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USC UPSTATE BASEBALL FIELD DRAINAGE SYSTEM IMPROVEMENTS

FOR THE
**UNIVERSITY OF SOUTH CAROLINA
SPARTANBURG COUNTY, SOUTH CAROLINA**

STATE PROJECT NO. H34-I376



LOCATION MAP

SCALE: 1" = 1 MILE

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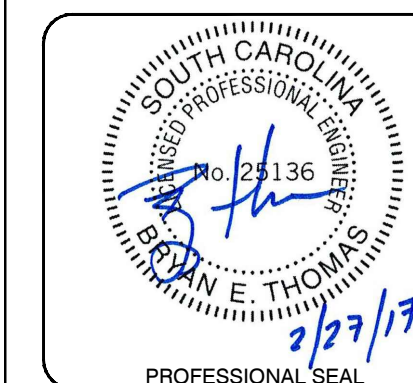
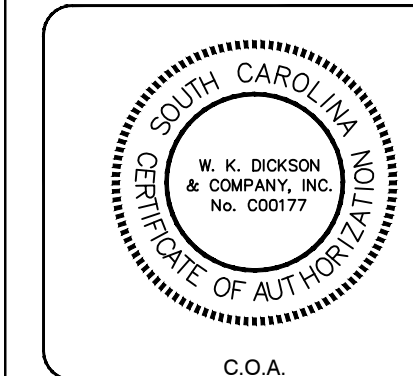
NOTICE TO CONTRACTOR

- PRIOR TO CONSTRUCTION, DIGGING, OR EXCAVATION THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES (PUBLIC OR PRIVATE) THAT MAY EXIST AND CROSS THROUGH THE AREA(S) OF CONSTRUCTION, WHETHER INDICATED ON THE PLANS OR NOT. CALL "811" A MINIMUM OF 72 HOURS PRIOR TO DIGGING OR EXCAVATING. REPAIRS TO ANY UTILITY DAMAGED RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.



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Call before you dig**

WK DICKSON
community infrastructure consultants
1320 MAIN STREET
SUITE 400
COLUMBIA, SC 29201
(781) 803-786-4261
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NO.	DATE	DESCRIPTION	BY

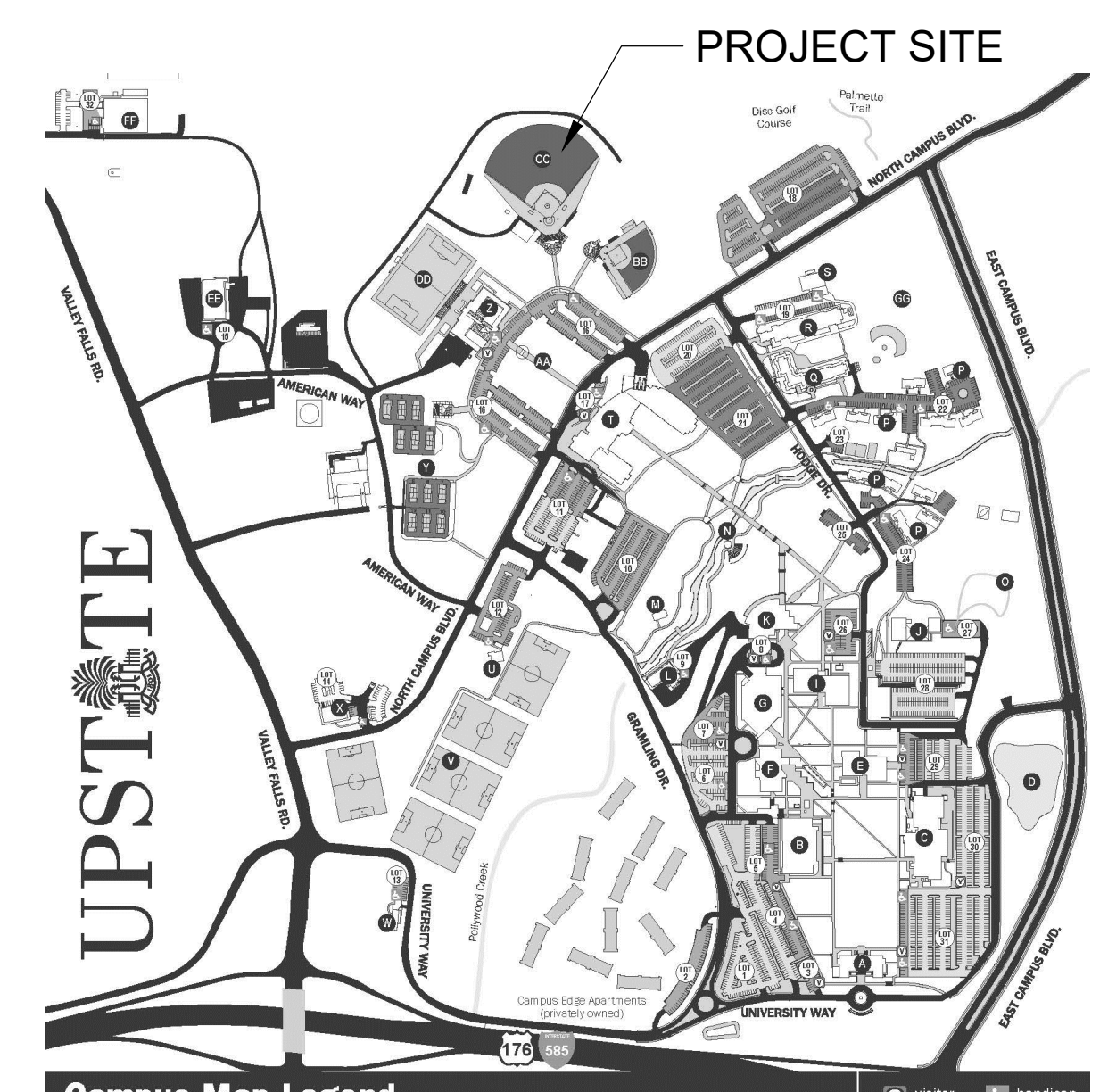
PROJECT NAME:
USC UPSTATE BASEBALL FIELD DRAINAGE SYSTEM IMPROVEMENTS
FOR THE
UNIVERSITY OF SOUTH CAROLINA
SPARTANBURG COUNTY, SOUTH CAROLINA
DRAWING TITLE:
COVER SHEET

PROJ. MGR.: BET
DESIGN BY: MDJ
DRAWN BY: MDJ
PROJ. DATE: FEB 27, 2017
DRAWING NUMBER:
1 OF 5
WKD PROJ. NO.:
20170043.00.CA

BID DOCUMENTS - DO NOT USE FOR CONSTRUCTION

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL APPLICABLE AGENCIES AND AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL APPLICABLE AGENCIES AND AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL APPLICABLE AGENCIES AND AGENCIES.

LEGEND table with columns for EXISTING and PROPOSED symbols. Includes 5-FOOT CONTOUR, 1-FOOT CONTOUR, STORM DRAINAGE PIPE, DROP INLET or CATCH BASIN, RIP RAP, FENCE, ROADWAY SIGN, TREE LINE, SANITARY SEWER GRAVITY LINE, SANITARY SEWER MANHOLE, POWER/UTILITY POLE, GUY WIRE, LIGHT POLE, TRANSFORMER, UNDERGROUND GAS LINE, GAS VALVE, OVERHEAD UTILITY LINE, UNDERGROUND UTILITY LINE, TELEPHONE PEDESTAL, IRRIGATION LINE, WATER LINE, WATER VALVE, WATER METER, WELL, FIRE HYDRANT, TOP OF BANK, BOTTOM OF BANK, PROPERTY LINE, LIMITS OF DISTURBANCE, REMOVE EXISTING STORM DRAINAGE, UNDERDRAIN FLOW DIRECTION, SILT FENCE, DOUBLE ROW SILT FENCE.



Campus Map Legend table listing building names and their corresponding letter codes (A through V) for reference on the project site map.

SCDHEC EROSION AND SEDIMENT CONTROL NOTES:

- 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:
A. WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
B. 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 INDICATES 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 ANY SEDIMENTS BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE.
5. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY 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 S.C. 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, INSPECTIONS 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 WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES 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:
A. WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL;
B. WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;
C. FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND
D. 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 THE REQUIREMENTS 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 REASONABLY 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. CONTRACTORS ARE REQUIRED TO HAVE RAIN GAUGES AT THE CONSTRUCTION SITE AND THE RAIN TOTALS DOCUMENTED FOR REVIEW BY SPARTANBURG COUNTY AND SCDHEC.
21. A PRE-CONSTRUCTION CONFERENCE MUST BE HELD WITH SPARTANBURG COUNTY AT LEAST 48 HOURS PRIOR TO BEGINNING ANY LAND DISTURBING ACTIVITIES. THE OWNER, DESIGN ENGINEER AND CONTRACTOR MUST BE PRESENT AND HAVE OBTAINED THE STORMWATER PERMIT, STAMPED APPROVED PLANS AND THE NOI APPROVAL LETTER FROM SCDHEC BEFORE CALLING SPARTANBURG COUNTY TO SCHEDULE THIS MEETING.

14 DAY STABILIZATION CLAUSE

ALL DISTURBED AREAS WHICH ARE TO BE LEFT IDLE FOR A PERIOD OF 14 DAYS OR LONGER ARE TO RECEIVE TEMPORARY VEGETATION OR MULCH.

EROSION CONTROL MAINTENANCE SCHEDULE

ALL SEDIMENT AND EROSION CONTROLS ARE TO BE INSPECTED AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS. CONTRACTOR TO DOCUMENT WITH SCDHEC APPROVED INSPECTION REPORTS AND LOGGED IN THE PROJECT SWPPP.

GENERAL NOTES

- 1. REFERENCE IS MADE TO THE FOLLOWING:
A. SPARTANBURG COUNTY ONLINE GIS DATA.
B. MISCELLANEOUS SITE PLANS FOR USC UPSTATE PREPARED BY OTHERS, PROVIDED BY USC UPSTATE.
2. ALL ELEVATIONS SHOWN ARE APPROXIMATE AND BASED ON GIS LIDAR INFORMATION FROM SPARTANBURG COUNTY.
3. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. VERIFY ALL FIELD CONDITIONS AND THE EXACT LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING DEMOLITION AND CONSTRUCTION. IF CONDITIONS ARE DIFFERENT FROM THAT SHOWN ON THE PLANS, STOP WORK AND NOTIFY THE ENGINEER.
4. ALL WORK FOR THE PROJECT SHALL CONFORM TO THE PROJECT SPECIFICATIONS FOUND IN THE PROJECT MANUAL (CONTRACT DOCUMENTS AND SPECIFICATIONS).
5. PROMPTLY INFORM THE ENGINEER OF ANY ERROR OR DISCREPANCY DISCOVERED IN THESE DRAWINGS OR SPECIFICATIONS OR CONFLICT BETWEEN THE DRAWINGS OR SPECIFICATIONS.
6. ALL EXCESS TOPSOIL FROM THE PROJECT SITES SHALL BE THE PROPERTY OF THE OWNER AND SHALL BE PLACED AT A LOCATION ON CAMPUS DETERMINED BY THE OWNER.
7. CONTRACTOR IS RESPONSIBLE FOR THE LAYOUT OF THE PROPOSED SITE AND LIMITS OF WORK.
8. ANY UTILITIES OR FACILITIES DAMAGED DURING THE PROJECT BY THE CONTRACTOR'S PERSONNEL OR EQUIPMENT SHALL BE PROMPTLY REPAIRED AT THE CONTRACTOR'S EXPENSE. HAND DIGGING TO PROTECT UTILITIES FROM DAMAGE SHOULD BE ANTICIPATED.
9. THE CONTRACTOR IS RESPONSIBLE FOR CONDUCTING WORK IN ACCORDANCE WITH THE LATEST REQUIREMENTS AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
10. ALL DEMOLITION DEBRIS SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS AND SPECIFICATIONS, LATEST REVISION.
11. PROMPTLY INFORM THE ENGINEER OF ANY ERROR OR DISCREPANCIES DISCOVERED IN THE DRAWINGS OR SPECIFICATIONS OR CONFLICTS BETWEEN THE DRAWING AND SPECIFICATIONS IN ORDER FOR CORRECTIONS TO BE MADE.
12. ALL WORK AND MATERIALS MUST CONFIRM WITH SPARTANBURG COUNTY REGULATIONS AND SPECIFICATIONS, LATEST REVISIONS AT THE BEGINNING OF CONSTRUCTION.
13. KEEP ALL ADJACENT AREAS TO THE LIMITS OF WORK CLEAN AND FREE OF DEBRIS/MATERIALS/EQUIPMENT AT ALL TIMES.

GRADING AND EROSION CONTROL NOTES:

- 1. WHEN GRADING BETWEEN CONTOURS AND BETWEEN POINTS OF SPOT ELEVATIONS, GRADE ON A UNIFORM SLOPE. PROPOSED GRADES SHOWN ARE FINAL SURFACE ELEVATIONS.
2. EACH SECTION OF STORM DRAINAGE PIPE SHALL BE LAID TO SPECIFIED GRADE AND LAID UPGRADE.
3. ALL VEGETATION TOPSOIL SHALL BE STRIPPED AND STOCKPILED PRIOR TO PLACING FILL, PROTECT STOCKPILE FROM EROSION.
4. CONTRACTOR SHALL, FOR ALL GRASSED AREAS, BE RESPONSIBLE FOR REPLACING ERODED SOIL AND GRASS SEED UNTIL AN APPROVED STAND OF GRASS IS ESTABLISHED.
5. PROPOSED FILL SOILS SHALL BE SUITABLE MATERIAL AND FREE OF ORGANIC MATERIAL, RUBBLE, DEBRIS, AND HIGHLY PLASTIC CLAYS OR SILTS.
6. CONTRACTOR SHALL, BEFORE BEGINNING GRADING WORK ON SITE, STAKE SILT FENCE AND INSTALL ALL PERIMETER EROSION CONTROLS AS SHOWN IN THESE PLANS.
7. CONTRACTOR SHALL BE AWARE OF EXISTING UTILITY LINES DURING PIPE LINE INSTALLATION. CONTRACTOR SHALL NOTIFY UTILITY COMPANIES SUCH AS THE LOCAL ELECTRIC COMPANY, AT&T, ETC. FOR LOCATION OF OTHER UTILITIES NOT SHOWN ON PLAN. CALL PALMETTO UTILITIES PROTECTION SERVICES 811 FOR UNDERGROUND UTILITY LINES LOCATION. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
8. ALL NEWLY CONSTRUCTED SLOPES WHICH ARE STEEPER THAN 2.5 TO 1 MUST BE STABILIZED BY INSTALLATION OF EROSION CONTROL MATTING. OTHER AREAS SUCH AS CHANNEL BOTTOMS, CHANNEL SIDESLOPES, AND SLOPES NEAR SENSITIVE WETLAND AREAS MAY ALSO REQUIRE EROSION CONTROL MATTING WHERE SHOWN ON PLANS. USE NORTH AMERICAN GREEN S150 OR APPROVED EQUAL. EQUAL PRODUCTS MUST BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
9. PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES AS MAY BE REQUIRED TO CONTROL SOIL EROSION DURING CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION.
10. ALL AREAS WHICH ARE DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE SEEDED AT NO ADDITIONAL EXPENSE TO THE OWNER.
11. INSTALL PERMANENT VEGETATIVE COVER AND THE LONG-TERM EROSION PROTECTION MEASURES OR STRUCTURES AS SOON AS PRACTICAL IN THE DEVELOPMENT PROCESS.
12. ALL DISTURBED AREAS NOT PAVED SHALL BE GRASSED OR LANDSCAPED. USE TEMPORARY PLANT COVER, MULCHING, AND/OR STRUCTURES TO CONTROL RUNOFF AND PROTECT AREA SUBJECT TO EROSION DURING CONSTRUCTION.
13. ALL SEDIMENT AND EROSION CONTROLS ARE TO BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. MAINTENANCE OF SEDIMENT TRAPPING DEVICES SHALL BE PERFORMED AS NECESSARY PER THESE INSPECTIONS. DAMAGED OR INEFFECTIVE DEVICES SHALL BE REPAIRED OR REPLACED, AS NECESSARY.
14. ADDITIONAL EROSION CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION TO CONTROL EROSION AND/OR OFF SITE SEDIMENTATION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE STABILITY OF ALL GRADED AND/OR CLEARED AREAS UNTIL PERMANENT GROUND COVER IS ESTABLISHED. ANY AREAS DAMAGED BY EROSION SHALL BE REPAIRED TO ITS ORIGINAL CONDITION AND PROTECTED FROM FURTHER EROSION AT NO ADDITIONAL COST TO THE OWNER.
15. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETED AND THE SITE STABILIZED.
16. ALL EROSION CONTROL METHODS SHALL BE IN ACCORDANCE WITH "SCDHEC STORM WATER MANAGEMENT & SEDIMENT CONTROL BMP HANDBOOK FOR LAND DISTURBANCE ACTIVITY".
17. ALL DISTURBED AREAS, INCLUDING THE CONTRACTORS STAGING AREA, HAUL ROUTES, GRADING LIMITS, ETC., SHALL BE RESTORED TO A SMOOTH LINE AND GRADE WITH POSITIVE DRAINAGE. THE CONTRACTOR SHALL PERMANENTLY SEED ALL DISTURBED AREAS.

WK DICKSON community infrastructure consultants. 1320 MAIN STREET SUITE 400 COLUMBIA, SC 29201 (803) 786-4261 (803) 786-4263 WWW.WKDICKSON.COM

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER W. K. DICKSON & COMPANY, INC. No. 000177 C.O.A.

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER W. K. DICKSON & COMPANY, INC. No. 25136 E. THOMAS BROWN 2/27/17 PROFESSIONAL SEAL

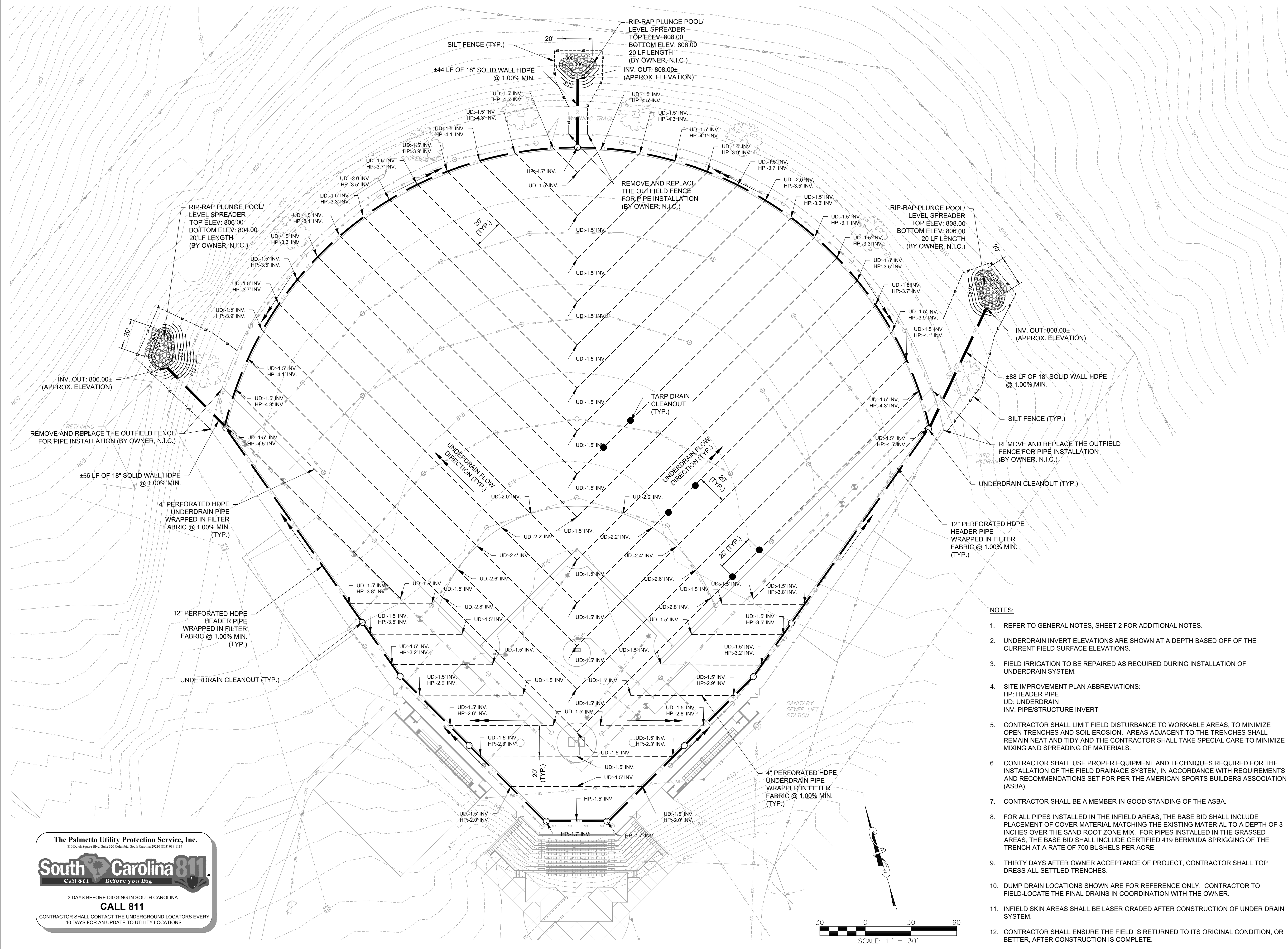
REVISION RECORD table with columns for NO., DATE, and DESCRIPTION.

PROJECT NAME: USC UPSTATE BASEBALL FIELD DRAINAGE SYSTEM IMPROVEMENTS FOR THE UNIVERSITY OF SOUTH CAROLINA SPARTANBURG COUNTY, SOUTH CAROLINA DRAWING TITLE: GENERAL NOTES

PROJ. MGR.: BET DESIGN BY: MDJ DRAWN BY: MDJ PROJ. DATE: FEB 27, 2017 DRAWING NUMBER:

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- NOTES:**
- REFER TO GENERAL NOTES, SHEET 2 FOR ADDITIONAL NOTES.
 - UNDERDRAIN INVERT ELEVATIONS ARE SHOWN AT A DEPTH BASED OFF OF THE CURRENT FIELD SURFACE ELEVATIONS.
 - FIELD IRRIGATION TO BE REPAIRED AS REQUIRED DURING INSTALLATION OF UNDERDRAIN SYSTEM.
 - SITE IMPROVEMENT PLAN ABBREVIATIONS:
 HP: HEADER PIPE
 UD: UNDERDRAIN
 INV: PIPE/STRUCTURE INVERT
 - CONTRACTOR SHALL LIMIT FIELD DISTURBANCE TO WORKABLE AREAS, TO MINIMIZE OPEN TRENCHES AND SOIL EROSION. AREAS ADJACENT TO THE TRENCHES SHALL REMAIN NEAT AND TIDY AND THE CONTRACTOR SHALL TAKE SPECIAL CARE TO MINIMIZE MIXING AND SPREADING OF MATERIALS.
 - CONTRACTOR SHALL USE PROPER EQUIPMENT AND TECHNIQUES REQUIRED FOR THE INSTALLATION OF THE FIELD DRAINAGE SYSTEM, IN ACCORDANCE WITH REQUIREMENTS AND RECOMMENDATIONS SET FOR PER THE AMERICAN SPORTS BUILDERS ASSOCIATION (ASBA).
 - CONTRACTOR SHALL BE A MEMBER IN GOOD STANDING OF THE ASBA.
 - FOR ALL PIPES INSTALLED IN THE INFIELD AREAS, THE BASE BID SHALL INCLUDE PLACEMENT OF COVER MATERIAL MATCHING THE EXISTING MATERIAL TO A DEPTH OF 3 INCHES OVER THE SAND ROOT ZONE MIX. FOR PIPES INSTALLED IN THE GRASSED AREAS, THE BASE BID SHALL INCLUDE CERTIFIED 419 BERMUDA SPRIGGING OF THE TRENCH AT A RATE OF 700 BUSHELS PER ACRE.
 - THIRTY DAYS AFTER OWNER ACCEPTANCE OF PROJECT, CONTRACTOR SHALL TOP DRESS ALL SETTLED TRENCHES.
 - DUMP DRAIN LOCATIONS SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR TO FIELD-LOCATE THE FINAL DRAINS IN COORDINATION WITH THE OWNER.
 - INFIELD SKIN AREAS SHALL BE LASER GRADED AFTER CONSTRUCTION OF UNDER DRAIN SYSTEM.
 - CONTRACTOR SHALL ENSURE THE FIELD IS RETURNED TO ITS ORIGINAL CONDITION, OR BETTER, AFTER CONSTRUCTION IS COMPLETE.

The Palmetto Utility Protection Service, Inc.
 810 Duck Square Blvd, Suite 130, Columbia, South Carolina 29210 (803) 939-1117

South Carolina 811
 Call 811 Before you Dig

3 DAYS BEFORE DIGGING IN SOUTH CAROLINA
CALL 811

CONTRACTOR SHALL CONTACT THE UNDERGROUND LOCATORS EVERY 10 DAYS FOR AN UPDATE TO UTILITY LOCATIONS.

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 community infrastructure consultants

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 BRUCE E. THOMAS
 2/27/17
 PROFESSIONAL SEAL

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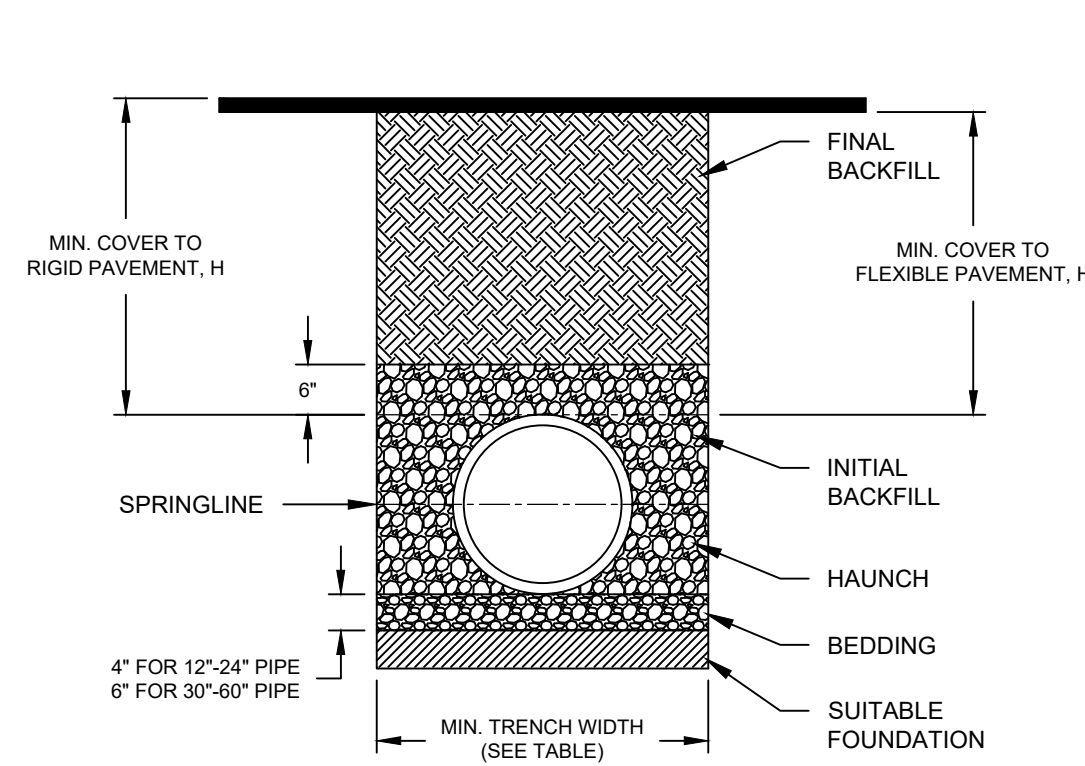
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PROJECT NAME: USC UPSTATE BASEBALL FIELD DRAINAGE SYSTEM IMPROVEMENTS
 FOR THE UNIVERSITY OF SOUTH CAROLINA
 SPARTANBURG COUNTY, SOUTH CAROLINA

DRAWING TITLE: SITE IMPROVEMENT PLAN

PROJ. MGR.: BET
 DESIGN BY: MDJ
 DRAWN BY: MDJ
 PROJ. DATE: FEB 27, 2017
 DRAWING NUMBER:
3 OF 5
 WKD PROJ. NO.: 20170043.00.CA

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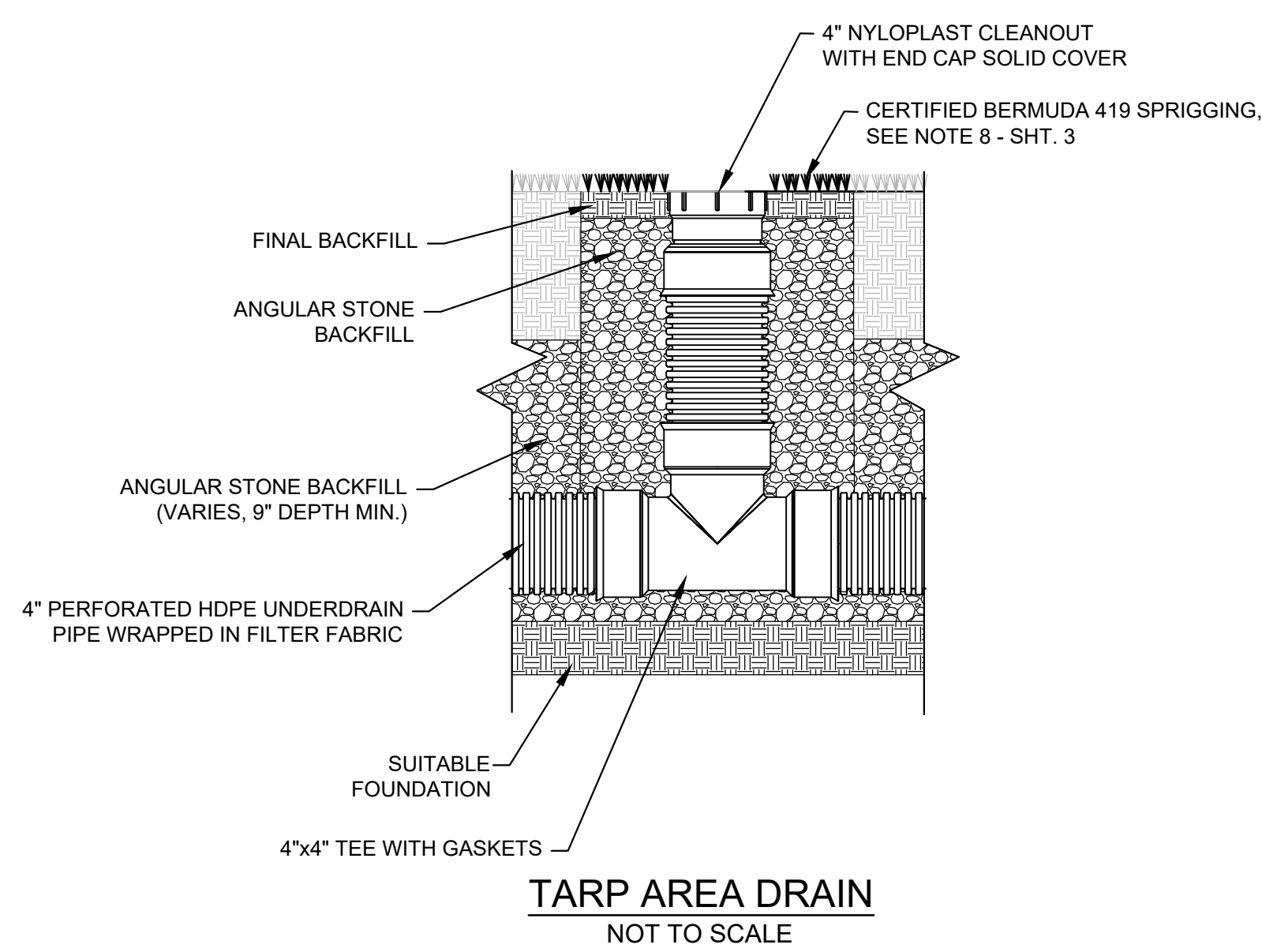
RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
(100mm)	(533mm)
6"	23"
(150mm)	(584mm)
8"	26"
(200mm)	(660mm)
10"	28"
(250mm)	(711mm)
12"	30"
(300mm)	(762mm)
15"	34"
(375mm)	(864mm)
18"	39"
(450mm)	(991mm)
24"	48"
(600mm)	(1219mm)
30"	56"
(750mm)	(1422mm)
36"	64"
(900mm)	(1626mm)
42"	72"
(1050mm)	(1829mm)
48"	80"
(1200mm)	(2032mm)
60"	96"
(1500mm)	(2438mm)

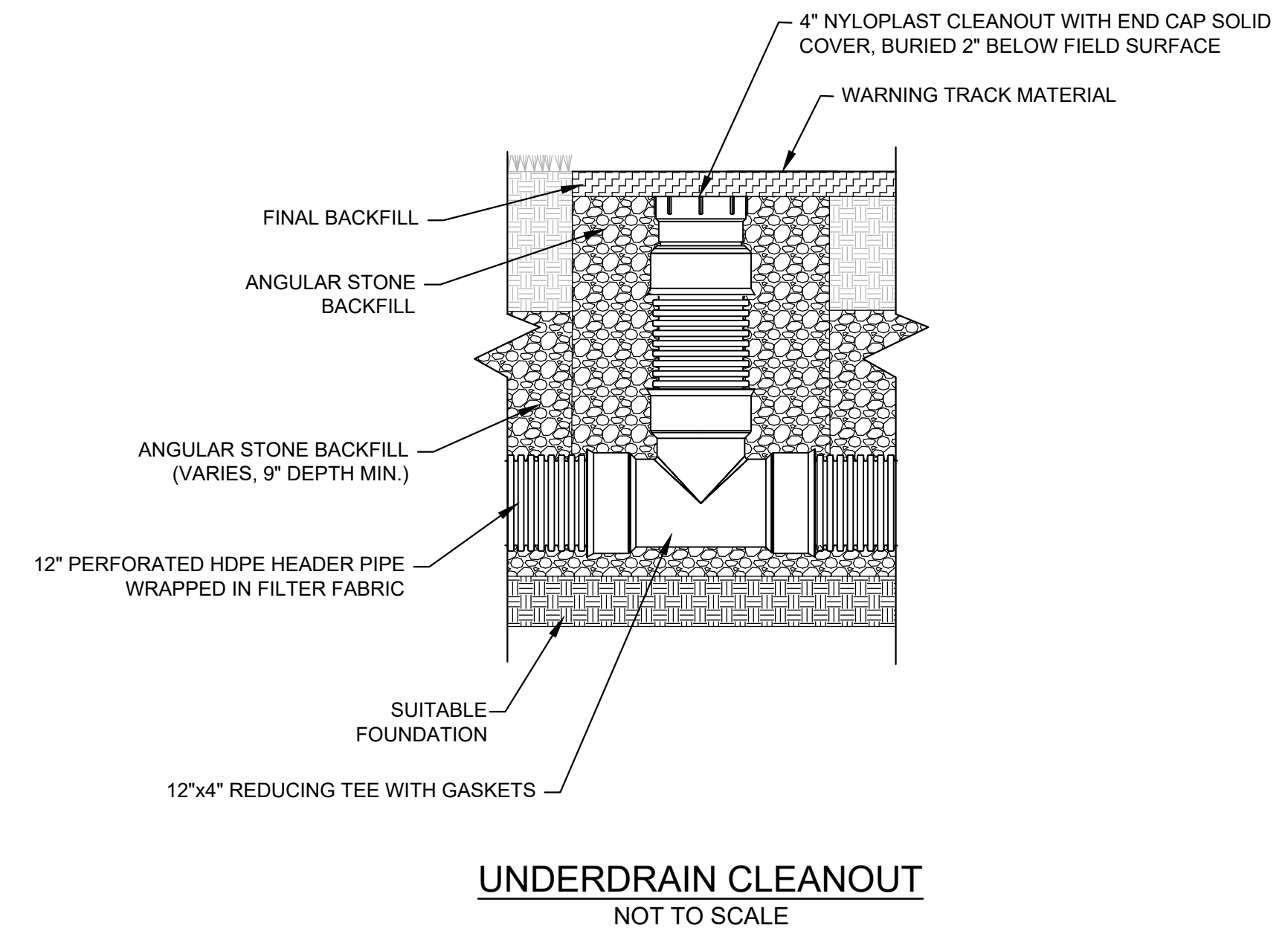
NOTES:

- ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION
- MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
- FOUNDATION:** WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
- BEDDING:** SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-1500mm).
- INITIAL BACKFILL:** SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
- MINIMUM COVER:** MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 60" DIAMETER PIPE. MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. FOR TRAFFIC APPLICATIONS WITH LESS THAN FOUR FEET OF COVER, EMBEDMENT OF THE PIPE SHALL BE USING ONLY A CLASS I OR CLASS II BACKFILL.

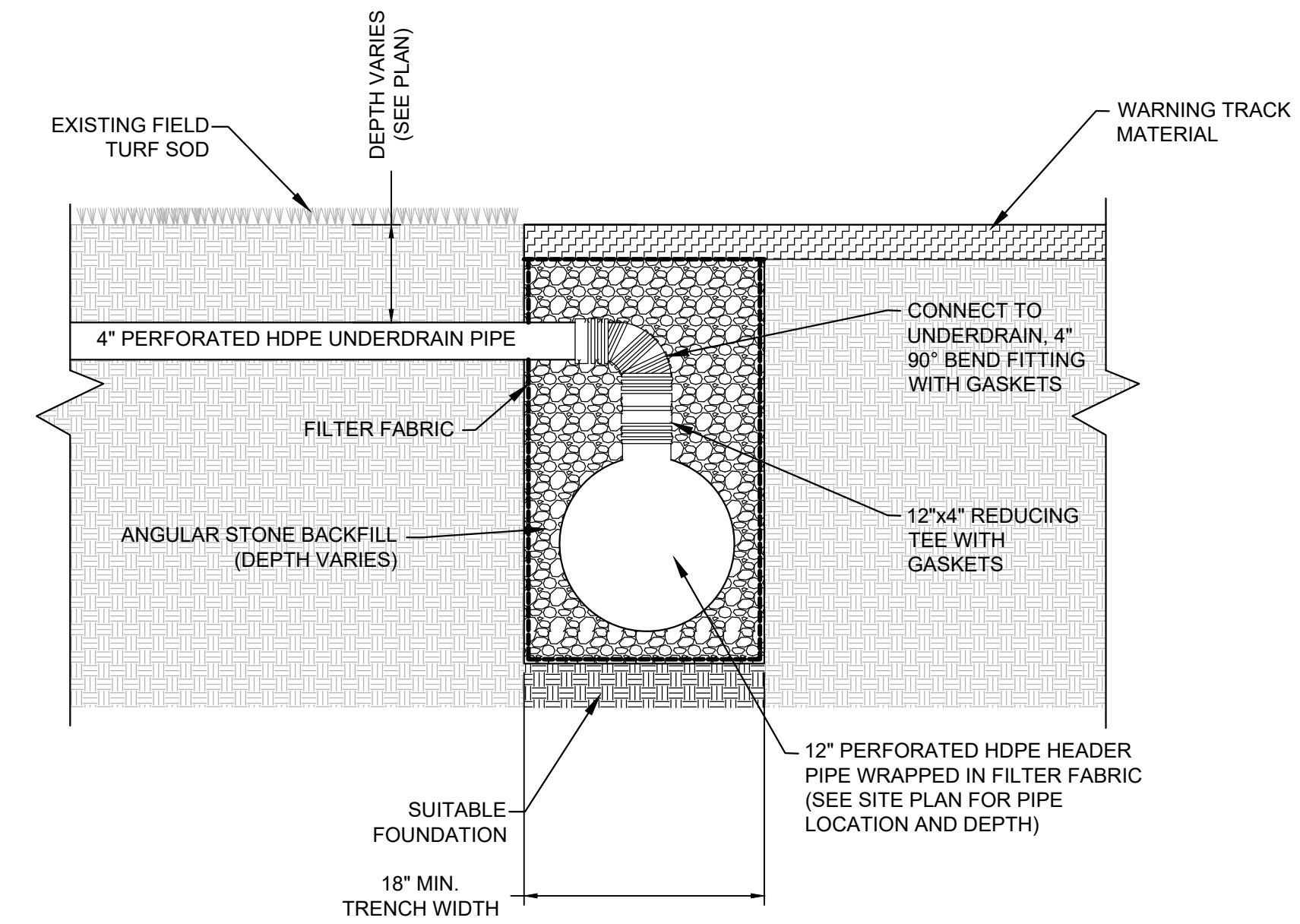
HDPE INSTALLATION (18" OUTFALL PIPES ONLY)
NOT TO SCALE



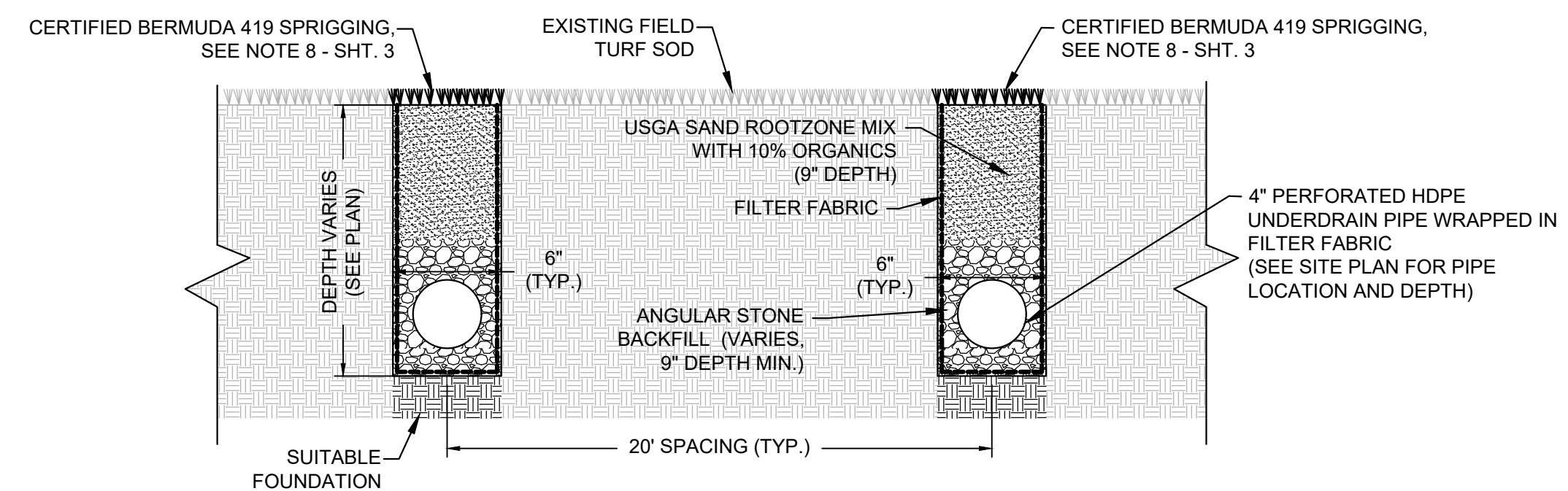
TARP AREA DRAIN
NOT TO SCALE



UNDERDRAIN CLEANOUT
NOT TO SCALE



HEADER PIPE INSTALLATION
NOT TO SCALE



UNDERDRAIN PIPE INSTALLATION
NOT TO SCALE

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SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
W. K. DICKSON & COMPANY, INC.
No. 000177
C.O.A.

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 251136
BRYAN E. THOMAS
2/27/17
PROFESSIONAL SEAL

REVISION RECORD

NO.	DATE	DESCRIPTION	BY

PROJECT NAME: USC UPSTATE BASEBALL FIELD DRAINAGE SYSTEM IMPROVEMENTS
FOR THE UNIVERSITY OF SOUTH CAROLINA
SPARTANBURG COUNTY, SOUTH CAROLINA
DRAWING TITLE: SITE DETAILS

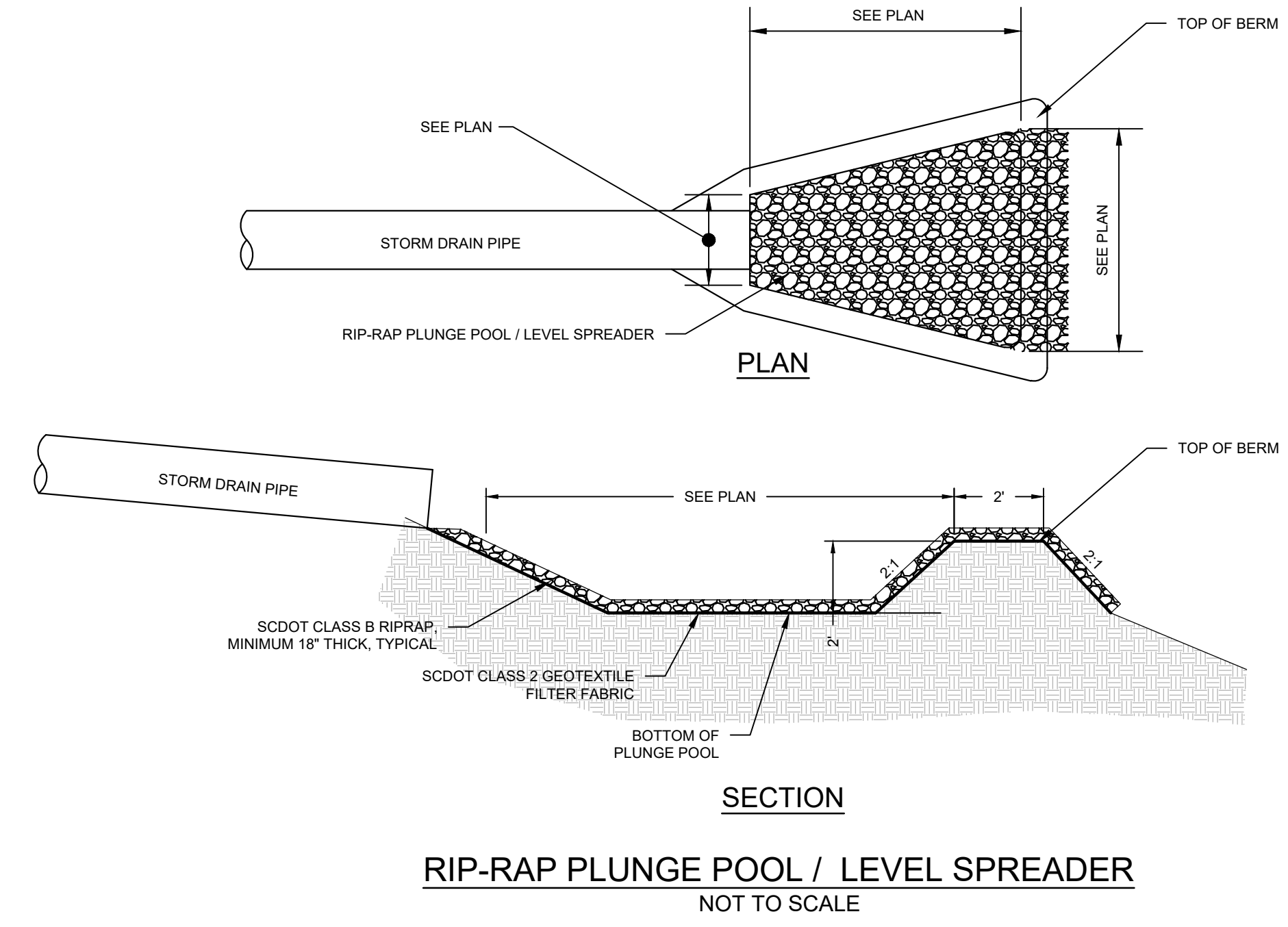
PROJ. MGR.: BET
DESIGN BY: MDJ
DRAWN BY: MDJ
PROJ. DATE: FEB 27, 2017
DRAWING NUMBER:

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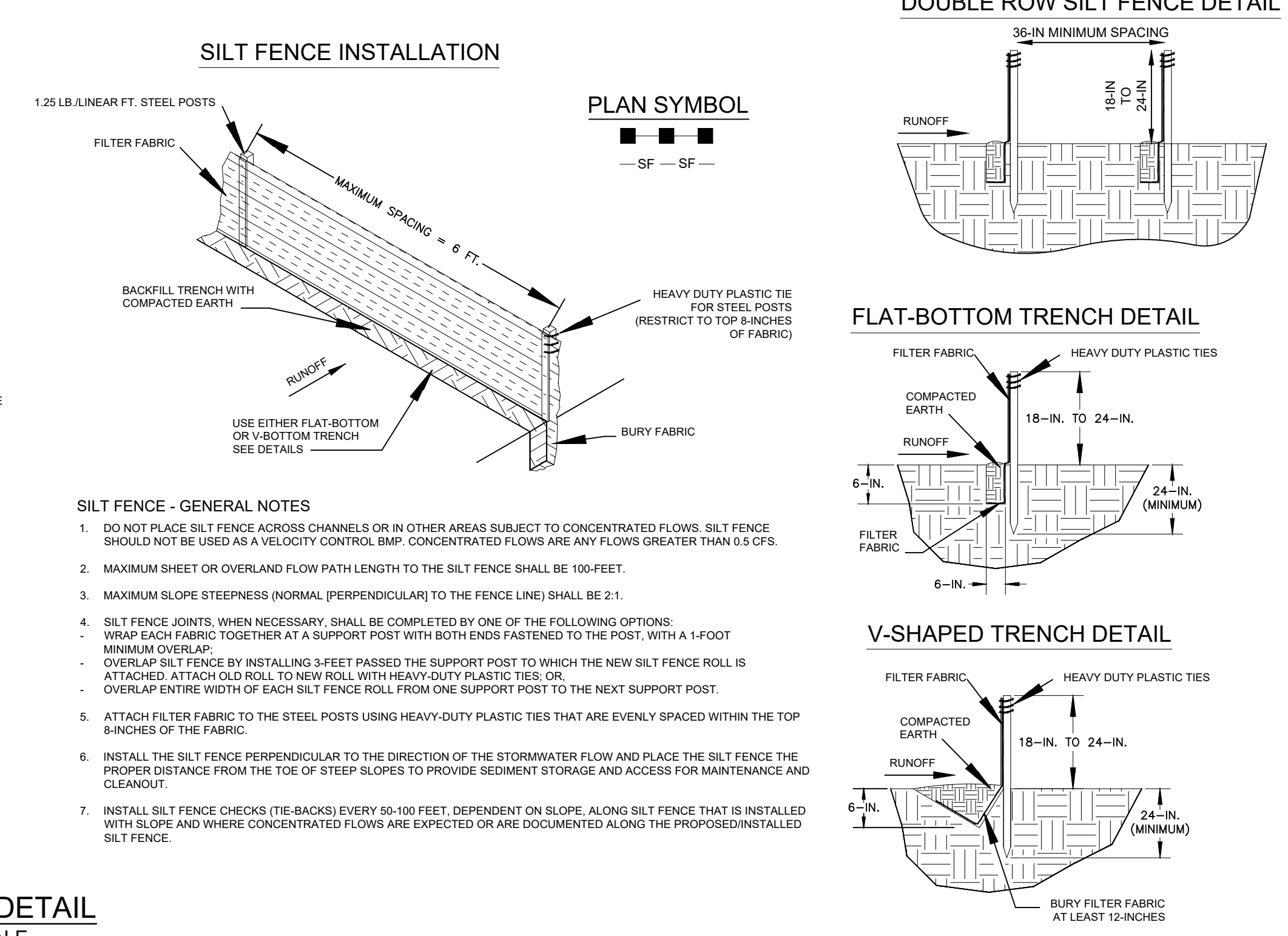
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FILE PATH: N:\projects\2017\0043_01_2017\Drawings\20170043_01_2017\Details\20170043_01_2017_RIP-RAP PLUNGE POOL / LEVEL SPREADER.DWG, DATE: 2/27/17, TIME: 11:23:17 AM



RIP-RAP PLUNGE POOL / LEVEL SPREADER
NOT TO SCALE



- SILT FENCE - GENERAL NOTES**
- 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.
 - MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE SILT FENCE SHALL BE 100 FEET.
 - MAXIMUM SLOPE STEEPNESS (NORMAL [PERPENDICULAR] TO THE FENCE LINE) SHALL BE 2:1.
 - SILT FENCE JOINTS, WHEN NECESSARY, SHALL BE COMPLETED BY ONE OF THE FOLLOWING OPTIONS:
 - OVERLAP SILT FENCE BY INSTALLING 3 FEET PAST 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.
 - ATTACH FILTER FABRIC TO THE STEEL POSTS USING HEAVY-DUTY PLASTIC TIES THAT ARE EVENLY SPACED WITHIN THE TOP 8-INCHES OF THE FABRIC.
 - 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.
 - INSTALL SILT FENCE CHECKS (TIE-BACKS) EVERY 50-100 FEET, DEPENDING 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.

SILT FENCE DETAIL
NOT TO SCALE

SILT FENCE - POST REQUIREMENTS

- 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%).
- POSTS SHALL BE EQUIPPED WITH PROJECTIONS TO AID IN FASTENING OF FILTER FABRIC.
- 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 1/2 GAUGE STEEL, AT A MINIMUM. THE METAL SOIL STABILIZATION PLATE SHOULD BE COMPLETELY BURIED.
- 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.
- POST SPACING SHALL BE AT A MAXIMUM OF 6-FEET ON CENTER.

SILT FENCE - FABRIC REQUIREMENTS

- 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 HEIGHT 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.
- 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.
- 12-INCHES OF THE FABRIC SHOULD BE PLACED WITHIN EXCAVATED TRENCH AND TOED IN WHEN THE TRENCH IS BACKFILLED.
- FILTER FABRIC SHALL BE PURCHASED IN CONTINUOUS ROLLS AND CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS.
- FILTER FABRIC SHALL BE INSTALLED AT A MINIMUM OF 24-INCHES ABOVE THE GROUND.

SILT FENCE - INSPECTION & MAINTENANCE

- THE KEY TO FUNCTIONAL SILT FENCE IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
- REGULAR INSPECTIONS OF SILT FENCE SHALL BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24-HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES 1/2-INCH OR MORE OF PRECIPITATION.
- ATTENTION TO SEDIMENT ACCUMULATIONS ALONG THE SILT FENCE IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
- REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE SILT FENCE.
- REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
- 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.
- 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.

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PROJ. DATE: FEB 27, 2017
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5 OF 5
 WKD PROJ. NO.:
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