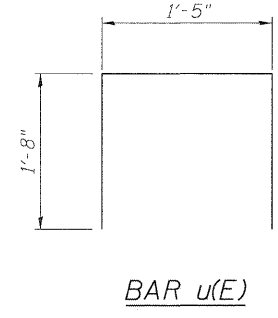
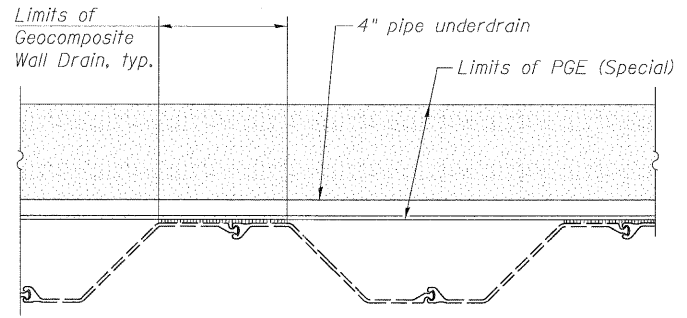


**SECTION THRU WALL**

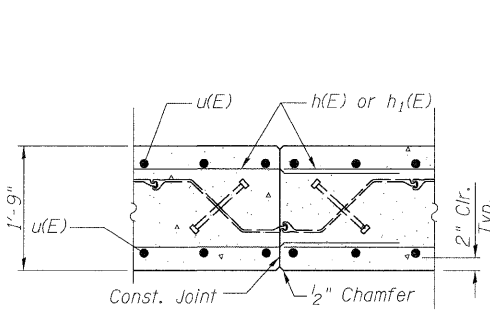
\*\* Pipe invert elevation to match existing grade line on opposite face of wall. Cost of any excavation required is included with Pipe Underdrains for Structures 4".

**DRAINAGE DETAILS**

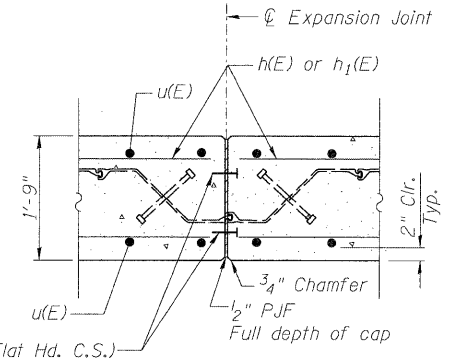


**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	42	#5	33'-1"	—
h <sub>1</sub> (E)	28	#5	29'-8"	—
u(E)	330	#5	4'-9"	⊏
Concrete Structures			Cu. Yd.	38.9
Reinforcement Bars, Epoxy Coated			Pound	3960



**CONSTRUCTION JOINT DETAIL**



**EXPANSION JOINT DETAIL**

Concrete nails (Flat Hd. C.S.) 1" long at 12" cts., vertical (Cost included with Concrete Structures)

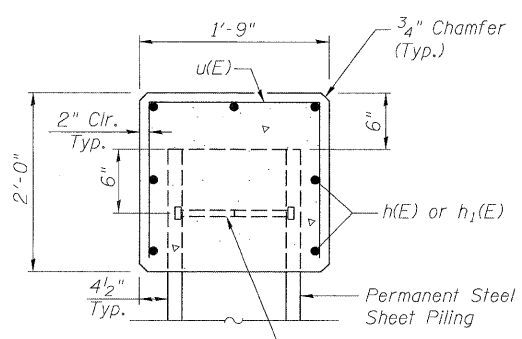
Expansion joints shall be located at the nearest sheet piling interlock to the indicated spacing shown.

**Notes:**  
The details for the concrete cap and reinforcement, and the required number of stud shear connectors are based on section PZ-27 sheet piling. If the Contractor chooses to use any other section, then the Contractor shall submit revised concrete cap and reinforcement configuration for approval by engineer. Such changes shall not be cause for additional compensation.

**\*MINIMUM SHEET PILE HEIGHT**

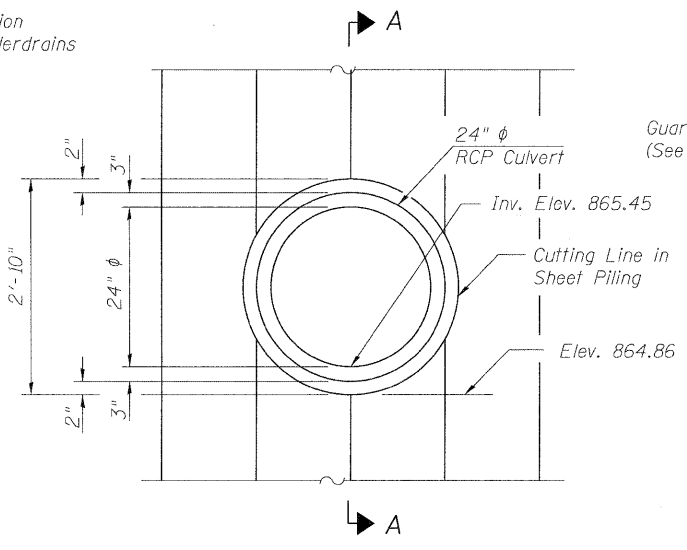
Panel	Height
Panel 1	25'-8"
Panels 2 to 6	42'-0"
Panels 7 to 9	26'-6"
Panel 10	18'-5"

**Notes:**  
Cost of Geotechnical Fabric and Drainage Aggregate are included in the cost of Pipe Underdrain for Structures 4".  
Perforated pipe drain shall outlet near station 515+58 thru 4 1/4" cut hole in wall.  
Cost of cutting 34" φ opening in sheet pile wall is included in the cost of Permanent Steel Sheet Piling.



**DETAIL A**

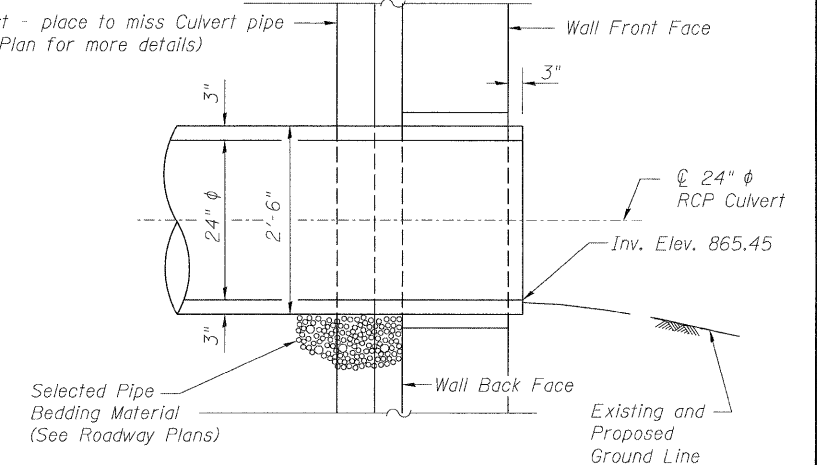
1-3/4" φ x 5" Granular or Solid Flux Filled Headed Stud according to Art. 1006.32 of the Std. Spec's at center of each side of sheeting.



**SECTION THRU PERMANENT SHEET PILING AT PIPE CULVERT**

(Contractor shall seal the void around the RCP with approval by the Engineer. Cost included with Permanent Steel Sheet Piling.)

Guard Rail Post - place to miss Culvert pipe (See Roadway Plan for more details)



**SECTION A-A**



USER NAME =	DESIGNED - ESH	REVISD -
PLOT SCALE =	CHECKED - ADB	REVISD -
PLOT DATE =	DRAWN - RH	REVISD -
	CHECKED - ADB	REVISD -

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**WALL DETAILS-3 STRUCTURE NO. 016-W998**  
SHEET NO. 54 OF 57 SHEETS

F.A.P. RTE. 339	SECTION 116 Y-1-R-1	COUNTY COOK	TOTAL SHEETS 122	SHEET NO. 85
CONTRACT NO. 60135				ILLINOIS FED. AID PROJECT