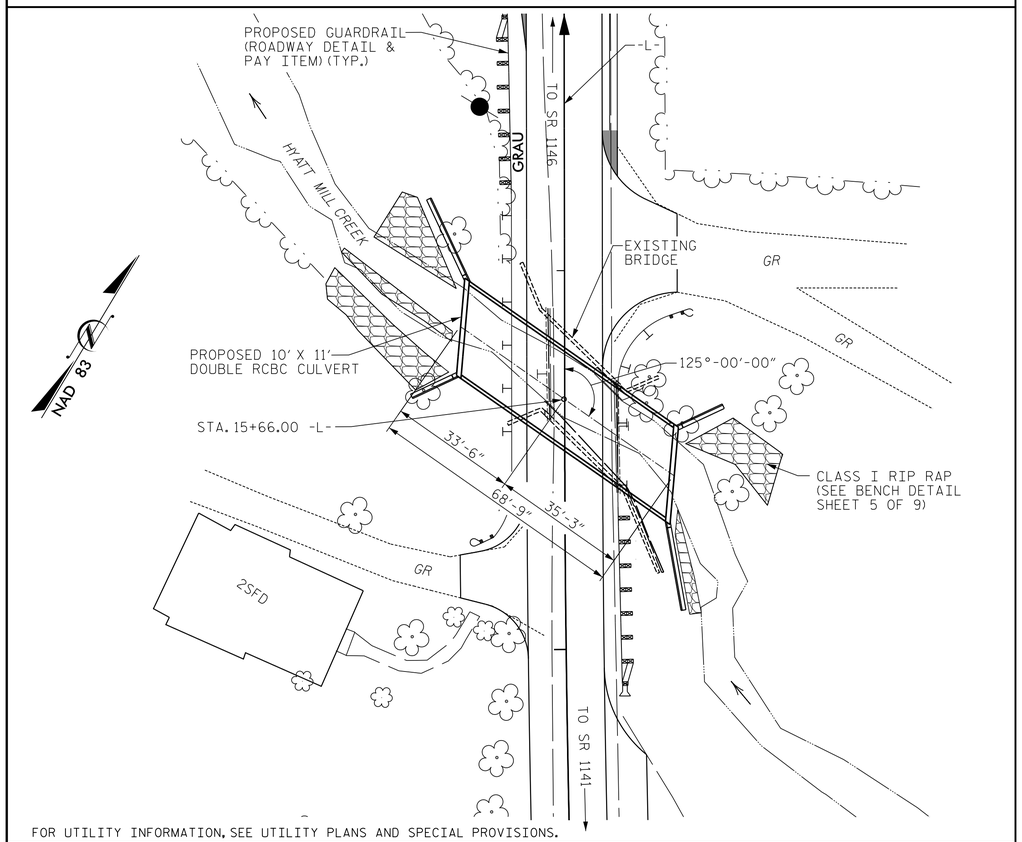
BM #4: 8" SPIKE IN BASE OF 18" WALNUT, 58.08' LEFT OF -L- STA. 17+16.26
N 499083, E 562943 EL. 1817.26'



FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

LOCATION SKETCH

NOTES

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

DESIGN FILL----------MAX. = 5.31' MIN. = 4.57'

FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTE SHEET.

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 SHEET.

STEEL IN THE BOTTOM SLAB MAY BE SPLICED AT THE PERMITTED CONSTRUCTION JOINT AT THE CONTRACTOR'S OPTION. EXTRA WEIGHT OF STEEL DUE TO THE SPLICES SHALL BE PAID FOR BY THE CONTRACTOR.

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.

AT THE CONTRACTOR'S OPTION HE MAY SUBMIT, TO THE ENGINEER FOR APPROVAL, DESIGN AND DETAIL DRAWINGS FOR A PRECAST REINFORCED CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE CULVERT SHOWN ON THE PLANS. THE DESIGN SHALL PROVIDE THE SAME SIZE AND NUMBER OF BARRELS AS USED ON THE CAST-IN-PLACE DESIGN. FOR OPTIONAL PRECAST REINFORCED CONCRETE BOX CULVERT, SEE SPECIAL PROVISIONS.

FOR ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION ACTIVITIES, SEE SPECIAL PROVISIONS

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

THE EXISTING STRUCTURE CONSISTING OF 1 SPAN @ 30'-0", WITH A CLEAR ROADWAY WIDTH OF 17'-11", WITH REINFORCED CONCRETE DECK GIRDERS AND CONCRETE ABUTMENTS, AND LOCATED AT THE PROPOSED STRUCTURE, SHALL BE REMOVED.

THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OFTRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED IN A MANNER THAT PREVENTS DEBRIS FROM FALLING INTO THE WATER. THE CONTRACTOR SHALL SUBMIT DEMOLITION PLANS FOR REVIEW AND REMOVE THE BRIDGE IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

EXCAVATE 1'-0" MIN. BENEATH CULVERT FOOTING AND REPLACE WITH FOUNDATION CONDITIONING MATERIAL IN ACCORDANCE WITH ARTICLE 414 OF THE STANDARD SPECIFICATIONS.

GRADE DATA

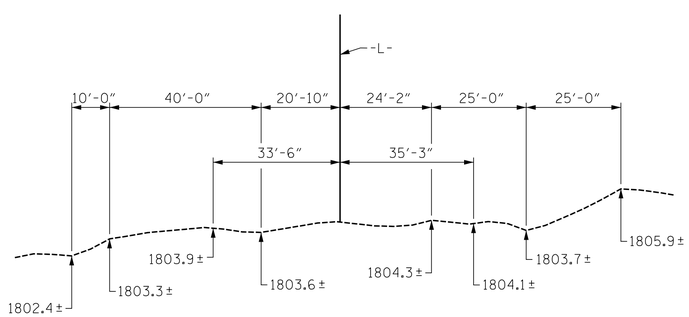
GRADE POINT ELEV. @ STA. 15+66.00 -L- = 1819.9
BED ELEV. @ STA. 15+66.00 -L- = 1802.7 ±
ROADWAY SLOPES 2:1

HYDRAULIC DATA

DESIGN DISCHARGE	= 950	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 1811.3	FT
DRAINAGE AREA	= 3.3	SQ. MI.
BASE DISCHARGE	= 1626	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 1814.11	FT
OVERTOPPING DISCHARGE	= 2900	CFS
OVERTOPPING FREQUENCY	= 500 +	YRS
OVERTOPPING ELEVATION	= 1819.7	FT
W.S. ELEVATION AT DATE OF SURVEY	= 1804.8 DATE: 10-9-12	FT

TOTAL STRUCTURE QUANTITIES

CLASS A CONCRETE		
BARREL @ 2.68 C.Y./FT.	184.3	C.Y.
SILLS	1.5	C.Y.
WINGS, ETC.	63.6	C.Y.
TOTAL	249.4	C.Y.
REINFORCING STEEL		
BARREL	19,474	LBS.
WINGS	3,982	LBS.
TOTAL	23,456	LBS.
CULVERT EXCAVATION	LUMP SUM	
FOUNDATION CONDITIONING MATERIAL	108 TONS	
REMOVAL OF EXISTING STRUCTURE	LUMP SUM	
RIP RAP CLASS 1	108 TONS	
GEOTEXTILE MATERIAL UNDER RIP RAP	100.6 S.Y.	
ASBESTOS ASSESSMENT	LUMP SUM	
CHANNEL SUBSTRATE MATERIAL	94 TONS	



PROFILE ALONG ℄ CULVERT

PROJECT NO. 14SP.20221.1/.2
CLAY COUNTY
STATION: 15+66.00 -L-

SHEET 1 OF 10 REPLACES BRIDGE NO. 87

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DOUBLE BARREL 10' X 11' RCBC 125° SKEW HYATT MILL CREEK

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NORTH CAROLINA PROFESSIONAL SEAL 20777 ENGINEER HARDY L. WILLIS
DocuSigned by: Hardy Willis, CC287FCF0223461...
11/4/2016

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Middlesboro, KY 606-248-6600
Atlanta, GA 770-627-3509

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DWN. BY: MAF DATE: 7/14
CHKD. BY: HLW DATE: 7/14

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

SHEET NO. C-1
TOTAL SHEETS 19