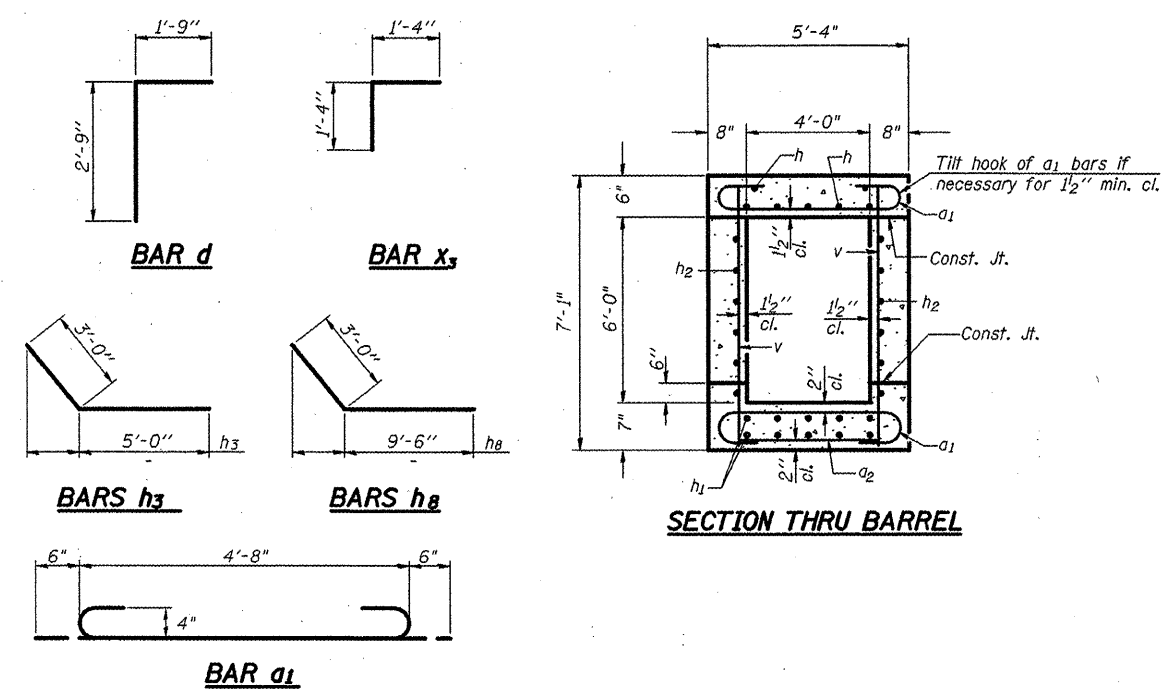


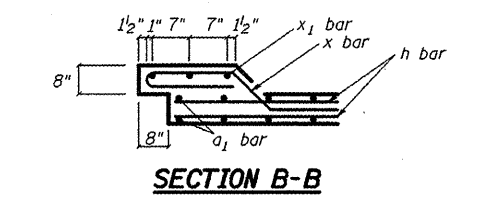
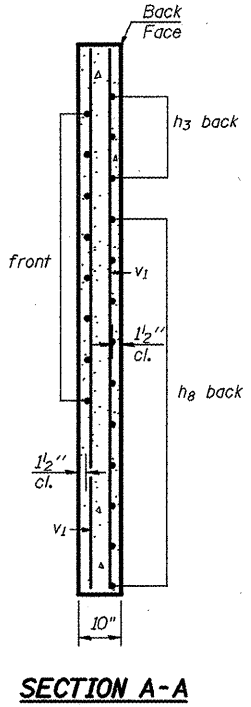
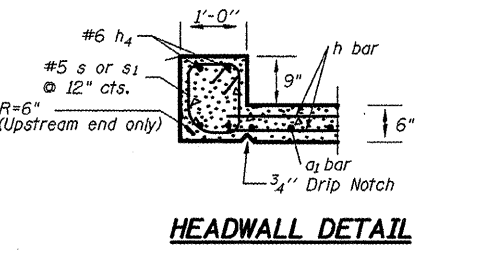
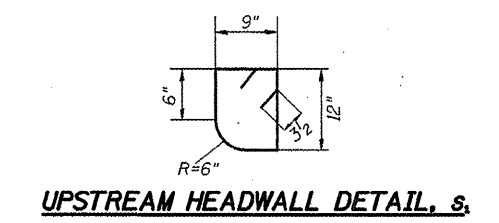
The design of the 4 x 6 precast box shall be as required for a 6 x 6 precast box. M259, Table 1 for 3 feet of fill except M shall be 48 in.

NOTES

A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.
 Reinforcement Bars shall conform to the requirements of ASTM A 706 Grade 60. See Special Provisions.
 Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.
 All construction joints shall be bonded.



DOWNSTREAM HEADWALL DETAIL, S



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1	36	#4	5'-8"	U
a2	10	#4	4'-8"	—
d	10	#4	4'-6"	L
h	14	#5	5'-8"	—
h1	20	#4	5'-8"	—
h2	24	#5	5'-8"	—
h3	44	#6	8'-0"	—
h4	4	#6	4'-8"	—
h8	40	#6	12'-6"	—
v	40	#4	6'-9"	—
v1	16	#4	9'-11"	—
s	6	#5	4'-5"	G
s1	6	#5	4'-5"	G
x	64	#4	5'-3"	—
x1	12	#4	6'-4"	—
x2	12	#4	8'-1"	—
x3	24	#4	2'-8"	—
Concrete Box Culverts	Cu. Yd.	21.9		
Reinforcement Bars	Pound	2529		
Precast Box 4x6*	Feet	60.0		
Temp. Soil Retention	Sq. Ft.	330.0		
Geotech Fabric	Sq. Ft.	104.0		
Rock Fill	Ton	315.7		
Trench Backfill	Cu. Yd.	366.0		
R&D Unsuitable	Cu. Yd.	154.0		
Filter Fabric	Sq. Yd.	259.2		

DESIGN STRESSES

fy = 60,000 psi
 f'c = 3,500 psi

*Design Fill Height of 3.0 ft. with AASHTO Designation of M259 on Precast Box Culvert

LOADING HS 20-44 & ALT.

SSB-H-0

10-22-04

FILE NAME = miscellaneous_sheets.dgn	USER NAME = horstkj	DESIGNED - KJH	REVISED -
		DRAWN - JGJ	REVISED -
		CHECKED - BJT	REVISED -
		DATE - 01-05-10	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

BOX CULVERT DETAIL STA 828 + 50

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	16W-2,RS-4,17W-1,RS-3	FULTON	240	105
			CONTRACT NO. 88703	
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			