



\*Dimensions shall be increased by 3'-0" if the Contractor elects to use the precast option for the Box Culvert End Sections. See Special Provisions.

\*\*Area of reinforcement for the cast-in-place section of the box culvert shall be as required in AASHTO M 273 except A<sub>1</sub>, A<sub>2</sub>, and A<sub>3</sub> shall be increased to 0.62, 0.32, and 0.23. Spacing and laps of WWF shall be in accordance with AASHTO M 273 except as shown in Cast-In-Place Section of Box Culvert To Be Built In Field. If the Contractor elects to use reinforcement bars instead of WWF for cast-in-place section of box culvert, bars may consist of #3 thru #6 bars and the spacing shall not exceed the lesser of the wall thickness or 8".

**BILL OF MATERIAL (UPSTREAM END)**

For Information Only  
(One End Section)

Bar	No.	Size	Length	Shape
h	4	#6	10'-1"	—
h <sub>1</sub>	10	#4	2'-7"	⌒
h <sub>2</sub>	10	#4	2'-2"	⌒
s or s <sub>1</sub>	9	#4	3'-10"	U U
v	18	#5	6'-10"	—
d	8	#4	4'-4"	└
Item	Unit	Total		
Concrete Box Culverts	Cu. Yd.	13.0		
Reinforcement Bars	Pound	228.0		
Welded Wire Fabric	Sq. Ft.	1350.0		

**END SECTION DETAILS  
SINGLE 7'x5' PRECAST BOX CULVERT  
F.A.P. ROUTE 711 - SECTION 115CR  
VERMILION COUNTY  
STATION 272+92.00, S.N. 092-8087  
CULVERT NO. 2**