

GENERAL NOTES

- THESE PLANS ARE BASED ON A SURVEY PERFORMED BY COLE AND ASSOCIATES, DATED 12/06/2024. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT THE IMPROVEMENTS EXIST AS SHOWN ON THE SURVEY. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER AND COLE OF ANY DEVIATIONS OR OMISSIONS THAT MAY EFFECT THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
- THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
- THE CONTRACTOR IS NOT TO START WORK UNTIL WRITTEN AUTHORIZATION FROM THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER HAS BEEN RECEIVED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING AND MAINTAINING AS-BUILT INFORMATION WHICH SHALL BE RECORDED AS CONSTRUCTION PROGRESSES OR AT THE COMPLETION OF APPROPRIATE CONSTRUCTION INTERVALS AND SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT DRAWINGS TO THE OWNER FOR THE PURPOSE OF CERTIFICATION TO JURISDICTIONAL AGENCIES AS REQUIRED. ALL AS-BUILT DATA SHALL BE COLLECTED BY A STATE OF MISSOURI PROFESSIONAL LAND SURVEYOR WHOSE SERVICES ARE ENGAGED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITE WORK THAT WOULD BE AFFECTED. FAILURE TO NOTIFY OWNER OF AN IDENTIFIABLE CONFLICT PRIOR TO PROCEEDING WITH INSTALLATION RELIEVES OWNER OF ANY OBLIGATION TO PAY FOR A RELATED CHANGE ORDER.
- FLOOD CERTIFICATION:**
THE SUBJECT SITE IS LOCATED IN ZONE "X" (AREAS OF MINIMAL FLOODING) AS DETERMINED BY FEMA FLOOD INSURANCE RATE MAP FOR ST. CHARLES COUNTY, MISSOURI AND INCORPORATED AREAS, PANEL 410 OF 525, MAP NUMBER 29183C0410G, EFFECTIVE DATE JANUARY 20, 2016.
- WETLANDS NOTE:**
ANY DEVELOPMENT, EXCAVATION, CONSTRUCTION, OR FILLING IN A U.S. ARMY CORPS OF ENGINEERS DESIGNATED WETLAND IS SUBJECT TO LOCAL, STATE AND FEDERAL APPROVALS. THE CONTRACTOR SHALL COMPLY WITH ALL PERMIT REQUIREMENTS AND/OR RESTRICTIONS AND ANY VIOLATION WILL BE SUBJECT TO FEDERAL PENALTY. THE CONTRACTOR SHALL HOLD THE OWNER/DEVELOPER, THE ENGINEER AND THE LOCAL GOVERNING AGENCIES HARMLESS AGAINST SUCH VIOLATION.
- WARRANTY/DISCLAIMER:**
THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER THE ENGINEER NOR ITS PERSONNEL CAN OR DO WARRANT THESE DESIGNS OR PLANS AS CONSTRUCTED EXCEPT IN THE SPECIFIC CASES WHERE THE ENGINEER INSPECTS AND CONTROLS THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.
- SAFETY NOTICE TO CONTRACTOR:**
IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. ANY CONSTRUCTION OBSERVATION BY THE ENGINEER OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTORS SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE.
- NOTICE TO BIDDERS:**
ALL QUESTIONS REGARDING THE PREPARATION OF THE CONTRACTOR'S BID SHALL BE DIRECTED TO THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER. SUBCONTRACTORS MUST DIRECT THEIR QUESTIONS THROUGH THE CONTRACTOR. THE CONSULTING ENGINEER SHALL NOT BE CONTACTED DIRECTLY WITHOUT PRIOR AUTHORIZATION FROM THE OWNER/DEVELOPER.

GENERAL DEMOLITION NOTES

- ALL EXISTING IMPROVEMENTS ARE TO REMAIN UNLESS NOTED OTHERWISE IN THESE PLANS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL OF (IN A LOCATION APPROVED BY ALL JURISDICTIONS HAVING AUTHORITY) ALL DEBRIS, STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE SPECIFICATIONS.
- DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.
- THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR ONSITE LOCATIONS OF EXISTING UTILITIES.
- ALL EXISTING UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH THE WORK. UTILITIES DETERMINED TO BE ABANDONED AND LEFT IN PLACE SHALL BE GROUTED IF UNDER BUILDINGS.
- THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION OF ALL PUBLIC AND PRIVATE UTILITIES, INCLUDING IRRIGATION, SPECIFIC TO THIS PROJECT PRIOR TO THE START OF ANY DEMOLITION OR CONSTRUCTION. SHOULD ANY UTILITY REQUIRE RELOCATION, CONTRACTOR SHALL COORDINATE WITH THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER AND THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISCONNECTION OF UTILITY SERVICES TO ANY EXISTING BUILDINGS PRIOR TO DEMOLITION OF THE EXISTING BUILDINGS.
- THE CONTRACTOR SHALL MAINTAIN ALL UTILITY SERVICES TO ANY EXISTING BUILDINGS TO REMAIN AT ALL TIMES. UTILITY SERVICES SHALL NOT BE INTERRUPTED WITHOUT APPROVAL FROM AND COORDINATION WITH THE BUILDING OWNER.
- ANY VALVES, BOXES, MANHOLES, METERS, AND OTHER SUCH ITEMS TO REMAIN SHALL BE ADJUSTED TO MATCH THE PROPOSED ELEVATION AND SLOPE.
- THE CONTRACTOR SHALL COORDINATE WITH THE RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.
- ANY DRY UTILITY LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIE-IN SHALL BE PROVIDED FOR RELOCATION. CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE. CONTRACTOR SHALL PAY CLOSE ATTENTION TO EXISTING UTILITIES WITHIN THE RIGHT OF WAY DURING CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE WATER MAIN WORK WITH THE FIRE DEPARTMENT AND THE UTILITY COMPANY TO PLAN PROPOSED IMPROVEMENTS AND TO ENSURE ADEQUATE FIRE PROTECTION IS CONSTANTLY AVAILABLE TO THE SITE THROUGHOUT THIS SPECIFIC WORK AND THROUGH ALL PHASES OF CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR ARRANGING/PROVIDING ANY REQUIRED WATER MAIN SHUT OFF WITH THE UTILITY COMPANY DURING CONSTRUCTION. ANY COSTS ASSOCIATED WITH WATER MAIN SHUT OFFS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY EXISTING IRRIGATION SYSTEMS IN THE AREAS OF PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL CAP ANY EXISTING IRRIGATION SYSTEMS TO REMAIN SUCH THAT THE REMAINING SYSTEMS SHALL CONTINUE TO FUNCTION PROPERLY.
- CONTRACTOR SHALL PROVIDE CLEAN CUTS AT EDGES OF DEMOLITION OF HARDSCAPE.
- EXISTING PAVEMENT THAT WILL REMAIN AFTER CONSTRUCTION SHALL BE PROTECTED FROM DAMAGE. CONTRACTOR MAY LIMIT SAWCUT AND PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THESE PLANS, BUT IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL AND REPAIR.
- CONTRACTOR IS RESPONSIBLE FOR REPAIRING THE DAMAGE DONE TO ANY EXISTING IMPROVEMENTS TO REMAIN DURING CONSTRUCTION, INCLUDING, BUT NOT LIMITED TO, DRAINAGE STRUCTURES, UTILITIES, PAVEMENT, STRIPING, CURBS, ETC. REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS AND SHALL BE AT THE CONTRACTOR'S EXPENSE. CONTRACTOR IS RESPONSIBLE TO DOCUMENT ALL EXISTING DAMAGE AND NOTIFY THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION START.
- PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED.
- CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC., (AND OTHER APPROPRIATE BEST MANAGEMENT PRACTICES) AS APPROVED BY THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER.
- CONTINUOUS ACCESS SHALL BE MAINTAINED FOR THE SURROUNDING PROPERTIES AT ALL TIMES DURING DEMOLITION OF THE EXISTING FACILITIES.
- THE CONTRACTOR SHALL RESTORE ALL OFF SITE CONSTRUCTION AREAS TO AN EQUAL OR BETTER CONDITION THAN EXISTED PRIOR TO THE COMMENCEMENT OF WORK.

GENERAL SITE NOTES

- ALL CONSTRUCTION MATERIALS AND TECHNIQUES OF INSTALLATION SHALL MEET PERFORMANCE VALUES OF THE MATERIALS SPECIFIED AND COMPLY WITH ALL REGULATIONS AND CODES OF THE AUTHORITY HAVING JURISDICTION AND O.S.H.A. STANDARDS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THIS PROJECT IS CONSTRUCTED IN ACCORDANCE WITH THESE DOCUMENTS AND IN COMPLIANCE WITH CODES INDICATED HEREIN. THE QUALITY OF WORKMANSHIP AND INSTALLATION OF MATERIALS SPECIFIED BY THE ENGINEER ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE ENGINEER WILL NOT BE HELD RESPONSIBLE FOR ANY SUBSTANDARD OR INSUFFICIENT WORKMANSHIP, MATERIALS, OR SERVICES PROVIDED IN THE EXECUTION OF ANY PHASE OF CONSTRUCTION OF THIS PROJECT.
- ALL MATERIALS ARE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. THE GENERAL CONTRACTOR SHALL ENSURE THAT ALL MANUFACTURER'S WARRANTIES WILL BE HONORED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING A THOROUGH KNOWLEDGE OF EXISTING FIELD CONDITIONS AND OF ALL DRAWINGS AND SPECIFICATIONS RELATED TO THEIR FIELD. THE FAILURE TO ACQUAINT HIMSELF WITH THIS PROJECT AND HIS FIELD OF SERVICE SHALL NOT RELIEVE HIM OF ANY RESPONSIBILITY FOR PERFORMING HIS WORK PROPERLY. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED DUE TO THE CONTRACTOR'S FAILURE TO CONVEY THE NECESSARY KNOWLEDGE TO FAMILIARIZE WORKERS AND SUBCONTRACTORS WITH THIS PROJECT.
- ALL CONDITIONS SHOWN TO BE "EXISTING" SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE NOTED AND SUBMITTED TO THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER AND THE ENGINEER FOR REVIEW. CHANGES TO THE ORIGINAL DESIGN OF THE PROJECT DUE TO EXISTING SITE CONDITIONS MUST BE APPROVED BY BOTH THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER AND THE ENGINEER PRIOR TO MAKING ANY CHANGES.

- SAWCUT AND REMOVE PORTIONS OF EXISTING PAVING ONLY AS REQUIRED TO INSTALL NEW UTILITIES OR TO CONSTRUCT PROPOSED FACILITIES PER THIS PLAN. REPLACE PORTIONS REMOVED TO MATCH EXISTING FLUSH AND SMOOTH.
- CONTRACTOR SHALL MATCH PROPOSED CURB AND GUTTER, CONCRETE, AND PAVEMENT TO EXISTING IN GRADE AND ALIGNMENT.
- ALL DIMENSIONS AND RADII ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS (UNLESS OTHERWISE NOTED ON PLANS) INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN BASE BID.
- CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL PROPERTY CORNERS.
- THE CONTRACTOR SHALL PROVIDE DUMPSTERS, PORTABLE TOILETS AND TEMPORARY POWER FOR UNRESTRICTED PROJECT RELATED USE BY OTHERS FOR THE DURATION OF THE PROJECT.
- THE CONTRACTOR IS RESPONSIBLE FOR RECEIVING, UNLOADING, STORING AND PROTECTING MATERIALS AND EQUIPMENT SUPPLIED BY THE OWNER/DEVELOPER UNTIL IT HAS BEEN INSTALLED AND ACCEPTED BY THE OWNER/DEVELOPER.
- THE CONTRACTOR SHALL COORDINATE PROJECT PHASING AND STORAGE OF MATERIALS WITH THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE AREA CLEAN AND FREE OF DEBRIS AT ALL TIMES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THE SAFETY OF ALL PERSONS ON THE JOB SITE AT ALL TIMES INCLUDING (BUT NOT LIMITED TO) SUBCONTRACTORS, STORE PERSONNEL, VENDORS, DESIGN STAFF PROFESSIONALS AND INSPECTION PERSONNEL.
- NO MONUMENT SIGNS OR THEIR PROPOSED LOCATIONS CAN BE APPROVED WITH THESE DOCUMENTS. A SEPARATE SIGN APPLICATION MUST BE SUBMITTED TO THE AUTHORITY HAVING JURISDICTION FOR REVIEW AND APPROVAL.
- ANY RETAINING WALLS REFERRED TO IN THESE PLANS ARE SHOWN FOR REFERENCE ONLY AND ARE NOT TO BE INTERPRETED AS THE DESIGN OF THE WALL SYSTEM. THE CONTRACTOR SHALL REFER TO STRUCTURAL PLANS PREPARED BY OTHERS FOR WALL DESIGN AND CONSTRUCTION DETAILS. A SEPARATE BUILDING PERMIT MAY BE REQUIRED FOR EACH WALL.

GENERAL GRADING NOTES

- TOPOGRAPHIC INFORMATION IS TAKEN FROM A TOPOGRAPHIC SURVEY BY LAND SURVEYORS. IF THE CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY, AT THEIR EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR TO THE OWNER/DEVELOPER FOR REVIEW.
- EXISTING GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT.
- PROPOSED GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT.
- CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
- CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
- ALL CUT OR FILL SLOPES SHALL BE 3H:1V OR FLATTER UNLESS OTHERWISE NOTED. THE ENGINEER ASSUMES NO LIABILITY FOR SLOPES EXCEEDING THOSE RECOMMENDED IN THE APPLICABLE GEOTECHNICAL REPORT.
- THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
- EXISTING DRAINAGE STRUCTURES AND STORM SEWER PIPES ARE TO BE INSPECTED, REPAIRED AS NEEDED, AND CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
- CONTRACTOR SHALL CLEAN ALL PROPOSED AND EXISTING IMPACTED DOWNSTREAM / DRAINAGE STRUCTURES AND PIPES UPON COMPLETION OF CONSTRUCTION.
- STORM PIPE SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:
PIPES DIAMETERS LESS THAN 12"
HIGH DENSITY POLYETHYLENE PIPE (HDPE): TYPE S PER ASHTO M252 (SMOOTH INTERIOR WITH CORRUGATIONS EXTERIOR)
POLYVINYL CHLORIDE PIPE (PVC): SDR35 PER ASTM D3034 (FOR PIPES LESS THAN 12" DEEP)
POLYVINYL CHLORIDE PIPE (PVC): SDR26 PER ASTM D3034 (FOR PIPES MORE THAN 12" DEEP)
PIPES DIAMETERS 12" OR GREATER
REINFORCED CONCRETE PIPE (RCP): CLASS III PER ASTM C76
POLYPROPYLENE (PP): SMOOTH INTERIOR WITH CORRUGATIONS EXTERIOR PER ASTM F2764
- ALL STORM SEWER PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATER TIGHT.
- ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT FROM INVERT IN TO INVERT OUT.
- ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT AND SHALL HAVE TRAFFIC BEARING RING AND COVERS. STORM MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISH GRADE.
- ALL PROPOSED CONTOURS SHOWN ARE TO FINISHED ELEVATIONS ON PAVED AREAS. THE CONTRACTOR SHALL GRADE ALL AREAS TO REQUIRED SUBGRADE.
- ALL PROPOSED SPOT GRADES SHOWN ARE TO FINISHED GRADE, FINISHED PAVEMENT, OR FINISHED BOTTOM FACE OF CURB UNLESS NOTED OTHERWISE.
- ALL FILLS AND BACKFILLS SHALL CONSIST OF SELECTED EARTH MATERIALS, FREE FROM BROKEN MASONRY, ROCK, FROZEN EARTH, RUBBISH, ORGANIC MATERIAL AND DEBRIS.
- ALL FILL PLACED FOR PROPOSED STORM AND SANITARY SEWER LINES, PAVED AREAS, OR DRAINAGE BERMS SHALL BE COMPACTED TO 90% OF THE MAXIMUM DENSITY AS DETERMINED BY THE AASHTO T 180 MODIFIED PROCTOR COMPACTION TEST OR 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY THE AASHTO T 99 STANDARD PROCTOR COMPACTION TEST. ALL TESTS SHALL BE VERIFIED BY A GEOTECHNICAL ENGINEER CONCURRENT WITH THE GRADING AND BACKFILLING OPERATIONS.
- ALL STORM WATER SHALL BE DISCHARGED AT AN ADEQUATE NATURAL DISCHARGE POINT.
- WHERE NATURAL VEGETATION IS REMOVED DURING GRADING, VEGETATION SHALL BE REESTABLISHED IN SUCH A DENSITY AS TO PREVENT EROSION. PERMANENT SOD SHALL BE ESTABLISHED AS SOON AS POSSIBLE.
- REFER TO LANDSCAPE PLANS FOR ALL HARDSCAPE AND PAVING MATERIALS AND PATTERNS.

GENERAL UTILITY NOTES

- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE EXACT HORIZONTAL AND VERTICAL LOCATIONS AND SIZES OF ALL EXISTING UTILITIES, WHETHER SHOWN OR NOT SHOWN IN THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER HAS NOT FIELD VERIFIED THE EXISTING UTILITIES. THE UTILITIES SHOWN ON THESE PLANS HAVE BEEN TAKEN FROM RECORDS AND UTILITY MAPS MADE AVAILABLE TO THE ENGINEER AND THE LOCATIONS AND SIZES SHALL BE CONSIDERED APPROXIMATE ONLY. OTHER UTILITIES, NOT SHOWN ON THIS PLAN, MAY EXIST ON OR NEAR THE PROJECT SITE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SCHEDULE FOR INSTALLATION WITH THE UTILITY COMPANIES AND THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER. ALL EXISTING CONDITIONS THAT ARE REMOVED OR DISRUPTED DURING THE PLACEMENT OF NEW UTILITIES SHALL BE RESTORED OR REPAIRED TO MATCH ORIGINAL CONDITIONS. ANY EXISTING UTILITIES DISRUPTED DURING PLACEMENT OF NEW UTILITIES SHALL BE REPAIRED AND OPERATING NORMALLY THE SAME DAY OF DISRUPTION. ITEMS THAT NEED TO BE RESTORED OR REPAIRED INCLUDE, BUT ARE NOT LIMITED TO: EXISTING ASPHALT PAVING, EXISTING CONCRETE PAVING, WATER LINES, IRRIGATION LINES, GRASS AREAS, LANDSCAPING, AND SITE LIGHTING. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION OF ALL EXISTING ITEMS THAT WILL BE DISRUPTED DURING THE PLACEMENT OF NEW UTILITIES AND PROVIDE THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER WITH A DETAILED SCHEDULE OUTLINING THE TIMELINE FOR INSTALLATION OF NEW UTILITIES INCLUDING THE PROPOSED TIMES THAT EXISTING UTILITIES WILL BE DISRUPTED.
- THE NEW UTILITY TRENCH WIDTHS AND DEPTHS SHALL MEET ALL LOCAL AND STATE REQUIREMENTS.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT ANY "STUB OUTS" FOR POWER, TELEPHONE, FIBER OPTICS, WATER AND SEWER (IF APPLICABLE) HAVE BEEN PROVIDED BY OTHERS AT THE AREA ADJACENT TO THE SITE BUILDING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL CONNECTIONS AT THE BUILDING.
- PRIOR TO THE CONSTRUCTION OF OR CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN OR ANY OF THE DRY UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM THE ENGINEER AND THE OWNER/DEVELOPER'S CONSTRUCTION MANAGER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION.
- CONSTRUCTION SHALL NOT START ON ANY PUBLIC UTILITY SYSTEM UNTIL WRITTEN APPROVAL HAS BEEN RECEIVED FROM THE APPROPRIATE AUTHORITY HAVING JURISDICTION.
- CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTORS AT LEAST 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
- EXISTING DRAINAGE STRUCTURES AND STORM SEWER PIPES ARE TO BE INSPECTED, REPAIRED AS NEEDED, AND CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
- ALL UTILITY EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.
- ALL FILL MATERIAL IS TO BE IN PLACE AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
- SANITARY SEWER PIPE SHALL BE AS FOLLOWS:
POLYVINYL CHLORIDE PIPE (PVC): SDR35 PER ASTM D3034 (FOR PIPES LESS THAN 12" DEEP)
POLYVINYL CHLORIDE PIPE (PVC): SDR26 PER ASTM D3034 (FOR PIPES MORE THAN 12" DEEP)
- SANITARY SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RINGS AND COVERS. SANITARY MANHOLES IN UNPAVED AREAS SHALL BE 12" ABOVE FINISH GRADE WITH WATER TIGHT LIDS.

- WATER LINES SHALL BE AS FOLLOWS:
PIPE DIAMETERS 1.5" OR LESS
COPPER (CPR): TYPE K PER AWWA C800
PIPE DIAMETERS 2" THROUGH 3"
COPPER (CPR): TYPE K PER AWWA C800
POLYVINYL CHLORIDE PIPE (PVC): SDR21 PER ASTM D2241, CLASS 200
PIPE DIAMETERS 4" THROUGH 12"
POLYVINYL CHLORIDE PIPE (PVC): DR18 PER AWWA C900 (DOMESTIC SERVICE)
POLYVINYL CHLORIDE PIPE (PVC): DR14 PER AWWA C900 (FIRE SERVICE IN LIEU OF DIP, WHERE ALLOWED BY LOCAL CODES)
DUCTILE IRON PIPE (DIP): PRESSURE CLASS 350 PER AWWA C151
PIPE DIAMETERS LARGER THAN 12"
POLYVINYL CHLORIDE PIPE (PVC): DR18 PER AWWA C905
DUCTILE IRON PIPE (DIP): PRESSURE CLASS 250 PER AWWA C151
- ALL WATER JOINTS ARE TO BE MECHANICAL JOINTS WITH THRUST BLOCKING.
- ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH AT 3000 P.S.I.
- UNDERGROUND UTILITY LINES SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
- CONTRACTOR TO RELOCATE LIGHT POLES AND REPLACE LUMINAIRES AS INDICATED. CONTRACTOR TO BUILD NEW POLE BASES AND STUB WIRE AS NEEDED.
- CONTRACTOR SHALL START LAYING PIPE AT DOWNSTREAM STRUCTURE AND WORK UPSTREAM.
- CLEANOUTS SHALL BE LOCATED AT ALL HORIZONTAL AND VERTICAL CHANGES IN DIRECTION OF FLOW IN BUILDING LATERALS AND ANY SANITARY LATERAL OF 100 FEET OR LONGER.
- ALL TRENCHES UNDER AREAS TO BE PAVED, EXISTING PAVED AREAS, OR PUBLIC RIGHT-OF-WAY SHALL BE GRANULARLY BACKFILLED WITH $\frac{3}{4}$ INCH MINUS CRUSHED WHITE ROCK.
- GAS, WATER AND OTHER UNDERGROUND UTILITIES SHALL NOT CONFLICT WITH THE DEPTH OR HORIZONTAL LOCATION OF EXISTING OR PROPOSED SANITARY AND STORM SEWERS.
- THE CONTRACTOR SHALL PREVENT ALL STORM WATER, SURFACE WATER, MUD AND CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER SYSTEM.
- THE EXISTING SANITARY SEWER SERVICE SHALL NOT BE INTERRUPTED.
- ALL SANITARY FLOW LINES AND TOPS BUILT WITHOUT ELEVATIONS FURNISHED BY THE ENGINEER SHALL BE THE RESPONSIBILITY OF THE SEWER CONTRACTOR.
- ALL SEWER PIPES SHALL HAVE POSITIVE DRAINAGE THROUGH STRUCTURES. NO FLAT INVERT STRUCTURES ARE ALLOWED.
- ANY ABANDONED SEWERS SHALL BE REMOVED OR COMPLETELY GROUT FILLED.
- CONTRACTOR SHALL SUPPORT AND PROTECT ALL EXISTING AND PROPOSED UTILITIES WHEN CONSTRUCTING NEW UTILITIES, INCLUDING SUPPORTING ELECTRICAL AND LIGHT POLES IF NEEDED.

DUCKETT CREEK SANITARY DISTRICT CONSTRUCTION NOTES

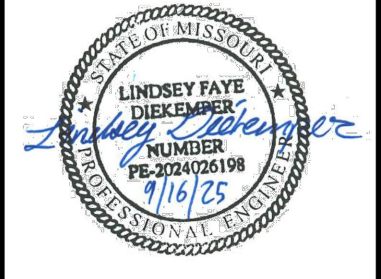
- UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE LOCATION SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE LOCATED PRIOR TO ANY GRADING OR CONSTRUCTION OF IMPROVEMENTS.
- GAS, WATER AND OTHER UNDERGROUND UTILITIES SHALL NOT CONFLICT WITH THE DEPTH OR HORIZONTAL LOCATION OF EXISTING OR PROPOSED SANITARY AND STORM SEWERS, INCLUDING HOUSE LATERALS.
- ALL EXISTING SITE IMPROVEMENTS DISTURBED, DAMAGED OR DESTROYED SHALL BE REPAIRED OR REPLACED TO CLOSELY MATCH PRECONSTRUCTION CONDITIONS.
- ALL FILL INCLUDING PLACES UNDER PROPOSED STORM AND SANITARY SEWER LINES AND PAVED AREAS INCLUDING TRENCH BACKFILLS WITHIN AND OFF THE ROAD RIGHT-OF-WAY SHALL BE COMPACTED TO 90 PERCENT OF MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED ASHOTO T-180 COMPACTION TEST (ASTM D1557). ALL TESTS SHALL BE VERIFIED BY A SOILS ENGINEER CONCURRENT WITH GRADING AND BACKFILLING OPERATIONS. THE COMPACTED FILL SHALL BE FREE OF RUTTING AND SHALL BE NON-YIELDING AND NON-PUMPING DURING PROOFROLLING AND COMPACTION.
- THE CONTRACTOR SHALL PREVENT ALL STORM, SURFACE WATER, MUD AND CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER SYSTEM. THE CONTRACTOR WILL BE REQUIRED TO INSTALL A BRICK BULKHEAD ON THE DOWNSTREAM SIDE OF THE FIRST NEW MANHOLE CONSTRUCTED WHEN CONNECTING INTO EXISTING SEWERS.
- ALL SANITARY SEWER FLOWLINES AND TOPS BUILT WITHOUT ELEVATIONS FURNISHED BY THE ENGINEER WILL BE THE RESPONSIBILITY OF THE SEWER CONTRACTOR.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST ALL SANITARY SEWER MANHOLES (THAT ARE AFFECTED BY THE DEVELOPMENT) TO FINISH GRADE.
- EASEMENTS SHALL BE PROVIDED FOR ALL SANITARY SEWERS, STORM SEWERS AND ALL UTILITIES ON THE RECORD PLAT.
- ALL SANITARY SEWER CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE CURRENT CONSTRUCTION STANDARDS OF THE DUCKETT CREEK SANITARY DISTRICT.
- THE DUCKETT CREEK SANITARY DISTRICT SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO CONSTRUCTION FOR COORDINATION OF INSPECTION.
- ALL SANITARY SEWER BUILDING CONNECTIONS SHALL BE DESIGNED SO THAT THE MINIMUM VERTICAL DISTANCE FROM THE LOW POINT OF THE BASEMENT TO THE FLOWLINE OF A SANITARY SEWER AT THE CORRESPONDING BUILDING CONNECTION SHALL NOT BE LESS THAN THE DIAMETER OF THE PIPE PLUS THE VERTICAL DISTANCE OF 2 $\frac{1}{2}$ FEET.
- ALL SANITARY SEWER MANHOLES SHALL BE WATER TIGHT IN ACCORDANCE WITH MISSOURI DEPT. OF NATURAL RESOURCES SPECIFICATION NO CSR 20-8.120(6)(f) 1.
- ALL PVC SANITARY SEWER PIPE SHALL CONFORM TO THE REQUIREMENTS OF ASTM D-3034 STANDARD SPECIFICATION FOR PSM POLYVINYL CHLORIDE SEWER PIPE, SDR-35 OR EQUAL, WITH "CLEAN" 1/2 INCH TO 1 INCH GRANULAR STONE BEDDING UNIFORMLY GRADED. THIS BEDDING SHALL EXTEND FROM 4 INCHES BELOW THE PIPE TO SPRINGLINE OF PIPE. IMMEDIATE BACKFILL OVER PIPE SHALL CONSIST OF SAME SIZE "CLEAN" OR "MINUS" STONE FROM SPRINGLINE OF PIPE TO 6 INCHES ABOVE THE TOP OF PIPE. FINAL BACKFILL MATERIAL SHALL BE OF SUITABLE MATERIAL REMOVED FROM EXCAVATION EXCEPT AS OTHER MATERIAL IS SPECIFIED. DEBRIS, FROZEN MATERIAL, LARGE ROCKS OR STONES, OR OTHER UNSTABLE MATERIALS SHALL NOT BE USED WITHIN 2 FEET FROM TOP OF PIPE.
- ALL SANITARY AND STORM SEWER TRENCH BACKFILLS SHALL BE WATER JETTED. GRANULAR BACKFILL WILL BE USED UNDER PAVEMENT AREAS.
- ALL PIPES SHALL HAVE POSITIVE DRAINAGE THROUGH MANHOLES. FLAT INVERT STRUCTURES NOT ALLOWED.
- EPOXY COATING SHALL BE USED ON ALL SANITARY SEWER MANHOLES THAT RECEIVE PRESSURIZED MAINS.
- ALL CREEK CROSSINGS SHALL BE LINED WITH RIP-RAP AS DIRECTED BY DISTRICT INSPECTORS.
- BRICK SHALL NOT BE USED ON SANITARY SEWER MANHOLES.
- EXISTING SANITARY SEWER SERVICE SHALL NOT BE INTERRUPTED.
- MAINTAIN ACCESS TO EXISTING RESIDENTIAL DRIVEWAYS AND STREETS.
- PRE-MANUFACTURED ADAPTERS SHALL BE USED AT ALL PVC TO DIP CONNECTIONS. RUBBER BOOT / MISSION-TYPE COUPLINGS WILL NOT BE ALLOWED.
- ANY PERMITS, LICENSES, EASEMENTS, OR APPROVALS REQUIRED TO WORK ON PUBLIC OR PRIVATE PROPERTIES OR ROADWAYS ARE THE RESPONSIBILITY OF THE DEVELOPER.
- TYPE N LOCK-TYPE COVER AND LOCKING DEVICE (LOCK-LUG) SHALL BE USED WHERE LOCK-TYPE COVERS ARE REQUIRED.
- ALL SANITARY SEWER SYSTEM WORK SHALL BE CONDUCTED UNDER THE INSPECTION OF A REPRESENTATIVE OF THE DISTRICT. ALL WORK MAY NOT REQUIRE INSPECTION BUT THE DISTRICT'S REPRESENTATIVE MAY DESIGNATE SPECIFIC AREAS THAT MUST BE INSPECTED BEFORE THE WORK IS BACKFILLED. ALL TESTING MUST BE WITNESSED BY THE DISTRICT'S INSPECTOR AND THE CONTRACTOR SHALL FURNISH ALL TESTING EQUIPMENT AS APPROVED BY THE DISTRICT. TESTING SHALL INCLUDE:
24.1. A MANHOLE TEST OF ALL GRAVITY SEWERS USING A MANHOLE WITH A DIAMETER THAT HAS A DIAMETER 95% OF THE INSIDE PIPE DIAMETER. IF THE MANHOLE TEST FAILS ON ANY SECTION OF PIPE, THAT SECTION OF PIPE SHALL BE UNCOVERED AND REPAIRED. NO EXPANSION DEVICES WILL BE ALLOWED TO BE USED TO "FORCE" THE PIPE THAT IS DEFORMED BACK INTO ROUND. ANY STRING LINES USED IN MANHOLE TESTING SHALL BE REMOVED AFTER TESTING IS COMPLETED. DEFLECTION TESTING CANNOT BE CONDUCTED PRIOR TO 30 DAYS AFTER FINAL BACKFILL.
24.2. AN AIR PRESSURE TEST OF ALL GRAVITY SEWERS TO A PRESSURE OF 5 PSI WITH NO OBSERVED DROP IN PRESSURE DURING A TEST PERIOD OF 5 MINUTES.
24.3. A VACUUM TEST OF ALL MANHOLES FOR A PERIOD OF 1 MINUTE AND THE VACUUM SHALL BE 10" OF MERCURY AND MAY NOT DROP BELOW 9" OF MERCURY AT THE END OF THE 1 MINUTE TEST.

NO.	REVISION DESCRIPTION	DATE

OPTWIO, LLC
1707 CHESTERFIELD AIRPORT RD.
SUITE 210
CHESTERFIELD, MO 63005

DEVELOPER/OWNER:

THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON
ASSUMES RESPONSIBILITY FOR THE ACCURACY OF THE INFORMATION ON THIS
DRAWING. ANY CHANGES TO THE DRAWING MUST BE MADE BY THE
ENGINEER AND THE LOCAL GOVERNING AGENCIES HARMLESS AGAINST SUCH VIOLATION.
SPECIFICATIONS, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OF INSTRUMENTS NOT
SCALED OR BEING AN PART OF THE PROJECT, WHICH THIS DRAWING IS
FOR, ARE NOT PART OF THE PROJECT, WHICH THIS DRAWING IS



LINDSEY FAYE DIKEMPER
CIVIL ENGINEER
PE-2024026198
CORPORATE
ENGINEERING
CERTIFICATE #001165

CALEDONIA LOT 3A
231 RUSH WAY
OTTALON, MO 63368

NOTES SHEET

+ ST. CHARLES
1300 5th Street
St. Charles, MO 63303
636.978.7508 tel
www.colstc.com



Cole Engineering & Surveying / Planning / Landscape Architecture
Civil & Architectural, Inc. is a Missouri Government Sub. Civil Design Group, Inc. is a Missouri & Texas license registered as an "Other"

DESIGN/CALC BY:
MRS

DRAWN BY:
MRS

CHECKED BY:
LFD

DRAWING SCALE:
AS SHOWN

DATE:
09/16/2025

Job Number
24-0089

Sheet Number
C2.0

2. Driveway locations shall not interfere with the sidewalk handicap ramps, or curb inlet sumps
3. Sidewalks, curb ramps, ramps and accessible parking spaces shall be constructed in accordance with the current approved American with Disabilities Act Accessibility Guidelines' (ADAAG) along with the required grades, construction materials, curbs, slopes and signs and/or any conflict with the above information and the plans, the ADAAG guidelines shall take precedence and the contractor prior to any construction shall notify the Project Engineer.
- 2.1. Truncated domes for curb ramps located in public right of way shall meet PROWAG requirements and shall be constructed using red pre-cast truncated domes per pavement details.
3. Any proposed grading and/or construction shall require a separate permit from the Building Division.
4. The Contractor is responsible to call Missouri One Call and The City of O'Fallon for the location of utilities. Contact The City of O'Fallon (636) 379-3814 for the location of City maintained cable for street lights and traffic signals, and other utilities call Missouri One Call 1-800-DIG-RITE. 1-800-344-7483
5. All proposed utilities and/or utility relocations shall be located underground.
6. All proposed fencing requires a separate permit through the Building Safety Division.
7. All construction operations and work zone traffic control within the right of way will follow MoDOT or M.U.T.C.D. standards whichever is more stringent.
8. (INTENTIONALLY OMITTED)
9. All subdivision identification or directional sign(s) must have the locations and sizes approved and permitted separately through the Planning and Development Division.
10. Materials such as trees, organic debris, rubble, foundations, and other deleterious material shall be removed from the site and disposed of in compliance with all applicable laws and regulations. If the material listed previously are reused, a letter from a soil Engineer must clarify amount, location, depth, etc. and be approved with the construction plans. Landfill tickets for such disposal shall be maintained on file by the developer. Burning on site shall be allowed only by permit from the local fire district. If a burn pit is proposed the location and mitigation shall be shown on the grading plan and documented by the soils engineer.
11. Twenty-four (24) hours prior to starting any of the work covered by the above plans and after approval thereof, the developer shall make arrangements with the Construction Inspection Office to provide for inspection of the work, sufficient in the opinion of the City Engineer, to assure compliance with the plans and specifications as approved.
12. The City Engineer or their duly authorized representative shall make all necessary inspections of City infrastructure, escrow items or infrastructure located on the approved plans.
13. All installations and construction shall conform to the approved engineering drawings. However, if the developer chooses to make minor modifications in design and/or specifications during construction, he/she shall make such changes at his/her expense without the approval of the City Engineer. The City Engineer will approve the completed installation or construction. It shall be the responsibility of the developer to notify the City Engineer of any changes from the approved drawings. The developer may be required to correct the installed improvements so as to conform to the approved engineering drawings. The developer may request a letter from the Construction Inspection Division regarding any field changes approved by the City Inspector.
14. City approval of the construction site plans does not mean that any building can be constructed on the lots without meeting the building setbacks as required by the zoning code.

1. Developer must supply City Construction Inspectors with an Engineer's soil reports prior to and during site grading. The soil report will be required to contain the following information on soil test curves (Proctor reports) for projects within the City:
 - 1.1. Maximum dry density
 - 1.2. Optimum moisture content
 - 1.3. Maximum and minimum allowable moisture content
2. Curve must be plotted to show density from a minimum of 90% Compaction and above as determined by the "Modified AASHTO T-180 Compaction Test" (A.S.T.M.-D-1157) or from a minimum of 95% as determined by the "Standard Proctor Test" (ASTM D-99, Method C (A.S.T.M.-D-698)). Proctor type must be designated on document.
3. Curve must have at least 5 density points with moisture content and sample locations listed on document
 - 1.6. Specific gravity
 - 1.7. Natural moisture content
 - 1.8. Liquid limit
 - 1.9. Plastic limit
- Be advised that if this information is not provided to the City's Construction Inspector the City will not allow grading or construction activities to proceed on any project site.
2. All fill placed in areas other than proposed storm sewers, sanitary sewers, proposed roads, and paved areas shall be compacted from the bottom of the fill up in 8" lifts and compacted to 90% maximum density as determined by Modified Proctor Test (ASTM D-1557) or 95% of maximum density as determined by the Standard Proctor Test (ASTM D-99). Ensure the moisture content of the soil in fill areas corresponds to the compactive effort as defined by the Standard or Modified Proctor Test. Optimum moisture content shall be determined using the same test that was used for compaction. Soil compaction curves shall be submitted to the City of O'Fallon prior to the placement of fill.
3. If the surface has been finished smooth, the surface shall be finished smooth. If the surface work it would appear that there may be rain prior to the next working day, the surface shall be finished smooth. If the surface has been finished smooth for any reason, it shall be scarified before proceeding with the placement of succeeding fills. Fill shall not be placed on frozen ground, nor shall filling operations continue when the temperature is such as to permit the layer under placement to freeze.
4. All storm water basins are to be constructed during the initial phase of the grading operation or in accordance with the approved SWPPP.
5. When grading operations are complete or suspended for more than 14 days, permanent grass must be established at sufficient density to provide erosion control on site. Between permanent grass seeding periods, temporary cover shall be placed on exposed areas. Resources Protecting Water Quality – a field guide to erosion, sediment and stormwater best management practices for development sites in Missouri and Kansas.All finished grades (areas not to be disturbed by improvements) in excess of 20% slopes (5:1) shall be mulched and tacked at a rate of 100 pounds per 1000 square feet when seeded.

1. The Permittee shall assume complete responsibility for controlling all siltation and erosion of the project area. The Permittee shall use whatever means necessary to control erosion and siltation including, but not limited to, staked straw bales and/or siltation fabric fences (possible methods of control are detailed in the plan). Control shall commence with the clearing operations and be maintained throughout the project until acceptance of the work by City of O'Fallon and as needed by Missouri Department of Transportation. The Permittee shall include measures to prevent erosion and the depositing of silt. The City of O'Fallon and as required by MoDOT may at their option direct the Permittee in his methods as deemed fit to protect property and improvements. Any depositing of silt or mud on new or existing pavement shall be removed immediately. Any depositing of silts or mud in new or existing storm sewers and/or swales shall be removed after each rain and affected areas cleaned to the satisfaction of the City of O'Fallon and as required by MoDOT.
2. The Permittee shall control erosion and siltation by installing, maintaining and repairing, as needed, any rain storm resulting one-quarter inch of rain or more. Any silt or debris leaving the site and affecting public right of way or storm water drainage facilities shall be cleaned up within 24 hours after the end of the storm.
3. Erosion control devices (silt fence, sediment basin, etc.) shall be in accordance with Missouri Department of Natural Resources Protecting Water Quality – a field guide to erosion, sediment and stormwater best management practices for development and construction. The Permittee shall also comply with the Kansas City, Missouri, Sewer and Stormwater Ordinance.
4. This development is required to provide long term post construction BMP's such as; low impact design, source control and treatment controls that protects water quality and controls run off to maximum extent practical in compliance with Phase II Illicit Storm Water Discharge Guidelines. (Ord. 5082, section 405.245)
5. Graded areas shall be seeded and mulched (strawed) within 14 days of stopping land disturbance activities. Unless it can be shown that the City of O'Fallon and as required by MoDOT that the vegetative growth is to be established within 6 weeks of stopping grading work on the project. The vegetative growth established shall be sufficient to prevent erosion and the standard shall be as required by EPA and DNR. (70% coverage per square foot) Ord. 6496, Section 405.095

REFER TO DUCKETT CREEK CONSTRUCTION NOTES ON SHEET C2.0.

1. All sanitary sewer installation is to be in accordance with M.S.D. standards and specifications except as modified by the City of O'Fallon Ordinances.
2. Brick shall not be used in the construction of sanitary sewer structures. Pre cast concrete structures are to be used unless otherwise approved by the City of O'Fallon.
3. Connections of all sanitary structures are to be made with A-Lock joint or equal.
4. All sanitary laterals shall have a minimum of 4" residential, 6" commercial diameter pipe.
5. All sanitary mains shall be a minimum of 8" diameter pipe.
6. All sanitary sewer line with a slope of less than 20% will require concrete pipe or concrete collar at each pipe joint.
7. Sanitary line with a slope greater than 50% will require a special approval design as shown on detail sheet.
8. All manholes built within the 100 year flood plain must have lock tight watertight manhole covers.
9. All sanitary sewer mains must have a minimum of 18" of cover over the sewer.
10. When sanitary mains cross over storm line the sanitary sewer must be ductile iron pipe for 10 feet on each side of the crossing.
11. Encase with concrete both sanitary and storm sewer at crossing where storm sewer is within 18 inches above sanitary sewer. Add concrete grade to only RCP storm sewer and encase flexible storm sewer when it is more than 18 inches above sanitary sewer. Show on profile sheet.
12. The sanitary sewers should run parallel along the side ways to minimize any additional utility easements required.
13. All sanitary sewer structures shall be waterproofed on the exterior in accordance to Minnesota DNR specifications 10CSR-8120 (7)(E).
14. All sanitary sewer pipe shall be SDR35 or equal. All sanitary sewer laterals shall be Schedule 40.
15. All sanitary sewer manholes and pipes will be tested to the following specifications: ASTM C1244, Standard testing method for Concrete Sewer Manhole by Negative Air Pressure (Vacuum), Latest revision ASTM F1417, Standard testing method for Installation Acceptance of Plastic Gravity Sewer Lines Using Low Pressure Air, Latest revision.
16. Add 1" minus rock back fill to all sanitary sewer and all other utilities that lie within the 1:1 shear plane of the road.

1. All Storm Sewer installation is to be in accordance with M.S.D. standards and specifications except as modified by the City of O'Fallon ordinances.
2. Brick shall not be used in the construction of storm sewer structures. Pre cast concrete structures are to be used unless otherwise approved by the City of O'Fallon.
3. A 5/8" rebar shall be installed horizontally in the center of the opening(s) in all curb inlets and area inlets.
4. (INTENTIONALLY OMITTED)
5. Encase with concrete both sanitary and storm sewer at crossing when storm sewer is within 18 inches above sanitary sewer. Add concrete cradle to only RCP storm sewer and encase flexible storm sewer when it is more than 18 inches above sanitary line. Show on profile sheet.
6. All storm sewers should run diagonally through the side yards to minimize any additional utility easements required.
7. All concrete pipes will be installed with O-ring rubber type gaskets.
8. Connections at all storm structures are to be made with A-lock joint or equal.
9. Pre cast concrete inlet covers are not to be used.
10. The swale in the detention basins shall have a minimum 2% longitudinal slope and be lined with a permanent erosion control blanket that will allow infiltration of storm water.
11. All structures and flored end sections must be concrete. H.D.P.E. pipe will not be allowed for detention basin outflows, final pipe run to detention basins, creek discharge or other approved means.
12. (INTENTIONALLY OMITTED)
13. Rip rap shown at flored end sections will be evaluated in the field by the Engineer, Contractor, and City Inspectors after blanket that will allow infiltration of storm water.
14. Add 1" minus rock back fill to all storm sewer that lie within the 1:1 shear plane of the road.
15. (INTENTIONALLY OMITTED)

1. Refer to Section 415 for Floodplain Development Information

1. A permit is required for all retaining walls that are 48 inches or taller in height, measured from the top of the footing to the top of the wall or for walls that support a surcharge load or that alters the channelized drainage of any lot or drainage area.
2. Retaining walls will not be allowed in public right-of-way without written approval from the City Engineer.
3. Any retaining wall more than thirty (30) inches tall which supports a walking surface that is within two (2) feet of the wall will require a guard rail on the retaining wall.
4. Retaining walls that alter the channelized drainage of any lot or drainage area shall not be constructed without prior approval and permitting from the City of O'Fallon Engineering Department regardless of the height of the wall.
5. See section 405.275 of the City code for additional design requirements.

1. All water main installations shall follow the current City of O'Fallon water main specifications.
2. Fire hydrants shall be a maximum of 600' apart. Local fire district approval is required.
3. Coordinate with the water company on the location of water meters. For meters in the City's district, meters shall be in the right-of-way, allowing an access easement from the right-of-way shall be provided.
4. All water mains must have a minimum of 42" of cover. (City water mains)
5. Provide water valves to isolate the system.
6. All water mains shall be C-900 PVC pressure pipe or equal with locator/tracer wires
7. If the excavations are made in the improved portion of the right-of-way, twelve inches of granular backfill will be placed over the exposed pipe, followed by a strength material, such as concrete, and the hole with eight inches of the finished surface placed over the concrete. A plastic membrane placed between the rock base and the CLSM to prevent the material from bleeding into the rock base. The remaining eight inches will be restored by placing a 28 day, 4,000 psi concrete mix.
8. DISINFECTION: Disinfecting shall be accomplished by placing sufficient hypo-chlorite granule (HTH) in each section of pipe to obtain a chlorine residual in the pipeline, upon initial filling, of 50 mg/L (ppm). HTB tablets will not be allowed. Following completion of the pipeline, it shall be slowly filled with water and a sample will be taken immediately and the chlorine residual must be 50 mg/L or greater. The solution shall be allowed to stand for 24 hours and a sample shall then be taken. The chlorine residual after 24 hours shall be 30 mg/L or greater. If the piping shows insufficient chlorine residuals in either test, the piping shall be re-chlorinated by the injection of hypo-chlorite solution until satisfactory results are achieved. Following successful disinfection, the chlorine residual must be 30 mg/L or greater. All pipe that is not disinfected by the City, shall be disinfected by the contractor.
9. PRESSURE TESTING: Immediately following disinfection, the piping shall be pumped to a pressure (at the HIGHEST point in the project) of 150 psi or higher where the working pressure is higher than 150 PSI as determined by the City. In such cases, the pressure shall be as specified by the City and two pressure tests shall be conducted. The first test shall be with the fire hydrant auxiliary valve open and be to 50 PSI. The second test shall be with the fire hydrant auxiliary valve closed and be to 150 PSI. The pressure test shall be held for 2 hours. All pipe that is not pressure gauged shall be provided by the contractor. After achieving the test pressure, the piping shall be left closed for a period of two (2) hours. At the end of this time the pressure drop shall not exceed 2 psi. In addition, if the pressure appears, in judgment of the City's representative, to be continuing to drop, the test shall be continued for another two (2) hours and if any further drops occur, the test shall be considered a failure. If the pressure test fails, the contractor will be required to find and correct the source of the leakage. The contractor shall be responsible for the cost of the test. If the pressure test is successful, the pipeline must be re-disinfected and the pressure tested again until satisfactory result are achieved. Any MDRN required dechlorination will be performed by the contractor.
10. All tops for valves, meters, and manholes are to be constructed to within 1 inch (0.08") of finish grade. Grading around structure tops on slopes need to be accounted for.
11. BACTERIOLOGICAL TESTING: After satisfactory disinfection and pressure testing, a sample shall be taken by the contractor in accordance with the procedures for bacteriological testing and submitted to and approved by the Missouri Department of Natural Resources and the City for bacteriological analysis. After 24 hours, a second sample shall be taken in a like manner and submitted for analysis. The two samples taken on consecutive days, a minimum of 24 hours apart, must be found to be "safe" by the testing laboratory, and copies of the test results must be supplied to the City. If the samples are not found to be "safe" by the testing laboratory, the contractor shall be required to re-disinfect and re-test. The contractor shall submit two samples on two consecutive test days are achieved. Following successful bacteriological testing and a determination by the City that the samples are "safe", the mains may be placed into service.

1. All paving (public and private) to be in accordance with St. Louis County Standards and Specifications except as modified by the existing or O'Fallon ordinances.
2. If the intersecting road does not have a curb, then the curb on the new entrance shall begin 10' from the edge of the existing road.
3. Provide 6" of concrete over 5" of aggregate base rock or asphalt equivalent for minor residential streets per City Code 405.370.
- 3.1. Rock to meet all the requirements of MoDOT type 5 rock with a tighter restriction on the fines being that no more than ten percent (10%) fines shall pass a no. 200 sieve. (City Code 405.210.B.1) The gradation of this rock needs to be submitted to the City for approval. Any deliveries made without the proper delivery ticket, including signature, will not be accepted. The delivery ticket must list the project name or jobsite location. A separate certification sheet may be provided attesting to the delivery ticket with a signature of the company's quality control manager. The quality control certification must be current and dated within 4 weeks of the delivery. (City Code 405.210.A.2,k)
4. Multi-use trail (when required) shall have a minimum of 3" Type "C" Asphalt over 4" aggregate base per City requirements.
5. Type C (BP-1) Compaction at required pavers shall be 98% minimum density according to St. Louis Co. Standard Specifications.
6. Proper paving striping at all paved areas where the multi-use trail crosses existing or proposed pavement.
7. All street sub-beds-outs over 250' in length will require a temporary turnaround.
8. All sub grade in cut or fill will need to conform to the City of O'Fallon Compaction requirements
9. Material Testing And Frequency. Materials for construction shall be tested and inspected per the appropriate ASTM code or at the City Engineer's discretion. The developer's engineer shall perform quality control guidelines, in accordance with St. Louis County Standard Specification 501.3-1.1.
10. Approval Of Sub grade And Base (Sub base). The City Engineer or representative shall approve the sub grade before any base is placed thereon and shall approve the base before concrete or surface course is placed. The sub grade and base shall be so constructed that it will be uniform in density throughout.
11. In all fill areas in street roadways, soil tests shall be submitted and approved by the City Engineer for each foot of fill and at least one (1) test and an average of one (1) test will every two hundred fifty (250) feet.
12. No traffic will be allowed on new concrete pavement until it has cured for seven (7) days and it reaches three thousand five hundred (3,500) psi within 28 days.
- 12.1. Concrete pavements shall not be approved unless it reaches a strength of four thousand (4,000) psi. Cylinders/compressive strength. One (1) set of four (5) cylinders within the first fifty (50) cubic yards and one (1) set per one hundred (100) cubic yards thereafter. One (1) cylinder must be tested at seven (7) days, three (3) at twenty-eight (28) days, and one (1) held in storage.
13. Prior to placement of aggregate base material on sub grade and prior to placement of pavement on base material, the sub grade and base must be proof-rolled with a fully loaded (ten (10) ton load) tandem truck or equivalent tire vehicle with one (1) pass down each driving lane no faster than three (3) miles per hour. If soft spots are detected, or pumping, rutting or heaving occurs, the contractor on one (1) inch at the sub grade, the roadbed shall be considered unsatisfactory and the soil in these areas shall be remediated to the depth indicated by the contractor's testing firm and approved by a representative of the City Engineer.
14. Sub grade and base beneath pavements shall be compacted to St. Louis County Highway Department specifications. The moisture range shall be determined by the Standard or Modified Proctor Density Test Method AASHTO T-99 and within -2/+4 percentage points of the optimum moisture content.
15. All sub grade and base shall conform to line, grade and cross section shown on the plans or as established by the engineer. If any settling or washing occurs, or where hauling results in ruts or other objectionable irregularities, the contractor shall improve the sub grade or base to the satisfaction of the City before the pavement is placed. Additional rolling or methods to verify compaction shall be at the discretion of the City Engineer. Tolerance allowed on all lines, grades and cross sections shall be plus or minus one (1) percent.
16. Utility Work Prior To Base Construction. No base course work may proceed on any street until all utility excavations (storm and sanitary sewers, water, gas, electric, etc.) have been properly back filled with granular material, crushed stone or gravel mechanically tamped in ten (10) inch lifts. Utilities installed after sub grade preparation shall be bored. Compaction requirements shall follow St. Louis County standards.
17. Equipment calibration. The developer's contractors and subcontractors must have their equipment calibrated by the following minimum standards:
 - 17.1. Air meter--weekly.
 - 17.2. Cylinder compaction--annually by independent calibration service.
 - 17.3. Batch scales--monthly.
 - 17.4. Nuclear testing devices--every six (6) months.
 - 17.5. Proctor equipment--every six (6) months.
 - 17.6. Slump cone--monthly.
18. All permanent traffic control will be per M.U.T.C.D. or MoDot standards. S1-1 from the M.U.T.C.D. manual will be used at all crosswalk locations accompanied with other w16-ga or w16-T signs.
19. All traffic signals, street signs, sign posts and bracket arms shall be painted black using Carboline Rust Bond Penetrating Sealer SG and Carboline 133 HB paint (or equivalent as approved by City of O'Fallon and MoDOT)
20. If the excavations are made in the improved portion of the right-of-way, twelve inches of granular backfill will be placed over exposed facilities and controlled low strength material (CLSM) aka flowable fill will fill the hole with eight inches of the finished surface for concrete structures. The CLSM will be placed on the sub grade and the CLSM to prevent the material from bleeding into the rock base. The remaining eight inches will be restored by placing a 28 day, 4,000 psi concrete mix.

DEVELOPER/OWNER:
CPTWQ, LLC
17107 CHESTERFIELD AIRPORT RD.
SUITE 210
CHESTERFIELD, MO 63005



231 RUSH WAY
'FALLON MO 63368

CITY OF O'FALLON NOTES

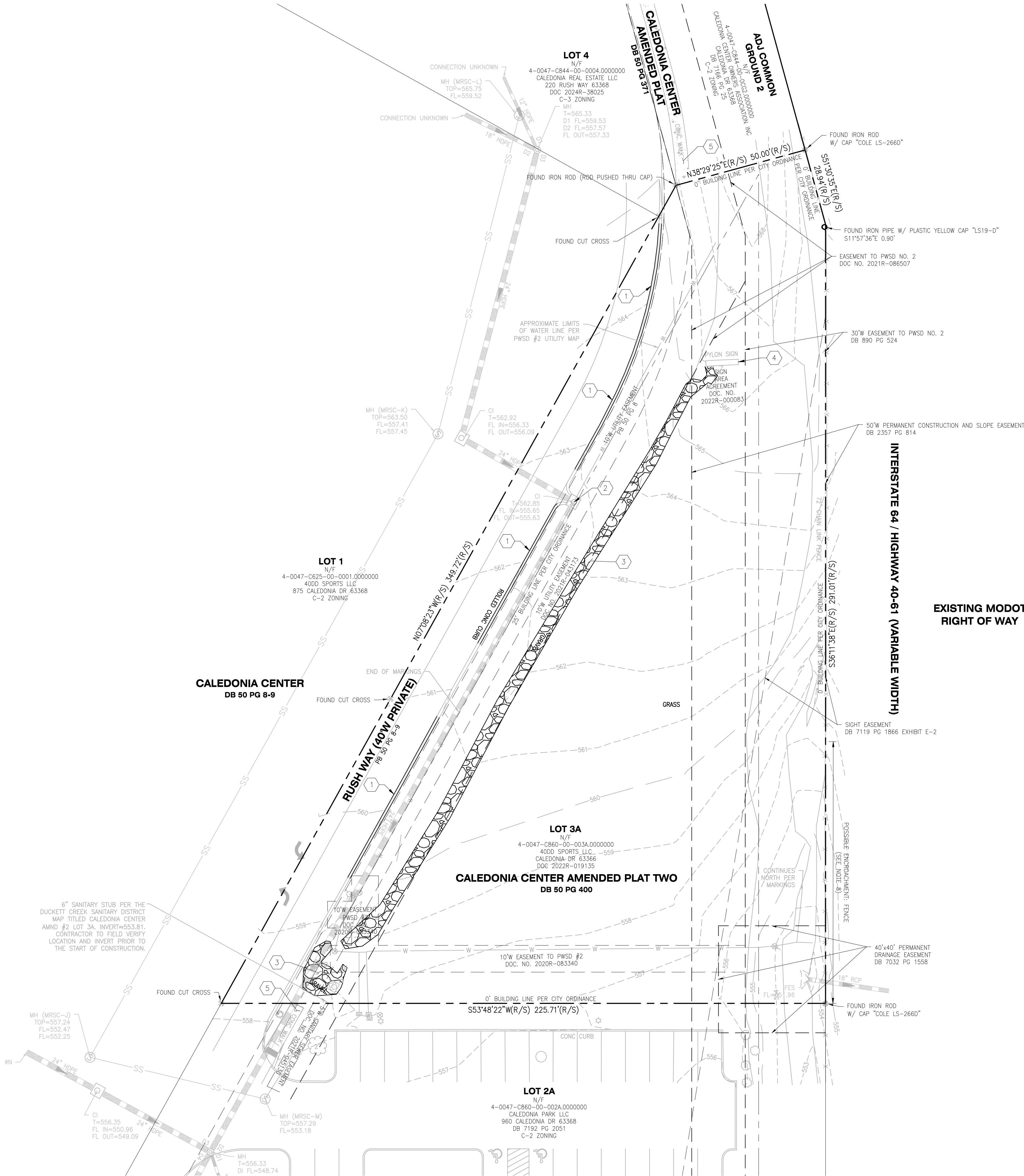
COLE[®] / PLANNING / LANDSCAPE ARCHITECTURE

**CIVIL ENGINEERING / SURVEYING
GIS / ADA TRANSITION PLANNING**

+ ST. CHARLES
1520 S. Fifth Street
Suite 307
St. Charles, MO 63003
636.578.7508 tel
www.colest.com

© Cole Design Group, Inc. is a Missouri Corporation. All rights reserved. "COLE" is a registered trademark of Cole Design Group, Inc. All other trademarks are the property of their respective owners.

DESIGN/CALC BY	MRS
DRAWN BY	MRS
CHECKED BY	LFD
DRAWING SCALE	AS SHOWN
DATE	09/16/2025
Job Number 24-0089	
Sheet Number C2.1	



KEYED NOTES

- EXISTING ROLLED CONCRETE CURB TO BE REMOVED.
- EXISTING CURB INLET TO REMAIN.
- EXISTING GRAVEL TO BE REMOVED.
- EXISTING SIGN TO REMAIN. CONTRACTOR TO PROTECT SIGN AND NOTIFY EOR OF ANY CONFLICTS DURING CONSTRUCTION.
- EXISTING SIDEWALK TO REMAIN.

LEGEND

- EXISTING ROLLED CONCRETE CURB TO BE REMOVED.
- EXISTING CONCRETE PAVEMENT TO BE REMOVED FOR UTILITY INSTALLATION.
- EXISTING GRAVEL TO BE REMOVED.

PTWQ, LLC
1707 CHESTERFIELD AIRPORT RD.
SUITE 210
CHESTERFIELD, MO 63005

DEVELOPER/OWNER:

THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON HAS REVIEWED THIS DRAWING FOR TECHNICAL ACCURACY AND COMPLIANCE WITH ALL APPLICABLE ORDINANCES, RULES, AND REGULATIONS. THIS REVIEW IS LIMITED TO THE TECHNICAL ASPECTS OF THE DRAWING AND DOES NOT CONSTITUTE A GUARANTEE OF THE ACCURACY OF THE INFORMATION PROVIDED OR THE RESULTS THEREOF. THE USER OF THIS DRAWING IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED.

DATE: NO. REVISION DESCRIPTION

LINDSEY FAYE DICKEMPER
REGISTERED PROFESSIONAL ENGINEER
PE-2024026198
CORPORATE ENGINEERING
CERTIFICATE #001165

STATE OF MISSOURI
LINDSEY FAYE DICKEMPER
REGISTERED PROFESSIONAL ENGINEER
PE-2024026198
CORPORATE ENGINEERING
CERTIFICATE #001165

CALEDONIA LOT 3A
231 RUSH WAY
OFFALON, MO 63368

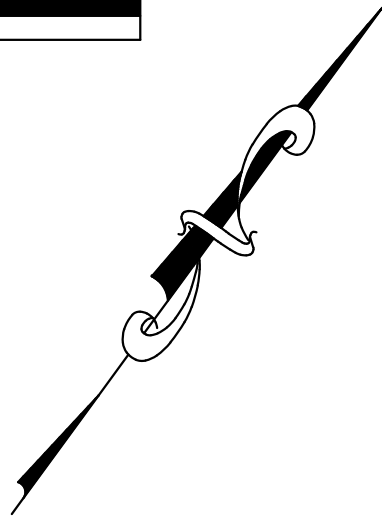
DEMOLITION PLAN

+ ST. CHARLES
320 South Street
St. Charles, MO 63303
636.978.7508 tel
www.collel.com

DESIGN/CALC BY: MRS
DRAWN BY: MRS
CHECKED BY: LFD
DRAWING SCALE: AS SHOWN
DATE: 09/16/2025
Job Number: 24-0089
Sheet Number: C3.0

COLE
CIVIL ENGINEERING / SURVEYING / PLANNING / LANDSCAPE ARCHITECTURE
1000 N. Main Street, Suite 100, St. Charles, MO 63303
636.978.7508 tel
www.collel.com

COLE
CIVIL ENGINEERING / SURVEYING / PLANNING / LANDSCAPE ARCHITECTURE
1000 N. Main Street, Suite 100, St. Charles, MO 63303
636.978.7508 tel
www.collel.com



STRUCTURES

1. PROPOSED BUILDING. REFER TO ARCHITECTURAL PLANS.
2. PROPOSED TRASH ENCLOSURE. REFER TO ARCHITECTURAL PLANS.

CURBS

3. PROPOSED VERTICAL CONCRETE CURB. REFER TO DETAIL SHEET C8.0.
- 3A. PROPOSED 8" VERTICAL CONCRETE CURB. REFER TO DETAIL SHEET C8.1.
4. PROPOSED CURB TO TRANSITION FROM FULL HEIGHT TO FLUSH.
5. PROPOSED FLUSH CURB. REFER TO DETAIL SHEET C8.0.
6. PROPOSED WHEEL STOP (TYP). REFER TO DETAIL SHEET C8.0.
7. TRANSITION TO AND MATCH EXISTING ROLLED CURB IN LOCATION AND ELEVATION.

PAVEMENTS

8. PROPOSED ASPHALT PAVEMENT (LIGHT DUTY). REFER TO DETAIL SHEET C8.0.
9. PROPOSED ASPHALT PAVEMENT (HEAVY DUTY). REFER TO DETAIL SHEET C8.0.
10. PROPOSED CONCRETE PAVEMENT (HEAVY DUTY). REFER TO DETAIL SHEET C8.0.
11. PROPOSED CONCRETE PAVEMENT (ENTRANCES). REFER TO DETAIL SHEET C8.0.
12. PROPOSED CONCRETE TRANSFORMER PAD.

SIDEWALKS

13. PROPOSED CONCRETE SIDEWALK. REFER TO DETAIL SHEET C8.0.
14. MATCH EXISTING CONCRETE SIDEWALK IN LOCATION AND ELEVATION.
15. PROPOSED ACCESSIBLE RAMP. REFER TO DETAIL SHEET C8.0.

SIGNS

16. EXISTING PYLON SIGN.
17. PROPOSED VAN ACCESSIBLE PARKING SIGN. REFER TO DETAIL SHEET C8.0.

PAVEMENT MARKINGS

18. PROPOSED PAINTED CROSS WALK. REFER TO DETAIL SHEET C8.1.
19. PROPOSED PAINTED ACCESSIBLE PARKING SYMBOL.
20. PROPOSED PAINTED AISLE (BLUE). REFER TO DETAIL SHEET C8.0.
21. PROPOSED PAINTED PARKING SPACE LINE (WHITE).

MISCELLANEOUS ITEMS

22. 12'W X 35'L LOADING/UNLOADING SPACE (NOT TO BE STRIPED). ALL LOADING/UNLOADING WILL TAKE PLACE OUTSIDE OF BUSINESS OPERATING HOURS.
23. PROPOSED BIKE RACK (TYP). REFER TO DETAIL SHEET C8.1.
24. PROPOSED LIGHT POLE. REFER TO PHOTOMETRIC PLANS BY OTHERS.

MINIMUM PARKING REQUIREMENTS (STANDARD – CITY OF O’FALLON)

REQUIREMENT	1 SPACE PER 300 S.F. FLOOR AREA
FLOOR AREA	6,925 S.F.
CALCULATION	$6,925 \text{ S.F.} \times (1 \text{ SPACES} / 300 \text{ S.F.}) = 24 \text{ SPACES}$

<u>PARKING DATA</u>	
SPACES REQUIRED (TOTAL)	24 SPACES
SPACES PROVIDED (STANDARD)	23 SPACES
SPACES PROVIDED (ACCESSIBLE)	1 SPACES (1 VAN ACCESSIBLE)
SPACES PROVIDED (TOTAL)	24 SPACES

BICYCLE PARKING REQUIREMENTS

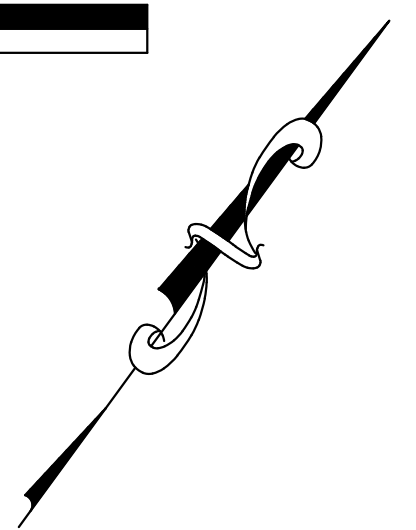
24 PARKING SPACES / (1 RACK SPACE/15 PARKING SPACES)
= 4 RACK SPACES

LOADING

REQUIREMENT	1 SPACE (12'W X 35'L) FOR BUILDINGS OVER 5,000 S.F.
SPACES PROVIDED	1 SPACE (ALL LOADING/UNLOADING WILL TAKE PLACE OUTSIDE OF BUSINESS OPERATING HOURS)

FRONT BUILDING SETBACK	25'
SIDE BUILDING SETBACK	0'
REAR BUILDING SETBACK	0'

	PROPOSED CONCRETE PAVEMENT/PROPOSED CONCRETE SIDEWALK.
	PROPOSED ASPHALT PAVEMENT (LIGHT DUTY).
	PROPOSED ASPHALT PAVEMENT (HEAVY DUTY).



BC	BOTTOM OF CURB FACE	
BR	BOTTOM OF RAMP	
FC	FLUSH CURB	
FF	FINISHED FLOOR	
LP	LOW POINT	
ME	MATCH EXISTING	
TC	TOP OF CURB FACE	
TP	TOP OF PAVEMENT	
TR	TOP OF RAMP	
TS	TOP OF SIDEWALK	
SPOT GRADES (TYP.)	(TOP OF CURB) (BOTTOM OF CURB / FINISH PAVEMENT)	

 PROPOSED CONCRETE PAVEMENT/PROPOSED CONCRETE SIDEWALK.

 PROPOSED ASPHALT PAVEMENT (LIGHT DUTY).

 PROPOSED ASPHALT PAVEMENT (HEAVY DUTY).



USER: Megan Silvey TAB: C5.0 GRADING PLAN
DATE: September 16, 2025 - 1:55:59 PM
DRAWING: s:\JOBS\Jobs2024\24-0089\CADD\C-Plan\PlotSheets\0_Plan_GRADE_24-0089.dwg



LINDSEY FAYE DIEKEMPER
CIVIL ENGINEER
PE-2024026198
CORPORATE
ENGINEERING
CERTIFICATE #001165

CALEDONIA LOT 3A
231 RUSH WAY
O'FALLON, MO 63368

GRADING PLAN

ST. CHARLES
1520 S. Fifth Street
Suite 307
St. Charles, MO 63303
636.976.7508 tel
www.collestim.com

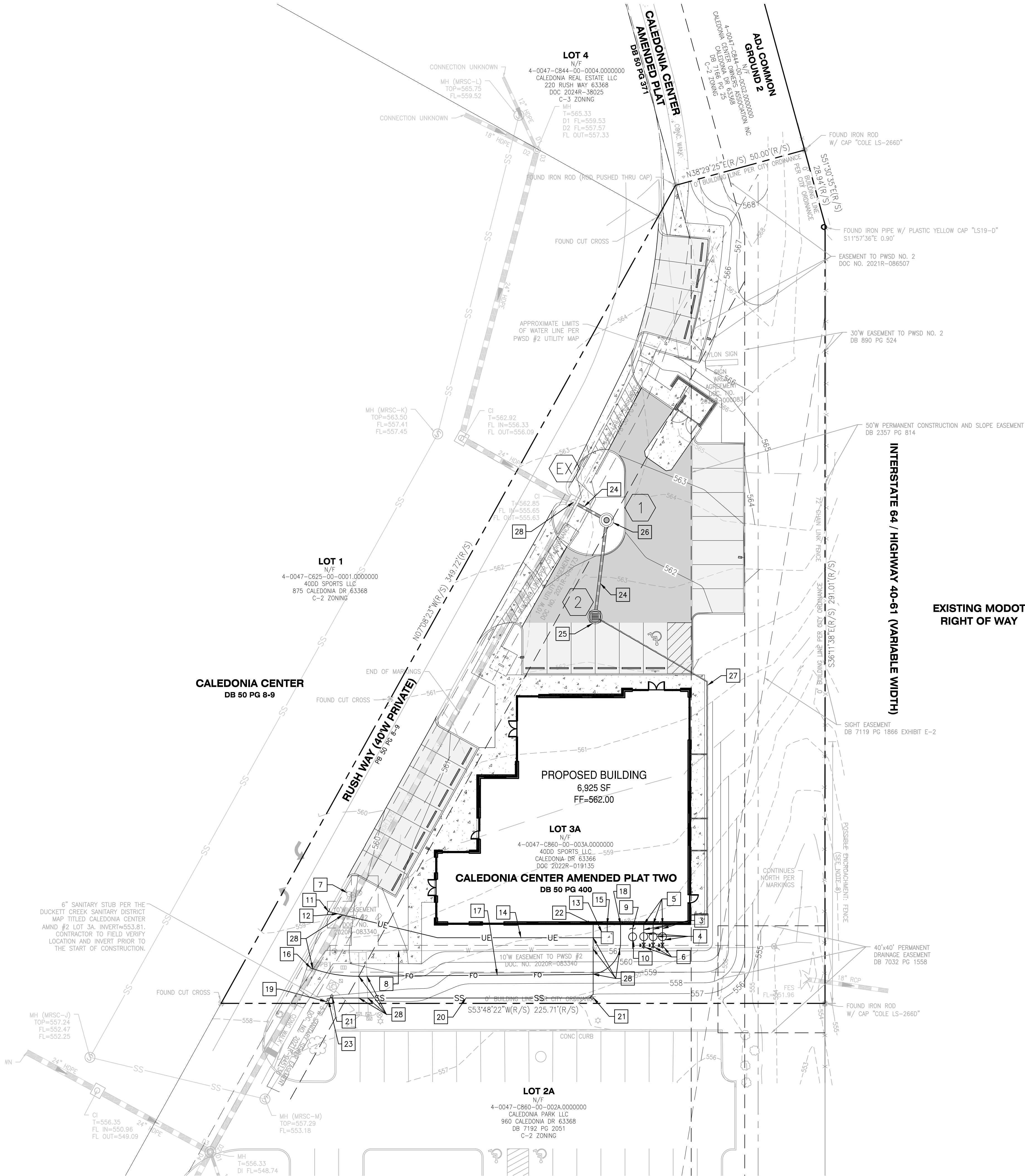
colle[®]

**CIVIL ENGINEERING / SURVEYING /
GIS / ADA TRANSITION PLANNING**

CIVIL ENGINEERING / PLANNING / LANDSCAPE ARCHITECTURE

Colle & Associates, Inc. is a Malvern Corporation d.b.a. Colle Design Group, Inc. All Projects & Fees herein referred to are "Colle"

DESIGN/CALC BY	MRS
DRAWN BY	MRS
CHECKED BY	LFD
DRAWING SCALE	AS SHOWN
DATE	09/16/2025
<i>Job Number</i> 24-0089	
<i>Sheet Number</i> C5.0	



KEYED NOTES

GAS SERVICE

- NOT IN USE — PROPOSED SPIRE DESIGNED GAS SERVICE (IN COORDINATION). ALL MATERIAL AND INSTALLATION BY SPIRE AT THE CONTRACTOR'S EXPENSE.
- NOT IN USE — REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND CONTINUATION OF GAS SERVICE.

WATER SERVICE

- PROPOSED 2" PVC PRIVATE DOMESTIC WATER SERVICE WITH 42" MINIMUM COVER AND 72" MAXIMUM COVER. REFER TO DETAIL SHEET C8.1.
- PROPOSED 2" DOMESTIC WATER METER AND PIT (PER PWSD NO. 2 STANDARDS). REFER TO DETAIL SHEET C8.1. PWSD NO. 2 TO PROVIDE AND SET THE METER AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OTHER MATERIAL AND INSTALLATION.
- REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND CONTINUATION OF DOMESTIC WATER SERVICE.
- PROPOSED 2" GATE VALVE. REFER TO DETAIL SHEET C8.1. THE CONNECTION TO THE EXISTING "PUBLIC" WATER MAIN MUST BE MADE PER PWSD NO. 2 SPECIFICATIONS.
- EXISTING FIRE HYDRANT.
- EXISTING 8" PVC IRRIGATION STUB TO BE DESIGNED BY OTHERS.
- PROPOSED 1" IRRIGATION METER AND PIT TO BE DESIGNED BY OTHERS. PWSD NO. 2 TO PROVIDE AND SET THE METER AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OTHER MATERIAL AND INSTALLATION.

ELECTRIC SERVICE

- PROPOSED ELECTRIC SERVICE TO THE NEAREST POINT OF CONNECTION. ALL MATERIAL AND INSTALLATION BY CUIVRE RIVER ELECTRIC CO. AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL CONTACT CUIVRE RIVER ELECTRIC CO. AS SOON AS POSSIBLE TO ACCOMMODATE REQUIRED LEAD TIME FOR DESIGN AND COORDINATION OF THE PROPOSED SERVICE.
- PROPOSED PRIMARY UNDERGROUND ELECTRIC SERVICE. CUIVRE RIVER ELECTRIC CO. SHALL SIZE CONDUIT AND PROVIDE AND PULL CONDUCTOR AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING THE CONDUIT.
- PROPOSED GROUND MOUNTED TRANSFORMER (PER CUIVRE RIVER ELECTRIC CO. STANDARDS). CUIVRE RIVER ELECTRIC CO. TO PROVIDE AND INSTALL THE TRANSFORMER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING THE CONCRETE PAD (CUIVRE RIVER ELECTRIC CO. STANDARDS).
- PROPOSED SECONDARY UNDERGROUND ELECTRIC SERVICE. CUIVRE RIVER ELECTRIC CO. TO SIZE CONDUIT AND CONDUCTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIAL AND INSTALLATION.
- REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND CONTINUATION OF ELECTRIC SERVICE.

COMMUNICATIONS SERVICE

- PROPOSED COMMUNICATIONS SERVICE. POINT OF CONNECTION. ALL MATERIAL AND INSTALLATION BY CHARTER AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL CONTACT CHARTER AS SOON AS POSSIBLE TO ACCOMMODATE REQUIRED LEAD TIME FOR DESIGN AND COORDINATION OF THE PROPOSED SERVICE.
- PROPOSED (1) 2" PVC AND (1) 4" PVC COMMUNICATION SERVICE CONDUIT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING THE CONDUIT AND PULLWIRE. ALL OTHER MATERIAL AND INSTALLATION BY CHARTER AT THE CONTRACTOR'S EXPENSE.
- REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND CONTINUATION OF COMMUNICATIONS SERVICE.

SANITARY SEWER SERVICE

- PROPOSED 6" SCHEDULE 40 PVC SANITARY SEWER SERVICE. POINT OF CONNECTION TO EXISTING 6" SANITARY STUB PER THE DUCKETT CREEK SANITARY DISTRICT MAP TITLED CALEDONIA CENTER AMND #2 LOT 3A (PER DUCKETT CREEK SANITARY DISTRICT STANDARDS, FL = ±553.81). CONTRACTOR TO FIELD VERIFY LOCATION AND INVERT PRIOR TO THE START OF CONSTRUCTION.
- PROPOSED 6" SCHEDULE 40 PVC SANITARY SEWER SERVICE WITH 2.00% MINIMUM SLOPE.
- PROPOSED SANITARY SEWER CLEANOUT. REFER TO DETAIL ON SHEET C8.2.
- PROPOSED SANITARY SEWER POINT OF BUILDING ENTRY (INVERT ELEVATION = ±557.82). REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND CONTINUATION OF SANITARY SEWER SERVICE.
- PROPOSED SANITARY SEWER SAMPLING TEE (PER DUCKETT CREEK SANITARY DISTRICT STANDARDS). REFER TO DETAIL ON SHEET C8.2.

STORM SEWER SERVICE

- PROPOSED STORM SEWER. REFER TO STORM SEWER PROFILES ON SHEET C6.1.
- PROPOSED GRATE INLET. TOP=561.13, FL=556.35. REFER TO STORM SEWER PROFILES ON SHEET C6.1.
- PROPOSED STORM MANHOLE. TOP=562.77, FL=555.99, FL_{INT}=555.79. REFER TO STORM SEWER PROFILES ON SHEET C6.1.
- PROPOSED 4" ROOF DRAIN TO CONNECT TO PROPOSED GRATE INLET #2 (FL=556.55). REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND CONTINUATION OF ROOF DRAIN.

MISCELLANEOUS ITEMS

- THE CONTRACTOR SHALL MAINTAIN 18" MINIMUM VERTICAL CLEARANCE AT ALL UTILITY CROSSINGS.

PWSD #2 NOTES

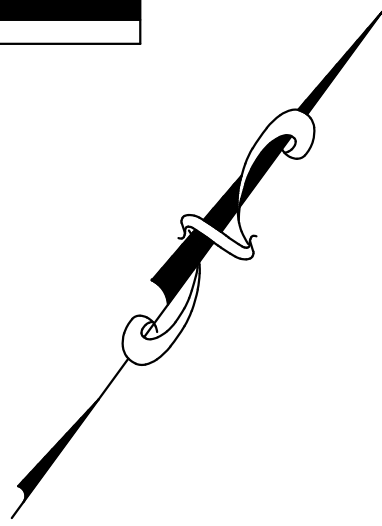
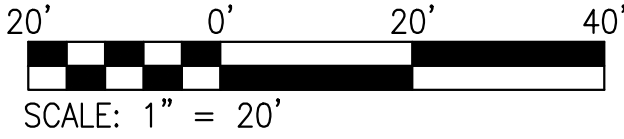
- THE PUBLIC WATER SUPPLY DISTRICT NO. 2 REQUIRES ONE (1) WEEK NOTICE BEFORE THE START OF CONSTRUCTION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ANY CITY OR MODOT PERMITS REQUIRED TO WORK ALONG THE ROADWAYS.
- ALL WATER SERVICE LINES, FIRE LINES, AND PRIVATE WATER MAINS MUST BE INSTALLED PER PWSD NO. 2'S SPECIFICATIONS.
- ALL "PRIVATE" FIRE HYDRANTS ARE TO BE PAINTED RED PER PWSD NO. 2 SPECIFICATIONS.
- ALL COMMERCIAL SITES MUST HAVE WATER METERS INSTALLED IN GREENSPACE.

DUCKETT CREEK SANITARY DISTRICT (DCSD) NOTES:

- EXISTING SANITARY SEWER SERVICE SHALL NOT BE INTERRUPTED.
- CONSTRUCTION OF WASTEWATER FACILITIES REQUIRES DCSD INSPECTION.
 - CONTACT DCSD ENGINEERING DEPARTMENT AT 636-441-1244 TO SCHEDULE INSPECTION.
 - 48 HOURS ADVANCE NOTICE IS REQUIRED.

LEGEND

- PROPOSED CONCRETE PAVEMENT/PROPOSED CONCRETE SIDEWALK.
- PROPOSED ASPHALT PAVEMENT (LIGHT DUTY).
- PROPOSED ASPHALT PAVEMENT (HEAVY DUTY).
- STORM STRUCTURE DESIGNATOR.



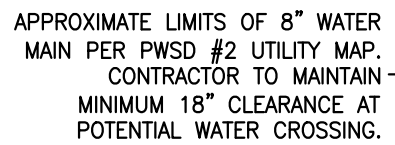
DEVELOPER/OWNER:
OPTWO, LLC
1707 CHESTERFIELD AIRPORT RD.
SUITE 210
CHESTERFIELD, MO 63005

LINDSEY FAYE DICKEMPER
CIVIL ENGINEER
PE-2024026198
CORPORATE
ENGINEERING
CERTIFICATE #001165

CALEDONIA LOT 3A
231 RUSH WAY
OTFALLON, MO 63368

+ ST. CHARLES
3200 5th Street
St. Charles, MO 63303
636.978.7508 tel
www.coledesign.com
COLE
CIVIL ENGINEERING / SURVEYING / PLANNING / LANDSCAPE ARCHITECTURE
Civil & Architectural, Inc. is a licensed professional firm. Civil Design Group, Inc. is a design & construction firm. "Cole" is a trademark of Cole Design Group, Inc.

DESIGN/CALC BY:
MRS
DRAWN BY:
MRS
CHECKED BY:
LFD
DRAWING SCALE:
AS SHOWN
DATE:
09/16/2025
Job Number:
24-0089
Sheet Number:
C6.0



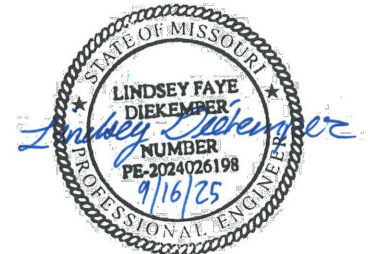
1

15 YEAR HYDRAULIC CALCULATIONS																
Line ID	Line Size (in)	Line Length	Line Slope (%)	n-value	Defl. Angle	Known Q (cfs)	Flow Rate (cfs)	Capacity Full (cfs)	Vel Dn (ft/s)	Invert Up (ft)	Grnd/Rim Elev Up	HGL Jct (ft)	Rim-Hw (ft)	Invert Dn (ft)	Grnd/Rim Elev Dn	HGL Dn (ft)
2-1	12	36.345	0.99	0.013	67.994	1.21	1.21	3.54	1.64	556.35	561.13	556.81	4.32	555.99	562.77	556.88
1-EX	12	14.047	1	0.013	89.546	0	1.21	3.55	1.54	555.79	562.77	556.88	5.89	555.65	562.85	556.83
EX-EX MH	24	278.228	2.5	0.012	-96.988	0.31	11.19	38.73	3.56	555.63	562.85	556.83	6.02	548.68	557.68	550.68

DEVELOPER/OWNER:

OWNER:
CPTWO, LLC
17107 CHESTERFIELD AIRPORT RD.
SUITE 210

THE PROFESSIONAL, WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327, 411, RSM) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT RELEASABLE BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDED TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



LINDSEY FAYE DIEKEMPER
CIVIL ENGINEER
PE-2024026198
CORPORATE
ENGINEERING
CERTIFICATE #001165

CALEDONIA LOT 3A

STORM SEWER PROFILES

cole[®]
+ ST. CHARLES
1520 S. Fifth Street
Suite 307
St. Charles, MO 63303
636.578.7508 tel
www.colesti.com

CIVIL ENGINEERING / SURVEYING
LANDSCAPE ARCHITECTURE
LEAP (LAND) TRANSITION PLANNING

CIVIL ENGINEERING / SURVEYING / PLANNING / LANDSCAPE ARCHITECTURE
/ GIS / ADA TRANSITION PLANNING
www.coolestl.com

DESIGN/CALC BY	MI
DRAWN BY	M
CHECKED BY	LI
DRAWING SCALE	AS S

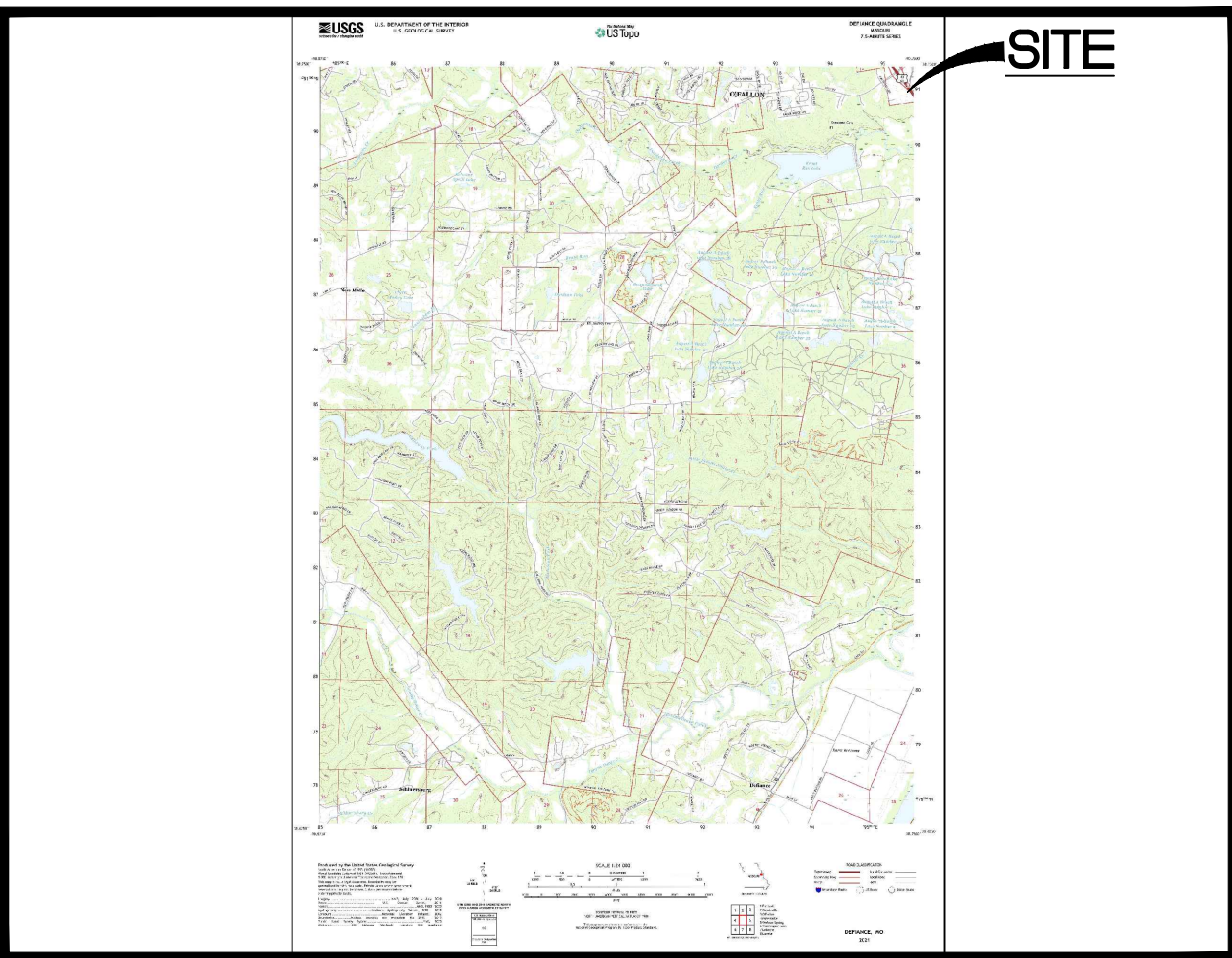
Job Number
24-0089

Sheet Number

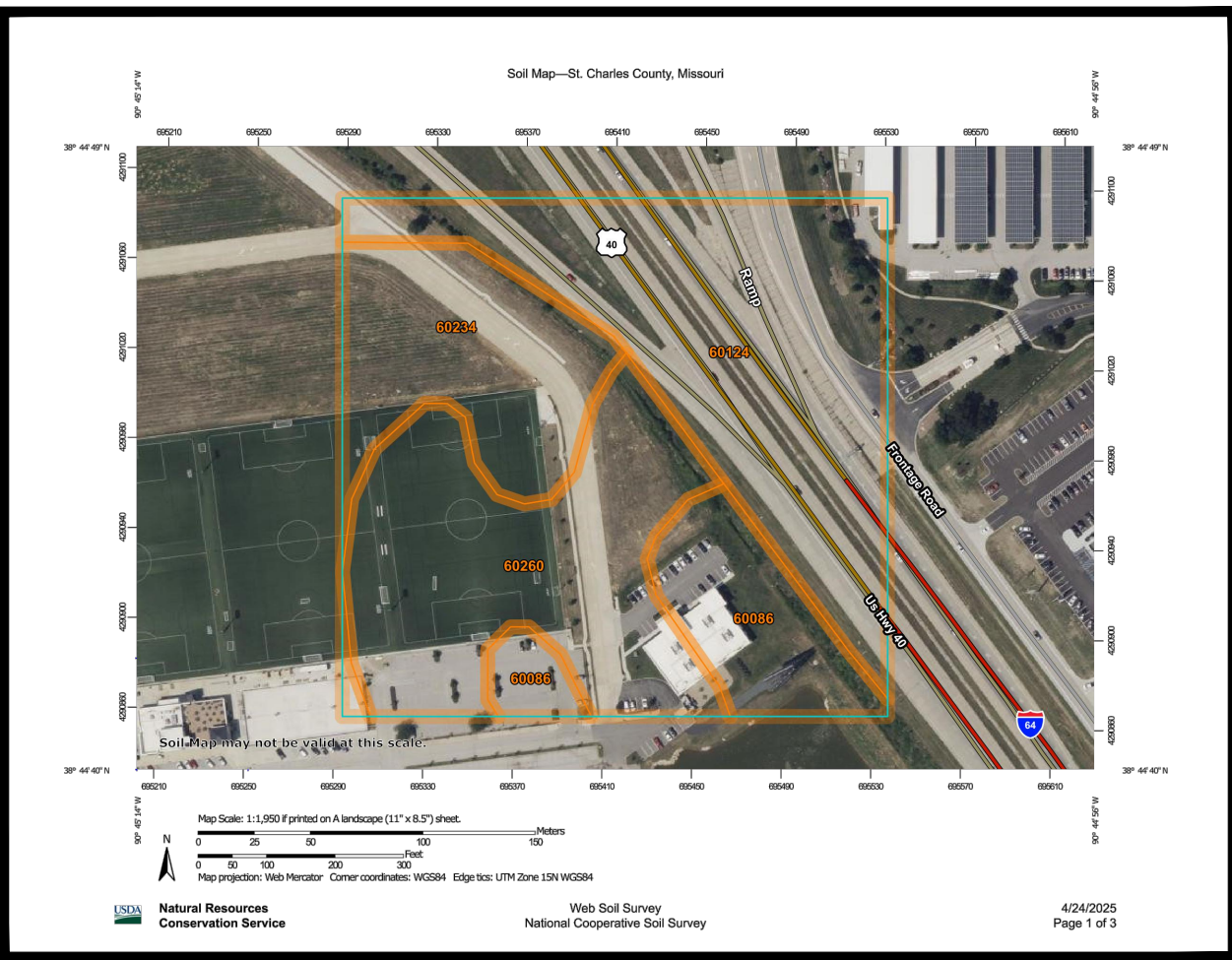
C6.1



LOCATION MAP
(NOT TO SCALE)



USGS MAP
(NOT TO SCALE)



SOILS MAP
(NOT TO SCALE)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
60086	Order silt loam, 9 to 14 percent slopes, eroded	1.8	13.0%
60124	Harvester-Urban land complex, 2 to 9 percent slopes	5.3	37.9%
60234	Weller silt loam, 2 to 5 percent slopes	2.6	18.4%
60260	Weller silt loam, 5 to 9 percent slopes	4.3	30.8%
Totals for Area of Interest		13.9	100.0%

SOILS MAP KEY
(NOT TO SCALE)

SWPPP CONTACT DATA

SITE ADDRESS	231 RUSH WAY O'FALLON, MO 63368
OWNER	CPTWO, LLC 17107 CHESTERFIELD AIRPORT RD. CHESTERFIELD, MO 63005
EMERGENCY CONTACT	TO BE DETERMINED
SITE OPERATOR	TO BE DETERMINED

SWPPP SEQUENCE

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE(S) AND SWPPP INFORMATION SIGN.
2. INSTALL SILT FENCE(S) ON THE SITE (CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL SILT FENCE).
3. PREPARE TEMPORARY PARKING AND STORAGE AREA.
4. HALT ALL ACTIVITIES AND OBTAIN ANY AND ALL REQUIRED INITIAL BMP INSPECTIONS BEFORE PROCEEDING WITH CONSTRUCTION.
5. CONSTRUCT AND STABILIZE ANY SEDIMENT BASIN(S) AND SEDIMENT TRAP(S) WITH APPROPRIATE OUTFALL STRUCTURES (CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL BASINS AND TRAPS).
6. INSTALL AND STABILIZE ANY HYDRAULIC CONTROL STRUCTURES (DIKES, SWALES, CHECK DAMS, ETC.).
7. BEGIN CLEARING AND GRUBBING THE SITE.
8. BEGIN GRADING THE SITE.
9. START CONSTRUCTION OF THE BUILDING PAD AND ACCESSORY STRUCTURES.
10. TEMPORARILY SEED, THROUGHOUT CONSTRUCTION, DENUDED AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE.
11. INSTALL BUILDING AND ACCESSORY STRUCTURES.
12. INSTALL PIPING, UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
13. INSTALL RIP RAP AROUND OUTLET STRUCTURES AS EACH OUTLET STRUCTURE IS INSTALLED.
14. INSTALL INLET PROTECTION AT ALL STORM SEWER STRUCTURES AS EACH INLET STRUCTURE IS INSTALLED.
15. PERMANENTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE BROUGHT TO FINAL GRADE.
16. PREPARE SITE FOR PAVING.
17. PAVE SITE.
18. INSTALL APPROPRIATE INLET PROTECTION DEVICES FOR PAVED AREAS AS WORK PROGRESSES.
19. COMPLETE GRADING AND INSTALL PERMANENT STABILIZATION OVER ALL AREAS.
20. OBTAIN CONCURRENCE FROM THE OWNER/DEVELOPER'S DESIGNATED REPRESENTATIVE (AS APPROPRIATE) THAT THE SITE HAS BEEN FULLY STABILIZED.
21. REMOVE ALL REMAINING TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES.
22. STABILIZE ANY AREAS DISTURBED BY THE REMOVAL OF BMP'S.
23. OBTAIN ANY AND ALL REQUIRED FINAL BMP INSPECTIONS.

SWPPP NOTES

1. THE STORMWATER POLLUTION PREVENTION PLAN IS COMPRISED OF THIS DRAWING ("SITE MAP"), THE STANDARD DETAILS, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
2. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
3. THE GENERAL CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
4. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. THE GENERAL CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
5. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.
6. THE GENERAL CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
7. THE GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES. CONTRACTOR SHALL CONSTRUCT TEMPORARY BERM ON DOWN STREAM SIDES IN COMPLIANCE WITH THIS SWPPP.
8. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
9. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
10. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
11. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
12. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS SITE MAP, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.
13. ALL DENUDED AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE MUST BE STABILIZED TEMPORARILY WITH THE USE OF FAST-GERMINATING ANNUAL GRASS/GRAIN VARIETIES, STRAW/HAY MULCH, WOOD CELLULOSE FIBERS, TACKIFIERS, NETTING OR BLANKETS AS SHOWN ON SITE MAP.
14. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY STABILIZED AS SHOWN ON THE PLANS. THESE AREAS SHALL BE SEEDED, SODDED, AND/OR VEGETATED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.
15. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OF MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. ONLY USE INGRESS/EGRESS LOCATIONS AS PROVIDED.
16. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
17. THE GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
18. ON-SITE & OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
19. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
20. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION AND SEDIMENT CONTROL MEASURES (SILT FENCES, ETC.) TO PREVENT EROSION AND POLLUTION DISCHARGE.
21. SEE SITE PLAN FOR PERMANENT AND TEMPORARY SIGNAGE.
22. GENERAL CONTRACTOR IS TO DESIGNATE/IDENTIFY AREAS ON THE SITE MAPS, INSIDE OF THE LIMITS OF DISTURBANCE, FOR WASTE DISPOSAL AND DELIVERY AND MATERIAL STORAGE.
23. REFER TO THE APPLICABLE NPDES PERMIT FOR REPORTABLE SPILL QUANTITIES OF PETROLEUM PRODUCTS AND/OR HAZARDOUS WASTES.
24. GENERAL CONTRACTOR TO LIMIT DISTURBANCE OF SITE IN STRICT ACCORDANCE WITH EROSION CONTROL SEQUENCING SHOWN ON THIS PLAN. NO UNNECESSARY OR IMPROPERLY SEQUENCED CLEARING AND/OR GRADING SHALL BE PERMITTED.
25. ALL CONSTRUCTION VEHICLES SHALL ENTER AND EXIT THE CONSTRUCTION SITE BY USING THE DESIGNATED ENTRANCE OVERLAID WITH GRAVEL.
26. NO CONSTRUCTION MATERIALS OR EQUIPMENT CAN BE STORED ON ADJACENT PROPERTIES.
27. NO COMBUSTIBLE RUBBISH SHALL ACCUMULATE ON THE CONSTRUCTION SITE. ALL COMBUSTIBLE RUBBISH MUST BE REMOVED DAILY AND SHALL NOT BE DISPOSED OF BY BURNING.
28. THE GENERAL CONTRACTOR SHALL MAINTAIN THE SILTATION CONTROL DEVICES SO AS TO PREVENT SILT FROM BYPASSING THEM AND DISTURBED AREAS SHALL BE BE ADEQUATELY RE-VEGETATED.
29. ALL GRADED AREAS SHALL BE PROTECTED FROM EROSION BY EROSION CONTROL DEVICES AND/OR SEEDING AND MULCHING. EROSION CONTROL SHALL NOT BE LIMITED TO WHAT IS SHOWN ON THE PLAN. WHATEVER MEANS NECESSARY SHALL BE TAKEN TO PREVENT SILTATION AND EROSION FROM ENTERING NATURAL STREAMS AND ADJACENT ROADWAYS, PROPERTIES AND DITCHES.
30. WHEN GRADING OPERATIONS ARE COMPLETED OR SUSPENDED FOR MORE THAN 30 DAYS, PERMANENT GRASS MUST BE ESTABLISHED AT SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON THE SITE. BETWEEN PERMANENT GRASS SEEDING PERIODS, TEMPORARY COVER SHALL BE PROVIDED.
31. IF WATER IS NOT AVAILABLE FOR CONSTRUCTION WASHDOWN AREA, A WATER TRUCK WILL BE PROVIDED.

BMP MAINTENANCE NOTES

ALL MEASURES STATED ON THIS SITE MAP, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.
2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEED AS NEEDED.
3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AREA AS CONDITIONS DEMAND.
6. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY AS BEEN REDUCED BY 50%.
7. PRIOR TO LEAVING THE SITE, ALL VEHICLES SHALL BE CLEANED OF DEBRIS, ANY DEBRIS AND/OR SEDIMENT REACHING THE PUBLIC STREET SHALL BE CLEANED IMMEDIATELY BY A METHOD OTHER THAN FLUSHING.

DEVELOPER/OWNER:
CPTWO, LLC
17107 CHESTERFIELD AIRPORT RD.
SUITE 210
CHESTERFIELD, MO 63005

THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON HAS ASSUMED RESPONSIBILITY FOR THE PREPARATION OF THIS SWPPP. THIS SWPPP WAS PREPARED IN ACCORDANCE WITH THE NPDES PERMIT AND THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

DATE

NO

REVISION DESCRIPTION

STATE OF MISSOURI
LINDSEY FAYE DIXEMPER
REGISTERED PROFESSIONAL ENGINEER
CORPORATE ENGINEERING
CERTIFICATE #001165

17107 CHESTERFIELD AIRPORT RD.
SUITE 210
CHESTERFIELD, MO 63005

CALEDONIA LOT 3A
231 RUSH WAY
O'FALLON, MO 63368

ST. CHARLES
1303 5th Street
St. Charles, MO 63303
636.978.7508 tel
www.coledesign.com

COLE
CIVIL ENGINEERING / SURVEYING / PLANNING / LANDSCAPE ARCHITECTURE
Civil & Architectural, Inc. is a Missouri Corporation and a State of Missouri Registered Professional Engineer and a State of Missouri Registered Professional Surveyor.

DESIGN/CALC BY
MRS

DRAWN BY
MRS

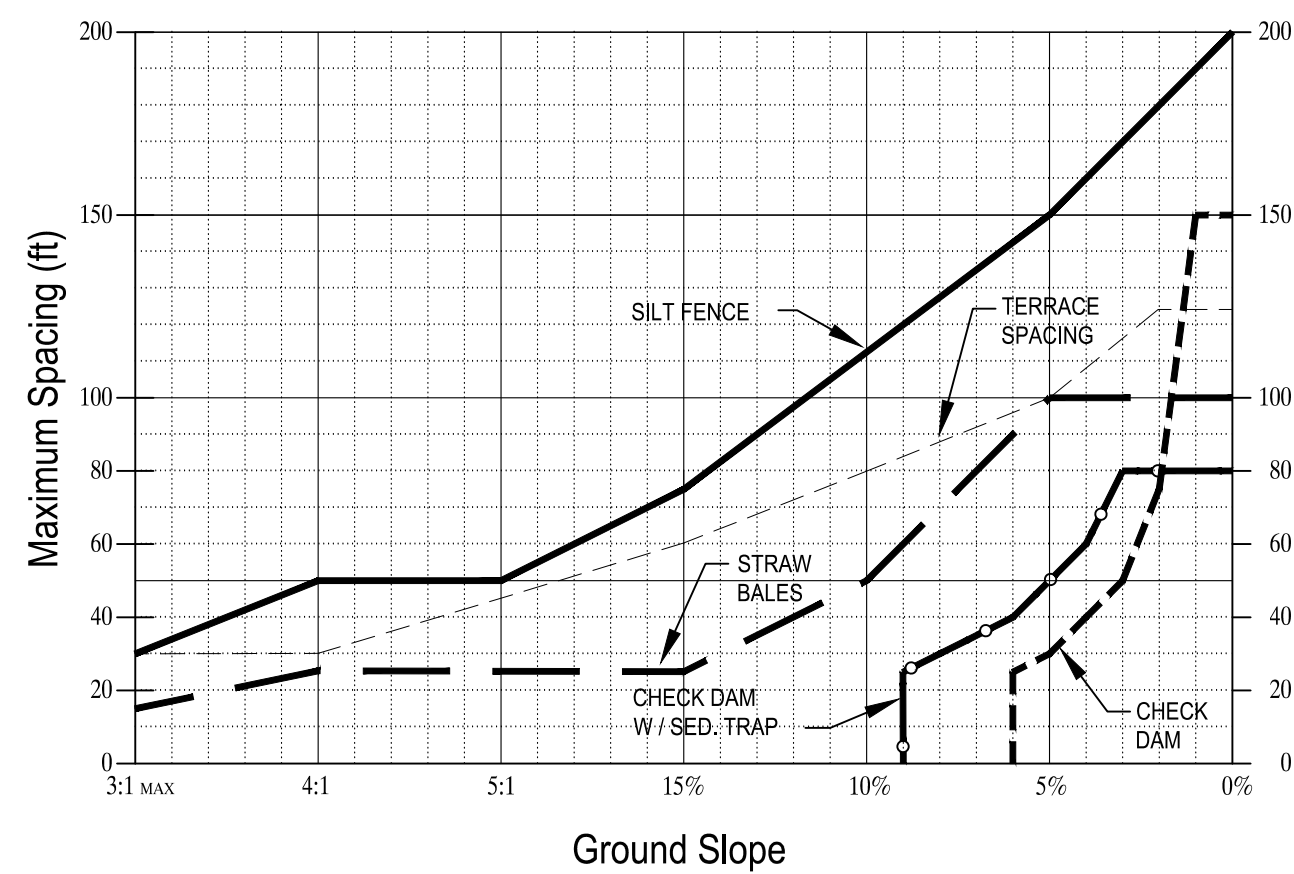
CHECKED BY
LFD

DRAWING SCALE
AS SHOWN

DATE
09/16/2025

Job Number
24-0089

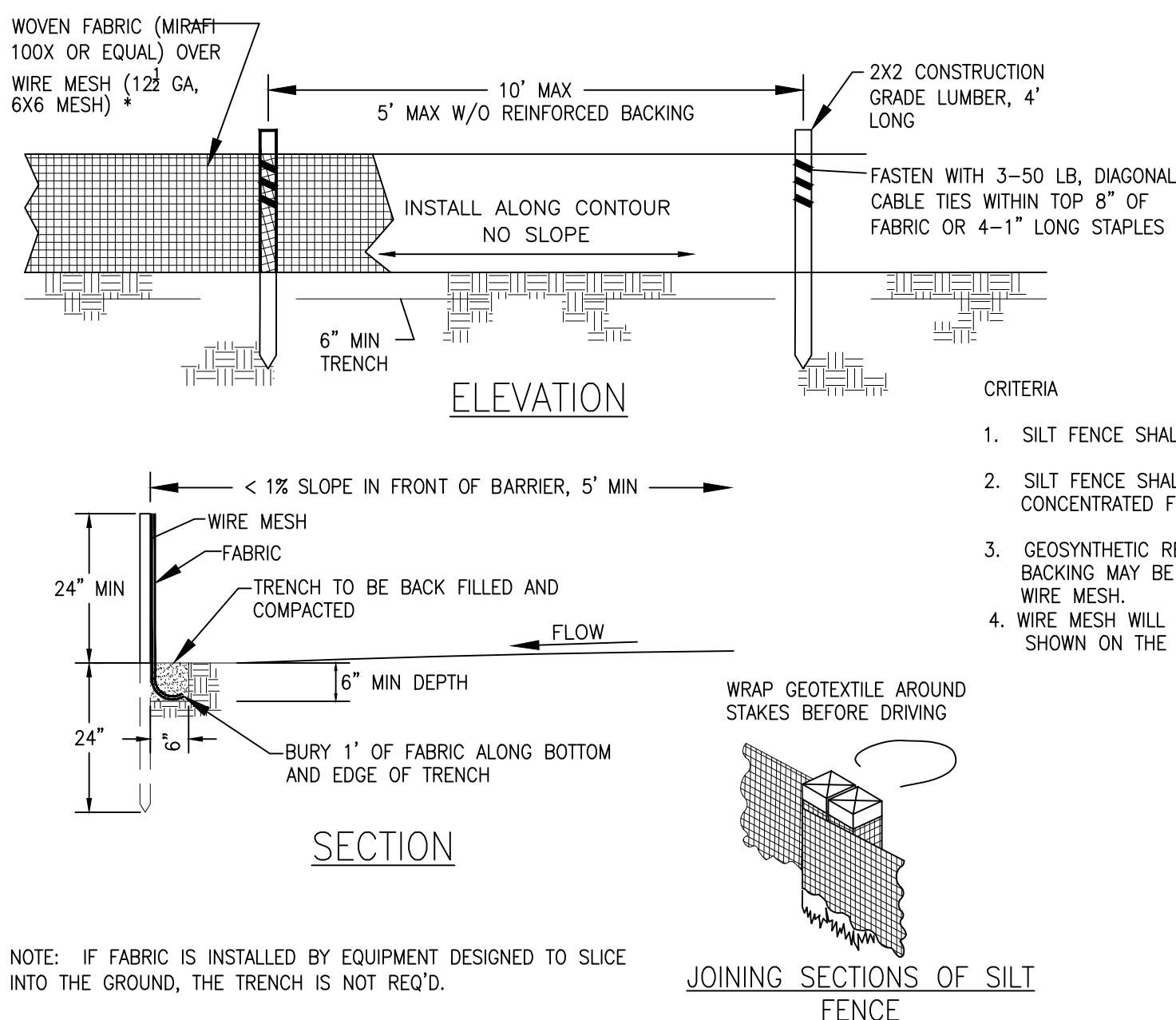
Sheet Number
C7.1



- DESIGN CRITERIA**
1. SILT FENCE FOR SHEET FLOW SHALL HAVE A MAXIMUM DRAINAGE AREA OF 1/4 ACRE PER 100 LF.
 2. STRAW BALE BARRIERS FOR SHEET FLOW SHALL HAVE A MAXIMUM DRAINAGE AREA OF 1/4 ACRE PER 100 LF.
 3. REFER TO INDIVIDUAL ESC FIGURE FOR INSTALLATION.
 4. TERRACING INCLUDES LOGS, WATTLES & FILTER SOCKS.

CITY OF O'FALLON
ENGINEERING DEPARTMENT
O'FALLON, MISSOURI

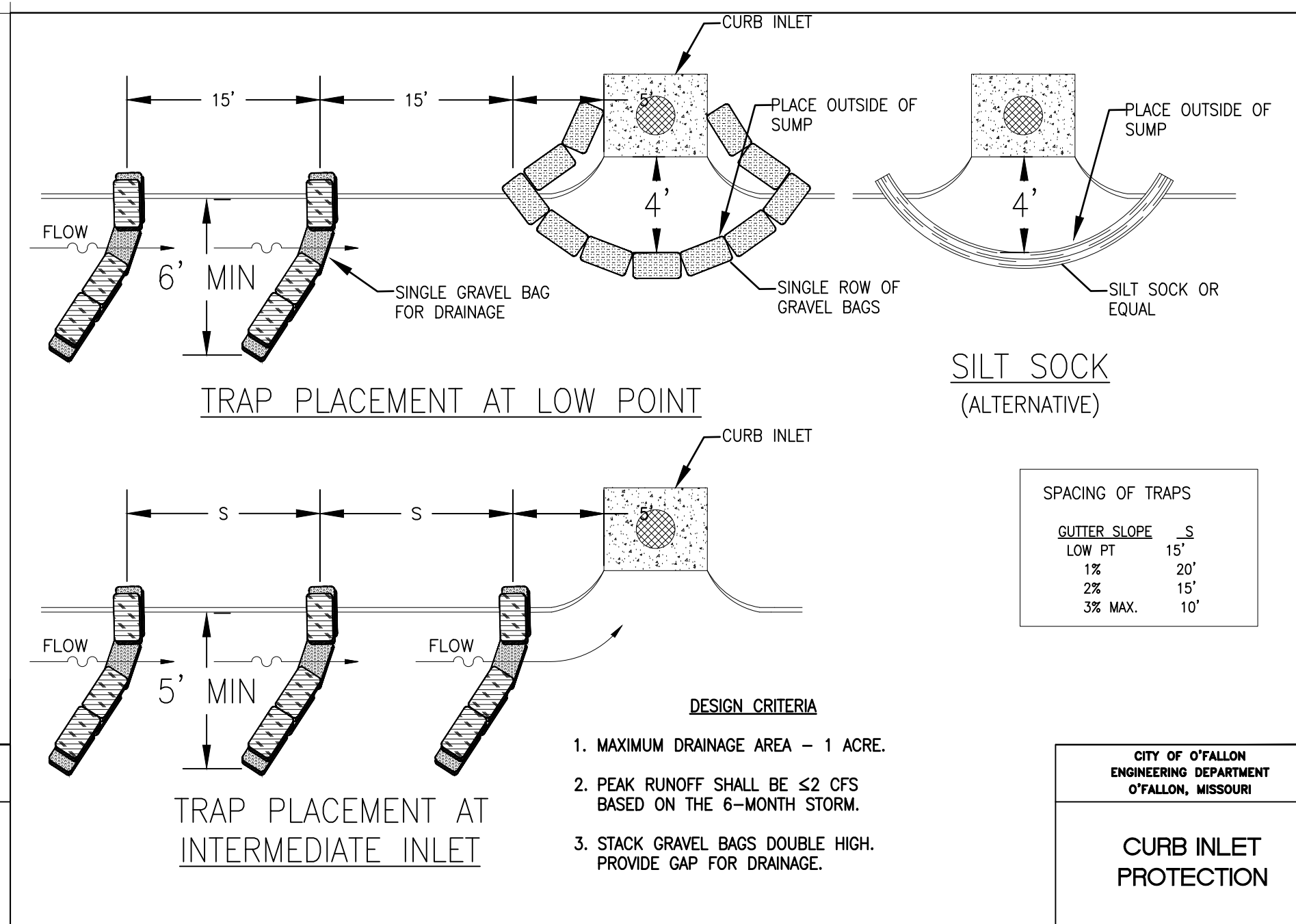
**SPACING CHART
FOR ESC DEVICES**



- CRITERIA**
1. SILT FENCE SHALL BE 24 INCHES HIGH.
 2. SILT FENCE SHALL NOT BE USED FOR CONCENTRATED FLOWS.
 3. GEOSYNTHETIC REINFORCED SILT FENCE BACKING MAY BE USED IN LIEU OF WIRE MESH.
 4. WIRE MESH WILL BE USED AT LOCATIONS SHOWN ON THE APPROVED SWPPP.

CITY OF O'FALLON
ENGINEERING DEPARTMENT
O'FALLON, MISSOURI

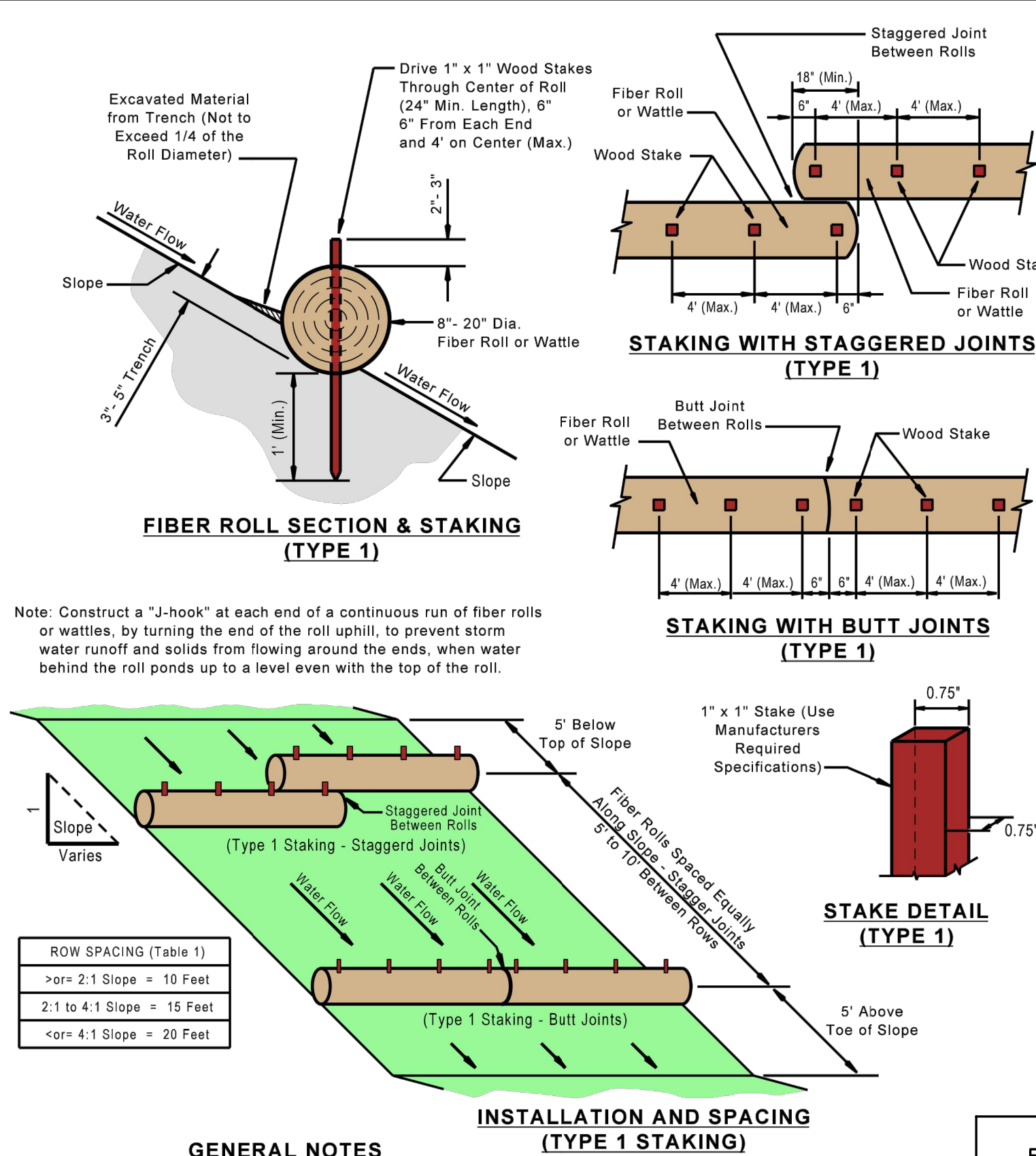
**SILT FENCE INSTALLATION
SHEET FLOW (ONLY)**



- DESIGN CRITERIA**
1. MAXIMUM DRAINAGE AREA - 1 ACRE.
 2. PEAK RUNOFF SHALL BE <2 CFS BASED ON THE 6-MONTH STORM.
 3. STACK GRAVEL BAGS DOUBLE HIGH. PROVIDE GAP FOR DRAINAGE.

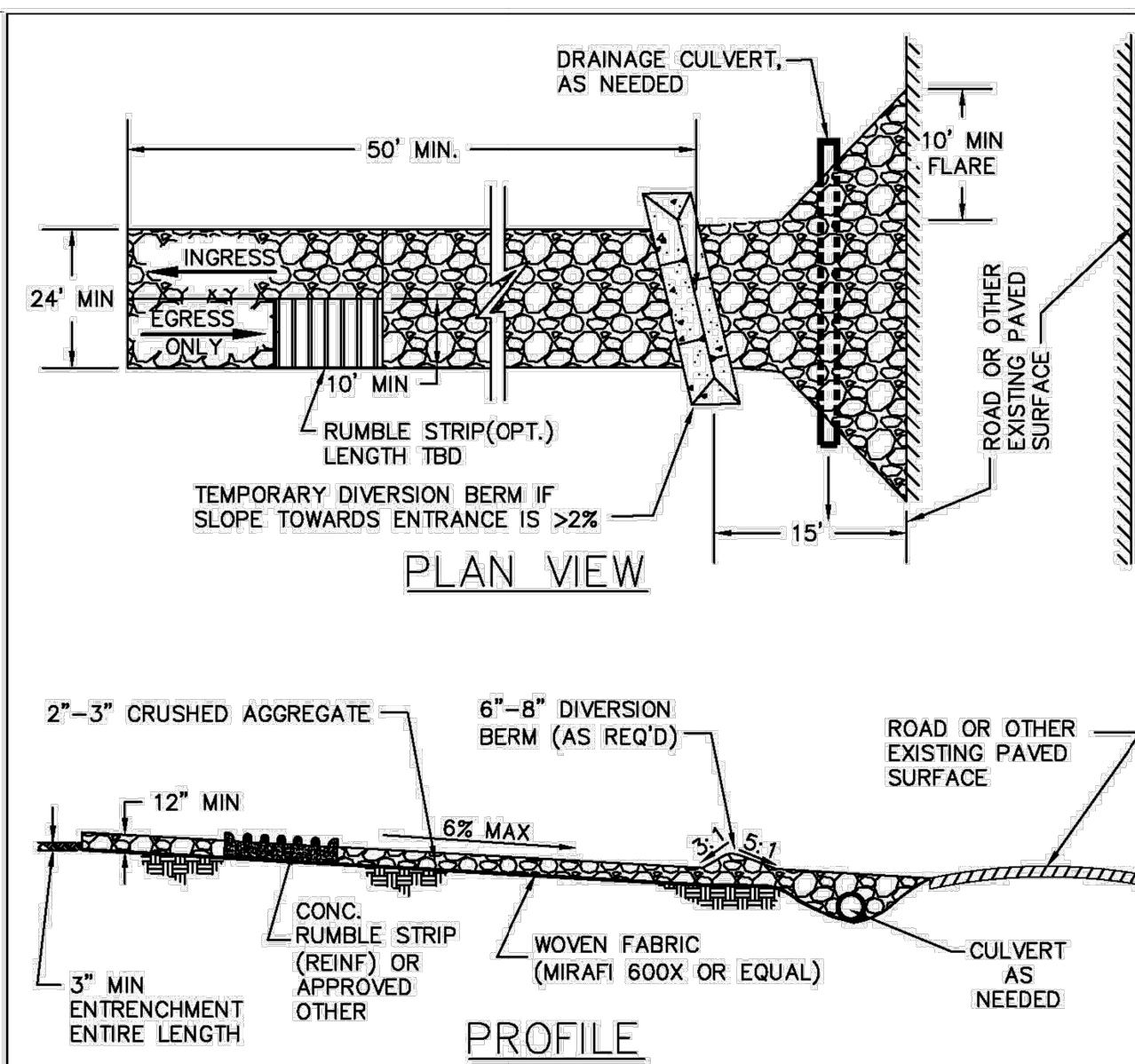
CITY OF O'FALLON
ENGINEERING DEPARTMENT
O'FALLON, MISSOURI

**CURB INLET
PROTECTION**

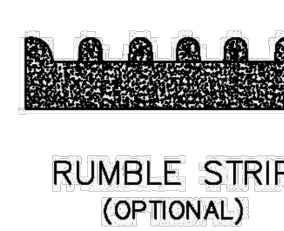


- GENERAL NOTES**
- 1) Do not scale drawing, follow dimensions.
 - 2) Row spacing for slope installations should be determined by site conditions such as slope gradient and soil type (see Table 1 for row spacing).
 - 3) Installations as shown above are designed for slopes of 1:10 and steeper.
 - 4) Netting, filter sock or outer cover of rolls must be constructed of photodegradable or biodegradable material.
 - 5) Fiber Rolls and Wattles shall contain straw, flax, coconut fiber (coir), rice straw or aspen excelsior, in a tight tubular roll, specifically designed for removal of solids from storm water runoff. Fill material must be biodegradable and contain no chemical additives.
 - 6) Fiber Rolls or Wattles may be weighted for use around street inlets (internal roll weight or by placing a weight, such as a concrete block, on the down stream side of the roll). Weight must not be placed on top of the roll, smashing or flattening the roll.
 - 7) Follow the roll manufacturers instructions and recommendations for the sizing, installation and maintenance of all Fiber Rolls or Wattles.

NOTE: IF WATER IS NOT AVAILABLE FOR WASHDOWN AREA, A WATER TRUCK WILL BE PROVIDED.



NOTE: A SPECIAL USE PERMIT IS REQ'D FOR THE ENTRANCE.

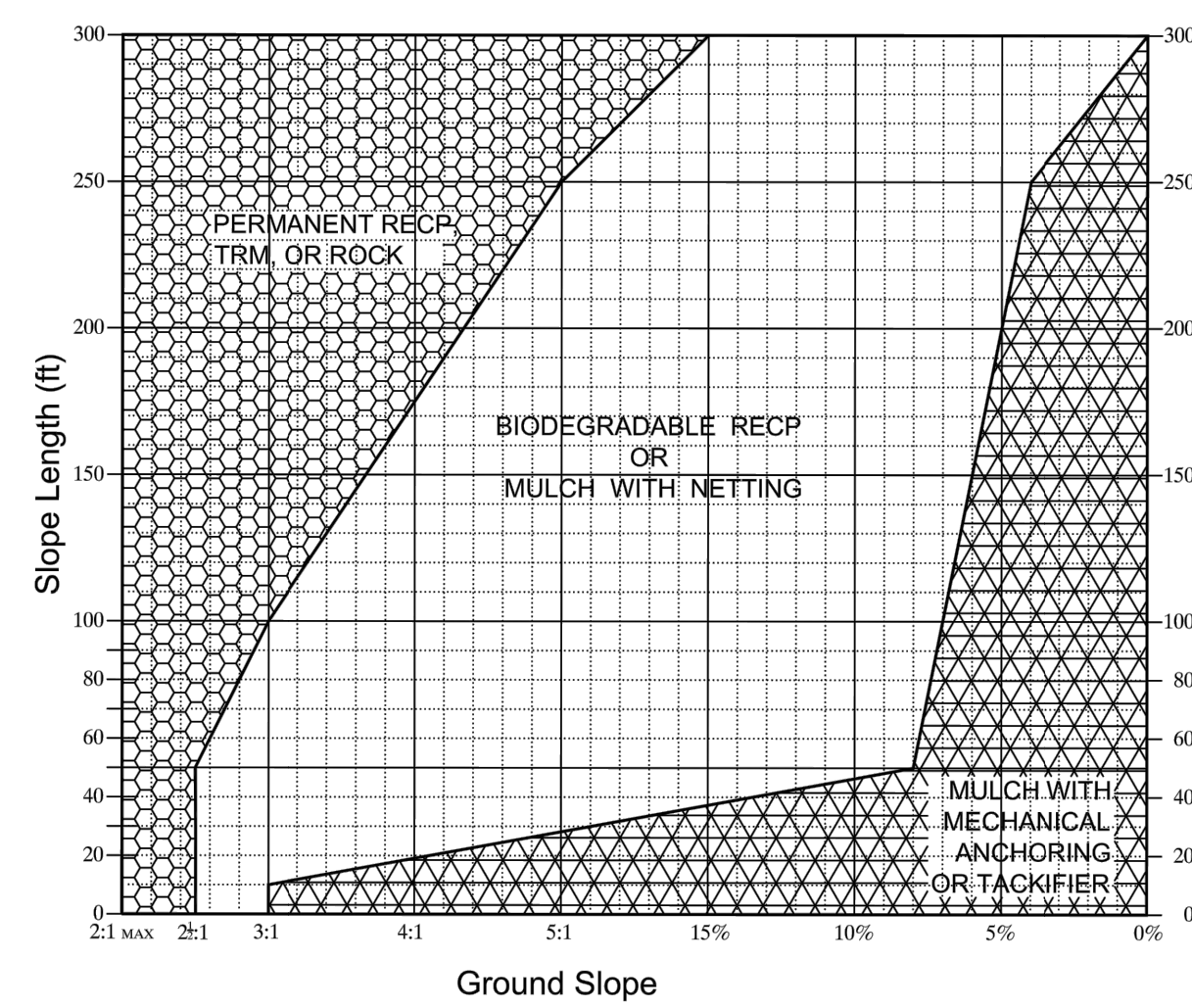


- DESIGN NOTES**
1. DIVERT ALL RUNOFF TO A SEDIMENTATION CONTROL DEVICE.
 2. PROVIDE WATER SUPPLY FOR WASHDOWN.

**St. Charles County
Erosion & Sediment Controls
Standard Drawings**

**CONSTRUCTION
TRAFFIC WASH-OFF
PAD**

DATE: **APRIL 2008** DRAWING: **ESC-4**

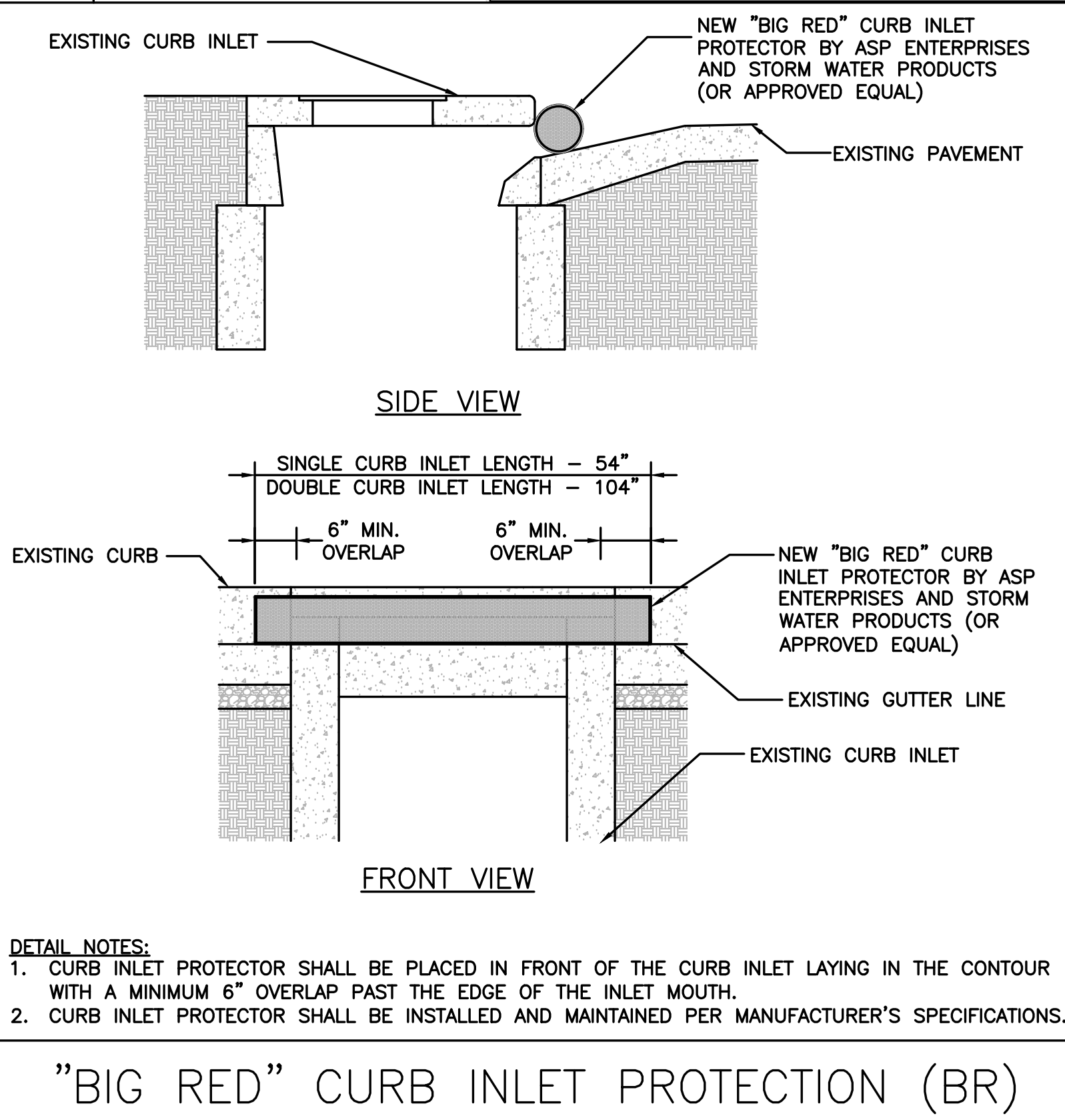


- NOTES**
1. REFER TO DESIGN MANUAL FOR APPLICATION RATES.
 2. DUE TO THE DIFFERENT PRODUCTS ON THE MARKET, CONTRACTOR MUST SUBMIT MANUFACTURER SPECIFICATIONS ON APPLICATION RATE AND PROCEDURES.

**St. Charles County
Erosion & Sediment Controls
Standard Drawings**

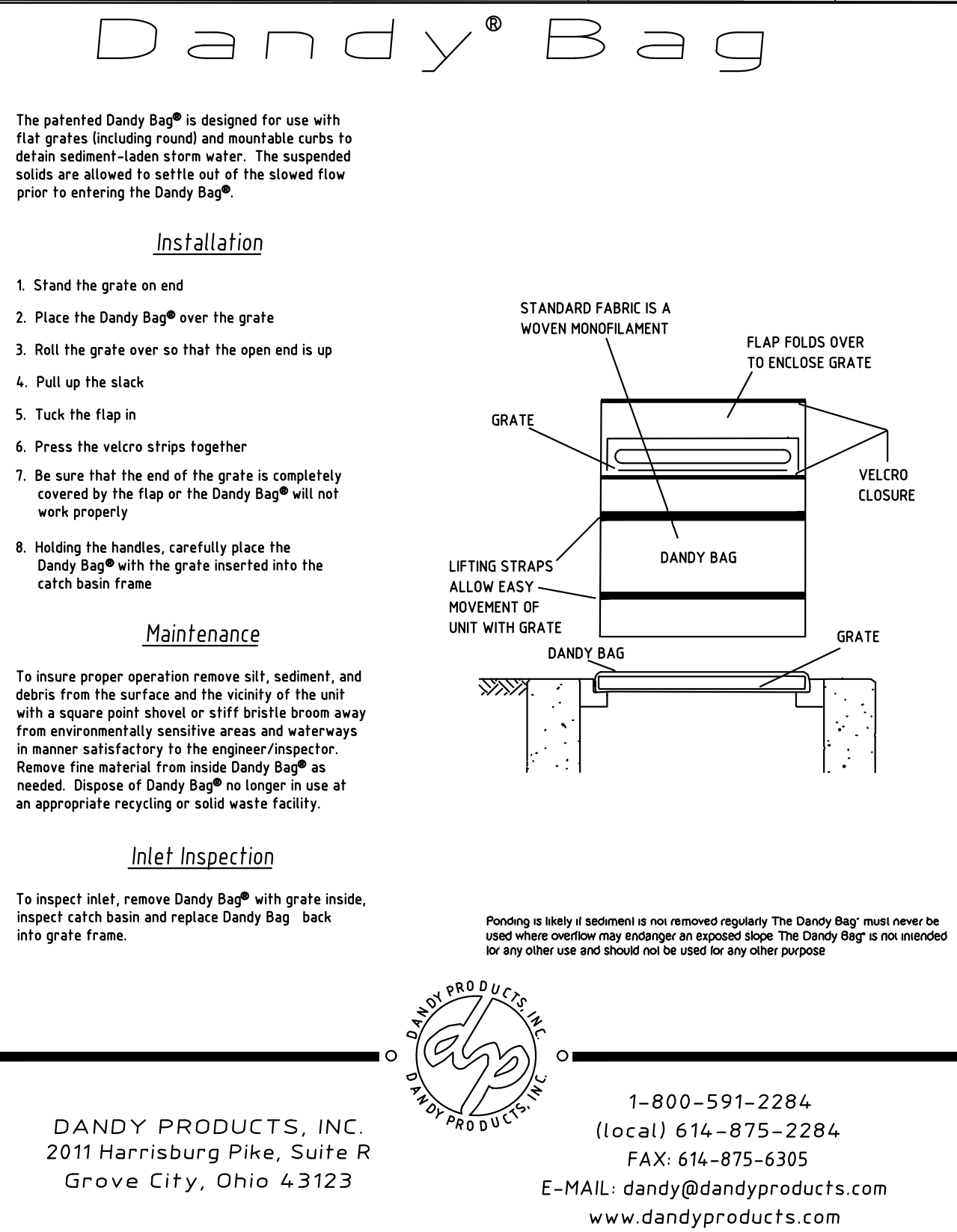
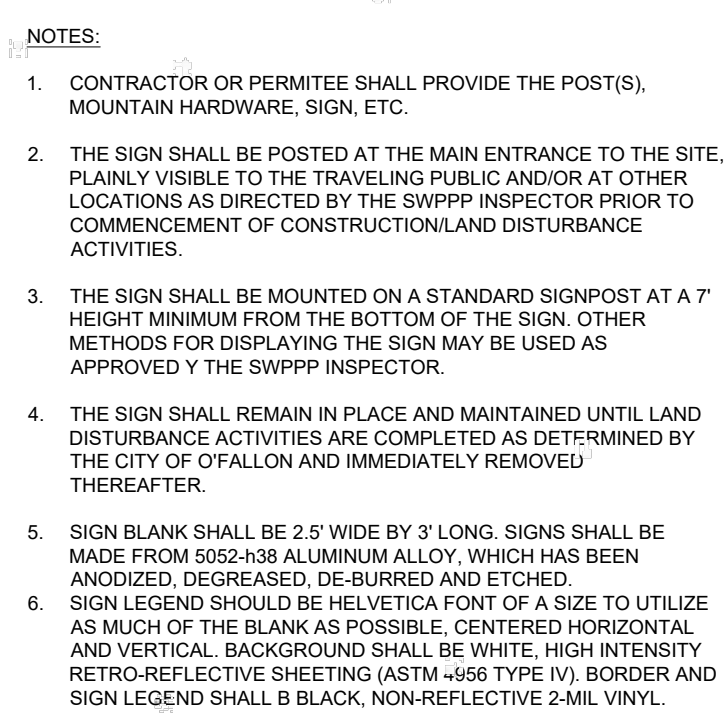
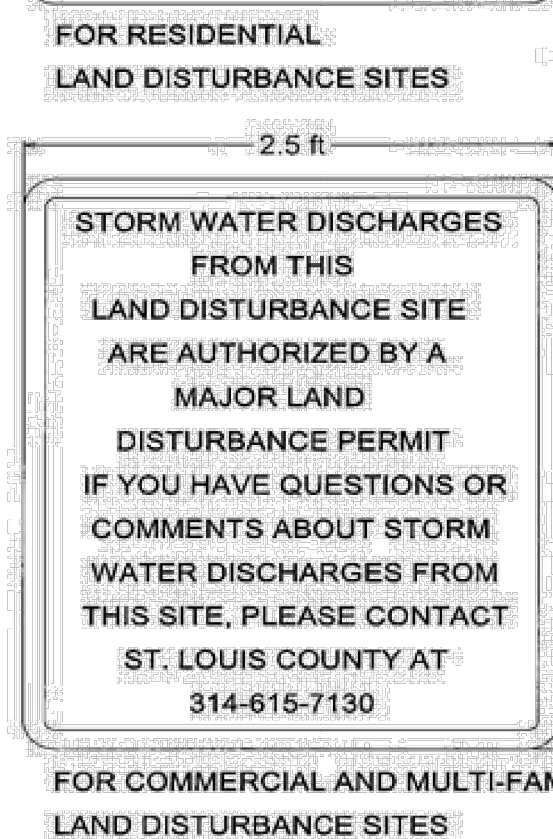
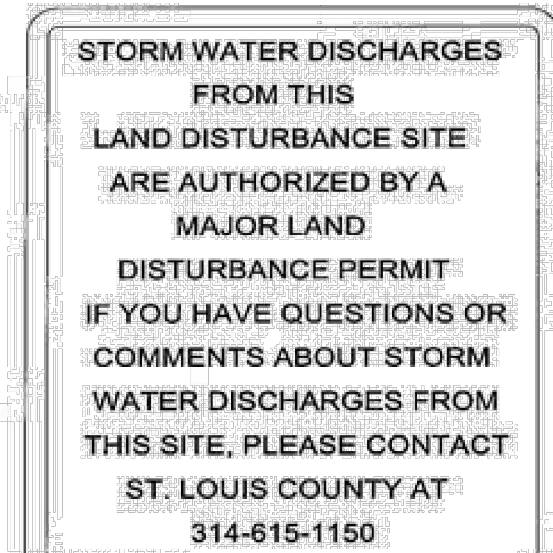
**SURFACE
STABILIZATION CHART
FOR SHEET FLOW**

DATE: **MAY 2005** DRAWING: **ESC-3**



"BIG RED" CURB INLET PROTECTION (BR)

PUBLIC NOTIFICATION SIGNS



DEVELOPER/OWNER:
CPTWQ, LLC
1707 CHESTERFIELD AIRPORT RD.
SUITE 210
CHESTERFIELD, MO 63005

LINDSEY FAYE DICKEMPER
CIVIL ENGINEER
PC-2024026198
CORPORATE
ENGINEERING
CERTIFICATE #001165

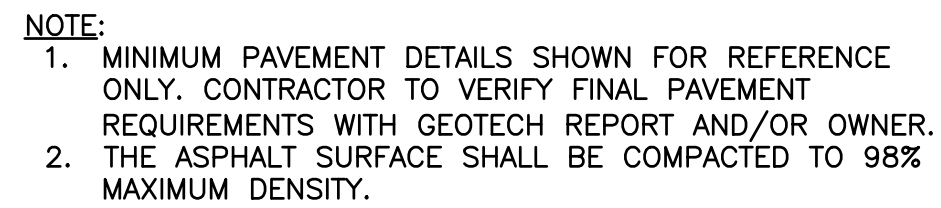
CALEDONIA LOT 3A
231 RUSH WAY
O'FALLON, MO 63368

+ ST. CHARLES
3200 South Street
St. Charles, MO 63303
636.978.7508 tel
www.colistm.com
CIVIL ENGINEERING / SURVEYING / PLANNING / LANDSCAPE ARCHITECTURE
Caledonia Lot 3A is a portion of the Caledonia Lot 3A, which is located in the City of St. Charles, Missouri. The Caledonia Lot 3A is a portion of the Caledonia Lot 3A, which is located in the City of St. Charles, Missouri.

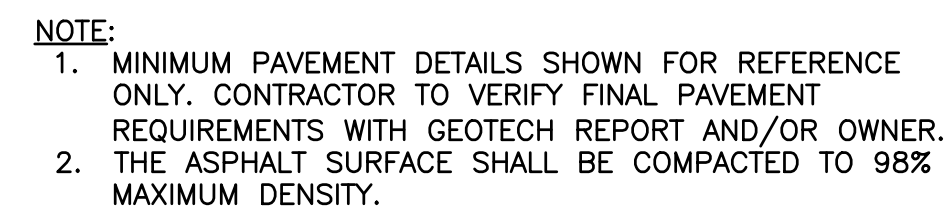
DESIGN/CALC BY: MRS
DRAWN BY: MRS
CHECKED BY: LFD
DRAWING SCALE: AS SHOWN
DATE: 09/16/2025
Job Number: 24-0089
Sheet Number: C7.2



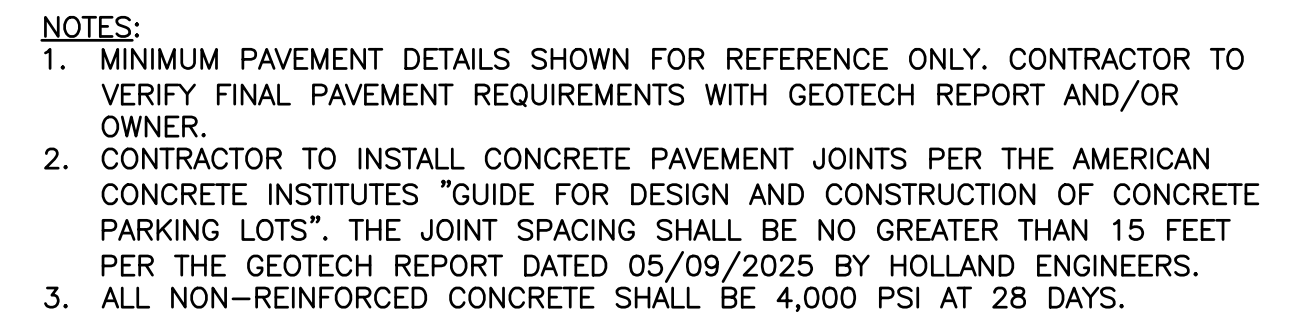
SCALE: N.T.S. **REF. DWG.** C4.0



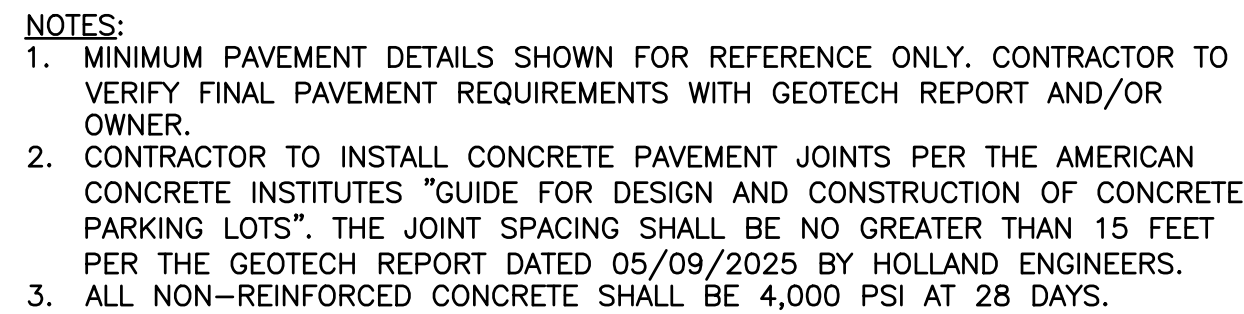
SCALE: N.T.S. REF. DWG. C2.0



SCALE: N.T.S. REF. DWG. C2.0



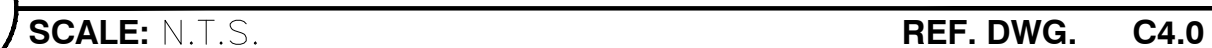
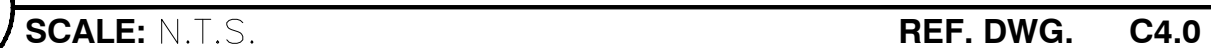
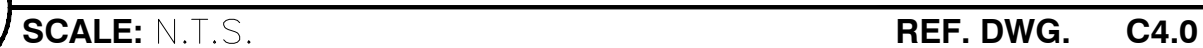
SCALE: N.T.S. **REF. DWG.** C2.0



SCALE: N.T.S. REF. DWG. C2.0

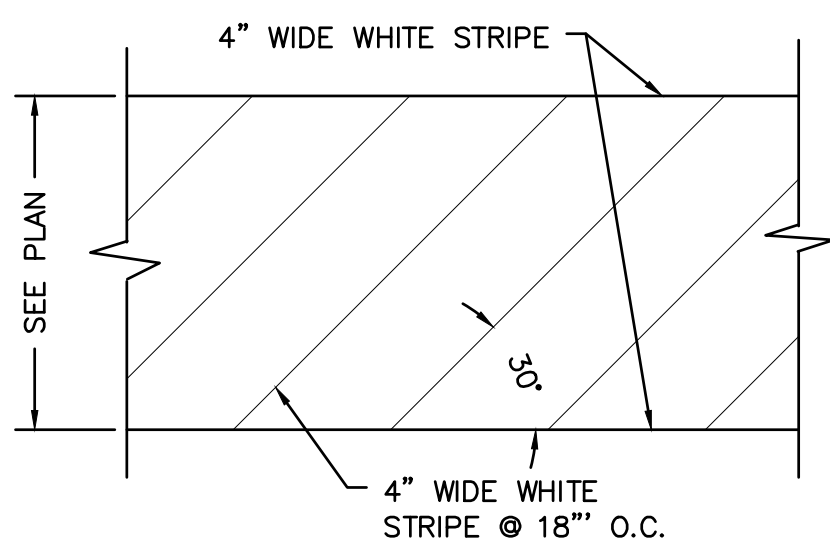


SCALE: N.T.S. REF. DWG. C4.0

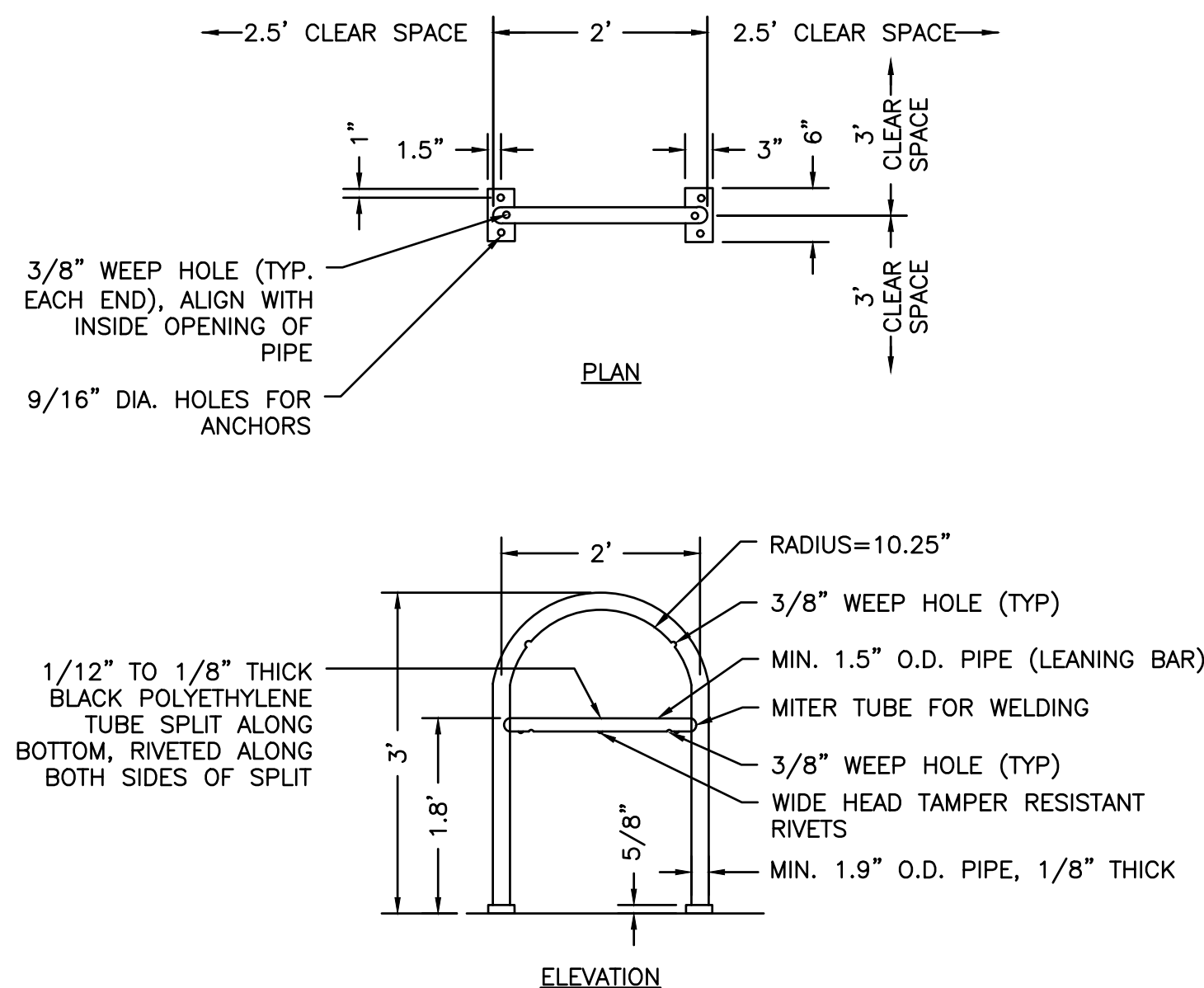


SCALE: N.T.S. REF. DWG. C4.0

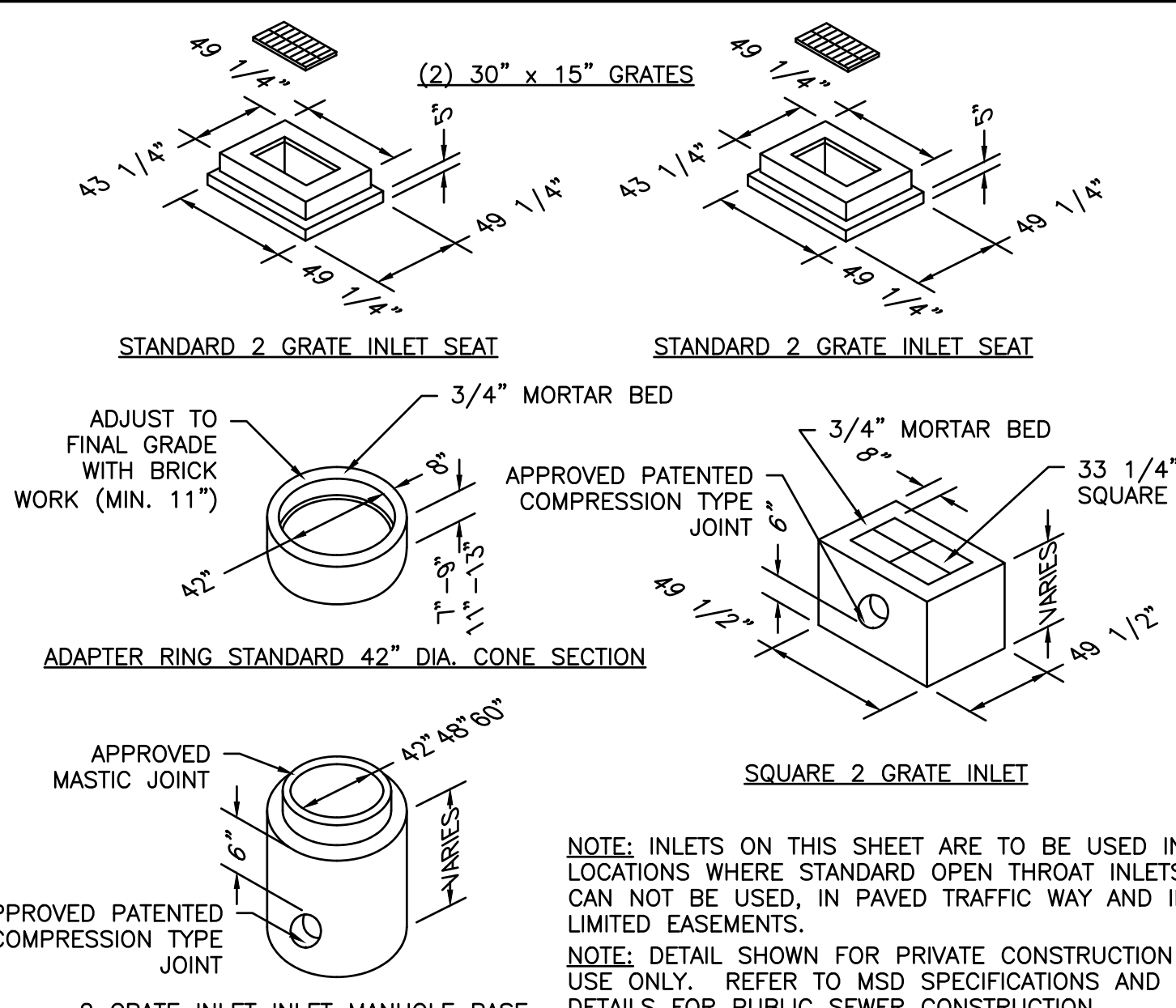
C8.0



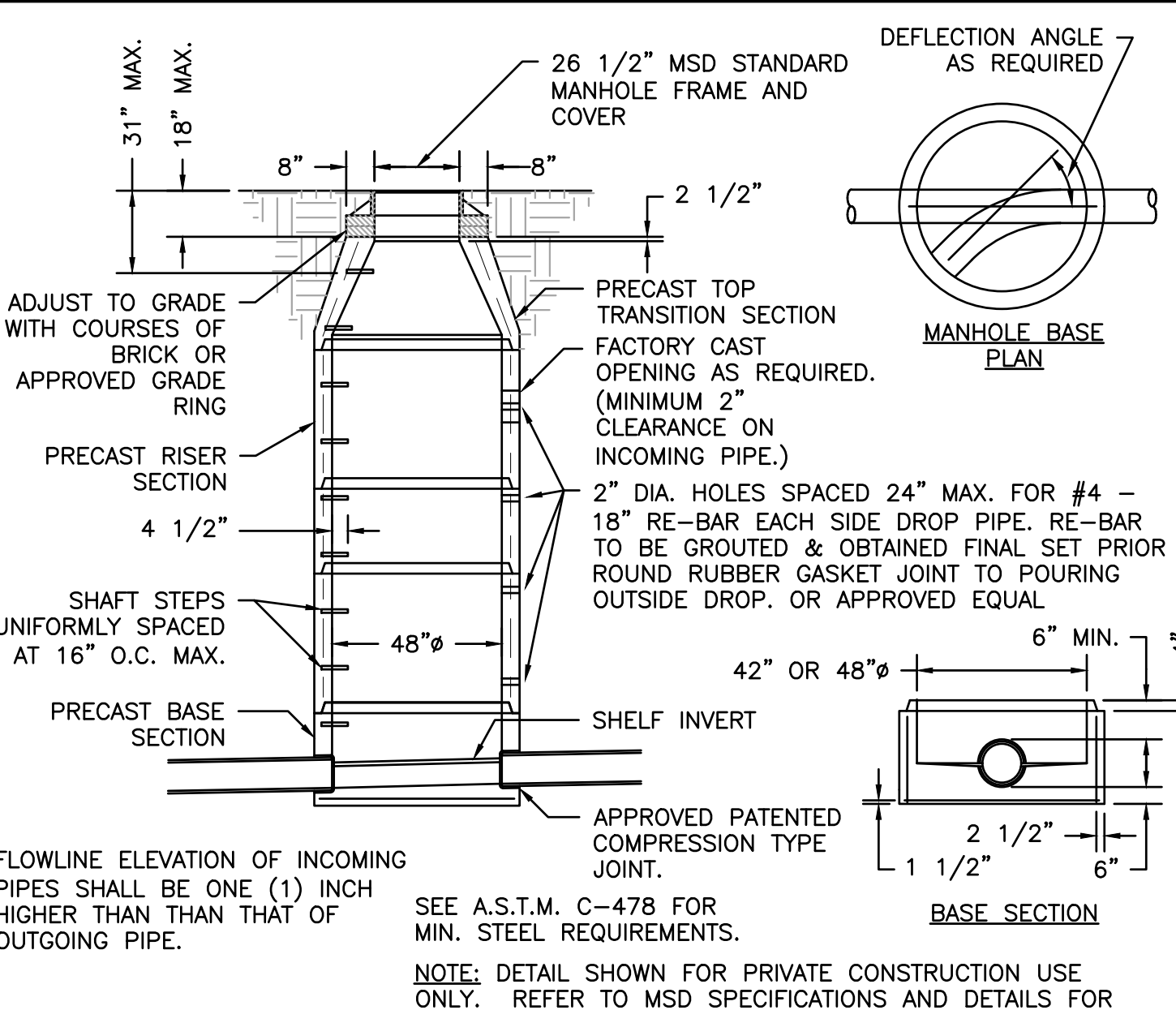
1 CROSS WALK DETAIL
SCALE: N.T.S. REF. DWG. C4.0



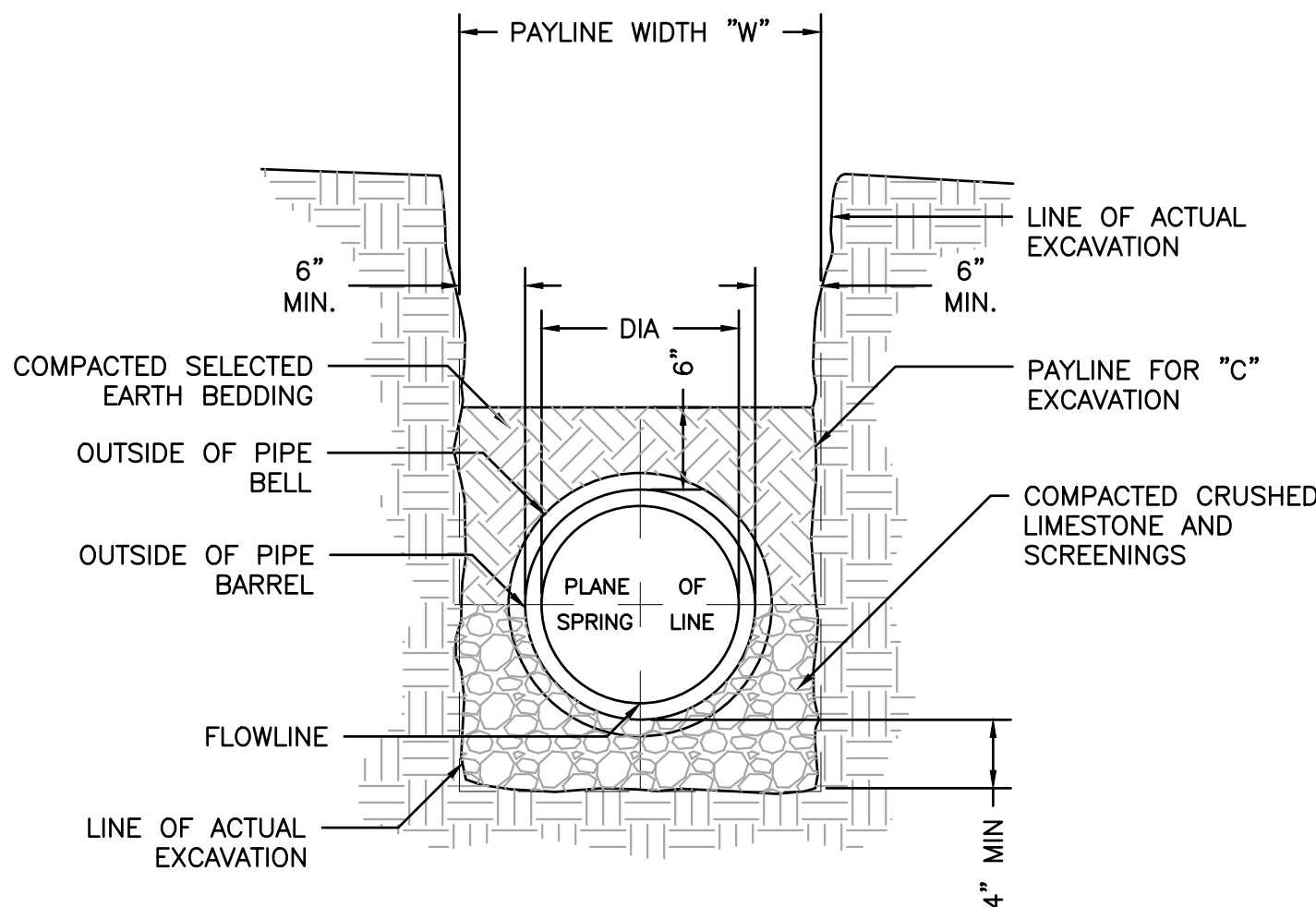
2 BIKE RACK DETAIL
SCALE: N.T.S. REF. DWG. C4.0



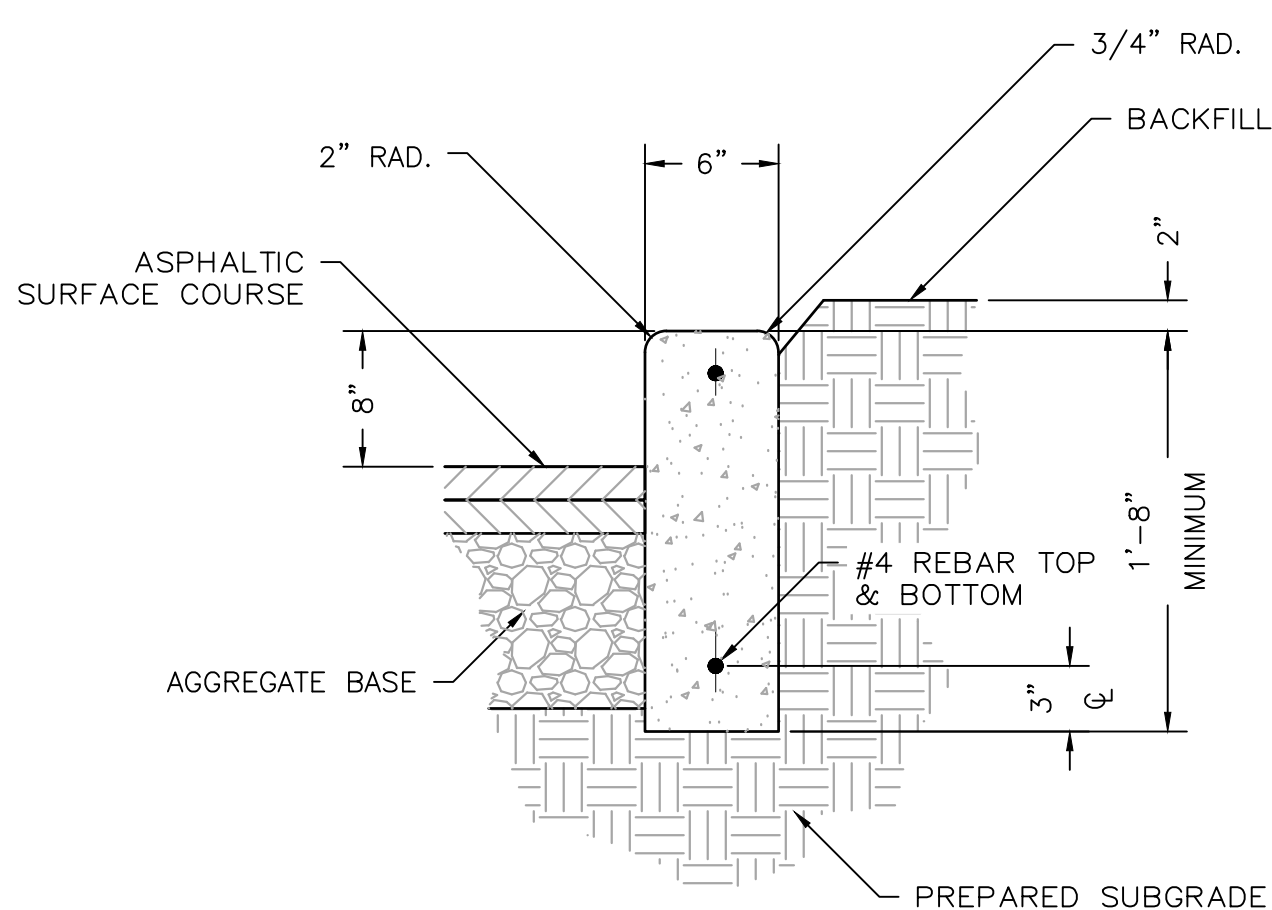
3 TWO GRATE INLET DETAIL
SCALE: N.T.S. REF. DWG. C6.0



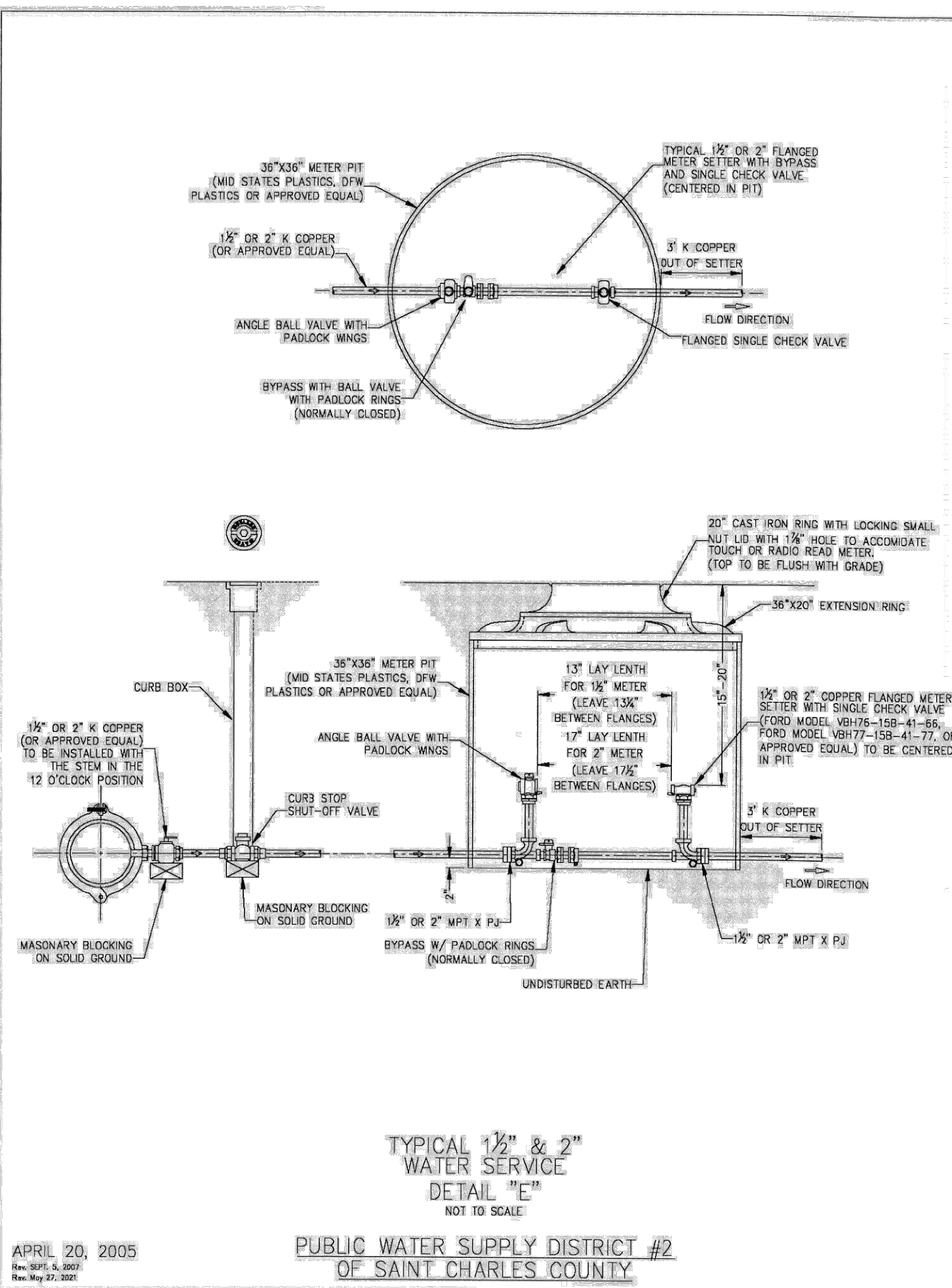
4 48" MANHOLE DETAIL
SCALE: N.T.S. REF. DWG. C6.0



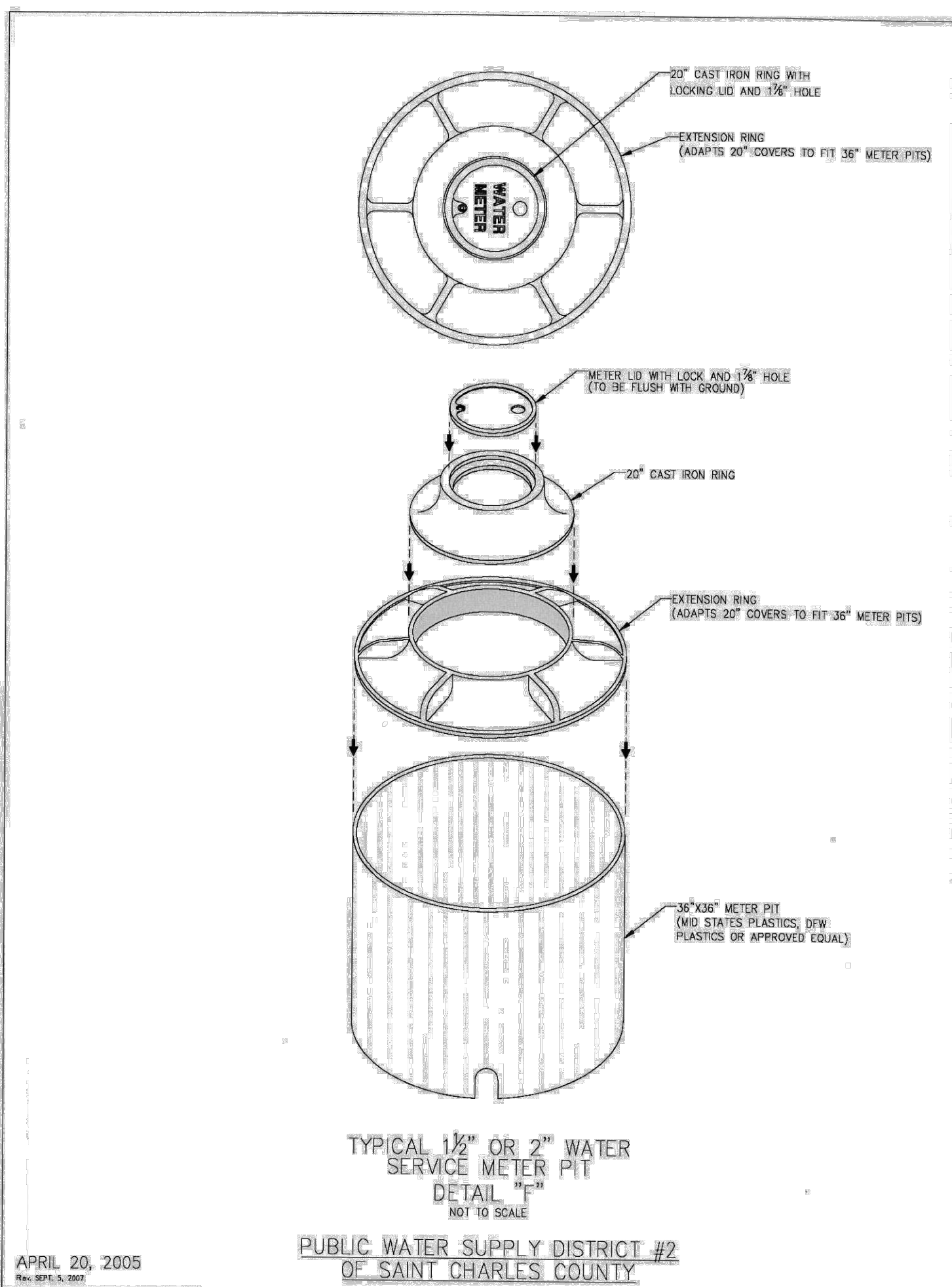
5 RCP PIPE BEDDING DETAIL
SCALE: N.T.S. REF. DWG. C6.0



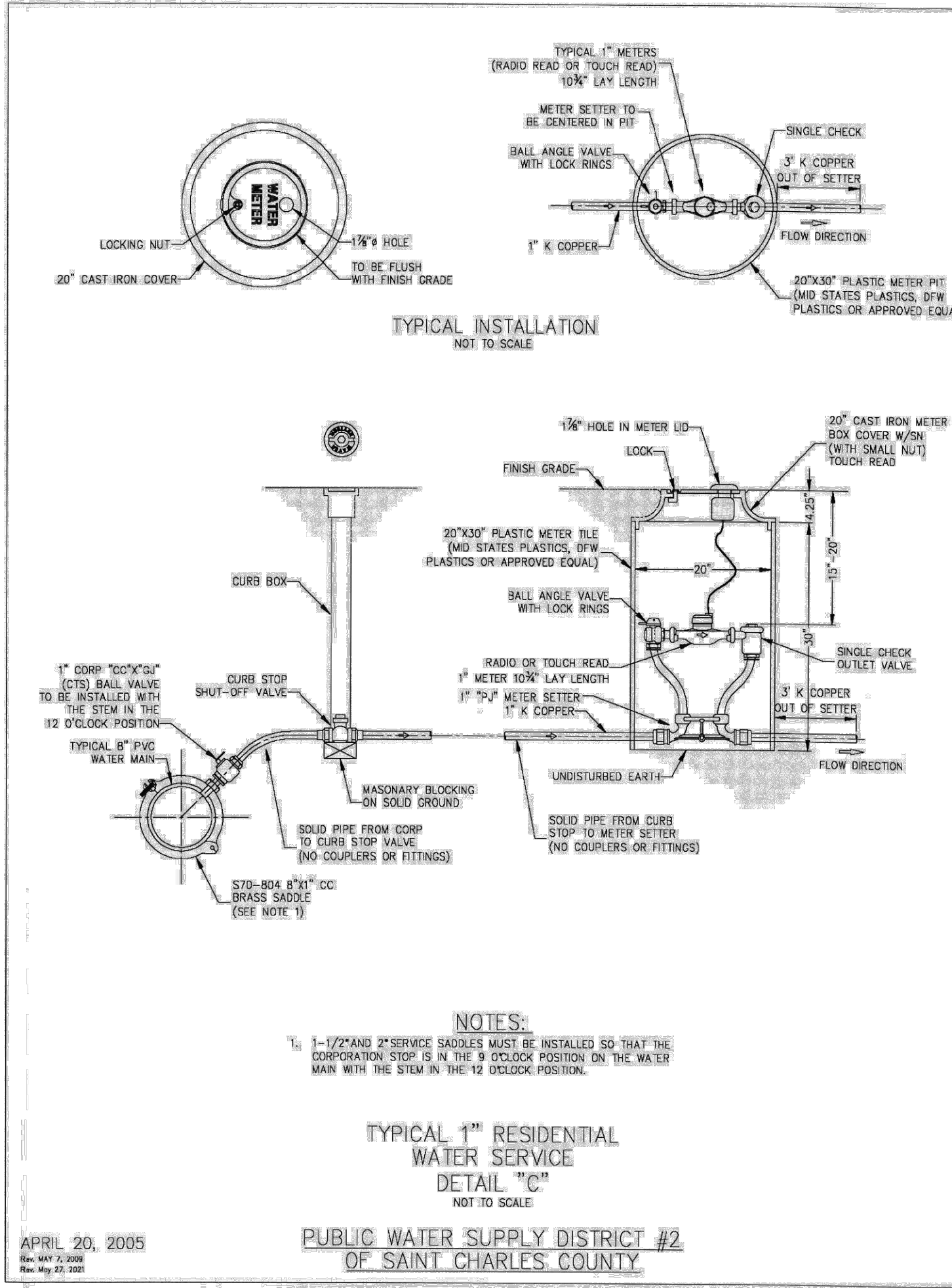
6 8" VERTICAL CONCRETE CURB DETAIL
SCALE: N.T.S. REF. DWG. C4.0



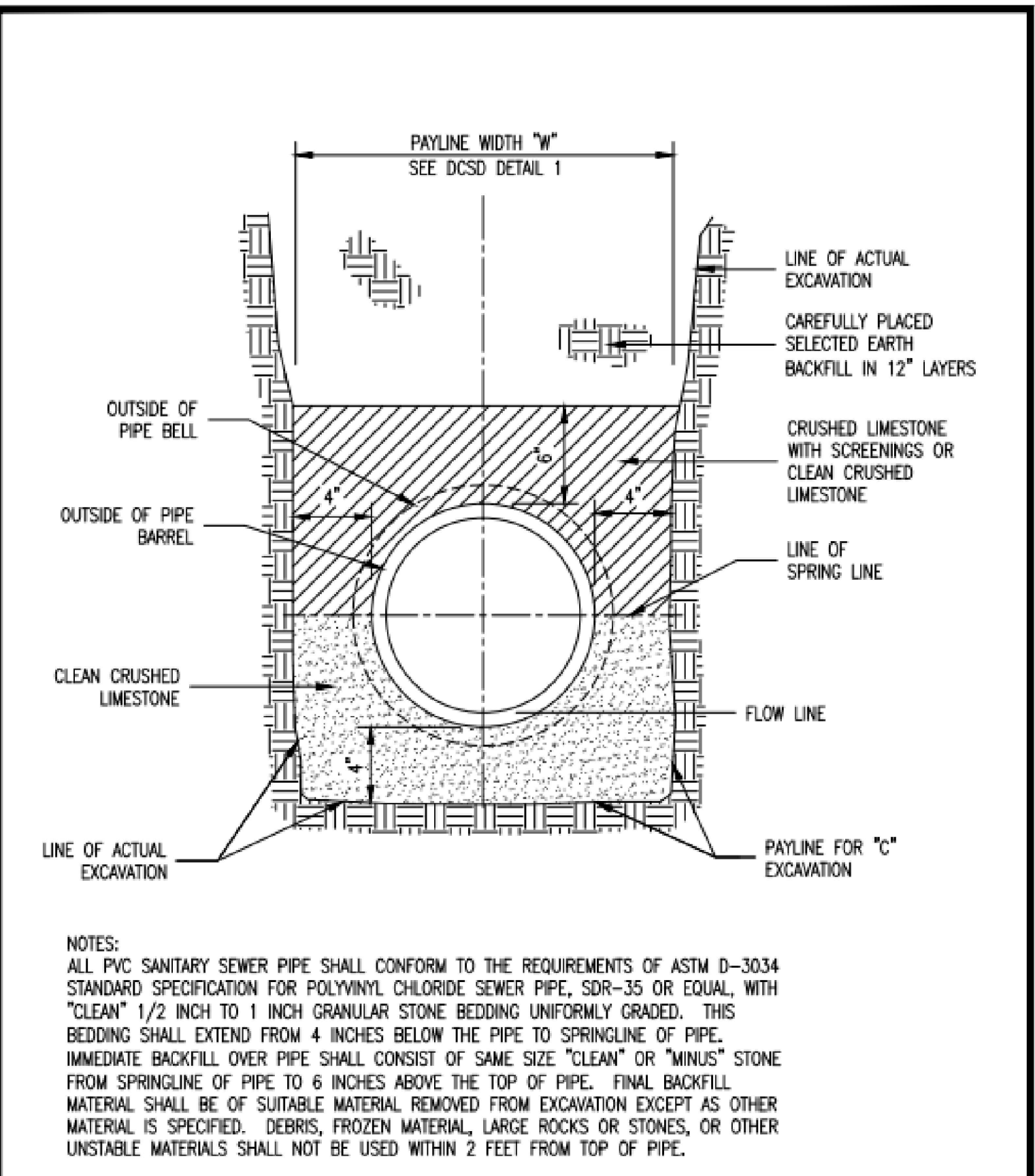
PUBLIC WATER SUPPLY DISTRICT #2
OF SAINT CHARLES COUNTY



PUBLIC WATER SUPPLY DISTRICT #2
OF SAINT CHARLES COUNTY

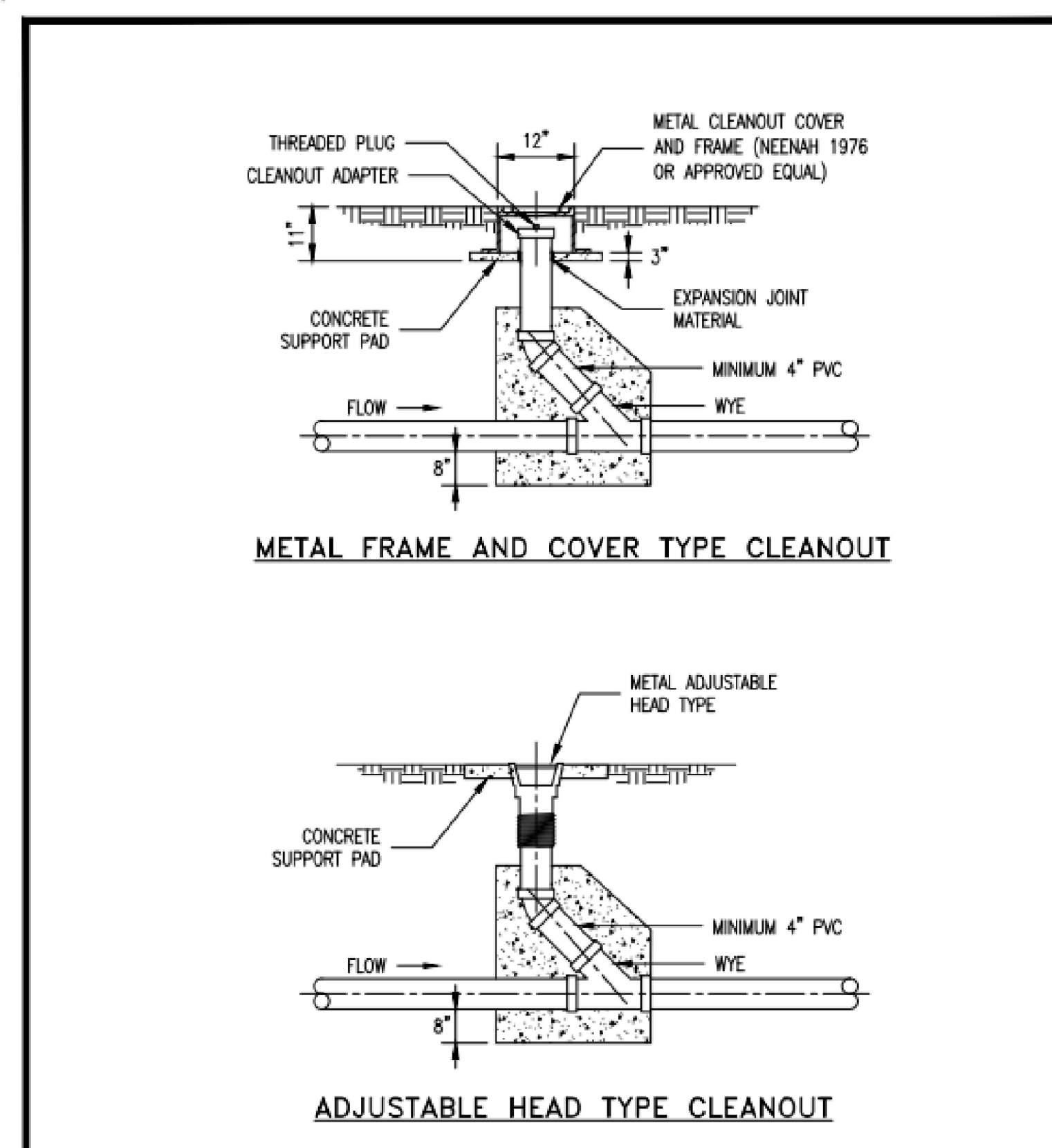


PUBLIC WATER SUPPLY DISTRICT #2
OF SAINT CHARLES COUNTY



NOTES:
ALL PVC SANITARY SEWER PIPE SHALL CONFORM TO THE REQUIREMENTS OF ASTM D-3034 STANDARD SPECIFICATION FOR POLYVINYL CHLORIDE SEWER PIPE, SDR-35 OR EQUAL, WITH "CLEAN" 1/2 INCH TO 1 INCH GRANULAR STONE BEDDING UNIFORMLY GRADED. THIS BEDDING SHALL EXTEND FROM 4 INCHES BELOW THE PIPE TO SPRINGLINE OF PIPE. IMMEDIATE BACKFILL OVER PIPE SHALL CONSIST OF SAME SIZE "CLEAN" OR "MINUS" STONE FROM SPRINGLINE OF PIPE TO 6 INCHES ABOVE THE TOP OF PIPE. FINAL BACKFILL MATERIAL SHALL BE OF SUITABLE MATERIAL REMOVED FROM EXCAVATION EXCEPT AS OTHER MATERIAL IS SPECIFIED. DEBRIS, FROZEN MATERIAL, LARGE ROCKS OR STONES, OR OTHER UNSTABLE MATERIALS SHALL NOT BE USED WITHIN 2 FEET FROM TOP OF PIPE.

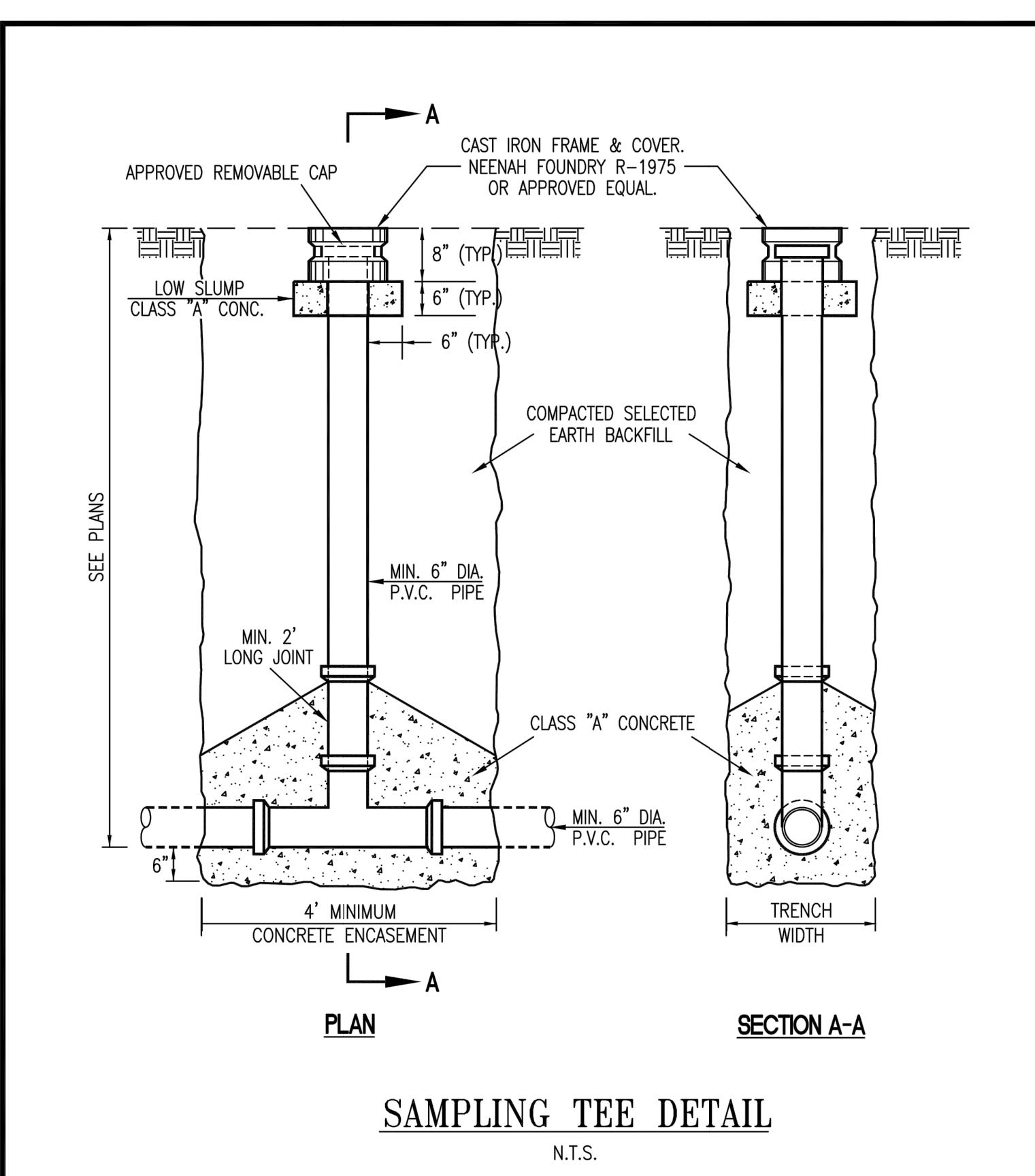
Duckett Creek Sanitary District
PIPE BEDDING CLASS "C"
(FOR ALL EXCEPT REINFORCED CONCRETE PIPE)
Dwn By: BSM App By: KA Detail No. 3
Ckd By: MDOB Date: JULY 2016



METAL FRAME AND COVER TYPE CLEANOUT

ADJUSTABLE HEAD TYPE CLEANOUT

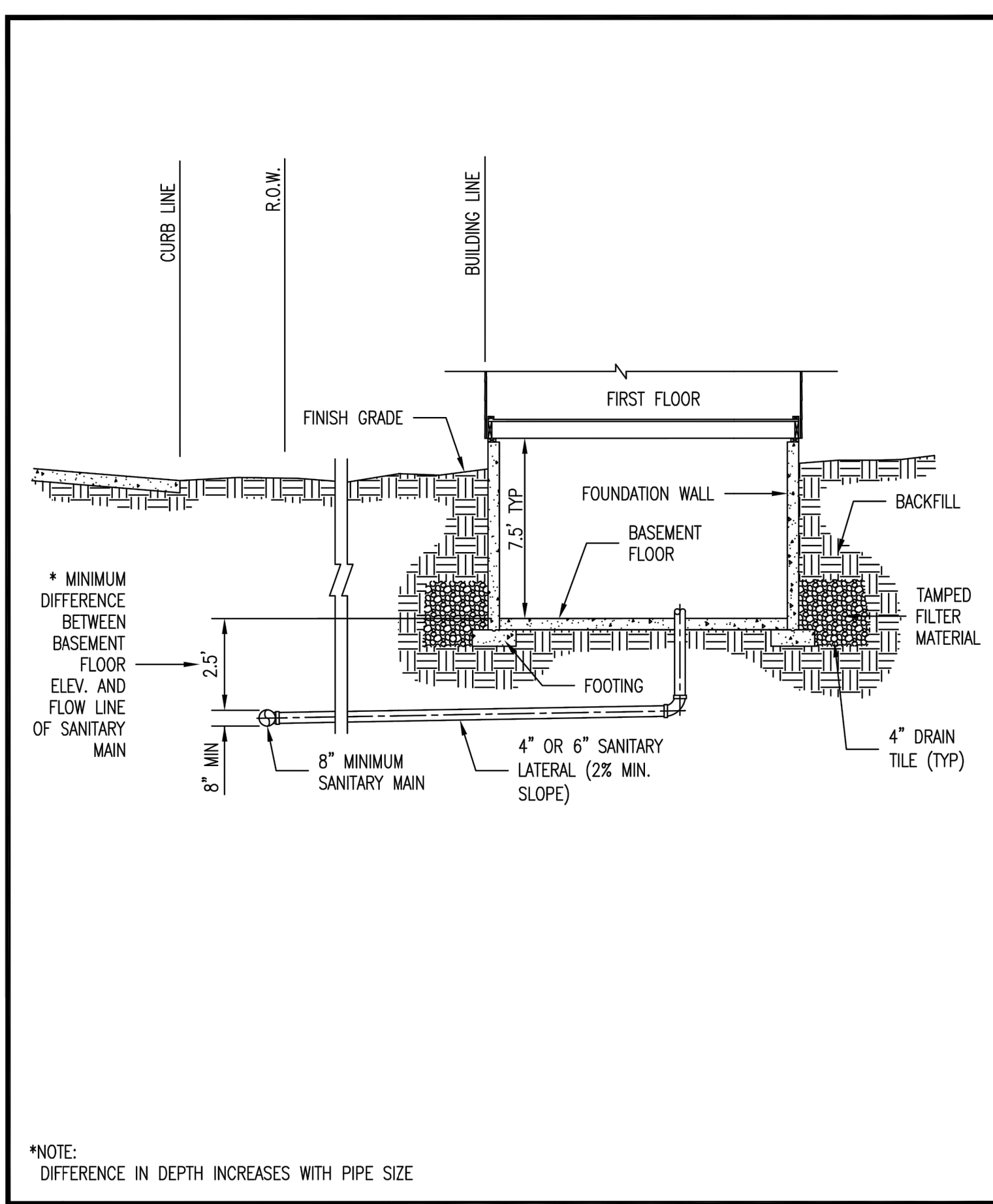
Duckett Creek Sanitary District
TYPICAL SEWER LATERAL CLEANOUT DETAIL
Dwn By: BSM App By: KLA Detail No. 25
Ckd By: MDOB Date: DEC. 2015



SAMPLING TEE DETAIL
N.T.S.

NOTES:
1. DO NOT USE WYES.

Duckett Creek Sanitary District
SAMPLING TEE
Dwn By: MSM App By: LRK Detail No. 31
Ckd By: LRK Date: APRIL 2022



*NOTE:
DIFFERENCE IN DEPTH INCREASES WITH PIPE SIZE.

Duckett Creek Sanitary District
TYPICAL SANITARY SEWER LATERAL PROFILE
Dwn By: BSM App By: KLA Detail No. 26
Ckd By: MDOB Date: DEC. 2015

Installation Techniques - Link-Seal® Modular Seals
Online Installation Video Visit www.linkseal.com

Link-Seal® Model
LS-200, LS-275
LS-300, LS-315
LS-325, LS-340, LS-360
LS-400, LS-410, LS-425, LS-475
LS-500, LS-525, LS-575
LS-600
LS-650

Tool Size/Type Req.
4mm, Allen
6mm, Allen
13mm, Hex
17mm, Hex
19mm, Hex
30mm, Hex
19mm, Hex

Installation Notes: The Link-Seal® modular seal bolt heads are usually recessed below the wall opening or the edge of casing pipe and therefore a socket or offset wrench must be used. Hand Tools: Reuse if provided chart above. (Tools not provided.) Tools can be purchased from hardware store, auto parts store, or home improvement store.

Always Wear Safety Equipment When Using Link-Seal® Modular Seals!

Link-Seal® Modular Seal - Do's
1. Make sure pipe is centered.
2. Install the belt with the pressure plates evenly spaced.
3. Install the exact number of links indicated in sizing charts.
4. Check to make sure pipe is supported properly during backfill operations.
5. Make sure seal assembly and pipe surfaces are free from dirt.
6. For right fits, use non-polluting liquid detergent to assist installation.

Link-Seal® Modular Seal - Don'ts
1. Don't install the belt with the pressure plates aimed in irregular directions. (Staggered)
2. Don't install Link-Seal® modular seals where weld-beds or other irregular surfaces exist without consideration of the sealing requirements.
3. Don't torque each bolt completely before moving on to the next.
4. Don't use high speed power tools (4500 rpm or more).
5. Do not use power tools on Link-Seal modular seal 315 stainless steel bolts.
6. Don't use grease installing Link-Seal modular seals.

If the seal doesn't appear to be correct using the techniques provided, call PSI at 713-747-6943 or 800-423-2410.

USER: Megan Slivy TAB: C8.2 DCSO DETAIL SHEET
DATE: September 16, 2022 - 1:57:36 PM
DRAWING: s:\0085\Job2024\24-0089\CADD\Plan\Detail\24-0089.dwg

DEVELOPER/OWNER: OPTWO, LLC
1707 CHESTERFIELD AIRPORT RD.
SUITE 210
CHESTERFIELD, MO 63005

THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON HAS REVIEWED THIS SET OF PLANS AND SPECIFICATIONS FOR THE PROJECT, TO WHICH THIS PAGE REFERS. I HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF MISSOURI, AND THAT I AM NOT PROVIDING ENGINEERING SERVICES TO ANY OTHER PARTY FOR THE SAME PROJECT, AND THAT I AM NOT PROVIDING ENGINEERING SERVICES TO ANY OTHER PARTY FOR THE SAME PROJECT, AND THAT I AM NOT PROVIDING ENGINEERING SERVICES TO ANY OTHER PARTY FOR THE SAME PROJECT.

LINDSEY FAYE DICKEMPER
CIVIL ENGINEER
PE-2024026198
CORPORATE
ENGINEERING
CERTIFICATE #001165

CALEDONIA LOT 3A
231 RUSH WAY
OFFALON, MO 63368

DCSD DETAIL SHEET

ST. CHARLES
320 South Street
St. Charles, MO 63303
636.978.7508 tel
www.colist.com

COLE
CIVIL ENGINEERING / SURVEYING / PLANNING / LANDSCAPE ARCHITECTURE
Civil & Architectural, Inc. is a Missouri Corporation with its principal office at 320 South Street, St. Charles, Missouri 63303.

DESIGN/CALC BY: MRS
DRAWN BY: MRS
CHECKED BY: LFD
DRAWING SCALE: AS SHOWN
DATE: 09/16/2025
Job Number: 24-0089
Sheet Number: C8.2

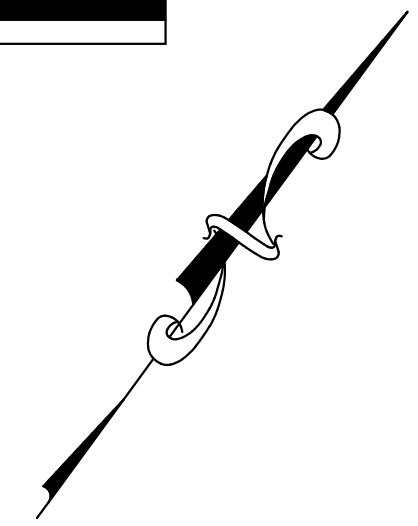
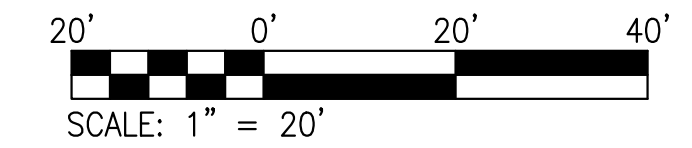
PRE DEVELOPED CONDITIONS	1.93 CFS
POST DEVELOPED CONDITIONS	2.83 CFS
DIFFERENTIAL RUNOFF RATE	+0.90 CFS

IMPERVIOUS AREA INCREASE = 0.39 ACRES
DISTURBED AREA = ±0.69 ACRES

STORM WATER COMPLIANCE

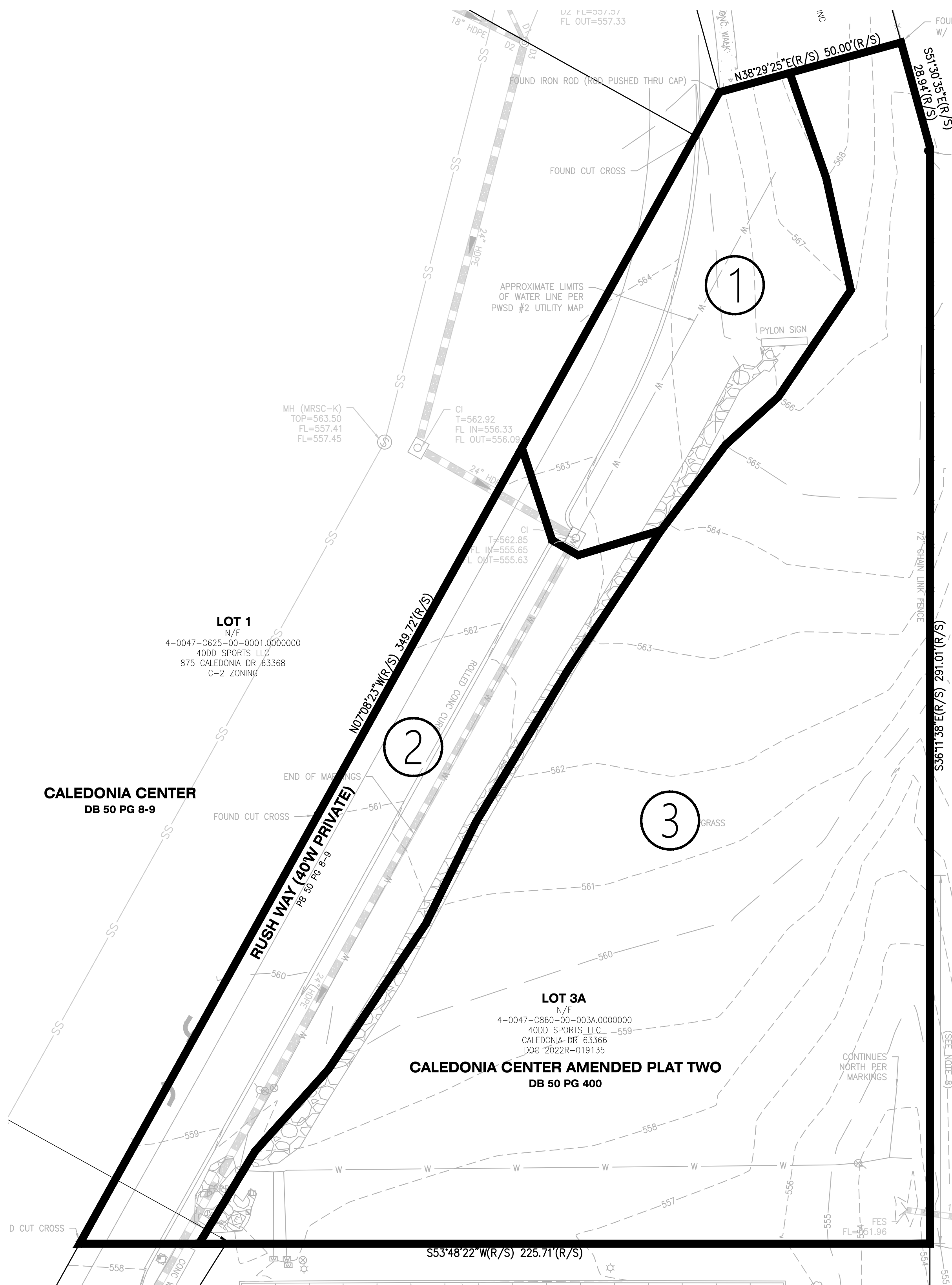
PER THE APPROVED CIVIL CONSTRUCTION PLANS FOR MISSOURI RUSH SOCCER COMPLEX BY COLE AND ASSOCIATES, INC., DATED APRIL 28, 2017, THE ± 0.995 AC SUBJECT SITE (LOT 3A) WAS ALLOTTED A PI VALUE OF 3.49, WITH AN ALLOWED 15-YR RUNOFF OF 3.47 CFS.

PER THE PROPOSED DRAINAGE AREA CALCULATIONS PROVIDED IN THE PROPOSED DRAINAGE AREA TABLE BELOW, THE TOTAL PROPOSED RUNOFF WAS CALCULATED USING A TOTAL WEIGHTED 15-YR PI VALUE OF 2.84. THIS RESULTS IN A 15-YR RUNOFF OF 2.83 CFS, WHICH IS LESS THAN THE ALLOTTED VALUE OF 3.47 CFS (PER THE OVERALL DEVELOPMENT PLANS), THEREFORE, NO ADDITIONAL MITIGATION IS REQUIRED. ADDITIONALLY, PER COORDINATION WITH THE CITY OF O'FALLON, WATER QUALITY IS ADDRESSED WITHIN THE MASTER BASIN PER THE OVERALL DEVELOPMENT PLANS AND ON-SITE WATER QUALITY TREATMENT IS NOT REQUIRED.

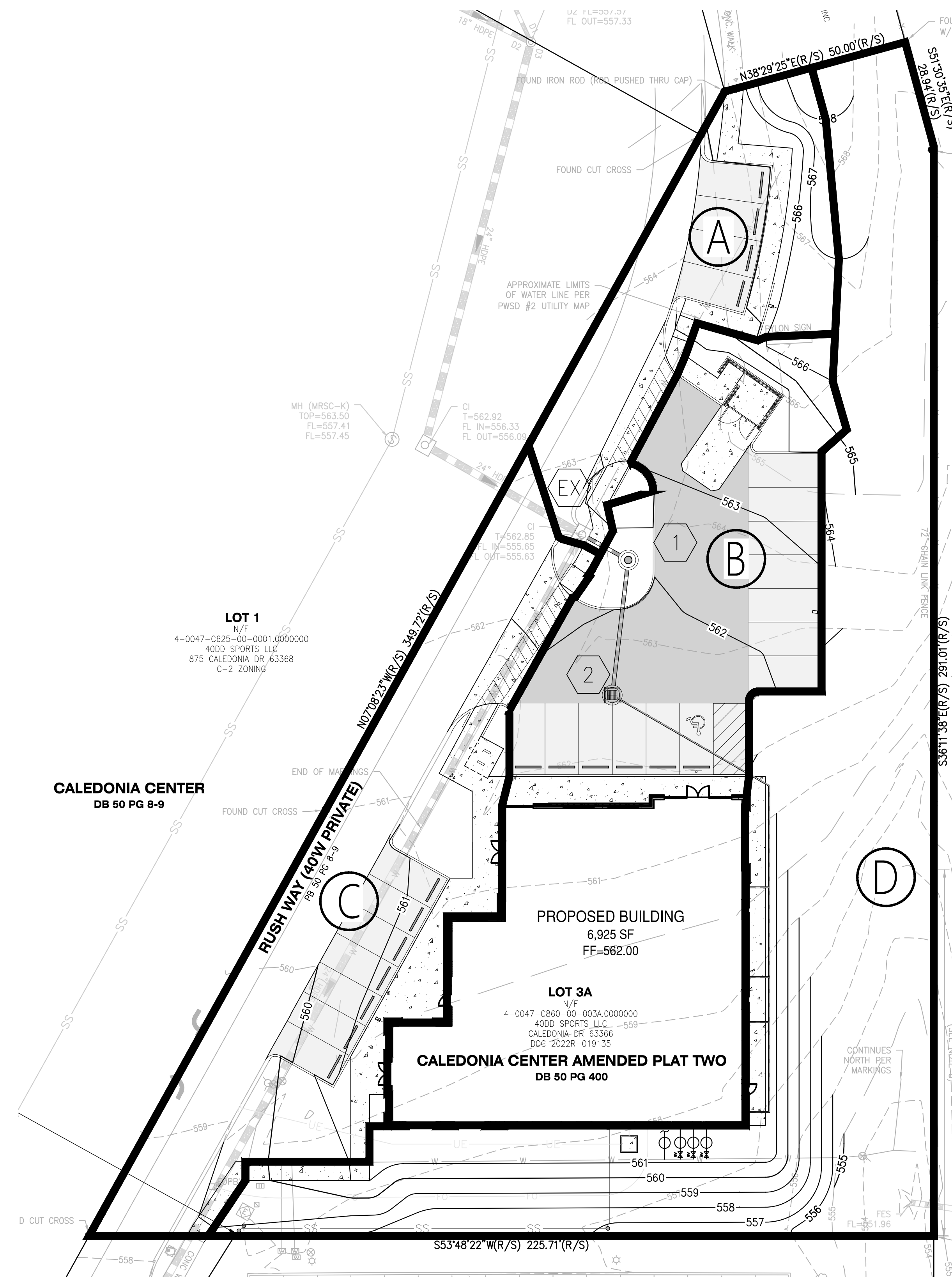


LEGEND

-
- EXISTING DRAINAGE AREA.
 - PROPOSED DRAINAGE AREA.
 - STORM STRUCTURE DESIGNATOR.



EXISTING DRAINAGE AREA TABLE (PER EXISTING CONDITIONS)													
Designation	Pervious (sf)	Impervious (sf)	Roof Area (sf)	Total Area (sf)	Pervious (ac)	Impervious (ac)	Total Area (ac)	IMPERV %	PI (100 yr, 20 min)	PI (15 yr, 20 min)	Q100 (cfs)	Q15 (cfs)	TRIBUTARY STRUCTURE
1	3,998	1,871	-	5,869	0.09	0.04	0.13	31.9%	3.00	2.23	0.40	0.30	EX
2	3,088	4,956	-	8,044	0.07	0.11	0.18	61.6%	3.77	2.80	0.70	0.52	OFFSITE-EX STRUCTURE
3	28,815	622	-	29,437	0.66	0.01	0.68	2.1%	2.29	1.70	1.55	1.15	OFFSITE-DETENTION POND
Total	35,901	7,449	0	43,350	0.82	0.17	1.00	17%	2.62	1.94	2.60	1.93	



PROPOSED DRAINAGE AREA TABLE													
Designation	Pervious (sf)	Impervious (sf)	Roof Area (sf)	Total Area (sf)	Pervious (ac)	Impervious (ac)	Total Area (ac)	IMPERV %	PI (100 yr, 20 min)	PI (15 yr, 20 min)	Q100 (cfs)	Q15 (cfs)	TRIBUTARY STRUCTURE
A	1,329	3,237	-	4,566	0.03	0.07	0.10	70.9%	4.01	2.98	0.42	0.31	EX
B	1,185	6,093	6,925	14,203	0.03	0.30	0.33	91.7%	4.98	3.71	1.62	1.21	2
C	1,470	7,400	-	8,870	0.03	0.17	0.20	83.4%	4.34	3.22	0.88	0.66	OFFSITE-EX STRUCTURE
D	14,849	861	-	15,710	0.34	0.02	0.36	5.5%	2.29	1.70	0.83	0.61	OFFSITE-DETENTION POND
Total	18,833	17,591	6,925	43,349	0.43	0.56	1.00	57%	3.83	2.85	3.81	2.83	

THIS SHEET IS FOR DRAINAGE CALCULATION PURPOSES ONLY AND NOT TO BE USED AS CONSTRUCTION PLANS

CF TWO, LLC
7 CHESTERFIELD AIRPORT RD.
SUITE 210
CHESTERFIELD, MO 63005

1710



LINDSEY FAYE DIEKEMPER
CIVIL ENGINEER
PE-2024026198
CORPORATE
ENGINEERING
CERTIFICATE #001165

CALEDONIA LOT 3A

251 ROSS ST
O'FALLON, MO 63368

DRAINAGE AREA MAP

1520 S. Fifth Street
Suite 307
St Charles, MO 63303

adco

CIVIL ENGINEERING / SURVEYING / PLANNING / LANDSCAPE ARCHITECTURE
GIS / ADA TRANSITION / ANIMATING

Coate & Associates, Inc. is a Missouri Corporation d.b.a. Coate Design Group, Inc. In Arizona & Texas herein referred to as "Coate."

SIGN/CALC BY

AWN BY

LFD

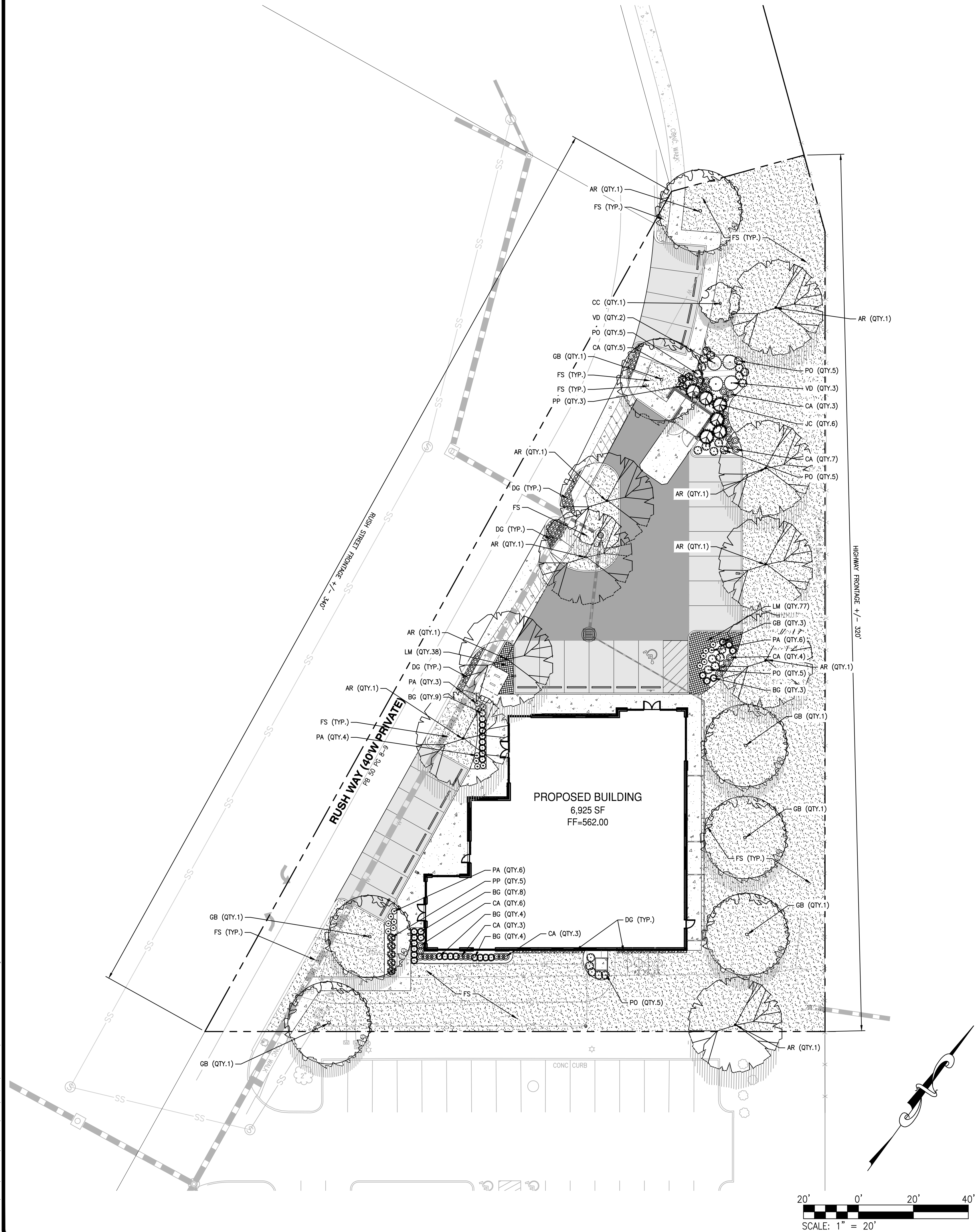
AS SHOWN

09/16/2025

Job Number
24-008

Sheet Numb

C9.



VEGETATION ESTABLISHMENT
FOR URBAN DEVELOPMENT SITES
(APPENDIX A)

SEEDING RATES

PERMANENT:

Tall Fescue - 150 lbs./ac.
Smooth Brome - 100 lbs./ac.
Combined
Fescue @ 75 lbs./ac. &
Brome @ 50 lbs./ac.

TEMPORARY:

Wheat or Rye - 150 lbs./ac. (3.5 lbs. per 1,000 s.f.)
Oats - 120 lbs./ac. (2.75 lbs. per 1,000 s.f.)

SEEDING PERIODS

Fescue or Brome - March 1 to June 1
August 1 to October 1
Wheat or Rye - March 15 to November 1
Oats - March 15 to September 15

MULCH RATES

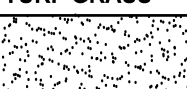
100 lbs. per 1,000 sq. ft. (4,356 lbs. per ac.)

FERTILIZER RATES

Nitrogen 30 lbs./ac.
Phosphate 30 lbs./ac.
Potassium 30 lbs./ac.
Lime 600 lbs./ac. ENM*

*ENM = Effective neutralizing material as per
state evaluation of quarried rock.

PROPOSED PLANT MATERIAL SCHEDULE

SYMB.	ABBREVIATION	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	COND.	MATURE HEIGHT
TREES							
	AR	9	Acer rubrum "Armstrong"	Red Maple	2" CAL. MIN.	B&B	50'
	GB	7	Ginkgo biloba (Male cultivar only)	Ginkgo	2" CAL. MIN.	B&B	35'–50'
	CC	1	Cercis canadensis	Redbud	1.5" CAL. – 4' HT. MIN.	B&B.	20'–30'
SHRUBS/ORNAMENTAL GRASSES							
SYMB.	ABBREVIATION	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	COND.	MATURE HEIGHT
	BG	31	Buxus x 'Green Velvet'	Green Velvet Boxwood	18" min.	CONT.	3'–8'
	PA	19	Pennisetum alopecuroides 'Hameln'	Dwarf Fountain Grass	18" min.	CONT.	2'–3'
	VD	4	Viburnum dentatum	Arrowwood Viburnum	5 GAL.	CONT.	6'–10'
	CA	31	Calamagrostis x acutiflora 'Karl Foerster'	Foerster's Feather Reed Grass	18" min.	CONT.	2'
	JC	6	Juniperus chinensis 'Spearmin'	Chinese Juniper	4' HT. MIN.	CONT.	10'–15'
	PO	25	Physocarpus opulifolius 'Diabolo'	ninebark	24" min.	CONT.	4'–6'
	PP	8	Picea pungens 'Globosa'	Dwarf Globe Blue Spruce			
GROUND COVER							
	LM	115	Liriope muscari	Lily Turf	1 GAL	CONT.	9"–18"
TURF GRASS							
	FS	+/- 17,564 S.F.	Fescue sod			SOD	
OTHER							
	DG	+/- 190 S.F.	DECORATIVE GRAVEL				

LANDSCAPE REQUIREMENTS

SECTION 402.170 B 2 a - PLANTING REQUIREMENTS WITHIN PARKING AND VEHICULAR USE AREAS			
REQUIREMENT	AREA / MEASUREMENT	REQ'D	PROV'D
NOT LESS THAN 6% OF INTERIOR PARKING LOT SHALL BE LANDSCAPED. THE INTERIOR PARKING LOT SHALL BE CALCULATED BY MULTIPLYING THE NUMBER OF PARKING SPACES BY 270 S.F.	270 X 24 = 4,050 - 6% = 388.8 S.F.	389 S.F.	553 S.F.
SECTION 402.180 BUFFER YARDS			
REQUIREMENT	AREA / MEASUREMENT	REQ'D	PROV'D
PROPERTY ZONING - C2-GENERAL BUSINESS	NORTH BOUNDARY LINE - ABUTS C-2 SAME USE	NO BUFFER REQUIRED	NO BUFFER REQUIRED
	WEST BOUNDARY LINE - ABUTS RIGHT-OF-WAY AND C-2 SAME USE	NO BUFFER REQUIRED	NO BUFFER REQUIRED
	SOUTH BOUNDARY LINE - ABUTS COMMON GROUND AND BRAIN	NO BUFFER REQUIRED	NO BUFFER REQUIRED
	EAST BOUNDARY LINE - ABUTS HIGHWAY RIGHT-OF-WAY	NO BUFFER REQUIRED	NO BUFFER REQUIRED
SECTION 402.090 COMMERCIAL ZONING DISTRICTS			
REQUIREMENT	AREA / MEASUREMENT	REQ'D	PROV'D
1 TREE FOR EVERY 40 FEET OF STREET FRONTAGE	HIGHWAY FRONTAGE +/- 320'/40' = 8	8 TREES	8 TREES
	RUSH WAY FRONTAGE +/- 340'/40' = 8.5	9 TREES	9 TREES
SECTION 402.040 TREE PROTECTION			
REQUIREMENT	AREA / MEASUREMENT	REQ'D	PROV'D
PRIOR TO DEVELOPMENT, THE DESTRUCTION OF MORE THAN TWENTY-FIVE PERCENT (25%) OF THE TREES ON ANY ONE PARCEL SHALL BE PROHIBITED.	** THERE ARE NO EXISTING TREES ON-SITE**	DOES NOT APPLY	
DURING DEVELOPMENT, ONCE A SITE PLAN OR PRELIMINARY PLAT APPROVAL HAS BEEN REQUESTED, A MINIMUM OF TWENTY PERCENT (20%) OF THE EXISTING TREES OR FIFTEEN (15) TREES PER ACRE OF THE ENTIRE DEVELOPMENT (WHICHEVER IS GREATER) SHALL BE RETAINED.	** THERE ARE NO EXISTING TREES ON-SITE**	DOES NOT APPLY	

LANDSCAPE NOTES:

- LANDSCAPE CONTRACTOR TO VERIFY LOCATION OF UNDERGROUND UTILITIES BEFORE BEGINNING WORK.
- ALL LANDSCAPE SHALL COMPLY WITH THE CURRENT EDITION OF ANSI Z 60.1 "AMERICAN STANDARD FOR NURSERY STOCK."
- ALL PLANTS SHALL MEET THE REQUIREMENTS OF THE STATE AND FEDERAL LAW WITH RESPECT TO DISEASE AND INSECT INFESTATION.
- MULCH AREAS WITH TRIPLE GROUND HARDWOOD MULCH 3" MIN. DEPTH.
- ALL LANDSCAPE SUBSTITUTIONS MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT.
- FORMAL LINES AND GROUPINGS OF A SPECIES OF TREE, SHRUB, OR GROUND COVER SHALL BE MATCHED FOR SIZE, FORM, AND COLOR.
- ALL BACKFILL IN PLANTING BEDS AND TREE PITS SHALL BE BACKFILLED WITH PLANTING SOIL.
- ALL TREES OUTSIDE OF PLANT BEDS SHALL BE PLANTED WITH A MULCH RING.
- ALL LANDSCAPING SHALL BE INSTALLED AS SHOWN ON THE APPROVED PLAN.
- AT PLANTING, TREE TRUNKS MUST BE STRAIGHT WITH MINIMAL DOG EYES.
- WIRE BASKETS, BURLAP WRAPPINGS, ROPE, TWINE OR ANY SIMILAR SHIPPING MATERIALS SHALL BE REMOVED BEFORE PLANTING.
- A SPADE CUT EDGE SHALL BE CREATED AT ALL LOCATIONS WHERE PLANTING BEDS ARE ADJACENT TO GRASS AREAS UNLESS OTHERWISE NOTED.
- SEE CIVIL PLANS FOR TYPE AND LOCATION OF EROSION CONTROL MATERIALS.
- DO NOT DISTURB EXISTING UTILITIES WITHIN WORK AREA. SILT FENCE AND PLANTINGS SHALL AVOID ANY EXISTING UTILITIES.
- THE CONTRACTOR SHALL FOLLOW THE LANDSCAPE PLANS. ANY SUBSTITUTION OR ALTERATION SHALL NOT BE ALLOWED WITHOUT APPROVAL OF THE OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT. OVERALL PLANT QUANTITY AND QUALITY SHALL BE CONSISTENT WITH THE PLANS.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL PLANT QUANTITIES. WRITTEN QUANTITIES TAKES PRECEDENCE OVER GRAPHIC QUANTITIES. NOTIFY OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT OF DISCREPANCIES.
- THE OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT MAY ELECT TO UPSIZE PLANT MATERIAL AT THEIR DISCRETION BASED ON SELECTION, AVAILABILITY, OR TO ENHANCE SPECIFIC AREAS OF THE PROJECT. THE CONTRACTOR SHALL VERIFY PLANT MATERIAL SIZES WITH OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT PRIOR TO PURCHASING, SHIPPING OR STOCKING OF PLANT MATERIALS. SUBMIT CHANGE ORDER REQUEST TO OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT FOR APPROVAL IF ADDITIONAL COST IS REQUESTED BY THE CONTRACTOR PRIOR TO INSTALLATION. RE-STOCKING CHARGES WILL NOT BE APPROVED IF THE CONTRACTOR FAILS TO SUBMIT A REQUEST FOR MATERIAL CHANGES.
- THE CONTRACTOR SHALL WARRANTY ALL CONTRACTED WORK AND MATERIALS FOR A PERIOD OF ONE YEAR AFTER SUBSTANTIAL COMPLETION HAS BEEN ISSUED BY THE OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT FOR THE ENTIRE PROJECT UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS OR SPECIFICATIONS.
- THE DEVELOPER, HIS SUCCESSORS AND ASSIGNS SHALL BE RESPONSIBLE FOR THE INSTALLATION, MAINTENANCE AND REPLACEMENT OF ALL LANDSCAPING MATERIALS SHOWN OR INDICATED ON THE APPROVED LANDSCAPE PLAN ON FILE WITH THE PLANNING DEPARTMENT. ALL LANDSCAPING WILL BE INSTALLED AS DEMONSTRATED ON THE PLAN, PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.
- PRIOR TO INSTALLATION OF PLANT MATERIALS, AREAS THAT HAVE BEEN COMPACTED OR DISTURBED BY CONSTRUCTION ACTIVITY SHALL BE THOROUGHLY LOOSENED TO A DEPTH OF 8" - 12" AND AMENDED PER SPECIFICATIONS.
- ALL LANDSCAPED AREAS ARE TO HAVE SOIL PREPARATION, (MINIMUM RATE OF 3 CU. YDS. OF ORGANIC MATTER PER 1000 S.F.). TREES SHALL NOT BE LOCATED IN DRAINAGE SWALES, DRAINAGE AREAS, OR UTILITY EASEMENTS. CONTACT OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT FOR RELOCATION OF PLANTS IN QUESTIONABLE AREAS PRIOR TO INSTALLATION.
- ALL EVERGREEN TREES SHALL BE FULLY BRANCHED TO THE GROUND AND SHALL NOT EXHIBIT SIGNS OF ACCELERATED GROWTH AS DETERMINED BY THE OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT.
- ALL TREES ARE TO BE STAKED AND GUYPED PER DETAILS FOR A PERIOD OF 1 YEAR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING STAKES AT THE END OF 1 YEAR FROM ACCEPTANCE OF LANDSCAPE INSTALLATION BY THE OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT. OBTAIN APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO REMOVAL.
- ALL TREES INSTALLED ABOVE RETAINING WALLS UTILIZING GEO-GRID MUST BE HAND DUG TO PROTECT GEO-GRID. IF GEO-GRID MUST BE CUT TO INSTALL TREES, APPROVAL MUST BE GIVEN BY OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT PRIOR TO DOING WORK.
- PLACE PLANT MATERIAL IN SHRUB BED SO THAT ONCE PLANTS GROW TO FULL SIZE THEY ARE FULLY CONTAINED WITHIN THE SHRUB BED AREA AND DO NOT HANG OVER THE EDGER LINE.
- REFER TO IRRIGATION PLANS FOR LIMITS AND TYPES OF IRRIGATION DESIGNED FOR THE LANDSCAPE. IN NO CASE SHALL IRRIGATION BE EMITTED WITHIN THE MINIMUM DISTANCE FROM BUILDING OR WALL FOUNDATIONS AS STIPULATED IN THE GEOTECHNICAL REPORT. ALL IRRIGATION DISTRIBUTION LINES, HEADS AND EMITTERS SHALL BE KEPT OUTSIDE THE MINIMUM DISTANCE FROM ALL BUILDINGS AND WALL FOUNDATIONS AS STIPULATED IN THE GEOTECHNICAL REPORT.
- LANDSCAPE AREAS SHALL BE IRRIGATED WITH AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM WITH INDIVIDUAL ZONES FOR TURF AND NON-TURF AREAS, AND MUST INCLUDE A MOISTURE DETECTION DEVICE TO PREVENT OPERATION DURING RAINY PERIODS. TURF AREAS SHALL BE IRRIGATED WITH AN AUTOMATIC POP-UP IRRIGATION SYSTEM. SHRUB AND PERENNIAL BEDS SHALL HAVE DRIP IRRIGATION.
- LANDSCAPE MATERIAL LOCATIONS SHALL HAVE PRECEDENCE OVER IRRIGATION MAINLINE AND LATERAL LOCATIONS. COORDINATE INSTALLATION OF IRRIGATION EQUIPMENT SO THAT IT DOES NOT INTERFERE WITH THE PLANTING OF TREES OR OTHER LANDSCAPE MATERIAL.
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING POSITIVE DRAINAGE EXISTS IN ALL LANDSCAPE AREAS. SURFACE DRAINAGE ON LANDSCAPE AREAS SHALL NOT FLOW TOWARD STRUCTURES AND FOUNDATIONS. MAINTAIN SLOPE AWAY FROM FOUNDATIONS PER THE GEOTECHNICAL REPORT RECOMMENDATIONS. ALL LANDSCAPE AREAS BETWEEN WALKS AND CURBS SHALL DRAIN FREELY TO THE CURB UNLESS OTHERWISE IDENTIFIED ON THE GRADING PLAN. IN NO CASE SHALL THE GRADE, TURF, THATCH, OR OTHER LANDSCAPE MATERIALS DAM WATER AGAINST WALKS. MINIMUM SLOPES ON LANDSCAPE AREAS SHALL BE 2%; MAXIMUM SLOPE SHALL BE 25% UNLESS SPECIFICALLY IDENTIFIED ON THE PLANS OR APPROVED BY THE OWNER'S REPRESENTATIVE/LANDSCAPE ARCHITECT.
- SHRUB, GROUND COVER AND PERENNIAL BEDS ARE TO BE CONTAINED BY A SPADE CUT EDGE. EDGER IS NOT REQUIRED WHEN ADJACENT TO CURBS, WALLS, WALKS OR SOLID FENCES WITHIN 3" OF PRE-MULCHED FINAL GRADE. EDGER SHALL NOT BE REQUIRED TO SEPARATE MULCH TYPES UNLESS SPECIFIED ON THE PLANS.
- EXISTING TURF AREAS THAT ARE DISTURBED DURING CONSTRUCTION, ESTABLISHMENT AND THE MAINTENANCE PERIOD SHALL BE RESTORED WITH NEW SOD TO MATCH EXISTING TURF SPECIES.
- WHEN COMPLETE, ALL GRADES SHALL BE WITHIN +/- 1/8" OF FINISHED GRADES AS SHOWN ON THE PLANS.
- COLE AND THE DESIGNERS OF COLE ARE NOT RESPONSIBLE FOR UTILITY CONFLICTS OR DAMAGE TO UTILITIES PER THIS LANDSCAPE DESIGN. FIELD VERIFY UTILITIES BEFORE BEGINNING WORK. EXTRA CAUTION SHALL BE TAKEN INSTALLING LANDSCAPE AROUND UTILITIES.
- TREE PITS SHALL BE TESTED FOR WATER PERCOLATION. IF WATER DOES NOT DRAIN OUT OF TREE PIT WITHIN 24-HOURS, THE TREE SHALL BE MOVED OR DRAINAGE SHALL BE PROVIDED.
- NATIVE SITE TOPSOIL IS TO BE PROTECTED FROM EROSION OR STOCKPILED.
- NATIVE SITE TOPSOIL SHALL BE LABORATORY TESTED BY AND ACCREDITED LABORATORY AND AMENDED PER SAID LABORATORY'S RECOMMENDATIONS.
- TREES ARE PROPOSED IN UTILITY EASEMENTS PER THE CITY'S REQUEST TO HAVE THE REQUIRED NUMBER OF STREET TREES.
- ALL TREES ALONG THE ROADS SHALL BE TRIMMED UP TO AND MAINTAINED AT A MIN. OF 6' CLEARANCE SO THE SIGHT LINES ARE NOT OBSTRUCTED.

DESIGNER/OWNER:
CPTWQ, LLC
1707 CHESTERFIELD AIRPORT RD.
SUITE 210
CHESTERFIELD, MO 63005

THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON
CERTIFIES THAT THIS PLAN WAS PREPARED BY HIMSELF OR UNDER HIS
SUPERVISION AND THAT HE IS A LICENSED LANDSCAPE ARCHITECT IN THE STATE OF
MISSOURI. HIS LICENSE NUMBER IS 0004029446. ANY OTHER DOCUMENTS OR INSTRUMENTS NOT
INCORPORATED BY REFERENCE INTO THIS PLAN ARE HEREBY REJECTED. THIS PLAN
IS VALID FOR ONE YEAR FROM THE DATE OF ISSUANCE. ANY CHANGES TO THIS
PLAN MUST BE MADE BY A REVISION TO THIS PLAN. THIS PLAN IS NOT TO BE
USED FOR ANY OTHER PROJECT OR FOR ANY OTHER PURPOSE.

LANDSCAPE ARCHITECT
CORPORATE
LANDSCAPE
ARCHITECT
CERTIFICATE
#0004029446
JOSEPH C.
HORVATH, III
NUMBER
LA-2007013280
DATE
09/16/2025

CALEDONIA LOT 3A
231 RUSH WAY
OTFALLON, MO 63368

LANDSCAPE PLAN

+ ST. CHARLES
1520 South Street
St. Charles, MO 63303
636.978.7208 tel
www.stcharles.com

COLE
CIVIL ENGINEERING / SURVEYING / PLANNING / LANDSCAPE ARCHITECTURE
COLE & ASSOCIATES, Inc. is a fully licensed and fully bonded design-build firm. We are a full-service design-build firm. We are a full-service design-build firm.

DESIGN/CALC BY
MRS

DRAWN BY
MRS

CHECKED BY
LFD

DRAWING SCALE
AS SHOWN

DATE
09/16/2025

Job Number
24-0089

Sheet Number
L1.0