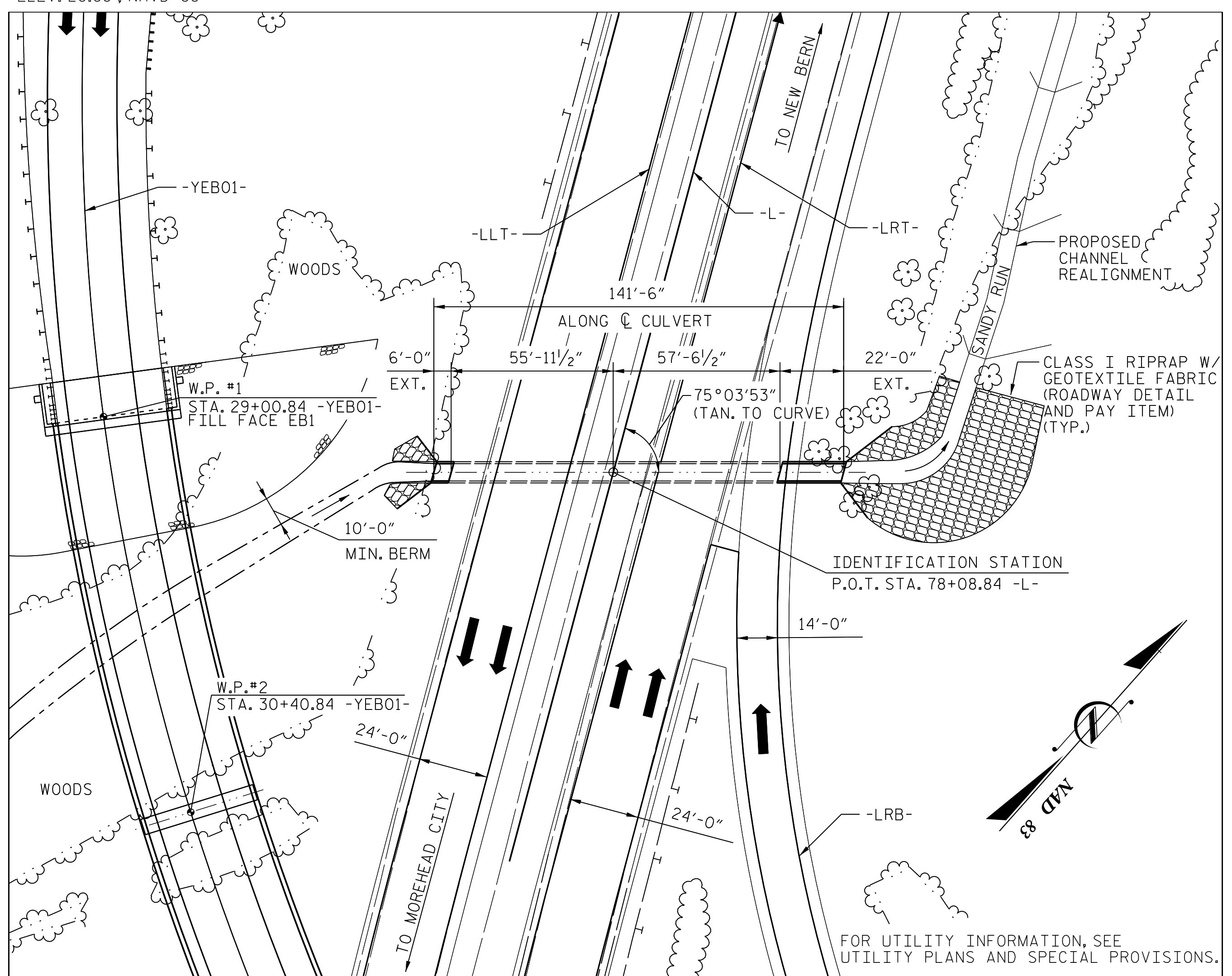


BENCH MARK: BM #8 - RR SPIKE IN LIGHT POLE ID# 129M02. -L- STA. 70+55.80, 137.2' RT
ELEV. 28.88', NAVD 88



GRADE PT. ELEV. @ STA. 78+08.84 -L- = 27.70
BED ELEV. @ STA. 78+08.84 -L- = 19.44
ROADWAY SLOPES = 3:1 LT; 4:1 RT

LOCATION SKETCH

HYDRAULIC DATA

DESIGN DISCHARGE	120	CFS
FREQUENCY OF DESIGN FLOOD	50	YR.
DESIGN HIGH WATER ELEVATION	23.4	FT.
BASE DISCHARGE (Q 100)	150	CFS
BASE FREQUENCY	100	YR.
BASE HIGH WATER ELEVATION	23.8	FT.

OVERTOPPING FLOOD DATA

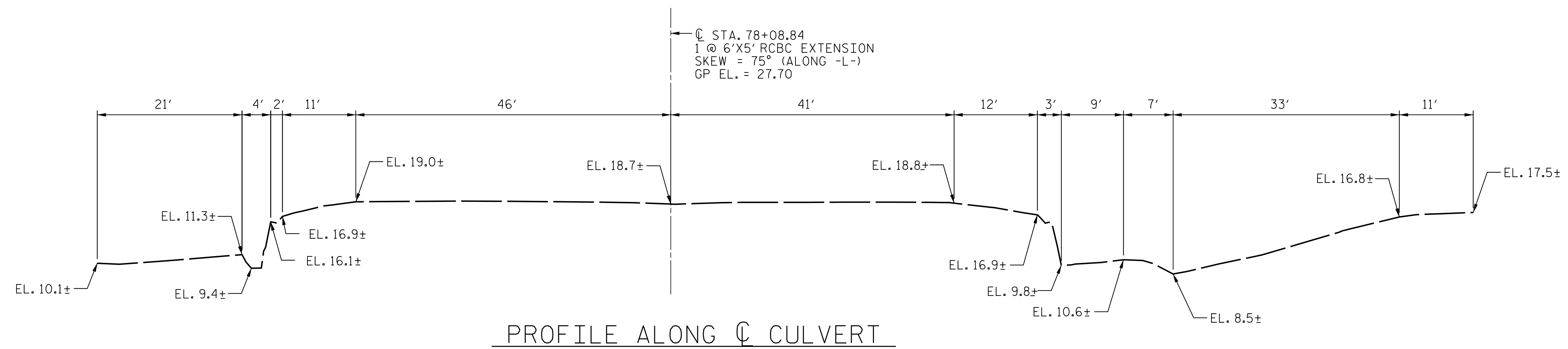
OVERTOPPING DISCHARGE	415	CFS
FREQUENCY OF OVERTOPPING FLOOD	500	YR.
OVERTOPPING FLOOD ELEVATION	29.2	FT.

TOTAL STRUCTURE QUANTITIES

CLASS A CONCRETE		
BARREL @ 0.6173	CY/FT	17.3 C.Y.
EDGE BEAMS		1.2 C.Y.
WING ETC.		21.0 C.Y.
TOTAL		39.5 C.Y.
EPOXY COATED REINFORCING STEEL		
BARREL		4181 LBS.
WINGS ETC.		1922 LBS.
TOTAL		6105 LBS.
FOUNDATION CONDITIONING MATERIAL		14.5 TONS
CULVERT EXCAVATION		LUMP SUM

NOTES:

- ASSUMED LIVE LOAD ----- HL-93 OR ALTERNATE LOADING.
- DESIGN FILL----- 5 FT.
- 3" Ø WEEP HOLES INDICATED TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.
- CONCRETE IN CULVERTS TO BE POURED IN THE FOLLOWING ORDER:
 1. WING FOOTINGS AND FLOOR SLAB INCLUDING 4" OF ALL VERTICAL WALLS.
 2. THE REMAINING PORTIONS OF THE WALLS AND WINGS FULL HEIGHT FOLLOWED BY ROOF SLAB AND HEADWALLS.
- 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.
- DIMENSIONS FOR WING LAYOUT AS WELL AS ADDITIONAL REINFORCING STEEL EMBEDDED IN BARREL ARE SHOWN ON WING SHEETS.
- TRANSVERSE CONSTRUCTION JOINTS SHALL BE USED IN THE BARREL. SPACED TO LIMIT THE POURS TO A MAXIMUM OF 70 FEET. LOCATION OF JOINTS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.
- AT THE CONTRACTOR'S OPTION, HE MAY SPLICE THE VERTICAL REINFORCING STEEL IN THE INTERIOR FACE OF EXTERIOR WALL AND BOTH FACES OF INTERIOR WALLS ABOVE LOWER WALL CONSTRUCTION JOINT. THE SPLICE LENGTH SHALL BE AS PROVIDED IN THE SPLICE LENGTH CHART SHOWN ON THE PLANS. EXTRA WEIGHT OF STEEL DUE TO THE SPLICES SHALL BE PAID FOR BY THE CONTRACTOR.
- DOWELS SHALL BE USED TO CONNECT THE CULVERT EXTENSION TO THE EXISTING CULVERT AS SHOWN. FOR NOTE REGARDING SETTING OF DOWELS, SEE SHEET SN.
- FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.
- A 3 FOOT STRIP OF FILTER FABRIC SHALL BE ATTACHED TO THE FILL FACE OF THE WING COVERING THE ENTIRE LENGTH OF THE EXPANSION JOINT.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- ALL BAR SUPPORTS USED IN THE CULVERT BARREL AND WINGS AND ALL INCIDENTAL REINFORCING STEEL SHALL BE EPOXY COATED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
- FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.



PROFILE ALONG CULVERT

PROJECT NO. R-5516
 CRAVEN COUNTY
 STATION: 78+08.84 -L-
 SHEET 1 OF 7

Professional Engineer Seal for John C. Morrison, License No. F-0342, State of North Carolina. The seal includes the AECOM logo and the date 4/12/2017.

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BARREL STANDARD					
SINGLE 6 FT. X 5 FT. CONCRETE BOX CULVERT EXTENSION 75° SKEW					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					C1-1 TOTAL SHEETS 7

DRAWN BY : NKB DATE : 03/16
 CHECKED BY : JCM DATE : 03/16
 DESIGN E.O.R. : JCM DATE : 05/16

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

DATE: 4/7/2017 TIME: 2:46:58 PM
 USER: jcm16032454-Strucum Road400_Technical\408_Structure\Cadd\Culverts\411_005_01-L_R5516_S1U_L0C.dgn