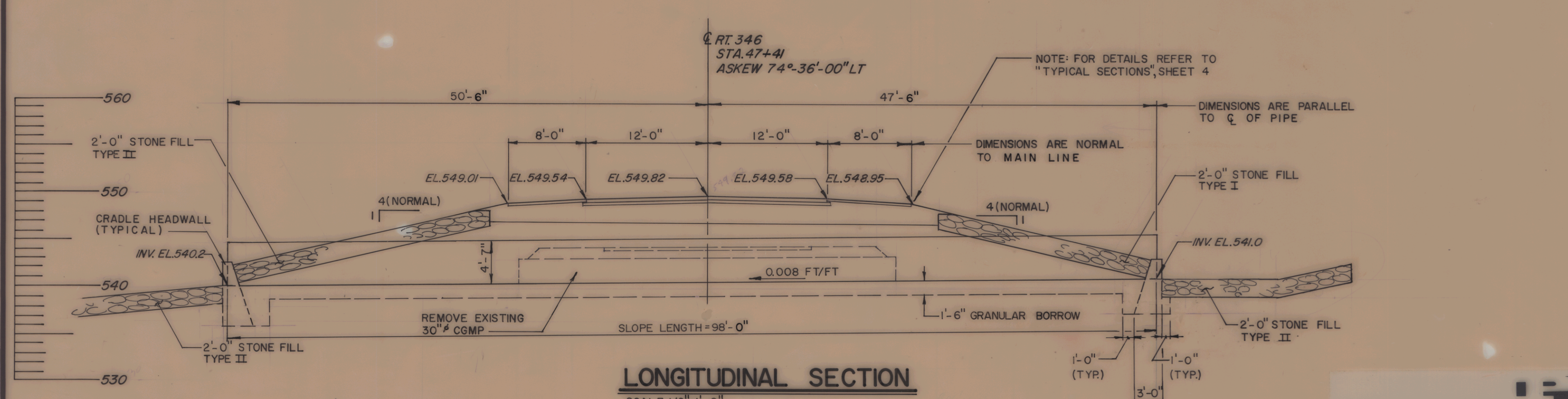


BORING No.	STATION	OFFSET	GROUND ELEV.
B-4	47+19	18' RT	545.0 ±
B-5	47+34	18' LT	545.0 ±

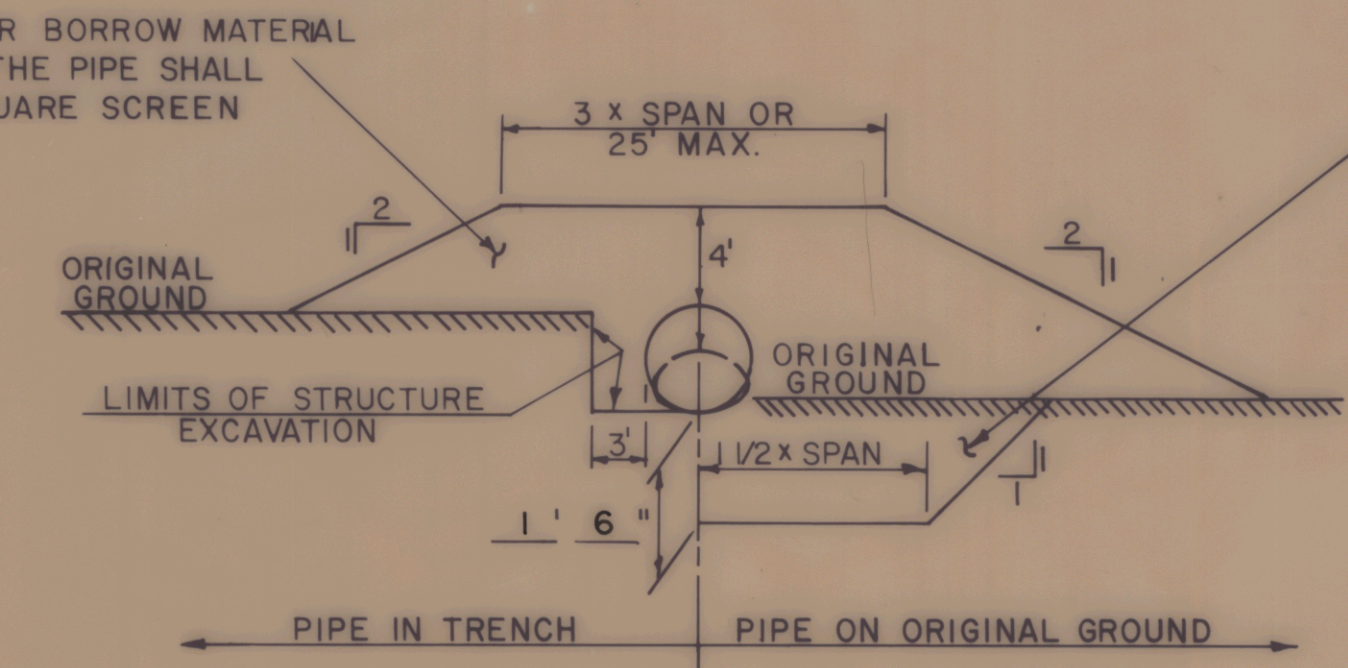
FOR BORINGS SEE SHEET 134

PLAN
SCALE: 1/8" = 1'-0"

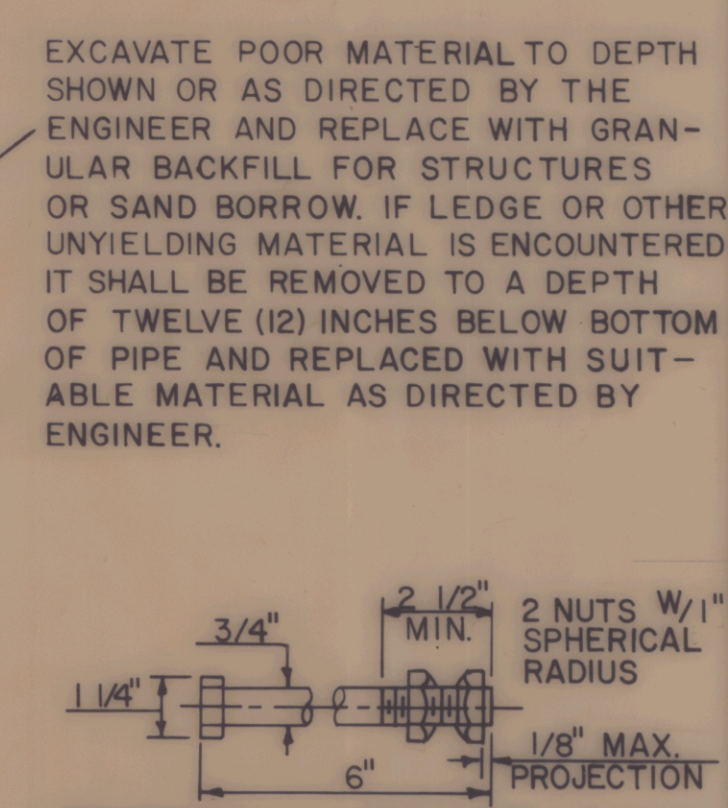


LONGITUDINAL SECTION
SCALE: 1/8" = 1'-0"

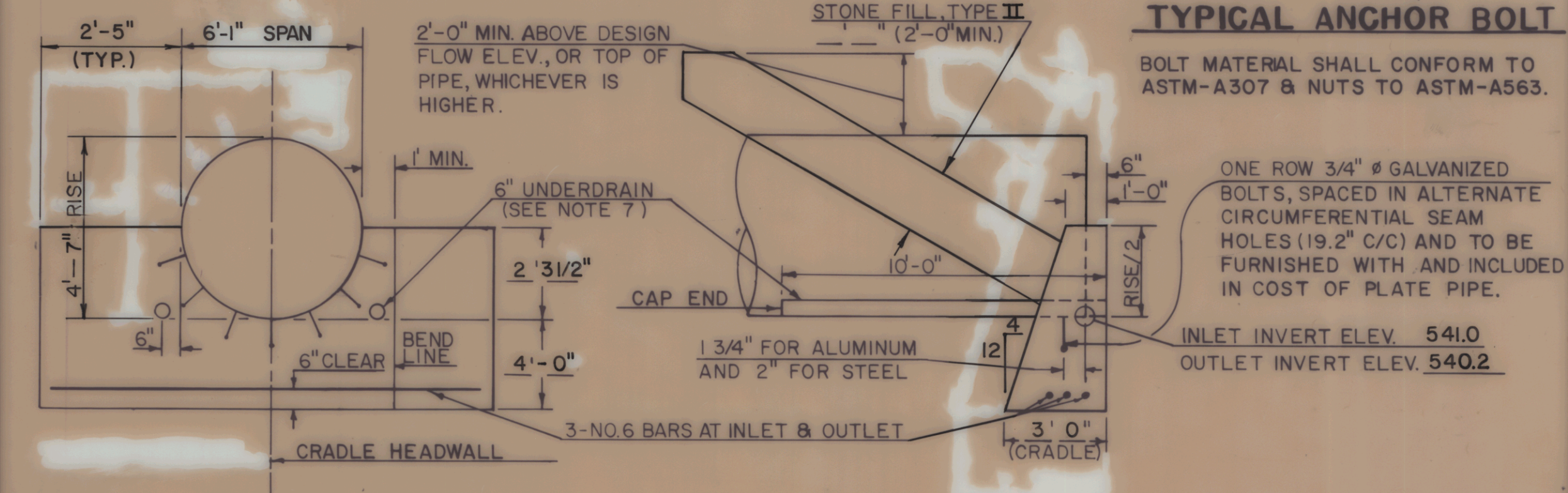
- ### NOTES
- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1986, AND THE LATEST A.A.S.H.T.O. STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES. DESIGN IS FOR HS-25 LIVE LOADING.
 - UNLESS OTHERWISE INDICATED FOUR (4) BOLTS 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 711.07. COST TO BE INCLUDED IN UNIT PRICE BID FOR THE CULVERT PIPE.



TYPICAL BACKFILL SECTION



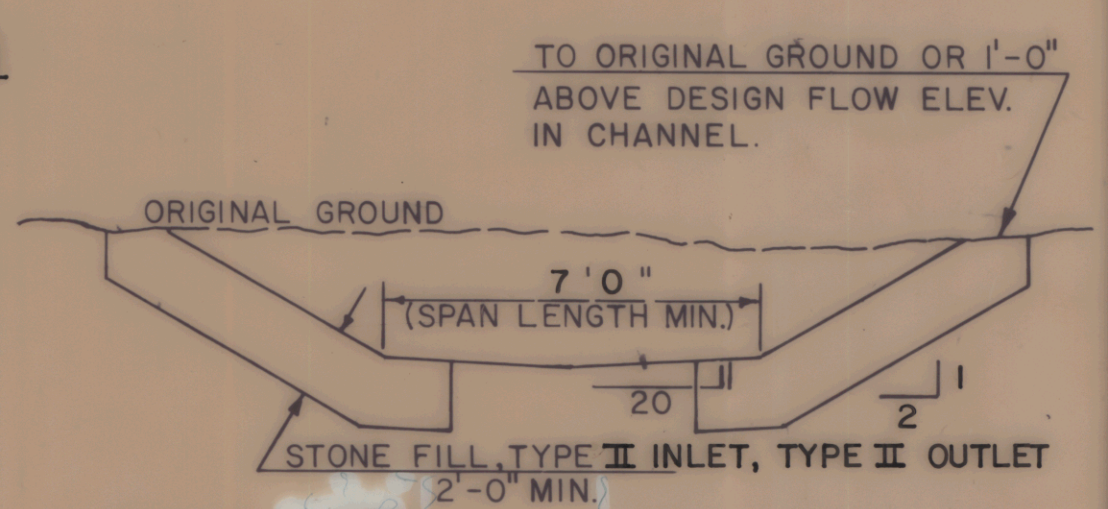
TYPICAL ANCHOR BOLT



CRADLE HEADWALL DETAILS

REINFORCING STEEL SCHEDULE

NO.	PIECES	SIZE	LENGTH	MARK	TYPE
203.27	6	6	15'-0"	HW601	STR CUT TO FIT IN THE FIELD



TYPICAL CHANNEL SECTION

ESTIMATED QUANTITIES

NO.	ITEM	UNIT	TOTAL	FINAL
203.27	UNCLASSIFIED CHANNEL EXCAV.	CY	136	
203.32	GRANULAR BORROW *	CY	194	
204.25	STRUCTURE EXCAVATION	CY	144	
204.30	GRANULAR BACKFILL for STRUCTURE	CY	63	
501.25	CONCRETE CLASS "B"	CY	10	
507.15	REINFORCING STEEL	LBS	136	

HYDRAULIC DATA

DRAINAGE AREA = 0.36 SQ. MI. DESIGN FLOW Q 50

Q ₁₀ = 98 C.F.S.	Q ₁₀ HEADWATER ELEVATION = 544.80
Q ₂₅ = 123 C.F.S.	Q ₂₅ HEADWATER ELEVATION = 545.44
Q ₅₀ = 142 C.F.S.	Q ₅₀ HEADWATER ELEVATION = 545.92
Q ₁₀₀ = 160 C.F.S.	Q ₁₀₀ HEADWATER ELEVATION = 546.46
TAILWATER DEPTH AT Q 50 = 2.83 FEET, ELEVATION = 540.89	
OUTLET VELOCITY AT Q 50 = 9.41 FEET PER SECOND	
ORDINARY HIGHWATER DEPTH = FEET	

COMMENTS:

DETAILS OF STRUCTURAL PLATE PIPE CULVERTS

	STEEL	STEEL	ALUMINUM
CORRUGATIONS		3" x 1"	
SIZE OF PIPE OR PIPE ARCH		73" x 55" PCCSPA	
WATERWAY AREA (S.F.)		22	
PLATE THICKNESS (COATED)		0.079"	
BOLT SIZE		N/A	
WEIGHT PER LINEAR FOOT		N/A	
TOTAL WEIGHT		N/A	
LENGTH		98 FT.	

601.3536	POLYMERIC COATED CORRUGATED STEEL PIPE ARCH (73"x55") (0.079", 9,259 LBS)	LF	98	
613.11	STONE FILL TYPE II	CY	139	

* INDICATES HIGHWAY QUANTITY

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TOWN OF **POWNA** Bridge No. 7A
 Log Sta. _____
 HIGHWAY NO. ROUTE 346 Surv. Sta. 47+41

73" x 55" STEEL PIPE ARCH
CULVERT DETAILS

Designed by G.F. Drawn by K.B.
 Checked by P.D.M. date 2-10-87 Bridge Design Supervisor date _____

PROJECT **POWNA** PROJECT NO. **RS0107 (7)**
 Bridge Sheet No. _____ Sheet 406 of 319
 REV. 12/11/85

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