

- IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, 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 CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL NECESSARY PERMITS HAVE BEEN OBTAINED FROM THE GOVERNING AGENCIES AND COORDINATING ALL GOVERNING AGENCY INSPECTIONS REQUIRED THROUGHOUT THE DURATION OF THE PROJECT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR RAZING AND REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, PAVING, AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED. REFERENCE SITE WORK SPECIFICATIONS.
- CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
- THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR DAMAGE TO ADJACENT PROPERTIES AND NEW CONSTRUCTION IN PLACE DURING THE CONSTRUCTION PHASES OF THIS PROJECT. ANY DISTURBED IMPROVEMENTS SHALL BE REPLACED IN KIND AT THE CONTRACTORS EXPENSE.
- ANY QUANTITIES PROVIDED ON THESE PLANS ARE FOR GENERAL REFERENCE PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE QUANTITIES REQUIRED FOR CONSTRUCTION.
- THE EXISTING FEATURES SHOWN ON THESE PLANS ARE THOSE NOTED IN THE FIELD AND THOSE TAKEN FROM RECORD DRAWINGS. THERE IS NO GUARANTEE THAT ALL FEATURES (ABOVE OR BELOW GROUND) ARE SHOWN ON THE PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING FEATURES PRIOR TO BIDDING THE PROJECT.
- THE CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION BY CONTACTING THE LOCAL UTILITY COMPANIES AND/OR UTILIZING THE LOCAL ONE-CALL SYSTEM. ANY DAMAGE DONE TO EXISTING UTILITIES (THAT ARE TO REMAIN IN PLACE) DURING CONSTRUCTION OPERATIONS WILL BE THE CONTRACTOR'S RESPONSIBILITY AND REPAIRED AT THE CONTRACTOR'S EXPENSE.
- ALL SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE OWNERS CONTRACT DOCUMENTS AND SPECIFICATIONS. ALL WORK SHALL MEET OR EXCEED THE RELEVANT UTILITY COMPANIES AND REGULATORY AGENCIES, CONTRACT DOCUMENTS AND SPECIFICATIONS. ALL WORK WITHIN PUBLIC AND STATE RIGHT OF WAY SHALL BE IN ACCORDANCE WITH THE GOVERNING AGENCIES STANDARDS AND SPECIFICATIONS.
- TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CURRENT EDITION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE PROPER TRAFFIC CONTROL IS IN PLACE FOR EACH PHASE OF CONSTRUCTION. THE CONTRACTOR IS ALSO RESPONSIBLE FOR PROPERLY MAINTAINING TRAFFIC CONTROL DEVICES THROUGHOUT THE DURATION OF THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING TRAFFIC CONTROL PLANS TO THE CITY AND DEPARTMENT OF TRANSPORTATION AS REQUIRED.

ANY DEVELOPMENT, EXCAVATION, CONSTRUCTION, OR FILLING IN A U.S. 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.

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.

ALL QUESTIONS REGARDING THE PREPARATION OF THE GENERAL CONTRACTOR'S BID SHALL BE DIRECTED TO THE OWNER'S CONSTRUCTION REPRESENTATIVE. SUBCONTRACTORS MUST DIRECT THEIR QUESTIONS THROUGH THE GENERAL CONTRACTOR. THE CONSULTING ARCHITECT AND/OR THE CONSULTING ENGINEER SHALL NOT BE CONTACTED DIRECTLY WITHOUT PRIOR AUTHORIZATION FROM THE OWNER/DEVELOPER.

THIS PROPERTY LIES IN ZONE "X" AND DOES NOT LOCATE WITHIN ANY PRESENTLY ESTABLISHED 100-YEAR FLOOD PLAIN, AS SHOWN BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP FOR THE CITY OF O'FALLON, MISSOURI, COMMUNITY PANEL NUMBER 29183C0237G EFFECTIVE DATE JANUARY 20, 2016.

VERTICAL RELIEF, AS SHOWN, DERIVED FROM GPS OBSERVATIONS USING THE MODOT NETWORK WITH GEIOD MODEL G18US.

BM-1 IRON PIPE AT THE SW CORNER OF LOT 1, MAIN STREET PLAZA PB 32, PG 286
ELEVATION = 537.75'

[illegible]

ENGINEER OF RECORD
CIVIL DESIGN, INC.
CONTACT: NATHAN COWAN, P.E.
5220 OAKLAND AVE.
ST. LOUIS, MISSOURI, 63110
TEL: 314-881-5475

SURVEYOR OF RECORD
VOLZ, INC.
CONTACT: MARK WILEY, L.S.
10849 INDIAN HEAD IND'L BLVD.
ST. LOUIS, MISSOURI 63132
TEL: 314-426-6212

SANITARY SEWERS
CITY OF O'FALLON
100 N. MAIN STREET
CONTACT:
O'FALLON, MO, 63366
TEL: 636-379-5596

WATER
CITY OF O'FALLON
CONTACT:
100 N. MAIN STREET
O'FALLON, MO, 63366
TEL: 636-379-7600

STORM SEWERS
CITY OF O'FALLON
CONTACT: RANDY CLARK
100 N. MAIN STREET
O'FALLON, MO, 63366
TEL: 636-379-7632

QT REAL ESTATE PROJECT MANAGER
QUICKTRIP CORPORATION
CONTACT: GWEN KEEN
13500 RIVERPORT DRIVE, SUITE 175
MARYLAND HEIGHTS, MISSOURI, 63043
TEL: 636-627-0003

QT CIVIL PROJECT MANAGER
QUICKTRIP CORPORATION
CONTACT: TRAVIS WUNSCH, P.E.
4705 SOUTH 129TH EAST AVENUE
TULSA, OK 74134
TEL: 918-615-7376

ELECTRIC
AMEREN MISSOURI
CONTACT: NEIL MANNING
200 CALLAHAN ROAD
WENTZVILLE, MO, 63385
TEL: 636-466-6903

GAS
SPIRE GAS
CONTRACT: NICHOLAS EGGERT
700 MARKET STREET
ST. LOUIS, MO 63101TEL:
TEL: 314-330-5720

TELEPHONE
BRIGHTSPEED
CONTACT: ANTHONY WILLIAMS
1120 S. TYRON STREET,
SUITE 700
CHARLOTTE, NC 28203
TEL: 883-692-7773

<u>O'FALLON PLANNING DEPARTMENT</u>	<u>O'FALLON FIRE PROTECTION DISTRICT</u>
CITY OF O'FALLON	111 LAURA K DRIVE
100 N. MAIN STREET	O'FALLON, MO 63366
CONTACT: ETHAN HENDRICKS	TEL: 636-272-3493
TEL: 636-379-5467	

O'FALLON ENGINEERING DEPARTMENT
CITY OF O'FALLON
100 N. MAIN STREET
CONTACT: RYAN ROCKWELL
TEL: 636-379-7630

CABLE
CHARTER COMMUNICATIONS
CONTACT: CHRISTIE DOLE
TEL: 888-438-2427

FIBER
GATEWAY FIBER
CONTACT: RENOY THOMAS
501 FOUNTAIN LAKE BLVD.
SUITE 105
ST. CHARLES, MO 63301
TEL: 636-229-1609

TELEPHONE
SOCKET
CONTACT: ADIAN HAMMOND
2703 CLARK LN
COLUMBIA, MO 65202
TEL: 573-239-8085

STAFF RECOMMENDATIONS:

1. THIS APPROVAL IS CONDITIONAL UPON ALL APPLICABLE REQUIREMENTS PROVIDED WITHIN TITLE IV OF THE CITY'S MUNICIPAL CODE BEING COMPLIED WITH ON THE PROJECT.
2. A FULL PARAPET WALL IS REQUIRED FOR HVAC AND MECHANICAL SCREENING. PLEASE REVISE THE ELEVATIONS.
3. THE MINIMUM PARKING SPACE SIZE IS 9' BY 19'. PLEASE ENSURE ALL PARKING SPACES MEET THE MINIMUM DIMENSIONS.
4. BE AWARE THAT CITY STAFF IS WORKING WITH AMEREN FOR AN ESTIMATE TO RELOCATE THE OVERHEAD POWER LINES UNDERGROUND AS PART OF THE MAIN STREET PHASE 2 PROJECT. WORK WITH STAFF TO COORDINATE THESE PLANS. COORDINATE WITH THE CITY ON MAIN STREET IMPROVEMENTS TO DETERMINE TIMING TO AVOID DUPLICATION OF CONSTRUCTION. BUILD YOUR ENTRANCE AND SIDEWALKS AND CURB AND GUTTER.

MUNICIPAL CODE REQUIREMENTS:

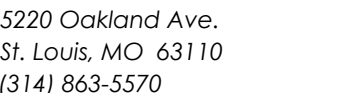
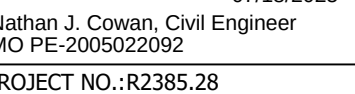
1. SHOW 10' WIDE UTILITY EASEMENT BEHIND ALL RIGHT-OF-WAY.
2. PROVIDE FIRE DISTRICT, MOONR, SANITARY AND WATER DISTRICT APPROVAL.
3. PROVIDE A SANITARY EFFLUENT SURVEY FOR BUSINESSES IN THE O'FALLON SEWER DISTRICT.
4. PROVIDE THE ESTIMATED SANITARY FLOW IN GDP ON THE PLAN.
5. PROVIDE A STRIPED ADA ACCESS PATH FROM THE SIDEWALK TO THE BUILDING.
6. ADA PARKING SPACES NEED TO BE 9FT WIDE.

CITY OF O FALLON
ENGINEERING DEPARTMENT
ACCEPTED FOR CONSTRUCTION
BY: Ryan Rockwell DATE: 09/11/2025
PROFESSIONAL ENGINEER'S SEAL
INDICATES RESPONSIBILITY FOR DESIGN

THE QUANTITIES ABOVE ARE INTENDED FOR INTERNAL TRACKING PURPOSES ONLY. THEY ARE NOT REPRESENTATIVE OF THE QUANTITIES FOR BIDDING PURPOSES. THE CONTRACTOR IS RESPONSIBLE FOR CALCULATING THEIR OWN QUANTITIES.

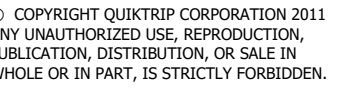
NO.	TITLE
C001	COVER SHEET
C002	SITE DATA AND JURISDICTIONAL NOTES
C030	DEMOLITION PLAN
C100	SITE PLAN
C110	GRADING PLAN
C111	DETAILED GRADING PLANS I
C112	DETAILED GRADING PLANS II
C113	DETAILED GRADING PLANS III
C114	ADA COMPLIANCE REFERENCE PLAN
C120	STORM SEWER PLAN
C121	PRE AND POST-DEVELOPED DRAINAGE MAP
C122	PROPOSED SUB-AREA DRAINAGE MAP
C130A	ASPHALT PAVING PLAN
C130B	CONCRETE PAVING PLAN
C131	BUILDING PAVING PLAN
C140	SWPP PLAN PHASE 1 AND NOTES
C141	SWPP PLAN PHASE 2 AND NOTES
C142	SWPP DETAILS I
C150	UTILITY PLAN
C151	UTILITY VERIFICATION PLAN
C160	PHOTOMETRIC SITE PLAN
C300	STORM SEWER PROFILES I
C301	STORM SEWER PROFILES II
C310	STORM SEWER BMP DETAILS I
C311	STORM SEWER BMP DETAILS II
C500	MISC. SITE DETAILS I
C501	MISC. SITE DETAILS II
C510	ADA DETAILS
C520	PAVING DETAILS I
C521	PAVING DETAILS II
C522	PAVING DETAILS III
C523	PAVING DETAILS IV
C524	PAVING DETAILS V
C530	COMPREHENSIVE TRENCHING DETAILS I
C531	COMPREHENSIVE TRENCHING DETAILS II
C540	DRAINAGE DETAILS I
C570	JURISDICTIONAL DETAILS I
C571	JURISDICTIONAL DETAILS II
C572	JURISDICTIONAL DETAILS III
L100	LANDSCAPE PLAN
L500	LANDSCAPE DETAILS
L110	IRRIGATION PLAN
L510	IRRIGATION DETAILS SHEET 1
L511	IRRIGATION DETAILS SHEET 2
COVER	RETAINING WALL COVER SHEET
P1	RETAINING WALL PLANS
P2	RETAINING WALL ELEVATIONS
D1	RETAINING WALL NOTES & DETAILS
D2	RETAINING WALL DETAILS

PLANNING AND DEVELOPMENT
DIVISION FILE NO. 25-000086



Missouri State Certificate of
Authority #2002006804

QuikTrip No. 0683



PROTOTYPE: P-120 (11/24/2024)

DIVISION:

DESIGNED BY:

REVIEWED BY: _____

[illegible]

SHEET TITLE:

COVER SHEET

SHEET NUMBER:

C001



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CITY OF O'FALLON SANITARY SEWER NOTES:

- 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.
- 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.
- CONNECTIONS AT ALL SANITARY STRUCTURES ARE TO BE MADE WITH A-A LOCK JOINT OR EQUAL
- ALL SANITARY LATERALS SHALL BE A MINIMUM OF 4" RESIDENTIAL, 6" COMMERCIAL DIAMETER PIPE.
- ALL SANITARY MAINS SHALL BE A MINIMUM OF 8" DIAMETER PIPE.
- ALL SANITARY SEWER LINE WITH A SLOPE GREATER THAN 20% WILL REQUIRE CONCRETE CRADLE OR CONCRETE COLLAR AT EACH PIPE JOINT. SANITARY LINE WITH A SLOPE GREATER THAN 50% WILL REQUIRE A SPECIAL APPROVED DESIGN AS SHOWN ON DETAIL SHEET.
- ALL MANHOLES BUILT WITHIN THE 100 YEAR FLOOD PLAIN MUST HAVE LOCK TYPE WATERTIGHT MANHOLE COVERS.
- ALL SANITARY SEWER MAINS MUST HAVE A MINIMUM OF 42" COVER.
- WHEN SANITARY MAINS CROSS OVER STORM LINE THE SANITARY MAIN MUST BE DUCTILE IRON PIPE FOR 10 FEET ON EACH SIDE OF THE CROSSING.
- 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.
- THE SANITARY SEWERS SHOULD RUN DIAGONALLY THROUGH THE SIDE YARDS TO MINIMIZE ANY ADDITIONAL UTILITY EASEMENTS REQUIRED.
- ALL SANITARY SEWER STRUCTURES SHALL BE WATERPROOFED ON THE EXTERIOR IN ACCORDANCE TO MISSOURI DNR SPECIFICATIONS 10CSR-8-120 (7)(E).
- ALL SANITARY SEWER PIPE SHALL BE SDR35 OR EQUAL. ALL SANITARY SEWER LATERALS SHALL BE SCHEDULE 40.
- ALL SANITARY SEWER MANHOLES AND PIPES WILL BE TESTED TO THE FOLLOWING SPECIFICATIONS. ASTM D1244, 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.
- 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.

CITY OF O'FALLON STORM SEWER NOTES:

- 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.
- 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.
- A 5/8" TRASH BAR SHALL BE INSTALLED HORIZONTALLY IN THE CENTER OF THE OPENING(S) IN ALL CURB INLETS AND INLET ANEETS.
- (INTENTIONALLY OMITTED)
- 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.
- THE STORM SEWERS SHOULD RUN DIAGONALLY THROUGH THE SIDE YARDS TO MINIMIZE ANY ADDITIONAL UTILITY EASEMENTS REQUIRED.
- ALL CONCRETE PIPES WILL BE INSTALLED WITH RING RUBBER TYPE GASKETS.
- CONNECTIONS AT ALL STORM STRUCTURES ARE TO BE MADE WITH A-A LOCK JOINT OR EQUAL.
- PRE CAST CONCRETE INLET COVERS ARE NOT TO BE USED.
- 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.
- ALL STRUCTURES AND FLARED 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.
- (INTENTIONALLY OMITTED)
- RIP RAP SHOWN AT FLARED END SECTIONS WILL BE EVALUATED IN THE FIELD BY THE ENGINEER, CONTRACTOR, AND CITY INSPECTORS AFTER INSTALLATION FOR EFFECTIVENESS AND FIELD MODIFIED, IF NECESSARY TO REDUCE EROSION ON AND OFF SITE.
- ADD 1" MINUS ROCK BACK FILL TO ALL STORM SEWER THAT LIE WITHIN THE 1:1 SHEAR PLANE OF THE ROAD.
- (INTENTIONALLY OMITTED)
- REFER TO JURISDICTIONAL DETAILS FOR STORM SEWER INLET MARKING DETAILS.

CITY OF O'FALLON EROSION CONTROL NOTES:

- 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 MODOT. THE PERMITTEE'S RESPONSIBILITIES INCLUDE ALL DESIGN AND IMPLEMENTATION AND REQUIRED 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.
- IMPLEMENTATION AND REQUIRED 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.
- 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 SITES IN MISSOURI AND KANSAS.
- 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 405.248)
- GRADED AREAS SHALL BE SEEDED AND MULCHED (STRAWED) WITHIN 14 DAYS OF STOPPING LAND DISTURBANCE ACTIVITIES. UNLESS IT CAN BE SHOWN TO THE CITY ENGINEER THAT WEATHER CONDITIONS ARE NOT FAVORABLE, 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

CITY OF O'FALLON ROADWAY NOTES:

- ALL PAVING (PUBLIC AND PRIVATE) TO BE IN ACCORDANCE WITH ST. LOUIS COUNTY STANDARDS AND SPECIFICATIONS EXCEPT AS MODIFIED BY THE CITY OF O'FALLON ORDINANCES.
- 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.
- PROVIDE 6" OF CONCRETE OVER 5" OF AGGREGATE BASE ROCK OR ASPHALT EQUIVALENT FOR MINOR RESIDENTIAL STREETS PER CITY CODE 405.370.
- ROCK TO MEET THE ALL THE REQUIREMENTS OF MODOT TYPE 5 FRACTION WITH A TIGHTER RESTRICTION ON THE FINES BEING THAT NO MORE THAN TEN PERCENT (10%) FINES SHALL PASS A NO. 200 SIEVE. (CITY CODE 405.210.8.1) THE GRADATION OF THIS ROCK NEEDS TO BE SUBMITTED TO THE CITY FOR APPROVAL. MAKE DELIVERY MADE WITHOUT THE PROPER DELIVERY SIGNATURE, INCLUDING SIGNATURE, WILL NOT BE ACCEPTED. THE DELIVERY TICKET MUST LIST THE PROJECT NAME OR JOBSITE LOCATION. A SEPARATE CERTIFICATION SHEET MAY BE PROVIDED ATTACHED 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)
- MULTI-USE TRAIL (WHEN REQUIRED) SHALL HAVE A MINIMUM OF 3" TYPE "C" ASPHALT OVER 4" AGGREGATE BASE PER CITY REQUIREMENTS.
- TYPE C (BP-1) COMPACTION REQUIREMENTS SHALL BE 98% MINIMUM DENSITY ACCORDING TO ST. LOUIS CO. STANDARD SPECIFICATIONS. PROVIDE PAVEMENT STRIPES AT ANY POINT WHERE THE MULTI-USE TRAIL CROSSES EXISTING OR PROPOSED PAVEMENT.
- ALL STREET STUB-OUTS OVER 250' IN LENGTH WILL REQUIRE A TEMPORARY TURNAROUND.
- ALL SUB GRADE IN CUT OR FILL WILL NEED TO CONFORM TO THE CITY OF O'FALLON COMPACTION REQUIREMENTS
- 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 REQUIREMENTS 501.3.1.
- 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.
- ALL FILL AREAS IN THE 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 WITHIN EVERY TWO HUNDRED FIFTY (250) FEET.
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 UNTIL 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 RESERVE.
- 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) TANDDEM 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 GREATER THAN 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.
- 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 METHOD AASHTO T-99 AND WITHIN -2/+4 PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT.
- THE ENTIRE WIDTH AND LENGTH WILL 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 FOUR-HUNDREDTHS (+/-0.04) FEET.
- 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.
- 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 COMPRESSION---ANNUALLY BY INDEPENDENT CALIBRATION SERVICE.
17.3. BATCH SCALES---MONTHLY.
17.4. NUCLEAR TESTER DEVICES---EVERY SIX (6) MONTHS.
17.5. PROCTOR EQUIPMENT---EVERY SIX (6) MONTHS.
17.6. SLUMP CONE---MONTHLY.
- 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 EITHER W16-9P OR W16-7P SIGNS.
- ALL TRAFFIC SIGNALS, STREET SIGNS, SIGN POST, BACKS 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)
- 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 PAVEMENT. THERE WILL BE 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.

CITY OF O'FALLON RETAINING WALL (TERRACED AND VERTICAL) NOTES:

- 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.
- RETAINING WALLS SHALL NOT BE ALLOWED IN PUBLIC RIGHT-OF-WAY WITHOUT WRITTEN APPROVAL FROM THE CITY ENGINEER.
- 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 ON THE RETAINING WALL.
- RETAINING WALLS THAT ALTER THE CHANNELLED 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.
- SEE SECTION 405.275 OF THE CITY CODE FOR ADDITIONAL DESIGN REQUIREMENTS.

SITE DATA AND NOTES:

EXISTING/PROPOSED ZONING: C-2 DOWNTOWN OVERLAY DISTRICT

PROPOSED USE: CONVENIENCE/FOOD STORE
W/ PETROLEUM SERVICES

EXISTING TOTAL SITE AREA: 69,817 SF (1.60 ACRES)

PROPOSED TOTAL SITE AREA: 68,163 SF (1.56 ACRES)
(AFTER DANIEL DR. ROW DEDICATION)

BUILDING INFORMATION: NEW 1-STORY BUILDING
6,262 SF

BUILDING SETBACKS: FRONT 25'
(EXCLUDES SIGNS, PUMP ISLANDS AND CANOPIES OF GASOLINE SERVICE STATIONS)
SIDE 0'
REAR 0'

PARKING SETBACKS: FRONT 10'
SIDE 10'
REAR 10'

BUFFER YARD: REAR 10' (PROPOSED)

PARKING CALCULATIONS:

PARKING REQUIRED = 32 SPACES
1 SPACE PER 250 SF OF FLOOR AREA PLUS 1 SPACE FOR EACH 2 PUMPS
(6,262 SF / 250 SF = 25 SPACES)
(14 PUMPS / 2 = 7 SPACES)
LOADING SPACE REQUIRED = 1 SPACE (12'x35')

PARKING PROPOSED = 54 SPACES
(INCLUDES 14 SPACES AT FUEL PUMPS)
(INCLUDES 1 STANDARD & 1 VAN ACCESSIBLE SPACE AT BUILDING AND 2 ACCESSIBLE FUEL PUMPS)
LOADING SPACE PROVIDED = 1 SPACE (12'x35')

BICYCLE PARKING CALCULATIONS:

BICYCLE PARKING REQUIRED = 4 RACK SPACES
1 RACK SPACE PER 15 REQUIRED AUTO PARKING SPACE (4 RACK MIN.)
(32 AUTO SPACES / 15 = 2.1 SPACES, THEREFORE USE MINIMUM)

BICYCLE PARKING PROPOSED = 4 RACK SPACES
(2 RACKS WITH 2 SPACES PER RACK)

SANITARY CALCULATION:

ESTIMATED PROPOSED SANITARY FLOW = 5,500 GALLONS/DAY

ADDITIONAL SITE NOTES:

- ALL PROPOSED SIGNAGE SHALL COMPLY WITH THE CITY OF O'FALLON SIGN REGULATIONS AND SEPARATE PERMITS WILL BE REQUIRED.
- SITE IMPROVEMENTS SHALL BE IN COMPLIANCE WITH CITY OF O'FALLON ARTICLE XIII, PERFORMANCE STANDARDS.
- SITE IMPROVEMENTS SHALL BE IN COMPLIANCE WITH THE CITY OF O'FALLON COMPREHENSIVE PLAN.
- OWNER TO COORDINATE WITH CITY, AMEREN AND ANY OTHER UTILITY COMPANIES FOR THE EXISTING OVERHEAD ELECTRIC RELOCATION AND/OR POTENTIAL RELOCATION UNDERGROUND ALONG MAIN STREET.
- ALL NEW SITE SERVICE UTILITIES SHALL BE UNDERGROUND.
- APPROVALS FROM O'FALLON FIRE DISTRICT, MODNR, SANITARY AND WATER DISTRICT SHALL BE REQUIRED PRIOR TO CONSTRUCTION.



Nathan J. Cowan, Civil Engineer
MO PE-2005022092
PROJECT NO.: R2385.28



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418 SOUTH MAIN STREET
O'FALLON, MISSOURI



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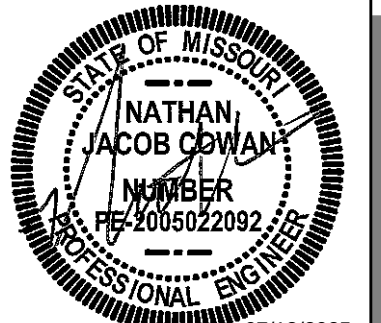
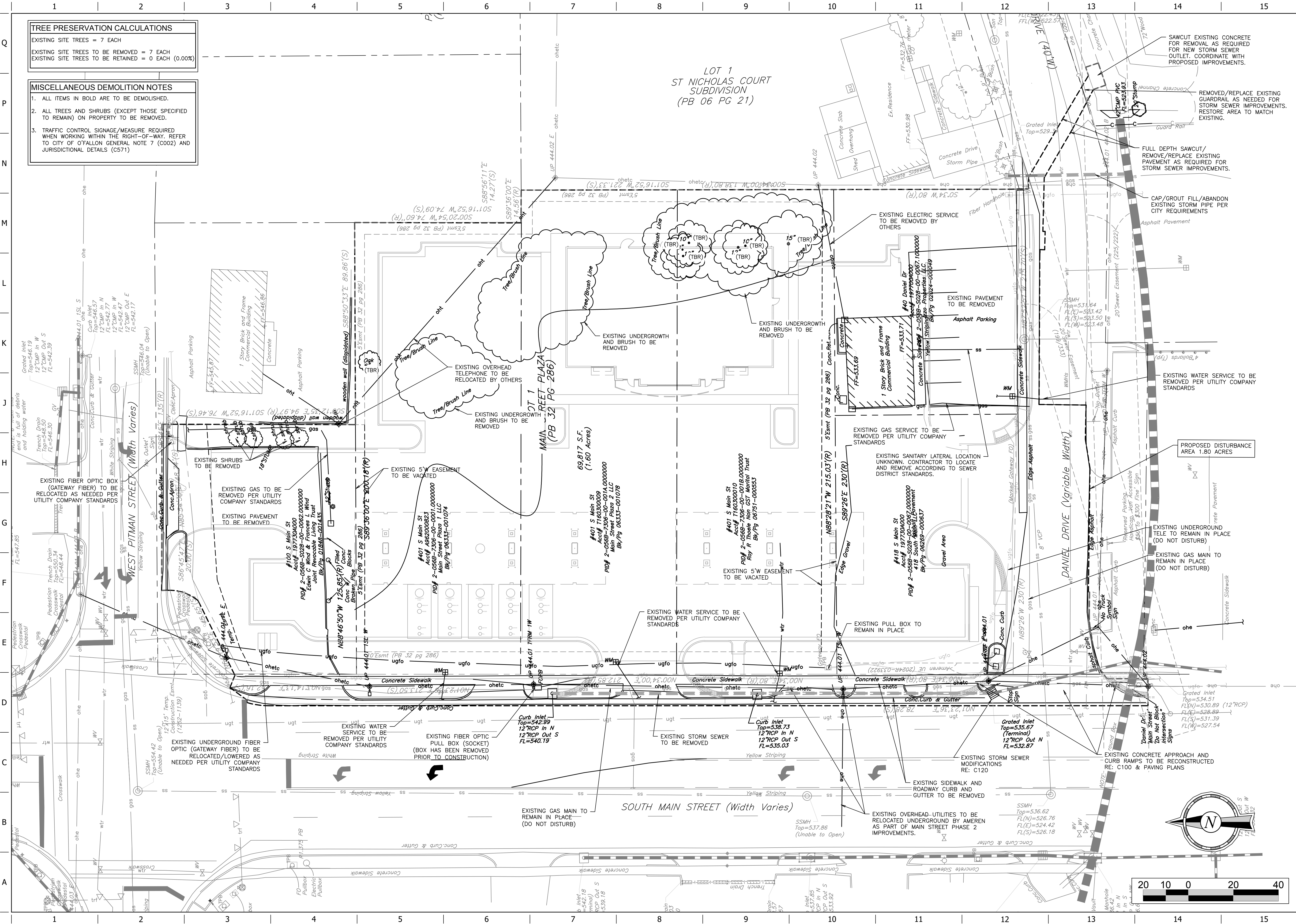
DIVISION:

VERSION: 001

DESIGNED BY:

TREE PRESERVATION CALCULATIONS
EXISTING SITE TREES = 7 EACH
EXISTING SITE TREES TO BE REMOVED = 7 EACH
EXISTING SITE TREES TO BE RETAINED = 0 EACH (0.00%)

MISCELLANEOUS DEMOLITION NOTES
1. ALL ITEMS IN BOLD ARE TO BE DEMOLISHED.
2. ALL TREES AND SHRUBS (EXCEPT THOSE SPECIFIED TO REMAIN) ON PROPERTY TO BE REMOVED.
3. TRAFFIC CONTROL SIGNAGE/MEASURE REQUIRED WHEN WORKING WITHIN THE RIGHT-OF-WAY. REFER TO CITY OF O'FALLON GENERAL NOTE 7 (C002) AND JURISDICTIONAL DETAILS (C571)



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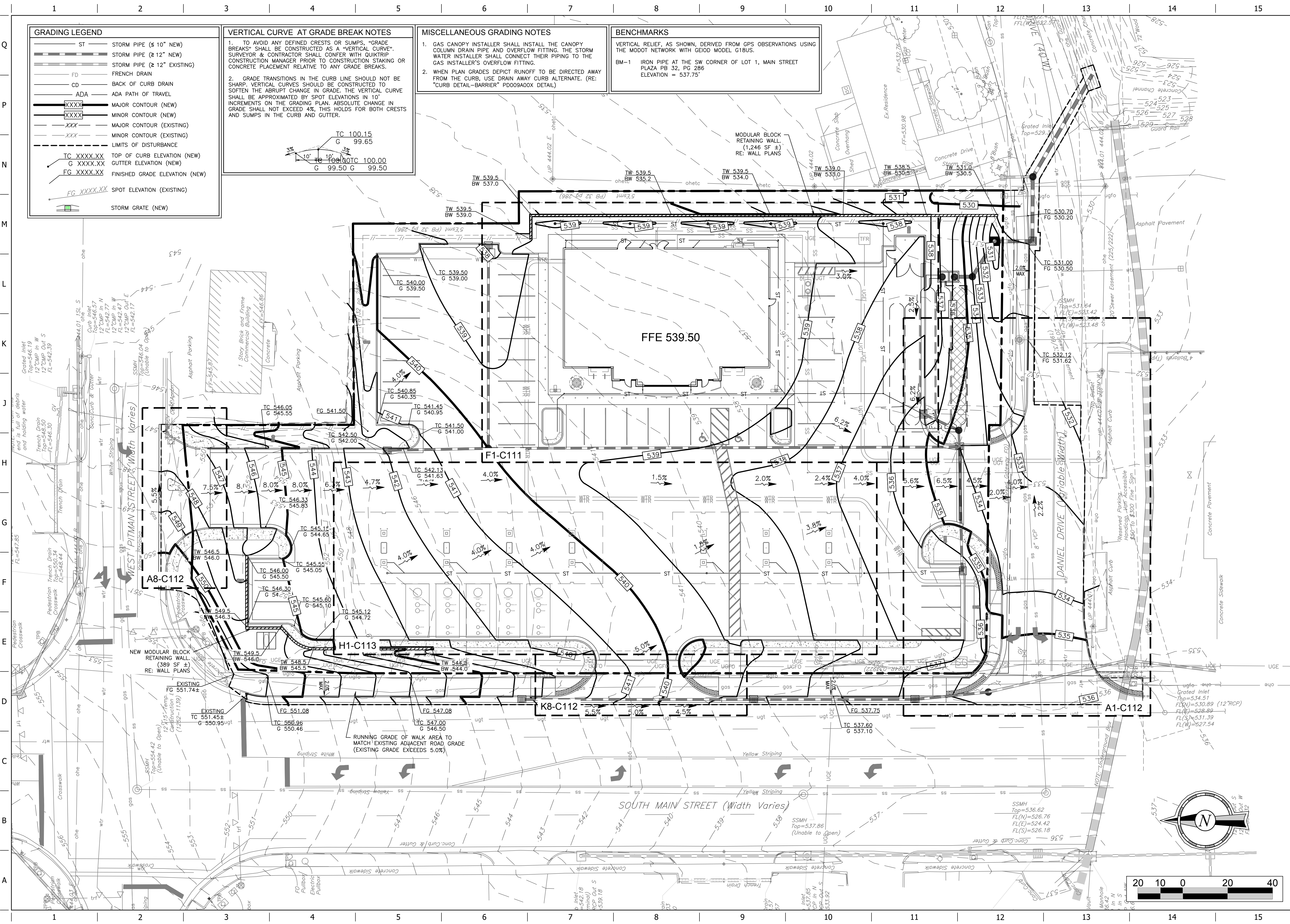
REV	DATE	DESCRIPTION

SHEET TITLE:
DEMOLITION PLAN

SHEET NUMBER:
C030

ORIGINAL ISSUE DATE:





GRADING LEGEND

- ST STORM PIPE (≤ 10" NEW)
- STORM PIPE (≥ 12" NEW)
- STORM PIPE (≥ 12" EXISTING)
- FD FRENCH DRAIN
- CD BACK OF CURB DRAIN
- ADA ADA PATH OF TRAVEL
- XXXX MAJOR CONTOUR (NEW)
- XXXX MINOR CONTOUR (NEW)
- XXX MAJOR CONTOUR (EXISTING)
- XXX MINOR CONTOUR (EXISTING)
- XXX LIMITS OF DISTURBANCE
- TC XXXX.XX TOP OF CURB ELEVATION (NEW)
- G XXXX.XX GUTTER ELEVATION (NEW)
- FG XXXX.XX FINISHED GRADE ELEVATION (NEW)
- FG XXXX.XX SPOT ELEVATION (EXISTING)
- STORM GRATE (NEW)

VERTICAL CURVE AT GRADE BREAK NOTES

1. TO AVOID ANY DEFINED CRESTS OR SUMPS, "GRADE BREAKS" SHALL BE CONSTRUCTED AS A "VERTICAL CURVE". SURVEYOR & CONTRACTOR SHALL CONFER WITH QUIKTRIP CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION STAKING OR CONCRETE PLACEMENT RELATIVE TO ANY GRADE BREAKS.

2. GRADE TRANSITIONS IN THE CURB LINE SHOULD NOT BE SHARP. VERTICAL CURVES SHOULD BE CONSTRUCTED TO SOFTEN THE ABRUPT CHANGE IN GRADE. THE VERTICAL CURVE SHALL BE APPROXIMATED BY SPOT ELEVATIONS IN 10' INCREMENTS ON THE GRADING PLAN. ABSOLUTE CHANGE IN GRADE SHALL NOT EXCEED 4%. THIS HOLDS FOR BOTH CRESTS AND SUMPS IN THE CURB AND GUTTER.

TC 100.15
G 99.65
TC 100.00
G 99.50

MISCELLANEOUS GRADING NOTES

1. GAS CANOPY INSTALLER SHALL INSTALL THE CANOPY COLUMN DRAIN PIPE AND OVERFLOW FITTING. THE STORM WATER INSTALLER SHALL CONNECT THEIR PIPING TO THE GAS INSTALLER'S OVERFLOW FITTING.

2. WHEN PLAN GRADES DEPICT RUNOFF TO BE DIRECTED AWAY FROM THE CURB, USE DRAIN AWAY CURB ALTERNATE. (RE: "CURB DETAIL-BARRIER" PD009A00X DETAIL)

BENCHMARKS

VERTICAL RELIEF, AS SHOWN, DERIVED FROM GPS OBSERVATIONS USING THE MODOT NETWORK WITH GEIOD MODEL G18US.

BM-1 IRON PIPE AT THE SW CORNER OF LOT 1, MAIN STREET PLAZA PB 32, PG 286 ELEVATION = 537.75'

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NATHAN JACOB COWAN
Professional Engineer
No. 0000022092
Exp. 12/31/2025
Nathan J. Cowan, Civil Engineer
MO PE-2005022092
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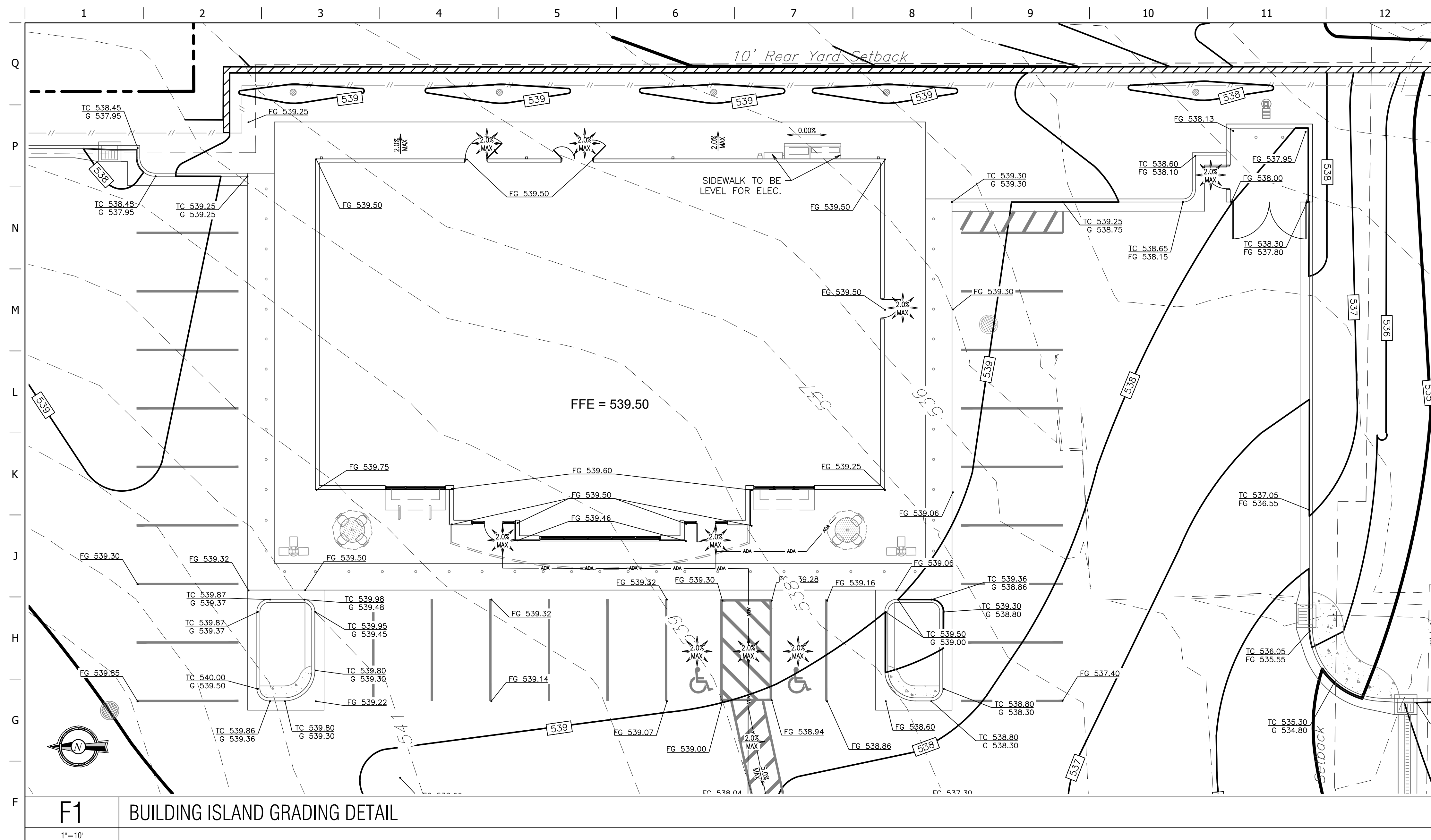
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REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE:

SHEET TITLE:
GRADING PLAN

SHEET NUMBER:
C110



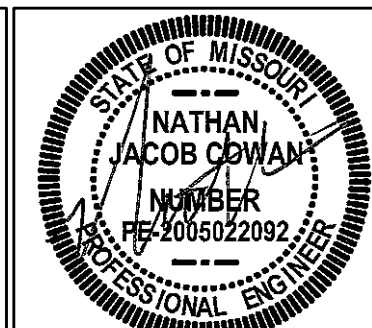
GRADING LEGEND

	MAJOR CONTOUR (NEW)
	MINOR CONTOUR (NEW)
	MAJOR CONTOUR (EXISTING)
	MINOR CONTOUR (EXISTING)
	LIMITS OF DISTURBANCE
	TOP OF CURB ELEVATION (NEW)
	GUTTER ELEVATION (NEW)
	FINISHED GRADE ELEVATION (NEW)
	SPOT ELEVATION (EXISTING)
	STORM GRATE (NEW)

PRIOR TO PLACING FRAMEWORK ON COMPLEX ADA RAMP DESIGNS, CONTRACTOR SHALL SUBMIT AN RFI WITH ADDITIONAL SURVEY DATA TO THE CONSULTANT. CONSULTANT WILL FINALIZE RAMP DESIGN AND RESPOND TO THE RFI.

BENCHMARKS	
VERTICAL RELIEF, AS SHOWN, DERIVED FROM GPS OBSERVATIONS USING THE MODOT NETWORK WITH GEIOD MODEL G18US.	
BM-1	IRON PIPE AT THE SW CORNER OF LOT 1, MAIN STREET PLAZA PB 32, PG 286 ELEVATION = 537.75'

GRADING GENERAL NOTES 1. REFER TO C110 FOR GRADING NOTES.
--



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[illegible]

SHEET TITLE:

DETAILED GRADING
PLANS I

SHEET NUMBER:



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MO PE-2006022092
PROJECT NO.: R2385.28



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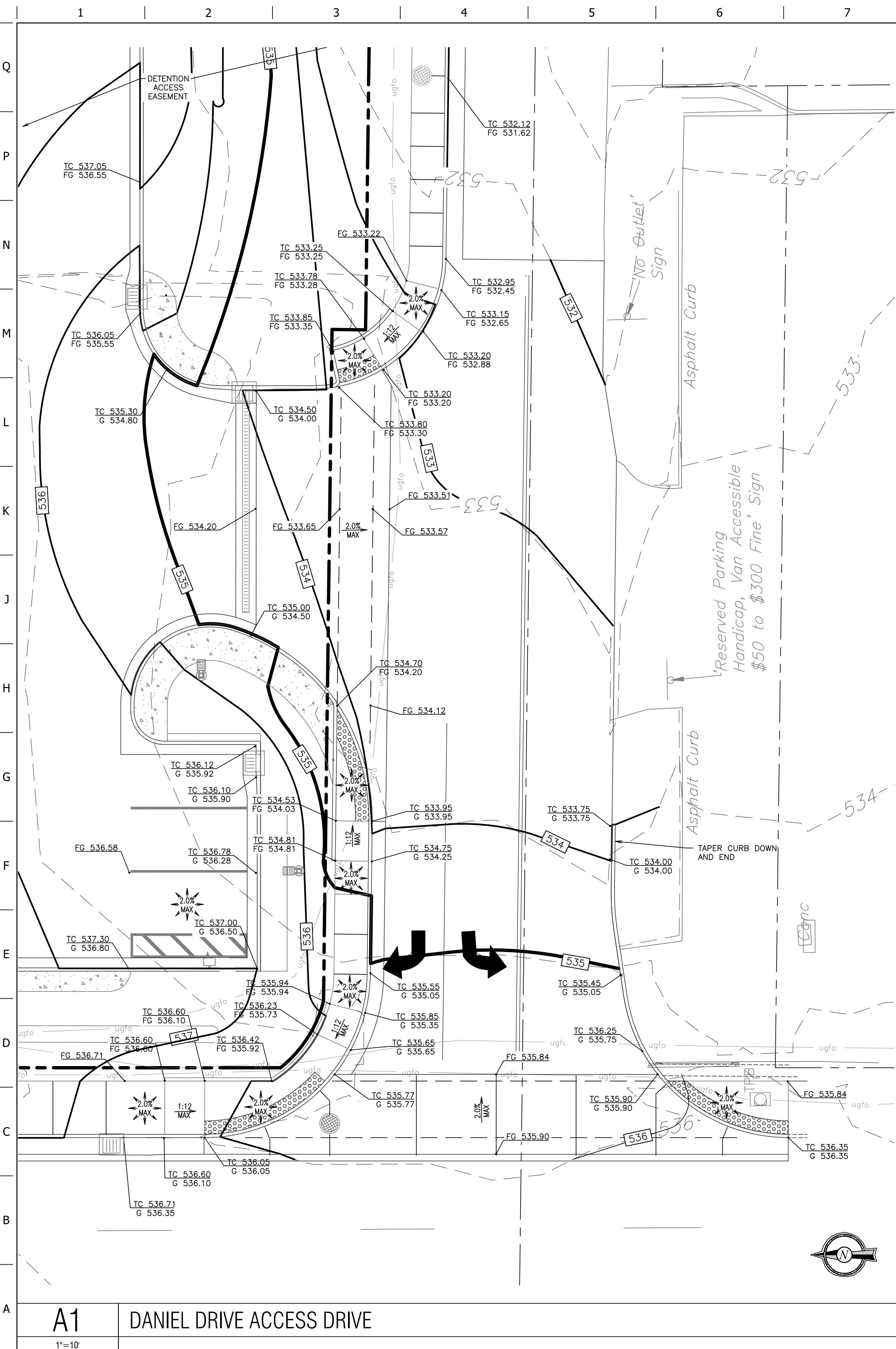
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SHEET TITLE:

DETAILED GRADING
PLANS II

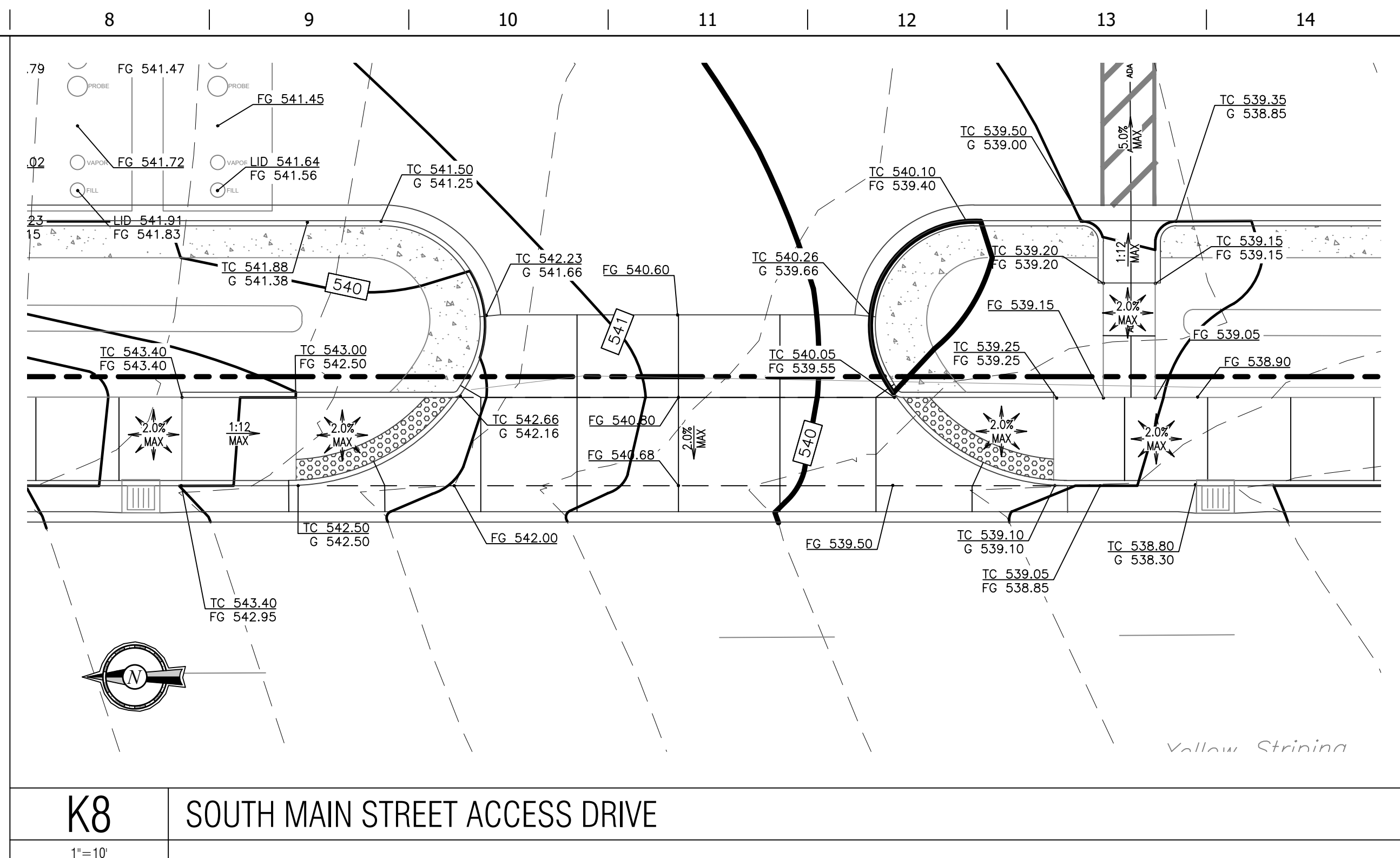
SHEET NUMBER:

C112



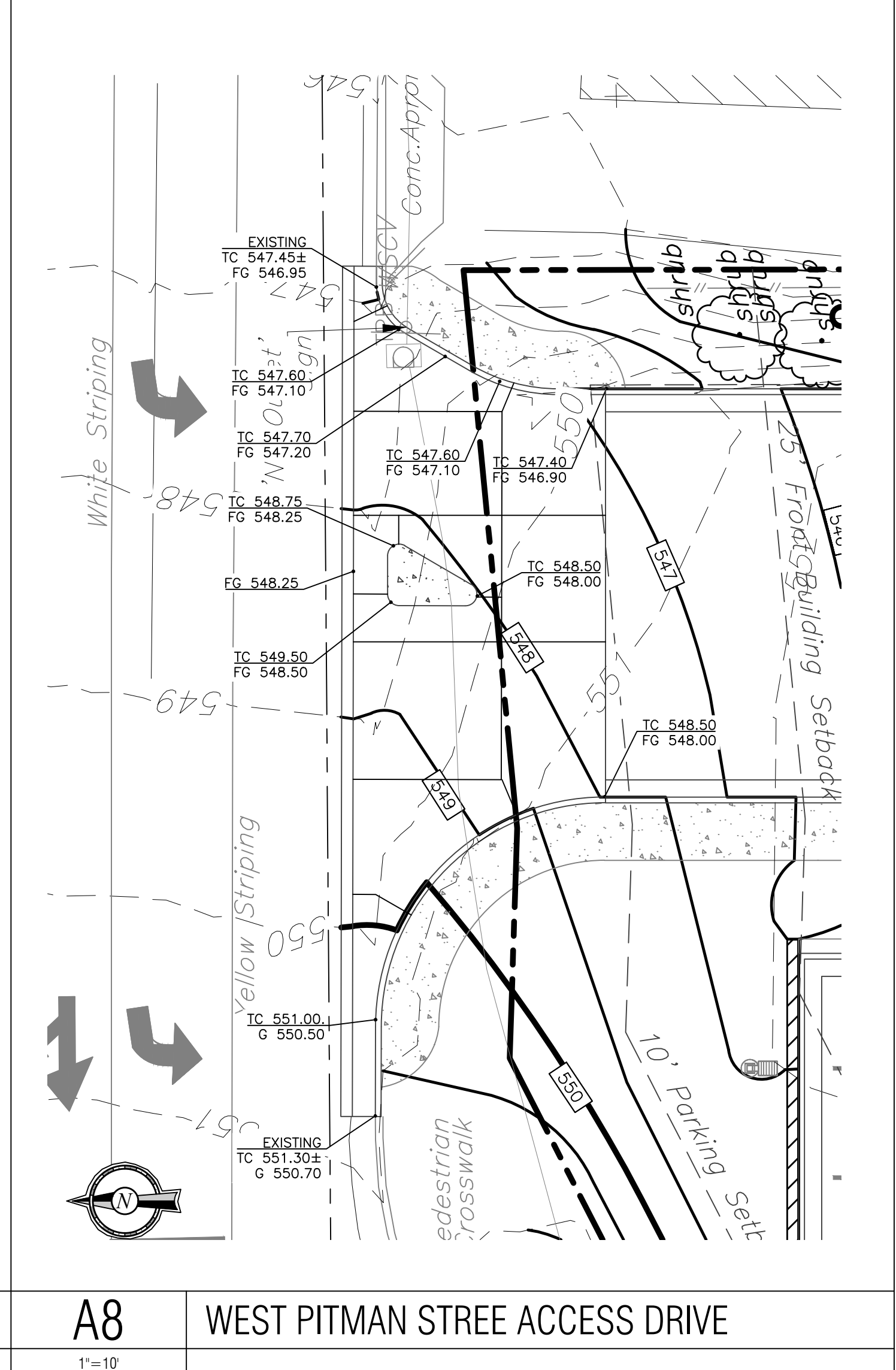
A1 DANIEL DRIVE ACCESS DRIVE

1"=10'



K8 SOUTH MAIN STREET ACCESS DRIVE

1"=10'



A8 WEST PITMAN STREE ACCESS DRIVE

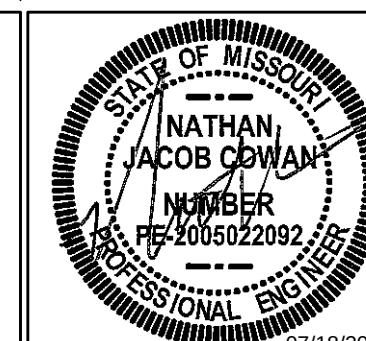
1"=10'

GRADING LEGEND	
	MAJOR CONTOUR (NEW)
	MINOR CONTOUR (NEW)
	MAJOR CONTOUR (EXISTING)
	MINOR CONTOUR (EXISTING)
	LIMITS OF DISTURBANCE
	TC XXXX.XX TOP OF CURB ELEVATION (NEW)
	G XXXX.XX GUTTER ELEVATION (NEW)
	FG XXXX.XX FINISHED GRADE ELEVATION (NEW)
	FG XXXX.XX SPOT ELEVATION (EXISTING)
	STORM GRATE (NEW)

PRIOR TO PLACING FRAMEWORK ON COMPLEX ADA RAMP
DESIGNS, CONTRACTOR SHALL SUBMIT AN RFI WITH
ADDITIONAL SURVEY DATA TO THE CONSULTANT. CONSULTANT
WILL FINALIZE RAMP DESIGN AND RESPOND TO THE RFI.

BENCHMARKS	
VERTICAL RELIEF, AS SHOWN, DERIVED FROM GPS OBSERVATIONS USING THE MODOT NETWORK WITH GEOD MODEL G18US.	
BM-1	IRON PIPE AT THE SW CORNER OF LOT 1, MAIN STREET PLAZA PB 32, PG 286 ELEVATION = 537.75'

GRADING GENERAL NOTES	
1. REFER TO C110 FOR GRADING NOTES.	



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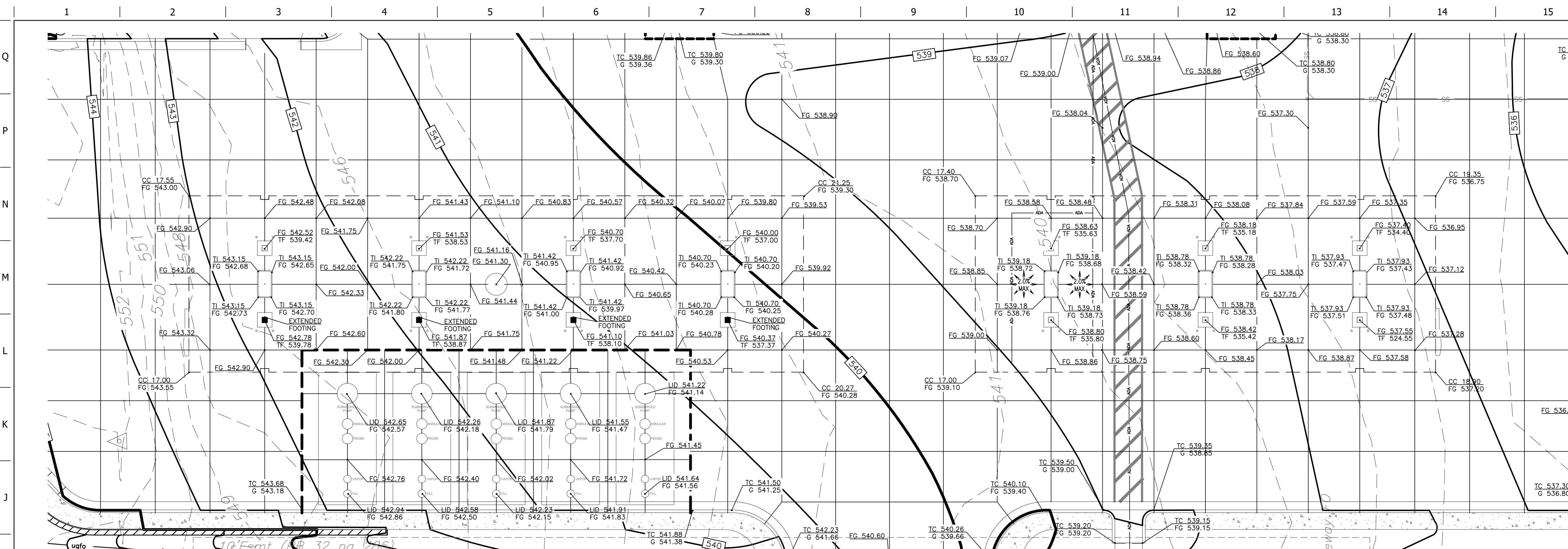
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SHEET TITLE:
DETAILED GRADING PLANS III

SHEET NUMBER:
C113



H1

FUEL CANOPY/TANKS GRADING DETAIL

 $1'' = 10'$

BENCHMARKS

VERTICAL RELIEF, AS SHOWN, DERIVED FROM GPS OBSERVATIONS USING THE MODOT NETWORK WITH GEIOD MODEL G18US.

BM-1 IRON PIPE AT THE SW CORNER OF LOT 1, MAIN STREET
PLAZA PB 32, PG 286
ELEVATION = 537.75'

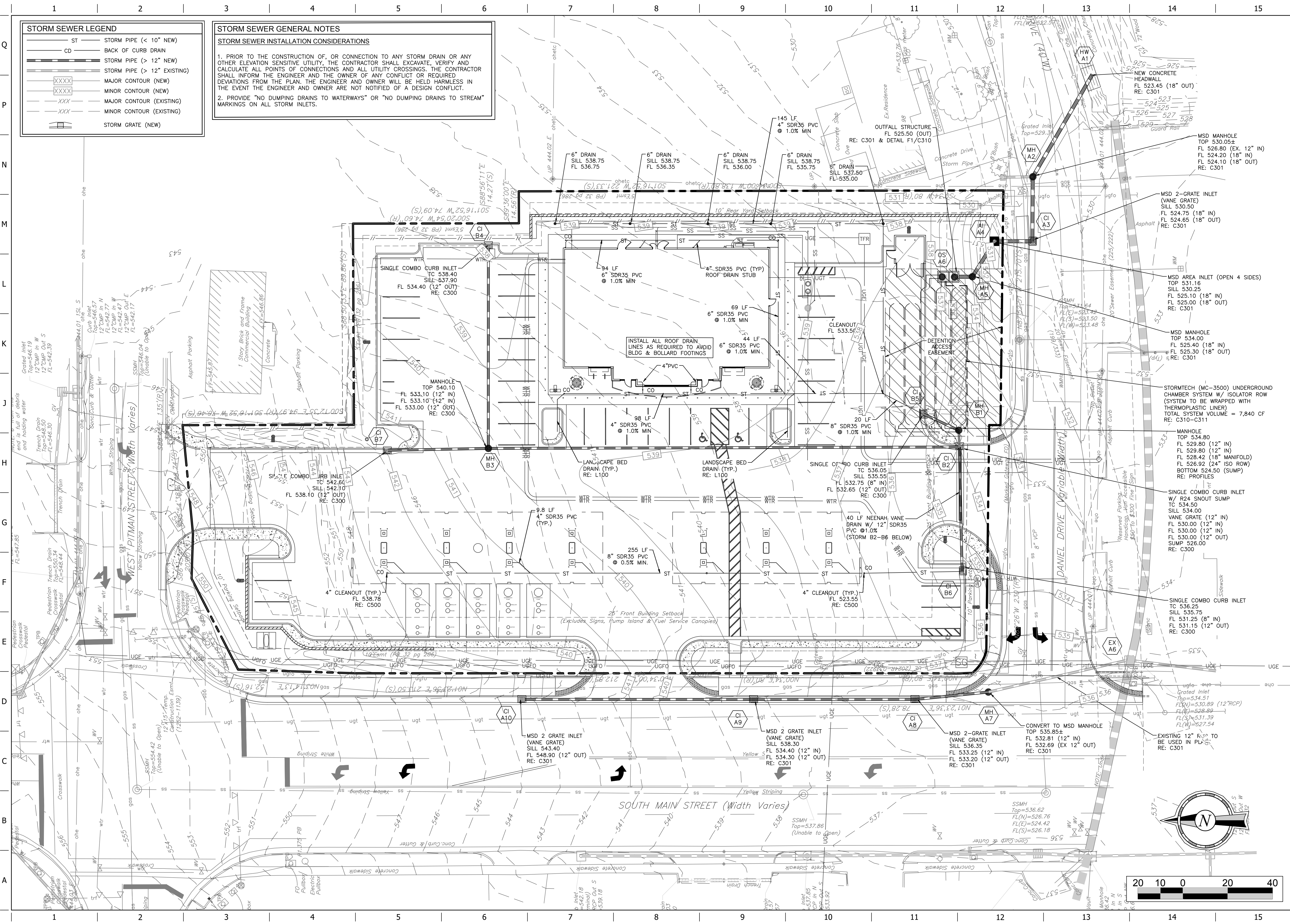
GRADING GENERAL NOTES

1. REFER TO C110 FOR GRADING NOTES.

GRADING LEGEND

-
- Diagram illustrating various elevation lines and their corresponding labels:
- MAJOR CONTOUR (NEW)
 - MINOR CONTOUR (NEW)
 - MAJOR CONTOUR (EXISTING)
 - MINOR CONTOUR (EXISTING)
 - LIMITS OF DISTURBANCE
 - TOP OF CURB ELEVATION (NEW)
 - GUTTER ELEVATION (NEW)
 - FINISHED GRADE ELEVATION (NEW)
 - SPOT ELEVATION (EXISTING)
 - STORM GRATE (NEW)

PRIOR TO PLACING FRAMEWORK ON COMPLEX ADA RAMP DESIGNS, CONTRACTOR SHALL SUBMIT AN RFI WITH ADDITIONAL SURVEY DATA TO THE CONSULTANT. CONSULTANT WILL FINALIZE RAMP DESIGN AND RESPOND TO THE RFI.



STORM SEWER LEGEND

- ST — STORM PIPE (< 10" NEW)
- CD — BACK OF CURB DRAIN
- ST — STORM PIPE (> 12" NEW)
- ST — STORM PIPE (> 12" EXISTING)
- XXXX — MAJOR CONTOUR (NEW)
- XXXX — MAJOR CONTOUR (EXISTING)
- XXXX — MINOR CONTOUR (NEW)
- XXXX — MINOR CONTOUR (EXISTING)
- XXXX — STORM GRATE (NEW)

STORM SEWER GENERAL NOTES

STORM SEWER INSTALLATION CONSIDERATIONS

1. PRIOR TO THE CONSTRUCTION OF, OR CONNECTION TO ANY STORM DRAIN OR ANY OTHER ELEVATION SENSITIVE UTILITY, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTIONS AND ALL UTILITY CROSSINGS. THE CONTRACTOR SHALL INFORM THE ENGINEER AND THE OWNER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. THE ENGINEER AND OWNER WILL BE HELD HARMLESS IN THE EVENT THE ENGINEER AND OWNER ARE NOT NOTIFIED OF A DESIGN CONFLICT.

2. PROVIDE "NO DUMPING DRAINS TO WATERWAYS" OR "NO DUMPING DRAINS TO STREAM" MARKINGS ON ALL STORM INLETS.

STATE OF MISSOURI
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No. 000000000
01/18/2025
Nathan J. Cowan, Civil Engineer
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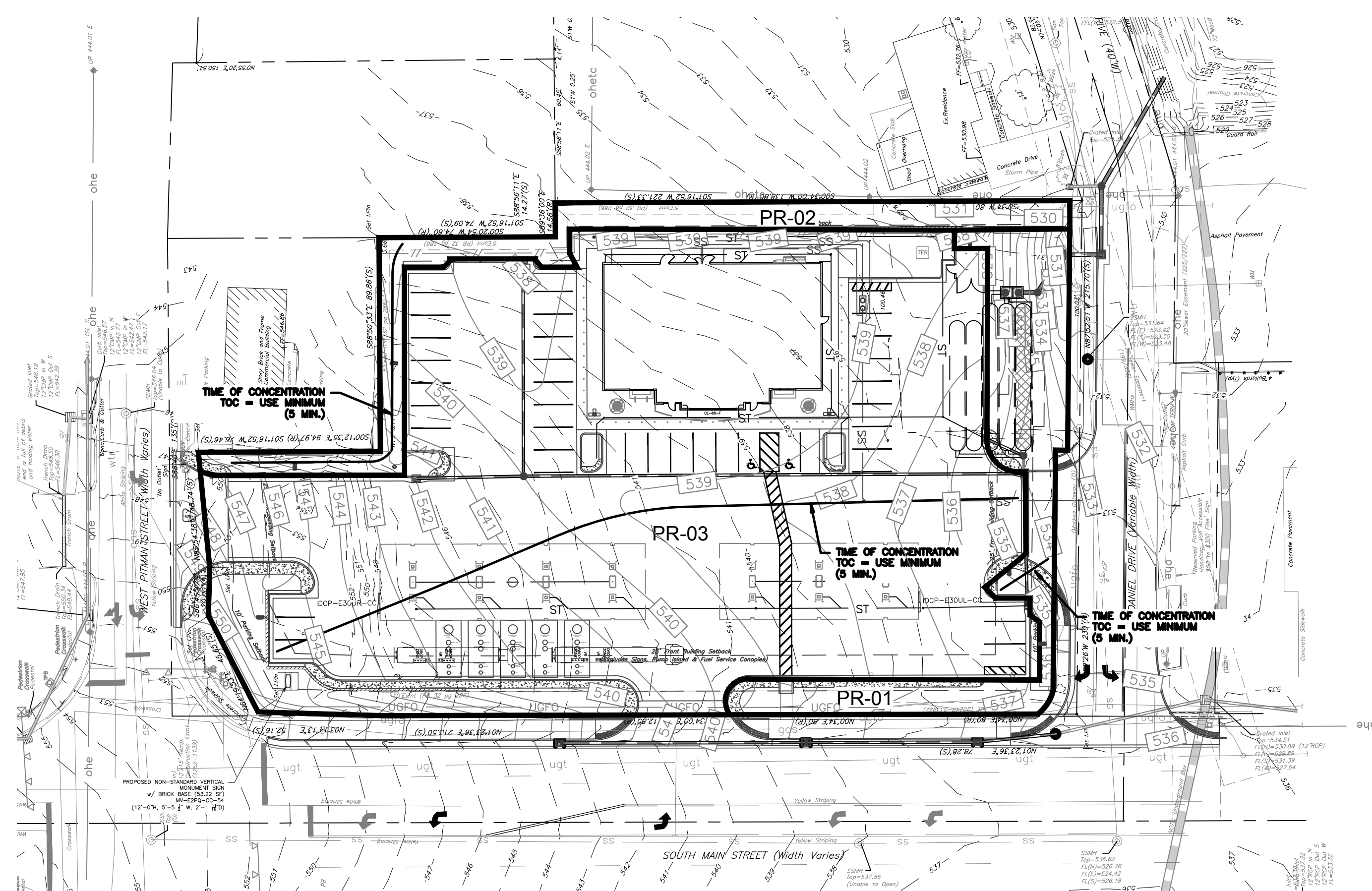
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REV	DATE	DESCRIPTION

SHEET TITLE:
STORM SEWER PLAN

SHEET NUMBER:
C120

ORIGINAL ISSUE DATE:



Design storm data:		MSD PI FACTORS:	
Rainfall frequency:	15 year storm	*Roof=	4.20
Time of concentration:	20 minute	Roof=	3.54
		Pavement=	3.54
		Gravel=	3.24
		Lawn=	1.70

Existing Site Drainage Areas:						
Drainage Area Title:	EX-01	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)
Q=P*IA	Discharge to Main St. & Daniel Dr. Q= flow (cfs) PI= PI factor (MSD) A=area (acres)	*Roof=	0	0.00	x 4.20	= 0.00
		Roof=	0	0.00	x 3.54	= 0.00
		Pavement=	0	0.00	x 3.54	= 0.00
		Gravel=	3230	0.07	x 3.24	= 0.24
		Lawn=	17636	0.40	x 1.70	= 0.69
		DA Totals=	20866	0.48		0.93

Drainage Area Title:	EX-02	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)
Description:	Discharge to East	*Roof=	0	0.00	x 4.20	= 0.00
		*Roof=	1176	0.03	x 3.54	= 0.10
Q=PI*A	Q= flow (cfs)	Pavement=	3065	0.07	x 3.54	= 0.25
	PI= PI factor (MSD)	Gravel=	0	0.00	x 3.24	= 0.00
	A=area (acres)	Lawn=	40865	0.94	x 1.70	= 1.59
		DA Totals=	45106	1.04		1.94

Drainage Area Title:	EX-03	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)
Description:	Discharge to Pitman St.	*Roof=	0	0.00 x	4.20 =	0.00
		Roof=	0	0.00 x	3.54 =	0.00
Q=PI*A	Q= flow (cfs)	Pavement=	0	0.00 x	3.54 =	0.00
	PI= PI factor (MSD)	Gravel=	0	0.00 x	3.24 =	0.00
	A=area (acres)	Lawn=	2191	0.05 x	1.70 =	0.09
		DA Totale=	2191	0.05		0.09

Existing Site Drainage Summary:				
DA Totals=	2191	0.03		0.09
Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)
*Roofs=	0	0.00	x 4.20	= 0.00
Roofs=	1176	0.03	x 3.54	= 0.10
Pavement=	3065	0.07	x 3.54	= 0.25
Gravel=	3230	0.07	x 3.24	= 0.24
Lawn=	60692	1.39	x 1.70	= 2.37
Totals=	68163	1.56		2.95

Design storm data:			MSD PI FACTORS:	
Rainfall frequency:	15	year storm	*Roof=	4.20
Time of concentration:	20	minute	Roof=	3.54
			Pavement=	3.54
			Gravel=	3.38
			Lawn=	1.70

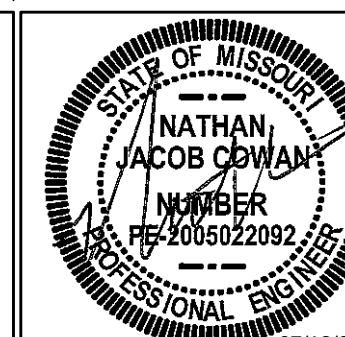
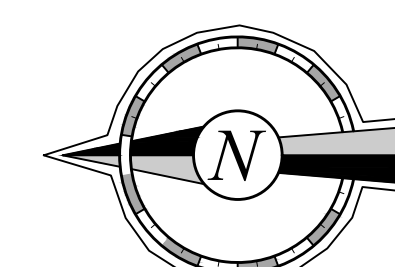
Proposed Site Drainage Areas:							
Drainage Area Title:	PR-01	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)	
Q=PTA	Discharge to Main St. & Daniel Dr.	*Roof=	0	0.00	x 4.20	=	0.00
		Roof=	0	0.00	x 3.54	=	0.00
		Q= flow (cfs)	1235	0.03	x 3.54	=	0.00
		PI= PI factor (MSD)	0	0.00	x 3.38	=	0.00
		Lawn=	5311	0.12	x 1.70	=	0.21
		DA Totals=	6546	0.15			0.31

Drainage Area Title:	PR-02	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)
Description:	Discharge to East	*Roof=	0	0.00 x	4.20 =	0.00
		Roof=	0	0.00 x	3.54 =	0.00
Q=PI*A	Q= flow (cfs)	Pavement=	0	0.00 x	3.54 =	0.00
	PI= PI factor (MSD)	Gravel=	0	0.00 x	3.38 =	0.00
	A=area (acres)	Lawn=	5078	0.12 x	1.70 =	0.20
		DA Totals=	5078	0.12		0.20

Drainage Area Title:	PR-03	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)
Description:	Discharge to Iso Row/Detention	*Roof=	0	0.00	x 4.20	= 0.00
		*Roof=	11987	0.28	x 3.54	= 0.97
Q=P*IA	Q= flow (cfs)	Pavement=	40952	0.94	x 3.54	= 3.33
	PI= PI factor (MSD)	Gravel=	0	0.00	x 3.38	= 0.00
	A=area (acres)	Lawn=	3600	0.08	x 1.70	= 0.14
		BA-Total=	56539	1.30		4.11

Proposed Site Drainage Summary:						
Description	Area (SF)	Area (AC)	MSD PI			Flow (CFS)
*Roofs=	0	0.00	x	4.20	=	0.00
Roofs=	11987	0.28	x	3.54	=	0.97
Pavement=	42187	0.97	x	3.54	=	3.43
Gravel=	0	0.00	x	3.38	=	0.00
Lawn=	13989	0.32	x	1.70	=	0.55
Totals=	68163	1.56				4.95

Site Differential Summary: Undetained (Proposed Development)				
Existing Drainage	Total Q=	2.95	CFS	
Proposed Drainage	Total Q=	4.95	CFS	
Differential	Total Q=	2.00	CFS	INCREASE



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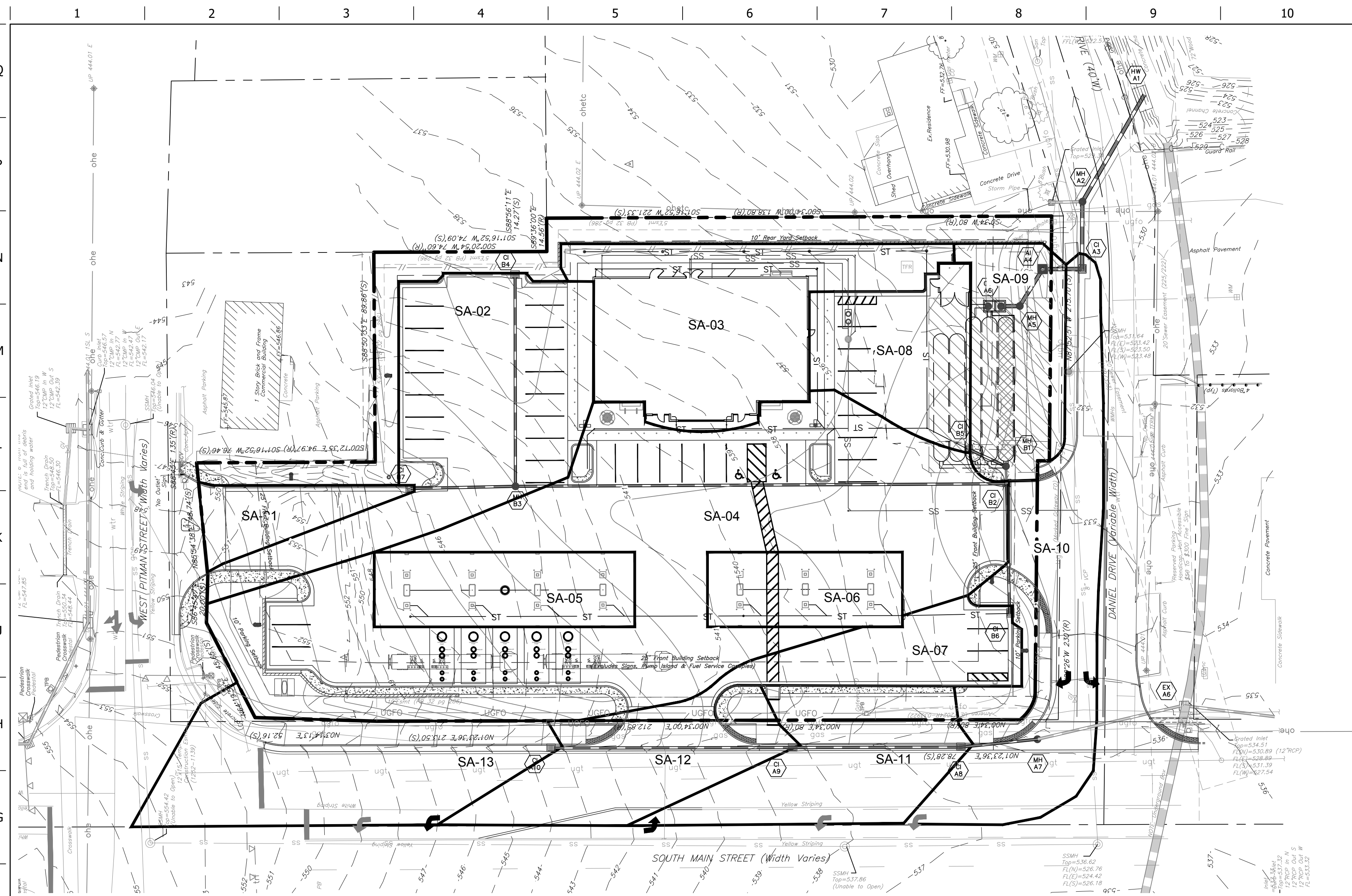
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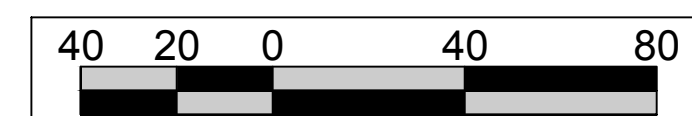
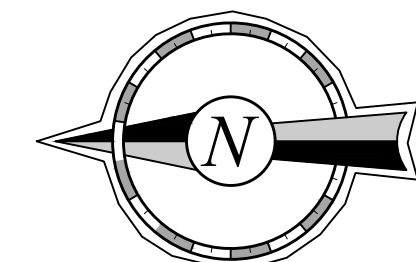
SHEET TITLE:
PRE AND POST-DEVELOPMENT
DRAINAGE MAP

SHEET NUMBER:

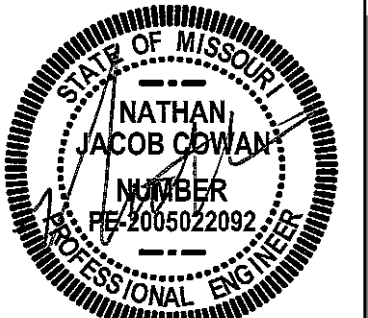
C121



Drainage Sub-Areas:					15 YR - 20 MIN		100 YR - 20 MIN	
Drainage Area Title: Description:	SA-01 To B7	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)	MSD PI	Flow (CFS)
Q=PFA	Q= flow (cfs) PI= PI factor (MSD) A=area (acres)	*Roof=	0	0.00 x	4.20	= 0.00	5.62	= 0.00
		Roof=	0	0.00 x	3.54	= 0.00	4.77	= 0.00
		Pavement=	1794	0.04 x	3.54	= 0.15	4.77	= 0.20
		Perm. Pavers=	0	0.00 x	1.78	= 0.00	2.54	= 0.00
		Lawn=	0	0.00 x	1.78	= 0.00	2.29	= 0.00
		DA Totals=	1794	0.04		0.15		0.20
Drainage Area Title: Description:	SA-02 To B4	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)	MSD PI	Flow (CFS)
Q=PFA	Q= flow (cfs) PI= PI factor (MSD) A=area (acres)	*Roof=	0	0.00 x	4.20	= 0.00	5.62	= 0.00
		Roof=	0	0.00 x	3.54	= 0.00	4.77	= 0.00
		Pavement=	9086	0.21 x	3.54	= 0.74	4.77	= 0.99
		Perm. Pavers=	0	0.00 x	1.70	= 0.00	2.54	= 0.00
		Lawn=	357	0.01 x	1.70	= 0.01	2.29	= 0.02
		DA Totals=	9443	0.22		0.75		1.01
Drainage Area Title: Description:	SA-03 To B5	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)	MSD PI	Flow (CFS)
Q=PFA	Q= flow (cfs) PI= PI factor (MSD) A=area (acres)	*Roof=	4996	0.11 x	4.20	= 0.48	5.62	= 0.64
		Roof=	0	0.00 x	3.54	= 0.00	4.77	= 0.00
		Pavement=	801	0.02 x	3.54	= 0.07	4.77	= 0.09
		Perm. Pavers=	0	0.00 x	1.70	= 0.00	2.54	= 0.00
		Lawn=	2541	0.06 x	1.70	= 0.10	2.29	= 0.13
		DA Totals=	8338	0.19		0.65		0.87
Drainage Area Title: Description:	SA-04 To B2 (Vane Grate) d	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)	MSD PI	Flow (CFS)
Q=PFA	Q= flow (cfs) PI= PI factor (MSD) A=area (acres)	*Roof=	0	0.00 x	4.20	= 0.00	5.62	= 0.00
		Roof=	0	0.00 x	3.54	= 0.00	4.77	= 0.00
		Pavement=	21850	0.50 x	3.54	= 1.78	4.77	= 2.39
		Perm. Pavers=	0	0.00 x	1.70	= 0.00	2.54	= 0.00
		Lawn=	862	0.02 x	1.70	= 0.03	2.29	= 0.05
		DA Totals=	22712	0.52		1.81		2.44
Drainage Area Title: Description:	SA-05 To B6	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)	MSD PI	Flow (CFS)
Q=PFA	Q= flow (cfs) PI= PI factor (MSD) A=area (acres)	*Roof=	3568	0.08 x	4.20	= 0.34	5.62	= 0.46
		Roof=	0	0.00 x	3.54	= 0.00	4.77	= 0.00
		Pavement=	0	0.00 x	3.54	= 0.00	4.77	= 0.00
		Perm. Pavers=	0	0.00 x	1.70	= 0.00	2.54	= 0.00
		Lawn=	0	0.00 x	1.70	= 0.00	2.29	= 0.00
		DA Totals=	3568	0.08		0.34		0.46
Drainage Area Title: Description:	SA-06 To B6	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)	MSD PI	Flow (CFS)
Q=PFA	Q= flow (cfs) PI= PI factor (MSD) A=area (acres)	*Roof=	2672	0.06 x	4.20	= 0.26	5.62	= 0.34
		Roof=	0	0.00 x	3.54	= 0.00	4.77	= 0.00
		Pavement=	0	0.00 x	3.54	= 0.00	4.77	= 0.00
		Perm. Pavers=	0	0.00 x	1.70	= 0.00	2.54	= 0.00
		Lawn=	0	0.00 x	1.70	= 0.00	2.29	= 0.00
		DA Totals=	2672	0.06		0.26		0.34
Drainage Area Title: Description:	SA-07 To B6	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)	MSD PI	Flow (CFS)
Q=PFA	Q= flow (cfs) PI= PI factor (MSD) A=area (acres)	*Roof=	0	0.00 x	4.20	= 0.00	5.62	= 0.00
		Roof=	0	0.00 x	3.54	= 0.00	4.77	= 0.00
		Pavement=	3491	0.08 x	3.54	= 0.28	4.77	= 0.38
		Perm. Pavers=	0	0.00 x	1.70	= 0.00	2.54	= 0.00
		Lawn=	0	0.00 x	1.70	= 0.00	2.29	= 0.00
		DA Totals=	3491	0.08		0.28		0.38
Drainage Area Title: Description:	SA-08 To B5	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)	MSD PI	Flow (CFS)
Q=PFA	Q= flow (cfs) PI= PI factor (MSD) A=area (acres)	*Roof=	0	0.00 x	4.20	= 0.00	5.62	= 0.00
		Roof=	0	0.00 x	3.54	= 0.00	4.77	= 0.00
		Pavement=	2498	0.06 x	3.54	= 0.20	4.77	= 0.27
		Perm. Pavers=	0	0.00 x	1.70	= 0.00	2.54	= 0.00
		Lawn=	0	0.00 x	1.70	= 0.00	2.29	= 0.00
		DA Totals=	2498	0.06		0.20		0.27
Drainage Area Title: Description:	SA-09 To A4	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)	MSD PI	Flow (CFS)
Q=PFA	Q= flow (cfs) PI= PI factor (MSD) A=area (acres)	*Roof=	0	0.00 x	4.20	= 0.00	5.62	= 0.00
		Roof=	0	0.00 x	3.54	= 0.00	4.77	= 0.00
		Pavement=	0	0.00 x	3.54	= 0.00	4.77	= 0.00
		Perm. Pavers=	0	0.00 x	1.70	= 0.00	2.54	= 0.00
		Lawn=	5137	0.12 x	1.70	= 0.20	2.29	= 0.27
		DA Totals=	5137	0.12		0.20		0.27
Drainage Area Title: Description:	SA-10 To A3	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)		
Q=PFA	Q= flow (cfs) PI= PI factor (MSD) A=area (acres)	*Roof=	0	0.00 x	4.20	= 0.00		
		Roof=	0	0.00 x	3.54	= 0.00		
		Pavement=	7577	0.17 x	3.54	= 0.62		
		Perm. Pavers=	0	0.00 x	1.70	= 0.00		
		Lawn=	1246	0.03 x	1.70	= 0.05		
		DA Totals=	8823	0.20		0.66		
Drainage Area Title: Description:	SA-11 To A8	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)		
Q=PFA	Q= flow (cfs) PI= PI factor (MSD) A=area (acres)	*Roof=	0	0.00 x	4.20	= 0.00		
		Roof=	0	0.00 x	3.54	= 0.00		
		Pavement=	4671	0.11 x	3.54	= 0.38		
		Perm. Pavers=	0	0.00 x	1.70	= 0.00		
		Lawn=	997	0.02 x	1.70	= 0.04		
		DA Totals=	5668	0.13		0.42		
Drainage Area Title: Description:	SA-12 To A9	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)		
Q=PFA	Q= flow (cfs) PI= PI factor (MSD) A=area (acres)	*Roof=	0	0.00 x	4.20	= 0.00		
		Roof=	0	0.00 x	3.54	= 0.00		
		Pavement=	4197	0.10 x	3.54	= 0.34		
		Perm. Pavers=	0	0.00 x	1.70	= 0.00		
		Lawn=	173	0.00 x	1.70	= 0.01		
		DA Totals=	4370	0.10		0.35		
Drainage Area Title: Description:	SA-13 To A10	Description	Area (SF)	Area (AC)	MSD PI	Flow (CFS)		
Q=PFA	Q= flow (cfs) PI= PI factor (MSD) A=area (acres)	*Roof=	0	0.00 x	4.20	= 0.00		
		Roof=	0	0.00 x	3.54	= 0.00		
		Pavement=	7162	0.16 x	3.54	= 0.58		
		Perm. Pavers=	0	0.00 x	1.70	= 0.00		
		Lawn=	0	0.00 x	1.70	= 0.00		
		DA Totals=	7162	0.16		0.58		



PLAN FOR JURISDICTIONAL REVIEW ONLY. NOT FOR CONSTRUCTION



Nathan J. Cowan, Civil Engineer
MO PE-2005022092
PROJECT NO.: R2385.28



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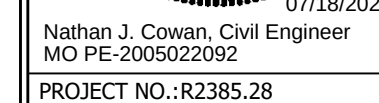
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SHEET TITLE:
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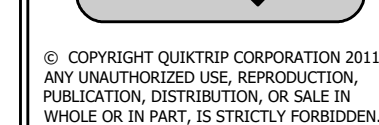
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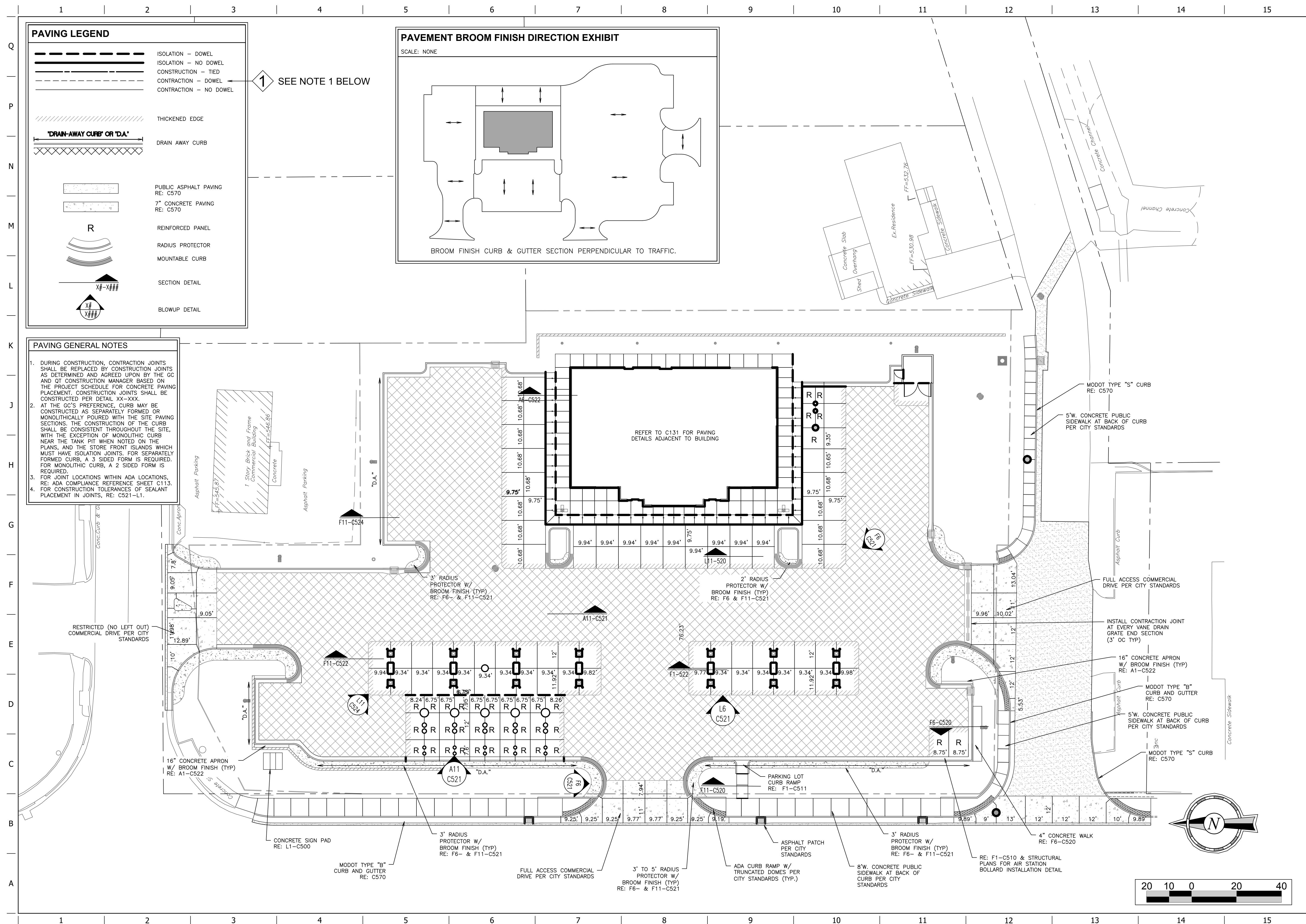
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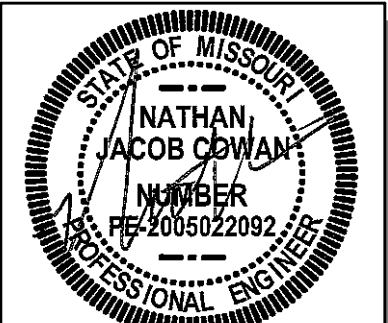
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SHEET TITLE:
ASPHALT PAVING PLAN

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C130A





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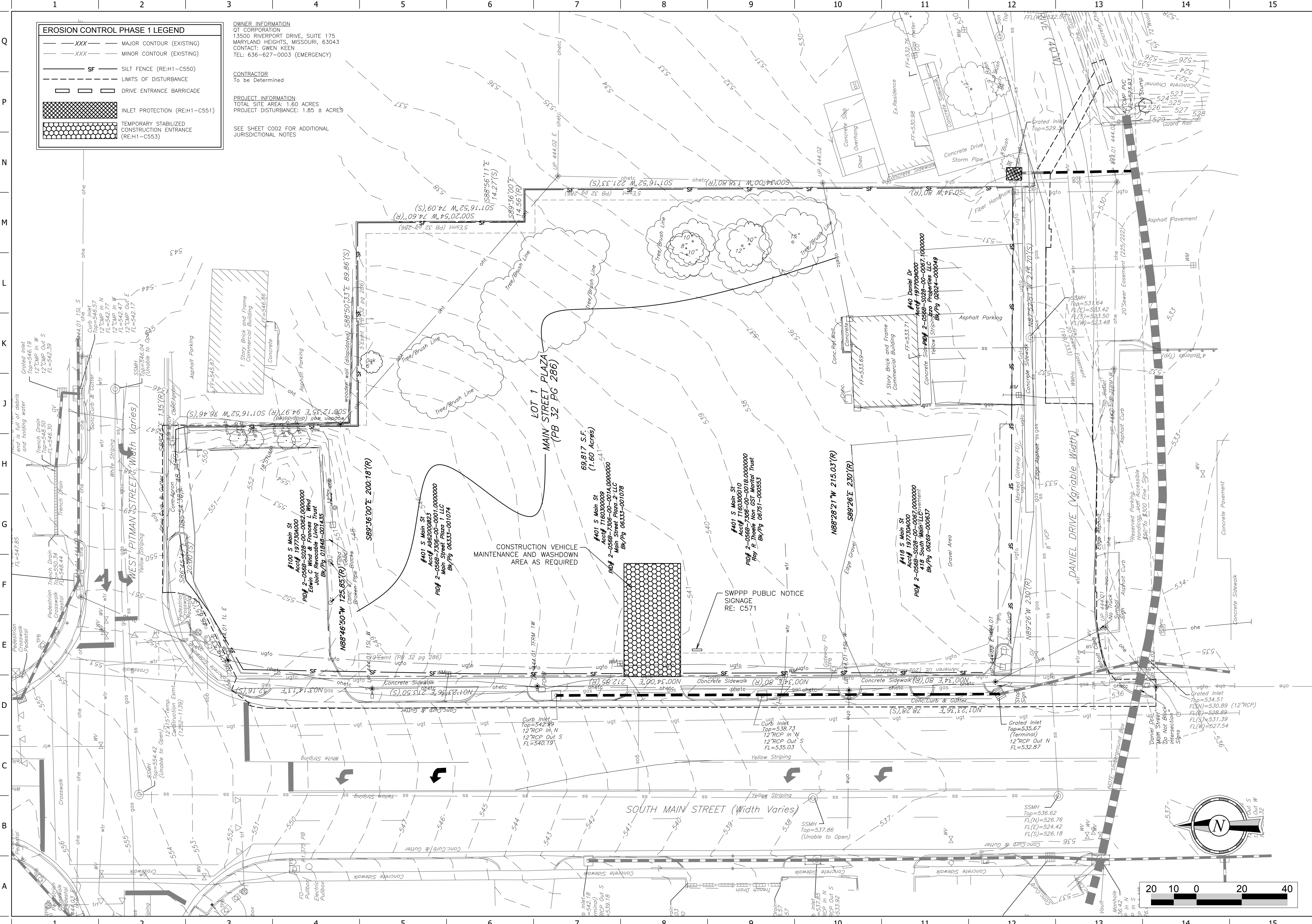
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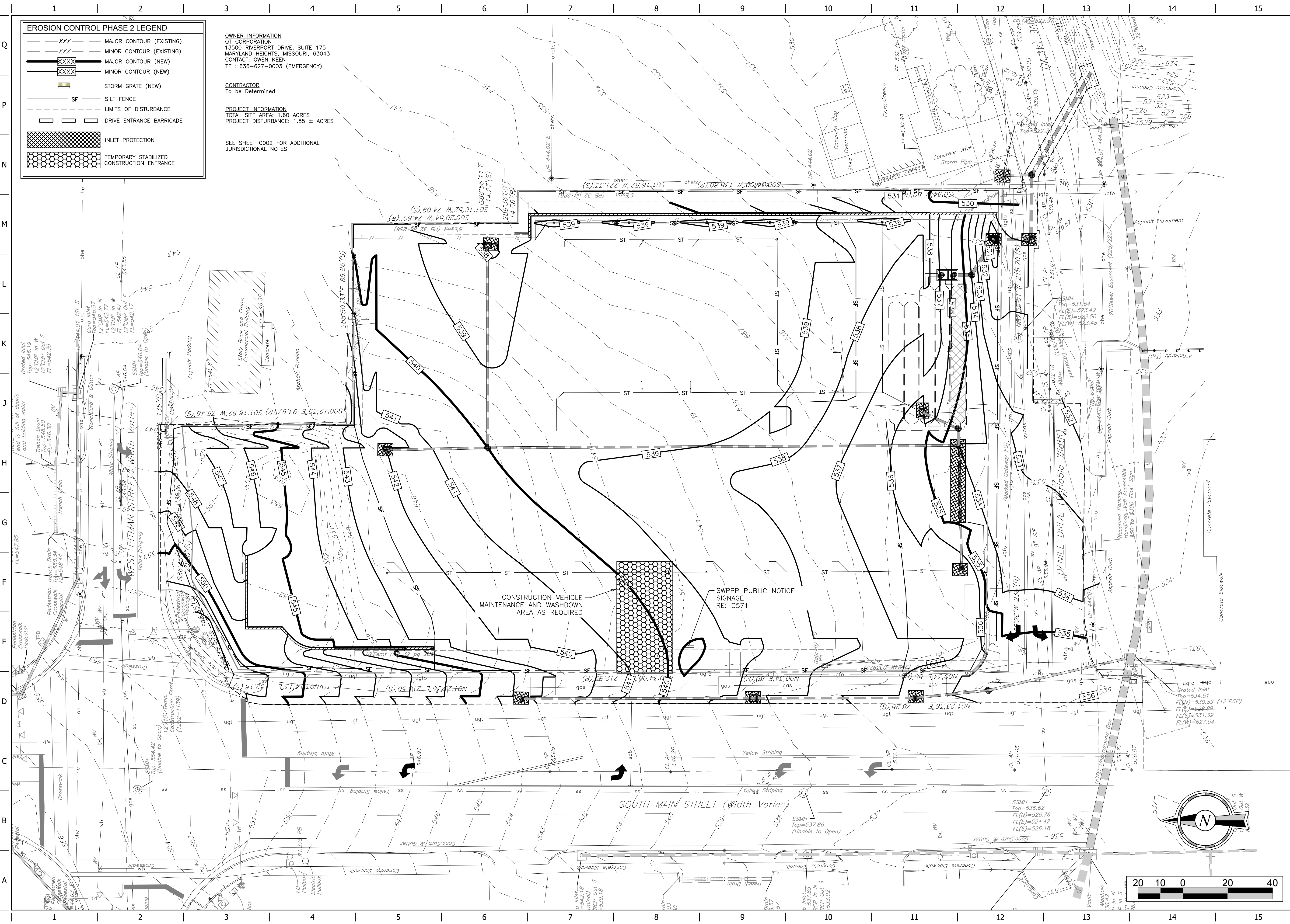
SWPP PLAN AND NOTES
PHASE 1

SHEET NUMBER:

C140

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EROSION CONTROL PHASE 2 LEGEND

- XXX --- MAJOR CONTOUR (EXISTING)
- xxx --- MINOR CONTOUR (EXISTING)
- XXXX --- MAJOR CONTOUR (NEW)
- xxxx --- MINOR CONTOUR (NEW)
- [Symbol] STORM GRATE (NEW)
- SF --- SILT FENCE
- --- LIMITS OF DISTURBANCE
- [Symbol] DRIVE ENTRANCE BARRICADE
- [Symbol] INLET PROTECTION
- [Symbol] TEMPORARY STABILIZED CONSTRUCTION ENTRANCE

OWNER INFORMATION
QT CORPORATION
13500 RIVERPORT DRIVE, SUITE 175
MARYLAND HEIGHTS, MISSOURI, 63043
CONTACT: OWEN KEEN
TEL: 636-627-0003 (EMERGENCY)

CONTRACTOR
To be Determined

PROJECT INFORMATION
TOTAL SITE AREA: 1.60 ACRES
PROJECT DISTURBANCE: 1.85 ± ACRES

SEE SHEET C002 FOR ADDITIONAL JURISDICTIONAL NOTES

STATE OF MISSOURI
NATHAN J. COWAN
Professional Engineer
No. 000022092
Exp. 12/31/2025
Nathan J. Cowan, Civil Engineer
MO PE-2005022092
PROJECT NO.: R2385.28

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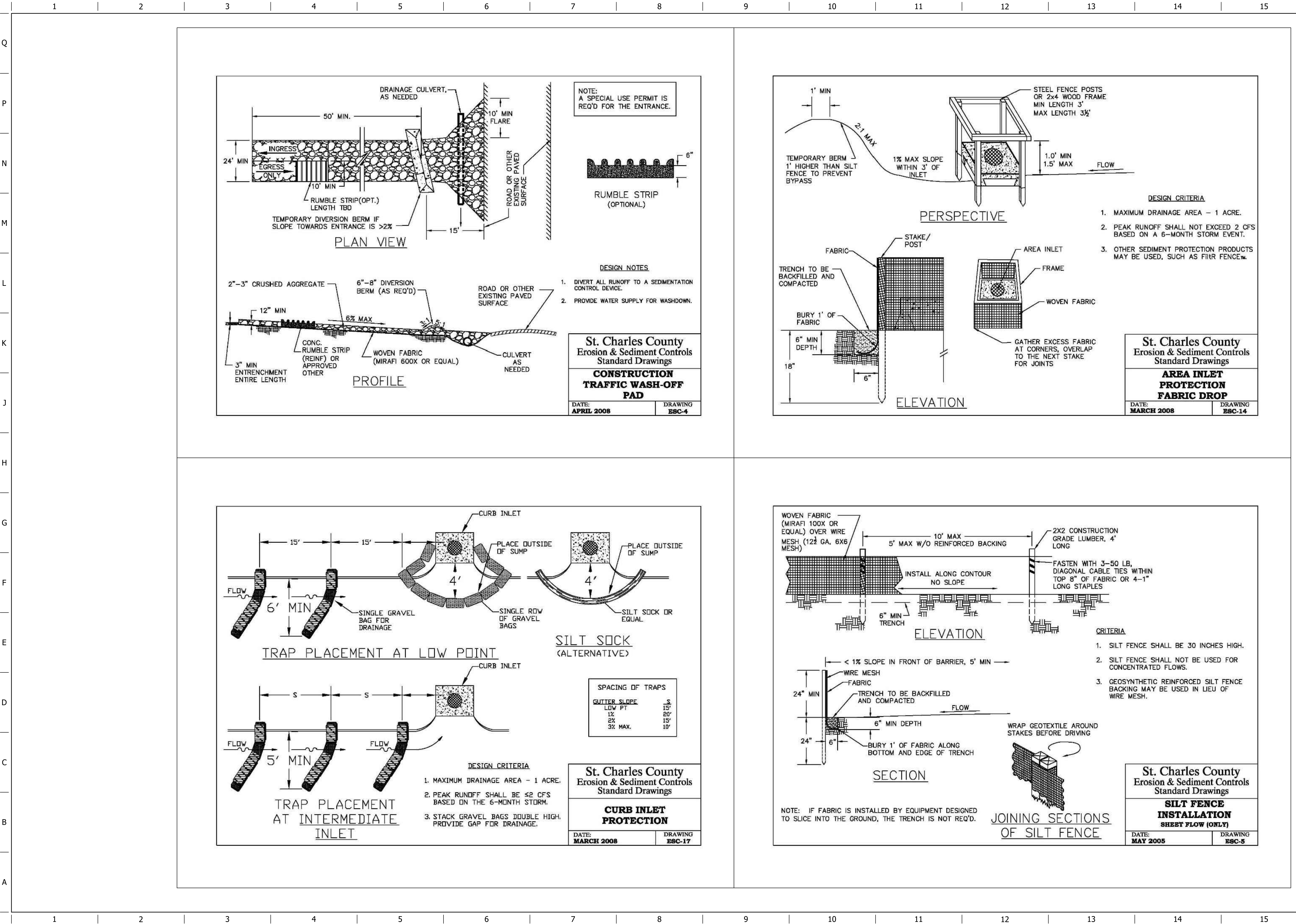
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SWPP PLAN AND NOTES
PHASE 2

SHEET NUMBER:
C141



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Nathan J. Cowan, Civil Engineer
MO PE-2005022092
PROJECT NO.: R2385.28



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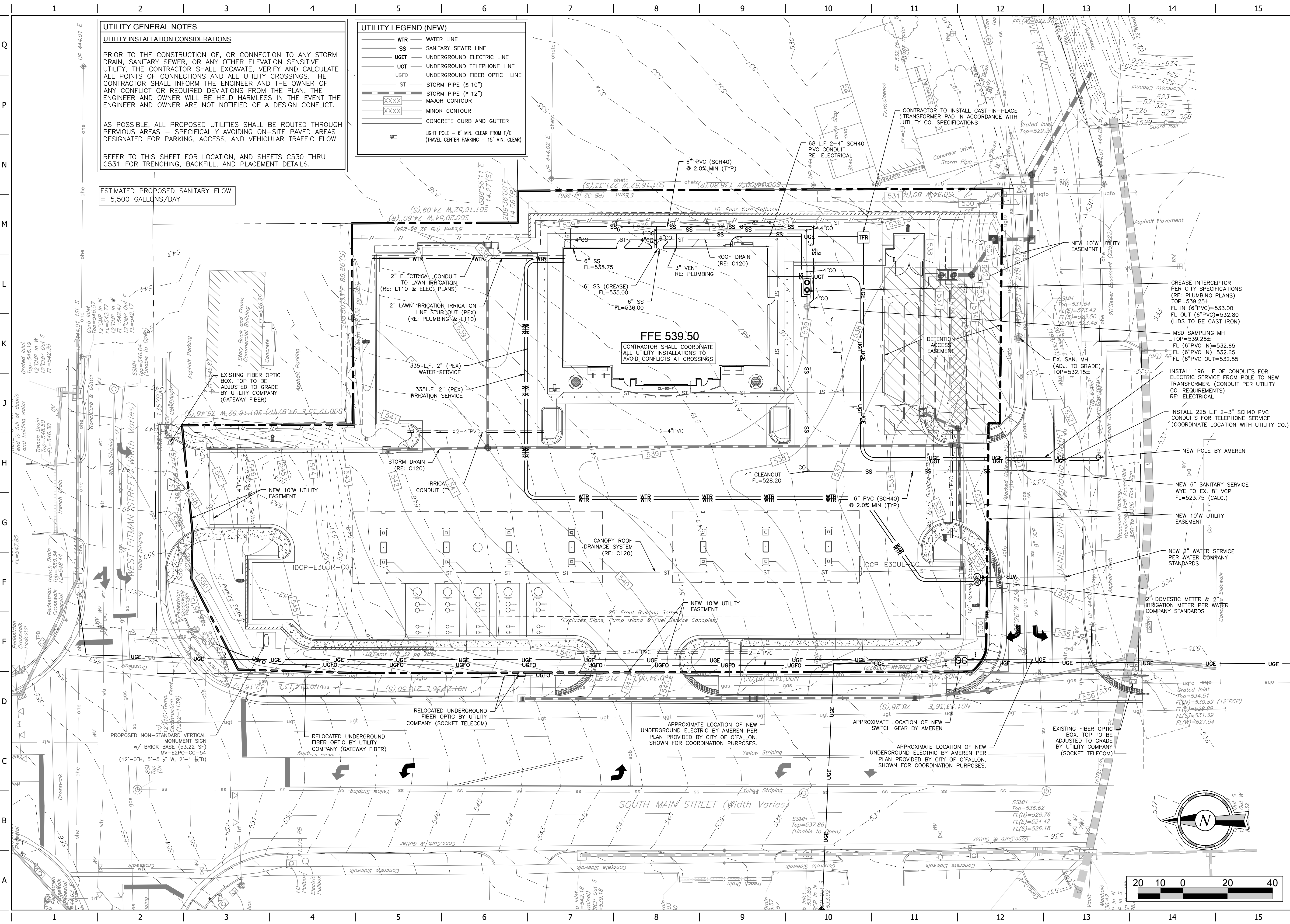
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SWPP DETAILS I

SHEET NUMBER:

C142



UTILITY GENERAL NOTES

UTILITY INSTALLATION CONSIDERATIONS

PRIOR TO THE CONSTRUCTION OF, OR CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, OR ANY OTHER ELEVATION SENSITIVE UTILITY, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTIONS AND ALL UTILITY CROSSINGS. THE CONTRACTOR SHALL INFORM THE ENGINEER AND THE OWNER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. THE ENGINEER AND OWNER WILL BE HELD HARMLESS IN THE EVENT THE ENGINEER AND OWNER ARE NOT NOTIFIED OF A DESIGN CONFLICT.

AS POSSIBLE, ALL PROPOSED UTILITIES SHALL BE ROUTED THROUGH PERVIOUS AREAS - SPECIFICALLY AVOIDING ON-SITE PAVED AREAS DESIGNATED FOR PARKING, ACCESS, AND VEHICULAR TRAFFIC FLOW.

REFER TO THIS SHEET FOR LOCATION, AND SHEETS C530 THRU C531 FOR TRENCHING, BACKFILL, AND PLACEMENT DETAILS.

ESTIMATED PROPOSED SANITARY FLOW
= 5,500 GALLONS/DAY

- UTILITY LEGEND (NEW)**
- WTR - WATER LINE
 - SS - SANITARY SEWER LINE
 - UGET - UNDERGROUND ELECTRIC LINE
 - UGT - UNDERGROUND TELEPHONE LINE
 - UGFO - UNDERGROUND FIBER OPTIC LINE
 - ST - STORM PIPE (8" 10")
 - ST - STORM PIPE (8" 12")
 - XXXX - MAJOR CONTOUR
 - XXXX - MINOR CONTOUR
 - CONCRETE CURB AND GUTTER
 - LIGHT POLE - 6" MIN. CLEAR FROM F/C (TRAVEL CENTER PARKING - 15' MIN. CLEAR)

STATE OF MISSOURI
NATHAN J. COWAN
Professional Engineer
No. 0000022092
Exp. 07/18/2025
Nathan J. Cowan, Civil Engineer
MO PE-2005022092
PROJECT NO.: R2385.28

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Nathan J. Cowan, Civil Engineer
MO PE-2005022092
PROJECT NO.: R2385.28



CIVIL DESIGN, INC.
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St. Louis, MO 63110
(314) 863-5570
Missouri State Certificate of
Authority #2002006804

QuikTrip No. 0683
418 SOUTH MAIN STREET
OFALLON, MISSOURI



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VERSION: 001
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REV	DATE	DESCRIPTION

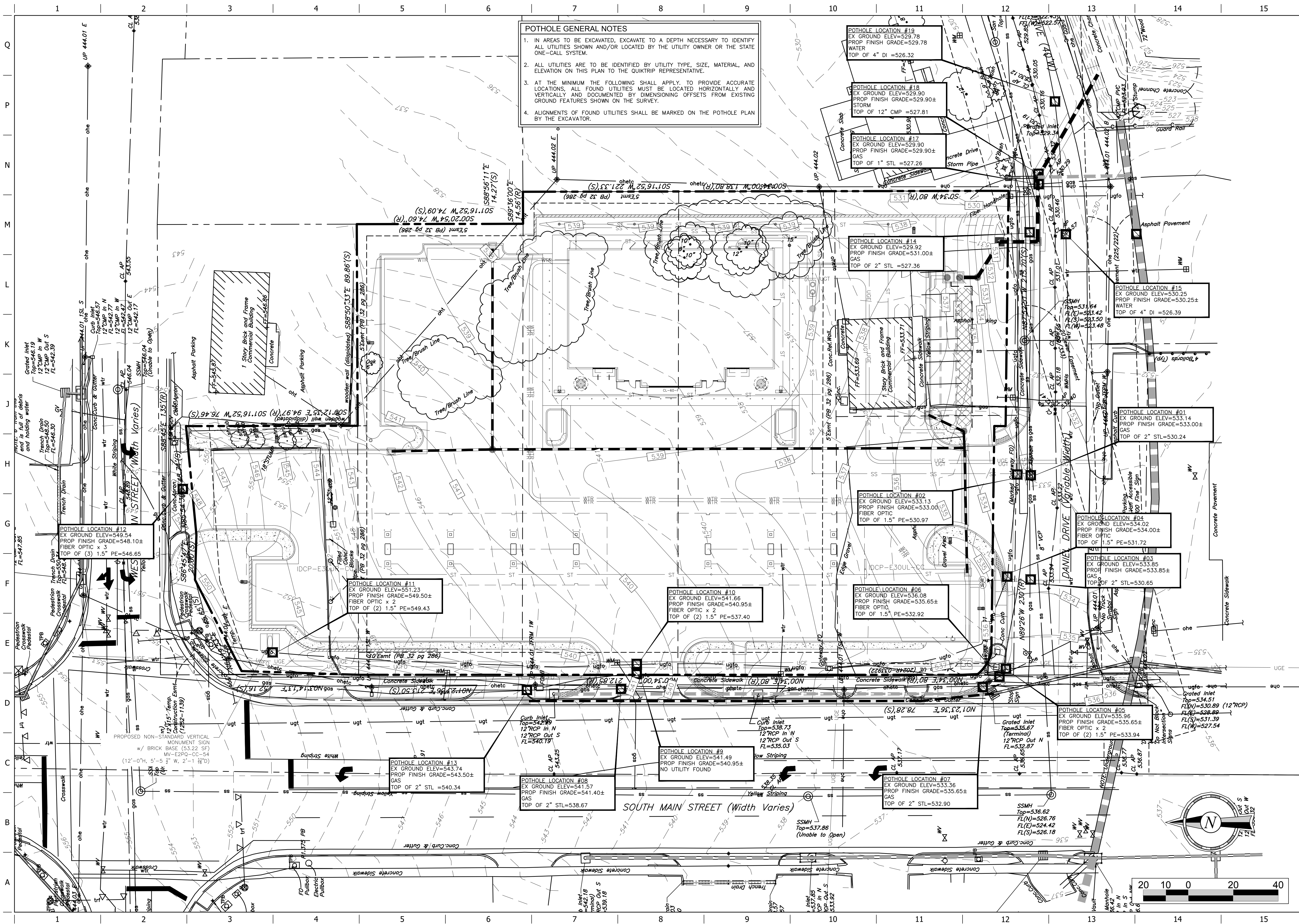
ORIGINAL ISSUE DATE:

SHEET TITLE:

UTILITY VERIFICATION PLAN

SHEET NUMBER:

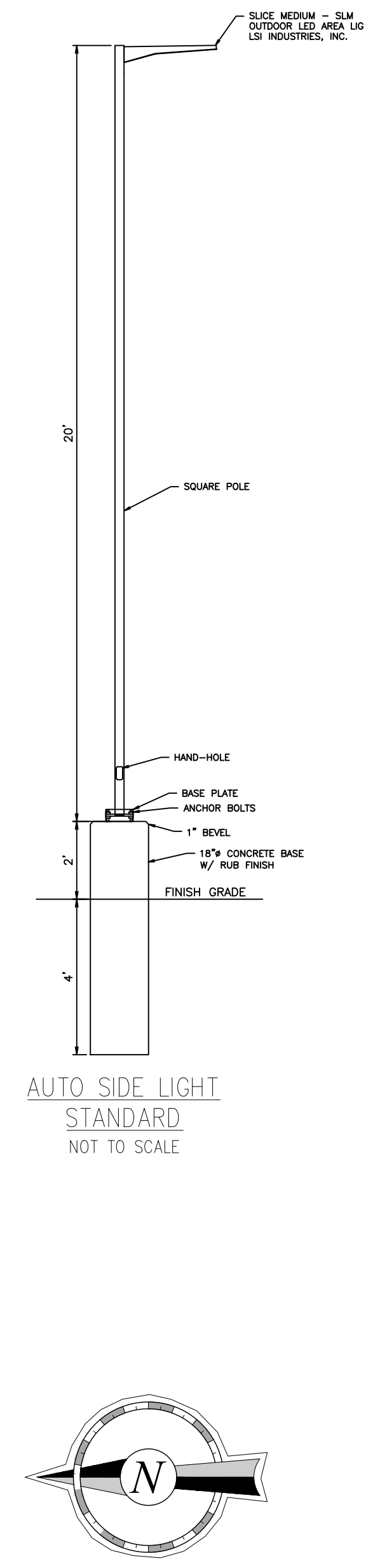
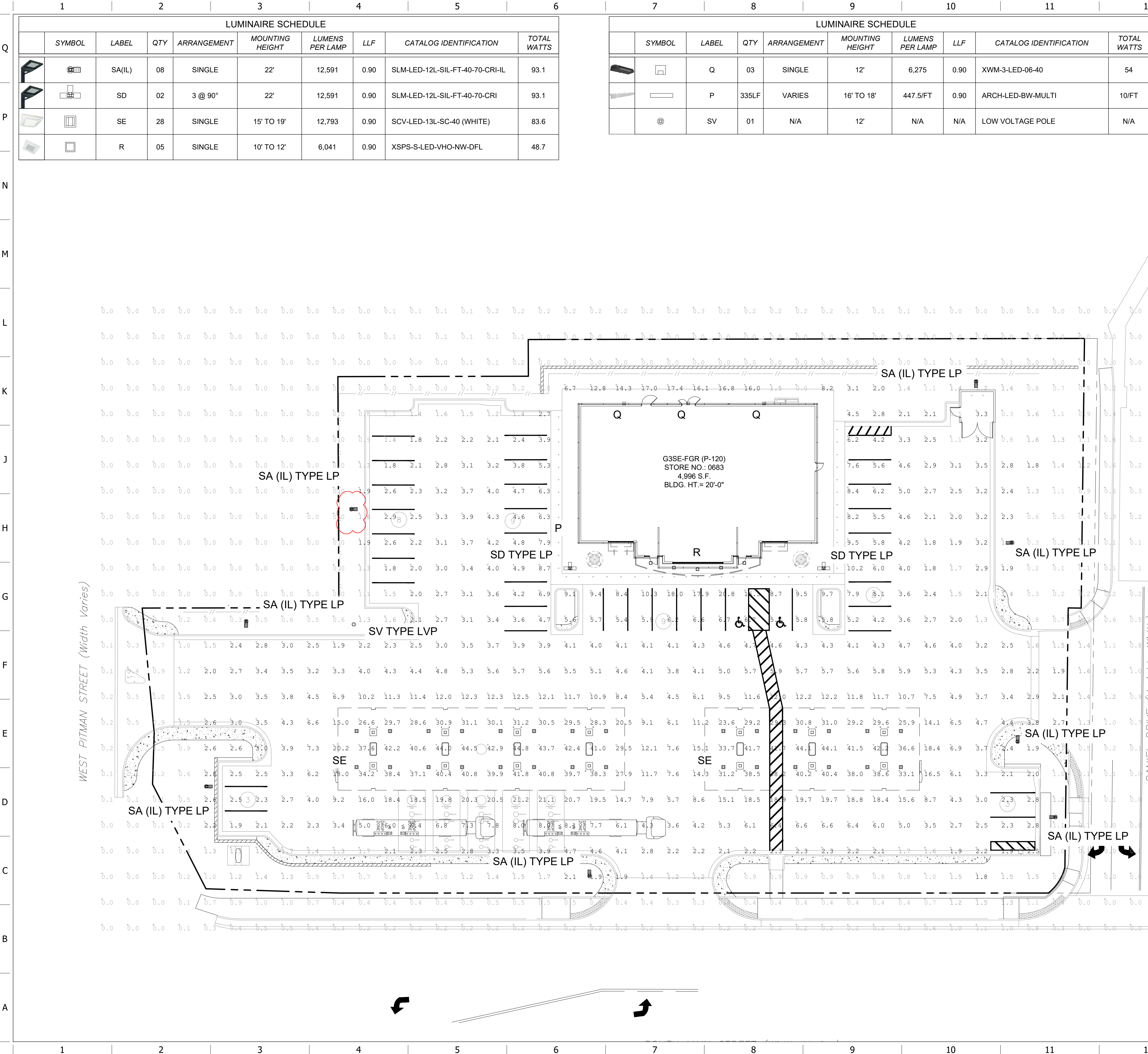
C151



POT HOLE GENERAL NOTES

1. IN AREAS TO BE EXCAVATED, EXCAVATE TO A DEPTH NECESSARY TO IDENTIFY ALL UTILITIES SHOWN AND/OR LOCATED BY THE UTILITY OWNER OR THE STATE ONE-CALL SYSTEM.
2. ALL UTILITIES ARE TO BE IDENTIFIED BY UTILITY TYPE, SIZE, MATERIAL, AND ELEVATION ON THIS PLAN TO THE QUIKTRIP REPRESENTATIVE.
3. AT THE MINIMUM THE FOLLOWING SHALL APPLY, TO PROVIDE ACCURATE LOCATIONS, ALL FOUND UTILITIES MUST BE LOCATED HORIZONTALLY AND VERTICALLY AND DOCUMENTED BY DIMENSIONING OFFSETS FROM EXISTING GROUND FEATURES SHOWN ON THE SURVEY.
4. ALIGNMENTS OF FOUND UTILITIES SHALL BE MARKED ON THE POT HOLE PLAN BY THE EXCAVATOR.

FILE LOCATION\\P\QuikTrip\A-New\04-SITE SPECIFIC SECURITY\02-MARKUPS\06-0683\06-0683.dwg TAB NAME:Photometric USER:G:\McDonus SAVED:7/2/2025 11:26 AM PLOTTED:7/2/2025 11:29 AM



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CRUX
TECHNOLOGY + SECURITY SOLUTIONS
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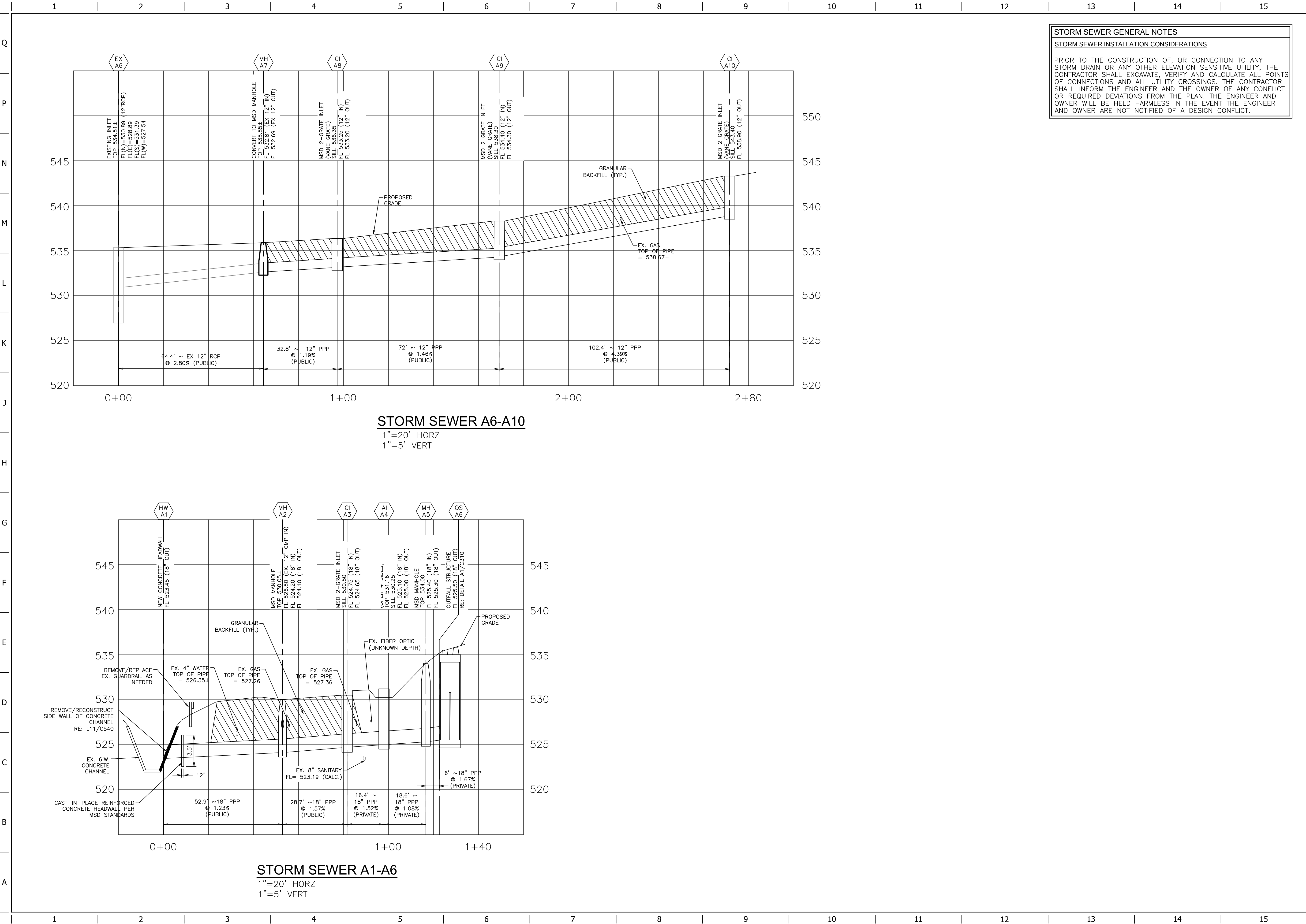
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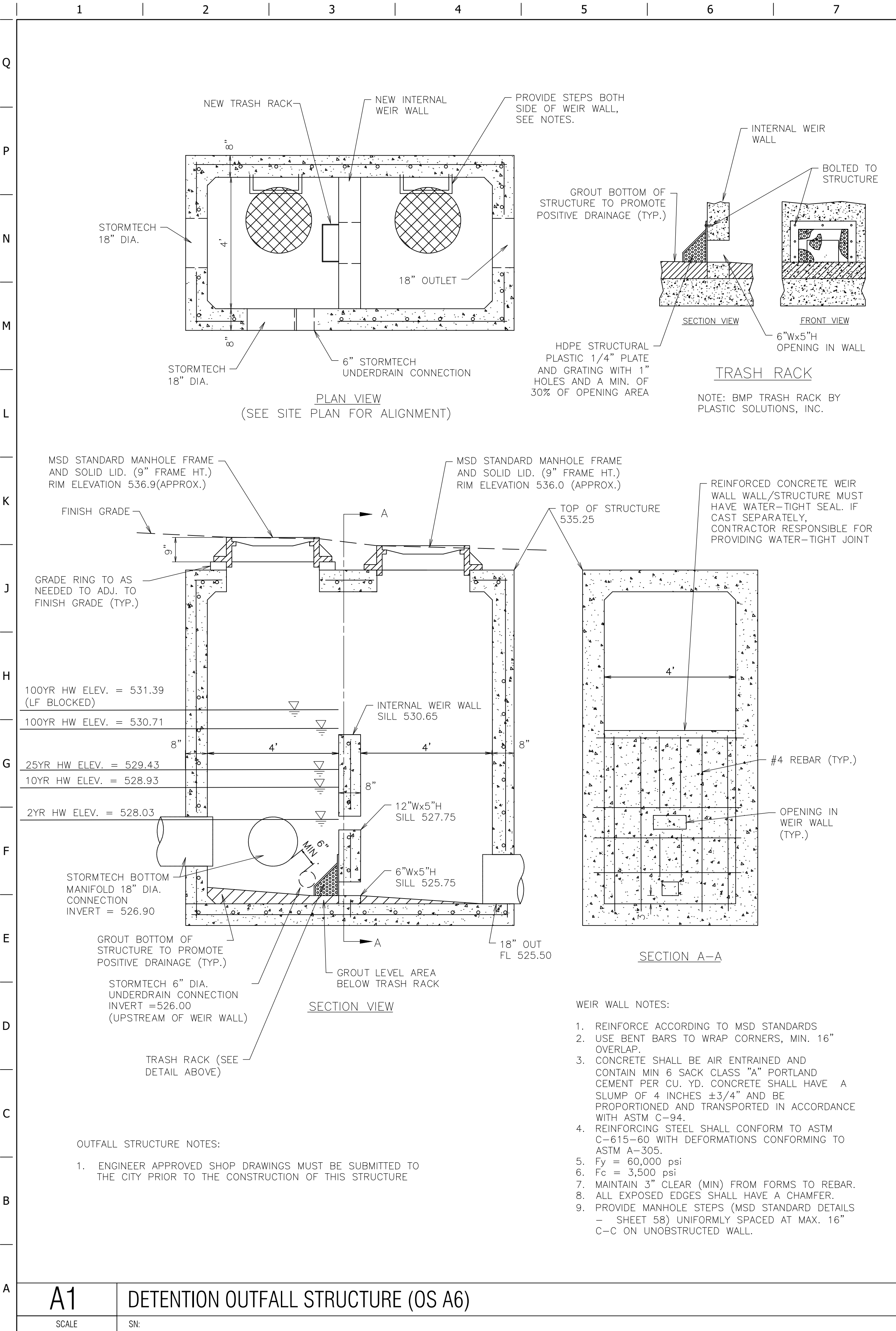
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B3	06-26-25	CIVIL UPDATES

ORIGINAL ISSUE DATE:

SHEET TITLE:
PHOTOMETRIC SITE PLAN

SHEET NUMBER:
C160





PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER:	DIRK HUDSON 816-402-4201 DIRK.HUDSON@ADSPIPE.COM
ADS SALES REP:	BRIAN SHELSON 816-505-8139 BRIAN.SHELSON@ADSPIPE.COM
PROJECT NO:	8472234



QT STORE #683 O'FALLON, MO

MC-3500 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH MC-3500.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45/70 DESIGNATION S8.
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (≤ 1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 500 LB/FT². THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.56 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD. THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 2 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
10. MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANIFOLD SIZING GUIDANCE. DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
11. ADS DOES NOT DESIGN OR PROVIDE MEMBRANE LINER SYSTEMS. TO MINIMIZE THE LEAKAGE POTENTIAL OF LINER SYSTEMS, THE MEMBRANE LINER SYSTEM SHOULD BE DESIGNED BY A KNOWLEDGEABLE GEOTEXTILE PROFESSIONAL AND INSTALLED BY A QUALIFIED CONTRACTOR.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

1. STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONES/ROCK LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HIDE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
8. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE, AASHTO M33 K3, 357, 4, 407, 5, 56, OR 57.
9. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
10. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
11. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

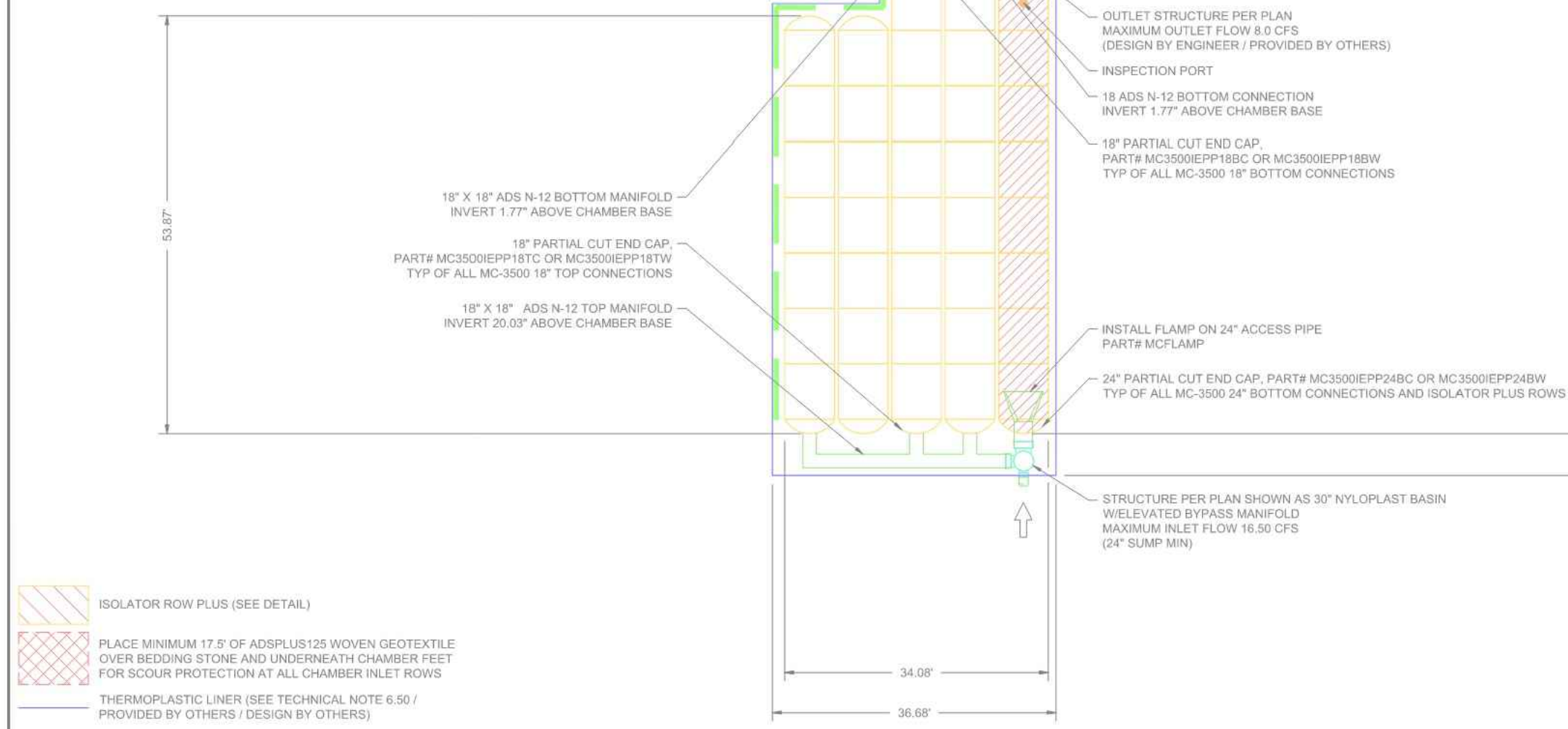
1. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
2. THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER Tired LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

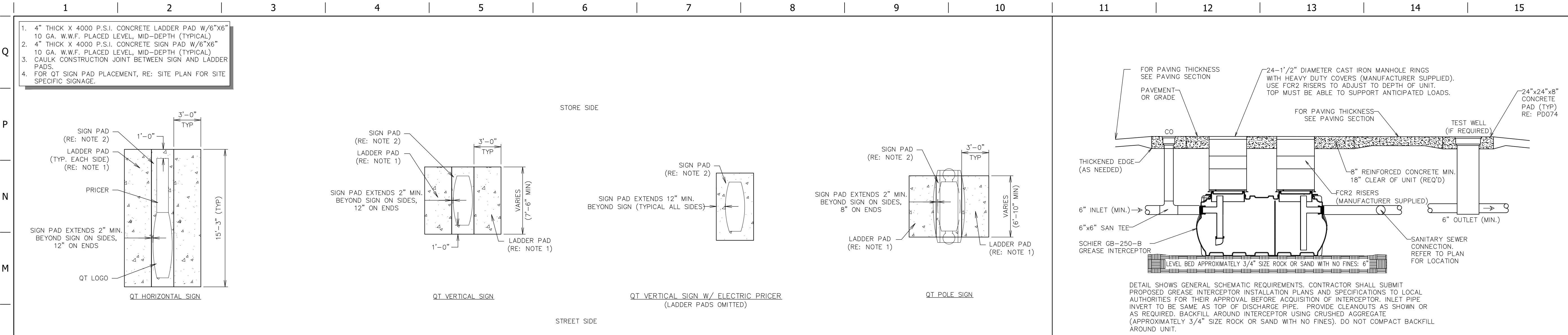
USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-800-821-6710 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

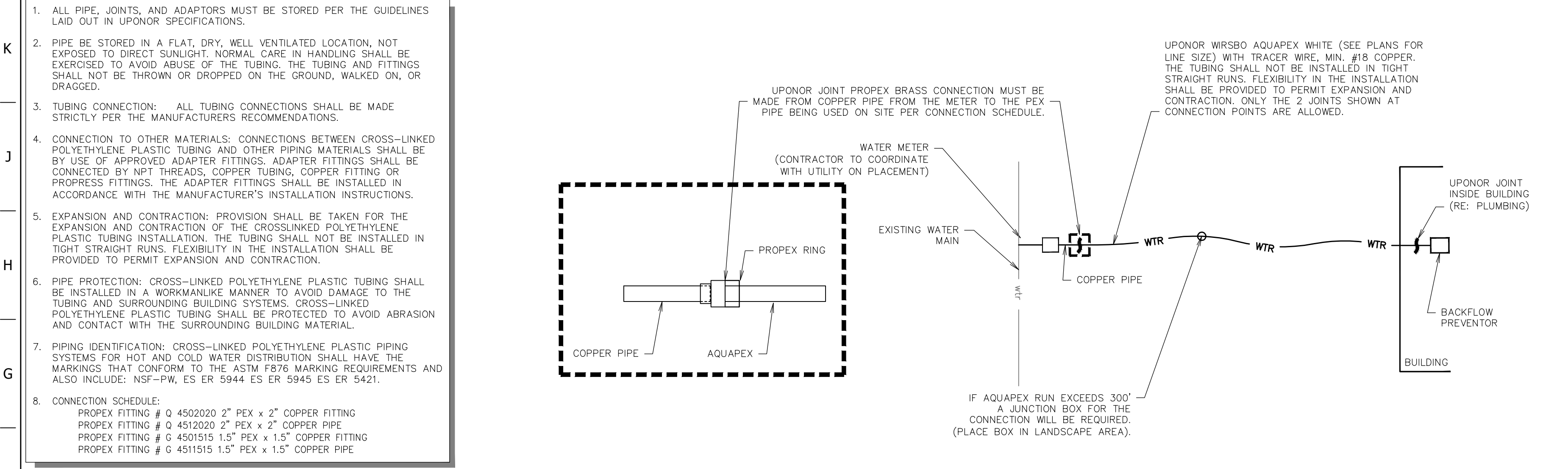
PROPOSED LAYOUT	
10	STORMTECH MC-3500 CHAMBERS
10	STORMTECH MC-3500 END CAPS
12	STONE ABOVE (IN)
9	STONE BELOW (IN)
40	% STONE VOID
8,148	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)
2533	SYSTEM AREA (FT ²)
221	SYSTEM PERIMETER (FT)

PROPOSED ELEVATIONS	
538.59	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)
532.50	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)
532.00	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)
532.00	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)
532.00	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)
531.50	TOP OF STONE
530.50	TOP OF MC-3500 CHAMBER
528.42	18" TOP MANIFOLD/CONNECTION INVERT
528.92	24" ISOLATOR ROW PLUS CONNECTION INVERT
528.90	18" BOTTOM MANIFOLD/CONNECTION INVERT
528.75	BOTTOM OF MC-3500 CHAMBER
528.00	UNDERMAN INVERT
526.00	BOTTOM OF STONE

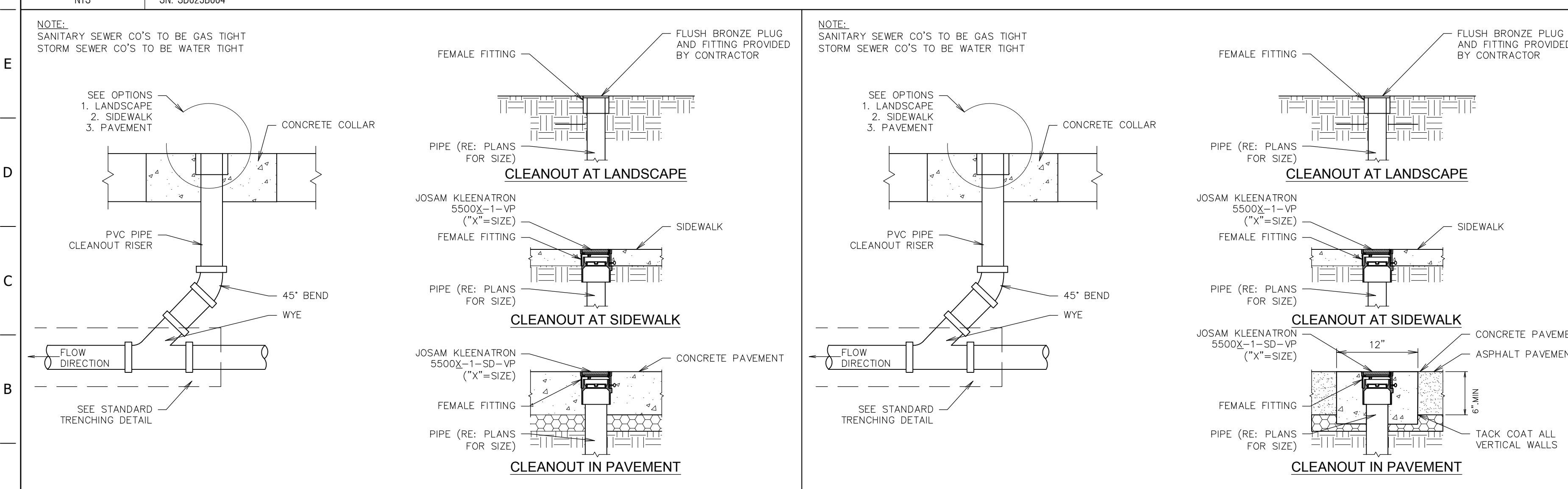




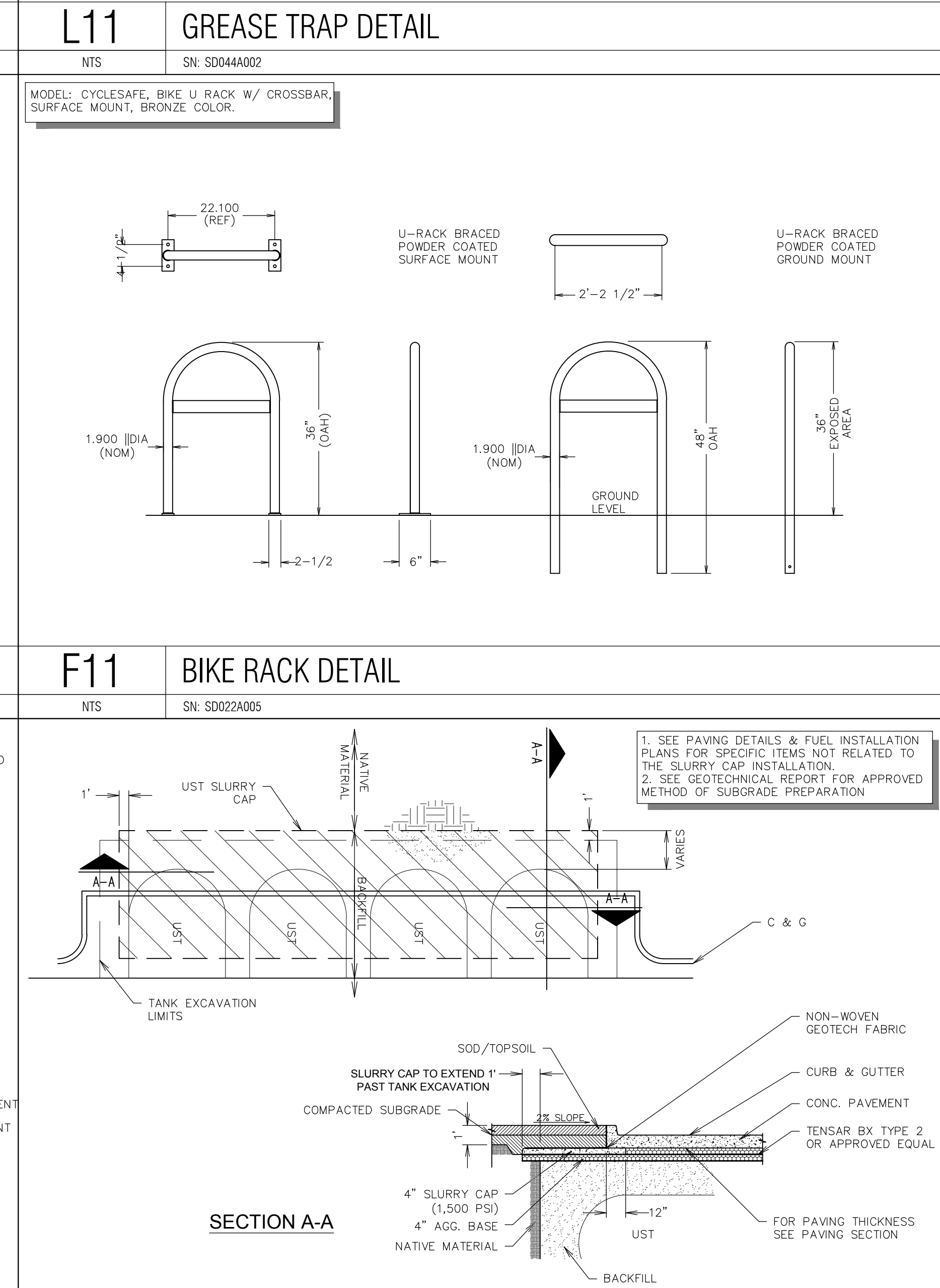
L1	GEN III SIGN PAD DETAIL	L11	GREASE TRAP DETAIL
NTS	SN: SD015A005	NTS	SN: SD044A002



F1	PEX DETAIL - WATER METER @ STREET, BFP IN BUILDING
NTS	SN: SD023B004



A1	CLEANOUT SECTION DETAIL	A6	CLEANOUT SECTION DETAIL (ASPHALT)
NTS	SN: SD016B007	NTS	SN: SD016A007



A11	UNDERGROUND STORAGE TANK (UST) SLURRY CAP DETAIL
NTS	SN: SD020A008

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STATE OF MISSOURI

NATHAN J. COWAN

PROFESSIONAL ENGINEER

NO. 0000022092

EXPIRATION DATE 07/18/2025

Nathan J. Cowan, Civil Engineer

MO PE-2005022092

PROJECT NO.: R2385.28

Civil Design, Inc.

WBE | DBE

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Missouri State Certificate of Authority #2002006804

QuikTrip No. 0683

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O'FALLON, MISSOURI

QT

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REVIEWED BY:

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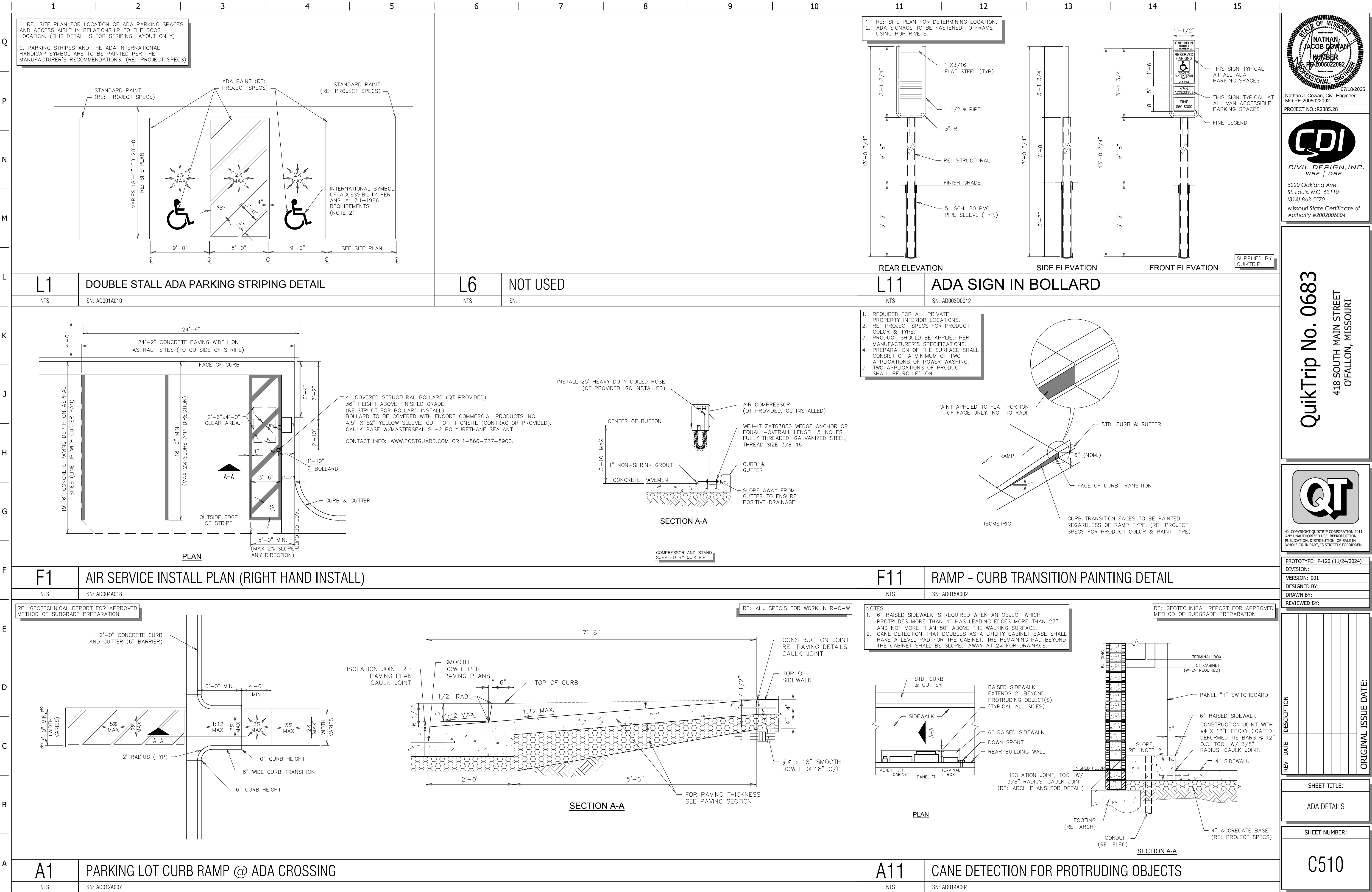
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MISC. SITE DETAILS I

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NATHAN JACOB COWAN

PROFESSIONAL ENGINEER

NUMBER 0000022092

EXPIRATION DATE 07/18/2025

Nathan J. Cowan, Civil Engineer

MO PE-2005022092

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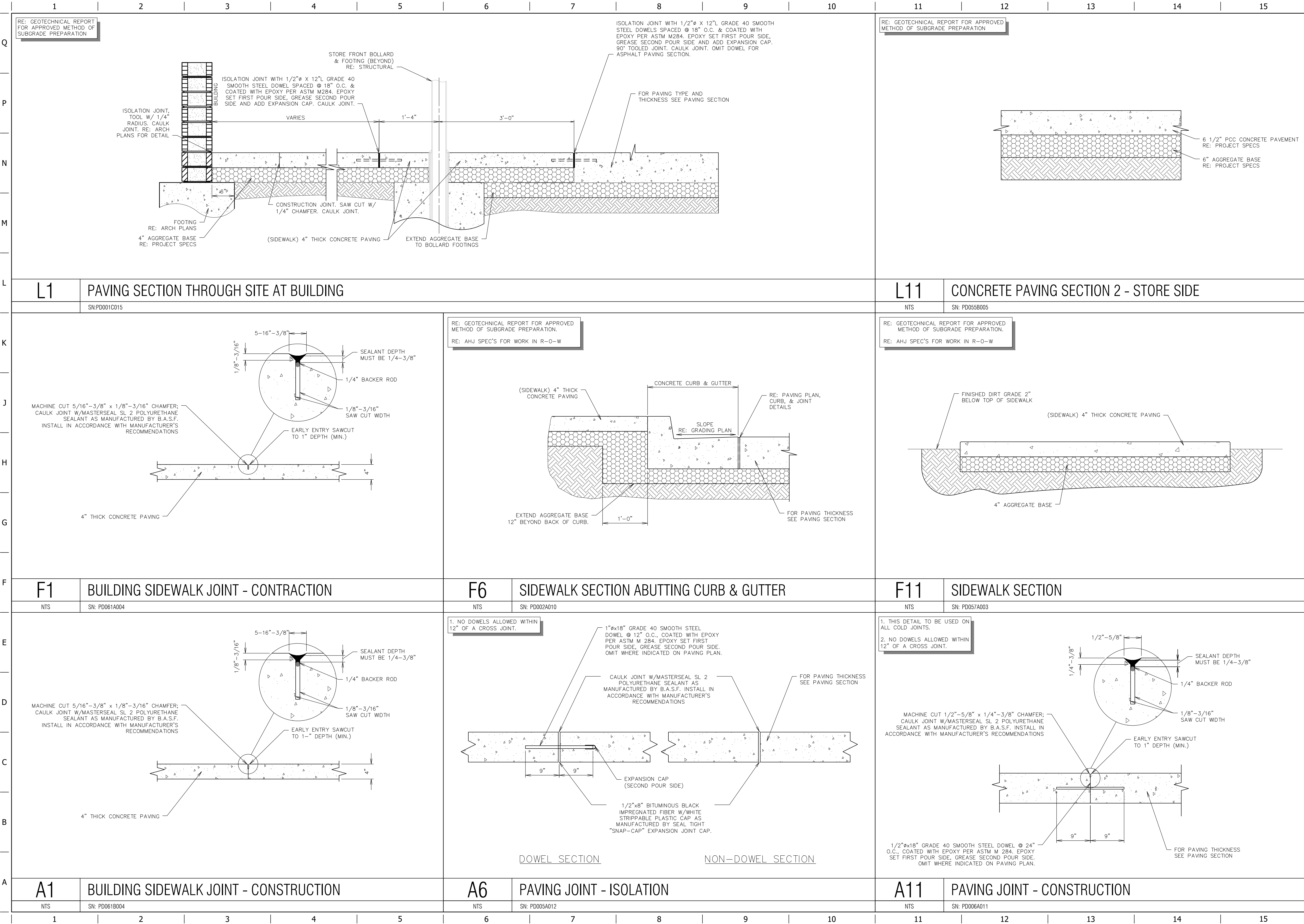
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ADA DETAILS

SHEET NUMBER:

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STATE OF MISSOURI

NATHAN J. COWAN

REGISTERED PROFESSIONAL ENGINEER

NUMBER 0000022092

EXPIRATION DATE 07/18/2025

Nathan J. Cowan, Civil Engineer

MO PE-2005022092

PROJECT NO.:R2385.28

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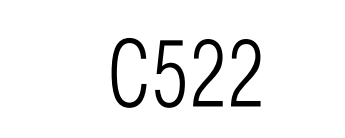
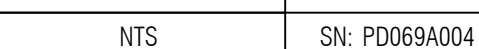
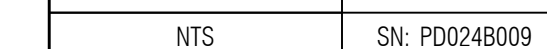
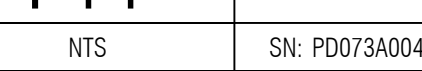
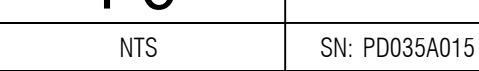
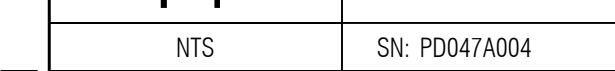
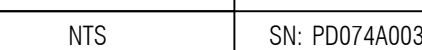
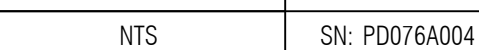
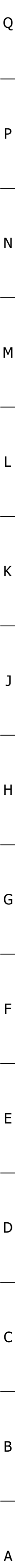
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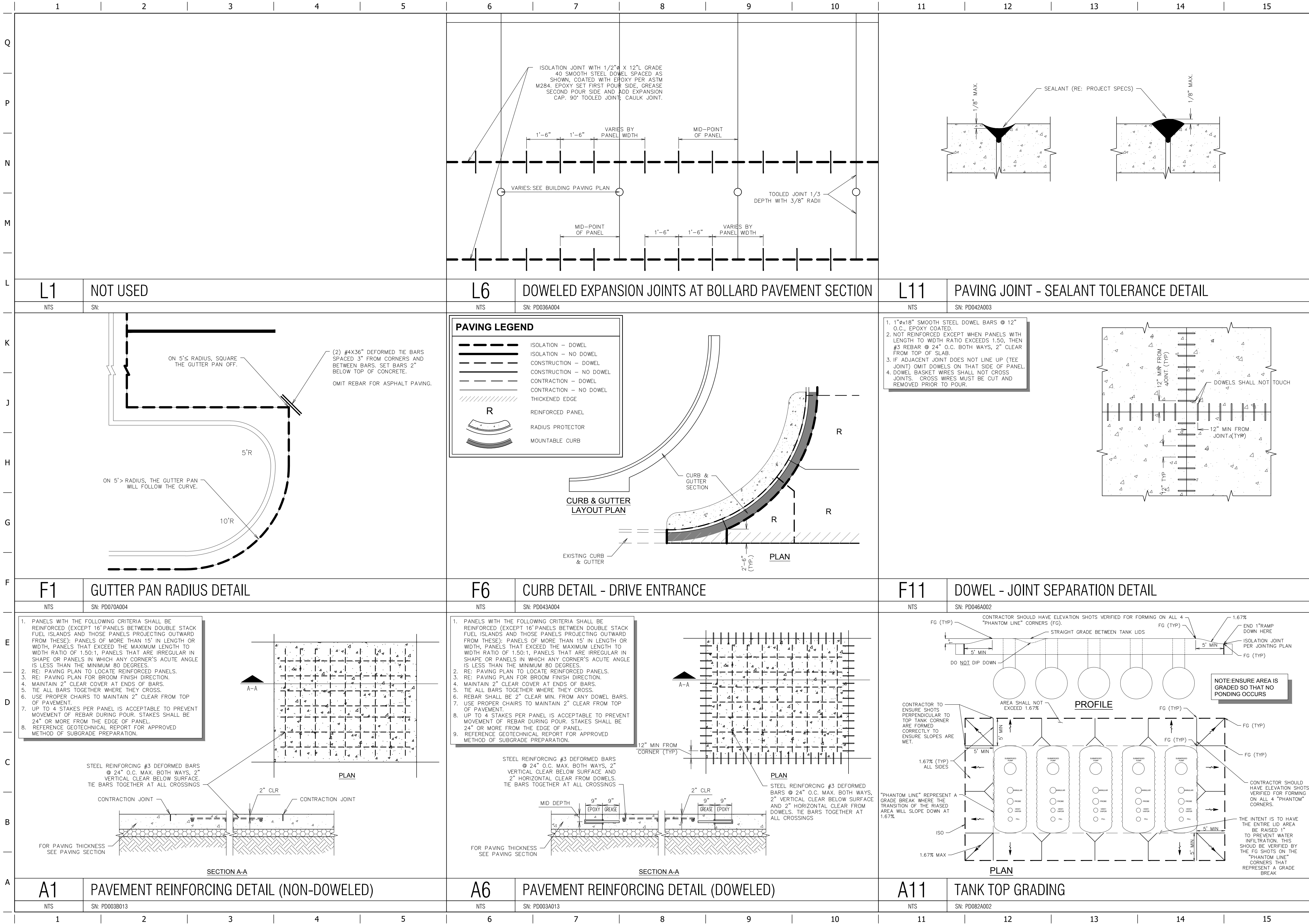
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C520





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NO. 00022092

EXPIRATION DATE 07/18/2025

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MO PE-2005022092

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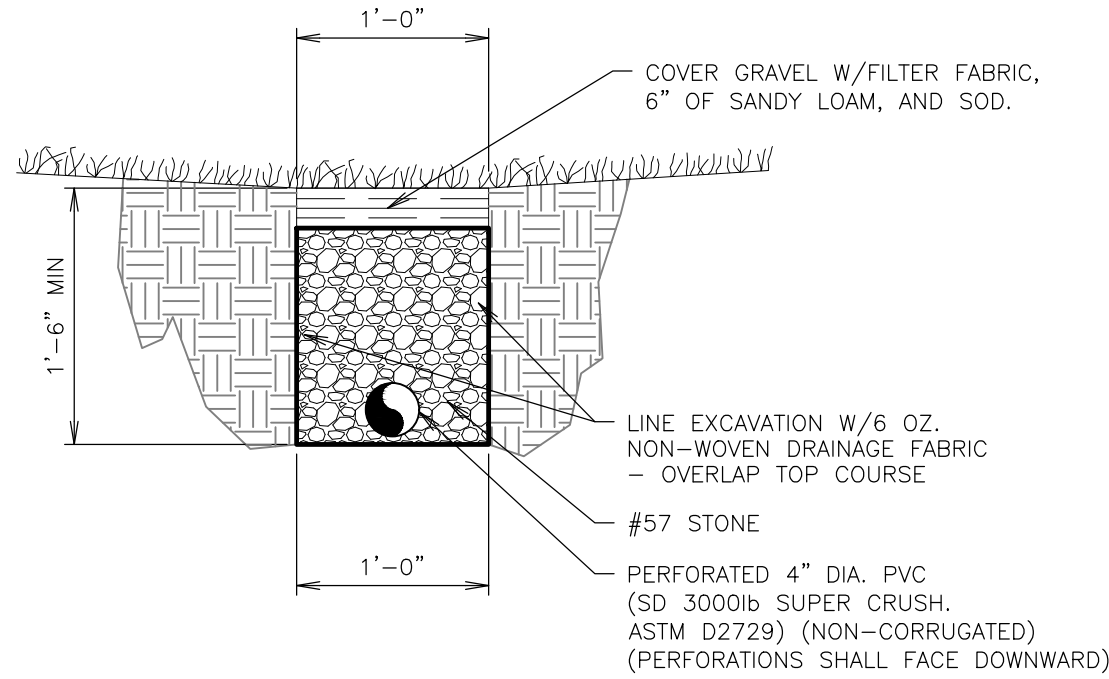
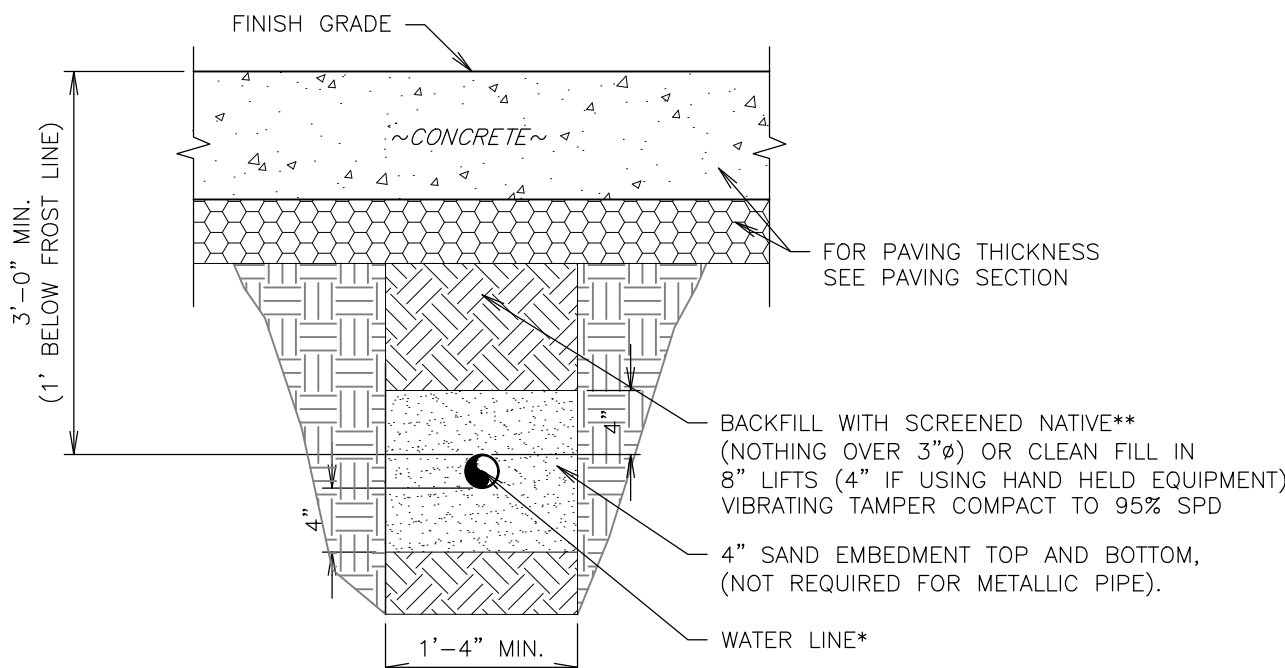
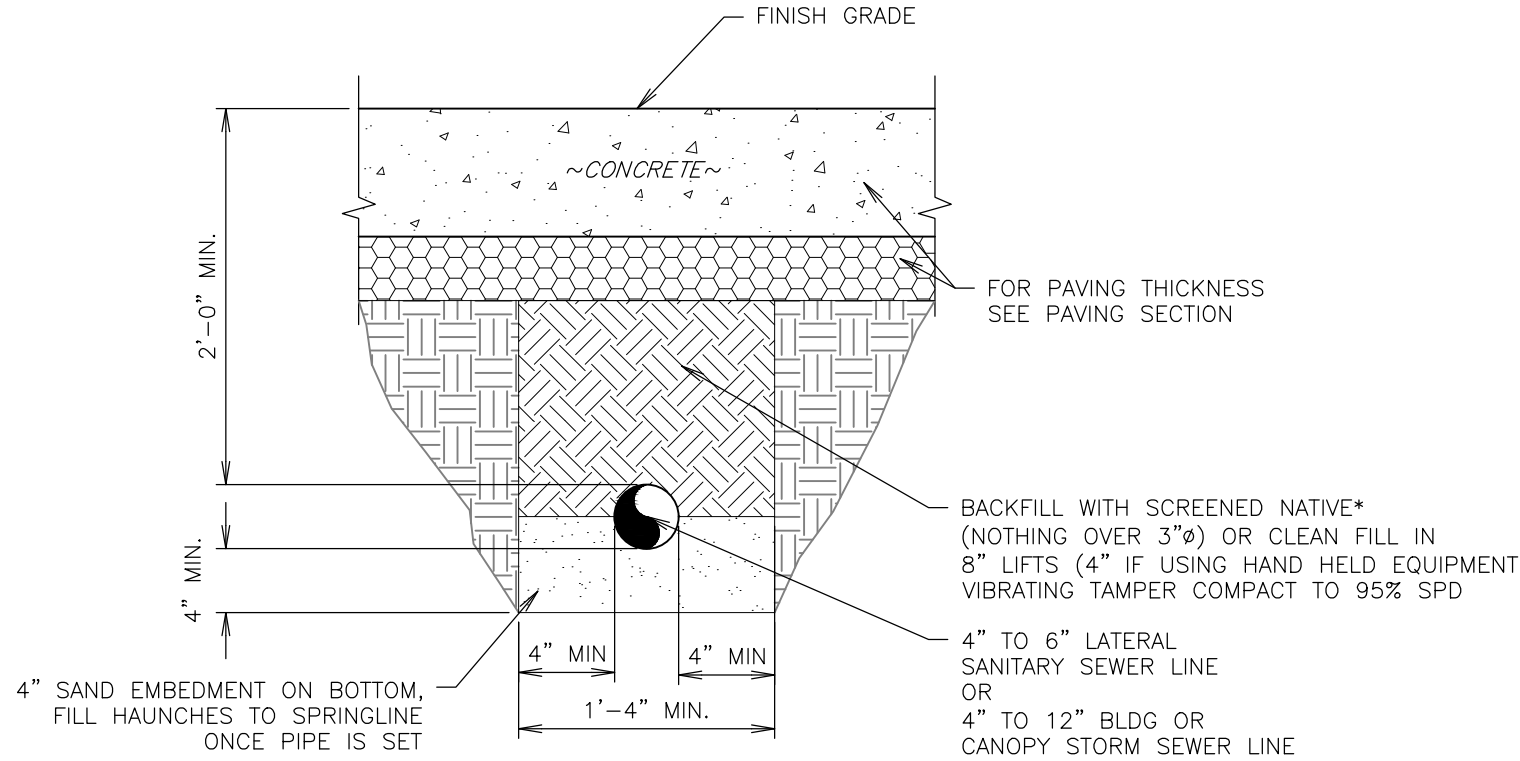
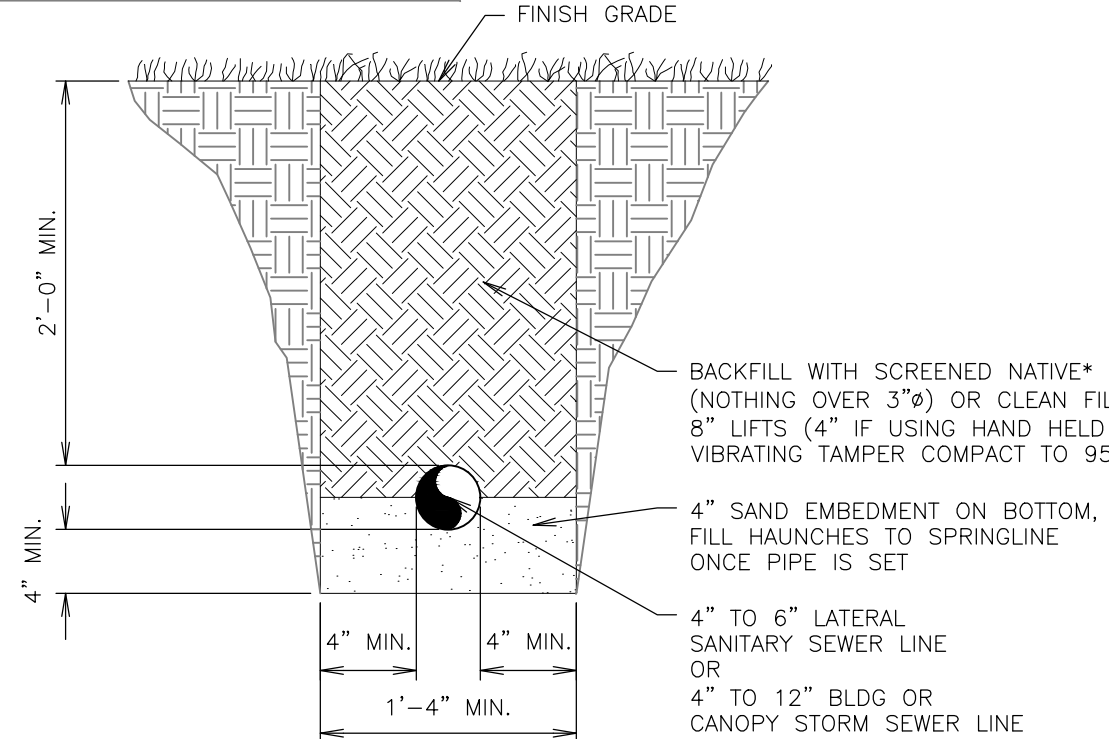
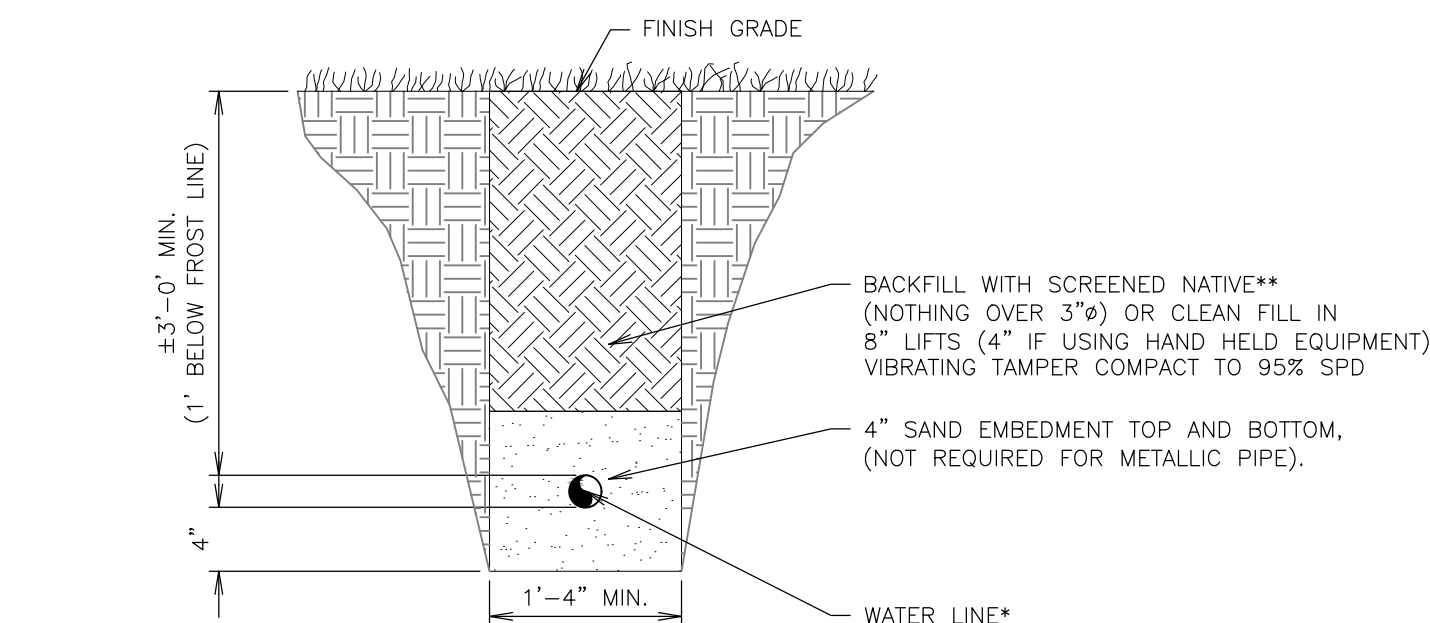
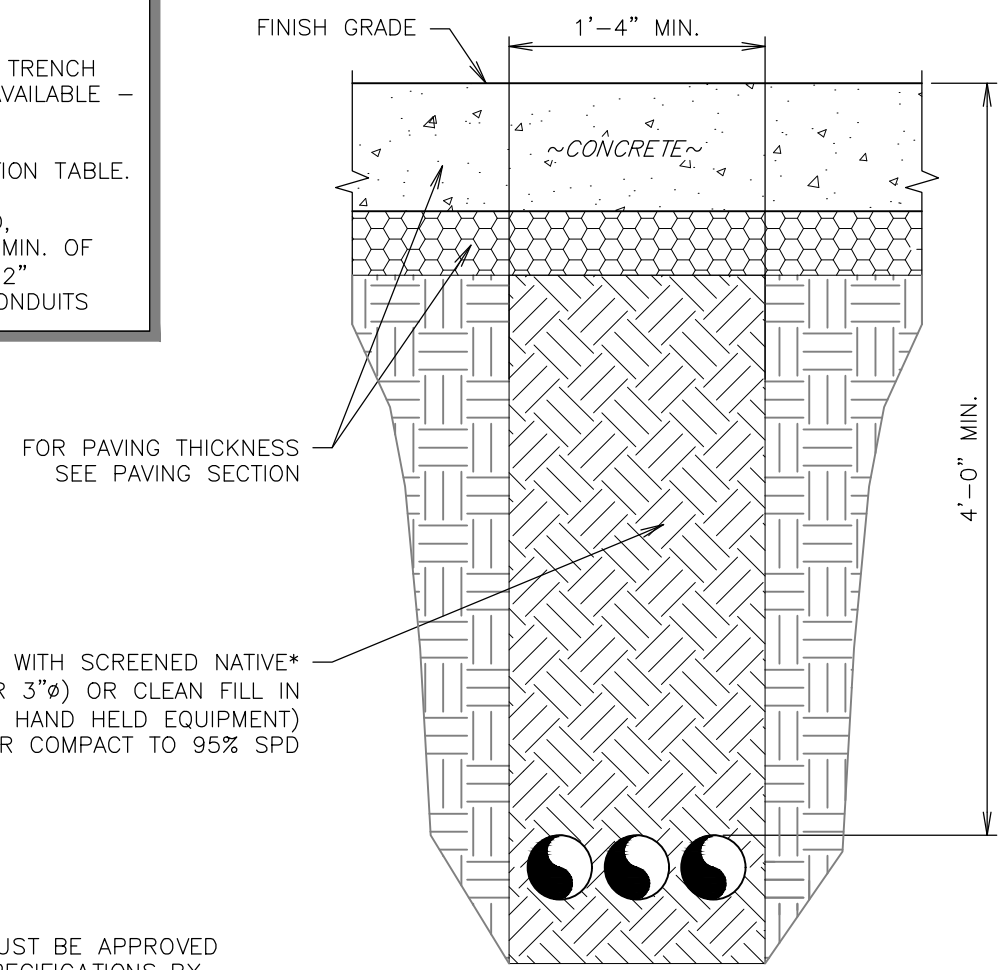
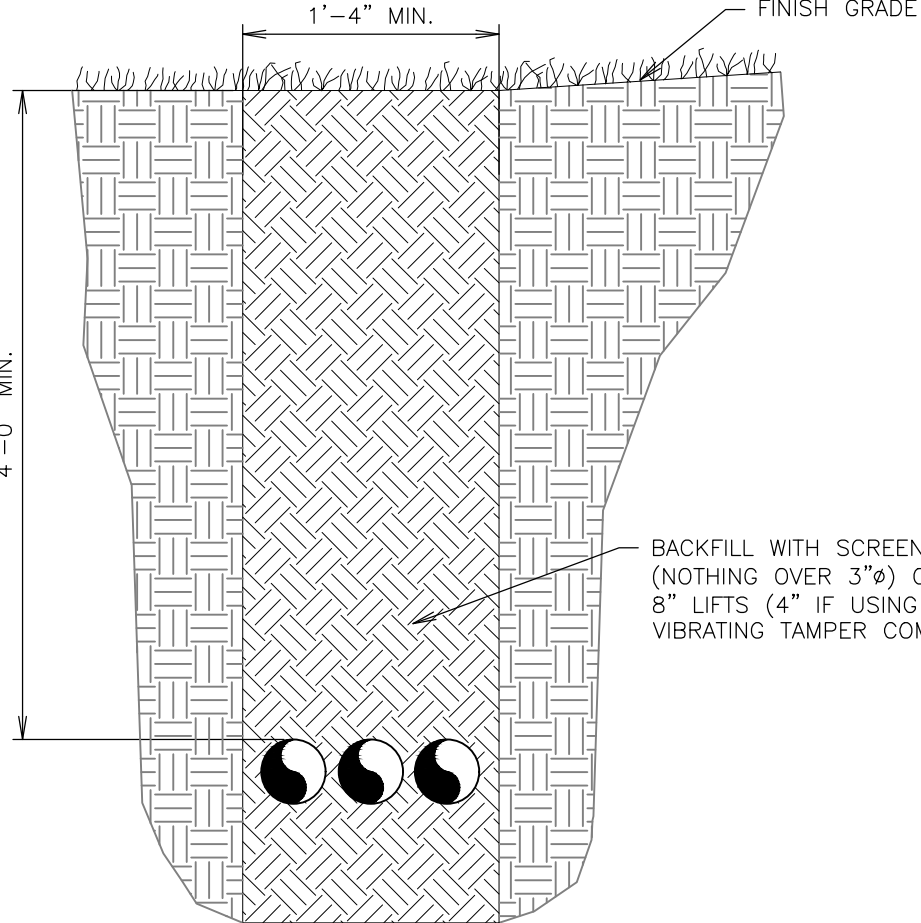
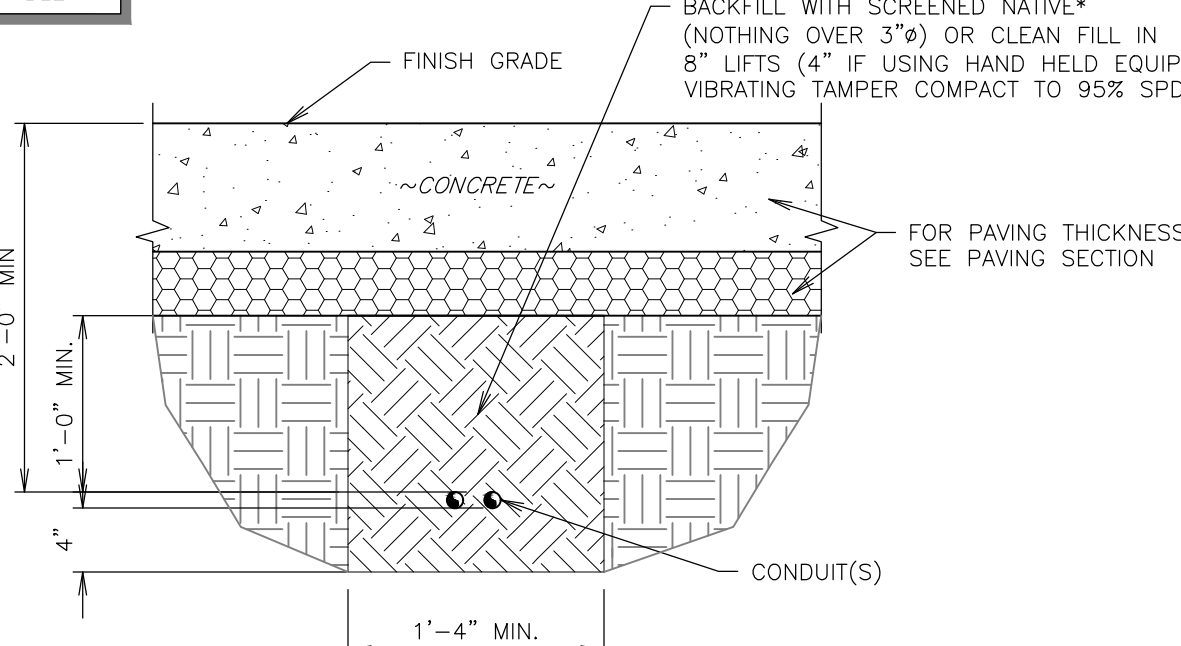
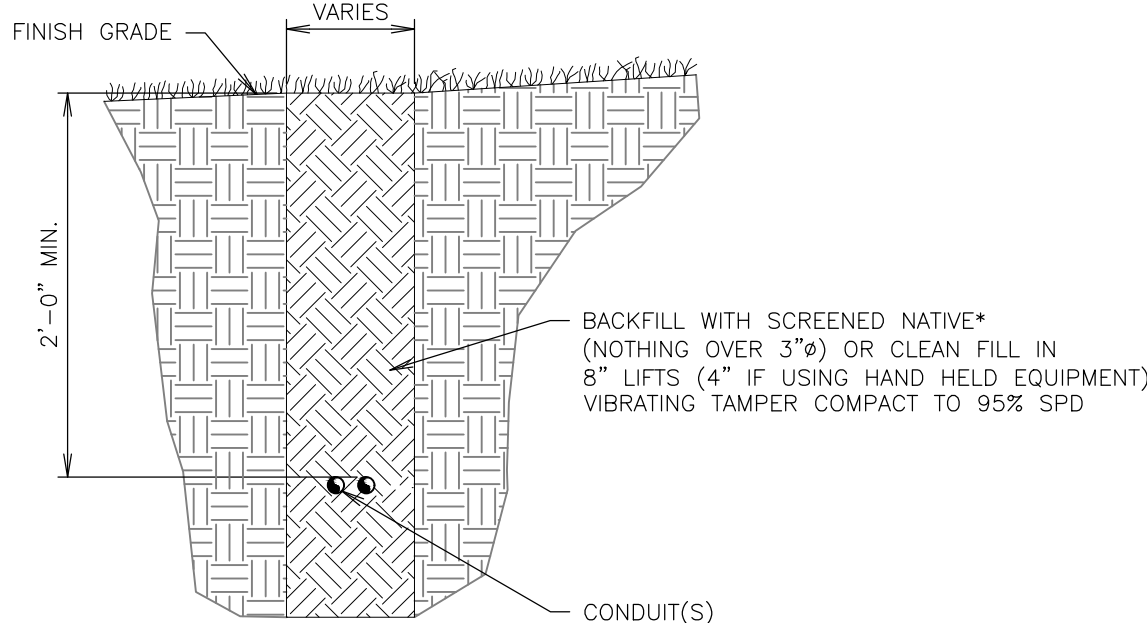
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PAVING DETAILS IV

SHEET NUMBER:

C523

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15					
Q	UNDER PAVEMENT, CURB, & FRENCH DRAIN PIPE MUST BE TAKEN TO STORM STRUCTURE, OR TO SURFACE DRAINAGE SWALE. SEE GRADING PLAN FOR LOCATION BEFORE TRANSITION TO NON PAVED TRENCH SECTION.					ALL COPPER PIPING SHALL BE TYPE K WRAPPED IN 3M VINYL TAPE FROM THE BUILDING TO THE METER. ALWAYS ATTEMPT TO RUN UTILITY TRENCH OUTSIDE OF PAVED AREA WHEN AVAILABLE – RE: PLAN SHEETS. RE. PROJECT SPECS FOR GRADATION TABLE.					* DETAIL APPLICABLE TO ANY DIRECT BURY WATER/IRRIGATION PEX LINES ** SCREENED NATIVE MATERIAL MUST BE APPROVED FOR USE PER THE PROJECT SPECIFICATIONS BY THE ONSITE CMT PRIOR TO PLACEMENT.					* SCREENED NATIVE MATERIAL MUST BE APPROVED FOR USE PER THE PROJECT SPECIFICATIONS BY THE ONSITE CMT PRIOR TO PLACEMENT.				
P																				
L	L1	FRENCH DRAIN SECTION				L6	ON-SITE WATER LINE TRENCH SECTION (PAVED)				L11	BUILDING OR CANOPY DRAINAGE TRENCH SECTION (PAVED)								
	NTS	SN: TD004A004				NTS	SN: TD005A009				NTS	SN: TD006A006								
K	TRENCH MATERIAL SHALL CONSIST OF DRY, ROCK–FREE DIRT. MIN. DRAIN PIPE CLEARANCE MAY BEGIN @ 1'–0" FROM T.O.P. TO FINISH GRADE IF CONDITIONS WARRANT DUE TO GRADES, ROCK, ETC. UNDER PAVEMENT, CURB, & FRENCH DRAIN PIPE MUST BE TAKEN TO STORM STRUCTURE, OR TO SURFACE DRAINAGE SWALE. SEE GRADING PLAN FOR LOCATION BEFORE TRANSITION TO NON PAVED TRENCH SECTION.					TRENCH MATERIAL SHALL CONSIST OF DRY, ROCK–FREE DIRT. ALL COPPER PIPING SHALL BE TYPE K WRAPPED IN 3M VINYL TAPE FROM THE BUILDING TO THE METER. ALWAYS ATTEMPT TO RUN UTILITY TRENCH OUTSIDE OF PAVED AREA WHEN AVAILABLE – RE: PLAN SHEETS					* DETAIL APPLICABLE TO ANY DIRECT BURY WATER/IRRIGATION PEX LINES ** SCREENED NATIVE MATERIAL MUST BE APPROVED FOR USE PER THE PROJECT SPECIFICATIONS BY THE ONSITE CMT PRIOR TO PLACEMENT.					EXTEND 18" BEYOND BACK OF CURB (OUTSIDE OF ALL PAVED AREAS) BEFORE TRANSITIONING TO NON–PAVED TRENCH DETAIL. ALWAYS ATTEMPT TO RUN UTILITY TRENCH OUTSIDE OF PAVED AREA WHEN AVAILABLE – RE: PLAN SHEETS RE. PROJECT SPECS FOR GRADATION TABLE. IF CONDUITS ARE TO BE STACKED, UPPERMOST CONDUIT TO REMAIN MIN. OF 4'–0" BELOW GRADE WITH MIN. 12" VERTICAL CLEARANCE BETWEEN CONDUITS				
J																				
H	F1					F6					F11									
G	BUILDING OR CANOPY DRAINAGE TRENCH SECTION (NON PAVED)					ON-SITE WATER LINE TRENCH SECTION (NON PAVED)					PRIMARY ELECTRICAL & TELEPHONE CONDUIT TRENCH SECTION (PAVED)									
F	NTS	SN: TD007A003				NTS	SN: TD008A005				NTS	SN: TD010A006								
E	TRENCH MATERIAL SHALL CONSIST OF DRY, ROCK–FREE DIRT. ALWAYS ATTEMPT TO RUN UTILITY TRENCH OUTSIDE OF PAVED AREA WHEN AVAILABLE – RE: PLAN SHEETS IF CONDUITS ARE TO BE STACKED, UPPERMOST CONDUIT TO REMAIN MIN. OF 4'–0" BELOW GRADE WITH MIN. 12" VERTICAL CLEARANCE BETWEEN CONDUITS					EXTEND 18" BEYOND BACK OF CURB (OUTSIDE OF ALL PAVED AREAS) BEFORE TRANSITIONING TO NON–PAVED TRENCH DETAIL. ALWAYS ATTEMPT TO RUN UTILITY TRENCH OUTSIDE OF PAVED AREA WHEN AVAILABLE – RE: PLAN SHEETS RE. PROJECT SPECS FOR GRADATION TABLE.					TRENCH MATERIAL SHALL CONSIST OF DRY, ROCK–FREE DIRT. ALWAYS ATTEMPT TO RUN UTILITY TRENCH OUTSIDE OF PAVED AREA WHEN AVAILABLE – RE: PLAN SHEETS					* SCREENED NATIVE MATERIAL MUST BE APPROVED FOR USE PER THE PROJECT SPECIFICATIONS BY THE ONSITE CMT PRIOR TO PLACEMENT.				
D																				
C	A1					A6					A11									
B	PRIMARY ELECTRICAL & TELEPHONE CONDUIT TRENCH SECTION (NON PAVED)					1" Ø OR SMALLER ELECTRICAL CONDUIT TRENCH SECTION (PAVED)					1" Ø OR SMALLER ELECTRICAL CONDUIT TRENCH SECTION (UNPAVED)									
A	NTS	SN: TD011A004				NTS	SN: TD012A006				NTS	SN: TD013A004								

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STATE OF MISSOURI

NATHAN JACOB COWAN

REGISTERED PROFESSIONAL ENGINEER

NUMBER PE-2005022092

EXPIRATION DATE 07/18/2025

07/18/2025

Nathan J. Cowan, Civil Engineer

MO PE-2005022092

PROJECT NO.: R2385.28

CDI

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WBE | DBE

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St. Louis, MO 63110

(314) 863-5570

Missouri State Certificate of Authority #2002006804

QuikTrip No. 0683

418 SOUTH MAIN STREET

O'FALLON, MISSOURI

QT

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PROTOTYPE: P-120 (11/24/2024)

DIVISION:

VERSION: 001

DESIGNED BY:

DRAWN BY:

REVIEWED BY:

REV	DATE	DESCRIPTION

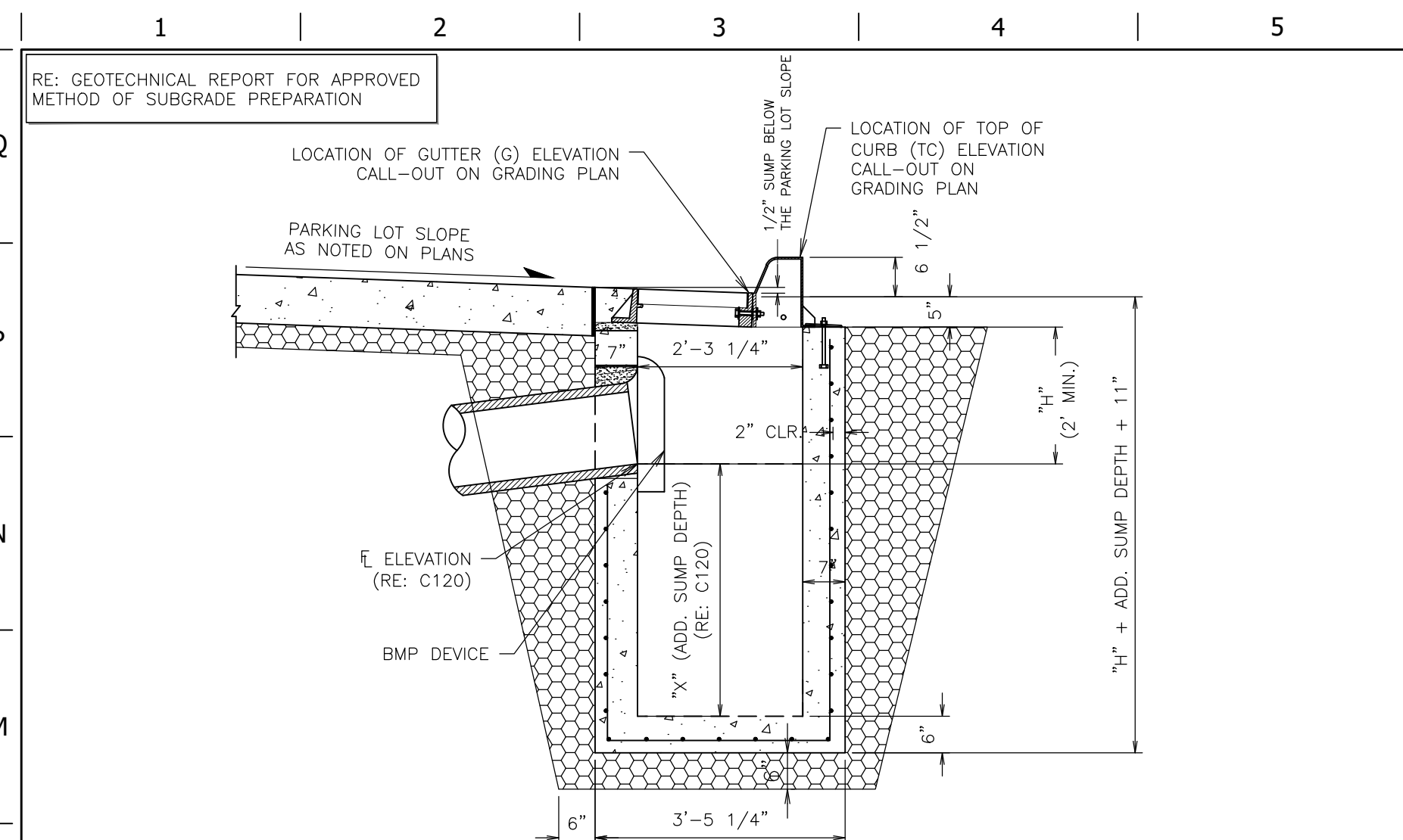
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COMPREHENSIVE
TRENCHING DETAILS I

SHEET NUMBER:
C530

ORIGINAL

ISSUE DATE:

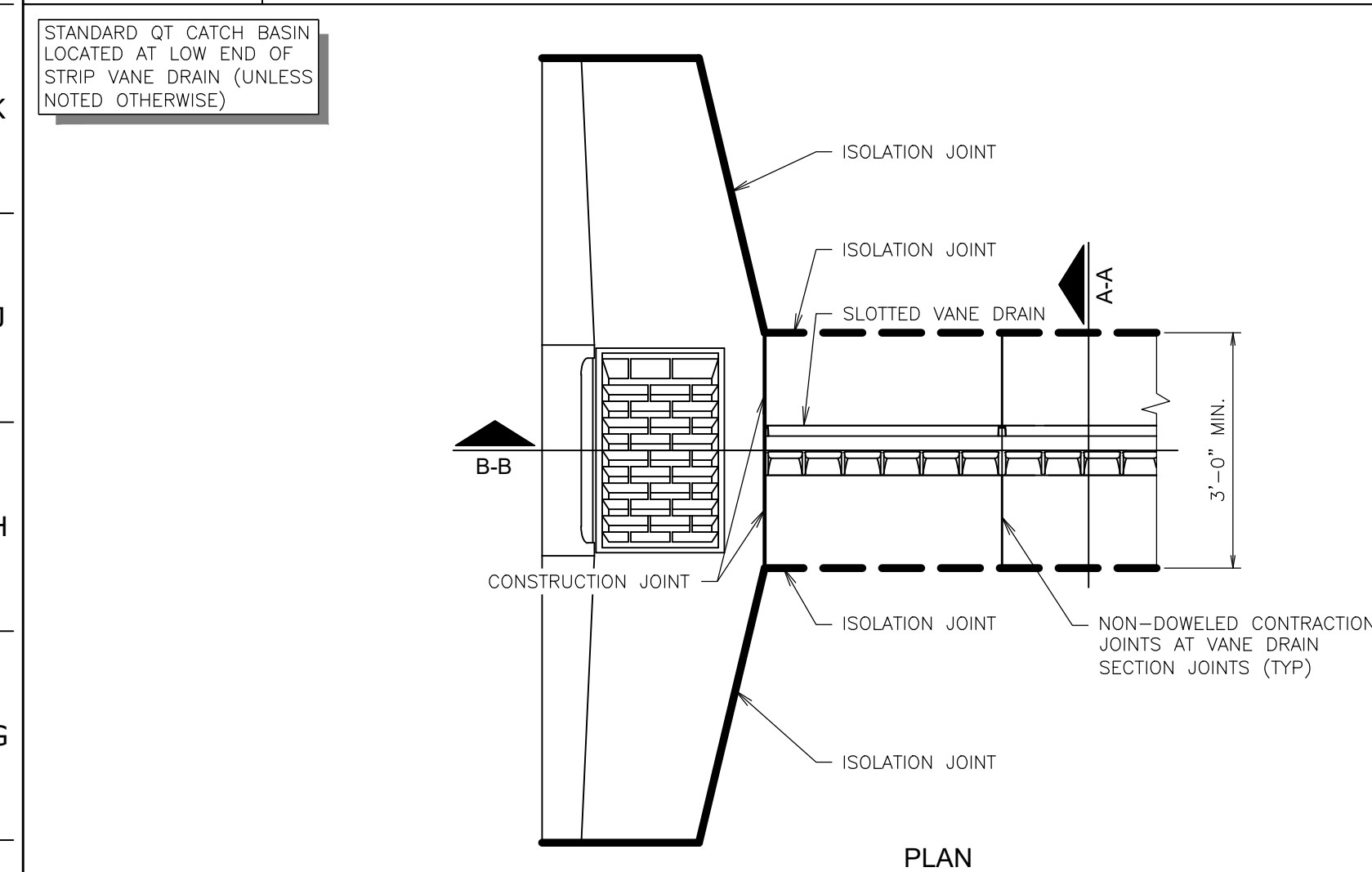
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L1	CURB INLET WITH SNOOT SUMP (SECTION VIEW)
----	---

NTS	SN: DD029A001
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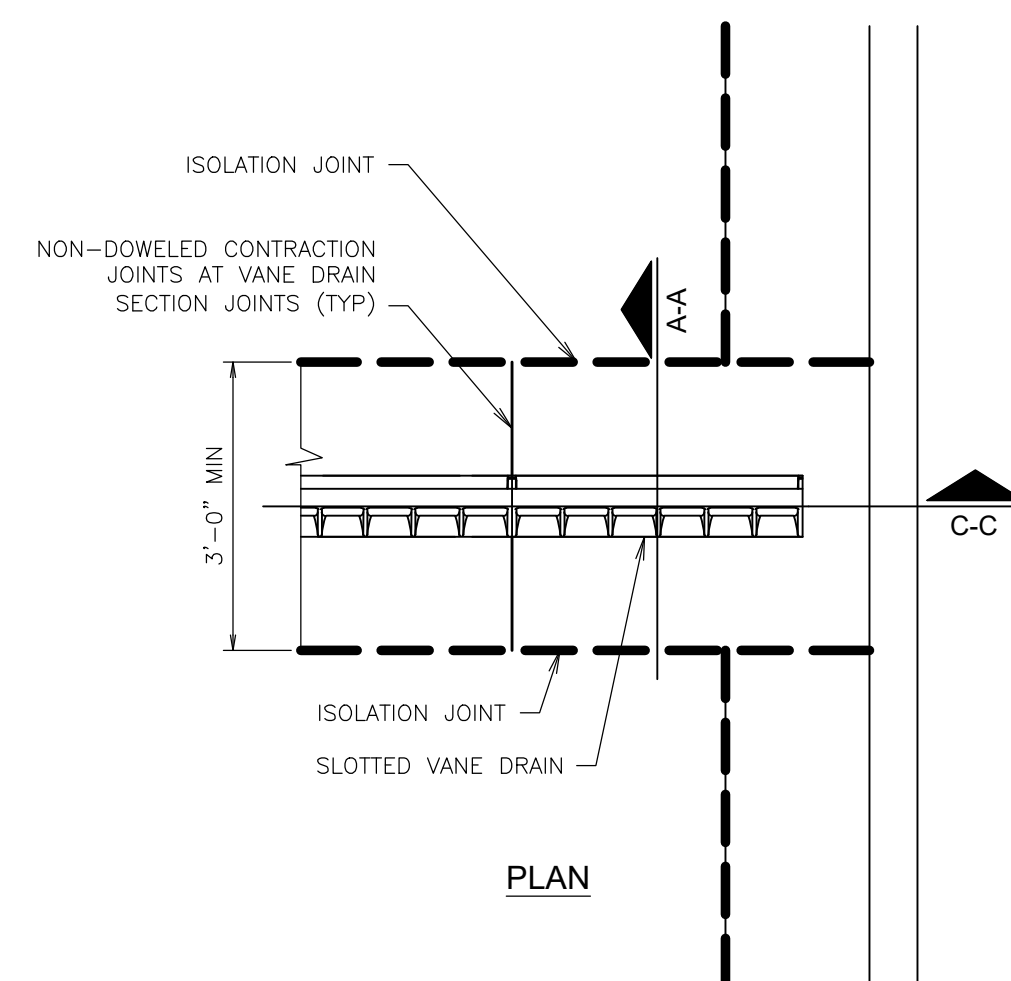
SN: DD029A001



F1	SLOTTED VANE DRAIN INSTALLATION @ CATCH BASIN DETAIL
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NTS	SN: DD004A007
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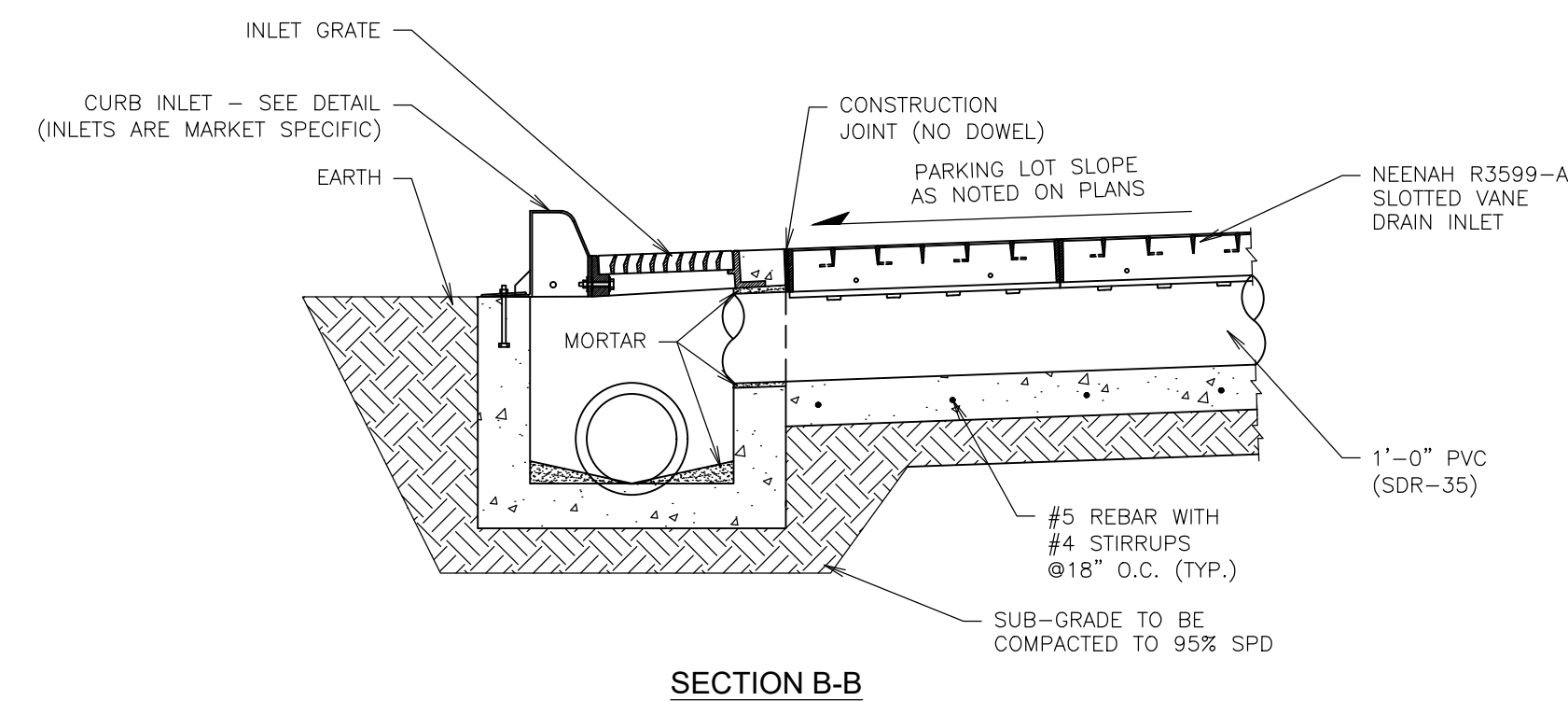
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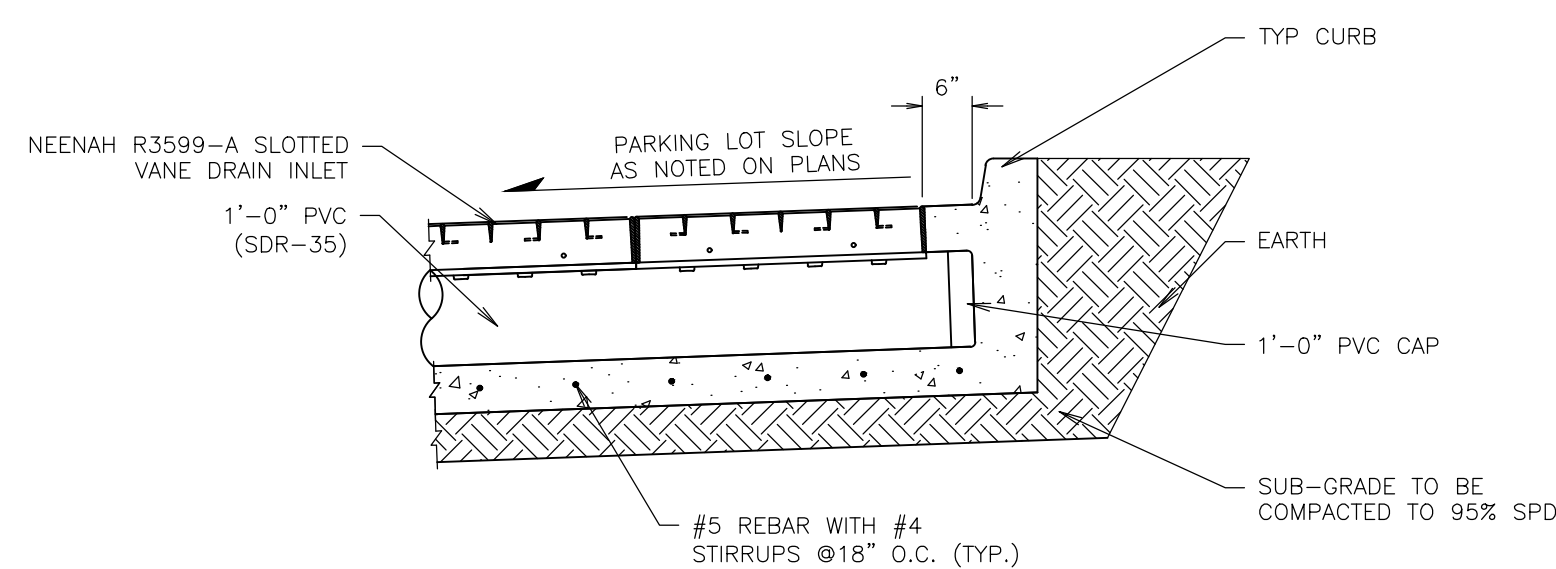
A1	SLOTTED VANE DRAIN INSTALLATION DETAIL
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NTS	SN: DD005A006
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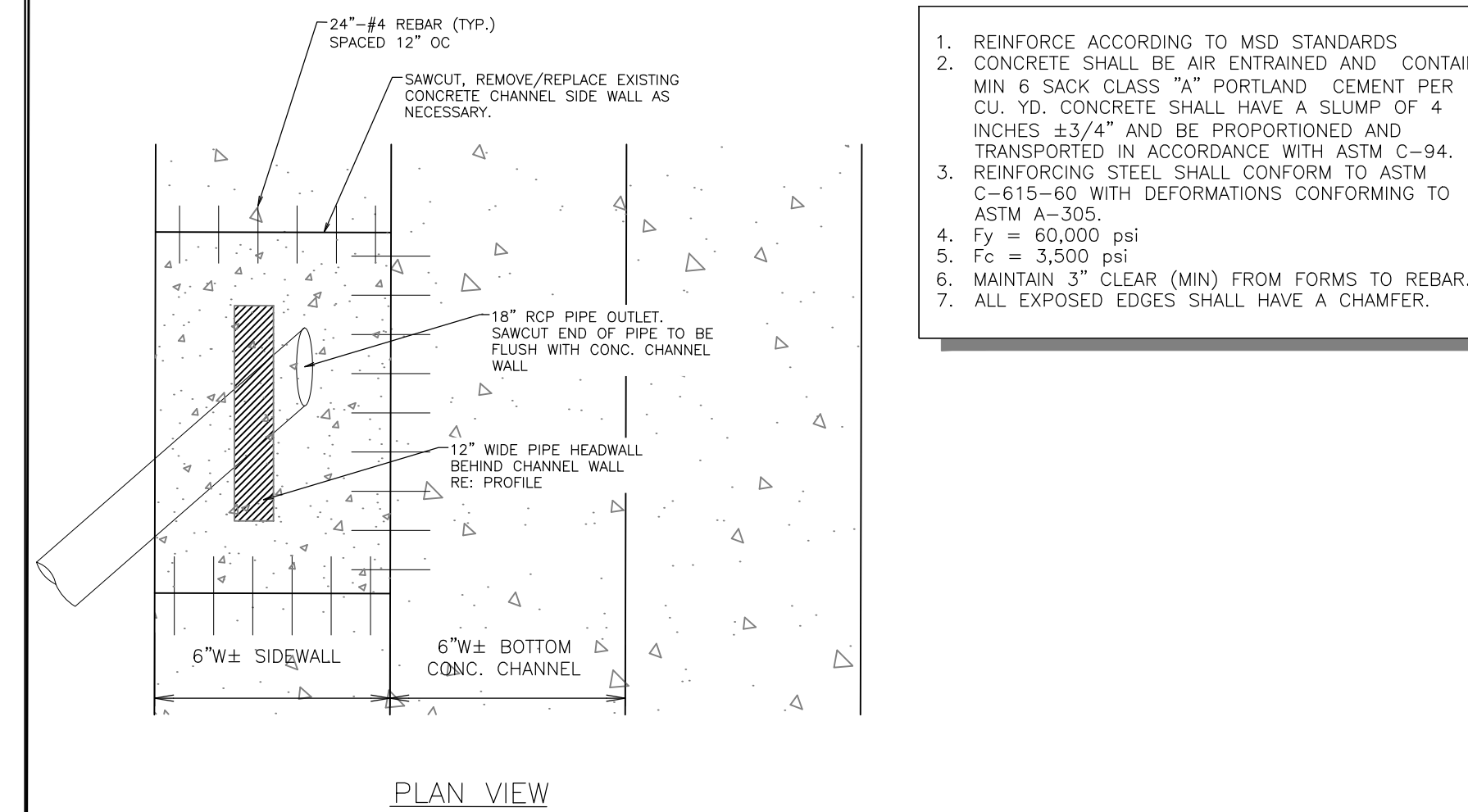
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SECTION B-B



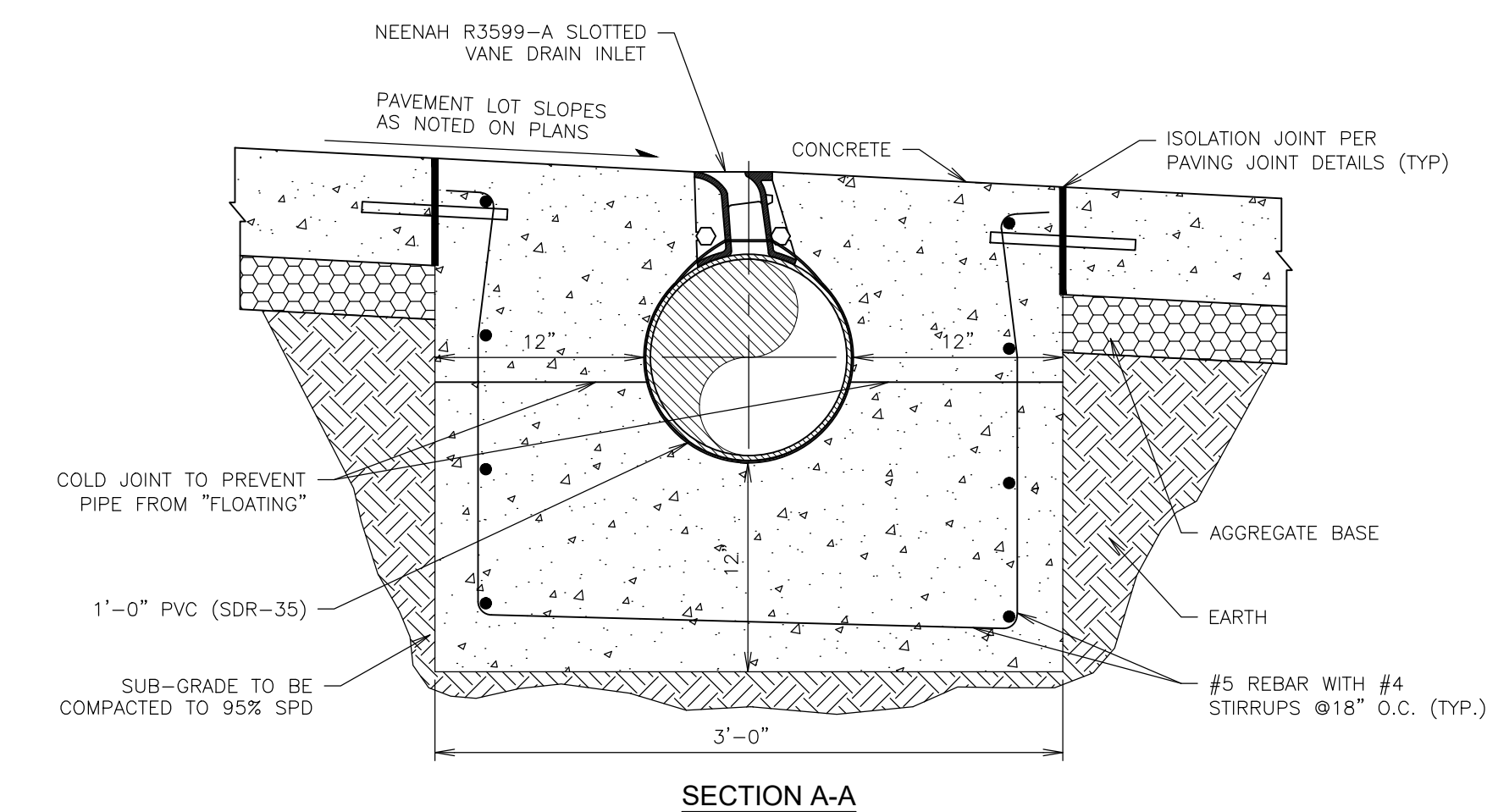
SECTION C-C



L11	PIPE OUTLET AT CONCRETE CHANNEL
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NTS	
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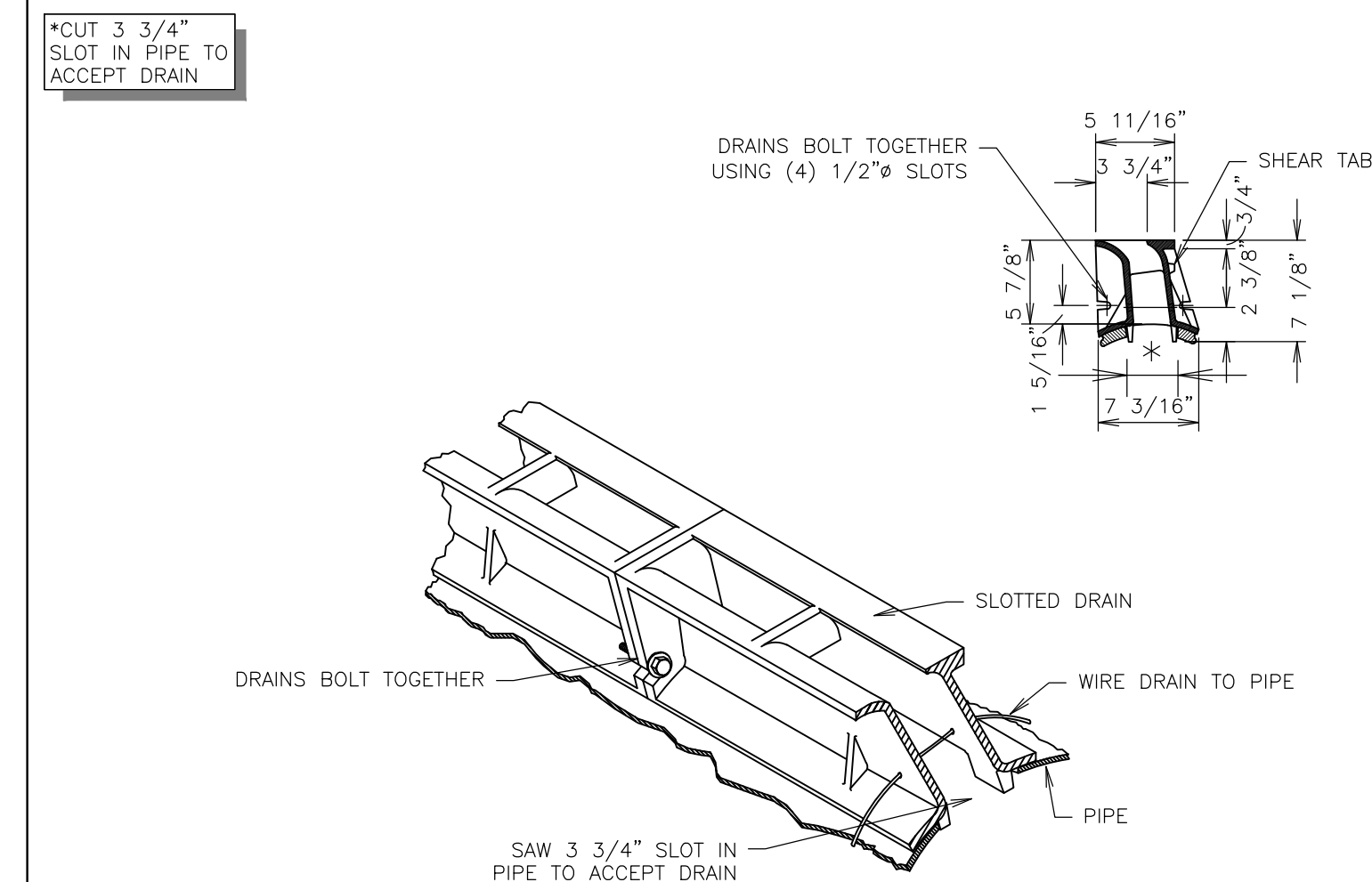
5



F11	SLOTTED VANE DRAIN INSTALLATION CROSS SECTION "A-A"
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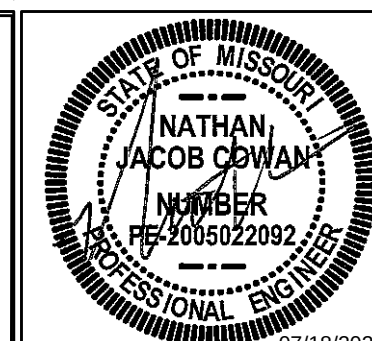
SN: DD006A008



A11	SLOTTED VANE DRAIN (ISOMETRIC VIEW)
-----	-------------------------------------

NTS	
-----	--

SN: DD007A003



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VERSION: 001

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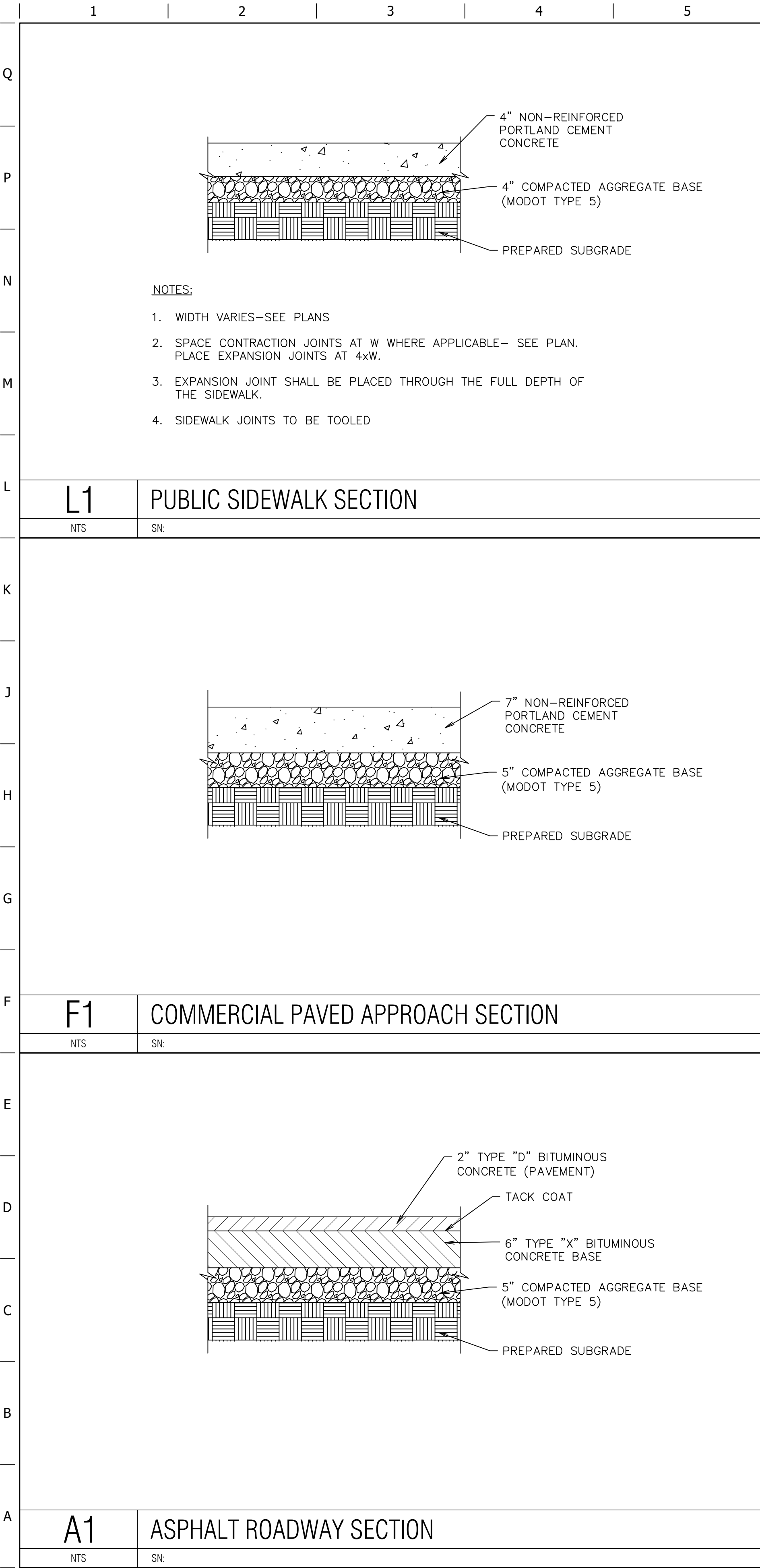
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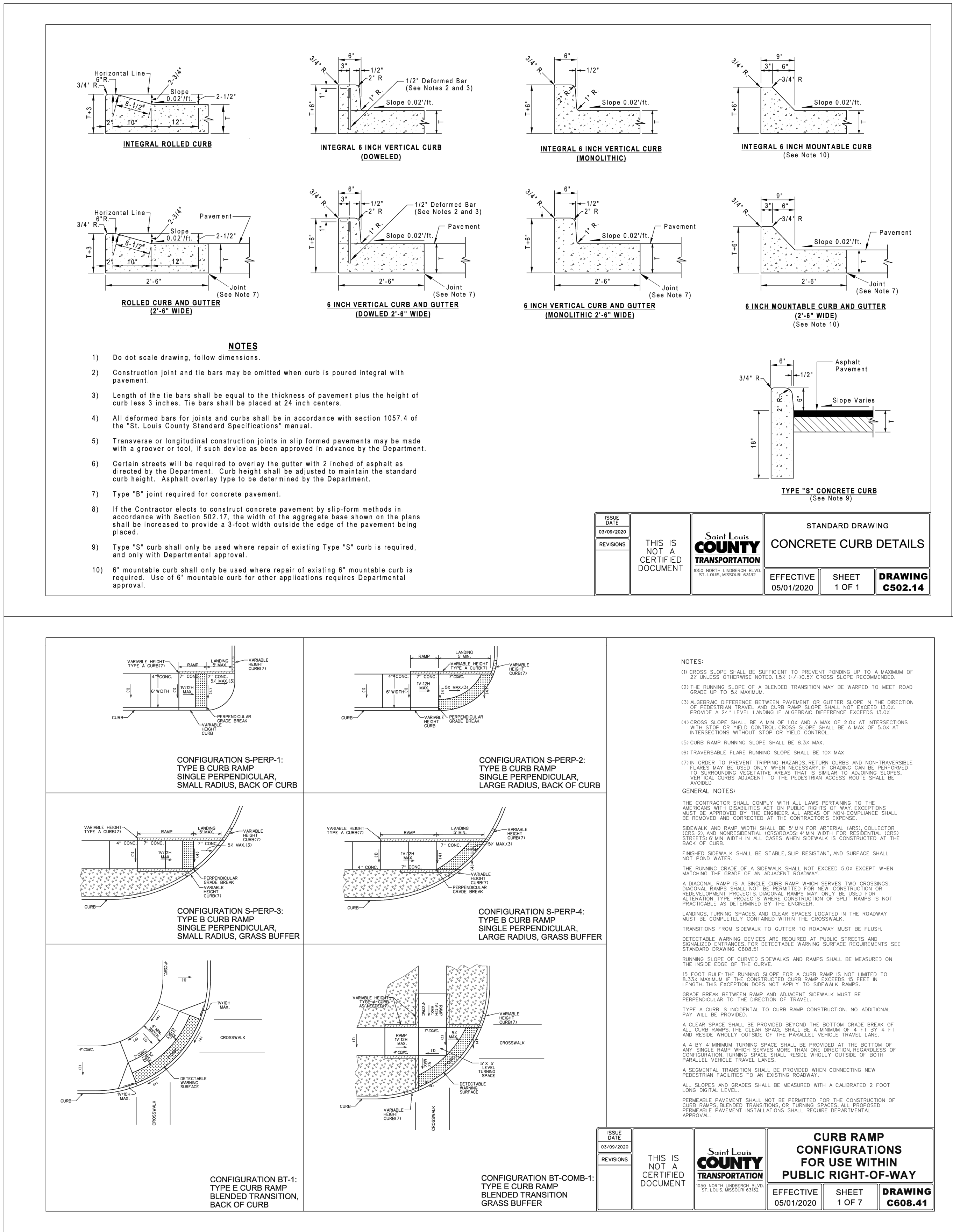
DRAINAGE DETAILS

SHEET NUMBER:

C540



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DIVISION:
VERSION: 001
DESIGNED BY:
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REVIEWED BY:

REV	DATE	DESCRIPTION

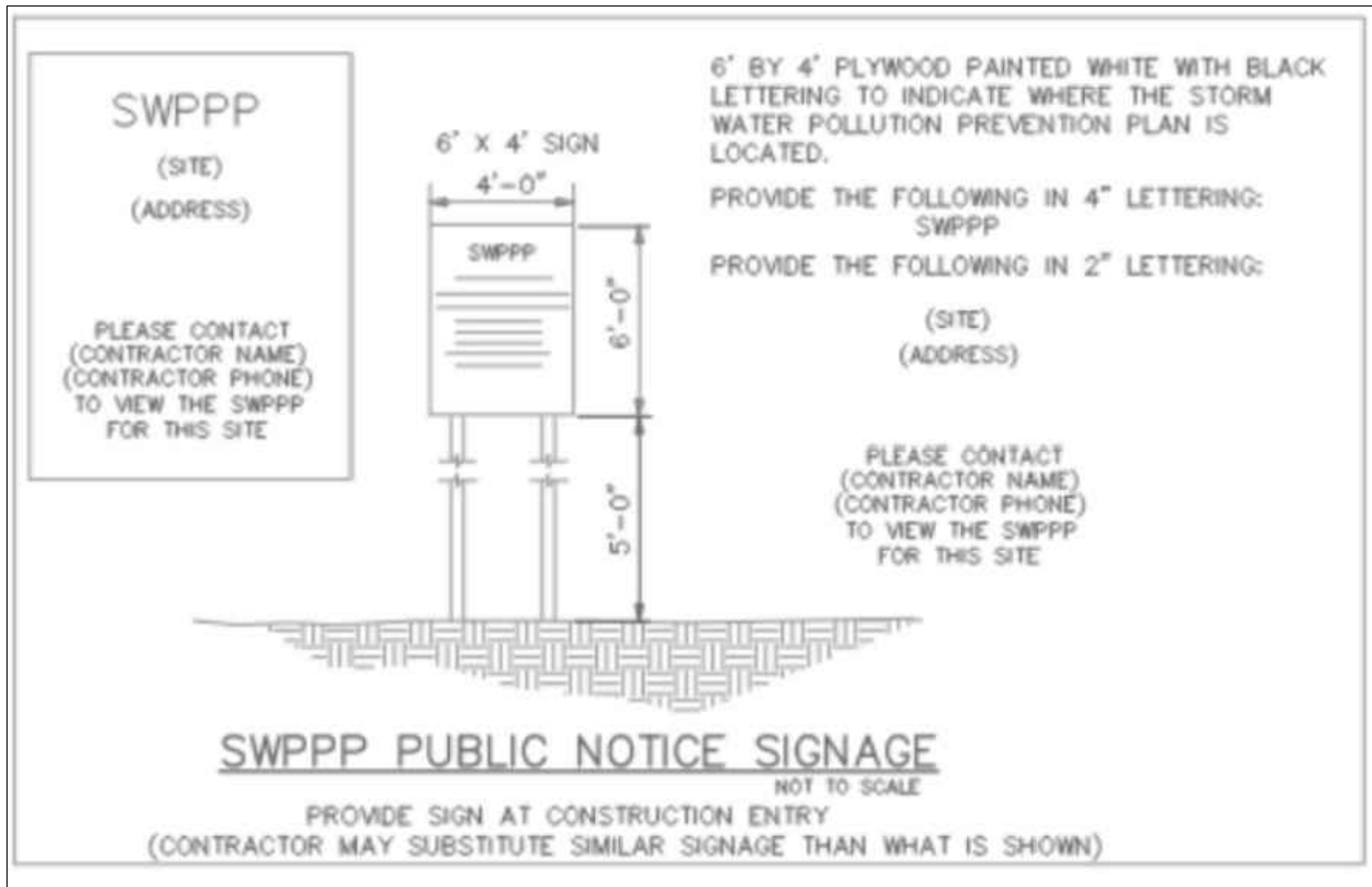
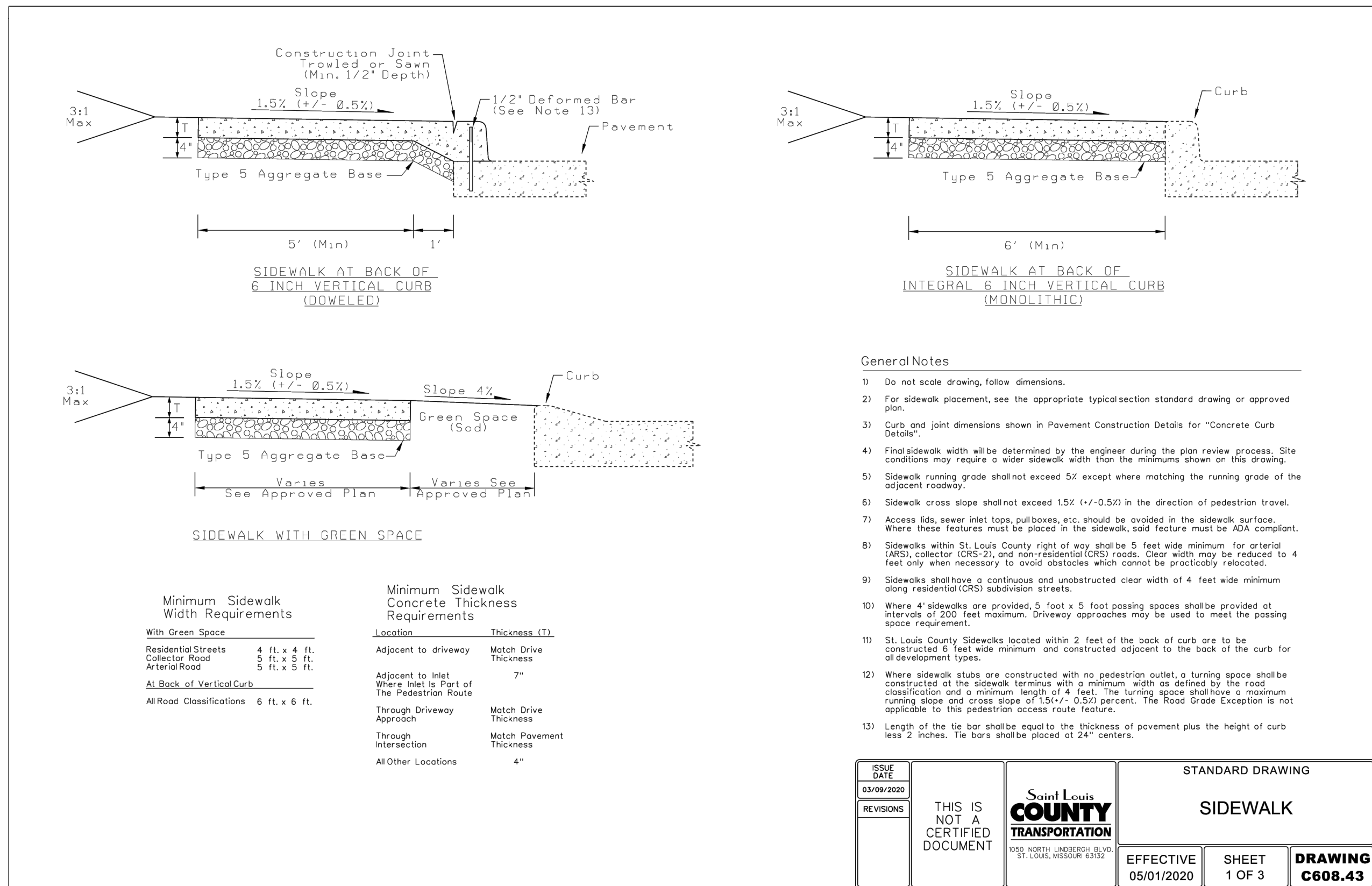
SHEET TITLE:
JURISDICTIONAL DETAILS I

SHEET NUMBER:

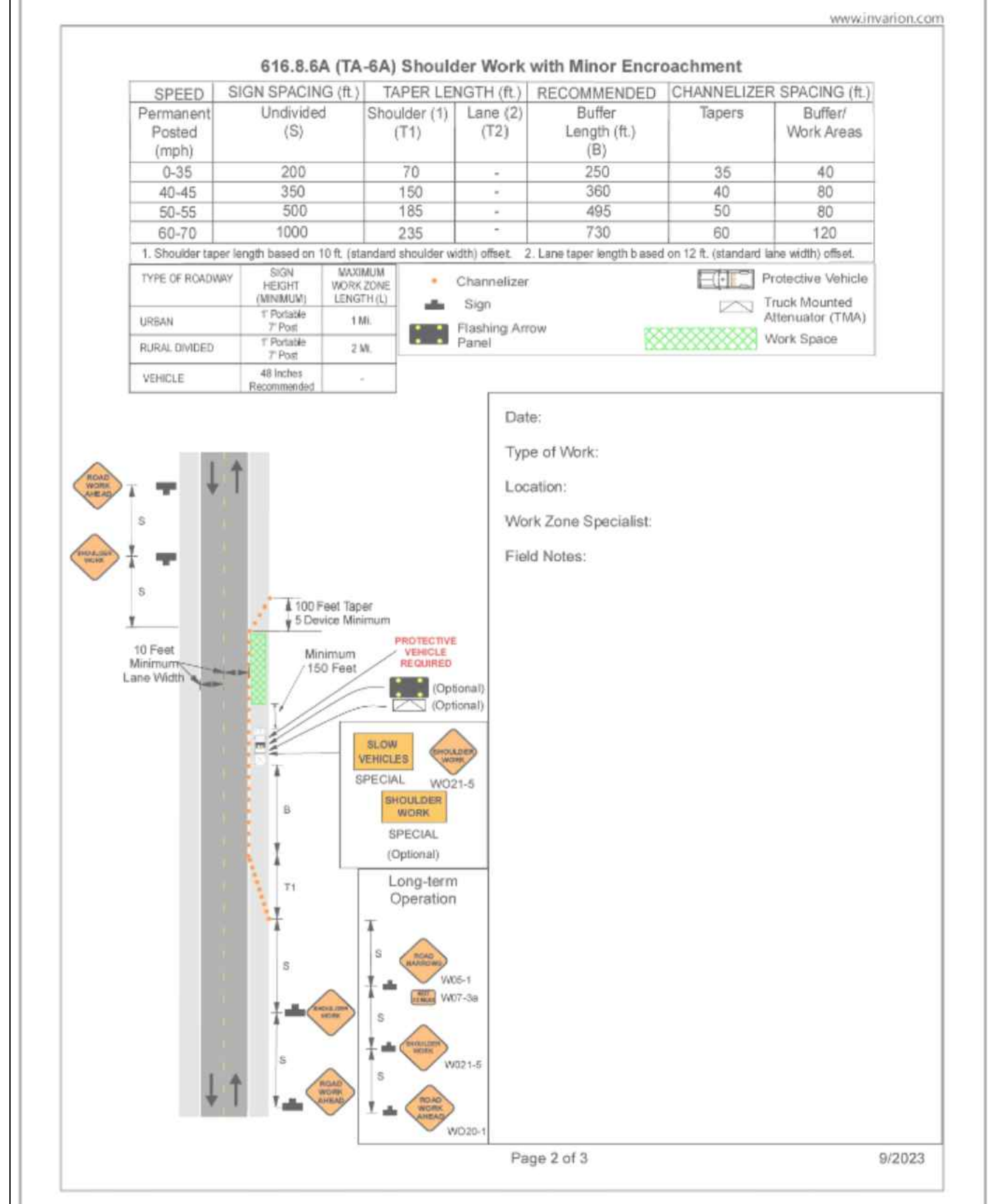
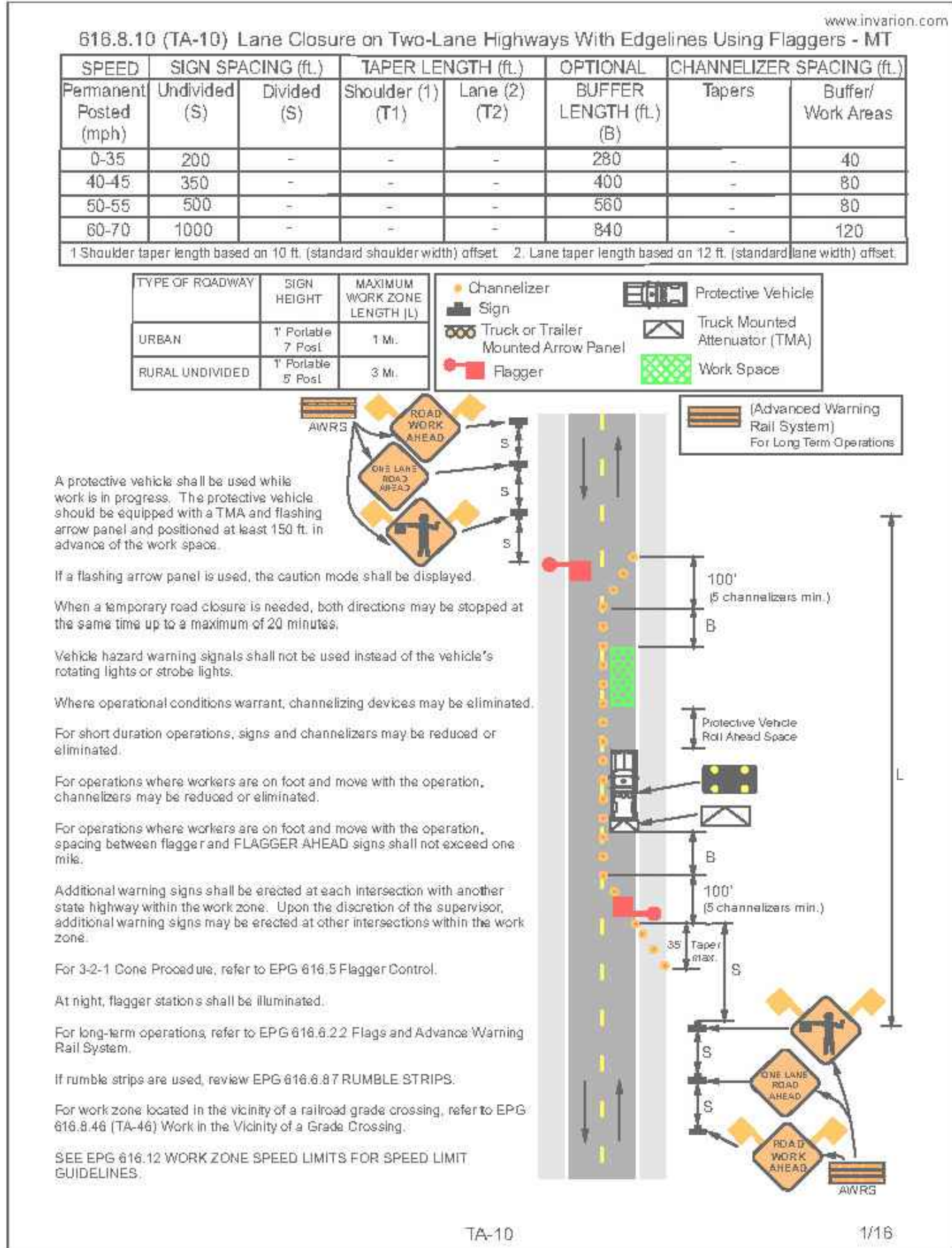
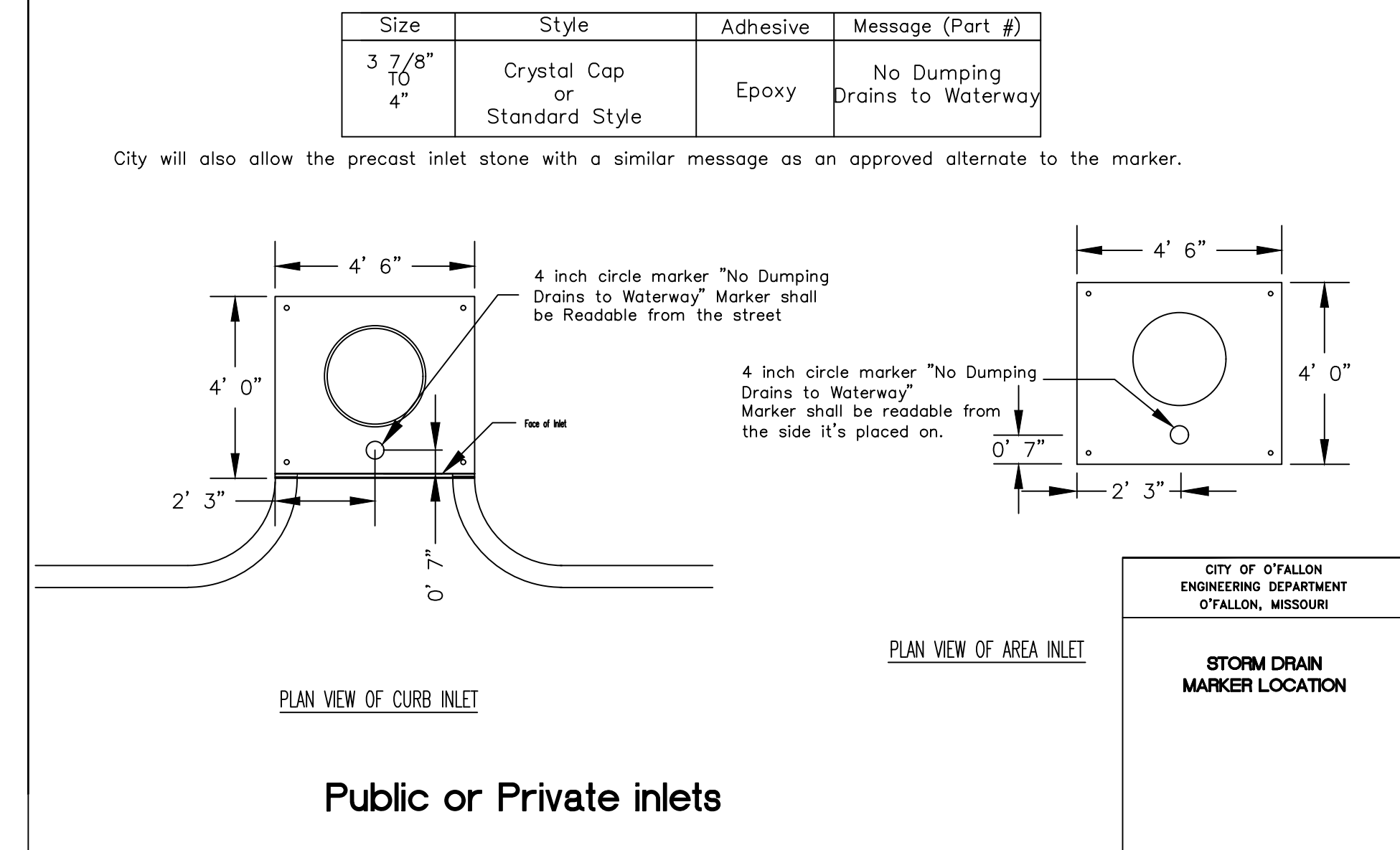
C570

ORIGINAL ISSUE DATE:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



* The City of O'Fallon must be provided with a symbol/medallion for review and approval prior to installation. Contact the City if any information is needed.



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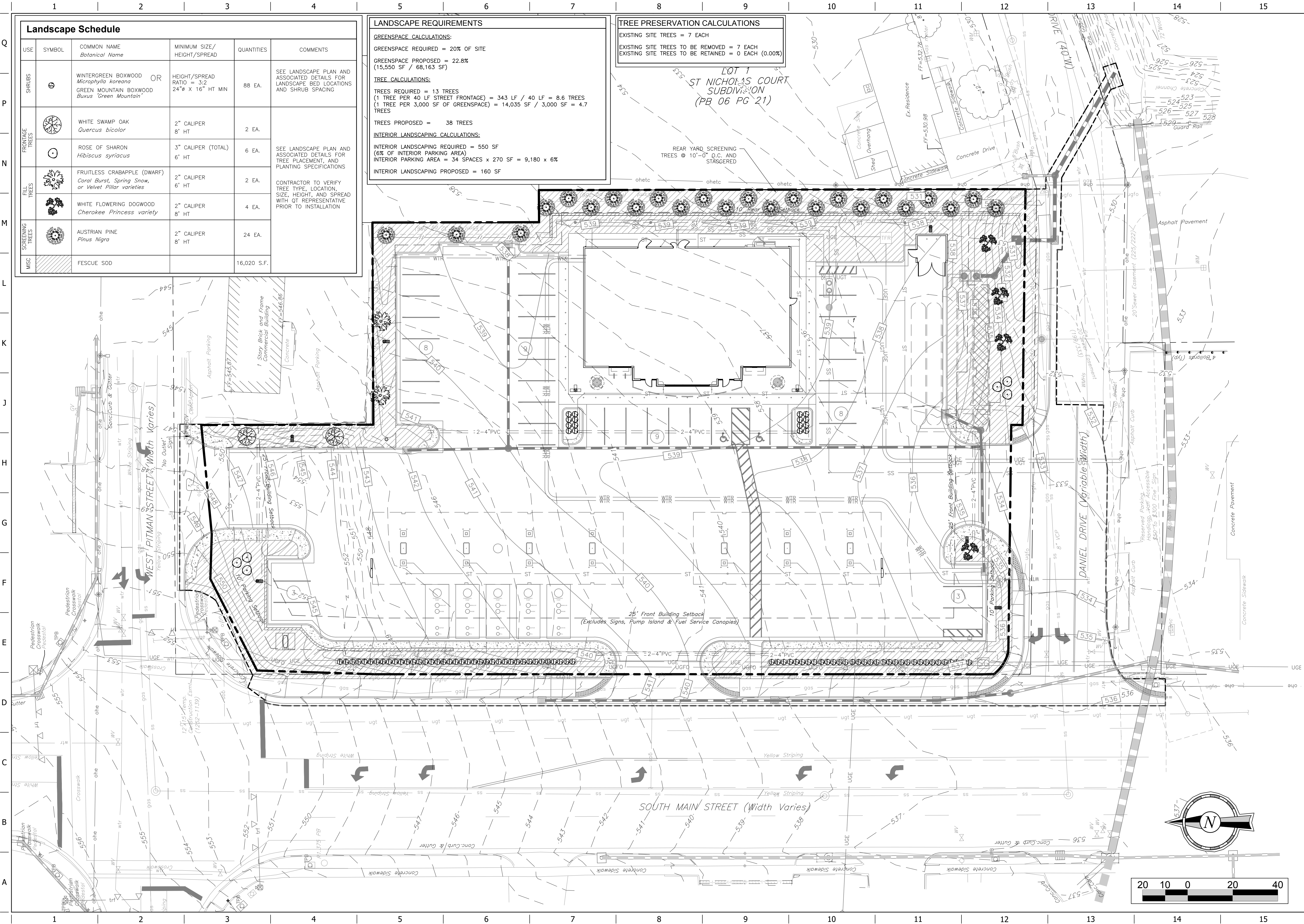
REV	DATE	DESCRIPTION

SHEET TITLE:

JURISDICTIONAL DETAILS II

SHEET NUMBER:

C571



Landscape Schedule					
USE	SYMBOL	COMMON NAME <i>Botanical Name</i>	MINIMUM SIZE/ HEIGHT/SPREAD	QUANTITIES	COMMENTS
SHRUBS		WINTERGREEN BOXWOOD <i>Microphylla korera</i> OR GREEN MOUNTAIN BOXWOOD <i>Buxus 'Green Mountain'</i>	HEIGHT/SPREAD RATIO = 3:2 24"Ø X 16" HT MIN	88 EA.	SEE LANDSCAPE PLAN AND ASSOCIATED DETAILS FOR LANDSCAPE BED LOCATIONS AND SHRUB SPACING
FRONTAGE TREES		WHITE SWAMP OAK <i>Quercus bicolor</i>	2" CALIPER 8' HT	2 EA.	SEE LANDSCAPE PLAN AND ASSOCIATED DETAILS FOR LANDSCAPE BED LOCATIONS AND SHRUB SPACING
		ROSE OF SHARON <i>Hibiscus syriacus</i>	3" CALIPER (TOTAL) 6' HT	6 EA.	
FILL TREES		FRUITLESS CRABAPPLE (DWARF) <i>Coral Burst, Spring Snow, or Velvet Pillar varieties</i>	2" CALIPER 6" HT	2 EA.	CONTRACTOR TO VERIFY TREE TYPE, LOCATION, SIZE, HEIGHT, AND SPREAD WITH QT REPRESENTATIVE PRIOR TO INSTALLATION
		WHITE FLOWERING DOGWOOD <i>Cherokee Princess variety</i>	2" CALIPER 8' HT	4 EA.	
SCREENING TREES		AUSTRIAN PINE <i>Pinus Nigra</i>	2" CALIPER 8' HT	24 EA.	
MISC		FESCUE SOD		16,020 S.F.	

LANDSCAPE REQUIREMENTS

GREENSPACE CALCULATIONS:

GREENSPACE REQUIRED = 20% OF SITE

GREENSPACE PROPOSED = 22.8%
(15,550 SF / 68,163 SF)

TREE CALCULATIONS:

TREES REQUIRED = 13 TREES
(1 TREE PER 40 LF STREET FRONTAGE) = 34.3 LF / 40 LF = 8.6 TREES
(1 TREE PER 3,000 SF OF GREENSPACE) = 14,035 SF / 3,000 SF = 4.7 TREES

TREES PROPOSED = 38 TREES

INTERIOR LANDSCAPING CALCULATIONS:

INTERIOR LANDSCAPING REQUIRED = 550 SF
(6% OF INTERIOR PARKING AREA)

INTERIOR PARKING AREA = 34 SPACES x 270 SF = 9,180 x 6%

INTERIOR LANDSCAPING PROPOSED = 160 SF

TREE PRESERVATION CALCULATIONS

EXISTING SITE TREES = 7 EACH

EXISTING SITE TREES TO BE REMOVED = 7 EACH

EXISTING SITE TREES TO BE RETAINED = 0 EACH (0.00%)

PROJECT NO.: R2385.28

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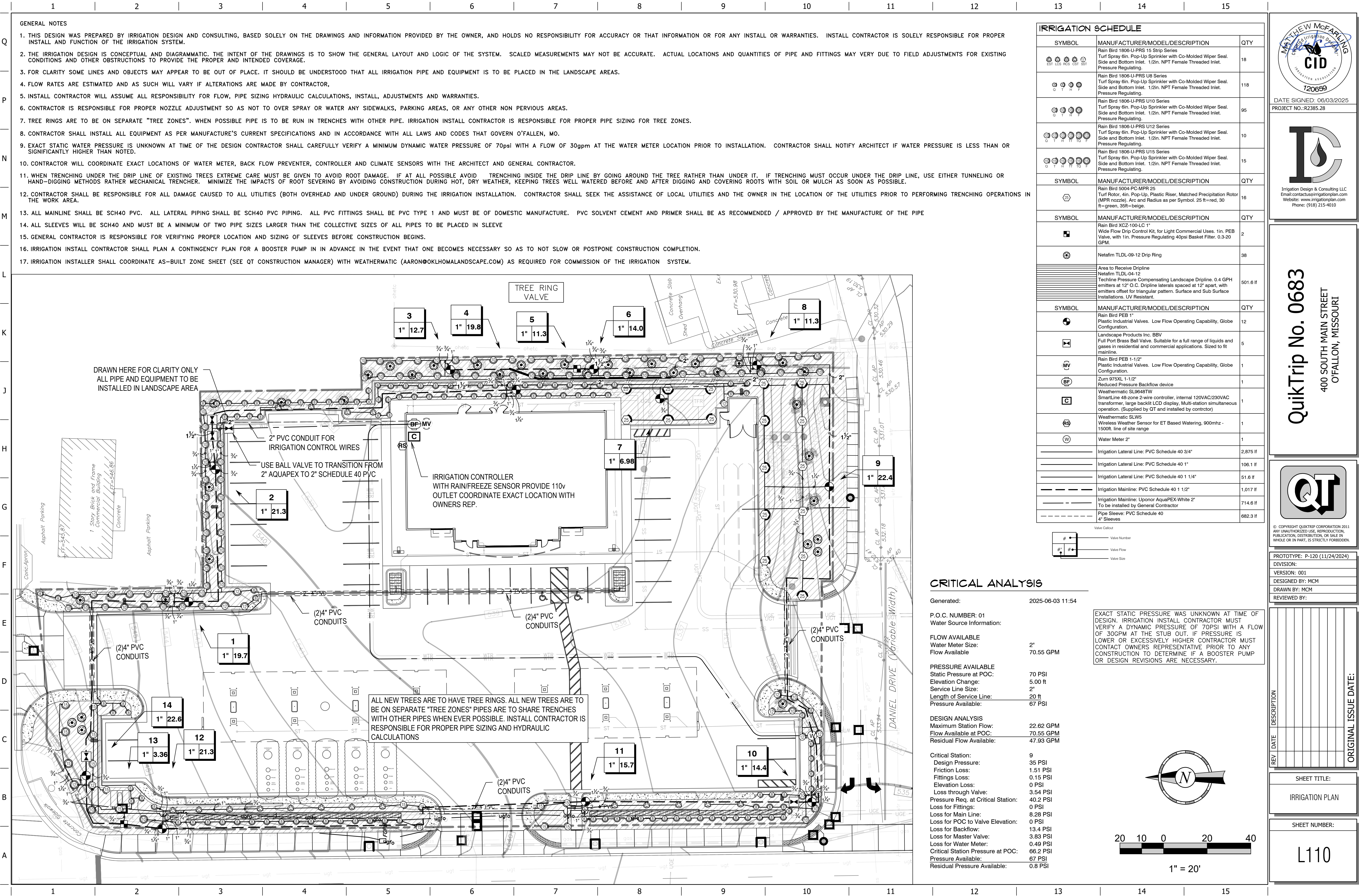
SHEET TITLE:

LANDSCAPE (PRELIM)

SHEET NUMBER:

L100

ORIGINAL ISSUE DATE:



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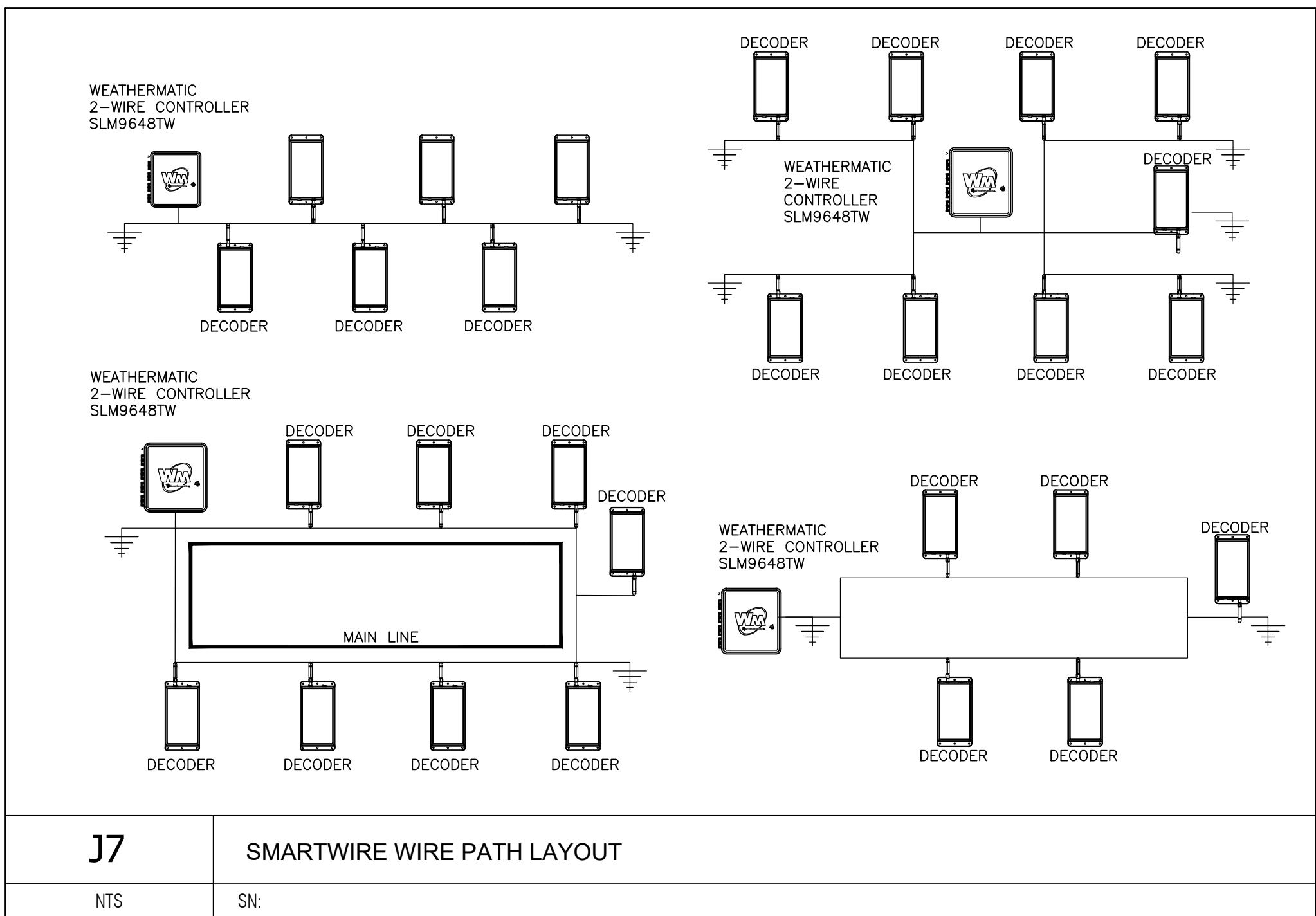
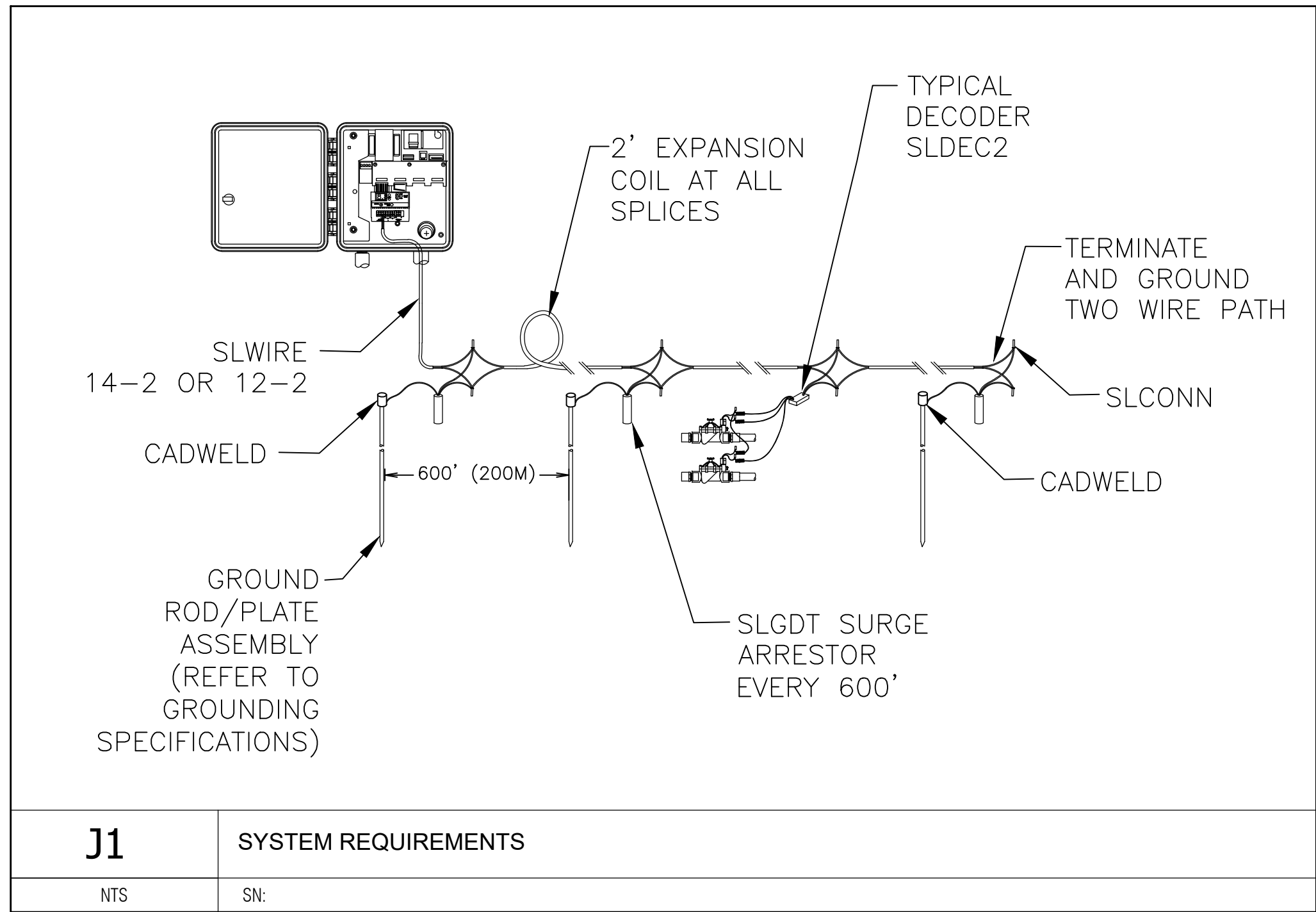
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Two-wire irrigation details:



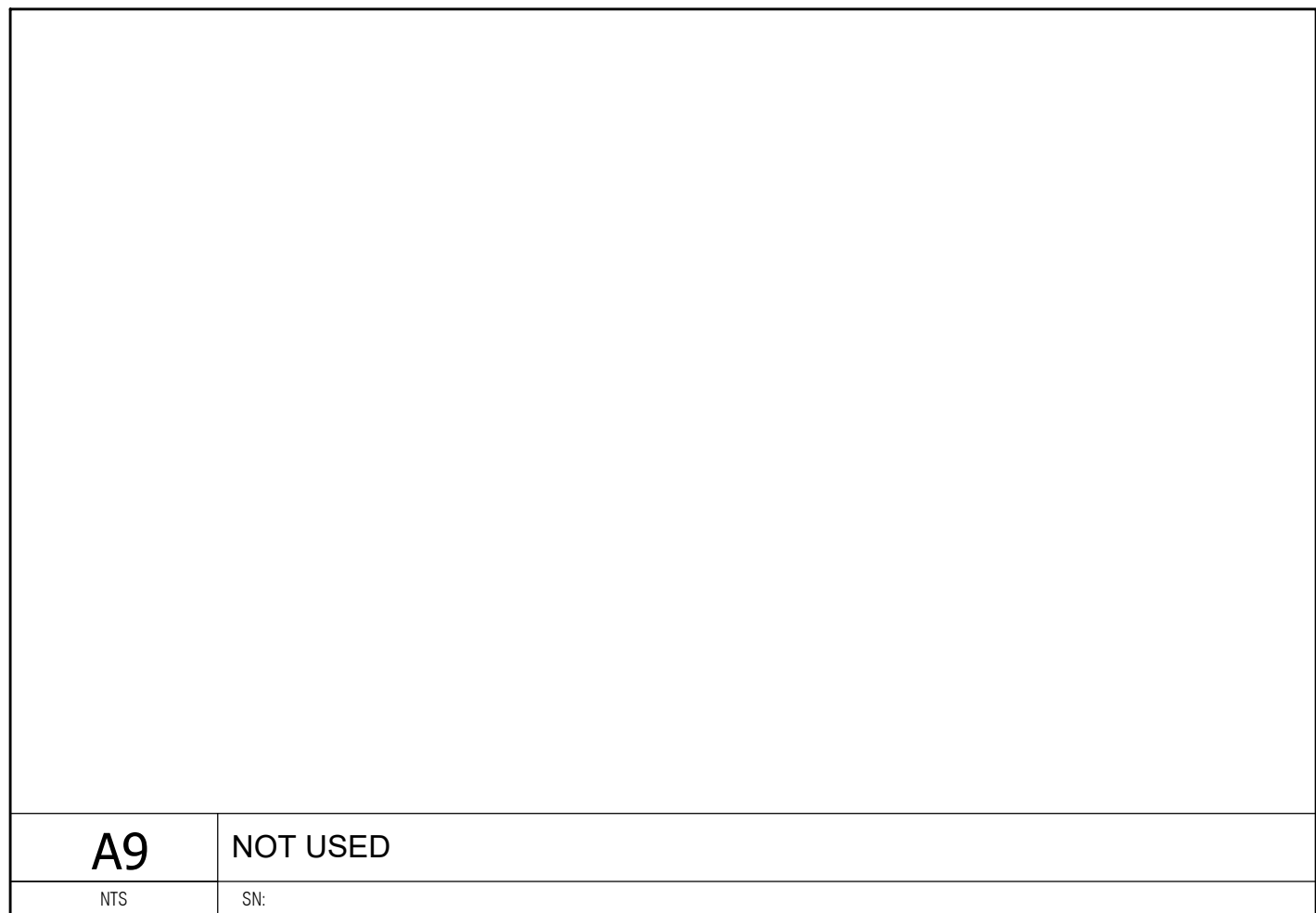
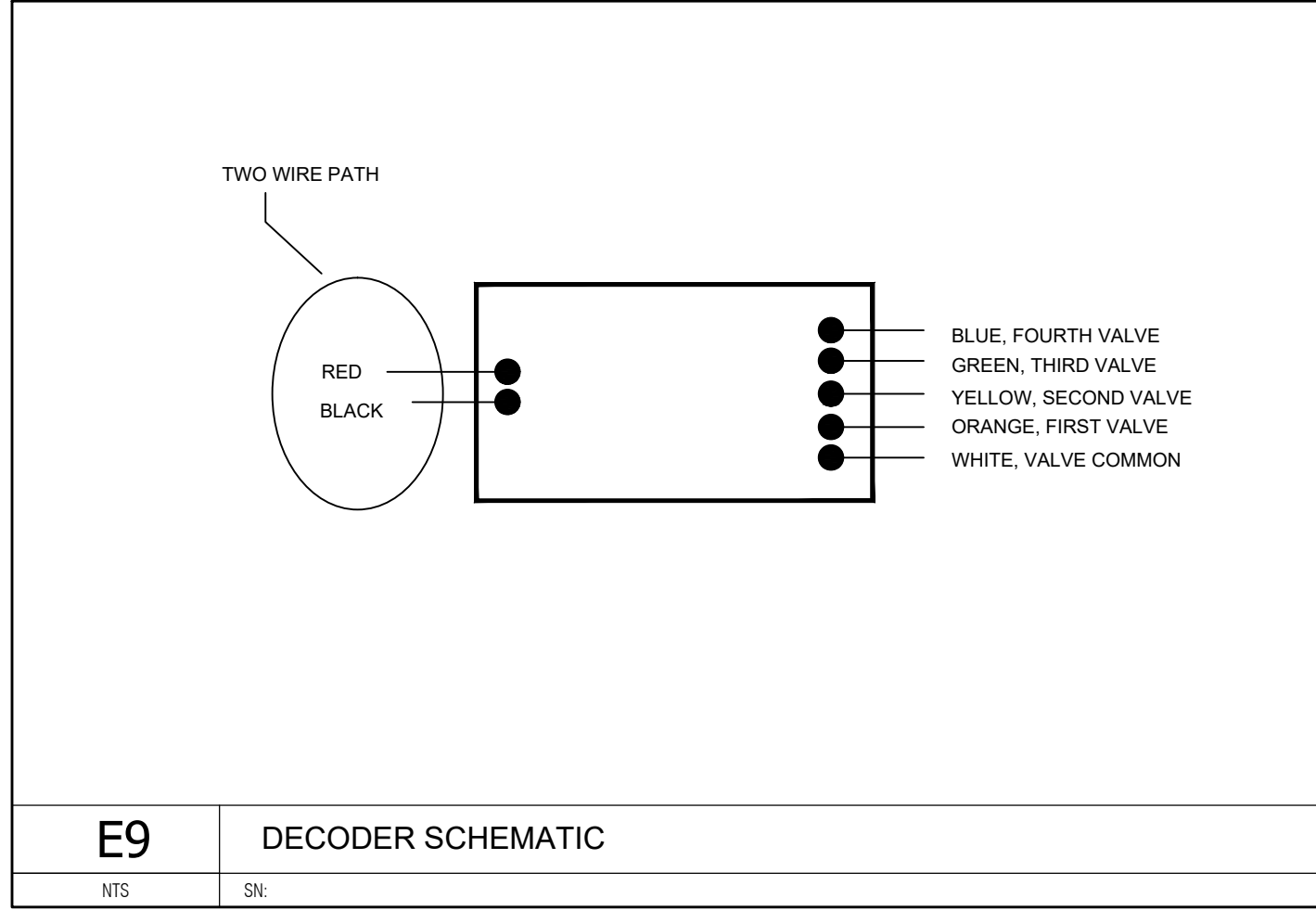
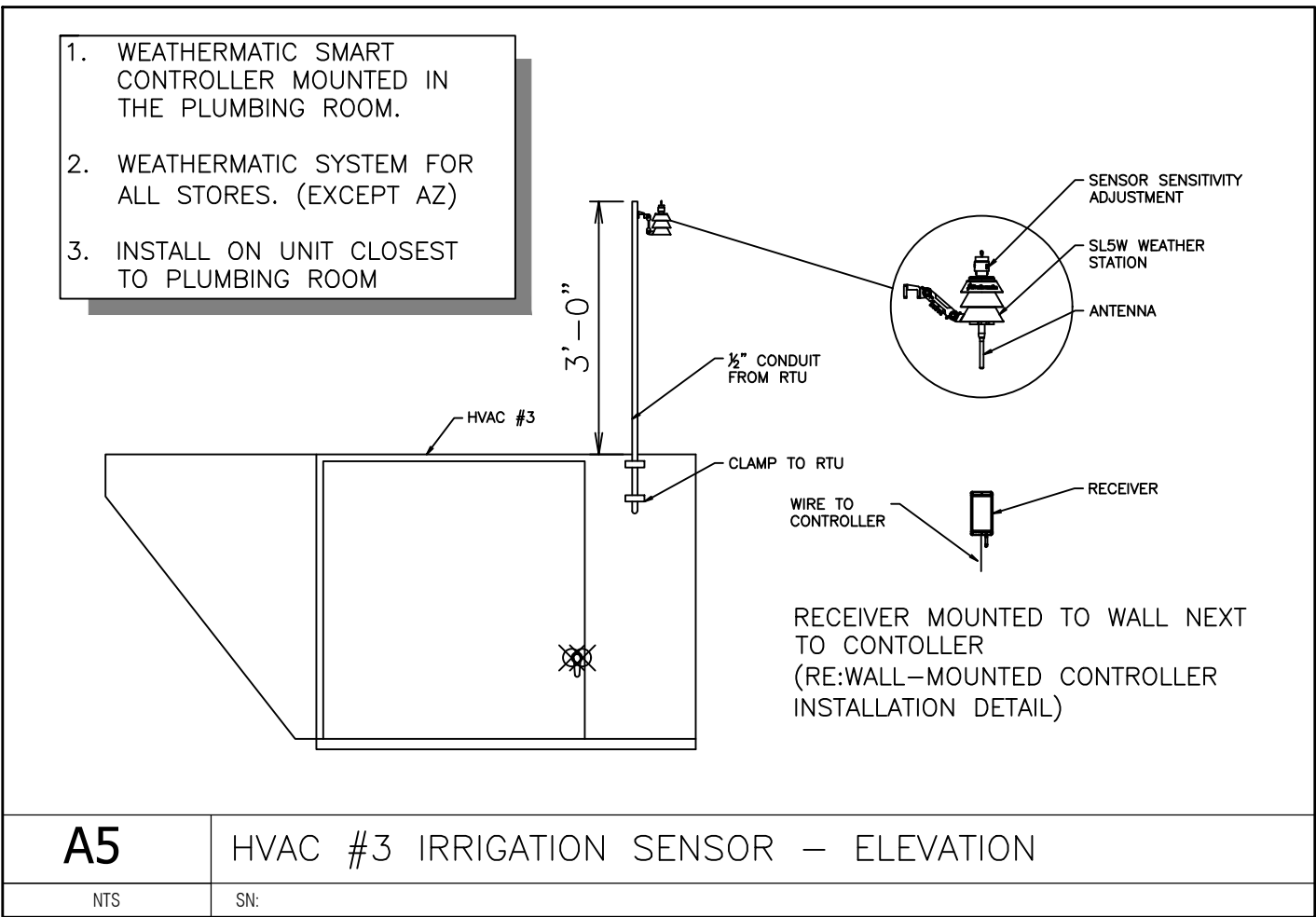
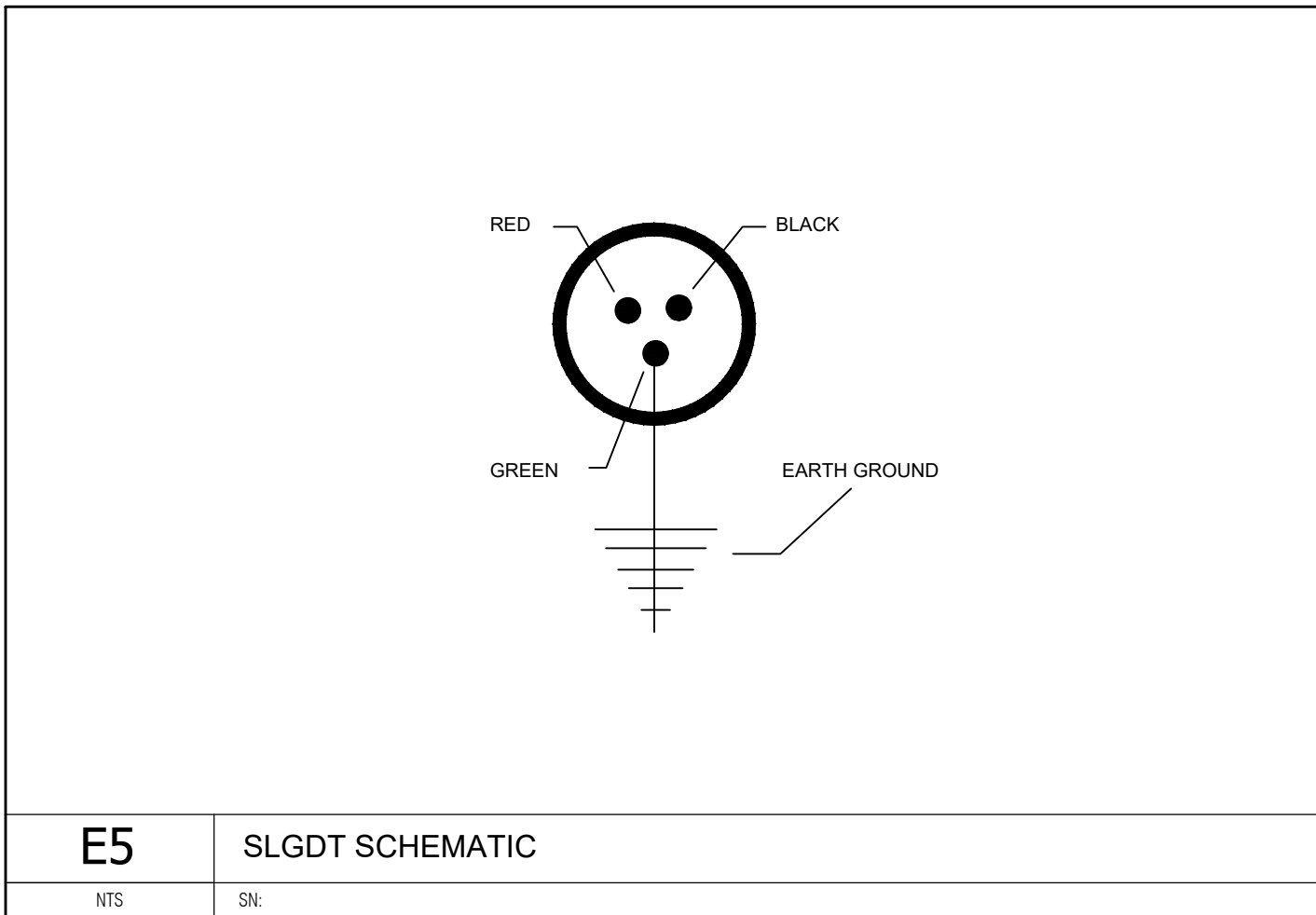
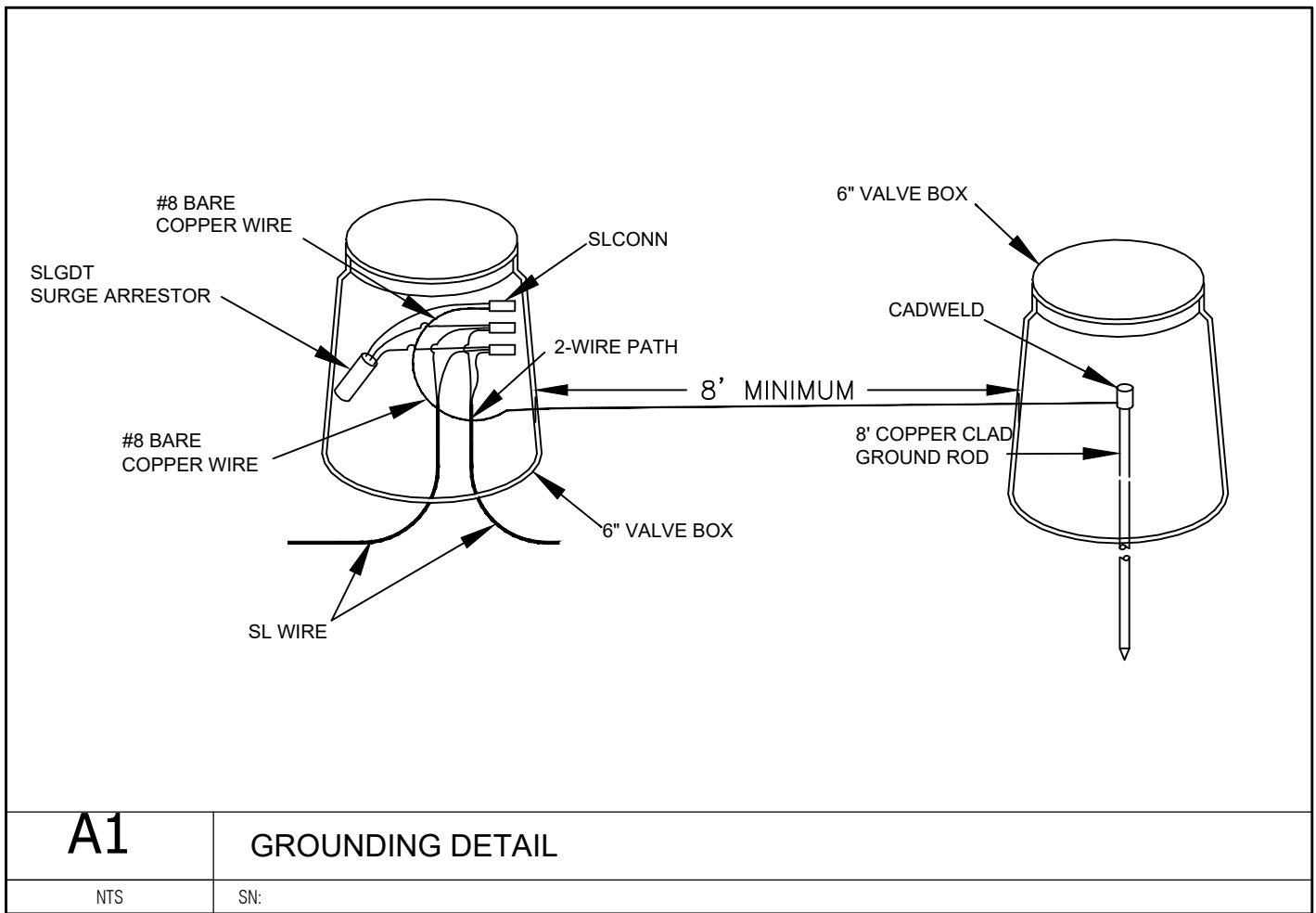
Two-wire notes:

- NOTES:
- Specific wire polarity is required. Maintain red and black wire polarity throughout installation.
 - Maintain independent wire path for each controller. No splicing or joining wire paths for multiple controls.
 - Up to three independent wire paths may be run for each SLM9648TW.
 - Maximum distance from SLDEC decoders to remote control valve not to exceed 100' (30.5m).
 - Each 2-wire run may be laid out in straight run, complete loop, star, or combination layouts as shown in details. Always terminate and ground each leg of the wire path using manufacturer's recommended grounding methods.
 - Use a continuous loop wire path whenever possible to provide the best communication and power path for the system. Looping provides a redundant path for the power and signal allowing the system to continue operation in the event the wire path is cut.
 - Mark each zone number on the SLDEC decoder. For multi-valve decoders record the zone in order of wire color code: orange, yellow, green, and blue.
 - Mark all zone numbers and decoder locations on the as-built plan for final submittal.
 - Secure all Red and Black 2-wire connections using only manufacturer's supplied SLCONN aluminum connectors and grease filled waterproof connectors.
 - All remote control valve wire splices shall be secured using an encapsulated, gel-filled waterproof wire connector suitable for direct burial and installed according to manufacturer's specifications.
 - Use SmartWire SLWIRE cable supplied by Weathermatic sprinkler division of Telsco Industries to comply with the following specifications:
 - Conductors must be soft drawn, annealed, solid copper conforming to ASTM 33.
 - Conductor insulation must be 4/64-inch thick polyvinyl chloride (PVC) conforming to UL #493.
 - The two insulated conductors laid in parallel and encased in a single outer jacket of 3/64-inch thick, high-density, sunlight resistant polyethylene conforming to ICEA S-61-402 and NEMA WC5, having a minimum wall thickness of .045-inch.
 - The two conductors must be color-coded: normally one conductor red and the other black. Both conductors shall be the same size.
 - The following brands meet the above specifications for direct burial cable: Weathermatic SLWIRE12; Weathermatic SLWIRE14.
 - Wire sizing and maximum distance shall not exceed manufacturer's recommendations to avoid voltage loss and insure proper operation of the system.
 - All 2-wire paths under hardscape surfaces shall be sleeved and include no splices of the 2-wire path within 5' of sleeves. Secure a 2' (0.6m) expansion loop in the two-wire path at each change of direction and entry and exit of sleeve locations during wire installation. Release the expansion loops prior to direct burial.
 - Install one SLGDT surge arrester at the following locations along the 2-wire path: within 25' (7.5m) of each controller, the farthest distance on the 2-wire path from the controller, every 600' along the wire path, at any independent branch termination greater than 50' (15m) from than main 2-wire path.
 - Connect each SLGDT to an 8' copper clad UL approved grounding round or other approved grounding method to obtain 12 ohms or less resistance. Use CADWELD TM permanent welded, low-resistance connection to assure best grounding performance. Consult ASIC specification 100-2002 for additional grounding specifications for appropriate for local soil conditions.
 - Use care in stripping all wire connections to avoid damage to the 2-wire shield and red and black wire path. Remove and discard any damaged 2-wire sections and repair using two SLCONN splice kits.
 - Use expansion coils on the red and black wires at each decoder installation. No expansion coils are necessary for the SLGDT.
 - Adhere to all local and national building and electrical codes.

Scale: Not to Scale

STRAIGHT LINE CONFIGURATION, I.E. WIRE DISTANCE TO FURTHEST DECODER, NO. LOOP:					
Wire Size (Guage)	#18	#16	#14	#12	
Wire Length (ft)	1,000	2,000	4,000	6,000	
Wire Length (m)	300	600	1,200	1,800	

LOOP CONFIGURATION, I.E. WIRE DISTANCE TO THE FURTHEST DECODER IN THE LOOP:					
Wire Size (Guage)	#18	#16	#14	#12	
Wire Length (ft)	2,000	4,000	10,000	10,000	
Wire Length (m)	600	1,200	3,000	3,000	

MAXIMUM TOTAL WIRE PATH LENGTH IS 10,000 FEET (3,000 M).					
E1	**Wire Sizing**				
NTS	SN:				


MATTHEW McFARLING
Certified Irrigation Designer
CID
120659
DATE SIGNED: 06/03/2025
PROJECT NO.: R2385.28

LD

Irrigation Design & Consulting LLC
Email: contact@irrigatorplan.com
Website: www.irrigatorplan.com
Phone: (918) 215-4010

QuikTrip No. 0683
400 SOUTH MAIN STREET
OFALLON, MISSOURI

QT

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WHOLE OR IN PART, IS STRICTLY FORBIDDEN.

PROTOTYPE: P-120 (11/24/2024)
DIVISION:
VERSION: 001
DESIGNED BY: MCM
DRAWN BY: MCM
REVIEWED BY:

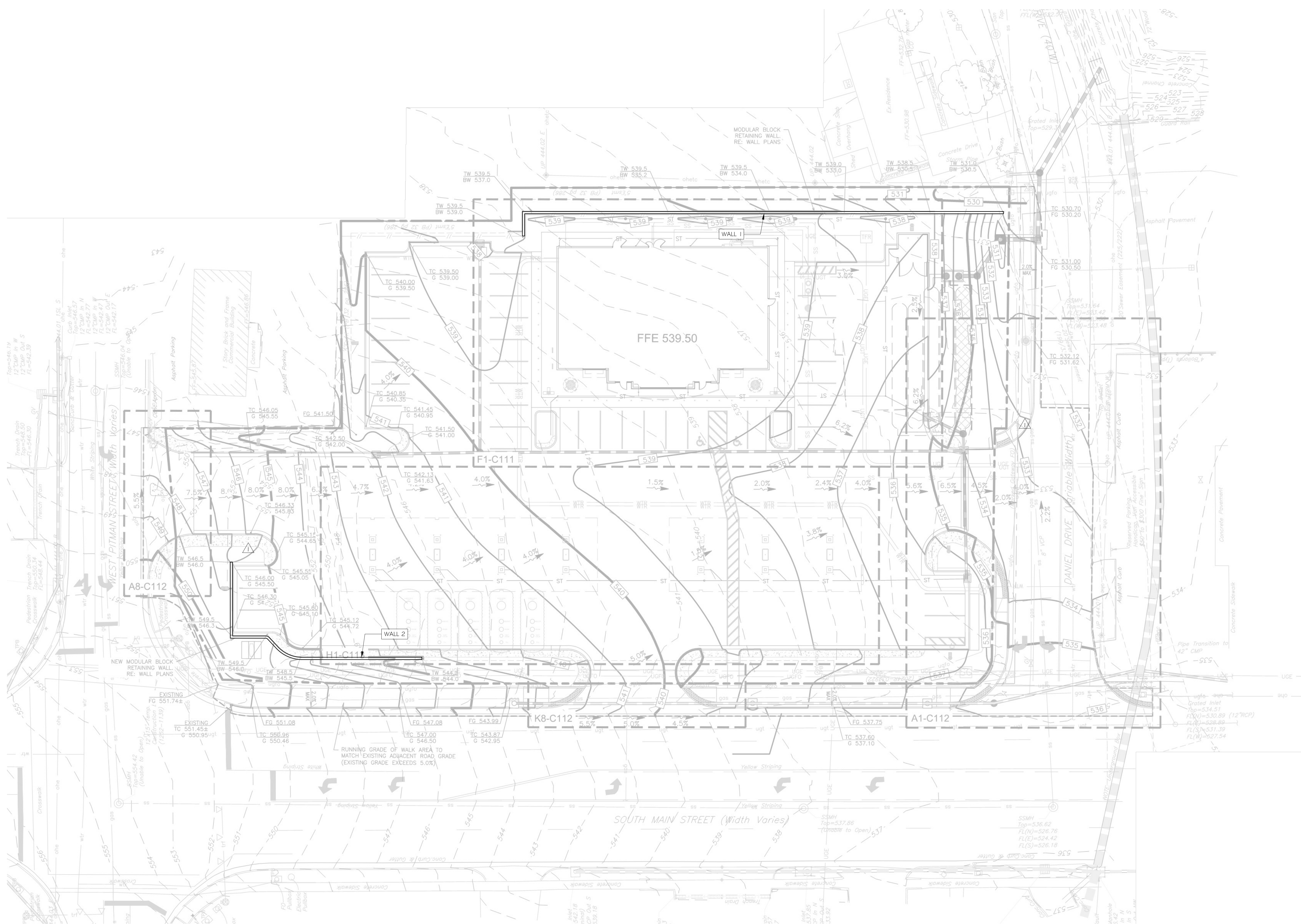
REV	DATE	DESCRIPTION

SHEET TITLE:
IRRIGATION DETAILS
SHEET 2

SHEET NUMBER:
L511

ORIGINAL ISSUE DATE:

QUIK TRIP 0683 RETAINING WALLS



STRUCTURAL DESIGN HEREIN REPRESENTS A FINISHED STRUCTURE. THE GENERAL CONTRACTOR/OWNER SHALL PROVIDE ALL INTERIM BRACING, SHORING, INTERIM DRAINAGE PROVISIONS, DRAINAGE DIVERSION AND EROSION PROTECTION REQUIRED UNTIL FINAL CAPPING, PAVING, CURBING AND COMPLETION OF FINAL STORM DRAIN SYSTEM IS COMPLETE.

THESE PLANS ARE FOR THE EXCLUSIVE USE OF ROSCH CONSTRUCTION. USE OF THESE PLANS BY ANY OTHER ENTITY TO CONSTRUCT THE SUBJECT STRUCTURES WILL RENDER THE ENGINEERING SEAL SHOWN NULL AND VOID.

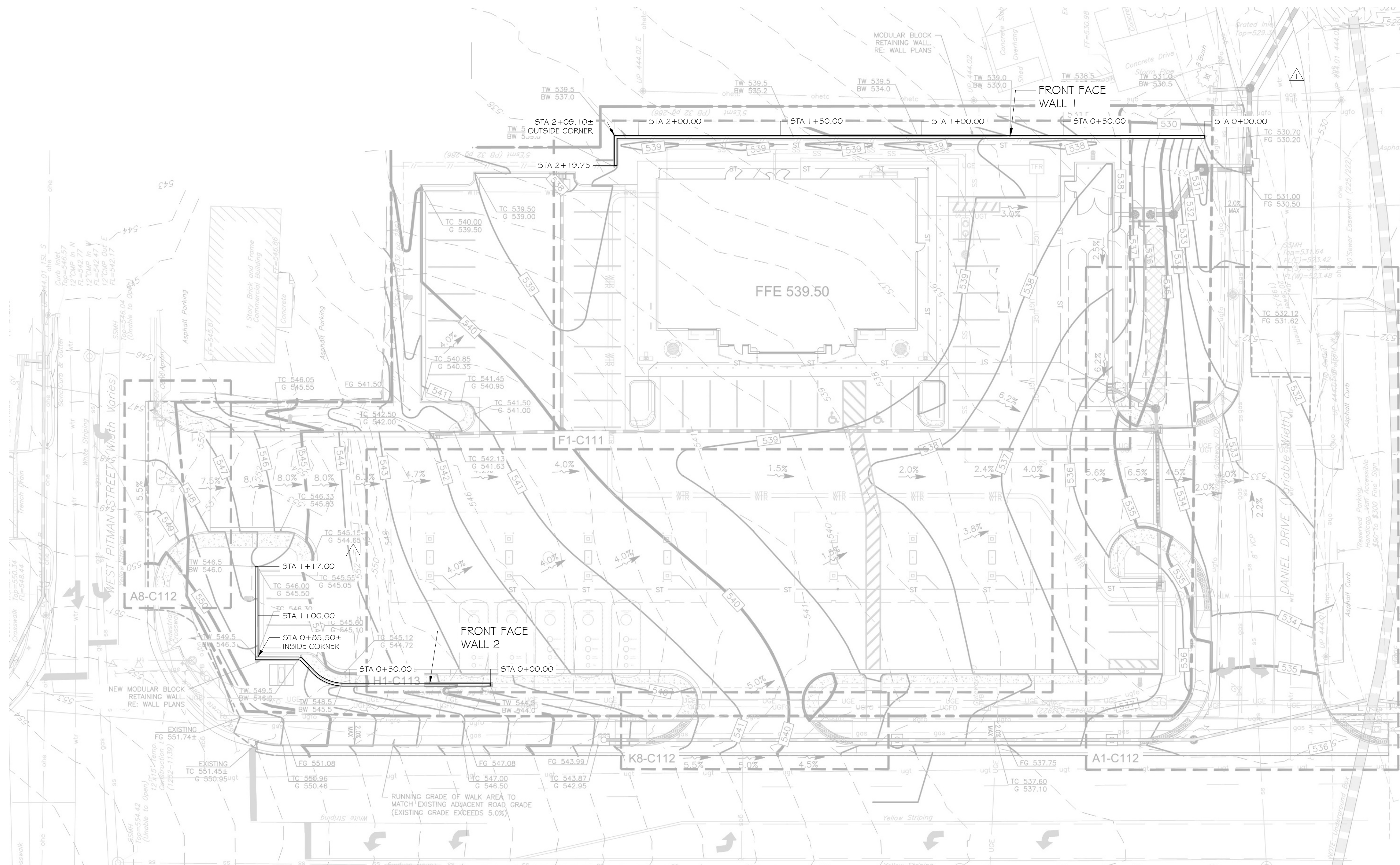
REV	DATE	DESCRIPTION
7-11-25	UPDATED GENERAL NOTES	
6-18-25	DESIGN REVISION	



ROSCH ENGINEERING
18390 WINGS CORPORATE DRIVE
CHESTERFIELD, MO 63005
PHONE: 636-519-7770
FAX: 636-532-7773

MO CERTIFICATE OF AUTHORITY #E-201-2039663

QUIK TRIP 0683 O'FALLON, MO RETAINING WALL COVER SHEET	
DESIGNED:	BCS
DRAWN:	JTM
DESIGN ENGINEER:	AMR
REVIEWED:	BCS
DATE:	4-23-25
JOB NO.:	25-2012
SHEET:	COVER



I PLAN VIEW OF WALLS I & 2
P1 SCALE: 1"=20'-0"

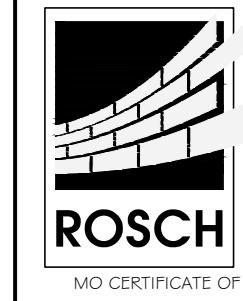
THE EDGE OF THE FENCE FOOTING
CLOSEST TO WALL 1 MUST BE AT
LEAST 36" AWAY FROM THE FACE OF
THE WALL CAP.

THIS WALL PLAN IS INTENDED FOR
GENERAL LOCATION PURPOSES ONLY.
ALL WALL LAYOUT, LOCATION AND
LENGTH INFORMATION MUST COME
FROM THE PROJECT CIVIL ENGINEER
AND THEIR PLANS OR CAD FILES.



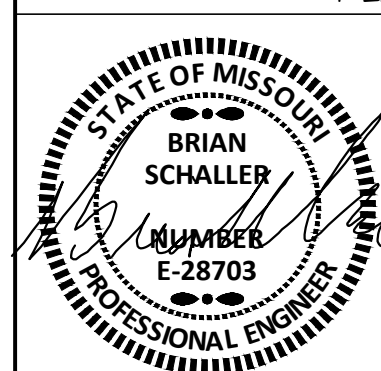
STRUCTURAL DESIGN HEREIN REPRESENTS A FINISHED STRUCTURE.
THE GENERAL CONTRACTOR/OWNER SHALL PROVIDE ALL INTERIM
BRACING, SHORING, INTERIM DRAINAGE PROVISIONS, DRAINAGE
DIVERSION AND EROSION PROTECTION REQUIRED UNTIL FINAL
CAPING, PAVING, CURBING AND COMPLETION OF FINAL STORM
DRAIN SYSTEM IS COMPLETE.

REV	DATE	DESCRIPTION
7-11-25		NO CHANGES THIS SHEET
6-18-25		DESIGN REVISION



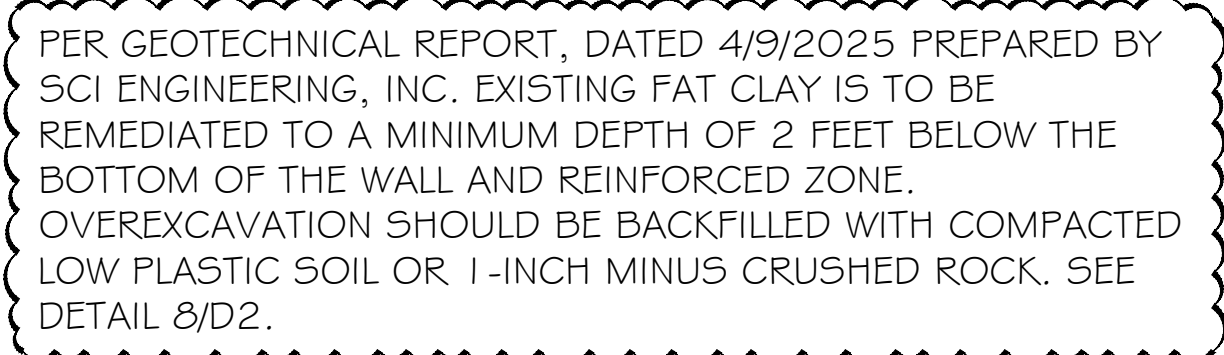
ROSCH ENGINEERING
18390 WINGS CORPORATE DRIVE
CHESTERFIELD, MO 63005
PHONE: 636-519-7770
FAX: 636-532-7773

QUICK TRIP 0683
O'FALLON, MO
RETAINING WALL
PLANS

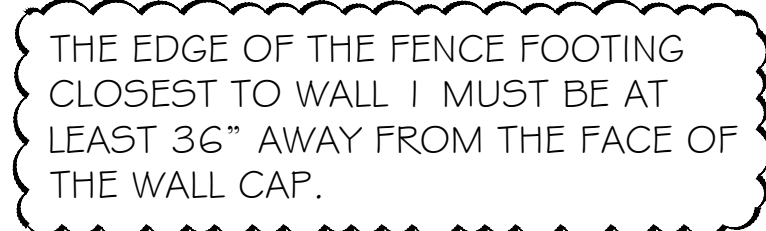


DESIGNED: BCS
DRAWN: JTM
DESIGN ENGINEER: AMR
REVIEWED: BCS
DATE: 4-23-25
JOB NO.: 25-2012
SHEET: P1

4-23-2025



P2 SCALE: 1"=20'-0" HORIZONTAL
SCALE: 1"=5'-0" VERTICAL



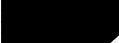
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SCALE: 1"=5'-0" VERTICAL

DESIGN TYPE 3		
WALL PROPERTIES		
BACKSLOPE	6:1 9.46	H:V DEGREES
TOESLOPE	- -	H:V DEGREES
BATTER	7.13	DEGREES
SETBACK	1.0	INCHES
SURCHARGE		
DEAD LOAD	0	PSF
LIVE LOAD	60	PSF

STORM PIPES, STORM STRUCTURES, LIGHT POLES BASES, ETC ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE BASED ON THE INFORMATION SHOWN ON THE PROJECT CIVIL PLANS REFERENCED IN GENERAL NOTE 1-4. REFER TO CURRENT PROJECT CIVIL PLANS FOR ALL SPECIFIC INFORMATION INCLUDING BUT NOT LIMITED TO SIZE AND LOCATION.

STRUCTURAL DESIGN HEREIN REPRESENTS A FINISHED STRUCTURE. THE GENERAL CONTRACTOR/OWNER SHALL PROVIDE ALL INTERIM BRACING, SHORING, INTERIM DRAINAGE PROVISIONS, DRAINAGE DIVERSION AND EROSION PROTECTION REQUIRED UNTIL FINAL CAPPING, PAVING, CURBING AND COMPLETION OF FINAL STORM DRAIN SYSTEM IS COMPLETE.

2	7-11-25	NO CHANGES THIS SHEET
1	6-18-25	DESIGN REVISION
REV	DATE	DESCRIPTION



ROSCH ENGINEERING
 18390 WINGS CORPORATE DRIVE
 CHESTERFIELD, MO 63005
 PHONE: 636-519-7770
 FAX: 636-532-7773

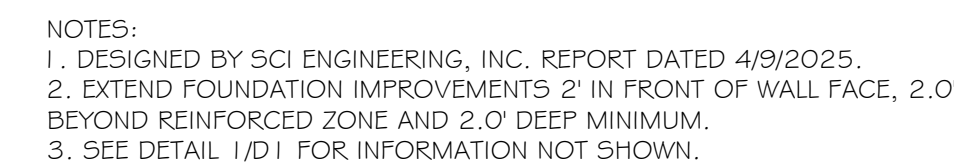
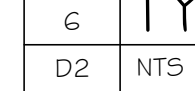
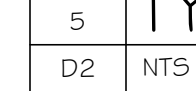
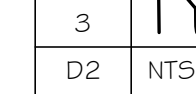
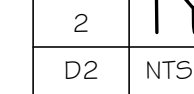
MO CERTIFICATE OF AUTHORITY #E-2012038663

QUICK TRIP 0683
O'FALLON, MO
RETAINING WALL
ELEVATIONS

A circular professional engineer seal for the State of Missouri. The outer ring contains the text "STATE OF MISSOURI" at the top and "PROFESSIONAL ENGINEER" at the bottom. Inside the ring, the name "BRIAN SCHALLER" is printed. Below the name is a signature in blue ink. Under the signature is the license number "E-28703" and the expiration date "4-23-2025".



I	I Y
D2	NTS



7	ITYF
D2	NTS

