

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	54-87 K-6657-01	2002	409	1122

GENERAL NOTES

UNIT STRESSES: Class AAA Concrete; $f'c = 28 \text{ MPa}$
Reinforcing Steel; $fy = 420 \text{ MPa}$

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

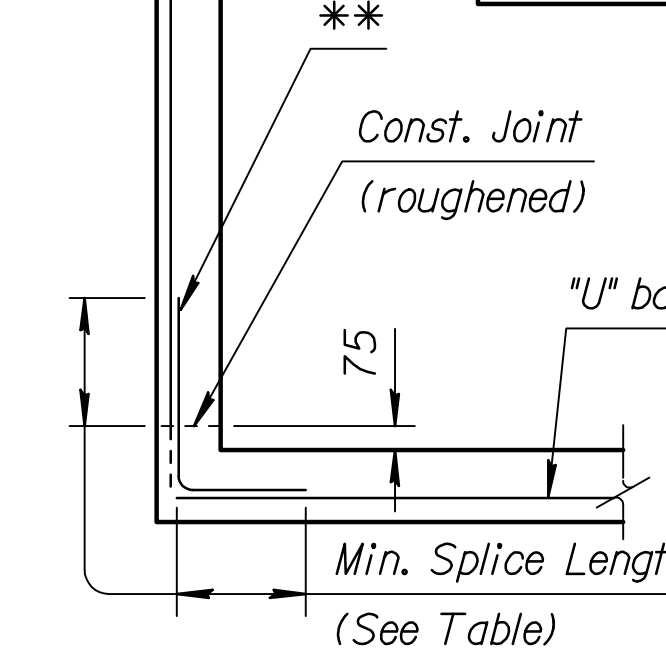
REINFORCING: All reinforcing shall conform to ASTM A615M, Grade 420. Welded wire fabric shall conform to ASTM A185M-16. Wire fabric shall be electrically welded and shall be composed of 150x150-MW10xMW10 welded wire fabric and shall be classified as kilograms of reinforcing.

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

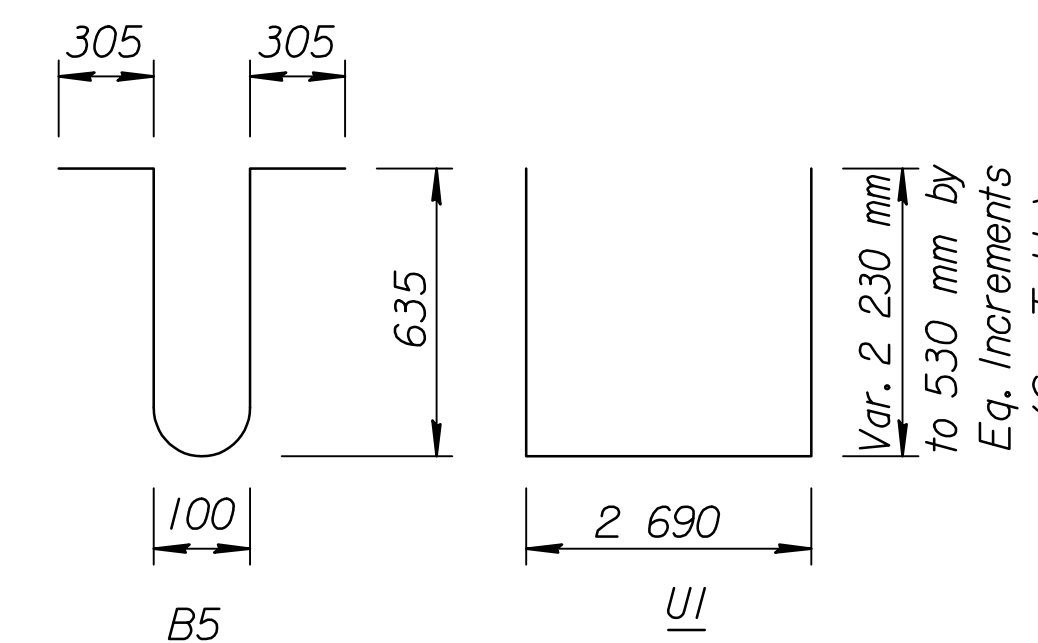
FOUNDATION AND BACKFILL MATERIAL: Soils judged as high plasticity clays, fat clays, expansive clays, or organic clays are unsuitable for foundation and/or backfill material for wingwalls and will not be used. Where these conditions exist, Foundation Stabilization and/or Granular Backfill (Wingwalls)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

INTERMEDIATE TOE-WALL: When the length of wingwalls and width of apron both exceed 4 570 m, an intermediate toe-wall shall be constructed at mid-length of wing-wall as shown on "Elevation of Wingwall".

MIN. SPLICE LENGTHS	
#12	405
#15	510
#20	610

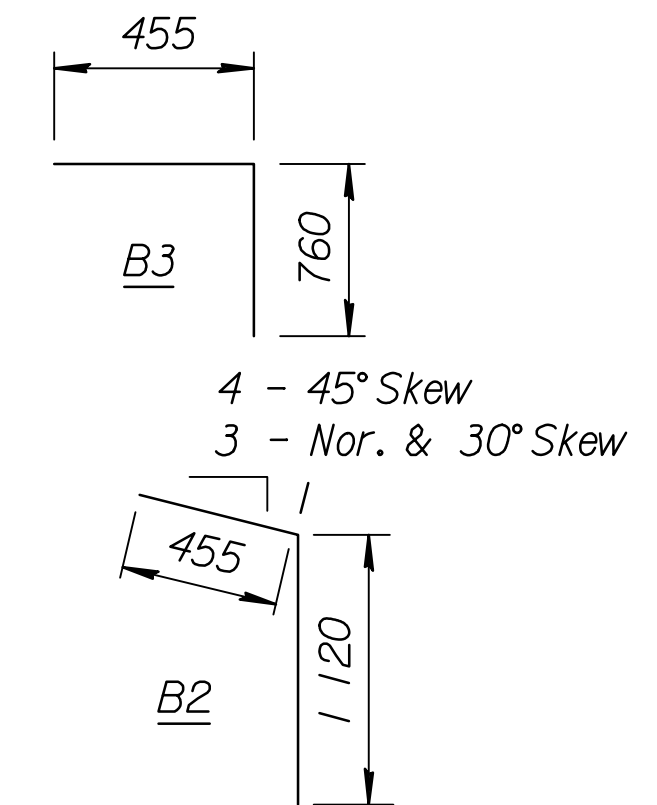


**At Contractors option, straight bars and bent bars may be substituted for "U" bars and spliced at locations shown. No allowance will be made for additional steel required. See table for required lap length.



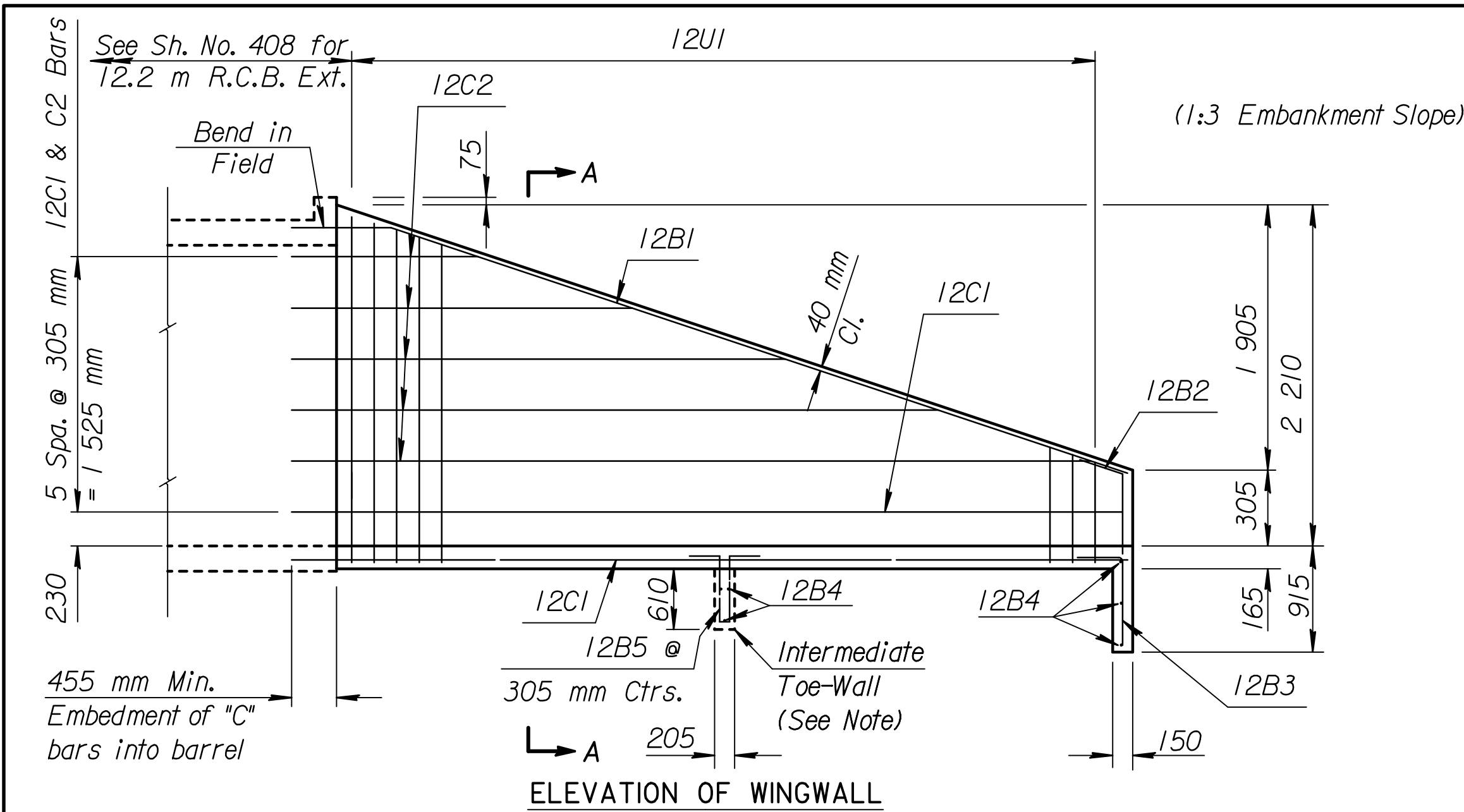
SKEW	INCREMENT
0°	100
30°	90
45°	75

Normal	Var. 1 660 mm to 5 380 mm by 930 mm Increments
30° Skew	Var. 1 880 mm to 6 145 mm by 1 065 mm Increments
45° Skew	Var. 2 285 mm to 7 470 mm by 1 295 mm Increments



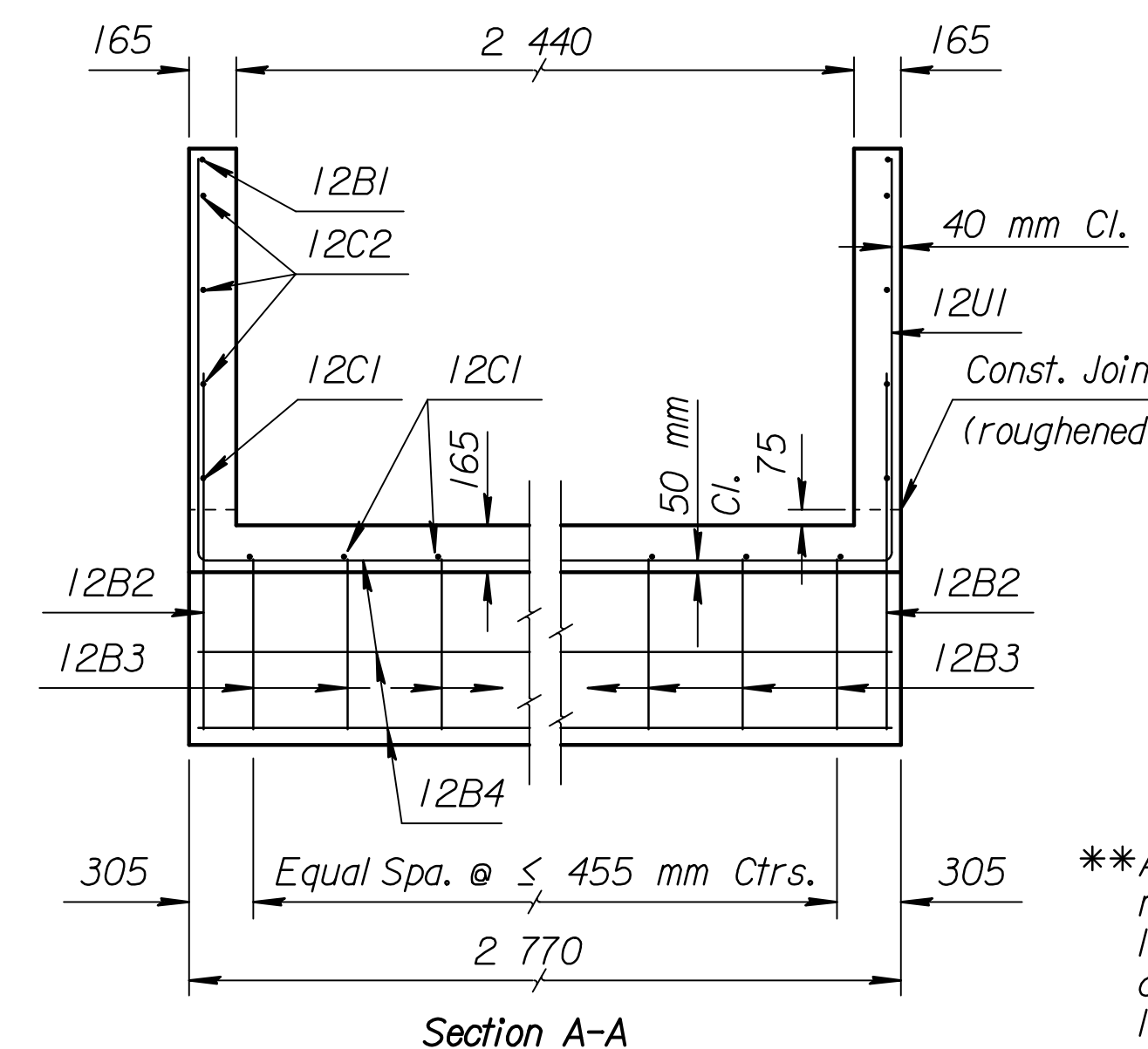
BENDING DIAGRAMS

All dimensions are out to out of bars.



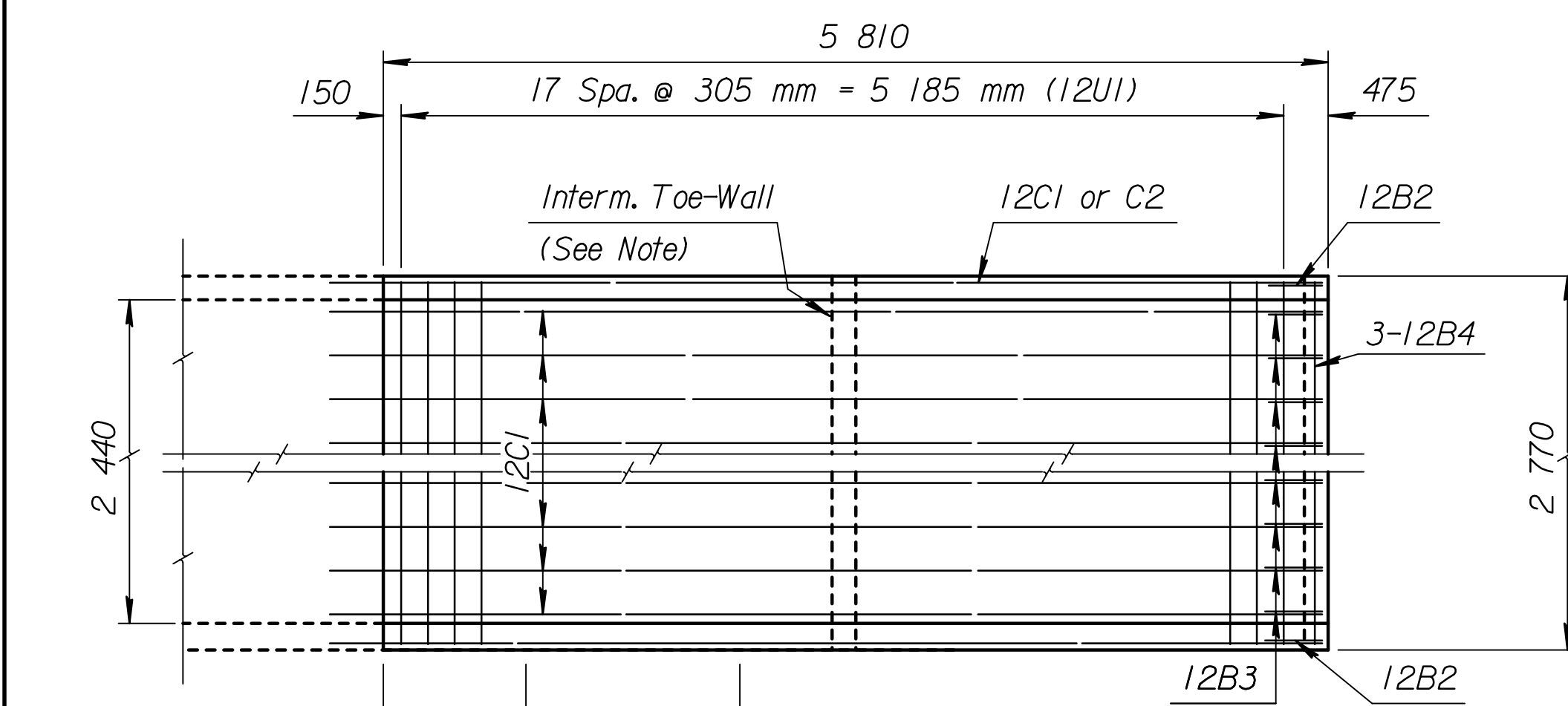
ELEVATION OF WINGWALL

NOTE: Wingwall floor and toewall shall be constructed with the RCB floor. Wingwalls to be constructed with RCB walls.



Section A-A

DESIGN	DATE	DATE	DATE	DATE
QUANTITIES	DATE	DATE	DATE	DATE
TRACING	DATE	DATE	DATE	DATE
RETRACTED	DATE	DATE	DATE	DATE



PLAN OF WINGWALLS

(Normal RCB)

* See Bending Diagram

NOTE: Reinforcing Bar List is for both wings at one end of box only.	12B1		12B2 *		12B3 *		12B4		12B5 *		12C1		12C2		12U1 *	
	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length
N/Skew	2	6 430	2	1 575	6	1 215	6	2 670	8	1 980	8	6 210	10	*	36	*

WINGWALL QUANTITIES (One End Only)	
Class AAA Concrete	5.7 m ³
Reinforcing Steel	335 kg

Quantities listed are included in the Summary of Quantities shown on the RCB.

RECORD DRAWING

3				
2				
1				
NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION
Sta. 17+090
STRAIGHT WINGWALLS (RIGHT)
1.8 m Rise (0° Skew)

Sedgwick

FHWA APPROVAL	6-5-91	APP'D	KENNETH F. HURST
DESIGNED	DETAIL	QUANTITIES	TRACED
DESIGN CK.	DETAIL CK.	QUAN. CK.	TRACE CK.

Plotted By: will Scale 1:1000
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