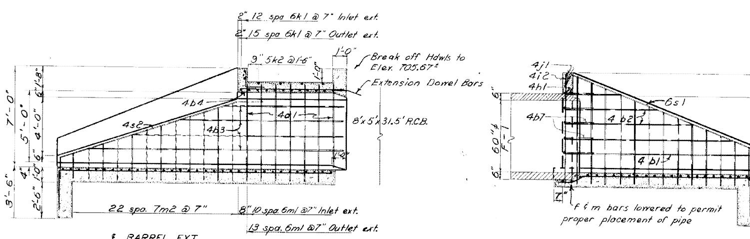
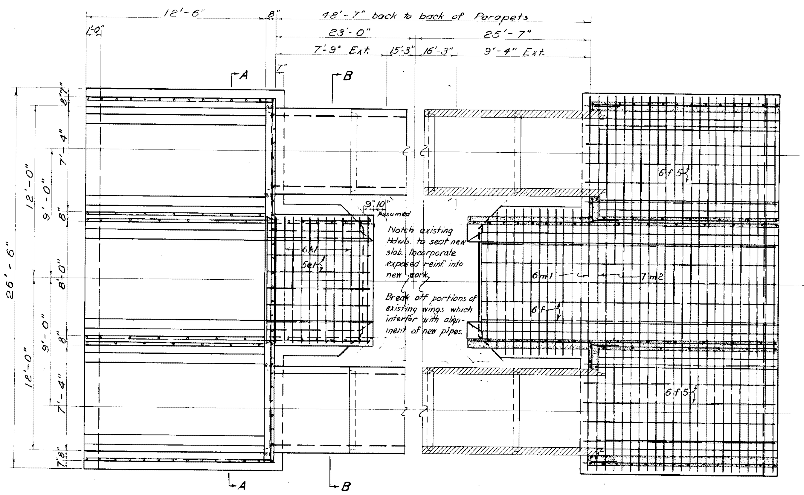
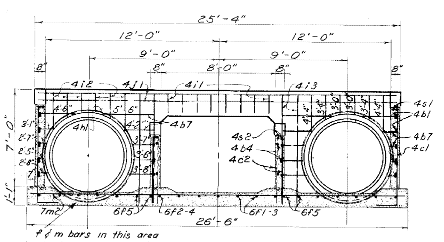


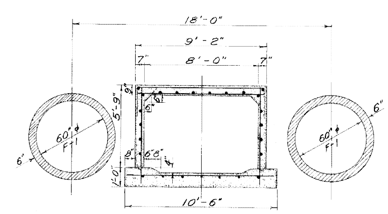
LONGITUDINAL SECTION



PLAN VIEW
SCALE 1/4" = 1'-0"



SECTION A - A



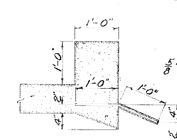
SECTION B - B

BAR	LOCATION	SHAPE	No.	LENGTH	LINEAR FEET 4	5	6	7
	~~ESTIMATED~~ QUANTITIES OF REINFORCING							
4a1	Walls Vert.		32	28 @ 6'-10" 4 @ 5'-9"	214.3			
4b1	Wings Outside Horiz.		4	12'-10"	51.3			
4b2	Wings Outside Horiz.		16	4'-3" • 11'-10"	128.7			
4b3	Ctr. Wngs. & Bbl. Walls Horiz. Inlet		8	8'-6" • 17'-10"	105.3			
4b4	Ctr. Wngs. & Bbl. Walls Horiz. Inlet		2	7'-3"	14.5			
4b5	Ctr. Wngs. & Bbl. Walls Horiz. Outlet		8	10'-1" • 19'-5"	118.0			
4b6	Ctr. Wngs. & Bbl. Walls Horiz. Outlet		2	8'-10"	17.7			
4b7	Hdwl. Face Horiz.		40	Shown	71.3			
4c1	Wings Vert. Outside		52	4'-0" • 8'-8"	329.3			
4c2	Wings Vert. Center		48	2'-2" • 5'-5"	182.0			
4c3	Wings Vert. Center Front		8	1'-10"	14.7			
5e1	Slab Long.		12	6 @ 7'-3" 6 @ 8'-10"		93.5		
4e2	Slab Long. Top		4	2 @ 7'-3" 2 @ 8'-10"	32.2			
6f1	Floor Long. Inlet		5	22'-4"			111.7	
6f2	Floor Long. Inlet		2	21'-2"			42.3	
6f3	Floor Long. Outlet		5	23'-11"			119.6	
6f4	Floor Long Outlet		2	22'-9"			45.5	
6f5	Floor Long.		28	16'-1"			450.3	
4h1	Hoops Around Pipe Ends		8	20'-9"	166.0			
4i1	Ppt. Vert.		16	1'-9"	28.0			
4i2	Ppt. Vert. & Hdwl. Face		24	Shown	42.7			
4i3	Ppt. Vert. & Hdwl. Face		8	7'-8"	61.3			
4j1	Ppt. Trans.		4	25'-0"	100.0			
6k1	Slab Trans. Bot.		29	8'-10"			256.2	
5k2	Slab Trans. Top		9	14'-6"		130.5		
6m1	Bbl. Floor Trans.		25	2 @ 26'-2" 23 @ 10'-2"			285.2	
7m2	Hdwl. Floor Trans.		44	26'-2"				1151.3
4s1	Wing Slope Outside		8	14'-4"	114.7			
4s2	Wing Slope Center		8	13'-11"	111.3			
				TOTAL LENGTH	1903.3	227.0	1310.8	1151.3
				WEIGHT	1271.4	236.8	1968.8	2353.2
				TOTAL WEIGHT	5830.2 LBS.			

~~ESTIMATED~~ QUANTITIES OF CONCRETE			
LOCATION	ABOVE KEYWAY	BELOW KEYWAY	TOTAL
2 HEADWALL	12.14 C.Y.	32.33 C.Y.	44.48 C.Y.
2 Beams 1'x1'x9'-2" BARREL EXT.	.67 7.39	6.12	14.20 C.Y.
TOTAL	20.22 C.Y.	38.46 C.Y.	58.68 C.Y.

For details and General Notes not shown, refer to Iowa State Highway Commission Standard, C-8-P with 2 feet of fill.

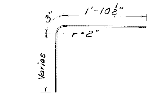
TOTAL ~~ESTIMATED~~ QUANTITIES		
CONCRETE	58.7	C.Y.
REINFORCING	5830	LBS.
60"φ F-1 PIPE	100	L.FT.
EXCAVATION CLASS 20	284	C.Y.



5/8"φ x 2'-0" dowels @ 1'-6"
6 dowels needed = 12.5 lbs
Cost to be included in price bid for concrete.

EXTENSION DOWEL BARS

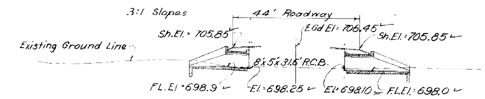
Installation of dowels
1. Drill holes twice the diameter of bar to indicated depth.
2. Fill holes with water and let stand long enough to thoroughly saturate concrete. (four hours)
3. Blow out all free water.
4. Fill holes about 2/3 full of mortar.
5. Insert dowels by driving, if necessary, and manipulate or tap with hammer to secure complete embedement.
6. Add more mortar if necessary to fill hole. Mortar mix shall consist of equal parts of cement and sand with just enough water to make workable mix.

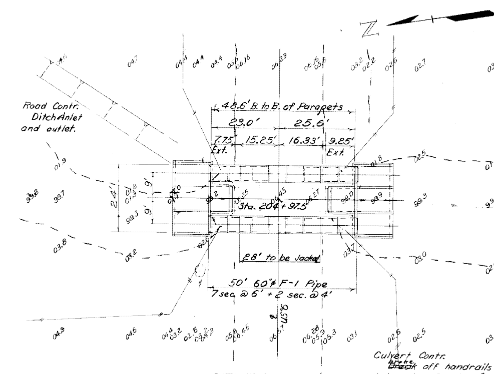


4b7

General Note:
Design stresses for the following materials are in accordance with AASHO Standard Specifications for Highway Bridges. Series of 1957
Reinforcing Steel in accordance with Section 1.4.12, "Reinforcement" for Intermediate, Hard or Rail Steel Grade.
Concrete in accordance with Section 1.4.11 $F_c' = 3500$ psi.

BENCH MARK No. 20AA ~~Sta. 204+97.8, "x" on outlet Handrail 8'x5'x31.6' R.C. Box, 17 Rt. Elev. 707.53~~ Sta. 204+97.5 I.H.C. plug in N. Hwl. 8x5 R.C.B. EL. 706.09





CONSTRUCTED ~~LOCATION~~
SECTION 27 T-80-N R-7-W
CLEARCREEK TOWNSHIP
JOHNSON COUNTY

SITUATION PLAN
SCALE 1" = 20.0'
D.A. 700 AC.
HILLY TO ROLLING
FILL 2 FT.

Culvert Contr.
~~Break~~ Broke off handrails to below elev. of 705.67±.
Jacked 2 pipes, 60"φ x 28'± F-1, under roadway.
Notch existing Hdwl. to seat new slab. Incorporate exposed reinf. into new work.
~~Break~~ Broke off portions of existing wings which interfer with alignment of new pipe.

DESIGN FOR

8' x 5' R.C. BOX CULVERT EXT.
FLANKED BY
2 - 60"φ F-1 PIPES
WITH
24' x 5' R.C. HEADWALL

STA. 204 + 97.5 PROJECT No. F - 289 (6)

JOHNSON COUNTY

Constructed as Shown

IOWA STATE HIGHWAY COMMISSION

FEBRUARY 1960 SCALES AS NOTED

DESIGN No. 2760 JOHNSON COUNTY FILE No. 20708