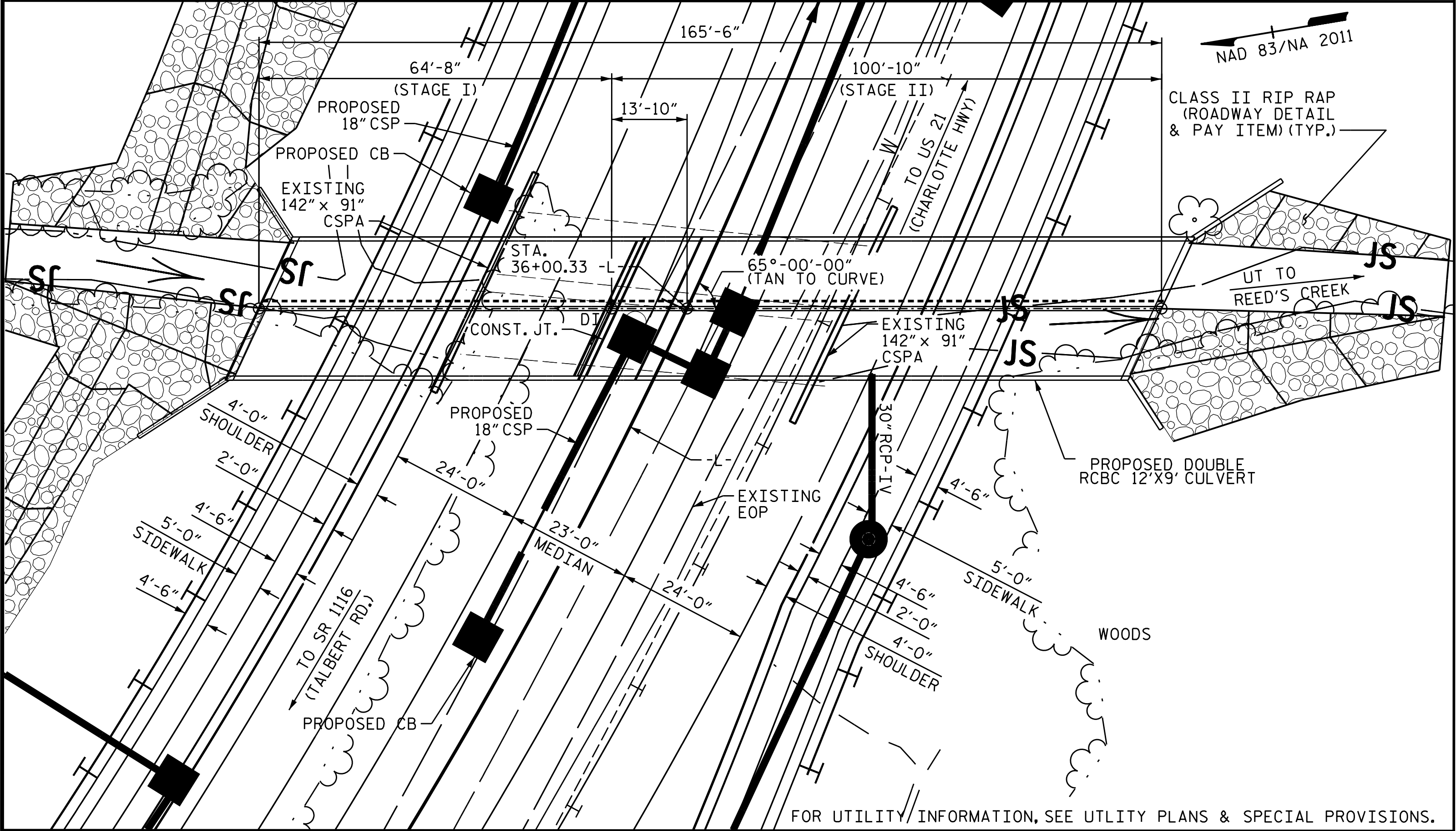


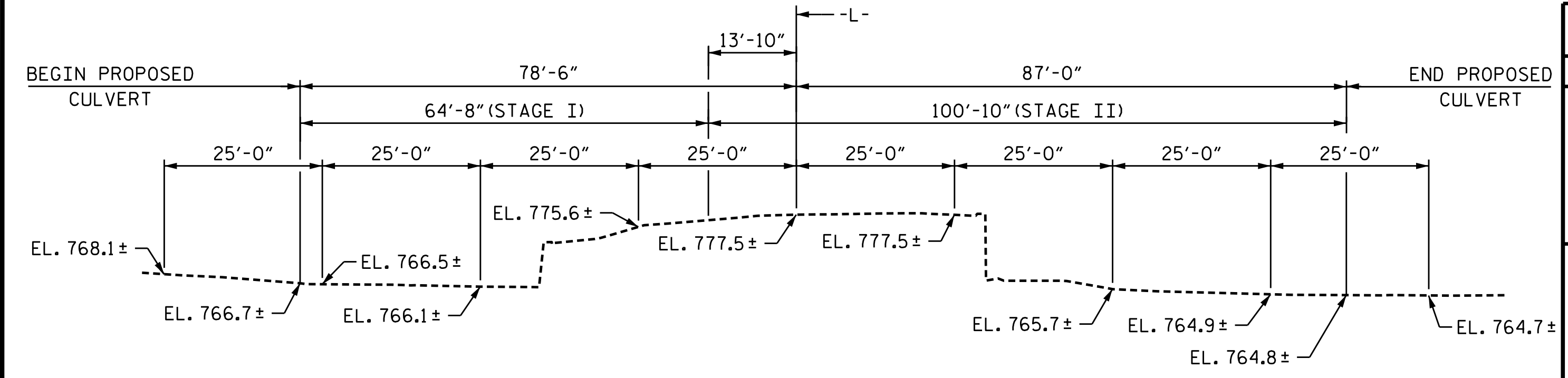
BL-45: 18" REBAR W/ ALUMINUM CAP N670091.02 E1450619.06, STA. 36+75.22 -L-, 29.79' RT., EL.777.24



LOCATION SKETCH

NOTES

- ASSUMED LIVE LOAD ----- HL-93 OR ALTERNATE LOADING.
- DESIGN FILL-----13.25'
- FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTE SHEET.
- THE 30"DIA. PIPE THROUGH THE SIDEWALL OF THE CULVERT SHALL BE LOCATED BY THE ENGINEER, THE REINFORCING STEEL SHALL BE FIELD BENT AS NECESSARY TO CLEAR PIPE.
- AFTER SERVING AS A TEMPORARY STRUCTURE, THE EXISTING 142" X 91" CMAP LOCATED AT THE PROPOSED STRUCTURE SHALL BE REMOVED. SHOULD THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE DETERIORATE DURING CONSTRUCTION, A LOAD LIMIT MAY BE POSTED AND MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT.
- TRAFFIC ON SR 1100 SHALL BE MAINTAINED. IN ORDER TO MAINTAIN TRAFFIC THE CULVERT SHALL BE CONSTRUCTED IN SECTIONS AS DIRECTED BY THE ENGINEER.
- 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 WILL BE PAID FOR BY THE CONTRACTOR.
- TRANSVERSE CONSTRUCTION JOINTS SHALL BE USED IN THE BARREL, SPACED TO LIMIT THE POURS TO A MAXIMUM OF 70 FT. LOCATION OF JOINTS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.
- 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.
- NO PRECAST REINFORCED BOX CULVERT OPTION WILL BE ALLOWED.
- 3"Ø WEEP HOLES INDICATED TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.
- 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.
- 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.
- THE ENTIRE COST OF WORK REQUIRED TO PLACE EXCAVATED OR SUPPLEMENTAL MATERIAL AS SHOWN ON THE PLANS SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR CULVERT EXCAVATION.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- DETAILED DRAWINGS FOR FALSEWORK AND FORMS FOR THIS BOX CULVERT SHALL BE SUBMITTED. SEE SHEET SN.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.



PROFILE ALONG CULVERT

TOTAL STRUCTURE QUANTITIES BY STAGE/PHASE

STAGE I, PHASE A			STAGE I, PHASE B		
CLASS A CONCRETE			CLASS A CONCRETE		
BARREL @ 1.287 CY/FT	83.3	C.Y.	BARREL @ 2.388 CY/FT	154.5	C.Y.
WING ETC.	13.0	C.Y.	WING ETC.	8.0	C.Y.
TOTAL	96.3	C.Y.	TOTAL	162.5	C.Y.
REINFORCING STEEL			REINFORCING STEEL		
BARREL	19,460	LBS.	BARREL	25,955	LBS.
WINGS ETC.	733	LBS.	WINGS ETC.	433	LBS.
TOTAL	20,193	LBS.	TOTAL	26,388	LBS.
STAGE II, PHASE C			STAGE II, PHASE D		
CLASS A CONCRETE			CLASS A CONCRETE		
BARREL @ 1.287 CY/FT	129.8	C.Y.	BARREL @ 2.388 CY/FT	240.8	C.Y.
WING ETC.	8.0	C.Y.	WING ETC.	12.0	C.Y.
TOTAL	137.8	C.Y.	TOTAL	252.8	C.Y.
REINFORCING STEEL			REINFORCING STEEL		
BARREL	30,138	LBS.	BARREL	39,850	LBS.
WINGS ETC.	433	LBS.	WINGS ETC.	733	LBS.
TOTAL	30,571	LBS.	TOTAL	40,583	LBS.

FOUNDATION NOTES

EXCAVATE FOUNDATION A MINIMUM OF 3.0 FEET BELOW CULVERT BEARING ELEVATION. PLACE 3.0 FEET OF CLASS VI FOUNDATION CONDITIONING MATERIAL IN ACCORDANCE WITH SECTION 414 OF THE STANDARD SPECIFICATIONS. ENCAPSULATE FOUNDATION CONDITIONING MATERIAL WITH TYPE 2 GEOTEXTILE, SEE SPECIAL PROVISION.

CONSTRUCT THE REINFORCED CONCRETE BOX CULVERT AT -L- STATION 36+00.33 WITH 4" OF CAMBER TO ACCOUNT FOR ANTICIPATED SETTLEMENT.

TOTAL STRUCTURE QUANTITIES

REMOVAL OF EXISTING STRUCTURE AT STATION 36+00.33 -L-	LUMP SUM
CULVERT EXCAVATION	LUMP SUM
CLASS A CONCRETE	649.4 C.Y.
REINFORCING STEEL	117,735 LBS
FOUNDATION CONDITIONING GEOTEXTILE, BOX CULVERT	
PHASE A	356 S.Y.
PHASE B	304 S.Y.
PHASE C	513 S.Y.
PHASE D	438 S.Y.
TOTAL	1611 S.Y.
FOUNDATION CONDITIONING MATERIAL, BOX CULVERT	
PHASE A	199 TONS
PHASE B	161 TONS
PHASE C	310 TONS
PHASE D	251 TONS
TOTAL	921 TONS

HYDRAULIC DATA

DESIGN DISCHARGE	=	1600 CFS
FREQUENCY OF DESIGN FLOOD	=	50 YR
DESIGN HIGH WATER ELEVATION	=	774.3
DRAINAGE AREA	=	1.0 SQ. MI.
BASIC DISCHARGE (Q100)	=	1800 CFS
BASIC HIGH WATER ELEVATION	=	775.0

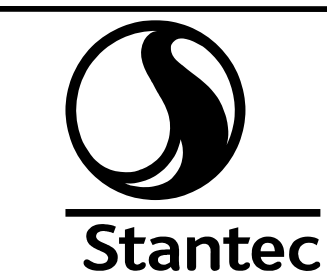
OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	=	N/A
FREQUENCY OF OVERTOPPING FLOOD	=	>500+ YR
OVERTOPPING FLOOD ELEVATION	=	785.7

ROADWAY DATA

GRADE POINT ELEV. @ STATION 36+00.33 -L-	=	783.32
BED ELEV. @ STATION	=	764.20
ROADWAY SLOPES	=	2:1

DRAWN BY: J. B. GEILE DATE: 08/01/19
 CHECKED BY: M. B. ISENHOUR DATE: 02/06/20
 DESIGN ENGINEER OF RECORD: M. B. ISENHOUR DATE: 05/04/23



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PROJECT NO. R-3833C
 IREDELL COUNTY
 STATION: 36+00.33 -L-

REPLACES BRIDGE NO. 480045

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DOUBLE 12 FT. X 9 FT. CONCRETE BOX CULVERT
 65° 00'00" SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-01
1			3			TOTAL SHEETS 16
2			4			