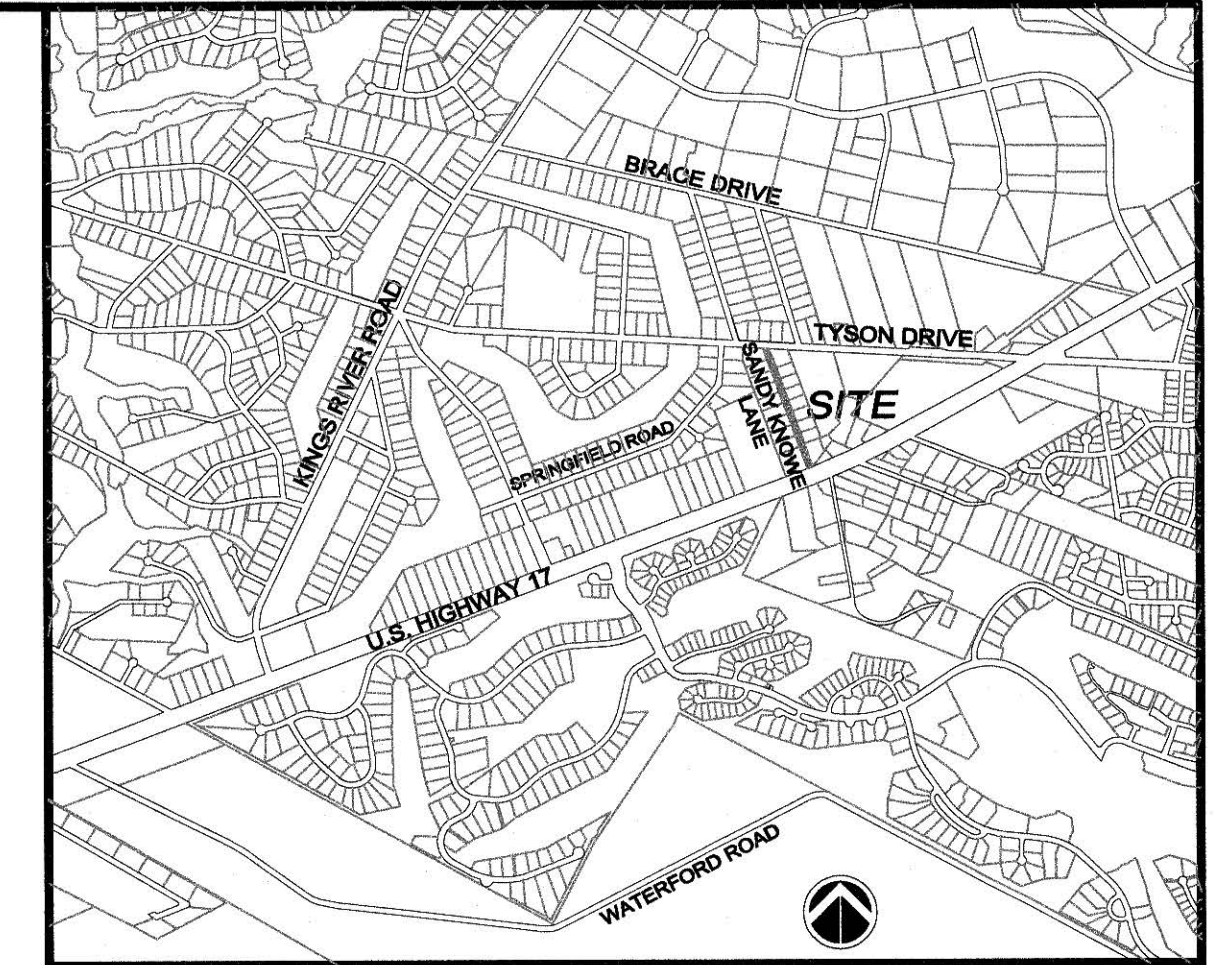


CONSTRUCTION PHASING		
PHASE	START DATE	COMPLETION DATE
1	-	-

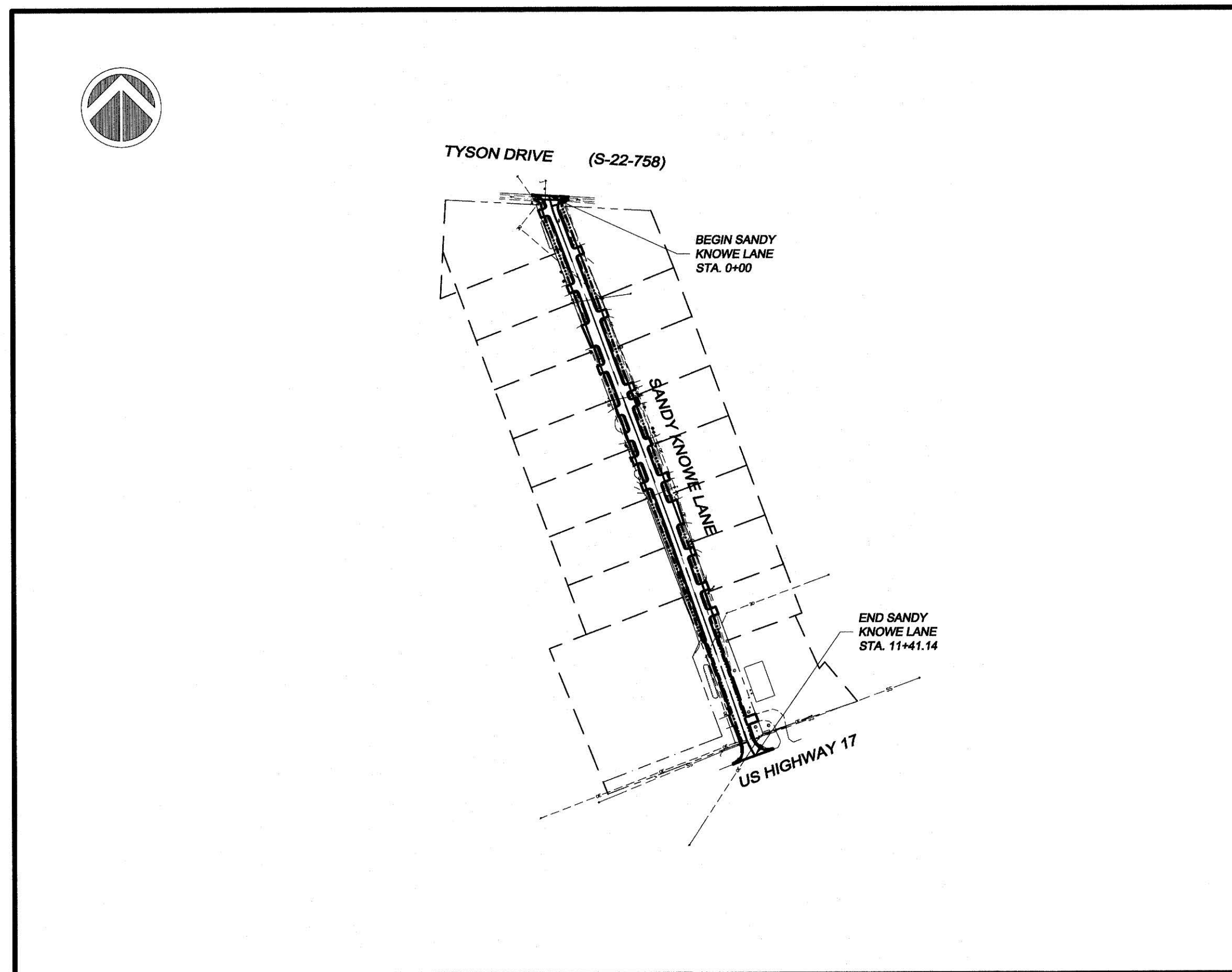
# Construction Plans

for

## GEORGETOWN COUNTY DIRT ROAD IMPROVEMENTS SANDY KNOWE LANE



VICINITY MAP  
N.T.S.



SITE LAYOUT  
SCALE: 1" = 200'

SHEET SCHEDULE

SHEET TITLE	SHEET NUMBER	ORIGINAL DATE	REVISION DATE
COVER SHEET	1	November 9, 2018	August 10, 2020
GENERAL NOTES AND LEGEND	2	November 9, 2018	-
SCDOT STANDARD NOTES	3	July 31, 2020	-
SANDY KNOWE LANE PLAN AND PROFILE	4	November 9, 2018	August 10, 2020
SANDY KNOWE LANE PLAN AND PROFILE	5	November 9, 2018	August 10, 2020
SANDY KNOWE LANE CROSS SECTIONS	6	November 9, 2018	-
SANDY KNOWE LANE CROSS SECTIONS	7	November 9, 2018	-
SEDIMENT AND EROSION CONTROL DETAILS	8	November 9, 2018	-
MISCELLANEOUS DETAILS	9	November 9, 2018	-
STANDARD DRAWING (WORKZONE OPERATIONS)	610-005-20	July 31, 2020	-
STANDARD DRAWING (MOUNTING DETAILS)	651-110-00	July 31, 2020	-
STANDARD DRAWING (RCP DETAILS)	714-205-00	August 10, 2020	-
STANDARD DRAWING (BEVELED END)	719-610-00	August 10, 2020	-

\* This set is current through sheet dated August 10, 2020.

3 DAYS BEFORE DIGGING IN  
SOUTH CAROLINA  
CALL 811  
www.sc811.org  
PALMETTO UTILITY LOCATION SERVICE

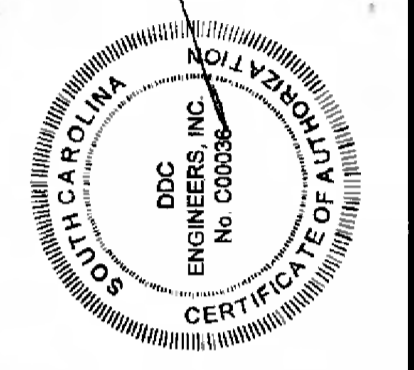
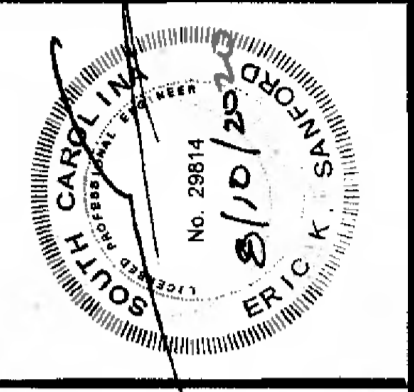
REVISION OCCURRENCE LIST			
REVISION NO.	DATE	REVISION DESCRIPTION	BY
1	8-10-20	REVISED PER SCDOT COMMENTS	JBE

**Owner:**  
**GEORGETOWN COUNTY**  
**P.O. BOX 421270**  
**GEORGETOWN, SC 29442-4200**

DDC ENGINEERS, INC.  
 Consulting Engineers, Surveyors, Planners,  
 Landscape Architects & Environmentalists  
 1298 Professional Dr., Myrtle Beach, SC 29577  
 Phone: (843) 692-3200 Fax: (843) 692-3210

DDC P/N: 18009B  
 GEORGETOWN COUNTY DIRT ROAD IMPROVEMENTS - SANDY KNOWE LANE





NO.	DATE	REVISION DESCRIPTION	BY

**SCDOT STANDARD NOTES**  
**GEORGETOWN COUNTY DIRT ROAD IMPROVEMENTS**  
**GEORGETOWN COUNTY, SOUTH CAROLINA**  
 PREPARED FOR: GEORGETOWN COUNTY

SCALE:	NO SCALE
DATE:	7-31-2020
DESIGNED BY:	EKS
DRAWN BY:	JBE
APPROV. BY:	EKS
PROJECT NO.:	18009B
	<b>3</b>
FILE NO.:	18009B

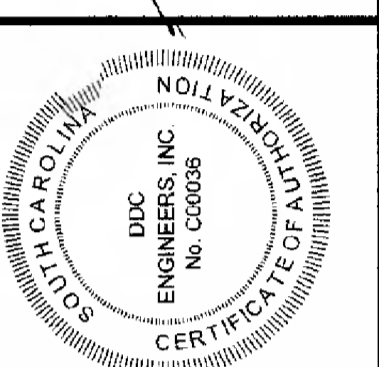
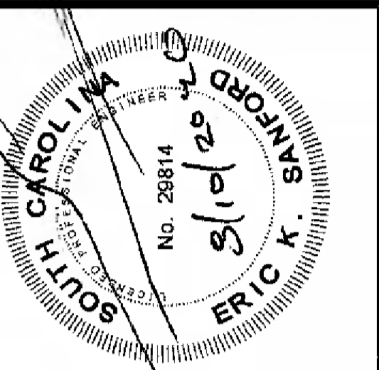
**SCDOT STANDARD NOTES:**

1. THERE CAN BE NO WORK PERFORMED IN THE SCDOT R/W BEFORE AN ENCROACHMENT PERMIT HAS BEEN ISSUED AND A PRECONSTRUCTION MEETING HAS BEEN HELD. THE PROPERTY OWNER AND CONTRACTOR MUST SCHEDULE AND ATTEND THE PRECONSTRUCTION MEETING.
2. ANY WORK PERFORMED BEFORE THE PRECONSTRUCTION MEETING WILL HAVE TAKEN PLACE WITHOUT SCDOT KNOWLEDGE, OVERSIGHT, AND CONSENT AND SHALL BE SUBJECT TO REMOVAL BY THE APPLICANT AND/OR AT THE APPLICANT'S EXPENSE.
3. ANY REVISIONS TO THIS APPROVED PLAN SET MUST HAVE PRIOR, WRITTEN APPROVAL FROM SCDOT OR ARE SUBJECT TO REMOVAL AT THE APPLICANT'S EXPENSE.
4. THE CONSTRUCTION ENTRANCE MUST BE ESTABLISHED AT THE LOCATION DESIGNATED IN THIS PLAN SET AND ACCORDING TO SCDOT TYPICAL 815-605-00. NO ADDITIONAL ENTRANCES OR LOCATIONS OTHER THAN SHOWN IN THIS PLAN SET ARE ALLOWED WITHOUT WRITTEN NOTICE FROM SCDOT. APPROVED CONSTRUCTION ENTRANCE SHALL BE INSTALLED PROPERLY AND SHALL BE MAINTAINED AT ALL TIMES. KEEP ROADWAY PROTECTED AND SWEEPED OFF AT ALL TIMES. ANY ADDITIONAL, EXISTING DRIVEWAYS OR CONSTRUCTION ENTRANCES, IF ANY, SHALL BE REMOVED FROM SCDOT RIGHT OF WAY AT NO EXPENSE TO SCDOT.
5. NO DEWATERING ACTIVITIES SHALL BE PERFORMED WITHIN SCDOT R/W OR BRING FORTH WATER TO THE SCDOT RIGHT OF WAY BY DIRECT OR INDIRECT METHODS.
6. POST DEVELOPMENT STORMWATER FLOWS TO THE SCDOT R/W CANNOT EXCEED PREDEVELOPMENT FLOW RATES AT ANY TIME FOR ANY REASON.
7. THE APPLICANT IS SOLELY RESPONSIBLE FOR REPAIRS OF ANY AND ALL DAMAGE TO THE TRAVEL WAY DUE TO ANY WORK ALONG THE FRONTAGE OF THIS SITE. AT NO EXPENSE TO SCDOT AND ALL REPAIRS MUST MEET CURRENT SCDOT STANDARDS.
8. ANY DAMAGE TO THE TRAVEL LANE WILL REQUIRE A FULL DEPTH ASPHALT PATCH AND TOTAL ROADWAY (ALL ADJACENT TRAVEL LANES) ASPHALT OVERLAY. PATCHES LARGER THAN A FEW SQUARE FEET OR EXTENDING PAST 1 FOOT INTO THE TRAVEL LANE SHALL REQUIRE AN OVERLAY OF THE ENTIRE WIDTH OF THE EXISTING TRAVEL WAY FOR 60 FEET BEYOND EACH SIDE OF THE FULL DEPTH PATCH. ALL OF THIS WORK WILL BE SOLELY AT THE EXPENSE OF THE APPLICANT AND MUST MEET CURRENT SCDOT STANDARDS.
9. BEFORE INSTALLATION OF ANY NEW DRIVEWAY, THE EXISTING TRAVEL EDGE MUST BE SAW CUT TO PROVIDE A STRAIGHT AND UNIFORM EDGE ALONG THE MOUTH OF THE PROPOSED DRIVEWAY. CARE MUST BE TAKEN TO NOT TO DAMAGE THE EDGE ONCE CUT. ANY DAMAGE TO THE TRAVEL LANE MUST BE REPAIRED AT THE APPLICANT'S EXPENSE.
10. PAVEMENT SECTION IN THE SCDOT R/W SHALL BE, AT A MINIMUM:
  - a. 6 INCHES OF COMPACTED GABC
  - b. 4 INCHES OF COMPACTED TYPE B BINDER COURSE HOT MIX ASPHALT
  - c. 2 INCHES OF COMPACTED TYPE B SURFACE COURSE HOT MIX ASPHALT
 SEE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION FOR SURFACE COURSE HOT MIX ASPHALT INSTALLATION TIME AND TEMPERATURE RESTRICTIONS AND THERMO PLASTIC TIME AND TEMPERATURE RESTRICTIONS.  
 OR  
  - d. 8 INCHES OF COMPACTED GABC
  - e. 4 INCHES OF 4,000 PSI CONCRETE
 NO REINFORCEMENT WIRE, REBAR, OR METAL OF ANY KIND IS PERMITTED
11. DRIVEWAY LANES SHALL BE A MINIMUM OF 12 FEET IN WIDTH MEASURED FROM EDGE TO EDGE OF ASPHALT.
12. DRIVEWAY RADII SHALL BE 30 FEET. (UNLESS NOTED OTHERWISE ON THE SCDOT APPROVED PLANS.
13. PAVEMENT MARKINGS SHALL BE THERMOPLASTIC WITH REFLECTIVE BEADS PER SECTION 627 OF THE SCDOT STANDARD SPECIFICATIONS:
  - a. ALL WHITE MARKINGS SHALL BE 125 MIL MINIMUM THICKNESS
  - b. ALL YELLOW MARKINGS SHALL BE 90 MIL MINIMUM THICKNESS
14. ALL PERMANENT SIGNAGE SHALL BE INSTALLED ON BREAKAWAY POSTS PER SCDOT STANDARD DRAWING 651-110-00 AND SHALL HAVE A 7 VERTICAL FOOT CLEARANCE FROM THE GROUND TO THE BOTTOM OF THE SIGN.
15. DRIVEWAYS SHALL BE CONSTRUCTED TO HAVE A MINIMUM OF A 2 FOOT GRASSED SHOULDER ON EACH SIDE OF THE DRIVEWAY THROAT.
16. DITCH SLOPES SHALL BE NO STEEPER THAN 3H:1V.
17. ALL DRIVEWAY CULVERTS SHALL BE INSTALLED AND SEALED ACCORDING TO SCDOT TYPICAL 714-205-01 DETAIL 4 AND 5 WITH AN AASHTO M 315 RUBBER GASKET SEAL, ON PROPER GRADE TO ALLOW FOR POSITIVE STORM WATER FLOW WITHIN THE PIPE AND TO/FROM ADJACENT PIPES/CROSS LINES.
18. ALL CULVERTS INSIDE OF THE SCDOT R/W ARE TO BE INSTALLED WITH BEVELED ENDS PER SCDOT STANDARD DRAWING 719-810-00 AND SEALED PER SCDOT STANDARD DRAWING 714-205-01 AND CANNOT BE COVERED UNTIL AFTER AN INSPECTION BY THE SCDOT INSPECTOR ASSIGNED TO THE PROJECT AT THE REQUIRED SCDOT PRECONSTRUCTION MEETING.
19. LANE CLOSURES ARE REQUIRED FOR ALL WORK WITHIN ONE FOOT OF THE TRAVEL WAY. SEE SCDOT LOCAL MAINTENANCE WORK RESTRICTIONS FOR ADDITIONAL INFORMATION.
20. SHOULDER CLOSURES ARE REQUIRED FOR ALL WORK IN THE SCDOT R/W BEYOND ONE FOOT FROM THE TRAVEL WAY.
21. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SCHEDULE ALL REQUIRED INSPECTIONS IN ADVANCE. IF WORK REQUIRING INSPECTION IS PERFORMED WITHOUT PRIOR NOTICE BEING GIVEN TO SCDOT, THAT INSTALLATION SHALL BE SUBJECT TO REMOVAL AT THE APPLICANT'S EXPENSE. SEVERAL MEANS OF CONTACT WILL BE GIVEN AT THE PRECONSTRUCTION MEETING. FAILURE TO OBTAIN CONTACT IS NOT AN APPROVAL TO PROCEED WITH ANY WORK.
22. NO VEGETATION INSTALLED ON PRIVATE PROPERTY SHALL BLOCK THE SCDOT SIGHT TRIANGLES OR SIGHT DISTANCES FOR MOTORISTS INGRESS OR EGRESS FROM APPROVED DRIVEWAYS AND OR ROADWAY INTERSECTIONS. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR KEEPING OFFSITE LANDSCAPINGS PROPERLY MAINTAINED TO IMPROVE ALL SIGHT DISTANCES. THE PROPERTY OWNER SHALL ALSO BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGES TO SIDEWALK, DRIVEWAY OR ROADWAY, UTILITY, DRAINAGE OR OTHER STRUCTURES DAMAGED DUE TO THE INSTALLATION OR EXISTENCE OF OFFSITE LANDSCAPING.
23. THE DEPARTMENT SHALL NOT BE RESPONSIBLE FOR DAMAGE TO ANY UTILITY STRUCTURES LOCATED WITHIN THE RIGHT-OF-WAY AS A RESULT OF ROUTINE HIGHWAY MAINTENANCE OPERATIONS. THESE STRUCTURES INCLUDE BUT ARE NOT LIMITED TO ARV, METERS, VALVES, MANHOLES, ALL TYPE OF PEDESTALS AND UTILITY LINES (OVERHEAD AND/OR UNDERGROUND). THE APPLICANT SHOULD USE MECHANICAL MOWERS TO CUT AROUND THESE TYPE STRUCTURES TO INCREASE VISIBILITY FOR HIGHWAY MAINTENANCE WORKERS.
24. APPLICANT IS RESPONSIBLE FOR THE INSTALLATION AND SECURING OF ANY VALVE OR MANHOLE RISERS AS NEEDED.

25. THE DEPARTMENT SHALL BE HELD HARMLESS FROM AND AGAINST ANY AND ALL CLAIMS, DAMAGES AND LOSSES ASSOCIATED WITH WORK AS APPROVED UNDER THIS PERMIT APPLICATION. ANY SUCH DAMAGE CLAIMS RECEIVED BY THE DEPARTMENT SHALL BE THE RESPONSIBILITY OF THE APPLICANT TO PROCESS ACCORDINGLY. THE HOLD HARMLESS AGREEMENT SHALL BE FOR THE LIFE OF THE FACILITY, STRUCTURE(S) OR ENCROACHMENT AS IT REMAINS WITHIN PUBLIC RIGHT-OF-WAY.
26. APPLICANT IS RESPONSIBLE FOR THE REPAIR OF ANY TRAFFIC SIGNAL LOOPS/WIRES/HEAD/CABINETS IF DAMAGED DUE TO THIS INSTALLATION. ALL WORK SHALL BE APPROVED UNDER THE DIRECTION OF THE SCDOT DISTRICT SIGNAL SHOP AND PERFORMED BY A SCDOT APPROVED SIGNAL CONTRACTOR, AT NO EXPENSE TO THE DEPARTMENT.
27. IF REQUIRED UNDER THE APPROVED SCDOT ENCROACHMENT PERMIT, A THIRD PARTY TESTER SHALL BE REQUIRED AT THE APPLICANT'S EXPENSE TO PERFORM COMPACTION ANALYSIS AND WITNESS A PASSING PROOF ROLL ON ALL SUB-GRADE, BASE, AND ASPHALT. ONE THIRD PARTY INSPECTOR SHALL TAKE DENSITY READINGS AT RANDOM STATION NUMBERS. A SECOND (2<sup>ND</sup>) THIRD PARTY INSPECTOR/TESTER SHALL BE AT THE ASPHALT PLANT TESTING THE ASPHALT AT THE TIME THAT SURFACE ASPHALT IS BEING PRODUCED AND PUT DOWN ON THE JOB. ONE CORE SAMPLE (LOCATIONS TO BE DETERMINED) SHALL BE TAKEN AND WEIGHED BY THE THIRD PARTY INSPECTOR. ALL RESULTS TO BE SUBMITTED IN WRITING TO SCDOT FOR REVIEW THE FOLLOWING DAY. WINTER WORK RESTRICTIONS AND HOLIDAY WORK RESTRICTIONS MUST BE ADHERED TO. SEE PERMIT FOR MORE DETAILS.
28. AN INSPECTION DATE SHALL BE SET UP IN ADVANCE FOR WHICH THE INSPECTOR WILL COME OUT AND INSPECT THE SIDEWALK FORMS BEFORE POURING CONCRETE. DO NOT LEAVE MORE THAN A 2" DROP OFF UNATTENDED. NO MORE THAN A 2" DROP OFF OR A 3:1 DITCH SLOPE IS PERMITTED ANYWHERE WITHIN THE RIGHT OF WAY DUE TO THE CONSTRUCTION ASSOCIATED WITH THIS SIDEWALK. THE INSTALLATION OF SIDEWALK SHALL BE FLUSH WITH SHOULDER OR HAVE A DRAINAGE INLET BUILT UNDERNEATH TO ALLOW FOR PROPER STORM WATER FLOW. NO WATER SHALL POND IN SHOULDER, ROADWAY, DRIVEWAYS, OR RIGHT OF WAY DUE TO THIS INSTALLATION.
29. ADA MATS (RAISED DETECTABLE WARNING PADS) SHALL BE INSTALLED AS WET INSETS AND AT ROADWAY INTERSECTIONS ONLY.
30. NO VALVES OR OTHER APPURTENANCES IN ROADWAY ASPHALT, WITHIN 5 FEET OF EDGE OF PAVEMENT, OR WITHIN DITCH LINE OR SWALE LINE. APPLICANT SHALL INSTALL 8-16 FEET OF NEW, UNDAMAGED RCP ON PROPER GRADE, FACING THE PROPER DIRECTION, MATCHING THE DIAMETER OF DRIVEWAY AND/OR CROSS LINE UPSTREAM, BUT NOT EXCEEDING THE PIPE DIAMETER DOWNSTREAM, IF THE ABOVE CANNOT BE AVOIDED. INSTALL RIP RAP AROUND ANY EXPOSED PIPES, COVER AND SOD TO MEET SCDOT MINIMUM STANDARDS. CALL SCDOT ENCROACHMENT OFFICE FOR INSPECTION OF PIPE BEFORE COVERING.
31. PROPOSED UTILITY INSTALLATION LOCATED IN SHOULDER AREA SHALL HAVE A MINIMUM COVER OF 42" ACCORDING TO FIGURE 6 OF APPENDIX B. ANY EXPOSED ROOTS TO BE REMOVED OR TRIMMED FLUSH WITH SHOULDER/DITCH.
32. ALL UTILITY ENCROACHMENTS SHALL BE SUBMITTED UNDER A SEPARATE APPLICATION.



ENGINEERS  
Consulting Engineers, Surveyors, Planners,  
Landscape Architects & Environmentalists  
1298 Professional Dr. Myrtle Beach, SC 29577  
Phone: (843) 692-3200 Fax: (843) 692-3210



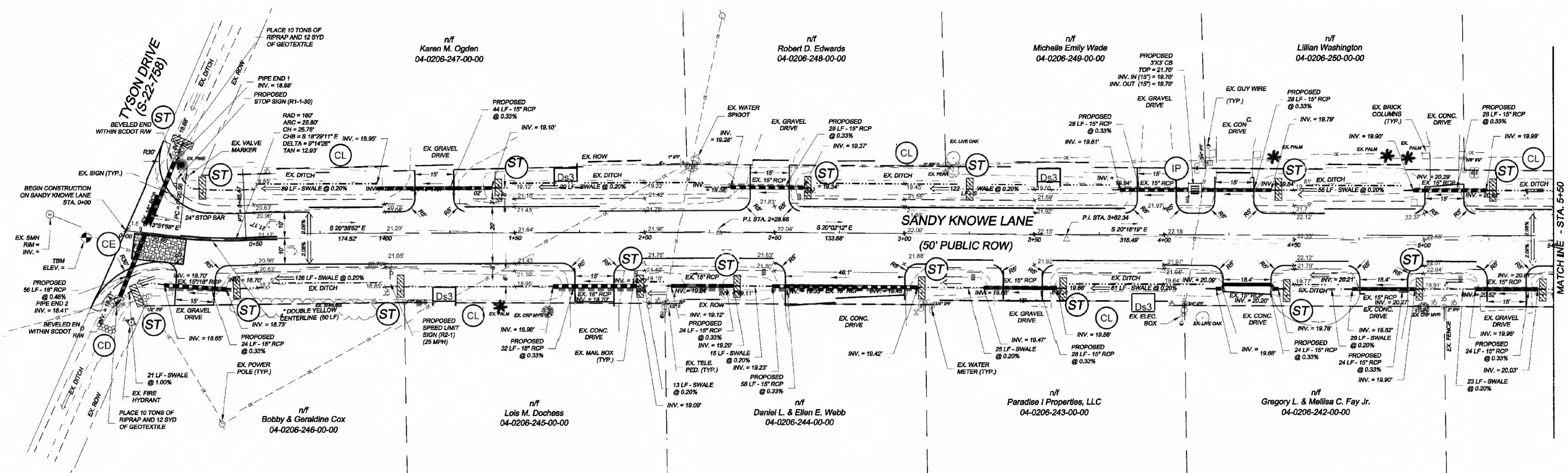
NO.	DATE	REVISION DESCRIPTION	BY
1	8-10-20	REVISED PER SCDOT COMMENTS	JK

NO REVISIONS HEREBY OVER THIS DOCUMENT TO THE PRIORITY OF ROADWORKERS DOCUMENT. PRINTS AND/OR COPIES OF PLANS WITHOUT SIGNATURE AND SEAL ARE INVALID.

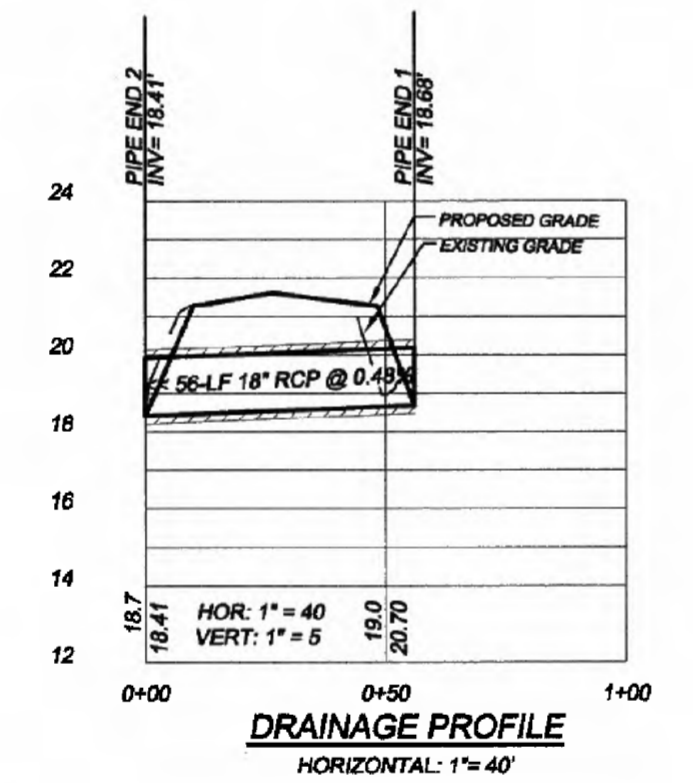
PROJECT NO.	180298
DATE	11-9-18
DESIGNED BY	EKS
DRAWN BY	PES
APPROV. BY	EKS
PROJECT NO.	180298
SCALE	1"=10'

**SANDY KNOWE LANE  
PLAN AND PROFILE**  
GEORGETOWN COUNTY DIRT ROAD IMPROVEMENTS  
GEORGETOWN COUNTY, SOUTH CAROLINA  
PREPARED FOR: GEORGETOWN COUNTY

SCALE	1"=10'
DATE	11-9-18
DESIGNED BY	EKS
DRAWN BY	PES
APPROV. BY	EKS
PROJECT NO.	180298
SCALE	1"=10'



NOTE: DRAINAGE PROFILE FOR PIPE END 2 TO PIPE END 1. SCALE DIFFERS FROM OTHERS ON THIS SHEET. SCALE AS NOTED.

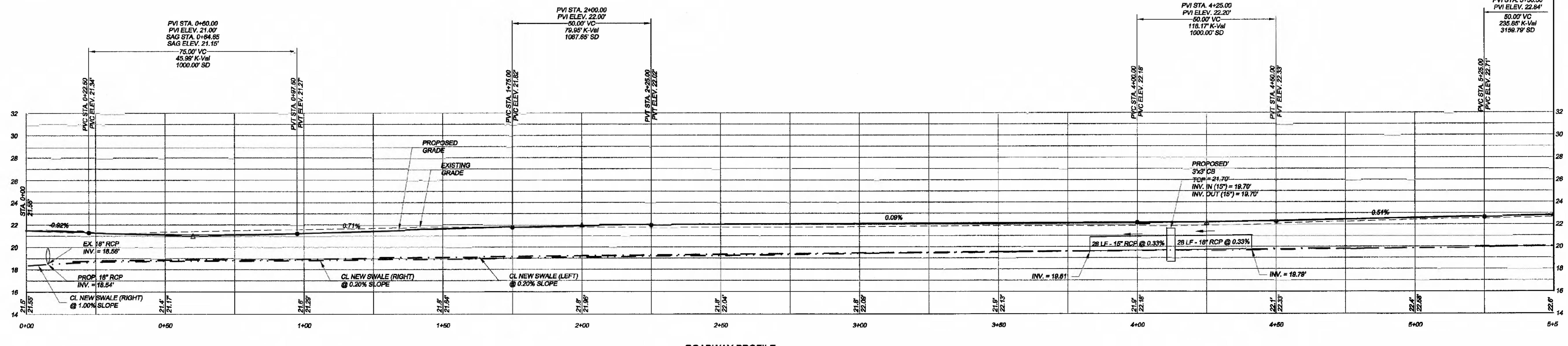


**CONSTRUCTION SEQUENCE:**

1. LOCATE ALL EXISTING UTILITIES IN PROJECT AREA.
2. INSTALL CONSTRUCTION ENTRANCE.
3. INSTALL PERIMETER EROSION CONTROL DEVICES / SILT FENCE.
4. CLEAR & GRUB SITE.
5. ROUGH GRADE ROADWAY.
6. CONSTRUCT DITCHES AND STORM DRAINAGE WITH INLET PROTECTION/EROSION CONTROL.
7. SEED DITCHES.
8. CONSTRUCT BASE AND PAVING.
9. STABILIZE SITE, AS SOON AS PRACTICAL AFTER CONSTRUCTION IS COMPLETE.
10. UPON APPROVAL BY SC DHEC / OCRM, REMOVE ALL TEMPORARY EROSION CONTROL DEVICES.

**NOTES:**

1. ALL EXISTING WATER METERS, CATV, PHONE AND POWER UTILITIES IN ROAD EASEMENT SHALL BE RELOCATED BY THE UTILITY COMPANY AT NO COST TO THE CONTRACTOR.
2. CONTRACTOR IS RESPONSIBLE FOR RELOCATING EXISTING MAIL BOXES AS NECESSARY.
3. CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TREES LOCATED IN ROAD EASEMENT, UNLESS OTHERWISE NOTED.
4. SEE GENERAL NOTES, LEGEND AND SHEET SCHEDULE, SHEET 2 FOR EROSION CONTROL LEGEND AND SEEDING SCHEDULE.
5. ALL DRIVEWAYS TO BE PAVED A MINIMUM WIDTH OF 15' AND A RADIUS OF 5' AND PAVED TO THE RIGHT-OF-WAY UNLESS OTHERWISE DIRECTED.
6. USE TEMPORARY EROSION CONTROL BLANKET (CLASS C) AS NEEDED TO STABILIZE THE DITCH BANKS.
7. THE CONTRACTOR IS TO COORDINATE WITH THE EXISTING UTILITIES ON RAISING AND LEVELING THEIR EXISTING INFRASTRUCTURE THAT IS LOCATED WITHIN THE ROADWAY RIGHT OF WAY. WATER AND SEWER VALVE COVERS, AIR RELEASE VALVES AND BOXES, ETC.
8. CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EXISTING PIPES WITHIN THE LIMITS OF CONSTRUCTION UNLESS INSTRUCTED OTHERWISE BY THE DESIGN ENGINEER.
9. CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE RELOCATION OF UTILITIES WITH THE UTILITY COMPANIES.

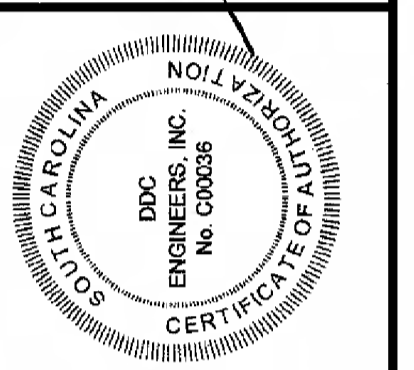
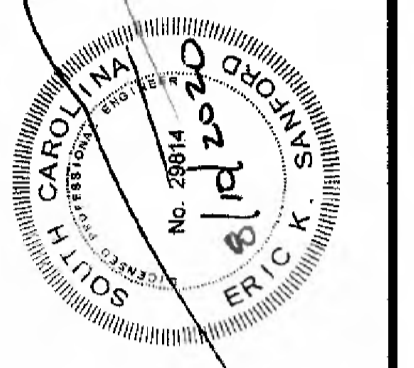


**ROADWAY PROFILE**  
SCALE:  
HORIZONTAL: 1"=20'  
VERTICAL: 1"=5'

PLOT SCALE: 1/8"=1'-0"



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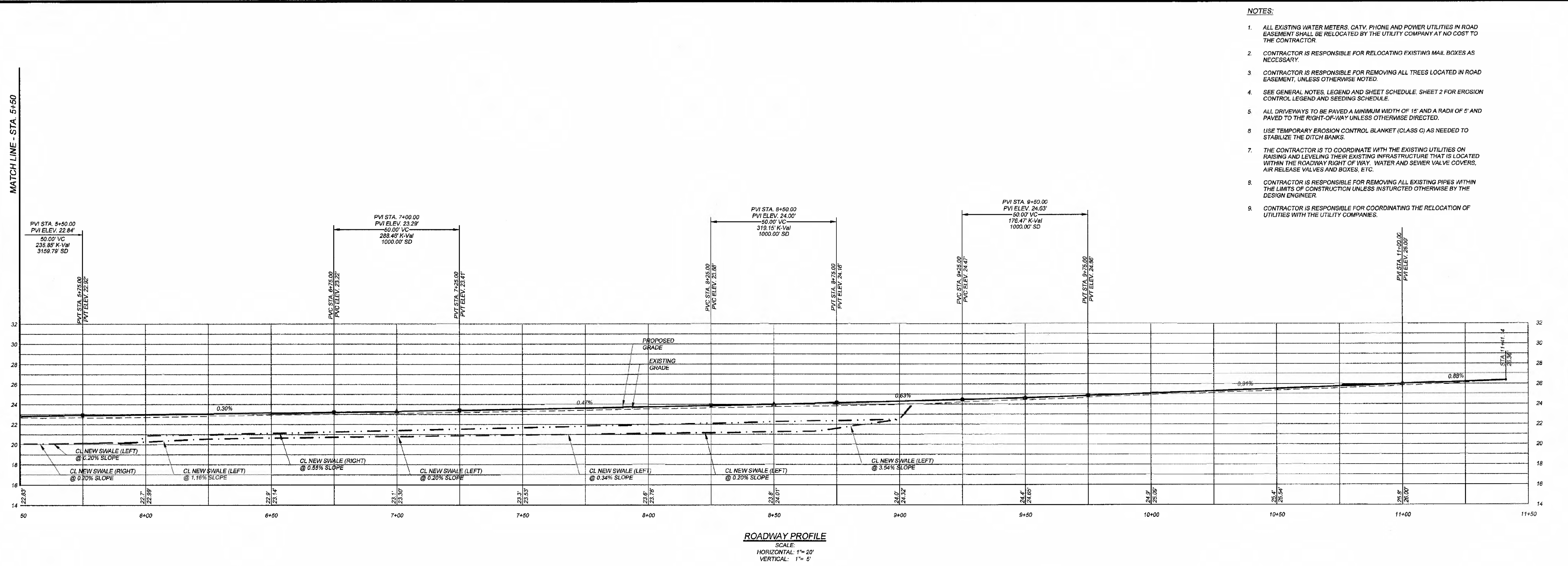
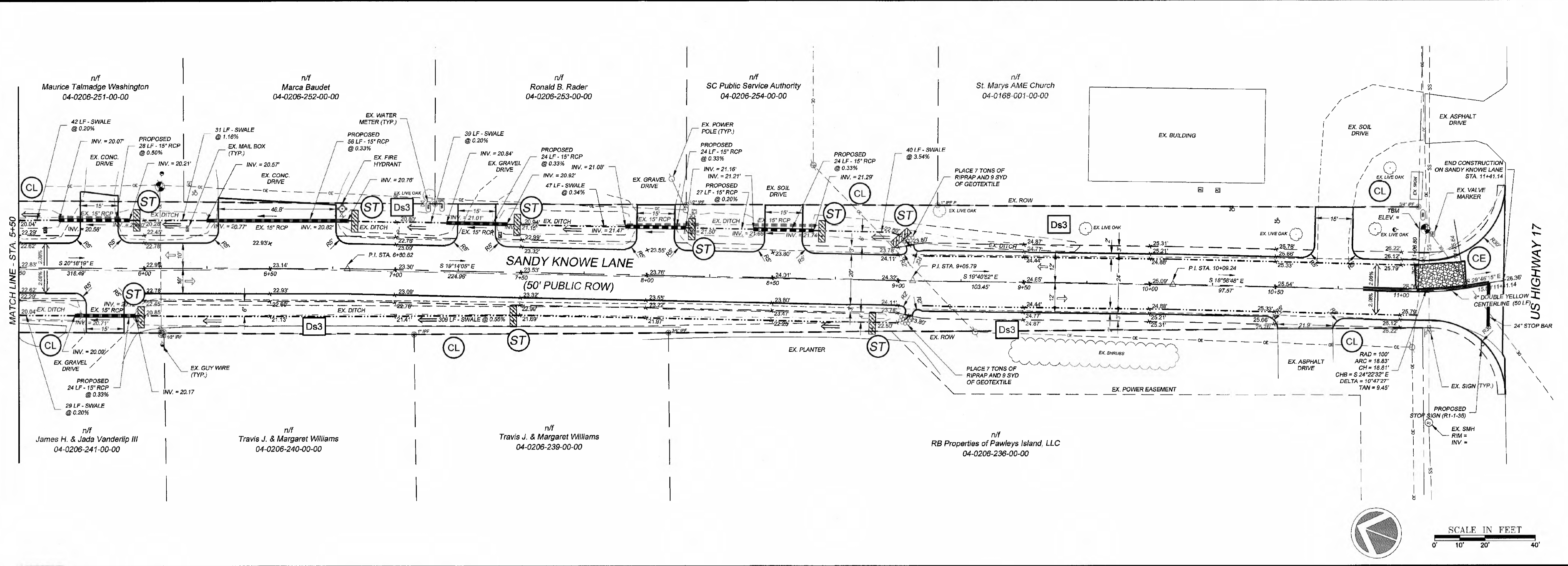


NO.	DATE	REVISION DESCRIPTION	BY
1	8-10-20	REVISED PER SDCOT COMMENTS	JBE

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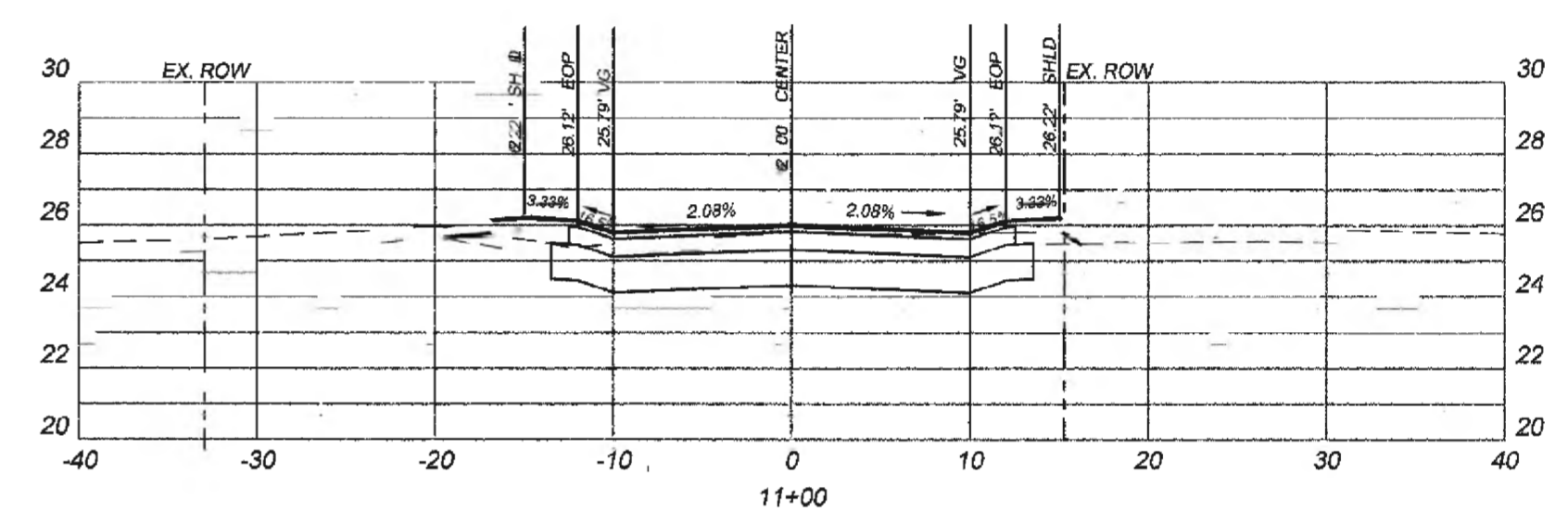
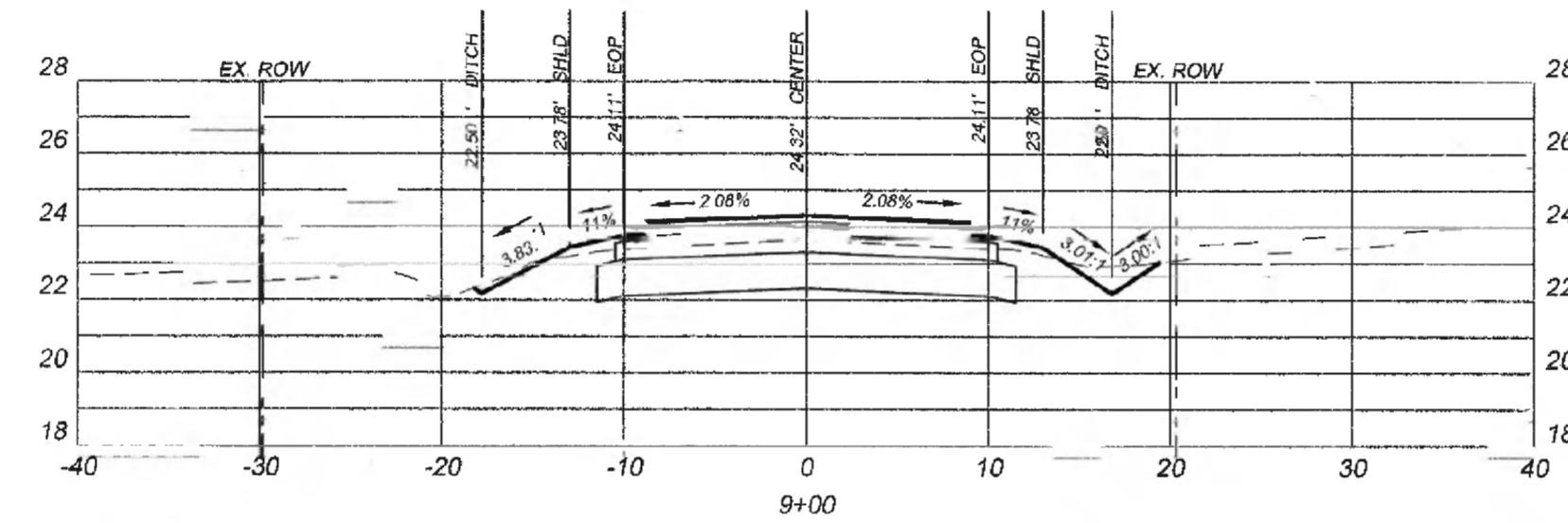
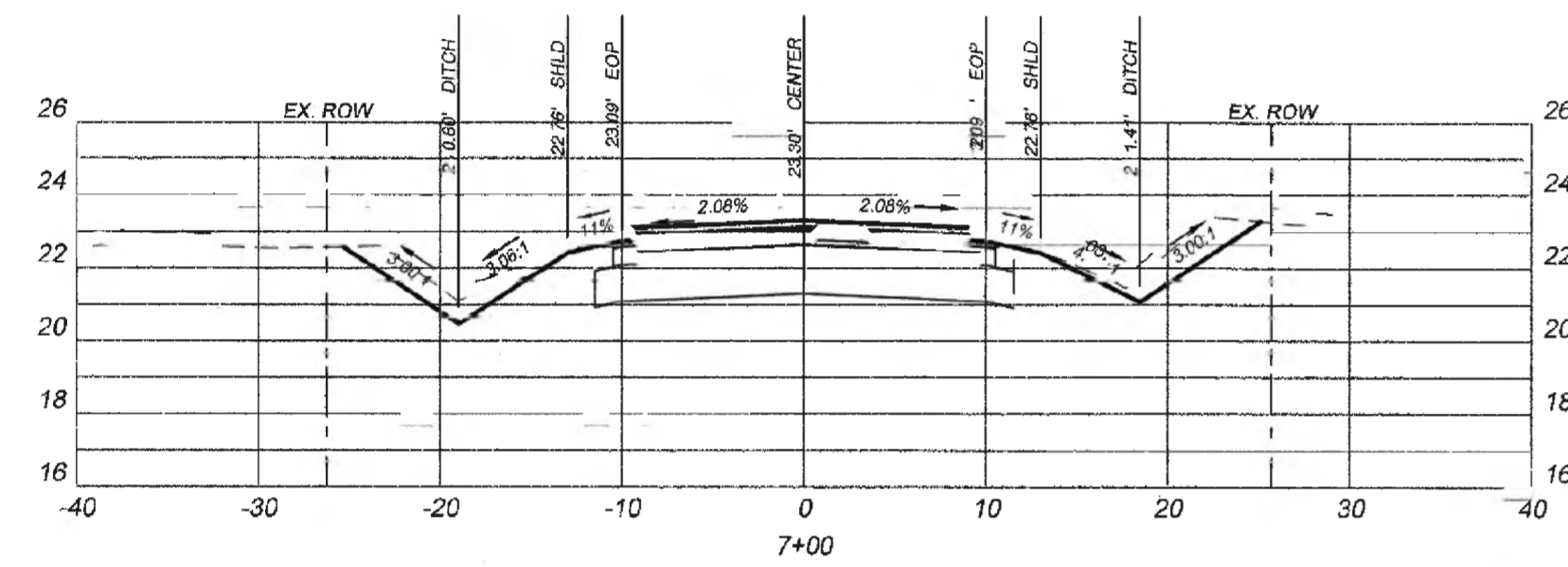
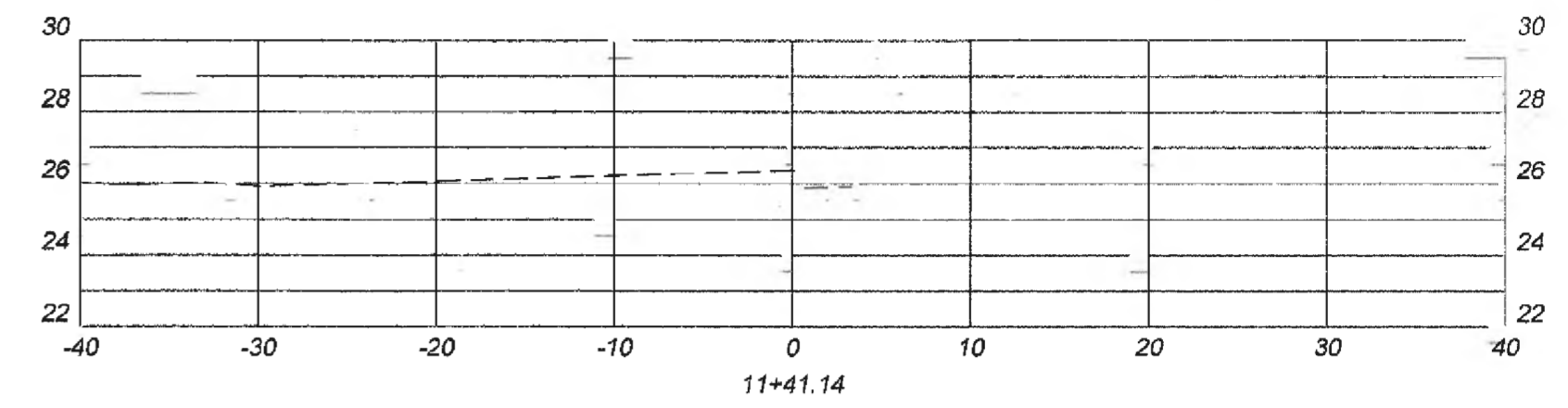
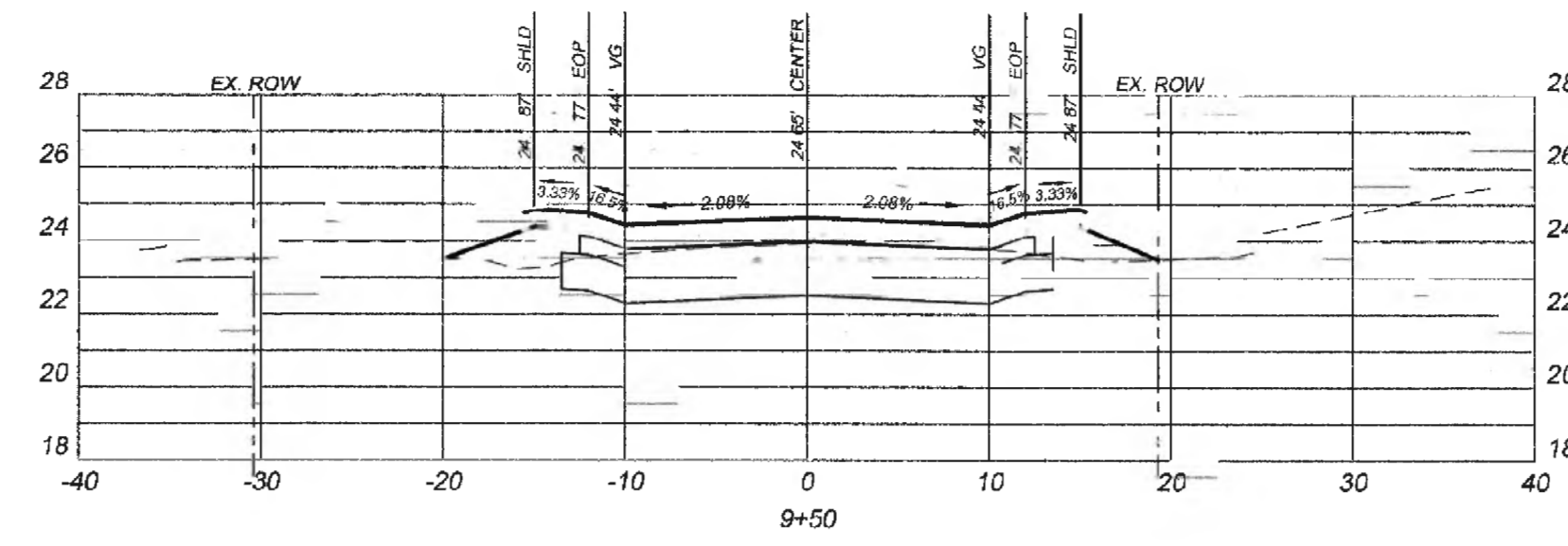
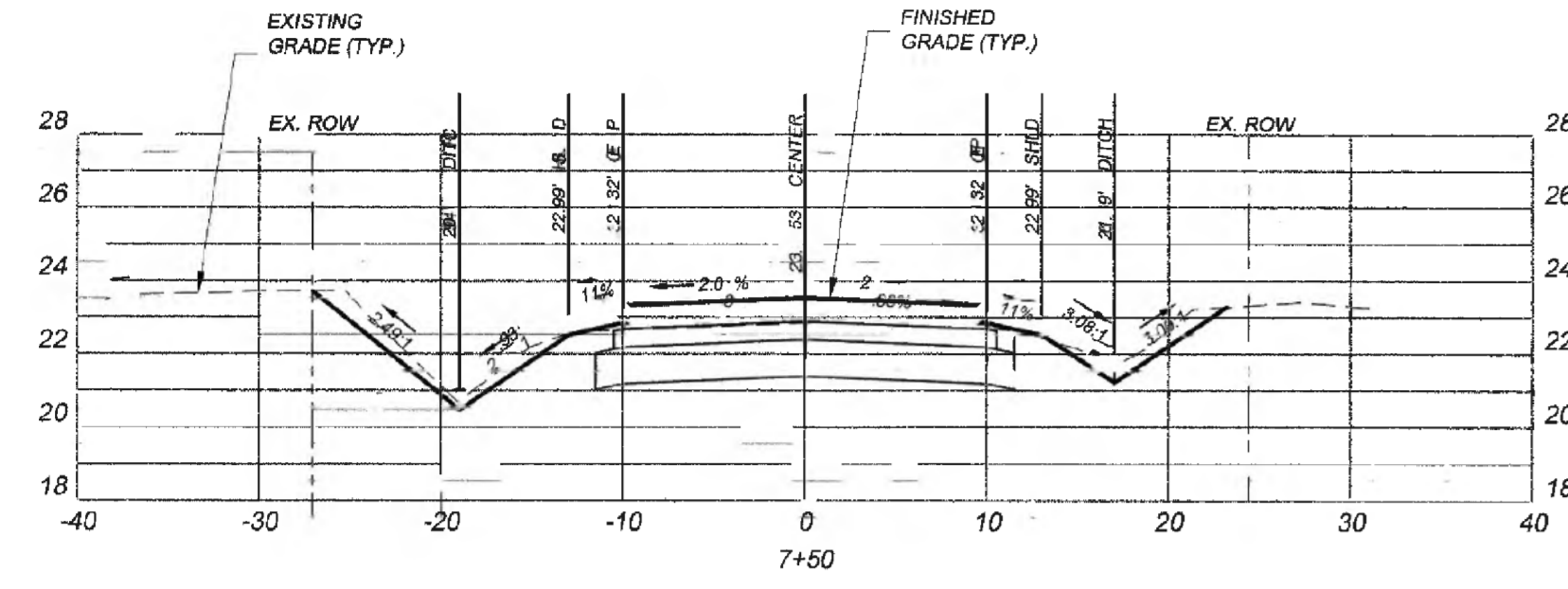
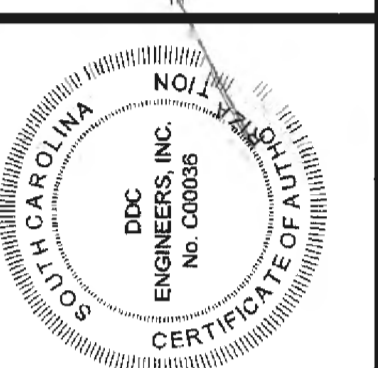
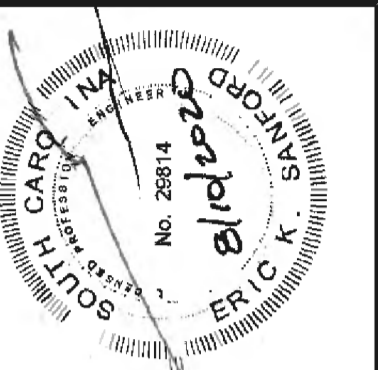
**SANDY KNOWE LANE  
PLAN AND PROFILE**  
GEORGETOWN COUNTY DIRT ROAD IMPROVEMENTS  
GEORGETOWN COUNTY, SOUTH CAROLINA  
PREPARED FOR: GEORGETOWN COUNTY

SCALE: H=1"=20'  
V=1"=5'  
DATE: 11-6-18  
DESIGNED BY: EKS  
DRAWN BY: PES  
APPROV. BY: EKS  
PROJECT NO.: 18009B  
**5**  
FILE NO.: 18009B

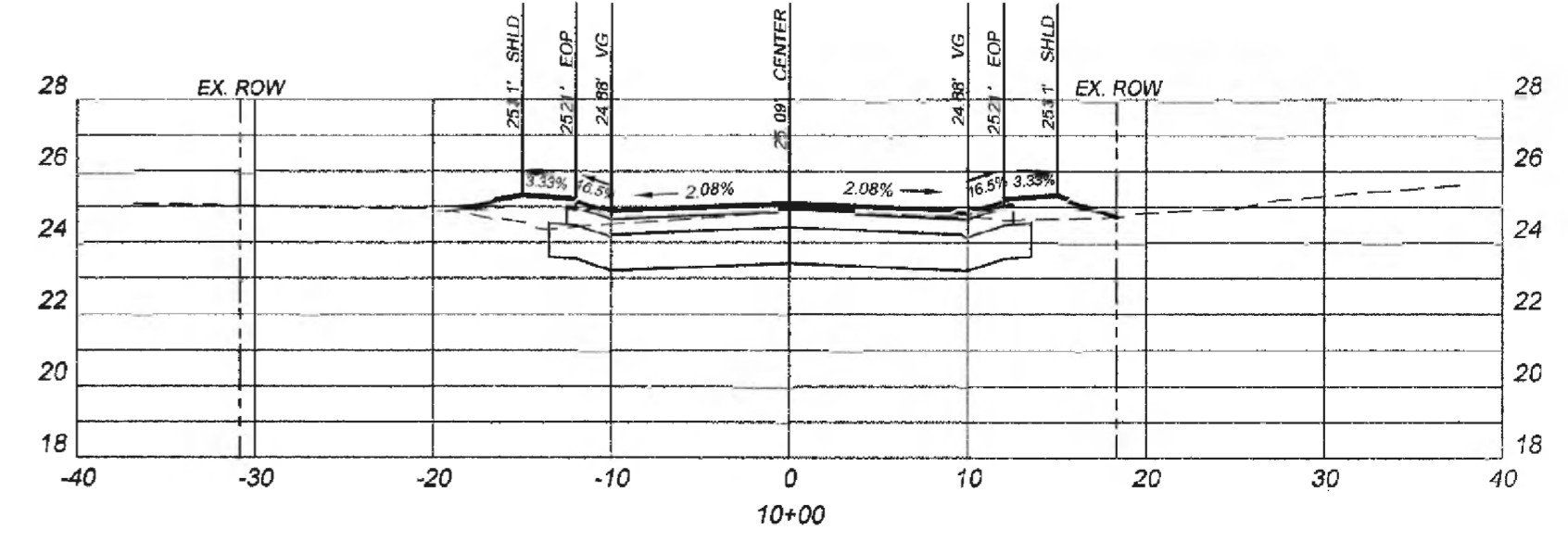
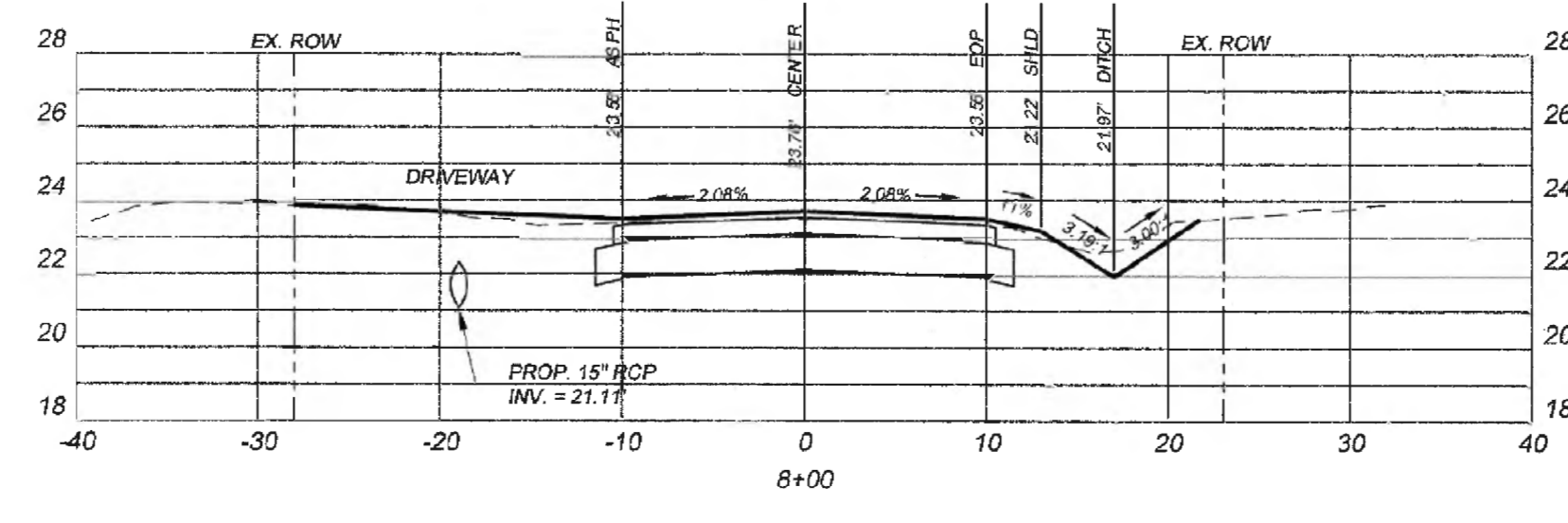
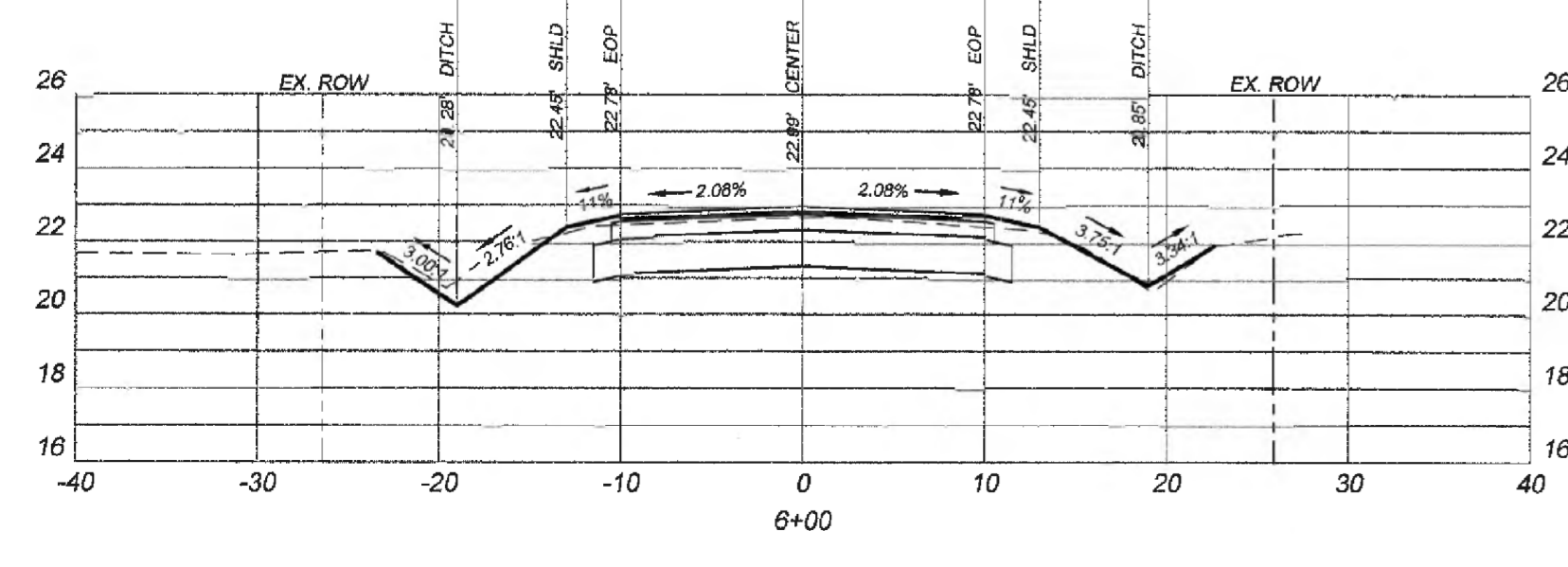
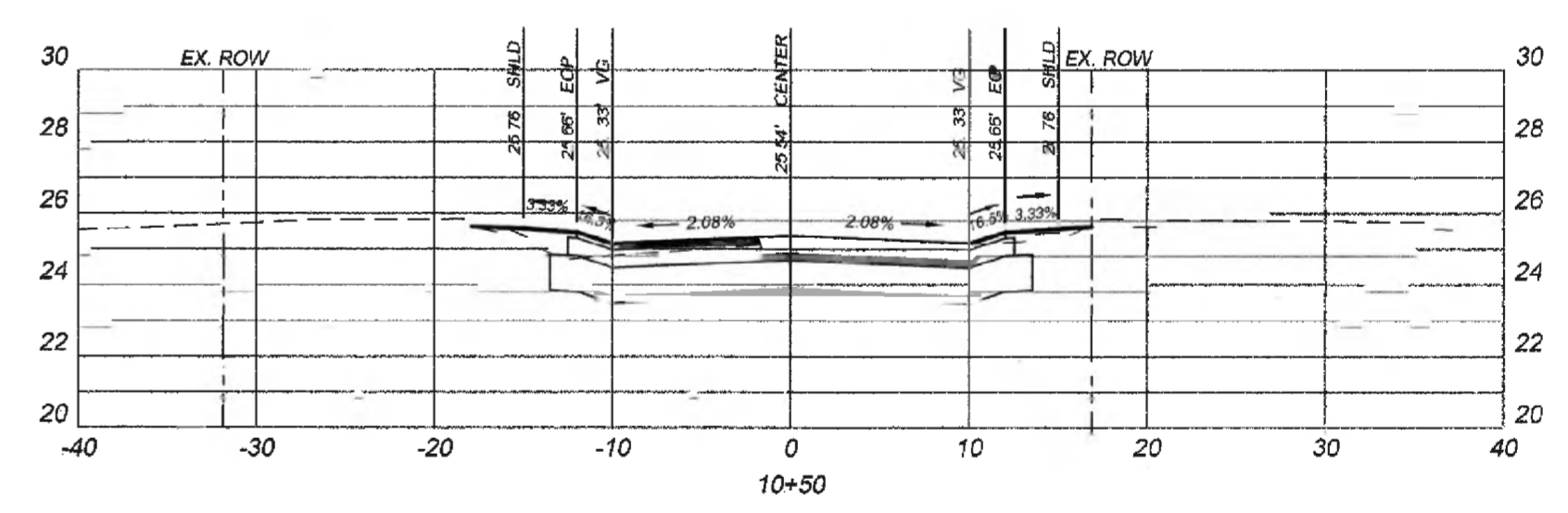
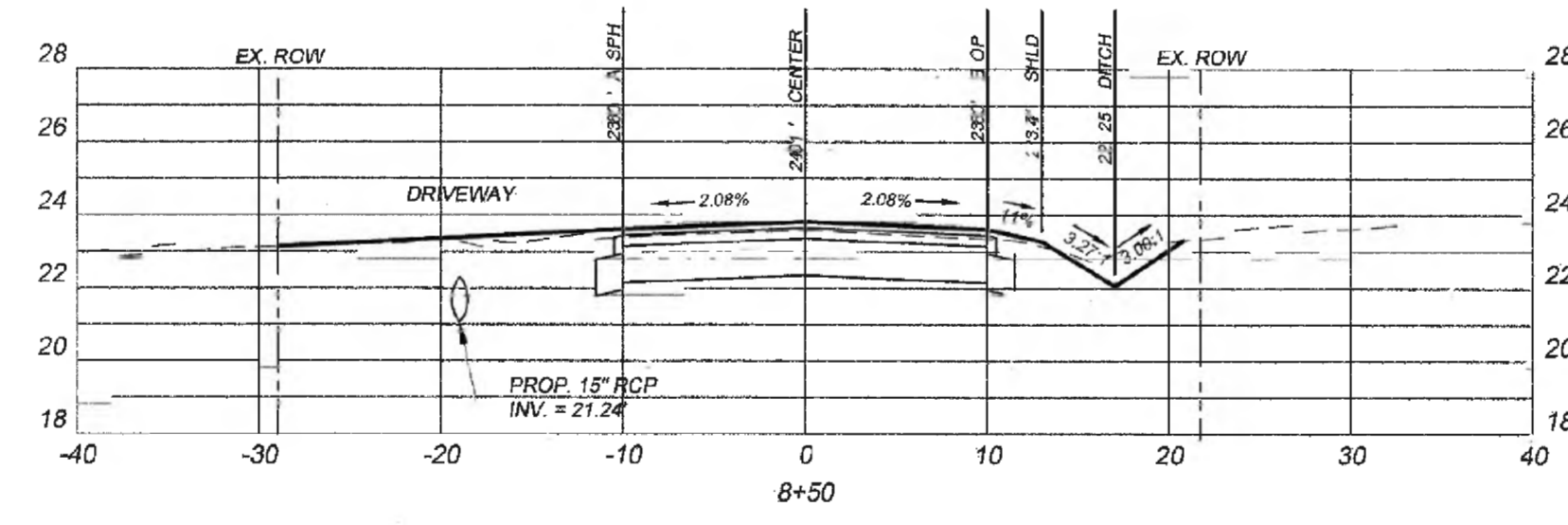
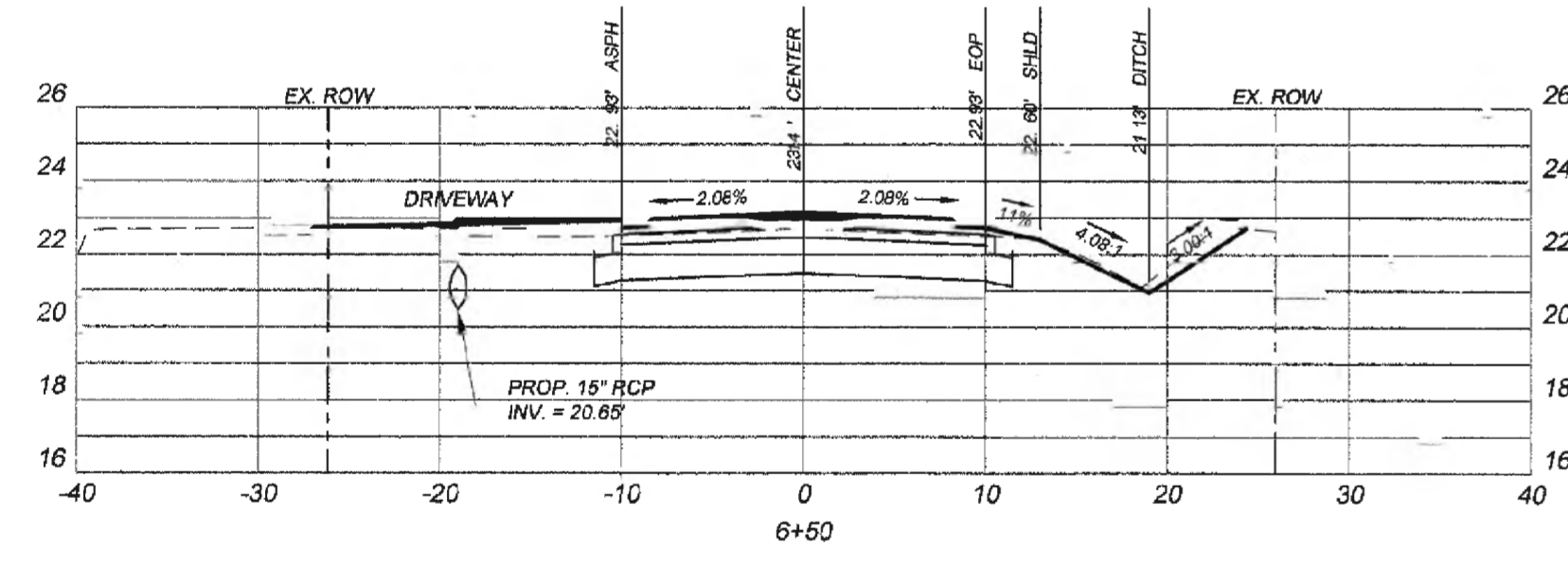


- NOTES:**
- ALL EXISTING WATER METERS, CATV, PHONE AND POWER UTILITIES IN ROAD EASEMENT SHALL BE RELOCATED BY THE UTILITY COMPANY AT NO COST TO THE CONTRACTOR.
  - CONTRACTOR IS RESPONSIBLE FOR RELOCATING EXISTING MAIL BOXES AS NECESSARY.
  - CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TREES LOCATED IN ROAD EASEMENT, UNLESS OTHERWISE NOTED.
  - SEE GENERAL NOTES, LEGEND AND SHEET SCHEDULE, SHEET 2 FOR EROSION CONTROL LEGEND AND SEEDING SCHEDULE.
  - ALL DRIVEWAYS TO BE PAVED A MINIMUM WIDTH OF 15' AND A RADII OF 5' AND PAVED TO THE RIGHT-OF-WAY UNLESS OTHERWISE DIRECTED.
  - USE TEMPORARY EROSION CONTROL BLANKET (CLASS C) AS NEEDED TO STABILIZE THE DITCH BANKS.
  - THE CONTRACTOR IS TO COORDINATE WITH THE EXISTING UTILITIES ON RAISING AND LEVELING THEIR EXISTING INFRASTRUCTURE THAT IS LOCATED WITHIN THE ROADWAY RIGHT OF WAY. WATER AND SEWER VALVE COVERS, AIR RELEASE VALVES AND BOXES, ETC.
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  - CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE RELOCATION OF UTILITIES WITH THE UTILITY COMPANIES.





TRANSITION TO VALLEY GUTTER - STA. 9+04  
 END NORMAL CROWN - STA 9+00



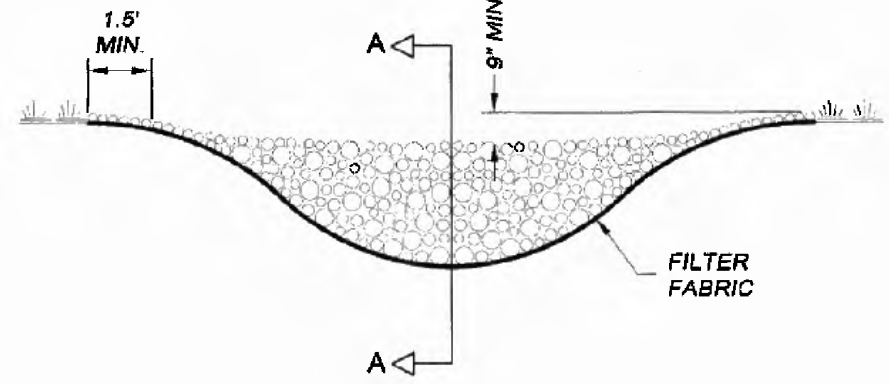
CROSS SECTIONS  
 SCALE  
 HORIZONTAL: 1"=10'  
 VERTICAL: 1"=5'

NOT SCALE 1:1 PLOT FILE NEWSDOC78

NO	DATE	REVISION DESCRIPTION	BY

**SANDY KNOWE LANE**  
**CROSS SECTIONS**  
 GEORGETOWN COUNTY DIRT ROAD IMPROVEMENTS  
 GEORGETOWN COUNTY, SOUTH CAROLINA  
 PREPARED FOR: GEORGETOWN COUNTY

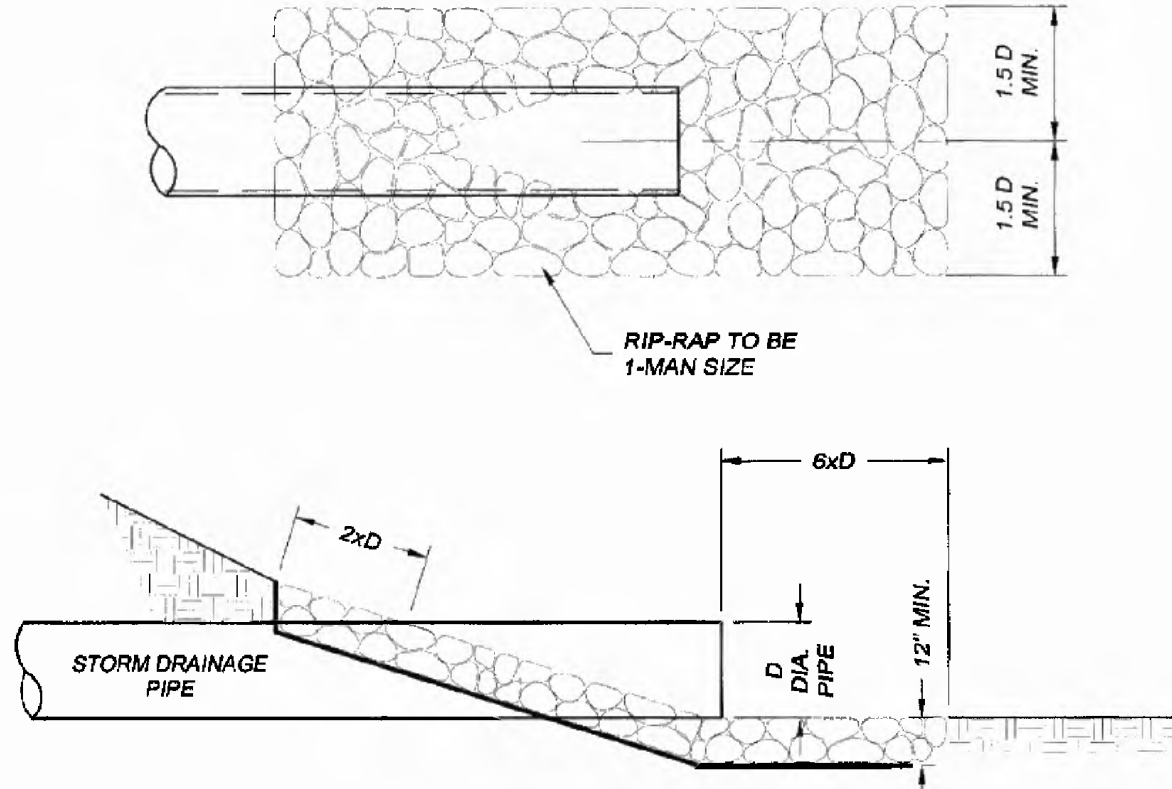
SCALE	1"=10'
DATE	11-9-18
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	18009B
<b>7</b>	
FILE NO.:	18009B



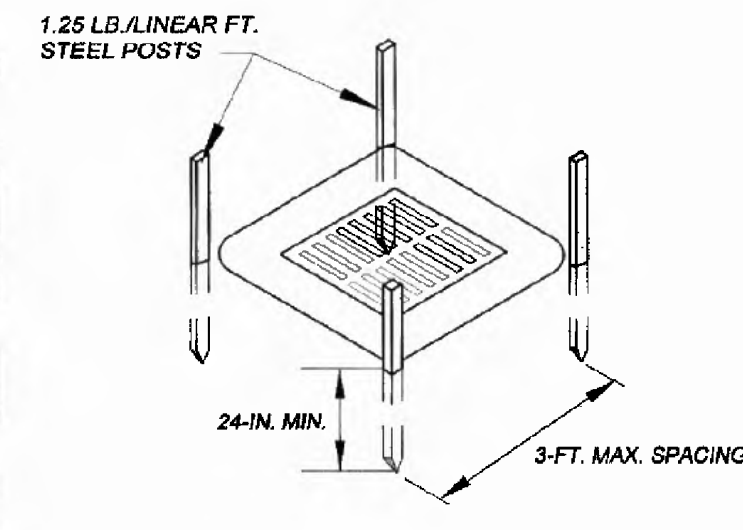
SECTION A-A

STONE CHECK DAM  
SCALE: N.T.S.

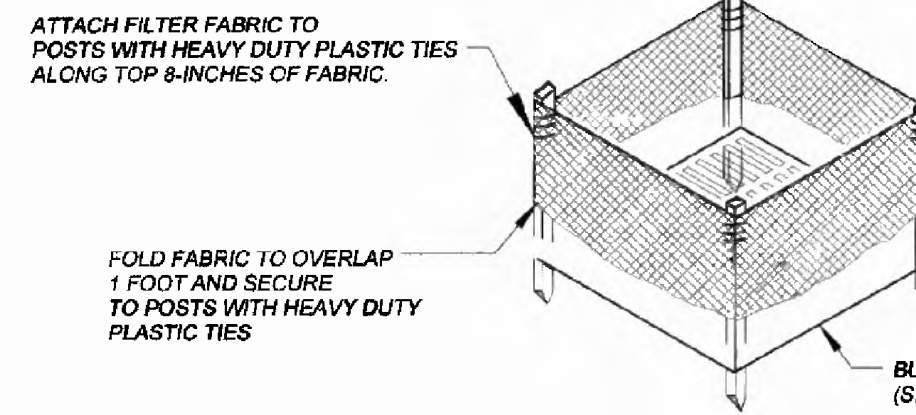
- NOTES:
1. FILTER FABRIC TO BE INSTALLED BENEATH STONE RIP-RAP.
  2. WHEN PIPE EMPTIES INTO A DITCH OR SWALE, THE RIP-RAP WILL TAKE THE SHAPE OF THE DITCH OR SWALE.



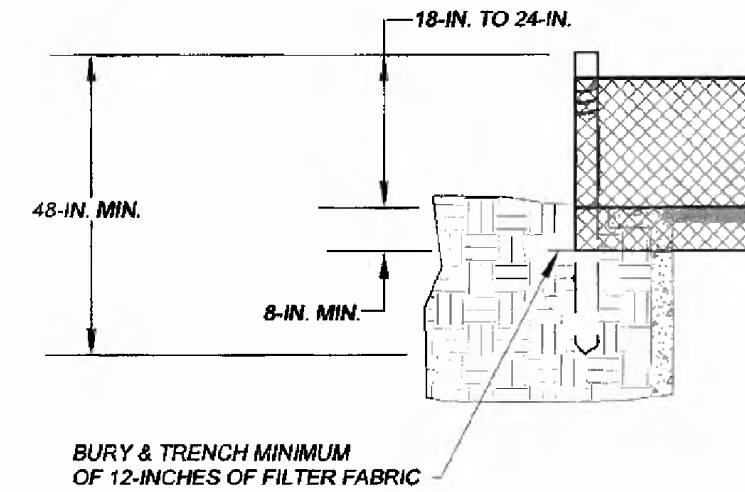
RIP-RAP PIPE OUTLET  
SCALE: N.T.S.



POST INSTALLATION DETAIL



FILTER FABRIC INSTALLATION  
DETAIL



FILTER FABRIC BURIAL DETAIL

TYPE A - POST REQUIREMENTS

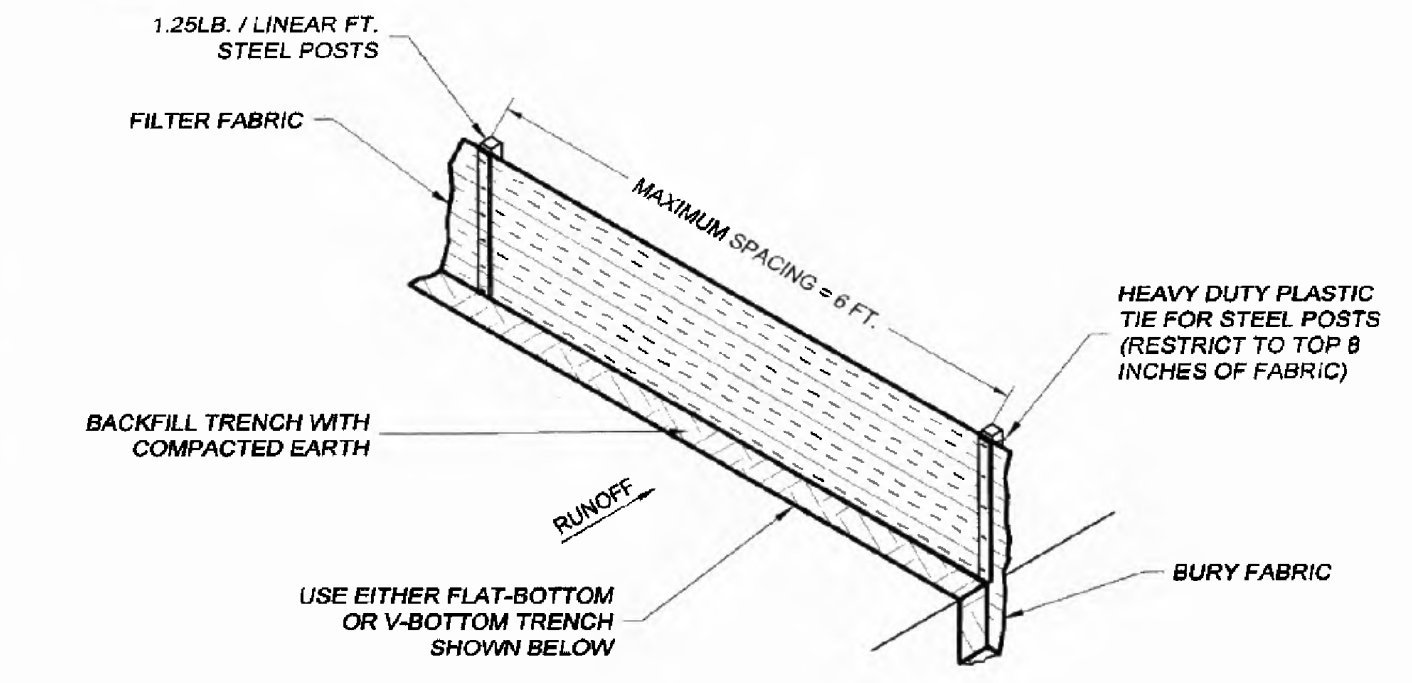
1. SILT FENCE POSTS MUST BE 48 INCH LONG STEEL POSTS THAT MEET, AT A MINIMUM, THE FOLLOWING PHYSICAL CHARACTERISTICS:
  - COMPOSED OF A HIGH STRENGTH STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI.
  - INCLUDE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38 INCHES AND A NOMINAL "T" LENGTH 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. 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.
4. POST SPACING SHALL BE AT A MAXIMUM OF 3 FEET ON CENTER.

TYPE A - FILTER FABRIC REQUIREMENTS

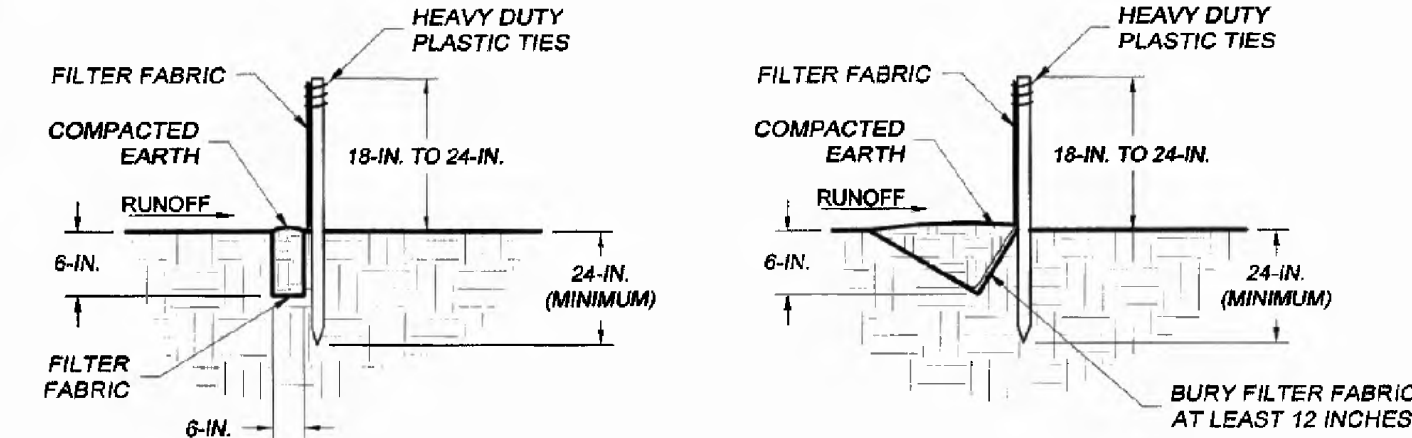
1. SILT FENCE MUST BE COMPOSED OF WOVEN GEOTEXTILE FILTER FABRIC THAT CONSISTS OF THE FOLLOWING REQUIREMENTS:
  - COMPOSED OF FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS OF AT LEAST 85% BY WEIGHT OF POLYOLEFINS, POLYESTERS OR POLYAMIDES THAT ARE FORMED INTO A NETWORK SUCH THAT THE FILAMENTS OR 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.

TYPE A - INSPECTION & MAINTENANCE

1. THE KEY TO FUNCTIONAL INLET PROTECTION IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE AND REGULAR SEDIMENT REMOVAL.
2. REGULAR INSPECTIONS OF 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 ALONG THE FILTER FABRIC 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 FILTER FABRIC. WHEN A SUMP IS INSTALLED IN FRONT OF THE FABRIC, 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. CHECK FOR AREAS WHERE STORM WATER RUNOFF HAS ERODED A CHANNEL BENEATH THE FILTER FABRIC. BENEATH THE FILTER FABRIC, OR WHERE THE FABRIC HAS SAGGED OR COLLAPSED DUE TO RUNOFF OVERTOPPING THE INLET PROTECTION.
7. CHECK FOR TEARS WITHIN THE FILTER FABRIC, AREAS WHERE FABRIC HAS BEGUN TO DECOMPOSE, AND FOR ANY OTHER CIRCUMSTANCE THAT MAY RENDER THE INLET PROTECTION INEFFECTIVE. REMOVE DAMAGED FABRIC AND REINSTALL NEW FILTER FABRIC IMMEDIATELY.
8. INLET PROTECTION STRUCTURES SHOULD BE REMOVED AFTER ALL 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 STRUCTURE CREST. STABILIZE ALL BARE AREAS IMMEDIATELY.



SILT FENCE INSTALLATION



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 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.
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 STORM WATER FLOW AND PLACE THE SILT FENCE THE PROPER DISTANCE FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEAN OUT.
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.

SILT FENCE - POST REQUIREMENTS

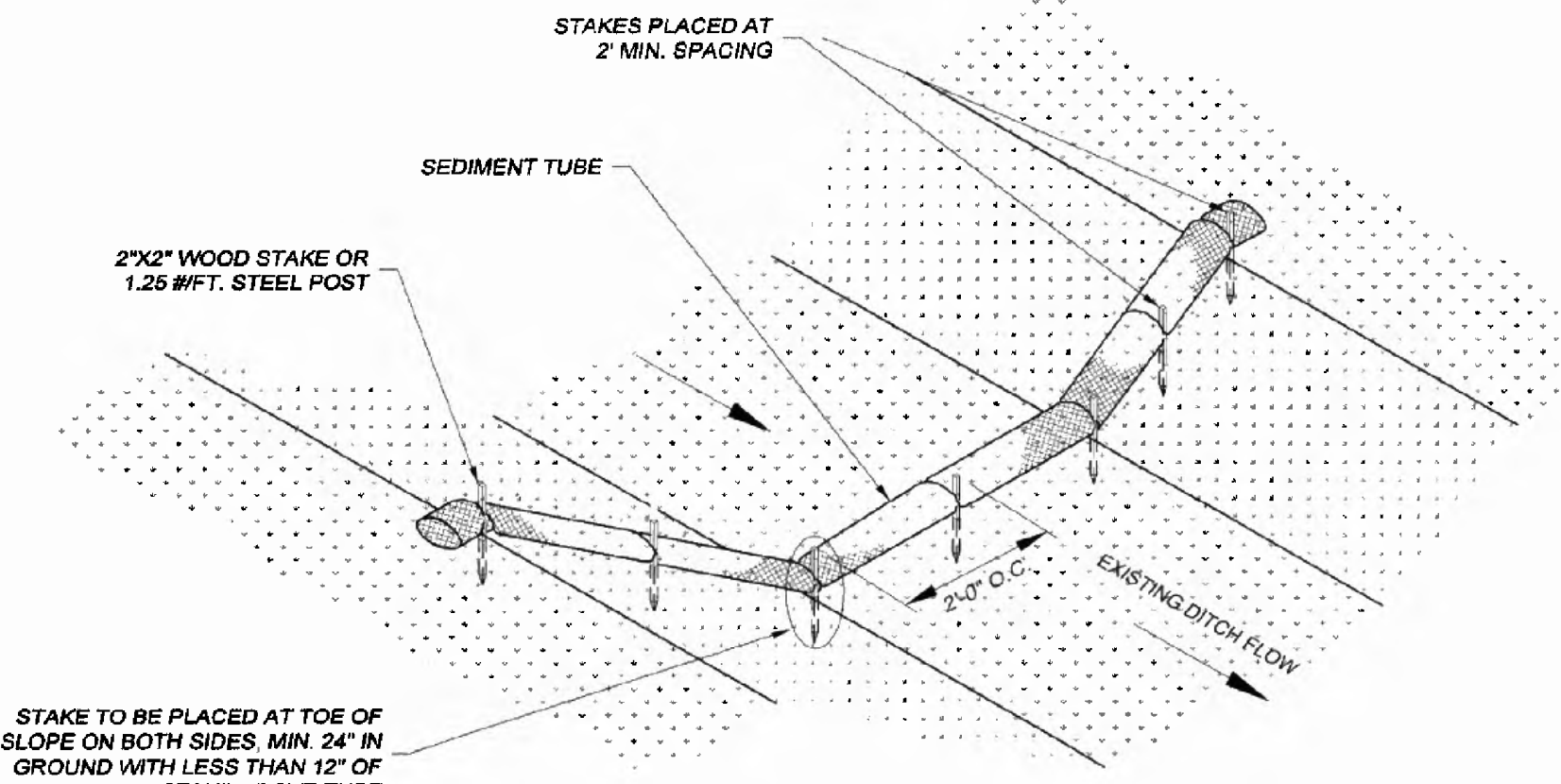
1. SILT FENCE POSTS MUST BE 48 INCH LONG STEEL POSTS THAT MEET, AT A MINIMUM, THE FOLLOWING PHYSICAL CHARACTERISTICS:
  - COMPOSED OF A HIGH STRENGTH STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI.
  - INCLUDE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38 INCHES AND A NOMINAL "T" LENGTH 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 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

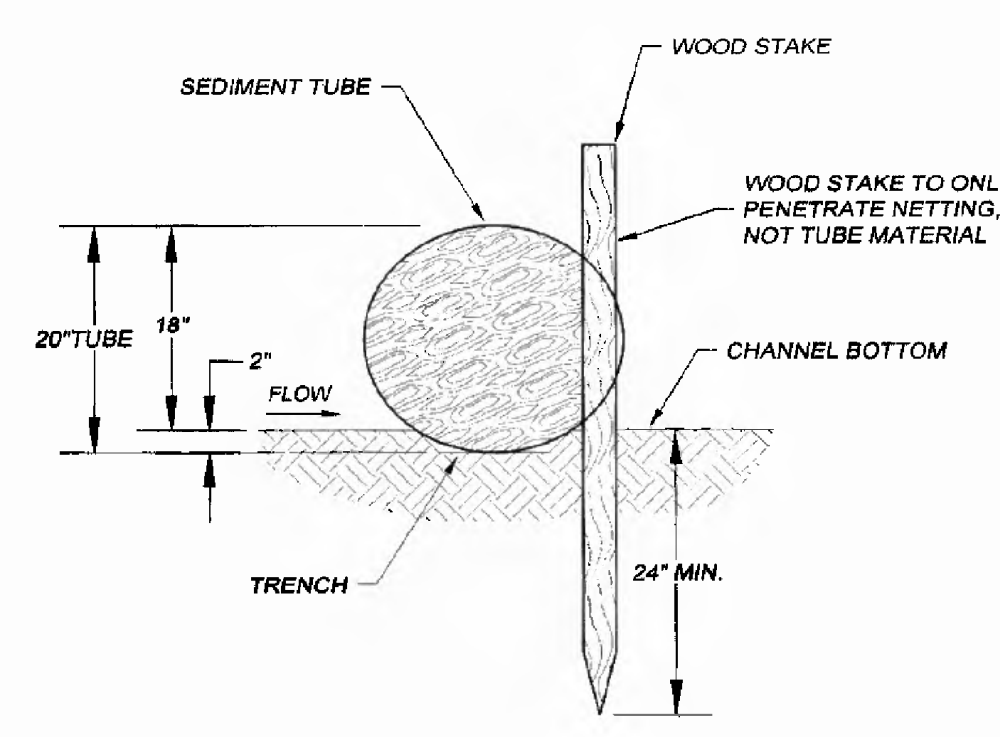
1. SILT FENCE MUST BE COMPOSED OF WOVEN GEOTEXTILE FILTER FABRIC THAT CONSISTS OF THE FOLLOWING REQUIREMENTS:
  - COMPOSED OF FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS OF AT LEAST 85% BY WEIGHT OF POLYOLEFINS, POLYESTERS OR POLYAMIDES THAT ARE FORMED INTO A NETWORK SUCH THAT THE FILAMENTS OR 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 STORM WATER 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 CHECKTIE-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. REMOVE DAMAGED SILT FENCE AND REINSTALL NEW SILT FENCE IMMEDIATELY.
8. 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.



SEDIMENT TUBE CHECK DAM DETAIL (NO BLANKET)

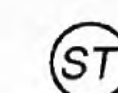


STAKE DETAIL (WITH TRENCH)

SEDIMENT TUBES - GENERAL NOTES

1. SEDIMENT TUBES MAY BE INSTALLED ALONG CONTOURS, IN DRAINAGE CONVEYANCE CHANNELS, AND AROUND INLETS TO HELP PREVENT OFF SITE DISCHARGE OF SEDIMENT LADEN STORM WATER RUNOFF.
2. SEDIMENT TUBES ARE ELONGATED TUBES OF COMPACTED GEOTEXTILES, CURLED EXCELSIOR WOOD, NATURAL COCONUT FIBER, OR HARDWOOD MULCH. STRAW, PINE NEEDLE AND LEAF MULCH FILLED SEDIMENT TUBES ARE NOT PERMITTED.
3. THE OUTER NETTING OF THE SEDIMENT TUBE SHOULD CONSIST OF SEAMLESS, HIGH DENSITY POLYETHYLENE PHOTODEGRADABLE MATERIALS TREATED WITH ULTRAVIOLET STABILIZERS OR A SEAMLESS, HIGH DENSITY POLYETHYLENE NON DEGRADABLE MATERIAL.
4. SEDIMENT TUBES, WHEN USED AS CHECKS WITHIN CHANNELS, SHOULD RANGE BETWEEN 18 INCHES AND 24 INCHES DEPENDING ON CHANNEL DIMENSIONS. DIAMETERS OUTSIDE THIS RANGE MAY BE ALLOWED WHERE NECESSARY WHEN APPROVED.
5. CURLED EXCELSIOR WOOD, OR NATURAL COCONUT PRODUCTS THAT ARE ROLLED UP TO CREATE A SEDIMENT TUBE ARE NOT ALLOWED.
6. SEDIMENT TUBES SHOULD BE STAKED USING WOODEN STAKES (2" X 2") OR STEEL POSTS (STANDARD "U" OR "T" SECTIONS WITH A MINIMUM WEIGHT OF 1.25 POUNDS PER FOOT) AT A MINIMUM OF 48 INCHES IN LENGTH PLACED ON 2 FOOT CENTERS.
7. INSTALL ALL SEDIMENT TUBES TO ENSURE THAT NO GAPS EXIST BETWEEN THE SOIL AND THE BOTTOM OF THE TUBE. MANUFACTURER'S RECOMMENDATIONS SHOULD ALWAYS BE CONSULTED BEFORE INSTALLATION.
8. THE ENDS OF ADJACENT SEDIMENT TUBES SHOULD BE OVERLAPPED 6 INCHES TO PREVENT FLOW AND SEDIMENT FROM PASSING THROUGH THE FIELD JOINT.
9. SEDIMENT TUBES SHOULD NOT BE STACKED ON TOP OF ONE ANOTHER, UNLESS RECOMMENDED BY MANUFACTURER.
10. EACH SEDIMENT TUBE SHOULD BE INSTALLED IN A TRENCH WITH A DEPTH EQUAL TO 1/3 THE DIAMETER OF THE SEDIMENT TUBE.
11. SEDIMENT TUBES SHOULD CONTINUE UP THE SIDE SLOPES A MINIMUM OF 1 FOOT ABOVE THE DESIGN FLOW DEPTH OF THE CHANNEL.
12. INSTALL STAKES AT A DIAGONAL FACING INCOMING RUNOFF.

SEDIMENT TUBE DETAIL  
SCALE: N.T.S.



SEDIMENT TUBE SPACING

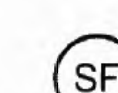
SLOPE	MAX. SEDIMENT TUBE SPACING
LESS THAN 2%	150-FEET
2%	100-FEET
3%	75-FEET
4%	50-FEET
5%	40-FEET
6%	30-FEET
GREATER THAN 6%	25-FEET

1 1/8" x 1 1/8" x 48" WOODEN STAKES ARE RECOMMENDED FOR 20" SEDIMENT LOGS.

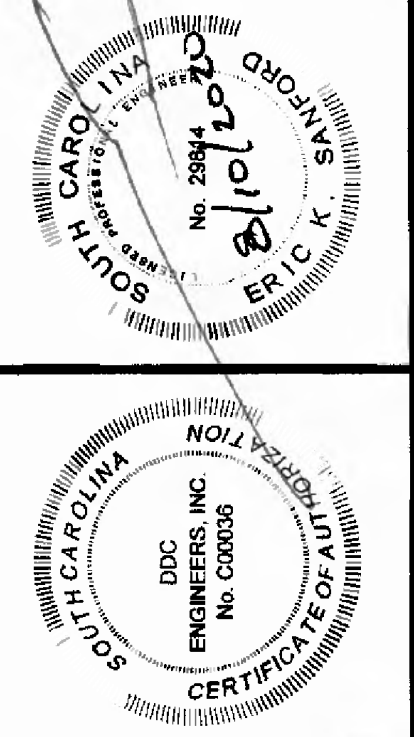
INLET PROTECTION  
SCALE: N.T.S.



CONSTRUCTION OF A SILT FENCE  
SCALE: N.T.S.



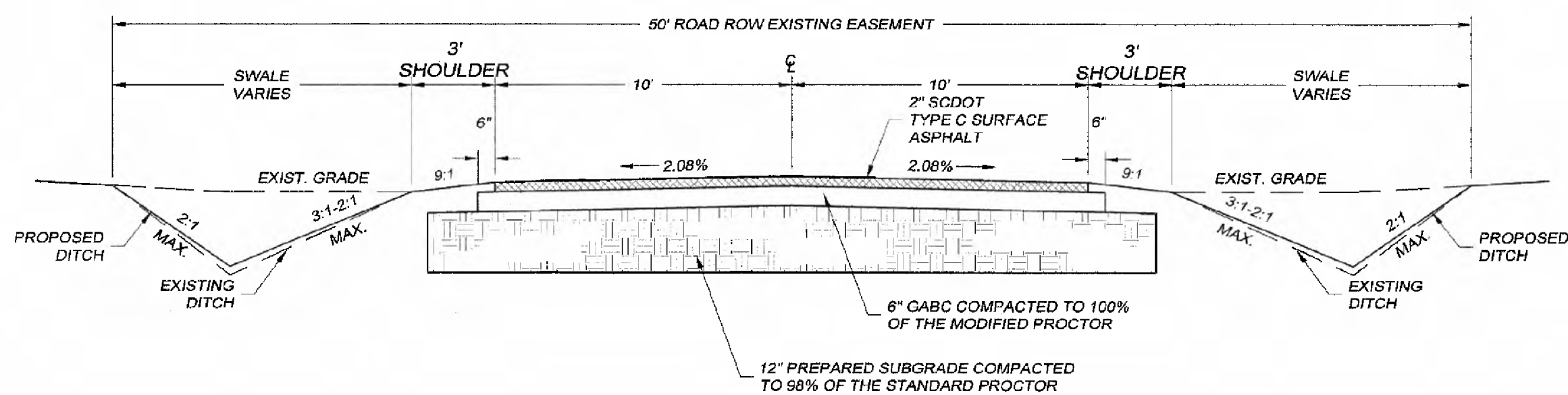
DDC ENGINEERS  
Consulting Engineers, Surveyors, Planners,  
Landscape Architects & Environmentalists  
1298 Professional Dr., Myrtle Beach, SC 29577  
Phone: (843) 692-3200 Fax: (843) 692-3210



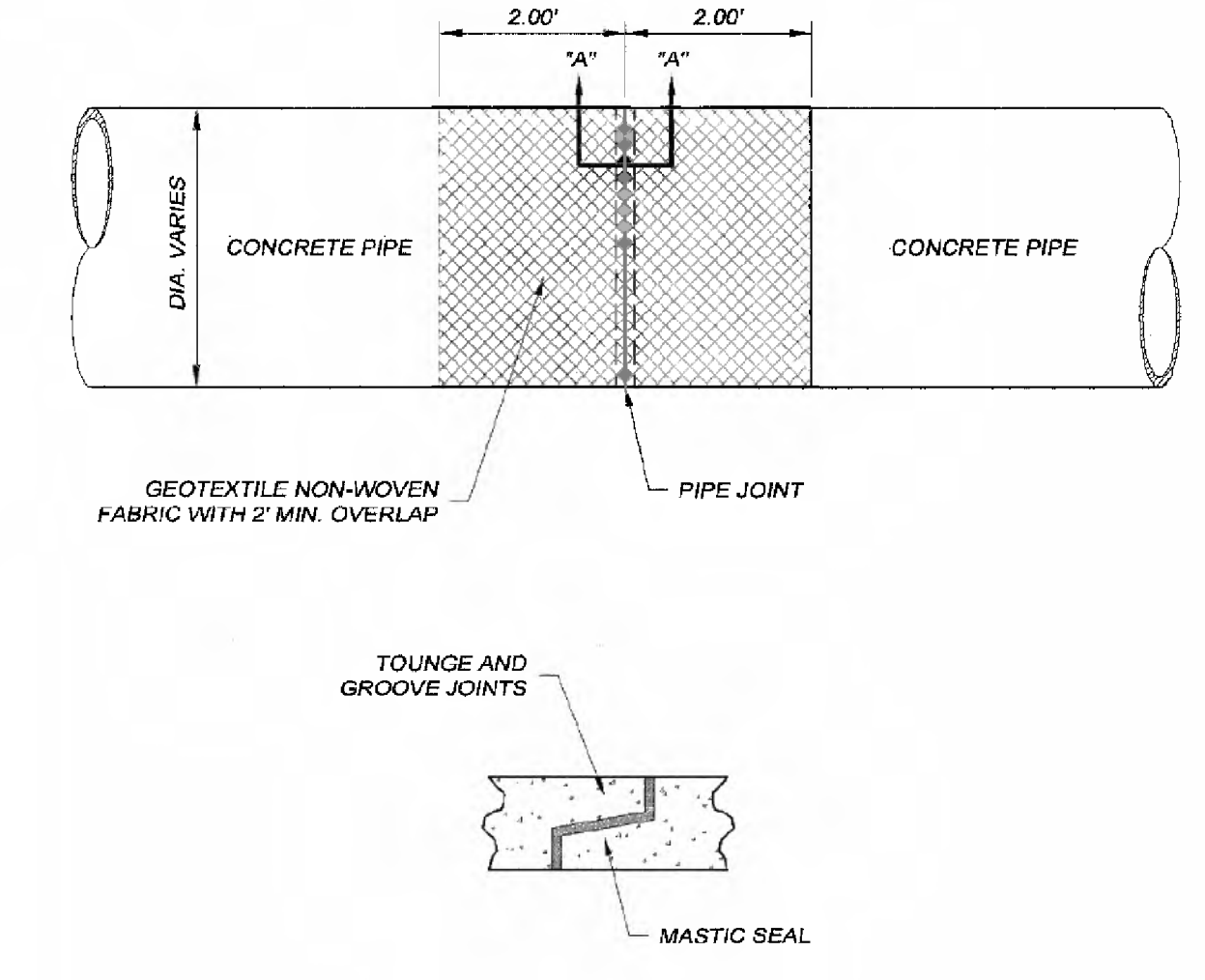
NO.	DATE	REVISION DESCRIPTION	BY

SEDIMENT AND EROSION CONTROL DETAILS  
GEORGETOWN COUNTY DIRT ROAD IMPROVEMENTS  
GEORGETOWN COUNTY, SOUTH CAROLINA  
PREPARED FOR: GEORGETOWN COUNTY  
SCALE: NO SCALE  
DATE: 11-9-18  
DESIGNED BY: EKS  
DRAWN BY: PES  
APPROV. BY: EKS  
PROJECT NO.: 18009B  
8  
FILE NO.: 18009B

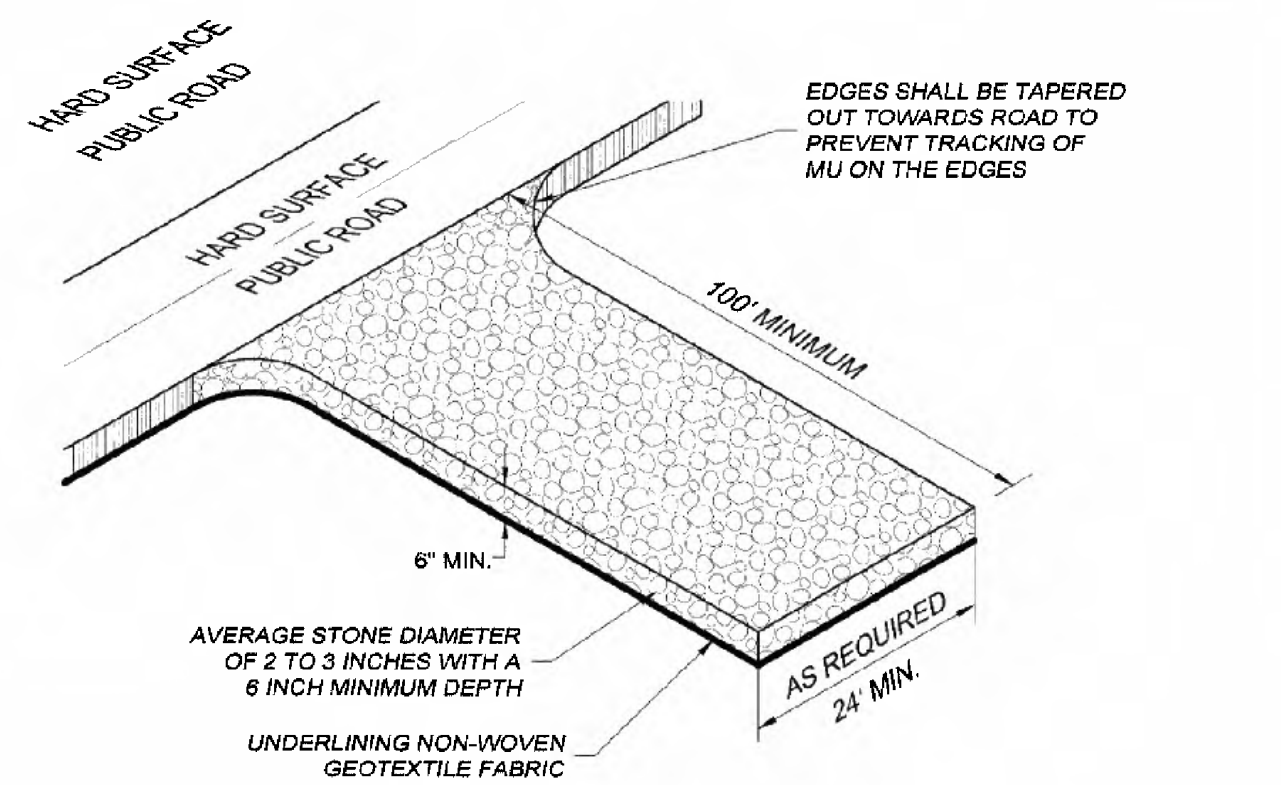




(FROM STA. 0+00 TO STA. 9+00)  
(FROM STA. 11+07 TO STA. 11+41.14)  
**TYPICAL ROADWAY CROSS SECTION**  
SCALE: N.T.S.

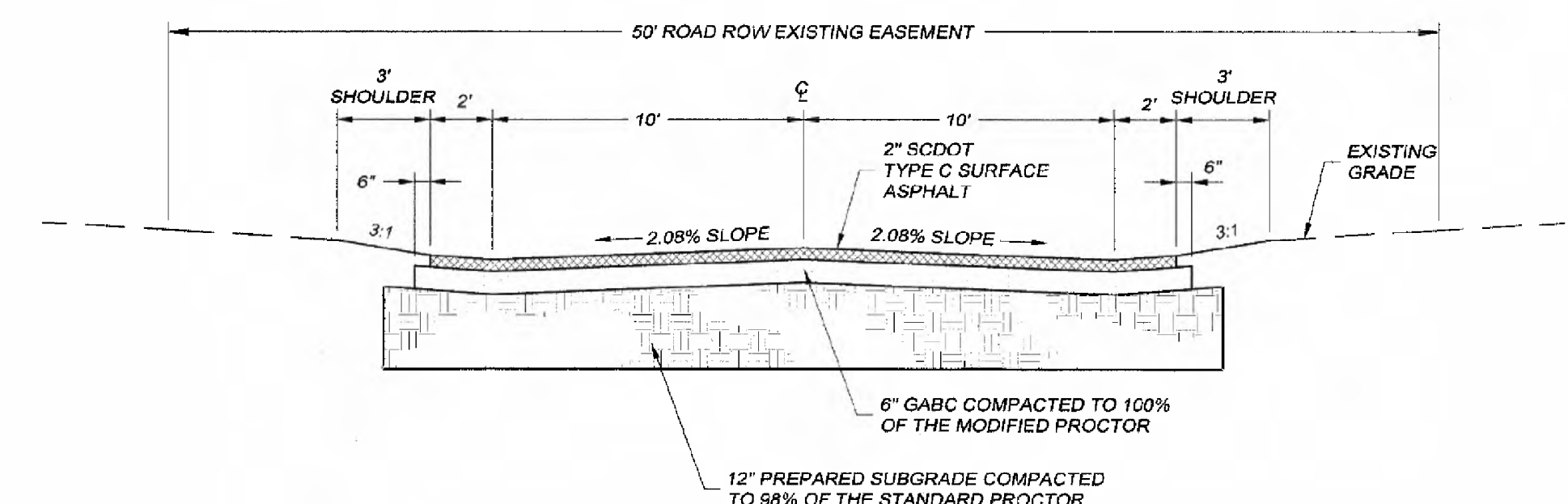


**SECTION "A"- "A"**  
**REINFORCED CONCRETE PIPE JOINT**  
SCALE: N.T.S.

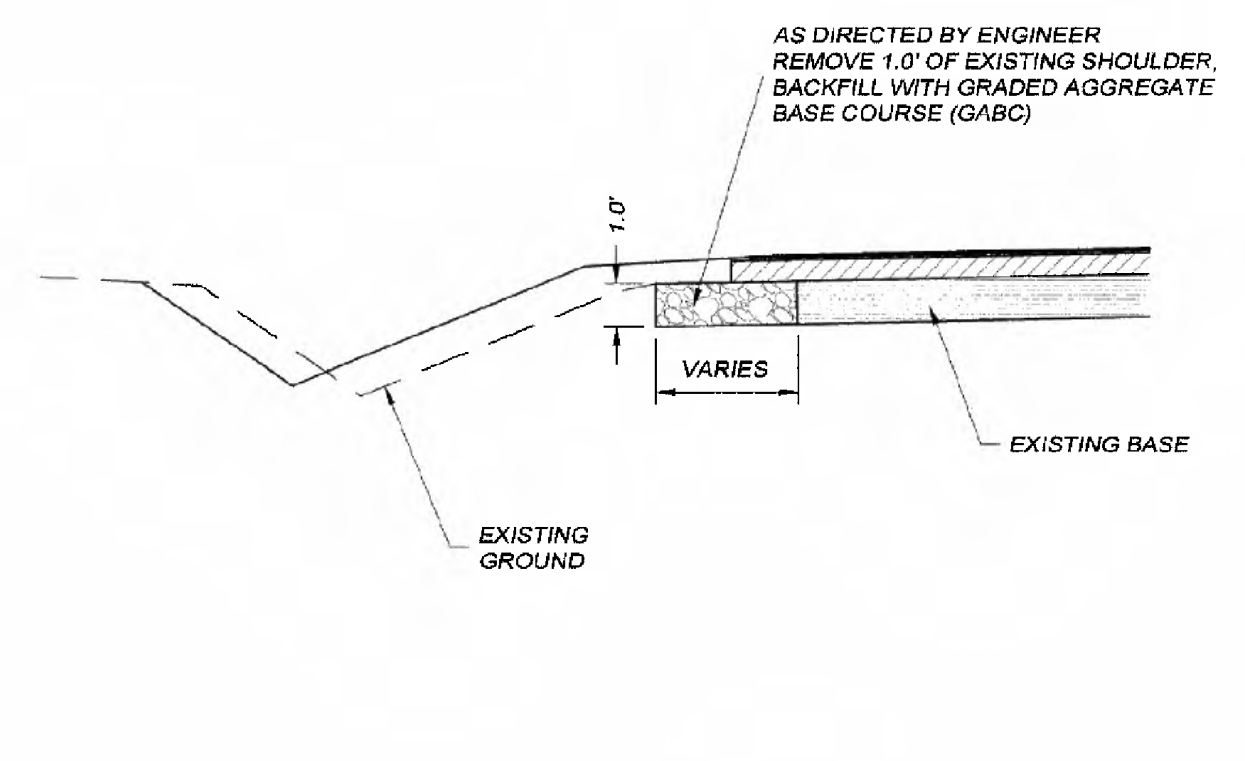
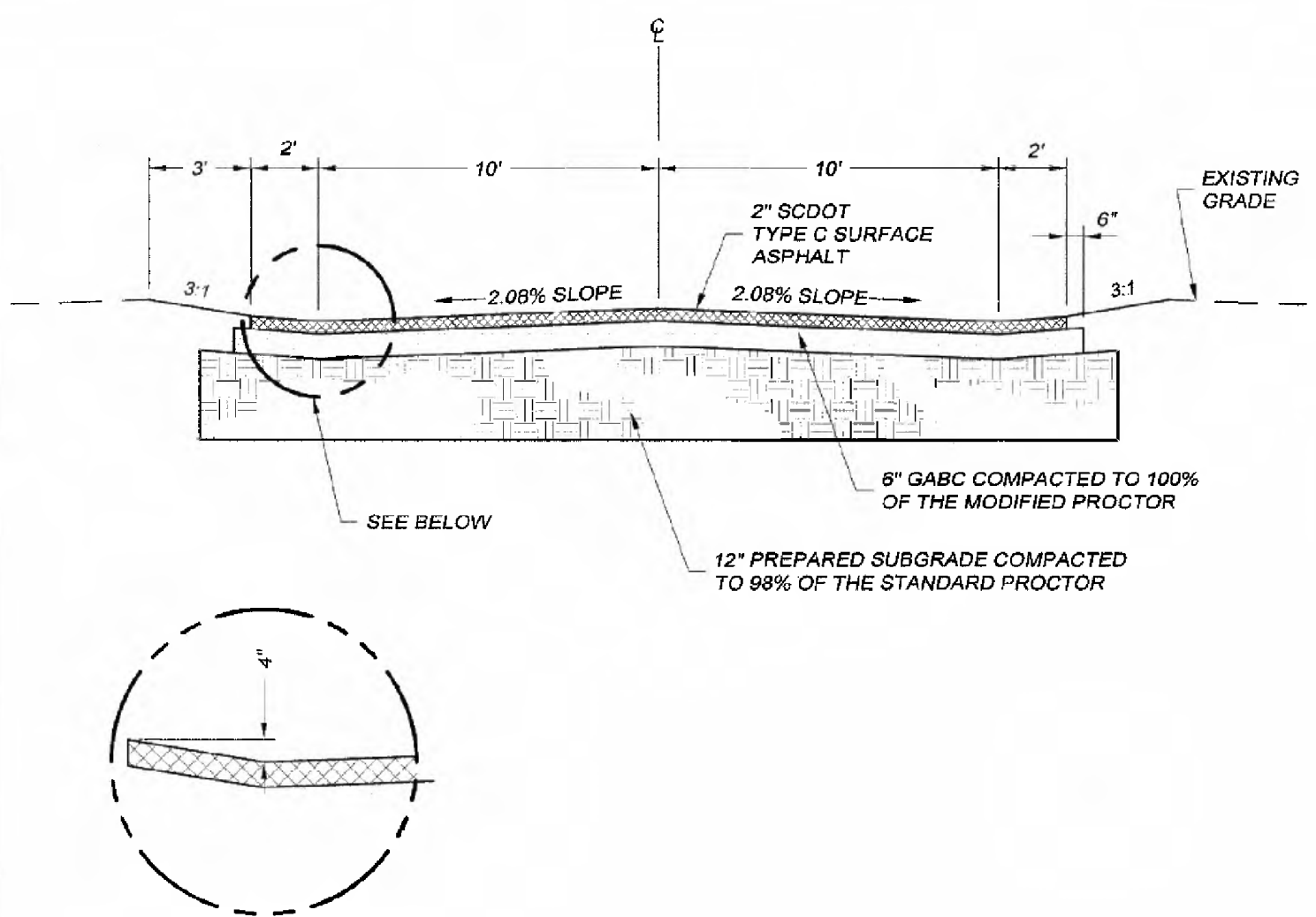


**CE**  
**STABILIZED CONSTRUCTION ENTRANCE**  
SCALE: N.T.S.

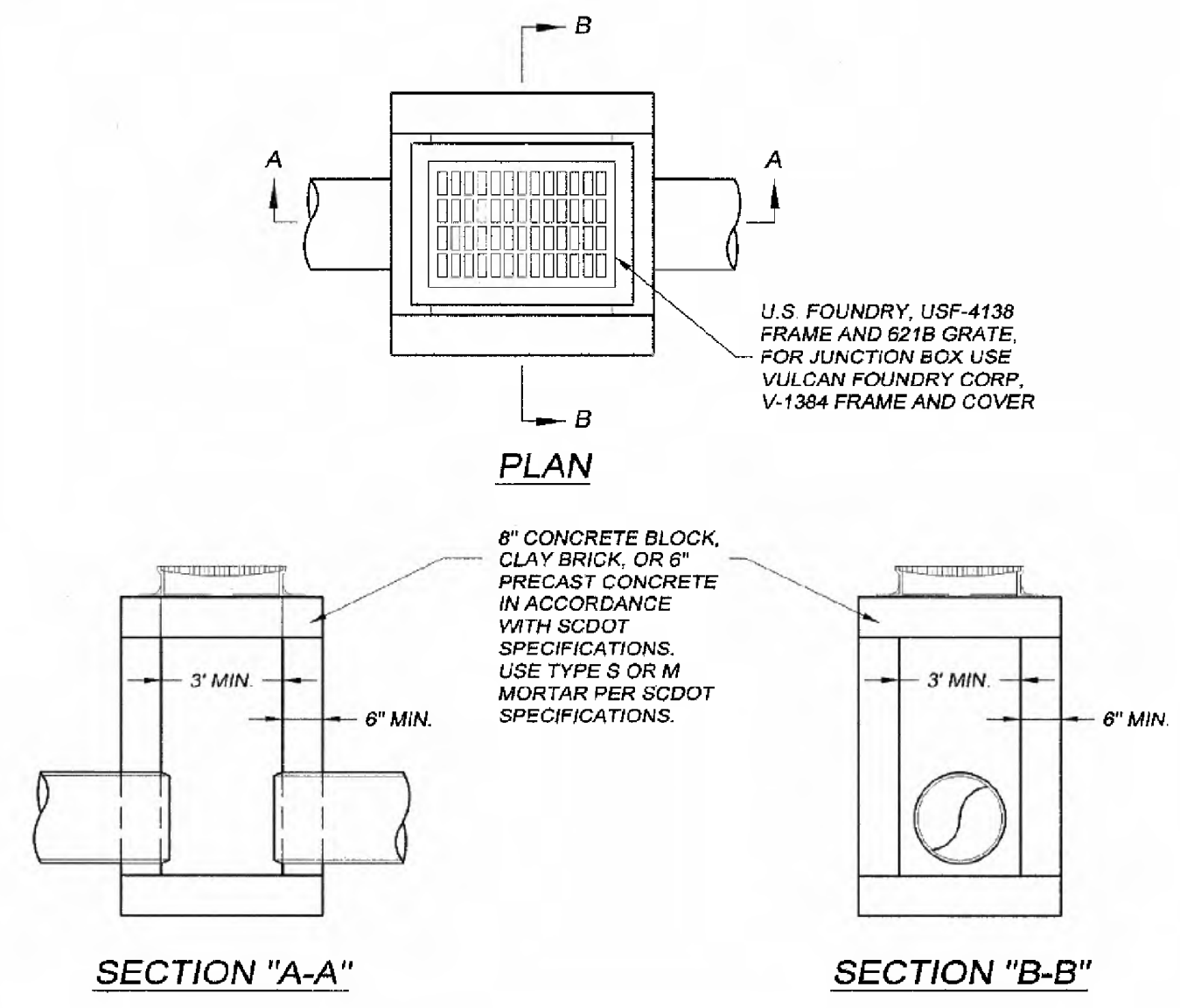
**NOTE:**  
- INSTALL A CULVERT PIPE ACROSS THE ENTRANCE WHEN NEEDED TO PROVIDE POSITIVE DRAINAGE.  
- DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN OR OTHER SEDIMENT TRAPPING STRUCTURE.  
- ENTRANCES SHALL COMPLY WITH SCDOT STANDARD DRAWING 651-115-01



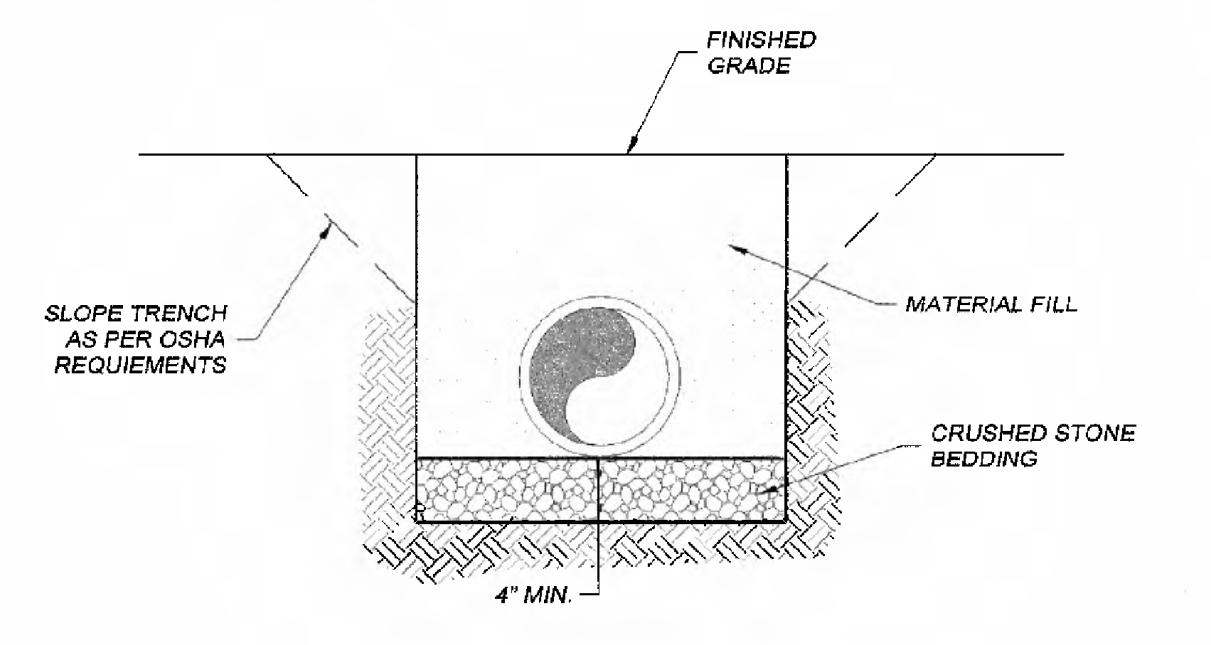
(FROM STA. 9+00 TO STA. 11+07)  
**TYPICAL PAVED VALLEY SWALE DETAIL**  
SCALE: N.T.S.



**TYPICAL ROADWAY CROSS SECTION WITHIN SCDOT R/W**  
SCALE: N.T.S.



**SECTION "A-A"**  
**SECTION "B-B"**  
**TYPICAL CATCH BASIN / JUNCTION BOX DETAIL**  
SCALE: N.T.S.

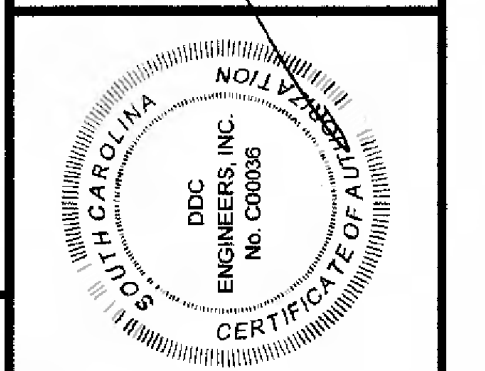


**NOTES:**  
1. BEDDING IS REQUIRED WHEN TRENCH BOTTOM IS BELOW THE WATER TABLE.  
2. BEDDING SHALL BE COMPACTED CRUSHED STONE (CLASS 1 MATERIAL) SHAPED TO THE BOTTOM OF THE PIPE.  
3. FILL SHALL BE SUITABLE MATERIAL IN NON PAVEMENT AREAS AND AGGREGATE BACKFILL MATERIAL IN PAVEMENT AREAS AND COMPACTED TO 95% OF THE SOILS STANDARD PROCTOR.  
4. FILL SHALL BE NATIVE MATERIAL FREE OF LARGE ROCKS, DEBRIS OR ORGANICS AND COMPACTED TO 95% OF THE SOIL'S STANDARD PROCTOR.  
5. FILTER FABRIC TO BE PLACED AT ALL JOINTS.

**REINFORCED CONCRETE PIPE BEDDING DETAIL**  
SCALE: N.T.S.



**ENGINEERS**  
Consulting Engineers, Surveyors, Planners,  
Landscape Architects & Environmentalists  
1208 Professional Dr., Myrtle Beach, SC 29577  
Phone: (843) 692-3200 Fax: (843) 692-3210



NO.	DATE	REVISION DESCRIPTION	BY

**MISCELLANEOUS DETAILS**  
GEORGETOWN COUNTY DIRT ROAD IMPROVEMENTS  
GEORGETOWN COUNTY, SOUTH CAROLINA  
PREPARED FOR: GEORGETOWN COUNTY

SCALE: NO SCALE  
DATE: 11-6-18  
DESIGNED BY: EKS  
DRAWN BY: PES  
APPROV. BY: EKS  
PROJECT NO.: 18009B  
FILE NO.: 18009B

REFERENCES

DRAWING 610-005-20 NOTES

- SEE STANDARD DRAWING NO. 610-005-00 FOR ALL GENERAL NOTES AND REQUIREMENTS. THE FOLLOWING NOTES ARE SPECIFIC REQUIREMENTS FOR THIS STANDARD DRAWING.
- WHEN THE WORK ZONE PROCEEDS THROUGH OR MUST ENCR OACH UPON THE "LIMITS OF THE INTERSECTION", DO NOT ALLOW THE "APPROACH TAPER" OR THE "DOWNSTREAM TAPER" OF THE LANE CLOSURE TO ENCR OACH UPON THE "LIMITS OF THE INTERSECTION". ONLY THE "BUFFER SPACE" OR THE "WORK ACTIVITY AREA" OF THE LANE CLOSURE MAY ENCR OACH UPON THE "LIMITS OF THE INTERSECTION".
- WHEN THE WORK ZONE PROCEEDS THROUGH OR MUST ENCR OACH UPON THE "LIMITS OF THE INTERSECTION" WITH "STOP SIGN CONTROLLED" "SIDE ROADS", UTILIZE FLAGGERS TO CONTROL THE TRAFFIC FROM THE INTERSECTING "SIDE ROADS" UNLESS OTHERWISE DIRECTED BY THE ENGINEER. MAINTAIN THESE FLAGGERS IN PLACE FOR THE DURATION THAT ANY PORTION OF THE "BUFFER SPACE" OR THE "WORK ACTIVITY AREA" MAY ENCR OACH UPON THE "LIMITS OF THE INTERSECTION".
- WHEN THE WORK ZONE PROCEEDS THROUGH OR MUST ENCR OACH UPON THE "LIMITS OF THE INTERSECTION" WITH "STOP SIGN CONTROLLED" "SIDE ROADS", THE CONTRACTOR SHOULD CONTINUE THE WORK OPERATIONS THROUGH THE INTERSECTION TO A LOCATION POINT BEYOND THE "LIMITS OF THE INTERSECTION" THAT WILL PERMIT THE WORK TRAIN TO CLEAR THE INTERSECTION AND THE LOCATION OF THE SUBSEQUENT "FLAGGER STATION" BE NO LESS THAN 200' PAST THE "LIMITS OF THE INTERSECTION" UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- WHEN THE WORK ZONE PROCEEDS THROUGH A "STOP SIGN CONTROLLED" "SIDE ROAD" INTERSECTION, CONTINUE THE WORK OPERATIONS THROUGH THE INTERSECTION TO A SPECIFIC LOCATION POINT WITHIN THE "DEPARTURE LANE" NO LESS THAN 300 FT TO 500 FT BEYOND THE LIMITS OF THE INTERSECTION TO ALLOW THE WORK TRAIN AND ALL PORTIONS OF THE LANE CLOSURE TO CLEAR THE INTERSECTION.
- MAINTAIN THE MAXIMUM TIME DURATION OF 5 TO 7 1/2 MINUTES FOR STOPPED TRAFFIC ON THE ROADWAY WHERE THE WORK ACTIVITY IS LOCATED AND BEING CONDUCTED UNLESS OTHERWISE DIRECTED BY THE ENGINEER. WHEN ANY PORTION OF THE "WORK ACTIVITY AREA" ENCR OACHES UPON THE "LIMITS OF THE INTERSECTION", VARIOUS TYPES OF WORK MAY REQUIRE TRAFFIC TO AND FROM THE "SIDE ROADS" BE STOPPED FOR TIME DURATIONS GREATER THAN THE MAXIMUM TIME DURATION OF 5 TO 7 1/2 MINUTES. ONLY WHEN APPROVED BY THE ENGINEER MAY THE MAXIMUM TIME DURATION OF 5 TO 7 1/2 MINUTES FOR STOPPED TRAFFIC FOR THE SIDE ROAD TRAFFIC BE EXCEEDED. IN THE EVENT THE TYPE OF WORK REQUIRES THE SIDE ROAD TRAFFIC BE STOPPED FOR TIME DURATIONS GREATER THAN 5 TO 7 1/2 MINUTES, THE SIDE ROAD TRAFFIC MAY BE STOPPED FOR TIME PERIODS UP TO 20 MINUTES IF APPROVED BY THE ENGINEER. IF THE SIDE ROAD TRAFFIC MUST BE STOPPED FOR TIME PERIODS GREATER THAN 20 MINUTES, CLOSURE OF THE "SIDE ROADS" MAY BE CONSIDERED IF APPROVED BY THE ENGINEER. IN THE EVENT CLOSURE OF THE "SIDE ROADS" IS APPROVED, CLOSE THE "SIDE ROADS" TO TRAFFIC IN ACCORDANCE WITH THE REQUIREMENTS OF STANDARD DRAWING NO. 610-510-00. INSTALL AND MAINTAIN APPROPRIATE DETOURS WHEN NECESSARY AND AS DIRECTED BY THE ENGINEER.

WORK ZONE TRAFFIC CONTROL ENGINEER



*Willie E. McConnell, Jr.*  
SIGNATURE

6/1/2018  
DATE

5			
4			
3			
2			
1	4-27-18	WEM	REVISED WORK ACTIVITY DIMENSION AND NOTE 5
0	1-15-15	JCS	NEW DRAWING
#	DATE	CHK	DESCRIPTION

**SCDOT**  
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION  
DESIGN STANDARDS OFFICE  
955 PARK STREET  
ROOM 405  
COLUMBIA, SC 29201

STANDARD DRAWING  
FLAGGING OPERATIONS WORK ZONES CONTINUING THROUGH STOP SIGN CONTROLLED SIDE ROADS

610-005-20

EFFECTIVE LETTING DATE | JAN 2019

(SEE STANDARD DRAWING NO. 610-005-00 )  
UTILIZE A CHANGEABLE MESSAGE SIGN AS ILLUSTRATED DURING NIGHTTIME FLAGGING OPERATIONS

THIS DRAWING IS NOT TO SCALE

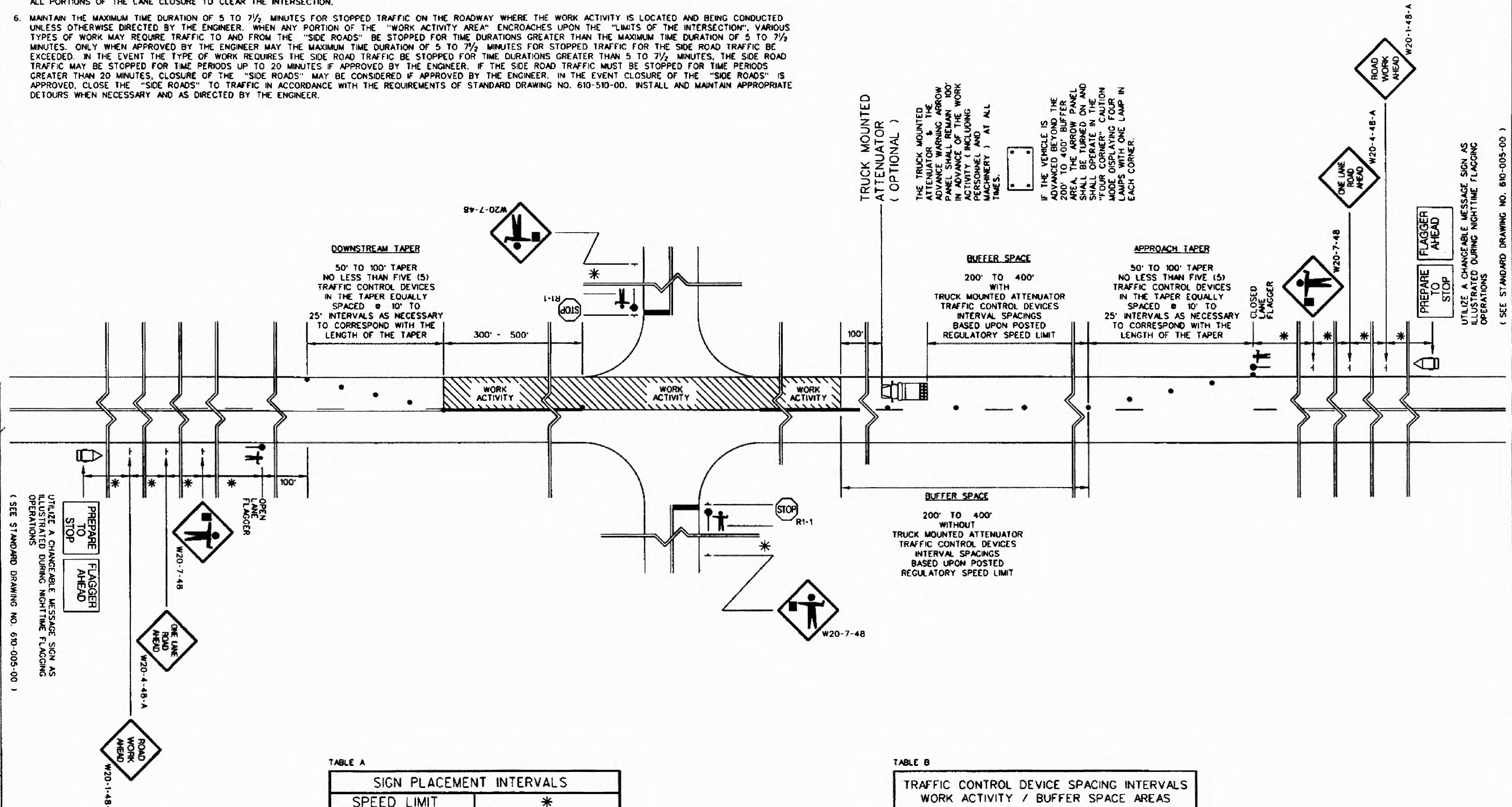


TABLE A

SIGN PLACEMENT INTERVALS	
SPEED LIMIT	*
* ≤ 35 MPH LOW SPEED	200
* 40 - 50 MPH INTERMEDIATE SPEED	350
* 55 MPH HIGH SPEED	500

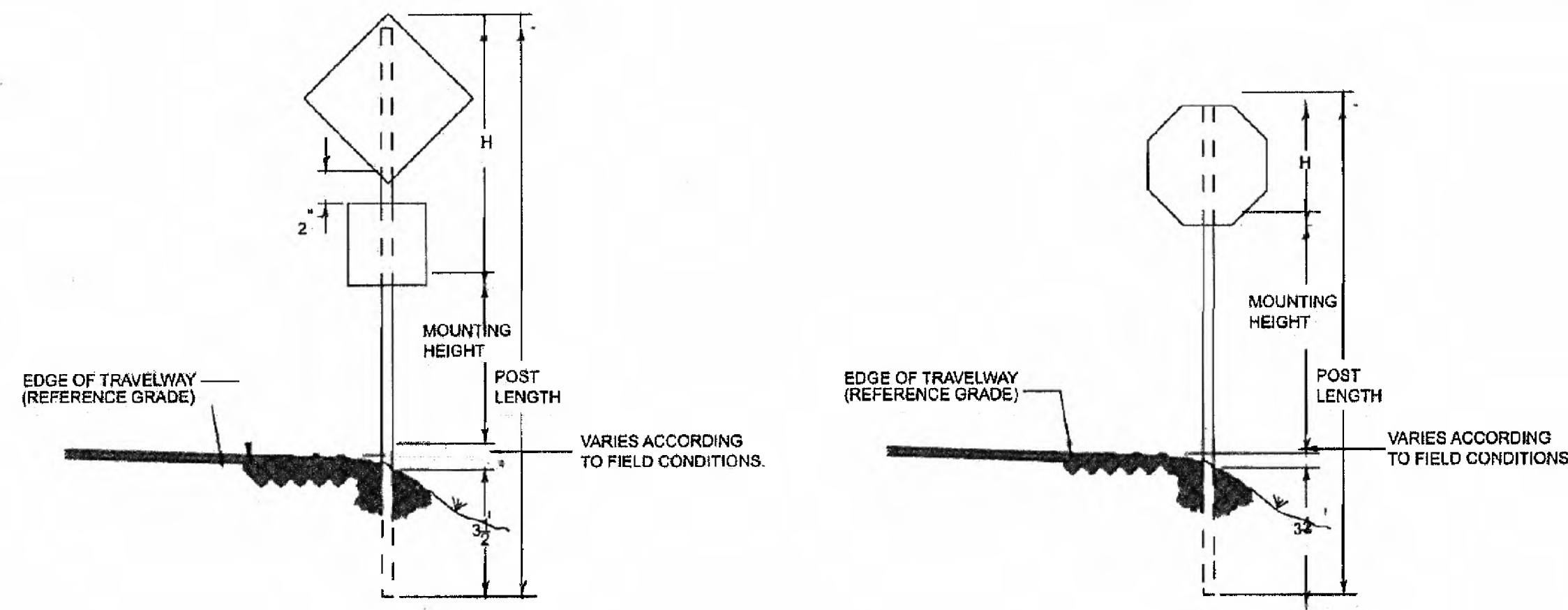
\* REGULATORY POSTED SPEED LIMIT PRIOR TO BEGINNING WORK

TABLE B

TRAFFIC CONTROL DEVICE SPACING INTERVALS WORK ACTIVITY / BUFFER SPACE AREAS	
SPEED LIMIT	SPACING INTERVALS
≤ 35 MPH	25 FEET
40 - 55 MPH	50 FEET

UTILIZE A CHANGEABLE MESSAGE SIGN AS ILLUSTRATED DURING NIGHTTIME FLAGGING OPERATIONS  
(SEE STANDARD DRAWING NO. 610-005-00 )

# FLAT SHEET SIGN MOUNTING DETAILS



SIGNS MOUNTED ON FREEWAY RAMP  
AND CONVENTIONAL ROADS

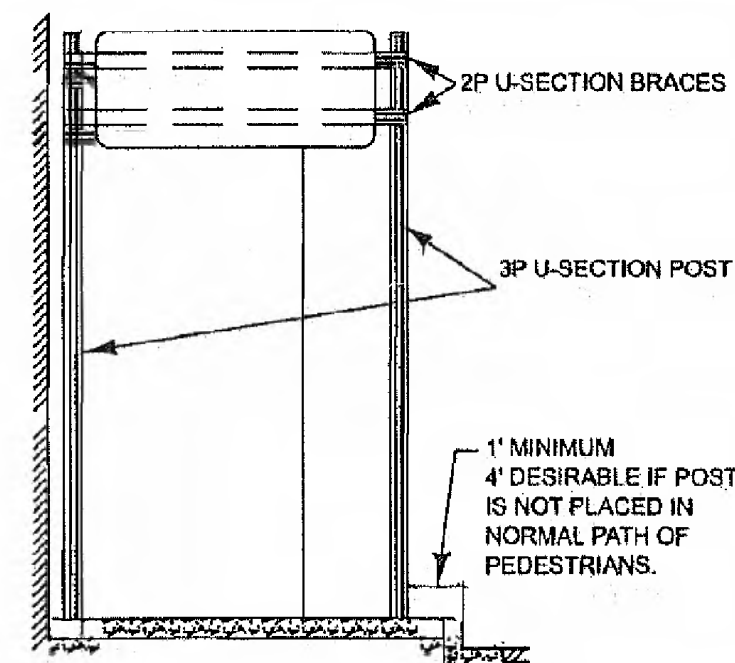
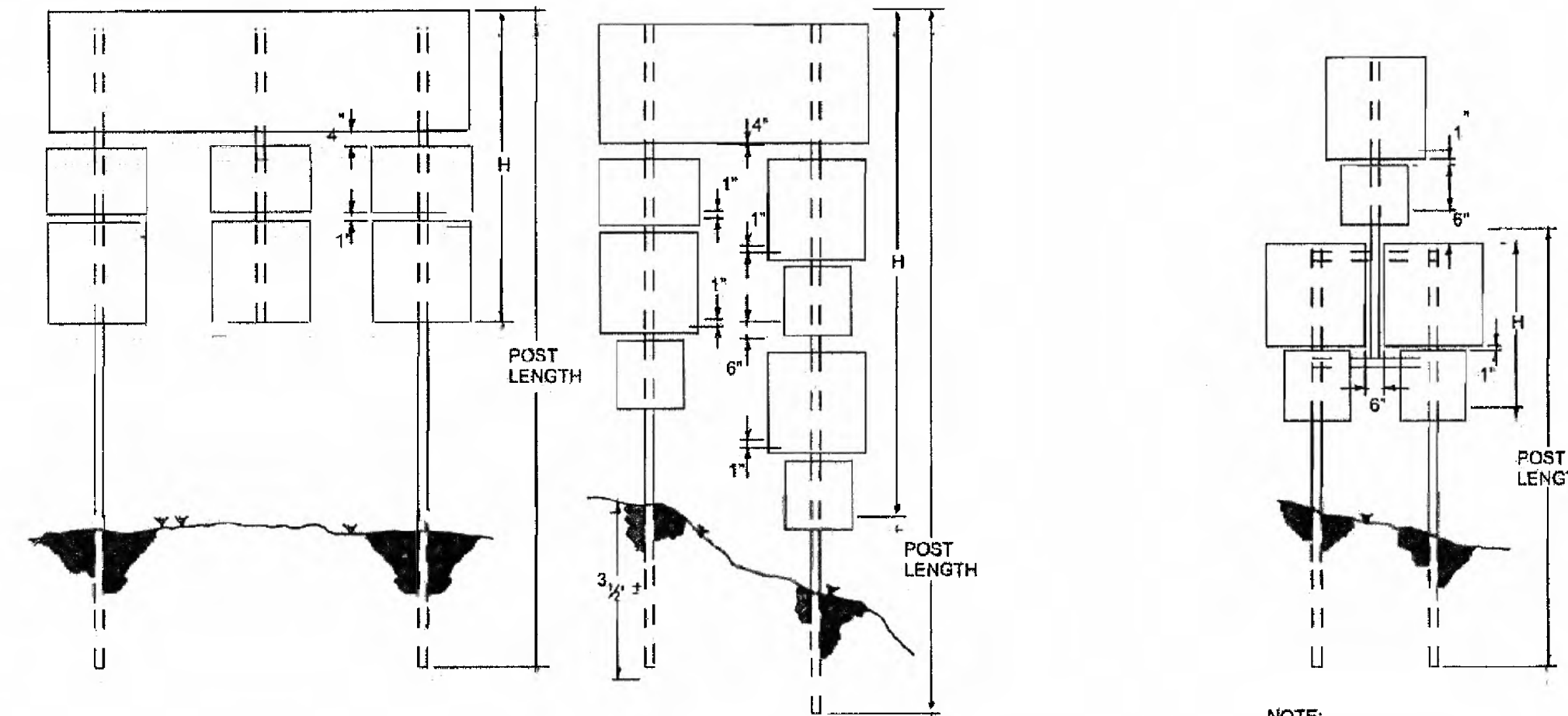


ILLUSTRATION OF SIGN ASSEMBLY  
SPANNING SIDEWALK

NOTE:  
THE PURPOSE OF SPANNING THE SIDEWALK IS TO PROVIDE AN UNOBSTRUCTED WAY FOR PEDESTRIANS, AND AT THE SAME TIME LOCATE SIGNS WITHIN RIGHT-OF-WAY, WITH GOOD VISIBILITY FOR TRAFFIC. EACH INSTALLATION MUST BE INDIVIDUALLY PLANNED AND CONSTRUCTED TO ACCOMPLISH THIS PURPOSE. THE PROJECT ENGINEER SHOULD APPROVE THE CONTRACTORS PLAN FOR SUPPORTING SIGNS SPANNING SIDEWALKS BEFORE THEY ARE ERECTED.



WHEN H IS	LESS THAN 2'	2' TO 2'-11"	3' TO 3'-11"	4' TO 4'-11"	5' AND LONGER
POST LENGTH (FT.) FOR 5' MOUNTING HGT.	12'	13'	14'	14'	H PLUS 10'

NOTE: ADD 2' TO POST LENGTH FOR 7' MOUNTING HEIGHT.

NOTE:  
POST LENGTHS NOT SHOWN ON THIS SHEET ARE SHOWN ON THE PLAN SHEETS.

## REFERENCES

SIGNING AND MARKING  
ENGINEER



*Mark H. Anthony*  
SIGNATURE  
2-11-09  
DATE

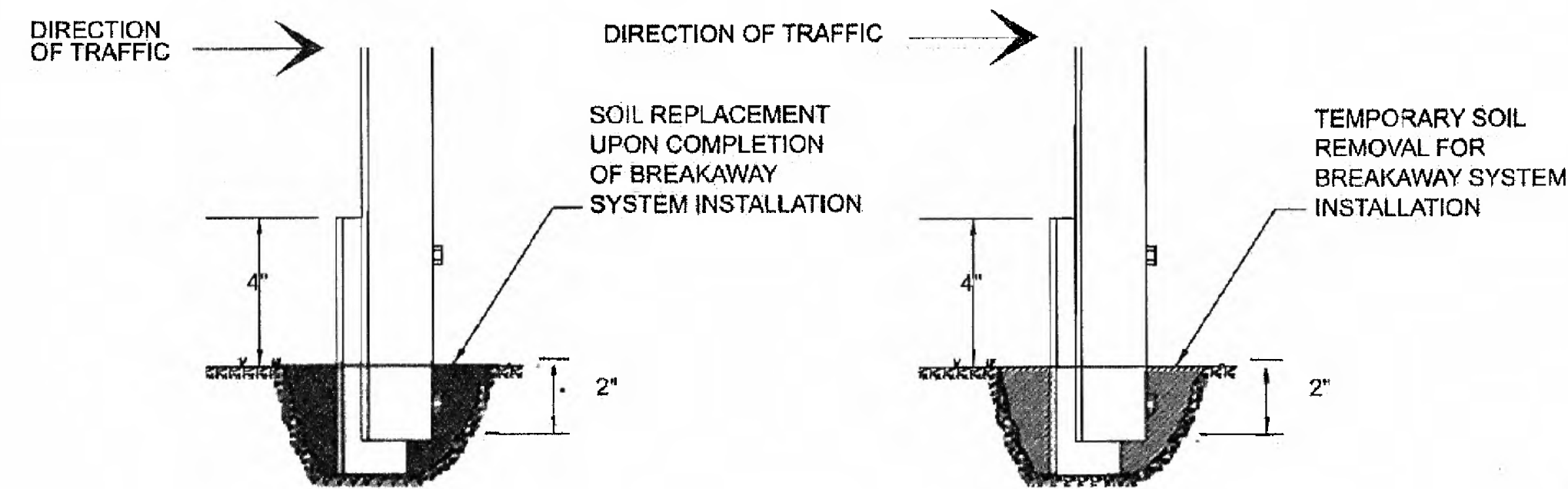
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5			
4			
3			
2			
1			
0			

**SCDOT**  
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION  
DESIGN STANDARDS OFFICE  
955 PARK STREET  
ROOM 405  
COLUMBIA, SC 29201

STANDARD DRAWING

FLAT SHEET  
MOUNTING  
DETAILS

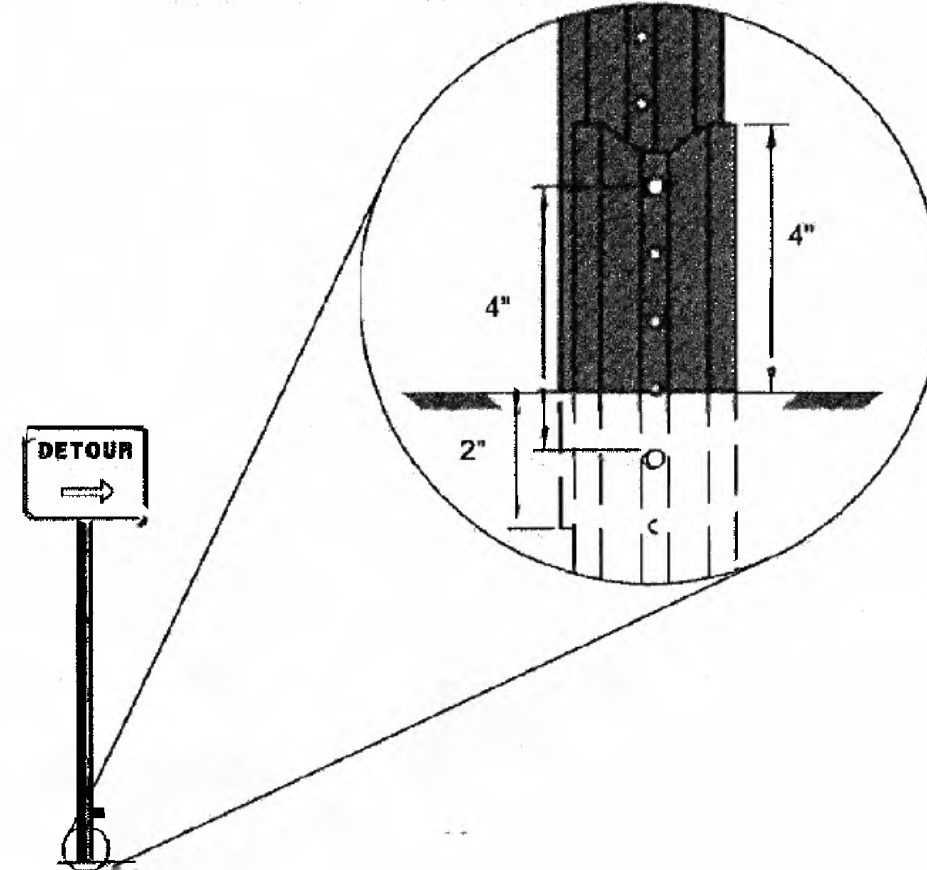
651-110-00  
EFFECTIVE LETTING DATE: MAY 2008



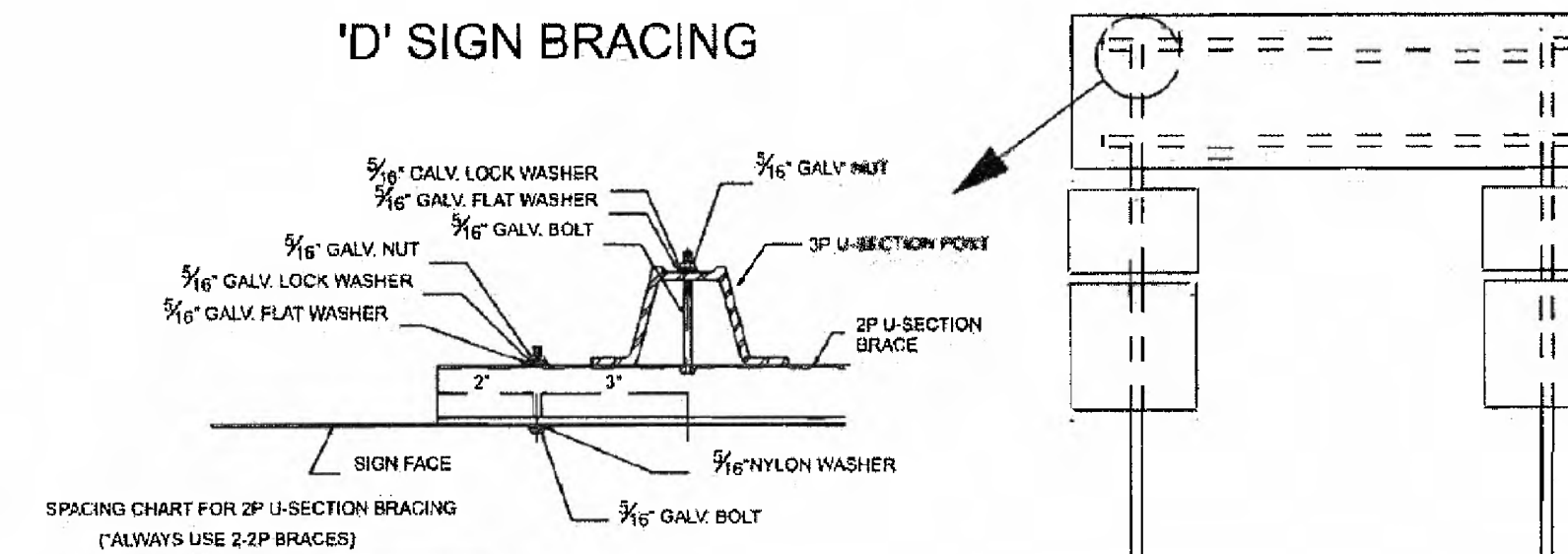
DRIVE THE GROUND SUPPORT (STUB) APPROXIMATELY 30" TO 36" INTO THE GROUND AS SPECIFIED BY THE MANUFACTURER OF THE BREAKAWAY SYSTEM SO THAT NO MORE THAN 4" OF THE GROUND SUPPORT (STUB) EXTENDS ABOVE THE GROUND. REMOVE ENOUGH SOIL FROM AROUND THE GROUND SUPPORT (STUB) TO PERMIT ACCESS TO THE HOLES FOR THE INSERTION AND TIGHTENING OF THE LOWER BOLT OF THE BREAKAWAY SYSTEM. UPON COMPLETING THE INSTALLATION OF THE BREAKAWAY SYSTEM, REPLACE THE SOIL AND TAMP.

LAP SPLICE FOR U-SECTION POSTS

BOLTS MUST BE 4" APART. THE GROUND SUPPORT (STUB) SHALL NOT EXTEND HIGHER THAN 4" ABOVE THE GROUND. ATTACH THE SIGN SUPPORT TO THE BACK OF THE GROUND SUPPORT (STUB) WITH THE APPROPRIATE HARDWARE PROVIDED BY THE MANUFACTURER OF THE BREAKAWAY SYSTEM. OVERALL LENGTH OF THE BREAKAWAY SYSTEM IS 6".



## 'D' SIGN BRACING



SPACING CHART FOR 2P U-SECTION BRACING  
(ALWAYS USE 2 2P BRACES)

SIGN WIDTH	BRACE LENGTH
72"	56"
78"	60"
84"	64"
90"	68"
96"	72"
102"	76"
108"	80"
114"	84"
120"	88"
126"	92"
132"	96"
144"	104"
150"	108"
156"	112"

1.) ALL "D" TYPE SIGNS ARE TO BE SUPPORTED BY 2 VERTICAL U-SECTION POSTS. ALL "D" TYPE SIGNS WHICH ARE 6' WIDE OR WIDER WILL BE HORIZONTALLY BRACED WITH 2 2P U-SECTION POSTS. ADDITIONALLY, ANY ASSEMBLY OF SIGNS ATTACHED BETWEEN VERTICAL SUPPORTS WILL BE ATTACHED WITH A PRESCRIBED LENGTH OF U-SECTION POST.

2.) ALL 2P POSTS USED AS CENTER VERTICAL MEMBERS IN SIGN ASSEMBLIES SHALL HAVE HOLES ON 1" CENTERS FOR ENTIRE LENGTH.

## SIZE & LENGTH OF U-SECTION POSTS FOR SINGLE SIGNS

POST QUANTITY, SIZE & LENGTH FOR INSTALLATIONS HAVING MORE THAN ONE SIGN ARE SHOWN ON THE PLANS.

SIGN NO.	NO. OF POSTS	POST SIZES				SIGN NO.	NO. OF POSTS	POST SIZES				SIGN NO.	NO. OF POSTS	POST SIZES			
		5' MTG. HT.		7' MTG. HT.				5' MTG. HT.		7' MTG. HT.				5' MTG. HT.		7' MTG. HT.	
		LBS./FT.	LGTH.	LBS./FT.	LGTH.			LBS./FT.	LGTH.	LBS./FT.	LGTH.			LBS./FT.	LGTH.	LBS./FT.	LGTH.
R1-1-24	1	3P	12	3P	14	R11-1-24	1	3P	12	3P	14	W2-1-24	1	3P	12	3P	14
R1-1-30	1	3P	12	3P	14	R11-1-36	2	3P	14	3P	16	W2-1-30	1	3P	13	3P	15
R1-1-48	2	3P	14	3P	16	R11-1-48	2	3P	12	3P	14	W2-1-36	1	3P	14	3P	16
R1-2-36	1	3P	12	3P	14	R11-5-36	2	3P	12	3P	14	W2-2-24	1	3P	12	3P	14
R1-2-48	2	3P	13	3P	15	R11-6-48	2	3P	12	3P	14	W2-5-30	1	3P	13	3P	15
R2-1-24	1	3P	12	3P	14	R11-7-30	1	3P	12	3P	14	W3-1-36	1	3P	14	3P	16
R2-5-24	1	3P	12	3P	14	R18-1-30	1	3P	13	3P	15	W3-2-36	1	3P	14	3P	16
R2-6-48	2	3P	15	3P	17							W5-1-36	1	3P	14	3P	16
R2-8-24	1	3P	12	3P	14							W9-1-36	1	3P	14	3P	16
R4-1-24	1	3P	12	3P	14							W9-2-36	1	3P	14	3P	16
R4-2-24	1	3P	12	3P	14	W1-1-30	1	3P	13	3P	15	W9-3-30	1	3P	13	3P	15
R4-3-24	1	3P	12	3P	14	W1-1-36	1	3P	14	3P	16	W14-1-24	1	3P	12	3P	14
R4-3-36	2	3P	14	3P	16	W1-2-30	1	3P	13	3P	15	W14-1-30	1	3P	13	3P	15
R4-4-42	2	3P	14	3P	16	W1-2-36	1	3P	14	3P	16	W6-4-46	2	3P	14	3P	16
R5-1-30	1	3P	12	3P	14	W1-3-30	1	3P	13	3P	15	W10-1-36	1	3P	13	3P	15
R5-1-36	2	3P	13	3P	15	W1-3-36	1	3P	14	3P	16						
R5-1a-36	2	3P	12	3P	14	W1-4-30	1	3P	13	3P	15						
R5-10a-30	1	3P	13			W1-4-36	1	3P	14	3P	16						
R6-1-36	1	3P	10	3P	12	W1-5L-30	1	3P	13	3P	15						
R6-4-36	2	3P	12	3P	14	W1-6-48	2	3P	12	3P	14						
R8-3-42	2	3P	12	3P	14	W1-7-48	2	3P	12	3P	14						

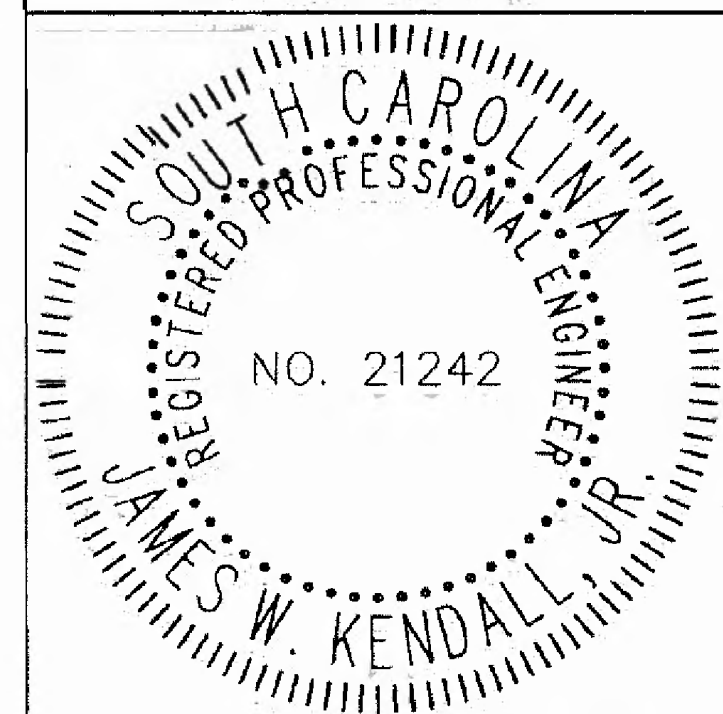
NOTE:  
POST LENGTHS SHOWN IN THIS CHART ARE GENERAL AND SHOULD BE USED FOR BID PURPOSES ONLY. CONTRACTOR IS REQUIRED TO VERIFY FIELD CONDITIONS TO DETERMINE EXACT LENGTHS OF POSTS NEEDED.

DELINEATOR POSTS SHALL BE 2P U-SECTION POSTS 17' LONG.

**REFERENCES**

- NATIONAL DOCUMENTS**  
 AASHTO M32, M55, M170, M198, M221, M225, M295, M302, M315, T96, T104, ASTM A706
- SCDOT DOCUMENTS**  
 SCDOT SUPPLEMENTAL TECHNICAL SPECIFICATION SC-M-714  
 ENGINEERING DIRECTIVE MEMO 24  
 INSTRUCTIONAL BULLETIN 2010-01  
 QUALIFIED PRODUCT LIST 60, 69  
 SCDOT TO ACPA (MARCH 14, 2012 LETTER)
- RELATED DRAWINGS & KEYWORDS**  
 714-005-00  
 714-105-00  
 714-110-00  
 714-205-02  
 714-990-M0

THIS DRAWING IS ONLY VALID FOR CONSTRUCTION WHEN SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF SOUTH CAROLINA. CHECK WWW.SCDOT.ORG FOR LATEST UPDATE.



*James W. Kendall, Jr.*  
 SIGNATURE  
 9-26-12  
 DATE

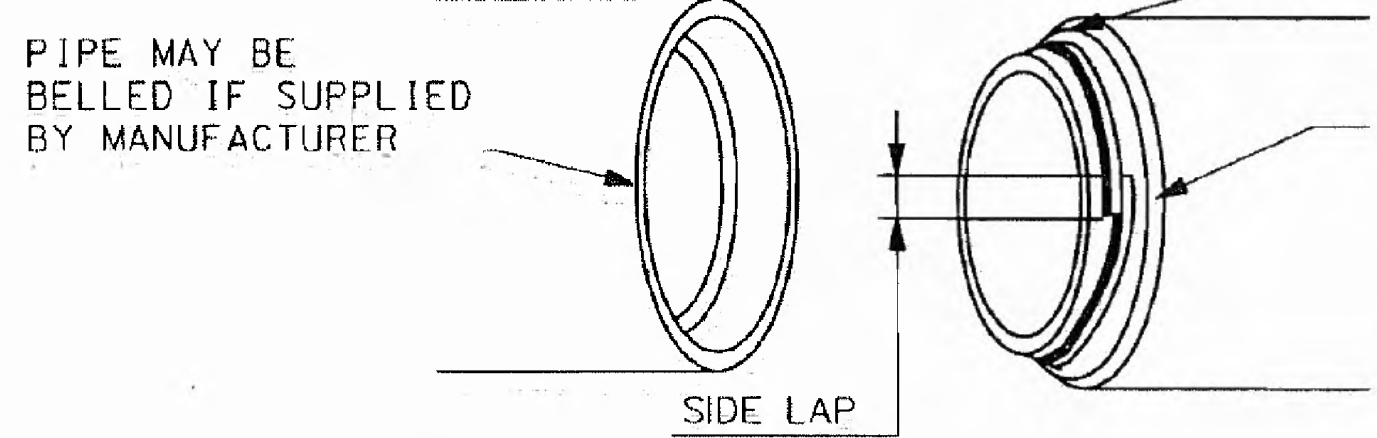
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4	8/2012	DSO	SCDOT LETTER 3/12
3	3/2010	JBH	GENERAL REVISIONS
2	3/2009	HJC	COMPLETE TABLE
1	7/2008	HJC	GENERAL REVISIONS
0	3/2008	DSO	NEW STANDARD



**STANDARD DRAWING**  
 PIPE CULVERTS  
 SMOOTH WALL  
 (RIGID REINFORCED CONCRETE PIPE (RCP) DETAILS & FILL HEIGHT)

714-205-01  
 EFFECTIVE LETTING DATE JANUARY, 2013

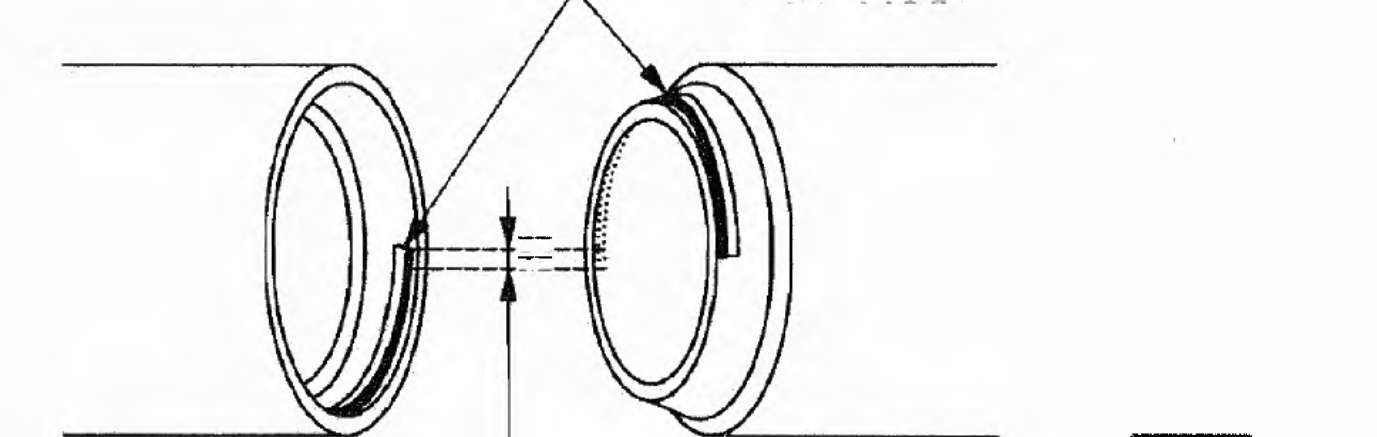
AASHTO M 198 PREFORMED FLEXIBLE JOINT SEALANT (INSTALL ACCORDING TO MANUFACTURER'S DIRECTIONS AND SCDOT SUPPLEMENTAL TECHNICAL SPECIFICATION SC-M-714.)



**DETAIL 1**  
 JOINT SEALANT INSTALLATION

PIPE MAY BE BELLED IF SUPPLIED BY MANUFACTURER

PROVIDE BETWEEN 1" & 3" SIDE LAP OF JOINT MATERIAL. DO NOT INSTALL WITH GAPS IN JOINT MATERIAL. DO NOT TWIST ENDS OF SEALANT AROUND EACH OTHER OR STACK ONE END ON TOP OF THE OTHER.



**DETAIL 2**  
 REINFORCED CONCRETE PIPE (AASHTO M 198) PREFORMED FLEXIBLE JOINT MATERIAL PIPES UP TO AND INCLUDING 48" DIAMETER

PLACE AASHTO M198 MATERIAL ON THE UPPER HALF OF THE TONGUE END AND LOWER HALF OF THE GROOVE END. PROVIDE BETWEEN 1" AND 3" OVERLAP ON EACH SIDE.



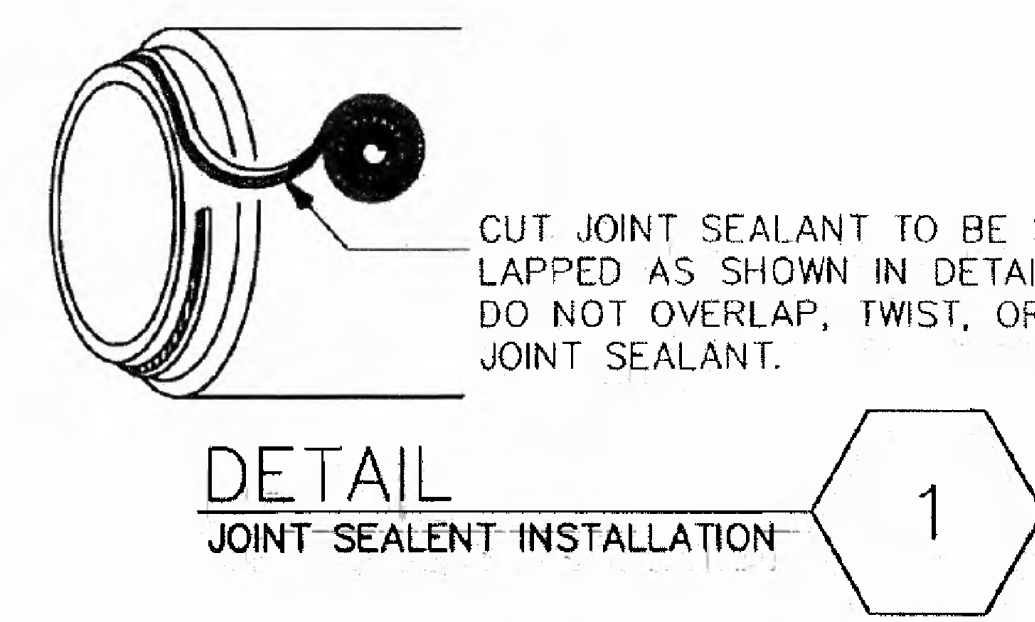
**DETAIL 3**  
 REINFORCED CONCRETE PIPE (AASHTO M 198) PREFORMED FLEXIBLE JOINT MATERIAL PIPES LARGER THAN 48" DIAMETER

AASHTO M 315 RUBBER GASKET (INSTALL ACCORDING TO MANUFACTURERS DIRECTIONS AND SCDOT SPECIFICATIONS)

PIPE MAY BE BELLED IF SUPPLIED BY MANUFACTURER



**DETAIL 4**  
 (AASHTO M 315) RUBBER PROFILE GASKET EQUALIZATION



**DETAIL 5**  
 (AASHTO M 315) RUBBER PROFILE GASKET

**NOTES:**

- SEE SHEET 714-005-00, 714-020-00, 714-105-00, & 714-120-00 FOR GENERAL NOTES, AND TRENCH INSTALLATION REQUIREMENTS.
- USE ONLY PIPE CLASSES LISTED IN TABLES 714-205A & 714-205B.
- USE B WALL PIPE FOR SIZES AND CLASSES INDICATED IN TABLES 714-205A & 714-205B. C WALL PIPE MAY BE SUBSTITUTED FOR B WALL PIPE ONLY FOR SIZES AND CLASSES INDICATED IN TABLES 714-205A & 714-205B.
- USE PIPE AND JOINT MATERIAL FROM A MANUFACTURER COMBINATION SHOWN ON QUALIFIED PRODUCT LIST 69.
- WHEN DEFORMED BILLET STEEL REBAR IS USED FOR CUSTOM PIPE, OBTAIN REBAR FROM A MANUFACTURER LISTED ON SCDOT QUALIFIED PRODUCT LIST 60. FOLLOW INSTRUCTIONAL BULLETIN 2010-01 AND ENGINEER OF RECORD RECOMMENDATIONS TO DETERMINE LOADING FOR CUSTOM PIPE.
- SEE 714-990-M0 FOR RESIDENTIAL DRIVEWAY INSTALLATION FOR MAINTENANCE APPLICATIONS.

**PAY ITEMS:**  
 7143xxx ( ) "SMOOTH WALL PIPE.....L.F.  
 xxxxxxxx ( ) "PIPE ADDITIONAL FOUNDATION WORK.....L.F.  
 7141xxx ( ) "RC PIPE CU-CLASS ( ).....L.F.  
 7141xxx ( ) "RC PIPE-CL ( ) AASHTO M315JNT.....L.F.  
 ( ) = (DIAMETER)  
 ( ) = (CLASS ROMAN #)

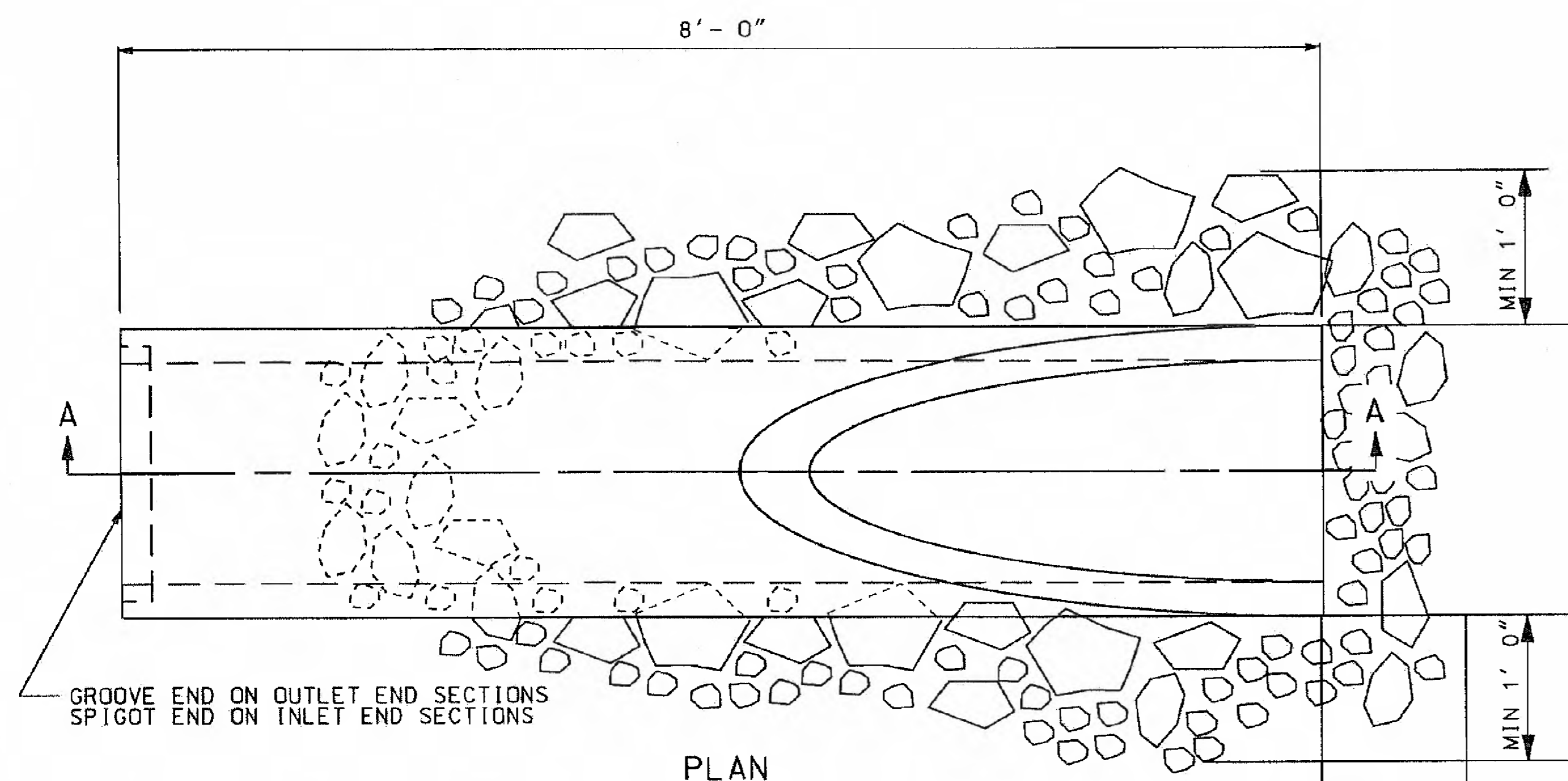
**TABLE 714-205A: REINFORCED CONCRETE PIPE FILL HEIGHT TABLE**

PIPE DIAMETER, [IN]	HYDRAULIC AREA, [FT²]	MANNING'S ROUGHNESS COEFFICIENT, [n]	ESTIMATED MINIMUM TRENCH WIDTH, [IN]	CASE 1: MAXIMUM COVER HIGHWAY VEHICLE LOADING, [FT]			CASE 2: MINIMUM COVER HIGHWAY VEHICLE LOADING, [FT]			CASE 3: MINIMUM COVER FOR CONSTRUCTION VEHICLE [FT] (AASHTO 27.5.4.4)			CASE 4: UNIVERSAL DRIVEWAY MINIMUM COVER [FT] NOT FOR USE IN ROADWAY			CASE 6: MAXIMUM COVER WITH INVERT AT 2 X O.D. BELOW GROUNDWATER, [FT]		
				CLASS III	CLASS IV	CLASS V	CLASS III	CLASS IV	CLASS V	CLASS III	CLASS IV	CLASS V	CLASS III	CLASS IV	CLASS V	CLASS III	CLASS IV	CLASS V
12	0.78	SEE MFG	42	16	25	30	1.75	1.00+	1.00+	3	3	3	1.75	1.00	0.50	---	20	30
15	1.22	SEE MFG	45	16	25	30	1.50	1.00+	1.00+	3	3	3	1.50	1.00	0	13	21	30
18	1.76	0.012	49	16	25	30	1.50	1.00+	1.00+	3	3	3	1.50	0.75	0	13	21	30
24	3.14	0.012	60	16	25	30	1.00	1.00+	1.00+	3	3	3	1.00	0	0	13	21	30
30	4.90	0.012	70	16	25	30	1.00	1.00+	1.00+	3	3	3	1.00	0	0	13	21	30
36	7.06	0.012	81	16 (B)	25 (B)	30	1.00+ (B)	1.00+ (B)	1.00+	3 (B)	3 (B)	3	0 (B)	0 (B)	0	---	12 (B)	25
42	9.62	0.012	91	16 (B)	25 (B)	30	1.00+ (B)	1.00+ (B)	1.00+	3 (B)	3 (B)	3	0 (B)	0 (B)	0	---	14 (B)	27
48	12.56	0.012	102	16	25	30	1.00+	1.00+	1.00+	3	3	3	0	0	0	---	16	26
54	15.90	0.012	112	16	25	30	1.00+	1.00+	1.00+	3	3	3	0	0	0	10	17	26
60	19.63	0.012	123	15	25	30	1.00+	1.00+	1.00+	3	3	3	0	0	0	10	16	25
66	23.75	0.012	133	15	25	30	1.00+	1.00+	1.00+	3	3	3	0	0	0	12	15	25
72	28.27	0.012	144	15	24	30	1.00+	1.00+	1.00+	3	3	3	0	0	0	12	18	23
78	33.18	0.012	154	15	24	---	1.00+	1.00+	---	3	3	---	0	0	---	12	17	---
84	38.48	0.012	165	15	24	---	1.00+	1.00+	---	3	3	---	0	0	---	12	17	---
90	44.17	0.012	175	15	---	---	1.00+	---	---	3	---	---	0	---	---	13	---	---
96	56.74	0.012	186	14	---	---	1.00+	---	---	3	---	---	0	---	---	13	---	---
108	63.61	0.012	207	14	---	---	1.00+	---	---	3	---	---	0	---	---	13	---	---
120	78.54	0.012	228	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

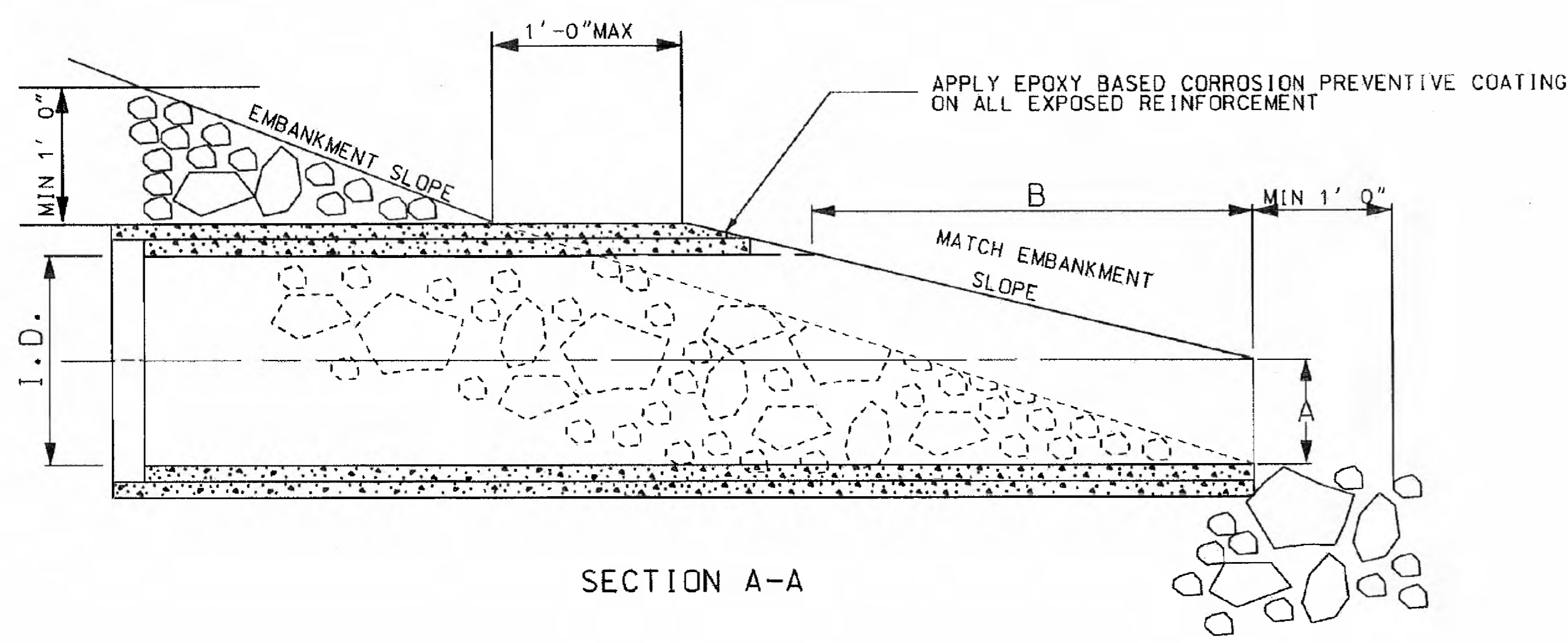
(B) B WALL ONLY. C WALL IS NOT ALLOWED FOR THIS DIAMETER AND CLASS.  
 "—" TYPICALLY INDICATE THAT PIPE SIZE IS NOT AVAILABLE OR IS NOT RECOMMENDED FOR THIS CONDITION.  
 "+" INDICATE THAT MINIMUM COVER MAY BE REDUCED TO 0.75' FOR SPECIFIED CLASS WHEN PIPE IS INSTALLED UNDER RIGID PAVEMENT.

**STRUCTURAL DESIGN NOTES:**

- MANUFACTURERS MAY SUBSTITUTE HIGHER CLASS PIPE THAN SPECIFIED IN THE PLANS, HOWEVER, INSTALLATION DEPTH SHALL NOT EXCEED THAT SHOWN FOR THE PIPE INDICATED IN THE PLANS UNLESS APPROVED BY THE ENGINEER OF RECORD. NO ADDITIONAL PAYMENT WILL BE MADE FOR HIGHER CLASS SUBSTITUTION.
- THE REINFORCED CONCRETE PIPE FILL HEIGHT TABLE IS BASED ON THE FOLLOWING CRITERIA:
  - LOAD CASE 1 - TYPICAL STANDARD INSTALLATION: SCDOT DEEP INSTALLATION = 30'. FOR ALL INSTALLATIONS BEYOND 30' EMBANKMENT SETTLEMENT MAY CONTROL DESIGN. CONSULT WITH PIPE MANUFACTURERS AND GEOTECHNICAL ENGINEERS BEFORE USING DEEPER THAN 30'. NUMBERS PUBLISHED ARE BASED ON AASHTO LRFD INDIRECT DESIGN OR SCDOT DEEP INSTALLATION CUTOFF.
  - LOAD CASE 2 - TYPICAL MINIMUM COVER INSTALLATION: NUMBERS PUBLISHED ARE BASED ON AASHTO LRFD INDIRECT DESIGN CALCULATIONS OR AASHTO LRFD TABLE 12.6.6.3-1 FOR CLASS SPECIFIED OF REINFORCED CONCRETE PIPE UNDER FLEXIBLE PAVEMENT.
  - LOAD CASE 3 - TYPICAL MINIMUM COVER FOR CONSTRUCTION VEHICLE EQUIPMENT LOADING: NUMBERS PUBLISHED ARE BASED ON AASHTO LRFD SECTION 27.5.4.4 FOR REINFORCED CONCRETE PIPE. AVOID DRIVING CONSTRUCTION VEHICLES OVER INSTALLED PIPE WHERE POSSIBLE. EXTEND CONSTRUCTION FILL HEIGHT BEYOND SIDES OF PIPE BY THE LARGER OF 3 FEET OR ONE PIPE DIAMETER. PERIODICALLY CHANGE LOCATION OF EQUIPMENT CROSSING OVER PIPE IN ORDER TO MINIMIZE CHANCE OF LATERAL DISPLACEMENT.
  - LOAD CASE 4 - UNIVERSAL DRIVEWAY MINIMUM COVER: USE ONLY FOR DRIVEWAY APPLICATIONS. NUMBERS PUBLISHED ARE BASED ON CAPACITY OF PIPE USING AASHTO LRFD INDIRECT DESIGN AT 0' COVER. CHOOSE PIPE CLASS BASED ON LOADING OF VEHICLES USING DRIVEWAY.
- SITE CONDITIONS OTHER THAN TYPICAL INSTALLATION MAY ALSO REQUIRE SPECIAL DESIGNED PIPE. FOR THESE CONDITIONS, OTHER PIPE TYPES MAY BE MORE APPROPRIATE. CONTACT PIPE MANUFACTURER BEFORE SPECIFYING THIS PIPE TYPE FOR CUSTOM INSTALLATIONS.
- THIS FILL HEIGHT TABLE IS FOR USE IN ROADWAY APPLICATIONS ONLY AND SHOULD NOT BE USED FOR ANY OTHER TRANSPORTATION FACILITY.
- SPECIAL DESIGN MAY BE REQUIRED FOR INSTALLATIONS OUTSIDE OF SCDOT RIGHT OF WAY - SEE RIGHT OF WAY/UTILITY/MUNICIPAL AGREEMENT FOR THESE INSTALLATIONS.



PLAN



SECTION A-A

NOTES:

1. BEVELED END SECTIONS WILL BE MANUFACTURED IN ACCORDANCE WITH SCDOT SUPPLEMENTAL TECHNICAL SPECIFICATIONS SC-M-714. THESE SPECIAL PIPE SECTIONS WILL BE MADE DURING THE MANUFACTURING OF OTHER STATE APPROVED REINFORCED CONCRETE PIPE.
2. THE PIPE BEVEL MAY BE SAWS IN THE FIELD IN LIEU OF BEING MANUFACTURED. IN FIELD SAWING, THE PIPE OPENING MAY COME TO A POINT AT THE PIPE CREST RATHER THAN A RADIUS IF APPROVED BY THE PIPE MANUFACTURER. ALTERNATE PIPE FOR SIDELINES MUST HAVE EACH END BEVELED TO MATCH THE ADJACENT SLOPES.
3. PLACE RIPRAP AS DIRECTED BY THE RCE.
4. PAYMENT FOR BEVELED END SECTIONS WILL BE AS DIRECTED IN SC-M-714.
5. THE PAY ITEM SHALL BE:

7199100 BEVELING OF PIPE ENDS-----EA.  
 8041XXX RIPRAP(CLASS\_)-----TON  
 8048XXX GEOTEXTILE FOR EROSION CONTROL UNDER RIPRAP(CLASS 2) TYPE-----S.Y.

CHART 719-610B  
RIPRAP PLACEMENT

CLASS	D <sub>50</sub> (FT)	MINIMUM THICKNESS (FT)
B	0.75	1.50
C	1.30	2.60

TABLE 719-610A  
EMBANKMENT SLOPE

I.D. (IN)	A (IN)	B (BEVELED LENGTH) (IN)				
		6:1	5:1	4:1	3:1	2:1
15	6	54	45	36	27	18
18	9	54	45	36	27	18
24	10	NA	70	56	42	28
30	12	NA	NA	72	54	36
36	15	NA	NA	NA	63	42
42	20	NA	NA	NA	66	44
48	24	NA	NA	NA	72	48
54	24	NA	NA	NA	NA	60
60	24	NA	NA	NA	NA	72

I.D. (IN)	A (IN)	B (BEVELED LENGTH) (IN)				
15	6	54	45	36	27	18
18	9	54	45	36	27	18
24	10	NA	70	56	42	28
30	12	NA	NA	72	54	36
36	15	NA	NA	NA	63	42
42	20	NA	NA	NA	66	44
48	24	NA	NA	NA	72	48
54	24	NA	NA	NA	NA	60
60	24	NA	NA	NA	NA	72

REFERENCES

- NATIONAL DOCUMENTS
- SCDOT DOCUMENTS
- SCDOT SUPPLEMENTAL TECHNICAL SPECIFICATION SC-M-714

PRECONSTRUCTION SUPPORT ENGINEER



*James W. Kendall, Jr.*  
SIGNATURE

AUGUST 23, 2012  
DATE

#	DATE	CHK	DESCRIPTION
5			
4			
3	8/2012	KNB	PAY ITEMS, RIPRAP, NOTES, SECTION A-A EPOXY
2	1/2010	DSO	GENERAL REVISIONS
1	6/2009	SDM	CHART 719-615D
0	3/2008	DSO	GENERAL REVISIONS

**SCDOT**  
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION  
DESIGN STANDARDS OFFICE  
955 PARK STREET  
ROOM 405  
COLUMBIA, SC 29201

STANDARD DRAWING

END TREATMENT  
(RCP BEVELED END)

719-610-00  
EFFECTIVE LETTING DATE JAN, 2013