

SITE LEGEND

- BOUNDARY LINE
- CONCRETE CURB AND GUTTER
- MOUNTABLE CURB W/RADIUS PROTECTOR
- PARKING SPACE INDICATOR
- AREA LIGHT (22" HIGH)
- MULTIPLE PRODUCT DISPENSER WITH CANDY COLUMNS AND BALLS

CITY OF O'FALLON
ENGINEERING DEPARTMENT
ACCEPTED FOR CONSTRUCTION
BY: Ryan Rockwell DATE: 11/13/2025
PROFESSIONAL ENGINEER'S SEAL
INDICATES RESPONSIBILITY FOR DESIGN

LOT 1
ST NICHOLAS COURT
SUBDIVISION
(PB 06 PG 21)

PROJECT NO. R2385.28

CDI
CIVIL DESIGN, INC.
5220 Oakwood Ave.
St. Louis, MO 63110
(314) 863-5370
Missouri State Certificate of
Authority #200200854

QuikTrip No. 0683
418 SOUTH MAIN STREET
O'FALLON, MISSOURI

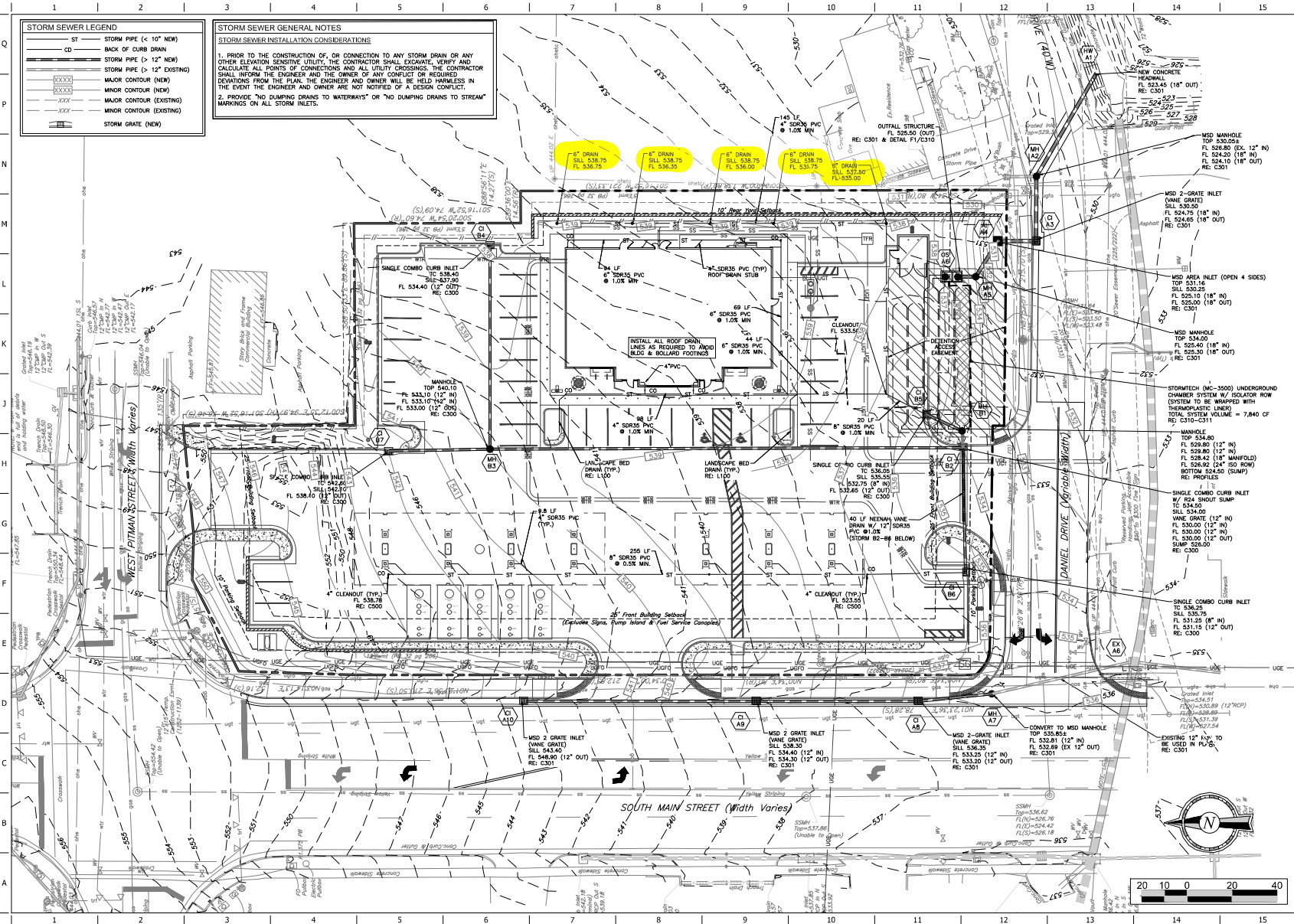
PHOTO TYPE: P-20 (11/24/2024)

REVISION	DATE	DESCRIPTION
1	11/13/2025	ISSUED FOR PERMIT
2	11/13/2025	ISSUED FOR CONSTRUCTION

DESIGNED BY: [Signature]
DRAWN BY: [Signature]
CHECKED BY: [Signature]
REVIEWED BY: [Signature]

SHEET TITLE:
SITE PLAN

SHEET NUMBER:
C100



STORM SEWER LEGEND

- ST - STORM PIPE (< 10" NEW)
- CD - BACK OF CURB DRAIN
- ST - STORM PIPE (> 12" NEW)
- ST - STORM PIPE (> 12" EXISTING)
- MAJOR CONTOUR (NEW)
- MAJOR CONTOUR (EXISTING)
- MINOR CONTOUR (NEW)
- MINOR CONTOUR (EXISTING)
- 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
NATHAN JACOB OWEN
Professional Engineer
No. 000000000
Missouri State Board of Professional Engineers and Surveyors
PROJECT NO. 0683-28

CDI
CIVIL DESIGN, INC.
5200 Oakwood Ave.
St. Louis, MO 63110
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QuikTrip No. 0683
418 SOUTH MAIN STREET
OFALLON, MISSOURI

QT
C. CORPORA QUOTER CONSULTATION 2004
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PROJECT NO.	P-2011104(2024)
DIVISION	DESIGN
VERSION	001
DESIGNED BY	
DRAWN BY	
REVIEWED BY	

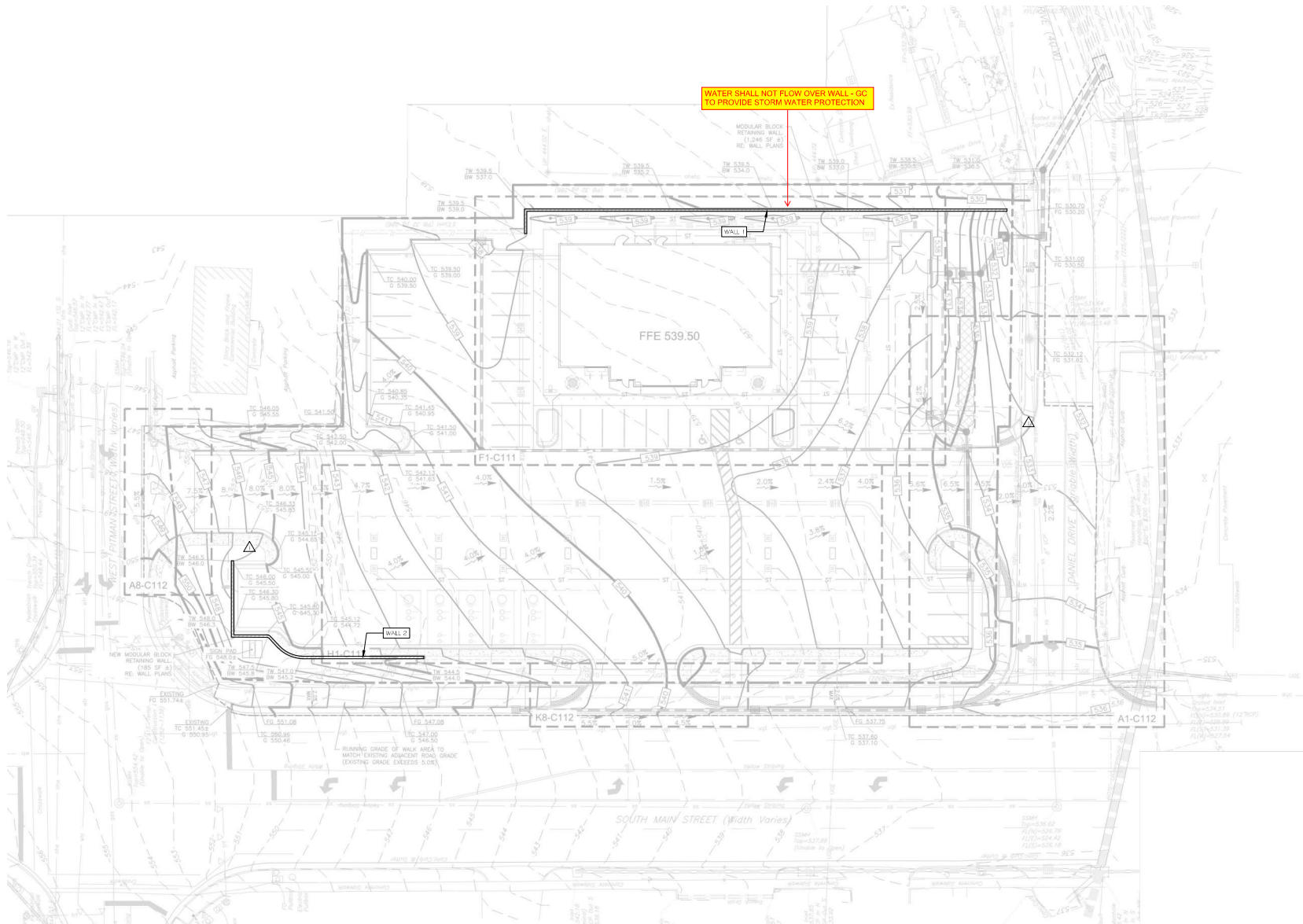
REV.	DATE	DESCRIPTION

SHEET TITLE:
STORM SEWER PLAN

SHEET NUMBER:
C120

ORIGINAL ISSUE DATE:

QUICK 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.

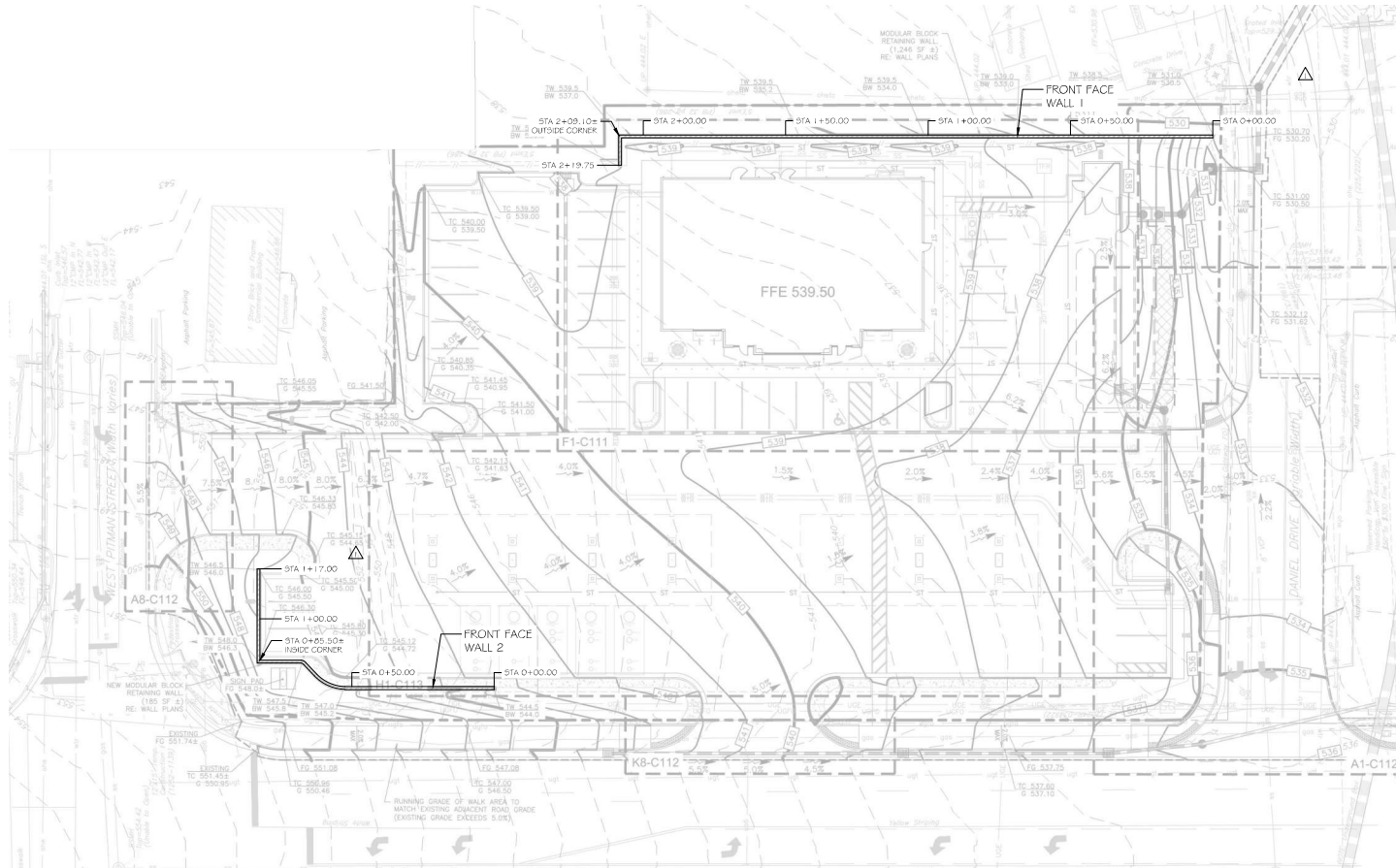
△	9-11-25	DESIGN REVISION
△	9-10-25	DESIGN REVISION - BLOCK TYPE CHANGE
△	7-11-25	UPDATED GENERAL NOTES
△	6-18-25	DESIGN REVISION
REV	DATE	DESCRIPTION



QUICK TRIP 0683
O'FALLON, MO
RETAINING WALL
COVER SHEET



DESIGNED:	BC
DRAWN:	JTH
DESIGN ENGINEER:	AM
REVIEWED:	BC
DATE:	4-23-2
JOB NO.:	25-201



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

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 C&G FILES.

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

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 CUTTING, PAVING, CURBING AND COMPLETION OF FINAL STORM DRAIN SYSTEM IS COMPLETE.

REV	DATE	DESCRIPTION
9-1-25		NO CHANGES THIS SHEET
9-1-25		NO CHANGES THIS SHEET
7-1-25		NO CHANGES THIS SHEET
6-18-25		DESIGN REVISION

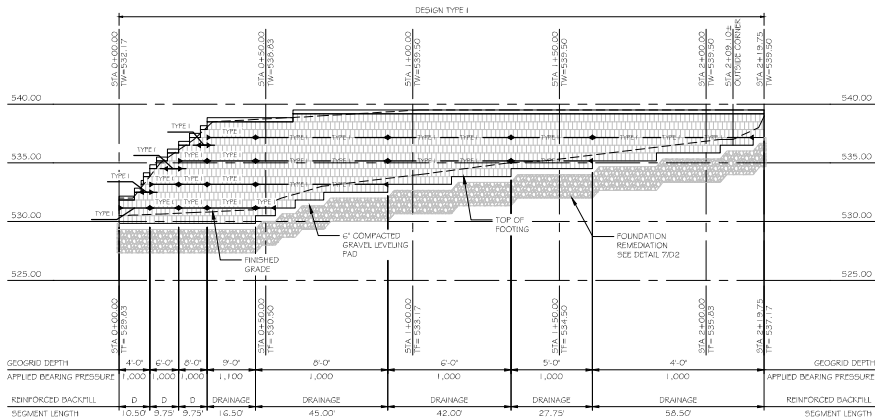
ROSCH ENGINEERING
 16390 WINNERS CORPORATE DRIVE
 CHESTERFIELD, MO 63005
 PHONE: 636-519-7770
 FAX: 636-532-7773

QUICK TRIP 0683
 O'FALLON, MO
 RETAINING WALL
 PLANS

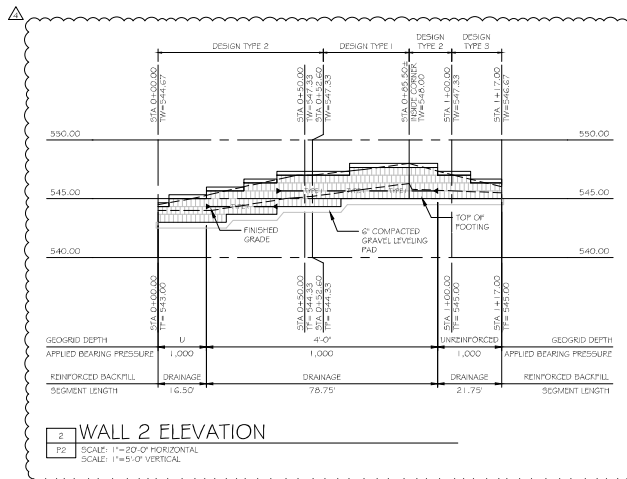
DESIGNED BY:	BCS
DRAWN BY:	JTM
DESIGN ENGINEER:	AMP
REVIEWED BY:	BCS
DATE:	4-23-25
JOB NO.:	25-2012
SHEET:	P 1



4-23-2025



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



2 WALL 2 ELEVATION
P2 SCALE: 1"=20'-0" HORIZONTAL
SCALE: 1"=5'-0" VERTICAL

BLOCK PROPERTIES	
BLOCK TYPE	ALLAN BLOCK
BLOCK STYLE	CLASSIC

ASSUMED DESIGN SOIL PARAMETERS			
	DESCRIPTION	φ (DEGREES)	c (PCF) / (PSF)
FOUNDATION SOIL	LEAN CLAY	22	120 / 100
RETAINED SOIL	LEAN CLAY	22	120 / N/A
REINFORCED BACKFILL	DRAINAGE*	36	105 / N/A

*SEE NOTES FOR ADDITIONAL INFORMATION

WALL ELEVATION NOTES

1. GEOGRID DEPTH IS MEASURED FROM THE FRONT FACE OF BLOCK
2. SEGMENT LENGTH IS THE DISTANCE BETWEEN GRID DEPTH TRANSITIONS
3. REINFORCED BACKFILL
 - 3.1. (DRAINAGE ROCK, SEE DETAIL 101)
 - 3.2. (UNREINFORCED, SEE DETAIL 201)
4. APPLIED BEARING PRESSURE IS 10 PSF

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

DESIGN TYPE 1	
WALL PROPERTIES	
BACKSLOPE	1:1.0 H/V DEGREES
TOESLOPE	1:1.0 H/V DEGREES
BATTER	6.06 DEGREES
SETBACK	0.65 INCHES
SURCHARGE	
DEAD LOAD	0 PSF
LIVE LOAD	100 PSF

DESIGN TYPE 3	
WALL PROPERTIES	
BACKSLOPE	6:1 H/V DEGREES
TOESLOPE	2:1 H/V DEGREES
BATTER	6.06 DEGREES
SETBACK	0.65 INCHES
SURCHARGE	
DEAD LOAD	0 PSF
LIVE LOAD	60 PSF

DESIGN TYPE 2	
WALL PROPERTIES	
BACKSLOPE	3:1 H/V DEGREES
TOESLOPE	1:0.4 H/V DEGREES
BATTER	6.06 DEGREES
SETBACK	0.65 INCHES
SURCHARGE	
DEAD LOAD	0 PSF
LIVE LOAD	25 PSF

STORM PIPES, STORM STRUCTURES, LIGHT POLLS 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 CUTTING, PAVING, CURBING AND COMPLETION OF FINAL STORM DRAIN SYSTEM IS COMPLETE.

REV	DATE	DESCRIPTION
1	9-11-25	DESIGN REVISION
2	9-11-25	DESIGN REVISION - BLOCK TYPE CHANGE
3	7-11-25	NO CHANGES THIS SHEET
4	6-18-25	DESIGN REVISION
<div> ROSCH ENGINEERING 16390 WINNS CORPORATE DRIVE CHESTERFIELD, MO 63005 PHONE: 636-519-7770 FAX: 636-532-7773 <small>NO COPYRIGHT OF AUTHORITY AS 2011 LICENSED</small> </div>		
QUICK TRIP 0683 O'FALLON, MO RETAINING WALL ELEVATIONS		
		DESIGNED: BCS DRAWN: JTM DESIGN ENGINEER: AMP REVIEWED: BCS DATE: 4-23-25 JOB NO.: 25-2012 SHEET: P2

PER GEOTECHNICAL REPORT, DATED 4/9/2025 PREPARED BY SGI ENGINEERING, INC., EXISTING FAT CLAY IS TO BE REMEDIATED TO A MINIMUM DEPTH OF 2 FEET BELOW THE BOTTOM OF THE WALL AND REINFORCED ZONE. OVEREXCAVATION SHOULD BE BACKFILLED WITH COMPACTED LOW PLASTIC SOIL OR 1-INCH MINUS CRUSHED ROCK. SEE DETAIL 8/D2.

GENERAL NOTES

- RETAINING WALL DESIGN:
1.1. STRUCTURAL DESIGN HEREIN REPRESENTS A FINISHED STRUCTURE. THE GENERAL CONTRACTOR/OWNER SHALL PROVIDE ALL INTERIOR BRACING, SHORING, INTERIOR DRAINAGE PROVISIONS, DRAINAGE DIVERSION AND EROSION PROTECTION REQUIRED UNTIL FINAL CAPTING, PAVING, CURBING AND COMPLETION OF FINAL STORM DRAIN SYSTEM.
1.1.1. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR/OWNER TO ENSURE THAT THE FINISHED SITE DRAINAGE IS DIRECTED AWAY FROM THE RETAINING WALL SYSTEM.
1.1.2. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR/OWNER TO ENSURE THAT THE SURFACE WATER RUNOFF FROM ADJACENT CONSTRUCTION AREAS IS NOT ALLOWED TO ENTER THE RETAINING WALL AREA OF THE CONSTRUCTION SITE.

- THE PROJECT GEOTECHNICAL ENGINEER SHALL REVIEW THESE DRAWINGS TO CONFIRM THE ASSUMPTIONS MEET THE INTENT OF THE GEOTECHNICAL REPORT. THE PROJECT GEOTECHNICAL ENGINEER SHALL REVIEW GLOBAL STABILITY OF THE RETAINING WALLS AND PROVIDE RECOMMENDATIONS AS NEEDED.

- THE DESIGN OF THE SEGMENTAL RETAINING WALLS IS IN ACCORDANCE WITH NCHRP DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS 3RD EDITION AND NCHRP SEGMENTAL RETAINING WALLS BEST PRACTICES GUIDE AND INCLUDES EXTERNAL STABILITY, SLIDING AND OVERTURNING OF THE REINFORCED MASS, AND INTERNAL STABILITY. PULL-OUT, CONNECTION STRENGTH AND TENSILE STRENGTH OF THE GEORGID AS WELL AS FACIAL STABILITY OF THE WALL UNITS. THE APPLIED BEARING PRESSURES ARE LISTED ON THE INDIVIDUAL WALL PROFILES.

- SCOPE OF DESIGN SERVICES ARE LIMITED TO THOSE DEFINED FOR "SRW RETAINING WALL ENGINEER" IN THE NCHRP BEST PRACTICES MANUAL (2017) AND NCHRP 15-03A. ALL OTHER ENGINEERING SERVICES ARE EXCLUDED.

- THE DESIGN OF THE SEGMENTAL RETAINING WALLS IS BASED ON THE FOLLOWING DOCUMENTS:

DRAWING SPS DATED 5/14/2024 PREPARED BY CIVIL DESIGN, INC.

DRAWING C-10 DATED 1/24/2024 PREPARED BY CIVIL DESIGN, INC.

DRAWING C-10 REVISIONS DATED 10/20/24 ON 9/10/2025 PREPARED BY CIVIL DESIGN, INC.

GEOTECHNICAL REPORT DATED 4/25/2025 PREPARED BY SOI ENGINEERING, INC.

SOI NO. 1025-03301-10

- THE DESIGN OF THE SEGMENTAL RETAINING WALLS IS BASED ON THE INDIVIDUAL SOIL PROPERTIES AS LISTED WITHIN THESE PLANS AS WELL AS THE FOLLOWING CRITERIA:

SEISMIC ACCELERATION = NA
GROUND WATER LOCATION = 2'N3 below top of level pad (WHERE H = HEIGHT OF WALL)
HYDROSTATIC LOADING = NONE
SURCHARGE LOADING = SEE WALL ELEVATIONS

- SETTLEMENT:
1.1. SEGMENTAL RETAINING WALLS ARE FLEXIBLE MASSES THAT CAN TOLERATE MINOR SETTLEMENT. SETTLEMENT SENSITIVE ROAD VARIATIONS FOUNDING OR ABOVE THE SEGMENTAL RETAINING WALL SHOULD BE REVIEWED AND, IF REQUIRED, A SETTLEMENT ANALYSIS SHOULD BE PERFORMED BY THE PROJECT GEOTECHNICAL ENGINEER. SETTLEMENT ANALYSIS IS OUTSIDE OF ROSCH ENGINEERING'S SCOPE OF WORK.

- MATERIAL PROPERTIES:

- 1.1. SEGMENTAL CONCRETE WALL UNITS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C1372 HAVING A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI AND A MAXIMUM MOISTURE ABSORPTION OF 0.6%. ALL UNITS SHALL BE CURED OR FREE OF CRACKS OR OTHER DEFECTS THAT WOULD INTERFERE WITH THE PROPER PLACING OF THE UNIT OR SIGNIFICANTLY IMPAIR THE STRENGTH OR PERFORMANCE OF THE CONSTRUCTION.

2. DRAINAGE ROCK SHALL BE A CLEAN CRUSHED STONE OR GRANULAR FILL SUCH AS 1" CLEAN MEETING THE FOLLOWING GRADATION AS DETERMINED IN ACCORDANCE WITH ASTM D 422:

sieve size	percent passing
1" NCH	100
3/4" NCH	75
NO. 4	0-50
NO. 10	0-50
NO. 200	0-5

3. COMPACTED ROCK SHALL BE FREE OF ORGANIC MATERIAL. THE ROCK SHALL BE A WELL GRADED GRAVEL OR LINDSTONE MEETING THE FOLLOWING GRADATION AS DETERMINED IN ACCORDANCE WITH ASTM D 422 AND A P-6:

sieve size	percent passing
1" NCH	100
3/4" NCH	100
NO. 4	0-50
NO. 10	0-50
NO. 200	0-15

4. LOW PERMEABLE SOIL SHALL CONSIST OF MATERIAL HAVING A MINIMUM PLASTICITY INDEX OF 10. NO MORE THAN 10% SHALL BE RETAINED ON A NO. 4 SIEVE AND NO LESS THAN 35% SHALL PASS A NO. 200 SIEVE. MATERIAL WITH A USC DESIGNATION OF M, CL, OR OL ARE ACCEPTABLE FOR USE AS LOW PERMEABLE SOIL.

5. THE GEORGID SHALL BE A HIGH DENSITY POLYETHYLENE EXPANDED SHEET OR POLYESTER WOVEN REEF MATERIAL, SPECIFICALLY FABRICATED FOR USE AS SOIL REINFORCEMENT. ACCEPTABLE GEORGID TYPES AND MANUFACTURER AS FOLLOWS:

TYPE II
SPB BY SYNTECH TECHNICAL FABRICS, INC.
XG1 GO BY STRATA SYSTEMS, INC.
MINIROAD 30T AS MANUFACTURED BY TENCATE GEOSYNTHETICS
HYPOD AS MANUFACTURED BY GEOSTAR TECHNOLOGIES, LLC.

6. GEOTEXTILE FILTER FABRIC SHALL BE A NONWOVEN GEOTEXTILE COMPOSED OF POLYPROPYLENE FIBERS WITH A MINIMUM FLOW RATE OF 140 GPM/FT WHEN TESTED ACCORDING TO ASTM D 4491.

7. DRAINAGE PIPE SHALL BE A 4" DR PERFORATED DR OR SLOTTED PVC OR CORRUGATED HDPE.

8. DRAINAGE PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM F 405 OR ASTM F 756.

9. CONSTRUCTION ADHESIVE SHALL BE EXTERIOR GRADE ADHESIVE AS RECOMMENDED BY THE SEGMENTAL CONCRETE WALL UNIT MANUFACTURER.

10. EXCAVATION:

- 1.1. THE CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES SHOWN ON THE PLANS. THE GENERAL CONTRACTOR SHALL TAKE PRECAUTIONS TO MINIMIZE OVER-EXCAVATION.

2. EXCAVATION SUPPORT, INCLUDING THE STABILITY OF THE EXCAVATION AND ITS INFLUENCE ON ADJACENT PROPERTY IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

3. FOUNDATION SOIL PREPARATION:

- 1.1. FOLLOWING EXCAVATION FOR THE LEVELING PAD AND THE REINFORCED SOIL ZONE, FOUNDATION SOIL SHALL BE EXAMINED BY THE OWNER'S GEOTECHNICAL ENGINEER TO ASSURE THE ACTUAL FOUNDATION SOIL STRENGTH MEETS OR EXCEEDS THE REQUIRED BEARING STRENGTH. SOIL NOT MEETING THE REQUIRED STRENGTH SHALL BE REMOVED AND REPLACED WITH SOIL MEETING THE DESIGN CRITERIA, AS DIRECTED BY THE OWNER'S GEOTECHNICAL ENGINEER.

2. IF HIGH PLASTIC SOILS ARE ENCOUNTERED IN THE FOUNDATION ZONE OF ANY RETAINING WALL, IT SHALL BE REMEDIATED SIMILAR TO ANY BUILDING FOUNDATION, AS DIRECTED BY THE PROJECT GEOTECHNICAL ENGINEER.

3. FOUNDATION SOIL IS DEFINED AS THE SOIL UNDER THE SEGMENTAL RETAINING WALL VOLUME, EXTENDING FROM THE TOE OF THE LEVELING PAD TO THE BACK OF THE REINFORCED MASS.

6. BASE LEVELING PAD INSTALLATION:

- 1.1. LEVELING PAD SHALL BE PLACED AS SHOWN ON THE DRAWINGS AND CONSIST OF EITHER:
LEAN CONCRETE (2,000 PSI) - 6" MINIMUM THICK
WELL GRADED 1" GRAVEL OR DRAINAGE ROCK WITH FINES - 6" MINIMUM THICK

2. SAND OR GRAVEL BASE SHALL BE COMPACTED WITH 3 PASSES OF A VIBRATORY COMPACTOR TO PROVIDE A FIRM, LEVEL BEARING PAD.

3. LEAN CONCRETE SHALL CURE A MINIMUM OF 12 HOURS PRIOR TO UNIT PLACEMENT.

4. LEVELING PAD SHALL BE CONSTRUCTED TO INSURE FULL BEARING OF RETAINING WALL UNITS.

7. UNIT INSTALLATION:

- 7.1. THE FIRST COURSE OF SEGMENTAL CONCRETE WALL UNITS SHALL BE PLACED ON THE LEVELING PAD AND CHECKED FOR LEVEL, ALIGNMENT, AND FULL CONTACT WITH BASE.

- 7.2. UNITS SHALL BE PLACED SIDE BY SIDE FOR FULL LENGTH OF WALL. ALIGNMENT SHALL BE DONE BY MEANS OF A STRING LINE OR OPTIC MEASUREMENT FROM BASE LINE.

- 7.3. PLACE DRAINAGE AGGREGATE WITHIN THE BLOCK CORERS DIRECTLY BETWEE AND BETWEEN THE UNITS AS SHOWN IN DETAILS. WHERE THE REINFORCED BACKFILL IS COMPACTED ROCK, PLACE REINFORCED BACKFILL DIRECTLY AGAINST DRAINAGE FILL. CONSOLIDATE DRAINAGE AGGREGATE WITH 2 PASSES OF A VIBRATORY COMPACTOR. COMPACTION TESTING OF DRAINAGE AGGREGATE IS NOT REQUIRED. EXCESS MATERIAL SHALL BE REMOVED FROM TOP OF UNITS PRIOR TO INSTALLATION OF NEXT COURSE.

- 7.4. LAY UP EACH COURSE INSURING POSITIVE CONTACT BETWEEN PREVIOUS COURSE IS ACHIEVED.

8. GEORGID INSTALLATION:

- 8.1. GEORGID SHALL BE LAID AT THE PROPER ELEVATION AND ORIENTATION AS SHOWN ON THE DRAWINGS.

- 8.2. THE GEORGID REINFORCEMENT SHALL BE Laid HORIZONTALLY ON LEVEL, COMPACTED BACKFILL, AND EMBEDDED IN THE BLOCK.

- 8.3. PLACE GEORGID ON CONCRETE WALL UNITS, PLACE THE NEXT COURSE OF UNITS, PLACE THE DRAINAGE FILL, FULL GEORGID TIGHT PRIOR TO BACKFILLING.

- 8.4. CORRECT ORIENTATION OF THE GEORGID SHALL BE VERIFIED.

- 8.5. 3" OF REINFORCED BACKFILL SHALL BE PLACED BETWEEN ALL LOCATIONS OF OVERLAPPING GEORGID.

9. BACKFILL PLACEMENT:

- 9.1. COMPACTED ROCK SHALL BE PLACED IN 8" MAXIMUM LIFTS AND COMPACTED TO A MINIMUM 95% OF STANDARD PROCTOR DENSITY PER ASTM 698 UNLESS NOTED OTHERWISE ON THE INDIVIDUAL WALL PROFILE.

- 9.2. DRAINAGE ROCK SHALL BE PLACED IN 24" MAXIMUM LIFTS AND COMPACTED WITH A MINIMUM OF 2 PASSES OF A VIBRATORY COMPACTOR. FIELD DENSITY TESTING WILL NOT BE REQUIRED FOR DRAINAGE ROCK.

- 9.3. ONLY LIGHTWEIGHT HAND-OPERATED COMPACTION EQUIPMENT SHALL BE USED WITHIN 3' OF THE BACK FACE OF BLOCK.

- 9.4. REINFORCED BACKFILL SHALL BE PLACED, SPREAD, AND COMPACTED IN SUCH A MANNER THAT ELIMINATES THE DEVELOPMENT OF WRINKLES AND/OR MOVEMENT OF THE GEORGID.

- 9.5. REINFORCED BACKFILL SHALL BE PLACED AND COMPACTED FROM THE BACK OF THE WALL REARWARD INTO THE EMBANKMENT TO INSURE THAT THE GEORGID REMAINS TIGHT.

- 9.6. TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY ON THE GEORGID. A MINIMUM BACKFILL THICKNESS OF 6" SHALL BE MAINTAINED TO OPERATE TRACKED VEHICLES OVER THE GEORGID. TURNING OF TRACKED CONSTRUCTION EQUIPMENT SHALL BE KEPT TO A MINIMUM TO PREVENT TRACKS FROM DISPLACING THE FILL AND DAMAGING THE GEORGID.

- 9.7. AT THE END OF EACH DAY'S OPERATION, SLOPE THE LAST LEVEL OF COMPACTED BACKFILL AWAY FROM THE INTERIOR (CONCEALED) FACE OF THE WALL TO DIRECT SURFACE WATER RUNOFF FROM THE WALL FACE.

- 9.7.1. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO ENSURE THE FINISHED SITE DRAINAGE IS DIRECTED AWAY FROM THE RETAINING WALL SYSTEM.

- 9.7.2. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO ENSURE THE SURFACE WATER RUNOFF FROM ADJACENT CONSTRUCTION AREAS IS NOT ALLOWED TO ENTER THE RETAINING WALL AREA OF THE CONSTRUCTION SITE.

10. DRAIN PIPE INSTALLATION:

- 10.1. DRAINAGE COLLECTION PIPES SHALL BE INSTALLED TO MAINTAIN GRAVITY FLOW OF WATER OUTSIDE OF THE REINFORCED SOIL ZONE. THE DRAINAGE COLLECTION PIPE SHOULD CONNECT INTO A STORM SEWER MAINLINE OR DAYLIGHT THROUGH THE FACE OF THE WALL.

11. CAP INSTALLATION:

- 11.1. CAP UNITS SHALL BE ADHERED TO THE TOP UNITS USING MANUFACTURER SUPPLIED ADHESIVE BY PLACING TWO (2) 1/4" BEADS OF ADHESIVE ON EACH UNIT ALONG THE ENTIRE LENGTH OF THE WALL. PRESS THE CAP UNITS FIRMLY INTO THE ADHESIVE AND ALLOW TO CURE.

12. FIELD QUALITY CONTROL:

- 12.1. THE OWNER OR OWNER'S REPRESENTATIVE IS RESPONSIBLE FOR ENGAGING THE SERVICES OF AN INDEPENDENT THIRD PARTY INSPECTOR TO OBSERVE AND VERIFY ALL SOIL PROPERTIES AS WELL AS VERIFY CORRECT INSTALLATION OF ALL SYSTEM COMPONENTS TO MEET THE REQUIREMENTS OF THESE GENERAL NOTES AND DRAWINGS.

- 12.2. TESTING METHODS, FREQUENCY AND VERIFICATION OF MATERIAL SPECIFICATIONS SHALL BE THE RESPONSIBILITY OF THE INDEPENDENT THIRD PARTY INSPECTOR. AT A MINIMUM, COMPACTION TESTING SHALL INCLUDE ONE COMPACTION TEST FOR EACH LIFT BUT NOT LESS THAN ONE TEST FOR EVERY 50 SQ YARDS OF COMPACTED FILL AT A SPACING NOT TO EXCEED 100.

13. ABBREVIATIONS:

- FGI FINISHED GRADE EXTERIOR

- FL FINISHED GRADE INTERIOR

- FL MAXIMUM FLOW LINE

- MC MAXIMUM MINOR CENTER PROPERTY LINE

- STA STATION

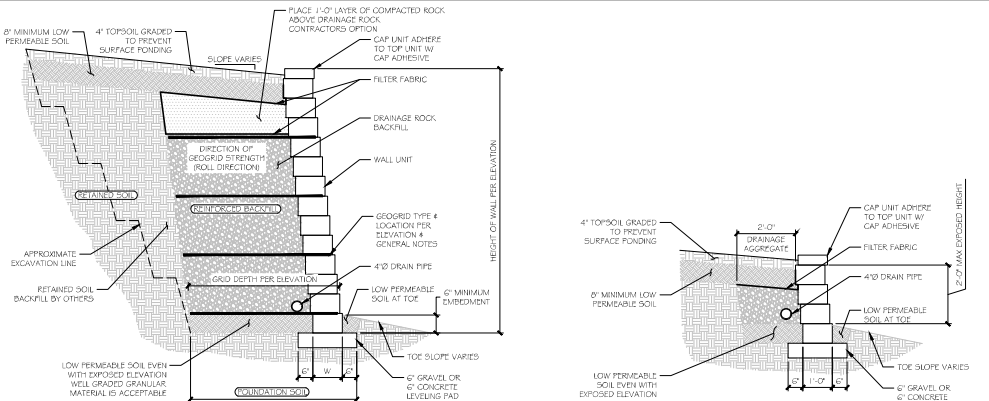
- TF TOP OF FOOTING ELEVATION

- TW TOP OF WALL ELEVATION

- TY TYPICAL

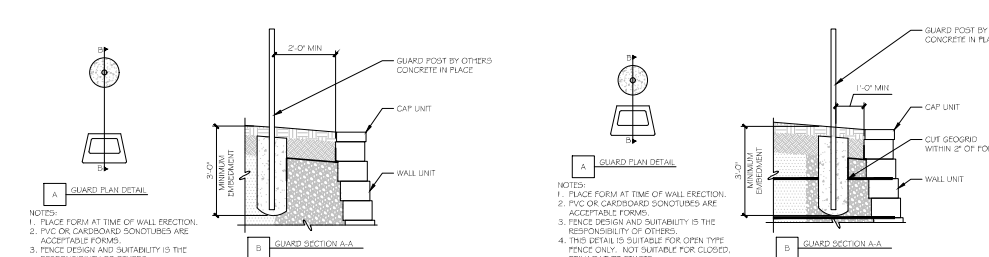
- UNO UNLESS NOTED OTHERWISE

ROSCH ENGINEERING HAS PERFORMED DESIGN CALCULATIONS BASED ON THE DESIGN CRITERIA, ASSUMED SOIL PARAMETERS, AND KNOWN LOADING CONDITIONS AS LISTED IN THESE DRAWINGS. THE OWNER'S REPRESENTATIVE, INDEPENDENT THIRD PARTY SPECIAL INSPECTOR AND INSTALLER SHALL NOTIFY ROSCH ENGINEERING OF ANY CHANGES OR DIFFERENCES IN ACTUAL SITE CONDITIONS WHICH VARY FROM THOSE LISTED, PRIOR TO CONSTRUCTING THE WALL.



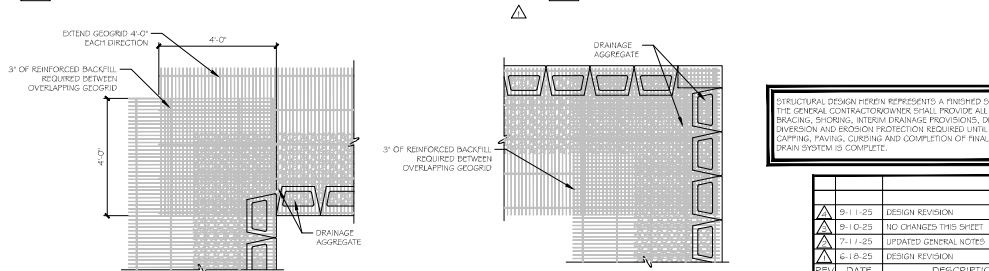
TYPICAL SECTION - DRAINAGE ROCK
D1 NTS

TYPICAL SECTION - UNREINFORCED WALL
D1 NTS



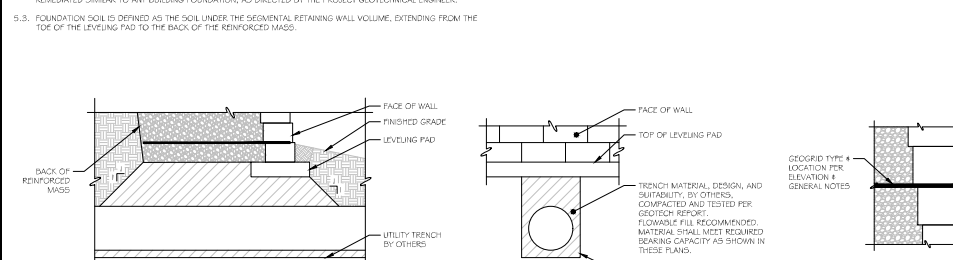
TYPICAL POST AT UNREINFORCED WALL
D1 NTS

TYPICAL POST AT REINFORCED WALL
D1 NTS



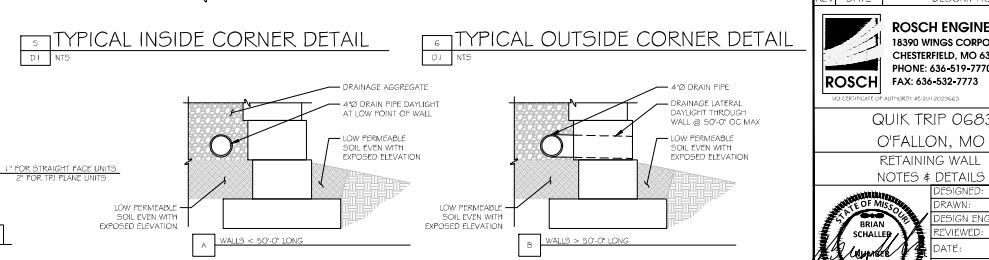
TYPICAL INSIDE CORNER DETAIL
D1 NTS

TYPICAL OUTSIDE CORNER DETAIL
D1 NTS



UTILITY TRENCH CROSSING DETAIL
D1 NTS

GEORGID PLACEMENT
D1 NOT TO SCALE



DRAIN PIPE INSTALLATION
D1 NOT TO SCALE

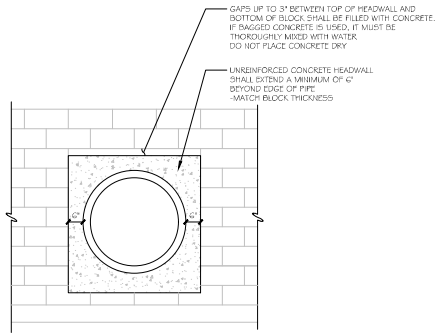
STRUCTURAL DESIGN HEREIN REPRESENTS A FINISHED STRUCTURE. THE GENERAL CONTRACTOR/OWNER SHALL PROVIDE ALL INTERIOR BRACING, SHORING, INTERIOR DRAINAGE PROVISIONS, DRAINAGE DIVERSION AND EROSION PROTECTION REQUIRED UNTIL FINAL CAPTING, PAVING, CURBING AND COMPLETION OF FINAL STORM DRAIN SYSTEM IS COMPLETE.

REV	DATE	DESCRIPTION
1	9-11-25	DESIGN REVISION
2	9-10-25	NO CHANGES THIS SHEET
3	7-11-25	UPDATED GENERAL NOTES
4	6-18-25	DESIGN REVISION

ROSCH ENGINEERING
16390 WINNERS CORPORATE DRIVE
CHESTERFIELD, MO 63005
PHONE: 636-519-7770
FAX: 636-532-7773

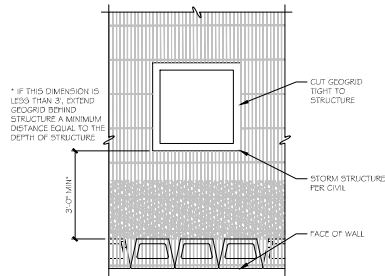
QUICK TRIP 0683	DESIGNED: BCS
O'FALLON, MO	DRAWN: JTM
RETAINING WALL	DESIGN ENGINEER: AMP
NOTES & DETAILS	REVIEWED: BCS
	DATE: 4-23-25
	JOB NO.: 25-2012
	SHEET: D1

4-23-2025

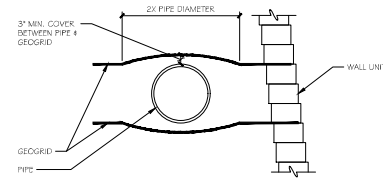


HEADWALL SHALL BE CONSTRUCTED WITH 3,000 PSI CONCRETE

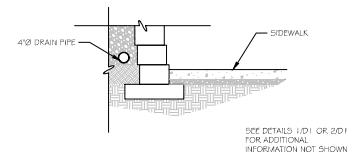
1
D2 NTS
TYPICAL CONCRETE HEADWALL



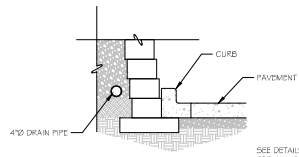
2
D2 NTS
TYPICAL SECTION - AT STRUCTURE



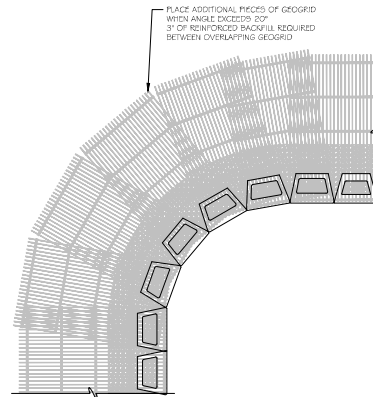
3
D2 NTS
TYPICAL SECTION - AT PIPE



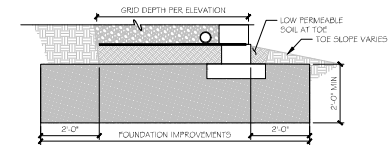
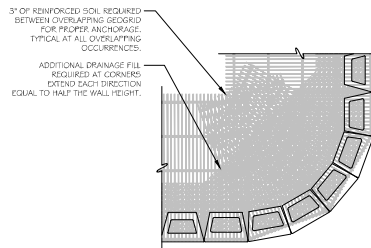
4
D2 NTS
TYPICAL SIDEWALK AT TOE OF WALL



5
D2 NTS
TYPICAL CURB AT TOE OF WALL

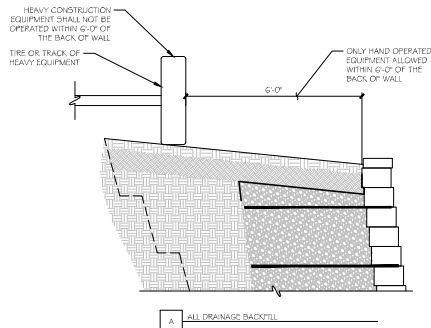


6
D2 NTS
TYPICAL CONCAVE CORNER DETAIL



NOTES:
1. DESIGNED BY SCI ENGINEERING, INC. REPORT DATED 4/9/2025.
2. EXTEND FOUNDATION IMPROVEMENTS 2' IN FRONT OF WALL FACE, 2'0" BEYOND REINFORCED ZONE AND 2'0" DEEP MINIMUM.
3. SEE DETAIL 1/D1 FOR INFORMATION NOT SHOWN.

7
D2 NTS
TYPICAL FOUNDATION IMPROVEMENTS



8
D1 NTS
HEAVY EQUIPMENT AT TOP OF WALL

SEE DETAIL 1/D1 FOR ADDITIONAL INFORMATION NOT SHOWN

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REV	DATE	DESCRIPTION
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<p>ROSCH ENGINEERING 16390 WINNS CORPORATE DRIVE CHESTERFIELD, MO 63005 PHONE: 636-519-7770 FAX: 636-532-7773</p>	<p>QUICK TRIP 0683 O'FALLON, MO RETAINING WALL DETAILS</p>
	<p>DESIGNED: BCS DRAWN: JTM DESIGN ENGINEER: AMP REVIEWED: BCS DATE: 4-23-25 JOB NO.: 25-2012 SHEET: D2</p>