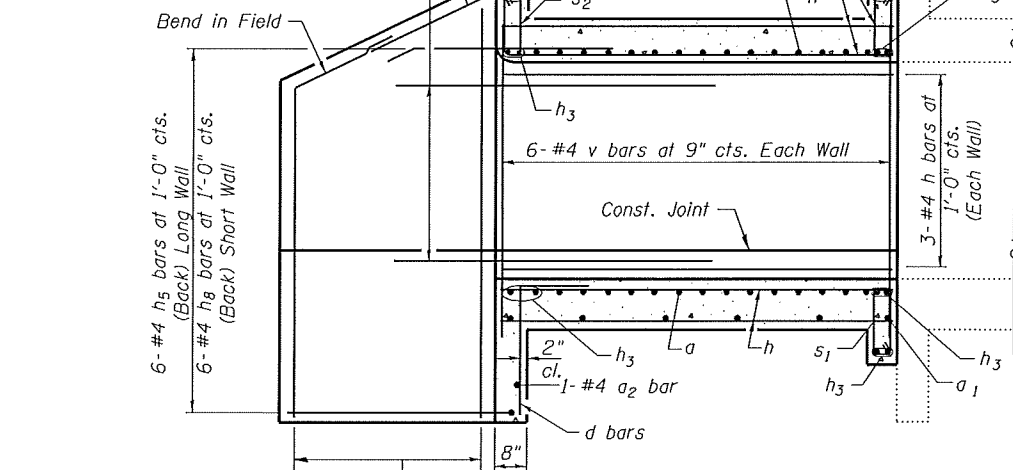


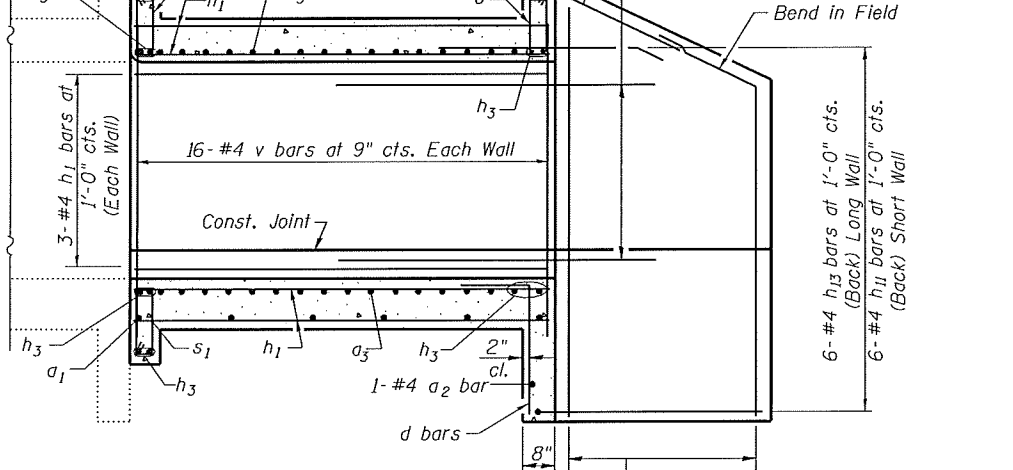
1 - #4 h₉ bar Each Face (Short Wall)
 1 - #4 h₆ bar Each Face (Long Wall)
 3 - #4 h₄ at 1'-0" cts. (Front) Long Wall
 3 - #4 h₇ at 1'-0" cts. (Front) Short Wall



5 - #4 v₁ at 1'-0" cts. (Short Wall)
 5 - #4 v₁ at 1'-0" cts. (Long Wall)

LEFT EXTENSION

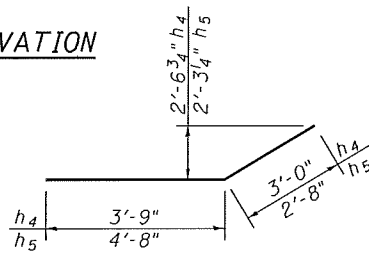
1 - #4 h₉ bar Each Face (Short Wall)
 1 - #4 h₆ bar Each Face (Long Wall)
 3 - #4 h₁₂ at 1'-0" cts. (Front) Long Wall
 3 - #4 h₁₀ at 1'-0" cts. (Front) Short Wall



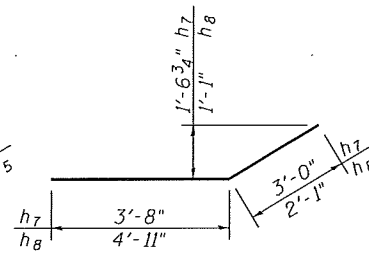
5 - #4 v₁ at 1'-0" cts. (Short Wall)
 5 - #4 v₁ at 1'-0" cts. (Long Wall)

RIGHT EXTENSION

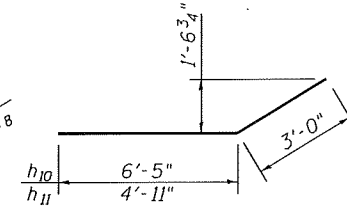
ELEVATION



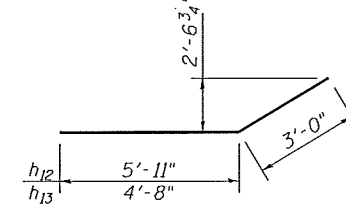
BARS h₄ & h₅



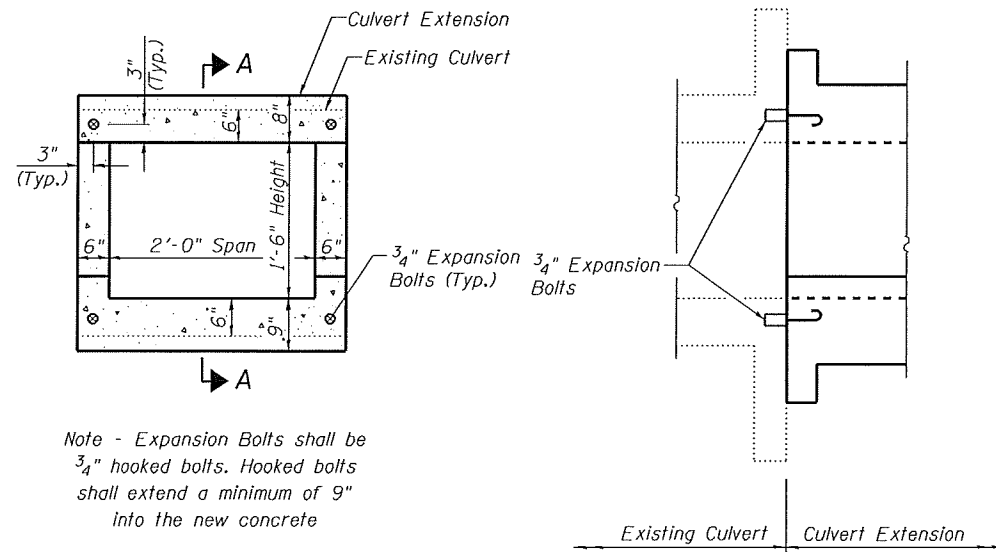
BARS h₇ & h₈



BARS h₁₀ & h₁₁



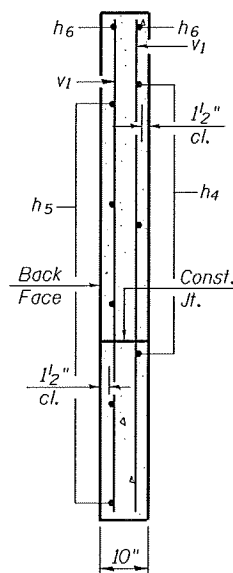
BARS h₁₂ & h₁₃



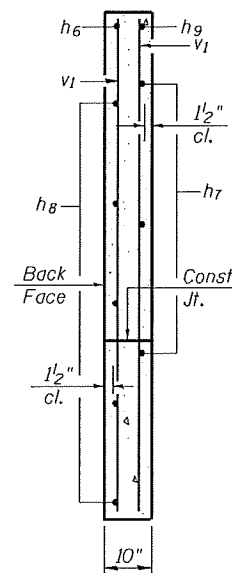
Note - Expansion Bolts shall be 3/4" hooked bolts. Hooked bolts shall extend a minimum of 9" into the new concrete

EXPANSION BOLT LAYOUT

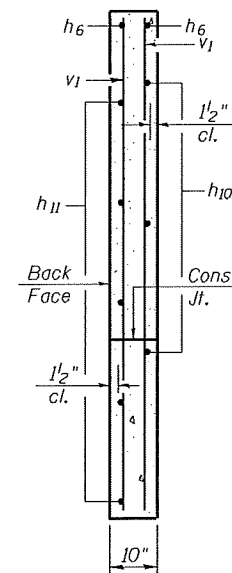
SECTION A-A



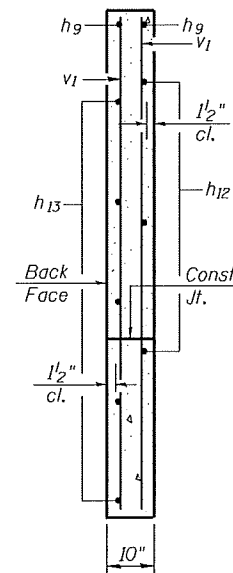
SECTION C-C



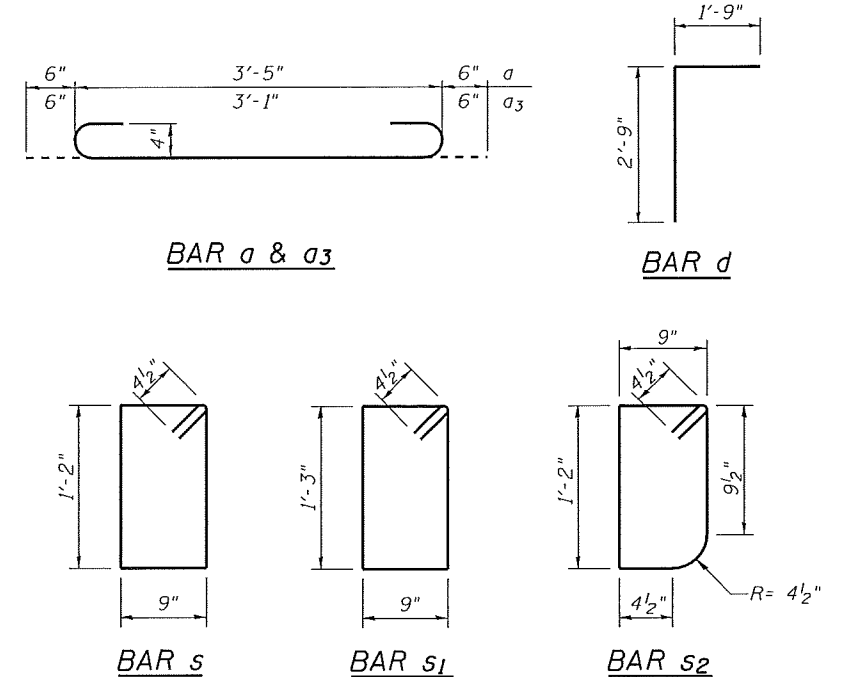
SECTION D-D



SECTION E-E



SECTION F-F



TOTAL BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	6	#4	4'-5"	[U-shape]
a ₁	3	#4	3'-5"	[U-shape]
a ₂	2	#4	3'-2"	[U-shape]
a ₃	24	#4	4'-1"	[U-shape]
a ₄	7	#4	3'-1"	[U-shape]
d	6	#4	4'-6"	[L-shape]
h	25	#4	3'-2"	[Straight]
h ₁	25	#4	10'-8"	[Straight]
h ₂	4	#6	2'-5"	[Straight]
h ₃	24	#6	3'-5"	[Straight]
h ₄	3	#4	6'-9"	[Straight]
h ₅	6	#4	7'-4"	[Straight]
h ₆	4	#4	3'-7"	[Straight]
h ₇	3	#4	6'-8"	[Straight]
h ₈	6	#4	7'-0"	[Straight]
h ₉	4	#4	3'-2"	[Straight]
h ₁₀	3	#4	9'-5"	[Straight]
h ₁₁	6	#4	7'-11"	[Straight]
h ₁₂	3	#4	8'-11"	[Straight]
h ₁₃	6	#4	7'-8"	[Straight]
s	12	#4	4'-7"	[Straight]
s ₁	8	#4	4'-9"	[Straight]
s ₂	4	#4	4'-5"	[Straight]
v	48	#4	2'-7"	[Straight]
v ₁	24	#4	5'-7"	[Straight]
Concrete Box Culverts		Cu. Yd.	6.2	
Reinforcement Bars		Pound	950	
Expansion Bolts 3/4"		Each	8	

FILE NAME = 321+53.05-76789-023.dgn



USER NAME =	DESIGNED - JD	REVISED -
Illinois Design Firm Number 184.001670	CHECKED - BB	REVISED -
PLOT SCALE =	DRAWN - EW	REVISED -
PLOT DATE = 4/17/05 PM 8/8/2014	CHECKED - CJF	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BOX CULVERT EXTENSION DETAILS
 STA 321 + 53.05

SHEET NO. 3 OF 3 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
752	101-2RS-1	JERSEY	438	236
CONTRACT NO. 76789			ILLINOIS FED. AID PROJECT	