

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	54-87 K-6657-01	2002	402	1122

**GENERAL NOTES**

**UNIT STRESSES:** Class AAA Concrete;  $f'c = 28$  MPa  
Reinforcing Steel;  $f_y = 420$  MPa

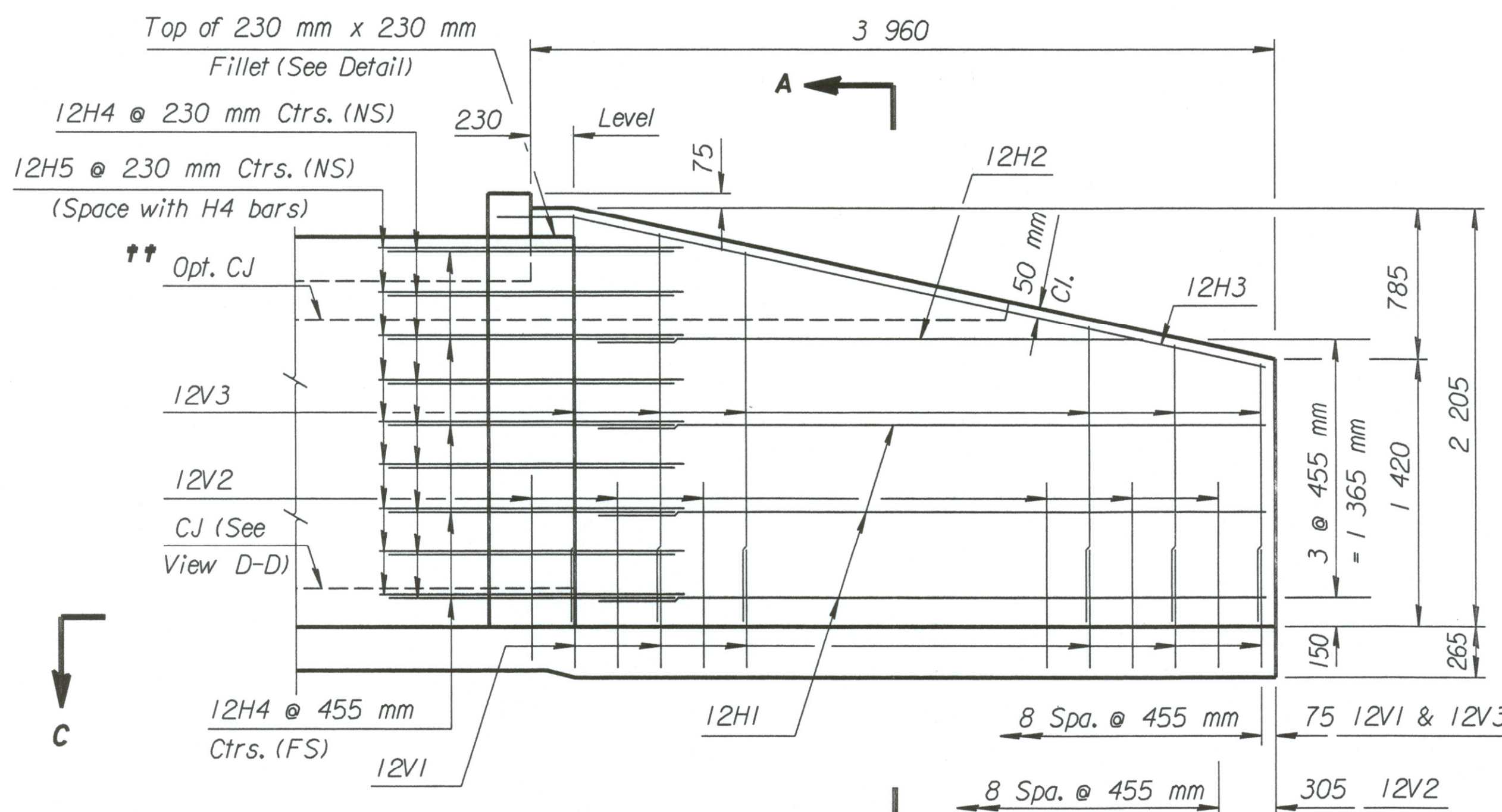
**CONCRETE:** Class AAA Concrete shall be used throughout. Bevel all exposed edges with a 20 mm triangular moulding.

**REINFORCING:** All reinforcing shall conform to ASTM A615M-96, Grade 420. Welded Wire Fabric shall conform to ASTM A185M. All dimensions relative to reinforcing steel shall be to center-line of bar unless otherwise noted.

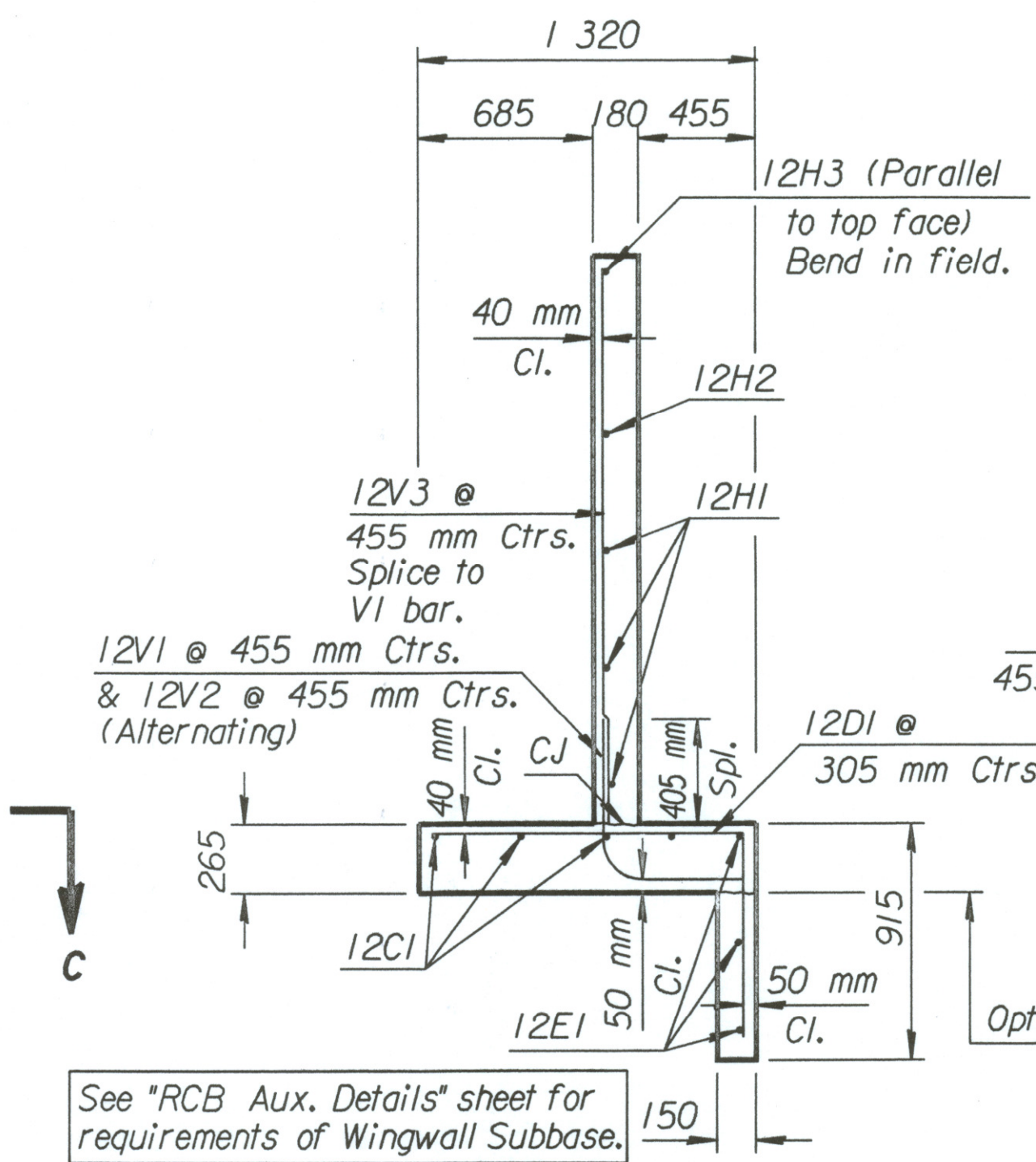
**QUANTITIES:** Wingwall Quantities include all quantities outside the neat lines of the box, excluding the hubguard.

**APRON:** A 125 mm concrete slab shall be constructed between the downstream wings in locations subject to scour only when specified on the plans or by the Engineer. Wire Reinforcing mesh shall be electrically welded and shall be composed of 150x150-MW10xMW10 welded wire fabric and shall be classified as kilograms of reinforcing.

**FOUNDATION AND BACKFILL MATERIAL:** Soils judged as high plasticity clays, fat clays, expansive clays, or organic clays are unsuitable for foundation and/or backfill material for wingwalls and will not be used. Where these conditions exist, Foundation Stabilization and/or Granular Backfill (Wingwalls) shall be used as determined by the Engineer. See "RCB Auxiliary Details" sheet for additional details.



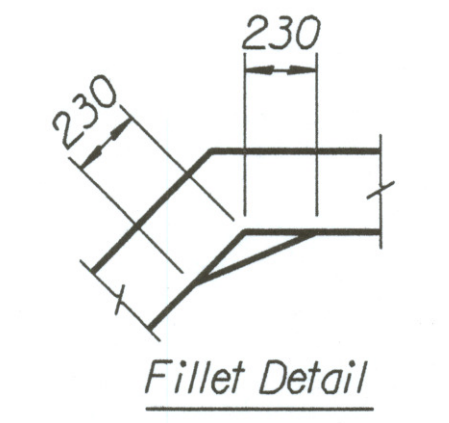
**ELEVATION OF WINGWALL**  
(Backface Shown)



**SECTION A-A**

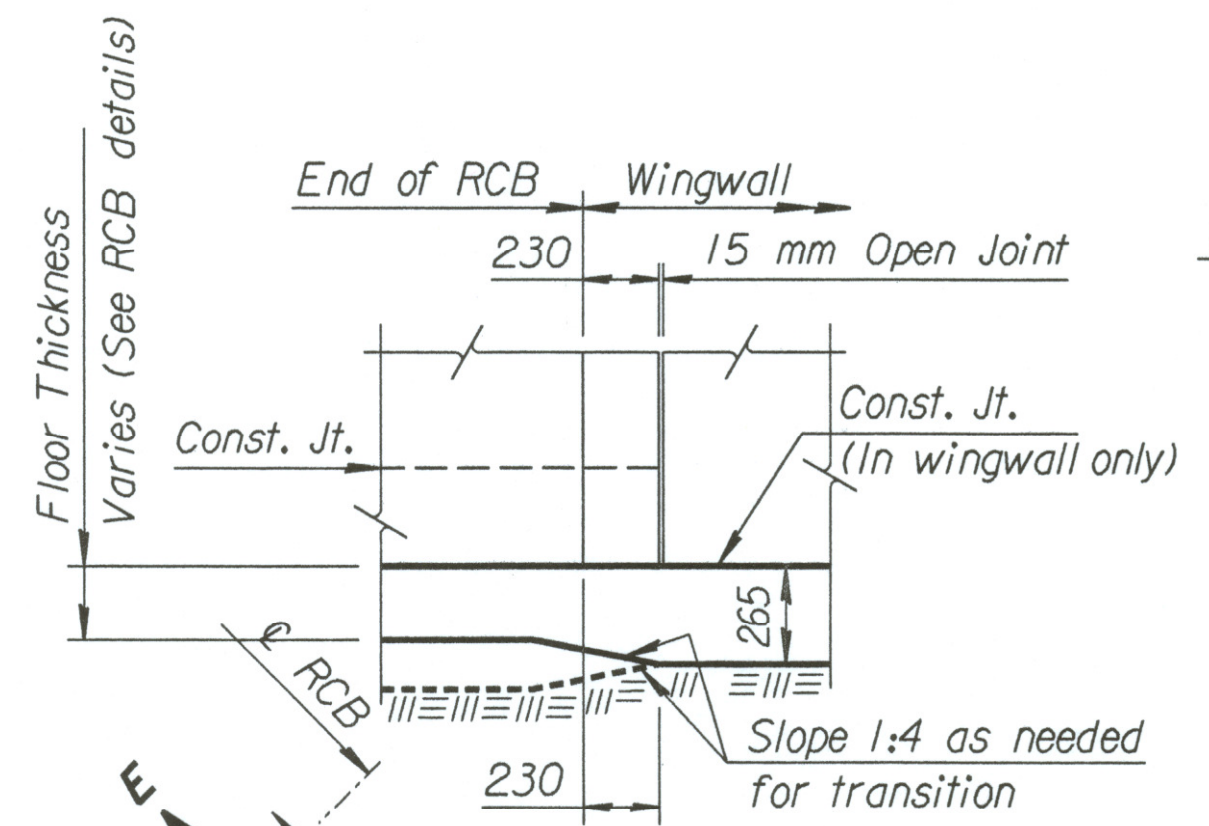
† NOTE: Const. Jt. may be used at Contractor's option when approved by the Engineer. DI bars or mesh may be spliced thus: Minimum overlap shall be 380 mm. No increase in quantities or cost shall be allowed when Contractor elects this option.

**DETAIL OF 230 mm x 230 mm FILLET**  
(Plan View)

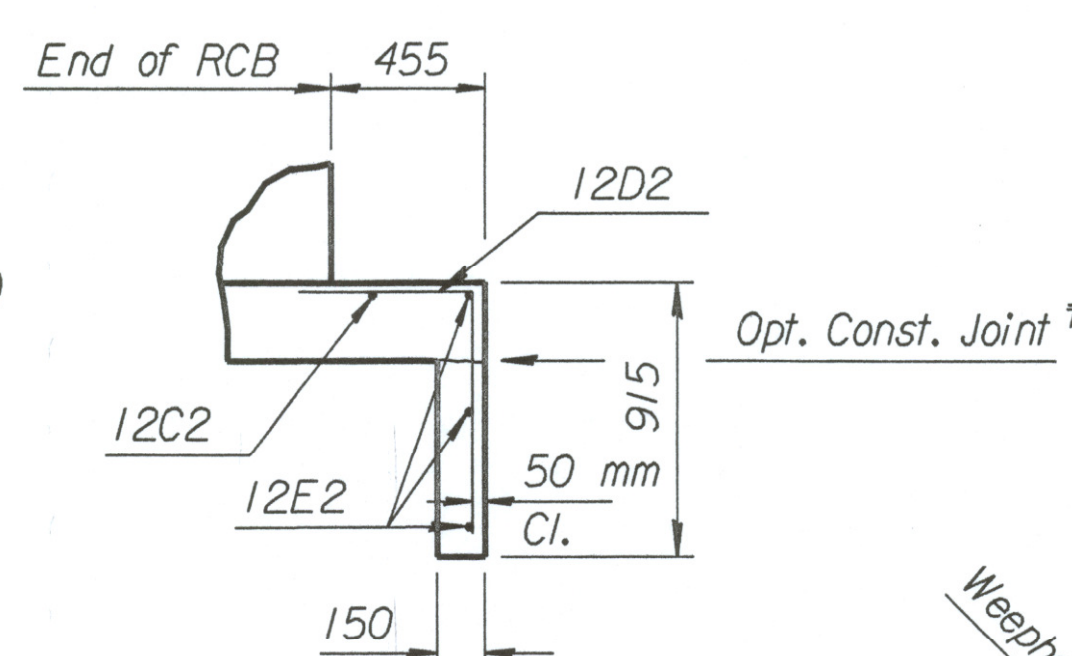


DESIGN	DATE	DESIGN	DATE
REVISION	DATE	REVISION	DATE
TRACING	DATE	TRACING	DATE
RETRACTED	DATE	RETRACTED	DATE

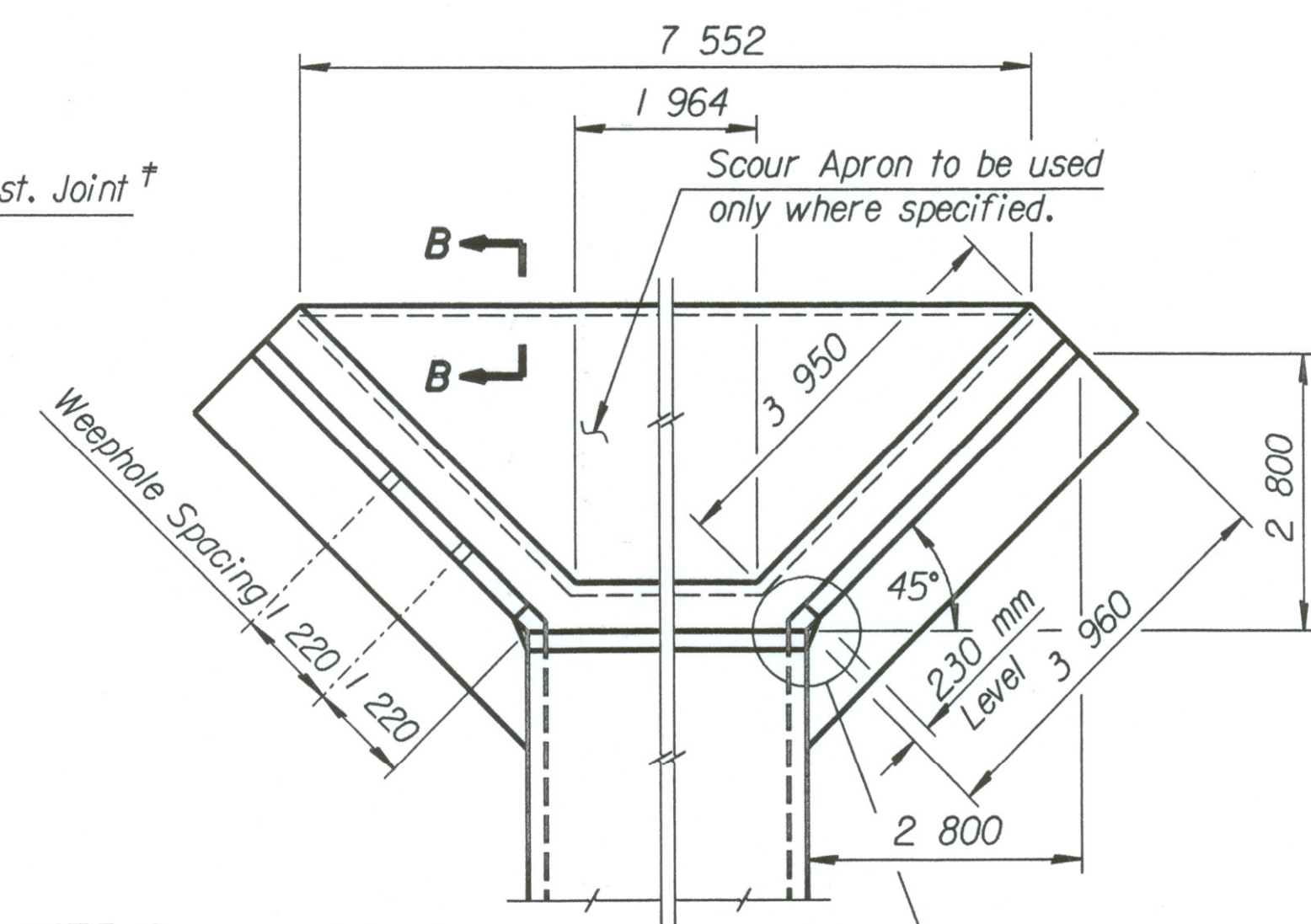
NOTE:  
EF = Each Face  
NS = Near Side  
FS = Far Side  
CJ = Const. Joint



**VIEW D-D**

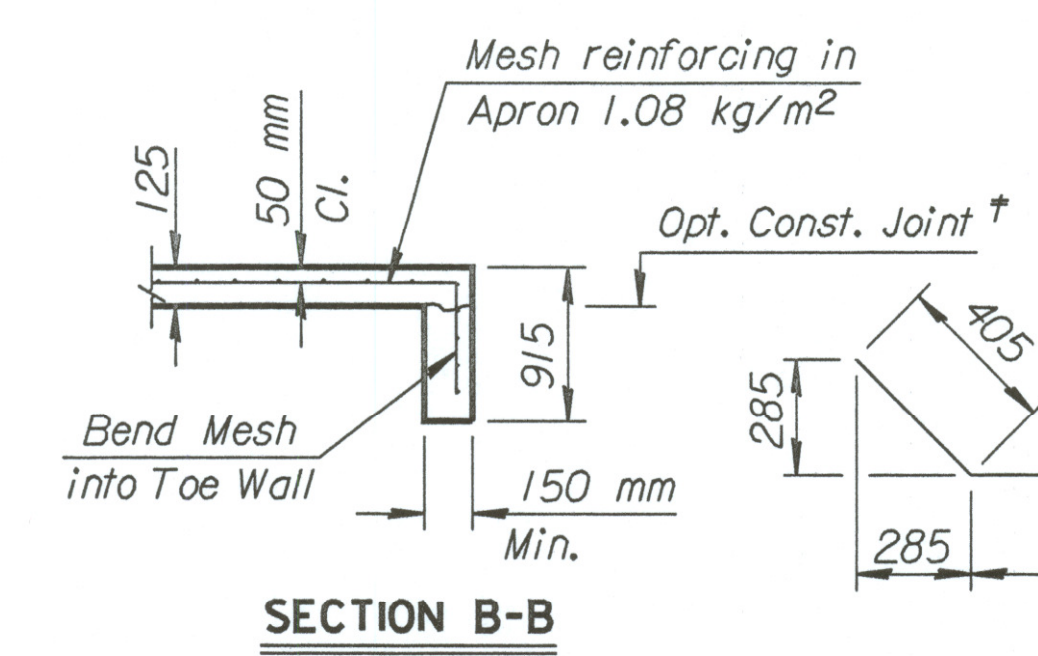


**SECTION E-E**



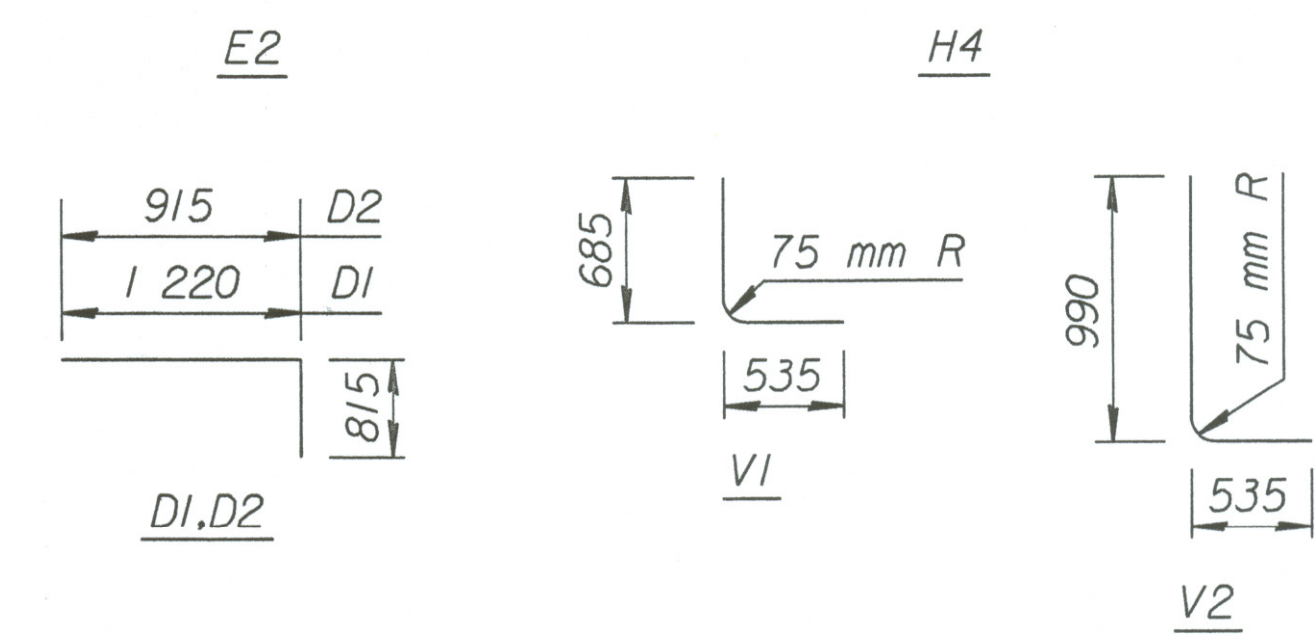
**WING DIMENSIONS FOR NORMAL BOX**  
(1:3.5 Embankment Slope)

NOTE: Space weepholes to clear reinforcing steel. See "RCB Aux. Details" sheet for additional weephole details.



**SECTION B-B**

Var. 1 345 mm to 2 135 mm | 2 Req'd.  
by equal Ince. (100 mm ±) each length



**BENDING DIAGRAM**

(All dimensions are out to out of bars.)

WINGWALL QUANTITIES (One End Only)		
Class AAA Concrete:		
Wingwalls	-----	7.0 m <sup>3</sup>
Apron	-----	0 m <sup>3</sup>
Soil Saver	-----	0.0 m <sup>3</sup>
Reinforcing Steel		
Welded Wire Fabric	-----	311 kg

NO.	DATE	REVISIONS	BY	APP'D
KANSAS DEPARTMENT OF TRANSPORTATION				
Sta. 17+090.000				
FLARED WINGWALLS (LEFT)				
1.830 m Rise (0'SKEW)				
BR 10.00.06 SI		Sedgwick		
DESIGNED	DATE	APP'D	DATE	APP'D
TRACED	DATE	QUANTITIES	DATE	TRACED
DESIGN CK.	DETAIL CK.	QUAN. CK.	TRACE CK.	

NOTE: Reinforcing Bar List is for both wings at one end of box only.

0° Skew	Mark	12C1	12D1	12E1	12C2	12D2	12E2	12V1	12V2	12V3	12H1	12H2	12H3	12H4	12H5
	Number	8	26*	6	1	5*	3*	18*	18*	18	6	2	2	28*	18
	Length	4 750	2 035	3 885	2 750	1 730	2 845	1 220	1 525	*	3 605	2 920	4 215	1 520	1 065

\* See Bending Diagram

Plotted By: r:ros Scale: 1:1000  
12/19/97/91362/001/rcb/17090a.dgn Last Rev. 2-11-2002