

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE TO THE CITY OF MARION AND/OR GUADALUPE COUNTY SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- ALL CONSTRUCTION IS SUBJECT TO INSPECTION AND APPROVAL BY THE CITY OF MARION AND/OR GUADALUPE COUNTY PUBLIC WORKS.
- NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS, BUT NOT INCLUDED IN THE BID PROPOSAL. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED IN THE PAY ITEM TO WHICH IT RELATES.
- THE CONTRACTOR IS RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION ANY DAMAGE DONE TO EXISTING FENCES, CONCRETE ISLANDS, STREET PAVING, CURBS, SHRUBS, BUSHES OR DRIVEWAYS (NO EXTRA PAY ITEM).
- DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.171 C.P.S. MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
- CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR TWENTY FOUR (24) HOURS PRIOR TO BACKFILL OF ANY UTILITY TRENCHES TO SCHEDULE FOR DENSITY TEST AS REQUIRED.
- CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES, MARKS, ETC. IF ANY ARE DESTROYED OR REMOVED BY THE CONTRACTOR OR HIS EMPLOYEES, THEY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION TO DETERMINE THE LOCATION OF EXISTING UTILITIES, CONTRACTOR SHALL NOTIFY THE FOLLOWING AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO EXCAVATION OPERATION.

GREEN VALLEY SPECIAL UTILITY DISTRICT

GUADALUPE VALLEY ELECTRIC COOPERATIVE

CENTERPOINT ENERGY

TEXAS STATE WIDE ON CALL LOCATOR

830-914-2330

830-379-2114

800-427-7142

800-545-6005 OR 811
- THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED, BUT SHALL BE INVESTIGATED AND VERIFIED BY THE CONTRACTOR BEFORE STARTING WORK. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR THE MAINTENANCE AND PROTECTION OF THE EXISTING UTILITIES EVEN IF THEY ARE NOT SHOWN ON THE PLANS. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HERE ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND HE SHALL BE RESPONSIBLE FOR PROTECTION OF SAME DURING CONSTRUCTION.
- ALL WASTE MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE PROJECT. NO WASTE MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING ARTIFICIAL OR NATURAL DRAINAGE.
- THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100-YEAR FLOODPLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOODPLAIN DEVELOPMENT PERMIT.
- THE CONTRACTOR SHALL MAINTAIN ALL ADJOINING STREETS AND TRAVELED ROUTES FREE FROM SPILLED AND/ OR TRACKED CONSTRUCTION MATERIALS AND/ OR DEBRIS.
- MATERIAL SPECIFICATIONS:

CONCRETE/ CONCRETE RIPRAP: CLASS A 3000 PSI IN 28 DAYS UNLESS OTHERWISE NOTED ON PLANS

REINFORCING STEEL: CONFORM TO A.S.T.M. A-615, GRADE 60 (2" COVER UNLESS OTHERWISE NOTED ON PLANS)

PIPE RAILING: CONFORM TO A.S.T.M. A-53, GRADE B, OR A-501

STRUCTURAL STEEL: CONFORM TO A.S.T.M. A-36
- CONTRACTOR TO COORDINATE CONCRETE CURB DEPRESSIONS WITH THE DEVELOPER (NO SEPARATE PAY ITEM).
- TRANSITION FROM NORMAL CROWN TO WASHOUT CROWN IN TWENTY-FIVE FEET (25') MINIMUM.
- IMPROVED EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING EIGHTY-FIVE PERCENT OF THE CHANNEL SUBGRADE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT THE CHANNEL FOR MAINTENANCE. REFER TO 35-504 OF THE CITY OF SAN ANTONIO UDC. NO EXTRA PAY ITEM.

GUADALUPE COUNTY NOTES

- PRIOR TO THE COMMENCEMENT OF ANY WORK, THE COUNTY SHALL ATTEND A PRECONSTRUCTION MEETING INCLUDING (BUT NOT LIMITED TO) THE CITY, ENGINEER, CONTRACTOR, DEVELOPER'S INSPECTION REPRESENTATIVE, AND DEVELOPER'S CONSTRUCTION MATERIAL TESTING REPRESENTATIVE.
- DURING CONSTRUCTION, NOTIFY THE COUNTY AT CONSTRUCTION@CO.GUADALUPE.TX.US AT LEAST 48 HOURS IN ADVANCE OF ANY WORK TO BE PERFORMED AFFECTING SUBGRADE, BASE, OR PAVEMENT INCLUDING BACKFILL OF ANY PROPOSED UTILITIES UNDERNEATH THE PAVEMENT AND FILL AREAS UPON WHICH PAVEMENT IS PROPOSED TO BE PLACED. SUCH NOTIFICATION IS ALSO REQUIRED BEFORE IMPLEMENTING ANY APPROVED TRAFFIC CONTROL PLANS ON EXISTING COUNTY-MAINTAINED ROADS. FULL CLOSURE OF COUNTY ROADS REQUIRES AT LEAST ONE MONTH ADVANCE NOTICE AND IS SUBJECT TO THE DISCRETION OF THE COUNTY ENGINEER AND POSSIBLE APPROVAL BY GUADALUPE COUNTY COMMISSIONERS COURT PER TRANSPORTATION CODE, CHAPTER 251.
- DURING CONSTRUCTION, PROVIDE ALL INSPECTION AND TESTING REPORTS TO THE COUNTY AT CONSTRUCTION@CO.GUADALUPE.TX.US AS SOON AS AVAILABLE FOR IDENTIFICATION AND CORRECTION OF ANY EMERGING DEFICIENCIES.
- AT THE COMPLETION OF CONSTRUCTION, PROVIDE AS-BUILT DRAWINGS AND A LETTER SIGNED AND SEALED BY THE ENGINEER OF RECORD CERTIFYING THAT:

ALL IMPROVEMENTS WERE MADE IN ACCORDANCE WITH THE APPROVED IMPROVEMENT PLANS AND COUNTY REGULATIONS.

ANY CHANGED IMPROVEMENTS WERE MADE IN ACCORDANCE WITH THE COUNTY'S REGULATIONS.

THE ELEVATIONS AND GRADES WERE TAKEN BY AN ON-SITE SURVEY ON A DATE SPECIFIED TO ENSURE THAT ALL PAVEMENT, INLETS, MANHOLES AND APPURTENANCES ARE CONSTRUCTED TO GRADE AS SHOWN ON THE RECORD. DRAWINGS AND ARE IN COMPLIANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.

ALL TRUNK STORM SEWERS AND LEADS ARE OF THE PROPER SIZE AND THAT ALL IMPROVEMENTS ARE CAPABLE OF PERFORMANCE AS DESIGNED AND APPROVED.

LEGAL DESCRIPTION

A 25.72 ACRE TRACT OF LAND SITUATED WITHIN THE WILLIAM BRACKEN SURVEY NO. 230, ABSTRACT NO. 71, GUADALUPE COUNTY, TEXAS, BEING OUT OF THE REMAINDER OF A CALLED 141.823 ACRE TRACT RECORDED IN DOCUMENT NO. 202299016819, GUADALUPE COUNTY OFFICIAL PUBLIC RECORDS

CONSTRUCTION MATERIALS TESTING NOTES (CITY OF MARION)

TESTING SHALL BE PERFORMED BY AN APPROVED, INDEPENDENT TESTING LABORATORY. THE FOLLOWING TEST SCHEDULE SHALL BE ADHERED TO:

- STREETS: SUBGRADE MOISTURE, DENSITY TEST AS OUTLINED IN THE TESTING SCHEDULE TABLE UNDER SECTION 42(C) OF THE CITY OF MARION SUBDIVISION ORDINANCE.
- FLEXIBLE BASE: FL, LL, PI, AND GRADATION OF MATERIAL USED; MOISTURE, DENSITY TEST ON SAME SPACING AS SUBGRADE.
- CONCRETE STRUCTURES: CONCRETE CYLINDERS, ONE/50 CY OR FOR EACH POUR IF LESS THAN 50 CY SHALL BE TAKEN FOR CURBS, DRAINAGE STRUCTURES AND SIDEWALKS.
- ALL TESTING IS THE RESPONSIBILITY OF THE DEVELOPER. COPIES OF ALL TEST RESULTS SHALL BE FURNISHED TO THE CITY BEFORE FINAL APPROVAL OF THE SUBDIVISION IS GIVEN.

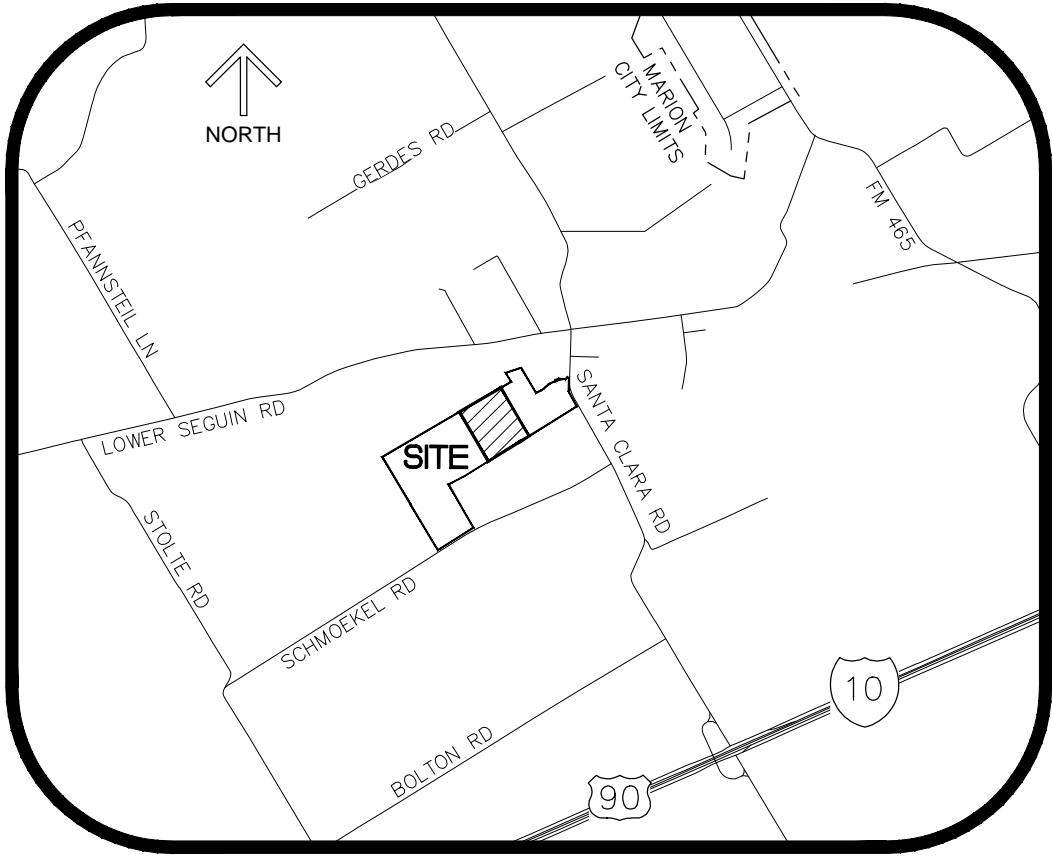
TESTING REQUIREMENTS:

- ALL MATERIALS TO BE USED IN SUBDIVISION CONSTRUCTION SHALL BE SUBJECT TO TESTING IF WARRANTED. THE PREPONDERANCE OF TESTING TO BE PERFORMED IN SUBDIVISIONS IS DIRECTLY RELATED TO STREET CONSTRUCTION AND A SERIES OF LABORATORY TESTS NORMALLY ASSOCIATED WITH ROAD AND STREET CONSTRUCTION WILL BE REQUIRED IN SUBDIVISIONS. SAID TESTS BEING PERFORMED BY AN INDEPENDENT TESTING LABORATORY USING QUALIFIED PERSONNEL. THE DESIGN (OR CONSULTING) ENGINEER OR HIS DESIGNATED REPRESENTATIVE SHALL BE PRESENT AT ALL TESTING'S.
- THE SUBDIVIDER SHALL NOTIFY THE CITY AT LEAST FIVE BUSINESS DAYS PRIOR TO THE CONTRACTOR BEGINNING CONSTRUCTION. CONTRACTOR SHALL BE REQUIRED TO NOTIFY THE CITY A MINIMUM OF AT LEAST TWENTY-FOUR (24) HOURS IN ADVANCE OF ALL TESTING BEING PERFORMED. IT IS ASSUMED THAT THE PREPONDERANCE OF TESTING REQUIRED IN THE SUBDIVISION IS THAT TESTING RELATED DIRECTLY TO STREET CONSTRUCTION.
- SUBGRADE MATERIALS SHALL BE COMPACTED BY APPROVED MECHANICAL TAMPING EQUIPMENT TO AN APPARENT DRY DENSITY OF THE TOTAL MATERIAL OF NOT LESS THAN NINETY (90%) PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE TEX-113-E COMPACTION TEST MADE IN ACCORDANCE WITH THE PROCEDURE OUTLINED IN THE TEXAS HIGHWAY DEPARTMENT TESTING MANUAL. TESTS FOR DENSITY WILL BE MADE WITHIN TWENTY-FOUR (24) HOURS AFTER COMPACTION OPERATIONS ARE COMPLETED. IF THE MATERIAL FAILS TO MEET THE DENSITY SPECIFIED, IT SHALL BE REMOVED AS NECESSARY TO OBTAIN THE DENSITY REQUIRED.
- WHEN A FILL OR EMBANKMENT IS REQUIRED TO ACHIEVE THE PRESCRIBED SUBGRADE, OR STRUCTURAL ELEVATION, SUCH FILL SHALL BE PLACED IN UNIFORM LIFTS COVERING THE ENTIRE WIDTH OF THE CROSS-SECTION. PRIOR TO COMPACTION, THE LAYERS SHALL NOT EXCEED A SIX (6) INCH DEPTH WHERE PNEUMATIC TIRE ROLLING IS TO BE USED AND SHALL NOT EXCEED EIGHT (8) INCHES IN DEPTH FOR ROLLING WITH OTHER TYPES OF ROLLERS. EACH LIFT SHALL BE COMPACTED TO THE REQUIRED DENSITY BEFORE SUCCEEDING LIFTS ARE PLACED. LIFTS SHALL BE COMPACTED TO NOT LESS THAN NINETY (90%) PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE TEX-113-E COMPACTION TEST MADE IN ACCORDANCE WITH THE PROCEDURE OUTLINED IN THE TEXAS HIGHWAY DEPARTMENT TESTING MANUAL.
- SWELLING SOILS (SOILS WITH PLASTICITY INDEX OF 20 OR MORE) SHALL BE TREATED AS REQUIRED BY ADDITION OF GRADE A, HYDRATED LIME AND COMPACTED. DEVELOPER MUST PROVIDE THE CITY WITH LAB REPORTS ON SOIL CONDITIONS, INCLUDING SULFATE TESTING, AND RECOMMENDATIONS.
- FLEXIBLE BASE MATERIALS SHALL BE COMPACTED BY APPROVED MECHANICAL TAMPING EQUIPMENT TO AN APPARENT DRY DENSITY OF THE TOTAL MATERIAL OF NOT LESS THAN NINETY- FIVE (95%) PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE TEX-113-E COMPACTION TEST MADE IN ACCORDANCE WITH THE PROCEDURE OUTLINED IN THE TEXAS HIGHWAY DEPARTMENT TESTING MANUAL. TESTS FOR DENSITY WILL BE MADE WITHIN TWENTY-FOUR (24) HOURS AFTER COMPACTION OPERATIONS ARE COMPLETED. IF THE MATERIAL FAILS TO MEET THE DENSITY SPECIFIED, IT SHALL BE REMOVED AS NECESSARY TO OBTAIN THE DENSITY REQUIRED.
- EACH COURSE OF FIVE (5) INCHES OR LESS SHALL BE COMPACTED TO FULL REQUIRED DENSITY BEFORE SUCCEEDING LAYERS ARE PLACED.
- IN THE EVENT OF FAILURES, ADDITIONAL TESTS WILL BE TAKEN. IF EXCESSIVE RAIN OCCURS ON A PREVIOUSLY TESTED SECTION, THE CITY SHALL HAVE THE RIGHT TO ORDER RETESTS AS NECESSARY.
- THE CONTRACTOR SHALL NOTIFY THE TESTING LAB WHEN TESTS ARE TO BE TAKEN. IF IT IS NECESSARY TO RETEST, SUCH RETESTING SHALL BE AT THE CONTRACTOR'S EXPENSE. THE SCOPE OF TESTING OF MATERIALS INCORPORATED IN SUBDIVISION CONSTRUCTION IS NOT NECESSARILY LIMITED TO THOSE TESTS OUTLINED ABOVE. IN THE EVENT OF UNUSUAL CONDITIONS OR FACTORS WHICH MAY GIVE THE CITY REASON TO QUESTION THE QUALITY OF THE MATERIALS IN ANY PORTION OF THE SUBDIVISION, THE CITY WILL HAVE THE RIGHT TO ORDER SUCH ADDITIONAL TESTS AS ARE NECESSARY AT THE CITY'S EXPENSE.
- ALL TESTING WITHIN THESE REQUIREMENTS WILL BE PERFORMED IN ACCORDANCE WITH THE AMERICAN SOCIETY OF TESTING MATERIALS (ASTM) LATEST REVISION, AND/OR AS ELSEWHERE PROVIDED IN APPROVED PLANS AND SPECIFICATIONS FOR THE SUBDIVISION. THE CITY WILL REQUIRE ALL SUBDIVISION TEST REPORTS TO BE CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER (TEXAS REGISTRATION) AND WILL FURTHER REQUIRE THAT THE CITY BE FURNISHED A MINIMUM OF TWO (2) COPIES OF TESTING REPORTS

CIVIL CONSTRUCTION PLANS

FOR KAYDEN SPRINGS UNIT 2

MARION, TX GUADALUPE COUNTY MUNICIPAL UTILITY DISTRICT NO. 10



LOCATION MAP

N.T.S.

NO.	DATE	REVISIONS	BY

TABLE OF CONTENTS

CIVIL PLANS

- C1.0 COVER SHEET
- C1.1 PLAT (1 OF 2)
- C1.2 PLAT (2 OF 2)
- C1.3 STORM WATER POLLUTION PREVENTION PLAN
- C1.4 STORM WATER POLLUTION PREVENTION PLAN DETAILS
- C1.5 EROSION CONTROL STANDARDS
- C1.6 GRADING PLAN
- C1.7 GRADING DETAILS
- C1.8 OVERALL UTILITY PLAN

STREETS

- C2.0 STREET COVER SHEET
- C2.1 SIGNAGE AND PAVEMENT MARKING PLAN
- C2.2 STREET PLAN AND PROFILE – RIVER GAIL WAY
- C2.3 STREET PLAN AND PROFILE – LAYNES FALLS
- C2.4 STREET PLAN AND PROFILE – KOLBE CREEK
- C2.5 STREET PLAN AND PROFILE – KNOB CREEK WAY
- C2.6 STREET PLAN AND PROFILE – LAURIE CREEK
- C2.7 STREET DETAILS (1 OF 2)
- C2.8 STREET DETAILS (2 OF 2)
- C2.9 TRAFFIC SIGNAGE DETAILS

DRAINAGE

- C3.0 DRAINAGE COVER SHEET
- C3.1 DRAIN PLAN AND PROFILE – DRAIN B
- C3.2 DRAIN B DETAILS
- C3.3 DRAIN PLAN AND PROFILE – DRAIN G
- C3.4 DRAIN PLAN AND PROFILE – DRAIN H
- C3.5 DRAIN PLAN AND PROFILE – DRAIN I
- C3.6 DRAIN PLAN AND PROFILE – DRAIN J
- C3.7 DRAINAGE DETAILS (1 OF 2)

WATER

- C4.0 WATER COVER SHEET
- C4.1 WATER DISTRIBUTION PLAN
- C4.2 WATER DETAILS (1 OF 5)
- C4.3 WATER DETAILS (2 OF 5)
- C4.4 WATER DETAILS (3 OF 5)
- C4.5 WATER DETAILS (4 OF 5)
- C4.6 WATER DETAILS (5 OF 5)

SANITARY SEWER

- C5.0 SANITARY SEWER COVER SHEET
- C5.1 OVERALL SANITARY SEWER LAYOUT
- C5.2 SANITARY SEWER PLAN AND PROFILE – LINE F
- C5.3 SANITARY SEWER PLAN AND PROFILE – LINE G
- C5.4 SANITARY SEWER PLAN AND PROFILE – LINE J
- C5.5 SANITARY SEWER PLAN AND PROFILE – LINE K
- C5.6 SANITARY SEWER PLAN AND PROFILE – LINE L
- C5.7 SANITARY SEWER DETAILS (1 OF 4)
- C5.8 SANITARY SEWER DETAILS (2 OF 4)
- C5.9 SANITARY SEWER DETAILS (3 OF 4)
- C5.10 SANITARY SEWER DETAILS (4 OF 4)



ENGINEER / SURVEYOR:

WESTWOOD PROFESSIONAL SERVICES
211 N LOOP 1604 E, SUITE 205
SAN ANTONIO, TEXAS 78232
TEL: (210) 265-8300

OWNER / DEVELOPER:

LENNAR HOMES OF TEXAS
100 NE LOOP 410, SUITE 1155
SAN ANTONIO, TEXAS 78216
TEL: (210) 403-6200

Westwood

Phone (210) 265-8300 211 North Loop 1604 East, Suite 205
Toll Free (888) 937-5150 San Antonio, TX 78232
westwoodps.com

Westwood Professional Services, Inc.

TBPELS FIRM REGISTRATION NO. F-11756
TBPELS FIRM REGISTRATION NO. 10074301

BENCHMARK LIST:

BENCHMARK #1 - 5/8IN IR W/ PINK WESTWOOD CAP
N = 13745774.11 / E = 2239314.16
ELEVATION = 623.48

BENCHMARK #2 - 5/8IN IR W/ PINK WESTWOOD CAP
N = 13745303.47 / E = 2239344.38
ELEVATION = 626.12

BENCHMARK #3 - 5/8IN IR W/ PINK WESTWOOD CAP
N = 13744921.74 / E = 2239395.02
ELEVATION = 627.07

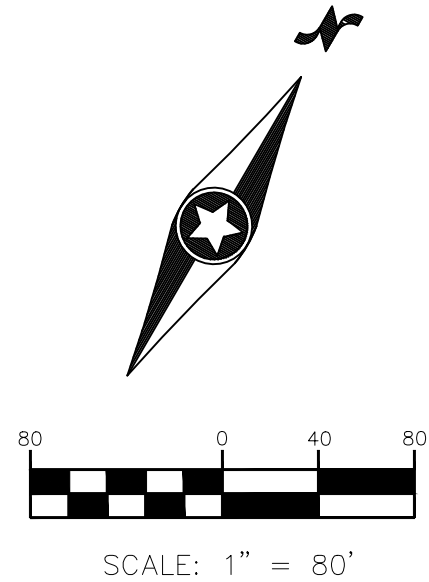
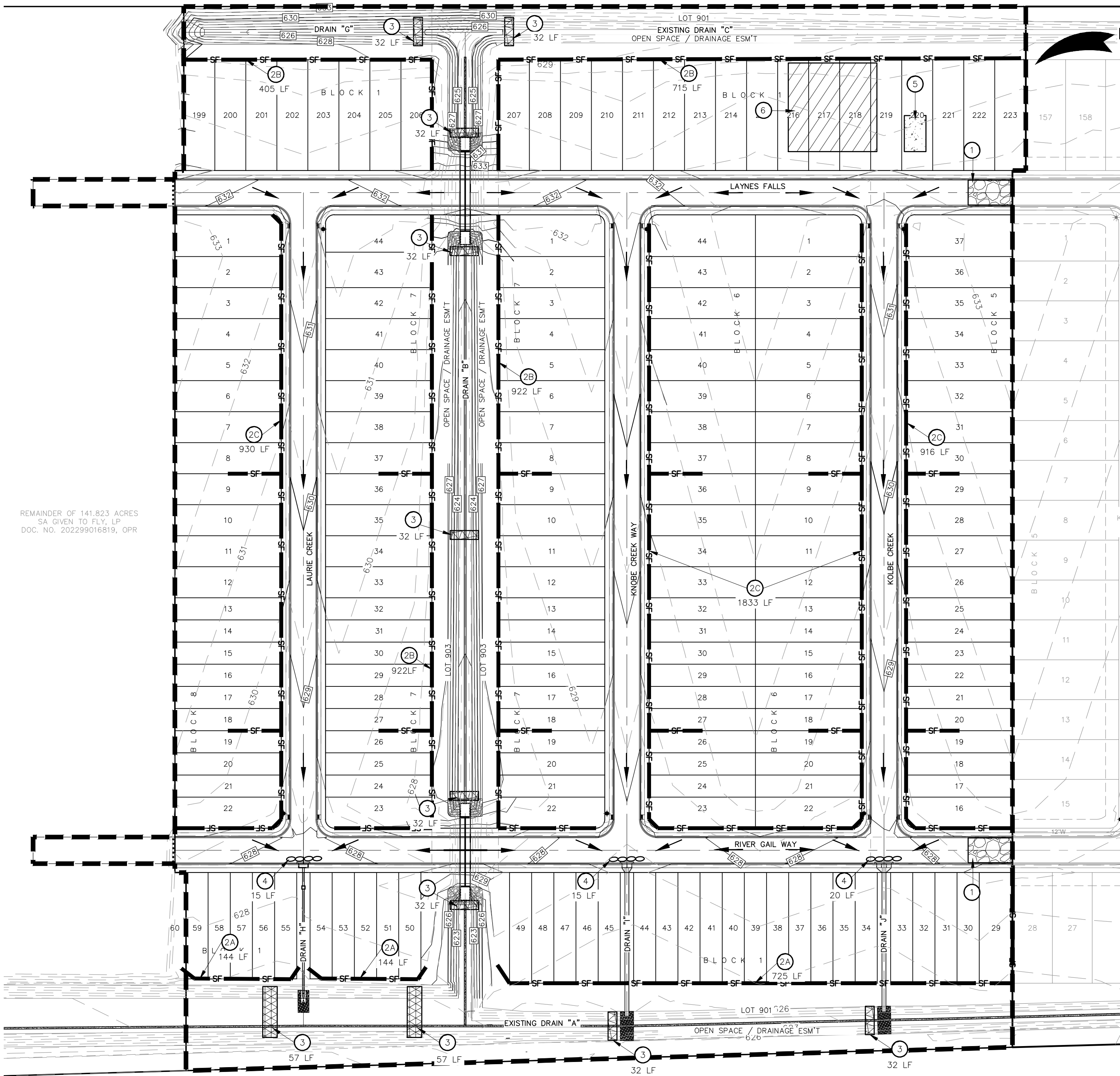
TRENCH EXCAVATION SAFETY PROTECTION

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

CAUTION: THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION PRIOR TO COMMENCING WORK AND IS RESPONSIBLE FOR ANY/ALL DAMAGES RESULTING FROM THE FAILURE TO LOCATE AND PRESERVE UTILITIES.

ESTIMATED SEDIMENTATION AND EROSION CONTROL QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITY
1	STABILIZED CONSTRUCTION ENTRANCE/EXIT	EA	2
2A	SILT FENCE (PHASE 1)	LF	1013
2B	SILT FENCE (PHASE 2)	LF	2964
2C	SILT FENCE (PHASE 3)	LF	3679
3	ROCK BERM	LF	402
4	INLET PROTECTION	LF	50
5	CONCRETE WASH OUT PIT	EA	1
6	EQUIPMENT STAGING AREA	EA	1



LEGEND

- 1200 --- EXISTING CONTOURS
- 6200 --- PROPOSED CONTOURS
- FLOW ARROWS ---
- SWALE ---
- AREA OF SOIL DISTURBANCE ---
- APPROXIMATE 100YR WATER SURFACE ---
- 1 STABILIZED CONSTRUCTION ENTRANCE/EXIT
- 2A --- SF --- SILT FENCE AND/OR APPROPRIATE SUBSTITUTE (PHASE 1)
- 2B --- SF --- SILT FENCE AND/OR APPROPRIATE SUBSTITUTE (PHASE 2)
- 2C --- SF --- SILT FENCE AND/OR APPROPRIATE SUBSTITUTE (PHASE 3)
- 3 ROCK BERM OR GABION
- 4 BAGGED GRAVEL INLET FILTER AND/OR APPROPRIATE SUBSTITUTE
- 5 *CONCRETE WASH OUT PIT
- 6 *EQUIPMENT STAGING AREA

* ACTUAL LAYOUT DETERMINED IN FIELD, SHOULD BE PLACED IN THE PROXIMITY OF THE CONSTRUCTION ENTRANCE/EXIT AND NOT LOCATED NEAR A WELL, FLOODPLAIN, OR OTHER POTENTIAL SOURCES OF CONTAMINATION.

SILT FENCE NOTES:

- SILT FENCE SHALL BE INSTALLED IN THREE PHASES.
- THE FIRST PHASE SHALL BE INSTALLED PRIOR TO CONSTRUCTION COMMENCING.
- THE SECOND PHASE SHALL BE INSTALLED AFTER DRAINS ARE CUT TO FINAL GRADE.
- THE THIRD PHASE SHALL BE INSTALLED AFTER STREETS HAVE BEEN PAVED.

NOTE:

- PER TPDES REQUIREMENTS, DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.

GENERAL NOTES:

- CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASHOUT PIT AND CONSTRUCTION EQUIPMENT AND STORAGE AREA ARE TO BE DETERMINED IN THE FIELD. THEY ARE SHOWN ON THIS PLAN FOR ILLUSTRATION PURPOSES ONLY.
- IF NECESSARY, CONTRACTOR MAY MODIFY STORMWATER CONTROLS TO ACHIEVE THE DESIRED INTENT. ANY CHANGES ARE TO BE NOTED, SIGNED AND DATED BY THE RESPONSIBLE PARTY IN THE TPDES BOOK.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL STORMWATER CONTROLS.
- REFER TO TPDES BOOK FOR THIS PROJECT FOR MORE INFORMATION/DETAILS.
- CONTRACTOR IS REQUIRED TO IMMEDIATELY NOTIFY ENGINEER OF ANY QUESTIONS REGARDING THE INTENT OF THIS PLAN.
- CONTRACTOR IS REQUIRED TO FILE NOI'S (NOTICE OF INTENT) AND NOT'S (NOTICE OF TERMINATION) FOR THIS PROJECT. REFER TO TPDES FOR PROPER POSTING REQUIREMENTS AND DOCUMENTS.
- A COPY OF THIS PLAN AND THE TPDES BOOK MUST REMAIN AT THE CONSTRUCTION SITE AT ALL TIMES.
- BARE SOILS SHOULD BE STABILIZED (e.g., HYDRO MULCH), WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OR WHERE CONSTRUCTION ACTIVITY HAS TEMPORARILY CEASED FOR MORE THAN 21 DAYS.
- ALL DISTURBED OR EXPOSED AREAS SUBJECT TO EROSION SHALL BE STABILIZED FOR TEMPORARY VEGETATIVE COVER. NO AREA SUBJECT TO EROSION SHALL BE LEFT DISTURBED AND UNSUITABLE FOR PERIODS LONGER THAN IS ABSOLUTELY NECESSARY TO CARRY OUT THAT PORTION OF THE CONSTRUCTION WORK. OR 1 WEEK AFTER SOIL HAS BEEN DISTURBED, WHICHEVER IS LESS.
- CONTRACTOR TO PROVIDE A COPY OF THE SIGNED AND CERTIFIED CONSTRUCTION SITE NOTICE TO THE OPERATOR OF THE MUNICIPAL SEPARATE STORM SEWER SYSTEM RECEIVING THE DISCHARGE AT LEAST TWO DAYS PRIOR TO COMMENCING OF CONSTRUCTION ACTIVITY.
- AN INSPECTION WILL BE PERFORMED BY THE CONTRACTOR EVERY 2 WEEKS AS WELL AS AFTER EVERY HALF INCH OR MORE OF RAIN (AS RECORDED ON A NON-FREEZING RAIN GAUGE TO BE LOCATED AT THE PROJECT SITE.) THE CONTROLS WILL BE REVISED AS NECESSARY.
- CONTRACTOR TO PLACE TRENCH EXCAVATION MATERIAL ON THE UPGRADE (HIGH) SIDE OF THE TRENCH.
- ALL SOIL, SAND, GRAVEL, AND EXCAVATED MATERIALS STOCKPILED ON-SITE WILL HAVE APPROPRIATELY SIZED SILT FENCE.
- CONTRACTOR TO INDICATE AND UTILIZE APPROPRIATE CONTROL METHODS AS NECESSARY.

NOTE: SEDIMENTATION AND EROSION CONTROLS SHOWN ARE SCHEMATIC ONLY. CONTROLS MAY BE FIELD LOCATED FOR BEST USE AND REPORTED TO ENGINEER. ADJUSTMENTS SHALL BE INDICATED ON PLAN BY CONTRACTOR.

SIGNATURE (OWNER) _____ DATE _____

CONTRACTOR'S CERTIFICATION
I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION PLAN.

SIGNATURE (CONTRACTOR) _____ DATE _____

BY					
REVISIONS					
DATE					
NO.					

Westwood

Phone (210) 955-9300

Toll Free (888) 937-5150

211 North Loop 1804 East, Suite 205
San Antonio, TX 78232
westwoodjps.com

Westwood Professional Services, Inc.

TPDES FIRM REGISTRATION NO. 10974801



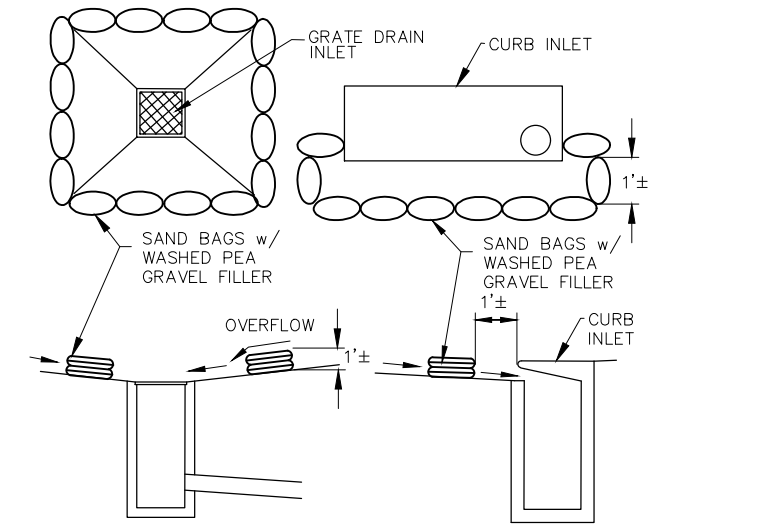
KAYDEN SPRINGS
UNIT 2
STORM WATER POLLUTION PREVENTION PLAN

JOB NO.:	0046599.02
DATE:	08/08/2024
DESIGN:	TBW
DRAWN:	SG
CHECKED:	DAD

SHEET
C1.3

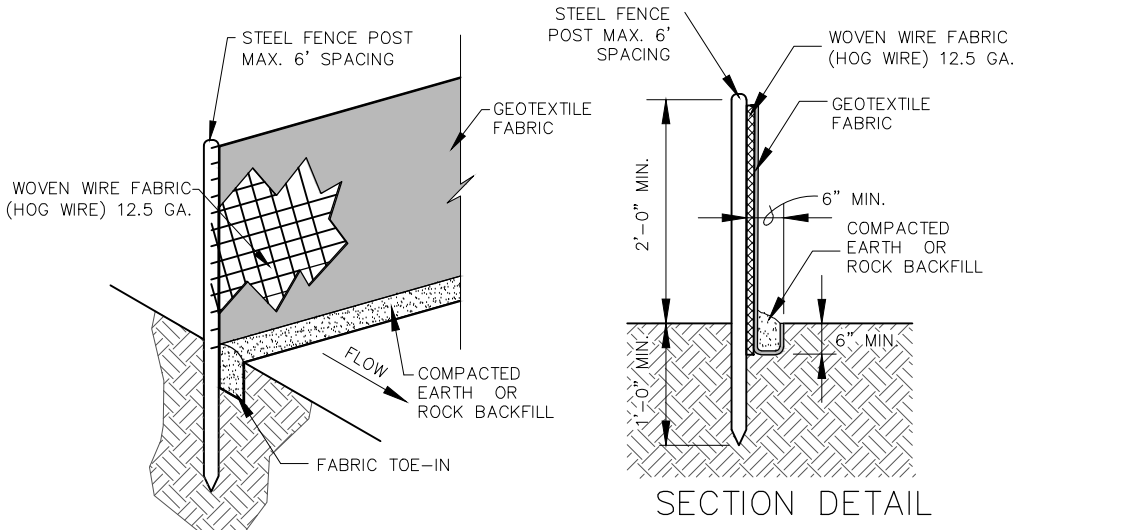
- STABILIZED CONSTRUCTION ENTRANCE/EXIT NOTES:**
1. AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.
 2. THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH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

1 STABILIZED CONSTRUCTION ENTRANCE \ EXIT
N.T.S.



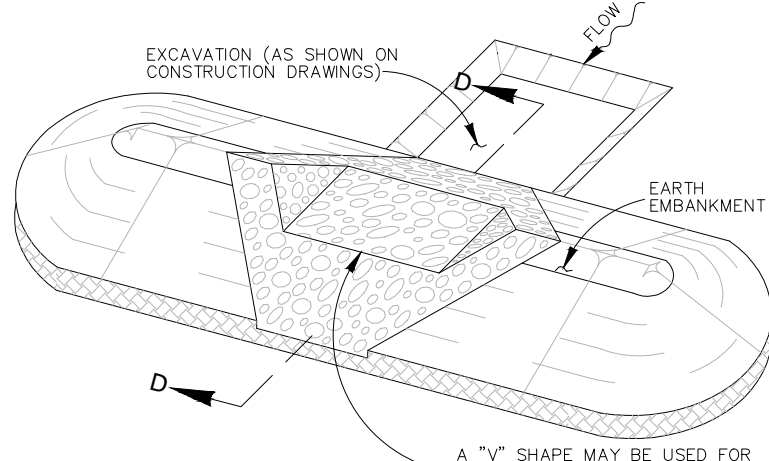
- CURB INLET FILTER NOTES:**
1. GRAVEL FILTERS CAN BE USED ON PAVEMENT OR BARE GROUND.
 2. REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
 3. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.
 4. INSPECT FILTER FABRIC AND PATCH OR REPLACE IF TORN OR MISSING.
 5. Z-TYPE CURB INLET FILTER IS NOT AN APPROVED TYPE OF BMP.

4 BAGGED GRAVEL INLET FILTER
N.T.S.

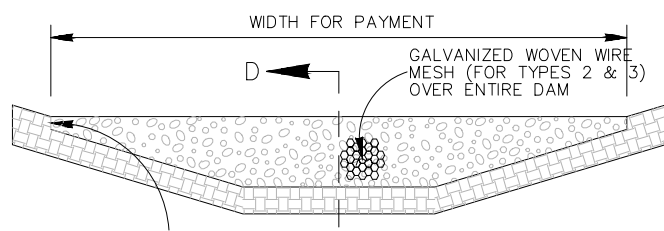


- SILT FENCE NOTES**
1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT DEEP AND SPACED NOT MORE THAN 8 FEET ON CENTER. WHERE WATER CONCENTRATES, THE MAXIMUM SPACING SHOULD BE 6 FEET.
 2. LAY OUT FENCING DOWN-SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS 1/4 ACRE/100 FEET OF FENCE.
 3. 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 TREATED (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.
 4. 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.
 5. 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.
 6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
 7. INSPECT ALL FENCING WEEKLY, AND AFTER ANY RAINFALL.
 8. REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.
 9. REPLACE ANY TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.
 10. REPLACE OR REPAIR ANY SECTION 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 VEHICLE ACCESS POINTS.
 11. 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.

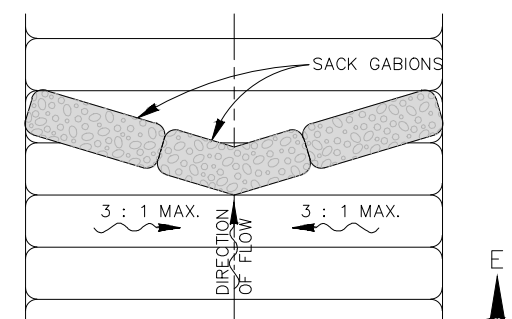
2 SILT FENCE
N.T.S.



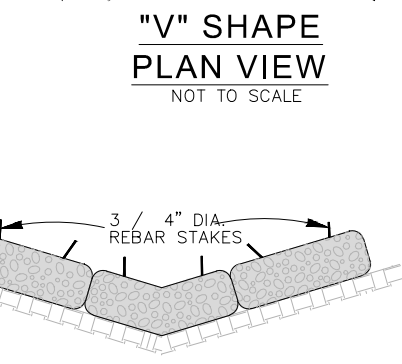
TYPE 1 & 2 FILTER DAM AT SEDIMENT TRAP
SCALE : 1" = 10'



TYPE 1, 2 & 3 FILTER DAM AT CHANNEL SECTIONS
SCALE : 1" = 6'



PLAN VIEW
SCALE : 1" = 10'

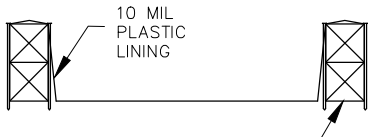


SECTION E-E
SCALE : 1" = 10'

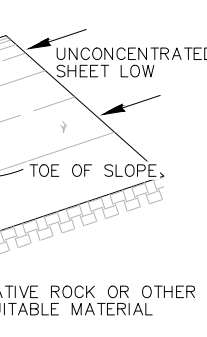
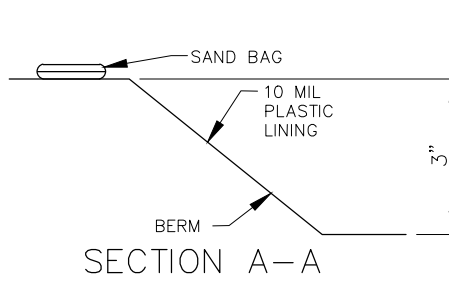
TYPE 4 FILTER DAM AT DITCHES & SMALLER CHANNELS PLAN VIEW

3 ROCK FILTER DAMS

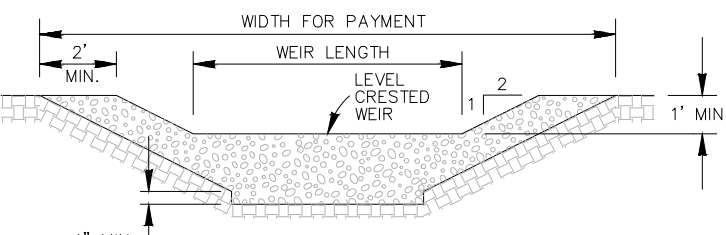
- CONCRETE WASH OUT PIT NOTES:**
1. DETAIL ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.
 2. PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL N POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.
 3. WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.
 4. WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF.
 5. DO NOT WASHOUT CONCRETE TRUCKS INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS.



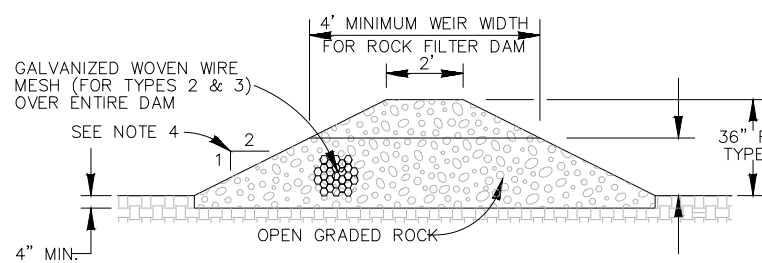
5 CONCRETE WASH OUT PIT
N.T.S.



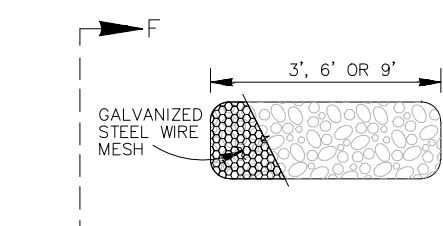
TYPE 1 FILTER DAM AT TOE OF SLOPE
SCALE : 1" = 10'



PROFILE OF TYPE 1 & 2 FILTER DAM AT SEDIMENT TRAP
SCALE : 1" = 6'

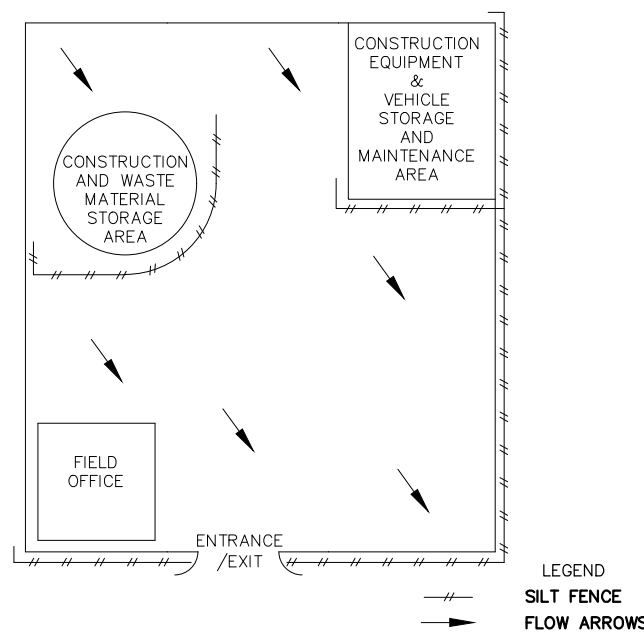


SECTION D-D
SCALE : 1" = 6'



TYPE 4 SACK GATION DETAIL
SCALE : 1" = 6'

SECTION F-F
SCALE : 1" = 6'



6 EQUIPMENT STAGING AREA
N.T.S.

ROCK FILTER DAM USAGE GUIDELINES

ROCK FILTER DAMS SHOULD BE CONSTRUCTED DOWNSTREAM FROM DISTURBED AREAS TO INTERCEPT SEDIMENT FROM OVERLOAD RUNOFF AND / OR CONCENTRATED FLOW. THE DAMS SHOULD BE SIZED TO FILTER A MAXIMUM FLOW THRU RATE OF 60 GPM / 7' FT SQUARED OF CROSS SECTIONAL AREA. A 2 YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE.

TYPE 1 (18" HIGH WITH NO WIRE MESH) :

TYPE 1 MAY BE USED AT THE TOE OF SLOPES, AROUND INLETS, IN SMALL DITCHES AND AT DIKE OR SWALE OUTLETS. THIS TYPE OF DAM IS RECOMMENDED TO CONTROL EROSION FROM A DRAINAGE AREA OF 5 ACRES OR LESS. TYPE 1 MAY NOT BE USED IN CONCENTRATED HIGH VELOCITY FLOWS (APPROXIMATELY 8 FT. / SEC. OR MORE) IN WHICH AGGREGATE WASH OUT MAY OCCUR. SANDBAGS MAY BE USED AT THE EMBEDDED FOUNDATION (4" DEEP MIN.) FOR BETTER FILTERING EFFICIENCY OF LOW FLOWS IF CALLED FOR ON THE PLANS.

TYPE 2 (18" HIGH WITH WIRE MESH) :

TYPE 2 MAY BE USED IN DITCHES AND AT DIKE OR SWALE OUTLETS.

TYPE 3 (36" HIGH WITH WIRE MESH) :

TYPE 3 MAY BE USED IN STEAM FLOW AND SHOULD BE SECURED TO THE STREAM BED.

TYPE 4 (SACK GABIONS) :

TYPE 4 MAY BE USED IN DITCHES AND SMALLER CHANNELS TO FORM AN EROSION CONTROL DAM.

GENERAL NOTES

1. IF SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER, FILTER DAMS SHOULD BE PLACED NEAR THE TOP OF SLOPES WHERE EROSION IS ANTICIPATED, UPSTREAM AND / OR DOWNSTREAM AT DRAINAGE STRUCTURES, AND IN ROADWAY DITCHES AND CHANNELS TO COLLECT SEDIMENT.
2. MATERIALS (AGGREGATE, WIRE MESH, SANDBAGS, ETC.) SHALL BE AS INDICATED BY THE SPECIFICATION FOR ROCK FILTER DAMS FOR EROSION AND SEDIMENTATION CONTROL.
3. THE ROCK FILTER DAM DIMENSIONS SHALL BE AS INDICATED ON THE STORM WATER POLLUTION PREVENTION PLANS.
4. SIDE SLOPES SHOULD BE 2 : 1 OR FLATTER. DAMS WITHIN THE SAFETY ZONE SHALL HAVE SIDE SLOPES OF 6 : 1 OR FLATTER.
5. MAINTAIN A MINIMUM OF 1' BETWEEN TOP OF ROCK FILTER DAM WEIR AND TOP OF EMBANKMENT FOR FILTER DAMS AT SEDIMENT TRAPS.
6. FILTER DAMS SHOULD BE EMBEDDED A MINIMUM OF 4" INTO THE EXISTING GROUND.
7. THE SEDIMENT TRAP FOR PONDING OF SEDIMENT LADEN RUNOFF SHALL BE OF THE DIMENSIONS SHOWN ON THE PLANS.
8. ROCK FILTER DAM TYPES 2 & 3 SHALL BE SECURED WITH 20 GAUGE GALVANIZED WOVEN WIRE MESH WITH 1" DIAMETER HEXAGONAL OPENINGS. THE AGGREGATE SHALL BE PLACED ON THE MESH TO THE HEIGHT AND SLOPES SPECIFIED. THE MESH SHALL BE FOLDED AT THE UPSTREAM SIDE OVER THE AGGREGATE AND TIGHTLY SECURED TO ITSELF ON THE DOWNSTREAM SIDE USING WIRE TIES OR HOG RINGS. IN STREAM USE, THE MESH SHOULD BE SECURED OR STAKED TO THE STREAM BED PRIOR TO AGGREGATE PLACEMENT.
9. SACK GABIONS SHOULD BE STAKED DOWN WITH 3 / 4" DIA. REBAR STAKES.
10. FLOW OUTLET SHOULD BE ONTO A STABILIZED AREA (VEGETATION, ROCK, ETC.).
11. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

File: N:\0046599.02\06 CAD\DWG\Site Design_C3D\SWPPP.dwg

SITE DESCRIPTION

PROJECT: KAYDEN SPRINGS UNIT 2

A PROPOSED SINGLE-FAMILY RESIDENTIAL DEVELOPMENT LOCATED IN THE ETJ OF THE CITY OF MARION, COUNTY OF GUADALUPE, TEXAS LOCATED ON SANTA CLARA RD APPROX. 0.2 MI SOUTH OF LOWER SEGUIN RD

PROJECT DESCRIPTION:

THE CONSTRUCTION OF ALL STREETS, DRAINAGE, WATER, STORM SEWER, SANITARY SEWER, AND UTILITY FACILITIES NECESSARY FOR THE DEVELOPMENT OF A SINGLE-FAMILY RESIDENTIAL SUBDIVISION

MAJOR SOIL DISTURBING ACTIVITIES:

ACTIVITIES ASSOCIATED WITH STREET, DRAIN & UTILITY CONSTRUCTION-TRENCHING, FILL AND EXCAVATION

TOTAL PROJECT AREA: 25.78 AC

TOTAL AREA TO BE DISTURBED: 25.94 AC

WEIGHTED RUNOFF COEFFICIENT (PRE CONSTRUCTION): 0.44

WEIGHTED RUNOFF COEFFICIENT (POST CONSTRUCTION): 0.72

EXISTING CONDITION OF SOIL & VEGETATIVE COVER AND % OF EXISTING VEGETATIVE COVER:

THE SOIL TYPE(S) ON SITE ARE AS FOLLOWS:

BRANYON CLAY (BrA & BrB)
TINN CLAY (Tw)
THE SITE IS 80% - 90% COVERED WITH NATIVE GRASSES AND BRUSH WITH SMALL TREE CLUSTERS

NAME OF RECEIVING WATERS:

THE SUBDIVISION GENERALLY DRAINS SOUTH-EAST TOWARDS SANTA CLARA TRIBUTARY 6

SOIL STABILIZATION PRACTICES:

TEMPORARY SEEDING
X PERMANENT PLANTING, SODDING, OR SEEDING
MULCHING
SOIL RETENTION BLANKET
X BUFFER ZONES
X PRESERVATIVE OF NATURAL RESOURCES

OTHER:

STRUCTURAL PRACTICES:

X SILT FENCES / SEDIMENT CONTROL ROLLS
HAY BALES
X ROCK BERMS
DIVERSION , INTERCEPTOR, OR PERIMETER DIKES
X DIVERSION , INTERCEPTOR, OR PERIMETER SWALES
DIVERSION DIKE AND SWALE COMBINATIONS
PIPE SLOPE DRAINS
PAVED FLUMES
X ROCK BEDDING AT CONSTRUCTION EXIT
TIMBER MATTING AT CONSTRUCTION EXIT
CHANNEL LINERS
SEDIMENT TRAPS
SEDIMENT BASINS
X STORM INLET SEDIMENT TRAP
STONE OUTLET STRUCTURES
CURBS AND GUTTERS
STORM SEWERS
X VELOCITY CONTROL DEVICES

OTHER:

NARRATIVE - SEQUENCE OF CONSTRUCTION (STORM WATER MANAGEMENT) ACTIVITIES:

STRUCTURAL PRACTICES, AS APPLICABLE, WILL BE INSTALLED PRIOR TO EACH PHASE OF THE PROJECT AND WILL BE MAINTAINED THROUGHOUT. SOIL STABILIZATION PRACTICES WILL CLOSELY FOLLOW COMPLETION AND ACCEPTANCE OF CONSTRUCTION FOR EACH PROJECT PHASE

STORM WATER MANAGEMENT:

THE CONTRACTOR WILL INSTALL AND MAINTAIN SEDIMENTATION AND EROSION CONTROL MEASURES AS SPECIFIED IN THE WATER POLLUTION ABATEMENT PLAN, TEMPORARY SEDIMENTATION & EROSION CONTROL PLAN, AND AS DIRECTED BY AUTHORIZED OFFICIALS

CONTRACTOR TO PLACE EXCAVATED MATERIAL ON THE HIGH SIDE OF THE TRENCH

EROSION AND SEDIMENT CONTROLS

OTHER EROSION AND SEDIMENT CONTROLS:

MAINTENANCE:

ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY, IT WILL BE DONE AT THE EARLIEST DATE POSSIBLE, BUT NO LATER THAN 7 CALENDAR DAYS AFTER THE SURROUNDING EXPOSED GROUND HAS DRIED SUFFICIENTLY TO PREVENT FURTHER DAMAGE FROM HEAVY EQUIPMENT

INSPECTION:

AN INSPECTION WILL BE PERFORMED BY THE CONTRACTOR:

A. EVERY 7 DAYS
B. EVERY 14 DAYS AS WELL AS AFTER EVERY HALF INCH OR MORE OF RAIN (AS RECORDED ON A NON-FREEZING RAIN GAUGE TO BE LOCATED AT THE PROJECT SITE).
CONTROLS WILL BE REPAIRED, REPLACED, AND/OR REVISED AS NECESSARY.

WASTE MATERIALS:

ALL WASTE MATERIAL WILL BE COLLECTED AND STORED IN A METAL DUMPSTER. THE DUMPSTER WILL MEET ALL STATE AND LOCAL CITY SOLID WASTE MANAGEMENT REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN THE DUMPSTER. THE DUMPSTER WILL BE EMPTIED AS NECESSARY OR AS REQUIRED BY LOCAL REGULATION, AND THE TRASH WILL BE HAULED TO A LOCAL DUMP. NO CONSTRUCTION WASTE MATERIAL WILL BE BURIED ON SITE

HAZARDOUS WASTE (INCLUDING SPILL REPORTING):

AT A MINIMUM, ANY PRODUCTS IN THE FOLLOWING CATEGORIES ARE CONSIDERED TO BE HAZARDOUS: PAINTS, ACIDS FOR CLEANING MASONRY SUPPLIES, CLEANING SOLVENTS, ASPHALT PRODUCTS, CHEMICAL ADDITIVES FOR SOIL STABILIZATION, OR CONCRETE CURING COMPOUNDS AND ADDITIVES. IN THE EVENT OF A SPILL WHICH MAY BE HAZARDOUS, THE SPILL COORDINATOR SHOULD BE CONTACTED IMMEDIATELY

SANITARY WASTE:

ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS AS NECESSARY OR AS REQUIRED BY LOCAL REGULATION BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR

OFF SITE VEHICLE TRACKING:

HAUL ROADS DAMPENED FOR DUST CONTROL
LOADED HAUL TRUCKS TO BE COVERED WITH TARPAULIN
EXCESS DIRT ON ROAD REMOVED DAILY
X STABILIZED CONSTRUCTION ENTRANCE

OTHER:

REMARKS:

OWNER'S CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY SUPERVISION IN ACCORDANCE WITH SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE (OWNER) DATE

CONTRACTOR'S CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION PLAN.

SIGNATURE (CONTRACTOR) DATE

NO.	DATE	REVISIONS	BY

Westwood

211 North Loop 1804 East, Suite 205
San Antonio, TX 78232
westwoodjps.com

(210) 265-9300
(888) 837-5150
Phone
Toll Free

Westwood Professional Services, Inc.

TXBPLS FIRM REGISTRATION NO. 10074801

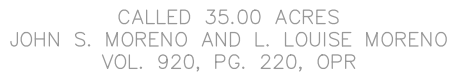


KAYDEN SPRINGS
UNIT 2

EROSION CONTROL STANDARDS

JOB NO.:	0046599.02
DATE:	08/08/2024
DESIGN:	TBW
DRAWN:	SG
CHECKED:	DAD

SHEET
C1.5



SCALE: 1" = 60'

LEGEND

- | | |
|------------------|--------------------------------|
| | EXISTING CONTOURS |
| E890.00 | EXISTING SPOT ELEVATION |
| | PROPOSED CONTOUR |
| 690.00 | PROPOSED SPOT ELEVATION |
| T690.00 | PROPOSED TOP OF CURB ELEVATION |
| | PROPOSED RIDGE LINE |
| | PROPOSED BUILDING SETBACK |
| A, B OR C | TYPE OF LOT GRADE |
| | FLOW ARROW |

ADD 600' TO ALL SPOT ELEVATIONS

NOTE:

1. SEE SHEETS C3.1-C3.8 FOR DRAIN DETAILS
2. STRIPPING OF VEGETATION FROM PROJECT SITES SHALL BE PHASED SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST POSSIBLE PERIOD OF TIME.
3. MINIMUM FINISHED FLOOR ELEVATIONS SHALL BE 10" ABOVE THE FINISHED GRADE OF THE SURROUNDING GROUND OR 12" ABOVE THE ONE-YEAR FLOOD SURFACE ELEVATION.
4. COMPACTION OF ALL EARTHWORK EMBANKMENTS SHALL HAVE A NON-PERMEABLE CORE, SHALL BE BASED ON A GEOTECHNICAL INVESTIGATION OF THE SITE, AND SHALL BE COMPACTED TO 90% STANDARD PROCTOR.



$$1'' = 20'$$


1. GENERAL DESCRIPTION
THIS ITEM SHALL CONSIST OF ALL CLEARING AND GRUBBING, DEMOLITION, PREPARATION OF LAND TO BE PLANTED, THE FILL, SPREADING AND COMPACTION TESTING, AND INSPECTION OF THE FILL, AND ALL SUBSIDIARY WORK NECESSARY TO COMPLETE THE GRADING OF THE CUT AND FILL AREAS TO CONFORM WITH THE LINES, GRADDES AND SLOPES AS SHOWN ON THE APPROVED PLANS.
2. CLEARING THE AREA TO BE FILLED
ALL TIMBER, LOGS, TREES, BRUSH, AND RUBBISH SHALL BE REMOVED FROM THE SITE.
3. SCARPING THE AREA TO BE FILLED
ALL ORGANIC MATTER SHALL BE REMOVED FROM THE SURFACE UPON WHICH THE FILL IS TO BE PLACED. IF THE FILL IS TO BE PLACED ON A SLOPE OF LESSER THAN A MINIMUM OF SIX INCHES (6"), ALL SURFACE RUTS OR OTHER UNEVEN FEATURES WILL BE LEVELED FIRST TO FIELD CONDITION TESTING. WHERE FILLS ARE MADE ON HILLSIDES OR SLOPES OF THE GRADE OF FIELD CONDITION TESTING, THE FILL SHALL BE BENCHED OR BENCHED SLOPES WHICH ARE FLATTER THAN THE SLOPE RATIO OF THE ORIGINAL GROUND IS STEEPER THAN 5 HORIZONTAL TO 1 VERTICAL, THE BENCHES SHALL BE BENCHES 15 FEET OR MORE WIDE. WHERE SLOPES ARE FLATTER THAN 5 TO 1 SHALL BE BENCHED WHEN CONSIDERED NECESSARY BY THE GEOTECHNICAL ENGINEER.
4. COMPACTING THE AREA TO BE FILLED
AFTER THE CLEARING AND DISBURSING OR SCARPING OF THE FILL AREA, IT SHALL BE BLADED UNTIL IT IS UNIFORM AND FREE FROM LARGE CLOS. THE AREA SHALL BE BROUGHT TO THE ADEQUATE MOISTURE CONTENT AND COMPACTED (TYPICALLY) TO NOT LESS THAN NINETY PERCENT OF THE MAXIMUM DENSITY IN ACCORDANCE WITH THE CURRENT ASTM D 1557-90 COMPACTION PROCEDURE, OR 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH THE CURRENT TxDOT--TEX--113--C COMPACTION PROCEDURE.
5. FILL MATERIALS
THE MATERIAL USED SHALL BE FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCE, SUCH AS TREES, BRUSH, AND RUBBISH.

THE SELECTED FILL MATERIAL SHALL BE PLACED IN LEVEL, UNIFORM LAYERS WHICH, WHEN COMPACTED, SHALL HAVE A DENSITY CONFORMING TO THAT STIPULATED ABOVE. EACH LAYER SHALL BE THOROUGHLY MIXED DURING THE SPREADING TO ENSURE UNIFORMITY OF MATERIAL IN EACH LAYER. COMPACTED LAYER THICKNESS NORMALLY WILL BE SIX INCHES (6"), HOWEVER IT MAY VARY DEPENDING ON THE DEMONSTRATED CAPABILITY OF COMPACTION EQUIPMENT. THE MAXIMUM LOOSE DEPTH FOR ANY MATERIAL SHALL NOT EXCEED TWELVE INCHES (12"). FOR TESTING REQUIREMENTS OF FILL MATERIAL, SEE DENSITY TESTING.

WHEN FILL MATERIAL INCLUDES ROCK, THE MAXIMUM ROCK SIZE SHALL BE AS APPROVED BY THE GEOTECHNICAL ENGINEER. NO LARGER ROCKS SHALL BE ALLOWED TO NEST AND ALL VOIDS MUST BE FILLED WITH SMALL STONES OR SOIL AND ADEQUATELY COMPACTED. NO LARGE ROCKS WILL BE PERMITTED WITHIN EIGHTEEN INCHES (18") OF THE FINISHED GRADE.

COMPACTATION EQUIPMENT SHALL BE CAPABLE OF COMPACTING THE FILL TO THE SPECIFIED DENSITY. COMPACTION SHALL BE ACCOMPLISHED WHILE THE FILL MATERIAL IS AT OR NEAR THE APPROPRIATE MOISTURE CONTENT. COMPACTION OF EACH LAYER SHALL BE CONTINUOUS OVER THE ENTIRE STRUCTURAL AREA (BENEATH PROPOSED STRUCTURES).

9. THE FACES OF FILL SLOPES SHALL BE COMPACTED. COMPACTING OPERATIONS SHALL BE CONTINUED UNTIL THE SLOPE FACES ARE STABLE BUT NOT TOO DENSE FOR PLANTING ON THE SLOPES. COMPACTING OF THE SLOPE FACES MAY BE DONE PROGRESSIVELY IN INCREMENTS OF THREE TO FIVE FEET (3' TO 5') IN FILL HEIGHT AS THIS FILL PROGRESSES ON AFTER THE FILL HAS BEEN BROUGHT TO ITS TOTAL HEIGHT.

THE FILL MATERIAL SHALL BE COMPACTED AT THE APPROPRIATE MOISTURE CONTENT SPECIFIED FOR THE SOILS BEING USED. APPROPRIATE MOISTURE CONTENT IS DEFINED, TYPICALLY, AS OPTIMUM MOISTURE CONTENT; HOWEVER, FOR EXPANSIVE SOILS IT MAY BE GREATER THAN OPTIMUM MOISTURE CONTENT, AND OTHER MOISTURE CONTENTS MAY BE NECESSARY TO PRODUCE THE DESIRED RESULTS WITH CERTAIN SOILS.

FIELD DENSITY TESTS SHALL BE PERFORMED ON LAYERS OF FILL WHEN THE FILL IS BEING PLACED AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE MAXIMUM FILL HEIGHT BETWEEN DENSITY TESTING SHALL BE EIGHTEEN INCHES (18"). ALL TESTING SHALL BE REQUESTED BY THE CONTRACTOR TO THE GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL ADVISE THE GEOTECHNICAL ENGINEER OF THE LOCATION OF THE TESTS. THE CONTRACTOR SHALL BE AT LEAST THE DAY BEFORE, THIS NOTIFICATION SHALL INCLUDE THE FILL AREA LOCATION, THE LIFT OR HEIGHT OF FILL AND APPROXIMATE VOLUME OF FILL. THE GEOTECHNICAL ENGINEER SHALL BE NOTIFIED OF ANY TESTS THAT ARE NOT IN ACCORDANCE WITH THE SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CORRECTION OF THE DEFECTIVE PORTION SHALL BE REWORKED AND RETESTED AT THE EXPENSE OF THE CONTRACTOR UNLESS THE CONTRACTOR CAN SHOW EVIDENCE THAT CIRCUMSTANCES BEYOND HIS CONTROL REQUIRED THE DEFECTIVE PORTION. THE TESTING SHALL BE AT LEAST FOLLOWED AND CONDUCTED BY THE GEOTECHNICAL ENGINEER.

- ### GRADING NOTES

1. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONNEL AND THE PROPERITY OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNERS AND THE ENGINEER HARMLESS FROM ANY AND ALL DAMAGES, INCLUDING REASONABLE ATTORNEY'S FEES, INCURRED BY THE OWNERS OR THE ENGINEER, EXCEPTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR PROJECT ENGINEER.
2. VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE COMMENCEMENT OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES, MINOR ADJUSTMENT TO FINISH GRADE TO ACCOMPLISH STOP DRAINAGE IS ACCEPTABLE, IF NECESSARY, UPON PRIOR APPROVAL OF THE ENGINEER.
3. REFER TO THE DIMENSION PLAN FOR HORIZONTAL DIMENSIONS.
4. SITE PREPARATION/GRADING, STRUCTURAL EXCAVATION, AND FILL SHALL BE PERFORMED AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
5. ALL FILL MATERIAL SHALL BE FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES SUCH AS TREES, BRUSH, AND RUBBISH. THE MATERIALS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING AND COMPACTING.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE GRADING ELEVATIONS ACCORDING TO THE FOLLOWING TOLERANCES:

PAD ELEVATIONS	±0.08 FOOT
PAVEMENT	±0.04 FOOT
CURBS, GUTTERS & ALL DRAINAGE FACILITIES	±0.02 FOOT
LANDSCAPING	±0.10 FOOT
7. SHOULD ANY ELEVATION BE FOUND TO BE BEYOND THE TOLERANCE AFTER CONTRACTOR'S OPERATIONS, THE CONTRACTOR SHALL RETURN AND CORRECT THE GRADING AT HIS OWN COST TO THE TOLERANCE. ALL MATERIALS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT THE CONTRACTOR'S EXPENSE.
8. PRIOR TO ANY GRADING, CONTRACTOR WILL CONTACT OWNER TO DETERMINE IF ANY TREES IN AREAS OF FILL/EXCAVATION CAN BE SAVED.



N.T.S.



N.T.S.



N.T.S



N.T.S.



N.T.S.



N.T.S.



N.T.S.



N.T.S.

[illegible]

Westwood

Phone (210) 265-8300 211 North Loop 1604 East, Suite 205
Toll Free (888) 937-5150 San Antonio, TX 78232
westwoodps.com



**KAYDEN SPRINGS
UNIT 2**

GRADING DETAILS

JOB NO.:	0046599.02
DATE:	08/08/2024
DESIGN:	TBW
DRAWN:	SC
CHECKED:	DAD

SHEET

C1.7

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

CAUTION: THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION PRIOR TO COMMENCING WORK AND IS RESPONSIBLE FOR ANY/ALL DAMAGES RESULTING FROM THE FAILURE TO LOCATE AND PRESERVE UTILITIES.

UTILITY TRENCH COMPACTION

ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINE BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.

NOTE:

OVERALL UTILITY PLAN IS PROVIDED AS A LOCATION REFERENCE FOR THE PURPOSE OF DRY UTILITY TRENCHING, CONDUIT PLACEMENT, AND TRANSFORMER / ENCLOSURE PAD INSTALLATION. CONTRACTOR SHALL REFER TO APPROPRIATE UTILITY PROVIDER CONSTRUCTION PLANS FOR DRY UTILITY CONSTRUCTION.

TELEPHONE AND CABLE LINES TO GO IN JOINT TRENCH WITH GVEC.

DRY UTILITY NOTES:

- GVEC TO SUPPLY ALL ELECTRIC CONDUITS FOR TRENCH AS FOLLOWS:
PRIMARY - 2 1/2" HDPE SCHEDULE 40
SECONDARY - 3" PVC SCHEDULE 40
SERVICE STUBS - 2 1/2" PVC SCHEDULE 40
- CONDUITS WILL BE REQUIRED FOR GVEC UTILITY CROSSINGS WHEN STREET OR DRAIN CONSTRUCTION PRECEDES UTILITY INSTALLATION. CONDUIT FOR CROSSINGS AS FOLLOWS:
ELECTRIC CROSSINGS - SCHEDULE 40
GAS CROSSINGS - SCHEDULE 40
- CONDUITS WILL BE REQUIRED FOR UNDERGROUND TELEPHONE AND CABLE T.V. IF ABOVE APPLIES. CONDUIT FOR CROSSINGS AS FOLLOWS:
PRIMARY - 4" SCHEDULE 40
SECONDARY - 2" SCHEDULE 40
- TELEPHONE/CABLE SERVICE PROVIDER TO SUPPLY ALL CONDUIT FOR TRENCH. CONTRACTOR TO COORDINATE WITH UTILITY PROVIDERS.
- DRY UTILITY CONDUIT TO EXTEND 2' OUTSIDE OF R.O.W.

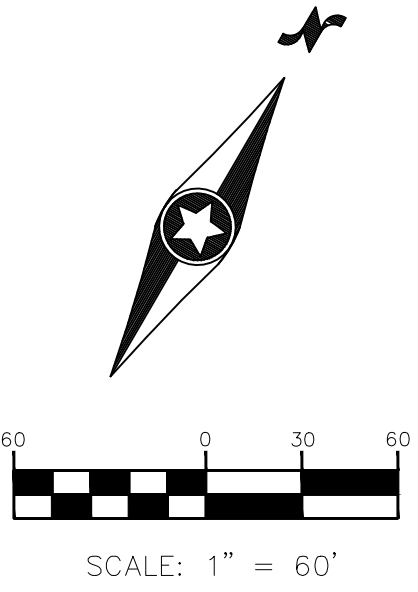
PRIVATE CONDUIT NOTES:

- CONTRACTOR TO COORDINATE WITH OWNER PRIOR TO CONSTRUCTION.
- PRIVATE CONDUIT SHALL BE "GRAY" SCHEDULE 80 PVC CONDUIT WITH 90° SWEEPS TO 6" ABOVE GRADE WITH CAP PIPE

DRIVEWAY NOTE:

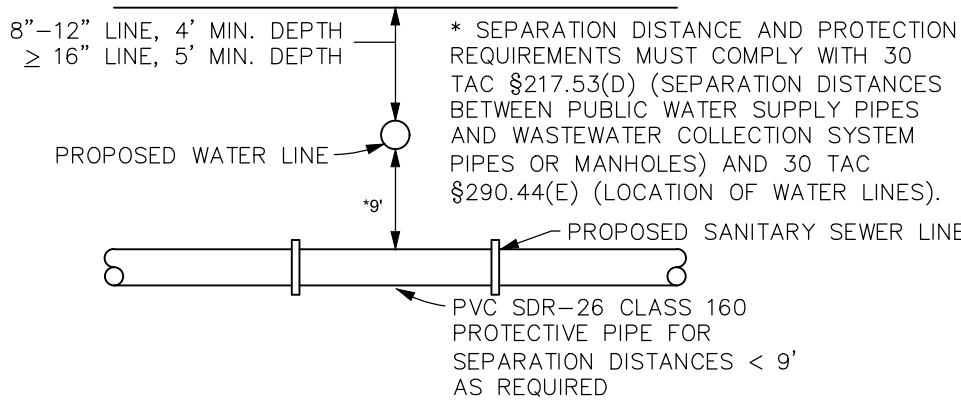
DRIVEWAY LOCATIONS SHOWN ON PLANS ARE APPROXIMATE. CONTRACTOR TO COORDINATE WITH OWNER REGARDING ACTUAL LOCATIONS OF DRIVEWAYS.

REMAINDER OF 141.823 ACRES
SA GIVEN TO FLY, LP
DOC. NO. 202299016819, OPR



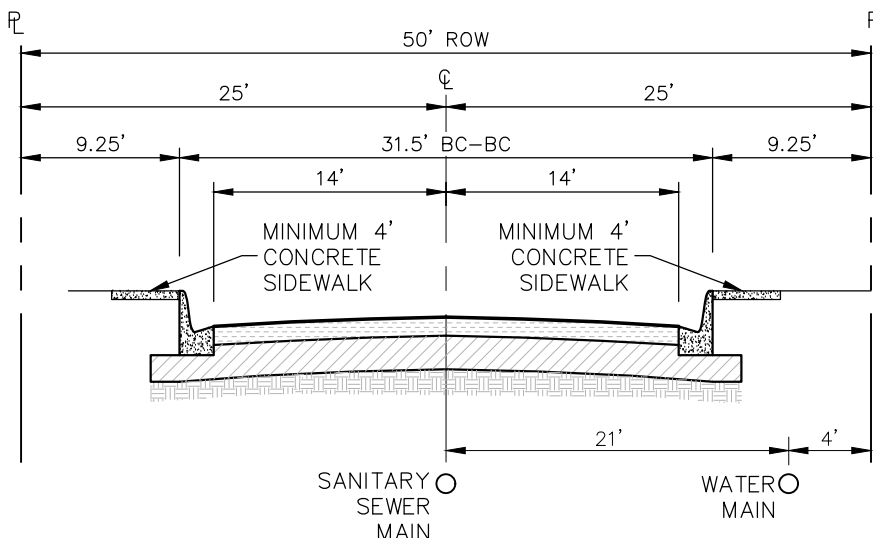
LEGEND

- E8"W--- EXISTING WATER MAIN
- 8"W--- PROPOSED WATER MAIN
- X--- EXISTING FIRE HYDRANT
- X--- PROPOSED FIRE HYDRANT
- X--- EXISTING GATE VALVE
- X--- PROPOSED GATE VALVE
- X--- PROPOSED WATER SERVICE
- E8"SS--- EXISTING SANITARY SEWER MAIN
- 8"SS--- PROPOSED SANITARY SEWER MAIN
- X--- EXISTING SANITARY SEWER MANHOLE
- X--- PROPOSED SANITARY SEWER MANHOLE
- X--- PROPOSED SANITARY SEWER LATERAL
- OHE--- OVERHEAD ELECTRIC
- P--- PRIMARY ELECTRIC CIRCUIT
- S--- SECONDARY ELECTRIC CIRCUIT
- S--- SECONDARY ELECTRIC SERVICE
- X--- PROPOSED TRANSFORMER
- X--- PROPOSED SECONDARY ENCLOSURE
- X--- PROPOSED STREET LIGHT



TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

NTS
SANITARY SEWER/WATER CROSSING
SERVICE LATERAL/WATER CROSSING
PVC SDR-26 CLASS 160 PROTECTIVE PIPE PER TCEQ
SEPARATION REQUIREMENTS REFER TO TYPICAL SANITARY
SEWER/WATER CROSSING DETAIL: THIS SHEET



LOCAL STREET - 50' SECTION
NOT TO SCALE

BY	
REVISIONS	
DATE	
NO.	

Westwood

Phone (210) 955-9300

Toll Free (888) 837-5150

211 North Loop 1804 East, Suite 205

San Antonio, TX 78232

westwoodjps.com

Westwood Professional Services, Inc.

TBPL FIRM REGISTRATION NO. 10974801

STATE OF TEXAS

DREW A. DEFENDORF

142247

Professional Engineer

08/08/24

KAYDEN SPRINGS

UNIT 2

OVERALL UTILITY PLAN

JOB NO.: 0046599.02

DATE: 08/08/2024

DESIGN: TBW

DRAWN: SG

CHECKED: DAD

SHEET

C1.8

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE TO THE CITY OF MARION AND/OR GUADALUPE COUNTY SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- ALL CONSTRUCTION IS SUBJECT TO INSPECTION AND APPROVAL BY THE CITY OF MARION AND/OR GUADALUPE COUNTY PUBLIC WORKS.
- NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS, BUT NOT INCLUDED IN THE BID PROPOSAL. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED IN THE PAY ITEM TO WHICH IT RELATES.
- THE CONTRACTOR IS RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION ANY DAMAGE DONE TO EXISTING FENCES, CONCRETE ISLANDS, STREET PAVING, CURBS, SHRUBS, BUSHES OR DRIVEWAYS. (NO EXTRA PAY ITEM).
- DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.171 C.P.S. MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
- CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR TWENTY FOUR (24) HOURS PRIOR TO BACKFILL OF ANY UTILITY TRENCHES TO SCHEDULE FOR DENSITY TEST AS REQUIRED.
- CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES, MARKS, ETC. IF ANY ARE DESTROYED OR REMOVED BY THE CONTRACTOR OR HIS EMPLOYEES, THEY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION TO DETERMINE THE LOCATION OF EXISTING UTILITIES. CONTRACTOR SHALL NOTIFY THE FOLLOWING AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO EXCAVATION OPERATION.

GREEN VALLEY SPECIAL UTILITY DISTRICT

GUADALUPE VALLEY ELECTRIC COOPERATIVE

CENTERPOINT ENERGY

TEXAS STATE WIDE ON CALL LOCATOR

830-914-2330

830-379-2114

800-427-7142

800-545-6005 OR 811

- THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED, BUT SHALL BE INVESTIGATED AND VERIFIED BY THE CONTRACTOR BEFORE STARTING WORK. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR THE MAINTENANCE AND PROTECTION OF THE EXISTING UTILITIES EVEN IF THEY ARE NOT SHOWN ON THE PLANS. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HERE ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND HE SHALL BE RESPONSIBLE FOR PROTECTION OF SAME DURING CONSTRUCTION.
- ALL WASTE MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE PROJECT. NO WASTE MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING ARTIFICIAL OR NATURAL DRAINAGE.
- THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100-YEAR FLOODPLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOODPLAIN DEVELOPMENT PERMIT.
- THE CONTRACTOR SHALL MAINTAIN ALL ADJOINING STREETS AND TRAVELED ROUTES FREE FROM SPILLED AND/ OR TRACKED CONSTRUCTION MATERIALS AND/ OR DEBRIS.
- MATERIAL SPECIFICATIONS:

CONCRETE/ CONCRETE RIPRAP: CLASS A 3000 PSI IN 28 DAYS UNLESS OTHERWISE NOTED ON PLANS.

REINFORCING STEEL:

PIPE RAILING:

STRUCTURAL STEEL:

CONFORM TO A.S.T.M. A-615, GRADE 60.

CONFORM TO A.S.T.M. A-53, GRADE B, OR A-501

CONFORM TO A.S.T.M. A-36
- CONTRACTOR TO COORDINATE CONCRETE CURB DEPRESSIONS WITH THE DEVELOPER (NO SEPARATE PAY ITEM).
- TRANSITION FROM NORMAL CROWN TO WASHOUT CROWN IN TWENTY-FIVE FEET (25') MINIMUM.
- IMPROVED EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING EIGHTY-FIVE PERCENT OF THE CHANNEL SUBGRADE AREA AND HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT THE CHANNEL FOR MAINTENANCE. REFER TO 35-504 OF THE CITY OF SAN ANTONIO UDC. NO EXTRA PAY ITEM.

GUADALUPE COUNTY NOTES

- PRIOR TO THE COMMENCEMENT OF ANY WORK, THE COUNTY SHALL ATTEND A PRECONSTRUCTION MEETING INCLUDING (BUT NOT LIMITED TO) THE CITY, ENGINEER, CONTRACTOR, DEVELOPER'S INSPECTION REPRESENTATIVE, AND DEVELOPER'S CONSTRUCTION MATERIAL TESTING REPRESENTATIVE.
- DURING CONSTRUCTION, NOTIFY THE COUNTY AT CONSTRUCTION@CO.GUADALUPE.TX.US AT LEAST 48 HOURS IN ADVANCE OF ANY WORK TO BE PERFORMED AFFECTING SUBGRADE, BASE, OR PAVEMENT INCLUDING BACKFILL OF ANY PROPOSED UTILITIES UNDERNEATH THE PAVEMENT AND FILL AREAS UPON WHICH PAVEMENT IS PROPOSED TO BE PLACED. SUCH NOTIFICATION IS ALSO REQUIRED BEFORE IMPLEMENTING ANY APPROVED TRAFFIC CONTROL PLANS ON EXISTING COUNTY-MAINTAINED ROADS. FULL CLOSURE OF COUNTY ROADS REQUIRES AT LEAST ONE MONTH ADVANCE NOTICE AND IS SUBJECT TO THE DISCRETION OF THE COUNTY ENGINEER AND POSSIBLE APPROVAL BY GUADALUPE COUNTY COMMISSIONERS COURT PER TRANSPORTATION CODE, CHAPTER Z51.
- DURING CONSTRUCTION, PROVIDE ALL INSPECTION AND TESTING REPORTS TO THE COUNTY AT CONSTRUCTION@CO.GUADALUPE.TX.US AS SOON AS AVAILABLE FOR IDENTIFICATION AND CORRECTION OF ANY EMERGING DEFICIENCIES.
- AT THE COMPLETION OF CONSTRUCTION, PROVIDE AS-BUILT DRAWINGS AND A LETTER SIGNED AND SEALED BY THE ENGINEER OF RECORD CERTIFYING THAT:

ALL IMPROVEMENTS WERE MADE IN ACCORDANCE WITH THE APPROVED IMPROVEMENT PLANS AND COUNTY REGULATIONS.

ANY CHANGED IMPROVEMENTS WERE MADE IN ACCORDANCE WITH THE COUNTY'S REGULATIONS.

THE ELEVATIONS AND GRADES WERE TAKEN BY AN ON-SITE SURVEY ON A DATE SPECIFIED TO ENSURE THAT ALL PAVEMENT, INLETS, MANHOLES AND APPURTENANCES ARE CONSTRUCTED TO GRADE AS SHOWN ON THE RECORD. DRAWINGS AND ARE IN COMPLIANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.

ALL TRUNK STORM SEWERS AND LEADS ARE OF THE PROPER SIZE AND THAT ALL IMPROVEMENTS ARE CAPABLE OF PERFORMANCE AS DESIGNED AND APPROVED.

CAUTION: THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION PRIOR TO COMMENCING WORK AND IS RESPONSIBLE FOR ANY/ALL DAMAGES RESULTING FROM THE FAILURE TO LOCATE AND PRESERVE UTILITIES.

NOTE TO CONTRACTOR

BY THE ACT OF SUBMITTING A BID FOR THIS PROPOSED CONTRACT, THE BIDDER WARRANTS THAT THE BIDDER, AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS HE INTENDS TO USE, HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM ANY AMBIGUITIES AND SUFFICIENT FOR THE PURPOSE INTENDED. THE BIDDER FURTHER WARRANTS THAT TO THE BEST OF HIS OR HIS SUBCONTRACTORS' AND MATERIAL SUPPLIERS' KNOWLEDGE, ALL MATERIALS AND PRODUCTS SPECIFIED OR INDICATED HEREIN ARE ACCEPTABLE FOR ALL APPLICABLE CODES AND AUTHORITIES.

THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON RECORD INFORMATION ONLY AND MAY NOT MATCH LOCATIONS AND/OR DEPTHS AS CONSTRUCTED. THE CONTRACTOR SHALL CONTACT EACH INDIVIDUAL UTILITY FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS AND DEPTHS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL UTILITY CROSSINGS PRIOR TO BEGINNING ANY CONSTRUCTION.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE JOB SITE AND THE JOB SITE CONDITIONS DURING CONSTRUCTION. THE RESPONSIBILITY IS NOT LIMITED TO NORMAL WORKING HOURS AND INCLUDES THE SAFETY OF ALL PERSONS AND PROPERTY. THE ENGINEER AND OWNER HAVE NO LIABILITY IN CONNECTION WITH THE CONSTRUCTION OF THIS PROJECT, EXCEPT FOR LIABILITY DIRECTLY CAUSED BY THE SOLE NEGLIGENCE OF THE ENGINEER AND/OR OWNER. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE ENGINEER AND/OR OWNER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE EXECUTION OF ALL WORK RELATED TO THIS PROJECT, EXCEPT FOR NEGLIGENCE ON THE PART OF THE ENGINEER AND/OR OWNER.

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

STREET CONSTRUCTION PLANS

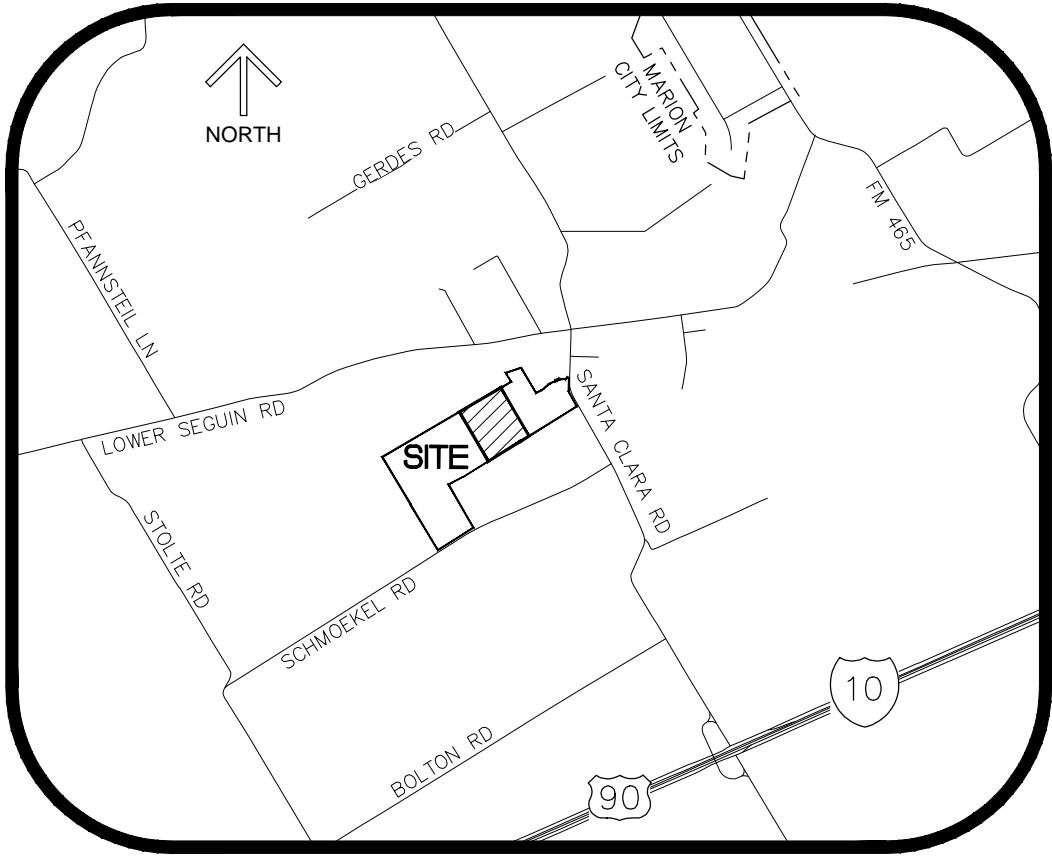
FOR

KAYDEN SPRINGS

UNIT 2

MARION, TX

GUADALUPE COUNTY MUNICIPAL UTILITY
DISTRICT NO. 10



LOCATION MAP

N.T.S.

NO.	DATE	REVISIONS	BY

TABLE OF CONTENTS

CIVIL PLANS

STREETS

- C2.0 STREET COVER SHEET
- C2.1 SIGNAGE AND PAVEMENT MARKING PLAN
- C2.2 STREET PLAN AND PROFILE – RIVER GAIL WAY
- C2.3 STREET PLAN AND PROFILE – LAYNES FALLS
- C2.4 STREET PLAN AND PROFILE – KOLBE CREEK
- C2.5 STREET PLAN AND PROFILE – KNOB CREEK WAY
- C2.6 STREET PLAN AND PROFILE – LAURIE CREEK
- C2.7 STREET DETAILS (1 OF 2)
- C2.8 STREET DETAILS (2 OF 2)
- C2.9 TRAFFIC SIGNAGE DETAILS



ENGINEER / SURVEYOR:

WESTWOOD PROFESSIONAL SERVICES
211 N LOOP 1604 E, SUITE 205
SAN ANTONIO, TEXAS 78232
TEL: (210) 265-8300

OWNER / DEVELOPER:

LENVIA HOMES OF TEXAS
100 NE LOOP 410, SUITE 1155
SAN ANTONIO, TEXAS 78216
TEL: (210) 403-6200

Westwood

Phone (210) 265-8300 211 North Loop 1604 East, Suite 205
Toll Free (888) 937-5150 San Antonio, TX 78232
westwoodps.com

Westwood Professional Services, Inc.

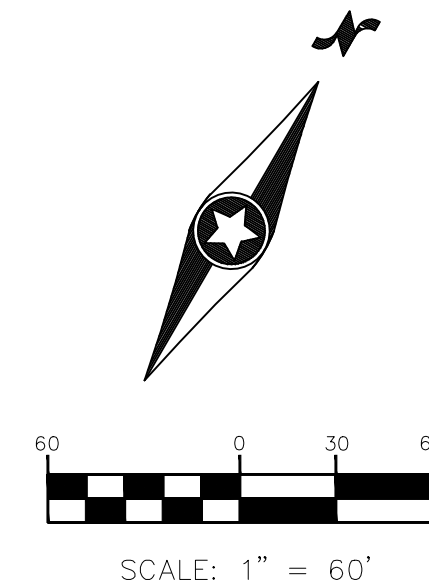
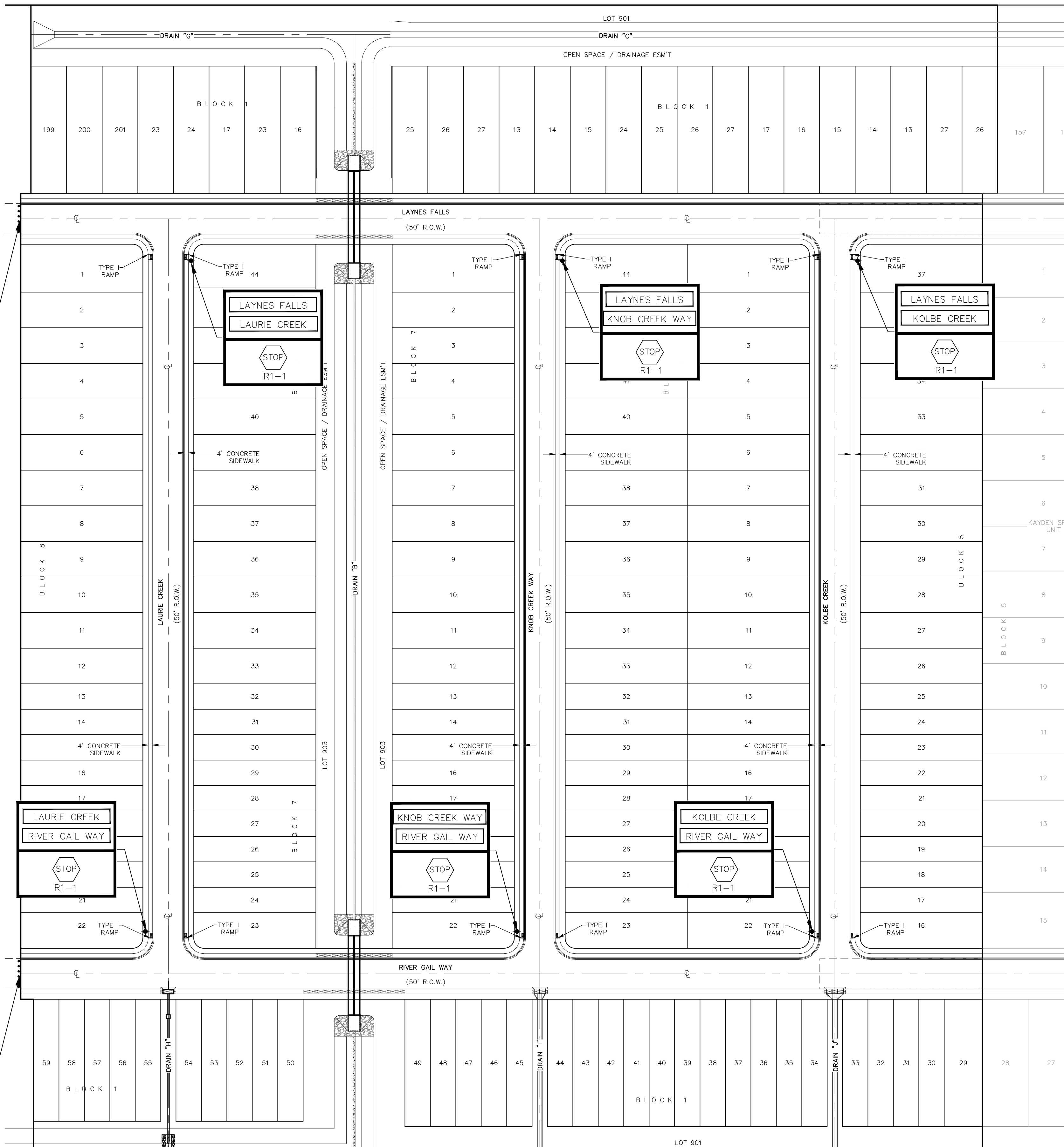
TBPELS FIRM REGISTRATION NO. F-11756
TBPELS FIRM REGISTRATION NO. 10074301

SIGN REQUIREMENTS

1. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL REGULATORY AND WARNING SIGNS, STREET NAME SIGNS AND SIGN MOUNTS IN ACCORDANCE WITH APPROVED REGULATORY PLANS. THE CONTRACTOR SHALL INSTALL ALL SIGNS AT FINAL LOCATION.
2. TRAFFIC SIGNS SHALL BE USED IN ACCORDANCE WITH THE LATEST REVISION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUCD) AND WHEN JUSTIFIED BY ENGINEERING JUDGEMENT OR STUDY, TRAFFIC SIGNS INCLUDING REGULATORY SIGNS, WARNING SIGNS AND ADVISORY SIGNS WITH WHITE BACKGROUND.
3. ALL SIGNS SHALL BE SHOWN IN THE ENGINEERING PLANS FOR REVIEW AND APPROVAL AS PART OF THE PLAN AND PROFILE SHEET. THE ENGINEERING PLANS SHALL INCLUDE SIGN LOCATION, NAME, DESIGNATION AND SIZE. SIGN STANDARDS SHALL BE USED FOR THE DESIGN OF THE SIGN.
4. THE WEDGE ANCHOR STEEL SYSTEM AND THIN-WALLED TUBING POST SHALL BE USED FOR SIGNS WITH UP TO 10 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TEXAS DEPARTMENT OF TRANSPORTATION (TxDOT) TRAFFIC STANDARDS TSM(01)-08 AND TSM(01)-09.
5. THE TRIANGULAR SIP BASE SYSTEM AND 10 BWG TUBING POST SHALL BE USED FOR SIGNS THAT HAVE 10 TO 16 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TxDOT TRAFFIC STANDARDS SMD(01)-08 AND SMD(01)-09.
6. ALL OTHER MARKERS, MATERIALS AND INSTALLATION SHOULD FOLLOW THE TxDOT TRAFFIC STANDARDS D&M(01)-05 TO 10.
7. SIGN MATERIALS INCLUDING ALUMINUM SIGN BLANKS AND SIGN FACE MATERIALS SHOULD FOLLOW THE TxDOT TRAFFIC STANDARDS TRS(1)-08.

PAVEMENT MARKING REQUIREMENTS

1. THE CONTRACTOR SHALL INSTALL ALL PAVEMENT MARKING IN ACCORDANCE WITH APPROVED ENGINEERING PLANS. THE CONTRACTOR SHALL NOTIFY THE CITY AT LEAST 24 HOURS BEFORE THE START OF PAVEMENT MARKING. THE CITY OF ANTONIO AND FINAL MARKINGS. THE CITY WILL INSPECT ALL MARKINGS AT FINAL INSPECTION.
2. PAVEMENT MARKINGS SHALL BE USED IN ACCORDANCE WITH THE LATEST REVISION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUDCD) AND WHERE APPLICABLE, THE ENGINEERING PLANS.
3. ALL PAVEMENT MARKINGS SHALL BE SHOWN IN THE ENGINEERING PLANS FOR REVIEW AND APPROVAL AS PART OF THE PLAN AND PROFILE SHEET OR SEPARATE SIGNING AND PAVEMENT MARKING LAYOUT SHEET. DESIGN, MATERIALS AND INSTALLATION SHALL FOLLOW THE LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUDCD) AND WHERE APPLICABLE, THE CITY OF ANTONIO'S TRAFFIC ENGINEERING STANDARDS FOR PAVEMENT MARKINGS DESIGNATING TRAFFIC LANES, LANE USAGE AND LANE REGULATIONS AND PEDESTRIAN/BICYCLIST ACCOMMODATIONS. THE CITY OF ANTONIO'S TRAFFIC ENGINEERING STANDARDS SHALL BE INCLUDED IN THE ENGINEERING PLANS.
4. ALL PAVEMENT MARKINGS SHALL BE TYPE 1 HOT APPLIED THERMOPLASTIC AND MEET TxDOT DEPARTMENTAL MATERIALS SPECIFICATIONS DMS-8200.
5. THE CONTRACTOR MAY BE RESPONSIBLE FOR PLACING OR REMOVING ANY PAVEMENT APPLICATION.



LEGEND



R1-1 STOP SIGN

RIVER GAIL WAY

STREET NAME SIGN



END OF ROAD
MARKER

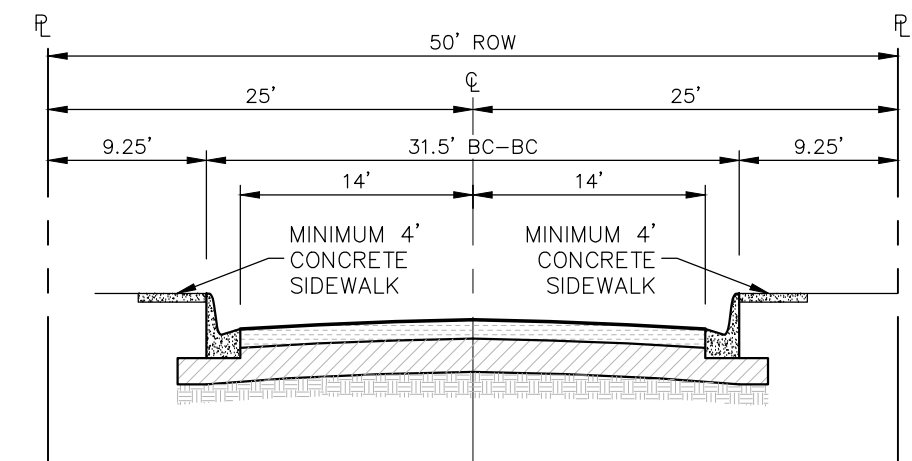
☐ SIDEWALK CONSTRUCTED
BY HOMEBUILDER

SIDEWALK CONSTRUCTED
BY HOMEBUILDER

SIDEWALK CONSTRUCTED
BY DEVELOPER

SIDEWALK AND PEDESTRIAN CROSSING RAMP NOTE:

1. SIDEWALKS REQUIRED ALONG ALL STREET LOT FRONTAGE AT TIME OF LOT IMPROVEMENT.
2. FOR LOTS WITH NO BUILDING IMPROVEMENTS, SIDEWALKS ARE REQUIRED WITH STREET CONSTRUCTION.
3. ALL PEDESTRIAN CROSSING RAMPS ARE REQUIRED AT STREET CONSTRUCTION.



LOCAL STREET - 50' SECTION
NOT TO SCALE

[illegible]

Westwood

Phone (210) 265-8300 211 North Loop 1604 East, Suite 2015
 Toll Free (888) 937-5150 San Antonio, TX 78232
[westwoodps.com](http://www.westwoodps.com)

Westwood Professional Services, Inc.
 TYPE FIRM REGISTRATION NO. F-117395
 TYPICAL FIRM REGISTRATION NO. 10074501



**KAYDEN SPRINGS
UNIT 2**

SIGNAGE AND PAVEMENT MARKING PLAN

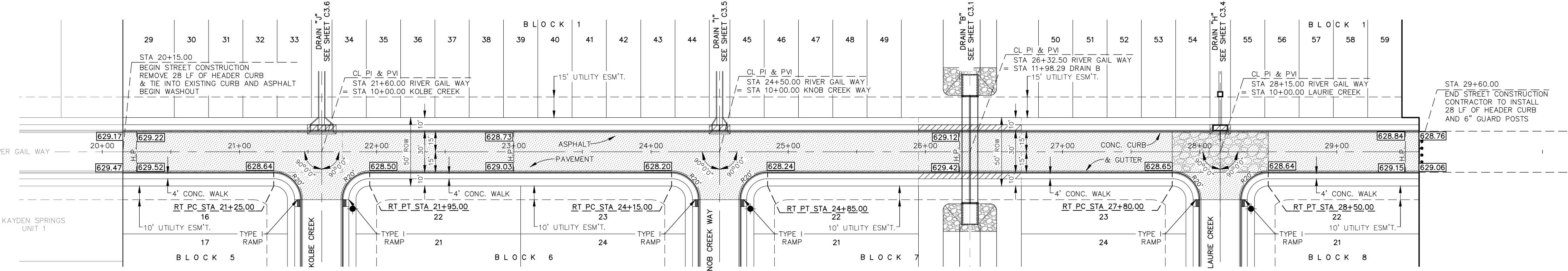
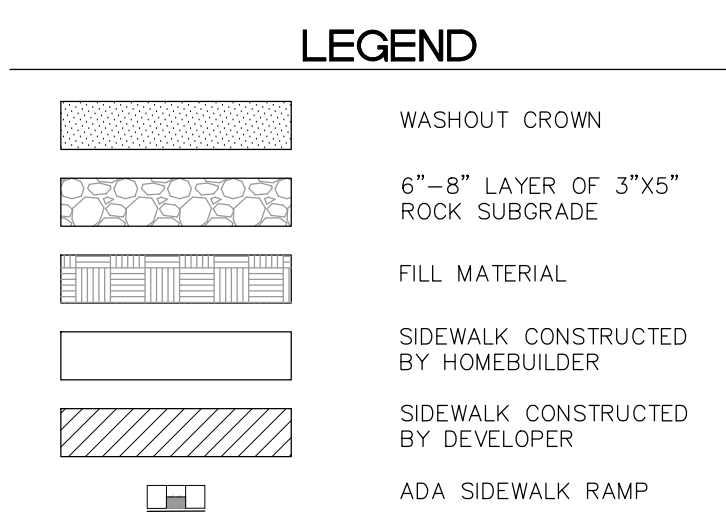
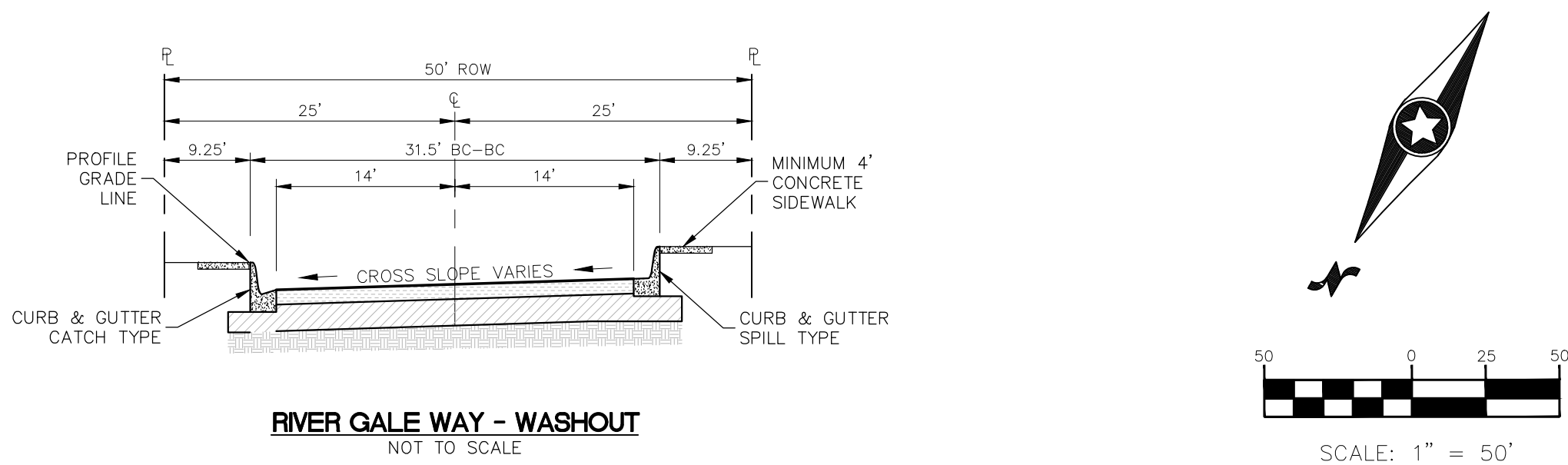
JOB NO.:	0046599.02
DATE:	08/08/2024
DESIGN:	TBW
DRAWN:	SC
CHECKED:	DAD

SHEET

C2.1

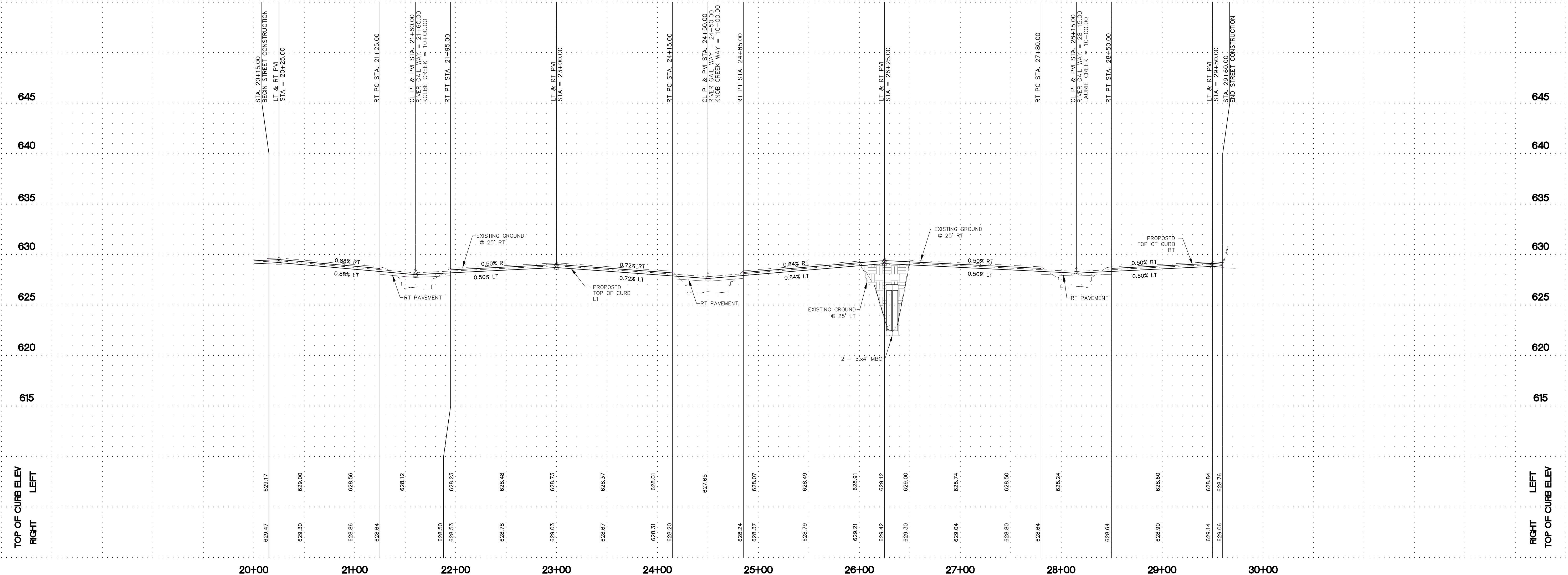
TRENCH EXCAVATION SAFETY PROTECTION
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA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

CAUTION: THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION PRIOR TO COMMENCING WORK AND IS RESPONSIBLE FOR ANY/ALL DAMAGES RESULTING FROM THE FAILURE TO LOCATE AND PRESERVE UTILITIES.



RIVER GALE WAY
STA. 20+15.00 TO STA. 29+60.00

SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



BY

REVISIONS

DATE

NO.

Westwood
Phone (210) 955-9300
Fax (888) 837-5150
211 North Loop East, Suite 205
San Antonio, TX 78232
westwoodps.com

Westwood Professional Services, Inc.
TPEL FIRM REGISTRATION NO. 10973001

STATE OF TEXAS
DREW A. DEFENDORF
142247
PROFESSIONAL ENGINEER
08/08/24

KAYDEN SPRINGS UNIT 2
STREET PLAN AND PROFILE
- RIVER GALE WAY

JOB NO.: 0046599.02
DATE: 08/08/2024
DESIGN: TBW
DRAWN: SG
CHECKED: DAD

SHEET
C2.2

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL BE RESPONSIBLE FOR AND SHALL PROVIDE THE DESIGN AND/OR ENGINEERED/ADAPTED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND/OR ENGINEERED/ADAPTED REQUIREMENTS FOR THE TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR 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.

The diagram illustrates a cross-section of a 50-foot Right-of-Way (ROW). The total width is 50 feet, with 25 feet on each side of a central 6-foot curb and gutter (BC-BC). The profile grade line is shown as a dashed line. The concrete sidewalk is 9.25 feet wide on each side of the curb. The curb and gutter is labeled as a minimum 4-foot concrete sidewalk. The cross slope varies across the sidewalk and curb area. The curb and gutter is labeled as a curb and gutter spill type.

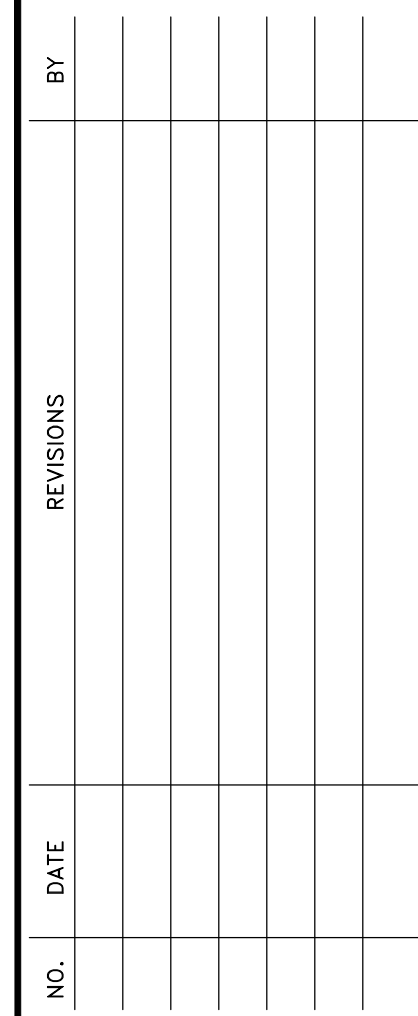
LEGEND

The diagram illustrates the cross-section of a sidewalk with the following layers from top to bottom:

- WASHOUT CROWN**: A thin, stippled layer at the top.
- 6"-8" LAYER OF 3"x5" ROCK SUBGRADE**: A layer of irregularly shaped stones.
- FILL MATERIAL**: A layer with a brick-like pattern.
- SIDEWALK CONSTRUCTED BY HOMEOWNER**: A solid white rectangular layer.
- SIDEWALK CONSTRUCTED BY DEVELOPER**: A layer with diagonal hatching.
- ADA SIDEWALK RAMP**: A small cross-section of a ramp with a brick pattern, shown at the bottom left.



SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



Westwood

Phone (210) 265-8300 211 North Loop 1604 East, Suite 2015
Toll Free (888) 937-5150 San Antonio, TX 78232
westwoods.com

Westwood Professional Services, Inc.
TYPE FIRM REGISTRATION NO. F-11736
TBPLS FRM REGISTRATION NO. 0074301



KAYDEN SPRINGS

UNIT 2

STREET PLAN AND PROFILE

— JAYNES FALLS —

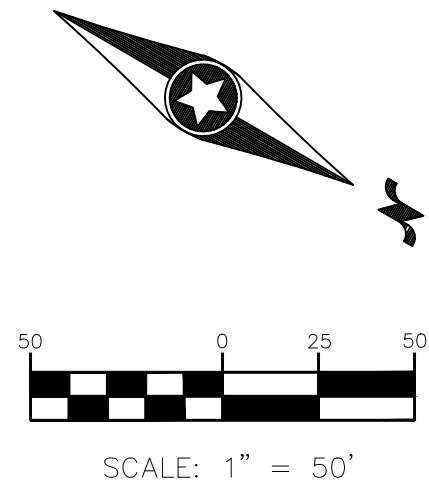
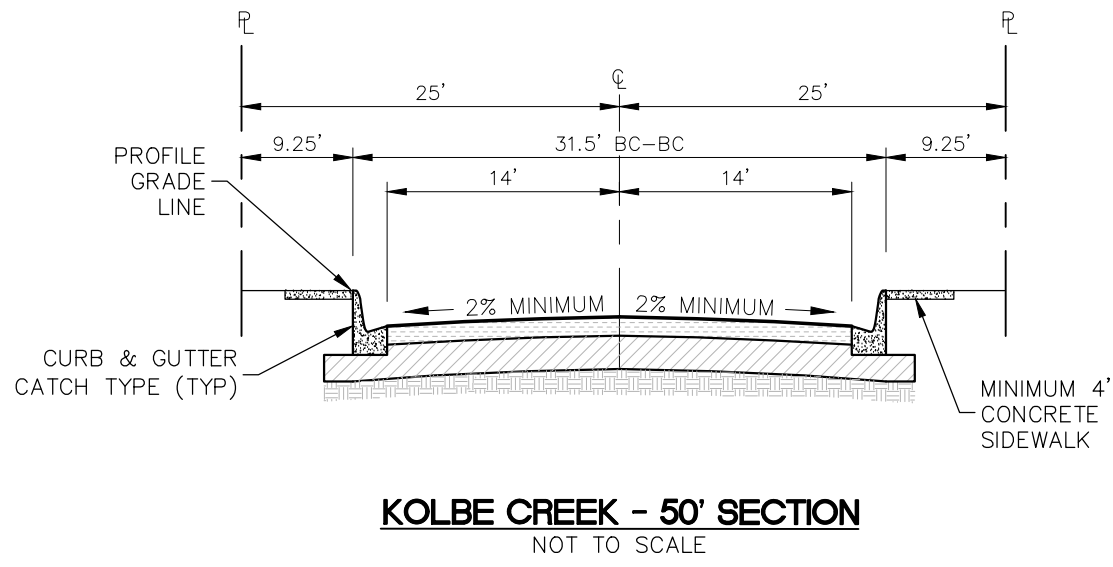
JOB NO.:	0046599.02
DATE:	08/08/2024
DESIGN:	TBW
DRAWN:	SC
CHECKED:	DAD

SHEET
C2.3

File: N:\0046599.02\06 CAD\DWG\Site Design C3D\0046599.02_STREETS.dwg

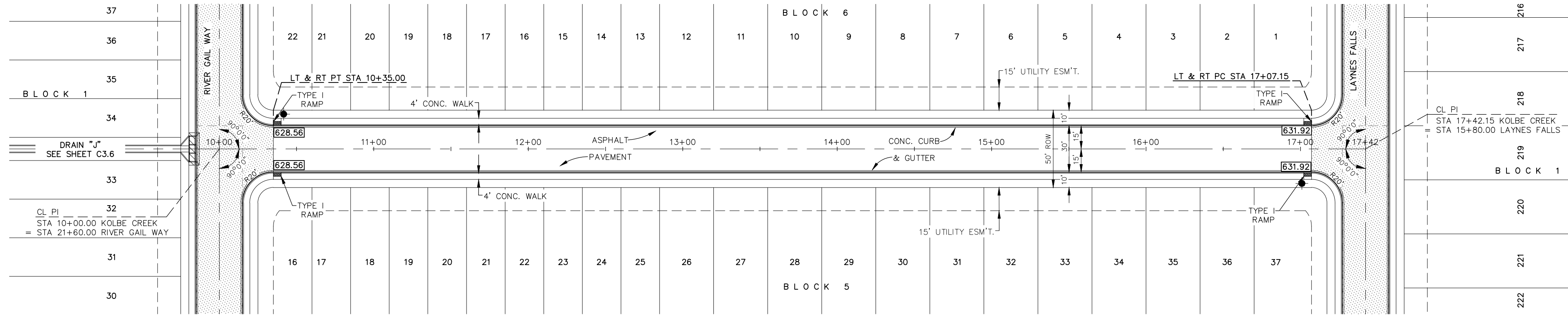
TRENCH EXCAVATION SAFETY PROTECTION
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA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

CAUTION: THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION PRIOR TO COMMENCING WORK AND IS RESPONSIBLE FOR ANY/ALL DAMAGES RESULTING FROM THE FAILURE TO LOCATE AND PRESERVE UTILITIES.



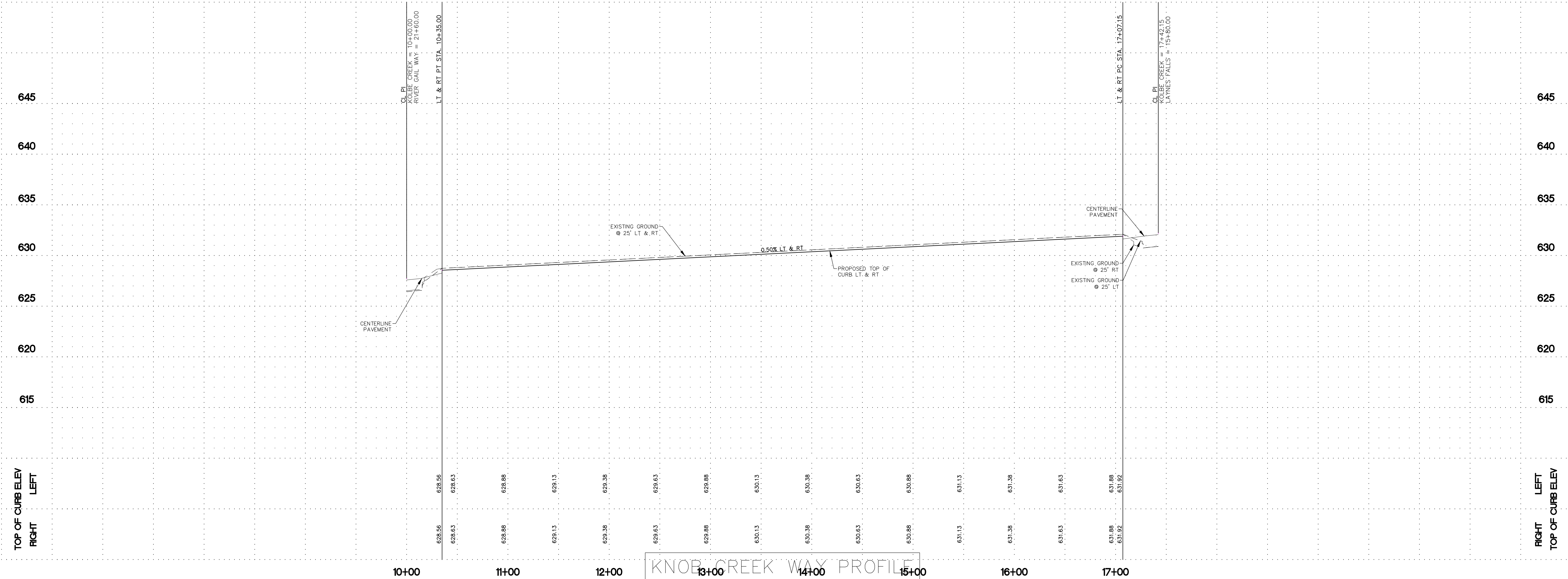
LEGEND

- WASHOUT CROWN
- 6"-8" LAYER OF 3"x5" ROCK SUBGRADE
- FILL MATERIAL
- SIDEWALK CONSTRUCTED BY HOMEBUILDER
- SIDEWALK CONSTRUCTED BY DEVELOPER
- ADA SIDEWALK RAMP



KOLBE CREEK
STA. 10+00.00 TO STA. 17+42.15

SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



NO.	DATE	REVISIONS

Westwood
Phone (210) 265-9300
Toll Free (888) 837-5150
211 North Loop East, Suite 205
San Antonio, TX 78232
westwoodps.com

Westwood Professional Services, Inc.
TPEL FIRM REGISTRATION NO. 1097801



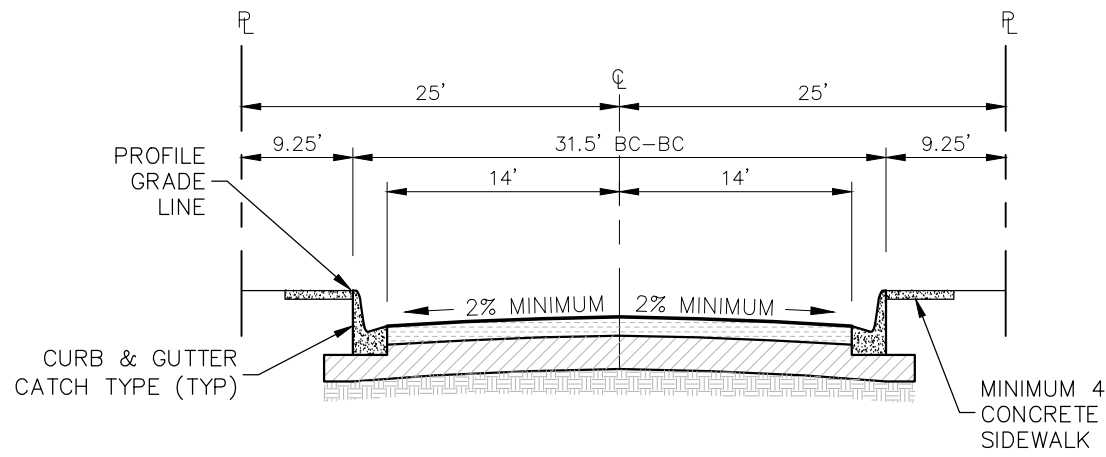
KAYDEN SPRINGS
UNIT 2
STREET PLAN AND PROFILE
- KOLBE CREEK

JOB NO.:	0046599.02
DATE:	08/08/2024
DESIGN:	TBW
DRAWN:	SG
CHECKED:	DAD

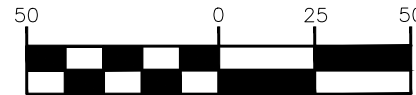
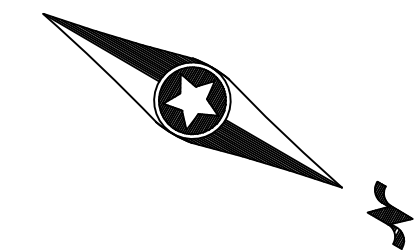
TRENCH EXCAVATION SAFETY PROTECTION

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

CAUTION: THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION PRIOR TO COMMENCING WORK AND IS RESPONSIBLE FOR ANY/ALL DAMAGES RESULTING FROM THE FAILURE TO LOCATE AND PRESERVE UTILITIES.



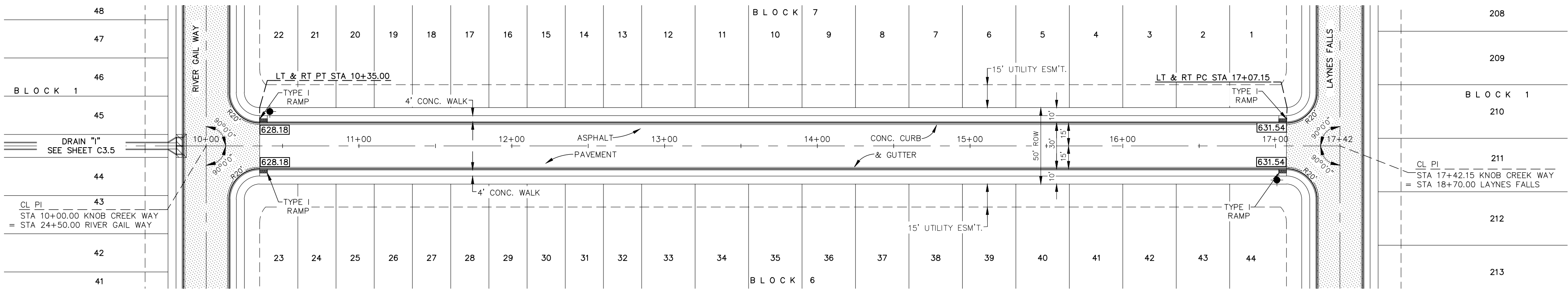
Knob Creek Way - 50' Section
NOT TO SCALE



SCALE: 1" = 50'

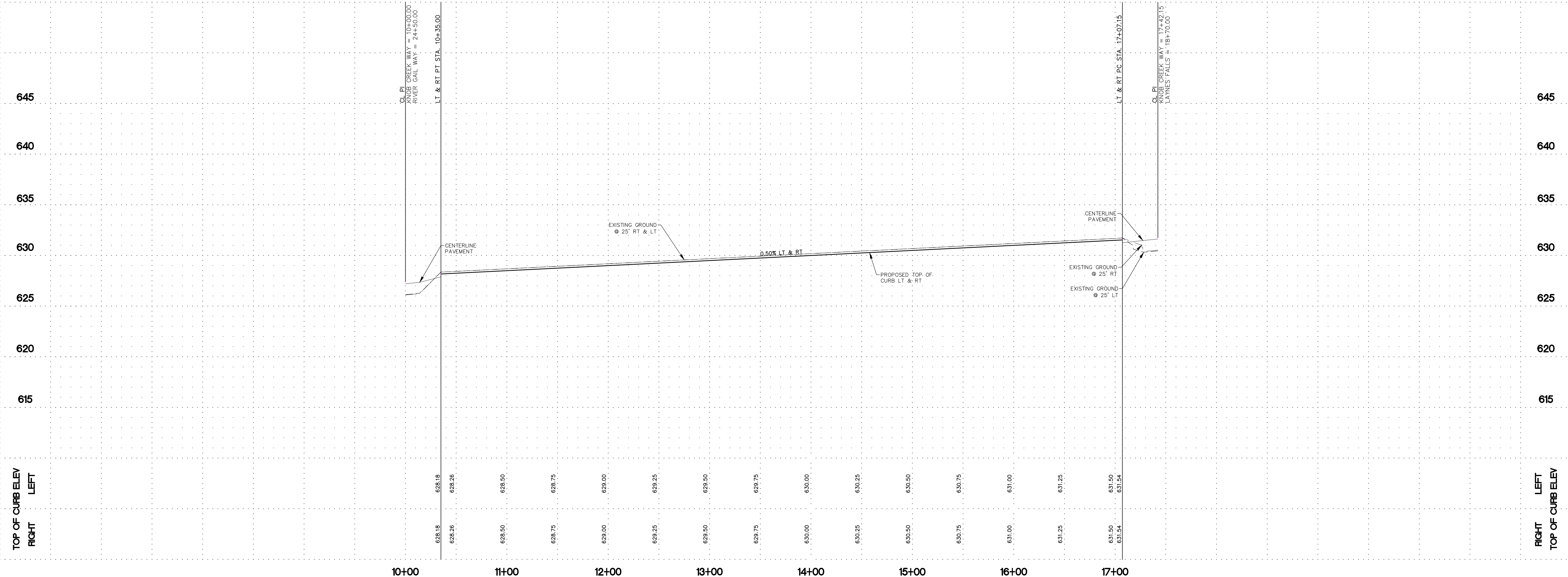
LEGEND

- WASHOUT CROWN
- 6"-8" LAYER OF 3"x5" ROCK SUBGRADE
- FILL MATERIAL
- SIDEWALK CONSTRUCTED BY HOMEBUILDER
- SIDEWALK CONSTRUCTED BY DEVELOPER
- ADA SIDEWALK RAMP



Knob Creek Way
STA. 10+00.00 TO STA. 17+42.15

SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



NO.	DATE	REVISIONS	BY

Westwood

Phone (210) 955-9300

Toll Free (888) 937-5150

211 North Loop East, Suite 205
San Antonio, TX 78232
westwoodps.com

Westwood Professional Services, Inc.

TBPL FIRM REGISTRATION NO. 10978001



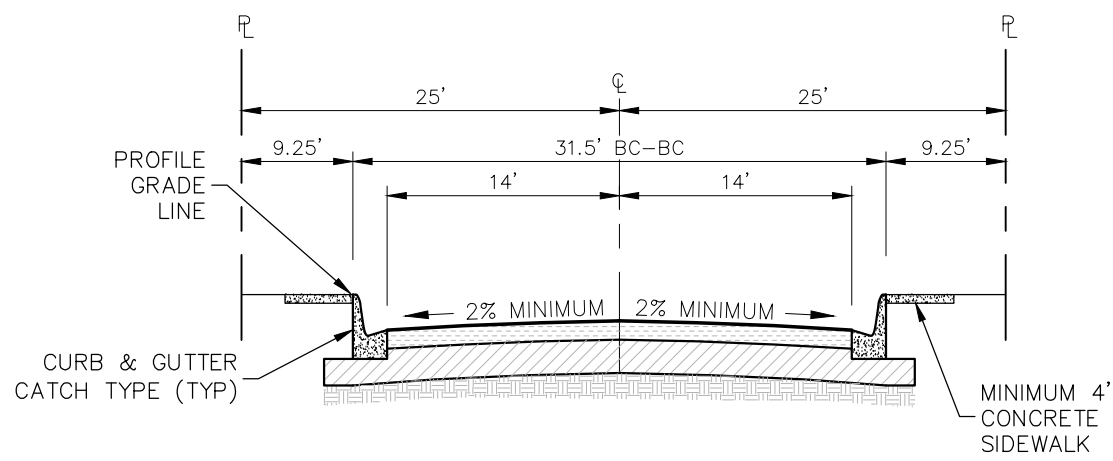
KAYDEN SPRINGS
UNIT 2
STREET PLAN AND PROFILE -
Knob Creek Way

JOB NO.:	0046599.02
DATE:	08/08/2024
DESIGN:	TBW
DRAWN:	SG
CHECKED:	DAD

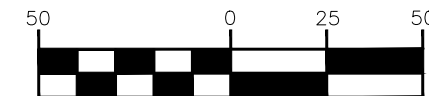
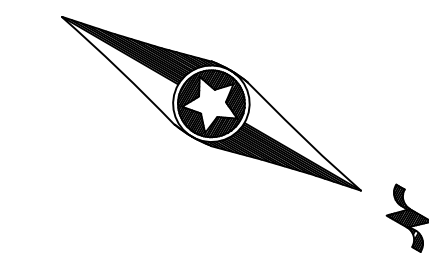
TRENCH EXCAVATION SAFETY PROTECTION

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

CAUTION: THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION PRIOR TO COMMENCING WORK AND IS RESPONSIBLE FOR ANY/ALL DAMAGES RESULTING FROM THE FAILURE TO LOCATE AND PRESERVE UTILITIES.



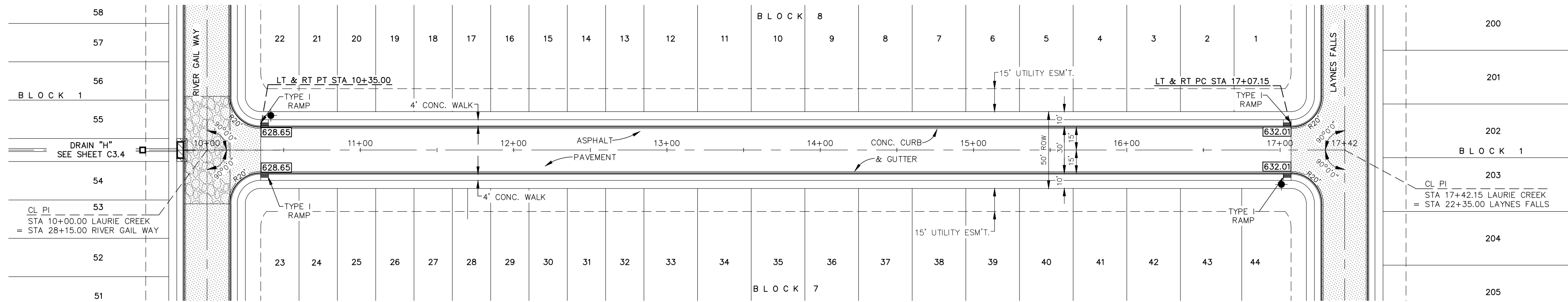
Laurie Creek - 50' Section
NOT TO SCALE



SCALE: 1" = 50'

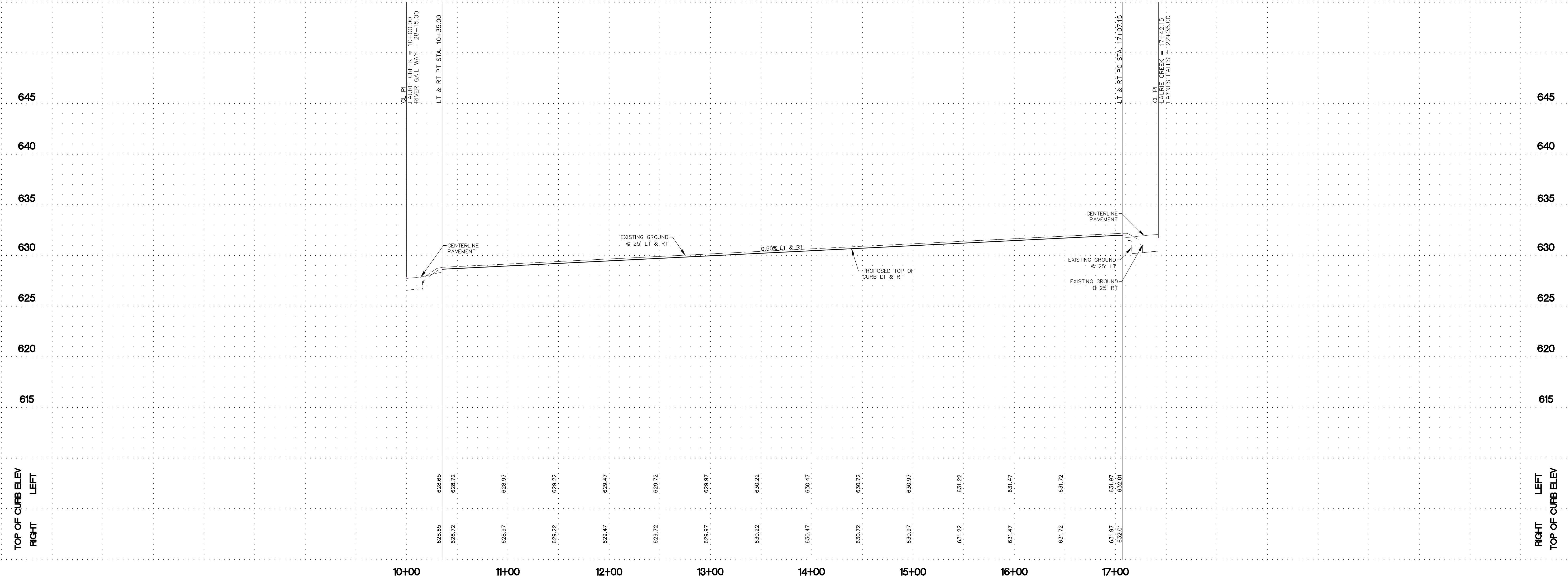
LEGEND

- WASHOUT CROWN
- 6"-8" LAYER OF 3"x5" ROCK SUBGRADE
- FILL MATERIAL
- SIDEWALK CONSTRUCTED BY HOMEBUILDER
- SIDEWALK CONSTRUCTED BY DEVELOPER
- ADA SIDEWALK RAMP



Laurie Creek
STA. 10+00.00 TO STA. 17+42.15

SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



File: N:\0046599.02\06 CAD\DWG\Site Design C3D\0046599.02_STREET1.dwg

NO.	DATE	REVISIONS	BY

Westwood

Phone (210) 265-9300
Toll Free (888) 837-5150

211 North Loop 1804 East, Suite 205
San Antonio, TX 78232

westwoodps.com

Westwood Professional Services, Inc.

TBPL FIRM REGISTRATION NO. 1097801

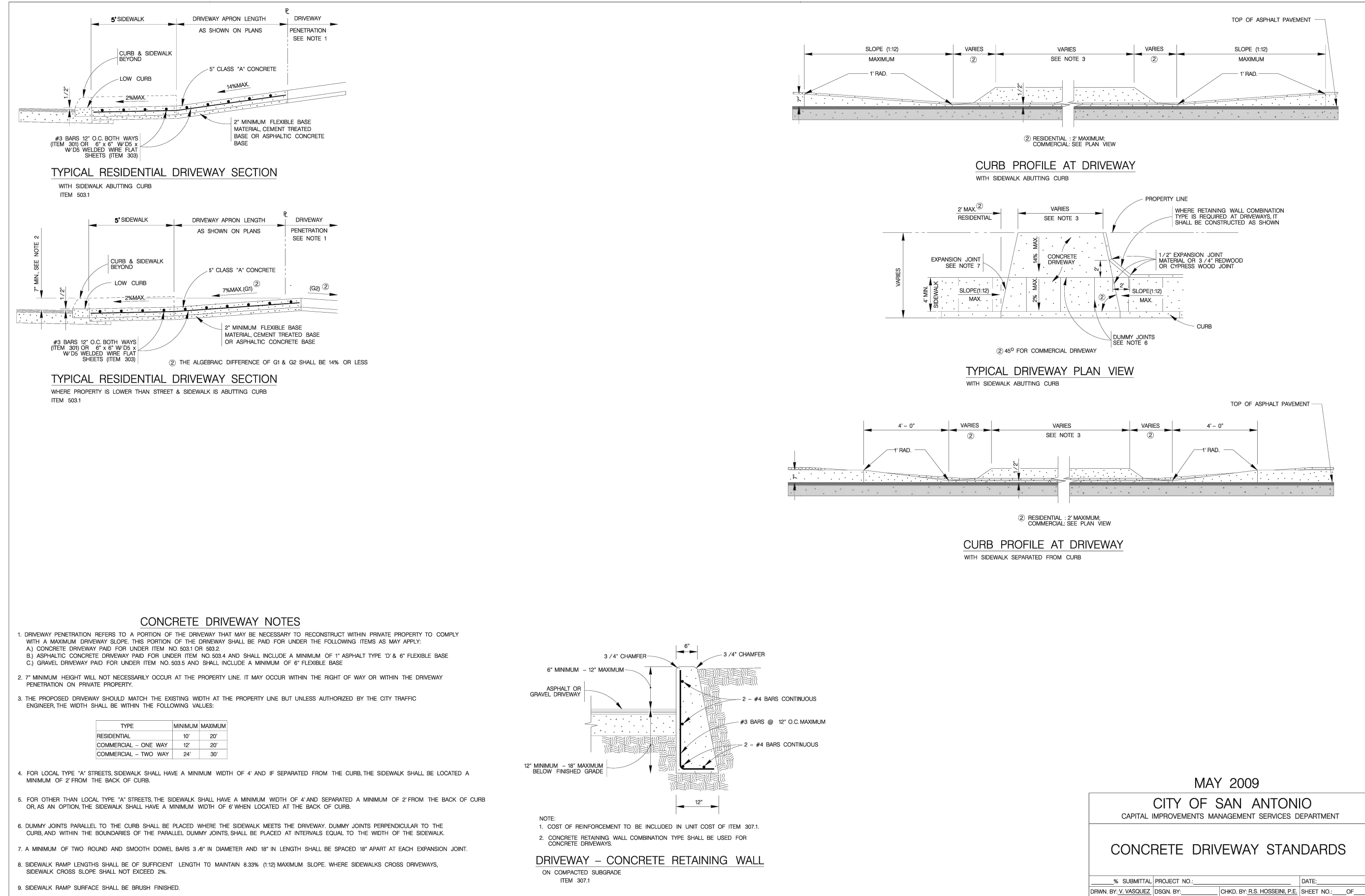
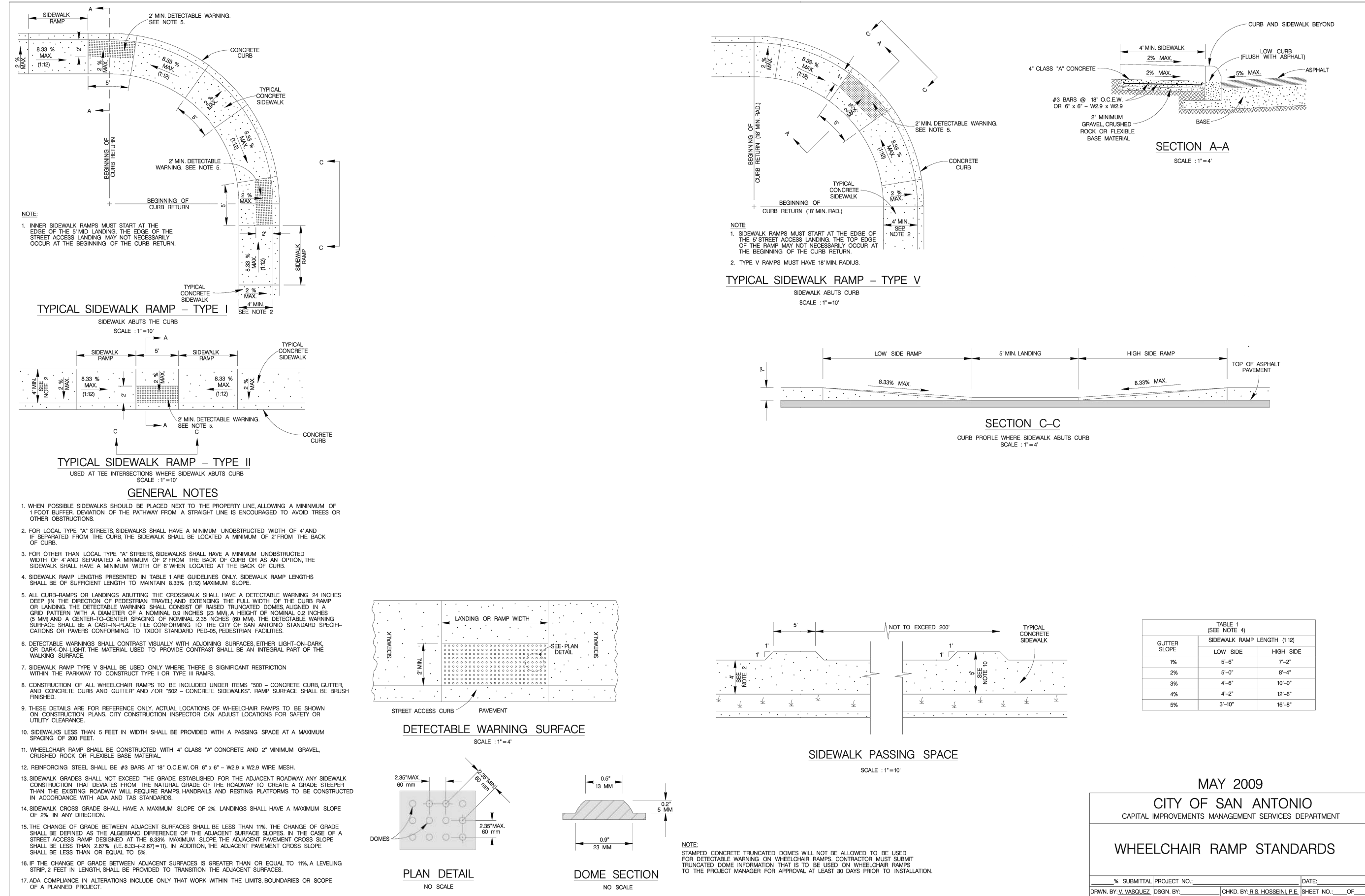


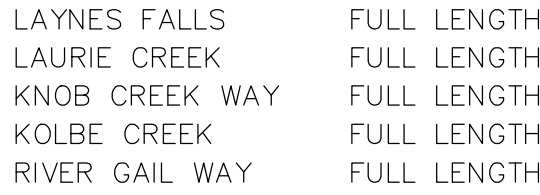
KAYDEN SPRINGS
UNIT 2
STREET PLAN AND PROFILE
- LAURIE CREEK

JOB NO.:	0046599.02
DATE:	08/08/2024
DESIGN:	TBW
DRAWN:	SG
CHECKED:	DAD

SHEET

C2.6





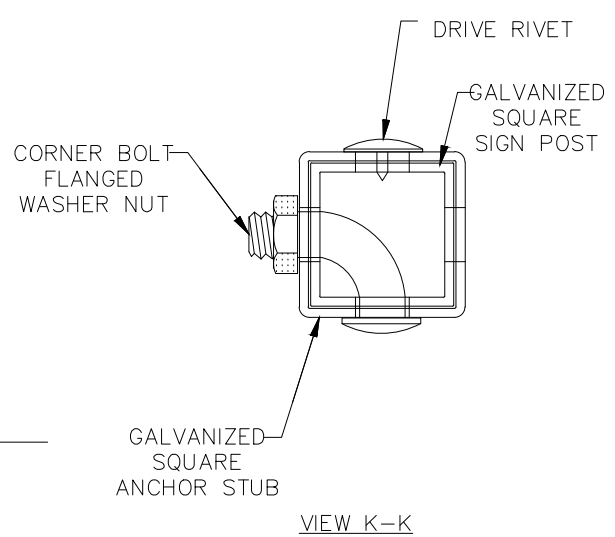
GEOGRID, SUCH AS TENSAR TRIAX TX130 OR BETTER, SHOULD BE INSTALLED AS PER MANUFACTURER'S GUIDELINES ON TOP OF MOISTURE CONDITIONED SUBGRADE OR STABILIZED SUBGRADE.

C2.8

Figure 1 illustrates the calculation of vertical and horizontal rectangles for a trapezoidal cross-section. The top part shows a vertical rectangle with width A and height 1, and a horizontal rectangle with width B and height 1. The bottom part shows a trapezoidal cross-section with top width A, bottom width B, and height 1. The vertical rectangle has width A and height 1, and the horizontal rectangle has width B and height 1. The trapezoid is divided into a central rectangle of width A and height 1, and two side triangles of width (B-A)/2 and height 1.

HEIGHT	9" (228 mm)
LENGTH	24" (600 MM) MIN. 54 (1380 MM) MAX. 6" (150 MM) INCREMENTS OF LENGTH
THICKNESS	0.125" (3MM)
SUBSTRATE	ALUMINUM ALLOY, 5052-H38 (ASTM B-209) GOLD CHROMATE FINISH
SIGN FACE MATERIALS	BLUE FILM OVER HIGH INTENSITY FP-85, SECTION 718 AND L-S-500C
LEGENDS AND SYMBOLS	SERIES D (USUAL) SERIES C OR B FOR MAXIMUM LENGTH SIGN BLANK IF NECESSARY
COLOR	WHITE LEGEND ON BLUE BACKGROUND
LETTER TRACKING	10%

HEIGHT	15" (381 MM)
LENGTH	48" (1219 MM) MIN. 72" (1800 MM) MAX.** 1" (300 MM) INCREMENTS OF LENGTH
THICKNESS	0.125" (3 MM)
SUBSTRATE	ALUMINUM ALLOY, 5052-H38 (ASTM B-209) GOLD CHROMATE FINISH
SIGN FACE MATERIALS	BLUE FILM OVER DIAMOND GRADE FP-85, SECTION 718 AND L-S-300C
LEGENDS AND SYMBOLS	SERIES D (USUAL) SERIES C OR B FOR MAXIMUM LENGTH SIGN BLANK, IF NECESSARY
COLOR	WHITE LEGEND ON BLUE BACKGROUND
LETTER TRACKING	17% (USUAL) 10% (MIN.)



Drawing Name: N:\046599-02\04 CAD\DWG\Site Design C3D\046599-02_C006.dwg User: lbwble Aug 08, 2024 - 6:26pm

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE TO THE CITY OF MARION AND/OR GUADALUPE COUNTY SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- ALL CONSTRUCTION IS SUBJECT TO INSPECTION AND APPROVAL BY THE CITY OF MARION AND/OR GUADALUPE COUNTY PUBLIC WORKS.
- NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS, BUT NOT INCLUDED IN THE BID PROPOSAL. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED IN THE PAY ITEM TO WHICH IT RELATES.
- THE CONTRACTOR IS RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION ANY DAMAGE DONE TO EXISTING FENCES, CONCRETE ISLANDS, STREET PAVING, CURBS, SHRUBS, BUSHES OR DRIVEWAYS. (NO EXTRA PAY ITEM).
- DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.171 C.P.S. MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
- CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR TWENTY FOUR (24) HOURS PRIOR TO BACKFILL OF ANY UTILITY TRENCHES TO SCHEDULE FOR DENSITY TEST AS REQUIRED.
- CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES, MARKS, ETC. IF ANY ARE DESTROYED OR REMOVED BY THE CONTRACTOR OR HIS EMPLOYEES, THEY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION TO DETERMINE THE LOCATION OF EXISTING UTILITIES, CONTRACTOR SHALL NOTIFY THE FOLLOWING AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO EXCAVATION OPERATION.

GREEN VALLEY SPECIAL UTILITY DISTRICT

GUADALUPE VALLEY ELECTRIC COOPERATIVE

CENTERPOINT ENERGY

TEXAS STATE WIDE ON CALL LOCATOR

830-914-2330

830-379-2114

800-427-7142

800-545-6005 OR 811
- THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED, BUT SHALL BE INVESTIGATED AND VERIFIED BY THE CONTRACTOR BEFORE STARTING WORK. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR THE MAINTENANCE AND PROTECTION OF THE EXISTING UTILITIES EVEN IF THEY ARE NOT SHOWN ON THE PLANS. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HERE ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND HE SHALL BE RESPONSIBLE FOR PROTECTION OF SAME DURING CONSTRUCTION.
- ALL WASTE MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE PROJECT. NO WASTE MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING ARTIFICIAL OR NATURAL DRAINAGE.
- THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100-YEAR FLOODPLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOODPLAIN DEVELOPMENT PERMIT.
- THE CONTRACTOR SHALL MAINTAIN ALL ADJOINING STREETS AND TRAVELED ROUTES FREE FROM SPILLED AND/ OR TRACKED CONSTRUCTION MATERIALS AND/ OR DEBRIS.
- MATERIAL SPECIFICATIONS:

CONCRETE/ CONCRETE RIPRAP: CLASS A 3000 PSI IN 28 DAYS UNLESS OTHERWISE NOTED ON PLANS.

REINFORCING STEEL: CONFORM TO A.S.T.M. A-615, GRADE 60
(2" COVER UNLESS OTHERWISE NOTED ON PLANS)

PIPE RAILING: CONFORM TO A.S.T.M. A-53, GRADE B, OR A-501

STRUCTURAL STEEL: CONFORM TO A.S.T.M. A-36
- CONTRACTOR TO COORDINATE CONCRETE CURB DEPRESSIONS WITH THE DEVELOPER (NO SEPARATE PAY ITEM).
- TRANSITION FROM NORMAL CROWN TO WASHOUT CROWN IN TWENTY-FIVE FEET (25') MINIMUM.
- IMPROVED EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING EIGHTY-FIVE PERCENT OF THE CHANNEL. SUBGRADE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT THE CHANNEL FOR MAINTENANCE. REFER TO 35-504 OF THE CITY OF SAN ANTONIO UDC. NO EXTRA PAY ITEM.

GUADALUPE COUNTY NOTES

- PRIOR TO THE COMMENCEMENT OF ANY WORK, THE COUNTY SHALL ATTEND A PRECONSTRUCTION MEETING INCLUDING (BUT NOT LIMITED TO) THE CITY, ENGINEER, CONTRACTOR, DEVELOPER'S INSPECTION REPRESENTATIVE, AND DEVELOPER'S CONSTRUCTION MATERIAL TESTING REPRESENTATIVE.
- DURING CONSTRUCTION, NOTIFY THE COUNTY AT CONSTRUCTION@CO.GUADALUPE.TX.US AT LEAST 48 HOURS IN ADVANCE OF ANY WORK TO BE PERFORMED AFFECTING SUBGRADE, BASE, OR PAVEMENT INCLUDING BACKFILL OF ANY PROPOSED UTILITIES UNDERNEATH THE PAVEMENT AND FILL AREAS UPON WHICH PAVEMENT IS PROPOSED TO BE PLACED. SUCH NOTIFICATION IS ALSO REQUIRED BEFORE IMPLEMENTING ANY APPROVED TRAFFIC CONTROL PLANS ON EXISTING COUNTY-MAINTAINED ROADS. FULL CLOSURE OF COUNTY ROADS REQUIRES AT LEAST ONE MONTH ADVANCE NOTICE AND IS SUBJECT TO THE DISCRETION OF THE COUNTY ENGINEER AND POSSIBLE APPROVAL BY GUADALUPE COUNTY COMMISSIONERS COURT PER TRANSPORTATION CODE, CHAPTER 251.
- DURING CONSTRUCTION, PROVIDE ALL INSPECTION AND TESTING REPORTS TO THE COUNTY AT CONSTRUCTION@CO.GUADALUPE.TX.US AS SOON AS AVAILABLE FOR IDENTIFICATION AND CORRECTION OF ANY EMERGING DEFICIENCIES.
- AT THE COMPLETION OF CONSTRUCTION, PROVIDE AS-BUILT DRAWINGS AND A LETTER SIGNED AND SEALED BY THE ENGINEER OF RECORD CERTIFYING THAT:

ALL IMPROVEMENTS WERE MADE IN ACCORDANCE WITH THE APPROVED IMPROVEMENT PLANS AND COUNTY REGULATIONS.

ANY CHANGED IMPROVEMENTS WERE MADE IN ACCORDANCE WITH THE COUNTY'S REGULATIONS.

THE ELEVATIONS AND GRADES WERE TAKEN BY AN ON-SITE SURVEY ON A DATE SPECIFIED TO ENSURE THAT ALL PAVEMENT, INLETS, MANHOLES AND APPURTENANCES ARE CONSTRUCTED TO GRADE AS SHOWN ON THE RECORD. DRAWINGS AND ARE IN COMPLIANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.

ALL TRUNK STORM SEWERS AND LEADS ARE OF THE PROPER SIZE AND THAT ALL IMPROVEMENTS ARE CAPABLE OF PERFORMANCE AS DESIGNED AND APPROVED.

CAUTION: THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION PRIOR TO COMMENCING WORK AND IS RESPONSIBLE FOR ANY/ALL DAMAGES RESULTING FROM THE FAILURE TO LOCATE AND PRESERVE UTILITIES.

NOTE TO CONTRACTOR

BY THE ACT OF SUBMITTING A BID FOR THIS PROPOSED CONTRACT, THE BIDDER WARRANTS THAT THE BIDDER, AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS HE INTENDS TO USE HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM ANY AMBIGUITIES AND SUFFICIENT FOR THE PURPOSE INTENDED. THE BIDDER FURTHER WARRANTS THAT TO THE BEST OF HIS OR HIS SUBCONTRACTORS' AND MATERIAL SUPPLIERS' KNOWLEDGE, ALL MATERIALS AND PRODUCTS SPECIFIED OR INDICATED HEREIN ARE ACCEPTABLE FOR ALL APPLICABLE CODES AND AUTHORITIES.

THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON RECORD INFORMATION ONLY AND MAY NOT MATCH LOCATIONS AND/OR DEPTHS AS CONSTRUCTED. THE CONTRACTOR SHALL CONTACT EACH INDIVIDUAL UTILITY FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS AND DEPTHS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL UTILITY CROSSINGS PRIOR TO BEGINNING ANY CONSTRUCTION.

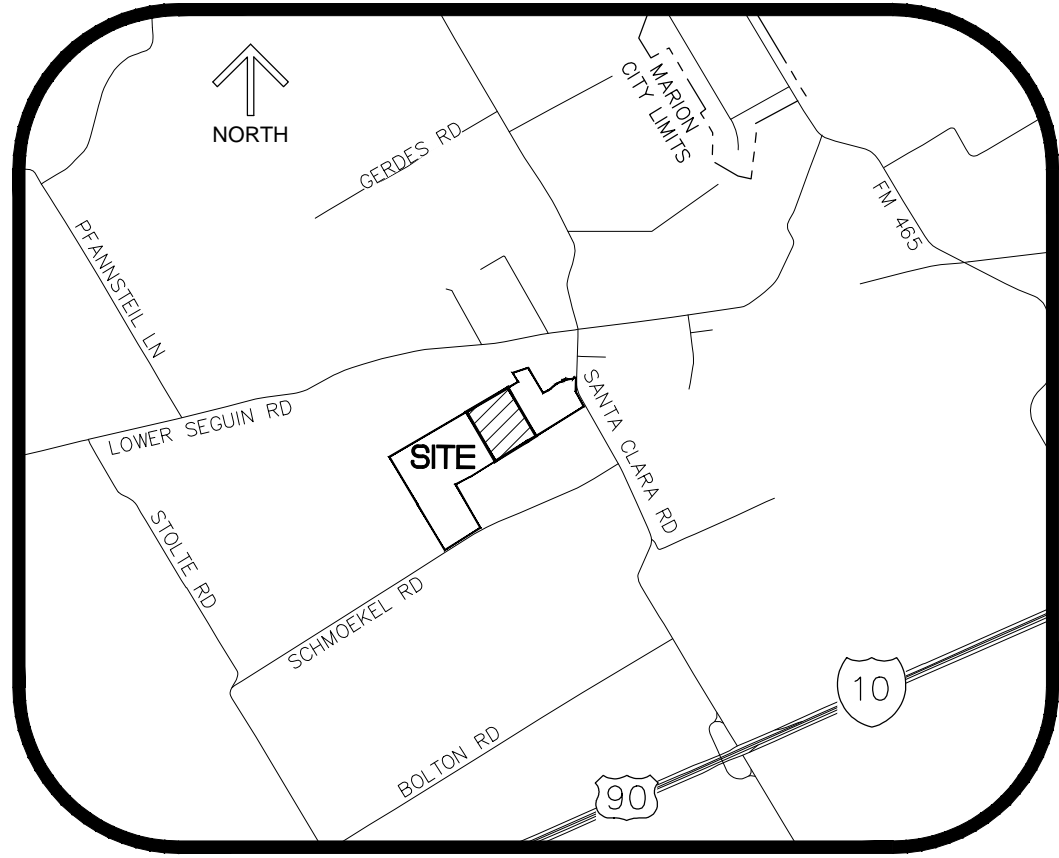
THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE JOB SITE AND THE JOB SITE CONDITIONS DURING CONSTRUCTION. THE RESPONSIBILITY IS NOT LIMITED TO NORMAL WORKING HOURS AND INCLUDES THE SAFETY OF ALL PERSONS AND PROPERTY. THE ENGINEER AND OWNER HAVE NO LIABILITY IN CONNECTION WITH THE CONSTRUCTION OF THIS PROJECT, EXCEPT FOR LIABILITY DIRECTLY CAUSED BY THE SOLE NEGLIGENCE OF THE ENGINEER AND/OR OWNER. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE ENGINEER AND/OR OWNER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE EXECUTION OF ALL WORK RELATED TO THIS PROJECT, EXCEPT FOR NEGLIGENCE ON THE PART OF THE ENGINEER AND/OR OWNER.

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 SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROGRAMS 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.

DRAINAGE CONSTRUCTION PLANS

FOR KAYDEN SPRINGS UNIT 2 MARION, TX GUADALUPE COUNTY MUNICIPAL UTILITY DISTRICT NO. 10



LOCATION MAP

N.T.S.

NO.	DATE	REVISIONS	BY

Westwood

Phone (210) 265-8300 211 North Loop 1604 East, Suite 205
TollFree (888) 937-5150 San Antonio, TX 78232
westwoodps.com

Westwood Professional Services, Inc.
TBPELS FIRM REGISTRATION NO. F-11756
TBPELS FIRM REGISTRATION NO. 10074301



ENGINEER / SURVEYOR:

WESTWOOD PROFESSIONAL SERVICES
211 N LOOP 1604 E, SUITE 205
SAN ANTONIO, TEXAS 78232
TEL: (210) 265-8300

OWNER / DEVELOPER:

LENMAR HOMES OF TEXAS
100 NE LOOP 410, SUITE 1155
SAN ANTONIO, TEXAS 78216
TEL: (210) 403-6200

TABLE OF CONTENTS

CIVIL PLANS

DRAINAGE

- C3.0 DRAINAGE COVER SHEET
- C3.1 DRAIN PLAN AND PROFILE – DRAIN B
- C3.2 DRAIN B DETAILS
- C3.3 DRAIN PLAN AND PROFILE – DRAIN G
- C3.4 DRAIN PLAN AND PROFILE – DRAIN H
- C3.5 DRAIN PLAN AND PROFILE – DRAIN I
- C3.6 DRAIN PLAN AND PROFILE – DRAIN J
- C3.7 DRAINAGE DETAILS (1 OF 2)
- C3.8 DRAINAGE DETAILS (2 OF 2)

DRAINAGE INFRASTRUCTURE MAINTENANCE SCHEDULE

EARTHEN CHANNELS, DRAINAGE LOTS/EASEMENTS, AND STORM DRAIN INFRASTRUCTURE SHALL BE INSPECTED AND MAINTAINED BY THE COMMUNITY ASSOCIATION OR PROPERTY OWNERS. THE CHANNELS ARE TO BE INSPECTED ON A BI-ANNUAL BASIS TO ENSURE PROPER OPERATION. AT A MINIMUM, ONE OF THE BI-ANNUAL INSPECTIONS SHALL BE PERFORMED DURING OR IMMEDIATELY AFTER A STORM EVENT. DAMAGE TO RETAINING WALLS, PIPES, CULVERTS, INLET/OUTLET STRUCTURES ETC. IDENTIFIED UPON INSPECTION SHALL BE REPAIRED IMMEDIATELY. STANDING WATER, WEEDS/BRUSH AND DEBRIS/LITTER ARE PERCEIVED ISSUES THAT GENERALLY POINT TOWARDS A FAILURE TO PERFORM REGULAR INSPECTIONS AND MAINTENANCE. GUADALUPE COUNTY DEPARTMENT HAS THE RIGHT TO DO PERIODIC INSPECTIONS OF DRAINAGE INFRASTRUCTURE TO ENSURE MAINTENANCE IS BEING PERFORMED.

EROSION

CHANNELS AND STORM DRAIN OUTFALL STRUCTURES MAY BE SUBJECT TO EROSION AND REGRADING, ADDITIONAL COMPACTION AND/OR REVEGETATION MAY BE REQUIRED.

BRUSH/WEEDS

CHANNELS AND DRAINAGE LOTS/EASEMENTS ARE TO BE MOWED REGULARLY TO CONTROL WEEDS/BRUSH. A MULCHING MOWER SHOULD BE USED OR GRASS CLIPPINGS SHALL BE CAUGHT AND DISPOSED OF PROPERLY.

DEBRIS/LITTER

AT PERIODIC INSPECTIONS, DEBRIS/LITTER SHALL BE REMOVED TO HELP ENSURE CHANNELS AND STORM DRAINAGE INFRASTRUCTURE ARE PERFORMING AS DESIGNED. ATTENTION SHALL BE SPECIFICALLY GIVEN TO THE TABLETOP INLETS LOCATED AT THE END OF EARTHEN CHANNELS.

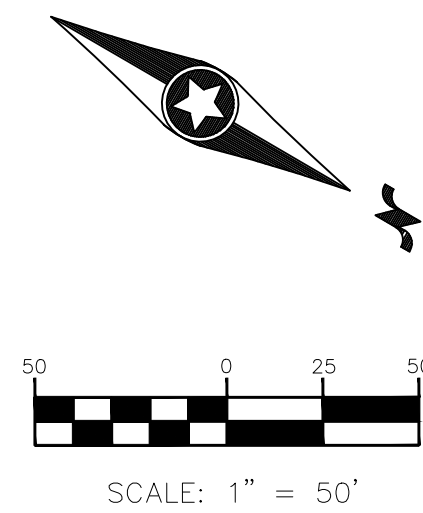
SEDIMENTATION

THE COLLECTION OF SEDIMENTATION HAS THE POTENTIAL TO ADVERSELY IMPACT CHANNELS. SEDIMENTATION BUILDUP NEAR WATER QUALITY CONTROL DEVICES MAY REDUCE THE EFFECTIVENESS OR ENTIRELY CLOG THE CONTROL DEVICES. SEDIMENT ACCUMULATION WITHIN CHANNELS OR STORM DRAINAGE INFRASTRUCTURE SHALL BE ADDRESSED IMMEDIATELY.

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL BE RESPONSIBLE FOR AND SHALL PROVIDE THE NECESSARY TRAINING AND SUPERVISORY PERSONNEL TO MAINTAIN THE PROPOSED TRENCH EXCAVATION AND/OR ADJACENT INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TRENCH EXCAVATION SAFETY PROGRAMS AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE THE NECESSARY TRAINING AND SUPERVISORY PERSONNEL TO MAINTAIN THE PROPOSED TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS, SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

NOTES:

1. THE MOST CURRENT EDITIONS OF THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS AND THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREET, AND BRIDGES SHALL BE FOLLOWED FOR ALL CONSTRUCTION.
2. COVER FOR REINFORCING STEEL IS 2" UNLESS OTHERWISE NOTED.
3. ALL CONNECTIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS
4. ALL EXPOSED CORNERS SHALL BE CHAMFERED TO MINIMUM BAR DEVELOPMENT LENGTH FOR SPLICE AND BENDS AT WALL AND FLOOR CONNECTIONS SHALL BE 24 INCHES UNLESS OTHERWISE NOTED.
5. ALL REINFORCING STEEL SHALL BE FROM NEW BILLET AND SHALL HAVE DEFORMATIONS CONFORMING TO ASTM SPECIFICATIONS AND SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:
 - A-615, GRADE 40.....#3 BARS AND DOWELS
 - A-615, GRADE 40.....#4 BARS AND DOWELS
 - A-615, GRADE 40.....ALL OTHER REINFORCING
7. INVERT OF INLETS TO BE SHAPED WITH CONCRETE TO FIT EXISTING DRAINAGE.
8. PAVE MOMENT STEEL OR USE #6 BARS, 45° DIAGONAL STEEL TO COMPENSATE FOR MOMENT AT PIPE ENTRIES.
9. PAYMENT FOR ALL EXCAVATION, BACK FILLING, CONCRETE REINFORCING STEEL, RING AND COVER SHALL BE INCLUDED IN THE UNIT PRICE FOR EACH STORM SEWER JUNCTION BOXES AND INLETS.
10. ALL CONCRETE SHALL RESIST A MINIMUM OF 3000 PSI COMPRESSIVE STRENGTH AND BE OTHERWISE TESTED.
11. STORM PIPE MATERIAL SPECIFICATIONS:
 - A) HIGH DENSITY CORRUGATED POLYETHYLENE PIPE (HDPE) - ASTM D 2998, TYPE S, A5, N-12, WT 1B OR EQUAL
 - B) APPROVED BY ENGINEER
 - B) GENIECORR CORRUGATED PIPE (CLASS III)
 - C) SPIRAL-RIB CORRUGATED METAL PIPE (ULTRA FLO) 16 GAUGE
 - D) ALUMINUM STEEL TYPE 2 W/ 3/4"x3/4"x7'-12" CONTINUOUS RIB CORRUGATIONS - ASTM-A760 TYPE 2
 - E) CORRUGATED METAL PIPE
 - F) 16 GAUGE W/ 2-3/32"x1/2" CORRUGATIONS MANUFACTURED IN ACCORDANCE W/ ASTM A760
12. PRECAST BOX CULVERT / QJALCRADE PRECAST BOX CULVERT TYPE I OR QJALCRADE TYPE II BY THE ENGINEER.



SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

[illegible]

Westwood

Phone (210) 265-8300 211 North Loop 1604 East, Suite 205
 Toll Free (888) 937-5150 San Antonio, TX 78232
westwoodps.com

Westwood Professional Services, Inc.
 TBPB FIRM REGISTRATION NO. F-11736
 TBPB FIRM REGISTRATION NO. 10074301



KAYDEN SPRINGS UNIT 2

JOB NO.:	0046599.02
DATE:	08/08/2024
DESIGN:	TB
DRAWN:	SI
CHECKED:	DA

SHEET
C3.1

TABLE OF DIMENSIONS AND REINFORCING STEEL
(Wings for one structure end)

Dimensions	Variable Reinforcing				Estimated Quantities per ft. of wing length (2-wings)	
	W	X	Y	Z	Bars J1	Bars J2
2'-0" 2'-5" 1'-0" 9"	#4	1'-0"	#4	1'-0"	33.73	0.248
3'-0" 2'-5" 1'-0" 9"	#4	1'-0"	#4	1'-0"	37.07	0.263
3'-0" 2'-5" 1'-0" 9"	#4	1'-0"	#4	1'-0"	37.74	0.273
4'-0" 2'-5" 1'-0" 9"	#4	1'-0"	#4	1'-0"	38.41	0.285
4'-0" 3'-2" 1'-6" 1'-0"	#4	1'-0"	#4	1'-0"	41.75	0.330
5'-0" 3'-2" 1'-6" 1'-0"	#4	1'-0"	#4	1'-0"	45.09	0.343
5'-0" 3'-2" 1'-6" 1'-0"	#4	1'-0"	#4	1'-0"	45.75	0.355
6'-0" 3'-2" 1'-6" 1'-0"	#4	1'-0"	#4	1'-0"	46.42	0.367
7'-0" 3'-8" 1'-9" 1'-3"	#4	1'-0"	#4	1'-0"	52.77	0.414
8'-0" 4'-2" 2'-0" 1'-6"	#5	1'-0"	#4	1'-0"	60.19	0.486
9'-0" 4'-8" 2'-3" 1'-9"	#5	1'-0"	#4	1'-0"	61.49	0.535
10'-0" 5'-2" 2'-6" 2'-0"	#5	1'-0"	#4	1'-0"	67.25	0.584
11'-0" 5'-8" 2'-9" 2'-3"	#6	1'-0"	#5	1'-0"	133.65	0.634
12'-0" 6'-2" 3'-0" 2'-6"	#7	1'-0"	#6	1'-0"	162.29	0.721
13'-0" 6'-8" 3'-3" 2'-9"	#7	1'-0"	#6	1'-0"	178.80	0.856
14'-0" 7'-2" 3'-6" 3'-0"	#8	1'-0"	#6	1'-0"	216.78	0.959
15'-0" 7'-8" 4'-0" 3'-0"	#9	1'-0"	#6	1'-0"	253.06	1.068
16'-0" 8'-2" 4'-6" 3'-0"	#9	1'-0"	#6	1'-0"	297.02	1.234

TABLE OF WINGWALL REINFORCING
(2-wings)

Bar	Size	No.	Spa
D	#5	~	1'-0"
E	#4	~	1'-0"
F	#4	~	1'-0"
G	#6	4	~
H	#4	4	~
P	#4	~	1'-0"
R	#5	6	~
V	#4	~	1'-0"

TABLE OF ESTIMATED CULVERT TOEWALL QUANTITIES

Bar	Size	No.	Spa
L	#4	~	1'-6"
Q	#4	1	~
Conc (CY/FT)			0.037

WING DIMENSION FORMULAS:
(All values are in feet.)
 $Hw = H + T + C - 0.25D$
 $Lw = (Hw - 0.333) (SL)$
 For cast-in-place culverts:
 $Lw = (H) (S) + (H + T) (U)$
 For precast culverts:
 $Lw = (H) (2U + S) + (H - 1) (0.5)$
 Total Wingwall Area (two wings - SF) = $(Hw + 0.333) (Lw)$

Hw = Height of wingwall
 SL = Side slope ratio (horizontal:1 vertical)
 Lw = Length of wingwall
 Lw = Culvert toewall length
 N = Number of culvert spans

See applicable box culvert standard sheet for H, S, T, and U values.

DISCLAIMER: This standard is approved by the Texas Engineering Practice Act. No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the correctness of this standard or for incorrect results or damages resulting from its use.

DATE: 1/2/2024

ALL CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 4500 psi.
 REINFORCING STEEL SHALL COMPLY WITH ASTM A615 GRADE 60, A706 GRADE 60 OR A497 GRADE 70. BAR BENDING AND PLACEMENT SHALL COMPLY WITH THE LATEST ACI STANDARDS.
 STANDARD STRUCTURAL DESIGN IS BASED ON AASHTO HS 20 WHEEL LOADING.
 WATER TABLE IS AT 3'-0" BELOW GRADE FOR STANDARD STRUCTURAL DESIGN.
 THE STANDARD DESIGN IS BASED ON THE TOP AT ANY ELEVATION BETWEEN FINISHED GRADE AND THE DEPTHS INDICATED.
 THE STRUCTURE SHALL BE PLACED ON A COMPACTED GRANULAR BASE TO INSURE UNIFORM DISTRIBUTION OF SOIL PRESSURES.
 SPECIAL DESIGNS BASED ON OTHER LOADINGS OR DEEPER INSTALLATION DEPTHS ARE AVAILABLE ON REQUEST.

SIZE	THICKNESS	APPROX. LBS.	STD.
3'-0" 1'-0"	8" 6"	3700 6400	10
3'-0" 1'-6"	8" 6"	3700 6400	12
4'-0" 1'-0"	8" 6"	4500 6400	12
4'-0" 2'-0"	8" 6"	4500 8200	12
4'-0" 2'-6"	8" 6"	4500 9800	12
4'-0" 4'-0"	8" 6"	4500 11800	12
5'-0" 1'-0"	8" 7"	6400 7300	10
5'-0" 2'-0"	8" 7"	6400 8000	10
5'-0" 2'-6"	8" 7"	6400 10900	10
5'-0" 4'-0"	8" 7"	6400 12800	10
6'-0" 1'-0"	8" 7"	7400 8200	8
6'-0" 2'-0"	8" 7"	7400 11000	8
6'-0" 2'-6"	8" 7"	7400 13800	8
6'-0" 4'-0"	8" 7"	7400 14800	8
7'-0" 1'-0"	8" 8"	9600 10300	8

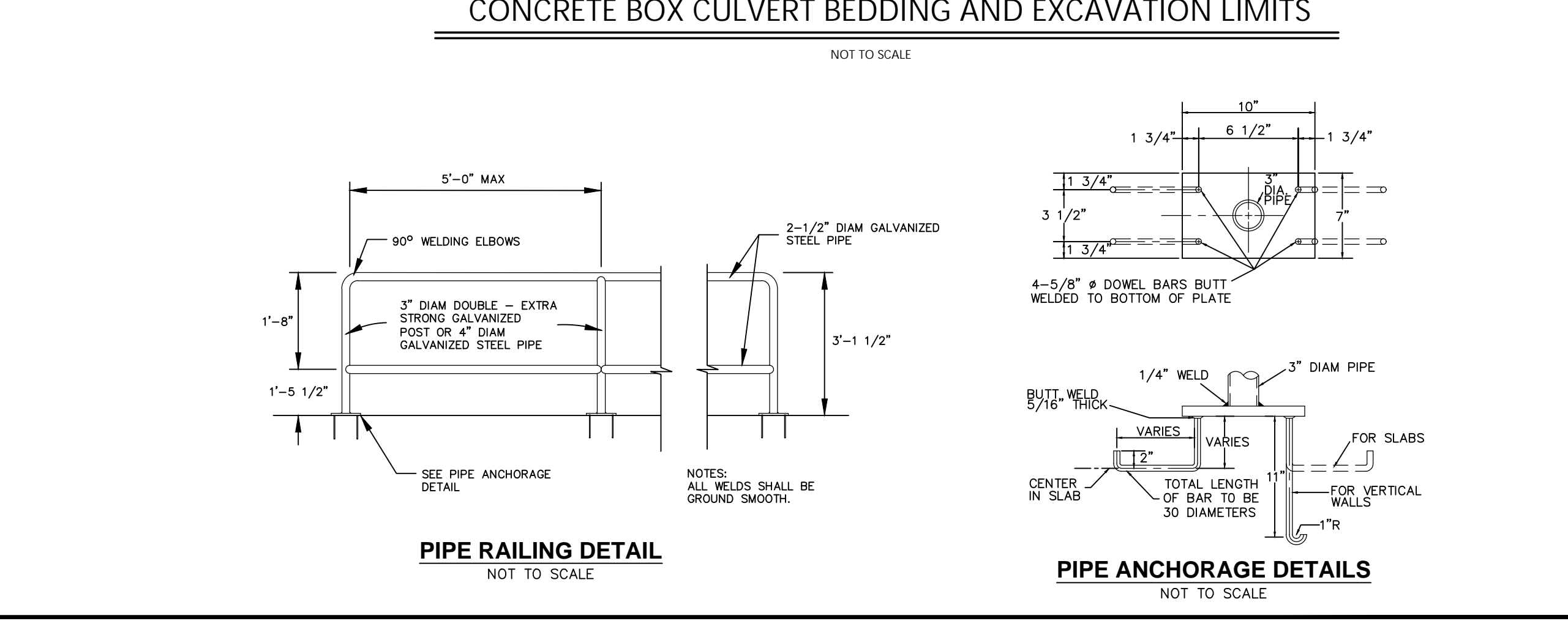
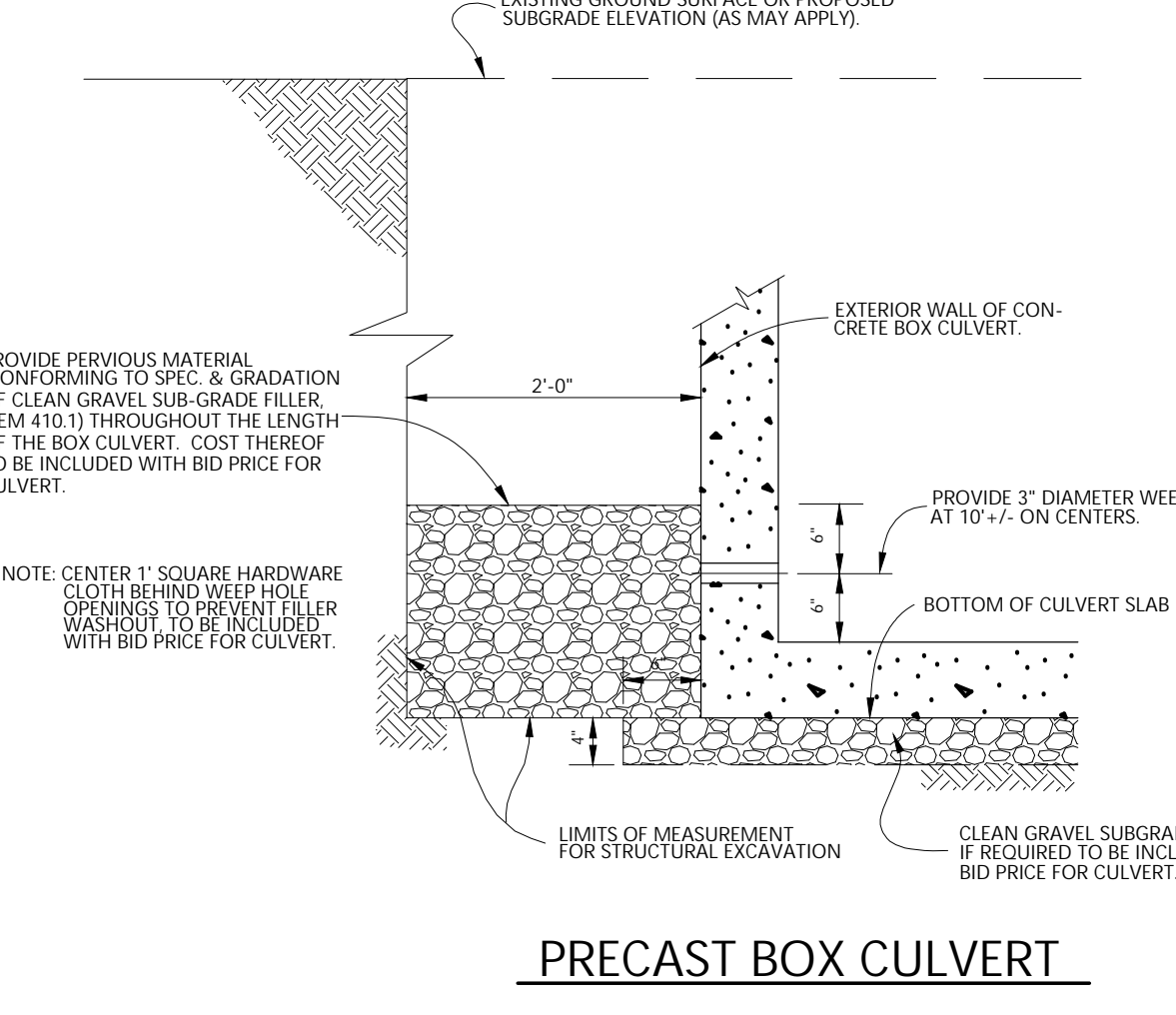
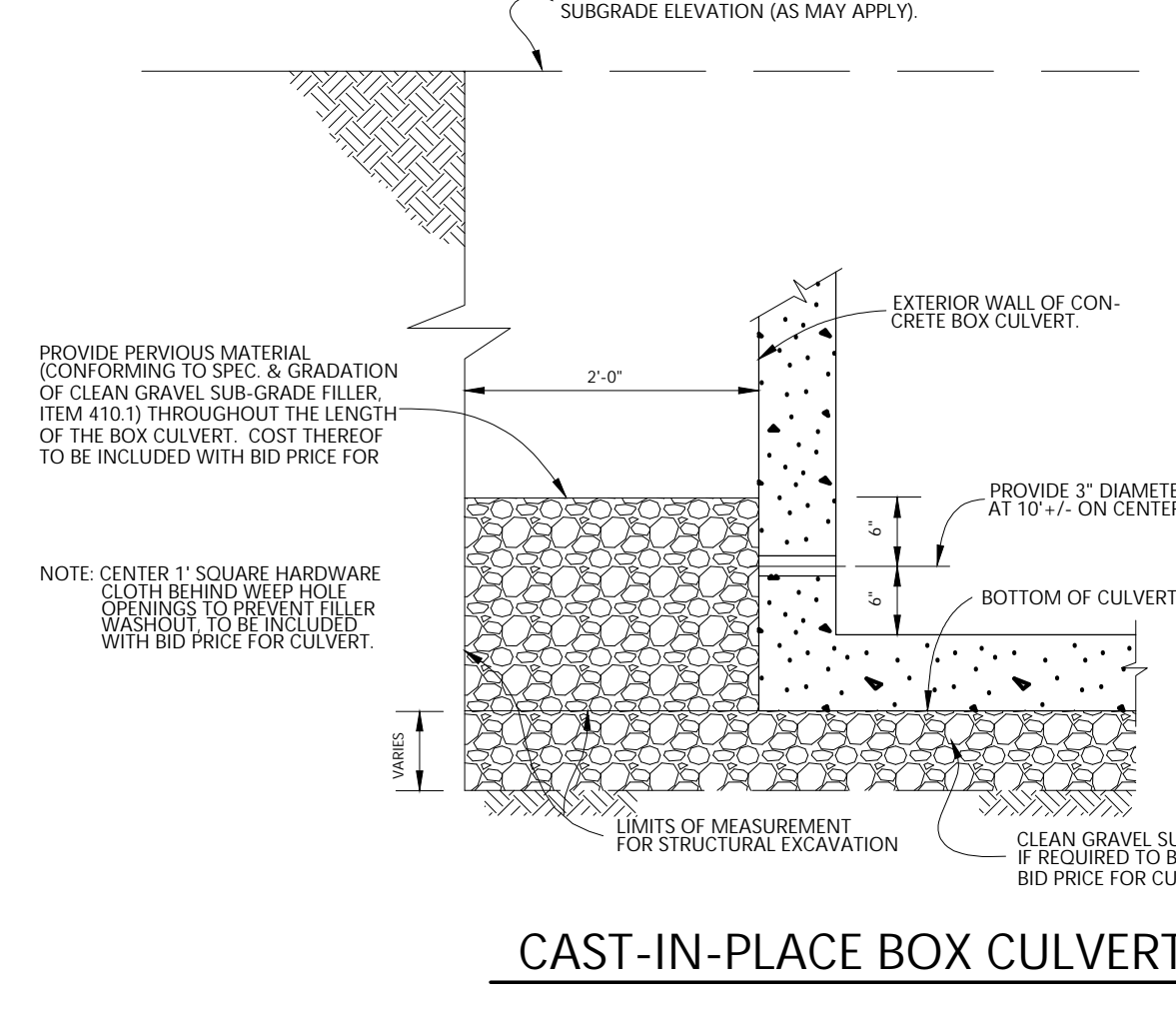
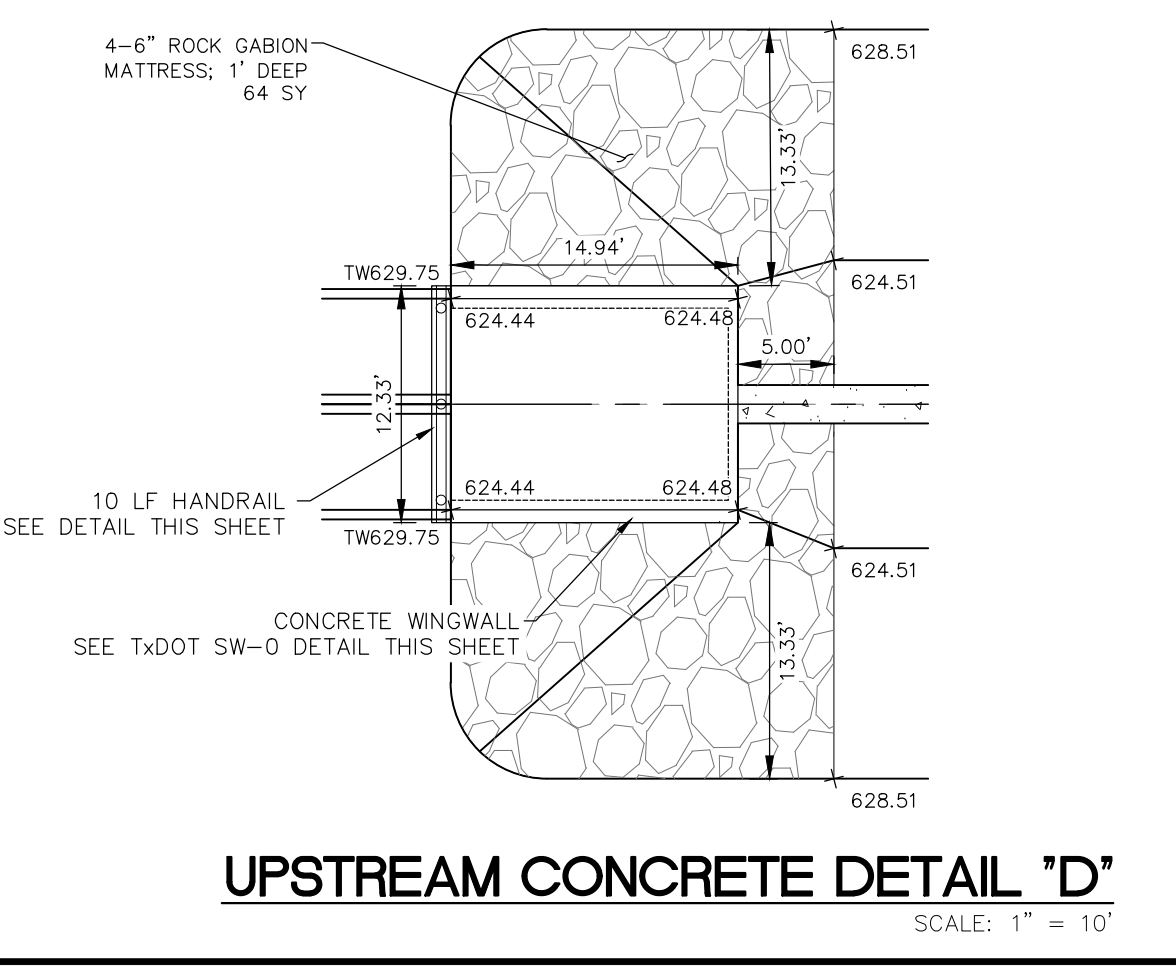
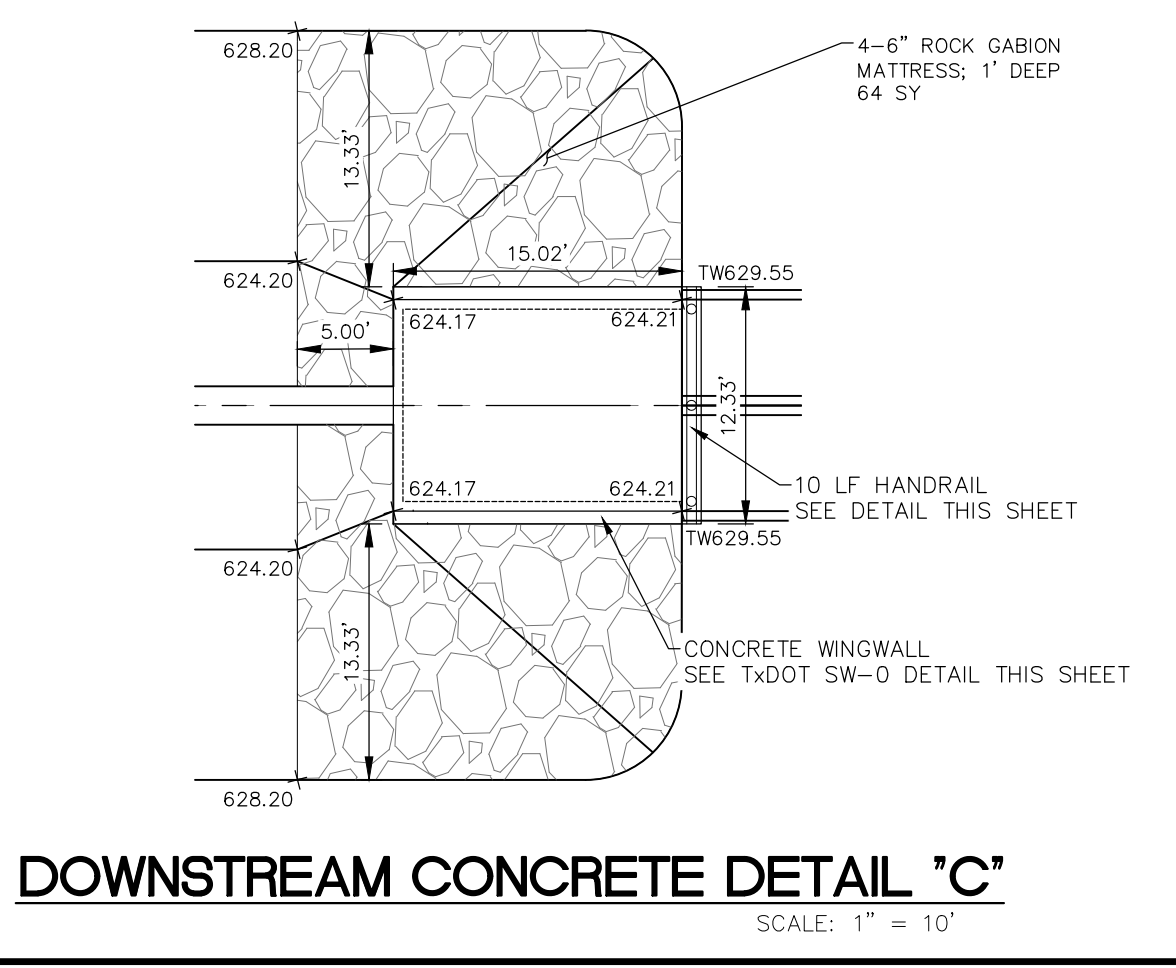
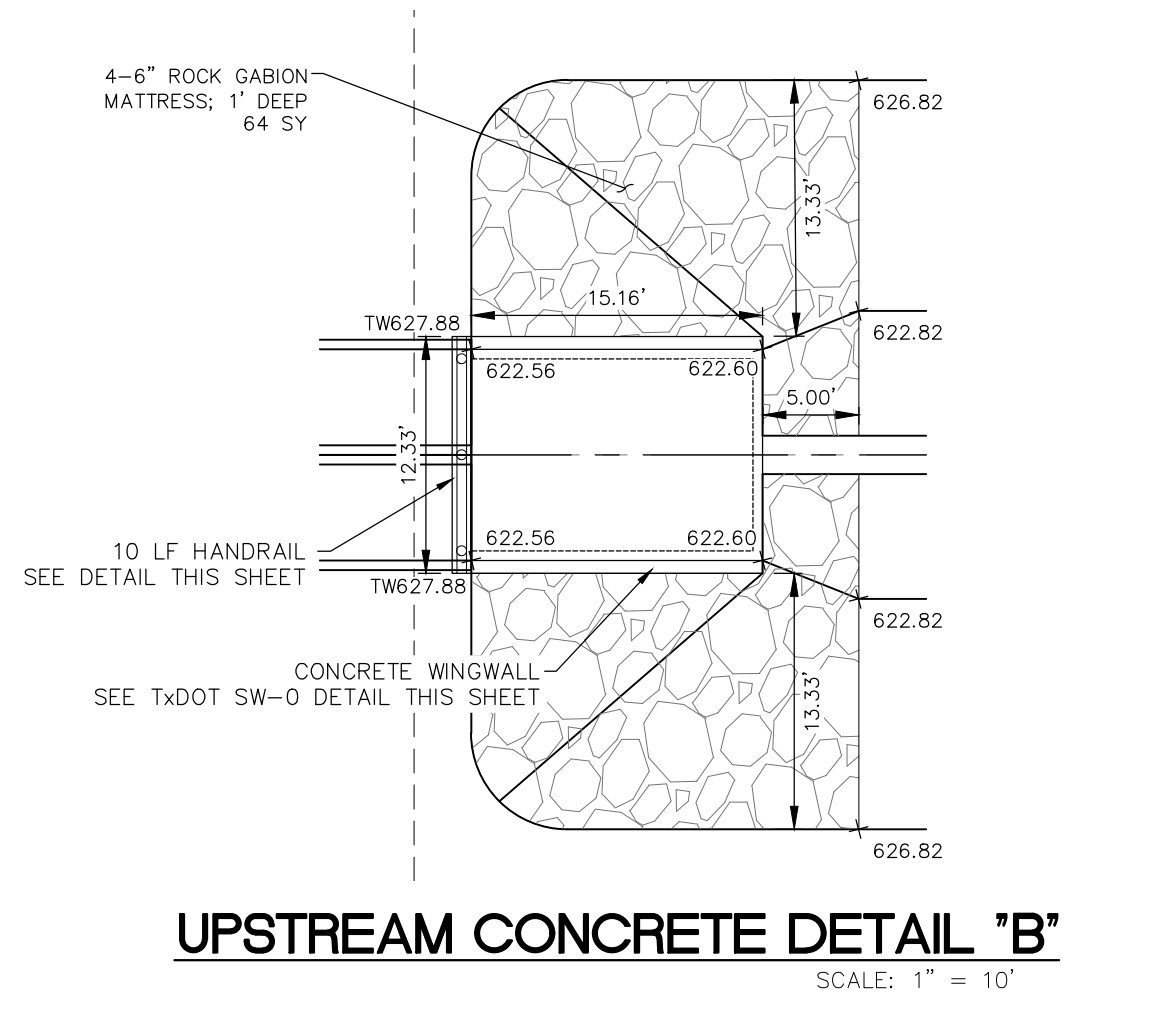
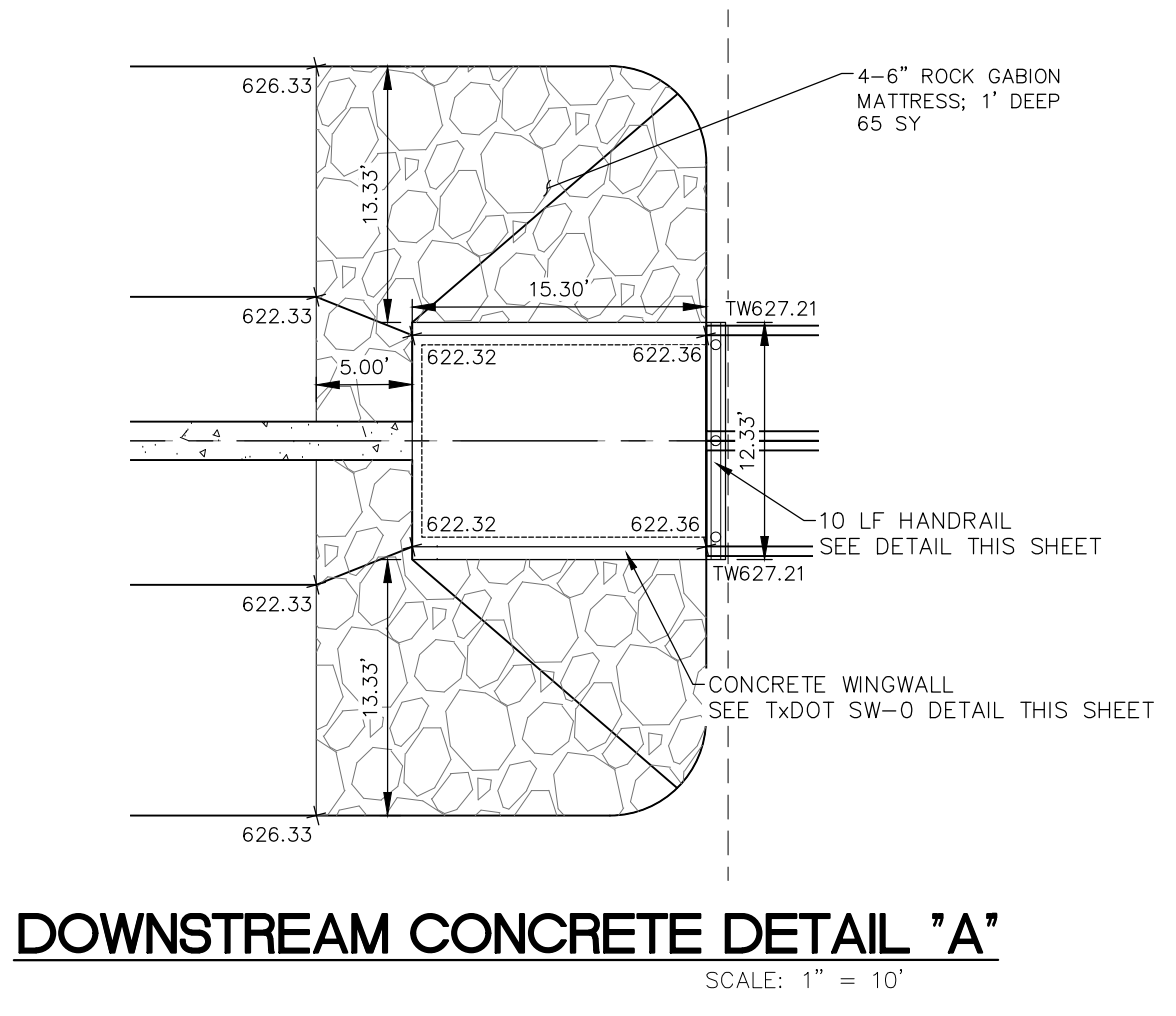
SIZE	THICKNESS	APPROX. LBS.	STD.
7'-0" 2'-0"	8" 8"	9600 12000	8
7'-0" 2'-6"	8" 8"	9600 13900	8
7'-0" 4'-0"	8" 8"	9600 15900	8
8'-0" 1'-0"	8" 8"	10900 12800	8
8'-0" 2'-0"	8" 8"	10900 14800	8
8'-0" 2'-6"	8" 8"	10900 16300	8
8'-0" 4'-0"	8" 8"	10900 18300	8
9'-0" 1'-0"	8" 8"	12300 13900	8
9'-0" 2'-0"	8" 8"	12300 15900	8
9'-0" 2'-6"	8" 8"	12300 17500	8
9'-0" 4'-0"	8" 8"	12300 19200	8
10'-0" 1'-0"	8" 8"	14800 15500	8
10'-0" 2'-0"	8" 8"	14800 16900	8
10'-0" 2'-6"	8" 8"	14800 18900	8
10'-0" 4'-0"	8" 8"	14800 20500	8

TOP SECTION

BOTTOM SECTION

TYPE 1 BOX CULVERT

Copyright 2005 Oldcastle Precast All Rights Reserved



BY: _____

REVISIONS: _____

DATE: _____

NO. _____

Westwood

211 North Loop 1604 East, Suite 205
 San Antonio, TX 78232
 Phone: (210) 955-9300
 Fax: (210) 937-5150
 Email: westwood@westwoodps.com

Westwood Professional Services, Inc.
 TPEL FIRM REGISTRATION NO. 10974801

KAYDEN SPRINGS UNIT 2

DRAIN B DETAILS

JOB NO.: 0046599.02

DATE: 08/08/2024

DESIGN: TBW

DRAWN: SG

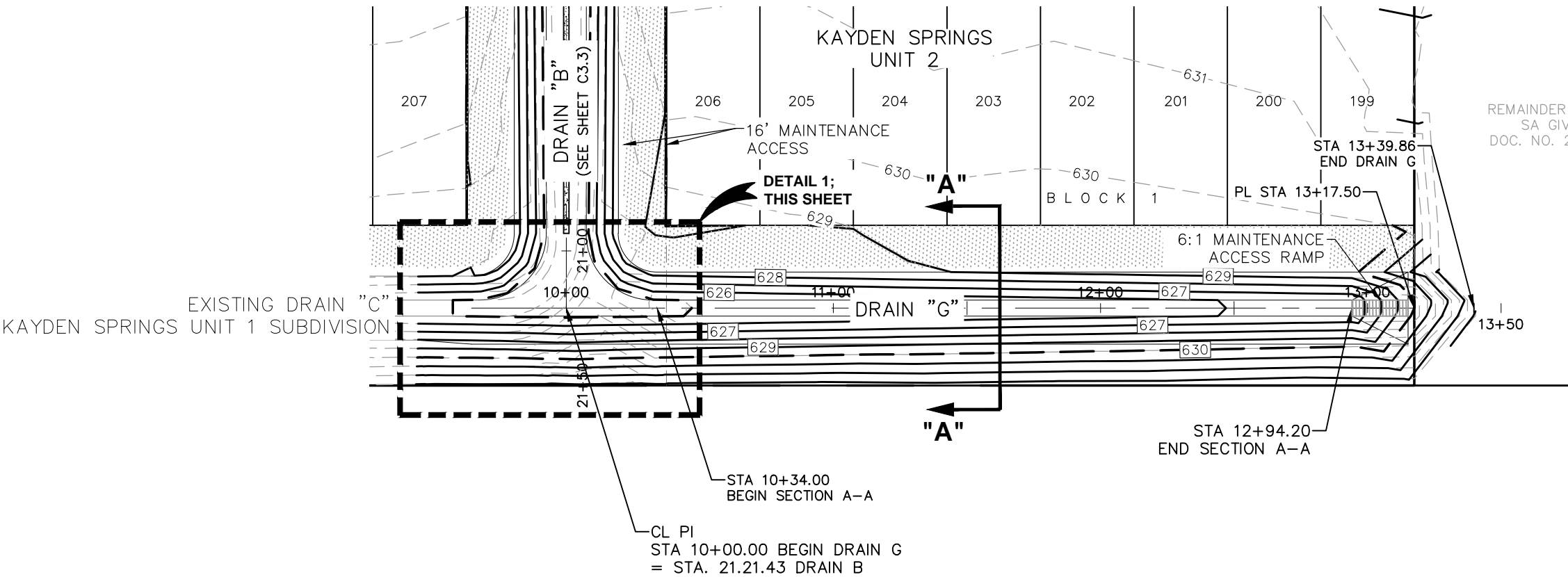
CHECKED: DAD

SHEET C3.2

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

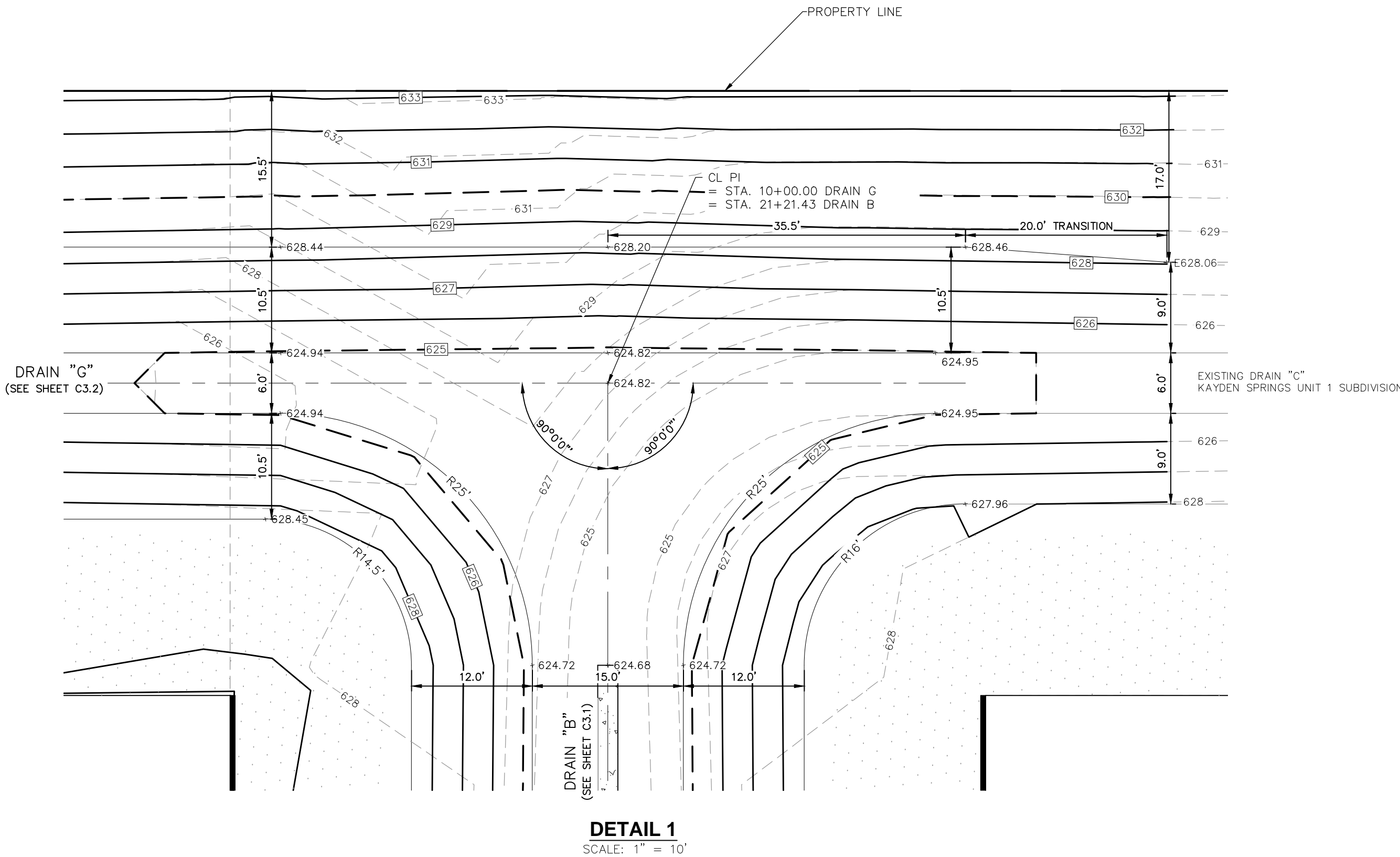
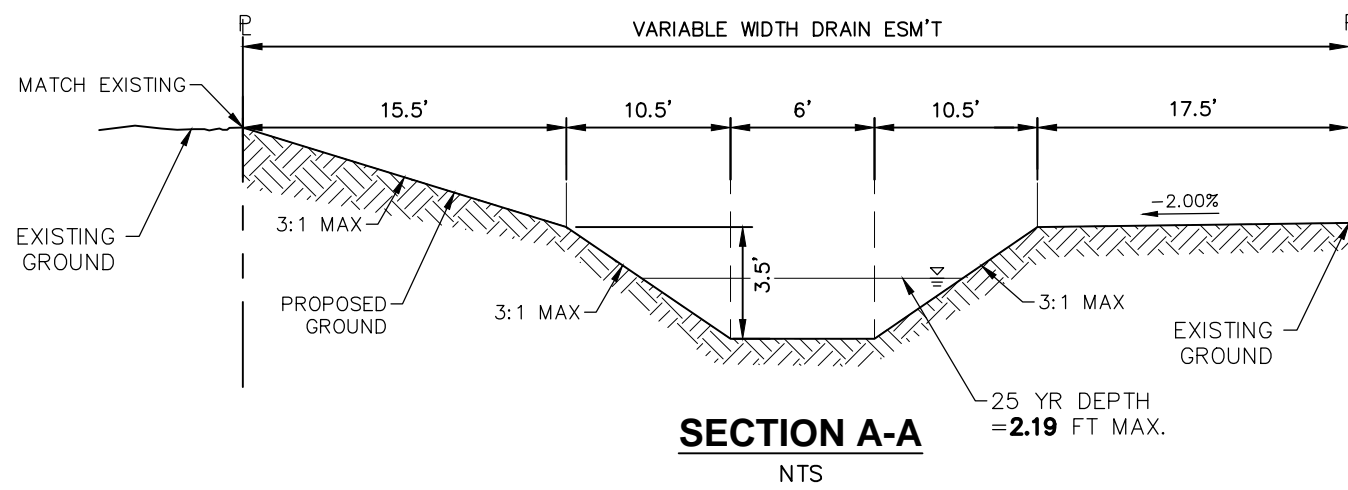
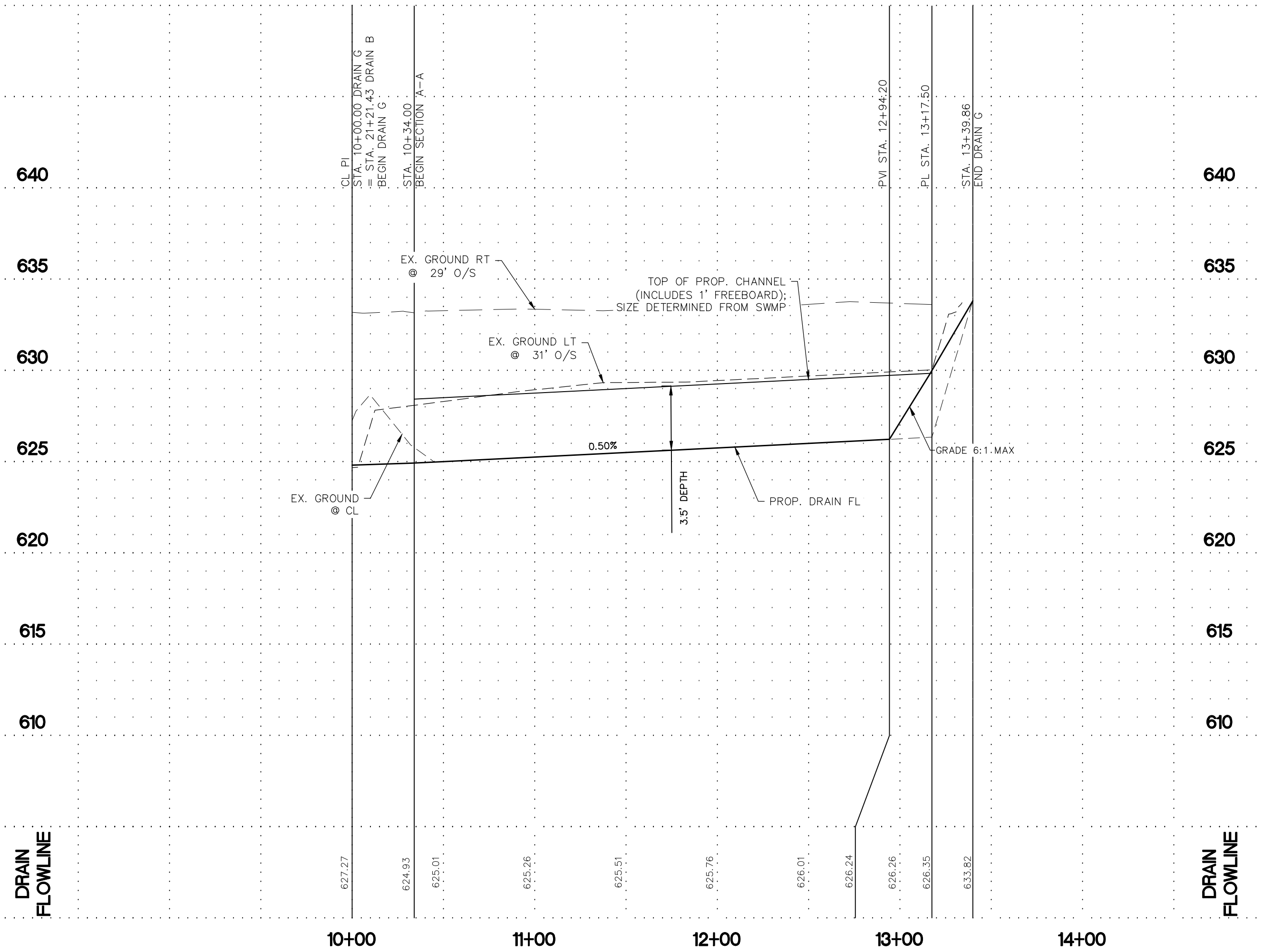
CAUTION: THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION PRIOR TO COMMENCING WORK AND IS RESPONSIBLE FOR ANY/ALL DAMAGES RESULTING FROM THE FAILURE TO LOCATE AND PRESERVE UTILITIES.



DRAIN "G"

STA 10+00.00 TO STA 13+17.50

SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



NOTES:

- THE MOST CURRENT EDITIONS OF THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS AND THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES SHALL BE FOLLOWED FOR ALL CONSTRUCTION.
- COVER FOR REINFORCING STEEL IS 2" UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
- ALL EXPOSED CORNERS SHALL BE CHAMFERED TO 3/4".
- MINIMUM BAR DEVELOPMENT LENGTH FOR SPICE AND BENDS AT WALL AND FLOOR CONNECTIONS SHALL BE 24 INCHES, UNLESS OTHERWISE NOTED.
- ALL REINFORCING STEEL SHALL BE FROM NEW BILLET AND SHALL HAVE DEFORMATIONS CONFORMING TO ASTM-615 AND SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:
 - A-615, GRADE 40.....#3 BARS AND DOWELS
 - A-185, WELDED WIRE FABRIC
 - A-615, GRADE 40.....ALL OTHER REINFORCING
- INVERT OF INLETS TO BE SHAPED WITH CONCRETE FILL TO EFFECT DRAINAGE TO OUTLET PIPE.
- SPRAY MOMENT STEEL OR USE 8-#6 BARS, 45° DIAGONAL STEEL TO COMPENSATE FOR MOMENT AT PIPE OPENINGS.
- PAYMENT FOR ALL EXCAVATION, BACK FILLING, CONCRETE REINFORCING STEEL, RING AND COVER SHALL BE INCLUDED IN THE UNIT COST OF FOR STORM SEWER JUNCTION BOXES AND INLETS.
- ALL CONCRETE SHALL RESIST A MINIMUM OF 3000 PSI 28 DAY BREAK UNLESS OTHERWISE NOTED.
- STORM PIPE MATERIAL SPECIFICATIONS:
 - A) HIGH DENSITY CORRUGATED POLYETHYLENE PIPE (HDPE), AASHTO M 294, TYPE S, ADS N-12, WT 18 OR EQUAL APPROVED BY ENGINEER.
 - B) REINFORCED CONCRETE PIPE (CLASS III)
 - C) SPIRAL-RIB CORRUGATED METAL PIPE (ULTRA FLO) 16 GAUGE ALUMINIZED STEEL TYPE 2 W/ 3/4"x3/4"x7-1/2" CONTINUOUS RIB CORRUGATIONS - ASTM-A760 TYPE 16
 - D) CORRUGATED METAL PIPE 16 GAUGE W/ 2-2/3"x1/2" CORRUGATIONS MANUFACTURED IN ACCORDANCE W/ ASTM A760
 - E) PRECAST BOX CULVERT OLDCASTLE PRECAST BOX CULVERT TYPE I OR EQUAL APPROVED BY THE ENGINEER.

NO.	DATE	REVISIONS	BY

Westwood

Phone (210) 355-9300

Toll Free (888) 837-5150

211 North Loop East, Suite 205
San Antonio, TX 78232
westwoodps.com

Westwood Professional Services, Inc.

TBPL FIRM REGISTRATION NO. 10974801

KAYDEN SPRINGS
UNIT 2

DRAIN PLAN AND PROFILE - DRAIN G

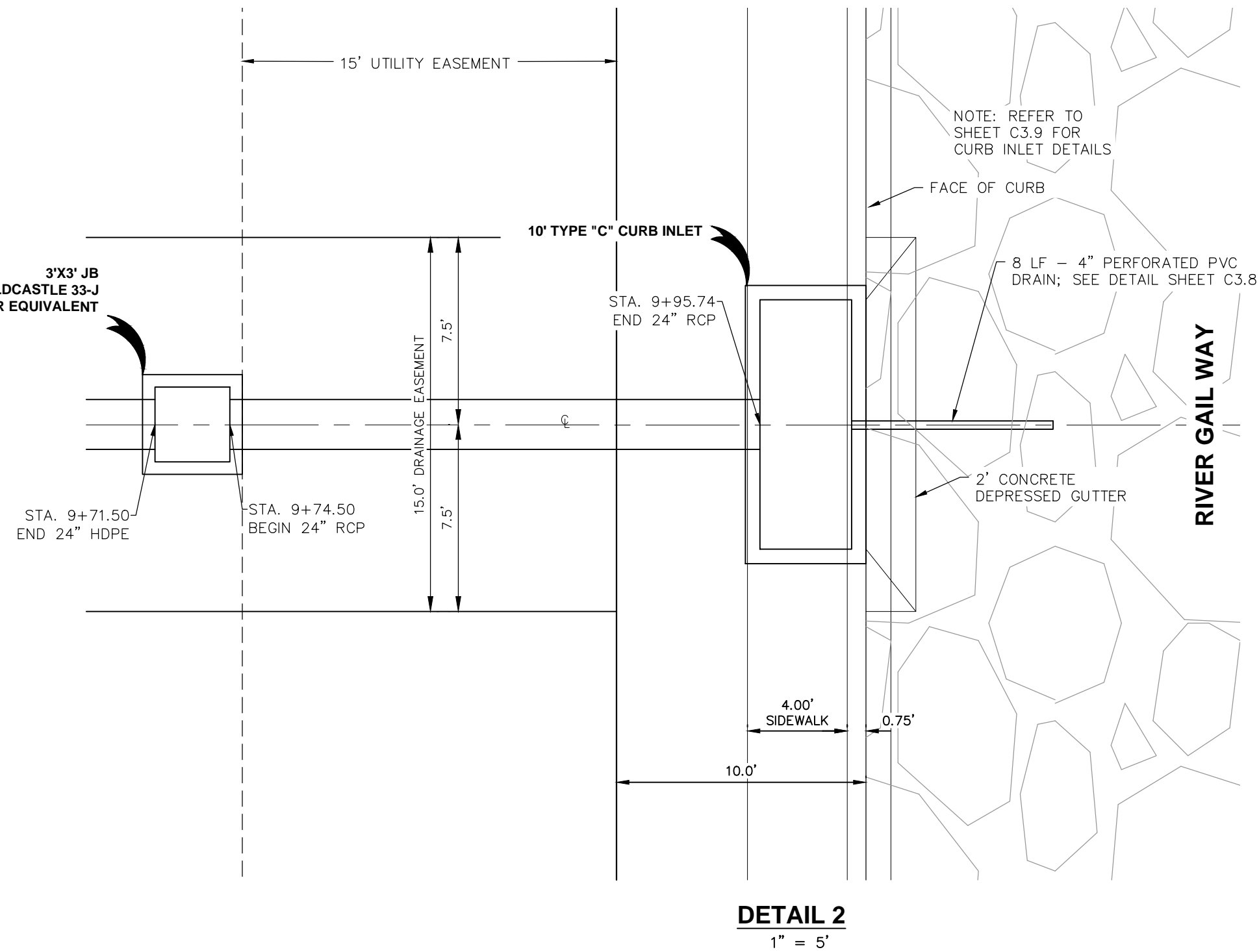
JOB NO.:	0046599.02
DATE:	08/08/2024
DESIGN:	TBW
DRAWN:	SG
CHECKED:	DAD

SHEET

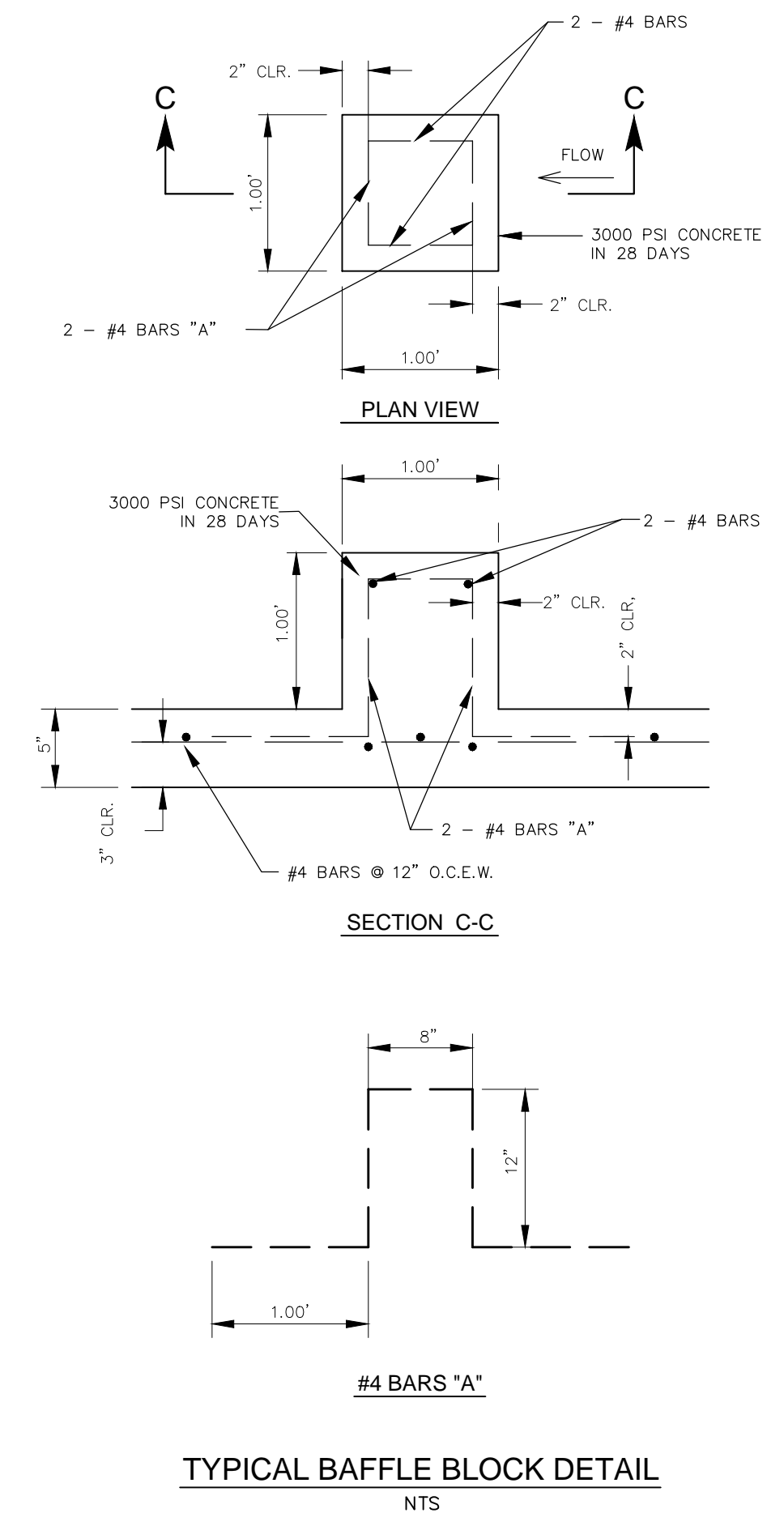
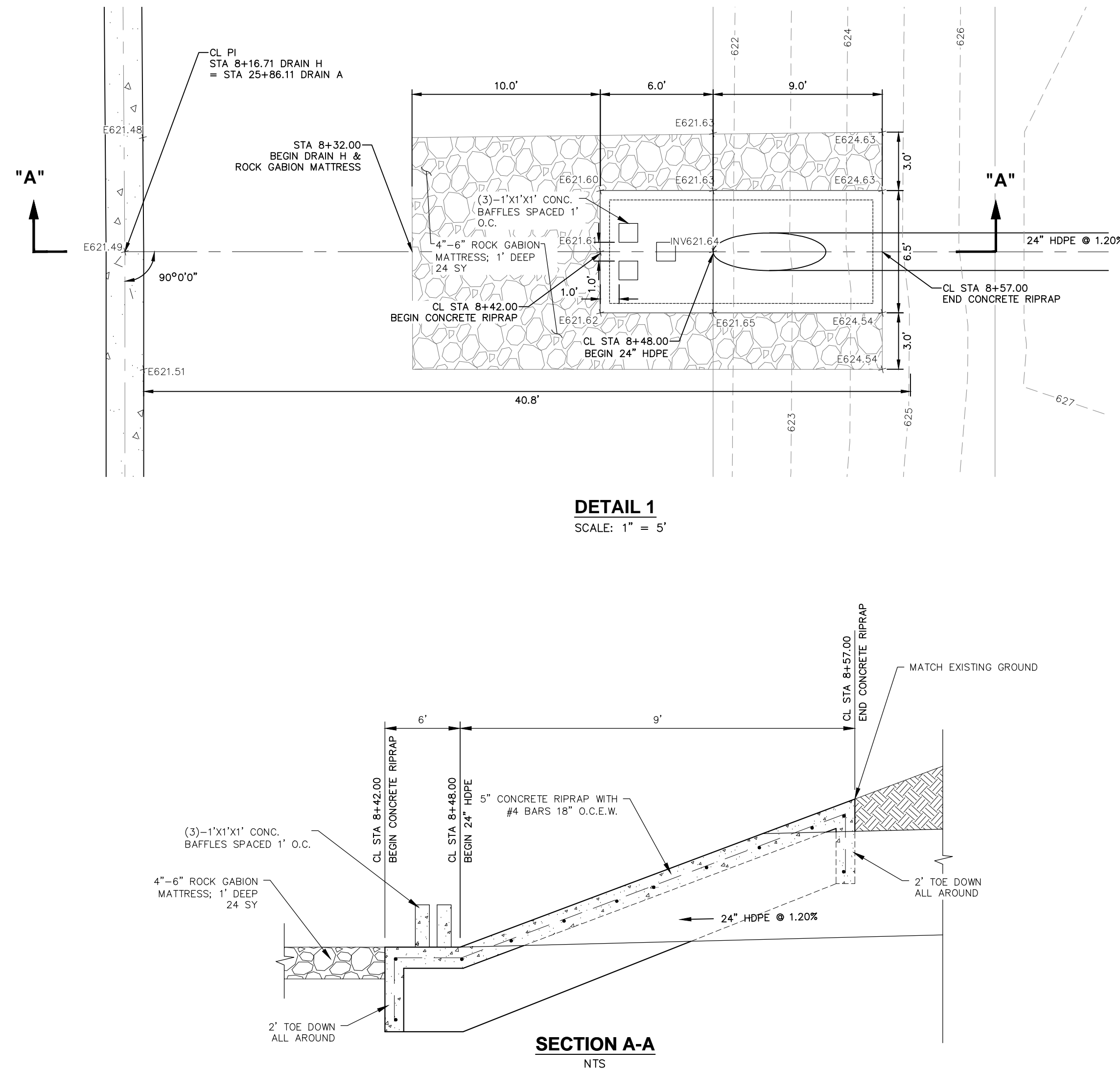
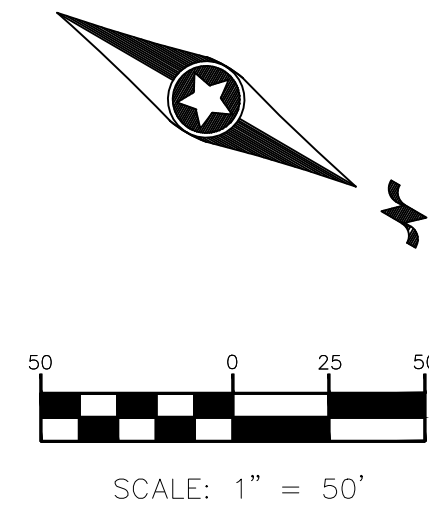
C3.3

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE, IF ANY, SHALL BE RESPONSIBLE FOR THE DESIGN OF THE TRENCH EXCAVATION SAFETY PROGRAM AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF THE TRENCH EXCAVATION SAFETY PROGRAM AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS, SPECIFICALLY, 29 CFR 1926.650 THROUGH 1926.654. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF THE TRENCH EXCAVATION SAFETY PROGRAM AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

STA 8+16.71 TO STA 10+00.00

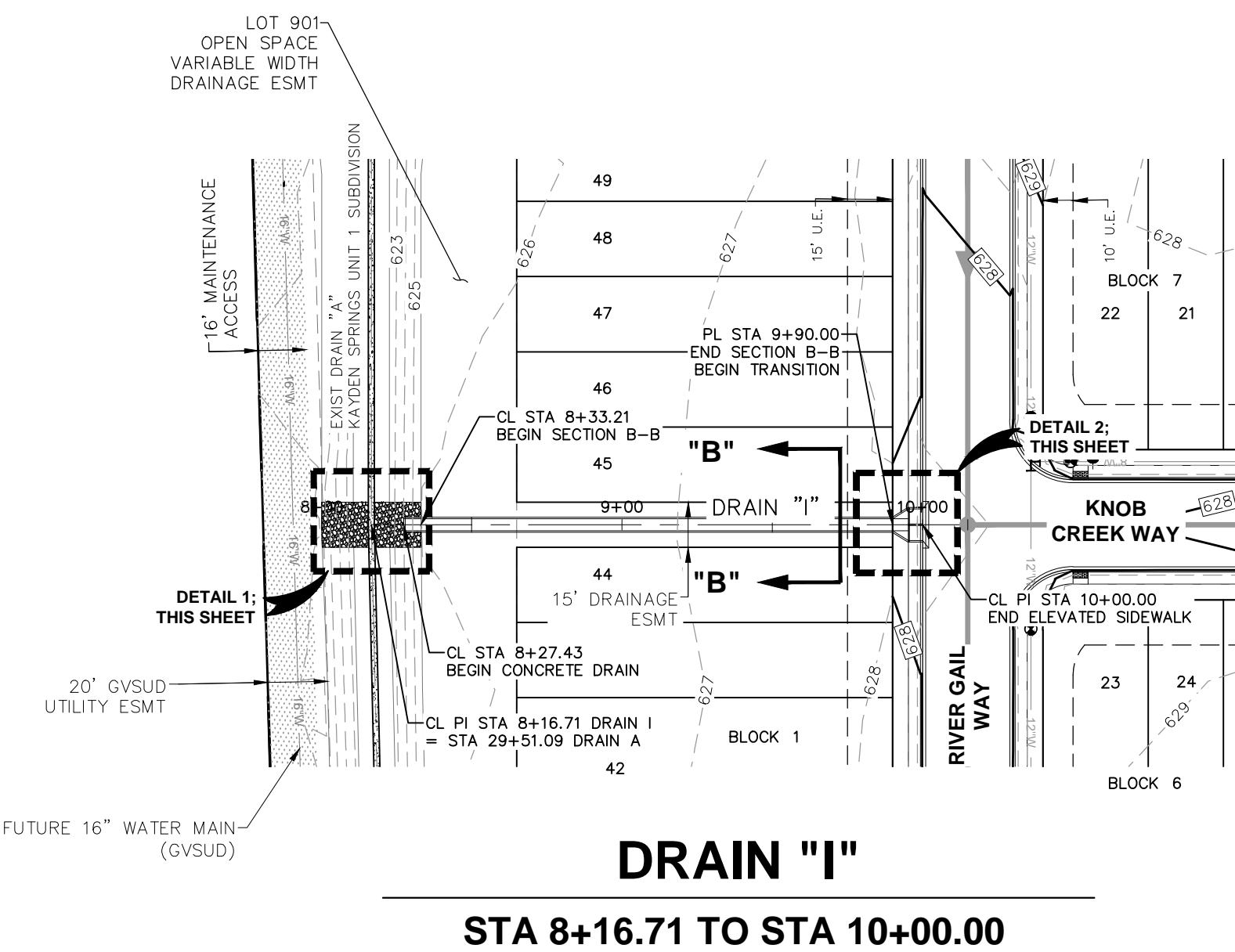


1. THE MOST CURRENT EDITIONS OF THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS AND THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS, STREETS, AND BRIDGES SHALL BE FOLLOWED FOR ALL CONSTRUCTION.
2. COVER FOR REINFORCING STEEL IS 2" UNLESS OTHERWISE NOTED.
3. ALL REINFORCING RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
4. ALL EXPOSED CORNERS SHALL BE CHAMFERED TO MINIMUM BAR DEVELOPMENT LENGTH FOR SPLICE AND BENDS AT WALL AND FLOOR CONNECTIONS SHALL BE 24 EIGHTH INCHES UNLESS OTHERWISE NOTED.
5. ALL REINFORCING STEEL SHALL BE FROM NEW BILLET AND SHALL HAVE DEFORMATIONS CONFORMING TO ASTM A618 AND SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:
 - A-615, GRADE 40.....#3 BARS AND DOWELS
 - A-615, GRADE 40.....#4 BARS AND DOWELS
 - A-615, GRADE 40.....#5 BARS AND DOWELS
 - A-615, GRADE 40.....#6 BARS AND DOWELS
 - A-615, GRADE 40.....#7 BARS AND DOWELS
 - A-615, GRADE 40.....#8 BARS AND DOWELS
 - A-615, GRADE 40.....#9 BARS AND DOWELS
 - A-615, GRADE 40.....#10 BARS AND DOWELS
 - A-615, GRADE 40.....#11 BARS AND DOWELS
 - A-615, GRADE 40.....#12 BARS AND DOWELS
 - A-615, GRADE 40.....#14 BARS AND DOWELS
 - A-615, GRADE 40.....#16 BARS AND DOWELS
 - A-615, GRADE 40.....#18 BARS AND DOWELS
 - A-615, GRADE 40.....#20 BARS AND DOWELS
 - A-615, GRADE 40.....#22 BARS AND DOWELS
 - A-615, GRADE 40.....#24 BARS AND DOWELS
 - A-615, GRADE 40.....#27 BARS AND DOWELS
 - A-615, GRADE 40.....#30 BARS AND DOWELS
 - A-615, GRADE 40.....#36 BARS AND DOWELS
 - A-615, GRADE 40.....#42 BARS AND DOWELS
 - A-615, GRADE 40.....#48 BARS AND DOWELS
 - A-615, GRADE 40.....#54 BARS AND DOWELS
 - A-615, GRADE 40.....#60 BARS AND DOWELS
 - A-615, GRADE 40.....#66 BARS AND DOWELS
 - A-615, GRADE 40.....#72 BARS AND DOWELS
 - A-615, GRADE 40.....#78 BARS AND DOWELS
 - A-615, GRADE 40.....#84 BARS AND DOWELS
 - A-615, GRADE 40.....#90 BARS AND DOWELS
 - A-615, GRADE 40.....#96 BARS AND DOWELS
 - A-615, GRADE 40.....#102 BARS AND DOWELS
 - A-615, GRADE 40.....#108 BARS AND DOWELS
 - A-615, GRADE 40.....#114 BARS AND DOWELS
 - A-615, GRADE 40.....#120 BARS AND DOWELS
 - A-615, GRADE 40.....#126 BARS AND DOWELS
 - A-615, GRADE 40.....#132 BARS AND DOWELS
 - A-615, GRADE 40.....#138 BARS AND DOWELS
 - A-615, GRADE 40.....#144 BARS AND DOWELS
 - A-615, GRADE 40.....#150 BARS AND DOWELS
 - A-615, GRADE 40.....#156 BARS AND DOWELS
 - A-615, GRADE 40.....#162 BARS AND DOWELS
 - A-615, GRADE 40.....#168 BARS AND DOWELS
 - A-615, GRADE 40.....#174 BARS AND DOWELS
 - A-615, GRADE 40.....#180 BARS AND DOWELS
 - A-615, GRADE 40.....#186 BARS AND DOWELS
 - A-615, GRADE 40.....#192 BARS AND DOWELS
 - A-615, GRADE 40.....#198 BARS AND DOWELS
 - A-615, GRADE 40.....#204 BARS AND DOWELS
 - A-615, GRADE 40.....#210 BARS AND DOWELS
 - A-615, GRADE 40.....#216 BARS AND DOWELS
 - A-615, GRADE 40.....#222 BARS AND DOWELS
 - A-615, GRADE 40.....#228 BARS AND DOWELS
 - A-615, GRADE 40.....#234 BARS AND DOWELS
 - A-615, GRADE 40.....#240 BARS AND DOWELS
 - A-615, GRADE 40.....#246 BARS AND DOWELS
 - A-615, GRADE 40.....#252 BARS AND DOWELS
 - A-615, GRADE 40.....#258 BARS AND DOWELS
 - A-615, GRADE 40.....#264 BARS AND DOWELS
 - A-615, GRADE 40.....#270 BARS AND DOWELS
 - A-615, GRADE 40.....#276 BARS AND DOWELS
 - A-615, GRADE 40.....#282 BARS AND DOWELS
 - A-615, GRADE 40.....#288 BARS AND DOWELS
 - A-615, GRADE 40.....#294 BARS AND DOWELS
 - A-615, GRADE 40.....#300 BARS AND DOWELS
 - A-615, GRADE 40.....#306 BARS AND DOWELS
 - A-615, GRADE 40.....#312 BARS AND DOWELS
 - A-615, GRADE 40.....#318 BARS AND DOWELS
 - A-615, GRADE 40.....#324 BARS AND DOWELS
 - A-615, GRADE 40.....#330 BARS AND DOWELS
 - A-615, GRADE 40.....#336 BARS AND DOWELS
 - A-615, GRADE 40.....#342 BARS AND DOWELS
 - A-615, GRADE 40.....#348 BARS AND DOWELS
 - A-615, GRADE 40.....#354 BARS AND DOWELS
 - A-615, GRADE 40.....#360 BARS AND DOWELS
 - A-615, GRADE 40.....#366 BARS AND DOWELS
 - A-615, GRADE 40.....#372 BARS AND DOWELS
 - A-615, GRADE 40.....#378 BARS AND DOWELS
 - A-615, GRADE 40.....#384 BARS AND DOWELS
 - A-615, GRADE 40.....#390 BARS AND DOWELS
 - A-615, GRADE 40.....#396 BARS AND DOWELS
 - A-615, GRADE 40.....#402 BARS AND DOWELS
 - A-615, GRADE 40.....#408 BARS AND DOWELS
 - A-615, GRADE 40.....#414 BARS AND DOWELS
 - A-615, GRADE 40.....#420 BARS AND DOWELS
 - A-615, GRADE 40.....#426 BARS AND DOWELS
 - A-615, GRADE 40.....#432 BARS AND DOWELS
 - A-615, GRADE 40.....#438 BARS AND DOWELS
 - A-615, GRADE 40.....#444 BARS AND DOWELS
 - A-615, GRADE 40.....#450 BARS AND DOWELS
 - A-615, GRADE 40.....#456 BARS AND DOWELS
 - A-615, GRADE 40.....#462 BARS AND DOWELS
 - A-615, GRADE 40.....#468 BARS AND DOWELS
 - A-615, GRADE 40.....#474 BARS AND DOWELS
 - A-615, GRADE 40.....#480 BARS AND DOWELS
 - A-615, GRADE 40.....#486 BARS AND DOWELS
 - A-615, GRADE 40.....#492 BARS AND DOWELS
 - A-615, GRADE 40.....#498 BARS AND DOWELS
 - A-615, GRADE 40.....#504 BARS AND DOWELS
 - A-615, GRADE 40.....#510 BARS AND DOWELS
 - A-615, GRADE 40.....#516 BARS AND DOWELS
 - A-615, GRADE 40.....#522 BARS AND DOWELS
 - A-615, GRADE 40.....#528 BARS AND DOWELS
 - A-615, GRADE 40.....#534 BARS AND DOWELS
 - A-615, GRADE 40.....#540 BARS AND DOWELS
 - A-615, GRADE 40.....#546 BARS AND DOWELS
 - A-615, GRADE 40.....#552 BARS AND DOWELS
 - A-615, GRADE 40.....#558 BARS AND DOWELS
 - A-615, GRADE 40.....#564 BARS AND DOWELS
 - A-615, GRADE 40.....#570 BARS AND DOWELS
 - A-615, GRADE 40.....#576 BARS AND DOWELS
 - A-615, GRADE 40.....#582 BARS AND DOWELS
 - A-615, GRADE 40.....#588 BARS AND DOWELS
 - A-615, GRADE 40.....#594 BARS AND DOWELS
 - A-615, GRADE 40.....#600 BARS AND DOWELS
 - A-615, GRADE 40.....#606 BARS AND DOWELS
 - A-615, GRADE 40.....#612 BARS AND DOWELS
 - A-615, GRADE 40.....#618 BARS AND DOWELS
 - A-615, GRADE 40.....#624 BARS AND DOWELS
 - A-615, GRADE 40.....#630 BARS AND DOWELS
 - A-615, GRADE 40.....#636 BARS AND DOWELS
 - A-615, GRADE 40.....#642 BARS AND DOWELS
 - A-615, GRADE 40.....#648 BARS AND DOWELS
 - A-615, GRADE 40.....#654 BARS AND DOWELS
 - A-615, GRADE 40.....#660 BARS AND DOWELS
 - A-615, GRADE 40.....#666 BARS AND DOWELS
 - A-615, GRADE 40.....#672 BARS AND DOWELS
 - A-615, GRADE 40.....#678 BARS AND DOWELS
 - A-615, GRADE 40.....#684 BARS AND DOWELS
 - A-615, GRADE 40.....#690 BARS AND DOWELS
 - A-615, GRADE 40.....#696 BARS AND DOWELS
 - A-615, GRADE 40.....#702 BARS AND DOWELS
 - A-615, GRADE 40.....#708 BARS AND DOWELS
 - A-615, GRADE 40.....#714 BARS AND DOWELS
 - A-615, GRADE 40.....#720 BARS AND DOWELS
 - A-615, GRADE 40.....#726 BARS AND DOWELS
 - A-615, GRADE 40.....#732 BARS AND DOWELS
 - A-615, GRADE 40.....#738 BARS AND DOWELS
 - A-615, GRADE 40.....#744 BARS AND DOWELS
 - A-615, GRADE 40.....#750 BARS AND DOWELS
 - A-615, GRADE 40.....#756 BARS AND DOWELS
 - A-615, GRADE 40.....#762 BARS AND DOWELS
 - A-615, GRADE 40.....#768 BARS AND DOWELS
 - A-615, GRADE 40.....#774 BARS AND DOWELS
 - A-615, GRADE 40.....#780 BARS AND DOWELS
 - A-615, GRADE 40.....#786 BARS AND DOWELS
 - A-615, GRADE 40.....#792 BARS AND DOWELS
 - A-615, GRADE 40.....#798 BARS AND DOWELS
 - A-615, GRADE 40.....#804 BARS AND DOWELS
 - A-615, GRADE 40.....#810 BARS AND DOWELS
 - A-615, GRADE 40.....#816 BARS AND DOWELS
 - A-615, GRADE 40.....#822 BARS AND DOW

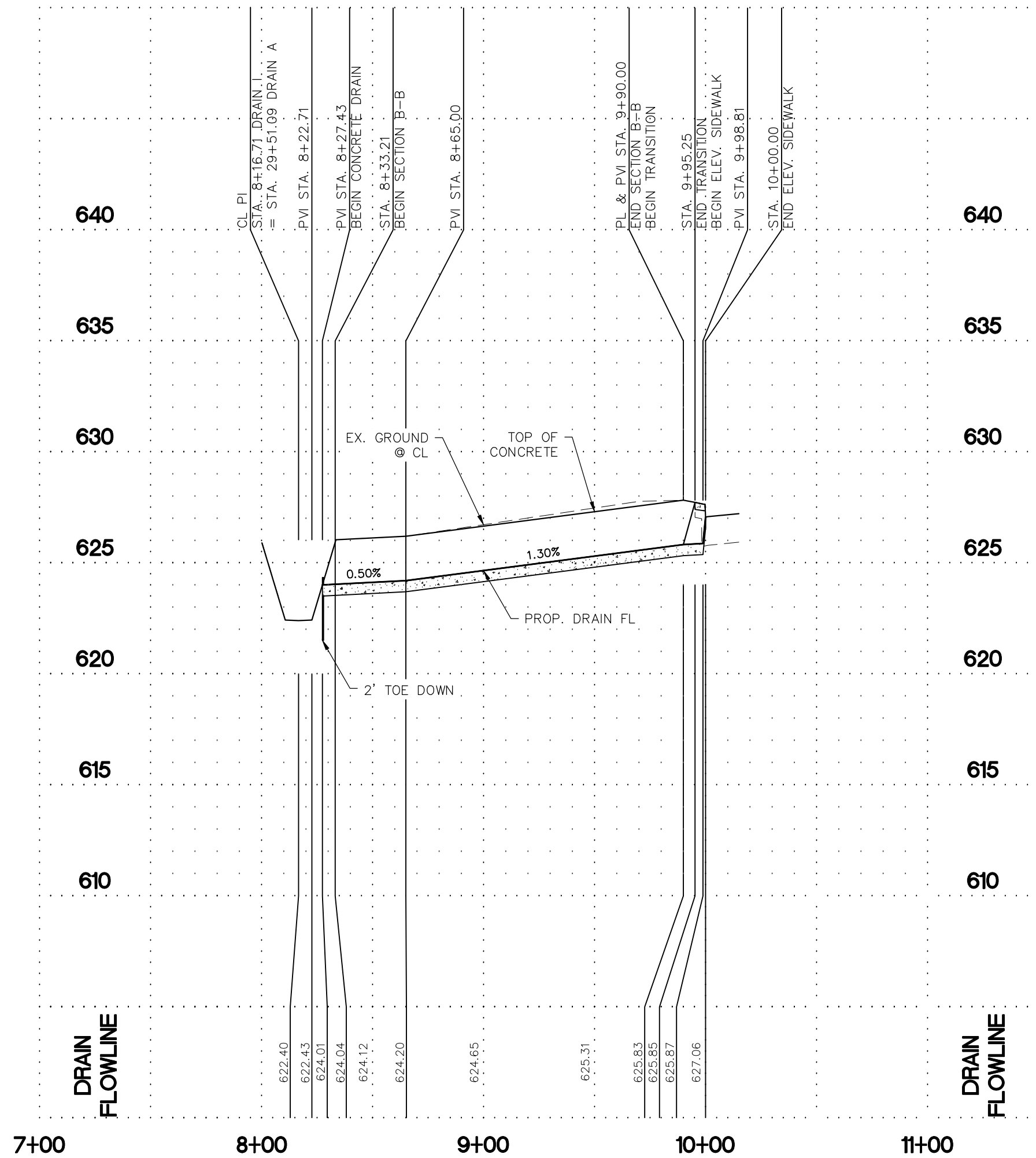


TRENCH EXCAVATION SAFETY PROTECTION
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA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

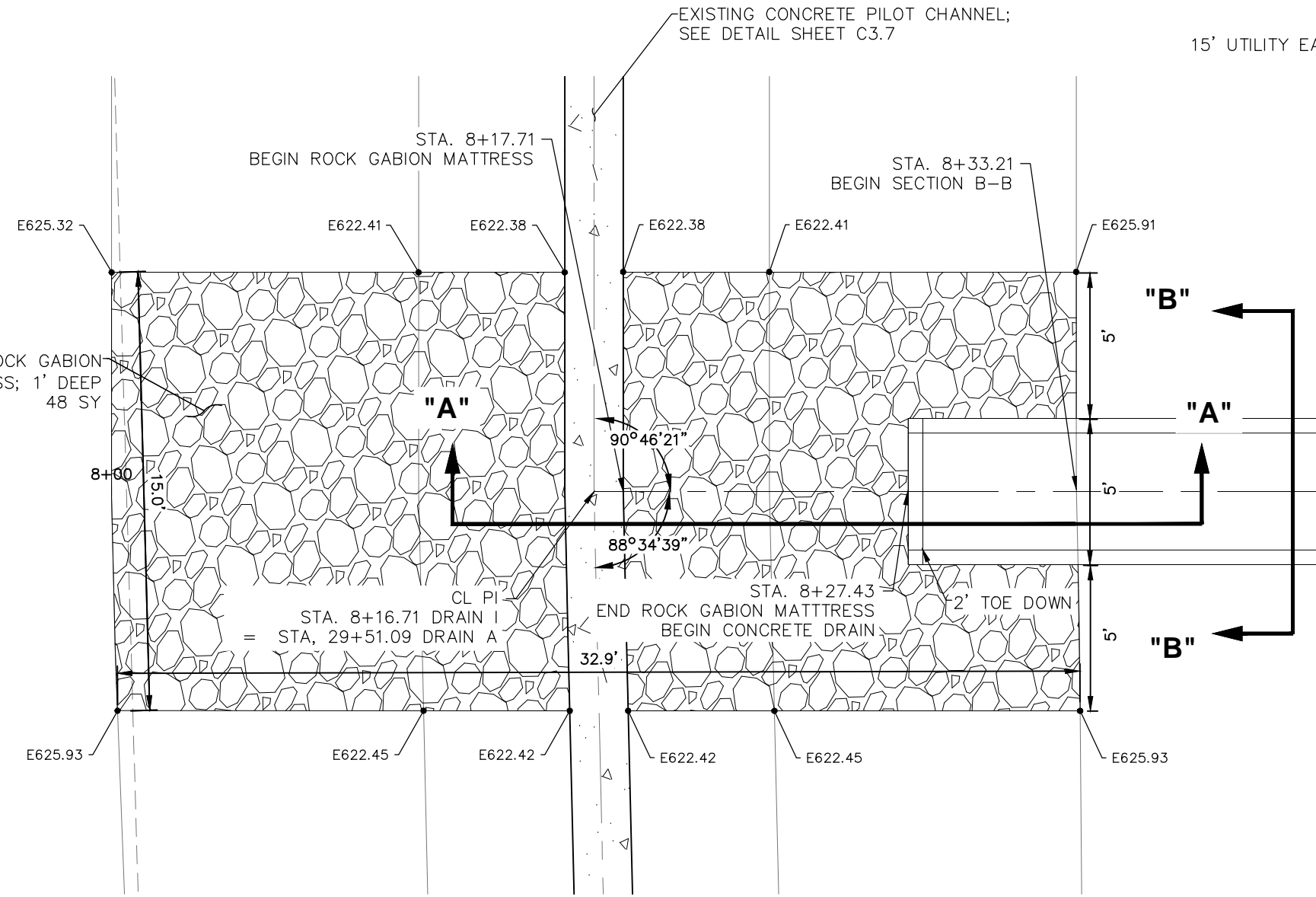
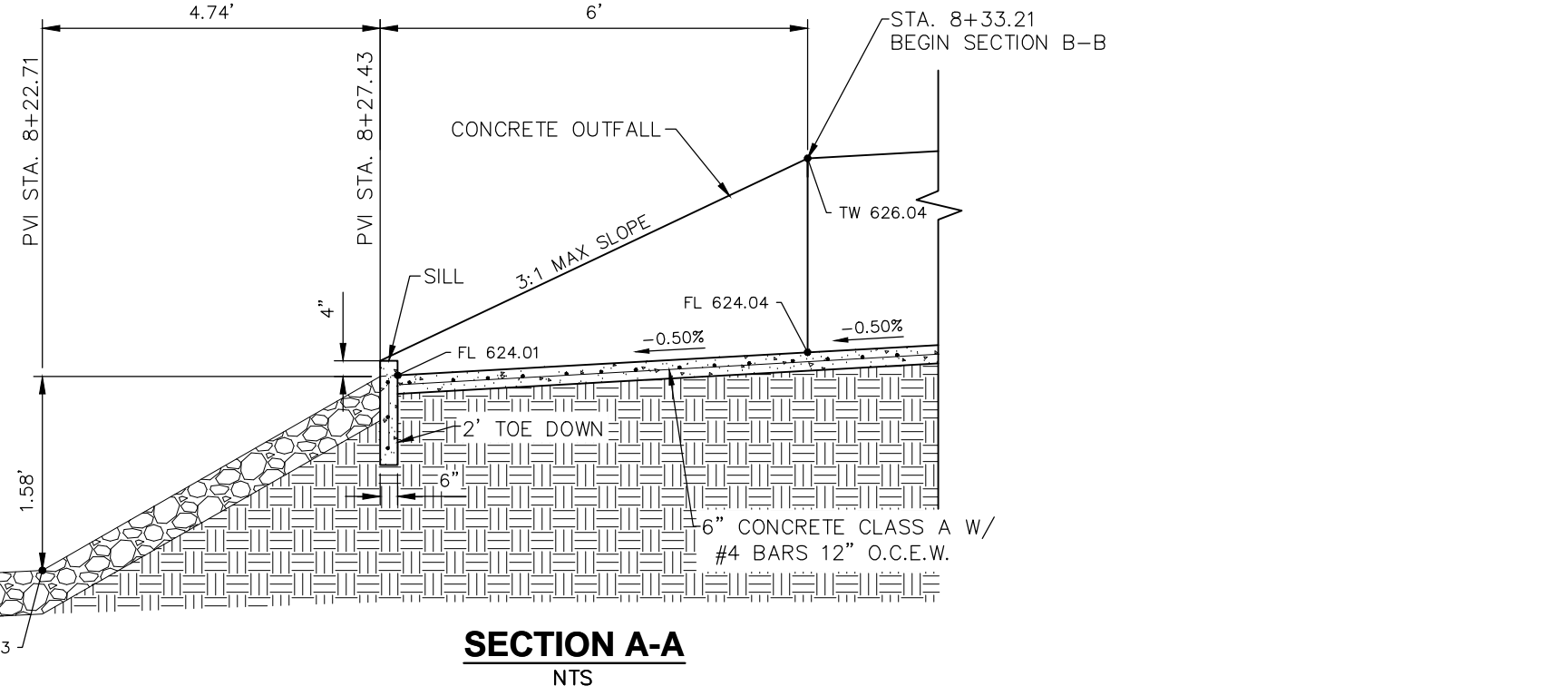
CAUTION: THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION PRIOR TO COMMENCING WORK AND IS RESPONSIBLE FOR ANY/ALL DAMAGES RESULTING FROM THE FAILURE TO LOCATE AND PRESERVE UTILITIES.



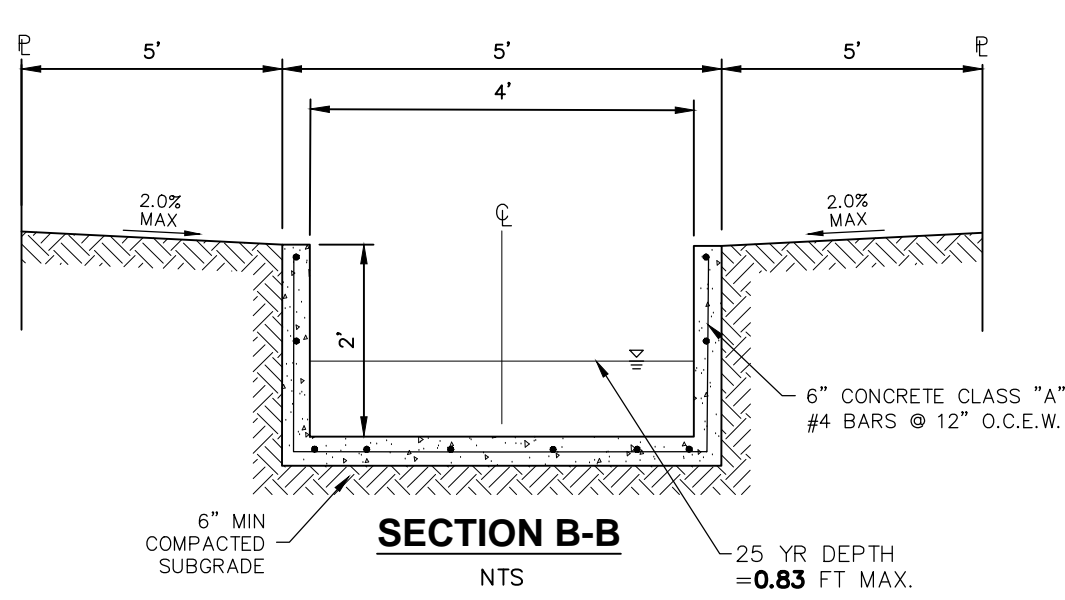
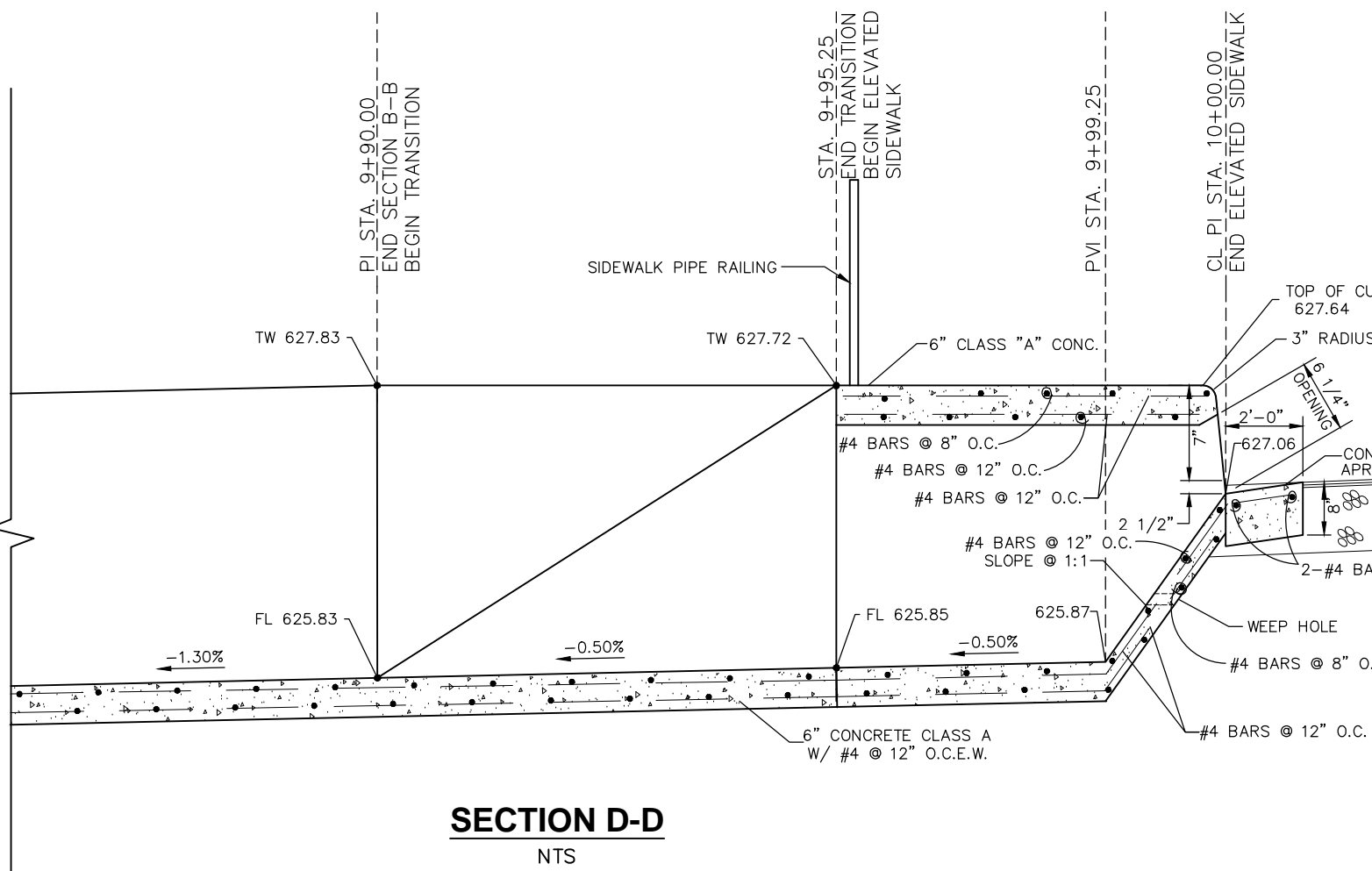
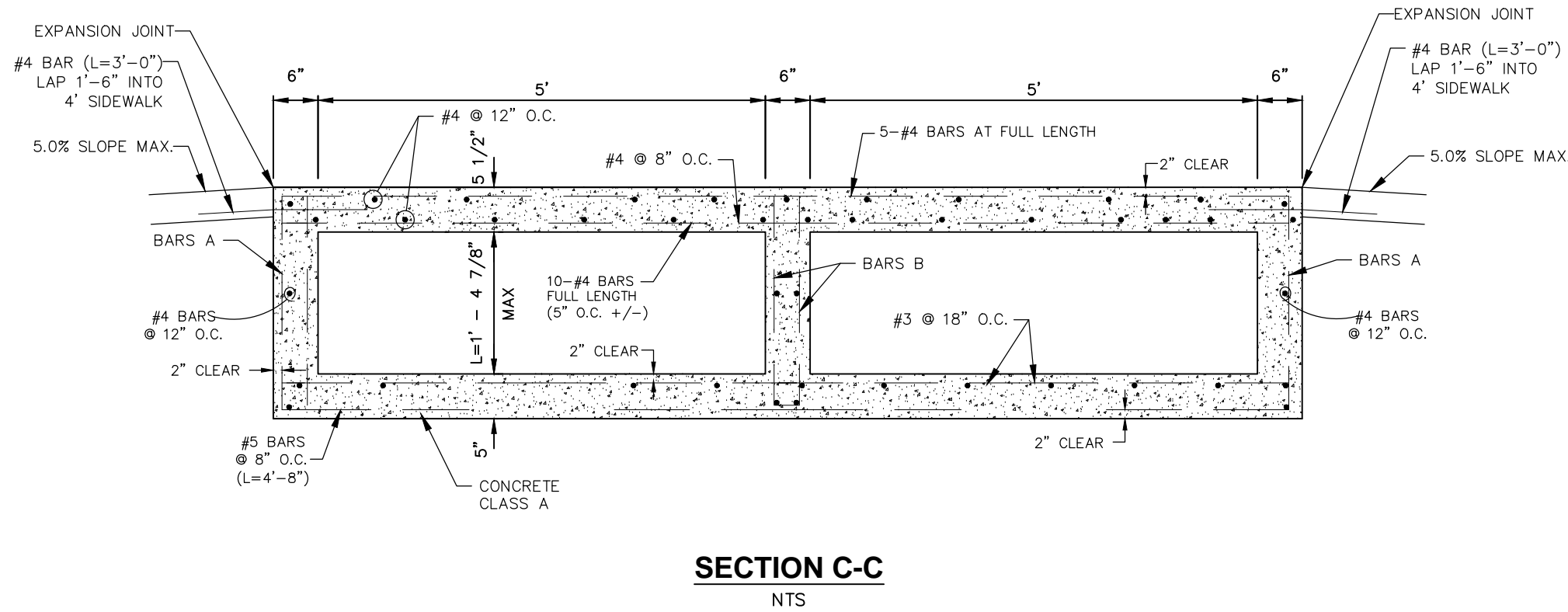
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



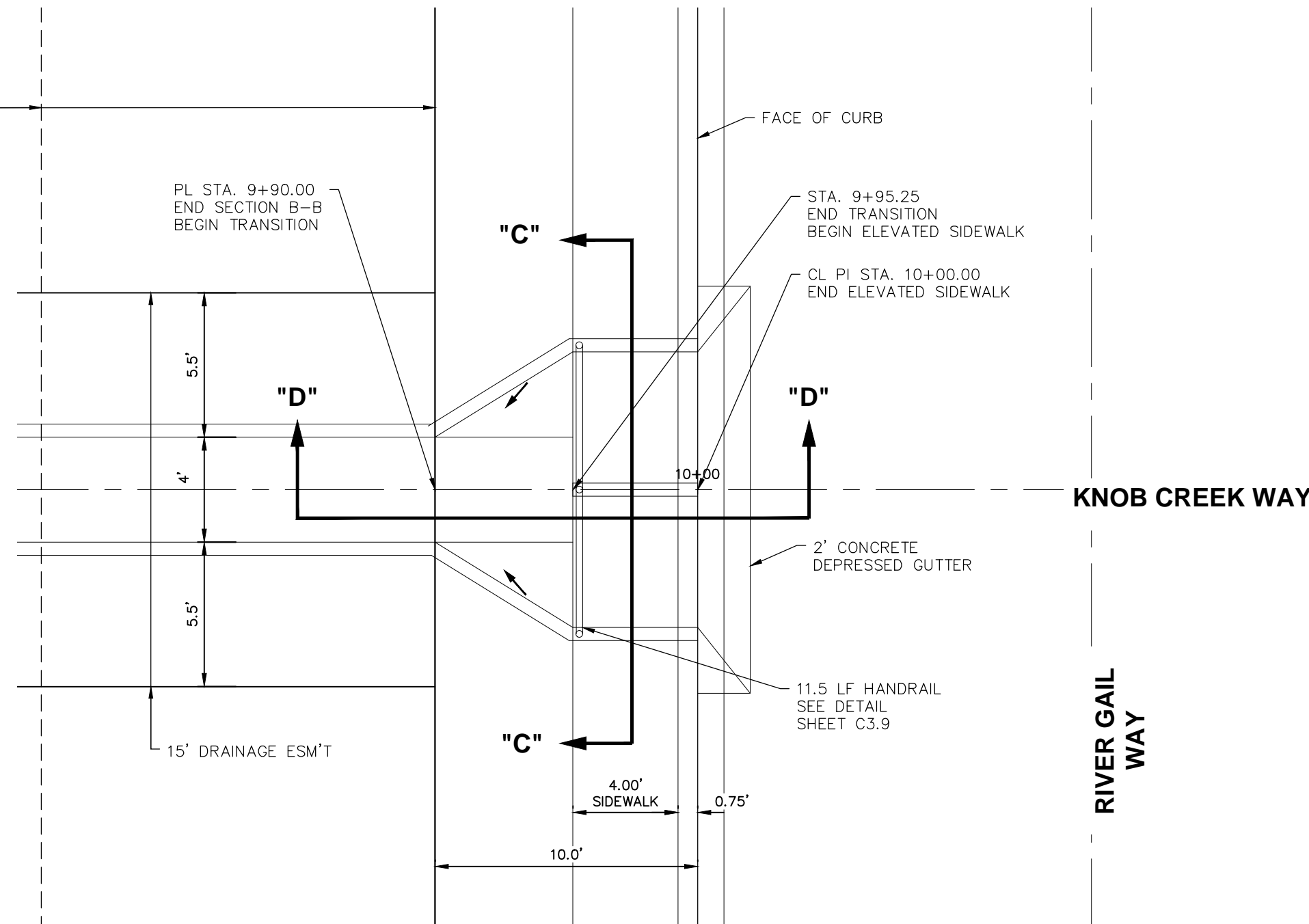
DRAIN FLOWLINE



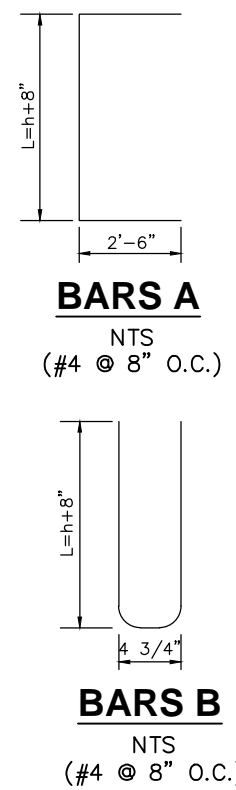
DETAIL 1
SCALE: 1" = 5'



DETAIL 2
SCALE: 1" = 5'



DETAIL 2
SCALE: 1" = 5'



BY	
REVISIONS	
DATE	
NO.	

Westwood
Phone (210) 955-9300
Fax (888) 937-5150
211 North Loop East, Suite 205
San Antonio, TX 78232
westwoodps.com

Westwood Professional Services, Inc.
TPEL FIRM REGISTRATION NO. 10974801



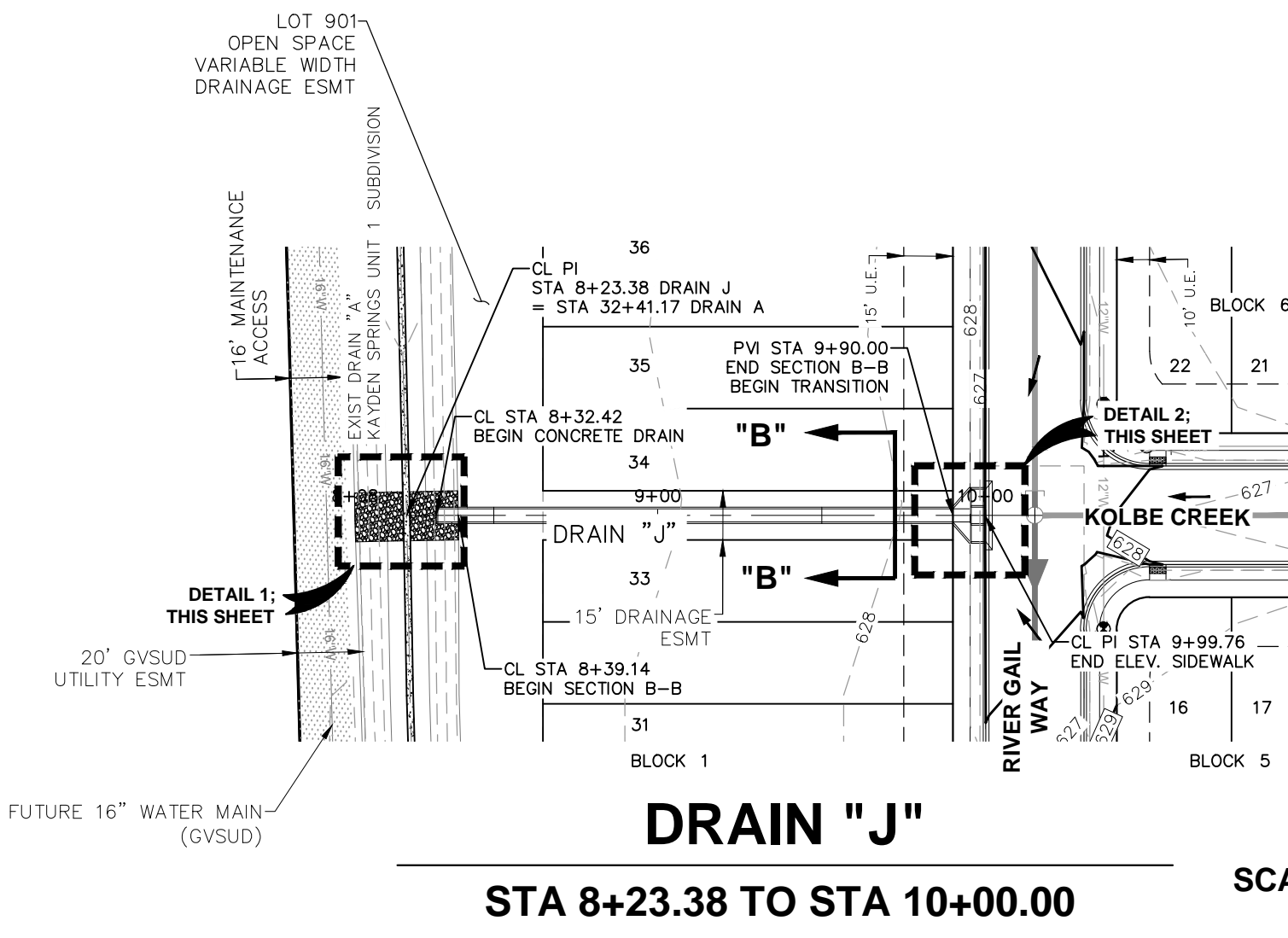
KAYDEN SPRINGS
UNIT 2
DRAIN PLAN AND PROFILE - DRAIN I

JOB NO.:	0046599.02
DATE:	08/08/2024
DESIGN:	TBW
DRAWN:	SG
CHECKED:	DAD

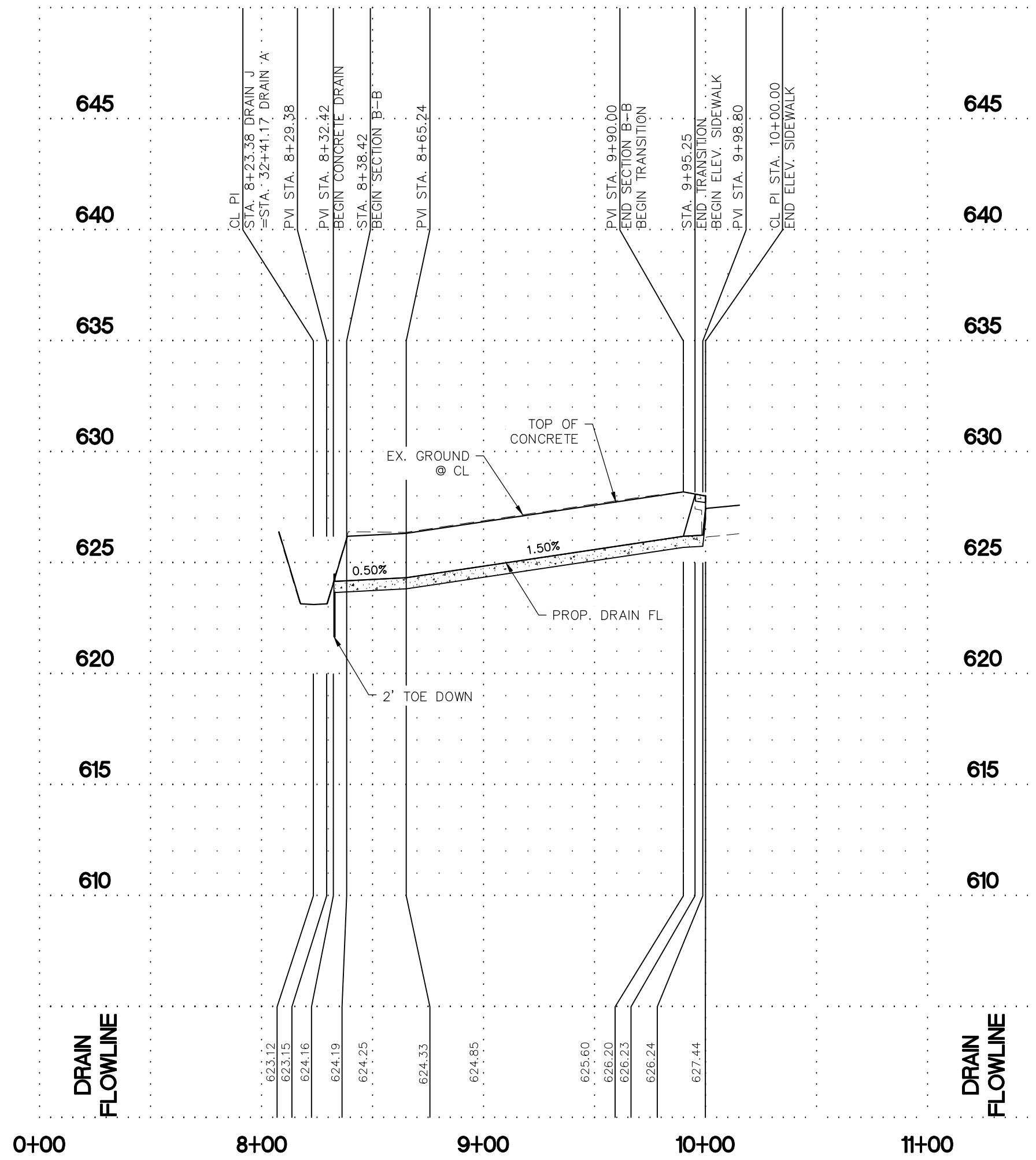
SHEET
C3.5

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

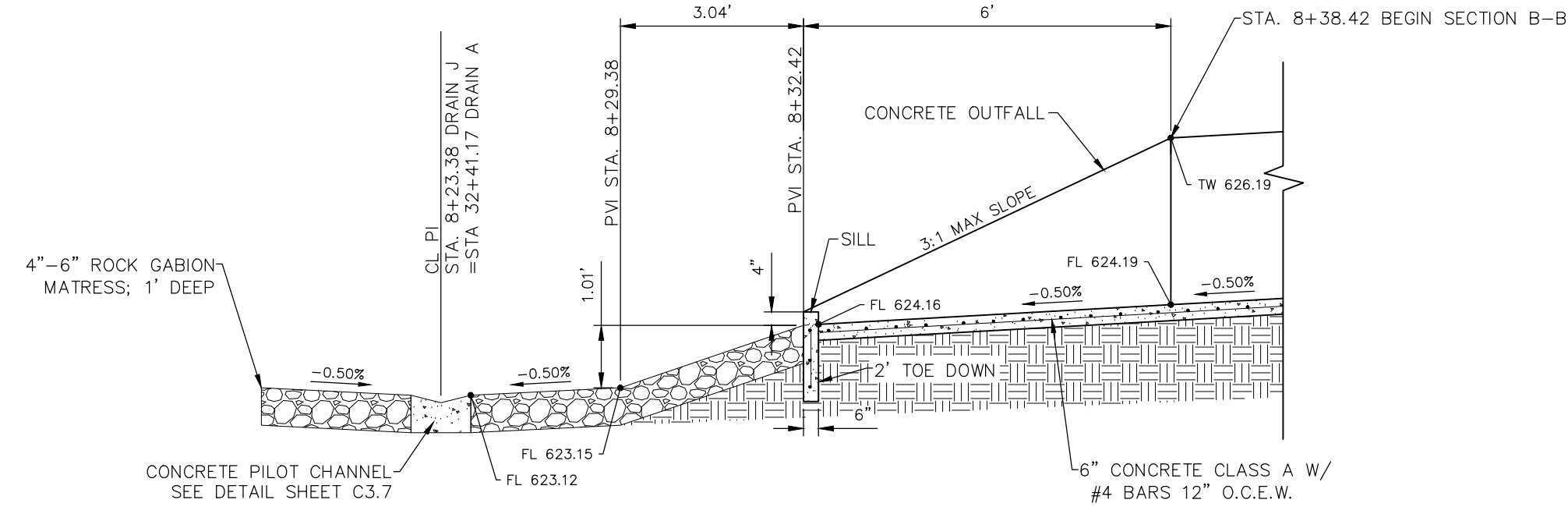
CAUTION: THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION PRIOR TO COMMENCING WORK AND IS RESPONSIBLE FOR ANY/ALL DAMAGES RESULTING FROM THE FAILURE TO LOCATE AND PRESERVE UTILITIES.



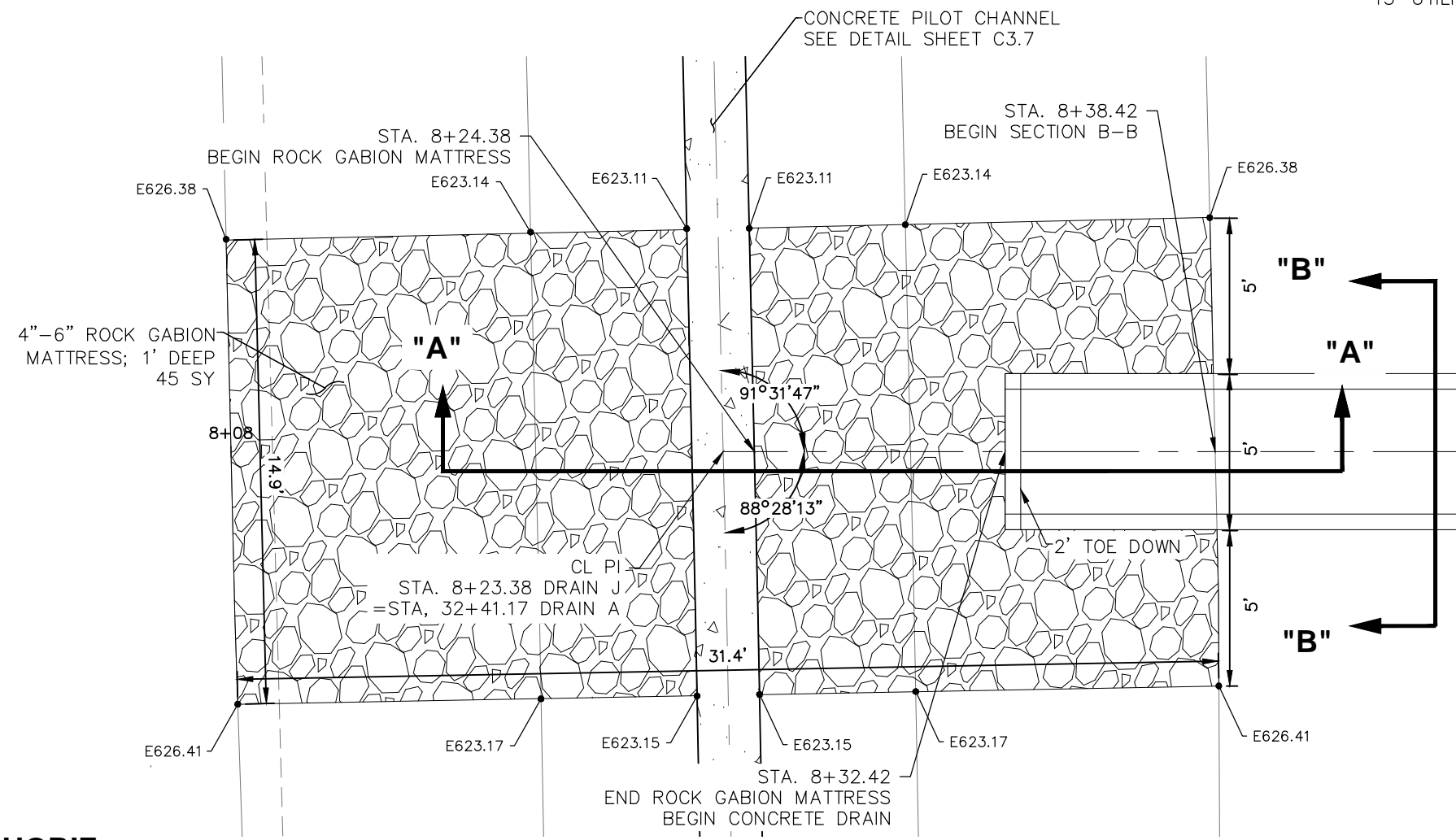
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



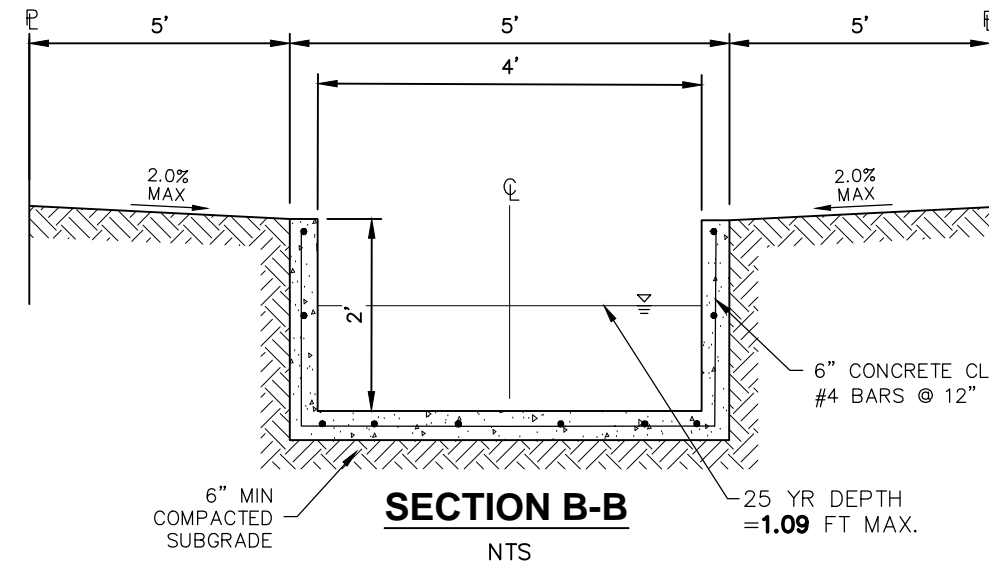
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



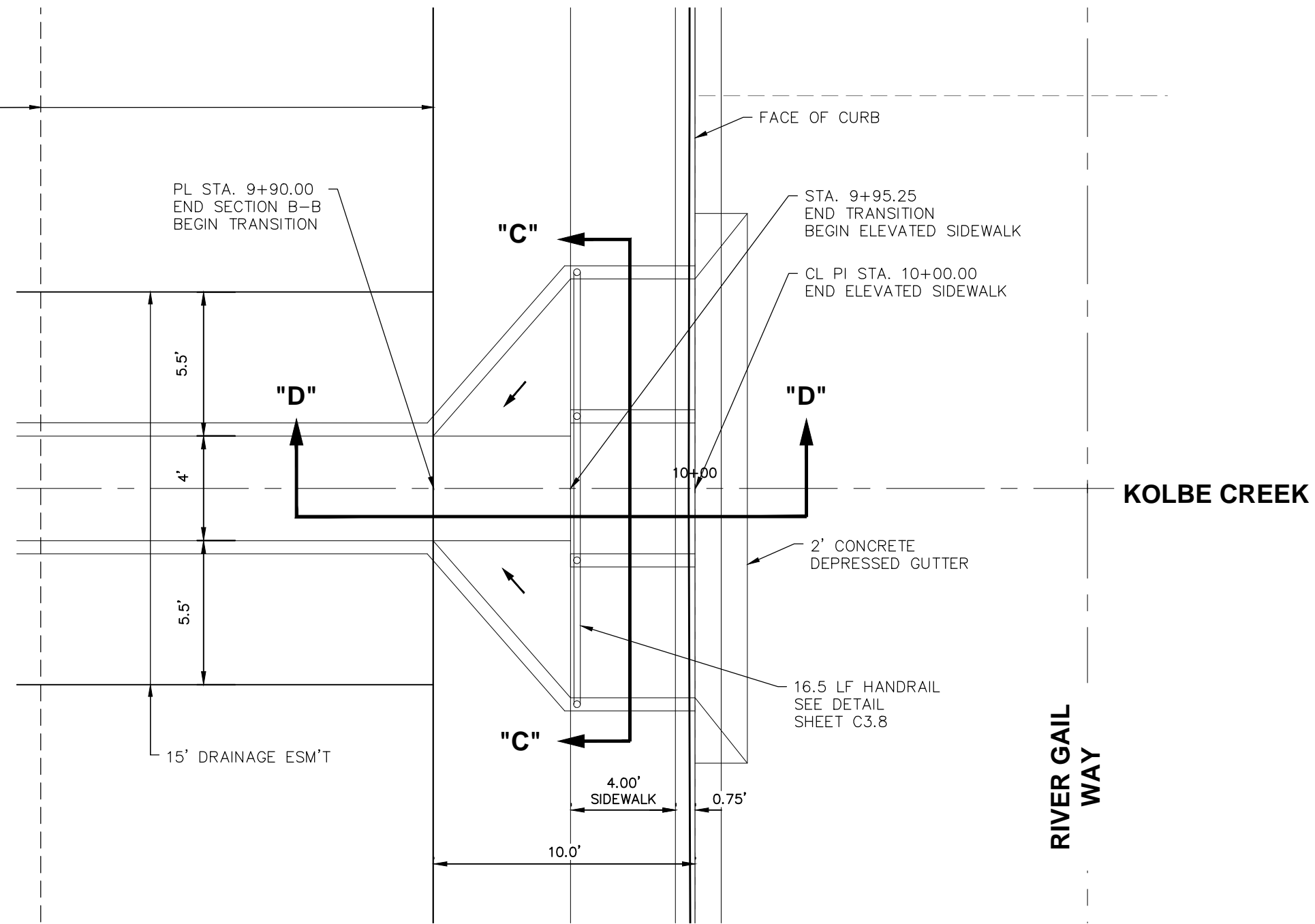
SECTION A-A
NTS



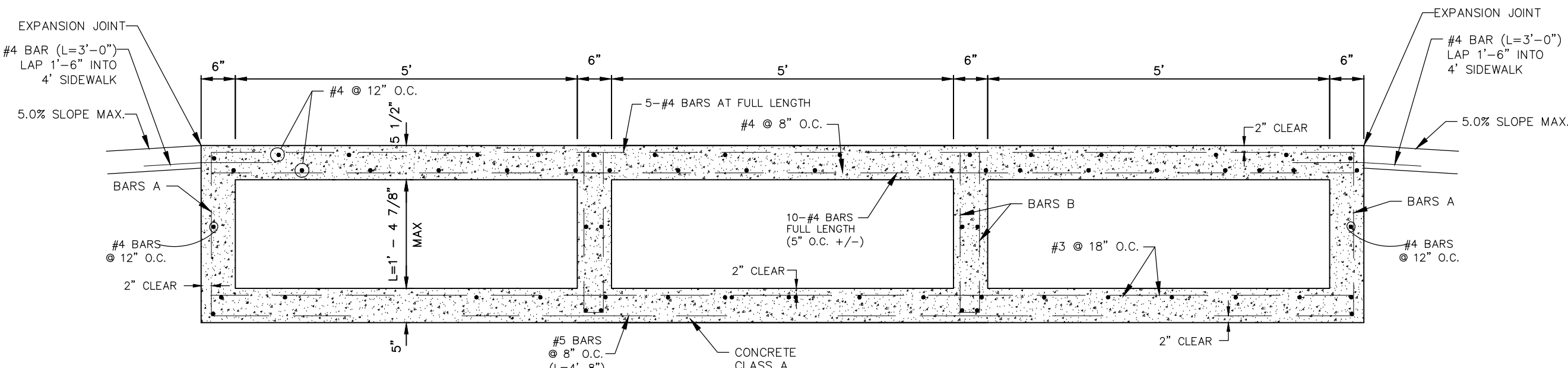
DETAIL 1
SCALE: 1" = 5'



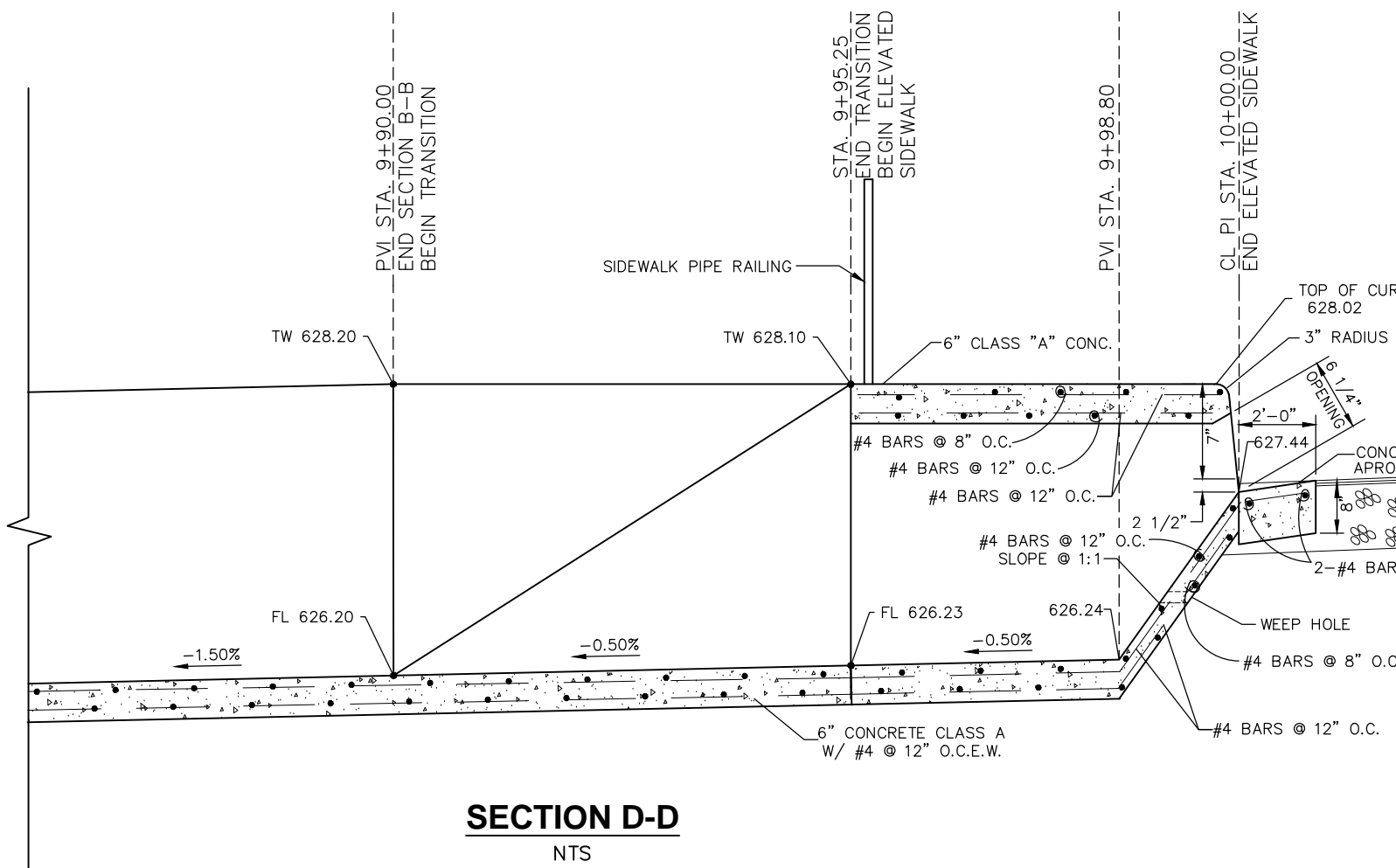
SECTION B-B
NTS



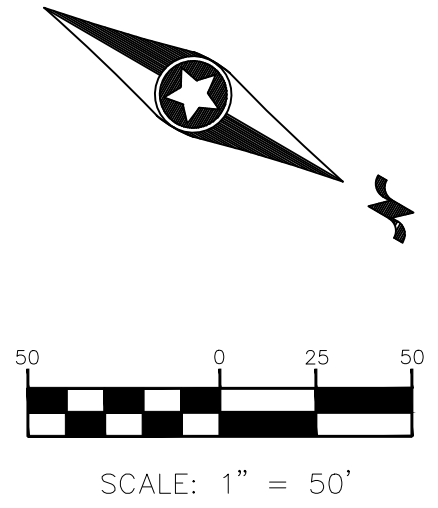
DETAIL 2
SCALE: 1" = 5'



SECTION C-C
NTS



SECTION D-D
NTS



BY	
REVISIONS	
DATE	
NO.	

Westwood
211 North Loop East, Suite 205
San Antonio, TX 78232
Phone (210) 955-9300
Fax (888) 937-5150
westwoodps.com

Westwood Professional Services, Inc.
TBDLS FIRM REGISTRATION NO. 10974801

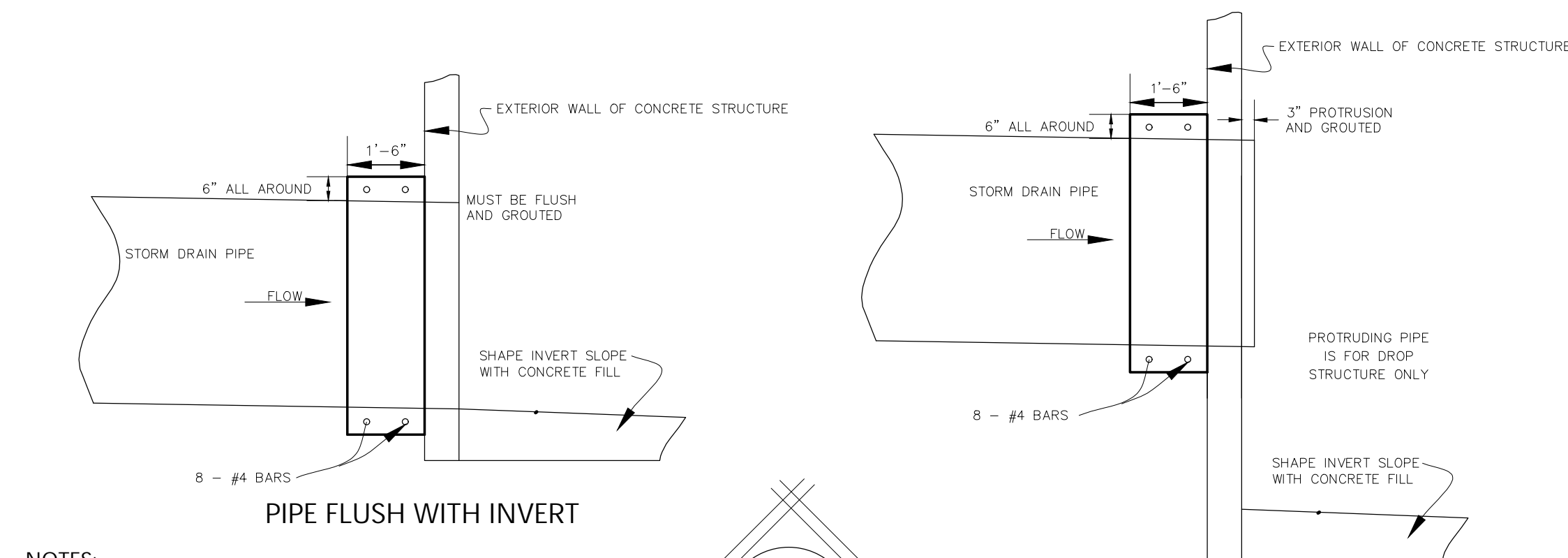


**KAYDEN SPRINGS
UNIT 2**

DRAIN PLAN AND PROFILE - DRAIN J

JOB NO.:	0046599.02
DATE:	08/08/2024
DESIGN:	TBW
DRAWN:	SG
CHECKED:	DAD

**SHEET
C3.6**

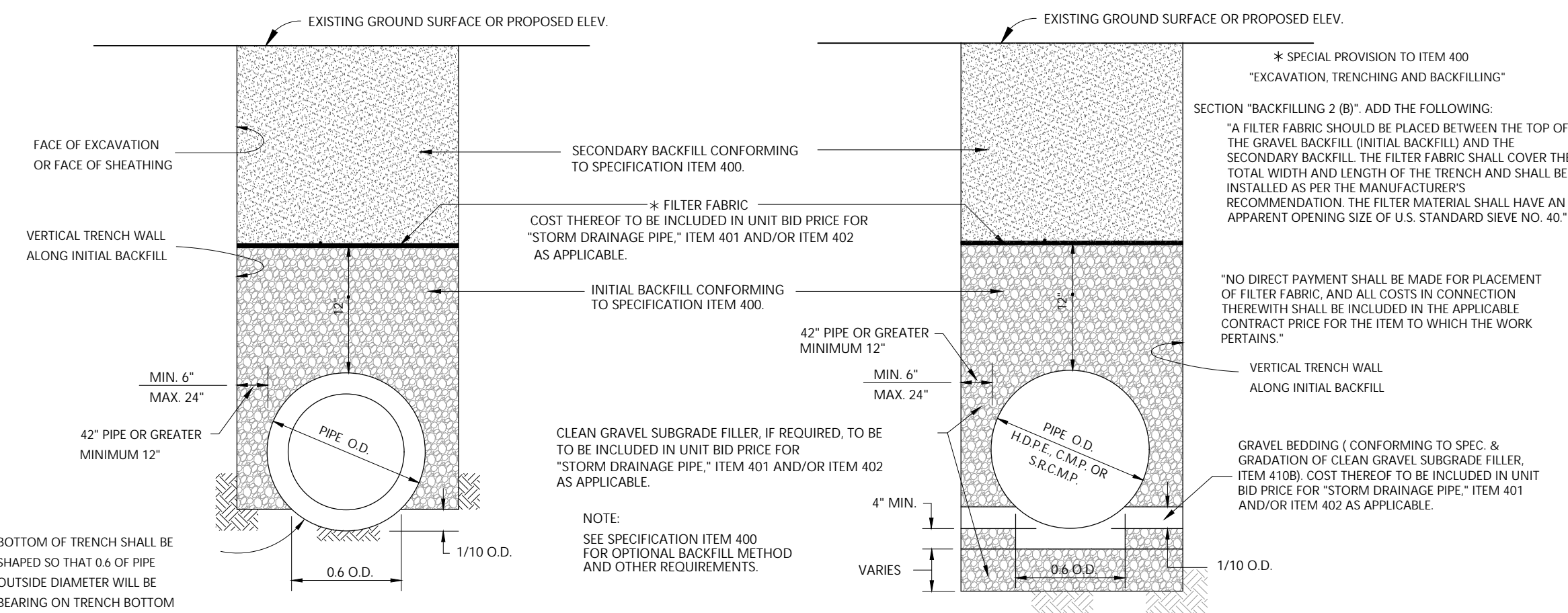


- NOTES:**
1. CONCRETE FOR STRUCTURE SHALL BE CLASS "A", 3,000 P.S.I. AT 28 DAYS.
 2. ALL EXPOSED EDGES SHALL BE CHAMFERED $3/4"$.
 3. REINFORCING STEEL SHALL BE NEW BUILT STEEL, INTERMEDIATE GRADE, ASTM-A15. THE DEFORMATION SHALL CONFORM TO ASTM-A-305.
 4. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
 5. ALL BARS INTERCEPTING MANHOLE OPENING AND STORM DRAIN PIPE SHALL BE FIELD-CUT.
 6. WHERE LAPPING OF BARS IS REQUIRED, A MINIMUM LAP OF 33 DIAMETERS SHALL BE USED.
 7. WARTS OF INLETS AND JUNCTION BOXES TO BE SHAPED WITH CONCRETE FILL (3,000 P.S.I. MIN.) TO EFFECT DRAINAGE TO OUTLET PIPE. COST SUBORDINATE TO CLASS "A" CONCRETE.

- ## NOTES:
1. REFERENCE RESPECTIVE DRAIN PLAN & PROFILE FOR TYPE AND SIZE
 2. STANDARD STRUCTURAL DESIGN IS BASED ON AASHTO HS 20 WHEEL LOADING
 3. MATERIAL SPECIFICATIONS:
 - CONCRETE TO HAVE 28 DAY COMPRESSIVE STRENGTH OF 4500 P.S.I.
 - REINFORCING TO COMPLY WITH ASTM A615 GRADE 60, A706 GRADE 60 OR A497 GRADE 70; BAR BENDING AND PLACEMENT SHALL COMPLY WITH THE LATEST ACI STANDARDS
 4. STRUCTURE TO LIE ON COMPACTED GRANULAR BASE TO ASSURE UNIFORM DISTRIBUTION OF SOIL PRESSURES
 5. SHAPE INVERT WITH 2500 P.S.I. CONCRETE FILL AS REQUIRED (NO EXTRA PAY ITEM)
 6. COORDINATE PIPE OPENINGS WITH MANUFACTURER

CONCRETE COLLAR DETAIL

NOT TO SCALE

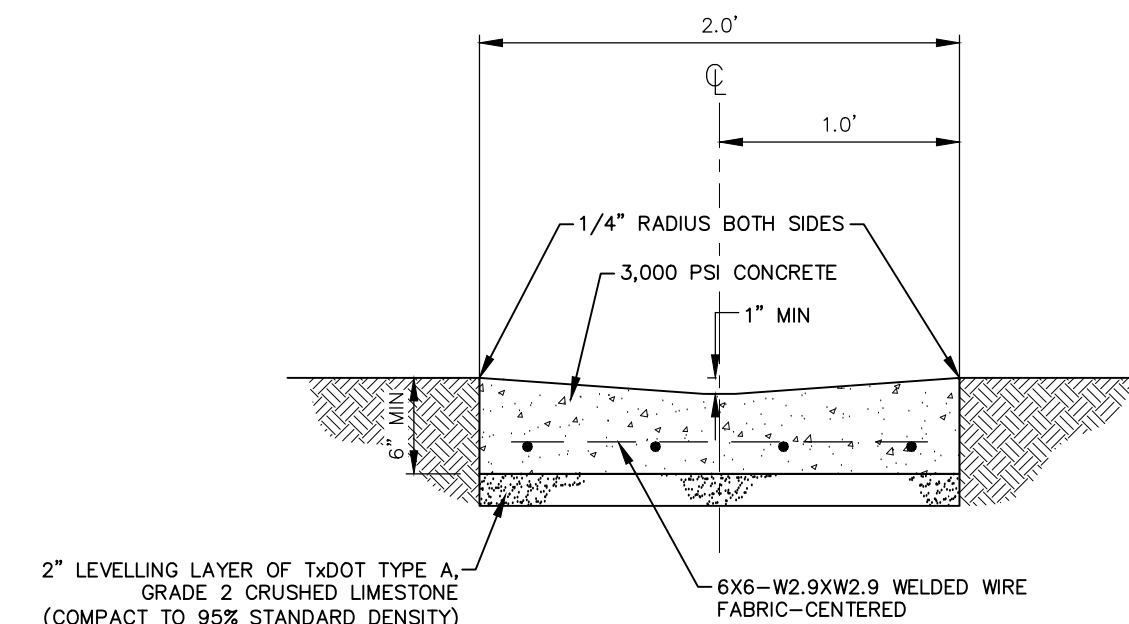


- * SPECIAL PROVISION TO ITEM 400
"EXCAVATION, TRENCHING AND BACKFILLING"
SECTION "BACKFILLING 2' OR" AND THE FOLLOWING:
"A FILTER FABRIC SHALL BE PLACED BETWEEN THE TOP OF THE GRAVEL BACKFILL (INITIAL BACKFILL) AND THE SECONDARY BACKFILL. THE FILTER FABRIC SHALL COVER THE TOTAL WIDTH AND LENGTH OF THE TRENCH AND SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATION. THE FILTER MATERIAL SHALL HAVE AN APPARENT OPENING SIZE OF U.S. STANDARD SIEVE NO. 40."

"NO DIRECT PAYMENT SHALL BE MADE FOR PLACEMENT OF FILTER FABRIC, AND ALL COSTS IN CONNECTION THEREWITH SHALL BE INCLUDED IN THE APPLICABLE CONTRACT PRICE FOR THE ITEM TO WHICH THE WORK PERTAINS."

VERTICAL TRENCH WALL
ALONG INITIAL BACKFILL

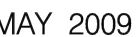
GRAVEL BEDDING (CONFORMING TO SPEC. & GRADATION OF CLEAN GRAVEL SUBGRADE FILL, ITEM 408 OR COST THEREOF TO BE INCLUDED IN UNIT PRICE FOR "STORM DRAIN, (ITEM 401 AND/OR ITEM 402) AS APPLICABLE."



NOT TO SCALE



% SUBMITTAL	PROJECT NO.:	DATE:
PER. UNOQUEST	FROM PER. EMISSIONS OF	CHARTERED BY PER. MORRIS OF
		SHEET NO.:



SUBMITTAL	PROJECT NO.:	DATE:
-----------	--------------	-------

UNIT 2

DRAINAGE DETAILS (2 OF 2)

PACKED:	DATE:
---------	-------

SHEET

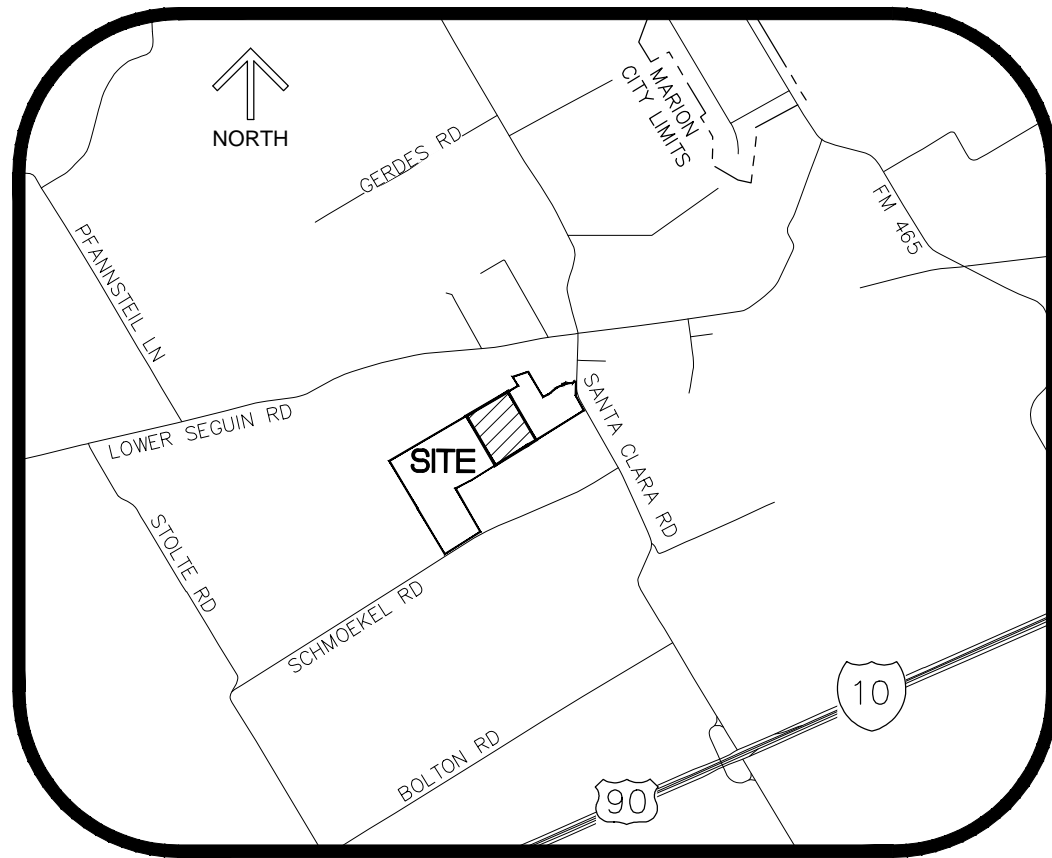
C3.8

GREEN VALLEY SPECIAL UTILITY DISTRICT -
CONSTRUCTION PLAN GENERAL NOTES (JULY 2022)

1. ALL WORKMANSHIP AND MATERIALS FOR THE WATER SYSTEM SHALL CONFORM TO THE CONSTRUCTION STANDARDS OF GREEN VALLEY SPECIAL UTILITY DISTRICT (GVUSD).
2. PVC MAINS 12-INCHES AND BELOW SHALL CONFORM TO AWWA C-909 PRESSURE CLASS 235 OR ABOVE DEPENDING ON SYSTEM PRESSURES. PVC MAIN GREATER THAN 12 INCHES SHALL CONFORM TO AWWA C-900 DR 18 OR ABOVE DEPENDING ON SYSTEM PRESSURES. WATER MAINS SHALL HAVE AN ABSOLUTE MINIMUM DEPTH OF 5-FEET BELOW ROADWAY LEVEL AND 42-INCHES IN ALL OTHER AREAS.
3. ALL WATER MAIN DUCTILE IRON FITTINGS SHALL BE MECHANICAL JOINT AND CONFORM TO ANSI/AWWA C-153 OR C-110. ALL BOLTS SHALL HAVE KOPR KOTE OR APPROVED EQUAL ANTISENSE CORROSION RESISTANT COATING. VALVES SHALL BE ATTACHED TO TEES BY FOSTER ADAPTOR OR ANCHOR NIPPLE. FOSTER ADAPTER, ANCHOR NIPPLE, OR FORD UNI-FLANGE RETAINER GLANDS AND THRUST BLOCKS SHALL BE USED ON ALL FITTINGS AND VALVES.
4. TRACER WIRE SHALL BE INSTALLED ON ALL PIPELINES INCLUDING SERVICE LINES AND BROUGHT INTO VALVE AND METER BOXES FOR LOCATING PURPOSES. INSULATED WATER PROOF CONNECTORS SHALL BE USED TO SPlice WIRES TOGETHER. A 12-INCH-WIDE DETECTABLE METAL TAPE SHALL BE PLACED ABOVE BEDDING INITIAL BACKFILL.
5. EXCEEDING MAXIMUM DEFLECTION IS PROHIBITED. THE ANGULAR DEFLECTION AT BELL-SPIGOT JOINTS SHOULD NOT EXCEED ONE (1) DEGREE. THIS WILL PRODUCE A 4-INCH OFFSET FOR EVERY 20-FOOT SECTION OF PIPE. JOINT DEFLECTION IS ACHIEVED AFTER THE JOINT IS ASSEMBLED IN STRAIGHT ALIGNMENT AND DEFLECTED TO THE REFERENCE MARK. THE BELL SHOULD BE BRACED TO ALLOW THE FREE END TO MOVE Laterally UNDER STEADY PRESSURE USING A PRY BAR OR OTHER SUITABLE MEANS. CARE SHOULD BE TAKEN NOT TO EXCEED THE MAXIMUM DEFLECTION ALLOWED OR TO DAMAGE THE PIPE WITH MACHINERY. ABRUPT CHANGES IN DIRECTION SHALL BE ACCOMPLISHED WITH FITTINGS.
6. OVER STRESSING THE BELL BY OVER INSERTING THE JOINTS, OVERBELLING, AND PASSING THE INSERTION REFERENCE MARK IS PROHIBITED AND WILL REQUIRE REMOVAL AND REINSTALLATION.
7. STANDARD FIRE HYDRANT SHALL INCLUDE HYDRANT, 6-INCH RESILIENT GATE VALVE AND BOX, ANCHOR FITTINGS, DUCTILE IRON PIPE, AND ALL APPURTENANCES. HYDRANTS SHALL BE LIMITED TO THOSE MANUFACTURED BY MUELLER, AVK, AMERICAN FLOW, CLOW, OR EAST JORDAN. ONLY MUELLER HYDRANTS AND EJ SHALL BE USED IN CITY OF OBOLLO'S JURISDICTION. HYDRANT UPPER BARREL SHALL BE FACTORY PAINTED RED. HYDRANTS SHALL HAVE A STORTZ CONNECTION ON STEAMER NOZZLE. FITTINGS FOR PLUG SHALL BE FULLY RESTRAINED AND TIED TO VALVE.
8. VALVES SHALL BE AWWA APPROVED RESILIENT WEDGE SEATED GATE VALVE, OPEN LEFT, AND LIMITED TO THOSE MANUFACTURED BY MUELLER, AVK, AMERICAN FLOW, CLOW, OR EAST JORDAN.
9. VALVES ARE PROHIBITED IN ADA RAMPS, CURBS, AND ROADWAYS. VALVES ARE PROHIBITED IN SIDEWALKS IN CITY OF NEW BRAUNFELS.
10. METER BOXES ARE PROHIBITED IN ANY SIDEWALKS, DRIVEWAYS, OR ROADWAYS.
11. SMALL SERVICE TAPS SHALL BE EITHER 1-INCH OR 2 INCH AND SHALL BE REHAU MUNIPEX WITH GTS 200 PSI PLASTIC INSERT. SMALL SERVICE TAPS TO BE MADE WITH SINGLE BRASS STRAP TAPPING SADDLE WITH IRON PIPE THREADS. EXCEPTION: IF LOCATED WITHIN CITY OF OBOLLO- SERVICE TAPS TO BE MADE WITH DOUBLE STAINLESS STRAP EPOXY COATING SADDLES WITH IRON PIPE THREADS.
12. CASING REQUIRED FOR ALL LONG SMALL SERVICES. 1 INCH SERVICE REQUIRES 3 INCH CASING AND 2 INCH SERVICE REQUIRES 4 INCH CASING. CASING SHALL BE PVC SCHEDULE 40 OR APPROVED EQUAL.
13. SINGLE 5/8" & 3/4"-METER BOXES SHALL BE DFW36C 16"X11". DUAL 5/8" & 3/4"-METER BOXES SHALL BE DFW36C 17" X15". 1-INCH METER BOXES SHALL BE DFW36C-14-1A 15 1/2"X3/8". 1-INCH METER BOXES SHALL BE PLASTIC WITH LIDS HAVING REBAR, ARM, AND KNOCKOUT.
14. THE FORD U BRANCH IS TO BE USED ON ALL DUAL SERVICES (U48-430) WITH THE 5/8"X 3/4"-FEMALE THREAD ANGLE HEAD. ALL OTHER ANGLE HEADS WILL BE THE FORD Q NUT. ALL CORPORATION STOPS WILL BE IPS X Q NUT. ALL BRASS VALVES TO BE BALL-TYPE MINIMUM 200 PSI PRESSURE RATING. "CC" THREADED CORPORATION STOPS PROHIBITED.
15. TAPPING MACHINES UTILIZED FOR INSTALLING ANY TYPE OF TAP 1-INCH TO 2-INCHES WILL BE OF THE PURGE TYPE, WHICH AT THE TIME OF TAPPING SHALL EXPEL ALL CHIPS AND RESIDUE TO ATMOSPHERE THROUGH AN APPROPRIATE OUTLET AND/OR BE ABLE TO RETAIN THE COUPON.
16. ALL WATER MAIN, PIPE, CASINGS, FITTINGS, AND VALVES SHALL BE LAID IN MANUFACTURED SAND EMBEDMENT PER DETAILS. THE SAND SHALL FULLY ENCASE ALL PIPES, INCLUDING FITTINGS AND VALVES, BY A MINIMUM OF 12-INCHES. ALL FITTINGS AND VALVES ARE TO RECEIVE THRUST BLOCKING, FOSTER ADAPTER, ANCHOR NIPPLE, FORD UNI-FLANGE RETAINER GLAND JOINT RESTRAINTS, AND BELL JOINT RESTRAINTS WHEN SPECIFIED BY GVUSD OR THE DISTRICT'S ENGINEER.
17. CONTRACTOR TO CURB CUT V'S FOR VALVES AND X'S FOR METERS.
18. PRIOR TO CONSTRUCTION OF THE SEWER AND WATER MAINS, ALL R.O.W. ROADWAYS AND PARKWAY SHALL HAVE REFERENCE SURVEY STAKING AND BE EXCAVATED OR PROPERLY FILLED TO SUB-GRADE ELEVATION.
19. SURVEY STAKING OFFSETS ARE REQUIRED FOR ALL WATER MAIN AND APPURTENANCES.
20. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED. CONTRACTOR SHALL INVESTIGATE AND FIELD VERIFY UTILITY LOCATIONS A MINIMUM OF 300 LF AHEAD OF CROSSING AND TIE-IN LOCATIONS. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR MAINTENANCE PROTECTION OF THE EXISTING UTILITIES, WHETHER THEY ARE SHOWN ON THE PLANS OR NOT.
21. ALL WASTEWATER PIPES CROSSING THE POTABLE WATER DISTRIBUTION SYSTEM WILL BE HELD IN STRICT ACCORDANCE WITH TCEQ RULES AND REGULATIONS. PROPOSED SUB-GRADE LIMITS AND DIMENSIONS MUST BE SHOWN ON THE PLANS, AND CONSTRUCTION PROCEDURES WILL BE INSPECTED TO VERIFY COMPLIANCE WITH TCEQ 290.44(E).
22. OTHER UTILITIES SHALL NOT BE LOCATED CLOSER THAN 3- FEET TO WATER MAINS.
23. THE GREEN VALLEY INSPECTOR SHALL BE NOTIFIED AT LEAST FORTY-EIGHT HOURS PRIOR TO BACK FILLING OR TESTING.
24. A FIELD PRE-CONSTRUCTION MEETING SHALL BE HELD BEFORE CONSTRUCTION BEGINS AND MATERIAL SHALL BE AVAILABLE ON-SITE FOR INSPECTION.
25. CONTRACTOR SHALL CHLORINATE NEW MAINS PER TCEQ AND ANSI/AWWA C651 AND DECHLORINATE DURING FLUSHING PER ANSI/AWWA C655. THE CONTRACTOR SHALL COORDINATE WITH THE GVUSD INSPECTOR TO WITNESS CHLORINATING AND PRESSURE TESTING OF NEW MAINS. ALL TEST RESULTS MUST BE PROVIDED TO GVUSD.
26. OPERATION OF EXISTING VALVES IN THE GVUSD WATER DISTRIBUTION SYSTEM SHALL ONLY BE AS APPROVED BY GVUSD AND IN THE PRESENCE OF GVUSD PERSONNEL. THE CONTRACTOR SHALL NOTIFY GVUSD WHEN A VALVE NEEDS TO BE OPERATED AND MAY ONLY OPERATE A VALVE IN THE PRESENCE OF THE GVUSD INSPECTOR.
27. NEW WATER MAINS AND APPURTENANCES SHALL PASS PRESSURE TESTING AND PASS THE MINIMUM PUBLIC HEALTH STANDARDS FOR BACTERIOLOGICAL QUALITY TESTING PRIOR TO ANY TIE IN TO THE EXISTING GVUSD WATER SYSTEM AS REQUIRED BY TCEQ AND ANSI/AWWA.
28. HYDROSTATIC PRESSURE TESTING SHALL BE EVERY 200 LF (MAX) OF LINE OR AS APPROVED BY THE ENGINEER. ALL ERRORS OF WORKMANSHIP SHALL BE CORRECTED IMMEDIATELY. ALL PARTS OF THE PIPELINE SHALL BE BACKFILLED AND BRACED SUFFICIENTLY TO PREVENT MOVEMENT UNDER PRESSURE.
29. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH AND CONFINED SPACE ENTRY SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION AND ALL RELATED WORK. ANY TRENCH PROTECTION SAFETY VIOLATION WILL BE DOCUMENTED AND WILL RESULT IN AN IMMEDIATE WORK STOPPAGE BY THE GVUSD INSPECTOR AT MINIMUM UNTIL THE NEXT WORKDAY.
30. CONTRACTOR MUST PROTECT ALL UNATTENDED TRENCHES AND EXCAVATIONS WITH TEMPORARY FENCING.
31. NO TREES MAY BE PLANTED IN THE AREAS DESIGNATED AS WATER OR UTILITY EASEMENTS, OR AREAS WHERE WATER MAINS AND WATER SERVICE CROSSINGS EXIST OR ARE PLANNED TO BE CONSTRUCTED.
32. ALL GARBAGE OR SPOIL MATERIAL FROM THE WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE.
33. CONTRACTOR SHALL PROVIDE "AS-BUILT" WATER LINE PLANS AT THE PRELIMINARY WALK THRU FOR THE GVUSD INSPECTOR AND ENGINEER. THE PLANS SHALL LIST MATERIAL MANUFACTURERS, LINE LENGTH FROM FITTING TO FITTING, AND TAP LOCATIONS.
34. GPS FILES SHALL BE PROVIDED BY THE CONTRACTOR TO THE ENGINEER AND GVUSD INSPECTOR FOR THE PLAN OF RECORD. CONTRACTOR SHALL PROVIDE AN ASCII COMMA DELIMITED OR EXCEL FILE CONTAINING THREE-DIMENSIONAL GPS SURVEY POINTS WITH FOUR (4) DECIMAL PLACES OF PRECISION, LESS THAN FOUR (4) INCHES OF HORIZONTAL POSITION ACCURACY, AND LESS THAN EIGHT (8) INCHES OF VERTICAL POSITION ACCURACY. POINTS SHALL BE PROVIDED FOR A MINIMUM OF THREE (3) CONTROL POINTS AND ALL FITTINGS, APPURTENANCES, ENCASEMENTS, VAULTS, AND TANKS. THE ENGINEER SHALL FURNISH PLAN OF RECORD DRAWINGS TO GVUSD FOR APPROVAL HAVING FINAL MEASUREMENTS AND THAT MATCH THE GPS 'X', 'Y', AND 'Z' COORDINATES.
35. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH ALL THE INFORMATION AS REQUIRED SO THAT THE ENGINEER CAN SUPPLY GVUSD THE GS PACKAGE FOR APPROVAL.
36. A FINAL WALK THRU FOR FINAL FIELD ACCEPTANCE WILL BE SCHEDULED WITH THE CONTRACTOR AFTER THE PRELIMINARY WALK THRU PUNCH LIST ITEMS HAVE BEEN COMPLETED AND AFTER THE GS PACKAGE IS APPROVED AND ACCEPTED BY GVUSD.
37. GVUSD CONTACT NUMBER: 830-914-2330

WATER CONSTRUCTION PLANS

FOR KAYDEN SPRINGS UNIT 2 MARION, TX GUADALUPE COUNTY MUNICIPAL UTILITY DISTRICT NO. 10



LOCATION MAP

N.T.S.

NO.	DATE	REVISIONS	BY

TABLE OF CONTENTS

CIVIL PLANS

WATER

C4.0	WATER COVER SHEET
C4.1	WATER DISTRIBUTION PLAN
C4.2	WATER DETAILS (1 OF 5)
C4.3	WATER DETAILS (2 OF 5)
C4.4	WATER DETAILS (3 OF 5)
C4.5	WATER DETAILS (4 OF 5)
C4.6	WATER DETAILS (5 OF 5)

ESTIMATED WATER QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITY
1	12" PIPE PVC, C-900 CLASS 235 (DR18)	LF	771
2	8" PIPE PVC, C-900 CLASS 235 (DR18)	LF	2,872
3	12" PIPE DI, C-151	LF	174
4	8" PIPE DI, C-151	LF	174
5	12" GATE VALVE, M.J. W/BOX	EA	8
6	8" GATE VALVE, M.J. W/BOX	EA	17
7	6" GATE VALVE, M.J. W/BOX	EA	7
8	STANDARD FIRE HYDRANT	EA	7
9	1" IRRIGATION SERVICE	EA	0
10	3/4" SINGLE SERVICE: LONG	EA	8
11	1" DUAL SERVICE: LONG	EA	57
12	1" DUAL SERVICE: SHORT	EA	33
13	2" TEMPORARY BLOW-OFF	EA	2
14	REMOVE 2" TEMPORARY BLOW-OFF	EA	2
15	METER BOX	EA	188
16	DUCTILE IRON FITTING	TON	1.5
17	TRENCH PROTECTION	LF	3991
18	HYDROSTATIC TEST	EA	1
19	JOINT RESTRAINTS	LS	1
20	TIE-IN TO EX. 12" MAIN	EA	1
21	TIE-IN TO EX. 8" MAIN	EA	1
22	CHLORINATION BY CONTRACTOR	LS	1



ENGINEER / SURVEYOR:

WESTWOOD PROFESSIONAL SERVICES
211 N LOOP 1604 E, SUITE 205
SAN ANTONIO, TEXAS 78232
TEL: (210) 265-8300

OWNER / DEVELOPER:

LENNAR HOMES OF TEXAS
100 NE LOOP 410, SUITE 1155
SAN ANTONIO, TEXAS 78216
TEL: (210) 403-6200

CAUTION: THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION PRIOR TO COMMENCING WORK AND IS RESPONSIBLE FOR ANY/ALL DAMAGES RESULTING FROM THE FAILURE TO LOCATE AND PRESERVE UTILITIES.

NOTE TO CONTRACTOR

BY THE ACT OF SUBMITTING A BID FOR THIS PROPOSED CONTRACT, THE BIDDER WARRANTS THAT THE BIDDER, AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS HE INTENDS TO USE HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM ANY AMBIGUITIES AND SUFFICIENT FOR THE PURPOSE INTENDED. THE BIDDER FURTHER WARRANTS THAT TO THE BEST OF HIS OR HIS SUBCONTRACTORS' AND MATERIAL SUPPLIERS' KNOWLEDGE, ALL MATERIALS AND PRODUCTS SPECIFIED OR INDICATED HEREIN ARE ACCEPTABLE FOR ALL APPLICABLE CODES AND AUTHORITIES.

THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON RECORD INFORMATION ONLY AND MAY NOT MATCH LOCATIONS AND/OR DEPTHS AS CONSTRUCTED. THE CONTRACTOR SHALL CONTACT EACH INDIVIDUAL UTILITY FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS AND DEPTHS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL UTILITY CROSSINGS PRIOR TO BEGINNING ANY CONSTRUCTION.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE JOB SITE AND THE JOB SITE CONDITIONS DURING CONSTRUCTION. THE RESPONSIBILITY IS NOT LIMITED TO NORMAL WORKING HOURS AND INCLUDES THE SAFETY OF ALL PERSONS AND PROPERTY. THE ENGINEER AND OWNER HAVE NO LIABILITY IN CONNECTION WITH THE CONSTRUCTION OF THIS PROJECT, EXCEPT FOR LIABILITY DIRECTLY CAUSED BY THE SOLE NEGLIGENCE OF THE ENGINEER AND/OR OWNER. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE ENGINEER AND/OR OWNER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE EXECUTION OF ALL WORK RELATED TO THIS PROJECT, EXCEPT FOR NEGLIGENCE ON THE PART OF THE ENGINEER AND/OR OWNER.

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 SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS 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.

Westwood

Phone (210) 265-8300 211 North Loop 1604 East, Suite 205
Toll Free (888) 937-5150 San Antonio, TX 78232
westwoodps.com

Westwood Professional Services, Inc.

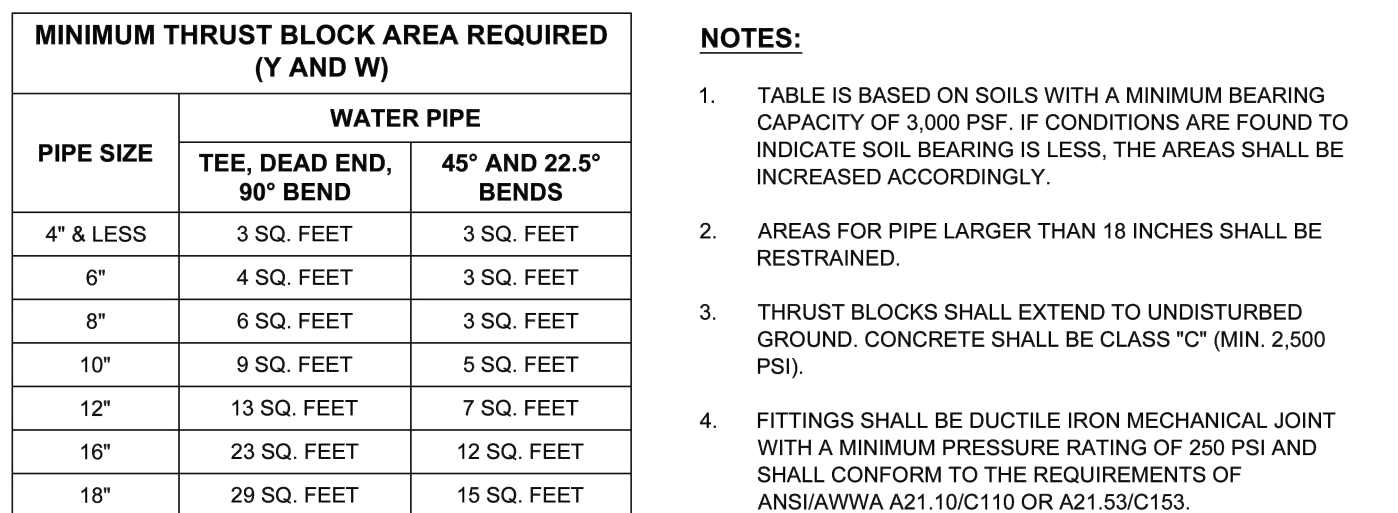
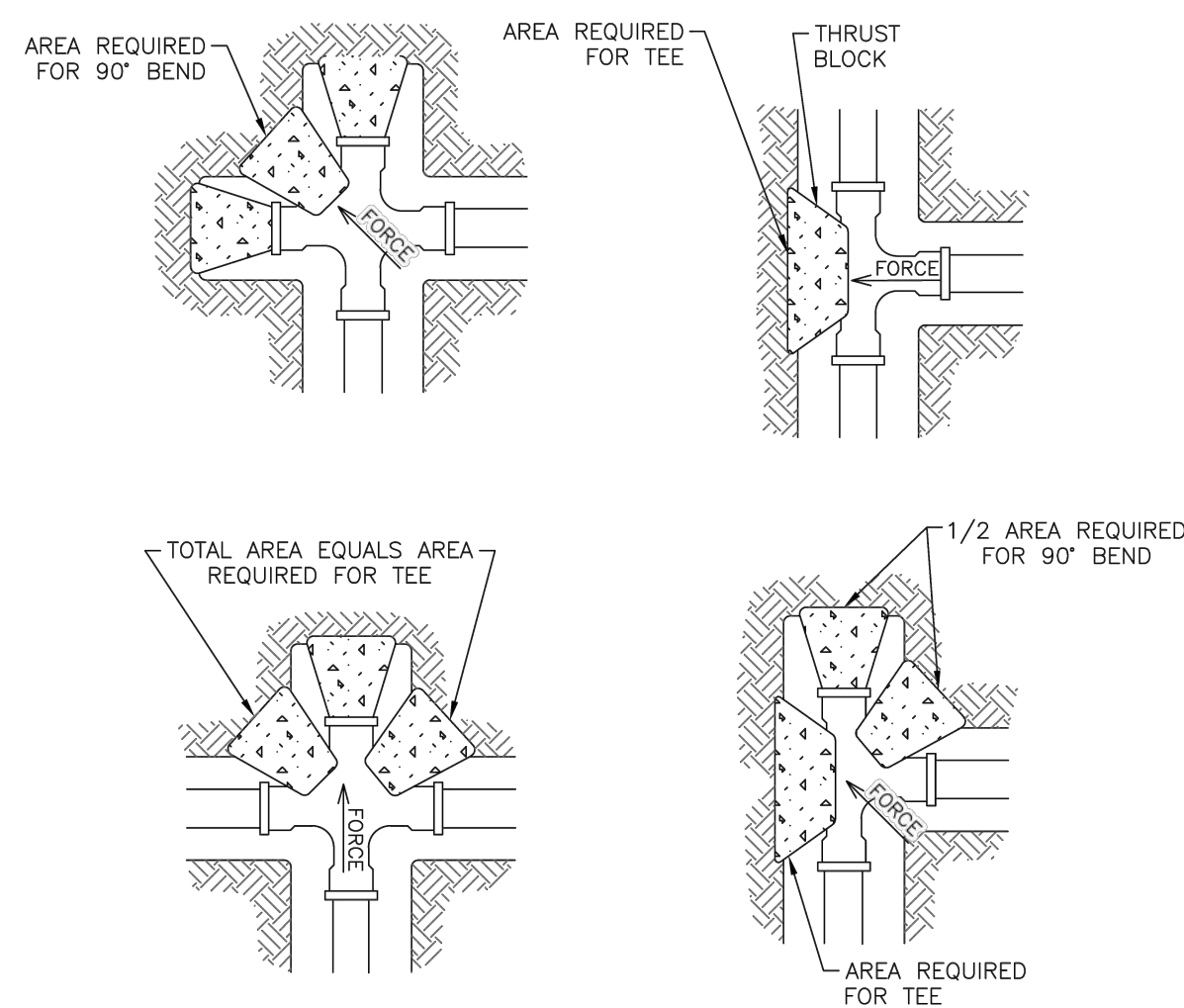
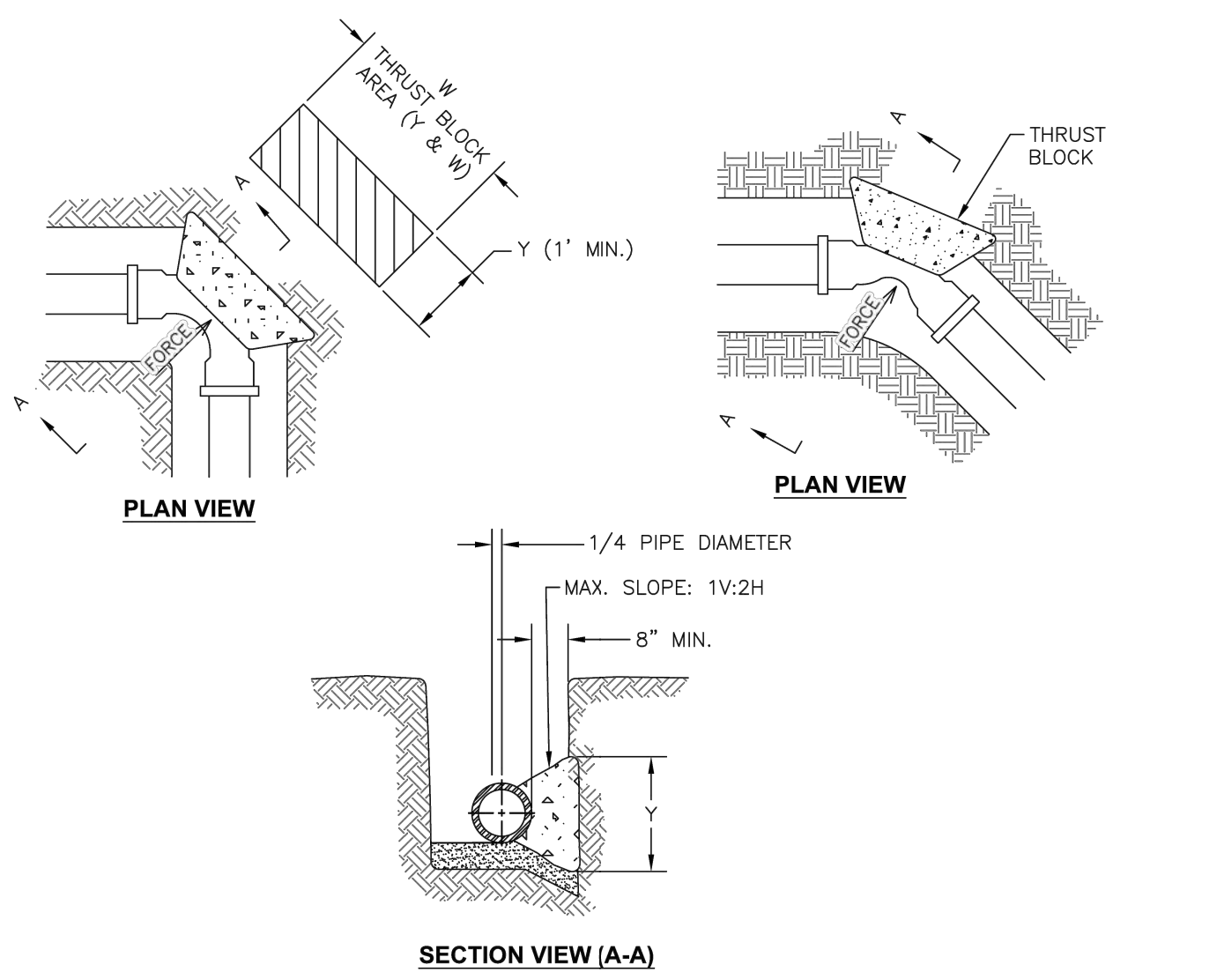
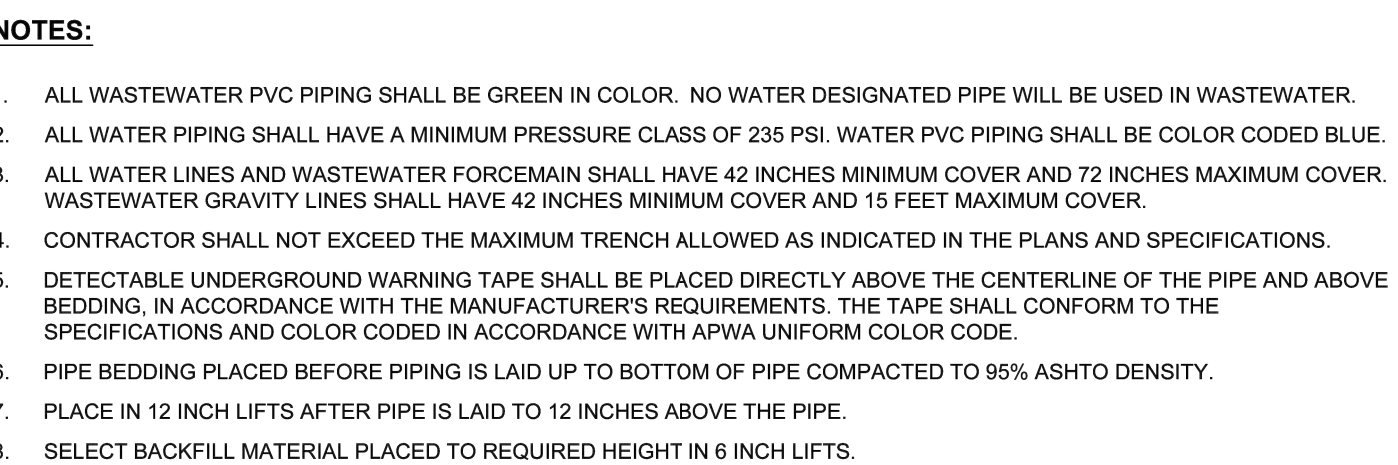
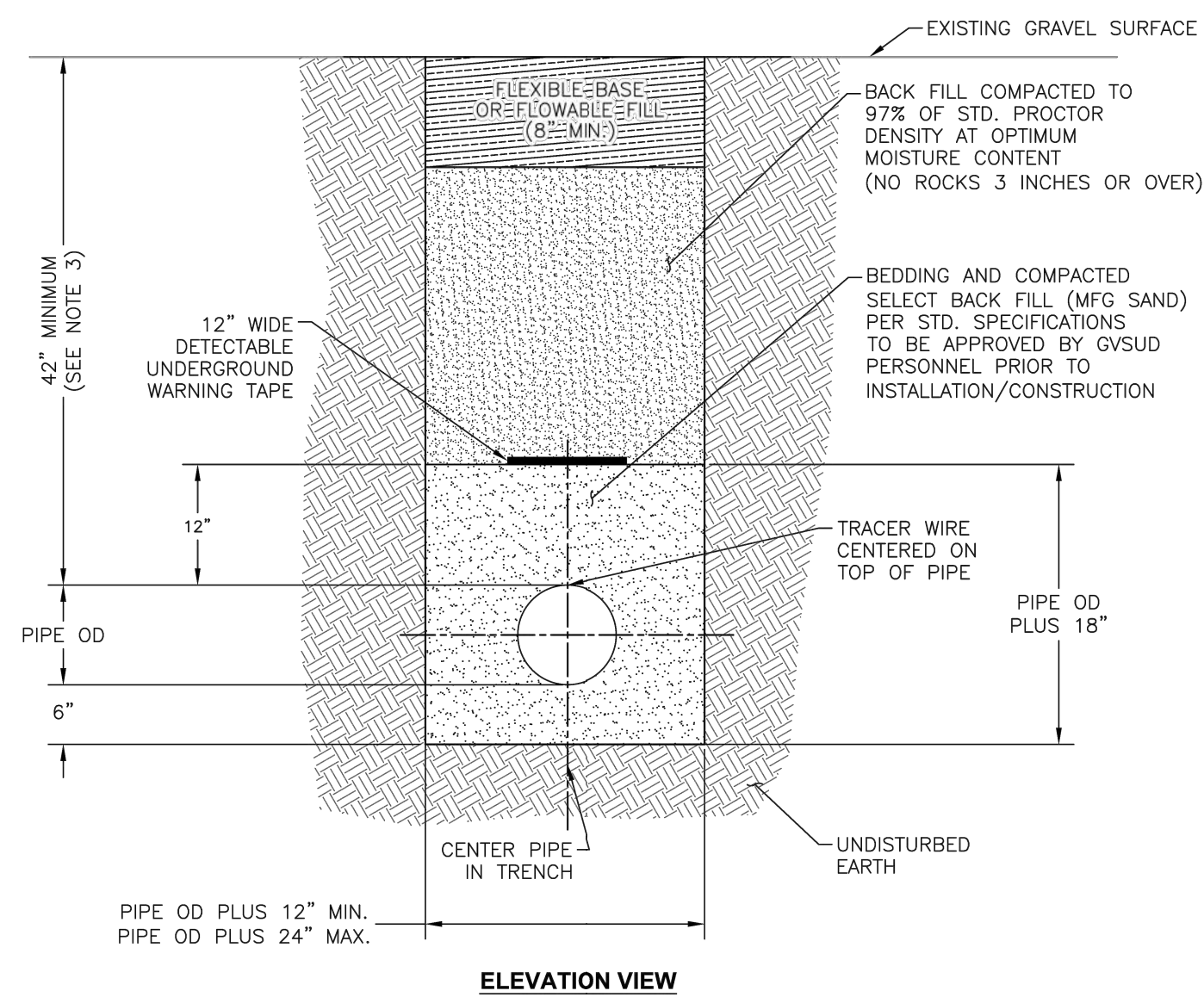
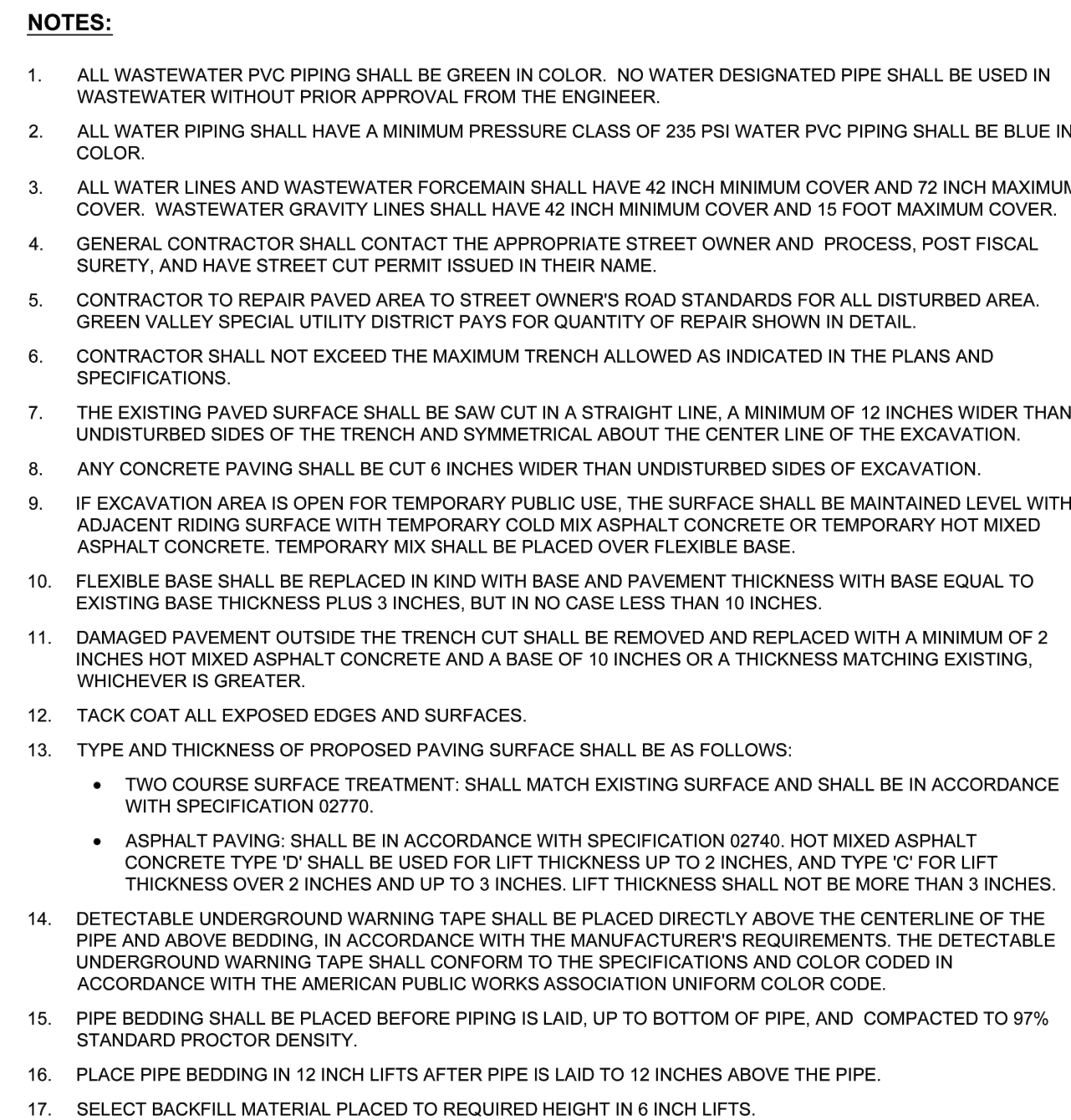
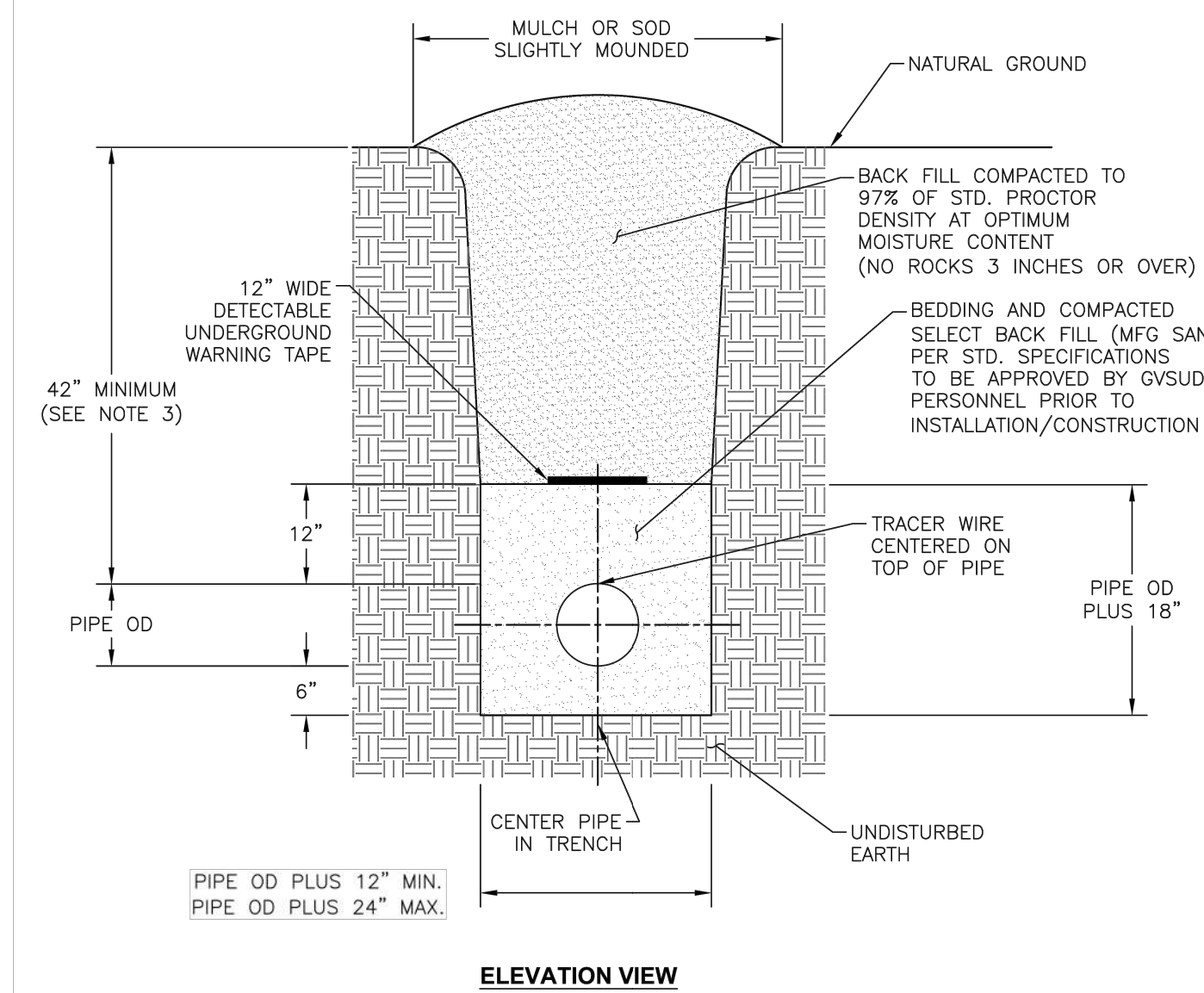
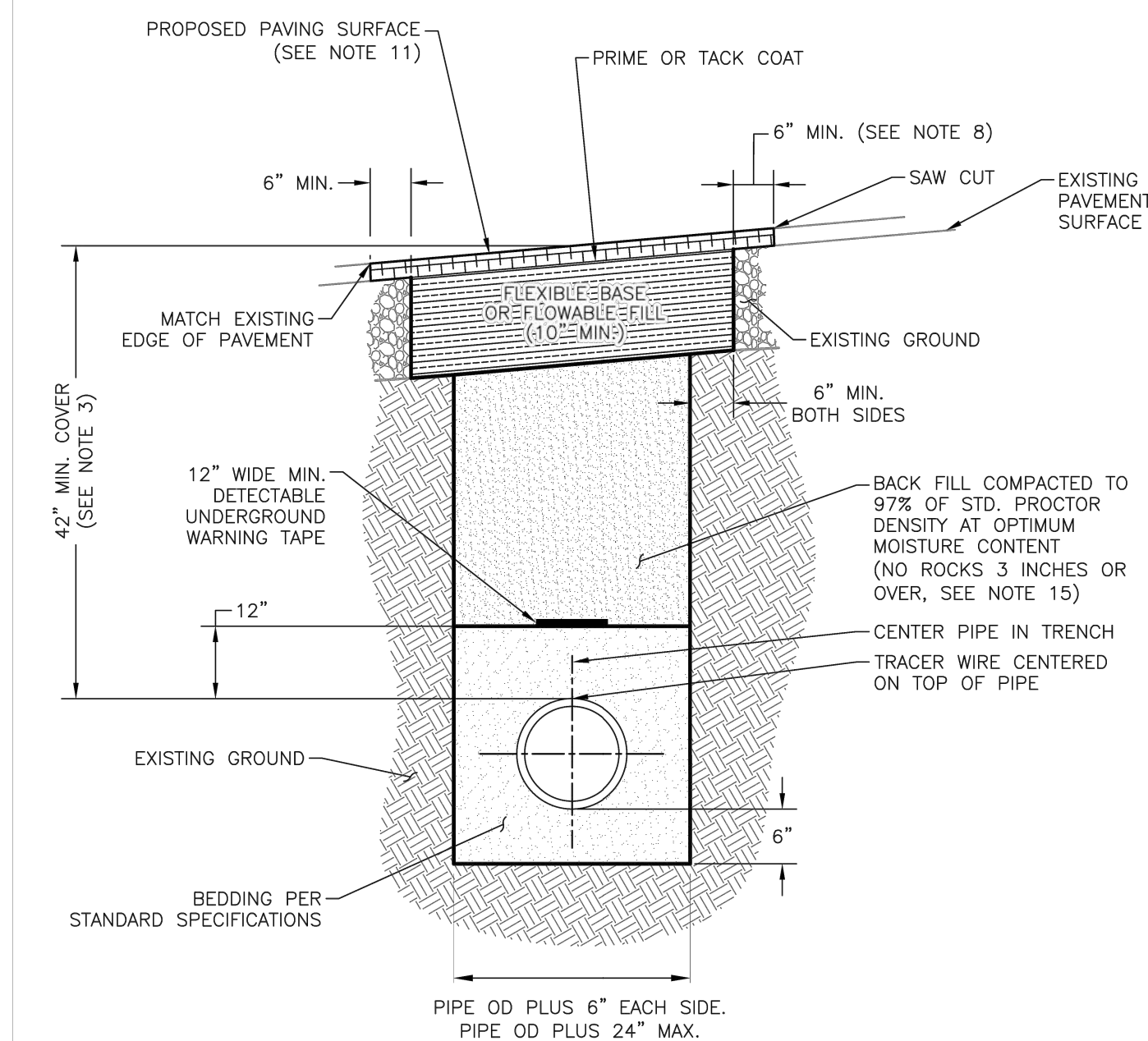
TBPELS FIRM REGISTRATION NO. F-11756
TBPELS FIRM REGISTRATION NO. 10074301

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL DESIGN, ENGINEER, CONSTRUCT, MAINTAIN AND/OR OPERATE THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE SAFETY MEASURES. THE CONTRACTOR 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 MAINTAIN A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. LIFT MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWENTY INCHES (12") THICK. EACH LAYER SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINE BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE NEW BRUNSWICK ENGINEERING DIVISION. ONE (1) TEST SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRUNSWICK WITH A LETTER OF SUBMITTAL WITH TESTING DOCUMENTATION INCLUDING TESTING LOGS, THE PLACEMENT OF THE MATERIAL TO BE TESTED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRUNSWICK INSPECTOR.



C4.1





1. A MINIMUM OF 2 TIE RODS SHALL BE USED FOR CARRIER PIPES 6 INCHES OR LESS. PIPES GREATER THAN 6 INCHES SHALL HAVE A MINIMUM OF 4 TIE RODS.
2. TIE RODS SHALL HAVE MINIMUM DIAMETER OF 3/4 INCH FOR PIPES 6 INCHES OR LESS, AND 1 INCH FOR PIPES GREATER THAN 6 INCHES.

PLAN VIEW



MATERIAL LIST			
LABEL	ITEMS	METER SIZE	
		5/8"	3/4"
A*	TUBING SHALL BE REHAU MUNICIPEX WITH CTS 200 PSI PLASTIC INSERT	1"	1"
B	APPROVED ANGLE METER STOP WITH PADLOCK WING. (FORD TYPE Q COMPRESSION FITTING OR APPROVED EQUIVALENT.)	5/8"	3/4"
C	WATER METER	5/8"	3/4"
D	WATER METER COUPLING - CONNECTION SWIVEL NUT	5/8"	3/4"
E	CUSTOMER YARD PIPE - AS SPECIFIED		
F	CUT-OFF VALVE **		
G	PLASTIC METER BOX AND LID WITH REBAR, ARM, AND KNOCKOUT		
H	6" COMPACTED SAND		
U	"U" BRANCH CONNECTION (COMPRESSION - TYPE FITTING)	1"x3/4"	1"x3/4"

1. REFERENCE GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAIL W-23 FOR METER AND METER BOX DIMENSIONS.
2. TOP OF METER BOX SHALL BE 1" ABOVE GRADE AFTER REVEGETATION OR FLUSH WITH PAVEMENT SURFACE. METER BOX ARE PROHIBITED IN ANY SIDEWALKS, DRIVEWAYS, OR ROADWAYS.
3. FOR PIPES AND FITTINGS OUTSIDE THE METER BOX SHALL BE EMBEDDED AND BACKFILLED, 6" SAND BEDDING MINIMUM, WITHIN THE R.O.W. OR EASEMENT.
4. METER BOX SHALL BE 18" DEEP. METER BOX SHALL BE 18" WIDE. METER BOX.
5. TAP TO CITY WATER LINE SHALL HAVE A 1" CORPORATION STOP AND A 1" TAP TO THE MAIN. CUT-OFF VALVE AND CONNECTION TO YARD PIPING TO BE SUBMITTED FOR APPROVAL.
6. METERS TO BE SUPPLIED BY CONTRACTOR FOR COMMERCIAL ACCOUNTS.
7. ALL WORK WILL BE PER THE CURRENT GREEN VALLEY SPECIAL UTILITY DISTRICT WATER STANDARDS AND DESIGN CRITERIA.

C4.6

Drawing Name: N:\046599\02\06 CAD\DWG\Site Design C3D\046599\02_C0V6.dwg User: lbwblete Aug 08, 2024 - 6:30pm

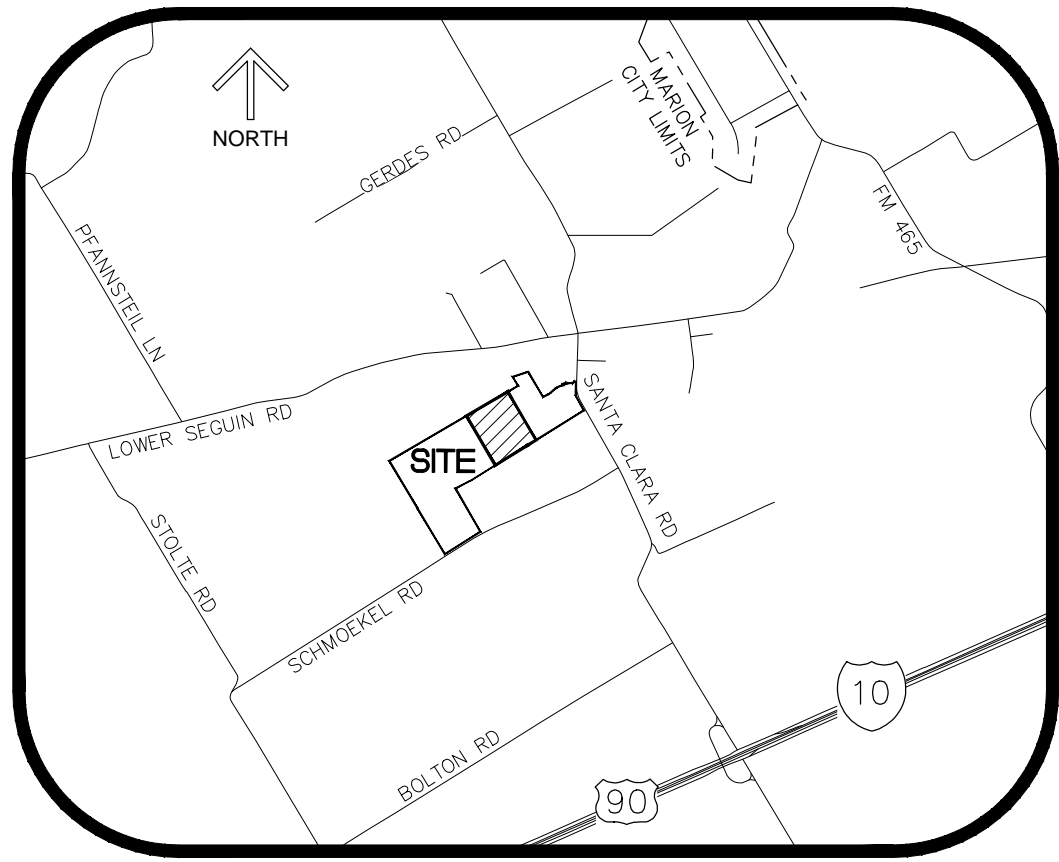
GREEN VALLEY SPECIAL UTILITY DISTRICT –
CONSTRUCTION PLAN GENERAL NOTES (JULY
2022)

1. ALL WORKMANSHIP AND MATERIALS FOR THE WATER SYSTEM SHALL CONFORM TO THE CONSTRUCTION STANDARDS OF GREEN VALLEY SPECIAL UTILITY DISTRICT (GVSD).
2. PVC MAINS 12-INCHES AND BELOW SHALL CONFORM TO AWWA C-909 PRESSURE CLASS 235 OR ABOVE DEPENDING ON SYSTEM PRESSURES. PVC MAIN GREATER THAN 12 INCHES SHALL CONFORM TO AWWA C-900 DR 18 OR ABOVE DEPENDING ON SYSTEM PRESSURES. WATER MAINS SHALL HAVE AN ABSOLUTE MINIMUM DEPTH OF 5- FEET BELOW ROADWAY LEVEL AND 42-INCHES IN ALL OTHER AREAS.
3. ALL WATER MAIN DUCTILE IRON FITTINGS SHALL BE MECHANICAL JOINT AND CONFORM TO ANSI/AWWA C-153 OR C-110. ALL BOLTS SHALL HAVE KOPR KOTE OR APPROVED EQUAL ANTI-SEIZE CORROSION RESISTANT COATING. VALVES SHALL BE ATTACHED TO TEES BY FOSTER ADAPTOR OR ANCHOR NIPPLE, FOSTER ADAPTER, ANCHOR NIPPLE, OR FORD UNI-FLANGE RETAINER GLANDS AND THRUST BLOCKS SHALL BE USED ON ALL FITTINGS AND VALVES.
4. TRACER WIRE SHALL BE INSTALLED ON ALL PIPELINES INCLUDING SERVICE LINES AND BROUGHT INTO VALVE AND METER BOXES FOR LOCATING PURPOSES. INSULATED WATER PROOF CONNECTORS SHALL BE USED TO SPLICE WIRES TOGETHER. A 12-INCH-WIDE DETECTABLE METAL TAPE SHALL BE PLACED ABOVE BEDDING INITIAL BACKFILL.
5. EXCEEDING MAXIMUM DEFLECTION IS PROHIBITED. THE ANGULAR DEFLECTION AT BELL-ROOT JOINTS SHOULD NOT EXCEED ONE (1) DEGREE. THIS WILL PRODUCE A 4-INCH OFFSET FOR EVERY 20-FOOT SECTION OF PIPE. JOINT DEFLECTION IS ACHIEVED AFTER THE JOINT IS ASSEMBLED IN STRAIGHT ALIGNMENT AND DEFLECTED TO THE REFERENCE MARK. THE BELL SHOULD BE BRACED TO ALLOW THE FREE END TO MOVE LATEROALLY UNDER STEADY PRESSURE USING A PIVOT BAR OR OTHER SUITABLE MEANS. CARE SHOULD BE TAKEN NOT TO EXCEED THE MAXIMUM DEFLECTION ALLOWED OR TO DAMAGE THE PIPE WITH MACHINERY. ABRUPT CHANGES IN DIRECTION SHALL BE ACCOMPLISHED WITH FITTINGS.
6. OVER STRESSING THE BELL BY OVER INSERTING THE JOINTS, OVERBELLING, AND PASSING THE INSERTION REFERENCE MARK IS PROHIBITED AND WILL REQUIRE REMOVAL AND REINSTALLATION.
7. STANDARD FIRE HYDRANT SHALL INCLUDE HYDRANT, 6-INCH RESILIENT GATE VALVE AND BOX, ANCHOR FITTINGS, DUCTILE IRON PIPE, AND ALL APPURTENANCES. HYDRANTS SHALL BE LIMITED TO THOSE MANUFACTURED BY MUELLER, AVK, AMERICAN FLOW, CLOW, OR EAST JORDAN. ONLY MUELLER HYDRANTS AND EJ SHALL BE USED IN CITY OF CIBOLO'S JURSDICTION. HYDRANT UPPER BARREL SHALL BE FACTORY PAINTED RED. HYDRANTS SHALL HAVE A STORTZ CONNECTION ON STEAMER NOZZLE. FITTINGS FOR PLUG SHALL BE FULLY RESTRAINED AND TIED TO VALVE.
8. VALVES SHALL BE AWWA APPROVED RESILIENT WEDGE SEATED GATE VALVE, OPEN LEFT, AND LIMITED TO THOSE MANUFACTURED BY MUELLER, AVK, AMERICAN FLOW, CLOW, OR EAST JORDAN.
9. VALVES ARE PROHIBITED IN ADA RAMPS, CURBS, AND ROADWAYS. VALVES ARE PROHIBITED IN SIDEWALKS IN CITY OF NEW BRAUNFELS.
10. METER BOXES ARE PROHIBITED IN ANY SIDEWALKS, DRIVEWAYS, OR ROADWAYS.
11. SMALL SERVICE TAPS SHALL BE EITHER 1-INCH OR 2 INCH AND SHALL BE REHAU MUNICIPEX WITH CTS 200 PSI PLASTIC INSERT. SMALL SERVICE TAPS TO BE MADE WITH SINGLE BRASS STRAP TAPPING SADDLE WITH IRON PIPE THREADS. EXCEPTION: IF LOCATED WITHIN CITY OF CIBOLO- SERVICE TAPS TO BE MADE WITH DOUBLE STAINLESS STRAP EPOXY COATING SADDLES WITH IRON PIPE THREADS.
12. CASING REQUIRED FOR ALL LONG SMALL SERVICES. 1 INCH SERVICE REQUIRES 3 INCH CASING AND 2 INCH SERVICE REQUIRES 4 INCH CASING. CASING SHALL BE PVC SCHEDULE 40 OR APPROVED EQUAL.
13. SINGLE 5/8" & 3/4" METER BOXES SHALL BE DFW36C 16" X 11". DUAL 5/8" & 3/4" METER BOXES SHALL BE DFW38C 17" X 15". 1-INCH METER BOXES SHALL BE DFW36C-14" X 15 1/4" X 30 3/8". ALL METER BOXES SHALL BE PLASTIC WITH LIDS HAVING REBAR, ARM, AND KNOCKOUT.
14. THE FORD U BRANCH IS TO BE USED ON ALL DUAL SERVICES (U48-430) WITH THE 5/8" X 3/4" FEMALE THREAD ANGLE HEAD. ALL OTHER ANGLE HEADS WILL BE THE FORD Q NUT. ALL COPORATION STOPS WILL BE IPS X Q NUT. ALL BRASS VALVES TO BE BALL TYPE MINIMUM 200 PSI PRESSURE RATING. "CO" THREADED COPORATION STOPS PROHIBITED.
15. TAPPING MACHINES UTILIZED FOR INSTALLING ANY TYPE OF TAP 1-INCH TO 2-INCHES WILL BE OF THE PUNCH TYPE, WHICH AT THE TIME OF TAPPING SHALL EXPEL ALL CHIPS AND RESIDUE TO ATMOSPHERE THROUGH AN APPROPRIATE OUTLET AND/OR BE ABLE TO RETAIN THE COUPON.
16. ALL WATER MAIN PIPE, CASINGS, FITTINGS, AND VALVES SHALL BE LAID IN MANUFACTURED SAND EMBEDMENT PER DETAILS. THE SAND SHALL FULLY ENCASE ALL PIPES, INCLUDING FITTINGS AND VALVES. BY A MINIMUM OF 12-INCHES. ALL FITTINGS AND VALVES ARE TO RECEIVE THRUST BLOCKING, FOSTER ADAPTER, ANCHOR NIPPLE, FORD UNI-FLANGE RETAINER GLAND JOINT RESTRAINTS, AND BELL JOINT RESTRAINTS WHEN SPECIFIED BY GVSD OR THE DISTRICT'S ENGINEER.
17. CONTRACTOR TO CURB CUT V'S FOR VALVES AND X'S FOR METERS.
18. PRIOR TO CONSTRUCTION OF THE SEWER AND WATER MAINS, ALL R.O.W. ROADWAYS AND PARKWAY SHALL HAVE REFERENCE SURVEY STAKING AND BE EXCAVATED OR PROPERLY FILLED TO SUB-GRADE ELEVATION.
19. SURVEY STAKING OFFSETS ARE REQUIRED FOR ALL WATER MAIN AND APPURTENANCES.
20. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED. CONTRACTOR SHALL INVESTIGATE AND FIELD VERIFY UTILITY LOCATIONS A MINIMUM OF 300 LF AHEAD OF CROSSING AND TIE-IN LOCATIONS. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR MAINTENANCE PROTECTION OF THE EXISTING UTILITIES, WHETHER THEY ARE SHOWN ON THE PLANS OR NOT.
21. ALL WASTEWATER PIPES CROSSING THE POTABLE WATER DISTRIBUTION SYSTEM WILL BE HELD IN STRICT ACCORDANCE WITH TCEQ RULES AND REGULATIONS. PROPOSED SUB-GRADE LIMITS AND DIMENSIONS MUST BE SHOWN ON THE PLANS, AND CONSTRUCTION PROCEDURES WILL BE INSPECTED TO VERIFY COMPLIANCE WITH TCEQ 29D.44(E).
22. OTHER UTILITIES SHALL NOT BE LOCATED CLOSER THAN 3- FEET TO WATER MAINS.
23. THE GREEN VALLEY INSPECTOR SHALL BE NOTIFIED AT LEAST FORTY-EIGHT HOURS PRIOR TO BACK FILLING OR TESTING.
24. A FIELD PRE-CONSTRUCTION MEETING SHALL BE HELD BEFORE CONSTRUCTION BEGINS AND MATERIAL SHALL BE AVAILABLE ON-SITE FOR INSPECTION.
25. CONTRACTOR SHALL CHLORINATE NEW MAINS PER TCEQ AND ANSI/AWWA C651 AND DECHLORINATE DURING FLUSHING PER ANSI/AWWA C655; THE CONTRACTOR SHALL COORDINATE WITH THE GVSD INSPECTOR TO WITNESS CHLORINATING AND PRESSURE TESTING OF NEW MAINS. ALL TEST RESULTS MUST BE PROVIDED TO GVSD.
26. OPERATION OF EXISTING VALVES IN THE GVSD WATER DISTRIBUTION SYSTEM SHALL ONLY BE AS APPROVED BY GVSD AND IN THE PRESENCE OF GVSD PERSONNEL. THE CONTRACTOR SHALL NOTIFY GVSD WHEN A VALVE NEEDS TO BE OPERATED AND MAY ONLY OPERATE A VALVE IN THE PRESENCE OF THE GVSD INSPECTOR.
27. NEW WATER MAINS AND APPURTENANCES SHALL PASS PRESSURE TESTING AND PASS THE MINIMUM PUBLIC HEALTH STANDARDS FOR BACTERIOLOGICAL QUALITY TESTING PRIOR TO ANY TIE IN TO THE EXISTING GVSD WATER SYSTEM AS REQUIRED BY TCEQ AND ANSI/AWWA.
28. HYDROSTATIC PRESSURE TESTING SHALL BE EVERY 200 LF (MAX) OF LINE OR AS APPROVED BY THE ENGINEER. ALL ERRORS OF WORKMANSHIP SHALL BE CORRECTED IMMEDIATELY. ALL PARTS OF THE PIPELINE SHALL BE BACKFILLED AND BRACED SUFFICIENTLY TO PREVENT MOVEMENT UNDER PRESSURE.
29. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH AND CONFINED SPACE ENTRY SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION AND ALL RELATED WORK. ANY TRENCH PROTECTION SAFETY VIOLATION WILL BE DOCUMENTED AND WILL RESULT IN AN IMMEDIATE WORK STOPPAGE BY THE GVSD INSPECTOR AT MINIMUM UNTIL THE NEXT WORKDAY.
30. CONTRACTOR MUST PROTECT ALL UNATTENDED TRENCHES AND EXCAVATIONS WITH TEMPORARY FENCING.
31. NO TREES MAY BE PLANTED IN THE AREAS DESIGNATED AS WATER OR UTILITY EASEMENTS, OR AREAS WHERE WATER MAINS AND WATER SERVICE CROSSINGS EXIST OR ARE PLANNED TO BE CONSTRUCTED.
32. ALL GARBAGE OR SPOIL MATERIAL FROM THE WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE.
33. CONTRACTOR SHALL PROVIDE "AS-BUILT" WATER LINE PLANS AT THE PRELIMINARY WALK THRU FOR THE GVSD INSPECTOR AND ENGINEER. THE PLANS SHALL LIST MATERIAL MANUFACTURERS, LINE LENGTHS FROM FITTING TO FITTING, AND TAP LOCATIONS.
34. GPS FILES SHALL BE PROVIDED BY THE CONTRACTOR TO THE ENGINEER AND GVSD INSPECTOR FOR THE PLAN OF RECORD. CONTRACTOR SHALL PROVIDE AN ASCII COMMA DELIMITED OR EXCEL FILE CONTAINING THREE-DIMENSIONAL GPS SURVEY POINTS WITH FOUR (4) DECIMAL PLACES OF PRECISION, LESS THAN FOUR (4) INCHES OF HORIZONTAL POSITION ACCURACY, AND LESS THAN EIGHT (8) INCHES OF VERTICAL POSITION ACCURACY. POINTS SHALL BE PROVIDED FOR A MINIMUM OF THREE (3) CONTROL POINTS AND ALL FITTINGS, APPURTENANCES, ENCASEMENTS, MANHOLETS, AND TANKS. THE ENGINEER SHALL FURNISH PLAN OF RECORD DRAWINGS TO GVSD FOR APPROVAL HAVING FINAL MEASUREMENTS AND THAT MATCH THE GPS 'X', 'Y', AND 'Z' COORDINATES.
35. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH ALL THE INFORMATION AS REQUIRED SO THAT THE ENGINEER CAN SUPPLY GVSD THE GIS PACKAGE FOR APPROVAL.
36. A FINAL WALK THRU FOR FINAL FIELD ACCEPTANCE WILL BE SCHEDULED WITH THE CONTRACTOR AFTER THE PRELIMINARY WALK THRU PUNCH LIST ITEMS HAVE BEEN COMPLETED AND AFTER THE GIS PACKAGE IS APPROVED AND ACCEPTED BY GVSD.
37. GVSD CONTACT NUMBER: 830-914-2330

SANITARY SEWER CONSTRUCTION PLANS

FOR KAYDEN SPRINGS UNIT 2

MARION, TX
GUADALUPE COUNTY MUNICIPAL UTILITY
DISTRICT NO. 10



LOCATION MAP
N.T.S.

NO.	DATE	REVISIONS	BY

TABLE OF CONTENTS

CIVIL PLANS

SANITARY SEWER

- C5.0 SANITARY SEWER COVER SHEET
- C5.1 OVERALL SANITARY SEWER LAYOUT
- C5.2 SANITARY SEWER PLAN AND PROFILE – LINE F
- C5.3 SANITARY SEWER PLAN AND PROFILE – LINE G
- C5.4 SANITARY SEWER PLAN AND PROFILE – LINE J
- C5.5 SANITARY SEWER PLAN AND PROFILE – LINE K
- C5.6 SANITARY SEWER PLAN AND PROFILE – LINE L
- C5.7 SANITARY SEWER DETAILS (1 OF 4)
- C5.8 SANITARY SEWER DETAILS (2 OF 4)
- C5.9 SANITARY SEWER DETAILS (3 OF 4)
- C5.10 SANITARY SEWER DETAILS (4 OF 4)

ESTIMATED SANITARY SEWER QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITY
1	8" SANITARY SEWER, SDR 26 (6'-10')	LF	2,944
2	8" SANITARY SEWER PIPE, SDR 26 CLASS 160	LF	120
3	12" SANITARY SEWER, SDR 26 (14'-18')	LF	635
4	SEWER MAIN TELEVISION INSPECTION	LF	4,011
5	TRENCH EXCAVATION PROTECTION	LF	4,011
6	6" SANITARY SEWER LATERALS	LF	5,076
7	SANITARY SEWER MANHOLE	EA	15
8	EXTRA DEPTH MANHOLE	VF	89
9	VERTICAL STACK	VF	217
10	8" SANITARY SEWER PLUG	EA	3
11	12" SANITARY SEWER PLUG	EA	1
12	DENSITY TESTING	LS	1

CAUTION: THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION PRIOR TO COMMENCING WORK AND IS RESPONSIBLE FOR ANY/ALL DAMAGES RESULTING FROM THE FAILURE TO LOCATE AND PRESERVE UTILITIES.

NOTE TO CONTRACTOR

BY THE ACT OF SUBMITTING A BID FOR THIS PROPOSED CONTRACT, THE BIDDER WARRANTS THAT THE BIDDER, AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS HE INTENDS TO USE HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM ANY AMBIGUITIES AND SUFFICIENT FOR THE PURPOSE INTENDED. THE BIDDER FURTHER WARRANTS THAT TO THE BEST OF HIS OR HIS SUBCONTRACTORS' AND MATERIAL SUPPLIERS' KNOWLEDGE, ALL MATERIALS AND PRODUCTS SPECIFIED OR INDICATED HEREIN ARE ACCEPTABLE FOR ALL APPLICABLE CODES AND AUTHORITIES.

THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON RECORD INFORMATION ONLY AND MAY NOT MATCH LOCATIONS AND/OR DEPTHS. AS CONSTRUCTED. THE CONTRACTOR SHALL CONTACT EACH INDIVIDUAL UTILITY FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS AND DEPTHS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL UTILITY CROSSINGS PRIOR TO BEGINNING ANY CONSTRUCTION.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE JOB SITE AND THE JOB SITE CONDITIONS DURING CONSTRUCTION. THE RESPONSIBILITY IS NOT LIMITED TO NORMAL WORKING HOURS AND INCLUDES THE SAFETY OF ALL PERSONS AND PROPERTY. THE ENGINEER AND OWNER HAVE NO LIABILITY IN CONNECTION WITH THE CONSTRUCTION OF THIS PROJECT, EXCEPT FOR LIABILITY DIRECTLY CAUSED BY THE SOLE NEGLIGENCE OF THE ENGINEER AND/OR OWNER. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE ENGINEER AND/OR OWNER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE EXECUTION OF ALL WORK RELATED TO THIS PROJECT, EXCEPT FOR NEGLIGENCE ON THE PART OF THE ENGINEER AND/OR OWNER.

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



ENGINEER / SURVEYOR:

WESTWOOD PROFESSIONAL SERVICES
211 N LOOP 1604 E, SUITE 205
SAN ANTONIO, TEXAS 78232
TEL: (210) 265-8300

OWNER / DEVELOPER:

LENNAR HOMES OF TEXAS
100 NE LOOP 410, SUITE 1155
SAN ANTONIO, TEXAS 78216
TEL: (210) 403-6200

Westwood

Phone (210) 265-8300 211 North Loop 1604 East, Suite 205
Toll Free (888) 937-5150 San Antonio, TX 78232
westwoodps.com

Westwood Professional Services, Inc.

TBPELS FIRM REGISTRATION NO. F-11756
TBPELS FIRM REGISTRATION NO. 10074301

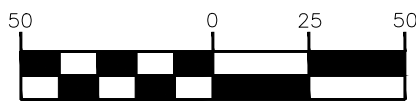
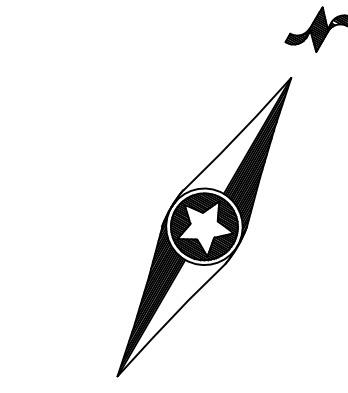
TRENCH EXCAVATION SAFETY PROTECTION

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

CAUTION: THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION PRIOR TO COMMENCING WORK AND IS RESPONSIBLE FOR ANY/ALL DAMAGES RESULTING FROM THE FAILURE TO LOCATE AND PRESERVE UTILITIES.

UTILITY TRENCH COMPACTION

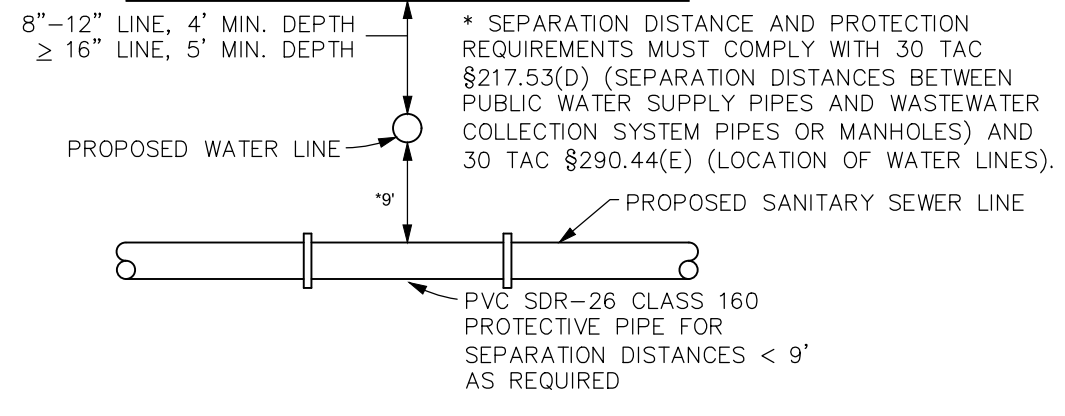
ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINE BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR.



SCALE: 1" = 50'

LEGEND

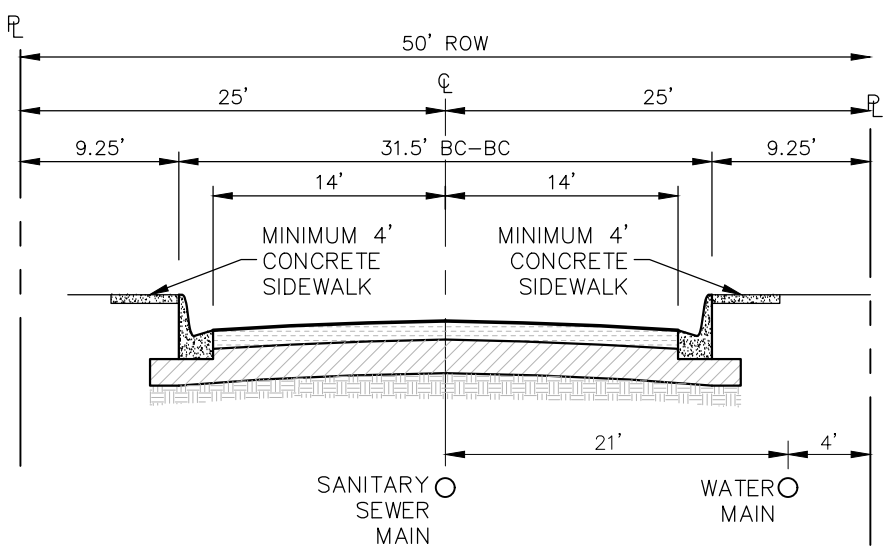
- E8"W- EXISTING WATER MAIN
- E8"W- PROPOSED WATER MAIN
- E8"W- EXISTING FIRE HYDRANT
- E8"W- PROPOSED FIRE HYDRANT
- E8"W- EXISTING GATE VALVE
- E8"W- PROPOSED GATE VALVE
- E8"W- PROPOSED WATER SERVICE
- E8"SS- EXISTING SANITARY SEWER MAIN
- E8"SS- PROPOSED SANITARY SEWER MAIN
- E8"SS- EXISTING SANITARY SEWER MANHOLE
- E8"SS- PROPOSED SANITARY SEWER MANHOLE
- E8"SS- PROPOSED SANITARY SEWER LATERAL



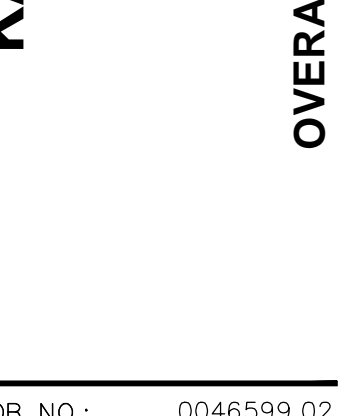
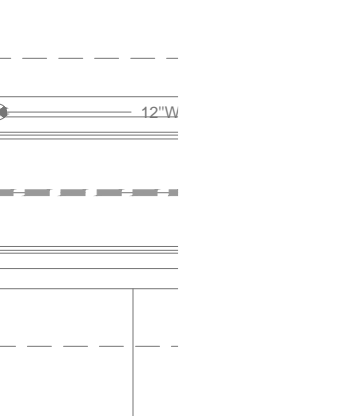
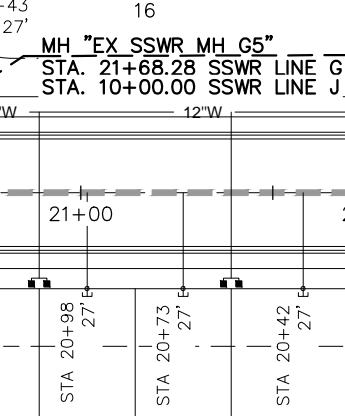
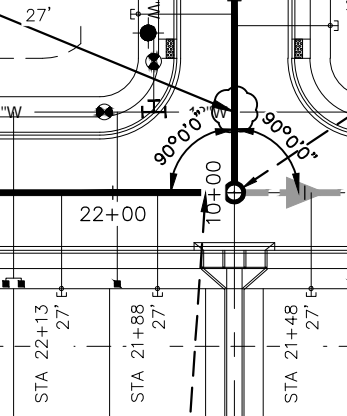
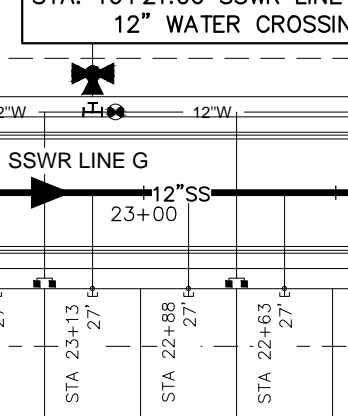
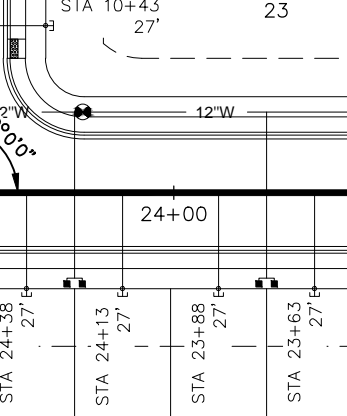
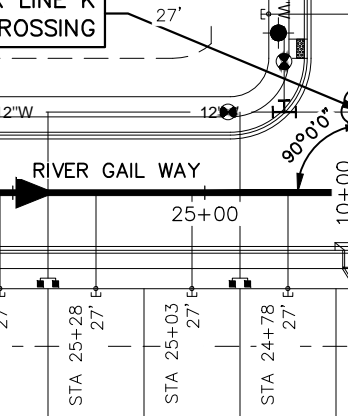
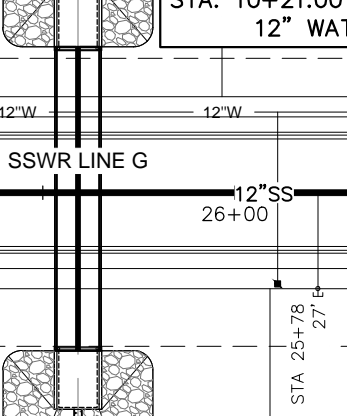
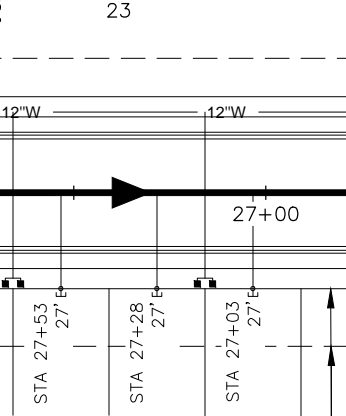
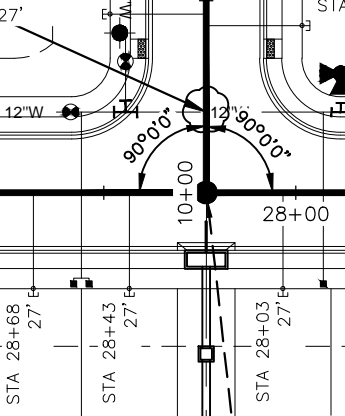
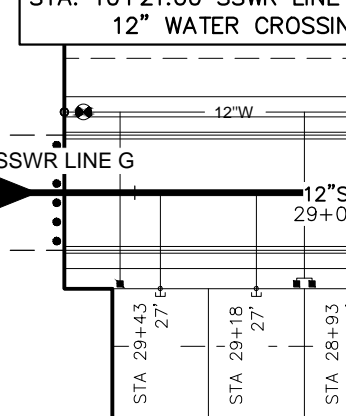
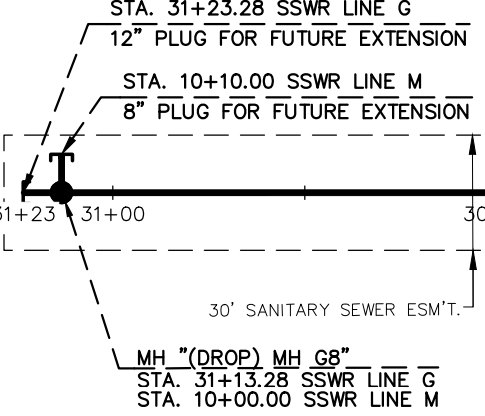
TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

SANITARY SEWER/WATER CROSSING SERVICE LATERAL/WATER CROSSING PVC SDR-26 CLASS 180 PROTECTIVE PIPE PER TCOO SEPARATION REQUIREMENTS REFER TO TYPICAL SANITARY SEWER/WATER CROSSING DETAIL: THIS SHEET

REMAINDER OF 141.823 ACRES SA GIVEN TO FLY, LP DOC. NO. 202299016819, OPR



LOCAL STREET - 50' SECTION NOT TO SCALE



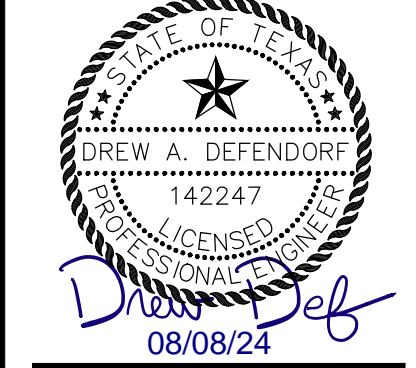
KAYDEN SPRINGS UNIT 2

OVERALL SANITARY SEWER LAYOUT

JOB NO.: 0046599.02
DATE: 08/08/2024
DESIGN: TBW
DRAWN: SG
CHECKED: DAD

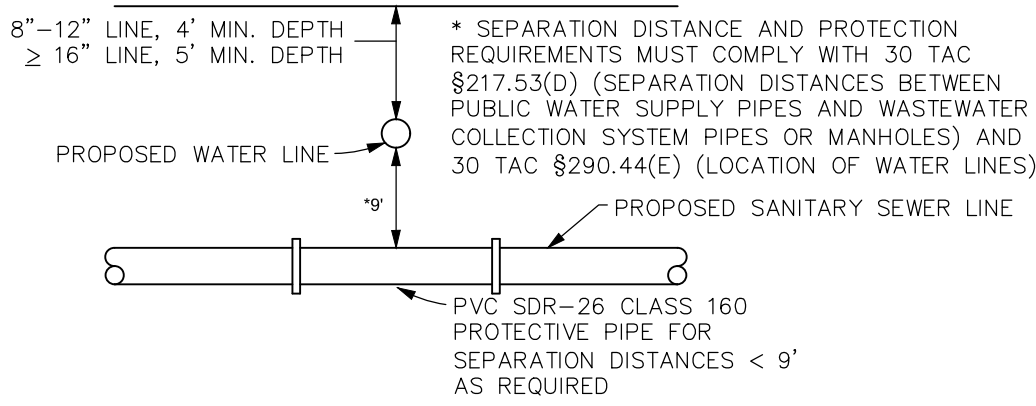
SHEET
C5.1

Westwood
Phone (210) 955-9300
Fax (888) 937-5150
211 North Loop 1804 East, Suite 205
San Antonio, TX 78232
westwoodps.com
Westwood Professional Services, Inc.
TPEL FIRM REGISTRATION NO. 10978301



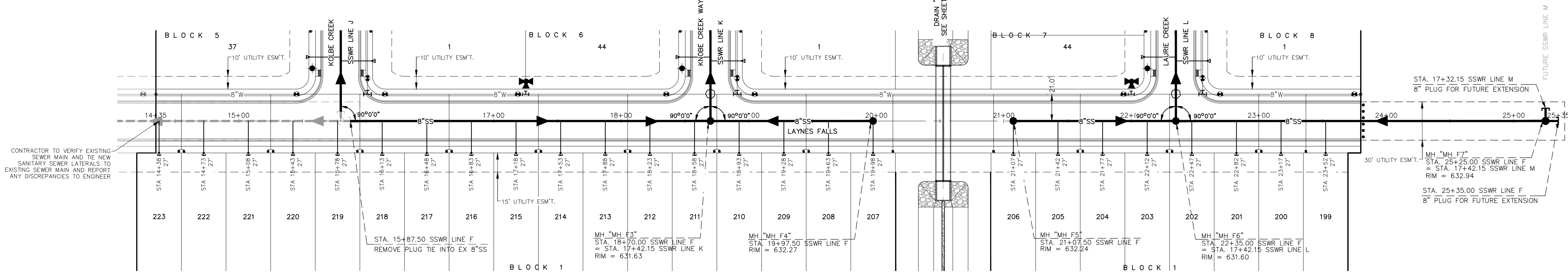
TRENCH EXCAVATION SAFETY PROTECTION
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA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

CAUTION: THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION PRIOR TO COMMENCING WORK AND IS RESPONSIBLE FOR ANY/ALL DAMAGES RESULTING FROM THE FAILURE TO LOCATE AND PRESERVE UTILITIES.



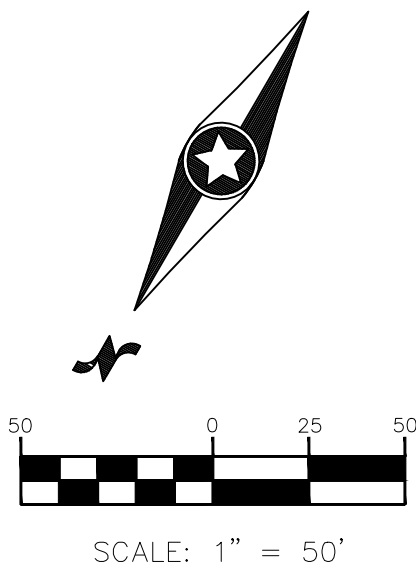
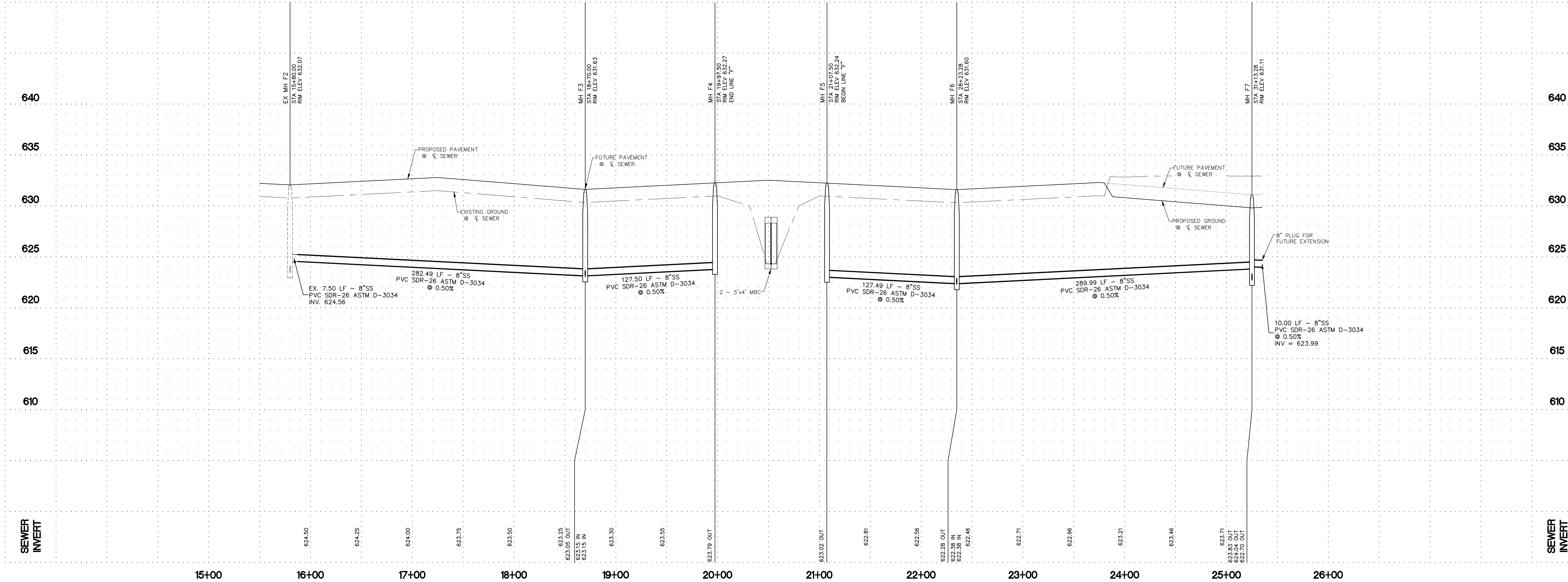
TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
NTS

SANITARY SEWER/WATER CROSSING
SERVICE LATERAL/WATER CROSSING
PVC SDR-26 CLASS 160 PROTECTIVE PIPE PER TCEQ
SEPARATION REQUIREMENTS REFER TO TYPICAL SANITARY
SEWER/WATER CROSSING DETAIL: THIS SHEET



LINE "F"
STA.10+00.00 TO STA. 19+52.00

SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

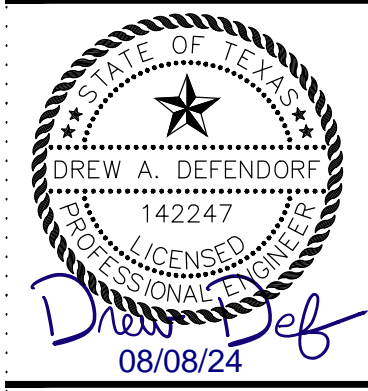


LEGEND

- E8"W---
- 8"W---
- 12"W---
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- EXISTING GATE VALVE
- PROPOSED GATE VALVE
- PROPOSED WATER SERVICE
- EXISTING SANITARY SEWER MAIN
- PROPOSED SANITARY SEWER MAIN
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER LATERAL

NO.	DATE	REVISIONS	BY

Westwood
211 North Loop 1804 East, Suite 205
San Antonio, TX 78232
westwoodps.com
Phone (210) 955-9300
Fax (888) 837-5150
Westwood Professional Services, Inc.
TPEL FIRM REGISTRATION NO. 10074801



KAYDEN SPRINGS
UNIT 2
SANITARY SEWER PLAN
AND PROFILE - LINE F

JOB NO.:	0046599.02
DATE:	08/08/2024
DESIGN:	TBW
DRAWN:	SG
CHECKED:	DAD

SHEET
C5.2

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL DESIGN AND CONSTRUCT AND MAINTAIN AND MONITOR AND INSPECT AND REPORT ON THE INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL PROVIDE A TRENCH EXCAVATION SAFETY PROTECTION PROGRAM THAT 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 DEVELOP AND MAINTAIN A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

8" - 12" LINE, 4' MIN. DEPTH
 ≥ 16" LINE, 5' MIN. DEPTH


* SEPARATION DISTANCE AND PROTECTION REQUIREMENTS MUST COMPLY WITH 30 TAC §217.53(D) (SEPARATION DISTANCES BETWEEN PUBLIC WATER SUPPLY PIPES AND WASTEWATER COLLECTION SYSTEM PIPES OR MANHOLES) AND 30 TAC §290.44(E) (LOCATION OF WATER LINES)

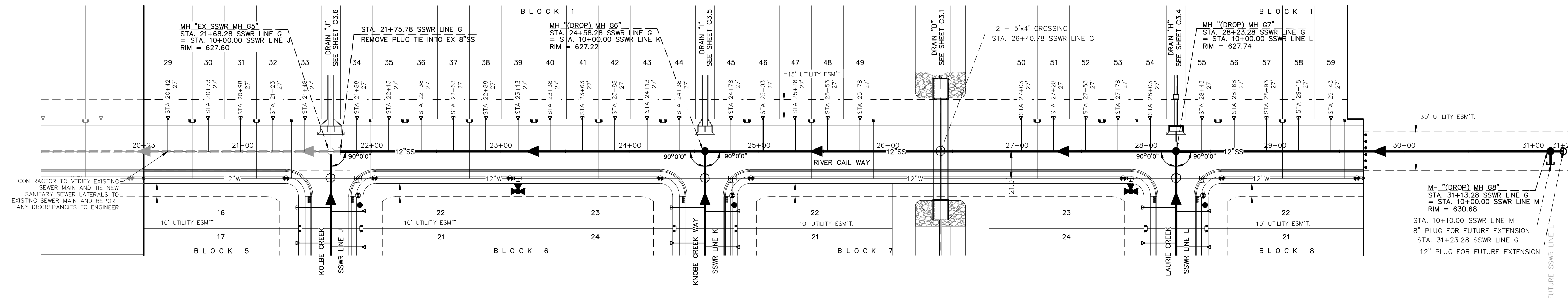
PROPOSED WATER LINE

PROPOSED SANITARY SEWER LINE

PVC SDR-26 CLASS 160 PROTECTIVE PIPE FOR SEPARATION DISTANCES < 9' AS REQUIRED

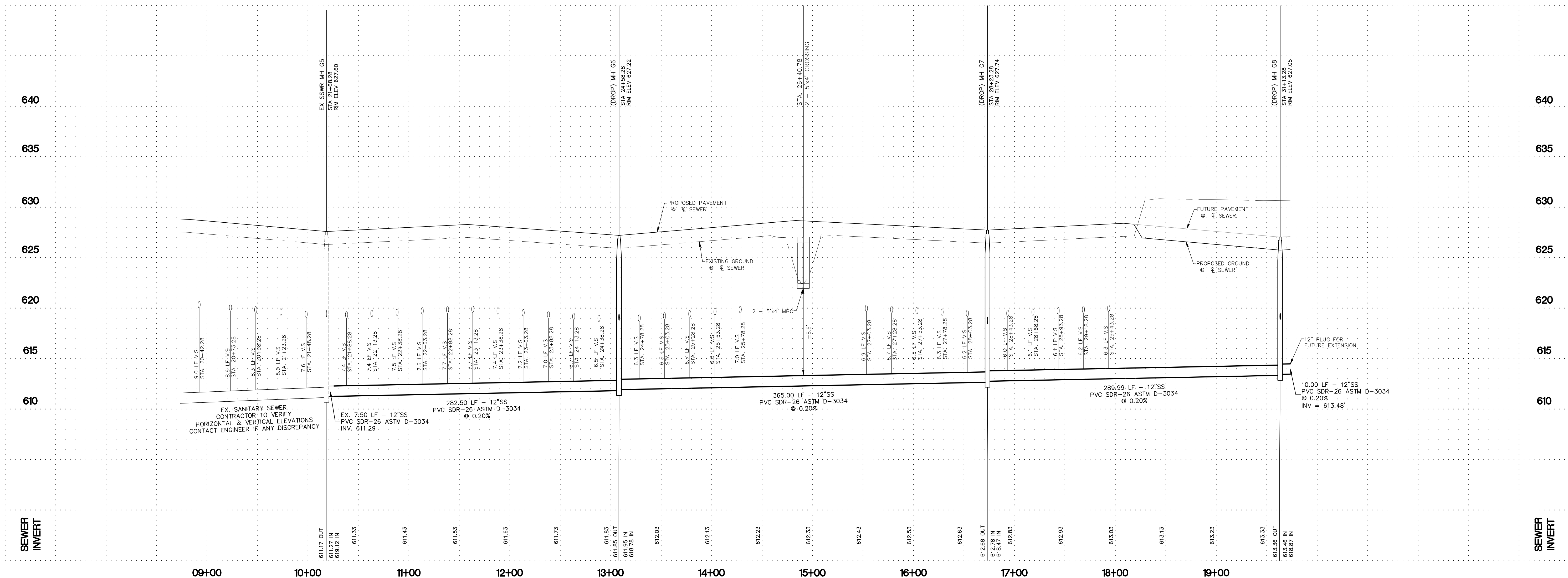
TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
NTS

SANITARY SEWER/WATER CROSSING 
SERVICE LATERAL/WATER CROSSING
PVC SDR-26 CLASS 160 PROTECTIVE PIPE PER TCEQ
SEPARATION REQUIREMENTS REFER TO TYPICAL SANITARY
SEWER/WATER CROSSING DETAIL: THIS SHEET

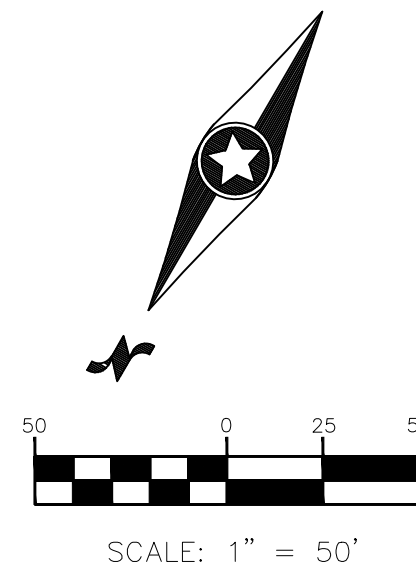


LINE "G"
STA.10+00.00 TO STA. 19+53.00

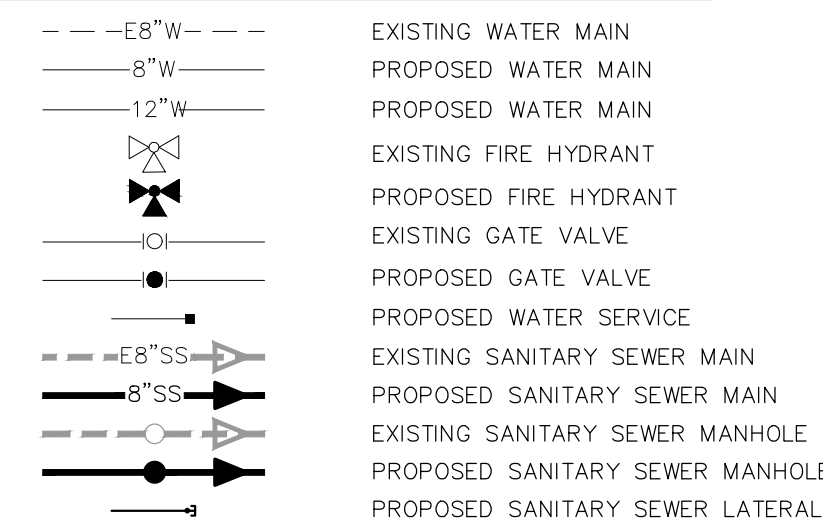
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



File: N:\0046599.02\06 CAD\DWG\Site Design C3D\0046599.02_SEWER.dwg



LEGEND

[illegible]

Westwood

Phone (210) 265-8300 211 North Loop 1604 East, Suite 205
Toll Free (888) 937-5750 San Antonio, TX 78232
westwoods.com

Westwood Professional Services, Inc.
TBE FIRM REGISTRATION NO. F-1756
TBE FIRM REGISTRATION NO. 10074301



KAYDEN SPRINGS UNIT 2

JOB NO.:	0046599.0
DATE:	08/08/202
DESIGN:	TB
DRAWN:	S
CHECKED:	DA

SHEET
C5.3

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL DESIGN AND CONSTRUCT AND MAINTAIN AND MONITOR AND INSPECT AND REPORT ON THE INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL PROVIDE A TRENCH EXCAVATION SAFETY PROTECTION PROGRAM THAT 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 DEVELOP AND MAINTAIN A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

8" - 12" LINE, 4' MIN. DEPTH
≥ 16" LINE, 5' MIN. DEPTH

* SEPARATION DISTANCE AND PROTECTION REQUIREMENTS MUST COMPLY WITH 30 TAC §217.53(D) (SEPARATION DISTANCES BETWEEN PUBLIC WATER SUPPLY PIPES AND WASTEWATER COLLECTION SYSTEM PIPES OR MANHOLES) AND 30 TAC §290.44(E) (LOCATION OF WATER LINES)

PROPOSED WATER LINE

9"

PROPOSED SANITARY SEWER LINE

PVC SDR-26 CLASS 160 PROTECTIVE PIPE FOR SEPARATION DISTANCES < 9' AS REQUIRED

NTS

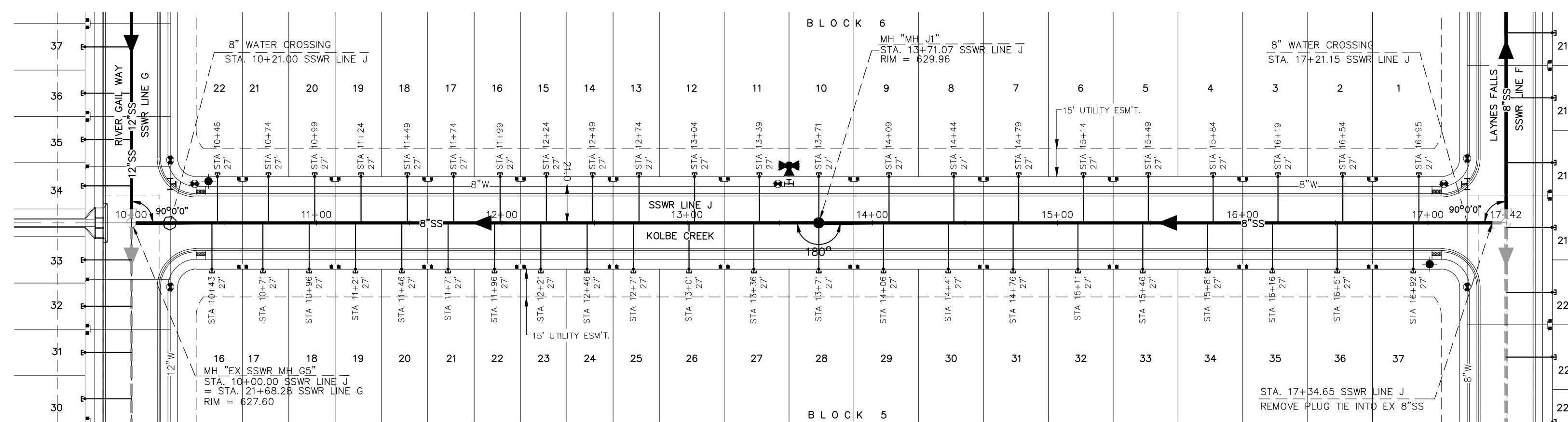
SANITARY SEWER/WATER CROSSING 

SERVICE LATERAL/WATER CROSSING

PVC SDR-26 CLASS 160 PROTECTIVE PIPE PER TCEQ

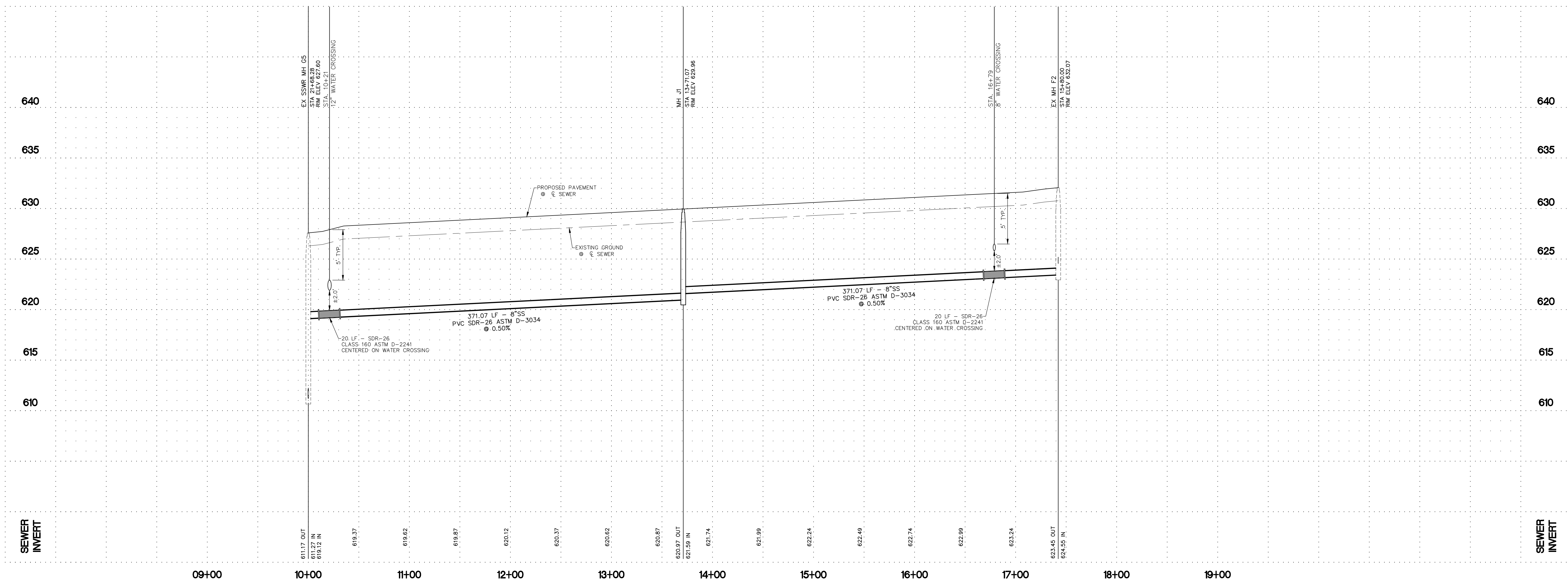
SEPARATION REQUIREMENTS REFER TO TYPICAL SANITARY

SEWER/WATER CROSSING DETAIL: THIS SHEET



---E8"W---	EXISTING WATER MAIN
---8"W---	PROPOSED WATER MAIN
---12"W---	PROPOSED WATER MAIN
	EXISTING FIRE HYDRANT
	PROPOSED FIRE HYDRANT
	EXISTING GATE VALVE
	PROPOSED GATE VALVE
	PROPOSED WATER SERVICE
---E8"SS---	EXISTING SANITARY SEWER MAIN
---8"SS---	PROPOSED SANITARY SEWER MAIN
	EXISTING SANITARY SEWER MANHOLE
	PROPOSED SANITARY SEWER MANHOLE
	PROPOSED SANITARY SEWER LATERAL

SCALE: 1" = 50' HORIZ.
1" = 5' VERT



File: N:\0046599.02\06 CAD\DWG\Site Design C3D\0046599.02_SEWER.dwg

[illegible]

Westwood

Phone (210) 265-8300 211 North Loop 1604 East, Suite 205
Toll Free (888) 937-5150 San Antonio, TX 78232
westwoodps.com

Westwood Professional Services, Inc.
 TYPE FIRM REGISTRATION NO. F-11736
 TBP'S FIRM REGISTRATION NO. 10074301



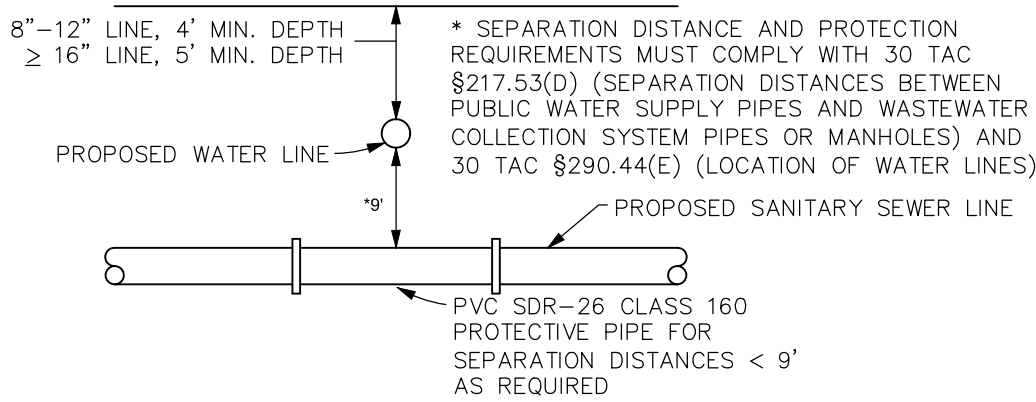
KAYDEN SPRINGS UNIT 2

JOB NO.:	0046599.02
DATE:	08/08/2024
DESIGN:	TBV
DRAWN:	SA
CHECKED:	DA

SHEET
C5.4

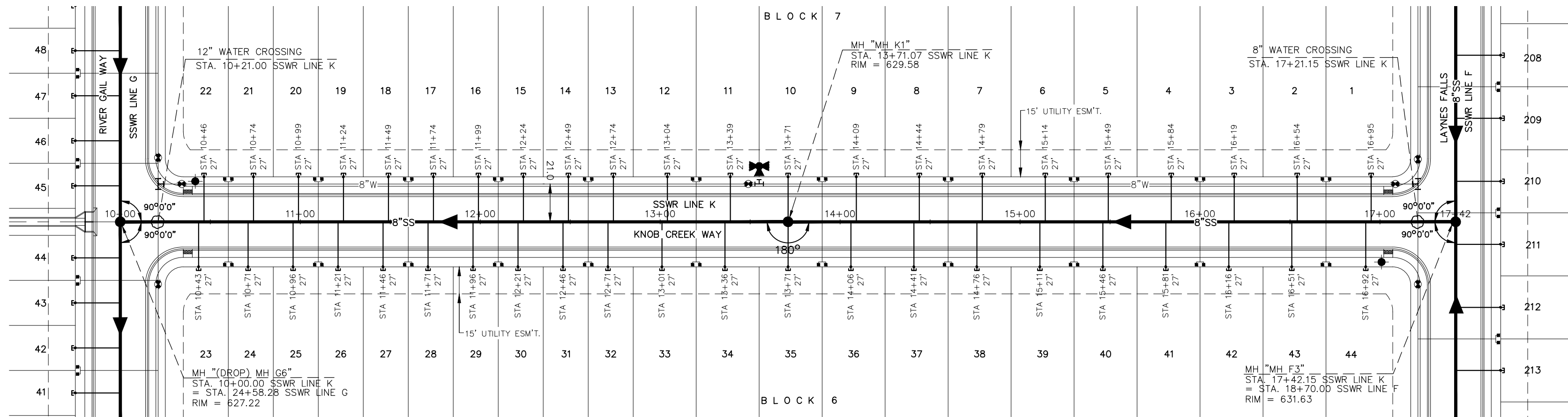
TRENCH EXCAVATION SAFETY PROTECTION
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA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

CAUTION: THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION PRIOR TO COMMENCING WORK AND IS RESPONSIBLE FOR ANY/ALL DAMAGES RESULTING FROM THE FAILURE TO LOCATE AND PRESERVE UTILITIES.



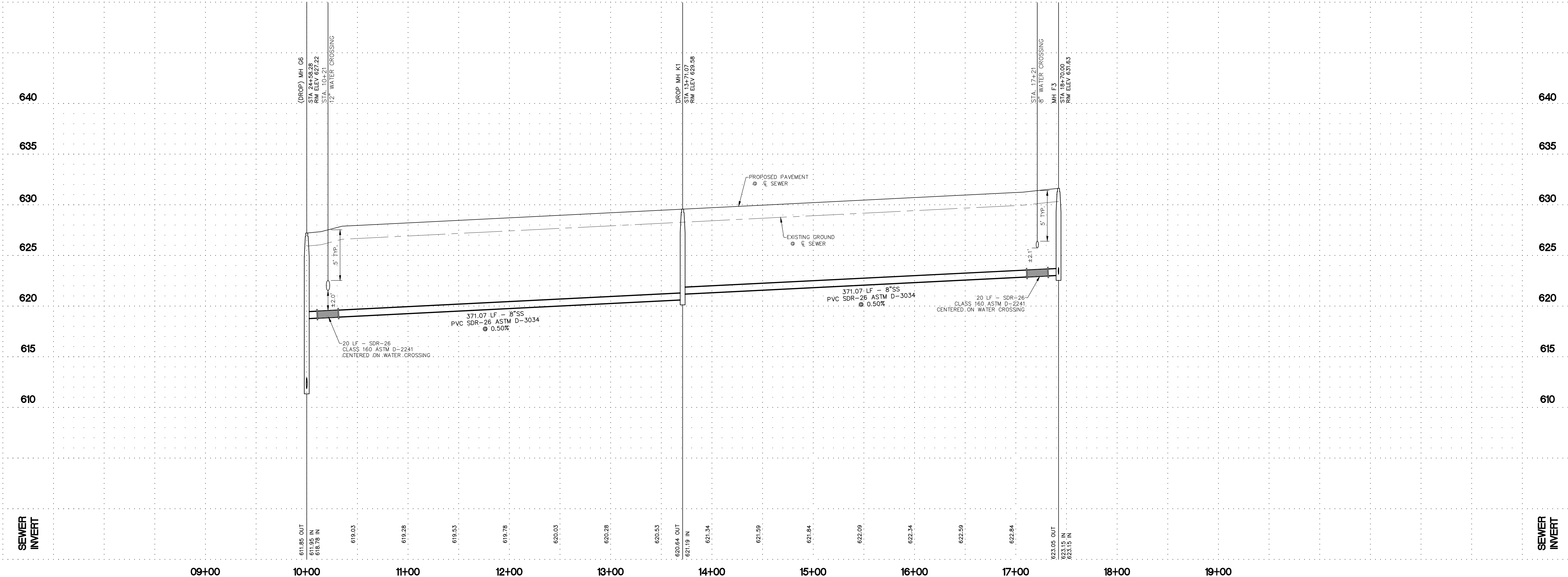
TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
NTS

SANITARY SEWER/WATER CROSSING
SERVICE LATERAL/WATER CROSSING
PVC SDR-26 CLASS 160 PROTECTIVE PIPE PER TCEQ
SEPARATION REQUIREMENTS REFER TO TYPICAL SANITARY
SEWER/WATER CROSSING DETAIL: THIS SHEET



LINE "K"
STA.10+00.00 TO STA. 17+42.15

SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



NO.	DATE	REVISIONS	BY

Westwood
211 North Loop 1804 East, Suite 205
San Antonio, TX 78232
westwoodps.com

Phone (210) 955-9300
Toll Free (888) 837-5150

Westwood Professional Services, Inc.
TPELS FIRM REGISTRATION NO. 10974801



KAYDEN SPRINGS
UNIT 2
SANITARY SEWER PLAN
AND PROFILE - LINE K

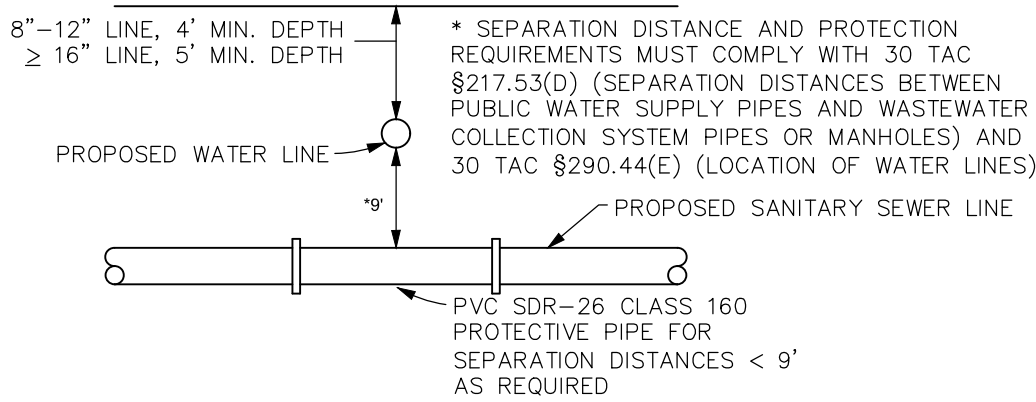
JOB NO.:	0046599.02
DATE:	08/08/2024
DESIGN:	TBW
DRAWN:	SG
CHECKED:	DAD

SHEET

C5.5

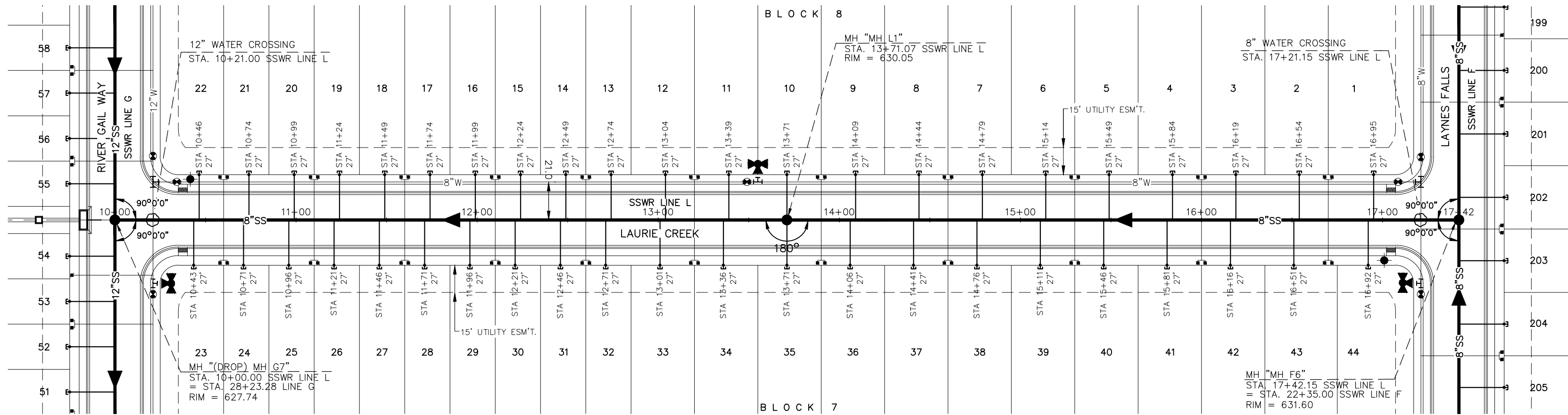
TRENCH EXCAVATION SAFETY PROTECTION
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA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

CAUTION: THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION PRIOR TO COMMENCING WORK AND IS RESPONSIBLE FOR ANY/ALL DAMAGES RESULTING FROM THE FAILURE TO LOCATE AND PRESERVE UTILITIES.

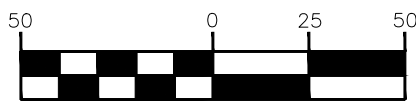
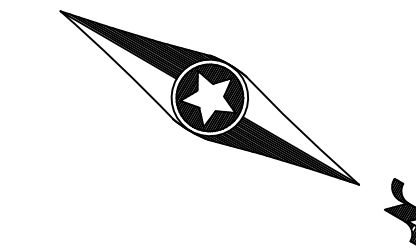


TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
NTS

SANITARY SEWER/WATER CROSSING
SERVICE LATERAL/WATER CROSSING
PVC SDR-26 CLASS 160 PROTECTIVE PIPE PER TCEQ
SEPARATION REQUIREMENTS REFER TO TYPICAL SANITARY
SEWER/WATER CROSSING DETAIL: THIS SHEET



LINE "L"
STA.10+00.00 TO STA. 17+42.15

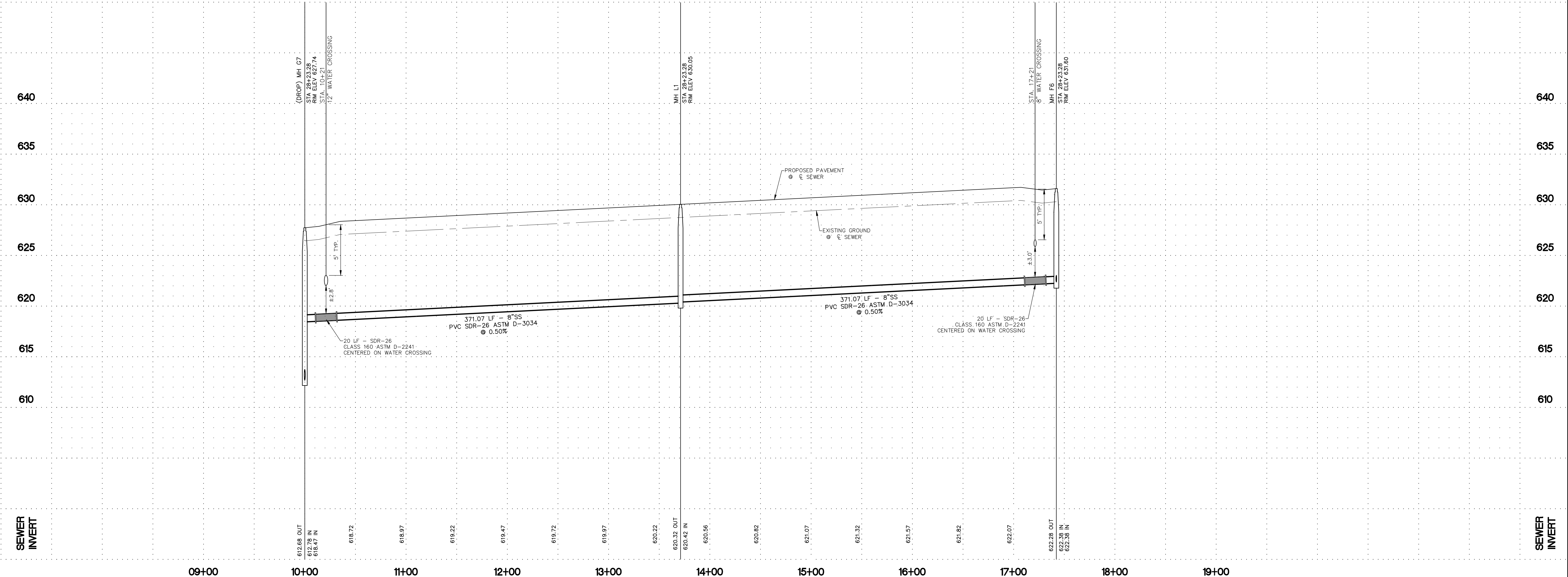


SCALE: 1" = 50'

LEGEND

- E8"W--- EXISTING WATER MAIN
- 8"W--- PROPOSED WATER MAIN
- 12"W--- PROPOSED WATER MAIN
- E8"SS--- EXISTING FIRE HYDRANT
- 8"SS--- PROPOSED FIRE HYDRANT
- E8"SS--- EXISTING GATE VALVE
- 8"SS--- PROPOSED GATE VALVE
- E8"SS--- PROPOSED WATER SERVICE
- 8"SS--- EXISTING SANITARY SEWER MAIN
- E8"SS--- PROPOSED SANITARY SEWER MAIN
- E8"SS--- EXISTING SANITARY SEWER MANHOLE
- E8"SS--- PROPOSED SANITARY SEWER MANHOLE
- E8"SS--- PROPOSED SANITARY SEWER LATERAL

SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



NO.	DATE	REVISIONS	BY

Westwood
211 North Loop East, Suite 205
San Antonio, TX 78232
westwoodips.com
Phone (210) 355-9300
Fax (888) 837-5150
Westwood Professional Services, Inc.
TPEL FIRM REGISTRATION NO. 1097301



KAYDEN SPRINGS
UNIT 2
SANITARY SEWER PLAN AND PROFILE - LINE L

JOB NO.:	0046599.02
DATE:	08/08/2024
DESIGN:	TBW
DRAWN:	SG
CHECKED:	DAD

SHEET
C5.6

THE STANDARD SPECIFICATIONS AND DRAWING (DD) ARE PROVIDED AS A TECHNICAL RESOURCE FOR ENGINEERING PROFESSIONALS FOR USE IN DESIGN AND CONSTRUCTION OF SEWER COLLECTION SYSTEMS PROJECTS MANAGED AND CONTRACTED BY THE GREEN VALLEY SPECIAL UTILITY DISTRICT (GVSUD)

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE GVSUD AND COMPLY WITH:
 - A. CURRENT GVSUD TECHNICAL SPECIFICATIONS FOR UTILITIES CONSTRUCTION.
 - B. TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ), FORMERLY TEXAS NATURAL RESOURCE CONSERVATION COMMISSION (TNRCC), DESIGN CRITERIA FOR SEWAGE SYSTEMS 31 TAC 317.1, 31 TAC 317.2 AND 31 TAC 317.3, 30 TAC & 213 40 TAC & 217.
2. THE CONTRACTOR IS TO NOTIFY AND MAKE ARRANGEMENTS WITH THE GVSUD INSPECTIONS DIVISION AT (830)914-2330 OR (210)372-2228 - 48 HOURS PRIOR TO ANY EXCAVATION. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD BEFORE ANY EXCAVATION OR START OF PROJECT.
3. WORK SHALL NOT BE PERFORMED ON SATURDAYS, SUNDAYS OR HOLIDAYS BEFORE 7:30 A.M. OR AFTER 4:30 P.M., UNLESS PRIOR APPROVAL IS GRANTED BY THE GVSUD ENGINEER.
 - A. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES TO INCLUDE SURFACE LATERALS, SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO LOCATION (POT HOLE, VERIFY LOCATION, ELEVATIONS OF ALL) UTILITY SERVICE LINES 48 HOURS PRIOR TO EXCAVATION AND TO PROTECT THE SAME DURING CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGES OF EXISTING UTILITIES AND REPAIRS WILL BE AT THE CONTRACTORS EXPENSE.

4. CONTRACTOR WILL MAINTAIN SERVICE TO ALL EXISTING SANITARY SEWERS AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR WILL MARK, CLEAN ALL DEBRIS, GRAVEL, DIRT, ETC. OUT OF MANHOLES AND ANY STOPPAGES CAUSED BY DEBRIS DURING CONSTRUCTION. CONTRACTOR WILL UNPLUG STOPPAGE AT CONTRACTORS EXPENSE. ANY DAMAGE TO EXISTING MANHOLES OR SEWER MAIN WILL BE CORRECTED AT THE CONTRACTORS EXPENSE. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO EXISTING OR NEW RINGS, COVERS, OR CONES FROM EQUIPMENT AND MATERIALS USED OR TAKEN THROUGH THE WORK AREA. IF AN EXISTING OR NEW MAIN RING, COVER, RING, OR CONE IS DAMAGED BY THE CONTRACTOR IT SHALL BE REPLACED AS DIRECTED BY THE GVUSD INSPECTOR. MANHOLES WILL NEED TO BE RESEALED WITH THE GVUSD APPROVED SEALING. IF SEAL COATING IS BROKEN, CONTRACTOR WILL HAVE MANHOLE RECOATED. RESEAL ALL LEAKS AT CONTRACTORS EXPENSE.

- B. CONTRACTOR WILL BE HELD LIABLE FOR ANY DAMAGES TO SEWER COLLECTION SYSTEM STOPPAGES, OVER-FLOWS, BACKUP INTO HOMES CAUSED BY LOST RUN-AWAY SEWER PLUGS THAT WERE USED ON THAT PROJECT OR OUTFALL LINE WASTEWATER TREATMENT PLANTS.

- ALL WORK IN THE TEXAS HIGHWAY DEPARTMENT, BEXAR COUNTY, GUADALUPE COUNTY, AND CITY OF CIBOLO RIGHT OF WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT.

8. NO TESTING WILL BE PERFORMED PRIOR TO 30 DAYS FROM THE COMPLETE INSTALLATION OF THE SANITARY SEWER LINES.

9. CONTRACTOR SHALL SUBMIT FIELD COPY PLANS AND PROFILES SHOWING AS-BUILT WORK AT END OF PROJECT, CCTV DVD AND COMPACTION DENSITY REPORTS FOR MAIN SEWER LINE AND ALL SERVICE LATERALS TRENCHES. WARRANTY LETTERS ON MATERIALS, WORKMANSHIP FOR 24 MONTHS AFTER FINAL ACCEPTANCE.

11. ALL MANHOLES SHALL BE WITH A 30" INCH OPENING, HAVE WATERTIGHT RING AND COVERS, WITH THE GVSUD LOGO. ON PRIVATE PROPERTY, MANHOLE RING AND COVER SHALL BE TYPICAL MANHOLE COVER WATER TIGHT.

- A. BEFORE BACK FILLING/COMPACTION/CONCRETE ENCASEMENT
- ALL MANHOLE JOINT SECTION RISERS, CONE SECTIONS AND GRADE RING SHALL BE WRAPPED WITH GATOR WRAP SEALING SYSTEMS, BUTYL ADHESIVE SEALANT WITH A MINIMUM THICKNESS OF 30 MILS. INFI-SHIELD WRAPPED WITH RISER-WRAP SEALING SYSTEM, GATOR WRAP
- MATERIAL: RUBBER MEETS ASTM C923/MASTIC MEETS ASTM C 990 OR APPROVE BY THE GVSUD ENGINEER SUBSTITUTION ON OUTSIDE FOR II, GROUND WATER TABLE.

- Note:** Manhole cover inserts shall be FRW Industries, inc., "Inflow Protector-Cover" "Preco Industries Ltd.", "Sewer Guard", or approved equal, and shall be installed in strict accordance with the manufacturer's recommendations. The contractor shall be responsible for making the necessary field measurements for the manufacturer prior to construction.

- A. ALL MANHOLES MUST HAVE 350-400 FEET SPACING BETWEEN MANHOLES TO PROVIDE ACCESS TO SEWER LINES FOR CLEANING, ON THE GVSUD PUBLIC SEWER EASEMENT. A 16 FOOT GATE WITH LOCK WILL BE PROVIDED BY THE CONTRACTOR FOR ACCESS TO CLEANING AND MAINTAINING SEWER LINES.
- B. DROP MANHOLES SHALL BE REQUIRED WHEN THE INFLOW ELEVATION IS MORE THAN TWENTY-FOUR (24) INCHES ABOVE THE OUTFLOW ELEVATION. DROP SHALL BE LOCATED OUTSIDE THE MANHOLE WITH ITS FLOW LINE ELEVATION LOCATED BETWEEN THE CENTER LINE AND TOP OF SEWER LINE.
14. ALL MANHOLES WILL BE CONCRETE ENCASEMENT 1 FOOT AROUND RING, 28-INCH DEEP AFTER GATOR WRAP SEALING SYSTEM HAS BEEN APPLIED.
15. NEW MANHOLE PROTECTIVE COATING, LINER IS FOR THE PURPOSE OF INFILTRATION BECAUSE OF HIGH WATER TABLE. APPLICATION PROCEDURES ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION AND PER THE FOLLOWING SPECIFICATIONS:
 - A. MANHOLE PROTECTIVE COATING: CONTRACTOR WILL BE RESPONSIBLE FOR MANHOLES ON PROJECT SAFETY ASSESSMENT; CONFINED SPACE ENTRY SET BY OCCUPATIONAL SAFETY AND HEALTH STANDARDS, 29 CFR 1910.146 APP E.
 - B. THE CONTRACTOR, SHALL NOTIFY THE GVSUD UTILITIES INSPECTIONS DEPARTMENT WITH A MINIMUM OF 2 DAYS ADVANCE NOTICE OF THE START OF ANY FIELD SURFACE PREPARATION WORK OF COATING APPLICATION WORK OF MANHOLES.
 - C. ALL NEW MANHOLES IN NEW DEVELOPMENTS SHALL BE 30" INCH OPENING, WATERTIGHT AND THE INTERIOR WALL COATED WITH A GVSUD APPROVED SEWER STRUCTURE FOR ALL MANHOLES, SEWPERCOAT 2000 HR REGULAR, WITH THE REQUIRED ONE-INCH THICK APPLICATION.

CEMENTITIOUS COATING WITH REQUIRED HALF-INCH THICK APPLICATION

- SEWPERCOAT 2000 HR REGULAR
- REFRATTA HAC 100
- MAXIMUM CA PLUS

- AROMATIC POLYUREA SCP DROPLINER REQUIRED THICKNESS 125 MILS

- D. WARRANTY LETTER ON MANHOLE PROTECTIVE COATING FOR 10 YEARS AFTER FINAL ACCEPTANCE OF PROTECTIVE COATINGS CONTRACTOR IS NOT RELIEVED OF ITS RESPONSIBILITIES UNDER THE CONTRACT DOCUMENTS.
- i. ANY CONNECTIONS TO EXISTING MANHOLES WILL REQUIRE A 36-INCH CRADLE TO SUPPORT INCOMING PIPE. A RUBBER GASKET WILL ALSO BE REQUIRED (CENTERED AT MANHOLE WALL) WITH GROUTING AT INTERIOR AND EXTERIOR PENETRATIONS.
- PENETRATION INTO MANHOLE WILL BE CORE DRILLED. ANY DAMAGE EXITING THE MANHOLE WILL BE REPLACED AT CONTRACTOR'S EXPENSE. IF COATING SEAL IS BROKEN, THE MANHOLE WILL BE RECOATED WITH THE SAME MATERIALS. IF EXISTING SEWER MANHOLE SEAL COATING IS BROKEN, ALL OF MANHOLE WILL BE RELEASED WITH SAME MATERIALS AND ONE-INCH THICKNESS.
- ii. ANY AND ALL EXISTING MANHOLES WITHIN CONSTRUCTION PROJECT THAT TIE IN, ARE DONE BY CONTRACTOR TO STUB-OUT ADJUSTMENT, RECONSTRUCTION, OR LEAKING. MANHOLE WILL BE COAT SEALED AT CONTRACTOR'S EXPENSE.
- iii. MANHOLES WITH STUB-OUTS (8") INCH OR LARGER MUST BE LOCATED AT THE END OF ALL SEWER LINES THAT MAY BE EXTENDED IN THE FUTURE. MANHOLES PLACED AT THE END OF THE WASTEWATER COLLECTION SYSTEM PIPES THAT MAY BE EXTENDED IN THE FUTURE MUST INCLUDE STUB-OUTS WITH PLUGS.

16. THE KIND AND DESCRIPTION OF THE PIPE CONDUIT IS SHOWN ON THE PLANS (IF PVC, SDR AND ASTM/ANSI DESIGNATION CLASS). AS SDR 26 PVC, ASTM D-3034 WITH A MINIMUM STIFFNESS OF 115 PSI TEXAS ADMINISTRATIVE CODE (TAC) RULES TO INCLUDE 30C & 213, OR ANY REVISIONS THERE TO APPLICABLE TECQ, 30 TAC 7 217, FOR ALL NEW DEVELOPMENT.

18. ALL PVC SEWER PIPE WITH OVER 14 FEET OF COVER SHALL BE EXTRA STRENGTH; MINIMUM PIPE STIFFNESS OF 150 PSI.

19. ALL SEWER PIPES SHALL HAVE COMPRESSION OR MECHANICAL JOINTS.

21. ALL PIPE TRENCHING, BEDDING AND BACKFILL SHALL BE DONE IN ACCORDANCE WITH APPROPRIATE ASTM/ANSI SPECIFICATIONS [REFERENCE 31 TAC 317.2(A)(5)(A); ASTM C-12 (ANSI A106.2) OR ASTM D-2321 (ANSI K65.171)]. ALL COMPACTION @ 98% DENSITY TESTS ACROSS THE BOARD, 1 RANDOM DENSITY TEST PER LIFT FOR EVERY 400 FEET.

- A. SAND MIGRATION, SEEPAGE PREVENTION COLLAR WHEN CHANGING THE INITIAL BACKFILL FROM SELECT INITIAL BACKFILL TO OPTIONAL SELECT INITIAL BACKFILL. A TWO (2) FOOT LONG CLASS D CONCRETE ENCASEMENT, EVERY 180 FEET ALONG PIPE AND 20 FEET FROM WALL OF MANHOLE IN EACH DIRECTION. NO EXTRA PAY ITEM.

- | | | |
|----|--------|--------|
| a. | 2" | 100.0% |
| b. | 1 3/4" | 100.0% |
| c. | 1 1/2" | 100.0% |
| d. | 1" | 52.6% |
| e. | 3/4" | 10.7% |
| f. | 3/8" | 1.3% |

- i. SEWER LINES SHALL BE SIZED AND EXTENDED THROUGH THE LIMITS OF A DEVELOPMENT TO SERVE ADJACENT PROPERTY, WITH MANHOLE AND STUB-OUT AT END OF SEWER LINE.
 - a. IN PHASED CONSTRUCTION OF THOROUGHFARES, THE SEWER LINE SHALL BE EXTENDED THE ENTIRE LENGTH OF THE THOROUGHFARE BEING CONSTRUCTED.
- ii. NO PUBLIC SEWER LINE SHALL BE LOCATED NEARER THAN FIVE (5) FEET FROM ANY TREE.
- iii. SIZES AND GRADES FOR SANITARY SEWER SHALL BE AS REQUIRED BY THE GVSUD ENGINEER AND CONSIDERATION SHALL BE GIVEN TO POSSIBLE EXTENSIONS FOR FUTURE DEVELOPMENT. NO SANITARY SEWERS, OTHER THAN LATERALS AND FORCE MAINS, SHALL BE LESS THAN EIGHT (8) INCH IN DIAMETER.

22. WHEN SEWER LATERALS ARE TO BE CONNECTED TO EXISTING SEWER MAINS AND NO STUB-OUT HAS BEEN EARLIER PROVIDED, THE CONNECTION MUST BE MADE WITH AN APPROVED SERVICE SADDLE AS PER 31 TAC 313.5(C) (7). NEW INVERT TO BE BUILT, SMOOTH CHANNEL FOR NEW PIPE/SLOPE AT 2% FLOW.
23. ALL RESIDENTIAL SEWER LATERALS SHALL BE SDR 26 WITH RATING OF 115 PSI, BE EXTENDED TO THE PROPERTY LINE AT (6 X 6) CAPPED AND SEALED. ATTACH SEWER BURIAL TAPE TO THE END OF ALL SEWER LATERALS AND BRING UP TO THE GROUND LEVEL FOR MARKER (GREEN). (SEE HOUSE LATERALS DETAILS)

AA. SEWER SERVICE LATERALS. THE SIZES AND LOCATIONS OF LATERALS SHALL BE DESIGNATED AS FOLLOWS UNLESS OTHERWISE DIRECTED BY THE GVSUD ENGINEER:

- i. IN GENERAL FOR SINGLE FAMILY DWELLING, THE LATERAL SIZE SHALL BE FOUR (4) INCH MINIMUM. HOUSE LATERALS SHALL BE IN STALL CENTER OF THE LOT AND SHALL HAVE A TEN(10) FOOT SEPARATION FROM THE WATER SERVICE. THE SERVICE SHALL THEN BE EXTENDED AT A FORTY-FIVE (45) DEGREE ANGLE TO FOUR (4) FEET ABOVE THE FINISHED GRADE AND CAPPED. USE SEWER BURIAL TAPE TO MARK ALL SEWER SERVICE LATERALS
- ii. MULTIPLE UNITS, APARTMENTS, LOCAL RETAIL AND COMMERCIAL SIX (6) INCH MINIMUM, MANUFACTURING AND INDUSTRIAL - EIGHT (8) INCH MINIMUM, OR LARGER AS REQUIRED.

UNIFORM PLUMBING CODE, CITY OF SAN ANTONIO BUILDING INSPECTIONS DEPARTMENT. ALL COMMERCIAL BUILDINGS WILL HAVE TRAPS (FOG-TECQ).


WHICH INCLUDE OIL SEPARATOR-GASOLINE SERVICE STATIONS, CAR WASHES, GARAGES, DRY CLEANERS, CHEMICAL PLANTS, GAS PLANTS, HIDE PROCESSORS, TESTING LABORATORIES, OR ANY PLACE WHERE OIL OR SOLVENTS MAY BE INTRODUCED IN TO THE SANITARY SEWER SYSTEM. THE SIZING CRITERIA FOR OIL SEPARATORS SHALL BE BASED ON THE G.P.M. RATE OF ALL FIXTURES, APPLIANCE OR APPURTENANCE, DRAINING INTO SEWER SYSTEM.

SAND INTERCEPTORS SHALL BE INSTALLED IN THE SEWER SYSTEM OF THE FOLLOWING ESTABLISHMENTS, GARAGES, CAR WASHES, SERVICE STATIONS, OR ANY PLACE OF BUSINESS WHERE HEAVY SOLIDS MAY BE INTRODUCED INTO THE SANITARY SEWER SYSTEM. THE SIZING CRITERIA FOR A SAND INTERCEPTOR SHALL BE BASED ON THE REQUIRED G.P.M. X 12 MINUTE RETENTION TIMES TO OBTAIN THE TANK SIZE IN GALLONS CAPACITY.

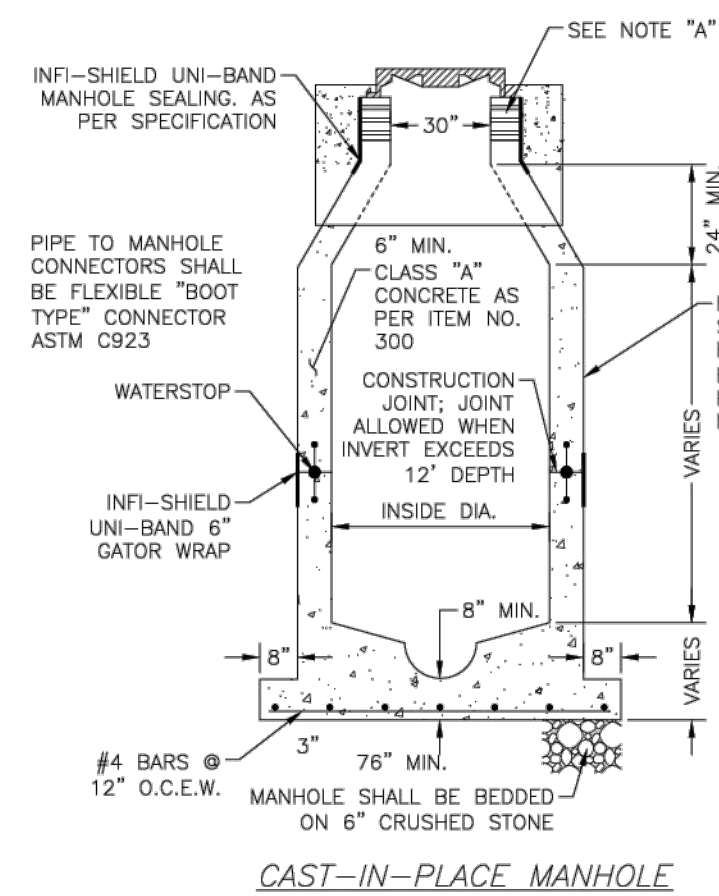
WITH HIGH PRESSURE SPRAYS AND/OR BRUSHES INSTALL A 50 G.P.M. INTERCEPTOR. MINIMUM, FOR A 4-BAY VEHICLE WASH, THE SIZE OF THE INTERCEPTOR SHALL INCREASE 10 G.P.M. FOR EACH ADDITIONAL WASH BAY OVER 4. SINGLE BAY OR PORTABLE WASHER TYPE VEHICLE WASHES SHALL INSTALL A 20 G.P.M. INTERCEPTOR MINIMUM.

IN NO CASE SHALL CORROSIVE LIQUIDS, SPENT ACIDS, OR OTHER HARMFUL CHEMICALS WHICH MIGHT DESTROY OR INJURE A DRAIN, SEWER, SOIL, OR WASTE PIPE, OR WHICH MIGHT CREATE NOXIOUS OR TOXIC FUMES, DISCHARGE INTO THE SANITARY SEWER SYSTEM WITH OUT BEING THOROUGHLY NEUTRALIZED BY PASSING THOROUGHLY CONSTRUCTED AND ACCEPTABLE NEUTRALIZING DEVICE. SUCH DEVICE SHALL BE PROVIDED WITH A SUFFICIENT INTAKE OF NEUTRALIZING MEDIUM, CONSISTING OF LIMESTONE OR MARBLE CHIPS, SO AS TO MAKE ITS CONTENTS NON-INJURIOUS BEFORE BEING DISCHARGED INTO THE SANITARY SEWER SYSTEM.

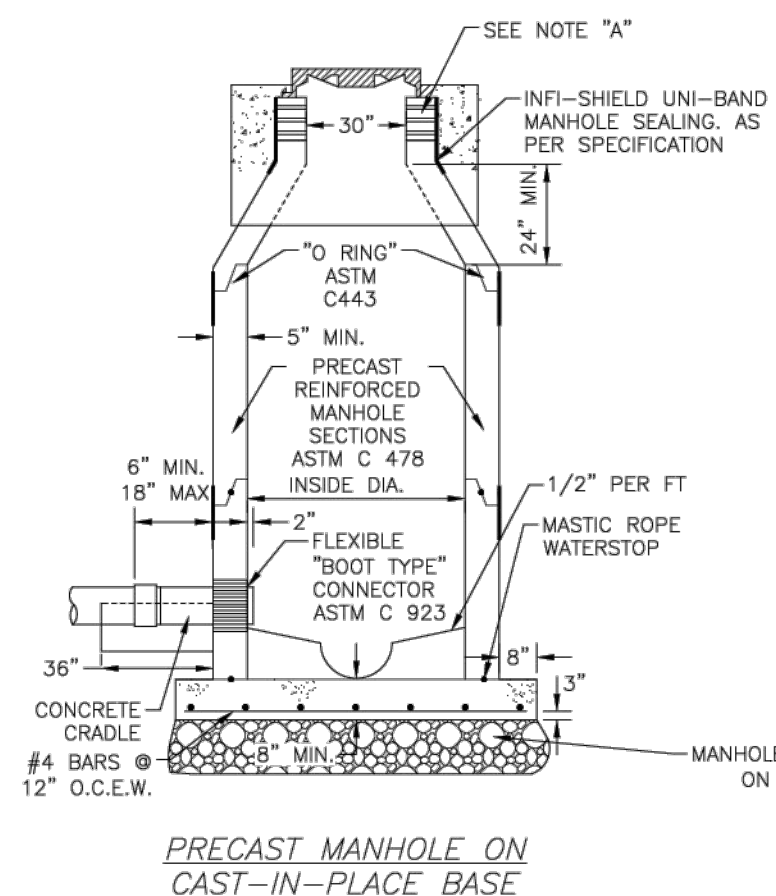
PUBLIC AND PRIVATE WASHATERIAS AND COMMERCIAL LAUNDRIES SHALL INSTALL A LINT TRAP EQUIPPED WITH A CONVENIENTLY LOCATED AND EASILY REMOVABLE WIRE BASKET OR OTHER SIMILAR DEVICE THAT WILL PREVENT THE STRINGS, RAGS, BUTTONS, OR OTHER PROHIBITED MATERIAL FROM ENTERING THE SANITARY SEWER SYSTEM. THE BASKET OR OTHER SIMILAR DEVICE SHALL PREVENT PASSAGE TO THE SANITARY SEWER SYSTEM OF ALL SOLIDS GREATER THAN 1/4 INCH IN DIAMETER. THE LINT TRAP SHALL BE INSTALLED IN THE LINE OF ALL FIXTURES, APPLIANCES AND APPURTENANCES DRAINING TO IT IN LIEU OF A LINT TRAP. A LINT INTERCEPTOR MAY BE INSTALL. THE INTERCEPTOR SHALL BE SIZED AND DESIGNED BY A TEXAS REGISTERED ENGINEER WITH HIS SEAL AND SIGNATURE ON THE DRAWINGS.

	GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS	SANITARY SEWER SYSTEM GENERAL NOTES (1 OF 2)	
	REVISED: OCTOBER 2021	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. G-1

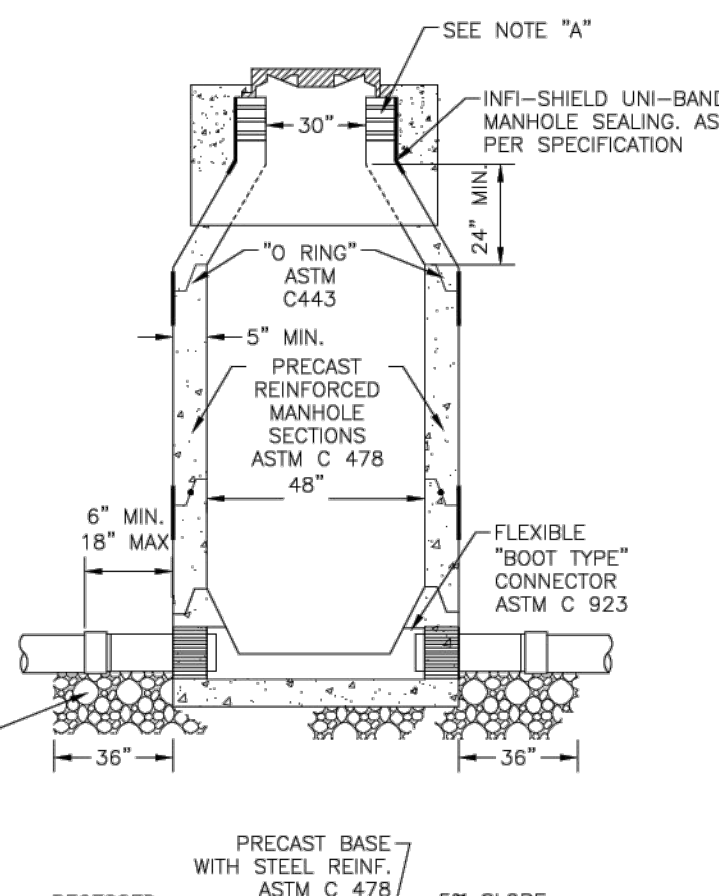
C:\Users\ADMIN\Documents\DWG\PLT\DWG\0046599.02\06 CAD\DWG\Site Design C3D\SEWER DETAILS.dwg



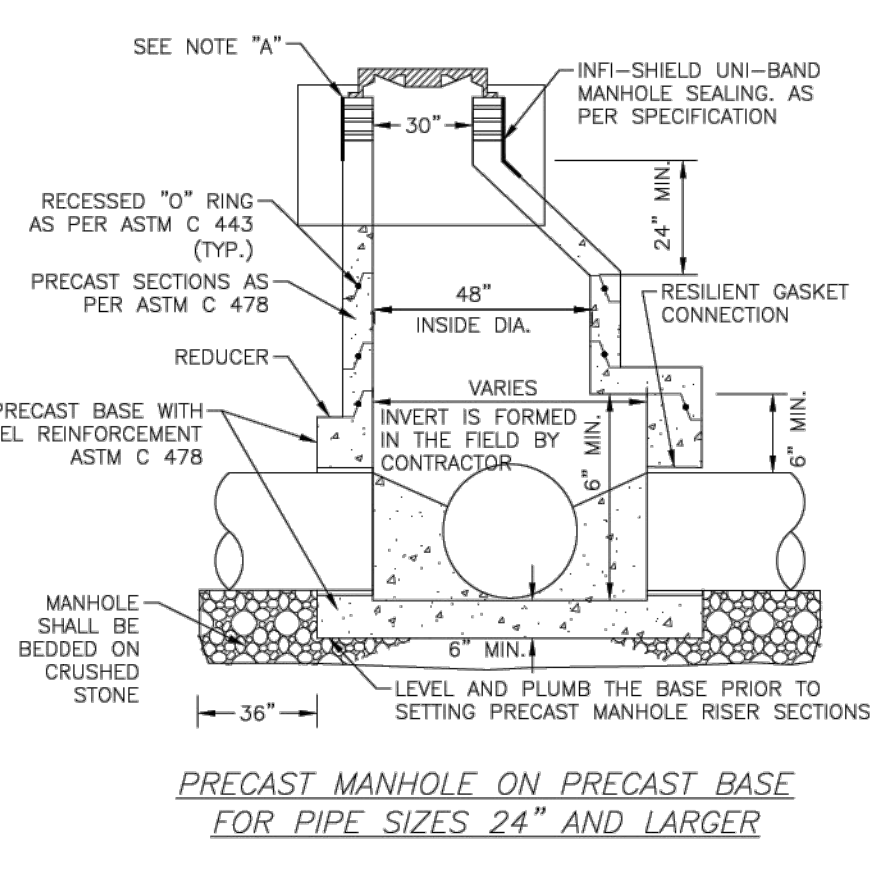
CAST-IN-PLACE MANHOLE



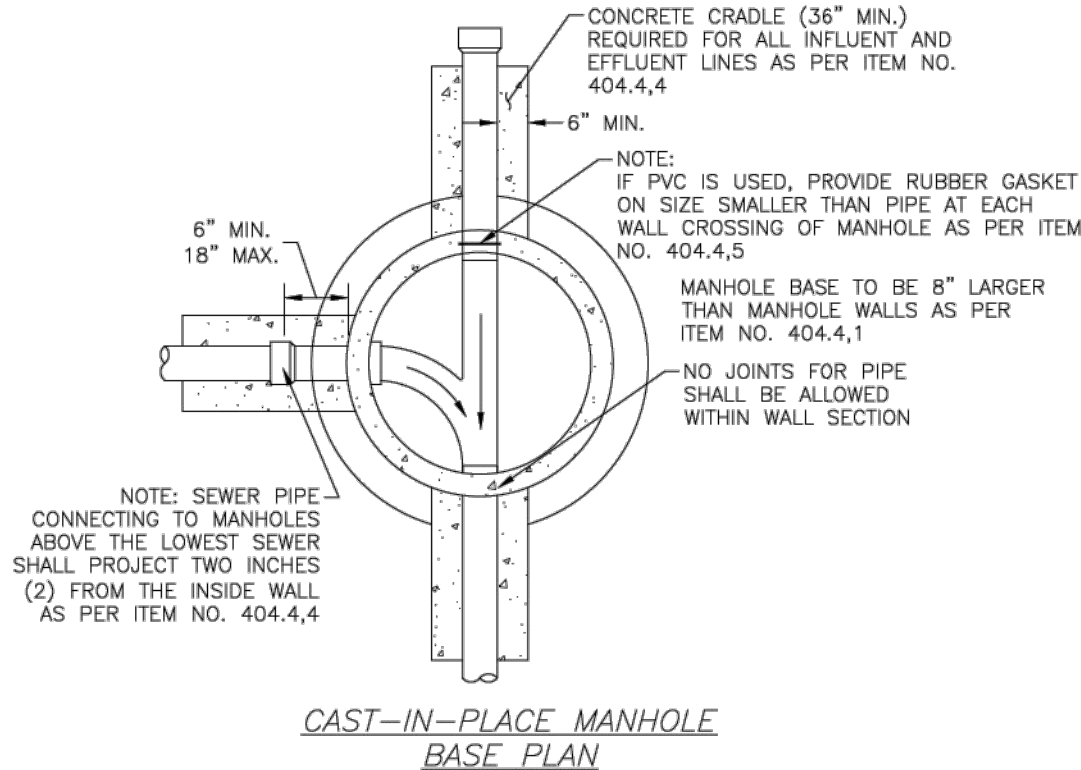
PRECAST MANHOLE ON CAST-IN-PLACE BASE



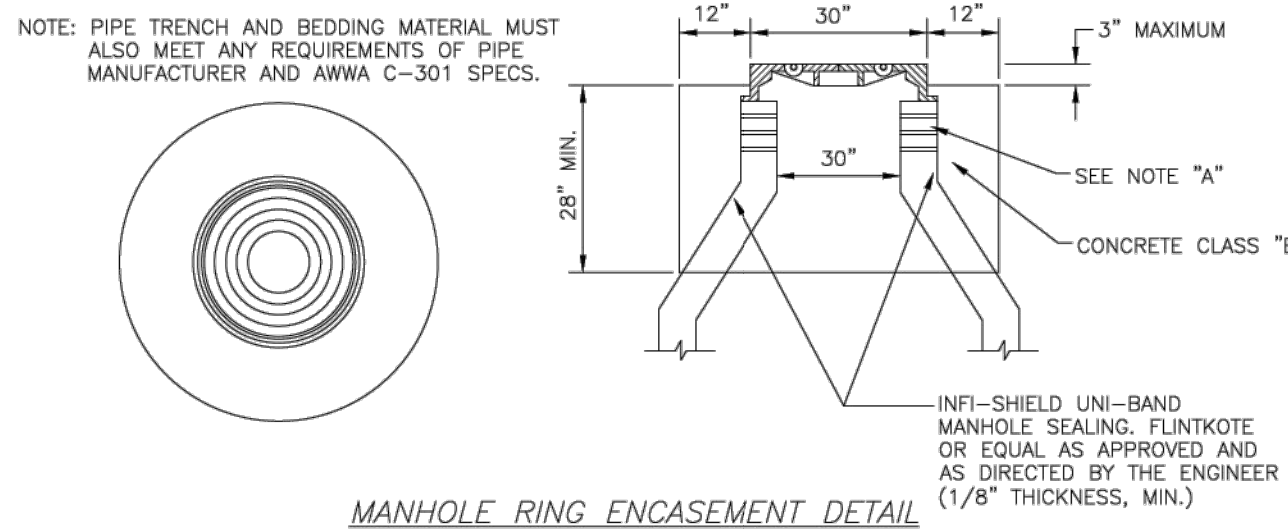
PRECAST MANHOLE ON PRECAST BASE FOR PIPE SIZES 15\"/>



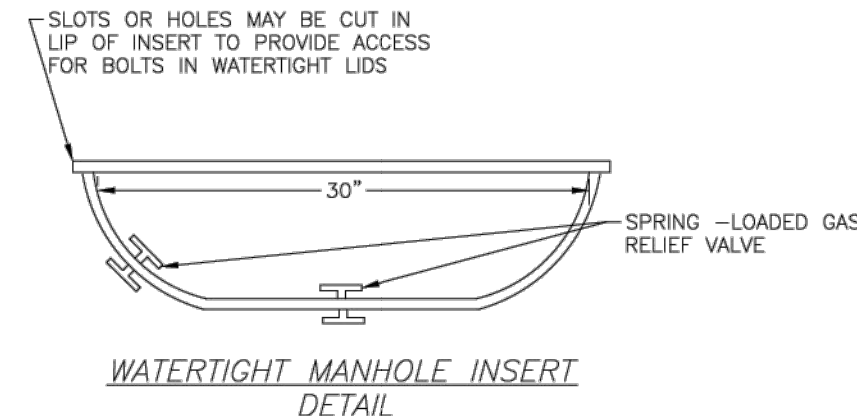
PRECAST MANHOLE ON PRECAST BASE FOR PIPE SIZES 24\"/>



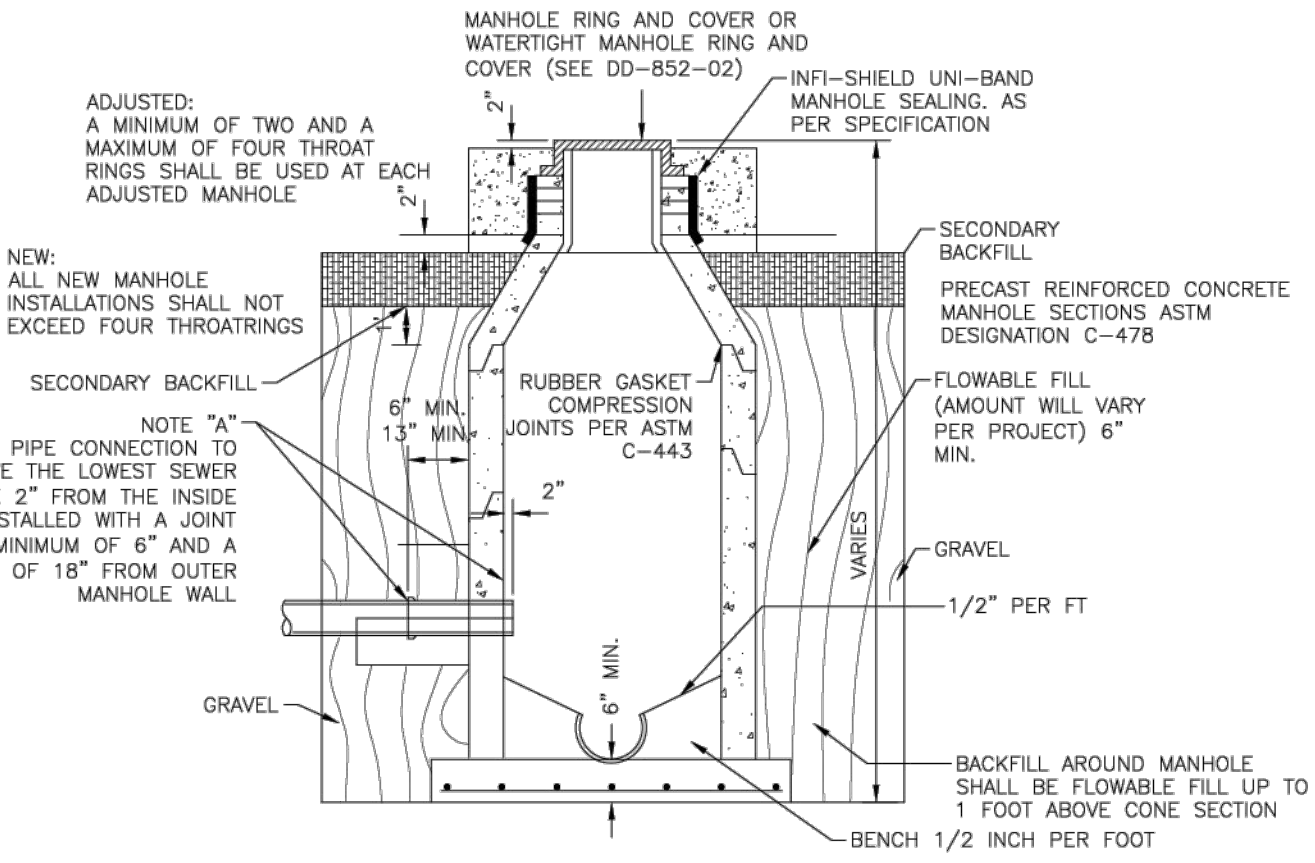
CAST-IN-PLACE MANHOLE BASE PLAN



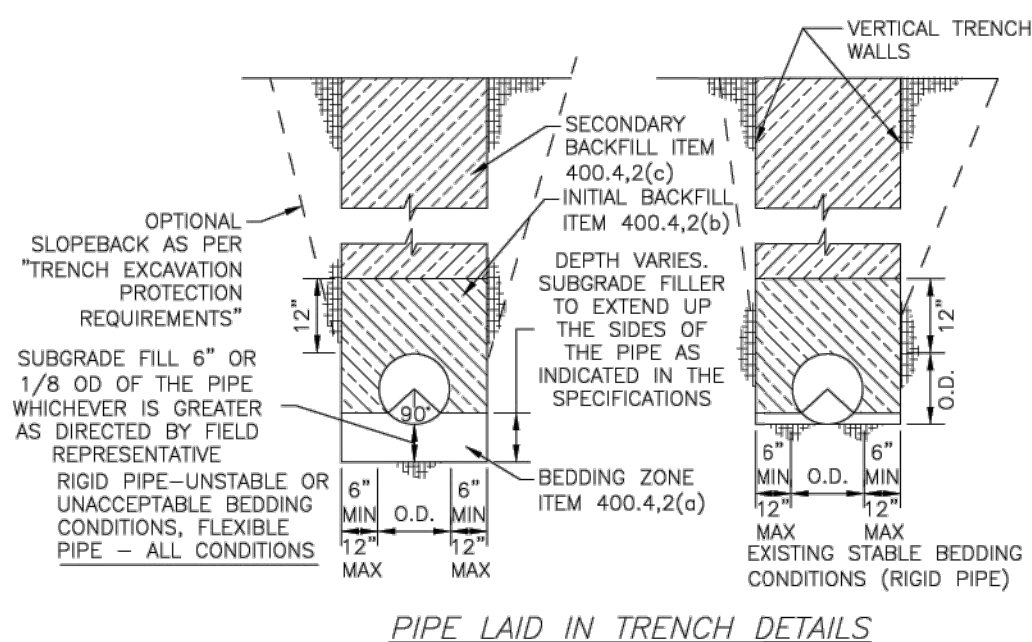
MANHOLE RING ENCASEMENT DETAIL



WATERTIGHT MANHOLE INSERT DETAIL

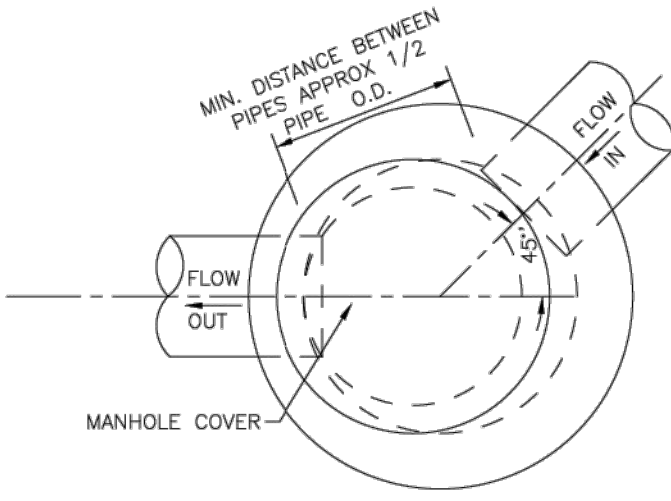


PRECAST MANHOLE ON PRECAST BASE

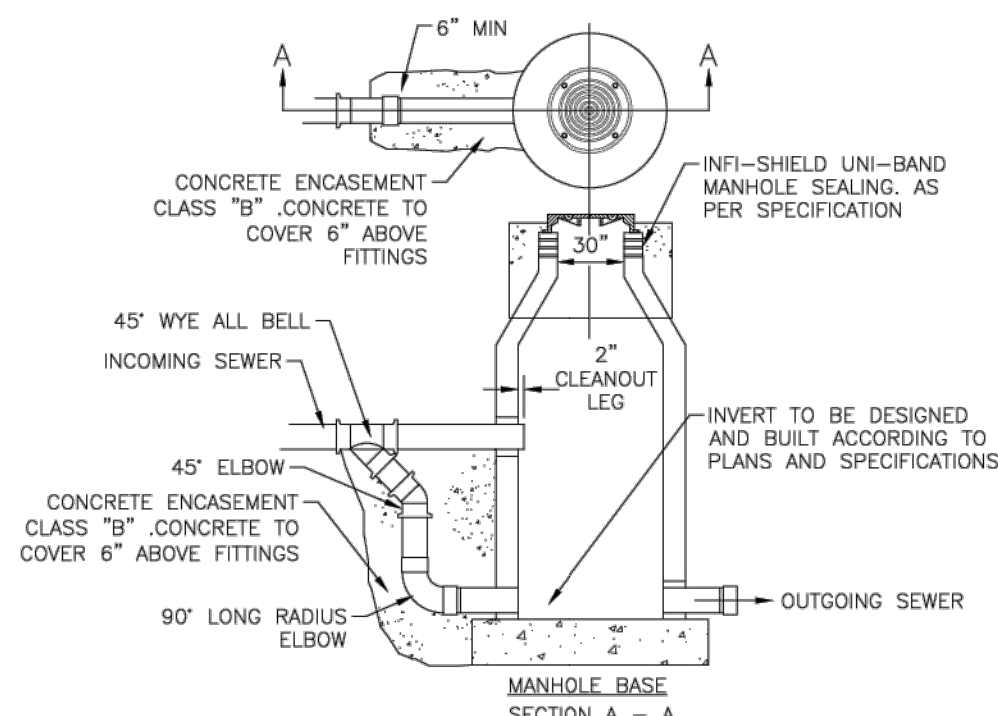


PIPE LAID IN TRENCH DETAILS

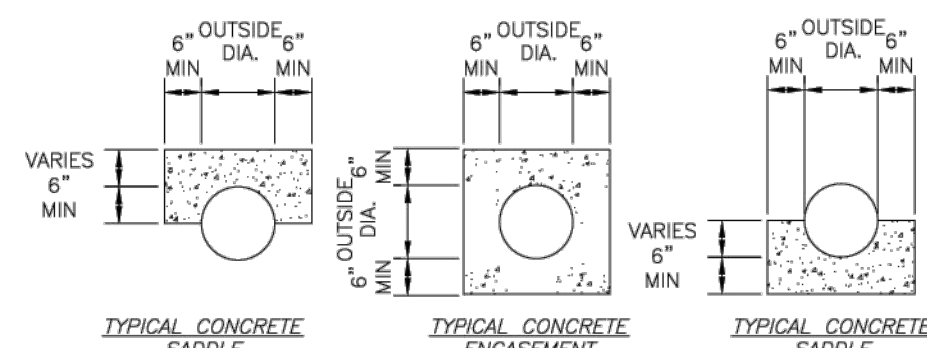
MAX PIPE SIZE OD	MANHOLE 0' TO 45'	45' TO 545'
5 FT	42"	32"
6 FT	51"	38"
8 FT	73 1/2"	50"



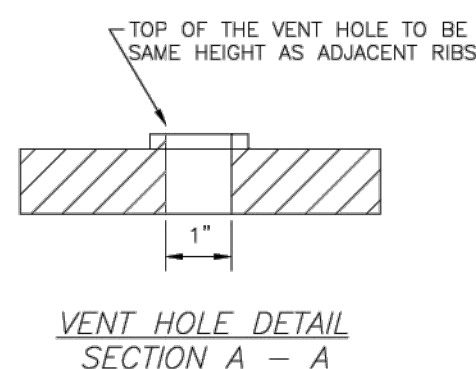
PRECAST MANHOLE ON PRECAST BASE-PLAN



OUTSIDE DROP MANHOLE



TYPICAL CONCRETE SADDLE



VENT HOLE DETAIL SECTION A - A

	GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS	SANITARY SEWER SYSTEM STANDARD DETAILS (1 OF 2)	
	REVISOR: OCTOBER 2021	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. S-1

KAYDEN SPRINGS
UNIT 2
SANITARY SEWER DETAILS (3 OF 4)

JOB NO.:	0046599.02
DATE:	08/08/2024
DESIGN:	TBW
DRAWN:	SG
CHECKED:	DAD

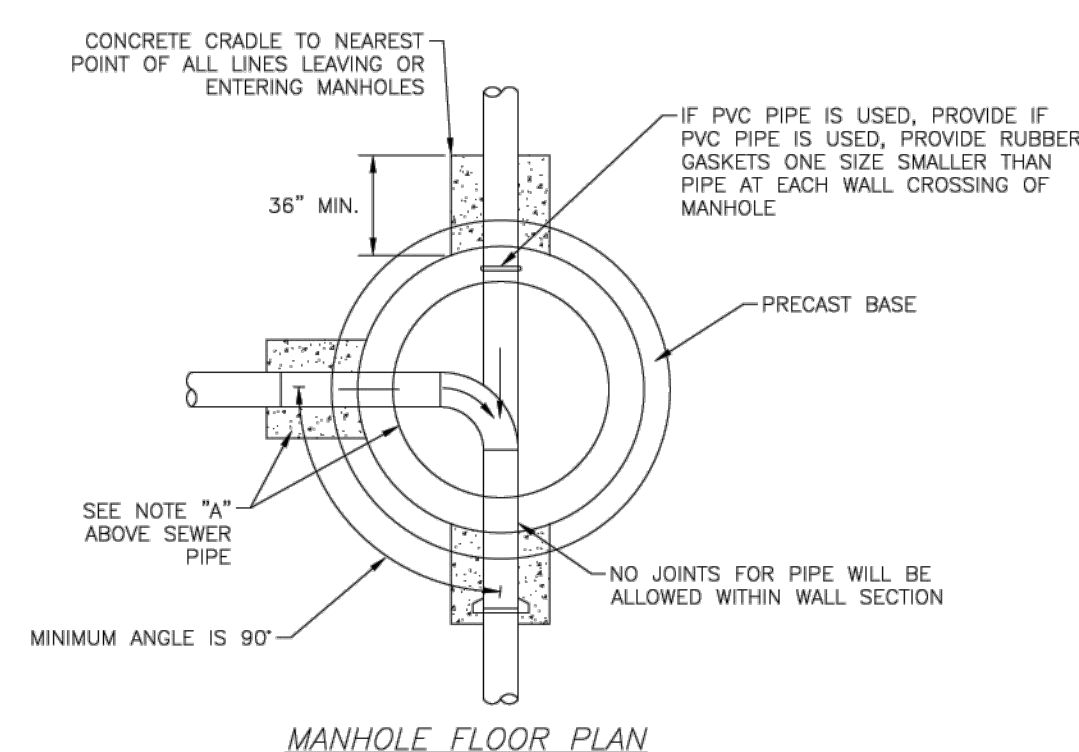
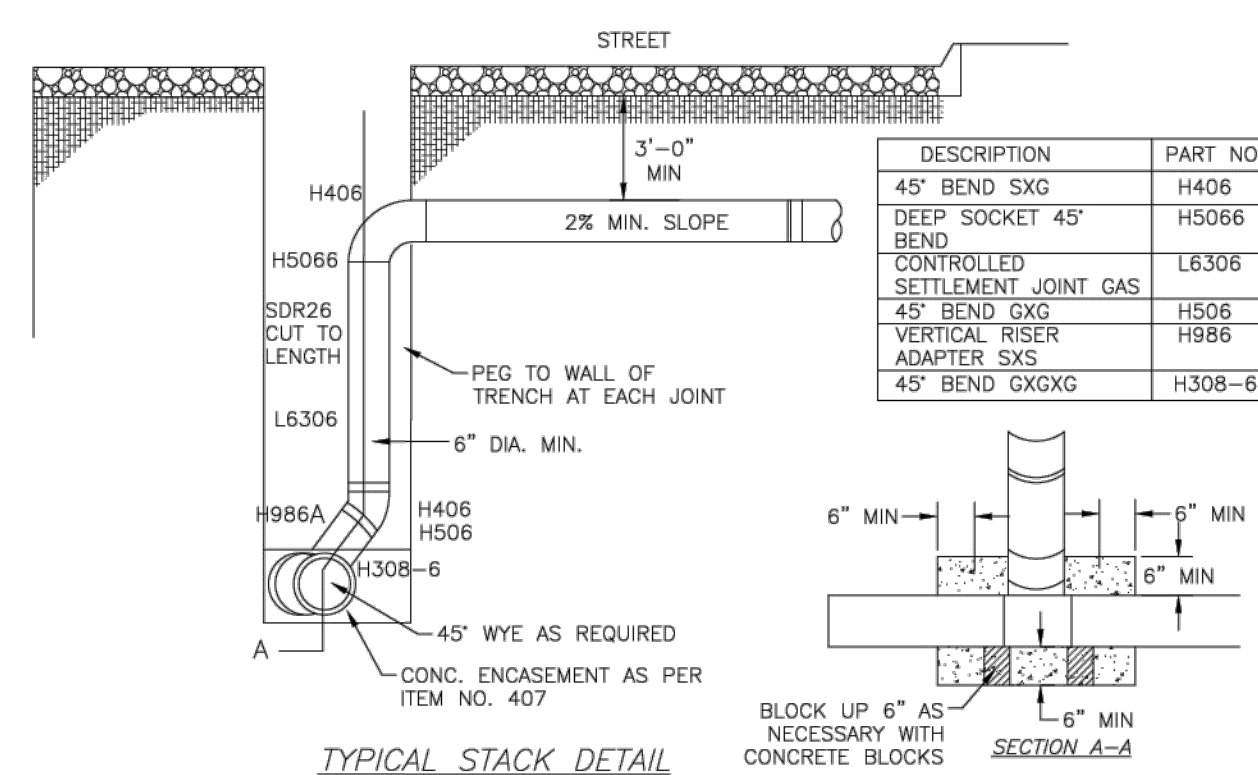
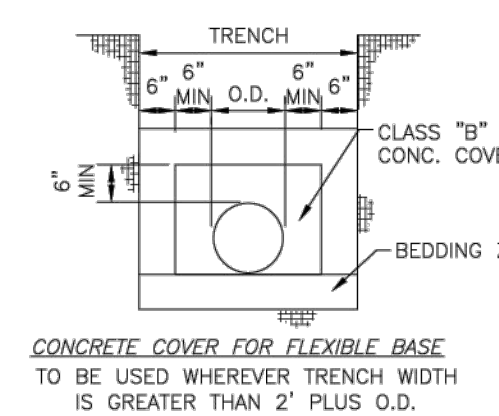
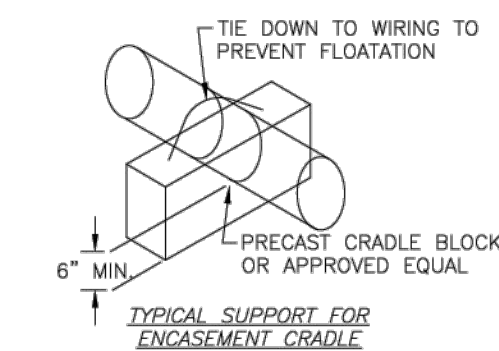
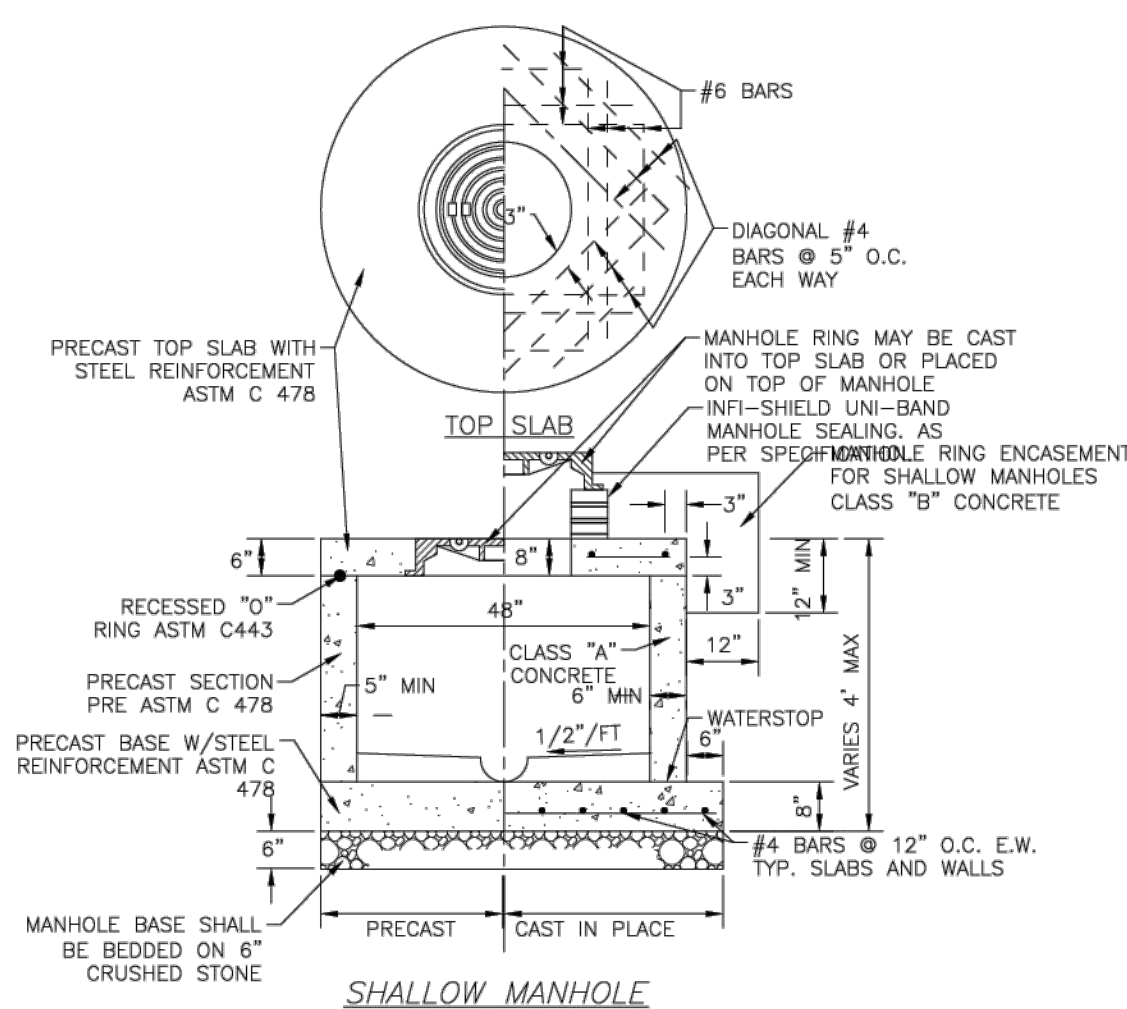
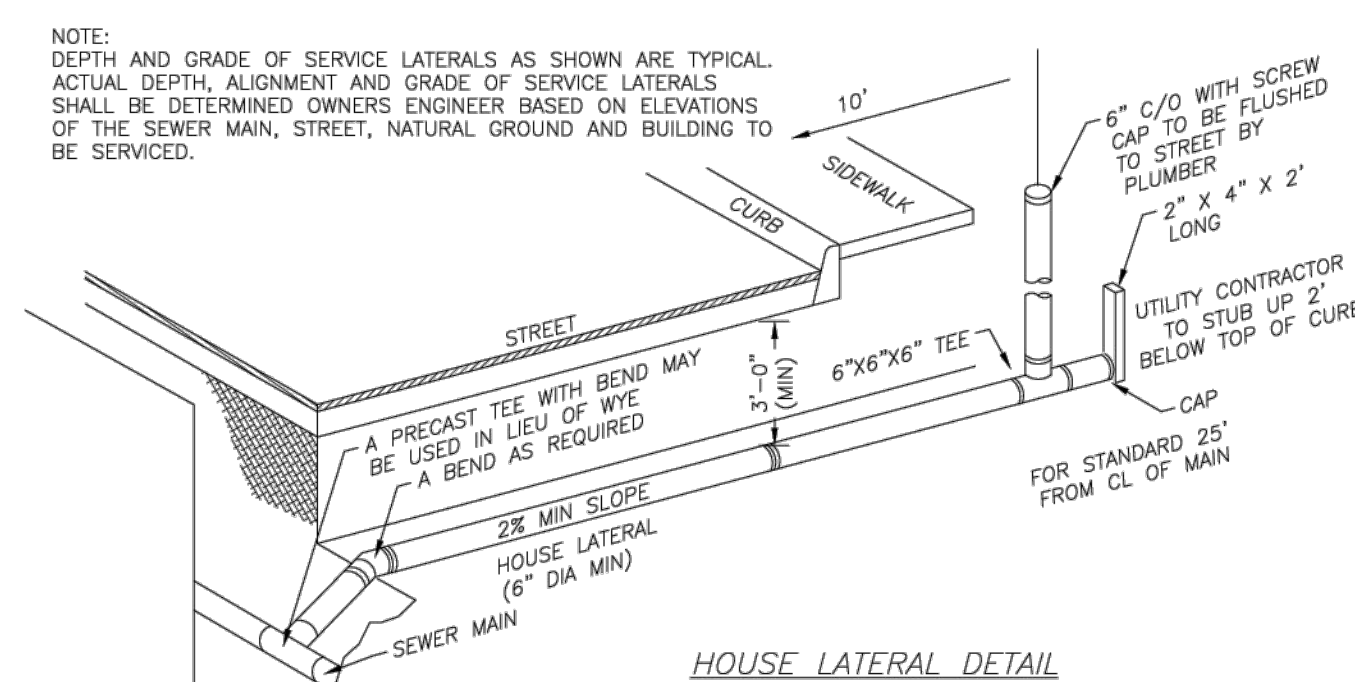
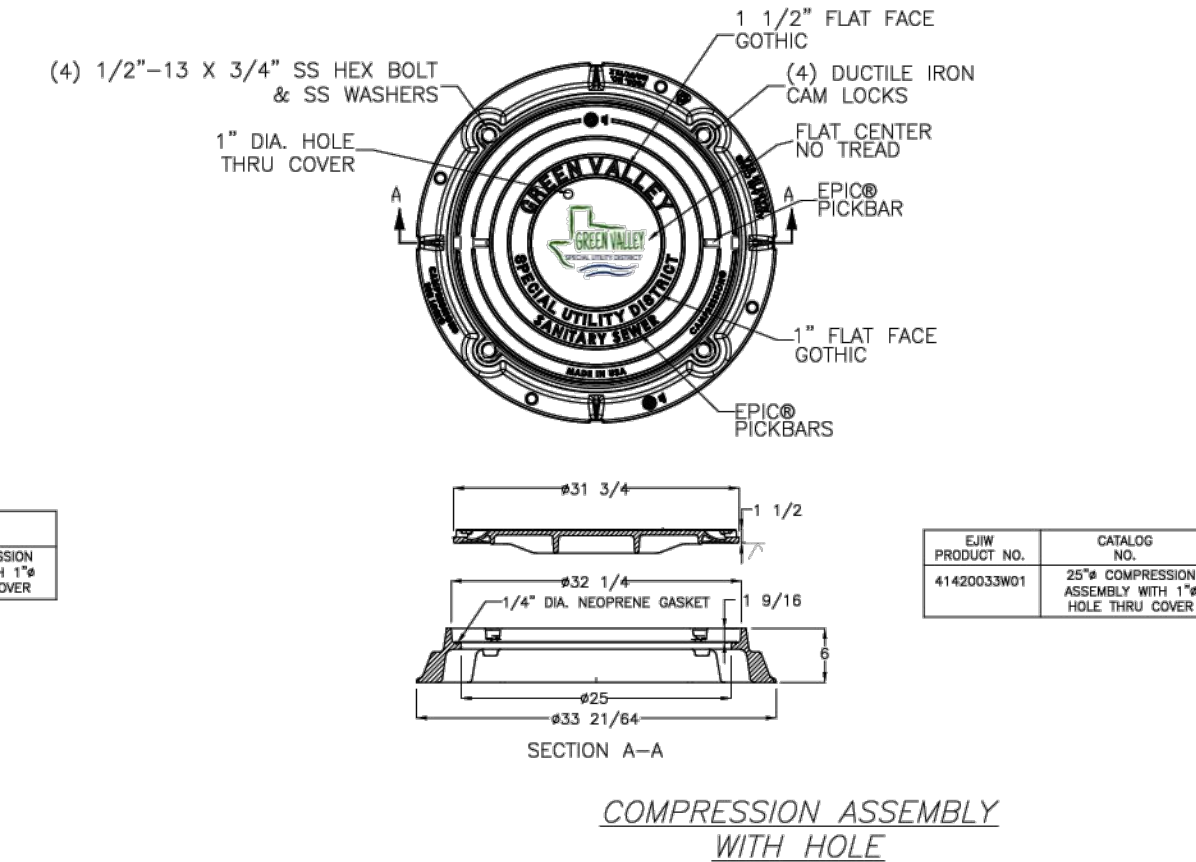
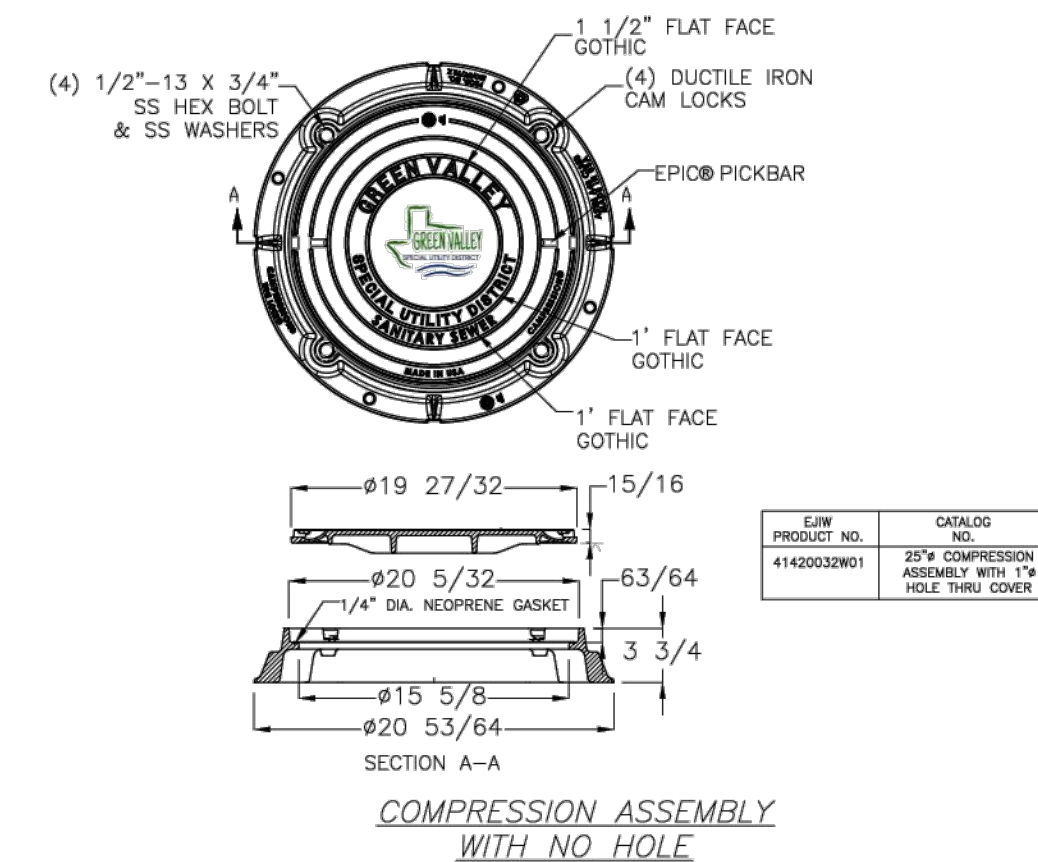
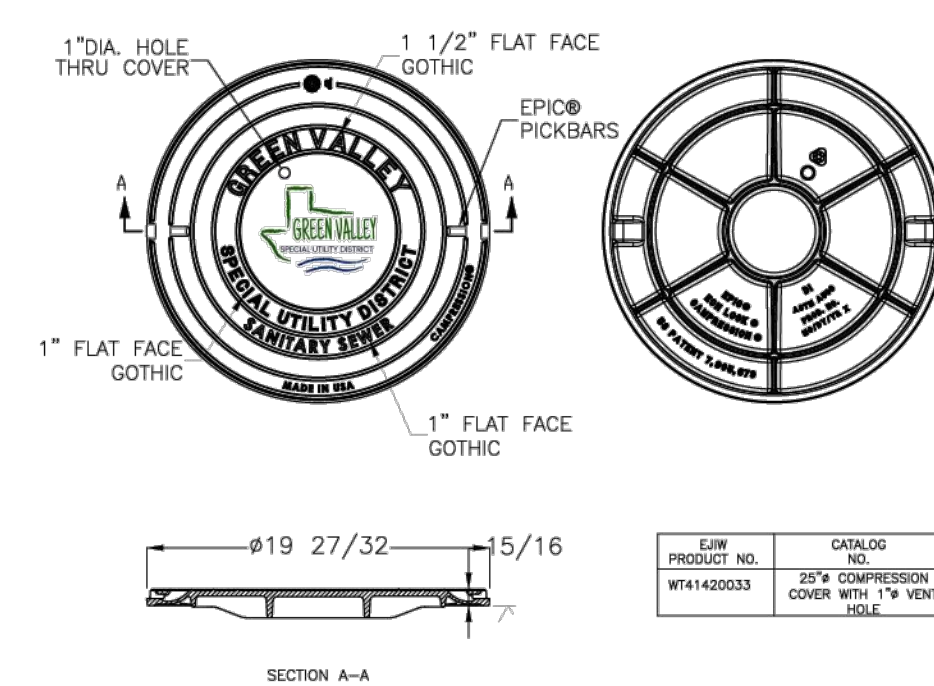
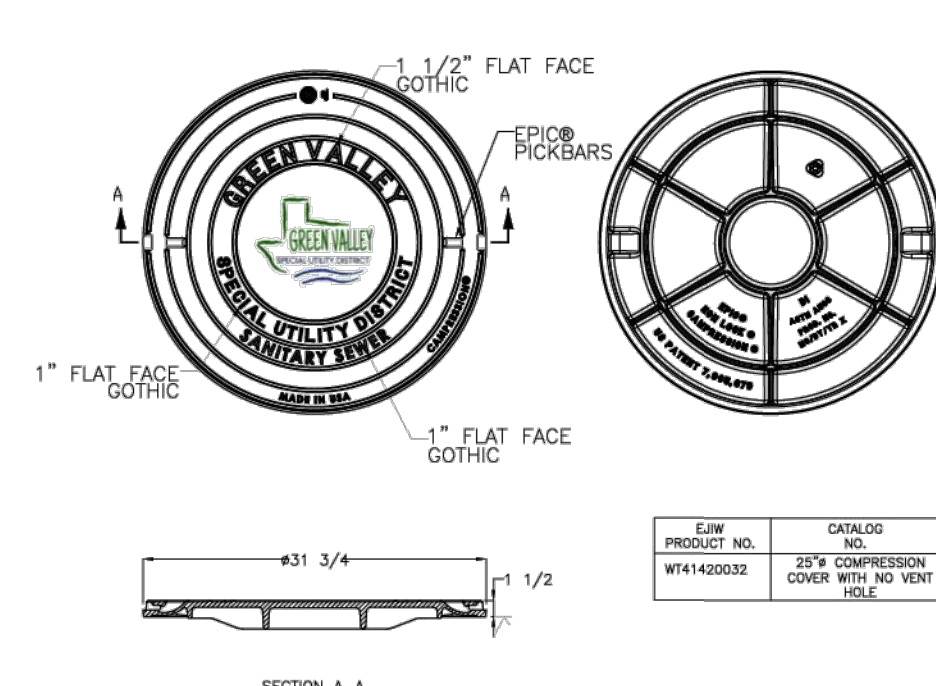
Westwood

Phone (210) 265-9300
Toll Free (888) 937-5150

211 North Loop 1804 East, Suite 205
San Antonio, TX 78232
westwoodps.com

STATE OF TEXAS
DREW A. DEFENDORF
142247
Professional Engineer
08/08/24


Westwood Professional Services, Inc.
10000 Katy Freeway, Suite 100
Houston, TX 77024
TPEL FIRM REGISTRATION NO. 10074801



SANITARY SEWER GENERAL NOTES

ALL NEW EXISTING SANITARY SEWER MAINS AND MANHOLES IN THIS PROJECT ARE TO REMAIN ACTIVE AND SHALL BE PROTECTED BY THE CONTRACTOR. ALL LINES AND MANHOLES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR RECONSTRUCTED BY THE CONTRACTOR AT NO ADDITIONAL COST. NOTIFY GVSUD'S UTILITY INSPECTORS AT (210)372-2223 PRIOR TO ENCASING.

THE EXISTING CONDITIONS OF SEWER MAINS AND MANHOLES HAVE BEEN DOCUMENTED BY GVSUD; A PRE-RECONSTRUCTION VIDEO OF THE LINES AND PHYSICAL SURVEY OF THE MANHOLES WILL BE USED TO DETERMINE THE PRE-EXISTING CONDITION OF THE SEWER SYSTEM; IF POST CONSTRUCTION INSPECTION WORK SHOWS PORTIONS OF SANITARY SEWER MAINS OR MANHOLES DAMAGED DURING CONSTRUCTION, THE CONTRACTOR SHALL REPAIR OR REPLACE THE SEWER MAIN AT THEIR EXPENSE, TO THE APPROVAL OF GVSUD'S INSPECTORS OR ENGINEER.

	GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS	SANITARY SEWER SYSTEM STANDARD DETAILS (2 OF 2)	
	REVISED: OCTOBER 2021	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. S-2

JOB NO.:	0046599.02
DATE:	08/08/2024
DESIGN:	TBW
DRAWN:	SG
CHECKED:	DAD

SHEET

**KAYDEN SPRINGS
UNIT 2
SANITARY SEWER DETAILS (4 OF 4)**