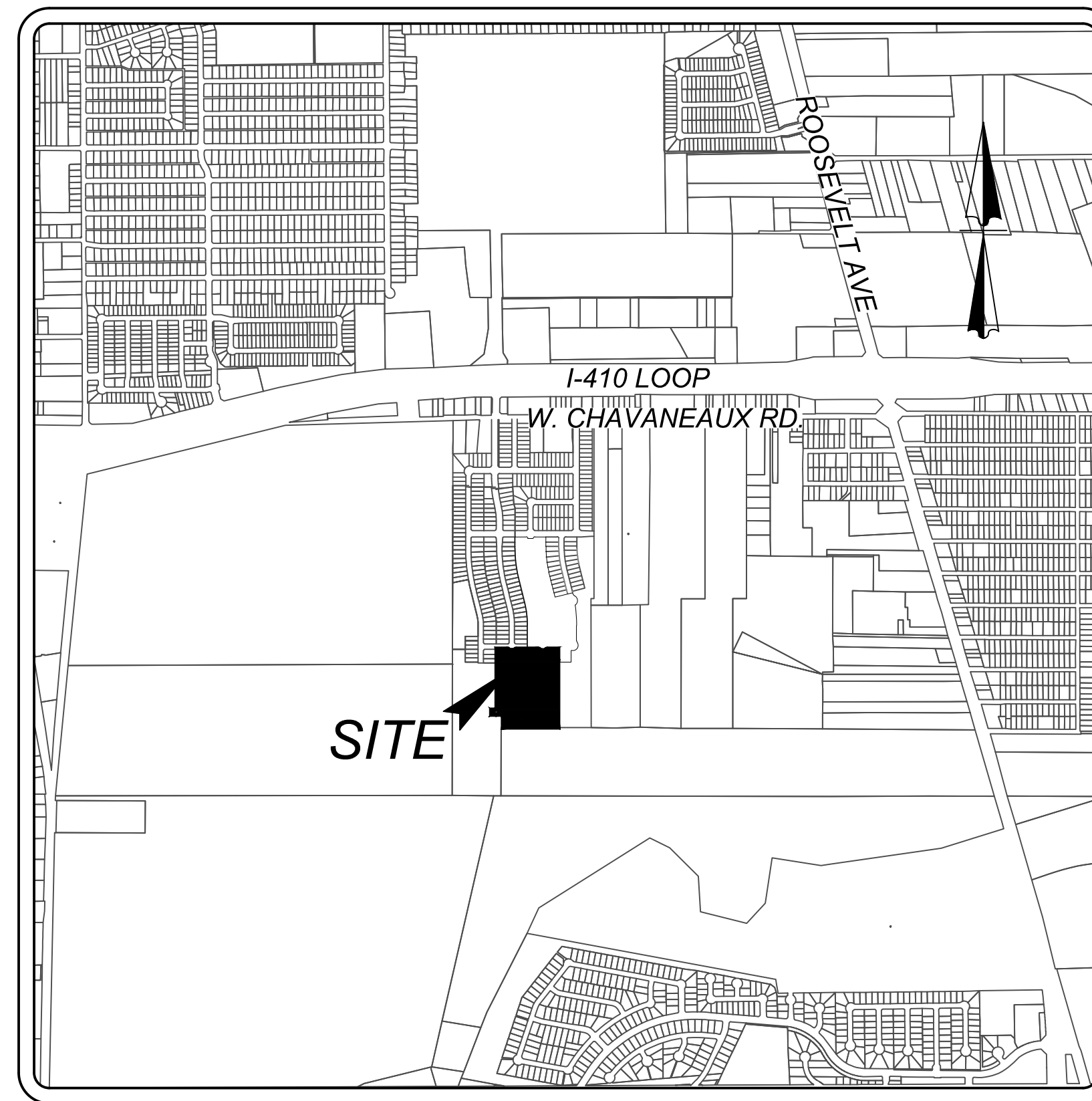


CHAVANEAUX SUBDIVISION UNIT 6

SAN ANTONIO, TX

STREET, DRAINAGE, WATER, SANITARY SEWER, AND UTILITY IMPROVEMENTS

CHAVANEAUX SUBDIVISION UNIT 6



LOCATION MAP NOT-TO-SCALE

VIVA LAND VENTURES, LP.
11427 ROJAS DRIVE
EL PASO, TX 79936

Sheet List Table

SHEET TITLE	SHEET NUMBER
COVER SHEET	0.0
OVERALL UTILITY PLAN	1.0
MASTER DRAINAGE PLAN	2.0
OVERALL GRADING PLAN	3.0
△ DRAIN "A" PLAN & PROFILE	4.0
DRAIN "B" PLAN & PROFILE	4.1
DRAIN "C" PLAN & PROFILE	4.2
DRAIN "D" PLAN & PROFILE	4.3
BEAUMONT BRK PLAN & PROFILE	5.0
BONNET PASS PLAN & PROFILE	5.1
CHAVANEAUX LNDG PLAN & PROFILE	5.2
TYPICAL STREET DETAILS	5.3
WHEELCHAIR RAMP DETAILS	5.4
CONCRETE DRIVEWAY DETAILS	5.5
TXDOT PEDESTRIAN CURB RAMP DETAIL	5.6
TRAFFIC SIGNAGE & PEDESTRIAN ACCESSIBILITY PLAN	5.7
TRAFFIC SIGNAGE DETAILS	5.8
SANITARY SEWER COVER SHEET	6.0
OVERALL SANITARY SEWER PLAN	6.1
LINE "B" & LINE "C" PLAN & PROFILE	6.2
EXISTING LINE "A" PLAN & PROFILE	6.3
WATER DISTRIBUTION COVER SHEET	7.0
WATER DISTRIBUTION PLAN	7.1
STORM WATER POLLUTION PREVENTION PLAN	8.0
STORM WATER POLLUTION PREVENTION PLAN DETAILS	8.1

SHEET REVISION LOG

DATE	SHEET NO.	REVISION NO.	DESCRIPTION
5/6/2026	4.2 & 4.3	1	ADDED DRAIN "C" AND DRAIN "D" PLAN & PROFILE SHEETS.



PLAT NO.22-11800409

SHEET 0.0

JOB NO.: 984-02-02

Date: May 06, 2026, 11:49am User: D. Jenkins File: K:\2022\2022design\civil\22-11800409.dwg

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TRENCH EXCAVATION SAFETY PROTECTION

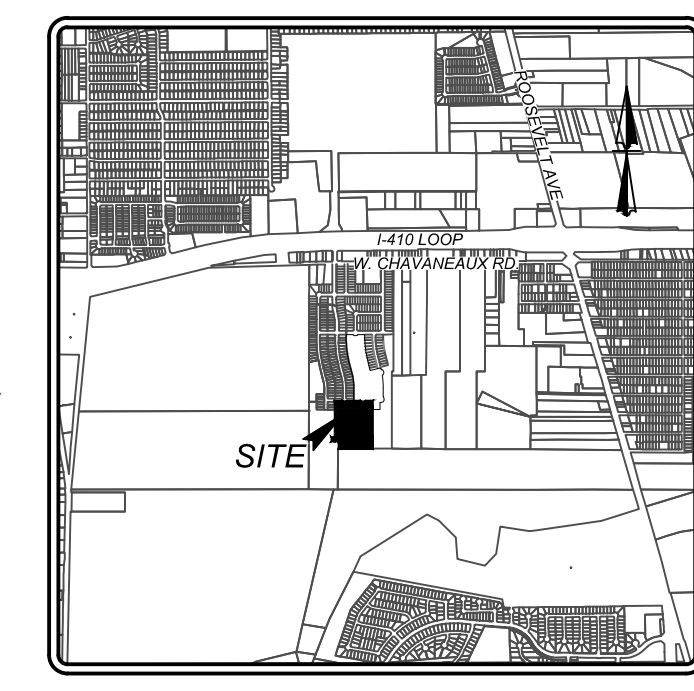
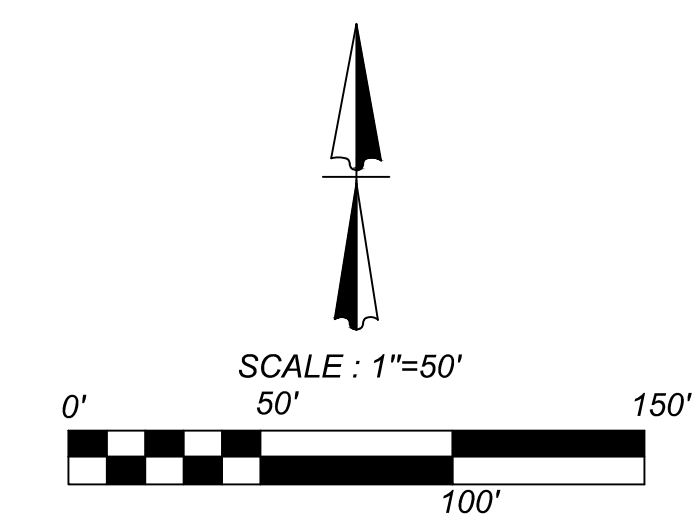
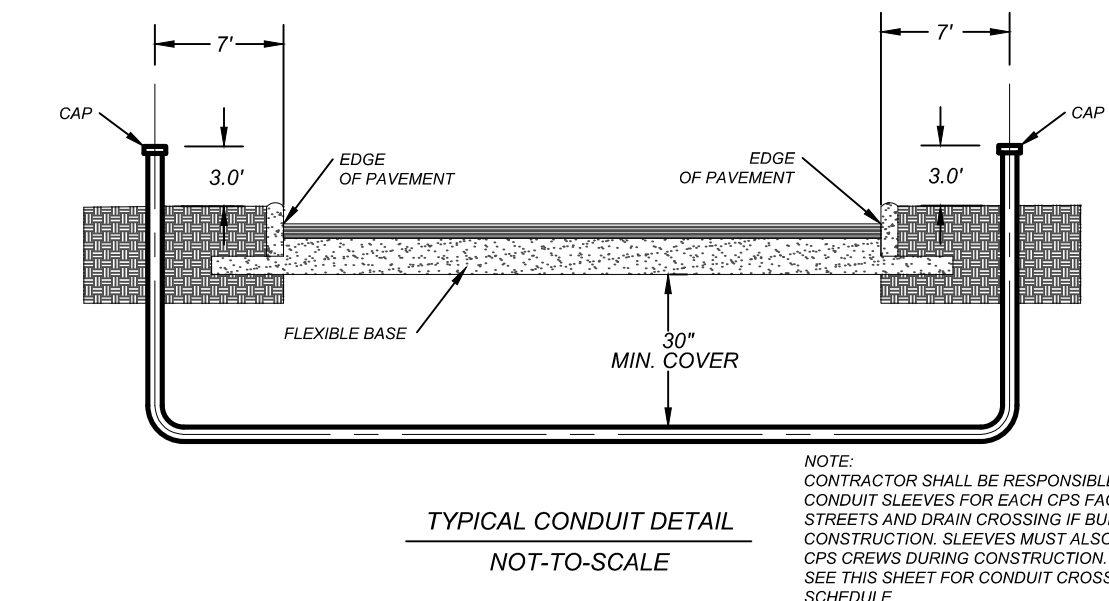
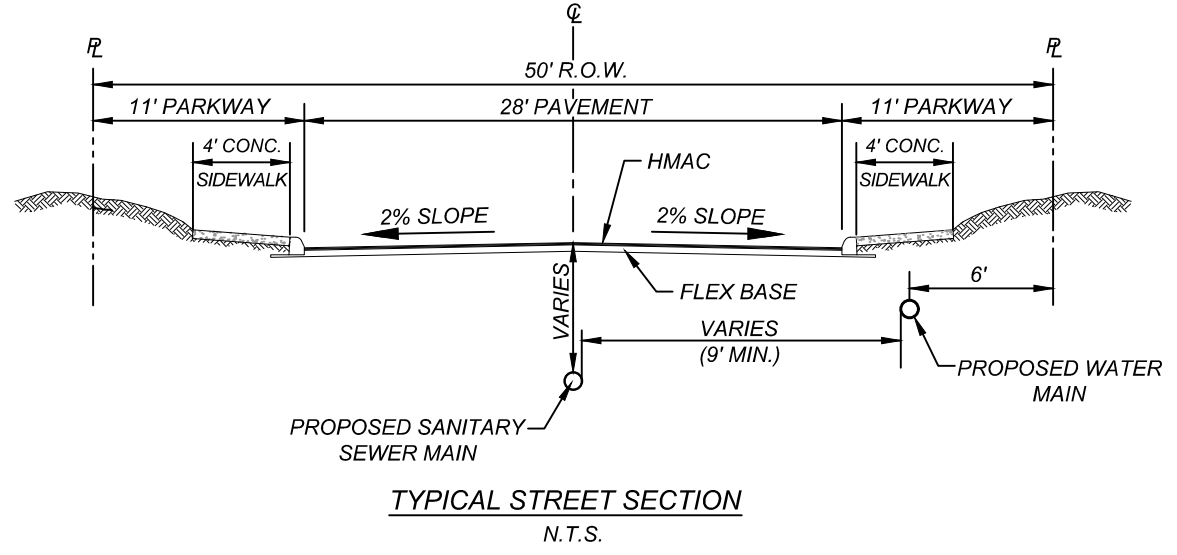
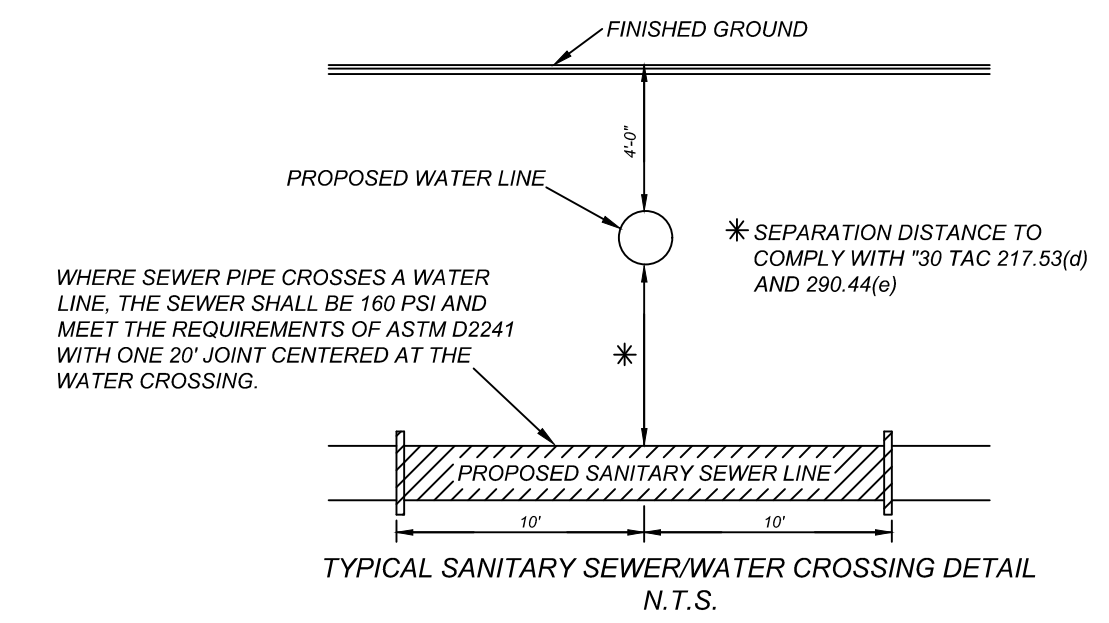
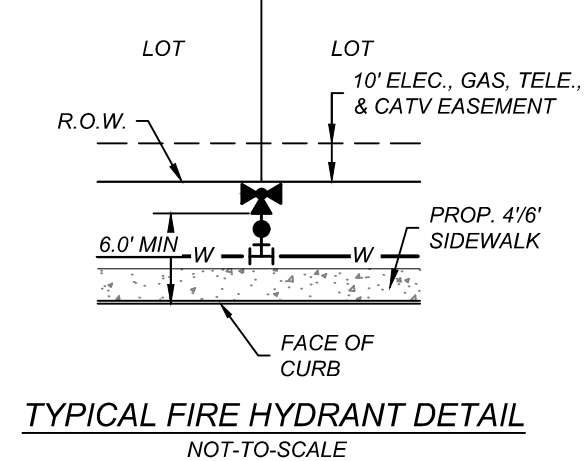
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S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

COMPACTION NOTE:

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

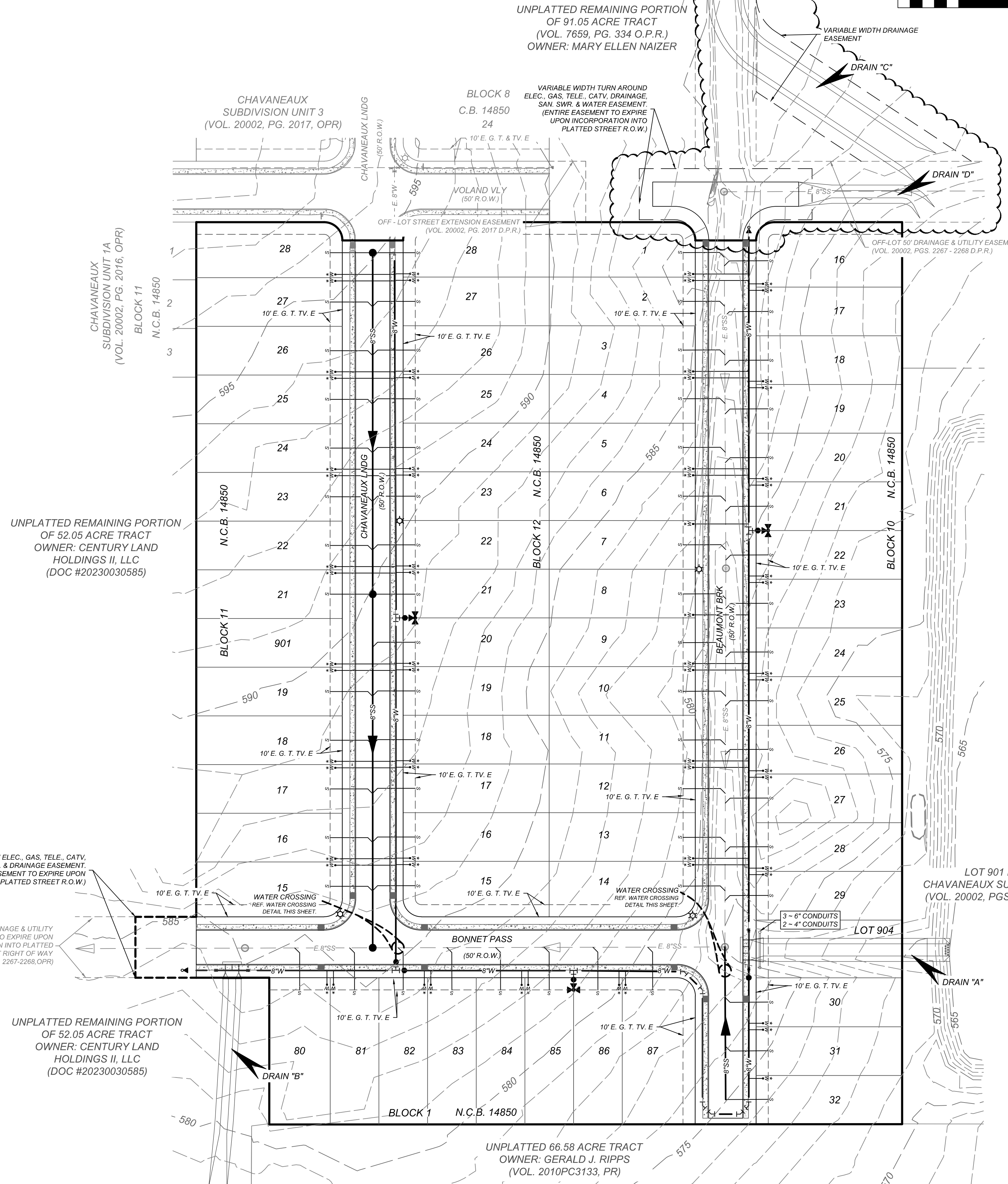
DRY UTILITY CONDUIT NOTE:

CONDUIT LOCATIONS SHOWN ON PLAN ARE FOR GEOGRAPHICAL PURPOSES ONLY AND ARE APPROXIMATE. CONTRACTOR TO INSTALL PROPOSED CONDUITS IN ACCORDANCE WITH DRY UTILITY PURVEYOR'S SPECIFICATIONS. CONTRACTOR TO VERIFY THE CONDUIT LOCATIONS AND SIZES BASED ON THE DRY UTILITY PURVEYOR'S PLAN.



LEGEND

PROPOSED WATER MAIN	— W —
PROPOSED WATER SERVICE & METER BOX	— W —
PROPOSED WATER 3/4\"/>	



Date: Apr 29, 2026, 3:55pm User ID: cgriff
 File: K:\964\02\02\Design\00\9640202.dwg

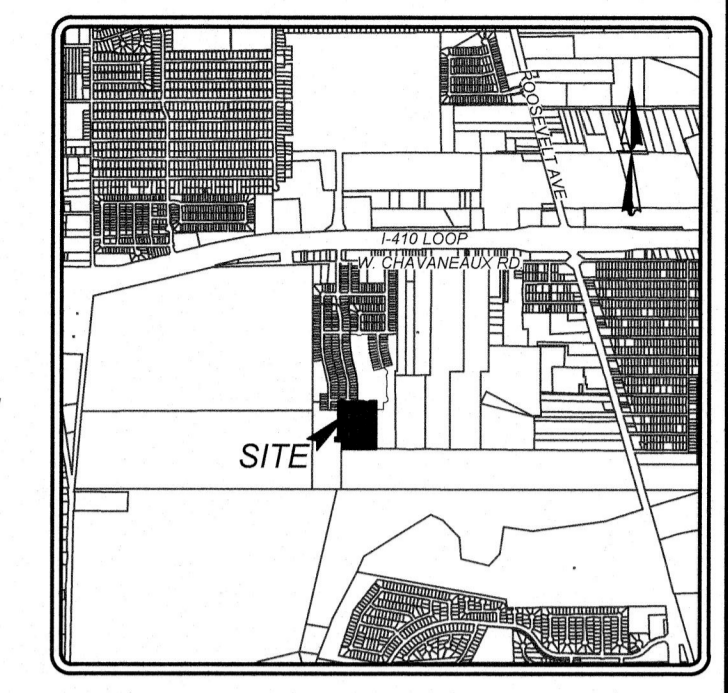
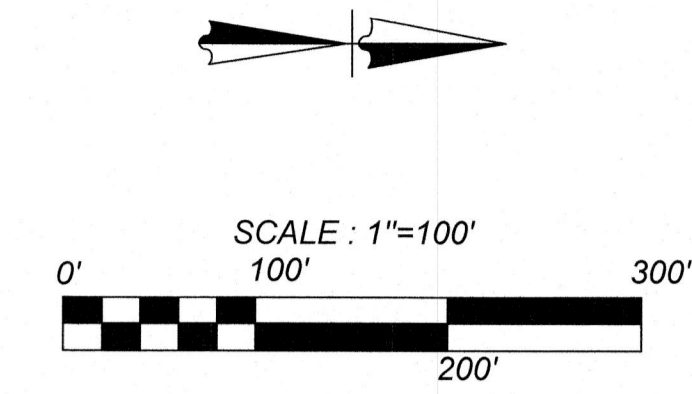
K&E
ENGINEERS + SURVEYING
 Phone #: (210) 878-8444 • Fax #: (210) 878-8441
 TBE Firm #: 9513 • TBE S Firm #: 1012300

ISSUE DATE: 4/14/2026
 REVISIONS: ADDED TURNAROUND EASEMENT TO BONNET PASS
 STATE OF TEXAS
 CLAYTON J. LINNEY
 111543
 LICENSED PROFESSIONAL ENGINEER
 Clayton J. Linney
 5/14/2026

CHAVANEAUX SUBDIVISION UNIT 6
 SAN ANTONIO, TX
OVERALL UTILITY PLAN

PLAT NO. 22-11800409
 JOB NO. 984-02-02
 DATE: APRIL, 2022
 DRAWN: WDS CHECKED: SM
 SHEET NUMBER:

1.0



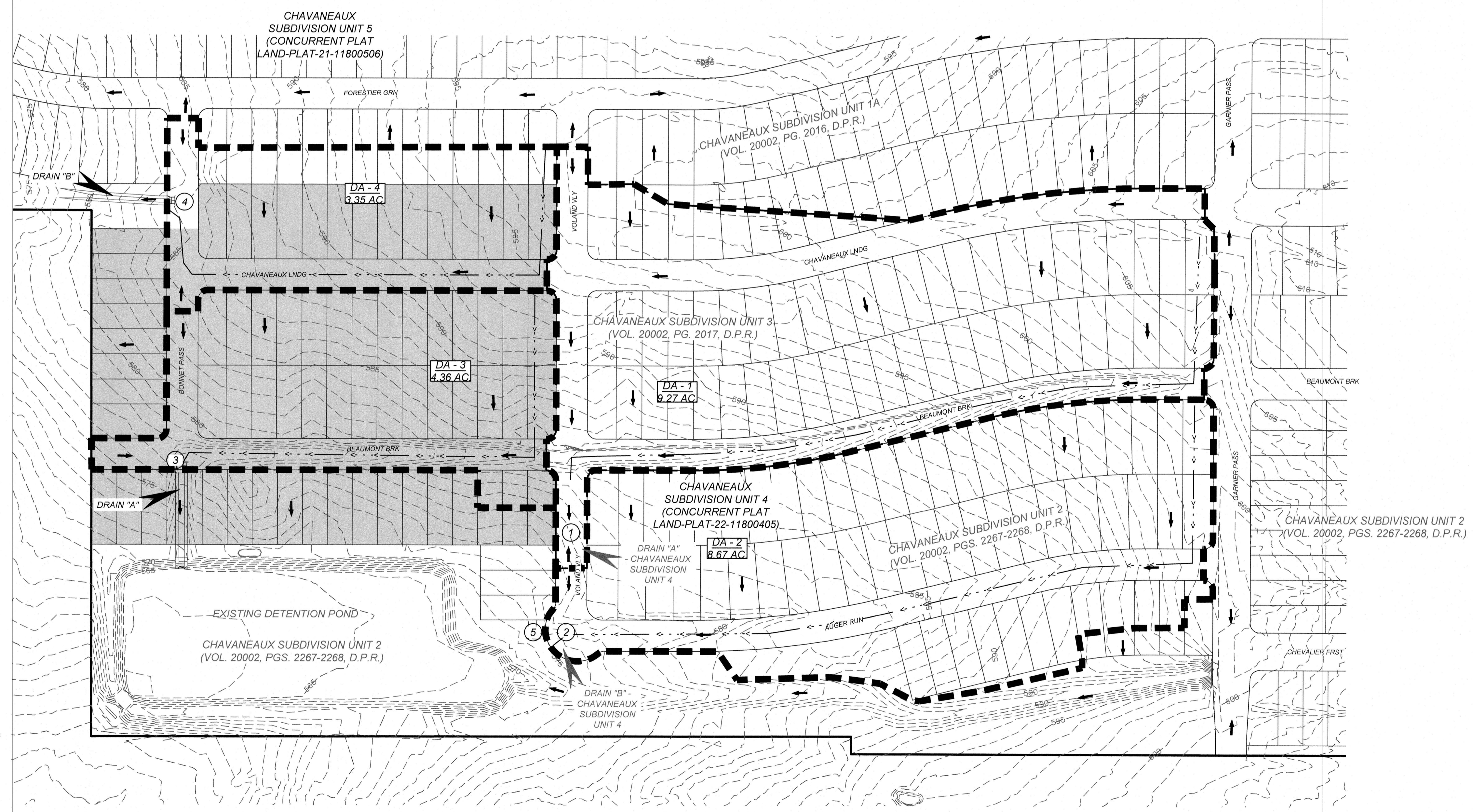
LOCATION MAP
NOT-TO-SCALE

LEGEND

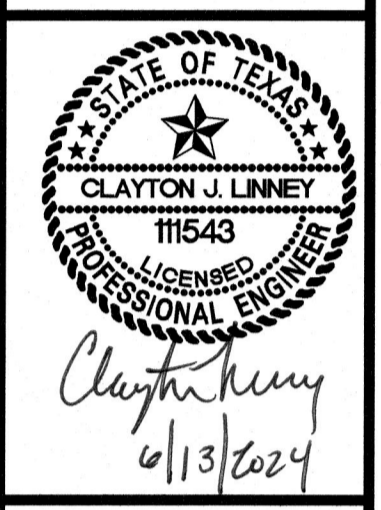
- ① STUDY POINT
- DRAINAGE AREA BOUNDARY
- - - - -802- - - - - EXISTING CONTOURS
- PROPOSED UNIT
- FLOW ARROW

Ultimate Conditions:

Study Point	AREA	(Acres)	C	T _{ovrl} (min)	Carryover	T _{sc} (min)	T _{ch} (min)	T _{tot} (min)	I _s (in/hr)	I ₂₅ (in/hr)	I ₁₀₀ (in/hr)	Q _s (ft ³ /s)	Q ₂₅ (ft ³ /s)	Q ₁₀₀ (ft ³ /s)
1	DA-1	9.43	0.77	9		2	2	13	5.61	7.82	9.76	40.75	56.77	70.87
2	DA-2	8.51	0.77	8		2	2	12	5.81	8.12	10.14	38.07	53.21	66.45
3	DA-3	4.36	0.77	5		2	1	8	6.75	9.48	11.85	22.65	31.83	39.80
4	DA-4	3.35	0.77	9		2	1	12	5.81	8.12	10.14	14.99	20.95	26.16
5	PT 1. + PT 2	17.94	0.77	9	CARRYOVER FROM PT. 1	2	2	13	5.61	7.82	9.76	77.52	108.00	134.82

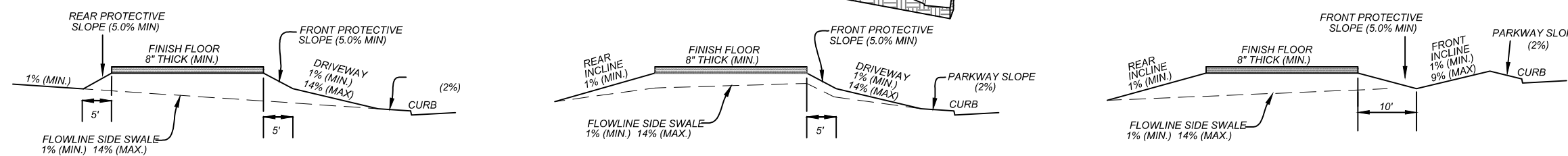
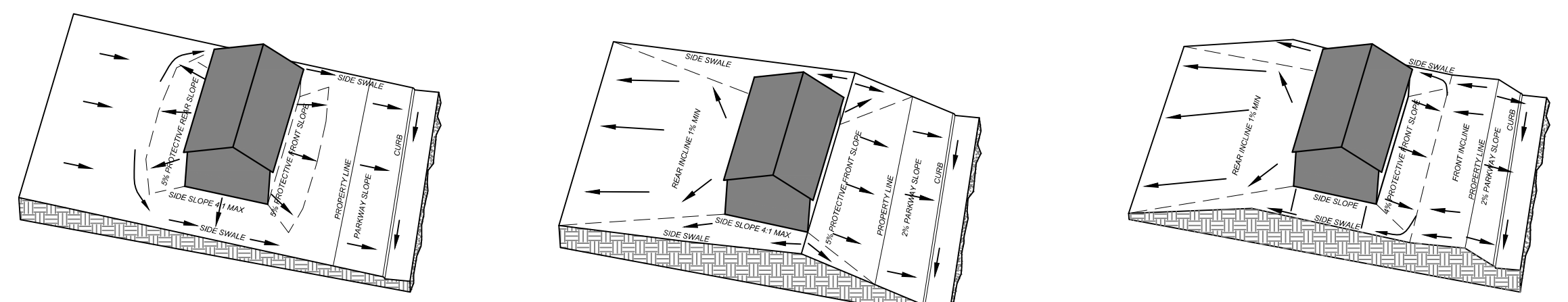


CHAVANEAUX SUBDIVISION UNIT 6
SAN ANTONIO, TX
MASTER DRAINAGE PLAN



PLAT NO.
22-11800409
JOB NO. 984-02-02
DATE: APRIL, 2022
DRAWN: WDS CHECKED: SM
SHEET NUMBER:

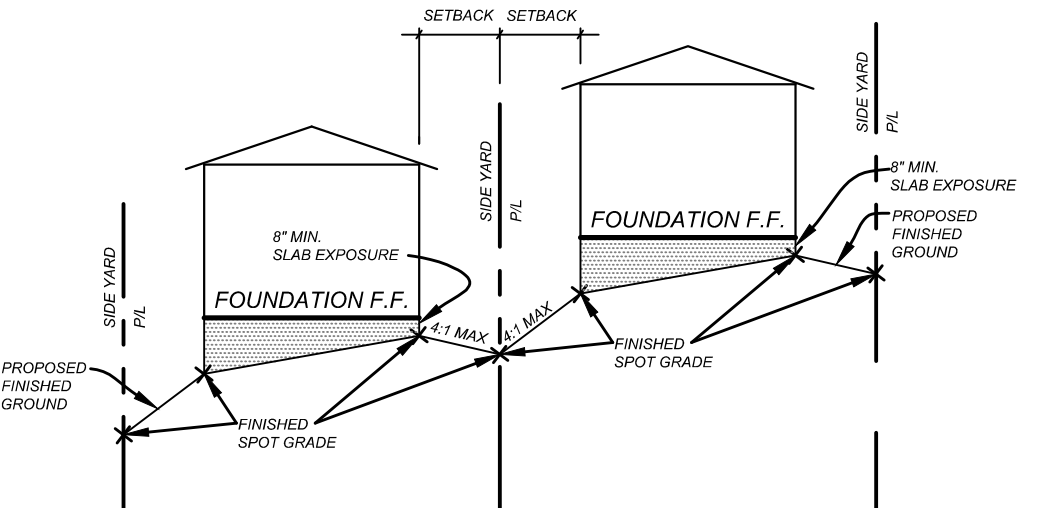
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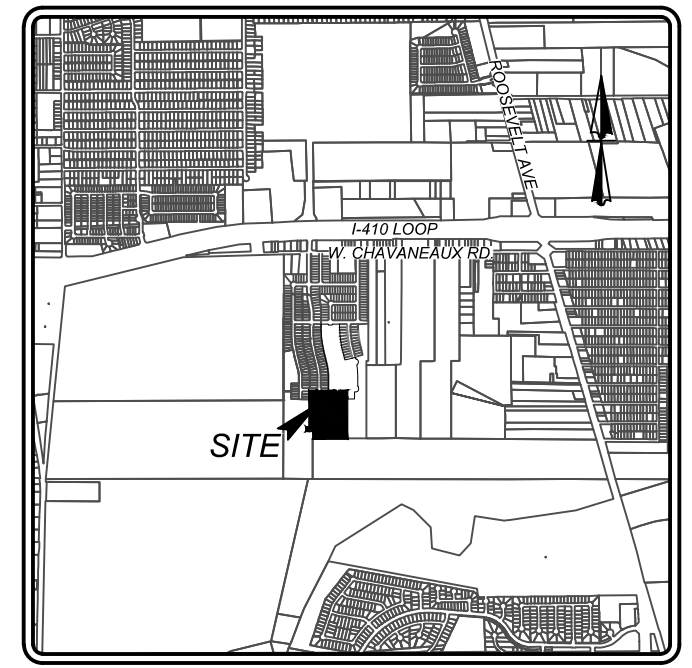
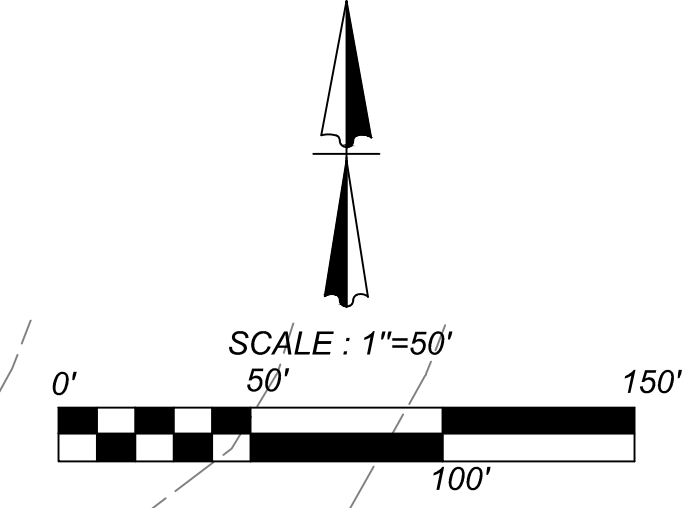
TYPE 'A' LOT GRADING

TYPE 'B' LOT GRADING

TYPE 'C' LOT GRADING



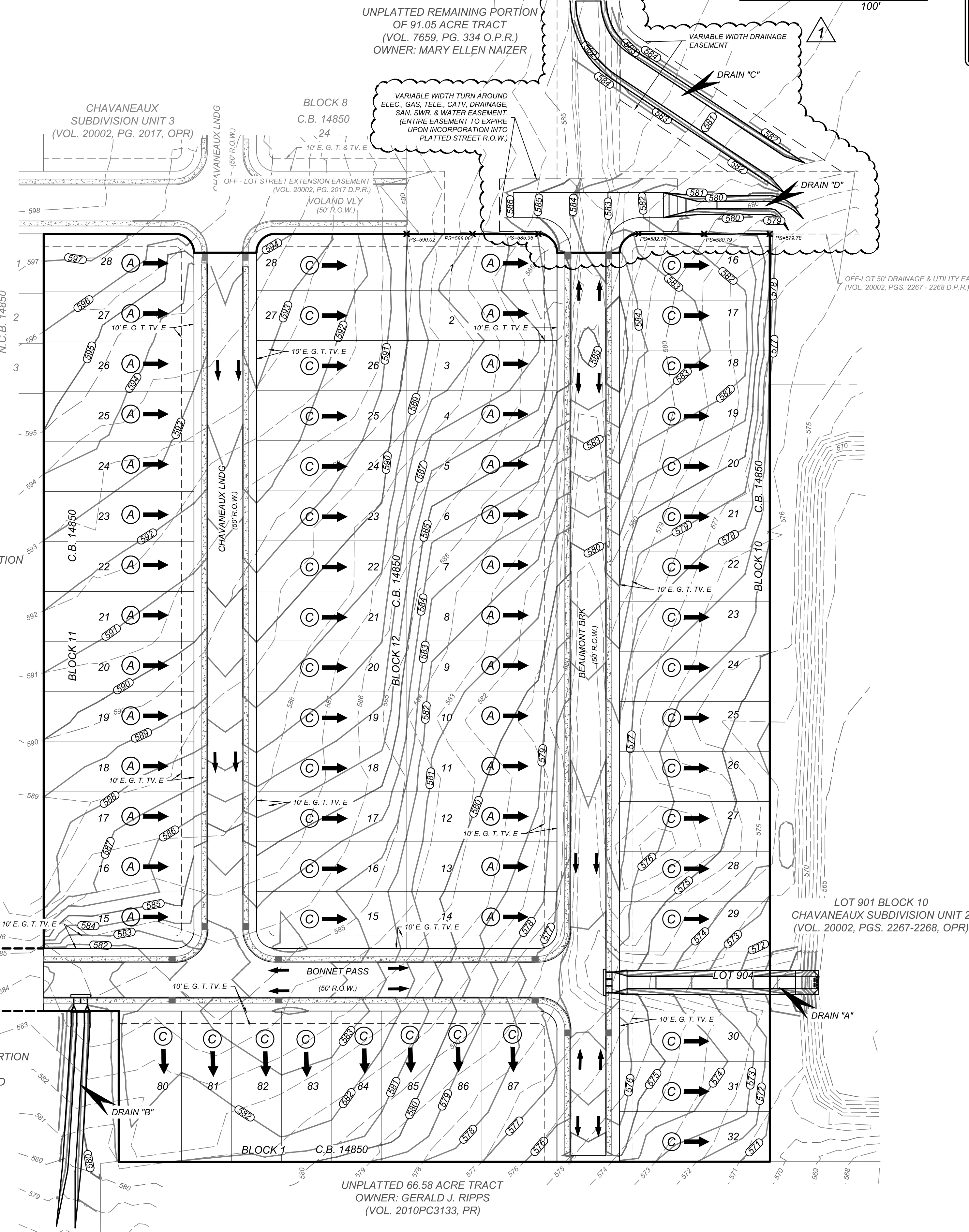
TYPICAL SIDE YARD GRADING
N.T.S.



LOCATION MAP
NOT-TO-SCALE

LEGEND

- E. G. T. & TV. E. = GAS, ELECTRIC, TELEPHONE, CABLE T.V. EASEMENT
- = FLOW ARROW
- (A) = LOT GRADE TYPE
- ▨ = PROPOSED DRIVEWAY LOCATION
- H.P. = HIGH POINT
- ▨ = EXISTING PAVEMENT



KFW
ENGINEERS + SURVEYING
Phone #: (210) 978-8444 • Fax #: (210) 978-8441
TBB#S Firm #: 9513 • TBB#S Firm #: 1012300

ISSUE DATE: 4/14/2022
REVISIONS:
ADDED TO DRAWING: LOT 17 & DRIVEWAY
BY: [Signature]



CHAVANEUX SUBDIVISION UNIT 6
SAN ANTONIO, TX
OVERALL GRADING PLAN

PLAT NO.
22-11800409
JOB NO. 984-02-02
DATE: APRIL, 2022
DRAWN:### CHECKED:##
SHEET NUMBER:

Date: Apr 29, 2022, 3:56pm User ID: cgriff
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TRENCH EXCAVATION SAFETY PROTECTION

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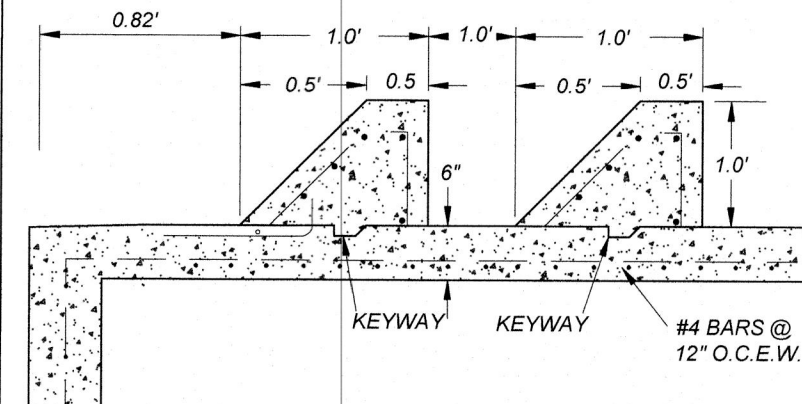
CAUTION:

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NOTE:
 1. ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 3000 PSI IN 28 DAYS.
 2. ANY DISTURBED AREAS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE DISTURBED SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.

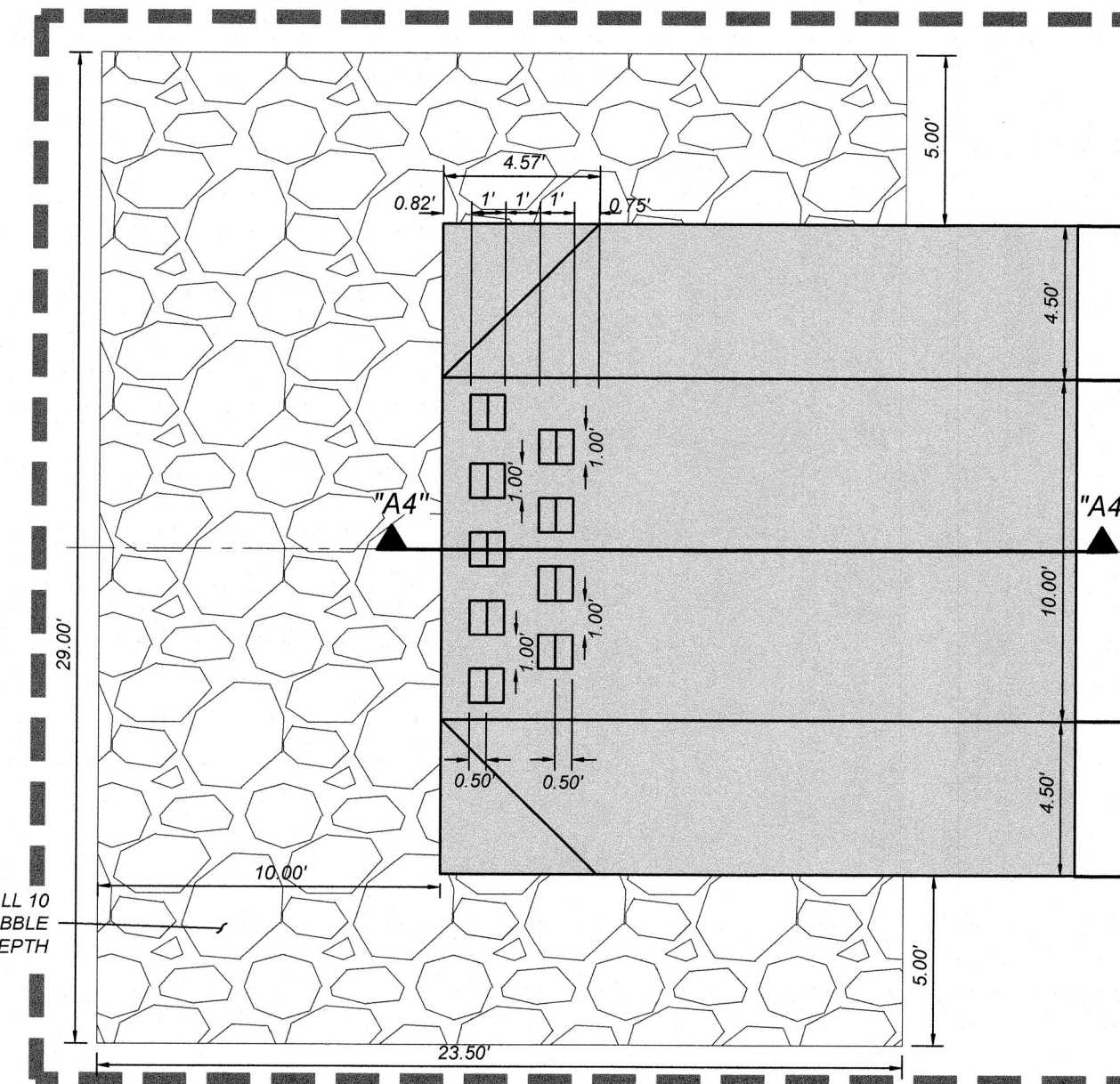
BAFFLE BLOCK CALCULATIONS (ST. ANTHONY FALLS METHOD)

Q(25) = 31.83 CFS
 BOTTOM WIDTH UPSTREAM = 10.0 FT
 BOTTOM WIDTH DOWNSTREAM = 10.0 FT
 Y1 = 0.18' (DEPTH BEFORE JUMP)
 Y2 = 1.62' (DEPTH AFTER JUMP)
 WIDTH OF BLOCKS = 0.75(Y1) = 0.13 FT. (USE 1.0 FT)
 SPACE BETWEEN BLOCKS = 0.75(Y1) = 0.13 FT. (USE 1.0 FT)
 HEIGHT OF BLOCKS = Y1 = 0.17 FT. (USE 1.0 FT)
 # OF BLOCKS ACROSS BOTTOM = 4
 % OF FLOOR COVERED WITH BLOCKS = 4 (1.0 FT) / 10.0 FT = 40%
 (% MUST BE BETWEEN 40% AND 55%)
 DEPTH OF TAILWATER (Y2)
 FROUDE NUMBER BEFORE JUMP = F1 = 7.12
 FROUDE NUMBER AFTER JUMP = F2 = 0.24
 LENGTH OF BASIN = LB = 4.8V2/F1 = 1.84 FT. (USE 4.57 FT.)
 DISTANCE TO FLOOR BLOCKS = LB/3 = 0.54 FT. (USE 0.75 FT.)
 HEIGHT OF MAX TAILWATER DEPTH:
 Z = Y2/3 = 0.54 FT.
 Y2' = 0.85 * Y2, H = Z + Y2' = 1.38 FT.
 VELOCITY AFTER JUMP:
 V = Q/A
 A = Y2' (B + T) / 2
 A = 1.62' (10.0 + 10.0) / 2 = 16.2 SQ. FT.
 V = 31.83 / 16.2 = 1.96 F.P.S.

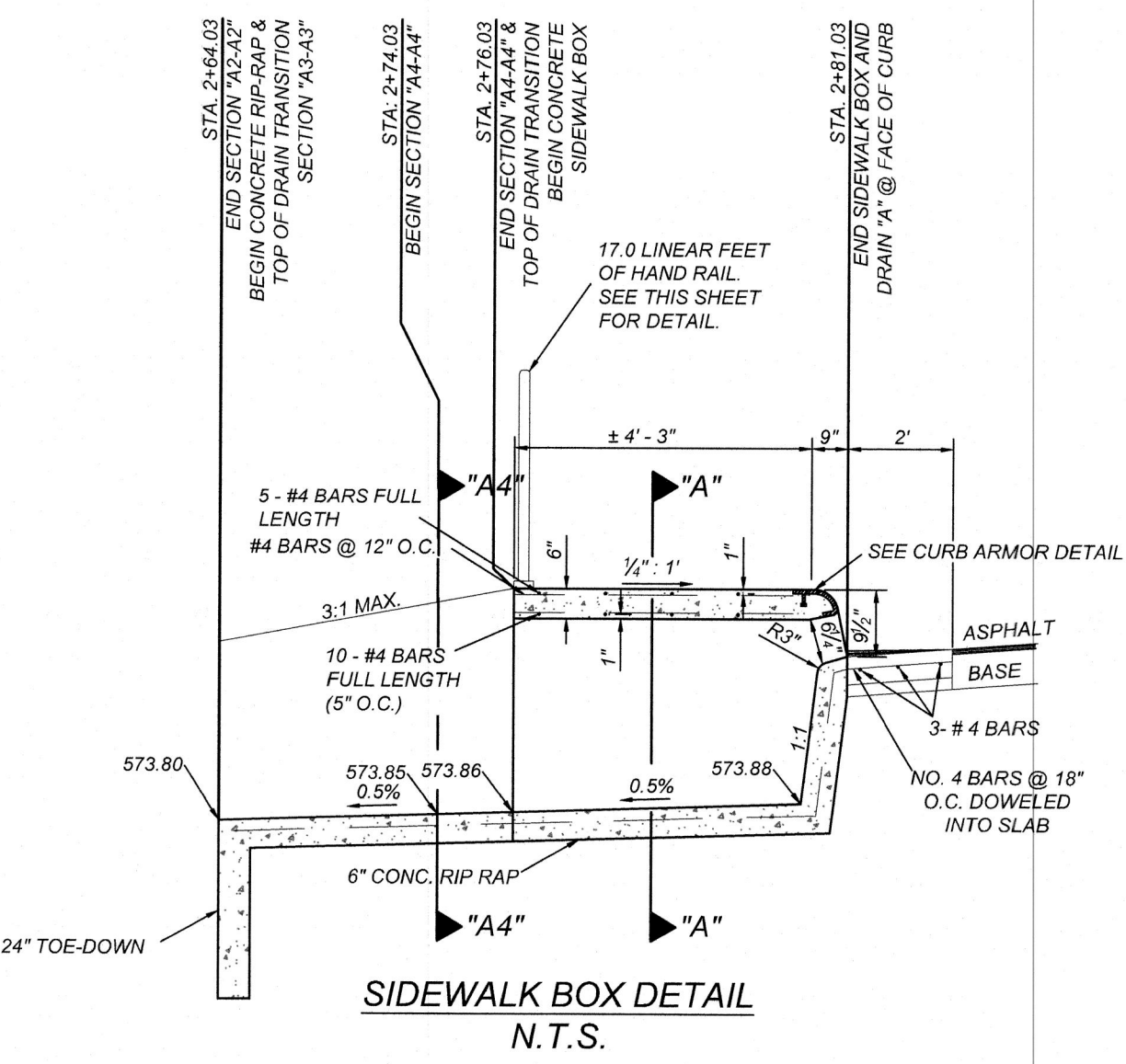


TYPICAL BAFFLE BLOCK DETAIL
 N.T.S.
SECTION A4-A4

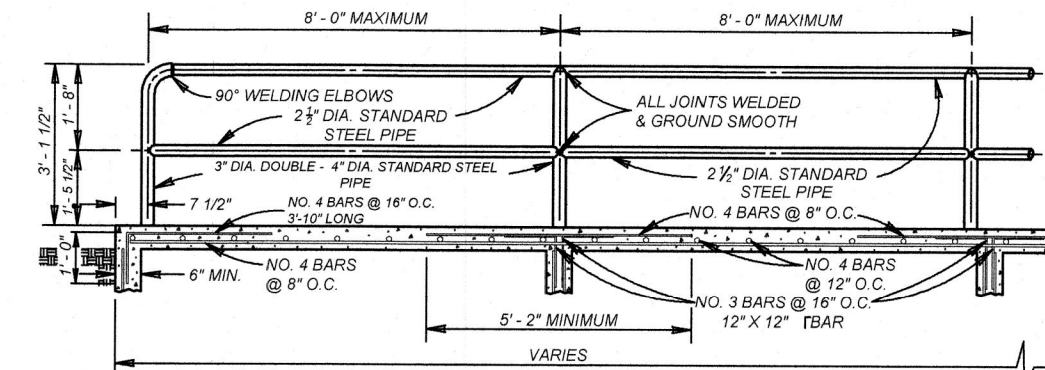
CONTRACTOR TO INSTALL 10 L.F. OF 18\"/>



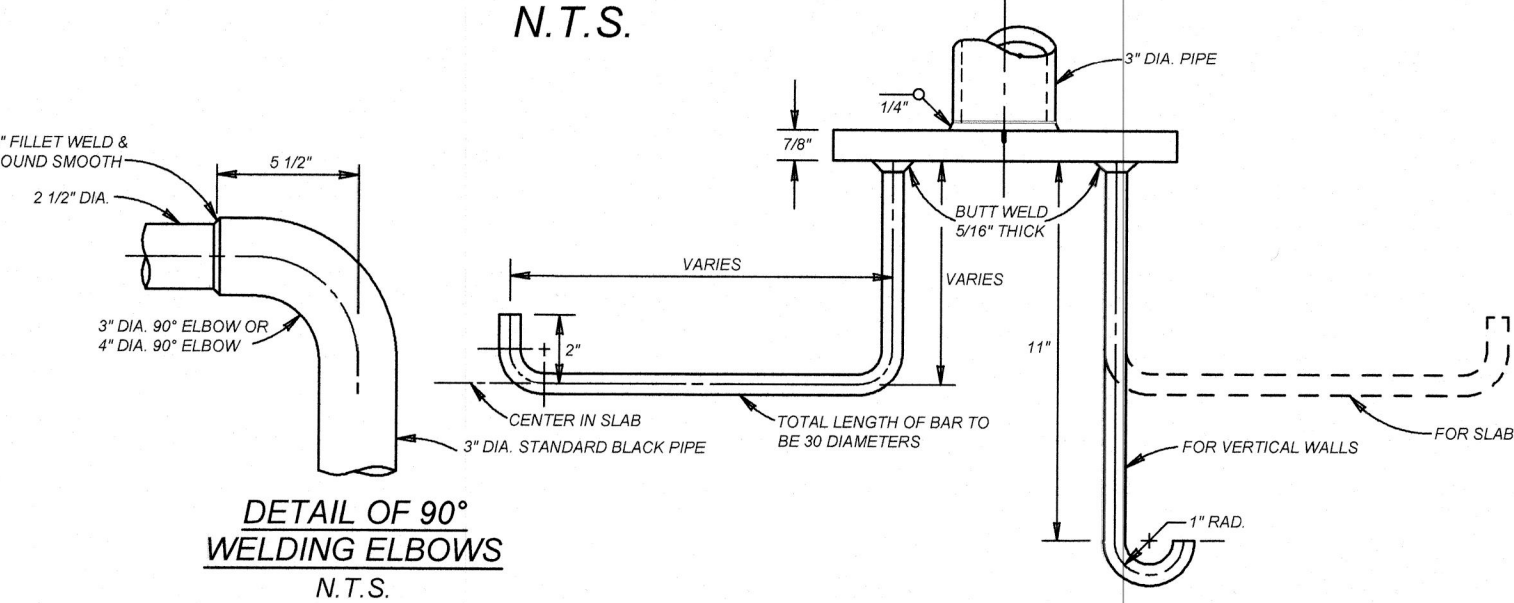
DETAIL "A"
 SCALE: 1"=5"



SIDEWALK BOX DETAIL
 N.T.S.

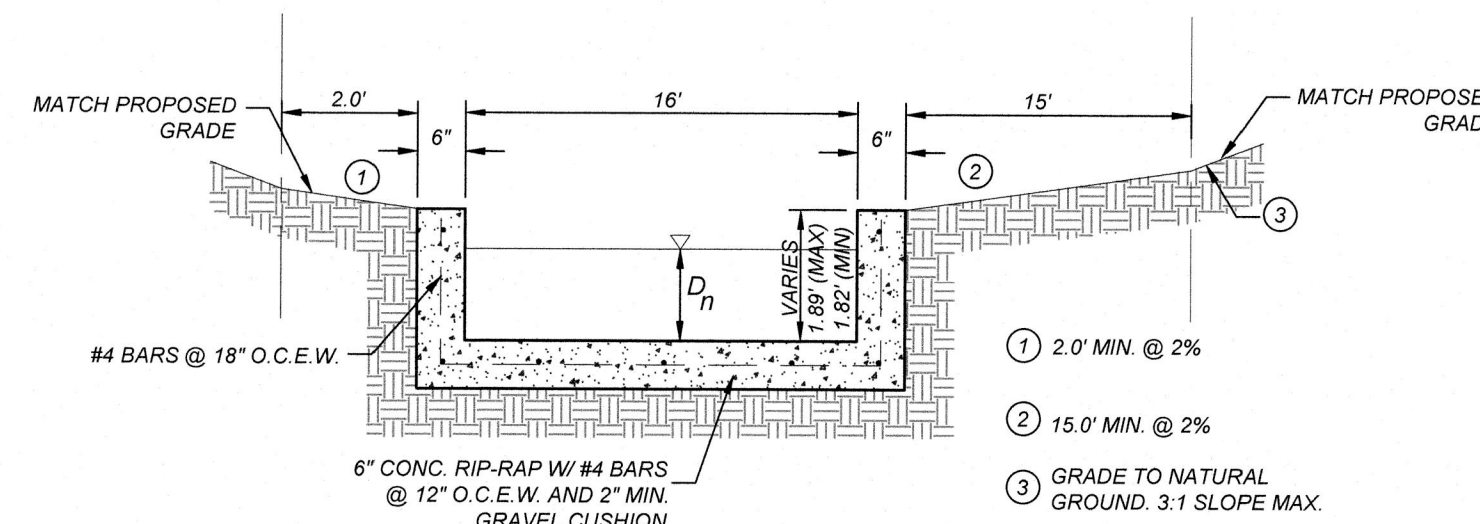


TYPICAL SIDEWALK BRIDGE & SIDEWALK PIPE RAILING SECTION
 N.T.S.

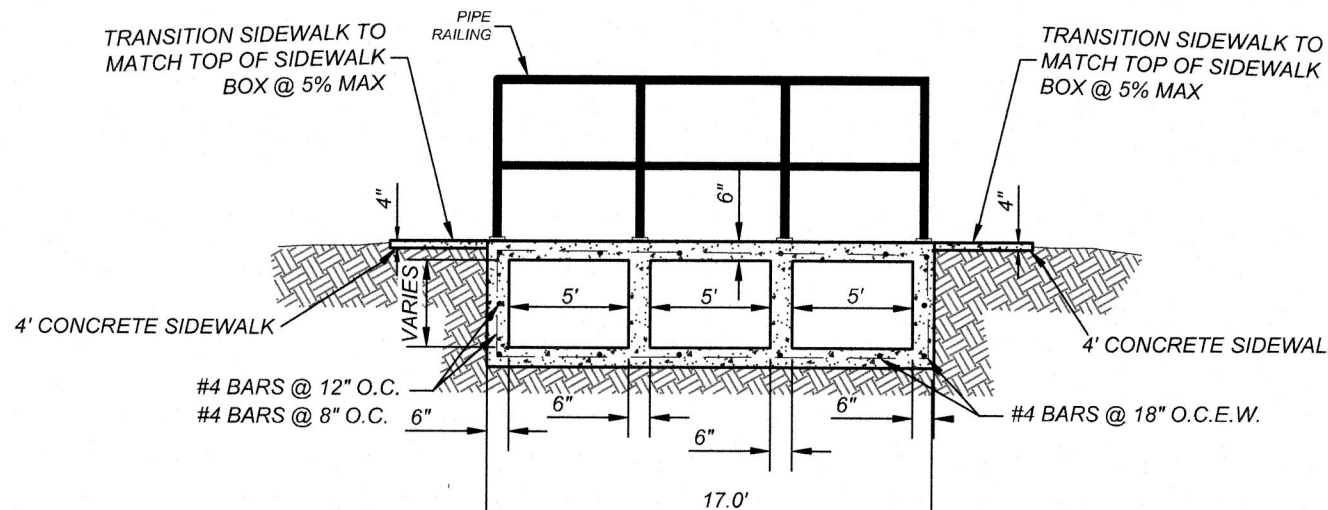


DETAIL OF 90° WELDING ELBOWS
 N.T.S.

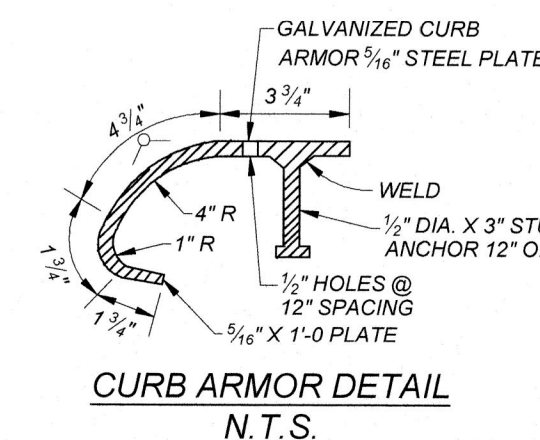
PIPE ANCHORAGE DETAILS
 N.T.S.



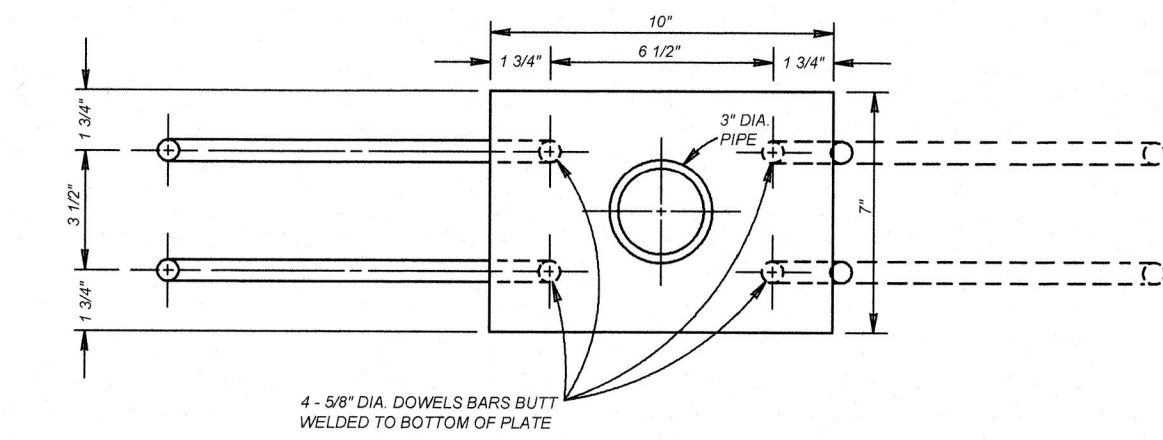
SECTION "A4-A4"
 STA. 1+50.89 - STA. 1+77.30
 N.T.S.



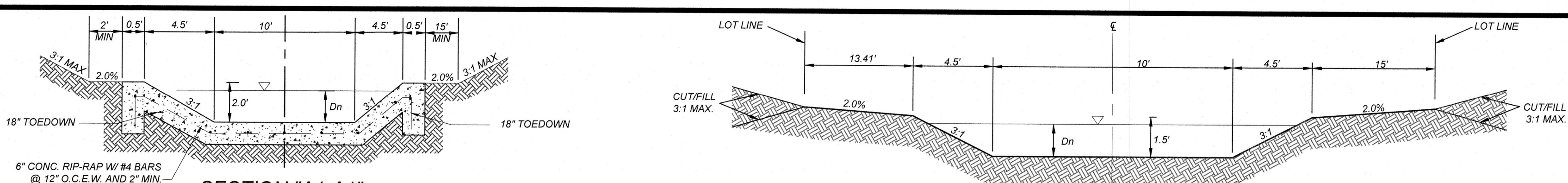
SECTION "A-A"
 N.T.S.



CURB ARMOR DETAIL
 N.T.S.

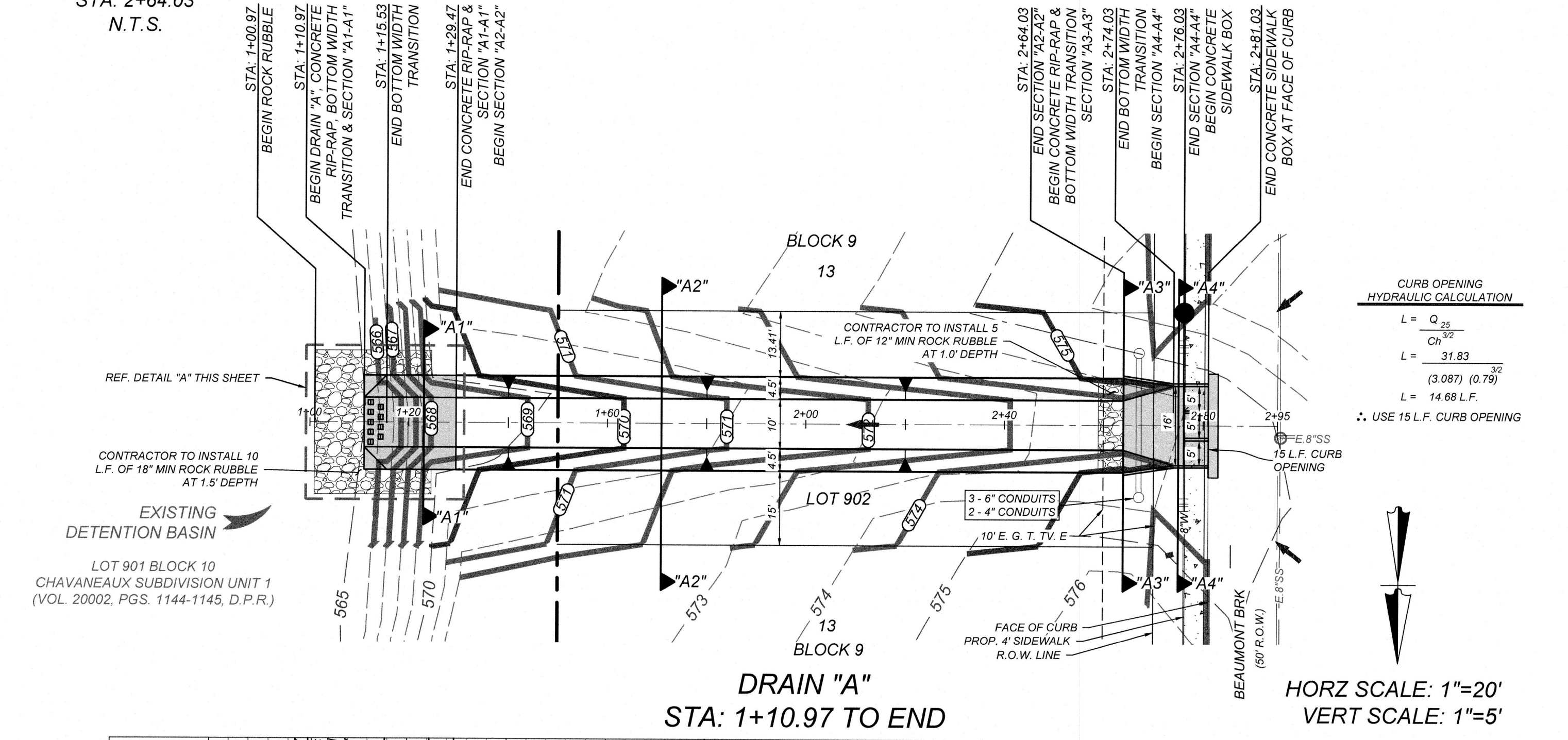


4" DIA. DOWELS BARS BUTT WELDED TO BOTTOM OF PLATE



SECTION "A1-A1"
 STA. 1+15.53 - STA. 1+29.47
SECTION "A3-A3"
 STA. 2+64.03
 N.T.S.

SECTION "A2-A2"
 STA. 1+29.47 - STA. 2+64.03
 N.T.S.



DRAIN "A"
 STA. 1+10.97 TO END

HORZ SCALE: 1"=20'
VERT SCALE: 1"=5'

590	590
585	585
580	580
575	575
570	570
565	565
560	560
555	555
550	550
545	545
PROPOSED TOP OF DRAIN FLOWLINE	PROPOSED TOP OF DRAIN FLOWLINE

565.00	565.00	565.00	565.00	565.00
566.02	566.52	566.51	566.01	566.26
566.51	566.01	566.00	566.50	566.80
566.26	569.76	569.76	570.30	571.33
570.86	572.36	573.06	573.06	573.06
571.56	573.06	573.06	573.06	573.06
572.26	573.06	573.06	573.06	573.06
572.96	574.46	575.16	575.30	575.67
573.66	575.16	575.30	575.30	575.67
573.80	575.30	575.30	575.67	575.67
573.85	575.67	575.67	575.67	575.67
573.86	575.67	575.67	575.67	575.67

590	590
585	585
580	580
575	575
570	570
565	565
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545	545

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545	545

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545	545

K&W ENGINEERS + SURVEYING
 3421 Pleasanton Pkwy, Suite 200, San Antonio, TX 78231
 Phone #: (210) 979-6444 • Fax #: (210) 979-6441
 E-File Form #: 95.03 • T&E License #: 10122000

ISSUE DATE: _____

REVISIONS:

STATE OF TEXAS
 CLAYTON J. LINNEY
 11543
 LICENSED PROFESSIONAL ENGINEER

Clayton J. Linney
 6/13/2024

CHAVANEUX SUBDIVISION UNIT 6
 SAN ANTONIO, TX
DRAIN "A" PLAN & PROFILE

PLAT NO. 22-11800409
 JOB NO. 984-02-02
 DATE: APRIL, 2022
 DRAWN/WDS CHECKED/SM
 SHEET NUMBER: 4.0

TRENCH EXCAVATION SAFETY PROTECTION

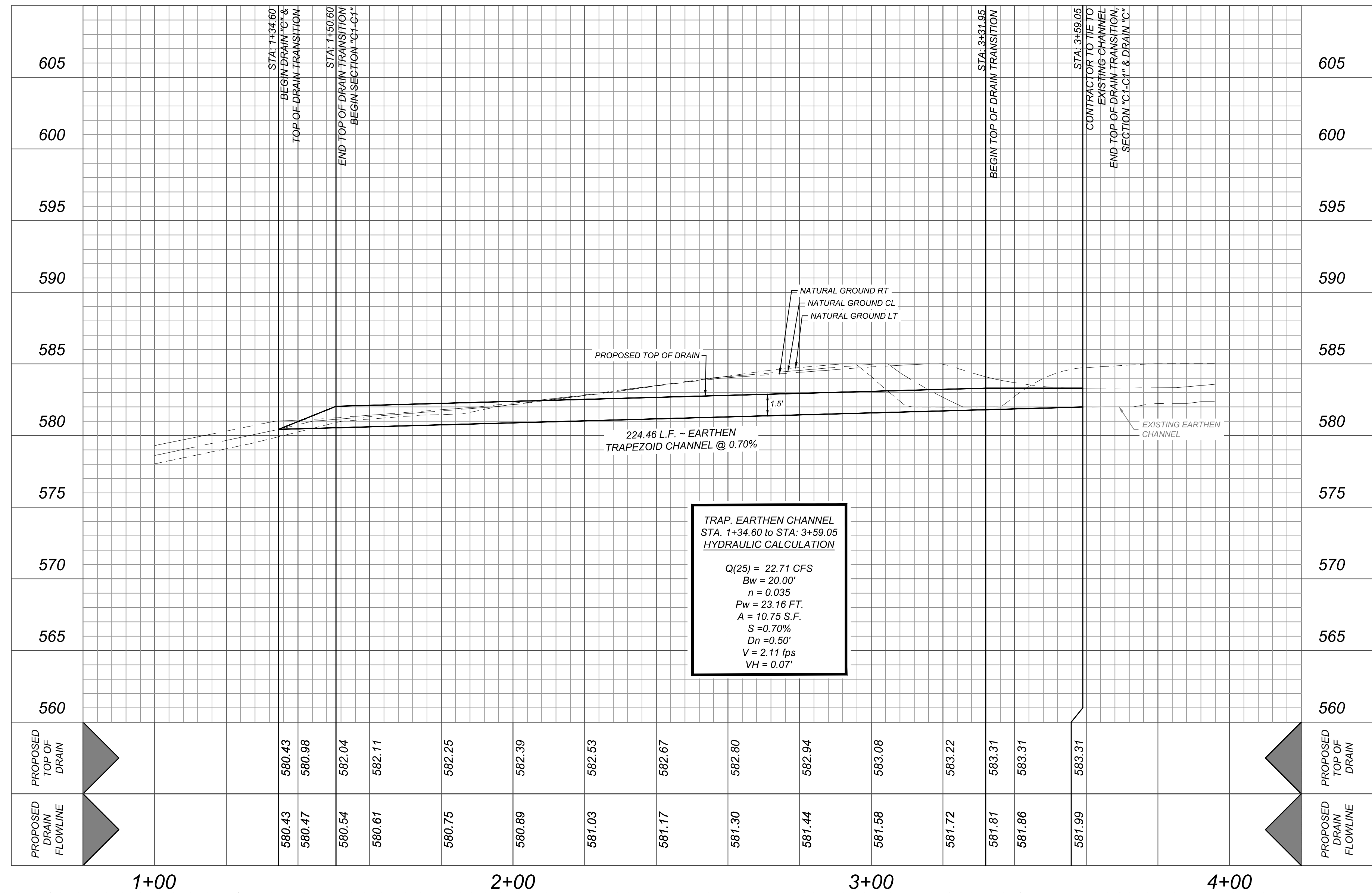
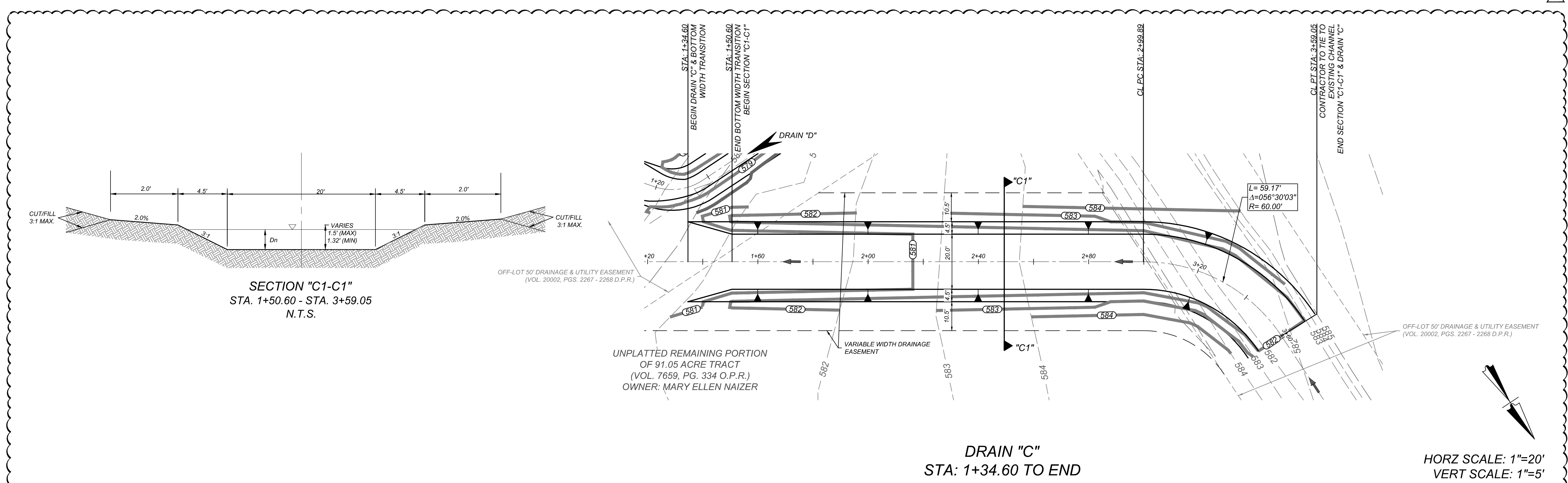
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NOTE:

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2. ANY DISTURBED AREAS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE DISTURBED SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.



KIEWIT
ENGINEERS + SURVEYING
11543
CLAYTON J. LINNEY
LICENSED PROFESSIONAL ENGINEER
5/14/2020

CHAVANEUX SUBDIVISION UNIT 6
SAN ANTONIO, TX
DRAIN "C" PLAN & PROFILE

PLAT NO. 22-11800-409
JOB NO. 984-02-02
DATE: APRIL, 2022
DRAWN:### CHECKED:##
SHEET NUMBER:
4.2

Date: Apr 29, 2023, 4:08pm User ID: cgriff
File: K:\984\02\Design\Civil\Drawings\9840202.dwg

TRENCH EXCAVATION SAFETY PROTECTION

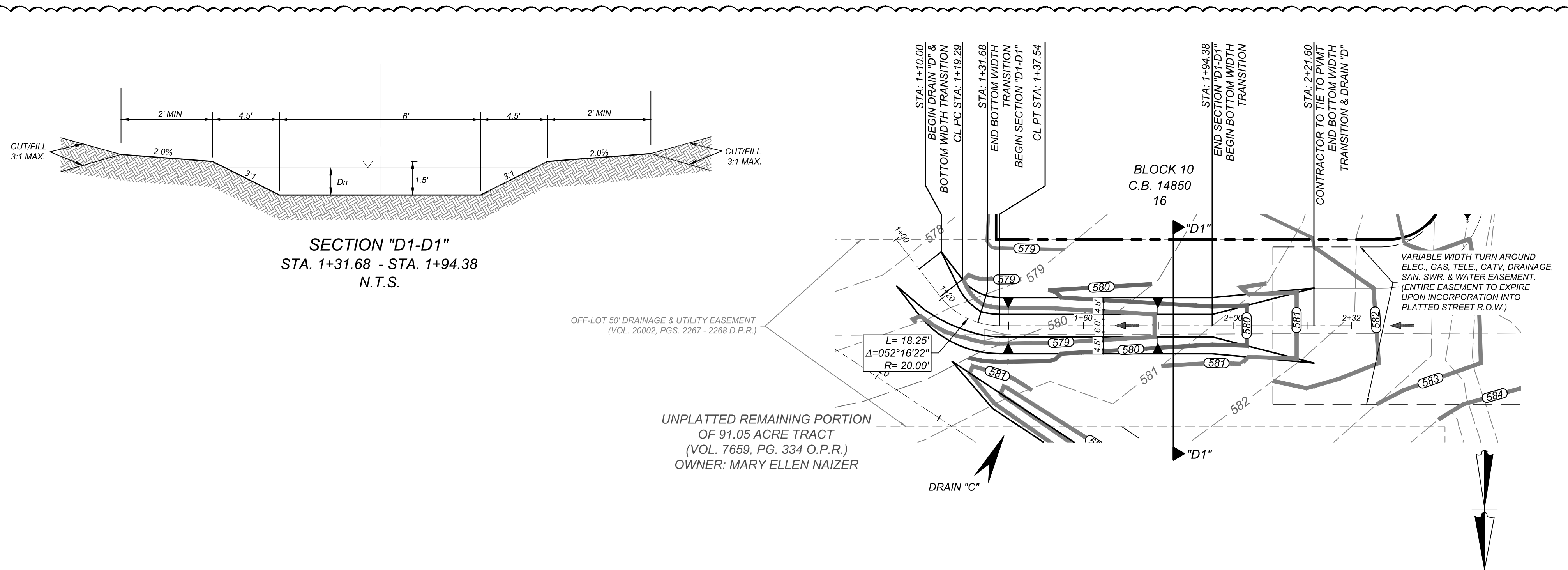
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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!!

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NOTE:

1. ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 3000 PSI IN 28 DAYS.
2. ANY DISTURBED AREAS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE DISTURBED SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.



DRAIN "D"
STA: 1+10.00 TO END
 HORZ SCALE: 1"=20'
 VERT SCALE: 1"=5'

605	STA: 1+10.00 BEGIN DRAIN 'D' & TOP OF DRAIN TRANSITION	605
600		600
595		595
590		590
585		585
580		580
575		575
570		570
565		565
560		560
	PROPOSED DRAIN TOP OF DRAIN	
	PROPOSED DRAIN FLOWLINE	
1+00		2+00
		2+40

TRAP, EARTHEN CHANNEL
 STA. 1+10.00 TO STA. 1+52.50
 HYDRAULIC CALCULATION

Q(25) = 19.73 CFS
 Bw = 6.00'
 n = 0.035
 Pw = 12.01 FT.
 A = 8.41 S.F.
 S = 0.50%
 Dn = 0.95'
 V = 2.35 fps
 VH = 0.09'

TRAP, EARTHEN CHANNEL
 STA. 1+52.50 TO STA. 1+94.38
 HYDRAULIC CALCULATION

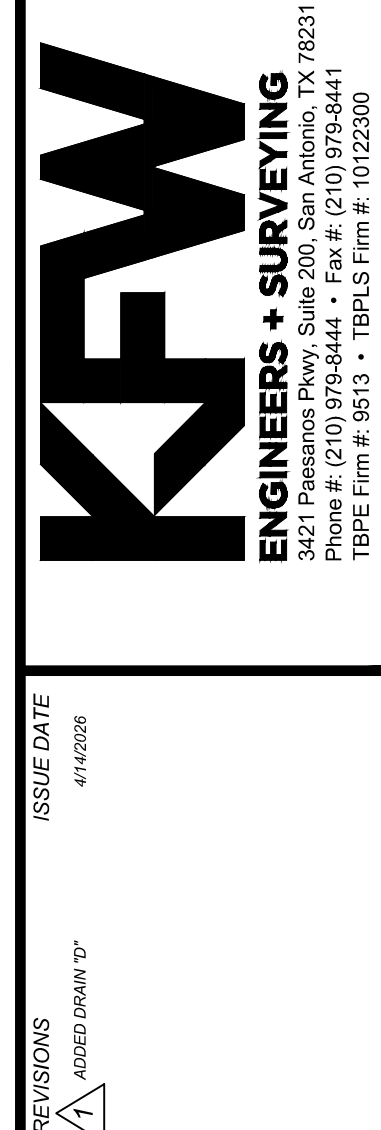
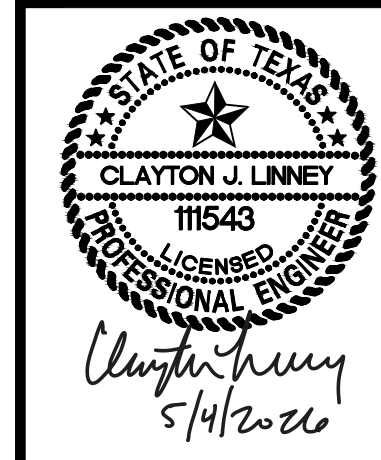
Q(25) = 19.73 CFS
 Bw = 6.00'
 n = 0.035
 Pw = 10.11 FT.
 A = 5.17 S.F.
 S = 2.00%
 Dn = 0.65'
 V = 3.82 fps
 VH = 0.23'

TRAP, EARTHEN CHANNEL
 STA. 1+94.38 TO STA. 2+21.60
 HYDRAULIC CALCULATION

Q(25) = 19.73 CFS
 Bw = 6.00'
 n = 0.035
 Pw = 8.85 FT.
 A = 3.31 S.F.
 S = 7.50%
 Dn = 0.45'
 V = 5.97 fps
 VH = 0.53'

CHAVANEUX SUBDIVISION UNIT 6
 SAN ANTONIO, TX
DRAIN "D" PLAN & PROFILE

PLAT NO.
 22-1800409
 JOB NO. 984-02-02
 DATE: APRIL, 2022
 DRAWN:### CHECKED:##
 SHEET NUMBER:
4.3



TRENCH EXCAVATION SAFETY PROTECTION

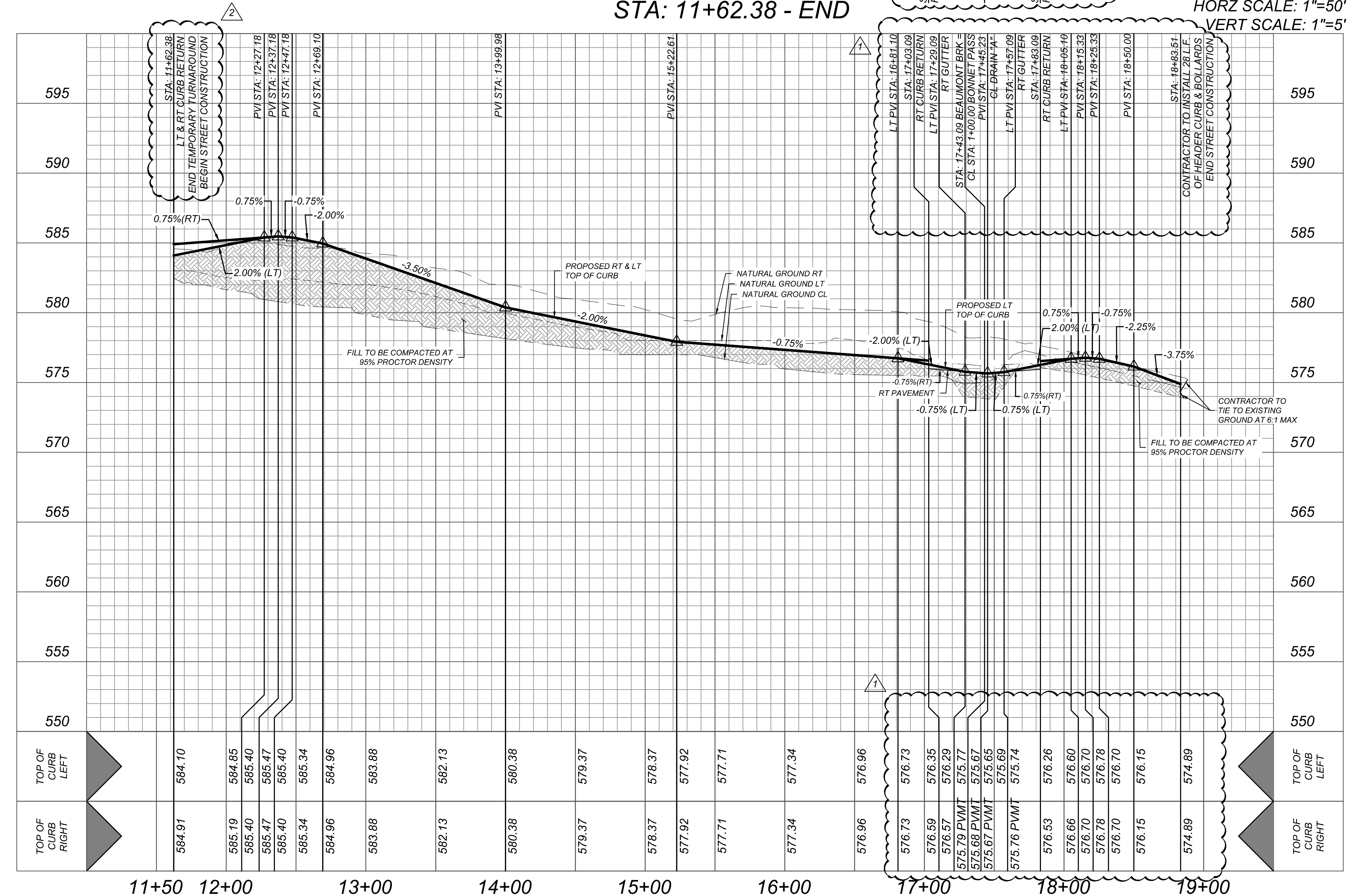
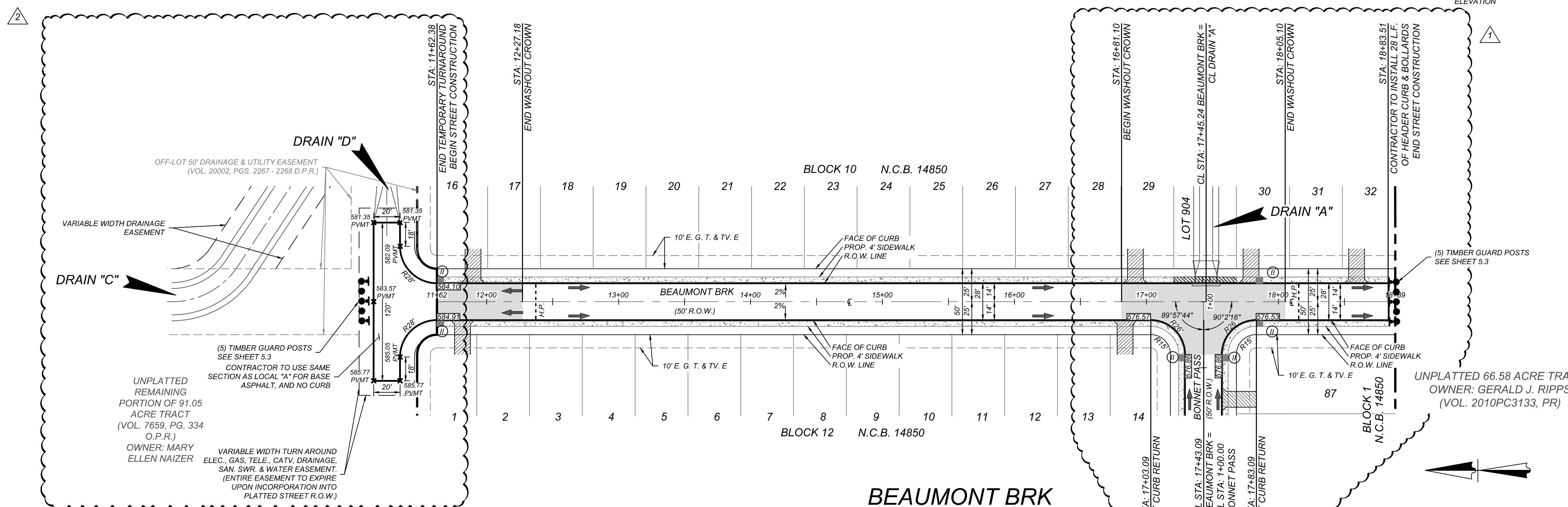
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LEGEND

- R.O.W. = RIGHT OF WAY
- G.E.T.T.V.E. = GAS, ELECTRIC, TELEPHONE & CABLE EASEMENT
- = FLOW ARROW
- = WASHOUT CROWN
- ⊙ = WHEELCHAIR RAMP TYPE III SEE SHEET ----
- ⊙ = WHEELCHAIR RAMP TYPE II SEE SHEET ----
- ////// = SIDEWALK TO BE CONSTRUCTED BY DEVELOPER
- = SIDEWALK TO BE BUILT AT THE TIME OF HOME CONSTRUCTION
- = PROPOSED DRIVEWAY LOCATION
- H.P. = HIGH POINT
- L.P. = LOW POINT
- = PROPOSED TOP OF CURB ELEVATION



K&E
ENGINEERS + SURVEYING
10251
Phone #: (210) 978-8444 • Fax #: (210) 978-8441
TBPE Firm #: 9513 • TBPE S Firm #: 1012300

ISSUE DATE: 2/20/2022
4/13/2022

STATION REVISION
ADDED TURNAROUND AND
TIMBER GUARD POSTS

STATE OF TEXAS
CLAYTON J. LINNEY
11543
LICENSED PROFESSIONAL ENGINEER
Clayton Linney
5/1/2020

CHAVANEUX SUBDIVISION UNIT 6
SAN ANTONIO, TX
BEAUMONT BRK PLAN & PROFILE

PLAT NO. 22-11800409
JOB NO. 984-02-02
DATE: APRIL, 2022
DRAWN:### CHECKED:##
SHEET NUMBER:
5.0

Date: Apr 29, 2022, 4:12pm User ID: cgriff
File: K:\984\02\Design\Civil\STREET\1519840202.dwg

TRENCH EXCAVATION SAFETY PROTECTION

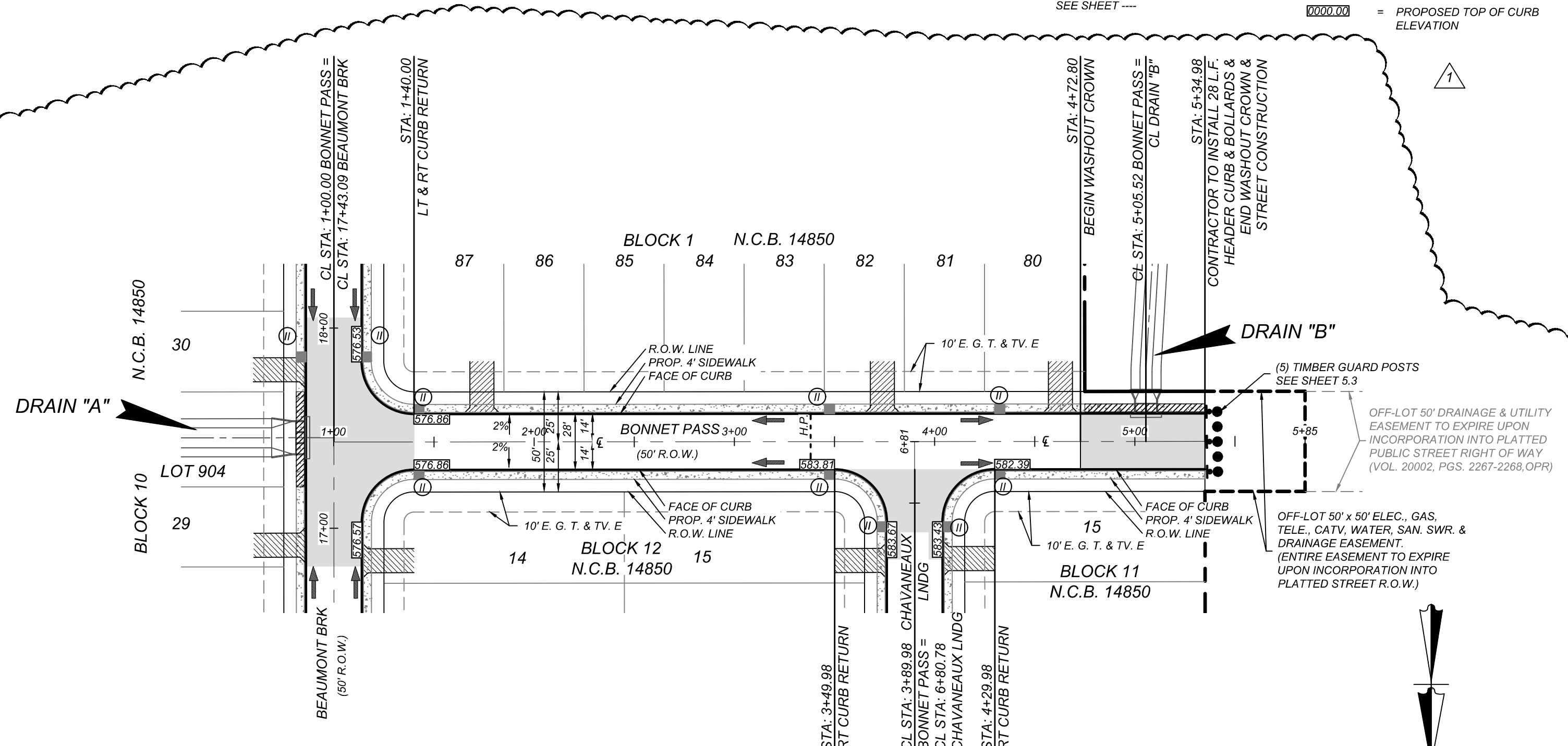
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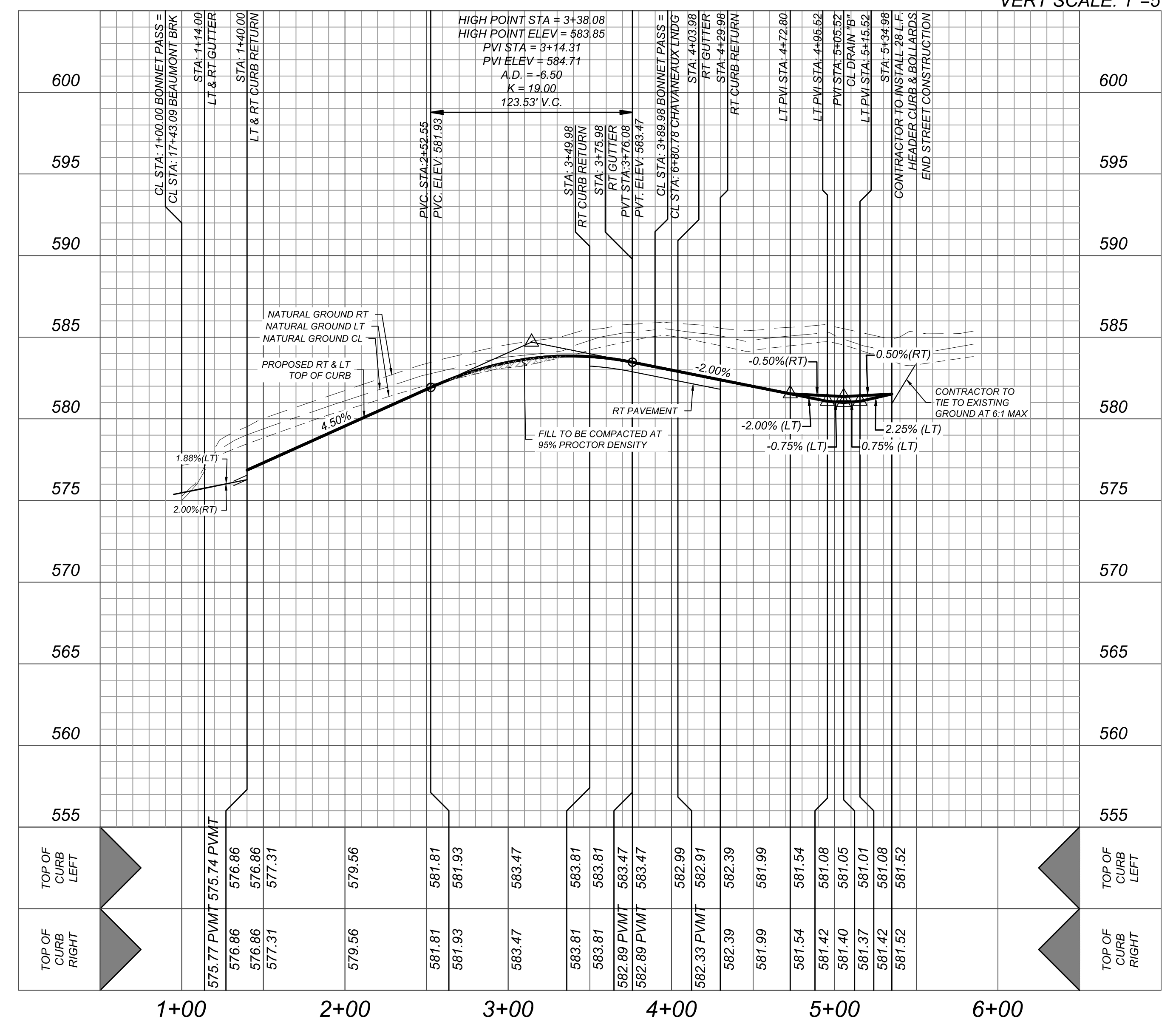
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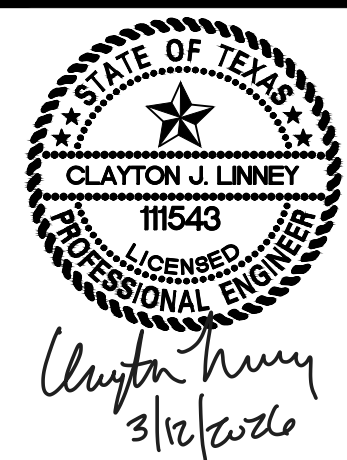


**BONNET PASS
STA: 1+00.00 - END**

HORZ SCALE: 1"=50'
VERT SCALE: 1"=5'



REVISIONS
ISSUE DATE
STREET CONTINUING REVISION
2/28/2022



Clayton Linney
3/12/2022

CHAVANEAUX SUBDIVISION UNIT 6
SAN ANTONIO, TX
BONNET PASS PLAN & PROFILE

PLAT NO.
22-11800409
JOB NO. 984-02-02
DATE: APRIL, 2022
DRAWN:### CHECKED:##
SHEET NUMBER:

TRENCH EXCAVATION SAFETY PROTECTION

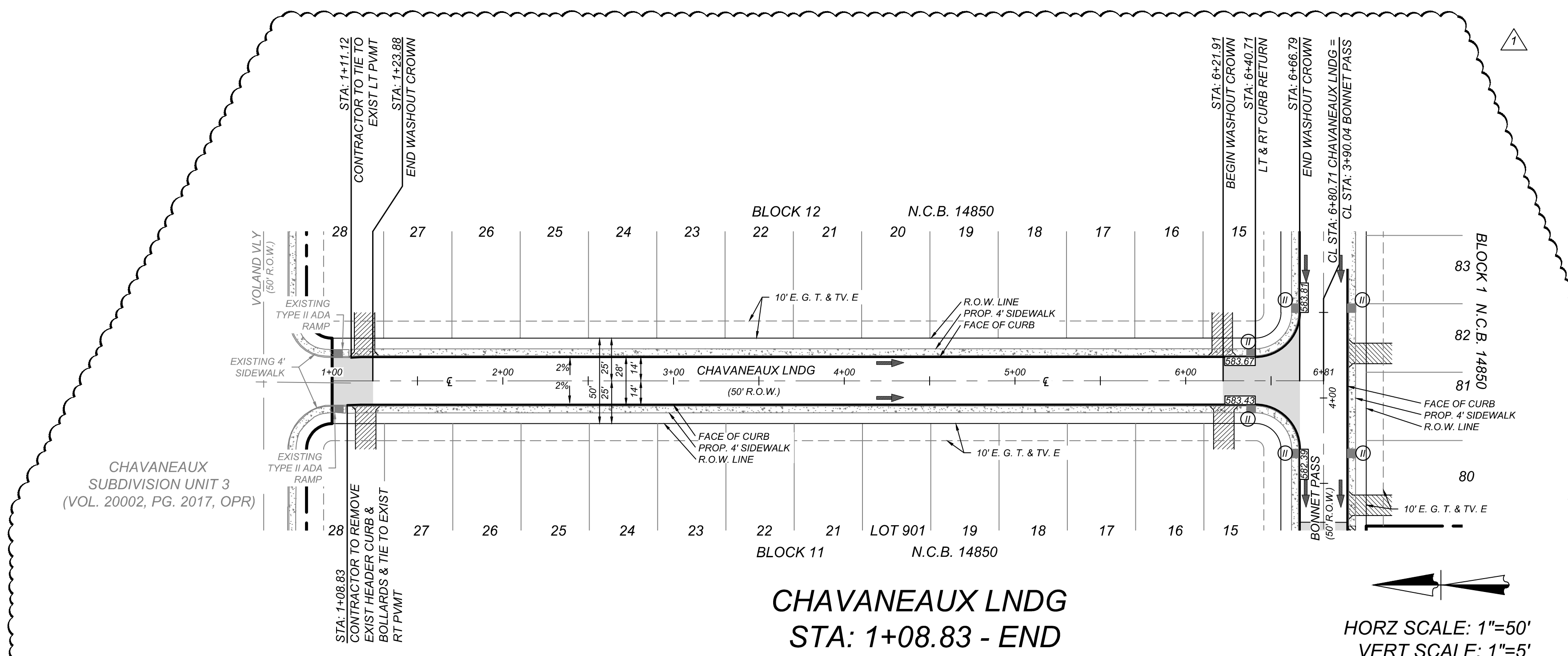
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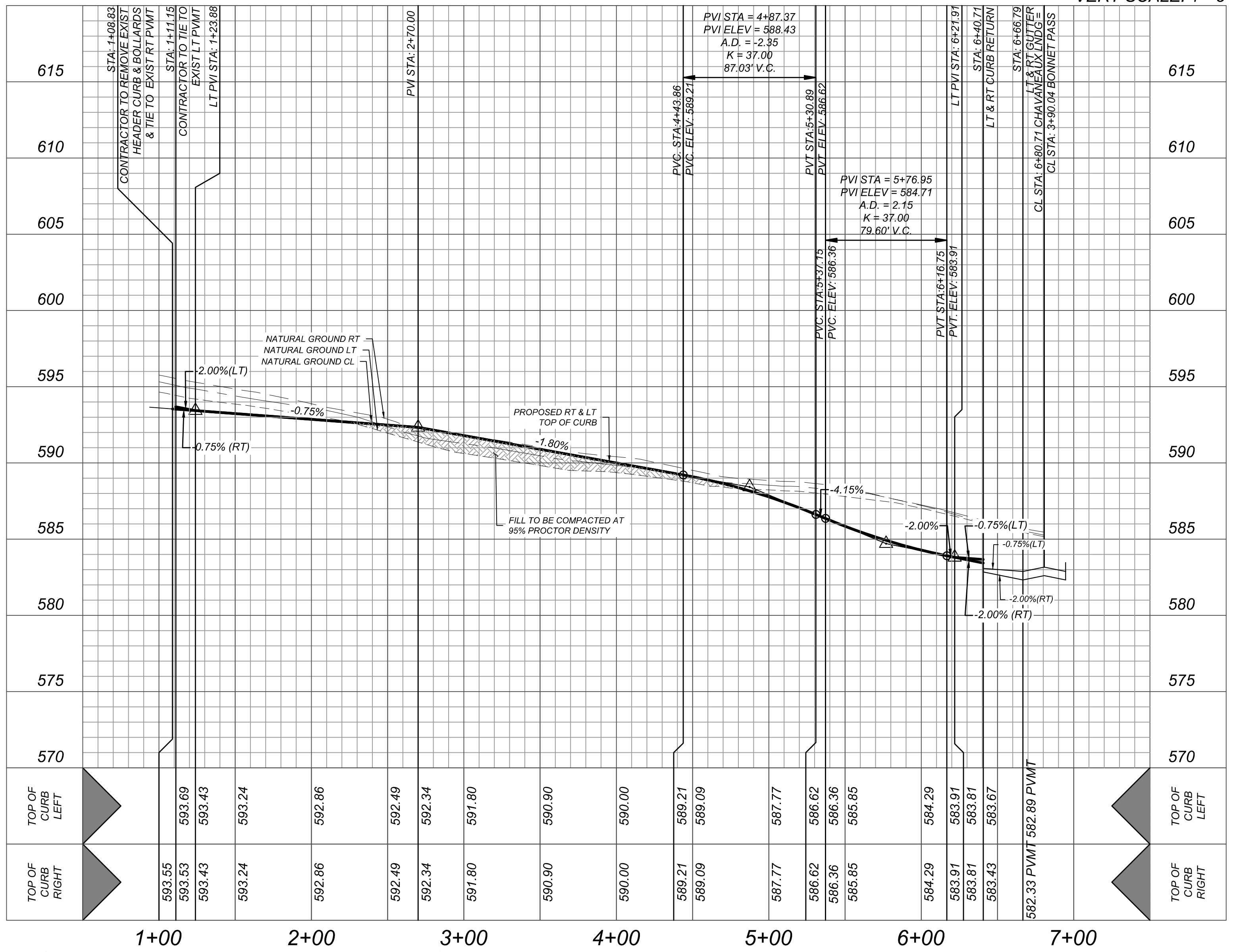
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**CHAVANEAUX LNDG
STA: 1+08.83 - END**

HORZ SCALE: 1"=50'
VERT SCALE: 1"=5'



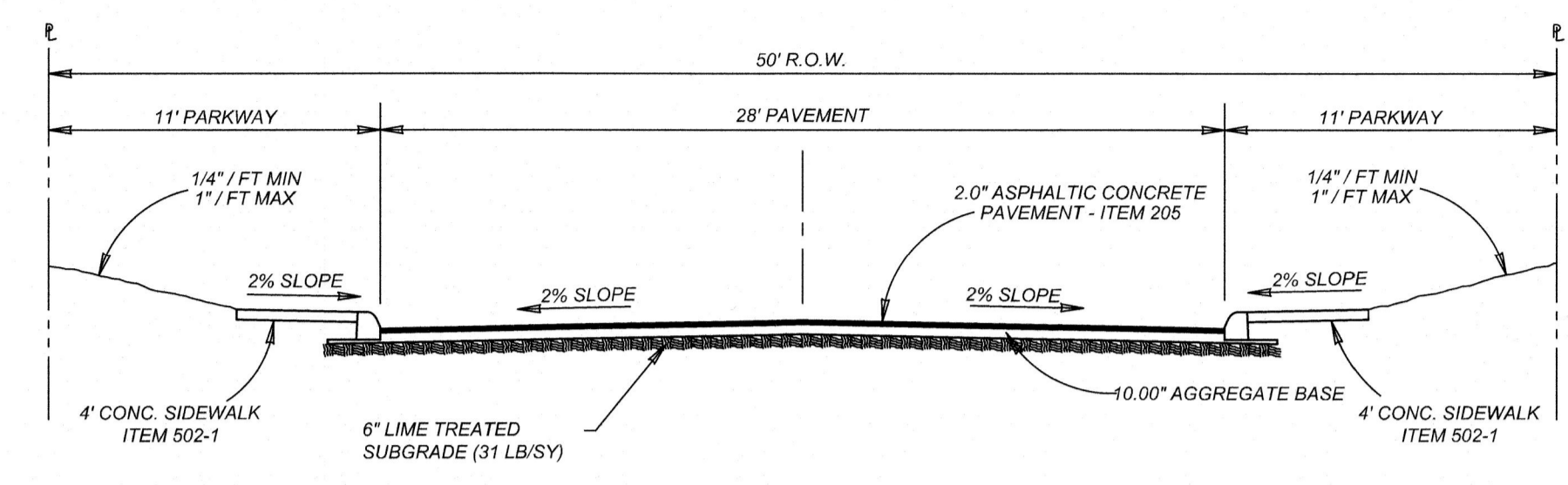
Date: Feb 26, 2026, 11:14am User ID: cgriff
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K&E
ENGINEERS + SURVEYING
111543
CLAYTON J. LINNEY
LICENSED PROFESSIONAL ENGINEER
3/12/2026

STATE OF TEXAS
CLAYTON J. LINNEY
111543
LICENSED PROFESSIONAL ENGINEER
3/12/2026

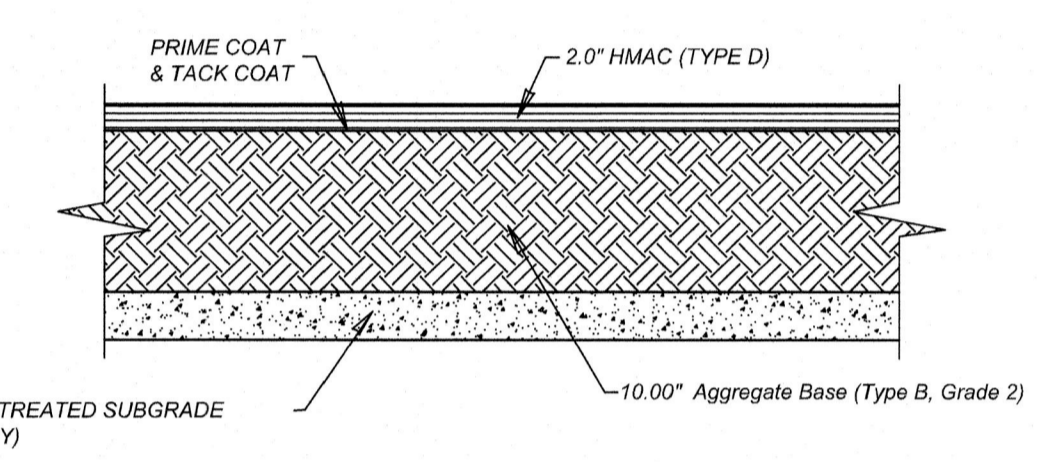
CHAVANEAUX SUBDIVISION UNIT 6
SAN ANTONIO, TX
CHAVANEAUX LNDG PLAN & PROFILE

PLAT NO.
22-11800-409
JOB NO. 984-02-02
DATE: APRIL, 2022
DRAWN:### CHECKED:##
SHEET NUMBER:



TYPICAL LOCAL "A" STREET SECTION
 NOT TO SCALE
 CHAVANEAUX LNDG, BEAUMONT BRK, BONNET PASS

Pavement Section
 2.0" HMAc Type "D"
 10.00" Aggregate Base (Type A, Grade 1 OR 2)
 6.0" Lime Treated Subgrade (31 LB/SY)
 Total: 18.00"
 Structural No: 2.76
 CBR: 2.5



ASPHALT PAVEMENT DETAIL
 NOT TO SCALE
 DETAIL FOR ALL LOCAL TYPE A

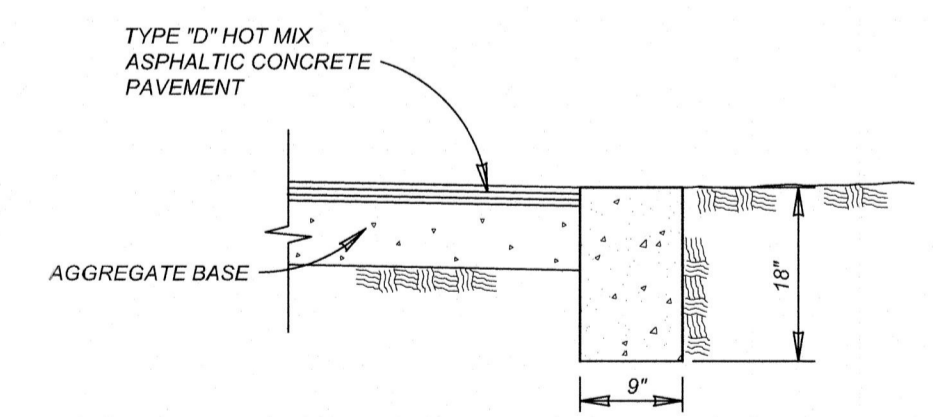
- NOTES:
- PAVEMENT DESIGN THICKNESS BASED ON GEOTECHNICAL REPORT BY INTEC, LLC, PROJECT NO. S241182, DATED AUGUST 29, 2024.
 - REFERENCE PROJECT GEOTECHNICAL REPORT AND PROJECT SPECIFICATION FOR ADDITIONAL REQUIREMENTS AND ALTERNATE PAVEMENT SECTIONS.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING MATERIAL TESTING. TESTING TO BE PAID BY OWNER.
 - CONTRACTOR MAY LEAVE VERTICAL CUT BANKS AT R.O.W. LINE AND MEDIANS PROVIDED PROJECT GEOTECHNICAL ENGINEER DETERMINES ROCK IS COMPETENT TO STAND ON ITS OWN.

- GENERAL NOTES:
- THE SUBGRADE SOILS SHOULD BE TESTED FOR SOLUBLE SULPHATE CONTENT PRIOR TO INSTALLATION OF THE LIME OR CEMENT.
 - THE APPLICATION RATE OF LIME SHALL BE DETERMINED BASED ON LABORATORY TESTING AND SHALL BE THE LOWEST PERCENTAGE OF LIME THAT PROVIDES AN UNCONFINED COMPRESSIVE STRENGTH (UCS) AT 7-DAYS OF AT LEAST 160 PSI IN ACCORDANCE WITH ASTM D5102 STANDARD TEST METHODS FOR UNCONFINED COMPRESSIVE STRENGTH OF COMPACTED SOIL-LIME MIXTURES (PROCEDURE B) (IN ADDITION, CURING SHOULD OCCUR FOR 7 DAYS AT 40° AND SPECIMENS SHOULD BE SUBJECT TO 24-HR CAPILLARY SOAK PRIOR TO TESTING).

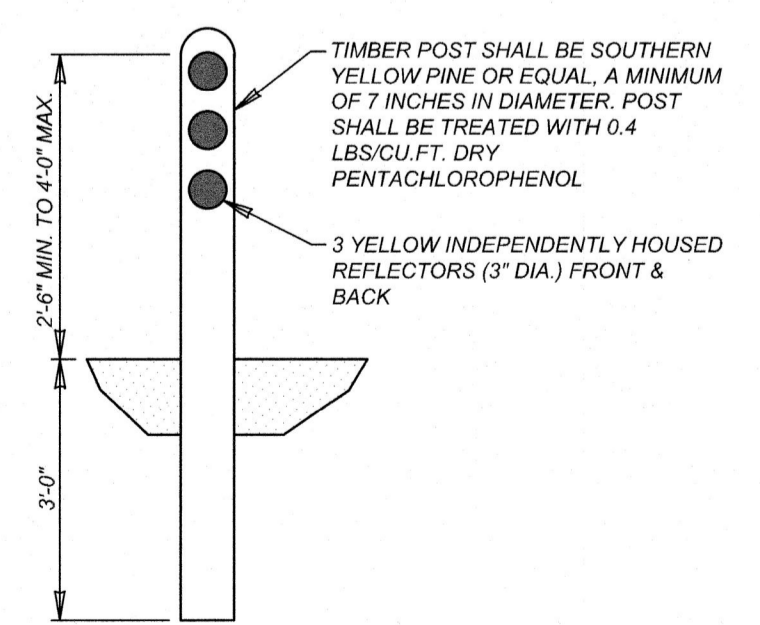
FOR CONSTRUCTION VERIFICATION THE FOLLOWING SHALL BE CONDUCTED IN THE FIELD:

- AFTER INITIAL MIXING THE SOIL-LIME MIXTURE SHALL MELLOW FOR A PERIOD OF TWO TO THREE (2 - 3) DAYS. MAINTAIN MOISTURE DURING MELLOWING;
- AFTER MELLOWING AND FINAL MIXING, THE PULVERIZATION SHALL BE CHECKED USING THE FOLLOWING CRITERIA (REMOVE NON-SLAKING AGGREGATES RETAINED ON THE 3/4 INCH SIEVE FROM THE SAMPLE):
 MINIMUM PASSING 1/2" SIEVE 100
 MINIMUM PASSING 3/4" SIEVE 85
 MINIMUM PASSING NO. 4 SIEVE 60
- SAMPLE SOIL-LIME MIXTURE FOR DETERMINATION OF MAXIMUM DRY DENSITY (MDD), IN THE LABORATORY, MOLD SPECIMENS TO 95% OF MDD AT OPTIMUM MOISTURE CONTENT AND VERIFY UCS TO BE AT LEAST 160 PSI IN ACCORDANCE WITH PROCEDURE OUTLINED ABOVE FOR MIXTURE DESIGN.
- COMPACT AND CHECK FIELD DENSITY (MINIMUM OF 95% OF MDD REQUIRED)
- CURE FOR AN ADDITIONAL 2 TO 5 DAYS (TOTAL MELLOWING AND CURING TIME SHOULD TOTAL AT LEAST 5 DAYS).
- VERIFY DEPTH OF LIME TREATED LAYER TO DEPTH AS NOTED ON PLAN TO WITHIN ± 1.0 INCH.

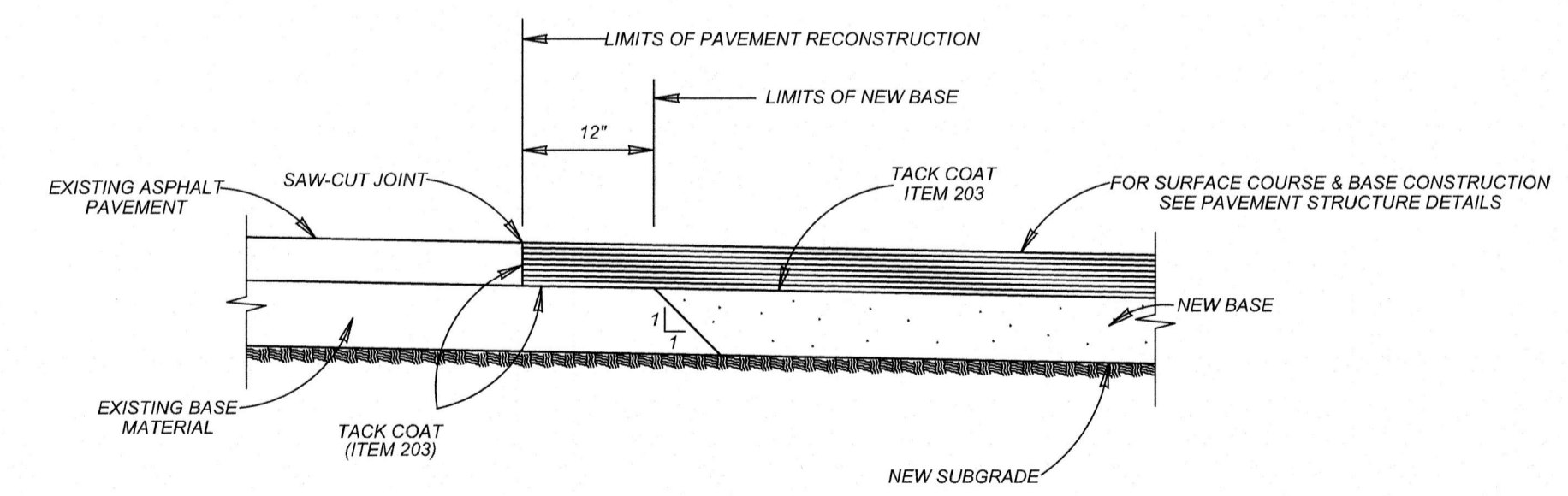
- NOTES:
- ANY FILL USED TO RAISE THE SUBGRADE:
- SHOULD NOT CONTAIN ANY DELETERIOUS MATERIAL.
 - SHOULD HAVE A CBR VALUE OF 2.5 OR GREATER.
 - SHOULD HAVE THE "LIME PERCENTAGE/APPLICATION RATE" RE-RUN PRIOR TO INSTALLATION
 - PI SHOULD BE LESS THAN 45



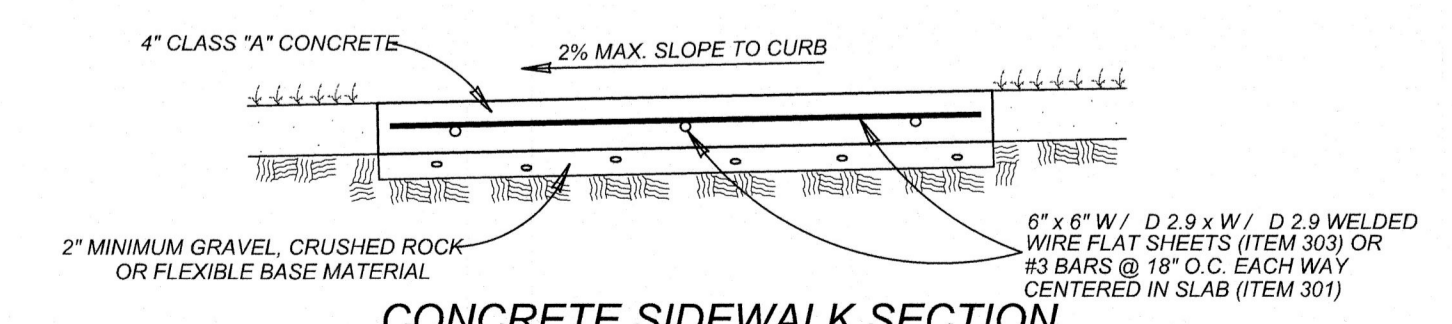
HEADER CURB
 ITEM 500 ON SAND OR GRAVEL
 NOT TO SCALE



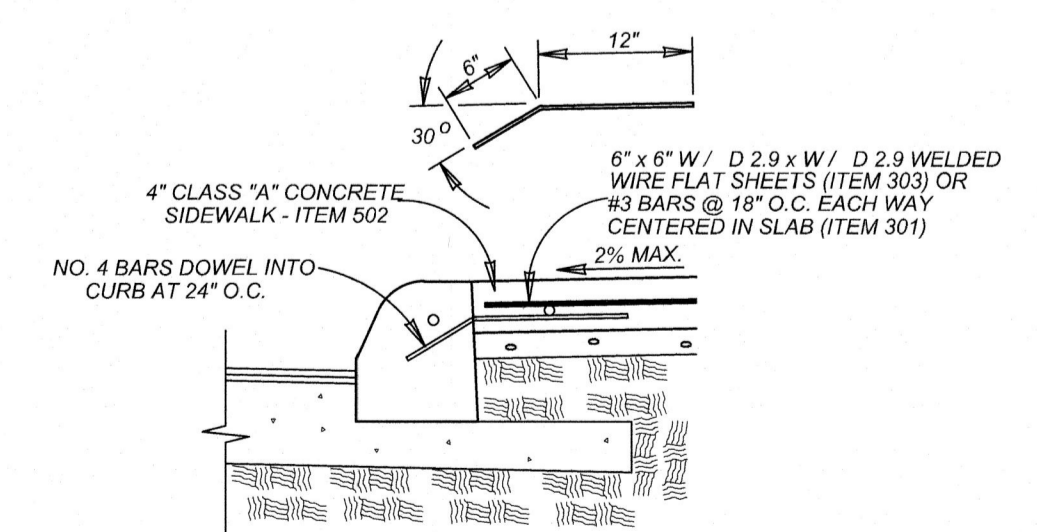
TIMBER GUARD POST DETAIL
 NOT TO SCALE



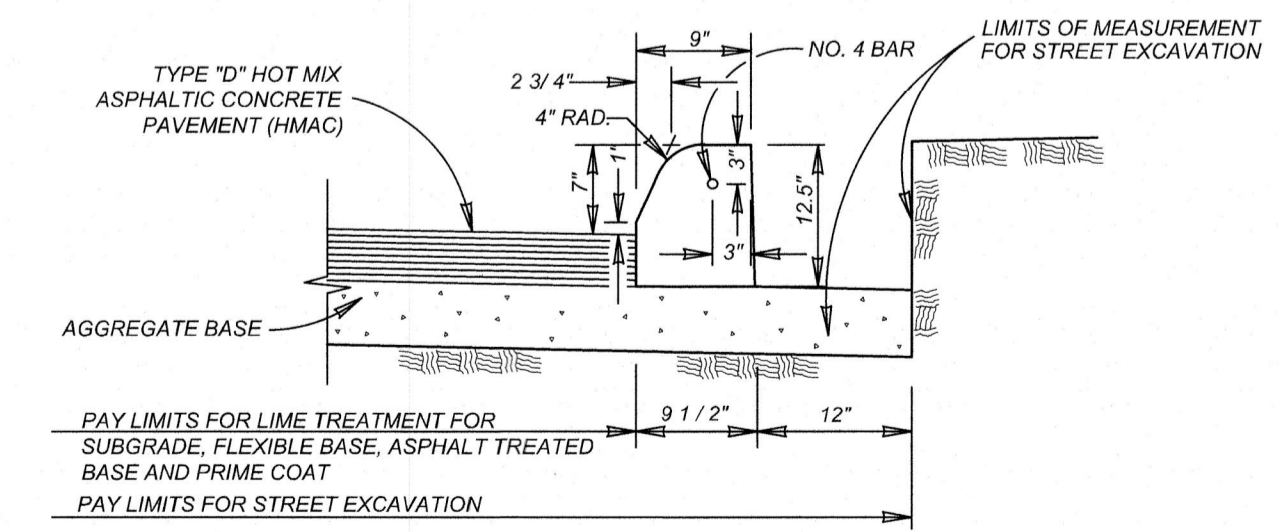
PAVEMENT JUNCTION DETAILS
 NOT TO SCALE



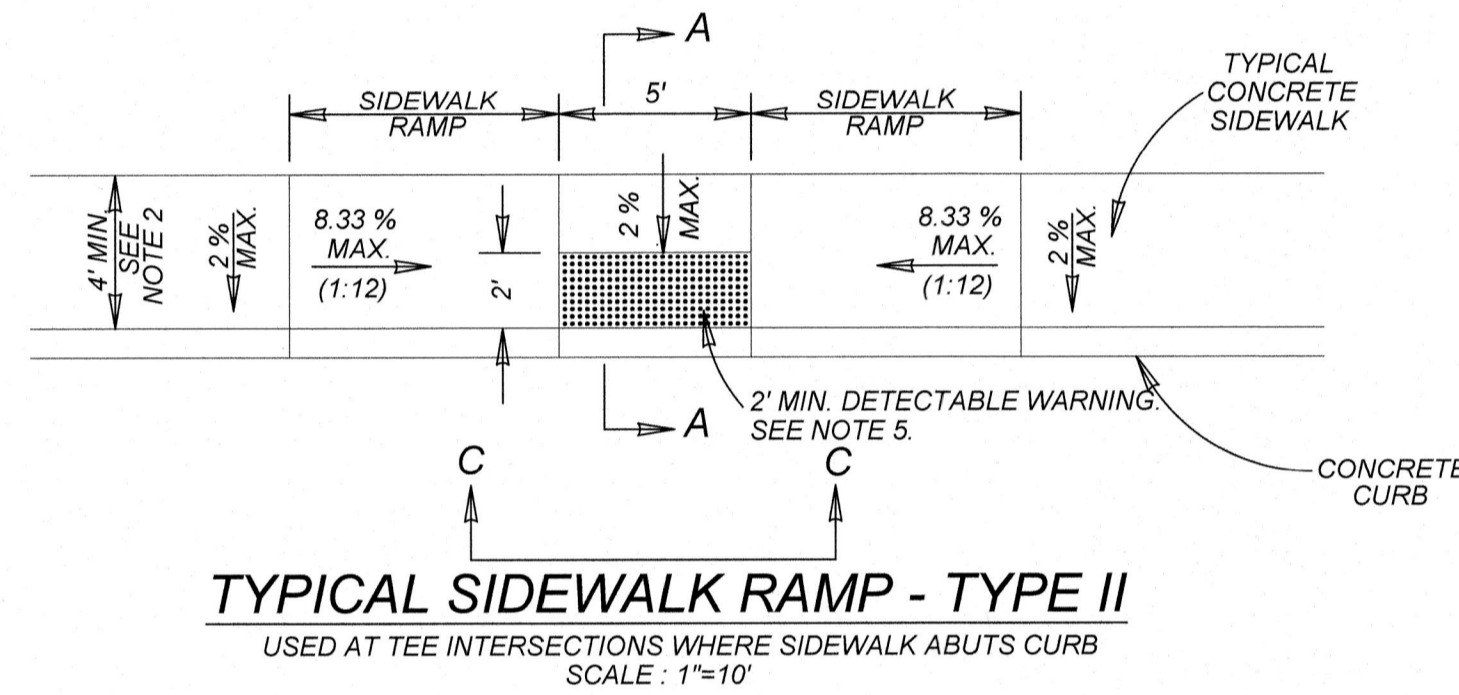
CONCRETE SIDEWALK SECTION
 ITEM 502
 NOT TO SCALE



CONCRETE SIDEWALK ABUTTING CURB SECTION
 ITEM 502
 NOT TO SCALE

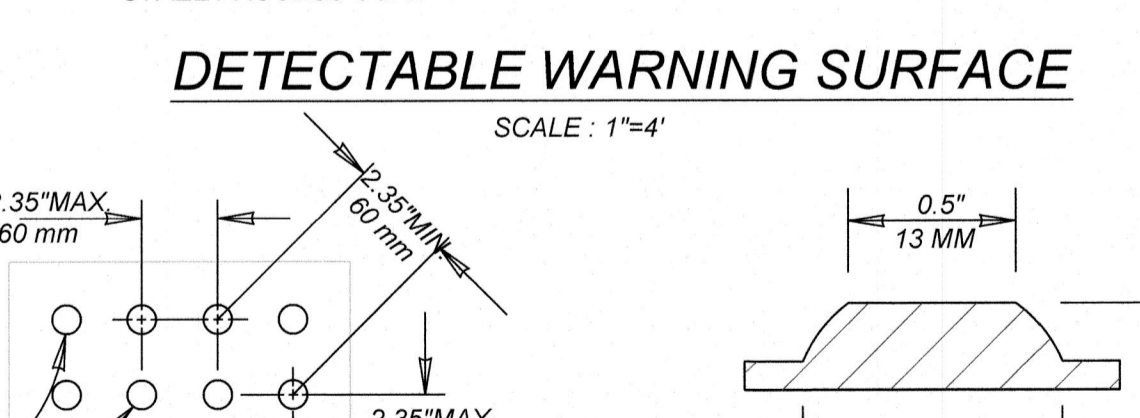
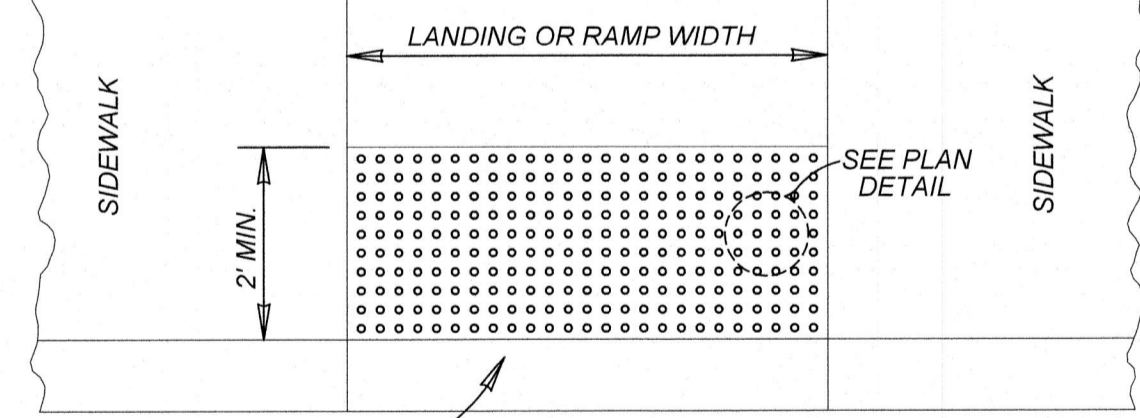
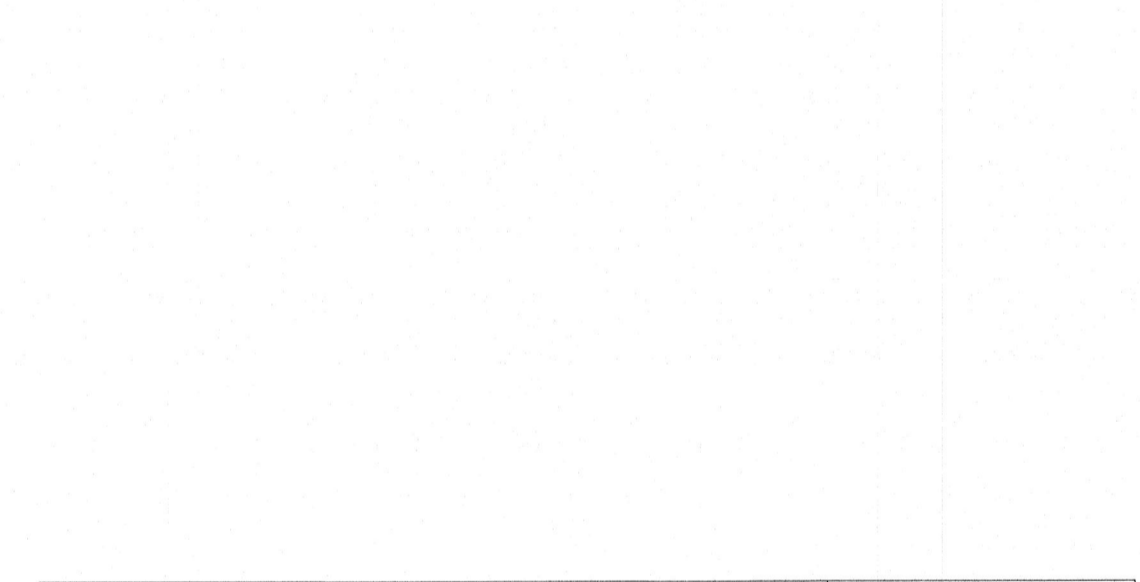


CONCRETE CURB
 ITEM 500 ON ASPHALT TREATED BASE OR ASPHALTIC CONCRETE BASE
 NOT TO SCALE



GENERAL NOTES

- WHEN POSSIBLE SIDEWALKS SHOULD BE PLACED NEXT TO THE PROPERTY LINE, ALLOWING A MINIMUM OF 1 FOOT BUFFER. DEVIATION OF THE PATHWAY FROM A STRAIGHT LINE IS ENCOURAGED TO AVOID TREES OR OTHER OBSTRUCTIONS.
- FOR LOCAL TYPE "A" STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 3' FROM THE BACK OF CURB.
- FOR OTHER THAN LOCAL TYPE "A" STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4' AND SEPARATED A MINIMUM OF 3' FROM THE BACK OF CURB OR AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.
- SIDEWALK RAMP LENGTHS PRESENTED IN TABLE 1 ARE GUIDELINES ONLY. SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE.
- ALL CURB-RAMPS OR LANDINGS ABUTTING THE CROSSWALK SHALL HAVE A DETECTABLE WARNING 24 INCHES DEEP (IN THE DIRECTION OF PEDESTRIAN TRAVEL) AND EXTENDING THE FULL WIDTH OF THE CURB RAMP OR LANDING. THE DETECTABLE WARNING SHALL CONSIST OF RAISED TRUNCATED DOMES ALIGNED IN A GRID PATTERN WITH A DIAMETER OF A NOMINAL 0.9 INCHES (23 MM), A HEIGHT OF NOMINAL 0.2 INCHES (5 MM) AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 INCHES (60 MM). THE DETECTABLE WARNING SURFACE SHALL BE PAVERS CONFORMING TO TxDOT STANDARD PED-18, PEDESTRIAN FACILITIES.
- DETECTABLE WARNINGS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE.
- SIDEWALK RAMP TYPE V SHALL BE USED ONLY WHERE THERE IS SIGNIFICANT RESTRICTION WITHIN THE PARKWAY TO CONSTRUCT TYPE I OR TYPE III RAMPS.
- CONSTRUCTION OF ALL WHEELCHAIR RAMPS TO BE INCLUDED UNDER ITEMS "500 - CONCRETE CURB, GUTTER, AND CONCRETE CURB AND GUTTER" AND / OR "502 - CONCRETE SIDEWALKS". RAMP SURFACE SHALL BE BRUSH.
- THESE DETAILS ARE FOR REFERENCE ONLY. ACTUAL LOCATIONS OF WHEELCHAIR RAMPS TO BE SHOWN ON CONSTRUCTION PLANS. CITY CONSTRUCTION INSPECTOR CAN ADJUST LOCATIONS FOR SAFETY OR
- SIDEWALKS LESS THAN 5 FEET IN WIDTH SHALL BE PROVIDED WITH A PASSING SPACE AT A MAXIMUM
- WHEELCHAIR RAMP SHALL BE CONSTRUCTED WITH 4" CLASS "A" CONCRETE AND 2" MINIMUM GRAVEL, CRUSHED ROCK OR FLEXIBLE BASE MATERIAL.
- REINFORCING STEEL SHALL BE #3 BARS AT 18" O.C.E.W. OR 6" x 6" - W2.9 x W2.9 WIRE MESH.
- SIDEWALK GRADES SHALL NOT EXCEED THE GRADE ESTABLISHED FOR THE ADJACENT ROADWAY, ANY SIDEWALK CONSTRUCTION THAT DEVIATES FROM THE NATURAL GRADE OF THE ROADWAY TO CREATE A GRADE STEEPER THAN THE EXISTING ROADWAY WILL REQUIRE RAMPS, HANDRAILS AND RESTING PLATFORMS TO BE CONSTRUCTED IN ACCORDANCE WITH ADA AND T&S STANDARDS.
- SIDEWALK CROSS GRADE SHALL HAVE A MAXIMUM SLOPE OF 2%. LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
- THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES SHALL BE LESS THAN 11%. THE CHANGE OF GRADE SHALL BE DEFINED AS THE ALGEBRAIC DIFFERENCE OF THE ADJACENT SURFACE SLOPES. IN THE CASE OF A STREET ACCESS RAMP DESIGNED AT THE 8.33% MAXIMUM SLOPE, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN 2.87% (I.E. 8.33-(2.87)=11). IN ADDITION, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN OR EQUAL TO 5%.
- IF THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES IS GREATER THAN OR EQUAL TO 11%, A LEVELING STRIP, 2 FEET IN LENGTH, SHALL BE PROVIDED TO TRANSITION THE ADJACENT SURFACES.
- ADA COMPLIANCE IN ALTERATIONS INCLUDE ONLY THAT WORK WITHIN THE LIMITS, BOUNDARIES OR SCOPE OF A PLANNED PROJECT.



NOTE:
 STAMPED CONCRETE TRUNCATED DOMES WILL NOT BE ALLOWED TO BE USED FOR DETECTABLE WARNING ON WHEELCHAIR RAMPS. CONTRACTOR MUST SUBMIT TRUNCATED DOME INFORMATION THAT IS TO BE USED ON WHEELCHAIR RAMPS TO THE PROJECT MANAGER FOR APPROVAL AT LEAST 30 DAYS PRIOR TO INSTALLATION.

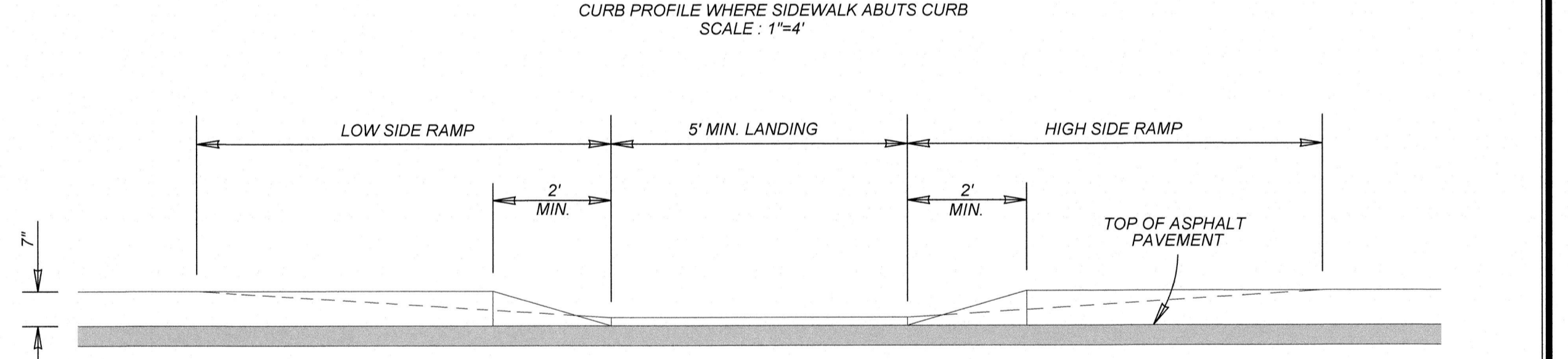
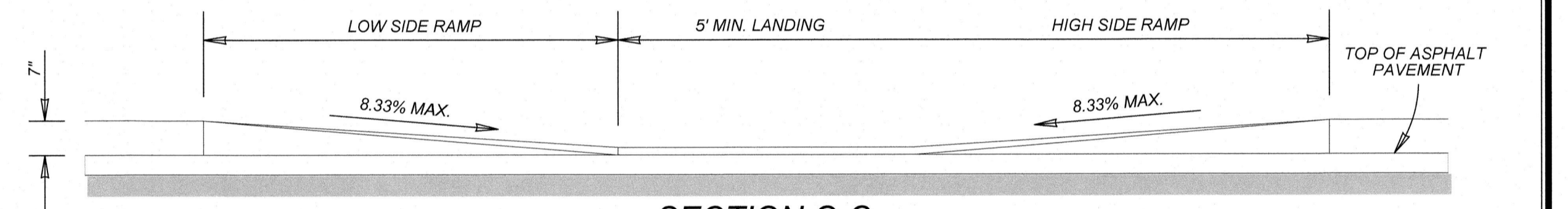


TABLE 1
 (SEE NOTE 4)

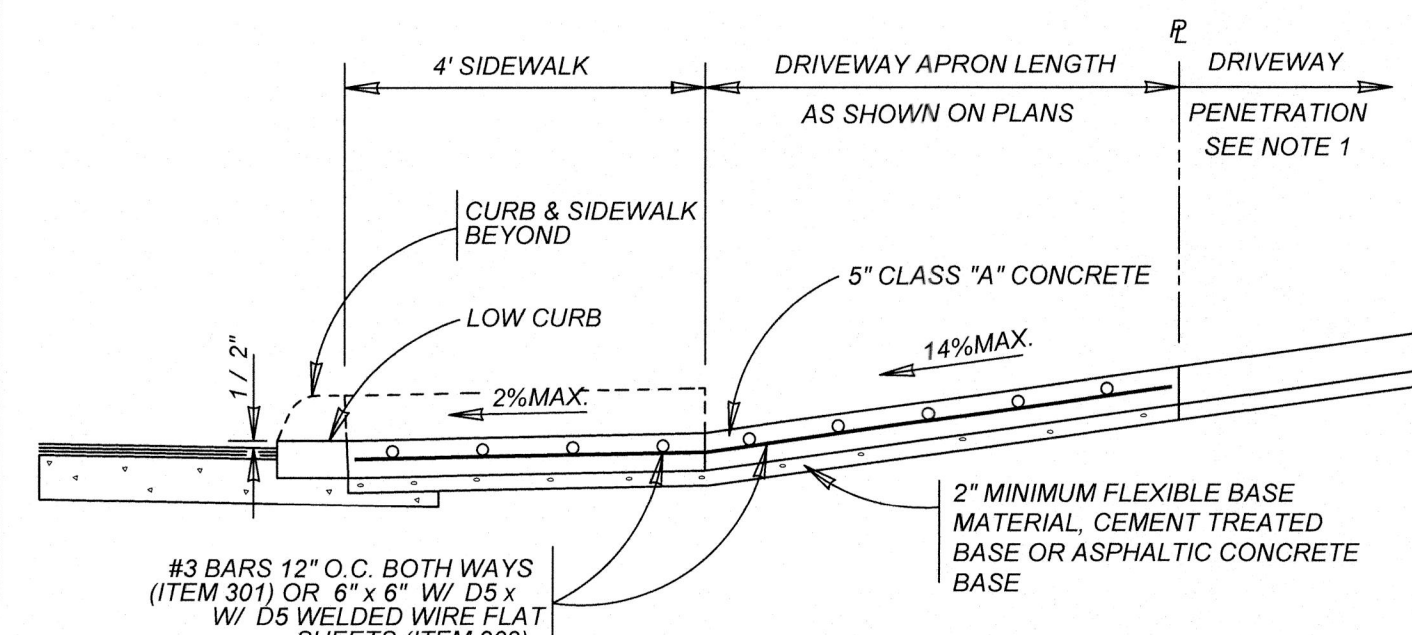
GUTTER SLOPE	SIDEWALK RAMP LENGTH (1:12)	
	LOW SIDE	HIGH SIDE
1%	5'-6"	7'-2"
2%	5'-0"	8'-4"
3%	4'-6"	10'-0"
4%	4'-2"	12'-6"
5%	3'-10"	16'-8"

MAY 2009
CITY OF SAN ANTONIO
 CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

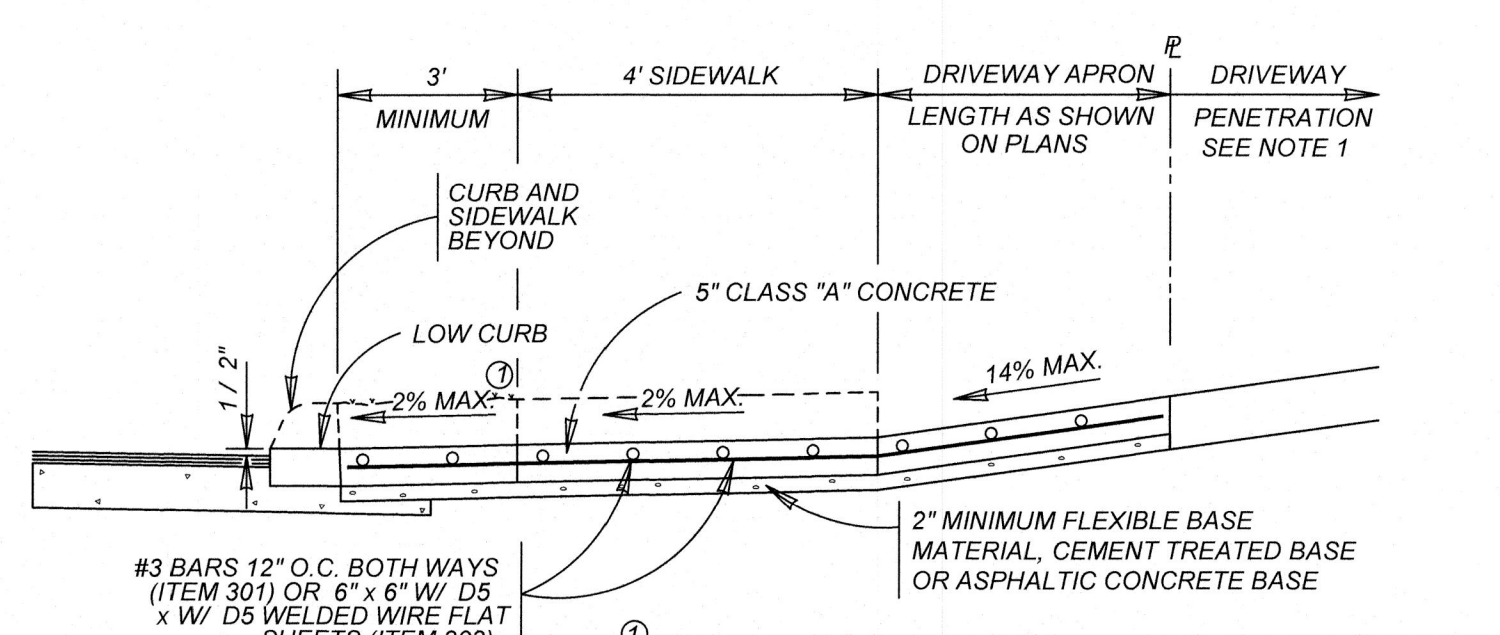
WHEELCHAIR RAMP STANDARDS

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

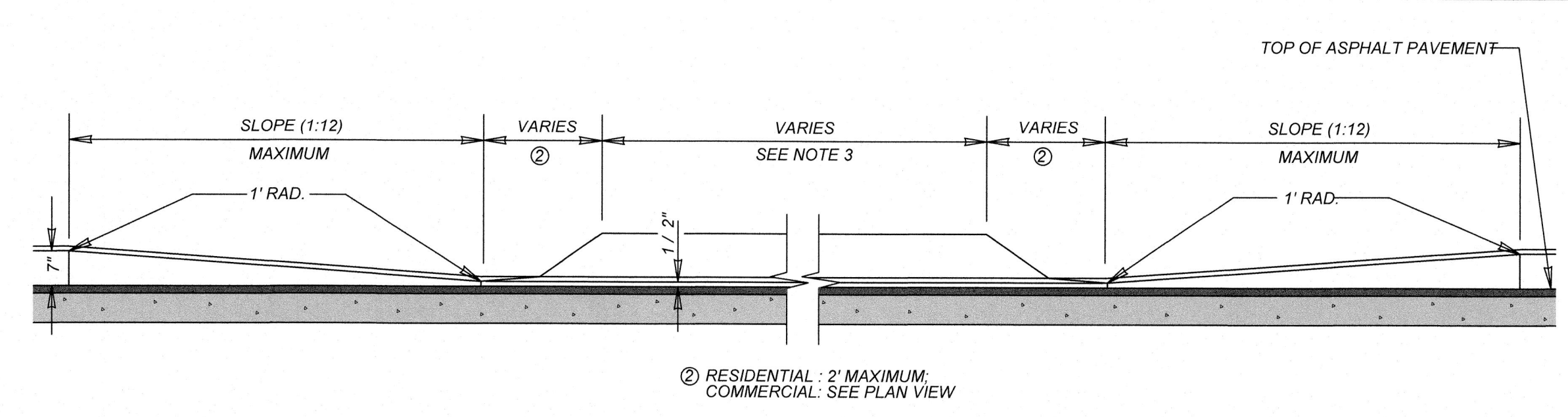
PLAT NO.
 22-11800409
 JOB NO. 984-02-02
 DATE: APRIL, 2022
 DRAWN### CHECKED###
 SHEET NUMBER:



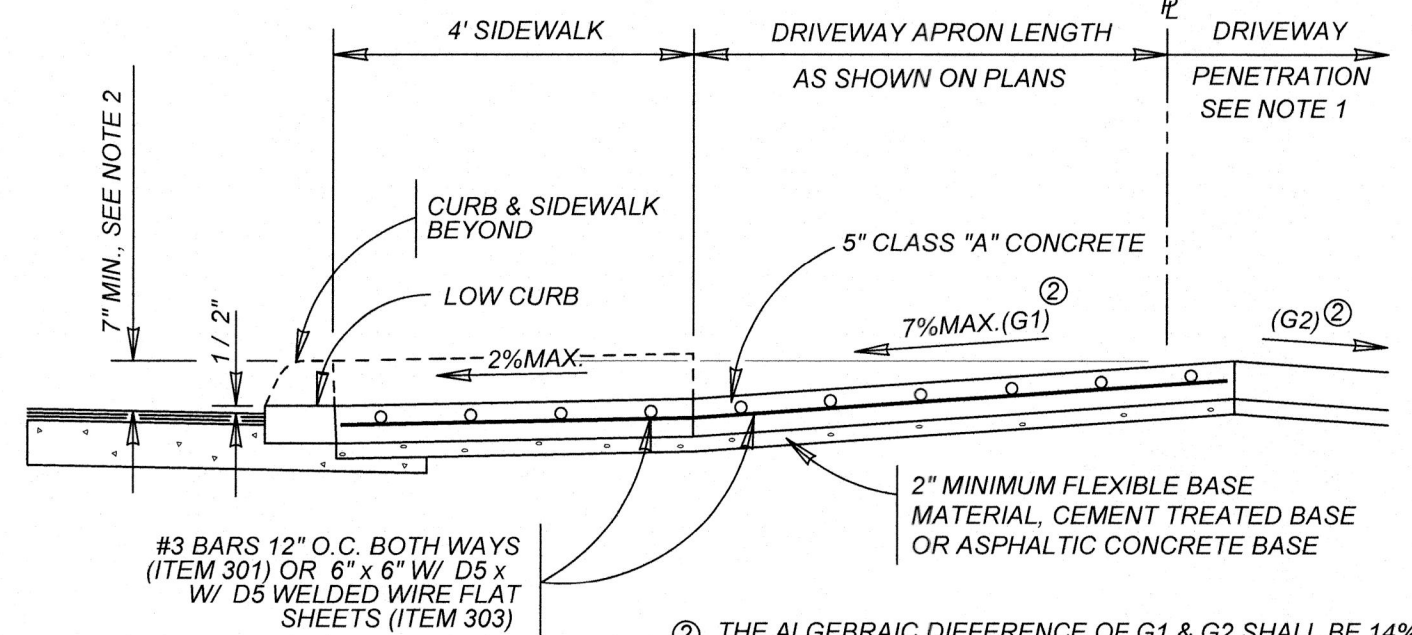
TYPICAL RESIDENTIAL DRIVEWAY SECTION
 WITH SIDEWALK ABUTTING CURB
 ITEM 503.1



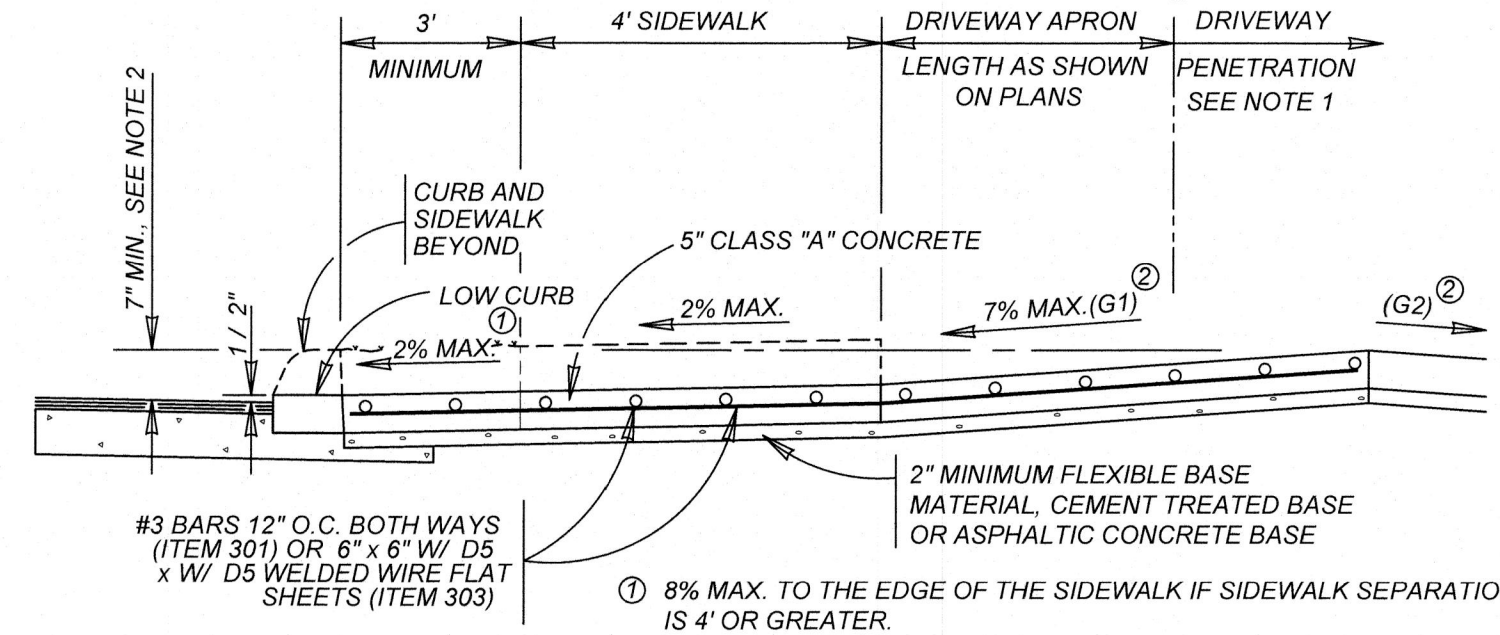
TYPICAL RESIDENTIAL DRIVEWAY SECTION
 WITH SIDEWALK SEPARATED FROM CURB
 ITEM 503.1



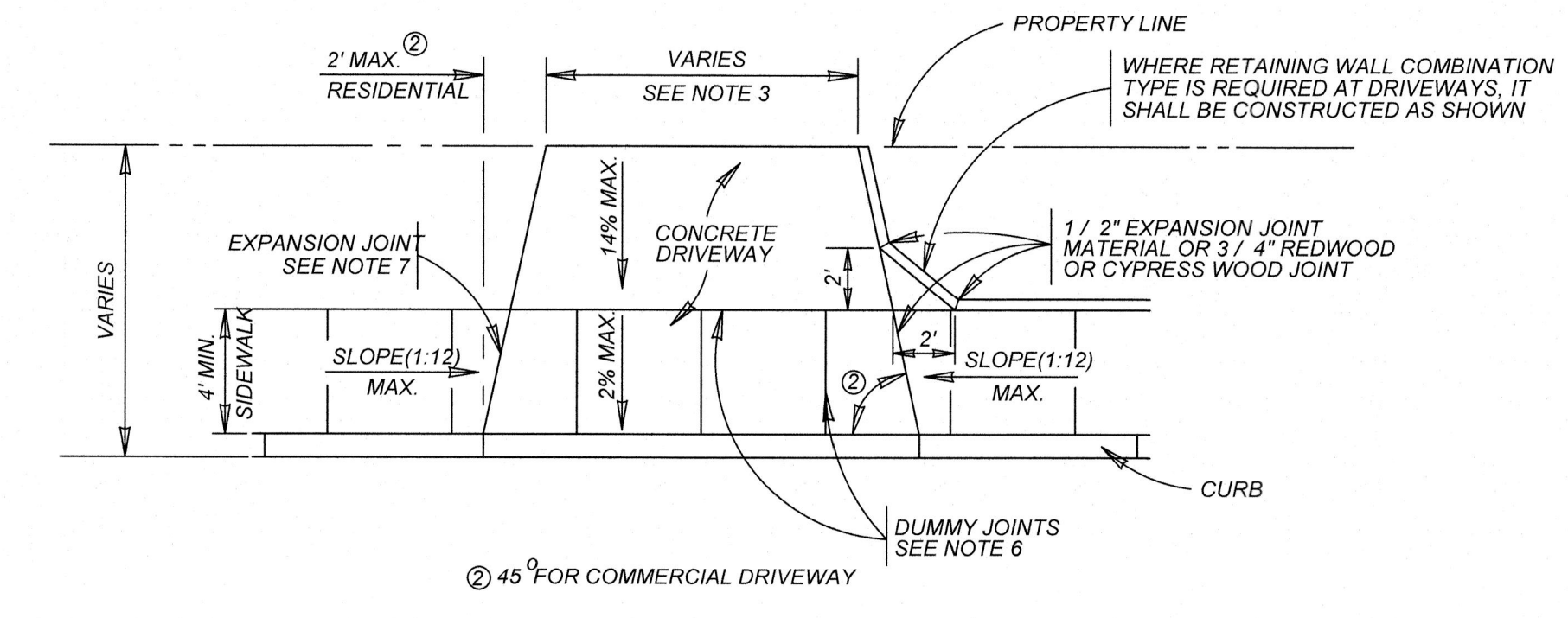
CURB PROFILE AT DRIVEWAY
 WITH SIDEWALK ABUTTING CURB



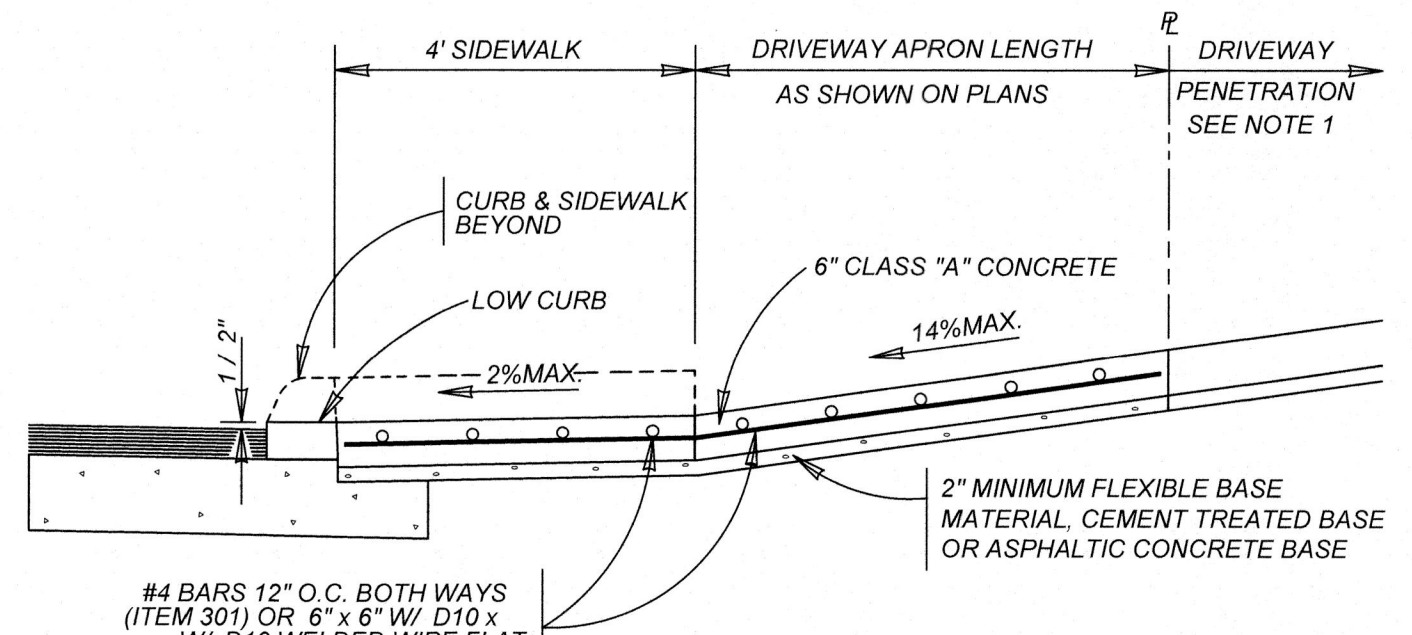
TYPICAL RESIDENTIAL DRIVEWAY SECTION
 WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS ABUTTING CURB
 ITEM 503.1



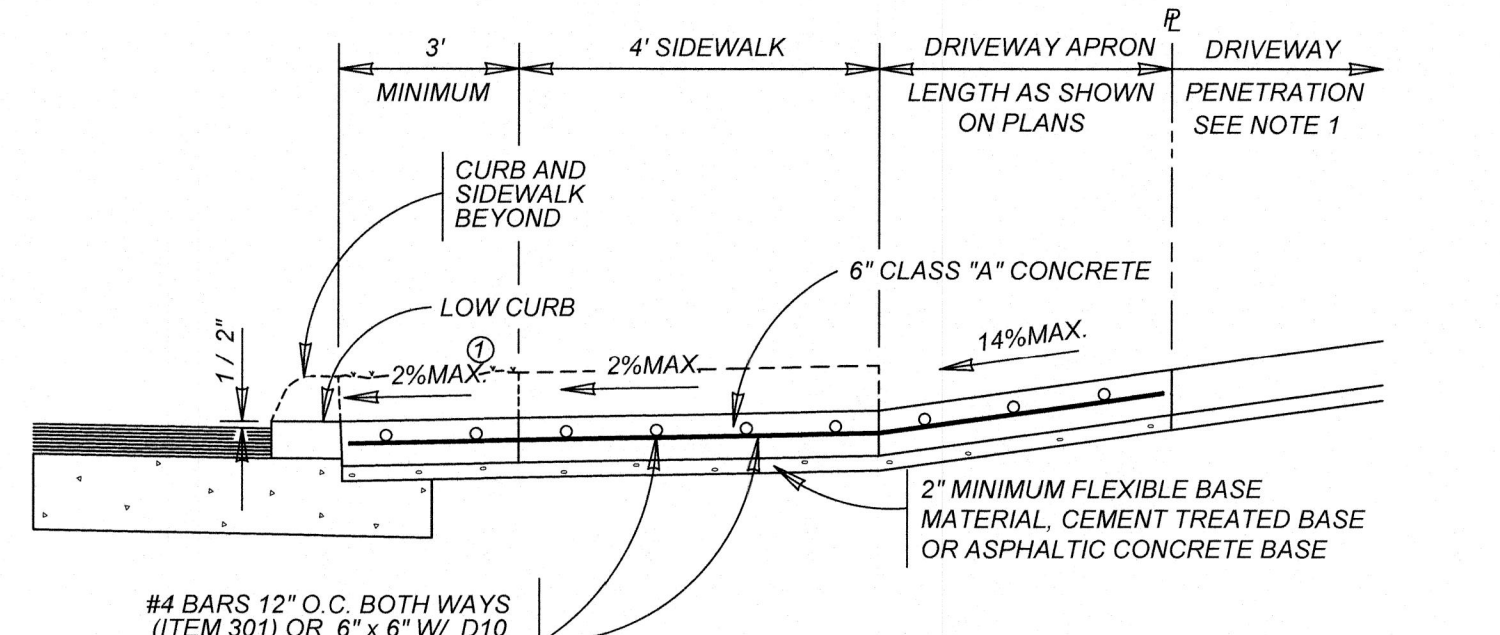
TYPICAL RESIDENTIAL DRIVEWAY SECTION
 WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS SEPARATED FROM CURB
 ITEM 503.1



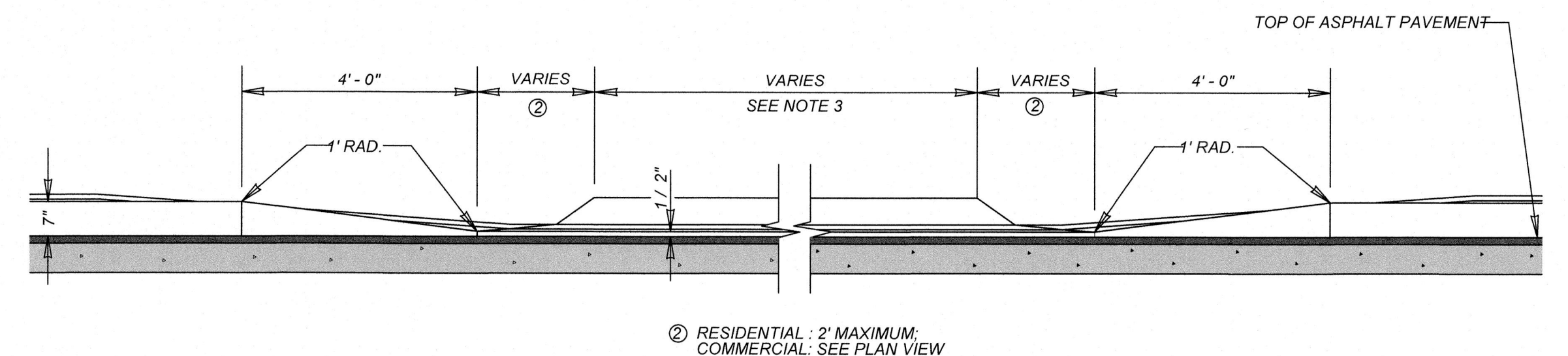
TYPICAL DRIVEWAY PLAN VIEW
 WITH SIDEWALK ABUTTING CURB



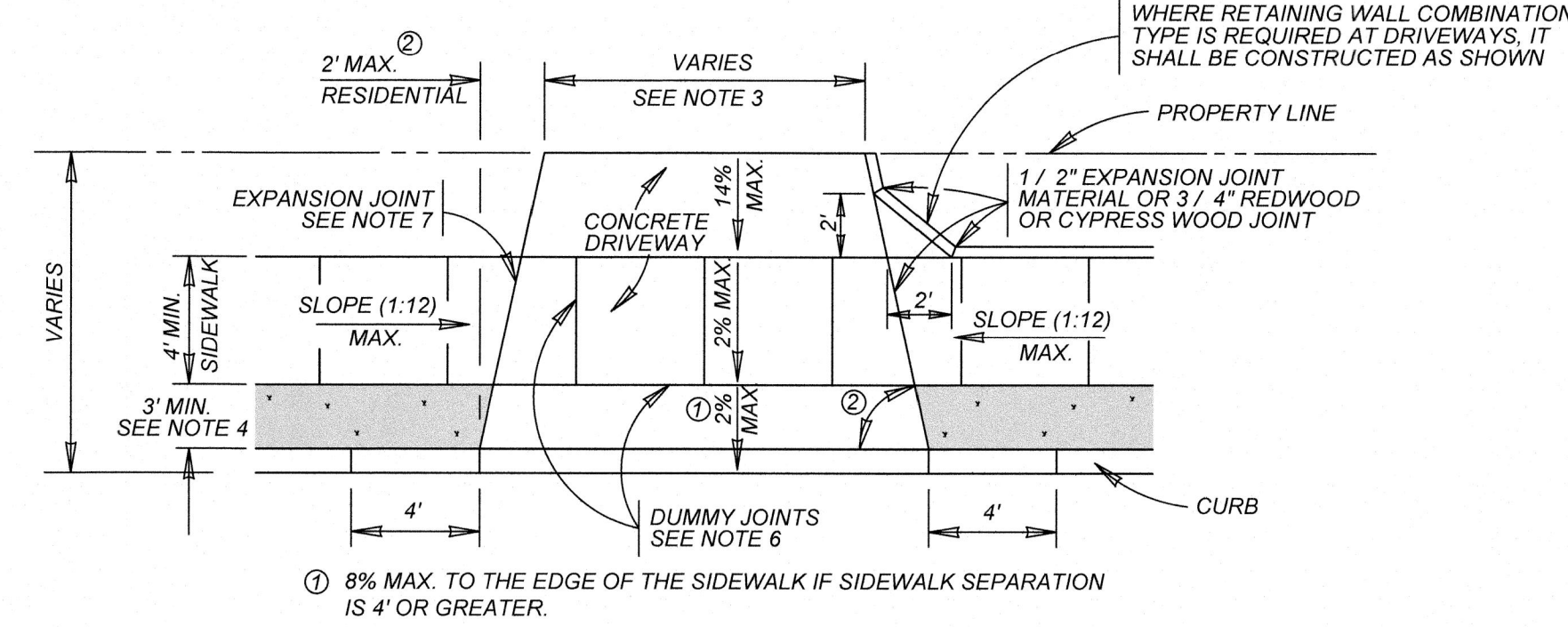
TYPICAL COMMERCIAL DRIVEWAY SECTION
 WITH SIDEWALK ABUTTING CURB
 ITEM 503.2



TYPICAL COMMERCIAL DRIVEWAY SECTION
 WITH SIDEWALK SEPARATED FROM CURB
 ITEM 503.2



CURB PROFILE AT DRIVEWAY
 WITH SIDEWALK SEPARATED FROM CURB



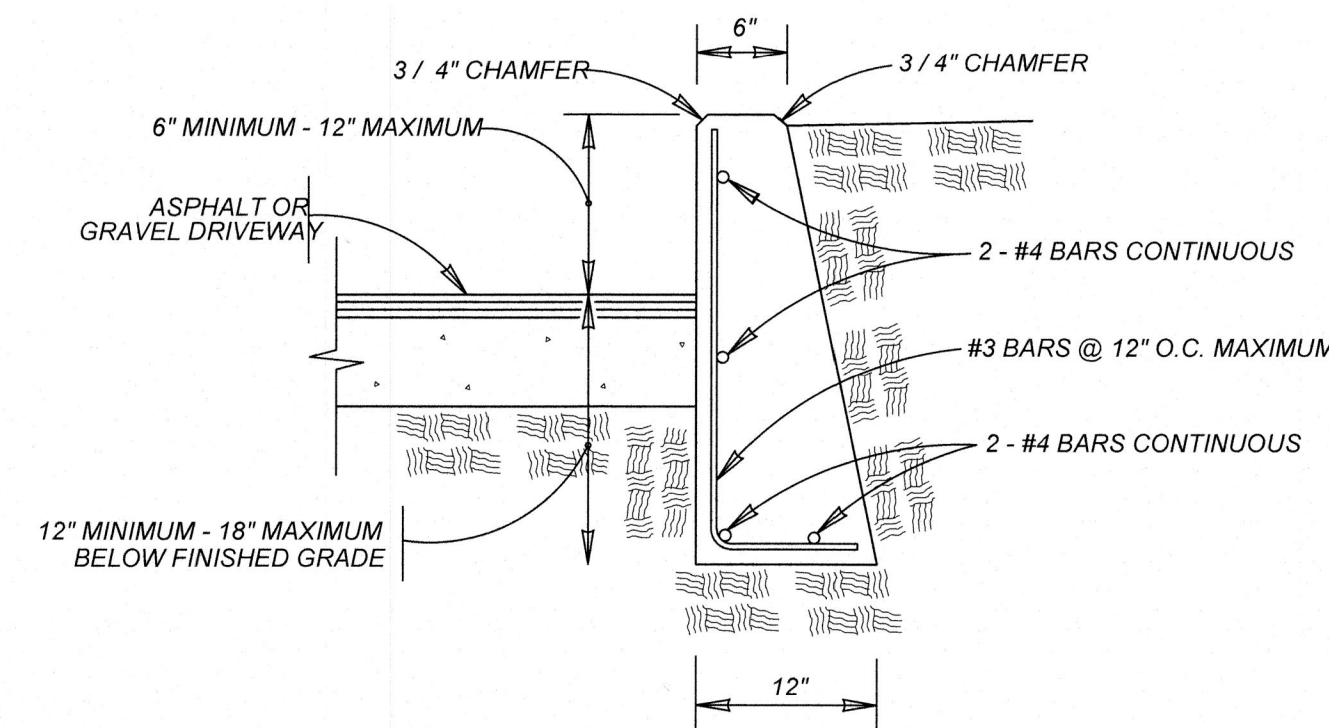
TYPICAL DRIVEWAY PLAN VIEW
 WITH SIDEWALK SEPARATED FROM CURB

CONCRETE DRIVEWAY NOTES

- DRIVEWAY PENETRATION REFERS TO A PORTION OF THE DRIVEWAY THAT MAY BE NECESSARY TO RECONSTRUCT WITHIN PRIVATE PROPERTY TO COMPLY WITH A MAXIMUM DRIVEWAY SLOPE. THIS PORTION OF THE DRIVEWAY SHALL BE PAID FOR UNDER THE FOLLOWING ITEMS AS MAY APPLY:
 A.) CONCRETE DRIVEWAY PAID FOR UNDER ITEM NO. 503.1 OR 503.2
 B.) ASPHALTIC CONCRETE DRIVEWAY PAID FOR UNDER ITEM NO. 503.4 AND SHALL INCLUDE A MINIMUM OF 1" ASPHALT TYPE 'D' & 6" FLEXIBLE BASE
 C.) GRAVEL DRIVEWAY PAID FOR UNDER ITEM NO. 503.5 AND SHALL INCLUDE A MINIMUM OF 6" FLEXIBLE BASE
- 7" MINIMUM HEIGHT WILL NOT NECESSARILY OCCUR AT THE PROPERTY LINE. IT MAY OCCUR WITHIN THE RIGHT OF WAY OR WITHIN THE DRIVEWAY PENETRATION ON PRIVATE PROPERTY.
- THE PROPOSED DRIVEWAY SHOULD MATCH THE EXISTING WIDTH AT THE PROPERTY LINE BUT UNLESS AUTHORIZED BY THE CITY TRAFFIC ENGINEER, THE WIDTH SHALL BE WITHIN THE FOLLOWING VALUES:

TYPE	MINIMUM	MAXIMUM
RESIDENTIAL	10'	20'
COMMERCIAL - ONE WAY	12'	20'
COMMERCIAL - TWO WAY	24'	30'

- FOR LOCAL TYPE "A" STREETS, SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 3' FROM THE BACK OF CURB.
- FOR OTHER THAN LOCAL TYPE "A" STREETS, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND SEPARATED A MINIMUM OF 3' FROM THE BACK OF CURB OR, AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.
- DUMMY JOINTS PARALLEL TO THE CURB SHALL BE PLACED WHERE THE SIDEWALK MEETS THE DRIVEWAY. DUMMY JOINTS PERPENDICULAR TO THE CURB, AND WITHIN THE BOUNDARIES OF THE PARALLEL DUMMY JOINTS, SHALL BE PLACED AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK.
- A MINIMUM OF TWO ROUND AND SMOOTH DOWEL BARS 3/8" IN DIAMETER AND 18" IN LENGTH SHALL BE SPACED 18" APART AT EACH EXPANSION JOINT.
- SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE. WHERE SIDEWALKS CROSS DRIVEWAYS, SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- SIDEWALK RAMP SURFACE SHALL BE BRUSH FINISHED.



DRIVEWAY - CONCRETE RETAINING WALL
 ON COMPACTED SUBGRADE
 ITEM 307.1

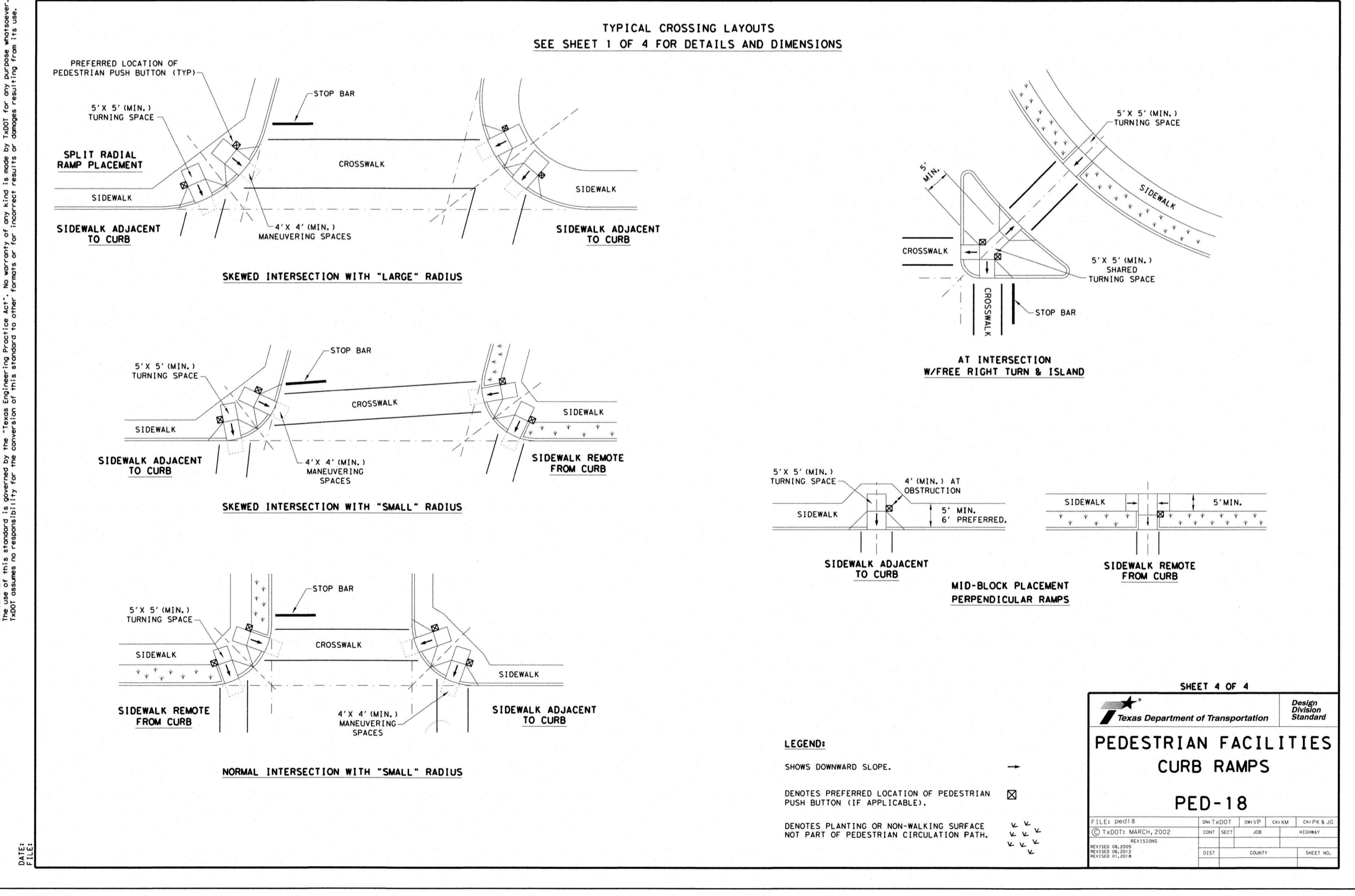
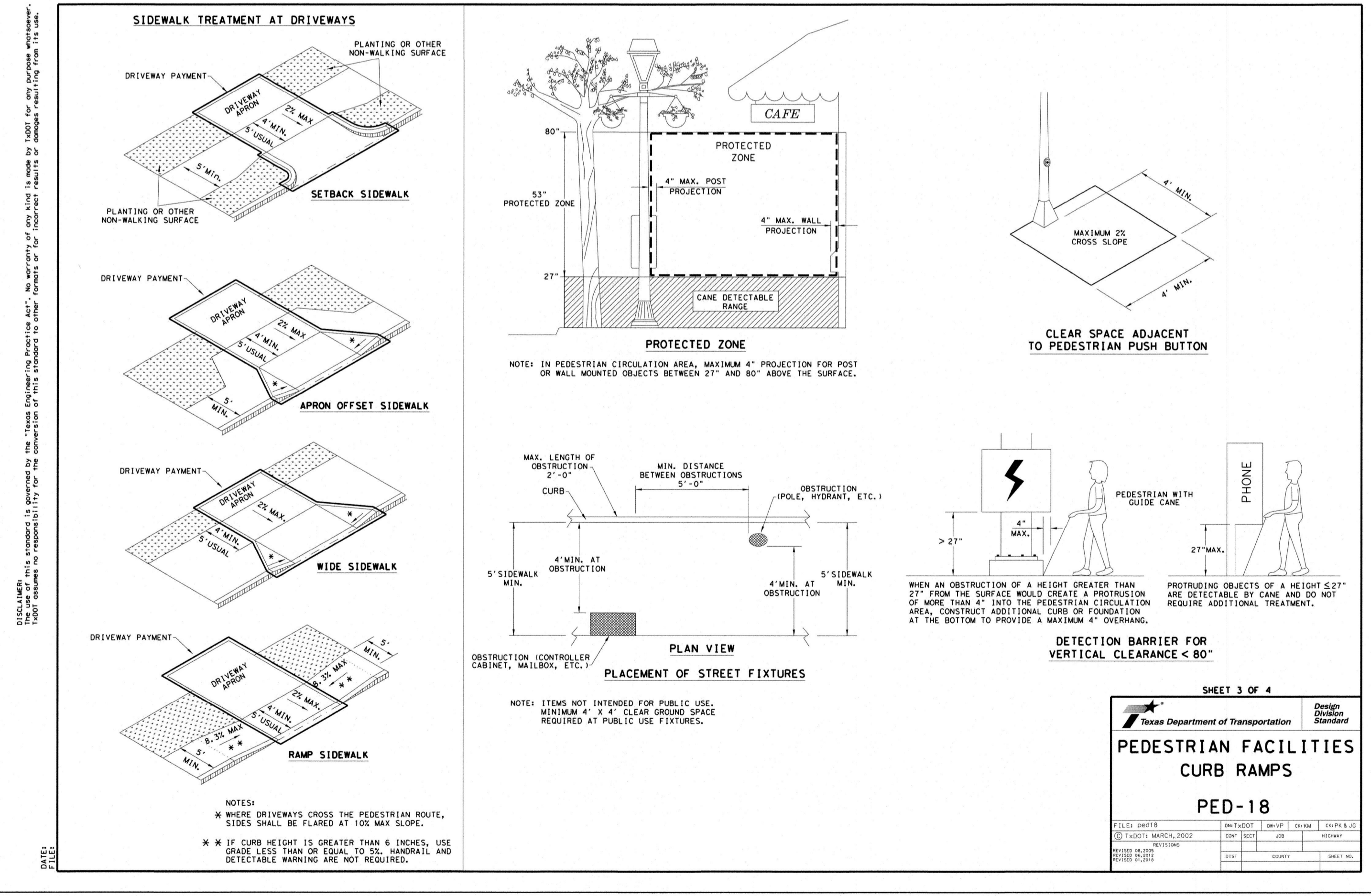
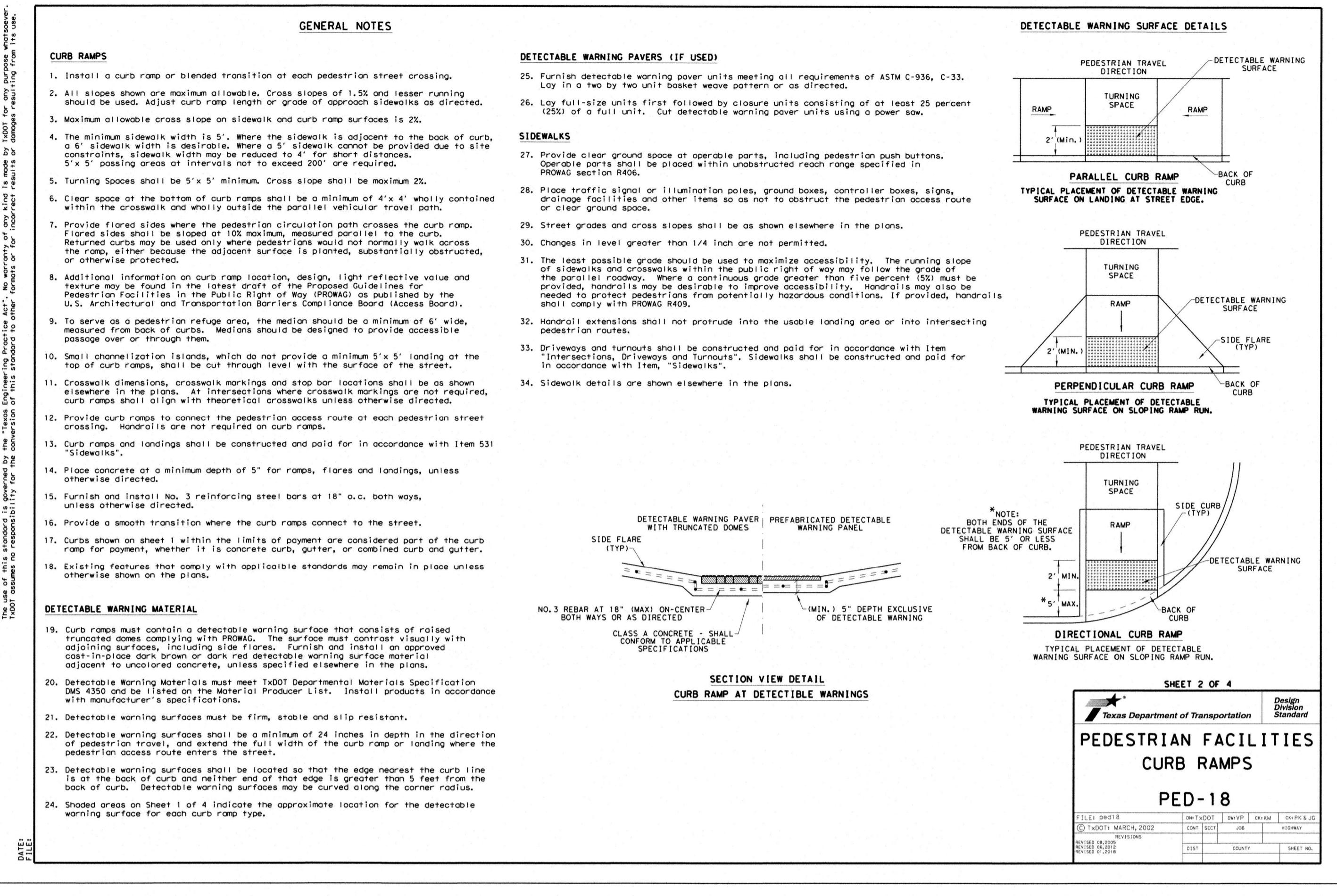
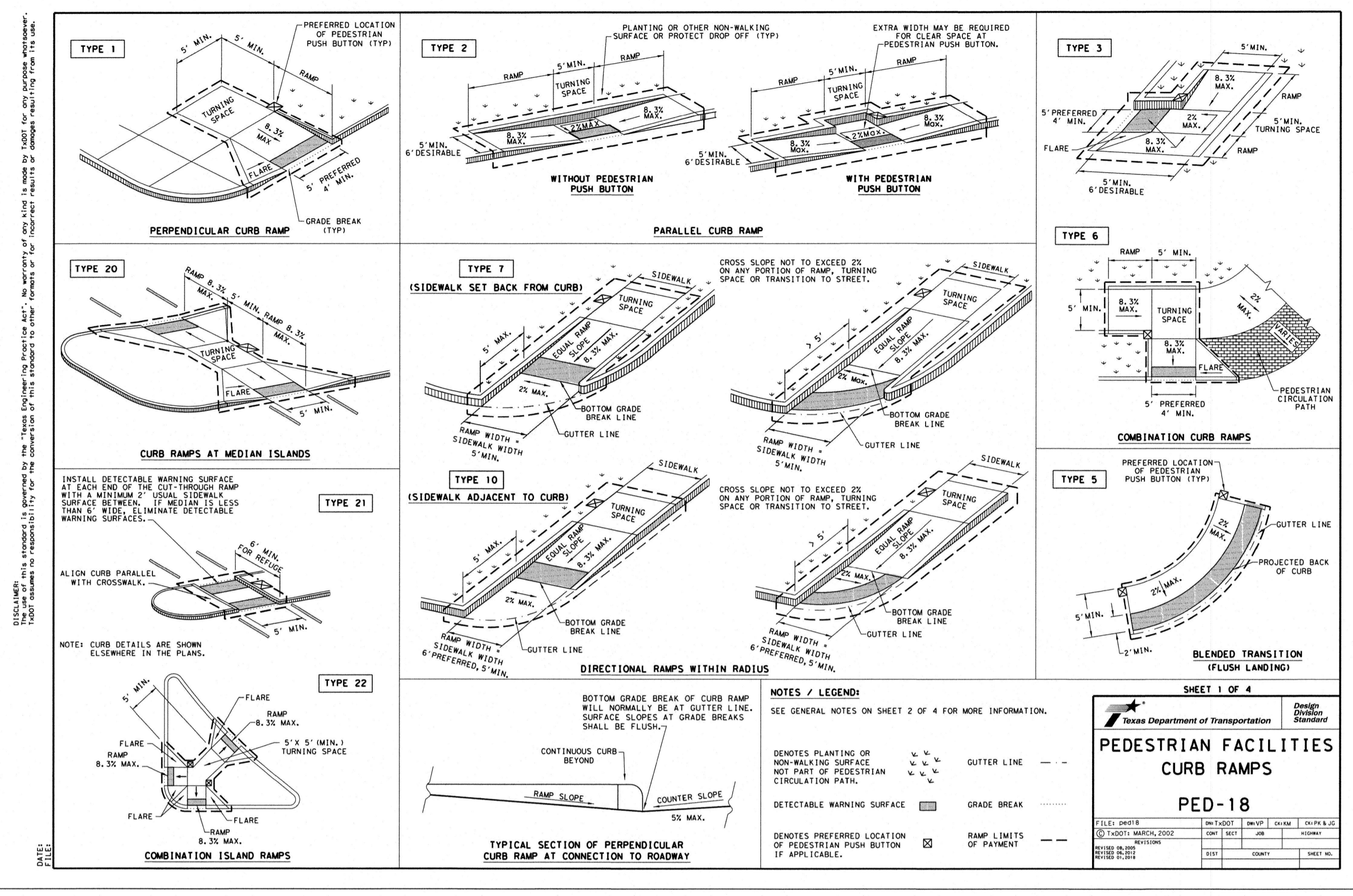
- NOTE:
- COST OF REINFORCEMENT TO BE INCLUDED IN UNIT COST OF ITEM 307.1.
 - CONCRETE RETAINING WALL COMBINATION TYPE SHALL BE USED FOR CONCRETE DRIVEWAYS.

MAY 2009

CITY OF SAN ANTONIO
 CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

CONCRETE DRIVEWAY STANDARDS

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

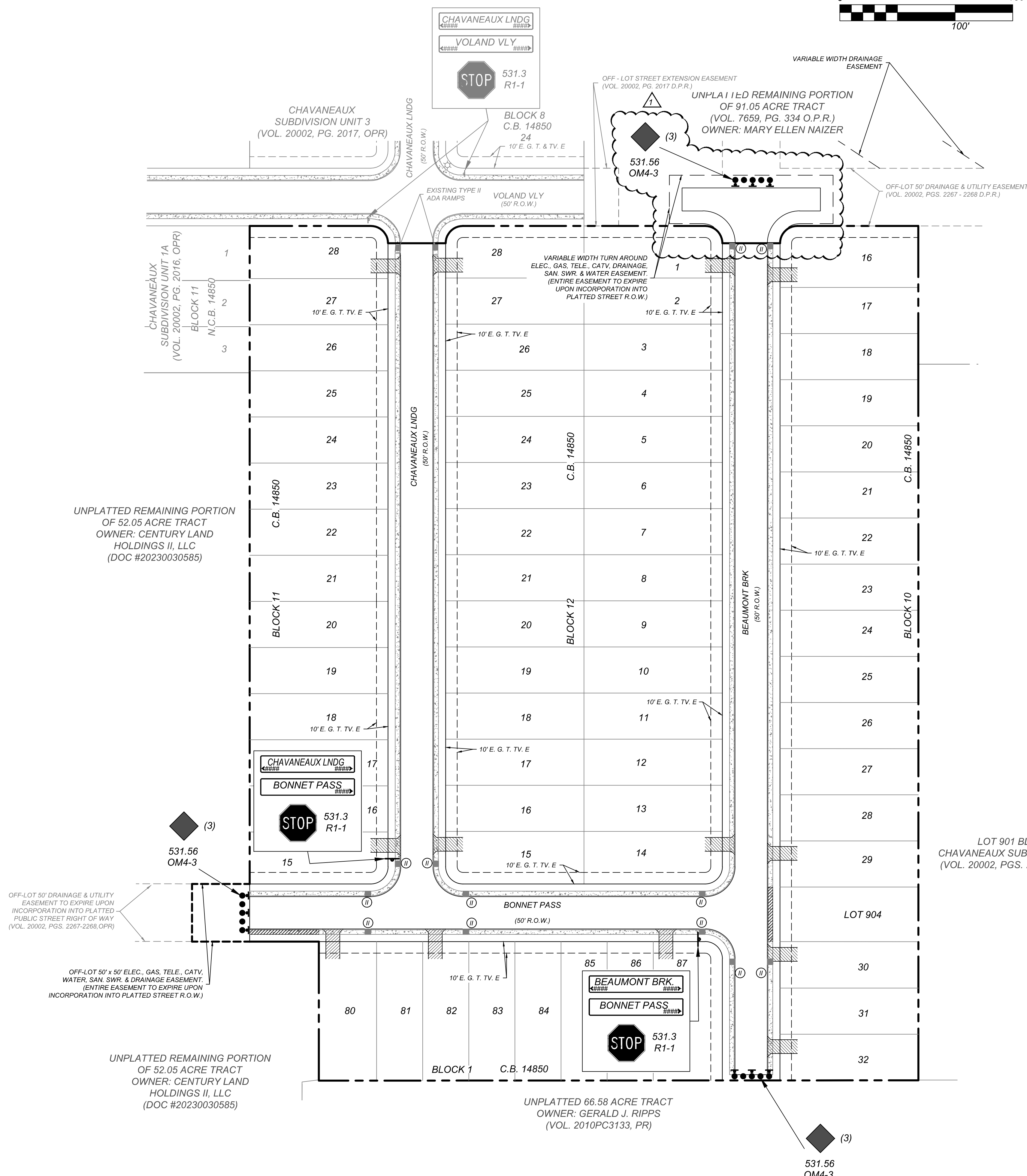
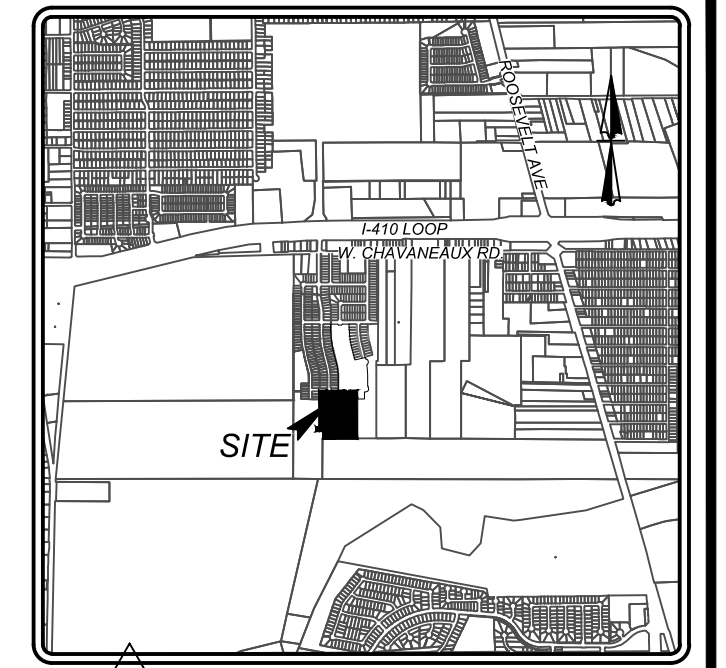
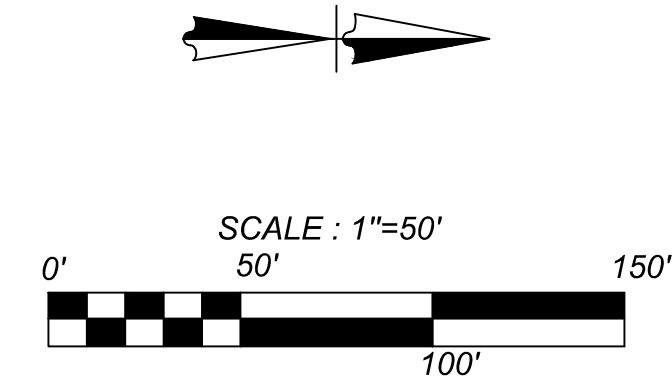


KIEWIT
ENGINEERS + SURVEYING
 11543
 CLAYTON J. LONEY
 LICENSED PROFESSIONAL ENGINEER
 11543
 Clay J. Loney
 4/23/2024

CHAVANEAUX SUBDIVISION UNIT 6
 SAN ANTONIO, TX
 TXDOT PEDESTRIAN CURB RAMP DETAIL
 PLAT NO. 22-1180409
 JOB NO. 984-02-02
 DATE: APRIL 2022
 DRAWN### CHECKED##
 SHEET NUMBER:
 5.6

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.

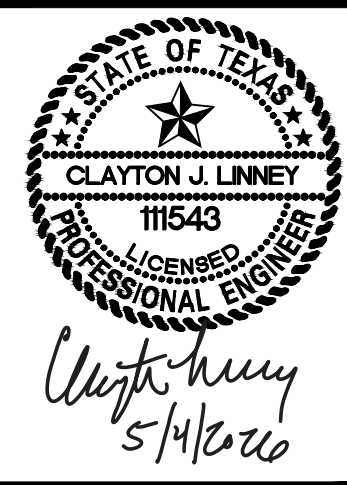
SIGN LEGEND		
SYMBOL		ITEM NUMBER
	R1-1 30"X30"	531.3
	STANDARD COSA STREET NAME SIGN STD. X 9"	531.57



- LOCATION MAP NOT-TO-SCALE**
- LEGEND**
- C.B. = COUNTY BLOCK
 - E. G. T. & TV. E. = GAS, ELECTRIC, TELEPHONE & CABLE EASEMENT
 - V.N.A.E. = VEHICULAR NON-ACCESS EASEMENT
 - ⓪ = WHEELCHAIR RAMP TYPE I SEE SHEET 5.4
 - Ⓛ = WHEELCHAIR RAMP TYPE I SEE SHEET 5.4
 - = SIDEWALK TO BE CONSTRUCTED BY DEVELOPER
 - = SIDEWALK TO BE BUILT AT THE TIME OF HOME CONSTRUCTION
 - = PROPOSED DRIVEWAY LOCATION

K&W
ENGINEERS + SURVEYING
 10251
 Phone #: (210) 979-8444 • Fax #: (210) 979-8441
 TBPE Firm #: 9513 • TBPE S Firm #: 1012300

ISSUE DATE: 4/14/2022
 REVISIONS:
 ADDED TURNAROUND AND STORAGE



CHAVANEAUX SUBDIVISION UNIT 6
 SAN ANTONIO, TX
TRAFFIC SIGNAGE & PEDESTRIAN ACCESSIBILITY PLAN

PLAT NO.
 22-11800409

JOB NO. 984-02-02
 DATE: APRIL, 2022

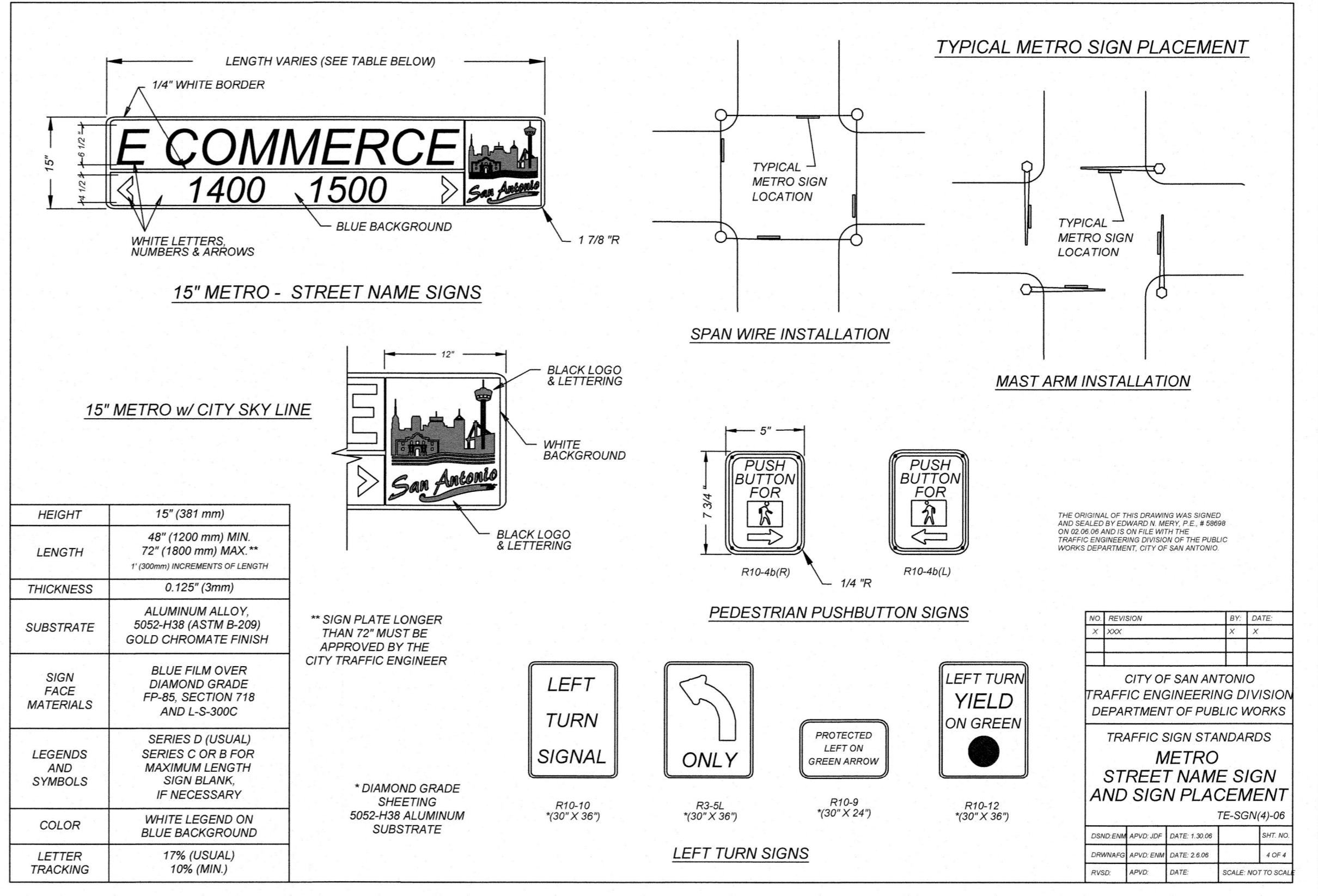
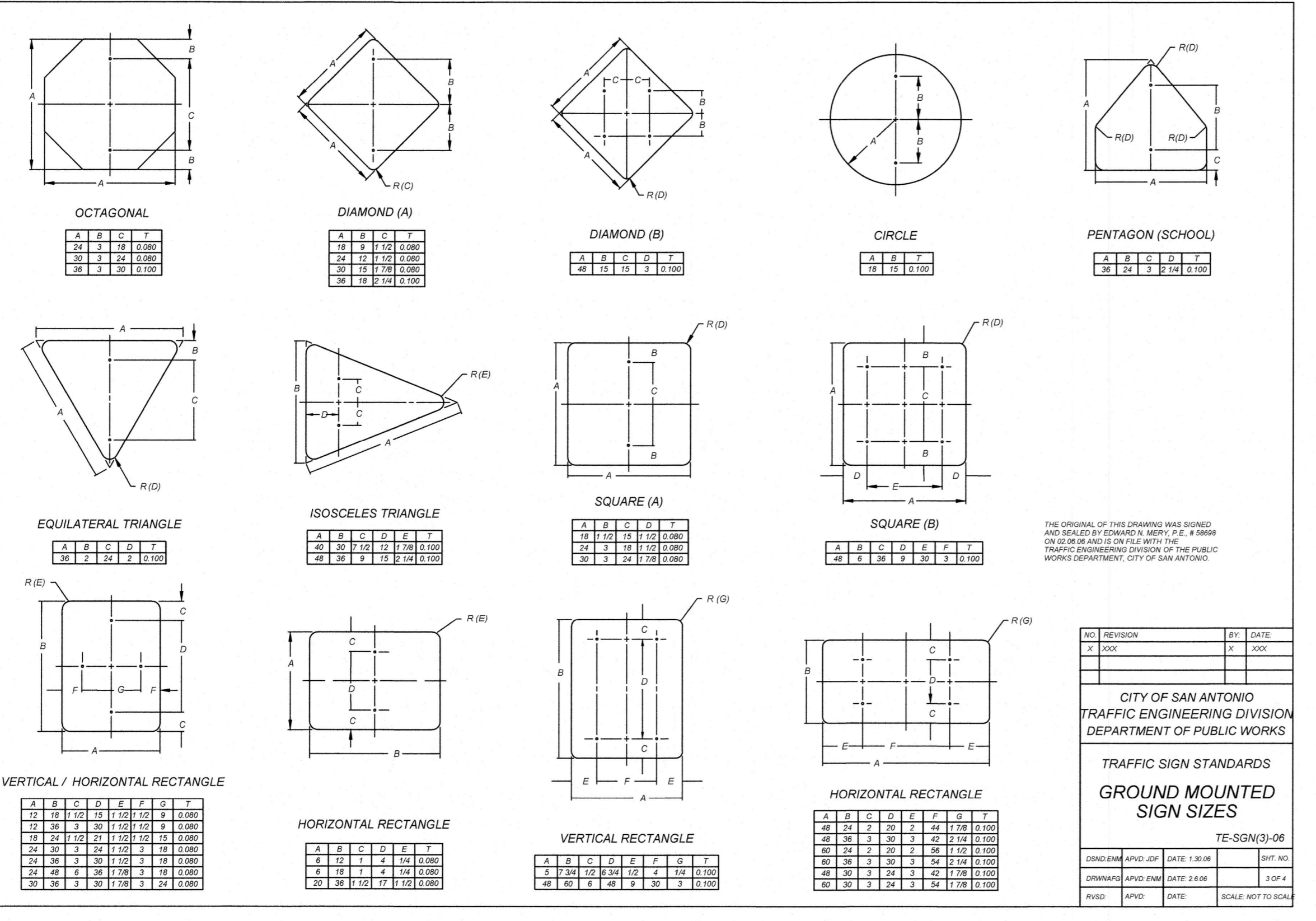
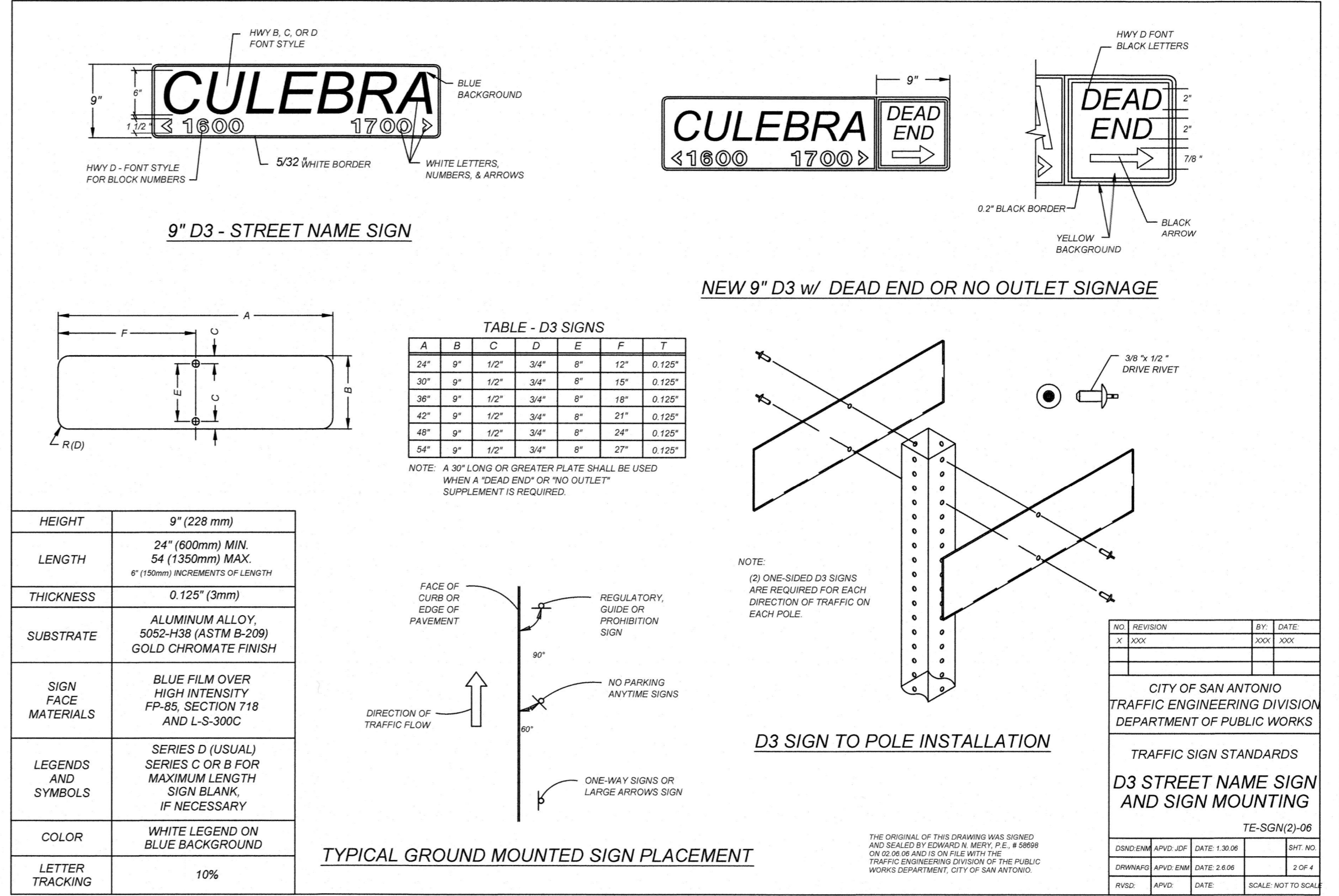
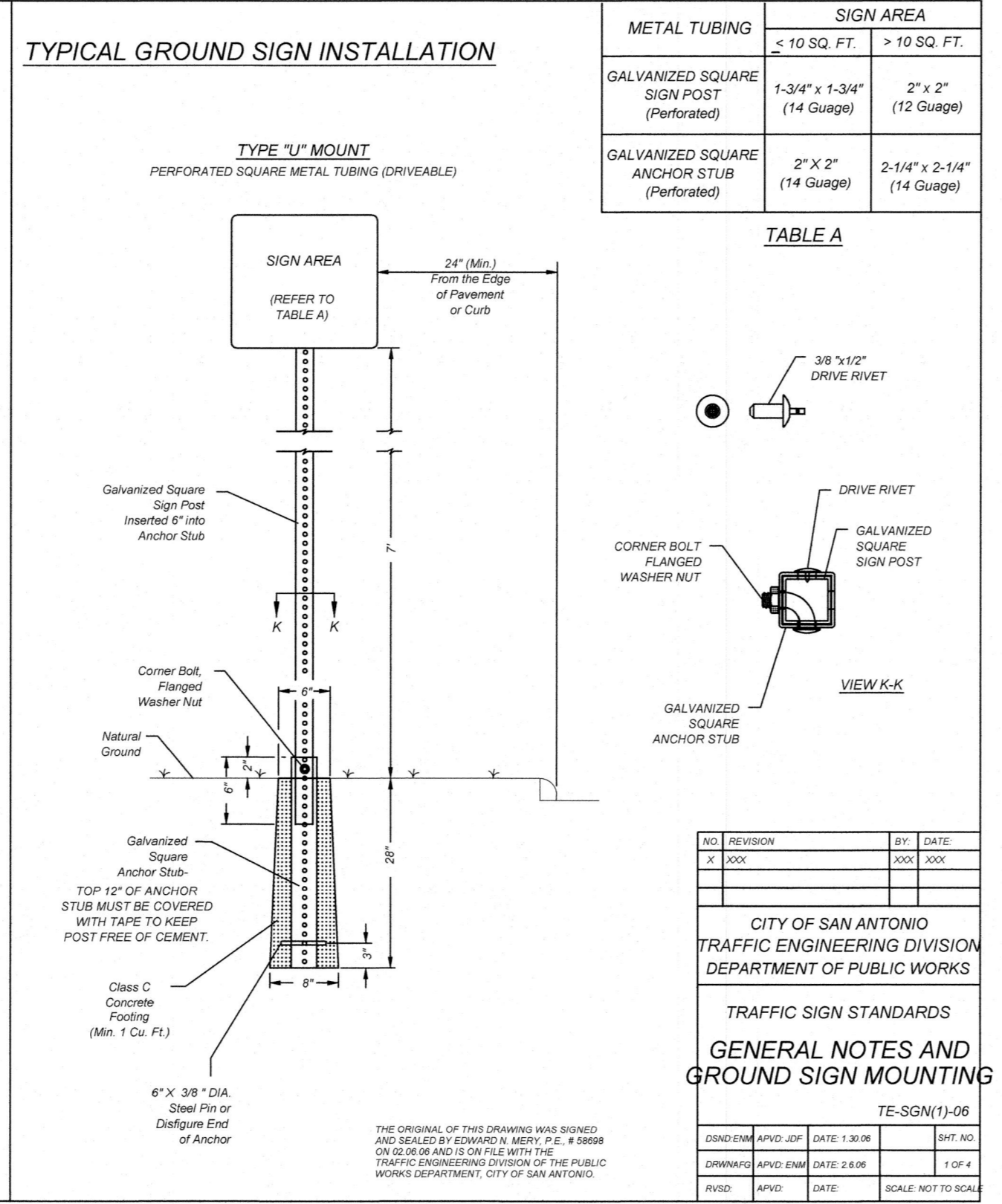
DRAWN:### CHECKED:##

SHEET NUMBER:
5.7

Date: Apr 29, 2022, 4:14pm User ID: cprhoff
 File: K:\364\02\Design\CHAV\STRSIS\159640202.dwg

GENERAL NOTES

- 1.) THE EXISTING SIGNS LOCATED ON THE JOBSITE ARE THE PROPERTY OF THE CITY OF SAN ANTONIO THROUGHOUT THE PERIOD OF THE CONTRACT. THE CONTRACTOR SHALL PROTECT THESE SIGNS SUCH THAT THEY ARE NOT DAMAGED IN THE COURSE OF CONSTRUCTION ACTIVITY. SUCH PROTECTION SHALL INCLUDE THE PERIOD AFTER SIGNS ARE REMOVED FROM INSTALLATION AND STORED BY THE CONTRACTOR OR DELIVERED TO TRAFFIC OPERATIONS. THE ASSISTANT TRAFFIC SUPERINTENDENT (207-7765) MUST BE NOTIFIED 48 HOURS IN ADVANCE PRIOR TO DELIVERY.
- 2.) AFTER SIGNS ARE REMOVED FROM INSTALLATION AND ARE BEING STORED BY THE CONTRACTOR, THE CONTRACTOR SHALL CONTACT THE TRAFFIC OPERATIONS SECTION OF THE PUBLIC WORKS DEPARTMENT (207-7765) AND ARRANGE FOR A CONVENIENT TIME TO DELIVER CITY SIGNS AND POLES.
- 3.) PRIOR TO THE START OF CONSTRUCTION, ALL EXISTING SIGNS WITHIN THE AREA OF CONSTRUCTION WILL BE INVENTORIED AND DOCUMENTED JOINTLY BY THE TRAFFIC ENGINEERING (207-7720) CONSTRUCTION INSPECTOR AND THE CONTRACTOR. THIS DOCUMENT WILL BE JOINTLY SIGNED BY BOTH PARTIES REFLECTING THE SIGN TYPE, SIGN SIZE, SIGN CONDITION, SIGN LOCATION, REFLECTIVITY ADEQUACY, ETC. THE CONTRACTOR IS HELD ACCOUNTABLE FOR THESE SIGNS THROUGHOUT THE PROJECT AND AT THE PROJECTS COMPLETION.
- 4.) ALL GROUND MOUNTED SHALL USE HIGH INTENSITY REFLECTIVE SHEETING.
- 5.) ALL OVERHEAD SIGNS SHALL USE DIAMOND GRADE REFLECTIVE SHEETING.
- 6.) ALL BLANKS TO BE ALUMINUM ALLOY NO. 5052-H38.
- 7.) "T" DENOTES THICKNESS OF SIGN BLANKS.
- 8.) ALL HOLES SHALL BE 3/8" DIAMETER DRILLED OR PUNCHED AS SHOWN ON EACH BLANK DETAIL AND SHALL BE FREE OF BURRS AND/OR ROUGH EDGES.
- 9.) SIGN BLANK CORNERS TO BE ROUNDED AS SHOWN ON EACH DETAIL.
- 10.) ALL SIGN BLANK TO BE ETCHED, DEGREASED, AND HAVE AN ALDINE FINISH PRIOR TO APPLICATION OF LEGENDS.
- 11.) ALL DETAILS ARE NOT TO SCALE.
- 12.) ALL DIMENSIONS ARE IN INCHES.
- 13.) ALL SIGNS SHALL BE MANUFACTURED AND INSTALLED IN CONFORMANCE TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND STANDARD HIGHWAY SIGNS (FHWA) LATEST EDITION.
- 14.) REINSTALLATION OF PREVIOUSLY EXISTING SIGNS, WHERE REQUIRED BY THE CITY TRAFFIC ENGINEER, SHALL BE AT THE CONTRACTOR'S EXPENSE.



CHAVANEAUX SUBDIVISION UNIT 6

SAN ANTONIO, TX

SANITARY SEWER IMPROVEMENTS

GENERAL SEWER NOTES (REVISED JULY 2017)

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 Waste Water 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 Inspection Division at (210) 233-2973, an notification procedure 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 pipe location markers on SAWS facilities. The following contact information are supplied for verification purposes:

SAWS Utility Locates: <http://www.saws.org/Service/Locates>
 COSA Drainage (210) 207-0724 or (210) 207-6026
 COSA Traffic Signal Operations (210) 206-8480
 COSA Traffic Signal Damages (210) 207-3951
 Texas State Wide One Call Locator 1-800-545-6005 or 811

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.

11. Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays. Request should be sent to construction@saws.org. Weekend Work: Contractors are required to notify the SAWS Construction Inspection Department 48 hours in advance to request weekend work. Request should be sent to construction@saws.org. 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.

Sewer Notes:

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

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

Should the Contractor fail to address an SSO immediately and to SAWS satisfaction, they will be responsible for all cost incurred by SAWS, including any fines from EPA, TCEQ and/or any other Federal, State or Local Agencies.

No separate measurement or payment shall be made for this work. All work shall be done according to guidelines set by TCEQ and SAWS.

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

3. Prior to tie-ins, any shutdowns of existing force mains of any size must be coordinated with the SAWS Construction Inspection Division at (210) 233-2973 at least one week in advance of the shutdown. The Contractor must also provide a sequence of tie-ins 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 sequence the work accordingly.

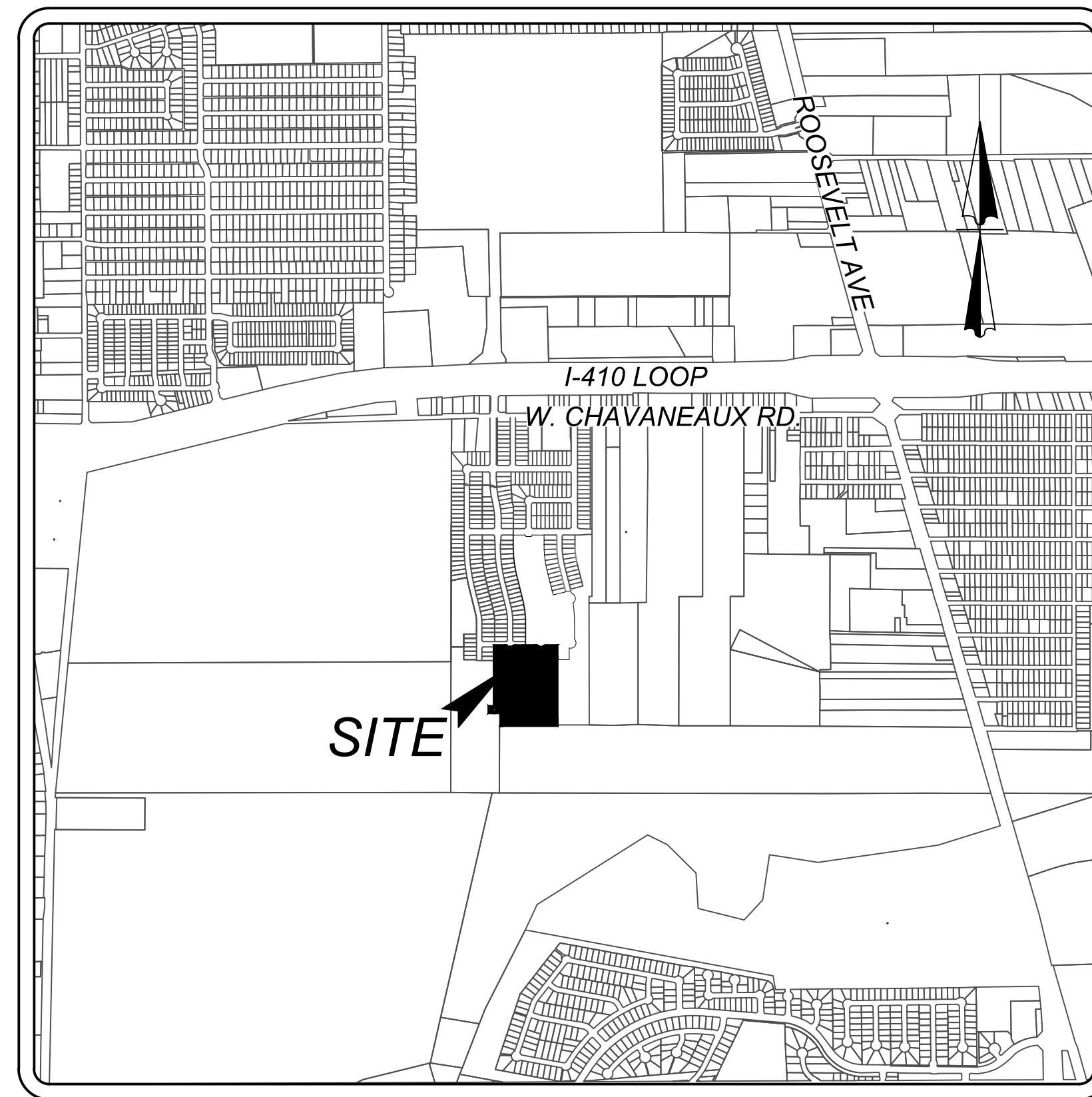
4. Sewer pipe water line crosses shall be 160 psi and meet the requirements of ASTM D2241, TAC 217.53 and TCEQ 390.44(c)(4)(E). Contractor shall center a 20' joint of 160 psi pressure rated PVC at the proposed water crossing.

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

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

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

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



LOCATION MAP NOT-TO-SCALE

FF DEVELOPMENT OF TEXAS I, LLC,
11450 ROJAS DRIVE, SUITE D-15
EL PASO, TX 79936

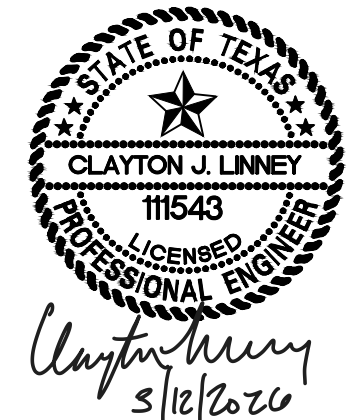
INDEX

SHEET TITLE	SHEET NUMBER
SANITARY SEWER COVER SHEET	6.0
OVERALL SANITARY SEWER PLAN	6.1
LINE "B" & LINE "C" PLAN & PROFILE	6.2
EXISTING LINE "A" PLAN & PROFILE	6.3

DATE	SHEET NO.	REVISION NO.	DESCRIPTION

SEWER: WEST SEWERSHED, LEON CREEK

DEVELOPER'S NAME: FF DEVELOPMENT OF TEXAS I, LLC		
DEVELOPER'S ADDRESS: 11450 ROJAS DRIVE, SUITE D-15		
CITY: EL PASO	STATE: TEXAS	ZIP: 79936
PHONE:	FAX:	TOTAL ACREAGE: 9.72
SAWS BLOCK MAP#: 162538	TOTAL EDU'S: 67	
TOTAL LINEAR FOOTAGE OF PIPE: 697 L.F. 8" SDR 26 PIPE		PLAT NO.: 22-11800409
NUMBER OF LOTS: 67	SAWS JOB#: 24-1522	



PLAT NO. 22-11800409

SHEET 6.0

CAUTION: THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED 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.

MANHOLE NOTE:
ALL MANHOLES MUST BE WATER TIGHT, WITH WATER TIGHT RINGS AND COVERS. THESE MANHOLES MUST BE VENTED PER SAWS DETAIL DD852-02.

- NOTE:**
- SEWER PIPE WHERE WATER LINE CROSSES SHALL MEET THE REQUIREMENTS OF ASTM D2241. CONTRACTOR SHALL CENTER A 20" FOOT JOINT OF 160 P.S.I. PRESSURE RATED P.V.C. AT THE PROPOSED WATER CROSSING (NO SEPARATE PAY ITEM).
 - SEE THIS SHEET FOR BENCHMARK INFORMATION.
 - PIPE TYPE DESIGNATIONS ARE SDR 26.
 - SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
 - ALL MANHOLES SHALL HAVE CONCRETE RING ENCASMENT AND A WATER TIGHT RING AND COVER.

TRENCH EXCAVATION SAFETY PROTECTION

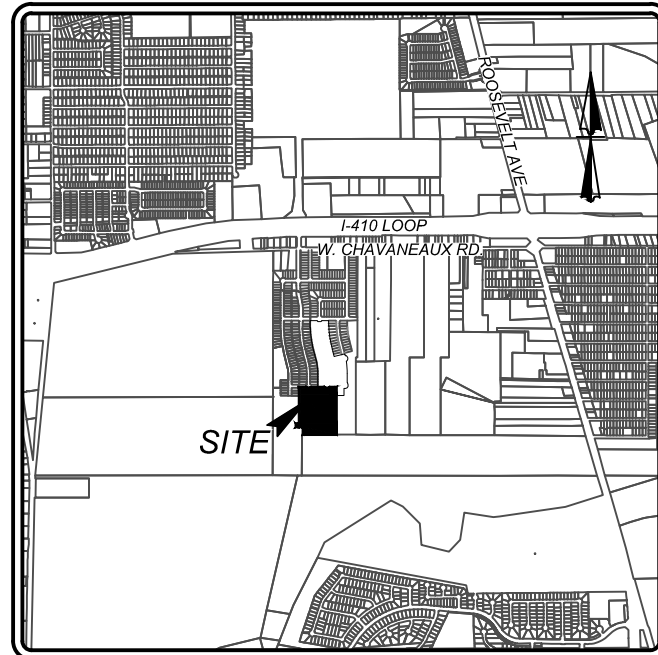
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S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

COMPACTION NOTE:

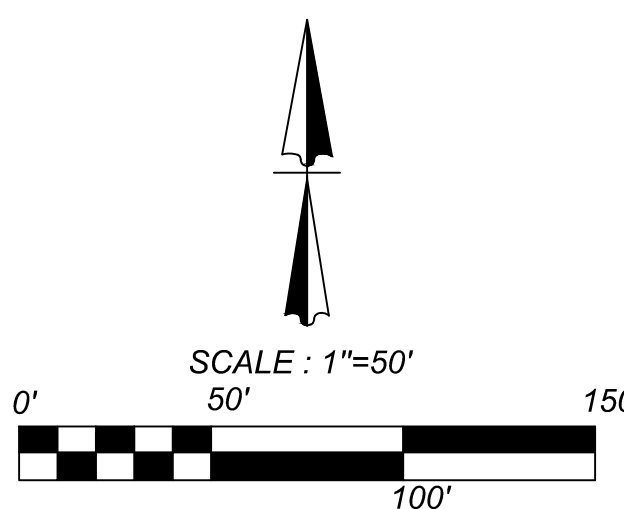
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REFERENCE S.A.W.S. DETAILS

- DD-804-01 SANITARY SEWER PIPE LAID IN TRENCH
- DD-804-02 TRENCH COMPACTION DETAIL
- DD-848-01 GO, NO GO DEFLECTION TESTING MANDREL
- DD-852-01 STANDARD PRECAST MANHOLE
- DD-852-02 VENTED MANHOLE RING AND COVER DETAIL (WHEN SPECIFIED)
- DD-852-03 MANHOLE RING ENCASMENT DETAIL
- DD-854-ERZD HOUSE LATERAL DETAIL (IN THE E.A.R.Z.)
- DD-858-01 TYPICAL CONCRETE ENCASMENT DETAILS
- DD-858-02 TYPICAL CONCRETE DETAILS
- DD-860-01 TYPICAL VERTICAL STACK DETAILS
- DD-852-06 PRECAST MANHOLE BASE 45° ANGLE
- DD-852-08 DROP MANHOLE DETAIL
- DD-852-07 MANHOLE RING AND COVER DETAIL

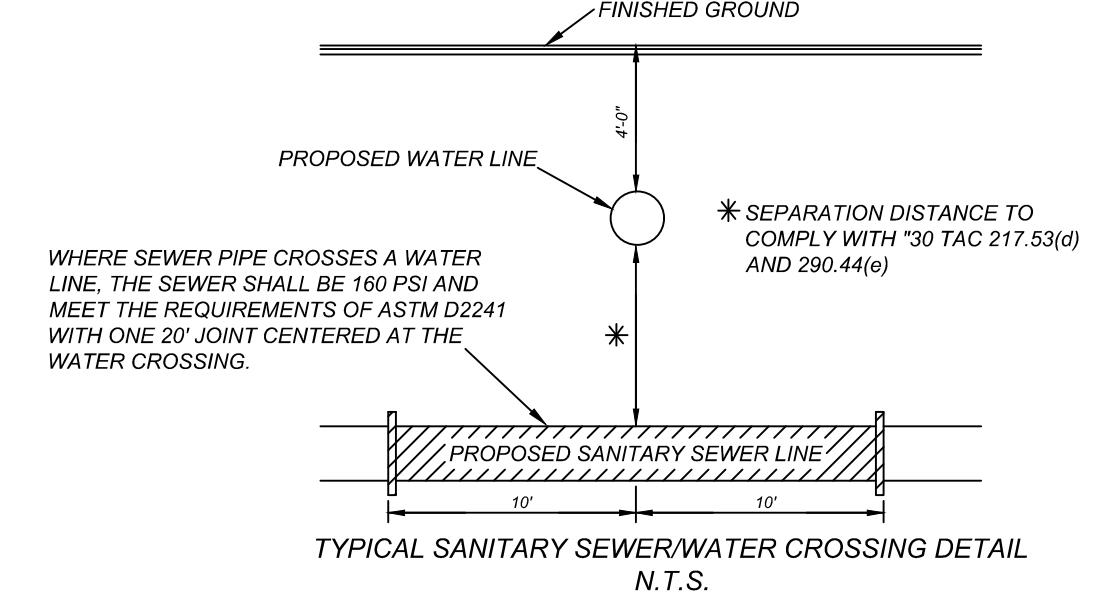
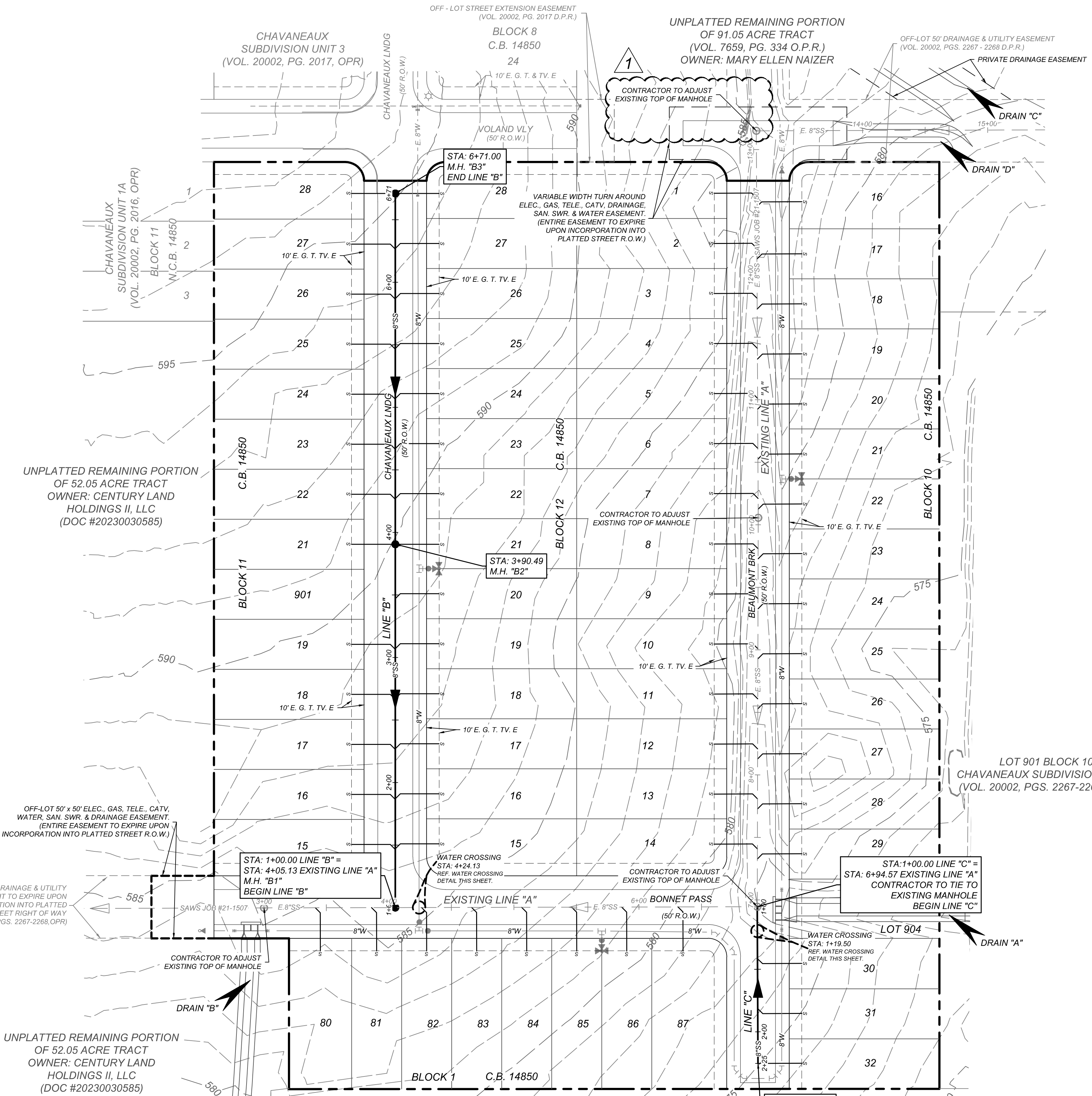


LOCATION MAP NOT-TO-SCALE



LEGEND

PROPOSED WATER MAIN	— W —
PROPOSED WATER SERVICE & METER BOX	— W —
PROPOSED WATER 3/4" IRRIGATION SERVICE & METER BOX	— W —
PROPOSED FIRE HYDRANT	— F —
PROPOSED WATER VALVE	— V —
PROPOSED 100W STREETLIGHT	— S —
PROPOSED SANITARY SEWER MAIN	— SS —
PROPOSED SANITARY SEWER MANHOLE	— M —
PROPOSED SANITARY SEWER LATERAL	— SL —
PROPOSED ELECTRIC, GAS, TELEPHONE, & CABLE TV EASEMENT	— E.G.T.V.E —
EXISTING WATER MAIN	— E.W —
EXISTING FIRE HYDRANT	— F —
EXISTING WATER VALVE	— V —
EXISTING SANITARY SEWER MAIN	— E.SS —
EXISTING SANITARY SEWER MANHOLE	— E.M —
EXISTING OVERHEAD ELECTRIC W/POWER POLE	— OHE —
EXISTING GUY WIRE/OVERHEAD ELECTRIC	— OHE —



SEWER: WEST SEWERSHED, LEON CREEK

DEVELOPER'S NAME: FF DEVELOPMENT OF TEXAS I, LLC	PLAT NO. 22-11800409
DEVELOPER'S ADDRESS: 11450 ROJAS DRIVE, SUITE D-15	JOB NO. 984-02-02
CITY: EL PASO STATE: TEXAS ZIP: 79936	DATE: APRIL, 2022
PHONER: SAWS BLOCK MAP#: 162538 FAX#: TOTAL ACREAGE: 9.72	DRAWN: WDS CHECKED: SM
TOTAL LINEAR FOOTAGE OF PIPE: 697 L.F. 8" SDR 26 PIPE	SHEET NUMBER: 6.1
NUMBER OF LOTS: 67 SAWS JOB#: 24-1522	PLAT NO.: 22-11800409

KIEWIT ENGINEERS + SURVEYING
Phone #: (210) 878-8444 • Fax #: (210) 878-8441
TBE Firm #: 8513 • TBE S Firm #: 1012300

ISSUE DATE: 4/15/2022
REVISIONS: AS NOTED
CLAYTON J. LINNEY
111543
LICENSED PROFESSIONAL ENGINEER
5/14/2026

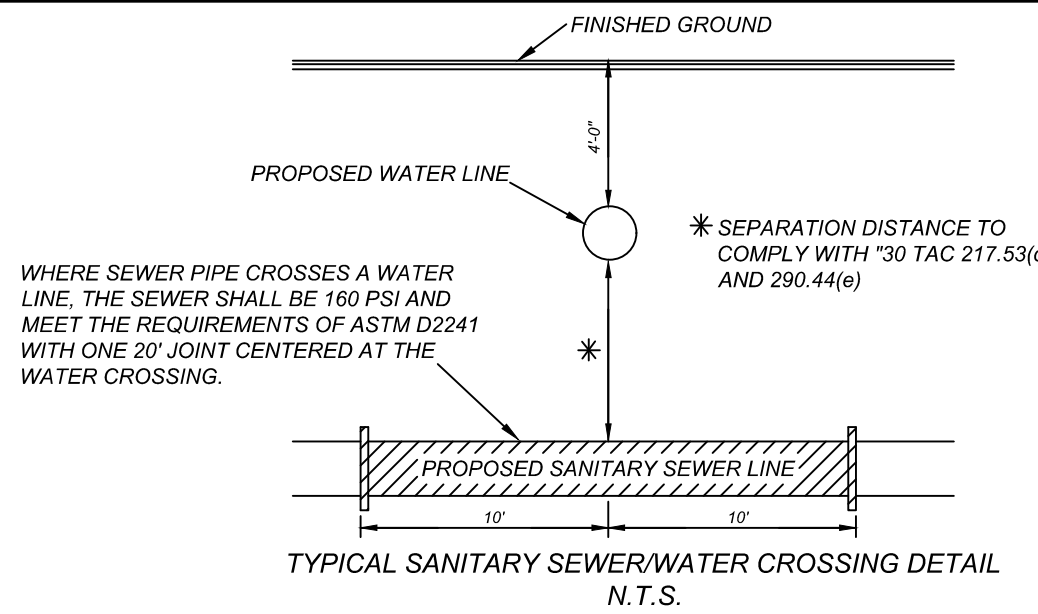
CHAVANEAUX SUBDIVISION UNIT 6
SAN ANTONIO, TX
OVERALL SANITARY SEWER PLAN

Date: Apr 29, 2023, 4:23pm User ID: cgriff
File: K:\984\02\Design\Civil\SEWER\059840202.dwg

CAUTION!!! THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED 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.

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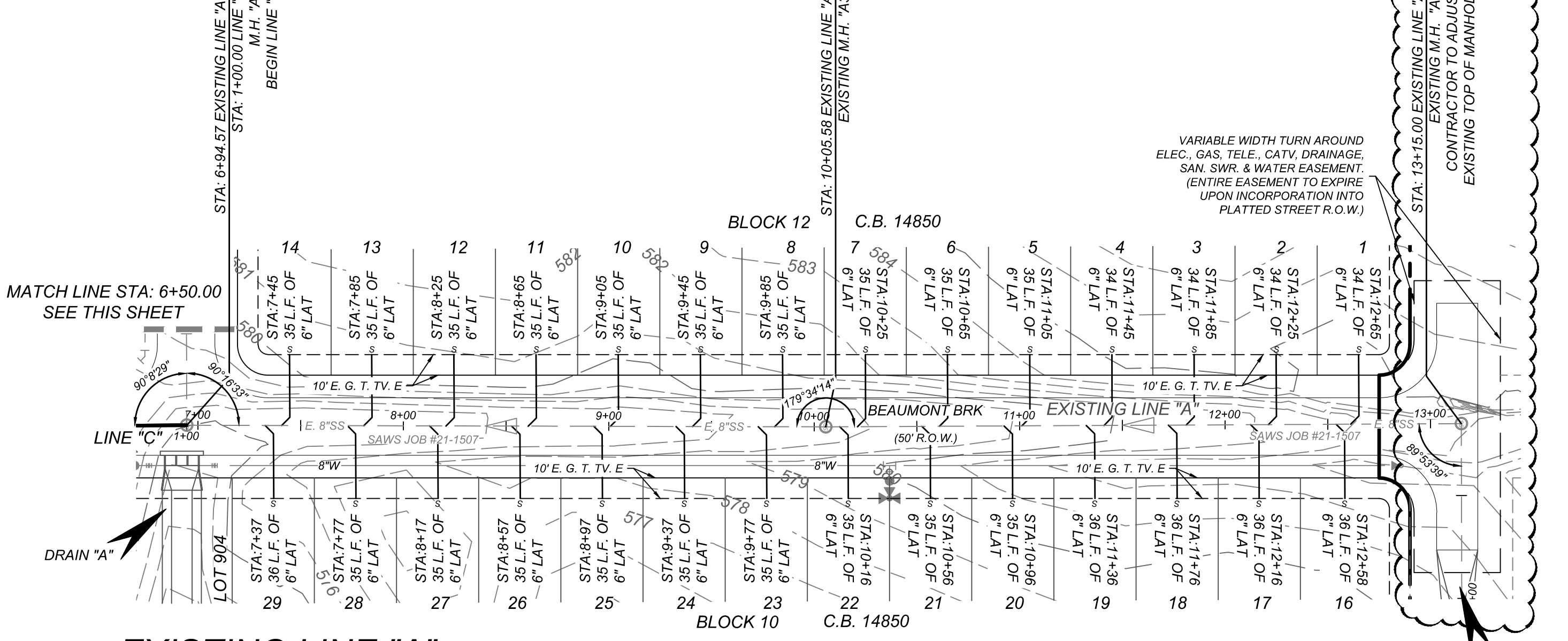
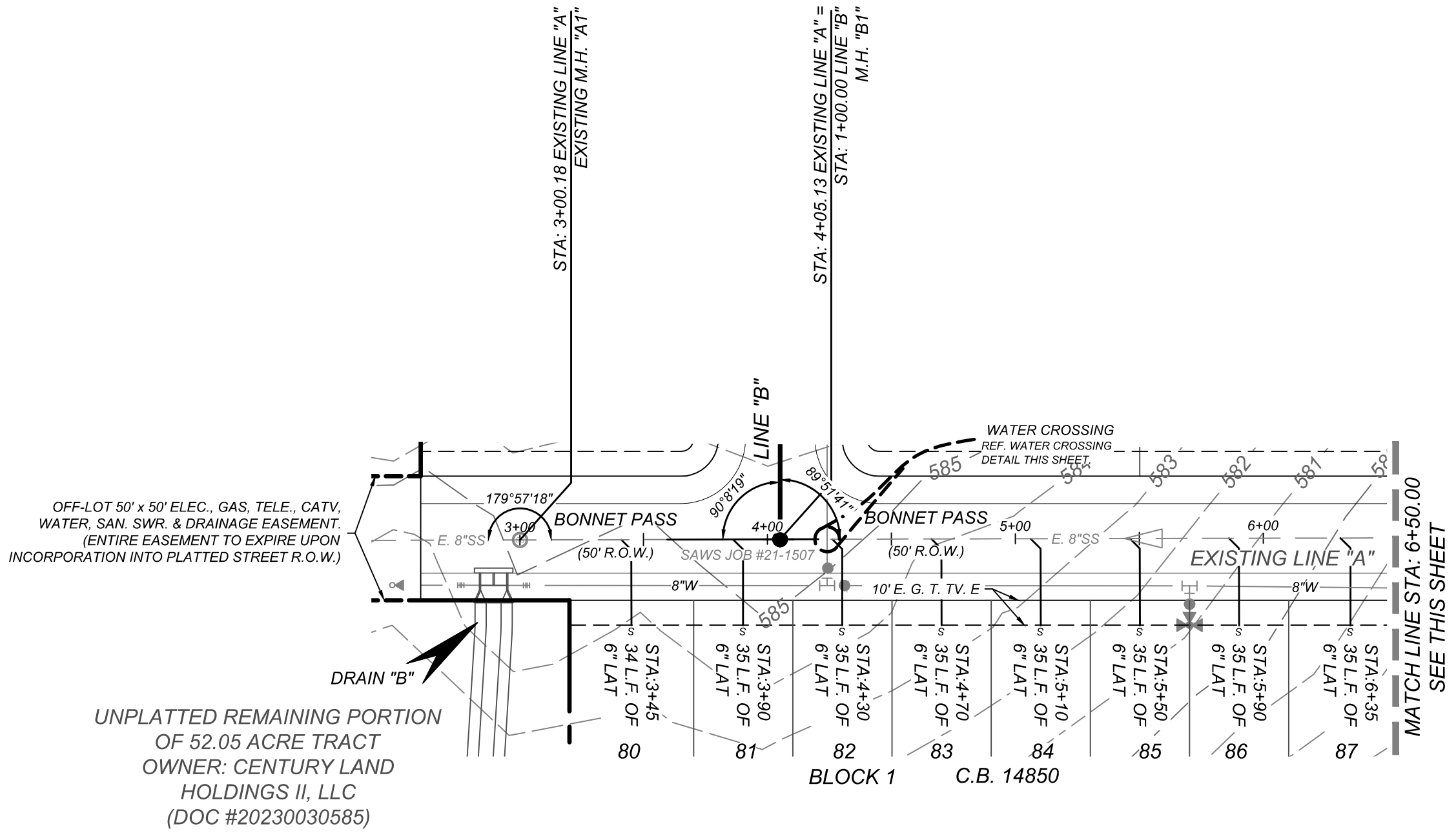
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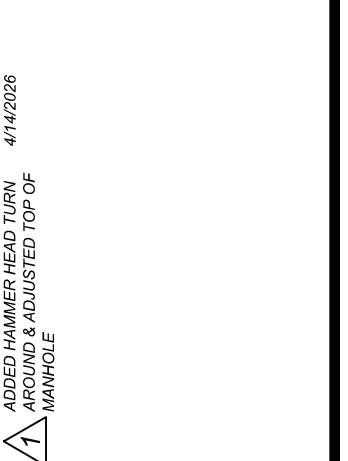
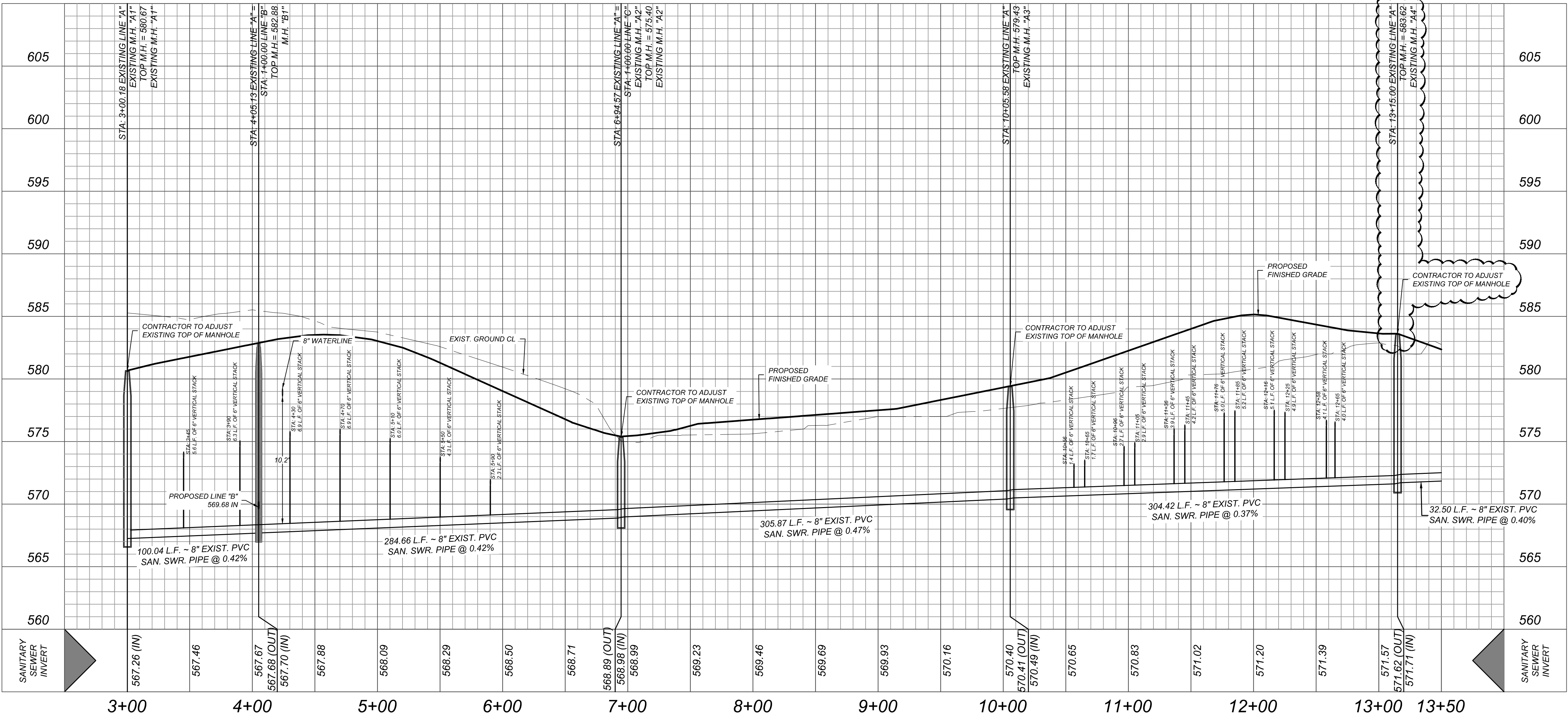
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SEWER: WEST SEWERSHED, LEON CREEK
DEVELOPER'S NAME: FF DEVELOPMENT OF TEXAS I, LLC
DEVELOPER'S ADDRESS: 11450 ROJAS DRIVE, SUITE D-15
CITY: EL PASO STATE: TEXAS ZIP: 79936
PHONE: FAX: TOTAL ACREAGE: 9.72
SAWS BLOCK MAP#: 162538 TOTAL EDU'S: 67
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NUMBER OF LOTS: 67 SAWS JOB#: 24-1522

- NOTE:**
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 - PIPE TYPE DESIGNATIONS ARE SDR 26.
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 - ALL MANHOLES SHALL HAVE CONCRETE RING ENCASMENT AND A WATER TIGHT RING AND COVER.



EXISTING LINE "A"
STA: 3+00.18 - 13+15.00



5/4/2026

CHAVANEUX SUBDIVISION UNIT 6
SAN ANTONIO, TX
EXISTING LINE "A" PLAN & PROFILE

PLAT NO. 22-11800409

JOB NO. 984-02-02
DATE: APRIL, 2022
DRAWN: WDS CHECKED: SM

SHEET NUMBER:

6.3

CHAVANEAUX SUBDIVISION UNIT 6

SAN ANTONIO, TX

WATER IMPROVEMENTS

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](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 INSPECTION DIVISION AT (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 PIPE LOCATION MARKERS ON SAWS FACILITIES. THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES: • SAWS UTILITY LOCATES: [HTTP://WWW.SAWS.ORG/SERVICE/LOCATES](http://www.saws.org/service/locates)

- COSA DRAINAGE (210) 207-0724 OR (210) 207-6026
- COSA TRAFFIC SIGNAL OPERATIONS (210) 206-6480
- COSA TRAFFIC SIGNAL DAMAGES (210) 207-3951
- TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-8005 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.

11. HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON SAWS RECOGNIZED HOLIDAYS. REQUEST SHOULD BE SENT TO CONSTRWORKREQ@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 CONSTRWORKREQ@SAWS.ORG. 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.

WATER SECTION

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 CAPPLUG. (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 605 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 605 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 LOTS. IF "PRV" IS ARE REQUIRED FOR SUCH LOTS, ONLY SINGLE SERVICE CONNECTIONS SHALL BE ALLOWED. *NOTE: A PRESSURE REGULATOR IS ALSO KNOWN AS A PRESSURE REDUCING VALVE (PRV).

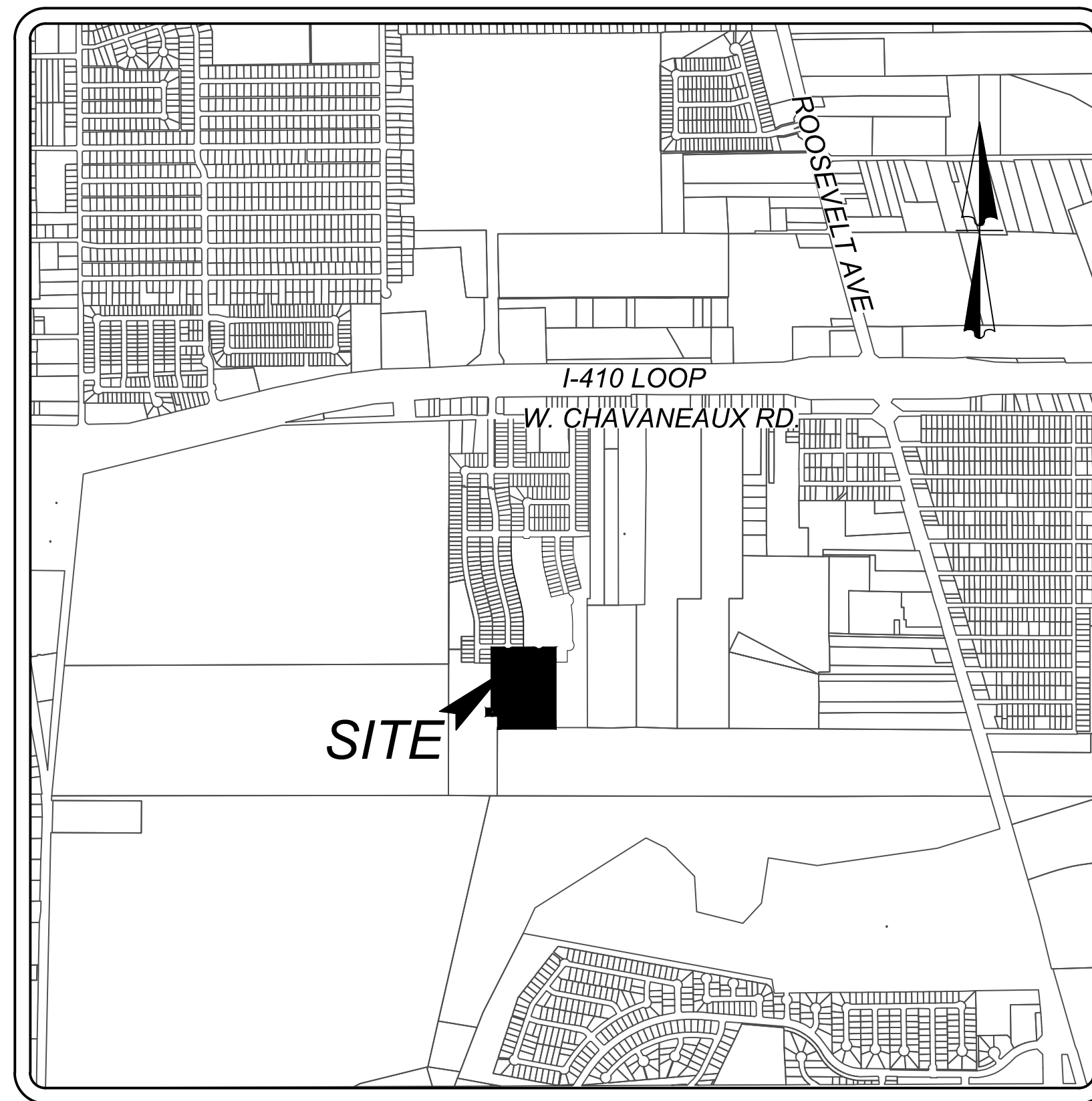
7. PIPE DISINFECTION WITH DRY HTH FOR PROJECTS LESS THAN 800 LINEAR FEET, (ITEM NO. 847.3): MAINS SHALL BE DISINFECTED WITH DRY HTH WHERE SHOWN IN THE CONTRACT DOCUMENTS OR AS DIRECTED BY THE INSPECTOR, AND SHALL NOT EXCEED A TOTAL LENGTH OF 800 FEET. THIS METHOD OF DISINFECTION WILL ALSO BE FOLLOWED 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.



LOCATION MAP

NOT-TO-SCALE

FF DEVELOPMENT OF TEXAS I, LLC,
11450 ROJAS DRIVE, SUITE D-15
EL PASO, TX 79936

Sheet List Table

SHEET TITLE	SHEET NUMBER
WATER DISTRIBUTION COVER SHEET	7.0
WATER DISTRIBUTION PLAN	7.1

DATE	SHEET NO.	REVISION NO.	DESCRIPTION



PRESSURE ZONE: 790

DEVELOPER'S NAME: FF DEVELOPMENT OF TEXAS I, LLC		
DEVELOPER'S ADDRESS: 11450 ROJAS DRIVE, SUITE D-15		
CITY: EL PASO	STATE: TEXAS	ZIP: 79936
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TOTAL LINEAR FOOTAGE OF PIPE: 1,865 L.F. ~ 8" C900 P.V.C. PLAT NO.: 22-11800409		
NUMBER OF LOTS: 67	SAWS JOB#: 24-1028	



D:\mfr\Feb_20_2020_1156pm_User_ID: jlibrey\KFW\K1616162122\design\chavaneaux\TERMINAL\CHAVANEUX\CHAVANEUX.dwg

CHAVANEUX SUBDIVISION UNIT 6

JOB NO.: 984-02-02

CAUTION!! THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED 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.

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 1,500 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.

PRESSURE REDUCING VALVE (PRV) NOTE:

CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 605 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 605 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(S) ARE REQUIRED FOR SUCH LOT(S). ONLY SINGLE SERVICE CONNECTIONS SHALL BE ALLOWED. WATER SERVICES WHERE PRV'S REQUIRED ARE DESIGNATED BY AN ASTERISK (*).

*NOTE: A PRESSURE REGULATOR IS ALSO KNOWN AS A PRESSURE REDUCING VALVE (PRV)

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.

JOINT RESTRAINT NOTE:

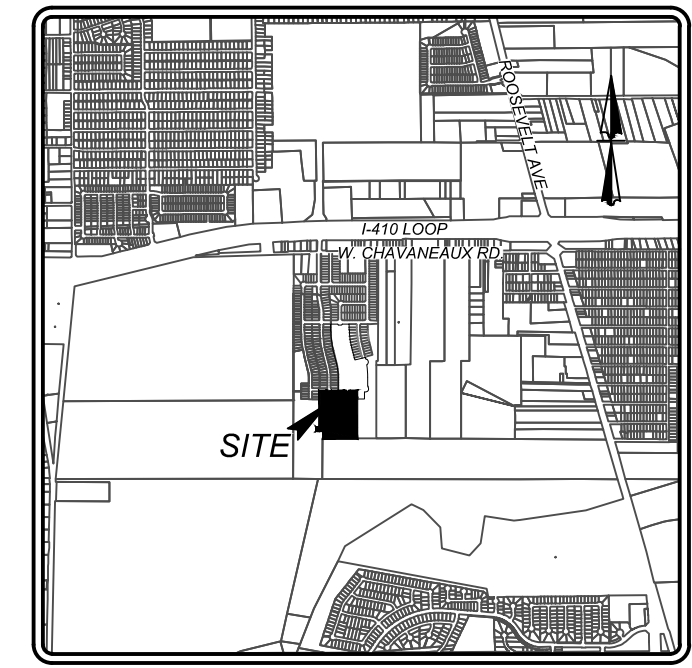
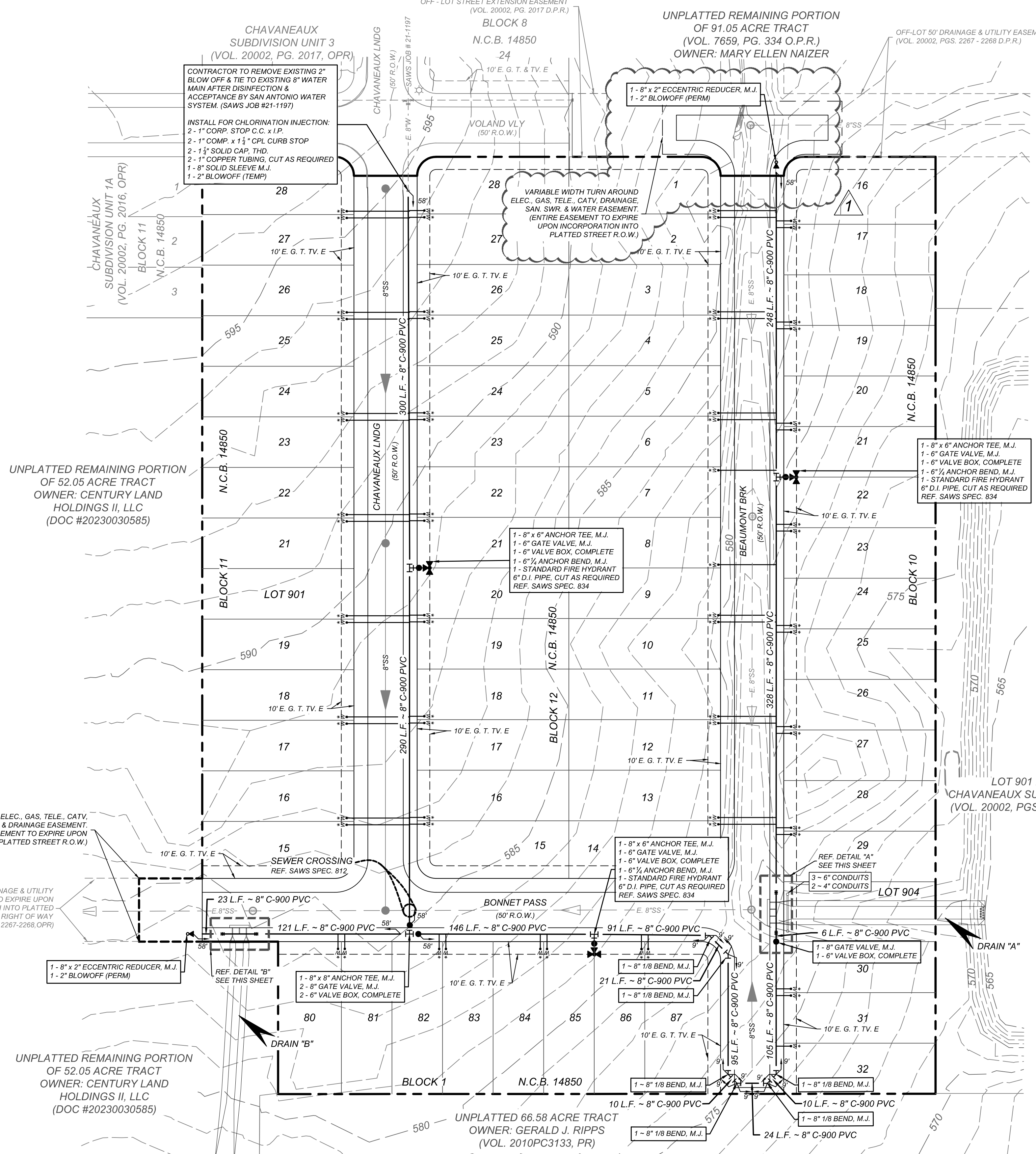
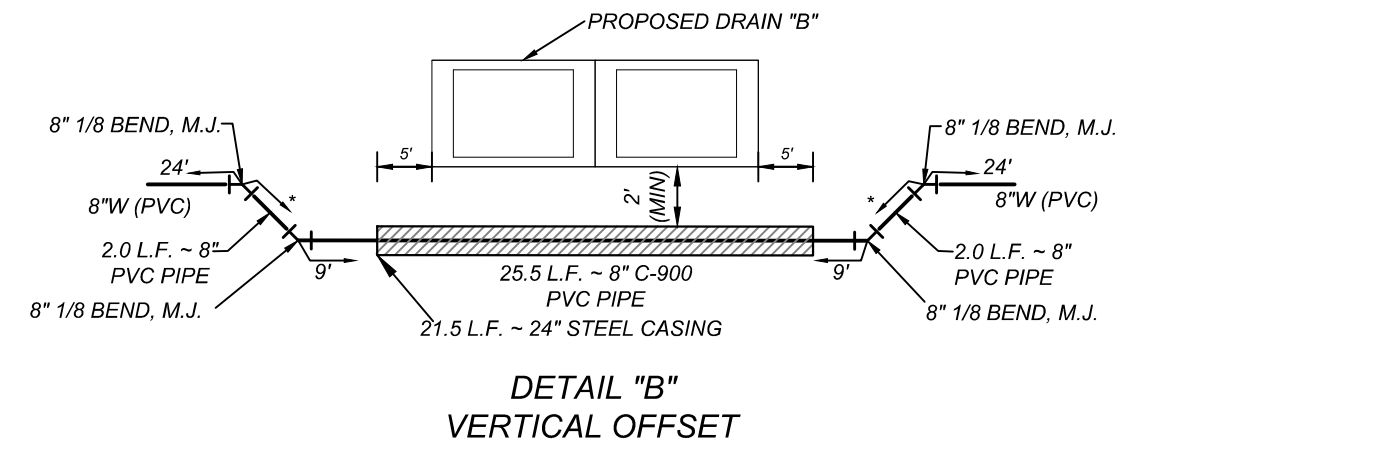
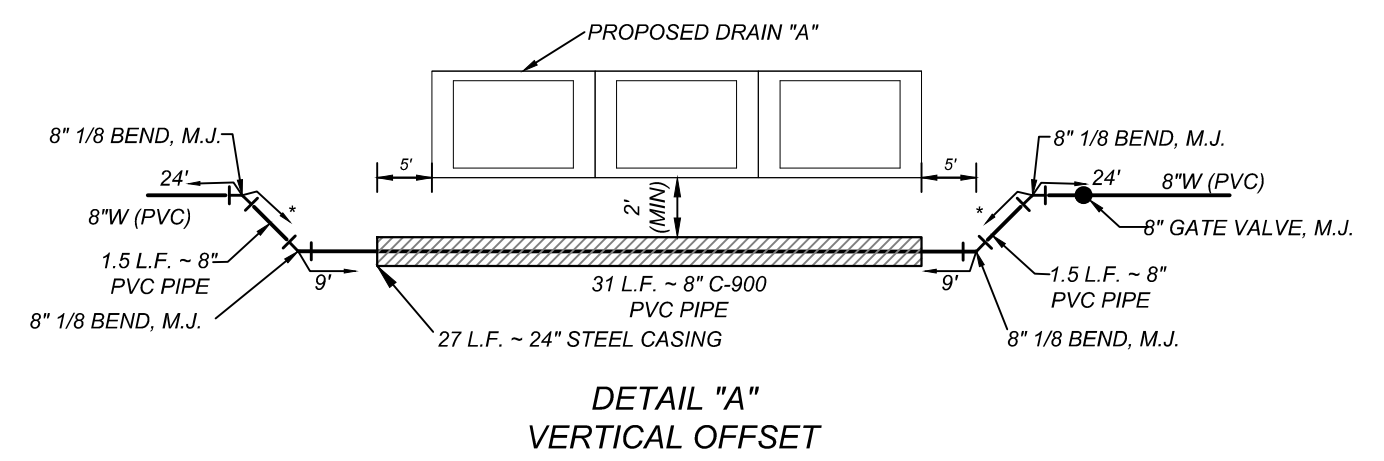
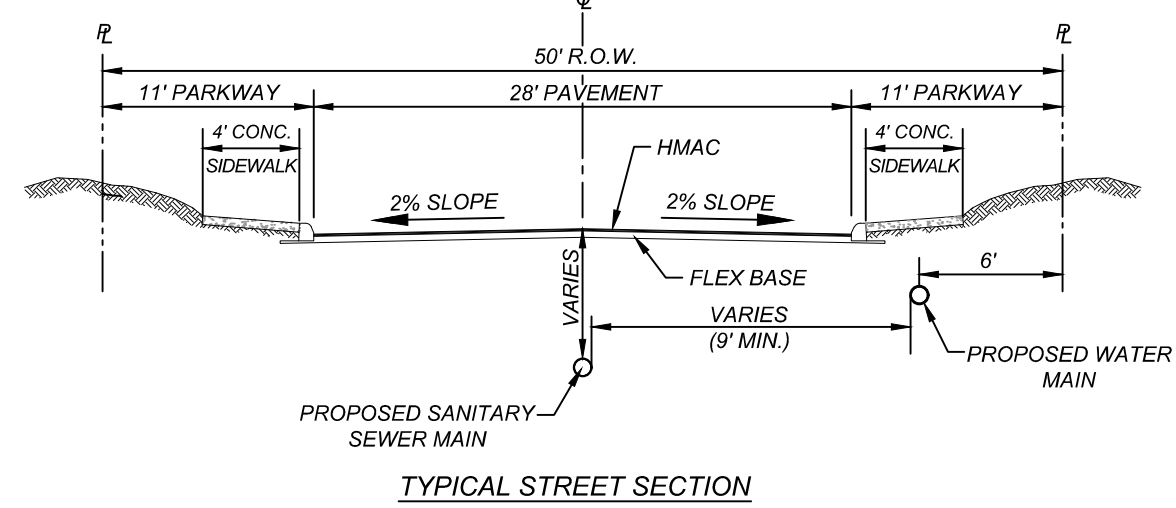
CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HARNESS OR FIELD LOCK GASKETS AT ALL JOINTS WITHIN THE LENGTH SHOWN. CONTRACTOR SHALL INSURE THAT ALL TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 5 FT OF PIPE WITH JOINTS ON EACH SIDE OF THE FITTING. JOINT RESTRAINTS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

SAWS NOTE:

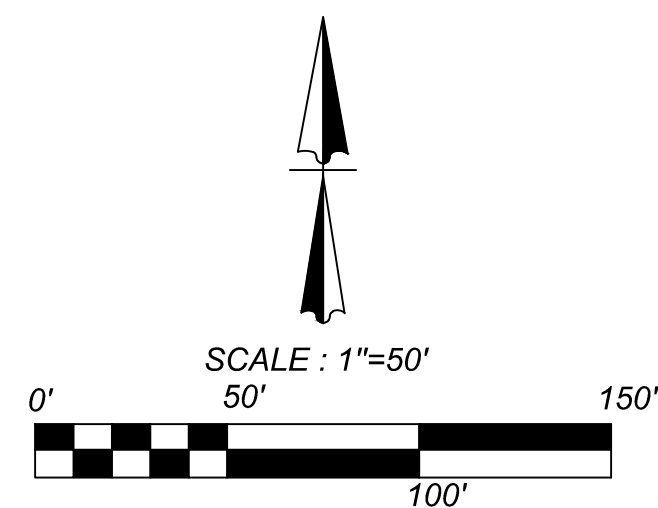
1. SAWS REQUIRES GCPs AND COUNTER PERMIT TO USE LEAD FREE (<0.25% LEAD) FIRE HYDRANTS.
2. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE SAN ANTONIO WATER SYSTEM (S.A.W.S.) STANDARD SPECIFICATIONS.

WATER PLAN NOTES:

1. ALL VALVES SHALL READ "OPEN RIGHT"
2. ALL PVC PIPE TO BE C-900 CLASS 235 (DR 18)

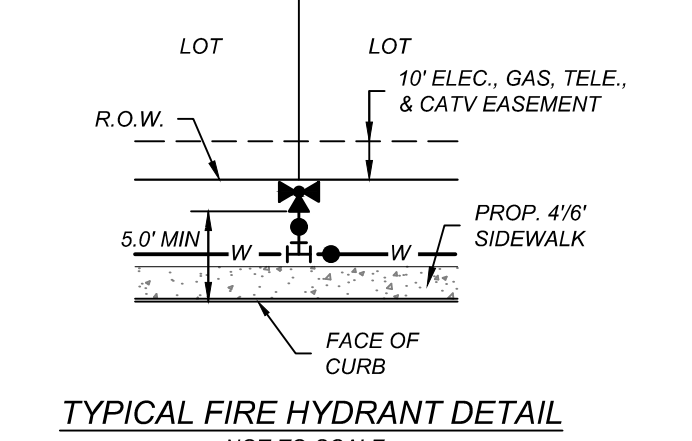


LOCATION MAP NOT-TO-SCALE

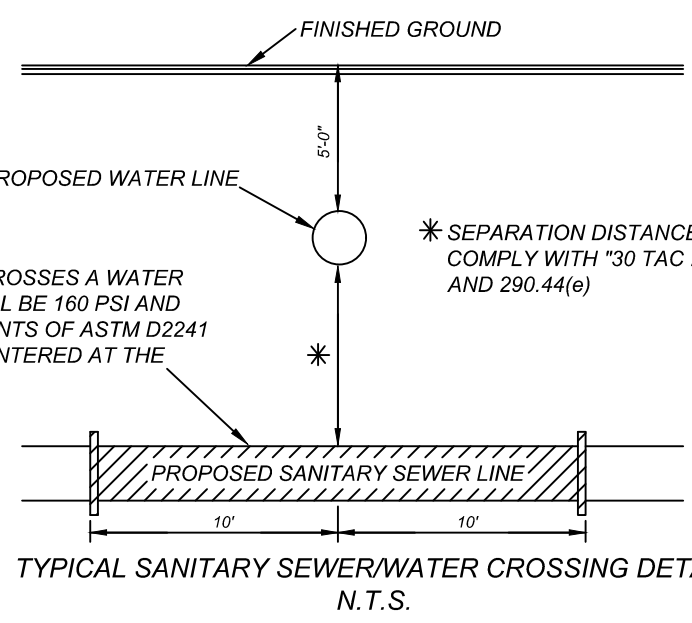


LEGEND

- PROPOSED WATER MAIN
- PROPOSED WATER SERVICE & METER BOX
- PROPOSED WATER 3/4" IRRIGATION SERVICE & METER BOX
- PROPOSED FIRE HYDRANT
- PROPOSED WATER VALVE
- PROPOSED 100W STREETLIGHT
- PROPOSED SANITARY SEWER MAIN
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER LATERAL
- PROPOSED ELECTRIC, GAS, TELEPHONE, & CABLE TV EASEMENT
- EXISTING WATER MAIN
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING SANITARY SEWER MAIN
- EXISTING SANITARY SEWER MANHOLE
- EXISTING OVERHEAD ELECTRIC WIPOWER POLE
- EXISTING GUY WIRE/OVERHEAD ELECTRIC



TYPICAL FIRE HYDRANT DETAIL NOT-TO-SCALE



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

DEVELOPER'S NAME: FF DEVELOPMENT OF TEXAS I, LLC
 DEVELOPER'S ADDRESS: 11450 ROJAS DRIVE, SUITE D-15
 CITY: EL PASO STATE: TEXAS ZIP: 79936
 PHONE#: FAX#: TOTAL ACREAGE: 9.72
 SAWS BLOCK MAP#: 162538 TOTAL EDUS: 67
 TOTAL LINEAR FOOTAGE OF PIPE: 1,865 L.F. - 8" C900 P.V.C. PLAT NO.: 22-11800409
 NUMBER OF LOTS: 67 SAWS JOB#: 24-1028

K&W ENGINEERS + SURVEYING
 Phone #: (210) 978-8444 Fax #: (210) 978-8441
 TBE Firm #: 95113 TBE S Firm #: 10122300

ISSUE DATE: 3/20/22
 REVISIONS: REVISED PER IN-CHARGE DR. 3/20/22
 DRAWN BY: CLAYTON J. LINNEY



CHAVANEAUX SUBDIVISION UNIT 6
 SAN ANTONIO, TX
 WATER DISTRIBUTION PLAN

PLAT NO. 22-11800409

JOB NO. 984-02-02
 DATE: APRIL, 2022
 DRAWN: WDS CHECKED: SM

SHEET NUMBER: 7.1

Date: Mar 31, 2022, 1:44pm User: ID: JAdkins
 File: K:\984\02\02\Design\Civil\WATER\09840202.dwg

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

DRY UTILITY CONDUIT NOTE:
 CONDUIT LOCATIONS SHOWN ON PLAN ARE FOR GEOGRAPHICAL PURPOSES ONLY AND ARE APPROXIMATE. CONTRACTOR TO INSTALL PROPOSED CONDUITS IN ACCORDANCE WITH DRY UTILITY PURVEYOR'S SPECIFICATIONS. CONTRACTOR TO VERIFY THE CONDUIT LOCATIONS AND SIZES BASED ON THE DRY UTILITY PURVEYOR'S PLAN.

INSTALLATION:

1. ALL OPERATORS SHALL SUBMIT A NOTICE OF INTENT (NOI) AT LEAST 48 HOURS IN ADVANCE AND ALL BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE IN PLACE PRIOR TO STARTING CONSTRUCTION ACTIVITIES.
2. CONTRACTOR TO ENSURE THAT STRUCTURAL BMP'S ARE INSTALLED WITHIN THE LIMITS OF THE SITE BOUNDARY.
3. CONTRACTOR MAY INSTALL THE BEST MANAGEMENT PRACTICES IN PHASES THAT COINCIDE WITH THE DISTURBANCE OF UP GRADIENT AREAS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
4. CONTRACTOR TO VERIFY SUFFICIENT VEGETATION IN AREAS DENOTED AS VEGETATED FILTER STRIP. IF INSUFFICIENT VEGETATION EXISTS, CONTRACTOR SHALL IMPLEMENT A DIFFERENT BEST MANAGEMENT PRACTICE AND WILL SHOW IT ON THIS PLAN WITH NOTATION IN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.

MAINTENANCE AND INSPECTION:

1. CONTRACTOR SHOULD LIMIT CONSTRUCTION ACTIVITIES TO ONLY THOSE AREAS SHOWN TO BE DISTURBED ON THIS PLAN. IF ADDITIONAL VEGETATED AREAS ARE DISTURBED THEY SHOULD BE PROTECTED WITH APPROPRIATE BEST MANAGEMENT PRACTICES UNTIL THE AREAS HAVE BEEN STABILIZED AS PER THE SPECIFICATIONS OF THE SWPPP. THE AREAS OF THIS ADDITIONAL SOIL DISTURBANCE AND THE MEASURES USED SHOULD BE SHOWN ON THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND INSPECTION OF BMP'S AS PER THE SPECIFICATIONS OF THE SWPPP. THE CONTRACTOR MAY MODIFY THE CONTROLS AS NECESSARY TO PREVENT SEDIMENT RUNOFF. THESE MODIFICATIONS SHOULD BE SHOWN AND THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
3. LOCATION OF CONSTRUCTION ENTRANCE/EXIT, CONCRETE WASHOUT PIT, AND EQUIPMENT AND STORAGE ARE TO BE FIELD DETERMINED. LOCATIONS SHALL BE UPDATED ON THIS PLAN.

PROJECT COMPLETION:

1. ALL DISTURBED AREAS ARE NOT COVERED BY IMPERVIOUS COVER ARE TO BE STABILIZED PER THE SWPPP AND PROJECT SPECIFICATIONS PRIOR TO REMOVAL OF ANY BMP'S AND/OR PRIOR TO FILING A NOTICE OF TERMINATION (NOT).
2. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN PHASES IF ALL UPGRADIENT AREAS HAVE BEEN STABILIZED PER SWPPP AND PROJECT SPECIFICATIONS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
3. CONTRACTOR TO ENSURE THEY HAVE MET ALL REQUIREMENTS OF THE SWPPP BEFORE FILING A NOTICE OF TERMINATION (NOT).

GENERAL:

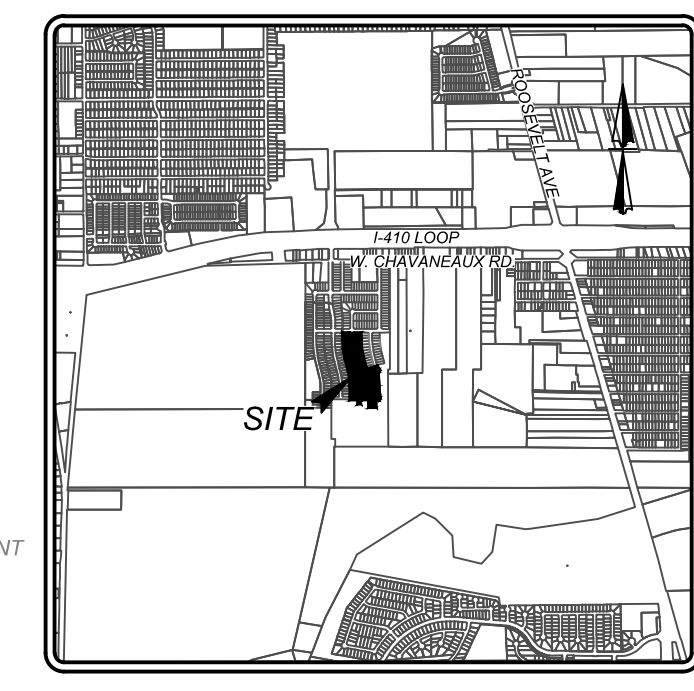
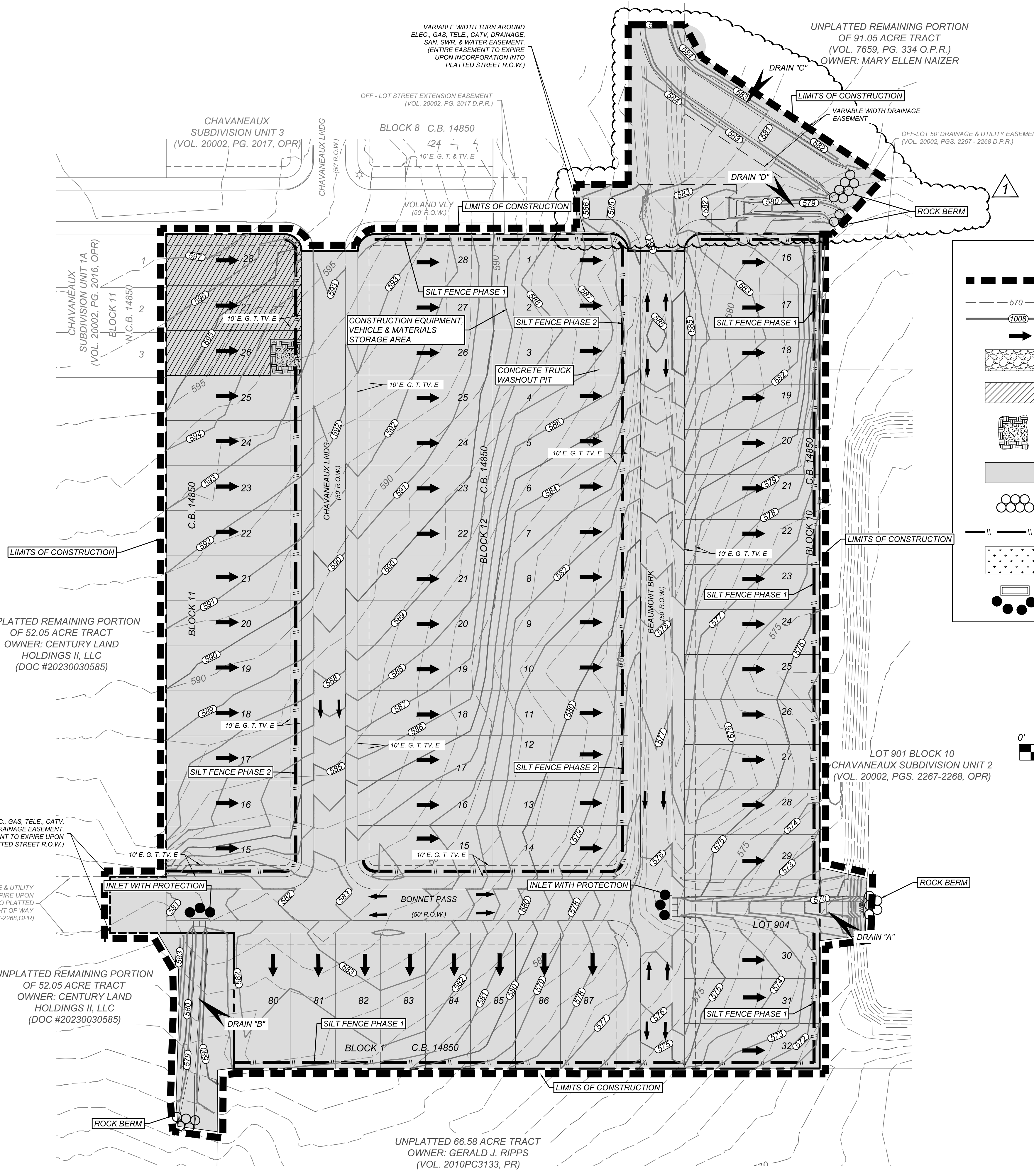
1. THIS EXHIBIT IS TO BE USED FOR THE PURPOSES OF STORMWATER POLLUTION PREVENTION ONLY. ALL OTHER CIVIL ENGINEERING INFORMATION SHOULD BE OBTAINED FROM THE APPROPRIATE CONSTRUCTION DOCUMENTS.
2. THE PURPOSE OF THE SIGNATURE AND SEAL OF THE ENGINEER ON THIS DOCUMENT IS TO DEMONSTRATE COMPLIANCE WITH THE TPDES STORMWATER POLLUTION PREVENTION PLAN REGULATIONS ONLY.
3. ALL OWNERS/OPERATORS ARE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH THE STORMWATER POLLUTION PREVENTION PLAN AND COMPLYING WITH THE REGULATIONS CONTAINED WITHIN IT.

COORDINATION NOTE:

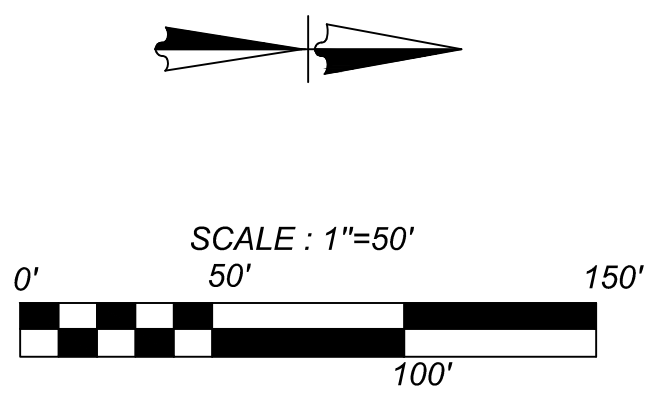
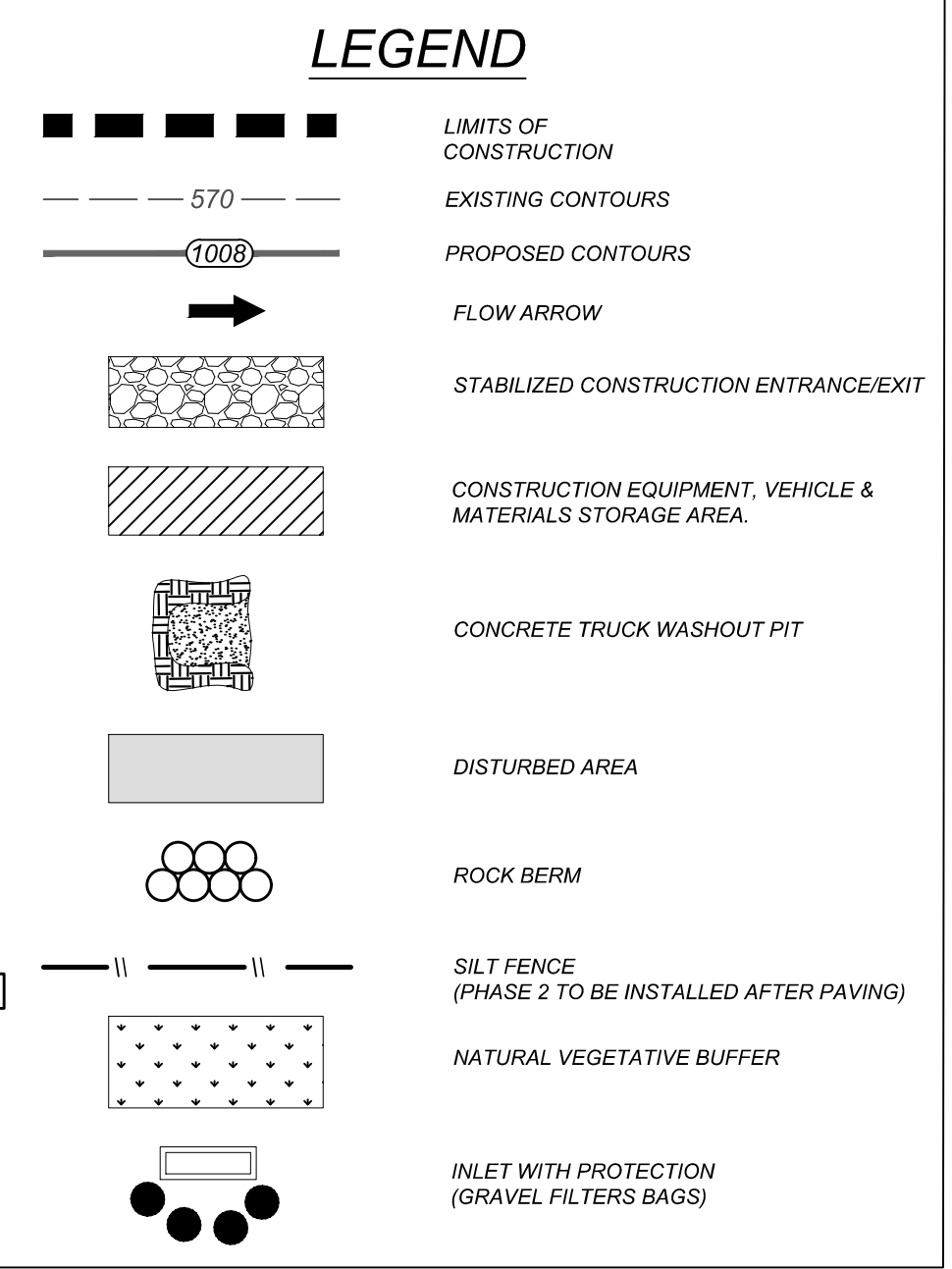
1. CONTACT TIME WARNER TO COORDINATE CABLE TV SERVICE. (210) 244-0500
2. CONDUIT FOR ELECTRICAL SERVICE. CONFIRM REQUIREMENTS AND COORDINATE WITH CPS FOR INSPECTION. (210) 353-9246
3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928
4. CONTRACTOR TO COORDINATE WITH CPS PRIOR TO CONSTRUCTION TO PLAN ELECTRIC SERVICE.
5. CONTRACTOR TO COORDINATE WITH SAWS TO PLAN WATER AND SANITARY SEWER SERVICES (210) 704-7297
6. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

SW3P MODIFICATIONS

DATE	SIGNATURE	DESCRIPTION



LOCATION MAP NOT-TO-SCALE



KIEWIT
ENGINEERS + SURVEYING
 Phone #: (210) 878-8444 • Fax #: (210) 878-8441
 TBE Firm #: 8513 • TBE S Firm #: 1012300

ISSUE DATE: 4/16/2022
 REVISIONS: REVISED DISTURBED CONSTRUCTION AND STABILIZED ROCK BERM

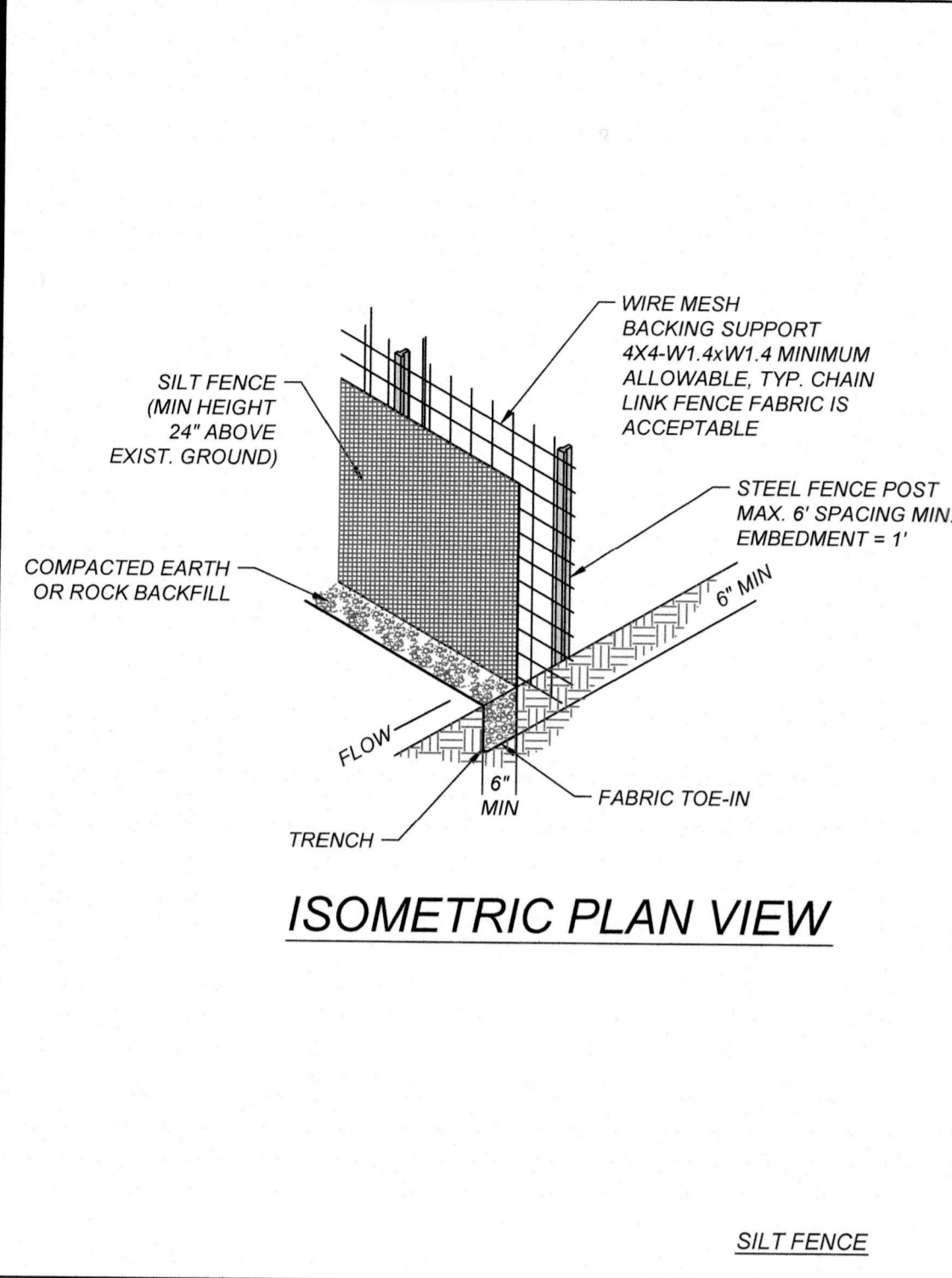


Clayton J. Linney
 5/14/2022

CHAVANEAUX SUBDIVISION UNIT 6
 SAN ANTONIO, TX
STORM WATER POLLUTION PREVENTION PLAN

PLAT NO. 22-11800-409
 JOB NO. 984-02-02
 DATE: APRIL, 2022
 DRAWN: WDS CHECKED: SM

SHEET NUMBER:
8.0



Materials:

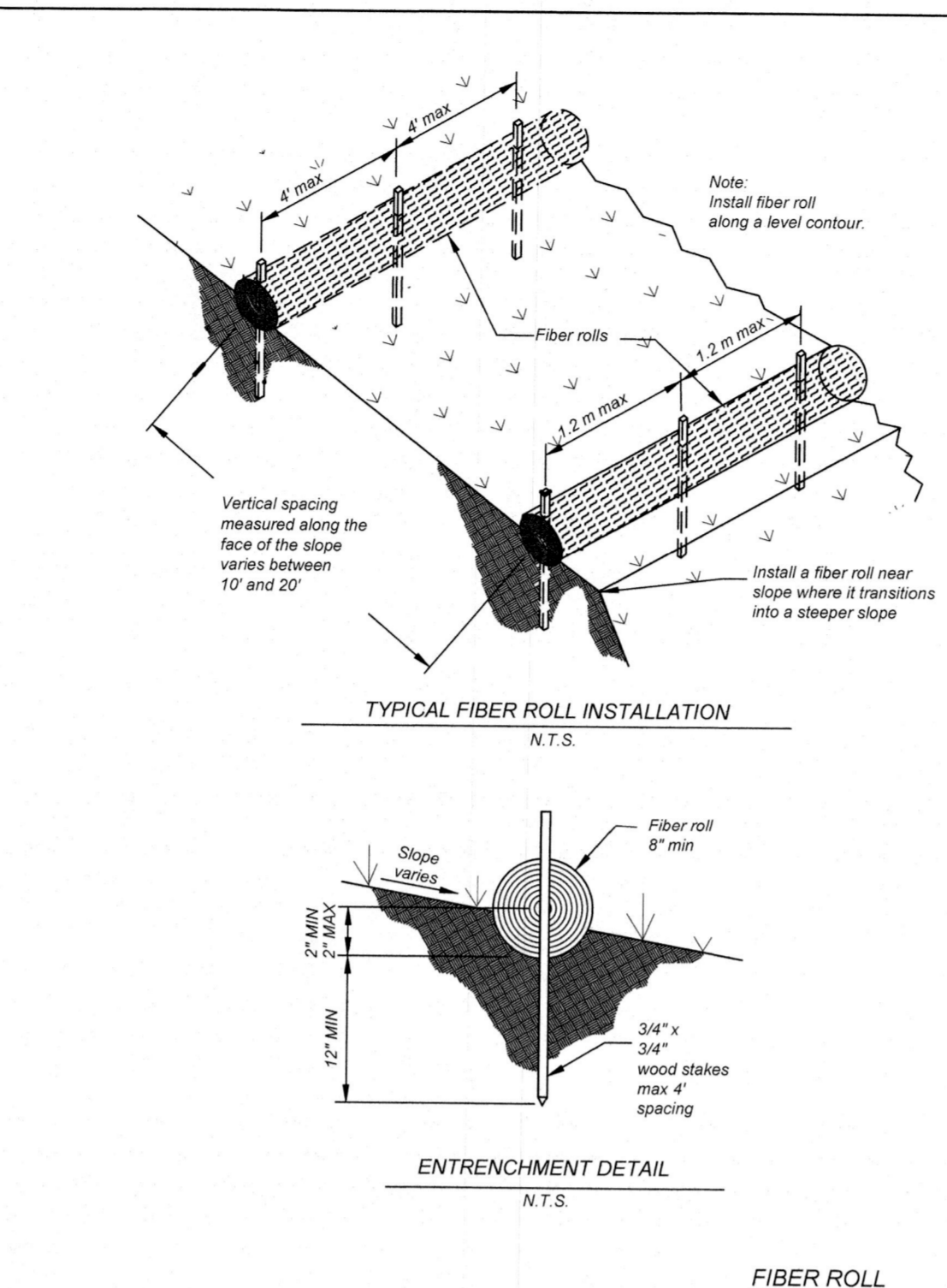
- Silt fence material should be polypropylene, polyethylene or polyamide woven or nonwoven fabric. The fabric width should be 36 inches, with a minimum unit weight of 4.5 oz/yd, mullen burst strength exceeding 190 lb/in², ultraviolet stability exceeding 70%, and minimum apparent opening size of U.S. Sieve No. 30.
- 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 nominal weight 1.25 lb/ft², and Brinell hardness exceeding 140.
- Woven wire backing to support the fabric should be galvanized 2" x 4" welded wire, 12 gauge minimum.

Installation:

- Steel posts, which support the silt fence, should be installed on a slight angle toward the anticipated runoff source. Post 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.
- 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 1/4 acre/100 feet of fence.
- The toe of the silt fence should be trenched in with a spade or mechanical trencher, so that the down-slope face of the trench is flat and perpendicular to the line of flow. Where fence cannot be trenched in (e.g., pavement or rock outcrop), weight fabric flap with 3 inches of pea gravel on uphill side to prevent flow from seeping under fence.
- The trench must be a minimum of 6 inches deep and 6 inches wide to allow for the silt fence fabric to be laid in the ground and backfilled with compacted material.
- Silt fence should be securely fastened to each steel support post or to woven wire, which is in turn attached to the steel fence post. There should be a 3-foot overlap, securely fastened where ends of fabric meet.
- Silt fence should be removed when the site is completely stabilized so as not to block or impede stone flow or drainage.

Inspection and Maintenance Guidelines:

- Inspect all fencing weekly, and after any rainfall.
- Remove sediment when buildup reaches 6 inches.
- Replace any torn fabric or install a second line of fencing parallel to the torn section.
- Replace or repair any sections crushed or collapsed in the course of construction activity. If a section of fence is obstructing vehicular access, consider relocating it to a spot where it will provide equal protection, but will not obstruct vehicles. A triangular filter dike may be preferable to a silt fence at common vehicle access points.
- When construction is complete, the sediment should be disposed of in a manner that will not cause additional siltation and the prior location of the silt fence should be revegetated. The fence itself should be disposed of in an approved landfill.



THE MATERIAL, INSTALLATION, INSPECTION, AND MAINTENANCE OF FIBER ROLLS WILL BE PER THE MANUFACTURE'S SPECIFICATIONS AND SHALL ALSO COMPLY WITH THE TEXAS COMMISSION OF ENVIRONMENTAL QUALITY CURRENT TECHNICAL GUIDANCE ON BEST MANAGEMENT PRACTICES AS NOTED BELOW.

Material:

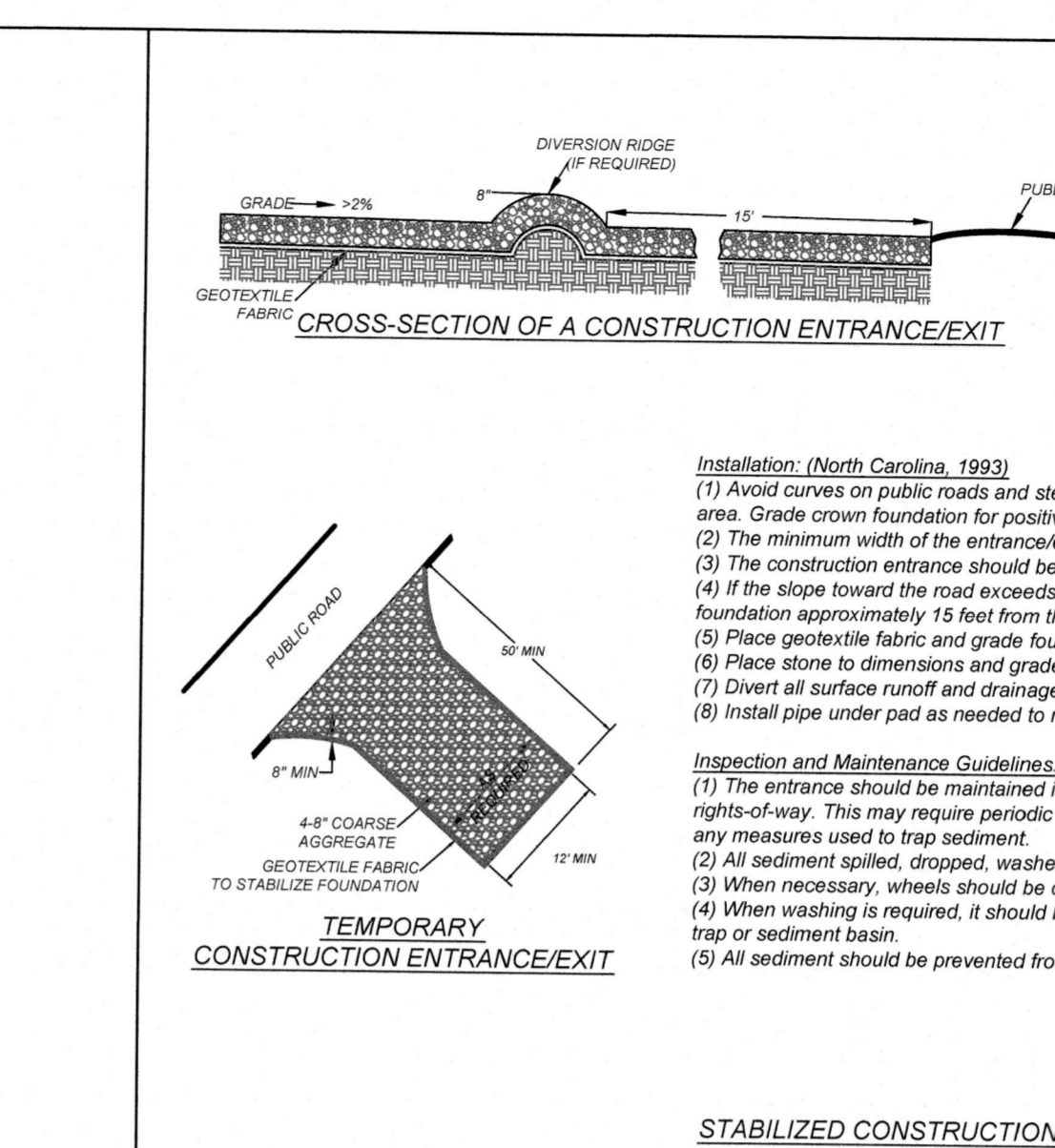
- Core material: Core material should be biodegradable or recyclable. Material may be compost, mulch, aspen wood fibers, chipped site vegetation, agricultural rice or wheat straw, coconut fiber, 100% recyclable fibers, or similar materials.
- Containment Mesh: Containment mesh should be 100% biodegradable, photodegradable or recyclable such as burlap, twine, UV photodegradable plastic, polyester, or similar material. When the fiber roll will remain in place as part of a vegetative system use biodegradable or photodegradable mesh. For temporary installation recyclable mesh is recommended.

Implementation:

- Locate fiber rolls on level contours spaced as follows:
Slope inclination of 4:1 (H:V) or flatter: Fiber rolls should be placed at a maximum interval of 20 ft.
Slope inclination between 4:1 and 2:1 (H:V): Fiber rolls should be placed at a maximum interval of 15 ft. (a closer spacing is more effective).
Slope inclination 2:1 (H:V) or greater: Fiber rolls should be placed at a maximum interval of 10 ft. (a closer spacing is more effective).
- Turn the ends of the fiber roll up slope to prevent runoff from going around the roll.
- Stake fiber rolls into a 2 to 4 in. deep trench with a width equal to the diameter of the fiber roll.
- Drive stakes at the end of each fiber roll and spaced 4 ft maximum on center.
- Use wood stakes with a nominal classification of 0.75 by 0.75 in. and minimum length of 24 in.
- If more than one fiber roll is placed in a row, the rolls should be overlapped, not abutted.

Inspection and Maintenance Guidelines:

- Inspect prior to forecast rain, daily during extended rain events, after rain events, and weekly.
- Repair or replace split, torn, unraveling, or slumping fiber rolls.
- If the fiber roll is used as a sediment capture device, or as an erosion control device to maintain sheet flows, sediment that accumulates behind the roll must be periodically removed in order to maintain its effectiveness. Sediment should be removed when the accumulation reaches one-half the designated sediment storage depth, usually one-half the distance between the top of the fiber roll and the adjacent ground surface. Sediment removed during maintenance may be incorporated into earthwork on the site or disposed of at an appropriate location.



Materials:

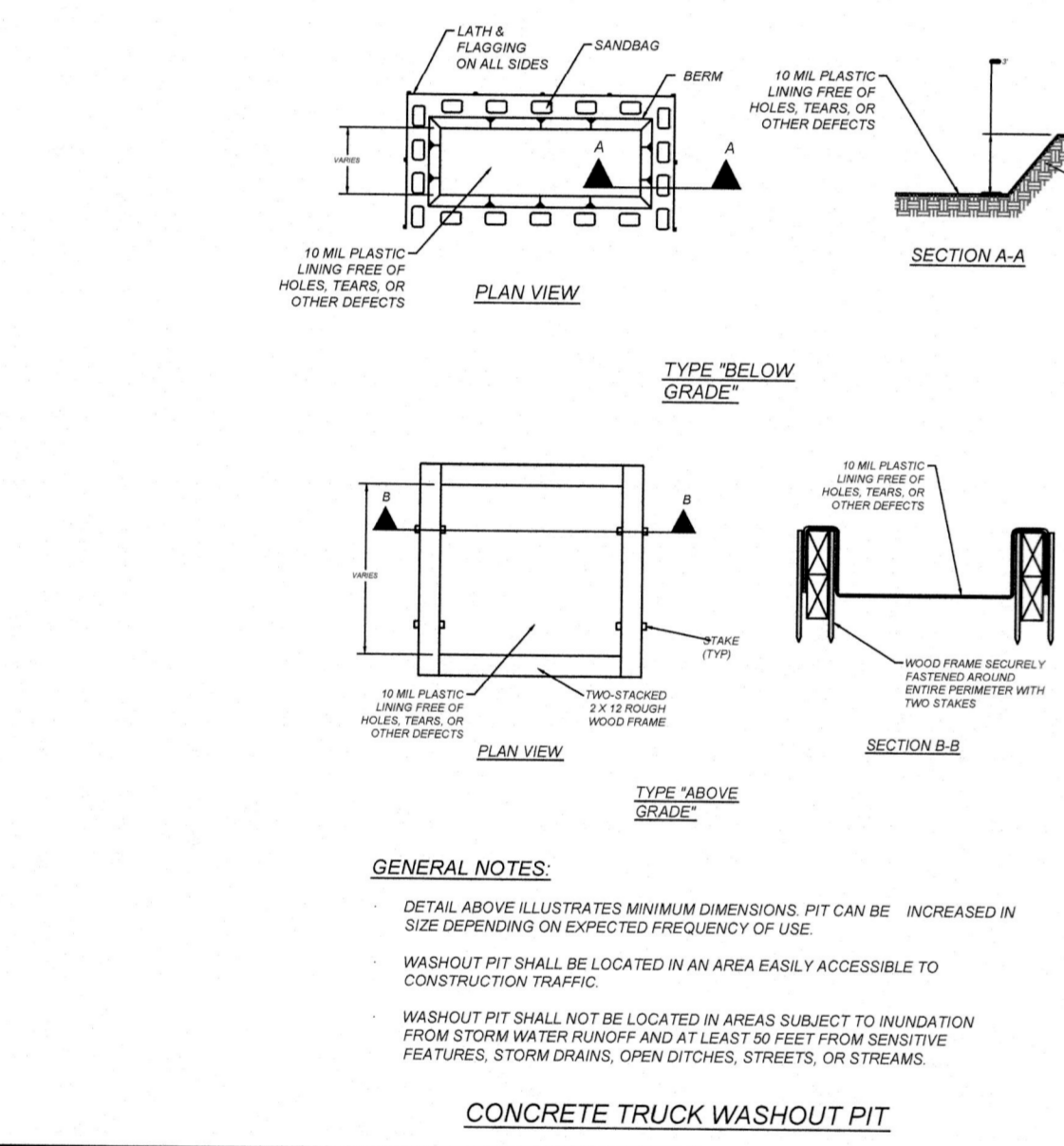
- The aggregate should consist of 4 to 8 inch washed stone over a stable foundation as specified in the plan.
- The aggregate should be placed with a minimum thickness of 8 inches.
- The geotextile fabric should be designed specifically for use as a soil filtration media with an approximate weight of 6 oz/yd², a mullen burst rating of 140 lb/in², and an equivalent opening size greater than a number 50 sieve.
- 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: (North Carolina, 1993)

- Avoid curves on public roads and steep slopes. Remove vegetation and other objectionable material from the foundation area. Grade crown foundation for positive drainage.
- The minimum width of the entrance/exit should be 12 feet or the full width of exit roadway, whichever is greater.
- The construction entrance should be at least 50 feet long.
- If the slope toward the road exceeds 2%, construct a ridge, 6 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.
- Place geotextile fabric and grade foundation to improve stability, especially where wet conditions are anticipated.
- Place stone to dimensions and grade shown on plans. Leave surface smooth and slope for drainage.
- Divert all surface runoff and drainage from the stone pad to a sediment trap or basin.
- Install pipe under pad as needed to maintain proper road drainage.

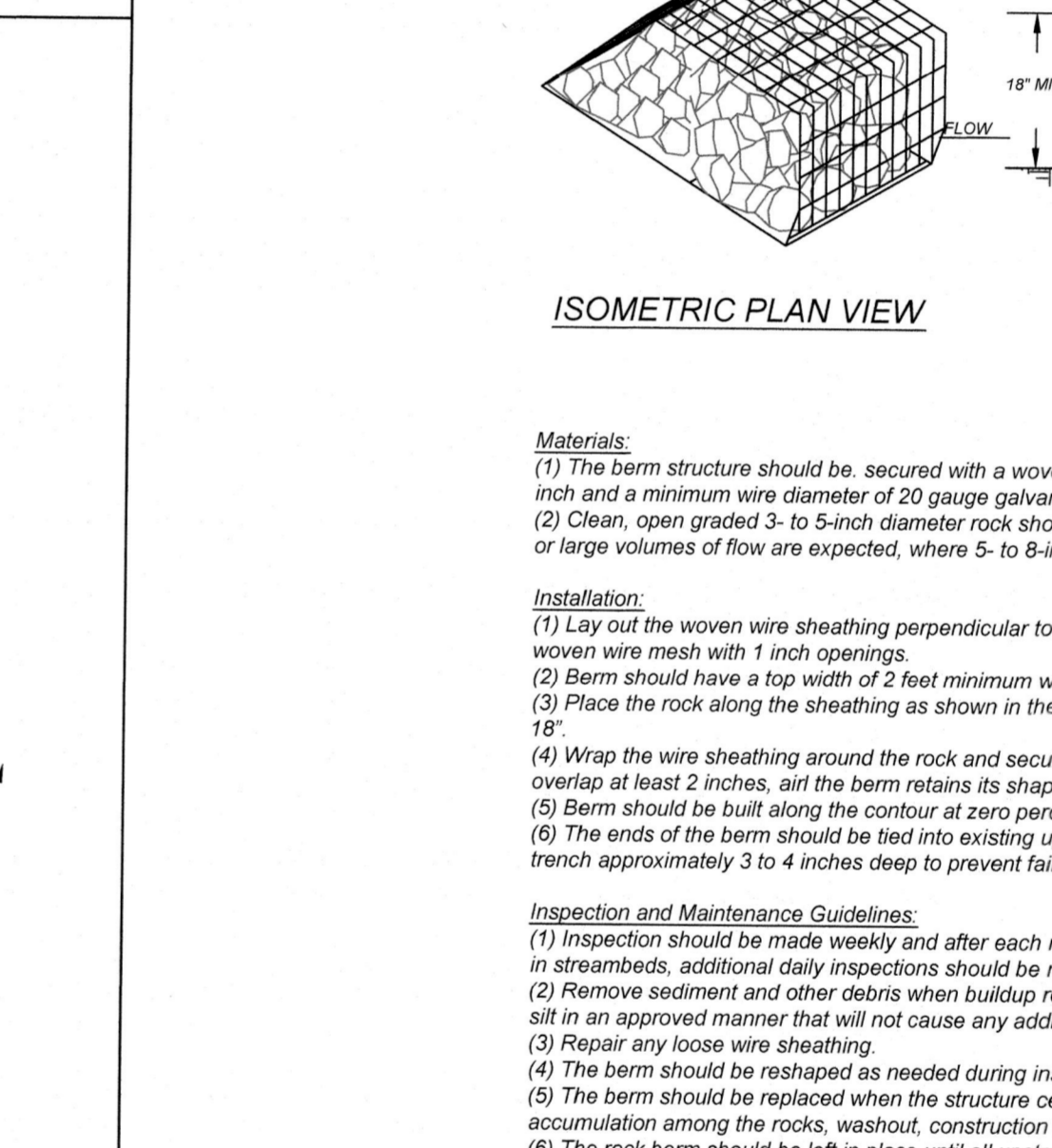
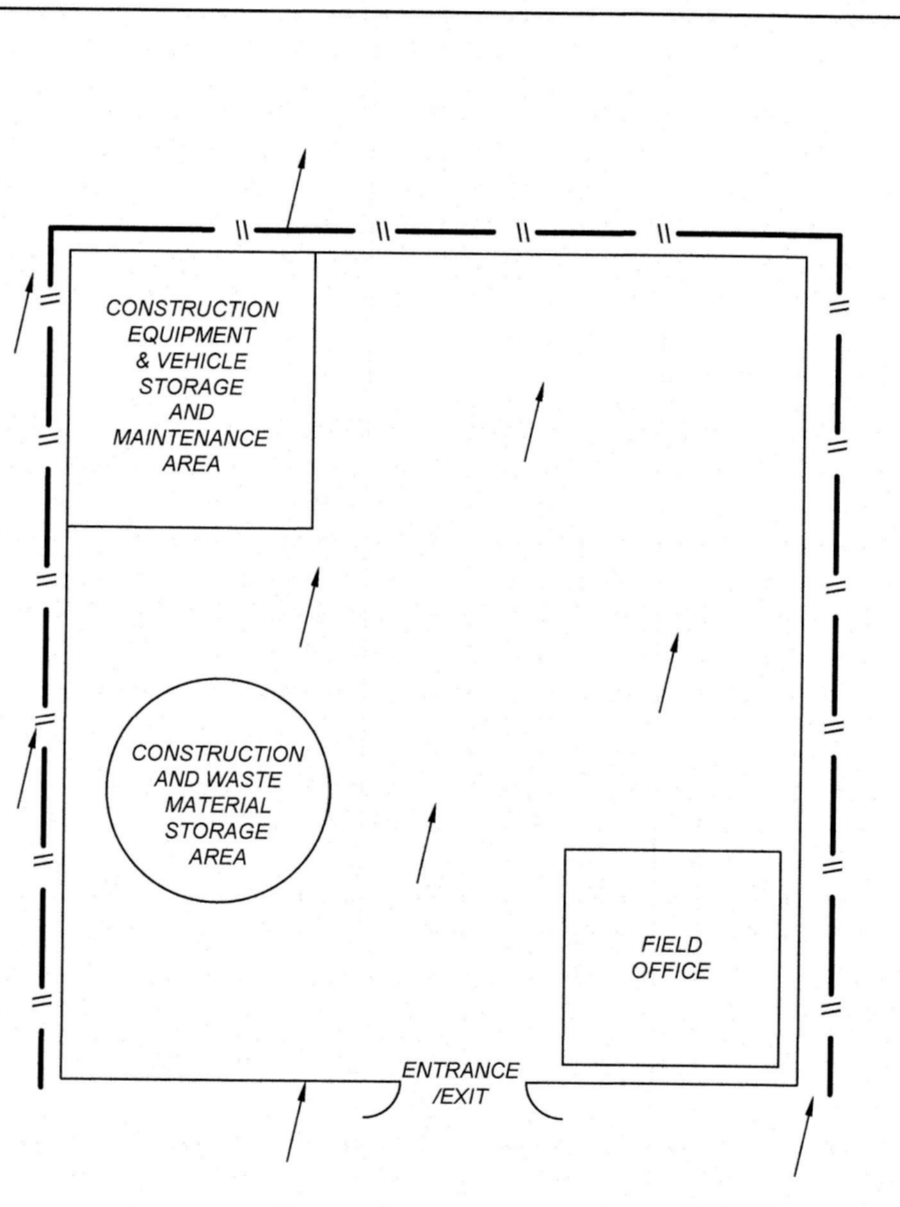
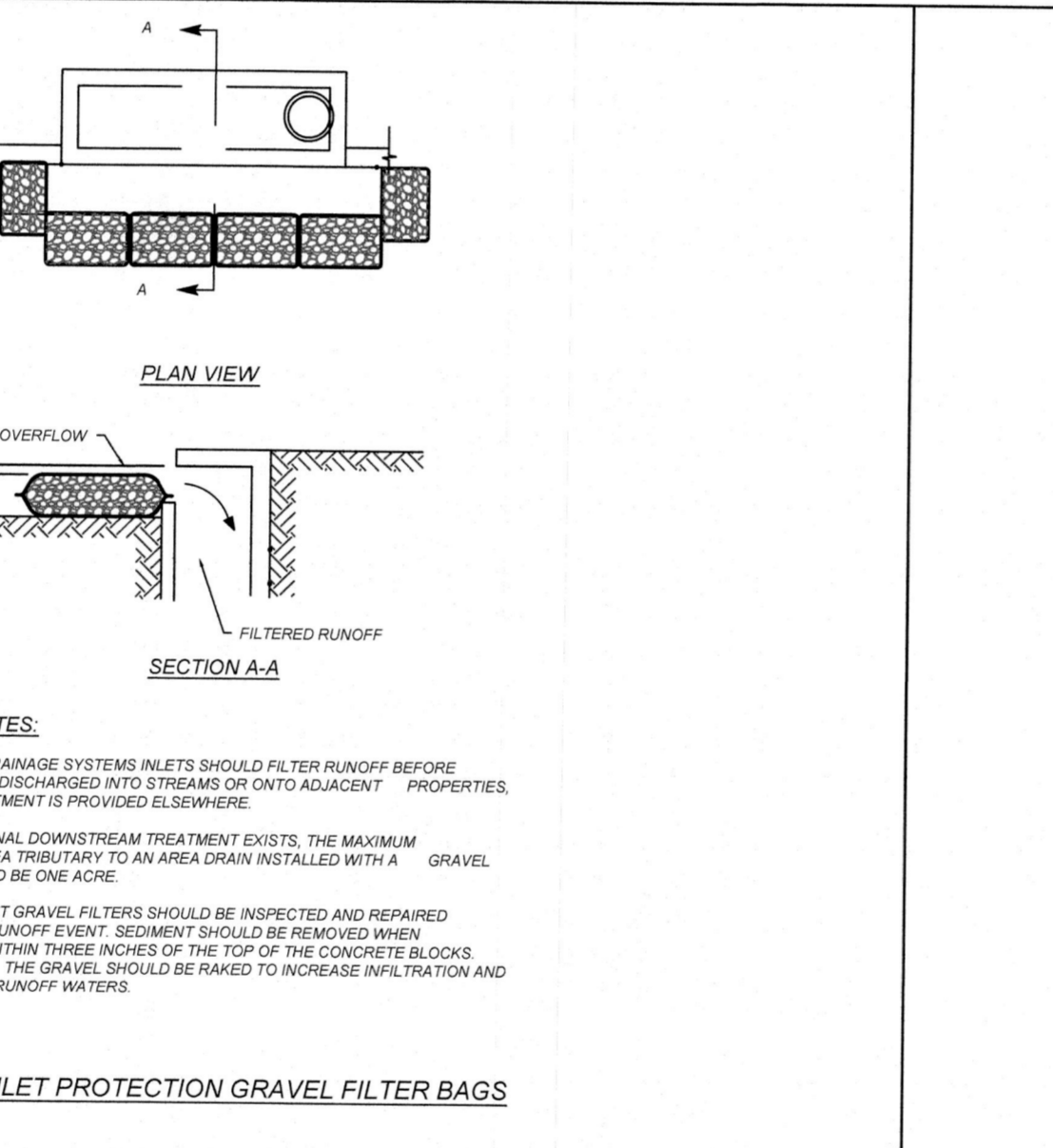
Inspection and Maintenance Guidelines:

- 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.
- All sediment spilled, dropped, washed or tracked onto public rights-of-way should be removed immediately by contractor.
- When necessary, wheels should be cleaned to remove sediment prior to entrance onto public right-of-way.
- 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.
- All sediment should be prevented from entering any storm drain, ditch or water course by using approved methods.



GENERAL NOTES:

- DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.
- WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.
- WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF AND AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS.



Materials:

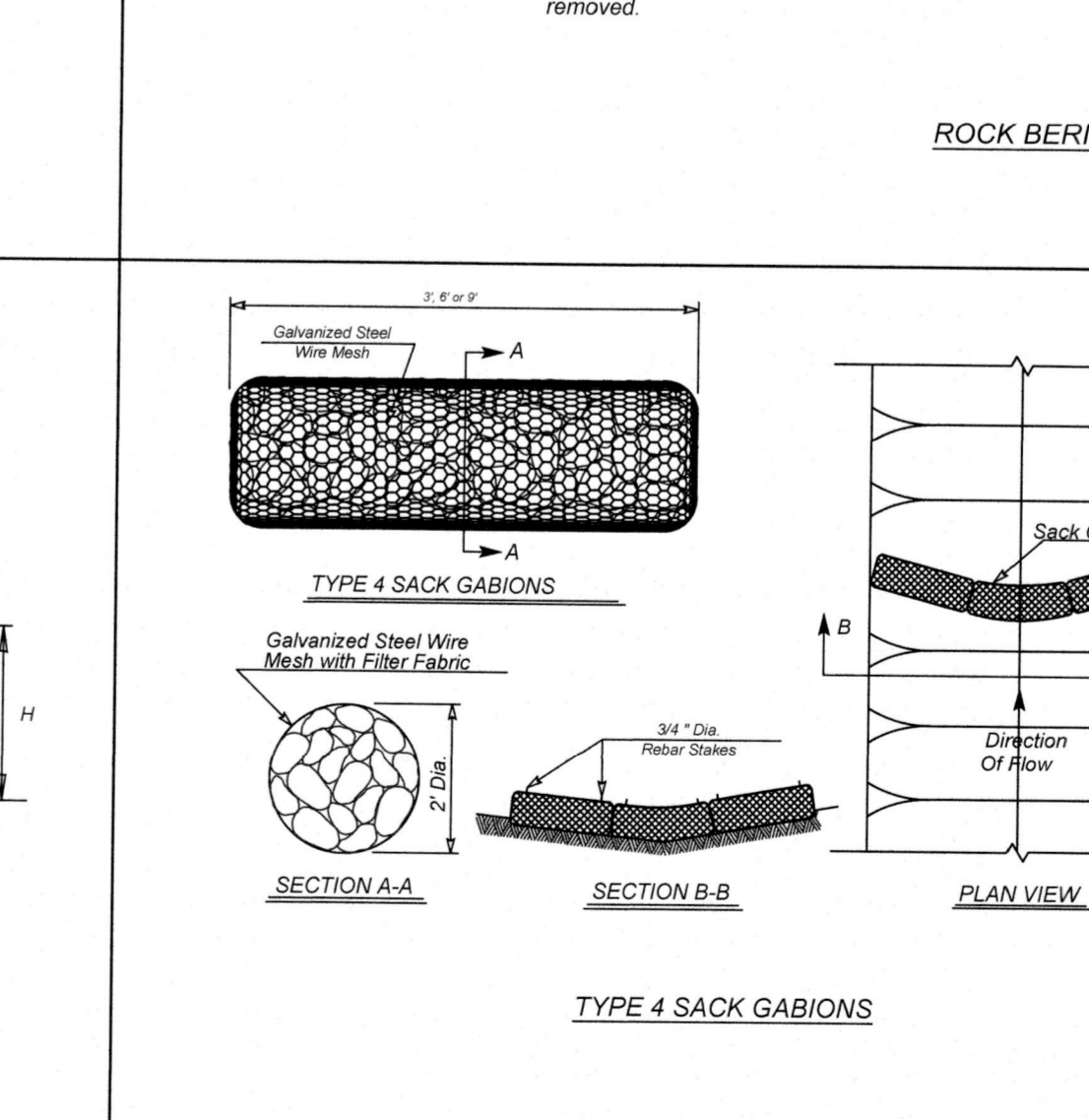
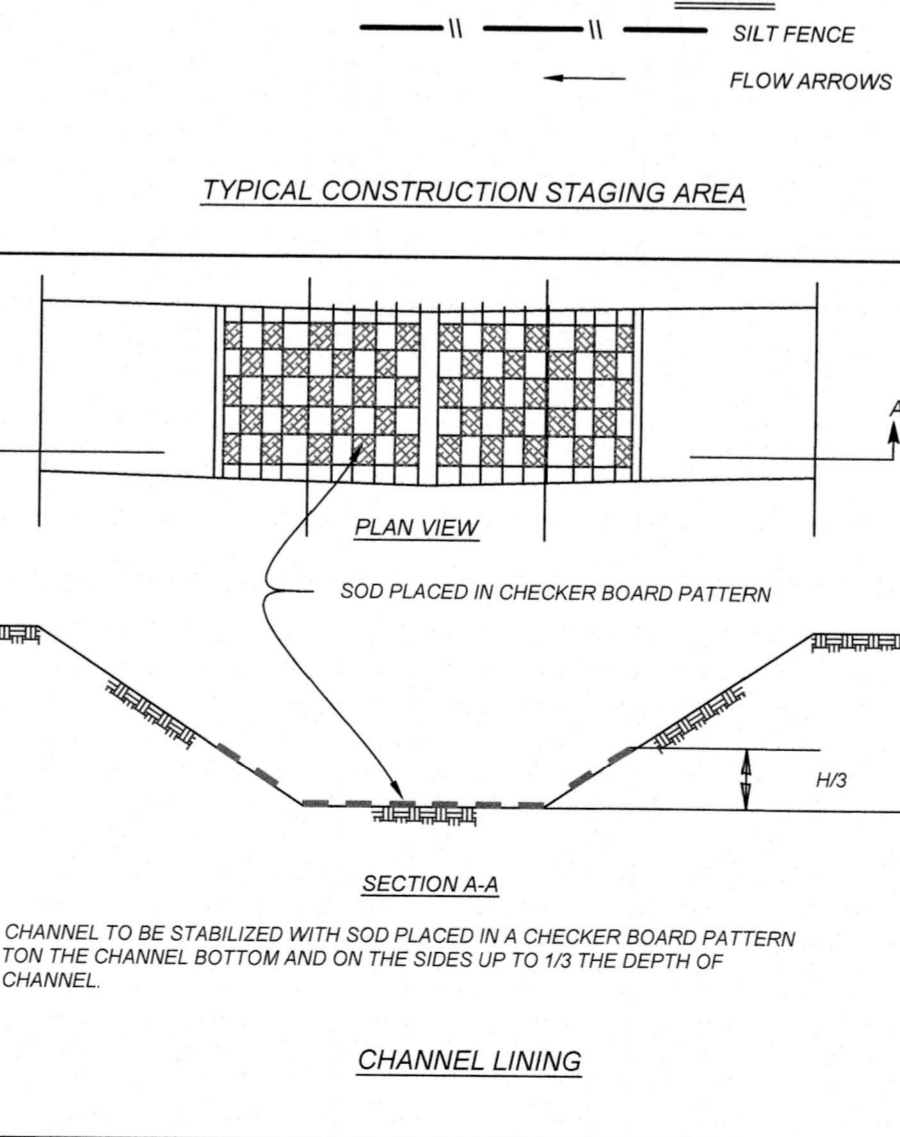
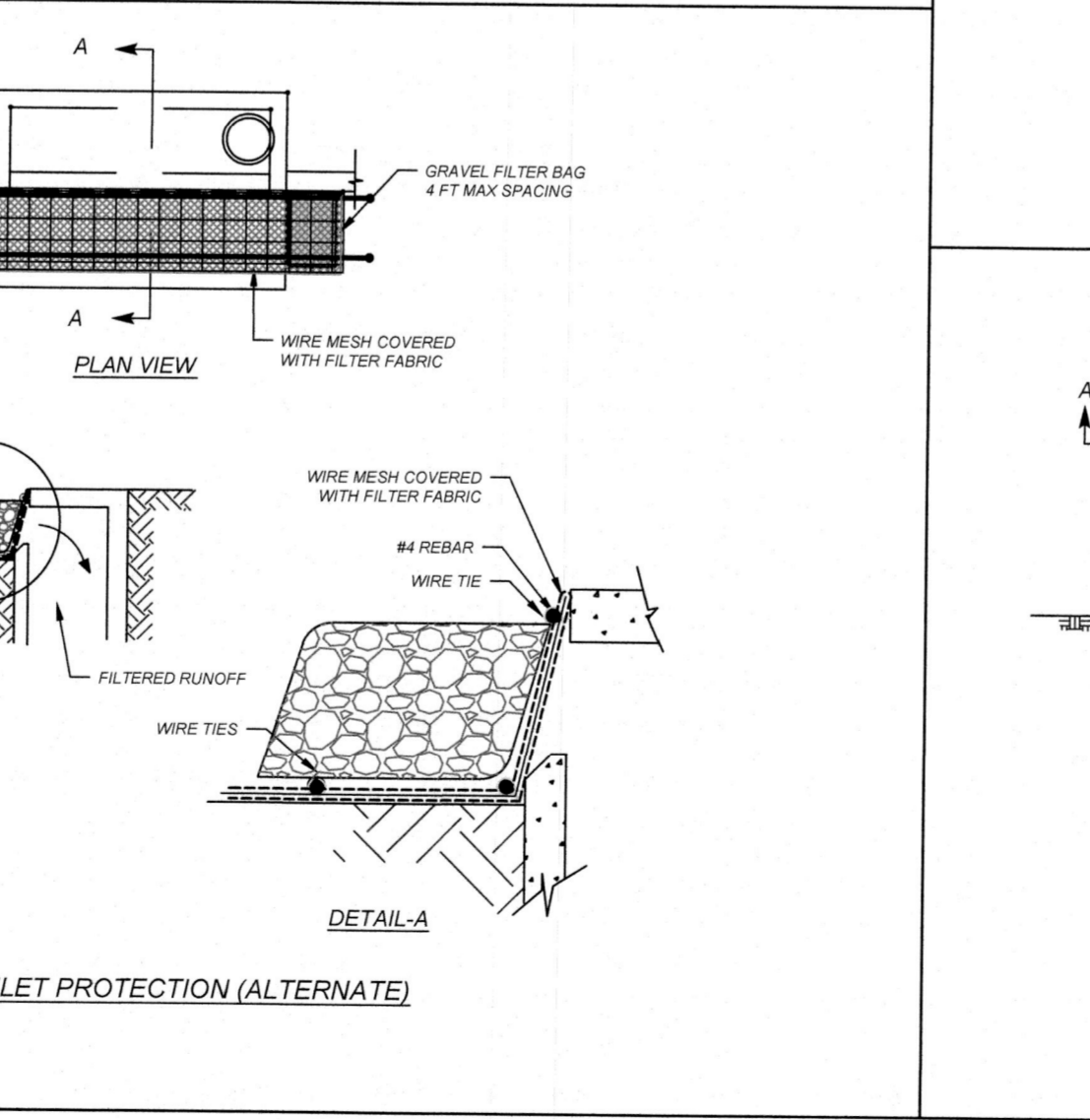
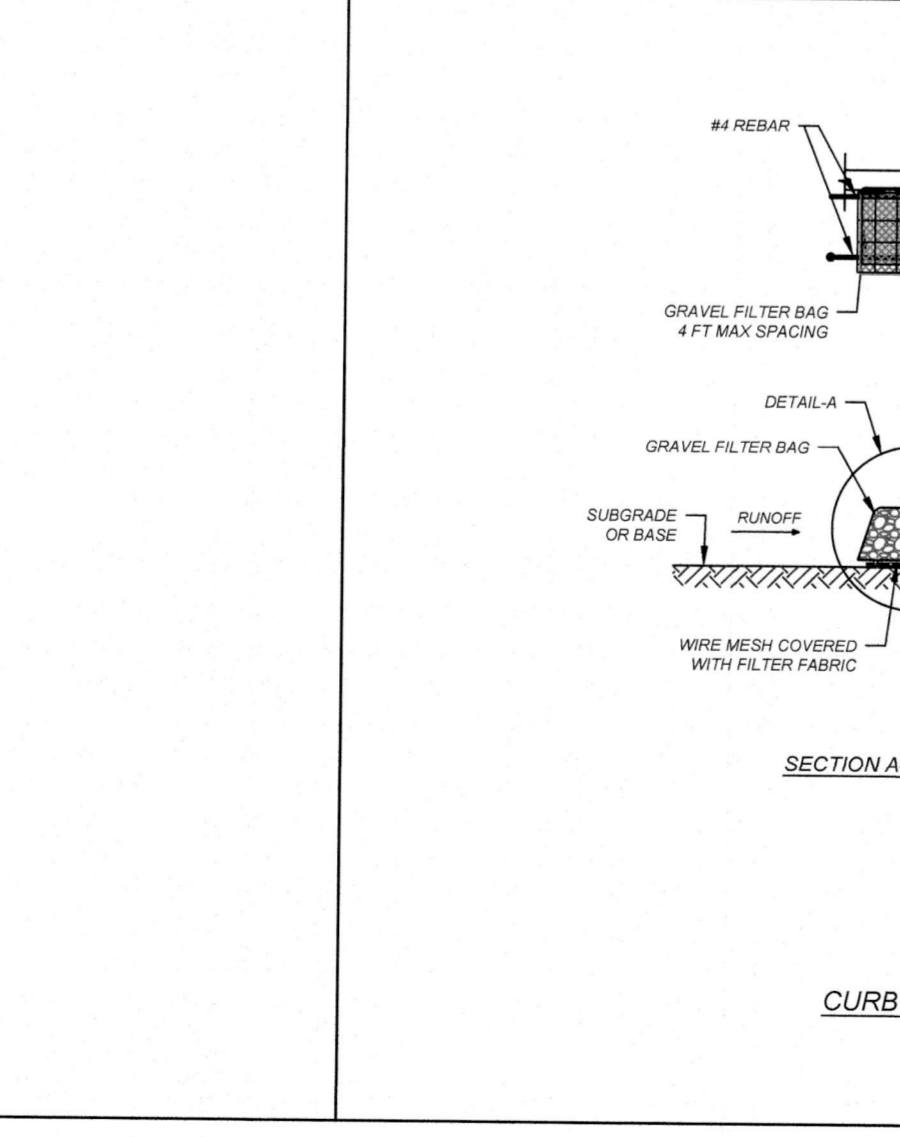
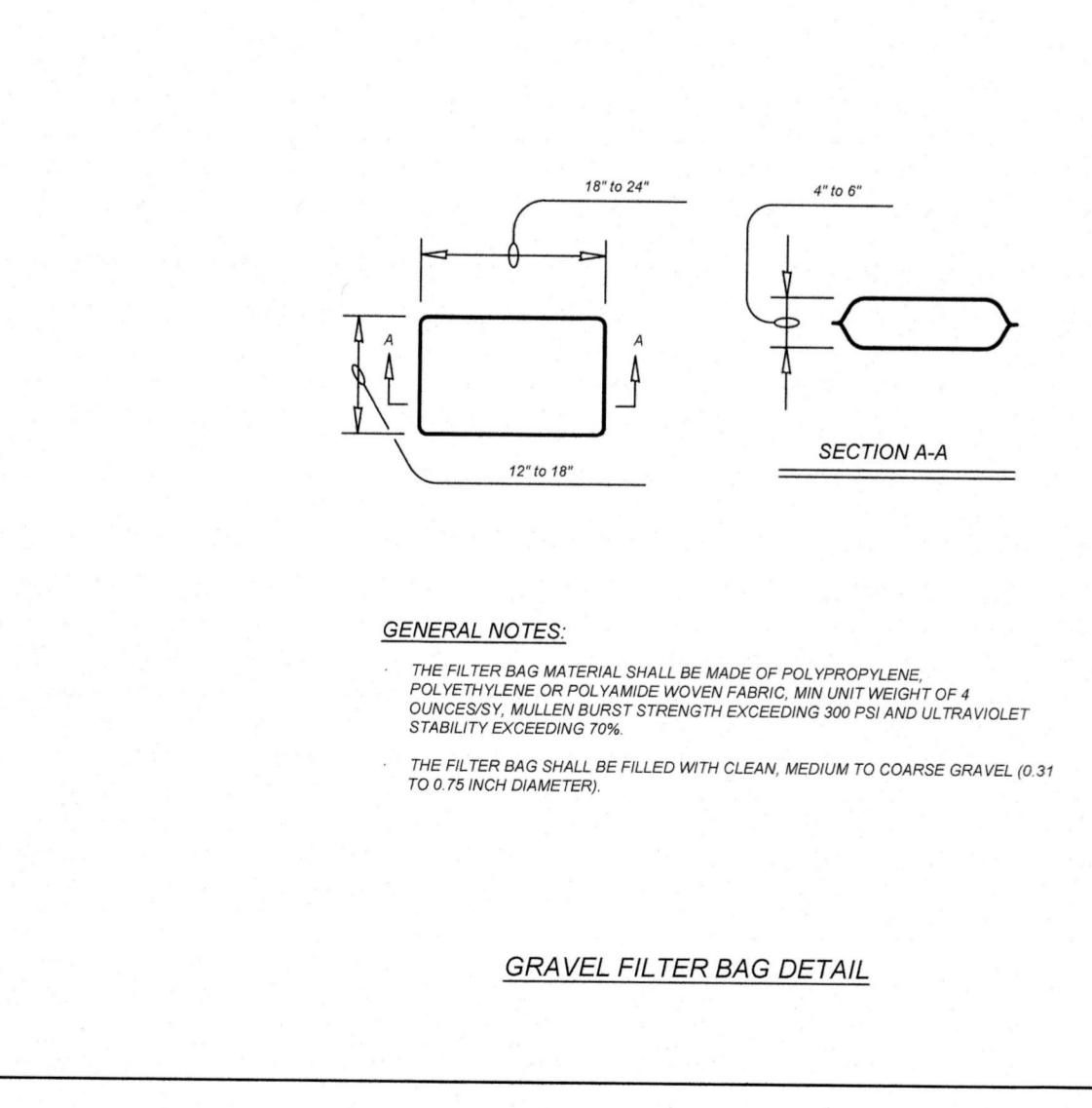
- The berm structure should be secured with a woven wire sheathing having maximum opening of 1 inch and a minimum wire diameter of 20 gauge galvanized and should be secured with shoot nails.
- Clean, open graded 3- to 5-inch diameter rock should be used, except in areas where high velocities or large volumes of flow are expected, where 5- to 8-inch diameter rocks may be used.

Installation:

- Lay out the woven wire sheathing perpendicular to the flow line. The sheathing should be 20 gauge woven wire mesh with 1 inch openings.
- Berm should have a top width of 2 feet minimum with side slopes being 2:1 (H:V) or flatter.
- Place the rock along the sheathing as shown in the diagram Figure 1-28, to a height not less than 18\".
- Wrap the wire sheathing around the rock and secure with tie wire so that the ends of the sheathing overlap at least 2 inches. Sift the berm when walked upon.
- Berm should be built along the contour at zero percent grade or as near as possible.
- 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.

Inspection and Maintenance Guidelines:

- Inspection should be made weekly and after each rainfall by the responsible party. For installations in streambeds, additional daily inspections should be made.
- Remove sediment and other debris when the structure ceases to function as intended due to silt accumulation among the rocks, washout, construction traffic damage, etc.
- Repair any loose wire sheathing.
- The berm should be reshaped as needed during inspection.
- 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.
- The rock berm should be left in place until all upstream areas are stabilized and accumulated silt removed.



GENERAL NOTES:

- THE TOP OF THE SACK GABIONS SHOULD BE LEVEL AND ORIENTED PERPENDICULAR TO THE DIRECTION OF FLOW.
- FILTER FABRIC MATERIAL SHALL BE FASTENED TO WOVEN WIRE SUPPORT.
- FILTER FABRIC MATERIAL SHOULD MEET THE FOLLOWING SPECIFICATIONS: RESISTANT TO ULTRAVIOLET LIGHT; FABRIC SHOULD BE NONWOVEN GEOTILE WITH MINIMUM HEIGHT OF 3.5 OUNCES PER SQUARE YARD, MINIMUM MULLEN BURST STRENGTH OF 200 POUNDS PER SQUARE INCH AND A FLOW THROUGH RATE OF 150 GALLONS PER MINUTE PER SQUARE FOOT OF FRONTAL AREA.
- STONE SIZE: 1/4-8\" OPEN GRADED CRUSHED LIMESTONE.
- INSPECT WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACE AS NEEDED.
- WHEN SILT REACHES A DEPTH OF 8 INCHES OR MORE ABOVE NATURAL GROUND, SILT SHALL BE REMOVED AND DISPOSED IN AN APPROVED MANNER THAT WILL NOT CONTRIBUTE TO RESILTATION. CONTAMINATED SEDIMENT MUST BE REMOVED AND DISPOSED OFF-SITE IN ACCORDANCE WITH APPLICABLE REGULATIONS.

CHAVANEUX SUBDIVISION UNIT 6
SAN ANTONIO, TX

STORM WATER POLLUTION PREVENTION PLAN DETAILS

ENGINEERS + SURVEYING
4411 S. W. Loop West, Suite 100
San Antonio, TX 78211
Phone #: (210) 978-9444 • Fax #: (210) 978-9441
TBE Firm #: 9513 • TBE License #: 10122000

STATE OF TEXAS
SAN ANTONIO
111543
LICENSED PROFESSIONAL ENGINEER
Clayton
1/29/2024

PLAT NO.
22-11800409

JOB NO. 984-02-02
DATE: APRIL, 2022
DRAWN:### CHECKED:###
SHEET NUMBER:
8.1