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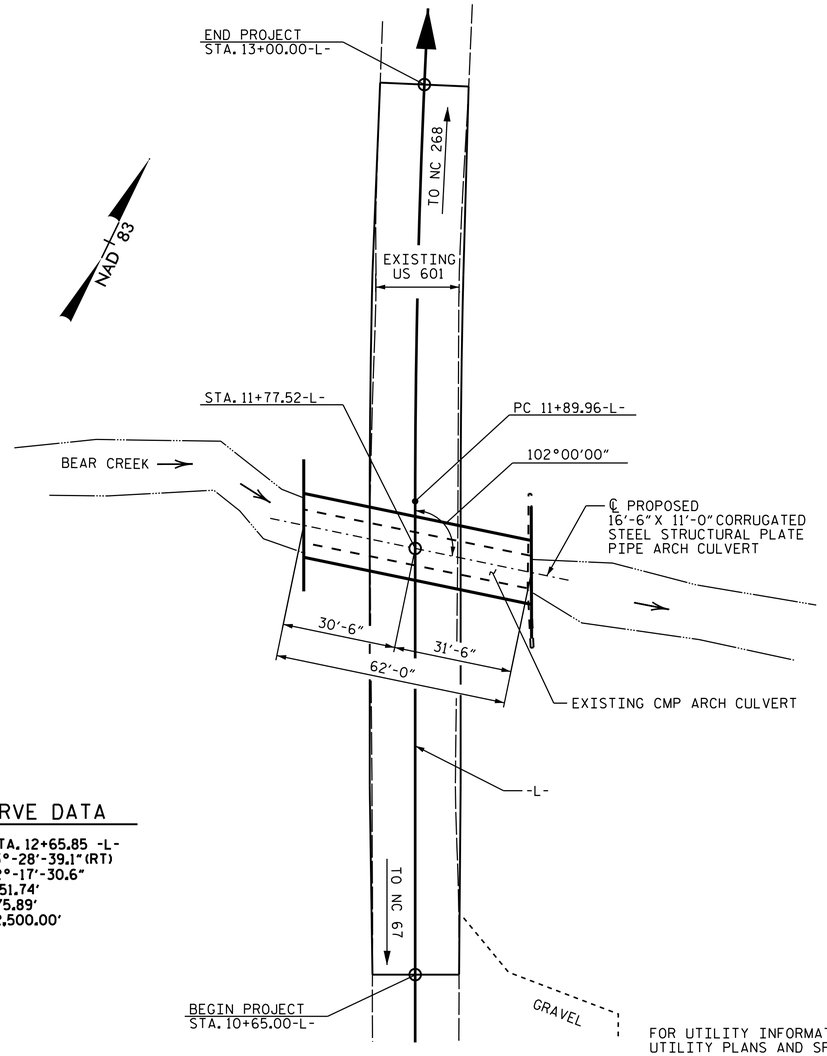
BENCHMARK: 8" SPIKE IN ROOT OF TRIPLE FORK POPLAR TREE 32' RT. OF STA 13+09-L-; ELEV. 978.17'



FOR UTILITY INFORMATION, SEE
UTILITY PLANS AND SPECIAL PROVISIONS

CURVE DATA

PI STA. 12+65.85 -L-
Δ = 3°-28'-39.1" (RT)
D = 2°-17'-30.6"
L = 151.74'
T = 75.89'
R = 2,500.00'

LOCATION SKETCH

ROADWAY DATA

GRADE POINT ELEV. @ STATION 11+77.52 -L-	= 977.29
BED ELEV. @ STATION 11+77.52 -L-	= 960.75
ROADWAY SLOPES	= 2:1

HYDRAULIC DATA

DESIGN DISCHARGE	= 890 C.F.S.
FREQUENCY OF DESIGN FLOOD	= 50 YEARS
DESIGN HIGH WATER ELEVATION	= 970.6
DRAINAGE AREA	= 1.75 SQ. MI.
BASE DISCHARGE (Q100)	= 1040 C.F.S.
BASE HIGH WATER ELEVATION	= 971.5

OVERTOPPING DATA

OVERTOPPING DISCHARGE	= 1760 C.F.S.
FREQUENCY OF OVERTOPPING FLOOD	= 500+ YEARS
OVERTOPPING HIGH WATER ELEVATION	= 976.8

TOTAL STRUCTURE QUANTITIES

CORRUGATED STEEL STRUCTURAL PLATE PIPE ARCH CULVERT	62 LIN. FT.
CLASS A CONCRETE	22 C.Y

NOTES

ASSUMED LIVE LOAD ---------- HL-93 OR ALTERNATE LOADING.

DESIGN FILL---------- 12.1 FT. MAX.

FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTES SHEET.

THE RESIDENT ENGINEER SHALL CHECK THE LENGTH OF CULVERT BEFORE STAKING IT OUT TO MAKE CERTAIN THAT IT WILL PROPERLY TAKE CARE OF THE FILL.

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

THE DETAILS SHOWN ARE FOR GENERAL LAYOUT ONLY, THE SUPPLIER SHALL PROVIDE DESIGNS AND DETAILS THAT MEET THE REQUIREMENTS OF AASHTO SECTION 12 AND ARE SEALED BY A NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER.

FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.

FOR FALSEWORK & FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CORRUGATED STEEL STRUCTURAL PLATE PIPE ARCH CULVERT, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

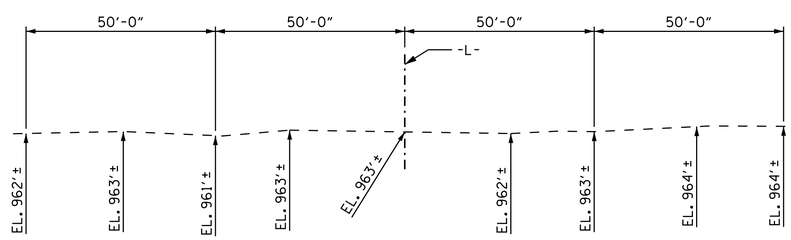
REMOVAL OF THE EXISTING PIPE CULVERT SHALL BE PERFORMED SO AS NOT TO ALLOW ANY DEBRIS TO FALL INTO THE WATER, THE CONTRACTOR SHALL REMOVE THE CMP ARCH CULVERT AND SUBMIT PLANS FOR DEMOLITION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

THE MANUFACTURER OF THE CORRUGATED STEEL STRUCTURAL PLATE PIPE ARCH CULVERT SHALL PROVIDE LOAD AND RESISTANCE FACTOR RATING (LRFD) SUMMARY PER NCDOT REQUIREMENTS.

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH "HEC 18- EVALUATING SCOUR AT BRIDGES."

EXCAVATE A MINIMUM OF 6" BELOW THE CULVERT AND REPLACE WITH FOUNDATION CONDITIONING MATERIAL PER SECTION 414 OF THE STANDARD SPECIFICATIONS.

FOR CLASS A CONCRETE, SEE CORRUGATED STEEL STRUCTURAL PLATE PIPE ARCH CULVERT SPECIAL PROVISIONS.



PROFILE ALONG ℄ CULVERT

PROJECT NO. 852114
SURRY COUNTY
STATION: 11+77.52-L-
SHEET 1 OF 3
REPLACES PIPE NO. 852144

NORTH CAROLINA PROFESSIONAL SEAL 20125 ENGINEER MARSHALL G. CUCK, JR.
Marshall G. Cuck, Jr.
12/20/2021 | 2:19 PM EST

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

16'-6" X 11'-0"
STRUCTURAL PLATE
PIPE ARCH CULVERT
102°-00'-00" SKEW

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

SHEET NO. C-1
TOTAL SHEETS 3

DRAWN BY :	NMW	DATE :	9/21
CHECKED BY :	MGC	DATE :	9/21