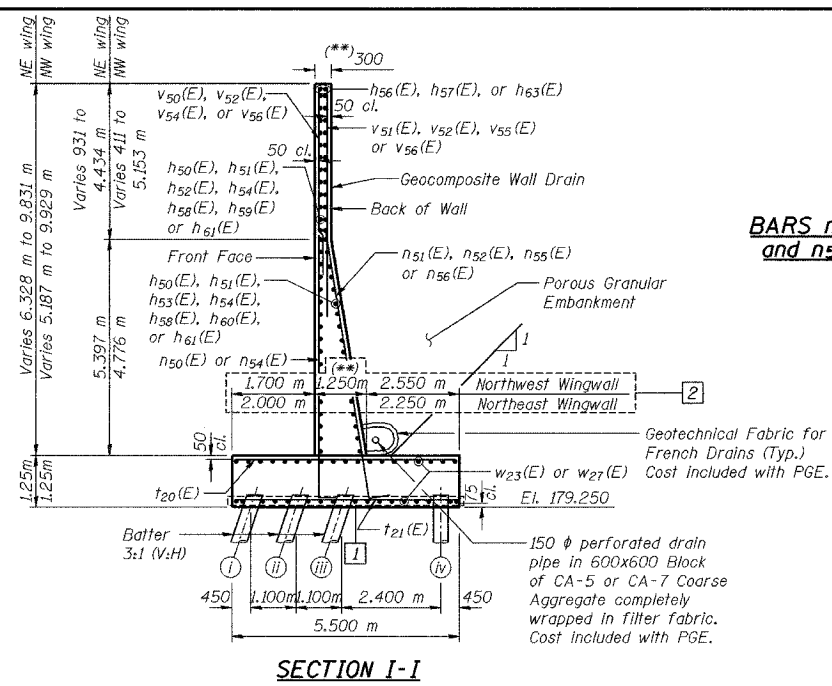
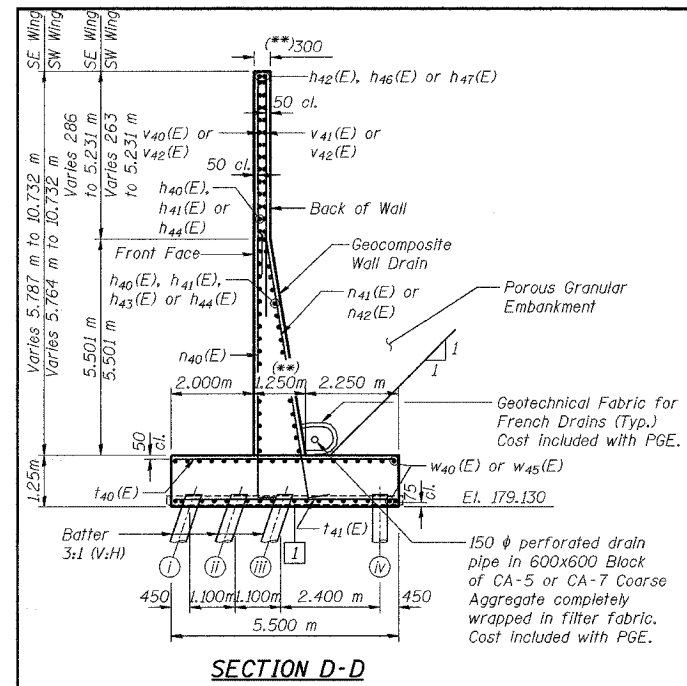


CONTRACT No. 62114
**NORTH ABUTMENT WINGWALLS
 BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
h ₅₀ (E)	104	#15	8.26	—
h ₅₁ (E)	6	#15	9.62	—
h ₅₂ (E)	21	#15	7.47	—
h ₅₃ (E)	21	#15	6.72	—
h ₅₄ (E)	6	#15	7.58	—
h ₅₅ (E)	42	#15	7.10	—
h ₅₆ (E)	4	#15	7.53	—
h ₅₇ (E)	2	#15	6.98	—
h ₅₈ (E)	8	#15	10.10	—
h ₅₉ (E)	17	#15	9.22	—
h ₆₀ (E)	17	#15	8.47	—
h ₆₁ (E)	8	#15	8.10	—
h ₆₂ (E)	38	#15	3.50	—
h ₆₃ (E)	2	#15	8.85	—
h ₆₄ (E)	40	#15	10.03	—
h ₆₅ (E)	8	#15	9.35	—
n ₅₀ (E)	84	#25	7.02	—
n ₅₁ (E)	130	#30	7.22	—
n ₅₂ (E)	34	#25	7.12	—
n ₅₃ (E)	102	#25	3.05	—
n ₅₄ (E)	52	#25	6.40	—
n ₅₅ (E)	52	#30	6.62	—
n ₅₆ (E)	38	#25	6.52	—
t ₂₀ (E)	178	#25	5.40	—
t ₂₁ (E)	165	#30	5.40	—
t ₂₂ (E)	35	#25	4.50	—
t ₂₃ (E)	42	#30	4.50	—
v ₅₀ (E)	26	#20	5.66	—
v ₅₁ (E)	26	#30	6.19	—
v ₅₂ (E)	58	#20	4.05	—
v ₅₃ (E)	76	#25	6.09	—
v ₅₄ (E)	26	#20	6.38	—
v ₅₅ (E)	26	#30	6.91	—
v ₅₆ (E)	73	#20	4.27	—
v ₅₇ (E)	38	#25	5.47	—
v ₅₈ (E)	32	#25	5.81	—
v ₅₉ (E)	37	#30	6.34	—
v ₆₀ (E)	2	#25	5.12	—
v ₆₁ (E)	2	#30	5.65	—
w ₂₀ (E)	30	#15	3.50	—
w ₂₁ (E)	14	#15	2.09	—
w ₂₂ (E)	22	#15	1.30	—
w ₂₃ (E)	72	#15	7.17	—
w ₂₄ (E)	36	#15	7.48	—
w ₂₅ (E)	72	#15	7.18	—
w ₂₆ (E)	60	#15	3.59	—
Porous Granular Embankment		m ³	1,133	
Structure Excavation		m ³	1,082	
Concrete Structures		m ³	502.8	
Reinforcement Bars, Epoxy Coated		kg	39,630	
Furnishing Metal Pile Shells, 356 φ		m	1,929.5	
Driving and Filling Shells		m	1,929.5	
Geocomposite Wall Drain		m ²	343	

**SOUTH ABUTMENT WINGWALLS
 BILL OF MATERIAL**

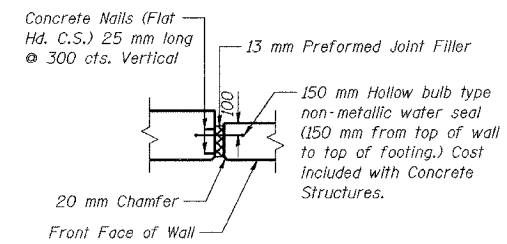
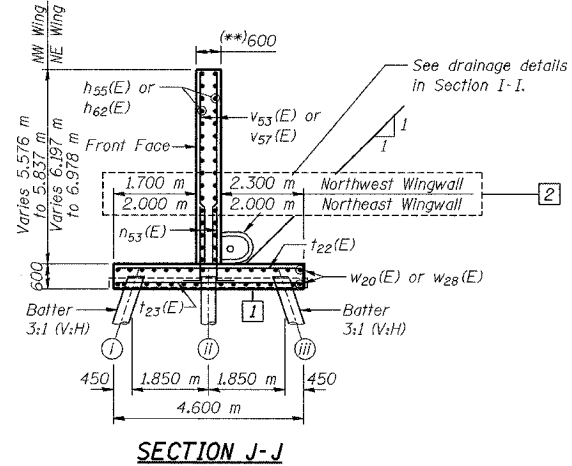
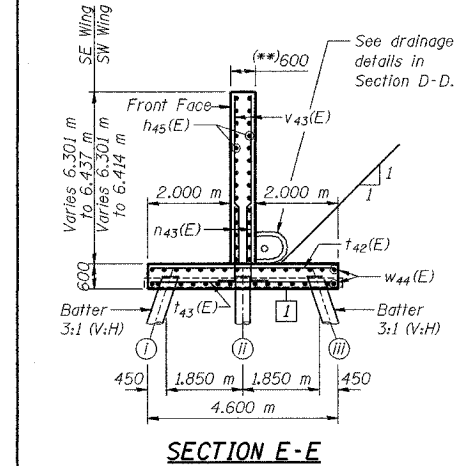
Bar	No.	Size	Length (m)	Shape
h ₄₀ (E)	146	#15	9.78	—
h ₄₁ (E)	16	#15	12.09	—
h ₄₂ (E)	4	#15	2.19	—
h ₄₃ (E)	38	#15	9.04	—
h ₄₄ (E)	16	#15	7.58	—
h ₄₅ (E)	84	#15	7.10	—
h ₄₆ (E)	4	#15	8.30	—
h ₄₇ (E)	4	#15	9.40	—
n ₄₀ (E)	118	#25	7.13	—
n ₄₁ (E)	130	#30	7.31	—
n ₄₂ (E)	75	#25	7.21	—
n ₄₃ (E)	132	#20	2.29	—
t ₄₀ (E)	162	#25	5.40	—
t ₄₁ (E)	132	#30	5.40	—
t ₄₂ (E)	54	#25	4.50	—
t ₄₃ (E)	62	#30	4.50	—
v ₄₀ (E)	62	#20	6.51	—
v ₄₁ (E)	66	#30	7.04	—
v ₄₂ (E)	146	#20	4.03	—
v ₄₃ (E)	132	#20	6.20	—
w ₄₀ (E)	72	#15	7.31	—
w ₄₁ (E)	8	#15	6.94	—
w ₄₂ (E)	6	#15	3.04	—
w ₄₃ (E)	14	#15	4.53	—
w ₄₄ (E)	60	#15	7.10	—
w ₄₅ (E)	72	#15	8.16	—
w ₄₆ (E)	22	#15	1.55	—
w ₄₇ (E)	14	#15	2.29	—
Porous Granular Embankment		m ³	1,282	
Structure Excavation		m ³	1,187	
Concrete Structures		m ³	519.3	
Reinforcement Bars, Epoxy Coated		kg	35,090	
Furnishing Metal Pile Shells, 356 φ		m	1,728.0	
Driving and Filling Shells		m	1,728.0	
Geocomposite Wall Drain		m ²	284	



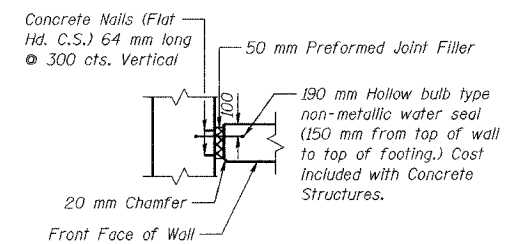
**BARS n₄₀(E) thru n₄₃(E)
 and n₅₀(E) thru n₅₆(E)**

BAR DIMENSIONS

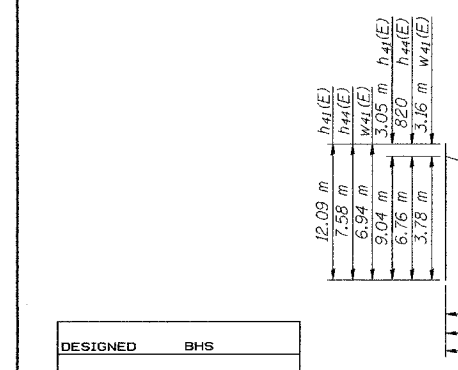
Bar	A	B
n ₄₀ (E)	6.73m	400
n ₄₁ (E)	6.81m	500
n ₄₂ (E)	6.81m	400
n ₄₃ (E)	1.99m	320
n ₅₀ (E)	6.62m	400
n ₅₁ (E)	6.72m	500
n ₅₂ (E)	6.72m	400
n ₅₃ (E)	2.65m	400
n ₅₄ (E)	6.00m	400
n ₅₅ (E)	6.12m	500
n ₅₆ (E)	6.12m	400



13 MM EXPANSION JOINT DETAIL

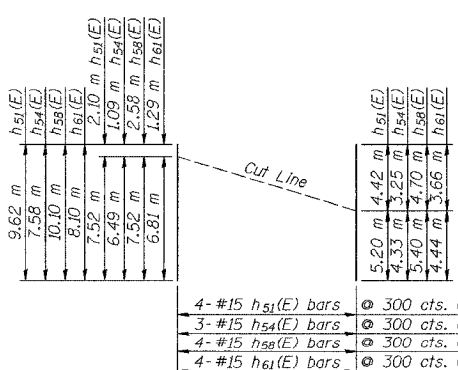


50 MM EXPANSION JOINT DETAIL



FIELD CUTTING DIAGRAM
 (Southeast and Southwest Wingwalls)

Order bars h₄₁(E), h₄₄(E), and w₄₁(E), cut to fit and use remainder in opposite end of slope.



FIELD CUTTING DIAGRAM
 (Northwest and Northeast Wingwalls)

Order bars h₅₁(E), h₅₄(E), h₅₈(E) and h₆₁(E), cut to fit and use remainder in opposite end of slope.

DESIGNED	BHS
CHECKED	GSP
DRAWN	BHS
CHECKED	GSP

MINIMUM BAR LAPS

- #15 bars = 640
- #20 bars = 790
- #25 bars = 1320
- #30 bars = 1850

LEGEND

- B.F. = Back Face
- F.F. = Front Face
- E.F. = Each Face

NOTES:
 Reinforcement bars designated (E) shall be epoxy coated.
 All edges shall have standard 20 mm chamfers except as noted.
 All dimensions are in millimeters (mm) except as noted.
 See Sheet S-28 for Rustication details.
 (***) Wall thickness includes 40 mm Rustication.

ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)
 UNDER WENTWORTH AVE
WINGWALL DETAILS (1 OF 2)
 SECTION 2626.1B
 COOK COUNTY
 STATION 7 + 579.488
 STRUCTURE NO. 016-2790
 DATE 07/05
AMERICAN
 CONSULTING ENGINEERS

FOR INFORMATION ONLY