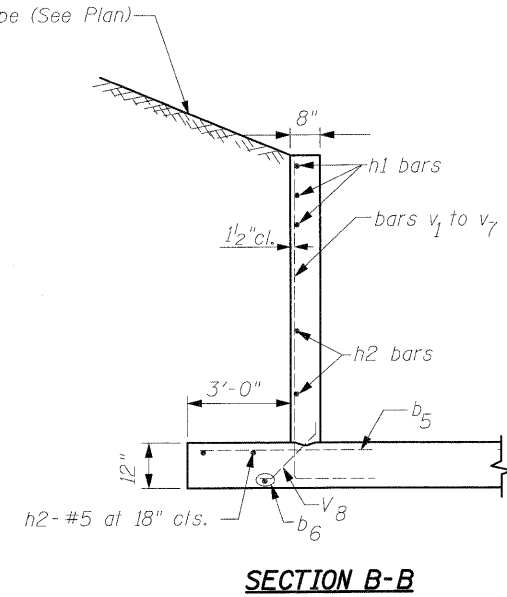
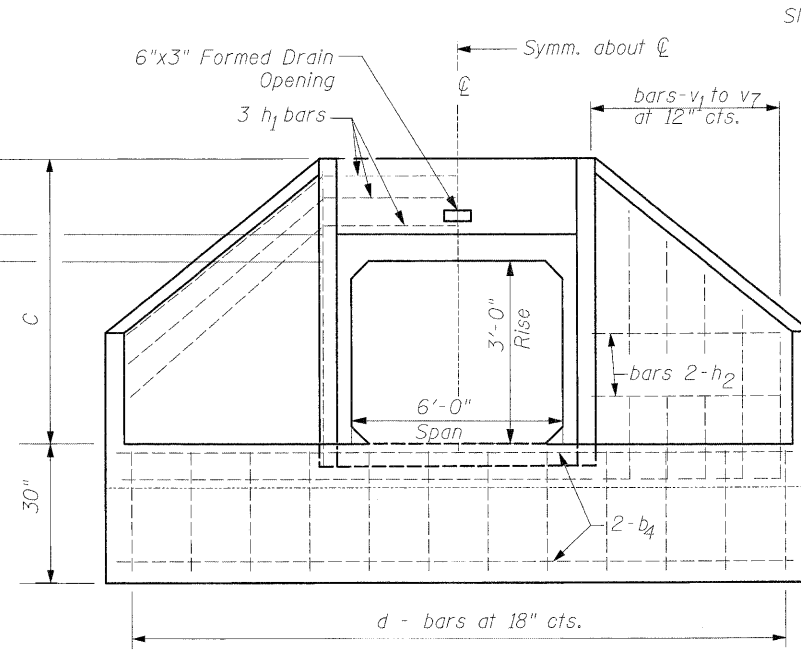
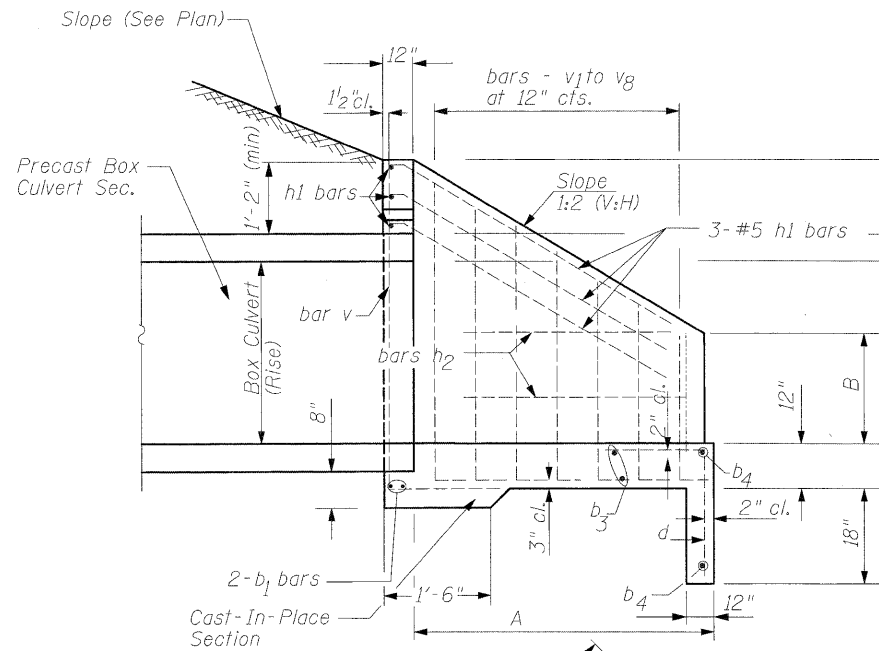


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**BARS IN ONE
END SECTION**

Bars	No.
d	12
b ₁	2
b ₂	1
b ₃	2
b ₄	2
b ₅	14
b ₆	2
h ₁	3
h ₂	4
v	2
v ₁	2
v ₂	2
v ₃	2
v ₄	2
v ₅	2
v ₆	2
v ₇	2
v ₈	14



SECTION B-B

SECTION A-A

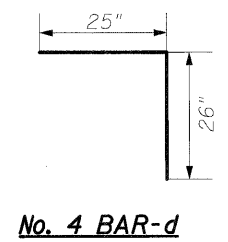
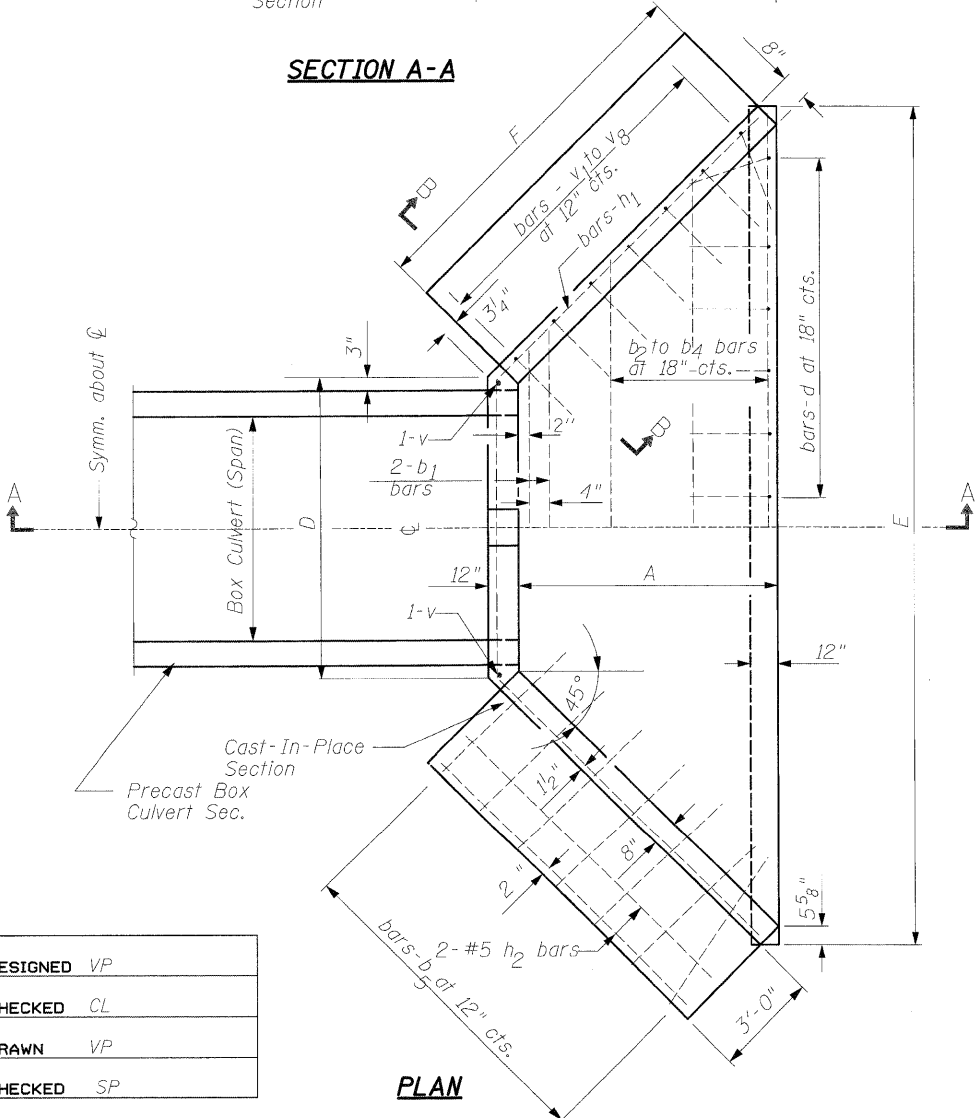
END ELEVATION

DIMENSIONS OF STRAIGHT BARS

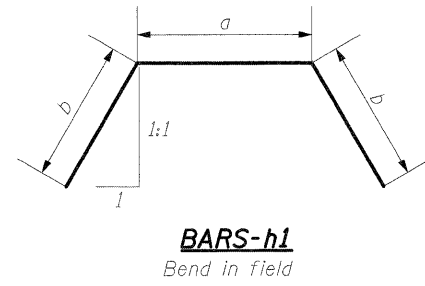
Bar	Size	Length
b ₁	No. 5	8'-0"
b ₂	No. 4	11'-0"
b ₃	No. 4	14'-0"
b ₄	No. 4	16'-8"
b ₅	No. 4	5'-0"
b ₆	No. 4	6'-3"
h ₂	No. 5	6'-6"

DIMENSIONS OF BENT BARS

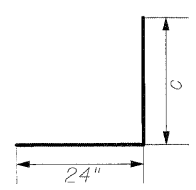
No. 5 - bars h ₁			
BARS	a'	b	Total Length
h ₁	7'-8"	6'-8"	21'-0"
No. 5 - bars v to v ₇			
BARS	c	Total Length	
v	5'-1"	7'-1"	
v ₁	5'-1"	7'-1"	
v ₂	4'-9"	6'-9"	
v ₃	4'-6"	6'-6"	
v ₄	4'-2"	6'-2"	
v ₅	3'-11"	5'-11"	
v ₆	3'-8"	5'-8"	
v ₇	3'-4"	5'-4"	



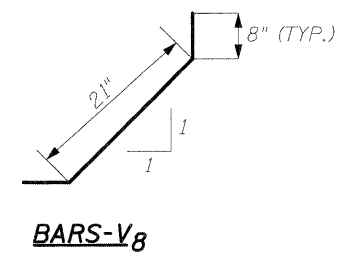
No. 4 BAR-d



BARS-h1
Bend in field



BARS - v to v₇



BARS-V8

DIMENSIONS AND QUANTITIES

Box Culvert Rise	Box Culvert Span	Slope of Wing Walls	Dimensions						Concrete for two (2) End Sections (Cu. Yd.)	Reinf. Bars for two (2) End Sections (Lbs.)
			A	B	C	D	E	F		
36"	72"	1:2	4'-7"	34 1/2"	4'-9"	8'-0"	17'-2"	6'-9"	15	765

NOTE:
1. Cast-In-Place Reinforced Concrete End Sections shall be constructed of Class SI concrete as per Article 503.

DESIGNED	VP
CHECKED	CL
DRAWN	VP
CHECKED	SP

SINGH
SINGH & ASSOCIATES, INC.
CONSULTING ENGINEERS
300 W. ADAMS ST.
CHICAGO, IL 60606
TEL: (312) 629-0240
FAX: (312) 629-8449

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SHEETS	55	(99-1&2)AC-3	WILL	524	335
S+a, 2017+14 (Ramp C)			CONTRACT NO. 60C31		
FED. RD. DIST. NO. 1		ILLINOIS		FED. AID PROJECT	

12/11/2009 10:49:45 PM sFILES