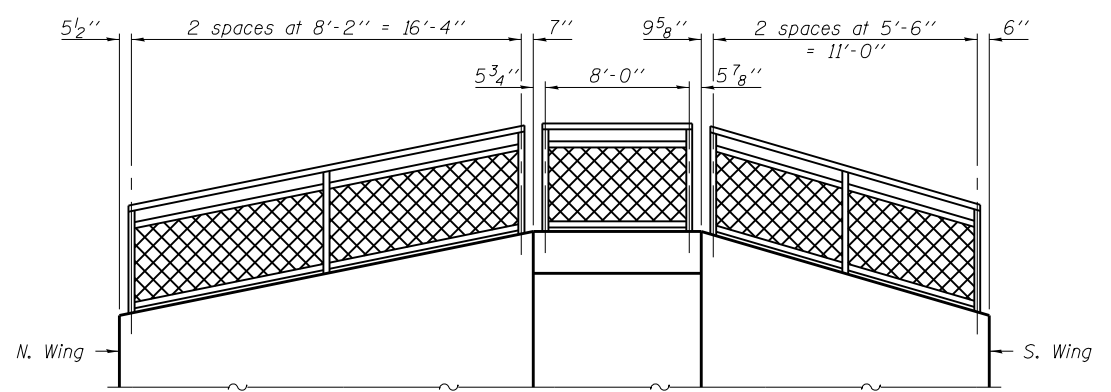
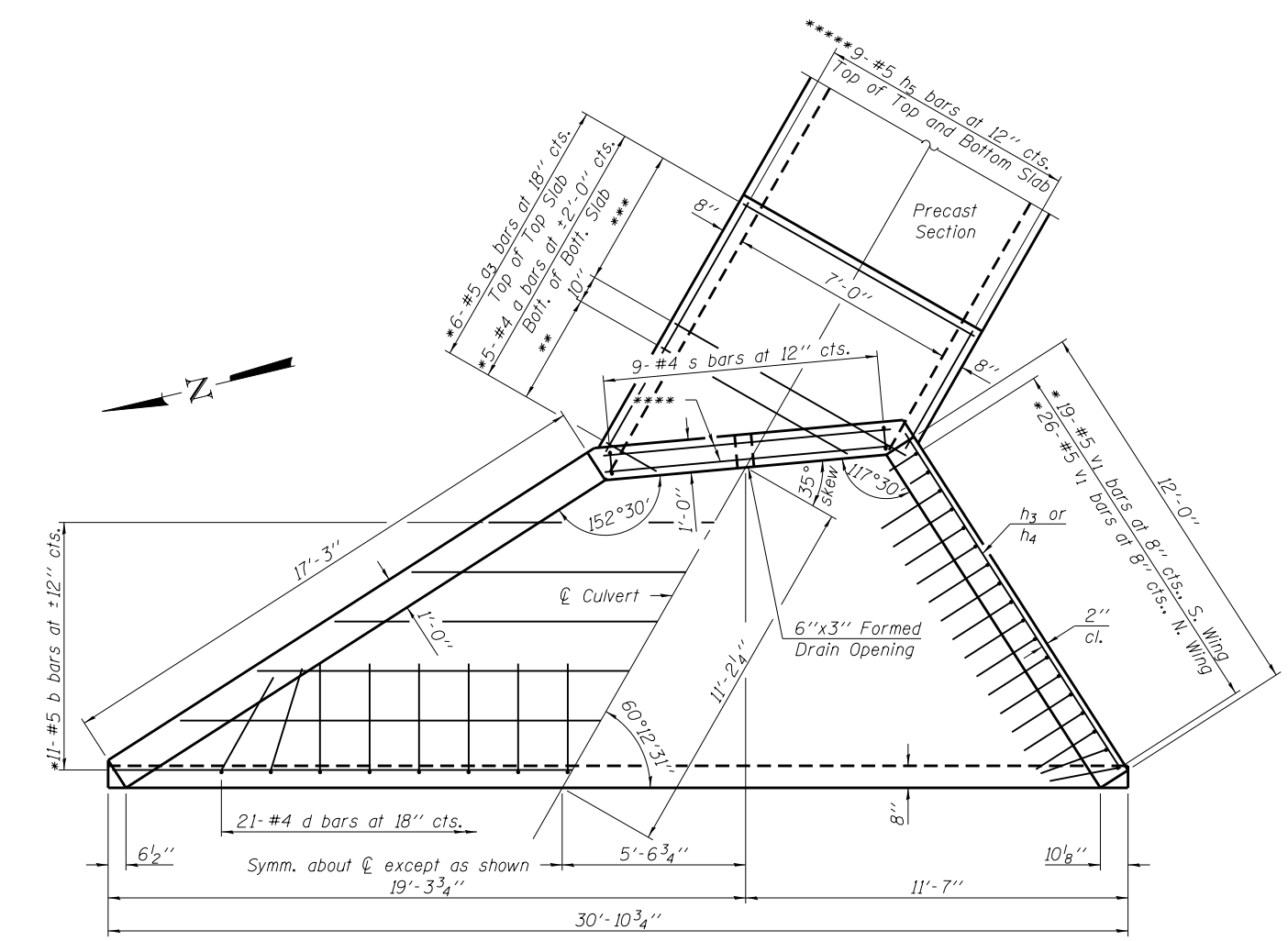


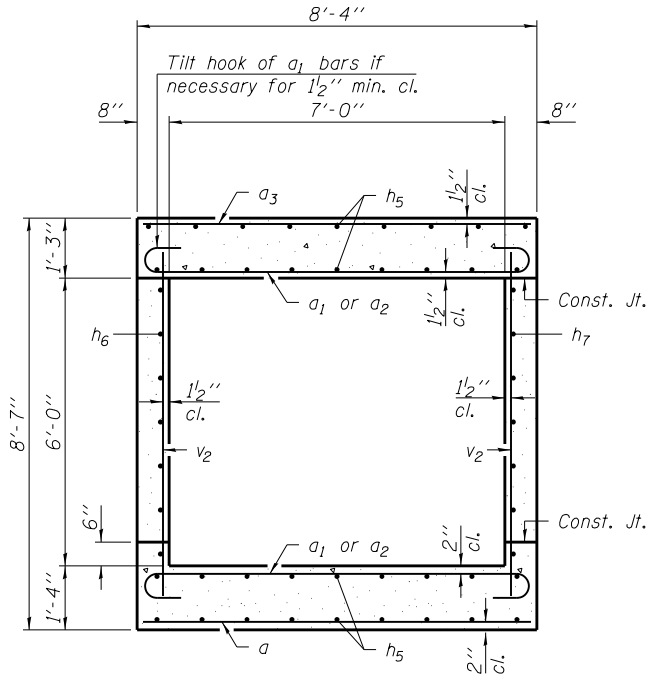
LONGITUDINAL SECTION



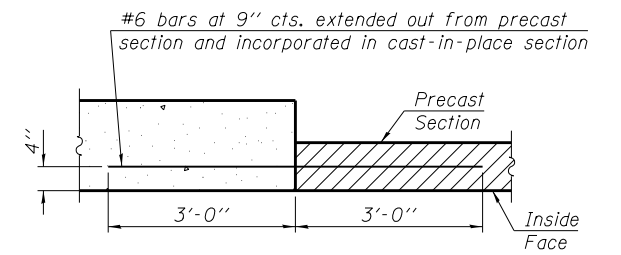
DEVELOPED ELEVATION



PLAN



SECTION THRU BARREL



PRECAST TO CAST-IN-PLACE CONNECTION
(Barrel reinforcement not shown for clarity)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	11	#4	8'-0"	—
a1	36	#6	9'-4"	U
a2	5	#6	9'-7"	U
a3	6	#5	8'-0"	—
b	12	#5	30'-7"	—
d	21	#4	5'-4"	J
h	43	#5	7'-0"	—
h1	4	#6	9'-9"	U
h2	2	#6	8'-5"	—
h3	6	#4	17'-3"	—
h4	6	#4	12'-0"	—
h5	18	#5	13'-8"	—
h6	7	#5	9'-6"	—
h7	7	#5	4'-6"	—
s	9	#4	5'-3"	□
v	15	#5	7'-2"	—
v1	45	#5	11'-5"	J
v2	15	#5	8'-3"	—
x	36	#4	5'-6"	—
x1	12	#4	18'-11"	—
Reinforcement Bars			Pound	3,110
Concrete Box Culverts			Cu. Yd.	34.0

- * Cut bars to fit.
- ** 5-#6 a2 bars at 10" cts., Bott. of Top Slab
Cut to fit skew and place remainder in Top of Bott. Slab. Place hooked end along outside edge of slab.
- *** 6-#6 a1 bars at 10" cts., Bott. of Top Slab and Top of Bottom Slab
- **** 2-#6 h1 bars in Bott. of Headwall and Top of Bott. Slab
2-#6 h2 bars in Top of Headwall
- ***** Cut to fit skew and place remainder in Bottom of Top and Bott. Slab
- ***** 10-#5 v2 bars at 12" cts., N. Wall
5-#5 v2 bars at 12" cts., S. Wall
- ***** 7-#5 h6 bars at ±12" cts., N. Wall
7-#5 h7 bars at ±12" cts., S. Wall

Notes:
For bar bending diagrams, see sheet 1 of 3.
For bicycle railing details, see sheet 3 of 3.

LAST SAVED = 1/23/2013
 PEN TABLE = V2-244-141
 PLOT DRIVER = pdfnclayers\pntocfg

FILE NAME =	USER NAME = elagemann	DESIGNED E.M. Lagemann	REVISED -
1:\1001100\Phase II - 76817\Cad\S\Plans\Headwalls-76817.dgn		DRAWN E.M. Lagemann	REVISED -
	PLOT SCALE = 0:2.0000 '1' / in.	CHECKED K.L. Hayes	REVISED -
	PLOT DATE = 1/23/2013 11:46:18 AM	DATE 12/21/12	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**HORNER &
SHIFRIN, INC.
ENGINEERS**

APRON DETAILS
CULVERT AT STA. 2016+44.66

F.A.P. R.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	68-WRS-1	MONROE	760	435
CONTRACT NO. 76817				
ILLINOIS FED. AID PROJECT				

SCALE: SHEET NO. 2 OF 3 SHEETS STA. 2015+24.21 TO STA. 2017+98.20