

## GENERAL NOTES

Box Culvert End Sections shall be constructed according to the requirements for end sections of Section 540 of the Standard Specifications except as modified herein. End sections will be paid for at the contract unit price per each for Box Culvert End Sections of the culvert number specified.

All costs associated with excavation, backfill, and construction of Box Culvert End Sections shall be included in the contract unit price per each for Box Culvert End Sections of the culvert number specified.

Number of sections shown in Elevation is for example only. Length and number of precast sections required to construct Box Culvert End Sections shall be determined by the Contractor and indicated in the shop drawings. Joints between precast sections shall be produced with reinforced tongue and groove ends conforming to the requirements of ASTM C 1577.

1"  $\phi$  anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, Grade 105. Structural steel for the plate and restraint angle shall conform to the requirements of Article 1006.04 of the Standard Specifications. All components of the culvert the detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable.  $2l_4'' \times 2l_4'' \times 5l_6''$  plate washers shall be provided under each nut required for the anchor rods. All anchor rods in a culvert the assembly shall be snug tightened by a few impacts of an impact wrench or the full force of a worker using an ordinary spud wrench. Holes in the walls for the culvert the assembly may be drilled using core bits in lieu of using formed holes.

Alternate culvert ties similar in strength and stiffness to the plan details may be provided by the Contractor. Alternate culvert ties shall be subject to approval of the Engineer.

All costs associated with furnishing and installing the toewall and culvert ties will not be measured for payment but shall be included in the contract unit price for Box Culvert End Sections of the culvert number specified. Performance back designed of (5) shall be apply costed

Reinforcement bars designated (E) shall be epoxy coated. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr, 60.

Drain holes shall conform to the requirements of Article 503.11 of the Standard Specifications unless noted otherwise.

Shop drawings that detail slab thickness and reinforcement layout shall be submitted to the Engineer for review and approval. Unless noted otherwise, reinforcement shall be detailed with a 1" concrete cover and a clear distance at the end of the reinforcement not less than  $\frac{l}{2}$ " nor more than 2".

Unless noted otherwise, concrete shall be class PC and shall have a minimum compressive strength of 5,000 psi at 28 days.

The Contractor may not construct any portion of the end section in the field using cast-in-place (CIP) construction.

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R Slotted hole, typ.	2'4' typ.	-						
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Kevin J. Brehm, S.E.	<u>/b</u> -201	rchn	Reg. No.	OUIS, UCTUR 081-0	CI CI	-		
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ITEM			UNIT	1707	r <u>a</u> 7 7			
Box Culvert End Sections, Culvert No. 1		Each		2				
Traversable Pipe Grate			Foot	\$	97			
RT END	F.A SE RTE. SE		CTION		COUN	ŧΤΥ	TOTAL	SHEE NO.
		58R-1	WHITE		146	90		
CONTRACT NO. SHEETS ILLINDIS FED. AID PROJECT						NO,	64F19	
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