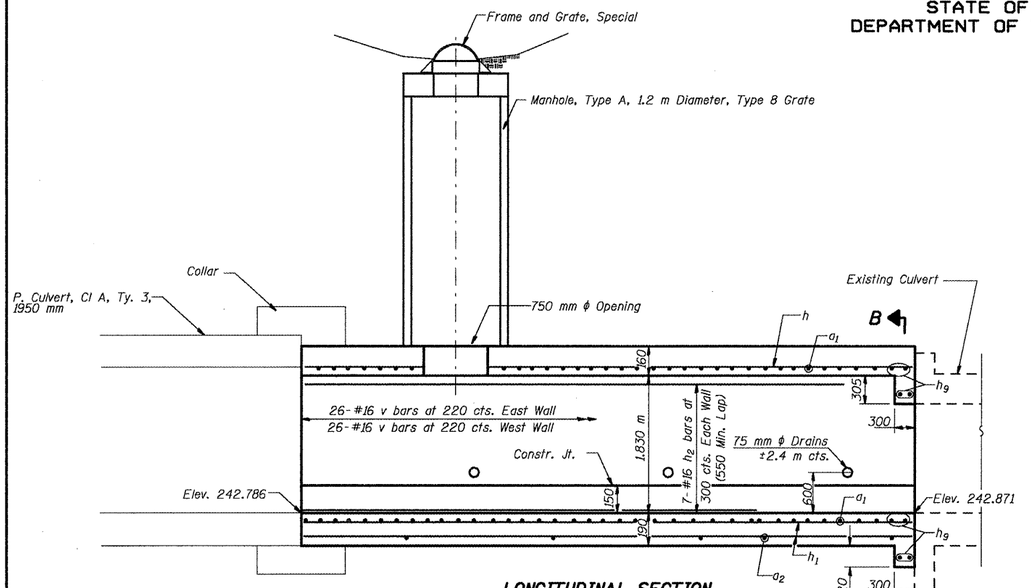
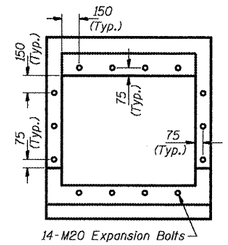
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 704	CDI	McLEAN	497	300A
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

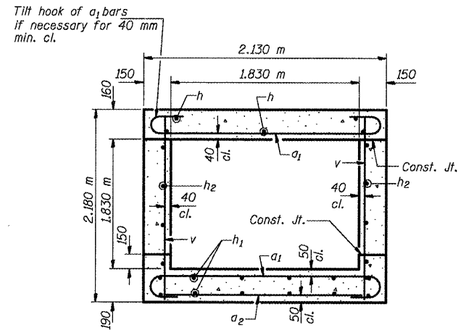


LONGITUDINAL SECTION

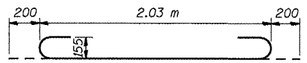


SECTION B-B

Expansion bolts shall be M20 hooked bolts. Hooked bolts shall extend a minimum of 230 mm into new concrete.



SECTION THRU BARREL



BAR a_1

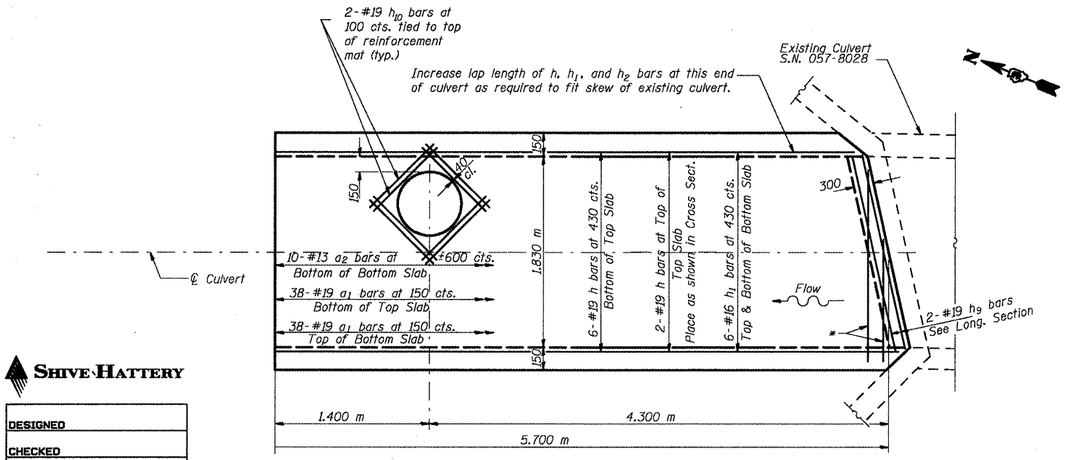
DESIGN STRESSES

f_y = 420 MPa
f'_c = 24 MPa

LOADING MS18 & ALT.

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
a_1	76	#19	2.43	
a_2	10	#13	1.91	
h	8	#19	5.62	
h_1	12	#16	5.62	
h_2	14	#16	5.62	
h_9	8	#19	1.89	
h_{10}	8	#19	1.09	
v	52	#16	2.08	
Concrete Box Culverts			m^3	7.6
Reinforcement Bars			kg	1151
M20 Expansion Bolts			each	14



PLAN

* a bars in skew portion of slab shall be ordered full length & cut to fit.

NOTES

Reinforcement Bars shall conform to the requirements of ASTM a706M Grade 420.

All dimensions are in millimeters (mm) except as noted.
All construction joints shall be bonded.

SHIVE-HATTERY

DESIGNED	
CHECKED	
DRAWN	
CHECKED	

CULVERT DETAILS
SPINGFIELD ROAD
STA. 0+972.395
22.220 m RT.
F.A.P. ROUTE 704 SECTION (1)I
McLEAN COUNTY