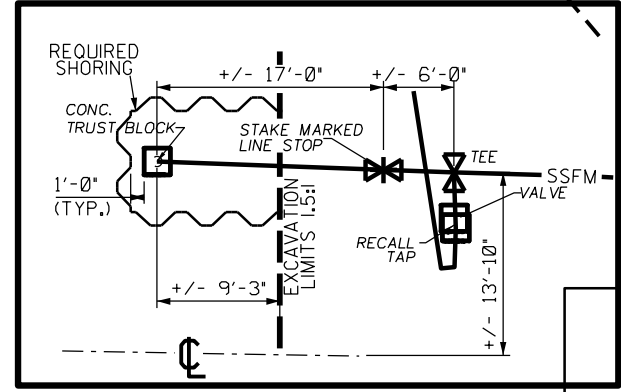


SANITARY SEWER FORCE MAIN
EAXAMPLE OF REQUIRED SHORING
ELEVATION VIEW



SANITARY SEWER FORCE MAIN
EAXAMPLE OF REQUIRED SHORING
PLAN VIEW

UTILITY PLAN

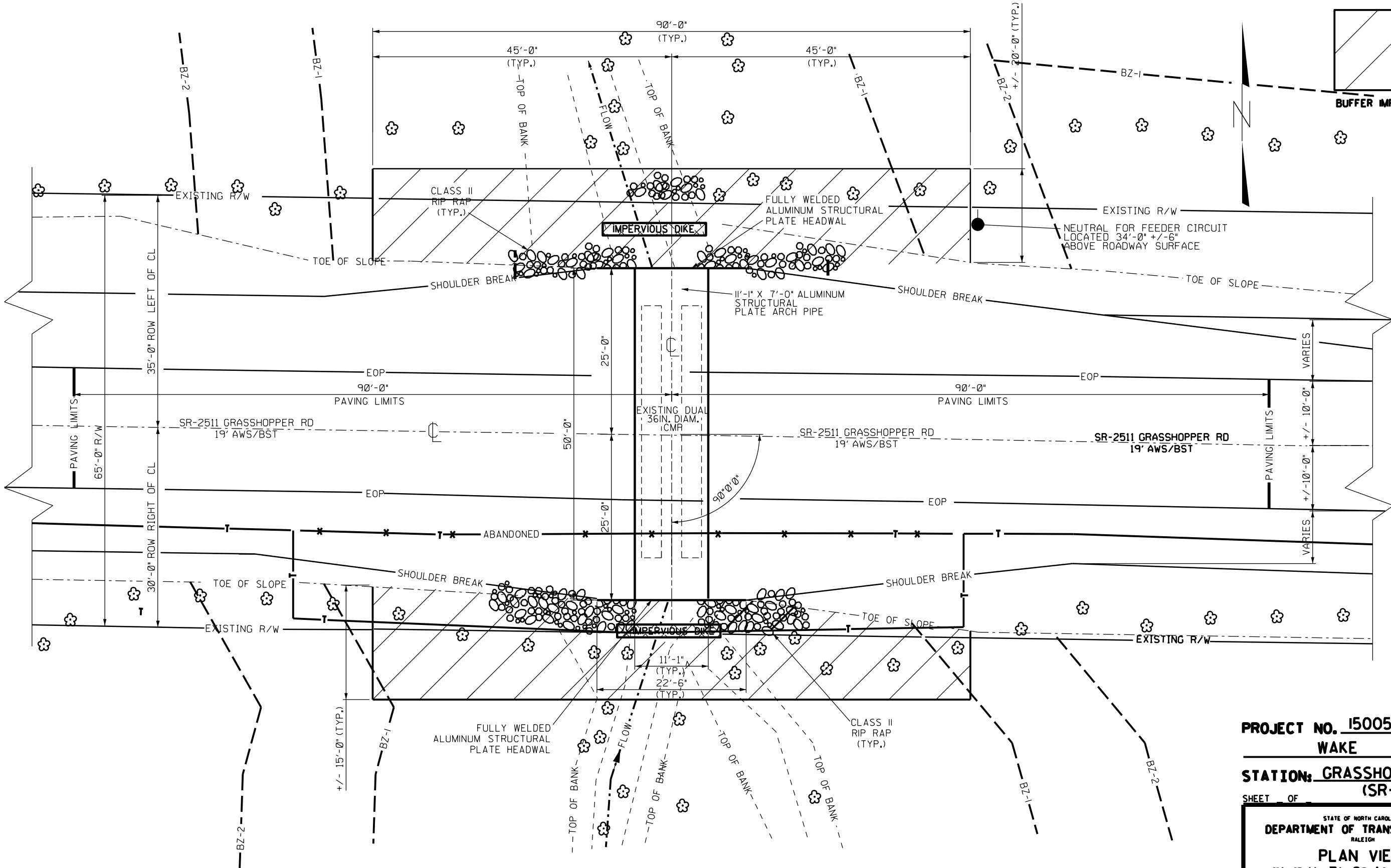
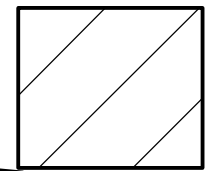
PROJECT NO. 15005.1092024
WAKE COUNTY
STATION: GRASSHOPPER RD.
(SR-2511)

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PLAN VIEW
12'-0" X 7'-0" ALUMINUM
CORRUGATED STRUCTURAL
PLATE ARCH

REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

DRAWN BY: REESE BRILEY DATE 2/12/2018
CHECKED BY: DATE:

*****SYTIME*****
*****D*****
*****USER*****



PLAN VIEW
11'-1" X 7'-0"
CORRUGATED ALUMINUM
STRUCTURAL PLATE ARCH

PROJECT NO. 15005.1092024
WAKE COUNTY
STATION: GRASSHOPPER RD.
(SR-2511)
SHEET OF

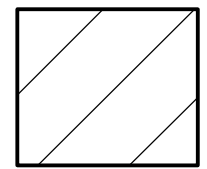
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PLAN VIEW
11'-1" X 7'-0" ALUMINUM
CORRUGATED STRUCTURAL
PLATE ARCH

REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			2		
2			3		
			4		

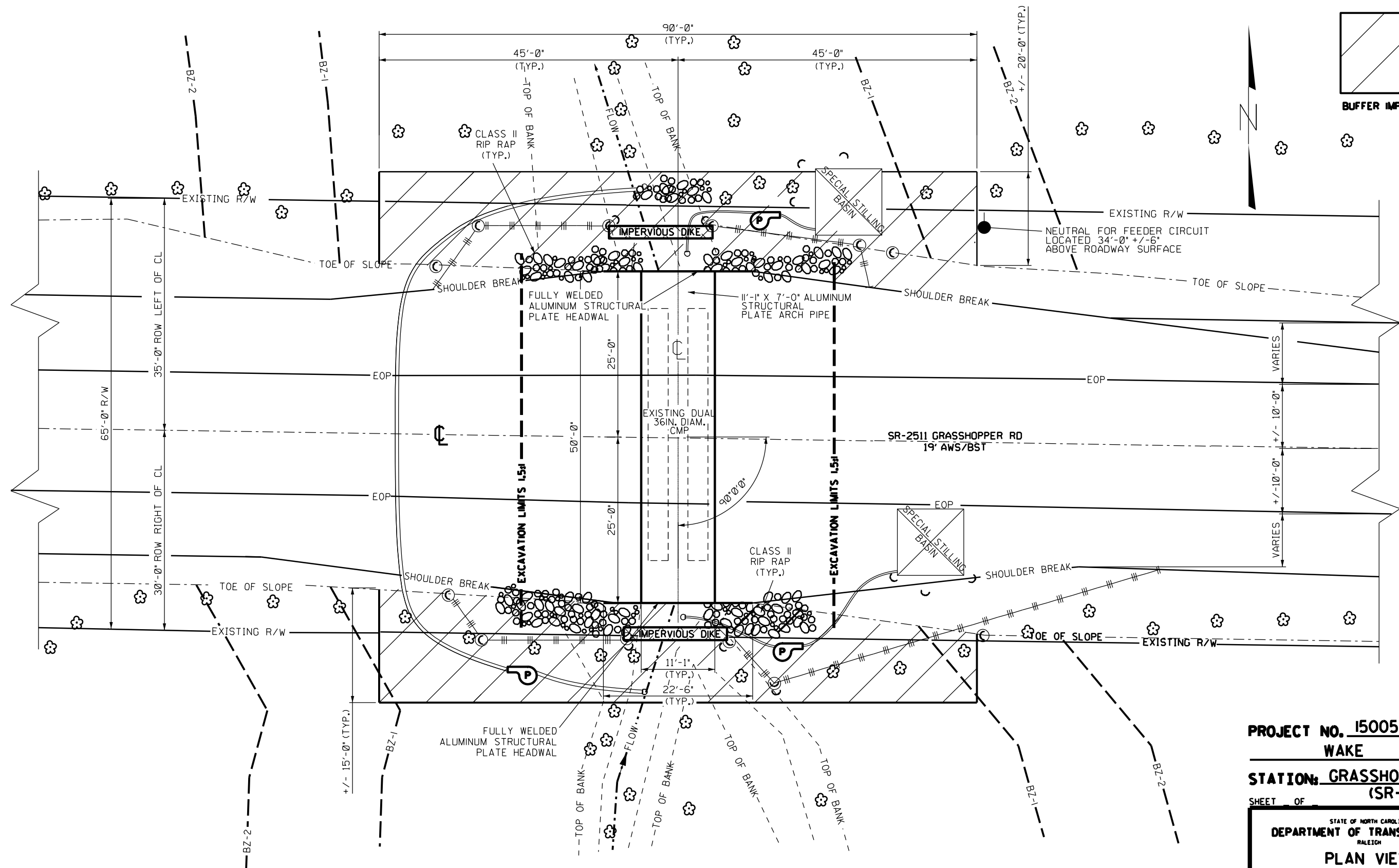
TOTAL SHEETS

DRAWN BY: REESE BRILEY DATE 2/12/2018
CHECKED BY: DATE:

*****SYTIME*****
*****USER*****



BUFFER IMPACTS



PROJECT NO. 15005.1092024
WAKE COUNTY
STATION: GRASSHOPPER RD.
(SR-2511)
SHEET OF

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PLAN VIEW
11'-1" X 7'-0" ALUMINUM
CORRUGATED STRUCTURAL
PLATE ARCH

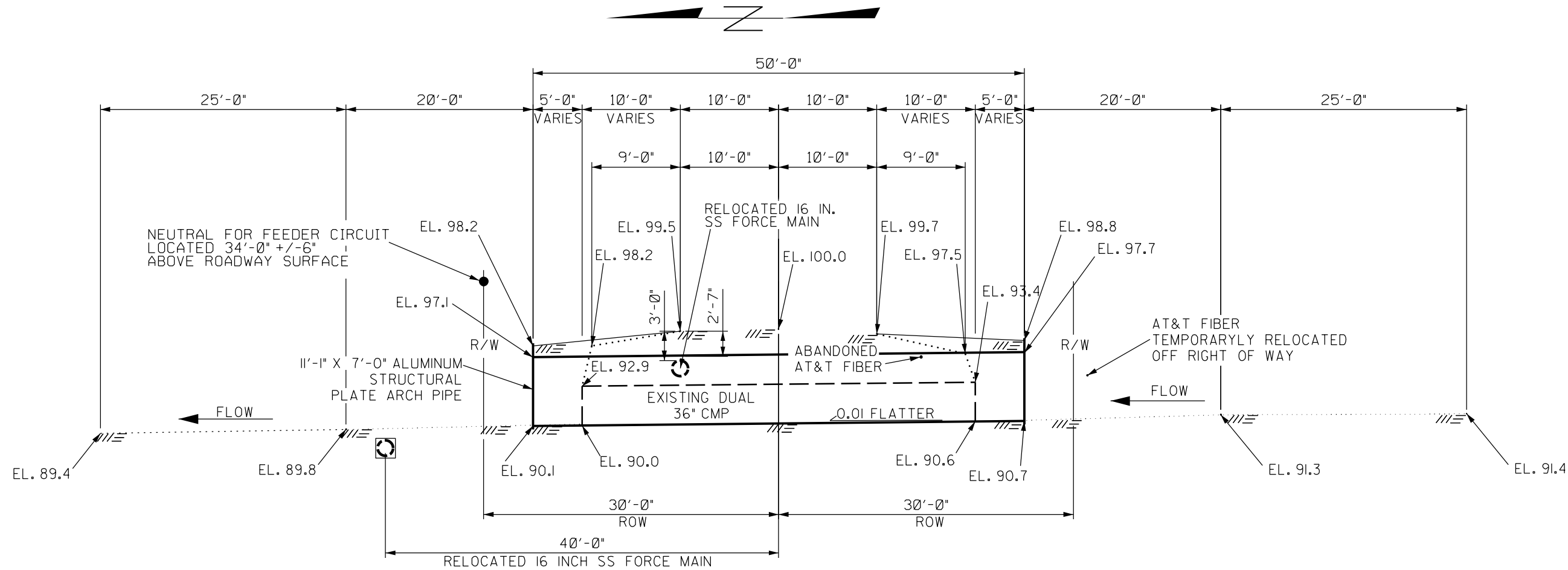
BYPASS PUMPNG PLAN

DRAWN BY : REESE BRILEY DATE: 02/12/2018
CHECKED BY : DATE :

REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

TOTAL SHEETS

*****SYSTEM*****
*****DC*****
*****USERNAME*****



ELEVATION VIEW
11'-1" X 7'-0"
CORRUGATED ALUMINUM
STRUCTURAL PLATE ARCH

PROPOSED ELEVATIONS:
CENTER LINE ROADWAY OVER PIPE
ASSUME= EL. 100.00

INLET:

TOP OF HEADWALL= EL. +/- 99.10
TOP OF PIPE= EL. +/- 97.70
INVERT STREAM= EL. +/- 90.70
INVERT PIPE= EL. +/- 90.70

OUTLET:

TOP OF HEADWALL= EL. +/- 98.50
TOP OF PIPE= EL. +/- 97.10
INVERT STREAM= EL. +/- 90.10
INVERT PIPE= EL. +/- 90.10

CENTER LINE LENGTH = 50'-0" OF 11'-1" X 7'-0"
CORRUGATED ALUMINUM STRUCTURAL PALTE ARCH.

TWO 22'-6" WIDE BY 9'-4" TALL FULLY WELDED
STRUCTURAL ALUMINUM STRUCTUARL PLATE
HEADWALLS W/ 2- SECTIONS
OF 11'-1" X 7'-0" 10 GAUGE ALUMINUM PLATE
STUBBED OUT, WHICH SHALL BE FULLY WELDED
TO ALUMINUM STRUCTURAL PLATE HEADWALL.

MINIMUM COVER= 1.20' AT HEADWALL; 2.70' AT ROADWAY
MAXIMUM COVER OVER THE PIPE= 3.0'

THE STRUCTURE AND ALL COMPONENTS SHALL BE
DESIGNED TO MEET OR EXCEED AASHTO HL-93
LOADING.

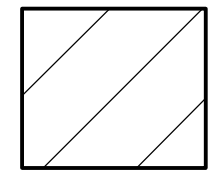
PROJECT NO. 15005.1092024
WAKE COUNTY
STATION: GRASSHOPPER RD.
(SR-2511)
SHEET OF

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
ELEVATION VIEW
11'-1" X 7'-0" ALUMINUM
CORRUGATED STRUCTURAL
PLATE ARCH

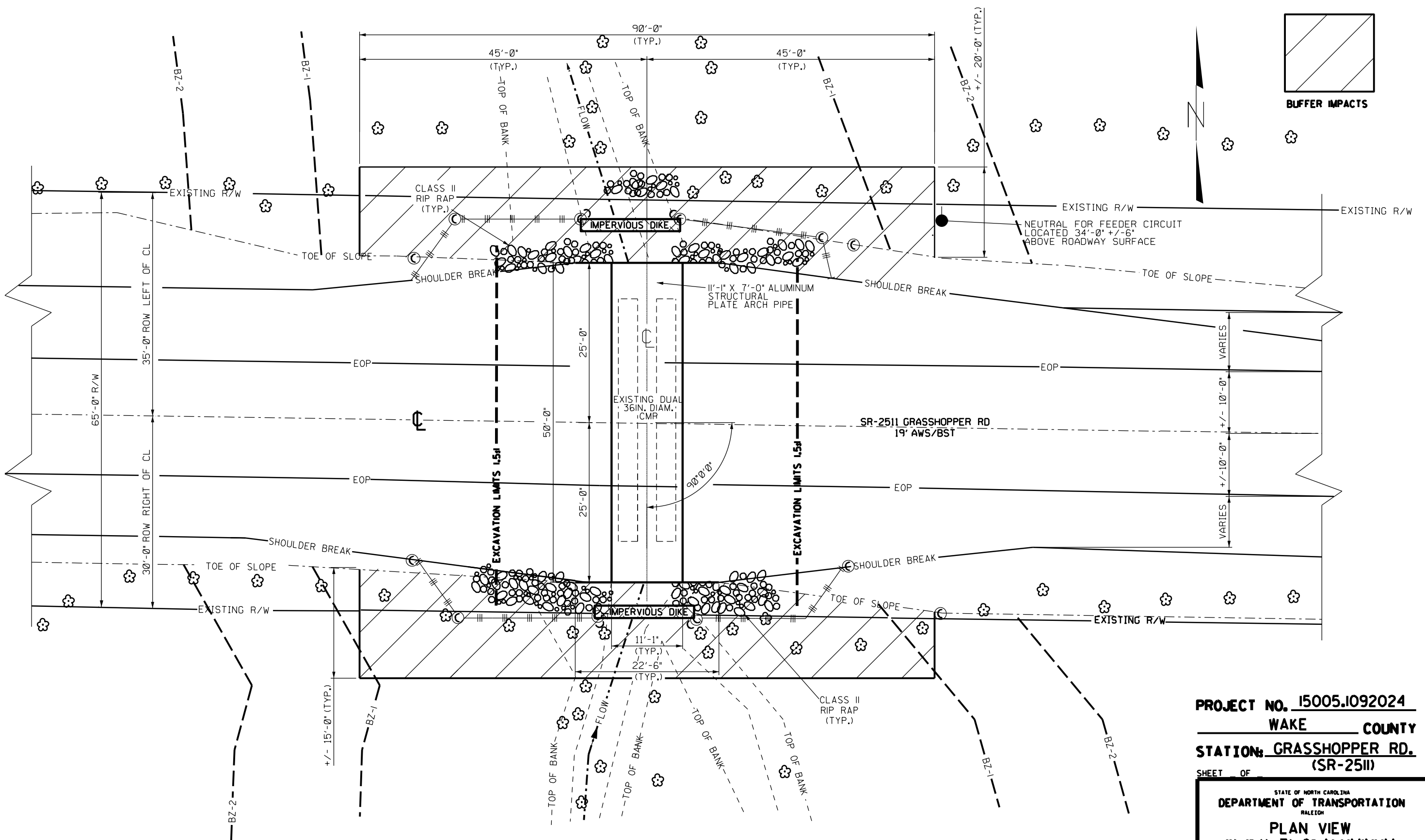
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	TOTAL SHEETS
1			3			4
2			4			

DRAWN BY : REESE BRILEY DATE : 2/12/2011
CHECKED BY : DATE :

*****SYTIME*****
*****OGN*****
*****USER*****



BUFFER IMPACTS



PROJECT NO. 15005.1092024
WAKE COUNTY
STATION: GRASSHOPPER RD.
(SR-2511)
SHEET OF

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PLAN VIEW
11'-1" X 7'-0" ALUMINUM
CORRUGATED STRUCTURAL
PLATE ARCH

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	TOTAL SHEETS
1			1			1
2			2			1

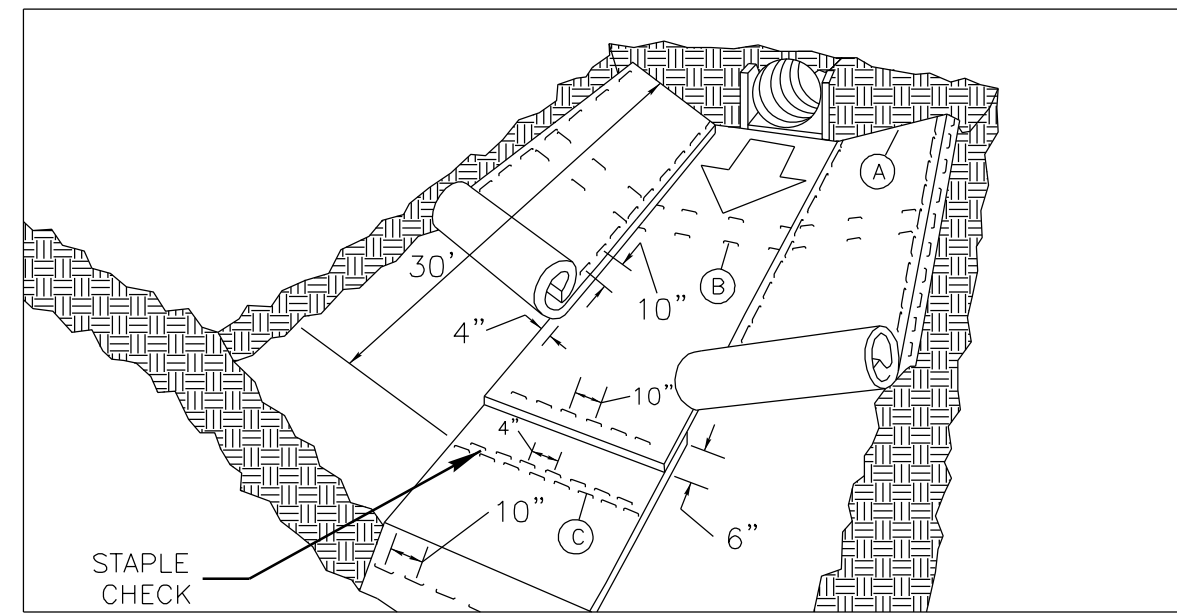
EROSION CONTROL PLAN

DRAWN BY: REESE BRILEY DATE 2/12/2018
CHECKED BY: DATE:

*****SYSTEM*****
*****DCN*****
*****USERNAME*****

PROJECT REFERENCE NO. X-XXXX	SHEET NO. EC-26
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATTING INSTALLATION DETAIL



MATTING IN DITCHES

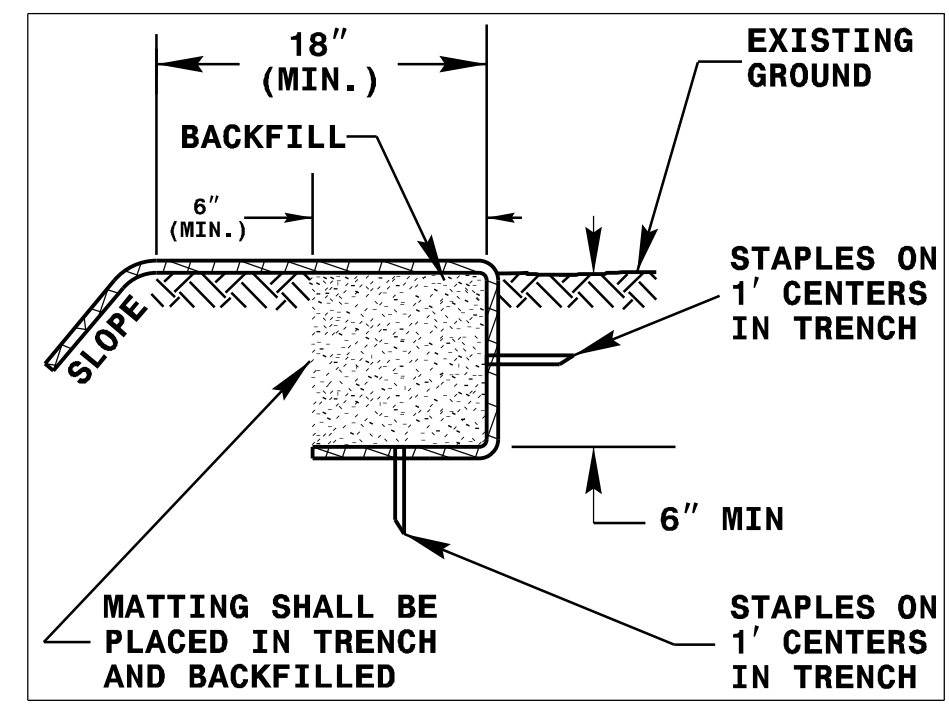
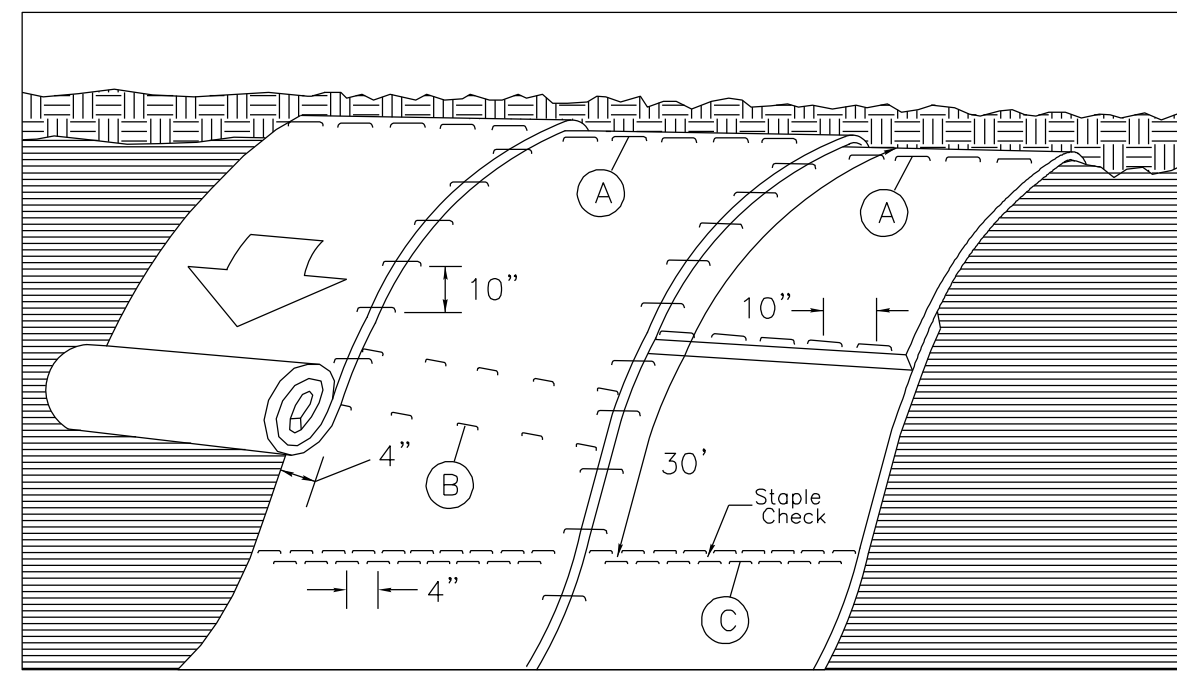


DIAGRAM (A)



MATTING ON SLOPES

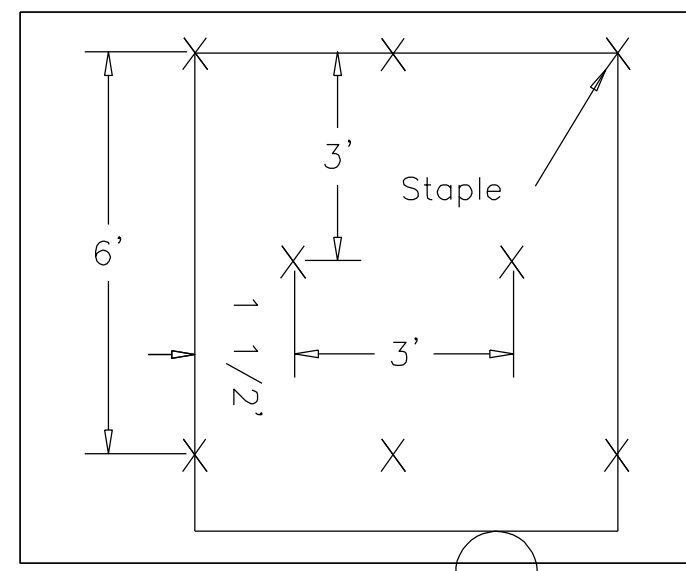


DIAGRAM B

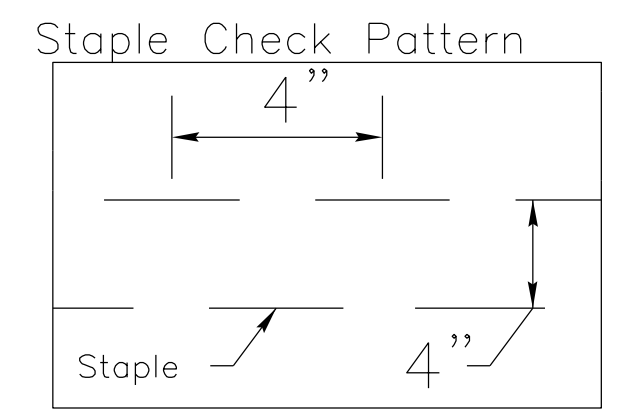
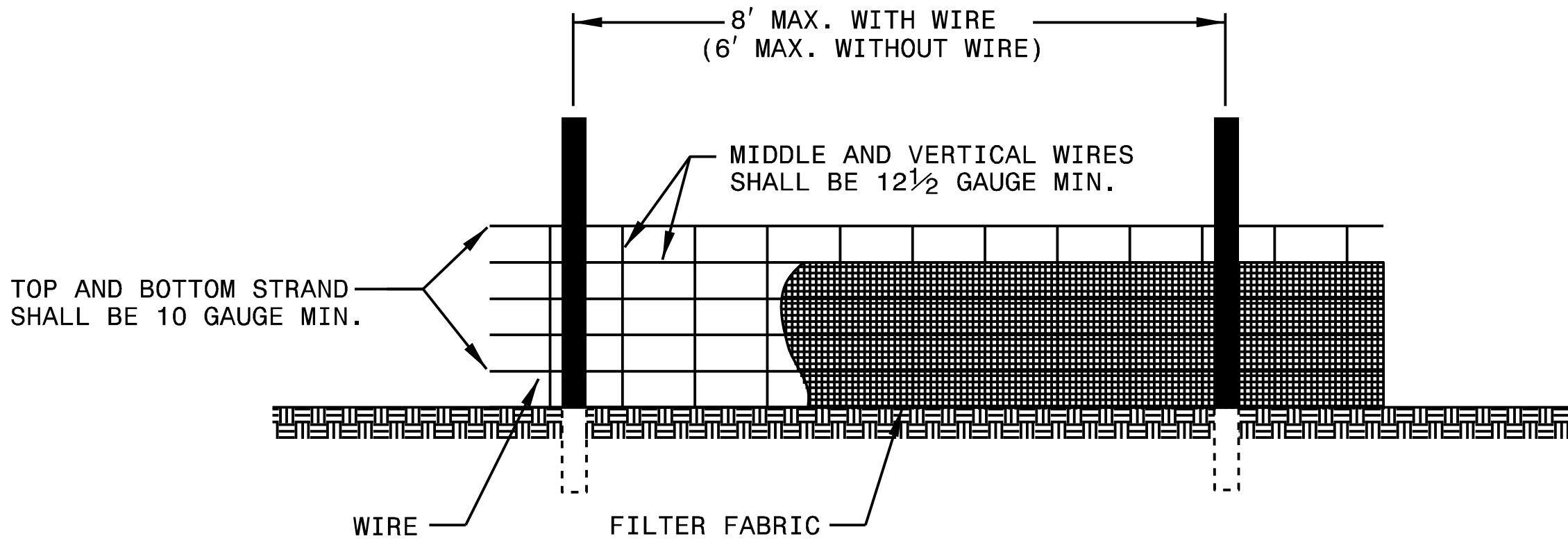


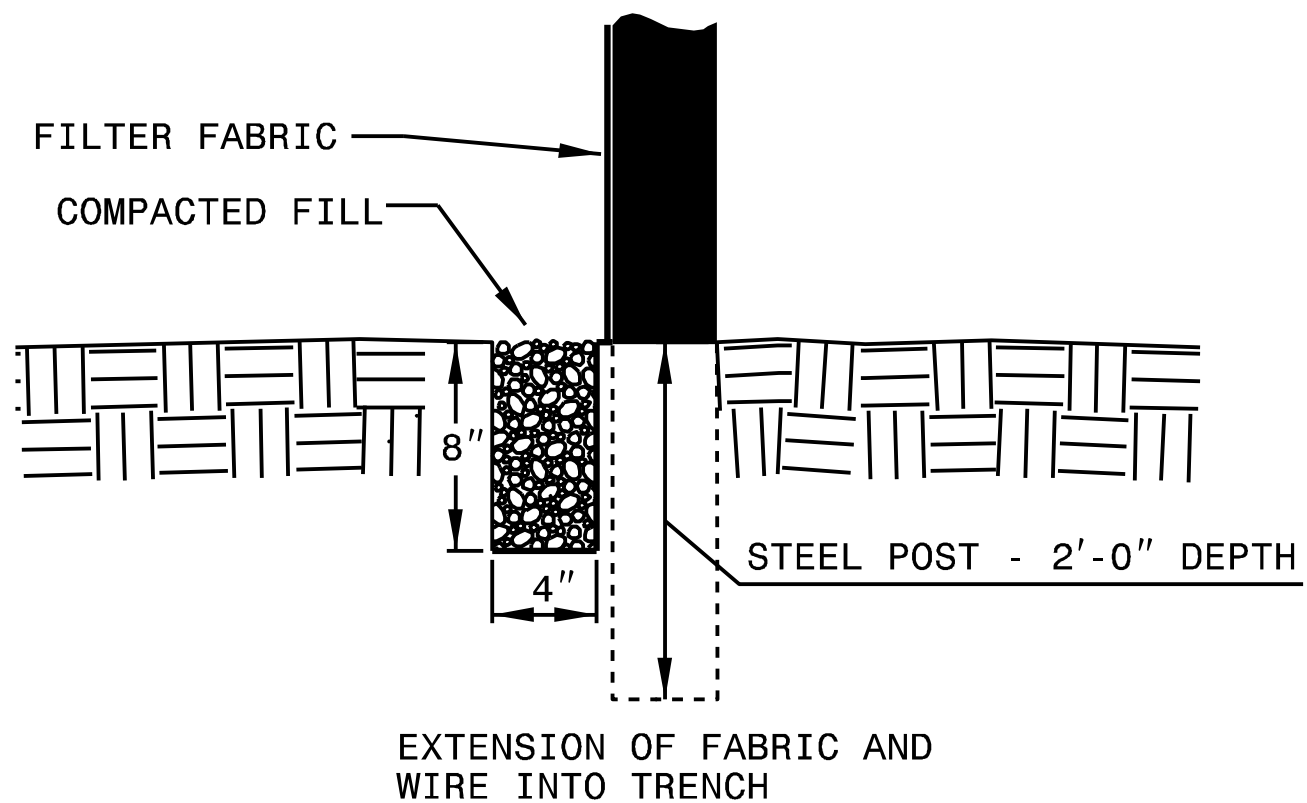
DIAGRAM (C)

NOTES:
 THIS DETAIL APPLIES TO STRAW, EXCELSIOR, AND PERMANENT SOIL REINFORCEMENT MAT (PSRM) INSTALLATION.
 STAPLES SHALL BE NO. 11 GAUGE STEEL WIRE FORMED INTO A "U" SHAPE WITH A MINIMUM THROAT WIDTH OF 1 INCH AND NOT LESS THAN 6 INCHES IN LENGTH.

NOT TO SCALE

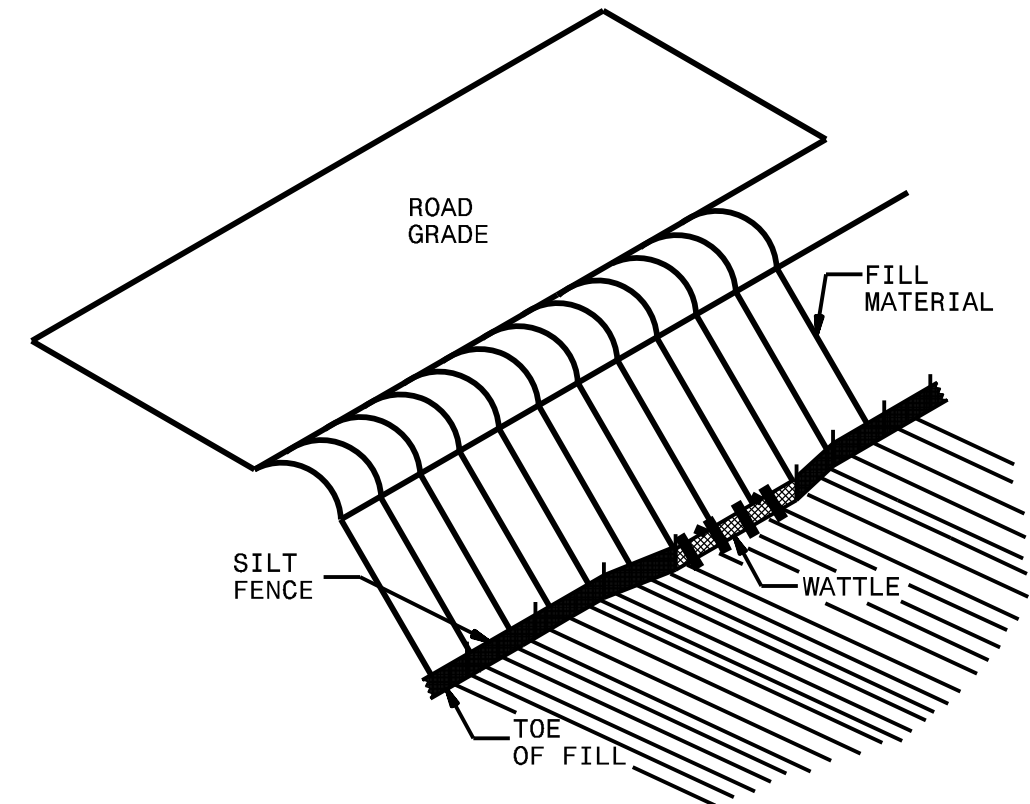


NOTES
 USE WIRE A MINIMUM OF 32" IN WIDTH AND WITH A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
 USE FILTER FABRIC A MINIMUM OF 36" IN WIDTH AND FASTEN ADEQUATELY TO THE WIRE AS DIRECTED BY THE ENGINEER.
 PROVIDE 5'-0" STEEL POST OF THE SELF-FASTENER ANGLE STEEL TYPE.

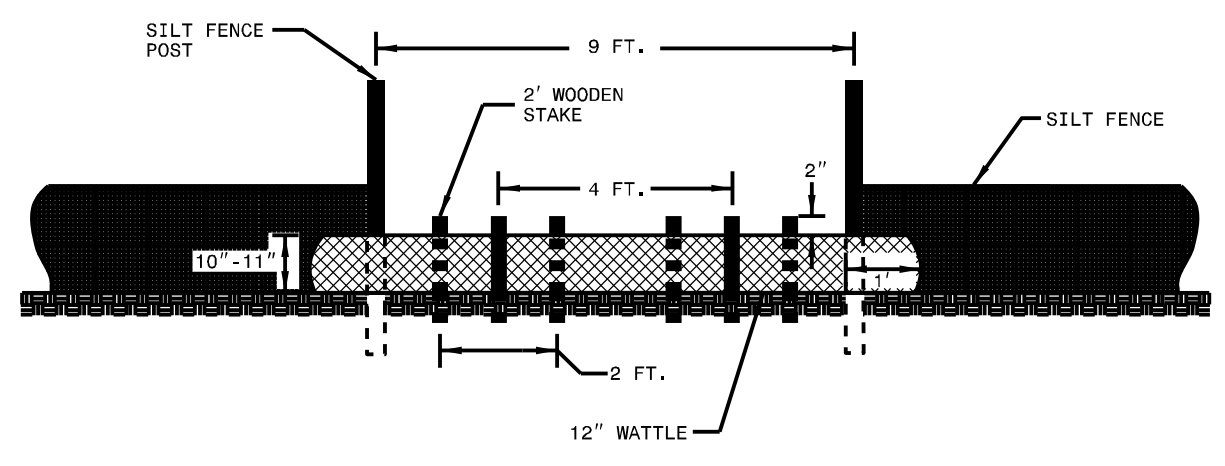


PROJECT REFERENCE NO. X-XXXX	SHEET NO. EC-26
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SILT FENCE WATTLE BREAK DETAIL



ISOMETRIC VIEW

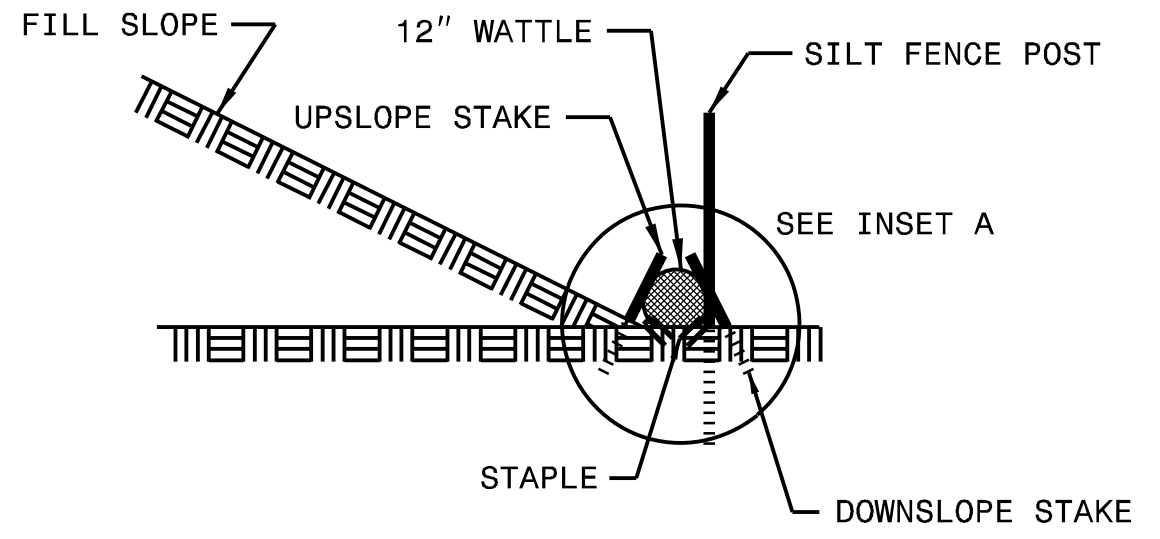
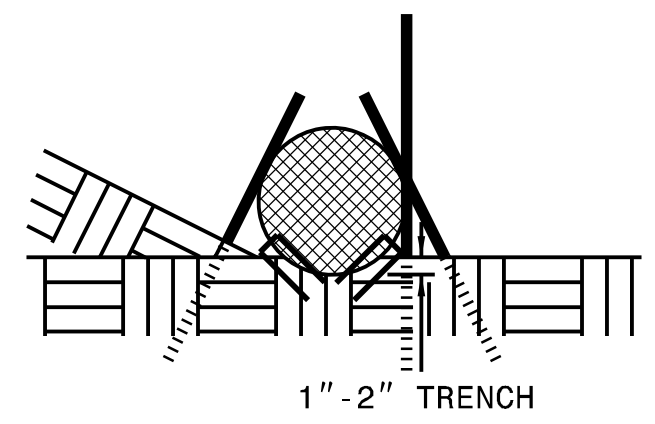


VIEW FROM SLOPE

NOTES:

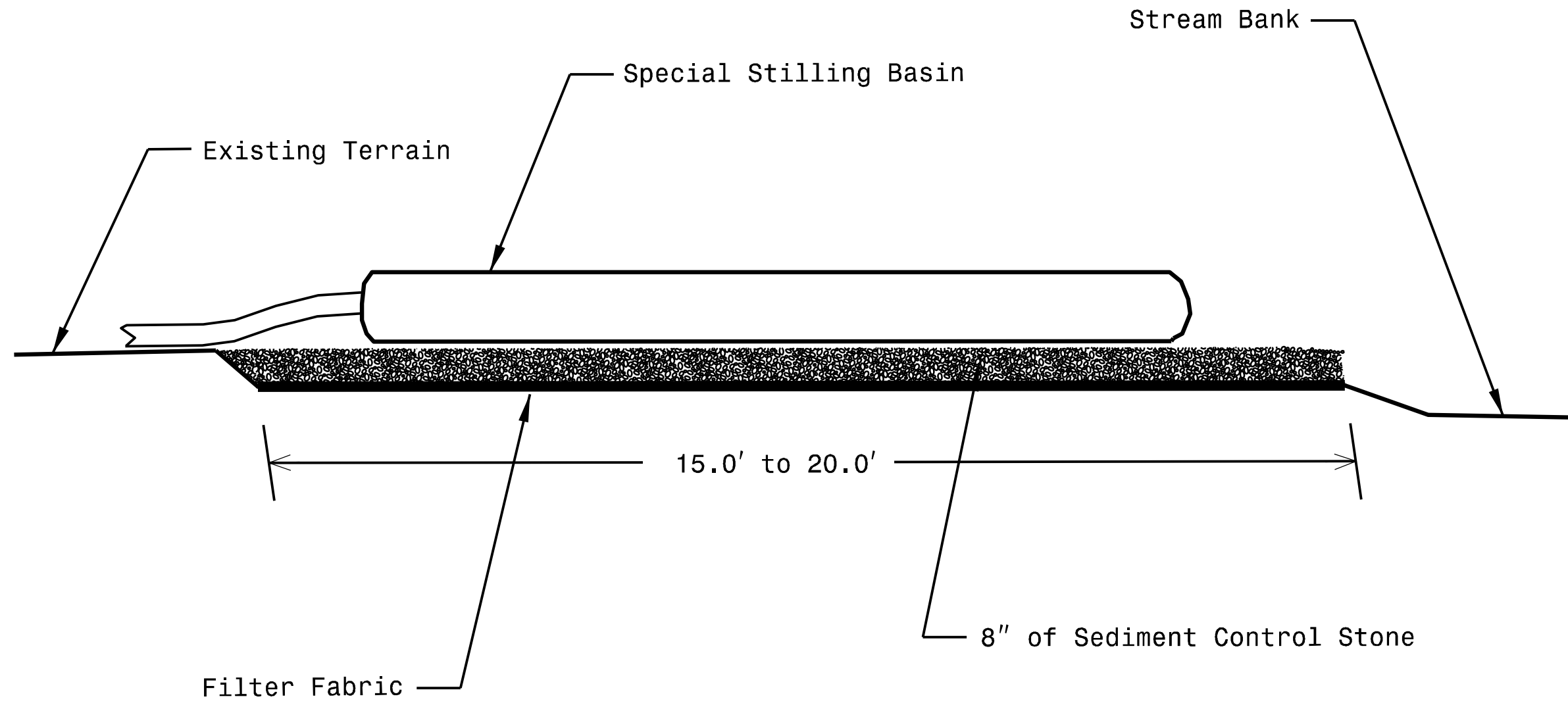
- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE AND LENGTH OF 10 FT.
- EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.
- DO NOT PLACE WATTLE ON TOE OF SLOPE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.
- PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.
- INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

INSET A



SIDE VIEW

ENGLISH STANDARD DRAWING FOR
SPECIAL STILLING BASIN



Note: Provide Stabilized Outlet to Streambank
Not To Scale

ENGLISH STANDARD DRAWING FOR
SPECIAL STILLING BASIN

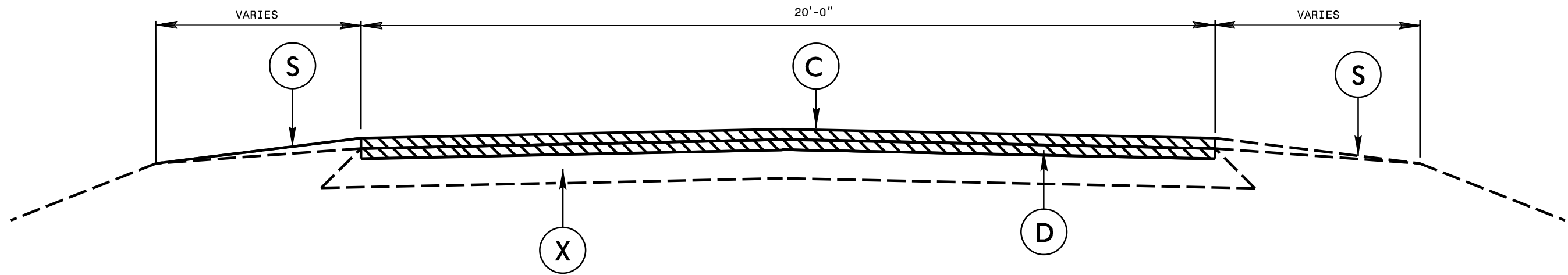
PAVEMENT SCHEDULE

C	2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
D	5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
S	SHOULDER GRADING ASB REQUIRED (EXCEPT AT RESIDENTIAL AREAS)
U	0"-2" MILLING NEW ASPHALT TO BE PAVED BACK FLUSH
V	EXISTING PAVEMENT
X	FULL DEPTH ABC

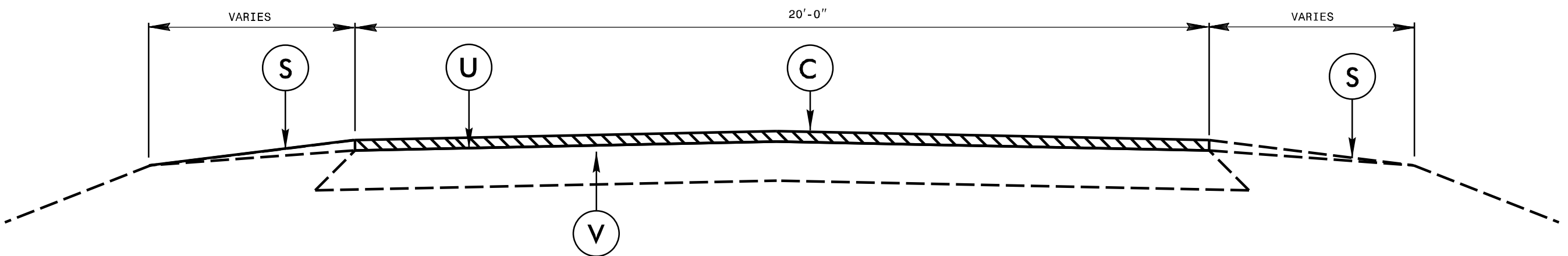
PROJECT REFERENCE NO.

15005J092024

SHEET NO.

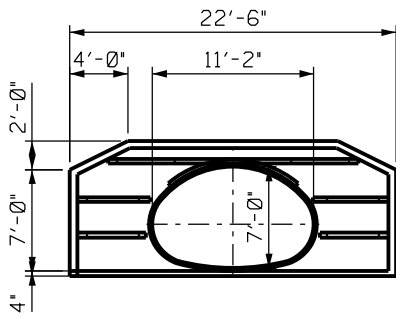


TYPICAL SECTION WITHIN EXCAVATION LIMITS

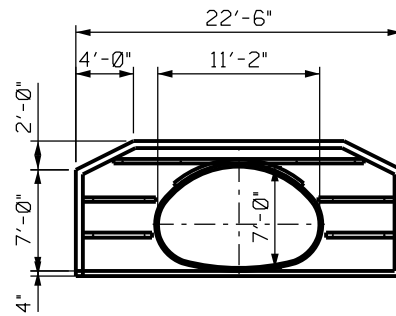


TYPICAL SECTION MILL AND FILL w/ TIE-INS

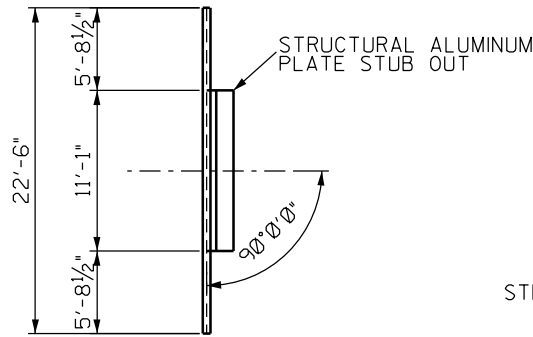
11'-1" X 7'-0 CORRUGATED ALUMINUM
STRUCTURAL PLATE ARCH W/
FULLY WELDED ALUMINUM STRUCTURAL PLATE
HEAD WALLS



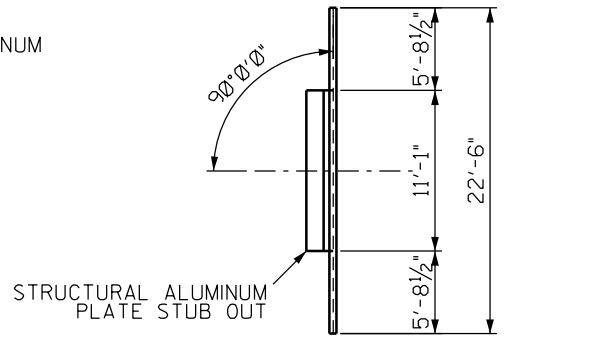
OUTLET HEADWALL
ELEVATION VIEW



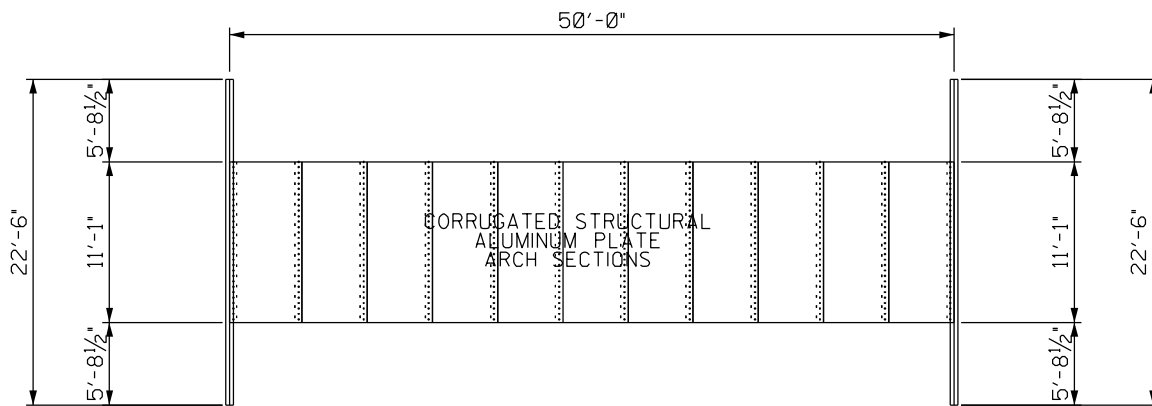
INLET HEADWALL
ELEVATION VIEW



OUTLET HEADWALL
PLAN VIEW



INLET HEADWALL
PLAN VIEW



PLAN VIEW

\$\$\$\$\$SYSTEM\$\$\$\$\$
\$\$\$\$\$DCN\$\$\$\$\$
\$\$\$\$\$SERNAME\$\$\$\$\$