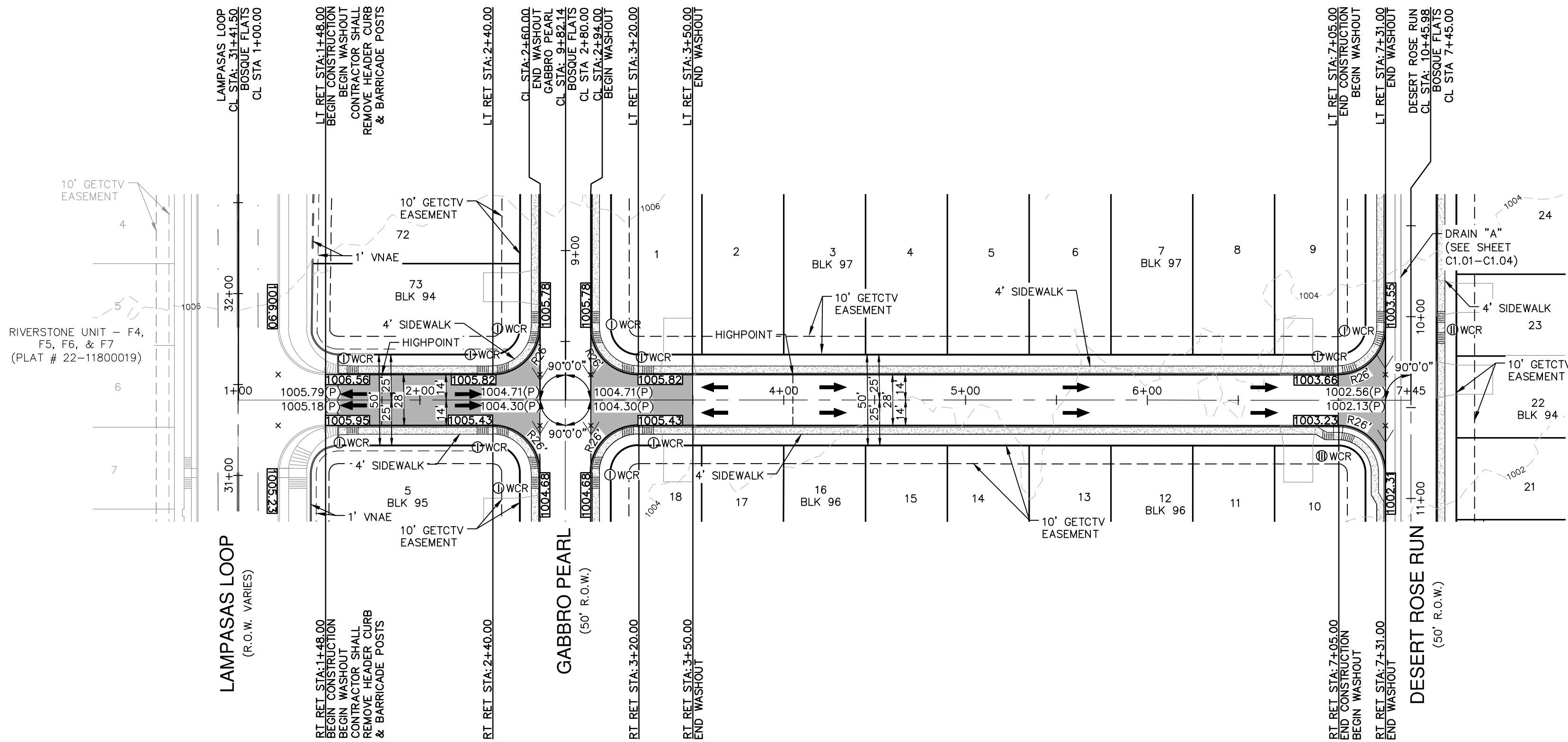


STREET LEGEND

PROJECT LIMITS	→ — — — — →
MAINTAIN GUTTER	→ — — — — →
EXISTING CONTOUR	970
WHEELCHAIR RAMP	①
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
DRAINAGE FLOW ARROW	→
TOP OF CURB SPOT ELEVATION	857.00(P) x
PAVEMENT ELEVATION	857.00(P) x
WASHOUT CROWN SECTION	857.00(P) x
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	857.00(P) x
SIDEWALK (DEVELOPER'S RESPONSIBILITY)	857.00(P) x
DRIVEWAY	— — — — —

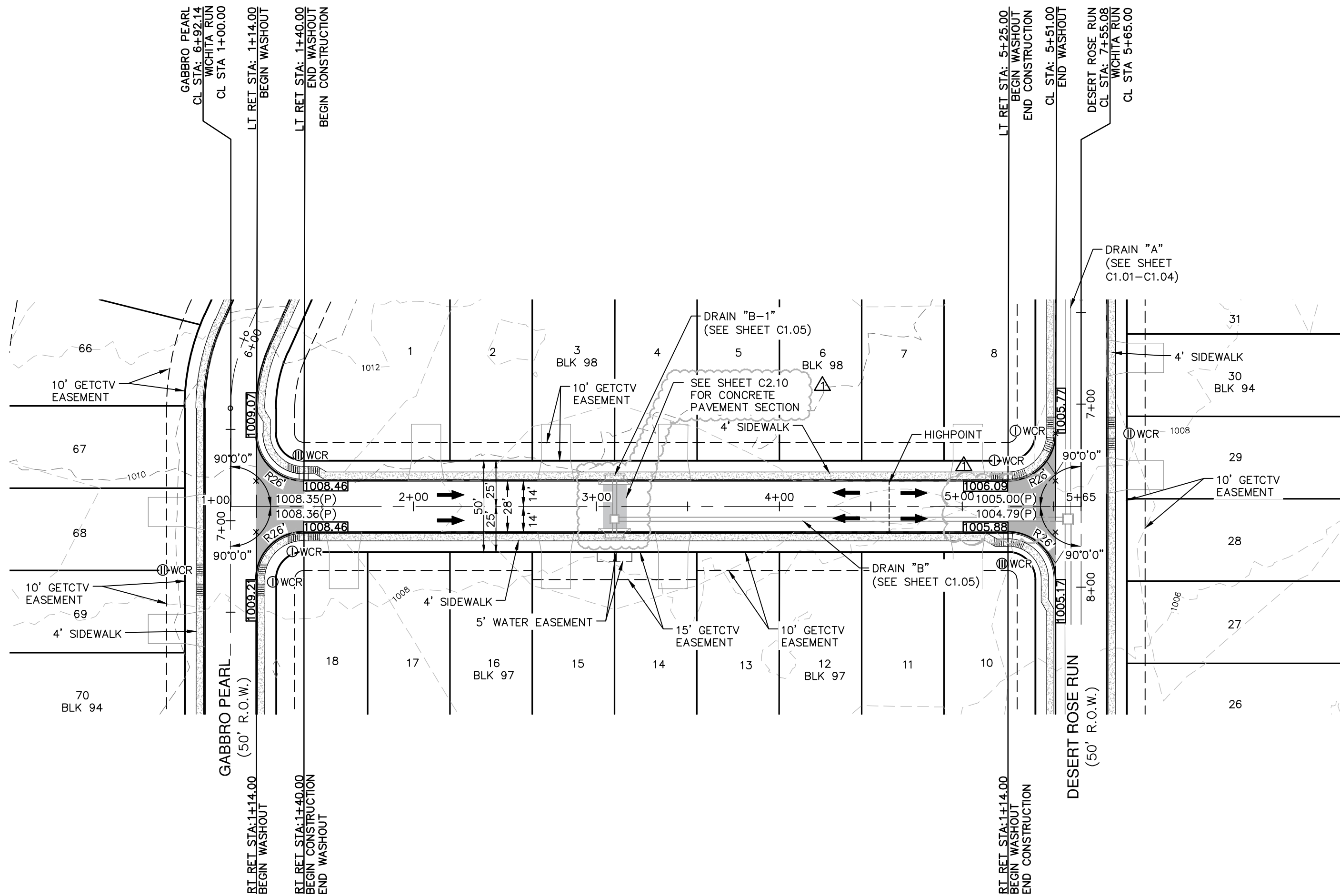
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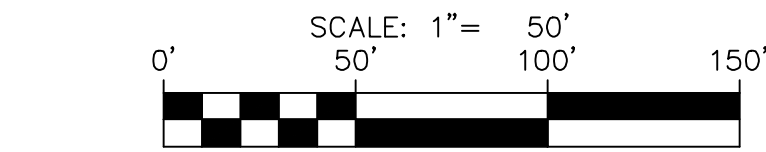
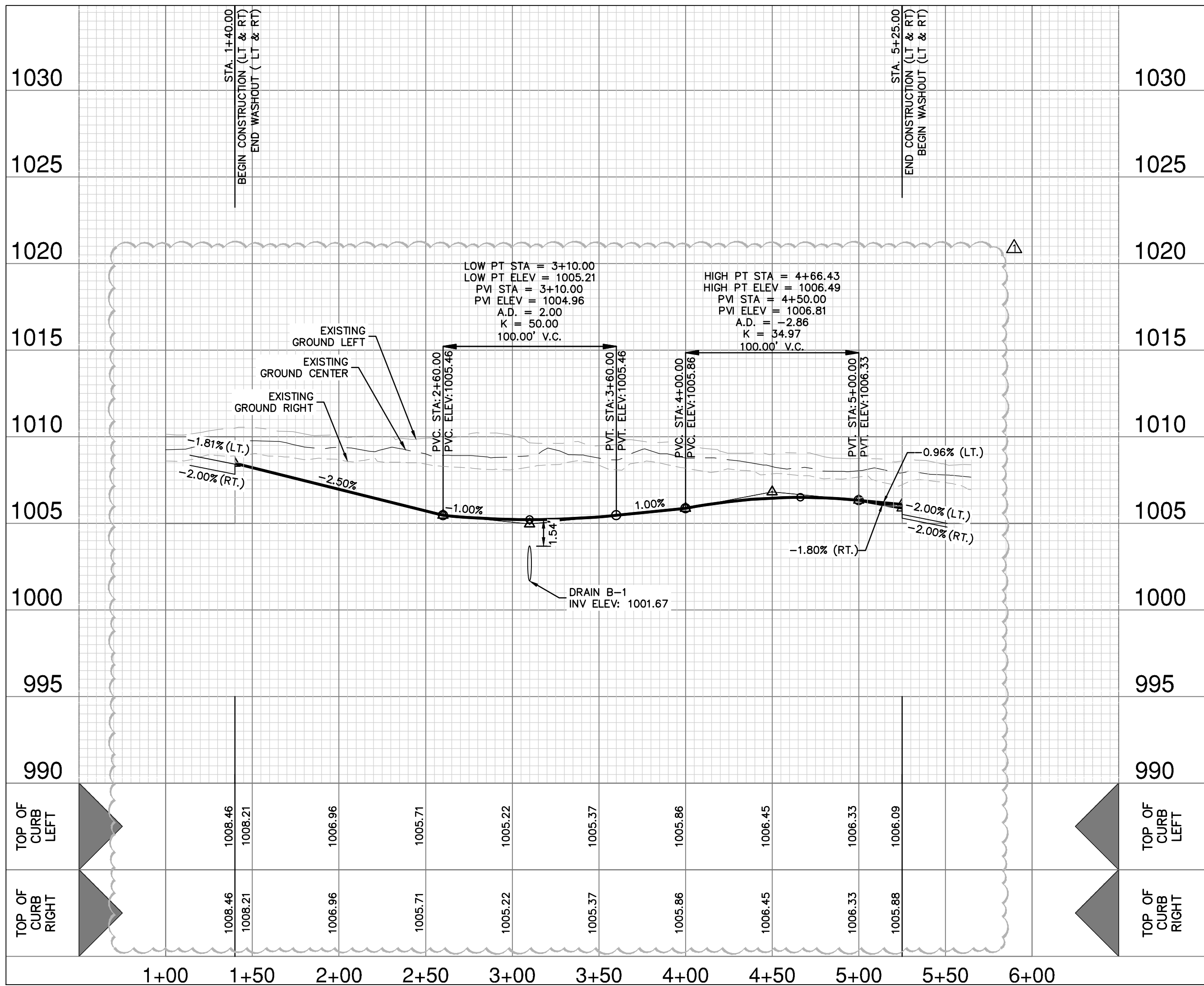
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WICHITA RUN
STA. 1+40.00 TO END

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



STREET LEGEND

PROJECT LIMITS	→
MAINTAIN GUTTER	→
EXISTING CONTOUR	970
WHEELCHAIR RAMP	⊕
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
DRAINAGE FLOW ARROW	→
TOP OF CURB SPOT ELEVATION	857.30
PAVEMENT ELEVATION	857.00(P) ×
WASHOUT CROWN SECTION	1006.21
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	1006.21
SIDEWALK (DEVELOPER'S RESPONSIBILITY)	1006.21
DRIVEWAY	→

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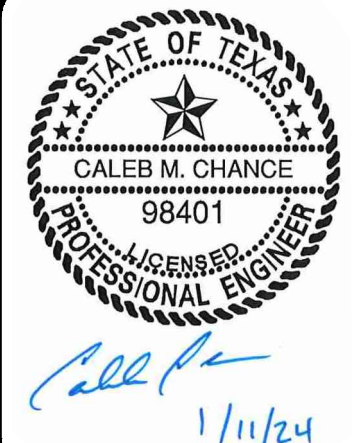
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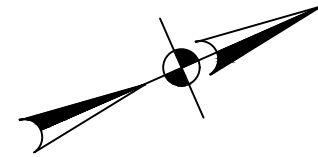
NO.	REVISION	DATE
1	REV STREET PROFILE	1-8-2024



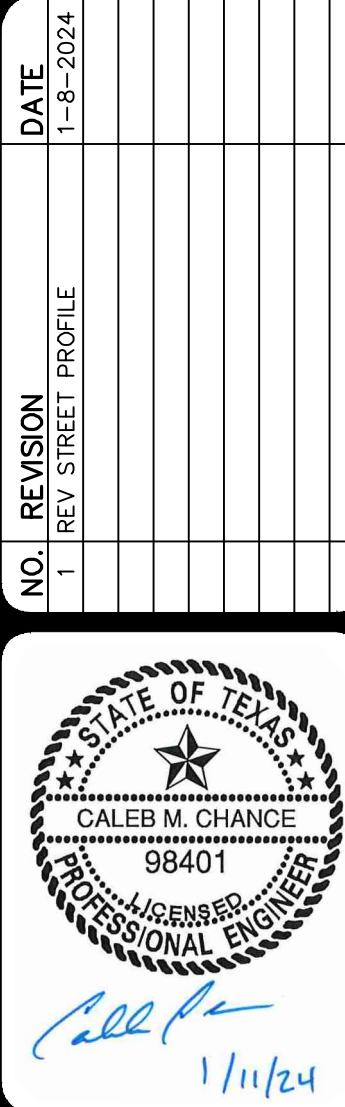
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TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS
WICHITA RUN PLAN & PROFILE
1+40.00 TO END

PLAT NO.	22-11800470
JOB NO.	11680-55
DATE	AUGUST 2022
DESIGNER	CB
CHECKED	BL DRAWN CB
SHEET	C2.06

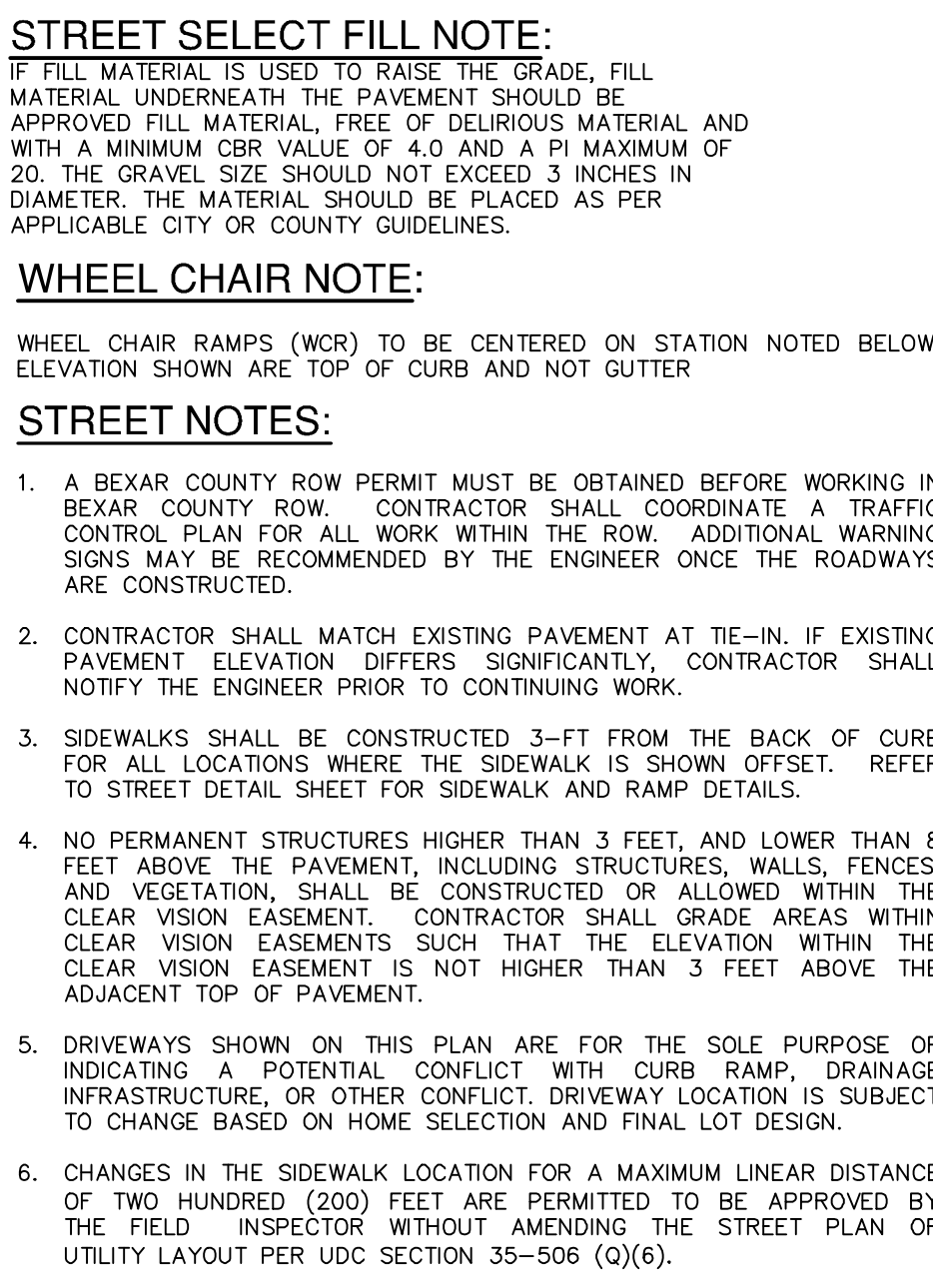


PROJECT LIMITS	
MAINTAIN GUTTER	
EXISTING CONTOUR	
WHEELCHAIR RAMP	
CENTERLINE	
RADIUS POINT	
POINT OF CURVATURE	
POINT OF TANGENCY	
RETURN	
DRAINAGE FLOW ARROW	
TOP OF CURB SPOT ELEVATION	
PAVEMENT ELEVATION	
WASHOUT CROWN SECTION	
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	
SIDEWALK (DEVELOPER'S RESPONSIBILITY)	
DRIVEWAY	



**PAPE-DAWSON
ENGINEERS**

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TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10029800



RIVERSTONE, UNIT F8 & F9

SAN ANTONIO, TEXAS

TACHYLITE ROAD PLAN & PROFILE

STA. 1+40.00 TO END

PLAT NO. 22-11800470
JOB NO. 11680-55
DATE AUGUST 2022
DESIGNER CB
CHECKED BL DRAWN CB
SHEET C2.07

PAVEMENT SECTION DETAIL								
STREET NAME	STATION	REINFORCED CONCRETE	TYPE "D" HMAC	CRUSHED LESTONE BASE	SUBGRADE	GEOGRID (TENSAR TRIAX TX5)	CBR	STRUCTURAL NUMBER
DESERT ROSE RUN	1+52.50 TO END	—	2"	10"	*	NO	4	2.28
NAVIDAD CHALK	1+52.50 TO END	—	2"	10"	*	NO	4	2.28
GABERO PEARL	1+52.50 TO END	—	2"	10"	*	NO	4	2.28
NECHES BLUFFS	1+53.30 TO END	—	2"	10"	*	NO	4	2.28
BOSQUE FLATS	1+48.00 TO END	—	2"	10"	*	NO	4	2.28
WICHITA RUN	1+40.00 TO 3+03.75	—	2"	10"	*	NO	4	2.28
WICHITA RUN	3+03.75 TO 3+16.36	6"	—	—	*	NO	—	—
WICHITA RUN	3+16.36 TO END	—	2"	10"	*	NO	4	2.28
TACHYLITE ROAD	1+40.00 TO END	—	2"	10"	*	NO	4	2.28

CONCRETE PAVEMENT REINFORCEMENT	
REINFORCEMENT	#3 REINFORCING STEEL BARS (GRADE 60) AT 18 INCHES ON CENTER EACH WAY AND #4 AT 12 INCHES ON CENTER EACH WAY FOR 10 INCH THICK CONCRETE
CONTRACTION JOINT SPACING	10 FEET EACH WAY FOR 6 INCH THICK CONCRETE 12 FEET EACH WAY FOR 8 INCH THICK CONCRETE 15 FEET EACH WAY FOR 10 INCH THICK CONCRETE THE SAW CUTS SHOULD BE PLANNED BASED ON FEATURES SUCH AS INLETS, MANHOLES, VALVES, ETC. THE SAW CUTS ARE RECOMMENDED TO BE MADE THE SAME DAY (BEFORE THE CONCRETE STARTS TO SET)
CONTRACTION JOINT DEPTH	AT LEAST ONE-FOURTH (1/4) OF PAVEMENT THICKNESS
CONTRACTION JOINT WIDTH	ONE-FOURTH (1/4) INCH OR AS REQUIRED BY JOINT SEALANT MANUFACTURER
EXPANSION JOINT	EXPANSION JOINTS ARE NOT RECOMMENDED
ISOLATION JOINT	FEATURES SUCH AS CONCRETE INLET STRUCTURES, MAN-HOLES, AND VALVE COVERS SHOULD BE ISOLATED USING ISOLATION JOINTS

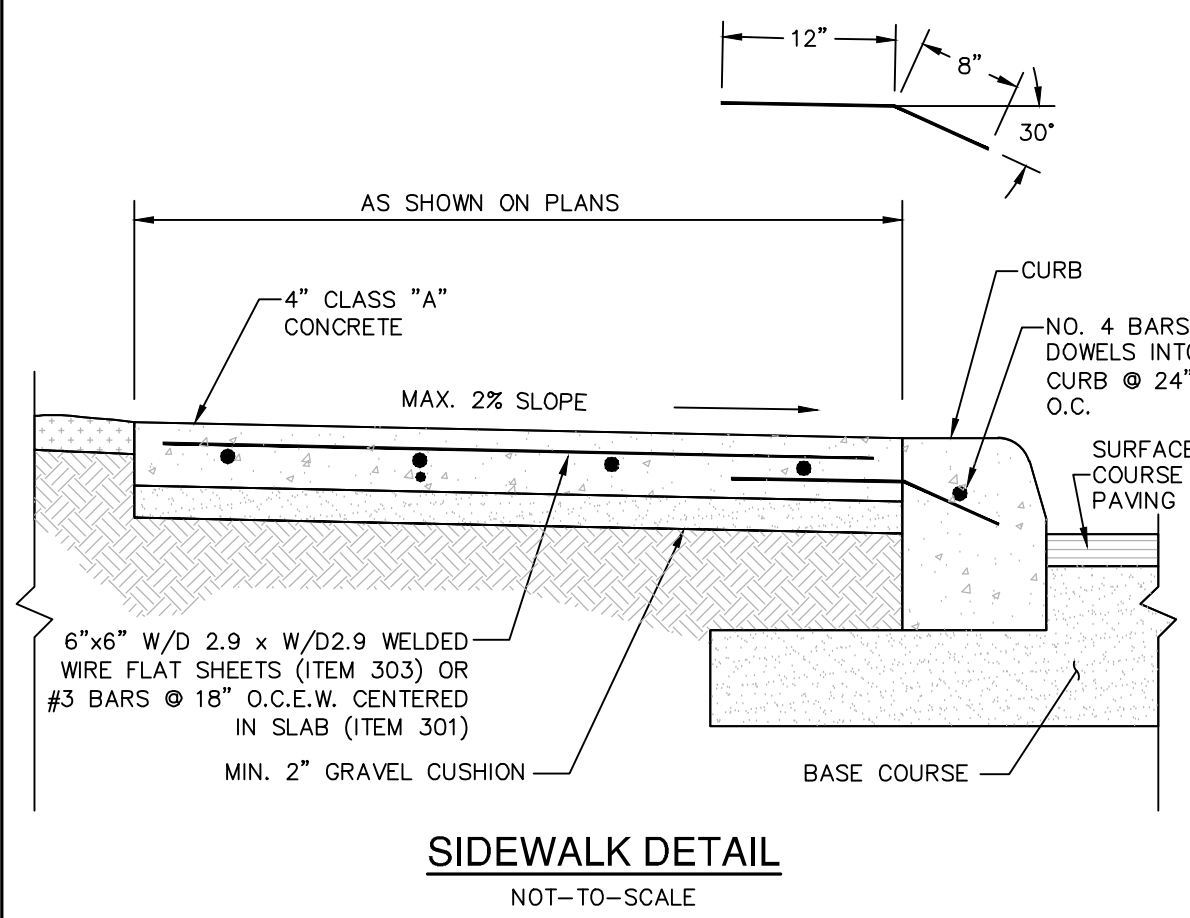
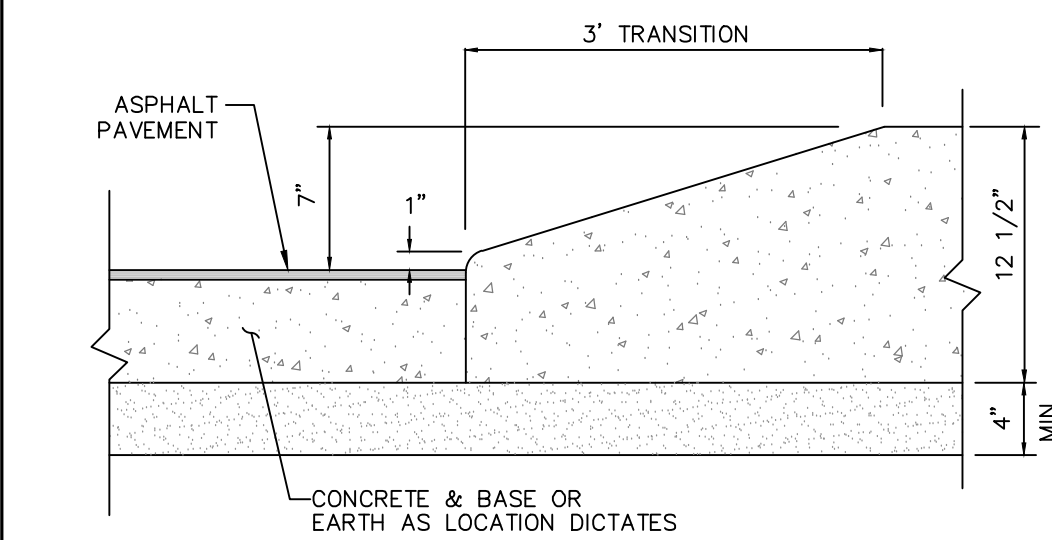
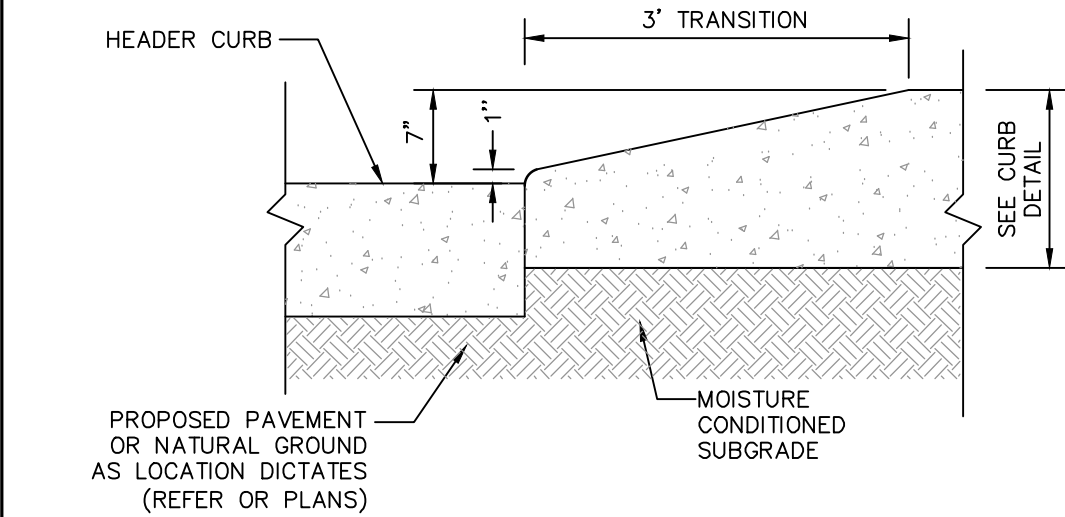
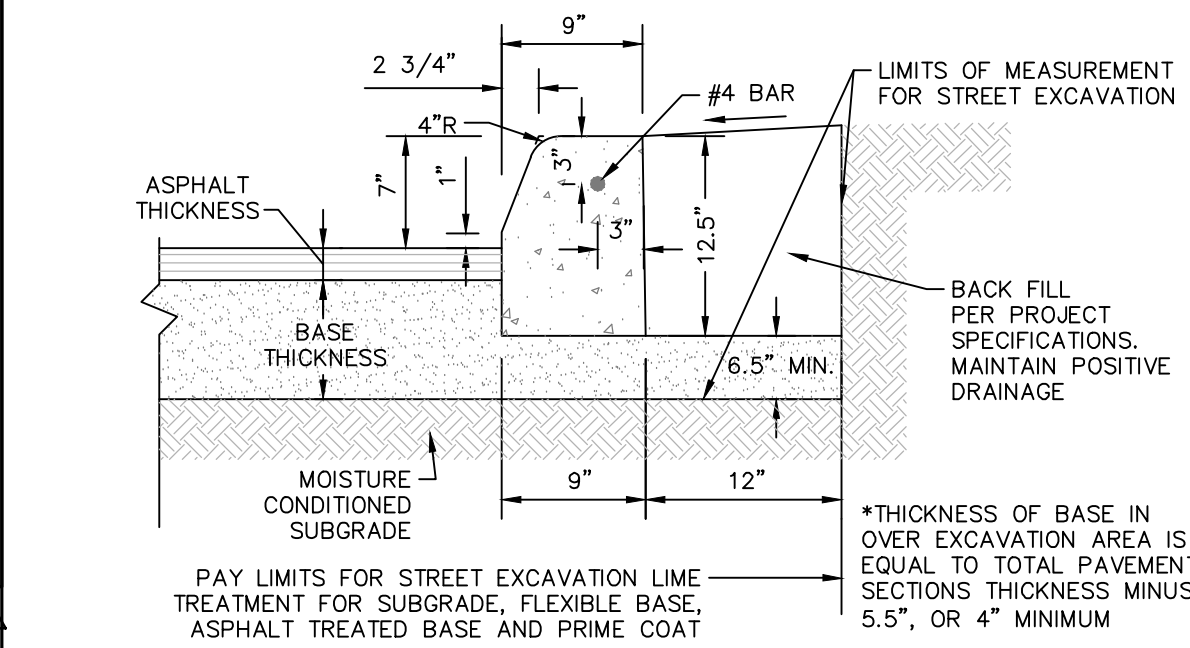
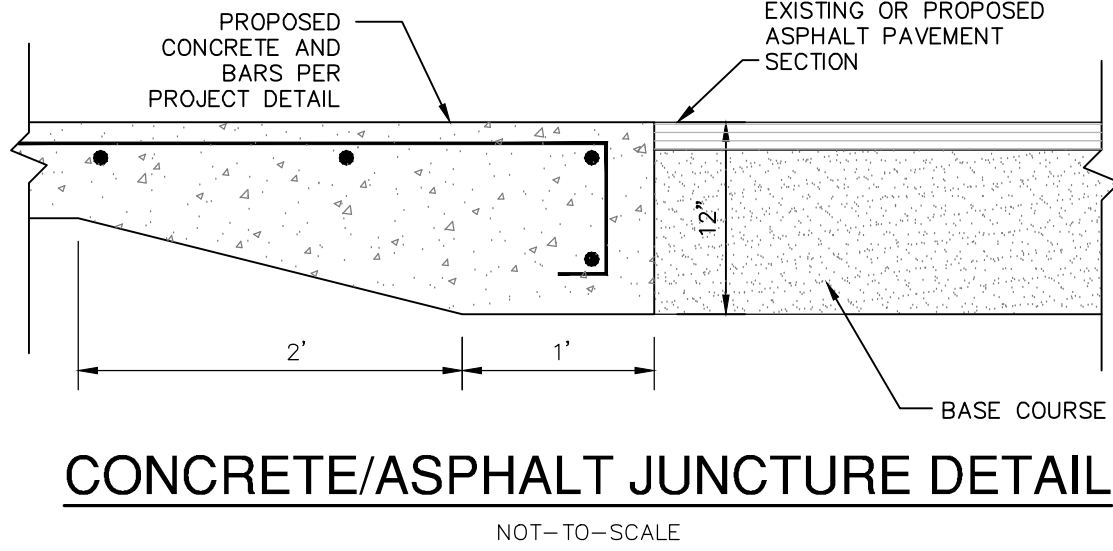
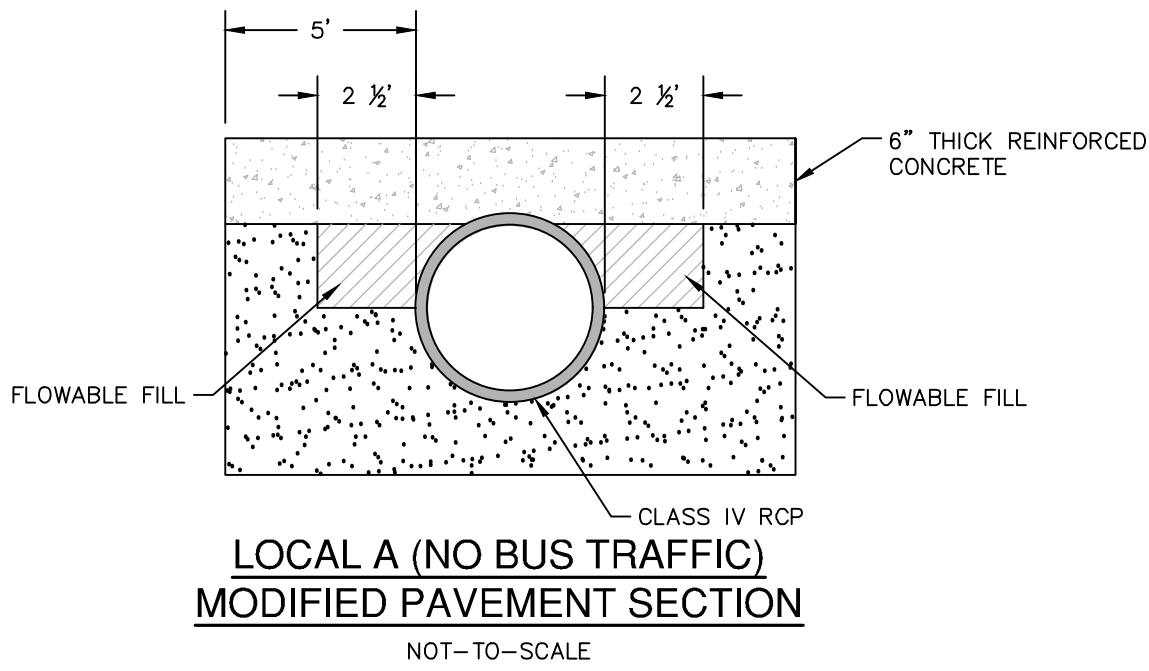
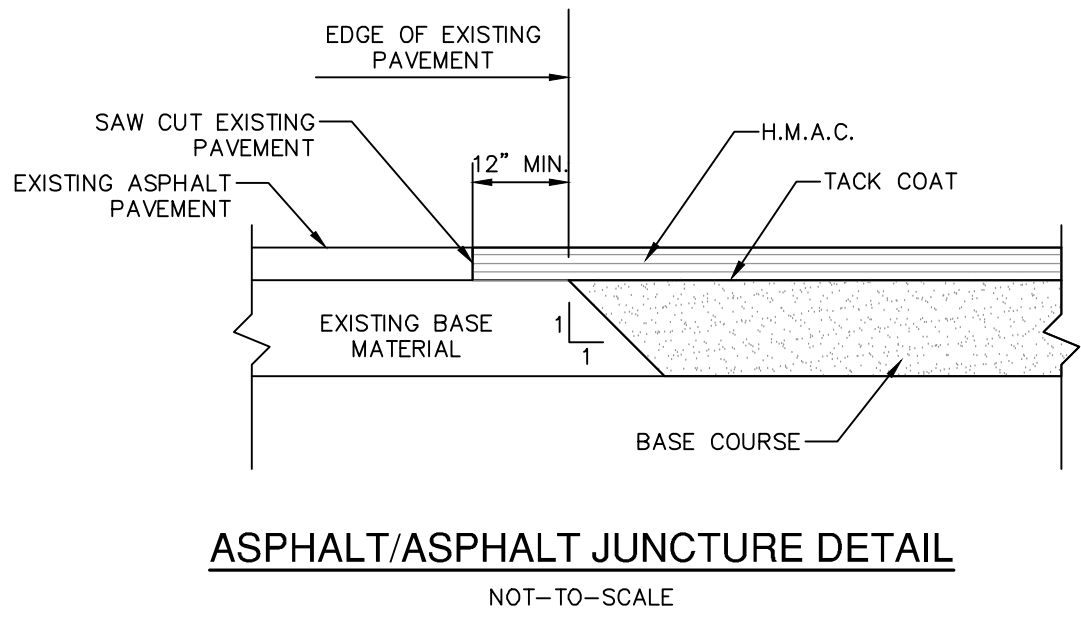
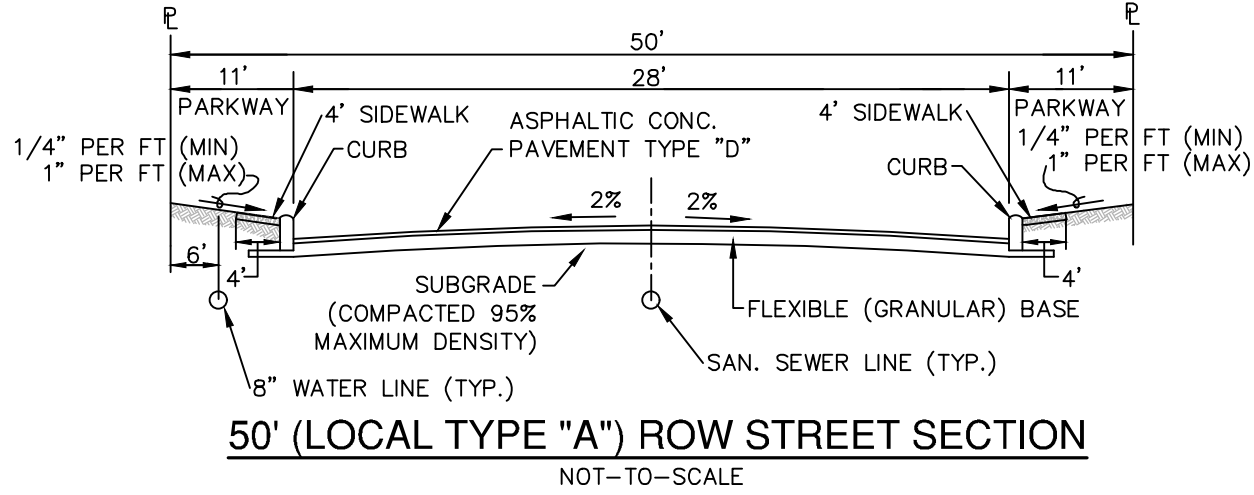
SUBGRADE NOTES (*):

- CUT AND FILL DATA ARE NOT AVAILABLE AT THIS TIME
- BASED ON THE REVIEW OF GEOLOGIC AND SOILS MAP, WE ANTICIPATE THE FINAL PAVEMENT SUBGRADE PLASTICITY INDEX VALUE TO BE LESS THAN OR EQUAL TO 20.
- IF THE SUBGRADE PLASTICITY INDEX VALUES ARE LESS THAN OR EQUAL TO 20, AS PER CITY OF SAN ANTONIO OR BEXAR COUNTY REQUIREMENTS, SUBGRADE STABILIZATION IS NOT NEEDED.
- IF FILL IS USED TO RAISE THE GRADE, FILL MATERIAL UNDERNEATH THE PAVEMENT SHOULD BE APPROVED FILL MATERIAL, FREE OF DELETERIOUS MATERIAL AND WITH A MINIMUM CBR VALUE OF 4.0 AND A MAXIMUM PLASTICITY INDEX VALUE OF 20. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES
- HOWEVER, IF THE FINAL STREET SUBGRADE PLASTICITY INDEX VALUES ARE GREATER THAN 20, THEN ONE OF THE FOLLOWING OPTIONS MAY BE FOLLOWED:
 - REMOVE THE CLAYS SOILS (WITH PLASTICITY INDEX VALUES GREATER THAN 20) AND REPLACE WITH FILL MATERIAL WITH PLASTICITY INDEX VALUES LESS THAN OR EQUAL TO 20. IF SUBGRADE STABILIZATION IS REQUIRED, THE FOLLOWING SPECIFICATIONS MUST BE MET. THE CONTRACTOR SHALL COORDINATE WITH THE GEOTECHNICAL ENGINEER IN THE FIELD FOR SUBGRADE TREATMENT.
 - TREAT THE SUBGRADE:
 - THE SUBGRADE SHOULD BE TREATED TO A DEPTH OF 6 INCHES USING 6 ½ PERCENT LIME CONTENT
 - THE SUBGRADE SOILS SHOULD BE TESTED FOR SOIL SULFATE CONTENT PRIOR TO TREATMENT. IF THE SOIL SULFATE CONTENT IS OVER 3000 PPM, AN ALTERNATE PROCEDURE WILL BE REQUIRED.
 - THE SUBGRADE MAY ALSO BE TREATED USING CEMENT.
 - APPLICATION RATES SHOULD BE DETERMINED AT THE TIME OF CONSTRUCTION.
 - LIME APPLICATION RATE OF 27 LBS PER SQ YARD FOR 6- INCH DEPTH OF TREATMENT MAY BE USED FOR PLANNING AND BUDGETING PURPOSES. THE LIME/CEMENT APPLICATION RATES SHOULD BE DETERMINED AT THE TIME OF CONSTRUCTION.

GENERAL NOTES:

- CONTRACTOR SHALL REFERENCE THE PROJECT PAVEMENT DESIGN REPORTS PREPARED BY INTEC DATED 05/20/21 (INTEC REPORT #S191159-P-R1) AND 01/24/22 (INTEC REPORT #S191159-P-A6)
- CONTRACTOR SHALL RETAIN A GEOTECHNICAL ENGINEER TO VERIFY THE SUB GRADE CONDITION PRIOR TO PLACING ANY BASE MATERIAL. GEOTECHNICAL ENGINEER SHALL DETERMINE THE SUB GRADE CONDITION AND IF LIME STABILIZATION IS REQUIRED.
- GEOTECHNICAL ENGINEER SHOULD VERIFY THE STREET SUBGRADE AT THE TIME OF CONSTRUCTION PRIOR TO PLACEMENT OF AGGREGATE BASE.
- THE FLEXIBLE BASE COURSE SHOULD BE CRUSHED LESTONE CONFORMING TO TXDOT STANDARD SPECIFICATIONS, ITEM 247, TYPE A, GRADES 1 OR 2
- THE MOISTURE CONTENT OF THE FILL SHOULD BE MAINTAINED WITHIN THE RANGE OF OPTIMUM WATER CONTENT TO 3 PERCENTAGE POINTS ABOVE THE OPTIMUM WATER CONTENT UNTIL PERMANENTLY COVERED.
- IN THE EVENT THAT THE CLAY FILL USED IS DIFFERENT THAN THE EXISTING SUBGRADE, THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT COULD BE INVALIDATED AND THE DESIGN ENGINEER MUST BE CONSULTED TO DETERMINE IF ADDITIONAL CBR TESTING AND THICKER PAVEMENT SECTIONS ARE REQUIRED.
- WHERE PAVEMENT SUBGRADE IS LOCATED WITHIN 2- FEET OF THE EXISTING GROUND SURFACE (STRATUM 1 CLAYS), MOISTURE CONDITIONED SUBGRADE WILL BE REQUIRED. GEOTECHNICAL ENGINEER SHOULD VERIFY THE STREET SUBGRADE AT THE TIME OF CONSTRUCTION PRIOR TO PLACEMENT OF AGGREGATE BASE TO DETERMINE WHERE THE MOISTURE CONDITIONED SUBGRADE IS NEEDED. REFERENCE GEOTECHNICAL ENGINEERING REPORT FOR MORE INFORMATION.

NOTE:
PAVEMENT DESIGN IS IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERING REPORTS PREPARED FOR RIVERSTONE SUBDIVISION BY INTEC. PROJECT NUMBER: **S191159-P-R1 DATED: 05/20/21 & S191159-P-A6 DATED: 01/24/22**



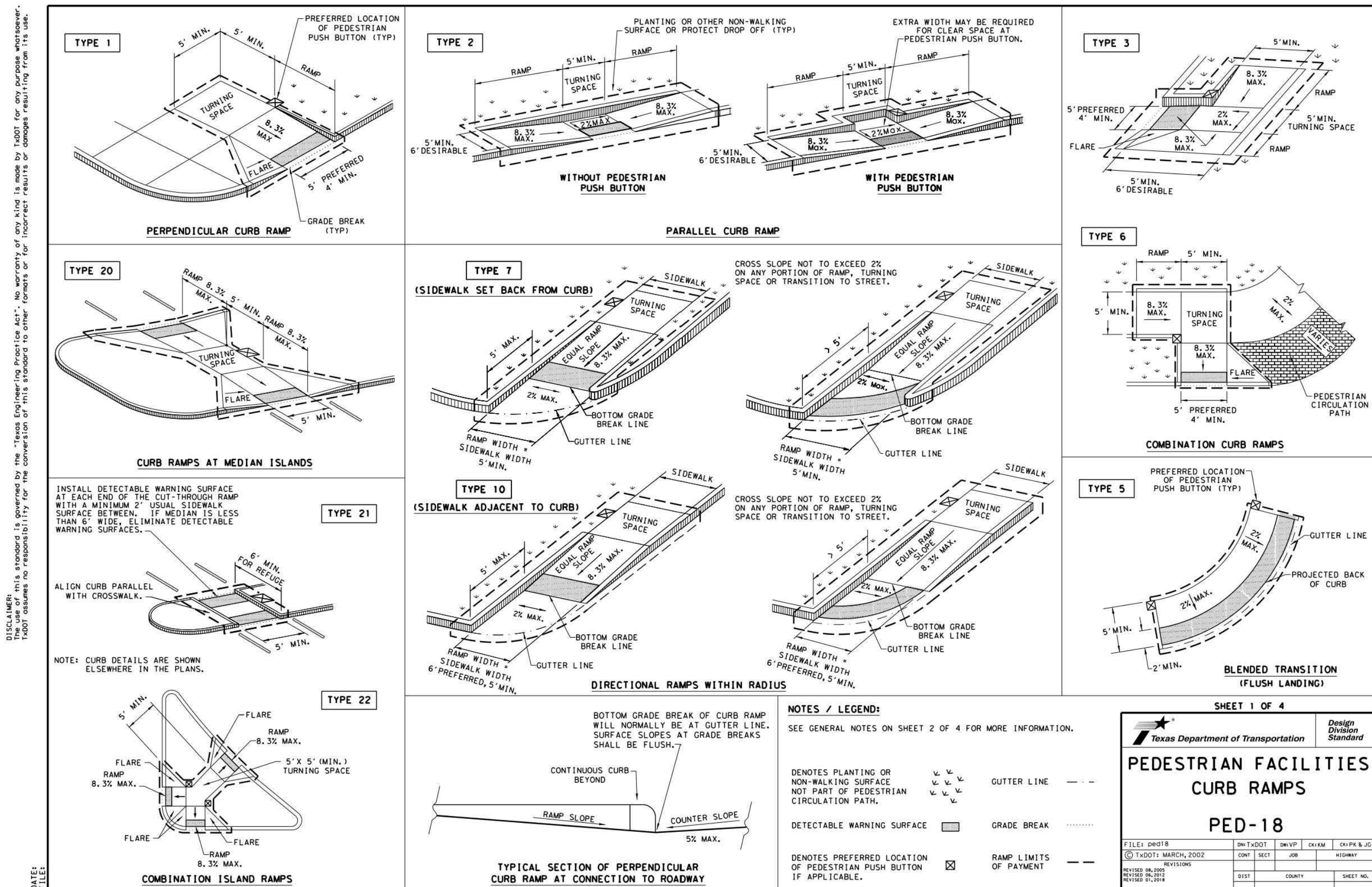
NO.	REVISION	DATE	1-8-2024
1	ADD CONC PAVE SECT & NOTE		



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2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028890

RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS
STREET DETAILS

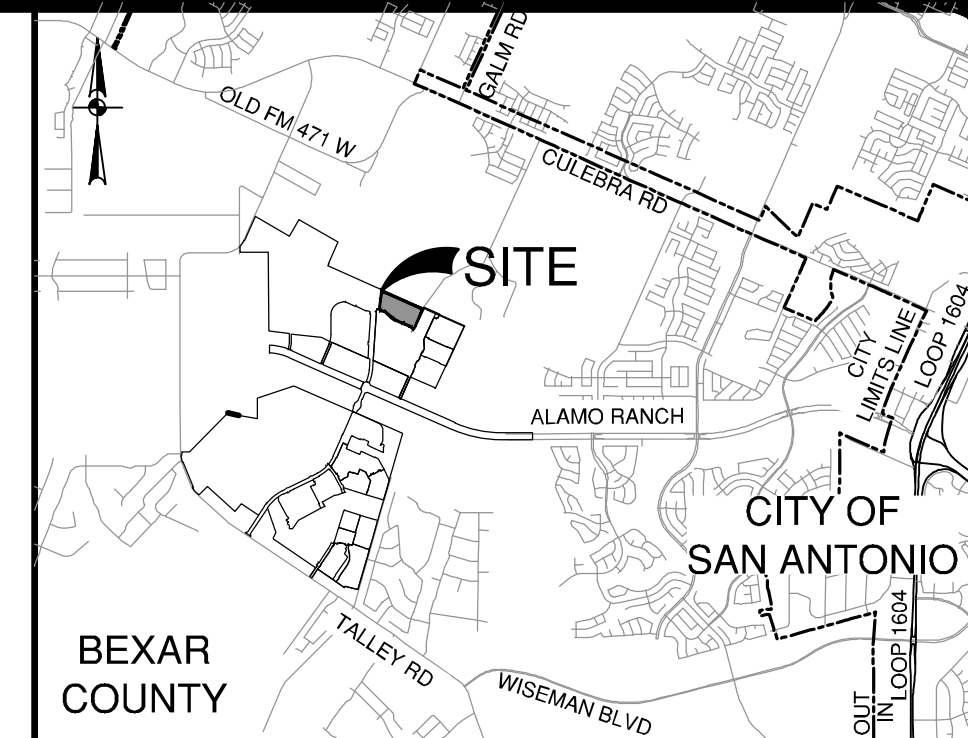
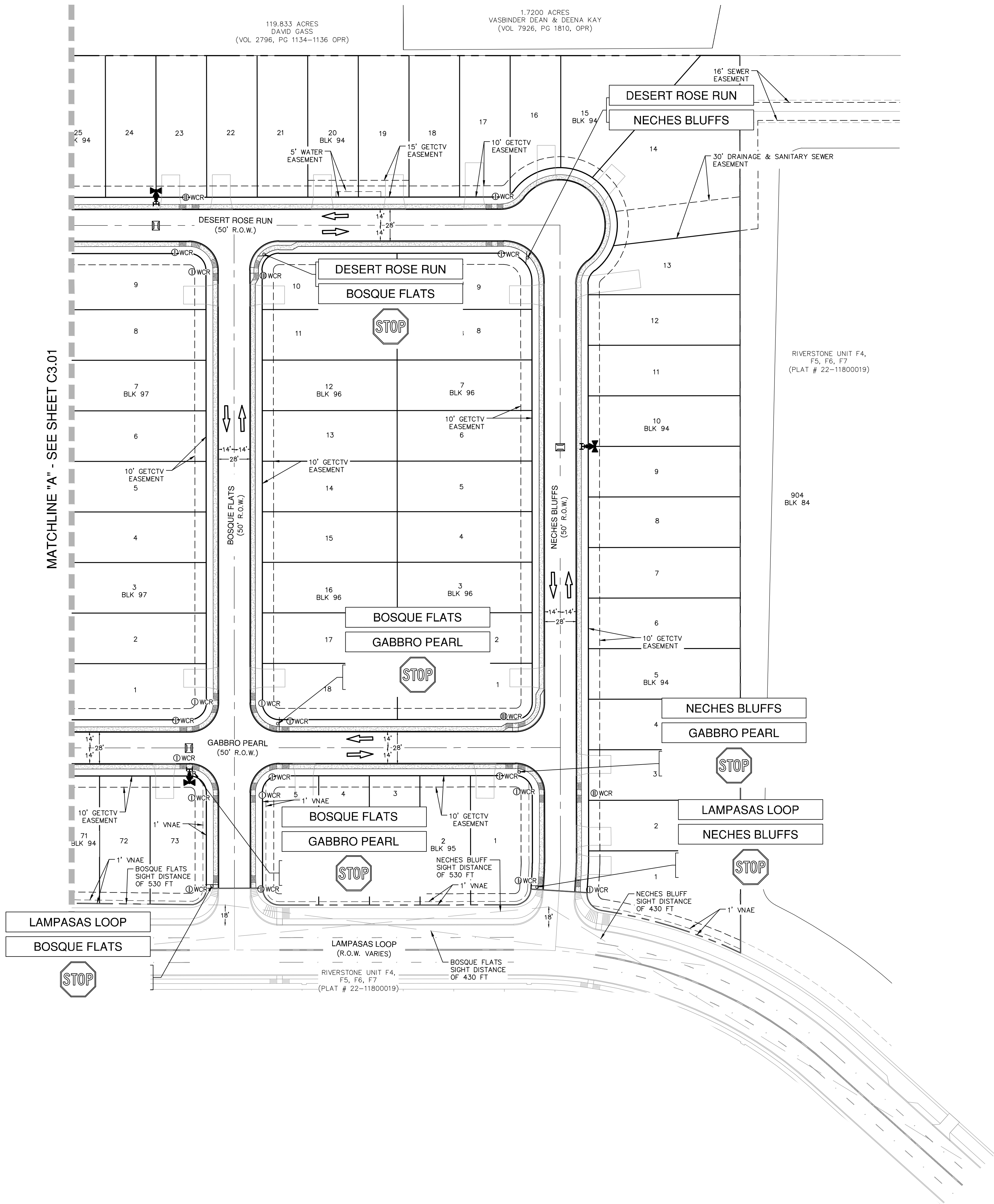
PLAT NO.	22-11800470
JOB NO.	11680-55
DATE	AUGUST 2022
DESIGNER	CB
CHECKED	BL
DRAWN	CB
SHEET	C2.10





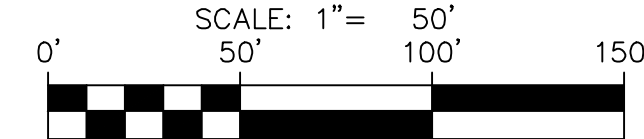
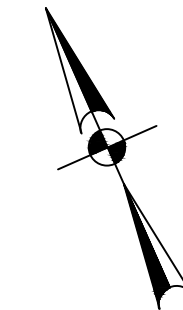
Date: Apr 18, 2023, 1:52pm, User ID: bpelema1
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THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL. AERIAL IMAGERY PROVIDED BY GOOGLE'S UNLESS OTHERWISE NOTED. Imagery © 2016, CAPCOG, Digital Globe, Texas Orthoregistry Program, USDA Farm Service Agency.



LOCATION MAP

NOT-TO-SCALE



SYMBOL	ITEM NUMBER
	UNIT BOUNDARY
	TRAFFIC FLOW ARROW
	TYPE II BLUE RAISED PAVEMENT MARKERS - NO SEPARATE PAY ITEM
	STREET SIGN
	R1-1 30"X30"
	SIDEWALK (HOMEOWNER RESPONSIBILITY)
	SIDEWALK (DEVELOPER RESPONSIBILITY)

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS
OVERALL SIGNAGE PLAN

BEXAR COUNTY ROW NOTES:

A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.

DRIVEWAY NOTE:

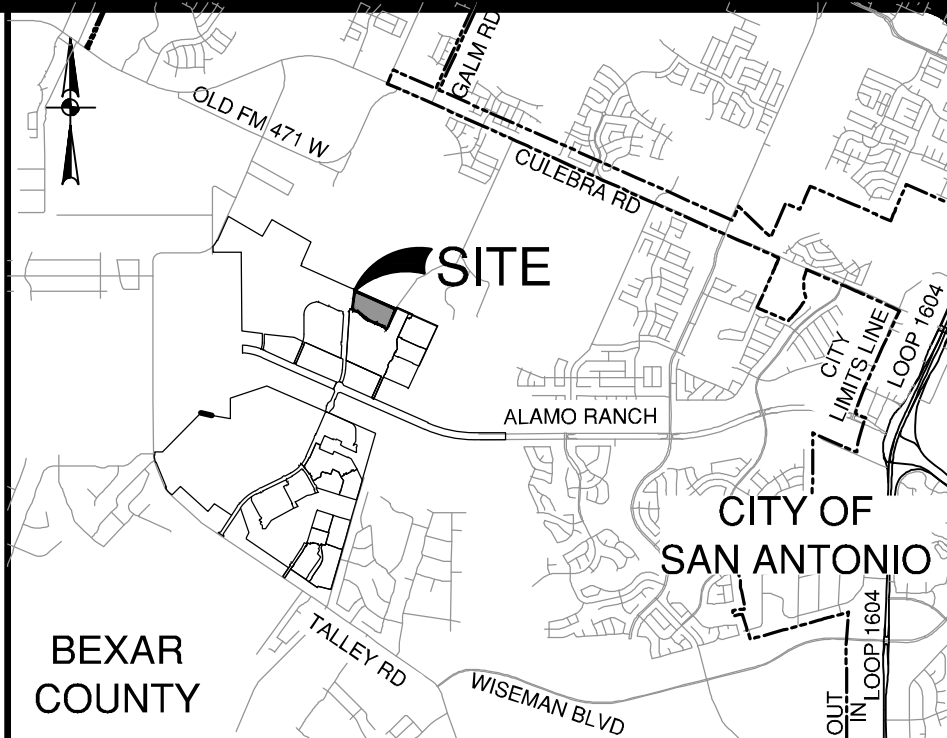
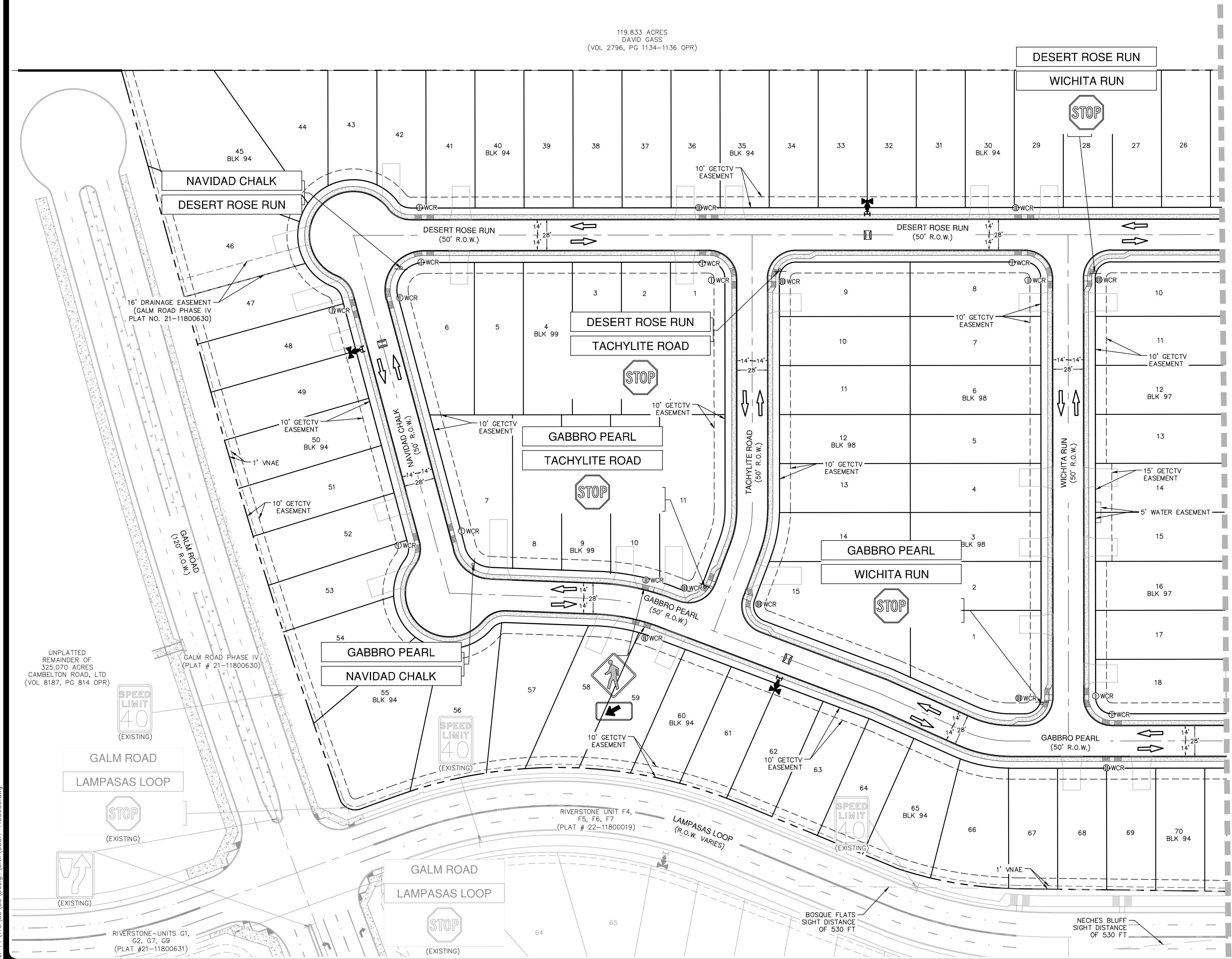
DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY 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.

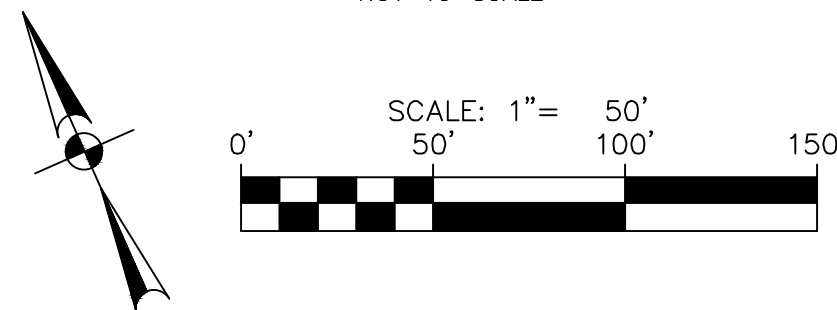
PLAT NO.	22-11800470
JOB NO.	11680-55
DATE	AUGUST 2022
DESIGNER	CB
CHECKED	BL DRAWN CB
SHEET	C3.00

Date: Mar 31, 2023, 2:30pm User: C:\Users\chance\Documents\PAPE-DAWSON\Riverstone Unit F8 & F9\Riverstone Unit F8 & F9.dwg



LOCATION MAP

NOT-TO-SCALE



SYMBOL	ITEM NUMBER
	UNIT BOUNDARY
	TRAFFIC FLOW ARROW
	TYPE II BLUE RAISED PAVEMENT MARKERS - NO SEPARATE PAY ITEM
	STREET SIGN
	R1-1 30"x30"
	SIDEWALK (HOMEOWNER RESPONSIBILITY)
	SIDEWALK (DEVELOPER RESPONSIBILITY)
	W11-2 30"x30"
	W16-7P 24"x12"

BEXAR COUNTY ROW NOTES:

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DRIVEWAY NOTE:

DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY 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.

PAPE-DAWSON
ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS

OVERALL SIGNAGE PLAN

PLAT NO.	22-11800470
JOB NO.	11680-55
DATE	AUGUST 2022
DESIGNER	CB
CHECKED	BL
DRAWN	BM
SHEET	C3.01

TRIANGULAR SLIPBASE INSTALLATION GENERAL REQUIREMENTS

NOTE

There are various devices approved for the Triangular Slipbase System. Please reference the Material Producer List for approved slip base systems. http://www.txdot.gov/business/producer_list.htm
The devices shall be installed per manufacturers' recommendations. Installation procedures shall be provided to the Engineer by Contractor.

CONCRETE ANCHOR

GENERAL NOTES:

- Slip base shall be permanently marked to indicate manufacturer, method, design, and location of marking are subject to approval of the TxDOT Traffic Standards Engineer.
- Material used as post with this system shall conform to the following specifications:
10 BW Tubing (12.875" outside diameter)
0.134" wall thickness
Seamless or electric-resistance welded steel tubing or pipe
Steel shall be A5013 or 55 per ASTM A501 or ASTM A508
Other steels may be used if they meet the following:
65,000 PSI minimum yield strength
100,000 PSI minimum tensile strength
50E minimum elongation in 2"
Wall thickness (uncoated) shall be within the range of 0.125" to 0.134"
Outside diameter (uncoated) shall be within the range of 2.867" to 2.893"
Galvanization per ASTM A123 or ASTM A653 D570. For pre-painted steel tubing (ASTM A653), recast
Use outside diameter weld size by installing with zinc wire per ASTM B933.
Schedule 40 Pipe (12.875" outside diameter)
0.281" wall thickness
Steel tubing per ASTM A500 C or C
Other seamless or electric-resistance welded steel tubing or pipe shall be equivalent
outside diameter and wall thickness may be used if they meet the following:
46,000 PSI minimum yield strength
62,000 PSI minimum tensile strength
51E minimum elongation in 2"
Wall thickness (uncoated) shall be within the range of 0.248" to 0.304"
Outside diameter (uncoated) shall be within the range of 2.855" to 2.895"
Galvanization per ASTM A123
- See the Traffic Operations Division website for detailed drawings of sign clamps and Texas Universal In-Trajectory Slipbase System components. The website address is:
<http://www.txdot.gov/publications/traffic.htm>
- Sign supports shall not be installed except where shown. Sign support posts shall not be applied.

ASSEMBLY PROCEDURE

Foundation

- Prepare 12-inch diameter by 42-inch deep hole. If solid rock is encountered, the depth of the foundation may be reduced such that it is embedded a minimum of 18 inches into the solid rock.
- The Engineer may permit brackets of concrete less than 2 cubic yards to be placed with a portable, motor-driven concrete mixer. For all placements, the mixer and the concrete shall be placed in a suitable container may be allowed by Engineer. Concrete shall be Class A.
- Push the pipe and all of the slip base into the concrete. The contractor shall prepare the stub bolts and form while putting it down into the concrete to ensure good contact between the concrete and stub.
- Continue to work the stub into the concrete until it is between 2 to 4 inches above the ground.
- Finish the stub. Allow a minimum of 4 days to set, unless otherwise directed by the Engineer.
- The triangular slipbase system is multidirectional and is designed to release when struck from any direction.

Support

- Cut support so that the bottom of the sign will be 7 to 7.5 feet above the edge of the travelway (i.e., edge of the closest lane) when slip plate is below the edge of pavement or 7 to 7.5 feet above slip joint when the slip plate is above the edge of the travelway. The cut shall be blunt and straight.
- Attach sign to support using connections shown. When multiple signs are installed on the same support, ensure the minimum clearance between each sign is maintained. See SMD (SLIP-1) for clearances based on sign types.

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

SMD (SLIP-1) - 08

03/0007 JULY 2003		NO. TIMES	REV. NO.	BY	DATE
9-08	REVISION	DATE	BY	DATE	

258

[illegible]

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DETAIL A

Extruded Alum. Window (See Detail D on SMD (SLIP-23) or 1.12" x 4" Wing Channel (See Detail A and Detail B))

Window = 18" x 18"

See Detail A

See Detail B

DETAIL B

Wing Channel

Side View

Sign Panel

Detail B

Drill 3/16" hole (through) after assembly and install bolt, nut, 2 flat washers and lock washer.

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" hex head bolt with nut, lock washer and 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

1 1/2"

Extender

Detail C

T-bracket

Splices shall only be allowed between the sign substrate.

DETAIL D

Extruded Alum. Window (See Detail D on SMD (SLIP-23) or 1.12" x 4" Wing Channel (See Detail A and Detail B))

Window = 18" x 18"

See Detail A

See Detail B

DETAIL E

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL F

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL G

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL H

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL I

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL J

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL K

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL L

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL M

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL N

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL O

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL P

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL Q

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL R

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL S

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL T

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL U

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL V

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL W

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL X

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL Y

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL Z

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL AA

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL AB

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

DETAIL AC

Sign Clamp (Specific or Universal)

Wing Channel

Top View

Sign Panel

Detail A

Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "galvanizing."

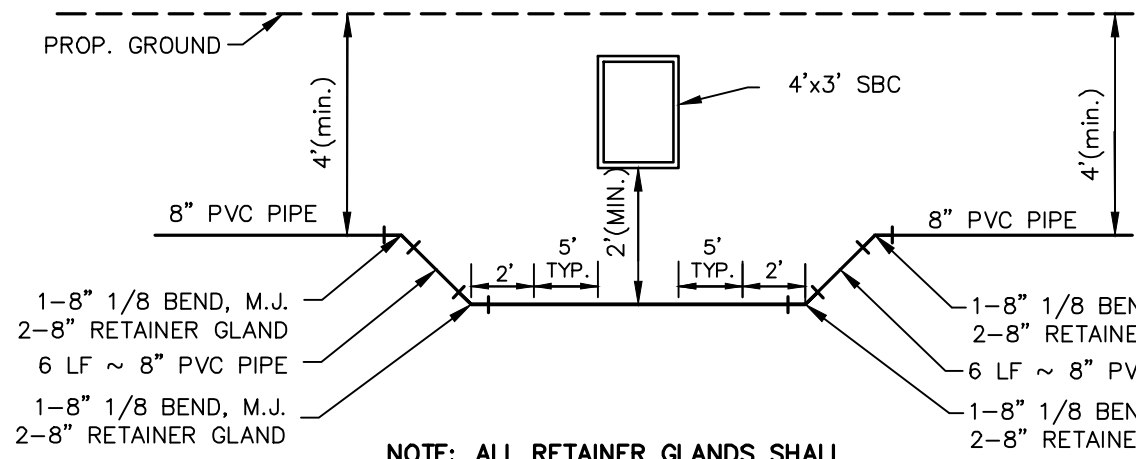
3/8" x 4" square head bolt and nut

Extruded Aluminum Panel

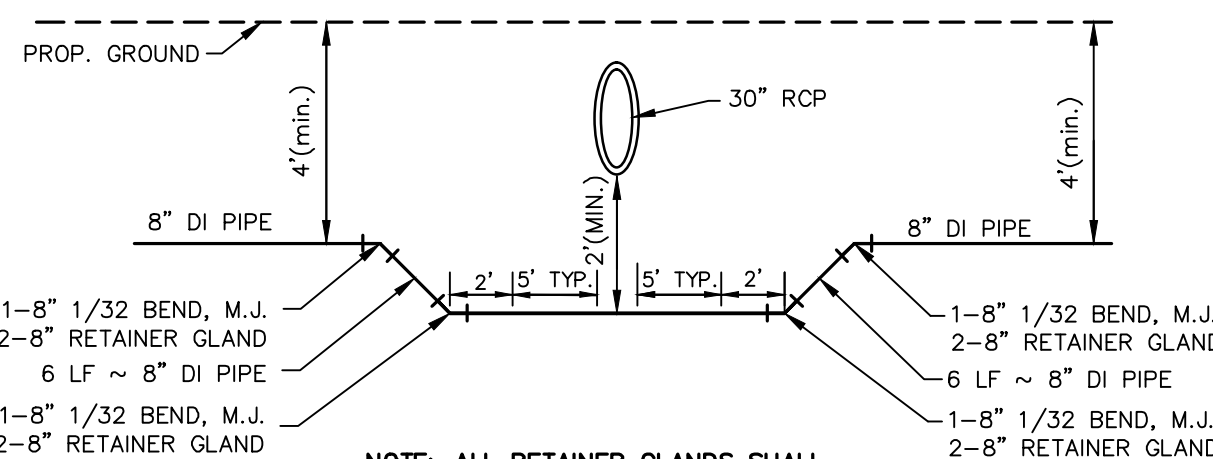
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RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS
SIGNAGE DETAILS

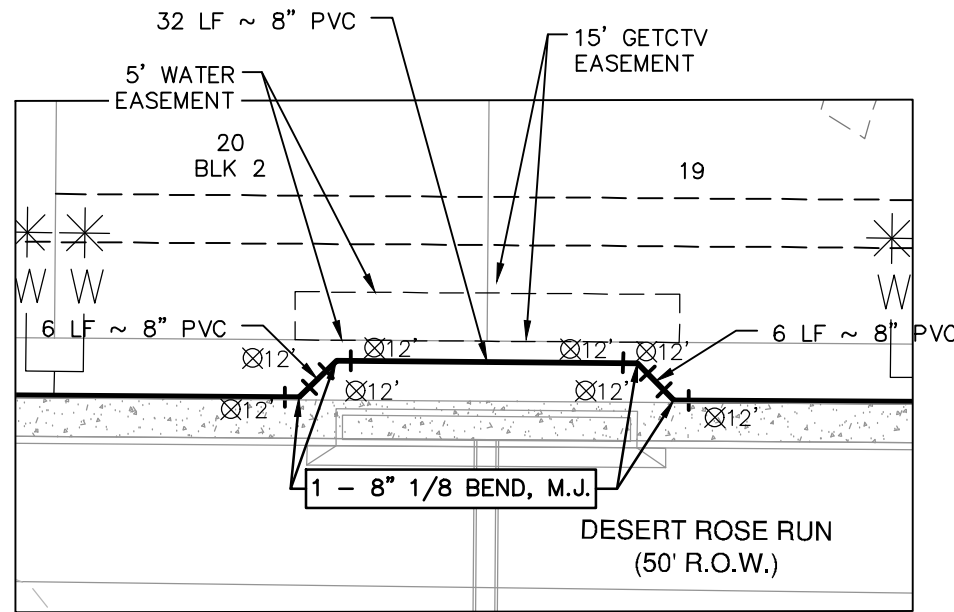
PLAT NO. **22-11800470**
JOB NO. **11680-55**
DATE **AUGUST 2022**
DESIGNER **CB**
CHECKED **BL** DRAWN **CB**
SHEET **C3.10**



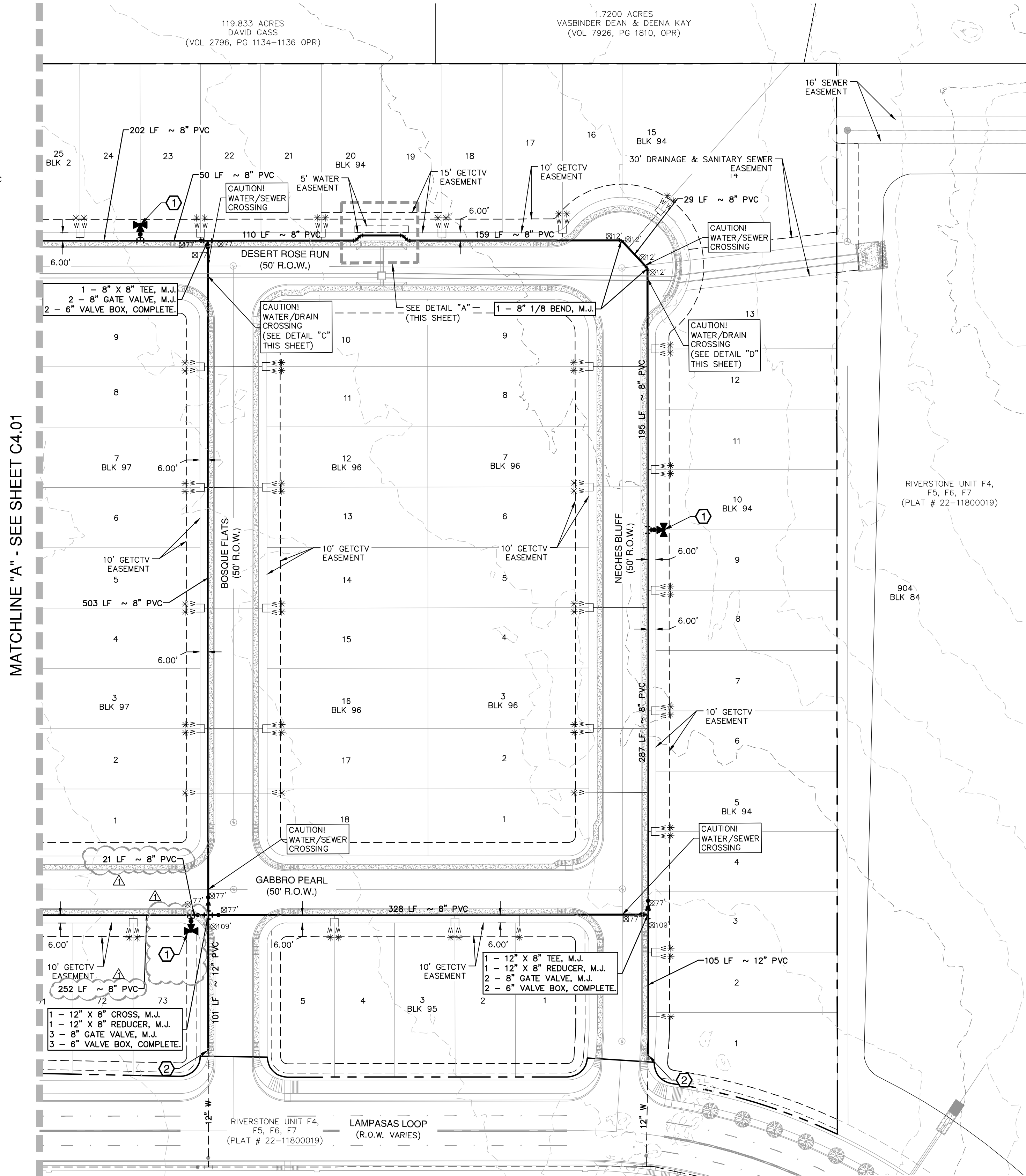
WATER/DRAIN CROSSING DETAIL "D"
NOT TO SCALE



WATER/DRAIN CROSSING DETAIL "C"
NOT TO SCALE



DETAIL "A"
SCALE: 1" = 20'



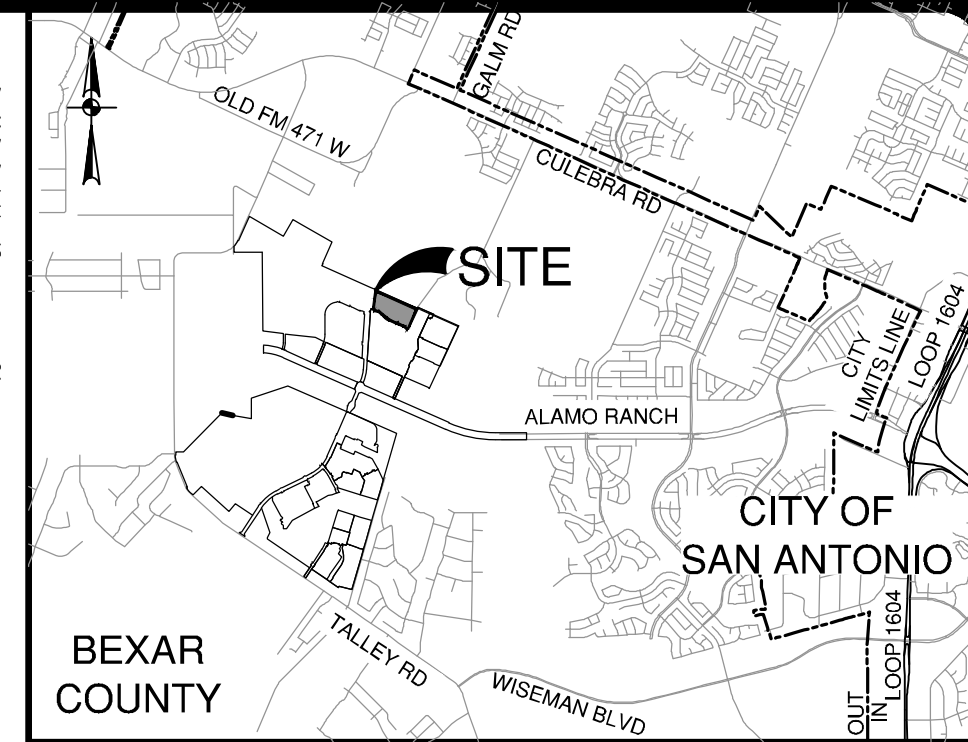
MATCHLINE "A" - SEE SHEET C4.01

FIRE FLOW NOTE:

IN AN EFFORT TO MEET THE CITY OF SAN ANTONIO'S FIRE FLOW REQUIREMENTS FOR THE PROPOSED RESIDENTIAL DEVELOPMENT, THE PUBLIC WATER MAIN SYSTEM HAS BEEN DESIGNED FOR A MINIMUM FIRE FLOW DEMAND OF 1000 GPM AT 25 PSI RESIDUAL PRESSURE. THE FIRE FLOW REQUIREMENTS FOR INDIVIDUAL STRUCTURES WILL BE REVIEWED DURING THE BUILDING PERMIT PROCESS IN ACCORDANCE WITH THE PROCEDURES SET FORTH BY THE CITY OF SAN ANTONIO DIRECTOR OF DEVELOPMENT SERVICES DEPARTMENT AND THE SAN ANTONIO FIRE DEPARTMENT FIRE MARSHAL.

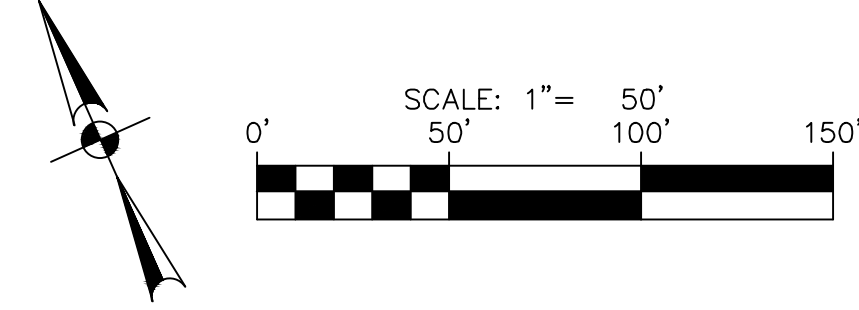
ROW PERMIT NOTE:

A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY RIGHTS-OF-WAY.

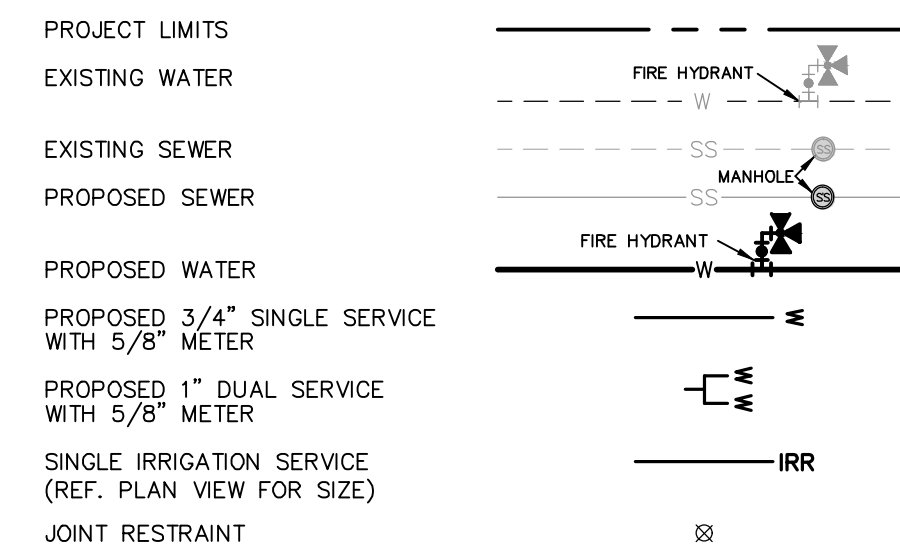


LOCATION MAP

NOT-TO-SCALE



WATER LEGEND



KEYED NOTES

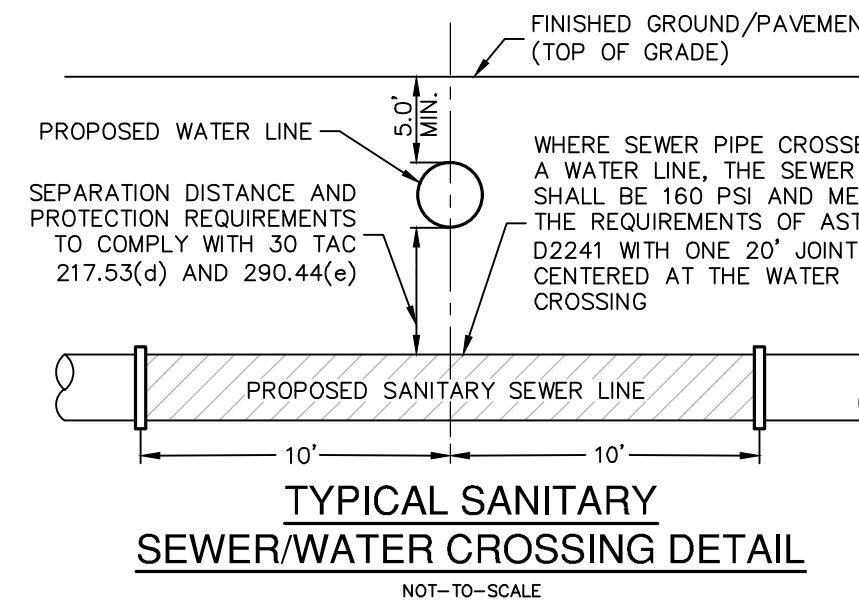
- 1 ~ STANDARD FIRE HYDRANT
 - 1 - 8" X 6" ANCHOR TEE, M.J.
 - 6" D.I. PIPE, CUT AS REQ'D
 - 1 - 6" 1/4 ANCHOR BEND, M.J.
 - 1 - 6" GATE VALVE, M.J.
 - 1 - 6" VALVE BOX, COMPLETE
- (SEE SAWS DETAIL DD-834-01 SHEET 2 OF 2)

- FOR CHLORINATION INJECTION
- 2 - 1" CORPORATION STOP, C.C.XI.P
 - 1 - 1" COPPER TUBING, CUT AS REQUIRED
 - 2 - 1" COMP. 1 1/4 COUPLING, CORP. STOP
 - 2 - 1 1/4" THD. SOLID CAPS, THR.

- 12" VALVE CONSTRUCTED WITH SAWS JOB NUMBER XX-XXXX SHALL REMAIN CLOSED UNTIL NEW MAINS HAVE BEEN DISINFECTED BY CONTRACTOR AND ACCEPTED BY SAWS

- CONTRACTOR SHALL TIE TO EXISTING 12" STUBOUT (SAWS JOB NO. XX-XXXX) AFTER DISINFECTION BY CONTRACTOR AND ACCEPTANCE BY SAWS

- 2" TEMPORARY BLOWOFF ASSEMBLY SEE SAWS DWG DD-844-01 SHEET 1 OF 4
- 1-12" SOLID SLEEVE, MJ



PRESSURE REDUCING VALVE NOTE:

PRESSURE REDUCING VALVE TO BE INSTALLED ON CUSTOMER'S SIDE OF METER BY HOMEOWNER.

PRESSURE NOTE:

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.

JOINT RESTRAINT NOTE:

CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HARNESSES OR FIELD LOCK GASKETS AT ALL JOINTS WITHIN THE LENGTH SHOWN. A CONTRACTOR SHALL INSURE THAT ALL TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 5 FT. OF PIPE WITH JOINTS ON EACH SIDE OF THE FITTING. JOINT RESTRAINTS AND RETAINER GLANDS SHALL BE CALCULATED BY SAWS APPROVED PROGRAMS. THERE WILL BE NO SEPARATE PAY ITEM FOR RETAINER GLANDS AND OTHER JOINT RESTRAINING HARNESSES AND GASKETS, BUT SHALL BE SUBSIDIARY TO THE UNIT COST PER LINEAL FOOT OF PIPE INSTALLED.

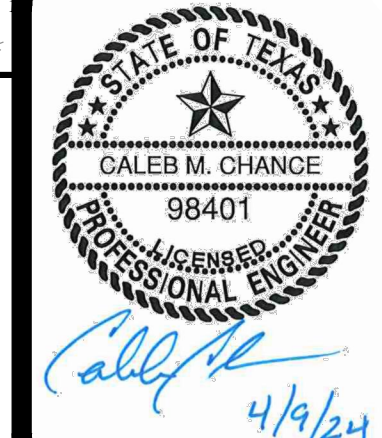
TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY 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.

WATER (SAWS PRESSURE ZONE 8)

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.			
ADDRESS: 5419 N LOOP 1604 E			
CITY: SAN ANTONIO	STATE: TEXAS	ZIP: 78218	
PHONE# (210)496-2668	FAX# (210)496-2668		
SAWS BLOCK MAP# 082616 & 082617 TOTAL EDU'S 140 TOTAL ACREAGE 25.004			
TOTAL LINEAR FOOTAGE OF PIPE: 8" 4,761.77 LF PLAT NO. 22-11800470			
NUMBER OF LOTS 140 SAWS JOB NO. 22-1185			

NO.	REVISION	DATE
1	RELOCATE FIRE HYDRANT	4/5/2024



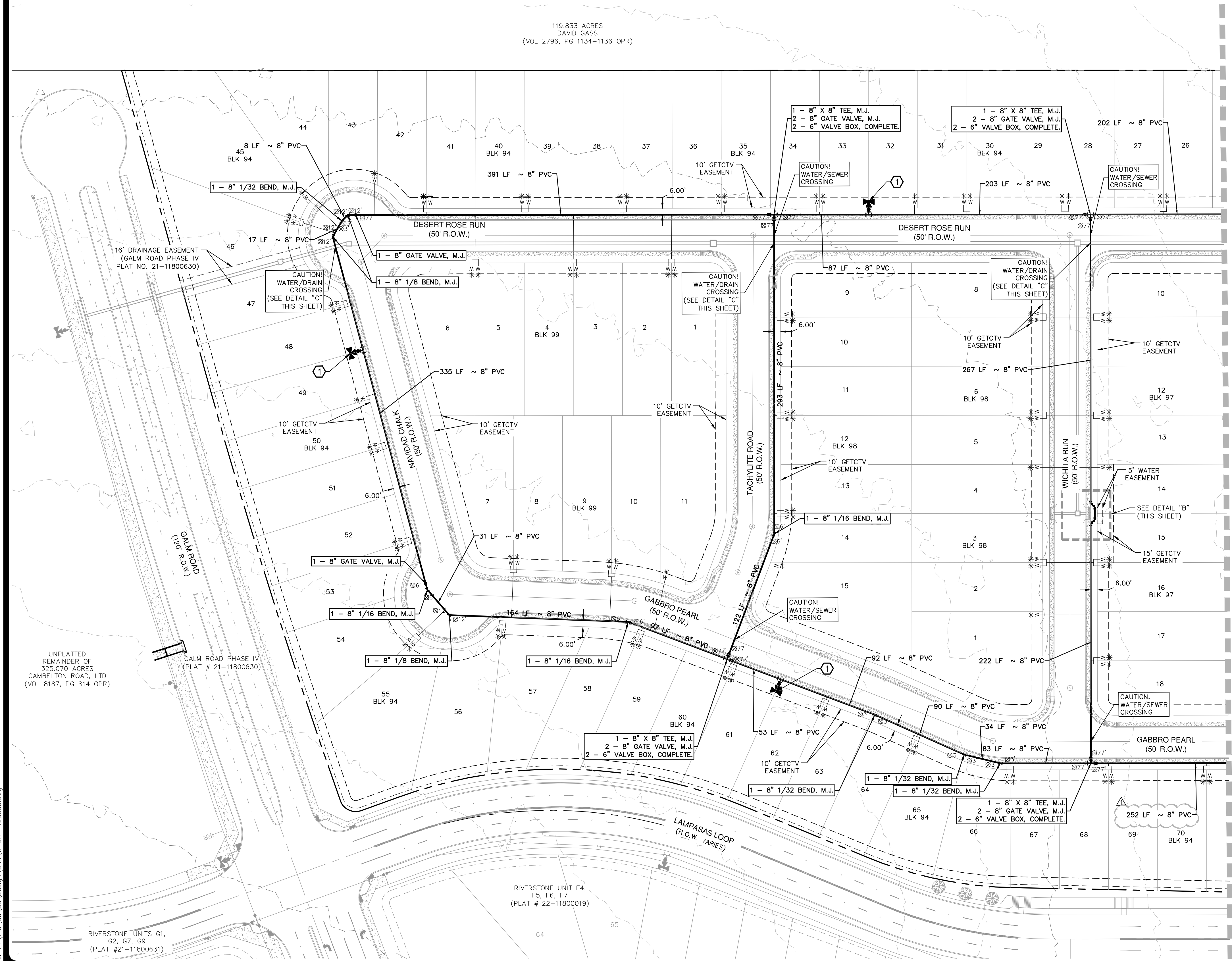
PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008890

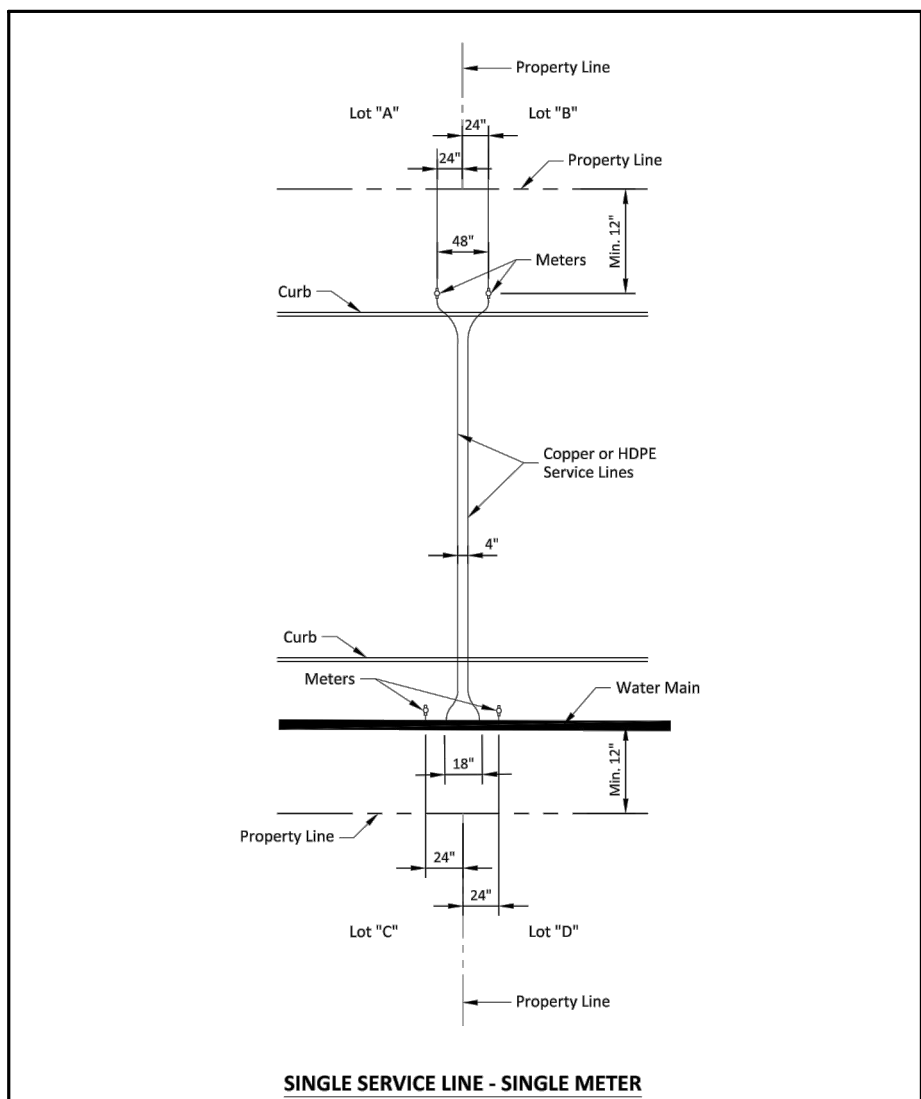
RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS
OVERALL WATER DISTRIBUTION PLAN

PLAT NO.	22-11800470
JOB NO.	11680-55
DATE	AUGUST 2022
DESIGNER	CB
CHECKED	BL DRAWN CB
SHEET	C4.00

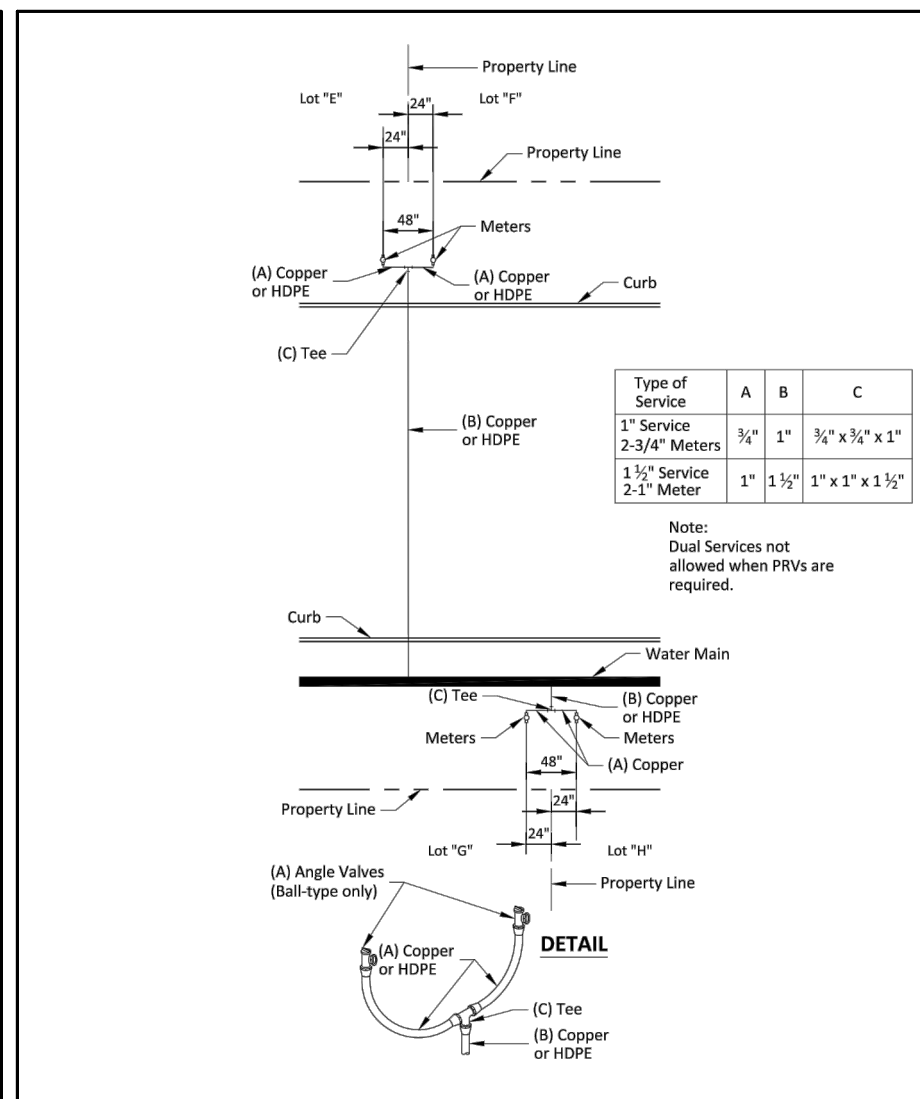
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THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL. AERIAL IMAGERY PROVIDED BY GOOGLE/UNLESS OTHERWISE NOTED. Imagery © 2016/CAPCO/DigitalGlobe/Terra/OrthoImage Program, USDA Farm Service Agency.

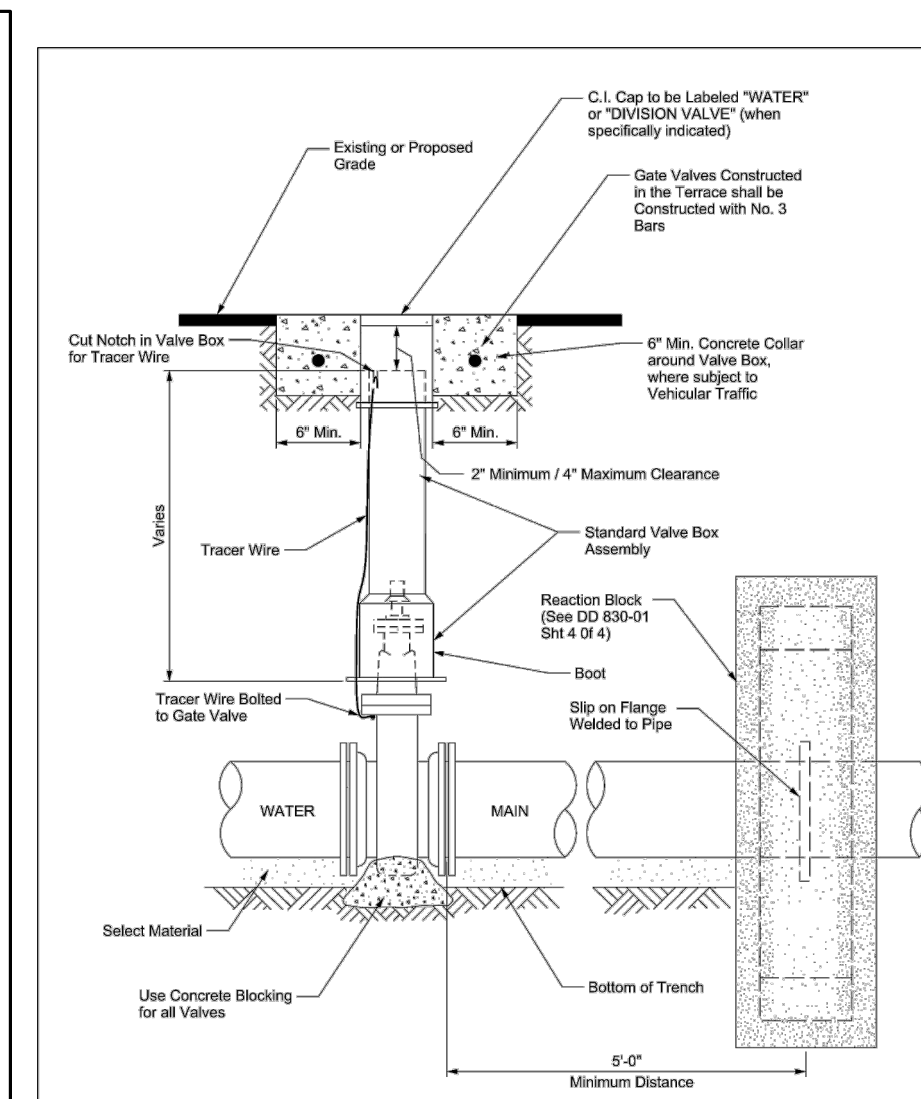




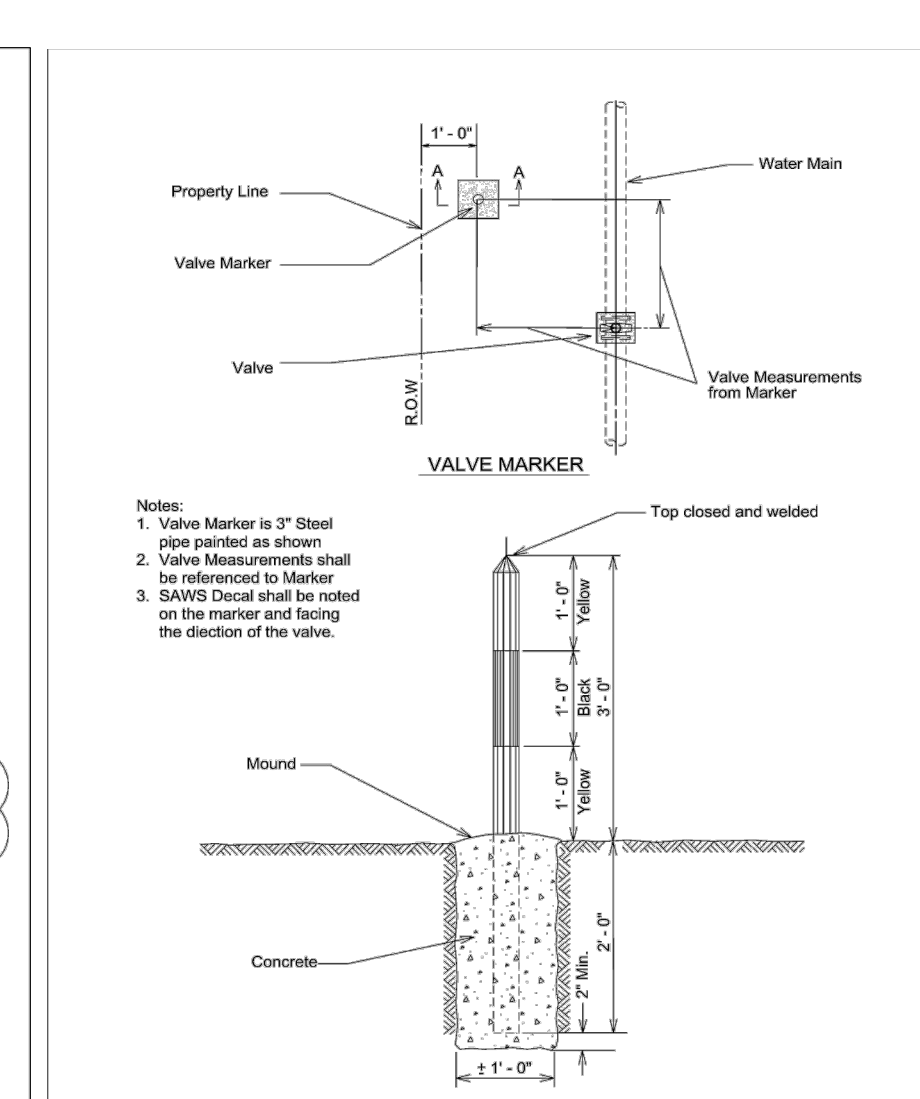
PROPERTY OF	TYPICAL	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM	NEW DEVELOPMENT	March 2008	December 2019
SAN ANTONIO, TEXAS	SERVICE ARRANGEMENT	DD-824-05	SHEET 1 OF 3



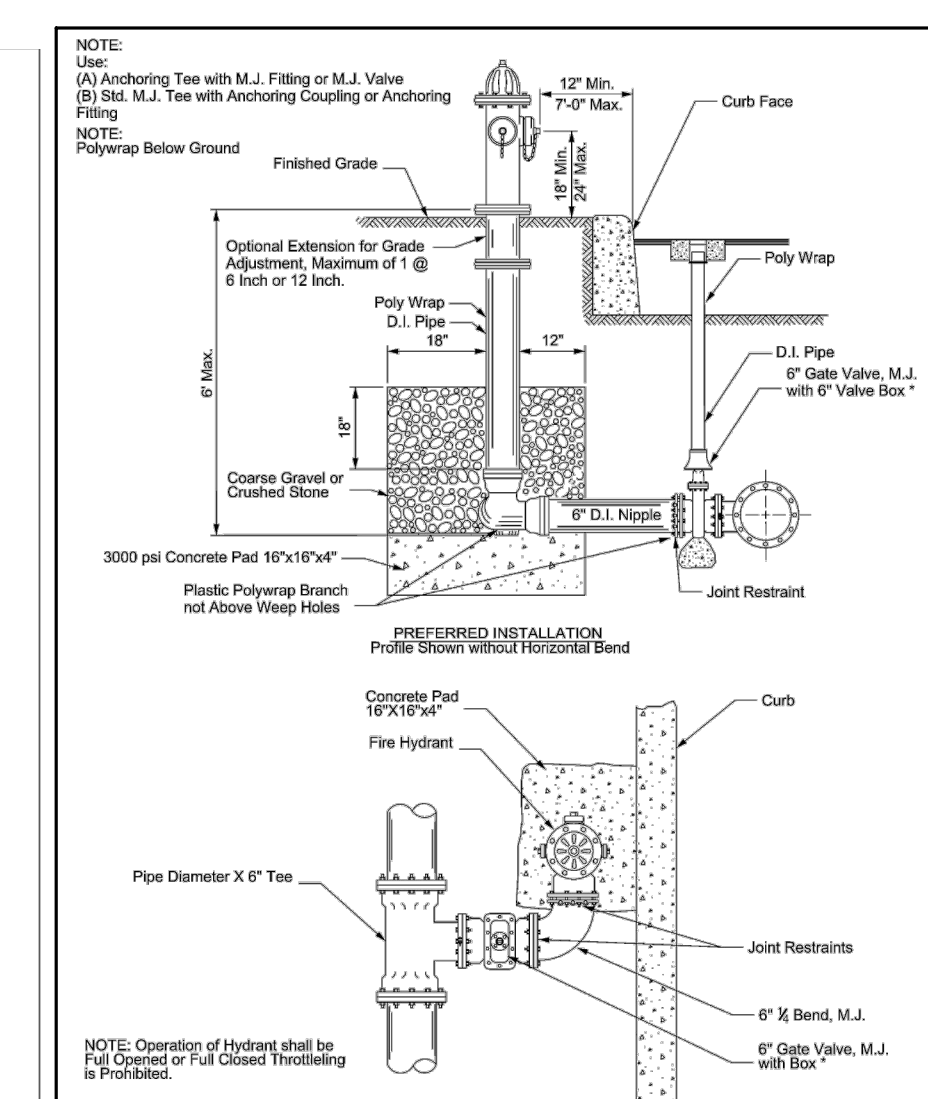
PROPERTY OF	TYPICAL	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM	SERVICE ARRANGEMENT	March 2008	December 2019
SAN ANTONIO, TEXAS	SERVICE ARRANGEMENT	DD-824-05	SHEET 1 OF 3



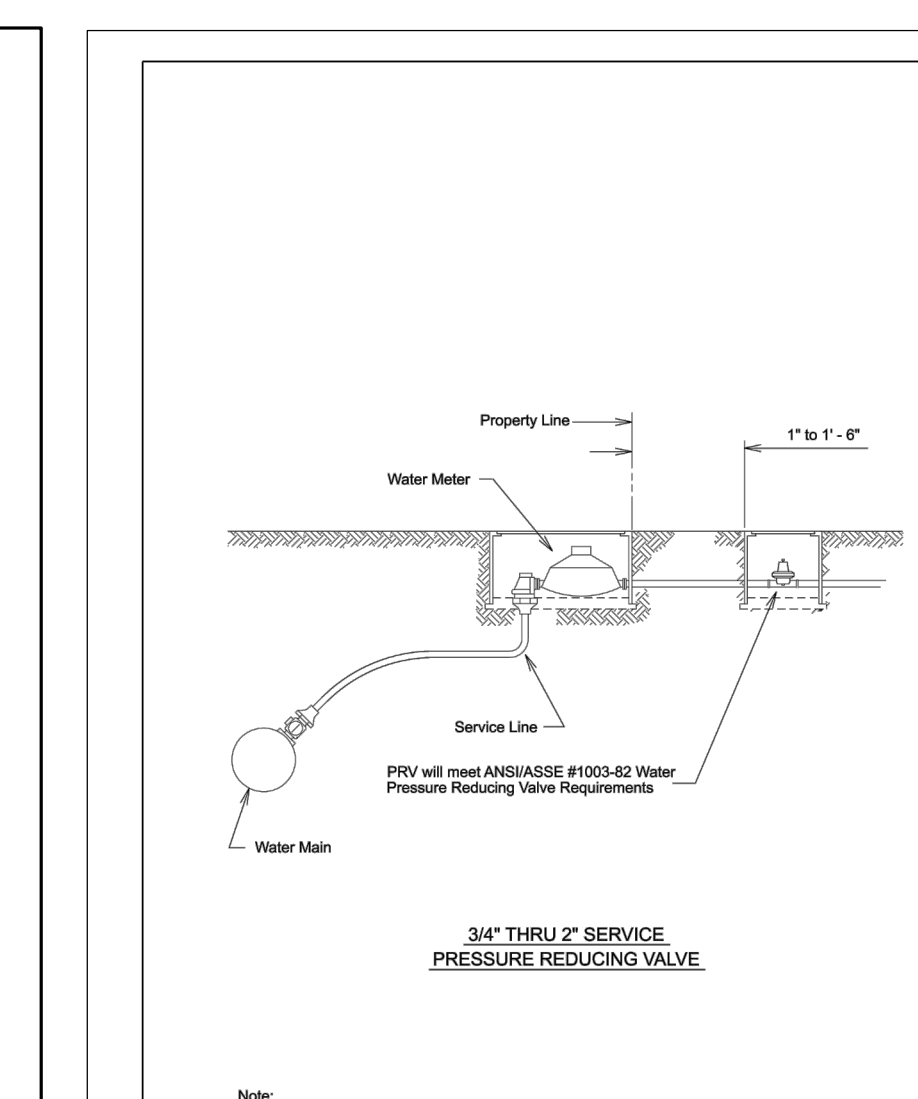
PROPERTY OF	INSTALLATION	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM	NON-GEARED GATE VALVE WITH VALVE BOX AND EXTENSION	March 2008	August 2019
SAN ANTONIO, TEXAS	INSTALLATION	DD-828-01	SHEET 1 OF 2



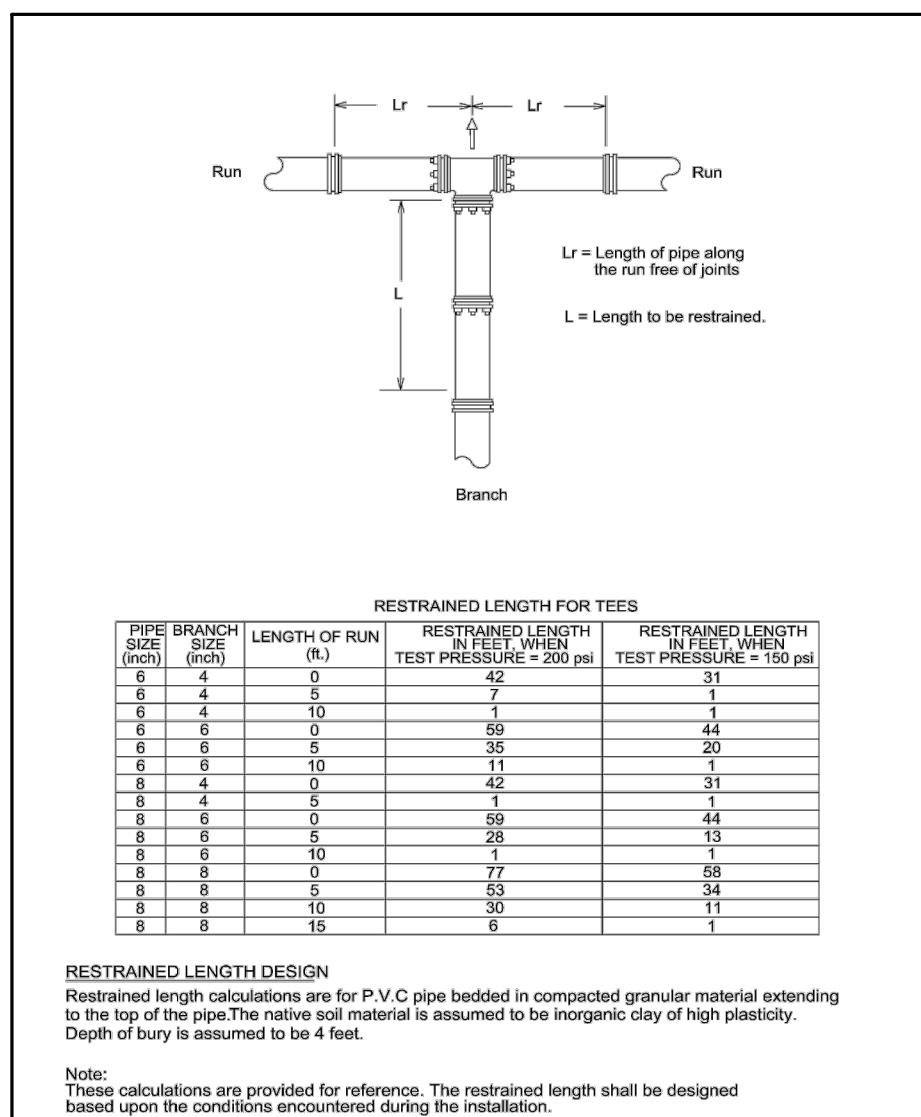
PROPERTY OF	VALVE MARKER	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM	VALVE MARKER	March 2008	August 2019
SAN ANTONIO, TEXAS	VALVE MARKER	DD-828-04	SHEET 1 OF 1



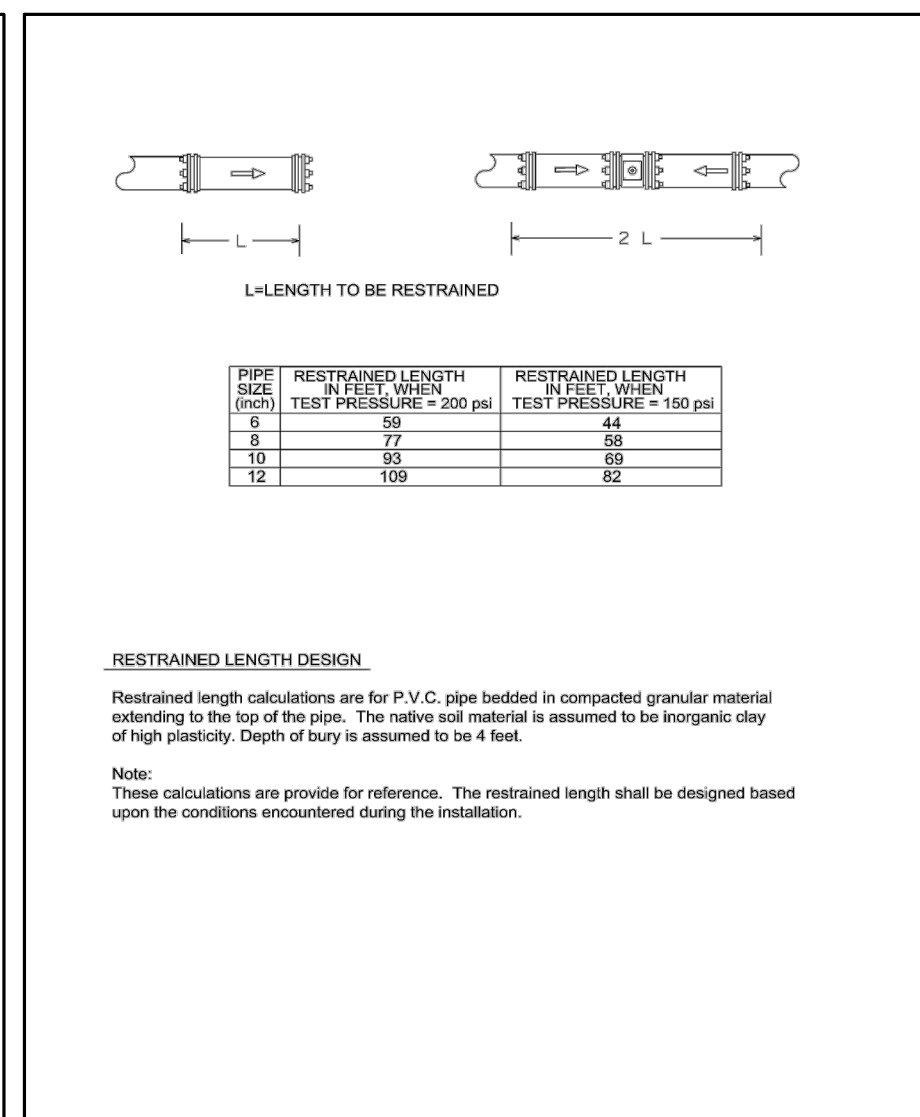
PROPERTY OF	FIRE HYDRANT	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM	FIRE HYDRANT	March 2008	August 2019
SAN ANTONIO, TEXAS	FIRE HYDRANT	DD-834-01	SHEET 1 OF 3



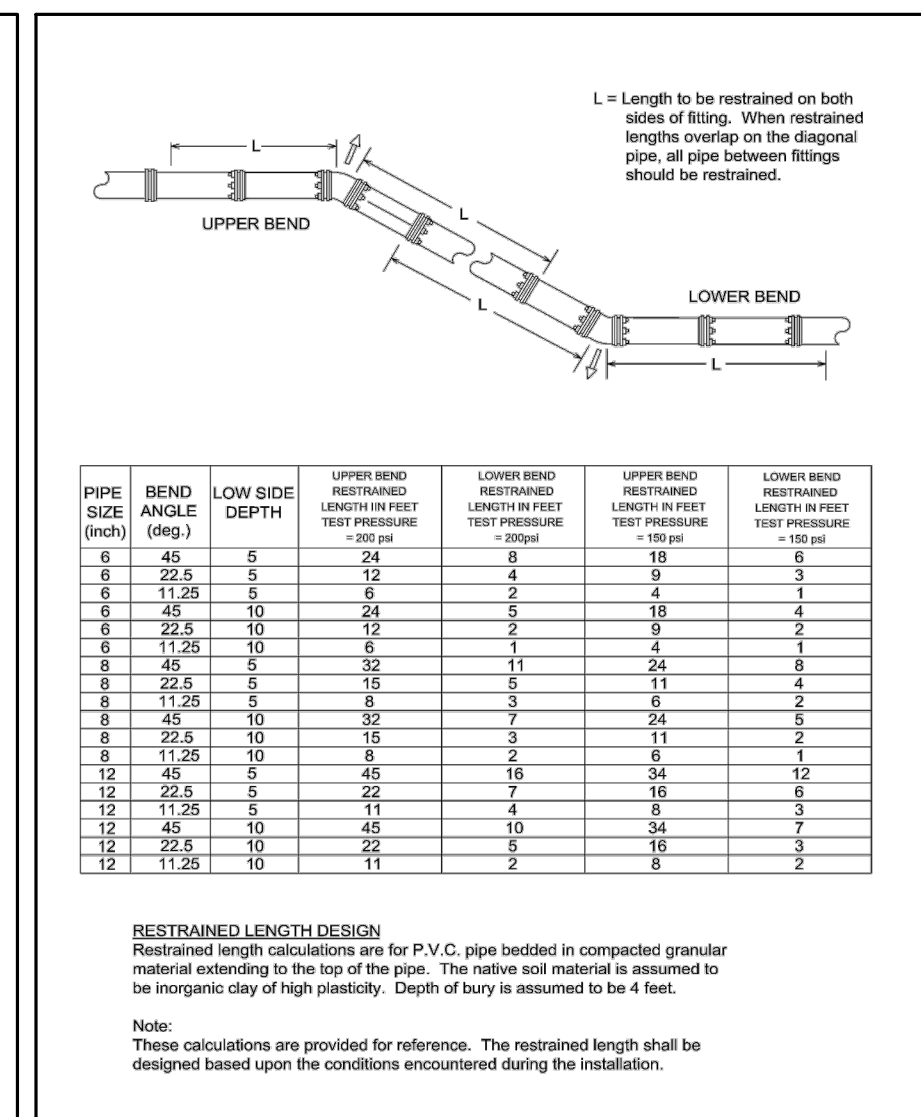
PROPERTY OF	SERVICE INSTALLATION	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM	SERVICE INSTALLATION	March 2008	April 2014
SAN ANTONIO, TEXAS	SERVICE INSTALLATION	DD-833-03	SHEET 1 OF 3



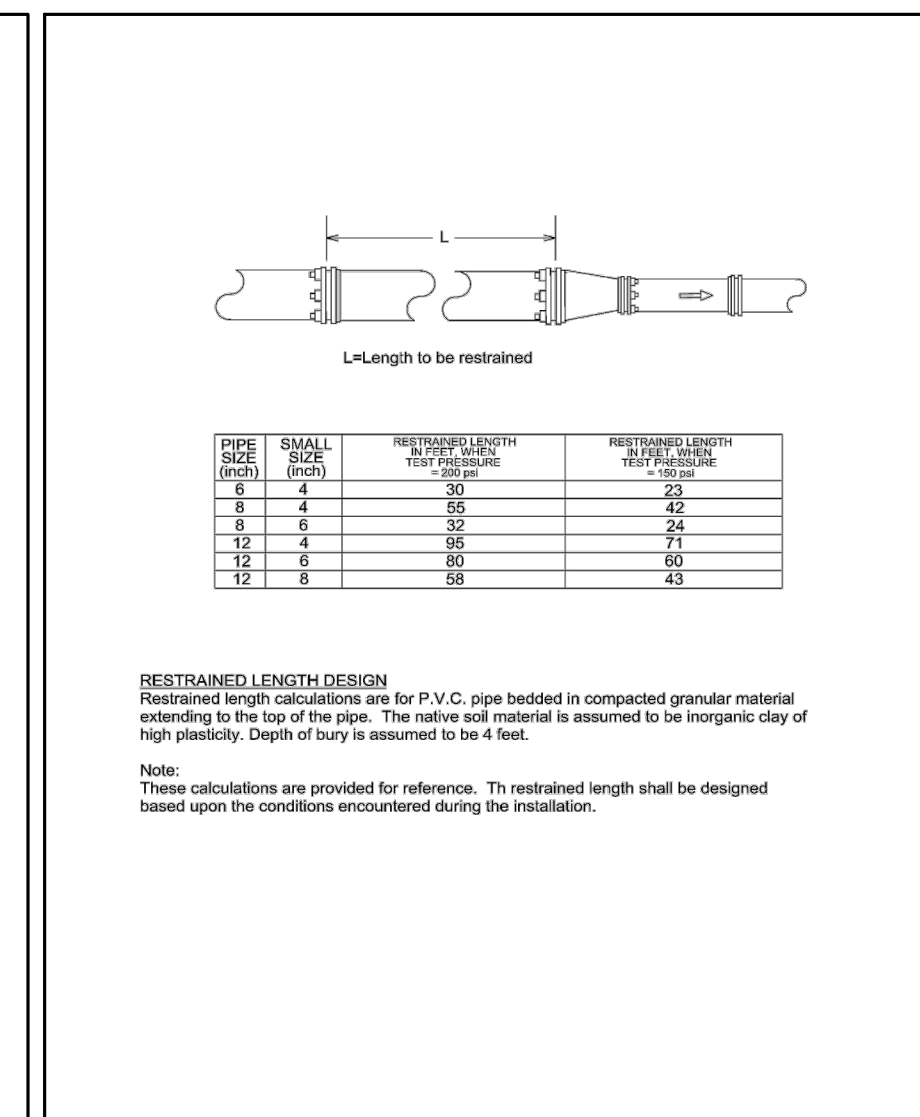
PROPERTY OF	RESTRAINED LENGTHS	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM	FOR TEES	March 2008	August 2019
SAN ANTONIO, TEXAS	FOR TEES	DD-839-04	SHEET 1 OF 2



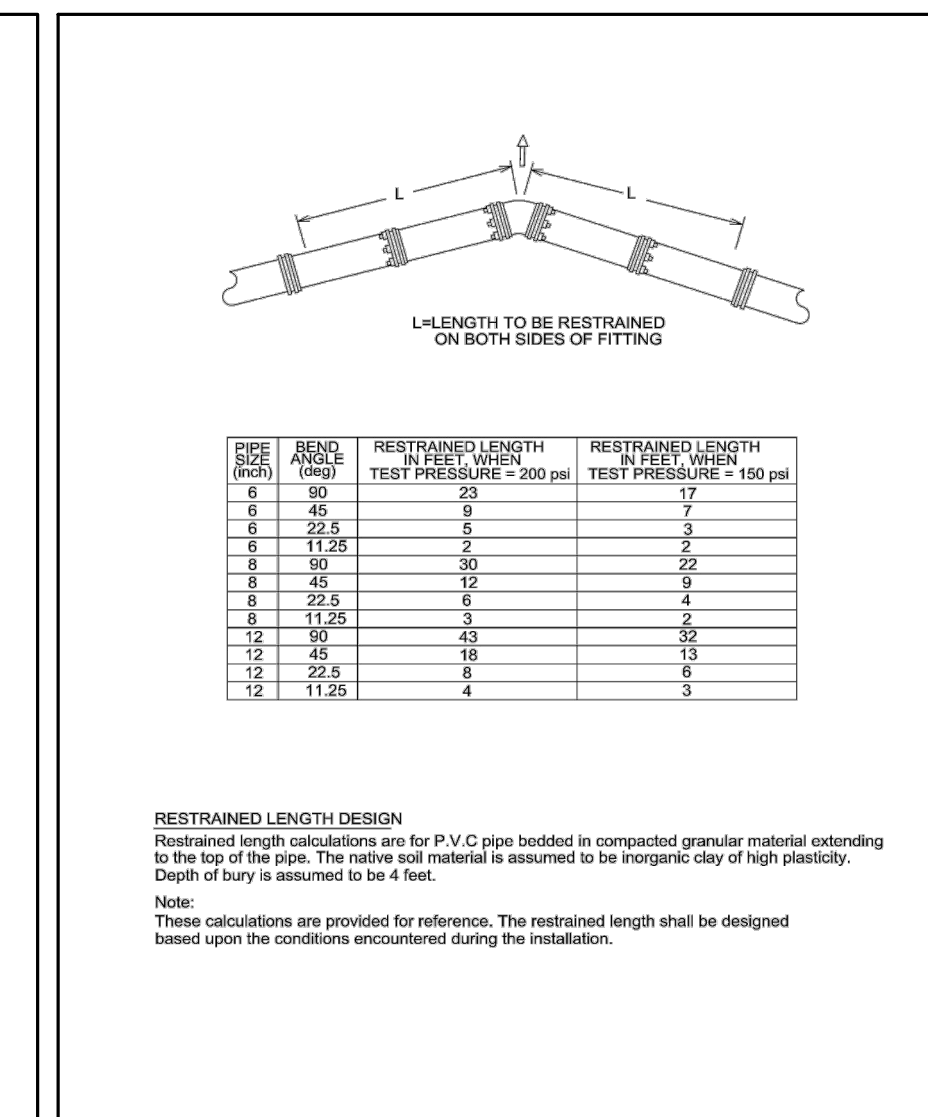
PROPERTY OF	RESTRAINED LENGTHS	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM	FOR DEAD ENDS / IN LINE VALVES	March 2008	August 2019
SAN ANTONIO, TEXAS	FOR DEAD ENDS / IN LINE VALVES	DD-839-05	SHEET 1 OF 1



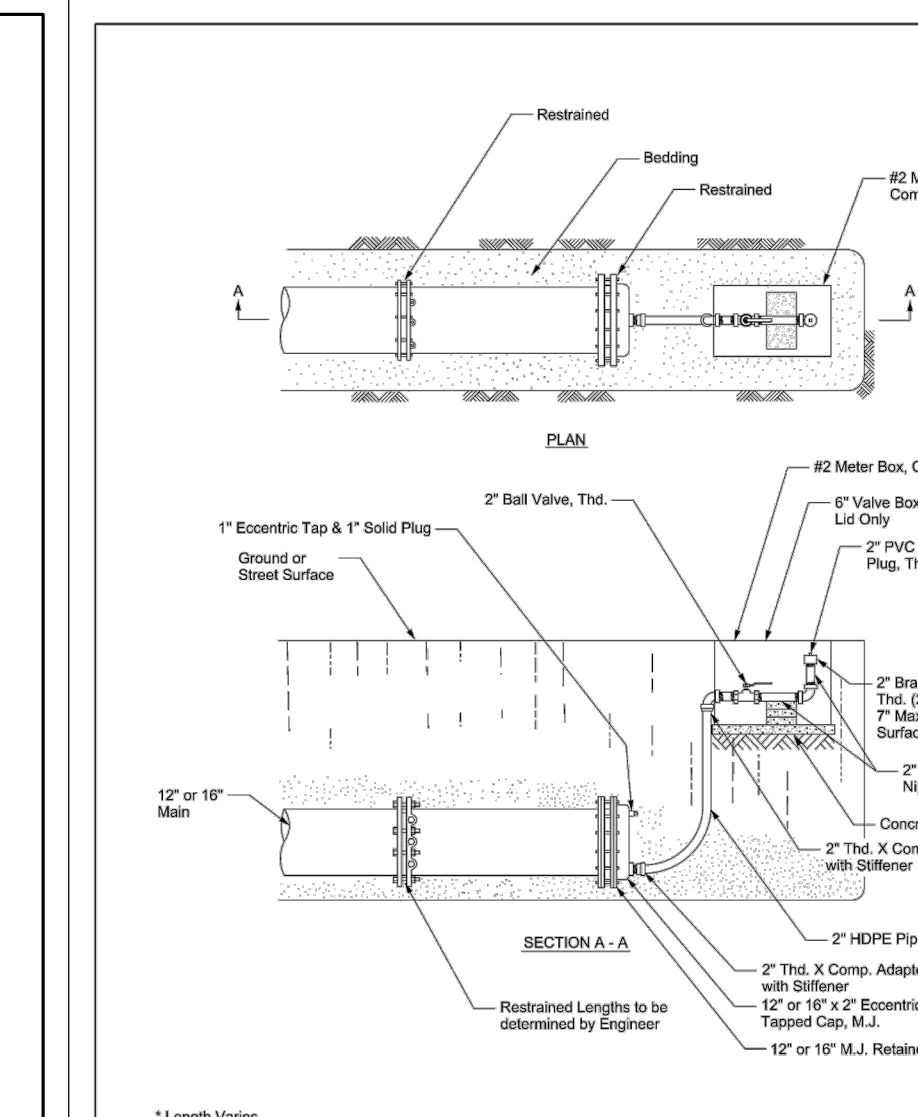
PROPERTY OF	RESTRAINED LENGTHS	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM	FOR VERTICAL OFFSETS	March 2008	August 2019
SAN ANTONIO, TEXAS	FOR VERTICAL OFFSETS	DD-839-06	SHEET 1 OF 1



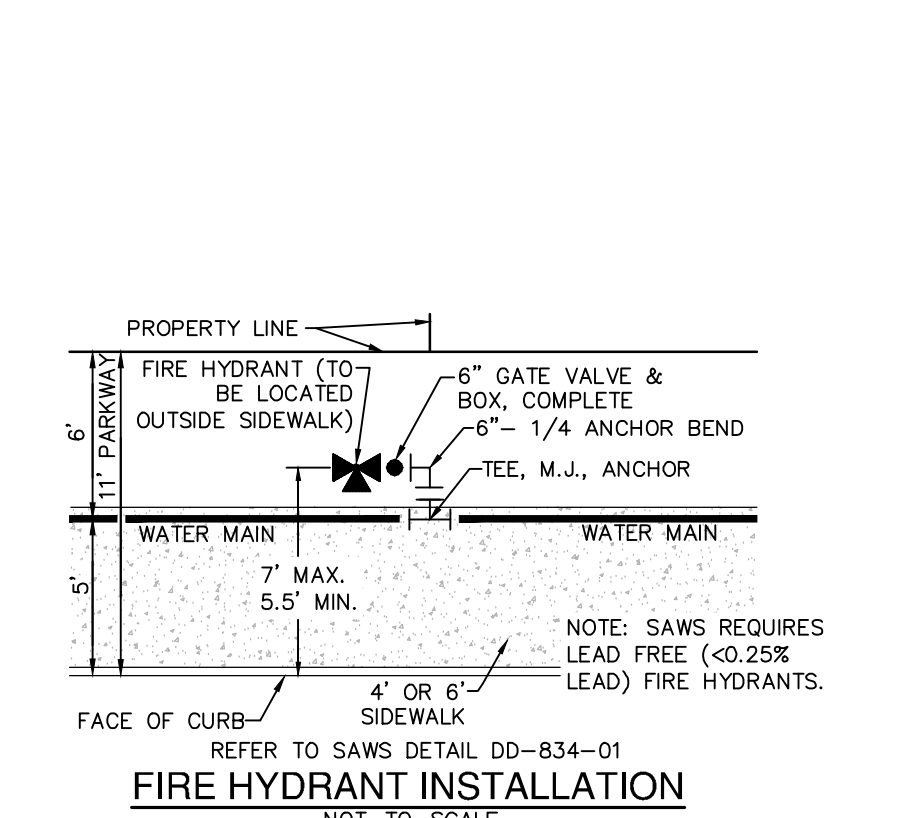
PROPERTY OF	RESTRAINED LENGTHS	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM	FOR REDUCERS	March 2008	August 2019
SAN ANTONIO, TEXAS	FOR REDUCERS	DD-839-07	SHEET 1 OF 1



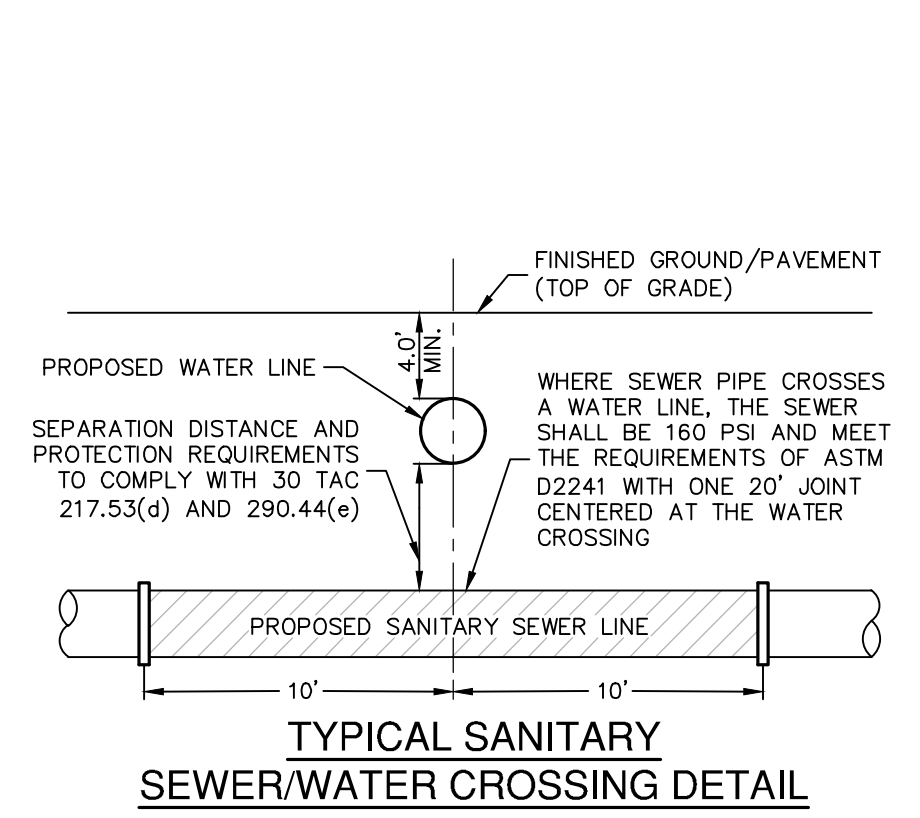
PROPERTY OF	RESTRAINED LENGTHS	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM	FOR HORIZONTAL BENDS	March 2008	August 2019
SAN ANTONIO, TEXAS	FOR HORIZONTAL BENDS	DD-839-08	SHEET 1 OF 1



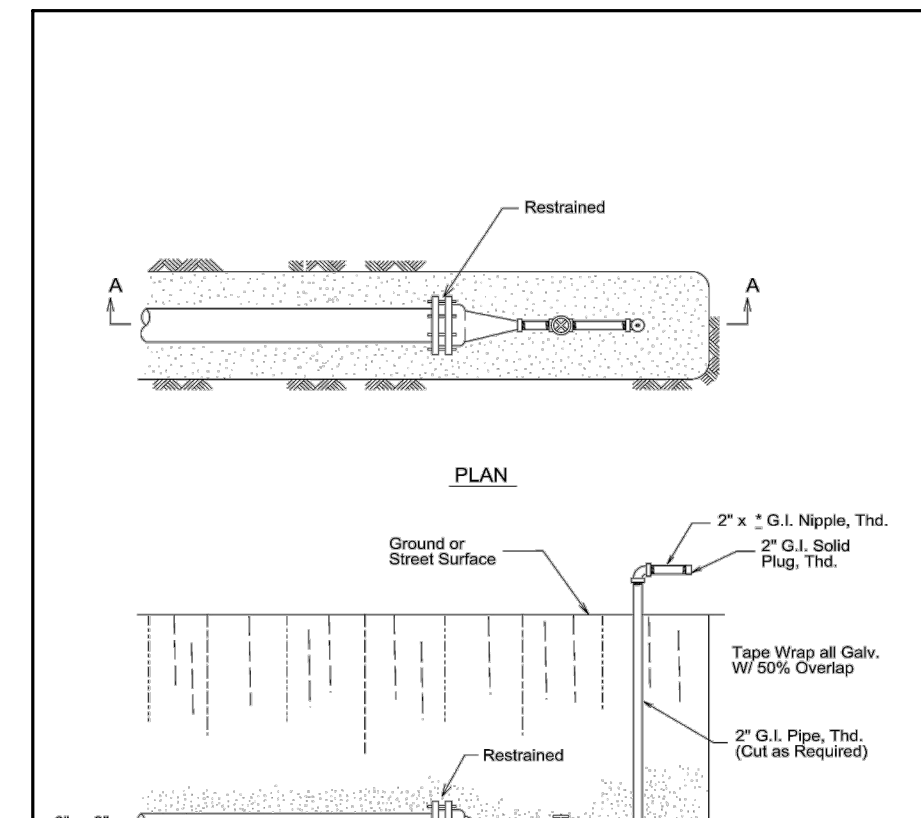
PROPERTY OF	RESTRAINED LENGTHS	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM	FOR 12" & 16" MAINS	March 2008	August 2019
SAN ANTONIO, TEXAS	FOR 12" & 16" MAINS	DD-844-02	SHEET 1 OF 3



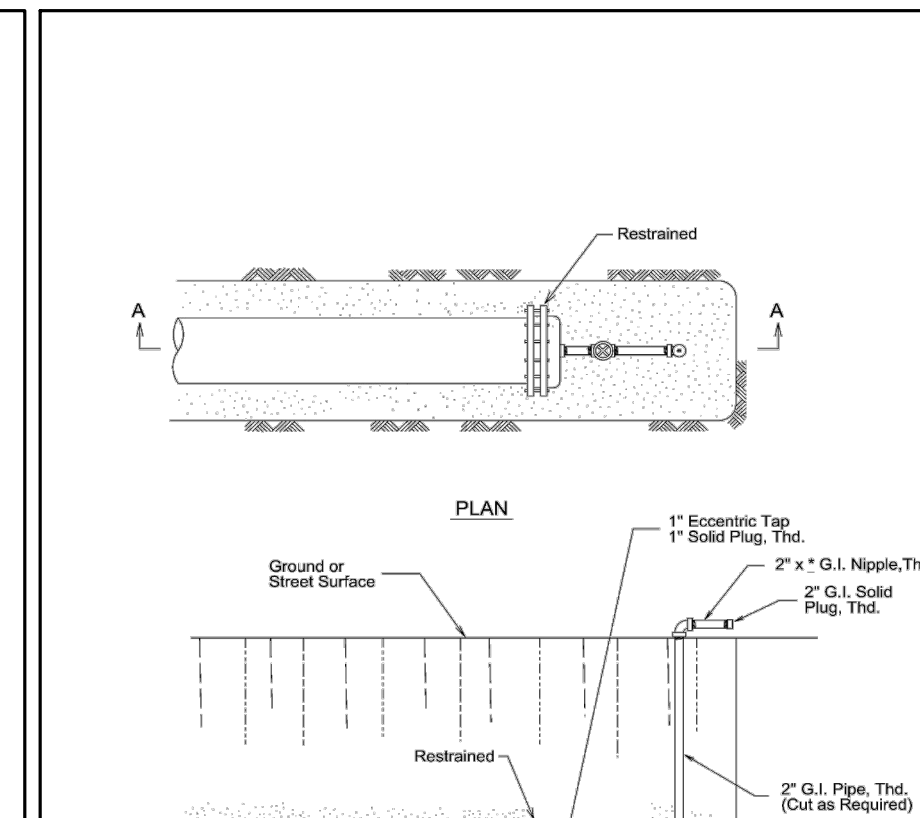
PROPERTY OF	FIRE HYDRANT INSTALLATION	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM	FIRE HYDRANT INSTALLATION	March 2008	August 2019
SAN ANTONIO, TEXAS	FIRE HYDRANT INSTALLATION	DD-834-01	SHEET 1 OF 1



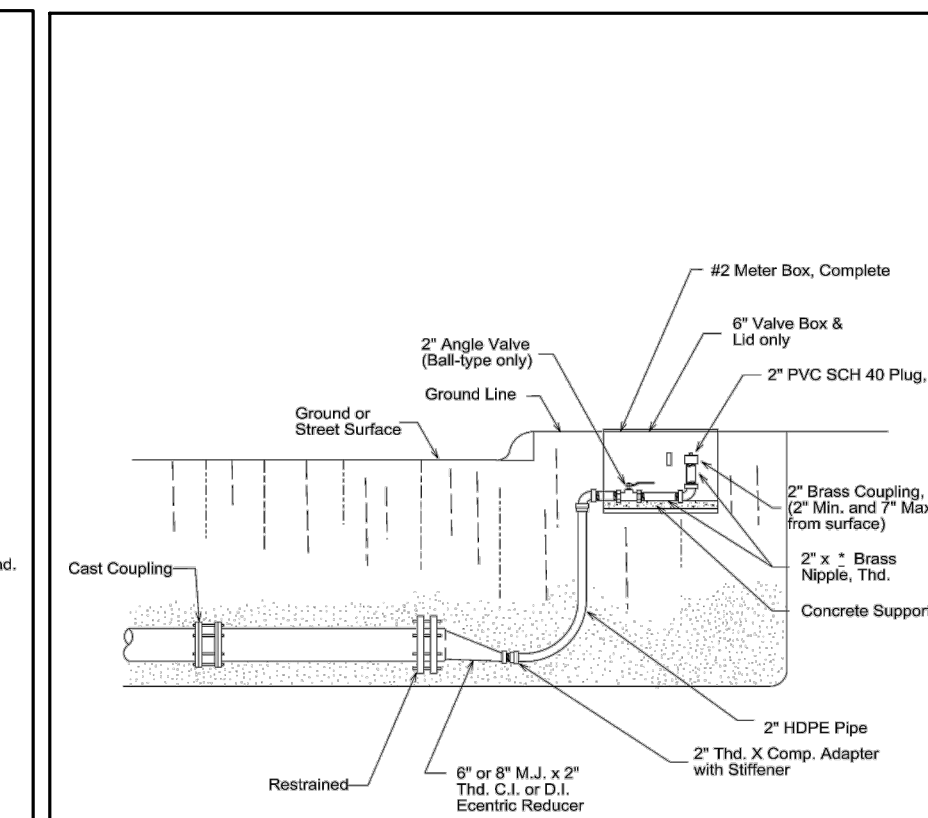
PROPERTY OF	TYPICAL SANITARY SEWER/WATER CROSSING DETAIL	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM	TYPICAL SANITARY SEWER/WATER CROSSING DETAIL	March 2008	August 2019
SAN ANTONIO, TEXAS	TYPICAL SANITARY SEWER/WATER CROSSING DETAIL	DD-844-01	SHEET 1 OF 4



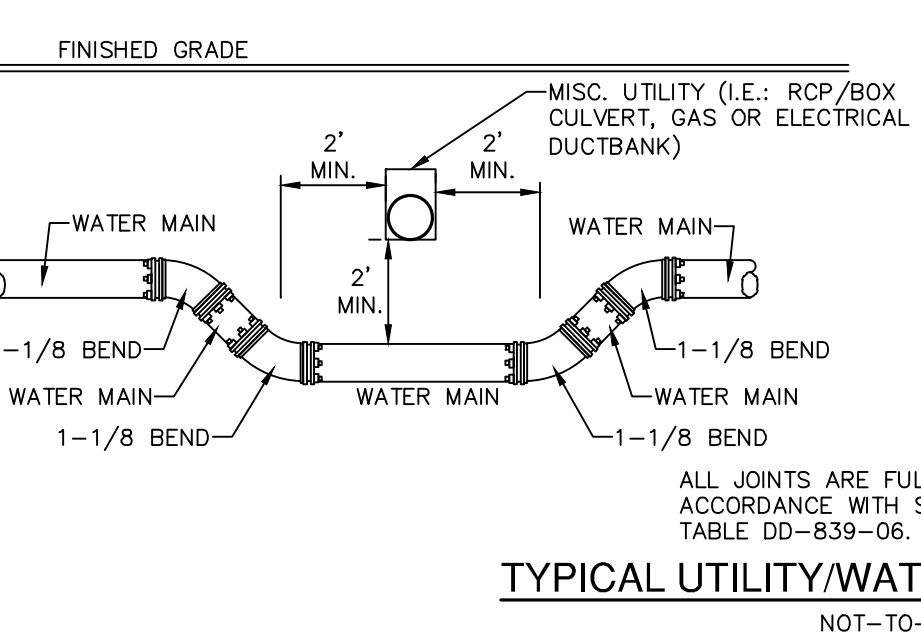
PROPERTY OF	TYPICAL SANITARY SEWER/WATER CROSSING DETAIL	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM	TYPICAL SANITARY SEWER/WATER CROSSING DETAIL	March 2008	August 2019
SAN ANTONIO, TEXAS	TYPICAL SANITARY SEWER/WATER CROSSING DETAIL	DD-844-01	SHEET 1 OF 4



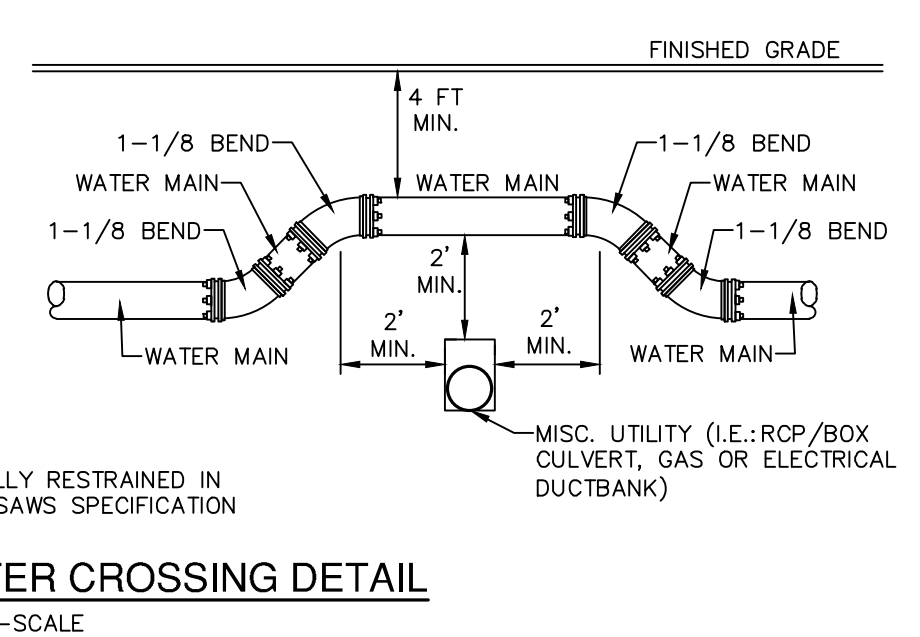
PROPERTY OF	TYPICAL SANITARY SEWER/WATER CROSSING DETAIL	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM	TYPICAL SANITARY SEWER/WATER CROSSING DETAIL	March 2008	August 2019
SAN ANTONIO, TEXAS	TYPICAL SANITARY SEWER/WATER CROSSING DETAIL	DD-844-01	SHEET 2 OF 4



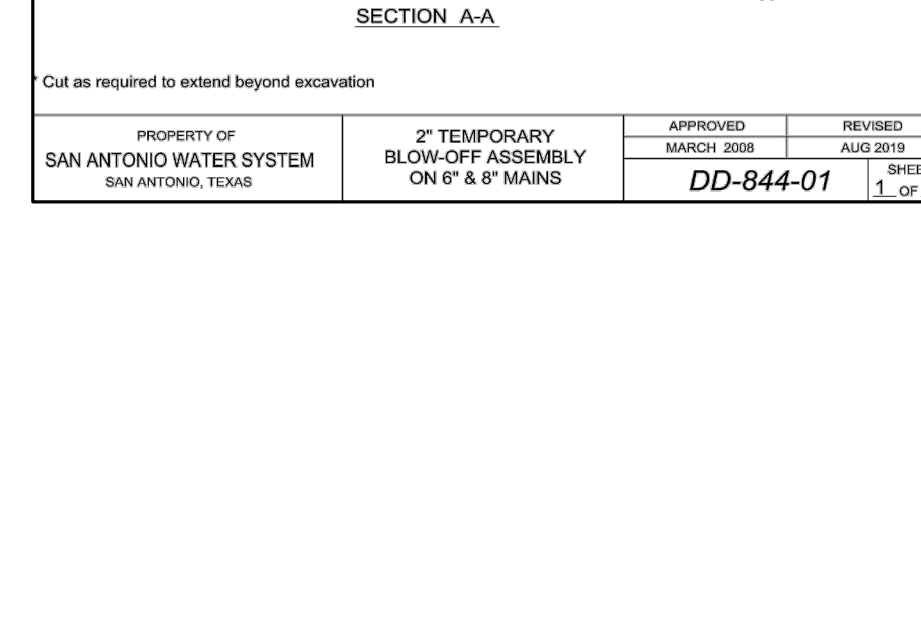
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SAN ANTONIO WATER SYSTEM	TYPICAL SANITARY SEWER/WATER CROSSING DETAIL	March 2008	August 2019
SAN ANTONIO, TEXAS	TYPICAL SANITARY SEWER/WATER CROSSING DETAIL	DD-844-02	SHEET 3 OF 5



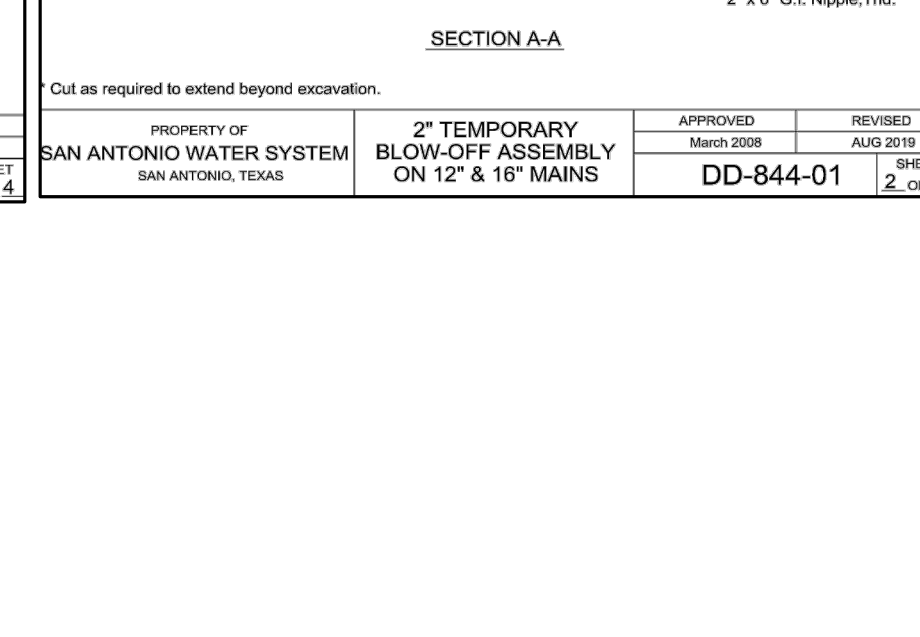
PROPERTY OF	TYPICAL UTILITY/WATER CROSSING DETAIL	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM	TYPICAL UTILITY/WATER CROSSING DETAIL	March 2008	August 2019
SAN ANTONIO, TEXAS	TYPICAL UTILITY/WATER CROSSING DETAIL	DD-844-01	SHEET 1 OF 4



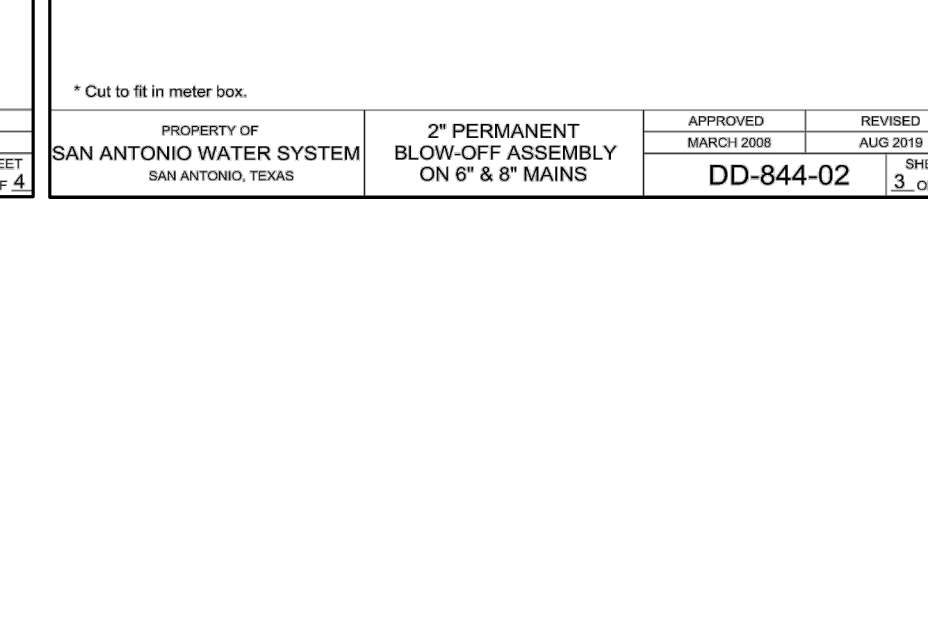
PROPERTY OF	TYPICAL UTILITY/WATER CROSSING DETAIL	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM	TYPICAL UTILITY/WATER CROSSING DETAIL	March 2008	August 2019
SAN ANTONIO, TEXAS	TYPICAL UTILITY/WATER CROSSING DETAIL	DD-844-01	SHEET 2 OF 4



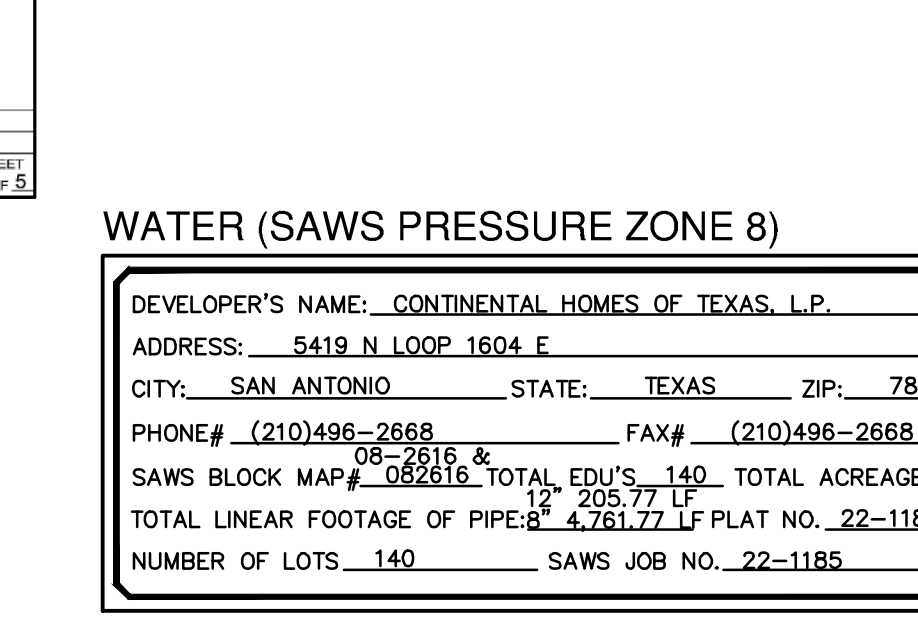
PROPERTY OF	TYPICAL UTILITY/WATER CROSSING DETAIL	APPROVED	REVISED
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SAN ANTONIO, TEXAS	TYPICAL UTILITY/WATER CROSSING DETAIL	DD-844-01	SHEET 3 OF 4



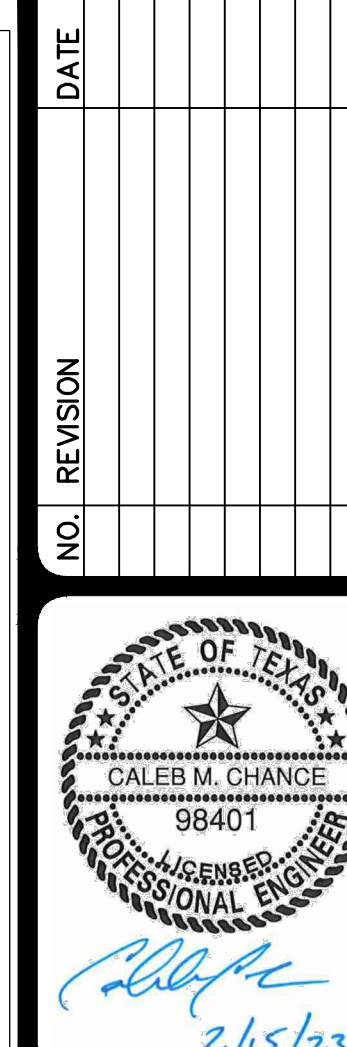
PROPERTY OF	TYPICAL UTILITY/WATER CROSSING DETAIL	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM	TYPICAL UTILITY/WATER CROSSING DETAIL	March 2008	August 2019
SAN ANTONIO, TEXAS	TYPICAL UTILITY/WATER CROSSING DETAIL	DD-844-01	SHEET 4 OF 4



PROPERTY OF	TYPICAL UTILITY/WATER CROSSING DETAIL	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM	TYPICAL UTILITY/WATER CROSSING DETAIL	March 2008	August 2019
SAN ANTONIO, TEXAS	TYPICAL UTILITY/WATER CROSSING DETAIL	DD-844-02	SHEET 5 OF 5



PROPERTY OF	TYPICAL UTILITY/WATER CROSSING DETAIL	APPROVED	REVISED
SAN ANTONIO WATER SYSTEM	TYPICAL UTILITY/WATER CROSSING DETAIL	March 2008	August 2019
SAN ANTONIO, TEXAS	TYPICAL UTILITY/WATER CROSSING DETAIL	DD-844-02	SHEET 6 OF 6



PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008860

RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS
WATER DISTRIBUTION PLAN DETAILS

PLAT NO.	22-11800470
JOB NO.	11680-55
DATE	AUGUST 2022
DRAWN	CB
CHECKED	BL
SHEET	C4.10

DEVELOPER'S NAME:	CONTINENTAL HOMES OF TEXAS, L.P.
ADDRESS:	5419 N LOOP 1604 E
CITY:	SAN ANTONIO
STATE:	TEXAS
ZIP:	78218
PHONE:	(210)496-2668
FAX:	(210)496-2668
SAWS BLOCK MAP:	08-2616 & 12-205.77 LP
TOTAL EDU'S:	140
TOTAL ACREAGE:	25.004
TOTAL LINEAR FOOTAGE OF PIPE:	4,761.77 LF
SAWS JOB NO.:	22-11800470

SAWS CONSTRUCTION NOTES
(LAST REVISED JANUARY 2022)

SAWS GENERAL SECTION

1. 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:
- A. 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.
- B. CURRENT TXDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE".
- C. CURRENT "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION".
- D. CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION".
- E. CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM).
2. 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.
3. 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.
4. THE CONTRACTOR IS TO MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION (210) 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.
5. 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.
6. 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 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
7. 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.
8. 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.
9. THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER GOVERNING MUNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES.
10. 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 CONSTWKRREQ@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 CONSTWKRREQ@SAWS.ORG.
11. ANY AND ALL SAWS UTILITY WORK INSTALLED WITHOUT HOLIDAY/WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION.
12. 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.
13. A COPY OF ALL TESTING REPORTS SHALL BE FORWARDED TO SAWS CONSTRUCTION INSPECTION DIVISION.

SAWS WATER NOTES

1. 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
2. ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE PIPE WHICH IS KNOWN TO CONTAIN ASBESTOS-CONTAINING 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".
3. 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)
4. SUITABLE ANCHORAGE/THRUST 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.
5. ALL VALVES SHALL READ "OPEN RIGHT".
6. 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).
7. 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.
8. 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.
9. 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.
10. DIVISION VALVES: DIVISION VALVES SHOWN ON PLANS OR NOT SHOWN ON PLANS BUT FOUND IN THE FIELD SHALL ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF AND ONLY WITH PRIOR WRITTEN APPROVAL OF THE SAWS DIRECTOR OF PRODUCTION AND OPERATIONS AND PROPER COORDINATION WITH ALL SAWS DEPARTMENTS. CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE INSPECTOR A MINIMUM OF TWO WEEKS IN ADVANCE TO START THE COORDINATION PROCESS AND WILL BE INFORMED BY THE INSPECTOR WHEN THE DIVISION VALVE WILL BE OPERATED BY THE SAWS DISTRIBUTION AND COLLECTION STAFF. THE DIVISION VALVE CAN ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF MEMBER NOT THE INSPECTOR OR THE CONTRACTOR. OPERATION OF A DIVISION VALVE WITHOUT THE EXPRESS PRIOR WRITTEN APPROVAL OF THE SAWS DISTRIBUTION AND COLLECTION STAFF WILL CONSTITUTE A MATERIAL BREACH OF ANY WRITTEN SAWS CONTRACT OR PERMIT IN ADDITION TO SUBJECTING THE CONTRACTOR TO LIABILITY FOR ANY AND ALL FINES, FEES, OR OTHER DAMAGES, DIRECT OR CONSEQUENTIAL, THAT MAY ARISE FROM OR BE CAUSED BY THE OPERATION OF THE VALVE WITHOUT PRIOR WRITTEN PERMISSION. PLEASE BE INFORMED THAT THE APPROVAL OF THE OPERATION OR OPENING OR CLOSING OF A DIVISION VALVE CAN TAKE SEVERAL WEEKS FOR APPROVAL. DIVISION VALVES WILL ALSO HAVE A VALVE LID LABELED DIVISION VALVE AND A LOCKING MECHANISM INSTALLED WITH A KEY. THE LOCK AND KEY MECHANISM WILL BE PAID FOR BY THE CONTRACTOR BUT WILL BE INSTALLED BY SAWS DISTRIBUTION AND COLLECTION STAFF.

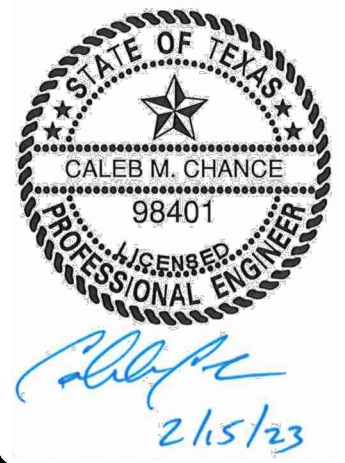
PROJECT WATER NOTES

1. MACHINE CHLORINATION BY THE S.A.W.S.
2. ALL 8", 12" AND 16" PIPE SHALL BE P.V.C. C-900 CLASS 235 DR 18.
3. ALL MAINS SHALL BE HYDROSTATICALLY TESTED BY THE CONTRACTOR, AS PROVIDED FOR IN THE SPECIAL CONDITIONS.
4. THE WATER LINES WILL BE SET FROM THE STREET HUBS BEFORE THIS CONTRACT BEGINS. STREET CUT SHEETS WILL BE SUPPLIED TO THE CONTRACTOR. THERE SHOULD BE NO ADDITIONAL STAKES REQUIRED, AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE SITE AND VERIFY THAT ALL STAKES REQUIRED FOR HIS WORK ARE IN PLACE AT THE TIME THE CONSTRUCTION BEGINS. IF ANY STAKES ARE MISSING THE ENGINEER SHOULD BE NOTIFIED IMMEDIATELY. AFTER CONSTRUCTION BEGINS, ALL CONSTRUCTION STAKES, MARKS, ETC., SHALL BE CAREFULLY PRESERVED BY THE CONTRACTOR, AND IN CASE OF DESTRUCTION OR REMOVAL BY THE CONTRACTOR, HIS EMPLOYEE OR ANY OTHER MEANS, SUCH STAKES, MARKS, ETC., SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
5. THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH ALL THE FINAL MEASUREMENTS, TAPS AND LENGTH OF SERVICE CONNECTIONS.
6. THE LOT CORNERS WILL BE SET BY THE ENGINEER FOR INSTALLATION OF ALL WATER SERVICES. THESE LOT CORNERS SHALL BE CAREFULLY PRESERVED BY THE CONTRACTOR SO THE METER BOXES CAN BE SET IN PHASE II. ANY LOT CORNER DESTROYED OR REMOVED BY THE CONTRACTOR, HIS EMPLOYEES, OR BY ANY OTHER MEANS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
7. STREETS WILL HAVE BEEN EXCAVATED DOWN TO SUBGRADE AND THE PARKWAY WILL BE CUT DOWN TO TOP OF CURB BY THE STREET CONTRACTOR, PRIOR TO CONSTRUCTION OF THE WATER MAINS. IT WILL BE THE UTILITY CONTRACTOR'S RESPONSIBILITY TO PROVIDE A PAD FOR HIS EQUIPMENT.
8. WATER METER BOXES IF APPLICABLE SHALL BE INSTALLED NINE FEET FROM FACE OF CURB TO CENTER OF THE METER BOX.
9. ALL GARBAGE OR SPOIL MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, AT HIS EXPENSE.
10. FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED AND THE S.A.W.S. RELEASES THE MAIN FOR TIE-IN AND USE.
11. UNIT PRICE BID FOR "STANDARD FIRE HYDRANT ASSEMBLY" SHALL INCLUDE FIRE HYDRANT, 6-INCH GATE VALVE AND 6-INCH VALVE BOX COMPLETE, ANCHOR BEND, AND ALL 6-INCH DI PIPE REQUIRED (DI PIPE REQUIRED SHALL INCLUDE ALL PIPE FROM THE TEE ON THE MAIN LINE TO THE FIRE HYDRANT).
12. WHEN SEWER LINES ARE INSTALLED IN THE VICINITY OF WATER MAINS, SUCH INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE TEXAS NATURAL RESOURCE CONSERVATION COMMISSION "RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS" (1988 OR ANY REVISIONS THERETO).
13. A CLEAR SPACE SHALL BE PROVIDED AROUND ALL FIRE HYDRANTS. THIS AREA SHOULD HAVE A MINIMUM DIAMETER OF 3.0' AND BE CLEAN OF VERTICAL OBSTRUCTIONS, VALVES, AND METER BOXES.
14. SAWS REQUIRES LEAD FREE (< 0.25%) FIRE HYDRANTS.
15. UNLESS OTHERWISE NOTED ALL SERVICES SHALL BE 3/4" WITH 5/8" METER.

WATER (SAWS PRESSURE ZONE 8)

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.			
ADDRESS: 5419 N LOOP 1604 E			
CITY: SAN ANTONIO	STATE: TEXAS	ZIP: 78218	
PHONE# (210)496-2668	FAX# (210)496-2668		
SAWS BLOCK MAP# 082616 TOTAL EDU'S 140 TOTAL ACREAGE 25.004			
TOTAL LINEAR FOOTAGE OF PIPE: 8" 4,761.77 LF PLAT NO. 22-11800470			
NUMBER OF LOTS 140	SAWS JOB NO. 22-1185		

DATE	NO.	REVISION



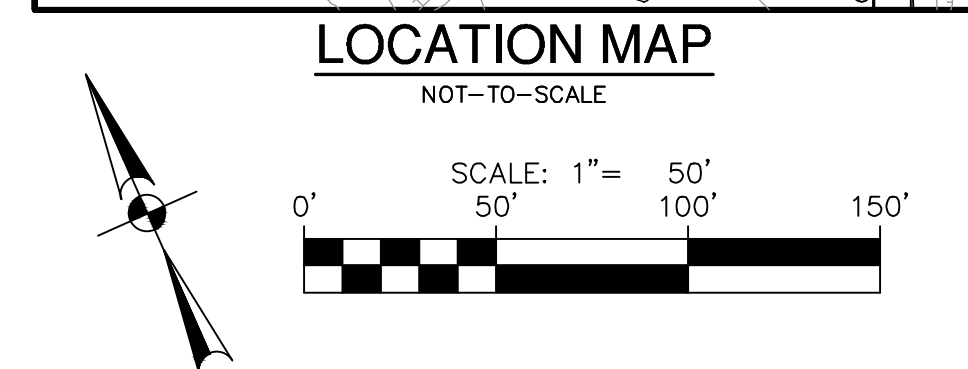
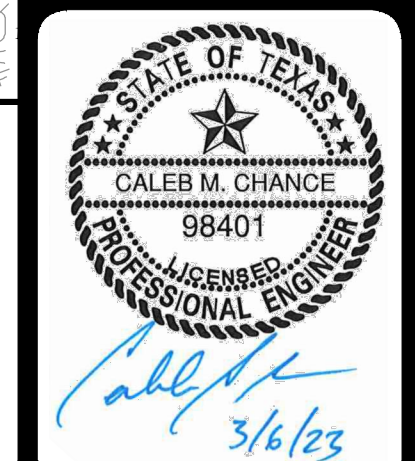
**PAPE-DAWSON
ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008860

RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS

WATER DISTRIBUTION PLAN NOTES

PLAT NO.	22-11800470
JOB NO.	11680-55
DATE	AUGUST 2022
DESIGNER	CB
CHECKED	BL DRAWN CB
SHEET	C4.11

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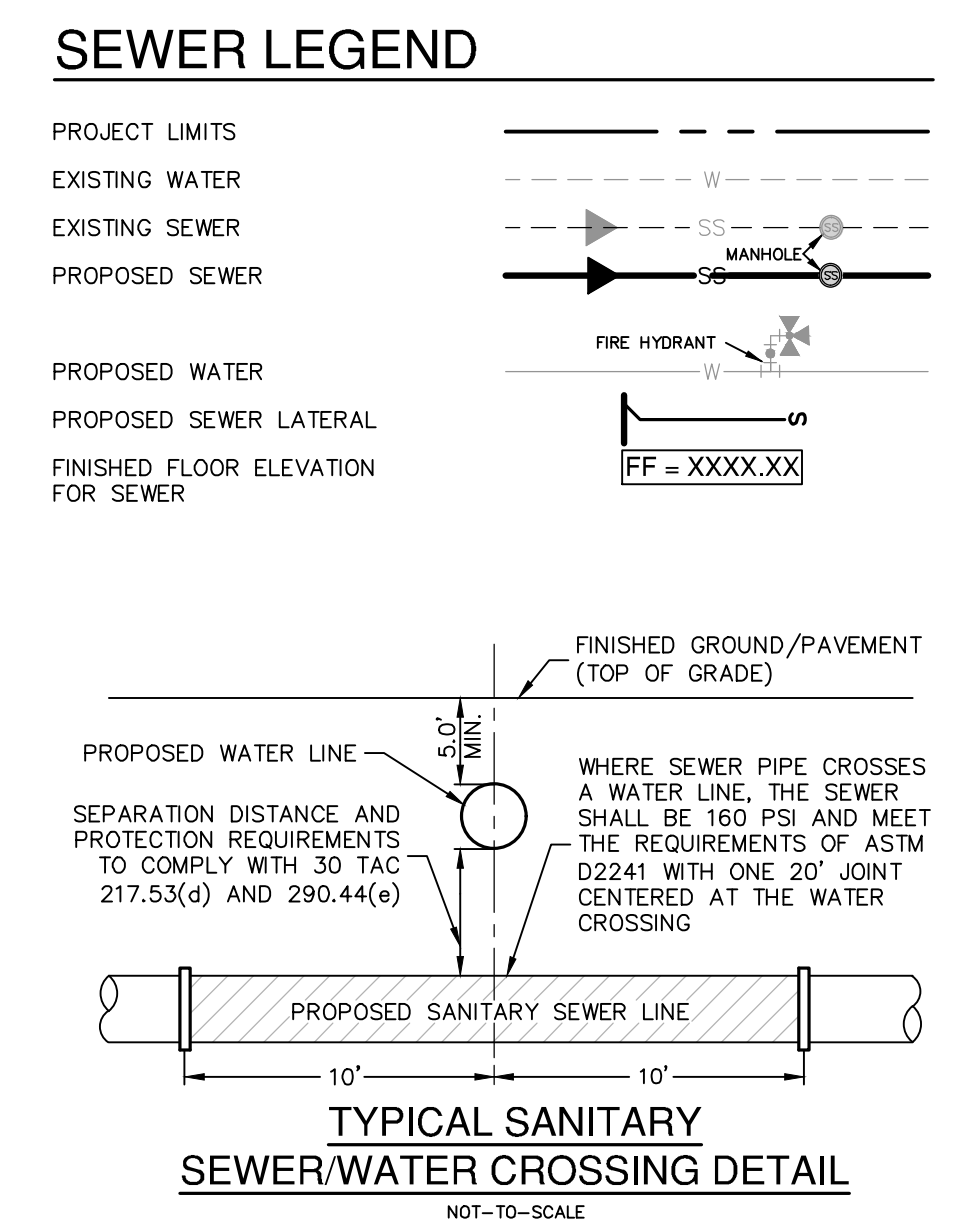
**PAPE-DAWSON
ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78212 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1029890

RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS

OVERALL SANITARY SEWER PLAN

PLAT NO. 22-11800470
JOB NO. 11680-55
DATE AUGUST 2022
DESIGNER CB
CHECKED BL DRAWN CB
SHEET C5.00



CAUTION!!

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRIC, LANDLINE, IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TELE A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

ROW PERMIT NOTE:

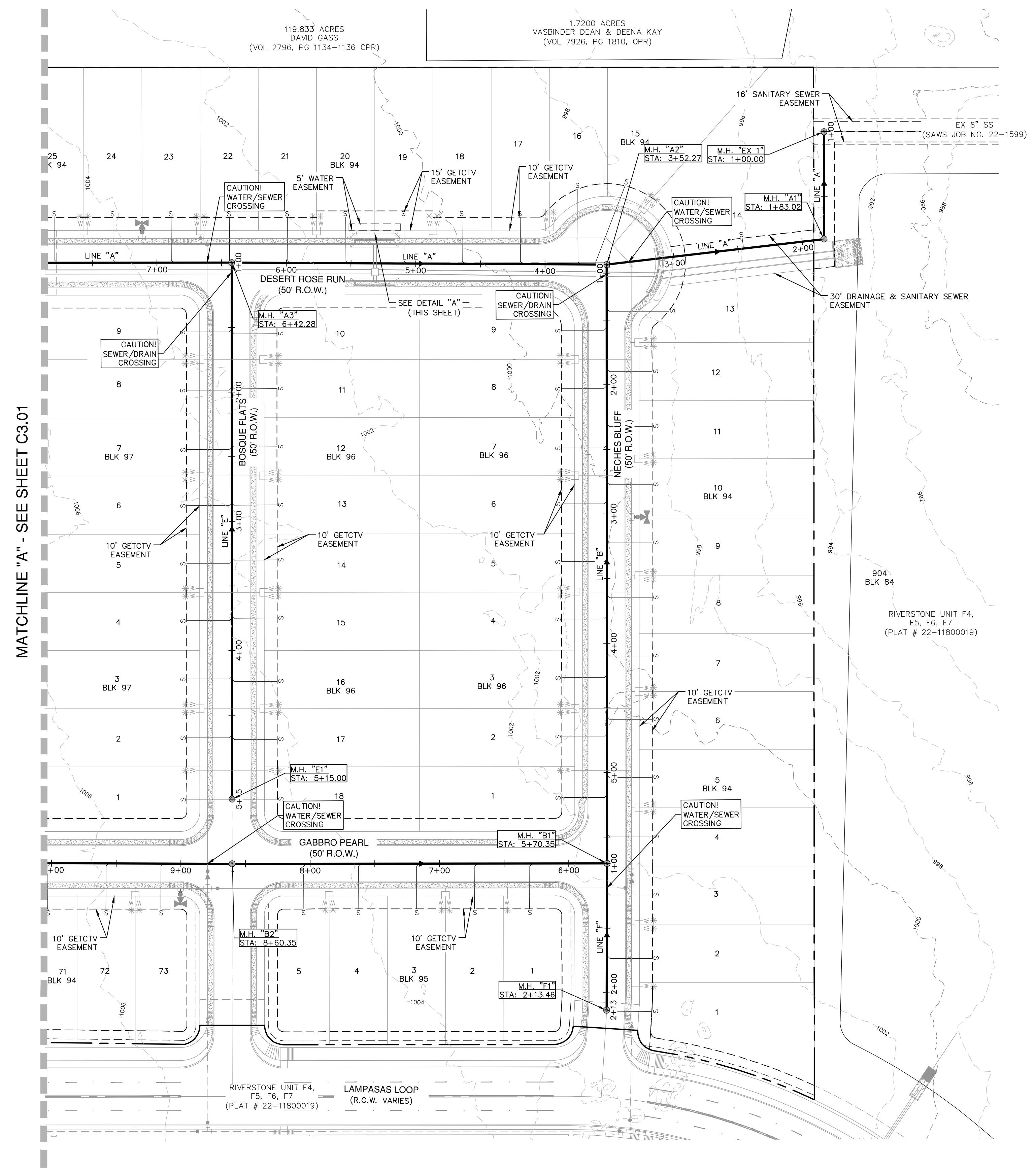
A BEYAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEYAR COUNTY RIGHTS-OF-WAY.

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND /OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYER OR STRUCTURAL DESIGNER/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTI-PANAMA INSTALLATION SITE 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 THE 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 TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

SEWER

DEVELOPER'S NAME: <u>CONTINENTAL HOMES OF TEXAS, L.P.</u>	
ADDRESS: <u>5419 N LOOP 1604 E</u>	
CITY: <u>SAN ANTONIO</u>	STATE: <u>TEXAS</u> ZIP: <u>78218</u>
PHONE# <u>(210)496-2668</u>	FAX# <u>(210)496-2668</u>
08-2616 &	
SAWS BLOCK MAP# <u>125X1</u> TOTAL EDU'S <u>140</u> TOTAL ACREAGE <u>25.004</u>	
TOTAL LINEAR FOOTAGE OF PIPE: <u>8" 4,665.65 LF</u> PLAT NO. <u>22-11800470</u>	
NUMBER OF LOTS <u>140</u>	SAWS JOB NO. <u>22-1679</u>



MATCHLINE "A" - SEE SHEET C3.01

71 BLK 94

72 1006

73

74 1004

75 1004

76 1004

77 1004

78 1004

79 1004

80 1004

81 1004

82 1004

83 1004

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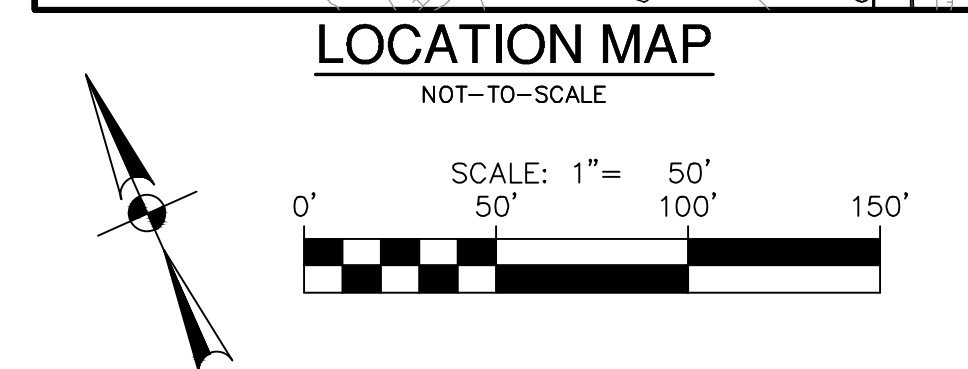
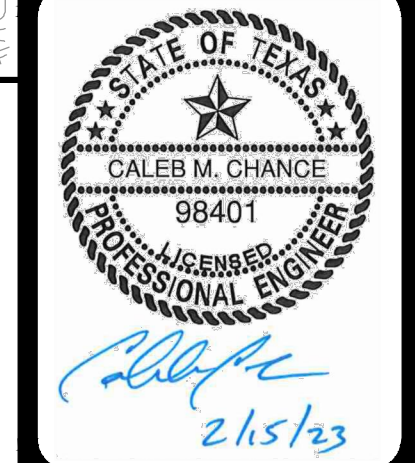
RIVERSTONE UNIT F4, F5, F6, F7 (PLAT # 22-11800019)

LAMPASAS LOOP (R.O.W. VARIES)

M.H. #F1 STA: 2+13.46

2+13 2+40

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PROJECT LIMITS

EXISTING WATER

EXISTING SEWER

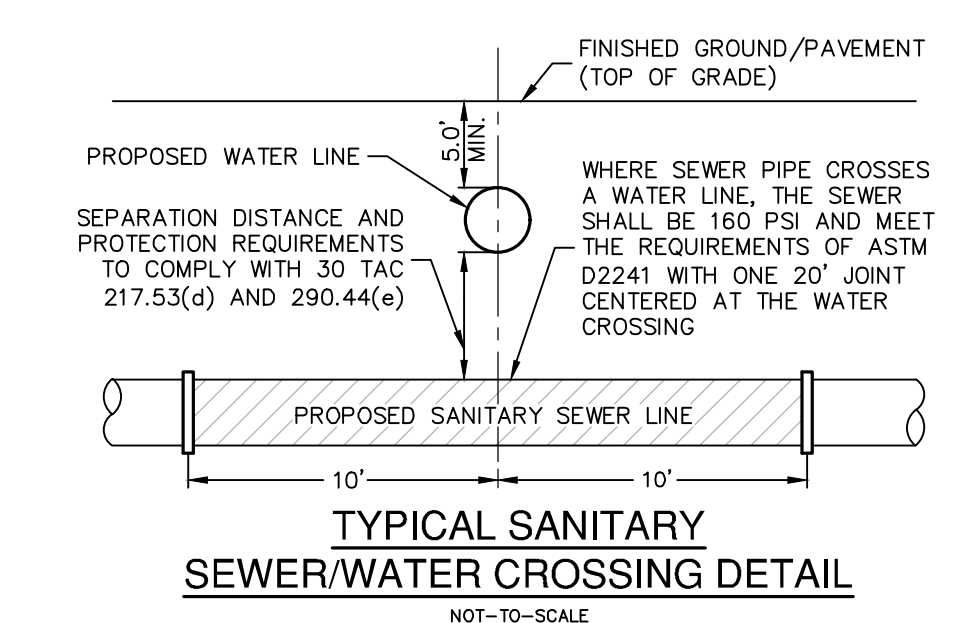
PROPOSED SEWER

PROPOSED WATER

PROPOSED SEWER LATERAL

FINISHED FLOOR ELEVATION FOR SEWER

Diagram showing a cross-section of a sewer line profile. The profile includes a main sewer line with a manhole, a fire hydrant, and a proposed sewer lateral. The profile is labeled with 'SS' (Solid Set) and 'SC' (Sewer Connection). The profile is shown in relation to the existing water level (W) and the existing sewer line (SS). The profile is also shown in relation to the proposed water level (W) and the proposed sewer lateral (SC). The profile is labeled with 'FF = XXXX.XX' indicating the finished floor elevation for the sewer.



TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYER OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANTS SHALL PROVIDE THE PROJECT WITH ANY AND ALL NECESSARY 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. THE DESIGNED CONSULTING DOCUMENTS SHALL INCLUDE 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 EMPLOYER OR SAFETY CONSULTANT SHALL CONSIDER THE FOLLOWING SAFETY PROGRAMS AND/OR ACTIVITIES WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

SEWER			
DEVELOPER'S NAME: <u>CONTINENTAL HOMES OF TEXAS, L.P.</u>			
ADDRESS: <u>5419 N LOOP 1604 E</u>			
CITY: <u>SAN ANTONIO</u>	STATE: <u>TEXAS</u>	ZIP: <u>78218</u>	
PHONE# <u>(210)496-2668</u>		FAX# <u>(210)496-2688</u>	
SAWS BLOCK MAP# <u>12-251</u> TOTAL EDU'S <u>140</u> TOTAL ACRES <u>25.004</u>			
TOTAL LINEAR FOOTAGE OF PIPE: <u>8' 4,665.65 L.F</u> PLAT NO <u>22-11800470</u>			
NUMBER OF LOTS <u>140</u>		SAWS JOB NO. <u>22-1679</u>	

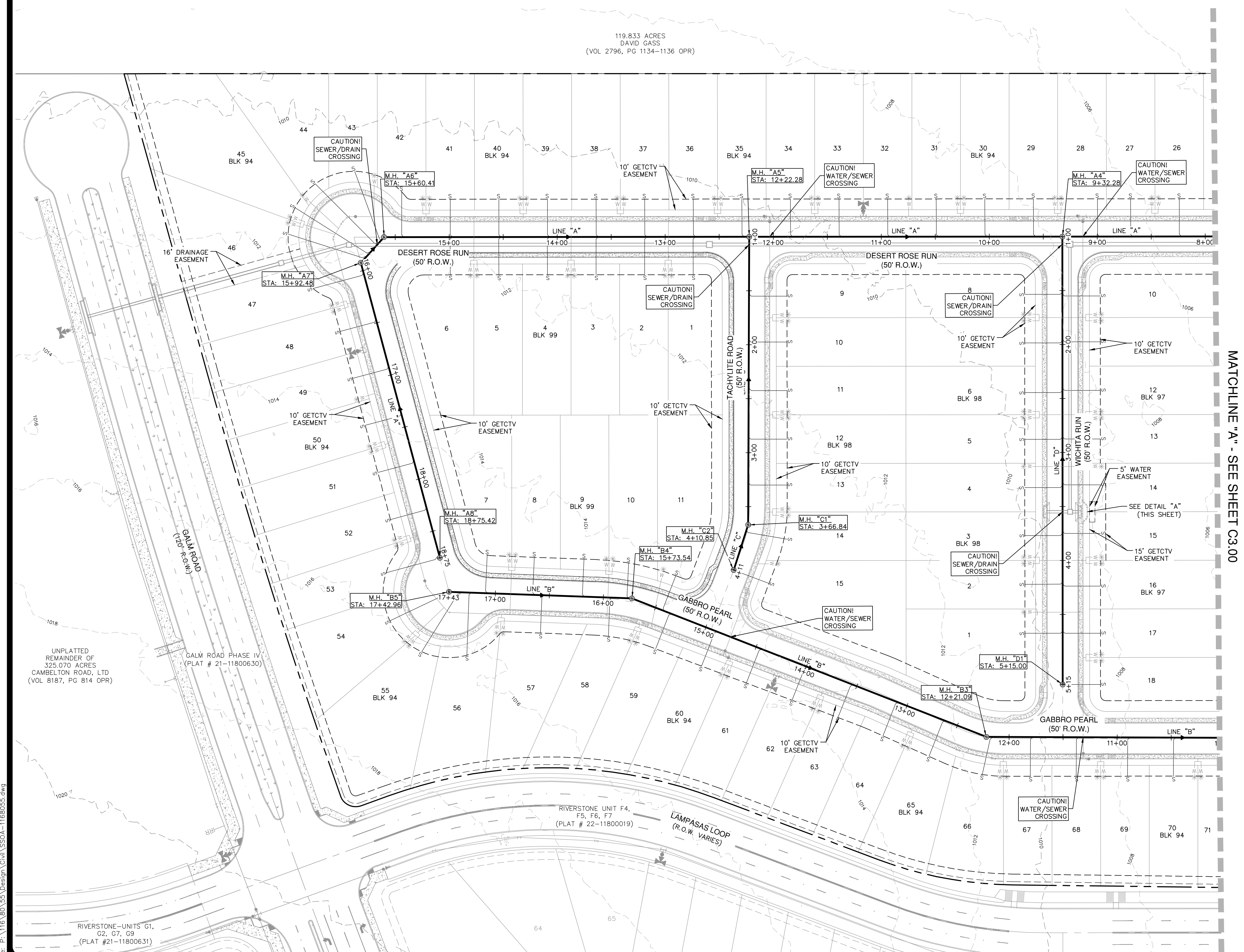
PAPE-DAWSON
PE ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

IVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS

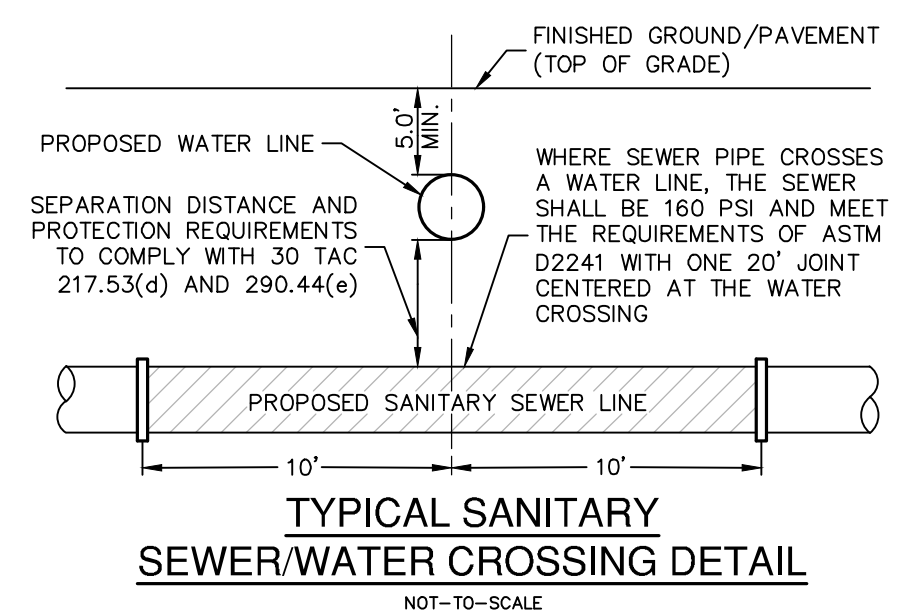
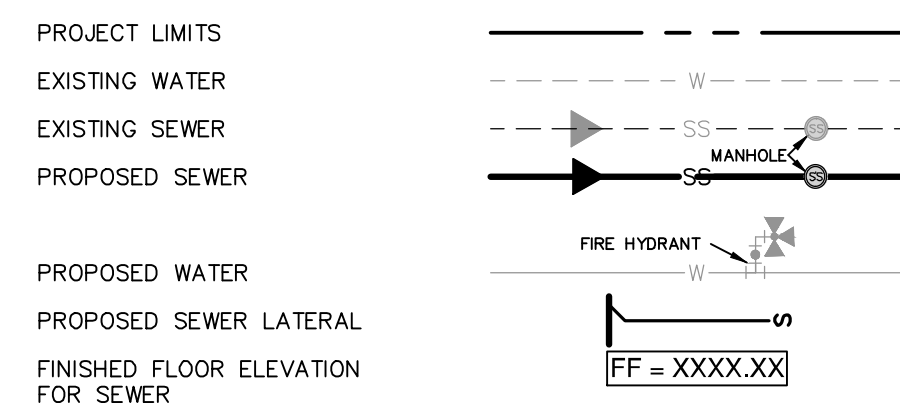
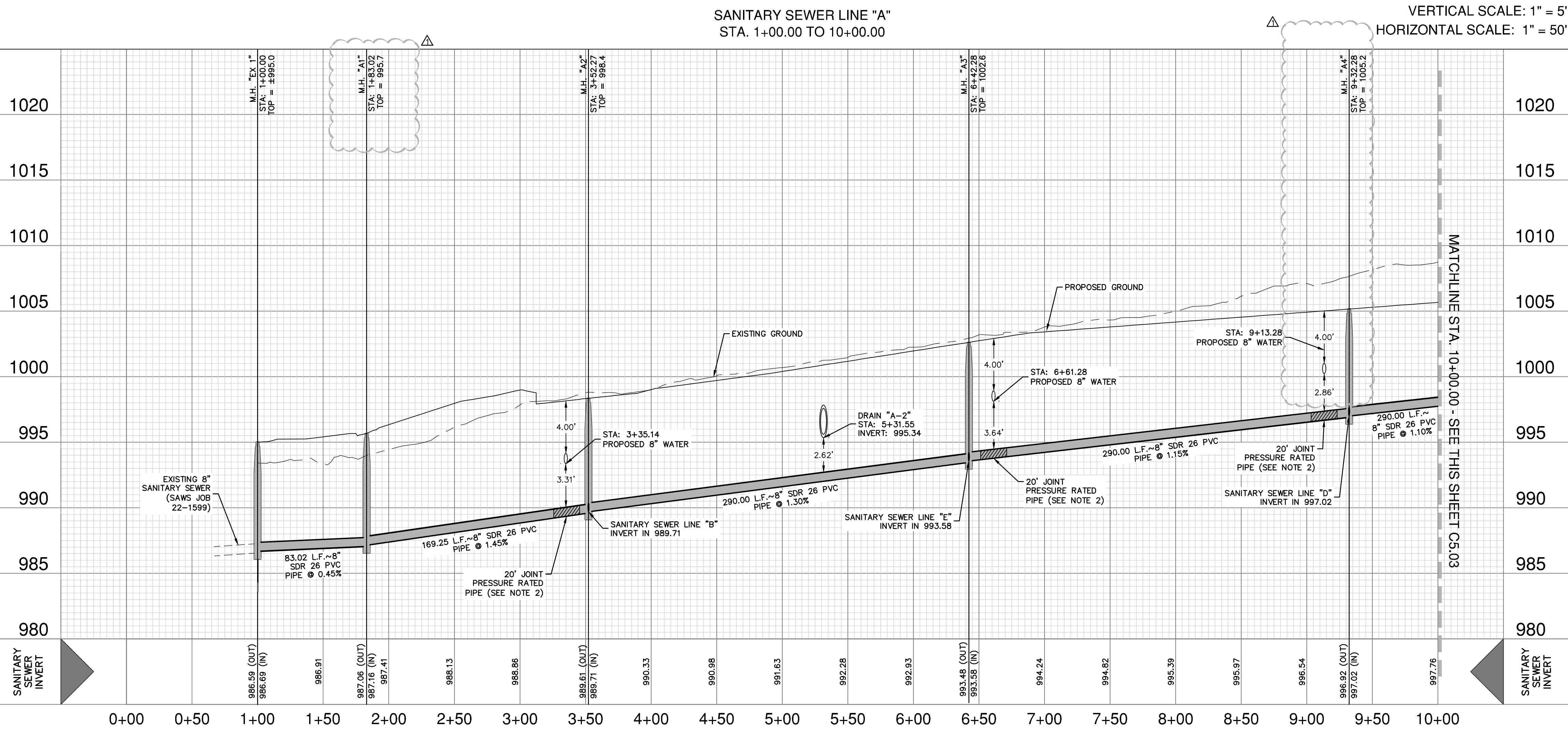
OVERALL SANITARY SEWER PLAN

PLAT NO. 22-11800470
JOB NO. 11680-55
DATE AUGUST 2022
DESIGNER CB
CHECKED BL DRAWN CB
SHEET C5.01



Date: Feb. 15, 2023, 12:38pm User ID: cbrunagio
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CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT THE CITY OF BIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION OF ANY DAMAGE TO EXISTING UTILITIES. SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA. WORK SHALL BE STOPPED IMMEDIATELY UPON REVIEW OF 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 PROTECTION, GEOTECHNICAL AND SAFETY MINIMUMS. CONTRACTOR SHALL STOP FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH THE TRENCH SHIELDING AND PROTECTIVE SYSTEMS ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.
ADDRESS: 5419 N LOOP 1604 F
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78218
PHONE# (210) 496-2668 FAX# (210) 496-2668
^{08-2616 &}
SAWS BLOCK MAP# 129X1 TOTAL EDU'S 140 TOTAL ACREAGE 25.004
TOTAL LINEAR FOOTAGE OF PIPE: 8" 4,666.65 LF PLAT NO. 22-11800470
NUMBER OF LOTS 140 SAWS JOB NO. 22-1679

PAPE-DAWSON
PE ENGINEERS

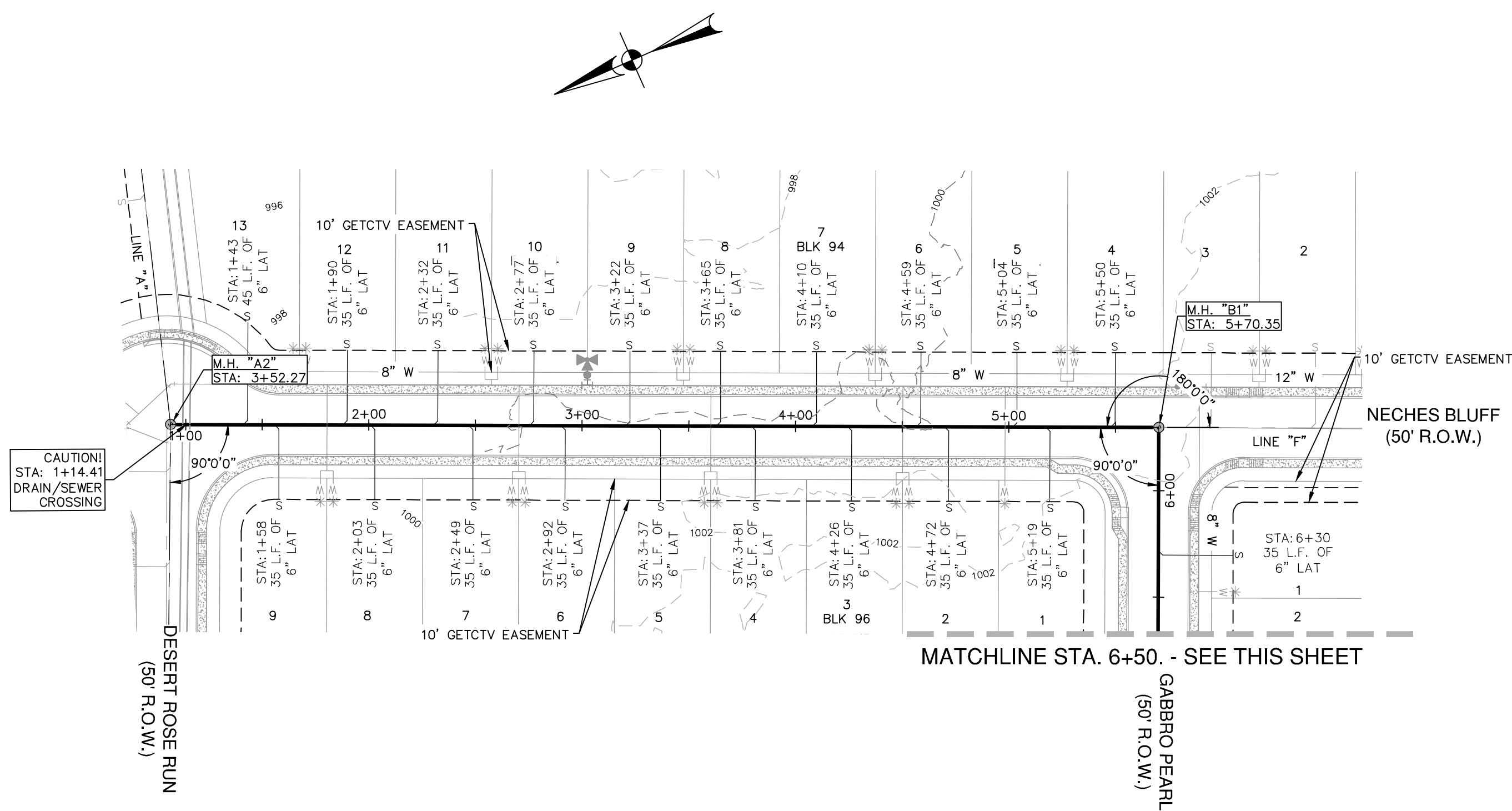
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028600

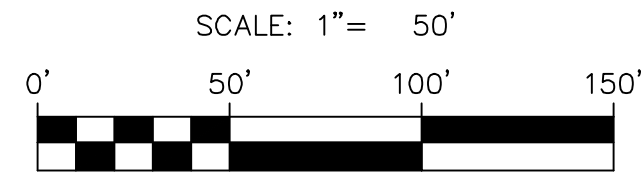
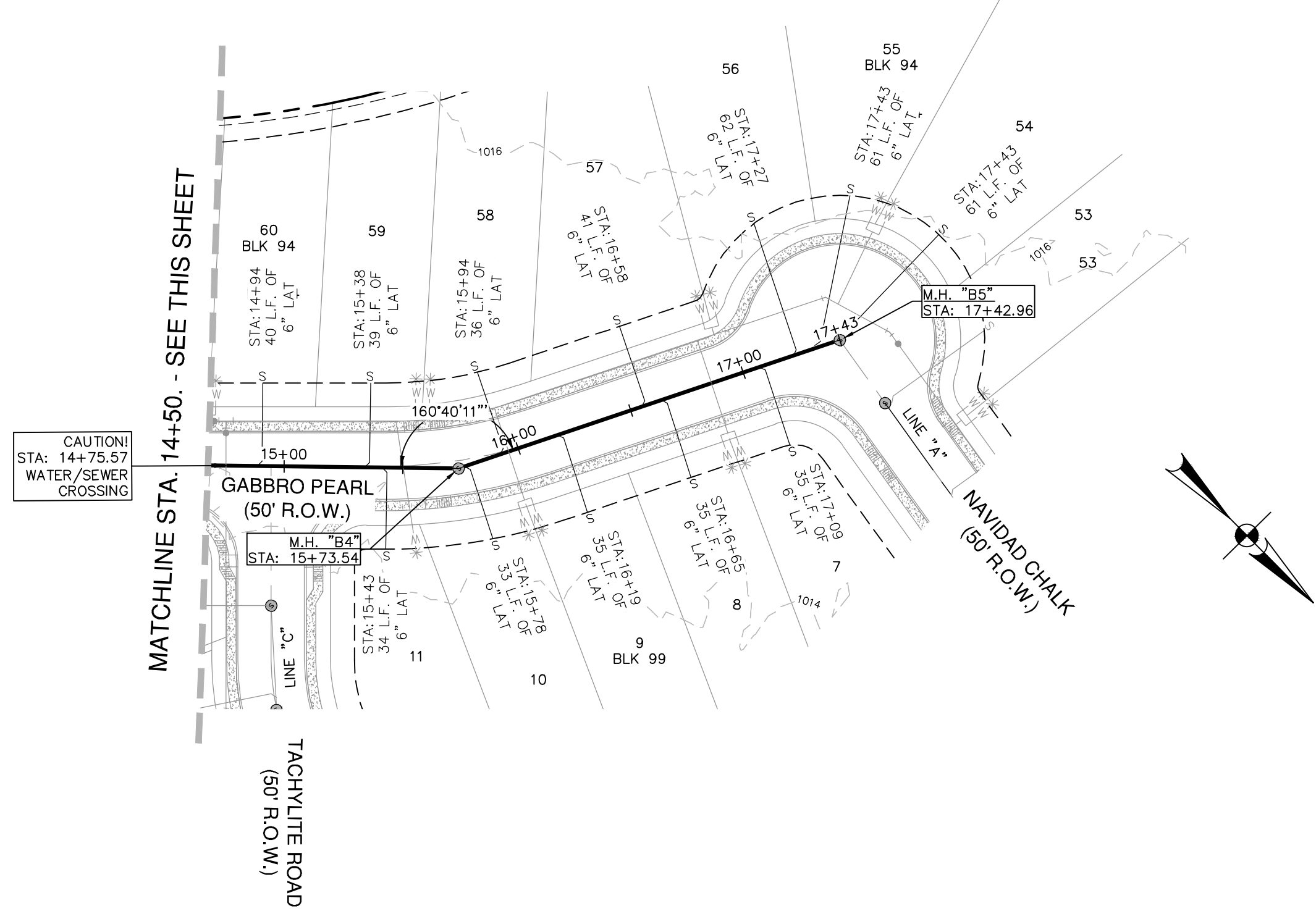
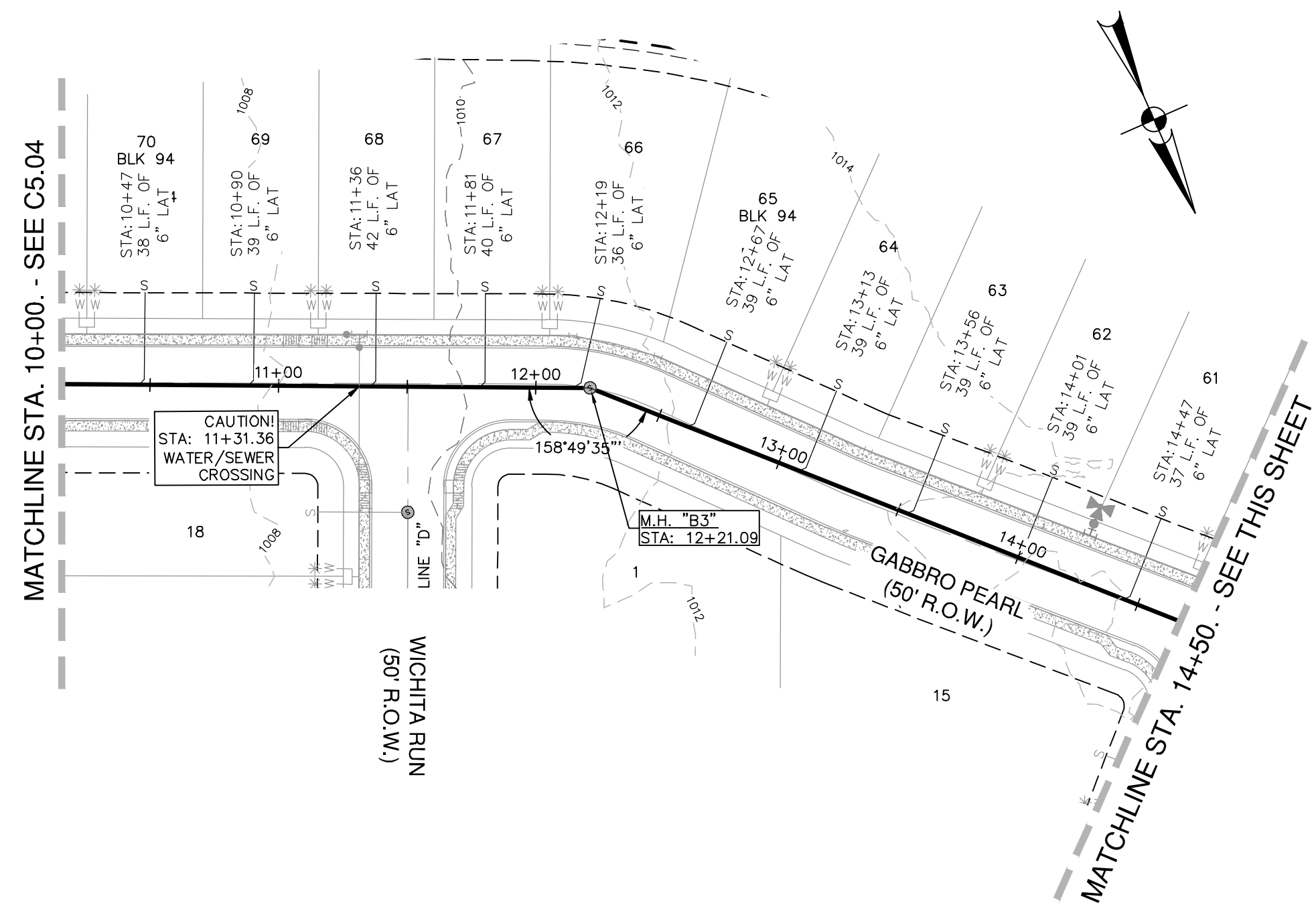
RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS

PLAT NO. 22-11800470
 JOB NO. 11680-55
 DATE AUGUST 2022
 DESIGNER CB
 CHECKED BL DRAWN CB
 SHEET **C5.02**

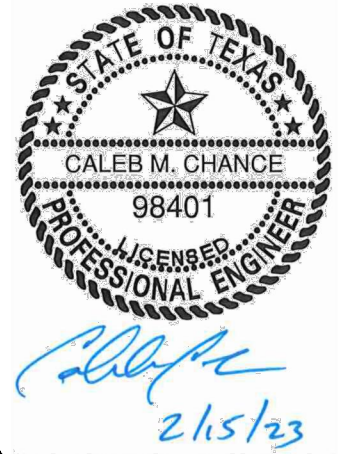
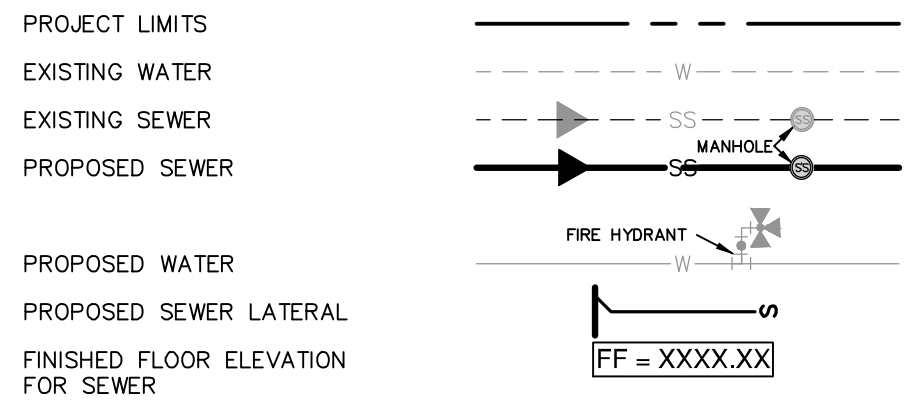
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SEWER LEGEND

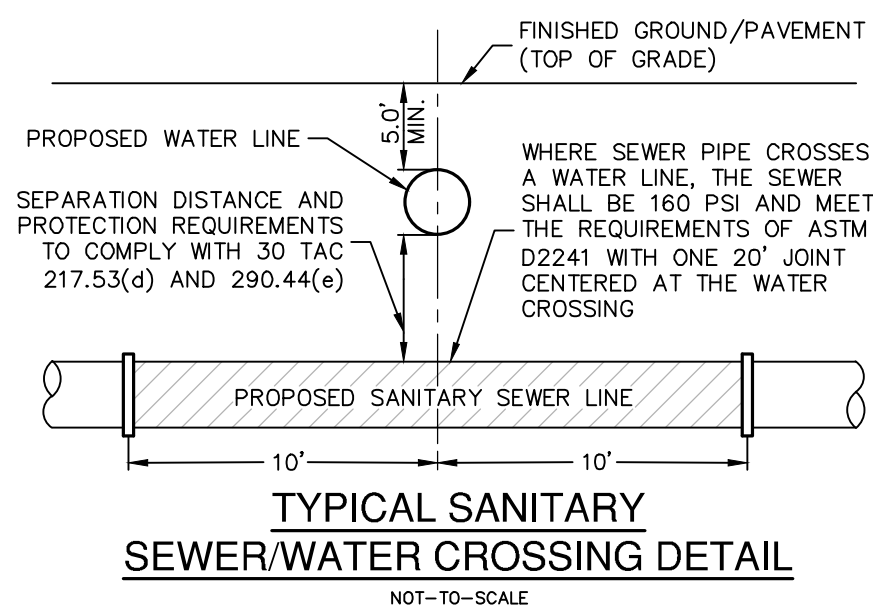
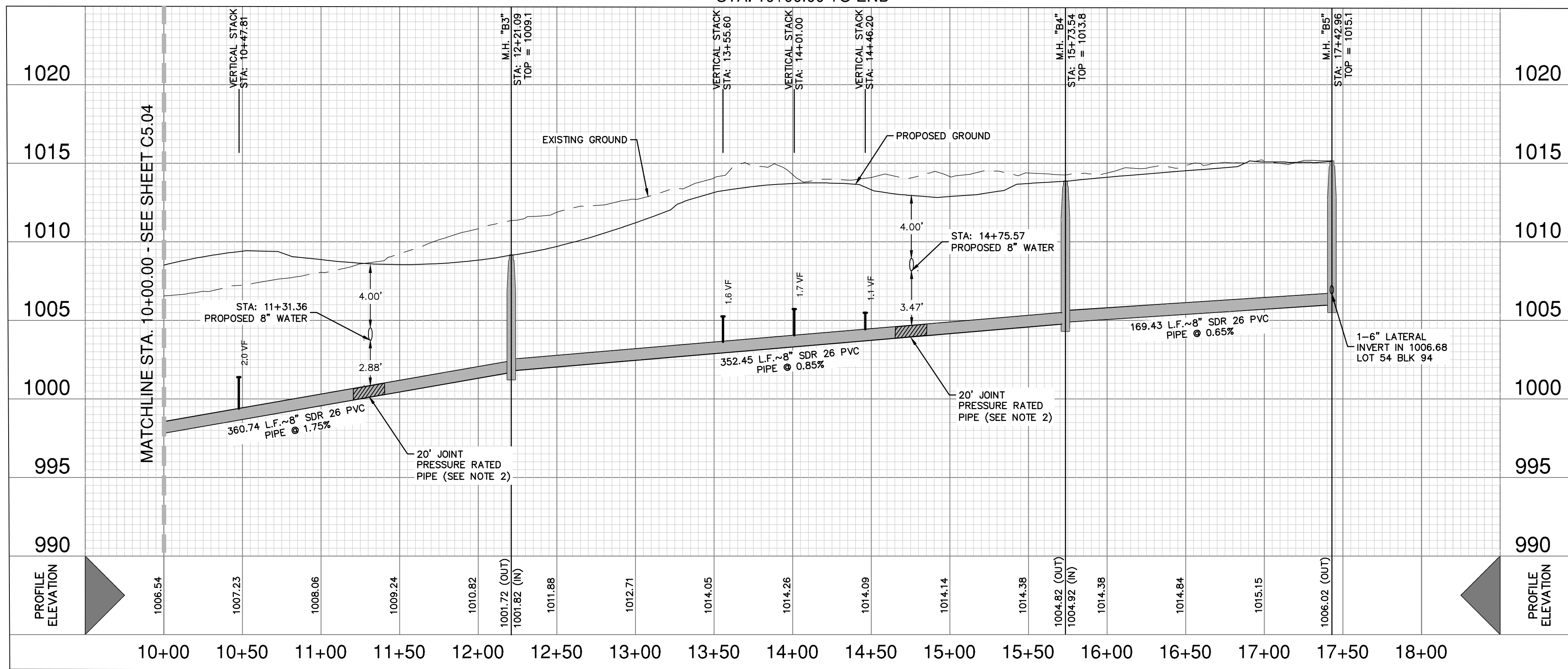


**PAPE-DAWSON
ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
CALEB M. CHANCE
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008860

SANITARY SEWER LINE "B"
STA. 10+00.00 TO END

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



CAUTION!!

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TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY 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.

SEWER

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.
ADDRESS: 5419 N LOOP 1604 E
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78218
PHONE# (210)496-2668 FAX# (210)496-2668
SAWS BLOCK MAP# 12301 & TOTAL EDU'S 140 TOTAL ACREAGE 25.004
TOTAL LINEAR FOOTAGE OF PIPE: 8" 4,665.65 LF PLAT NO. 22-11800470
NUMBER OF LOTS 140 SAWS JOB NO. 22-1679

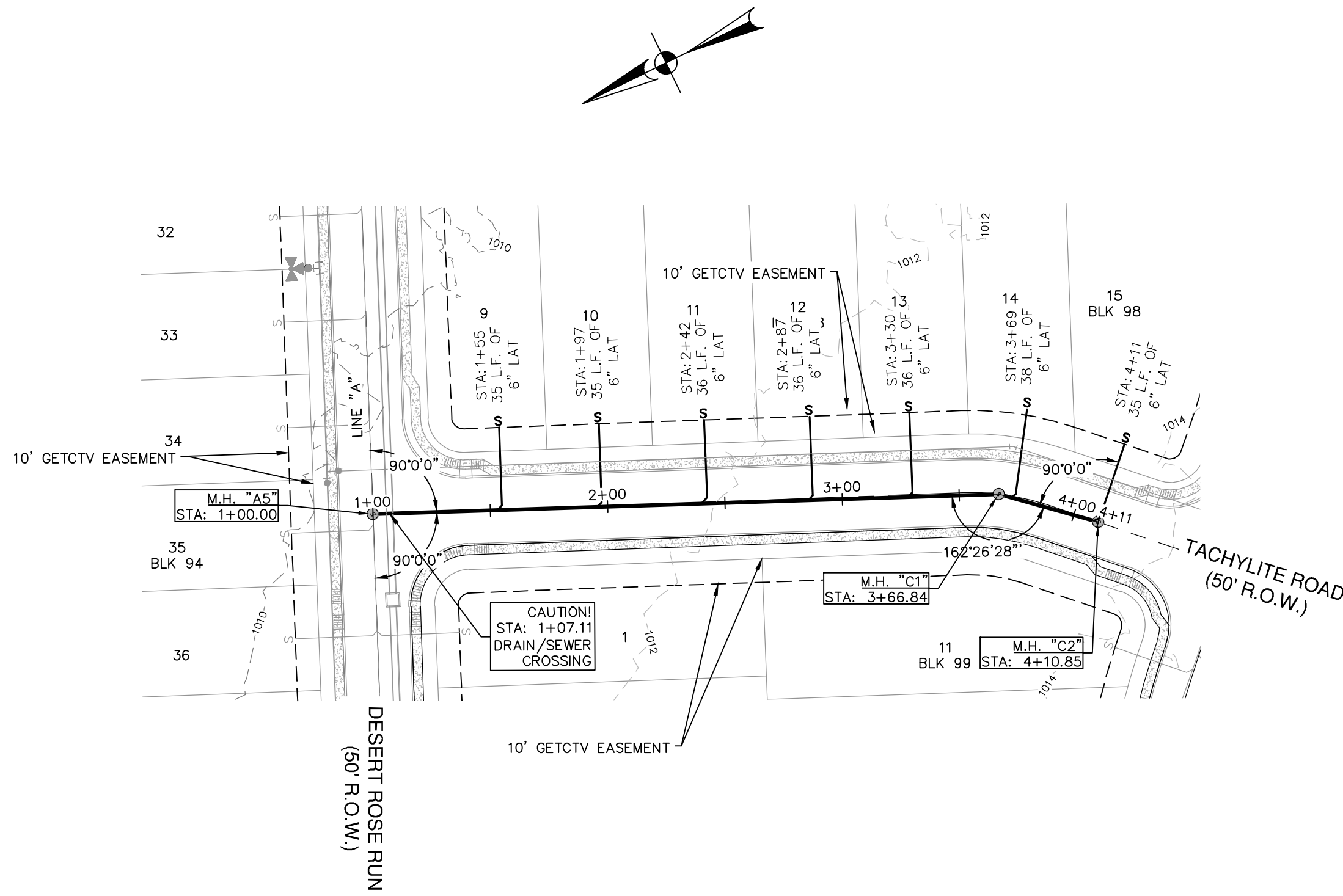
RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS

SANITARY SEWER LINE B PLAN & PROFILE
STA. 10+00.00 TO END

PLAT NO. 22-11800470
JOB NO. 11680-55
DATE AUGUST 2022
DESIGNER CB
CHECKED BL DRAWN CB
SHEET C5.05

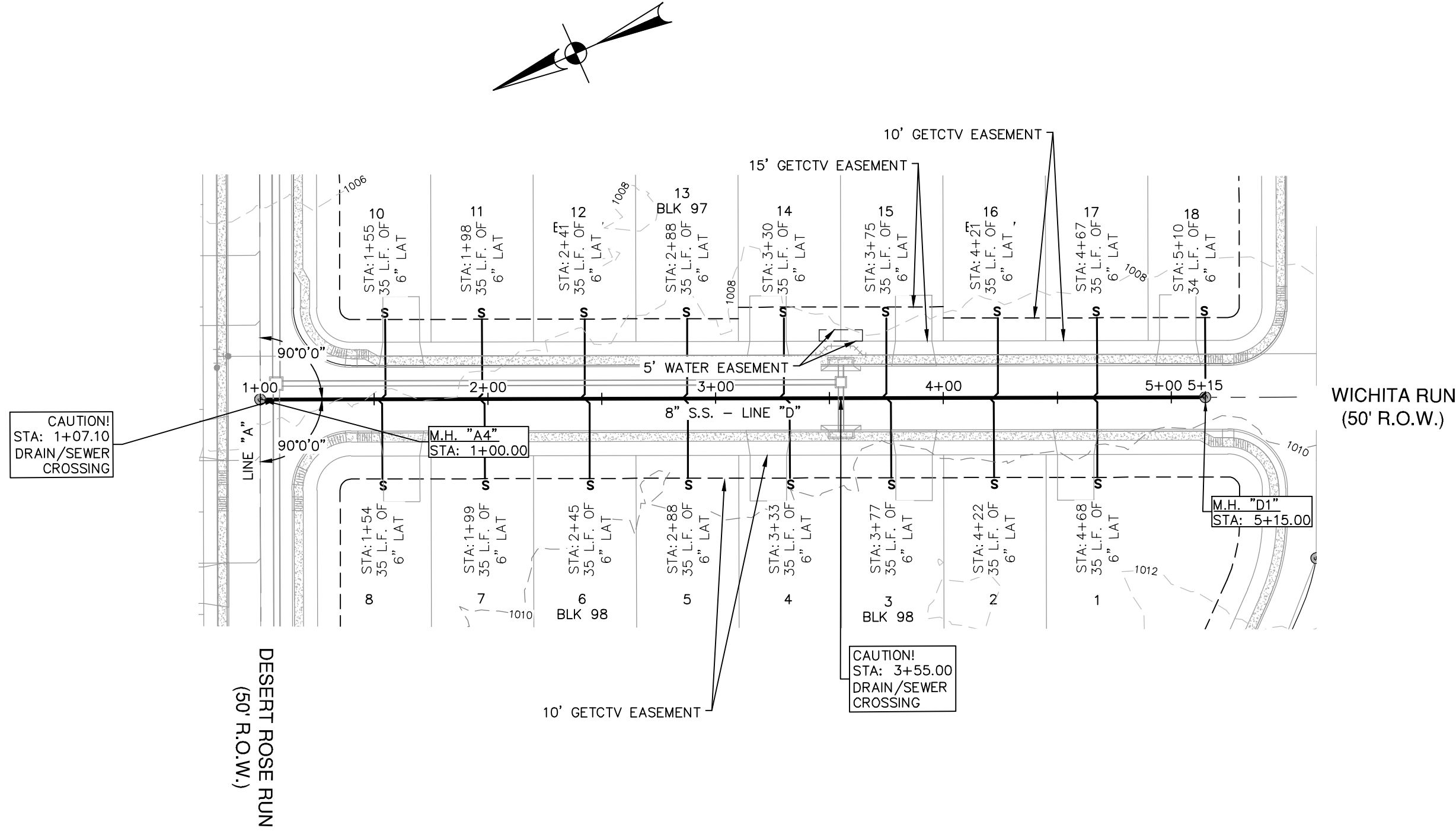
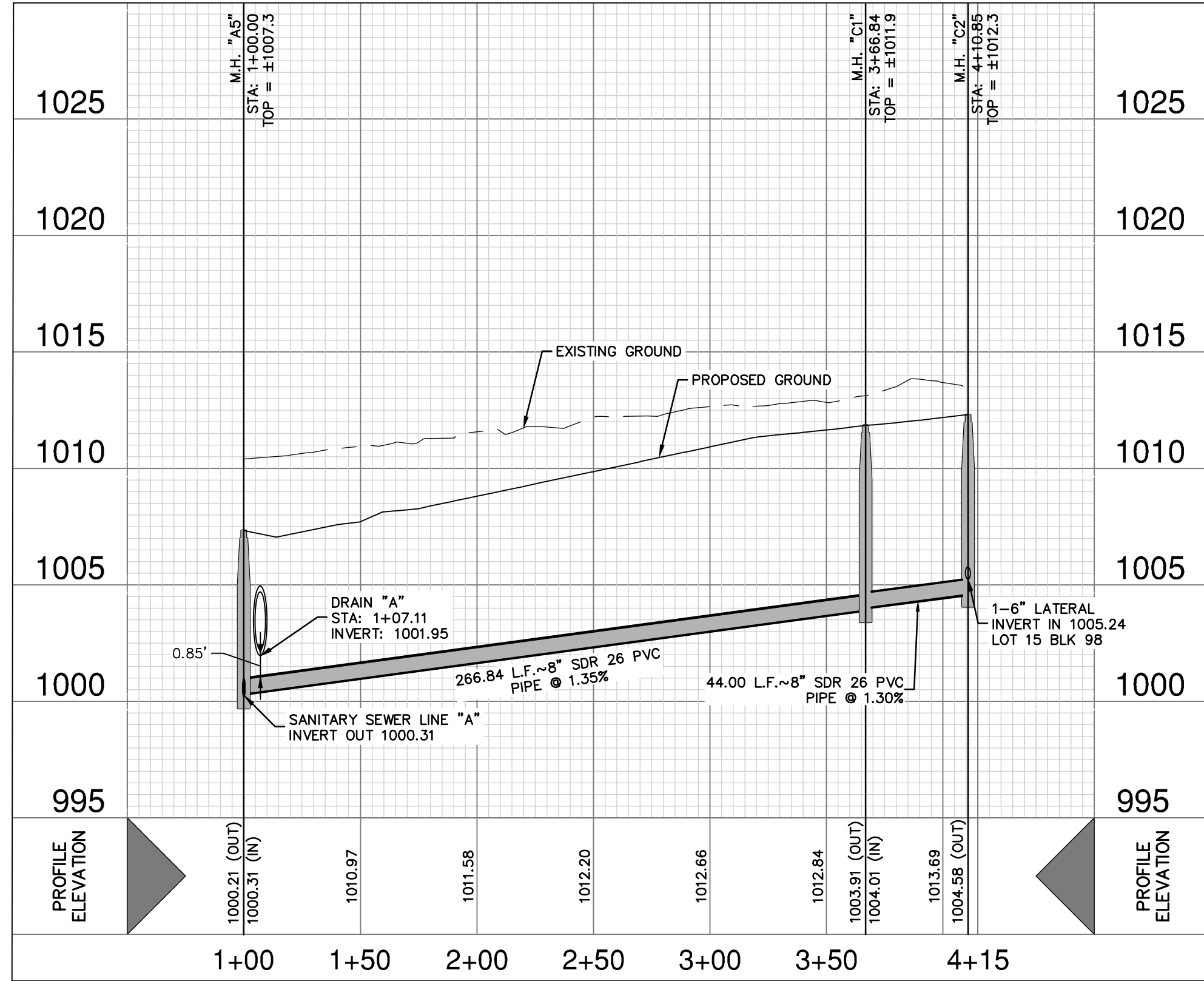
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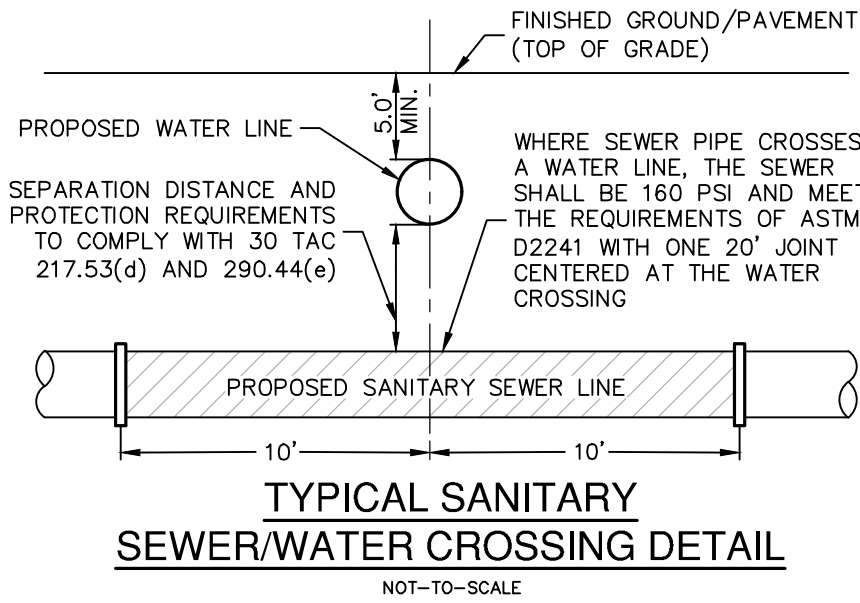
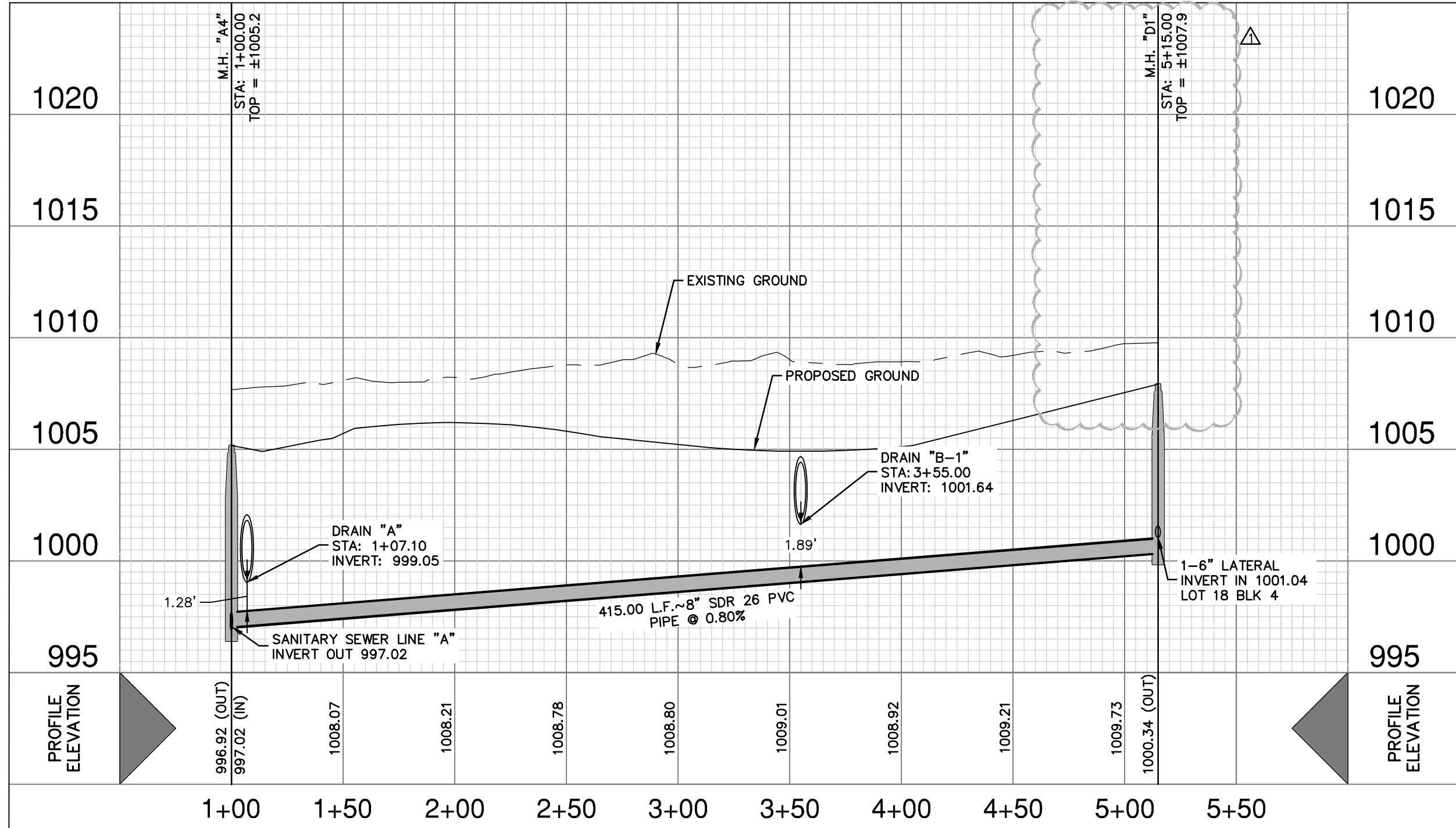
SANITARY SEWER LINE "C"
STA. 1+00.00 TO END

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



SANITARY SEWER LINE "D"
STA. 1+00.00 TO END

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



CAUTION!!
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TRENCH EXCAVATION SAFETY PROTECTION:
CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY 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.

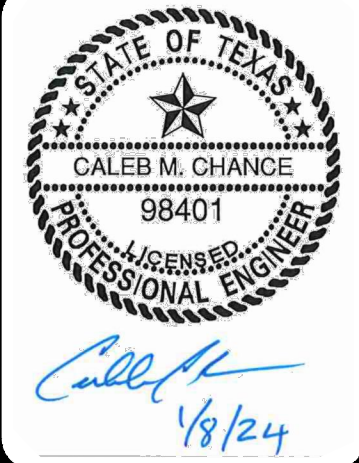
SEWER	
DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.	
ADDRESS: 5419 N LOOP 1604 E	
CITY: SAN ANTONIO	STATE: TEXAS ZIP: 78218
PHONE# (210)496-2668	FAX# (210)496-2668
SAWS BLOCK MAP# 22-11800470 TOTAL EDU'S 140 TOTAL ACREAGE 25.004	
TOTAL LINEAR FOOTAGE OF PIPE: 8' 4,665.65 LF PLAT NO. 22-11800470	
NUMBER OF LOTS 140 SAWS JOB NO. 22-1679	

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10088600

RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS
SANITARY SEWER LINE C & D PLAN & PROFILE

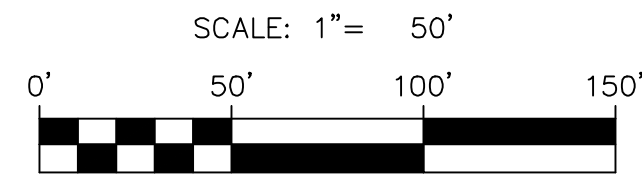
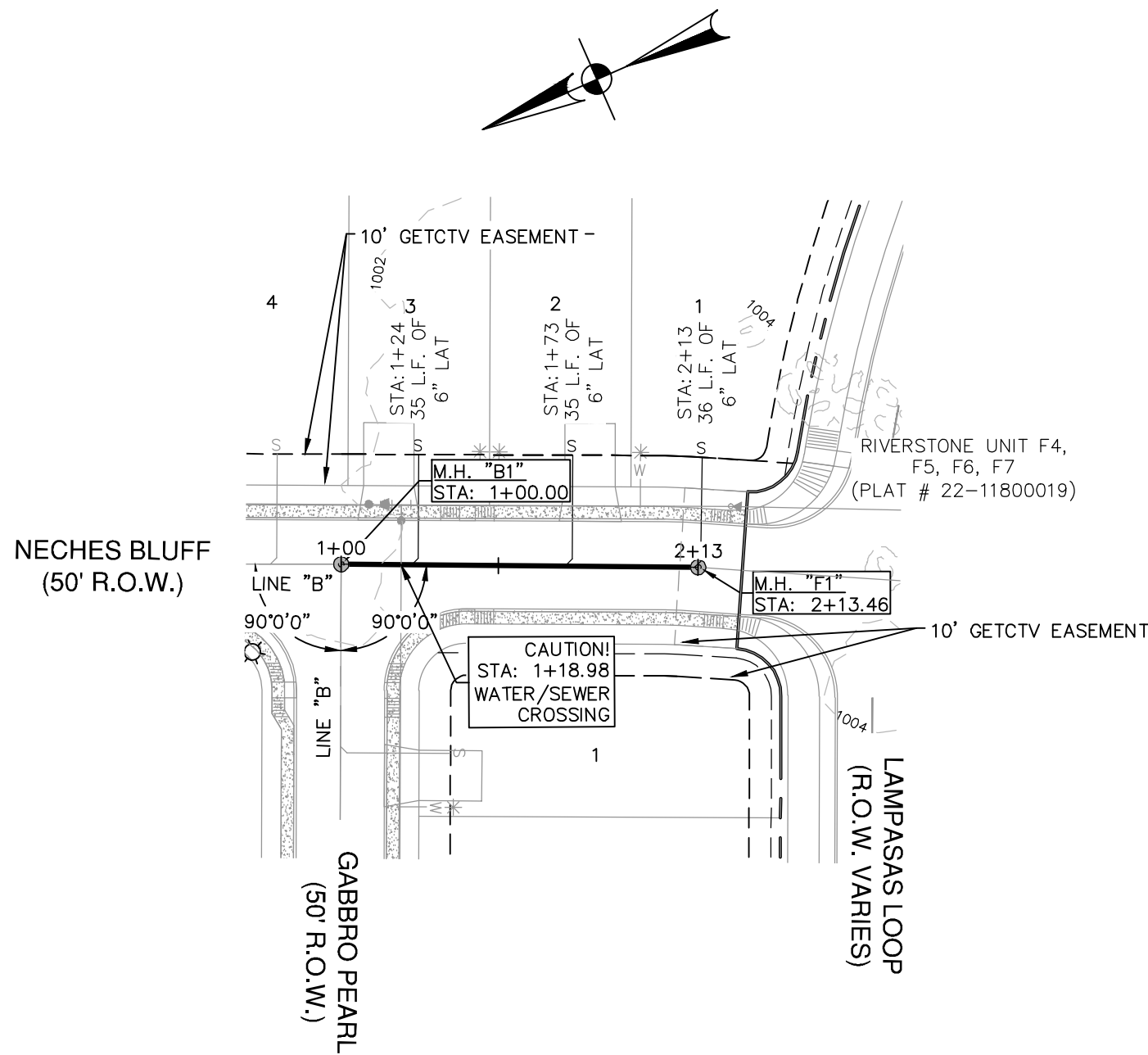
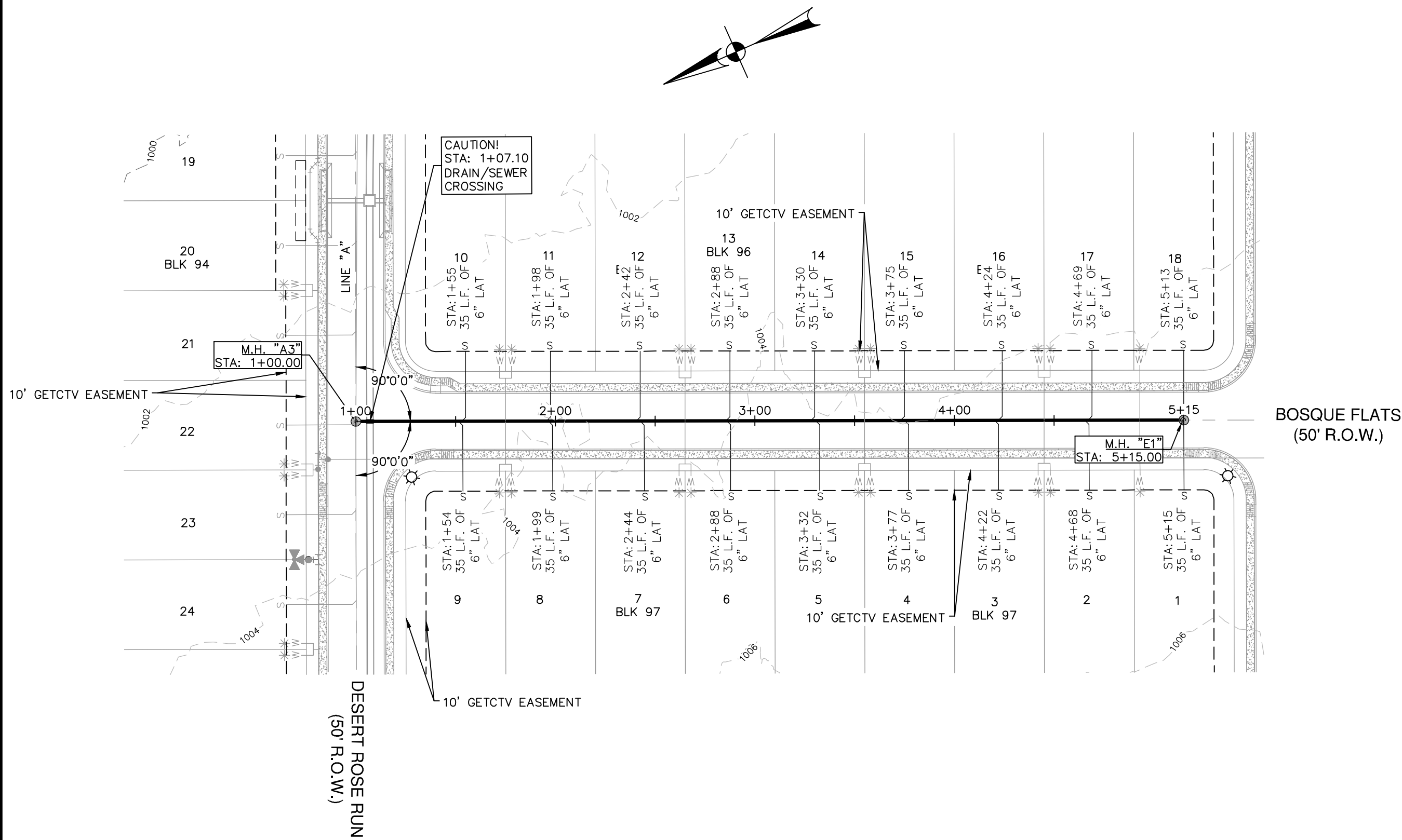
PLAT NO. 22-11800470
JOB NO. 11680-55
DATE AUGUST 2022
DESIGNER CB
CHECKED BL DRAWN CB
SHEET C5.06

NO.	REVISION	DATE
1	REV STREET PROFILE	1-8-2024

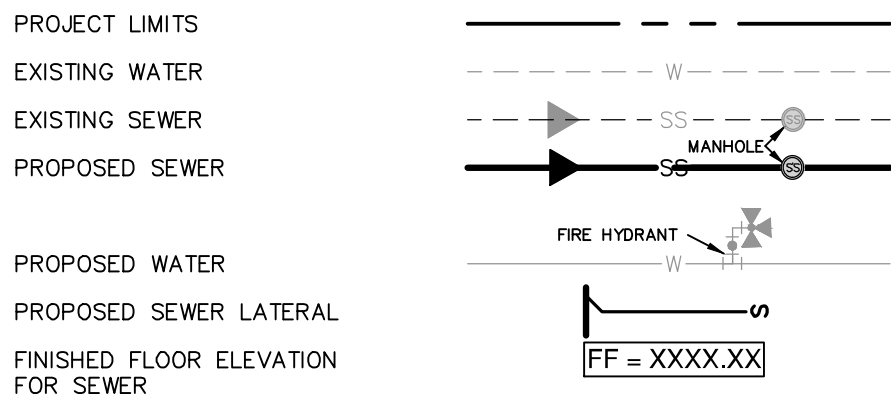


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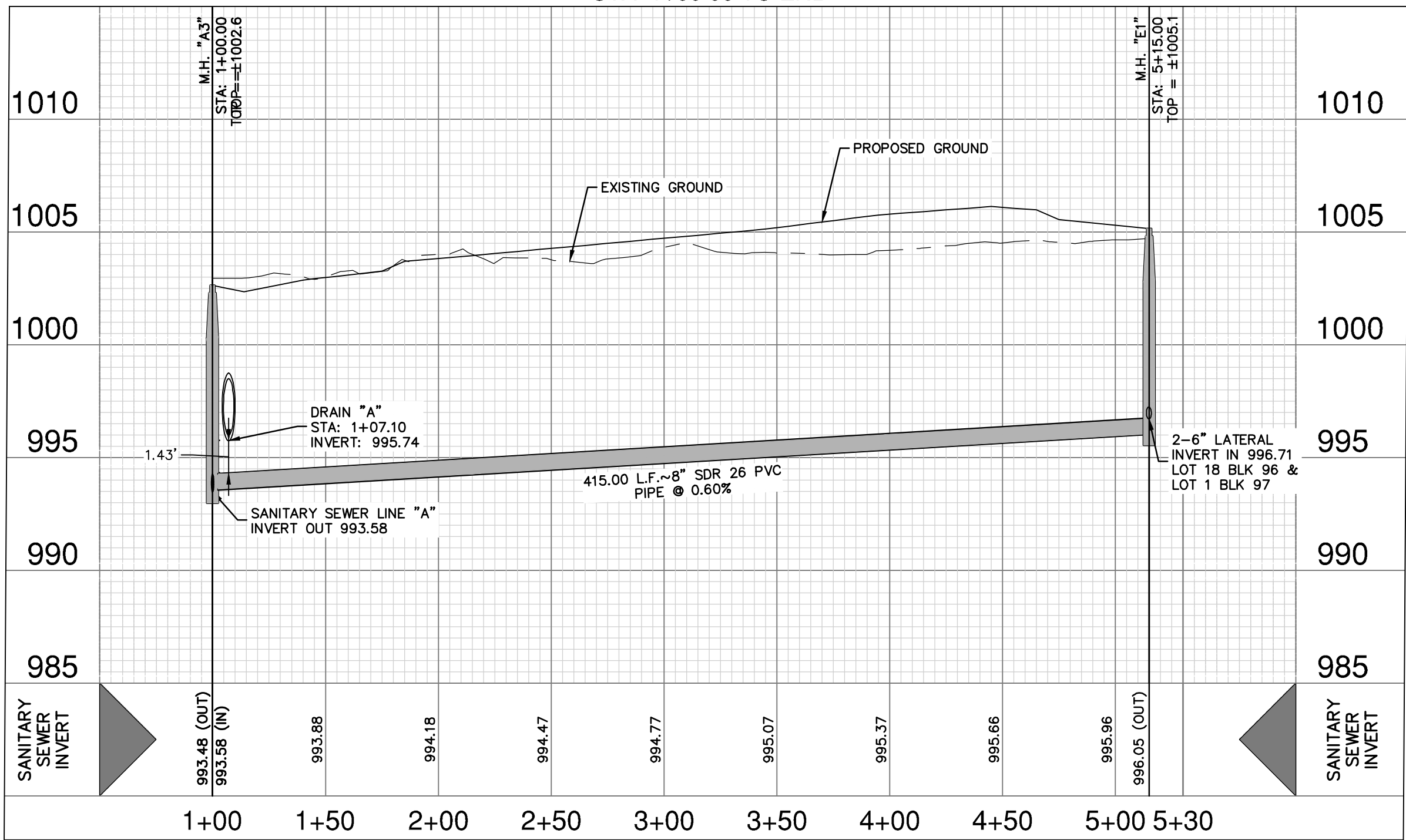
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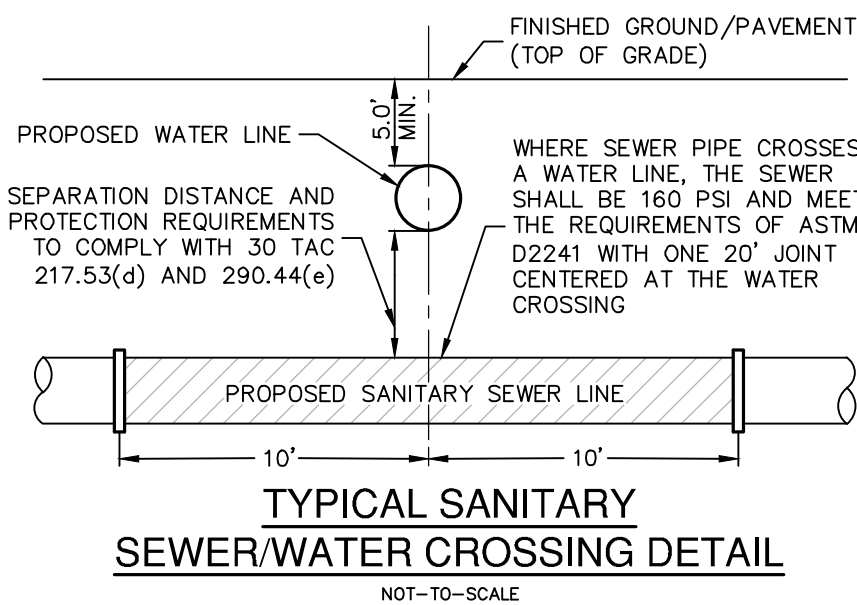
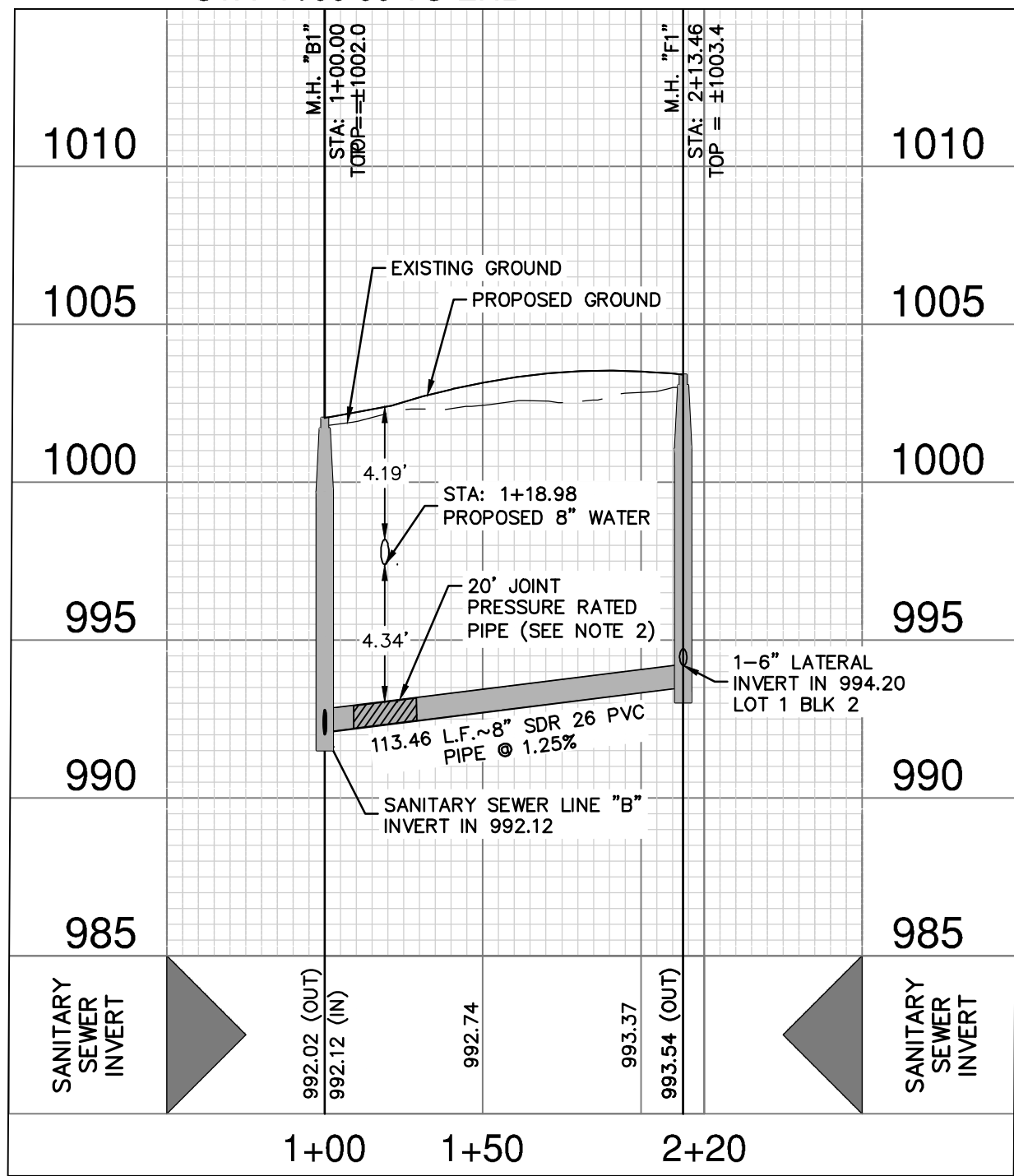
SEWER LEGEND



SANITARY SEWER LINE "E"
 STA. 1+00.00 TO END
 VERTICAL SCALE: 1" = 5'
 HORIZONTAL SCALE: 1" = 50'



SANITARY SEWER LINE "F"
 STA. 1+00.00 TO END
 VERTICAL SCALE: 1" = 5'
 HORIZONTAL SCALE: 1" = 50'



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 TOTAL LINEAR FOOTAGE OF PIPE: 8" 4,665.65 LF PLAT NO. 22-11800470
 NUMBER OF LOTS 140 SAWS JOB NO. 22-1679

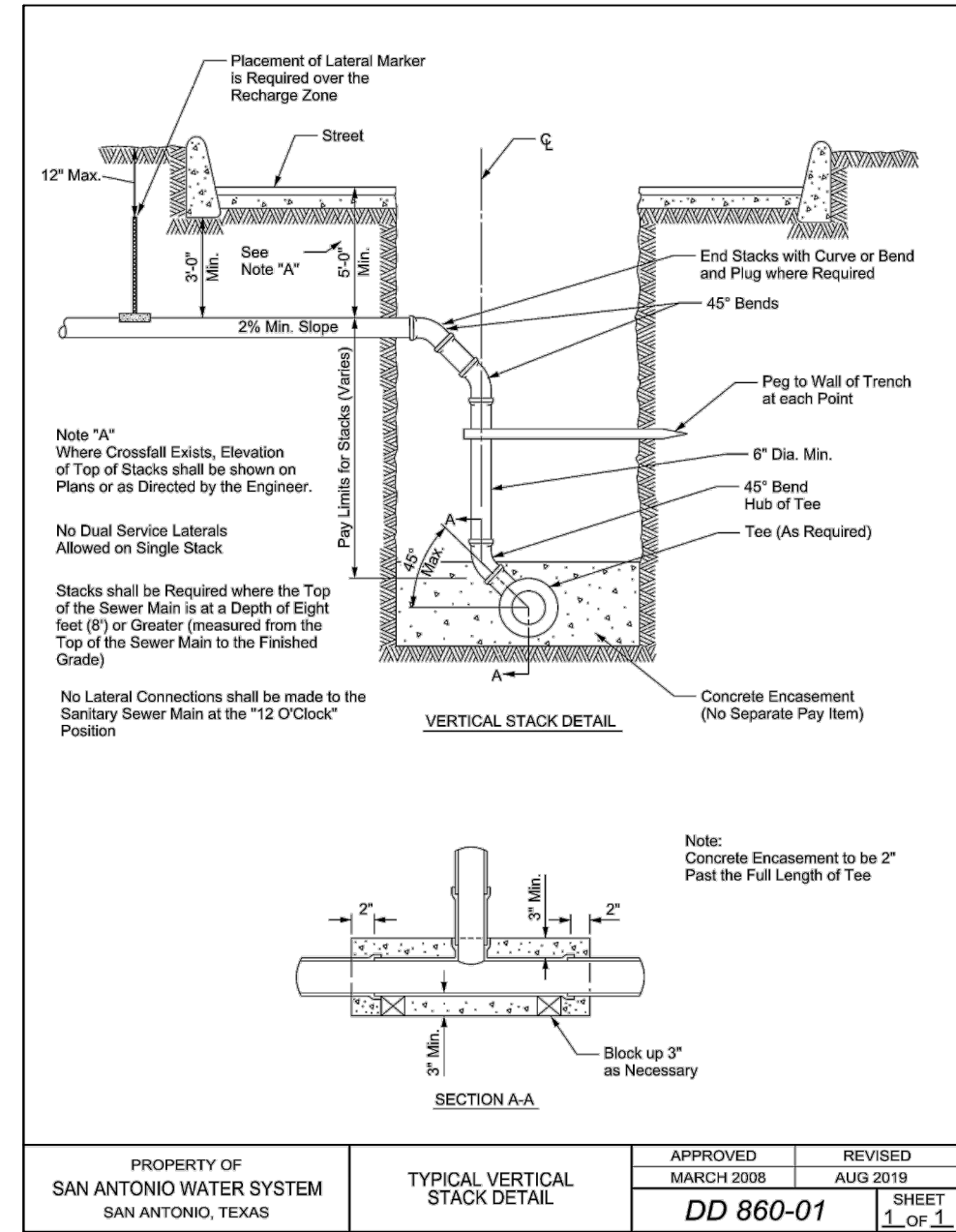
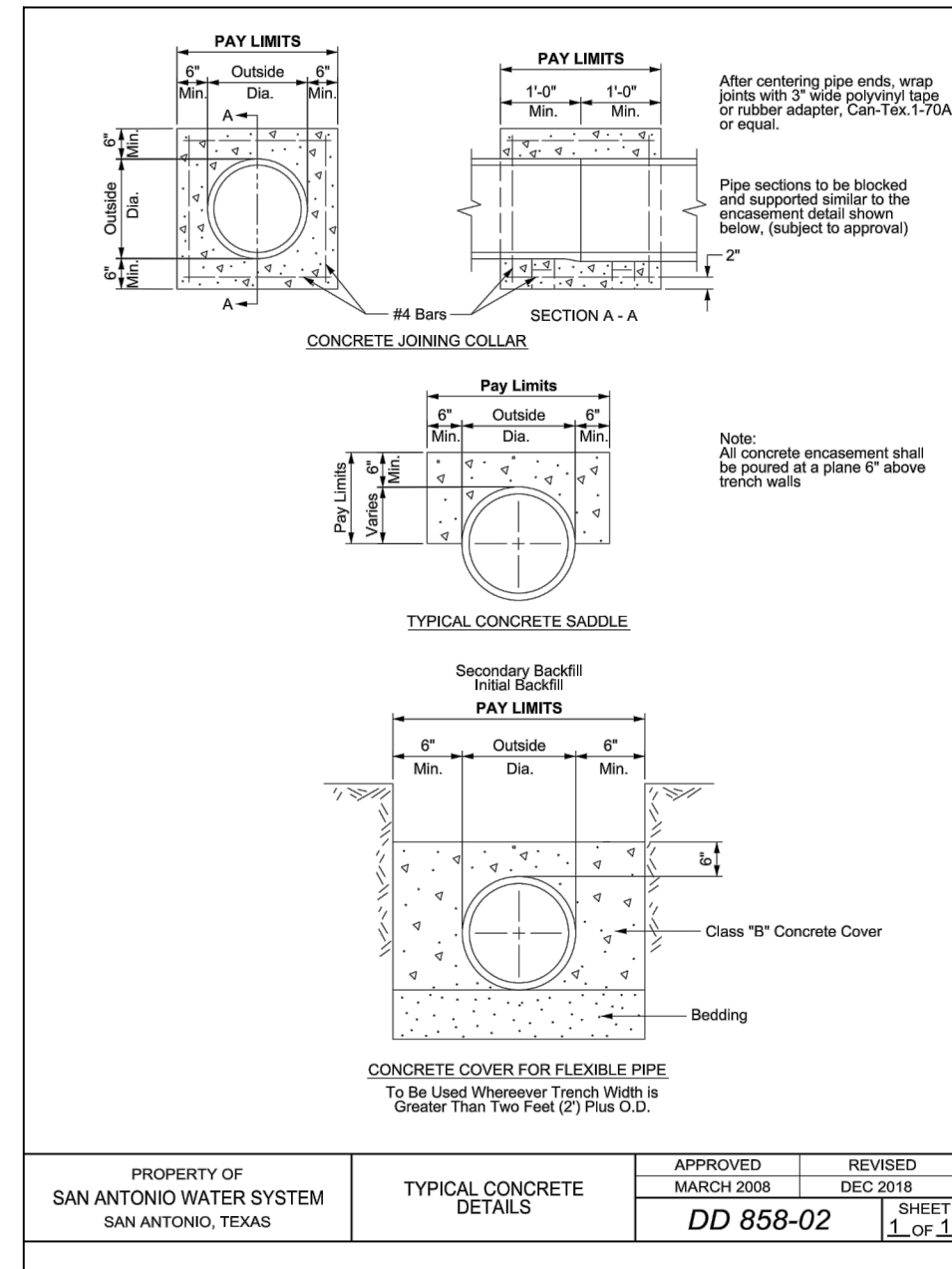
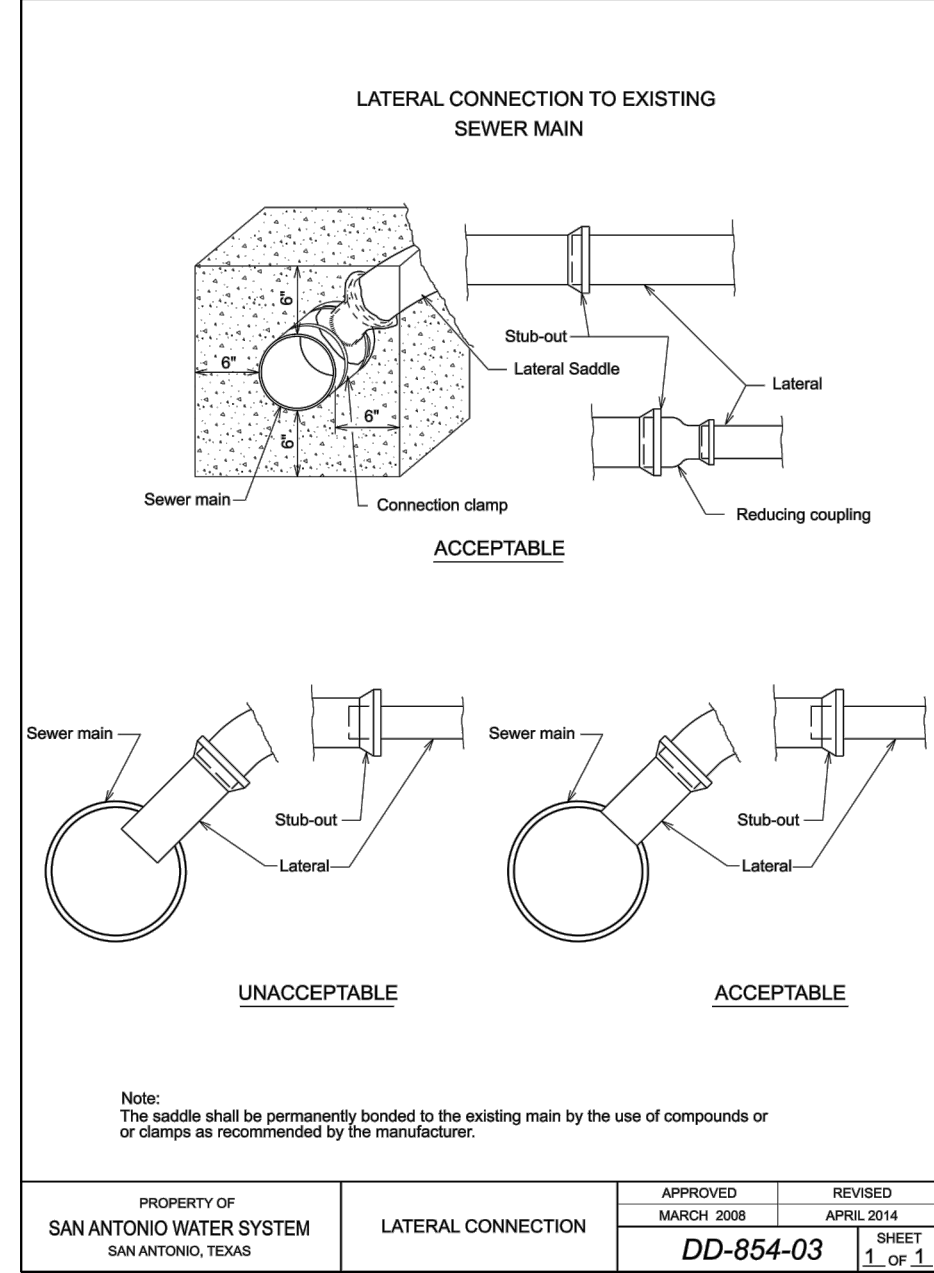
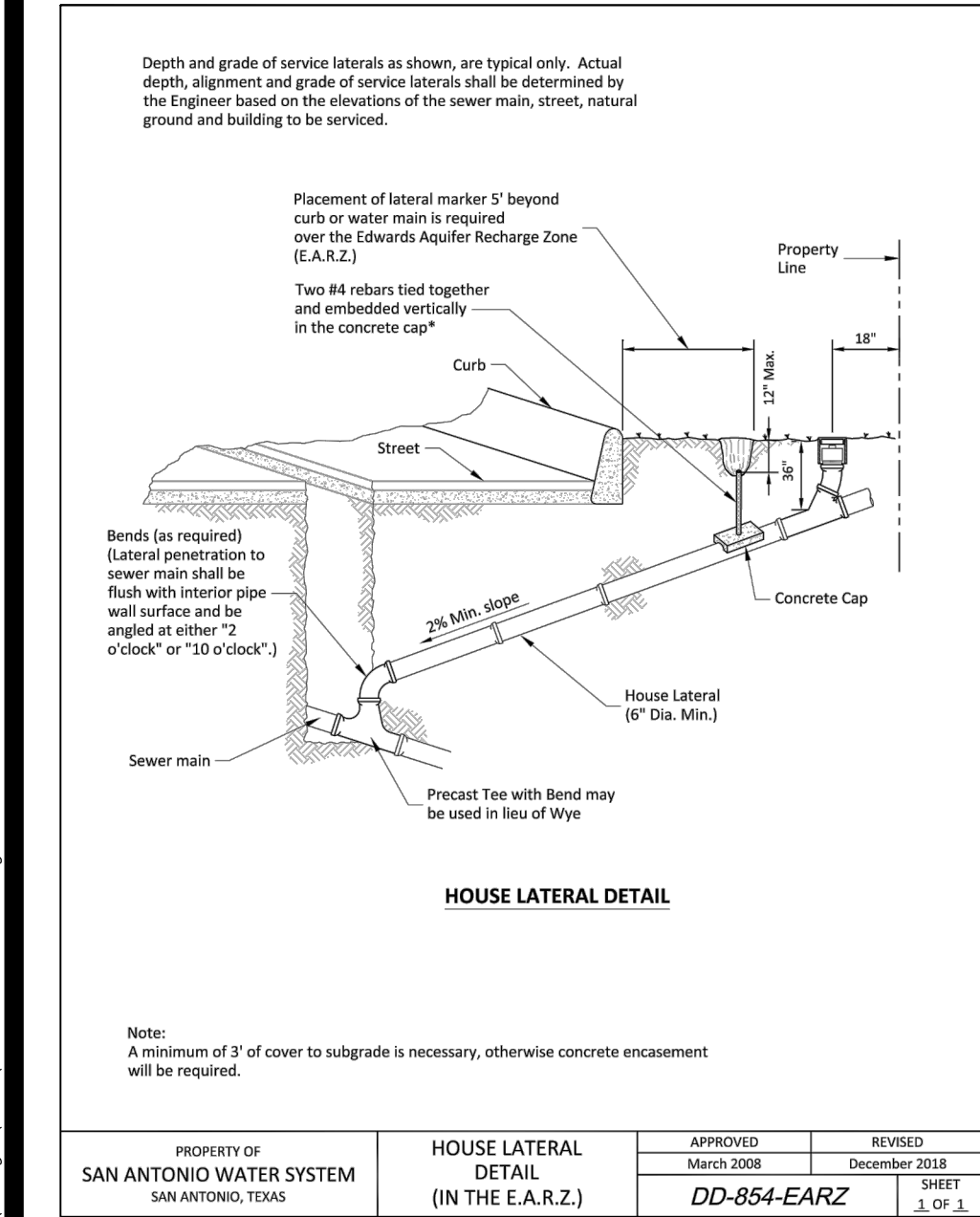
PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10088600

RIVERSTONE, UNIT F8 & F9
 SAN ANTONIO, TEXAS
 SANITARY SEWER LINE E & F PLAN & PROFILE

PLAT NO. 22-11800470
 JOB NO. 11680-55
 DATE AUGUST 2022
 DESIGNER CB
 CHECKED BL DRAWN CB
 SHEET C5.07

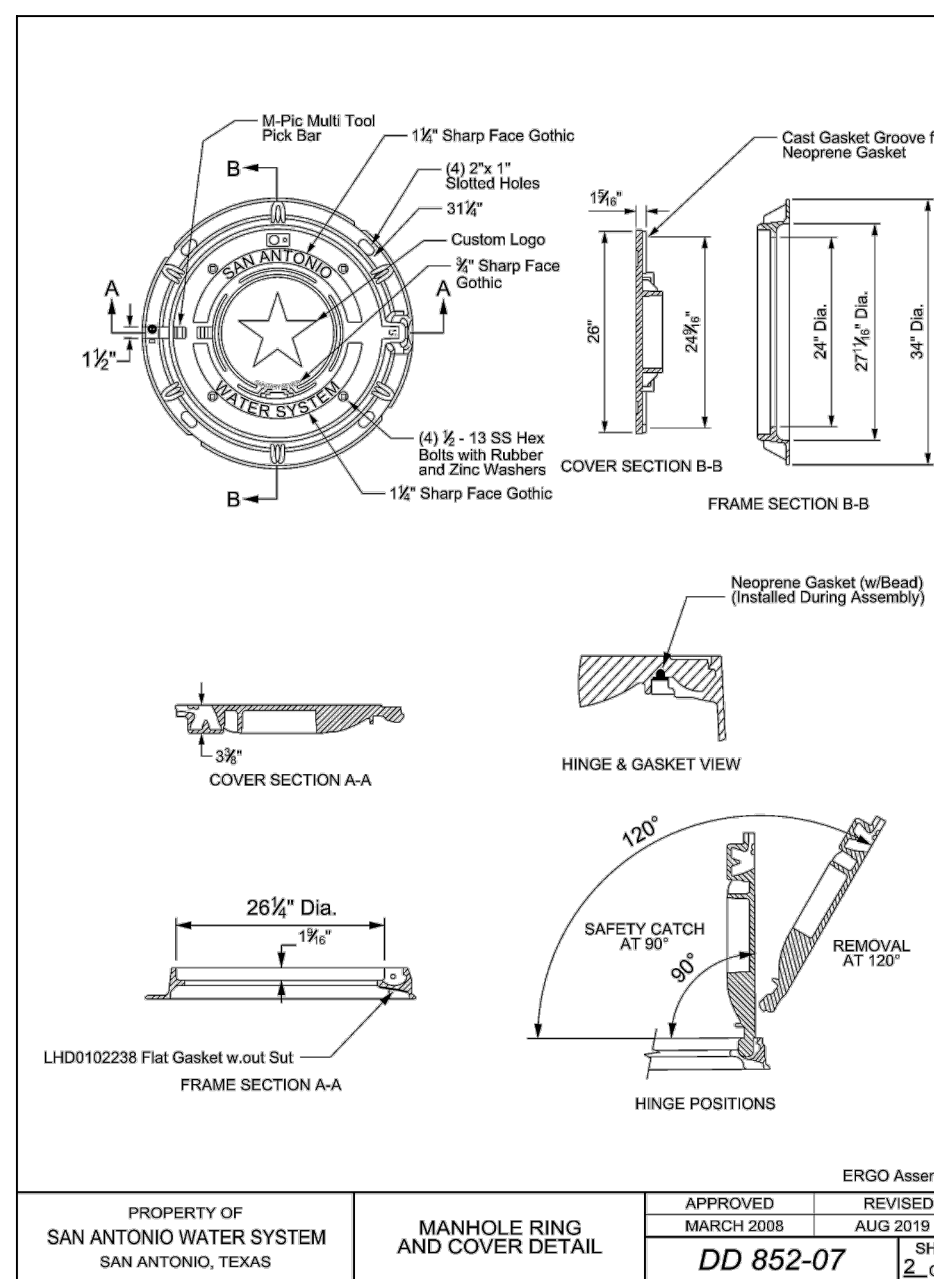
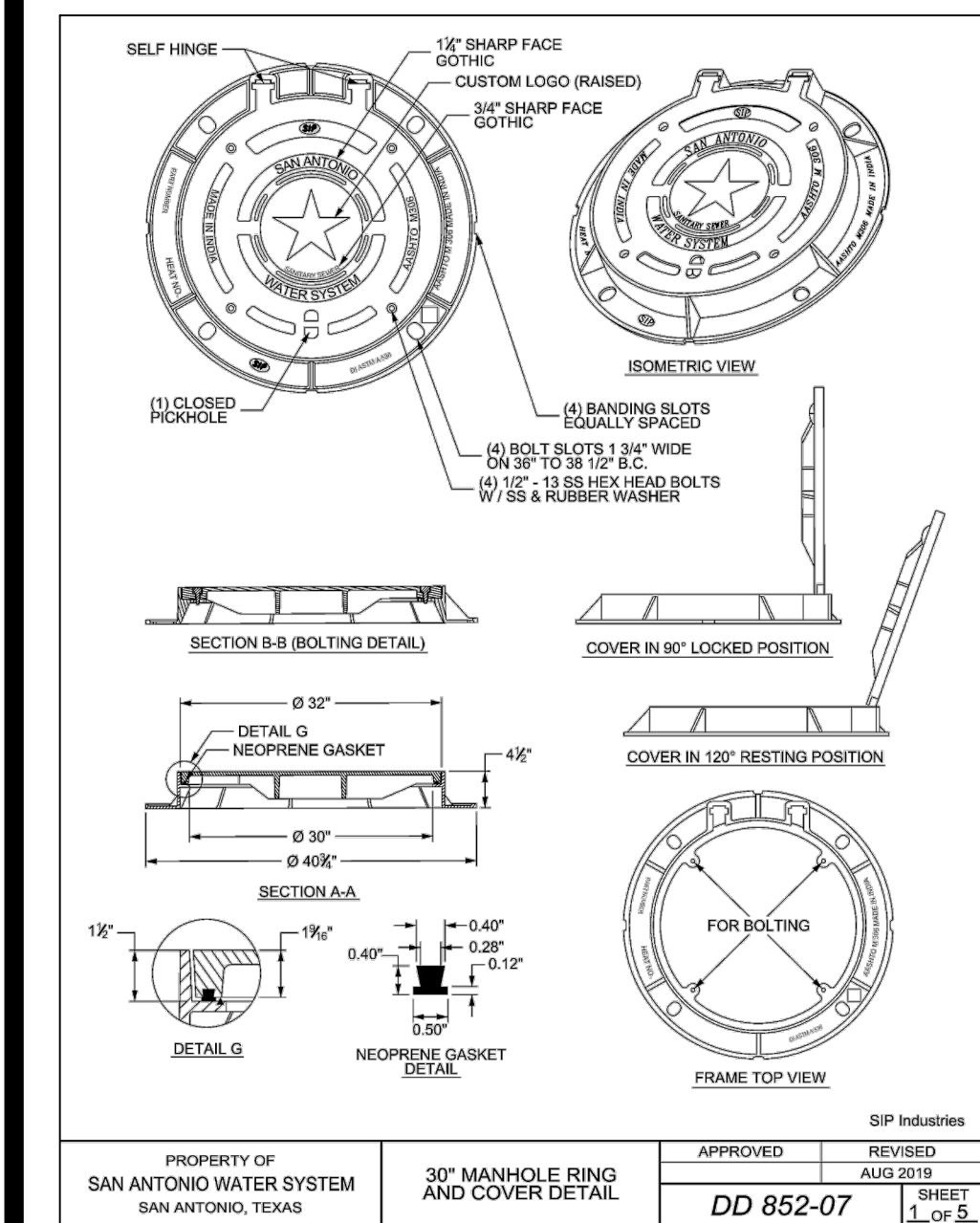
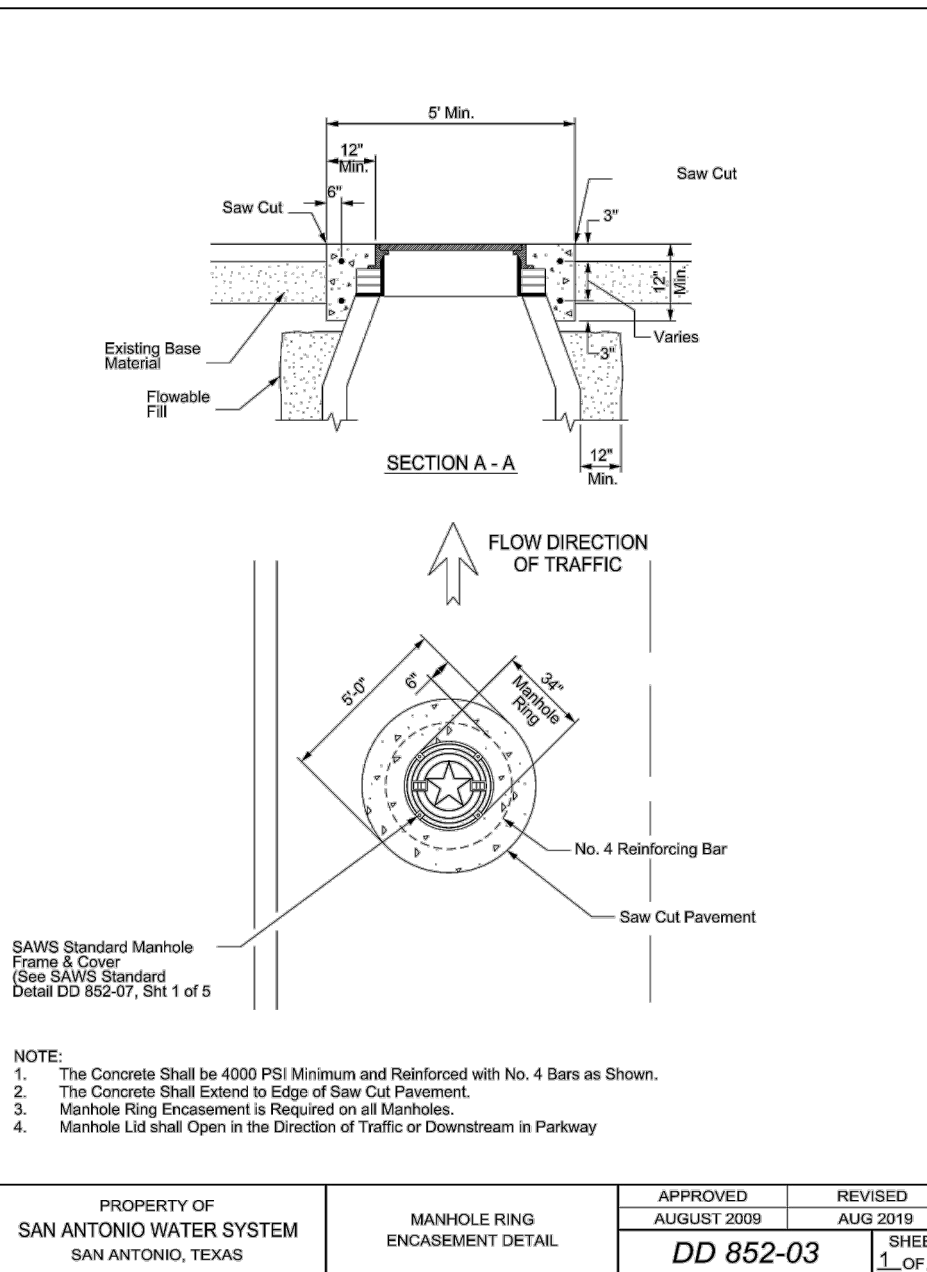
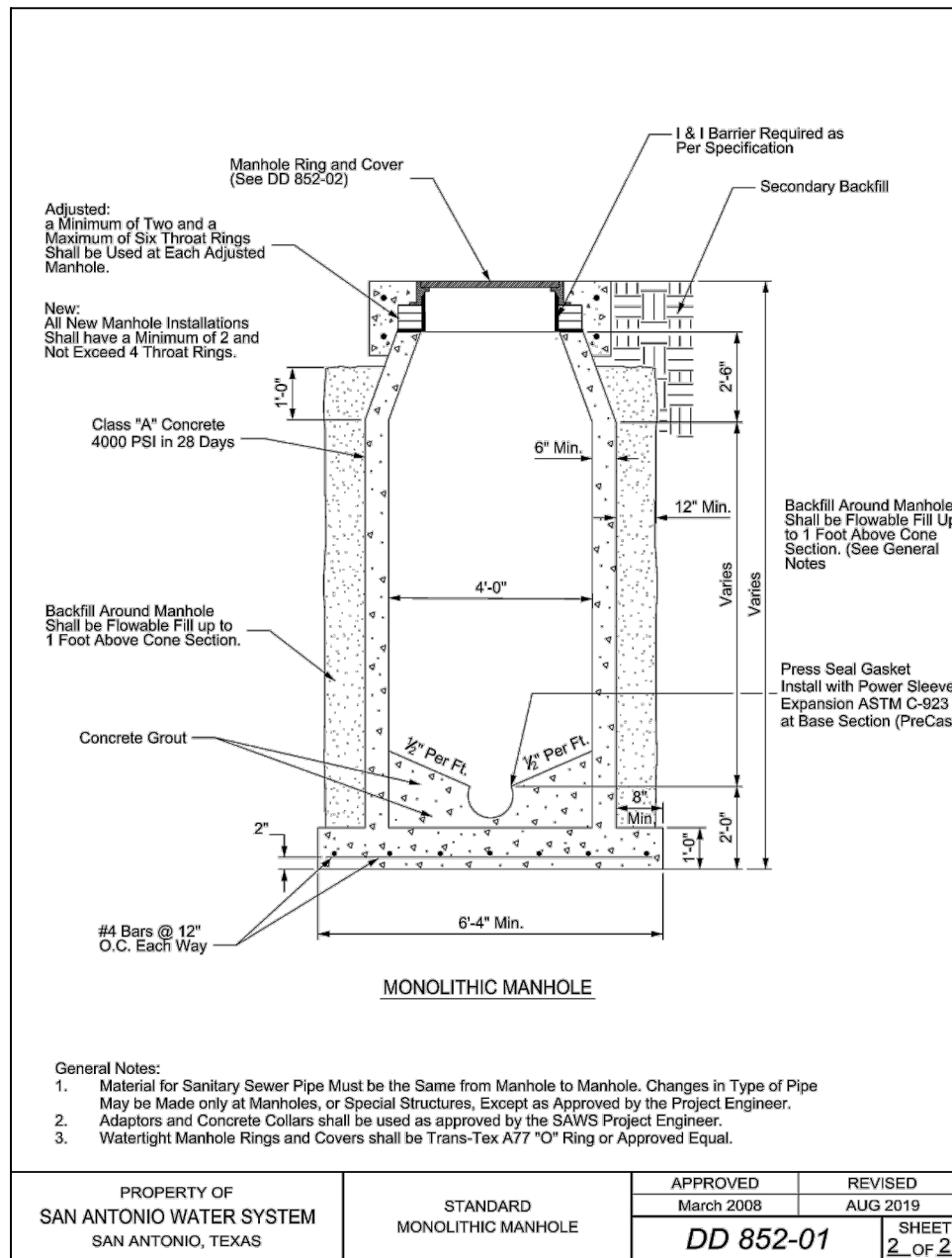
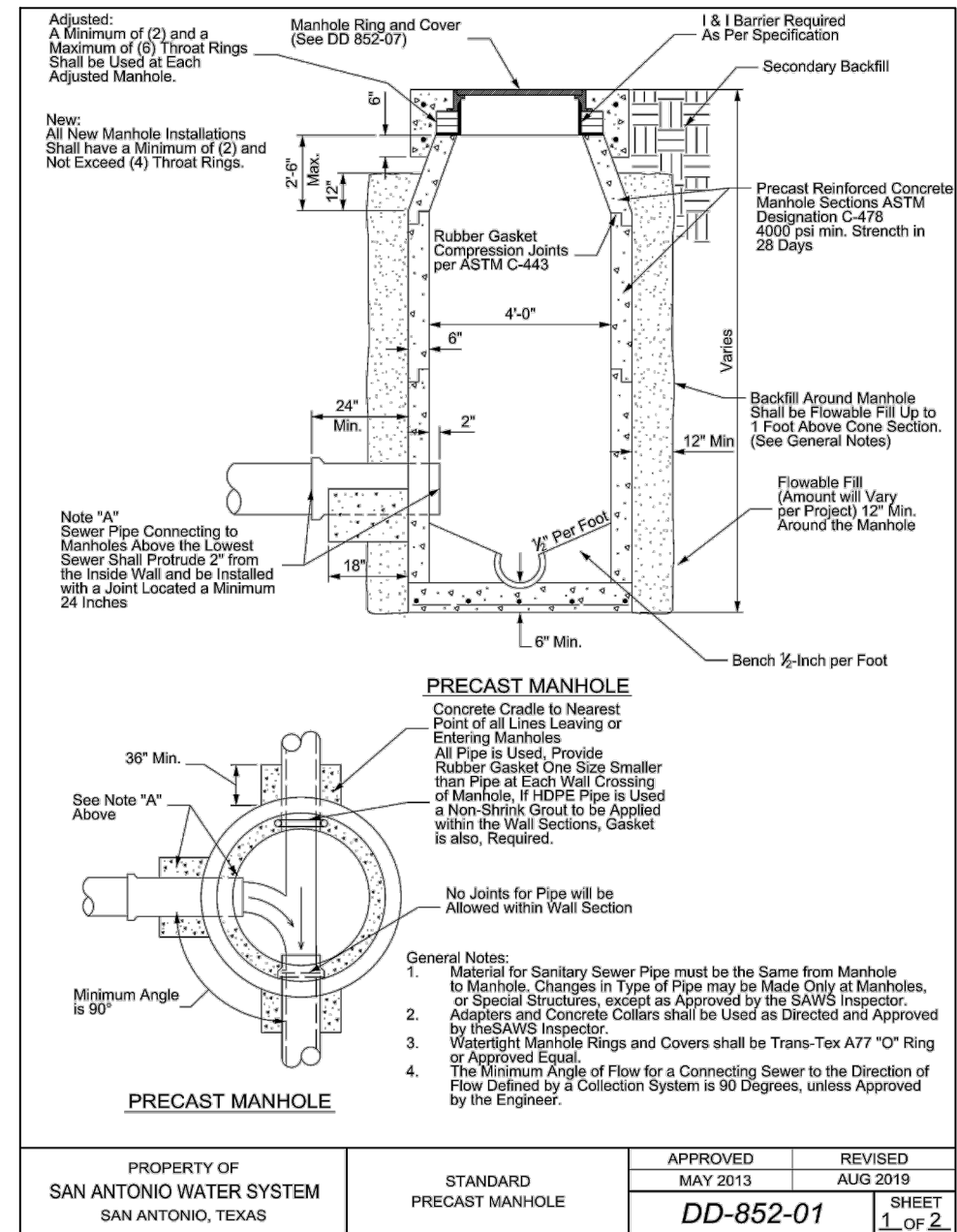
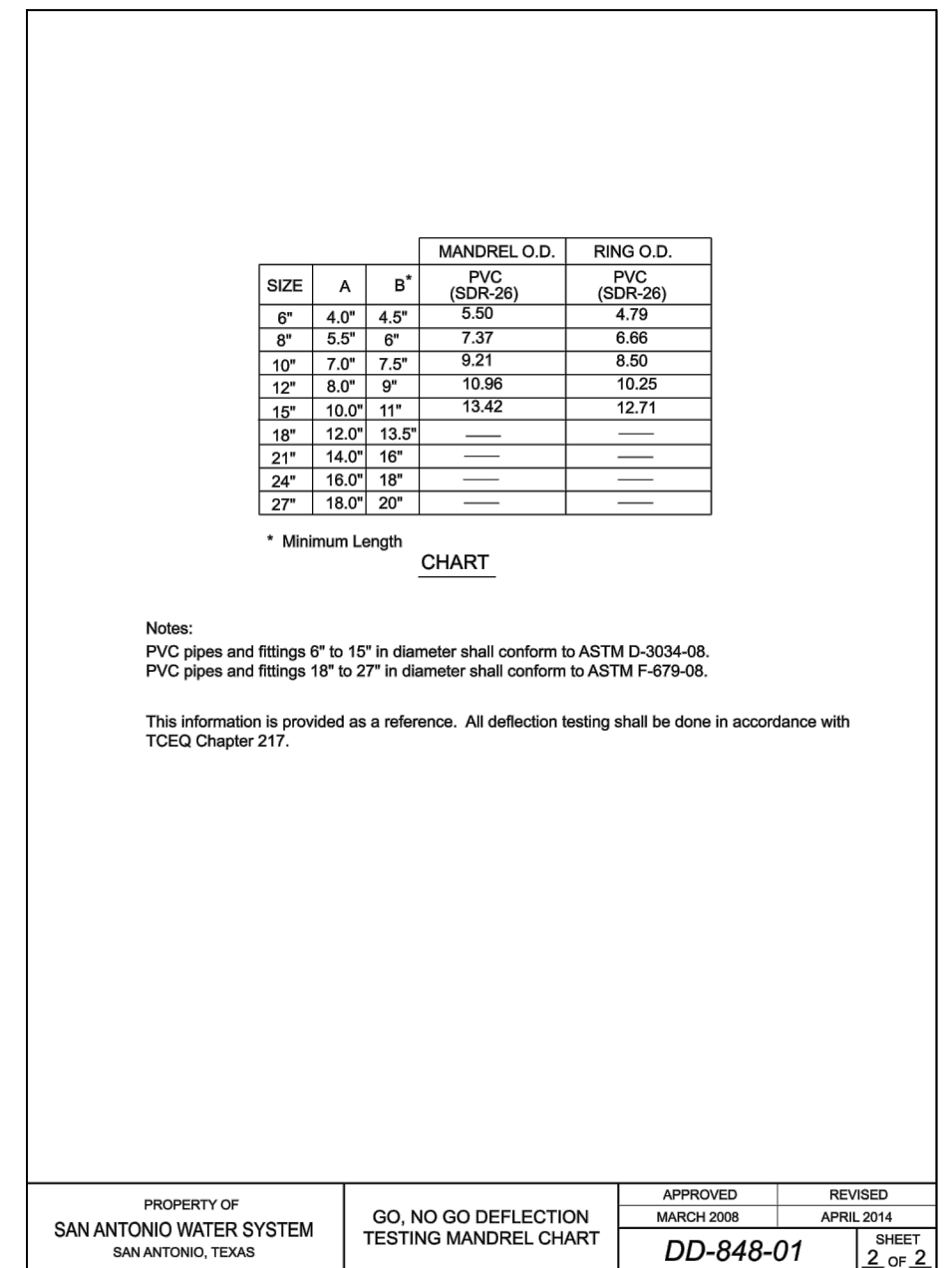
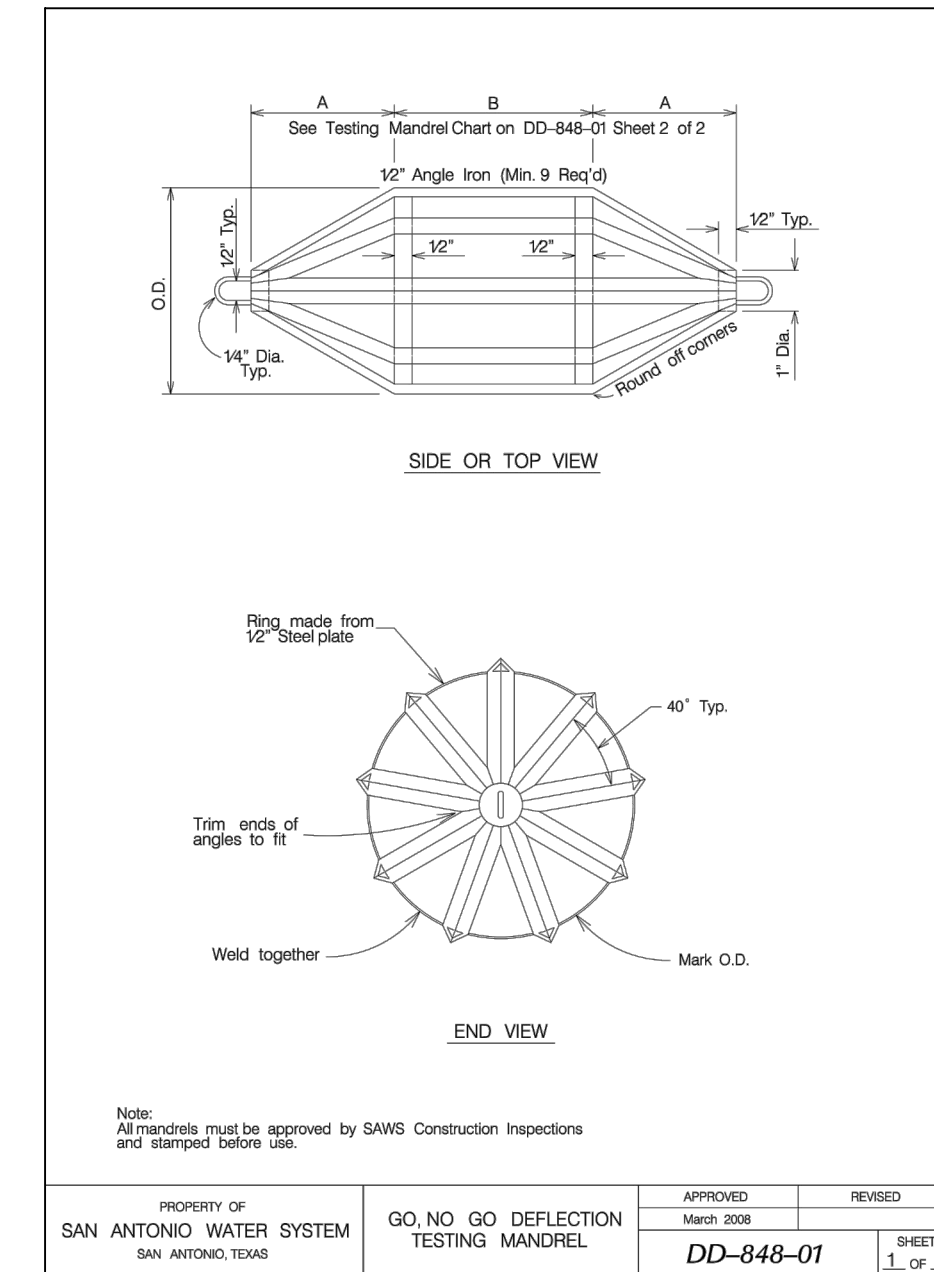
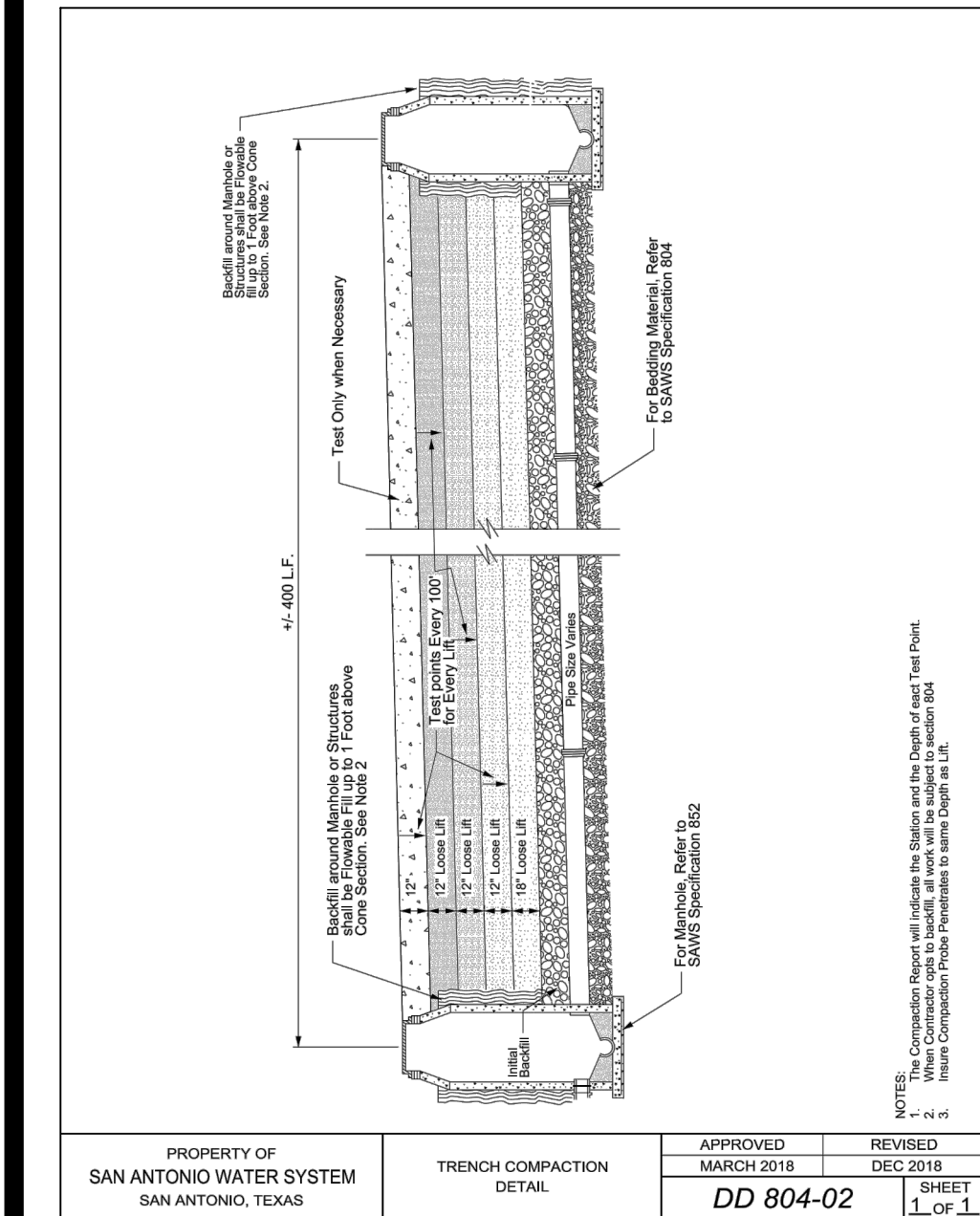
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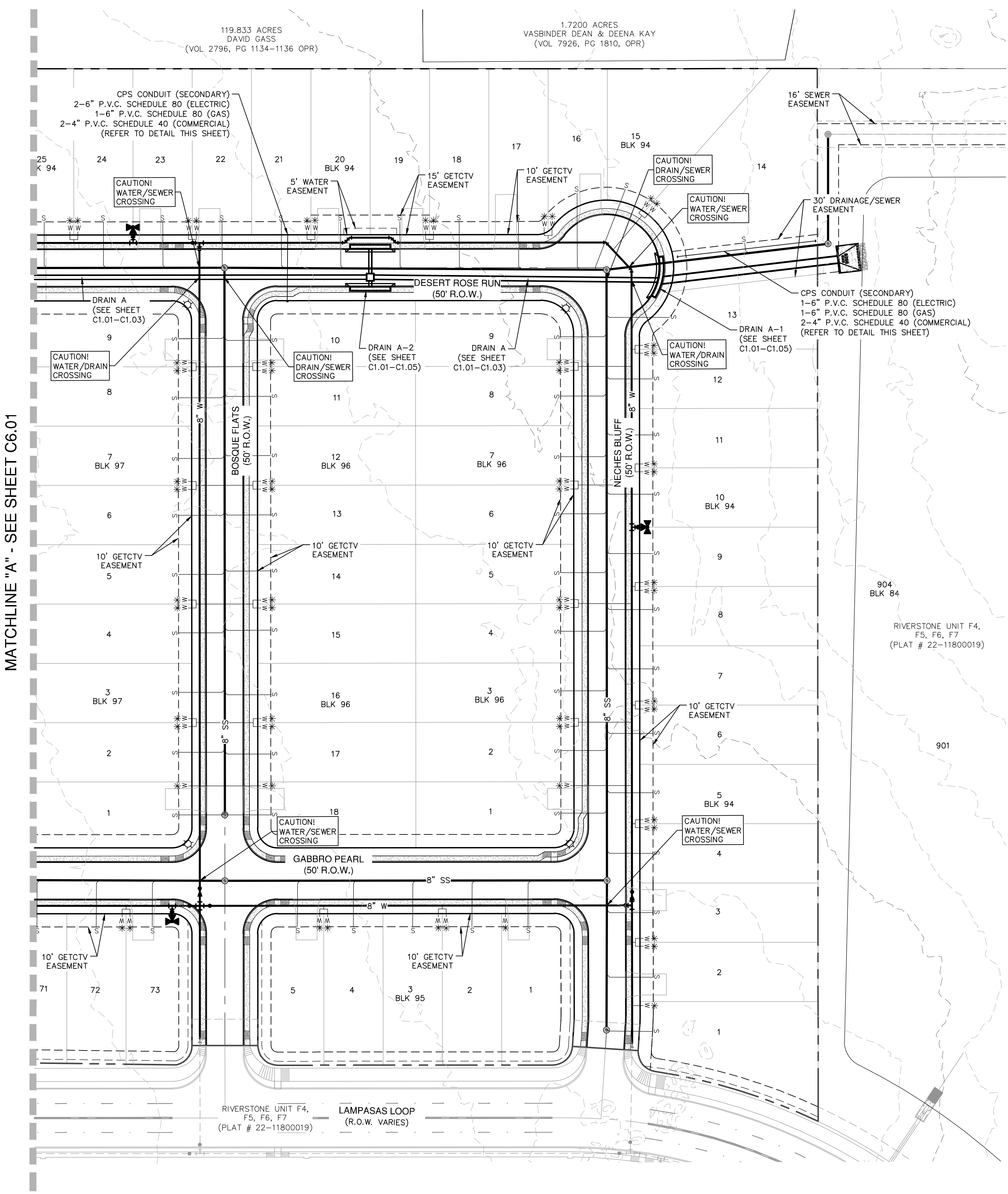
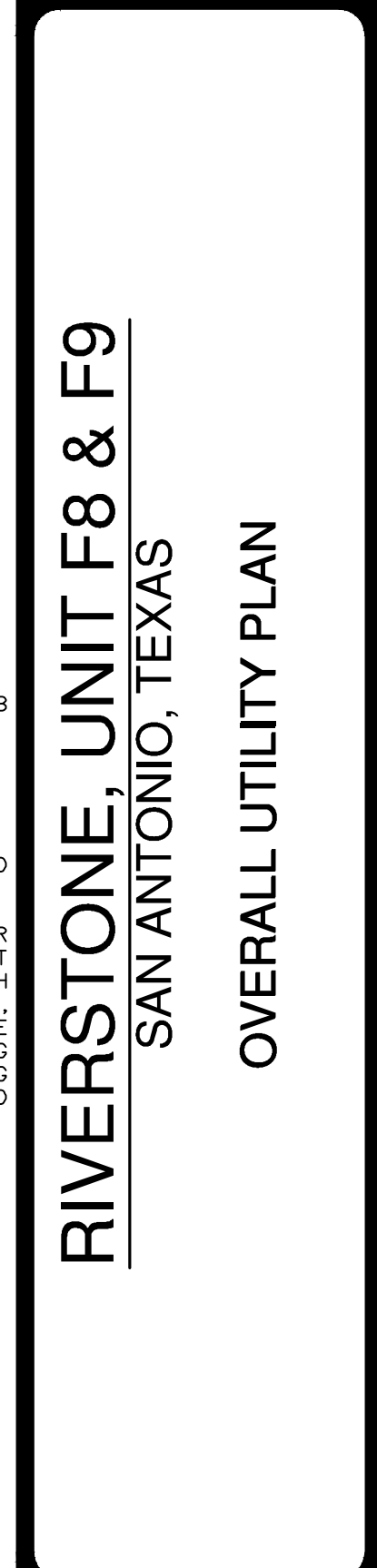
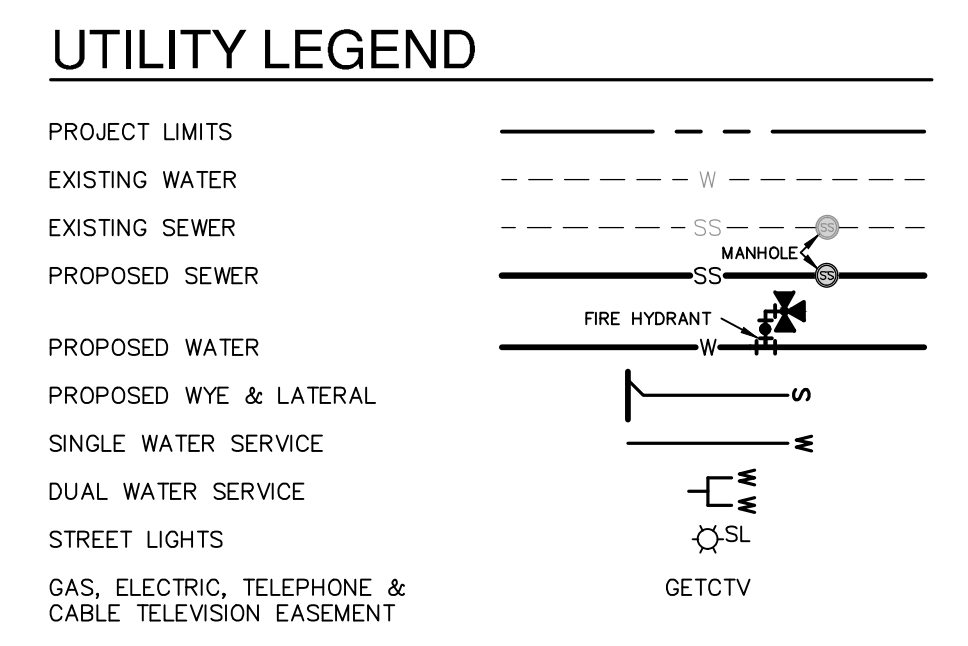


SEWER

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.			
ADDRESS: 5419 N LOOP 1604 E			
CITY: SAN ANTONIO	STATE: TEXAS	ZIP: 78218	
PHONE# (210)496-2668	FAX# (210)496-2668		
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TOTAL LINEAR FOOTAGE OF PIPE: 8" 4,665.65 LF PLAT NO 22-11800470			
NUMBER OF LOTS 140	SAWS JOB NO. 22-1679		

PLAT NO.	22-11800470
JOB NO.	11680-55
DATE	AUGUST 2022
DESIGNER	CB
CHECKED	BL DRAWN CB
SHEET	C5.10





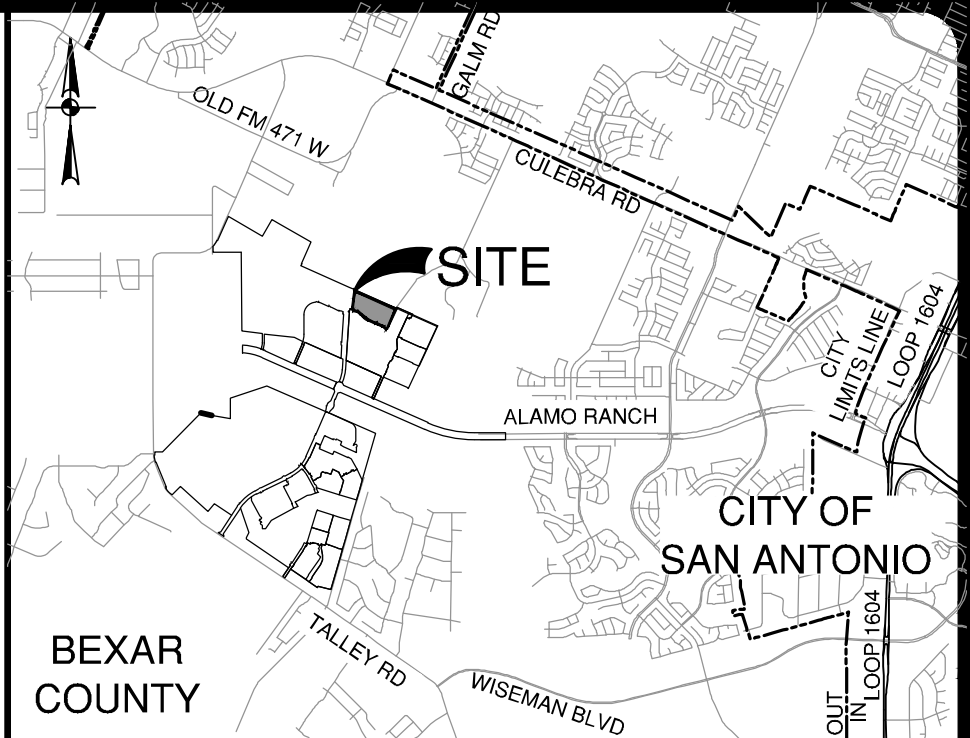
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 BLK 95

RIVERSTONE UNIT F4,
 F5, F6, F7
 (PLAT # 22-11800019)

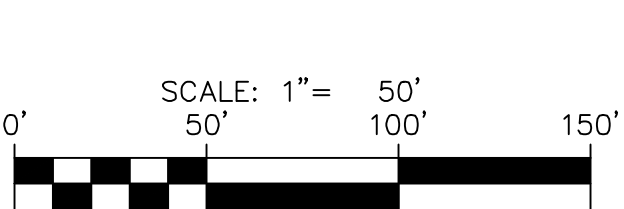
LAMPASAS LOOP
 (R.O.W. VARIES)

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LOCATION MAP

NOT-TO-SCALE



GRADING LEGEND

PROJECT LIMITS

100 YR FLOODPLAIN

EXISTING CONTOUR

PROPOSED CONTOUR

FLOW ARROW (EXISTING)

FLOW ARROW (PROPOSED)

MINIMUM FINISHED FLOOR ELEVATION:

TREES TO REMAIN

PROPOSED WALL

GRADING NOTES:

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THIS SCOPE OF WORK SHALL NOT SPECIFICALLY COVERED IN THE SPECIFICATIONS OR GEOTECHNICAL REPORT SHALL CONFORM TO ALL APPLICABLE CITY, COUNTY AND STATE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION).
2. SITE PREPARATION, GRADING, EXCAVATION AND FILL SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT AND SPECIFICATIONS.
3. ALL SELECT FILL MATERIAL PROVIDED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING AND COMPACTING.
4. ALL ELEVATIONS AND PROPOSED CONTOURS SHOWN ON THIS GRADING PLAN REFLECT FINISHED GRADES. THE THICKNESS OF PAVING, BASE, GRASS, TOPSOIL, AND MULCH MUST BE SUBTRACTED TO OBTAIN SUBGRADE ELEVATIONS.
5. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT, OR THE VERTICAL DIMENSIONS OR GRADES NECESSARY FOR CONSTRUCTION OF THIS PROJECT.
6. THE CONTRACTOR SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE COMMENCEMENT OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
8. THE CONTRACTOR SHALL REMOVE TOP SOIL, GRASS, ROOTS, DEBRIS, ETC., AND DISPOSE OFF SITE THOSE MATERIALS NOT SUITABLE FOR EMBANKMENT AND UTILITIES. UNCLEARED STEPPINGS AND TOPSOIL MAY BE STOCKPILED ON SITE FOR REUSE IN A LOCATION SPECIFIED BY THE OWNER.
9. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE STABILIZATION. ALL DISTURBED AREAS SHALL BE REVEGETATED IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND TPDES/SWPPP REQUIREMENTS. REFERENCE THE LANDSCAPE ARCHITECT'S PLAN, IF APPLICABLE.
10. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS (USE OF SILT FENCES, ETC.) TO KEEP DRAINAGE AND SILT FROM WASHING ONTO ADJACENT PROPERTY, STREETS, OR DRAINAGE WAYS. CONTRACTOR SHALL IMMEDIATELY REMOVE SILT/DEBRIS WHICH WASHES OFFSITE OR INTO EXISTING STORM DRAIN SYSTEMS. (SEE SWPPP PLANS & TPDES BOOK).
11. THE CONTRACTOR SHALL OBTAIN GRADES SHOWN HEREON WITHIN $\pm 1/8$ " ONE-TENTH (0.10) FOOT.
12. IN THE OPENED PAVING AREAS, STREET DESIGN PLANS SHALL CONTROL. ALL EARTHEN SLOPES SHALL BE A MAXIMUM OF 3:1 AND A MINIMUM OF 1:0% UNLESS OTHERWISE SHOWN.
13. THE CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING SITE AND PROPOSED IMPROVEMENTS.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER, CONDITION ANY DAMAGE DONE TO EXISTING TREES, FENCES, PAVEMENT, CURBS, OR DRIVEWAYS (NO SEPARATE PAY ITEMS).
15. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN WORKING NEAR EXISTING UTILITIES. THE CONTRACTOR SHALL NOT REPRESENT ALL EXISTING UTILITIES ON SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES WHETHER SHOWN ON THE GRADING PLAN. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION AND VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES OR OTHER PROPERTY SHALL BE REPAIRED AT THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS OWN EXPENSE.

[illegible]

Callahan
1/8/24



**PAPE-DAWSON
ENGINEERS**

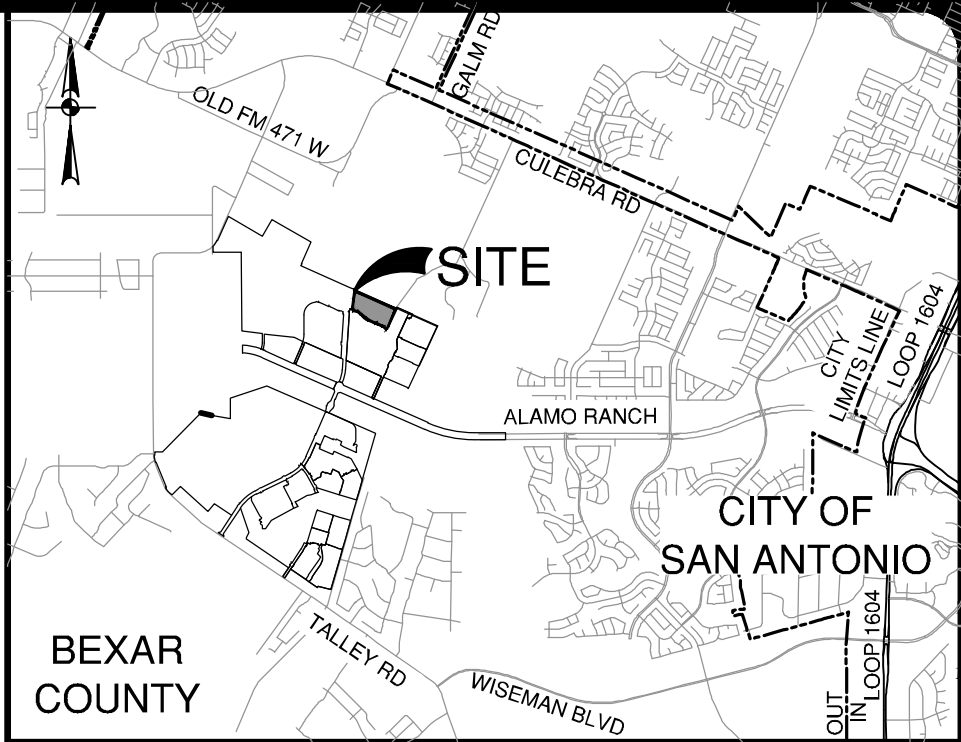
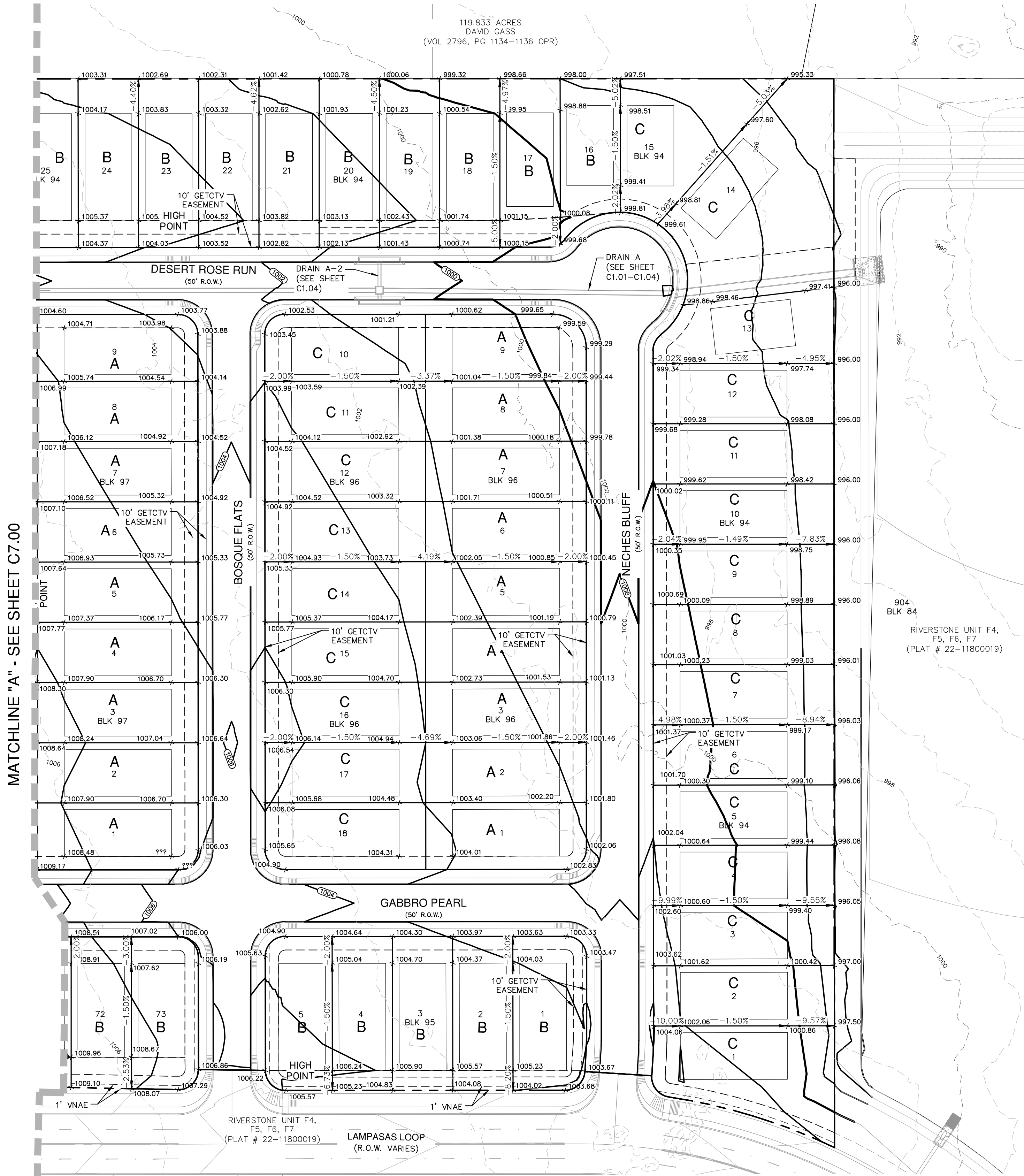
RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS

OVERALL GRADING PLAN

PLAT NO. 22-11800470
 JOB NO. 11680-55
 DATE AUGUST 2022
 DESIGNER CB
 CHECKED BL DRAWN CB
 SHEET C7.00

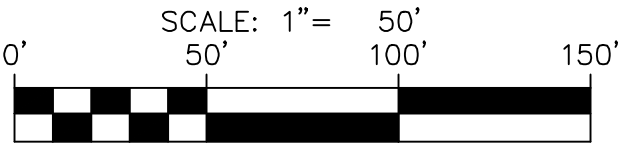
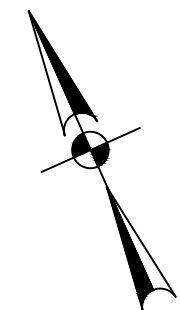
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LOCATION MAP

NOT-TO-SCALE



GRADING LEGEND

PROJECT LIMITS	
100 YR FLOODPLAIN	
EXISTING CONTOUR	
PROPOSED CONTOUR	
FLOW ARROW (EXISTING)	
FLOW ARROW (PROPOSED)	
MINIMUM FINISHED FLOOR ELEVATION	
TREES TO REMAIN	

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- ALL ELEVATIONS AND PROPOSED CONTOURS SHOWN ON THIS GRADING PLAN REFLECT FINISHED GRADES. THE THICKNESS OF PAVING, BASE, GRASS, TOPSOIL, AND MULCH MUST BE SUBTRACTED TO OBTAIN SUBGRADE ELEVATIONS.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT, OR LIMITS OF DIMENSIONS OR GRADES NECESSARY FOR CONSTRUCTION OF THIS PROJECT.
- THE CONTRACTOR SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE COMMENCEMENT OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
- THE CONTRACTOR SHALL REMOVE TOP SOIL, GRASS, ROOTS, DEBRIS, ETC. AND DISPOSE OFF SITE THOSE MATERIALS NOT SUITABLE FOR EMBANKMENT AND TOPSOIL. CLEAN STRIPPINGS AND TOPSOIL MAY BE STOCKPILED ON SITE FOR REUSE IN A LOCATION SPECIFIED BY THE OWNER.
- THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE STABILIZATION, ALL DISTURBED AREAS SHALL BE REVEGETATED IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND TPDES/SMPPP REQUIREMENTS. REFERENCE THE LANDSCAPE ARCHITECT'S PLAN, IF APPLICABLE.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS (USE OF SILT FENCES, ETC.) TO KEEP DRAINAGE AND SILT FROM WASHING ONTO ADJACENT PROPERTY, STREETS, OR DRAINAGE WAYS. CONTRACTOR SHALL IMMEDIATELY REMOVE SILT/DEBRIS WHICH WASHES OFFSITE OR INTO EXISTING STORM DRAIN SYSTEMS. (SEE SWPPP PLANS & TPDES BOOK).
- THE CONTRACTOR SHALL OBTAIN GRADES SHOWN HEREON WITHIN +/- ONE-TENTH (0.10) FOOT.
- IN PROPOSED PAVING AREAS, STREET DESIGN PLANS SHALL CONTROL. ALL EARTHEN SLOPES SHALL BE A MAXIMUM OF 3:1 AND A MINIMUM OF 1:0% UNLESS OTHERWISE SHOWN.
- THE CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING SITE AND PROPOSED IMPROVEMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL, OR BETTER, CONDITION ANY DAMAGE DONE TO EXISTING TREES, BUILDINGS, UTILITIES, FENCES, PAVEMENT, CURBS, OR DRIVEWAYS (NO SEPARATE PAY ITEMS).
- THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN WORKING NEAR UTILITIES, GAS LINES, SEWER, OR EXISTING APPURTENANCES. PRIOR TO PERFORMING ANY EXCAVATION, CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND ASSURE HIMSELF THAT ALL UTILITIES HAVE BEEN ADEQUATELY LOCATED AND IDENTIFIED. THE ENGINEER SHALL BE NOTIFIED IF ANY UTILITY CONFLICTS ARE DISCOVERED.
- UTILITIES SHOWN ON THE PLANS ARE FROM INFORMATION SOURCES AVAILABLE AT THE TIME OF DESIGN BUT MAY NOT REPRESENT ALL EXISTING UTILITIES ON SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION AND VERIFY SIZE, GRADE AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR, AT HIS OWN EXPENSE.
- POSITIVE DRAINAGE SHALL BE MAINTAINED THROUGHOUT THE SCOPE OF THE PROJECT. DRAINAGE SHALL BE DIRECTED AWAY FROM ALL BUILDING FOUNDATIONS. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW ANY PONDING OF WATER.
- FOR FILL PLACEMENT ON HILL SIDES OR STEEP SLOPE AREAS, THE CONTRACTOR SHALL REFERENCE THE PROJECT SPECIFICATIONS AND GEOTECHNICAL REPORT FOR SPECIAL INSTRUCTIONS REGARDING BENCHING.
- NO WORK SHALL BE PERFORMED IN A PUBLIC RIGHT-OF-WAY WITHOUT A PERMIT.



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RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS

OVERALL GRADING PLAN

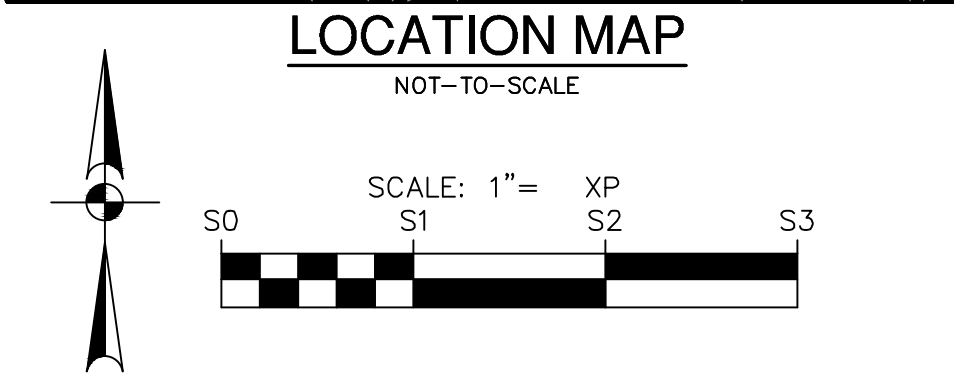
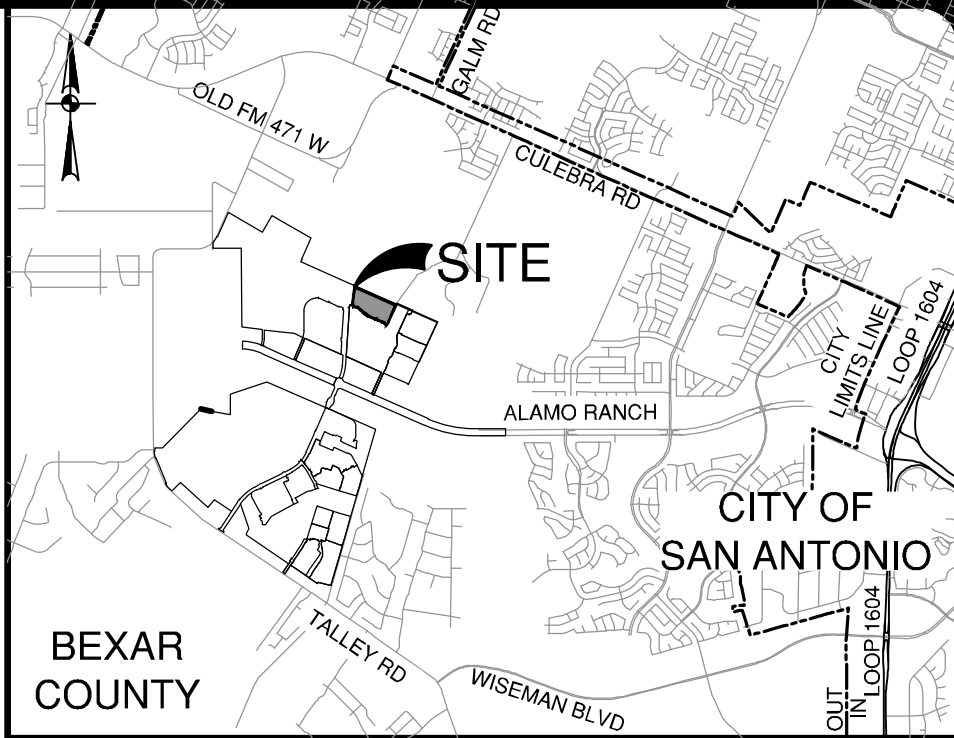
PLAT NO.	22-11800470
JOB NO.	11680-55
DATE	AUGUST 2022
DESIGNER	CB
CHECKED	BL DRAWN
SHEET	C7.01

Date: Aug 12, 2022 4:10pm User: jh_chen@auto
File: P:\A\16360\16360\16360\16360\SWP3-2022.dwg

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MATCHLINE "A" - SEE SHEET C8.00



SWPPP LEGEND

PROJECT LIMITS	---
EXISTING CONTOUR	---976---
PROPOSED CONTOUR	---970---
FLOW ARROW (EXISTING)	→
FLOW ARROW (PROPOSED)	→
SILT FENCE	
ROCK BERM	
GRAVEL FILTER BAGS	
GRATE INLET PROTECTION	
SEDIMENT CONTROL ROLLS	
LIMITS OF DISTURBED AREA (24.985)	
STABILIZED CONSTRUCTION ENTRANCE/EXIT (FIELD LOCATE)	
CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA (FIELD LOCATE)	
CONCRETE TRUCK WASH-OUT PIT (FIELD LOCATE)	

GENERAL NOTES

- DO NOT DISTURB VEGETATED AREAS (TREES, GRASS, WEEDS, BRUSH, ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.
- CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASH-OUT PIT, AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD TO BE DETERMINED IN THE FIELD.
- STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO BE MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. ALL MODIFICATIONS ARE TO BE NOTED ON THIS EXHIBIT AND SIGNED AND DATED BY THE RESPONSIBLE PARTY.
- RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS BY USE OF ADEQUATE FENCING, IF NECESSARY.
- ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO BE MAINTAINED AND IN WORKING CONDITIONS AT ALL TIMES.
- FOR A COMPLETE LISTING OF TEMPORARY STORM WATER POLLUTION PREVENTION CONTROLS REFER TO THE TPDES STORM WATER POLLUTION PREVENTION PLAN.
- STORM WATER POLLUTION PREVENTION STRUCTURES SHOULD BE CONSTRUCTED WITHIN THE SITE BOUNDARIES. SOME OF THESE FEATURES MAY BE SHOWN OUTSIDE THE SITE BOUNDARIES ON THIS PLAN FOR VISUAL CLARITY.
- AS SOON AS PRACTICAL, ALL DISTURBED SOIL THAT WILL NOT BE COVERED BY IMPERVIOUS COVER SUCH AS PARKWAY AREAS, EASEMENT AREAS, EMBANKMENT SLOPES, ETC. WILL BE STABILIZED PER APPLICABLE PROJECT SPECIFICATIONS.
- BEST MANAGEMENT PRACTICES MAY BE INSTALLED IN STAGES TO COINCIDE WITH THE DISTURBANCE OF UPGRADE AREAS.
- BEST MANAGEMENT PRACTICES MAY BE REMOVED IN STAGES ONCE THE WATERSHED FOR THAT PORTION CONTROLLED BY THE BEST MANAGEMENT PRACTICES HAS BEEN STABILIZED IN ACCORDANCE WITH TPDES REQUIREMENTS.
- UPON COMPLETION OF THE PROJECT, INCLUDING SITE STABILIZATION, AND BEFORE FINAL PAYMENT IS ISSUED, CONTRACTOR SHALL REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES, PAYING SPECIAL ATTENTION TO ROCK BERMS IN DRAINAGE FEATURES.
- WHERE VEGETATED FILTER STRIPS ARE INDICATED, CONTRACTOR SHALL VERIFY THAT SUFFICIENT VEGETATION EXISTS, OTHERWISE CONTRACTOR SHALL PLACE SILT FENCING IN LIEU OF VEGETATED FILTER STRIP.
- SHADED AREA DENOTES LIMITS OF DISTURBED AREAS. OTHER AREAS WITHIN THE PROJECT LIMITS, WITH THE EXCEPTION OF A CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD, ARE NOT A PART OF THIS TPDES STORM WATER POLLUTION PREVENTION PLAN (SWP3) AND WILL NOT BE DISTURBED BY CIVIL CONSTRUCTION ACTIVITIES. HOUSE CONSTRUCTION ACTIVITIES WILL REQUIRE A SEPARATE STORM WATER POLLUTION PREVENTION PLAN.
- PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL COORDINATE PLACEMENT OF TEMPORARY BEST MANAGEMENT PRACTICES WITHIN TxDOT RIGHT-OF-WAY WITH TxDOT.
- CPS ENERGY WILL FUNCTION AS A SECONDARY OPERATOR ON THIS PROJECT AND WILL BE INSTALLING ELECTRIC UTILITIES FOR ON-SITE CONSTRUCTION AND OFF-SITE FEED TO THE PROJECT.

THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE TPDES-STORM WATER POLLUTION PREVENTION PLAN (SWP3) REGULATIONS.

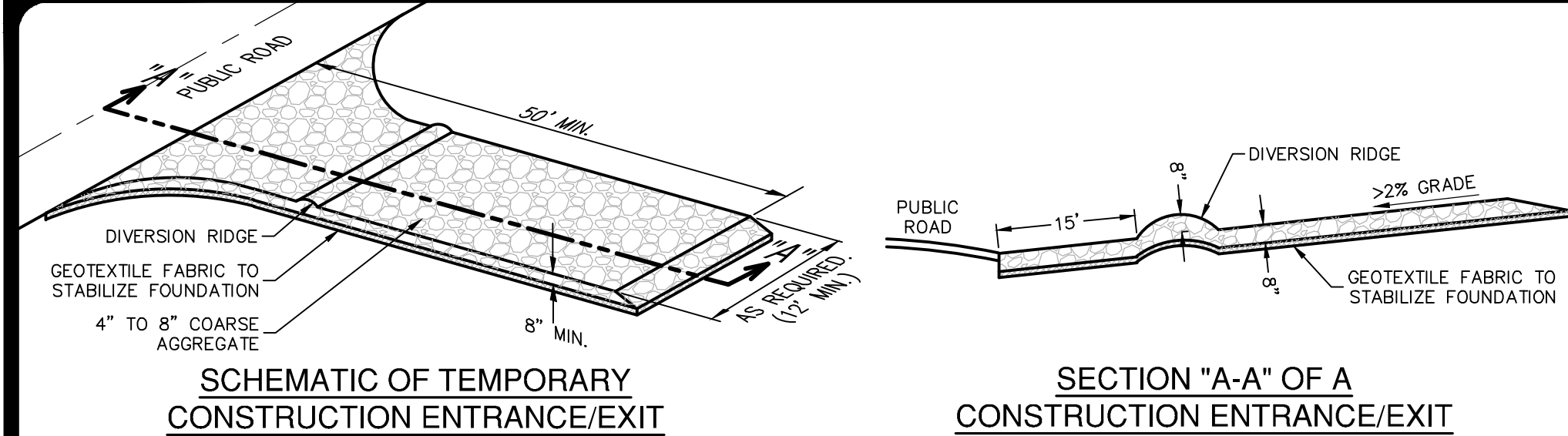
THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF THE SWP3 ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENT PLANS.

EXHIBIT 2

PAPE-DAWSON ENGINEERS
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TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008860

RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS
STORM WATER POLLUTION PREVENTION PLAN

PLAT NO. 22-11800470
JOB NO. 11680-55
DATE AUGUST 2022
DESIGNER CB
CHECKED BL DRAWN CB
SHEET C8.01

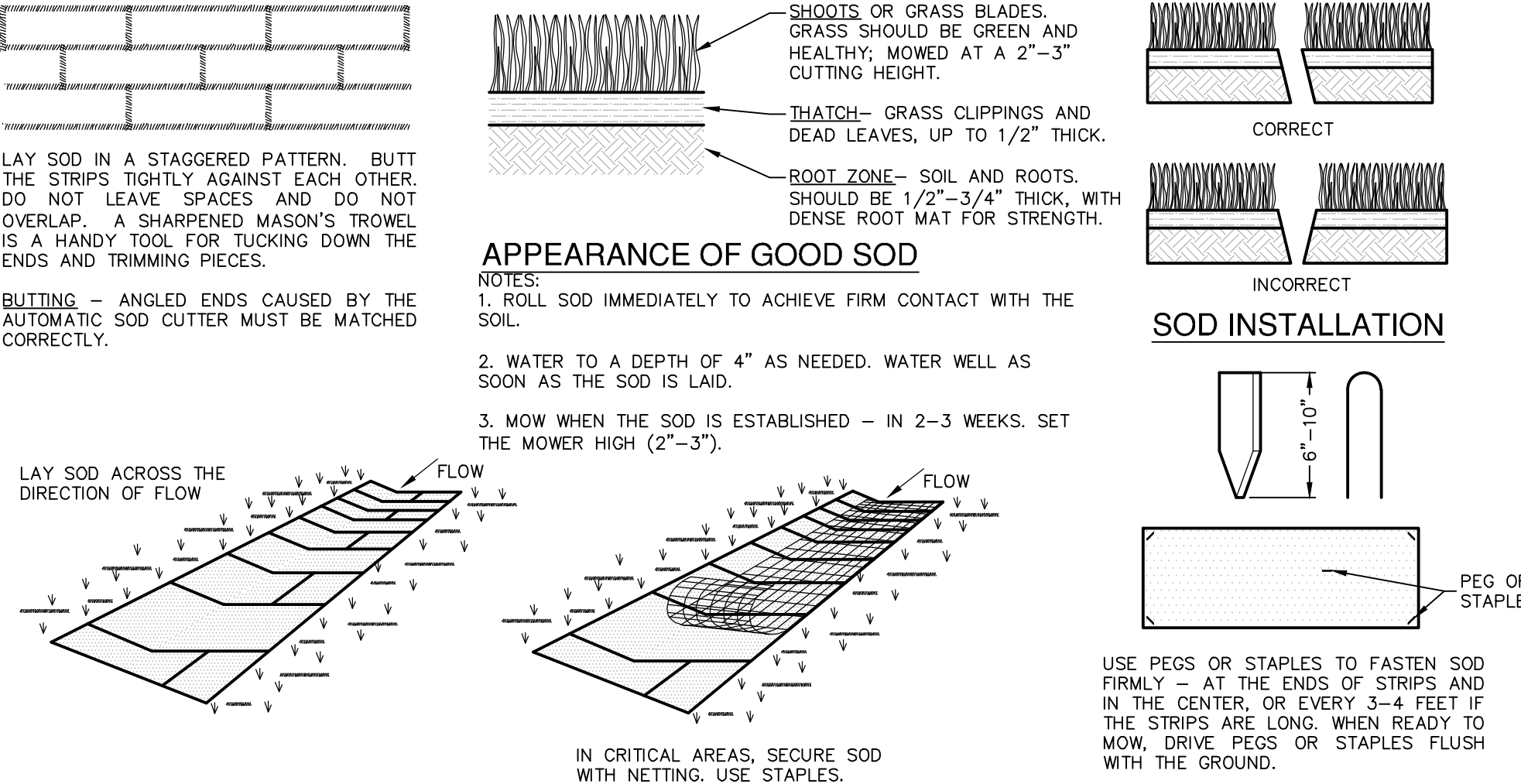


- MATERIALS**
1. THE AGGREGATE SHOULD CONSIST OF 4-INCH TO 8-INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.
 2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8-INCHES.
 3. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD², A MULLEN BURST RATING OF 140 LB/IN², AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.
 4. IF A WASHING FACILITY IS REQUIRED, A LEVEL AREA WITH A MINIMUM OF 4-INCH DIAMETER WASHED STONE OR COMMERCIAL ROCK SHOULD BE INCLUDED IN THE PLANS. DIVERT WASTEWATER TO A SEDIMENT TRAP OR BASIN.

- INSTALLATION**
1. AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.
 2. THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.
 3. THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.
 4. IF THE SLOPE TOWARD THE ROAD EXCEEDS 2%, CONSTRUCT A RIDGE, 6-INCHES TO 8-INCHES HIGH WITH 3:1 (H:V) SIDE SLOPES, ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE PUBLIC ROAD.
 5. PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.
 6. PLACE STONE TO DIMENSIONS AND GRADE SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.
 7. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN.
 8. INSTALL PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.

STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL

NOT-TO-SCALE



- MATERIALS**
1. SOD SHOULD BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4" INCH (± 1/4" INCH) AT THE TIME OF CUTTING. THIS THICKNESS SHOULD EXCLUDE SHOOT GROWTH AND THATCH.
 2. PIECES OF SOD SHOULD BE CUT TO THE SUPPLIER'S STANDARD WIDTH AND LENGTH, WITH A MAXIMUM ALLOWABLE DEVIATION IN ANY DIMENSION OF 5%. TORN OR UNEVEN PADS SHOULD NOT BE ACCEPTABLE.
 3. STANDARD SIZE SECTIONS OF SOD SHOULD BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT, THEIR SIZE AND SHAPE WHEN SUBSEQUENT ROWS ARE LAYED. SOD SHOULD BE INSTALLED WITH THE LENGTH PERPENDICULAR TO THE SLOPE (ON CONTOUR).
 4. SOD SHOULD BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS.

SITE PREPARATION

1. PRIOR TO SOD PREPARATION, AREAS TO BE SODDED SHOULD BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLAN.
2. THE SURFACE SHOULD BE CLEARED OF ALL TRASH, DEBRIS AND OF ALL ROOTS, BRUSH, WIRE, GRADE STAKES AND OTHER OBJECTS THAT WOULD INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS.
3. FERTILIZE ACCORDING TO SOIL TESTS. FERTILIZER NEEDS CAN BE DETERMINED BY A SOIL TESTING LABORATORY OR REGIONAL RECOMMENDATIONS CAN BE MADE BY COUNTY AGRICULTURAL EXTENSION AGENTS. FERTILIZER SHOULD BE WORKED INTO THE SOIL TO A DEPTH OF 3 INCHES WITH A DISC, SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT. ON SLOPING LAND, THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE CONTOUR.

INSTALLATION IN CHANNELS

1. SOD STRIPS IN WATERWAYS SHOULD BE LAID PERPENDICULAR TO THE DIRECTION OF FLOW. CARE SHOULD BE TAKEN TO BUTT ENDS OF STRIPS TIGHTLY (SEE FIGURE ABOVE).
2. AFTER ROLLING OR TAMPING, SOD SHOULD BE PEGGED OR STAPLED TO RESIST WASHOUT DURING THE ESTABLISHMENT PERIOD. MESH OR OTHER NETTING MAY BE PEGGED OVER THE SOD FOR EXTRA PROTECTION IN CRITICAL AREAS.

SOD INSTALLATION DETAIL

NOT-TO-SCALE

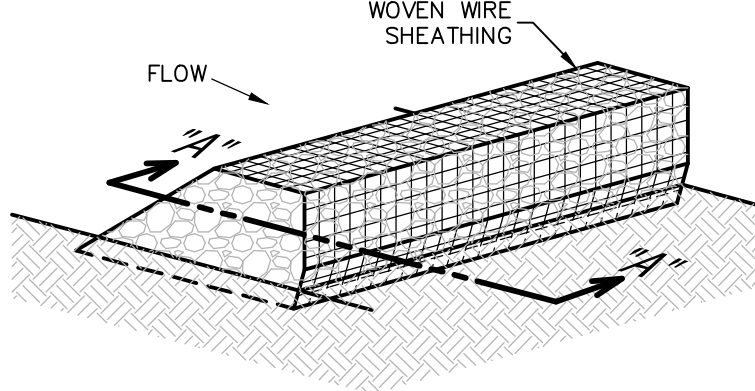
COMMON TROUBLE POINTS

1. INADEQUATE RUNOFF CONTROL--SEDIMENT WASHES ONTO PUBLIC ROAD.
2. STONE TOO SMALL OR GEOTEXTILE FABRIC ABSENT, RESULTS IN MUDDY CONDITION AS STONE IS PRESSED INTO SOIL.
3. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC--EXTEND PAD BEYOND THE MINIMUM 50-FOOT LENGTH AS NECESSARY.
4. PAD NOT FLARED SUFFICIENTLY AT ROAD SURFACE, RESULTS IN MUD BEING TRACKED ON TO ROAD AND POSSIBLE DAMAGE TO ROAD.
5. UNSTABLE FOUNDATION -- USE GEOTEXTILE FABRIC UNDER PAD AND/OR IMPROVE FOUNDATION DRAINAGE.

INSPECTION AND MAINTENANCE GUIDELINES

1. THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
3. WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
4. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
5. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.

ISOMETRIC PLAN VIEW



ROCK BERMS

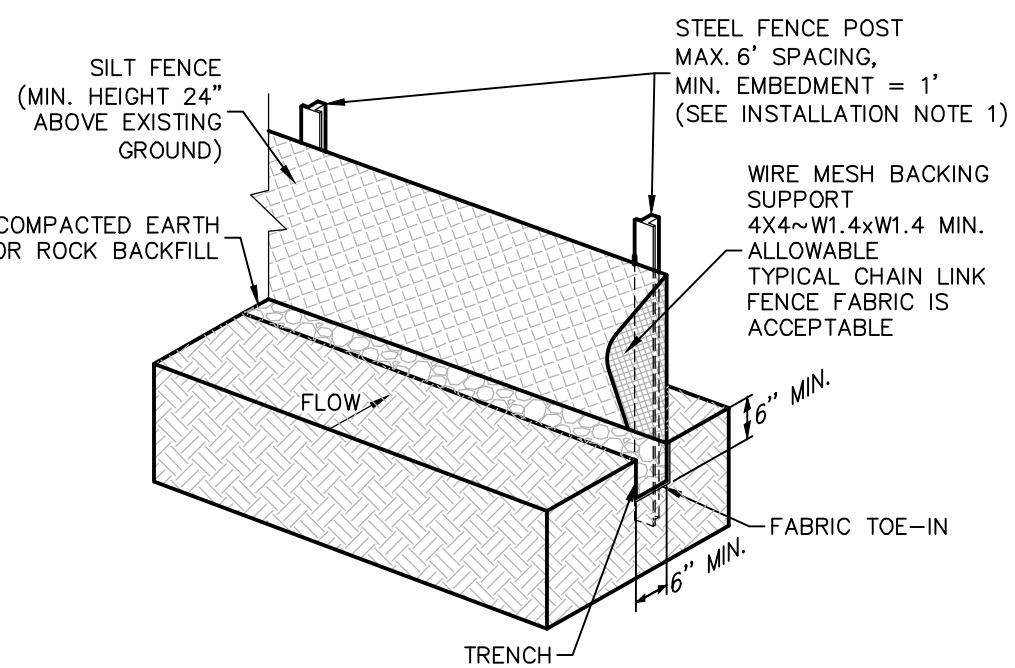
THE PURPOSE OF A ROCK BERM IS TO SERVE AS A CHECK DAM IN AREAS OF CONCENTRATED FLOW, TO INTERCEPT SEDIMENT-LADEN RUNOFF, DETAIN THE SEDIMENT AND RELEASE THE WATER IN SHEET FLOW. THE ROCK BERM SHOULD BE USED WHEN THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 5 ACRES. ROCK BERMS ARE USED IN AREAS WHERE THE VOLUME OF RUNOFF IS TOO GREAT FOR A SILT FENCE TO CONTAIN. THEY ARE LESS EFFECTIVE FOR SEDIMENT REMOVAL THAN SILT FENCES, PARTICULARLY FOR FINE PARTICLES, BUT ARE ABLE TO WITHSTAND HIGHER FLOWS THAN A SILT FENCE AS SUCH. ROCK BERMS ARE OFTEN USED IN AREAS OF CHANNEL FLOWS (DITCHES, GULLIES, ETC.). ROCK BERMS ARE MOST EFFECTIVE AT REDUCING BED LOAD IN CHANNELS AND SHOULD NOT BE SUBSTITUTED FOR OTHER EROSION AND SEDIMENT CONTROL MEASURES FARTHER UP THE WATERSHED.

INSPECTION AND MAINTENANCE GUIDELINES

1. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE.
2. REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER THAT WILL NOT CAUSE ANY ADDITIONAL SILTATION.
3. REPAIR ANY LOOSE WIRE SHEATHING.
4. THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
5. THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
6. THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

ROCK BERM DETAIL

NOT-TO-SCALE



ISOMETRIC PLAN VIEW

SILT FENCE

A SILT FENCE IS A BARRIER CONSISTING OF GEOTEXTILE FABRIC SUPPORTED BY METAL POSTS TO PREVENT SOIL AND SEDIMENT LOSS FROM A SITE. WHEN PROPERLY USED, SILT FENCES CAN BE HIGHLY EFFECTIVE AT CONTROLLING SEDIMENT FROM DISTURBED AREAS. THEY CAUSE RUNOFF TO POND, ALLOWING HEAVIER SOLIDS TO SETTLE OUT. IF NOT PROPERLY INSTALLED, SILT FENCES ARE NOT LIKELY TO BE EFFECTIVE.

THE PURPOSE OF A SILT FENCE IS TO INTERCEPT AND DETAIN WATER-BORN SEDIMENT FROM UNPROTECTED AREAS OF A LIMITED EXTENT. SILT FENCE IS USED DURING THE PERIOD OF CONSTRUCTION NEAR THE PERIMETER OF A DISTURBED AREA TO INTERCEPT SEDIMENT WHILE ALLOWING WATER TO PERCOLATE THROUGH. THIS FENCE SHOULD REMAIN IN PLACE UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED. SILT FENCE SHOULD NOT BE USED WHERE THERE IS A CONCENTRATION OF WATER IN A CHANNEL OR DRAINAGE WAY. IF CONCENTRATED FLOW OCCURS AFTER INSTALLATION, CORRECTIVE ACTION MUST BE TAKEN SUCH AS PLACING A ROCK BERM IN THE AREAS OF CONCENTRATED FLOW.

SILT FENCING WITHIN THE SITE MAY BE TEMPORARILY MOVED DURING THE DAY TO ALLOW CONSTRUCTION ACTIVITY PROVIDED IT IS REPLACED AND PROPERLY ANCHORED TO THE GROUND AT THE END OF THE DAY. SILT FENCES ON THE PERIMETER OF THE SITE OR AROUND DRAINAGE WAYS SHOULD NOT BE MOVED AT ANY TIME.

MATERIALS

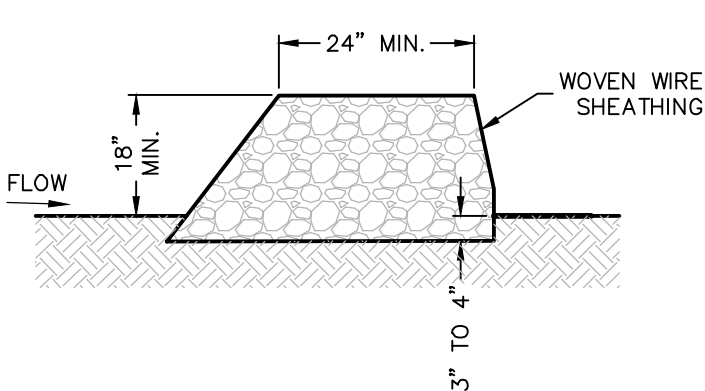
1. SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN², ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NUMBER 30.
2. FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEE OR Y-BAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM WEIGHT 1.25 LB/FT, AND BRINDELL HARDNESS EXCEEDING 140.
3. WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12 GAUGE MINIMUM.

INSTALLATION

1. STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS MUST BE EMBEDDED A MINIMUM OF 1-FOOT DEEP AND SPACED NOT MORE THAN 8 FEET ON CENTER. WHERE WATER CONCENTRATES, THE MAXIMUM SPACING SHOULD BE 6 FEET.
2. LAY OUT FENCING DOWN-SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS ¼ ACRE/100 FEET OF FENCE.

SILT FENCE DETAIL

NOT-TO-SCALE



SECTION "A-A"

MATERIALS

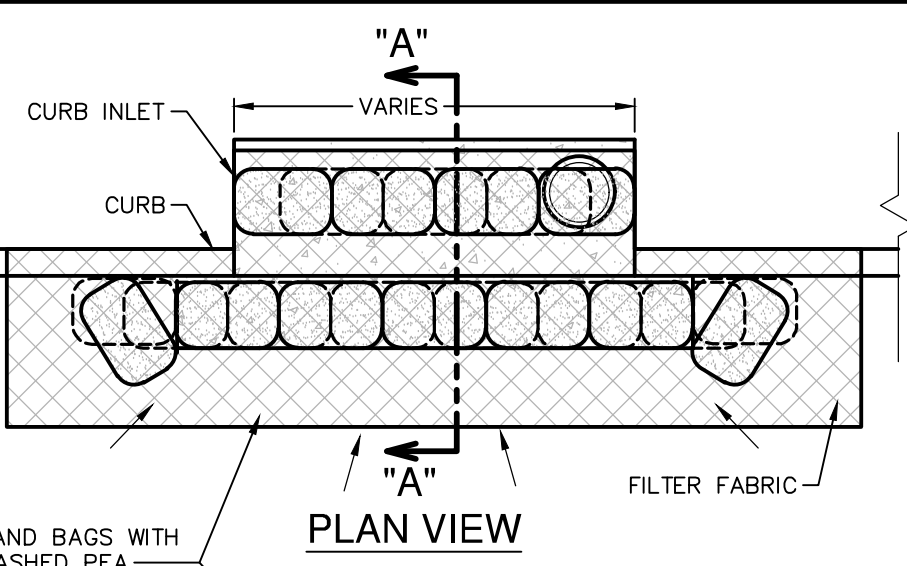
1. THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED AND SHOULD BE SECURED WITH SHOAT RINGS.
2. CLEAN, OPEN GRADED 3-INCH TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5-INCH TO 8-INCH DIAMETER ROCKS MAY BE USED.

INSTALLATION

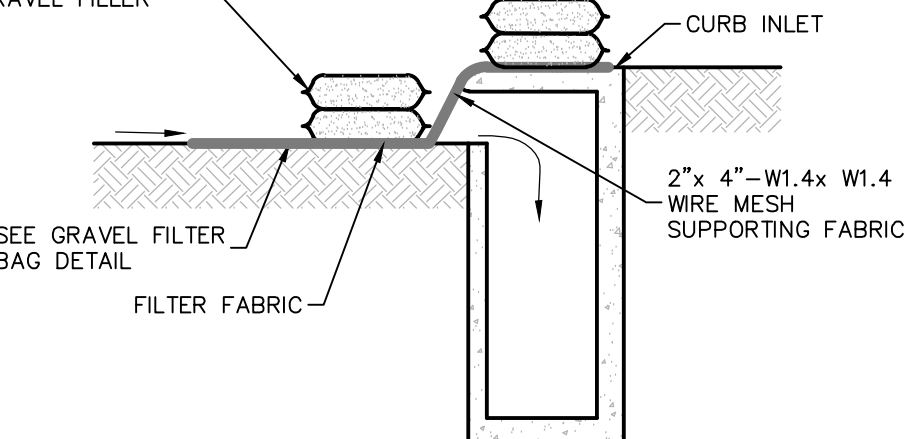
1. LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE. THE SHEATHING SHOULD BE 20 GAUGE WOVEN WIRE MESH WITH 1 INCH OPENINGS.
2. BERM SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER.
3. PLACE THE ROCK ALONG THE SHEATHING AS SHOWN IN THE DIAGRAM TO A HEIGHT NOT LESS THAN 18".
4. WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH TIE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES, AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON.
5. BERM SHOULD BE BUILT ALONG THE CONTOUR AT ZERO PERCENT GRADE OR AS NEAR AS POSSIBLE.
6. THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.

COMMON TROUBLE POINTS

1. INSUFFICIENT BERM HEIGHT OR LENGTH (RUNOFF QUICKLY ESCAPES OVER THE TOP OR AROUND THE SIDES OF BERM).
2. BERM NOT INSTALLED PERPENDICULAR TO FLOW LINE (RUNOFF ESCAPING AROUND ONE SIDE).



PLAN VIEW



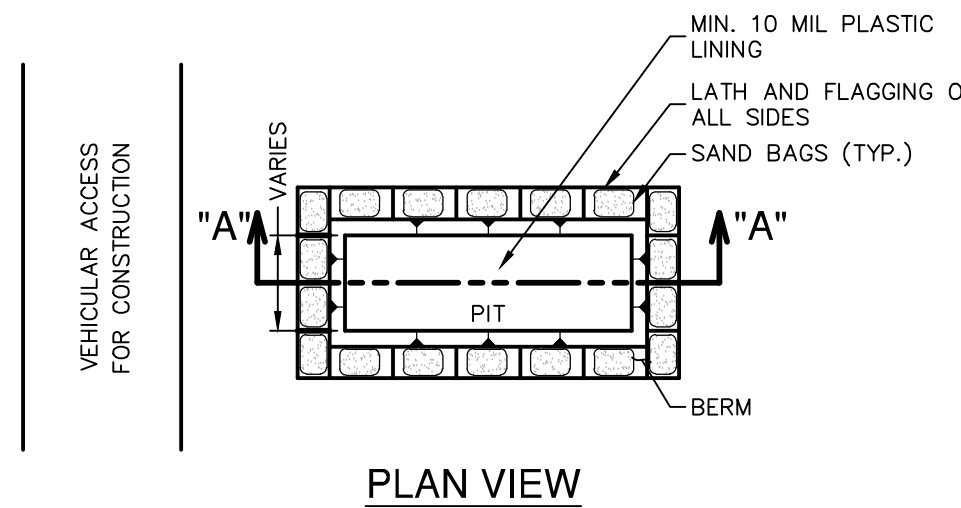
SECTION "A-A"

GENERAL NOTES

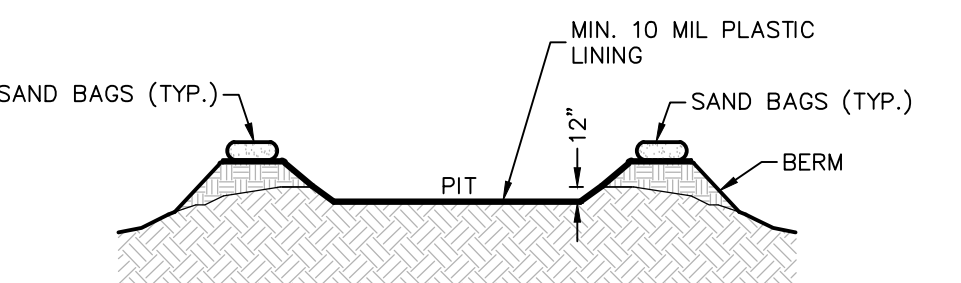
1. CONTRACTOR TO INSTALL 2"x4"-W1.4xW1.4 WIRE MESH SUPPORTING FILTER FABRIC OVER THE INLET OPENING. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR WIRE TIES AT THIS LOCATION. SAND BAGS FILLED WITH WASHED PEA GRAVEL SHOULD BE PLACED ON TOP OF WIRE MESH ON TOP OF THE INLET AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SANDBAGS FILLED WITH WASHED PEA GRAVEL SHOULD ALSO BE PLACED ALONG THE GUTTER AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SAND BAGS TO BE STACKED TO FORM A CONTINUOUS BARRIER AROUND INLETS.
2. THE BAGS SHOULD BE TIGHTLY ABUTTED AROUND EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.
3. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.
4. INSPECT FILTER FABRIC AND PATCH OR REPLACE IF TORN OR MISSING.
5. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

BAGGED GRAVEL CURB INLET PROTECTION DETAIL

NOT-TO-SCALE



PLAN VIEW



SECTION "A-A"

GENERAL NOTES

1. DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.
2. WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.
3. WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF.
4. LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES OR WATER BODIES.
5. TEMPORARY CONCRETE WASHOUT FACILITY SHOULD BE CONSTRUCTED WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.

MATERIALS

PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL IN POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.

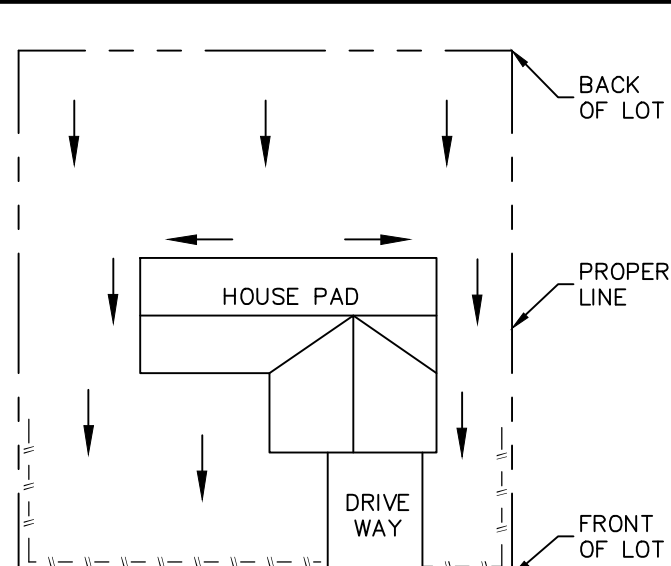
MAINTENANCE

1. WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED OF.
2. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF.
3. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE BACKFILLED AND REPAIRED.

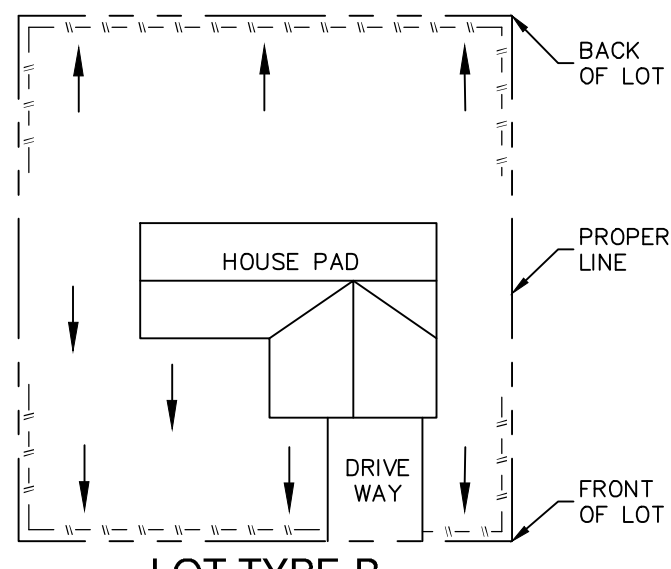
CONCRETE TRUCK WASHOUT

PIT DETAIL

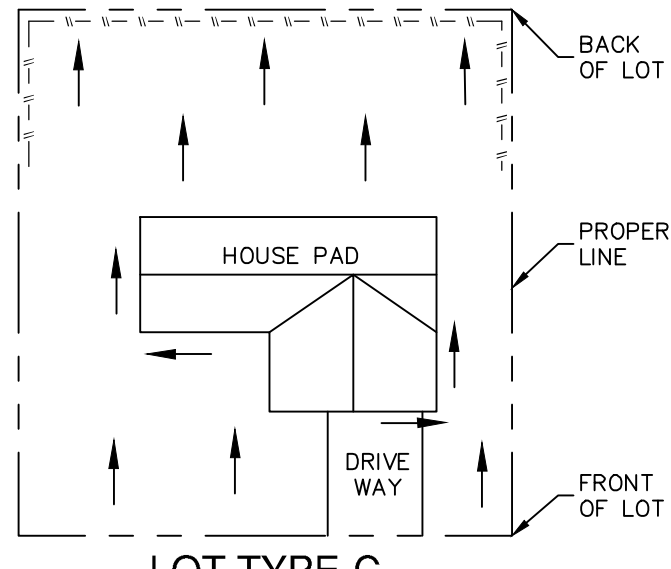
NOT-TO-SCALE



LOT TYPE-A



LOT TYPE-B



LOT TYPE-C

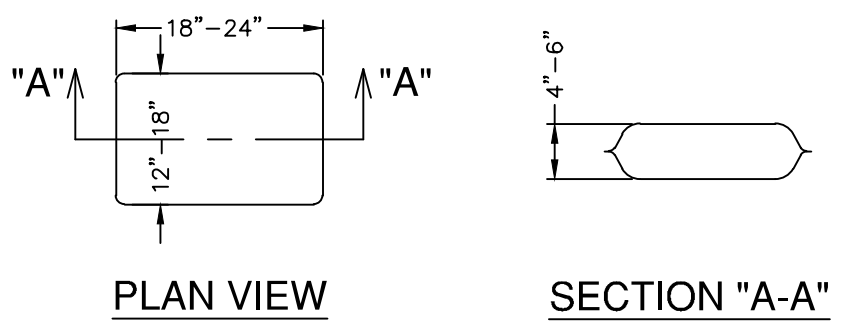
NOTE: SILT FENCE TO BE INSTALLED PER THESE DETAILS AND LOCATED ON THE DOWNGRADIENT SIDE OF EACH LOT LINE OR LIMITS OF CLEARING AS GENERALLY SHOWN ON THE OVERALL SITE PLAN.

LEGEND

--- SILT FENCE DRAINAGE FLOW

TYPICAL HOUSE LOT LAYOUTS

NOT-TO-SCALE



PLAN VIEW

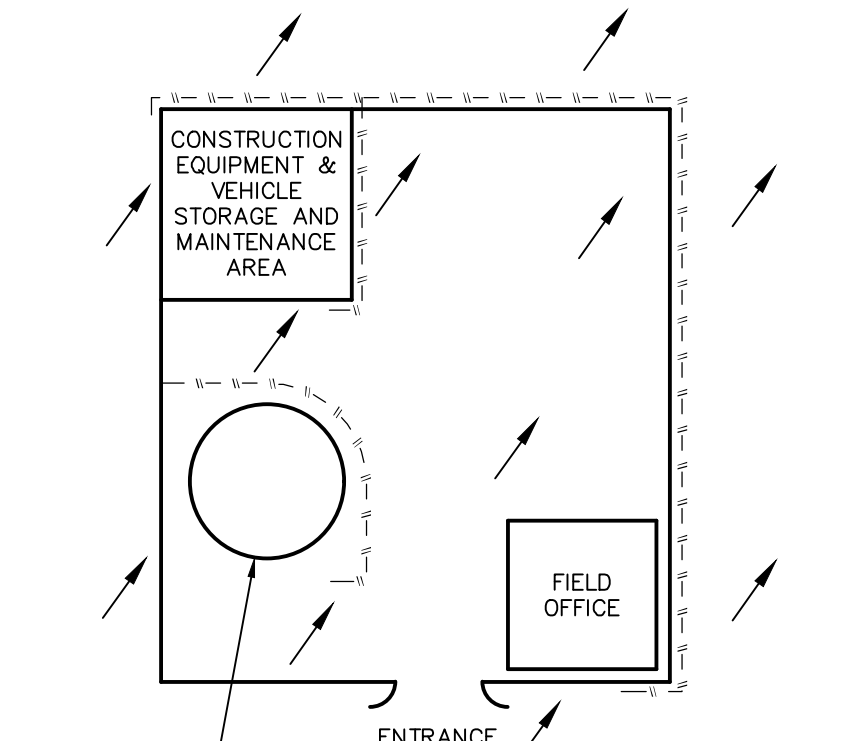
SECTION "A-A"

NOTES:
1. THE FILTER BAG MATERIAL SHALL BE MADE OF POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN FABRIC, MIN. UNIT WEIGHT OF 4 OUNCES/SY, HAVE A MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70%.

2. THE FILTER BAG SHALL BE FILLED WITH CLEAN, MEDIUM WASHED PEA GRAVEL TO COARSE GRAVEL (0.31 TO 0.75 INCH DIAMETER).
3. SAND SHALL NOT BE USED TO FILL THE FILTER BAGS.

GRAVEL FILTER BAG DETAIL

NOT-TO-SCALE



LEGEND

--- SILT FENCE FLOW ARROWS

CONSTRUCTION STAGING AREA

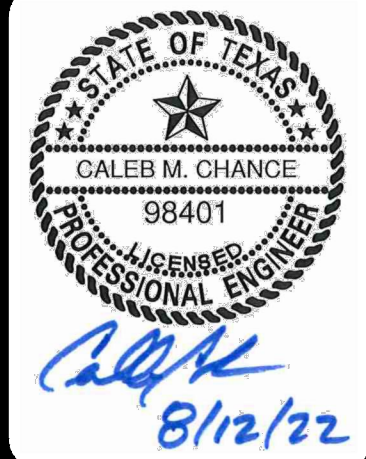
NOT-TO-SCALE

THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE TPDES--STORM WATER POLLUTION PREVENTION PLAN (SWP3) REGULATIONS.

THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF THE SWP3 ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENT PLANS.

EXHIBIT 3

DATE	
NO.	
REVISION	



PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS SURVEYING FIRM #1008860

RIVERSTONE, UNIT F8 & F9
SAN ANTONIO, TEXAS

STORM WATER POLLUTION PREVENTION PLAN DETAILS

PLAT NO.	22-11800470
JOB NO.	11680-55
DATE	AUGUST 2022
DESIGNER	CB
CHECKED	BL
DRAWN	CB
SHEET	C8.10