

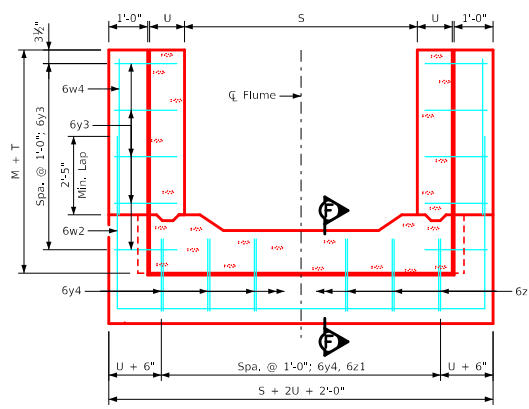
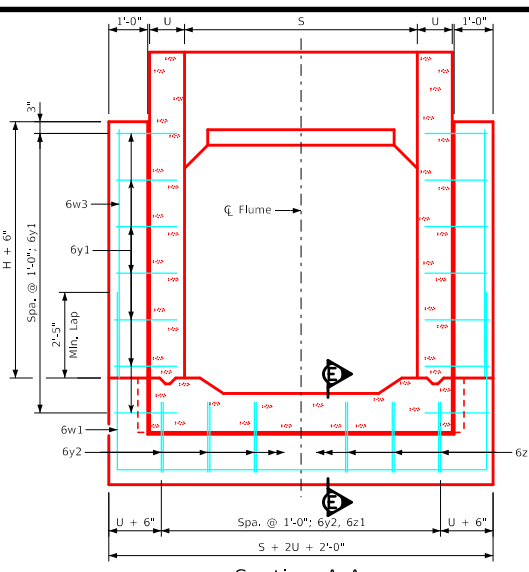
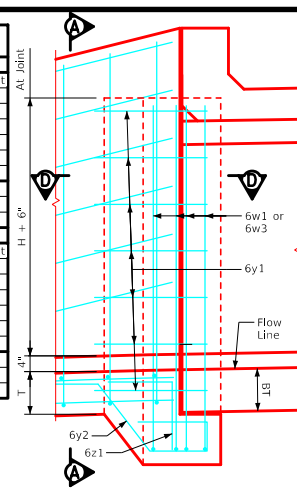
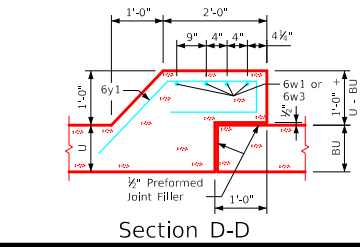
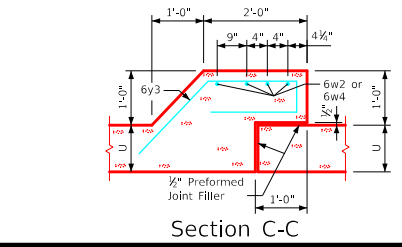
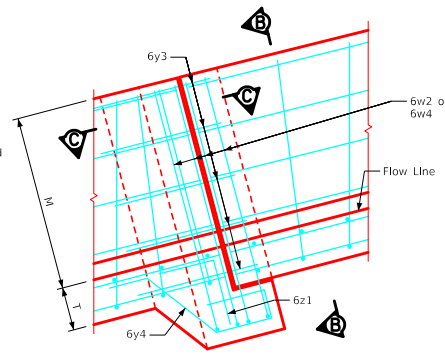
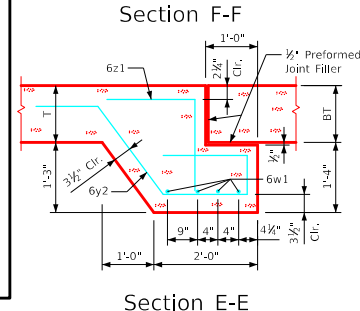
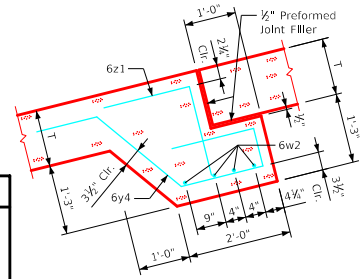
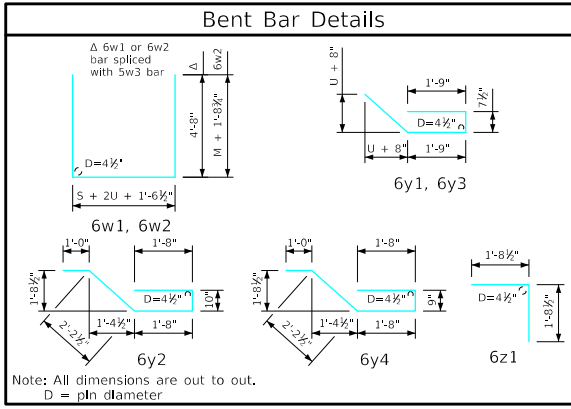
### Estimate of Quantities - Flume Bell Joints

Junction Bell Joint		8' x 4'			8' x 5'			8' x 6'			8' x 7'			8' x 8'			8' x 9'			8' x 10'			
Bar	Location	Shape	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight
6w1	Walls & Floor		4	20'-5"	123	4	20'-5"	123	4	20'-5"	123	4	20'-5"	123	4	20'-7"	124	4	20'-7"	124	4	20'-7"	124
6w3	Walls Vert.		8	4'-4"	52	8	5'-4"	64	8	6'-4"	76	8	7'-4"	88	8	8'-4"	100	8	9'-4"	112	8	10'-4"	124
6y1	Walls Horiz.		12	6'-2"	111	14	6'-2"	130	16	6'-2"	148	18	6'-2"	167	20	6'-3"	188	22	6'-3"	207	24	6'-3"	225
6y2	Floor Vert.		10	7'-5"	111	10	7'-5"	111	10	7'-5"	111	10	7'-5"	111	10	7'-5"	111	10	7'-5"	111	10	7'-5"	111
6z1	Floor Vert.		10	3'-5"	51	10	3'-5"	51	10	3'-5"	51	10	3'-5"	51	10	3'-5"	51	10	3'-5"	51	10	3'-5"	51
Total Weight (LB)			448			479			509			540			574			605			635		
Concrete (CY)		Footings	1.6			1.6			1.6			1.6			1.6			1.6			1.6		
		Walls	0.8			1.0			1.2			1.4			1.6			1.8			1.9		
		Total	2.4			2.6			2.8			3.0			3.2			3.4			3.5		
Chute Bell Joint		8' x 4'			8' x 5'			8' x 6'			8' x 7'			8' x 8'			8' x 9'			8' x 10'			
Bar	Location	Shape	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight
6w2	Walls & Floor		4	20'-6"	123	4	22'-0"	132	4	20'-5"	123	4	20'-5"	123	4	20'-7"	124	4	20'-7"	124	4	20'-7"	124
6w4	Walls Vert.		-	...	-	-	...	-	8	4'-0"	48	8	4'-9"	57	8	5'-6"	66	8	6'-3"	75	8	7'-0"	84
6y3	Walls Horiz.		8	6'-2"	74	10	6'-2"	93	12	6'-2"	111	12	6'-2"	111	14	6'-3"	131	16	6'-3"	150	18	6'-3"	169
6y4	Floor Vert.		10	7'-4"	110	10	7'-4"	110	10	7'-4"	110	10	7'-4"	110	10	7'-4"	110	10	7'-4"	110	10	7'-4"	110
6z1	Floor Vert.		10	3'-5"	51	10	3'-5"	51	10	3'-5"	51	10	3'-5"	51	10	3'-5"	51	10	3'-5"	51	10	3'-5"	51
Total Weight (LB)			358			386			443			452			482			510			538		
Concrete (CY)		Footings	1.5			1.5			1.5			1.5			1.6			1.6			1.6		
		Walls	0.5			0.6			0.8			0.9			1.0			1.2			1.3		
		Total	2.0			2.1			2.3			2.4			2.6			2.8			2.9		

#### Barrel & Chute Dimensions

S x H	M	T	U	BT	BU
8' x 4'	3'-0"	1'-0"	9"	11"	9"
8' x 5'	3'-9"	1'-0"	9"	11"	9"
8' x 6'	4'-6"	1'-0"	9"	11"	9"
8' x 7'	5'-3"	1'-0"	9"	11"	9"
8' x 8'	6'-0"	1'-0"	10"	11"	9"
8' x 9'	6'-9"	1'-0"	10"	11"	9"
8' x 10'	7'-6"	1'-0"	10"	11"	9"

S = Culvert Span  
H = Culvert Height



- Notes:**
- Dimensions and quantities shown based on "U" flume walls, "BU" barrel walls, "M" flume floor and "BT" barrel floor thicknesses.
  - Change lengths of bars 6w1 and adjust reinforcing steel and concrete quantities accordingly for wall and floor thicknesses other than shown.
  - Floor bars m1 are to be shortened 6" at bell joints.
  - See Sheet RCF 01-20 for general information.

LATEST REVISION DATE		<b>IOWADOT</b> Highway Division	
	APPROVED BY BRIDGE ENGINEER	Standard Design Single Reinforced Concrete Box Culverts December, 2020	
	Flume Bell Joint Details 8'-0" Span		FBJ 03-20

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