Benchmark: Cut square on jaywall at north line of Taylor Street, approximately 100' west of Des Plaines Street and 3' above walk (opposite traffic signal). Elevation 596.30.

Existing Structure: Originally built in 1987. Southwest Retaining Wall is a cast-in-place cantilever type wall on a spread footing foundation. Footing of wall is 1'-6" deep and of variable width. Stem is 10½" wide and of variable height.

Traffic Control: Traffic to be maintained on SB I-90/94 and Union Ave. during construction.

Salvage: No salvage.

APPROVED

OCT 17 2014

AS A BASIS FOR PREPARATION OF DETAILED PLANS

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications
6th Edition with 2013 Interim Revisions

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
f'c = 7,000 psi (Drilled Shaft)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50) (Soldier Piles)

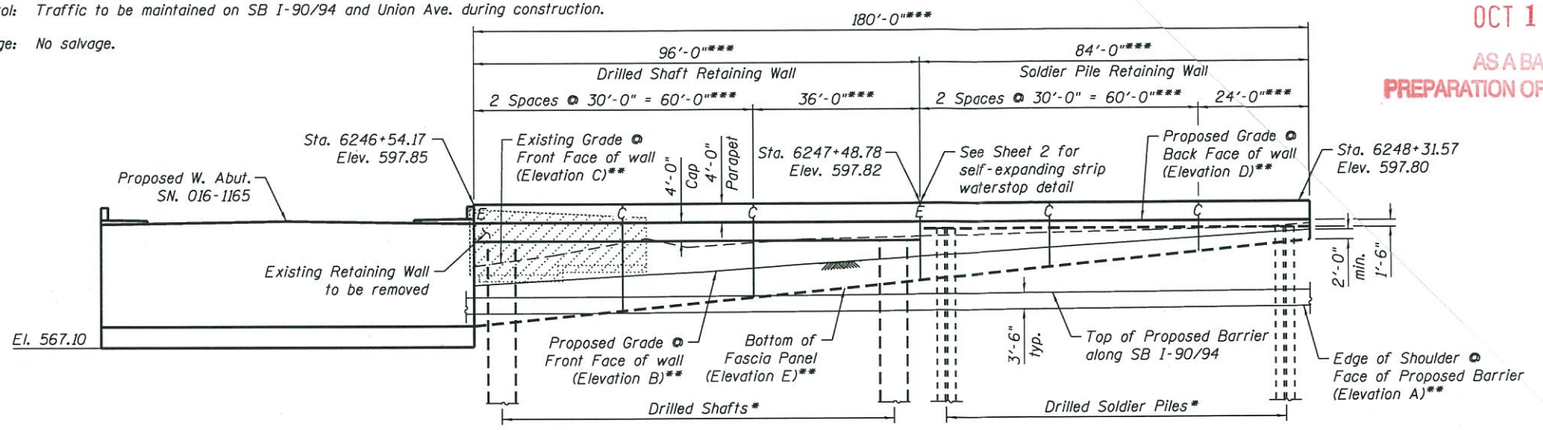
HIGHWAY CLASSIFICATION

F.A.I. Rte. SB I-90/94
Functional Class: Interstate
ADT: 140,500 (2012); 148,000 (2040)
ADTT: 13,994 (2012); 14,741 (2040)
DHV: 8,960 (2040)
Design Speed: 60 m.p.h.
Posted Speed: 45 m.p.h.
One-Way Traffic
Directional Distribution: NA

* Shaft diameter or Pile size, spacing and tip elevation, to be determined in the final design.

** See Elevation Table Sheet 2.

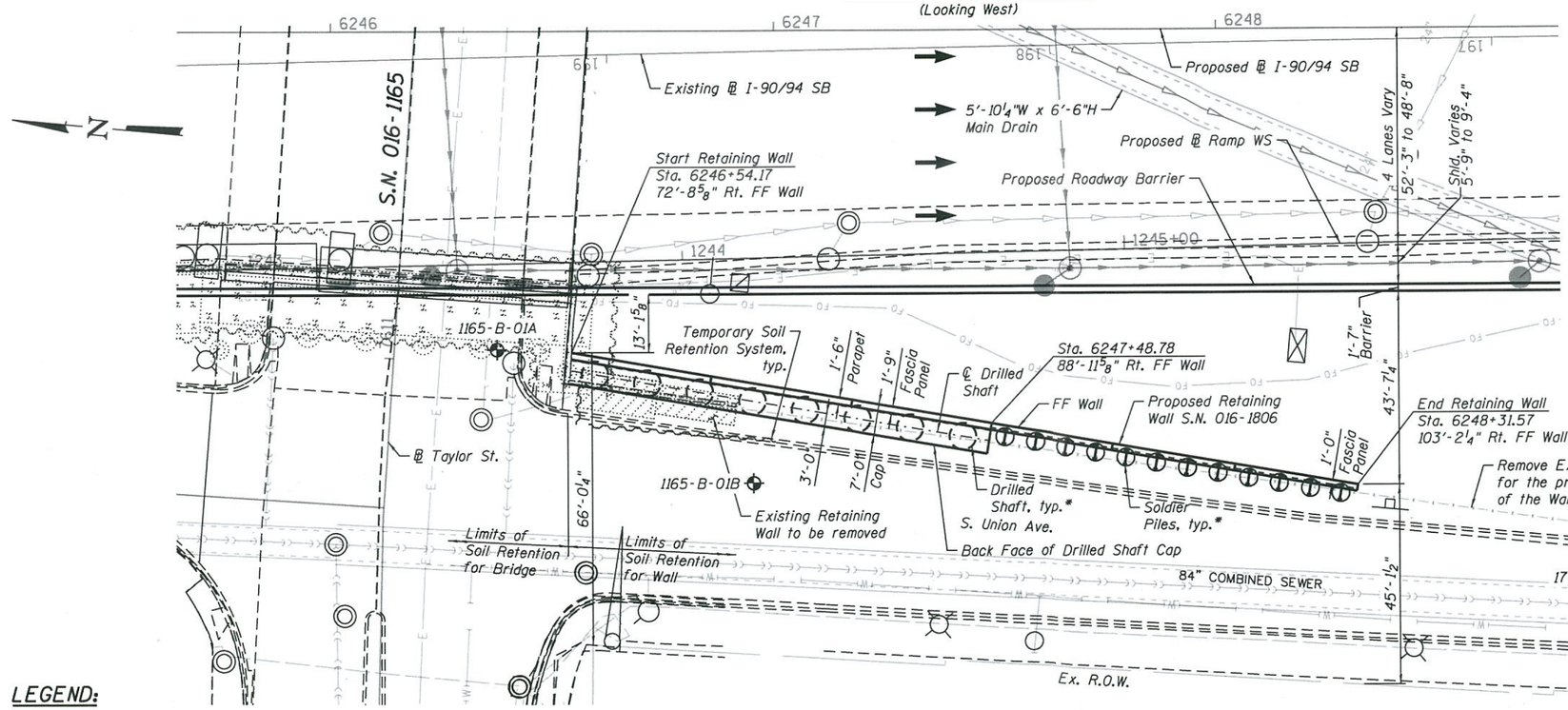
*** Measured along Front Face of wall.



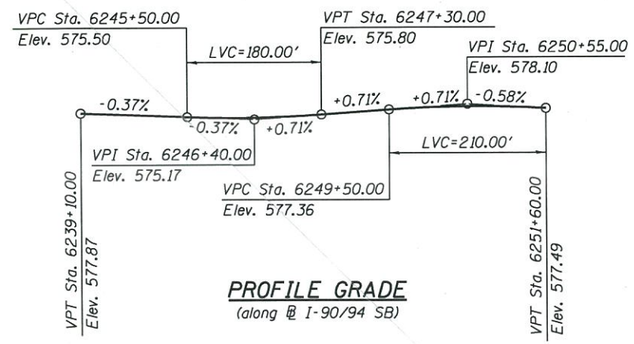
El. 600
El. 595
El. 590
El. 585
El. 580
El. 575
El. 570

REFLECTED ELEVATION

(Looking West)

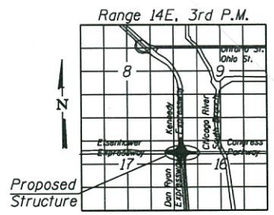


PLAN



PROFILE GRADE

(along @ I-90/94 SB)



LOCATION SKETCH

LEGEND:

Combined Sewer	Fiber Optic	FO	C = Construction Joint
Electric	E	Fire Hydrant	E = Expansion Joint
Existing Storm Sewer		Light Pole	FF = Front face of wall
		Soil Boring Location	BF = Back face of wall
Proposed Storm Sewer		Existing Fence	

NOTES:

1. Stations and offsets are measured along @ I-90/94 SB.

GENERAL PLAN & ELEVATION
RETAINING WALL 17
F.A.I. RTE. 90/94 - SECTION 2013-012R
COOK COUNTY
STATION 6246+54.17 TO 6248+31.57
STRUCTURE NO. 016-1806

AECOM

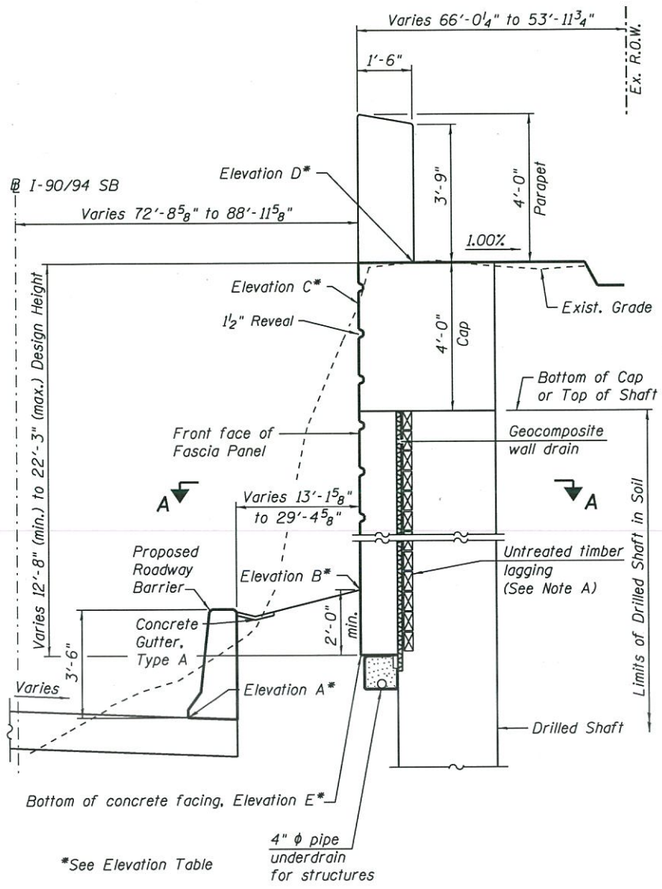
USER NAME = patelv1	DESIGNED - DD	REVISED	
	CHECKED - ATB	REVISED	
PLOT SCALE = N.T.S.	DRAWN - BRD	REVISED	
PLOT DATE = 9/30/2014	CHECKED - ATB	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 3 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	3	1
		CONTRACT NO. 60W30		
ILLINOIS FED. AID PROJECT				

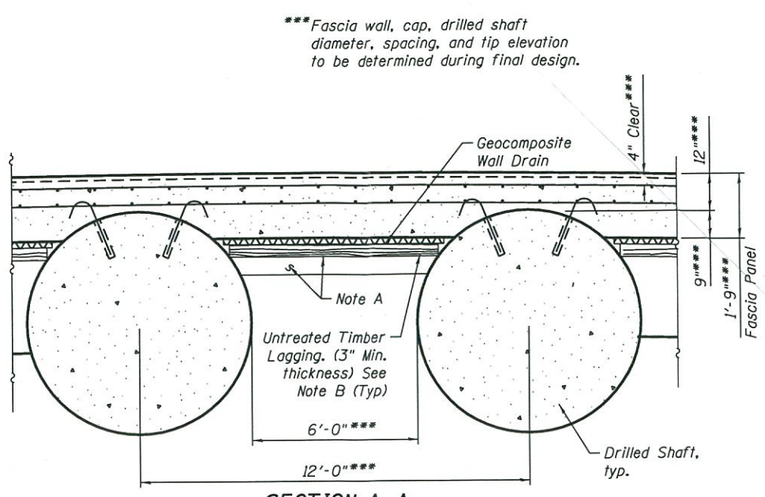
016-1806-CIRCLE10G-SHT-ACM-ST-TSL-001



*See Elevation Table

TYPICAL SECTION DRILLED SHAFT RETAINING WALL

(Looking South)



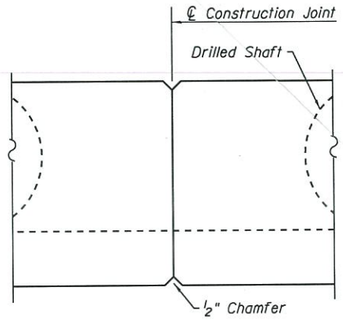
SECTION A-A

Note A
Install lagging and Geocomposite Wall Drain from top down as excavation proceeds. Minimize over-excavation and backfill voids with dry loose sand. Cost included with Class SI Concrete Miscellaneous.

Note B
The Contractor is responsible for the design and performance of the lagging system, using no less than a 3 in. nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1000 psi, until the concrete facing is installed. The Contractor shall submit design calculations and details prepared by an Illinois Licensed Structural Engineer for the attachment of the lagging to the shaft for approval by the Engineer. Alternative equivalent systems may be submitted for approval by the Engineer. Cost included with Class SI Concrete Miscellaneous.

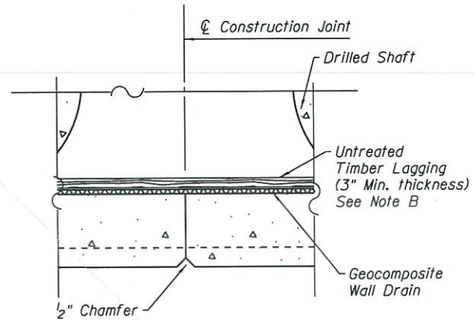
ELEVATION TABLE							
Station	Offset	Elevation A	Elevation B	Elevation C	Elevation D	Elevation E	Wall Type
6246+54.17	72'-8 5/8" Rt.	574.23	580.36	584.52	593.85	571.60	Drilled Shafts Wall
6246+71.20	75'-7 3/4" Rt.	574.27	581.38	586.77	593.85	573.32	
6246+91.20	79'-1" Rt.	574.35	582.59	590.42	593.84	575.34	
6247+00.00	80'-7 1/2" Rt.	574.39	583.14	588.44	593.84	576.23	
6247+25.00	84'-10 5/8" Rt.	574.53	584.71	590.13	593.83	578.75	
6247+48.78	88'-11 5/8" Rt.	574.68	586.23	590.66	593.82	581.16	Solder Piles Wall
6247+50.00	89'-2 1/8" Rt.	574.69	586.31	590.69	593.82	581.28	
6247+75.00	93'-5 5/8" Rt.	574.86	587.90	591.25	593.82	583.81	
6248+00.00	97'-9 1/8" Rt.	575.02	589.50	591.80	593.81	586.33	
6248+25.00	102'-0 5/8" Rt.	575.19	591.10	592.37	593.80	588.86	
6248+31.57	103'-2 1/4" Rt.	575.24	591.52	592.51	593.80	589.52	

Elevation A - Edge of Shoulder at Face of Proposed Roadway Barrier
Elevation B - Proposed Grade at Front Face of Wall
Elevation C - Existing Grade at Front Face of Wall
Elevation D - Proposed Grade at Back Face of Wall
Elevation E - Bottom of Fascia Panel



PLAN

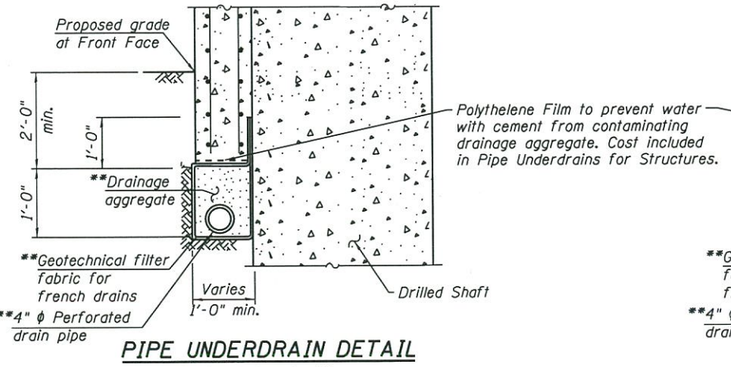
(Cap)



SECTION THRU WALL

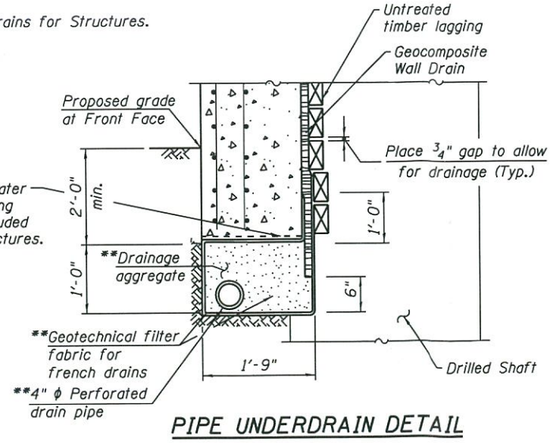
CONSTRUCTION JOINT DETAILS

**Included in the cost of Pipe Underdrains for Structures.



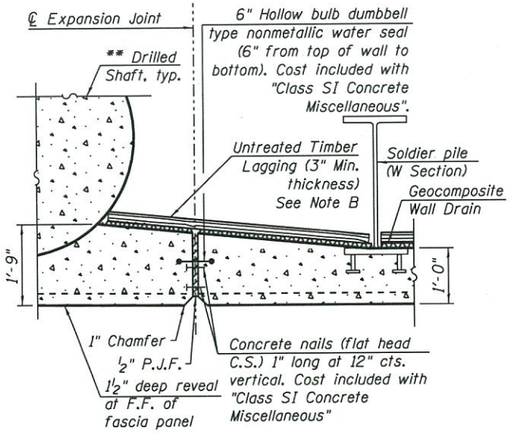
PIPE UNDERDRAIN DETAIL

(At Drilled Shaft)



PIPE UNDERDRAIN DETAIL

(Between Drilled Shaft)



EXPANSION JOINT DETAILS

(At Sta. 6247+48.78)

APPROVED
OCT 17 2014
AS A BASIS FOR
PREPARATION OF DETAILED PLANS

SECTION & DETAILS
RETAINING WALL 17
F.A.I. RTE. 90/94 - SECTION 2013-012R
COOK COUNTY
STATION 6246+54.17 TO 6248+31.57
STRUCTURE NO. 016-1806

016-1806-CIRCLE100-SHT-ACM-ST-TSL-002

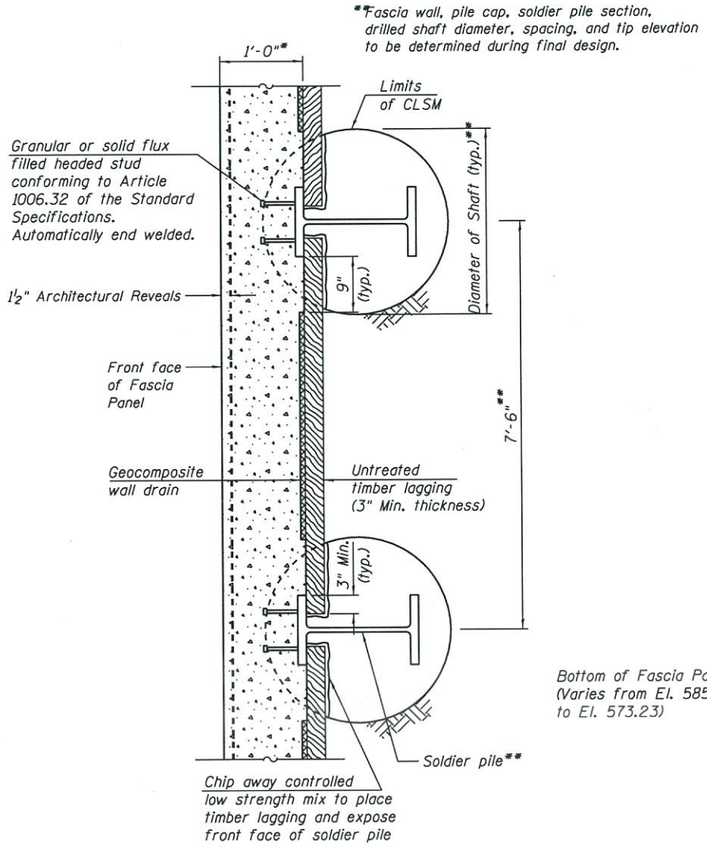
AECOM

USER NAME = patelvl	DESIGNED - DD	REVISED	
	CHECKED - ATB	REVISED	
PLOT SCALE = N.T.S.	DRAWN - BRD	REVISED	
PLOT DATE = 9/30/2014	CHECKED - ATB	REVISED	

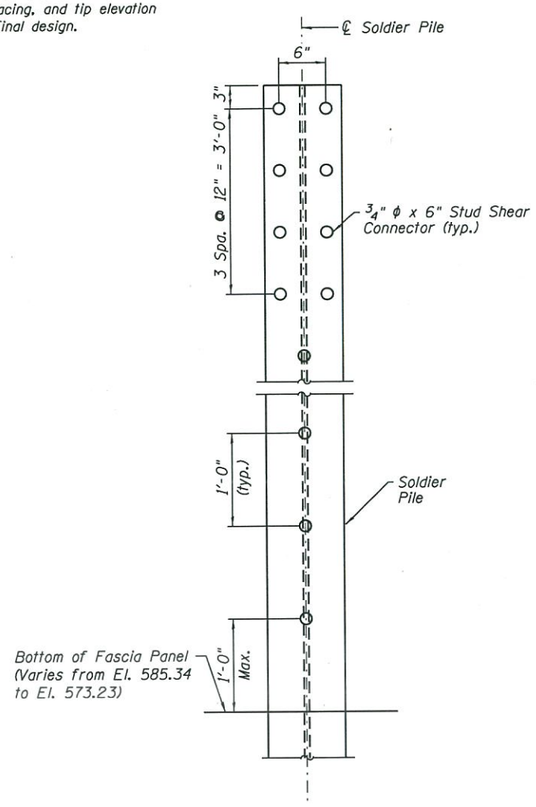
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 2 OF 3 SHEETS

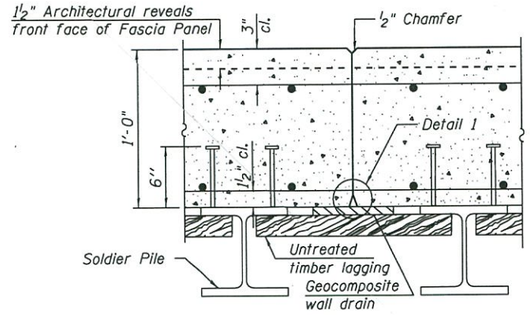
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	3	2
		CONTRACT NO. 60W30		
ILLINOIS	FED. AID PROJECT			



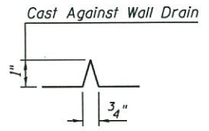
SECTION A-A



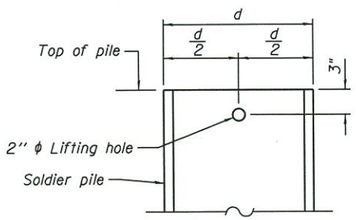
STUD SHEAR CONNECTOR DETAIL



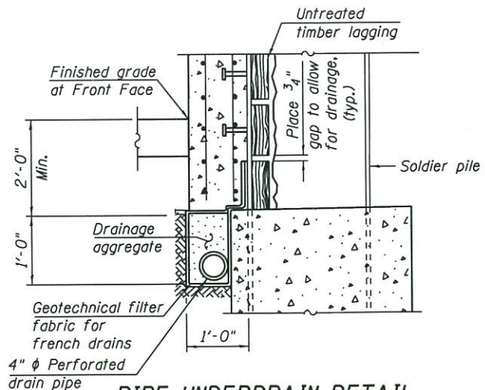
CONSTRUCTION JOINT DETAILS



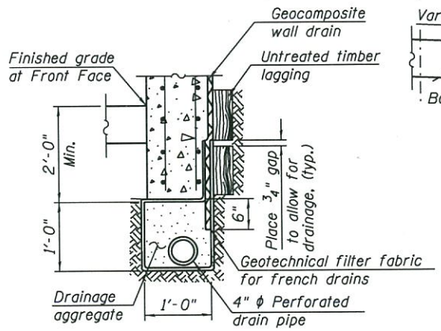
DETAIL 1



LIFTING HOLE DETAIL

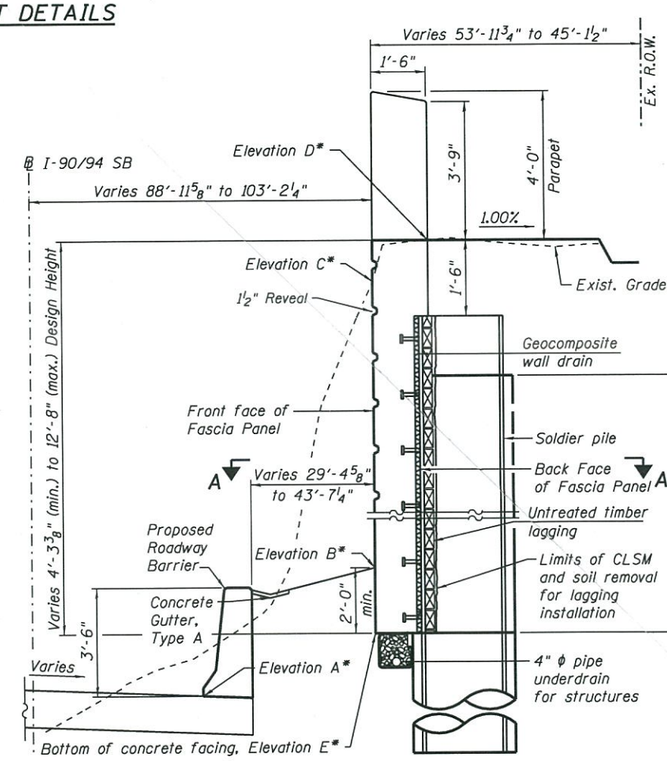


PIPE UNDERDRAIN DETAIL AT SOLDIER PILE



PIPE UNDERDRAIN DETAIL BETWEEN SOLDIER PILES

APPROVED
OCT 17 2014
AS A BASIS FOR
PREPARATION OF DETAILED PLANS



*See Elevation Table Sheet 2

TYPICAL SECTION SOLDER PILE RETAINING WALL

(Looking South)

SECTION & DETAILS
RETAINING WALL 17
F.A.I. RTE. 90/94 - SECTION 2013-012R
COOK COUNTY
STATION 6246+54.17 TO 6248+31.57
STRUCTURE NO. 016-1806

AECOM	USER NAME = patelvl	DESIGNED - VP	REVISED
		CHECKED - ATB	REVISED
	PLOT SCALE = N.T.S.	DRAWN - MRK	REVISED
	PLOT DATE = 9/30/2014	CHECKED - VP	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 3 OF 3 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	3	3
		CONTRACT NO. 60W30		
ILLINOIS	FED. AID PROJECT			

016-1806-CIRCLE100-SHT-ACM-ST-TSL-003