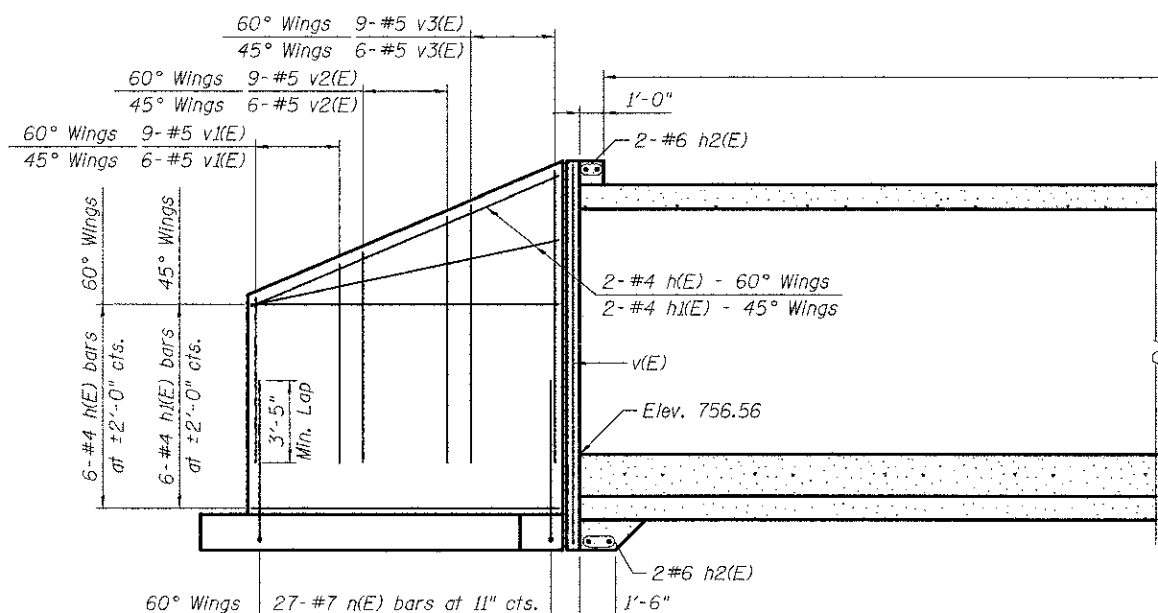
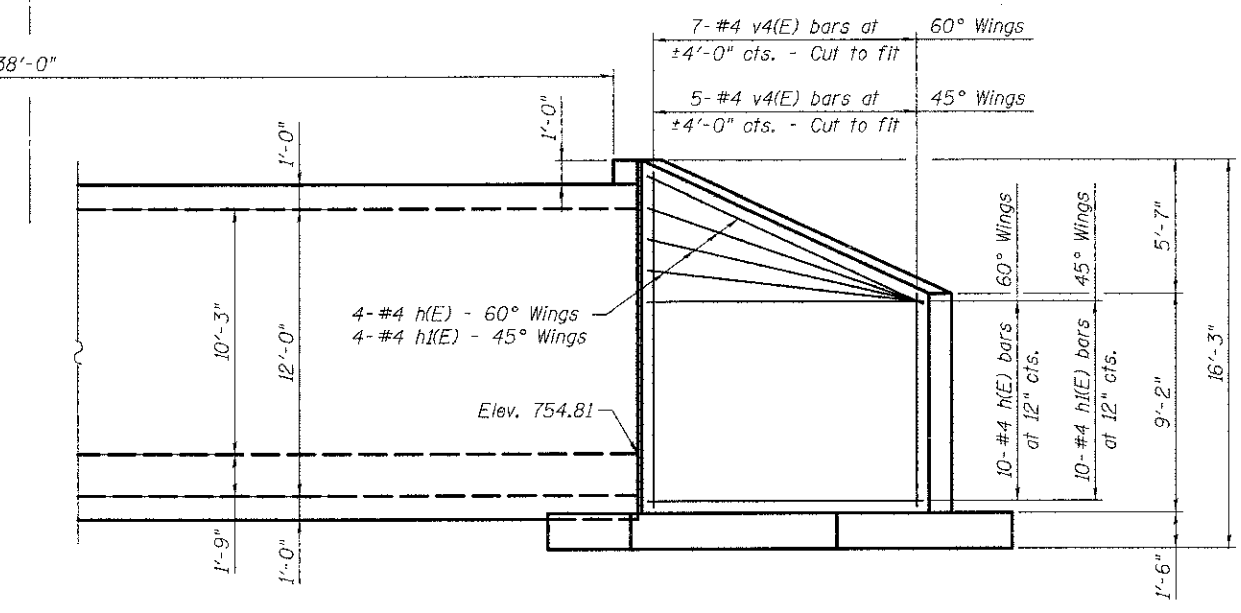


Randall Road & Tunnel

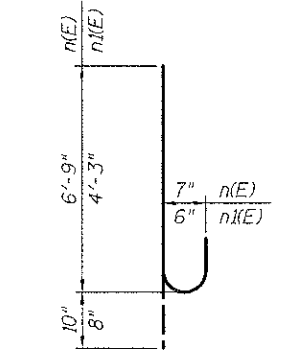


**HALF LONGITUDINAL SECTION**



**HALF ELEVATION**

**REINFORCEMENT FRONT FACE**

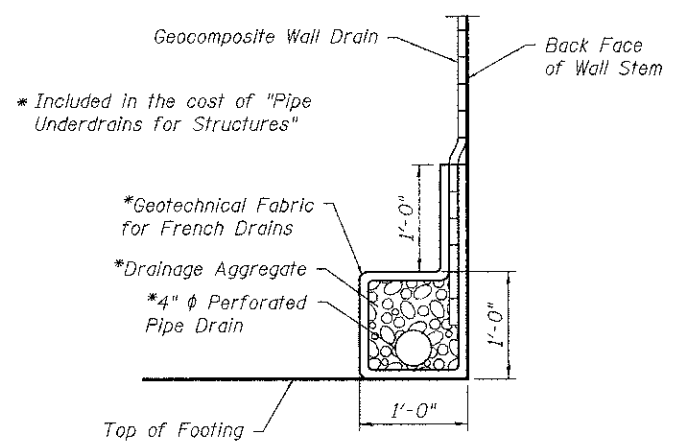


**BARS n(E) & n(I(E))**

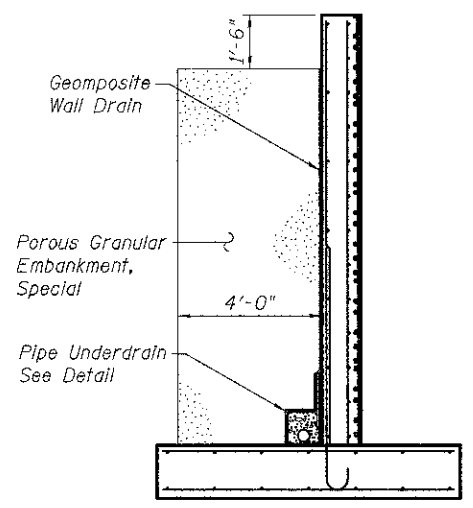
**REINFORCEMENT BACK FACE**

60° Wings	27-#7 n(E) bars at 11" cts. Alternate with 26-#6 n(I(E)) bars at 11" cts.
45° Wings	18-#7 n(E) bars at 11" cts. Alternate with 17-#6 n(I(E)) bars at 11" cts.

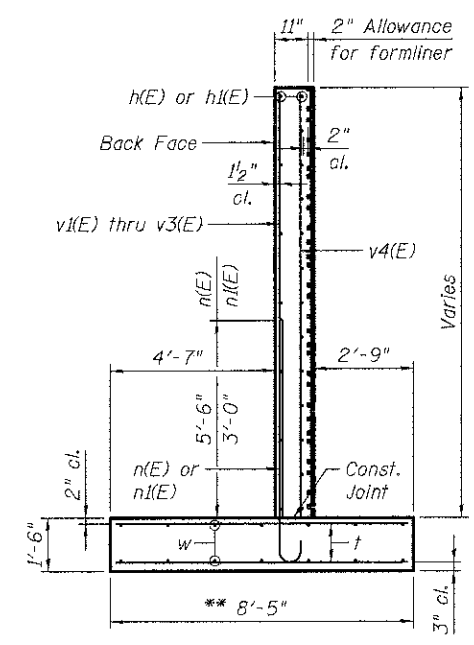
**REINFORCEMENT BACK FACE**



**PIPE UNDERDRAIN DETAIL**



**WINGWALL SECTION**  
Showing drainage and backfill details behind wingwalls



**SECTION A-A**  
**SECTION B-B**

\*\* 8'-5" footing width assumes a 2" allowance for formliner thickness. Footing width shall be adjusted for a different formliner thickness.

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	44	#4	23'-10"	—
h(I(E))	44	#4	15'-10"	—
h2(E)	8	#6	16'-4"	—
n(E)	90	#7	7'-7"	U
n(I(E))	86	#6	4'-11"	U
t(E)	184	#5	8'-3"	—
v(E)	8	#5	15'-10"	—
v(I(E))	30	#5	12'-5"	—
v2(E)	30	#5	10'-6"	—
v3(E)	30	#5	8'-8"	—
v4(E)	24	#4	14'-4"	—
w(E)	28	#5	23'-10"	—
w(I(E))	28	#5	15'-10"	—
Structure Excavation			Cu. Yd.	519
Concrete Structures			Cu. Yd.	86.7
Reinforcement Bars, Epoxy Coated			Pound	7,490
Geomposite Wall Drain			Sq. Yd.	94
Porous Granular Embankment, Special			Cu. Yd.	125
Pipe Underdrain for Structures 4"			Foot	172

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**WILLS BURKE KELSEY ASSOCIATES LTD.**  
 110 West Main Street, Suite 201  
 St. Charles, Illinois 60174  
 (630) 443-7755

USER NAME = nparrie	DESIGNED - DLS	REVISED -
PLOT SCALE =	CHECKED - AEU	REVISED -
PLOT DATE = 5/11/2012	DRAWN - DLS	REVISED -
	CHECKED - AEU	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**END SECTION DETAILS II**  
**STRUCTURE NO. 045-3181**

SHEET NO. 10 OF 20 SHEETS

F.A.P. RTE. 0336	SECTION 00-00259-00-BT	COUNTY KANE	TOTAL SHEETS 79	SHEET NO. 38
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 63667	