DEVELOPER: PULTE HOMES OF TEXAS 1311 BROADFIELD BLVD, SUITE 100 HOUSTON, TEXAS 77084 (281) 749-8000

SHEET NO. SHEET TITLE

COVER SHEET

GENERAL NOTES

DRAINAGE LAYOUT

WATER & SANITARY LAYOUT

DRAINAGE CALCULATIONS

LOT GRADING LAYOUT

LOST WAGON DRIVE

SANITARY SEWER DETAILS

STORM SEWER DETAILS

RETAINING WALL DETAILS

HIGH MESA LANE

WATER DETAILS

PAVING DETAILS

LANDSCAPE PLAN

CONSTRUCTION OF WATER, SANITARY, DRAINAGE AND PAVING FACILITIES FOR

MONTGOMERY BEND SEC 4

TITLE SHEET

STORM WATER POLLUTION PREVENTION PLAN LAYOUT

STORM WATER POLLUTION PREVENTION PLAN DETAILS

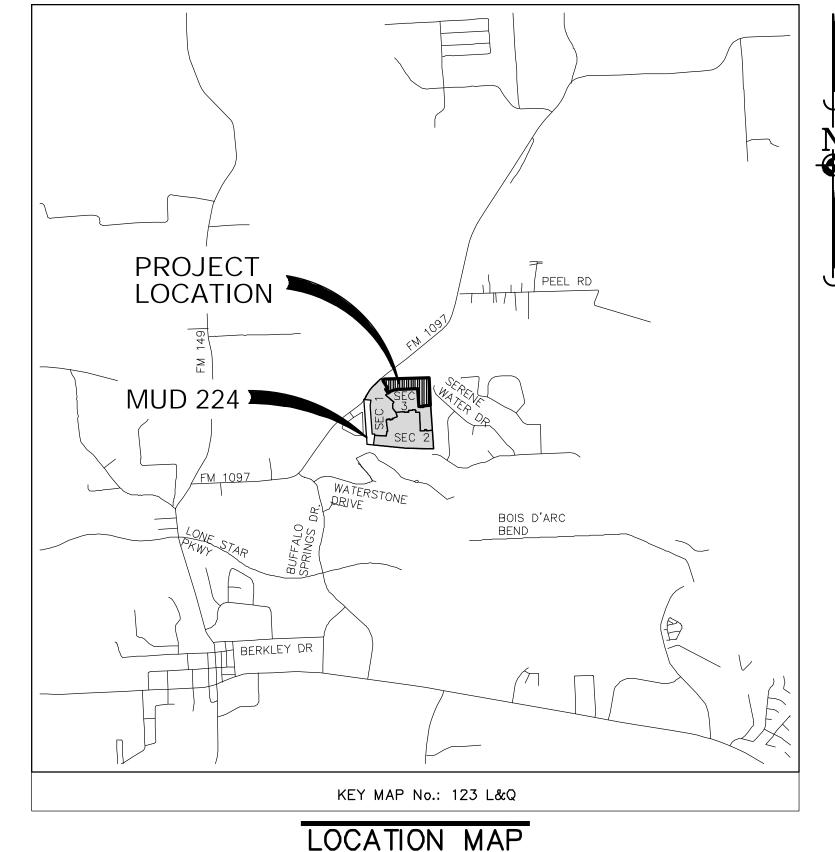
TRAFFIC SIGNAGE & PAVEMENT MARKINGS LAYOUT

RED RIVER DRIVE (STA 13+00 TO 19+00)

RED RIVER DRIVE (STA 19+00 TO 24+15)

DEVELOPMENT No. 2203 MONTGOMERY COUNTY MUNICIPAL UTILITY DISTRICT NO. 224

> CITY OF MONTGOMERY MONTGOMERY COUNTY, TX 610.126.008.00



ONE-CALL NOTIFICATION SYSTEM CALL BEFORE YOU DIG!!! (713) 223-4567 (In Houston) (New Statewide Number Outside Houston) 1-800-344-8317

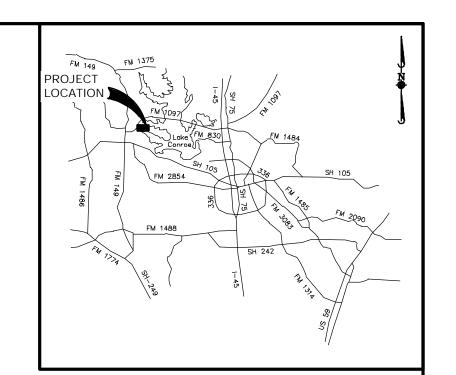
48 HOUR NOTICE:

CONTRACTOR SHALL NOTIFY KATHERINE VU THE CITY OF MONTGOMERY ENGINEER AND OPERATOR AT 713-789-1900 BEFORE STARTING WORK ON THIS PROJECT.

ELEVATION LAND SOLUTIONS IS NOT RESPONSIBLE FOR THE SAFETY OF ANY PARTY AT OR ON THE CONSTRUCTION SITE. SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND ANY OTHER PERSON OR ENTITY PERFORMING WORK OR SERVICES. NEITHER THE OWNER NOR ENGINEER ASSUMES ANY RESPONSIBILITY FOR THE JOB SITE SAFETY OF PERSONS ENGAGED IN THE WORK OR THE MEANS OR METHODS OF CONSTRUCTION.



N.T.S.



MONTGOMERY COUNTY AREA VICINITY MAP

BENCHMARK: SOURCE BENCHMARK:

ELEVATIONS SHOWN HEREON ARE BASED ON NATIONAL GEODETIC SURVEY MONUMENT DESIGNATION HGCSD 81. PID No HAVING PUBLISHED INFORMATION AS FOLLOWS:

LATITUDE: 30° 21' 12.45392" NORTH LONGITUDE: 095° 34' 45.02514" WEST ORTHO HEIGHT: 212.4 FT. (64.74 METERS) HORIZONTAL DATUM: NAD83 (2011) VERTICAL DATUM: NAVD88

FLOODPLAIN INFORMATION:

EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAPS FOR MONTGOMERY COUNTY, DATED AUGUST 18, 2014, THE SUBJECT TRACT IS SITUATED WITHIN: UNSHADED ZONE "X"; DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 100-YEAR FLOOD PLAIN.

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

6/18/25 NEW CITY SIGNATURE BLOC

9709 LAKESIDE BLVD. THE WOODLANDS, TX 77381 AMANDA GONZALEZ

AMANDA GONZALEZ

9709 LAKESIDE BLVD.

(832) 823-2200

THE WOODLANDS, TX 77381

CITY OF MONTGOMERY CITY ENGINEER SIGNATURE BLOCK

CITY OF MONTGOMERY CITY ENGINEER

SIGNATURE VALID FOR ONE (1) YEAR

DSN: GMC DATE:MAY 2024

PM: GJD DFT: MAQ

SUITE 200

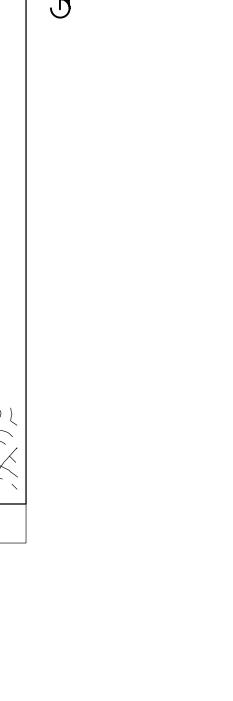
CITY OF MONTGOMERY CITY ENGINEER SIGNATURE BLOCK

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

SHEET 1 OF 19

5-29-24

DATE



- 1. MATERIALS, CONSTRUCTION, AND TESTING TO BE IN ACCORDANCE WITH THE SPECIFICATIONS INDICATED IN THE PLANS AND CONTRACTS AND ARE TO BE INCLUDED IN ALL SETS OF CONSTRUCTION DRAWINGS.
- 2. CONTRACTOR TO OBTAIN ALL DEVELOPMENT AND CONSTRUCTION PERMITS REQUIRED BY CITY OF MONTGOMERY, TEXAS AT HIS EXPENSE PRIOR TO COMMENCEMENT OF WORK, WHERE APPLICABLE.
- 3. 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 LOCATED IN STREET RIGHT OF WAYS AND EASEMENTS.
- 4. ALL EXISTING UNDERGROUND UTILITIES ARE AN APPROXIMATE LOCATION ONLY AND ARE NOT GUARANTEED TO BE COMPLETED OR DEFINITE BUT WERE OBTAINED FROM THE BEST INFORMATION AVAILABLE. CONTRACTOR HAS SOLE RESPONSIBILITY FOR FIELD VERIFICATION TO DETERMINE EXACT LOCATIONS AND DEPTHS FOR ALL EXISTING FACILITIES SHOWN ON DRAWINGS BEFORE COMMENCING ANY WORK. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF THEIR CONSTRUCTION ACTIVITIES WITH THE UTILITY COMPANIES AS TO THE RELOCATION OF THEIR FACILITIES, IF NEEDED. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ANY AND ALL DAMAGES CAUSED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ALL UNDERGROUND
- 5. THE LOCATION OF ALL UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL REQUEST THE EXACT LOCATION OF THESE FACILITIES BY CALLING THE UTILITY COMPANY, 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.
- 6. TEXAS LAW ARTICLE 1436C, PROHIBITS ALL ACTIVITIES IN WHICH PERSONS OR EQUIPMENT MAY COME WITHIN 6 FEET OF ENERGIZED OVERHEAD POWER LINES. FEDERAL REGULATION TITLE 29, PART 1910.130(1) AND PART 1926.440(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 THE CONTRACTOR OR THE OWNER MUST WORK NEAR ENERGIZED OVERHEAD POWER LINES, CALL THE COMPANY FOR THE LINES TO BE DEENERGIZED AND/OR MOVED AT YOUR EXPENSE.
- 7. 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 B, AS PUBLISHED IN THE FEDERAL REGISTER, VOLUME 54, NO. 209, DATED OCTOBER 31, 1989.
- 8. DETAILS PRESENTED IN THESE PLANS DO NOT EXTEND TO OR INCLUDE DESIGNED 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.
- 9. CONTRACTOR SHALL COVER OPEN EXCAVATIONS WITH ANCHORED STEEL PLATES DURING NON-WORKING HOURS, ALONG EXISTING ROADWAYS AND TRAFFIC AREAS.
- 10. ADEQUATE DRAINAGE MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE PROJECT ENGINEER. ALL CONSTRUCTION RUNOFF SHALL COMPLY WITH STORM WATER MANAGEMENT FOR CONSTRUCTION ACTIVITIES AND THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS.
- 11. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE FLAGMEN, SIGNING, STRIPING AND WARNING TRAFFIC CONTROL 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 AND PROVIDE ALL WEATHER DETOURS AROUND CONSTRUCTION SITE, PROVIDE PUBLIC NOTIFICATION, AND USE UNIFORMED POLICE OFFICERS TO CONTROL TRAFFIC, ESPECIALLY IN HEAVY TRAFFIC LOCATIONS.
- 12. EXISTING PAVEMENT, CURBS, SIDEWALKS, AND DRIVEWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO CITY OF MONTGOMERY STANDARDS. ALL ASPHALT AND CONCRETE DRIVEWAYS EXCAVATED DURING CONSTRUCTION SHALL BE BACKFILLED WITH CEMENT STABILIZED SAND (CSS) AND RETURNED TO EXISTING CONDITIONS OR BETTER. 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.
- 13. EXISTING ROADS AND/OR RIGHT OF WAYS DISTURBED DURING CONSTRUCTION SHALL BE AS GOOD OR BETTER THAN THE CONDITION PRIOR TO STARTING WORK, UPON COMPLETION OF THE PROJECT.
- 14. 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 NOT, ACTIVITY MUST BE PERFORMED WITHIN THE DISTURBED CONSTRUCTION AREA. AFTER 14 DAYS OF INACTIVITY, THE AREA MUST BE HYDROMULCHED TO AVOID EROSION. IF NO PROVISION FOR PLANTING GRASS IS INCLUDED IN THE PLANS OR SPECIFICATIONS, THE MINIMUM REQUIREMENT FOR THIS ITEM SHALL BE IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR "SODDING OR SEEDING FOR EROSION CONTROL".
- 15. ALL TRENCHES, INCLUDING TRENCHES FOR LEADS AND STUBS UNDER PAVEMENT AND TO A POINT ONE (1) FOOT BEHIND BACK OF CURB SHALL BE BACKFILLED WITH CEMENT STABILIZED SAND AS PER CITY OF MONTGOMERY SPECIFICATIONS 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 T99). MOISTURE CONTENT OF BACKFILL SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CEMENT STABILIZED SAND SPECIFICATIONS, ATTACHED DETAILS IN PLANS ARE SPECIFIC FOR BEDDING AND BACKFILL.
- 16. CONTRACTOR IS TO INCLUDE PRICE OF ALL BEDDING AND BACKFILL OF PIPES REQUIRED, IN PRICE PER LINEAR FOOT OF PIPE.
- 17. CONTRACTOR IS TO INCLUDE SPREADING AND COMPACTION OF SPOILS INCIDENTAL TO CONSTRUCTION OF ALL UNDERGROUND UTILITIES IN PRICE PER LINEAR FOOT OF PIPE.
- 18. CONTRACTOR TO REMOVE EXISTING PLUGS AND CONNECT TO EXISTING UTILITY LINES AS INDICATED ON
- 19. UNLESS OTHERWISE NOTED IN PLANS, WHERE MANHOLES ARE LOCATED WITHIN THE UTILITY EASEMENT. THE CONTRACTOR SHALL SET RIM ELEVATIONS TWO INCHES ABOVE FINISHED GROUND ELEVATIONS.
- 20. WHEN TRENCH CONDITIONS REQUIRE THE USE OF WELL POINTS. THIS IS TO BE REQUESTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
- 21. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING THE MUD, DIRT, AND DEBRIS DEPOSITED ON EXISTING PAVEMENT DUE TO HIS CONSTRUCTION ACTIVITY DAILY. ALL EXISTING STREETS AND ADJACENT PAVEMENT AREAS IMPACTED BY CONSTRUCTION ACTIVITIES SHALL BE CLEANED USING A STREET SWEEPER. THIS ACTIVITY WILL BE INCIDENTAL TO ALL OTHER ITEMS.
- 22. THE CONTRACTOR SHALL REMOVE ALL NON-PERMANENT SIGNS FROM THE ROW AND/OR EASEMENT LIMITS, AND RETURN THEM TO THE SIGN OWNER FOR THEM TO HAVE PLACED AT THEIR EXPENSE ON PROPERTY OTHER THAN THAT STATED ABOVE UNLESS OTHERWISE SPECIFIED.
- 23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATING OR REPLACING ALL EXISTING FENCES INSIDE THE WORK ZONE, TO EXISTING OR BETTER CONDITIONS, EXCEPT FOR THOSE THAT FALL WITHIN A ROAD RIGHT OF
- 24. THE CONTRACTOR IS RESPONSIBLE FOR RELOCATING ALL EXISTING IRRIGATION OUTSIDE OF THE RIGHT OF WAY AND/OR EASEMENT UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- 25. ALL EQUIPMENT SHALL BE REMOVED FROM THE PROJECT SITE ONCE THE PROJECT IS COMPLETED, AS WELL AS, ALL REMAINING DEBRIS WITHIN THE PROJECT SHALL BE REMOVED AND PROPERLY DISPOSED OF AT AN APPROVED DISPOSAL SITE.
- 26. CONTRACTOR SHALL BE RESPONSIBLE FOR MARKING ALL UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGE TO UTILITIES, PAVEMENT, OR OTHER INFRASTRUCTURE AS A RESULT OF ANY WORK.

GRADING NOTES

- 1. BEFORE STARTING CONSTRUCTION, CONTRACTOR SHALL VERIFY BENCHMARK ELEVATION AND NOTIFY ENGINEER IF ANY DISCREPANCY AND/OR CONFLICT IS FOUND.
- 2. GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE STARTING CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
- 3. AREAS THAT ARE TO RECEIVE FILL SHALL BE PREPARED AS FOLLOWS (NO SEPARATE PAY):
- a. AREAS THAT ARE TO RECEIVE FILL WILL BE STRIPPED TO A DEPTH OF 6". STRIPPINGS SHALL BE STOCKPILED AND THEN SPREAD EVENLY ON SURFACE OF FILLED AREAS.
- b. PRIOR TO PLACEMENT OF FILL ON STRIPPED AREAS, THE CONTRACTOR SHALL PROOF ROLL USING A PNEUMATIC ROLLER (12 TON OR APPROVED EQUAL) (NO SEPARATE PAY). SHOULD SOFT UNSTABLE AREAS APPEAR IN THE LOTS, THE CONTRACTOR SHALL REMOVE UNSUITABLE MATERIAL AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL REPLACE THIS WITH A SUITABLE MATERIAL COMPACTED AS REQUIRED.
- 4. ALL AREAS REQUIRING FILL SHALL BE FILLED IN 8" LIFTS, WITH TESTS TAKEN AT 100 FOOT INTERVALS IN EACH LIFT, AND MECHANICALLY COMPACTED TO A DENSITY OF NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST (ASTM D-698/AASHTO T99). FINISH SURFACE SHALL BE LEFT LEVEL, SMOOTHED AND FINE GRADED.
- 5. FINAL PAYMENT SHALL BE CONTINGENT ON THE ENGINEER'S VERIFICATION THAT LOT GRADING IS IN ACCORDANCE WITH THE GRADING PLAN, AND THAT SOIL COMPACTION TESTS WERE PERFORMED AS REQUIRED.
- 6. CONTRACTOR SHALL ENSURE THERE IS POSITIVE DRAINAGE FROM THE PROPOSED BUILDINGS AND NO PONDING IN PAVED AREAS, AND SHALL NOTIFY ENGINEER IF ANY GRADING DISCREPANCIES ARE FOUND IN THE EXISTING AND PROPOSED GRADES PRIOR TO PLACEMENT OF PAVEMENT OR UTILITIES.
- 7. CONTRACTOR SHALL PROTECT ALL MANHOLE COVERS, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, POWER POLES, GUY WIRES, AND TELEPHONE BOXES THAT ARE TO REMAIN IN PLACE AND UNDISTURBED DURING CONSTRUCTION.
- 8. ALL EXISTING CONCRETE PAVING, SIDEWALK, AND CURB DEMOLITION SHALL BE REMOVED AND DISPOSED OF BY CONTRACTOR. DISPOSAL SHALL BE AT AN APPROVED OFF—SITE, LAWFUL LOCATION, UNLESS DIRECTED OTHERWISE BY THE OWNER
- 9. EXISTING DRAINAGE SWALES: ALL EXISTING DRAINAGE SWALES SHALL BE FILLED AS SHOWN WITH MATERIAL FROM EXISTING ADJACENT SPOIL BANKS IN MAXIMUM 8: LOOSE LIFTS AND COMPACTED TO 95% PROCTOR DENSITY AS PER AASHTO TEST METHOD T-99
- 10. EXISTING DRAINAGE SWALES: ALL EXISTING DRAINAGE SWALES UNDER PROPSED CONCRETE PAVEMENT SHALL BE CLEANED, MUCKED OUT AND SCARIFIED TO A MINIMUM DEPTH OF 6"AND FILLED AS SPECIFIED ABOVE IN FILL NOTE NO. 9NO SEPARATE PAY.
- 11. ROADWAY EMBANKEMENT: STRIP 6" OF VEGETATION FROM AREA TO BE FILLED AND RE-COMPACT SOIL TO 95% PROCTOR DENSITY, PLACE FILL MATERIAL AS SPECIFIED IN FILL NOTE NO. 9

STORM SEWER NOTES

- 1. STORM SEWER AND LEADS SHALL BE REINFORCED CONCRETE PIPE, ASTM C-76, CLASS III, WITH O-RING RUBBER GASKET JOINT, AND SHALL BE INSTALLED, BEDDED AND BACKFILLED IN ACCORDANCE WITH THE SPECIFICATIONS INDICATED IN THE PLANS AND CONTRACTS.
- 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 2 SACK CEMENT PER TON). FOR INSTALLATION OF PRE-CAST 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, INLETS, AND JUNCTION BOXES SHALL BE STANDARD PRE-CAST, UNLESS OTHERWISE NOTED.
- 5. ALL INLETS TO BE TYPE "C" UNLESS OTHERWISE STATED ON PLANS
- 6. ALL STORM SEWER LEADS SHALL BE 24 INCH MINIMUM UNLESS OTHERWISE INDICATED.
- 7. GRADE DROP ON LEADS BETWEEN INLETS TO BE A MINIMUM OF 0.20 FOOT. GRADE DROP BETWEEN INLET AND MANHOLES TO BE 0.20 FOOT UNLESS OTHERWISE SHOWN.
- 8. WHEN MANHOLE FRAME AND COVER IS REQUIRED, USE VULCAN FOUNDRY V-1418-Z FRAME AND COVER (OR EQUAL), UNLESS OTHERWISE INDICATED ON THE PLANS.
- 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. ALL STORM SEWER PIPES UNDER OR WITHIN 1' OF PAVEMENT SHALL BE BACKFILLED WITH COMPACTED CEMENT STABILIZED SAND (2.0 SACKS PER TON OF SAND) TO THE BOTTOM OF 6" STABILIZED SUBGRADE.

CITY OF MONTGOMERY GENERAL CONSTRUCTION NOTES:

- 1. CONTRACTOR SHALL CONTACT CITY OF MONTGOMERY CITY ENGINEER, KATHERINE VU AT (713) 789-1900 A MINIMUM OF 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
- 2. CONTRACTOR SHALL CONTACT CITY OF MONTGOMERY DIRECTOR OF PUBLIC WORKS, MIKE MUCKLEROY AT (936) 597-6434 A MINIMUM OF 48 HOURS PRIOR TO COMMENCING CONSTRUCTION TO SET UP AN INSPECTION TO VERIFY CITY'S FACILITIES.
- 3. CONTRACTOR TO CONTACT CITY OF MONTGOMERY UTILITY OPERATOR. JACOB WILLIAMS OF H20 INNOVATIONS AT (281) 353-9809 A MINIMUM OF 48 HOURS PRIOR TO COMMENCING CONSTRUCTION TO SET UP AN INSPECTION TO VERIFY CITY'S FACILITIES.
- 4. 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 INSPECT THE CONNECTION.
- 5. CONTRACTOR SHALL CONTACT THE CITY'S 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.
- 6. THE OWNER OR CONTRACTOR SHALL INSTALL AND TEST APPROPRIATE BACKFLOW PREVENTION, PER THE CITY OF MONTGOMERY RULES & REGULATIONS.
- 7. ALL TAPS TO THE CITY'S SYSTEM SHALL BE MADE BY THE CITY'S OPERATOR AT THE OWNERS EXPENSE
- 8. IF THE ELECTRICAL UTILITY PROVIDER STANDARDS CONFLICT WITH THE APPROVED LAYOUT BY THE CITY AND/OR CITY STANDARDS, A VARIANCE MUST BE RECEIVED FROM THE CITY COUNCIL.

<u>CITY OF MONTGOMERY ORDINANCE NOTES:</u>

1. REMAINING TREE COVERAGE MUST COMPLY WITH ALL APPLICABLE CITY OF MONTGOMERY ORDINANCES. A TREE PRESERVATION PLAN SHOWING COMPLIANCE WITH CANOPY COVERAGE REQUIREMENTS WILL BE SUBMITTED WITH THE CONSTRUCTION PLANS FOR THE DEVELOPMENT.

SANITARY SEWER NOTES:

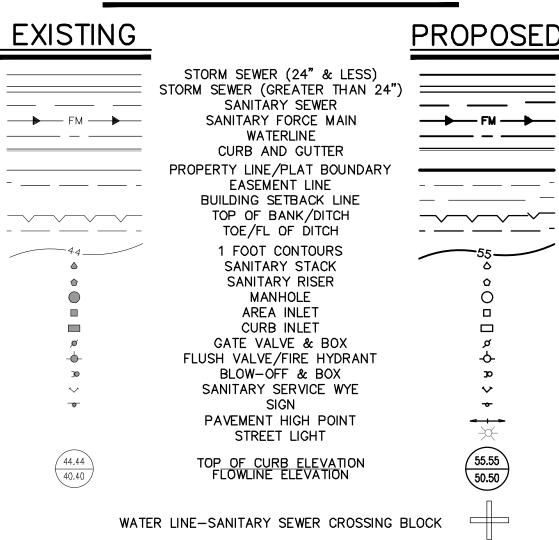
- 1. ALL SANITARY SEWER MUST BE IN COMPLIANCE OF TCEQ CHAPTER 217.
- 2. SANITARY SEWERS SHALL BE CONSTRUCTED AND TESTED IN COMPLIANCE OF THE TCEQ REQUIREMENTS, UNLESS OTHERWISE SPECIFIED.
- 3. BACKFILL AND BEDDING FOR SANITARY SEWER MUST MEET THE MINIMUM REQUIREMENTS OF ASTM D-2321 AND IN ACCORDANCE WITH THE SPECIFICATIONS AND DETAILS FOUND IN THIS PLAN SET AND IN THE CONTRACTS.
- 4. SANITARY SEWER PIPE SHALL BE PVC SDR 26 OR PVC SDR 35 (WITH APPROVAL), IN ACCORDANCE WITH ASTM SPECIFICATIONS D-3034, FOR 4" THROUGH 15" AND ASTM F-879 FOR 18" THROUGH 27", UNLESS OTHERWISE SPECIFIED. MINIMUM SIZE SANITARY SEWER MAIN IS 6", SDR 35 MAY BE USED WHEN DEPTH IS MORE THAN 3 FEET AND LESS THAN 6 FEET.
- 5. SEWER LINES SHALL BE LOCATED ON THE OPPOSITE SIDE OF THE STREET FROM WHERE WATER IS LOCATED.
- 6. CONTRACTOR SHALL PROVIDE A MINIMUM HORIZONTAL CLEARANCE OF 9' (NINE FEET) BETWEEN WATER LINES AND SANITARY SEWER MANHOLES AND LINES PER TCEQ CHAPTER 290.
- 7. CONTRACTOR SHALL PROVIDE 24-INCHES OF CLEARANCE AT ALL SANITARY SEWERS CROSSING WATER LINES.
- 8. 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.
- 9. WHEN THE NATURAL GROUND LEVEL AROUND MANHOLE LIES BELOW THE 100 YEAR FLOODPLAIN ELEVATION, THE MANHOLE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATION AND DETAILS FOUND IN THE PLAN SET AND IN THE CONTRACTS, FOR A SEALED AND VENTED MANHOLE
- 10. A DEFLECTION TEST SHALL BE PERFORMED 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 MANDREL FROM MANHOLE TO MANHOLE. THE MANDREL SHALL HAVE AN OUTSIDE DIAMETER THAT IS AT LEAST 95% OF THE ORIGINAL INSIDE DIAMETER OF THE PIPE MANDREL TO BE MANUFACTURED WITH A MINIMUM OF SEVEN (7) RUNNERS, WITH EACH RUNNER BEING A MINIMUM OF 5 INCHES LONG. ANY PIPE NOT MEETING TEST REQUIREMENTS TO BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.
- 11. WHERE A SEWER LINE HAS LESS THAN (2) FEET OF COVER, PROVIDE CEMENT STABILIZED SAND BACKFILL MATERIAL
- 12. WHEN MANHOLE FRAME AND COVER IS REQUIRED, USE VULCAN FOUNDRY V-1418-2 FRAME AND COVER (OR EQUAL), UNLESS OTHERWISE INDICATED ON THE PLANS.
- 13. CONTRACTOR SHALL KEEP RECORD OF LOCATION OF ALL STACKS, STUBS, SEWER LEADS, ETC. THE AS-BUILT DRAWINGS MUST SHOW THE EXACT LOCATION.
- 14. IF SANITARY SERVICE LEADS ARE INSTALLED DURING CONSTRUCTION OF MAIN LINE, ALL LEADS TO HAVE A MINIMUM SLOPE OF 0.70% 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 6 INCH, AND ALL DOUBLE SERVICE LEADS TO BE 6 INCH. IF AN 8 INCH LEAD IS REQUIRED, LEADS MUST HAVE A MINIMUM SLOPE OF 0.44%.
- 15. BYPASSING (DISCHARGING) OF RAW SEWAGE ON THE SURFACE OR TO ADJOINING WATERWAYS IS STRICTLY PROHIBITED.
- 16. CONTRACTOR SHALL PERFORM BYPASS PUMPING AS REQUIRED. THERE SHALL BE NO SEPARATE PAYMENT FOR BYPASS PUMPING PERFORMED ON THIS PROJECT.
- 17. CONTRACTOR TO VERIFY LOCATIONS OF EXISTING WATERLINES DURING CONSTRUCTION. IF THE REQUIRED SEPARATION DISTANCE BETWEEN PARALLEL WATER AND SEWER LINES, AS DETAILED IN TECHNICAL SPECIFICATION SECTION 33 31 13, CANNOT BE MAINTAINED, CONTRACTOR TO RELOCATE WATERLINE AS DIRECTED BY THE ENGINEER.
- 18. WHERE A WET CONNECTION TO AN EXISTING 6" OR 8" LINE IS TO BE MADE BY CUTTING THE EXISTING LINE, DR18 C-900 PVC PIPE SHALL BE USED TO REPLACE THE SECTION OF OLD ONE REMOVED AND SHALL BE COUPLED TO THE EXISTING ONE WITH A SOUND D.L. SLEEVE, SEPARATE COMPENSATION WILL BE MADE FOR THE REQUIRED DUCTILE IRON FITTINGS. THE BID PRICE FOR WET CONNECTION TO AN EXISTING ONE SHALL INCLUDE LABOR, TOOLS, PIPE, AND MISCELLANEOUS FITTINGS FOR SMALL DIAMETER PIPE NOT OTHERWISE PROVIDED FOR IN THE BID PROPOSAL.
- 19. ALL PENETRATIONS INTO A SANITARY SEWER MANHOLE, INCLUDING SERVICE LEADS SHALL BE SERVED BY AN INVERT. ALL INVERTS SHALL EXTEND ALL THE WAY TO THE WALLS OF THE MANHOLE.
- 20. INSTALLATION OF GRAVITY SANITARY SEWER PIPE AND FORCE MAIN BY TRENCHLESS CONSTRUCTION SHALL MEET ASTM, ANSI, AND AWWA STANDARDS. IF THERE IS A CONFLICT IN STANDARDS THE MOST STRINGENT SHALL GOVERN.
- 21. ALL SANITARY SEWER PIPES UNDER OR WITHIN 1' OF PAVEMENT SHALL BE BACKFILLED WITH COMPACTED CEMENT STABILIZED SAND (2.D SACKS PER TON OF SAND) TO THE BOTTOM OF 6" STABILIZED SUBGRADE.
- 22. THE PROPOSED CONNECTION OF THE SANITARY SEWER LINE TO THE SANITARY SEWER MANHOLE SHALL BE BY MEANS OF CORE AND BOOT AT SPECIFIED FLOWLINE. THE OPENING IN THE SIDE OF THE MANHOLE SHALL NOT BE MORE THAN 3-INCHES NOR LESS THAN 1-INCH IN DIAMETER THAN THE OUTSIDE DIAMETER FOR THE PROPOSED. PIPE. THE PROPOSED PIPE SHALL NOT PRODUCE MORE THAN 3-INCHES PAST THE INSIDE FACE OF THE MANHOLE WALL. FILL THE ENTIRE VOID AROUND THE EXISTING MANHOLE WITH CEMENT-SAND, CONNECTION TO EXISTING PUBLIC SANITARY SEWER MANHOLE SHALL BE COMPLETED BY THE CITY OF MONTGOMERY AT THE OWNER'S EXPENSE.

WATER CONSTRUCTION NOTES:

- CONTRACTOR SHALL PROVIDE ADEQUATE THRUST BLOCKING TO WITHSTAND TEST PRESSURE AS SPECIFIED IN THE SPECIFICATIONS INDICATED IN THE PLANS AND CONTRACTS FOR WATER MAIN CONSTRUCTION AND MATERIALS.
- 2. ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE/NSF INTERNATIONAL (ANSI/NSF) STANDARD 61 AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI.
- 3. ALL PLASTIC PIPES FOR USE IN PUBLIC WATER SYSTEMS MUST ALSO BEAR THE NSF INTERNATIONAL SEAL OF APPROVAL (NSF-PW) AND HAVE AN ASTM DESIGN PRESSURE RATING OF AT LEAST 150 POUNDS PER SQUARE INCH (PSI) OR A STANDARD DIMENSION RATIO OF 26 OR LESS.
- 4. PRIOR TO INSTALLATION OF WATER METER, WATER METER LEAD OR UNMETERED FIRE SPRINKLER LINE, THE CONTRACTOR SHALL CONTACT THE PROVIDER. 5. PRIOR TO WATER MAIN CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE CITY ENGINEER NO LESS
- THAN 48 HOURS IN ADVANCE AND COMPLY WITH ALL REQUIREMENTS NECESSARY FOR APPROVAL OF THE WATER MAIN CONSTRUCTION.
- 6. ALL WATER LINE AND SEWER LINE CROSSINGS SHALL BE CONSTRUCTED PER TCEQ REGULATIONS.
- 7. TWELVE-INCH (12") AND SMALLER MAINS SHALL HAVE A MINIMUM COVER OF FOUR FEET (4') FROM THE TOP OF 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.
- 8. 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.
- 9. ALL WATER MAINS SHALL BE HYDROSTATICALLY TESTED BEFORE BACTERIOLOGICAL TESTING IN ACCORDANCE WITH AWWA STANDARD C-600 FOR DI PIPE OR C-605 FOR PVC AS REQUIRED IN 30 TAC 290-44 (A) (5).
- 10. ALL WATER PIPING SHALL BE DISINFECTED AND BACTERIOLOGICALLY TESTED PRIOR TO USE IN ACCORDANCE WITH AWWA STANDARD C-651.
- 11. ALL WATER MAINS 4" AND LARGER SHALL BE C-900 (SDR-18), UNLESS OTHERWISE NOTED IN PLANS.
- 12. 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
- 13. ALL WATER VALVES SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA C-500 AND SHALL BE OF THE RESILIENT SEAT TYPE.
- 14. THE USE OF PIPES AND PIPE FITTINGS THAT CONTAIN MORE THAN 0.25% LEAD OR SOLDERS AND FLUX THAT CONTAINS MORE THAN 0.2% LEAD IS PROHIBITED.
- 15. WATER MAINS CROSSING OR WITHIN 1' OF PAVEMENT SHALL HAVE A BANK SAND ENVELOPE OF 12" AND THE REMAINING TRENCH FILLED WITH COMPACTED CEMENT STABILIZED SAND (2.0 SACK PER TON SAND) TO BOTTOM OF 6" STABILIZED SUBGRADE.

ELEVATION land solutions 9709 I AKESIDE BLVD, SUITE 200 THE WOODLANDS, TX 77381 832-823-2200

STANDARD SYMBOLS



ABBREVIATIONS

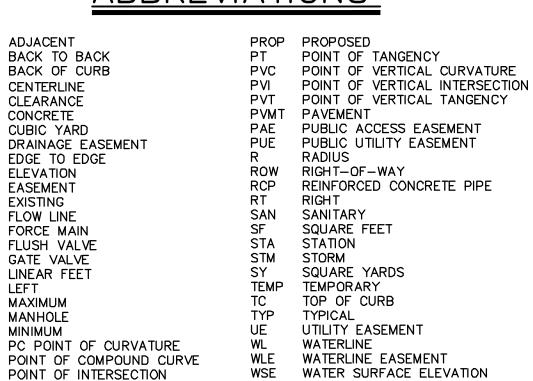
BOC

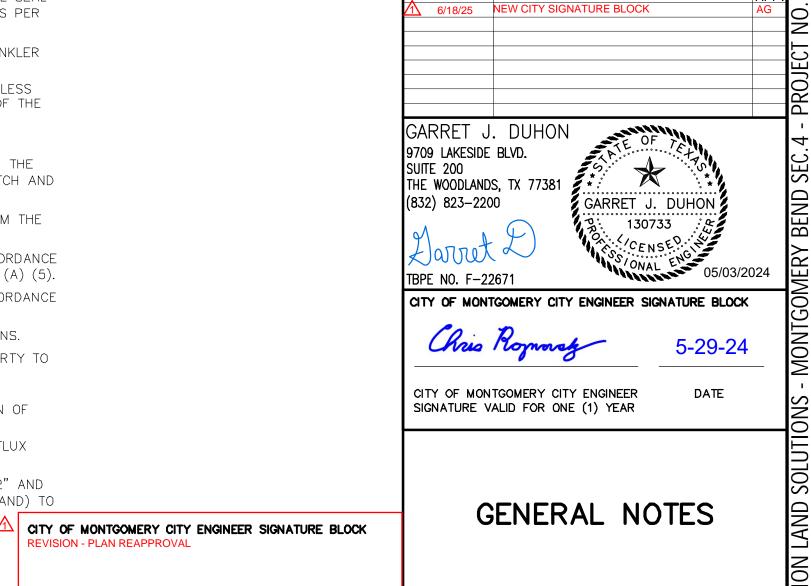
CONC

ELEV

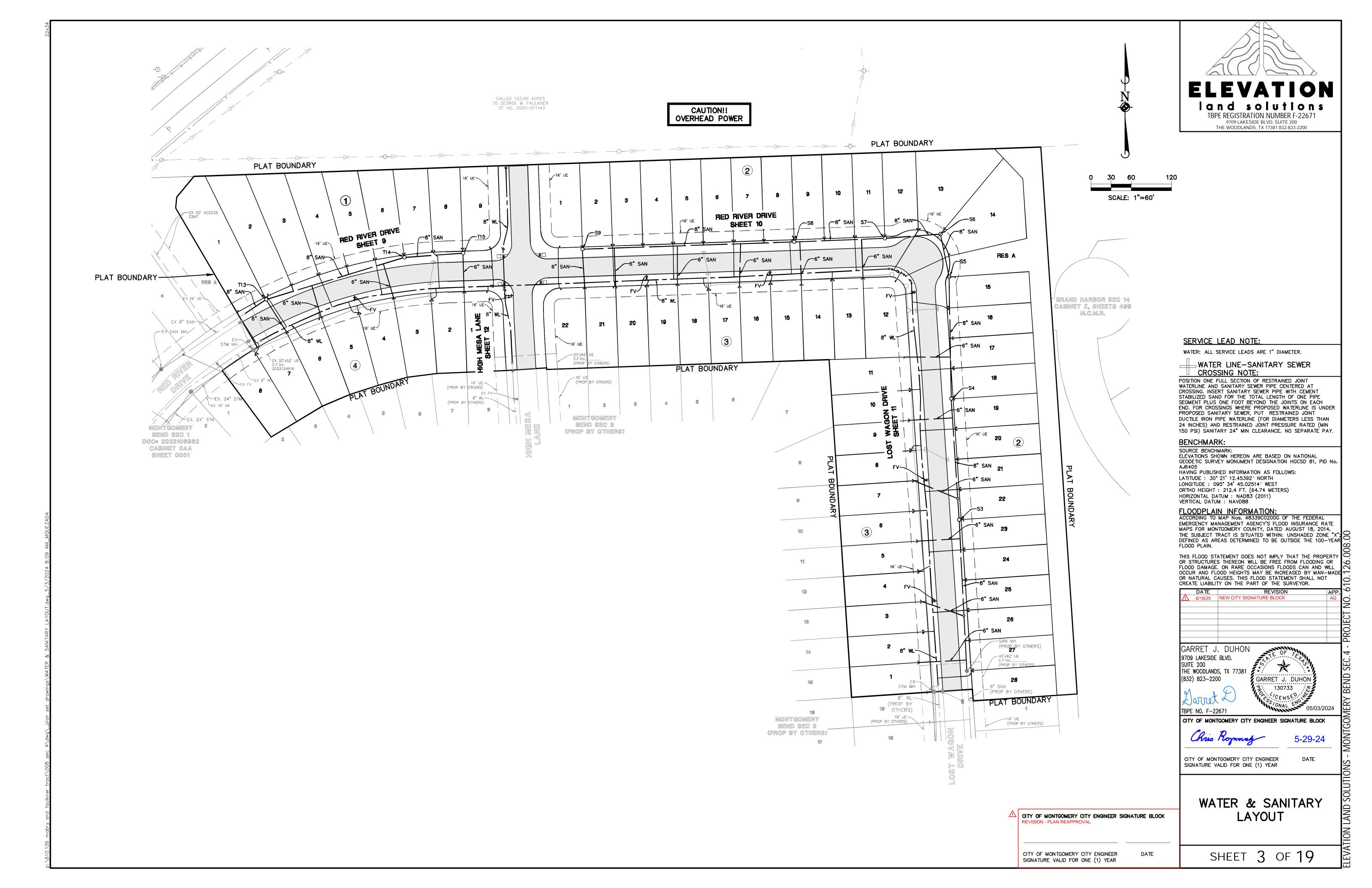
ESMT

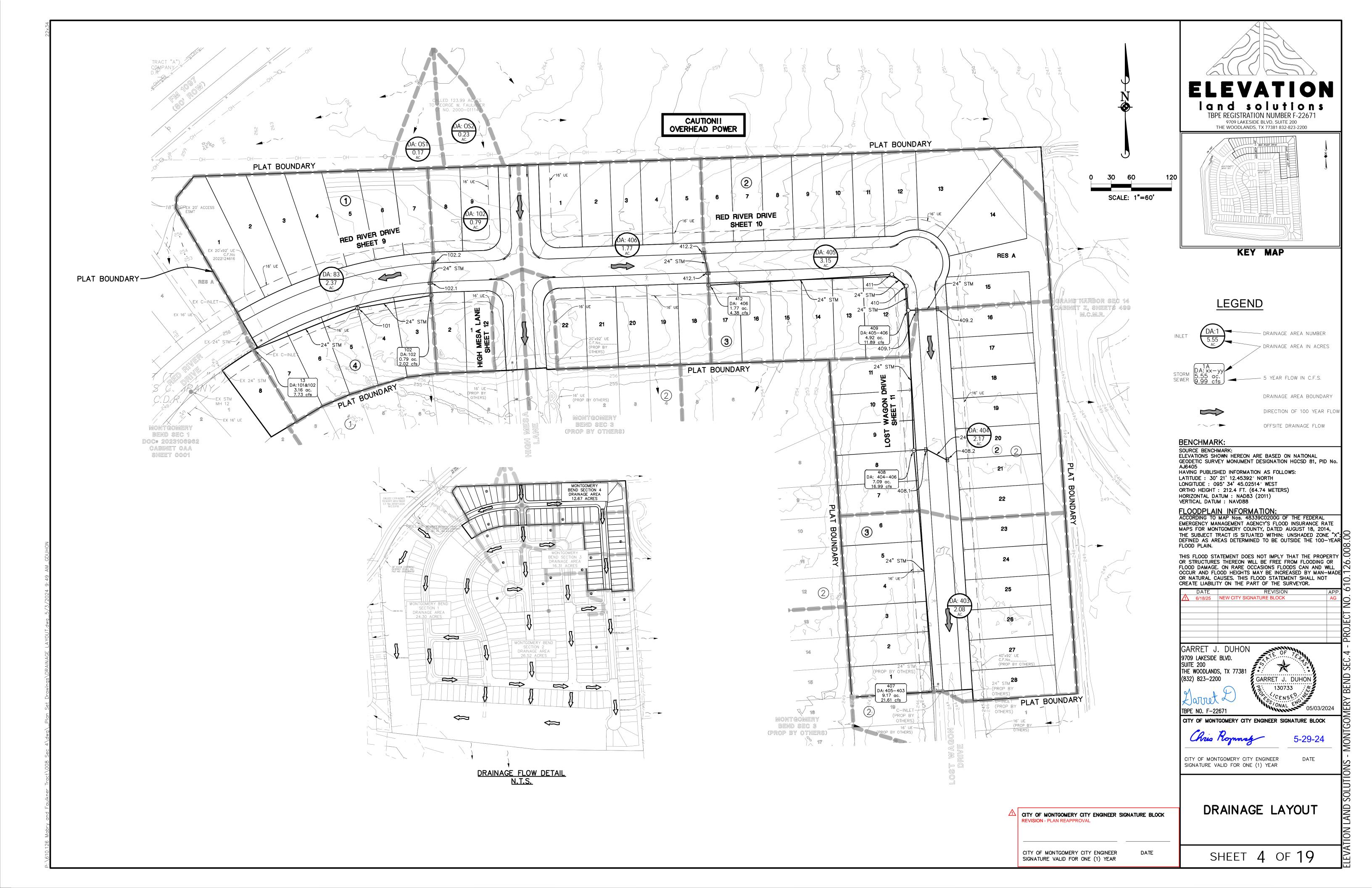
EVISION - PLAN REAPPROVAL



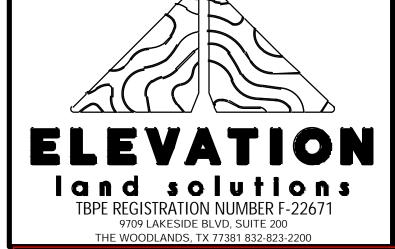


SHEET 2 OF 19 CITY OF MONTGOMERY CITY ENGINEER SIGNATURE VALID FOR ONE (1) YEAR





| ELEVAT I and solutible registration Number | - Method 2 | d1 TP 101 - |) 101 - Metho | | vr Und-s | 100 | | | rada Lizz | Lindranii | | oc oc | | y Outside Hous 100-yr b 56.68 d 4.46 e 0.5857 Cf 1.25 | sity Coefficie gomery Coun 5-yr b 54.09 d 8.34 e 0.7051 Cf 1.00 | Mon | $(Ac^{0.1761})$ | $y(I) = \frac{b}{(d+T_0)}$ $aTc = 15 + 10$ | | | 228.05 228.05 228.05 228.05 228.05 | and Tailwater Cor | Outfall 5-yr HGL 226 226.00 226 226 | | Outfall | g Limit: 0.00 g Limit: 1.00 | ent Pond | 007.00 | Project: Montgo ob Number: 610.126 Design By: MQ/GC Jurisdiction: Montgo torm Year 1: 5-yr torm Year 2: 100-yr torm Year 3: | |
|--|--|---|--|--|--|---|--|---|--|---|---|--|---|--|---|--|---|--|---|---|--|--|---|---|---|--|--|--|---|---|
| 9709 LAKESIDE BLVD, SUI THE WOODLANDS, TX 77381 83 CITY OF MONTGOMERY CITY ENGINEER REVISION - PLAN REAPPROVAL CITY OF MONTGOMERY CITY ENGINEER SIGNATURE VALID FOR ONE (1) YEAR | Depth of Flow at High Point Upstream Q _{req} ≤ Q _{allow} (Pass/Fail) | (Pass/Fail) Max Allowed Overland Flow (Qallow, cfs) Required Overland Flow (Qreq, cfs) | Elevation Upstream Upstream HGL Below | (tr.) Grad. Downstream Grad. Downstream | (t.) Elevation of Hyd. Grad. Upstream | Wydraulic Gradient (t.) | Actual Velocity | Upstream HGL Below Gutter | Elevation of Hyd. Grad. Downstream | Change in Head (tr.) (tr.) Elevation of Hyd. | Coscy: Actual Velocity Hydraulic Gradient | Concentration Concentration Total TOC | Time of Concentration | (cts) (cts) (cts) | 5-yr Flow | Sum of C*A | ু Runoff Coefficient Weighted C | Drainage Area Lotal Area Pipes (ac.) | Drainage Area | Elowline Elevation Upstream Flowline Elevation Downstream | Point Node Drop Ownstream | Gutter Elevation Upstream Gutter Elevation at | Fall Top of Curb Upstream | Design Velocity | Mannings "n" Design Capacity (cts) | Box Span Slope Slope | (#) Pipe Length | Node Downstream | Node Upstream | Alienment/Road |
| | | S None | 57.96 PA 55.51 PA 51.45 PA 49.85 PA 46.29 PA 43.75 PA 42.42 PA 41.38 PA 40.86 PA 41.12 PA | 236.10 2 245.22 2 245.01 2 243.16 2 239.35 2 238.03 2 235.80 2 234.86 2 232.05 2 249.81 2 245.19 2 245.19 2 245.19 2 237.05 2 236.38 2 235.74 2 234.75 2 233.66 2 232.94 2 | 246.08 2 245.22 3 245.01 2 240.20 5 239.35 3 236.98 4 235.80 2 233.10 7 251.15 0 247.24 7 244.36 3 241.59 0 238.35 6 237.05 6 236.38 3 235.74 9 234.75 2 233.66 | 0.14 0.05 0.00 0.00 0.02 0.02 0.02 0.03 0.02 0.06 0.76 1.18 0.23 0.24 0.45 0.52 0.06 0.10 0.69 0.77 0.68 1.68 1.05 1.30 0.57 0.66 0.62 0.65 0.44 0.98 0.73 1.09 0.47 0.72 | 2.74 0.00 0.91 0.90 0.90 3.93 6.26 3.97 5.60 1.79 1.78 5.96 5.94 7.39 6.30 6.55 6.24 8.05 7.20 | PASS PASS PASS PASS PASS PASS PASS PASS | 22 245.01 21 243.16 20 239.35 35 238.03 23 235.80 30 234.86 10 232.05 24 245.19 36 243.01 39 239.12 36 236.12 12 235.42 12 235.42 12 234.79 79 233.44 37 231.07 | 0.01 236.3 0.00 246.0 0.00 245.2 0.01 245.0 0.00 240.3 0.14 239.3 0.25 236.3 0.11 233.3 0.01 251.3 0.02 247.3 0.17 244.3 0.36 241.3 0.28 237.3 0.14 236.3 0.14 235.4 0.21 234.3 0.24 231.3 0.16 231.0 | 0.00 0.00 0.42 0.00 0.42 0.00 0.42 0.00 1.83 0.06 2.91 0.16 1.85 0.05 2.60 0.10 0.84 0.01 0.83 0.01 2.78 0.15 2.77 0.15 3.44 0.23 2.93 0.12 3.06 0.13 2.91 0.09 3.75 0.16 3.35 0.10 | 0.18 26.08 0.20 26.03 0.63 26.65 0.37 27.03 0.42 27.45 0.66 28.11 0.46 28.57 0.22 28.79 0.24 29.03 0.23 25.30 0.35 25.65 0.24 27.02 0.57 27.59 0.29 27.88 0.30 28.18 0.27 26.05 0.51 27.15 0.59 27.75 0.53 28.27 | 25.90 25.83 26.03 26.65 27.03 27.45 28.11 28.57 28.79 25.07 25.30 26.78 27.02 27.59 27.88 25.78 26.64 27.15 27.75 | 1.75 5.63 1.71 5.60 1.44 18.74 1.40 18.65 1.30 23.20 1.25 30.93 1.62 32.17 1.46 44.08 1.37 56.92 1.27 69.31 | 4.01 0.00 1.33 1.32 1.31 5.75 9.15 9.07 12.78 2.63 2.62 8.73 8.69 10.80 14.39 15.01 20.55 26.51 32.26 | 0.90 4.4 0.00 4.4 0.30 4.4 0.3 4.3 1.3 4.3 2.1 4.2 2.1 4.2 3.0 4.2 0.6 4.5 0.6 4.5 2.0 4.4 2.0 4.3 3.3 4.3 3.3 4.4 4.6 4.4 6.0 4.3 7.4 4.3 | 0.55 0.55 0.55 0.14 0.14 0.14 0.55 0.33 0.55 0.39 0.39 0.55 0.43 0.55 0.55 0.55 0.55 0.55 0.55 0.55 0.55 0.55 0.55 | 0.00 1.04 1.04 1.04 1.04 3.58 3.58 3.58 3.58 4.50 4.50 6.03 6.03 6.03 6.03 8.40 10.03 10.95 10.95 13.48 | 9 1.63 15 1.57 10 0.54 11 1.85 12 1.46 13 1.60 102 1.04 101 2.54 3 0.92 4-REC 1.53 5 2.37 6 0.92 7 2.53 | 230.91 230.05 234.17 234.10 244.08 243.22 243.22 243.01 243.01 241.16 238.20 237.35 237.35 236.03 234.73 233.80 233.30 232.36 230.60 229.55 249.15 247.81 245.24 243.19 242.36 241.01 239.59 237.12 235.36 234.12 233.62 232.92 231.79 230.44 228.37 228.07 227.57 227.25 | 2.57 0.83 | 243.09 241.08 256.46 254.01 249.95 248.35 244.79 242.25 240.92 239.88 239.36 239.62 | 0.07 239.63 0.86 251.05 0.21 249.86 1.85 248.04 0.85 246.60 1.32 245.91 0.93 244.44 0.94 243.59 1.05 241.58 1.34 256.96 2.05 254.51 1.35 250.45 2.47 248.85 1.24 245.29 0.70 242.75 0.63 241.42 1.35 240.38 0.30 239.86 0.32 240.12 | 2 3.22 2 7.20 3 .06 3 7.55 2 5.58 2 5.58 2 5.58 1 7.93 1 7.93 8 7.92 9 7.99 8 7.89 2 7.20 2 7.20 2 7.20 7 6.47 7 6.47 6 7.31 3 4.22 1 4.79 | 0.013 22.6 0.013 9.60 0.013 17.5 0.013 17.5 0.013 17.5 0.013 17.5 0.013 38.9 0.013 24.8 0.013 25.0 0.013 24.7 0.013 22.6 0.013 22.6 0.013 31.7 0.013 31.7 0.013 31.7 0.013 29.8 0.013 29.8 0.013 29.8 | 0.18 0 1.1 0 0.6 0 0.6 0 0.9 0 0.9 0 1.21 0 1.23 0 1.2 0 1 0.6 0 0.6 0 0.6 0 0.6 0 0.6 0 0.6 0 | 171 24 34 24 86 24 115 24 168 24 141 24 220 24 155 24 104 30 116 30 111 24 167 24 112 24 247 24 124 24 116 30 105 30 225 36 150 36 151 42 | 2 7 20 19 18 17 16 15 14 2 101 13 12 11 10 9 8 7 6 5 | 23 Sec 3 20 Sec 1 19 18 17 16 Sec 2 15 14 2c 4 102 101 | Amber Falls Driv Amber Falls Driv Amber Falls Driv Amber Falls Driv Red River Drive |
| | | S 23.53 S 33.95 S 41.47 S 48.66 S 47.65 S None S None S None | 40.67 PA 39.70 PA 39.32 PA 39.25 PA 35.63 PA 49.76 PA 39.31 PA 39.61 PA 50.62 PA | 230.48 2 229.49 2 228.05 2 244.56 2 229.53 2 233.61 2 248.27 2 | 7 232.80 1 232.03 1 230.92 9 230.48 1 228.46 1 244.58 3 230.29 2 233.78 2 248.87 | 0.46 0.77 0.65 1.11 0.62 0.44 0.62 0.99 0.61 0.41 0.07 0.01 0.09 0.08 0.08 0.02 | 7.12 8.43 9.02 8.98 8.90 1.96 2.12 2.01 | PASS PASS PASS PASS PASS PASS PASS PASS | 59 230.36 36 229.99 39 229.81 31 229.49 39 226.00 58 244.56 29 229.34 78 233.61 | 0.21 229.8 0.09 226.0 0.00 244.5 0.02 230.2 0.00 233.7 0.00 248.8 | 3.31 0.10 3.92 0.14 4.19 0.13 4.17 0.13 4.13 0.13 0.91 0.02 0.99 0.02 0.99 0.02 0.94 0.02 | 0.52 30.28 0.22 30.50 0.06 25.29 0.05 25.33 0.19 22.79 | 28.38 28.97 29.55 29.76 30.28 25.23 25.23 25.23 | 3.98 113.29 3.95 112.90 3.87 111.89 3.72 6.15 3.72 6.67 3.71 6.30 3.27 1.20 | 31.87 37.70 52.60 52.41 51.90 2.87 3.11 2.94 | 0.7 4.5 0.6 4.5 0.1 4.8 | 0.55 0.55 0.51 0.51 0.51 0.55 0.55 0.55 | 0.00 1.24 0.00 1.17 0.00 0.21 | 203 1.14 18 1.24 17 1.17 206 0.21 | 227.25 227.19 227.19 226.86 226.86 226.49 225.99 225.81 225.81 225.49 220.61 220.47 242.58 242.56 228.29 227.34 231.78 231.61 247.62 247.02 | 2.75 1.00 5.27 | 234.13 248.26 237.81 238.11 249.12 | 0.33 239.67 0.37 238.70 0.18 238.32 0.32 238.25 0.14 234.63 0.02 248.76 0.95 238.31 0.17 238.61 0.60 249.62 | 9 4.68 9 4.90 2 5.72 4 5.11 4 5.11 0 3.06 2 7.20 9 6.52 | 0.013 44.9 0.013 47.1 0.013 71.8 0.013 64.2 0.013 64.2 0.013 9.60 0.013 22.6 0.013 20.4 0.013 6.46 | 0.82 0 | 30 42 167 42 170 42 70 48 161 48 68 48 11 24 95 24 21 24 60 15 | 2 1.1 1 Outfall_1 206 203 203 | ec 2 208 ec 2 207 | Green Wren Ct S Longhorn Drive |
| DATE REVIO | | S None S None S None S None S None S 14.65 S 14.14 S None | 51.12 PA 49.70 PA 47.46 PA 43.38 PA 39.50 PA 38.61 PA 35.60 PA | 241.82 2 240.04 2 235.54 2 233.57 2 229.21 2 | 242.68 241.82 239.27 235.04 229.53 229.21 228.34 | 0.06 | 1.74 3.69 6.15 6.58 6.31 6.29 6.22 | PASS PASS PASS PASS PASS PASS PASS PASS | 58 241.82 32 240.04 27 235.54 04 233.57 34 228.82 32 228.49 06 226.00 | 0.01 242.6 0.08 241.8 0.54 239.7 0.22 235.0 0.07 229.3 0.16 228.8 0.06 226.0 0.01 230.6 | 0.74 | 0.15 25.16 0.30 25.59 0.75 26.34 0.34 27.14 0.15 27.29 0.64 27.94 0.27 28.20 0.18 25.35 | 25.02 25.29 25.59 26.80 27.14 27.29 27.94 | 0.76 5.47 0.71 11.58 0.65 19.33 0.43 32.28 0.37 44.61 0.35 44.48 0.24 43.96 0.74 5.94 | 2.56 5.41 9.02 15.05 20.78 20.72 20.46 | 0.6 4.5 1.2 4.5 2.0 4.5 3.4 4.4 4.7 4.3 4.7 4.3 4.7 4.3 0.6 4.5 | 0.55 0.55 0.55 0.55 0.55 0.55 0.55 0.55 0.55 0.55 | 0.00 1.01 2.15 2.15 2.49 3.61 3.61 6.17 8.58 8.58 8.58 8.58 8.58 8.58 | 201 1.12 16 2.56 24 1.10 | 247.02 | 0.77 1.00 4.73 | 249.62 248.20 245.96 241.88 238.00 237.11 234.10 | 1.47 242.38 0.52 238.50 | 9 7.99 9 7.99 3 7.55 1 7.93 0 8.01 3 4.22 3 4.22 | 0.013 25.0 0.013 25.0 0.013 23.7 0.013 38.9 0.013 56.6 0.013 29.8 0.013 29.8 | 1.23 | 60 15 70 24 144 24 339 24 164 30 72 36 163 36 68 36 87 24 28 24 | 205 206 205 204 203 202 201 Outfall_2 303 | 206 ec 2 205 204 203 202 201 | High Mesa Lane High Mesa Lane Longhorn Drive |
| GARRET J. DUHON 9709 LAKESIDE BLVD. SUITE 200 THE WOODLANDS, TX 77381 (832) 823-2200 GARRET GARRET TEPE NO. F-22671 CITY OF MONTEOMERY CITY ENGINEER Chic Roymons | | S None S 2.18 S None S 8.06 S 12.71 S None S None S None S None S None S None | 52.53 PA 48.90 PA 46.96 PA 43.36 PA 39.14 PA 38.52 PA 35.85 PA 46.27 PA 31.90 PA 33.17 PA | 239.22 2 235.43 2 231.84 2 229.76 2 229.10 2 228.05 2 241.83 2 | 2 244.74 2 241.33 0 237.06 5 233.73 8 230.04 6 229.76 6 228.11 241.85 241.85 0 229.43 0 228.62 | 0.06 0.12 0.59 2.11 0.34 0.80 0.60 1.25 0.41 0.28 0.41 0.66 0.09 0.06 0.10 0.01 0.02 0.03 0.00 0.00 | 1.82 5.52 4.89 6.46 6.04 6.02 3.35 2.22 | PASS PASS PASS PASS PASS PASS PASS PASS | 74 242.83 33 239.22 36 235.43 73 231.84 52 229.43 33 229.10 31 226.00 35 241.83 33 229.27 38 227.93 | 0.03 244.7 0.46 240.8 0.17 237.0 0.27 233.7 0.06 229.6 0.14 229.2 0.01 226.0 0.00 241.8 0.01 229.4 0.00 227.5 | 2.58 0.13 2.28 0.07 3.00 0.13 2.81 0.09 2.80 0.09 1.55 0.02 1.04 0.02 0.38 0.00 | 0.44 25.70 24 27.76 0.56 28.32 0.44 28.76 0.23 28.99 0.64 29.63 0.22 29.85 0.05 25.53 0.45 24.28 0.15 24.43 | 25.26 26.53 27.76 28.32 28.76 28.99 29.63 25.47 | 0.75 5.73 0.72 5.71 0.48 17.36 0.27 24.01 0.18 31.70 0.10 42.72 0.07 42.54 0.97 42.07 0.68 6.98 0.21 1.42 0.91 1.37 0.88 1.37 | 2.67 8.09 11.17 14.75 19.86 19.77 19.53 3.26 0.66 1 | 0.6 4.5 1.8 4.4 2.6 4.3 3.4 4.2 4.7 4.2 4.7 4.1 0.7 4.5 0.1 4.7 0.1 4.6 | 0.55 0.55 0.55 0.55 0.55 0.55 0.55 0.55 | 0.00 1.06 1.06 1.06 1.06 3.30 3.30 4.67 4.67 6.23 8.46 8.46 8.46 8.46 8.46 8.46 0.00 1.30 0.00 0.25 0.25 0.25 | 301 2.24 22 1.37 23 1.56 406 1.30 | 245.00 244.83 242.74 240.83 238.83 237.22 234.56 232.93 231.23 229.34 226.62 226.43 226.43 226.10 221.28 221.14 239.85 239.83 227.93 227.77 225.98 225.93 225.93 225.90 | 2.09 2.00 2.66 1.70 2.72 4.82 6.60 | 251.03 247.40 245.46 241.86 237.64 237.02 | 1.61 247.90 1.63 245.96 1.89 242.36 0.19 238.14 0.33 237.52 0.14 234.85 0.02 245.27 0.16 230.90 0.05 232.17 | 7.20 8 4.83 2 6.99 1 7.93 6 4.90 3 4.22 4 5.11 0 3.06 | 0.013 22.6 0.013 15.1 0.013 34.3 0.013 38.9 0.013 34.6 0.013 29.8 0.013 64.2 0.013 9.60 0.013 3.32 0.013 9.60 | 0.4 0 1 0 0.45 0 0.7 0 0.9 0 0.27 0 0.2 0 0.2 0 0.18 0 0.18 0 0.18 0 | 42 24 191 24 358 24 233 30 210 30 69 36 163 36 68 48 10 24 163 18 28 24 16 24 | 307 306 305 304 303 302 301 Outfall_3 406 | 307 306 Sec 2 305 304 303 302 301 | Silver Buckle Lar Silver Buckle Lar Juniper Creek D |
| CALCULATIONS SHEET 5 (| PASS PASS PASS | L 50 None L 50 None L 50 4.68 L 50 16.46 S 50 7.00 S None S 50 10.00 S 50 43.64 S 50 28.10 S None | 51.06 FA 50.83 FA 50.59 FA 48.31 FA 46.82 PA 46.41 PA 41.99 PA 37.96 PA 35.43 PA 34.94 PA | • | 251.95 251.90 251.84 249.19 239.85 2236.62 235.10 233.29 232.37 228.62 | 0.17 0.06 1.27 2.65 2.60 9.34 1.28 1.97 0.62 1.52 0.99 1.81 0.97 0.91 1.27 2.67 | 2.96 2.95 8.13 11.60 9.44 7.44 9.37 9.30 10.65 6.74 | PASS PASS PASS PASS PASS PASS PASS PASS | 11 239.30 30 237.88 23 234.49 49 233.19 05 230.76 76 229.71 | 0.01 244.5 0.01 244.5 0.57 243.6 2.02 242.5 0.43 239.5 0.33 236.2 0.39 234.4 0.20 230.5 0.57 230.5 | 1.39 0.04 1.38 0.04 1.38 0.04 3.79 0.28 5.40 0.56 4.39 0.28 3.46 0.13 4.35 0.21 4.32 0.21 4.94 0.27 3.12 0.07 2.63 0.05 | 0.06 26.69 0.09 26.78 0.52 27.76 0.94 28.70 0.32 29.03 0.51 29.54 0.38 29.92 0.50 30.42 0.52 30.95 | 26.63 26.69 27.24 27.76 28.70 29.03 29.54 29.92 30.42 | 0.27 36.44 0.11 46.35 0.06 52.62 0.98 66.20 | 4.33 4.33 11.89 16.96 21.54 24.45 30.74 30.52 34.91 39.24 | 1.0 4.4 1.0 4.4 2.7 4.3 3.9 4.3 5.0 4.2 5.8 4.2 7.3 4.1 7.3 4.1 8.4 4.1 | 0.55 0.55 0.55 0.55 0.55 0.55 0.55 0.55 | 4.92 7.09 7.09 9.17 10.47 10.47 | 405 3.15 404 2.17 403 2.08 402 2.82 401 2.05 | 246.89 243.53 242.53 242.19 242.19 241.88 241.88 240.11 240.11 237.30 236.80 235.38 233.23 231.49 231.49 230.19 227.86 227.76 227.76 226.71 223.93 223.42 221.86 221.54 | | 246.81 245.32 244.91 240.49 236.46 233.93 | 0.34 250.06 0.31 249.83 1.77 249.59 2.81 247.31 1.42 245.82 1.74 245.41 1.30 240.99 0.10 236.96 1.05 234.43 0.51 233.94 | 9 7.99 6 6.64 8 6.36 4 8.01 0 7.95 0 7.95 2 3.13 6 6.67 6 7.67 | 0.013 25.0 0.013 20.8 0.013 20.8 0.013 19.9 0.013 39.3 0.013 56.2 0.013 56.2 0.013 22.1 0.013 47.1 | 1.23 0 1.23 0 0.85 0 0.85 0 0.85 0 0.78 0 0.92 0 0.71 0 0.71 0 0.11 0 0.5 0 0.45 0 | 273 24 28 24 36 24 208 24 360 24 155 30 245 36 184 36 94 36 209 36 114 48 81 54 | 411 410 409 408 407 406 405 404 403 402 401 Outfall_4 | 411 410 409 408 Sec 3 407 406 405 404 Sec 2 403 402 | Red River Drive Red River Drive Lost Wagon Driv Lost Wagon Driv |

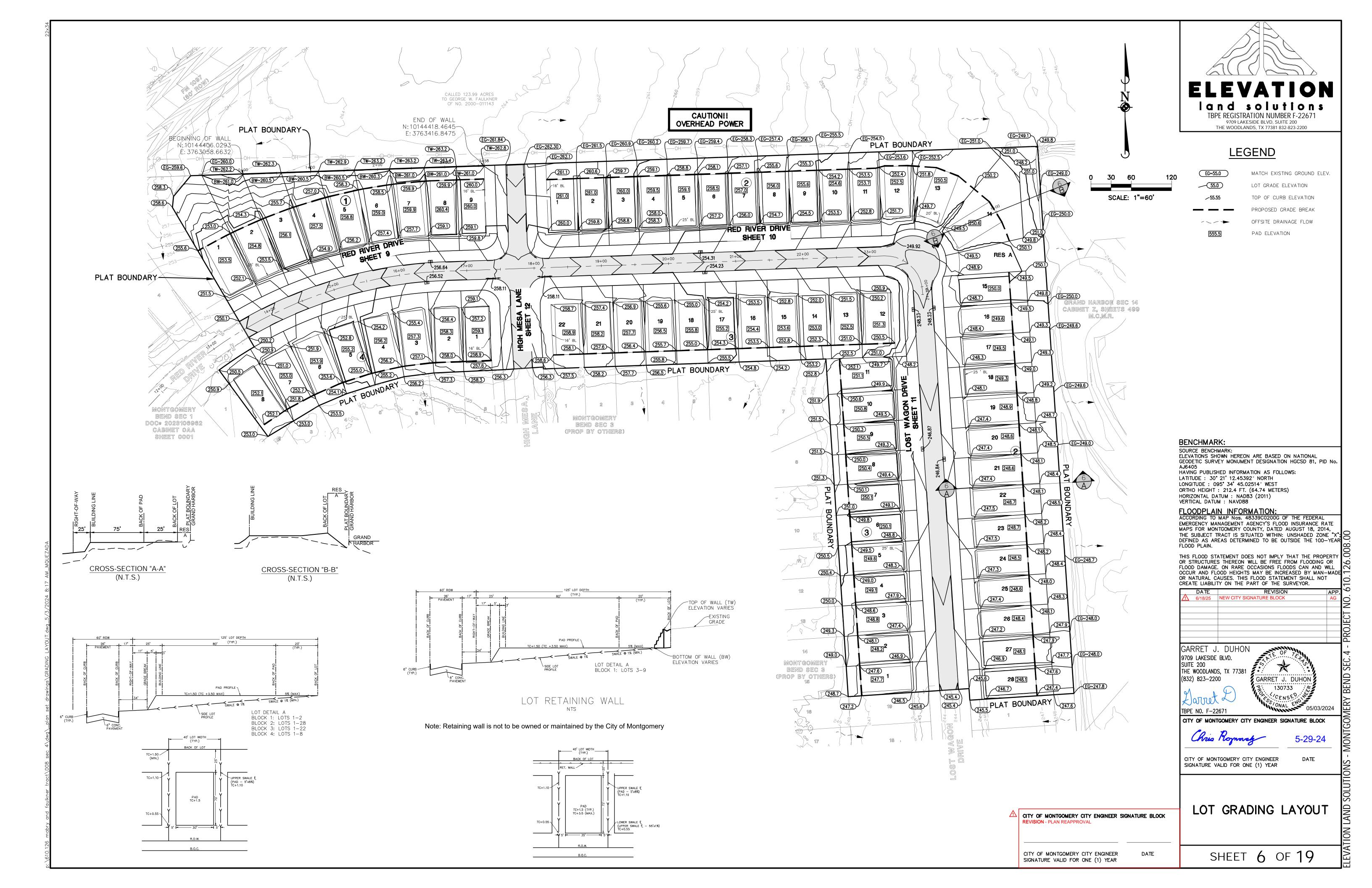


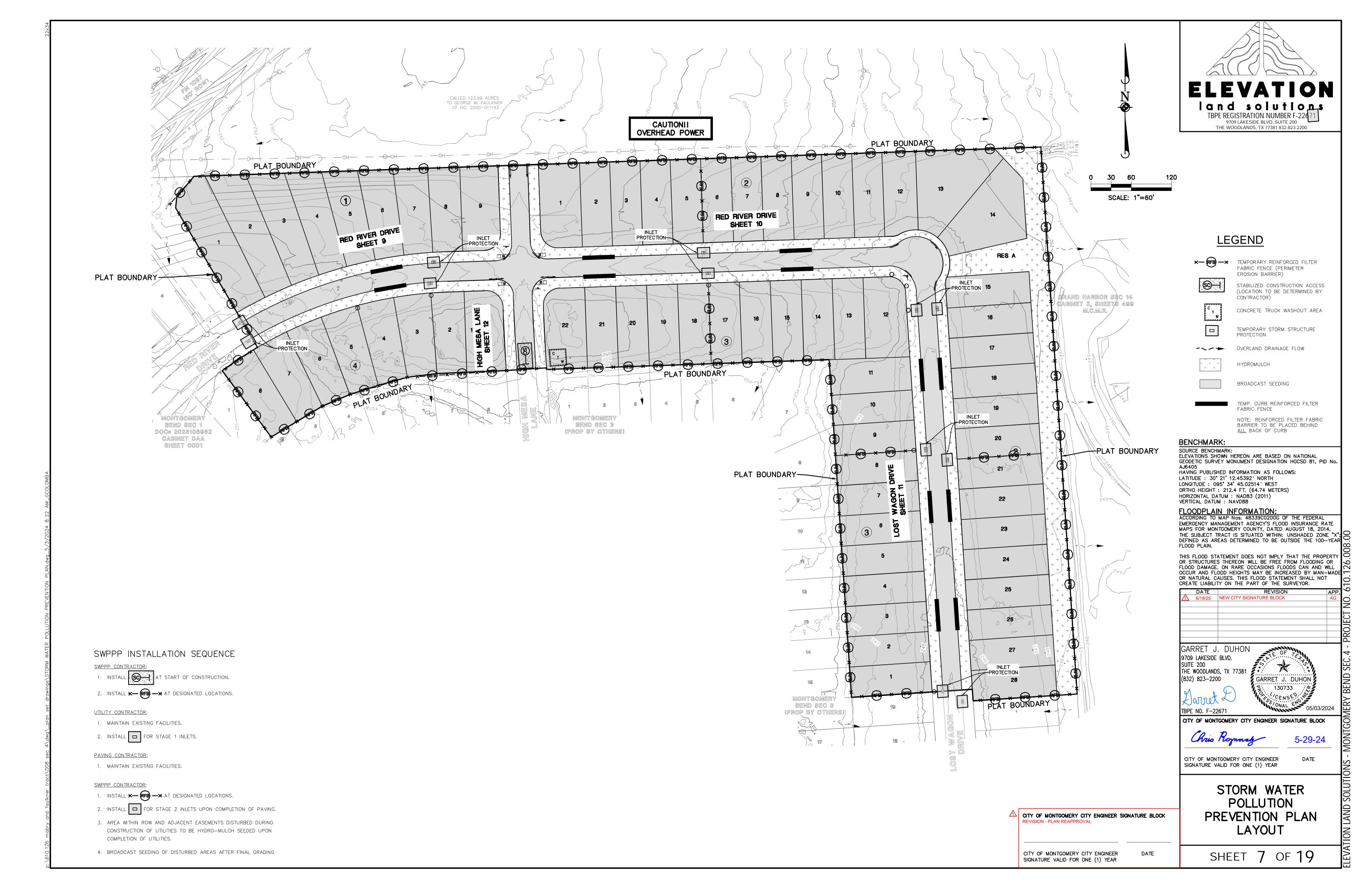
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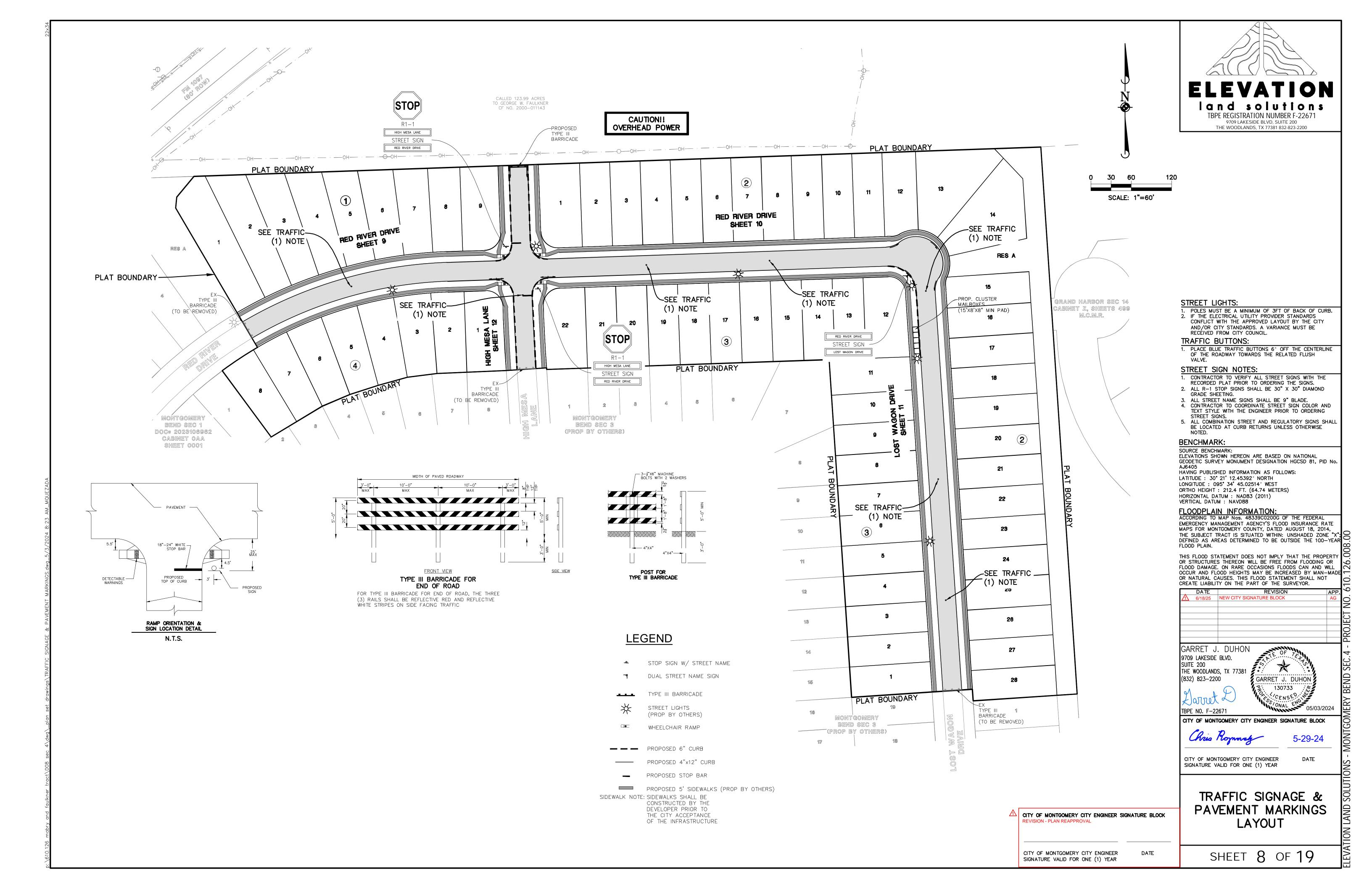
RRET J. DUHON
19 LAKESIDE BLVD.
TE 200
E WOODLANDS, TX 77381 Chris Romoney 5-29-24

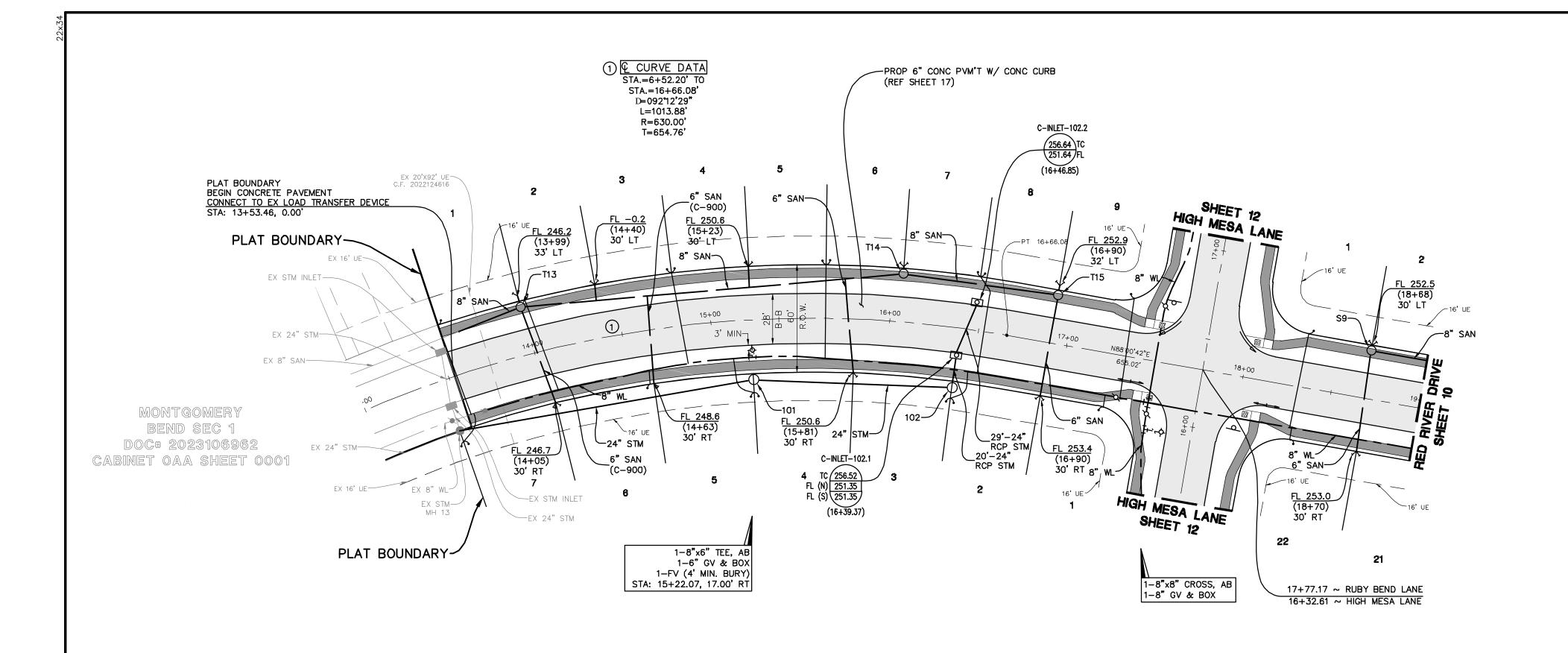
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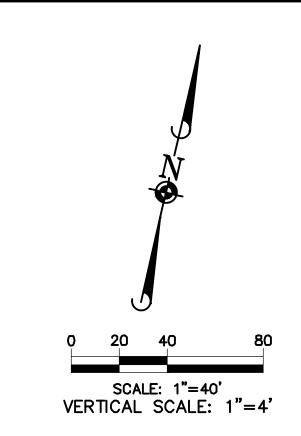
SHEET 5 OF 19

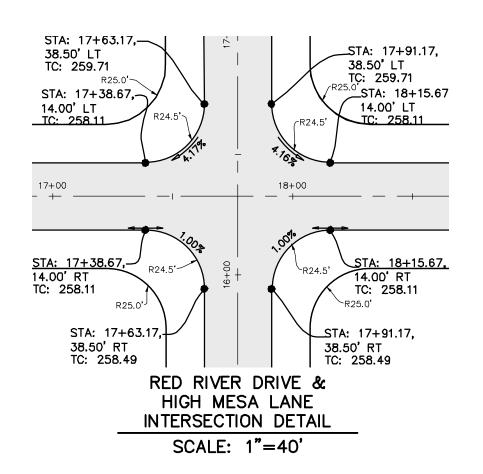




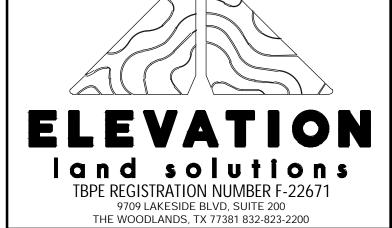


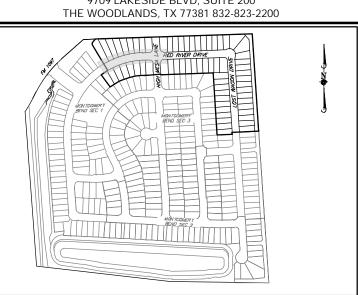






| Station | Elevation | Grade Percent (%) | Location |
|----------|---------------------|-------------------|----------|
| 17+26.88 | 257.56' | | PCI |
| 17+36.88 | 257.71' | 1.46% | |
| 17+46.88 | 257.82' | 1.13% | |
| 17+56.88 | 257.90' | 0.80% | |
| 17+66.88 | 257.95' | 0.48% | |
| 17+76.88 | 257.96' | 0.15% | Crest |
| 17+86.88 | 257.95 ['] | -0.05% | |
| 17+96.88 | 257.90' | -0.17% | |
| 18+06.88 | 257.81' | -0.50% | |
| 18+16.88 | 257.70' | -0.83% | |
| 18+24.67 | 257.97' | -1.29% | PVT |





KEY MAP

WATER LINE-SANITARY SEWER **CROSSING NOTE:**

POSITION ONE FULL SECTION OF RESTRAINED JOINT WATERLINE AND SANITARY SEWER PIPE CENTERED AT CROSSING. INSERT SANITARY SEWER PIPE WITH CEMENT STABILIZED SAND FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS ONE FOOT BEYOND THE JOINTS ON EACH END. FOR CROSSINGS WHERE PROPOSED WATERLINE IS UNDER PROPOSED SANITARY SEWER, PUT RESTRAINED JOINT DUCTILE IRON PIPE WATERLINE (FOR DIAMETERS LESS THAN 24 INCHES) AND RESTRAINED JOINT PRESSURE RATED (MIN 150 PSI) SANITARY 24" MIN CLEARANCE. NO SEPARATE PAY.

FILL NOTES:

- 1) EXISTING DRAINAGE SWALES: ALL EXISTING DRAINAGE SWALES SHALL BE FILLED AS SHOWN WITH MATERIAL FROM EXISTING ADJACENT SPOIL BANKS IN MAXIMUM 8" LOOSE LIFTS AND COMPACTED TO 95% PROCTOR DENSITY AS PER AASHTO TEST METHOD T-99.
- 2) EXISTING DRAINAGE SWALES: ALL EXISTING DRAINAGE SWALES UNDER PROPOSED CONCRETE PAVEMENT SHALL B CLEANED, MUCKED OUT AND SCARIFIED TO A MINIMUM DEPTH OF 6" AND FILLED AS SPECIFIED ABOVE IN FILL NOTE NO. 1 NO SEPARATE PAY.
- 3) ROADWAY EMBANKMENT: STRIP 3" OF VEGETATION FROM AREA TO BE FILLED AND RE-COMPACT SOIL TO 95% PROCTOR DENSITY. PLACE FILL MATERIAL AS SPECIFIED IN FILL NOTE NO. 1

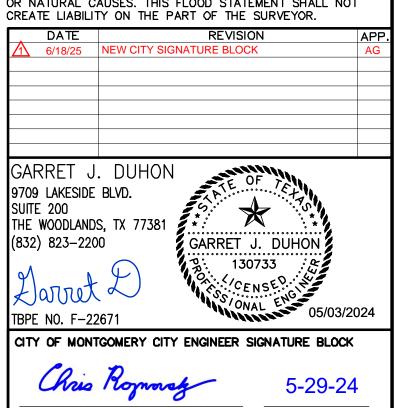
BENCHMARK:

SOURCE BENCHMARK: ELEVATIONS SHOWN HEREON ARE BASED ON NATIONAL GEODETIC SURVEY MONUMENT DESIGNATION HGCSD 81, PID No

HAVING PUBLISHED INFORMATION AS FOLLOWS: LATITUDE: 30° 21' 12.45392" NORTH LONGITUDE: 095° 34' 45.02514" WEST ORTHO HEIGHT: 212.4 FT. (64.74 METERS) HORIZONTAL DATUM: NAD83 (2011) VERTICAL DATUM : NAVD88

FLOODPLAIN INFORMATION:
ACCORDING TO MAP Nos. 48339C0200G OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAPS FOR MONTGOMERY COUNTY, DATED AUGUST 18, 2014, THE SUBJECT TRACT IS SITUATED WITHIN: UNSHADED ZONE "X": DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 100-YEAR FLOOD PLAIN.

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CITY OF MONTGOMERY CITY ENGINEER SIGNATURE BLOCK

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

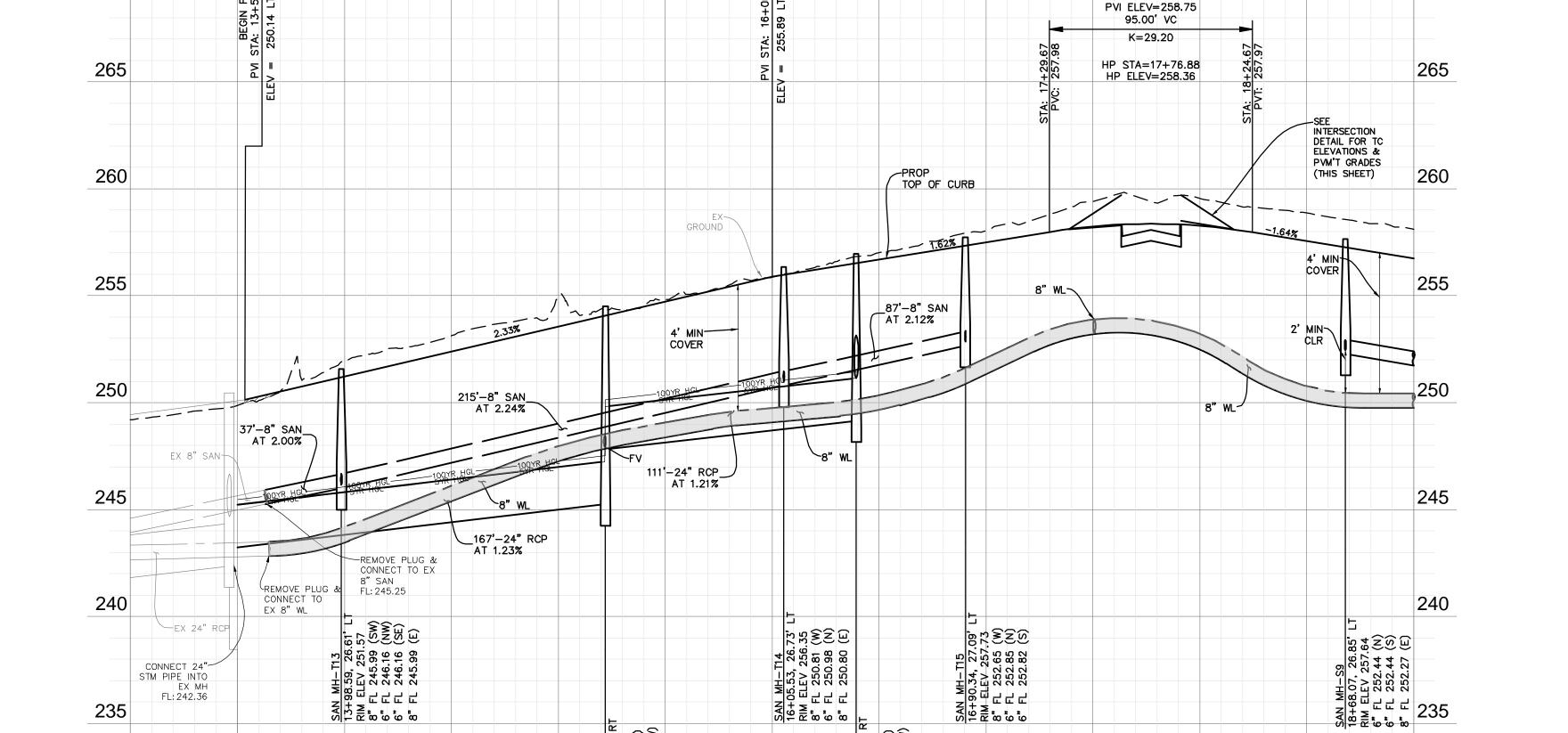
RED RIVER DRIVE (STA 13+00 TO 19+00)

CITY OF MONTGOMERY CITY ENGINEER

SIGNATURE VALID FOR ONE (1) YEAR

SHEET 9 OF 19

DATE



16+50

16+00

17+00

17+50

18+00

18+50

15+50

15+00

50. 36 36

14+00

14 + 50

13+50

230

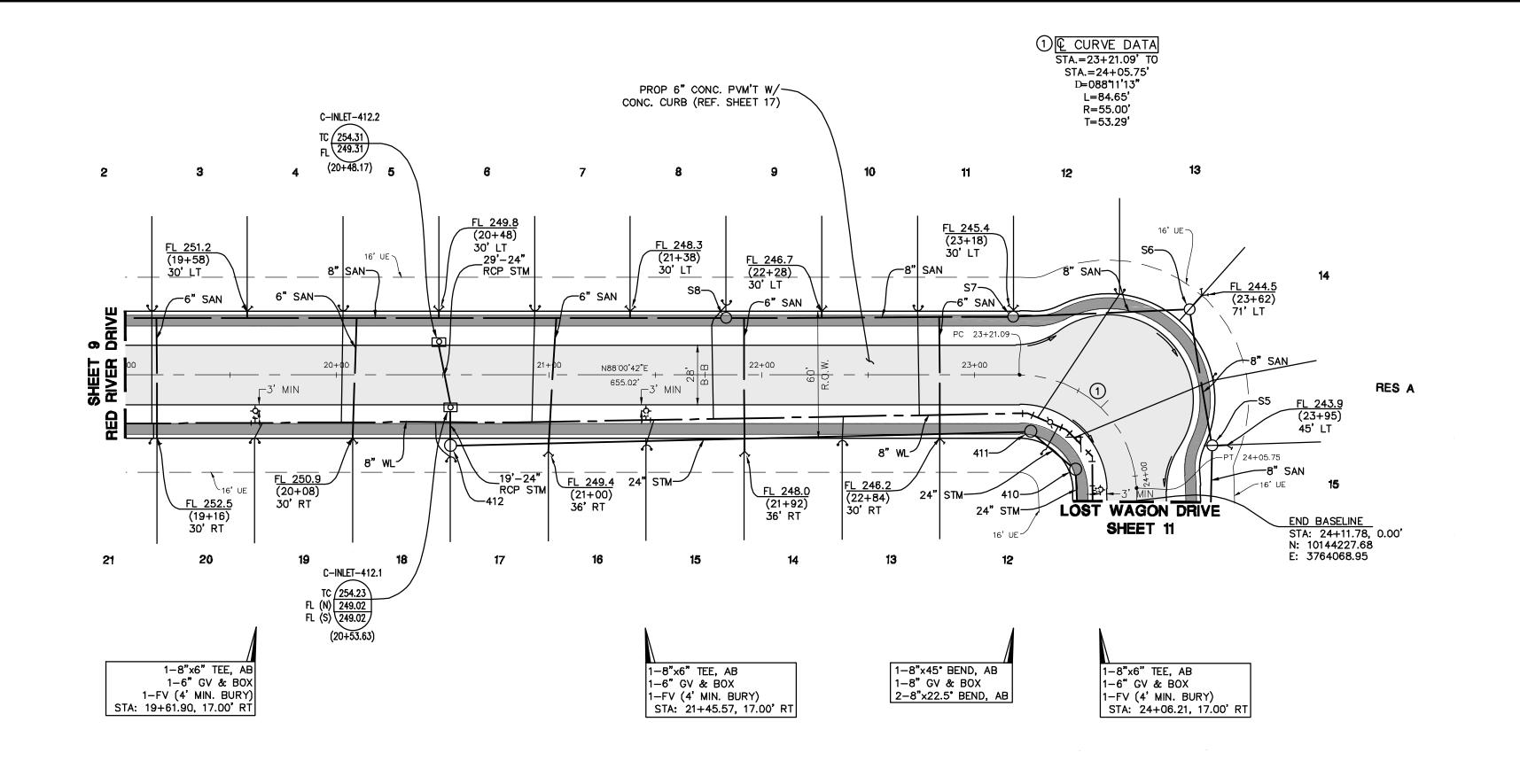
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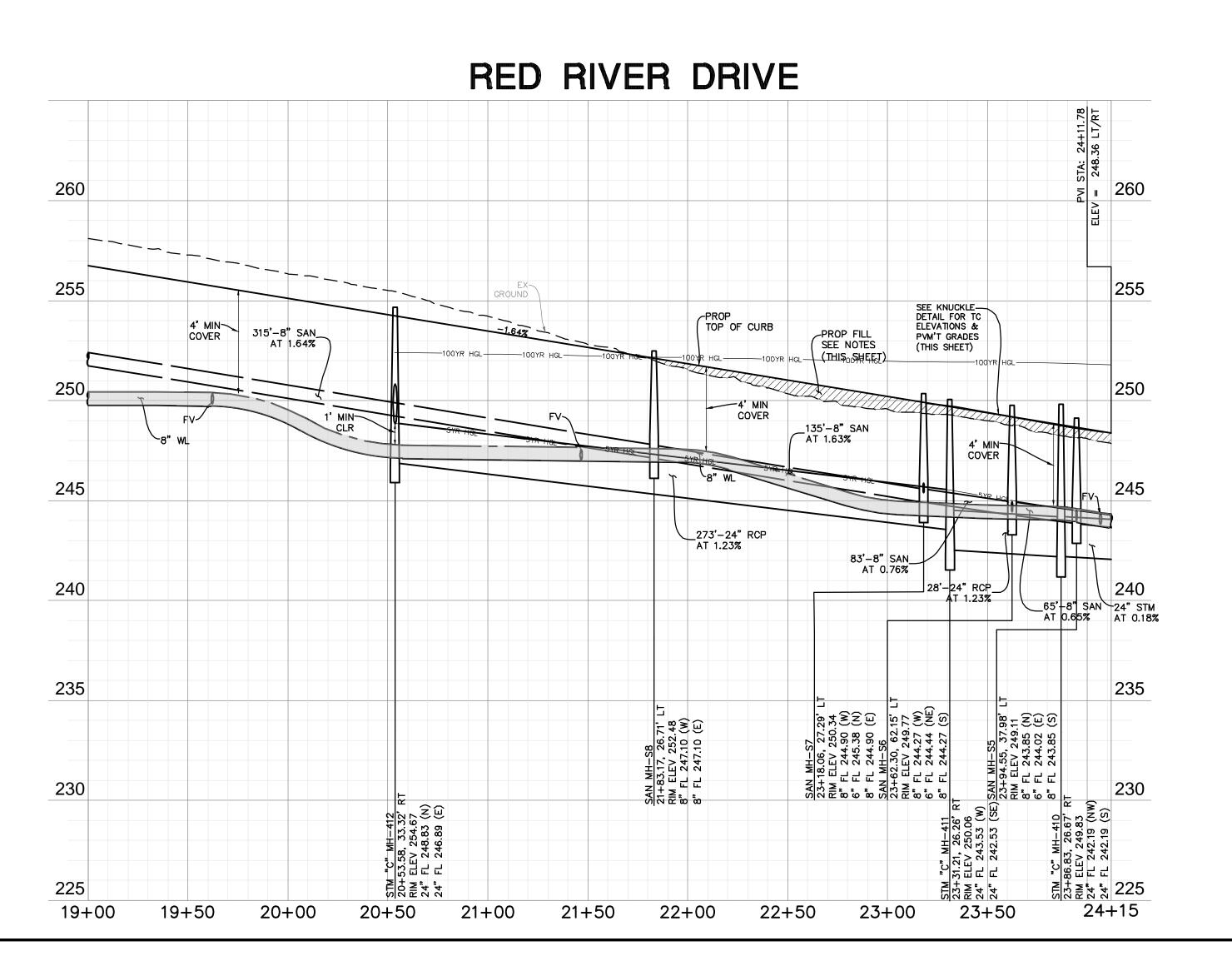
RED RIVER DRIVE

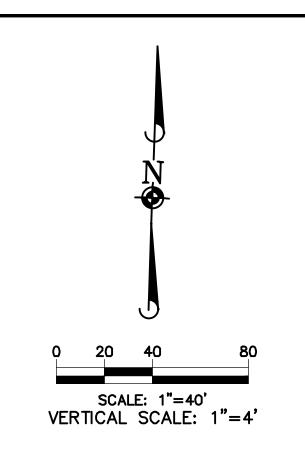
VERTICAL CURVE 1 PVI STA=17+77.17

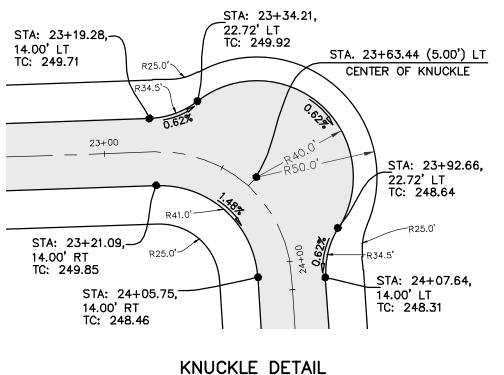
230

19+00





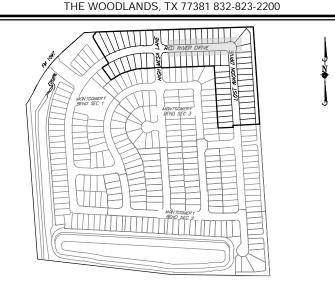




SCALE: 1"=40'



TBPE REGISTRATION NUMBER F-22671 9709 LAKESIDE BLVD, SUITE 200 THE WOODLANDS, TX 77381 832-823-2200



KEY MAP

WATER LINE-SANITARY SEWER CROSSING NOTE:

POSITION ONE FULL SECTION OF RESTRAINED JOINT WATERLINE AND SANITARY SEWER PIPE CENTERED AT CROSSING. INSERT SANITARY SEWER PIPE WITH CEMENT STABILIZED SAND FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS ONE FOOT BEYOND THE JOINTS ON EACH END. FOR CROSSINGS WHERE PROPOSED WATERLINE IS UNDER PROPOSED SANITARY SEWER, PUT RESTRAINED JOINT DUCTILE IRON PIPE WATERLINE (FOR DIAMETERS LESS THAN 24 INCHES) AND RESTRAINED JOINT PRESSURE RATED (MIN 150 PSI) SANITARY 24" MIN CLEARANCE. NO SEPARATE PAY.

FILL NOTES:

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BENCHMARK:

SOURCE BENCHMARK: ELEVATIONS SHOWN HEREON ARE BASED ON NATIONAL GEODETIC SURVEY MONUMENT DESIGNATION HGCSD 81, PID No

HAVING PUBLISHED INFORMATION AS FOLLOWS: LATITUDE: 30° 21' 12.45392" NORTH LONGITUDE: 095° 34' 45.02514" WEST ORTHO HEIGHT: 212.4 FT. (64.74 METERS) HORIZONTAL DATUM: NAD83 (2011) VERTICAL DATUM : NAVD88

FLOODPLAIN INFORMATION: ACCORDING TO MAP Nos. 48339C0200G OF THE FEDERAL

EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAPS FOR MONTGOMERY COUNTY, DATED AUGUST 18, 2014, THE SUBJECT TRACT IS SITUATED WITHIN: UNSHADED ZONE "X": DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 100-YEAR FLOOD PLAIN.

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DATE REVISION
6/18/25 NEW CITY SIGNATURE BLOCK GARRET J. DUHON 9709 LAKESIDE BLVD. SUITE 200 THE WOODLANDS, TX 7738 (832) 823-2200 GARRET J. DUHON TBPE NO. F-22671 CITY OF MONTGOMERY CITY ENGINEER SIGNATURE BLOCK 5-29-24

CITY OF MONTGOMERY CITY ENGINEER SIGNATURE BLOCK

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

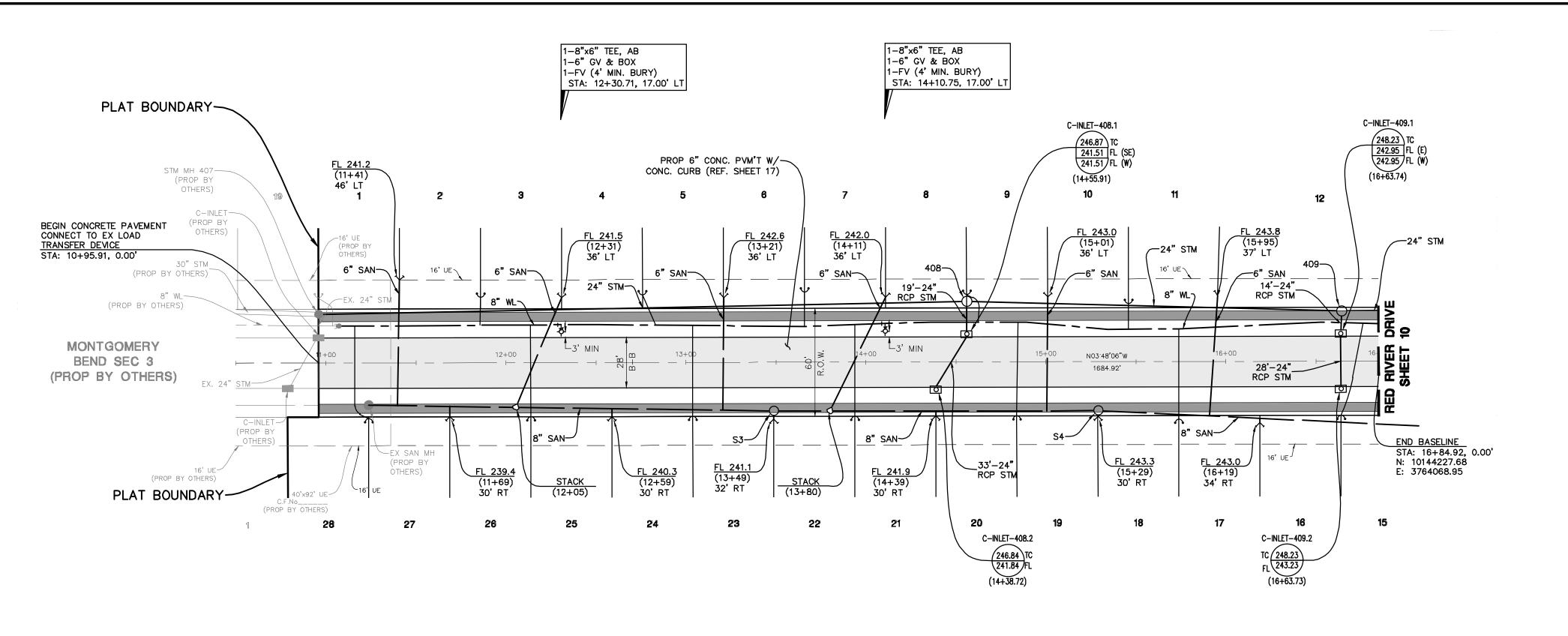
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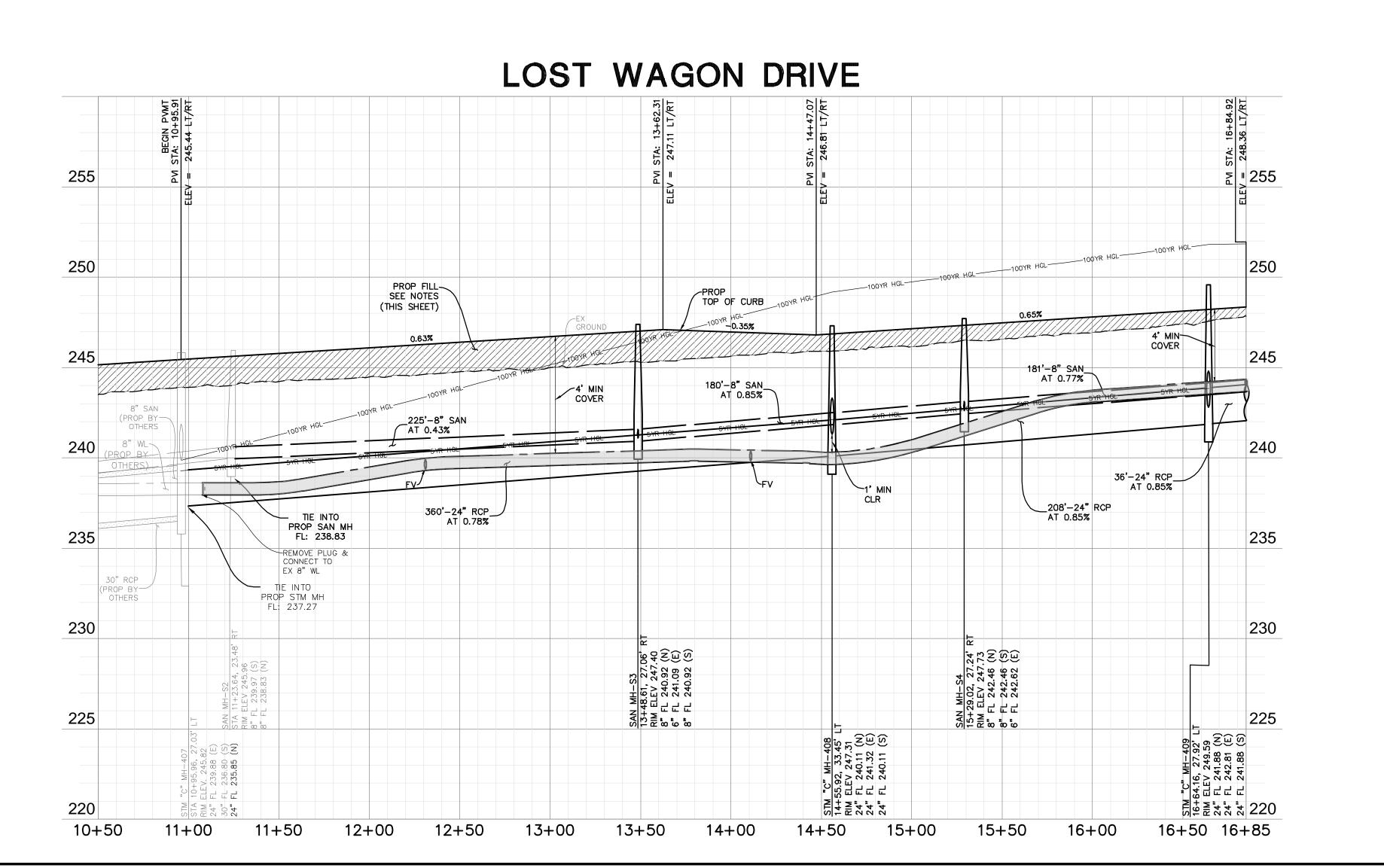
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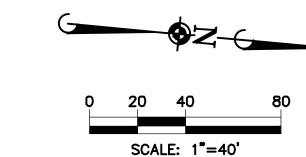
SHEET 10 OF 19

CITY OF MONTGOMERY CITY ENGINEER

SIGNATURE VALID FOR ONE (1) YEAR

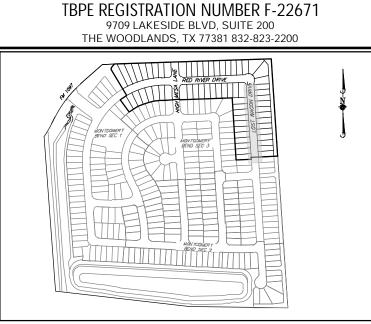






VERTICAL SCALE: 1"=4"





KEY MAP

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BENCHMARK:

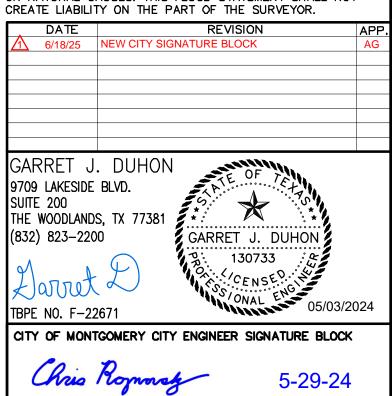
SOURCE BENCHMARK:

ELEVATIONS SHOWN HEREON ARE BASED ON NATIONAL GEODETIC SURVEY MONUMENT DESIGNATION HGCSD 81, PID No

HAVING PUBLISHED INFORMATION AS FOLLOWS: LATITUDE: 30° 21' 12.45392" NORTH LONGITUDE: 095° 34' 45.02514" WEST ORTHO HEIGHT: 212.4 FT. (64.74 METERS) HORIZONTAL DATUM: NAD83 (2011) VERTICAL DATUM : NAVD88

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

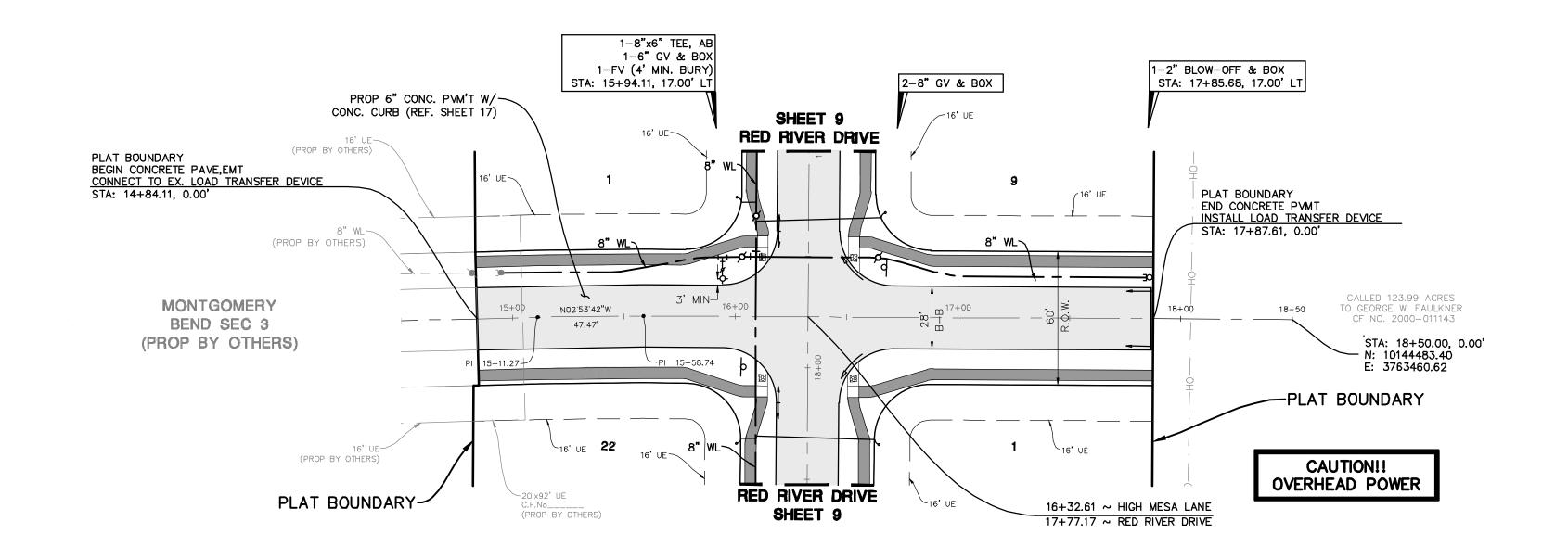
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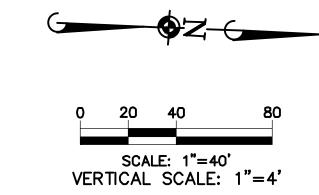
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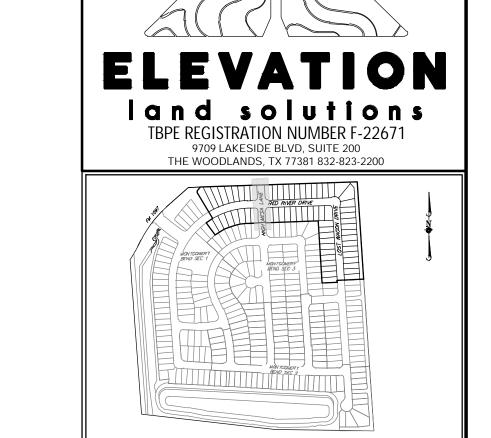
CITY OF MONTGOMERY CITY ENGINEER SIGNATURE BLOCK

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

SHEET 11 OF 19







KEY MAP

WATER LINE-SANITARY SEWER CROSSING NOTE:

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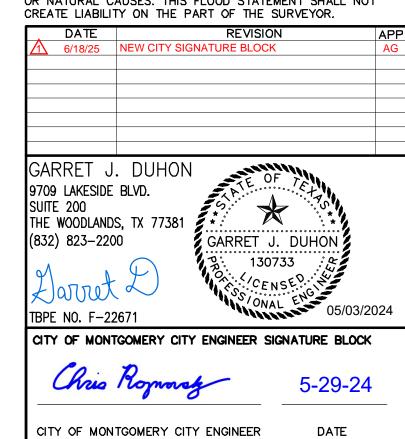
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EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAPS FOR MONTGOMERY COUNTY, DATED AUGUST 18, 2014, THE SUBJECT TRACT IS SITUATED WITHIN: UNSHADED ZONE "X";
DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 100-YEAR FLOOD PLAIN.

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



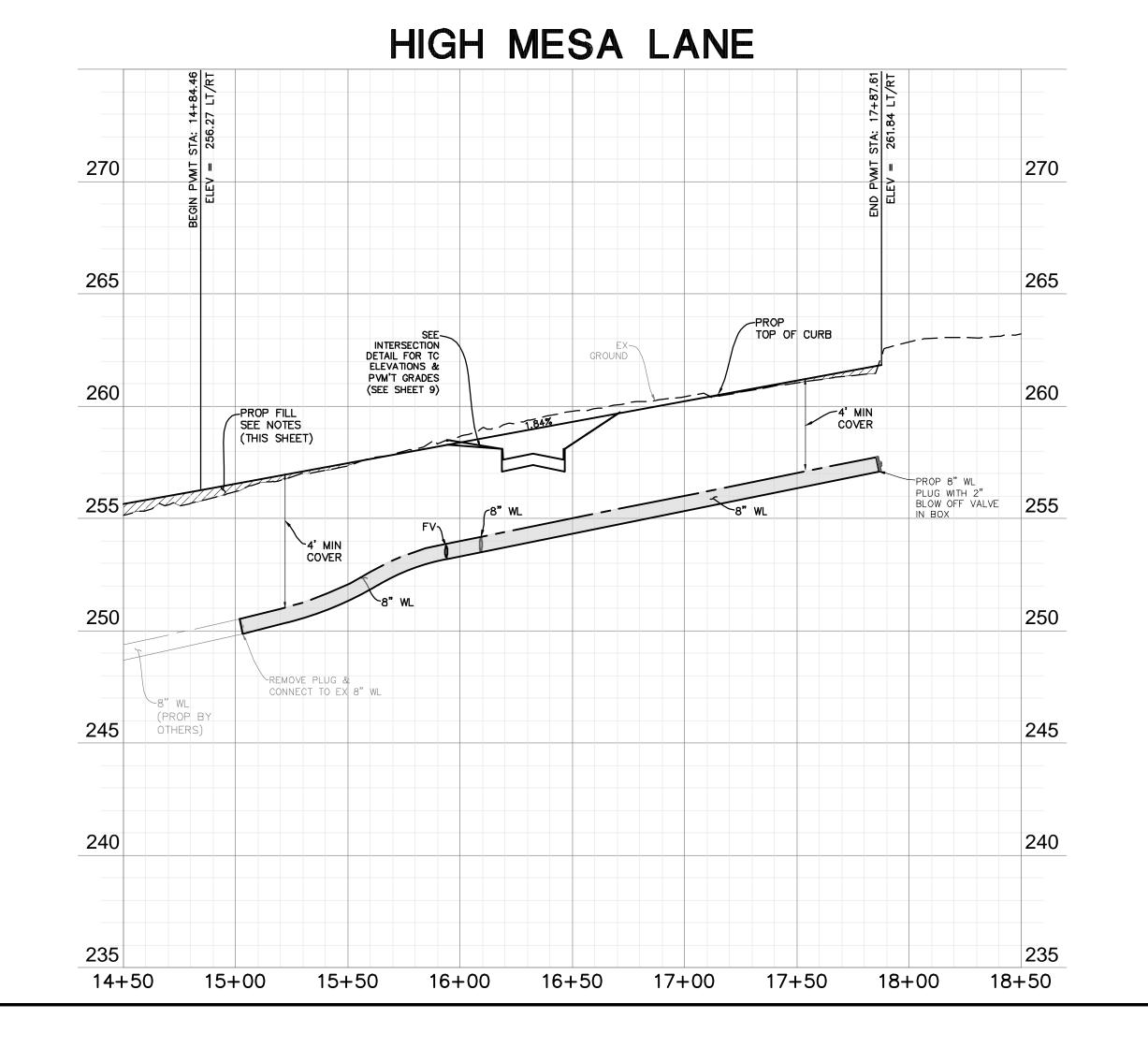
HIGH MESA LANE

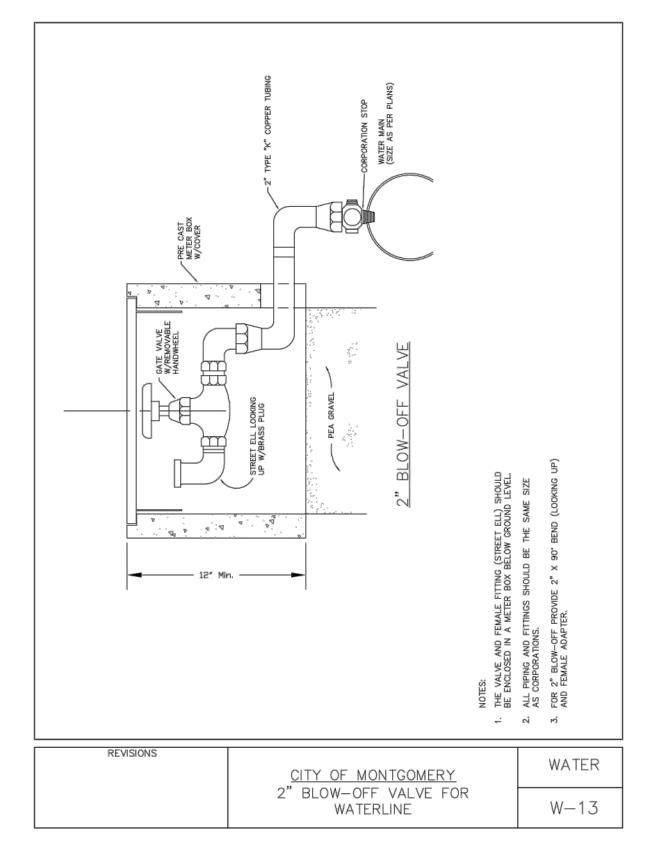
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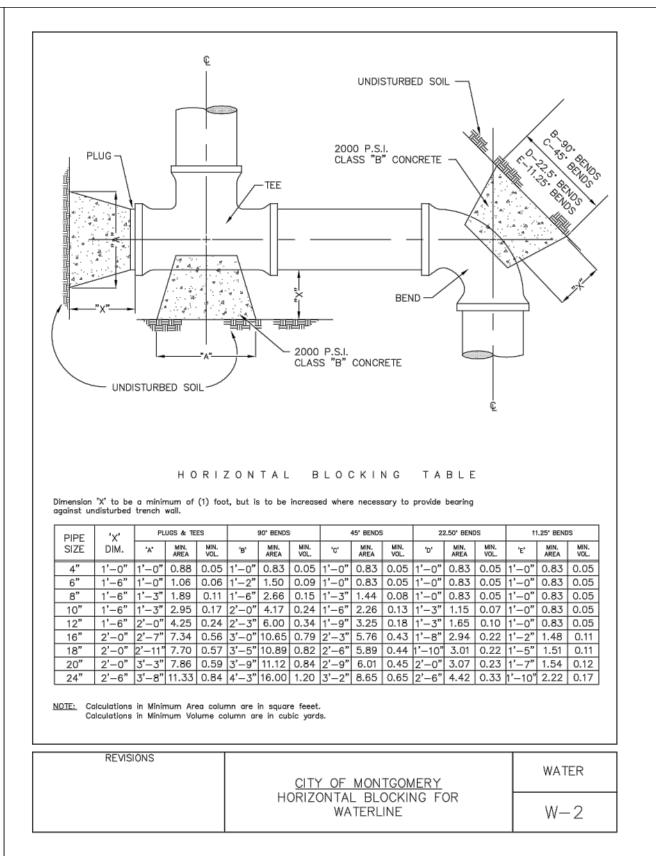
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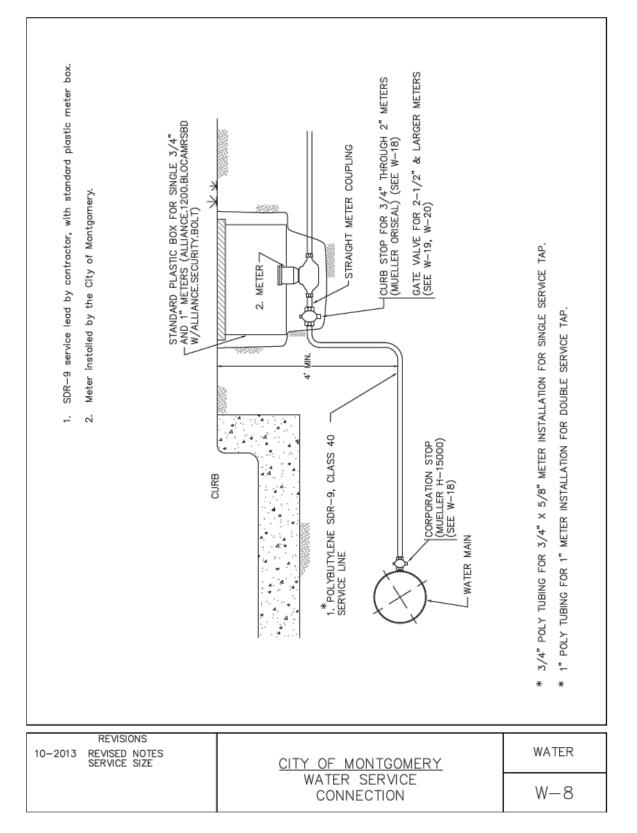
SHEET 12 OF 19

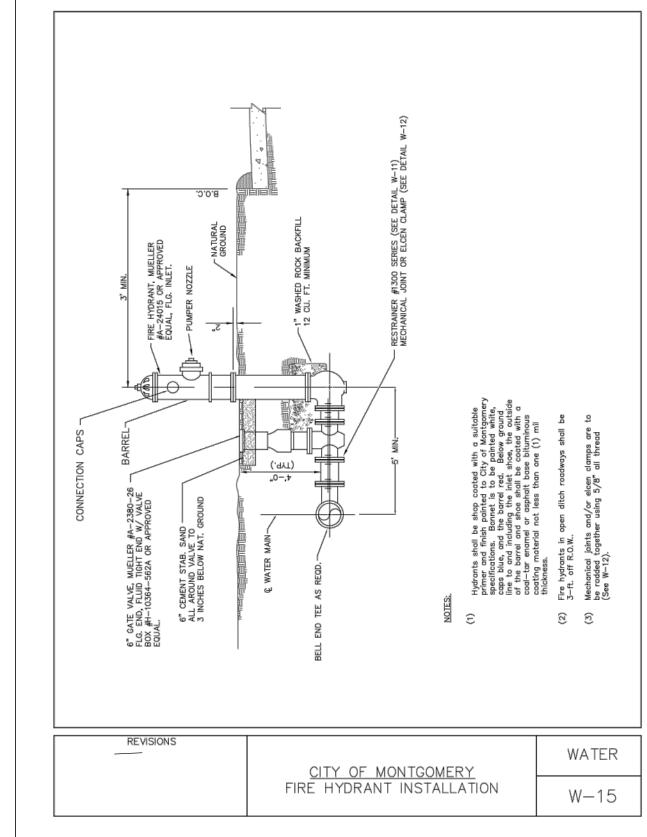
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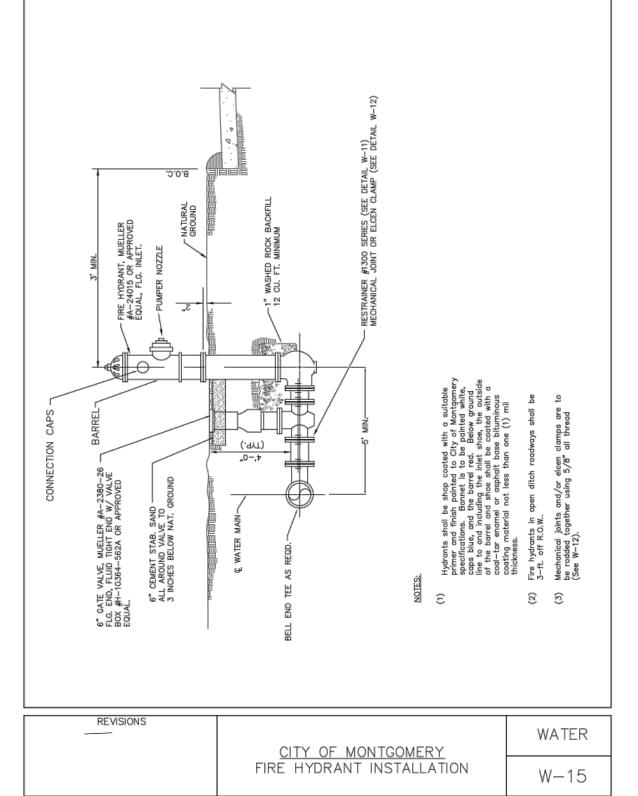


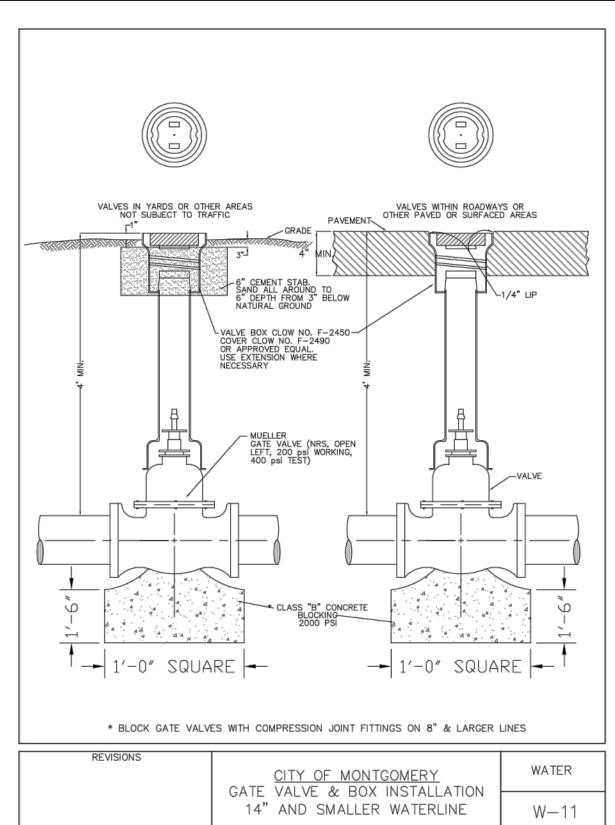


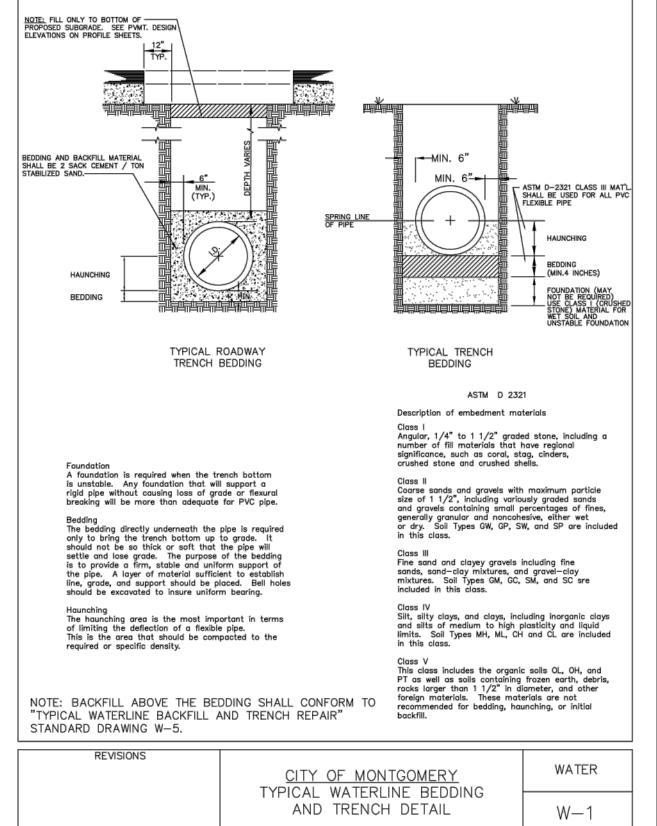


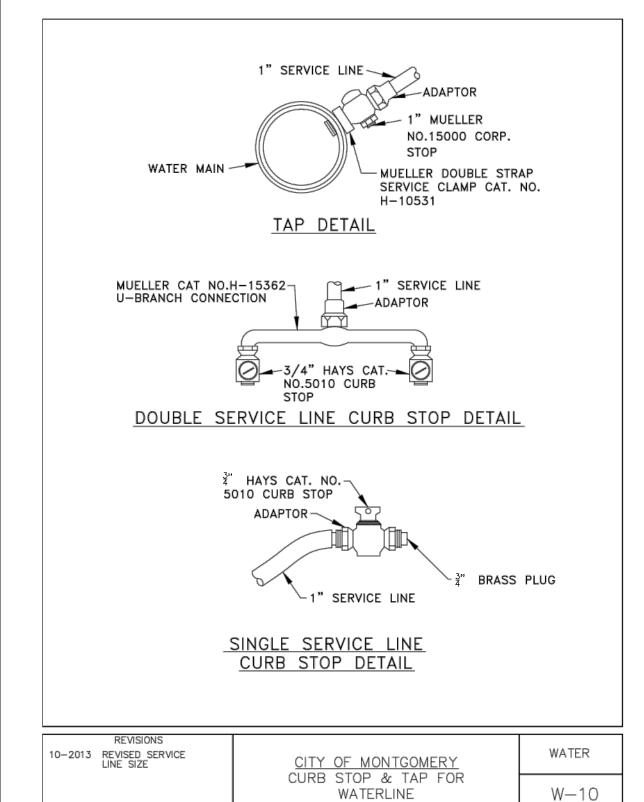


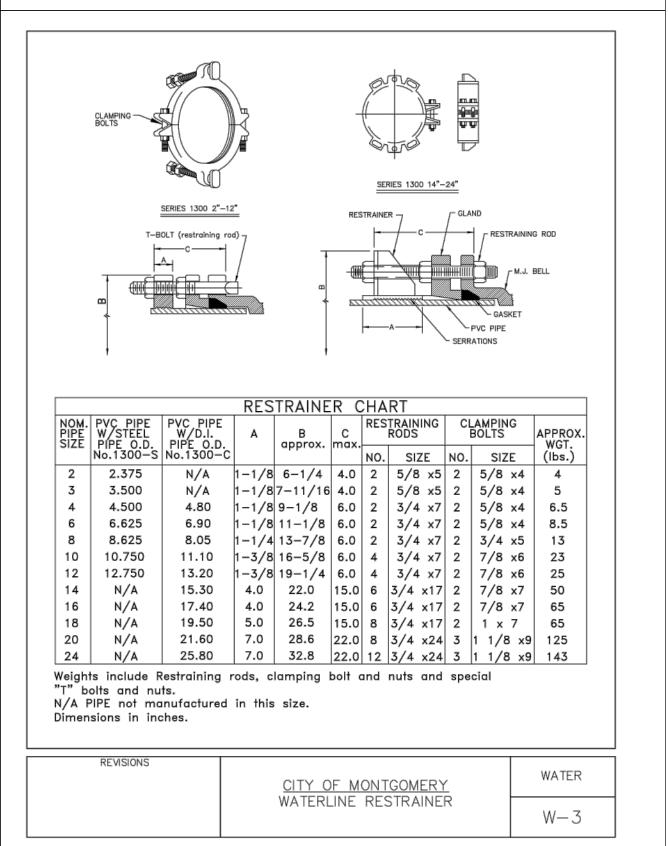


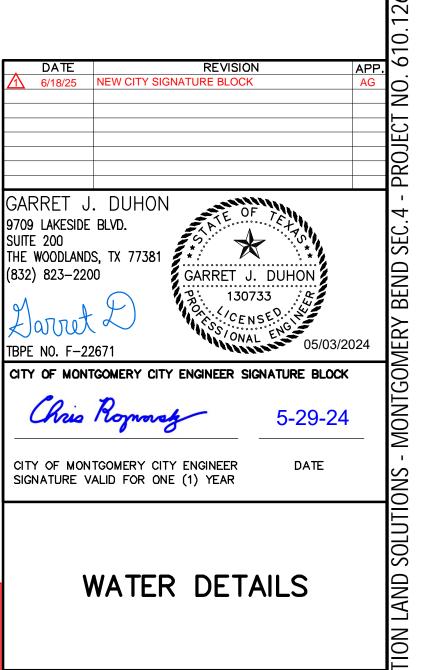












land solutions TBPE REGISTRATION NUMBER F-22671 9709 LAKESIDE BLVD, SUITE 200 THE WOODLANDS, TX 77381 832-823-2200

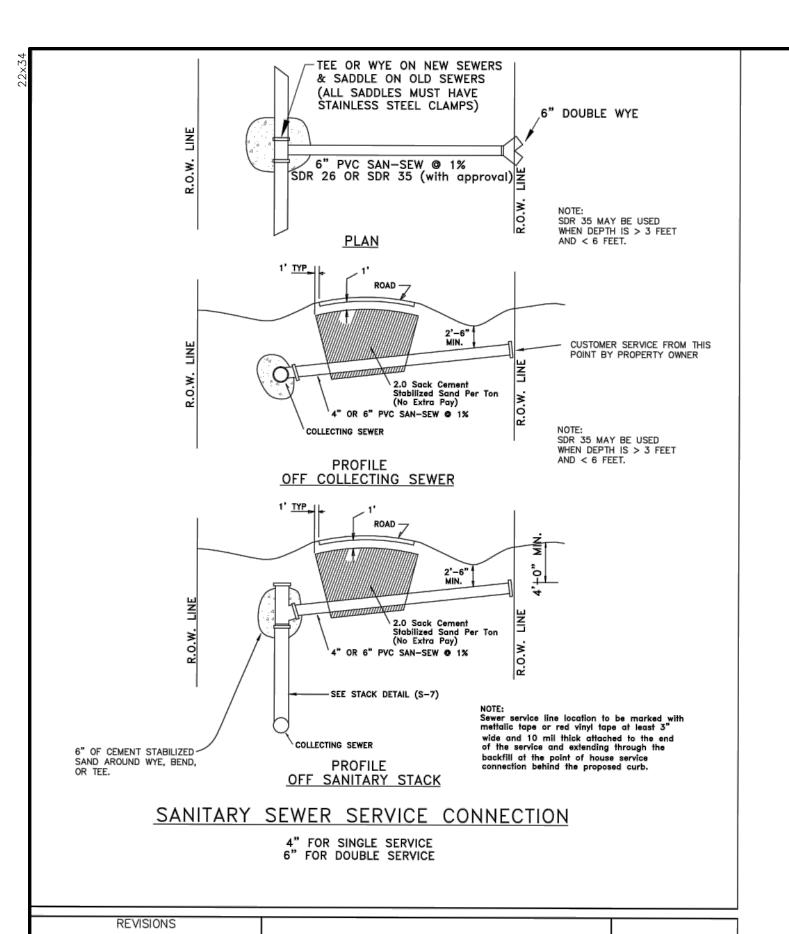
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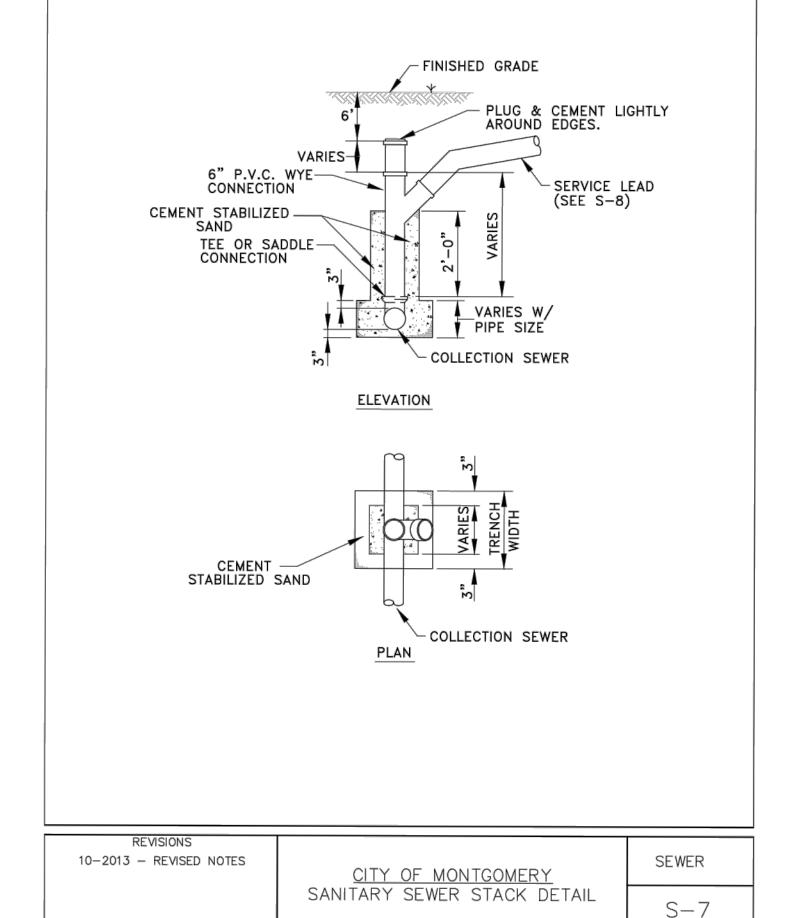
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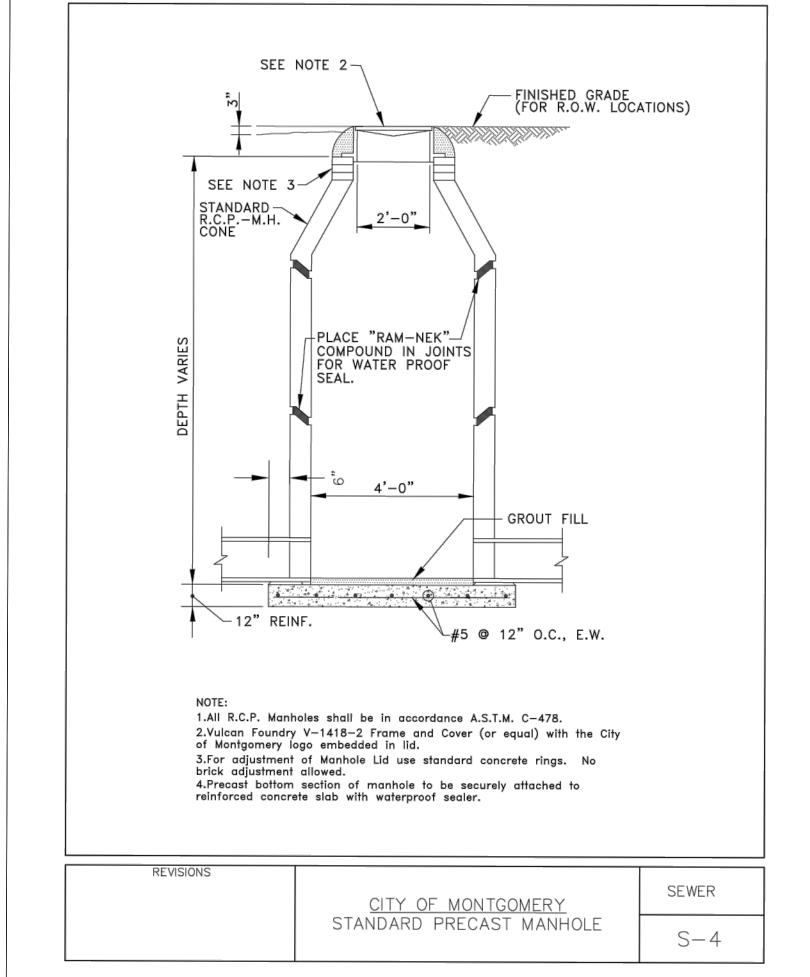
CITY OF MONTGOMERY CITY ENGINEER

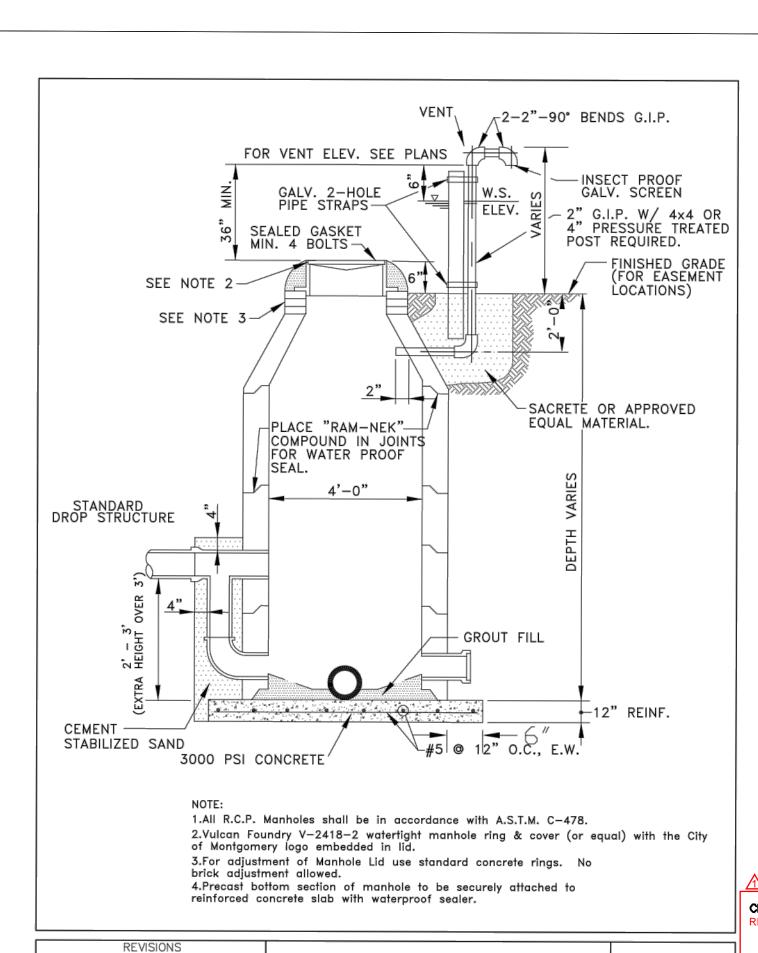
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SHEET 13 OF 19

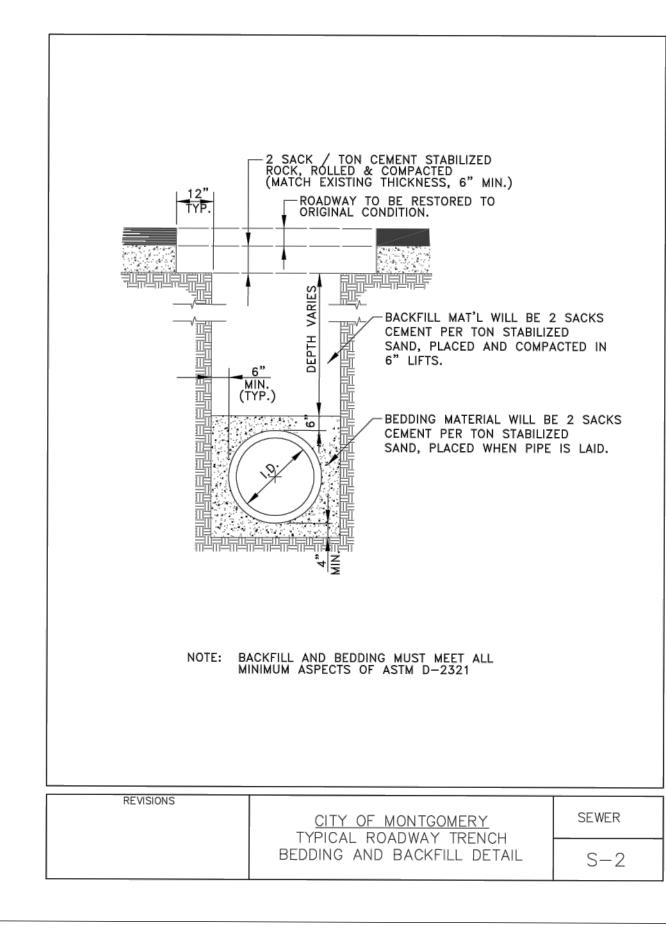








W/ DROP CONNECTION & VENT



NEW CITY SIGNATURE BLOCK

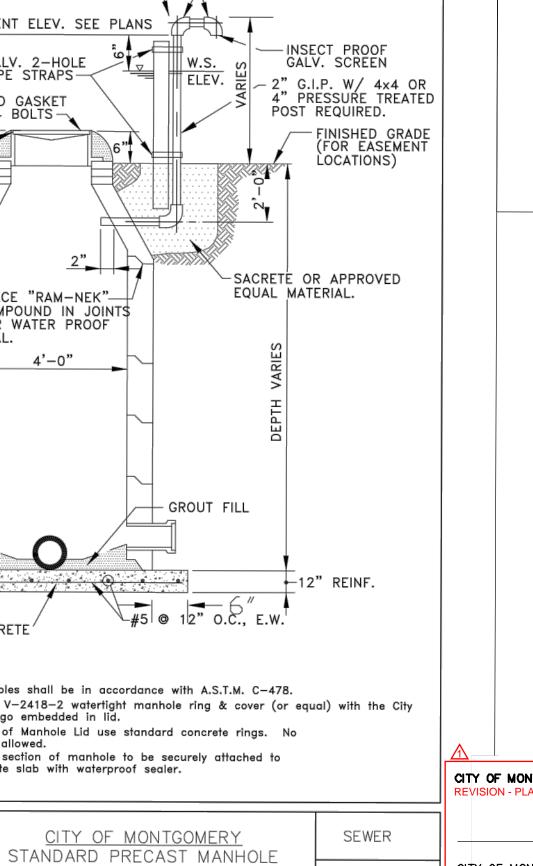
ELEVATION

land solutions

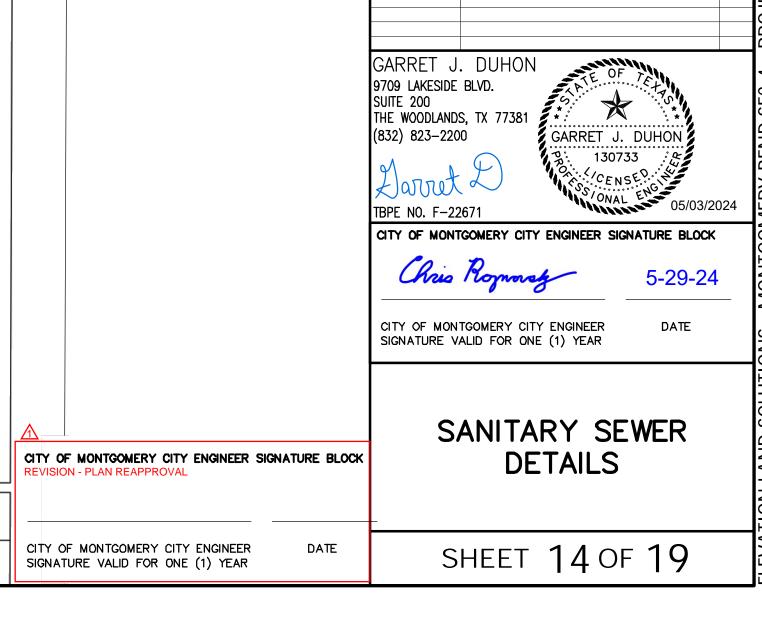
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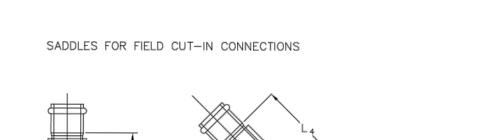
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THE WOODLANDS, TX 77381 832-823-2200



S-5





CITY OF MONTGOMERY

RESIDENTIAL SANITARY SEWER

SERVICE CONNECTION

SEWER

S - 8

| | TEE SADDLE | E | ٧ | VYE SADDLE | |
|--------|------------|----------|--------|------------|----------|
| D | L4 | Wt. Ibs. | D | L 4 | Wt. Ibs. |
| 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 |

The base of the saddle is curved to fit the size for which it was made.

PROCEDURE FOR PLACING SADDLE CONNECTION

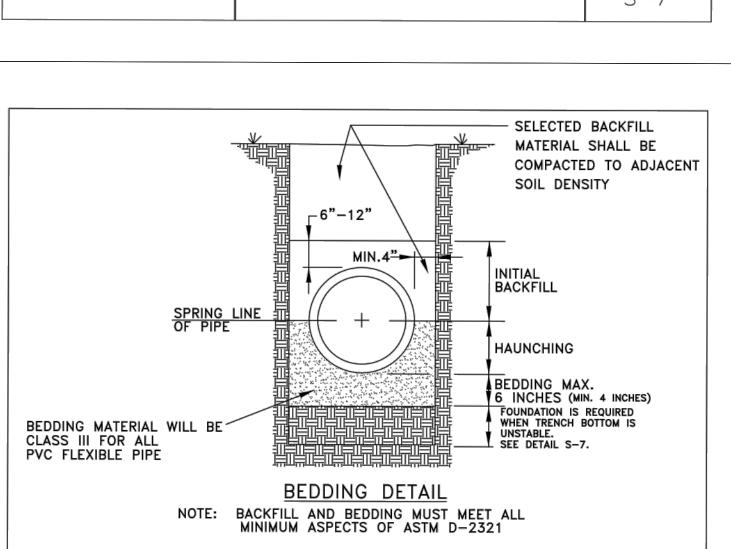
- 1. Place saddle in position on pipe. Mark hole guide for cut in pipe using saddle as a template. Remove saddle from pipe.
- 2. Auger a hole into pipe wall on hole guide mark.

10-2013 REVISED SERVICE

GRADE & NOTES

- 3. The hole should be 1/2" outside the hole guide mark.
- 4. Wipe clean and dry both the underside of the saddle and the mating surface
- 5. Apply primer to both mating surfaces. Check the PVC surfaces while still wet with primer to see that the surfaces have been etched.
- 6. While the surfaces are still wet with primer, liberally brush cement base on mating surface of saddle and pipe.
- Immediately position the saddle over the hole in the pipe and draw down with stainless steel straps. The saddle must not be moved once it makes contact with the pipe.

| | | <u></u> |
|-----------|--|---------|
| REVISIONS | <u>CITY OF MONTGOMERY</u> TEE & WYE SADDLES FOR | SEWER |
| | PVC PIPE | S-11 |



Foundation 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.

The bedding directly underneath 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 of 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.

The haunching area is the most important in terms of limiting the deflection of a flexible

ASTM D-2321 DESCRIPTION OF EMBEDMENT MATERIALS

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

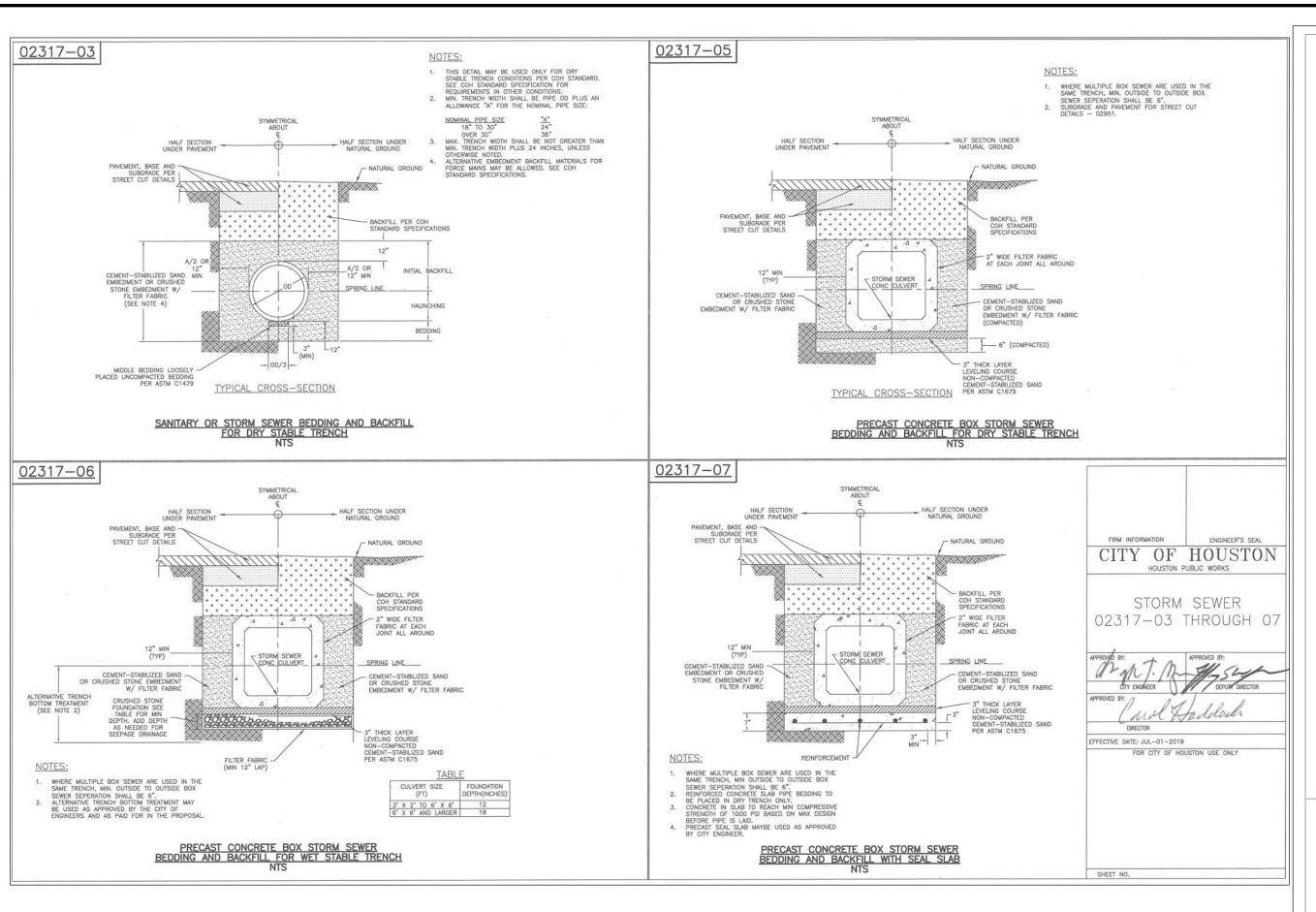
Class II Coarse sands and gravels with maximum particle size of 1-1/2", including variously graded sands, and gravels containing small percentages of fines, generally granular and noncohesive, either wet or dry. Soil types GW, GP, SW, and SP are included in this class.

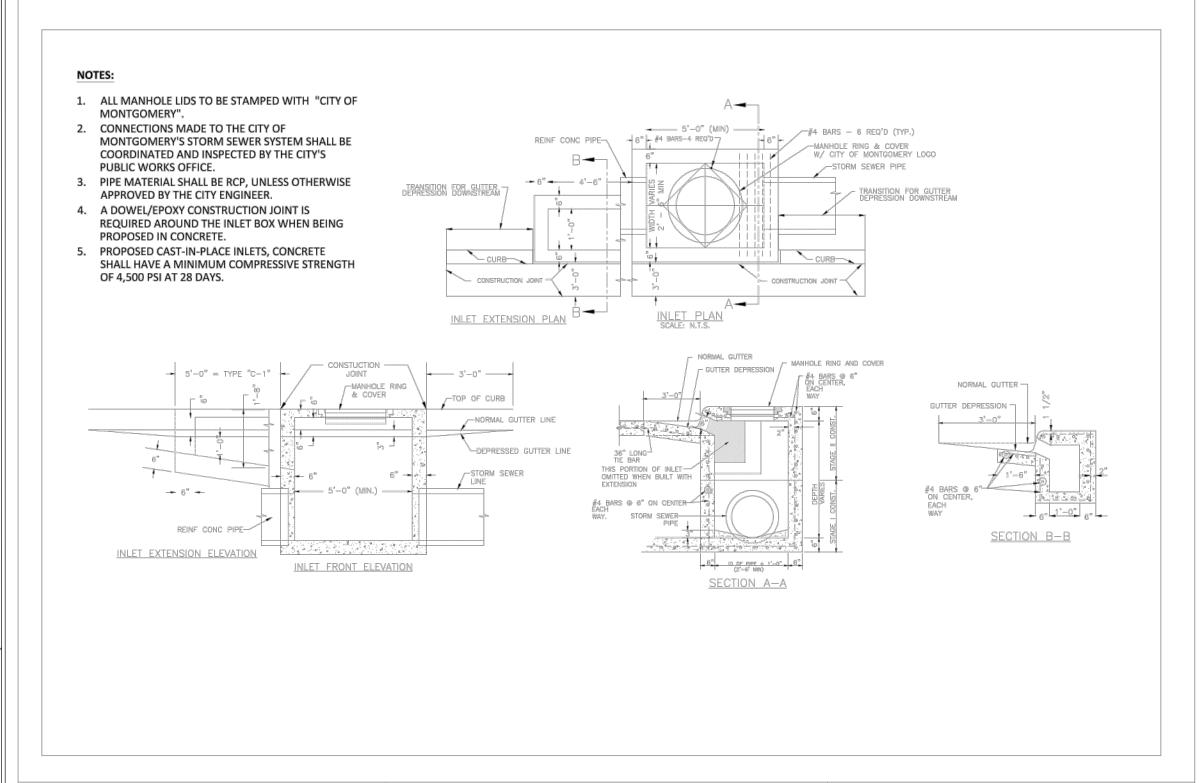
Fine sand and clayey gravels, including fine sands and sand-clay mixtures, and gravel clay mixtures. Soil types GM, GC, SM and SC are included in this class.

Silt, silty clays, and clays, including inorganic clays and silts of medium to high plasticity and liquid limits. Soil pipe. This is the area that should be compacted types MH, ML, CH, and CL are included in this class. to the required or specified density.

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.

| REVISIONS | <u>CITY OF MONTGOMERY</u> TYPICAL SANITARY SEWER | SEWER |
|-----------|---|-------|
| | BEDDING AND TRENCH DETAIL | S-1 |





CITY OF MONTGOMERY

TYPE - C-1

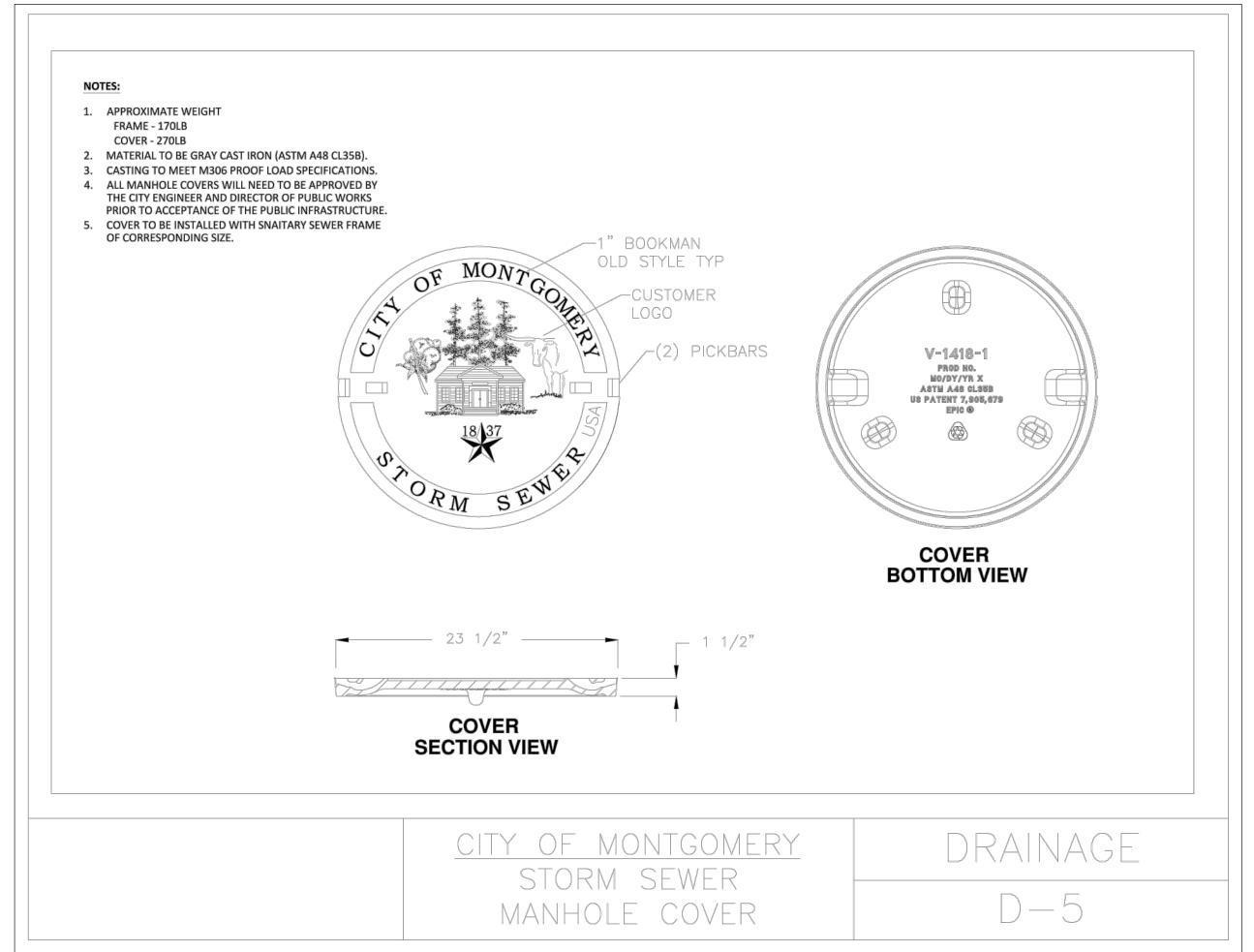
STORM SEWER INLET

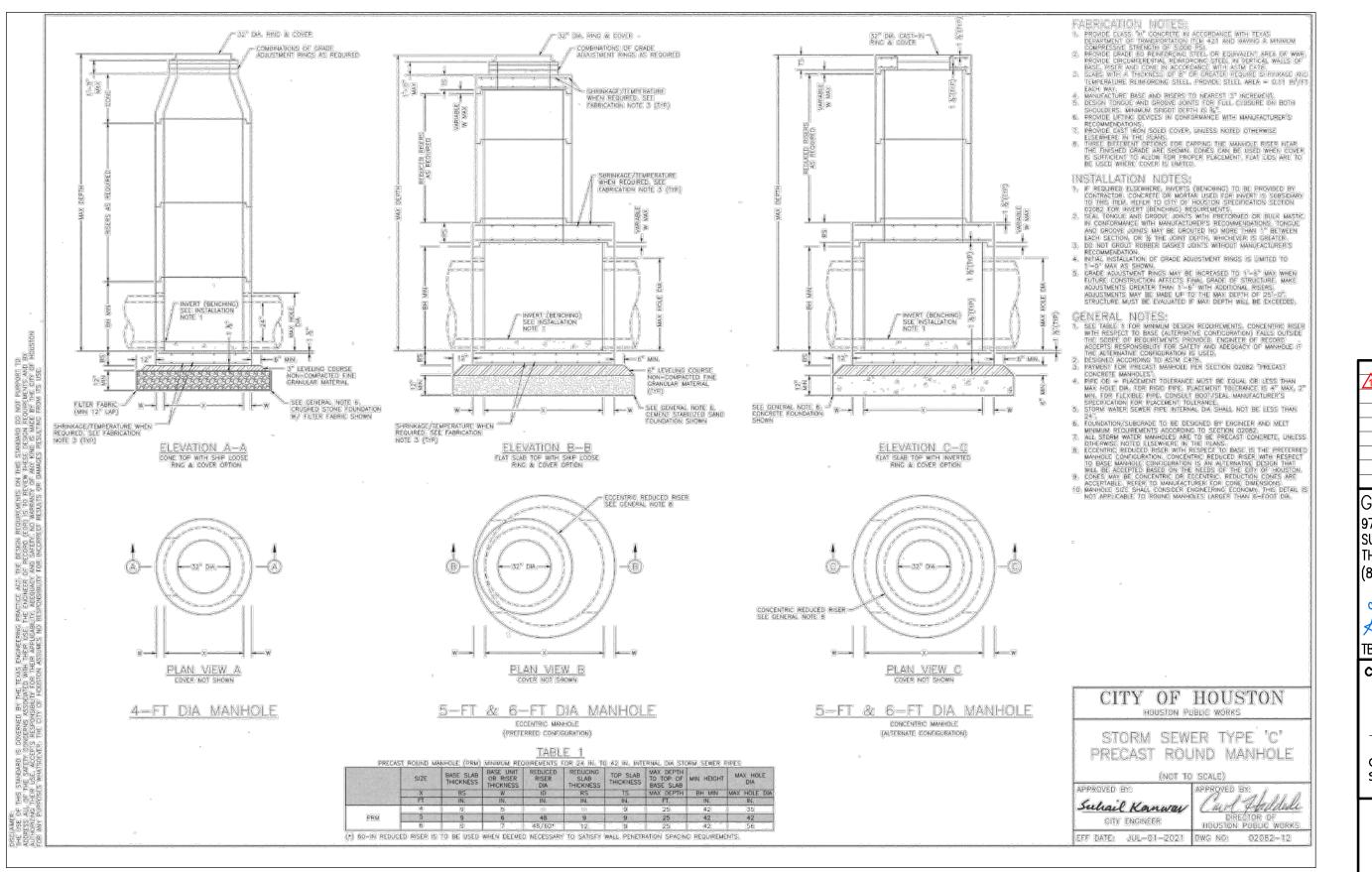
DRAINAGE

D-1

CITY OF MONTGOMERY CITY ENGINEER SIGNATURE BLOCK

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





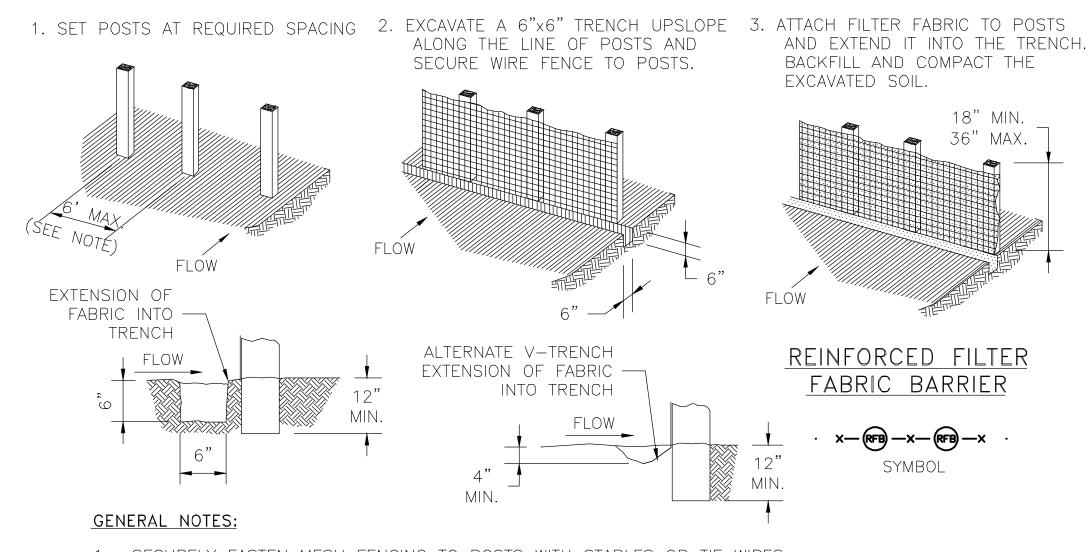
DATE REVISION
6/18/25 NEW CITY SIGNATURE BLOCK GARRET J. DUHON 9709 LAKESIDE BLVD. SUITE 200 THE WOODLANDS, TX 7738 (832) 823-2200 GARRET J. DUHON TBPE NO. F-22671 CITY OF MONTGOMERY CITY ENGINEER SIGNATURE BLOCK 5-29-24 CITY OF MONTGOMERY CITY ENGINEER DATE SIGNATURE VALID FOR ONE (1) YEAR STORM SEWER **DETAILS** SHEET 15 OF 19

ELEVATION

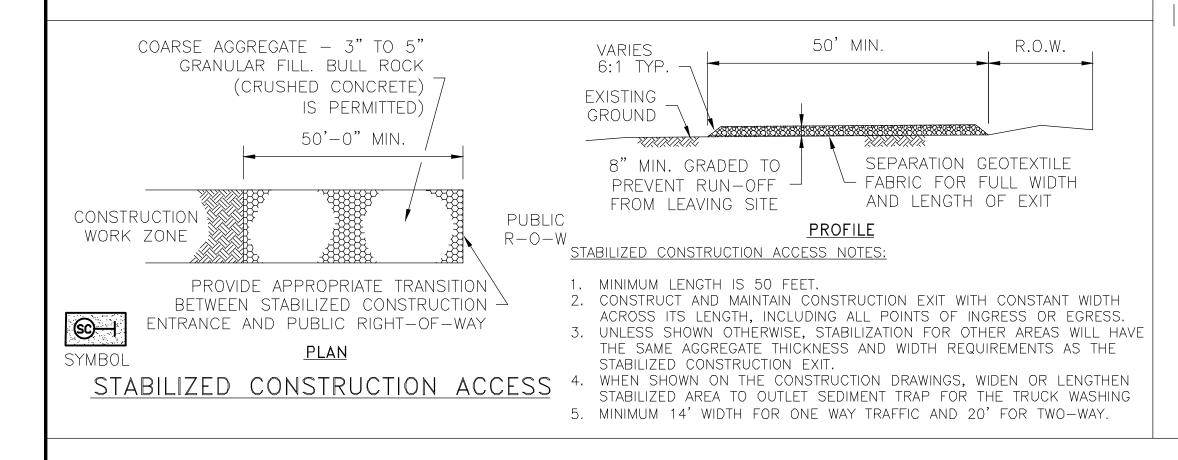
land solutions

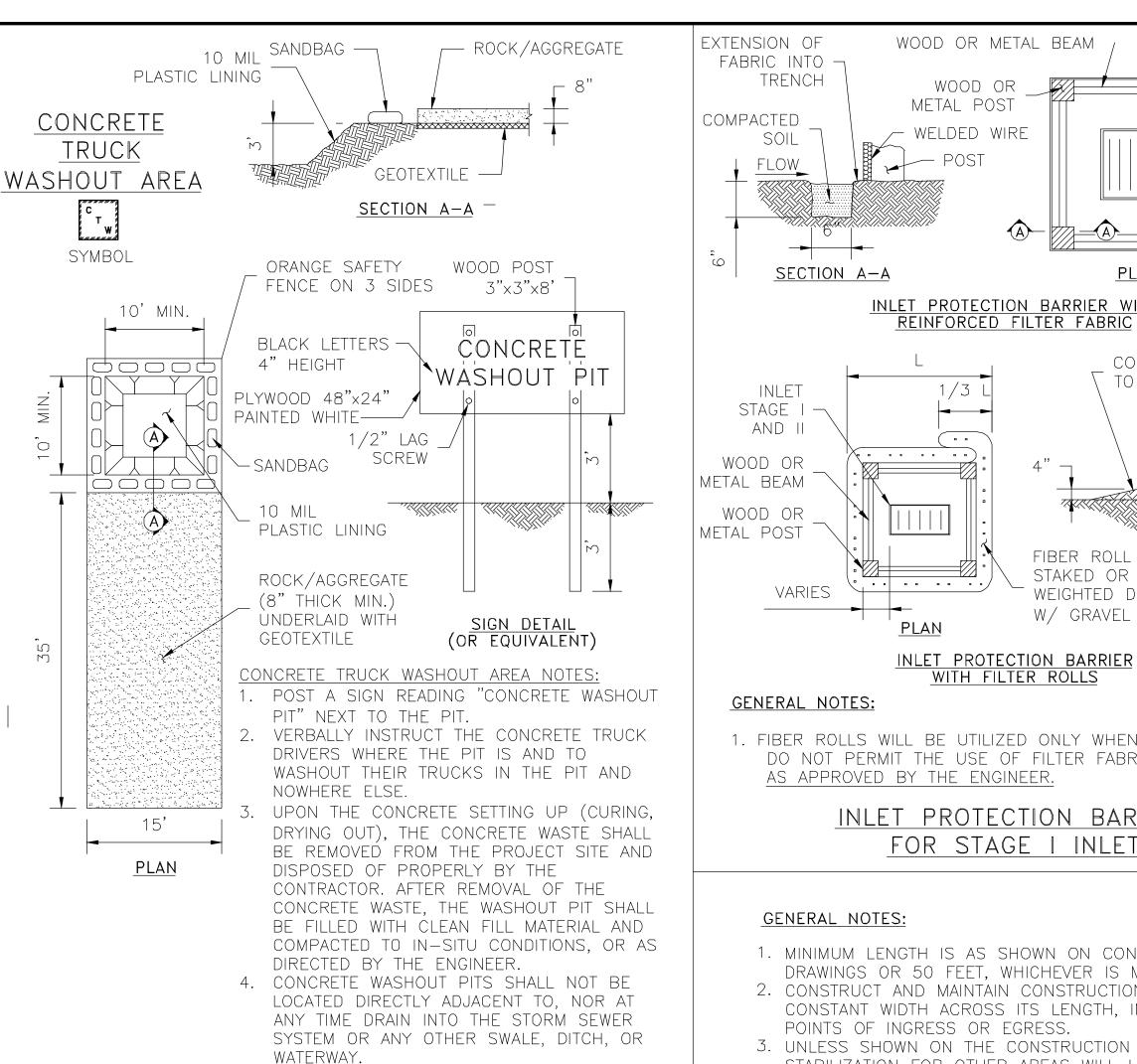
TBPE REGISTRATION NUMBER F-22671

9709 LAKESIDE BLVD, SUITE 200 THE WOODLANDS, TX 77381 832-823-2200



- 1. SECURELY FASTEN MESH FENCING TO POSTS WITH STAPLES OR TIE WIRES.
- 2. SECURELY FASTEN FILTER FABRIC TO MESH FENCING.
- 3. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, OVERLAP 6 INCHES AT A POST, FOLD
- TOGETHER, AND ATTACH TO A POST. 4. REMOVE SEDIMENT DEPOSITS WHEN SILT REACHES ONE-THIRD OF THE HEIGHT OF THE FENCE IN DEPTH.



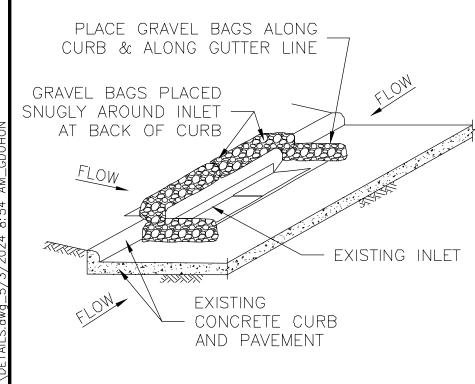


5. CONSTRUCT ENTRY ROAD AND BOTTOM OF

LOADINGS FROM TRUCKS EQUIPMENT.

WASHOUT AREA TO SUPPORT EXPECTED

- 2. CONSTRUCT AND MAINTAIN CONSTRUCTION EXIT WITH
- 3. UNLESS SHOWN ON THE CONSTRUCTION DRAWINGS, STABILIZATION FOR OTHER AREAS WILL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION EXIT.
- 4. WHEN SHOWN ON THE CONSTRUCTION DRAWINGS, WIDEN OR LENGTHEN STABILIZED AREA TO
- OUTLET SEDIMENT TRAP FOR THE TRUCK WASHING
- 5. PROVIDE PERIODIC TOP DRESSING WITH ADDITIONAL
- 6. PERIODICALLY TURN AGGREGATE TO EXPOSE A CLEAN
- 7. MINIMUM 14' WIDTH FOR ONE WAY TRAFFIC AND 20'

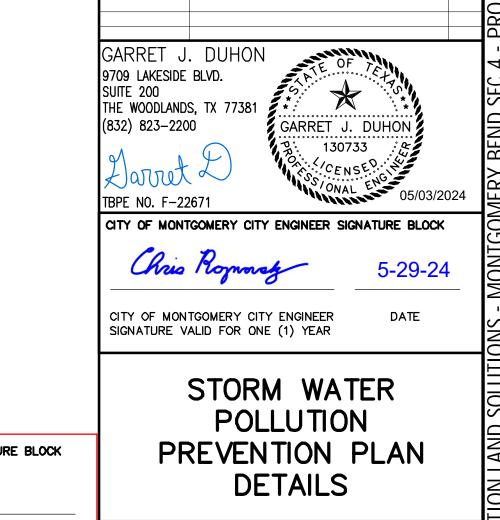


INLET PROTECTION BARRIERS IPB-II SYMBOL FOR STAGE II INLETS

GENERAL NOTES:

REMOVE SEDIMENT DEPOSIT WHEN THE SEDIMENT HAS ACCUMULATED TO ONE—THIRD THE HEIGHT OF THE BARRIER.

2. GRAVEL BAGS SHALL NOT BLOCK THROAT OF INLET UNLESS DIRECTED BY ENGINEER.



REVISION NEW CITY SIGNATURE BLOCK

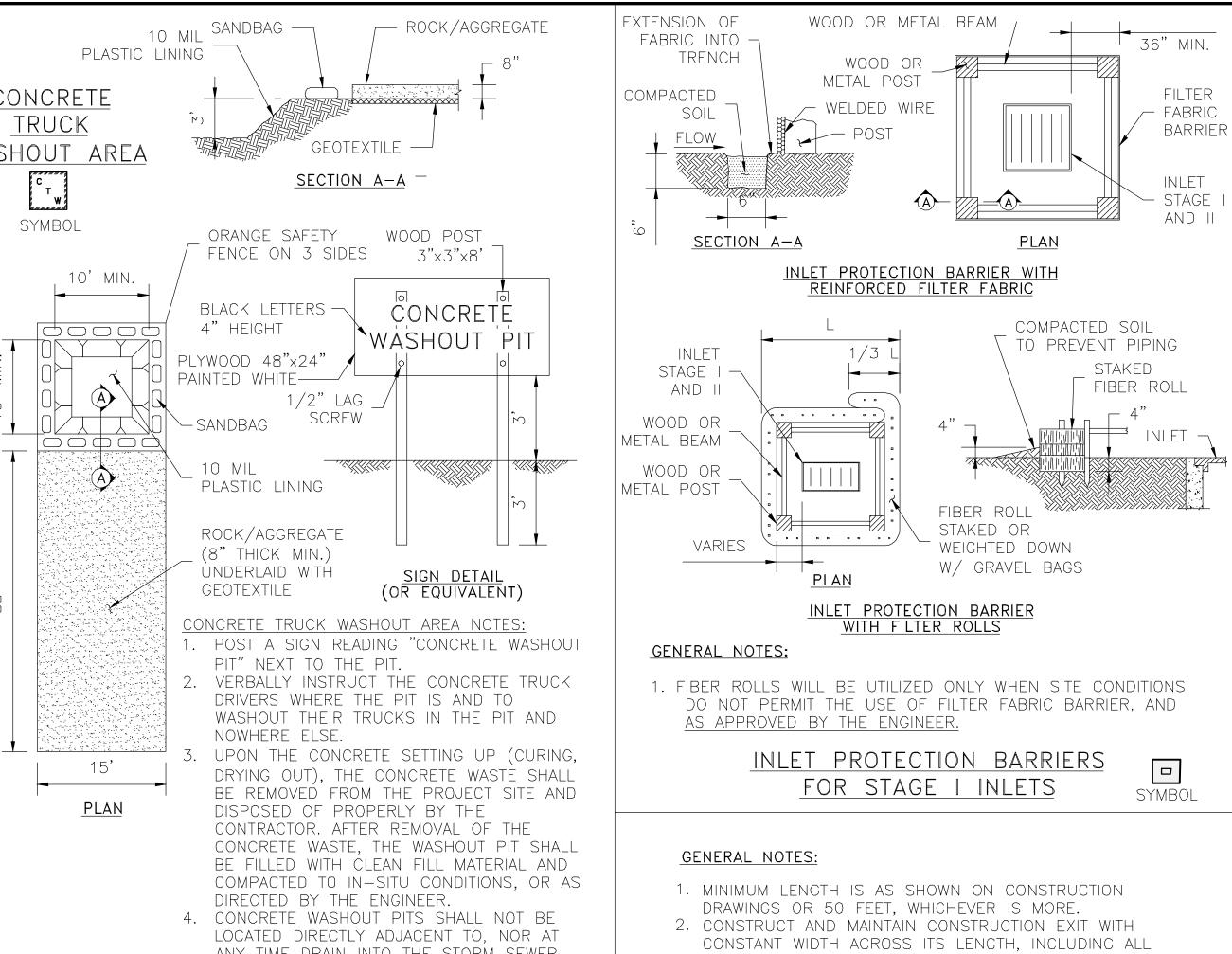
land solutions

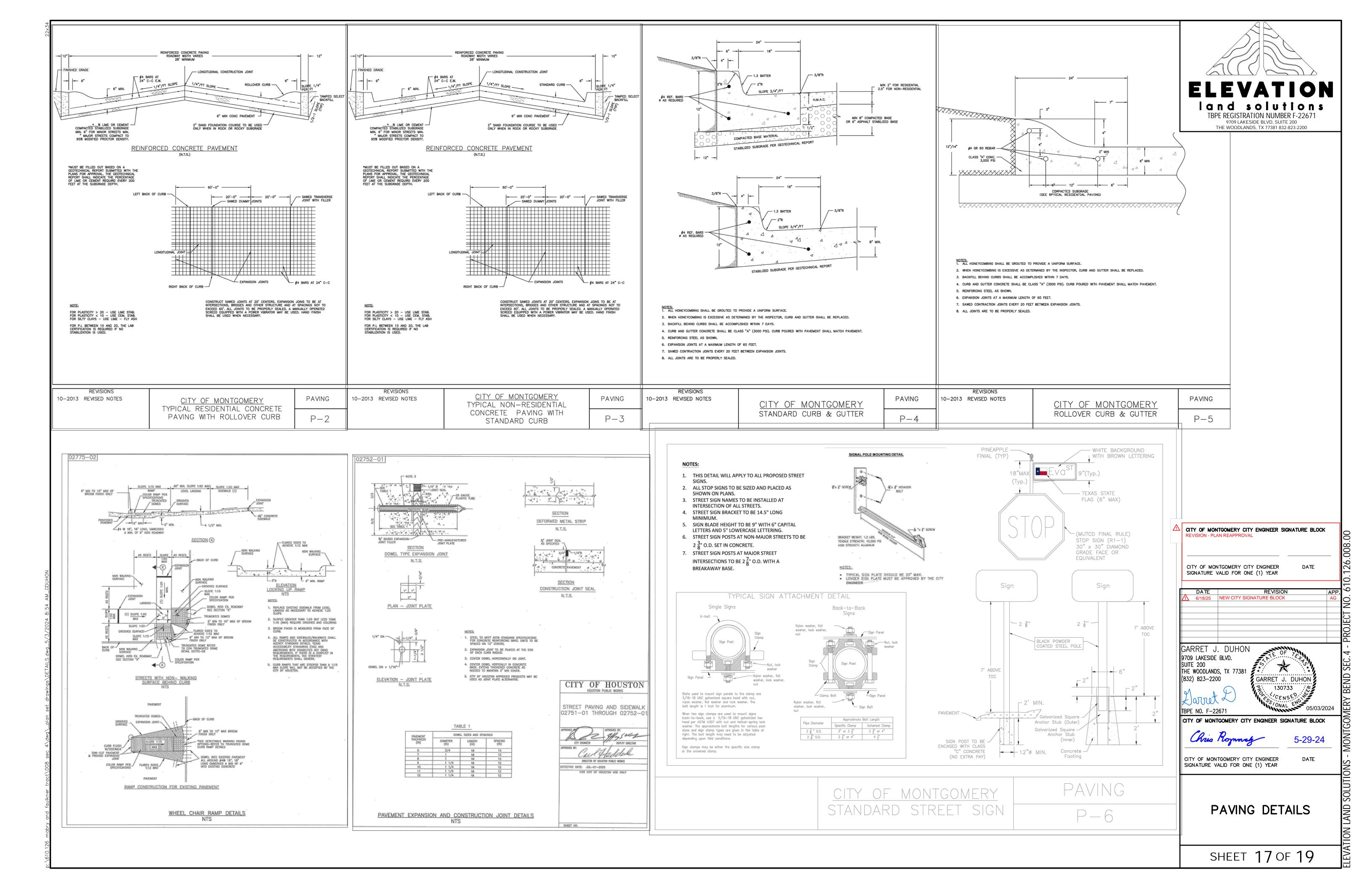
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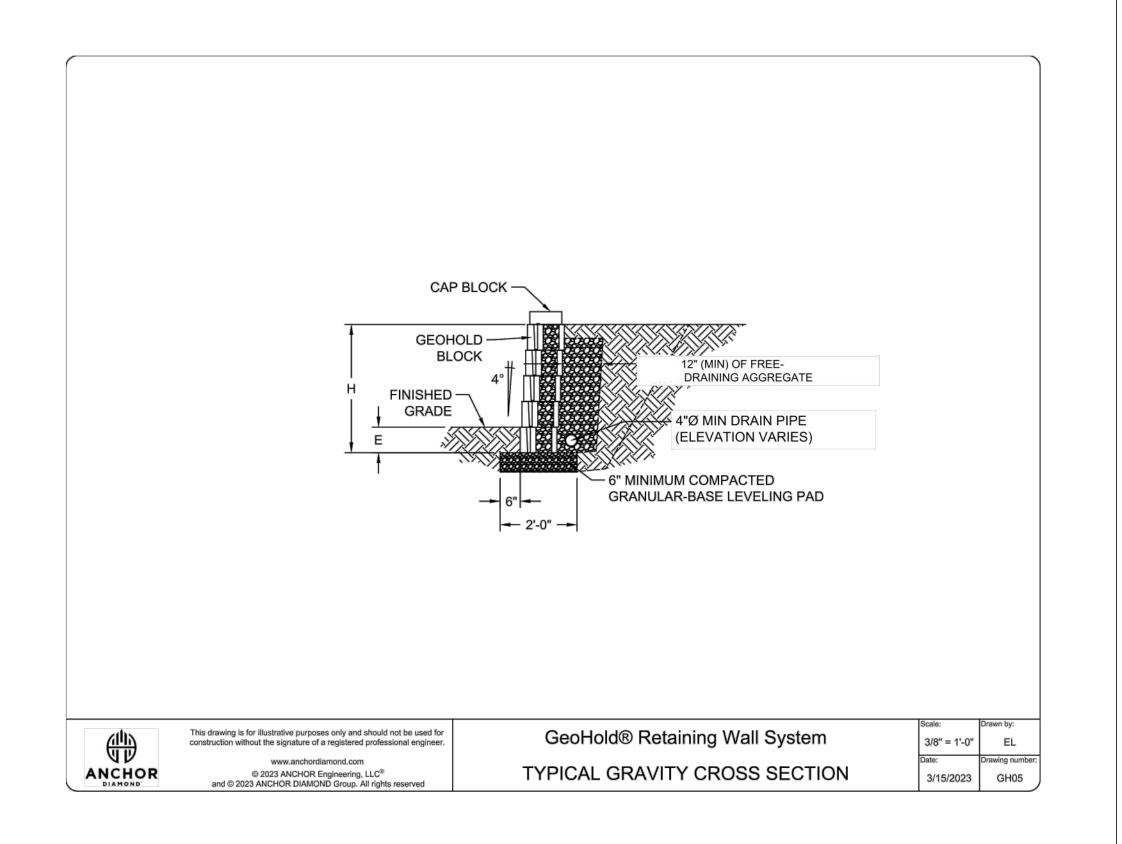
9709 LAKESIDE BLVD, SUITE 200

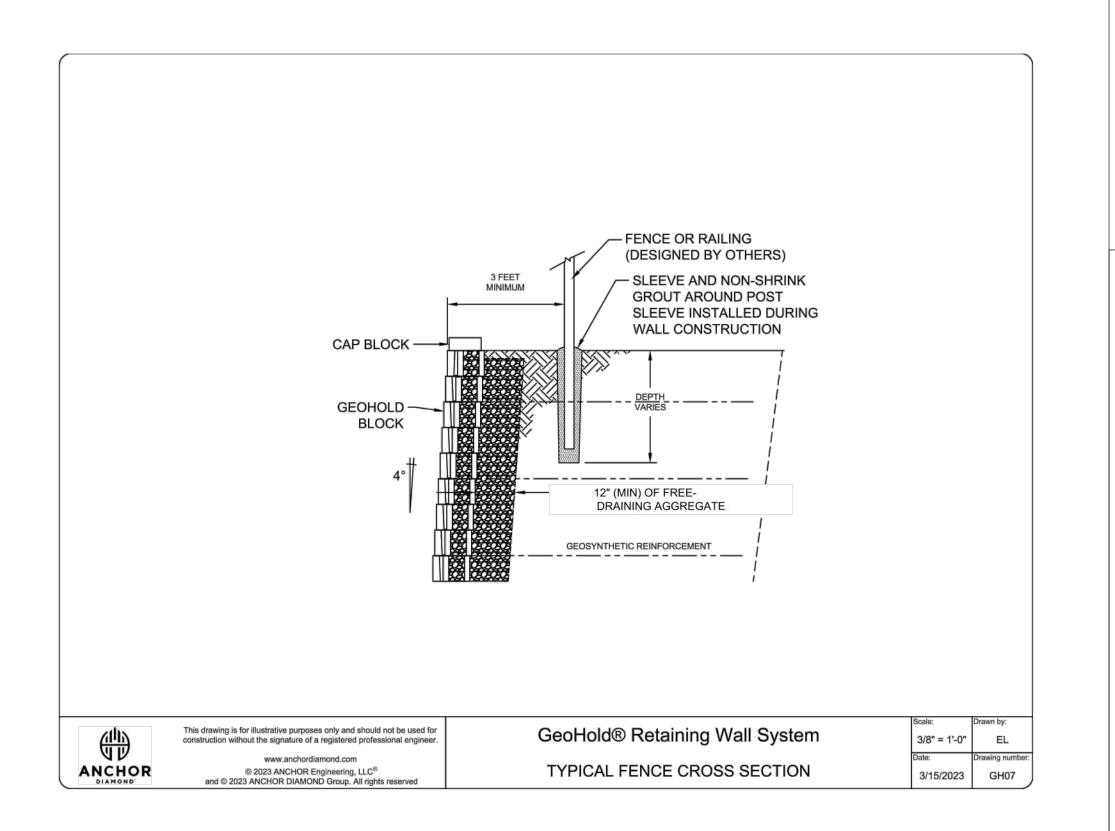
THE WOODLANDS, TX 77381 832-823-2200

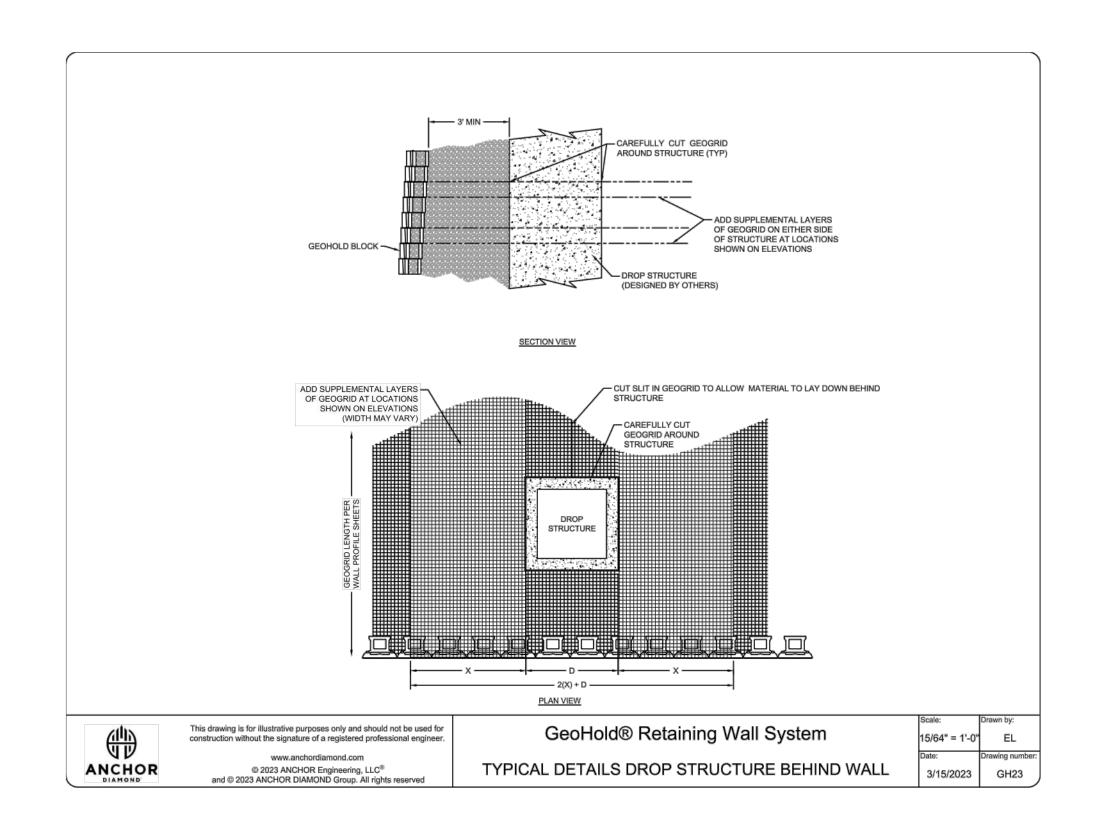
CITY OF MONTGOMERY CITY ENGINEER SIGNATURE BLOCK SHEET 16 OF 19 CITY OF MONTGOMERY CITY ENGINEER SIGNATURE VALID FOR ONE (1) YEAR

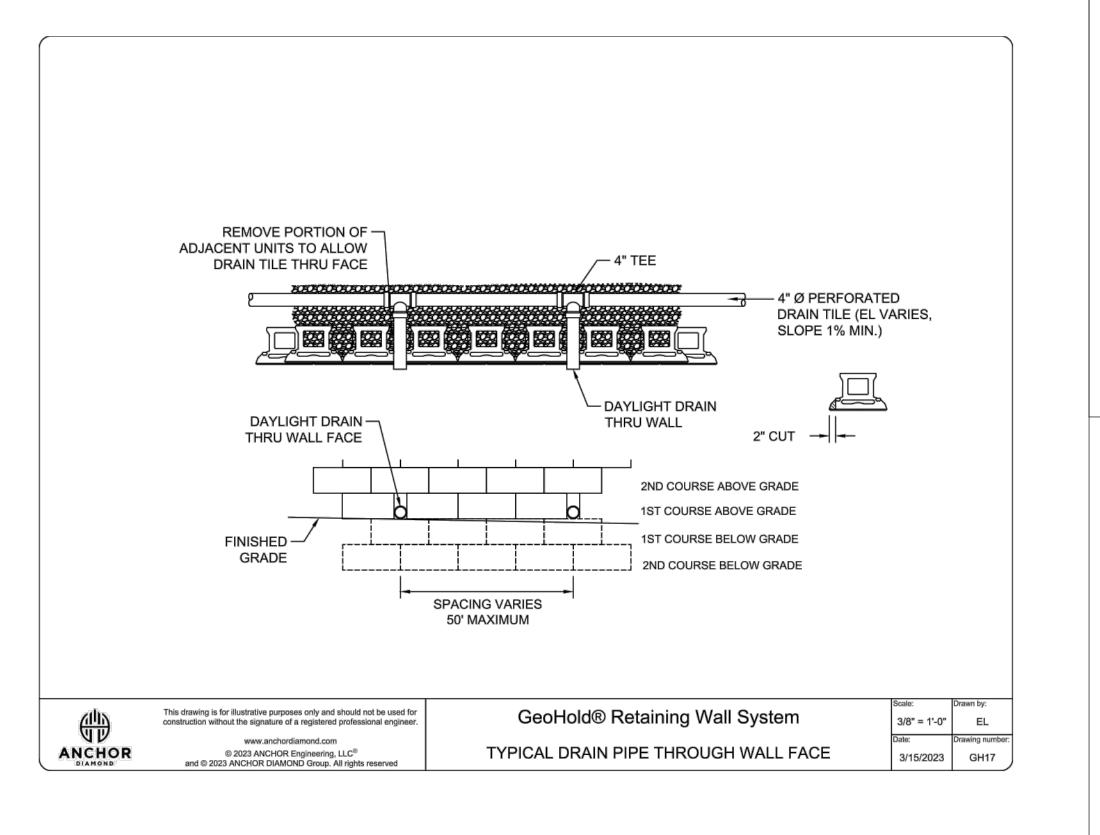














TBPE REGISTRATION NUMBER F-22671 9709 LAKESIDE BLVD, SUITE 200

THE WOODLANDS, TX 77381 832-823-2200

Printed: 2 MAY 2024, 8:27PM

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Montgomery Bend Section 3 Retaining Wall Design ELEVATION

Montgomery Bend Sec 3 Retaining Wall Garret J. Duhon, P.E. Project Title: 610.126.008.01 Retaining wall design to accommodate boundary Project Descr: grading condition

Project File: Montgomery Bend Sec 4 Retaining Wall Design File.ec6 Segmental Retaining Wall LIC#: KW-06019834, Build:20.23.05.25

3.33 ft Wall height (retained height) Backfill slope Level Backfill angle 0.0 deg Embedment 2.0 ft Soil data External Soil, Phi_e External soil density (In situ) 95 pcf Internal Soil, Phi_i 24 deg 95 pcf Internal soil density Wall Soil Friction Angle 0 deg K_a(Horiz) 0.34 K_AE(Horiz)

0.39

0.00 in

1.04

1.04

0.05 ft

4.91 ft

Seismic Factor, A d_seismic Base length

Dead load

Live load

Base Sliding Force (w/o Seismic) 180.64 lb Base Resisting Force (w/o Seismic) 188.70 lb Base Sliding (w/o Seismic) FS Base Sliding Force (w/ Seismic) 180.64 lb Base Resisting Force (w/ Seismic) 188.70 lb Base Sliding (w/ Seismic) FS Overturning Moment (w/o Seismic) 200.69 ft lb

Resisting Moment (w/o Seismic) 431.40 ft lb Overturning (w/o Seismic) FS 2.15 Overturning Moment (w/ Seismic) 200.69 ft lb 431.40 ft lb Resisting Moment (w/ Seismic) 2.15 Overturning (w/ Seismic) FS

Applied Bearing Pressure (w/o Seismic) Allowable Bearing Pressure (w/o Seismic) Bearing (w/o Seismic) FS

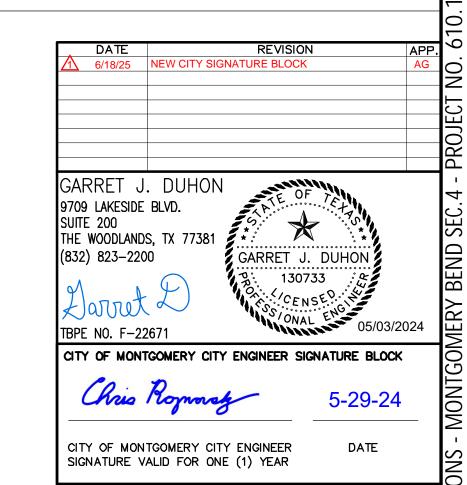
Applied Bearing Pressure (w/ Seismic) Allowable Bearing Pressure (w/ Seismic) Bearing (w/ Seismic) FS Eccentricity of Vert. Force (w/o Seismic) Effective Base Width (w/o Seismic) Eccentricity of Vert. Force (w Seismic)

Effective Base Width (w Seismic)

Thumbnail

Anchor Retaining Wall ICC ESR-1959[Valid through 4650.00 lb 12.00 in 0.37 Block depth tan(lambda_u1) Offset per block 0.50 in Max_1 7009.00 lb 3.58 deg alpha(u_2) 4650.00 lb Batter angle Wall weight 55.00 psf tan(lambda_u2) 0.37 7009.00 lb Max_2

451.51 psf Factors of Safety 1,000.00 psf 2.21 Acceptable Actual Status Acceptable Actual Status 1,000.00 psf 1.04 OK 1.10 Base Sliding 1.00 1.50 2.15 OK 1.10 2.00 2.21 OK Internal Sliding 1.50 40.68 OK 1.10 40.68 4.91 ft



CITY OF MONTGOMERY CITY ENGINEER SIGNATURE BLOCK

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

SHEET 18 OF 19

RETAINING WALL **DETAILS**

Montgomery Bend Landscape Concept Plan

| - ® | |
|----------------|--|
| | |
| May 2023 | |

| | | | • | 1 3 |
|----|---|---------|---------------|-----------------------------------|
| | | Acreage | NQ Acreage Qu | ualifying Acreage Notes for Usage |
| | а | 1.04 | 0.52 | 0.52 CNP Pole Remove |
| | b | 1.56 | 0 | 1.56 Rec Center |
| | С | 0.15 | 0 | 0.15 Landscape |
| | d | 0.18 | 0.04 | 0.14 Access Removed |
| | е | 0.12 | 0.12 | 0 Lift Station |
| | f | 5.02 | 5.02 | 0 Drng Channel |
| | g | 0.13 | 0.13 | 0 Drainage & Utility |
| S1 | h | 1.22 | 1.01 | 0.21 |
| | а | 0.62 | 0.62 | 0 Drainage Swale |
| | b | 9.93 | 9.93 | 0 Detention Pond |
| | С | 0.07 | 0.07 | 0 Drainage Swale |
| | d | 0.07 | 0.07 | 0 Drainage Swale |
| S2 | е | 0.05 | 0.05 | 0 Drainage Swale |
| | а | 0.56 | | 0.56 |
| S3 | b | 0.1 | | 0.1 |
| | а | 0.09 | | 0.09 |
| S4 | b | 0.57 | | 0.57 |
| • | | | · | |

Reserves and Required Tree Canopy

3.9 Gross Reserve Area 0.78 20% (Ac.)

33976.8 20% (sq. ft.)

| | Tree Canopy Area Credit Calculation | | | | | | |
|-------------|-------------------------------------|-----------------|--------------|---------------|--|--|--|
| DBH | # of Ex. Trees | # of Prop Trees | 150' Bonus | Canopy Credit | | | |
| 3"< D <8" | 23 | 15 | 150% | 59,400 | | | |
| 8"< D <18" | 0 | 0 | 150% | 0 | | | |
| 18"< D <24" | 0 | 0 | 150% | 0 | | | |
| D > 24" | 0 | 0 | 150% | 0 | | | |
| | | Drovided Co | anany Cradit | EQ 400 | | | |

Provided Canopy Credit 59,400 33,977 Required Canopy

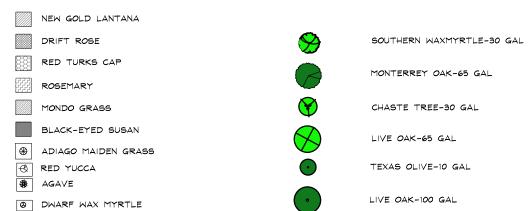
PLANT SCHEDULE

 INDIAN GRASS BUTTERFLY IRIS

SWITCH GRASS

DWARF YAUPON HOLLY BLUE FESCUE GRASS

GULF COAST MUHLY GRASS



MONTERREY OAK-65 GAL CHASTE TREE-30 GAL TEXAS OLIVE-10 GAL LIVE OAK-100 GAL LOBLOLLY PINE-30 GAL LOBLOLLY PINE-45 GAL



