CLEMSON PARK

CLEMSON, SOUTH CAROLINA

100% CONSTRUCTION DRAWING SET 11.1.24

DRAWING LIST

SITE SURVEY

S-0.0 EXISTING CONDITIONS SITE SURVEY PLAN

LANDSCAPE

L-1.0 SITE DEMOLITION & PREPARATION PLAN

CIVIL DRAWINGS

C1.0 SITE NOTES
C2.0 EROSION CONTROL PLAN
C3.0 DRAINAGE PLAN
C4.0 UTILITY PLAN
C5.0 SITE DETAILS
C5.1 SITE DETAILS
C5.2 SITE DETAILS

GENERAL SHEETS

G002 PROJECT DATA AND DRAWING INDEX
G003 GENERAL NOTES & ABBREVIATIONS
G110 LIFE SAFETY LEGEND & PLANS

SKATE PARK DRAWINGS

SK-6.0 ROUGH GRADING + DRAINAGE PLAN

RUSSELL
DESIGN OFFICE

BRITT, PETERS AND ASSOCIATES INC.
consulting engineers

CLEMSON PARK

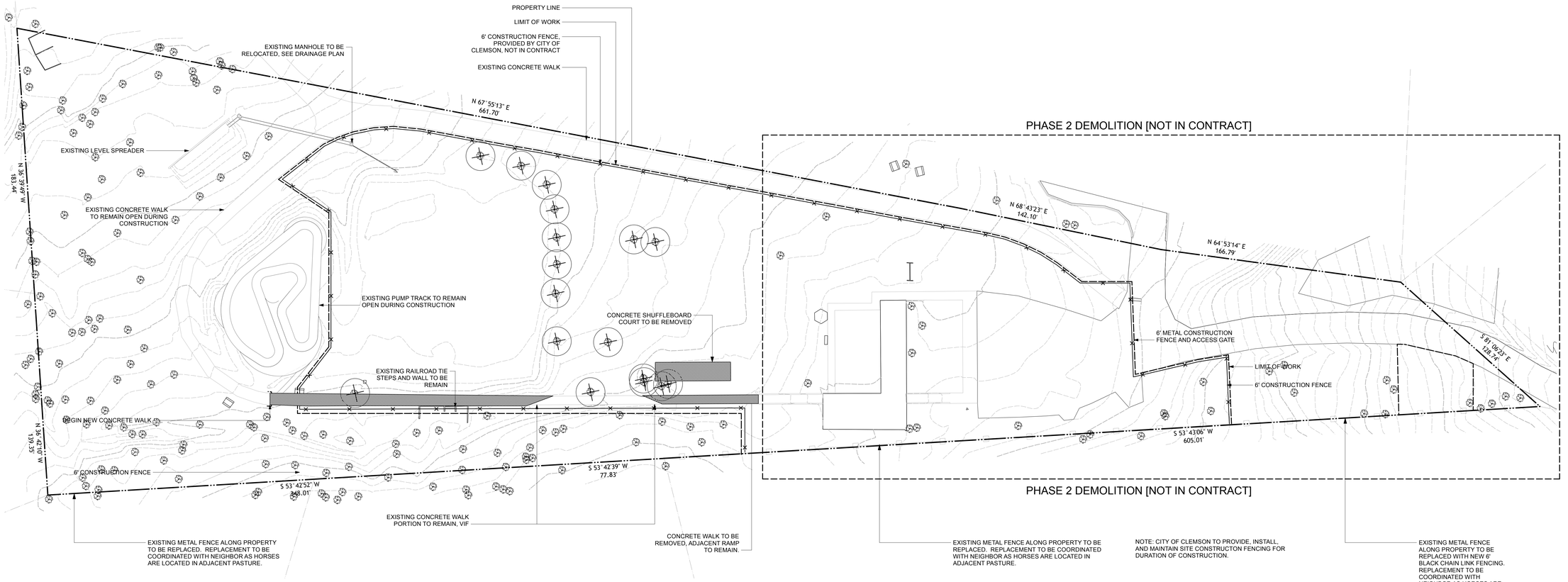
CLEMSON, SC

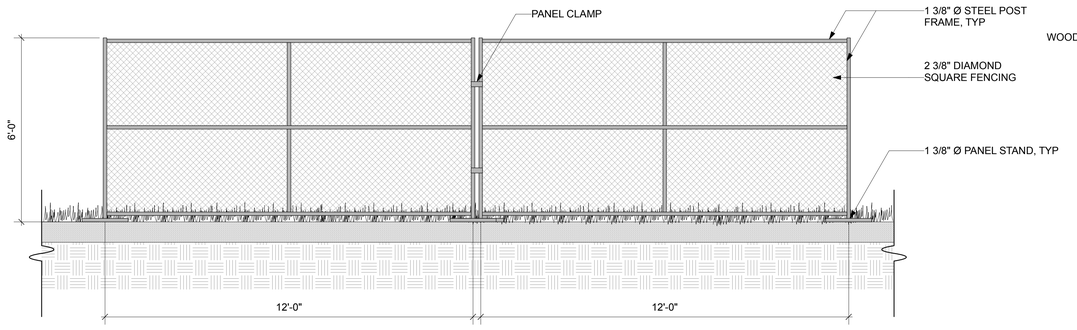
GENERAL NOTES

1. Existing conditions and topography data are from a survey prepared by Ridgewater Engineering & Surveying. PO Box 806 Anderson, SC 29622. (864) 226-0980
2. Contractor shall verify location of any existing utilities and services and provide protection during construction. Utilities damaged during construction shall be repaired at contractors expense.
3. Contractor shall obtain permits for the work as required and comply with all laws, ordinances, rules and regulations of the local jurisdiction, the state, and all other authorities having jurisdiction.
4. Contractor shall leave site clean and orderly during construction process. Remove from site all excess materials, soil, debris and equipment. Store materials only in an approved location.

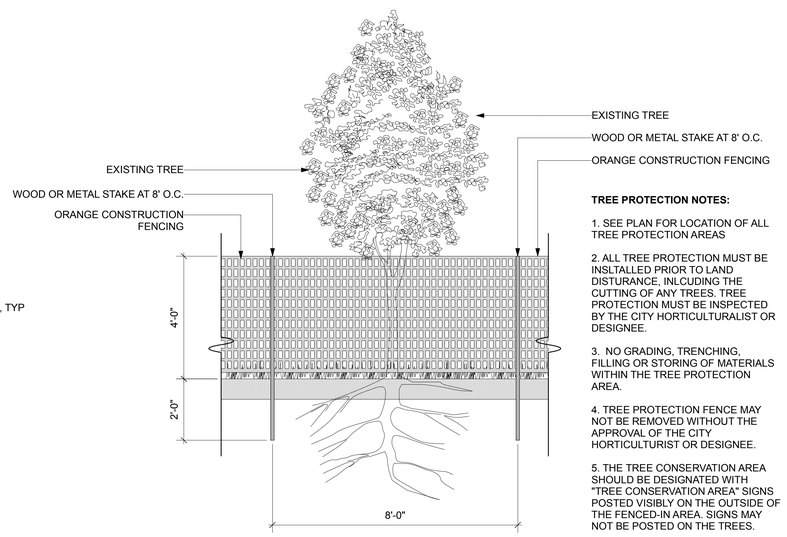
SITE DEMOLITION NOTES

1. Contractor shall verify all existing conditions in the field and report any discrepancies between plans and actual conditions to Landscape Designer before beginning work.
2. Tree and shrub removal shall include the felling, cutting, grubbing out of roots and satisfactory off-site disposal of all stumps vegetative and extraneous debris produced through the removal operations.
3. Existing trees and shrubs to remain shall not be altered under any circumstances and must remain in the same condition as observed prior to construction.
4. Existing trees, shrubs, and perennials/groundcover to be relocated shall be balled and burlapped, heeled-in and maintained (including watering, pruning, fertilization, etc.) by contractor on-site until new planting area is prepared.
5. No heavy machinery is to be used within the root system of existing trees. Excavation within root system zones is to be performed by hand.
6. Any items scheduled to remain which are damaged by Contractor's operations shall be at Contractor's expense.
7. Any plants scheduled to be relocated and stockpiled on site which are damaged by Contractor's operations shall be replaced Contractor's expense.
8. Area for stockpiled items shall be located by Landscape Designer and approved by owner prior to removal operations.
9. Contractor shall leave work site free of any debris at the end of each day's operations.





1 Construction Fence [Provided by City of Clemson]
Scale: 1/2" = 1'-0"



TREE PROTECTION NOTES:

1. SEE PLAN FOR LOCATION OF ALL TREE PROTECTION AREAS
2. ALL TREE PROTECTION MUST BE INSLTALLED PRIOR TO LAND DISTURANCE. INLCUDING THE CUTTING OF ANY TREES. TREE PROTECTION MUST BE INSPECTED BY THE CITY HORTICULTURALIST OR DESIGNEE.
3. NO GRADING, TRENCHING, FILLING OR STORING OF MATERIALS WITHIN THE TREE PROTECTION AREA.
4. TREE PROTECTION FENCE MAY NOT BE REMOVED WITHOUT THE APPROVAL OF THE CITY HORTICULTURIST OR DESIGNEE.
5. THE TREE CONSERVATION AREA SHOULD BE DESIGNATED WITH "TREE CONSERVATION AREA" SIGNS POSTED VISIBLY ON THE OUTSIDE OF THE FENCED-IN AREA. SIGNS MAY NOT BE POSTED ON THE TREES.

2 Tree Protection Fence
Scale: 1/2" = 1'-0"

LEGEND

- PROPERTY LINE
- LIMIT OF WORK
- 6' CONSTRUCTION FENCE
- STRUCTURE TO BE REMOVED
- 4' TREE PROTECTION FENCE
- EXISTING TREE TO REMOVE

0 30 60

RDO
RUSSELL DESIGN OFFICE
Clemson
864.643.7794

Revisions		
Number	Date	Description
1	6.16.24	50% Progress Set
2	10.01.24	90% CD
3	11.01.24	100% CD

Scale 1"=30'-0" Date 8/16/24

Title

Site Preparation Plan

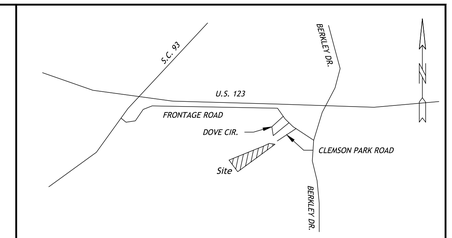
Sheet No

L-1.0

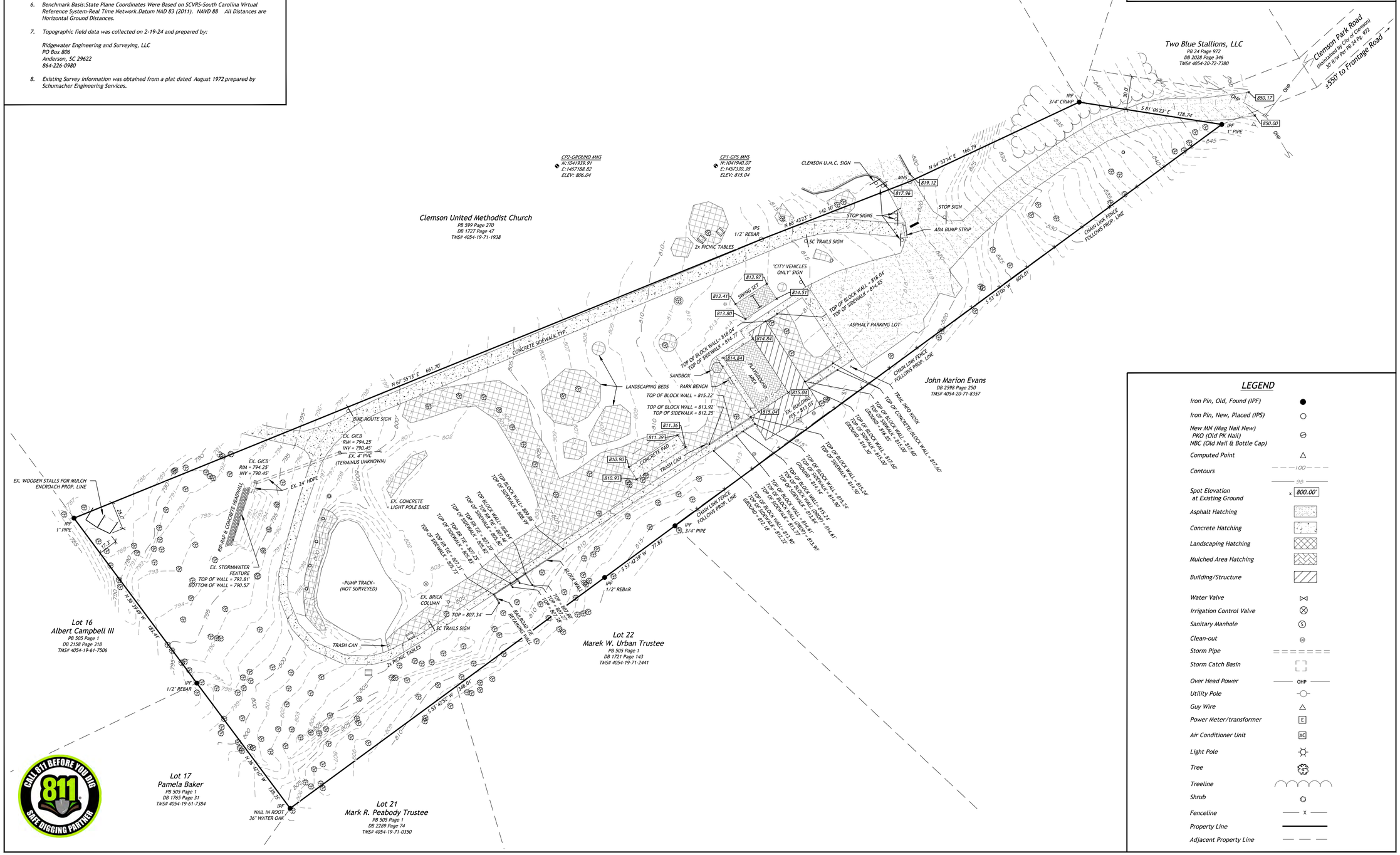
Site Notes:

1. *TMS# 4054-19-71-0690*
   DB 125 Page 630
2. *Total Area of Site = 4.50 Acres*
3. *Zoning : R-20*
   Setbacks:
   Front: 20'
   Sides: 7'
   Rear: 10'
4. *The site is not located within a Special Flood Hazard Zone according to NFIP, FIRM Map-Community Panel Number 45077C0391E , Effective date : 12/21/2017 .*
5. *The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantee that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.*
6. *Benchmark Basis:State Plane Coordinates Were Based on SCVRS-South Carolina Virtual Reference System-Real Time Network.Datum NAD 83 (2011). NAVD 88 All Distances are Horizontal Ground Distances.*
7. *Topographic field data was collected on 2-19-24 and prepared by:*

   Ridgewater Engineering and Surveying, LLC
   PO Box 806
   Anderson, SC 29622
   864-226-0980
8. *Existing Survey information was obtained from a plat dated August 1972 prepared by Schumacher Engineering Services.*



Location Map - No Scale



LEGEND

- *Iron Pin, Old, Found (IPF)*
- *Iron Pin, New, Placed (IPS)*
- *New MN (Mag Nail New)*
  PKO (Old PK Nail)
  NBC (Old Nail & Bottle Cap)
- *Computed Point*
- *Contours*
- *Spot Elevation at Existing Ground* x 800.00'
- *Asphalt Hatching*
- *Concrete Hatching*
- *Landscaping Hatching*
- *Mulched Area Hatching*
- *Building/Structure*
- *Water Valve*
- *Irrigation Control Valve*
- *Sanitary Manhole*
- *Clean-out*
- *Storm Pipe*
- *Storm Catch Basin*
- *Over Head Power* OHP
- *Utility Pole*
- *Guy Wire*
- *Power Meter/transformer* E
- *Air Conditioner Unit* AC
- *Light Pole*
- *Tree*
- *Treeline*
- *Shrub*
- *Fenceline* X
- *Property Line*
- *Adjacent Property Line*

RIDGEWATER
ENGINEERING & SURVEYING

PO BOX 806
ANDERSON, SC 29622
(864) 226-0980
RIDGEWATERENG.COM

SOUTH CAROLINA
RIDGEWATER ENGINEERING & SURVEYING No. 5816
CERTIFICATE OF AUTHORIZATION

S.C.S.P.C. NAD 83 (2011)
NAVD 88 (GEOID 12B)
GRID NORTH

40 0 20 40
SCALE: 1 in = 40ft.

CLEMSON PARK

CITY OF CLEMSON
PICKENS COUNTY
SOUTH CAROLINA

DRAWN BY: BAM
CHECKED: JT
JOB NUMBER: 24050

REV #	DATE	COMMENT
0	2-22-24	RELEASE TO CLIENT

SHEET

Existing Conditions

C - 1A

CLEMSON STANDARD NOTES FOR SITE PLANS

1. IF NECESSARY, SLOPES WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.
2. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW.
   - WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
   - WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.
3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK. IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATED THAT A BMP HAS BEEN INAPPROPRIATELY OR INCORRECTLY INSTALLED, THE PERMITTEE MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HOURS OF IDENTIFICATION.
4. PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE SEDIMENT BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE.
5. ALL EROSION CONTROL DEVICES SHALL BE PROPERTY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
6. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
7. RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL PLAN IN ACCORDANCE WITH SC REG. 72-300 ET SEQ. AND SCR100000.
8. TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT-LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.
9. ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CAN'T BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS.
10. LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.
11. A COPY OF THE SWPPP, INSPECTION RECORDS, AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED.
12. INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND-DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.
13. MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.
14. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WAS WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDED EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE.
15. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPS (SEDIMENT BASIN, FILTER BAG, ETC.).
16. THE FOLLOWING DISCHARGES FROM SITES ARE PROHIBITED:
   - WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL;
   - WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;
   - FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND
   - SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.
17. AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
18. IF EXISTING BMPS NEED TO BE MODIFIED OR IF ADDITIONAL BMPS ARE NECESSARY TO COMPLY WITH THEREQUIREMENTS OF THIS PERMIT AND/OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPS MUST BE IMPLEMENTED AS SOON AS REASONABLE POSSIBLE.
19. A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON-LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.
20. NO HAY BALES SHOULD BE USED TO SLOW OR STOP WATER AS THEY CAN BREAK-UP EASILTY AND CLOG THE STORM DRAINS DOWN STREAM

UTILITY NOTES

GENERAL:

1. ALL FILL MATERIAL IS TO BE IN PLACE AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
2. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITY'S INSPECTOR 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
3. TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS, AND TO BE 6" ABOVE FINISHED GROUND ELEVATIONS
4. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRE BY CODES AND/OR UTILITY SERVICE COMPANIES.

WATER:

1. PVC DENOTES POLYVINYL CHLORIDE PIPE. PVC SHALL COMPLY WITH ASTM D 2241, RATED SDR 21 (CLASS 150). PIPE JOINTS SHALL BE INTEGRALLY MOLDED BELL ASTM D 3139, WITH FACTORY SUPPLIED ELASTOMERIC GASKETS AND LUBRICANT.
2. CP DENOTES COPPER PIPE. CP SHALL BE TYPE "K" SOFT COPPER TO COMPLY WITH ASTM B 88 LATEST EDITION AND INSTALLED WITH WROUGHT COPPER (95-5 TIN ANTIMONY SOLDER JOINT) FITTINGS IN ACCORDANCE WITH ASME B16.22.
3. PEX DENOTES CROSS-LINKED POLYETHYLENE PIPE. PEX TO COMPLY WITH AWWA C904 SPECIFICATIONS.
4. ALL WATER LINES SHALL HAVE A MINIMUM COVER OF THREE (3) FEET, UNLESS NOTED OTHERWISE.
5. WHERE POTABLE WATER LINES AND SANITARY SEWER LINES CROSS WITH LESS THAN 18" OF VERTICAL CLEARANCE OR WHERE THE SEWER LINE IS ABOVE THE WATER LINE, THE SEWER LINE SHALL BE PRESSURE RATED PVC PIPE, MEETING THE AWWA C900-DR18 OR C905-DR18 WITH A MINIMUM VERTICAL CLEARANCE OF 12" SPECIFICATION FOR A MINIMUM LENGTH OF 20 FEET, CENTERED ON THE POINT OF CROSSING. A MINIMUM HORIZONTAL SEPARATION OF 10 FEET (EDGE TO EDGE) BETWEEN POTABLE WATER LINES AND SEWER LINES SHALL BE MAINTAINED WHEN AT ALL POSSIBLE. WHEN THE 10 FOOT HORIZONTAL SEPARATION CANNOT BE MAINTAINED THE WATER LINE SHALL BE INSTALLED IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF AT LEAST 12" ABOVE THE SEWER LINE. ALTERNATIVELY, THE SEWER LINE SHALL BE ENCLOSED IN A WATER TIGHT CARRIER PIPE, OR PRESSURE RATED PBC PIPE (MEETING AWWA C-900 OR C905 SPECIFICATION) AND PRESSURE TESTED.
6. CONNECT TO EXISTING MUNICIPAL WATER SYSTEM IN COMPLIANCE WITH THE UTILITY REQUIREMENTS FOR NEW SERVICE CONNECTIONS.
7. MECHANICAL JOINT RESTRAINTS (1100 MEGALUG OR APPROVED ALTERNATE) SHALL BE USED AT ALL BENDS AND TEES.
8. ALL DOMESTIC WATER LINES SHALL BE DISINFECTED PER AWWA REQUIREMENTS OR STATE REQUIREMENTS, WHICHEVER IS MORE STRINGENT.
9. REFER TO LANDSCAPE IRRIGATION PLAN FOR IRRIGATION REQUIREMENTS.
10. WATER INSTALLATION SHALL CONFORM TO ALL FEDERAL, STATE AND LOCAL REQUIREMENTS.

SANITARY SEWER:

1. GRAVITY PVC PIPES SHALL BE SCHEDULE 40 AND COMPLY WITH ASTM D3034 SPECIFICATIONS. FORCE PIPES SHALL BE PVC AND SHALL COMPLY WITH ASTM D 2241, RATED SDR 21 (CLASS 150). PIPE JOINTS SHALL BE INTEGRALLY MOLDED BELL ASTM D 3139, WITH FACTORY SUPPLIED ELASTOMERIC GASKETS AND LUBRICANT. PVC DENOTES POLYVINYL CHLORIDE PIPE.
2. ALL PIPES, FITTINGS AND ACCESSORIES SHALL BE INSTALLED IN ACCORDANCE WITH ASTM C 12, ASTM C 14, MANUFACTURER'S PUBLISHED INSTRUCTIONS AND STATE OR LOCAL REQUIREMENTS. JOINTS SHALL BE WATER TIGHT.
3. ALL PIPE SHALL HAVE A MINIMUM COVER OF THREE (3) FEET. WHERE THREE FEET OF COVER CANNOT BE ACHIEVED, USE DUCTILE IRON PIPE (CLASS 50 PR PRESSURE CLASS 350 INSTALLED IN ACCORDANCE WITH ANSI/AWWA C600 STANDARDS WITH TNEMEC 431 INTERIOR COATING).
4. CONNECT TO EXISTING SANITARY SEWER LATERAL IN COMPLIANCE WITH CITY AND/OR SEWER DISTRICT REGULATIONS.
5. SANITARY SEWER CLEAN OUTS SHALL BE SPACED A MAXIMUM OF 50' ON CENTER AND AT ALL BENDS GREATER THAN 45 DEGREES. REFER TO DETAIL SHEETS.
6. ALL 90 DEGREE TURNS SHALL BE ACCOMPLISHED BY 45 DEGREE ELBOWS.
7. SEWER INSTALLATION AND TESTING SHALL CONFORM TO MUNICIPALITY/GOVERNING AGENCY STANDARDS.
8. CORE AND BOOT (KOR N SEAL SERIES 106 OR APPROVED ALTERNATE) EXISTING MANHOLES 1.5 FEET OR LESS FROM BOTTOM.

STORM SEWER:

1. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATER TIGHT.
2. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING AND COVERS. JUNCTION BOXES, IN UNPAVED AREAS SHALL BE 6" ABOVE FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER" AND/OR "NO DUMPING, DRAINS TO THE RIVER" OR ENVIRONMENTAL MESSAGE AS REQUIRED BY LOCAL JURISDICTION.
3. THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE EPA OR APPLICABLE STATE GENERAL NPDES PERMIT FOR STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
4. REINFORCED CONCRETE PIPE (RCP) SHALL CONFORM TO ASTM C76, LATEST EDITION. RCP WITH COVER LESS THAN 15' AND GREATER THAN 2' SHALL BE CLASS III BELL AND SPIGOT TYPE AND INSTALLED WITH FLEXIBLE PLASTIC (BITUMEN) GASKETS AT ALL JOINTS, UNLESS OTHERWISE NOTED. ALL OTHER DEPTHS OF COVER SHALL BE CLASS IV OR V AS NOTED. GASKETS SHALL COMPLY WITH AASHTO M-198 751, TYPE B, AND SHALL BE INSTALLED IN STRICT ACCORDANCE WITH PIPE MANUFACTURER'S RECOMMENDATIONS.
5. ALL CORRUGATED PLASTIC PIPE (HDPE) SHALL MEET THE REQUIREMENTS OF AASHTO M-294, TYPE S, SHALL BE SMOOTH INTERIOR WITH ANNULAR CORRUGATED EXTERIOR. HI-Q SURE-LOCK 10.8 PIPE, ADS, N-12, OR APPROVED EQUAL. ALL JOINTS SHALL BE BELL AND SPIGOT AND SHALL MEET THE REQUIREMENTS OF AASHTO M-294 SHALL BE WATERTIGHT, MEETING THE REQUIREMENTS OF ASTM D 3212. THE GASKETS SHALL BE MADE OF POLYISOPRENE MEETING THE REQUIREMENTS OF ASTM F 477. INSTALLATION SHALL CONFORM TO AASHTO M-294, ASTM D 2321, AND MANUFACTURER'S INSTALLATION PROCEDURES. THE MAXIMUM COVER ALLOWED OVER THE TOP OF CPP IS 15'.
6. ROOF DRAINS SHALL BE 8"Ø SCHEDULE 80 PVC.
7. STRUCTURES SHALL BE PRECAST OR CONCRETE BRICKS WITH CLASS M MORTAR. THE MAXIMUM HEIGHT OF UNREINFORCED MASONRY ALLOWED IS 8' WITHOUT A PROFESSIONAL ENGINEER'S DESIGN. STEPS ARE TO BE PROVIDED IN ALL STRUCTURES GREATER THAN 42" IN DEPTH.
8. STRUCTURE DIMENSION SHALL BE AT A MINIMUM: 15" PIPE: 2'X3'
   18" PIPE: 2'X3'
9. FRAME AND GRATE SPECIFICATIONS ARE AS FOLLOWS:
   CURB INLET (CI): TINDALL CAST IRON HOODED FRAME AND GRATE I23-CG0 OR APPROVED ALTERNATE.
   JUNCTION BOX (JB): TINDALL CAST IRON RING & COVER I24-SW OR APPROVED ALTERNATE.
   GRATE INLET (GI): TINDALL CAST IRON GRATE I23-F OR APPROVED ALTERNATE.
   AREA DRAIN (AD): 24" NYLOPLAST DRAIN BASIN & PEDESTRIAN GRATE OR APPROVED ALTERNATE.

LANDSCAPE NOTES

GRASSING SPECIFICATION

TEMPORARY VEGETATION

2

APRIL 1 TO AUGUST 31	SEED: 40 LBS/ACRE COMMON BERMUDA GRASS)
AUGUST 1 - APRIL 30	SEED: 110 LBS/ACRE RYE GRAIN
FERTILIZATION:	700 LBS/ACRE 10-10-10 EQUIVALENT (POOR SOILS ONLY)
LIME:	NOT REQUIRED
MULCH:	HYDRO-MULCH OR STRAW (OPTIONAL)

1. HYDROSEED ALL SLOPES AND SEED REMAINING AREAS BY CONVENTIONAL METHODS FOR COST EFFECTIVENESS.
2. SEED BED PREPARATION: STANDARD (RIPPING, DISCING, DRAGGING, ETC.)
3. ANY RYEGRASS USED MUST BE PERENNIAL RYEGRASS.

2

PERMANENT VEGETATION

REFER TO LANDSCAPE ARCHITECTURAL PLANS FOR PERMANENT STABILIZATION.

SITE DATA

1. TMS # 4054-19-71-0690
2. PROPERTY SIZE: 4.5 ACRES
3. TOTAL DISTURBED AREA: 2.3 ACRES
4. THE SITE IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE PER F.I.R.M. COMMUNITY PANEL NUMBER 45077C0391E WITH AN EFFECTIVE DATE 12/21/2017.
5. EXISTING INFORMATION WAS OBTAINED FROM A TOPOGRAPHIC SURVEY DATED 02/22/2024 AND PREPARED BY:

   RIDGEWATER ENGINEERING AND SURVEYING, LLC
   P.O. BOX 806
   ANDERSON, SC 29622
   864-226-0980
6. THE BUILDING FOOTPRINT WAS OBTAINED FROM AN ARCHITECTURAL FLOOR PLAN DATED 09/26/2024.

CONSTRUCTION SEQUENCE:

1. RECEIVE NPDES PERMIT FROM SCDES.
2. NOTIFY THE CITY OF CLEMSON AT LEAST 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITY.
3. SCHEDULE AND ATTEND A PRE-CONSTRUCTION MEETING.
4. DETERMINE AND MARK LIMITS OF DISTURBANCE.
5. CLEAR AREA AS REQUIRED TO INSTALL INITIAL EROSION CONTROL MEASURES (SHOWN ON C2.0).
6. INSTALL INITIAL EROSION CONTROL MEASURES (SHOWN ON C2.0).
7. CLEAR LIMITS OF DISTURBANCE.
8. BEGIN MASS GRADING
9. INSTALL INLET PROTECTION AS INLETS ARE CONSTRUCTED.
10. CONSTRUCT BUILDINGS AND PAVEMENT.
11. PERMANENT GRASS SHALL BE INSTALLED FOR ALL AREAS AT THE FINAL GRADE AND IN SEASON. FERTILIZE, WATER, AND RESEED AS REQUIRED TO ESTABLISH AND MAINTAIN A VIGOROUS STAND OF GRASS
12. AFTER COMPLETION OF CONSTRUCTION AND THE SITE IS STABILIZED:
    12.1. REMOVE ALL ACCUMULATED SEDIMENT FROM SEDIMENT TRAPPING MEASURES AND SPREAD EVENLY ACROSS SITE.
    12.2. REMOVE TEMPORARY EROSION CONTROL MEASURES (SKIMMER, POROUS, BAFFLES AND SILT FENCE), SMOOTH AREA AND APPLY APPROPRIATE GRASS AND LANDSCAPE BUFFERS.

NOTES:

1. DISTURBED AREAS AND EROSION CONTROL MEASURES WILL BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT.
2. INSPECTIONS TO BE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES 1/2" OR MORE PRECIPITATION.

SITE NOTES

1. EXISTING SITE CONDITIONS SHALL BE VERIFIED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPORT ANY DIFFERENCES FROM THE PLAN THAT WILL AFFECT CONSTRUCTION IN WRITING TO THE ENGINEER AND AWAIT FURTHER INSTRUCTIONS.
2. BEFORE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL REVIEW ALL PLANS AND SPECIFICATIONS AND THE JOB SITE. THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER WHO PREPARED THE PLANS OF ANY DISCREPANCIES THAT MAY REQUIRE MODIFICATIONS TO THESE PLANS OR OF ANY FIELD CONFLICTS.
3. ALL WORK IN THE RIGHT OF WAY SHALL BE VERIFIED WITH THE APPROVED ENCROACHMENT PERMIT PRIOR TO COMMENCING WORK.
4. ALL PERMITS RELATIVE TO THE PROJECT MUST BE OBTAINED PRIOR TO CONSTRUCTION. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH PERMITS ISSUED AND APPLICABLE STATE, COUNTY AND LOCAL CODES.
5. ALL DIMENSIONS SHOWN ON THE DRAWINGS ARE MEASURED FROM OUTSIDE FACE OF BUILDING WALL, FACE OF CURB LINE, OR PROPERTY LINE UNLESS OTHERWISE NOTED. CURB AND GUTTER IS SHOWN AS THREE (3) LINES (OUTSIDE EDGE OF GUTTER, FACE OF CURB, AND BACK OF CURB).
6. R DENOTES FACE OF CURB OR EDGE OF PAVEMENT RADIUS. ALL RADII ARE 5 FEET UNLESS NOTED OTHERWISE.
7. AN ELECTRONIC FILE OF THE SITE PLAN SHALL BE MADE AVAILABLE FOR STAKING PURPOSES.
8. ALL REFERENCE TO STATE STANDARDS AND SPECIFICATIONS ARE MADE FROM THE SOUTH CAROLINA HIGHWAY DEPARTMENT'S STANDARD SPECIFICATION, LATEST EDITION.
9. IF ANY CONFLICTS BETWEEN THE NOTES, DETAILS, SPECIFICATIONS, AND DRAWINGS OCCUR THEN BY RULE THE STRICTER SHALL GOVERN.
10. THE CONTRACTOR SHALL MAINTAIN AN "AS BUILT" SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE OWNER UPON COMPLETION OF THE PROJECT.
11. "STOP" SIGNS, AND OTHER TRAFFIC REGULATION SIGNAGE, SHALL MEET THE CRITERIA OF THE MUTCD AND STATE DEPARTMENT OF TRANSPORTATION STANDARDS.
12. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY/COUNTY REGULATIONS AND CODES AND OSHA STANDARDS.
13. THE CONTRACTOR IS EXCLUSIVELY RESPONSIBLE FOR THE CONDITION OF THE SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY THROUGHOUT THE TERM OF THE PROJECT CONSTRUCTION.
14. THE ENGINEER'S REVIEW OF THE CONTRACTOR'S WORK PRODUCT AND PERFORMANCE WILL NOT INCLUDE REVIEW OF THE CONTRACTOR'S SAFETY PROGRAMS. SUCH REVIEWS ARE TO BE BY OSHA INSPECTORS AND THE OWNER'S REPRESENTATIVE.
15. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING ALL NECESSARY TRAFFIC CONTROL DEVICES DURING CONSTRUCTION. UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE LOADED OR OFF-LOADED ON AN OPEN ROADWAY. IF SUCH ACTIVITY IS REQUIRED THE CONTRACTOR SHALL COORDINATE SHUTTING DOWN THE ROAD WITH THE APPROPRIATE DOT AND UTILIZE APPROPRIATE TRAFFIC CONTROL WARNING DEVICES.
16. THE GENERAL CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES AND RIGHT-OF-WAYS, PUBLIC OR PRIVATE, PRIOR TO WORKING IN THESE AREAS. ACCESS SHALL BE LIMITED UNTIL PERMISSION IS GRANTED.
17. THE GENERAL CONTRACTOR SHALL KEEP THE AREA OUTSIDE THE "CONSTRUCTION LIMITS" BROOM CLEAN AT ALL TIMES AND REMOVE ALL TRASH AND DEBRIS FROM THE SITE.

BRITT PETERS AND ASSOCIATES INC.
consulting engineers
Copyright © Britt, Peters & Associates, Inc.
101 Falls Park Drive
Greenville, SC 29601
(864) 271-8869
Greenville • Charleston
Norfolk • Charlotte
www.brittpeters.com

SEALS

SOUTH CAROLINA
BRITT, PETERS & ASSOCIATES, INC.
CONSULTING ENGINEERS
No. C00781
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
JOHN A. CONNELLY
No. 29812
1/10/25

CLEMSON PARK

114 CLEMSON PARK RD
CLEMSON, SC 29631

REVISIONS:

NO.	DATE	DESCRIPTION
0	11/01/2024	100% SET
1	12/17/2024	CITY REVISIONS
2	01/10/2025	CITY REVISIONS

Project Manager:	JAC
Project Engineer:	TAH
Drawn By:	MPM

Sheet Title: SITE NOTES

Sheet Number: C1.0

Project Number: 240385

Date: 11/01/2024

LEGEND

- SEDIMENT TUBE REFER TO C5.0 — ST
- SILT FENCE REFER TO C5.0 — SF
- LIMITS OF DISTURBANCE — LD
- TEMPORARY INLET PROTECTION REFER TO C5.0
- CONCRETE WASHOUT AREA REFER TO C5.0
- STORM PIPE REFER TO C3.0

KEYNOTES:

1. INSTALL CONSTRUCTION ENTRANCE. REFER TO C5.0.
2. INSTALL TEMPORARY STOCKPILE AREA. REFER TO C5.0.
3. INSTALL RIPRAP APRON. REFER TO C5.0.
4. INSTALL SILT FENCE OUTLET AT LOWEST POINT. REFER TO C5.0
6. WHEEL WASH STATION.
8. FUEL / OIL STORAGE LOCATION

CAUTION

ALL EXISTING UTILITIES SHOWN ARE THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS, AND MAKE ALL NECESSARY ARRANGEMENTS WITH PRIVATE AND PUBLIC UTILITY COMPANIES TO AVOID ANY POSSIBLE DAMAGE TO OR INTERRUPTION OF UTILITY EQUIPMENT OR SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INQUIRIES CONCERNING LOCATION OF UTILITY LINES. REPAIR OF ANY DAMAGE TO UTILITY LINES AND EQUIPMENT DUE TO THIS WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

811 Know what's below. Call before you dig.

REFER TO SHEET C1.0 (SITE NOTES) FOR NOTES AND SPECIFICATIONS.

30' 0 15' 30' 60' 90'

SCALE : 1 INCH = 30 FT

BRITT PETERS AND ASSOCIATES INC.
consulting engineers

101 Falls Park Drive
Greenville, SC 29601
(864) 271-8869

Greenville • Charleston
Norfolk • Charlotte
www.brittpeters.com

SEALS

SOUTH CAROLINA — BRITT, PETERS & ASSOCIATES, INC. CONSULTING ENGINEERS — No. C00781 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — JOHN A. CORNELL — 1/10/25

CLEMSON PARK

114 CLEMSON PARK RD
CLEMSON, SC 29631

REVISIONS:

NO.	DATE	DESCRIPTION
0	11/01/2024	100% SET
1	12/17/2024	CITY REVISIONS
2	01/10/2025	CITY REVISIONS

Project Manager: JAC
Project Engineer: TAH
Drawn By: MPM

Sheet Title: EROSION CONTROL PLAN

Sheet Number: C2.0

Project Number: 240385

Date: 11/01/2024

PROPOSED STORM DRAINAGE TABLE				
LABEL	TYPE	RIM	INV IN	INV OUT
1	GI	796.5	793.4	793.3
2	GI	799.6	793.8	793.7
3	OCS	804.7	794.0	794.0
4	AD	805.2	795.0	794.92 (24") 796.42 (18")
5	GI	805.5	797.0	796.9
6	GI	806.5	-	800.0
7	AD	805.0	795.0	794.92 (24") 796.42 (18")
8	AD	805.0	796.4	796.3
9	AD	805.0	-	797.2
10	AD	805.0	-	794.92 (24") 796.42 (18")
11	AD	799.5	-	795.6
12	GI	798.5	794.1	794.0
13	GI	799.5	-	794.5
14	FE (2X)	-	813.0	-
15	CI	815.7	-	813.5
16	FE	-	-	814.0

PROPOSED STORM PIPE TABLE					
LABEL	ORIG-DEST.	TYPE	SLOPE	SIZE	LENGTH
P1	CB2-CB1	RCP/HDPE	0.5%	15"	57'
P2	CB3-CB2	RCP/HDPE	1.4%	15"	14'
P3	CB5-CB4	RCP/HDPE	6.6%	15"	29'
P4	CB6-CB5	RCP/HDPE	7.0%	15"	43'
P5	CB8-CB7	PVC	4.8%	12"	27'
P6	CB9-CB8	PVC	5.0%	12"	16'
P7	CB11-ADS	PVC	1.4%	8"	25'
P8	CB12-CB1	RCP/HDPE	1.2%	15"	52'
P9	CB13-CB12	RCP/HDPE	1.0%	15"	33'
P10	CB15-CB14	RCP/HDPE	1.0%	15"	48'
P11	CB16-CB14	RCP/HDPE	1.0%	15"	32'

NOTES:

1. FE DENOTES FLARED END SECTION. REFER TO C1.0.
2. GI DENOTES GRATE INLET. REFER TO C1.0
3. JB DENOTES JUNCTION BOX. REFER TO C1.0
4. OCS DENOTES OUTLET CONTROL STRUCTURE. REFER TO C5.1.
5. AD DENOTES AREA DRAIN. REFER TO C1.0.
6. RCP DENOTES A REINFORCED CONCRETE PIPE. REFER TO C1.0.
7. HDPE DENOTES HIGH DENSITY POLYETHYLENE PIPE. REFER TO C1.0

LEGEND

STORM PIPE
REFER TO C1.0

6"Ø PVC
UNDERDRAIN PIPE
REFER TO C1.0

RIP RAP APRON
REFER TO C5.0

PROPOSED CONTOURS
REFER TO LANDSCAPE ARCHITECTURE PLANS FOR MORE INFORMATION.
808

CAUTION

ALL EXISTING UTILITIES SHOWN ARE THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS, AND MAKE ALL NECESSARY ARRANGEMENTS WITH PRIVATE AND PUBLIC UTILITY COMPANIES TO AVOID ANY POSSIBLE DAMAGE TO OR INTERRUPTION OF UTILITY EQUIPMENT OR SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INQUIRIES CONCERNING LOCATION OF UTILITY LINES. REPAIR OF ANY DAMAGE TO UTILITY LINES AND EQUIPMENT DUE TO THIS WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

811 Know what's below. Call before you dig.

REFER TO SHEET C1.0 (SITE NOTES) FOR NOTES AND SPECIFICATIONS.

30' 0 15' 30' 60' 90'

SCALE : 1 INCH = 30 FT

BRITT PETERS AND ASSOCIATES INC.
consulting engineers

101 Falls Park Drive
Greenville, SC 29601
(864) 271-8869

Greenville • Charleston
Norfolk • Charlotte
www.brittpeters.com

SEALS

SOUTH CAROLINA
BRITT, PETERS & ASSOCIATES, INC.
CONSULTING ENGINEERS
No. C00781
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
JOHN A. CORNELL
1/10/25

CLEMSON PARK

114 CLEMSON PARK RD
CLEMSON, SC 29631

REVISIONS:

NO.	DATE	DESCRIPTION
0	11/01/2024	100% SET
1	12/17/2024	CITY REVISIONS
2	01/10/2025	CITY REVISIONS

Project Manager: JAC
Project Engineer: TAH
Drawn By: MPM

Sheet Title:

DRAINAGE PLAN

Sheet Number: C3.0

Project Number: 240385

Date: 11/01/2024

KEY NOTES:

1. INSTALL CLEANOUT AND CONNECT TO EXISTING STUB-OUT PROVIDED BY UTILITY PROVIDER. CONTRACTOR TO COORDINATE. STUB-OUT WILL BE INSTALLED PRIOR TO CONSTRUCTION.
2. INSTALL APPROXIMATELY 206± LF OF 6" PVC (SCH 35) WITH SANITARY SEWER CLEANOUTS EVERY 75' O.C. AND EVERY BEND. REFER TO C5.1 & C5.3 FOR DETAIL.
3. METER PIT AND WATER LINE INSTALLED BY UTILITY PROVIDER. CONTRACTOR TO COORDINATE.
4. INSTALL 427± LF OF 2"Ø PEX SERVICE LINE TO PROPOSED BUILDING. REFER TO PLUMBING FOR CONTINUATION INTO BUILDING.
5. INSTALL 470± LF OF 2"Ø PEX SERVICE LINE TO SPLASH PAD AND IRRIGATION SYSTEM. REFER TO A/E PLANS FOR MORE INFORMATION

LEGEND

	EXISTING	PROPOSED
WATER LINE REFER TO C1.0	W	W
SEWER LINE REFER TO C1.0	S	S
STORM PIPE REFER TO C4.0		
6"Ø PVC UNDERDRAIN PIPE REFER TO C1.0		
STORM STRUCTURE REFER TO C4.0		
SANITARY CLEAN-OUT REFER TO 5.0		CO

*****CAUTION*****

ALL EXISTING UTILITIES SHOWN ARE THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS, AND MAKE ALL NECESSARY ARRANGEMENTS WITH PRIVATE AND PUBLIC UTILITY COMPANIES TO AVOID ANY POSSIBLE DAMAGE TO OR INTERRUPTION OF UTILITY EQUIPMENT OR SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INQUIRIES CONCERNING LOCATION OF UTILITY LINES. REPAIR OF ANY DAMAGE TO UTILITY LINES AND EQUIPMENT DUE TO THIS WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

811 Know what's below. Call before you dig.

UTILITY CONTACTS	
SEWER: CITY OF CLEMSON 300 COCKRAN ROAD CLEMSON, SC 29631 864.653.2046	WATER: CITY OF CLEMSON 300 COCKRAN ROAD CLEMSON, SC 29631 864.653.2046

REFER TO SHEET C1.0 (SITE NOTES) FOR NOTES AND SPECIFICATIONS.

30' 0 15' 30' 60' 90'

SCALE : 1 INCH = 30 FT

BRITT PETERS AND ASSOCIATES INC.
consulting engineers

101 Falls Park Drive
Greenville, SC 29601
(864) 271-8869

Greenville • Charleston
Norfolk • Charlotte
www.brittpeters.com

SEALS

SOUTH CAROLINA
BRITT, PETERS & ASSOCIATES, INC.
CONSULTING ENGINEERS
No. C00781
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
JOHN A. CORNELL
1/10/25

CLEMSON PARK

114 CLEMSON PARK RD
CLEMSON, SC 29631

REVISIONS:

NO.	DATE	DESCRIPTION
0	11/01/2024	100% SET
1	12/17/2024	CITY REVISIONS
2	01/10/2025	CITY REVISIONS

Project Manager: JAC
Project Engineer: TAH
Drawn By: MPM

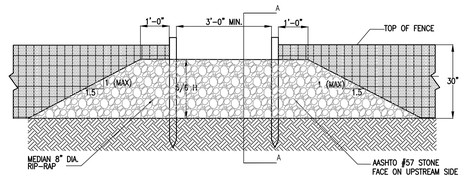
Sheet Title:
UTILITY PLAN

Sheet Number: C4.0

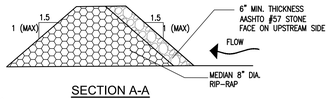
Project Number: 240385

Date: 11/01/2024

SILT FENCE ROCK OUTLET



ELEVATION - UP-SLOPE FACE



SECTION A-A

NOTES:

1. WASHED STONE (#57) TO BE REMOVED AND REPLACED ONCE IT BECOMES CLOGGED WITH SEDIMENT.
2. SEDIMENT TO BE REMOVED WHEN ACCUMULATIONS REACH 1/3 HEIGHT OF SILT FENCE
3. THE KEY TO FUNCTIONAL ROCK OUTLETS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.

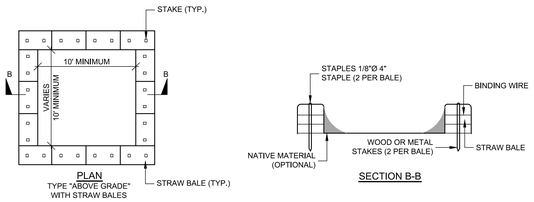
South Carolina Department of Health and Environmental Control

SILT FENCE ROCK OUTLET

STANDARD DRAWING NO. SC-14 PAGE 1 of 1

NOT TO SCALE — FEBRUARY 2014 DATE

STRAW BALE BARRIER CONCRETE WASHOUT

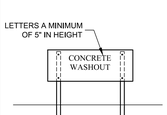


PLAN
TYPE "ABOVE GRADE" WITH STRAW BALES

SECTION B-B

NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. INSTALL CONCRETE WASHOUT SIGN (24"X24", MINIMUM) WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. TEMPORARY WASHOUT AREA MUST BE AT LEAST 50' FROM A STORM DRAIN, CREEK BANK OR PERIMETER CONTROL.
4. CLEAN OUT CONCRETE WASHOUT AREA WHEN 50% FULL. INSPECT EVERY 7 CALENDAR DAYS.
5. THE KEY TO FUNCTIONAL CONCRETE WASHOUTS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR CLEAN OUT.
6. SILT FENCE SHALL BE INSTALLED AROUND PERIMETER OF CONCRETE WASHOUT AREA EXCEPT FOR THE SIDE UTILIZED FOR ACCESSING THE WASHOUT.
7. A ROCK CONSTRUCTION ENTRANCE MAY BE NECESSARY ALONG ONE SIDE OF THE WASHOUT TO PROVIDE VEHICLE ACCESS.



CONCRETE WASHOUT SIGN DETAIL

South Carolina Department of Health and Environmental Control

CONCRETE WASHOUT

STRAW BALES OR ABOVE GROUND

STANDARD DRAWING NO. RC-07 Page 1 of 1

NOT TO SCALE — FEBRUARY 2014 DATE

SILT FENCE - POST REQUIREMENTS

1. SILT FENCE POSTS MUST BE 48-INCH LONG STEEL POSTS THAT MEET, AT A MINIMUM, THE FOLLOWING PHYSICAL CHARACTERISTICS.
   - COMPOSED OF A HIGH STRENGTH STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI.
   - INCLUDE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38-INCHES AND A NOMINAL "T" LENGTH OF 1.48-INCHES.
   - WEIGH 1.25 POUNDS PER FOOT (± 8%)
2. POSTS SHALL BE EQUIPPED WITH PROJECTIONS TO AID IN FASTENING OF FILTER FABRIC.
3. STEEL POSTS MAY NEED TO HAVE A METAL SOIL STABILIZATION PLATE WELDED NEAR THE BOTTOM WHEN INSTALLED ALONG STEEP SLOPES OR INSTALLED IN LOOSE SOILS. THE PLATE SHOULD HAVE A MINIMUM CROSS SECTION OF 17-SQUARE INCHES AND BE COMPOSED OF 15 GAUGE STEEL, AT A MINIMUM. THE METAL SOIL STABILIZATION PLATE SHOULD BE COMPLETELY BURIED.
4. INSTALL POSTS TO A MINIMUM OF 24-INCHES. A MINIMUM HEIGHT OF 1- TO 2- INCHES ABOVE THE FABRIC SHALL BE MAINTAINED, AND A MAXIMUM HEIGHT OF 3 FEET SHALL BE MAINTAINED ABOVE THE GROUND.
5. POST SPACING SHALL BE AT A MAXIMUM OF 6-FEET ON CENTER.

SILT FENCE - FABRIC REQUIREMENTS

1. SILT FENCE MUST BE COMPOSED OF WOVEN GEOTEXTILE FILTER FABRIC THAT CONSISTS OF THE FOLLOWING REQUIREMENTS:
   - COMPOSED OF FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS OF AT LEAST 85% BY WEIGHT OF POLYOLEFINS, POLYESTERS, OR POLYAMIDES THAT ARE FORMED INTO A NETWORK SUCH THAT THE FILAMENTS OR YARNS RETAIN DIMENSIONAL STABILITY RELATIVE TO EACH OTHER;
   - FREE OF ANY TREATMENT OR COATING WHICH MIGHT ADVERSELY ALTER ITS PHYSICAL PROPERTIES AFTER INSTALLATION;
   - FREE OF ANY DEFECTS OR FLAWS THAT SIGNIFICANTLY AFFECT ITS PHYSICAL AND/OR FILTERING PROPERTIES; AND,
   - HAVE A MINIMUM WIDTH OF 36-INCHES.
2. USE ONLY FABRIC APPEARING ON SC DOT'S QUALIFIED PRODUCTS LISTING (QPL), APPROVAL SHEET #34, MEETING THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE SC DOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
3. 12-INCHES OF THE FABRIC SHOULD BE PLACED WITHIN EXCAVATED TRENCH AND TOED IN WHEN THE TRENCH IS BACKFILLED.
4. FILTER FABRIC SHALL BE PURCHASED IN CONTINUOUS ROLLS AND CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS.
5. FILTER FABRIC SHALL BE INSTALLED AT A MINIMUM OF 24-INCHES ABOVE THE GROUND.

SILT FENCE - INSPECTION & MAINTENANCE

1. THE KEY TO FUNCTIONAL SILT FENCE IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
2. REGULAR INSPECTIONS OF SILT FENCE SHALL BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24-HOURS AFTER EACH RAINFALL EVEN THAT PRODUCES 1/2-INCH OR MORE OF PRECIPITATION.
3. ATTENTION TO SEDIMENT ACCUMULATIONS ALONG THE SILT FENCE IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
4. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE SILT FENCE.
5. REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
6. CHECK FOR AREAS WHERE STORMWATER RUNOFF HAS ERODED A CHANNEL BENEATH THE SILT FENCE, OR WHERE THE FENCE HAS SAGGED OR COLLAPSED DUE TO RUNOFF OVERTOPPING THE SILT FENCE. INSTALL CHECKS/TIE-BACKS AND/OR REINSTALL SILT FENCE, AS NECESSARY.
7. CHECK FOR TEARS WITHIN THE SILT FENCE, AREAS WHERE SILT FENCE HAS BEGUN TO DECOMPOSE, AND FOR ANY OTHER CIRCUMSTANCE THAT MAY RENDER THE SILT FENCE INEFFECTIVE. REMOVED DAMAGED SILT FENCE AND REINSTALL NEW SILT FENCE IMMEDIATELY.

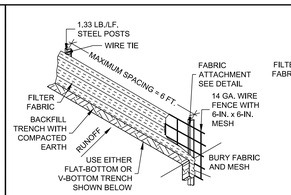
SILT FENCE SHOULD BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED AND ONCE IT IS REMOVED, THE RESULTING DISTURBED AREA SHALL BE PERMANENTLY STABILIZED.

South Carolina Department of Health and Environmental Control

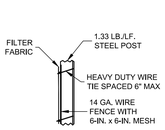
SILT FENCE

STANDARD DRAWING NO. SC-03 Page 2 of 2

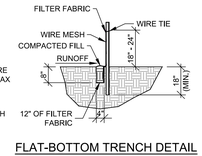
GENERAL NOTES — FEBRUARY 2014 DATE



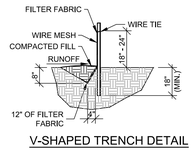
SILT FENCE INSTALLATION



FABRIC ATTACHMENT DETAIL



FLAT-BOTTOM TRENCH DETAIL



V-SHAPED TRENCH DETAIL

SILT FENCE - GENERAL NOTES

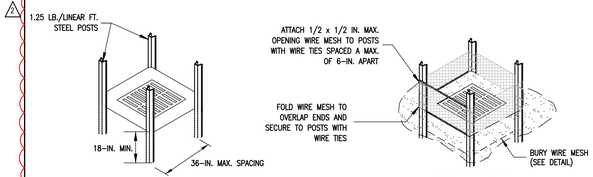
1. DO NOT PLACE SILT FENCE ACROSS CHANNELS OR IN OTHER AREAS SUBJECT TO CONCENTRATED FLOWS. SILT FENCE SHOULD NOT BE USED AS A VELOCITY CONTROL BMP. CONCENTRATED FLOWS ARE ANY FLOWS GREATER THAN 0.5 CFS.
2. MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE SILT FENCE SHALL BE 100-FEET.
3. MAXIMUM SLOPE STEEPNESS (NORMAL (PERPENDICULAR) TO THE FENCE LINE) SHALL BE 2:1.
4. SILT FENCE JOINTS, WHEN NECESSARY, SHALL BE COMPLETED BY ONE OF THE FOLLOWING OPTIONS:
   - WRAP EACH FABRIC TOGETHER AT A SUPPORT POST WITH BOTH ENDS FASTENED TO THE POST, WITH A 1-FOOT MINIMUM OVERLAP;
   - OVERLAP SILT FENCE BY INSTALLING 3-FEET PASSED THE SUPPORT POST TO WHICH THE NEW SILT FENCE ROLL IS ATTACHED. ATTACH OLD ROLL TO NEW ROLL WITH HEAVY-DUTY PLASTIC TIES; OR,
   - OVERLAP ENTIRE WIDTH OF EACH SILT FENCE ROLL FROM ONE SUPPORT POST TO THE NEXT SUPPORT POST.
5. ATTACH FILTER FABRIC TO THE STEEL POSTS USING HEAVY-DUTY PLASTIC TIES THAT ARE EVENLY SPACED WITHIN THE TOP 8-INCHES OF THE FABRIC.
6. INSTALL THE SILT FENCE PERPENDICULAR TO THE DIRECTION OF THE STORMWATER FLOW AND PLACE THE SILT FENCE THE PROPER DISTANCE FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEANOUT.
7. INSTALL SILT FENCE CHECKS (TIE-BACKS) EVERY 50-100 FEET, DEPENDENT ON SLOPE, ALONG SILT FENCE THAT IS INSTALLED WITH SLOPE AND WHERE CONCENTRATED FLOWS ARE EXPECTED OR ARE DOCUMENTED ALONG THE PROPOSED/INSTALLED SILT FENCE.

South Carolina Department of Health and Environmental Control

SILT FENCE

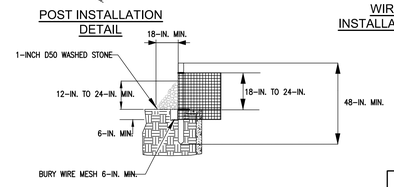
STANDARD DRAWING NO. SC-03 Page 1 of 2

NOT TO SCALE — FEBRUARY 2014 DATE



POST INSTALLATION DETAIL

WIRE MESH INSTALLATION DETAIL



STONE AND WIRE MESH INSTALLATION DETAIL

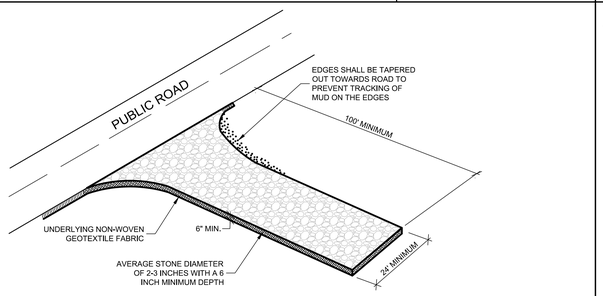
South Carolina Department of Health and Environmental Control

Type B

WIRE MESH & STONE INLET PROTECTION

STANDARD DRAWING NO. SC-08 PAGE 1 of 2

NOT TO SCALE — FEBRUARY 2014 DATE



SPECIFICATION	SIZE
ROCK PAD THICKNESS	6 INCHES
ROCK PAD WIDTH	24 FEET
ROCK PAD LENGTH	100 FEET
ROCK PAD STONE SIZE	D = 2-3 INCHES

South Carolina Department of Health and Environmental Control

CONSTRUCTION ENTRANCE

STANDARD DRAWING NO. SC-06 Page 1 of 2

NOT TO SCALE — FEBRUARY 2014 DATE

CONSTRUCTION ENTRANCE - GENERAL NOTES

1. STABILIZED CONSTRUCTION ENTRANCES SHOULD BE USED AT ALL POINTS WHERE TRAFFIC WILL EGRESS/INGRESS A CONSTRUCTION SITE ONTO A PUBLIC ROAD OR ANY IMPERVIOUS SURFACES, SUCH AS PARKING LOTS.
2. INSTALL A NON-WOVEN GEOTEXTILE FABRIC PRIOR TO PLACING ANY STONE.
3. INSTALL A CULVERT PIPE ACROSS THE ENTRANCE WHEN NEEDED TO PROVIDE POSITIVE DRAINAGE.
4. THE ENTRANCE SHALL CONSIST OF 2-INCH TO 3-INCH D50 STONE PLACED AT A MINIMUM DEPTH OF 6-INCHES.
5. MINIMUM DIMENSIONS OF THE ENTRANCE SHALL BE 24-FEET WIDE BY 100-FEET LONG, AND MAY BE MODIFIED AS NECESSARY TO ACCOMMODATE SITE CONSTRAINTS.
6. THE EDGES OF THE ENTRANCE SHALL BE TAPERED OUT TOWARDS THE ROAD TO PREVENT TRACKING AT THE EDGE OF THE ENTRANCE.
7. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN OR OTHER SEDIMENT TRAPPING STRUCTURE.
8. LIMESTONE MAY NOT BE USED FOR THE STONE PAD.

CONSTR. ENTRANCE - INSPECTION & MAINTENANCE

1. THE KEY TO FUNCTIONAL CONSTRUCTION ENTRANCES IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
2. REGULAR INSPECTIONS OF CONSTRUCTION ENTRANCES SHALL BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24-HOURS AFTER EACH RAINFALL EVEN THAT PRODUCES 1/2-INCH OR MORE OF PRECIPITATION.
3. DURING REGULAR INSPECTIONS, CHECK FOR MUD AND SEDIMENT BUILDUP AND PAD INTEGRITY. INSPECTION FREQUENCIES MAY NEED TO BE MORE FREQUENT DURING LONG PERIODS OF WET WEATHER.
4. RESHAPE THE STONE PAD AS NECESSARY FOR DRAINAGE AND RUNOFF CONTROL.
5. WASH OR REPLACE STONES AS NEEDED AND AS DIRECTED BY SITE INSPECTOR. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE THE AMOUNT OF MUD BEING CARRIED OFF-SITE BY VEHICLES. FREQUENT WASHING WILL EXTEND THE USEFUL LIFE OF STONE PAD.
6. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO ADJACENT IMPERVIOUS SURFACES BY BRUSHING OR SWEEPING. FLUSHING SHOULD ONLY BE USED WHEN THE WATER CAN BE DISCHARGED TO A SEDIMENT TRAP OR BASIN.
7. DURING MAINTENANCE ACTIVITIES, ANY BROKEN PAVEMENT SHOULD BE REPAIRED IMMEDIATELY.
8. CONSTRUCTION ENTRANCES SHOULD BE REMOVED AFTER THE SITE HAS REACHED FINAL STABILIZATION. PERMANENT VEGETATION SHOULD REPLACE AREAS FROM WHICH CONSTRUCTION ENTRANCES HAVE BEEN REMOVED. UNLESS AREA WILL BE CONVERTED TO AN IMPERVIOUS SURFACE TO SERVE POST-CONSTRUCTION.

South Carolina Department of Health and Environmental Control

CONSTRUCTION ENTRANCE

STANDARD DRAWING NO. SC-06 Page 2 of 2

GENERAL NOTES — FEBRUARY 2014 DATE

WIRE MESH & STONE INLET PROTECTION

INSPECTION & MAINTENANCE

1. The key to functional inlet protection is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of wire mesh and stone inlet protection shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
3. Attention to sediment accumulations in front of the inlet protection is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when the sediment reaches 1/3 height of the stone fill or when stone becomes clogged. When a sump is installed in front of inlet protection, sediment should be removed when it fills approximately 1/3 the depth of the sump.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Large debris, trash, and leaves should be removed from in front of the inlet protection when found.
7. After accumulated sediment is removed, pull stones from around wire mesh to wash or to replace with fresh stones as necessary.
8. Inlet protection structures should be removed after the disturbed areas are permanently stabilized. Remove all construction material and sediment, and dispose of them properly. Grade the disturbed area to the elevation of the drop inlet crest. Stabilize all bare areas immediately.

GENERAL NOTES

1. Use hardware fabric or comparable wire mesh with maximum openings of 0.5-inches x 0.5-inches as the supporting material.
2. Use steel posts that meet the following physical requirements:
   - Be composed of high strength steel with a minimum yield of 50,000 psi.
   - Have a standard "T" section with a nominal face width of 1.38 inches and a nominal "T" width of 1.48-inches.
   - Weigh 1.25 pounds per foot (±8%)
3. Use heavy-duty wire ties to attach the wire mesh material to the steel posts.
4. Space the steel posts a maximum of 3-feet apart around the perimeter of the inlet and drive them into the ground a minimum of 18-inches.
5. Excavate a trench 6-inches deep around the outside perimeter of the inlet to install wire mesh. Backfill the trench with soil or crushed stone and compact over the wire mesh.
6. Place Aggregate No. 5 washed stone (or 1-inch D50 stone) to a minimum height of 12-inches, and a maximum of 24-inches against the wire mesh on all sides.

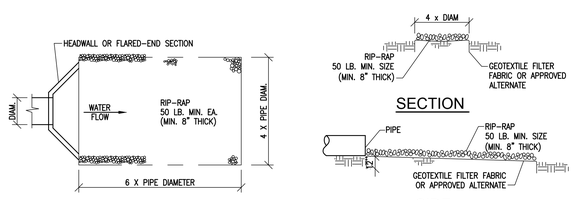
South Carolina Department of Health and Environmental Control

Type B

WIRE MESH & STONE INLET PROTECTION

STANDARD DRAWING NO. SC-08 PAGE 2 of 2

NOT TO SCALE — FEBRUARY 2014 DATE



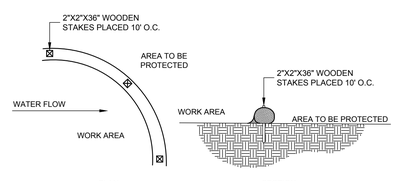
PLAN

SECTION

SIDE

RIP RAP PLACEMENT DETAIL

NTS



PLAN — SECTION

NOTES:

1. INSTALL PER THE MANUFACTURER'S RECOMMENDATIONS PRIOR TO EXPOSING SUBGRADE.
2. ROUTINE INSPECTIONS SHALL BE MADE WITHIN 24 HRS OF A RUNOFF EVENT.
3. THE CONTRACTOR SHALL REMOVE SEDIMENT ONCE IT HAS REACHED 1/2 THE EFFECTIVE HEIGHT.
4. THE SEDIMENT TUBE SHALL BE REPAIRED OR REPLACED IF IT IS DAMAGED.
5. SEDIMENT TUBES SHALL BE 12" FILTREXX FILTER SOXX OR AN APPROVED ALTERNATE.

SEDIMENT TUBE

NTS

BRITT PETERS AND ASSOCIATES INC.
consulting engineers

101 Falls Park Drive
Greenville, SC 29601
(864) 271-8869

Greenville • Charleston
Norfolk • Charlotte
www.brittpeters.com

SEALS

SOUTH CAROLINA — BRITT, PETERS & ASSOCIATES, INC. CONSULTING ENGINEERS — No. C00781 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — JOHN A CORNELIUS — 1/10/25

CLEMSON PARK

114 CLEMSON PARK RD
CLEMSON, SC 29631

REVISIONS:

NO.	DATE	DESCRIPTION
0	11/01/2024	100% SET
1	12/17/2024	CITY REVISIONS
2	01/10/2025	CITY REVISIONS

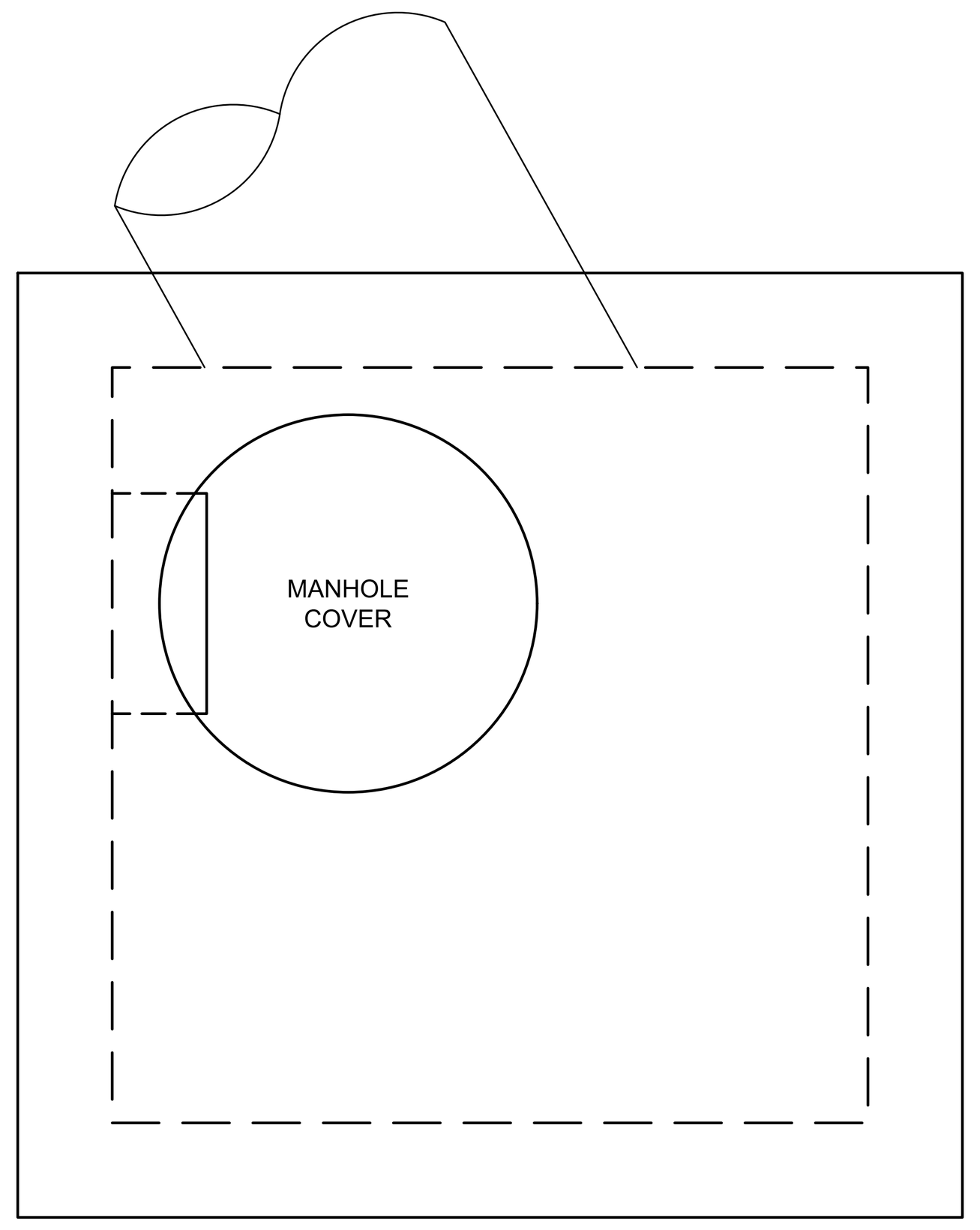
Project Manager: JAC
Project Engineer: TAH
Drawn By: MPM

Sheet Title: SITE DETAILS

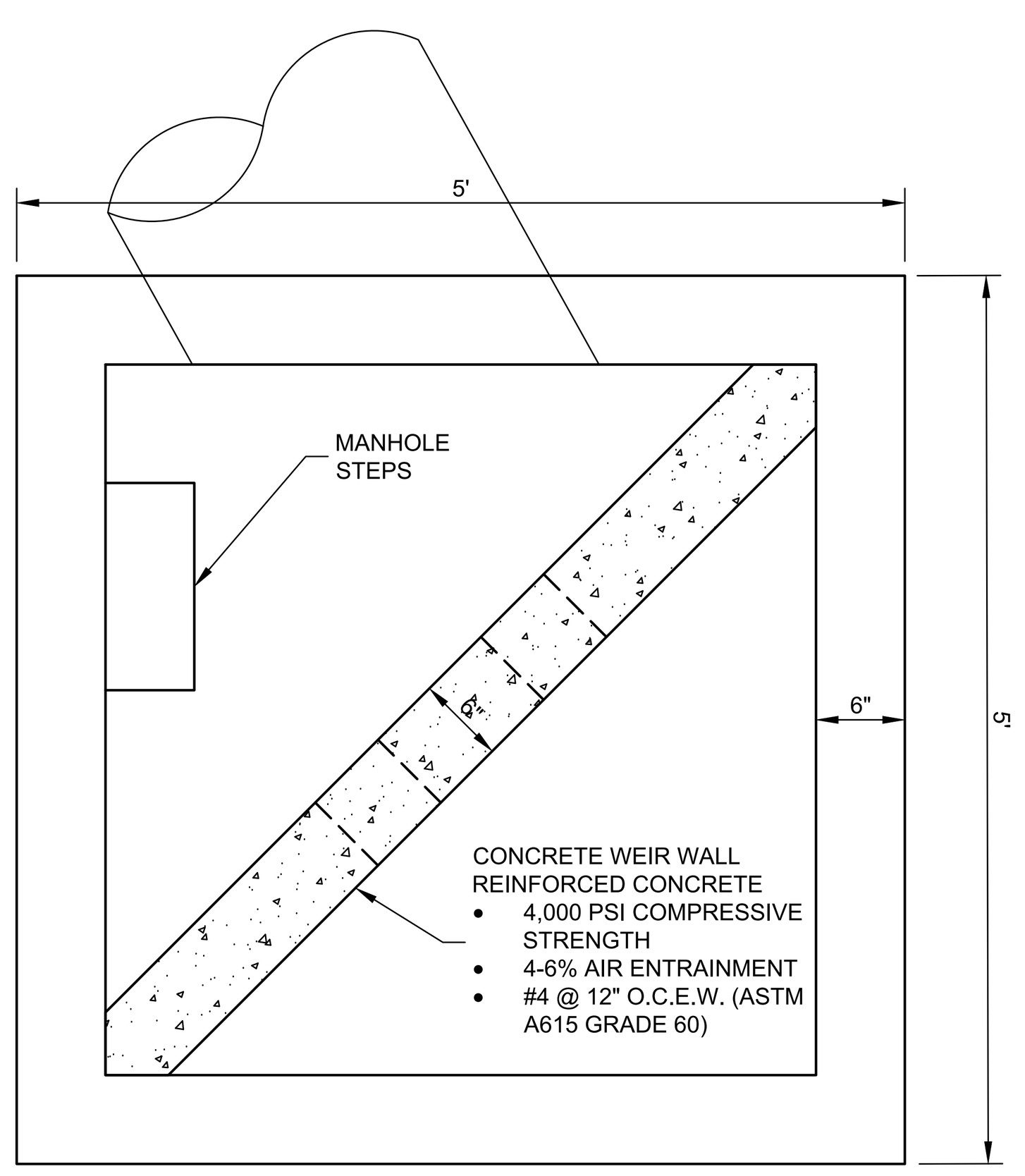
Sheet Number: C5.0

Project Number: 240385

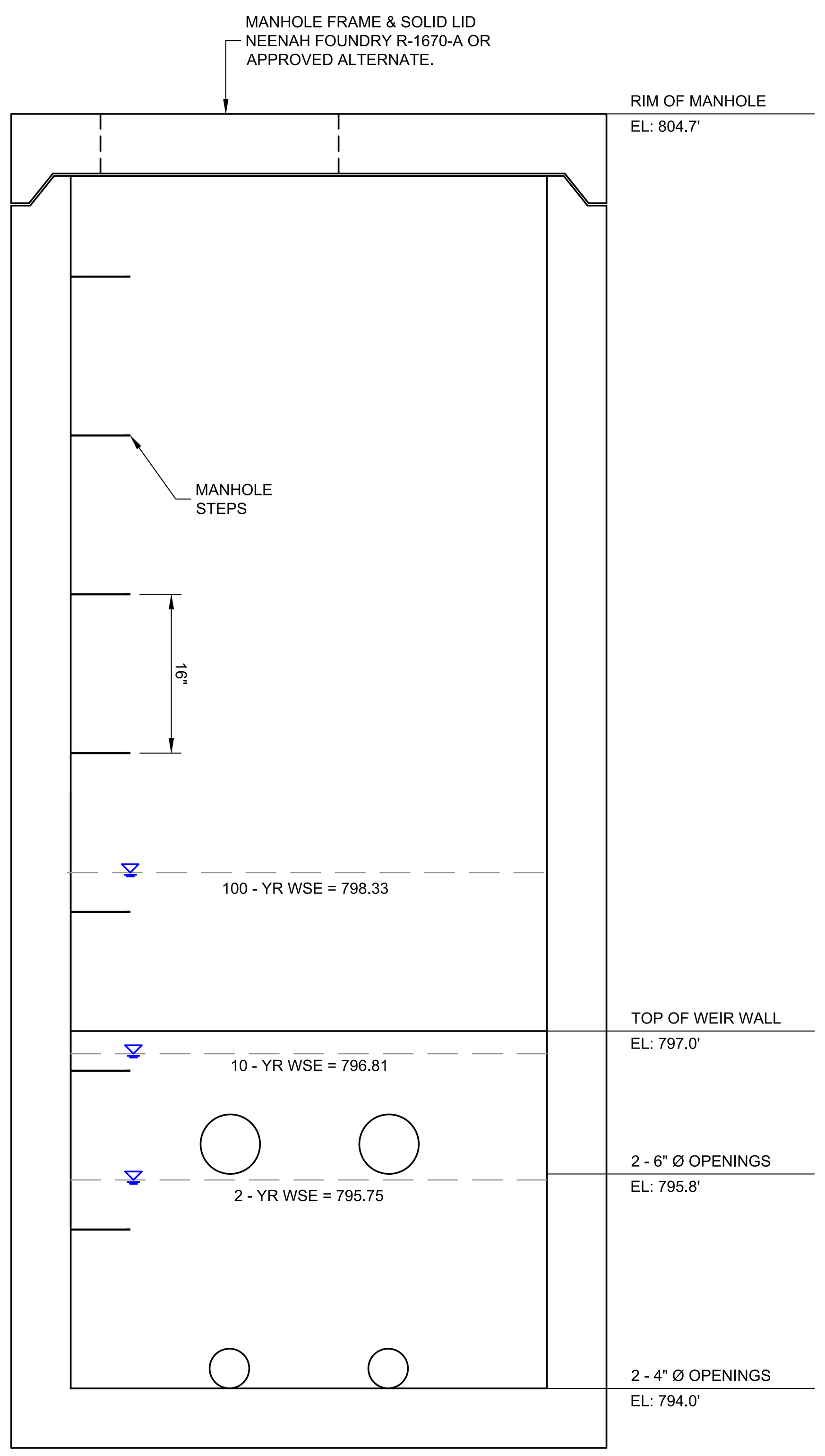
Date: 11/01/2024



TOP



PLAN



OUTLET CONTROL STRUCTURE / WEIR WALL

NTS

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	BRENT HUTCHINSON 8643990545 BRENT.HUTCHINSON@ADS-PIPE.COM
ADS SALES REP	RYAN HORNISH 8649055854 RYAN.HORNISH@ADSPIPE.COM
PROJECT NO.	

ADS Advanced Drainage Systems, Inc.

ADS SiteAssist FOR STORMTECH INSTALLATION INSTRUCTIONS VISIT OUR APP

CLEMSON PARK

CLEMSON, SC, USA

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 45x76 DESIGNATION SS.
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, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT/%. 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 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 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 TECH 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:
   - STONESHOOTER 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 HOE 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 M43 #3, 357, 4, 467, 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.

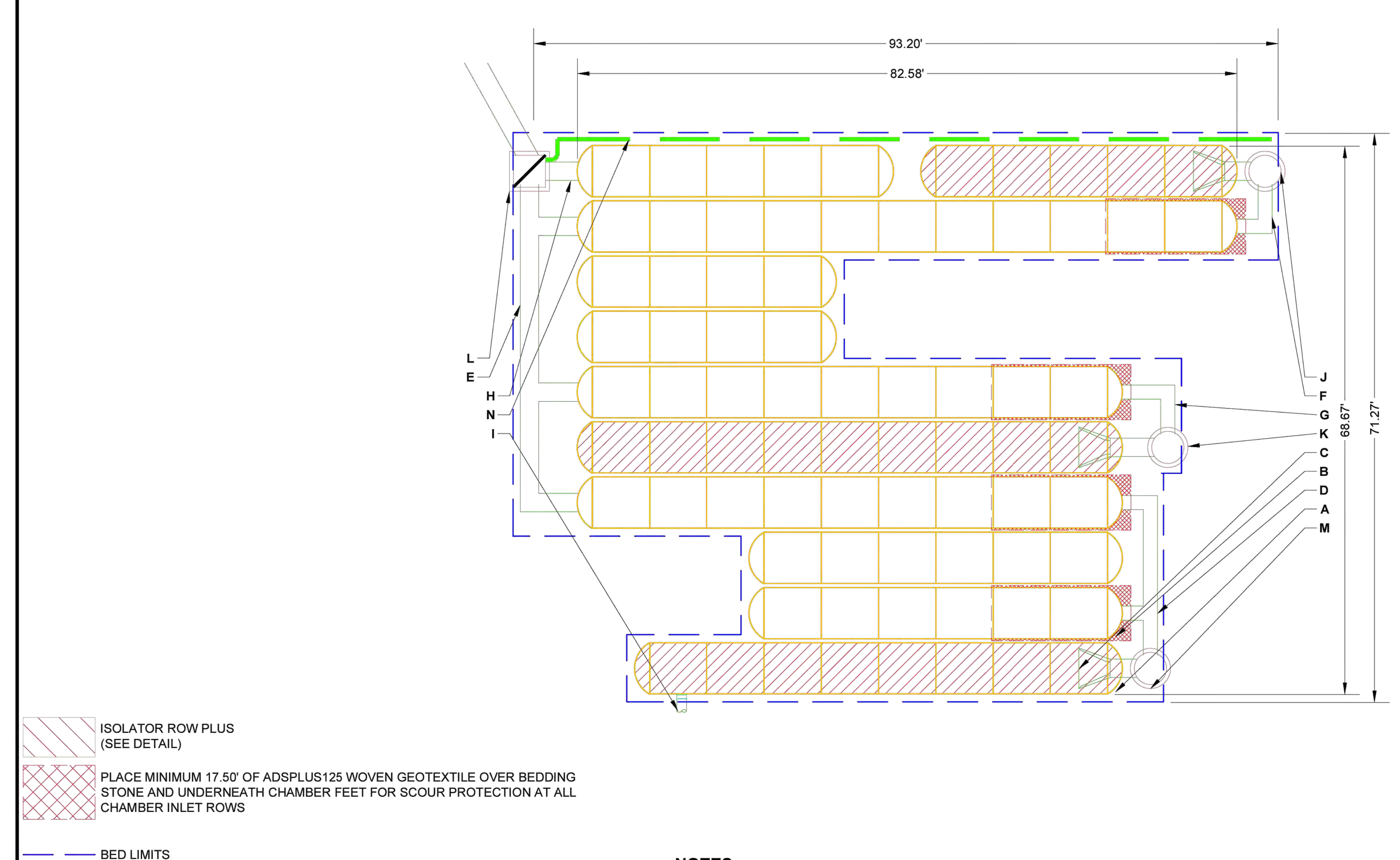
CONTACT STORMTECH AT 1-800-821-6710 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

PROPOSED LAYOUT	
76	STORMTECH MC-3500 CHAMBERS
22	STORMTECH MC-3500 END CAPS
12	STONE ABOVE (in)
9	STONE BELOW (in)
40	STONE VOID
16431	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)
5100	SYSTEM AREA (SF)
447.2	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS:	
MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	806.50
MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	800.50
MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	800.00
MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	800.00
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	800.00
TOP OF STONE:	799.50
TOP OF MC-3500 CHAMBER:	798.50
18" x 18" TOP MANIFOLD INVERT:	796.42
18" x 18" TOP MANIFOLD INVERT:	796.42
18" x 18" TOP MANIFOLD INVERT:	796.42
12" INSERTA TEE INVERT:	795.25
24" x 24" BOTTOM MANIFOLD INVERT:	794.92
24" ISOLATOR ROW PLUS INVERT:	794.92
24" ISOLATOR ROW PLUS INVERT:	794.92
24" ISOLATOR ROW PLUS INVERT:	794.92
24" BOTTOM CONNECTION INVERT:	794.92
BOTTOM OF MC-3500 CHAMBER:	794.75
UNDERDRAIN INVERT:	794.00
BOTTOM OF STONE:	794.00

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	
PREFABRICATED END CAP	A	24" BOTTOM CORED END CAP, PART#: MC3500IEPP24BC / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	2.06"	
PREFABRICATED END CAP	B	18" TOP CORED END CAP, PART#: MC3500IEPP18TC / TYP OF ALL 18" TOP CONNECTIONS	20.03"	
FLAMP	C	INSTALL FLAMP ON 24" ACCESS PIPE / PART#: MCFLAMP (TYP 3 PLACES)		
MANIFOLD	D	18" x 18" TOP MANIFOLD, ADS N-12	20.03"	
MANIFOLD	E	24" x 24" BOTTOM MANIFOLD, ADS N-12	2.06"	
MANIFOLD	F	18" x 18" TOP MANIFOLD, ADS N-12	20.03"	
MANIFOLD	G	18" x 18" TOP MANIFOLD, ADS N-12	20.03"	
PIPE CONNECTION	H	24" BOTTOM CONNECTION	2.06"	
INSERTA TEE	I	REF: PLAN SET FOR DIAMETER REQUIRED	6.00"	
CONCRETE STRUCTURE	J	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		
CONCRETE STRUCTURE	K	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		
CONCRETE STRUCTURE	L	OCS (DESIGN BY ENGINEER / PROVIDED BY OTHERS)		
CONCRETE STRUCTURE	M	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		
UNDERDRAIN	N	6" ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN		



ISOLATOR ROW PLUS (SEE DETAIL)

PLACE MINIMUM 17.50' OF ADSPLUS125 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

BED LIMITS

NOTES

- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.

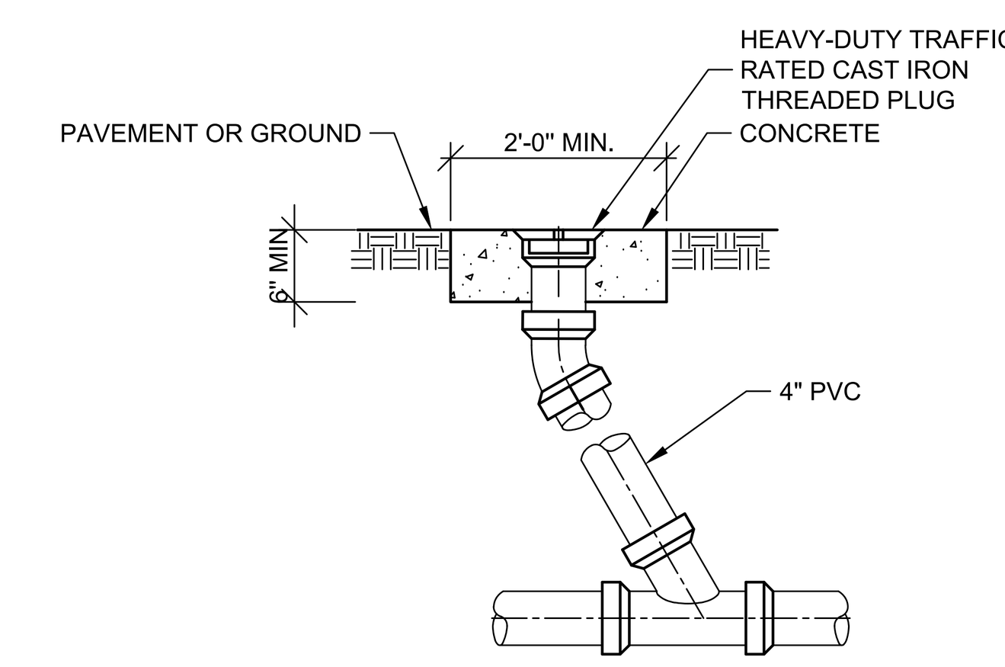
CLEMSON PARK
CLEMSON, SC, USA

DATE: 10/15/2024 DRAWN: BH
PROJECT #: CHECKED: N/A

StormTech® Chamber System

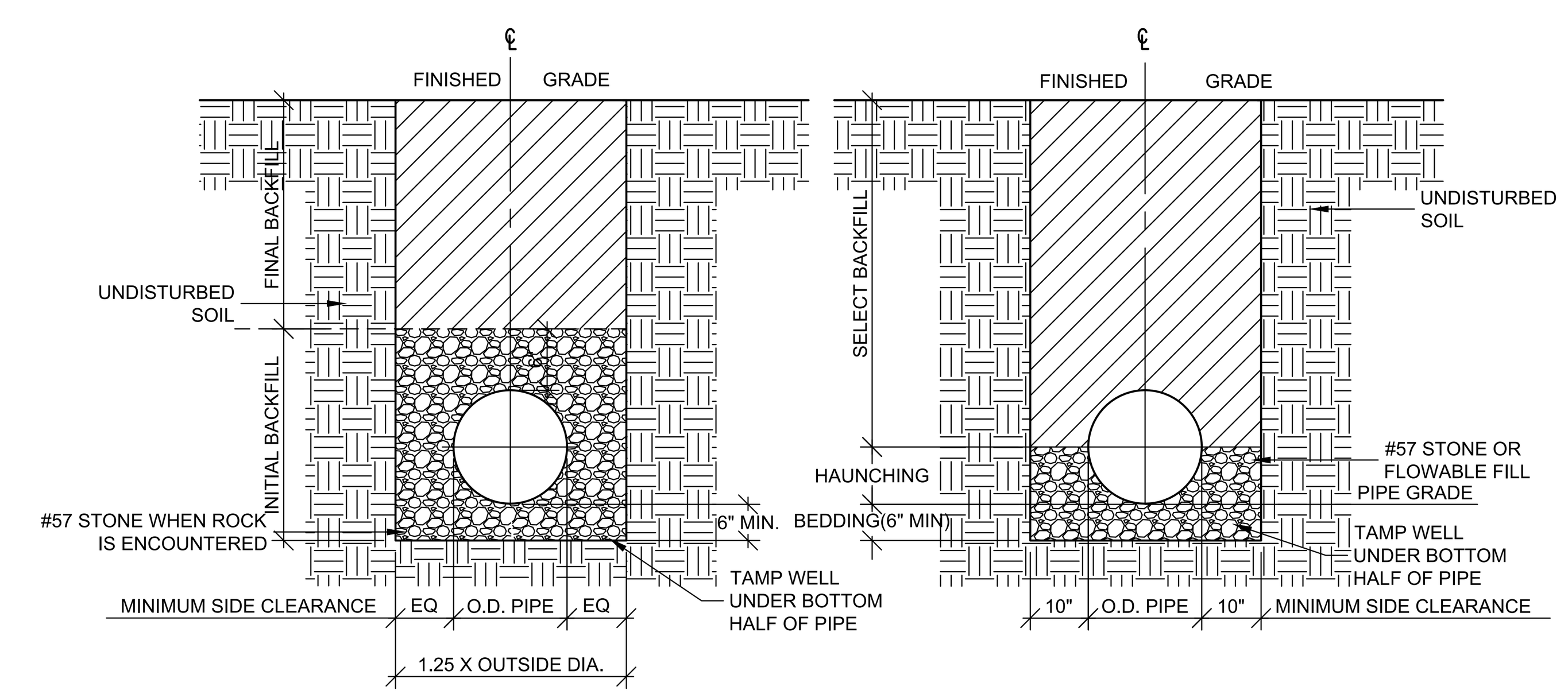
4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473

SHEET 2 OF 6



CLEAN-OUT DETAIL

NTS



TRENCH REQUIREMENTS FOR HDPE PIPES

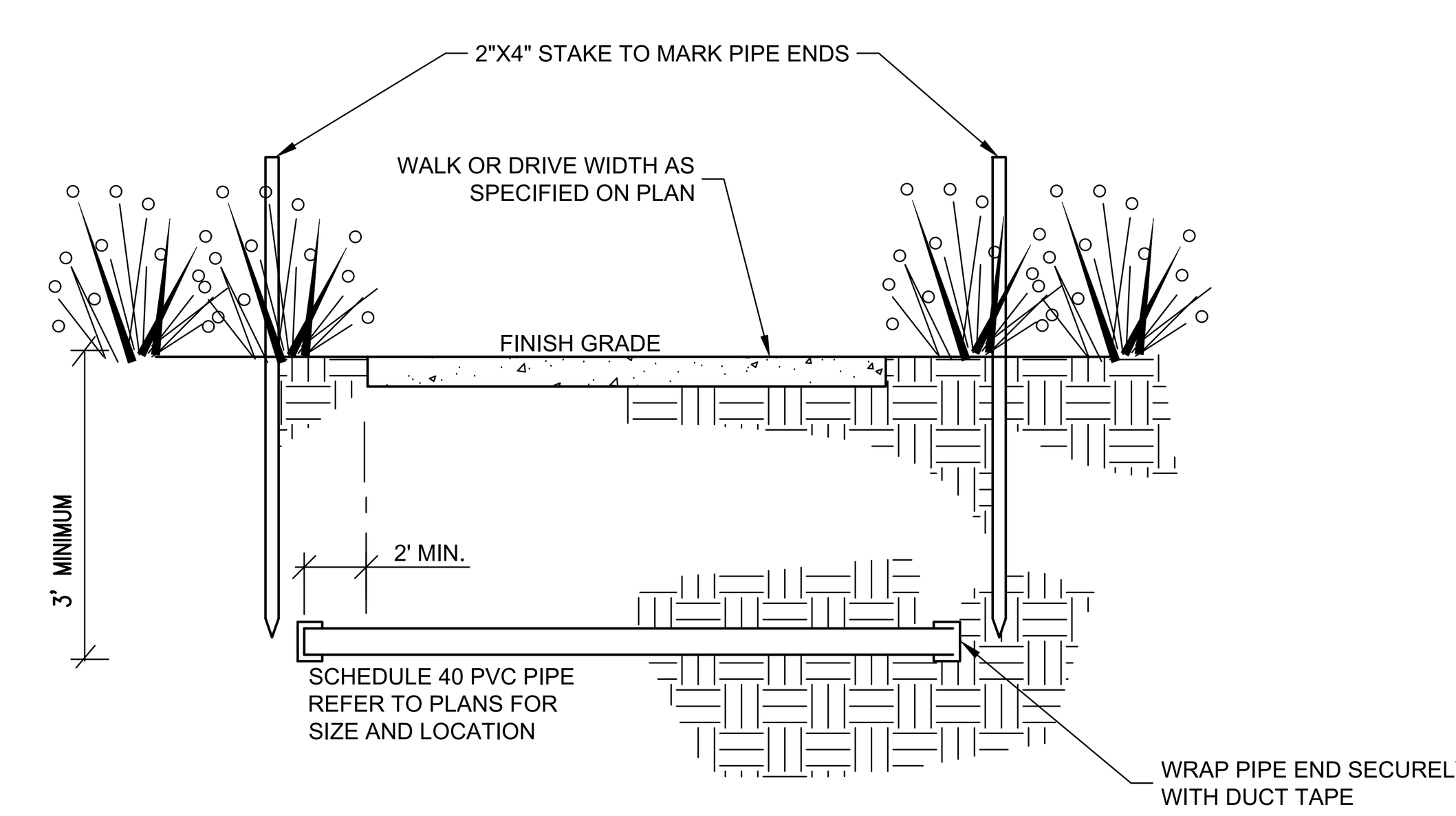
TRENCH REQUIREMENTS FOR DUCTILE IRON AND REINFORCED CONCRETE PIPES

NOTES:

1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE FACE OF THE SHORING AND BRACING.
2. THE TRENCH FOUNDATION SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO INSTALLING PIPE.
3. SELECT BACKFILL MATERIAL SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO INSTALLATION.
4. BACKFILL SHALL BE TAMPED IN 6" LIFTS IN TRAFFIC AREAS, 8" IN NON-TRAFFIC AREAS.
5. FLOWABLE FILL SHALL MEET SCDOT SPECIFICATIONS FOR EXCAVATABLE FLOWABLE FILL.

TRENCH DETAILS

NTS



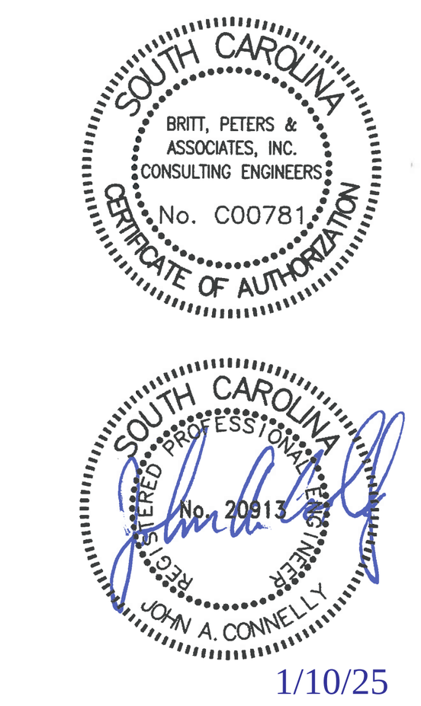
NOTE:
INSERT # 4 REBAR SECTION OR OTHER METAL OBJECT INSIDE PIPE END PRIOR TO TAPING TO FACILITATE FUTURE FINDINGS OF SLEEVE WITH METAL DETECTOR. REMOVE REBAR PRIOR TO USING SLEEVE.

UTILITY SLEEVE DETAIL

NTS

BRITT PETERS AND ASSOCIATES INC.
consulting engineers
Copyright © Britt, Peters & Associates, Inc.
101 Falls Park Drive
Greenville, SC 29601
(864) 271-8869
Greenville • Charleston
Norfolk • Charlotte
www.brittpeters.com

SEALS



CLEMSON PARK

114 CLEMSON PARK RD
CLEMSON, SC 29631

REVISIONS:

NO.	DATE	DESCRIPTION
0	11/01/2024	100% SET
1	12/17/2024	CITY REVISIONS
2	01/10/2025	CITY REVISIONS

Project Manager: JAC
Project Engineer: TAH
Drawn By: MPM

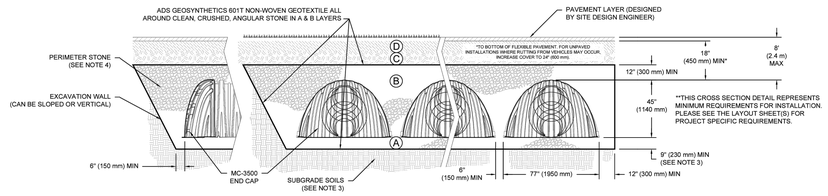
Sheet Title:
SITE DETAILS

Sheet Number: C5.1
Project Number: 240385
Date: 11/01/2024

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[4] A-1, A-2-4, A-3 OR AASHTO M43[4] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[4] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[4] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. REFERENCE STORMTECH DESIGN MANUAL FOR BEARING CAPACITY GUIDANCE.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. 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, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT/% . 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.

CLEMSON PARK
CLEMSON, SC. USA
DATE: 10/15/2024
DRAWN: BH
CHECKED: N/A
PROJECT #:
DESCRIPTION
DATE DRW CHK

StormTech® Chamber System
1-800-821-6710 | WWW.STORMTECH.COM

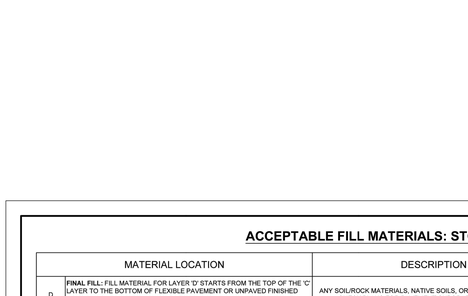
4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473

THESE DRAWINGS AND DETAILS ARE THE PROPERTY OF STORMTECH LLC AND ARE NOT TO BE USED, REPRODUCED OR COPIED IN WHOLE OR IN PART. THEY ARE THE EXCLUSIVE PROPRIETARY PROPERTY OF STORMTECH LLC AND WITHIN THEIR RIGHTFUL USE BY THE RECIPIENT FOR THE PURPOSES AUTHORIZED BY STORMTECH LLC. ANY REPRODUCTION IN PART OR WHOLE, OR USE OF THE DESIGN CONCEPTS SHOWN ON THESE DRAWINGS FOR ANY PROJECT NOT SPECIFICALLY AUTHORIZED TO STORMTECH LLC IS PROHIBITED AND WILL BE ENFORCED AGAINST TO THE FULLEST EXTENT OF THE LAW. ANY RECIPIENT OF THESE DRAWINGS BY ITS ACCEPTANCE AGREES TO RELEASE, INDEMNIFY, AND HOLD HARMLESS STORMTECH LLC FROM ANY AND ALL CLAIMS ARISING FROM THE USE OF THESE DRAWINGS, INCLUDING ANY CLAIMS ARISING FROM THE DESIGN, MANUFACTURE OR INSTALLATION OF STORMTECH PRODUCTS, EVEN IF STORMTECH LLC IS NAMED AS A CO-DEFENDANT.

SHEET 3 OF 6

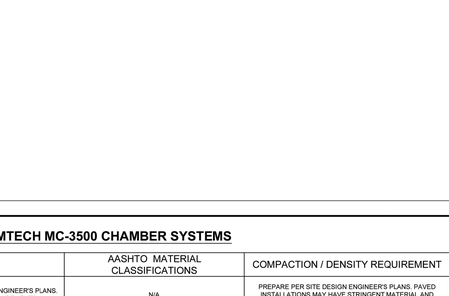
UNDERDRAIN DETAIL

NTS



MC-3500 TECHNICAL SPECIFICATION

NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	77.0" X 45.0" X 86.0"	(1956 mm X 1143 mm X 2184 mm)
CHAMBER STORAGE	109.9 CUBIC FEET	(3.11 m³)
MINIMUM INSTALLED STORAGE*	175.0 CUBIC FEET	(4.96 m³)
WEIGHT	134 lbs.	(60.8 kg)

NOMINAL END CAP SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	75.0" X 45.0" X 22.2"	(1905 mm X 1143 mm X 564 mm)
END CAP STORAGE	14.9 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	45.1 CUBIC FEET	(1.28 m³)
WEIGHT	49 lbs.	(22.2 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION, 6" SPACING BETWEEN CHAMBERS, 6" (152 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A WELDED CROWN PLATE END WITH "C"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

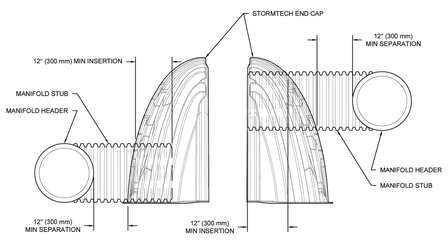
PART #	STUB	B	C
MC3500IEPP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500IEPP06B		---	0.68" (17 mm)
MC3500IEPP08T	8" (200 mm)	31.16" (791 mm)	---
MC3500IEPP08B		---	0.81" (21 mm)
MC3500IEPP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500IEPP10B		---	0.93" (24 mm)
MC3500IEPP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500IEPP12B		---	1.35" (34 mm)
MC3500IEPP15T	15" (375 mm)	23.39" (594 mm)	---
MC3500IEPP15B		---	1.50" (38 mm)
MC3500IEPP18TC	18" (450 mm)	20.03" (509 mm)	---
MC3500IEPP18TW			
MC3500IEPP18BC		---	1.77" (45 mm)
MC3500IEPP18BW			
MC3500IEPP24TC	24" (600 mm)	14.48" (368 mm)	---
MC3500IEPP24TW			
MC3500IEPP24BC		---	2.08" (52 mm)
MC3500IEPP24BW			
MC3500IEPP30BC	30" (750 mm)	---	2.75" (70 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL

CUSTOM PRECORED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-3500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

MC-SERIES END CAP INSERTION DETAIL

NTS



NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

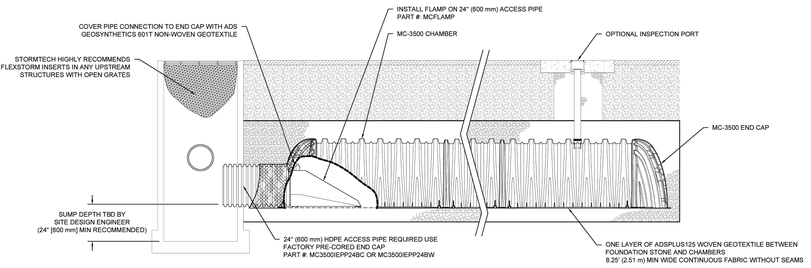
CLEMSON PARK
CLEMSON, SC. USA
DATE: 10/15/2024
DRAWN: BH
CHECKED: N/A
PROJECT #:
DESCRIPTION
DATE DRW CHK

StormTech® Chamber System
1-800-821-6710 | WWW.STORMTECH.COM

4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473

THESE DRAWINGS AND DETAILS ARE THE PROPERTY OF STORMTECH LLC AND ARE NOT TO BE USED, REPRODUCED OR COPIED IN WHOLE OR IN PART. THEY ARE THE EXCLUSIVE PROPRIETARY PROPERTY OF STORMTECH LLC AND WITHIN THEIR RIGHTFUL USE BY THE RECIPIENT FOR THE PURPOSES AUTHORIZED BY STORMTECH LLC. ANY REPRODUCTION IN PART OR WHOLE, OR USE OF THE DESIGN CONCEPTS SHOWN ON THESE DRAWINGS FOR ANY PROJECT NOT SPECIFICALLY AUTHORIZED TO STORMTECH LLC IS PROHIBITED AND WILL BE ENFORCED AGAINST TO THE FULLEST EXTENT OF THE LAW. ANY RECIPIENT OF THESE DRAWINGS BY ITS ACCEPTANCE AGREES TO RELEASE, INDEMNIFY, AND HOLD HARMLESS STORMTECH LLC FROM ANY AND ALL CLAIMS ARISING FROM THE USE OF THESE DRAWINGS, INCLUDING ANY CLAIMS ARISING FROM THE DESIGN, MANUFACTURE OR INSTALLATION OF STORMTECH PRODUCTS, EVEN IF STORMTECH LLC IS NAMED AS A CO-DEFENDANT.

SHEET 5 OF 6



MC-3500 ISOLATOR ROW PLUS DETAIL

NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

CLEMSON PARK
CLEMSON, SC. USA
DATE: 10/15/2024
DRAWN: BH
CHECKED: N/A
PROJECT #:
DESCRIPTION
DATE DRW CHK

StormTech® Chamber System
1-800-821-6710 | WWW.STORMTECH.COM

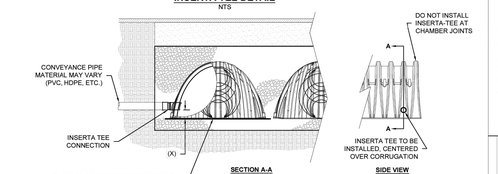
4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473

THESE DRAWINGS AND DETAILS ARE THE PROPERTY OF STORMTECH LLC AND ARE NOT TO BE USED, REPRODUCED OR COPIED IN WHOLE OR IN PART. THEY ARE THE EXCLUSIVE PROPRIETARY PROPERTY OF STORMTECH LLC AND WITHIN THEIR RIGHTFUL USE BY THE RECIPIENT FOR THE PURPOSES AUTHORIZED BY STORMTECH LLC. ANY REPRODUCTION IN PART OR WHOLE, OR USE OF THE DESIGN CONCEPTS SHOWN ON THESE DRAWINGS FOR ANY PROJECT NOT SPECIFICALLY AUTHORIZED TO STORMTECH LLC IS PROHIBITED AND WILL BE ENFORCED AGAINST TO THE FULLEST EXTENT OF THE LAW. ANY RECIPIENT OF THESE DRAWINGS BY ITS ACCEPTANCE AGREES TO RELEASE, INDEMNIFY, AND HOLD HARMLESS STORMTECH LLC FROM ANY AND ALL CLAIMS ARISING FROM THE USE OF THESE DRAWINGS, INCLUDING ANY CLAIMS ARISING FROM THE DESIGN, MANUFACTURE OR INSTALLATION OF STORMTECH PRODUCTS, EVEN IF STORMTECH LLC IS NAMED AS A CO-DEFENDANT.

SHEET 4 OF 6

INSERTA TEE DETAIL

NTS



SECTION A-A

SIDE VIEW

CHAMBER	MAX DIAMETER OF INSERTA TEE	HEIGHT FROM BASE OF CHAMBER (X)
SC-310	6" (150 mm)	4" (100 mm)
SC-740	10" (250 mm)	4" (100 mm)
SC-800	10" (250 mm)	4" (100 mm)
DC-780	10" (250 mm)	4" (100 mm)
MC-3500	12" (300 mm)	6" (150 mm)
MC-4500	12" (300 mm)	8" (200 mm)
MC-7200	12" (300 mm)	8" (200 mm)
INSERTA TEE FITTINGS AVAILABLE FOR SDR 26, SDR 35, SCH 40 IPS GASKETED & SOLVENT WELD, N-12, HP STORM, C-900 OR DUCTILE IRON		

NOTES:
- PART NUMBERS WILL VARY BASED ON INLET PIPE MATERIALS. CONTACT STORMTECH FOR MORE INFORMATION.
- CONTACT ADS ENGINEERING SERVICES IF INSERTA TEE INLET MUST BE RAISED AS NOT ALL INVERTS ARE POSSIBLE.

CLEMSON PARK
CLEMSON, SC. USA
DATE: 10/15/2024
DRAWN: BH
CHECKED: N/A
PROJECT #:
DESCRIPTION
DATE DRW CHK

Inserta Tee® Lateral Connection

4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473

THESE DRAWINGS AND DETAILS ARE THE PROPERTY OF STORMTECH LLC AND ARE NOT TO BE USED, REPRODUCED OR COPIED IN WHOLE OR IN PART. THEY ARE THE EXCLUSIVE PROPRIETARY PROPERTY OF STORMTECH LLC AND WITHIN THEIR RIGHTFUL USE BY THE RECIPIENT FOR THE PURPOSES AUTHORIZED BY STORMTECH LLC. ANY REPRODUCTION IN PART OR WHOLE, OR USE OF THE DESIGN CONCEPTS SHOWN ON THESE DRAWINGS FOR ANY PROJECT NOT SPECIFICALLY AUTHORIZED TO STORMTECH LLC IS PROHIBITED AND WILL BE ENFORCED AGAINST TO THE FULLEST EXTENT OF THE LAW. ANY RECIPIENT OF THESE DRAWINGS BY ITS ACCEPTANCE AGREES TO RELEASE, INDEMNIFY, AND HOLD HARMLESS STORMTECH LLC FROM ANY AND ALL CLAIMS ARISING FROM THE USE OF THESE DRAWINGS, INCLUDING ANY CLAIMS ARISING FROM THE DESIGN, MANUFACTURE OR INSTALLATION OF STORMTECH PRODUCTS, EVEN IF STORMTECH LLC IS NAMED AS A CO-DEFENDANT.

SHEET 6 OF 6

BRITT PETERS AND ASSOCIATES INC.
consulting engineers
Copyright © Britt, Peters & Associates, Inc.
101 Falls Park Drive
Greenville, SC 29601
(864) 271-8869
Greenville • Charleston
Norfolk • Charlotte
www.brittpeters.com

SEALS

SOUTH CAROLINA — BRITT, PETERS & ASSOCIATES, INC. CONSULTING ENGINEERS — No. C00781 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — JOHN A. CONNELLY — 28812 — 1/10/25

CLEMSON PARK

114 CLEMSON PARK RD
CLEMSON, SC 29631

REVISIONS:

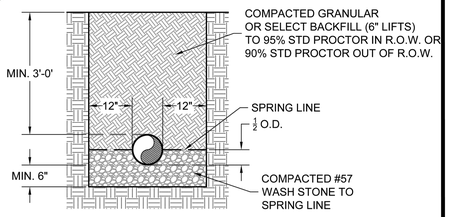
NO.	DATE	DESCRIPTION
0	11/01/2024	100% SET
1	12/17/2024	CITY REVISIONS
2	01/10/2025	CITY REVISIONS

Project Manager: JAC
Project Engineer: TAH
Drawn By: MPM

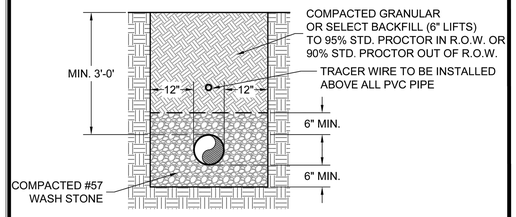
Sheet Title:
SITE DETAILS

Sheet Number: C5.2
Project Number: 240385
Date: 11/01/2024

DUCTILE IRON PIPE



PVC PIPE



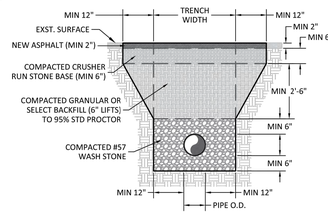
	CITY OF CLEMSON STANDARD CONSTRUCTION DETAILS	1 OF 1
		SCALE: N.T.S.
	PIPE EMBEDMENT	VERSION: 1.0
		11/3/2023

City of Clemson - Water Distribution Specifications (Condensed)

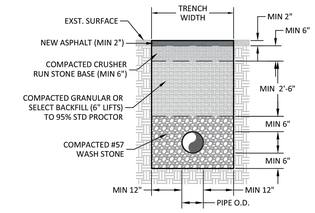
1) A pre-construction conference to include the owner, contractor, City Utilities Department personnel prior to any water line construction will be required.
2) All newly constructed water lines greater than 2 inches in diameter shall be Class 350 Ductile Iron Pipe. All 2 inch water lines shall be Class 315 PVC pipe. Each joint shall be clearly and legibly marked with the manufacturer's name or identifying symbol. Special circumstances may require different pipe material as specified or approved by the City of Clemson Utilities Director or City Engineer.
3) The contractor shall notify the City of Clemson Utilities Department a minimum of 72 hours prior the tapping of any existing water line.
4) All newly constructed water lines requiring a bore under City, County or State roads shall be steel cased per the details to center the carrier pipe and distribute weight.
5) All mechanical joints (tees, bends, connections, etc.) shall be Mega-Lugged with appropriate thrust blocking per the standard details. (See standard thrust block schedule detail)
6) All above ground swale or creek crossings will be made with ductile iron pipe per standard details.
7) All newly constructed water lines shall have a minimum of 3 feet of cover, unless otherwise approved by the Utilities Director or City Engineer.
8) No trees or shrubs shall be planted within 10 feet of water main or fire hydrant.
9) All newly constructed water lines water line trenches shall be compacted with select, clean backfill in 1 foot lifts or layers to a compaction level that meets or exceeds the 95% SPT within a roadway and 90% SPT when outside of a roadway.
10) All gate valves shall be AWWA approved, non-rising stem, mechanical joint, epoxy coated, cast-iron by Mueller or approved equal
11) All valve boxes shall be screw type, cast iron with cast iron cover, traffic-duty rated and the text "WATER" cast into lid. Valves should be placed as close to the main as practicable & clustered with other valves for ease of system operation
12) Valve boxes outside of the roadway shall have a concrete collar.
13) All fire hydrant barrels shall be painted red and the hydrant dome or top shall be painted a reflective white.
14) All fire hydrants shall be Mueller Three-Way, Centurion or approved equal. Fire Hydrants connected water mains with diameters greater than 10 inches shall have a 5 ¼"opening and hydrants connected to water mains from 6 to 8 inches shall have a 4½" opening.
15) The City of Clemson shall be granted a minimum 20' wide utility service and maintenance easement prior to the acceptance or transfer of ownership of any water lines.
16) All newly constructed water lines shall maintain a minimum 10 foot horizontal and 2 foot vertical clearance between sanitary sewer lines.
17) All 'blow-offs' for 6 inch diameter water lines shall be at least 2 inches in diameter, larger diameter water lines may require larger 'blow-offs' to determined by the design engineer and verified by City of Clemson Utilities plan review personnel.
18) All service lines shall be Type 'K' Copper as specified in the standard details. Service lines shall be sleeved with a PVC conduit under roadways and areas where damage to the service line is above normal potential, to be determined by the Utilities Inspector.
19) After construction, all water lines shall be positive pressure tested to 200 PSI for a duration of two hours, with no loss of water being acceptable. After a passing pressure test, two DHEC certified bacterial samples, each separated by 24 hours, shall be taken to verify the newly
constructed water lines are safe for consumption, per SC DHEC regulations and specifications.
20) All water lines shall be inspected, approved and certified by the City of Clemson Utilities inspection staff, design engineer and SC DHEC staff prior to issuance of permit to operate and and any acceptance by the City of Clemson.
21) Prior to the acceptance of any newly constructed water lines 'as-built' drawings must be certified and submitted by the design engineer to the City Engineer.
22) All newly constructed water lines and associated infrastructure shall include a minimum of one calendar year warranty. The City of Clemson reserves the right to prescribe a greater warranty period if deemed necessary prior to the acceptance of any water line system maintenance.
23) The City of Clemson reserves the right to charge any contractor for extensive or excessive use of water during the construction and testing process. All use of water shall be estimated and reported to the Utilities Inspector as soon as practicable.

	CITY OF CLEMSON STANDARD CONSTRUCTION DETAILS	1 OF 1
		SCALE: N.T.S.
	WATER DISTRIBUTION SPECIFICATIONS	VERSION: 1.0
		4/21/2023

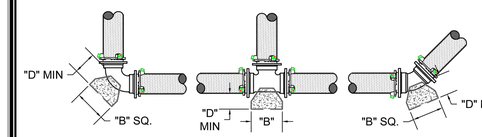
SECONDARY & COUNTY ROAD ASPHALT REPLACEMENT



MUNICIPAL ROAD ASPHALT REPLACEMENT



	CITY OF CLEMSON STANDARD CONSTRUCTION DETAILS	1 OF 1
		SCALE: N.T.S.
	ASPHALT REPLACEMENT	VERSION: 1.0
		4/21/2023

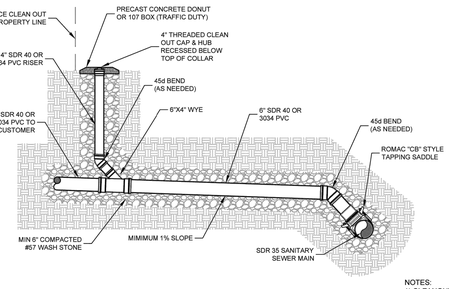


THRUST BLOCKS (MIN. DIMENSIONS IN FEET)

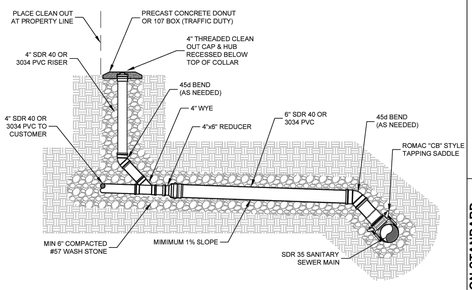
PIPE SIZE (IN.)	90° BENDS			45° BENDS			22 ½° BENDS			TEE		
	B	D	REINF. (EA. WAY)	B	D	REINF. (EA. WAY)	B	D	REINF. (EA. WAY)	B	D	REINF. (EA. WAY)
2	1.0	0.7	-	1.0	0.7	-	1.0	0.7	-	1.0	0.7	-
3	1.0	0.7	-	1.0	0.7	-	1.0	0.7	-	1.0	0.7	-
4	1.0	0.7	-	1.0	0.7	-	1.0	0.7	-	1.2	0.7	-
6	1.4	0.7	-	1.0	0.7	-	1.0	0.7	-	1.6	0.7	-
8	1.8	0.8	-	1.4	0.7	-	1.0	0.7	-	2.2	1.0	-
10	2.3	1.0	-	1.7	0.8	-	1.2	0.7	-	2.7	1.0	-
12	2.7	1.0	-	2.0	0.8	-	1.4	0.7	-	3.2	1.0	-
14	3.2	1.0	4-#5'S	2.4	1.0	3-#5'S	1.7	0.7	-	3.8	1.0	5-#5'S
16	3.6	1.0	5-#5'S	2.7	1.0	3-#5'S	1.9	0.8	2-#5'S	4.3	1.2	5-#5'S
18	4.1	1.2	5-#5'S	3.0	1.0	4-#5'S	2.2	1.0	3-#5'S	4.9	1.2	6-#5'S
20	4.5	1.2	5-#5'S	3.4	1.0	4-#5'S	2.4	1.0	3-#5'S	5.4	1.2	6-#5'S
24	5.5	1.2	6-#5'S	4.0	1.0	5-#5'S	2.9	1.0	3-#5'S	6.5	1.5	8-#5'S
30	6.8	1.5	8-#5'S	5.0	1.2	6-#5'S	3.6	1.0	5-#5'S	8.1	1.7	9-#5'S
36	8.2	1.7	9-#5'S	6.0	1.3	7-#5'S	4.3	1.2	5-#5'S	9.7	1.8	10-#5'S
42	9.6	1.8	10-#5'S	7.0	1.5	8-#5'S	5.0	1.2	6-#5'S	11.3	2.0	12-#5'S

	CITY OF CLEMSON STANDARD CONSTRUCTION DETAILS	1 OF 1
		SCALE: N.T.S.
	THRUST BLOCK SCHEDULE	VERSION: 1.0
		4/21/2023

NON-RESIDENTIAL SERVICE



RESIDENTIAL SERVICE



NOTES:
1) CLEANOUTS ARE REQUIRED EVERY 75 LF OF SERVICE LINE OR ANY INSTANCE WHERE THE SUM OF BENDS EXCEEDS 45 DEGREES.

2) A SC DHEC APPROVED BACKFLOW PREVENTION DEVICE SHALL BE REQUIRED IF THE LOWEST F.F.E. IS NOT GREATER THAN 18" ABOVE THE CLOSEST UPSTREAM MANHOLE

3) AN SERVICE CROSSING A ROADWAY OR DRIVEWAY WILL BE DEEMED "TRAFFIC DUTY" AND WILL REQUIRE MIN SDR 40 CARRIER PIPE

1 OF 1	**CITY OF CLEMSON STANDARD CONSTRUCTION DETAILS**	**SANITARY SEWER LATERAL**
	SCALE: N.T.S.	
	VERSION: 1.0	
	4/21/2023	

CITY OF CLEMSON - SANITARY SEWER SPECIFICATIONS (CONDENSED)

1) THE CITY OF CLEMSON HAS BEEN GRANTED DELEGATED REVIEW AUTHORITY BY SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (SC DHEC). THEREFORE, WRITTEN APPROVAL FROM THE CITY OF CLEMSON MUST BE OBTAINED PRIOR TO ANY SUBMISSIONS TO SC DHEC FOR PERMITTING.
2) A PRE-CONSTRUCTION CONFERENCE WITH THE CONTRACTOR, DESIGN ENGINEER, CITY OF CLEMSON ENGINEERING & UTILITIES DEPARTMENT STAFF AND SC DHEC SHALL BE HELD PRIOR TO THE CONSTRUCTION OF ANY SANITARY SEWER CONSTRUCTION OR MODIFICATION.
3) ALL WORK SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH THE APPROVED PLANS, SPECIFICATIONS AND INSTRUCTIONS GIVEN BY THE OWNER'S REPRESENTATIVE, SC DHEC AND THE CITY OF CLEMSON.
4) ALL SANITARY SEWER WORK SHALL COMPLY WITH LOCAL CODES AND ORDINANCES, APPLICABLE STATE AND FEDERAL STANDARDS AND OSHA REGULATIONS.
5) THE DESIGN ENGINEER, CITY OF CLEMSON UTILITIES DEPARTMENT AND SC DHEC MUST PERMIT, INSPECT AND APPROVE ALL WORK BEFORE BEING PLACED INTO SERVICE.
6) AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE CITY OF CLEMSON AND SC DHEC IN BOTH HARD COPY (PAPER) AND ELECTRONIC (PDF, CAD/DWG) BEFORE FINAL APPROVAL IS ISSUED.
7) ALL RIGHT-OF-WAY EASEMENT/INFORMATION ASSIGNED TO THE CITY OF CLEMSON MUST BE FILED AND RECORDED AT THE PICKENS COUNTY DEEDS AND PROPERTIES OFFICE.
8) ALL WORK SHALL CARRY A MINIMUM OF ONE CALENDAR YEAR WARRANTY AS PRESCIRBED BY THE CITY OF CLEMSON PRIOR TO ASSUMPTION OF MAINTENANCE ACTIVITIES BY THE CITY OF CLEMSON UTILITIES DEPARTMENT. THE CITY OF CLEMSON RESERVES THE RIGHT TO REQUIRE LONGER WARRANTY PERIODS IF DEEMED NECESSARY BYTHE CITY ENGINEER OR UTILITIES DIRECTOR.
9) AN APPROVED ENCROACHMENT PERMIT MUST BE OBTAINED FOR ANY SANITARY SEWER WORK OCCURING WITHIN A STREET RIGHT-OF-WAY THROUGH THE CITY OF CLEMSON PUBLIC WORKS DEPARTMENT.
10) THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS TO EXISTING ROADWAYS USED DURING CONSTRUCTION. THE CONTRACTOR SHALL REMOVE ANY DIRT, MUD OR DEBRIS FROM THE HIGHWAY/ROADWAY AND WILL BE HELD RESPONSIBLE FOR ANY DAMAGES CAUSED BY LACK OF COMPLIANCE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REPAVING THE ENTIRE AFFECTED ROADWAY SURFACE IF DEEMED NECESSARY BY THE CITY ENGINEER OR UTILITIES DIRECTOR FOR EXCESSIVE ROADWAY CUTS OR DAMAGE.
11) NO TREES OR SHRUBS SHALL BE PLANTED OR ALLOWED WITHIN 10 LINEAR FEET OF A SANITARY SEWER LINE
12) THE CITY OF CLEMSON SHALL BE PROVIDED WITH A CERTIFICATION LETTER FROM THE PIPE SUPPLIER THAT ALL PVC PIPE HAS BEEN STORED INSIDE FROM THE TIME OF MANUFACTURE
13) EACH JOINT OF PIPE SHALL BE CLEARLY AND LEGIBLY MARKED WITH THE MANUFACTURER'S NAME AND IDENTIFYING SYMBOL.
14) ALL SANITARY SEWER PIPE SHALL BE PVC (SDR 35) OR DUCTILE IRON PIPE (DIP) WITH PROTECTO 401TM CERAMIC EPOXY COATING
15) A MINIMUM OF 4 FEET OF COVER DEPTH SHALL BE MAINTAINED FOR ALL PVC PIPE.
16) ANY TIME THAT 4 FEET MINIMUM OF COVER DEPTH CANNOT BE MAINTAINED OR EXCEEDS 10 FEET OF COVER DEPTH, DUCTILE IRON PIPE SHALL BE REQUIRED AND MUST ALSO BE APPROVED BY THE CITY ENGINEER OR UTILITIES DIRECTOR
17) ANY ROADWAY OR CREEK CROSSINGS WILL REQUIRE DUCTILE IRON PIPE AND MAY REQUIRE ENCASEMENT W/ PIPE SPIDERS AT THE DISCRETION OF THE CITY OF CLEMSON.
18) ALL EXCAVATIONS SHALL BE COMPACTED IN ONE (1) FOOT LIFTS OR LAYERS AND SHALL BE CLEAN OF ANY DEBRIS. BACKFILL IN ROADWAY ROW'S SHALL COMPACTED TO THE 95% STD PROCTOR. ALL OTHER BACKFILLS SHALL BE COMPACTED TO THE 90% STD PROCTOR.
19) PIPE BEDDING AND BACKFILL SHALL BE CAREFULLY CONTROLLED AT THE DISCRETION OF THE UTILITIES INSPECTOR.

	CITY OF CLEMSON STANDARD CONSTRUCTION DETAILS	1 OF 2
		SCALE: N.T.S.
	SANITARY SEWER SPECIFICATIONS	VERSION: 1.0
		2/21/2024

CITY OF CLEMSON - SANITARY SEWER SPECIFICATIONS (CONDENSED)

20) ALL NEWLY CONSTRUCTED SANITARY SEWER LINES WILL BE LOW PRESSURE AIR TESTED TO ASTM F1417 AND UNI B-6-90 STANDARDS AND MANDREL TESTED.
21) THE CONSTRACTOR SHALL PROVIDE CITY OF CLEMSON APPROVED, STANDARD PRE-CAST MANHOLES AT ALL BENDS AND CHANGES IN GRADE OF SANITARY SEWER LINES AND CONNECTIONS TO PRE-EXISTING SANITARY SEWER LINES.
22) ALL NEWLY CONSTRUCTED MANHOLES SHALL BE VACUUM TESTED TO ASTM C1244 STANDARDS
23) REINFORCED PRE-CAST MANHOLES WITH FORMED INVERTS SHALL BE USED UNLESS OTHERWISE APPROVED BY THE CITY OF CLEMSON.
24) ALL CONNECTIONS TO MANHOLES WILL REQUIRE A RUBBER PIPE BOOT AND AND PIPE STRAP FOR THE CORRESPONDING PIPE SIZE.
25) IN CERTAIN WET OR OTHER CIRCUMSTANCES A SEAL COATING (SPECIFIED BY THE CITY OF CLEMSON) MAY BE REQUIRED FOR THE INTERIOR AND/OR EXTERIOR WALLS IF DEEMED NECESSARY THE CITY ENGINEER, UTILITIES DIRECTOR OR UTILITIES INSPECTOR.
26) IF A MANHOLE INVERT MUST BE POURED IN A MANHOLE THE BENCH MAY CONTAIN CONCRETE BRICKS IN A STANDARD CONCRETE MIX
27) REINFORCED RISER RINGS SHALL BE USED FOR FINAL RING ADJUSTMENT TO SURFACE. THE SUM OF MULTIPLE RINGS SHALL NOT EXCEED 12 INCHES. A STANDARD MANHOLE PRE-CAST RISER SECTION WITH A STEP SHALL BE USED IN LIEU OF ADDITIONAL RISER RINGS.
28) ALL STEPS SHALL BE PLASTIC/RUBBER COATED STEEL AT 16" O.C. NO MANHOLE SHALL REQUIRE ENTRY WITHOUT ACCESS TO A STEP IN EXCESS OF 18 INCHES.
29) THE CONTRACTOR IS RESPONSIBLE FOR RAISING FINAL RIM ELEVATION EQUAL TO ROADWAY ELEVATION OR FINISH GRADE FOR MANHOLES WITHIN TRAVEL LANES
30) THE CONTRACTOR IS RESPONSIBLE FOR RAISING FINAL RIM ELEVATION TO 1 FOOT ABOVE FINISH GRADE FOR MANHOLES LOCATED IN BACK EASEMENTS AND RAISING FINAL RIM ELEVATIONS TO 1 FOOT ABOVE FLOOD PLAIN ELEVATION IF LOCATED WITHIN A FLOOD PLAIN
31) A MAXIMUM OF 18 INCHES IS ALLOWED BETWEEN THE INVERT ELEVATIONS OF THE ENTRANCE AND EXIT OF SEWAGE (SLIDE) BEFORE AN OUTSIDE DROP IS REQUIRED.
32) DROP MANHOLES WILL REQUIRE AND OUTSIDE ALL DUCTILE IRON DROP (PROTECTO 401TM COATED) AND SHALL BE COMPLETELY ENCASED IN STANDARD CONCRETE MIX
33) ALL MANHOLE RING & COVERS SHALL BE TRAFFIC DUTY RATED REGARDLESS OF LOCATION AND WEIGH APPROXIMATELY 200 POUNDS & 12 POUNDS, RESPECTIVELY. ALL COVERS SHALL BE VENTED UNLESS OTHERWISE SPECIFIED. ALL MANHOLES LOCATED WITHIN A FLOOD PLAIN SHALL ALSO HAVE BOLTED A BOLTED RING & COVER.
34) THE CITY OF CLEMSON PREFERS SERVICE CONNECTIONS AT THE MANHOLE. CONNECTIONS TO SEWER MAINS SHALL REQUIRE PRIOR APPROVAL BY THE CITY OF CLEMSON UTILTIES DEPARTMENT.
35) SERVICE LATERALS SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE OR SCHEDULE 40 PVC PIPE TO THE PROPERTY LINE WITH A CLEANOUT AND CLEARLY MARKED IF NOT PLACED INTO IMMEDIATE USE. ADDITIONAL CLEANOUTS ARE REQUIRED EVERY 75 LINEAR FEET AND ANY BENDS GREATER THAN 45 DEGREES.
36) CONCRETE COLLARS OR CAST IRON TRAFFIC DUTY 107 BOXES ARE TO BE USED TO PROTECT AND IDENTIFY ALL CLEANOUTS. ALL CLEANOUTS SHALL BE SUFFICIENTLY RECESSED IN ORDER TO PROTECT THE CLEANOUT FROM DAMAMGE.

	CITY OF CLEMSON STANDARD CONSTRUCTION DETAILS	2 OF 2
		SCALE: N.T.S.
	SANITARY SEWER SPECIFICATIONS	VERSION: 1.0
		4/21/2023

BRITT PETERS AND ASSOCIATES INC.
consulting engineers
Copyright © Britt, Peters & Associates, Inc.
101 Falls Park Drive
Greenville, SC 29601
(864) 271-8869
Greenville • Charleston
Norfolk • Charlotte
www.brittpeters.com

SEALS

SOUTH CAROLINA — BRITT, PETERS & ASSOCIATES, INC. — CONSULTING ENGINEERS — No. C00781 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — JOHN A. CORNELL — 30812 — 1/10/25

CLEMSON PARK

114 CLEMSON PARK RD
CLEMSON, SC 29631

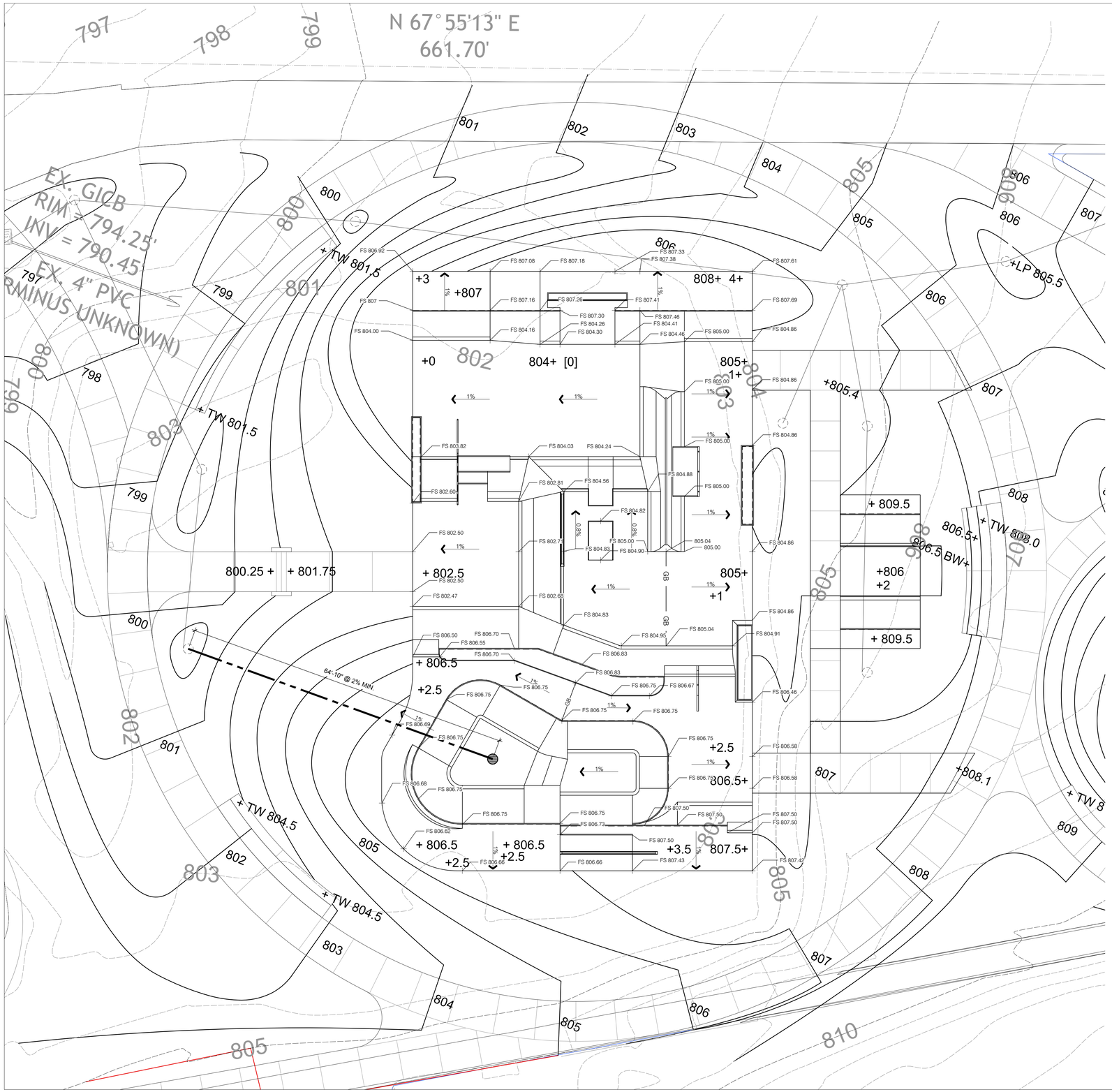
REVISIONS:

NO:	DATE	DESCRIPTION
0	11/01/2024	100% SET
1	12/17/2024	CITY REVISIONS
2	01/10/2025	CITY REVISIONS

Project Manager:	JAC
Project Engineer:	TAH
Drawn By:	MPM

Sheet Title: SITE DETAILS

Sheet Number:	Project Number:
C5.3	240385
	Date: 11/01/2024



DRAINAGE SCHEDULE

SYMBOL	DESCRIPTION	QTY	DETAIL
L-01	AREA DRAIN	1	2/SK9.0
L-02	4" SDR 35 DRAIN LINE	65 LF	

GRADING NOTES

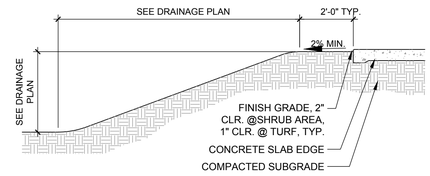
1. ALL GRADING SHALL BE IN ACCORDANCE WITH THE LOCAL GRADING CODE AND ANY SPECIAL REQUIREMENTS OF THE GRADING PERMIT.
2. CONTRACTOR TO VERIFY GRADES AND NOTIFY OWNER'S CONSTRUCTION ADMINISTRATOR PRIOR TO START OF GRADING WORK.
3. SLOPES SHALL BE NO STEEPER THAN 3' HORIZONTAL TO 1' VERTICAL (3:1) AND SHALL HAVE NOT LESS THAN 90% COMPACTION OUT TO THEIR FINISH SURFACES.
4. ALL PAVED AREAS SHALL SLOPE AS SHOWN ON PLANS WITH A 2% MAXIMUM FALL. PLANTED AREAS SHALL HAVE A MINIMUM 2% FALL.
5. FINISH GRADE SHALL HAVE A UNIFORM SURFACE, FREE OF LUMPS, BUMPS AND DEPRESSIONS AND ANY OBJECTS THAT MAY PREVENT A POSITIVE FLOW TO DRAIN.
6. ALL PROPOSED PAVING SURFACES SHALL MEET EXISTING PAVING SURFACES WITH SMOOTH AND CONTINUOUS TRANSITIONS AND FLUSH ALONG ENTIRE EDGE.
7. CONCRETE WALKS TO HAVE A MAXIMUM CROSS SLOPE OF 2% AND SHALL MEET ALL CITY AND COUNTY REQUIREMENTS.
8. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS, EXISTING DRAINAGE STRUCTURES, PARKING LOT IMPROVEMENTS, AND FINISH FLOOR ELEVATIONS. NOTIFY THE OWNER'S CONSTRUCTION ADMINISTRATOR IMMEDIATELY UPON NOTING ANY DISCREPANCIES.
9. FINISH GRADE AT TURF AREAS SHALL BE ONE INCH BELOW FINISH SURFACE OF SIDEWALKS, CURBS OR PAVED AREAS. PLANTING AREA FINISH GRADE SHALL BE 2" BELOW SAME UNLESS OTHERWISE SPECIFIED.
10. ALL CONSTRUCTION AREAS SHALL BE FREE OF ROCK, DEBRIS, ETC. ALL EXISTING WEEDS SHALL BE REMOVED.
11. CONTRACTOR SHALL MEET EXISTING GRADE AT GRADING LIMITS WITH A SMOOTH AND CONTINUOUS TRANSITION.

GRADING LEGEND:

- EXISTING CONTOURS
- PROPOSED CONTOURS
- GB — GB — PROPOSED GRADE BREAK
- XXX.XX FS — PROPOSED ELEVATIONS
- PROPOSED FLOW DIRECTION

BS	BOTTOM OF STEP
FG	FINISH GRADE
FS	FINISH SURFACE
HP	HIGH POINT
INV	INVERT ELEVATION (MAY CHANGE IN FIELD)
PA	PLANTING AREA
TD	TOP OF DRAIN
TL	TOP OF LEDGE
TP	TOP OF PAD
TR	TOP OF RAIL
TS	TOP OF STEP

XXXX — EXISTING ELEVATION (VERIFY IN FIELD)



NOTES

1. TYPICAL SLOPE DETAIL FOR INFORMATIONAL PURPOSES ONLY. ALL SLOPE GRADING AND DRAINAGE SHALL CONFORM TO APPROVED GRADING PLAN.

TYPICAL SLOPE FACTORS

1:1	2:1	3:1	4:1	5:1
1' / 1'	1' / 2'	1' / 3'	1' / 4'	1' / 5'

1 TYPICAL SLOPE DETAIL
3/4" = 1'-0" P-PIP-CLEMSON-34

NORTH

0 5' 10' 20'
Scale: 1" = 10'-0"

NOT FOR CONSTRUCTION

SPOHN RANCH SKATEPARKS
DESIGN. BUILD. COME TOGETHER.
6824 S. CENTINELA AVE. - LOS ANGELES, CA 90230
OFFICE (626) 330-5803 ~ FAX (626) 330-5803

REVISIONS

NO	DATE	DESCRIPTION	BY
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

STAMP:

SKATE PARK DESIGNED BY: CW
DOCUMENTS BY: DM / AL
PLAN CHECKED BY: DH
DATE: 8/16/2024

PROJECT TITLE
CLEMSON PARK SKATEPARK

SHEET TITLE
GRADING + DRAINAGE PLAN

SHEET
SK6.0
OF XX