

HYDRAULIC DATA

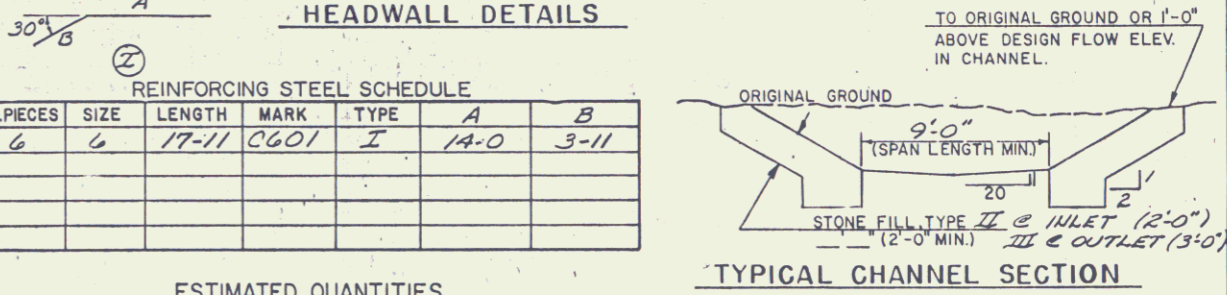
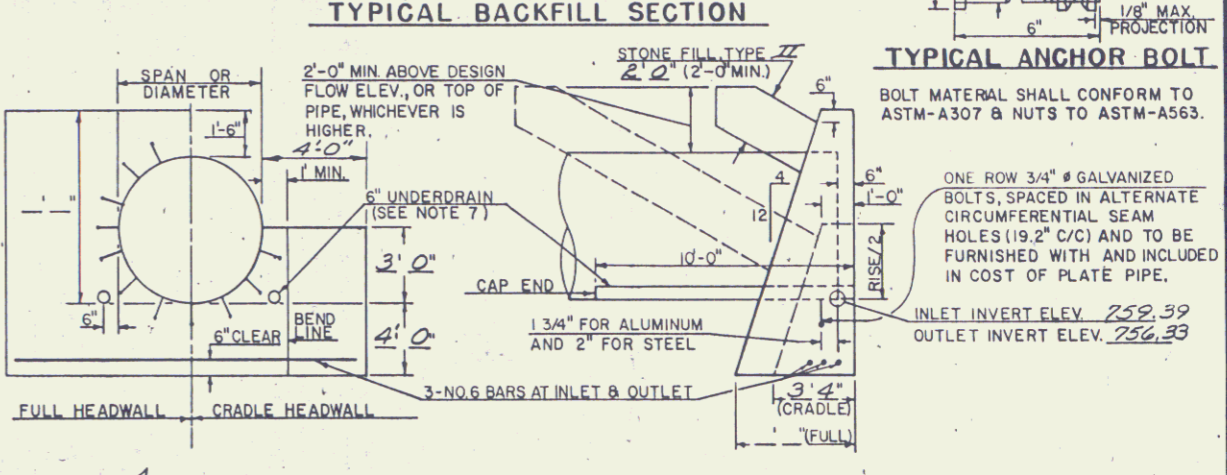
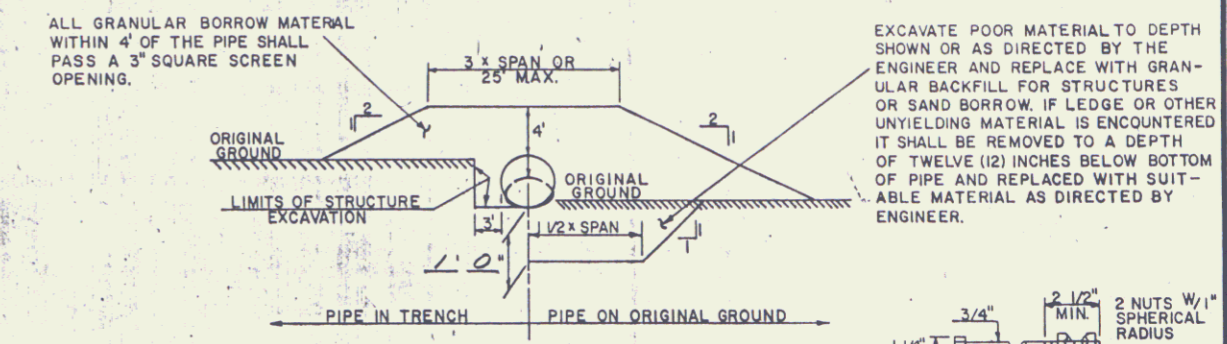
DRAINAGE AREA = 7.41 SQ. MI.	DESIGN FLOW Q = 50
Q ₁₀ = 200 C.F.S.	Q ₁₀ HEADWATER ELEVATION = 764.1
Q ₂₅ = 250 C.F.S.	Q ₂₅ HEADWATER ELEVATION = 764.9
Q ₅₀ = 310 C.F.S.	Q ₅₀ HEADWATER ELEVATION = 765.8
Q ₁₀₀ = 350 C.F.S.	Q ₁₀₀ HEADWATER ELEVATION = 766.8
TAILWATER DEPTH AT Q ₅₀ = 2.5 FEET, ELEVATION	
OUTLET VELOCITY AT Q ₅₀ = 12.3 FEET PER SECOND	
ORDINARY HIGHWATER DEPTH = FEET	

COMMENTS: STONE FILL TYPE II @ INLET, TYPE III @ OUTLET CHAN.

DETAILS OF STRUCTURAL PLATE PIPE CULVERTS

	STEEL	STEEL	ALUMINUM
CORRUGATIONS	6" x 2"		
SIZE OF PIPE OR PIPE ARCH	8'-7" x 5'-11"		
WATERWAY AREA (S.F.)	40		
PLATE THICKNESS (COATED)	0.109		
BOLT SIZE	3/4"		
WEIGHT PER LINEAR FOOT	141 #		
TOTAL WEIGHT	14490 #		

- NOTES**
- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1986, AND THE LATEST A.A.S.H.T.O. STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES. DESIGN IS FOR HS-20 LIVE LOADING.
 - UNLESS OTHERWISE INDICATED FOUR (4) BOLTS PER LINEAR FOOT FOR STEEL PLATES AND FIVE AND ONE THIRD (5 1/3) BOLTS FOR ALUMINUM PLATES ARE REQUIRED ALONG THE LONGITUDINAL SEAMS. ALL CONNECTIONS FOR STRUCTURAL PLATE SECTIONS SHALL BE MADE WITH GALVANIZED ASTM A-449 BOLTS.
 - WHEN NORMAL CONSTRUCTION OR REGULAR ROADWAY TRAFFIC IS MAINTAINED OVER THE PIPE THE CONTRACTOR SHALL MAINTAIN A MINIMUM COVER OF 3 FEET OF COMPACTED MATERIAL.
 - ALUMINUM PIPE THAT IS TO BE IN CONTACT WITH CONCRETE SHALL HAVE CONTACT SURFACES THOROUGHLY COATED WITH ZINC CHROMATE, OR BITUMINOUS OR ASPHALTIC PAINT.
 - PIPES SHALL BE FACTORY ELONGATED 5% (PIPE ARCHES SHALL NOT BE ELONGATED).
 - THE ENDS OF THE PIPE SHALL BE CUT SQUARE (NOT BEVELED TO MATCH SLOPES).
 - AT THE OUTLET END INCLUDE A 10 FOOT PIECE OF 6" UNDERDRAIN EACH SIDE ON SAME GRADIENT AS CULVERT CONFORMING TO SECTION 711.01. COST TO BE INCLUDED IN UNIT PRICE BID FOR THE CULVERT PIPE.



ESTIMATED QUANTITIES

NO.	ITEM	UNIT	TOTAL	FINAL
203.27	UNCLASS. GRANULAR EXCAV.	CY	390	
203.32	GRANULAR BORROW	CY	220	
204.25	STRUCTURE EXCAVATION	CY	400	
204.30	GRAVEL BACKFILL FOR STRUCT.	CY	100	
501.24	CONCRETE CL. B	CY	18	
502.19	PRIMEGRADING STEEL	LB	160	
511.6	CORR. GRAY METAL PLATE	EA	1	
512.12	PIPE ARCH (Q102) W/ 14490 #	EA	1	
522.15	REMOVAL OF STRUCTURE	EA	1	
613.11	STONE FILL TYPE III	CY	140	
613.12	STONE FILL TYPE III	CY	230	

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TOWN OF TROY Bridge No. _____
 Log Sta. _____
 HIGHWAY NO. RTE 101 Surv. Sta. 237+48
 RTE 101 OVER BUGBEE BROOK

8'-7" x 5'-11" PLATE PIPE DETAILS
 Designed by M. GAECIA Drawn by M. GAECIA
 Checked by G. S. BAKUM Bridge Design Supervisor
 date 4/87 F. Y. Bolkum date 4/87
 PROJECT TROY PROJECT NO. 25 031(1)
 Bridge Sheet No. 5 of 50

MAY 19 1987 REV. 12/11/85