

CITY OF MONTGOMERY, TEXAS

LEGACY GROVE

SECTION 1 WS&D

PUBLIC IMPROVEMENTS

ONE-CALL NOTIFICATION SYSTEM
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CITY OF MONTGOMERY
DEVELOPMENT NUMBER: 2409

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PROJECT NOTES

ENGINEER'S CERTIFICATION:
I CERTIFY THAT THESE PLANS WHICH BEAR MY SEAL HAVE BEEN PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND ARE IN COMPLIANCE WITH ALL APPLICABLE CITY, STATE AND FEDERAL REQUIREMENTS. THE PROPOSED IMPROVEMENTS SHOWN IN THESE PLANS WILL NOT IMPEDE THE FLOW OF SURFACE WATERS FROM HIGHER ADJACENT PROPERTIES, WILL NOT ALTER THE NATURAL FLOW OF SURFACE WATERS SO AS TO DISCHARGE THEM UPON ADJACENT PROPERTIES AT A MORE RAPID RATE OR IN A DIFFERENT LOCATION, AND WILL NOT CONCENTRATE FLOWS OF SURFACE WATERS IN A MANNER WHICH EXCEEDS THE CAPACITY OF THE RECEIVING WATERCOURSE. THIS CERTIFICATION DOES NOT APPLY TO ANY EXISTING IMPROVEMENTS ON THE SUBJECT PROPERTY.

CIVIL NOTE:
FIELD VERIFY ALL EXISTING CONDITIONS AND ELEVATIONS INCLUDING PAVEMENT AND UTILITY TIE-INS PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ALL DISCREPANCIES PRIOR TO BEGINNING ANY WORK.

TDLR NOTE:
TEXAS DEPARTMENT OF LICENSING AND REGISTRATION (TDLR) NUMBER REQUIRED FOR ALL PROPOSED COMMERCIAL BUILDINGS. **IF TDLR NUMBER IS NOT PRESENT, CLIENT IS RESPONSIBLE FOR ACQUIRING REGISTRATION NUMBER PRIOR TO CONSTRUCTION.

WETLAND NOTE:
THESE PLANS WERE PREPARED WITHOUT THE BENEFIT OF AN ENVIRONMENTAL OR OTHER WETLANDS STUDY. L SQUARED ENGINEERING IS NOT AN ENVIRONMENTAL ENGINEERING FIRM AND DOES NOT HAVE THE ABILITY TO DETERMINE ENVIRONMENTAL OR WETLAND IMPACTS. THE CLIENT AND/OR OWNER SHALL BE RESPONSIBLE FOR ANY SUCH STUDY AND NOTIFY ENGINEER IF ANY RESULTING CHANGES ARE NEEDED PRIOR TO CONSTRUCTION.

LEGAL DESCRIPTION:
A TRACT OR PARCEL CONTAINING 108.8 ACRES OR 4,741,398 SF OF LAND SITUATED IN THE BENJAMIN RIGSBY LEAGUE, ABSTRACT NO. 31, MONTGOMERY COUNTY, TEXAS, BEING PART OF AND OUT OF THE RESIDUE OF A CALLED 94.889 ACRE TRACT OF LAND DESCRIBED IN

DEED TO NORMAN R. STEWART, JR. AND WIFE, JENNIFER H. STEWART AS RECORDED UNDER MONTGOMERY COUNTY CLERK'S FILE (M.C.C.F.) NO. 9357628M AND PART OF AND OUT OF A CALLED 67.820 ACRE TRACT OF LAND DESCRIBED IN DEED TO CMC PARTNERSHIP, LTD. AS RECORDED UNDER M.C.C.F. NO. 2022130572, WITH ALL BEARINGS BASED ON THE TEXAS COORDINATE SYSTEM OF 1983, CENTRAL ZONE (4203)

BENCHMARK:
CITY OF MONTGOMERY BENCHMARK NO. 4, BEING A BRASS DISK IN CONCRETE WITH A 6"X 5/8" IRON REBAR DROVE INTO IT, WITH A PUNCH HOLE IN THE CENTER OF PKWY +/- 4,500 FEET TO AN ASPHALT DRIVE THAT LEADS NOWHERE ON THE SOUTH SIDE OF ROAD. DRIVEWAY IS WEST OF AN OLD WOOD FRAME BUILDING THAT SITS UPON THE TOP BANK OF THE SLOPE THAT GOES DOWN TO THE ROAD. BUILDING IS BELIEVED TO HAVE BEEN FOR A NURSERY. DRIVEWAY IS ACROSS THE STREET FROM WHAT LOOKS TO BE AN UNOCCUPIED MOBILE HOME WITH THE ADDRESS 3300 ON THE MAILBOX. FROM THE SW CORNER OF ASPHALT DRIVE IN A SW DIRECTION +/- 5 FEET, MARK IS +/- 100 FEET EAST OF THE WEST CITY LIMITS LINE. (PER CITY OF MONTGOMERY BENCHMARK DATA SHEET, VERTICAL DATUM IS GEOID '09)

SITE BENCHMARK:

TBM "A"
TEMPORARY BENCHMARK "A" IS A RAILROAD SPIKE IN A POWER POLE LOCATED ON THE NORTH SIDE OF LONE STAR PARKWAY, APPROXIMATELY 1.2 MILES NORTH OF THE INTERSECTION OF LONE STAR PARKWAY AND STATE HIGHWAY NO. 105, APPROXIMATELY 16 FEET WEST OF A GRAVEL DRIVE, AND APPROXIMATELY 113 FEET NORTH OF THE EDGE OF PAVING OF LONE STAR PARKWAY.

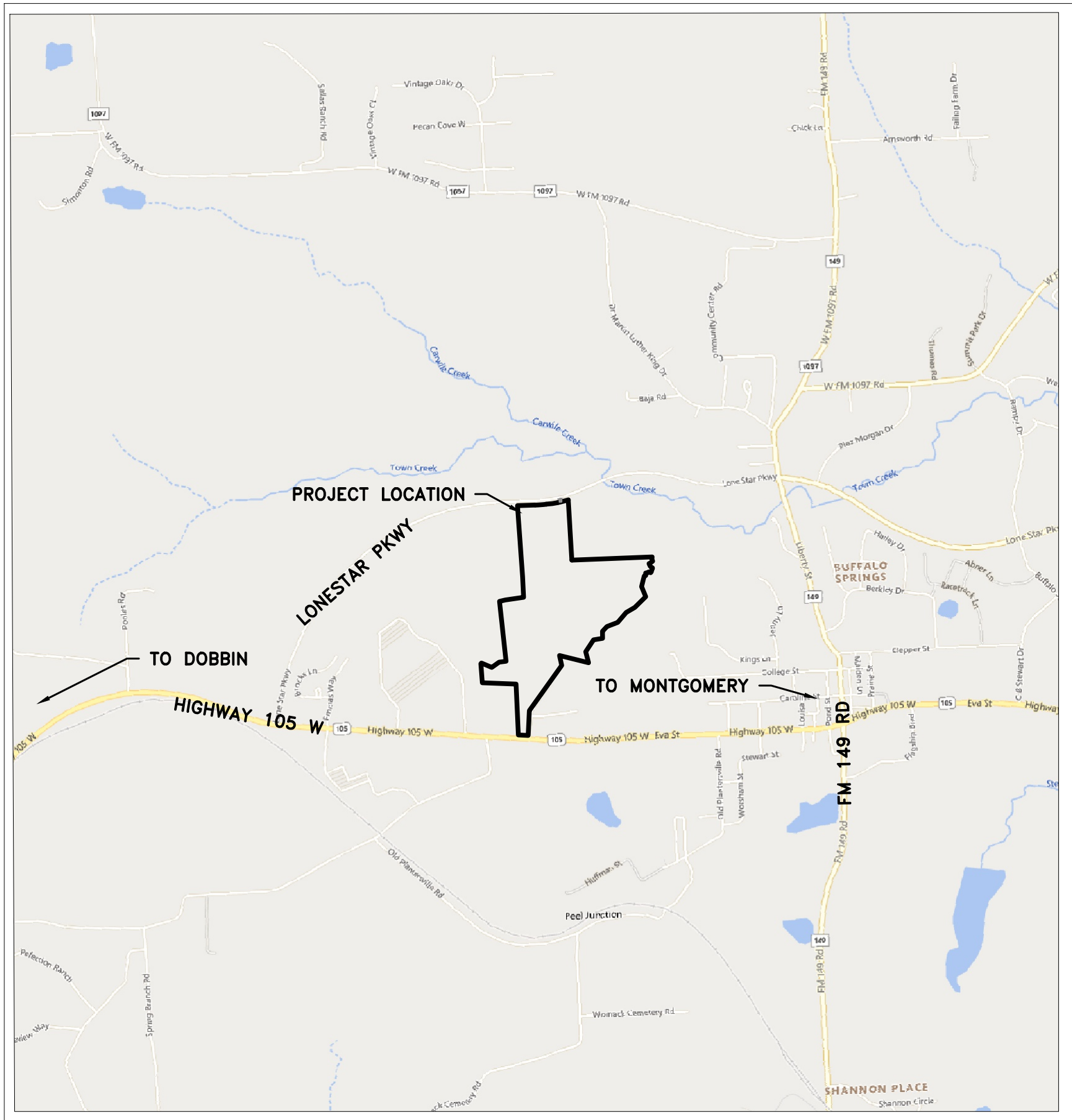
TBM "B"
TEMPORARY BENCHMARK "A" IS A RAILROAD SPIKE IN A POWER POLE LOCATED ON THE NORTH SIDE OF LONE STAR PARKWAY, APPROXIMATELY 1.3 MILES NORTH OF THE INTERSECTION OF LONE STAR PARKWAY AND STATE HIGHWAY NO. 105, APPROXIMATELY 73 FEET EAST OF A CONCRETE DRIVE, AND APPROXIMATELY 106 FEET NORTH OF THE EDGE OF PAVING OF LONE STAR PARKWAY.

TBM "C"
A CUT BOX ON TOP OF CONCRETE STORM HEADWALL OF THE WESTERLY END OF A 24 INCH STORM PIPE UNDERNEATH A DRIVEWAY, LOCATED APPROX. 3,330 FEET EAST OF EMMA'S WAY ON THE NORTH SIDE OF HIGHWAY NO. 105, BEING APPROX. 19 FEET NORTH OF THE EDGE OF PAVEMENT OF HIGHWAY NO. 105 AND BEING APPROX. 33 FEET SOUTH OF A FIRE HYDRANT.

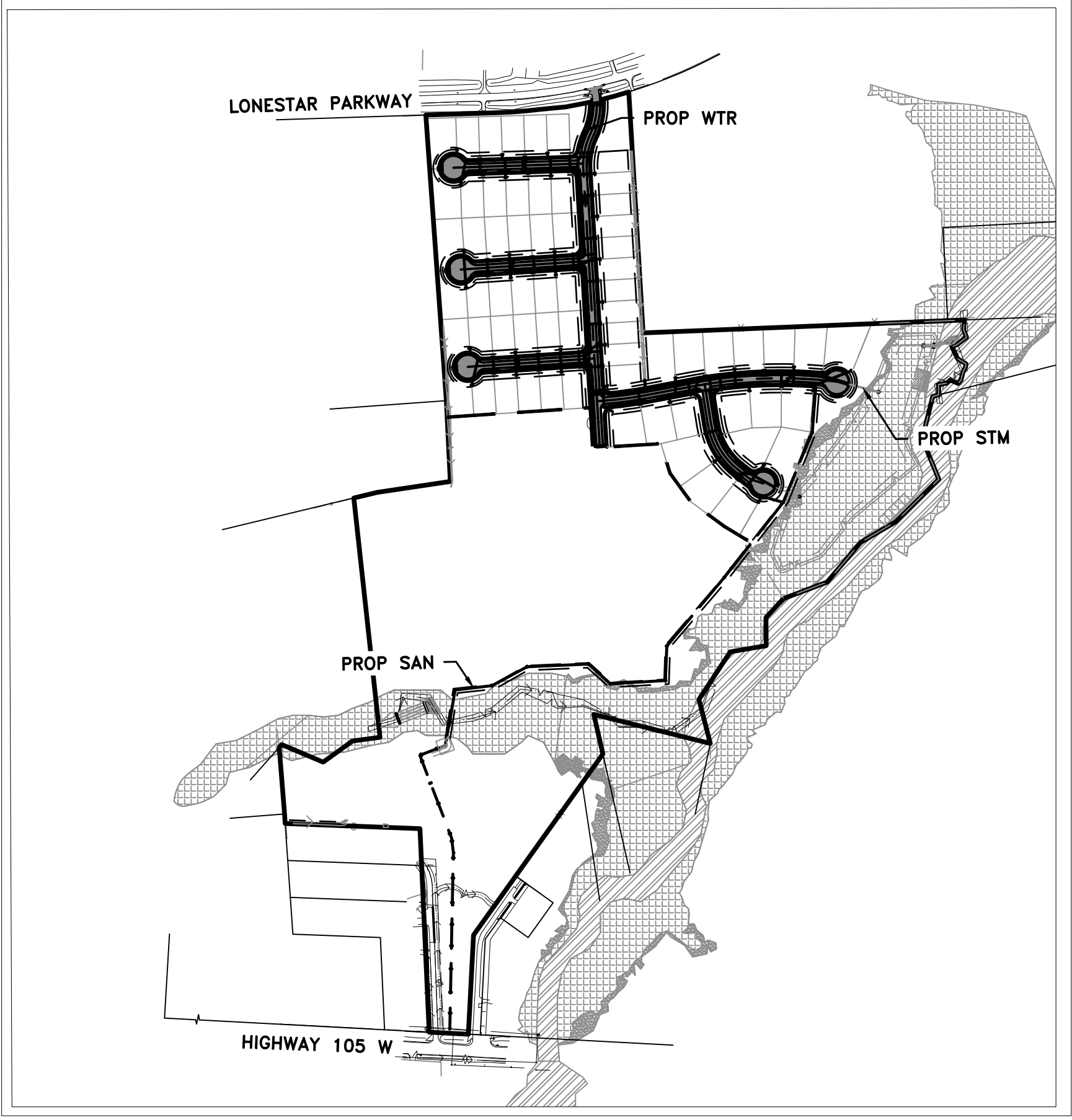
TBM "D"
A CUT BOX ON TOP OF CONCRETE STORM HEADWALL OF THE WESTERLY END OF A 24 INCH STORM PIPE UNDERNEATH A DRIVEWAY, LOCATED APPROX. 3,175 FEET EAST OF EMMA'S WAY ON THE NORTH SIDE OF HIGHWAY NO. 105, BEING APPROX. 22 FEET NORTH OF THE EDGE OF PAVEMENT OF HIGHWAY NO. 105 AND BEING APPROX. 25 FEET SOUTHWESTERLY OF A TRAFFIC SIGN AND APPROX. 32 FEET SOUTHEASTERLY OF A TELEPHONE PEDESTAL.

FLOODPLAIN:
ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), FLOOD INSURANCE RATE MAP (FIRM) FOR MONTGOMERY COUNTY, TEXAS, MAP NO. 48339C0200G REVISED/DATED AUGUST 18, 2014, THE SUBJECT TRACT APPEARS TO LIE WITHIN UNSHADED ZONE "X", SHADED ZONE "X", ZONE "AE", AND ZONE "AE FLOODWAY". THIS DETERMINATION WAS DONE BY GRAPHIC PLOTTING AND IS APPROXIMATE ONLY, AND HAS NOT BEEN FIELD VERIFIED. THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY OR STRUCTURES THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE. ON RARE OCCASIONS FLOODS CAN AND WILL OCCUR AND FLOOD HEIGHTS MAY BE INCREASED BY MAN-MADE OR NATURAL CAUSES. THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF WINDROSE SURVEYING AND LAND SERVICES. BFE ELEVATIONS 247' TO 265'.

SURVEY NOTE:
SURVEY PROVIDED BY WINDROSE LAND SURVEYING DATED 09/26/2024. CONTRACTOR TO VERIFY EXISTING CONDITIONS PRIOR TO ANY WORK AND NOTIFY ENGINEER OF ANY DISCREPANCIES.



KEY MAP 122Z,122R,123S,123N
SCALE: 1" = 2000'



PROJECT MAP
SCALE: 1" = 500'

CITY OF MONTGOMERY, CITY ENGINEER
SIGNATURE VALID FOR ONE (1) YEAR

DATE



CLIENT INFORMATION

TRI-POINTE HOMES
DANIEL GILLHAM
16340 PARK TEN PLACE, SUITE 250
HOUSTON, TX 77084

PROJECT ADDRESS
LONESTAR PKWY/SH 105
MONTGOMERY, TX 77356

LEGACY GROVE
SECTION 1 WS&D

COVER SHEET

DRAWING ISSUE			
#	DATE	BY	* COMMENT
1	04/29/25	JP	FOR PERMIT

DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	AS SHOWN	SHEET	01



Jonathan Payne 04/29/2025

*PLANS NOT RELEASED FOR CONSTRUCTION UNLESS INDICATED ABOVE

REFERENCE SPECIFICATIONS:

APPLICABLE ENTITY DETAILS & SPECIFICATIONS SHALL APPLY. WHEN NO SUCH INFORMATION EXISTS, CONTRACTOR SHALL THEN REFERENCE MONTGOMERY COUNTY DETAILS AND SPECIFICATIONS.

GENERAL CONSTRUCTION NOTES:

- MATERIALS, CONSTRUCTION AND TESTING TO BE IN ACCORDANCE WITH THE GOVERNING ENTITY'S ORDINANCES AND SPECIFICATIONS, LATEST PRINTING AND AMENDMENTS THERETO.
- CONTRACTOR TO OBTAIN ALL DEVELOPMENT AND CONSTRUCTION PERMITS REQUIRED BY ALL ENTITIES AT HIS EXPENSE PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR SHALL GIVE NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS OR PERSONS IN CHARGE OF PRIVATE AND PUBLIC UTILITIES OR RAILROADS AFFECTED BY HIS OPERATIONS 48 HOURS PRIOR TO COMMENCEMENT OF WORK IN STREET RIGHTS--OF-WAY OR EASEMENTS.
- ALL EXISTING UNDERGROUND UTILITIES SHOWN ARE NOT GUARANTEED TO BE COMPLETED OR DEFINITE, BUT WERE OBTAINED FROM THE BEST INFORMATION AVAILABLE. CONTRACTOR HAS SOLE RESPONSIBILITY FOR FIELD VERIFICATION OF ALL EXISTING FACILITIES SHOWN ON DRAWINGS. CONTRACTOR SHALL COORDINATE ALL CONFLICTS WITH THE APPROPRIATE GOVERNING AGENCY.
- THE LOCATION OF EXISTING UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL REQUEST THE EXACT LOCATION OF THESE FACILITIES BY CALLING THE UTILITY COMPANIES, AT LEAST 48 HOURS BEFORE COMMENCING WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE WHICH OCCURS DUE TO HIS FAILURE TO REQUEST THE LOCATION AND PRESERVATION OF THESE UNDERGROUND FACILITIES. ANY DAMAGE TO EXISTING FACILITIES INCURRED AS A RESULT OF CONSTRUCTION OPERATIONS WILL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- TEXAS LAW ARTICLE 1436C, PROHIBITS ALL ACTIVITIES IN WHICH PERSONS OR EQUIPMENT MAY COME WITHIN 6 FEET OF ENERGIZED OVERHEAD POWER LINES, AND FEDERAL REGULATION, TITLE 29, PART 1910.130(1) AND PART 1926.40 (A) (15) REQUIRE A MINIMUM CLEARANCE OF 10 FEET FROM THESE FACILITIES. THE ABOVE LAWS CARRY BOTH CRIMINAL AND CIVIL LIABILITIES, WITH CONTRACTORS AND OWNERS BEING LEGALLY RESPONSIBLE FOR THE SAFETY OF WORKERS UNDER THESE LAWS. IF YOU OR YOUR COMPANY MUST WORK NEAR ENERGIZED OVERHEAD POWER LINES, CALL THE POWER COMPANY FOR THE LINES TO BE DE-ENERGIZED AND/OR MOVED AT YOUR EXPENSE.
- CONSTRUCTION SHALL COMPLY WITH THE LATEST REVISIONS OF OSHA REGULATIONS AND STATE OF TEXAS LAW CONCERNING TRENCHING AND SHORING. CONTRACTOR SHALL PROVIDE A TRENCH SAFETY SYSTEM TO MEET, AS A MINIMUM, THE REQUIREMENTS OF OSHA SAFETY AND HEALTH REGULATION, PART 1926, SUB-PART P AS PUBLISHED IN THE FEDERAL REGISTER, VOLUME 54, NO. 209, DATED OCTOBER 31, 1989.
- DETAILS SHOWN DO NOT EXTEND OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS, INCLUDING THE PLANS AND SPECIFICATIONS REQUIRED BY CHAPTER 756, SUBCHAPTER "C" OF THE TEXAS HEALTH AND SAFETY CODE.
- CONTRACTOR SHALL COVER OPEN EXCAVATIONS WITH ANCHORED STEEL PLATES DURING NON-WORKING HOURS, ALONG EXISTING ROADWAYS AND TRAFFIC AREAS.
- ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE GOVERNING ENTITY. ALL CONSTRUCTION RUNOFF SHALL COMPLY WITH STORM WATER MANAGEMENT FOR CONSTRUCTION ACTIVITIES AND THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE FLAGMEN, SIGNING, STRIPING AND WARNING DEVICES, ETC., DURING CONSTRUCTION IN ACCORDANCE WITH THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". CONTRACTOR SHALL MAINTAIN AT LEAST ONE LANE OF TRAFFIC IN EACH DIRECTION DURING WORKING HOURS OR PROVIDE ALL--WEATHER DETOURS AROUND CONSTRUCTION SITE, PROVIDE PUBLIC NOTIFICATION, AND USE UNIFORMED POLICE OFFICERS TO CONTROL TRAFFIC.
- EXISTING PAVEMENTS, CURBS, SIDEWALKS AND DRIVEWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO THE GOVERNING ENTITY'S STANDARDS. ALL ASPHALT AND CONCRETE DRIVEWAYS EXCAVATED DURING CONSTRUCTION SHALL BE BACKFILLED WITH STABILIZED MATERIAL AND RETURNED TO EXISTING CONDITIONS. ALL STATE AND COUNTY HIGHWAY PAVEMENT AND RAILROAD RIGHT-OF-WAYS TO BE BORED ACCORDING TO THE RULES, REGULATIONS AND REQUIREMENTS FOR APPROVAL AND ACCEPTANCE BY SAID AGENCIES.
- EXISTING ROADS AND/OR RIGHT-OF-WAYS DISTURBED DURING CONSTRUCTION SHALL BE AS GOOD OR BETTER THAN THE CONDITION PRIOR TO STARTING THE WORK, UPON COMPLETION OF THE PROJECT.
- AFTER DISTURBED AREAS HAVE BEEN COMPLETED TO THE LINES, GRADES, AND CROSS--SECTIONS SHOWN ON THE PLANS, SEEDING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS TO ESTABLISH ADEQUATE VEGETATION COVERAGE TO ELIMINATE EROSION. IF NO PROVISION FOR PLANTING GRASS IS INCLUDED IN THE PLANS OR SPECIFICATIONS, THE MINIMUM REQUIREMENT FOR THIS ITEM WILL BE IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR "SOODING OR SEEDING FOR EROSION CONTROL" (ITEMS 162 OR 164). ANY SOD OR SEED IS TO BE WATERED BY THE CONTRACTOR UNTIL 80% ESTABLISHED. ALL GRASS SHALL BE MOVED AND MAINTAINED BY THE CONTRACTOR UNTIL FINAL ACCEPTANCE.
- ALL TRENCHES, INCLUDING TRENCHES FOR LEADS AND STUBS UNDER PAVEMENT AND TO A POINT ONE (1) FOOT BACK OF ALL CURBS SHALL BE BACKFILLED WITH CEMENT STABILIZED SAND AS PER SPECIFICATION TO A POINT IMMEDIATELY BELOW THE SUBGRADE. TRENCHES OTHER THAN UNDER PAVEMENT SHALL BE BACKFILLED WITH SUITABLE EARTH MATERIAL IN 6 INCH LAYERS AND MECHANICALLY COMPACTED TO A DENSITY OF NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST (ASTM DESIGNATION D-698/AASHTO 199). MOISTURE CONTENT OF BACKFILL SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CEMENT STABILIZED SAND SPECIFICATIONS. SEE GOVERNING ENTITY'S STANDARD DETAIL SHEETS FOR BEDDING AND OTHER DESIGN REQUIREMENTS.
- CONTRACTOR TO REMOVE EXISTING PLUGS AND CONNECT TO EXISTING UTILITY LINES AS INDICATED ON PLANS.
- UNLESS OTHERWISE NOTED ON PLANS, WHERE MANHOLES ARE LOCATED WITHIN THE UTILITY EASEMENTS, THE CONTRACTOR SHALL SET RIM ELEVATIONS THREE INCHES ABOVE FINISHED GROUND ELEVATIONS.
- WHEN TRENCH CONDITION REQUIRES THE USE OF WELL POINTS, THIS IS TO BE REQUESTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING THE MUD AND/OR DIRT DEPOSITED ON EXISTING PAVEMENT DUE TO HIS CONSTRUCTION ACTIVITY DAILY. ALL EQUIPMENT AND DEBRIS FROM CONSTRUCTION TO BE MOVED AT END OF PROJECT.
- NOTES LAST UPDATED ON: 11/1/2024

STORM WATER QUALITY NOTES:

- COVERAGE IS REQUIRED UNDER THE TPDES GENERAL PERMIT TXR150000 FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FILING NOI/NOT, IMPLEMENTATION, INSPECTION, AND MAINTENANCE OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. THE COSTS TO IMPLEMENT, INSPECT, AND MAINTAIN THE SWPPP SHALL BE CONSIDERED INCIDENTAL TO THE SWPPP BID ITEMS.
- IF THE PROJECT DISTURBS GREATER THAN 5 ACRES, A NOTICE OF INTENT (NOI) SHALL BE SUBMITTED TO THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) AT LEAST 7 DAYS PRIOR TO THE START OF ANY EARTH DISTURBING ACTIVITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TCEQ COMPLIANCE, PLAN IMPLEMENTATION AND MAINTENANCE DURING CONSTRUCTION, WHEN DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL PROVIDE A COPY OF THE CONTRACTOR'S NOTICE OF INTENT (NOI) AND PROOF THAT IT HAS BEEN SENT TO THE TCEQ.
- COPIES OF THE CONTRACTOR'S NOI AND CONSTRUCTION SITE NOTICE (CSN) SHALL BE POSTED AT THE SITE BY THE CONTRACTOR. COPIES SHALL ALSO BE SUBMITTED TO THE PROJECT OWNER AND ENGINEER. THE CONTRACTOR SHALL LAMINATE AND POST THE TWO NOIS, TWO CSNS AND ANY "SECONDARY OPERATOR" CSNS ON THE PROJECT SITE AT A LOCATION WITH EASY ACCESS TO THE PUBLIC FOR CLEAR VIEWING AND AS APPROVED BY THE ENGINEER. THE COST OF LAMINATION AND POSTING OF THE NOIS & CSNS SHALL BE CONSIDERED INCIDENTAL TO THE SWPPP BID ITEMS.
- UPON COMPLETION OF CONSTRUCTION ACTIVITIES AND FINAL STABILIZATION OF THE SITE, AS DEFINED BY THE TPDES GENERAL PERMIT, A NOTICE OF TERMINATION (NOT) IS REQUIRED TO BE SUBMITTED TO THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ). WHEN DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL PROVIDE A COPY OF THE CONTRACTOR'S NOTICE OF TERMINATION (NOT) AND PROOF THAT IT HAS BEEN SENT TO THE TCEQ.
- A RAIN GAUGE SHALL BE KEPT ON THE PROJECT SITE OR WITHIN THE IMMEDIATE PROJECT VICINITY. RECORDS OF RAINFALL EVENTS SHALL BE KEPT BY THE CONTRACTOR TO ASSIST WITH DETERMINING IF AN SWPPP SITE INSPECTION IS REQUIRED. THE COSTS FOR THE RAIN GAUGE SHALL BE CONSIDERED INCIDENTAL TO THE SWPPP BID GRADING.
- THE SWPPP, INSPECTION & MAINTENANCE REPORTS, CERTIFICATIONS, RAINFALL RECORDS, MAJOR TRADING DATE RECORDS AND TEMPORARY AND PERMANENT STABILIZATION DATE RECORDS SHALL BE KEPT CURRENT BY THE CONTRACTOR AND IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS. COPIES OF THE ALL SWPPP RECORDS SHALL BE KEPT ON-SITE, IF FEASIBLE, UNTIL THE NOTICE OF TERMINATION HAS BEEN SUBMITTED TO THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY. THE SWPPP RECORDS SHALL BE MADE READILY AVAILABLE TO ENGINEER AND REGULATORY AUTHORITIES UPON AN ON-SITE INSPECTION. THE CONTRACTOR SHALL DELIVER COPIES OF ALL SWPPP RECORDS TO PROJECT OWNER AND ENGINEER AS DIRECTED BY THE ENGINEER.
- CONTRACTOR TO PROTECT FINISH GRADES FROM EROSION AND REPAIR ANY DAMAGE PRIOR TO ACCEPTANCE.

SANITARY SEWER CONSTRUCTION NOTES:

- SANITARY SEWERS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE LATEST SPECIFICATIONS FOR SEWER CONSTRUCTION, AND TESTED AS SPECIFIED FROM THE LATEST TEST PROCEDURE FOR EITHER LIQUID OR AIR, INCLUDING ALL AMENDMENTS AND REVISIONS THERETO. BACKFILL AND BEDDING FOR SANITARY SEWERS MUST MEET ALL MINIMUM ASPECTS OF ASTM D-2321 AND MUST BE PLACED IN ACCORDANCE WITH THE APPLICABLE ENTITY'S SPECIFICATIONS.
 - ALL SANITARY SEWER MANHOLES SHALL BE THE APPLICABLE ENTITIES STANDARD PRE-CAST USING RAM-NECK OR CAST IN PLACE CONCRETE IN ACCORDANCE WITH ASTM C-478. NO BRICK MANHOLES ALLOWED. FOR PVC PIPE, USE MANHOLE WATER STOP GASKET AND CLAMP ASSEMBLY AT MANHOLE CONNECTIONS. SANITARY SEWER MANHOLE RIMS SHALL BE 3 INCHES ABOVE NATURAL GROUND. BACKFILL SHALL BE ADDED AND SLOPED AWAY FROM THE MANHOLE RIM FOR DRAINAGE PURPOSES.
 - MANHOLE CONCRETE BOTTOM FOUNDATION SHALL BE 12" REINFORCED WITH #5 BARS AT 12", ON CENTERS, EACH WAY, WITH A MINIMUM OF 6" EXTRA SLAB LENGTH AROUND THE MANHOLE, IF POURED IN PLACE, APPROVED CHEMICALS SHALL BE USED FOR PATCHING AROUND MANHOLE JOINTS. MORTAR CEMENT WILL NOT BE ACCEPTED.
 - SANITARY SEWER PIPE SHALL BE PVC SDR 26, IN ACCORDANCE WITH ASTM SPECIFICATIONS D-3034, FOR 4" THROUGH 15" AND ASTM F-879 FOR 18" THROUGH 27". MINIMUM SIZE SANITARY SEWER MAIN IS 6".
 - SEWER LINES SHALL BE LOCATED ON THE OPPOSITE SIDE OF THE STREET FROM WHERE WATER IS LOCATED. SEWER LINE AND WATER LINE SEPARATION SHALL BE IN ACCORDANCE WITH TCEQ CHAPTER 217.
 - NO SEWER PIPE SHALL BE LAID ON AN UNSTABLE FOUNDATION. SELECTED MATERIAL SHALL BE USED AND/OR WET SAND CONSTRUCTION DETAILS, WHICHEVER APPLIES IN THE OPINION OF THE ENGINEER. NO PIPE SHALL BE COVERED WITHOUT APPROVAL OF THE ENGINEER OR HIS REPRESENTATIVE. SANITARY SEWERS CONSTRUCTED IN WET SAND SHALL HAVE A SPECIAL PROCEDURE AND SHALL BE CONSTRUCTED AS PER THE APPLICABLE ENTITY STANDARDS.
 - WHEN THE NATURAL GROUND LEVEL AROUND MANHOLE LIDS BELOW THE 100 YEAR FLOODPLAIN ELEVATION, THE MANHOLE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SEALED AND VENTED MANHOLE DETAIL.
 - A DEFLECTION TEST SHALL BE REQUIRED AFTER THE BACKFILL HAS BEEN IN PLACE A MINIMUM OF 30 DAYS. THIS TEST SHALL BE DONE BY PULLING A HAND LINE WITH AN ATTACHED MANDEL FROM MANHOLE TO MANHOLE. THE MANDEL SHALL HAVE AN OUTSIDE DIAMETER THAT IS AT LEAST 95% OF THE ORIGINAL INSIDE DIAMETER OF THE PIPE. MANDEL TO BE MANUFACTURED WITH A MINIMUM OF SEVEN (7) RUNNERS, WITH EACH RUNNER BEING A MINIMUM OF 5 INCHES LONG. ANY PIPE NOT MEETING EST REQUIREMENTS TO BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.
 - INFILTRATION/EXFILTRATION NOT TO EXCEED 10 GALLONS PER INCH DIAMETER PER MILE OF PIPE FOR 24 HOURS UNDER A MINIMUM OF 2 FEET OF HEAD, OR AN AIR TEST SHALL BE REQUIRED IN ACCORDANCE WITH ASTM C-828.
 - WHERE A SEWER LINE HAS LESS THAN (2) FEET OF COVER, PROVIDE CEMENT STABILIZED SAND BACKFILL MATERIAL.
 - CONTRACTOR SHALL KEEP RECORD OF LOCATION OF ALL STACKS, STUBS, SEWER LEADS, ETC. THE AS-BUILT DRAWINGS MUST SHOW THE EXACT LOCATION.
 - IF SANITARY SERVICE LEADS ARE INSTALLED DURING CONSTRUCTION OF MAIN LINE, ALL LEADS TO HAVE A MINIMUM SLOPE OF 1.0% OR GREATER. ALL PVC LEADS TO BE THE SAME MATERIAL AS MAIN LINE. ALL DOUBLE SERVICE LEADS TO HAVE WYE LOCATED ON THE END OF THE LEAD. ALL SINGLE SERVICE LEADS TO BE 4 INCH, AND ALL DOUBLE SERVICE LEADS TO BE 6 INCH.
 - THE INSTALLATION OF ALL SANITARY SEWER LINES SHALL EXTEND ALONG THE ENTIRE LENGTH OF THE PROPERTY TO BE SERVED. SANITARY SEWER LINES THAT DEAD END SHALL EXTEND TO THE PROJECT LIMITS FOR FUTURE EXTENSIONS, WITH DEPTHS BASED ON ENTIRE SERVICE AREA.
- PAVING NOTES:
- FOR ASPHALT CROSS--SECTIONS, MATERIAL TO BE 2" TYPE "D" HOT MIX ASPHALTIC CONCRETE SURFACING AND 8" FLEXIBLE BASE (PER TXDOT SPECIFICATION ITEM 247) AT MINIMUM. CROSS--SECTION TO COMPLY WITH APPLICABLE ENTITY REQUIREMENTS AND GEOTECHNICAL REPORT.
 - EXPPOSE 15 INCHES OF REINFORCING STEEL AT ALL PROPOSED SAWED JOINTS. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS PER NOTE #4.
 - REQUIRE A ONE (1) INCH REDWOOD EXPANSION BOARD OR PRE--MOLDED NON--EXTRUDING JOINT BETWEEN SIDEWALK AND BACK OF CURB.
 - HORIZONTAL DOWELS SHALL BE NO. 6 BARS, 24 INCHES LONG, DRILLED AND EMBEDDED 8 INCHES INTO THE CENTER OF THE EXISTING SLAB WITH "PO ROC" OR EQUAL. DOWELS SHALL BE 24 INCHES CENTER TO CENTER UNLESS OTHERWISE SPECIFIED.
 - WHEN PROPOSED PAVEMENT ENDS AT A CONSTRUCTION JOINT LEAVE 15 INCHES OF REINFORCING STEEL EXPOSED BEYOND PAVEMENT, COAT WITH ASPHALT, AND WRAP WITH BURLAP FOR FUTURE PAVEMENT TIE-IN. AT EXPANSION JOINTS, EXTEND DOWELS 5 INCHES; COAT AND WRAP SAME AS CONSTRUCTION JOINTS.
 - WHEREVER A SIDEWALK IS REQUIRED BY GOVERNING ENTITY'S ORDINANCE , PROVIDE WHEELCHAIR RAMP AND/OR SIDEWALKS IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD WHEELCHAIR RAMP AND SIDEWALK DETAILS".
 - ADJUST EXISTING MANHOLE FRAMES AND COVERS TO FIT NEW GRADE.
 - ADJUST EXISTING WATER VALVE BOXES TO NEW PAVING GRADE. REPLACE ALL MISSING OR DAMAGED VALVE BOXES AND COVERS.
 - PLACE WHITE OR YELLOW PLASTIC MARKER OR PAINT AS SHOWN BY THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST REVISION) FOR PAVEMENT MARKINGS.
 - PROVIDE A CONCRETE PAVING HEADER AT THE END OF THE PAVEMENT.
 - T. C. INDICATES TOP OF CURB ELEVATION AND T. P. INDICATES TOP OF PAVEMENT ELEVATION.
 - CURB RADI AT STREET INTERSECTIONS TO BE 25.0 FEET TO BACK OF CURB WITH A MINIMUM OF ONE (1) PERCENT GRADE UNLESS OTHERWISE NOTED.
 - GUIDELINES SET FORTH IN THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST REVISION WILL BE OBSERVED.
 - TRANSVERSE EXPANSION JOINTS SHALL BE INSTALLED AT ALL RADIUS RETURNS AND AT A MAXIMUM SPACING OF 60 FOOT INTERVALS.
 - CONTRACTOR WILL USE CONTINUOUS LONGITUDINAL REINFORCING BARS IN CURBS AS SHOWN ON DETAILS PROVIDED IN CONSTRUCTION DRAWINGS.
 - CYLINDER COMPRESSION TEST OR BEAM FLEXURAL TEST SHALL BE REQUIRED. TWO SAMPLES SHALL BE TAKEN FOR EACH 100 CUBIC YARDS OF CONCRETE POURED. FOR SMALLER QUANTITIES, TWO SAMPLES SHALL BE TAKEN REGARDLESS OF THE AMOUNT OF CONCRETE POURED EACH DAY. CONCRETE SHALL HAVE 5 SACKS CEMENT PER CUBIC YARD AND A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS OR A MINIMUM FLEXURAL STRENGTH OF 600 PSI IN 28 DAYS. NO TRAFFIC SHALL BE ALLOWED ON CONCRETE FOR 28 DAYS. IF EXTRA TESTS ARE MADE 75% OF THE 28 DAY STRENGTH IS ACHIEVED THE GOVERNING ENTITY'S ENGINEER MAY ALLOW TRAFFIC ON THE PAVEMENT IF IT DEEMS NECESSARY.
 - PRIOR TO PLAN APPROVAL, A CERTIFIED LAB SHALL DETERMINE THE PERCENTAGE OF CEMENT CONTENT FOR SUBGRADE STABILIZATION IN SANDY SOILS WITH P.I. LESS THAN 10 TO OBTAIN A COMPRESSIVE STRENGTH OF 400 PSI IN 28 DAYS. THE LAB SHALL ALSO DETERMINE THE PERCENTAGE OF LIME CONTENT FOR SUBGRADE STABILIZATION IN CLAY SOILS WITH A P.I. GREATER THAN 20. ALL STREETS SHALL BE TESTED EVERY 200 FEET AND SUBGRADE SHALL BE STABILIZED UNLESS THE LAB CERTIFIES THE P.I. TO BE BETWEEN 10 AND 20 AND THAT STABILIZATION IS NOT NEEDED.
 - A CONCRETE MIX DESIGN BY THE CERTIFIED LAB SHALL BE SUBMITTED TO AND APPROVED BY THE GOVERNING ENTITY'S ENGINEER BEFORE ANY CONCRETE IS POURED.
 - A MINIMUM OF TWO (2) COMPACTION TESTS SHALL BE PERFORMED A MAXIMUM DISTANCE OF 500 FEET, AND FOR EACH 2"-6" MAXIMUM THICK LAYERS OF FILL. IN AREAS WHERE NO FILL IS REQUIRED, TWO (2) SAMPLES SHALL BE TAKEN AT A MAXIMUM DISTANCE OF 500 FEET. ADDITIONAL TESTING SHALL BE PERFORMED IF SEEN NECESSARY BY THE ENGINEER. NO ADDITIONAL LAYERS OF FILL SHALL BE MADE WITHOUT HAVING THE LAB'S WRITTEN APPROVAL OF COMPLETED LAYERS. PROOF ROLLING SHALL BE REQUIRED BY THE INSPECTOR ON EACH LAYER PLACED AND ANY "PUMPING" AREAS SHALL BE REMOVED IMMEDIATELY AND REPLACED OR STABILIZED AND RE--COMPACTED TO A PASSING DENSITY.
 - CONSTRUCTION OF ITEMS THAT ARE NOT SPECIFICALLY ADDRESSED TO BE IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (LATEST REVISION).
 - RIGHT--OF-WAY SHALL BE SLOPED FROM THE PROPERTY TO THE TOP OF CURB AND HYDROMULCHED OR SODDED BEFORE FINAL ACCEPTANCE BY THE GOVERNING ENTITY TO CONTROL EROSION INTO THE STREET AND STORM SEWER.
 - MEMBRANE CURING TYPE 2, WHITE PIGMENTED, SHALL BE USED FOR CURING ALL CONCRETE SURFACES IMMEDIATELY AFTER FINISHING OF SURFACES AND SHALL BE IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS ITEM #526.
 - ALL FIRST STAGE INLET CONSTRUCTION SHALL BE PROTECTED WITH 3 INCH THICK BOARDS AT ALL TIMES.
 - ALL SUBGRADE AND EMBANKMENT AREAS SHALL BE STRIPPED OF ALL ORGANIC AND UNSUITABLE MATERIAL BEFORE STABILIZATION OR FILLING IS BEGUN. MATERIAL USED FOR FILL SHALL BE CERTIFIED BY A LAB TO HAVE A PLASTICITY INDEX BETWEEN 10 AND 20.
 - FONEY SHALL BE SET TO THE PROPER GRADE AND PROPERLY SUPPORTED SO THAT NO DISPLACEMENT OCCURS WITH THE PAVING ACTIVITIES. ALL CONCRETE SHALL BE VIBRATED BY MECHANICAL MEANS TO INSURE PROPER COMPACTION AND NO HONEY COMBS.

26. CONCRETE SHALL NOT BE PLACED WHEN THE TEMPERATURE IS BELOW 40° F. AND FALLING, BUT MAY BE PLACED WHEN TEMPERATURE IS ABOVE 35° F. AND RISING. THE TEMPERATURE SHALL BE TAKEN IN THE SHADE AND AWAY FROM ARTIFICIAL HEAT.

27. THE CONTRACTOR SHALL ERECT AND MAINTAIN BARRICADES TO ADEQUATELY PROTECT THE PAVEMENT. THE CONTRACTOR SHALL HAVE PERSONNEL ON SITE UNTIL THE PAVEMENT HAS REACHED SUFFICIENT STRENGTH AS NOT TO BE DAMAGED BY ANIMALS OR FOOT TRAFFIC.

28. JOINT SEALING MATERIAL SHALL BE A HOT POURED RUBBER TYPE AND SHALL MEET THE REQUIREMENTS IN ACCORDANCE WITH TEST METHOD TEX-525-C, OR AN APPROVED EQUAL. TAR WILL NOT BE ALLOWED.

29. JOINTS SHALL BE CLEANED OF ALL SCALE, DIRT, DUST, CURING COMPOUND, AND CONCRETE TO THE WIDTH AND DEPTH OF THE JOINT AND SHALL BE DRY BEFORE SEALING IS PERFORMED.

30. REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM 615 GRADE 60 (GRADE 40 ONLY FOR BARS REQUIRING BENDING). REINFORCING STEEL SHALL BE SUPPORTED ON CHAIRS STRONG ENOUGH TO HOLD IT IN PLACE AND BE TIED.

31. CONCRETE FOR PAVEMENT SHALL MEET TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND SHALL BE A MINIMUM OF 5 SACK, 3,000 PSI UNLESS STATED SPECIFICALLY BY THE PLANS OR THE SPECIFICATIONS.

32. CONCRETE PAVEMENT SHALL BE CORED TO VERIFY THICKNESS OF CONCRETE AT INTERVALS OF 1,000 LINEAR FEET PER TRAFFIC LANE, IF REQUIRED BY THE GOVERNING ENTITY ENGINEER.

STORM SEWER NOTES:

1. STORM SEWER AND LEADS SHALL BE REINFORCED CONCRETE PIPE, ASTM C-76, CLASS III, WITH O-RING RUBBER GASKET JOINTS, AND SHALL BE INSTALLED, BEDDED AND BACKFILLED IN ACCORDANCE WITH THE GOVERNING ENTITIES' STANDARDS AND SPECIFICATIONS

NOTE: HDPE PIPE MAY BE USED PROVIDED THAT IT IS BACKFILLED WITH CEMENT STABILIZED SAND (2 SACKS CEMENT/TON), OR OTHER BACKFILL MATERIALS THAT HAVE BEEN APPROVED BY THE GOVERNING ENTITY. SEE NOTES BELOW.

2. ALL PROPOSED PIPE STUB OUTS FROM MANHOLES OR INLETS ARE TO BE PLUGGED WITH 8 INCH BRICK WALLS UNLESS OTHERWISE NOTED.

3. ALL BOX CULVERTS INSTALLED SHALL BE PLACED ON A MINIMUM OF 6 INCHES OF CEMENT STABILIZED SAND (CEMENT STABILIZED SAND SHALL BE 1½ SACK CEMENT PER TON), FOR INSTALLATION OF PRE--CASE CONCRETE BOX CULVERTS IN POOR SOIL CONDITIONS, A 7 INCH REINFORCED CONCRETE SLAB SHALL BE INSTALLED, FOR INSTALLATION OF MONOLITHIC REINFORCED CONCRETE BOX CULVERTS IN POOR SOIL CONDITIONS, A 4 INCH THICK CLASS "C" CONCRETE SEAL SLAB SHALL BE INSTALLED, PRIOR TO CONSTRUCTION OF BOX CULVERTS.

4. STORM SEWER MANHOLES SHALL BE STANDARD PRE--CAST, UNLESS OTHERWISE NOTED.

5. ALL INLETS TO BE TO THE DETAIL SPECIFICATIONS SHOWN IN THE PLANS OR APPROVED EQUAL OR UNLESS OTHERWISE STATED ON PLANS. INLETS TO BE STANDARD DEPTH UNLESS OTHERWISE NOTED.

6. ALL STORM SEWER LEADS SHALL HAVE A GRADE DROP BETWEEN INLETS OF A MINIMUM OF 0.20 FOOT. GRADE DROP BETWEEN INLET AND MANHOLES TO BE 0.20 FOOT UNLESS OTHERWISE SHOWN. WHEN MANHOLE FRAME AND COVER IS REQUIRED, USE EAST JORDAN 24" FRAME AND COVER (OR EQUAL).

9. FOR ADJUSTMENT OF MANHOLE LIDS USE STANDARD CONCRETE RINGS.

10. CONCRETE USED FOR ALL POURED--IN--PLACE MANHOLES, INLETS, WINGWALLS, HEADWALLS AND OTHER APPURTENANCES TO BE CLASS "A" CONCRETE WITH 3,000 P.S.I. STRENGTH AT 28 DAYS.

11. ALL EXPOSED CORNERS TO BE CHAMFERED 3/4".

12. OTHER BACKFILL MATERIALS MAY BE USED BASED ON THE GEOTECHNICAL REPORT OR PER HDPE SPECIFICATIONS. BACKFILL MUST BE USED WITH APPROPRIATE COMPACT.

13. SEE MANUFACTURERS SPECIFICATIONS FOR THE USE OF HIGH DENSITY POLYETHYLENE PIPE FOR STORM DRAINS FOR SPECIFIC TECHNICAL INFORMATION.

WATER CONSTRUCTION NOTES:

1. CONTRACTOR SHALL PROVIDE ADEQUATE THRUST BLOCKING TO WITHSTAND TEST PRESSURE AS SPECIFIED IN THE APPLICABLE ENTITY STANDARD DRAWINGS AND REQUIREMENTS FOR WATER MAIN CONSTRUCTION AND MATERIALS.

2. PRIOR TO INSTALLATION OF WATER METER, WATER METER LEAD OR UNMETERED FIRE SPRINKLER LINE, THE CONTRACTOR SHALL CONTACT THE PERMIT DIVISION.

3. PRIOR TO WATER MAIN CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE GOVERNING ENTITY'S ENGINEER AND COMPLY WITH ALL REQUIREMENTS NECESSARY FOR THE ISSUANCE OF A WORK ORDER FOR THE WATER MAIN CONSTRUCTION.

4. SEPARATION DISTANCES FOR ALL WATER MAIN AND SANITARY SEWER MAIN CONSTRUCTION SHALL BE GOVERNED BY TCEQ CHAPTER 217.

5. TWELVE-INCH (12") AND SMALLER MAINS SHALL HAVE A MINIMUM COVER OF FOUR FEET (4') FROM THE TOP OF THE CURB OR FIVE FEET (5') FROM THE MEAN ELEVATION OF THE BOTTOM OF THE NEARBY DITCH AND NEARBY RIGHT--OF--WAY ELEVATION FOR OPEN DITCH SECTIONS.

6. MAINS LARGER THAN TWELVE--INCHES (12") SHALL HAVE A MINIMUM COVER OF FIVE FEET (5') FROM THE TOP OF THE CURB OR SIX FEET (6') FROM THE MEAN ELEVATION FOR OPEN DITCH SECTIONS.

7. ALL WATER MAINS SHALL BE HYDROSTATICALLY TESTED BEFORE BACTERIOLOGICAL TESTING IN ACCORDANCE WITH AWWA AND TCEQ STANDARDS.

8. ALL WATER PIPING SHALL BE DISINFECTED AND BACTERIOLOGICALLY TESTED PRIOR TO USE IN ACCORDANCE WITH AWWA AND TCEQ STANDARDS.

9. ALL WATER MAINS 4" THROUGH 12" SHALL BE C-900 (SDR-18). ALL WATER MAINS 14" THROUGH 36" SHALL BE C-651 (SDR-18).

10. PRIOR TO BACKFILLING OF ALL UNDERGROUND WATER LINES, INSTALL A CONTINUOUS TRACER WIRE, LOCATED DIRECTLY OVER BURIED LINES AND ACCESSIBLE AT EACH VALVE STACK PER APPLICABLE ENTITIES REQUIREMENT.

11. THE INSTALLATION OF ALL WATER LINES SHALL EXTEND ALONG THE ENTIRE LENGTH OF THE PROPERTY TO BE SERVED. WATER LINES THAT DEAD END SHALL EXTEND TO THE PROJECT LIMITS FOR FUTURE EXTENSIONS.

12. BOTTOM FLANGE OF ALL FIRE HYDRANTS TO BE A MINIMUM OF 6" ABOVE FINISH GRADE (INCLUDING SOD) OR APPLICABLE ENTITY STANDARD, WHICHEVER IS GREATER.

CITY OF MONTGOMERY

GENERAL CONSTRUCTION NOTES

- CONTRACTOR SHALL CONTACT CITY OF MONTGOMERY CITY ENGINEER, KATHERINE VU AT (713)789-1900 A MINIMUM OF 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
- CONTRACTOR SHALL CONTACT CITY OF MONTGOMERY DIRECTOR OF PUBLIC WORKS, MIKE MUCKLEROF AT (936) 597-6434 A MINIMUM OF 48 HOURS PRIOR TO COMMENCING CONSTRUCTION TO SET UP AN INSPECTION TO VERIFY CITY'S FACILITIES.
- CONTRACTOR TO CONTACT CITY OF MONTGOMERY UTILITY OPERATOR PHILIP WRIGHT OF HAYS UTILITY NORTH CORPORATION AT (936) 588-1166 A MINIMUM OF 48 HOURS PRIOR TO COMMENCING CONSTRUCTION TO SET UP AN INSPECTION TO VERIFY CITY'S FACILITIES.
- THE CITY UTILITY OPERATOR AND PUBLIC WORKS FOREMAN SHALL BE NOTIFIED 24 HOURS IN ADVANCE TO WITNESS AND INSPECT ANY SANITARY SEWER LINE CONNECTION. NO SANITARY SEWER LINES SHALL BE BACKFILLED BEFORE THE CITY'S UTILITY OPERATOR OR PUBLIC WORKS FOREMAN HAS INSPECTED THE CONNECTION.
- ALL WATERLINES TO BE DEDICATED TO THE PUBLIC SHALL INCLUDE A CONTINUOUS #14 COPPER TRACER WIRE, LOCATED DIRECTLY OVER BURIED LINES AND ACCESSIBLE AT EACH VALVE STEM.
- CONTRACTOR SHALL CONTACT THE CITY'S UTILITY OPERATOR OR PUBLIC WORKS FOREMAN TO OPERATE ANY VALVES. AT NO TIME IS THE CONTRACTOR OR CONTRACTOR'S REPRESENTATIVE TO OPERATE ANY PART OF THE CITY OF MONTGOMERY WATER SYSTEM.
- THE OWNER OR CONTRACTOR SHALL INSTALL AND TEST APPROPRIATE BACKFLOW PREVENTION, PER THE CITY OF MONTGOMERY RULES & REGULATIONS.
- ALL TAPS TO THE CITY'S SYSTEM SHALL BE MADE BY THE CITY'S OPERATOR AT THE OWNERS EXPENSE.
- STORMWATER POLLUTION PROTECTION MUST BE IN PLACE PRIOR TO ANY CONSTRUCTION COMMENCES AND MUST REMAIN IN PLACE UNTIL CONSTRUCTION HAS CONCLUDED. ALL PROTECTION MEASURES MUST BE INSPECTED EVERY 30 DAYS, OR AFTER A RAIN EVENT OF ANY SIZE, WHICHEVER IS SOONER.
- ALL CONSTRUCTION DRAWINGS MUST INCLUDE A TRAFFIC CONTROL MEASURES THAT MUST BE APPROVED BY THE APPROPRIATE JURISDICTION PRIOR TO CONSTRUCTION BEGINNING AND COORDINATED WITH SAID JURISDICTION THROUGHOUT THE DURATION OF CONSTRUCTION.

LEGEND:

	EX ADJOINER LINE, ADJ
	EX SANITARY, SAN
	EX WATERLINE, WL
	EX STORM SEWER, STM
	EX DRAINAGE PATH, FL
	EX HIGH BANK, HB
	EX EASEMENT, ESMT
	EX BUILDING LINE, BL
	EX OVERHEAD POWER, P
	EX UNDERGROUND POWER, UG
	EX FIBER, FO
	EX TELEPHONE, T
	EX GAS LINE, G
	EX FENCE, FNC
	EX ZONE X, 500 YR FLOODPLAIN, FP
	EX ZONE AE, 100 YR FLOODPLAIN, FP
	EX FLOODWAY
	EX WETLANDS
	NATURAL GROUND, NG
	PROP BOUNDARY LINE, BNDY
	PROP PHASE LINE
	PROP SANITARY, SAN
	PROP FORCE MAIN, FM
	PROP WATERLINE, WL
	PROP STORM SEWER, STM
	PROP DRAINAGE PATH, FL
	PROP HIGH BANK, HB
	PROP EASEMENT, ESMT
	PROP BUILDING LINE, BL
	PROP OVERHEAD POWER, P
	PROP UNDERGND POWER, UG
	PROP FIBER, FO
	PROP TELEPHONE, T
	PROP GAS LINE, G
	PROP FENCE, FNC
	PROP PAVEMENT, PVMT BC
	PROP FACE OF CURB 4", FC
	PROP FACE OF CURB 6", FC
	PROP CASING
	FINISHED GRADE, FG
	INVERT ELEVATION, IE
	CROWN ELEVATION, CE

BENCHMARK:
CITY OF MONTGOMERY BENCHMARK NO. 4, BEING A BRASS DISK IN CONCRETE WITH A 6"X 5/8" IRON REBAR DROVE INTO IT, WITH A PUNCH HOLE IN THE CENTER OF PKWY +/- 4,300 FEET TO AN ASPHALT DRIVE THAT LEADS NOWHERE ON THE SOUTH SIDE OF ROAD, DRIVEWAY IS WEST OF AN OLD WOOD FRAME BUILDING THAT SITS UPON THE TOP BANK OF THE SLOPE THAT GOES DOWN TO THE ROAD, BUILDING IS BELIEVED TO HAVE BEEN FOR A NURSERY. DRIVEWAY IS ACROSS THE STREET FROM DRIVE, AND APPROXIMATELY 115 FEET NORTH OF THE EDGE OF PAVING OF LONE STAR PARKWAY.

SITE BENCHMARK:
TBM "A"
TEMPORARY BENCHMARK "A" IS A RAILROAD SPIKE IN A POWER POLE LOCATED ON THE NORTH SIDE OF LONE STAR PARKWAY, APPROXIMATELY 1.2 MILES NORTH OF THE INTERSECTION OF LONE STAR PARKWAY AND STATE HIGHWAY NO. 105, APPROXIMATELY 16 FEET WEST OF A GRAVEL DRIVE, AND APPROXIMATELY 115 FEET NORTH OF THE EDGE OF PAVING OF LONE STAR PARKWAY.

TBM "B"
TEMPORARY BENCHMARK "A" IS A RAILROAD SPIKE IN A POWER POLE LOCATED ON THE NORTH SIDE OF LONE STAR PARKWAY, APPROXIMATELY 1.3 MILES NORTH OF THE INTERSECTION OF LONE STAR PARKWAY AND STATE HIGHWAY NO. 105, APPROXIMATELY 73 FEET EAST OF A CONCRETE DRIVE, AND APPROXIMATELY 106 FEET NORTH OF THE EDGE OF PAVING OF LONE STAR PARKWAY.

TBM "C"
A CUT BOX ON TOP OF CONCRETE STORM HEADWALL OF THE WESTERLY END OF A 24 INCH STORM PIPE UNDERNEATH A DRIVEWAY, LOCATED APPROX. 3,350 FEET EAST OF EMMA'S WAY ON THE NORTH SIDE OF HIGHWAY NO. 105, BEING APPROX. 19 FEET NORTH OF THE EDGE OF PAVEMENT OF HIGHWAY NO. 105 AND BEING APPROX. 33 FEET SOUTH OF A FIRE HYDRANT.

TBM "D"
A CUT BOX ON TOP OF CONCRETE STORM HEADWALL OF THE WESTERLY END OF A 24 INCH STORM PIPE UNDERNEATH A DRIVEWAY, LOCATED APPROX. 3,175 FEET EAST OF EMMA'S WAY ON THE NORTH SIDE OF HIGHWAY NO. 105, BEING APPROX. 22 FEET NORTH OF THE EDGE OF PAVEMENT OF HIGHWAY NO. 105 AND BEING APPROX. 25 FEET SOUTHWESTERLY OF A TRAFFIC SIGN AND APPROX. 32 FEET SOUTHEASTERLY OF A TELEPHONE PEDESTAL.

FLOODPLAIN:
ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), FLOOD INSURANCE RATE MAP (FIRM) FOR MONTGOMERY COUNTY, TEXAS, MAP NO. 48339C0200Q REVISED/DATED AUGUST 18, 2014, THE SUBJECT TRACT APPEARS TO LIE WITHIN UNSHADED ZONE "X", SHADED ZONE "X", ZONE "AE", AND ZONE "AE FLOODWAY". THIS DETERMINATION WAS DONE BY GRAPHIC PLOTTING AND IS APPROXIMATE ONLY, AND HAS NOT BEEN FIELD VERIFIED. THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY OR STRUCTURES THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE, ON RARE OCCASIONS FLOODS CAN AND WILL OCCUR AND FLOOD HEIGHTS MAY BE INCREASED BY MAN--MADE OR NATURAL CAUSES. THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF WINDROSE SURVEYING AND LAND SERVICES. BFE ELEVATIONS 247' TO 265'.

CITY OF MONTGOMERY, CITY ENGINEER
SIGNATURE VALID FOR ONE (1) YEAR

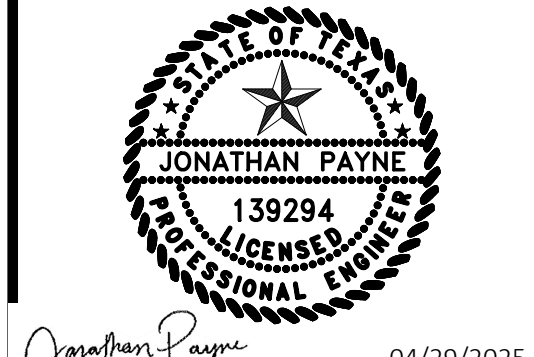
DATE

DRAWING ISSUE				
#	DATE	BY	* COMMENT	
1	04/29/25	JP	FOR PERMIT	

DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE		SHEET	

NONE

02



Jonathan Payne 04/29/2025

L:\SHARED\L2 ENGINEERING PROJECTS\ENGINEERING PROJECTS\11020 - TRI POINTE 108\03 CAD\DESIGN SET\PHASE 1\02 CONSTRUCTION NOTES.DWG Apr. 30, 2025--8:00 AM LAURYN JOHNSON

Texas Commission on Environmental Quality
Organized Sewage Collection System
General Construction Notes

Edwards Aquifer Protection Program Construction Notes – Legal Disclaimer

The following listed "construction notes" are intended to be advisory in nature only and do not constitute an approval or conditional approval by the Executive Director, nor do they constitute a comprehensive listing of rules or conditions to be followed during construction. Further actions may be required to achieve compliance with TCEQ regulations found in Title 30, Texas Administrative Code, Chapters 213 and 217, as well as local ordinances and regulations providing for the protection of water quality. Additionally, nothing contained in the following listed "construction notes" restricts the power of the Executive Director, the commission or any other governmental entity to prevent, correct, or curtail activities that result or may result in pollution of the Edwards Aquifer or hydrologically connected surface waters. The holder of any Edwards Aquifer Protection Plan containing "construction notes" is still responsible for compliance with Title 30, Texas Administrative Code, Chapters 213 or any other applicable TCEQ regulation, as well as all conditions of an Edwards Aquifer Protection Plan through all phases of plan implementation. Failure to comply with any condition of the Executive Director's approval, whether or not in contradiction of any "construction notes," is a violation of TCEQ regulations and any violation is subject to administrative rules, orders, and penalties as provided under Title 30, Texas Administrative Code § 213.10 (relating to Enforcement). Such violations may also be subject to civil penalties and injunction. The following listed "construction notes" in no way represent an approved exception by the Executive Director to any part of Title 30 Texas Administrative Code, Chapters 213 and 217, or any other TCEQ applicable regulation.

- This Organized Sewage Collection System (SCS) must be constructed in accordance with 30 Texas Administrative Code (TAC) §213.5(c), the Texas Commission on Environmental Quality's (TCEQ) Edwards Aquifer Rules and any local government standard specifications.
- All contractors conducting regulated activities associated with this proposed regulated project must be provided with copies of the SCS plan and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors must be required to keep on-site copies of the plan and the approval letter.
- A written notice of construction must be submitted to this proposed TCEQ regional office at least 48 hours prior to the start of any regulated activities. This notice must include:
 - the name of the approved project;
 - the activity start date; and
 - the contact information of the prime contractor.
- Any modification to the activities described in the referenced SCS application following the date of approval may require the submittal of an SCS application to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval.
- Prior to beginning any construction activity, all temporary erosion and sedimentation (E&S) control measures must be properly installed and maintained in accordance with the manufacturers specifications. These controls must remain in place until the disturbed areas have been permanently stabilized.
- If any sensitive features are discovered during the wastewater line trenching activities, all regulated activities near the sensitive feature must be suspended immediately. The applicant must immediately notify the appropriate regional office of the TCEQ of the feature discovered. A geologist's assessment of the location and extent of the feature discovered must be reported to that regional office in writing and the applicant must submit a plan for ensuring the structural integrity of the sewer line or for modifying the proposed collection system alignment around the feature. The regulated activities near the sensitive feature may not proceed until the

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executive director has reviewed and approved the methods proposed to protect the sensitive feature and the Edwards Aquifer from any potentially adverse impacts to water quality while maintaining the structural integrity of the line.

- Sewer lines located within or crossing the 5-year floodplain of a drainage way will be protected from inundation and stream velocities which could cause scouring of backfill. The trench must be capped with concrete to prevent scouring of backfill, or the sewer lines must be encased in concrete. All concrete shall have a minimum thickness of 6 inches.
- Blasting procedures for protection of existing sewer lines and other utilities will be in accordance with the National Fire Protection Association criteria. Sand is not allowed as bedding or backfill in trenches that have been blasted. If any existing sewer lines are damaged, the lines must be repaired and retested.
- All manholes constructed or rehabilitated on this project must have watertight size on size resilient connectors allowing for differential settlement. If manholes are constructed within the 100-year floodplain, the cover must have a gasket and be bolted to the ring. Where gasketed manhole covers are required for more than three manholes in sequence or for more than 1500 feet, alternate means of venting will be provided. Bricks are not an acceptable construction material for any portion of the manhole.

The diameter of the manholes must be a minimum of four feet and the manhole for entry must have a minimum clear opening diameter of 30 inches. These dimensions and other details showing compliance with the commission's rules concerning manholes and sewer line/manhole inverts described in 30 TAC §217.55 are included on Plan Sheet **34 of 37**.

It is suggested that entrance into manholes in excess of four feet deep be accomplished by means of a portable ladder. The inclusion of steps in a manhole is prohibited.

- Where water lines and new sewer line are installed with a separation distance closer than nine feet (i.e., water lines crossing wastewater lines, water lines paralleling wastewater lines, or water lines next to manholes) the installation must meet the requirements of 30 TAC §217.53(d) (Pipe Design) and 30 TAC §290.44(e) (Water Distribution).

- Where sewers lines deviate from straight alignment and uniform grade all curvature of sewer pipe must be achieved by the following procedure which is recommended by the pipe manufacturer: **N/A**

If pipe flexure is proposed, the following method of preventing deflection of the joint must be used: **N/A**

Specific care must be taken to ensure that the joint is placed in the center of the trench and properly bedded in accordance with 30 TAC §217.54.

- New sewage collection system lines must be constructed with stub outs for the connection of anticipated extensions. The location of such stub outs must be marked on the ground such that their location can be easily determined at the time of connection of the extensions. Such stub outs must be manufactured wyes or tees that are compatible in size and material with both the sewer line and the extension. At the time of original construction, new stub-outs must be constructed sufficiently to extend beyond the end of the street pavement. All stub-outs must be sealed with a manufactured cap to prevent leakage. Extensions that were not anticipated at the time of original construction or that are to be connected to an existing sewer line not furnished with stub outs must be connected using a manufactured saddle and in accordance with accepted plumbing techniques.

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If no sub-out is present an alternate method of joining laterals is shown in the detail on Plan Sheet **34 of 37**. (For potential future laterals).

The private service lateral stub-outs must be installed as shown on the plan and profile sheets on Plan Sheet ___ of ___ and marked after backfilling as shown in the detail on Plan Sheet ___ of ___.

- Trenching, bedding and backfill must conform with 30 TAC §217.54. The bedding and backfill for flexible pipe must comply with the standards of ASTM D-2321, Classes IA, IB, II or III. Rigid pipe bedding must comply with the requirements of ASTM C 12 (ANSI A 106.2) classes A, B or C.

- Sewer lines must be tested from manhole to manhole. When a new sewer line is connected to an existing stub or clean-out, it must be tested from existing manhole to new manhole. If a stub or clean-out is used at the end of the proposed sewer line, no private service attachments may be connected between the last manhole and the cleanout unless it can be certified as conforming with the provisions of 30 TAC §213.5(c)(3)(E).

- All sewer lines must be tested in accordance with 30 TAC §217.57. The engineer must retain copies of all test results which must be made available to the executive director upon request. The engineer must certify in writing that all wastewater lines have passed all required testing to the appropriate regional office within 30 days of test completion and prior to use of the new collection system. Testing method will be:

- For a collection system pipe that will transport wastewater by gravity flow, the design must specify an infiltration and exfiltration test or a low-pressure air test. A test must conform to the following requirements:
 - Low Pressure Air Test.
 - A low pressure air test must follow the procedures described in American Society For Testing And Materials (ASTM) C-828, ASTM C-924, or ASTM F-1417 or other procedure approved by the executive director, except as to testing times as required in Table C.3 in subparagraph (C) of this paragraph or Equation C.3 in subparagraph (B)(ii) of this paragraph.
 - For sections of collection system pipe less than 36 inch average inside diameter, the following procedure must apply, unless a pipe is to be tested as required by paragraph (2) of this subsection.
 - A pipe must be pressurized to 3.5 pounds per square inch (psi) greater than the pressure exerted by groundwater above the pipe.
 - Once the pressure is stabilized, the minimum time allowable for the pressure to drop from 3.5 psi gauge to 2.5 psi gauge is computed from the following equation:

$$\text{Equation C.3} \quad T = \frac{0.085 \times D \times K}{Q}$$

Where:

T = time for pressure to drop 1.0 pound per square inch gauge in seconds
K = $0.000419 \times D \times L$, but not less than 1.0
D = average inside pipe diameter in inches

L = length of line of same size being tested, in feet

Q = rate of loss, 0.0015 cubic feet per minute per square foot internal surface

- Since a K value of less than 1.0 may not be used, the minimum testing time for each pipe diameter is shown in the following Table C.3:

Pipe Diameter (inches)	Minimum Time (seconds)	Maximum Length for Minimum Time (feet)	Time for Longer Length (seconds/foot)
6	340	398	0.855
8	454	298	1.520
10	567	239	2.374
12	680	199	3.419
15	850	159	5.342
18	1020	133	7.693
21	1190	114	10.471
24	1360	100	13.676
27	1530	88	17.309
30	1700	80	21.369
33	1870	72	25.856

- An owner may stop a test if no pressure loss has occurred during the first 25% of the calculated testing time.
- If any pressure loss or leakage has occurred during the first 25% of a testing period, then the test must continue for the entire test duration as outlined above or until failure.
- Wastewater collection system pipes with a 27 inch or larger average inside diameter may be air tested at each joint instead of following the procedure outlined in this section.
- A testing procedure for pipe with an inside diameter greater than 33 inches must be approved by the executive director.

- Infiltration/Exfiltration Test.
 - The total exfiltration, as determined by a hydrostatic head test, must not exceed 50 gallons per inch of diameter per mile of pipe per 24 hours at a minimum test head of 2.0 feet above the crown of a pipe at an upstream manhole.
 - An owner shall use an infiltration test in lieu of an exfiltration test when pipes are installed below the groundwater level.
 - The total exfiltration, as determined by a hydrostatic head test, must not exceed 50 gallons per inch diameter per mile of pipe per 24 hours at a minimum test head of two feet above the crown of a pipe at an upstream manhole, or at least two feet above existing groundwater level, whichever is greater.
 - For construction within a 25-year flood plain, the infiltration or exfiltration must not exceed 10 gallons per inch diameter per mile of pipe per 24 hours at the same minimum test head as in subparagraph (C) of this paragraph.
 - If the quantity of infiltration or exfiltration exceeds the maximum quantity specified, an owner shall undertake remedial action in order to reduce

the infiltration or exfiltration to an amount within the limits specified. An owner shall retest a pipe following a remediation action.

- If a gravity collection pipe is composed of flexible pipe, deflection testing is also required. The following procedures must be followed:
 - For a collection pipe with inside diameter less than 27 inches, deflection measurement requires a rigid mandrel.
 - Mandrel Sizing.
 - A rigid mandrel must have an outside diameter (OD) not less than 95% of the base inside diameter (ID) or average ID of a pipe, as specified in the appropriate standard by the ASTMs, American Water Works Association, UNI-BELL, or American National Standards Institute, or any related appendix.
 - If a mandrel sizing diameter is not specified in the appropriate standard, the mandrel must have an OD equal to 95% of the ID of a pipe. In this case, the ID of the pipe, for the purpose of determining the OD of the mandrel, must equal the average outside diameter minus two minimum wall thicknesses for OD controlled pipe and the average inside diameter for ID controlled pipe.
 - All dimensions must meet the appropriate standard.
 - Mandrel Design.
 - A rigid mandrel must be constructed of a metal or a rigid plastic material that can withstand 200 psi without being deformed.
 - A mandrel must have nine or more odd number of runners or legs.
 - A barrel section length must equal at least 75% of the inside diameter of a pipe.
 - Each size mandrel must use a separate proving ring.
 - Method Options.
 - An adjustable or flexible mandrel is prohibited.
 - A test may not use television inspection as a substitute for a deflection test.
 - If requested, the executive director may approve the use of a deflectorometer or a mandrel with removable legs or runners on a case-by-case basis.
 - For a gravity collection system pipe with an inside diameter 27 inches and greater, other test methods may be used to determine vertical deflection.
 - A deflection test method must be accurate to within plus or minus 0.2% deflection.
 - An owner shall not conduct a deflection test until at least 30 days after the final backfill.
 - Gravity collection system pipe deflection must not exceed five percent (5%).
 - If a pipe section fails a deflection test, an owner shall correct the problem and conduct a second test after the final backfill has been in place at least 30 days.

- All manholes must be tested to meet or exceed the requirements of 30 TAC §217.58.

- All manholes must pass a leakage test.
- An owner shall test each manhole (after assembly and backfilling) for leakage, separate and independent of the collection system pipes, by hydrostatic exfiltration testing, vacuum testing, or other method approved by the executive director.
 - Hydrostatic Testing.

- The maximum leakage for hydrostatic testing or any alternative test methods is 0.025 gallons per foot diameter per foot of manhole depth per hour.
- To perform a hydrostatic exfiltration test, an owner shall seal all wastewater pipes coming into a manhole with an internal pipe plug, fill the manhole with water, and maintain the test for at least one hour.
- A test for concrete manholes may use a 24-hour wetting period before testing to allow saturation of the concrete.
- Vacuum Testing.
 - To perform a vacuum test, an owner shall plug all lift holes and exterior joints with a non-shrink grout and plug all pipes entering a manhole.
 - No grout must be placed in horizontal joints before testing.
 - Stub-outs, manhole boots, and pipe plugs must be secured to prevent movement while a vacuum is drawn.
 - An owner shall use a minimum 80 in/lb torque wrench to tighten the external clamps that secure a test cover to the top of a manhole.
 - A test head must be placed at the inside of the top of a cone section, and the seal inflated in accordance with the manufacturer's recommendations.
 - There must be a vacuum of 10 inches of mercury inside a manhole to perform a valid test.
 - A test does not begin until after the vacuum pump is off.
 - A manhole passes the test if after 2.0 minutes and with all valves closed, the vacuum is at least 9.0 inches of mercury.

- All private service laterals must be inspected and certified in accordance with 30 TAC §213.5(c)(3)(I). After installation of and, prior to covering and connecting a private service lateral to an existing organized sewage collection system, a Texas Licensed Professional Engineer, Texas Registered Sanitarian, or appropriate city inspector must visually inspect the private service lateral and the connection to the sewage collection system, and certify that it is constructed in conformity with the applicable provisions of this section. The owner of the collection system must maintain such certifications for five years and forward copies to the appropriate regional office upon request. Connections may only be made to an approved sewage collection system.

Austin Regional Office 12100 Park 35 Circle, Building A Austin, Texas 78753-1808 Phone (512) 339-2929 Fax (512) 339-3795	San Antonio Regional Office 14250 Judson Road San Antonio, Texas 78233-4480 Phone (210) 490-3096 Fax (210) 545-4329
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THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS.

TCEQ WATER DISTRIBUTION SYSTEM
GENERAL CONSTRUCTION NOTES

- This water distribution system must be constructed in accordance with the current Texas Commission on Environmental Quality (TCEQ) Rules and Regulations for Public Water Systems 30 Texas Administrative Code (TAC) Chapter 290 Subchapter D. When conflicts are noted with local standards, the more stringent requirement shall be applied. At a minimum, construction for public water systems must always meet TCEQ's "Rules and Regulations for Public Water Systems."
- All newly installed pipes and related products must conform to American National Standards Institute (ANSI)/NSF International Standard 61 and must be certified by an organization accredited by ANSI [§290.44(a)(1)].
- Plastic pipe for use in public water systems must bear the NSF International Seal of Approval (NSF-pw) and have an ASTM design pressure rating of at least 150 psi or a standard dimension ratio of 26 or less [§290.44(a)(2)].
- No pipe which has been used for any purpose other than the conveyance of drinking water shall be accepted or relocated for use in any public drinking water supply [§290.44(a)(3)].
- All water line crossings of wastewater mains shall be perpendicular [§290.44(e)(4)(B)].
- Water transmission and distribution lines shall be installed in accordance with the manufacturer's instructions. However, the top of the water line must be located below the frost line and in no case shall the top of the water line be less than 24 inches below ground surface [§290.44(a)(4)].
- The maximum allowable lead content of pipes, pipe fittings, plumbing fittings, and fixtures is 0.25 percent [§290.44(b)].
- The contractor shall install appropriate air release devices with vent openings to the atmosphere covered with 16-mesh or finer, corrosion resistant screening material or an acceptable equivalent [§290.44(d)(1)].
- The contractor shall not place the pipe in water or where it can be flooded with water or sewage during its storage or installation [§290.44(f)(1)].
- When waterlines are laid under any flowing or intermittent stream or semi-permanent body of water the waterline shall be installed in a separate watertight pipe encasement. Valves must be provided on each side of the crossing with facilities to allow the underwater portion of the system to be isolated and tested [§290.44(f)(2)].
- Pursuant to 30 TAC §290.44(a)(5), the hydrostatic leakage rate shall not exceed the amount allowed or recommended by the most current AWWA formulas for PVC pipe, cast iron and ductile iron pipe. Include the formulas in the notes on the plans.
 - The hydrostatic leakage rate for polyvinyl chloride (PVC) pipe and appurtenances shall not exceed the amount allowed or recommended by formulas in America Water Works Association (AWWA) C-605 as required in 30 TAC §290.44(a)(5). Please ensure that the formula for this calculation is correct and most current formula is in use;

$$Q = \frac{LD\sqrt{P}}{148,000}$$

Where:

- Q = the quantity of makeup water in gallons per hour,
- L = the length of the pipe section being tested, in feet,
- D = the nominal diameter of the pipe in inches, and
- P = the average test pressure during the hydrostatic test in pounds per square inch (psi).

- The hydrostatic leakage rate for ductile iron (DI) pipe and appurtenances shall not exceed the amount allowed or recommended by formulas in America Water Works Association (AWWA) C-600 as required in 30 TAC §290.44(a)(5). Please ensure that the formula for this calculation is correct and most current formula is in use;

$$L = \frac{SD\sqrt{P}}{148,000}$$

Where:

- L = the quantity of makeup water in gallons per hour,
- S = the length of the pipe section being tested, in feet,
- D = the nominal diameter of the pipe in inches, and
- P = the average test pressure during the hydrostatic test in pounds per square inch (psi).

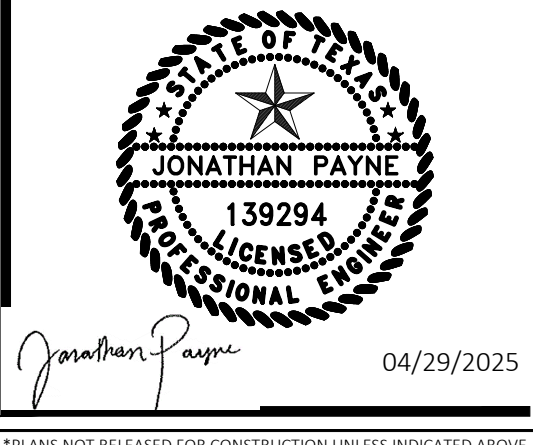
- The contractor shall maintain a minimum separation distance in all directions of nine feet between the proposed waterline and wastewater collection facilities including manholes. If this distance cannot be maintained, the contractor must immediately notify the project engineer for further direction. Separation distances, installation methods, and materials utilized must meet §290.44(e)(1)-(4).
- The separation distance from a potable waterline to a wastewater main or lateral manhole or cleanout shall be a minimum of nine feet. Where the nine-foot separation distance cannot be achieved, the potable waterline shall be encased in a joint of at least 150 psi pressure class pipe at least 18 feet long and two nominal sizes larger than the new conveyance. The space around the carrier pipe shall be supported at five-foot intervals with spacers or be filled to the springline with washed sand. The encasement pipe shall be centered on the crossing and both ends sealed with cement grout or manufactured sealant [§290.44(e)(5)].
- Fire hydrants shall not be installed within nine feet vertically or horizontally of any wastewater line, wastewater lateral, or wastewater service line regardless of construction [§290.44(e)(6)].
- Suction mains to pumping equipment shall not cross wastewater mains, wastewater laterals, or wastewater service lines. Raw water supply lines shall not be installed within five feet of any tile or concrete wastewater main, wastewater lateral, or wastewater service line [§290.44(e)(7)].
- Waterlines shall not be installed closer than ten feet to septic tank drainfields [§290.44(e)(8)].
- The contractor shall disinfect the new waterlines in accordance with AWWA Standard C-651-14 or most recent, then flush and sample the lines before being placed into service. Samples shall be collected for microbiological analysis to check the effectiveness of the disinfection procedure which shall be repeated if contamination persists. A minimum of one sample for each 1,000 feet of completed waterline will be required or at the next available sampling point beyond 1,000 feet as designated by the design engineer [§290.44(f)(3)].
- Dechlorination of disinfecting water shall be in strict accordance with current AWWA Standard C655-09 or most recent.

CITY OF MONTGOMERY, CITY ENGINEER
SIGNATURE VALID FOR ONE (1) YEAR

DATE

DRAWING ISSUE			
#	DATE	BY	* COMMENT
1	04/29/25	JP	FOR PERMIT

DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	SHEET		
NONE		03	



*PLANS NOT RELEASED FOR CONSTRUCTION UNLESS INDICATED ABOVE

LEGACY GROVE
SECTION 1 WS&D
TCEQ CONSTRUCTION NOTES



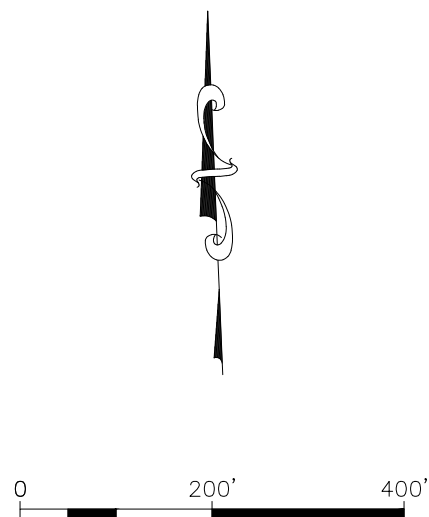
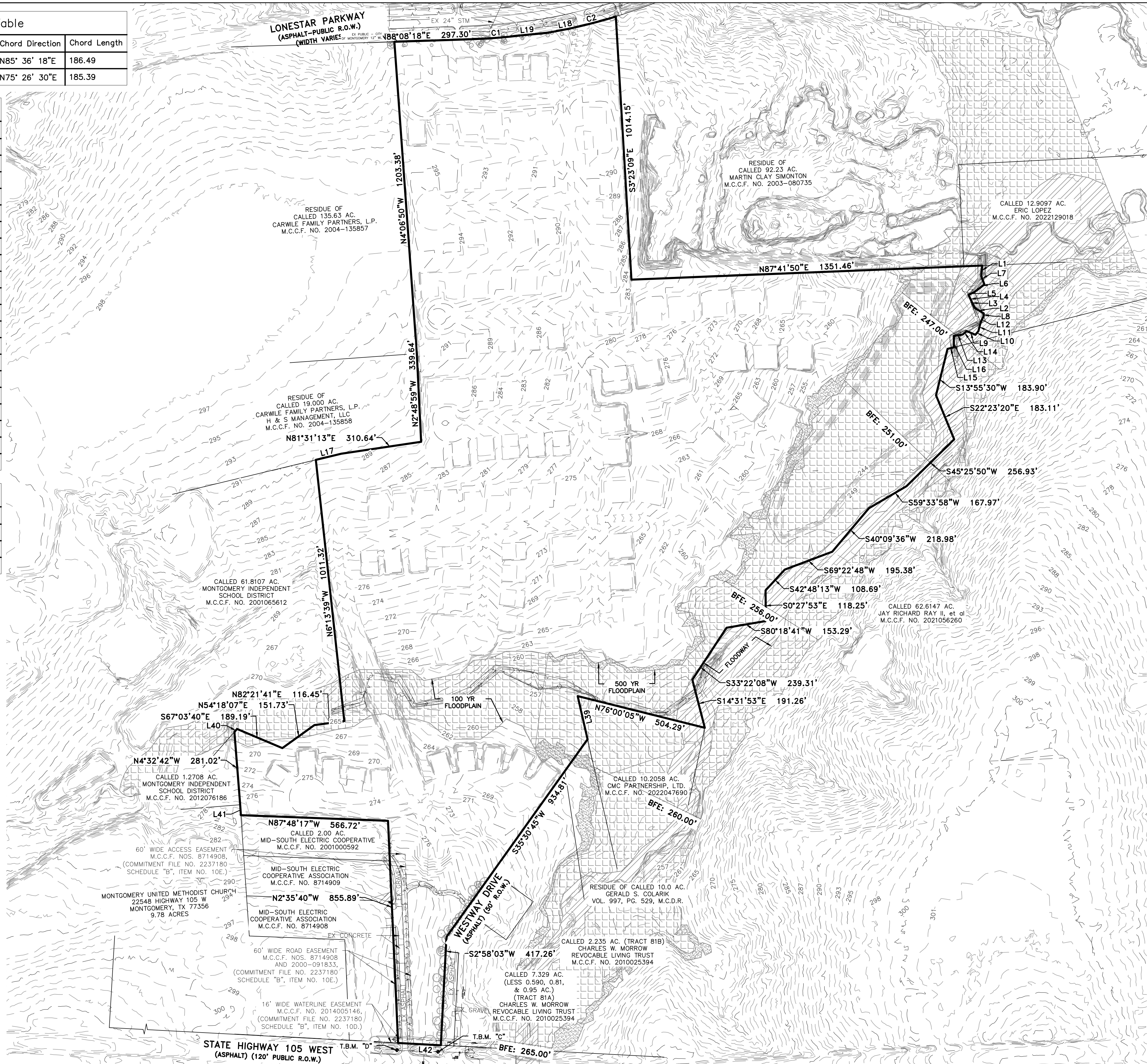
CLIENT INFORMATION	
TRI POINTE HOMES DANIEL GILLHAM 16340 PARK TEN PLACE, SUITE 250 HOUSTON, TX 77084	
PROJECT ADDRESS	
LONESTAR PKWY / SH 105 MONTGOMERY, TX 77356	

L:\SHARED\12. ENGINEERING PROJECTS\ENGINEERING PROJECTS\11020 - TRI POINTE 108\03 CAD\DESIGN SET\PHASE 1\03 EXISTING CONDITIONS SURVEY.DWG Apr. 30, 2025-8:00 AM LAURYN JOHNSON

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	186.55	2139.85	5.00	N85° 36' 18"E	186.49
C2	185.45	2144.85	4.95	N75° 26' 30"E	185.39

Parcel Line Table		
Line #	Length	Direction
L1	40.70	S5° 51' 46.00"W
L2	40.92	S58° 38' 09.00"E
L3	28.22	S25° 42' 31.00"E
L4	27.55	S26° 06' 10.00"E
L5	24.40	S66° 05' 51.00"W
L6	49.55	S52° 46' 43.00"W
L7	34.78	S21° 05' 35.00"E
L8	11.36	S5° 15' 25.00"W
L9	36.50	N67° 05' 23.00"W
L10	18.11	S39° 56' 21.00"W
L11	33.05	S14° 03' 47.00"W
L12	27.54	S25° 01' 16.00"W
L13	34.72	S80° 54' 16.00"W
L14	20.17	S48° 51' 33.00"W
L15	25.57	S75° 49' 01.00"W
L16	43.56	S0° 50' 41.00"E
L17	100.92	N76° 27' 15.00"E
L18	87.20	N79° 13' 20.00"E
L19	104.65	N84° 29' 43.00"E
L39	170.39	S12° 52' 18.00"E

Parcel Line Table		
Line #	Length	Direction
L40	15.51	N41° 24' 28.00"E
L41	40.15	N3° 53' 09.00"W
L42	164.83	N86° 57' 13.00"W



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3307 W. DAVIS STREET #100
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MONTGOMERY, TX 77356

LEGACY GROVE SECTION 1 WS&D EXISTING CONDITIONS SURVEY

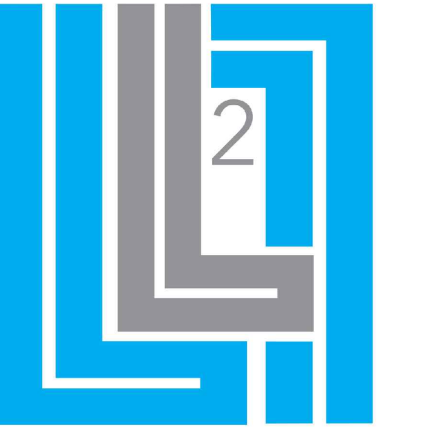
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#	DATE	BY	* COMMENT	
1	04/29/25	JP	FOR PERMIT	

DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	1" = 200' (24x36) 1" = 400' (11x17)	SHEET	04

STATE OF TEXAS
JONATHAN PAYNE
13929.4
LICENSED PROFESSIONAL ENGINEER
04/29/2025

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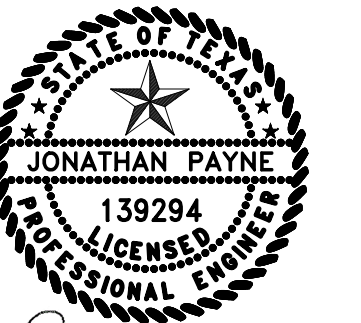
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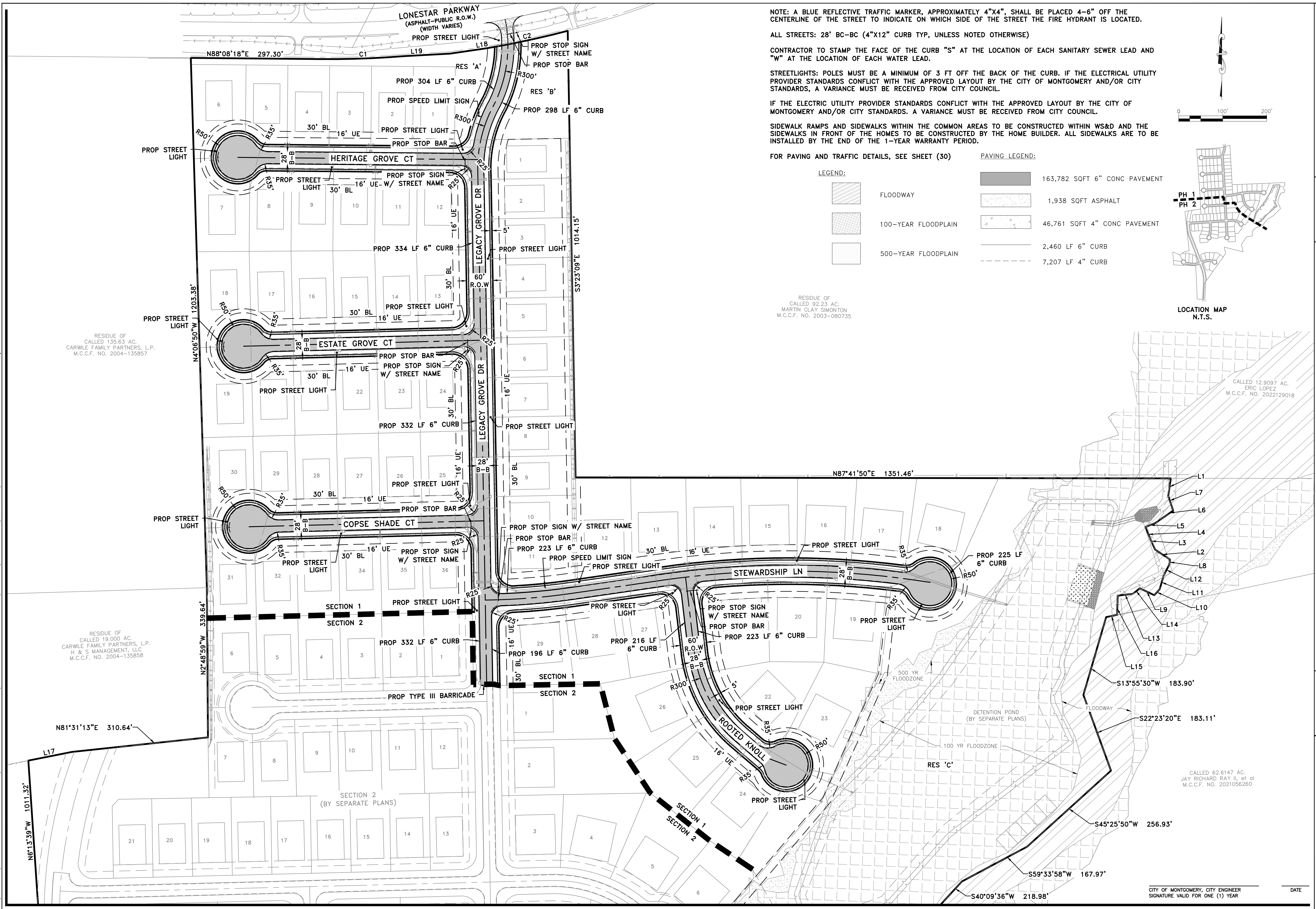
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MONTGOMERY, TX 77356

LEGACY GROVE SECTION 1 WS&D OVERALL LAYOUT AND INDEX



L:\SHARED\L2 ENGINEERING PROJECTS\ENGINEERING PROJECTS\11020 - TRI POINTE 108'03 CAD\DESIGN SET\PHASE 1\05 TRAFFIC AND PAVING PLAN.DWG May, 6, 2025--8:30 AM LAURYN JOHNSON



NOTE: A BLUE REFLECTIVE TRAFFIC MARKER, APPROXIMATELY 4"x4", SHALL BE PLACED 4-6" OFF THE CENTERLINE OF THE STREET TO INDICATE ON WHICH SIDE OF THE STREET THE FIRE HYDRANT IS LOCATED.

ALL STREETS: 28' BC-BC (4"x12" CURB TYP, UNLESS NOTED OTHERWISE)

CONTRACTOR TO STAMP THE FACE OF THE CURB "S" AT THE LOCATION OF EACH SANITARY SEWER LEAD AND "W" AT THE LOCATION OF EACH WATER LEAD.

STREETLIGHTS: POLES MUST BE A MINIMUM OF 3 FT OFF THE BACK OF THE CURB. IF THE ELECTRICAL UTILITY PROVIDER STANDARDS CONFLICT WITH THE APPROVED LAYOUT BY THE CITY OF MONTGOMERY AND/OR CITY STANDARDS, A VARIANCE MUST BE RECEIVED FROM CITY COUNCIL.

IF THE ELECTRIC UTILITY PROVIDER STANDARDS CONFLICT WITH THE APPROVED LAYOUT BY THE CITY OF MONTGOMERY AND/OR CITY STANDARDS. A VARIANCE MUST BE RECEIVED FROM CITY COUNCIL.

SIDEWALK RAMPS AND SIDEWALKS WITHIN THE COMMON AREAS TO BE CONSTRUCTED WITHIN WS&D AND THE SIDEWALKS IN FRONT OF THE HOMES TO BE CONSTRUCTED BY THE HOME BUILDER. ALL SIDEWALKS ARE TO BE INSTALLED BY THE END OF THE 1-YEAR WARRANTY PERIOD.

FOR PAVING AND TRAFFIC DETAILS, SEE SHEET (30)

LEGEND:

- FLOODWAY
- 100-YEAR FLOODPLAIN
- 500-YEAR FLOODPLAIN

PAVING LEGEND:

- 163,782 SQFT 6" CONC PAVEMENT
- 1,938 SQFT ASPHALT
- 46,761 SQFT 4" CONC PAVEMENT
- 2,460 LF 6" CURB
- 7,207 LF 4" CURB

RESIDUE OF
CALLED 92.23 AC.
MARTIN CLAY SIMONTON
M.C.C.F. NO. 2003-080735

RESIDUE OF
CALLED 135.63 AC.
CARWILE FAMILY PARTNERS, L.P.
M.C.C.F. NO. 2004-135857

RESIDUE OF
CALLED 19.000 AC.
CARWILE FAMILY PARTNERS, L.P.
H & S MANAGEMENT, LLC
M.C.C.F. NO. 2004-135858

CALLED 12.9097 AC.
ERIC LOPEZ
M.C.C.F. NO. 2022129018

CALLED 62.6147 AC.
JAY RICHARD RAY II, et al
M.C.C.F. NO. 2021056260

DRAWING ISSUE				
#	DATE	BY	* COMMENT	
1	04/29/25	JP	FOR PERMIT	

DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	1" = 100' (24x36) 1" = 200' (11x17)	SHEET	06

STATE OF TEXAS
JONATHAN PAYNE
139294
LICENSED PROFESSIONAL ENGINEER

Jonathan Payne
CITY OF MONTGOMERY, CITY ENGINEER
SIGNATURE VALID FOR ONE (1) YEAR

DATE
04/29/2025

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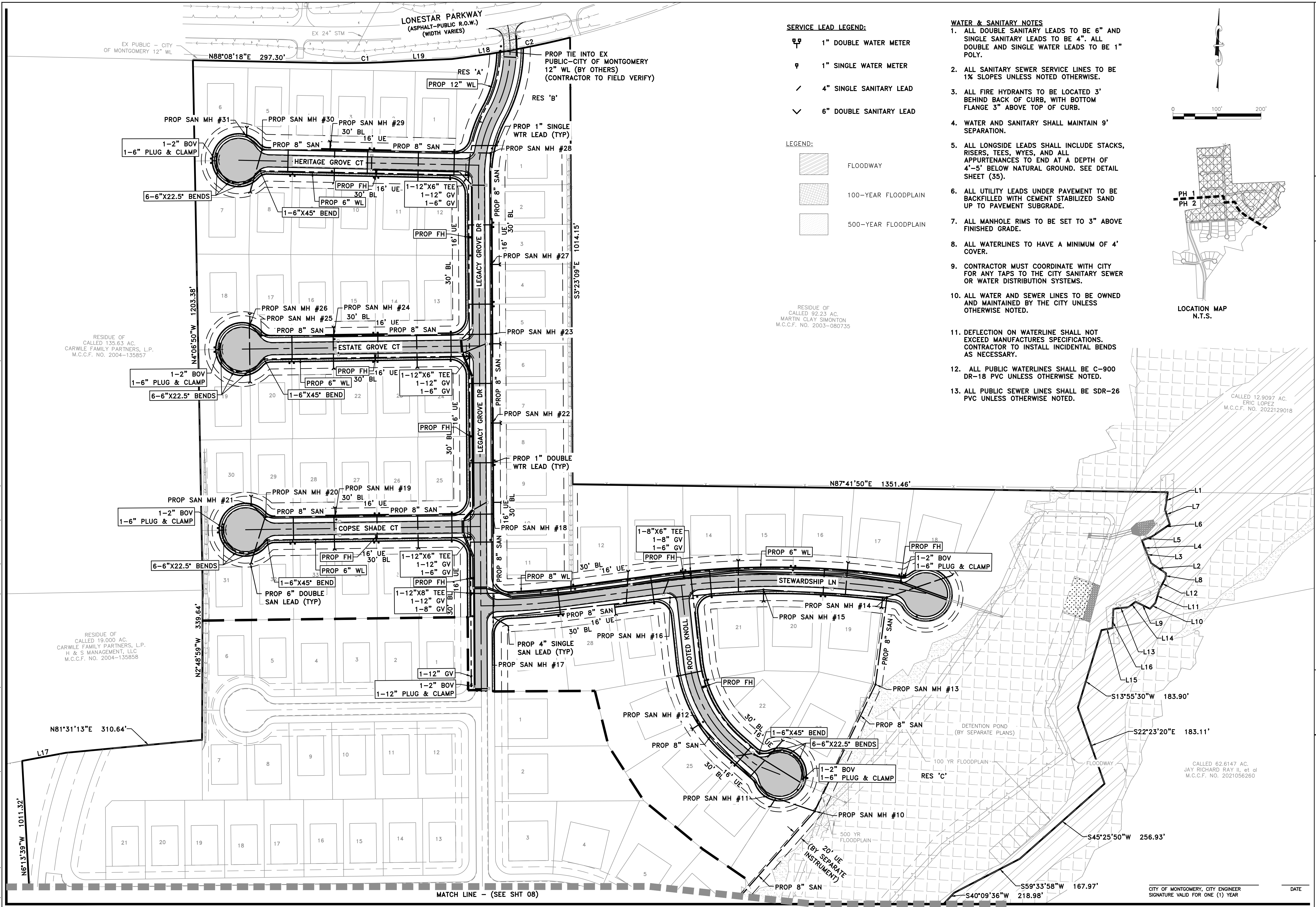
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WWW.L2ENGINEERING.COM
PROF REGISTRATION NUMBER 13225
3307 W. DAVIS STREET #100
CONROE, TEXAS 77384
OFFICE: 281-467-0600

CLIENT INFORMATION
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DANIEL GILLHAM
16340 PARK TEN PLACE, SUITE 250
HOUSTON, TX 77084
PROJECT ADDRESS
LONESTAR PKW / SH 105
MONTGOMERY, TX 77356

LEGACY GROVE SECTION 1 WS&D

TRAFFIC AND PAVING PLAN

L:\SHARED\12. ENGINEERING PROJECTS\ENGINEERING PROJECTS\11020 - TRI POINTE 108\03 CAD\DESIGN SET\PHASE 1\06 OVERALL WATER AND SAN.DWG Apr. 30, 2025-8:00 AM LAURYN JOHNSON



SERVICE LEAD LEGEND:

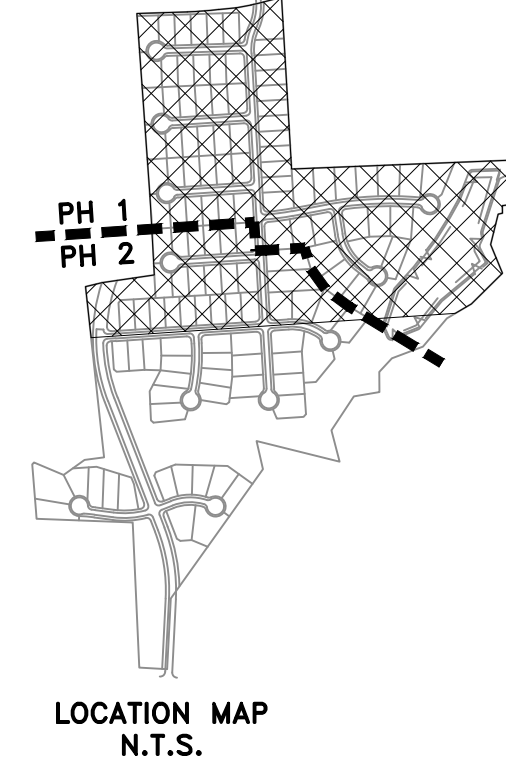
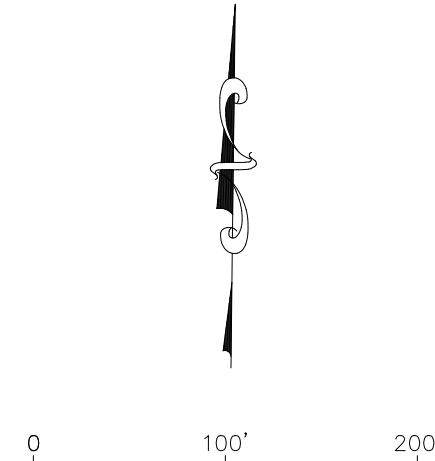
- 1" DOUBLE WATER METER
- 1" SINGLE WATER METER
- 4" SINGLE SANITARY LEAD
- 6" DOUBLE SANITARY LEAD

LEGEND:

- FLOODWAY
- 100-YEAR FLOODPLAIN
- 500-YEAR FLOODPLAIN

WATER & SANITARY NOTES

- ALL DOUBLE SANITARY LEADS TO BE 6" AND SINGLE SANITARY LEADS TO BE 4". ALL DOUBLE AND SINGLE WATER LEADS TO BE 1" POLY.
- ALL SANITARY SEWER SERVICE LINES TO BE 1% SLOPES UNLESS NOTED OTHERWISE.
- ALL FIRE HYDRANTS TO BE LOCATED 3' BEHIND BACK OF CURB, WITH BOTTOM FLANGE 3" ABOVE TOP OF CURB.
- WATER AND SANITARY SHALL MAINTAIN 9' SEPARATION.
- ALL LONGSIDE LEADS SHALL INCLUDE STACKS, RISERS, TEES, WYES, AND ALL APPURTENANCES TO END AT A DEPTH OF 4'-5' BELOW NATURAL GROUND. SEE DETAIL SHEET (35).
- ALL UTILITY LEADS UNDER PAVEMENT TO BE BACKFILLED WITH CEMENT STABILIZED SAND UP TO PAVEMENT SUBGRADE.
- ALL MANHOLE RIMS TO BE SET TO 3" ABOVE FINISHED GRADE.
- ALL WATERLINES TO HAVE A MINIMUM OF 4' COVER.
- CONTRACTOR MUST COORDINATE WITH CITY FOR ANY TAPS TO THE CITY SANITARY SEWER OR WATER DISTRIBUTION SYSTEMS.
- ALL WATER AND SEWER LINES TO BE OWNED AND MAINTAINED BY THE CITY UNLESS OTHERWISE NOTED.
- DEFLECTION ON WATERLINE SHALL NOT EXCEED MANUFACTURERS SPECIFICATIONS. CONTRACTOR TO INSTALL INCIDENTAL BENDS AS NECESSARY.
- ALL PUBLIC WATERLINES SHALL BE C-900 DR-18 PVC UNLESS OTHERWISE NOTED.
- ALL PUBLIC SEWER LINES SHALL BE SDR-26 PVC UNLESS OTHERWISE NOTED.



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PROJECT ADDRESS
LONESTAR PKW / SH 105
MONTGOMERY, TX 77356

LEGACY GROVE
SECTION 1 WS&D
WATER AND SANITARY SEWER PLAN
(1 OF 2)

DRAWING ISSUE				
#	DATE	BY	* COMMENT	
1	04/29/25	JP	FOR PERMIT	

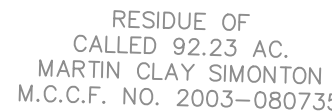
DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	1" = 100' (24x36) 1" = 200' (11x17)	SHEET	07

STATE OF TEXAS
JONATHAN PAYNE
139294
LICENSED PROFESSIONAL ENGINEER
04/29/2025

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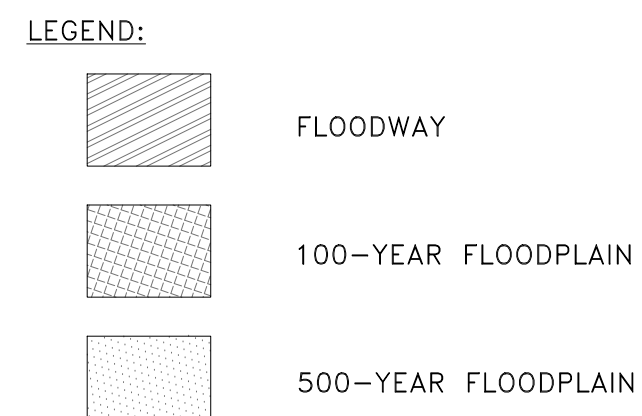


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DAT



TRI POINTE HOMES
DANIEL GILLHAM
16340 PARK TEN PLACE, SUTIE 250
HOUSTON, TX 77084

PROJECT ADDRESS
LONESTAR PKW / SH 105
MONTGOMERY, TX 77356

STORM SEWER PLAN (1 OF 3)

DRAWING ISSUE			
#	DATE	BY	* COMMENT
1	04/29/25	JP	FOR PERMIT

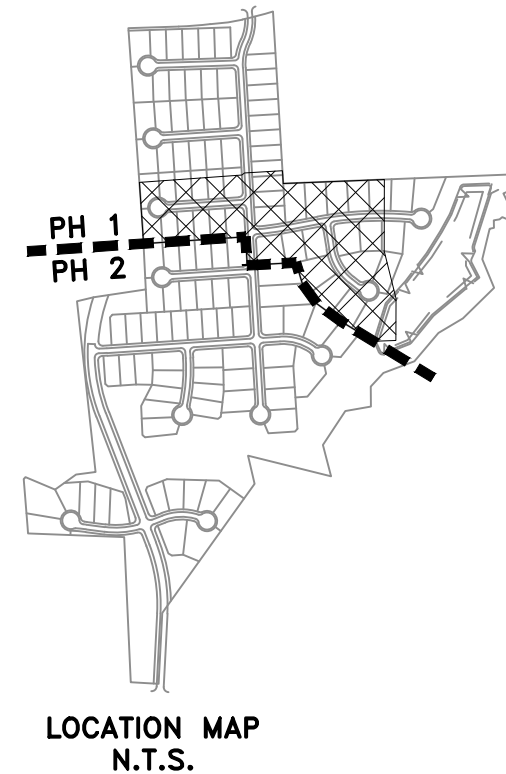
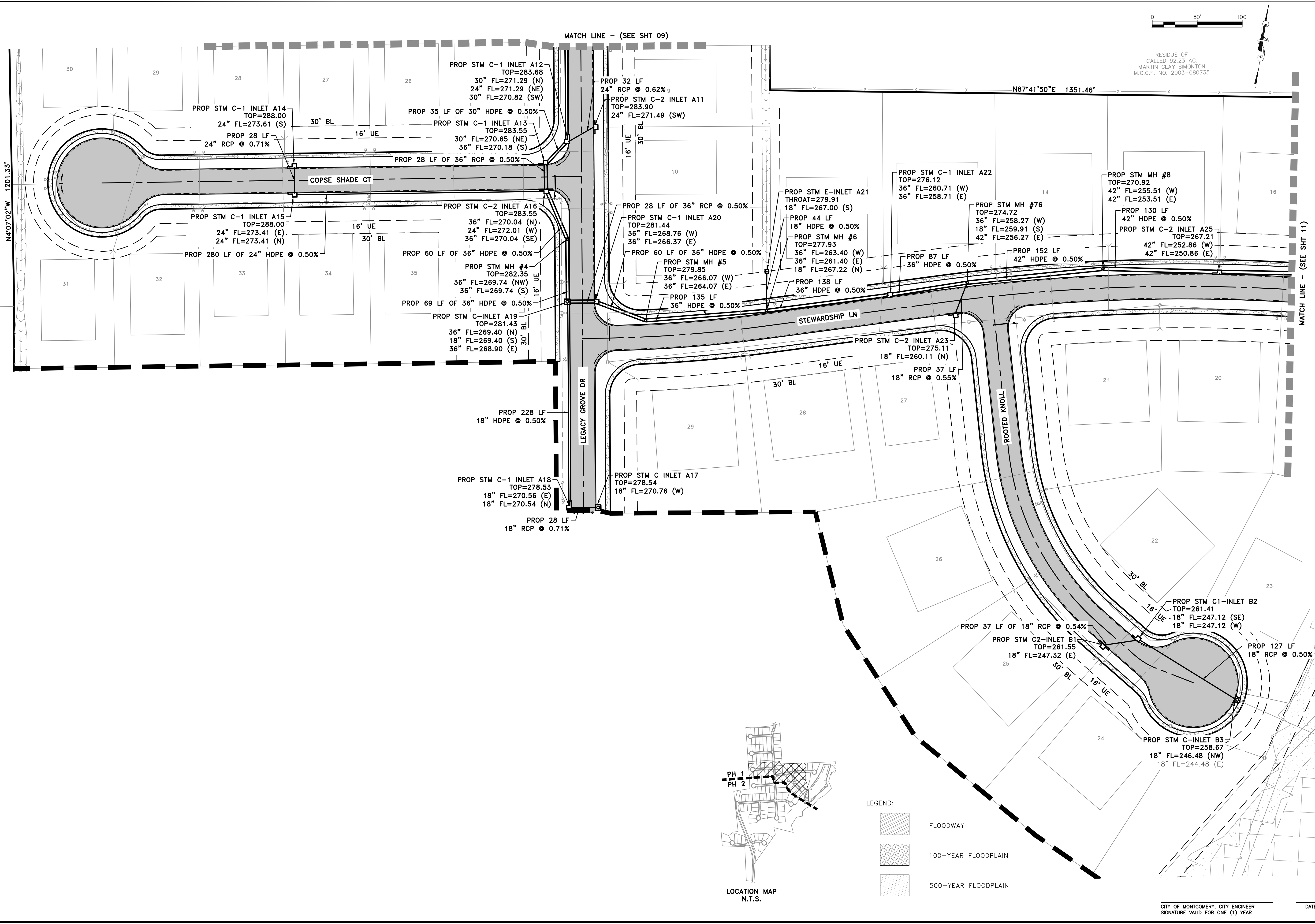
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PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE		SHEET	
1" = 50' (24x36) 1" = 100' (11x17)		09	



Jonathan Payne 04/29/2025

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L:\SHARED\L2 ENGINEERING PROJECTS\ENGINEERING PROJECTS\11020 - TRI POINTE 108\03 CAD\DESIGN SET\PHASE 1\08 STORM SEWER PLANDWG Apr. 30, 2025-8:08 AM LAURYN JOHNSON



- LEGEND:
- FLOODWAY
 - 100-YEAR FLOODPLAIN
 - 500-YEAR FLOODPLAIN

CITY OF MONTGOMERY, CITY ENGINEER
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DATE



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MUNICIPAL COMMERCIAL RESIDENTIAL
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3307 W. DAVIS STREET #100
CONROE, TEXAS 77384
OFFICE: 281-467-0600

CLIENT INFORMATION
TRI POINTE HOMES
DANIEL GILLHAM
16340 PARK TEN PLACE, SUITE 250
HOUSTON, TX 77084

PROJECT ADDRESS
LONESTAR PKWY / SH 105
MONTGOMERY, TX 77356

LEGACY GROVE SECTION 1 WS&D

STORM SEWER PLAN (2 OF 3)

DRAWING ISSUE			
#	DATE	BY	* COMMENT
1	04/29/25	JP	FOR PERMIT

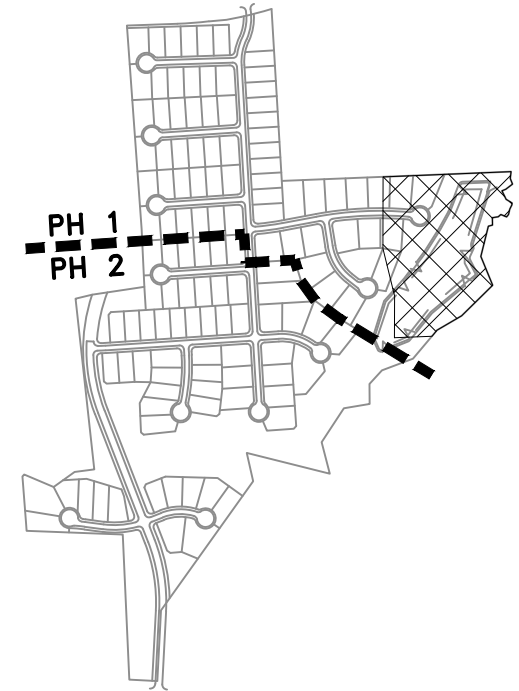
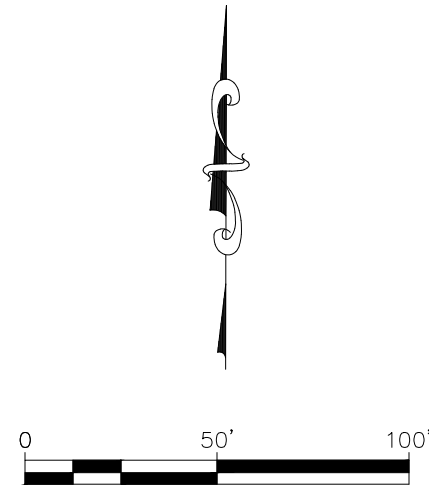
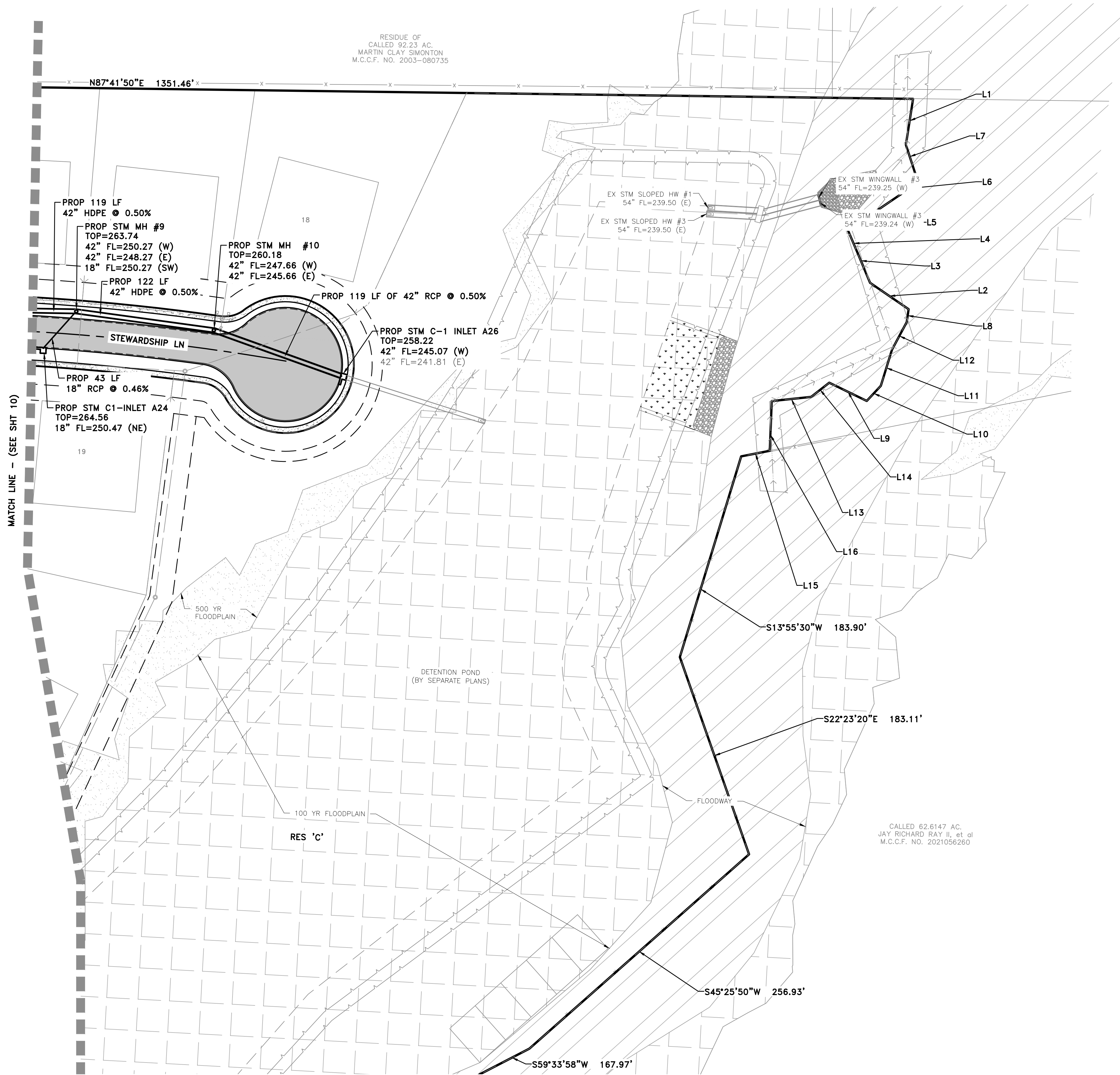
DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	1" = 50' (24x36) 1" = 100' (11x17)	SHEET	10



Jonathan Payne
04/29/2025

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L:\SHARED\L2 ENGINEERING PROJECTS\ENGINEERING PROJECTS\11020 - TRI POINTE 108\03 CAD\DESIGN SET\PHASE 1\08 STORM SEWER PLANDWG Apr. 30, 2025-8:02 AM LAURYN JOHNSON



LOCATION MAP
N.T.S.

LEGEND:

- FLOODWAY
- 100-YEAR FLOODPLAIN
- 500-YEAR FLOODPLAIN



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PWS REGISTRATION NUMBER: 11225
3307 W. DAVIS STREET #100
CONROE, TEXAS 77384
OFFICE: 281-467-0400

CLIENT INFORMATION

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PROJECT ADDRESS
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MONTGOMERY, TX 77356

LEGACY GROVE
SECTION 1 WS&D

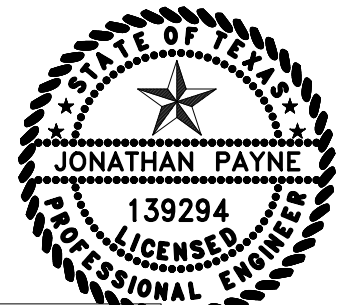
STORM SEWER PLAN (3 OF 3)

DRAWING ISSUE

#	DATE	BY	* COMMENT
1	04/29/25	JP	FOR PERMIT

DRAWING INFORMATION

PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	1" = 50' (24x36) 1" = 100' (11x17)	SHEET	11



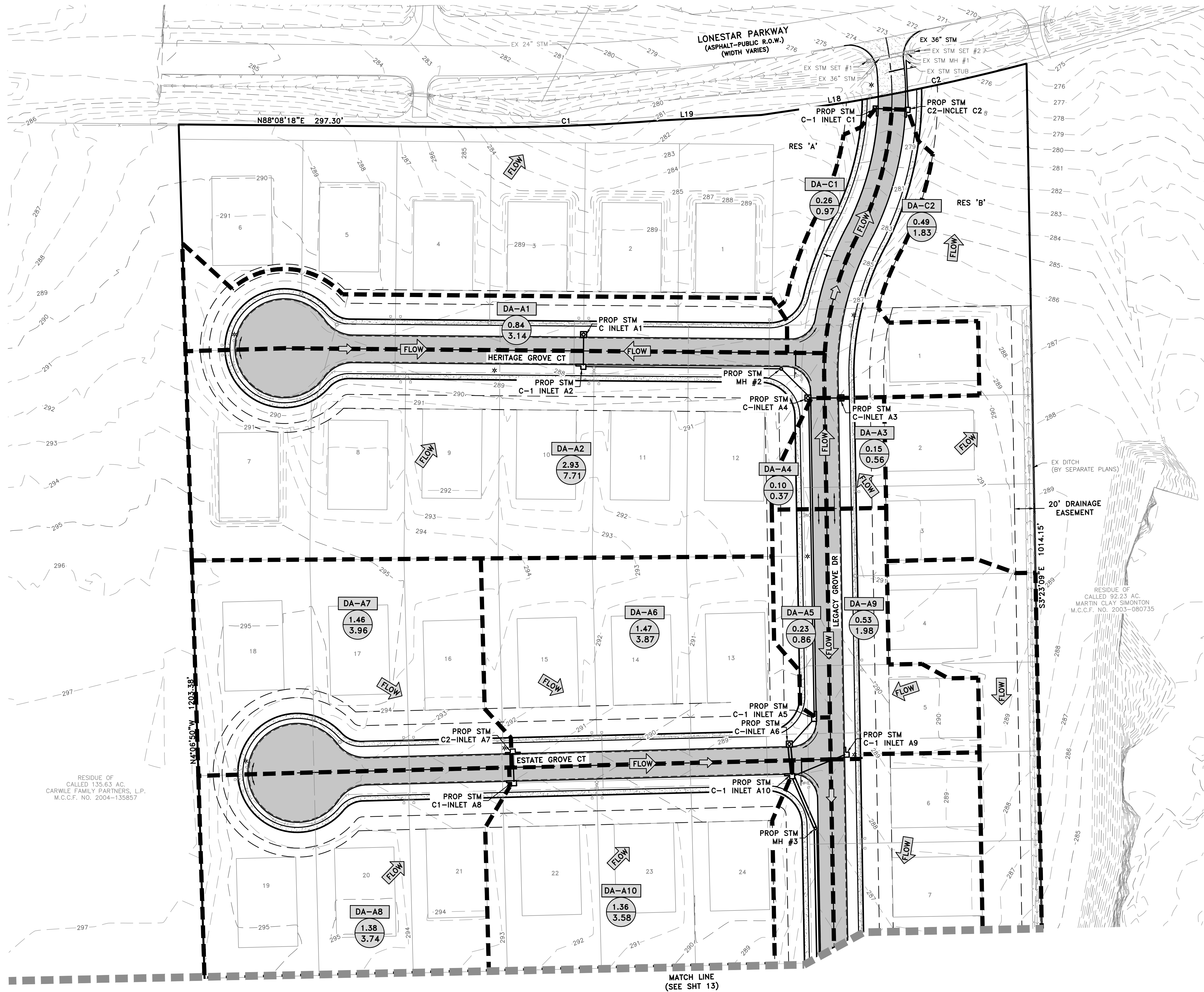
Jonathan Payne DATE 04/29/2025

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SIGNATURE VALID FOR ONE (1) YEAR

DATE

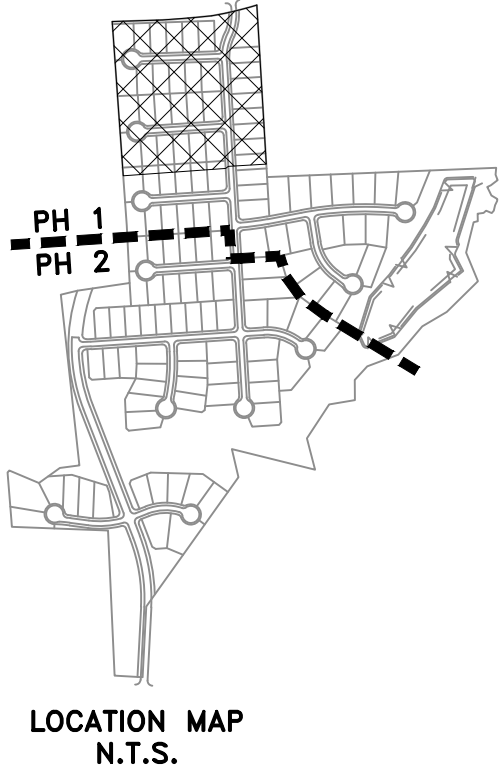
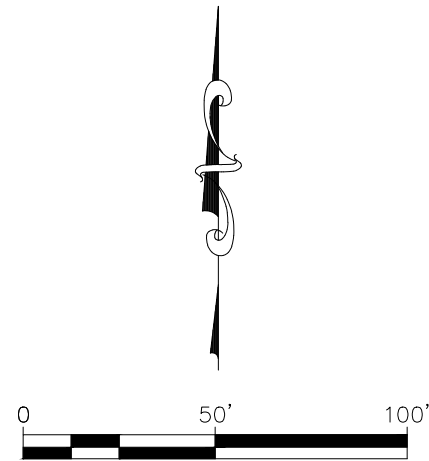
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L:\SHARED\L2 ENGINEERING PROJECTS\ENGINEERING PROJECTS\11020 - TRI POINTE 108\03 CAD\DESIGN SET\PHASE 1\09 POST DEVELOPED DAM.DWG Apr. 30, 2025-8:05 AM LAURYN JOHNSON



RESIDUE OF
CALLED 135.63 AC.
CARWILE FAMILY PARTNERS, L.P.
M.C.C.F. NO. 2004-135857

RESIDUE OF
CALLED 92.23 AC.
MARTIN CLAY SIMONTON
M.C.C.F. NO. 2003-080735



- DRAINAGE LEGEND:**
- PROP DRAINAGE AREA BREAKLINE
 - DA-A1
AREA
FLOW PROP DRAINAGE AREA NUMBER
 - OUTFALL A
AREA
FLOW PROP DRAINAGE AREA ACRES & FLOW (5 YEAR)
 - OUTFALL A
AREA
FLOW PROP DRAINAGE AREA ACRES & FLOW (100 YEAR)
 - FLOW DRAINAGE FLOW DIRECTION
 - EXTREME EVENT OVERFLOW PATH
- LEGEND:**
- FLOODWAY
 - 100-YEAR FLOODPLAIN
 - 500-YEAR FLOODPLAIN

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PROJECT ADDRESS
LONESTAR PKW / SH 105
MONTGOMERY, TX 77356

LEGACY GROVE SECTION 1 WS&D DRAINAGE PLAN (1 OF 3)

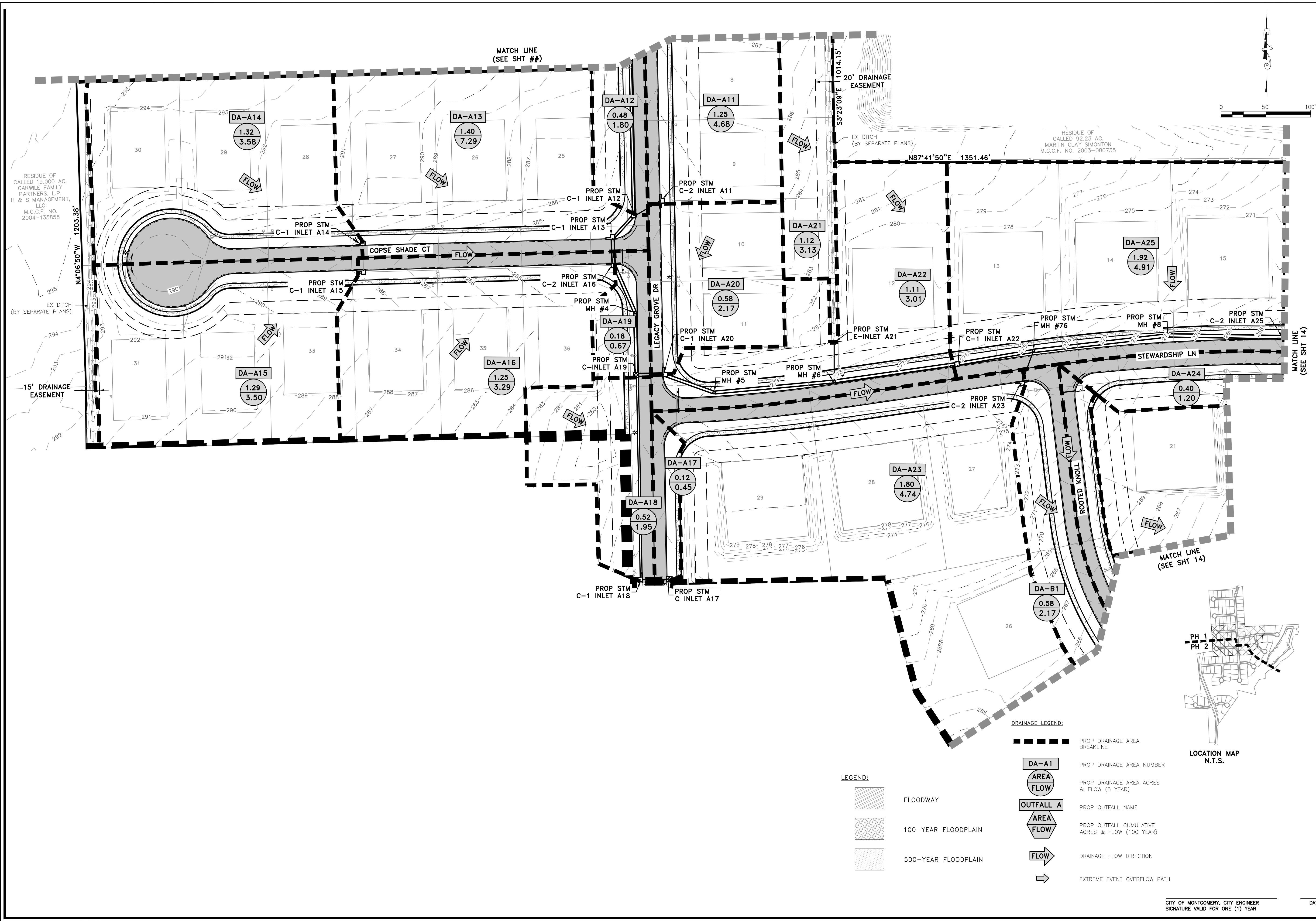
DRAWING ISSUE			
#	DATE	BY	* COMMENT
1	04/29/25	JP	FOR PERMIT

DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	1" = 50' (24x36) 1" = 100' (11x17)	SHEET	12

STATE OF TEXAS
JONATHAN PAYNE
139294
LICENSED PROFESSIONAL ENGINEER
Jonathan Payne
04/29/2025

*PLANS NOT RELEASED FOR CONSTRUCTION UNLESS INDICATED ABOVE

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LONESTAR PKWY / SH 105
MONTGOMERY, TX 77356

LEGACY GROVE SECTION 1 WS&D

DRAINAGE PLAN (2 OF 3)

DRAWING ISSUE			
#	DATE	BY	* COMMENT
1	04/29/25	JP	FOR PERMIT

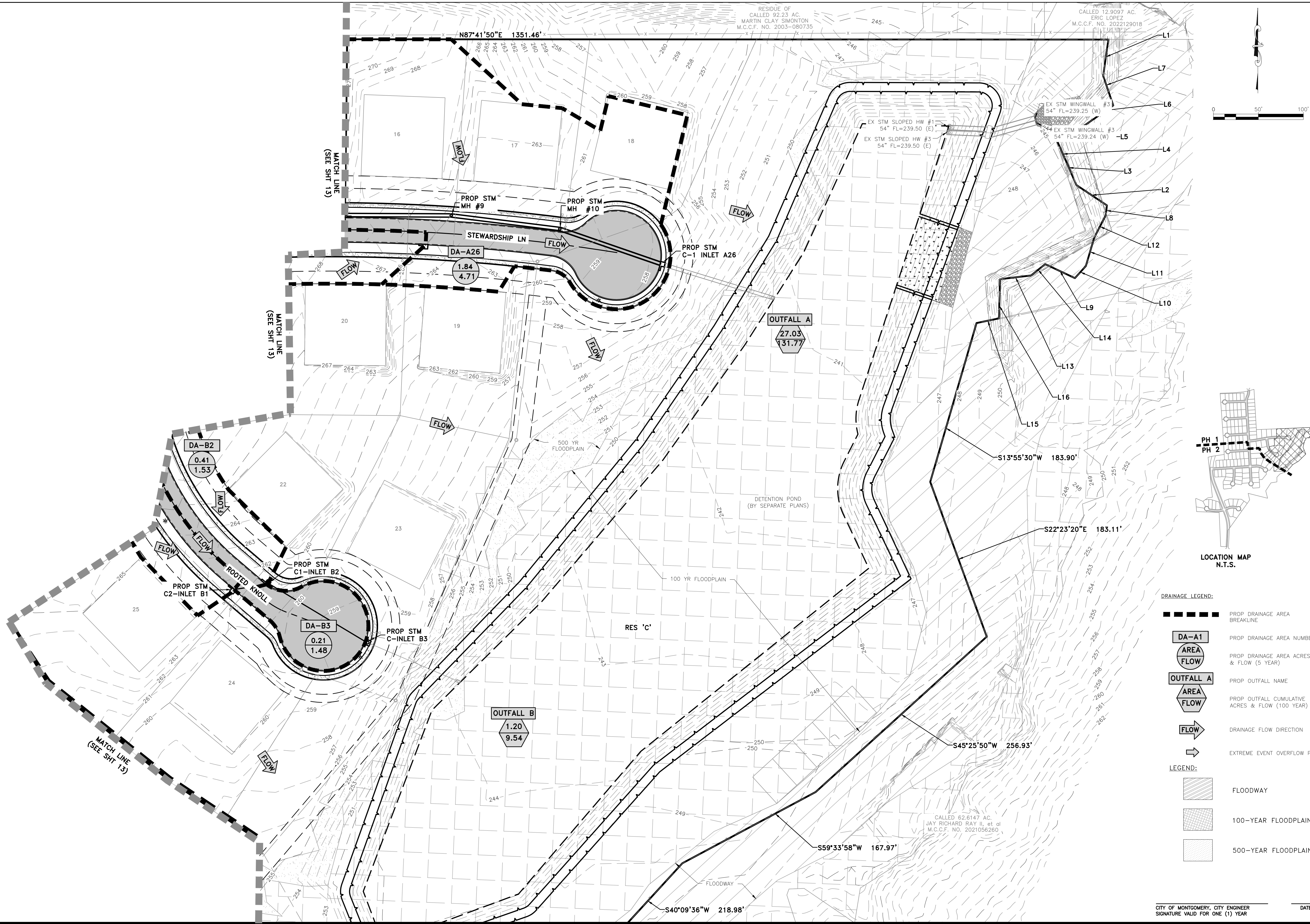
DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	SHEET		
1" = 50' (24x36)	13		
1" = 100' (11x17)			



Jonathan Payne
04/29/2025

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DRAINAGE LEGEND:

- PROP DRAINAGE AREA BREAKLINE
- DA-A1 PROP DRAINAGE AREA NUMBER
- AREA FLOW PROP DRAINAGE AREA ACRES & FLOW (5 YEAR)
- OUTFALL A PROP OUTFALL NAME
- AREA FLOW PROP OUTFALL CUMULATIVE ACRES & FLOW (100 YEAR)
- FLOW DRAINAGE FLOW DIRECTION
- EXTREME EVENT OVERFLOW PATH

LEGEND:

- FLOODWAY
- 100-YEAR FLOODPLAIN
- 500-YEAR FLOODPLAIN

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MONTGOMERY, TX 77356

LEGACY GROVE SECTION 1 WS&D DRAINAGE PLAN (3 OF 3)

DRAWING ISSUE			
#	DATE	BY	* COMMENT
1	04/29/25	JP	FOR PERMIT

DRAWING INFORMATION		
PROJECT	11020	TDLR **
DRAWN	LMJ	CHECKED JP
SCALE	1" = 50' (24x36) 1" = 100' (11x17)	SHEET 14

STATE OF TEXAS
JONATHAN PAYNE
139294
LICENSED PROFESSIONAL ENGINEER
Jonathan Payne
04/29/2025

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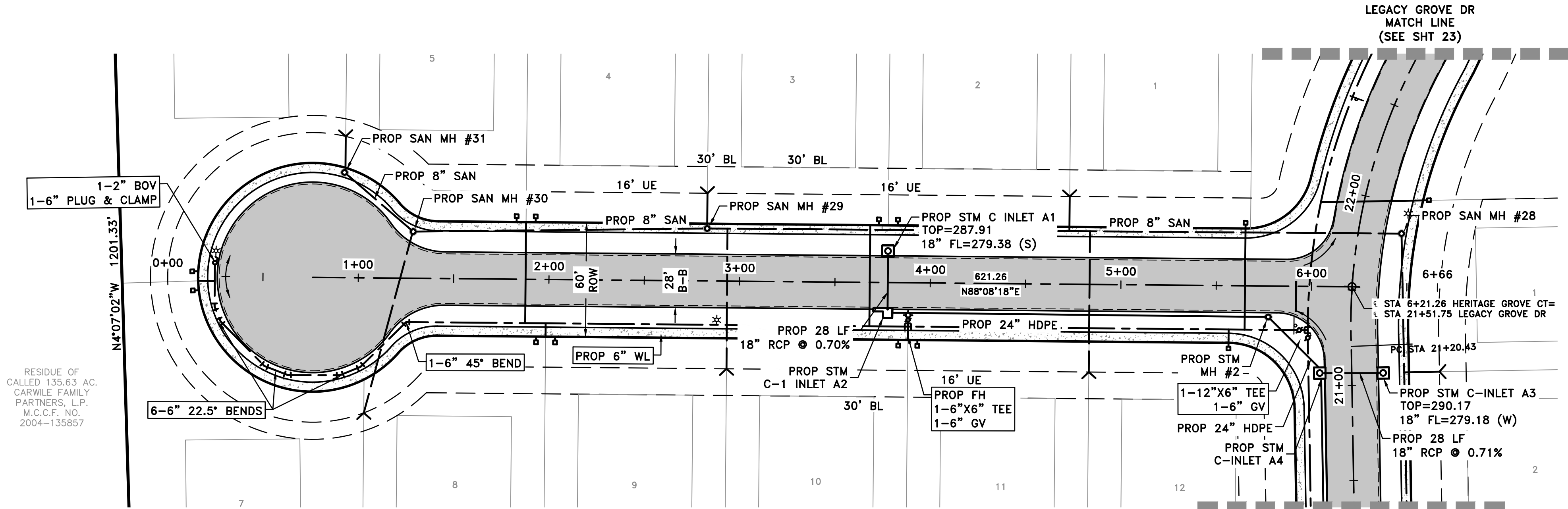
Inlet No.	Inlet Type	Calculated Minimum Length (ft)	5-Yr Flow	Proposed Inlet Size	Proposed Inlet Length (ft)
A1	Sag	3.57	3.14	C	5
A2	Sag	7.89	7.71	C-1	10
A3	On-Grade	6.06	1.42	C-1	10
A4	On-Grade	3.46	0.37	C	5
A5	On-Grade	5.08	0.86	C-1	10
A6	Sag	3.71	3.74	C	5
A7	On-Grade	10.11	3.96	C-2	15
A8	On-Grade	9.87	3.74	C-1	10
A9	On-Grade	9.42	3.22	C-1	10
A10	On-Grade	9.85	3.58	C-1	10
A11	On-Grade	11.03	4.68	C-2	15
A12	On-Grade	7.38	1.80	C-1	10
A13	Sag	7.43	3.68	C-1	10
A14	On-Grade	9.81	3.58	C-1	10
A15	On-Grade	9.71	3.50	C-1	10
A16	On-Grade	10.58	3.29	C-2	15
A17	On-Grade	4.10	0.45	C	5
A18	On-Grade	7.59	1.95	C-1	10
A19	On-Grade	4.85	0.67	C	5
A20	On-Grade	7.93	2.17	C-1	10
A22	On-Grade	9.37	3.01	C-1	10
A23	On-Grade	11.34	4.74	C-2	15
A24	On-Grade	7.93	1.20	C-1	10
A25	On-Grade	14.33	4.91	C-2	15
A26	Sag	6.86	4.71	C-1	10
B1	On-Grade	10.21	2.17	C-2	15
B2	On-Grade	8.83	1.53	C-1	10
B3	Sag	3.39	1.48	C	5
C1	On-Grade	8.57	0.97	C-1	10
C2	On-Grade	11.18	1.83	C-2	15

Drainage Calculations (25-Yr)							
Drainage Area	Area	Tc	C	I	C _f	Q	
DA-A1	0.84	5.00	0.45	11.61	1.1	4.83	
DA-A2	2.93	14.00	0.45	8.11	1.1	11.77	
DA-A3	0.38	5.00	0.45	11.61	1.1	2.18	
DA-A4	0.10	5.00	0.45	11.61	1.1	0.57	
DA-A5	0.23	5.00	0.45	11.61	1.1	1.32	
DA-A6	1.47	14.00	0.45	8.11	1.1	5.90	
DA-A7	1.46	13.00	0.45	8.36	1.1	6.05	
DA-A8	1.38	13.00	0.45	8.36	1.1	5.71	
DA-A9	0.86	5.00	0.45	11.61	1.1	4.94	
DA-A10	1.36	14.00	0.45	8.11	1.1	5.46	
DA-A11	1.25	5.00	0.45	11.61	1.1	7.18	
DA-A12	0.48	5.00	0.45	11.61	1.1	2.76	
DA-A13	1.40	14.00	0.45	8.11	1.1	5.62	
DA-A14	1.32	13.00	0.45	8.36	1.1	5.47	
DA-A15	1.29	13.00	0.45	8.36	1.1	5.34	
DA-A16	1.25	14.00	0.45	8.11	1.1	5.02	
DA-A17	0.12	5.00	0.45	11.61	1.1	0.69	
DA-A18	0.52	5.00	0.45	11.61	1.1	2.99	
DA-A19	0.18	5.00	0.45	11.61	1.1	1.03	
DA-A20	0.58	5.00	0.45	11.61	1.1	3.33	
DA-A21	0.88	12.00	0.45	8.64	1.1	3.76	
DA-A22	1.11	13.00	0.45	8.36	1.1	4.60	
DA-A23	1.80	14.00	0.45	8.11	1.1	7.23	
DA-A24	0.40	10.00	0.45	9.26	1.1	1.83	
DA-A25	1.92	15.00	0.45	7.88	1.1	7.49	
DA-A26	1.84	15.00	0.45	7.88	1.1	7.18	
DA-B1	0.58	5.00	0.45	11.61	1.1	3.33	
DA-B2	0.41	5.00	0.45	11.61	1.1	2.36	
DA-B3	0.21	5.00	0.85	11.61	1.1	2.28	
DA-C1	0.26	5.00	0.45	11.61	1.1	1.49	
DA-C2	0.49	5.00	0.45	11.61	1.1	2.82	

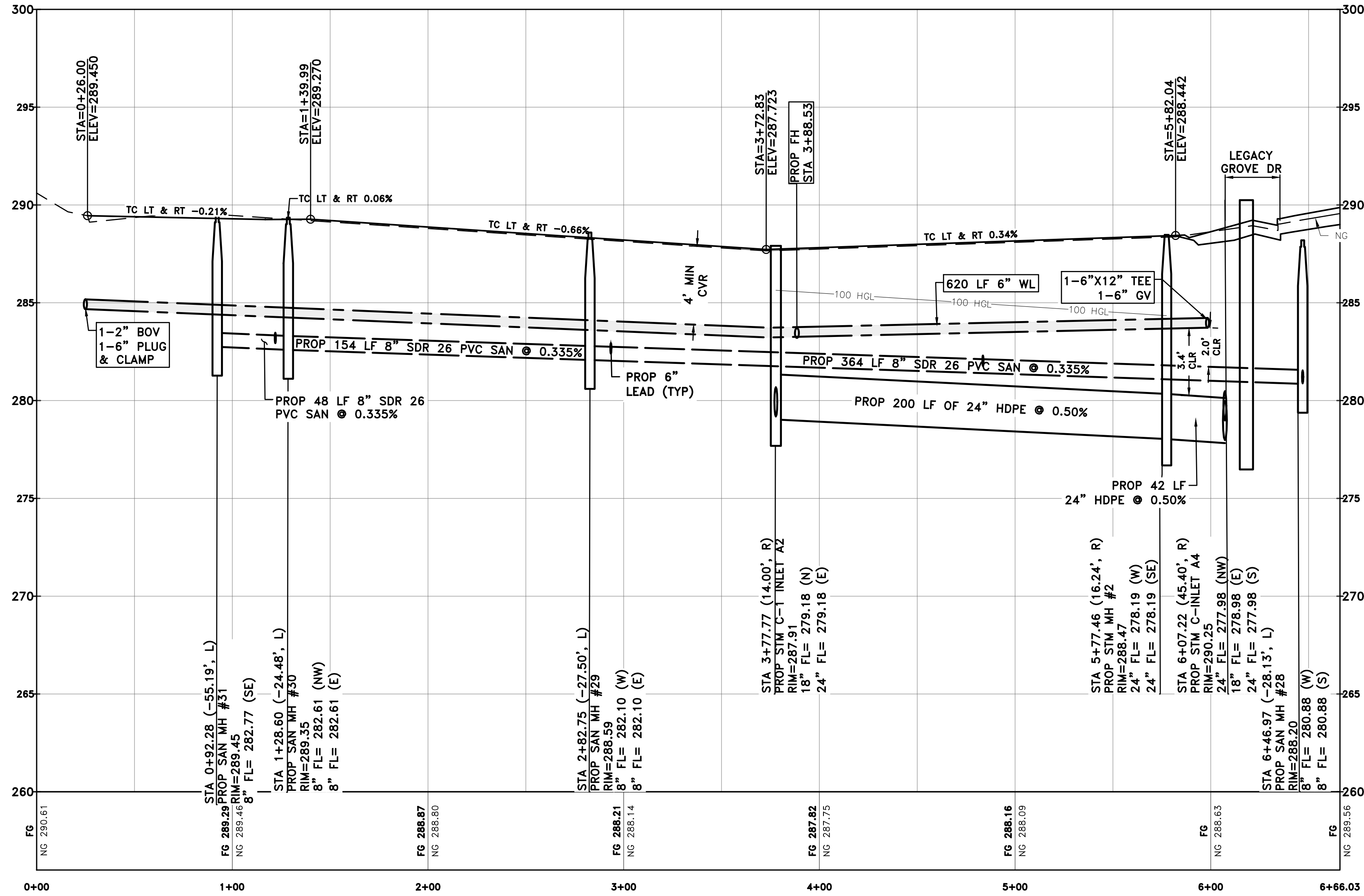
SYSTEM A

5 Year																									HGL			
Inlet Info																												
Inlet/MH From	Inlet/MH To	Drainage Area	Total Drainage Area	Runoff Co. "C"	DA C/A	Total C/A	Drainage Area Time of Conc. (Min)	Total Time of Conc. (Min)	Intensity (I)	Cf	Drainage Area Flow (cfs)	Total Flow (cfs)	Number of Barrels	Culvert Size (ft)	Slope	Area (A)	Perimeter (P)	R/(A/P)	Length (ft)	Roughness (n)	Q _{Design} (CFS)	V _{Full-Flow} (FPS)	Upstream FL	Downstream FL	Change in Head (ft)	Hydraulic GradeLine %	Elevation of Hyd. Grad. Upstream (ft)	Elevation of Hyd. Grad. Downstream (ft)
Inlet A1	Inlet A2	0.84	0.84	0.45	0.38	0.38	5.00	5.00	8.32	1.00	3.14	3.14	1	1.5	0.007	1.77	4.71	0.375	28	0.013	8.87	5.02	279.38	279.18	0.03	0.09	280.71	280.68
Inlet A2	MH1	2.93	3.77	0.45	1.32	1.70	14.00	14.00	8.85	1.00	7.71	9.92	1	2	0.005	3.14	6.28	0.500	200	0.011	18.81	5.99	279.18	278.19	0.28	0.14	280.47	280.19
MH1	Inlet A4	0.00	0.00	0.00	0.00	0.00	0.00	14.56	5.76	1.00	0.00	9.76	1	2	0.005	3.14	6.28	0.500	42	0.011	18.80	6.02	278.19	277.88	0.06	0.13	280.04	279.88
Inlet A3	Inlet A4	0.15	0.15	0.45	0.07	0.07	5.00	5.00	8.32	1.00	0.56	0.56	1	1.5	0.007	1.77	4.71	0.375	28	0.013	8.87	5.02	279.18	278.98	0.00	0.00	280.48	280.48
Inlet A4	Inlet A5	0.10	4.02	0.45	0.05	1.81	5.00	14.67	5.74	1.00	0.37	10.38	1	2	0.005	3.14	6.28	0.500	324	0.011	18.80	6.02	277.98	276.36	0.49	0.15	279.10	278.61
Inlet A5	Inlet A6	0.23	4.25	0.45	0.10	1.91	5.00	15.57	5.59	1.00	0.86	10.70	1	2	0.005	3.14	6.28	0.500	37	0.011	19.15	6.10	276.36	276.17	0.06	0.16	278.61	278.55
Inlet A6	Inlet A7	1.47	4.88	0.45	0.66	2.20	14.00	15.67	5.58	1.00	8.87	12.25	1	2.5	0.005	4.91	7.85	0.625	28	0.013	29.00	5.91	276.17	276.03	0.02	0.09	278.55	278.53
Inlet A7	Inlet A8	1.46	1.46	0.45	0.66	0.66	13.00	13.00	10.47	1.25	8.60	8.60	1	1.5	0.007	1.77	4.71	0.375	28	0.013	8.87	5.02	278.68	278.48	0.04	0.14	280.02	279.98
Inlet A8	Inlet A9	1.38	2.84	0.45	0.62	1.28	13.00	13.09	6.01	1.00	5.74	7.68	1	2	0.005	3.14	6.28	0.500	285	0.011	18.73	5.96	278.48	277.08	0.24	0.08	279.32	279.08
Inlet A9	Inlet A10	0.53	0.53	0.45	0.24	0.24	5.00	5.00	8.32	1.00	1.98	1.98	1	1.5	0.004	1.77	4.71	0.375	57	0.013	6.22	3.52	277.23	277.03	0.02	0.04	278.55	278.53
Inlet A10	MH2	1.36	10.45	0.45	0.61	4.70	14.00	16.37	5.47	1.00	3.58	25.74	1	2.5	0.005	4.91	7.85	0.625	60	0.011	34.27	6.98	276.03	275.73	0.17	0.28	278.40	278.23
MH2	Inlet A12	0.00	10.45	0.45	0.00	4.70	0.00	16.46	9.45	1.25	0.00	55.58	1	2.5	0.005	4.91	7.85	0.625	301	0.011	34.33	6.99	272.80	271.29	3.94	0.28	274.63	274.29
Inlet A11	Inlet A12	1.25	1.25	0.45	0.56	0.56	5.00	5.00	8.32	1.00	4.68	4.68	1	2	0.006	3.14	6.28	0.500	32	0.013	17.88	5.69	271.49	271.29	0.01	0.04	273.30	273.28
Inlet A12	Inlet A13	0.48	12.18	0.45	0.22	5.48	5.00	16.55	9.45	1.00	1.80	29.86	1	2.5	0.005	4.91	7.85	0.625	35	0.011	33.78	6.88	270.82	270.65	0.13	0.38	273.28	273.15
Inlet A13	Inlet A16	1.40	13.58	0.45	0.63	6.11	14.00	16.64	5.44	1.00	3.88	33.21	1	3	0.005	7.07	9.42	0.750	28	0.013	47.16	6.67	270.18	270.04	0.07	0.25	273.11	273.04
Inlet A14	Inlet A15	1.32	1.32	0.45	0.59	0.59	13.00	13.00	6.03	1.00	3.58	3.58	1	1.5	0.007	1.77	4.71	0.375	28	0.013	8.87	5.02	273.61	273.41	0.09	0.12	274.54	274.51
Inlet A15	Inlet A16	1.29	2.61	0.45	0.58	1.17	13.00	13.09	6.01	1.00	3.50	7.06	1	1.5	0.005	1.77	4.71	0.375	285	0.011	8.60	4.87	273.41	272.04	0.92	0.32	274.46	273.54
Inlet A16	MH3	1.25	17.44	0.45	0.56	7.85	14.00	17.61	5.30	1.00	3.29	41.58	1	3	0.005	7.07	9.42	0.750	60	0.011	55.73	7.88	270.04	269.74	0.17	0.28	272.71	272.74
MH3	Inlet A19	0.00	17.44	0.45	0.00	7.85	0.00	17.74	5.28	1.00	0.00	41.45	1	3	0.005	7.07	9.42	0.750	69	0.011	55.33	7.83	269.74	269.40	0.19	0.28	272.59	272.40
Inlet A17	Inlet A18	0.12	0.12	0.45	0.05	0.05	5.00	5.00	8.32	1.00	0.45	0.45	1	1.5	0.007	1.77	4.71	0.375	28	0.013	8.87	5.02	270.18	269.98	0.00	0.00	271.56	271.56
Inlet A18	Inlet A19	0.52	0.64	0.45	0.23	0.29	5.00	5.09	8.27	1.00	1.95	2.38	1	1.5	0.005	1.77	4.71	0.375	228	0.011	8.78	4.97	270.54	269.40	0.08	0.04	271.96	271.88
Inlet A19	Inlet A20	0.18	18.26	0.45	0.08	8.22	5.00	17.89	5.26	1.00	0.67	43.24	1	3	0.005	7.07	9.42	0.750	28	0.013	47.16	6.67	268.90	268.76	0.12	0.42	271.88	271.76
Inlet A20	MH4	0.58	18.84	0.45	0.26	8.48	5.00	17.96	5.25	1.00	2.17	44.53	1	3	0.005	7.07	9.42	0.750	60	0.011	55.73	7.88	266.37	266.07	0.19	0.32	269.26	269.07
MH4	MH5	0.00	18.84	0.45	0.00	8.48	0.00	18.08	5.24	1.00	0.00	44.39	1	3	0.005	7.07	9.42	0.750	135	0.011	55.53	7.86	264.07	263.40	0.43	0.32	268.83	268.40
Inlet A21	MH5	1.12	1.12	0.45	0.50	0.50	12.00	12.00	10.81	1.25	6.81	6.81	1	1.5	0.005	1.77	4.71	0.375	44	0.011	8.78	4.97	270.54	269.40	0.13	0.09	269.75	269.62
MH5	Inlet A22	0.00	19.96	0.45	0.00	8.98	0.00	18.37	5.20	1.00	0.00	46.69	1	3	0.005	7.07	9.42	0.750	138	0.011	55.73	7.88	261.40	260.71	0.48	0.35	264.19	263.71
Inlet A22	MH6	1.11	21.07	0.45	0.50	9.48	13.00	18.38	5.20	1.00	3.01	49.28	1	3	0.005	7.07	9.42	0.750	87	0.011	56.05	7.93	258.71	258.27	0.34	0.39	261.61	261.27
Inlet A23	MH6	1.80	1.80	0.45	0.81	0.81	14.00	14.00	5.85	1.00	4.74	4.74	1	1.5	0.005	1.77	4.71	0.375	37	0.013	7.72	4.37	260.11	259.91	0.08	0.20	261.49	261.41
MH6	MH7	0.00	22.87	0.45	0.00	10.29	0.00	18.56	5.17	1.00	0.00	53.24	1	3.5	0.005	9.62	11.00	0.875	152	0.013	84.07	8.74	256.27	255.51	0.30	0.20	259.31	259.03
Inlet A24	MH7	0.00	22.87	0.45	0.00	10.29	0.00	18.56	5.14	1.00	0.00	52.86	1	3.5	0.005	9.62	11.00	0.875	139	0.011	84.07	8.74	253.51	252.86	0.26	0.20	256.62	256.36
Inlet A25	MH8	4.40	23.27	0.45	0.18	10.47	15.00	19.00	6.66	1.00	1.20	69.70	1	3.5	0.005	9.62	11.00	0.875	119	0.011	83.72	8.70	250.56	250.27	0.41	0.34	254.18	253.77
Inlet A25	MH9	1.92	1.92	0.45	0.86	0.86	15.00	19.10	5.10	1.00	4.91	4.41	1	1.5	0.005	1.77	4.71	0.375	43	0.013	7.16	4.05	250.47	250.27	0.08	0.18	251.83	251.77
Inlet A26	MH8	0.00	19.96	0.45	0.00	8.98	0.00	18.37	5.20	1.00	0.00	46.69	1	3	0.005	7.07	9.42	0.750	138	0.011	55.73	7.88	261.40	260.71	0.48	0.35	264.19	263.71
MH9	Inlet A27	0.00	25.19	0.45	0.00	11.34	0.00	19.51	5.05	1.00	0.00	57.29	1	3.5	0.005	9.62	11.00	0.875	119	0.011	70.94	7.96	245.66	245.07	0.39	0.32	248.56	248.57
Inlet A26	OUT	1.84	27.03	0.45	0.83	12.16	15.00	19.78	5.02	1.00	4.71	61.08	1	3.5	0.005	9.62	11.00	0.875	132	0.011	84.07	8.74	241.81	241.15	0.35	0.26	245.00	244.65

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HERITAGE GROVE CT PROFILE
SCALE:
1"=40' HORIZ
1"=4' VERT



SAN LEAD TABLE			
STATION & OFFSET	LENGTH	START FL	END FL
0+92.74, -74.13	17.78	283.03	282.85
1+03.50, 70.83	96.69	283.69	282.72
2+82.74, -46.02	16.52	282.34	282.17
2+93.53, 46.00	73.52	282.88	282.14
4+72.74, -46.04	18.20	281.73	281.54
4+83.57, 46.00	73.85	282.25	281.51

LEGEND:

- 1" DOUBLE WATER METER
- 1" SINGLE WATER METER
- 6" DOUBLE SAN SWR LEAD
- 4" SINGLE SAN SWR LEAD

NOTES:

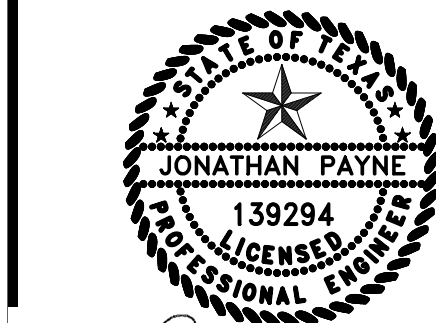
- ALL LONGSIDE LEADS SHALL INCLUDE STACKS, RISERS, TEES, WYES, AND ALL APPURTENANCES TO END AT A DEPTH OF 4'-5' BELOW NATURAL GROUND. (SEE DETAIL SHT. 35)
- ALL SANITARY SEWER SERVICE LINES TO BE 1% SLOPE, UNLESS OTHERWISE NOTED
- ALL FIRE HYDRANTS TO BE LOCATED 3' BEHIND BACK OF CURB WITH BOTTOM FLANGE 3" ABOVE TOP OF CURB.
- ALL UTILITY LEADS UNDER PAVEMENT IN CUL-DE-SACS AND/OR KNUCKLES TO BE BACKFILLED WITH CEMENT STABILIZED SAND UP TO PAVEMENT SUBGRADE.
- SEE PROFILE FOR ACTUAL LOCATION OF EACH WATERLINE APPURTENANCE. PROFILE VIEW GOVERNS OVER PLAN VIEW.
- HGL IS FOR THE 100-YR EVENT IN STORM SEWER.
- WATER AND SANITARY SHALL MAINTAIN 9' SEPARATION.
- STORM AND SANITARY SHALL MAINTAIN 5' SEPARATION.
- 4"x12" CURB TO BE IN FRONT OF ALL LOTS, AND 6" CURBS TO BE LOCATED ON ALL SIDE LOT, MEDIANS, ECT.
- ALL UTILITY LEADS UNDER PAVEMENT TO BE BACKFILLED WITH CEMENT STABILIZED SAND UP TO PAVEMENT SUBGRADE.
- ALL MANHOLES TO BE SET TO FINISHED GRADE WITH A MINIMUM OF 6" OF ADJUSTMENT RINGS.
- ALL TOP OF CURB ELEVATIONS ARE BASED ON 4" CURB. CONTRACTOR SHALL ADD .17 FEET TO THE TOP OF CURB ELEVATIONS SHOWN ON PLANS TO DETERMINE TOP OF CURB ELEVATIONS WHERE 6" CONCRETE CURB IS PROPOSED.
- ALL PUBLIC WATERLINES SHALL BE C-900 DR-18 PVC UNLESS OTHERWISE NOTED.
- ALL PUBLIC SEWER LINES SHALL BE SDR-26 PVC UNLESS OTHERWISE NOTED.
- CONTRACTOR TO STAMP THE FACE OF THE CURB "S" AT THE LOCATION OF EACH SANITARY SEWER LEAD AND "W" AT THE LOCATION OF EACH WATER LEAD.

CITY OF MONTGOMERY, CITY ENGINEER
SIGNATURE VALID FOR ONE (1) YEAR

DATE

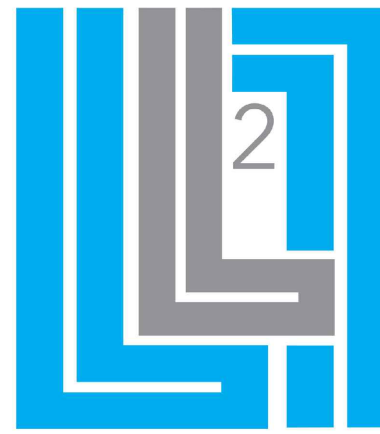
DRAWING ISSUE			
#	DATE	BY	* COMMENT
1	04/29/25	JP	FOR PERMIT

DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	SHEET		
1" = 40' (24x36)	16		
1" = 80' (11x17)			



Jonathan Payne 04/29/2025

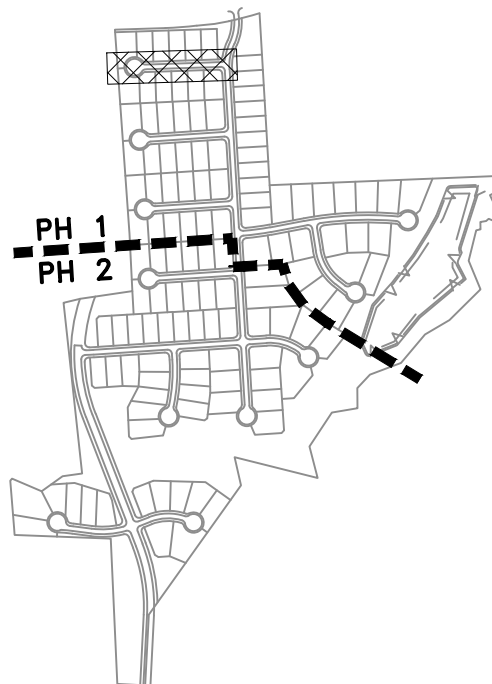
*PLANS NOT RELEASED FOR CONSTRUCTION UNLESS INDICATED ABOVE



L SQUARED ENGINEERING
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CONROE, TEXAS 77384
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CLIENT INFORMATION
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DANIEL GILLHAM
16340 PARK TEN PLACE, SUITE 250
HOUSTON, TX 77084

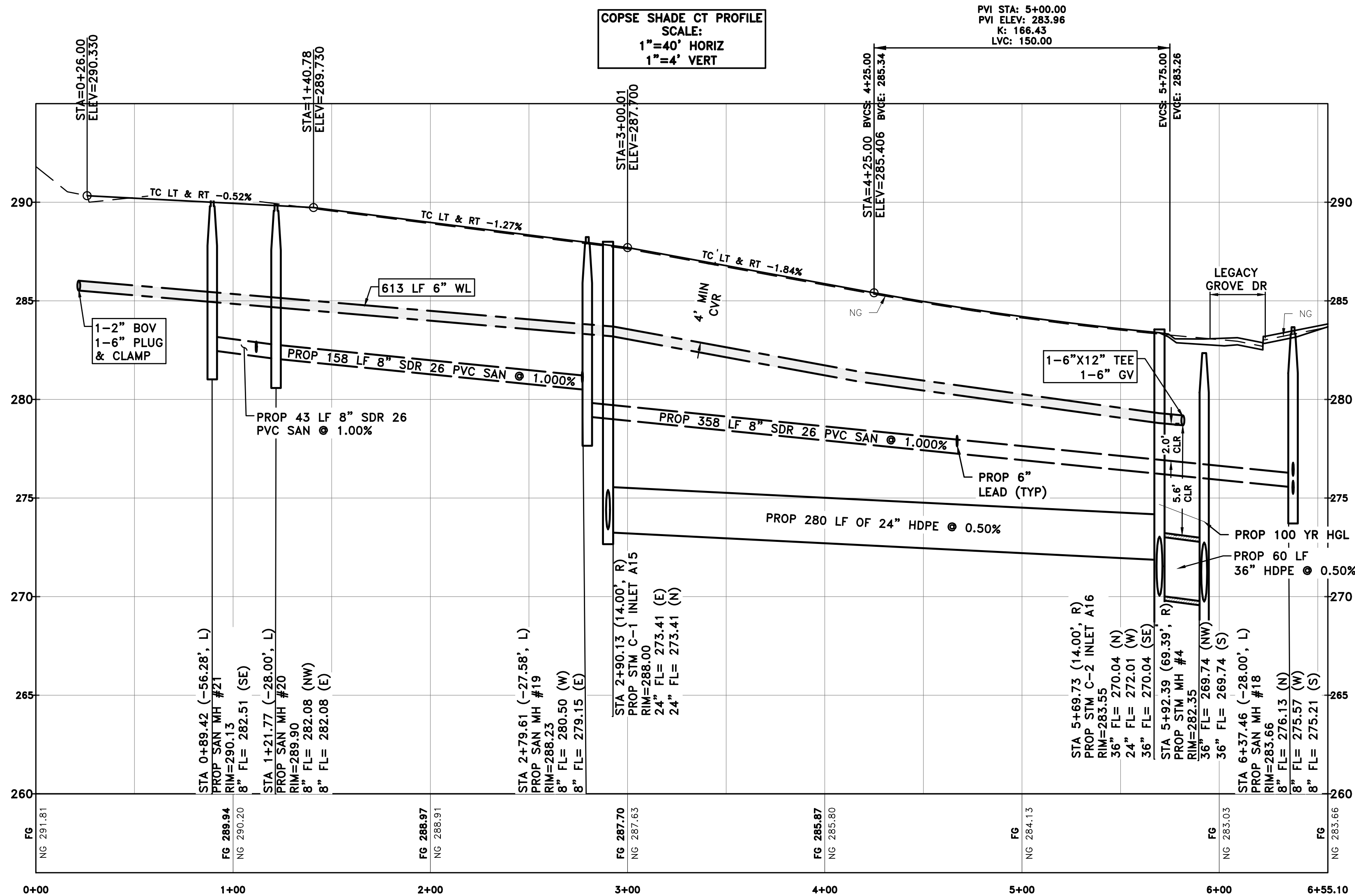
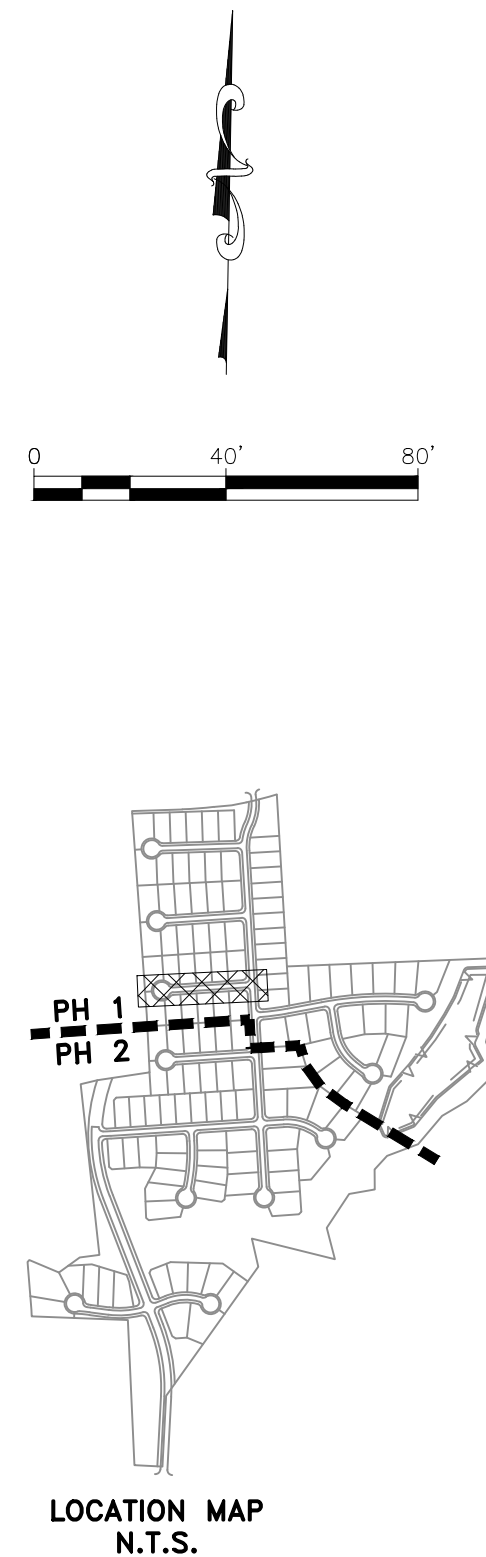
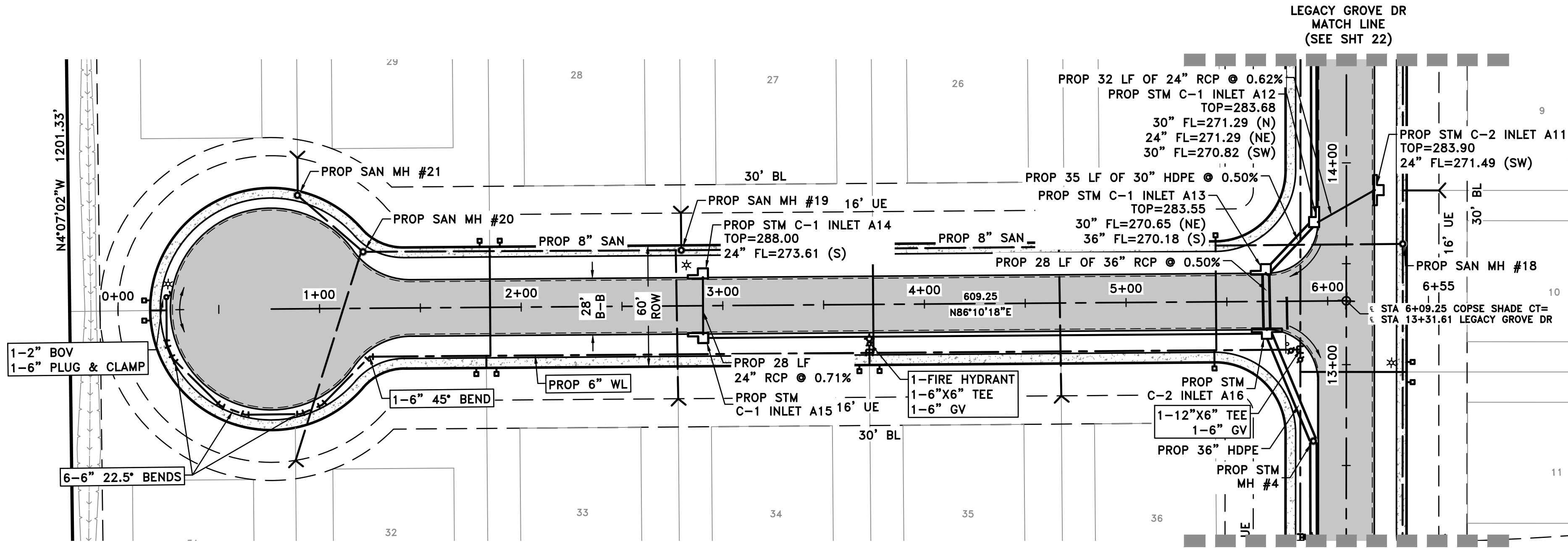
PROJECT ADDRESS
LONESTAR PKWY SH 105
MONTGOMERY, TX 77356



LOCATION MAP
N.T.S.

LEGACY GROVE SECTION 1 WS&D HERITAGE GROVE CT PLAN AND PROFILE 0+00-END

L:\SHARED\L2 ENGINEERING PROJECTS\ENGINEERING PROJECTS\11020 - TRI POINTE 108\03 CAD\DESIGN SET\PHASE 1\12 STREET C P&P.DWG Apr. 30, 2025-8:03 AM LAURYN JOHNSON



SAN LEAD TABLE				
STATION & OFFSET	LENGTH	START FL	END FL	
0+87.52, 75.12	106.93	283.21	282.14	
0+89.56, -74.78	16.33	282.74	282.58	
2+77.51, 46.00	73.59	281.35	280.61	
2+79.56, -46.00	16.42	279.38	279.21	
4+67.52, 46.00	73.81	278.10	277.36	
4+69.56, -46.00	18.20	277.51	277.33	

Station	Elevation	Grade Percent (%)	Location
4+25.00	285.34'	-1.84%	PVC
4+26.00	285.32'	-1.83%	
4+36.00	285.14'	-1.80%	
4+46.00	284.96'	-1.74%	
4+56.00	284.80'	-1.68%	
4+66.00	284.63'	-1.62%	
4+76.00	284.48'	-1.56%	
4+86.00	284.33'	-1.50%	
4+96.00	284.18'	-1.44%	
5+00.00	284.13'	-1.40%	Sag
5+06.00	284.05'	-1.37%	
5+16.00	283.92'	-1.32%	
5+26.00	283.79'	-1.26%	
5+36.00	283.67'	-1.20%	
5+46.00	283.56'	-1.14%	
5+56.00	283.45'	-1.08%	
5+66.00	283.35'	-1.02%	
5+75.00	283.26'	-0.96%	PVT

LEGEND:

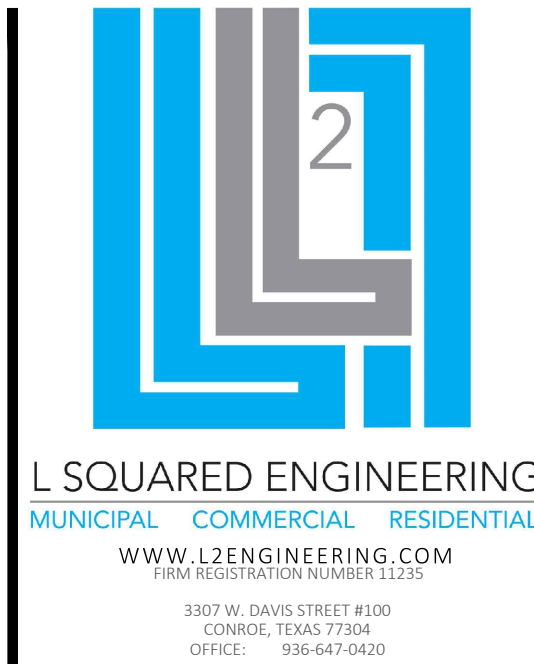
- 1" DOUBLE WATER METER
- 1" SINGLE WATER METER
- 6" DOUBLE SAN SWR LEAD
- 4" SINGLE SAN SWR LEAD

NOTES:

- ALL LONGSIDE LEADS SHALL INCLUDE STACKS, RISERS, TEES, WYES, AND ALL APPURTENANCES TO END AT A DEPTH OF 4'-5' BELOW NATURAL GROUND. (SEE DETAIL SHT. 35)
- ALL SANITARY SEWER SERVICE LINES TO BE 1% SLOPE, UNLESS OTHERWISE NOTED
- ALL FIRE HYDRANTS TO BE LOCATED 3' BEHIND BACK OF CURB WITH BOTTOM FLANGE 3" ABOVE TOP OF CURB.
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CITY OF MONTGOMERY, CITY ENGINEER
SIGNATURE VALID FOR ONE (1) YEAR

DATE

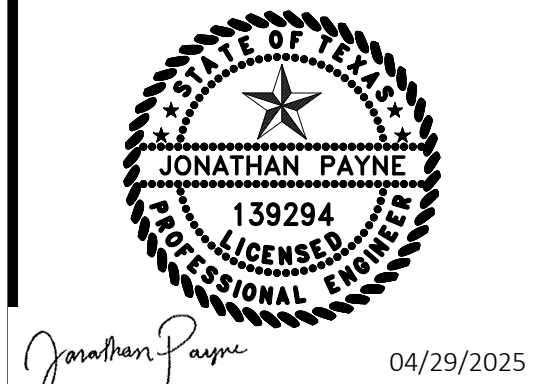


CLIENT INFORMATION
TRI POINTE HOMES
DANIEL GILLHAM
16340 PARK TEN PLACE, SUITE 250
HOUSTON, TX 77084
PROJECT ADDRESS
LONESTAR PKWY SH 105
MONTGOMERY, TX 77356

LEGACY GROVE SECTION 1 WS&D COPSE SHADE CT PLAN AND PROFILE 0+00-END

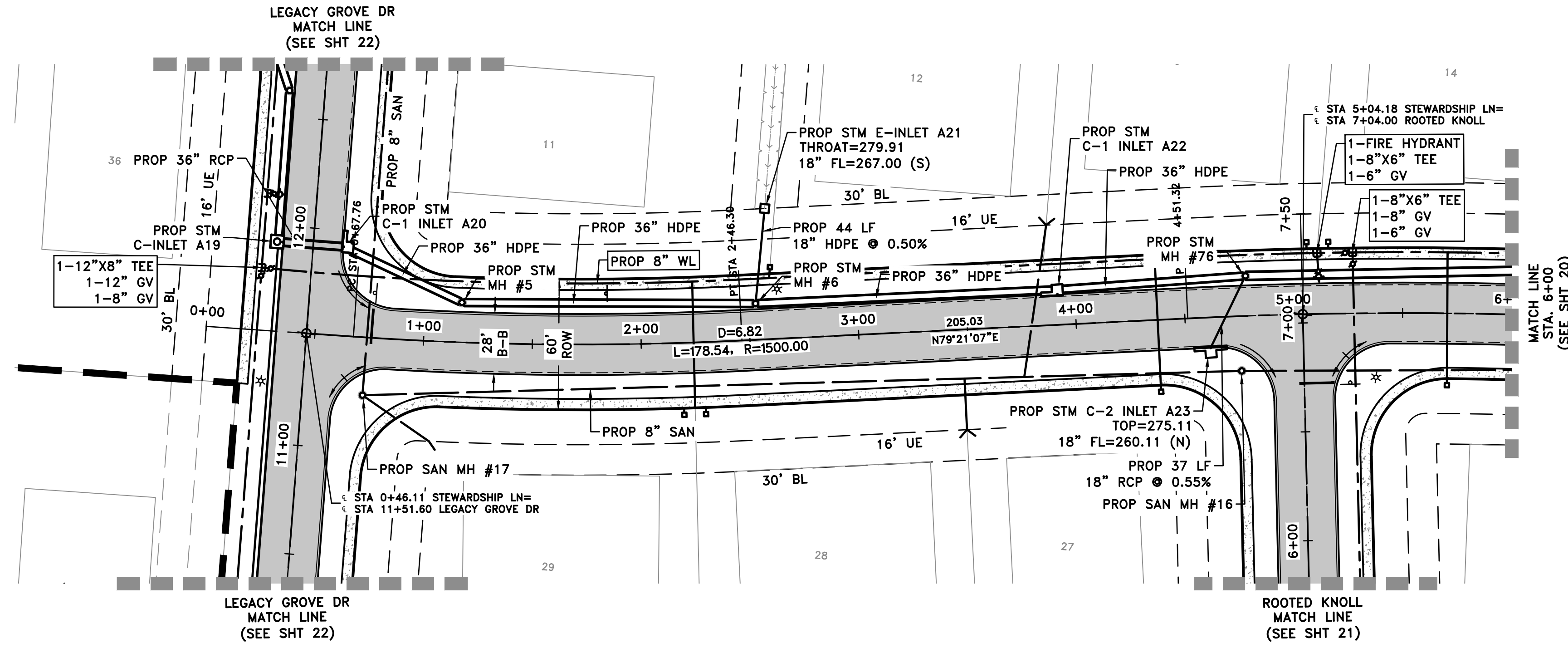
DRAWING ISSUE			
#	DATE	BY	* COMMENT
1	04/29/25	JP	FOR PERMIT

DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	1" = 40' (24x36) 1" = 80' (11x17)	SHEET	18

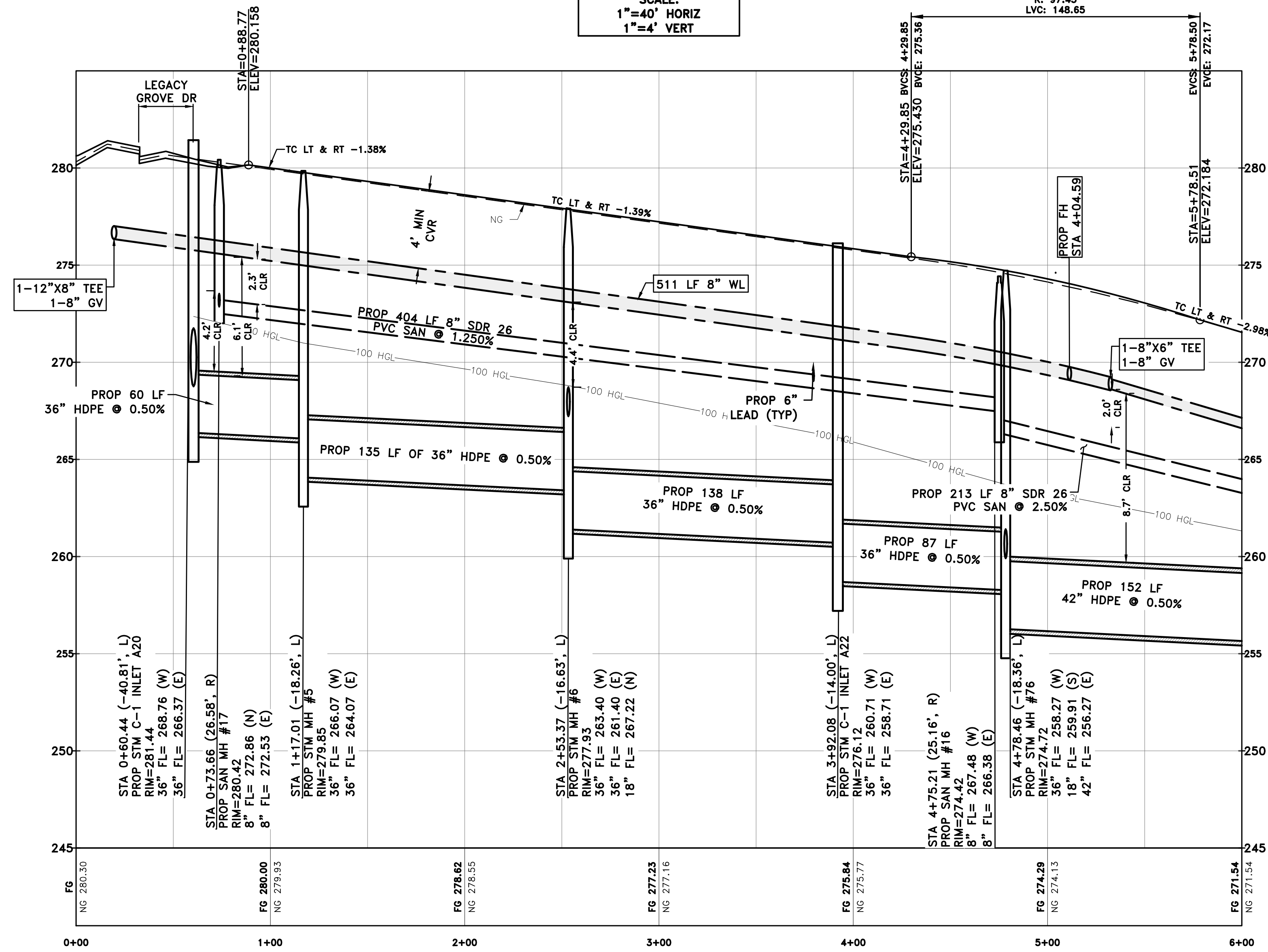


*PLANS NOT RELEASED FOR CONSTRUCTION UNLESS INDICATED ABOVE

L:\SHARED\L2 ENGINEERING PROJECTS\ENGINEERING PROJECTS\11020 - TRI POINTE 108\03 CAD\DESIGN SET\PHASE 1\13 STREET E P&P.DWG Apr. 30, 2025-8:06 AM LAURYN JOHNSON

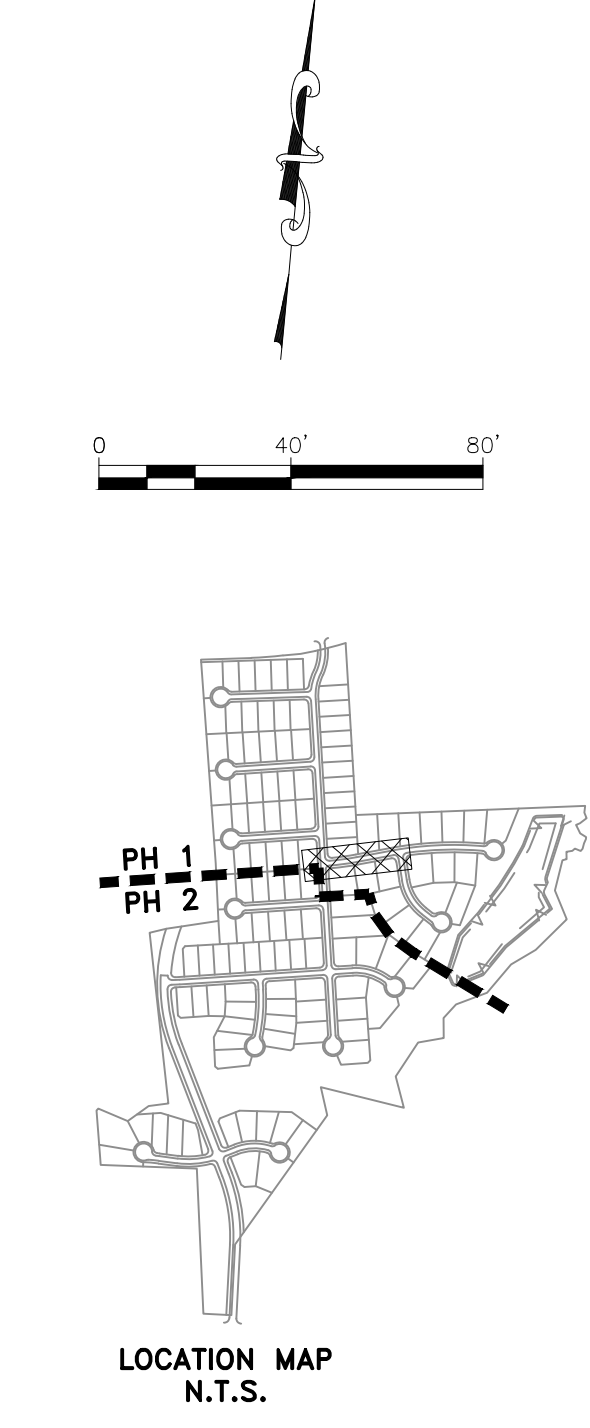


STEWARDSHIP LN PROFILE
SCALE:
1"=40' HORIZ
1"=4' VERT



SAN LEAD TABLE			
STATION & OFFSET	LENGTH	START FL	END FL
1+04.53, 46.00	35.11	272.94	272.59
3+47.54, 46.00	23.48	269.39	269.16
3+88.47, -46.00	70.42	269.52	268.81

Station	Elevation	Grade Percent (%)	Location
4+29.85	275.36'	-1.39%	PVC
4+32.61	275.32'	-1.40%	
4+42.61	275.17'	-1.47%	
4+52.61	275.02'	-1.58%	
4+62.61	274.85'	-1.68%	
4+72.61	274.67'	-1.79%	
4+82.61	274.48'	-1.90%	
4+92.61	274.28'	-2.01%	
5+02.61	274.07'	-2.11%	
5+04.18	274.03'	-2.18%	Crest
5+12.61	273.85'	-2.23%	
5+22.61	273.61'	-2.33%	
5+32.61	273.37'	-2.43%	
5+42.61	273.11'	-2.54%	
5+52.61	272.85'	-2.65%	
5+62.61	272.57'	-2.76%	
5+72.61	272.29'	-2.86%	
5+78.50	272.11'	-2.95%	PVT



- LEGEND:
- 1" DOUBLE WATER METER
 - 1" SINGLE WATER METER
 - 6" DOUBLE SAN SWR LEAD
 - 4" SINGLE SAN SWR LEAD

- NOTES:
- ALL LONGSIDE LEADS SHALL INCLUDE STACKS, RISERS, TEES, WYES, AND ALL APPURTENANCES TO END AT A DEPTH OF 4'-5' BELOW NATURAL GROUND. (SEE DETAIL SHT. 35)
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CITY OF MONTGOMERY, CITY ENGINEER
SIGNATURE VALID FOR ONE (1) YEAR

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DANIEL GILLHAM
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PROJECT ADDRESS
LONESTAR PKWY SH 105
MONTGOMERY, TX 77356

LEGACY GROVE SECTION 1 WS&D STEWARDSHIP LN PLAN AND PROFILE 0+00-6+00

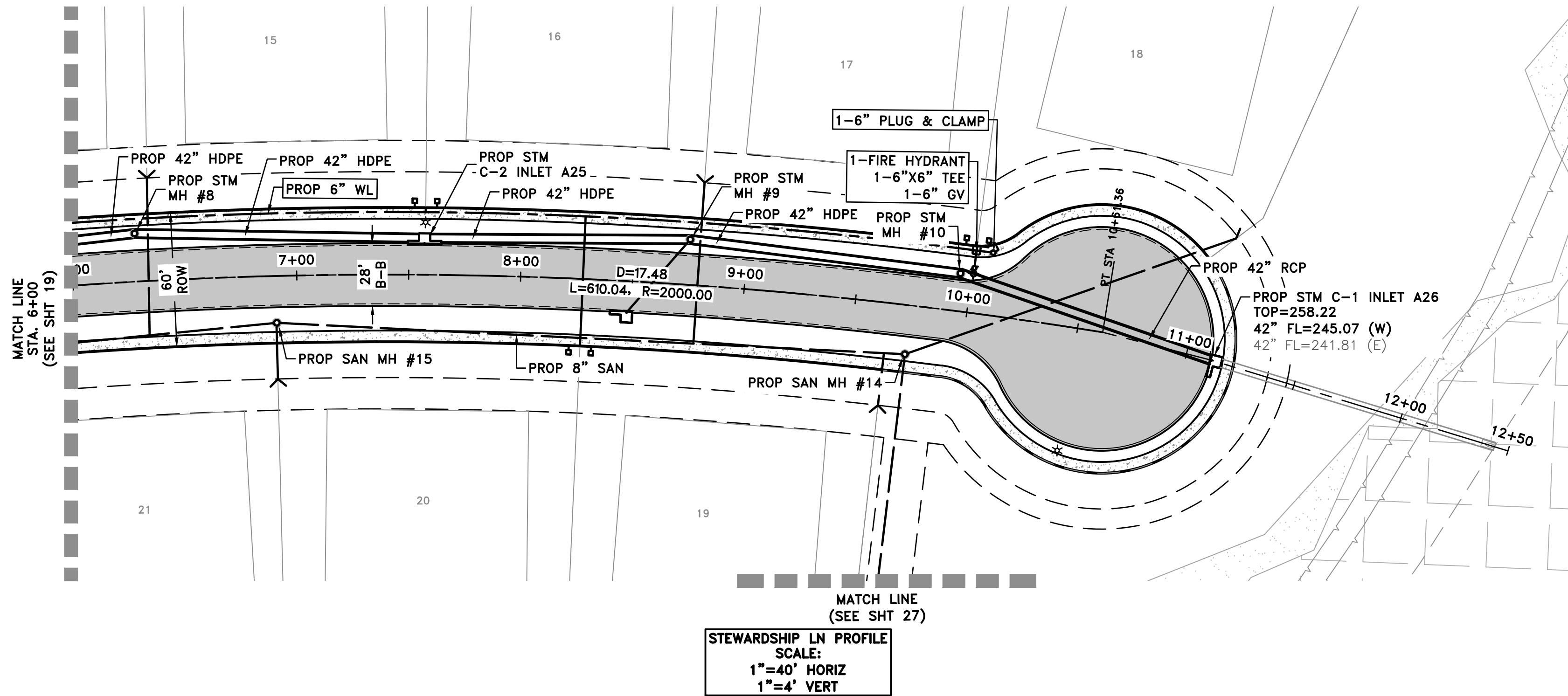
DRAWING ISSUE			
#	DATE	BY	* COMMENT
1	04/29/25	JP	FOR PERMIT

DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	1" = 40' (24x36) 1" = 80' (11x17)	SHEET	19

JONATHAN PAYNE
139294
PROFESSIONAL ENGINEER
STATE OF TEXAS
04/29/2025

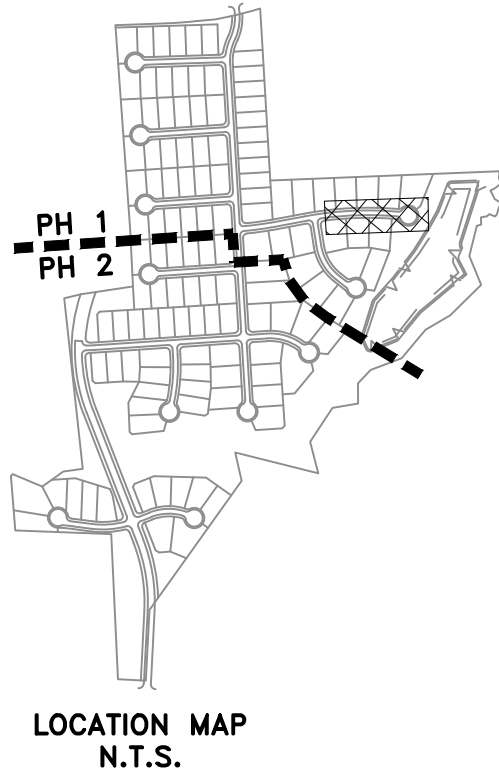
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STEWARDSHIP LN PROFILE
SCALE:
1"=40' HORIZ
1"=4' VERT

SAN LEAD TABLE			
STATION & OFFSET	LENGTH	START FL	END FL
6+35.42, -46.00	70.38	264.27	262.57
6+90.45, 46.00	23.07	262.42	261.19
8+79.07, -46.00	72.05	258.11	254.99
11+08.66, -55.43	154.77	256.62	252.67

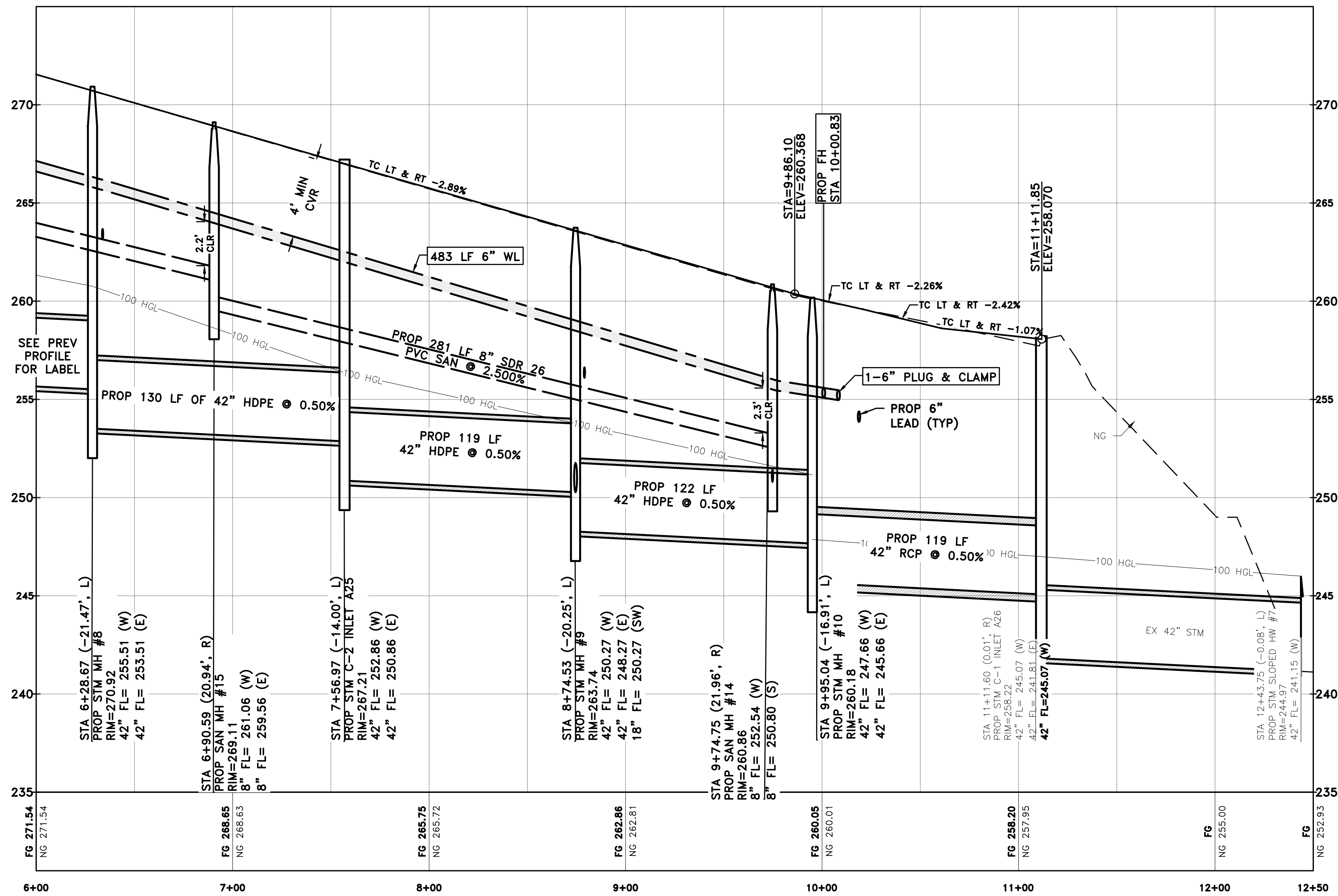


LEGEND:

- 1" DOUBLE WATER METER
- 1" SINGLE WATER METER
- 6" DOUBLE SAN SWR LEAD
- 4" SINGLE SAN SWR LEAD

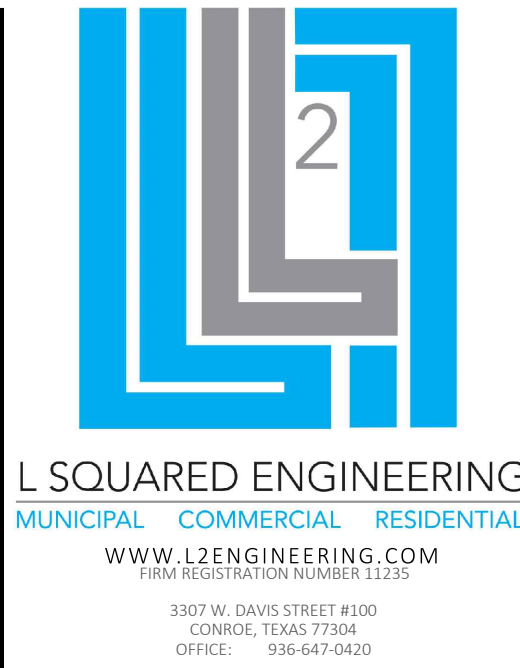
NOTES:

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- ALL SANITARY SEWER SERVICE LINES TO BE 1% SLOPE, UNLESS OTHERWISE NOTED
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CITY OF MONTGOMERY, CITY ENGINEER
SIGNATURE VALID FOR ONE (1) YEAR

DATE

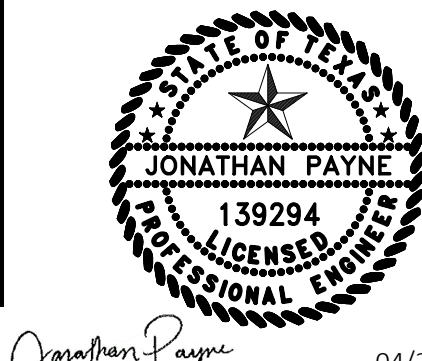


CLIENT INFORMATION
TRI POINTE HOMES
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16340 PARK TEN PLACE, SUITE 250
HOUSTON, TX 77084
PROJECT ADDRESS
LONESTAR PKWY SH 105
MONTGOMERY, TX 77356

LEGACY GROVE
SECTION 1 WS&D
STEWARDSHIP LN PLAN AND
PROFILE 6+00-END

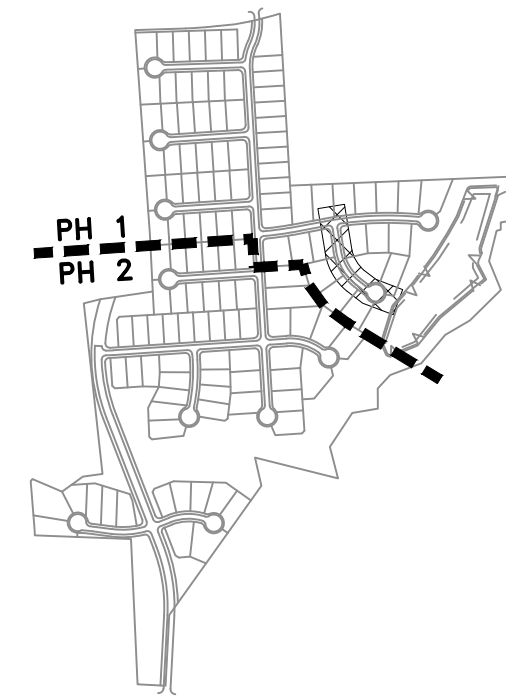
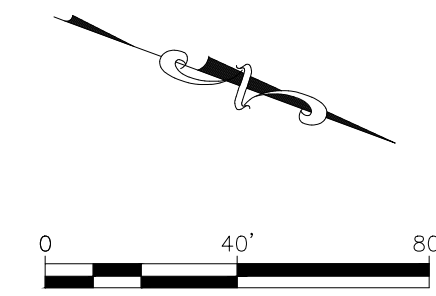
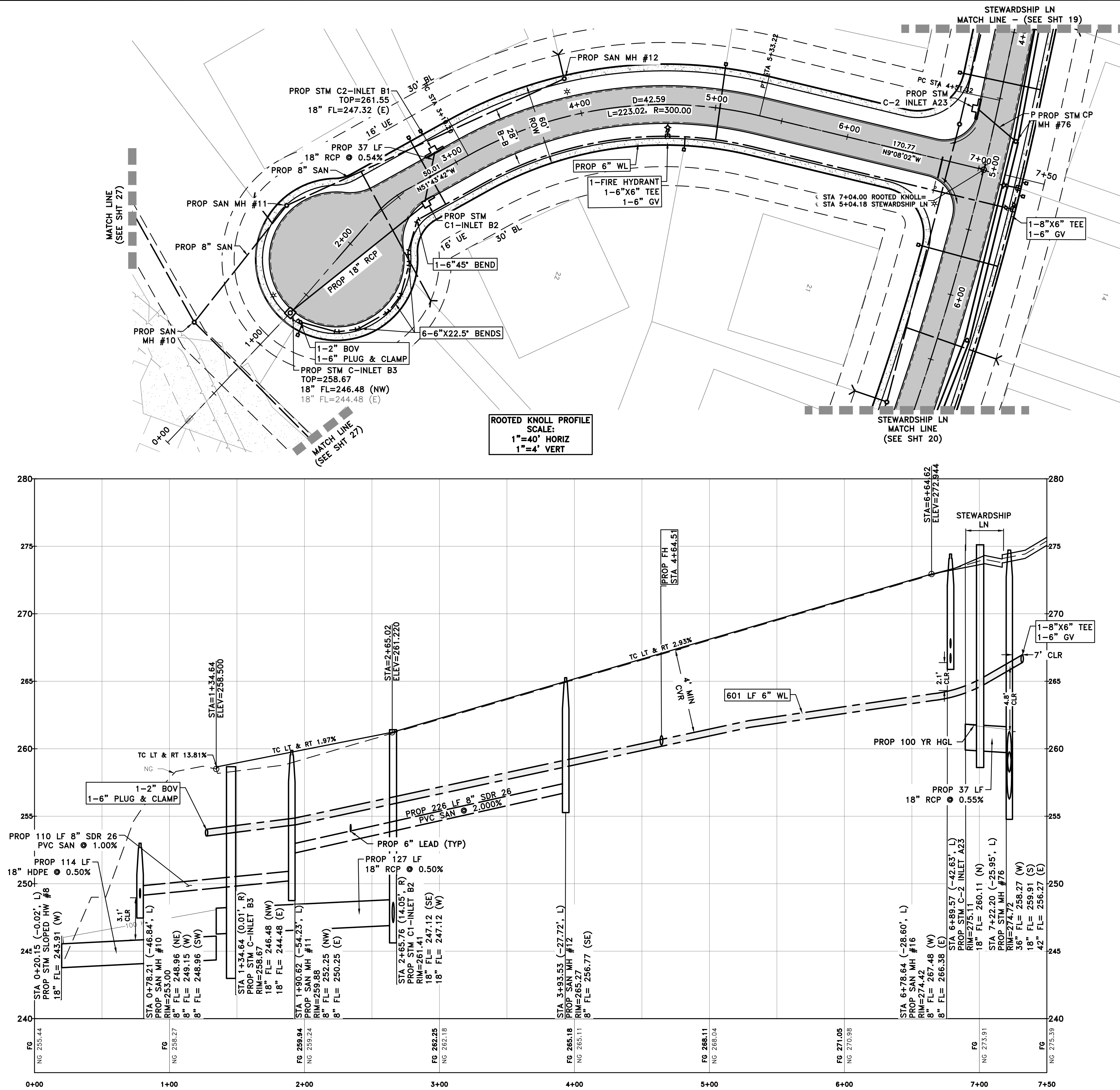
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#	DATE	BY	* COMMENT
1	04/29/25	JP	FOR PERMIT

DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	1" = 40' (24x36) 1" = 80' (11x17)	SHEET	20







Jonathan Payne 04/29/2025

*PLANS NOT RELEASED FOR CONSTRUCTION UNLESS INDICATED ABOVE



LOCATION MAP
N.T.S.

LEGEND:

-  1" DOUBLE WATER METER
 1" SINGLE WATER METER
 6" DOUBLE SAN SWR LEAD
 4" SINGLE SAN SWR LEAD

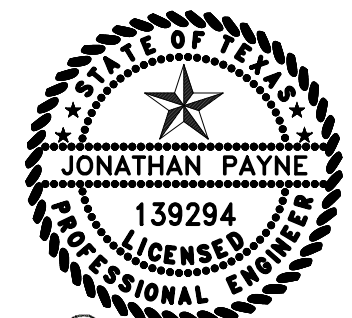
SAN LEAD TABLE			
STATION & OFFSET	LENGTH	START FL	END FL
1+78.16, -75.73	22.71	251.39	251.16
2+07.12, 72.59	108.70	254.63	253.54
3+93.33, -46.00	16.00	256.97	256.81

NOTES:

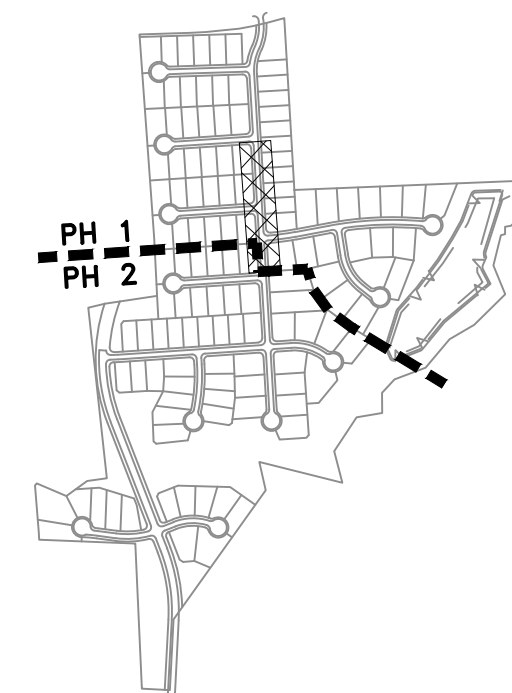
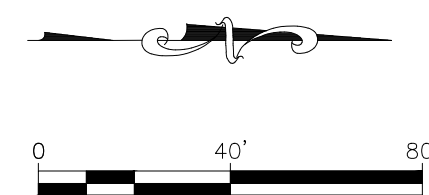
1. ALL LONGSIDE LEADS SHALL INCLUDE STACKS, RISERS, TEES, WYES, AND ALL APPURTENANCES TO END AT A DEPTH OF 4'-5' BELOW NATURAL GROUND. (SEE DETAIL SHT. 35)
2. ALL SANITARY SEWER SERVICE LINES TO BE 1X SLOPE, UNLESS OTHERWISE NOTED
3. ALL FIRE HYDRANTS TO BE LOCATED 3' BEHIND BACK OF CURB WITH BOTTOM FLANGE 3" ABOVE TOP OF CURB.
4. ALL UTILITY LEADS UNDER PAVEMENT IN CUL-DE-SACS AND/OR KNUCKLES TO BE BACKFILLED WITH CEMENT STABILIZED SAND UP TO PAVEMENT SUBGRADE.
5. SEE PROFILE FOR ACTUAL LOCATION OF EACH WATERLINE APPURTENANCE. PROFILE VIEW GOVERNS OVER PLAN VIEW.
6. HGL IS FOR THE 100-YR EVENT IN STORM SEWER.
7. WATER AND SANITARY SHALL MAINTAIN 9' SEPARATION.
8. STORM AND SANITARY SHALL MAINTAIN 5' SEPARATION.
9. 4"x12" CURB TO BE IN FRONT OF ALL LOTS, AND 6" CURBS TO BE LOCATED ON ALL SIDE LOT, MEDANS, ECT.
10. ALL UTILITY LEADS UNDER PAVEMENT TO BE BACKFILLED WITH CEMENT STABILIZED SAND UP TO PAVEMENT SUBGRADE.
11. ALL MANHOLES TO BE SET TO FINISHED GRADE WITH A MINIMUM OF 6" OF ADJUSTMENT RINGS.
12. ALL TOP OF CURB ELEVATIONS ARE BASED ON 4" CURB. CONTRACTOR SHALL ADD .17 FEET TO THE TOP OF CURB ELEVATIONS SHOWN ON PLANS TO DETERMINE TOP OF CURB ELEVATIONS WHERE 6" CONCRETE CURB IS PROPOSED.
13. ALL PUBLIC WATERLINES SHALL BE C-90 DR-18 PVC UNLESS OTHERWISE NOTED.
14. ALL PUBLIC SEWER LINES SHALL BE SDR-26 PVC UNLESS OTHERWISE NOTED.
15. CONTRACTOR TO STAMP THE FACE OF THE CURB "S" AT THE LOCATION OF EACH SANITARY SEWER LEAD AND "W" AT THE LOCATION OF EACH WATER LEAD.

DRAWING ISSUE			
#	DATE	BY	* COMMENT
1	04/29/25	JP	FOR PERMIT

DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE		SHEET	
1" = 40' (24x36)		21	



Jonathan Payne 04/29/2025



LOCATION MAP
N.T.S.

LEGEND:

1" DOUBLE WATER METER

1" SINGLE WATER METER

Y 6" DOUBLE SAN SWR LEAD

4" SINGLE SAN SWR LEAD

SAN LEAD TABLE			
STATION & OFFSET	LENGTH	START FL	END FL
12+12.17, 45.88	17.97	274.00	273.82
13+86.36, 45.90	17.91	276.65	276.47
15+66.36, 45.93	16.11	278.55	278.39

SAN LEAD TABLE

STATION & OFFSET	LENGTH	START FL	END FL
12+12.17, 45.88	17.97	274.00	273.82
13+86.36, 45.90	17.91	276.65	276.47
15+66.36, 45.93	16.11	278.55	278.39

NOTES:

1. ALL LONGSIDE LEADS SHALL INCLUDE STACKS, RISERS, TEES, WYES, AND ALL APPURTENANCES TO END AT A DEPTH OF 4'-5" BELOW NATURAL GROUND. (SEE DETAIL SHT. 35)
2. ALL SANITARY SEWER SERVICE LINES TO BE 1% SLOPE, UNLESS OTHERWISE NOTED
3. ALL FIRE HYDRANTS TO BE LOCATED 3' BEHIND BACK OF CURB WITH BOTTOM FLANGE 3' ABOVE TOP OF CURB.
4. ALL UTILITY LEADS UNDER PAVEMENT IN CUL-DE-SACS AND/OR KNUCKLES TO BE BACKFILLED WITH CEMENT STABILIZED SAND UP TO PAVEMENT SUBGRADE.
5. SEE PROFILE FOR ACTUAL LOCATION OF EACH WATERLINE APPURTENANCE. PROFILE VIEW GOVERNS OVER PLAN VIEW.
6. HGL IS FOR THE 100-YR EVENT IN STORM SEWER.
7. WATER AND SANITARY SHALL MAINTAIN 9' SEPARATION.
8. STORM AND SANITARY SHALL MAINTAIN 5' SEPARATION.
9. 4"x12" CURB TO BE IN FRONT OF ALL LOTS, AND, 6" CURBS TO BE LOCATED ON BE SIDE LOT, MEDANS, ECT.
10. ALL UTILITY LEADS UNDER PAVEMENT TO BE BACKFILLED WITH CEMENT STABILIZED SAND UP TO PAVEMENT SUBGRADE.
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13. ALL PUBLIC WATERLINES SHALL BE C-900 DR-18 PVC UNLESS OTHERWISE NOTED.
14. ALL PUBLIC SEWER LINES SHALL BE SDR-26 PVC UNLESS OTHERWISE NOTED.
15. CONTRACTOR TO STAMP THE FACE OF THE CURB "3" AT THE LOCATION OF EACH SANITARY SEWER LEAD AND "W" AT THE LOCATION OF EACH WATER LEAD.

DRAWING ISSUE

#	DATE	BY	* COMMENT
1	04/29/25	JP	FOR PERMIT

DRAWING INFORMATION

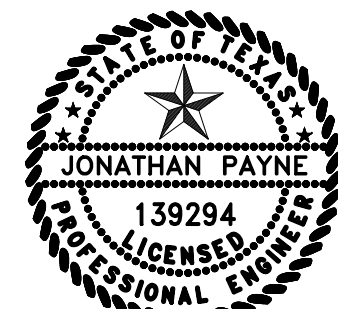
PROJECT	11020	TDLR
DRAWN	LMJ	CHECKED

SCALE

1" = 40' (24x36)

1" = 80' (11x17)

22

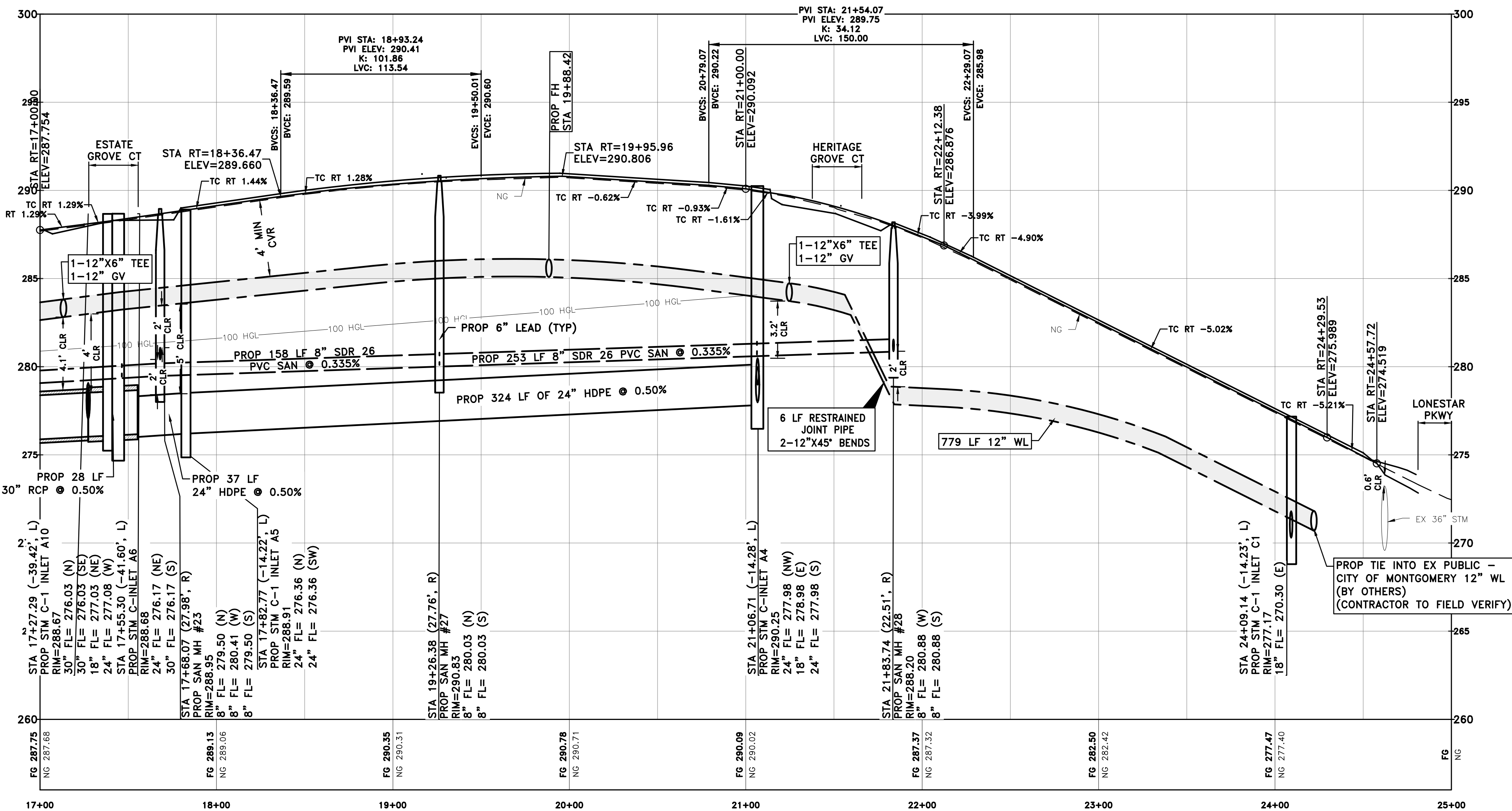
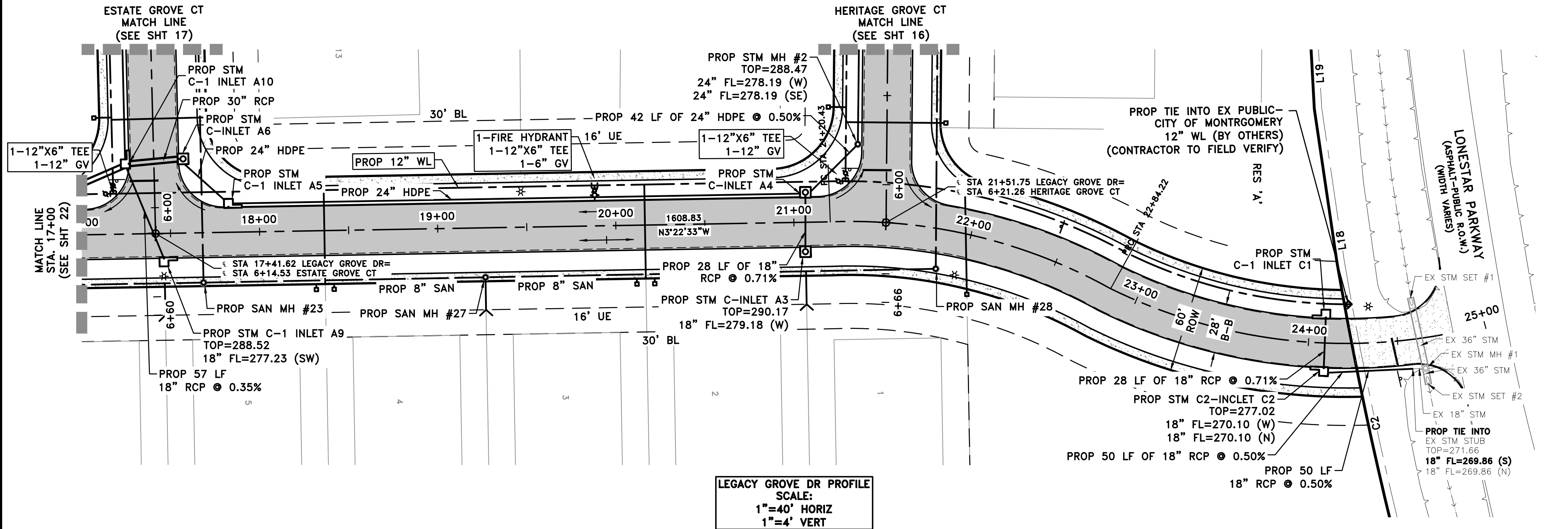


Jonathan Payne

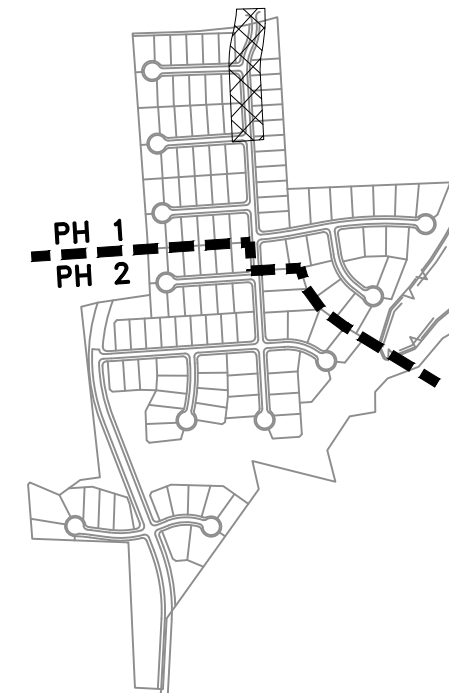
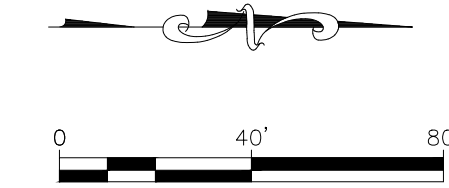
04/29/2025

*PLANS NOT RELEASED FOR CONSTRUCTION UNLESS INDICATED ABOVE

L:\SHARED\12. ENGINEERING PROJECTS\ENGINEERING PROJECTS\11020 - TRI POINTE 108\03 CAD\DESIGN SET\PHASE 1\15 STREET G P&P.DWG Apr. 30, 2025-8:04 AM LAURYN JOHNSON



- NOTES:
1. ALL LONGSIDE LEADS SHALL INCLUDE STACKS, RISERS, TEES, WYES, AND ALL APPURTENANCES TO END AT A DEPTH OF 4'-5' BELOW NATURAL GROUND. (SEE DETAIL SHT. 35)
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 15. CONTRACTOR TO STAMP THE FACE OF THE CURB "S" AT THE LOCATION OF EACH SANITARY SEWER LEAD AND "W" AT THE LOCATION OF EACH WATER LEAD.



LOCATION MAP
N.T.S.

LEGEND:

- 1" DOUBLE WATER METER
- 1" SINGLE WATER METER
- 6" DOUBLE SAN SWR LEAD
- 4" SINGLE SAN SWR LEAD

Station	Elevation	Grade Percent (%)	Location
18+36.47	289.59'	1.44%	PVC
18+45.96	289.72'	1.40%	
18+55.96	289.85'	1.30%	
18+65.96	289.97'	1.20%	
18+75.96	290.08'	1.11%	
18+85.96	290.18'	1.01%	
18+93.24	290.25'	0.92%	Crest
18+95.96	290.28'	0.87%	
19+05.96	290.36'	0.81%	
19+15.96	290.43'	0.71%	
19+25.96	290.49'	0.61%	
19+35.96	290.54'	0.52%	
19+45.96	290.58'	0.42%	
19+50.01	290.60'	0.35%	PVT
20+79.07	290.22'	-0.62%	PVC
20+85.96	290.17'	-0.73%	
20+95.96	290.07'	-0.97%	
21+05.96	289.94'	-1.27%	
21+15.96	289.79'	-1.56%	
21+25.96	289.60'	-1.85%	
21+35.96	289.39'	-2.15%	
21+45.96	289.14'	-2.44%	
21+54.07	288.92'	-2.70%	Crest
21+55.96	288.87'	-2.85%	
21+65.96	288.57'	-3.02%	
21+75.96	288.24'	-3.32%	
21+85.96	287.87'	-3.61%	
21+95.96	287.48'	-3.90%	
22+05.96	287.06'	-4.20%	
22+15.96	286.62'	-4.49%	
22+25.96	286.14'	-4.78%	
22+29.07	285.98'	-4.98%	PVT

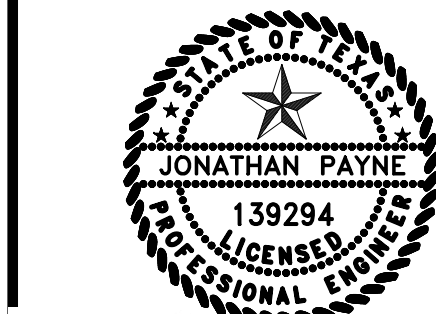
SAN LEAD TABLE			
STATION & OFFSET	LENGTH	START FL	END FL
17+46.36, 45.92	17.94	279.63	279.45
19+26.36, 45.97	16.22	280.28	280.12
21+06.36, 46.00	18.50	280.90	280.72

CITY OF MONTGOMERY, CITY ENGINEER
SIGNATURE VALID FOR ONE (1) YEAR

DATE

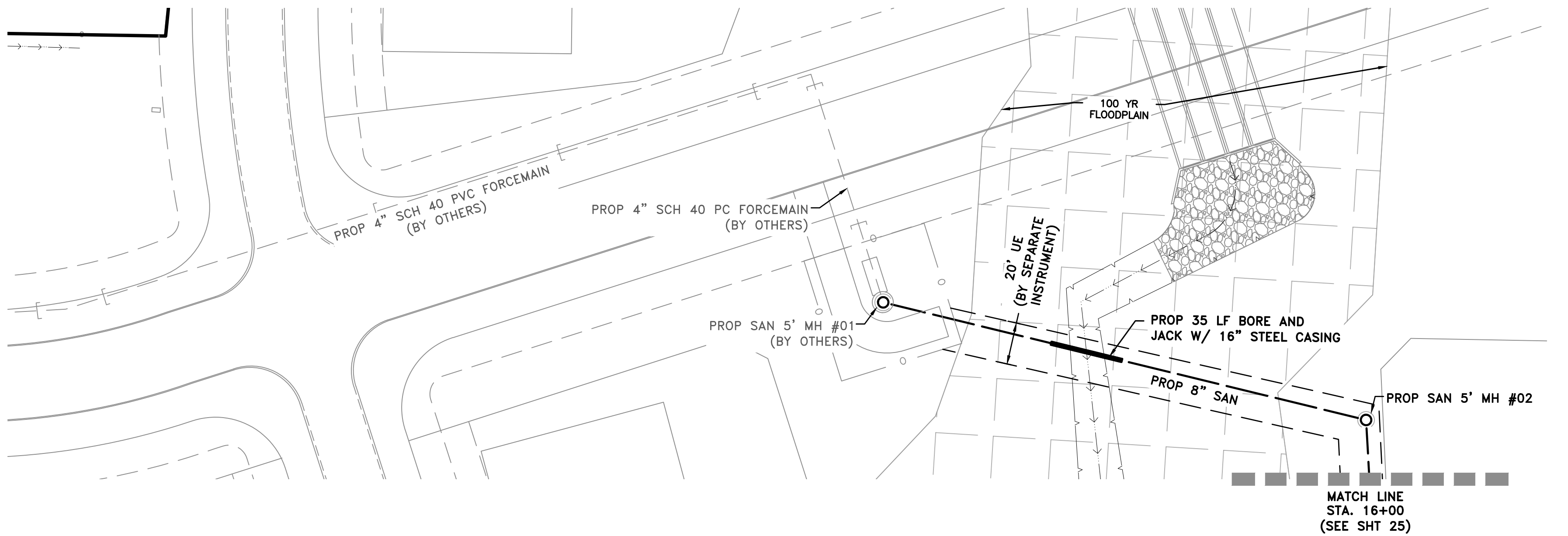
DRAWING ISSUE			
#	DATE	BY	* COMMENT
1	04/29/25	JP	FOR PERMIT

DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	1" = 40' (24x36) 1" = 80' (11x17)	SHEET	23

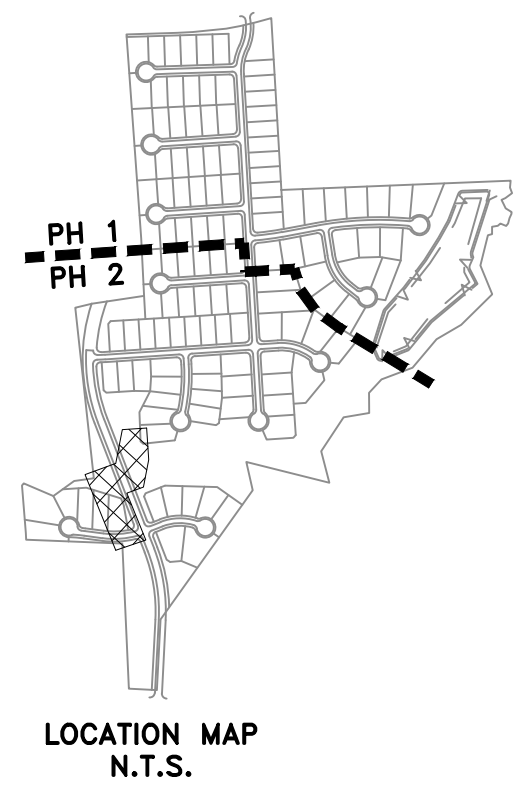
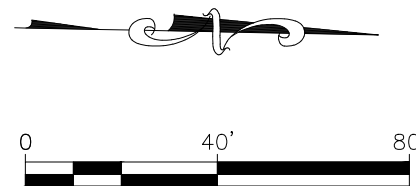
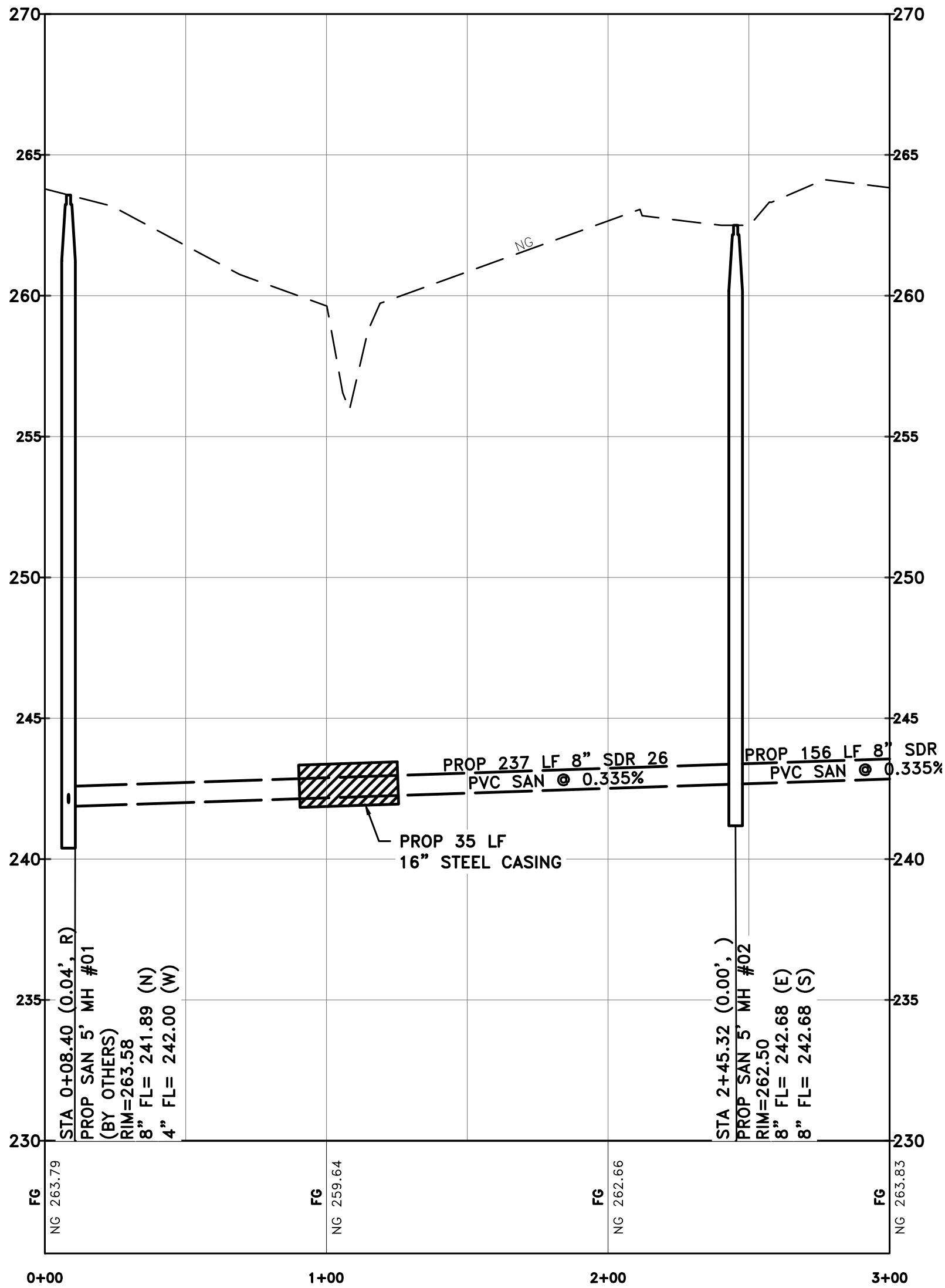


Jonathan Payne
04/29/2025

*PLANS NOT RELEASED FOR CONSTRUCTION UNLESS INDICATED ABOVE



SANITARY TRUNK LINE PROFILE
SCALE:
1"=40' HORIZ
1"=4' VERT



L SQUARED ENGINEERING
MUNICIPAL COMMERCIAL RESIDENTIAL
WWW.LZENGINERING.COM
PRO REGISTRATION NUMBER 13125
3307 W. DAVIS STREET #100
CONROE, TEXAS 77384
OFFICE: 281-467-0602

CLIENT INFORMATION
TRI POINTE HOMES
DANIEL GILLHAM
16340 PARK TEN PLACE, SUITE 250
HOUSTON, TX 77084

PROJECT ADDRESS
LONESTAR PKW / SH 105
MONTGOMERY, TX 77356

LEGACY GROVE
SECTION 1 WS&D
SANITARY TRUNK LINE (1 OF 4)

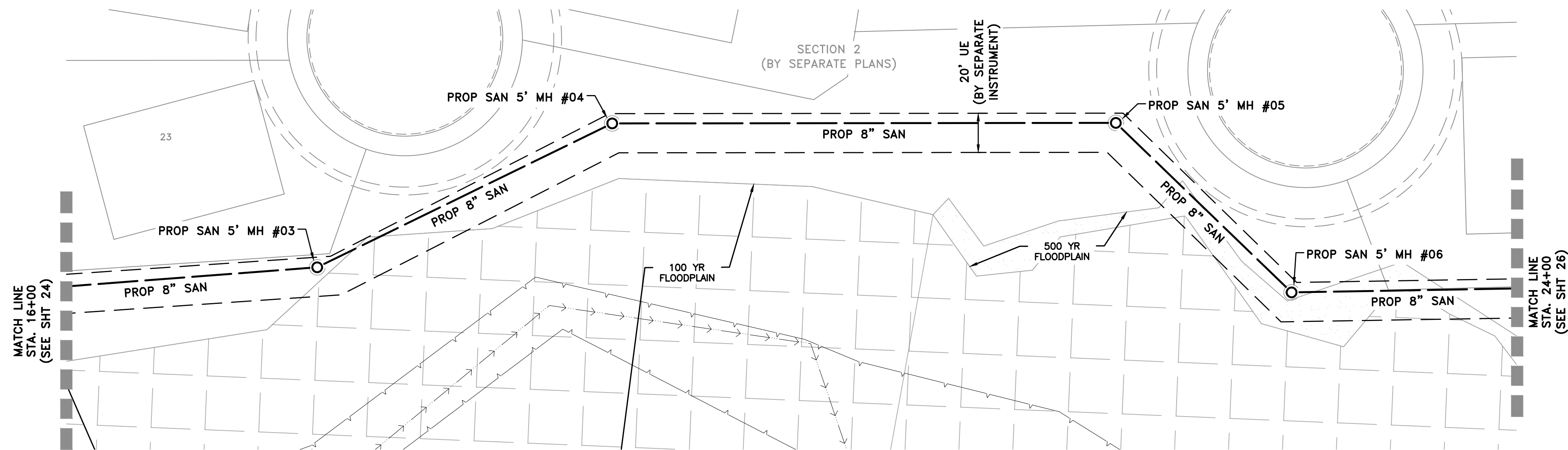
DRAWING ISSUE			
#	DATE	BY	* COMMENT
1	04/29/25	JP	FOR PERMIT

DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	SHEET		
1" = 40' (24x36)	24		
1" = 80' (11x17)			

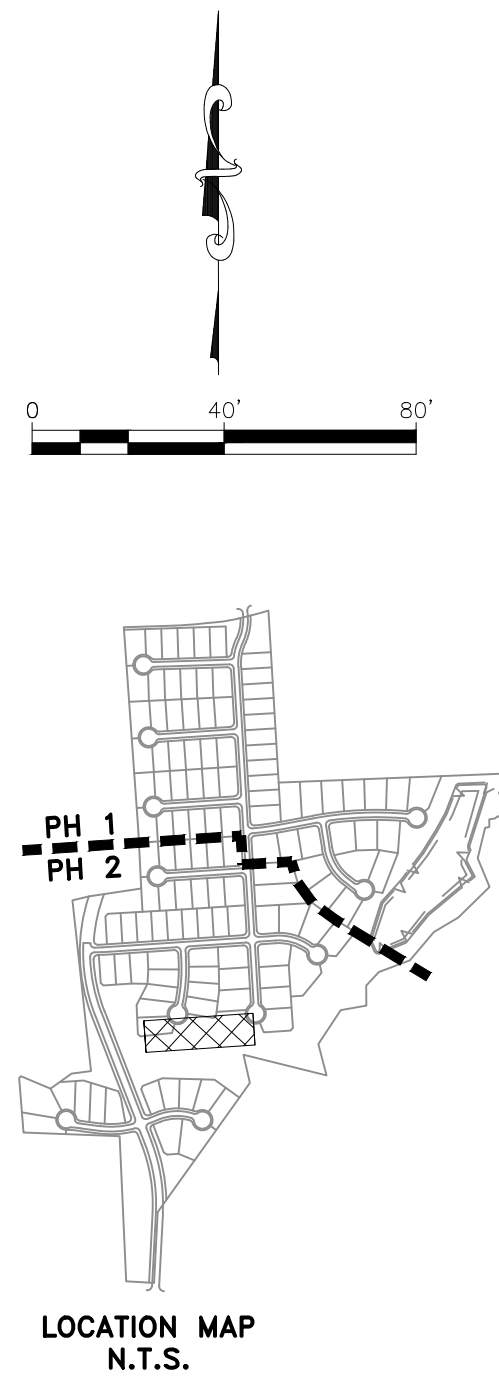
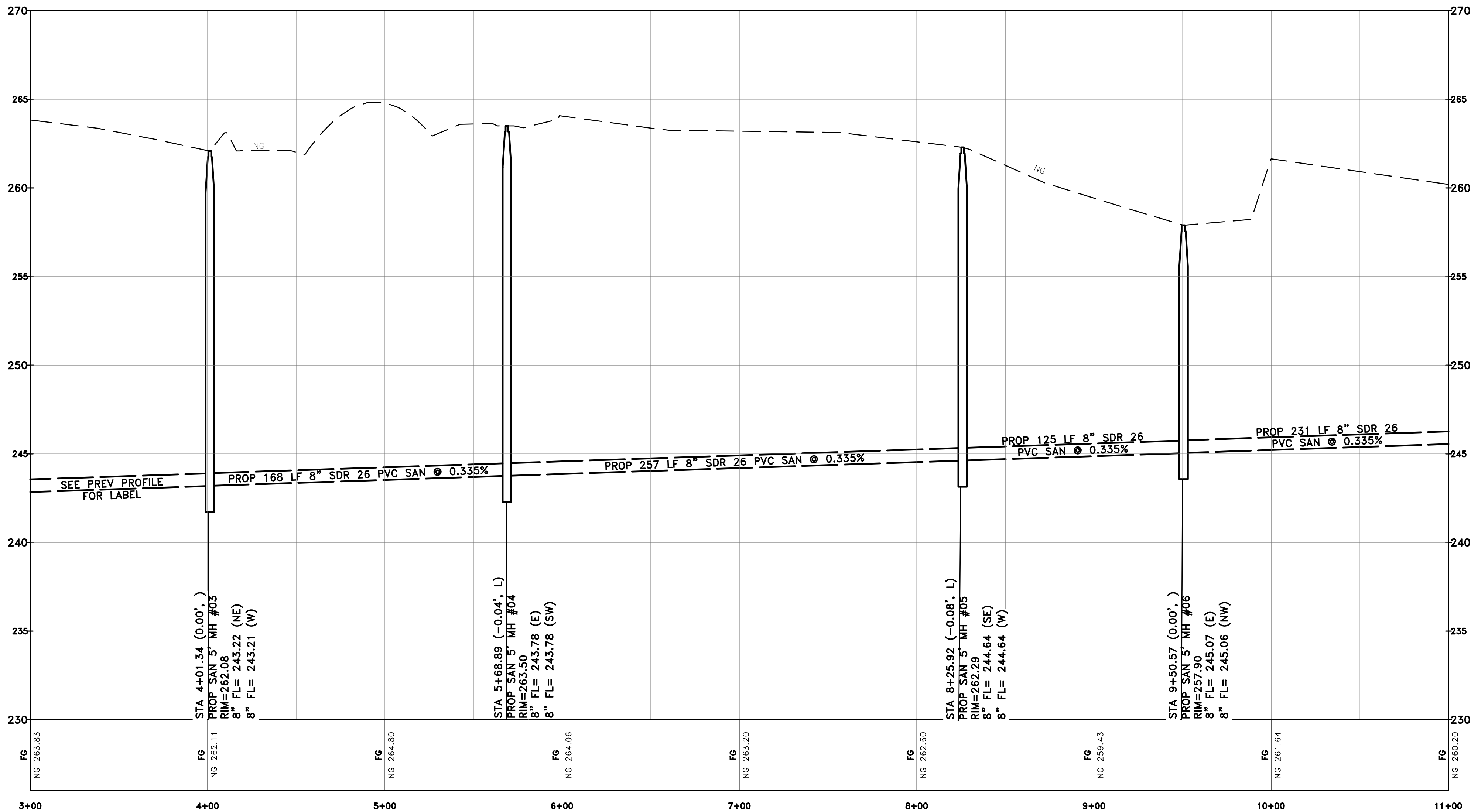


Jonathan Payne DATE 04/29/2025
CITY OF MONTGOMERY, CITY ENGINEER
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*PLANS NOT RELEASED FOR CONSTRUCTION UNLESS INDICATED ABOVE



SANITARY TRUNK LINE PROFILE
SCALE:
1"=40' HORIZ
1"=4' VERT



L SQUARED ENGINEERING
MUNICIPAL COMMERCIAL RESIDENTIAL
WWW.LZENGINERING.COM
PRO REGISTRATION NUMBER 13125
3307 W. DAVIS STREET #100
CONROE, TEXAS 77384
OFFICE: 281-447-0400

CLIENT INFORMATION

TRI POINTE HOMES
DANIEL GILLHAM
16340 PARK TEN PLACE, SUITE 250
HOUSTON, TX 77084

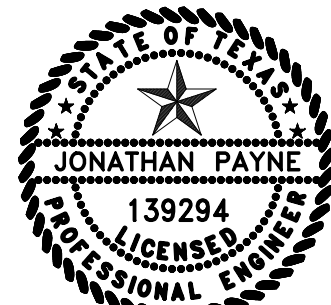
PROJECT ADDRESS
LONESTAR PKW / SH 105
MONTGOMERY, TX 77356

LEGACY GROVE
SECTION 1 WS&D

SANITARY TRUNK LINE (2 OF 4)

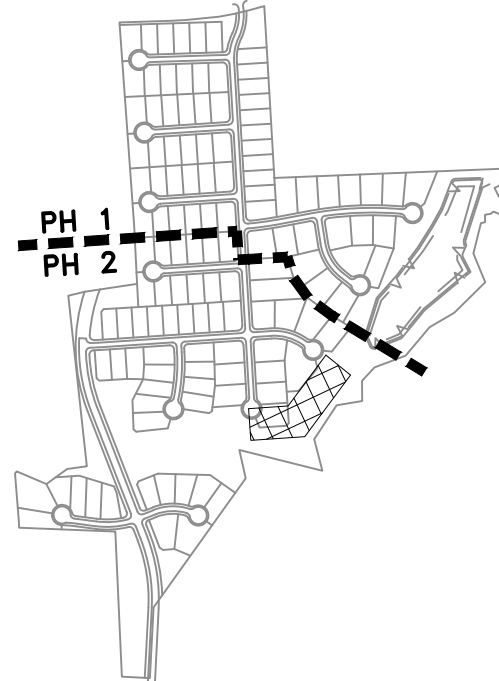
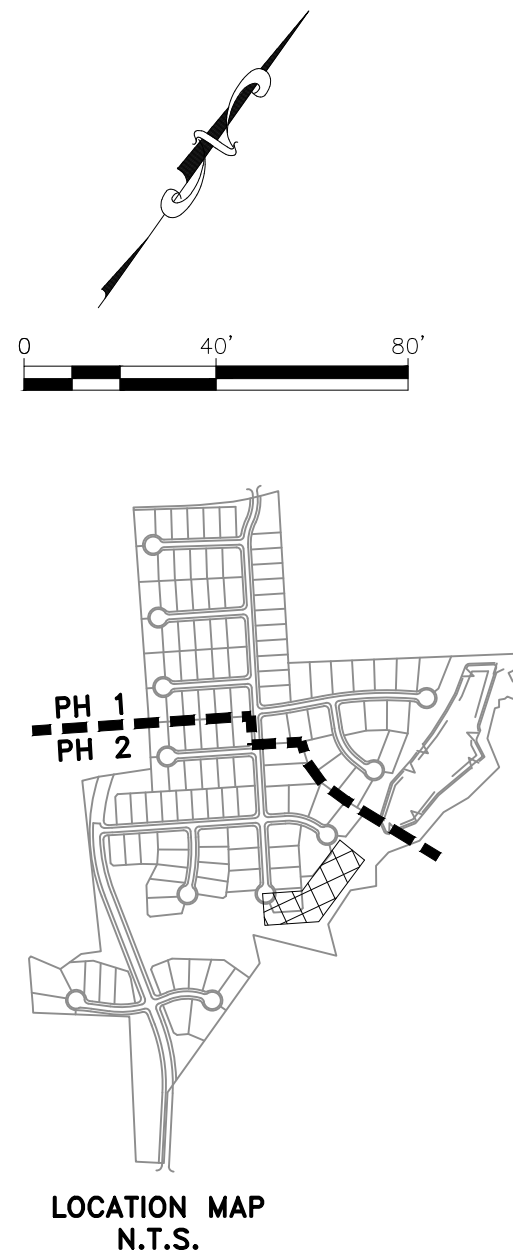
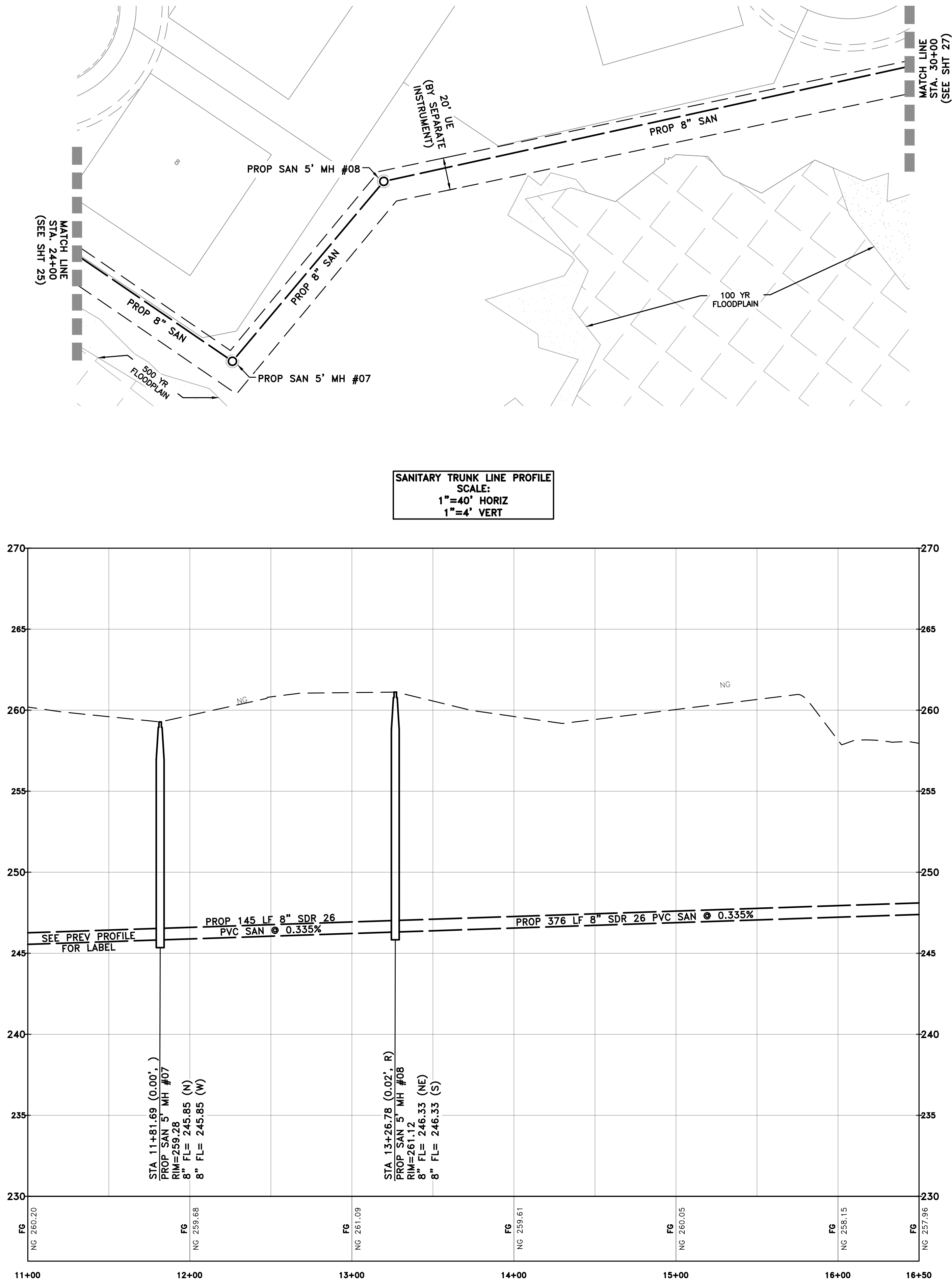
DRAWING ISSUE			
#	DATE	BY	* COMMENT
1	04/29/25	JP	FOR PERMIT

DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	SHEET		
1" = 40' (24x36)	25		
1" = 80' (11x17)			

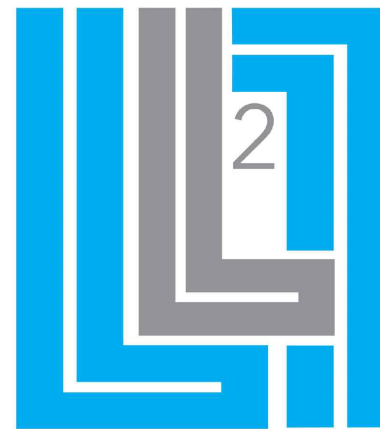


Jonathan Payne
CITY OF MONTGOMERY, CITY ENGINEER
SIGNATURE VALID FOR ONE (1) YEAR
DATE 04/29/2025

*PLANS NOT RELEASED FOR CONSTRUCTION UNLESS INDICATED ABOVE



LOCATION MAP
N.T.S.



L SQUARED ENGINEERING
MUNICIPAL COMMERCIAL RESIDENTIAL
WWW.L2ENGINEERING.COM
PRO REGISTRATION NUMBER 13125
3307 W. DAVIS STREET #100
CONROE, TEXAS 77384
OFFICE: 281-467-0600

CLIENT INFORMATION

TRI POINTE HOMES
DANIEL GILLHAM
16340 PARK TEN PLACE, SUITE 250
HOUSTON, TX 77084

PROJECT ADDRESS
LONESTAR PKW / SH 105
MONTGOMERY, TX 77356

LEGACY GROVE
SECTION 1 WS&D

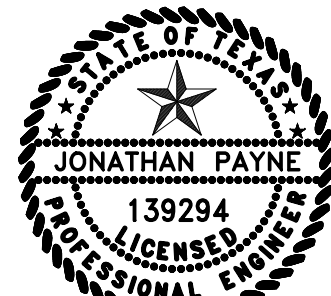
SANITARY TRUNK LINE (3 OF 4)

DRAWING ISSUE

#	DATE	BY	* COMMENT
1	04/29/25	JP	FOR PERMIT

DRAWING INFORMATION

PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	1" = 40' (24x36) 1" = 80' (11x17)	SHEET	26



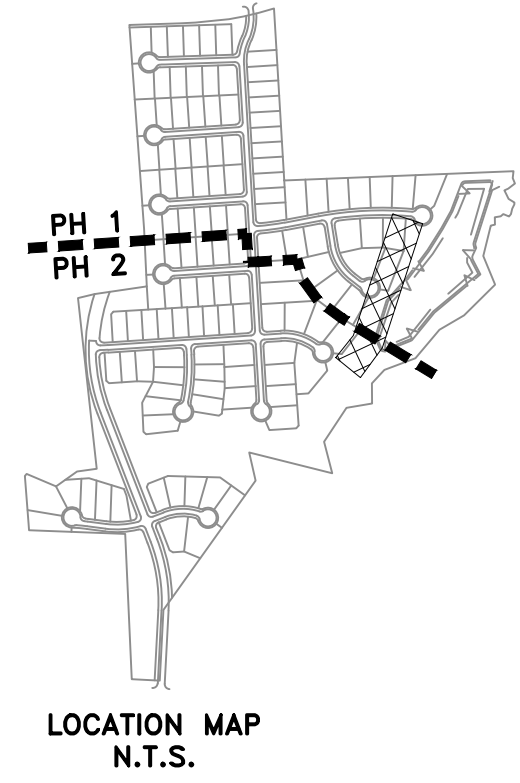
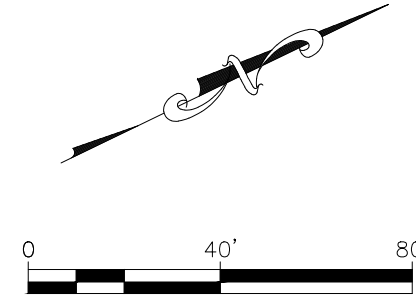
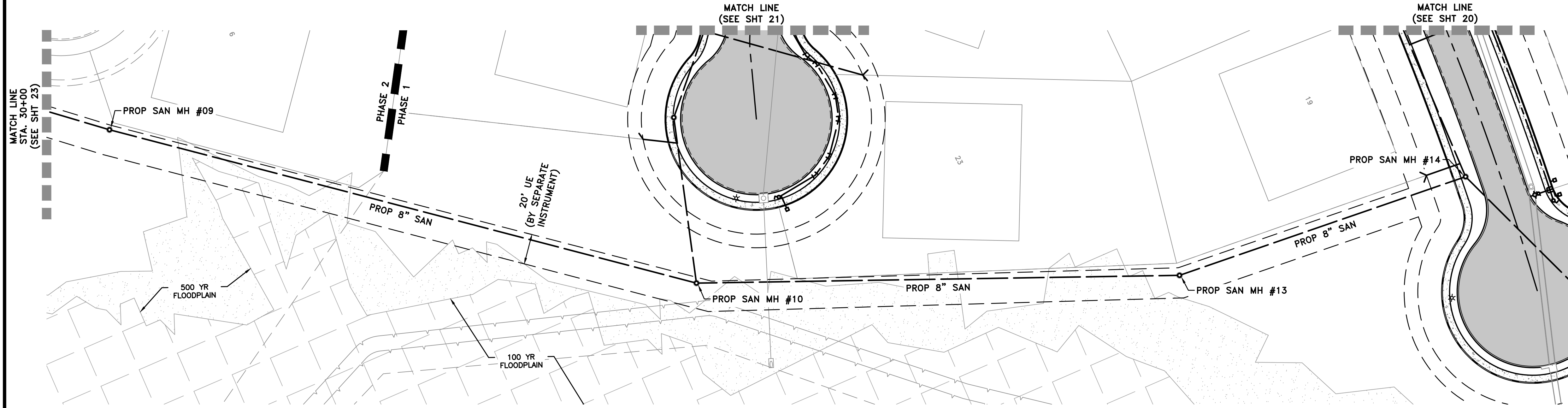
Jonathan Payne 04/29/2025

CITY OF MONTGOMERY, CITY ENGINEER
SIGNATURE VALID FOR ONE (1) YEAR

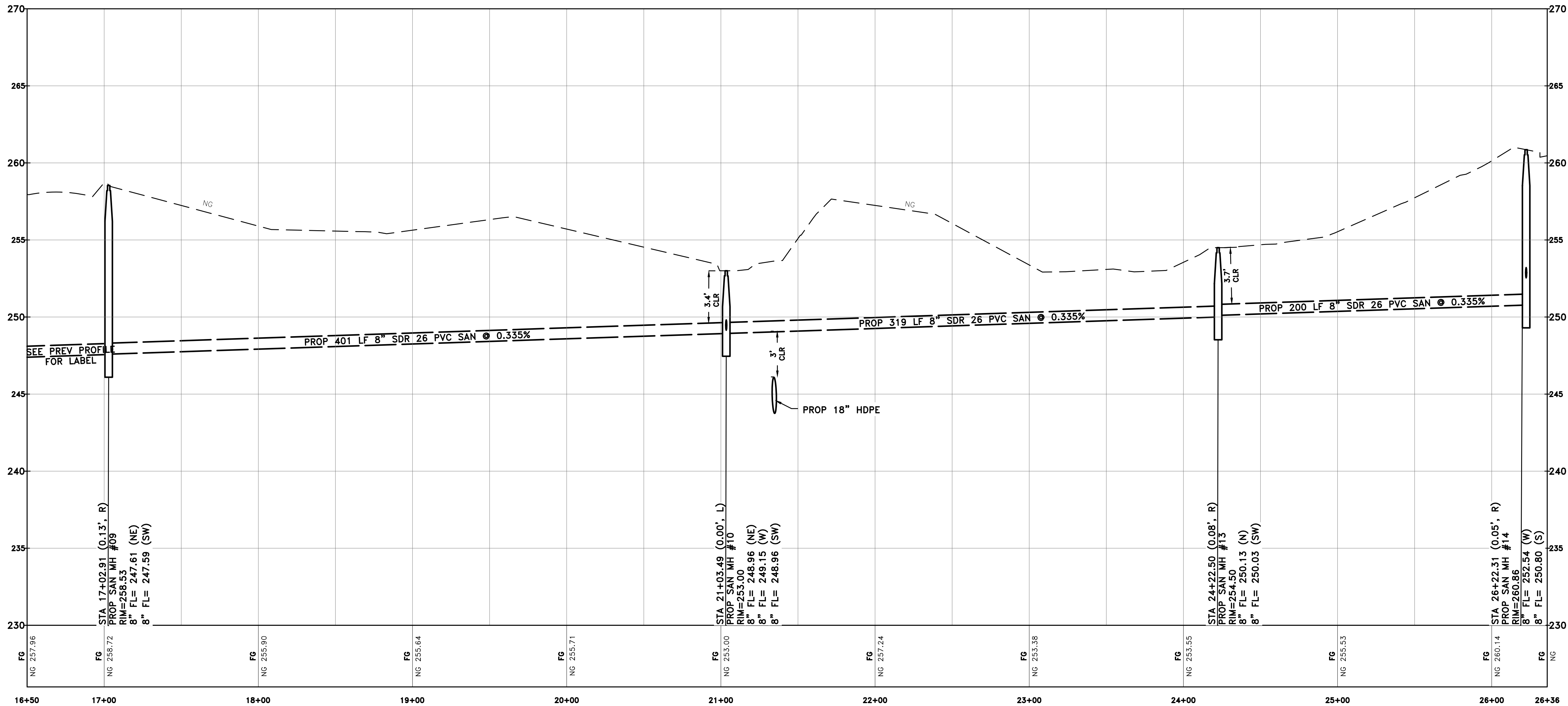
DATE

*PLANS NOT RELEASED FOR CONSTRUCTION UNLESS INDICATED ABOVE

L:\SHARED\L2 ENGINEERING PROJECTS\ENGINEERING PROJECTS\11020 - TRI POINTE 108\03 CAD\DESIGN SET\PHASE 1\16 SANITARY TRUNK LINE.DWG Apr. 30, 2025-8:01 AM LAURYN JOHNSON



SANITARY TRUNK LINE PROFILE
SCALE:
1"=40' HORIZ
1"=4' VERT

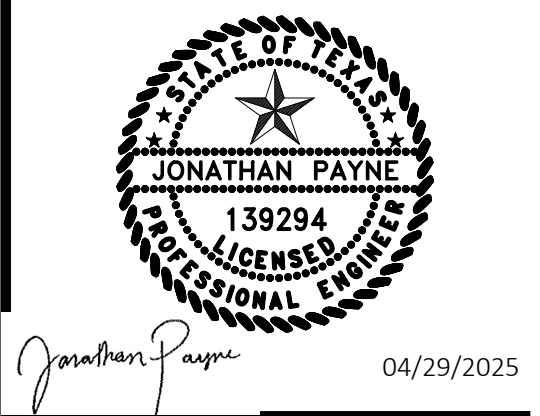


CITY OF MONTGOMERY, CITY ENGINEER
SIGNATURE VALID FOR ONE (1) YEAR

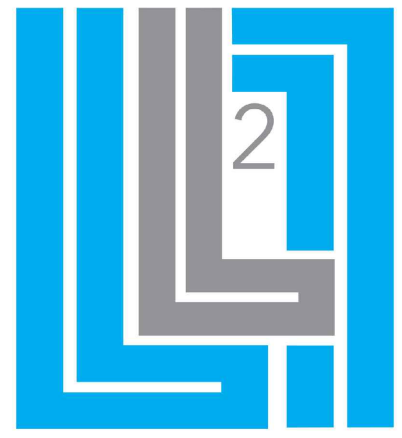
DATE

DRAWING ISSUE			
#	DATE	BY	* COMMENT
1	04/29/25	JP	FOR PERMIT

DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	SHEET		
1" = 40' (24x36)	27		
1" = 80' (11x17)			



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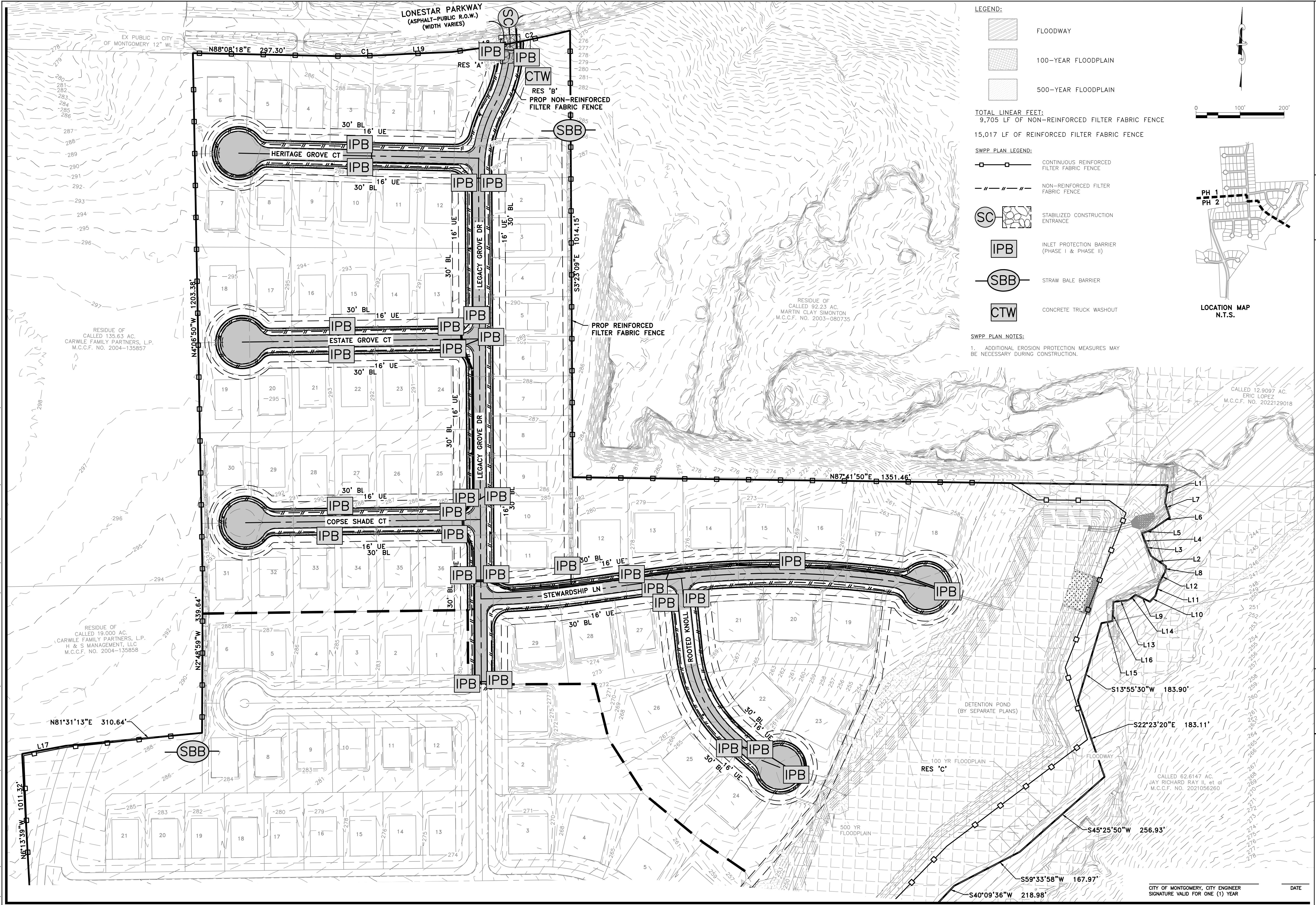


L SQUARED ENGINEERING
MUNICIPAL COMMERCIAL RESIDENTIAL
WWW.LZENGINERING.COM
3307 W. DAVIS STREET #100
CONROE, TEXAS 77384
OFFICE: 281-467-0602

CLIENT INFORMATION
TRI POINTE HOMES
DANIEL GILLHAM
16340 PARK TEN PLACE, SUITE 250
HOUSTON, TX 77084
PROJECT ADDRESS
LONESTAR PKW / SH 105
MONTGOMERY, TX 77356

LEGACY GROVE SECTION 1 WS&D SANITARY TRUNK LINE (4 OF 4)

L:\SHARED\12. ENGINEERING PROJECTS\ENGINEERING PROJECTS\11020 - TRI POINTE 108\03 CAD\DESIGN SET\PHASE 1\17 SWPP PLAN.DWG Apr. 30, 2025--8:07 AM LAURYN JOHNSON

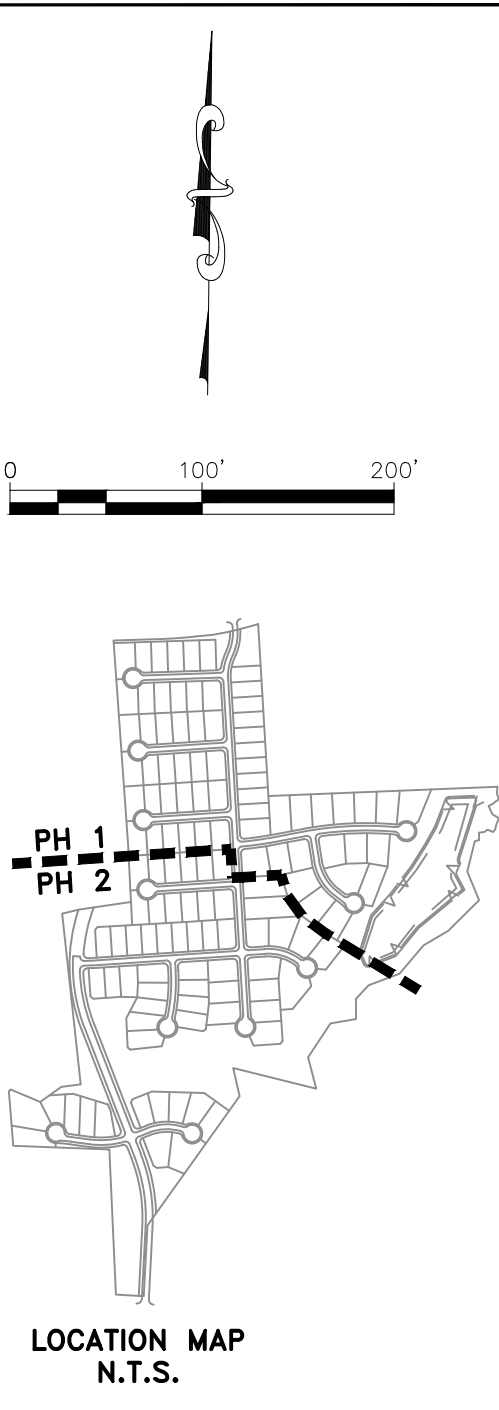


- LEGEND:
- FLOODWAY
 - 100-YEAR FLOODPLAIN
 - 500-YEAR FLOODPLAIN

TOTAL LINEAR FEET:
9,705 LF OF NON-REINFORCED FILTER FABRIC FENCE
15,017 LF OF REINFORCED FILTER FABRIC FENCE

- SWPP PLAN LEGEND:
- CONTINUOUS REINFORCED FILTER FABRIC FENCE
 - NON-REINFORCED FILTER FABRIC FENCE
 - STABILIZED CONSTRUCTION ENTRANCE
 - INLET PROTECTION BARRIER (PHASE I & PHASE II)
 - STRAW BALE BARRIER
 - CONCRETE TRUCK WASHOUT

SWPP PLAN NOTES:
1. ADDITIONAL EROSION PROTECTION MEASURES MAY BE NECESSARY DURING CONSTRUCTION.



L SQUARED ENGINEERING
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CLIENT INFORMATION
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DANIEL GILLHAM
16340 PARK TEN PLACE, SUITE 250
HOUSTON, TX 77084
PROJECT ADDRESS
LONESTAR PKW / SH 105
MONTGOMERY, TX 77356

LEGACY GROVE SECTION 1 WS&D SWPP PLAN

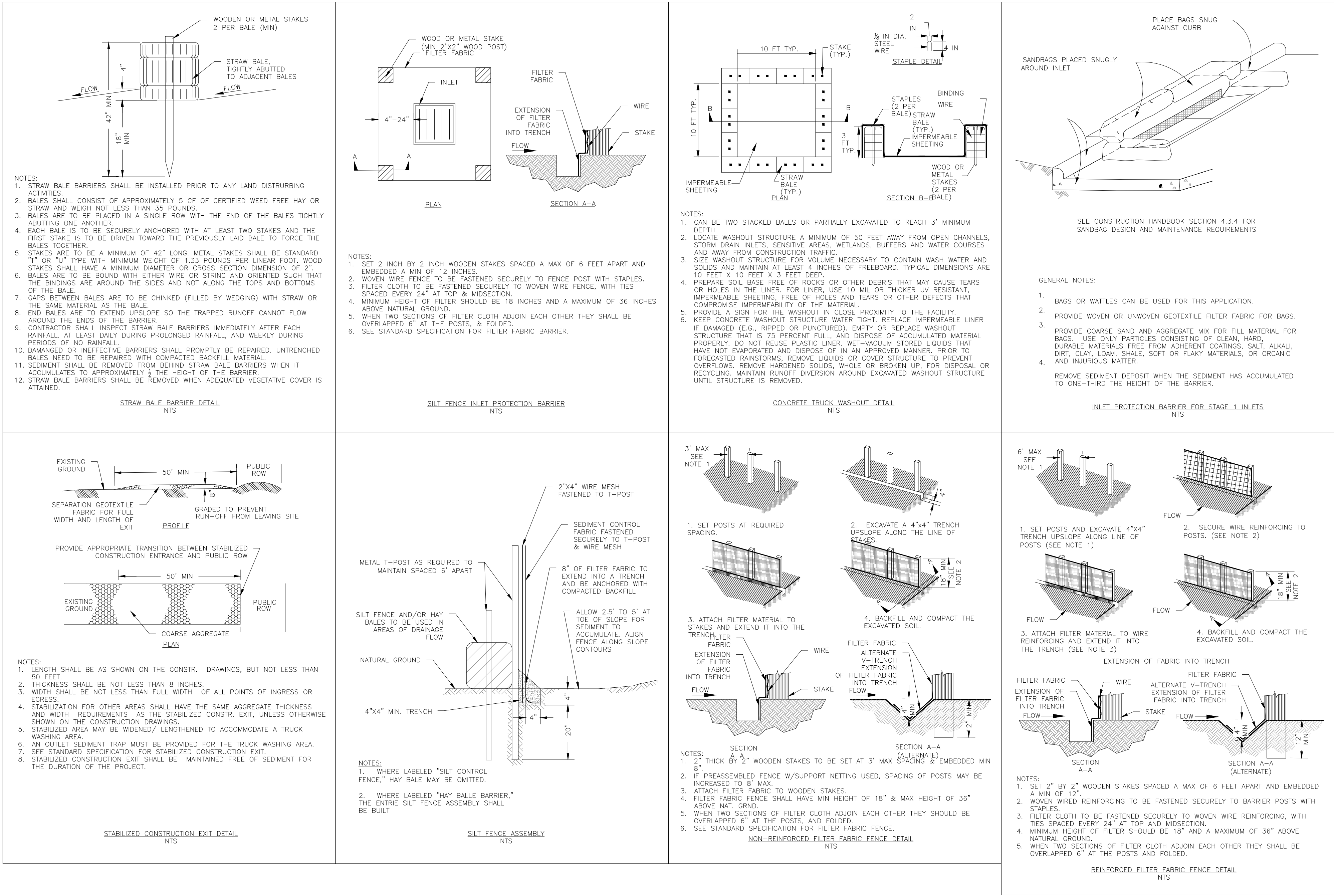
DRAWING ISSUE				
#	DATE	BY	* COMMENT	
1	04/29/25	JP	FOR PERMIT	

DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	1" = 100' (24x36) 1" = 200' (11x17)	SHEET	28

STATE OF TEXAS
JONATHAN PAYNE
139294
LICENSED PROFESSIONAL ENGINEER
04/29/2025

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PROF. REGISTRATION NUMBER 13125
3307 W. DAVIS STREET #100
CONROE, TEXAS 77384
OFFICE: 281-467-0902

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DANIEL GILLHAM
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PROJECT ADDRESS
LONESTAR PKWY SH 105
MONTGOMERY, TX 77356

LEGACY GROVE
SECTION 1 WS&D
SWPP DETAILS

DRAWING ISSUE			
#	DATE	BY	* COMMENT
1	04/29/25	JP	FOR PERMIT

DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	AS NOTED	SHEET	29

STATE OF TEXAS
JONATHAN PAYNE
139294
LICENSED PROFESSIONAL ENGINEER
Jonathan Payne
04/29/2025

CITY OF MONTGOMERY, CITY ENGINEER
SIGNATURE VALID FOR ONE (1) YEAR

DATE

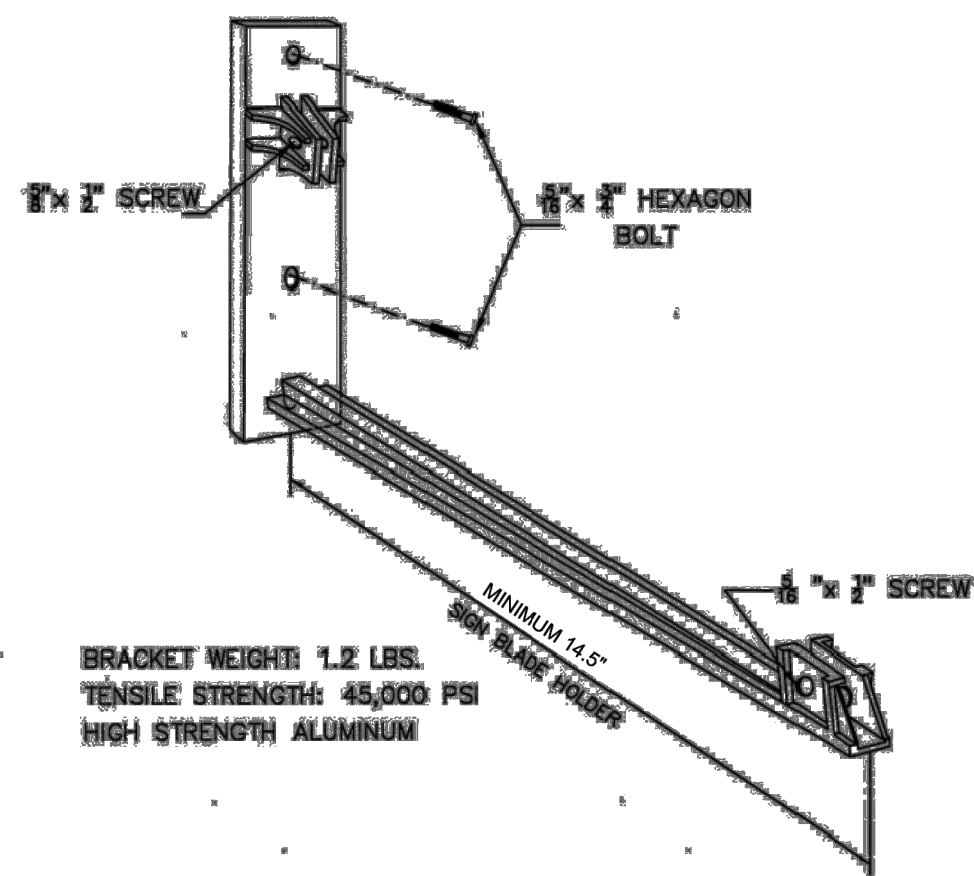
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L:\SHARED\L2 ENGINEERING PROJECTS\ENGINEERING PROJECTS\11020 - TRI POINTE 108\03 CAD\DESIGN SET\PHASE 1\18 DETAIL SHEETS.DWG Apr. 30, 2025--8:07 AM LAURYN JOHNSON

NOTES:

1. THIS DETAIL WILL APPLY TO ALL PROPOSED STREET SIGNS.
2. ALL STOP SIGNS TO BE SIZED AND PLACED AS SHOWN ON PLANS.
3. STREET SIGN NAMES TO BE INSTALLED AT INTERSECTION OF ALL STREETS.
4. STREET SIGN BRACKET TO BE 14.5" LONG MINIMUM.
5. SIGN BLADE HEIGHT TO BE 9" WITH 6" CAPITAL LETTERS AND 5" LOWERCASE LETTERING.
6. STREET SIGN POSTS AT NON-MAJOR STREETS TO BE 2 $\frac{3}{8}$ " O.D. SET IN CONCRETE.
7. STREET SIGN POSTS AT MAJOR STREET INTERSECTIONS TO BE 2 $\frac{7}{8}$ " O.D. WITH A BREAKAWAY BASE.

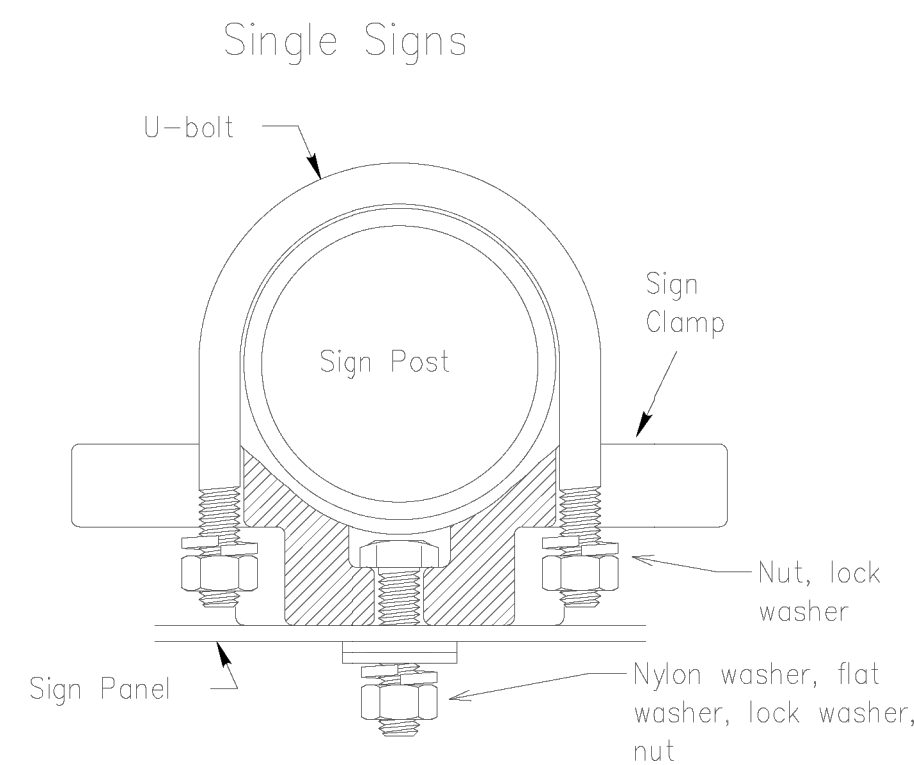
SIGNAL POLE MOUNTING DETAIL



NOTES:

- * TYPICAL SIGN PLATE SHOULD BE 30" MAX.
- * LONGER SIGN PLATE MUST BE APPROVED BY THE CITY ENGINEER

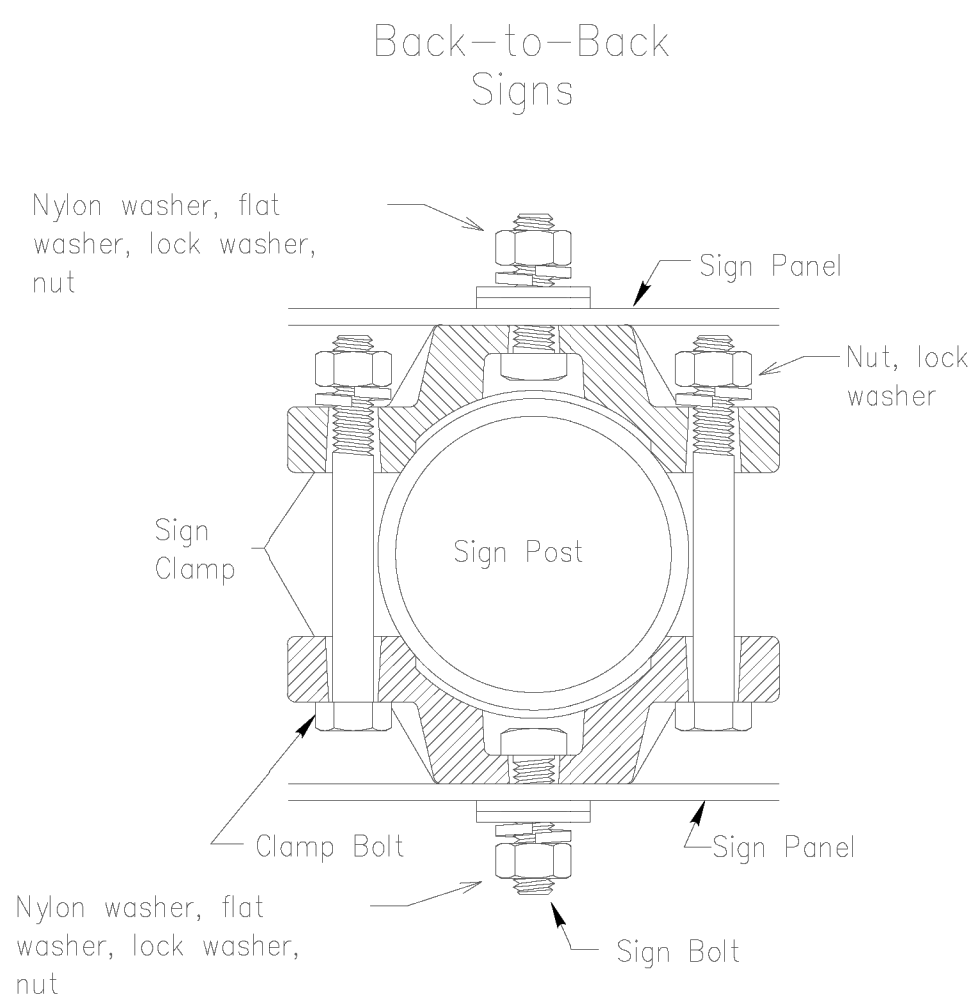
TYPICAL SIGN ATTACHMENT DETAIL



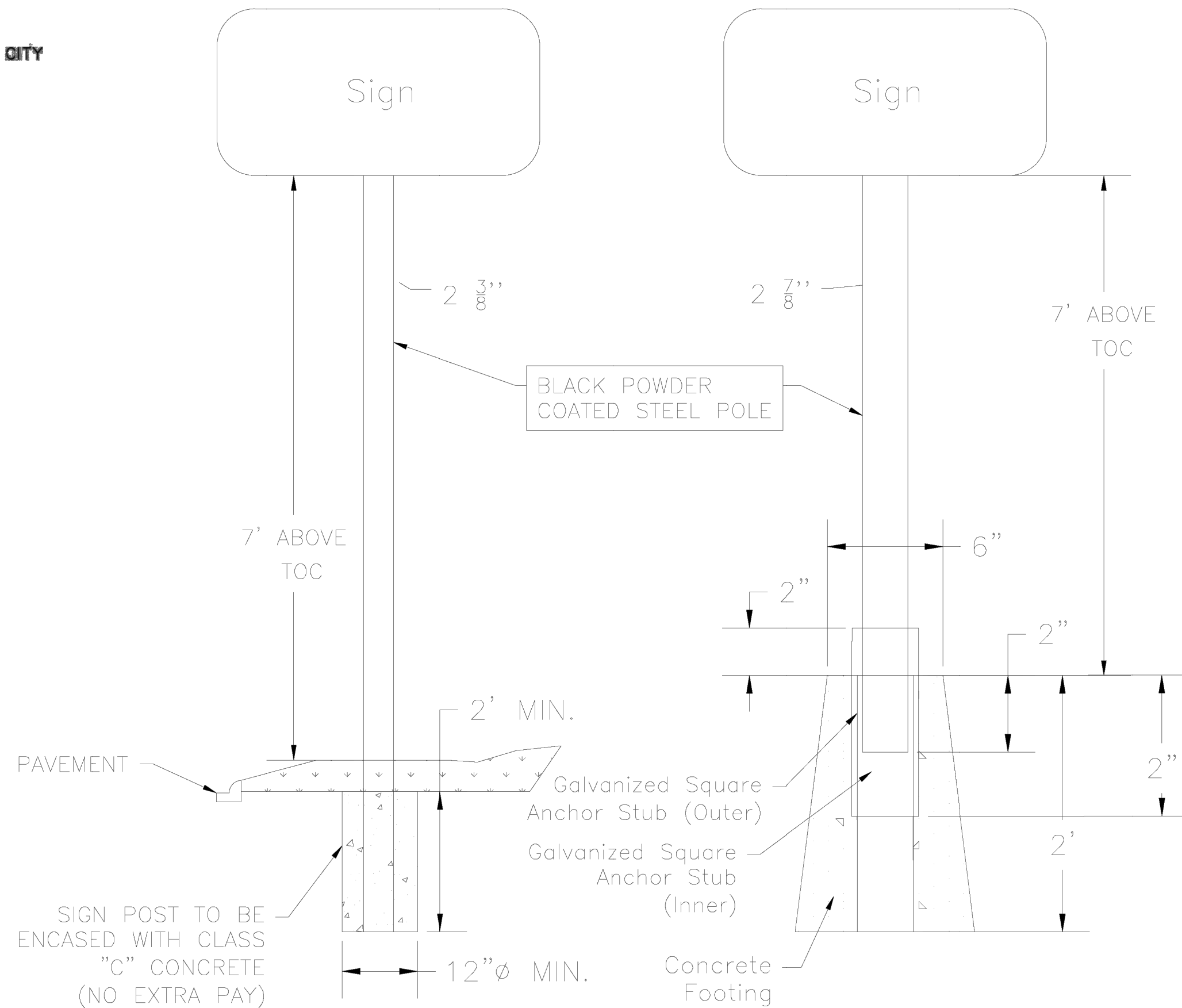
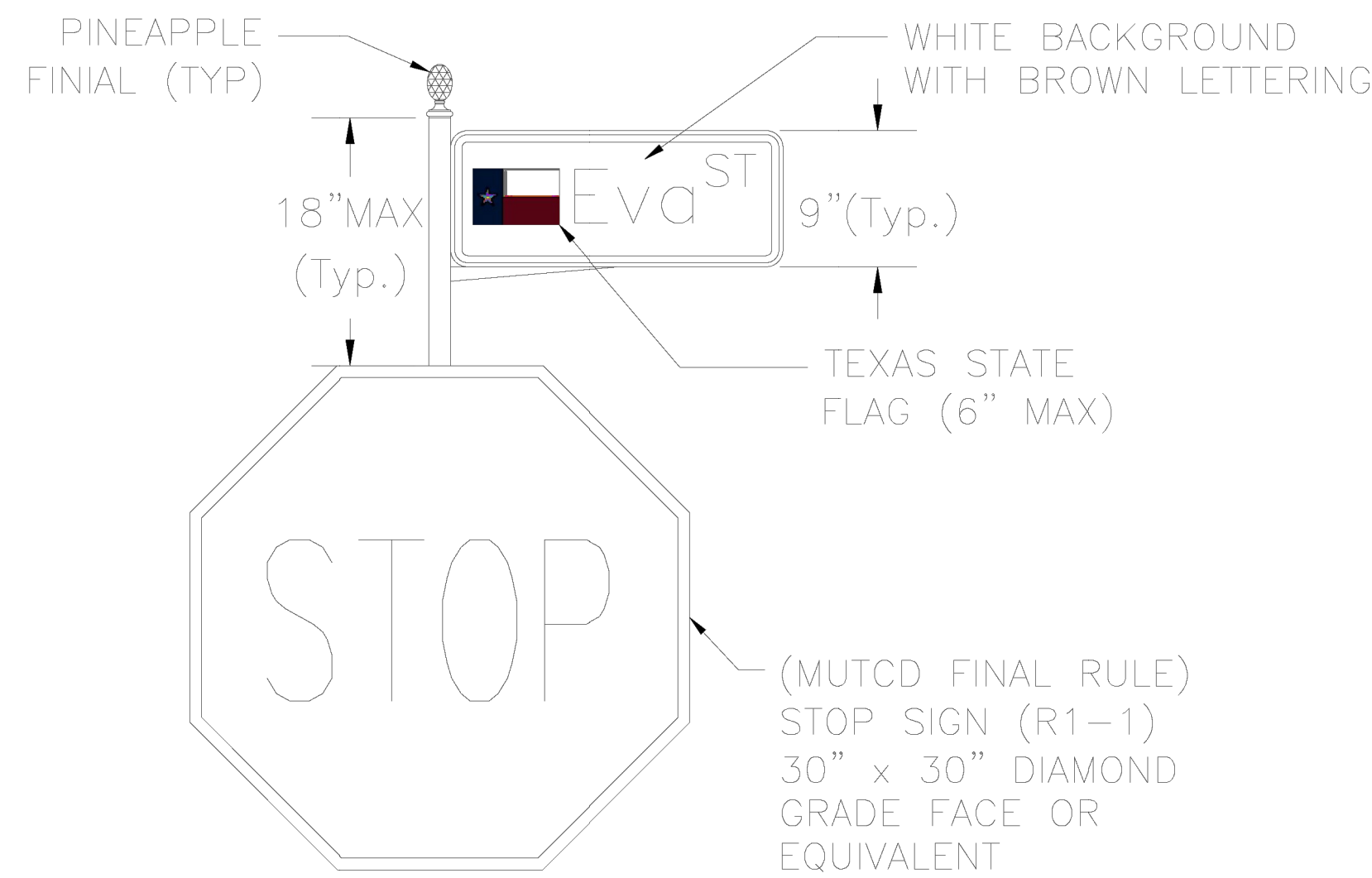
Bolts used to mount sign panels to the clamp are 5/16-18 UNC galvanized square head with nut, nylon washer, flat washer and lock washer. The bolt length is 1 inch for aluminum.

When two sign clamps are used to mount signs back-to-back, use a 5/16-18 UNC galvanized hex head per ASTM A307 with nut and helical-spring lock washer. The approximate bolt lengths for various post sizes and sign clamp types are given in the table at right. The bolt length may need to be adjusted depending upon field conditions.

Sign clamps may be either the specific size clamp or the universal clamp.

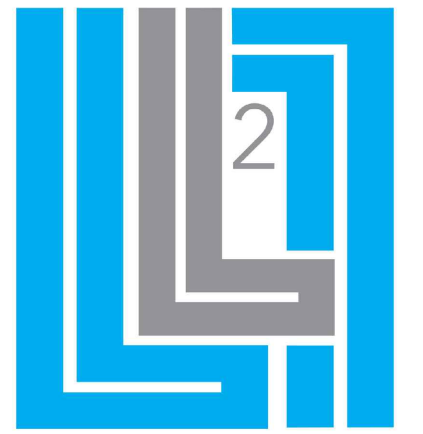


Pipe Diameter	Approximate Bolt Length	
	Specific Clamp	Universal Clamp
2 $\frac{3}{8}$ " O.D.	3" or 3 $\frac{1}{2}$ "	3 $\frac{1}{2}$ " or 4"
2 $\frac{7}{8}$ " O.D.	3 $\frac{1}{2}$ " or 4"	4 $\frac{1}{2}$ "



CITY OF MONTGOMERY
STANDARD STREET SIGN

PAVING
P-6



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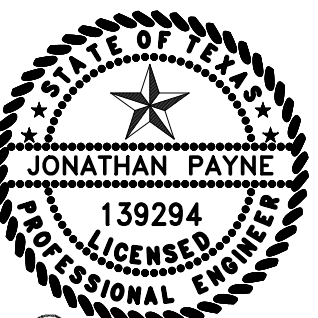
PROJECT ADDRESS
LONESTAR PKWY / SH 105
MONTGOMERY, TX 77356

LEGACY GROVE
SECTION 1 WS&D

PAVING DETAILS (2 OF 3)

DRAWING ISSUE			
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DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	AS NOTED	SHEET	31



DATE: 04/29/2025

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DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by the State of Texas for the use of this standard for any purpose other than that for which it was intended. The user assumes all liability for any results or damages resulting from its use.

DATE: FILE:

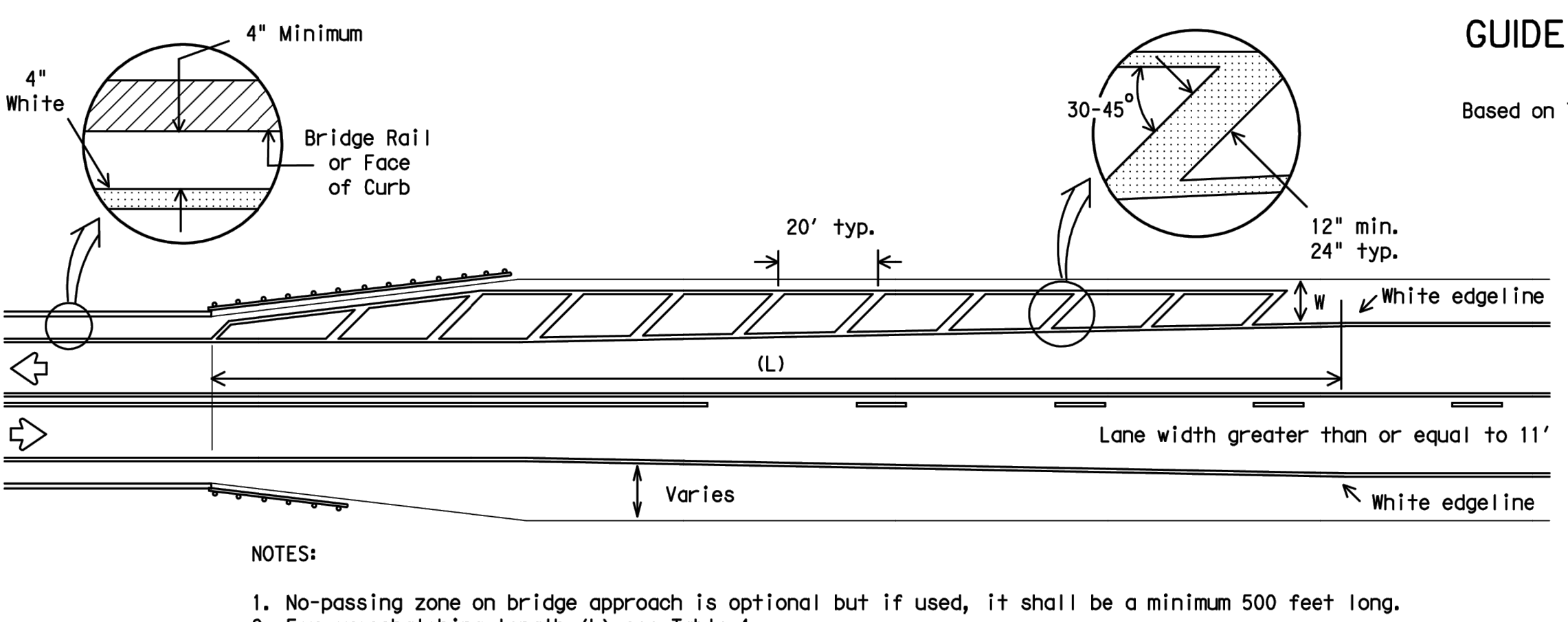
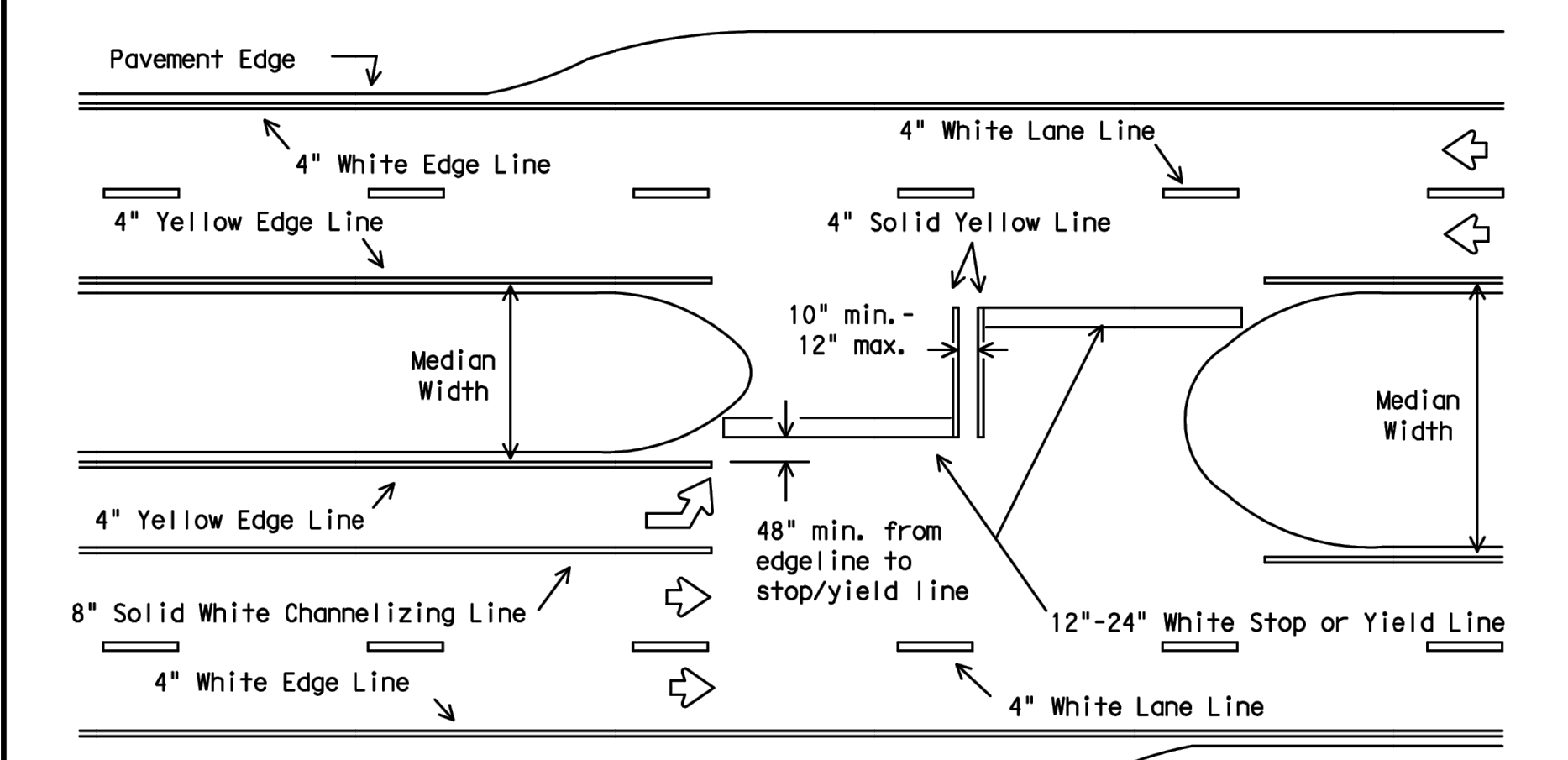
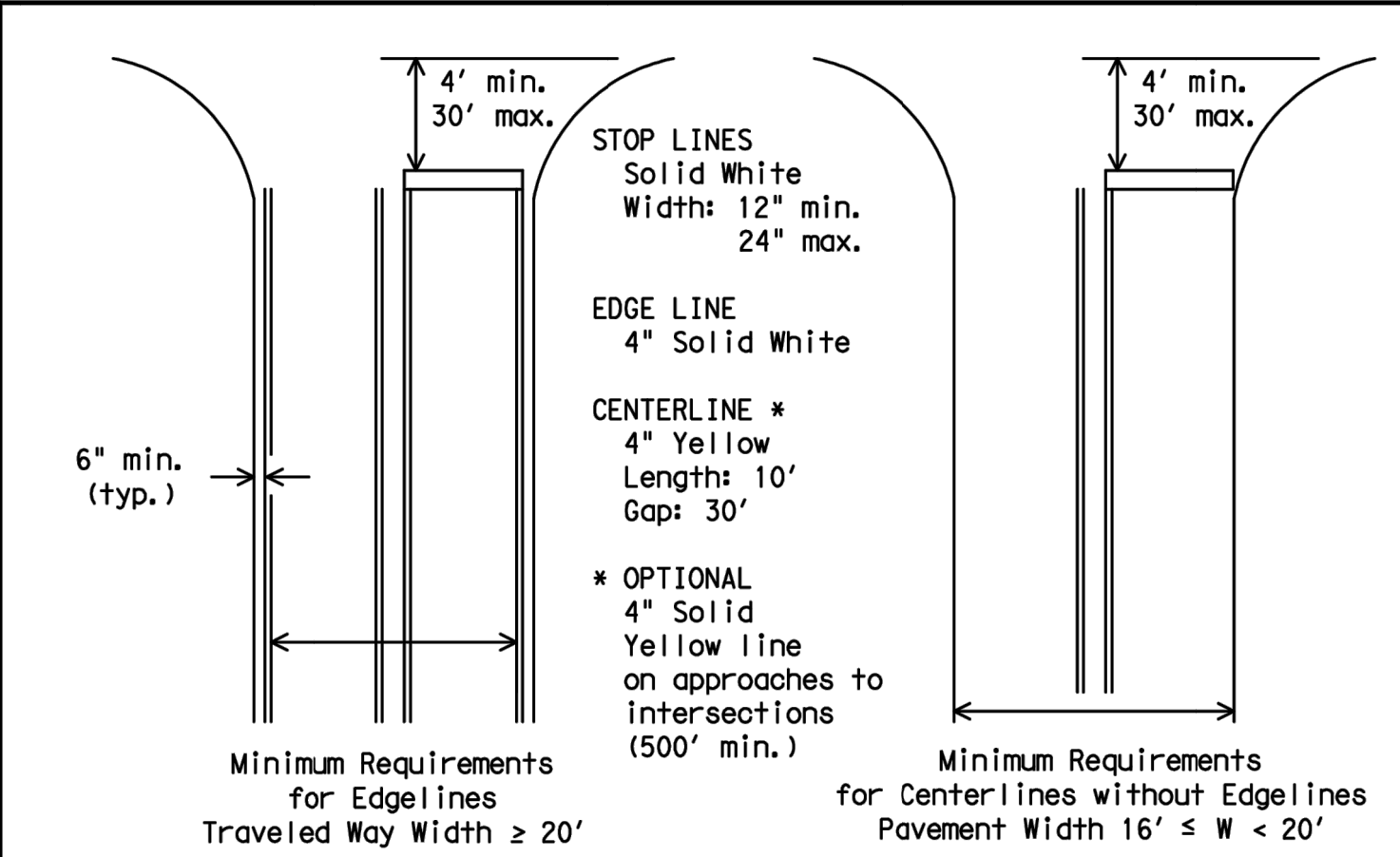
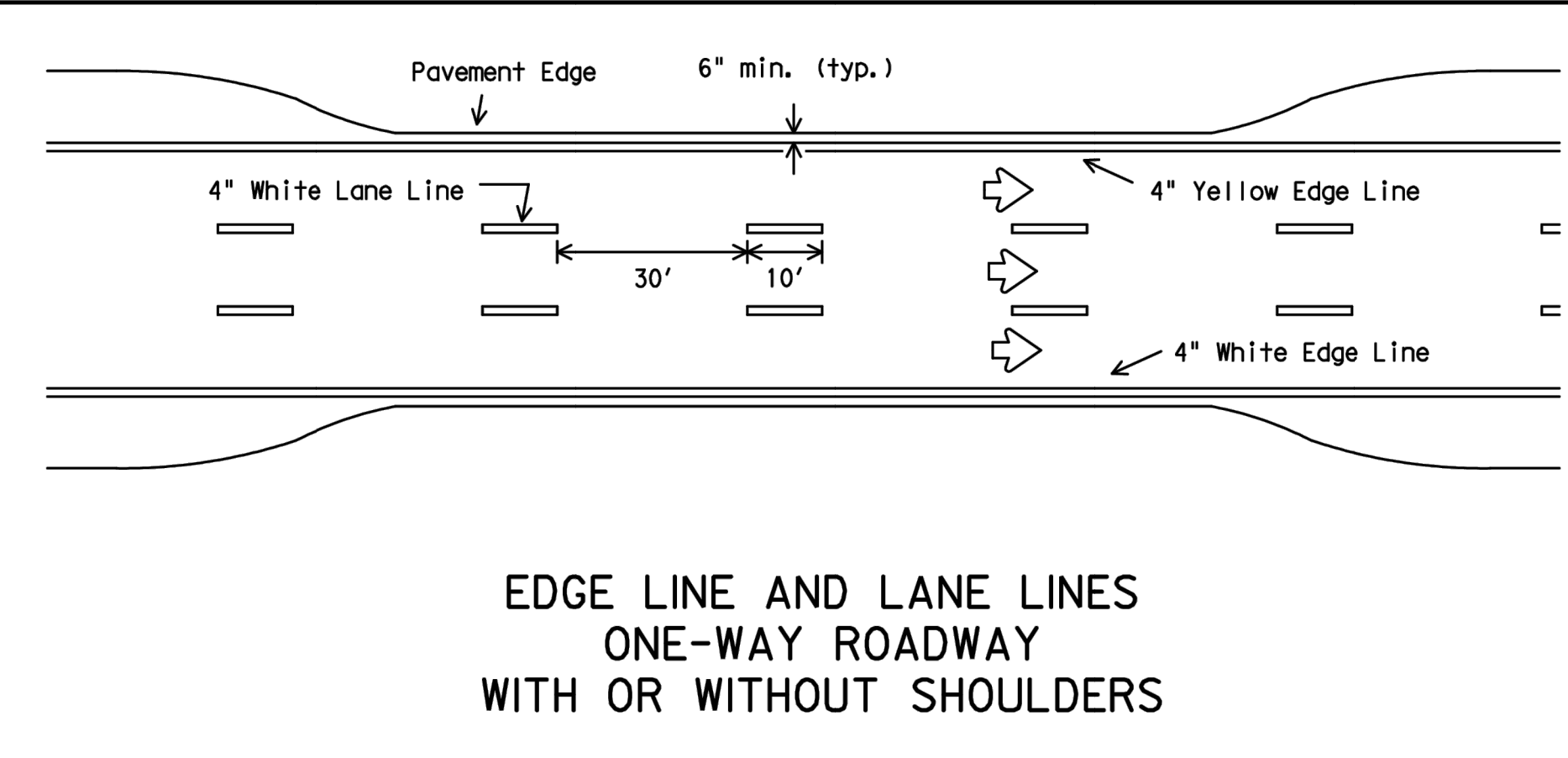
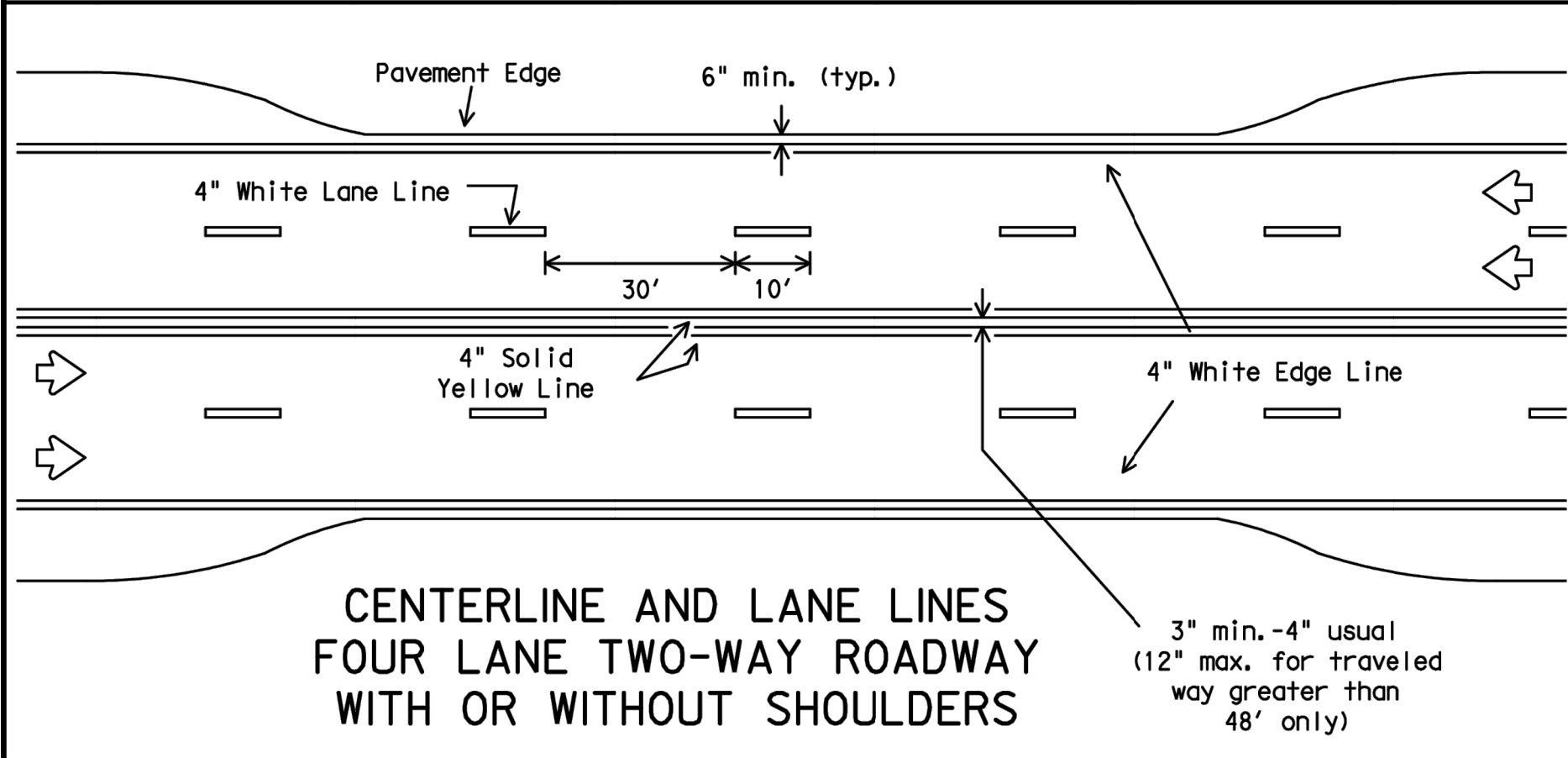
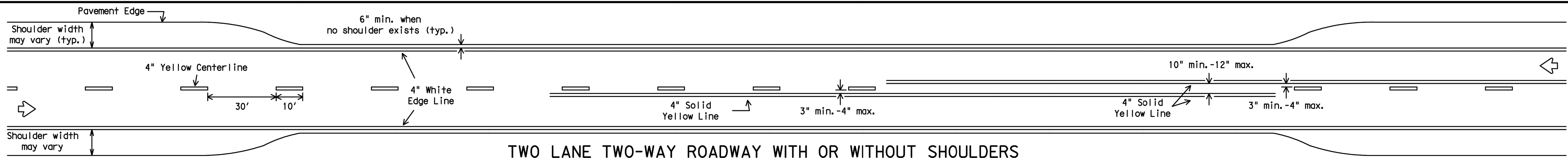


TABLE 1 - TYPICAL LENGTH (L)

Posted Speed *	Formula
≤ 40	$L = \frac{WS^2}{60}$
≥ 45	$L = WS$

* 85th Percentile Speed may be used on roads where traffic speeds normally exceed the posted speed limit. Crosshatching length should be rounded up to nearest 5 foot increment.

L=Length of Crosshatching (FT.) W=Width of Offset (FT.) S=Posted Speed (MPH)

EXAMPLES:

An 8 foot shoulder in advance of a bridge reduces to 4 feet on a 70 MPH roadway. The length of the cross-hatching should be:
 $L = 8 \times 70 = 560$ ft.

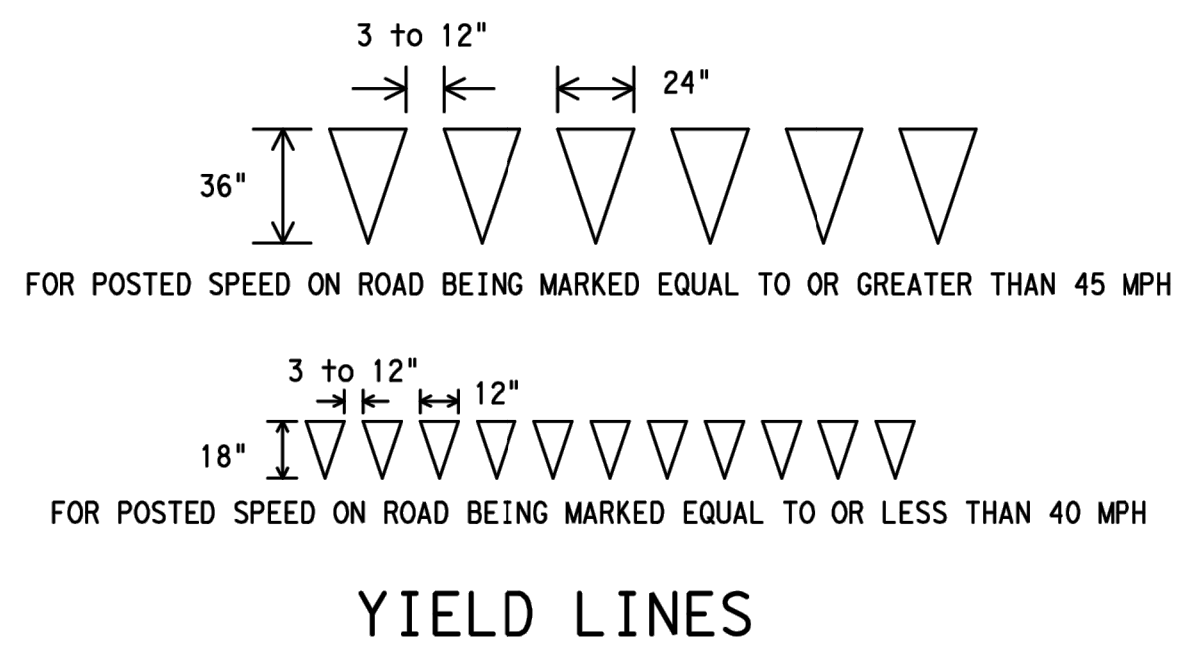
A 4 foot shoulder in advance of a bridge reduces to 2 feet on a 40 MPH roadway. The length of the cross-hatching should be:
 $L = 4(40)^2 / 60 = 106.67$ ft. rounded to 110 ft.

GENERAL NOTES

- Edgeline striping shall be as shown in the plans or as directed by the Engineer. The edgeline should typically be placed a minimum of 6 inches from the edge of pavement. This distance may vary due to pavement raveling or other conditions. Edgelines are not required in curb and gutter sections of roadways.
- The traveled way includes only that portion of the roadway used for vehicular travel and not the parking lanes, sidewalks, berms and shoulders. The traveled ways shall be measured from the inside of edgeline to inside of edgeline of a two lane roadway.

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



Texas Department of Transportation
Traffic Operations Division

TYPICAL STANDARD PAVEMENT MARKINGS

PM(1)-12

© TxDOT November 1978	DIV: TXDOT	CR: TXDOT	DW: TXDOT	CK: TXDOT
REVISIONS	CONT	SECT	JOB	HIGHWAY
8-95 2-12				
5-00				
8-00				
3-03				
22A				

SCALE: AS NOTED

SHEET: 32

CITY OF MONTGOMERY, CITY ENGINEER
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DRAWN	LMJ	CHECKED	JP

SCALE: AS NOTED

SHEET: 32

STATE OF TEXAS
JONATHAN PAYNE
139294
LICENSED PROFESSIONAL ENGINEER

9/29/2025

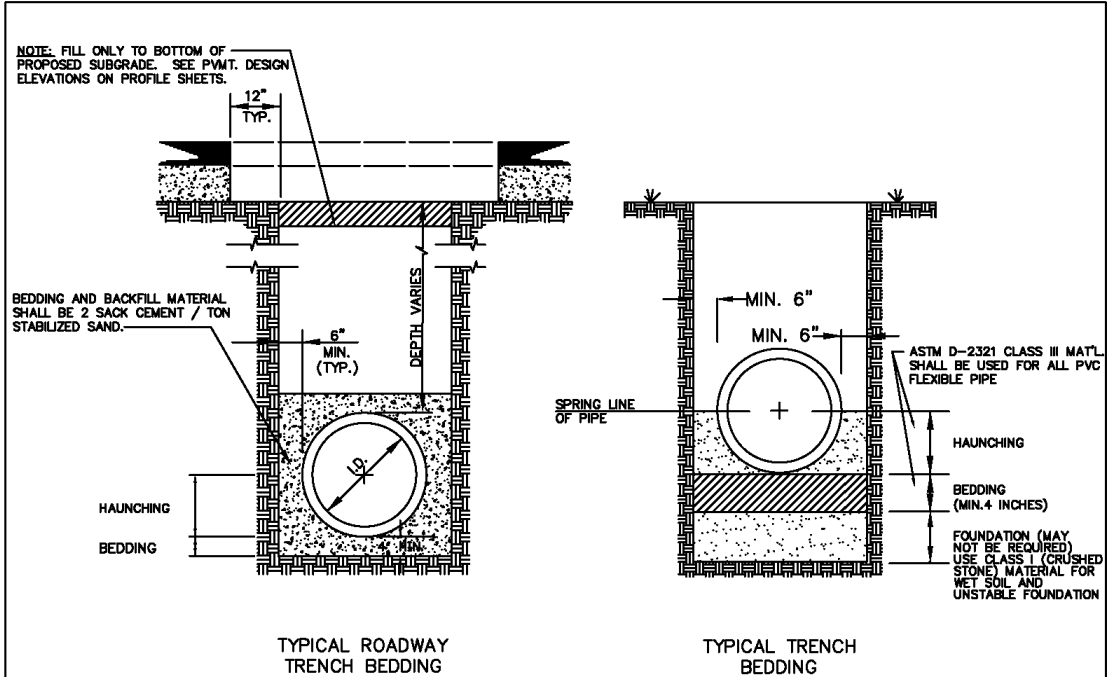
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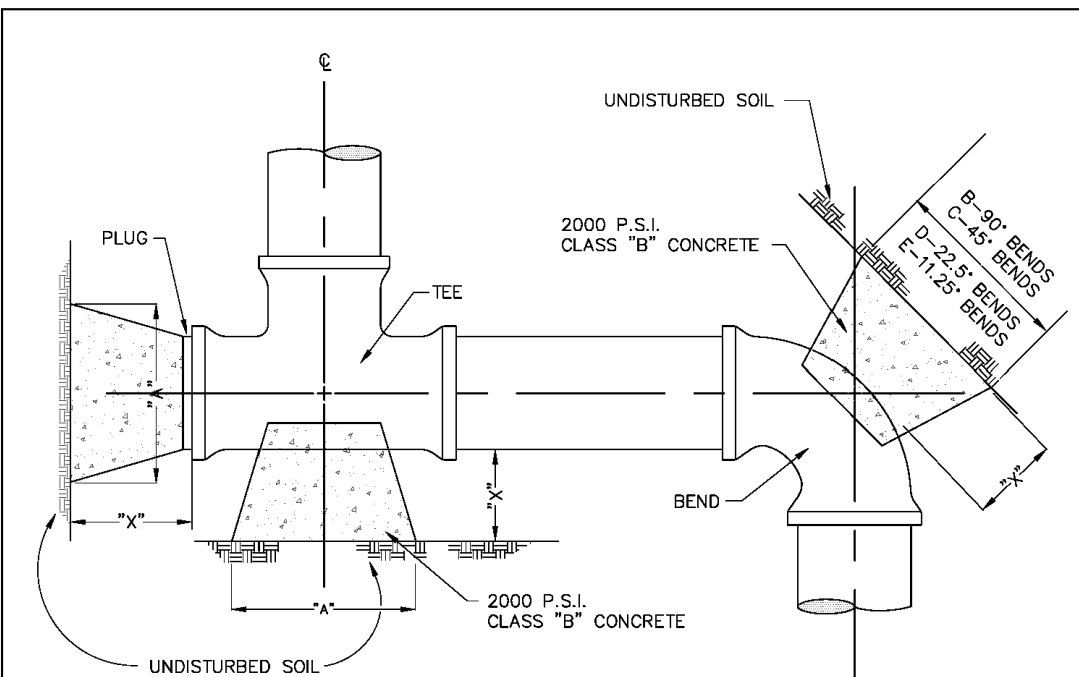
PROJECT ADDRESS
LONESTAR PKWY / SH 105
MONTGOMERY, TX 77356

LEGACY GROVE SECTION 1 WS&D PAVING DETAILS (3 OF 3)



ASTM D 2321
Description of embankment materials
Class I
Angular, 1/4" to 1 1/2" graded stone, including a number of #1 materials that have regional significance, such as corals, shells, crushed stone and crushed shells.
Class II
Coarse sand and gravel with maximum particle size of 1 1/2", including various graded sands and gravels containing small percentages of fines, generally granular and noncohesive, either wet or dry. Soil Types GW, GP, SW, and SP are included in this class.
Class III
Fine sand and clayey grouts including the sands, sand-gravel mixtures, and gravel-grout mixtures. Soil Types GM, GC, MH, and SC are included in this class.
Class IV
Silty clay, clay, and clay, including inorganic clay and silts of medium to high plasticity and liquid limits. Soil Types MH, CL, CH, and CI are included in this class.
Class V
This class includes the organic soils OL, OH, and PT or wet or with containing trace amounts, such as peat, muck, and other organic materials. These materials are not recommended for bedding, haunching, or initial backfill.
NOTE: BACKFILL ABOVE THE BEDDING SHALL CONFORM TO "TYPICAL WATERLINE BACKFILL AND TRENCH REPAIR" STANDARD DRAWING W-5.

REVISIONS	CITY OF MONTGOMERY TYPICAL WATERLINE BEDDING AND TRENCH DETAIL	WATER
		W-1



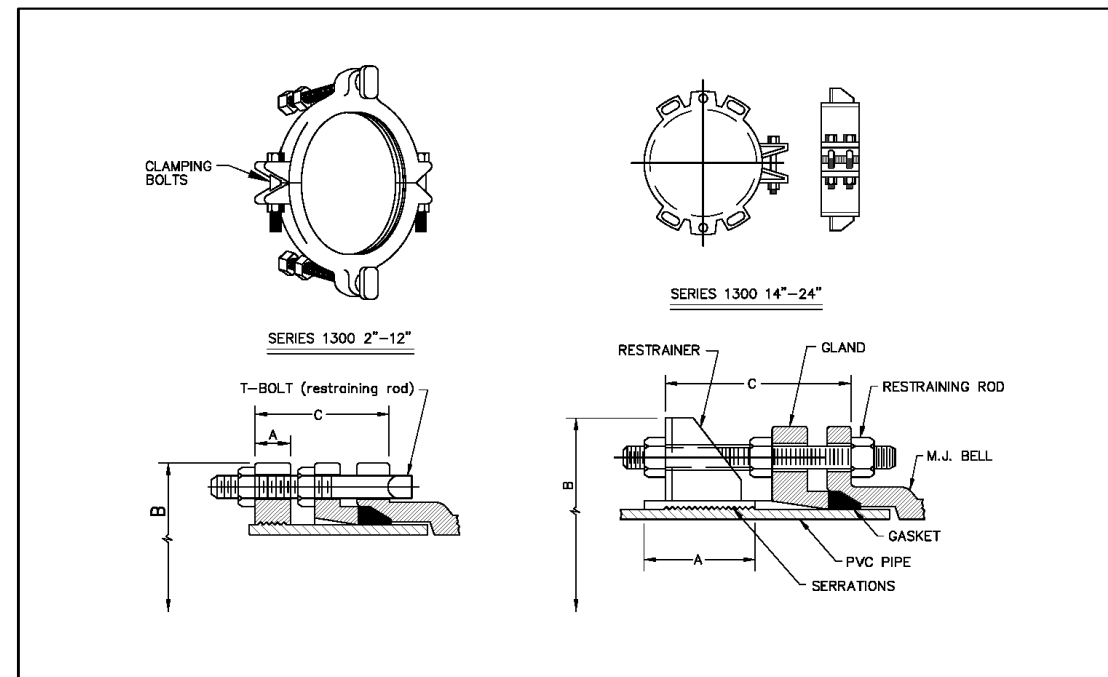
HORIZONTAL BLOCKING TABLE

Dimension "X" to be a minimum of (1) foot, but is to be increased where necessary to provide bearing against undisturbed trench wall.

PIPE SIZE	"X" DIM.	PLUGS & TEES			90° BENDS			45° BENDS			22.50° BENDS			11.25° BENDS		
		MIN. AREA	MIN. W	MIN. L	MIN. AREA	MIN. W	MIN. L	MIN. AREA	MIN. W	MIN. L	MIN. AREA	MIN. W	MIN. L	MIN. AREA	MIN. W	MIN. L
4"	1'-0"	1'-0"	0.88	0.05	1'-0"	0.83	0.05	1'-0"	0.83	0.05	1'-0"	0.83	0.05	1'-0"	0.83	0.05
6"	1'-6"	1'-0"	1.06	0.06	1'-2"	1.50	0.09	1'-0"	0.83	0.05	1'-0"	0.83	0.05	1'-0"	0.83	0.05
8"	1'-6"	1'-3"	1.89	0.11	1'-2"	2.66	0.15	1'-2"	1.44	0.08	1'-0"	0.83	0.05	1'-0"	0.83	0.05
10"	1'-6"	1'-3"	2.95	0.17	2'-0"	4.17	0.24	1'-6"	2.26	0.13	1'-3"	1.15	0.07	1'-0"	0.83	0.05
12"	1'-6"	1'-3"	4.25	0.24	2'-3"	6.00	0.34	1'-9"	3.25	0.18	1'-3"	1.65	0.10	1'-0"	0.83	0.05
16"	2'-0"	2'-7"	7.34	0.36	3'-0"	10.65	0.79	2'-3"	5.78	0.43	1'-9"	2.94	0.22	1'-2"	1.48	0.11
18"	2'-0"	2'-7"	7.70	0.57	3'-5"	10.89	0.82	2'-6"	5.89	0.44	1'-10"	3.01	0.22	1'-5"	1.50	0.11
20"	2'-0"	2'-7"	7.86	0.58	3'-9"	11.12	0.84	2'-9"	6.01	0.45	2'-0"	3.07	0.23	1'-7"	1.54	0.12
24"	2'-6"	3'-8"	11.33	0.84	4'-3"	16.00	1.20	3'-2"	8.65	0.65	2'-6"	4.42	0.33	1'-10"	2.22	0.17

NOTE: Calculations in Minimum Area column are in square feet.
Calculations in Minimum Volume column are in cubic yards.

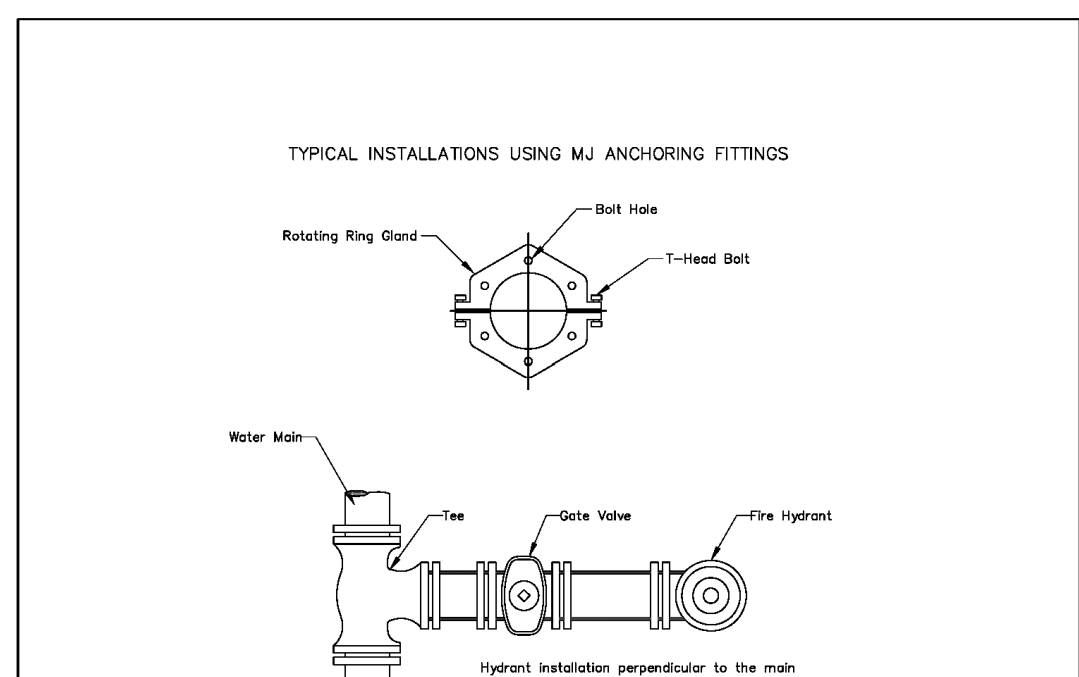
REVISIONS	CITY OF MONTGOMERY HORIZONTAL BLOCKING FOR WATERLINE	WATER
		W-2



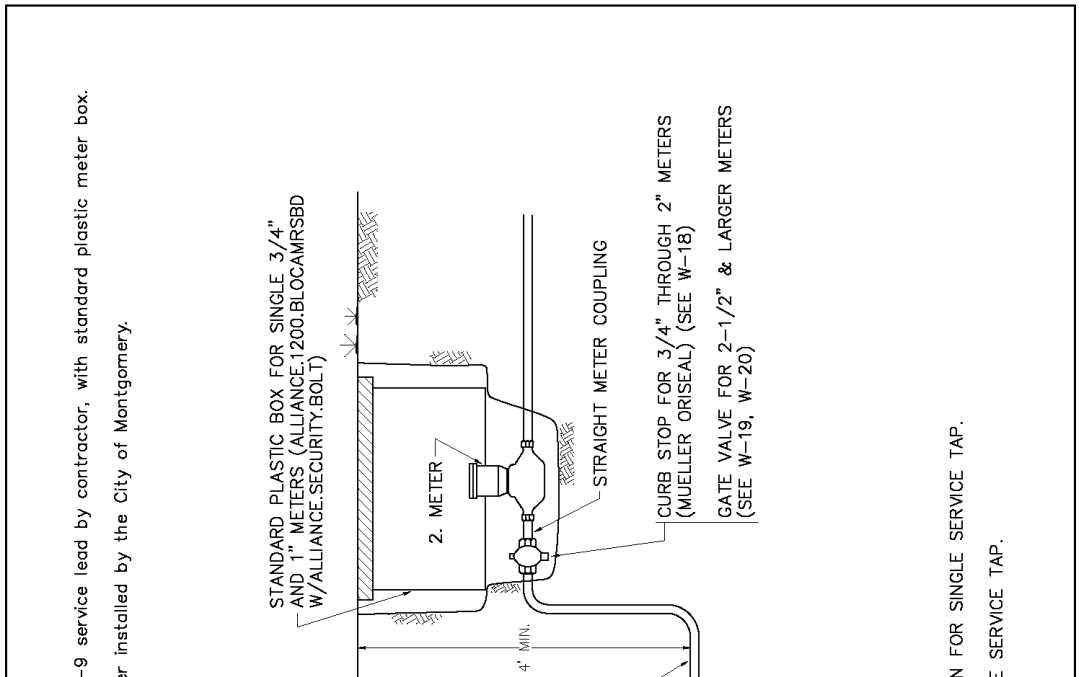
RESTRAINER CHART									
NOM. PIPE SIZE	PVC PIPE W/STEEL PIPE O.D. No. 1300-S	PVC PIPE W/DI. PIPE O.D. No. 1300-C	A	B approx.	C max.	RESTRAINING RODS NO.	CLAMPING BOLTS SIZE	APPROX. WGT. (lbs.)	
2	2.375	N/A	1-1/8	6-1/4	4.0	2	5/8 x 5	2	5/8 x 4
3	3.500	N/A	1-1/8	7-11/16	4.0	2	5/8 x 5	2	5/8 x 4
4	4.500	4.80	1-1/8	9-1/8	6.0	2	3/4 x 7	2	5/8 x 4
6	6.625	6.90	1-1/8	11-1/8	6.0	2	3/4 x 7	2	5/8 x 4
8	8.625	8.05	1-1/4	13-7/8	6.0	2	3/4 x 7	2	3/4 x 5
10	10.750	11.10	1-3/8	16-5/8	6.0	4	3/4 x 7	2	7/8 x 6
12	12.750	13.20	1-3/8	19-1/4	6.0	4	3/4 x 7	2	7/8 x 6
14	N/A	15.30	4.0	22.0	15.0	6	3/4 x 17	2	7/8 x 7
16	N/A	17.40	4.0	24.2	15.0	6	3/4 x 17	2	7/8 x 7
18	N/A	19.50	5.0	26.5	15.0	8	3/4 x 17	2	1 x 7
20	N/A	21.60	7.0	28.6	22.0	8	3/4 x 24	3	1 1/8 x 9
24	N/A	25.80	7.0	32.8	22.0	12	3/4 x 24	3	1 1/8 x 9

Weights include Restraining rods, clamping bolt and nuts and special "T" bolts and nuts.
N/A PIPE NOT MANUFACTURED IN THIS SIZE.
Dimensions in inches.

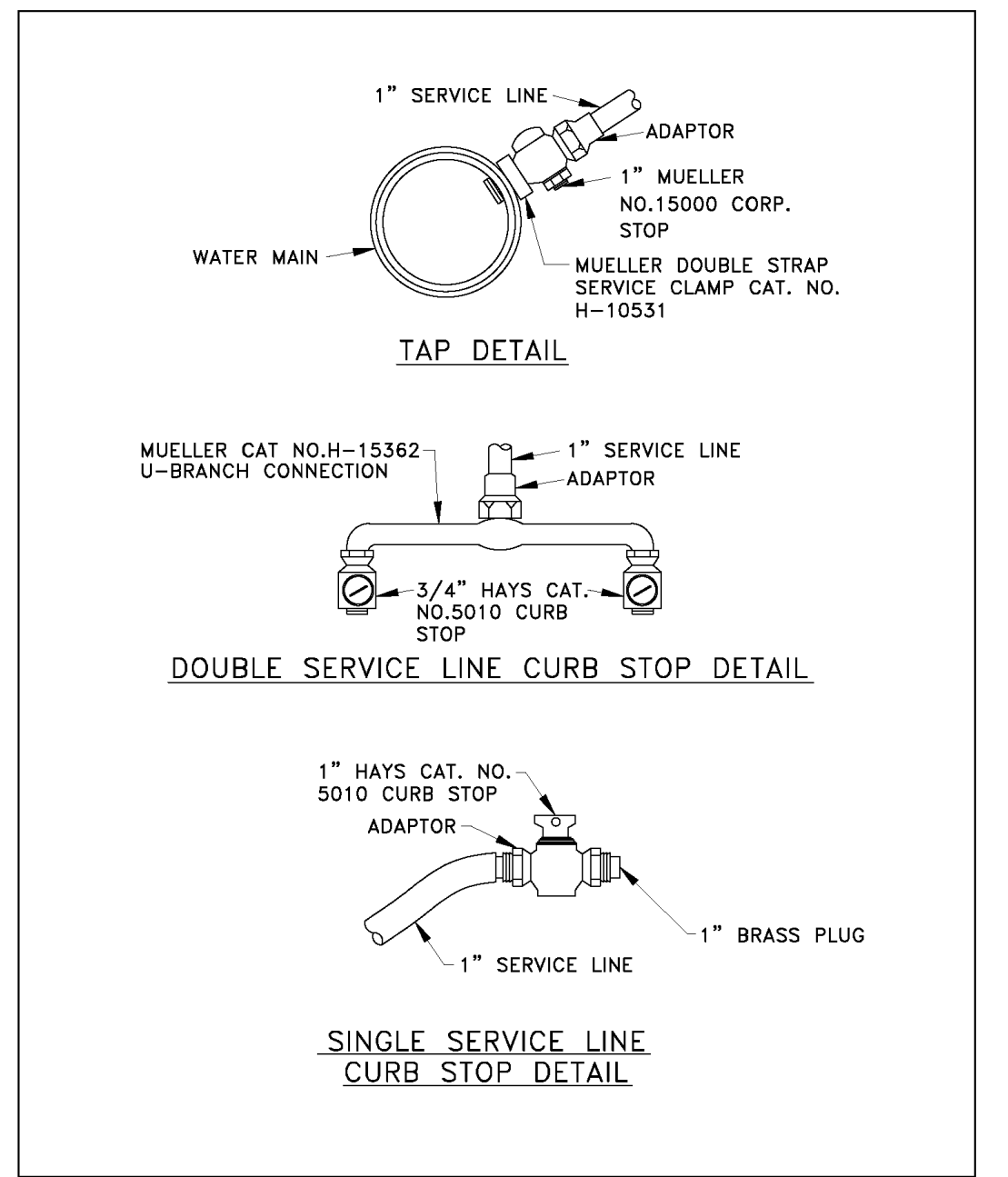
REVISIONS	CITY OF MONTGOMERY WATERLINE RESTRAINER	WATER
		W-3



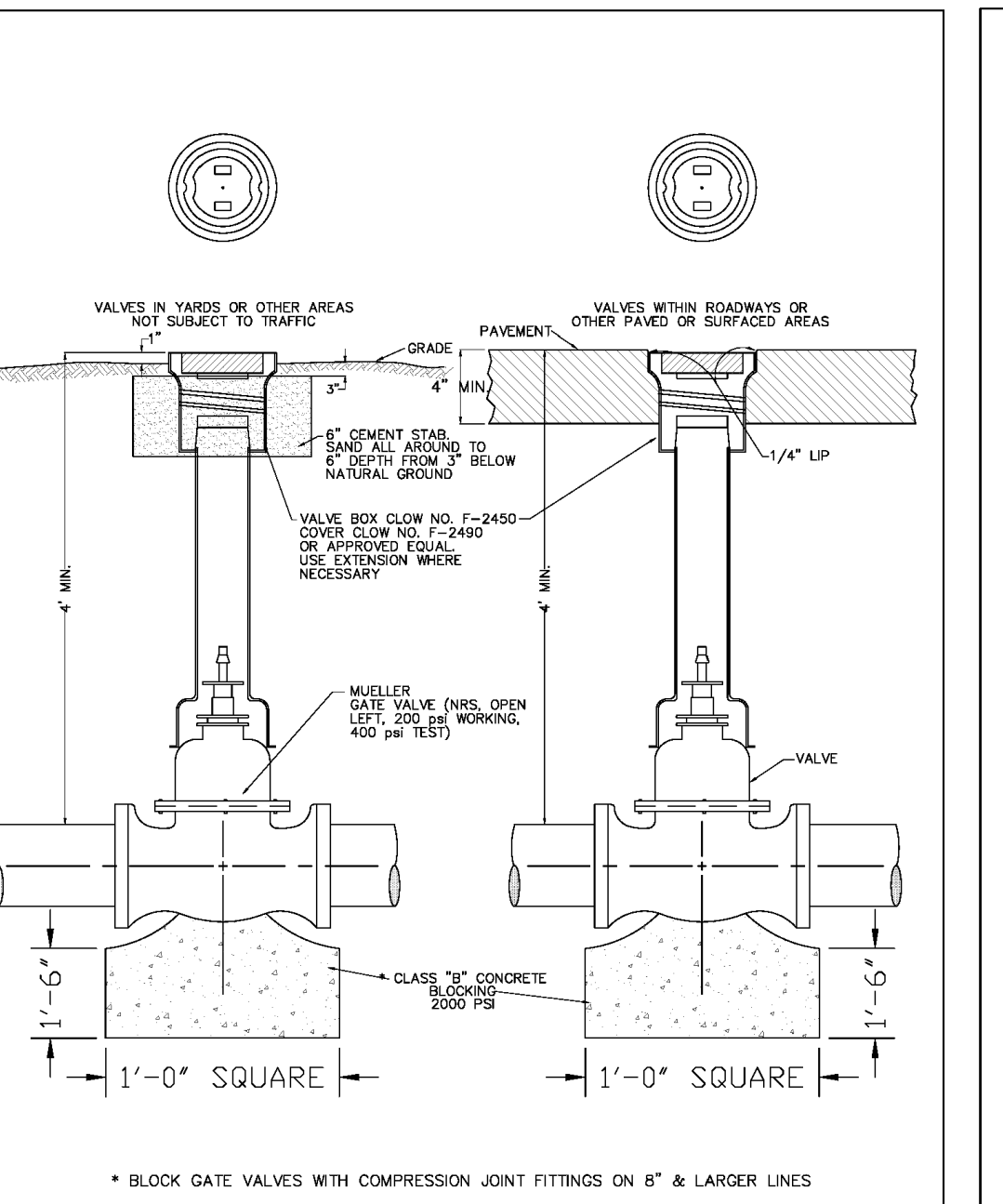
REVISIONS	CITY OF MONTGOMERY MECHANICAL JOINTS AND ELCEN CLAMPS FOR WATERLINES	WATER
		W-4



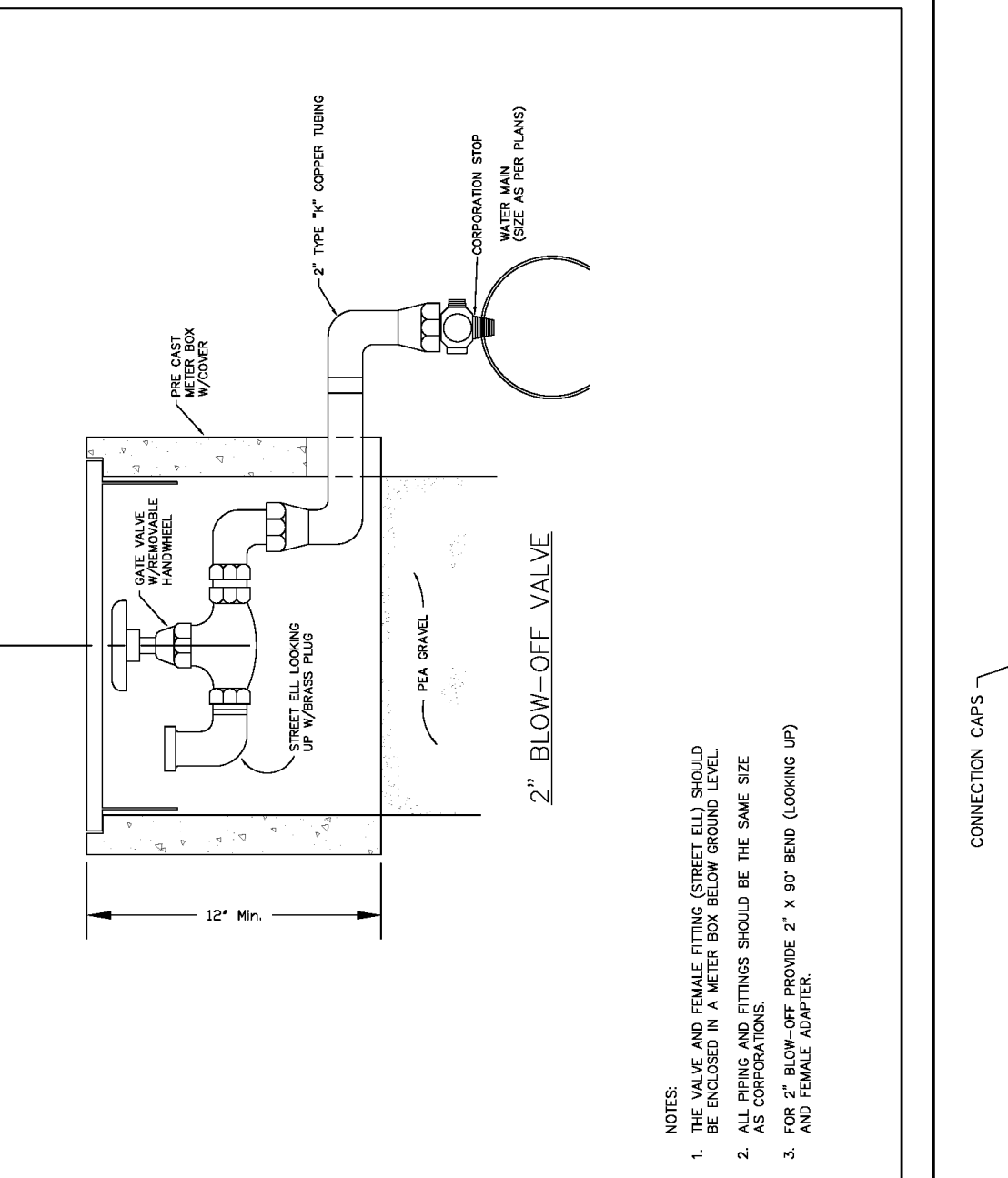
REVISIONS	CITY OF MONTGOMERY WATER SERVICE CONNECTION	WATER
		W-8



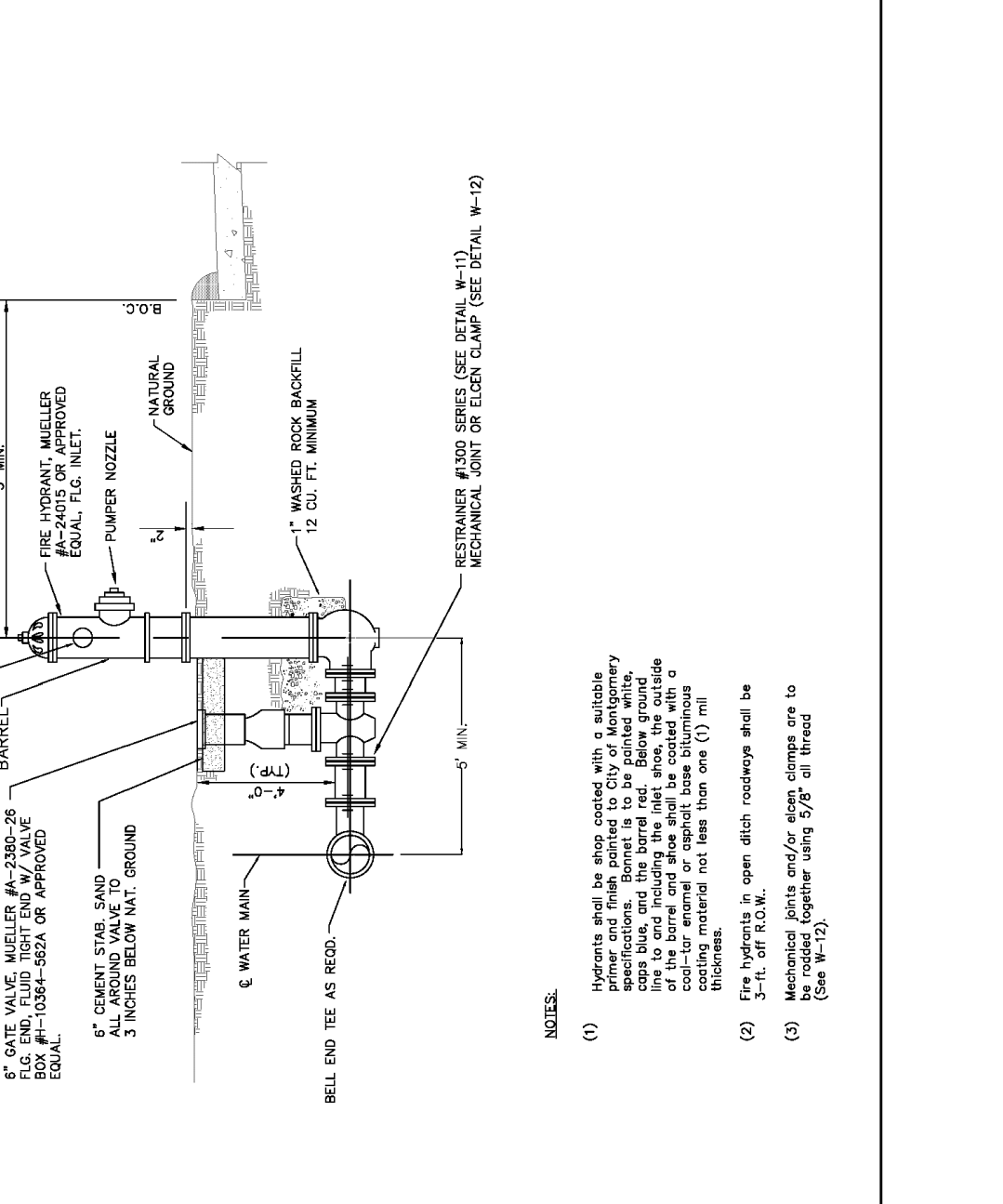
REVISIONS	CITY OF MONTGOMERY CURB STOP & TAP FOR WATERLINE	WATER
		W-10



REVISIONS	CITY OF MONTGOMERY GATE VALVE & BOX INSTALLATION 14" AND SMALLER WATERLINE	WATER
		W-11



REVISIONS	CITY OF MONTGOMERY 2" BLOW-OFF VALVE FOR WATERLINE	WATER
		W-13



REVISIONS	CITY OF MONTGOMERY FIRE HYDRANT INSTALLATION	WATER
		W-15

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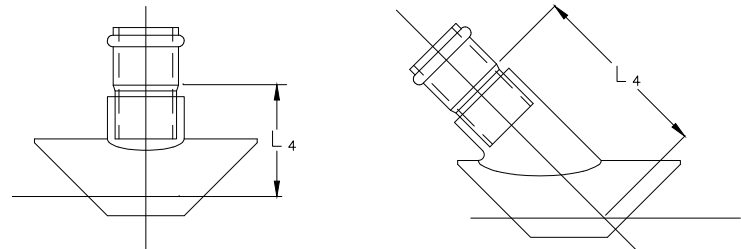
LEGACY GROVE SECTION 1 WS&D UTILITY DETAILS (1 OF 3)

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PROJECT	11020	TDLR	**
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SCALE	AS NOTED	SHEET	34

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STATE OF TEXAS
04/29/2025

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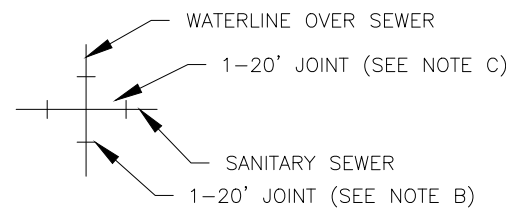
TEE SADDLE				WYE SADDLE			
D	L4	WT. lbs.		D	L4	WT. lbs.	
6 x 4	6.0	2.3		6 x 4	7.1	5.9	
8 x 4	7.0	2.3		8 x 4	7.9	5.9	
8 x 6	7.8	4.5		8 x 6	9.7	5.4	
10 x 4	9.0	2.3		10 x 4	9.3	5.9	
10 x 6	9.8	4.5		10 x 6	11.1	5.4	
12 x 4	10.0	2.3		12 x 4	10.8	5.9	
12 x 6	10.8	4.5		12 x 6	12.5	5.4	

- NOTES:
1. PLACE SADDLE IN POSITION ON PIPE.
 2. MARK HOLE GUIDE FOR CUT IN PIPE USING SADDLE AS A TEMPLATE.
 3. REMOVE SADDLE FROM PIPE.
 4. AUGER A HOLE INTO PIPE WALL ON HOLE GUIDE MARK. THE HOLE SHOULD BE 1/2" OUTSIDE THE HOLE GUIDE MARK.
 5. WIPE CLEAN AND DRY BOTH THE UNDERSIDE OF THE SADDLE AND THE MATING SURFACE OF THE PIPE.
 6. APPLY PRIMER TO BOTH MATING SURFACES. CHECK THE PVC SURFACES WHILE STILL WET WITH PRIMER TO SEE THAT THE SURFACES HAVE BEEN ETCHED.
 7. WHILE THE SURFACES ARE STILL WET WITH PRIMER, LIBERALLY BRUSH CEMENT BASE ON MATING SURFACE OF SADDLE AND PIPE.
 8. IMMEDIATELY POSITION THE SADDLE OVER THE HOLE IN THE PIPE AND DRAW DOWN WITH STAINLESS STEEL STRAPS.
 9. THE SADDLE MUST NOT BE MOVED ONCE IT MAKES CONTACT WITH THE PIPE.

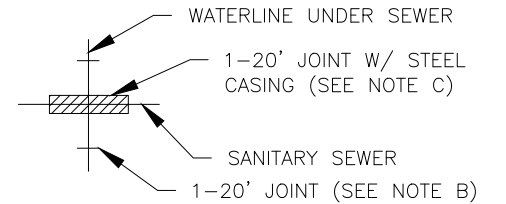
TEE & WYE SADDLES FOR PVC PIPE
NTS

CONSTRUCT WATER LINE-SANITARY SEWER CROSSING PER THE FOLLOWING REQUIREMENTS:

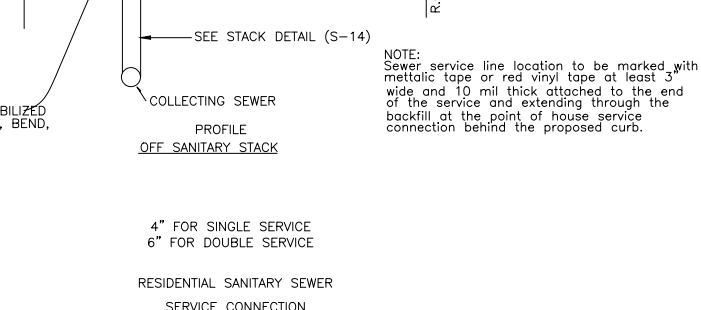
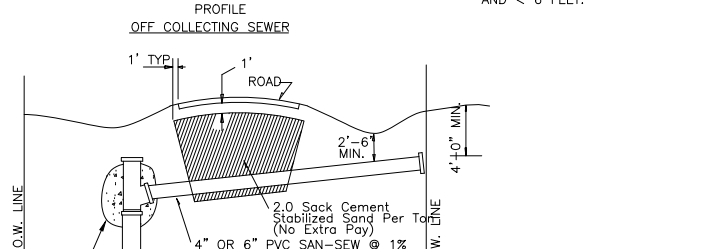
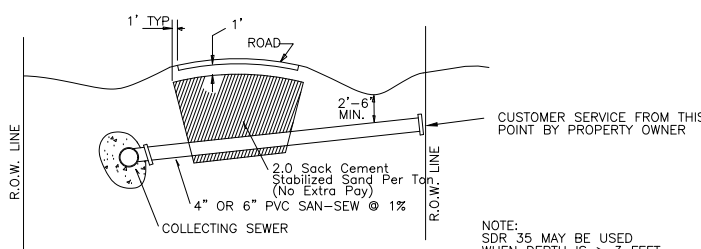
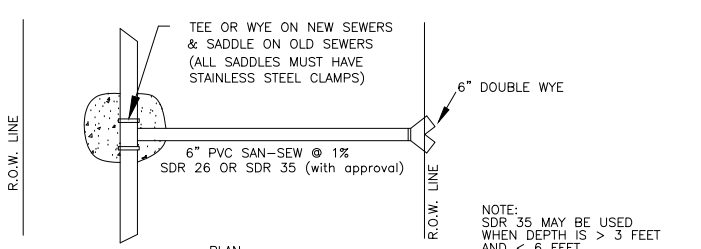
1. A. PROVIDE MINIMUM 2' VERTICAL CLEARANCE.
B. PLACE ONE FULL SECTION (MIN. 18 FT) OF WATERLINE CENTERED AT SANITARY SEWER CROSSING. PROVIDE RESTRAINED JOINTS ON WATERLINE, SPACED AT LEAST 9 FEET HORIZONTALLY FROM CENTERLINE SAND, AS PER TAC § 290.44.
C. WHERE A WATERLINE CROSSES A SEWER MAIN OR LATERAL WITHOUT 2' CLEARANCE, WATERLINE MUST BE 6" ABOVE SEWER MAIN OR LATERAL. SEWER MUST HAVE A PRESSURE RATED PIPE OF AT LEAST 150 PSI AND SHALL BE EMBEDDED IN CEMENT STABILIZED SAND FOR A TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12" BEYOND THE JOINT ON EACH END.
D. PLACE ONE FULL SECTION (MIN. 18 FT) OF 150 PSI SANITARY SEWER CENTERED AT WATERLINE CROSSING, SPACED AT LEAST 9 FEET HORIZONTALLY FROM CENTERLINE OF WATERLINE, AND EMBED IN CEMENT STABILIZED SAND.
E. WATERLINES, INCLUDING SERVICE LEADS, SHALL ALWAYS CROSS OVER SANITARY SEWER LINES AND SERVICE LEADS UNLESS SPECIFICALLY LABELED AND APPROVED OTHERWISE.



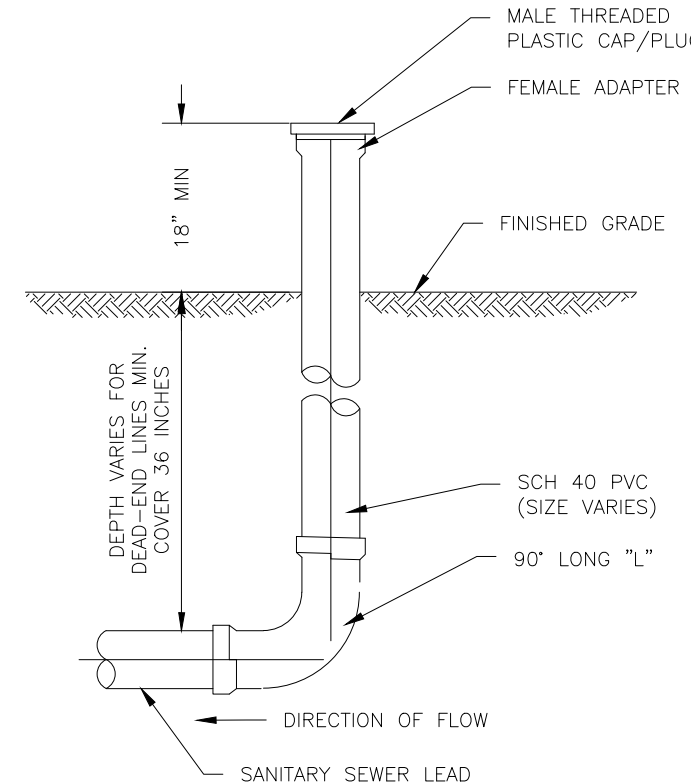
2. A. ANY SANITARY SEWER MAIN OR LATERAL THAT CROSSES OVER A NEW WATERLINE SHALL BE ENCASED IN 18" OR LONGER SECTION OF PIPE CENTERED ON THE WATERLINE OR CONSTRUCTED WITH DUCTILE IRON OR STEEL PIPE WITH MECHANICAL WELDED JOINTS.



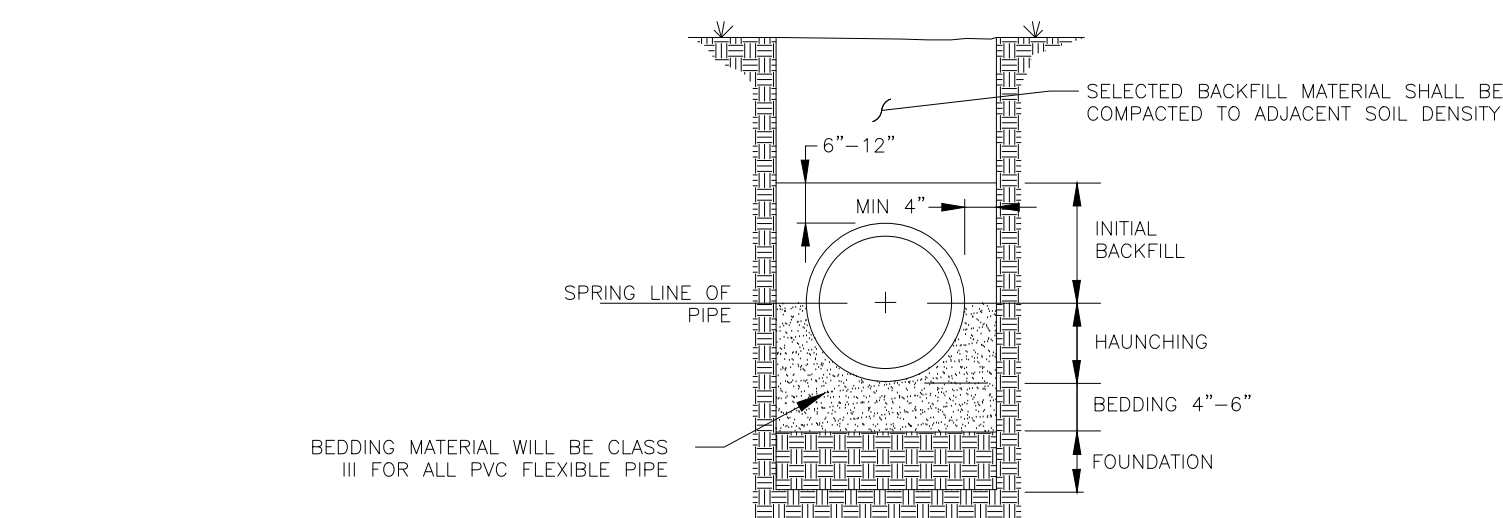
WATER LINE AND SANITARY SEWER CROSSING NOTES AND DETAIL
NTS



4" FOR SINGLE SERVICE
6" FOR DOUBLE SERVICE
RESIDENTIAL SANITARY SEWER
SERVICE CONNECTION



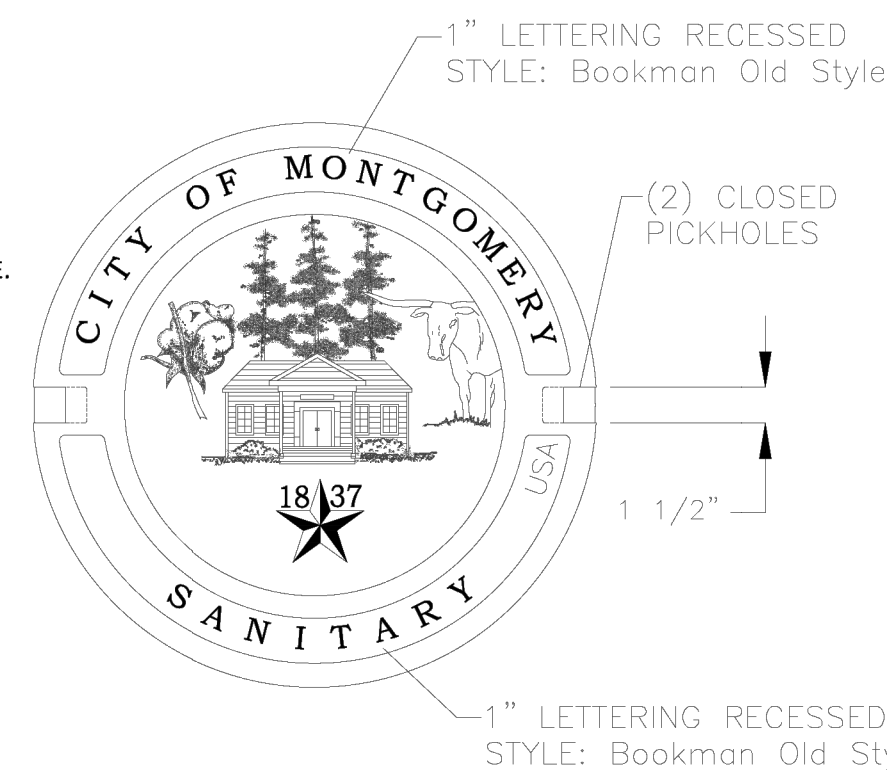
SANITARY SEWER LEAD TEMPORARY STUB UP DETAIL
NTS



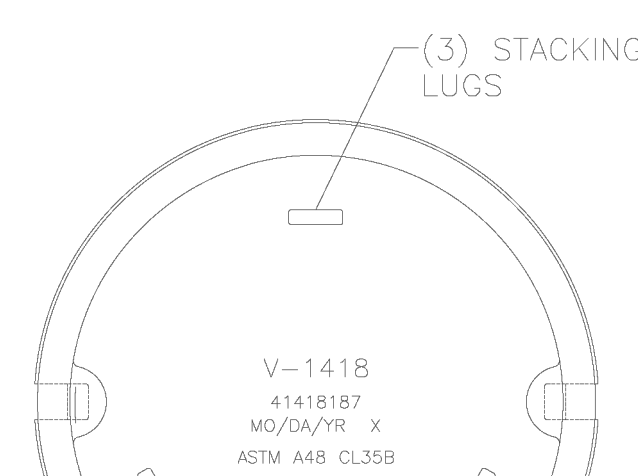
- NOTES:
1. A FOUNDATION IS REQUIRED WHEN THE TRENCH BOTTOM IS UNSTABLE. ANY FOUNDATION THAT WILL SUPPORT A RIGID PIPE WITHOUT CAUSING LOSS OF GRADE OR FLEXURAL BREAKING WILL BE MORE THAN ADEQUATE FOR PVC PIPES.
 2. THE BEDDING DIRECTLY UNDERNATH THE PIPE IS REQUIRED ONLY TO BRING THE TRENCH BOTTOM UP TO GRADE. IT SHOULD NOT BE SO THICK OR SOFT THAT THE PIPE WILL SETTLE AND LOSE GRADE. THE PURPOSE OF THE BEDDING IS TO PROVIDE A FIRM, STABLE AND UNIFORM SUPPORT FOR THE PIPE. A LAYER OF MATERIAL SUFFICIENT TO ESTABLISH LINE, GRADE, AND SUPPORT SHOULD BE PLACED. BELL HOLES SHOULD BE EXCAVATED TO INSURE UNIFORM BEARING.
 3. THE HAUNCHING AREA IS THE MOST IMPORTANT IN TERMS OF LIMITING THE DEFLECTION OF A FLEXIBLE PIPE. THIS IS THE AREA THAT SHOULD BE COMPACTED TO THE REQUIRED OR SPECIFIED DENSITY.

ASTM D-2321 DESCRIPTION OF EMBEDMENT MATERIALS:
CLASS I: ANGULAR, 1/4" TO 1-1/2" GRADED STONE, INCLUDING A NUMBER OF FILL MATERIALS THAT HAVE REGIONAL SIGNIFICANCE, SUCH AS CORAL, SLAG, CINDERS, CRUSHED STONE AND CRUSHED SHELLS.
CLASS II: COARSE SANDS AND GRAVELS WITH MAXIMUM PARTICLE SIZE OF 1-1/2", INCLUDING VARIOUSLY GRADED SANDS, AND GRAVELS CONTAINING SMALL PERCENTAGES OF FINES, GENERALLY GRANULAR AND NONCOHESIVE, EITHER WET OR DRY. SOIL TYPES GW, GP, SW, AND SP ARE INCLUDED IN THIS CLASS.
CLASS III: FINE SAND AND CLAYEY GRAVELS, INCLUDING FINE SANDS AND SAND-CLAY MIXTURES, AND GRAVEL CLAY MIXTURES. SOIL TYPES GM, GC, SM AND SC ARE INCLUDED IN THIS CLASS.
CLASS IV: SILT, SILTY CLAYS, AND CLAYS, INCLUDING INORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY AND LIQUID LIMITS. SOIL TYPES MH, ML, CH, AND CL ARE INCLUDED IN THIS CLASS.
CLASS V: THIS CLASS INCLUDES THE ORGANIC SOILS OL, OH, AND PT AS WELL AS SOILS CONTAINING FROZEN EARTH, DEBRIS, ROCKS LARGER THAN 1-1/2" IN DIAMETER, AND OTHER FOREIGN MATERIALS. THESE MATERIALS ARE NOT RECOMMENDED FOR BEDDING, HAUNCHING, OR INITIAL BACKFILL.

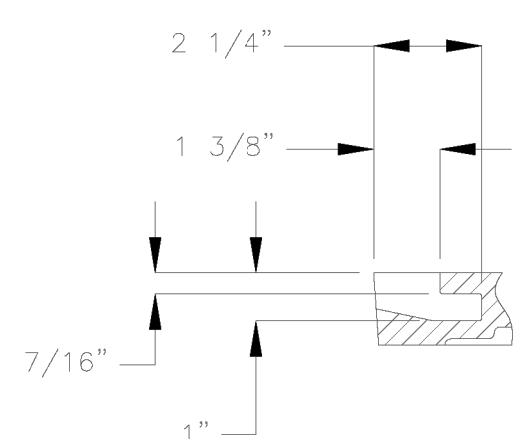
TYPICAL SANITARY BEDDING & TRENCH DETAIL
NTS



COVER
SECTION VIEW



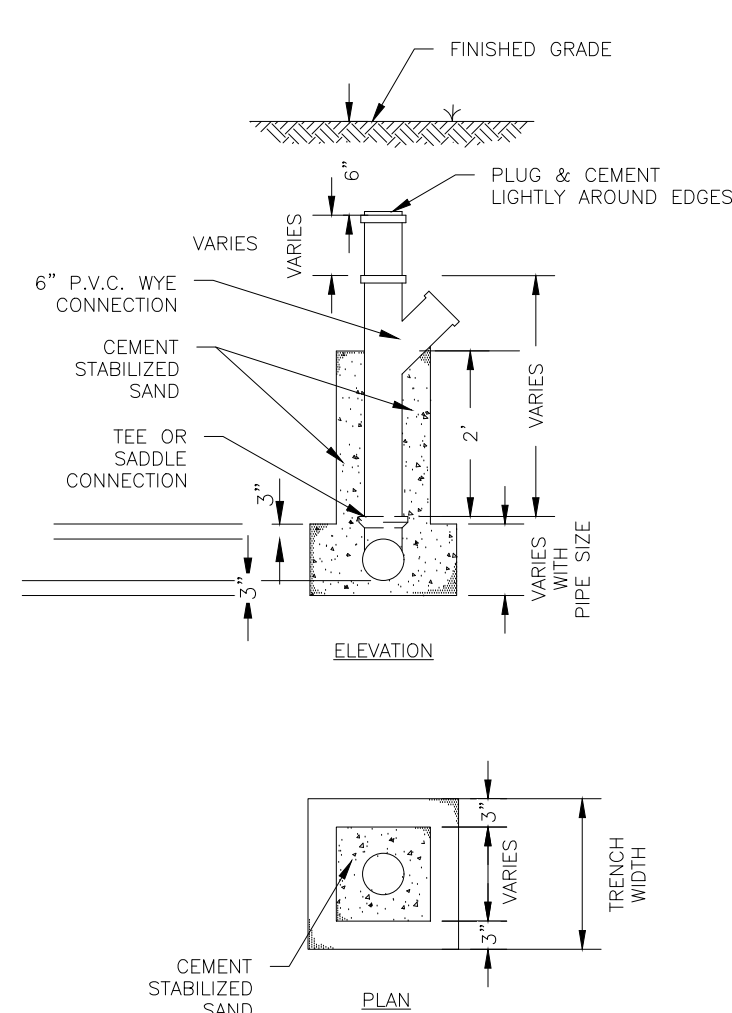
COVER
BOTTOM VIEW



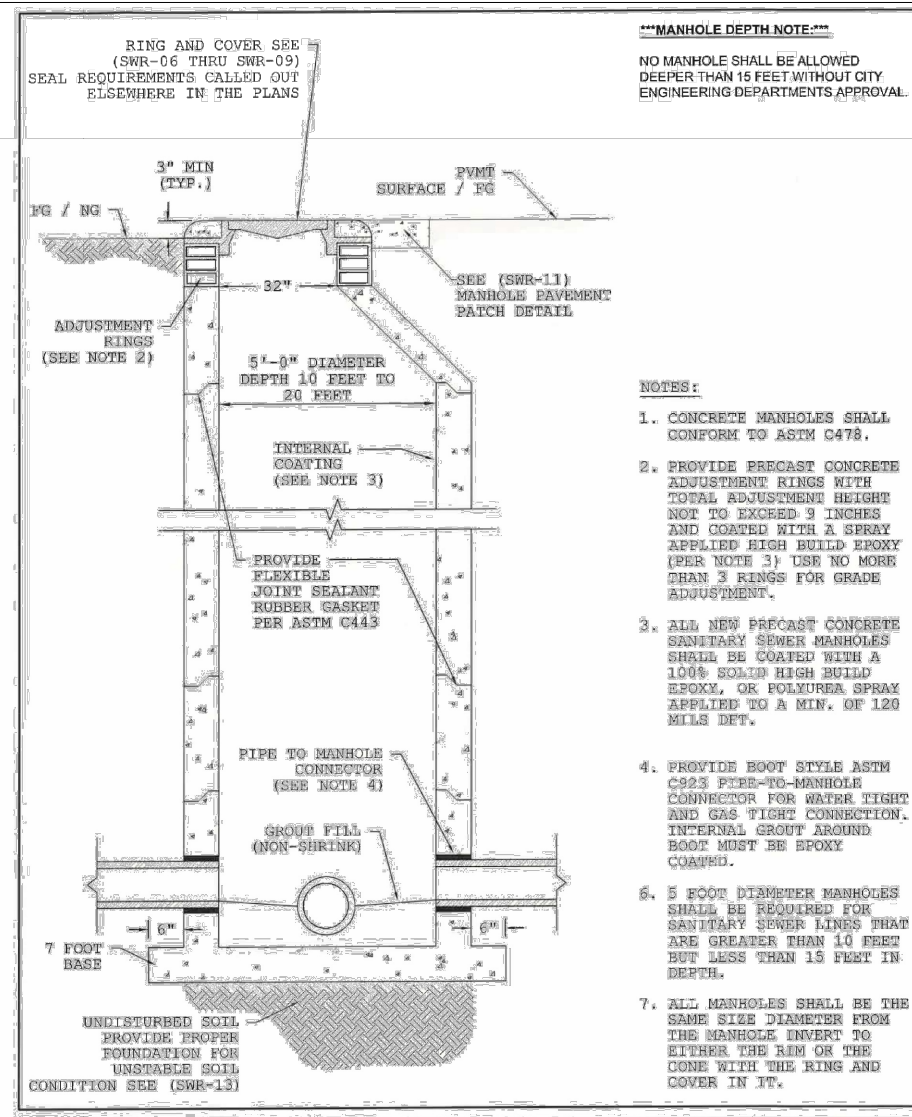
PICKHOLE DETAIL

CITY OF MONTGOMERY
24" SANITARY
MANHOLE COVER

SANITARY
S-2



SANITARY SEWER STACK DETAIL
NTS



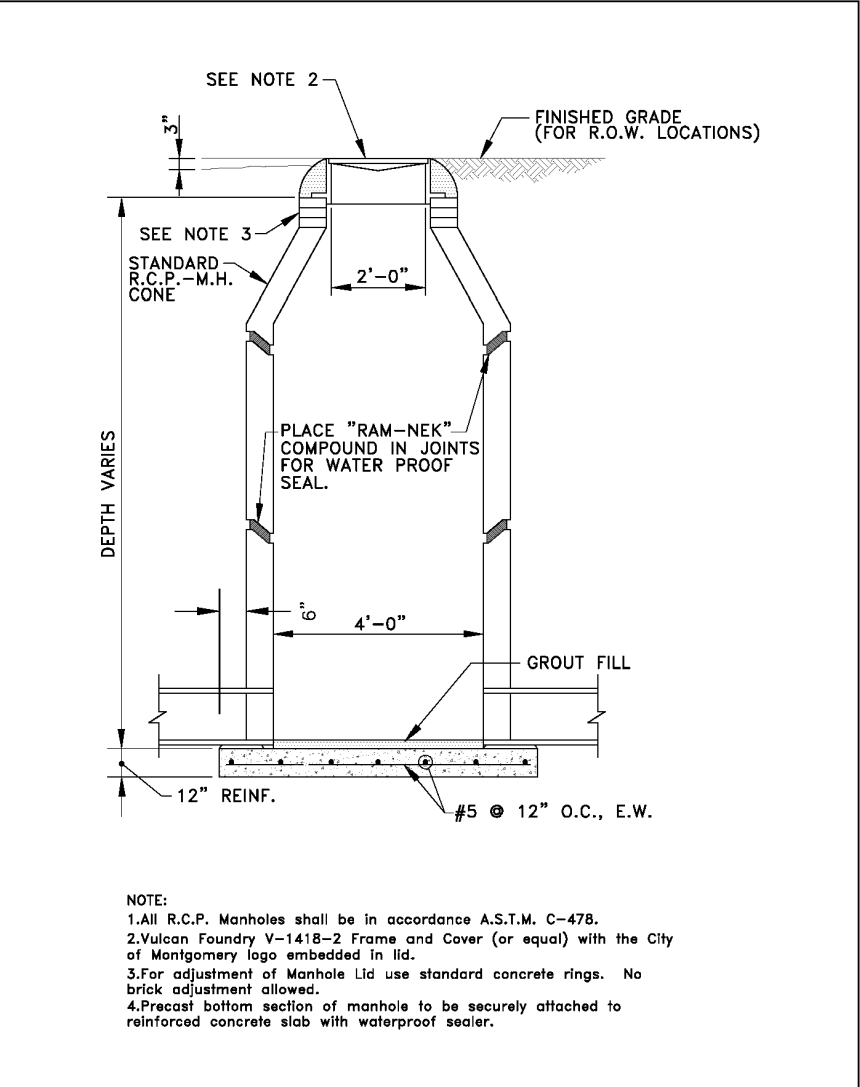
CITY OF CONROE
ENGINEERING
300 N. LAKE, P.O. BOX 300
CONROE, TEXAS 77385
1001 102-1000

SANITARY SEWER
5 FOOT DIAMETER OFFSET MANHOLE
WITH 7 FT BASE

Revision Date
01 / 04 / 2024

Approved By: *the best*

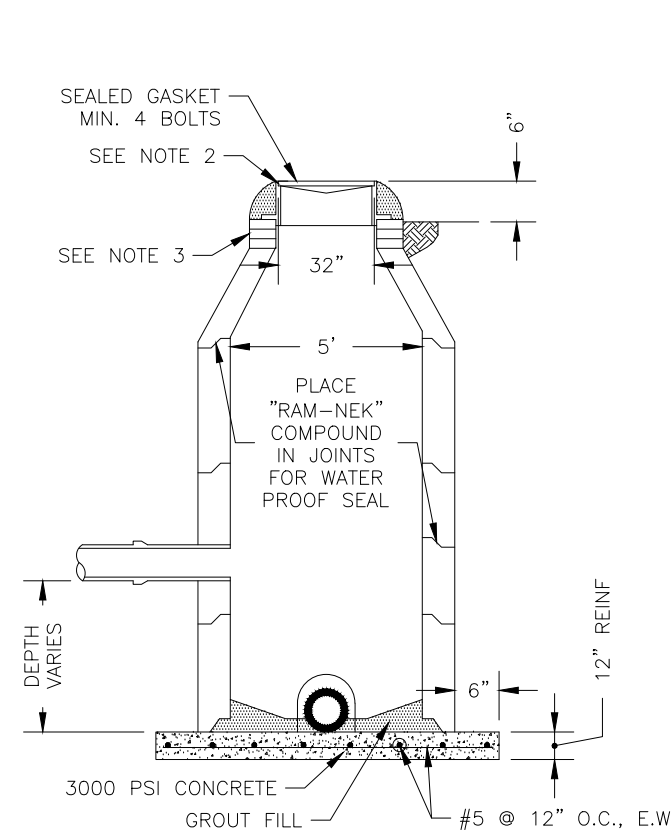
SWR-04A



REVISIONS

CITY OF MONTGOMERY
STANDARD PRECAST MANHOLE

SEWER
S-4



- NOTE:
1. A DROP PIPE SHALL BE PROVIDED FOR A SEWER ENTERING A MANHOLE MORE THAN 24" ABOVE THE MANHOLE INVERT & SHALL BE AN INTERNAL DROP.
 2. ALL R.C.P. MANHOLES SHALL BE IN ACCORDANCE WITH A.S.T.M. C-478.
 3. USE WATERTIGHT MANHOLE RING & COVER (OR EQUAL).
 4. FOR ADJUSTMENT OF MANHOLE LID USE STANDARD CONCRETE RINGS. NO BRICK ADJUSTMENT ALLOWED.
 5. PRECAST BOTTOM SECTION OF MANHOLE TO BE SECURELY ATTACHED TO REINFORCED CONCRETE SLAB WITH WATERPROOF SEALER.
 6. MANHOLE SECTIONS, CONES AND INVERT TOPS SHALL BE COATED WITH A SUITABLE, PROTECTIVE, 20 MILS THICK, COLD TAR EPOXY COATING.

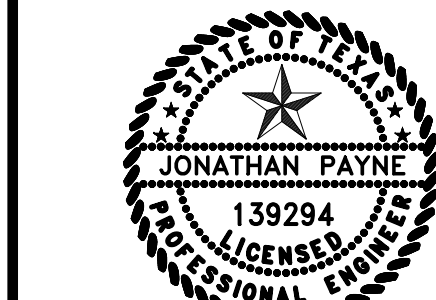
STANDARD PRECAST DOUGHHOUSE MANHOLE
NTS

CITY OF MONTGOMERY, CITY ENGINEER
SIGNATURE VALID FOR ONE (1) YEAR

DATE

DRAWING ISSUE				
#	DATE	BY	* COMMENT	
1	04/29/25	JP	FOR PERMIT	

DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	AS NOTED	SHEET	35



Jonathan Payne
04/29/2025

*PLANS NOT RELEASED FOR CONSTRUCTION UNLESS INDICATED ABOVE

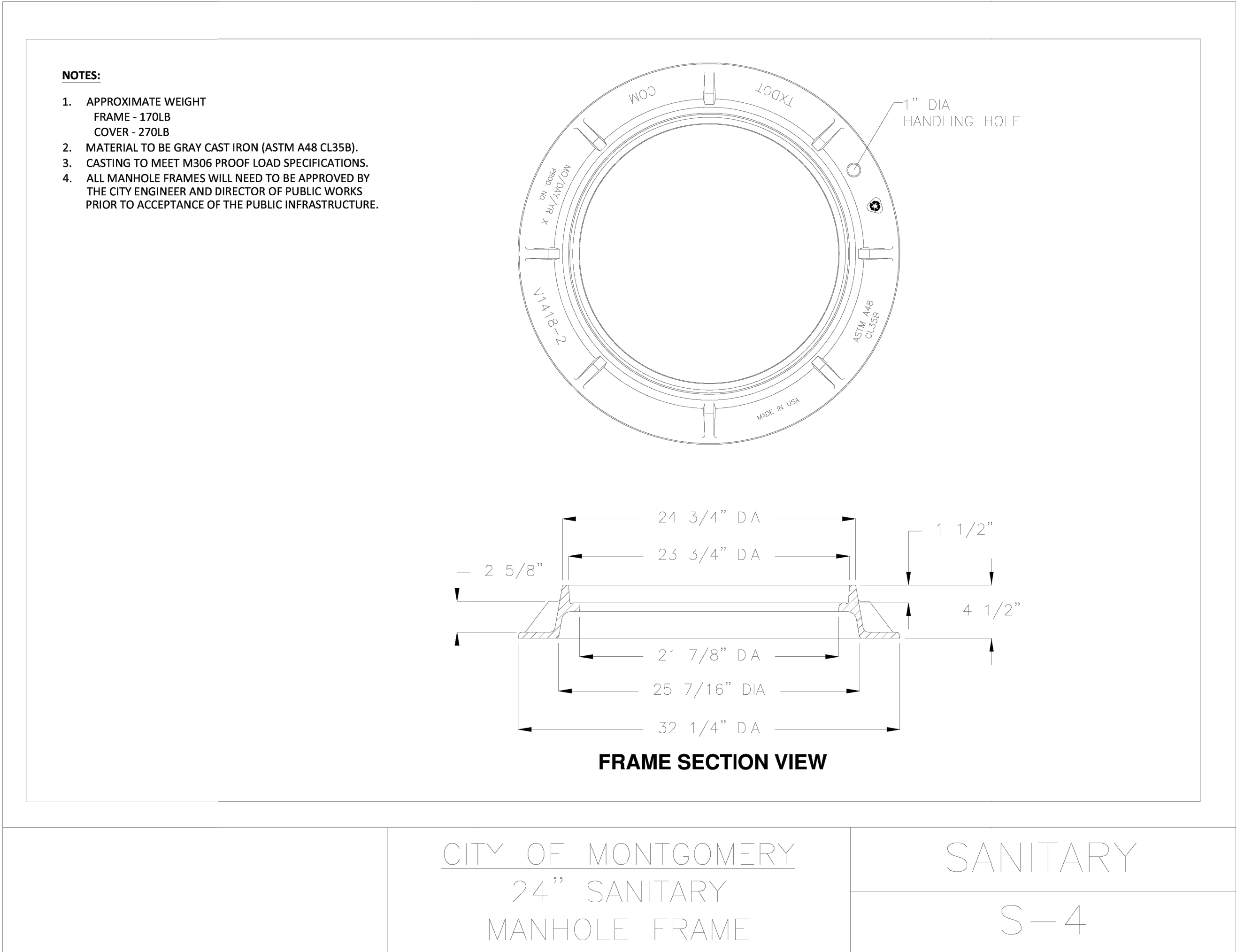
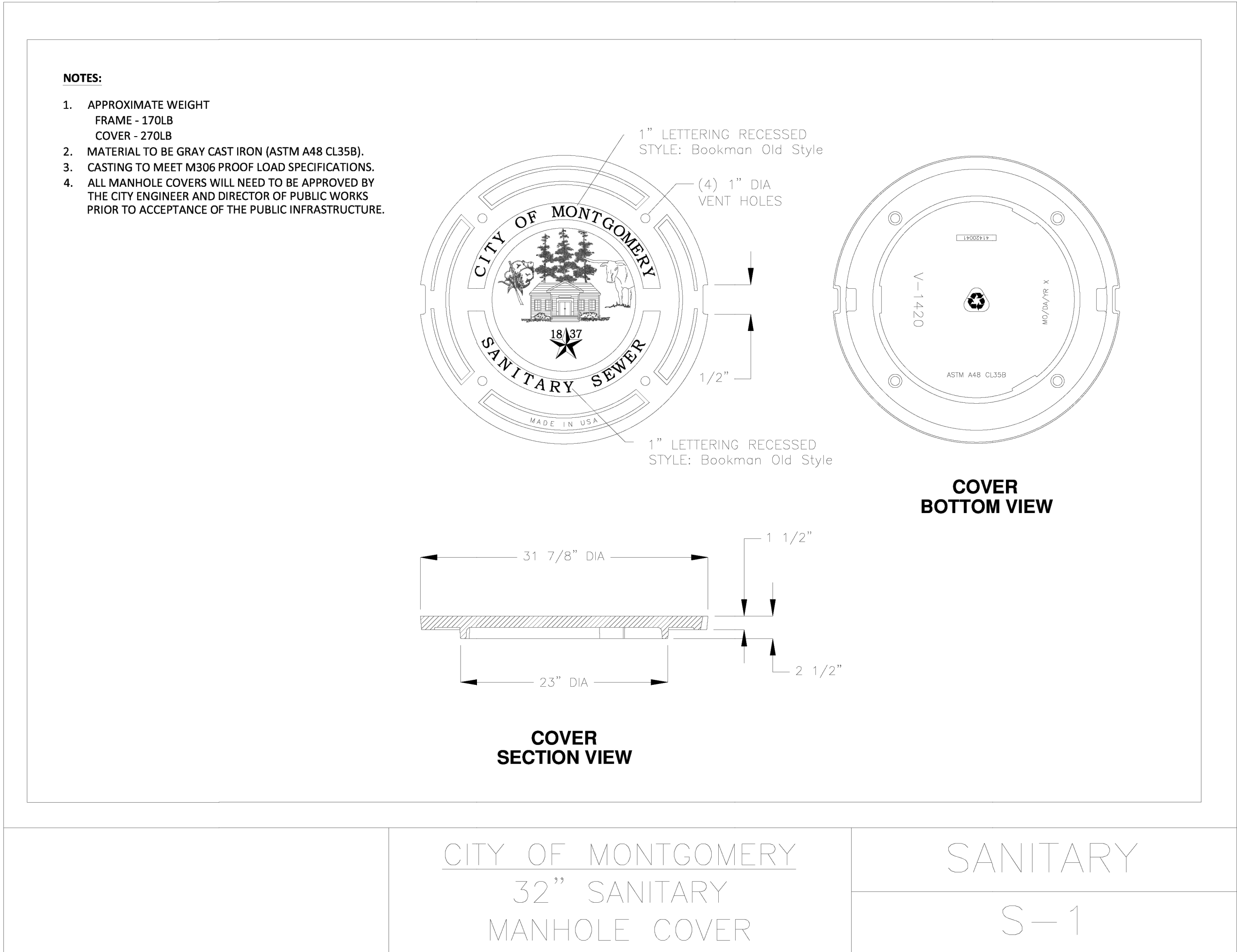
L SQUARED ENGINEERING
MUNICIPAL COMMERCIAL RESIDENTIAL
WWW.LZENGINERING.COM
1000 REGISTRATION NUMBER 13225
3307 W. DAVIS STREET #100
CONROE, TEXAS 77384
OFFICE: 281-447-0902

CLIENT INFORMATION
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DANIEL GILLHAM
16340 PARK TEN PLACE, SUITE 250
HOUSTON, TX 77084

PROJECT ADDRESS
LONESTAR PKW / SH 105
MONTGOMERY, TX 77356

LEGACY GROVE
SECTION 1 WS&D
UTILITY DETAILS (2 OF 3)

L:\SHARED\L2 ENGINEERING PROJECTS\ENGINEERING PROJECTS\11020 - TRI POINTE 108\03 CAD\DESIGN SET\PHASE 1\18 DETAIL SHEETS.DWG Apr. 30, 2025--8:04 AM LAURYN JOHNSON



L SQUARED ENGINEERING
MUNICIPAL COMMERCIAL RESIDENTIAL
WWW.L2ENGINEERING.COM
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MONTGOMERY, TX 77356	

LEGACY GROVE
SECTION 1 WS&D

UTILITY DETAILS (3 OF 3)

DRAWING ISSUE			
#	DATE	BY	* COMMENT
1	04/29/25	JP	FOR PERMIT

DRAWING INFORMATION			
PROJECT	11020	TDLR	**
DRAWN	LMJ	CHECKED	JP
SCALE	AS NOTED	SHEET	36

CITY OF MONTGOMERY, CITY ENGINEER
SIGNATURE VALID FOR ONE (1) YEAR

DATE 04/29/2025

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