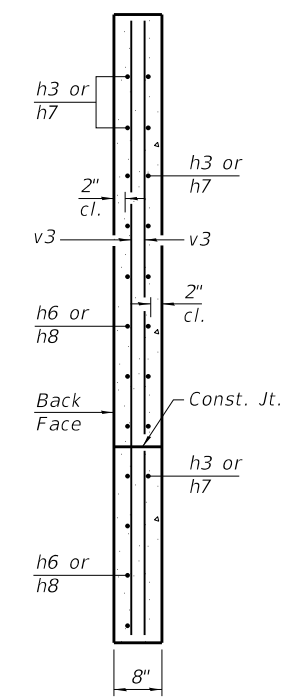
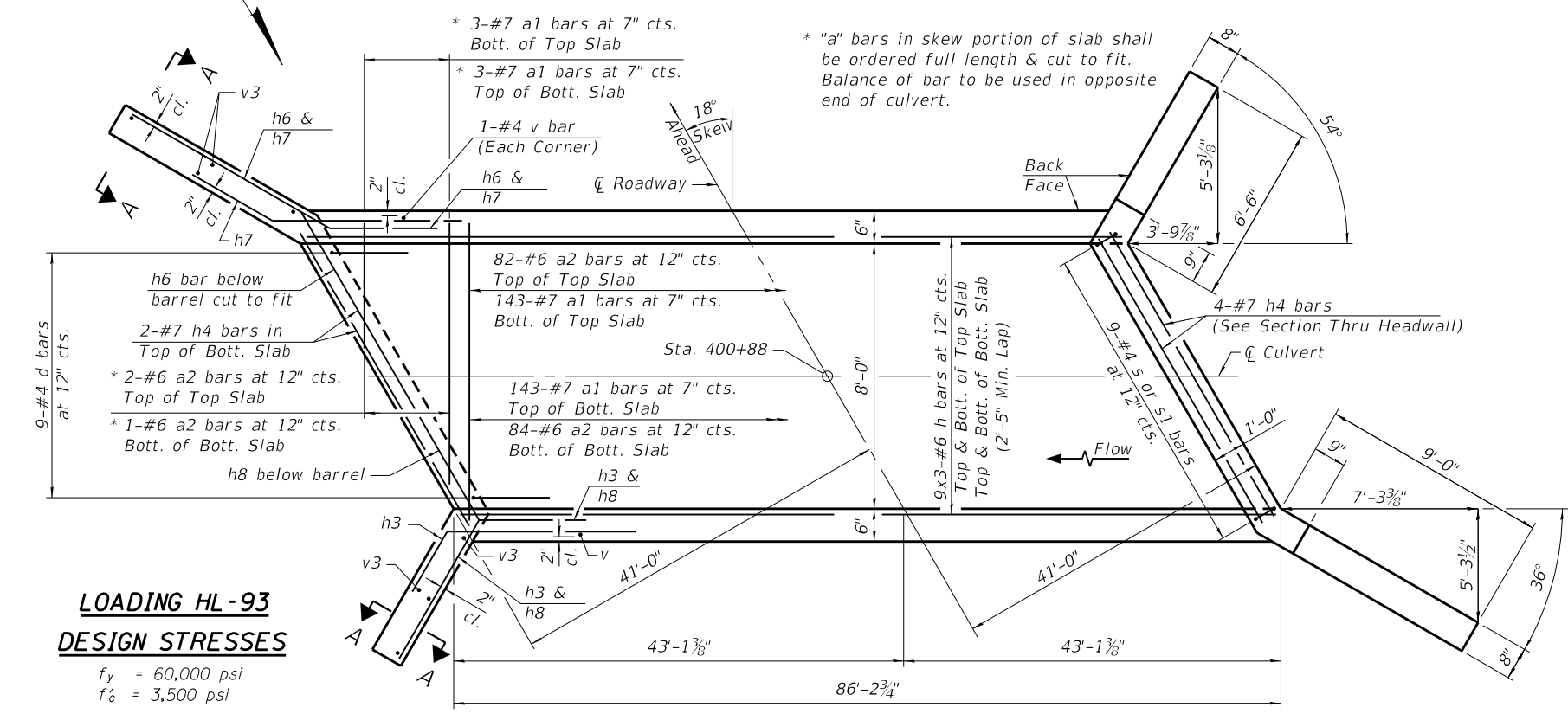


**SECTION THRU HEADWALL**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a1	292	#7	10'-4"	
a2	171	#6	8'-8"	
d	18	#4	4'-5"	
h	108	#6	30'-2"	
h2	30	#4	30'-0"	
h3	22	#4	8'-0"	
h4	12	#7	8'-6"	
h6	30	#5	12'-0"	
h7	28	#5	8'-0"	
h8	24	#4	9'-6"	
s	9	#4	5'-1"	
s1	9	#4	5'-0"	
v	380	#4	5'-6"	
v3	16	#4	8'-4"	
Concrete Box Culverts				Cu. Yd. 75.7
Reinforcement Bars				Pound 16,580



**LOADING HL-93  
DESIGN STRESSES**  
 $f_y = 60,000 \text{ psi}$   
 $f'_c = 3,500 \text{ psi}$

**SHOWING TOEWALL**

**SHOWING HEADWALL**

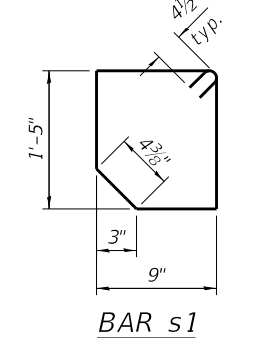
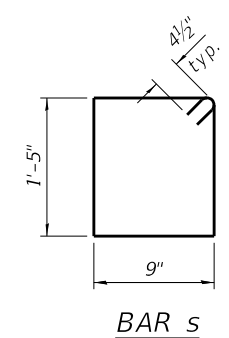
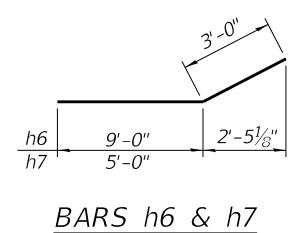
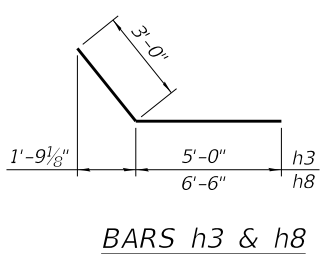
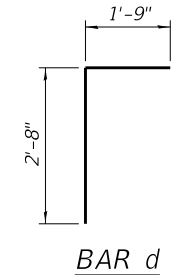
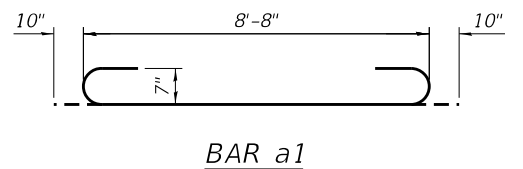
**SECTION A-A**

**WATERWAY INFORMATION**  
Drainage Area 55 Acres  
15 yr. Design Discharge 77 c.f.s.  
100 yr. Design Discharge 116 c.f.s.  
15 yr. Design Headwater Elev. 576.0 ft.  
100 yr. Headwater Elev. 576.8 ft.

**Notes:**  
A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.  
Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.

Precast alternate is not allowed.

**PLAN**



MODEL: Default  
FILE NAME: 2585\_1\_Culvert\_400+88.dgn

TSA-SB-HC-LS

2-17-2017

**CEC** Cummins Engineering Corporation  
Civil and Structural Engineering

JOB = 2585.1	DESIGNED - AAN	REVISED - $\Delta$ 2/11/2021
FILE NAME = 2585_1_Culvert_400+88.dgn	CHECKED - MDC	REVISED -
PLOT DATE = 2/11/2021	DRAWN - SJS	REVISED -
	CHECKED - ANN	REVISED -

**FULTON COUNTY  
CH 2 IMPROVEMENT**

**CULVERT DETAILS  
STATION 400+88**

SHEET 1 OF 1 SHEETS

F.A.S. RTE. 452	SECTION 14-00130-12-RS	COUNTY FULTON	TOTAL SHEETS 90	SHEET NO. 37
CONTRACT NO. 89765				
ILLINOIS FED. AID PROJECT				