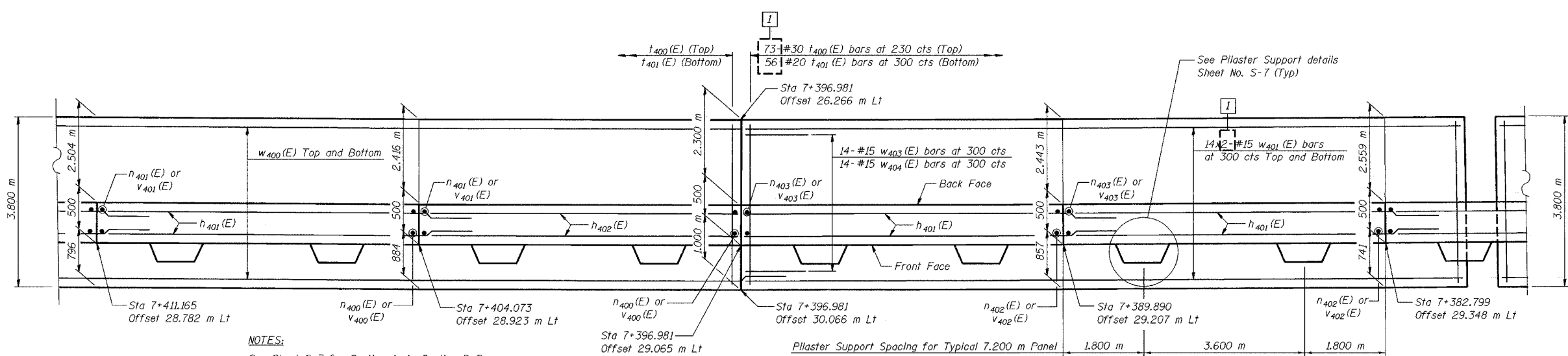
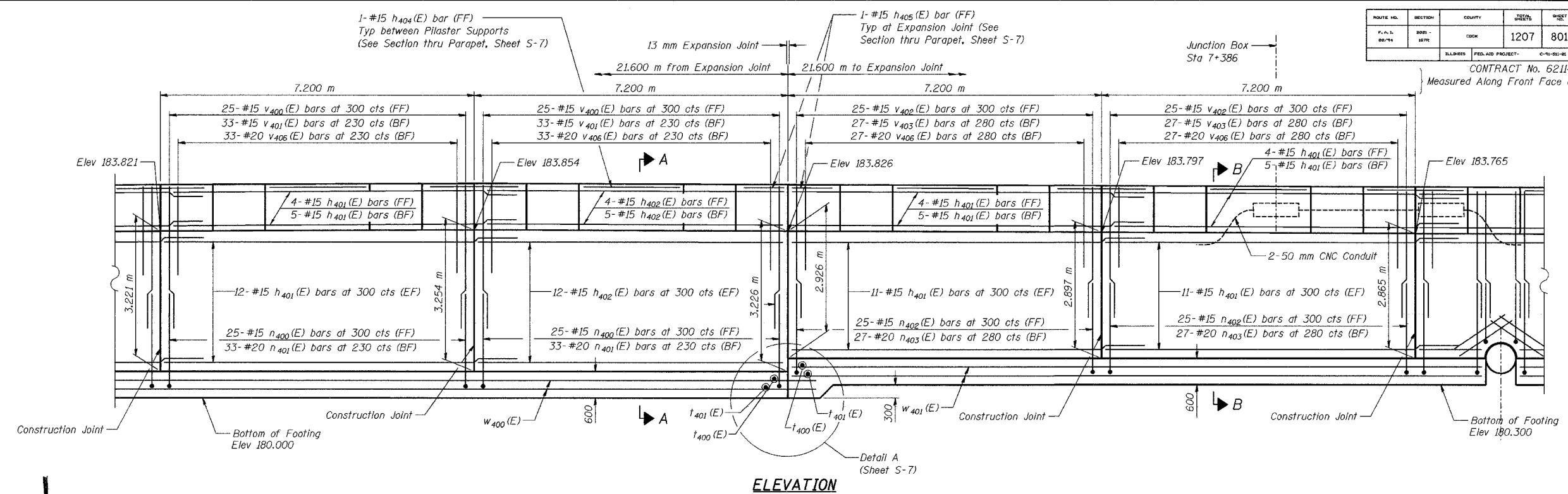


ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO. S-5 12 SHEETS
F.A.L. 88/94	2001- 167R	COOK	1207	801	
CONTRACT No. 62114					Measured Along Front Face of Wall
ILLINOIS DEPARTMENT OF TRANSPORTATION					



NOTES:
 See Sheet S-7 for Section A-A, Section B-B, Expansion Joint Detail, and Bill of Material.
 See Sheet S-8 for Rustication details.
 Stations are referenced to \odot I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 See Electrical Drawings for Junction Box and Conduit Details.
 Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

DESIGNED	KFA
CHECKED	MJW
DRAWN	MJW
CHECKED	GSP

MINIMUM BAR LAPS
 #15 bars = 640
 #20 bars = 790

LEGEND
 BF = Back Face
 FF = Front Face
 EF = Each Face

REVISED 10-22-04 KFA

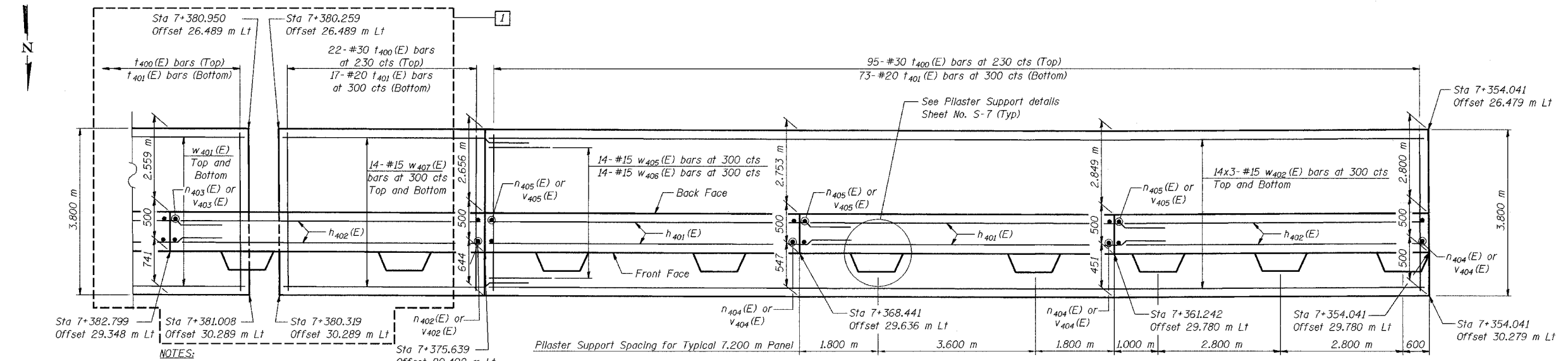
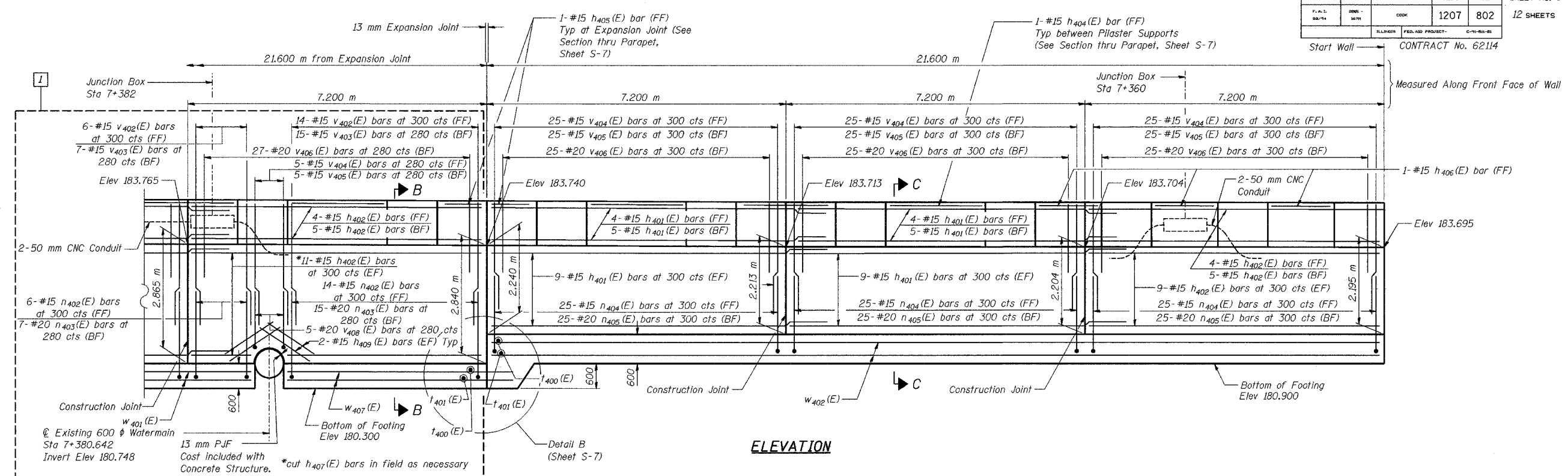
ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.L. ROUTE 80/94 AND U.S. ROUTE 6
 LOCAL ROAD RECONSTRUCTION

PLAN AND ELEVATION (3 OF 4)
SECTION 2001-167R
COOK COUNTY
STATION 7+354.041 to STATION 7+465.004
STRUCTURE NO. 016-W854
 DATE 07/05

AMERICAN
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	PROJECT	SHEET	SHEET NO. S-6 12 SHEETS
F.A.L. 80/94	ZONE 16TH	COOK	1207 802	802	
CONTRACT No. 62114					



NOTES:
 See Sheet S-7 for Section B-B, Section C-C Expansion Joint Detail, and Bill of Material.
 See Sheet S-8 for Rustication details.
 Stations are referenced to \odot I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 See Electrical Drawings for Junction Box and Conduit Details.
 Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

DESIGNED	KFA
CHECKED	MJW
DRAWN	MJW
CHECKED	GSP

MINIMUM BAR LAPS
 #15 bars = 640
 #20 bars = 790

LEGEND
 BF = Back Face
 FF = Front Face
 EF = Each Face

REVISED 10-22-04 KFA

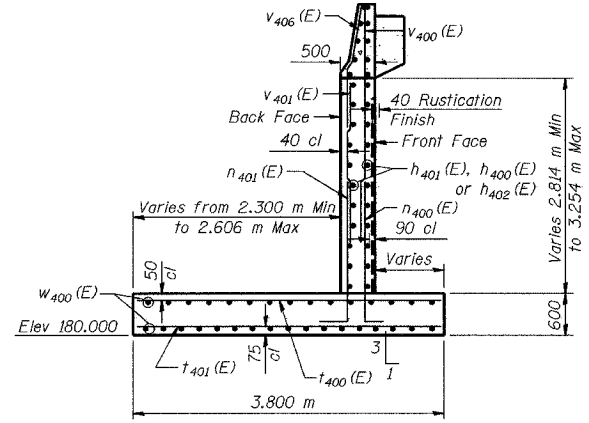
ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. ROUTE 80/94 AND U.S. ROUTE 6
 LOCAL ROAD RECONSTRUCTION

PLAN AND ELEVATION (4 OF 4)
 SECTION 2001-167R
 COOK COUNTY
 STATION 7+354.041 to STATION 7+465.004
 STRUCTURE NO. 016-W854

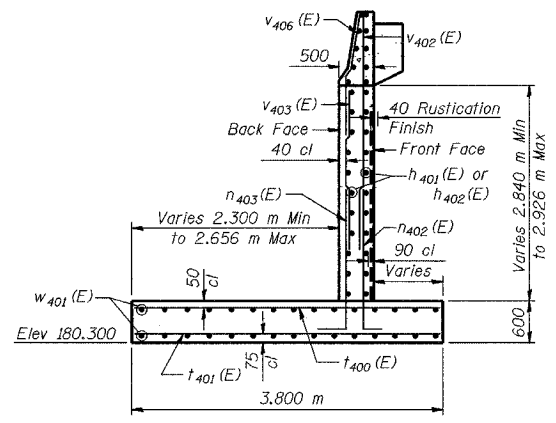
DATE 07/05

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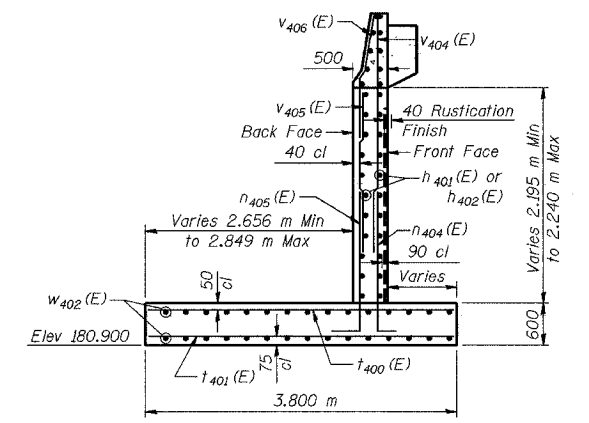
FOR INFORMATION ONLY



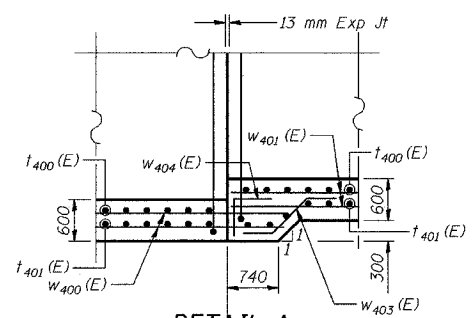
SECTION A-A



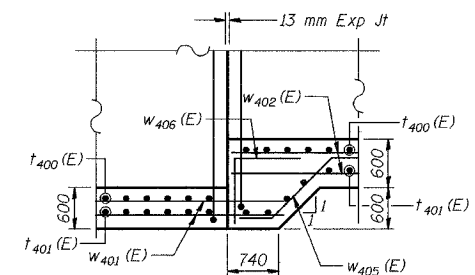
SECTION B-B



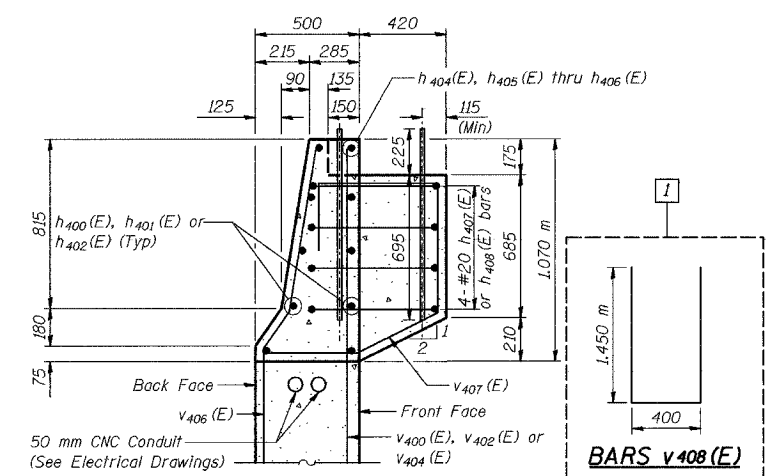
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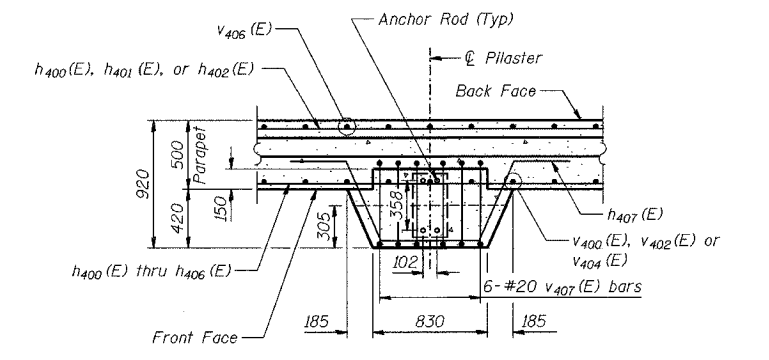
DETAIL A



DETAIL B

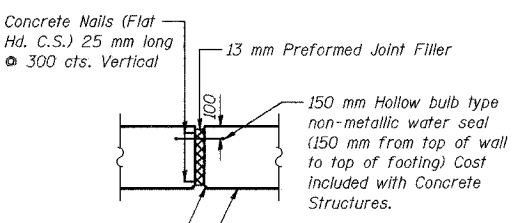


SECTION THRU PARAPET

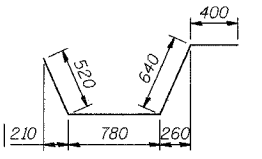


TYPICAL PILASTER SUPPORT - PLAN VIEW

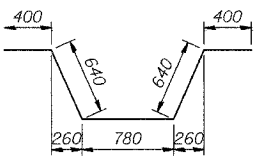
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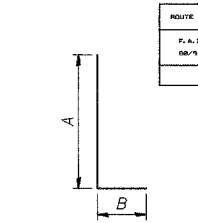
13 MM EXPANSION JOINT DETAIL



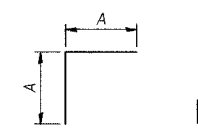
BAR h408(E)



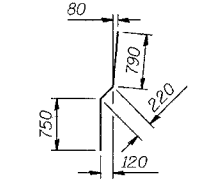
BAR h407(E)



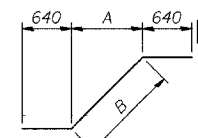
BARS n400(E) thru n405(E)



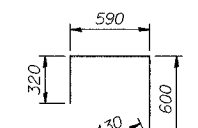
BARS w404(E) and w405(E)



BARS v406(E)



BARS w403(E) and w405(E)



BAR v407(E)

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h400(E)	31	#15	4.88	
h401(E)	306	#15	7.84	
h402(E)	151	#15	7.10	
h403(E)	16	#15	0.60	
h404(E)	23	#15	2.30	
h405(E)	9	#15	1.10	
h406(E)	4	#15	1.50	
h407(E)	124	#20	2.86	
h408(E)	8	#20	2.34	
h409(E)	8	#15	1.20	
n400(E)	240	#15	2.05	L
n401(E)	316	#20	2.11	L
n402(E)	70	#15	1.96	L
n403(E)	76	#20	2.02	L
n404(E)	75	#15	1.69	L
n405(E)	75	#20	1.75	L
t400(E)	505	#30	3.70	
t401(E)	376	#20	3.70	
v400(E)	240	#15	3.62	
v401(E)	316	#15	2.55	
v402(E)	70	#15	3.42	
v403(E)	76	#15	2.35	
v404(E)	80	#15	3.00	
v405(E)	80	#15	1.93	
v406(E)	472	#20	1.76	
v407(E)	198	#20	2.39	
v408(E)	5	#20	3.30	
w400(E)	224	#15	9.28	
w401(E)	156	#15	8.41	
w402(E)	84	#15	7.60	
w403(E)	14	#15	2.38	
w404(E)	14	#15	1.54	
w405(E)	14	#15	2.79	
w406(E)	14	#15	2.24	
w407(E)	28	#15	5.26	
Structure Excavation		m ³	1,467	
Concrete Structures		m ³	466.0	
Protective Coat		m ²	657	
Reinforcement Bars, Epoxy Coated		kg	36,150	
Geocomposite Wall Drain		m ²	321	
Pipe Underdrains for Structures 150 mm		m	120.5	
Noise Abatement Wall Anchor Rod Assembly		Each	33	

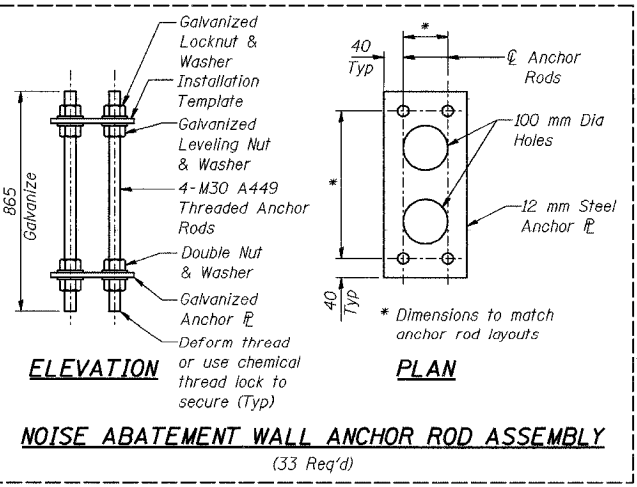
BAR DIMENSIONS

Bar	A	B
n400(E)	1.79m	260
n401(E)	1.79m	320
n402(E)	1.66m	260
n403(E)	1.66m	320
n404(E)	1.35m	260
n405(E)	1.49m	320
w403(E)	770	1,10m
w404(E)	770	---
w405(E)	1,07m	1,51m
w406(E)	1,07m	---

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790

DESIGNED	KFA
CHECKED	MJW
DRAWN	MJW
CHECKED	GSP

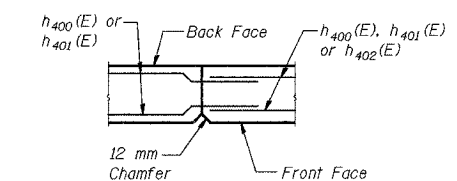


ELEVATION

PLAN

NOISE ABATEMENT WALL ANCHOR ROD ASSEMBLY

(33 Req'd)



CONSTRUCTION JOINT DETAIL

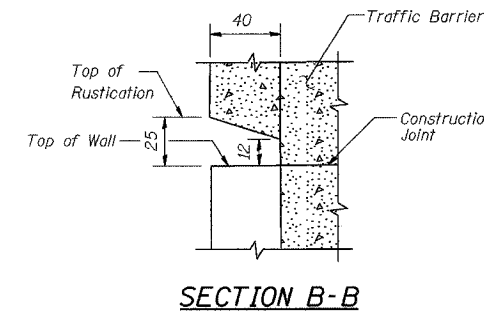
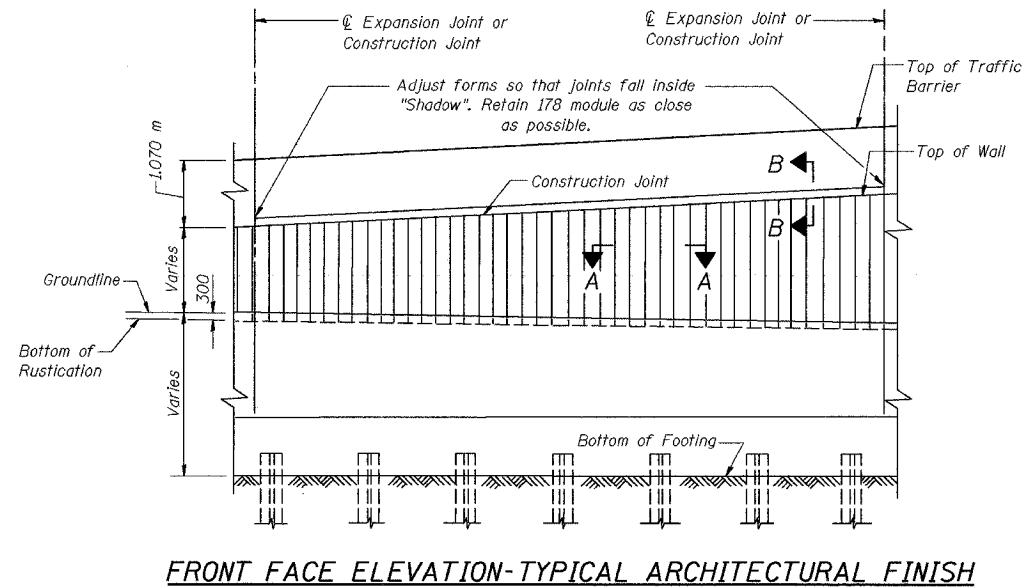
1 REVISED 10-22-04 KFA
2 REVISED 05-25-04 KFA

NOTES:
See Sheet S-8 for Rustication details.
Stations are referenced to I-80/94.
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.
See Typical Section on Sheet S-2 for Drainage Details and Protective Coat Limits.

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.L. ROUTE 80/94 AND U.S. ROUTE 6
LOCAL ROAD RECONSTRUCTION
WALL SECTIONS AND DETAILS
SECTION 2001-167R
COOK COUNTY
STATION 7+354.041 TO STATION 7+465.004
STRUCTURE NO. 016-W854
DATE 07/05

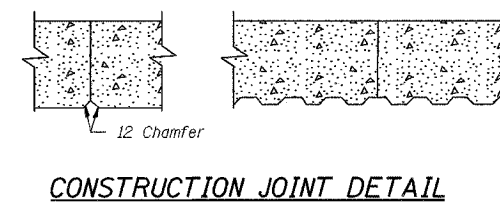
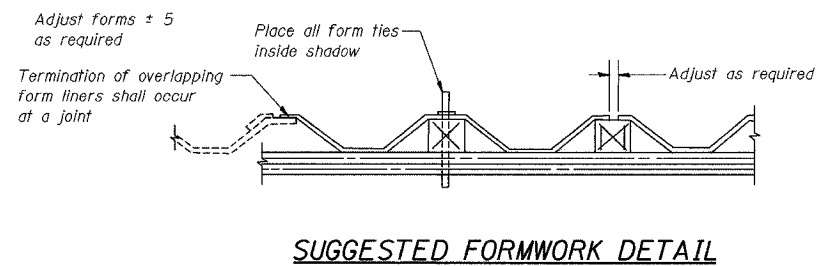
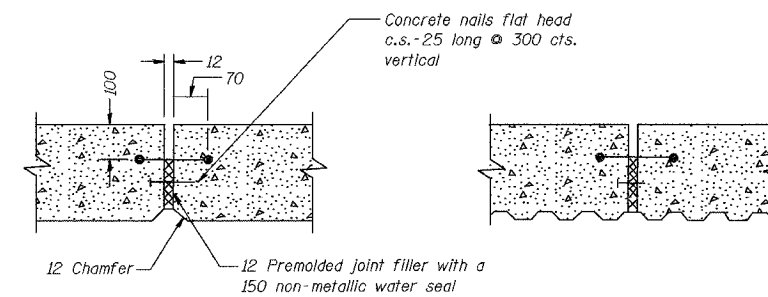
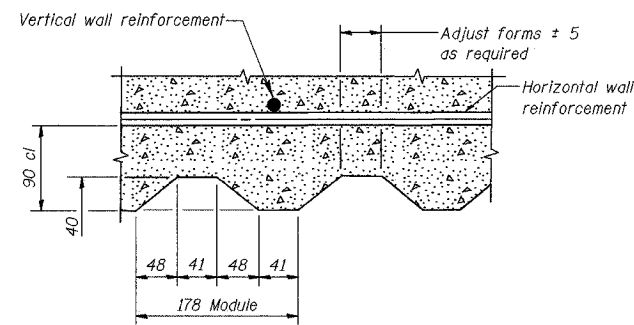


FOR INFORMATION ONLY



RUSTICATION LIMITS

STATION	TOP OF WALL ELEVATION	BOTTOM OF RUSTICATION ELEVATION
7+354.041	183.695	183.395
7+361.242	183.704	183.149
7+368.441	183.713	182.807
7+375.639	183.740	182.465
7+382.799	183.765	182.243
7+389.890	183.797	182.144
7+396.981	183.826	182.016
7+404.073	183.854	181.972
7+411.165	183.821	181.928
7+418.258	183.762	181.885
7+425.351	183.701	181.842
7+432.445	183.639	181.801
7+439.539	183.580	181.759
7+446.634	183.534	181.718
7+453.730	183.488	181.928
7+460.825	183.441	182.679
7+465.004	183.414	183.121



BILL OF MATERIAL

Item	Unit	Total
Rustication Finish	m ²	166

Note: All dimensions are in millimeters (mm) unless otherwise noted.

DESIGNED	KFA
CHECKED	MJW
DRAWN	MJW
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. ROUTE 80/94 AND U.S. ROUTE 6
 LOCAL ROAD RECONSTRUCTION

RUSTICATION FINISH DETAILS
 SECTION 2001-167R
 COOK COUNTY
 STATION 7+354.041 to STATION 7+465.004
 STRUCTURE NO. 016-W854

DATE 07/05

AMERICAN
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

10/20/05 10:12 AM

BORING NO. AR-021 (1 OF 2)

BORING NO. AR-021 (2 OF 2)

BORING NO. AR-022 (1 OF 1)

Wang Engineering, INC.
wangen3ewangeng.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

BORING LOG AR-021
WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: USGS
Elevation: 183.06 m
North: 545536.54 m
East: 366776.46 m
Station: 7 +340.37
Offset: 15.91 LT

Page 1 of 2

Wang Engineering, INC.
wangen3ewangeng.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

BORING LOG AR-021
WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: USGS
Elevation: 183.06 m
North: 545536.54 m
East: 366776.46 m
Station: 7 +340.37
Offset: 15.91 LT

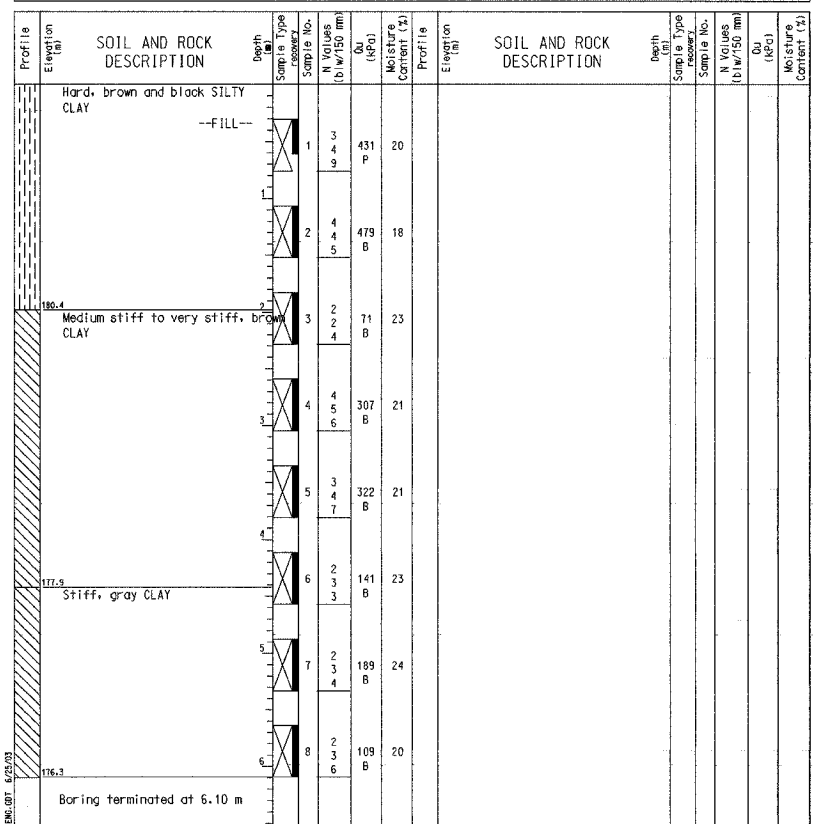
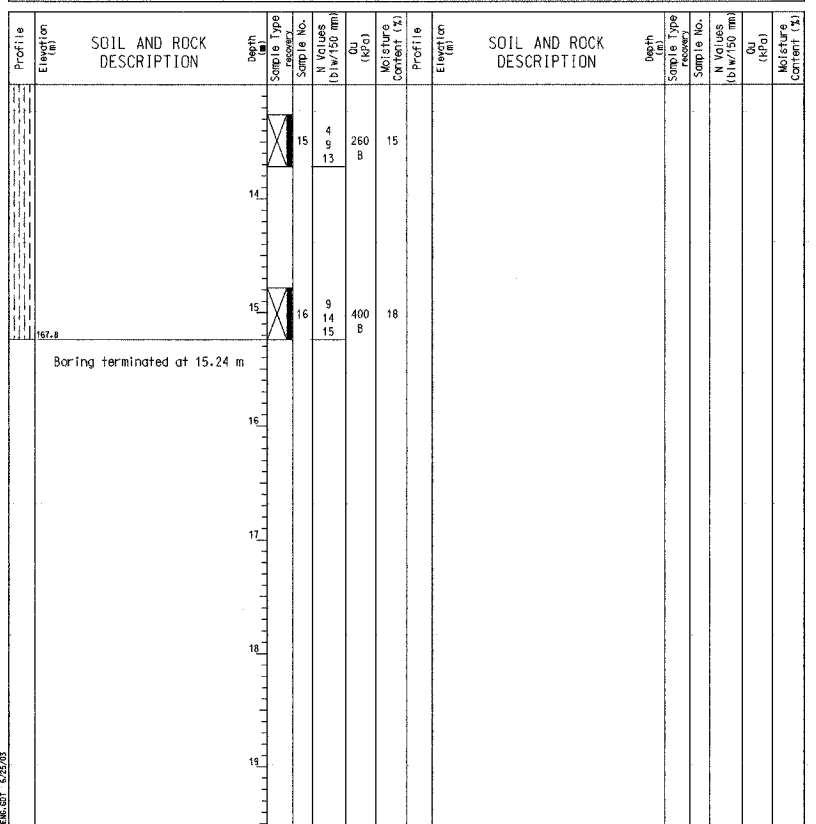
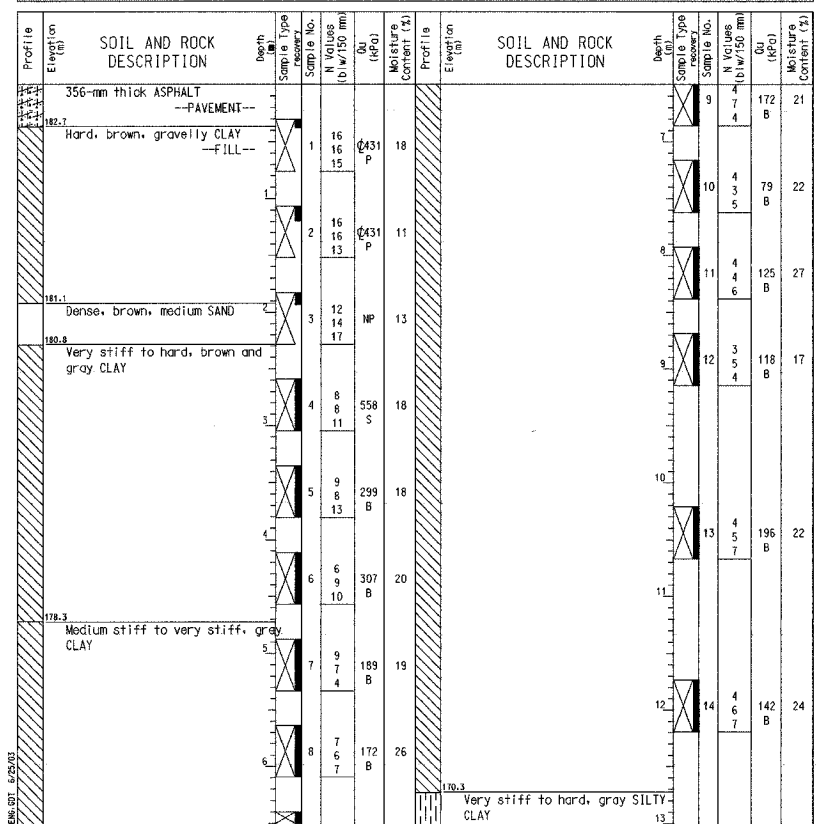
Page 2 of 2

Wang Engineering, INC.
wangen3ewangeng.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

BORING LOG AR-022
WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: USGS
Elevation: 182.35 m
North: 545542.99 m
East: 366799.47 m
Station: 7 +363.45
Offset: 22.10 LT

Page 1 of 1



GENERAL NOTES
Begin Drilling 11-15-2001 Complete Drilling 11-16-2001
Drilling Contractor TSC Drill Rig CP750C
Driller J&A Logger B. Fugiel Checked by L. Jardache
Drilling Method Mud Rotary; Boring grouted upon completion

WATER LEVEL DATA
While Drilling DRY
At Completion of Drilling DRY
Time After Drilling NA
Depth to Water NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES
Begin Drilling 11-15-2001 Complete Drilling 11-16-2001
Drilling Contractor TSC Drill Rig CP750C
Driller J&A Logger B. Fugiel Checked by L. Jardache
Drilling Method Mud Rotary; Boring grouted upon completion

WATER LEVEL DATA
While Drilling DRY
At Completion of Drilling DRY
Time After Drilling NA
Depth to Water NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES
Begin Drilling 09-18-2001 Complete Drilling 09-18-2001
Drilling Contractor TSC Drill Rig B-61
Driller G&E Logger B. Fugiel Checked by B. Fugiel
Drilling Method 2.25-in. SSA; Backfilled

WATER LEVEL DATA
While Drilling DRY
At Completion of Drilling DRY
Time After Drilling NA
Depth to Water NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	KFA
CHECKED	MJW
DRAWN	MJW
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.L. ROUTE 80/94 AND U.S. ROUTE 6
LOCAL ROAD RECONSTRUCTION

BORING LOGS (1 OF 4)
SECTION 2001-167R
COOK COUNTY
STATION 7+354.041 to STATION 7+465.004
STRUCTURE NO. 016-W854
DATE 07/05

AMERICAN CONSULTING ENGINEERS

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	PROJECT NO.	SHEET NO.
1207	806	COOK	1207 806	12 SHEETS
CONTRACT No. 62114				

BORING NO. AR-023 (1 OF 2)

BORING NO. AR-023 (2 OF 2)

BORING NO. AR-024 (1 OF 1)

BORING LOG AR-023 Page 1 of 2

Wang Engineering, INC.
 Consulting Geotechnical and Environmental Engineers
 wangeng3ewangeng.com
 100 Fairbank Street
 Addison, IL 60101
 Telephone: 630 458-0700
 Fax: 630 458-0900

WEI Job No.: 255-08-01
 Client: American Consulting Engineers
 Project: FAI 80/94, I-294 to US 41
 Location: s13 T36N R10W & s29 R15E T36N

Datum: USGS
 Elevation: 182.53 m
 North: 545542.01 m
 East: 366823.47 m
 Station: 7 +387.36
 Offset: 20.86 LT

BORING LOG AR-023 Page 2 of 2

Wang Engineering, INC.
 Consulting Geotechnical and Environmental Engineers
 wangeng3ewangeng.com
 100 Fairbank Street
 Addison, IL 60101
 Telephone: 630 458-0700
 Fax: 630 458-0900

WEI Job No.: 255-08-01
 Client: American Consulting Engineers
 Project: FAI 80/94, I-294 to US 41
 Location: s13 T36N R10W & s29 R15E T36N

Datum: USGS
 Elevation: 182.53 m
 North: 545542.01 m
 East: 366823.47 m
 Station: 7 +387.36
 Offset: 20.86 LT

BORING LOG AR-024 Page 1 of 1

Wang Engineering, INC.
 Consulting Geotechnical and Environmental Engineers
 wangeng3ewangeng.com
 100 Fairbank Street
 Addison, IL 60101
 Telephone: 630 458-0700
 Fax: 630 458-0900

WEI Job No.: 255-08-01
 Client: American Consulting Engineers
 Project: FAI 80/94, I-294 to US 41
 Location: s13 T36N R10W & s29 R15E T36N

Datum: USGS
 Elevation: 182.30 m
 North: 545541.99 m
 East: 366846.88 m
 Station: 7 +410.52
 Offset: 20.80 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
182.2	Black SANDY LOAM	0					179.9	Medium stiff to very stiff, gray CLAY	0	7	3	63	22
	---TOPSOIL---									9	3	2	
	Hard, brown and gray SILTY CLAY	1	1	2	393	17			10	2	3	133	24
	---FILL---	1	2	3					11	2	3	189	24
180.9	Hard, brown CLAY	1.5	3	3	589	18			12	2	3	236	20
179.9	Very stiff, gray CLAY	2	4	4	236	17			13	4	5	251	20
178.3	Medium dense, gray SILT	2.5	5	7	204	20			14	4	5	267	20
177.4	Gray SILTY CLAY	3	6	7	NP	20							
177.5	Medium dense, gray SILT	3.5	7	5	NP	22							
176.9	Very stiff, gray SILTY CLAY	4	8	4	NP	20							
176.9	Medium dense, gray SILT	4.5											

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
189.2	Hard, gray SILTY CLAY	14	15	3	236	15							
187.3	Boring terminated at 15.24 m	15	16	4	447	13							

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/150 mm)	Qu (kPa)	Moisture Content (%)
431.4	Hard, black, brown, and gray SILTY CLAY	1	3	3	431	21	175.6	Stiff, gray CLAY	10	4	4	118	19
	---FILL---						174.7	Boring terminated at 7.62 m					
456.8	Hard, brown CLAY	2	4	4	558	19							
456.8	Hard, brown CLAY	2	5	5	558	19							
179.6	Loose, brown SAND	3	4	3	227	20							
178.4	Stiff to very stiff, gray CLAY	4	3	3	110	20							
178.4	Stiff to very stiff, gray CLAY	4	4	4	110	20							
178.4	Stiff to very stiff, gray CLAY	4	5	5	110	20							
176.6	Medium dense, gray SILT	6	3	4	118	18							
176.6	Medium dense, gray SILT	6	4	4	118	18							
176.6	Medium dense, gray SILT	6	5	5	118	18							
176.6	Medium dense, gray SILT	6	6	6	118	18							
176.6	Medium dense, gray SILT	6	7	2	133	21							
176.6	Medium dense, gray SILT	6	8	10	12	23							

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling 10-15-2001	Complete Drilling 10-15-2001	While Drilling	DRY
Drilling Contractor TSC	Drill Rig B-61	At Completion of Drilling	DRY
Driller GAF	Logger B. Fugiel	Time After Drilling	NA
Drilling Method 3.25-in. HSA	Grouted	Depth to Water	NA

The stratification lines represent the approximate boundary between soil types. The actual transition may be gradual.

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling 10-15-2001	Complete Drilling 10-15-2001	While Drilling	DRY
Drilling Contractor TSC	Drill Rig B-61	At Completion of Drilling	DRY
Driller GAF	Logger B. Fugiel	Time After Drilling	NA
Drilling Method 3.25-in. HSA	Grouted	Depth to Water	NA

The stratification lines represent the approximate boundary between soil types. The actual transition may be gradual.

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling 09-18-2001	Complete Drilling 09-18-2001	While Drilling	DRY
Drilling Contractor TSC	Drill Rig B-61	At Completion of Drilling	DRY
Driller GAF	Logger B. Fugiel	Time After Drilling	NA
Drilling Method 2.25-in. SSA	Backfilled	Depth to Water	NA

The stratification lines represent the approximate boundary between soil types. The actual transition may be gradual.

DESIGNED	KFA
CHECKED	MJW
DRAWN	MJW
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. ROUTE 80/94 AND U.S. ROUTE 6
 LOCAL ROAD RECONSTRUCTION

BORING LOGS (2 OF 4)
SECTION 2001-167R
COOK COUNTY
STATION 7+354.041 to STATION 7+465.004
STRUCTURE NO. 016-W854

DATE 07/05

AMERICAN
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

BORING NO. AR-025 (1 OF 2)

BORING NO. AR-025 (2 OF 2)

BORING NO. AR-026 (1 OF 1)

BORING LOG AR-025 Page 1 of 2

Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: USGS
Elevation: 182.04 m
North: 545541.95 m
East: 366869.30 m
Station: 7 +432.7
Offset: 20.98 LT

BORING LOG AR-025 Page 2 of 2

Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

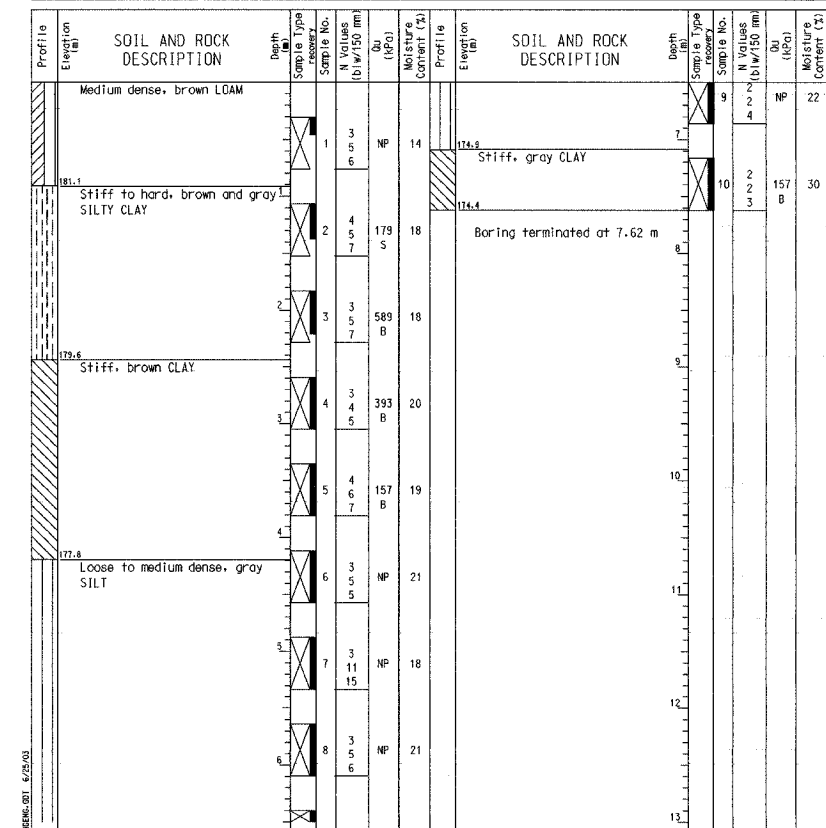
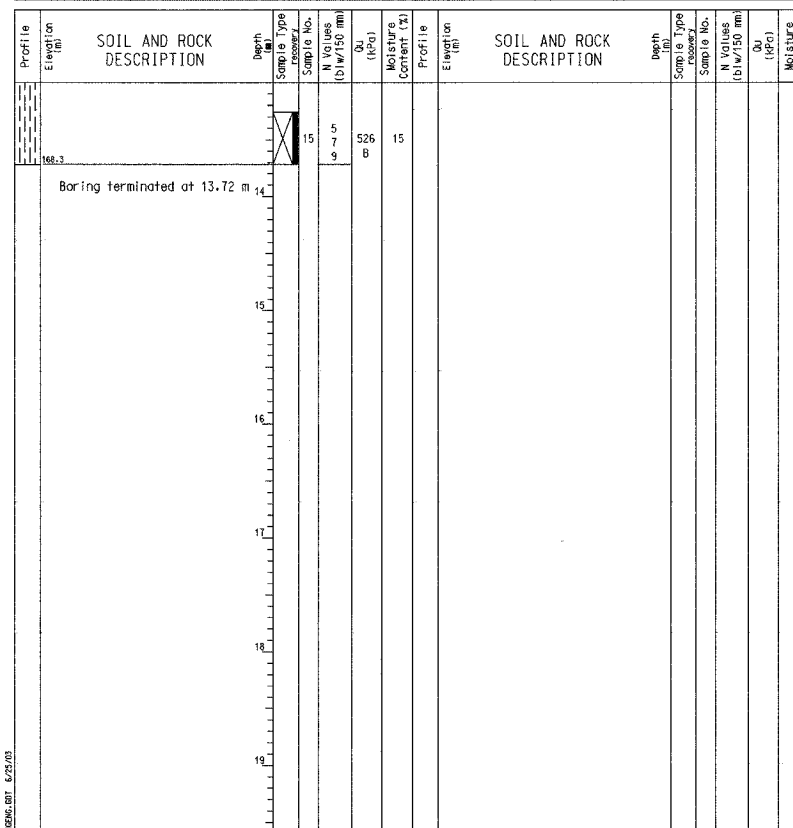
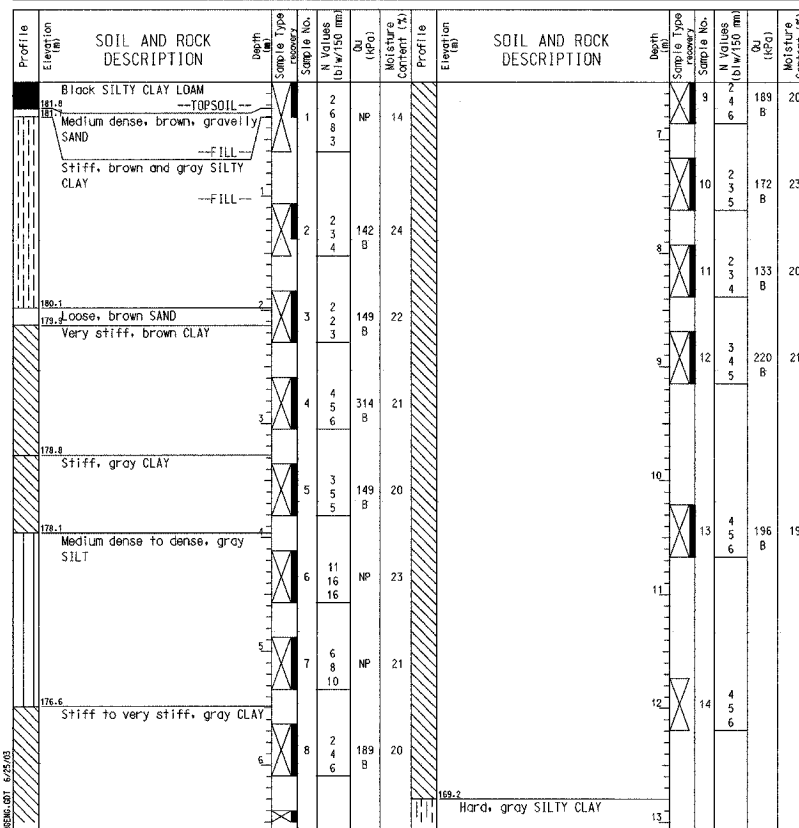
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North: 545541.95 m
East: 366869.30 m
Station: 7 +432.7
Offset: 20.98 LT

BORING LOG AR-026 Page 1 of 1

Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: USGS
Elevation: 182.01 m
North: 545541.01 m
East: 366892.38 m
Station: 7 +455.54
Offset: 20.54 LT



GENERAL NOTES

Begin Drilling 10-08-2001 Complete Drilling 10-08-2001
Drilling Contractor TSC Drill Rig B-61
Driller G&F Logger B. Fugiel Checked by B. Fugiel
Drilling Method 3.25-in. HSA; Grouted

WATER LEVEL DATA

While Drilling DRY
At Completion of Drilling DRY
Time After Drilling NA
Depth to Water NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES

Begin Drilling 10-08-2001 Complete Drilling 10-08-2001
Drilling Contractor TSC Drill Rig B-61
Driller G&F Logger B. Fugiel Checked by B. Fugiel
Drilling Method 3.25-in. HSA; Grouted

WATER LEVEL DATA

While Drilling DRY
At Completion of Drilling DRY
Time After Drilling NA
Depth to Water NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES

Begin Drilling 09-18-2001 Complete Drilling 09-18-2001
Drilling Contractor TSC Drill Rig B-61
Driller G&F Logger B. Fugiel Checked by B. Fugiel
Drilling Method 2.25-in. SSA; Backfilled

WATER LEVEL DATA

While Drilling DRY
At Completion of Drilling DRY
Time After Drilling NA
Depth to Water NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	KFA
CHECKED	MJW
DRAWN	MJW
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 80/94 AND U.S. ROUTE 6
LOCAL ROAD RECONSTRUCTION

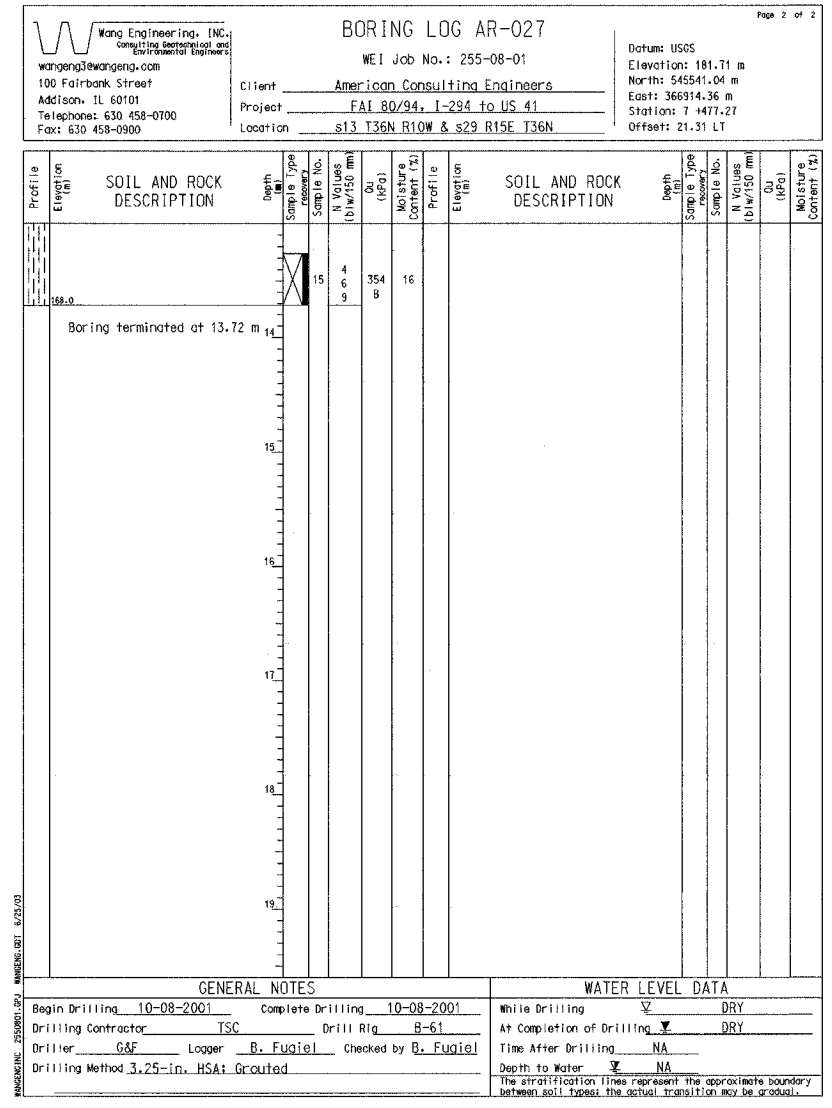
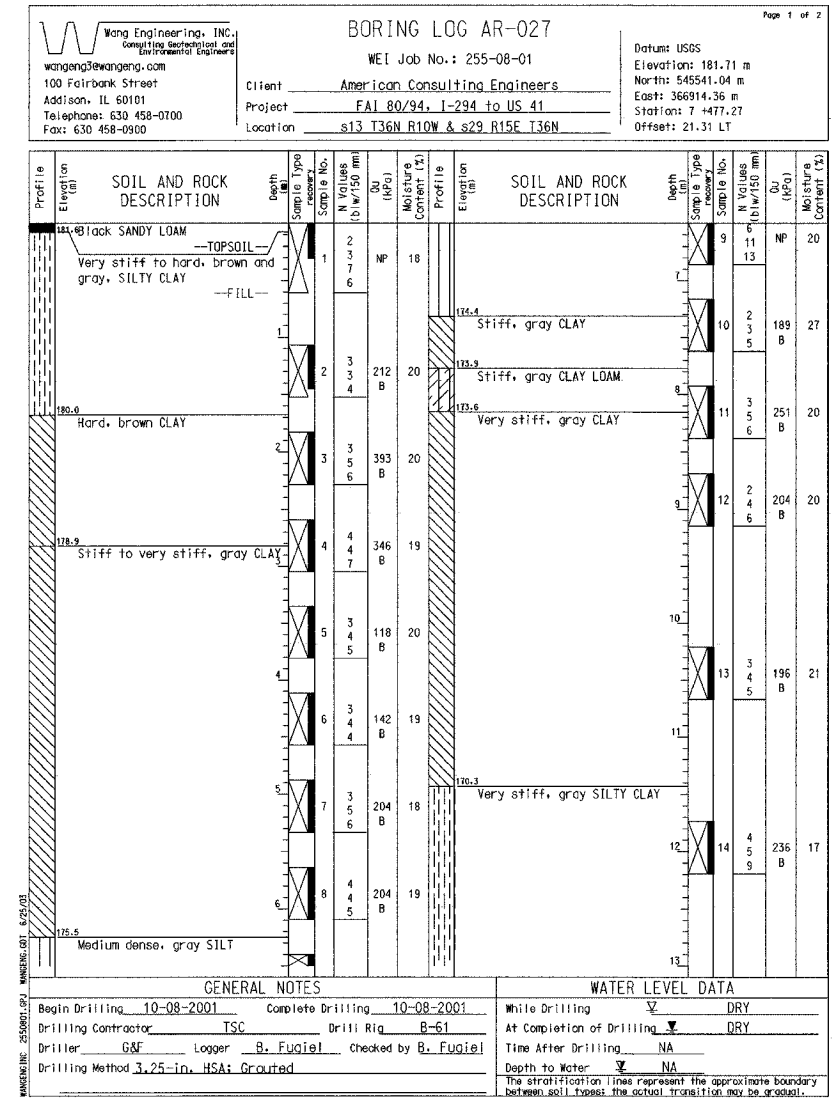
BORING LOGS (3 OF 4)
SECTION 2001-167R
COOK COUNTY
STATION 7+354.041 to STATION 7+465.004
STRUCTURE NO. 016-W854
DATE 07/05

AMERICAN
CONSULTING ENGINEERS

FOR INFORMATION ONLY

BORING NO. AR-027 (1 OF 2)

BORING NO. AR-027 (2 OF 2)



DESIGNED	KFA
CHECKED	MJW
DRAWN	MJW
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.L. ROUTE 80/94 AND U.S. ROUTE 6
LOCAL ROAD RECONSTRUCTION

BORING LOGS (4 OF 4)
SECTION 2001-167R
COOK COUNTY
STATION 7+354.041 to STATION 7+465.004
STRUCTURE NO. 016-W854

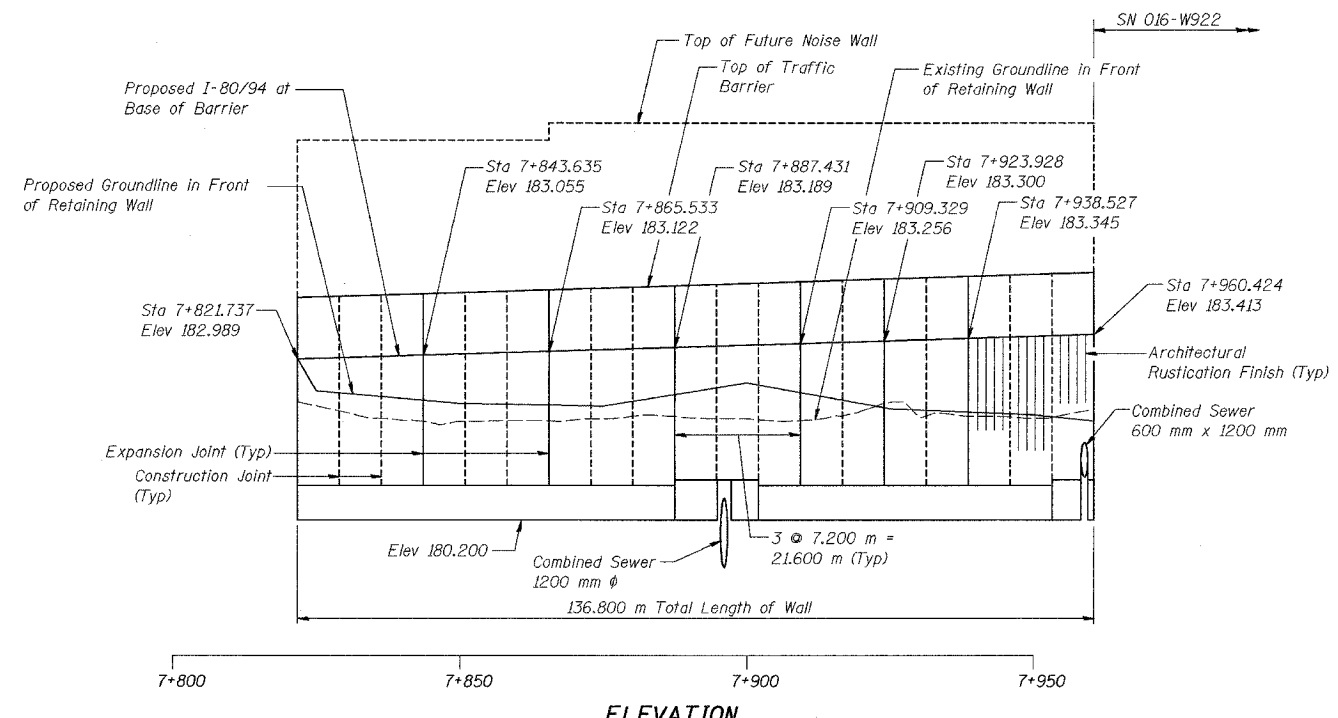
DATE 07/05

AMERICAN
CONSULTING ENGINEERS

FOR INFORMATION ONLY

Benchmark: Chiseled box on South face of metal base of Light Pole #AC12 on center of Jersey Wall +/- 200 m East of Wentworth Avenue. Station 7+809.5
 Offset 0.0 Elevation = 183.748
 Existing Structure: None
 All dimensions in millimeters (mm) except as noted.

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. S-1
1207	809	COOK	1207 809	12 SHEETS
ILLINOIS PROJECT				CONTRACT NO. 62114 INDOT DES. NO. 0100987



- LEGEND**
- ⊕ - Soil Boring Location
 - - Existing Roadway/Structure
 - - Proposed Roadway/Structure
 - ⊙ - Tree
 - - Shrubs/Brush
 - - Proposed Storm Sewer
 - - Existing Sanitary Sewer
 - - Existing Storm Sewer
 - CTV --- - Existing Cable TV
 - E — - Existing Electricity Line
 - T — - Existing Telephone Line
 - - Temporary Soil Retention System

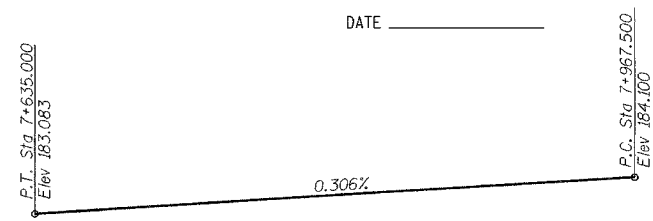
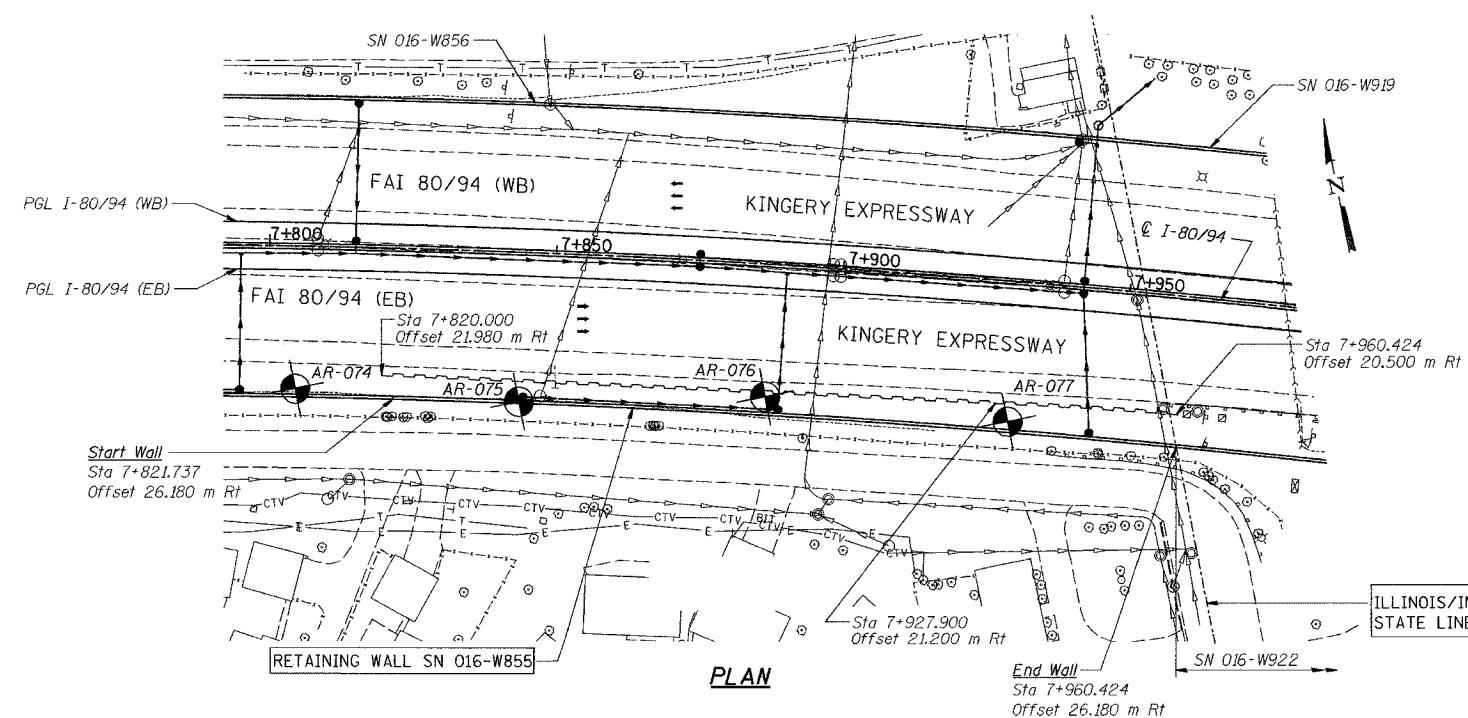
LOADING
 Wind Load on Future Noise Wall = 1.7 kPa

DESIGN STRESSES
 FIELD UNITS
 $f'_c = 24 \text{ MPa}$
 $f_y = 400 \text{ MPa (Reinf.)}$
 Maximum Applied Soil Bearing Pressure = 150 kPa

DESIGN SPECIFICATIONS
 AASHTO 2002 Standard Specifications for Highway Bridges
 AASHTO 1989 Guide Specifications for Structural Design of Sound Barriers and 1992 Interims



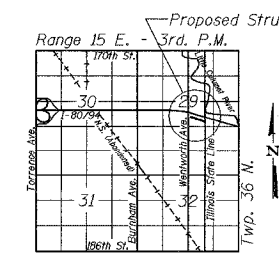
GARY S. POWELL, S.E.
 IL. LIC. NO. 081-004771
 EXP _____
 DATE _____



**PROFILE GRADE
 FUTURE I-80/94 EASTBOUND**

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

Note: Retaining Wall is built in straight line segments between Expansion and Construction Joints. Back Face of the Retaining Wall is aligned with the outside edge of shoulder at joints.



LOCATION SKETCH

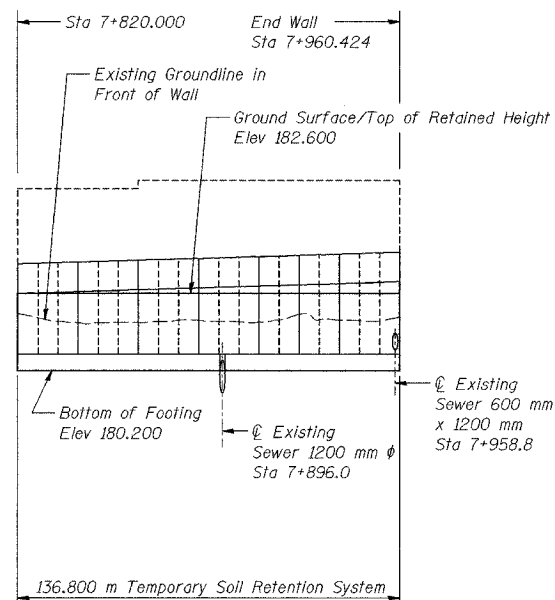
ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41
**GENERAL PLAN
 SECTION 2626.2-R-1
 COOK COUNTY**
**STATION 7+821.737 TO STATION 7+960.424
 STRUCTURE NO. 016-W855**
 DATE 07/05



FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET TOTAL	SHEET NO. S-2
F.A.S. 06-74	2626.2-R-1	COOK	1207	810	12 SHEETS
BLDG. NO.		FED. AID PROJECT			

CONTRACT NO. 62114 INDOT DES. NO. 0100987



GENERAL NOTES

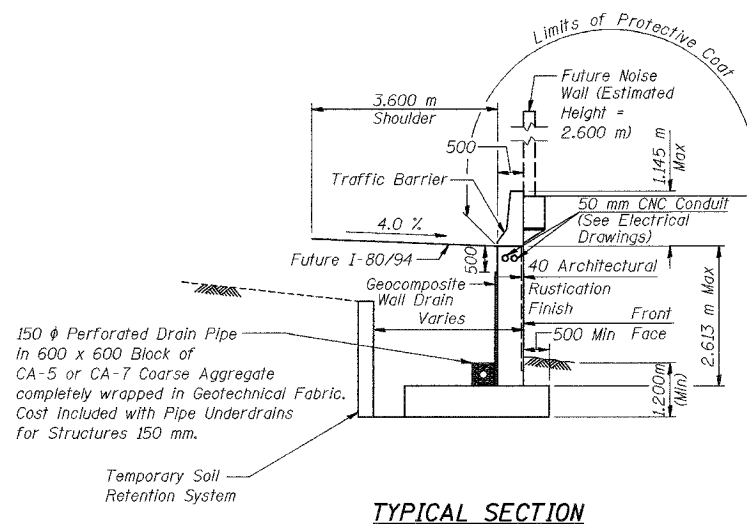
1. Reinforcement bars shall conform to the requirements of AASHTO M 31M or M322M Grade 400.
2. All dimensions are in millimeters (mm) except as noted.
3. All construction joints shall be bonded.

INDEX OF SHEETS

SHEET NO.	TITLE
S-1	General Plan
S-2	Index of Sheets, General Notes and Total Bill of Material
S-3	Plan and Elevation (1 of 6)
S-4	Plan and Elevation (2 of 6)
S-5	Plan and Elevation (3 of 6)
S-6	Plan and Elevation (4 of 6)
S-7	Plan and Elevation (5 of 6)
S-8	Plan and Elevation (6 of 6)
S-9	Wall Sections and Details
S-10	Rustication Finish Details
S-11	Boring Logs (1 of 2)
S-12	Boring Logs (2 of 2)

TEMPORARY SOIL RETENTION SYSTEM - ELEVATION

A cantilevered sheet piling design does not seem feasible due to underground utility restrictions, and additional members may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.



TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structure Excavation	m ³	1,284
Concrete Structures	m ³	498.6
Rustication Finish	m ²	246
Protective Coat	m ²	208
Reinforcement Bars, Epoxy Coated	kg	35,620
Temporary Soil Retention System	m ²	328
Geocomposite Wall Drain	m ²	258
Pipe Underdrains for Structures 150 mm	m	145.0
Noise Abatement Wall Anchor Rod Assembly	Each	39

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

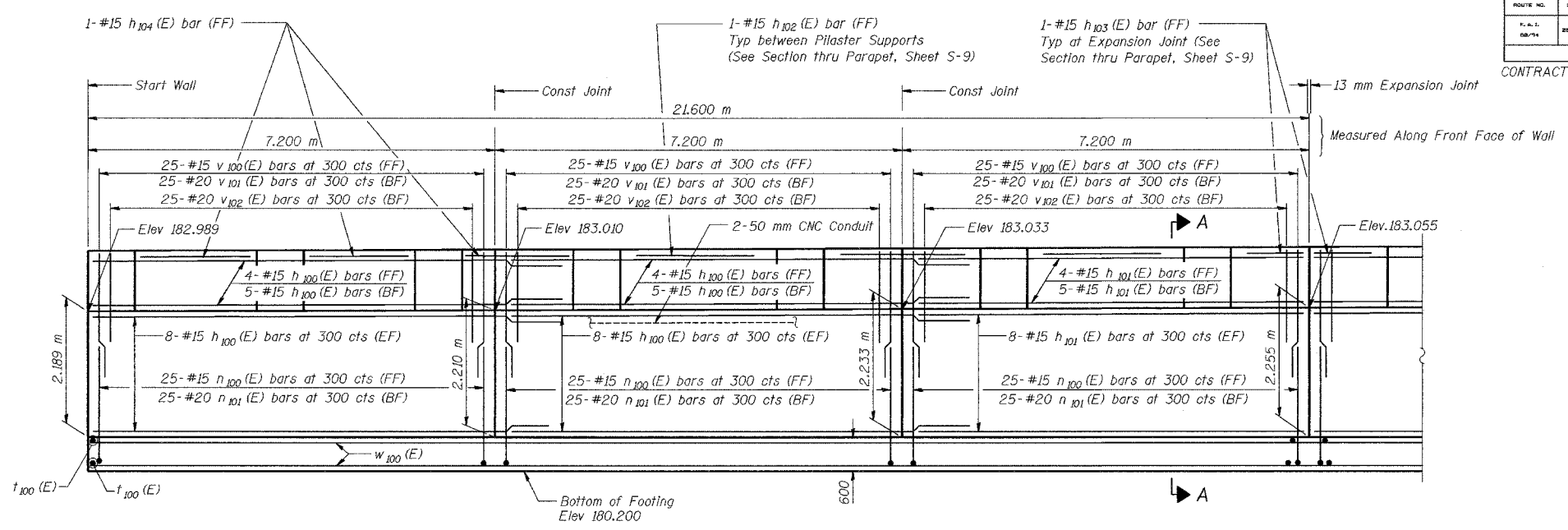
ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41
**INDEX OF SHEETS, GENERAL NOTES
 AND TOTAL BILL OF MATERIAL**
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+821.737 TO STATION 7+960.424
STRUCTURE NO. 016-W855
 DATE 07/05
AMERICAN
 CONSULTING ENGINEERS

REVISD KFA 10-15-04

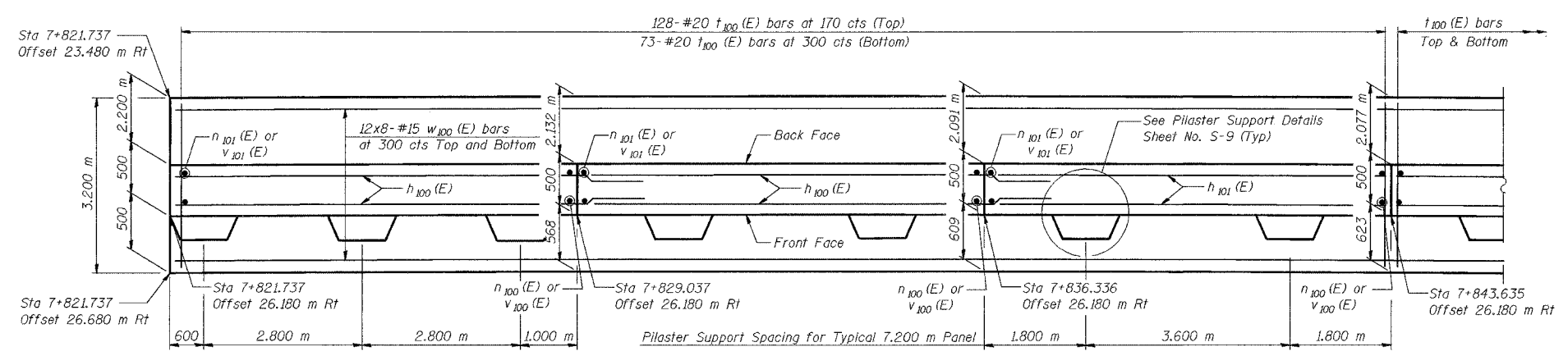
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO. S-3
1207	811	12	12	12	12 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



ELEVATION



FOOTING PLAN

NOTES:
 See Sheet S-9 for Section A-A, Expansion Joint Detail, and Bill of Material.
 See Sheet S-10 for Rustication details.
 Stations are referenced to @ I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.
 See Electrical Drawings for Junction Box and Conduit Details.

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS
 #15 bars = 640
 #20 bars = 790

LEGEND
 BF = Back Face
 FF = Front Face
 EF = Each Face

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

PLAN AND ELEVATION (1 OF 6)
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+821.737 TO STATION 7+960.424
STRUCTURE NO. 016-W855
 DATE 07/05

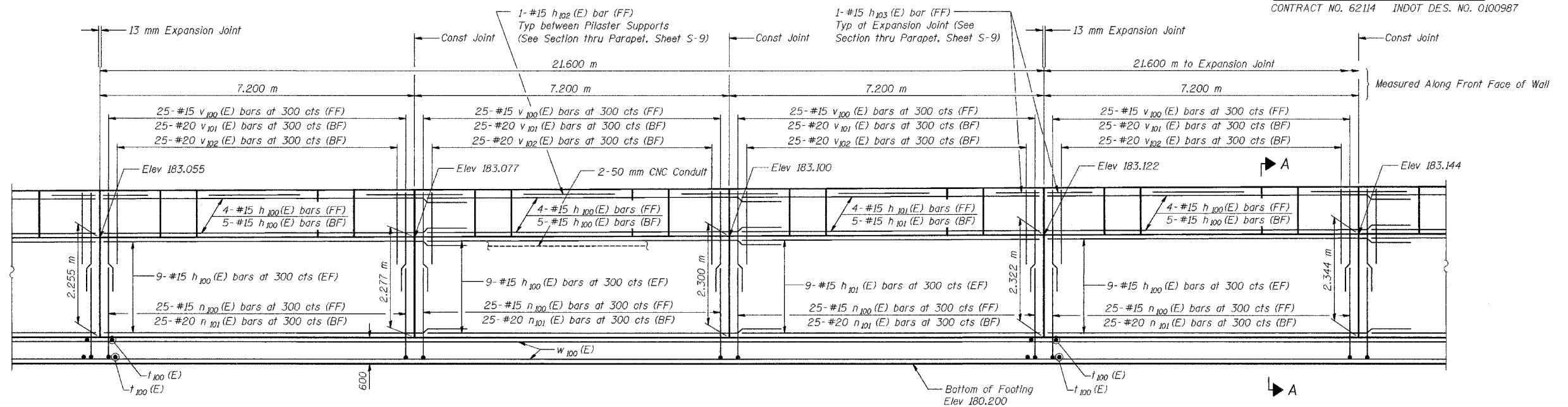
AMERICAN
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

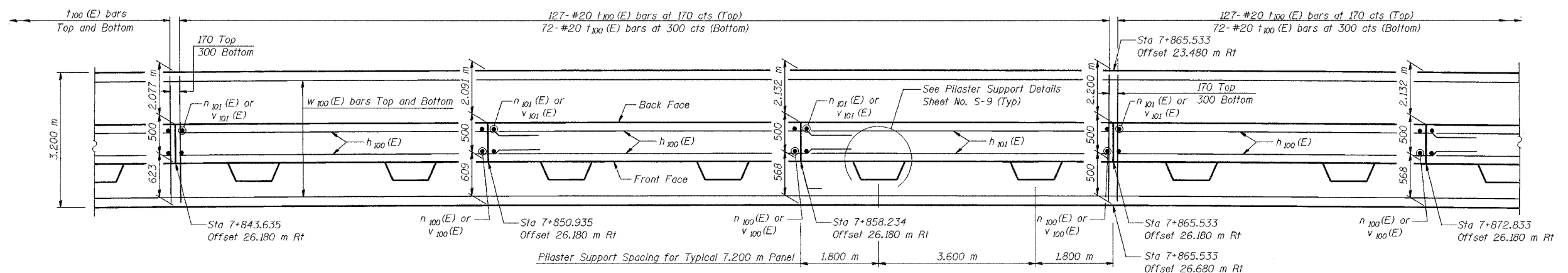
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66-11	2626.2-R-1	COOK	1207	812
ILLINOIS		FED. AID PROJECT-		

CONTRACT NO. 62114 INDOT DES. NO. 0100987

SHEET NO. S-4
12 SHEETS



ELEVATION



FOOTING PLAN

NOTES:
 See Sheet S-9 for Section A-A, Expansion Joint Detail, and Bill of Material.
 See Sheet S-10 for Rustication details.
 Stations are referenced to \odot I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 See Electrical Drawings for Junction Box and Conduit Details.

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS
 #15 bars = 640
 #20 bars = 790

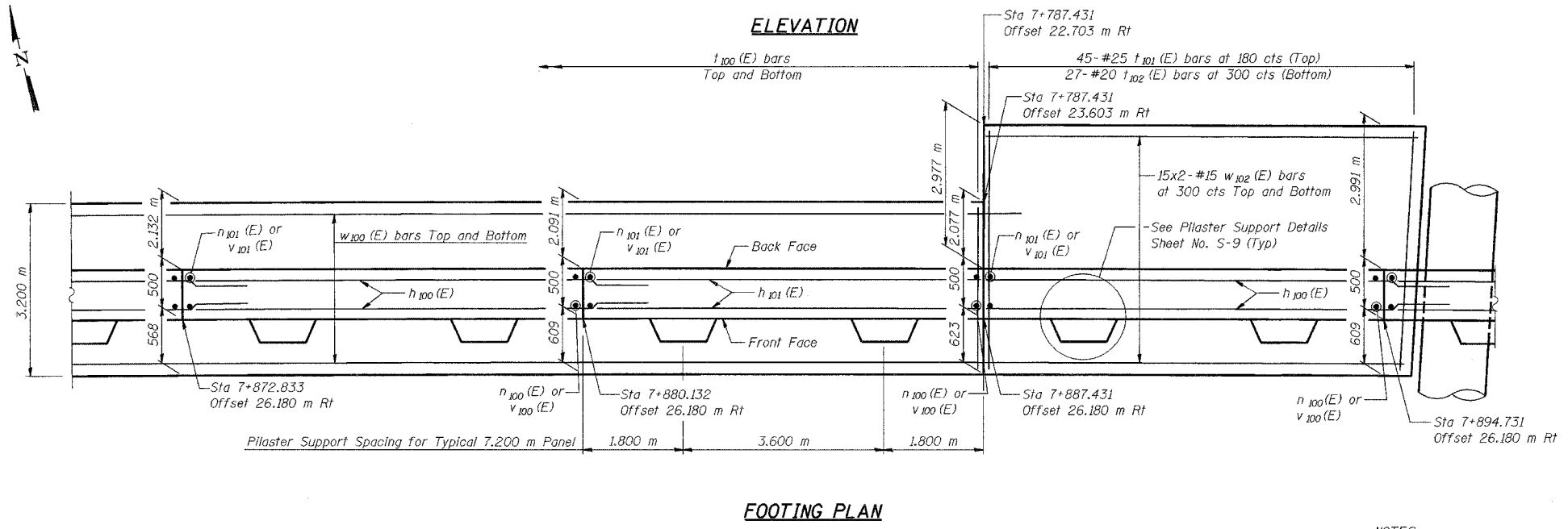
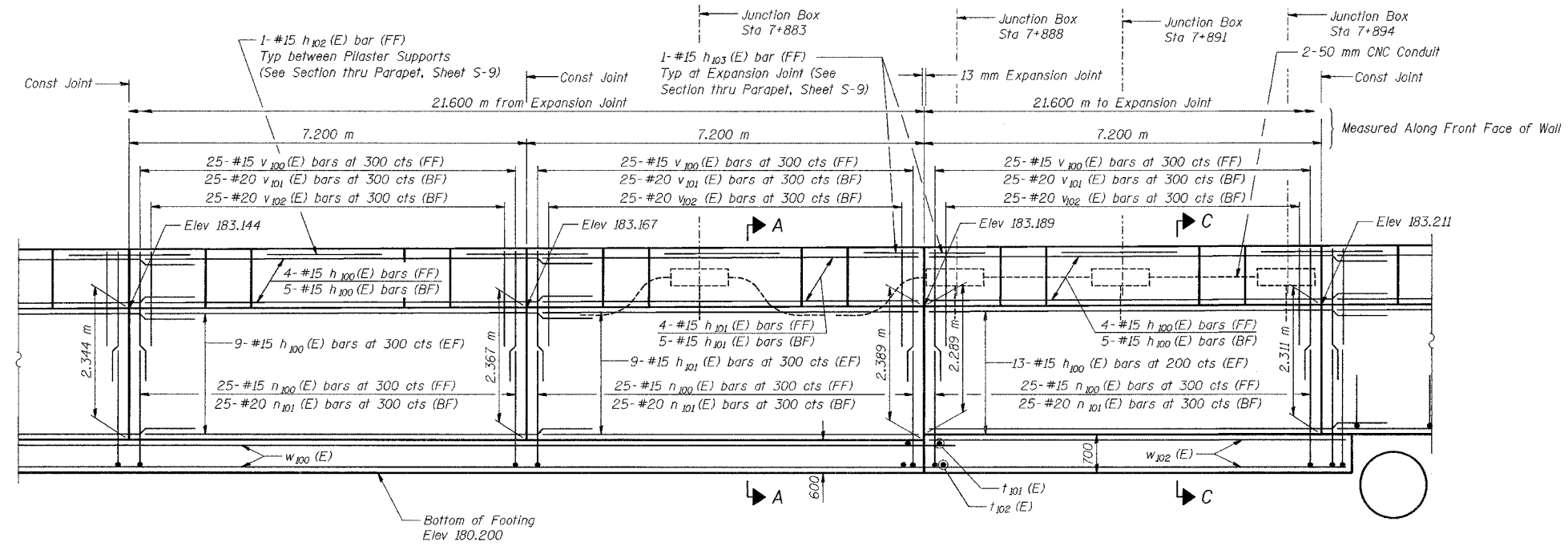
LEGEND
 BF = Back Face
 FF = Front Face
 EF = Each Face

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41
PLAN AND ELEVATION (2 OF 6)
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+821.737 TO STATION 7+960.424
STRUCTURE NO. 016-W855
 DATE 07/05
AMERICAN
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEET	POST	SHEET NO. S-5
7+814	2626.2-R-1	COOK	1207	813	12 SHEETS
BLINDS		FED. AID PROJECT			

CONTRACT NO. 62114 INDOT DES. NO. 0100987



ELEVATION

FOOTING PLAN

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790

LEGEND

BF = Back Face
FF = Front Face
EF = Each Face

NOTES:

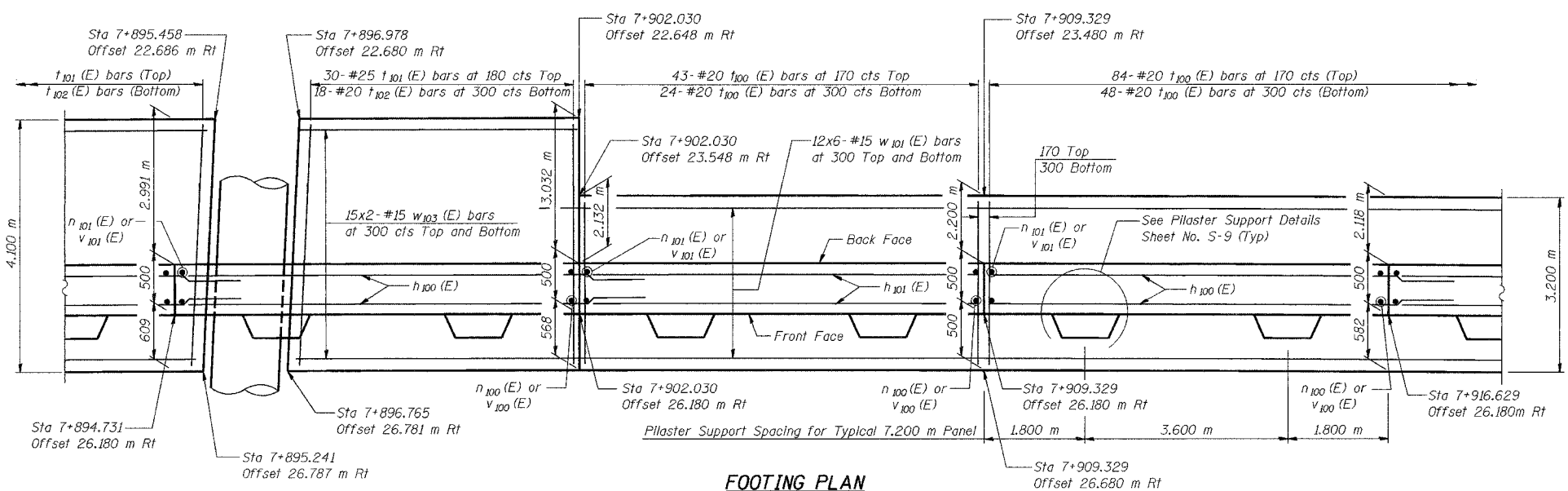
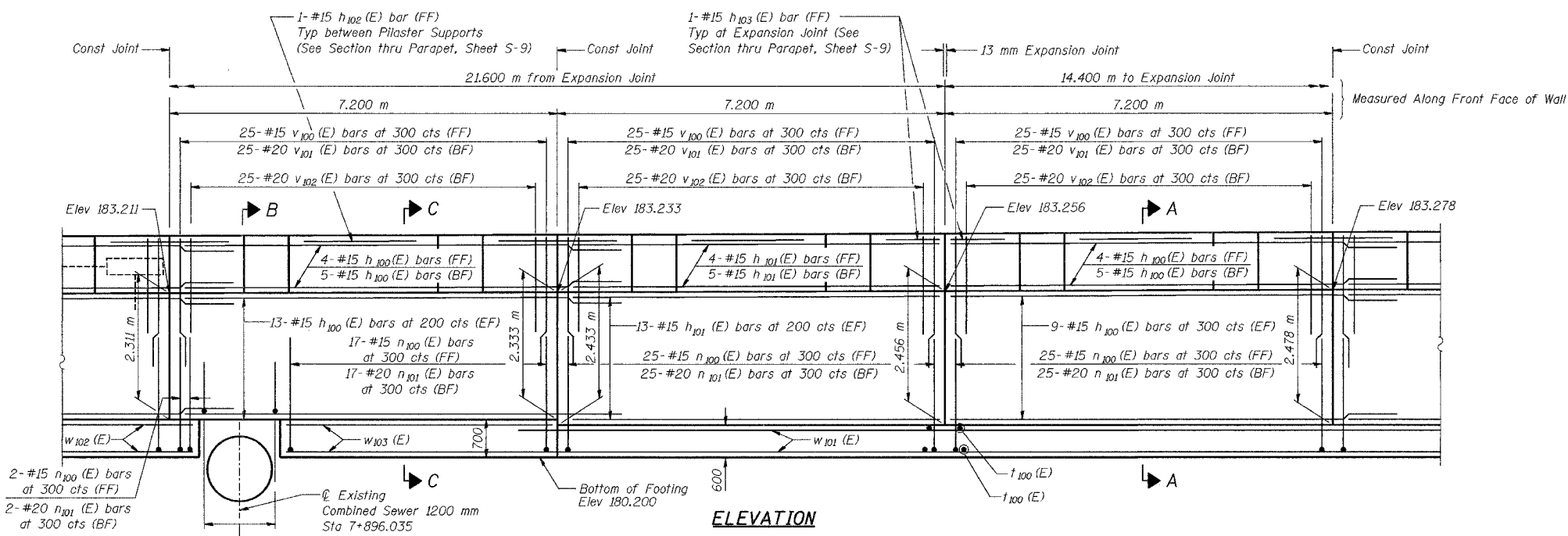
See Sheet S-9 for Section A-A, Section C-C, Expansion Joint Detail, and Bill of Material.
See Sheet S-10 for Rustication details.
Stations are referenced to $\text{C} \perp$ I-80/94.
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.
Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.
See Electrical Drawings for Junction Box and Conduit Details.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

PLAN AND ELEVATION (3 OF 6)
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+821.737 TO STATION 7+960.424
STRUCTURE NO. 016-W855
DATE 07/05

AMERICAN
CONSULTING ENGINEERS

FOR INFORMATION ONLY



NOTES:
 See Sheet S-9 for Section A-A, Section B-B, Section C-C, Expansion Joint Detail, and Bill of Material.
 See Sheet S-10 for Rustication details.
 Stations are referenced to $\text{C} \pm$ I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS
 #15 bars = 640
 #20 bars = 790

LEGEND
 BF = Back Face
 FF = Front Face
 EF = Each Face

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

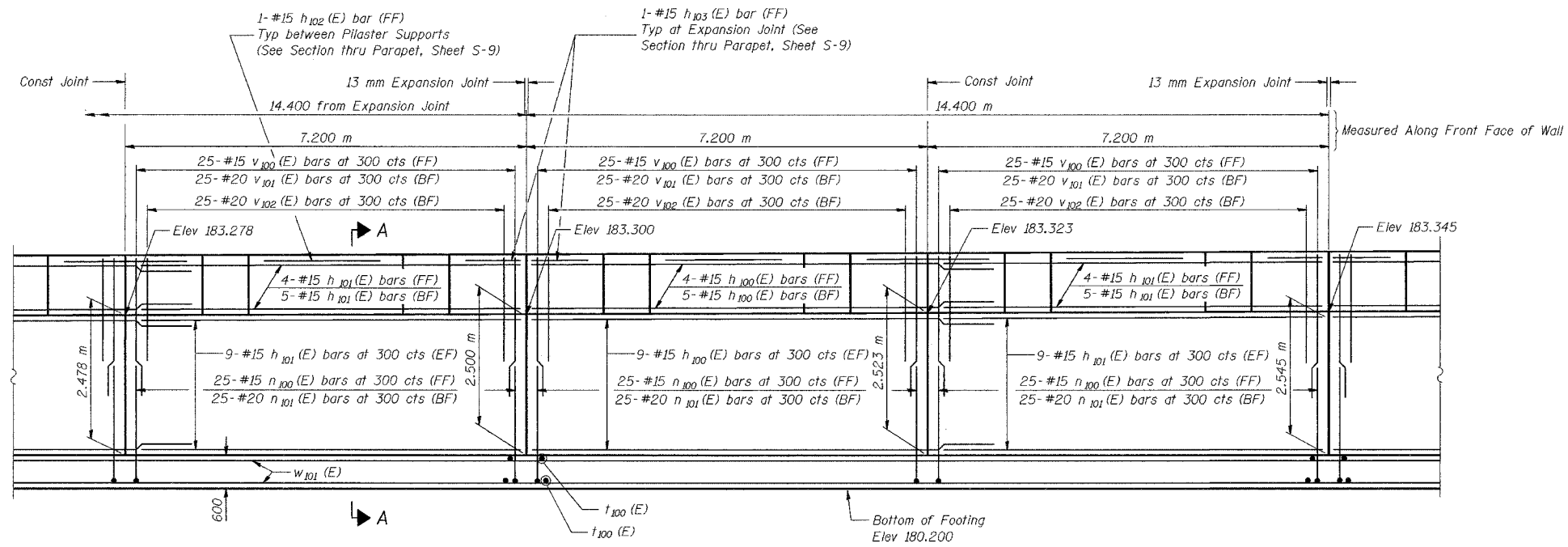
PLAN AND ELEVATION (4 OF 6)
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+821.737 TO STATION 7+960.424
STRUCTURE NO. 016-W855
 DATE 07/05

AMERICAN
 CONSULTING ENGINEERS

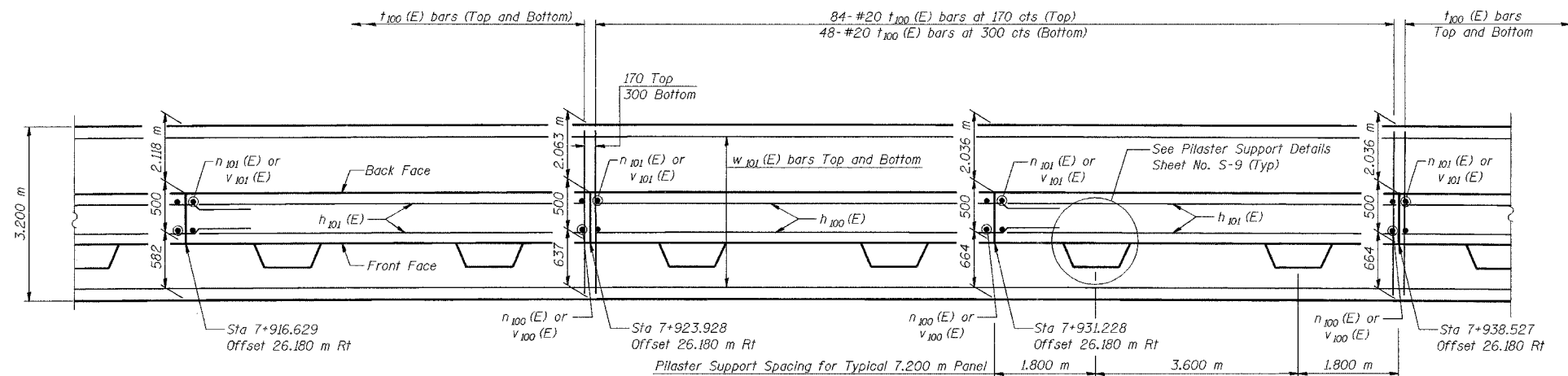
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET	SHEET NO. S-7
7-8-1	2626.2-R-1	COOK	1207	815	12 SHEETS
ILLINOIS		FED. AID PROJECT			

CONTRACT NO. 62114 INDOT DES. NO. 0100987



ELEVATION



FOOTING PLAN

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790

LEGEND

BF = Back Face
FF = Front Face
EF = Each Face

NOTES:

See Sheet S-9 for Section A-A, Expansion Joint Detail, and Bill of Material.
See Sheet S-10 for Rustication details.
Stations are referenced to C I-80/94 .
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.

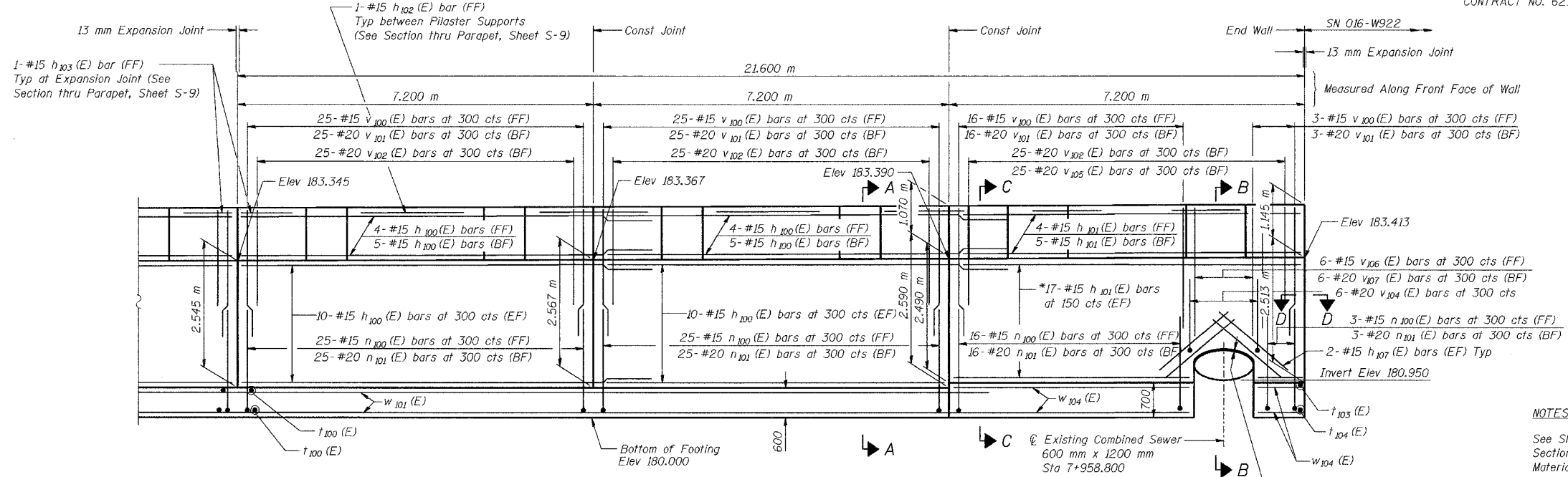
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

PLAN AND ELEVATION (5 OF 6)
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+821.737 TO STATION 7+960.424
STRUCTURE NO. 016-W855

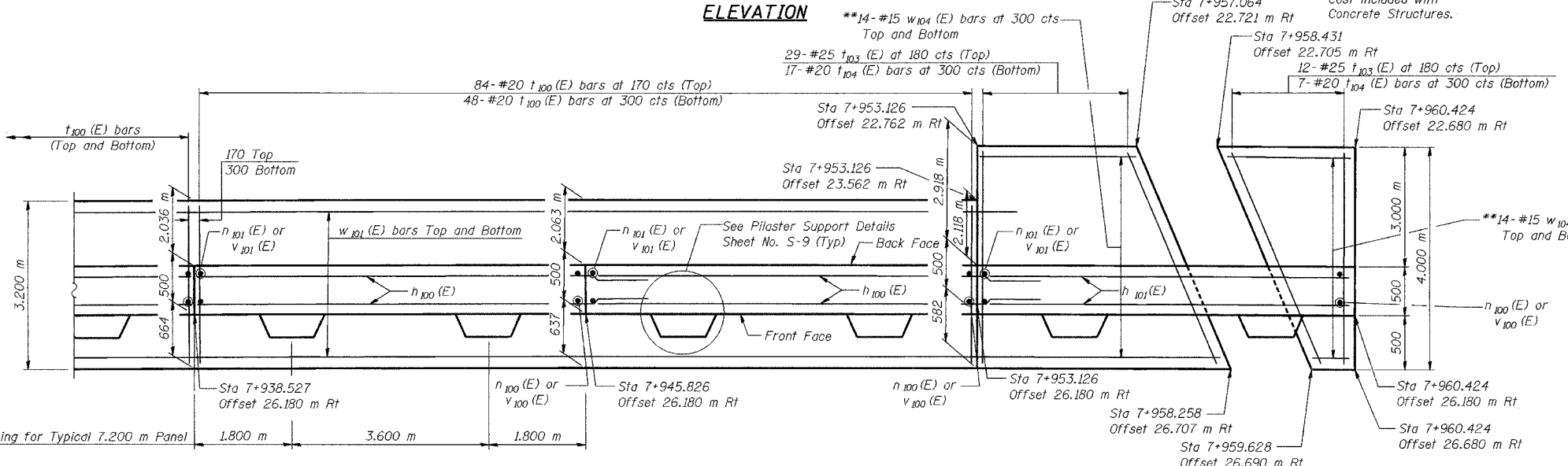
DATE 07/05

AMERICAN
CONSULTING ENGINEERS

FOR INFORMATION ONLY



ELEVATION

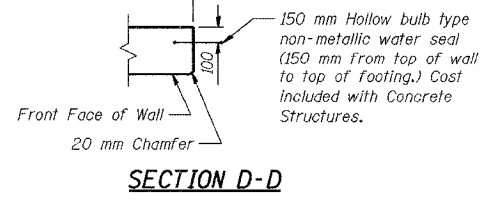


FOOTING PLAN

NOTES:

- See Sheet S-9 for Section A-A, Section B-B, Section C-C, Expansion Joint Detail, and Bill of Material.
- See Sheet S-10 for Rustication details.
- Stations are referenced to ϕ I-80/94.
- Reinforcement bars designated (E) shall be epoxy coated.
- All dimensions are in millimeters (mm) except as noted.
- * Cut h₁₀₁(E) bars in field as necessary
- ** See Sheet S-9 for Cut Diagram

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP



SECTION D-D

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790

LEGEND

BF = Back Face
FF = Front Face
EF = Each Face

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

PLAN AND ELEVATION (6 OF 6)
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+821.737 TO STATION 7+960.424
STRUCTURE NO. 016-W855

DATE 07/05

AMERICAN
CONSULTING ENGINEERS

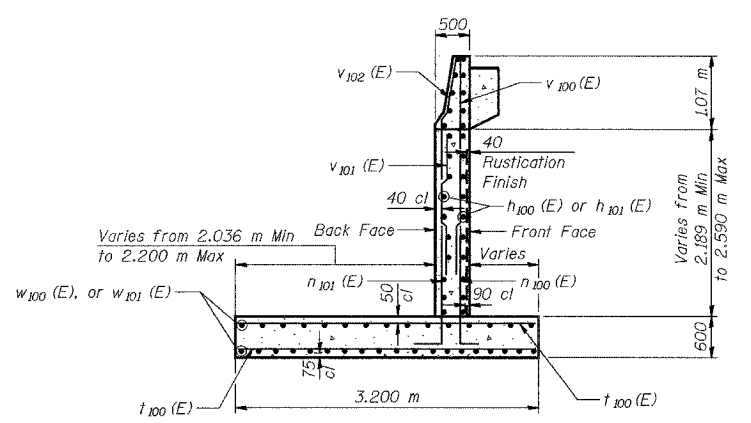
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET
66-14	2626.2-R-1	COOK	1207	817
SHEET NO. S-9				

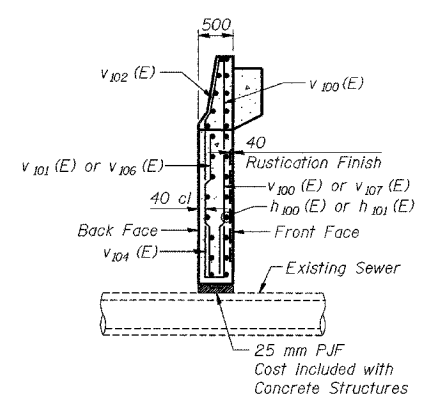
CONTRACT NO. 62114 INDOT DES. NO. 0100987

BILL OF MATERIAL

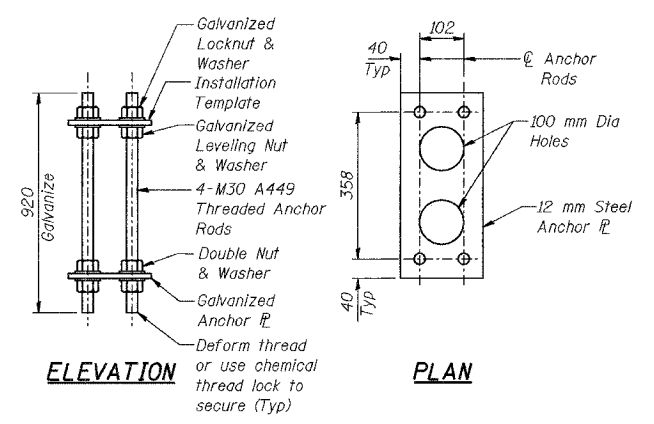
Bar	No.	Size	Length (m)	Shape
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h ₁₀₁ (E)	211	#15	7.10	—
h ₁₀₂ (E)	29	#15	2.30	—
h ₁₀₃ (E)	13	#15	1.10	—
h ₁₀₄ (E)	3	#15	1.50	—
h ₁₀₅ (E)	152	#20	2.86	—
h ₁₀₆ (E)	4	#20	2.74	—
h ₁₀₇ (E)	8	#15	2.40	—
n ₁₀₀ (E)	463	#15	2.16	—
n ₁₀₁ (E)	463	#20	2.22	—
t ₁₀₀ (E)	1062	#20	3.10	—
t ₁₀₁ (E)	75	#25	4.00	—
t ₁₀₂ (E)	45	#20	4.00	—
t ₁₀₃ (E)	41	#25	3.90	—
t ₁₀₄ (E)	24	#20	3.90	—
v ₁₀₀ (E)	469	#15	2.98	—
v ₁₀₁ (E)	469	#20	1.98	—
v ₁₀₂ (E)	475	#20	1.91	—
v ₁₀₃ (E)	234	#20	2.39	—
v ₁₀₄ (E)	12	#20	2.94	—
v ₁₀₅ (E)	25	#20	0.87	—
v ₁₀₆ (E)	6	#15	2.28	—
v ₁₀₇ (E)	6	#20	1.28	—
w ₁₀₀ (E)	192	#15	8.75	—
w ₁₀₁ (E)	144	#15	9.18	—
w ₁₀₂ (E)	60	#15	4.24	—
w ₁₀₃ (E)	60	#15	2.87	—
w ₁₀₄ (E)	32	#15	5.65	—
Structure Excavation		m ³	1,284	
Concrete Structures		m ³	498.6	
Protective Coat		m ²	208	
Reinforcement Bars, Epoxy Coated		kg	35,620	
Geocomposite Wall Drain		m ²	258	
Pipe Underdrains for Structures 150 mm		m	145.0	
Noise Abatement Wall Anchor Rod Assembly		Each	39	



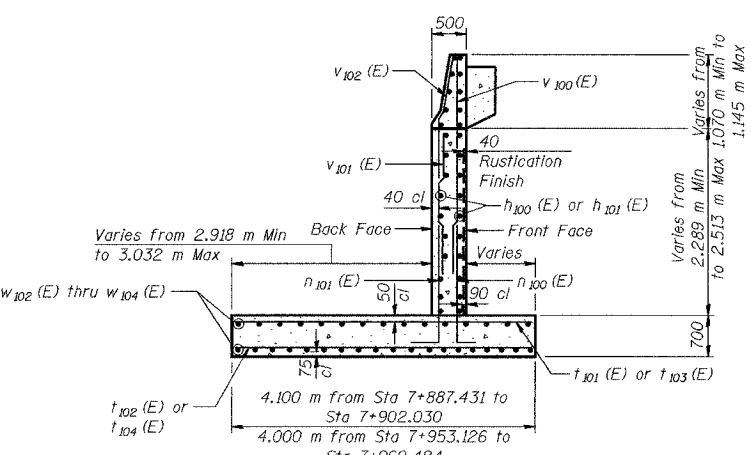
SECTION A-A



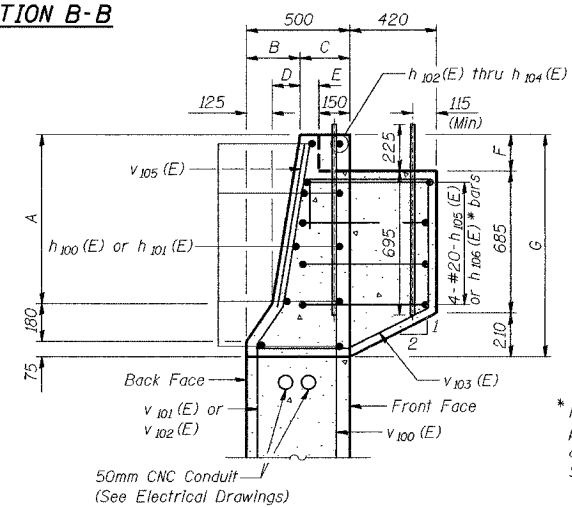
SECTION B-B



NOISE ABATEMENT WALL ANCHOR ROD ASSEMBLY
(39 Req'd)

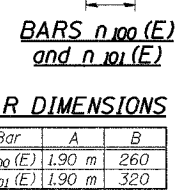
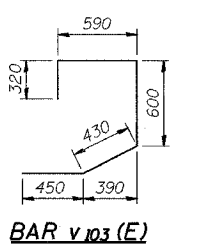
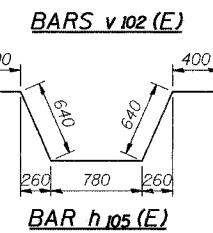
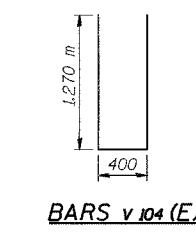


SECTION C-C



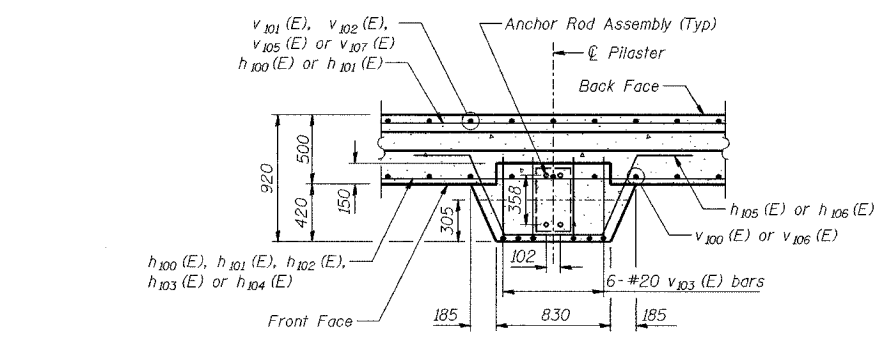
SECTION THRU PARAPET

Dimension	Constant from Sta 7+821.737 to Sta 7+953.126	Varies from Sta 7+953.126 to Sta 7+960.424
A	815	815 to 890
B	215	215 to 225
C	285	285 to 275
D	90	90 to 100
E	135	135 to 125
F	175	175 to 250
G	1.070 m	1.070 m to 1.145 m



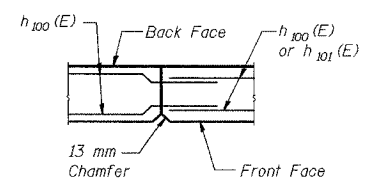
BAR DIMENSIONS

Bar	A	B
n ₁₀₀ (E)	1.90 m	260
n ₁₀₁ (E)	1.90 m	320

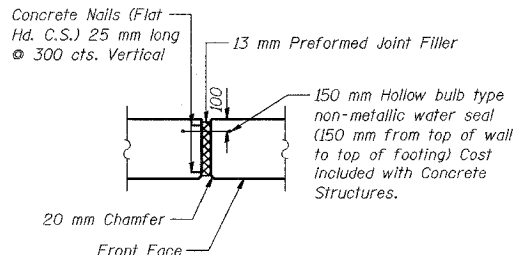


TYPICAL PILASTER SUPPORT - PLAN VIEW
(39 Locations)

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP



CONSTRUCTION JOINT DETAIL



13 MM EXPANSION JOINT DETAIL

NOTES:
See Sheet S-10 for Rustication details.
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.
See Typical Section on S-2 for Drainage Details and Protective Coat Limits.

**** FIELD CUTTING DIAGRAM**

Order bars full length. Cut to fit as shown and place in footing on one side of pipe. Place remainder on other side of pipe.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

WALL SECTIONS AND DETAILS
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+821.737 TO STATION 7+960.424
STRUCTURE NO. 016-W855

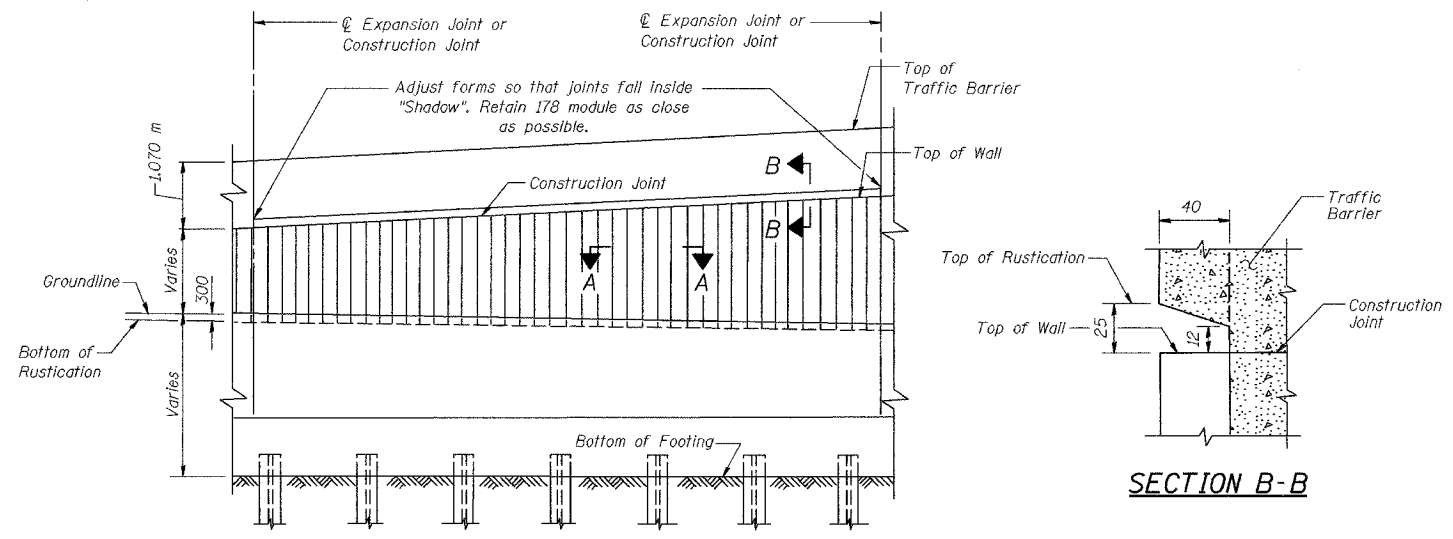
DATE 07/05

AMERICAN
CONSULTING ENGINEERS

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. S-10
F.A.L. 02/14	2626.2-R-1	COOK	1207 818	12 SHEETS
ILLINOIS PROJECT				

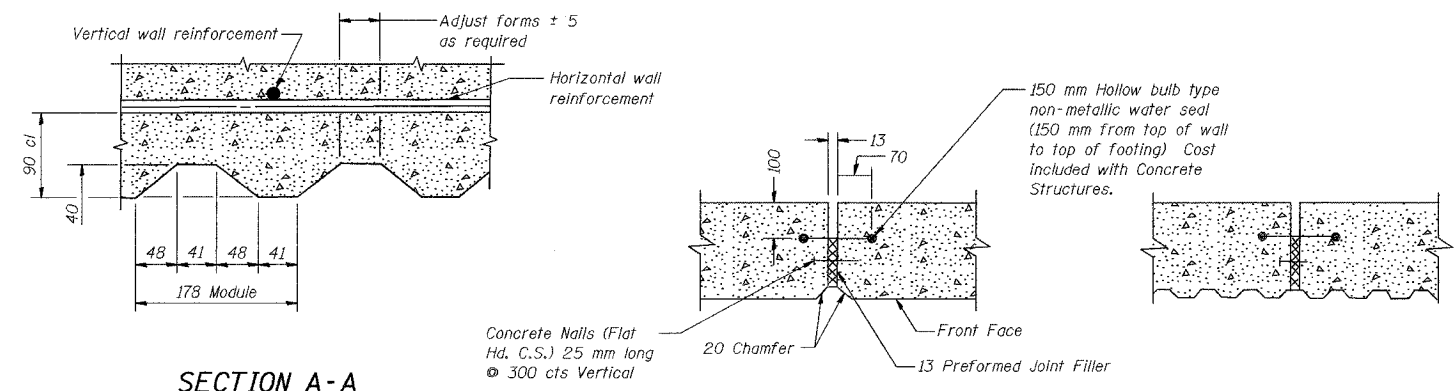
CONTRACT NO. 62114 INDOT DES. NO. 0100987



FRONT FACE ELEVATION-TYPICAL ARCHITECTURAL FINISH

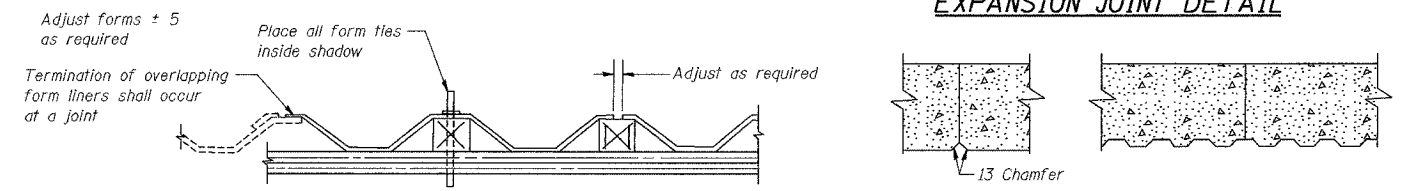
RUSTICATION LIMITS

STATION	TOP OF WALL ELEVATION	BOTTOM OF RUSTICATION ELEVATION
7+821.737	182.989	181.400
7+829.037	183.010	181.400
7+836.336	183.033	181.400
7+843.635	183.055	181.400
7+850.935	183.077	181.400
7+858.234	183.100	181.400
7+865.533	183.122	181.400
7+872.833	183.144	181.400
7+880.132	183.167	181.400
7+887.431	183.189	181.400
7+894.731	183.211	181.400
7+902.030	183.233	181.400
7+909.329	183.256	181.400
7+916.629	183.278	181.400
7+923.928	183.300	181.400
7+931.228	183.323	181.400
7+938.527	183.345	181.400
7+945.826	183.367	181.400
7+953.126	183.390	181.400
7+960.424	183.413	181.400



SECTION A-A

EXPANSION JOINT DETAIL



SUGGESTED FORMWORK DETAIL

CONSTRUCTION JOINT DETAIL

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

BILL OF MATERIAL

Item	Unit	Total
Rustication Finish	m ²	246

Note: All dimensions are in millimeters (mm) unless otherwise noted.

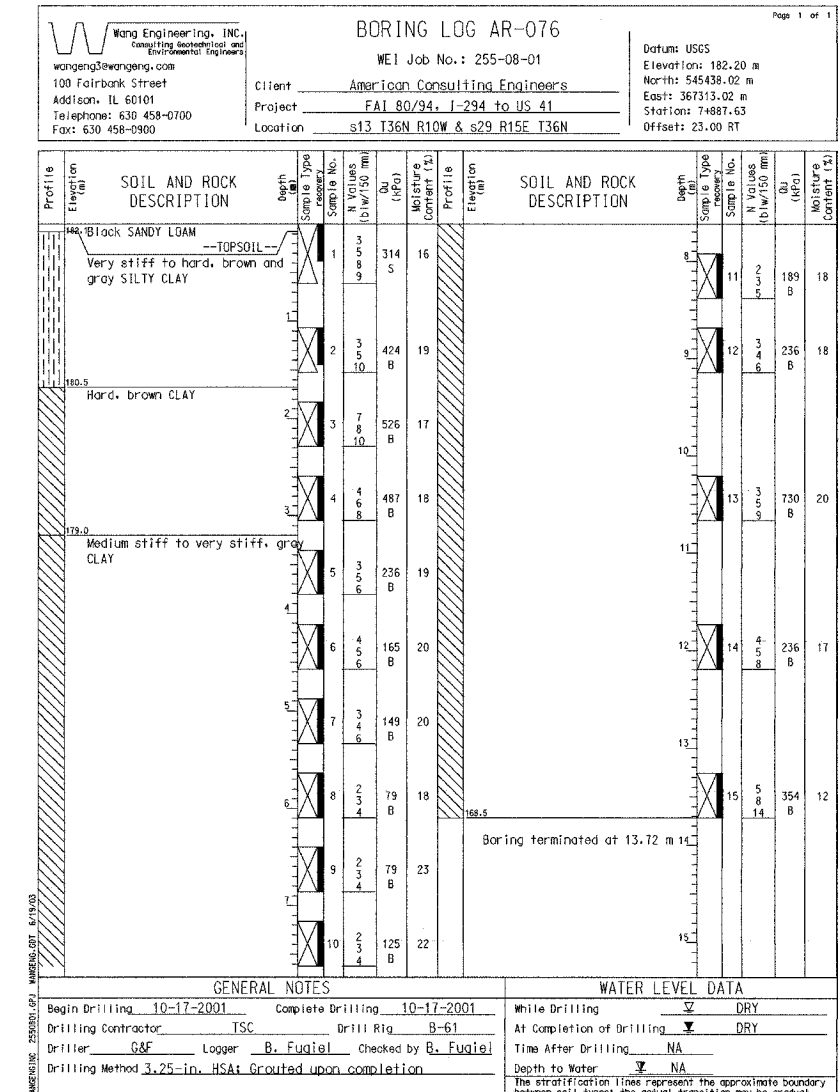
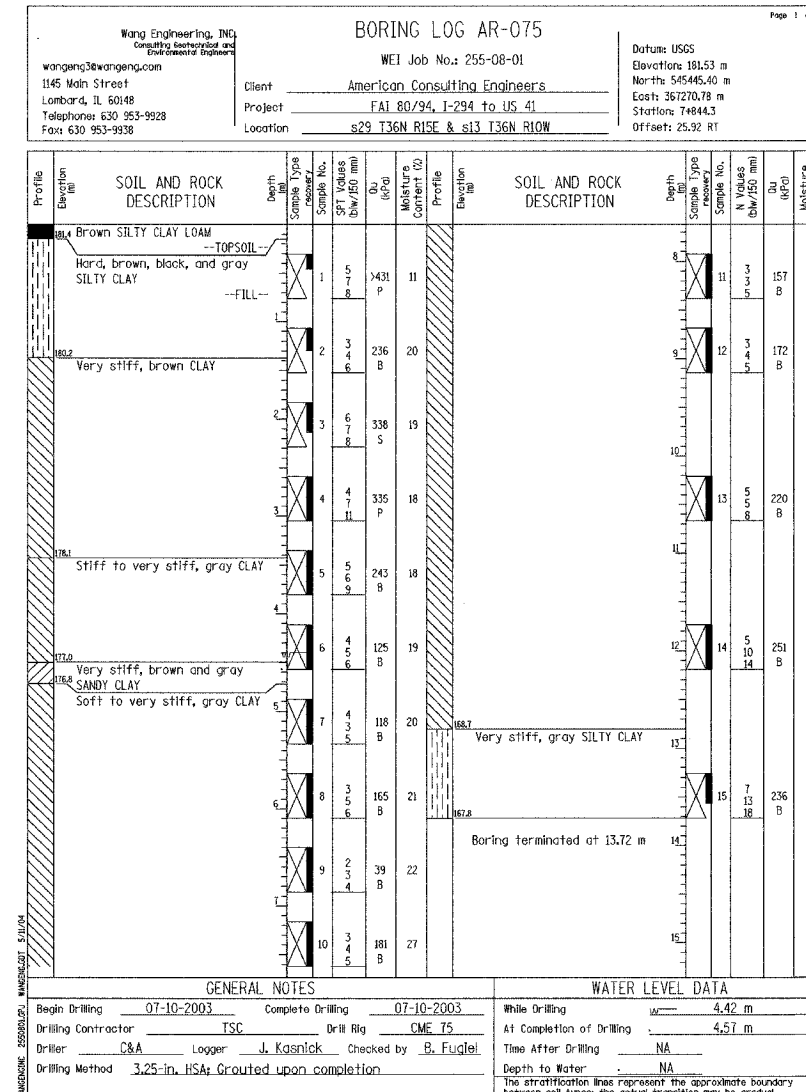
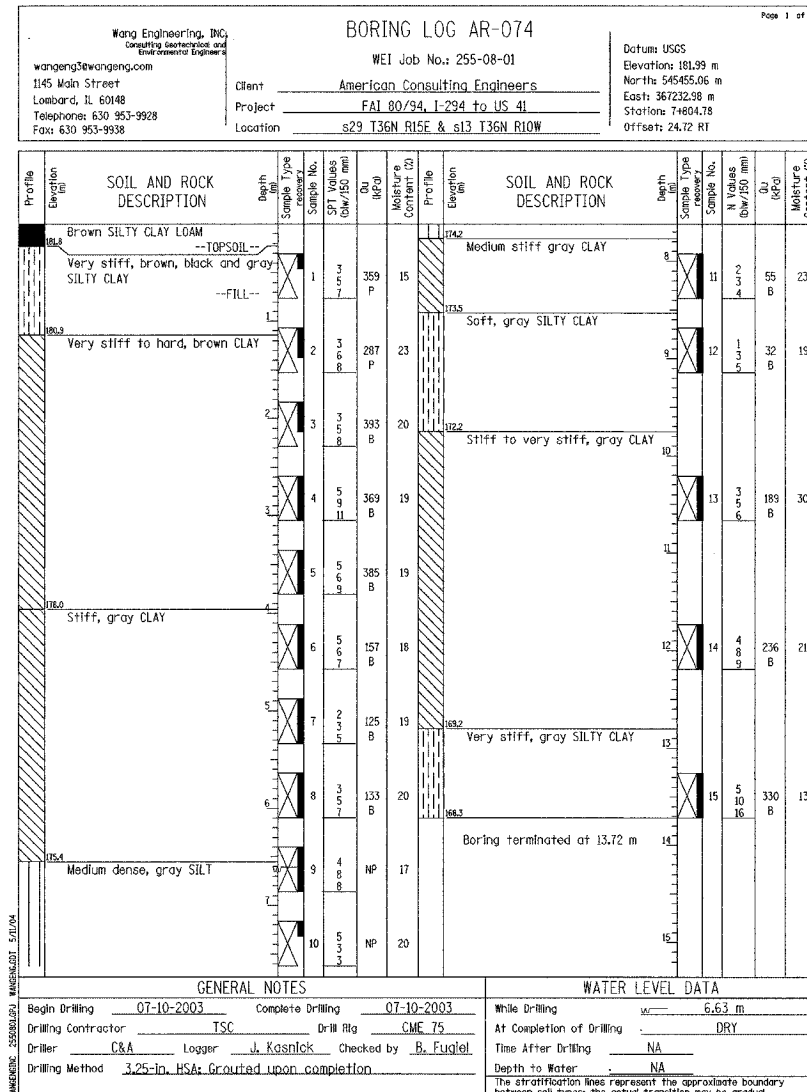
ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41
RUSTICATION FINISH DETAILS
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+821.737 TO STATION 7+960.424
STRUCTURE NO. 016-W855
 DATE 07/05
AMERICAN
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

BORING NO. AR-074 (1 OF 1)

BORING NO. AR-075 (1 OF 1)

BORING NO. AR-076 (1 OF 1)



DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMANN EXPRESSWAY
BURNHAM ROAD TO US 41

BORING LOGS (1 OF 2)
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+821.737 TO STATION 7+960.424
STRUCTURE NO. 016-W855

DATE 07/05

AMERICAN
CONSULTING ENGINEERS

FOR INFORMATION ONLY

BORING NO. AR-077 (1 OF 2)

BORING NO. AR-077 (2 OF 2)

W Wang Engineering, INC.
 Consulting Geotechnical and
 Environmental Engineers
 wangeng@wangeng.com
 100 Fairbank Street
 Addison, IL 60101
 Telephone: 630 458-0700
 Fax: 630 458-0900

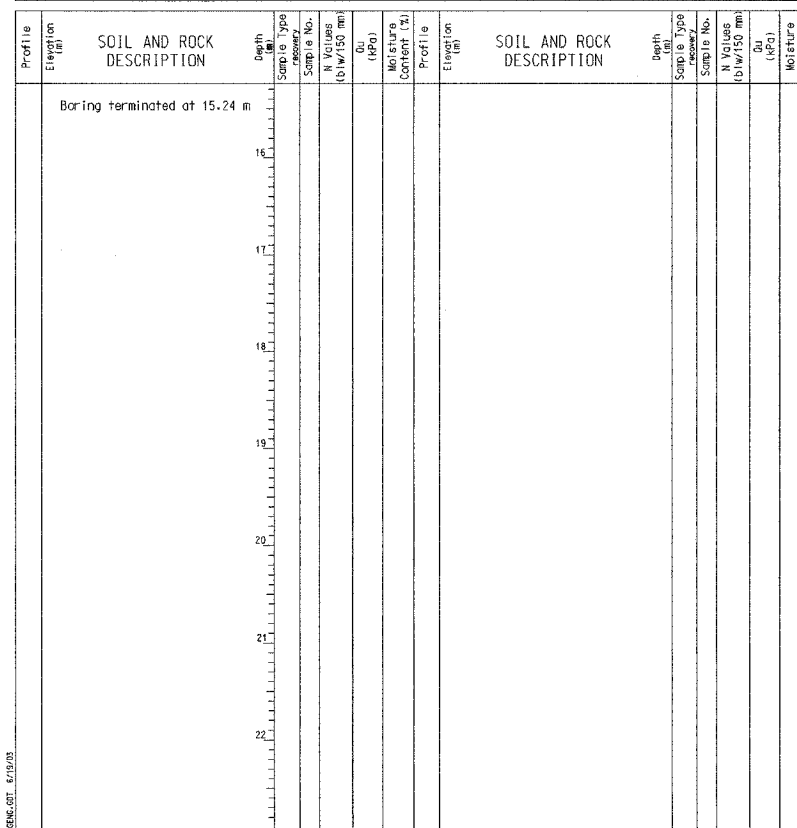
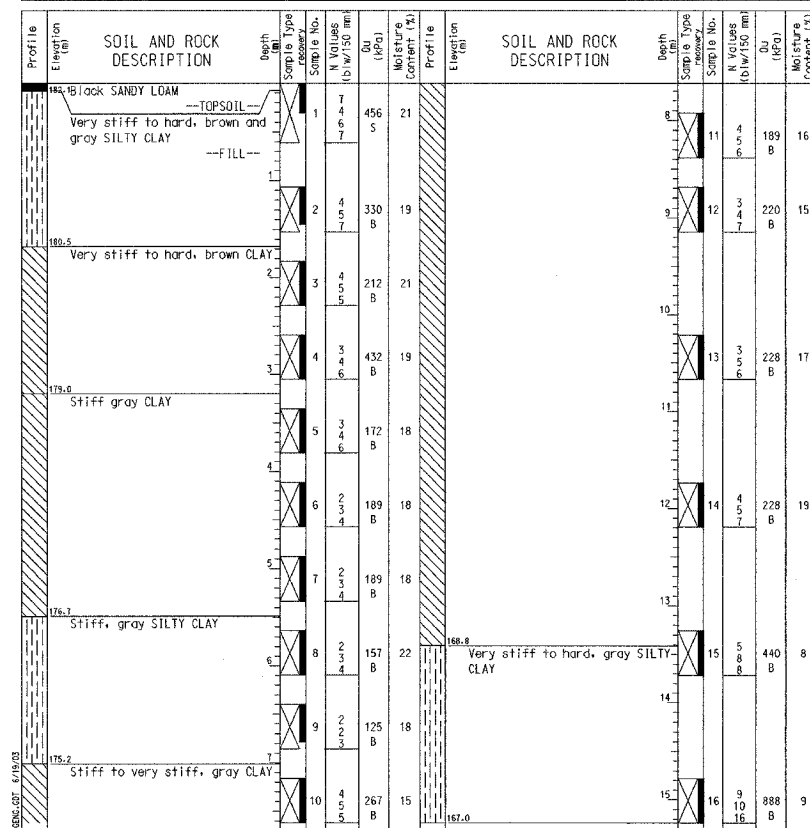
BORING LOG AR-077 Page 1 of 2
 WEI Job No.: 255-08-01
 Client: American Consulting Engineers
 Project: FAI 80/94, I-294 to US 41
 Location: s13 T36N R10W & s29 R15E T36N

Datum: USGS
 Elevation: 182.19 m
 North: 545425.73 m
 East: 367353.62 m
 Station: 7+930.56
 Offset: 24.29 RT

W Wang Engineering, INC.
 Consulting Geotechnical and
 Environmental Engineers
 wangeng@wangeng.com
 100 Fairbank Street
 Addison, IL 60101
 Telephone: 630 458-0700
 Fax: 630 458-0900

BORING LOG AR-077 Page 2 of 2
 WEI Job No.: 255-08-01
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Datum: USGS
 Elevation: 182.19 m
 North: 545425.73 m
 East: 367353.62 m
 Station: 7+930.56
 Offset: 24.29 RT



GENERAL NOTES

Begin Drilling 10-12-2001 Complete Drilling 10-12-2001
 Drilling Contractor TSC Drill Rig B-61
 Driller GAF Logger B. Fugiel checked by B. Fugiel
 Drilling Method 3.25-in. HSA; Grouted upon completion

WATER LEVEL DATA

While Drilling DRY
 At Completion of Drilling DRY
 Time After Drilling NA
 Depth to Water NA
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES

Begin Drilling 10-12-2001 Complete Drilling 10-12-2001
 Drilling Contractor TSC Drill Rig B-61
 Driller GAF Logger B. Fugiel checked by B. Fugiel
 Drilling Method 3.25-in. HSA; Grouted upon completion

WATER LEVEL DATA

While Drilling DRY
 At Completion of Drilling DRY
 Time After Drilling NA
 Depth to Water NA
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

BORING LOGS (2 OF 2)
 SECTION 2626.2-R-1
 COOK COUNTY

STATION 7+821.737 TO STATION 7+960.424
 STRUCTURE NO. 016-W855

DATE 07/05

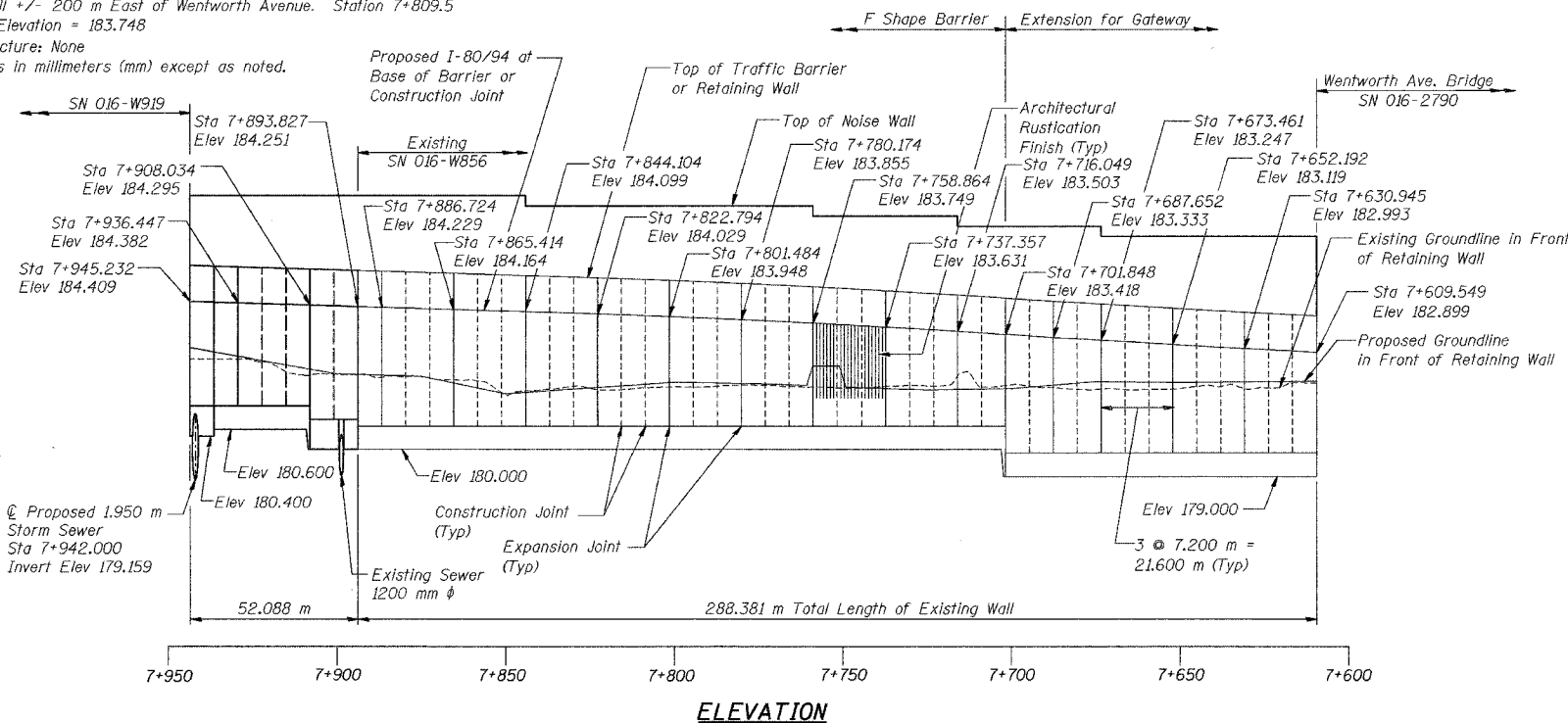
AMERICAN
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

Benchmark: Chiseled box on South face of metal base of Light Pole #AC12 on center of Jersey Wall +/- 200 m East of Wentworth Avenue. Station 7+809.5
 Offset 0.0 Elevation = 183.748
 Existing Structure: None
 All dimensions in millimeters (mm) except as noted.

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET	SHEET NO. S-1
P.A.L.	2626.2-R-1	COOK	1207	821	20 SHEETS
DATE	09/05				

CONTRACT NO. 62114 INDOT DES. NO. 0100987



LEGEND

- ⊕ - Soil Boring Location
- - - Existing Roadway/Structure
- Proposed Roadway/Structure
- ⊙ - Tree
- Shrubs/Brush
- Proposed Storm Sewer
- - - Existing Sanitary Sewer
- Existing Storm Sewer
- CTV - Existing Cable TV
- E - Existing Electricity Line
- T - Existing Telephone Line
- A - Electrical Aerial Cable
- Temporary Sheet Piling

LOADING

Wind Load on Future Noise Wall = 1.7 kPa

DESIGN STRESSES

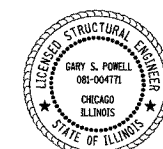
FIELD UNITS

$f'_c = 24 \text{ MPa}$
 $f_y = 400 \text{ MPa (Rein.)}$
 Maximum Applied Soil Bearing Pressure = 135 kPa Phase 2
 = 130 kPa Phase 3

DESIGN SPECIFICATIONS

AASHTO 2002 Standard Specifications for Highway Bridges

AASHTO 1989 Guide Specifications for Structural Design of Sound Barriers and 1992 Interims

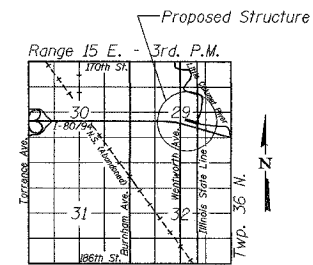
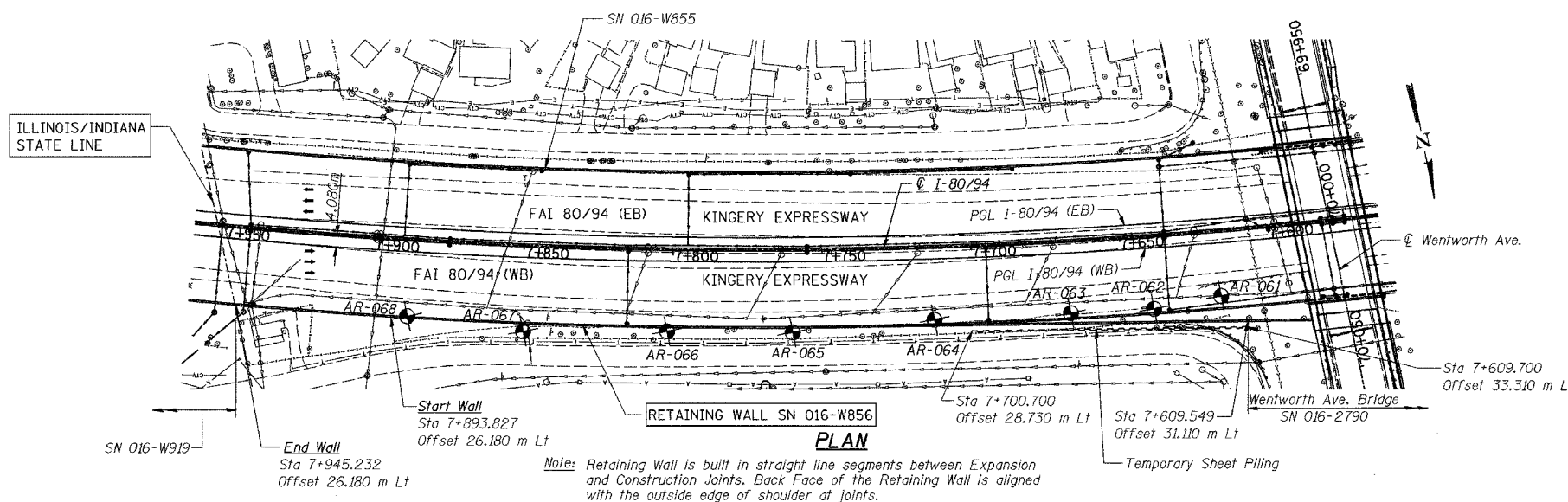


Gary S. Powell
 GARY S. POWELL, S.E.
 IL. LIC. NO. 081-004771
 EXP 11-30-2006
 DATE 09-12-2005

Gary S. Powell
 GARY S. POWELL, P. E.
 IN. LIC. NO. 10403944
 EXP 07-31-2006
 DATE 09-12-2005

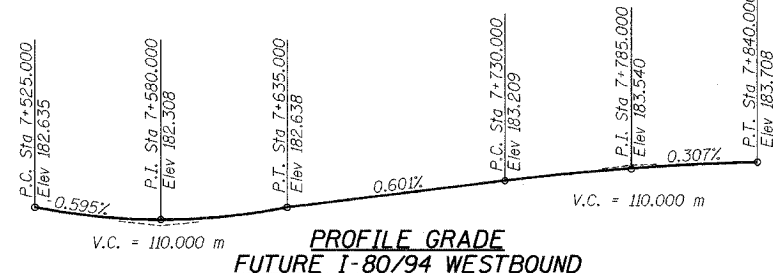
APPROVED
 FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Adams
 ENGINEER OF BRIDGES AND STRUCTURES



LOCATION SKETCH

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP



CURVE DATA I-80/94

$\Delta = 20^\circ - 11' - 25''$
 $R = 1,923.600 \text{ m}$
 $T = 342.476 \text{ m}$
 $L = 677.849 \text{ m}$
 $E = 30.249 \text{ m}$
 $P.C. \text{ Sta} = 7+380.276$
 $P.I. \text{ Sta} = 7+722.751$
 $P.T. \text{ Sta} = 8+058.125$
 $S.E. = 2.9\%$

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

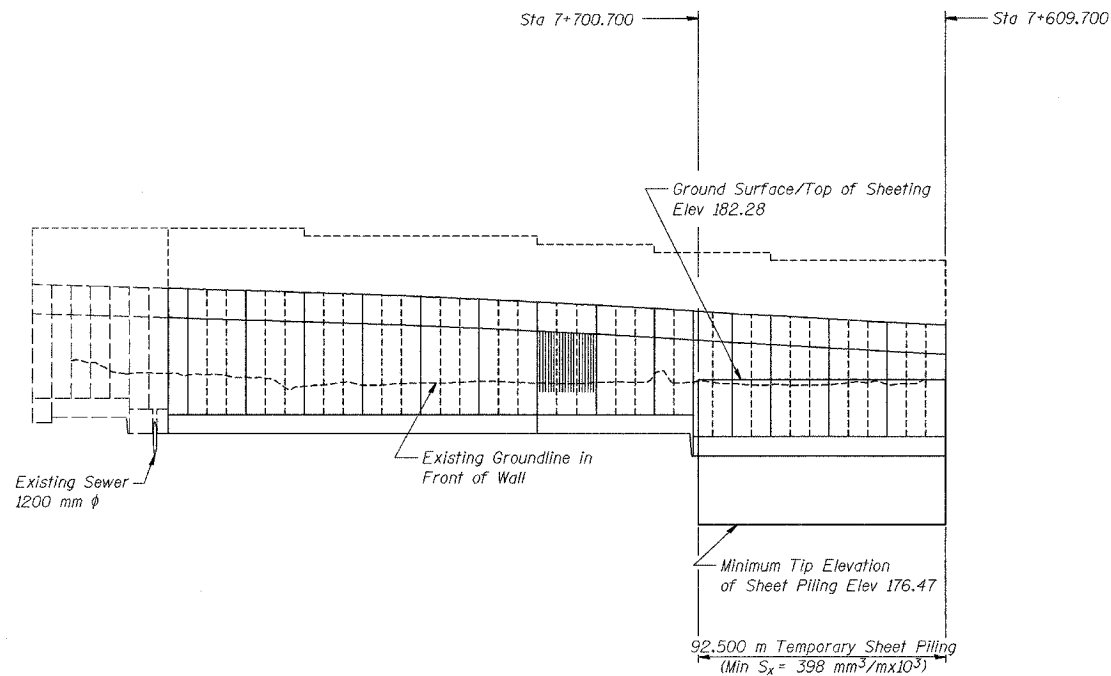
GENERAL PLAN
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+893.827 TO STATION 7+945.232
STRUCTURE NO. 016-W856

DATE 09/05



ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
1-80/94	2626.2-R-1	COOK	1207	822
CONTRACT NO. 62114				INDOT DES. NO. 0100987

SHEET NO. S-2
20 SHEETS



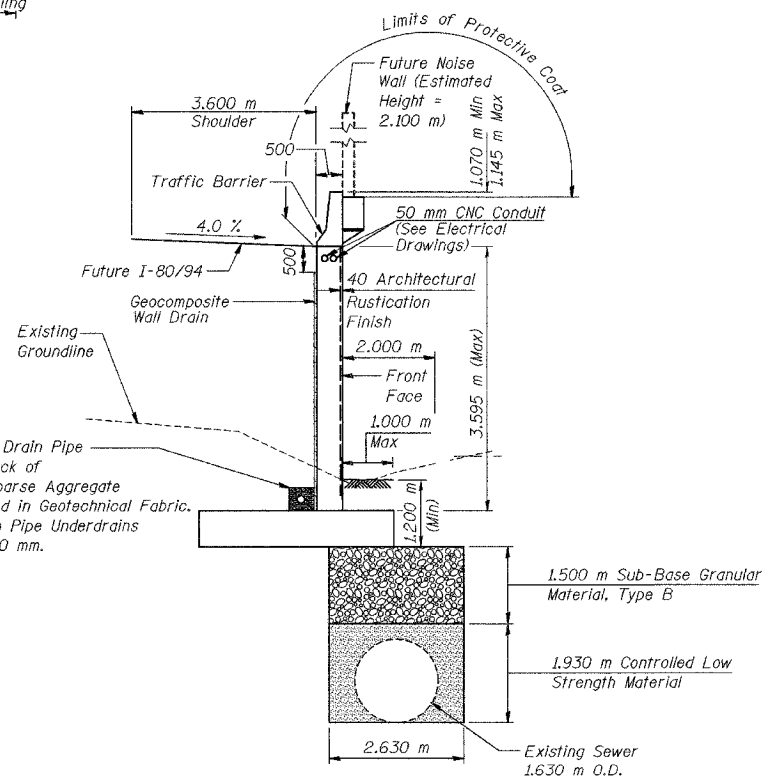
*** TEMPORARY SHEET PILING - ELEVATION**

GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of AASHTO M 31M or M322M Grade 400.
2. All dimensions are in millimeters (mm) except as noted.
- * 3. If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.
4. All construction joints shall be bonded.
5. Construction for Retaining Wall SNO16-W856 will be let in separate contracts (Phase 2 and Phase 3), with each contract responsible for construction to the limits shown.

INDEX OF SHEETS

SHEET NO.	TITLE
S-1	General Plan
S-2	Index of Sheets, General Notes and Total Bill of Material
S-3	Plan and Elevation (1 of 13)
S-4	Plan and Elevation (2 of 13)
S-5	Plan and Elevation (3 of 13)
* S-6	Plan and Elevation (4 of 13)
* S-7	Plan and Elevation (5 of 13)
* S-8	Plan and Elevation (6 of 13)
* S-9	Plan and Elevation (7 of 13)
* S-10	Plan and Elevation (8 of 13)
* S-11	Plan and Elevation (9 of 13)
* S-12	Plan and Elevation (10 of 13)
* S-13	Plan and Elevation (11 of 13)
* S-14	Plan and Elevation (12 of 13)
* S-15	Plan and Elevation (13 of 13)
S-16	Wall Sections and Details
S-17	Rustication Finish Details
S-18	Boring Logs (1 of 3)
S-19	Boring Logs (2 of 3)
S-20	Boring Logs (3 of 3)



TYPICAL SECTION

TOTAL BILL OF MATERIAL

ITEM	UNIT	PHASE 3 QUANTITY	PHASE 3 QUANTITY
Structure Excavation	m ³	4,139	535.1
Concrete Structures	m ³	1,547.6	269.0
Rustication Finish	m ²	753	148
Protective Coat	m ²	470	92.7
Reinforcement Bars, Epoxy Coated	kg	102,730	18,390
Temporary Sheet Piling	m ²	538	-
Geocomposite Wall Drain	m ²	782	138
Pipe Underdrains for Structures 150 mm	m	296.5	52.5
Noise Abatement Wall Anchor Rod Assembly	Each	82	15
Controlled Low Strength Material	m ³	-	140.4
Sub-Base Granular Material, Type B	M Ton	-	408.5

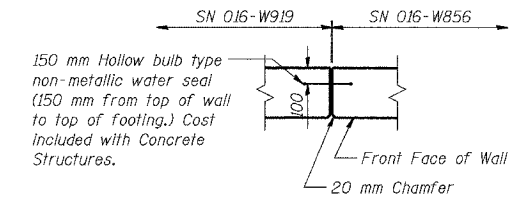
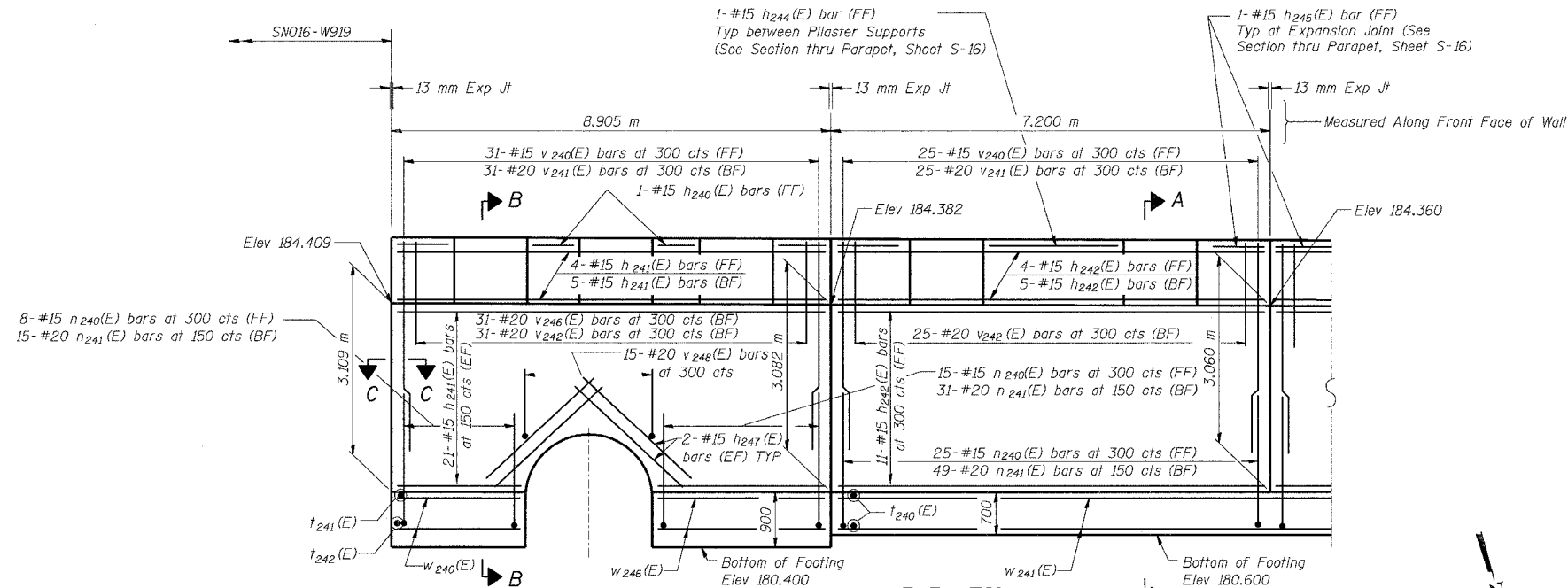
DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
1-80/94/US 6
KINCERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41
**INDEX OF SHEETS GENERAL NOTES
AND TOTAL BILL OF MATERIAL**
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+893.827 TO STATION 7+945.232
STRUCTURE NO. 016-W856
DATE 09/05
AMERICAN
CONSULTING ENGINEERS

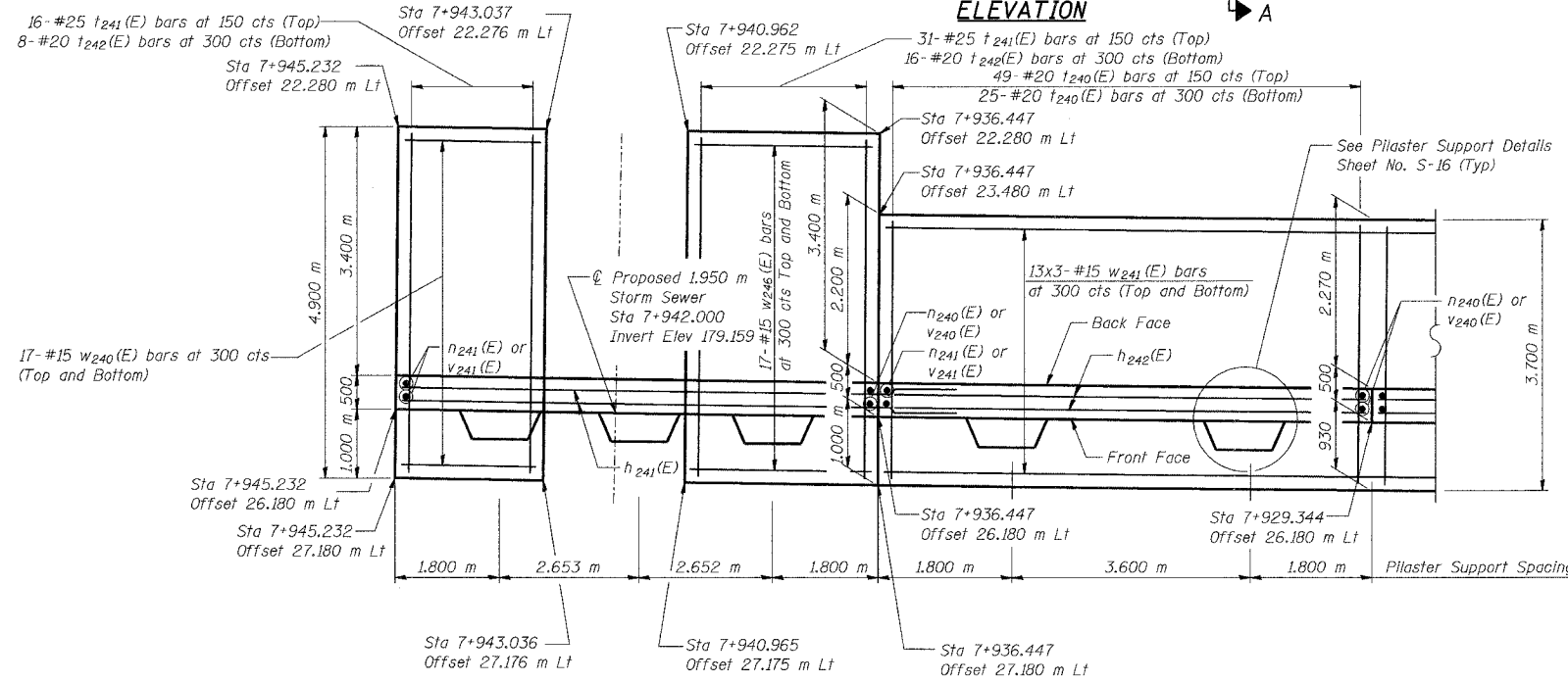
* FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEETS
1207	823	COOK	1207	823
SHEET NO. S-3				
20 SHEETS				

CONTRACT NO. 62114 INDOT DES. NO. 0100987



SECTION C-C



FOOTING PLAN

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

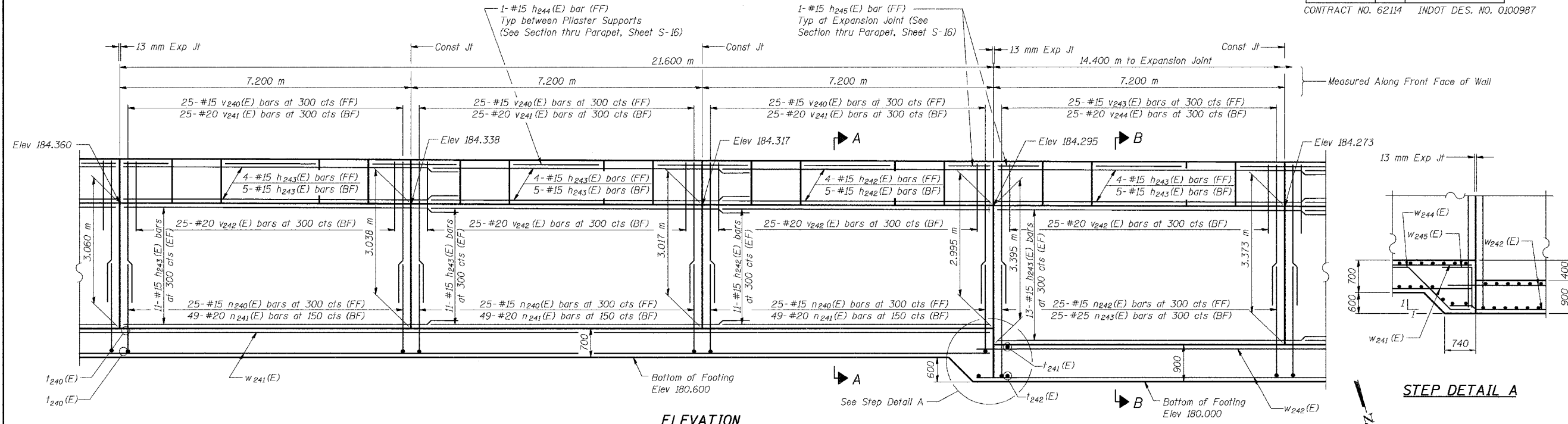
NOTES:
 See Sheet S-16 for Section A-A, Section B-B, Expansion Joint Detail, and Bill of Material.
 See Sheet S-17 for Rustication details.
 Stations are referenced to \odot I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.
 See Electrical Drawings for Junction Box and Conduit Details.

MINIMUM BAR LAPS	LEGEND
#15 bars = 640	BF = Back Face
#20 bars = 790	FF = Front Face
	EF = Each Face

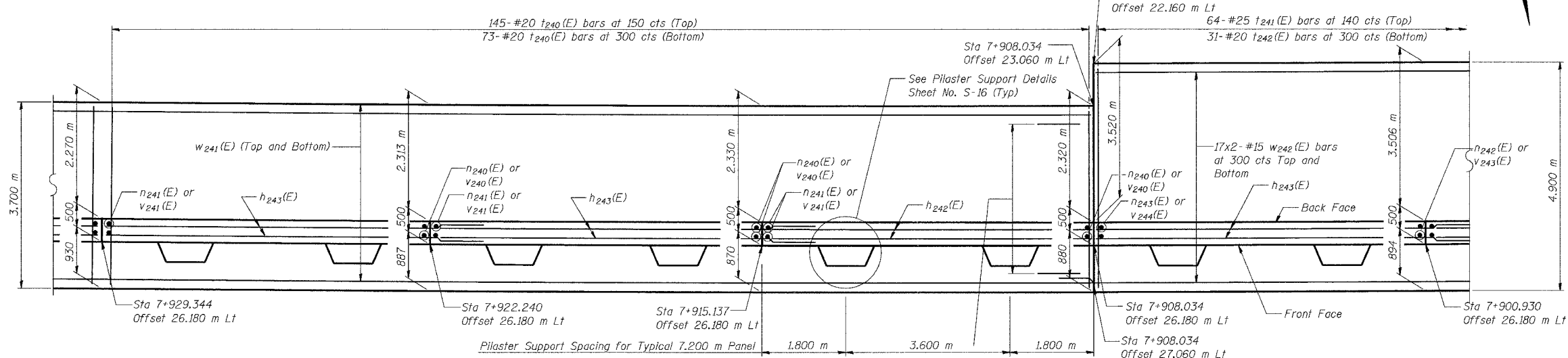
ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94 US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41
PLAN AND ELEVATION (1 OF 13)
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+893.827 TO STATION 7+945.232
STRUCTURE NO. 016-W856
 DATE 09/05
AMERICAN
 CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. S-4
P.A. 2	2626.2-R-1	COOK	1207	824
DATE	DESIGNED	DRAWN	CHECKED	DATE

CONTRACT NO. 62114 INDOT DES. NO. 0100987



ELEVATION



FOOTING PLAN

NOTES:
 See Sheet S-16 for Section A-A, Section B-B, Expansion Joint Detail, and Bill of Material.
 See Sheet S-17 for Rustication details.
 Stations are referenced to \odot I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.
 See Electrical Drawings for Junction Box and Conduit Details.

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS
 #15 bars = 640
 #20 bars = 790

LEGEND
 BF = Back Face
 FF = Front Face
 EF = Each Face

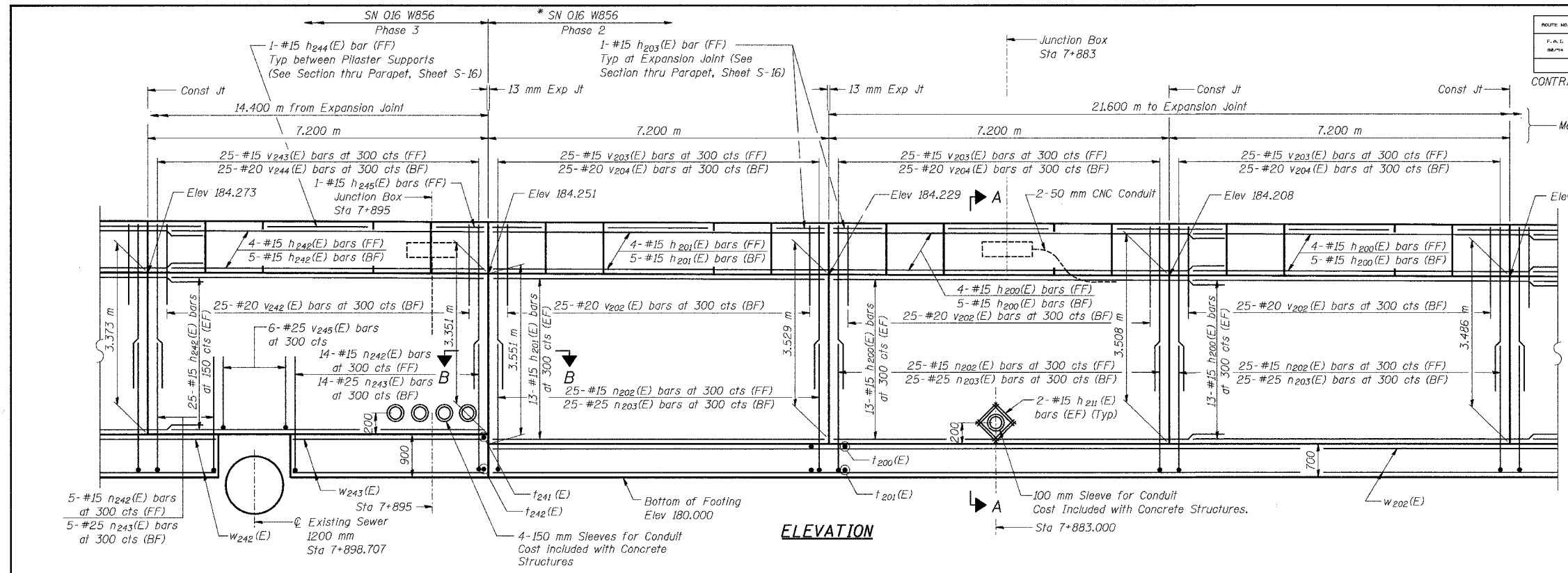
ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94 US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

PLAN AND ELEVATION (2 OF 13)
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+893.827 TO STATION 7+945.232
STRUCTURE NO. 016-W856
 DATE 09/05

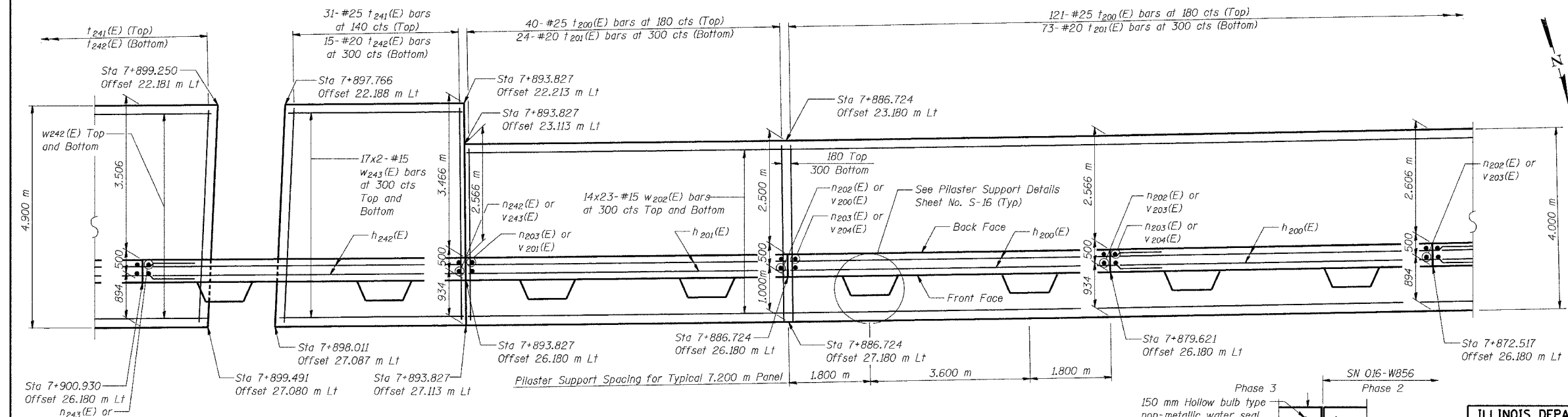
AMERICAN
 CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
1207	825	COOK	1207	825
SHEET NO. S-5		20 SHEETS		

CONTRACT NO. 62114 INDOT DES. NO. 0100987



ELEVATION



FOOTING PLAN

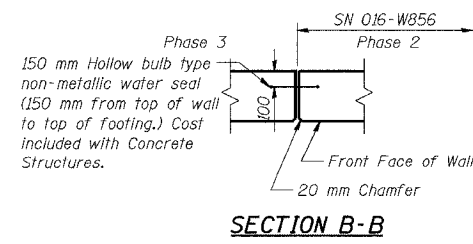
MINIMUM BAR LAPS
 #15 bars = 640
 #20 bars = 790

LEGEND
 BF = Back Face
 FF = Front Face
 EF = Each Face

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

NOTES:
 See Sheet S-16 for Section A-A, Expansion Joint Detail, and Bill of Material.
 See Sheet S-17 for Rustication details.
 Stations are referenced to ϕ I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.

Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.
 See Electrical Drawings for Junction Box and Conduit Details.



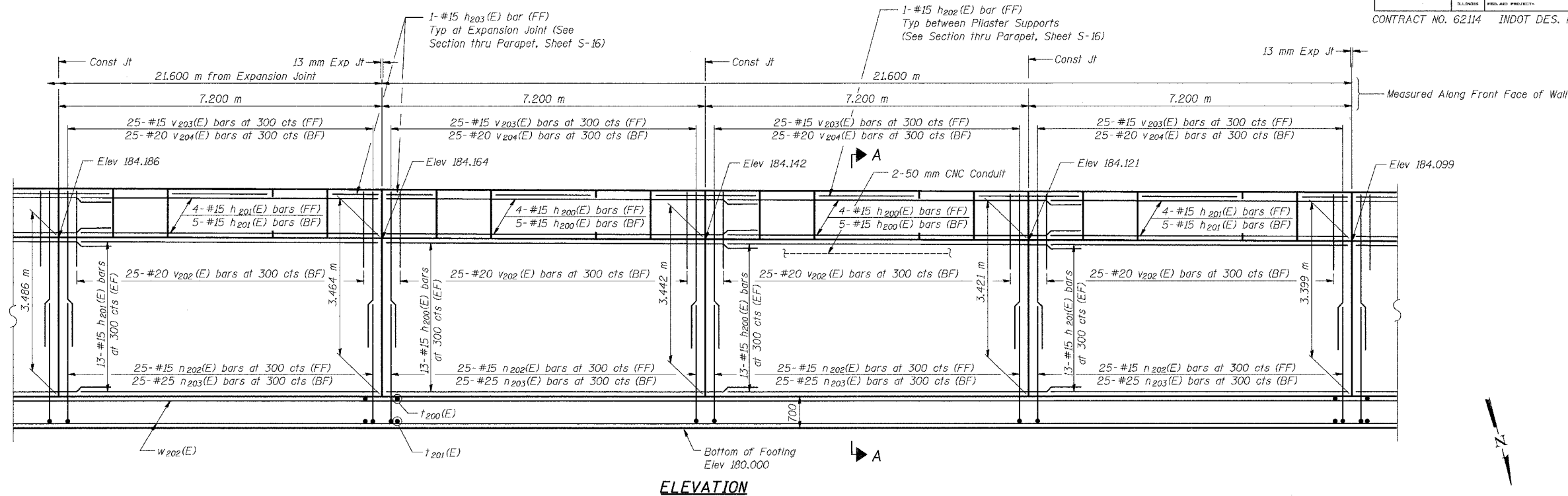
SECTION B-B

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41
PLAN AND ELEVATION (3 OF 13)
 SECTION 2626.2-R-1
 COOK COUNTY
 STATION 7+893.827 TO STATION 7+945.232
 STRUCTURE NO. 016-W856
 DATE 09/05
AMERICAN
 CONSULTING ENGINEERS

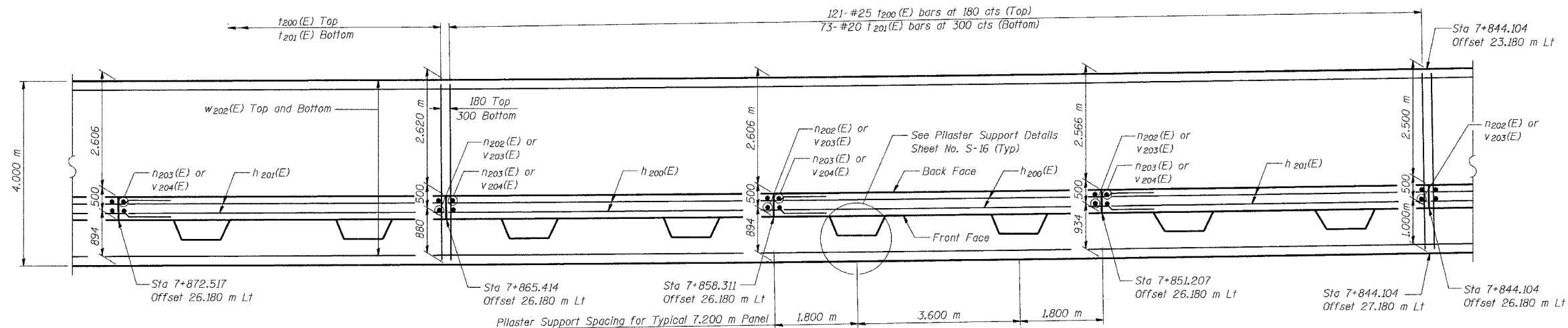
* FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO. S-6
P.A.L.	2626.2-R-1	COOK	1207	826	20 SHEETS
DATE	DESIGNED	DRAWN	CHECKED	DATE	
08/94					

CONTRACT NO. 62114 INDOT DES. NO. 0100987



ELEVATION



FOOTING PLAN

NOTES:

See Sheet S-16 for Section A-A, Expansion Joint Detail, and Bill of Material.
 See Sheet S-17 for Rustication details.
 Stations are referenced to \mathcal{C} I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 See Electrical Drawings for Junction Box and Conduit Details.

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS

#15 bars = 640
 #20 bars = 790

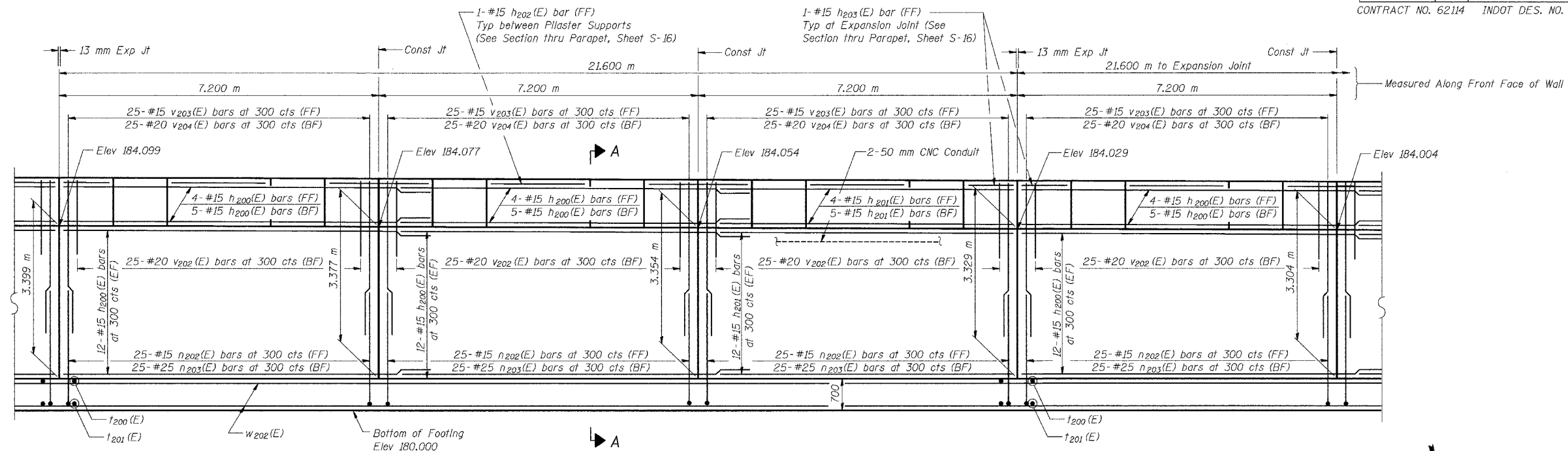
LEGEND

BF = Back Face
 FF = Front Face
 EF = Each Face

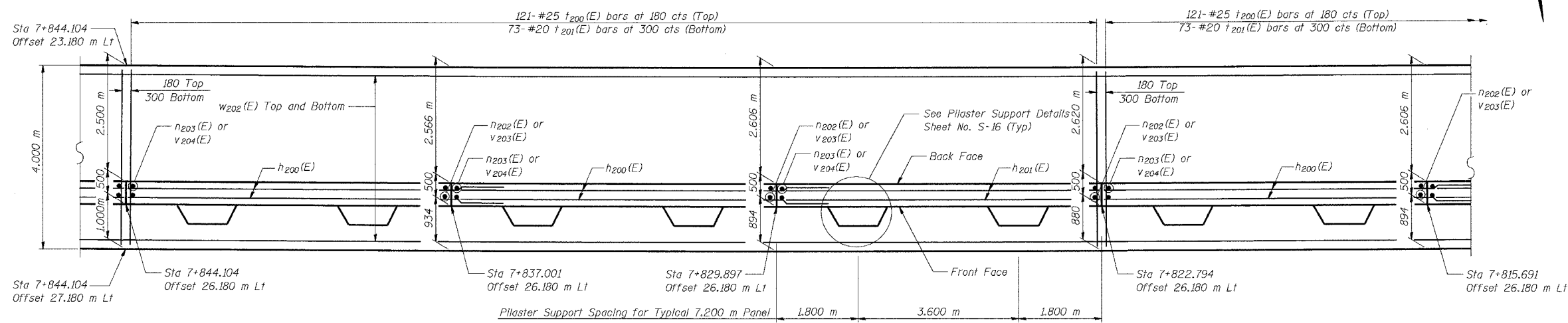
ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94 US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41
PLAN AND ELEVATION (4 OF 13)
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+609.549 TO STATION 7+893.827
STRUCTURE NO. 016-W856
 DATE 07/05
AMERICAN
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO. S-7
66-74	266.2-R-1	COOK	1207	827	20 SHEETS
DRAWN		CONTRACT NO. 62114 INDOT DES. NO. 0100987			



ELEVATION



FOOTING PLAN

NOTES:
 See Sheet S-16 for Section A-A, Expansion Joint Detail, and Bill of Material.
 See Sheet S-17 for Rustication details.
 Stations are referenced to ϕ I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 See Electrical Drawings for Junction Box and Conduit Details.

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS
 #15 bars = 640
 #20 bars = 790

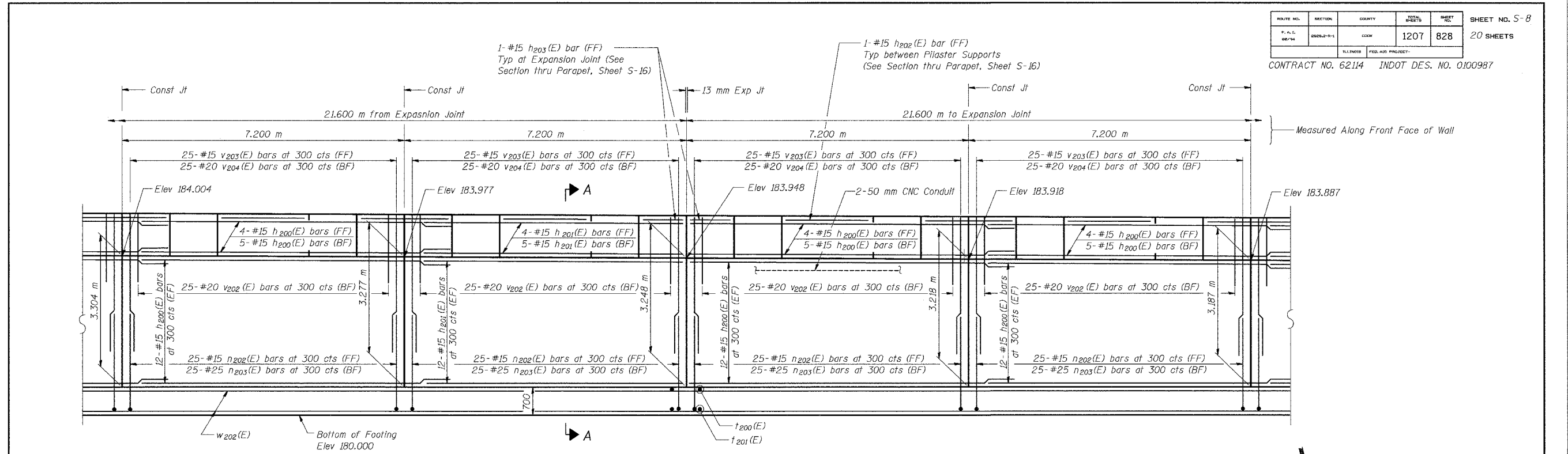
LEGEND
 BF = Back Face
 FF = Front Face
 EF = Each Face

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41
PLAN AND ELEVATION (5 OF 13)
 SECTION 266.2-R-1
 COOK COUNTY
 STATION 7+609.549 TO STATION 7+893.827
 STRUCTURE NO. 016-W856
 DATE 07/05
AMERICAN
 CONSULTING ENGINEERS

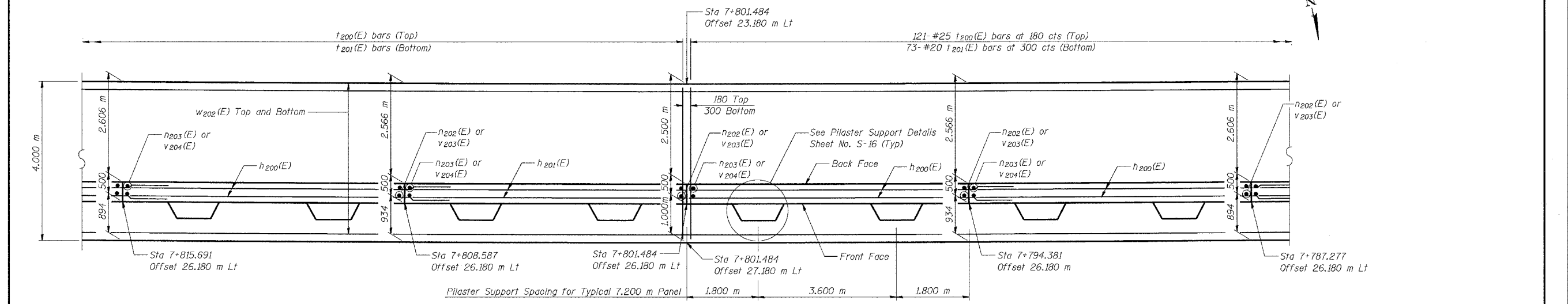
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
1207	2626.2-R-1	COOK	1207	828
ILLINOIS		FIELD AND PROJECT		

CONTRACT NO. 62114 INDOT DES. NO. 0100987



ELEVATION



FOOTING PLAN

NOTES:
 See Sheet S-16 for Section A-A, Expansion Joint Detail, and Bill of Material.
 See Sheet S-17 for Rustication details.
 Stations are referenced to \odot I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 See Electrical Drawings for Junction Box and Conduit Details.

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS
 #15 bars = 640
 #20 bars = 790

LEGEND
 BF = Back Face
 FF = Front Face
 EF = Each Face

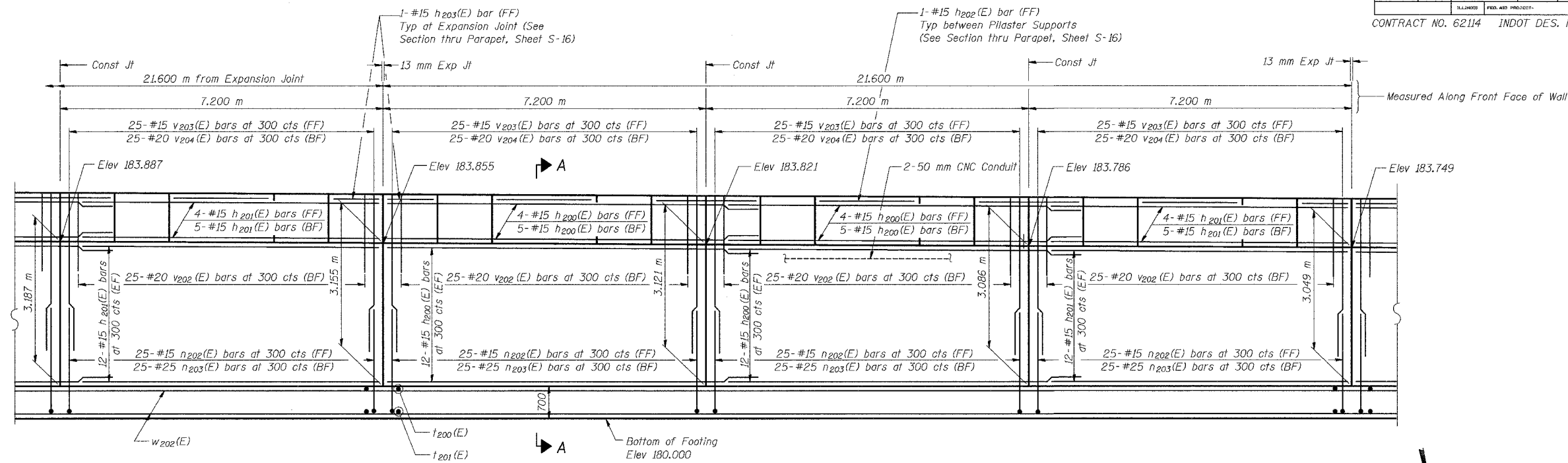
ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

PLAN AND ELEVATION (6 OF 13)
 SECTION 2626.2-R-1
 COOK COUNTY
 STATION 7+609.549 TO STATION 7+893.827
 STRUCTURE NO. 016-W856
 DATE 07/05

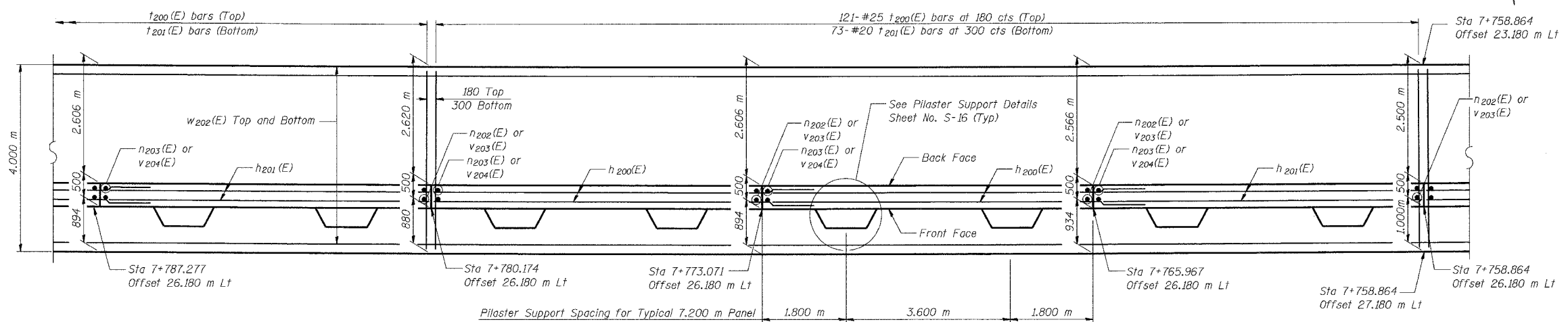
AMERICAN
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	POST MILE	SHEET NO.
F.A.L.	2626.2-R-1	COOK	1207	829
SHEET NO. S-9		20 SHEETS		
CONTRACT NO. 62114		INDOT DES. NO. 0100987		



ELEVATION



FOOTING PLAN

NOTES:
 See Sheet S-16 for Section A-A, Expansion Joint Detail, and Bill of Material.
 See Sheet S-17 for Rustication details.
 Stations are referenced to \mathcal{Q} I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 See Electrical Drawings for Junction Box and Conduit Details.

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS
 #15 bars = 640
 #20 bars = 790

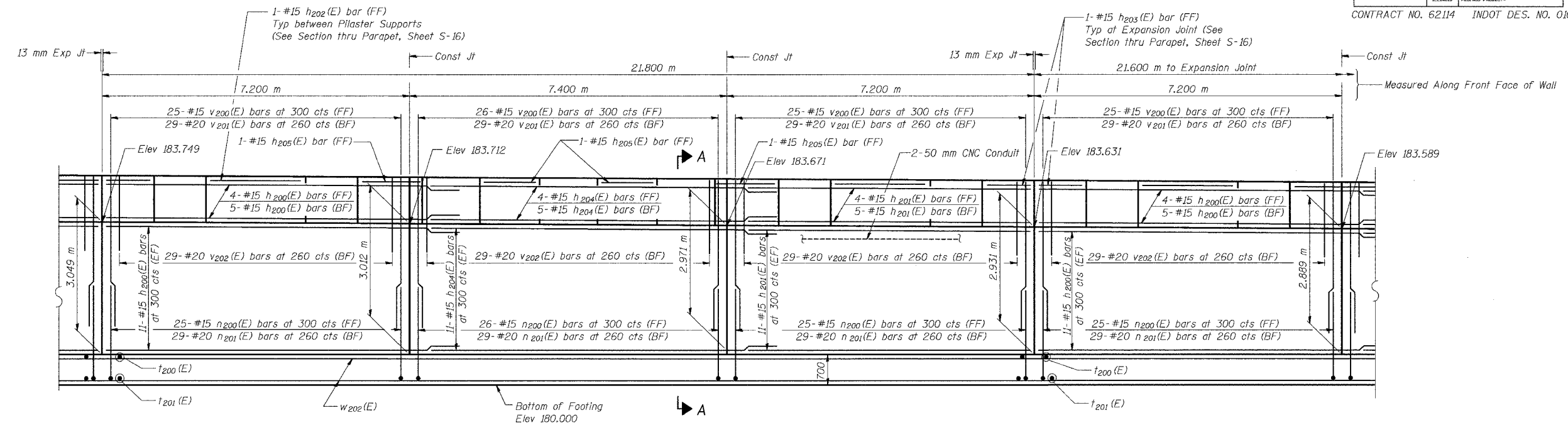
LEGEND
 BF = Back Face
 FF = Front Face
 EF = Each Face

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41
PLAN AND ELEVATION (7 OF 13)
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+609.549 TO STATION 7+893.827
STRUCTURE NO. 016-W856
 DATE 07/05
AMERICAN
 CONSULTING ENGINEERS

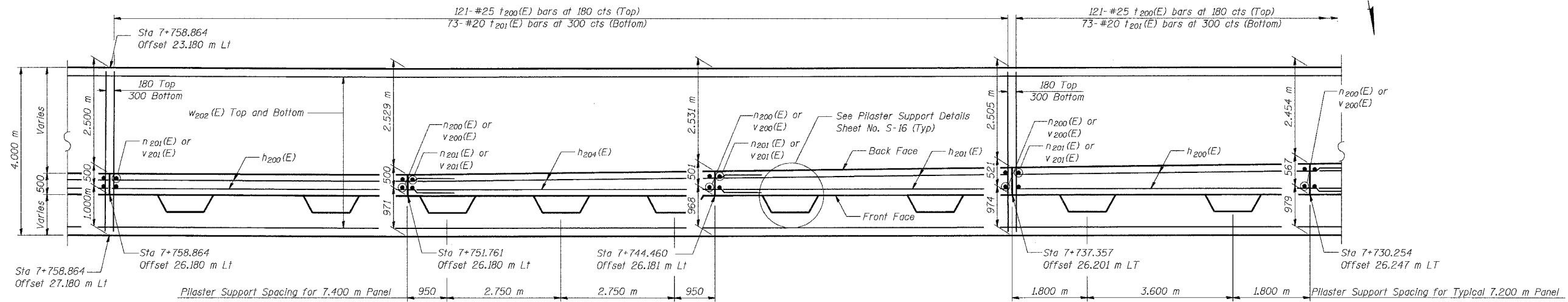
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. S-10
P.A.L.	2626.2-R-1	COOK	1207 830	20 SHEETS
DRAWN		DESIGNED		

CONTRACT NO. 62114 INDOT DES. NO. 0100987



ELEVATION



FOOTING PLAN

NOTES:
 See Sheet S-16 for Section A-A, Expansion Joint Detail, and Bill of Material.
 See Sheet S-17 for Rustication details.
 Stations are referenced to \odot I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 See Electrical Drawings for Junction Box and Conduit Details.

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS
 #15 bars = 640
 #20 bars = 790

LEGEND
 BF = Back Face
 FF = Front Face
 EF = Each Face

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

PLAN AND ELEVATION (8 OF 13)
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+609.549 TO STATION 7+893.827
STRUCTURE NO. 016-W856
 DATE 07/05

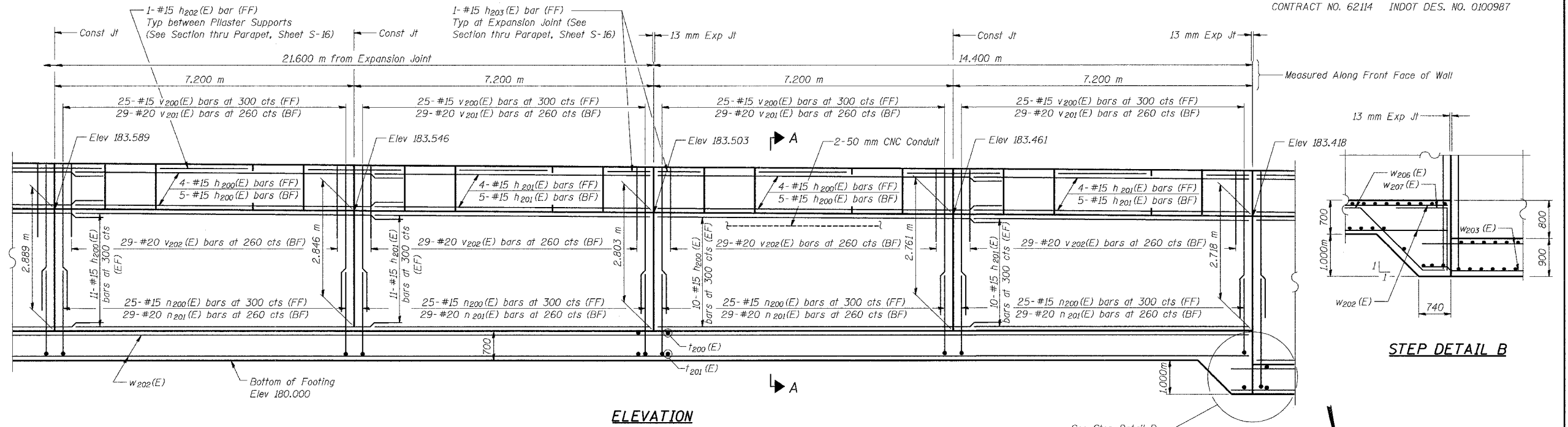
AMERICAN
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

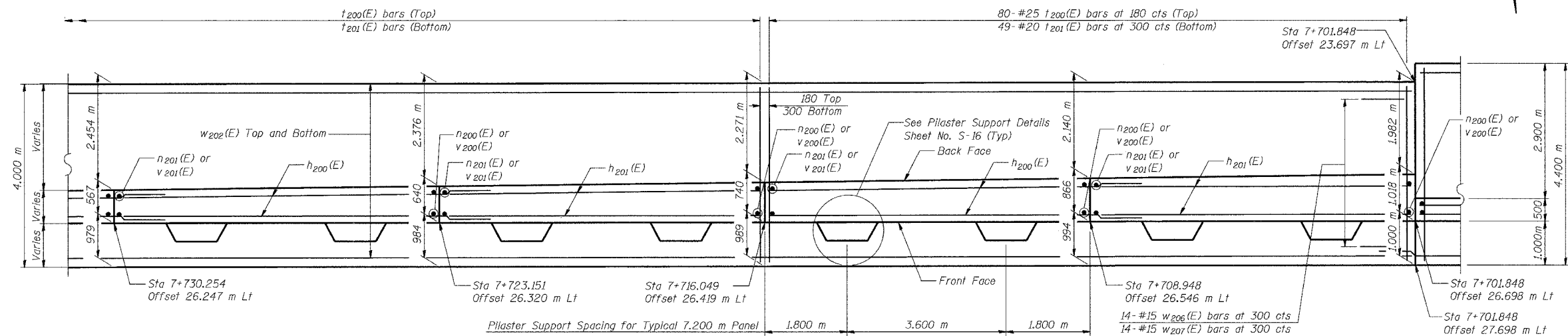
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ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO. S-11
88-74	2626.2-R-1	COOK	1207	831	20 SHEETS
ILLINOIS		FED. AID PROJECT			

CONTRACT NO. 62114 INDOT DES. NO. 0100987



ELEVATION



FOOTING PLAN

NOTES:

See Sheet S-16 for Section A-A, Expansion Joint Detail, and Bill of Material.
 See Sheet S-17 for Rustication details.
 Stations are referenced to \odot I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 See Electrical Drawings for Junction Box and Conduit Details.

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS

#15 bars = 640
 #20 bars = 790

LEGEND

BF = Back Face
 FF = Front Face
 EF = Each Face

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

PLAN AND ELEVATION (9 OF 13)
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+609.549 TO STATION 7+893.827
STRUCTURE NO. 016-W856

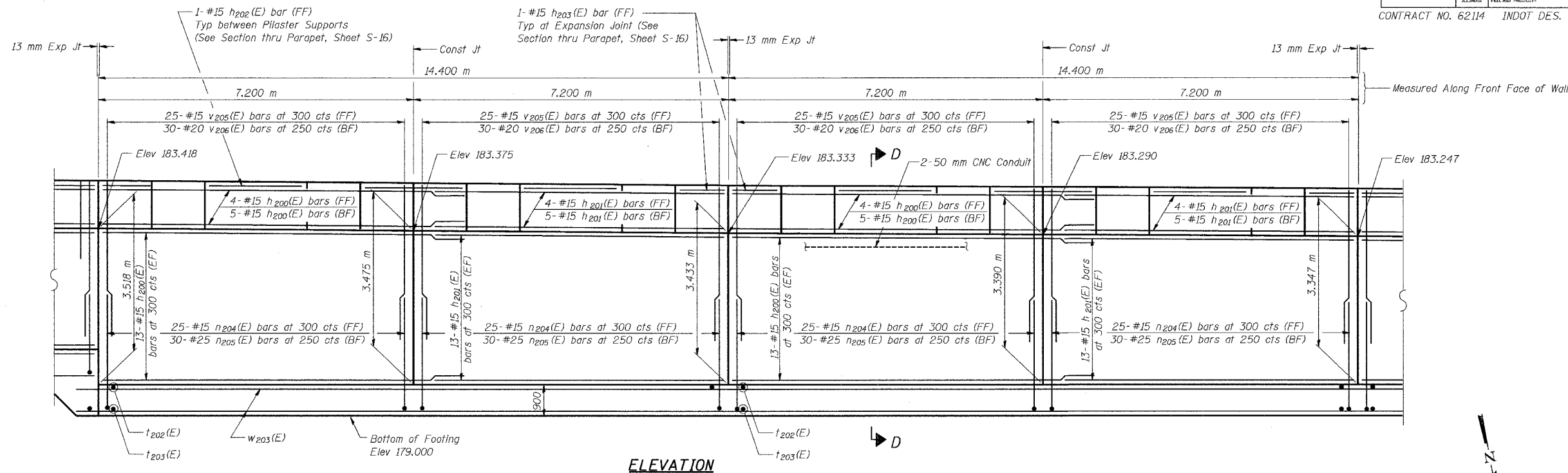
DATE 07/05

AMERICAN
 CONSULTING ENGINEERS

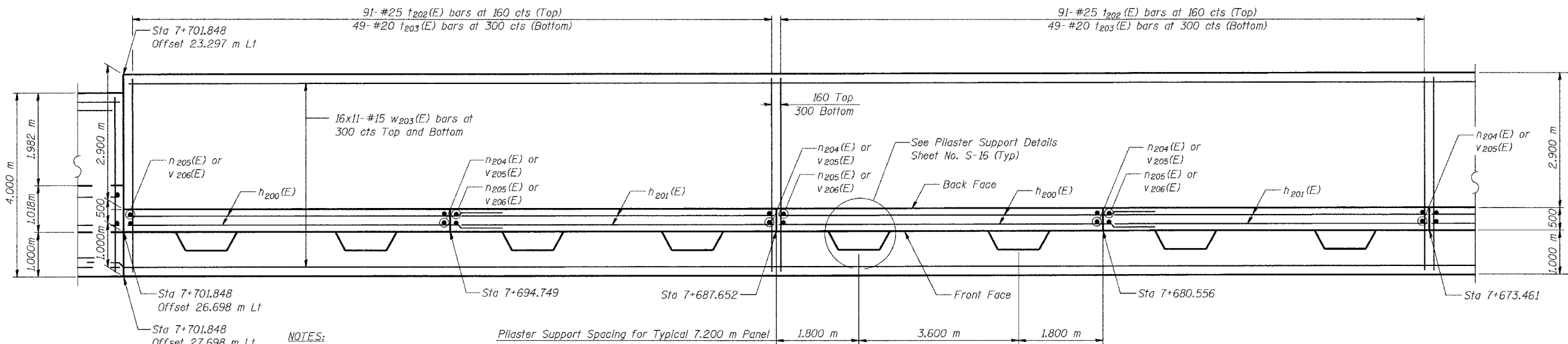
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO. S-12
F.A.L.	2626.2-R-1	COOK	1207	832	20 SHEETS
S.D.S.		FED. AID PROJECT			

CONTRACT NO. 62114 INDOT DES. NO. 0100987



ELEVATION



FOOTING PLAN

NOTES:
 See Sheet S-16 for Section D-D, Expansion Joint Detail, and Bill of Material.
 See Sheet S-17 for Rustication details.
 Stations are referenced to \odot I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 Bars indicated thus 20 x 3-#15 etc. Indicates 20 lines of bars with 3 lengths per line.
 See Electrical Drawings for Junction Box and Conduit Details.

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS
 #15 bars = 640
 #20 bars = 790

LEGEND
 BF = Back Face
 FF = Front Face
 EF = Each Face

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

PLAN AND ELEVATION (10 OF 13)
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+609.549 TO STATION 7+893.827
STRUCTURE NO. 016-W856
 DATE 07/05

AMERICAN
 CONSULTING ENGINEERS

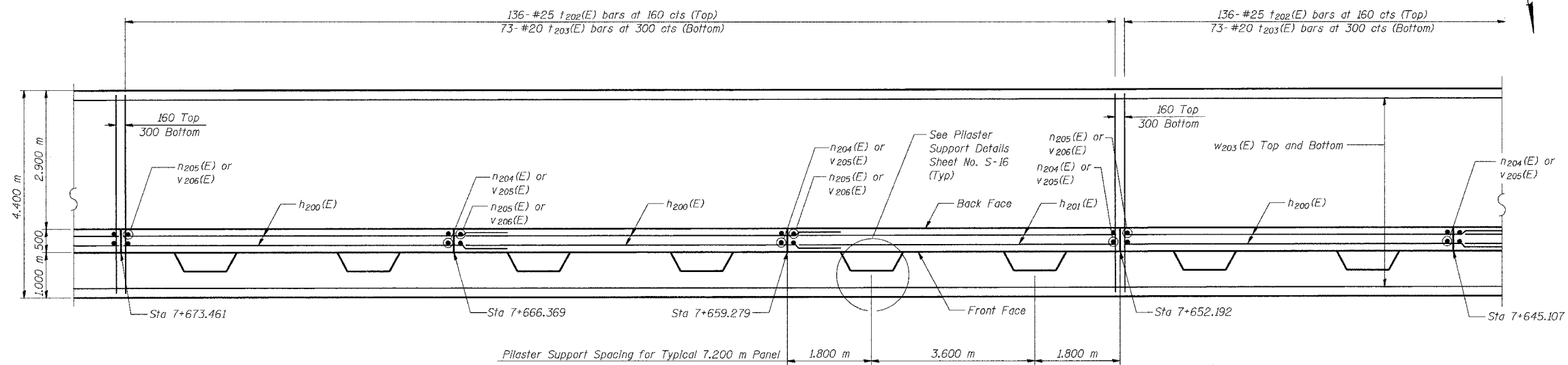
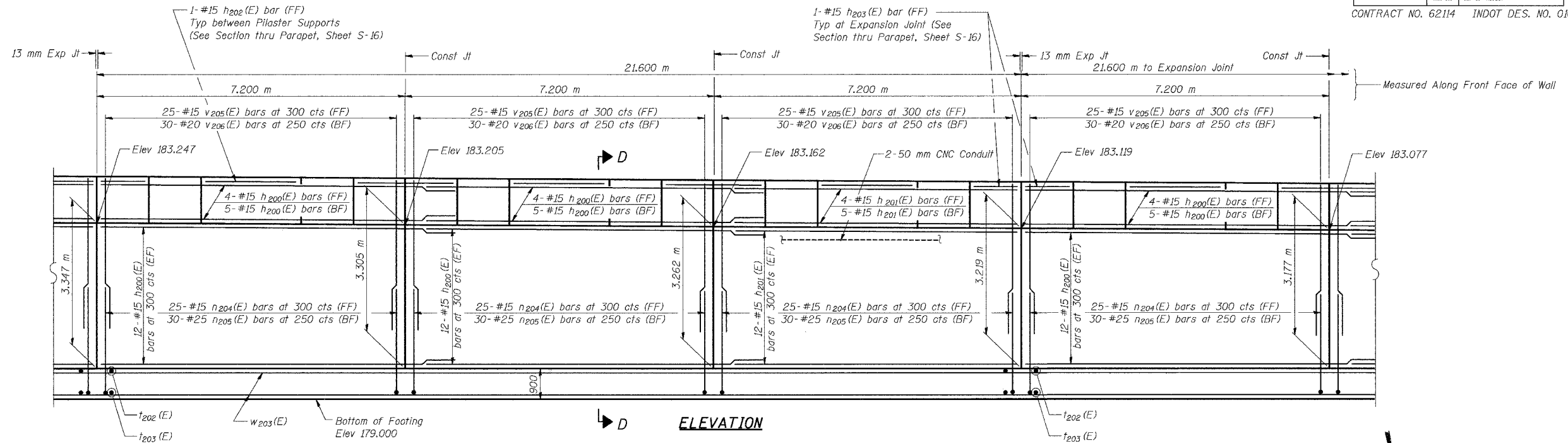
FOR INFORMATION ONLY

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-80/94	2626.2-R-1	COOK	1207	833
ILLINOIS		FED. AID PROJECT		

SHEET NO. S-13
20 SHEETS

CONTRACT NO. 62114 INDOT DES. NO. 0100987



NOTES:

See Sheet S-16 for Section D-D, Expansion Joint Detail, and Bill of Material.
See Sheet S-17 for Rustication details.
Stations are referenced to \mathcal{L} 1-80/94.
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.
See Electrical Drawings for Junction Box and Conduit Details.

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790

LEGEND

BF = Back Face
FF = Front Face
EF = Each Face

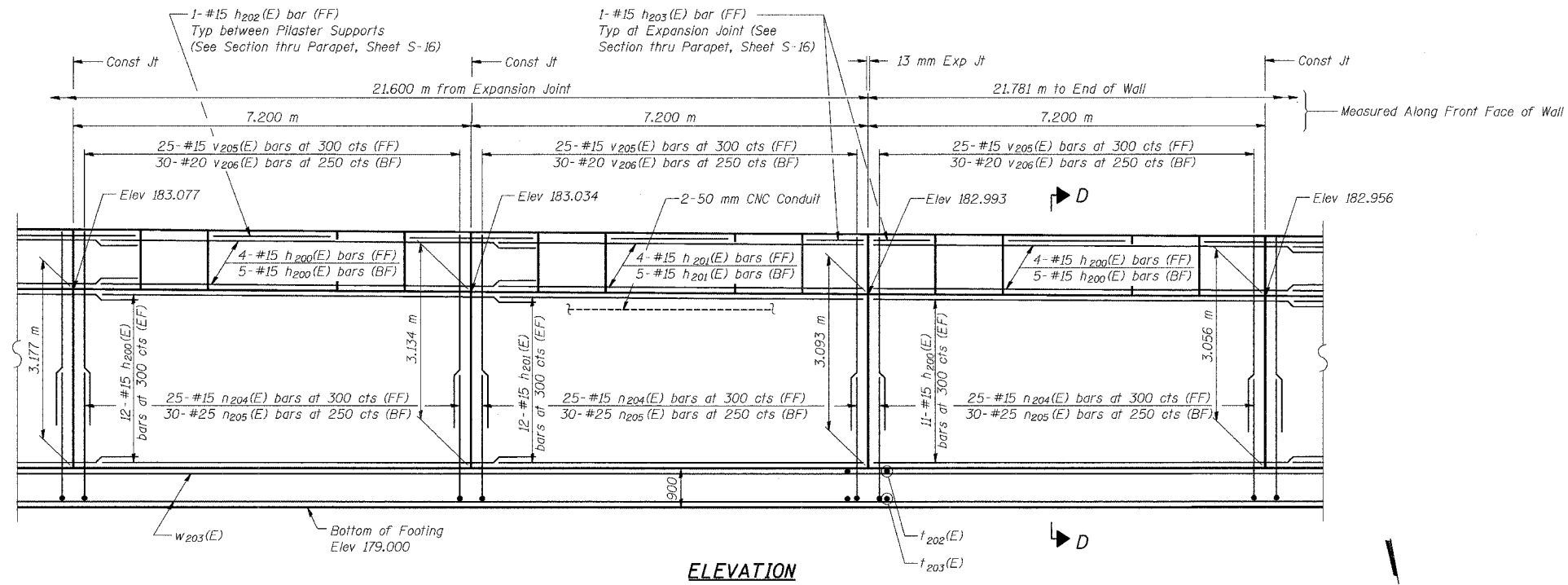
ILLINOIS DEPARTMENT OF TRANSPORTATION
1-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

PLAN AND ELEVATION (11 OF 13)
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+609.549 TO STATION 7+893.827
STRUCTURE NO. 016-W856
DATE 07/05

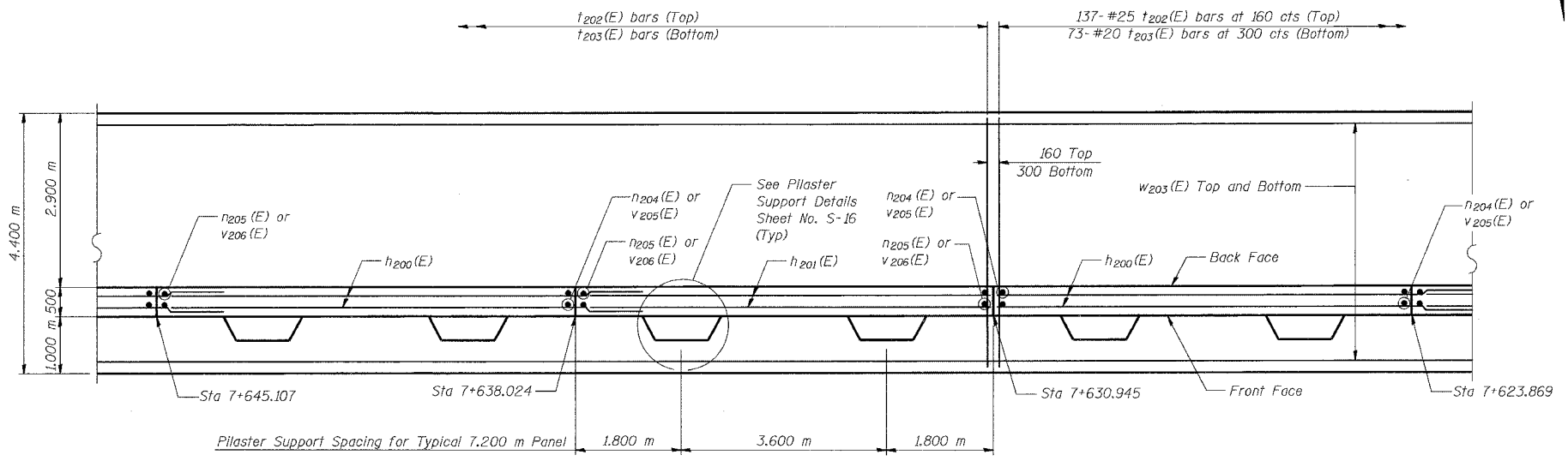
AMERICAN
CONSULTING ENGINEERS

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. S-14
I-80/94	2626.2-R-1	COOK	1207 834	20 SHEETS
ILLINOIS		INDOT DES. NO. 0100987		



ELEVATION



FOOTING PLAN

NOTES:
 See Sheet S-16 for Section D-D, Expansion Joint Detail, and Bill of Material.
 See Sheet S-17 for Rustication details.
 Stations are referenced to \odot I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 See Electrical Drawings for Junction Box and Conduit Details.

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS
 #15 bars = 640
 #20 bars = 790

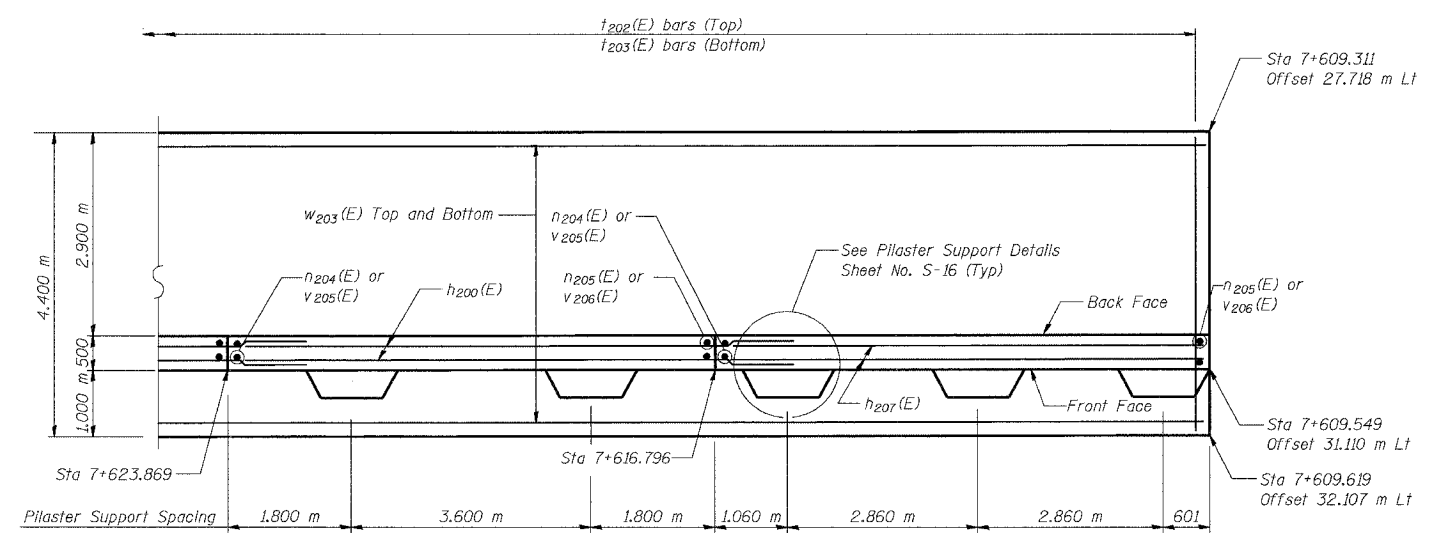
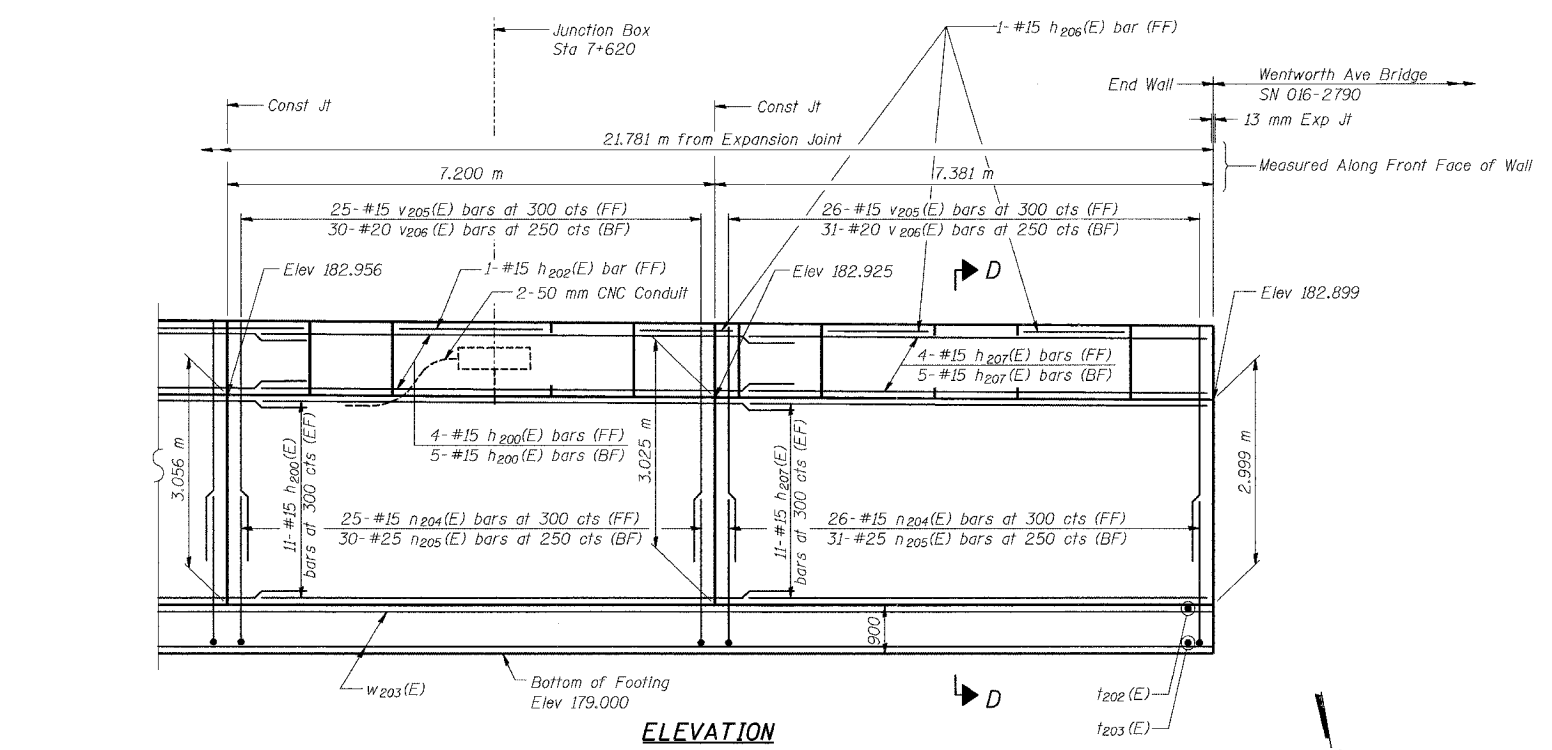
LEGEND
 BF = Back Face
 FF = Front Face
 EF = Each Face

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

PLAN AND ELEVATION (12 OF 13)
 SECTION 2626.2-R-1
 COOK COUNTY
 STATION 7+609.549 TO STATION 7+893.827
 STRUCTURE NO. 016-W856
 DATE 07/05

AMERICAN
 CONSULTING ENGINEERS

FOR INFORMATION ONLY



NOTES:
 See Sheet S-16 for Section D-D, Expansion Joint Detail, and Bill of Material.
 See Sheet S-17 for Rustication details.
 Stations are referenced to I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 See Electrical Drawings for Junction Box and Conduit Details.

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS
 #15 bars = 640
 #20 bars = 790

LEGEND
 BF = Back Face
 FF = Front Face
 EF = Each Face

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41
PLAN AND ELEVATION (13 OF 13)
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+609.549 TO STATION 7+893.827
STRUCTURE NO. 016-W856
 DATE 07/05
AMERICAN
 CONSULTING ENGINEERS

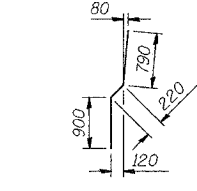
FOR INFORMATION ONLY

CONTRACT NO. 62114 INDOT DES. NO. 0100987

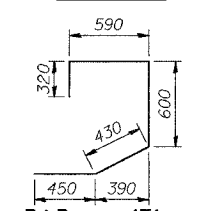
BILL OF MATERIAL - PHASE 2

Bar	No.	Size	Length (m)	Shape
h200(E)	790	#15	7.84	
h201(E)	464	#15	7.10	
h202(E)	60	#15	2.30	
h203(E)	29	#15	1.10	
h204(E)	31	#15	8.04	
h205(E)	4	#15	1.45	
h206(E)	3	#15	1.56	
h207(E)	31	#15	7.28	
h208(E)	220	#20	2.86	
h209(E)	4	#20	2.93	
h210(E)	108	#20	3.38	
h211(E)	16	#15	0.60	
h200(E)	201	#15	2.10	
h201(E)	232	#20	2.16	
h202(E)	475	#15	2.76	
h203(E)	475	#25	2.90	
h204(E)	326	#15	2.80	
h205(E)	391	#25	2.94	
h200(E)	1088	#25	3.90	
h201(E)	657	#20	3.90	
h202(E)	591	#25	4.30	
h203(E)	317	#20	4.30	
h200(E)	201	#15	3.51	
h201(E)	232	#20	2.59	
h202(E)	707	#20	1.91	
h203(E)	475	#15	3.39	
h204(E)	475	#20	2.47	
h205(E)	326	#15	3.47	
h206(E)	391	#20	3.62	
h207(E)	492	#20	2.39	
h202(E)	644	#15	9.11	
h203(E)	352	#15	9.16	
h206(E)	14	#15	3.49	
h207(E)	14	#15	3.12	
Structure Excavation	m ³		4,139	
Concrete Structures	m ³		1,547.6	
Protective Coat	m ²		470	
Reinforcement Bars, Epoxy Coated	kg		102,730	
Geocomposite Wall Drain	m ²		782	
Pipe Underdrains for Structures 150 mm	m		296.5	
Noise Abatement Wall Anchor Rod Assembly	Each		82	

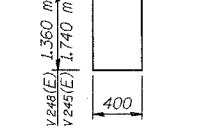
BARS n200(E) thru n205(E) or n240(E) thru n243(E)



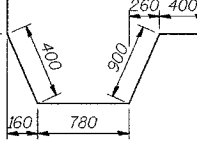
BARS v202(E) or v242(E)



BAR v207(E) or v247(E)



BARS v245(E) OR v248(E)



BILL OF MATERIAL - PHASE 3

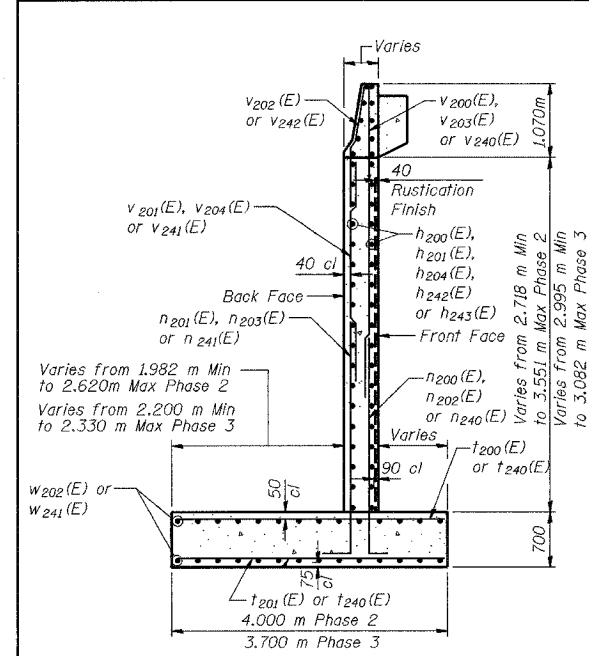
Bar	No.	Size	Length (m)	Shape
h240(E)	2	#15	1.35	
h241(E)	51	#15	8.81	
h242(E)	121	#15	7.10	
h243(E)	97	#15	7.84	
h244(E)	9	#15	2.30	
h245(E)	8	#15	1.10	
h246(E)	60	#20	2.86	
h247(E)	8	#20	0.90	
h248(E)	15	#15	2.11	
n240(E)	123	#15	2.49	
n241(E)	242	#20	2.55	
n242(E)	44	#15	2.89	
n243(E)	44	#25	3.03	
t240(E)	292	#20	3.60	
t241(E)	142	#25	4.80	
t242(E)	70	#20	4.80	
v240(E)	131	#15	3.44	
v241(E)	131	#20	2.44	
v242(E)	181	#20	1.91	
v243(E)	50	#15	3.25	
v244(E)	50	#20	2.33	
v245(E)	6	#25	3.88	
v246(E)	31	#20	0.87	
v247(E)	90	#20	2.39	
v248(E)	15	#20	3.12	
w240(E)	34	#15	2.13	
w241(E)	78	#15	10.00	
w242(E)	68	#15	4.72	
w243(E)	68	#15	2.40	
w244(E)	13	#15	2.93	
w245(E)	13	#15	2.34	
w246(E)	34	#15	4.48	
Structure Excavation	m ³		535.1	
Concrete Structures	m ³		269.0	
Protective Coat	m ²		92.7	
Reinforcement Bars, Epoxy Coated	kg		18,390	
Geocomposite Wall Drain	m ²		138	
Pipe Underdrains for Structures 150 mm	m		52.5	
Noise Abatement Wall Anchor Rod Assembly	Each		15	

PHASE 2 BAR DIMENSIONS

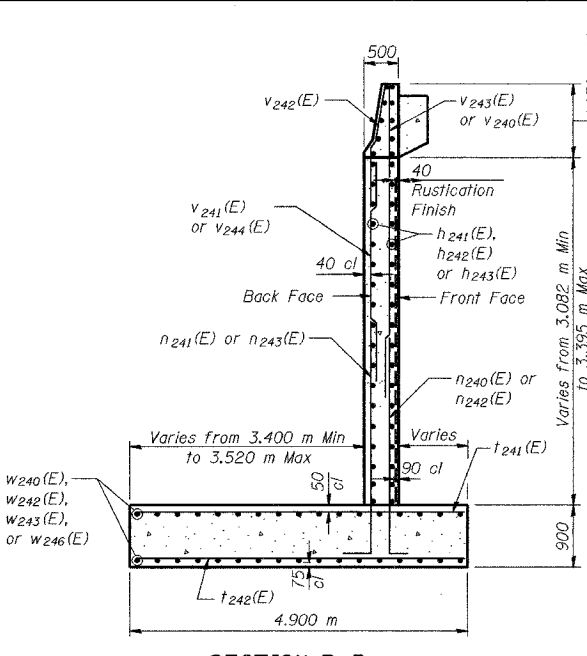
Bar	A	B
n200(E)	1.84 m	260
n201(E)	1.84 m	320
n202(E)	2.50 m	260
n203(E)	2.50 m	400
n204(E)	2.54 m	260
n205(E)	2.54 m	400
w206(E)	1.56 m	2.21 m
w207(E)	1.56 m	-

PHASE 3 BAR DIMENSIONS

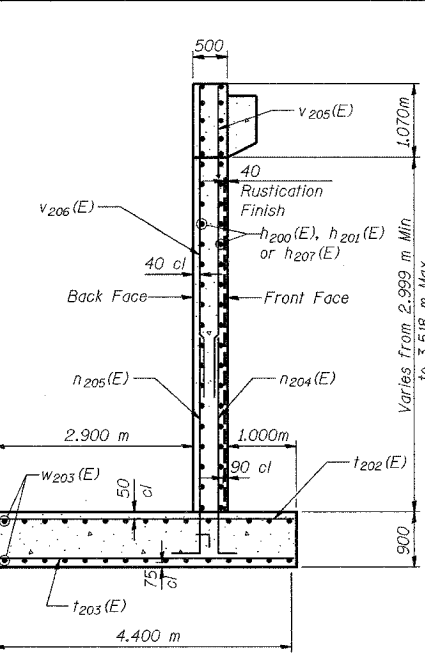
Bar	A	B
n240(E)	2.23 m	260
n241(E)	2.23 m	320
n242(E)	2.63 m	260
n243(E)	2.63 m	400
w244(E)	1.17 m	1.65 m
w245(E)	1.17 m	-



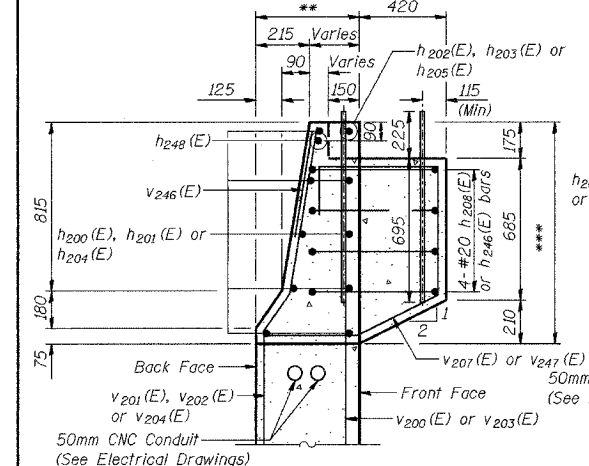
SECTION A-A



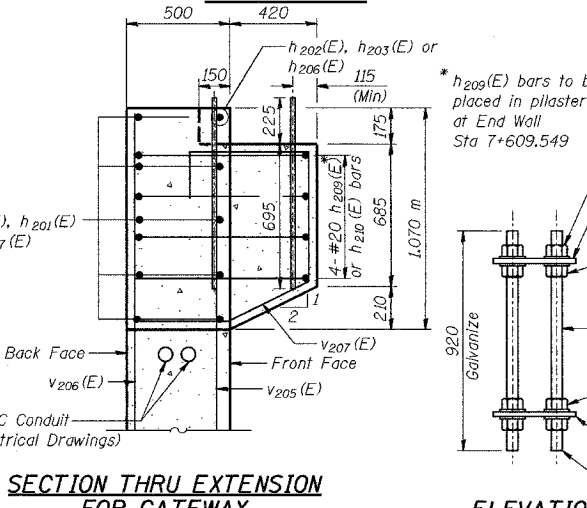
SECTION B-B



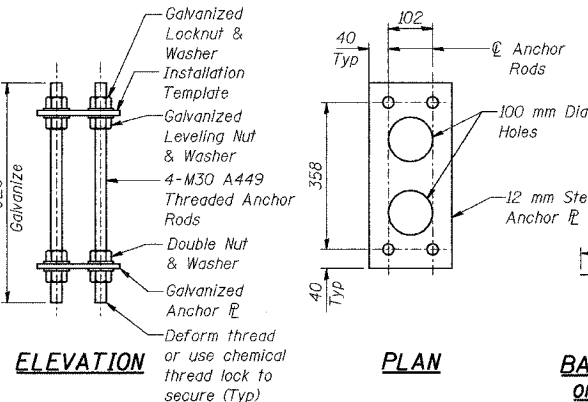
SECTION D-D



SECTION THRU PARAPET



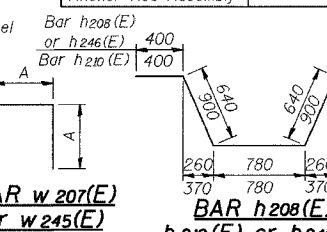
SECTION THRU EXTENSION FOR GATEWAY



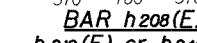
ELEVATION

PLAN

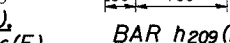
NOISE ABATEMENT WALL ANCHOR ROD ASSEMBLY
 (82 Req'd Phase 2)
 (15 Req'd Phase 3)



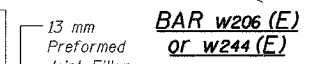
BAR w207(E) or w245(E)



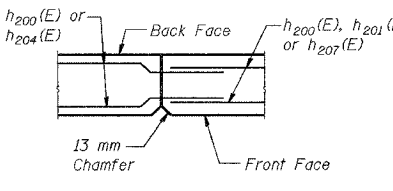
BAR h208(E), h210(E) or h246(E)



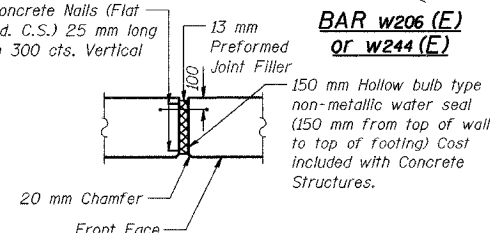
BAR h209(E)



BAR w206(E) or w244(E)



CONSTRUCTION JOINT DETAIL



13 MM EXPANSION JOINT DETAIL

** Varies 1.018 m Max at Sta 7+701.848 to 500 Min at Sta 7+751.761.
 500 From Sta 7+751.761 to Sta 7+893.827

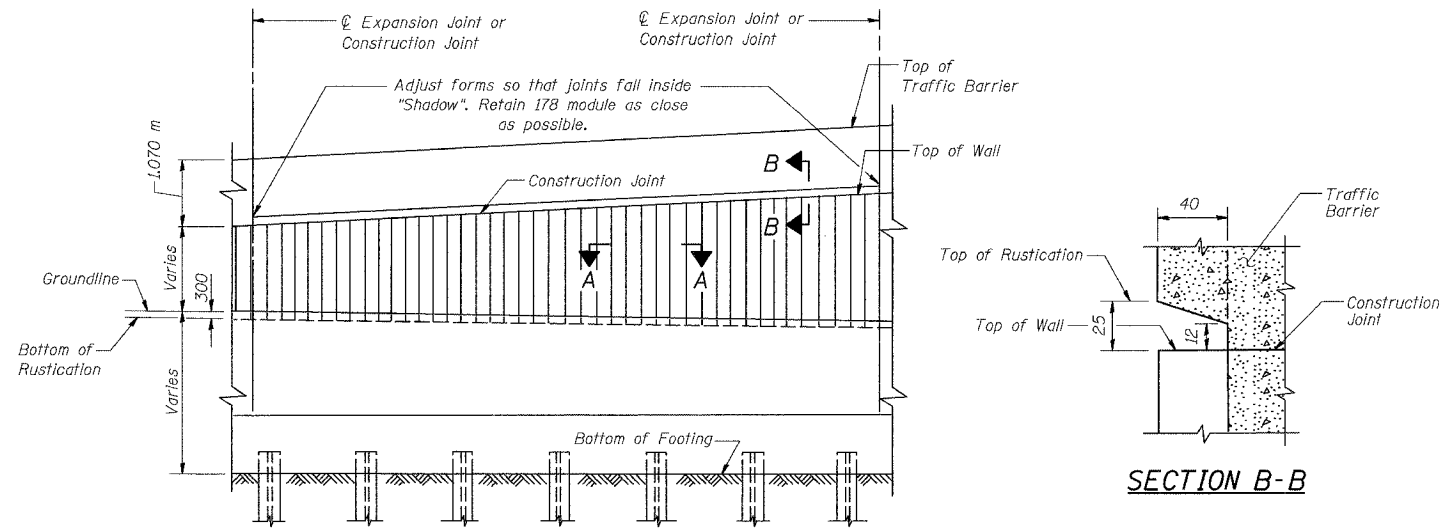
*** Constant 1.070 m from Sta 7+701.848 to Sta 7+936.447
 Varies from 1.070 m at Sta 7+701.848 to 1.145 m at Sta 7+945.232

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

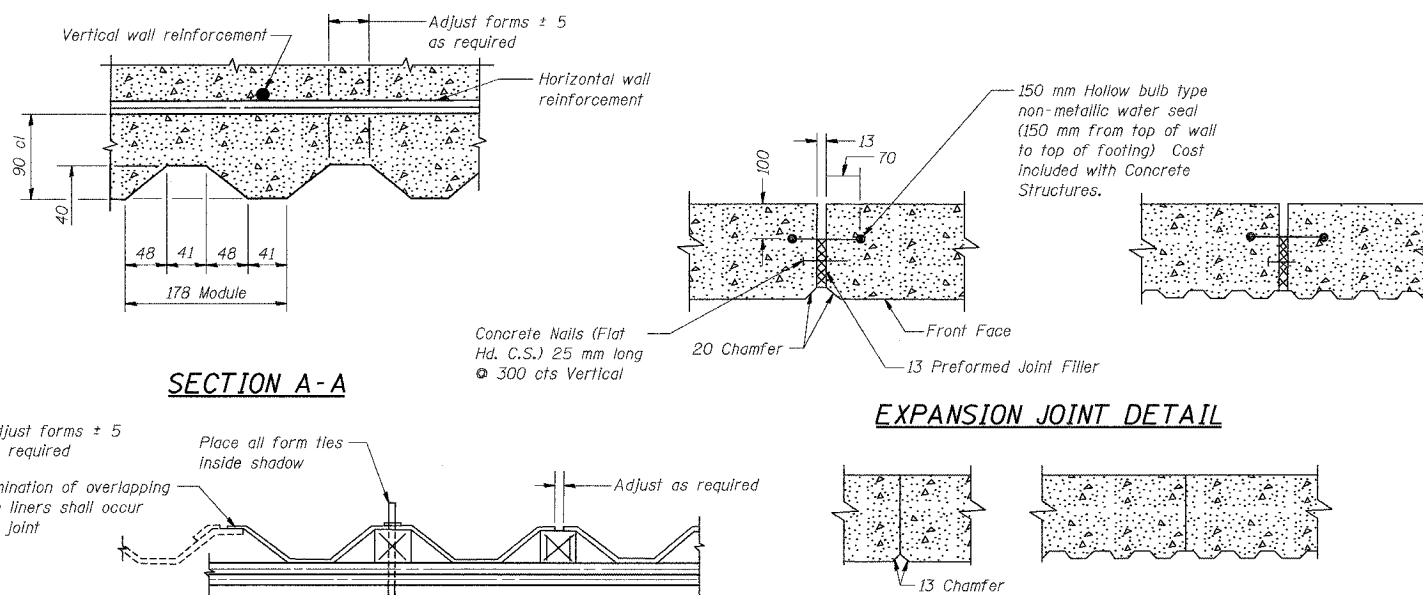
PILASTER SUPPORT - PLAN VIEW
 (82 Locations Phase 2)
 (15 Locations Phase 3)

NOTES:
 See Sheet S-17 for Rustication details.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 See Typical Section on Sheet S-2 for Drainage Details and Protective Coat Limits.

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41
WALL SECTIONS AND DETAILS
SECTION 2626.2-R-1
 COOK COUNTY
STATION 7+893.827 TO STATION 7+945.232
STRUCTURE NO. 016-W856
 DATE 09/05
AMERICAN CONSULTING ENGINEERS



FRONT FACE ELEVATION-TYPICAL ARCHITECTURAL FINISH



SECTION A-A

EXPANSION JOINT DETAIL

SUGGESTED FORMWORK DETAIL

CONSTRUCTION JOINT DETAIL

**PHASE 3
RUSTICATION LIMITS**

STATION	TOP OF WALL ELEVATION	BOTTOM OF RUSTICATION ELEVATION
7+893.827	184.251	181.200
7+900.930	184.273	181.200
7+908.034	184.295	181.200
7+908.034	184.295	181.600
7+915.137	184.317	181.600
7+922.240	184.338	181.600
7+929.344	184.360	181.600
7+936.477	184.382	181.600
7+945.232	184.409	181.600

**PHASE 2
RUSTICATION LIMITS**

STATION	TOP OF WALL ELEVATION	BOTTOM OF RUSTICATION ELEVATION
7+609.549	182.899	180.500
7+616.796	182.925	180.500
7+623.869	182.956	180.500
7+630.945	182.993	180.500
7+638.024	183.034	180.500
7+645.107	183.077	180.500
7+652.192	183.119	180.500
7+659.279	183.162	180.500
7+666.369	183.205	180.500
7+673.461	183.247	180.500
7+680.556	183.290	180.500
7+687.652	183.333	180.500
7+694.749	183.375	180.500
7+701.848	183.418	180.500
7+701.848	183.418	181.300
7+708.948	183.461	181.300
7+716.049	183.503	181.300
7+723.151	183.546	181.300
7+730.254	183.589	181.300
7+737.357	183.631	181.300
7+744.460	183.671	181.300
7+751.761	183.712	181.300
7+758.864	183.749	181.300
7+765.967	183.786	181.300
7+773.071	183.821	181.300
7+780.174	183.855	181.300
7+787.277	183.887	181.300
7+794.381	183.918	181.300
7+801.484	183.948	181.300
7+808.587	183.977	181.300
7+815.691	184.004	181.300
7+822.794	184.029	181.300
7+829.897	184.054	181.300
7+837.001	184.077	181.300
7+844.104	184.099	181.300
7+851.207	184.121	181.300
7+858.311	184.142	181.300
7+865.414	184.164	181.300
7+872.517	184.186	181.300
7+879.621	184.208	181.300
7+886.724	184.229	181.300
7+893.827	184.251	181.300

BILL OF MATERIAL

Item	Unit	Phase 2	Phase 3
		Total	Total
Rustication Finish	m ²	753	148

Note: All dimensions are in millimeters (mm) unless otherwise noted.

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORNMAN EXPRESSWAY
BURNHAM ROAD TO US 41

RUSTICATION FINISH DETAILS
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+893.827 TO STATION 7+945.232
STRUCTURE NO. 016-W856
DATE 09/05

AMERICAN
CONSULTING ENGINEERS

BORING NO. AR-061 (1 OF 1)

BORING NO. AR-062 (1 OF 1)

BORING NO. AR-063 (1 OF 1)

BORING LOG AR-061 Page 1 of 1

Wang Engineering, INC.
Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: USGS
Elevation: 180.59 m
North: 545530.82 m
East: 367055.77 m
Station: 74667.52
Offset: 21.78 LT

BORING LOG AR-062 Page 1 of 1

Wang Engineering, INC.
Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

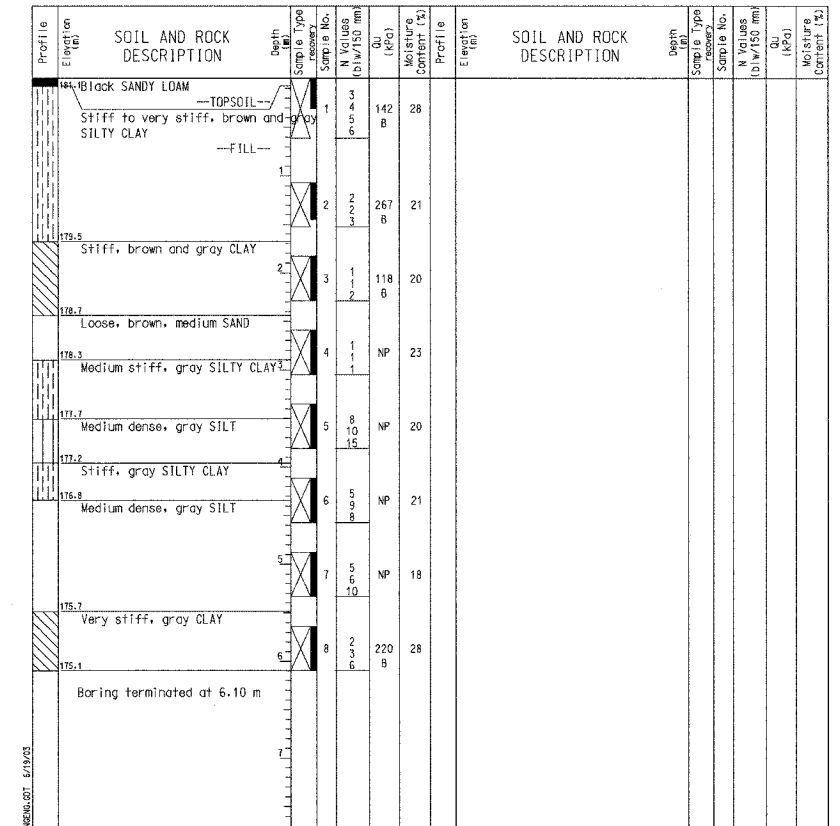
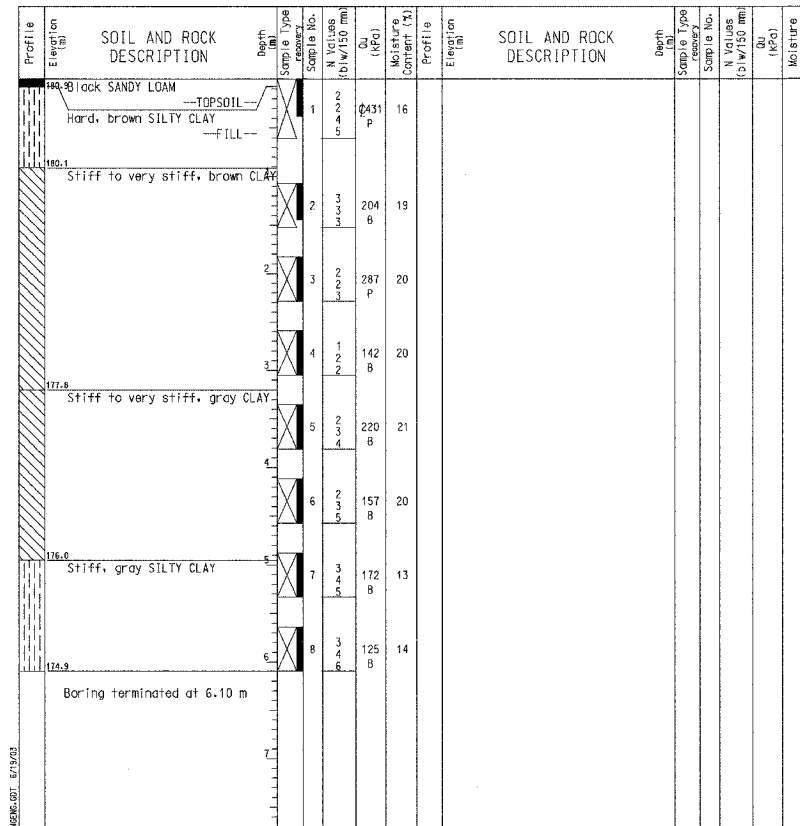
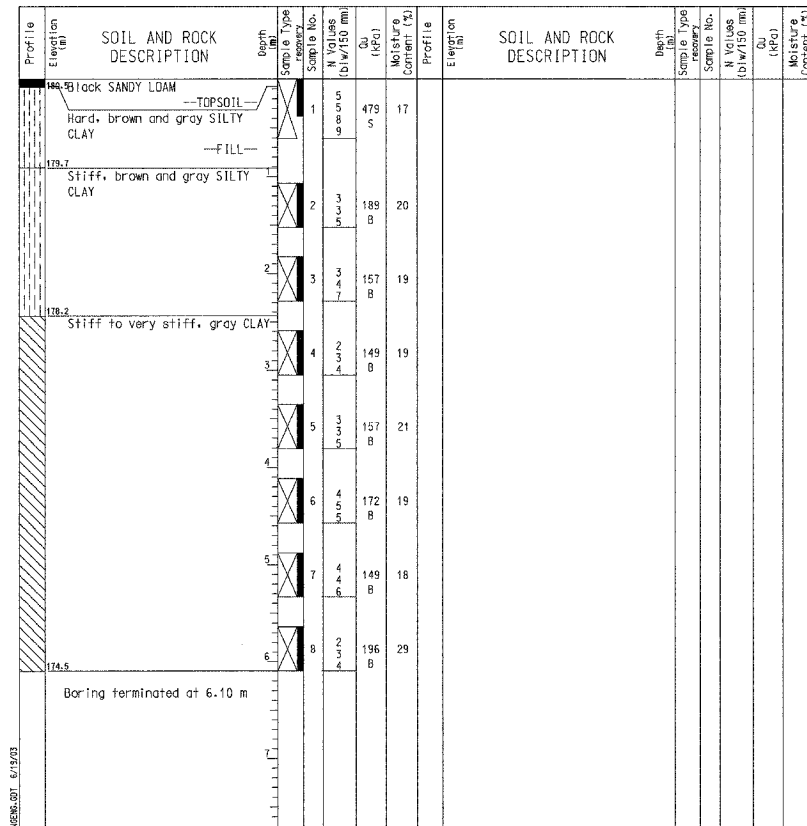
Datum: USGS
Elevation: 180.99 m
North: 545530.72 m
East: 367078.73 m
Station: 74660.05
Offset: 24.37 LT

BORING LOG AR-063 Page 1 of 1

Wang Engineering, INC.
Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: USGS
Elevation: 181.18 m
North: 545526.75 m
East: 367106.46 m
Station: 74667.72
Offset: 24.06 LT



GENERAL NOTES

Begin Drilling 10-02-2001 Complete Drilling 10-02-2001
 Drilling Contractor TSC Drill Rig B-61
 Driller GAF Logger B. Fugiel Checked by B. Fugiel
 Drilling Method 2.75-in. HSA; Grouted upon completion

WATER LEVEL DATA

While Drilling DRY
 At Completion of Drilling DRY
 Time After Drilling NA
 Depth to Water NA
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES

Begin Drilling 10-02-2001 Complete Drilling 10-02-2001
 Drilling Contractor TSC Drill Rig B-61
 Driller GAF Logger B. Fugiel Checked by B. Fugiel
 Drilling Method 2.75-in. HSA; Grouted upon completion

WATER LEVEL DATA

While Drilling DRY
 At Completion of Drilling DRY
 Time After Drilling NA
 Depth to Water NA
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES

Begin Drilling 10-02-2001 Complete Drilling 10-02-2001
 Drilling Contractor TSC Drill Rig B-61
 Driller GAF Logger B. Fugiel Checked by B. Fugiel
 Drilling Method 2.75-in. HSA; Grouted upon completion

WATER LEVEL DATA

While Drilling DRY
 At Completion of Drilling DRY
 Time After Drilling NA
 Depth to Water NA
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

BORING LOGS (1 OF 3)
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+609.549 TO STATION 7+893.827
STRUCTURE NO. 016-W856

DATE 07/05

AMERICAN
 CONSULTING ENGINEERS

BORING NO. AR-064 (1 OF 1)

BORING NO. AR-065 (1 OF 1)

BORING NO. AR-066 (1 OF 1)

BORING LOG AR-064 Page 1 of 1

Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers
wangeng@wangeng.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 I36N R10W & s29 R15E T36N

Datum: USGS
Elevation: 181.92 m
North: 545520.12 m
East: 367151.82 m
Station: 7+713
Offset: 24.27 LT

BORING LOG AR-065 Page 1 of 1

Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers
wangeng@wangeng.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 I36N R10W & s29 R15E T36N

Datum: USGS
Elevation: 182.03 m
North: 545515.18 m
East: 367199.37 m
Station: 7+760.05
Offset: 27.63 LT

BORING LOG AR-066 Page 1 of 1

Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers
wangeng@wangeng.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 I36N R10W & s29 R15E T36N

Datum: USGS
Elevation: 181.94 m
North: 545506.73 m
East: 367240.71 m
Station: 7+801.65
Offset: 27.42 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Moisture Content (%)
184.4	Loose, black SANDY LOAM --TOPSOIL--	1	3 2 2	120 P	184.4	Loose, black SANDY LOAM --TOPSOIL--	1	3 2 2	120 P
183.4	Loose, black SAND and GRAVEL --FILL--	2	4 4 2	267 B	183.4	Loose, black SAND and GRAVEL --FILL--	2	4 4 2	267 B
182.4	Stiff, black SANDY CLAY LOAM --FILL--	3	4 4 4	196 B	182.4	Stiff, black SANDY CLAY LOAM --FILL--	3	4 4 4	196 B
181.4	Very stiff, brown to gray SILTY CLAY --FILL--	4	2 4 4	157 B	181.4	Very stiff, brown to gray SILTY CLAY --FILL--	4	2 4 4	157 B
178.5	Stiff, brown CLAY	5	2 4 5	165 B	178.5	Stiff, brown CLAY	5	2 4 5	165 B
178.7	Stiff, gray CLAY	6	3 4 8	236 B	178.7	Stiff, gray CLAY	6	3 4 8	236 B
177.7	Very stiff, gray SILTY CLAY	7	4 5 7	NP	177.7	Very stiff, gray SILTY CLAY	7	4 5 7	NP
177.2	Medium dense to dense, gray SILT	8	7 15 15	NP	177.2	Medium dense to dense, gray SILT	8	7 15 15	NP
175.7	Stiff, gray SILTY CLAY	9	2 3 8	142 B	175.7	Stiff, gray SILTY CLAY	9	2 3 8	142 B
175.2	Medium dense, gray SANDY LOAM	10			175.2	Medium dense, gray SANDY LOAM	10		
174.4	Boring terminated at 6.86 m				174.4	Boring terminated at 6.86 m			

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Moisture Content (%)
184.4	Loose, black SANDY LOAM --TOPSOIL--	1	3 4 5	359 P	184.4	Loose, black SANDY LOAM --TOPSOIL--	1	3 4 5	359 P
183.3	Very stiff to hard, brown and gray SILTY CLAY --FILL--	2	3 4 7	393 S	183.3	Very stiff to hard, brown and gray SILTY CLAY --FILL--	2	3 4 7	393 S
182.3	Very stiff, brown CLAY	3	3 4 6	330 B	182.3	Very stiff, brown CLAY	3	3 4 6	330 B
181.8	Stiff, gray CLAY	4	3 4 7	251 B	181.8	Stiff, gray CLAY	4	3 4 7	251 B
178.8	Stiff, gray CLAY	5	3 4 6	165 B	178.8	Stiff, gray CLAY	5	3 4 6	165 B
177.3	Loose, gray SANDY LOAM	6	2 3 5	125 B	177.3	Loose, gray SANDY LOAM	6	2 3 5	125 B
176.5	Medium dense, gray SILT	7	3 4 5	NP	176.5	Medium dense, gray SILT	7	3 4 5	NP
175.8	Medium stiff to stiff, gray CLAY	8	11 14 7	NP	175.8	Medium stiff to stiff, gray CLAY	8	11 14 7	NP
174.4	Boring terminated at 7.62 m				174.4	Boring terminated at 7.62 m			

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Moisture Content (%)
184.4	Loose, black SANDY LOAM --TOPSOIL--	1	3 4 5 6	314 B	184.4	Loose, black SANDY LOAM --TOPSOIL--	1	3 4 5 6	314 B
183.3	Very stiff to hard, black, brown and gray SILTY CLAY --FILL--	2	4 5 5	550 B	183.3	Very stiff to hard, black, brown and gray SILTY CLAY --FILL--	2	4 5 5	550 B
182.3	Very stiff to hard, brown and gray CLAY	3	3 4 6	314 B	182.3	Very stiff to hard, brown and gray CLAY	3	3 4 6	314 B
181.8	Stiff, gray CLAY	4	6 7 7	471 B	181.8	Stiff, gray CLAY	4	6 7 7	471 B
178.8	Stiff, gray CLAY	5	3 4 8	251 B	178.8	Stiff, gray CLAY	5	3 4 8	251 B
178.0	Very stiff, gray SILTY CLAY	6	5 4 4	NP	178.0	Very stiff, gray SILTY CLAY	6	5 4 4	NP
177.7	Loose, gray SILT	7	4 6 5	189 B	177.7	Loose, gray SILT	7	4 6 5	189 B
176.5	Stiff, gray CLAY	8	7 7 4	NP	176.5	Stiff, gray CLAY	8	7 7 4	NP
175.8	Medium dense, gray SILT	9	3 3 6	48 P	175.8	Medium dense, gray SILT	9	3 3 6	48 P
175.7	Medium stiff to stiff, gray CLAY	10	2 3 5	103 B	175.7	Medium stiff to stiff, gray CLAY	10	2 3 5	103 B
174.4	Boring terminated at 7.62 m				174.4	Boring terminated at 7.62 m			

GENERAL NOTES

Begin Drilling 10-02-2001 Complete Drilling 10-02-2001
Drilling Contractor TSC Drill Rig B-61
Driller G&F Logger B. Fugiel Checked by B. Fugiel
Drilling Method 2.75-in. HSA; Grouted upon completion

WATER LEVEL DATA

While Drilling DRY
At Completion of Drilling DRY
Time After Drilling NA
Depth to Water NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES

Begin Drilling 10-02-2001 Complete Drilling 10-02-2001
Drilling Contractor TSC Drill Rig B-61
Driller G&F Logger B. Fugiel Checked by B. Fugiel
Drilling Method 2.75-in. HSA; Grouted upon completion

WATER LEVEL DATA

While Drilling DRY
At Completion of Drilling DRY
Time After Drilling NA
Depth to Water NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES

Begin Drilling 10-02-2001 Complete Drilling 10-02-2001
Drilling Contractor TSC Drill Rig B-61
Driller G&F Logger B. Fugiel Checked by B. Fugiel
Drilling Method 2.75-in. HSA; Grouted upon completion

WATER LEVEL DATA

While Drilling DRY
At Completion of Drilling DRY
Time After Drilling NA
Depth to Water NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

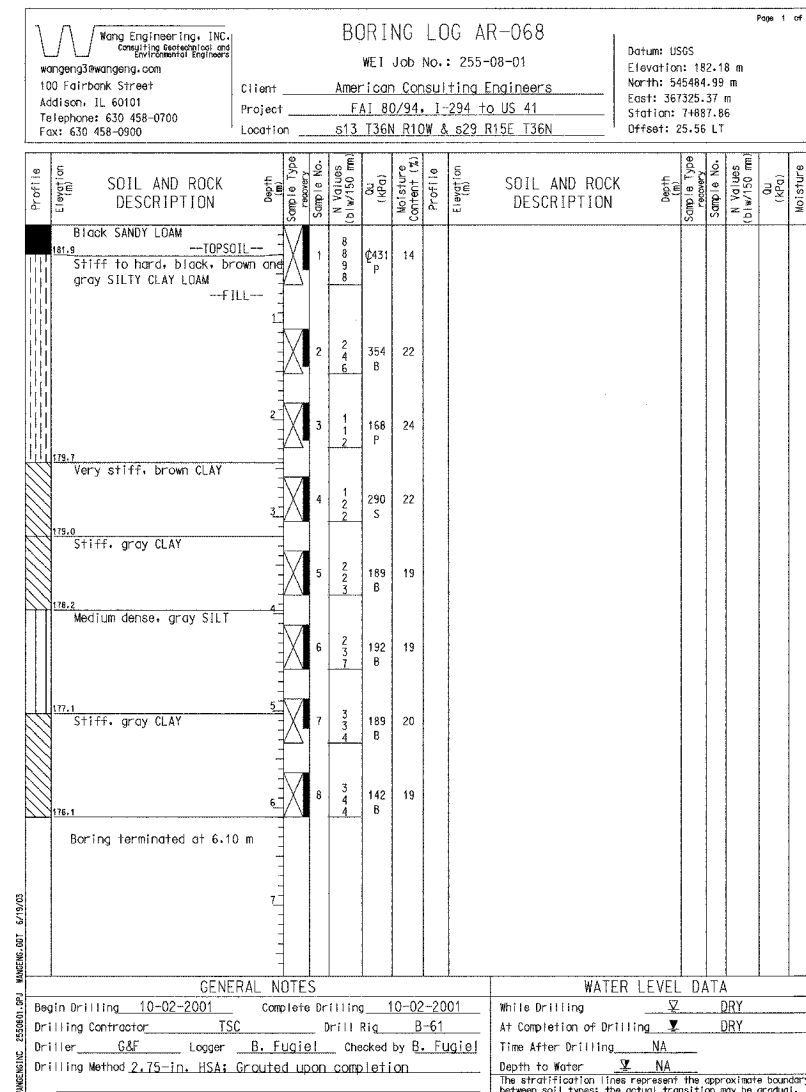
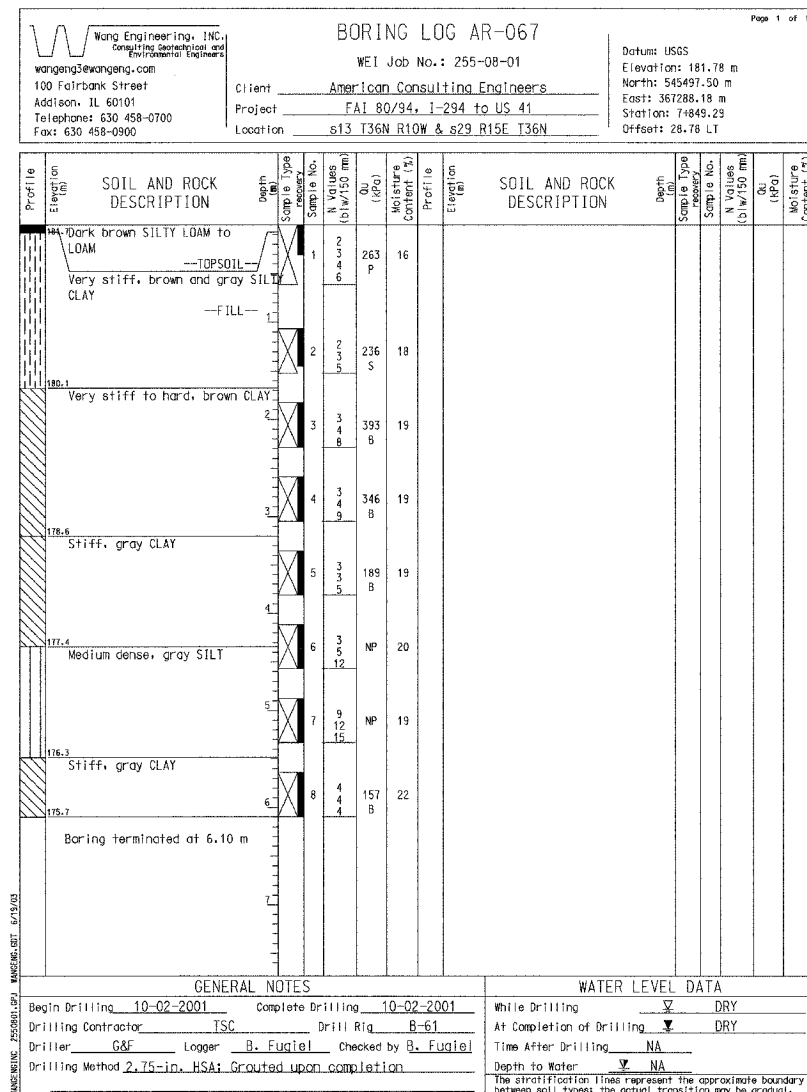
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

BORING LOGS (2 OF 3)
SECTION 2626.2-R-1
COOK COUNTY
STATION 7+609.549 TO STATION 7+893.827
STRUCTURE NO. 016-W856
DATE 07/05

AMERICAN
CONSULTING ENGINEERS

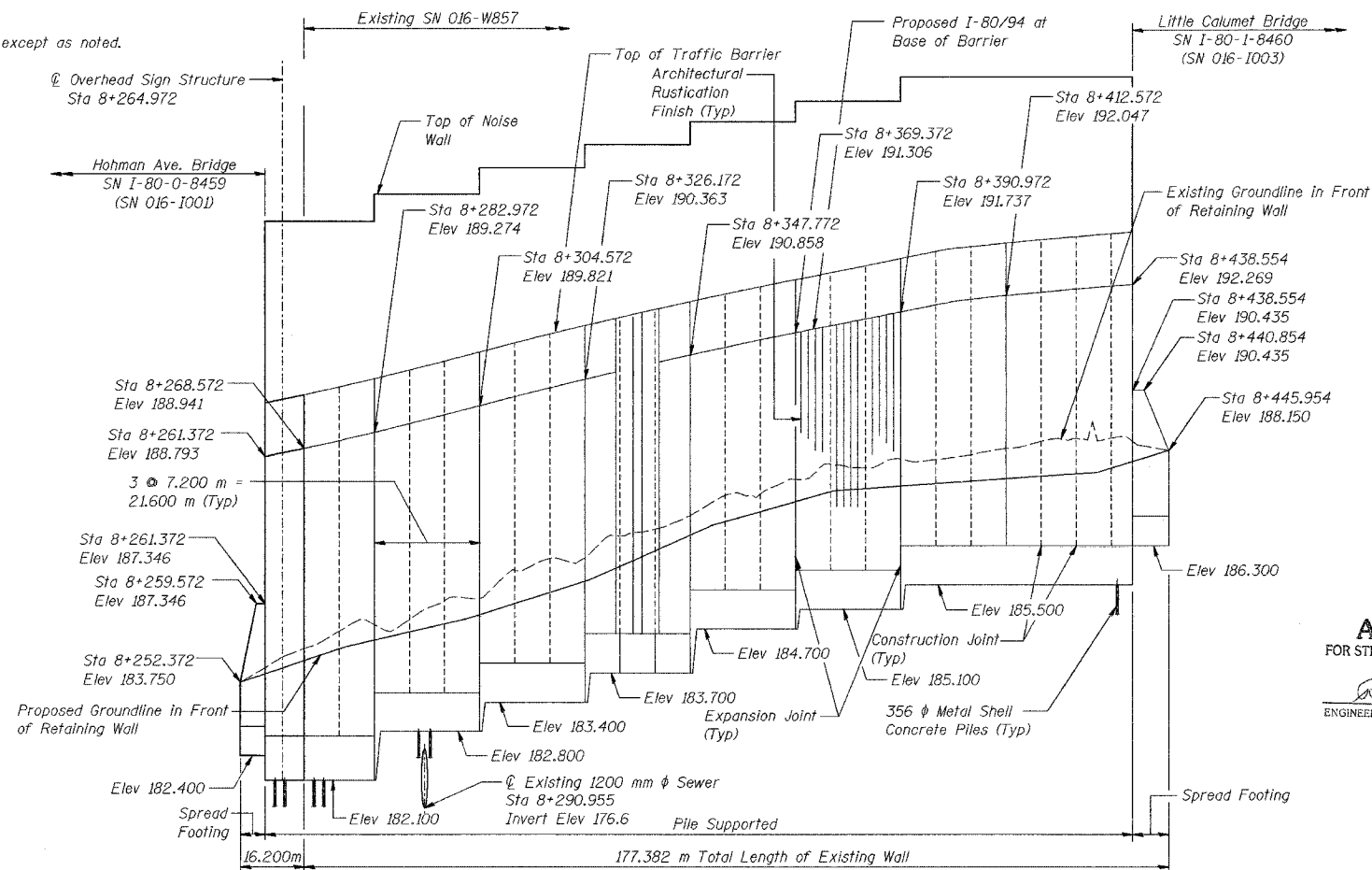
BORING NO. AR-067 (1 OF 1)

BORING NO. AR-068 (1 OF 1)



Benchmark: Chiseled box on Northeast corner of Crashwall on I-80 Hohman Avenue on Eastbound side of Expressway. Station 8+259.5 Offset 18.1 Rt. Elevation = 189.171
Existing Structure: None
All dimensions in millimeters (mm) except as noted.

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. S-1
I-80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207 841	20 SHEETS
ILLINOIS ROAD PROJECT				CONTRACT NO. 62114 INDOT DES. NO. 0100987



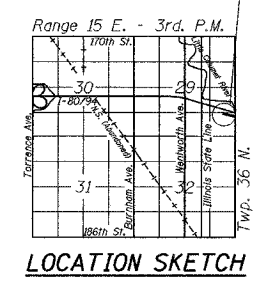
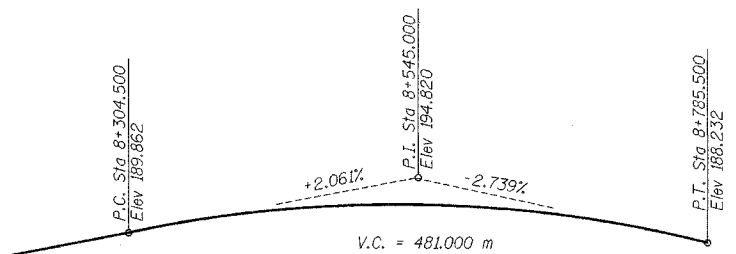
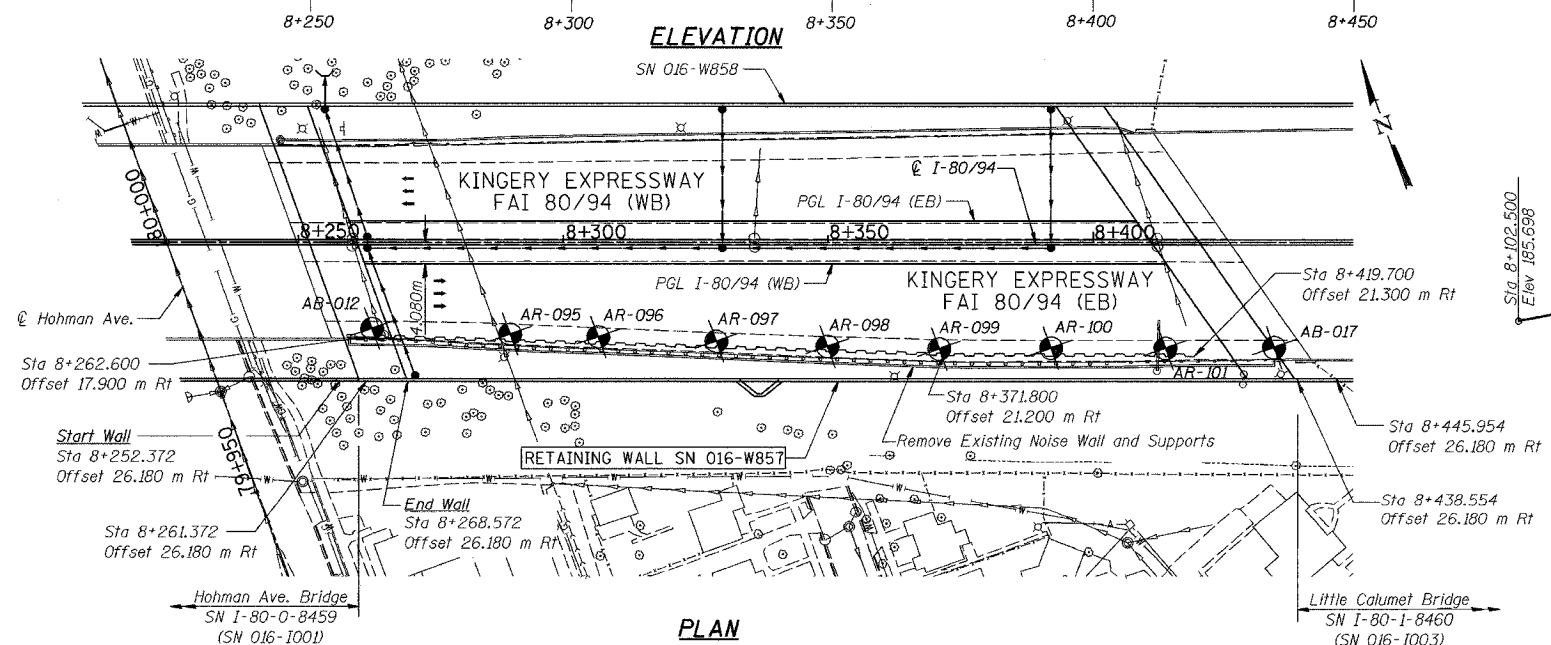
- LEGEND**
- ⊙ - Soil Boring Location
 - - Existing Roadway/Structure
 - - Proposed Roadway/Structure
 - ⊙ - Tree
 - - Shrubs/Brush
 - - Proposed Storm Sewer
 - - Existing Sanitary Sewer
 - - Existing Storm Sewer
 - - Existing Gas Line
 - - Existing Water Main
 - - Electrical Aerial Cable
 - - Temporary Sheet Piling
- LOADING**
- Wind Load on Future Noise Wall = 1.7 kPa
- DESIGN STRESSES**
- FIELD UNITS**
- $f'_c = 24 \text{ MPa}$
 $f_y = 400 \text{ MPa (Reinf.)}$
Maximum Applied Soil Bearing Pressure = 55 kPa (Phase 2)
70 kPa (Phase 3)
- DESIGN SPECIFICATIONS**
- AASHTO 2002 Standard Specifications for Highway Bridges
AASHTO 1989 Guide Specifications for Structural Design of Sound Barriers and 1992 Interlms

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



Gary S. Powell
GARY S. POWELL, S.E.
IL. LIC. NO. 081-004771
EXP 11-30-2006
DATE 09-12-2005

Gary S. Powell
GARY S. POWELL, P. E.
IN. LIC. NO. 10403944
EXP 07-31-2006
DATE 09-12-2005

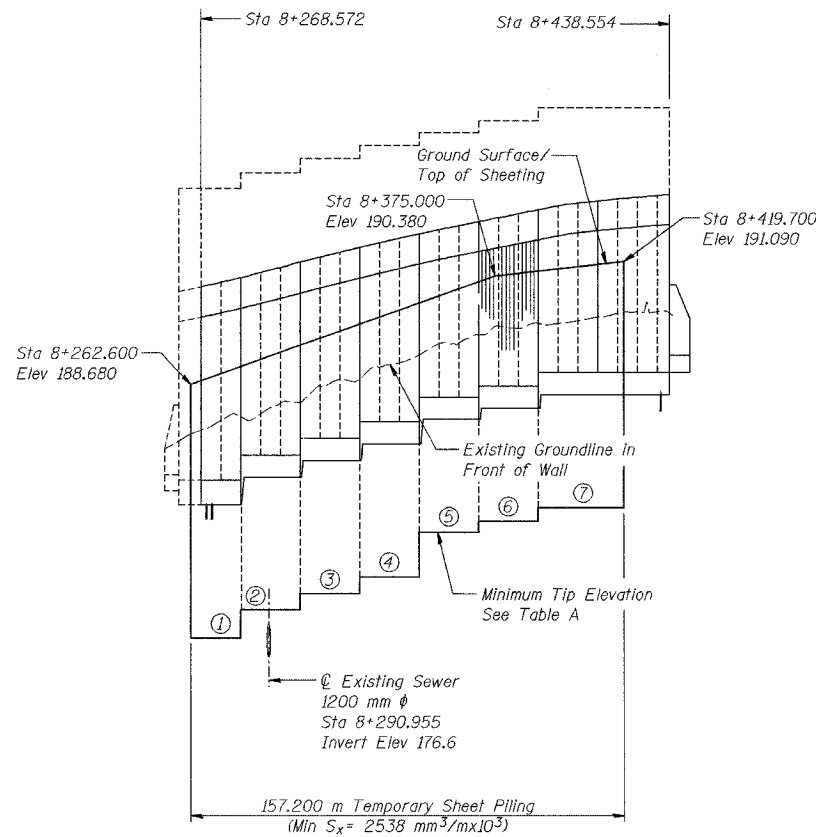


ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

GENERAL PLAN
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+253.769 TO STATION 8+268.572
STRUCTURE NO. 016-W857
DATE 09/05

AMERICAN
CONSULTING ENGINEERS

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP



*** TEMPORARY SHEET PILING - ELEVATION**

Estimated Area = 1,633 m²
The cost of Temporary Sheet Piling is included with Excavation, Foundation, Unclassified.

TABLE A

	Minimum Tip Elevation of Sheet Piling	Length (m)
1	177.28	20.400
2	177.98	21.600
3	178.58	21.600
4	178.88	21.600
5	180.59	21.600
6	180.99	21.600
7	181.39	28.800

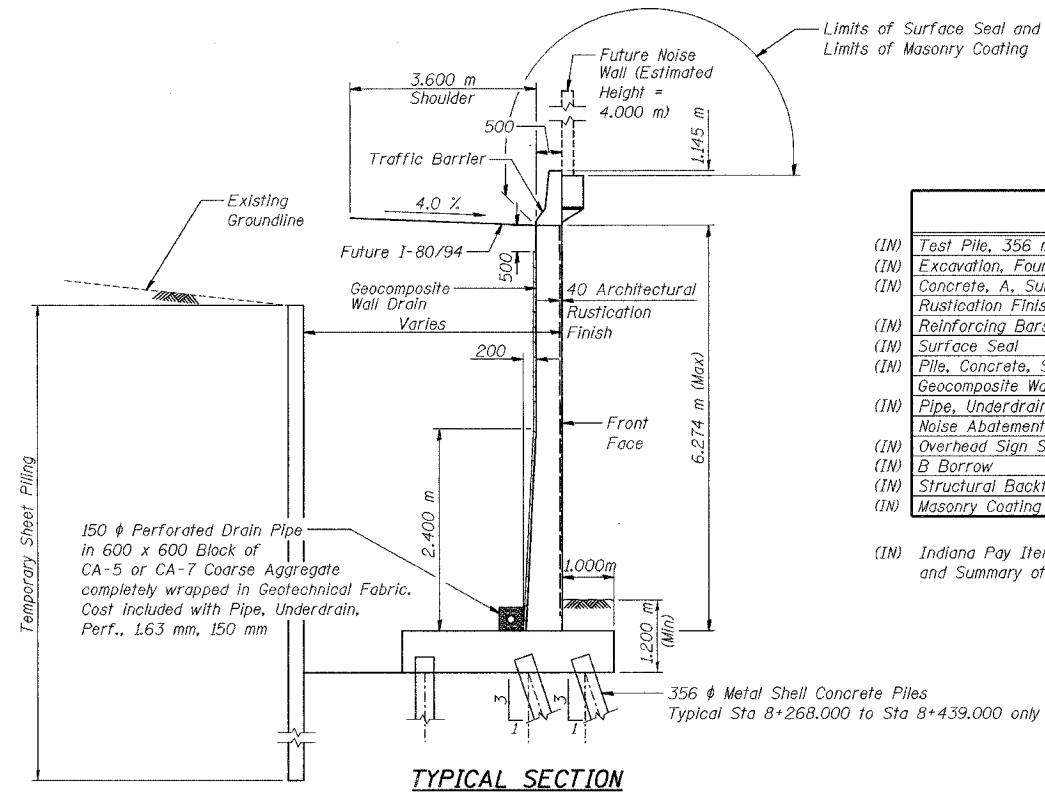
DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of AASHTO M 31M or M322M Grade 400.
- * 2. The Contractor shall drive 4 test piles in permanent locations spaced approximately 60 m apart, as directed by the Engineer before ordering the remainder of the piles.
3. All dimensions are in millimeters (mm) except as noted.
- * 4. If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.
5. All construction joints shall be bonded.
6. Construction for Retaining Wall SNO16-W857 will be let in separate contracts (Phase 2 and Phase 3), with each contract responsible for construction to the limits shown.
7. Masonry Coating should be applied from Sta 8+261.372 to Sta 8+438.554

INDEX OF SHEETS

SHEET NO.	TITLE
S-1	General Plan
S-2	Index of Sheets, General Notes and Total Bill of Material
S-3	Plan and Elevation (1 of 8)
* S-4	Plan and Elevation (2 of 8)
* S-5	Plan and Elevation (3 of 8)
* S-6	Plan and Elevation (4 of 8)
* S-7	Plan and Elevation (5 of 8)
* S-8	Plan and Elevation (6 of 8)
* S-9	Plan and Elevation (7 of 8)
* S-10	Plan and Elevation (8 of 8)
S-11	Wall Sections and Details (1 of 2)
S-12	Wall Sections and Details (2 of 2)
S-13	Rustication Finish Details
S-14	Concrete Pile Details
S-15	Boring Logs (1 of 6)
S-16	Boring Logs (2 of 6)
S-17	Boring Logs (3 of 6)
S-18	Boring Logs (4 of 6)
S-19	Boring Logs (5 of 6)
S-20	Boring Logs (6 of 6)



TOTAL BILL OF MATERIAL

ITEM	UNIT	PHASE 2 QUANTITY	PHASE 3 QUANTITY
(IN) Test Pile, 356 mm	Each	4	-
(IN) Excavation, Foundation, Unclassified	m ³	3,336	377.4
(IN) Concrete, A, Substructure	m ³	1,261.8	123.0
(IN) Rustication Finish	m ²	972	66
(IN) Reinforcing Bars, Epoxy Coated	kg	90,300	5,390
(IN) Surface Seal	L Sum	0.08	0.01
(IN) Pile, Concrete, Steel Shell Encased, 6.35 mm, 356 mm	m	5,776.0	384.0
(IN) Geocomposite Wall Drain	m ²	935	59
(IN) Pipe, Underdrain, Perf., 1.63 mm, 150 mm	m	189.0	16.2
(IN) Noise Abatement Wall Anchor Rod Assembly	Each	52	3
(IN) Overhead Sign Structure-Span Anchor Rod Assembly	Each	-	2
(IN) B Borrow	m ³	-	48.6
(IN) Structural Backfill	m ³	-	354.7
(IN) Masonry Coating	L Sum	-	0.04

(IN) Indiana Pay Items, denoted by "(Indiana)" in Special Provisions and Summary of Quantities.

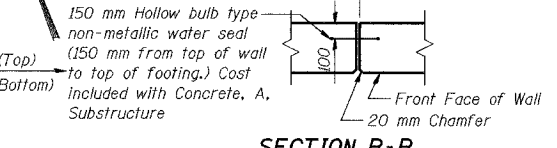
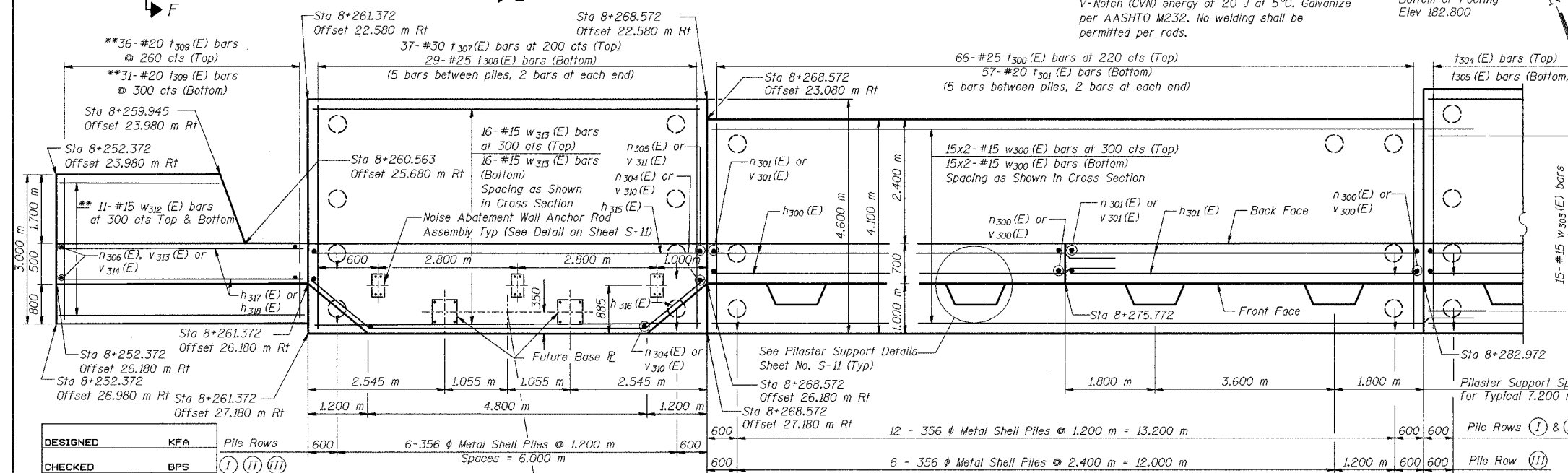
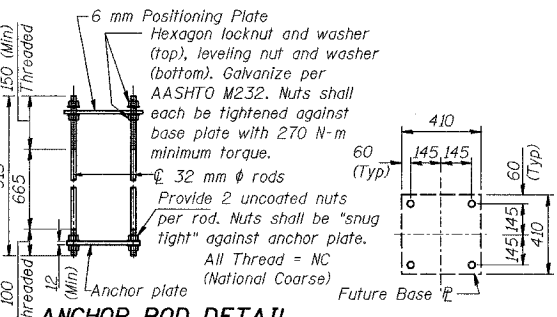
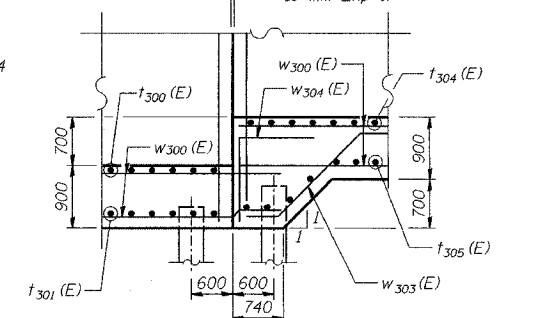
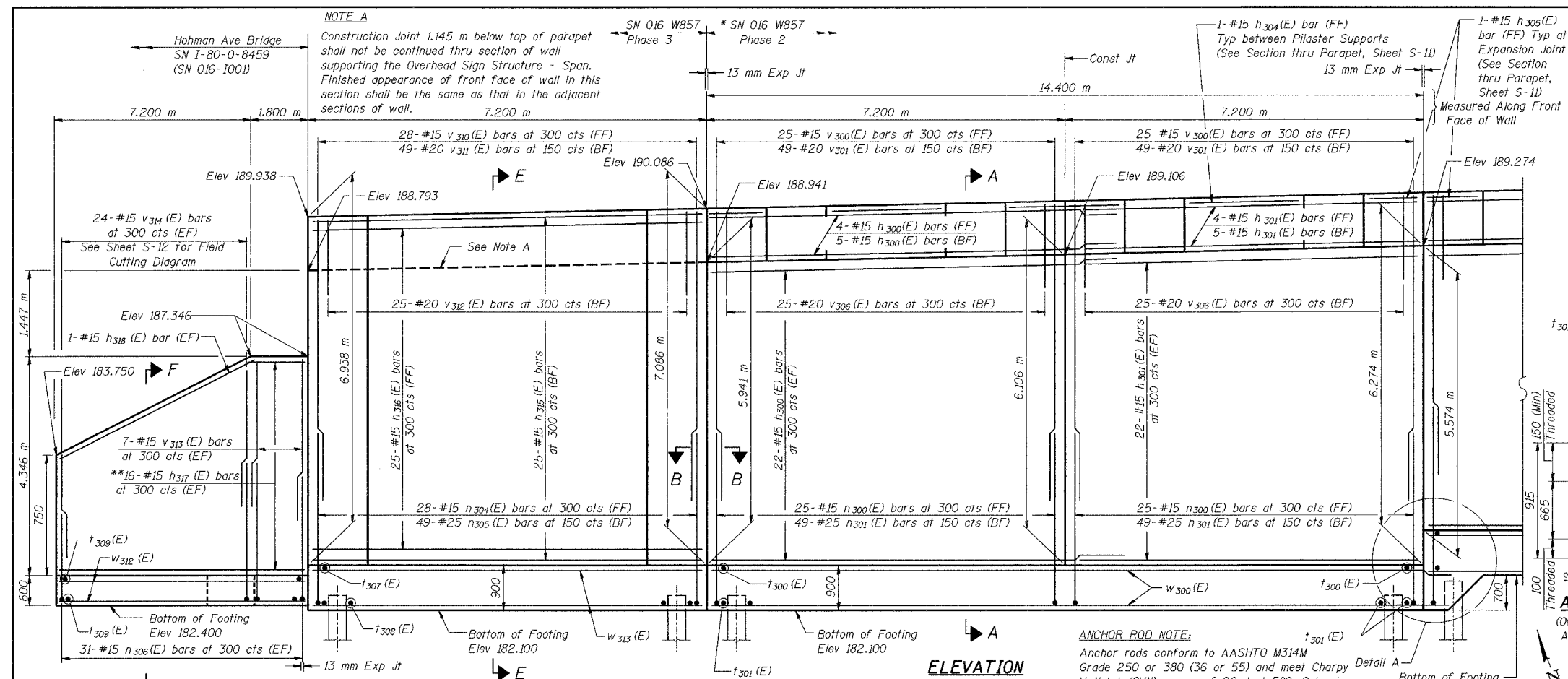
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41
**INDEX OF SHEETS, GENERAL NOTES
AND TOTAL BILL OF MATERIAL**
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+253.769 TO STATION 8+268.572
STRUCTURE NO. 016-W857
DATE 09/05



* FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. S-3
I-80/94	262.2-R-1	LAKE COUNTY, INDIANA	1207 843	20 SHEETS
ILLINOIS	FED. AID PROJECT			

CONTRACT NO. 62114 INDOT DES. NO. 0100987



NOTES:
See Sheet S-11 for Section A-A, Section E-E and Section F-F.
See Sheet S-12 for Expansion Joint Detail and Bill of Material.
See Sheet S-13 for Rustication details.
Stations are referenced to $\text{E} 1-80/94$.
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.
Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.
** Cut to fit.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

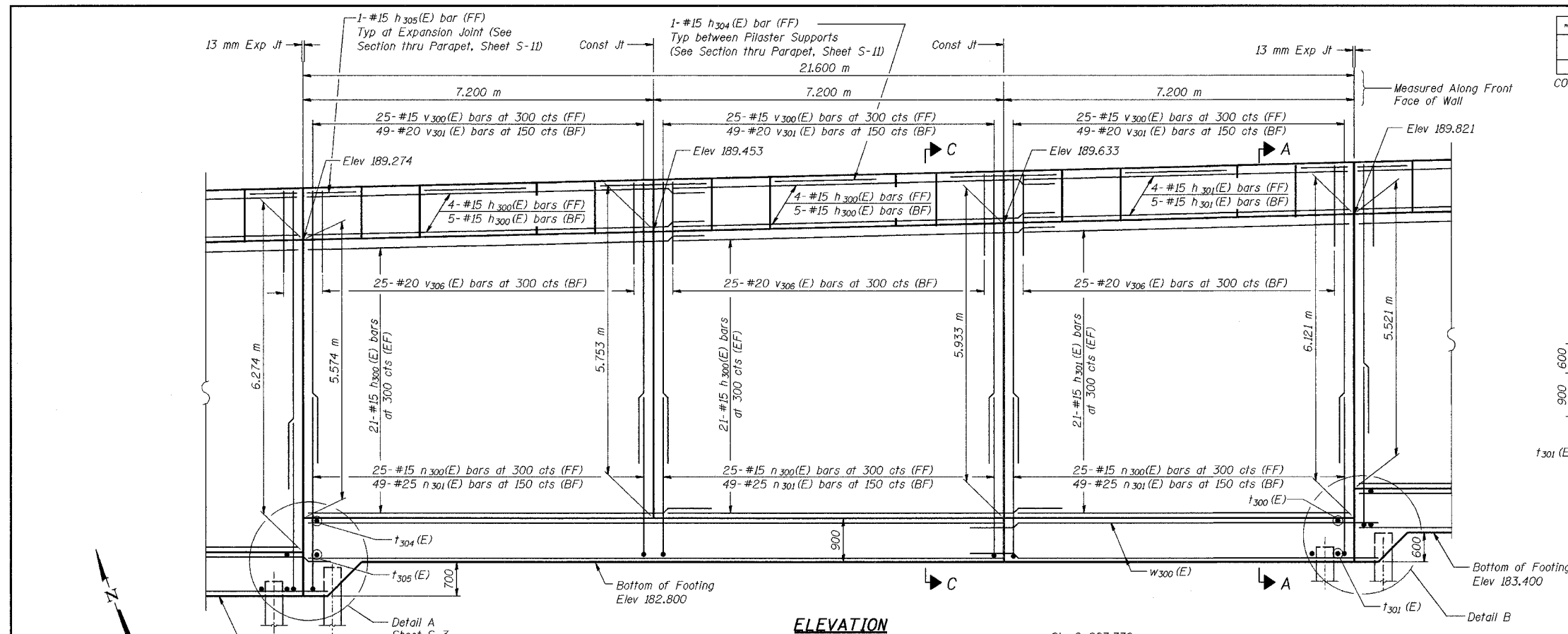
PLAN AND ELEVATION (1 OF 8)
SECTION 262.2-R-1
LAKE COUNTY, INDIANA
STATION 8+253.769 TO STATION 8+268.572
STRUCTURE NO. 016-W857

DATE 09/05

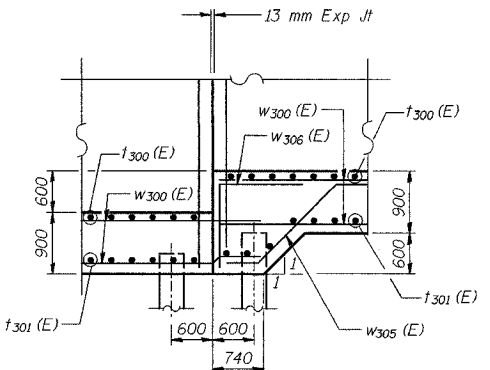


* FOR INFORMATION ONLY

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SHEET		CONTRACT NO. 62114 INDOT DES. NO. 0100987		

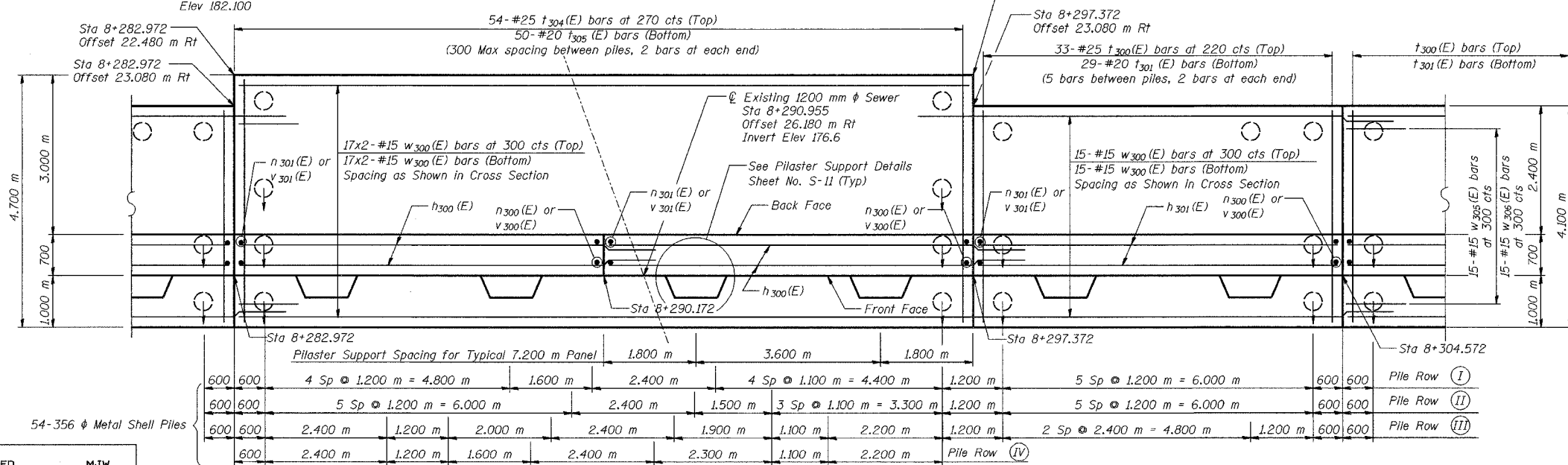


ELEVATION



DETAIL B

NOTES:
 See Sheet S-11 for Section A-A, Section C-C
 See Sheet S-12 for Expansion Joint Detail and Bill of Material.
 See Sheet S-13 for Rustication details.
 Stations are referenced to \pm 1-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.
 The Contractor shall locate all utilities (existing and new) prior to driving piles, by exploratory test pits and/or probes. The cost of locating utilities shall be included with Pile, Concrete, Steel Shell Encased, 6.35 mm, 356 mm. Any conflicts between the utilities and the proposed piles shall be reported in writing to the Bureau of Bridges and Structures for further disposition. Piles within 3 meters horizontally of actual utility location shall be preaugered/precored to the greater of bottom of the utility or 3 meter depth to maintain utility in original vertical and horizontal position. The diameter of preaugered/precored hole shall be the same diameter as outside diameter of pile. The cost of the preaugering/precoreing shall be included with Pile, Concrete, Steel Shell Encased, 6.35 mm, 356 mm.



FOOTING PLAN

MINIMUM BAR LAPS

#15 bars = 640
 #20 bars = 790

LEGEND

BF = Back Face
 FF = Front Face
 EF = Each Face

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

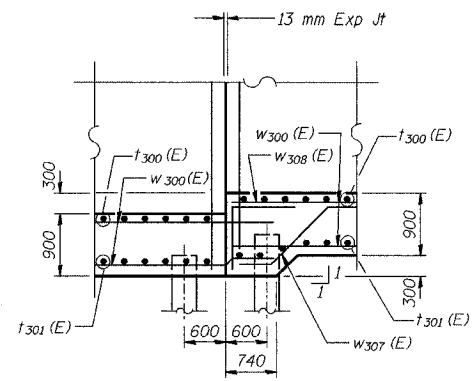
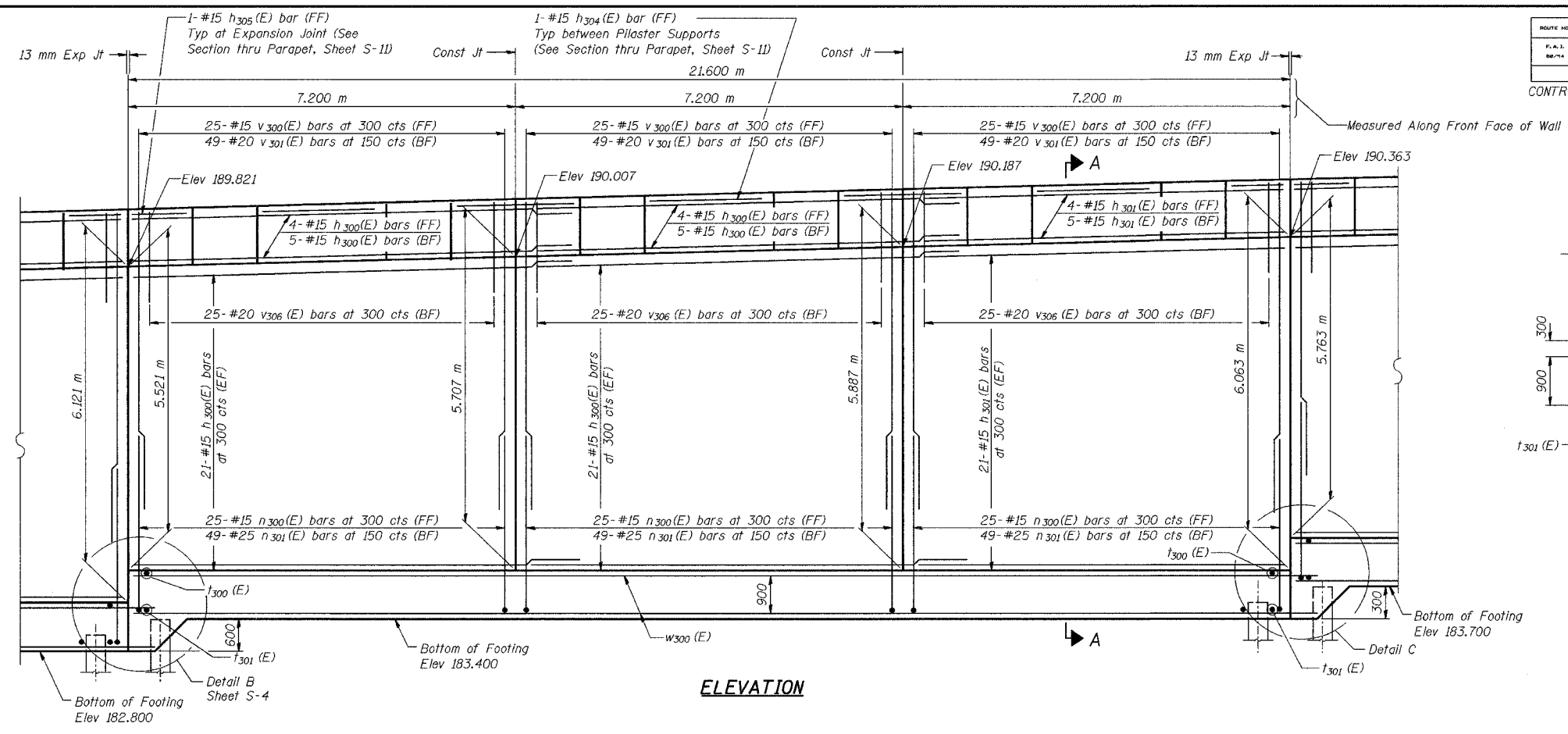
PLAN AND ELEVATION (2 OF 8)
SECTION 266.2-R-1
LAKE COUNTY, INDIANA
STATION 8+268.572 TO STATION 8+445.954
STRUCTURE NO. 016-W857

DATE 07/05

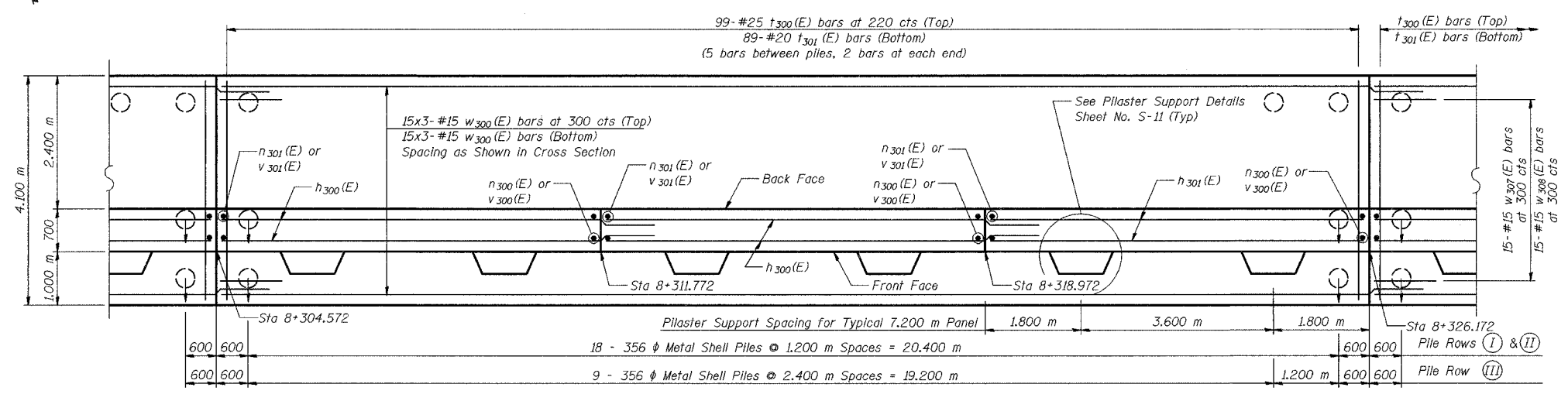
AMERICAN
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. S-5
F.A. 1	2626.2-R-1	LAKE COUNTY, INDIANA	1207	845
ILLINOIS PROJECT				20 SHEETS
CONTRACT NO. 62114				INDOT DES. NO. 0100987



ELEVATION



FOOTING PLAN

NOTES:
 See Sheet S-11 for Section A-A.
 See Sheet S-12 for Expansion Joint Detail and Bill of Material.
 See Sheet S-13 for Rustication details.
 Stations are referenced to @ I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS
 #15 bars = 640
 #20 bars = 790

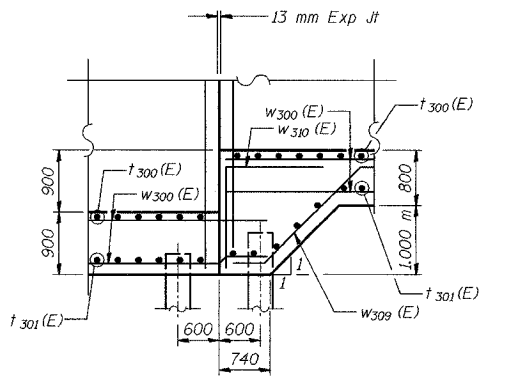
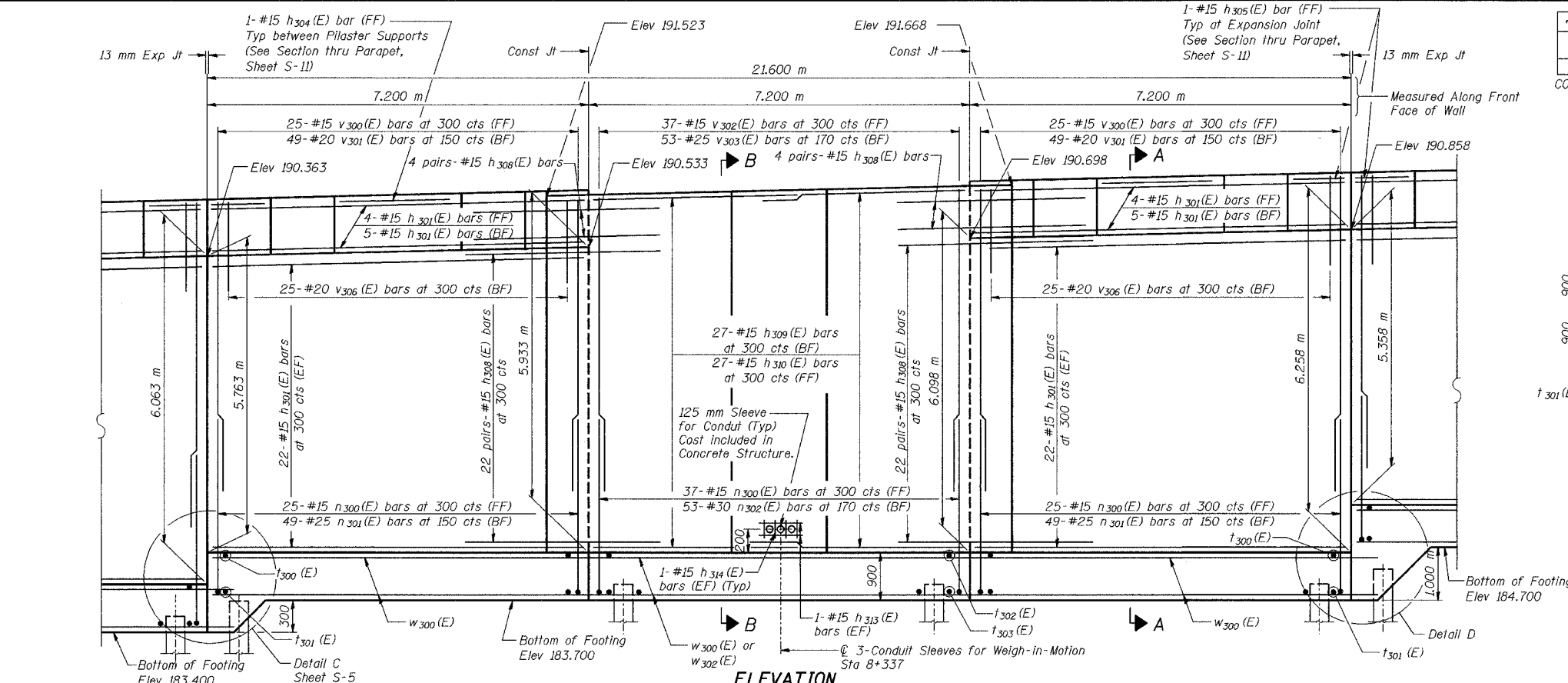
LEGEND
 BF = Back Face
 FF = Front Face
 EF = Each Face

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41
PLAN AND ELEVATION (3 OF 8)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+268.572 TO STATION 8+445.954
STRUCTURE NO. 016-W857
 DATE 07/05
AMERICAN
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

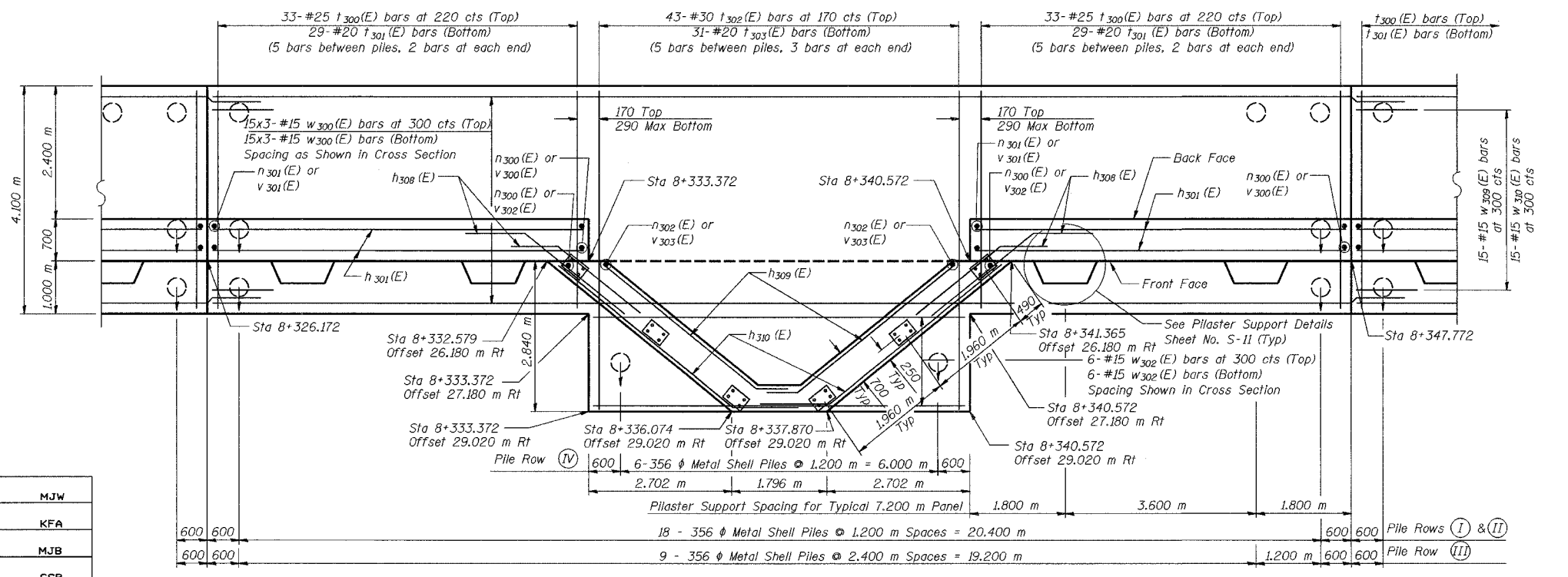
ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO. S-6
F.A.L.	2626.2-R-1	LAKE COUNTY, INDIANA	1207	846	20 SHEETS
REV/WH					
DESIGNED	MJW				
CHECKED	KFA				
DRAWN	MJB				
CHECKED	GSP				

CONTRACT NO. 62114 INDOT DES. NO. 0100987



DETAIL D

NOTES:
 See Sheet S-11 for Section A-A, Section B-B
 See Sheet S-12 for Expansion Joint Detail and Bill of Material.
 See Sheet S-13 for Rustication details.
 Stations are referenced to \pm I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.
 See Electrical Drawings for Conduit Details



FOOTING PLAN

MINIMUM BAR LAPS
 #15 bars = 640
 #20 bars = 790
 #25 bars = 1320

LEGEND
 BF = Back Face
 FF = Front Face
 EF = Each Face

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

**PLAN AND ELEVATION (4 OF 8)
 SECTION 2626.2-R-1
 LAKE COUNTY, INDIANA
 STATION 8+268.572 TO STATION 8+445.954
 STRUCTURE NO. 016-W857**

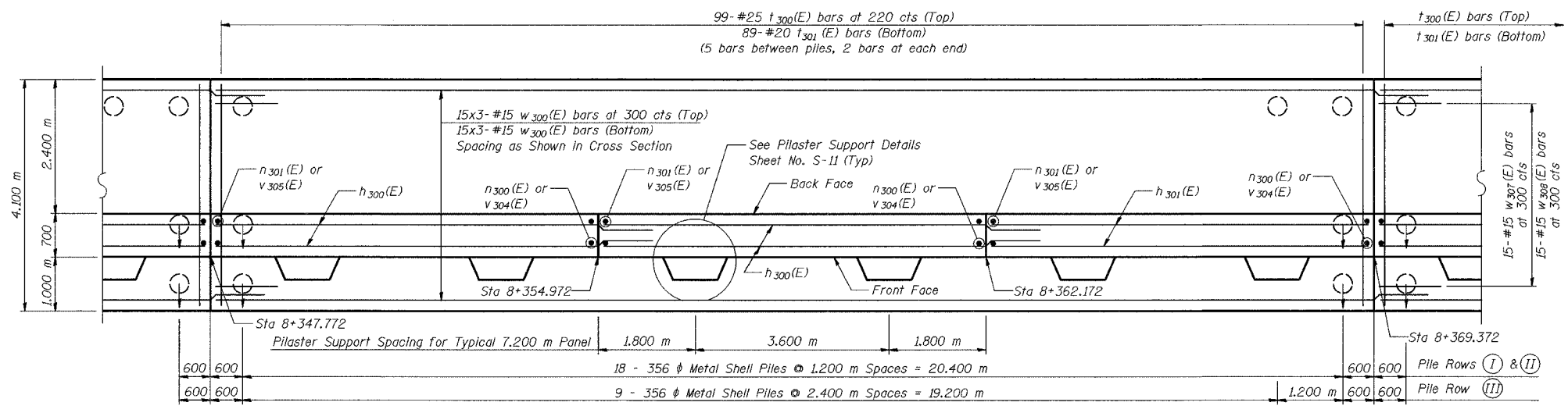
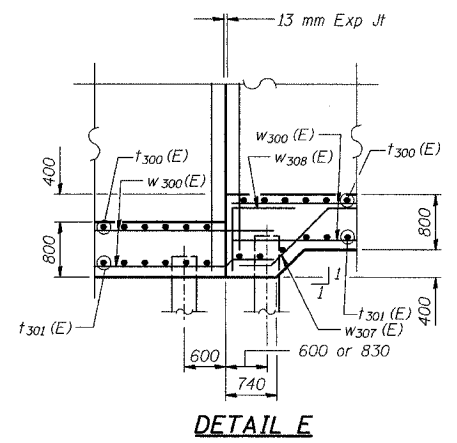
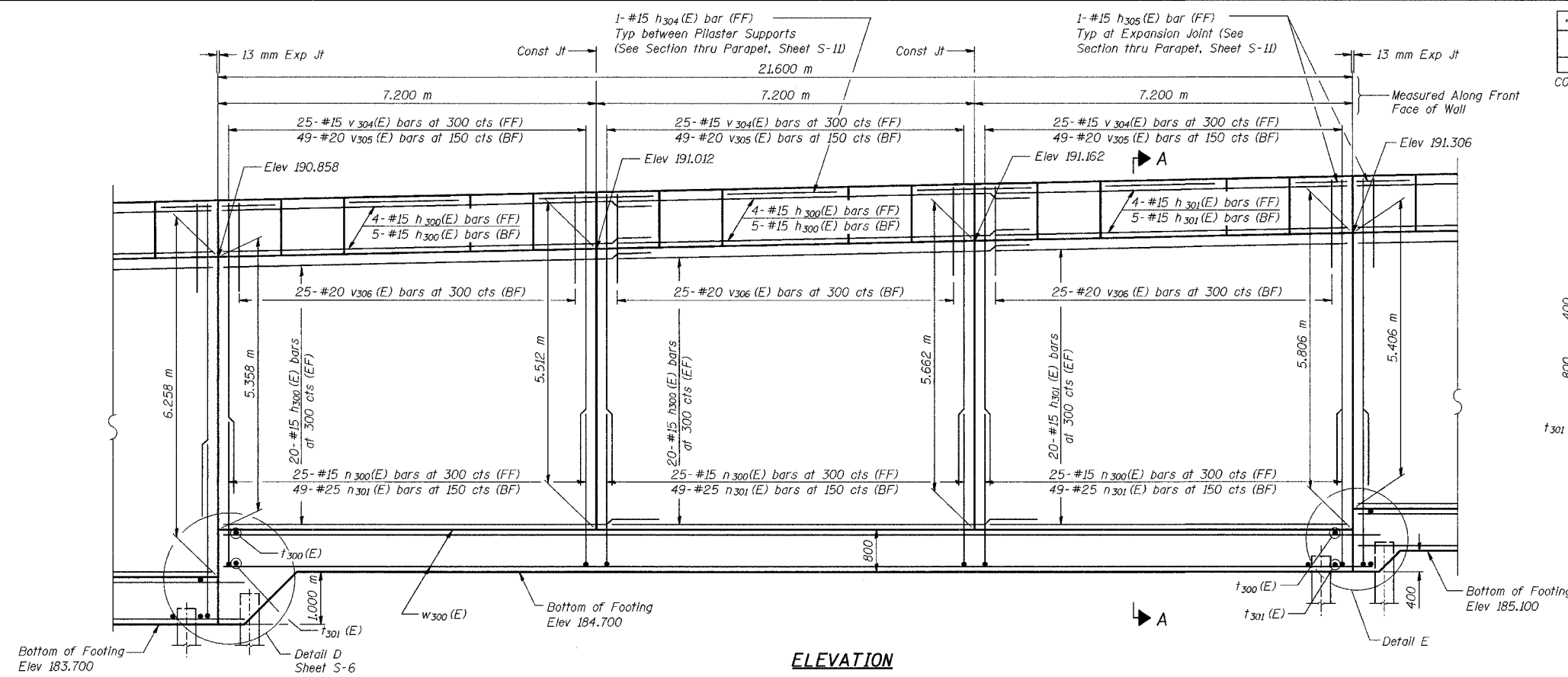
DATE 07/05

AMERICAN
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. S-7
1207	847	LAKE COUNTY, INDIANA	20 SHEETS	

CONTRACT NO. 62114 INDOT DES. NO. 0100987



NOTES:
 See Sheet S-11 for Section A-A.
 See Sheet S-12 for Expansion Joint Detail and Bill of Material.
 See Sheet S-13 for Rustication details.
 Stations are referenced to @ I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS
 #15 bars = 640
 #20 bars = 790

LEGEND
 BF = Back Face
 FF = Front Face
 EF = Each Face

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

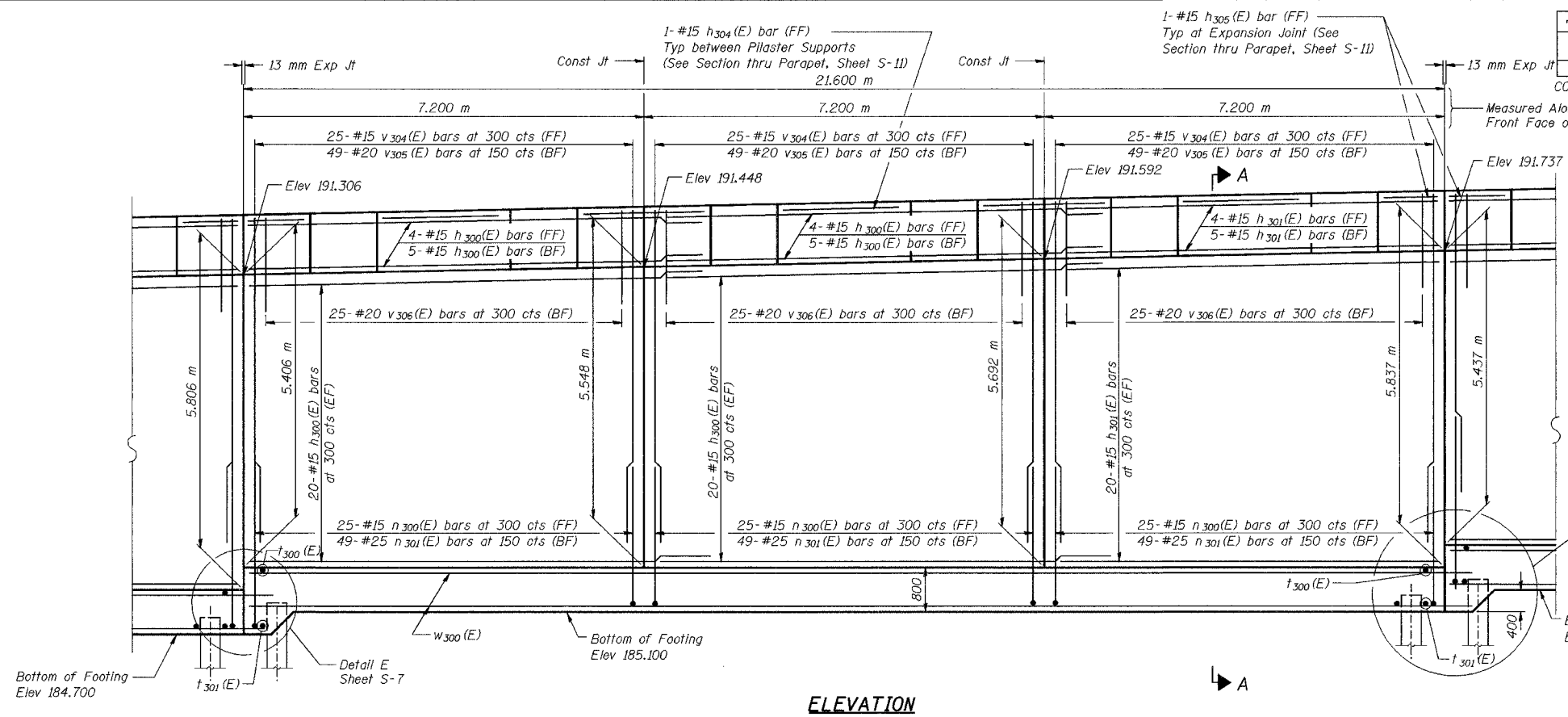
PLAN AND ELEVATION (5 OF 8)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+268.572 TO STATION 8+445.954
STRUCTURE NO. 016-W857
 DATE 07/05

AMERICAN
 CONSULTING ENGINEERS

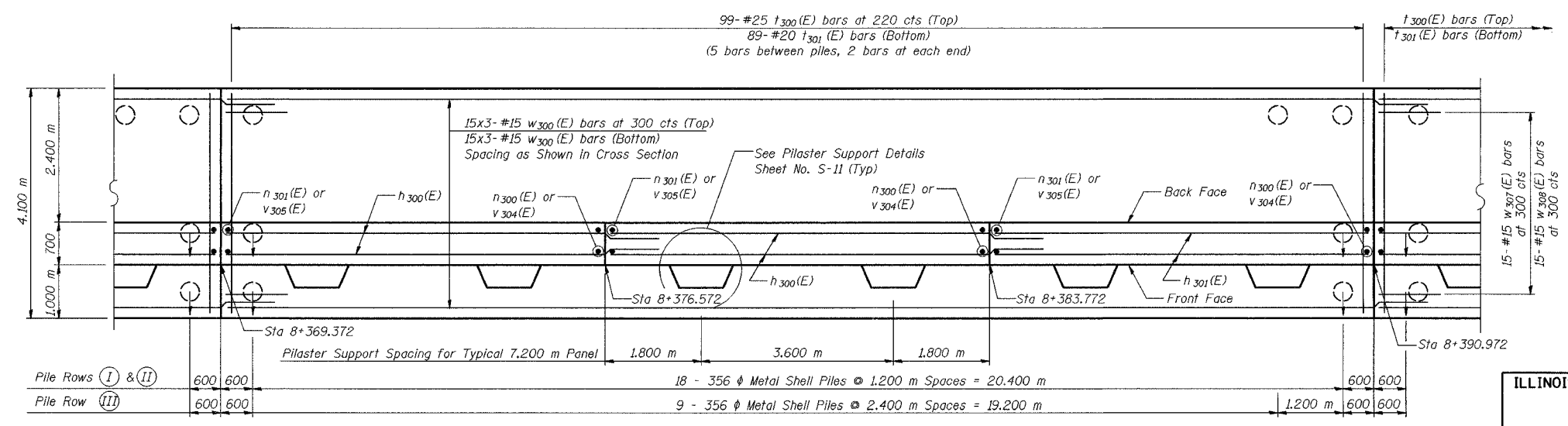
FOR INFORMATION ONLY

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P.A.2.	2626.2-R-1	LAKE COUNTY, INDIANA	1207	848
SHEET NO. S-8		20 SHEETS		

CONTRACT NO. 62114 INDOT DES. NO. 0100987



NOTES:
 See Sheet S-11 for Section A-A.
 See Sheet S-12 for Expansion Joint Detail and Bill of Material.
 See Sheet S-13 for Rustication details.
 Stations are referenced to ϕ I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 Bars Indicated thus 20 x 3-#15 etc. Indicates 20 lines of bars with 3 lengths per line.



FOOTING PLAN

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS
 #15 bars = 640
 #20 bars = 790

LEGEND
 BF = Back Face
 FF = Front Face
 EF = Each Face

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

PLAN AND ELEVATION (6 OF 8)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+268.572 TO STATION 8+445.954
STRUCTURE NO. 016-W857

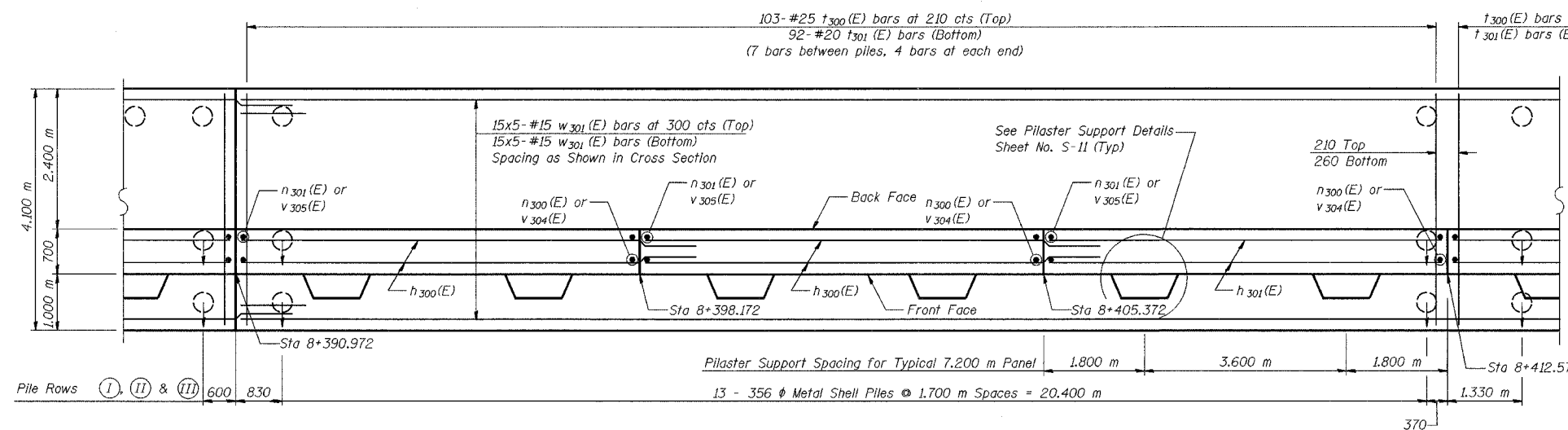
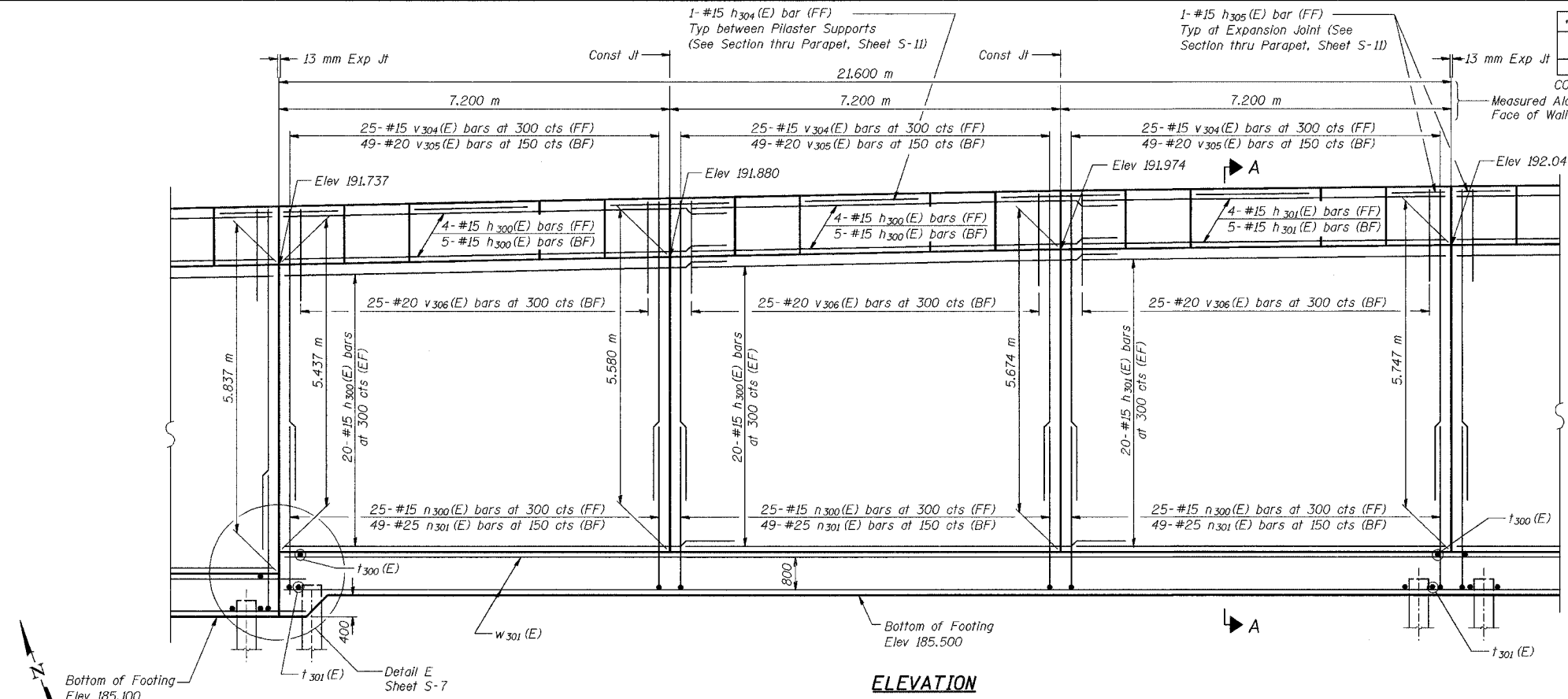
DATE 07/05

AMERICAN
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. S-9
F.A.L. 62/74	PROJ. 262-1	LAKE COUNTY, INDIANA	1207 849	20 SHEETS
ILLINOIS		FED. AID PROJECT		

CONTRACT NO. 62114 INDOT DES. NO. 0100987
Measured Along Front Face of Wall



NOTES:
See Sheet S-11 for Section A-A.
See Sheet S-12 for Expansion Joint Detail and Bill of Material.
See Sheet S-13 for Rustication details.
Stations are referenced to @ I-80/94.
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.
Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS
#15 bars = 640
#20 bars = 790

LEGEND
BF = Back Face
FF = Front Face
EF = Each Face

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

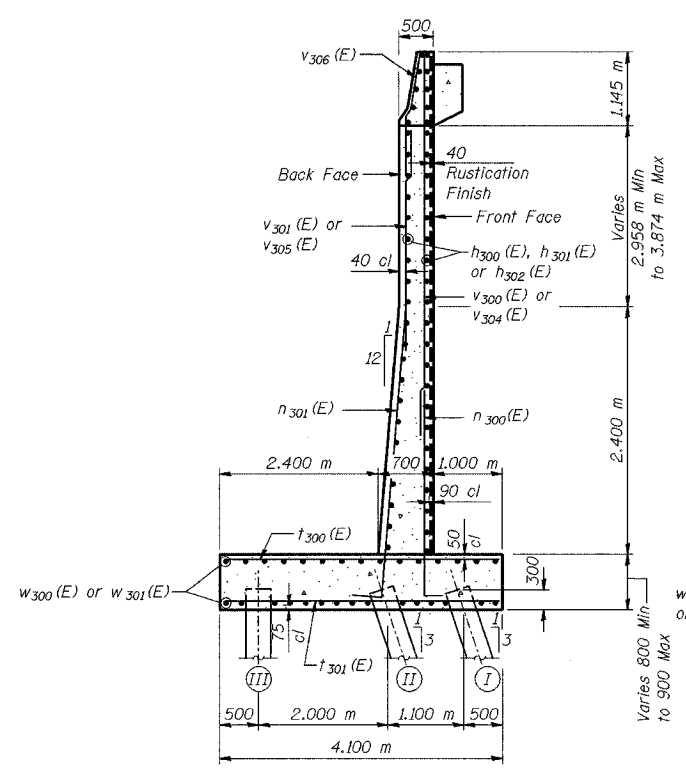
PLAN AND ELEVATION (7 OF 8)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+268.572 TO STATION 8+445.954
STRUCTURE NO. 016-W857
DATE 07/05

AMERICAN
CONSULTING ENGINEERS

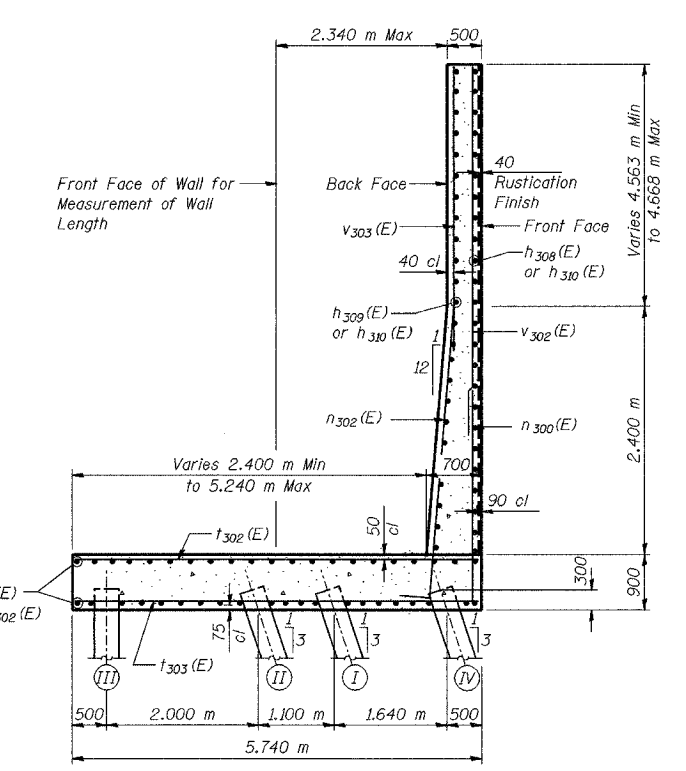
FOR INFORMATION ONLY

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SHEET NO. S-11		CONTRACT NO. 62114 INDOT DES. NO. 0100987		

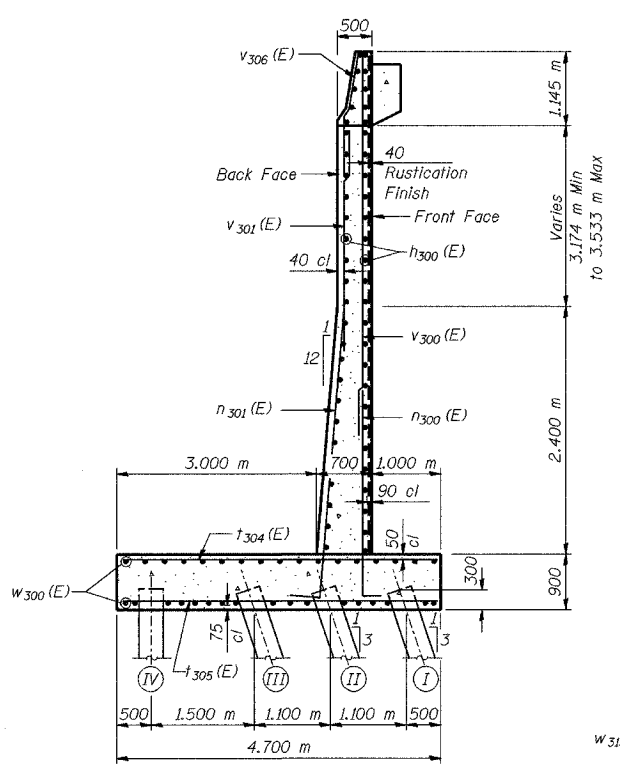
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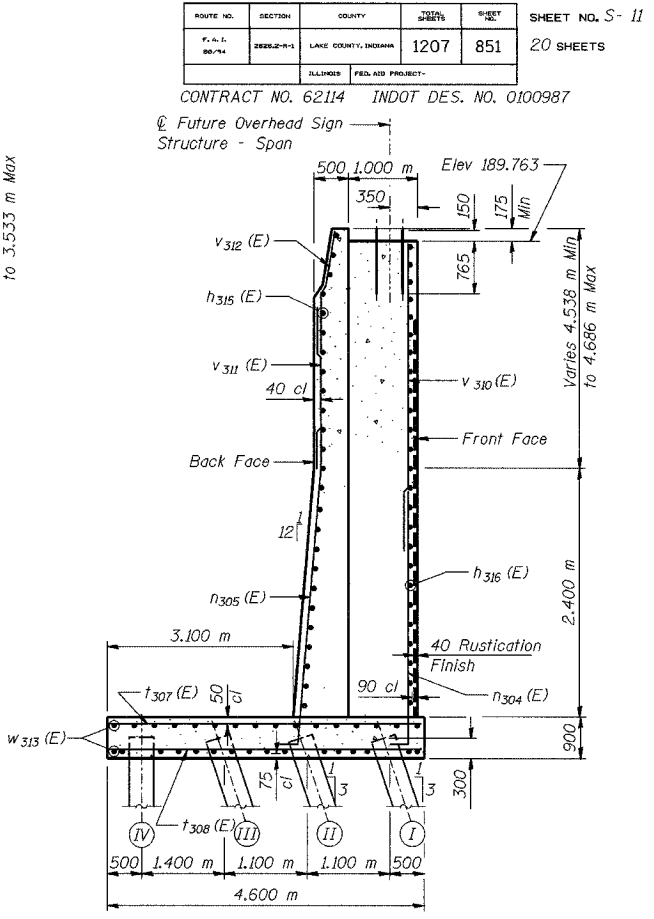
SECTION A-A



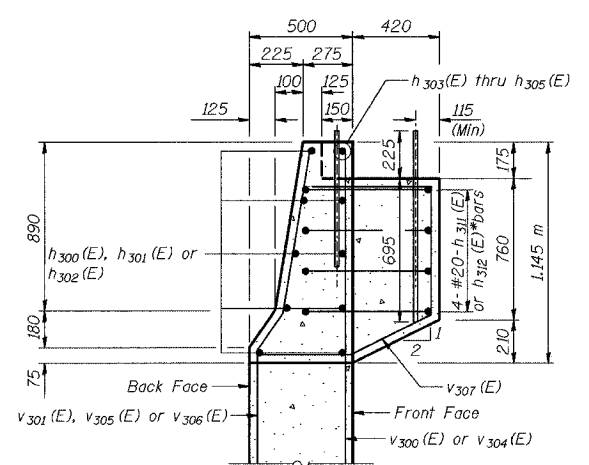
SECTION B-B



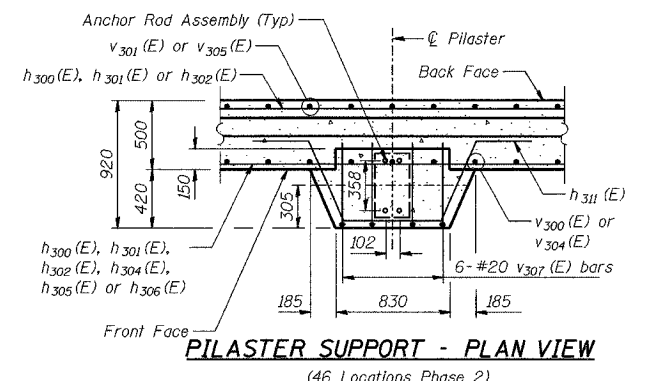
SECTION C-C



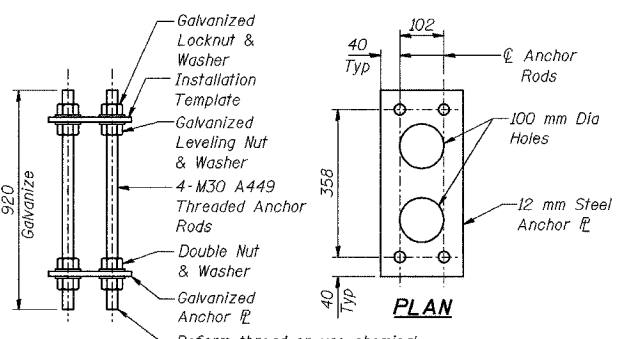
SECTION E-E



SECTION THRU PARAPET

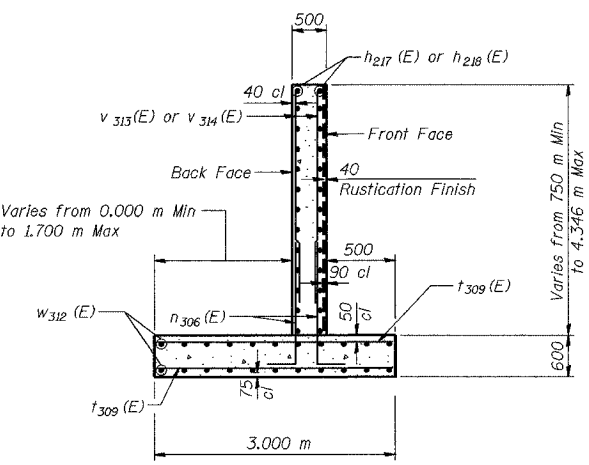


PILASTER SUPPORT - PLAN VIEW
(46 Locations Phase 2)

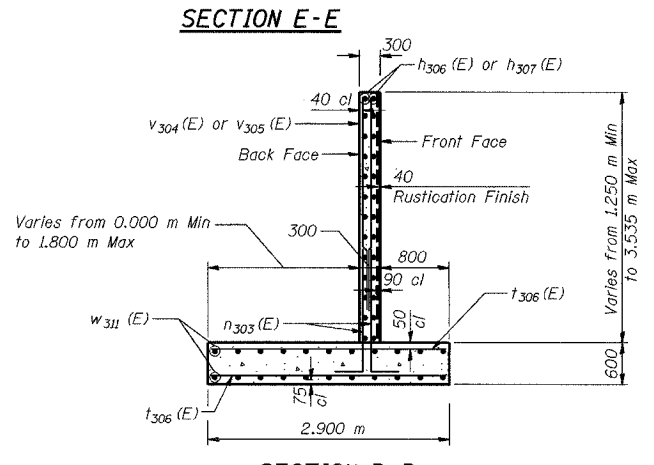


ELEVATION

NOISE ABATEMENT WALL ANCHOR ROD ASSEMBLY
(52 Req'd Phase 2)
(3 Req'd Phase 3)



SECTION F-F



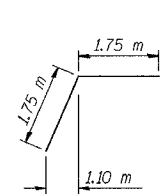
SECTION D-D

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

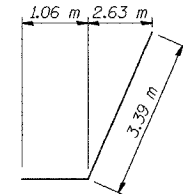
PILE DATA
Type - 356 ϕ Metal Shell
Capacity - 500 kN
Est. Length - 16.0 m
No. Req'd - 361 (Phase 2)
- 24 (Phase 3)
Test Piles - 4

NOTES:
See Sheet S-12 for Expansion Joint details and Bill of Material
See Sheet S-13 for Rustication details.
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.
See Typical Section on Sheet S-2 for Drainage Details and Surface Seal Limits.

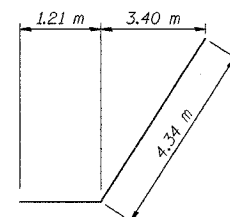
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41
WALL SECTIONS AND DETAILS (1 OF 2)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+253.769 TO STATION 8+268.572
STRUCTURE NO. 016-W857
DATE 09/05
AMERICAN
CONSULTING ENGINEERS



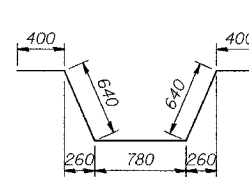
BAR h 308 (E)



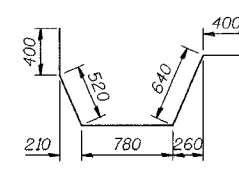
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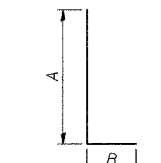
BAR h 310 (E)



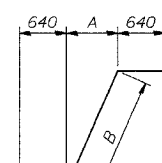
BAR h 311 (E)



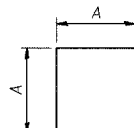
BAR h 312 (E)



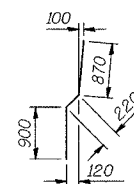
BARS n 300 (E) thru n 303 (E) or n 304 (E) thru n 306 (E)



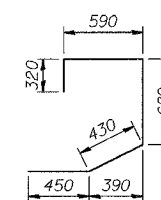
BARS w 303 (E), w 305 (E), w 307 (E) or w 309 (E)



BARS w 304 (E), w 306 (E), w 308 (E) or w 310 (E)



BARS v 306 (E) or v 312 (E)



BAR v 307 (E)

PHASE 2 BAR DIMENSIONS

Bar	A	B
n 300 (E)	3.51 m	260
n 301 (E)	3.51 m	400
n 302 (E)	3.57 m	500
n 303 (E)	1.22 m	260
w 303 (E)	1.46 m	2,06 m
w 304 (E)	1.46 m	-
w 305 (E)	1.36 m	1.92 m
w 306 (E)	1.36 m	-
w 307 (E)	1.06 m	1.50 m
w 308 (E)	1.06 m	-
w 309 (E)	1.66 m	2.35 m
w 310 (E)	1.66 m	-

PHASE 3 BAR DIMENSIONS

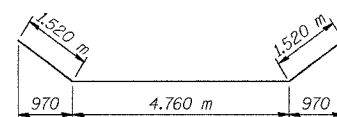
Bar	A	B
n 304 (E)	3.51 m	260
n 305 (E)	3.51 m	500
n 306 (E)	1.21 m	260

PHASE 2 BILL OF MATERIAL

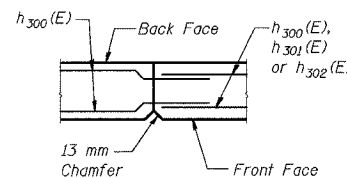
Bar	No.	Size	Length (m)	Shape
h 308 (E)	704	#15	7.84	—
h 309 (E)	408	#15	7.10	—
h 310 (E)	51	#15	4.28	—
h 311 (E)	2	#15	1.49	—
h 312 (E)	35	#15	2.30	—
h 305 (E)	16	#15	1.10	—
h 306 (E)	24	#15	7.30	—
h 307 (E)	2	#15	5.50	—
h 308 (E)	104	#15	3.50	—
h 309 (E)	54	#15	4.45	—
h 310 (E)	54	#15	5.55	—
h 311 (E)	180	#20	2.86	—
h 312 (E)	4	#20	2.74	—
h 313 (E)	4	#15	0.90	—
h 314 (E)	8	#15	0.60	—

PHASE 3 BILL OF MATERIAL

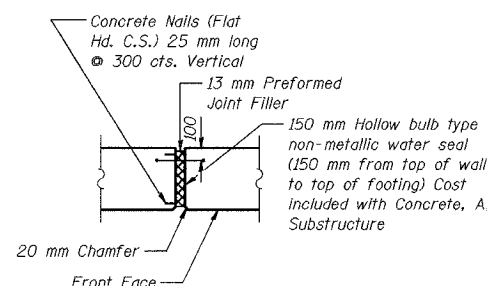
Bar	No.	Size	Length (m)	Shape
h 315 (E)	25	#15	7.10	—
h 316 (E)	25	#15	7.80	—
h 317 (E)	32	#15	8.90	—
h 318 (E)	2	#15	6.74	—
n 304 (E)	28	#15	3.77	—
n 305 (E)	49	#20	4.01	—
n 306 (E)	62	#15	1.47	—
t 307 (E)	37	#30	4.50	—
t 308 (E)	29	#20	4.50	—
t 309 (E)	67	#20	2.90	—
v 310 (E)	28	#15	4.67	—
v 311 (E)	49	#20	3.60	—
v 312 (E)	25	#20	1.99	—
v 313 (E)	14	#15	4.25	—
v 314 (E)	24	#15	4.80	—
w 313 (E)	32	#15	7.10	—
w 314 (E)	22	#15	8.90	—



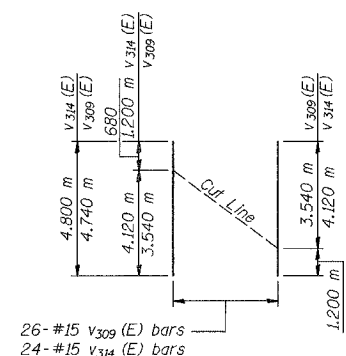
BAR h 316 (E)



CONSTRUCTION JOINT DETAIL



13 MM EXPANSION JOINT DETAIL



FIELD CUTTING DIAGRAM

Order v 309 (E) or v 314 (E) bars full length. Cut as shown and use remainder of bars in opposite face.

NOTES:

See Sheet S-11 for Wall and Parapet Sections and Anchor Rod Assembly Details

See Sheet S-13 for Rustication details.

Reinforcement bars designated (E) shall be epoxy coated.

All dimensions are in millimeters (mm) except as noted.

See Typical Section on Sheet S-2 for Drainage Details and Surface Seal Limits.

n 300 (E)	603	#15	3.77	—
n 301 (E)	1108	#25	3.91	—
n 302 (E)	53	#30	4.07	—
n 303 (E)	76	#15	1.48	—
t 300 (E)	696	#25	4.00	—
t 301 (E)	617	#20	4.00	—
t 302 (E)	43	#30	5.84	—
t 303 (E)	31	#20	5.84	—
t 304 (E)	54	#25	4.60	—
t 305 (E)	50	#20	4.60	—
t 306 (E)	58	#20	2.80	—
v 300 (E)	250	#15	5.33	—
v 301 (E)	490	#20	4.34	—
v 302 (E)	37	#15	4.98	—
v 303 (E)	53	#25	5.60	—
v 304 (E)	316	#15	4.93	—
v 305 (E)	618	#20	3.93	—
v 306 (E)	566	#20	1.99	—
v 307 (E)	276	#20	2.47	—
v 308 (E)	24	#15	3.44	—
v 309 (E)	26	#15	4.74	—
w 300 (E)	518	#15	7.84	—
w 301 (E)	150	#15	10.01	—
w 302 (E)	12	#15	7.10	—
w 303 (E)	15	#15	3.34	—
w 304 (E)	15	#15	2.92	—
w 305 (E)	15	#15	3.20	—
w 306 (E)	15	#15	2.72	—
w 307 (E)	45	#15	2.78	—
w 308 (E)	45	#15	2.12	—
w 309 (E)	15	#15	3.63	—
w 310 (E)	15	#15	3.32	—
w 311 (E)	44	#15	3.97	—

Test Pile, 356 mm	Each	4
Excavation, Foundation, Unclassified	m ³	3,336
Concrete, A, Substructure	m ³	1261.8
Reinforcing Bars, Epoxy Coated	kg	90,300
Surface Seal	L Sum	0.08
Pile, Concrete, Steel Shell Encased, 6.35 mm, 356 mm	m	5,776.0
Geocomposite Wall Drain	m ²	935
Pipe, Underdrain, Perf. 1.63 mm, 150 mm	m	189.0
Noise Abatement Wall Anchor Rod Assembly	Each	52

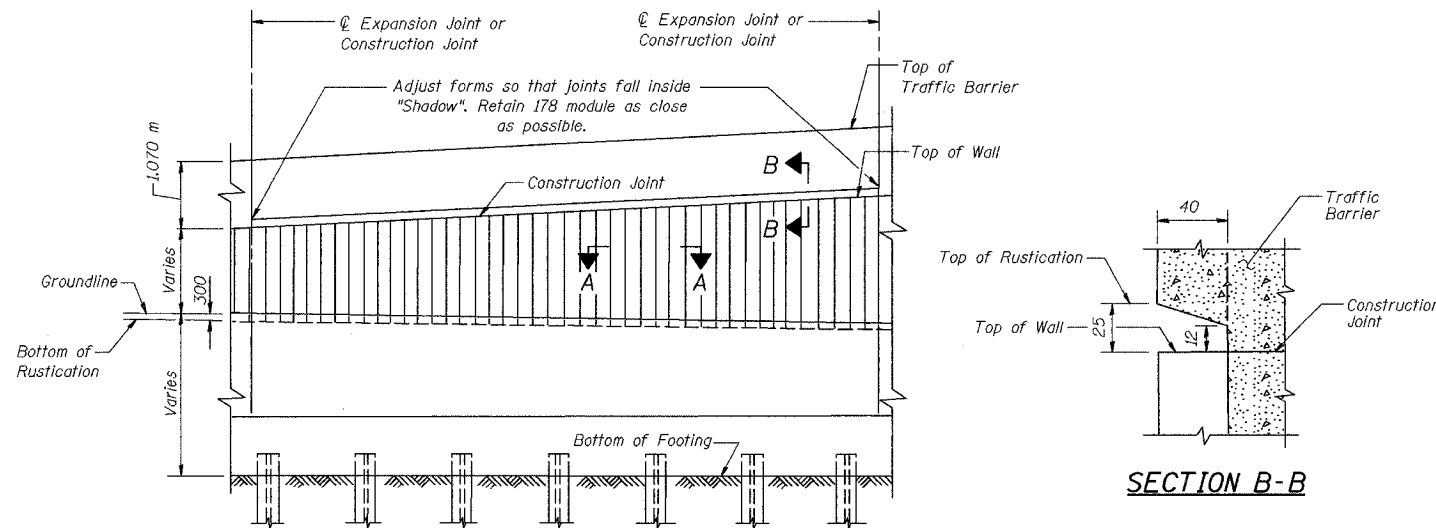
The estimated Phase 2 Surface Seal area is 268 m²

Excavation, Foundation, Unclassified	m ³	377.4
Concrete, A, Substructure	m ³	123.0
Reinforcing Bars, Epoxy Coated	kg	5,390
Surface Seal	L Sum	0.01
Pile, Concrete, Steel Shell Encased, 6.35 mm, 356 mm	m	384.0
Geocomposite Wall Drain	m ²	59
Pipe, Underdrain, Perf. 1.63 mm, 150 mm	m	16.2
Noise Abatement Wall Anchor Rod Assembly	Each	3
Overhead Sign Structure-Span Anchor Rod Assembly	Each	2
B Borrow	m ³	48.6
Structural Backfill	m ³	354.7
Masonry Coating	L Sum	0.04

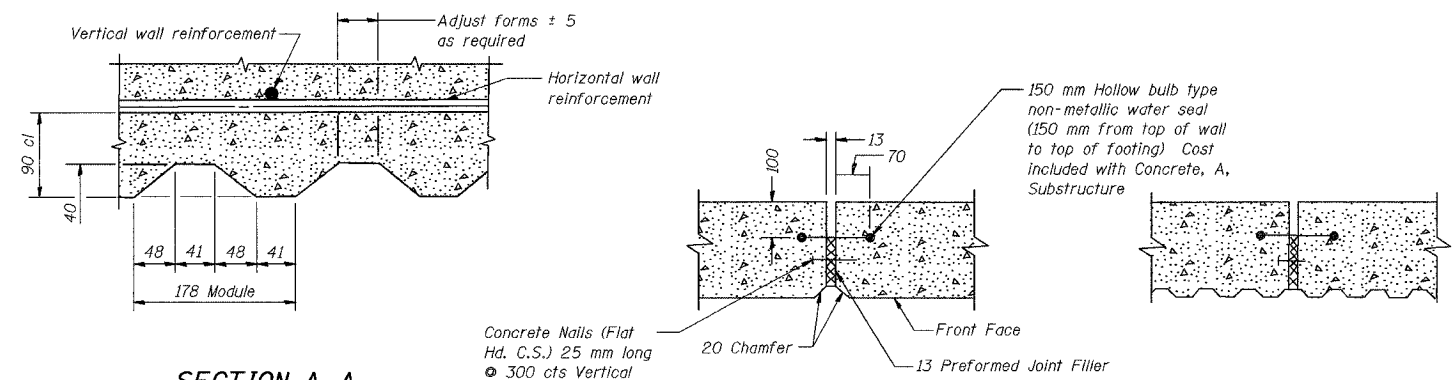
The estimated Phase 3 Surface Seal area is 17.9 m²
The estimated Phase 3 Masonry Coating area is 285.9 m²

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41
WALL SECTIONS AND DETAILS (2 OF 2)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+253.769 TO STATION 8+268.572
STRUCTURE NO. 016-W857
DATE 09/05
AMERICAN
CONSULTING ENGINEERS



FRONT FACE ELEVATION-TYPICAL ARCHITECTURAL FINISH



SECTION A-A

EXPANSION JOINT DETAIL

SUGGESTED FORMWORK DETAIL

CONSTRUCTION JOINT DETAIL

**PHASE 2
RUSTICATION LIMITS**

STATION	TOP OF WALL ELEVATION	BOTTOM OF RUSTICATION ELEVATION
8+268.572	188.941	183.300
8+275.772	189.106	183.300
8+282.972	189.274	183.300
8+282.972	189.274	184.000
8+290.172	189.453	184.000
8+297.372	189.633	184.000
8+304.572	189.821	184.000
8+304.572	189.821	184.600
8+311.772	190.007	184.600
8+318.972	190.187	184.600
8+326.172	190.363	184.600
8+326.172	190.363	184.900
8+333.372	190.533	184.900
8+340.572	190.698	184.900
8+347.772	190.858	184.900
8+347.772	190.858	185.800
8+354.972	191.012	185.800
8+362.172	191.162	185.800
8+369.372	191.306	185.800
8+369.372	191.306	186.200
8+376.572	191.448	186.200
8+383.772	191.592	186.200
8+390.972	191.737	186.200
8+390.972	191.737	186.600
8+398.172	191.880	186.600
8+405.372	191.974	186.600
8+412.572	192.047	186.600
8+419.772	192.115	186.600
8+426.972	192.178	186.600
8+434.172	192.236	186.600
8+438.554	192.269	186.600
8+438.554	190.435	187.200
8+440.854	190.435	187.200
8+445.954	188.150	187.200

**PHASE 3
RUSTICATION LIMITS**

STATION	TOP OF WALL ELEVATION	BOTTOM OF RUSTICATION ELEVATION
8+252.372	183.750	183.300
8+259.572	187.346	183.300
8+261.372	187.346	183.300
8+261.372	188.793	183.300
8+268.572	188.491	183.300

BILL OF MATERIAL

Item	Unit	Phase 2	Phase 3
		Total	Total
Rustication Finish	m ²	972	66

Note: All dimensions are in millimeters (mm) unless otherwise noted.

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

RUSTICATION FINISH DETAILS
SECTION 262.2-R-1
LAKE COUNTY, INDIANA
STATION 8+253.769 TO STATION 8+268.572
STRUCTURE NO. 016-W857

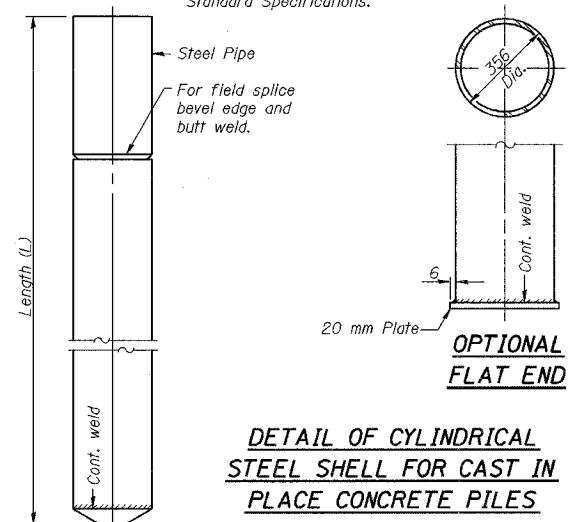
DATE 09/05

AMERICAN
CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.	SHEET NO. S-14
F.A.S. 08/74	2626.2-R-1	LAKE COUNTY, INDIANA	1207	854	20 SHEETS
ILLINOIS		FED. AID PROJECT			

CONTRACT NO. 62114 INDOT DES. NO. 0100987

Notes: Driving and bearing ends of pipe shall be cut square. The thickness of the shell shall be 6.35 mm with a tolerance of 5%. The shell shall be according to Article 1006.05(a) of the Standard Specifications.



DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

X-PB (M) 4-30-97 (All dimensions are in millimeters (mm) except as noted.)

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

CONCRETE PILE DETAILS
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+268.572 TO STATION 8+445.954
STRUCTURE NO. 016-W857

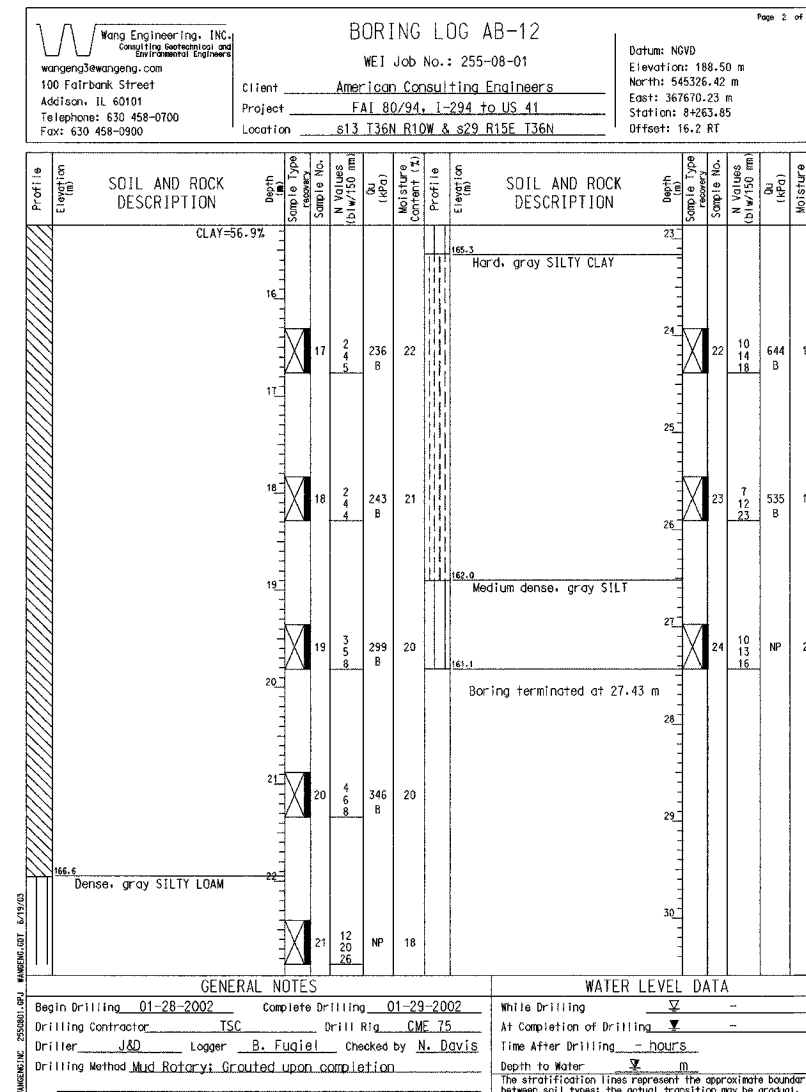
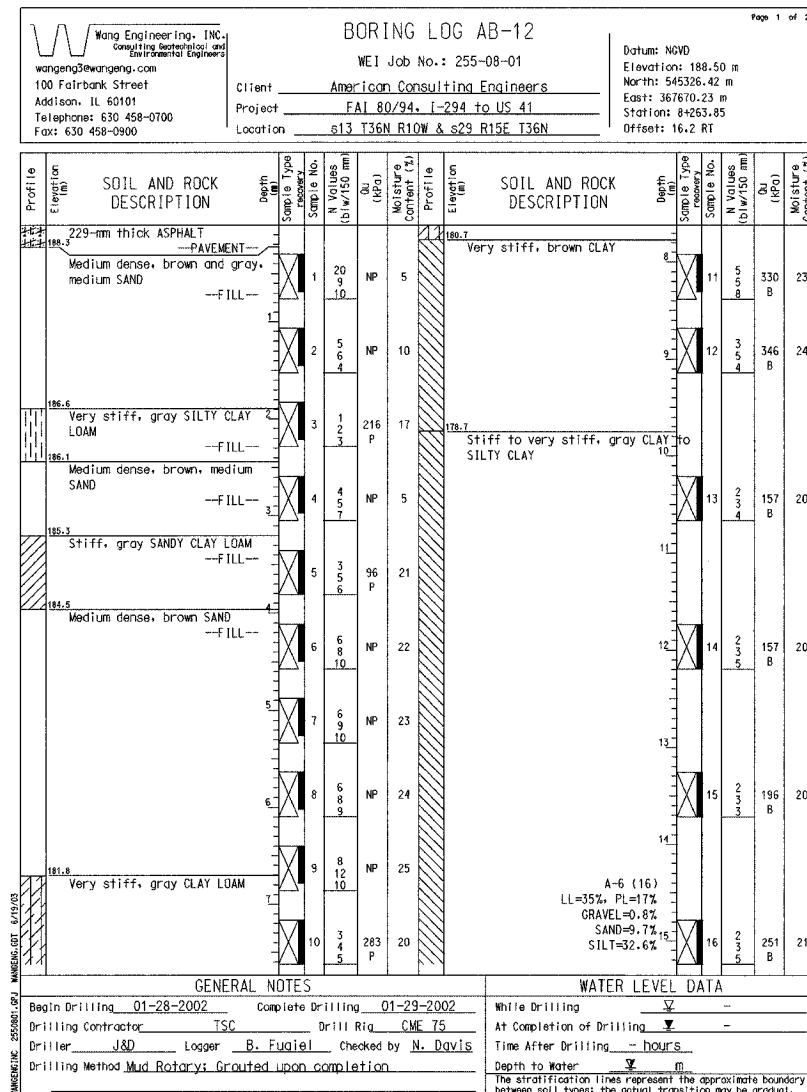
DATE 07/05

AMERICAN
CONSULTING ENGINEERS

BORING NO. AB-012 (1 OF 2)

BORING NO. AB-012 (2 OF 2)

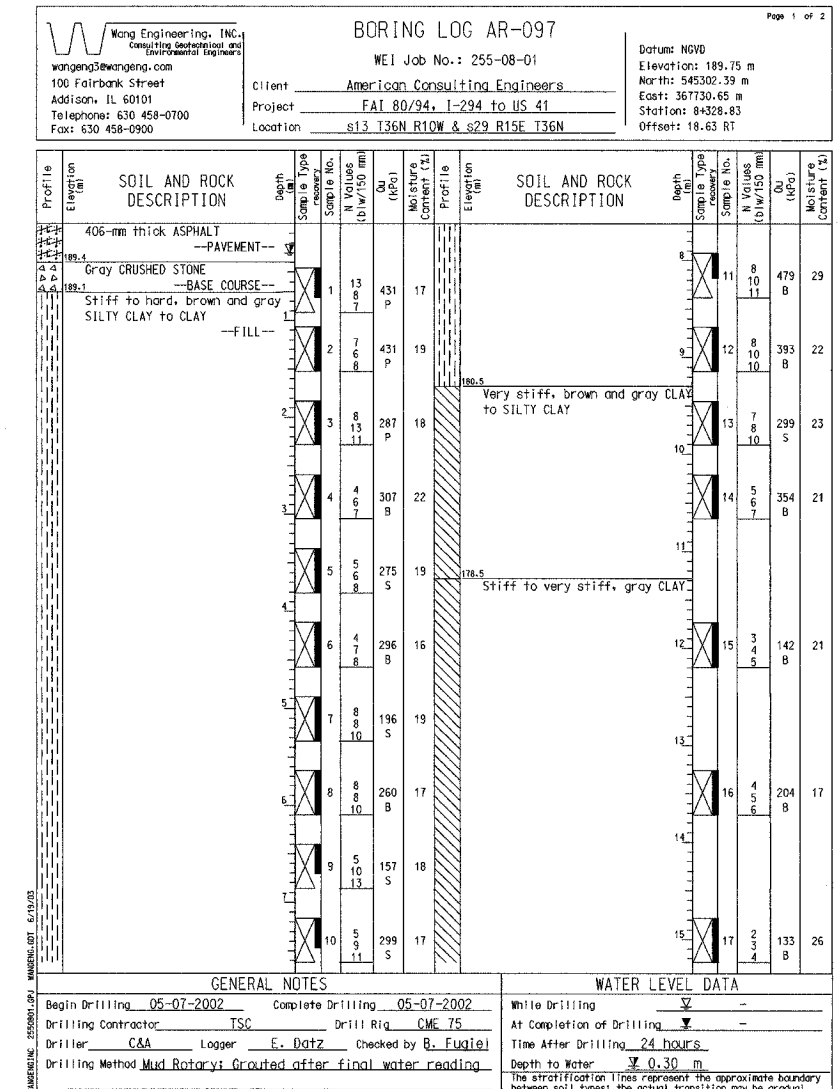
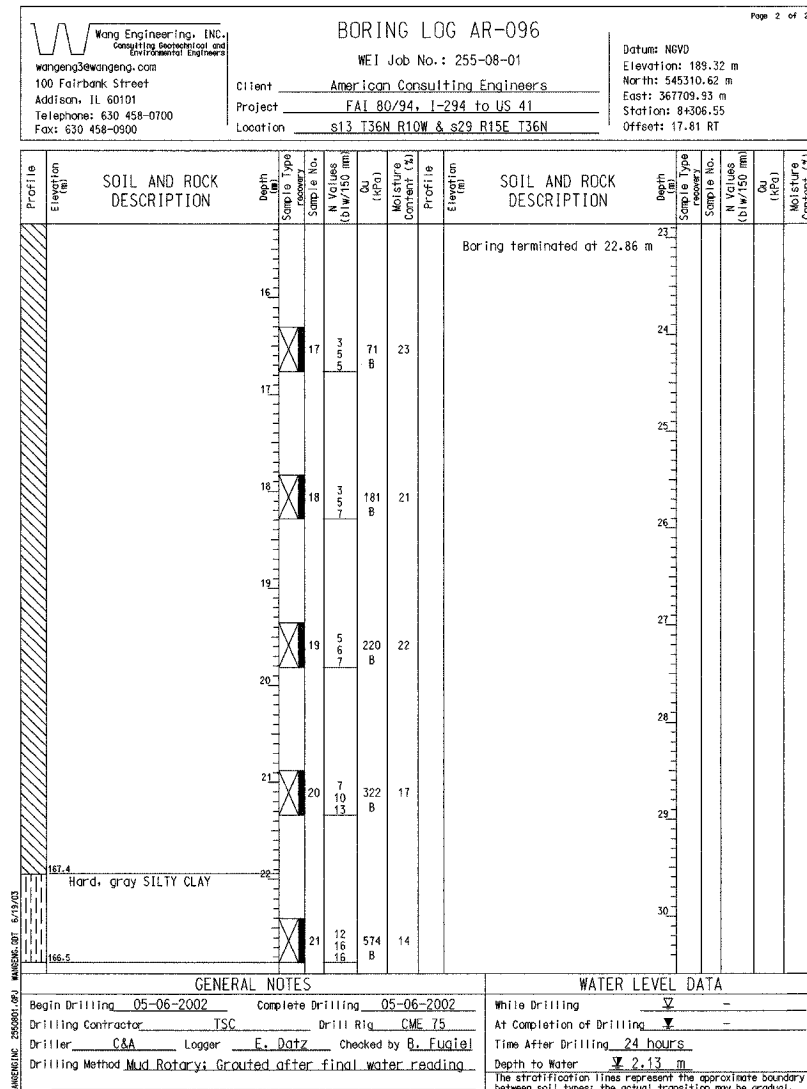
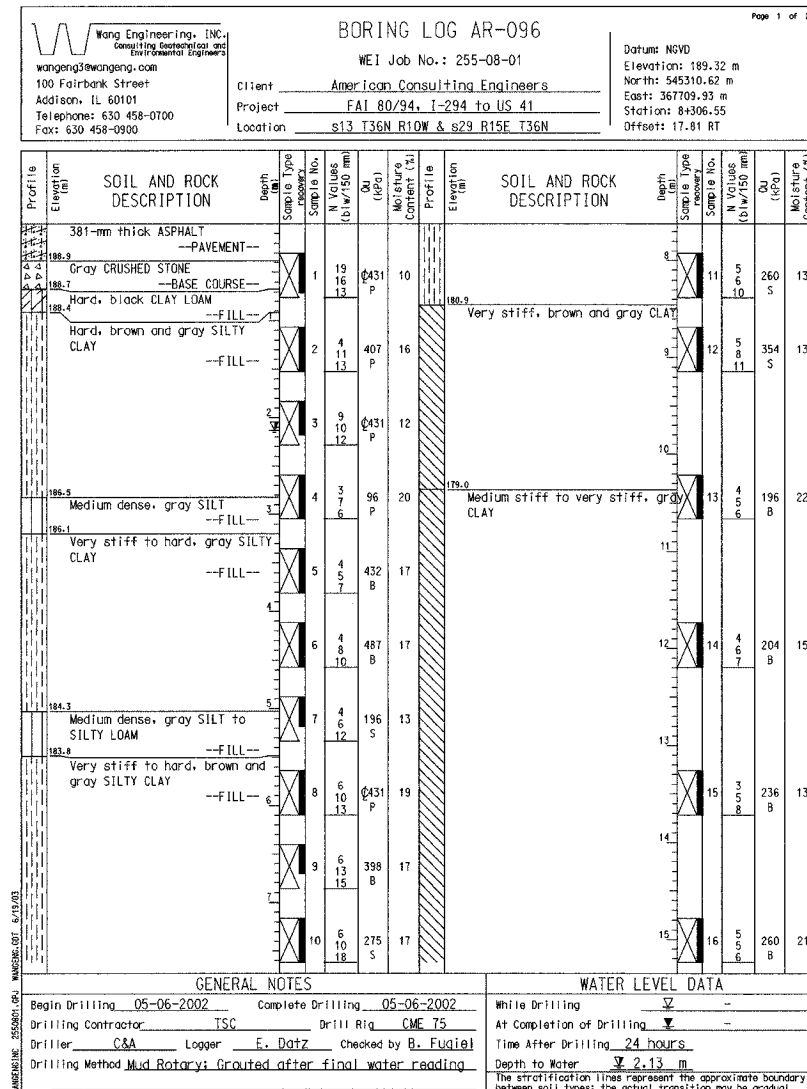
BORING NO. AR-095 (1 OF 1)



BORING NO. AR-096 (1 OF 2)

BORING NO. AR-096 (2 OF 2)

BORING NO. AR-097 (1 OF 2)



DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

BORING LOGS (2 OF 6)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+268.572 TO STATION 8+445.954
STRUCTURE NO. 016-W857

DATE 07/05

AMERICAN
CONSULTING ENGINEERS

BORING NO. AR-097 (2 OF 2)

BORING NO. AR-098 (1 OF 2)

BORING NO. AR-098 (2 OF 2)

BORING LOG AR-097 Page 2 of 2

Wang Engineering, INC.
wangeng@wangeng.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 189.75 m
North: 545302.39 m
East: 367730.65 m
Station: 8+348.83
Offset: 19.63 RT

BORING LOG AR-098 Page 1 of 2

Wang Engineering, INC.
wangeng@wangeng.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 190.07 m
North: 545294.46 m
East: 367750.08 m
Station: 8+349.8
Offset: 19.61 RT

BORING LOG AR-098 Page 2 of 2

Wang Engineering, INC.
wangeng@wangeng.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
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WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

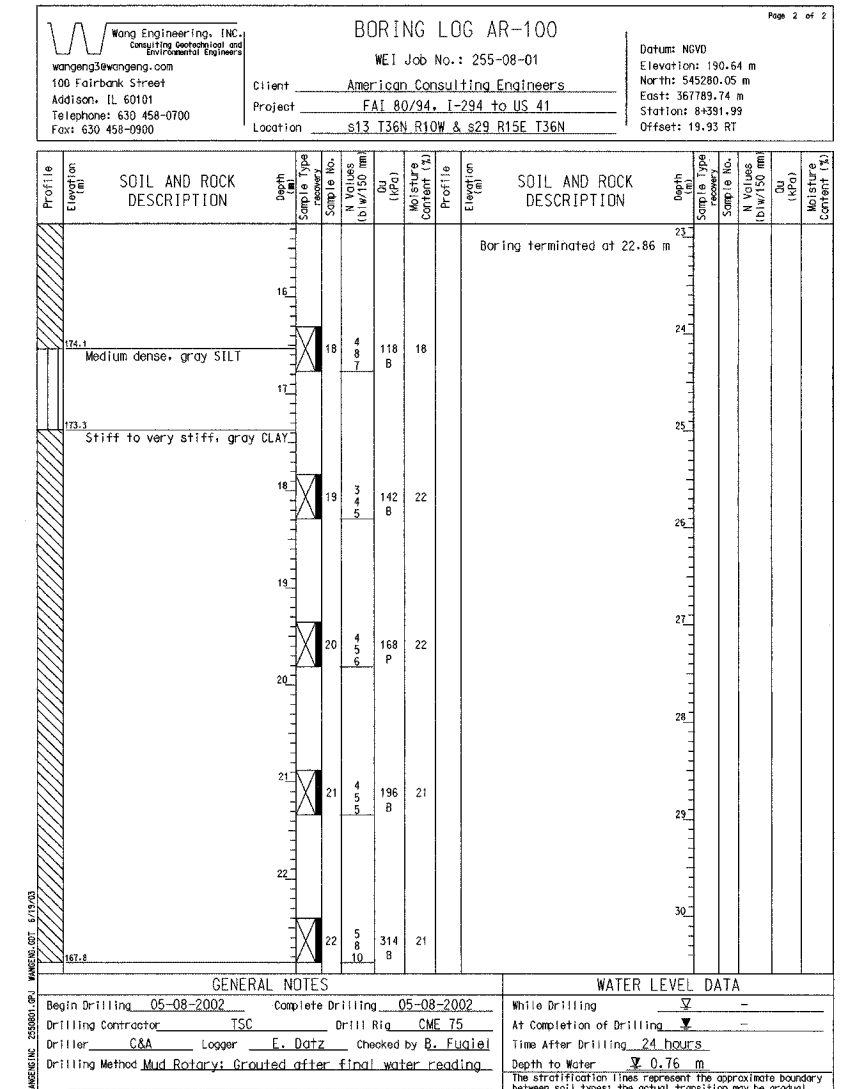
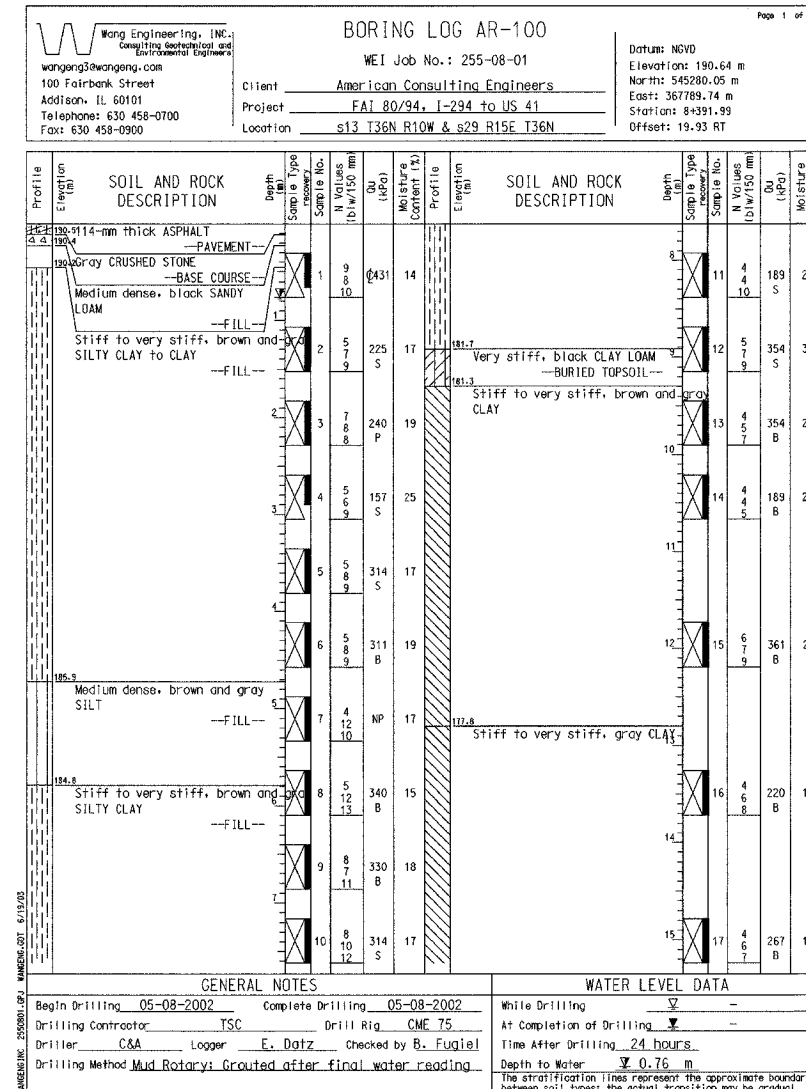
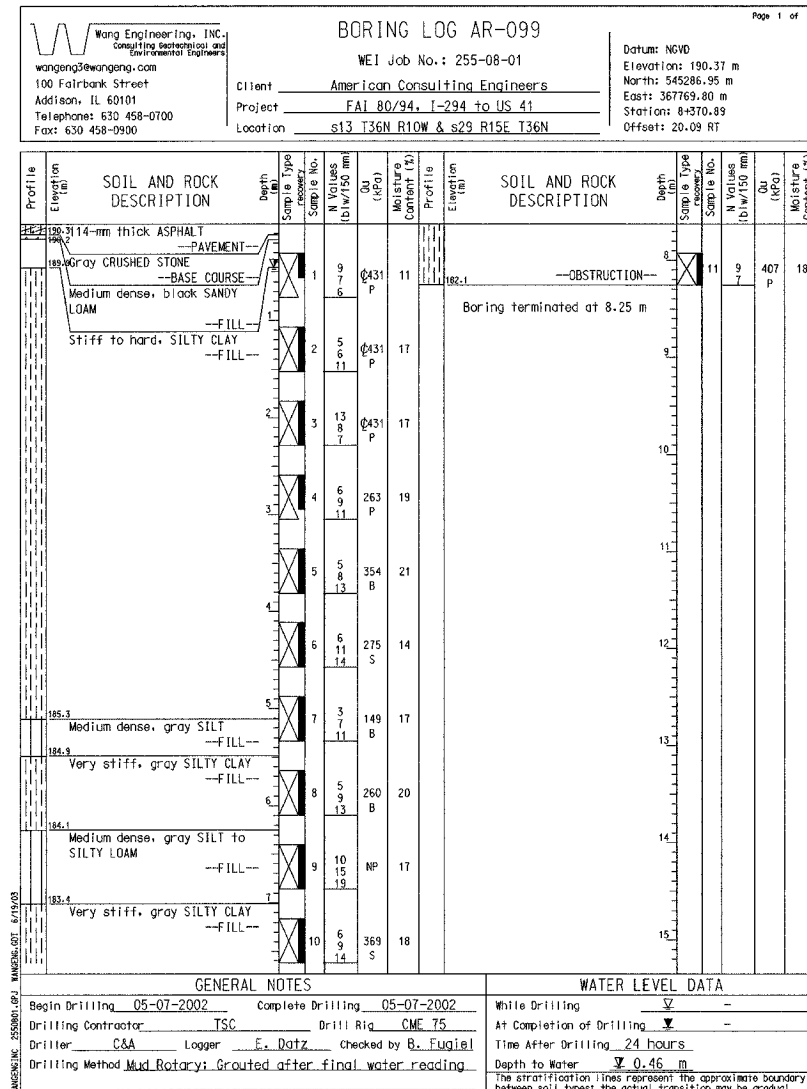
Datum: NGVD
Elevation: 190.07 m
North: 545294.46 m
East: 367750.08 m
Station: 8+349.8
Offset: 19.61 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/150 mm)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/150 mm)	Moisture Content (%)
189.4	355-mm thick ASPHALT --PAVEMENT--					189.4	355-mm thick ASPHALT --PAVEMENT--				
	Gray CRUSHED STONE --BASE COURSE--						Gray CRUSHED STONE --BASE COURSE--				
	Stiff to hard, brown and gray SILTY CLAY --FILL--						Stiff to hard, brown and gray SILTY CLAY --FILL--				
		16	18	4 5 6	220 B			16	11	6 7 8	290 S
		17						17	12	6 9 9	447 B
		18	19	4 5 6	194 B			18	13	6 8 8	287 P
		19						19	14	6 8 8	400 B
		20	20	3 6 7	251 B			20	15	6 8 8	400 B
		21	21	7 9 12	330 B			21	16	6 8 8	251 B
		22						22	17	3 4 4	142 B
								23	18	6 8 8	196 B
								24	19	6 8 8	196 B
								25	20	6 8 8	196 B
								26	21	6 8 8	196 B
								27	22	6 8 8	196 B
								28	23	6 8 8	196 B
								29	24	6 8 8	196 B
								30	25	6 8 8	196 B
								31	26	6 8 8	196 B
								32	27	6 8 8	196 B
								33	28	6 8 8	196 B
								34	29	6 8 8	196 B
								35	30	6 8 8	196 B
								36	31	6 8 8	196 B
								37	32	6 8 8	196 B
								38	33	6 8 8	196 B
								39	34	6 8 8	196 B
								40	35	6 8 8	196 B
								41	36	6 8 8	196 B
								42	37	6 8 8	196 B
								43	38	6 8 8	196 B
								44	39	6 8 8	196 B
								45	40	6 8 8	196 B
								46	41	6 8 8	196 B
								47	42	6 8 8	196 B
								48	43	6 8 8	196 B
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								51	46	6 8 8	196 B
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								136	131	6 8 8	196 B
								137	132	6 8 8	196 B
								138	133	6 8 8	196 B
								139	134	6 8 8	196 B

BORING NO. AR-099 (1 OF 1)

BORING NO. AR-100 (1 OF 2)

BORING NO. AR-100 (2 OF 2)



DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

BORING LOGS (4 OF 6)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+268.572 TO STATION 8+445.954
STRUCTURE NO. 016-W857

DATE 07/05

AMERICAN
CONSULTING ENGINEERS

BORING NO. AR-101 (1 OF 1)

BORING NO. AB-017 (1 OF 3)

BORING NO. AB-017 (2 OF 3)

BORING LOG AR-101 Page 1 of 1
 Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers
 wangeng@wangeng.com
 100 Fairbank Street
 Addison, IL 60101
 Telephone: 630 458-0700
 Fax: 630 458-0900

WEI Job No.: 255-08-01
 Client: American Consulting Engineers
 Project: FAI 80/94, I-294 to US 41
 Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
 Elevation: 190.97 m
 North: 545272.78 m
 East: 367810.09 m
 Station: 8+413.59
 Offset: 19.98 RT

BORING LOG AB-17 Page 1 of 3
 Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers
 wangeng@wangeng.com
 100 Fairbank Street
 Addison, IL 60101
 Telephone: 630 458-0700
 Fax: 630 458-0900

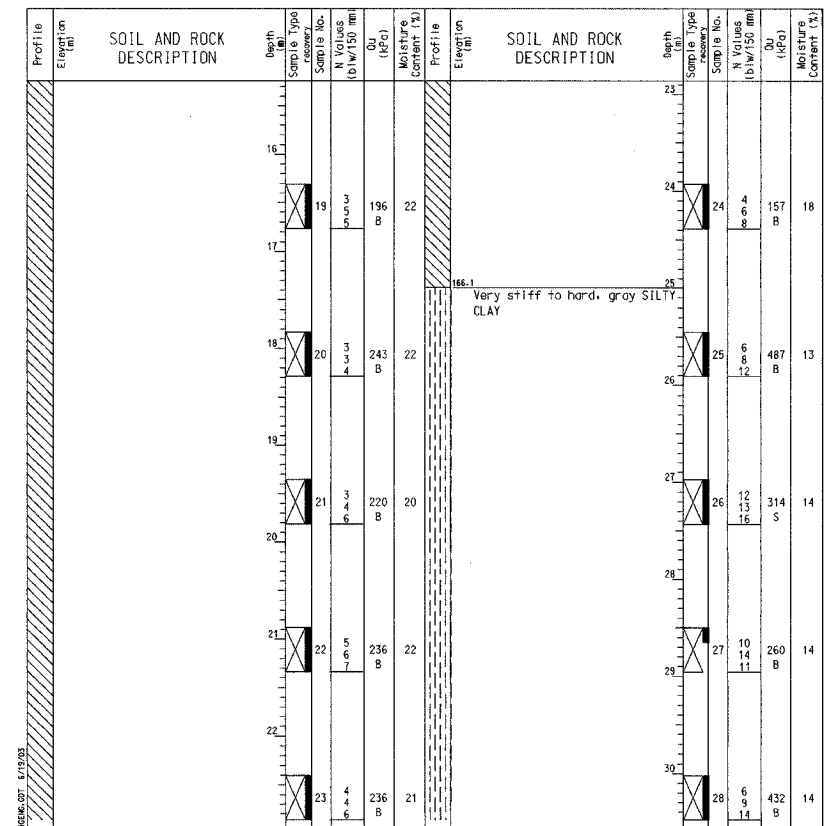
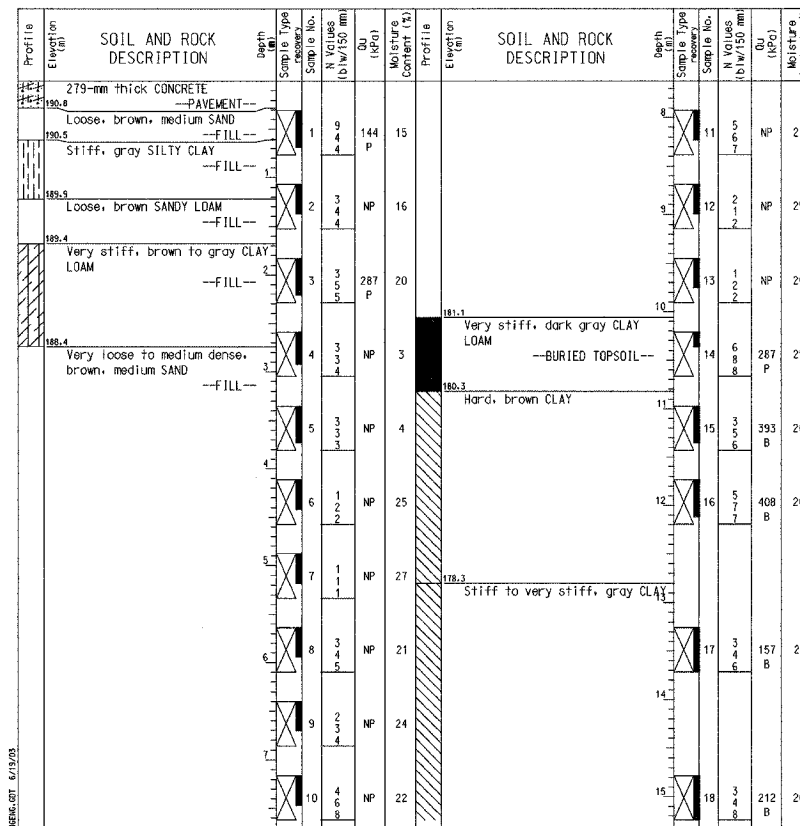
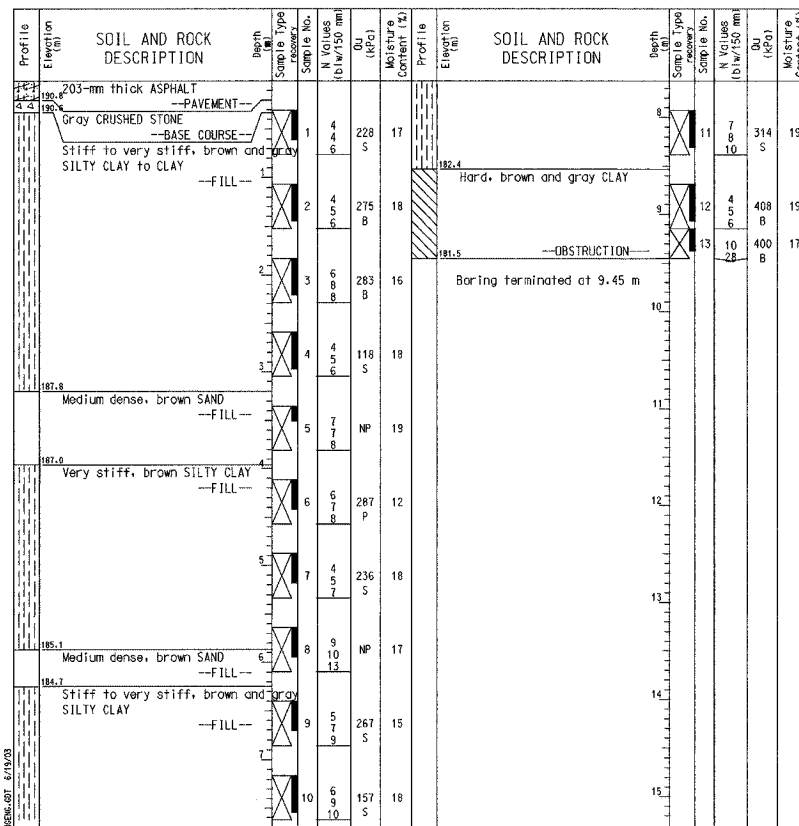
WEI Job No.: 255-08-01
 Client: American Consulting Engineers
 Project: FAI 80/94, I-294 to US 41
 Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
 Elevation: 191.12 m
 North: 545266.08 m
 East: 367829.44 m
 Station: 8+434.07
 Offset: 19.82 RT

BORING LOG AB-17 Page 2 of 3
 Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers
 wangeng@wangeng.com
 100 Fairbank Street
 Addison, IL 60101
 Telephone: 630 458-0700
 Fax: 630 458-0900

WEI Job No.: 255-08-01
 Client: American Consulting Engineers
 Project: FAI 80/94, I-294 to US 41
 Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
 Elevation: 191.12 m
 North: 545266.08 m
 East: 367829.44 m
 Station: 8+434.07
 Offset: 19.82 RT



GENERAL NOTES
 Begin Drilling 05-16-2002 Complete Drilling 05-16-2002
 Drilling Contractor TSC Drill Rig CME 75
 Driller C&A Logger H. Suhail Checked by B. Fugiel
 Drilling Method Mud Rotary; Grouted upon completion

WATER LEVEL DATA
 While Drilling
 At Completion of Drilling
 Time After Drilling - hours
 Depth to Water m
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES
 Begin Drilling 01-24-2002 Complete Drilling 01-25-2002
 Drilling Contractor TSC Drill Rig CME 75
 Driller C&J Logger B. Fugiel Checked by N. Davis
 Drilling Method Mud Rotary; Grouted upon completion

WATER LEVEL DATA
 While Drilling
 At Completion of Drilling
 Time After Drilling - hours
 Depth to Water m
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES
 Begin Drilling 01-24-2002 Complete Drilling 01-25-2002
 Drilling Contractor TSC Drill Rig CME 75
 Driller C&J Logger B. Fugiel Checked by N. Davis
 Drilling Method Mud Rotary; Grouted upon completion

WATER LEVEL DATA
 While Drilling
 At Completion of Drilling
 Time After Drilling - hours
 Depth to Water m
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

BORING LOGS (5 OF 6)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+268.572 TO STATION 8+445.954
STRUCTURE NO. 016-W857

DATE 07/05

AMERICAN
 CONSULTING ENGINEERS

BORING NO. AB-017 (3 OF 3)

<p>Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers wangeng@wangeng.com 100 Fairbank Street Addison, IL 60101 Telephone: 630 458-0700 Fax: 630 458-0900</p>	BORING LOG AB-17		Page 3 of 3
	WEI Job No.: 255-08-01		Datum: NGVD
	Client: American Consulting Engineers		Elevation: 191.12 m
	Project: FAI 80/94- I-294 to US 41		North: 545266.08 m
Location: s13 T36N R10W & s29 R15E T36N		East: 367829.44 m	Station: 8+434.07
		Offset: 19.82 RT	

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blows/150 mm)	Su (kPa)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blows/150 mm)	Su (kPa)	Moisture Content (%)
31.6															
32.0		9		29	16	526	14								
		20													
33.0		15		30	23	746	11								
		60													
	Boring terminated at 33.53 m														

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling: 01-24-2002	Complete Drilling: 01-25-2002	Water Drilling:	
Drilling Contractor: TSC	Drill Rig: CME 75	At Completion of Drilling:	
Driller: C&J	Logger: B. Fugiel	Time After Drilling: - hours	
Checked by: N. Davis		Depth to Water:	
Drilling Method: Mud Rotary; Grouted upon completion		The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

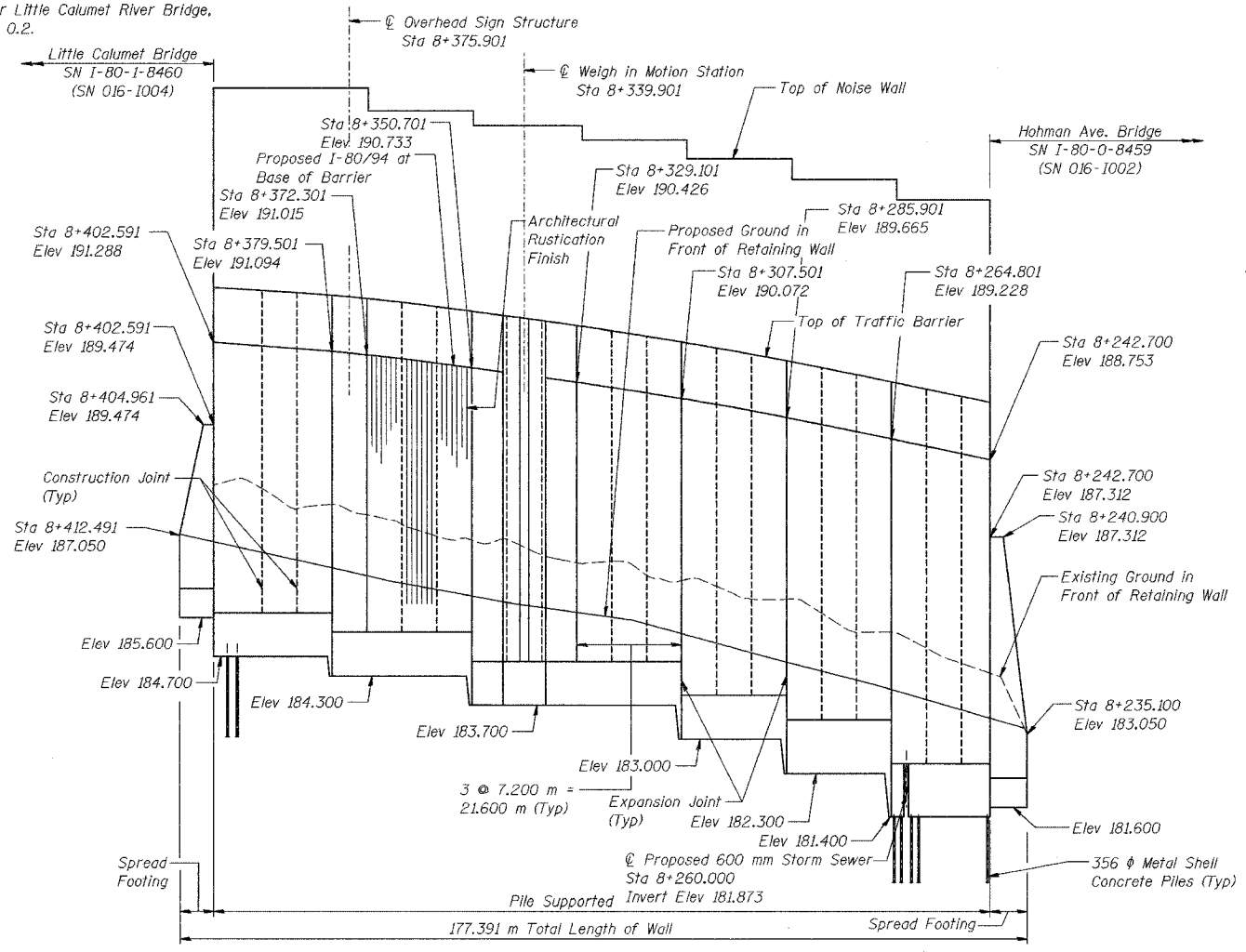
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

BORING LOGS (6 OF 6)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+268.572 TO STATION 8+445.954
STRUCTURE NO. 016-W857

DATE 07/05

Benchmark: Chiseled box at SW corner of NW wingwall over Little Calumet River Bridge,
Westbound I-80 +/- 70m east of mile marker 0.2.
Elevation = 191.662
Existing Structure: None
All dimensions in millimeters (mm) except as noted.

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO. S-1
I-80	2626.2-R-2	LAKE COUNTY, INDIANA	1207	861
CONTRACT NO. 62114				INDOT DES. NO. 0100987



LOADING
Wind Load on Noise Wall = 1.7 kPa

DESIGN STRESSES
FIELD UNITS
f'c = 24 MPa
fy = 400 MPa (Reinf.)
Maximum Applied Soil Bearing Pressure = 70 kPa from Sta 8+402.5 to Sta 8+412.5
110 kPa from Sta 8+235.1 to Sta 8+242.7

DESIGN SPECIFICATIONS
AASHTO 2002 Standard Specifications for Highway Bridges
AASHTO 1989 Guide Specifications for Structural Design of Sound Barriers and 1992 Interims

APPROVED
FOR STRUCTURAL ADEQUACY ONLY



Gary S. Powell
GARY S. POWELL, S.E.
IL. LIC. NO. 081-004771
EXP 11-30-2006
DATE 09-12-2005

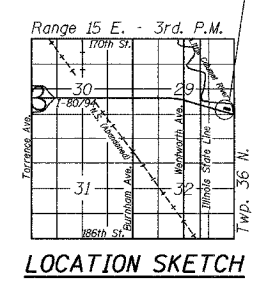
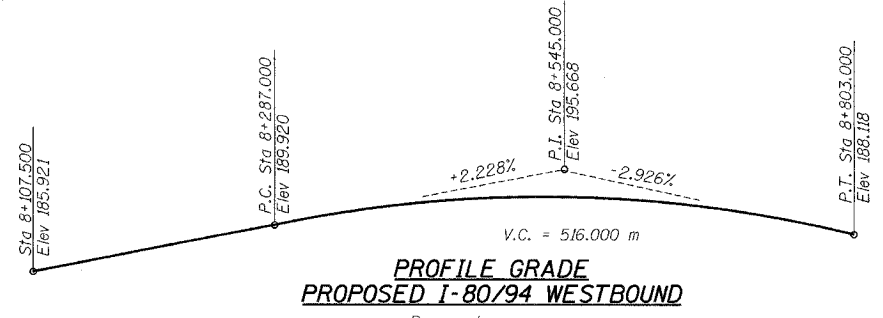
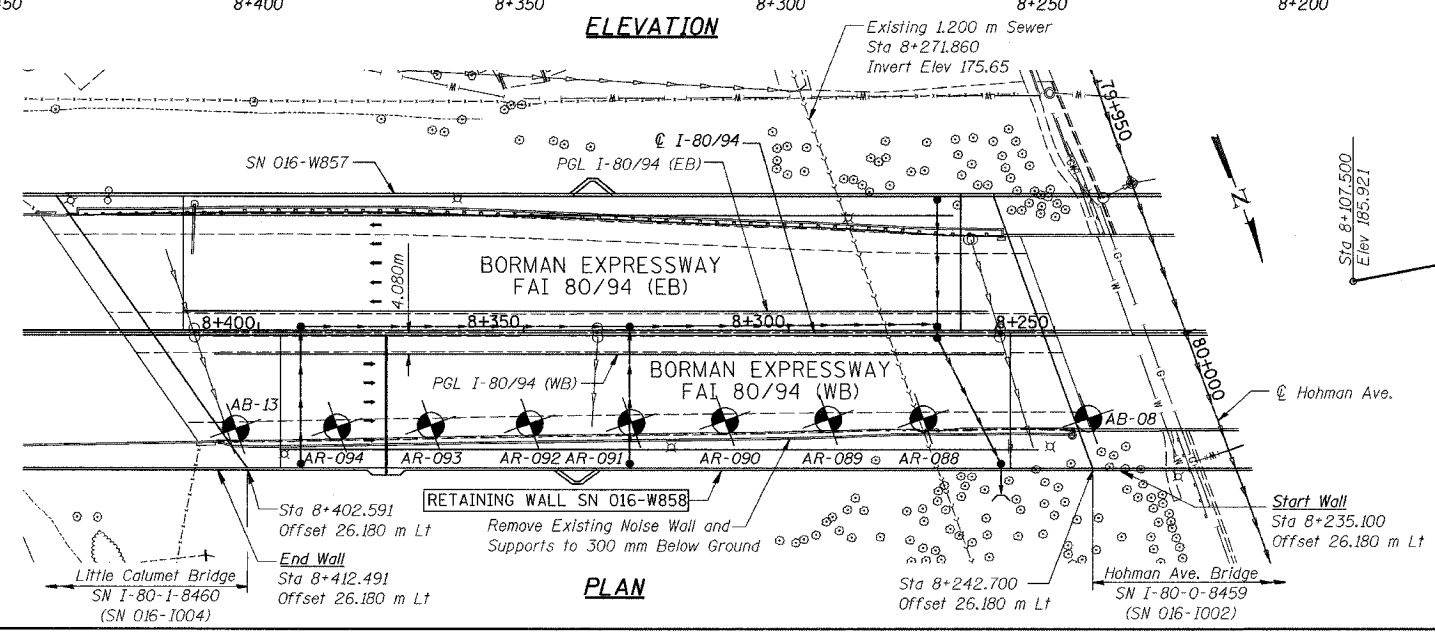


Gary S. Powell
GARY S. POWELL, P. E.
IN. LIC. NO. 10403944
EXP 07-31-2006
DATE 09-12-2005

LEGEND

- ⊙ - Soil Boring Location
- - - Existing Roadway/Structure
- Proposed Roadway/Structure
- ⊙ - Tree
- ~ Shrubs/Brush
- Proposed Storm Sewer
- - - Existing Sanitary Sewer
- Existing Storm Sewer
- Existing Gas Line
- Existing Water Main
- Electrical Aerial Cable

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

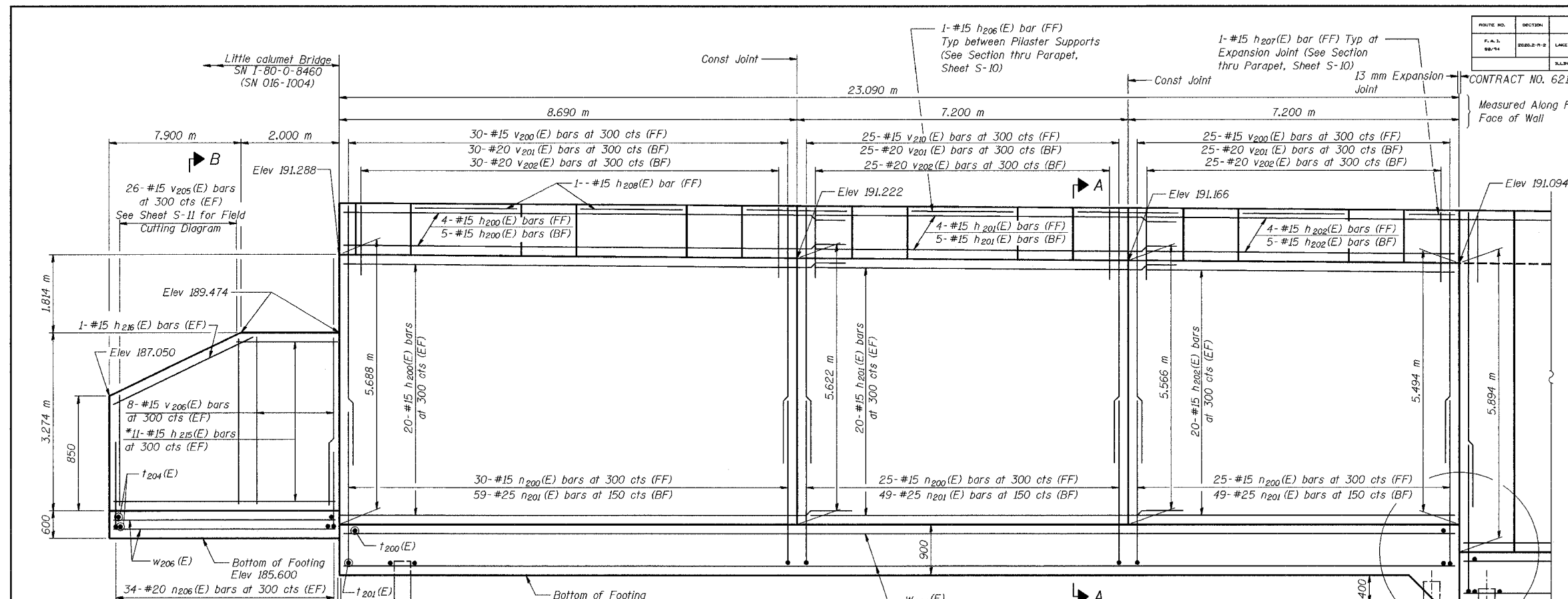


ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

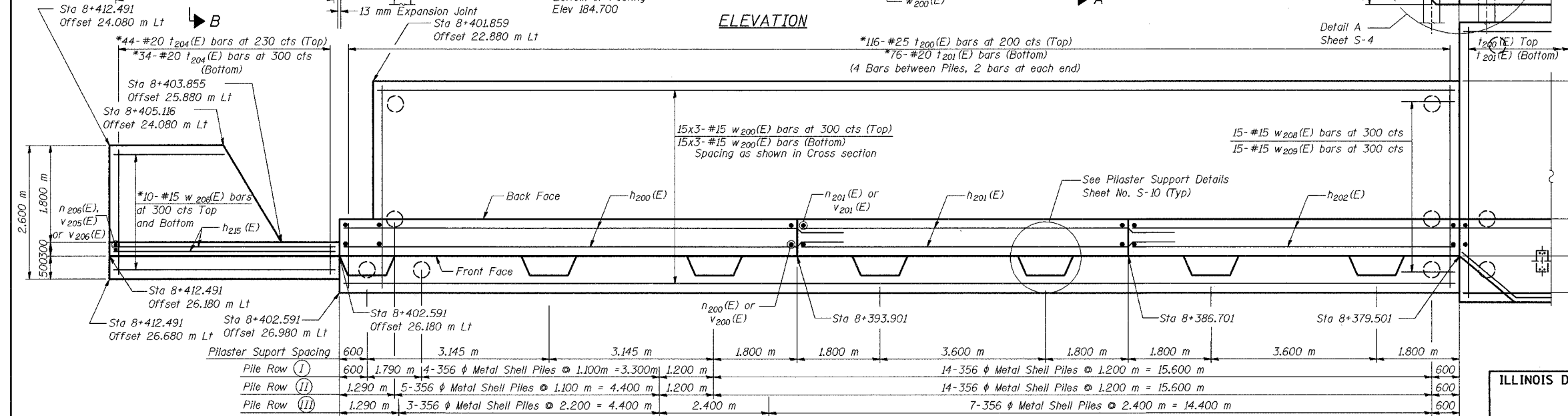
GENERAL PLAN SECTION 2626.2-R-2 LAKE COUNTY, INDIANA
STATION 8+235.100 TO STATION 8+412.491
STRUCTURE NO. 016-W858
DATE 09/05

AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. S-3
I-80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	863
PROJECT		CONTRACT NO. 62114 INDOT DES. NO. 0100987		
SHEETS		20 SHEETS		



ELEVATION



FOOTING PLAN

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790

LEGEND

BF = Back Face
FF = Front Face
EF = Each Face

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

NOTES:

See Sheet S-10 for Section A-A and Section B-B.
See Sheet S-11 for Expansion Joint Detail and Bill of Material.
See Sheet S-12 for Rustication details.
Stations are referenced to I-80/94.
Reinforcement bars designated (E) shall be epoxy coated.

All dimensions are in millimeters (mm) except as noted.
Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.
* Cut to Fit

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

PLAN AND ELEVATION (1 OF 7)
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+235.100 TO STATION 8+412.491
STRUCTURE NO. 016-W858

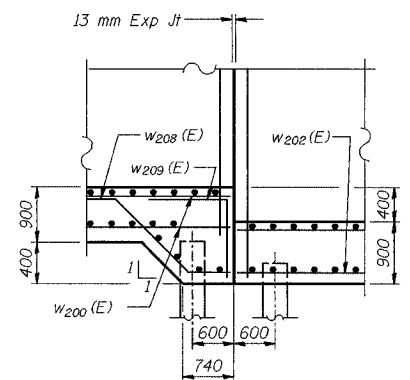
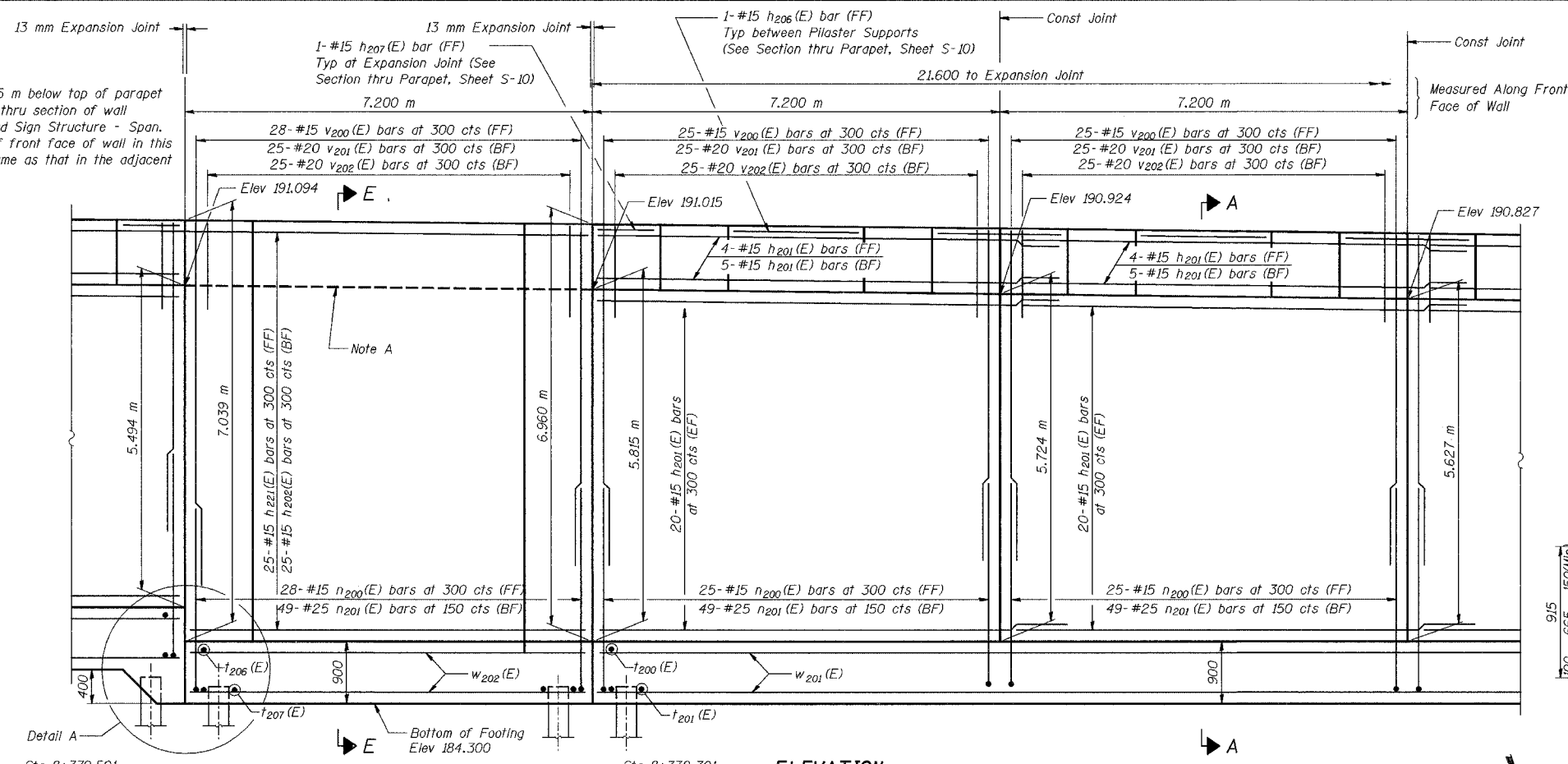
DATE 09/05

AMERICAN
CONSULTING ENGINEERS

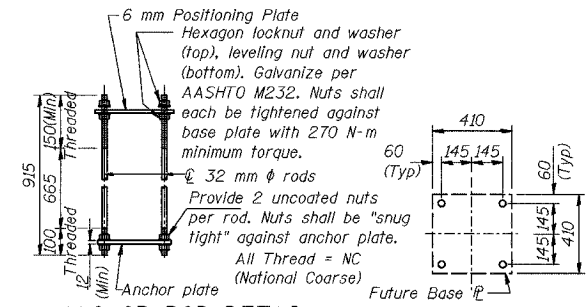
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
I-80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	864
CONTRACT NO. 62114		INDOT DES. NO. 0100987		

20 SHEETS

NOTE A
Construction Joint 1.145 m below top of parapet shall not be continued thru section of wall supporting the Overhead Sign Structure - Span. Finished appearance of front face of wall in this section shall be the same as that in the adjacent sections of wall.



DETAIL A

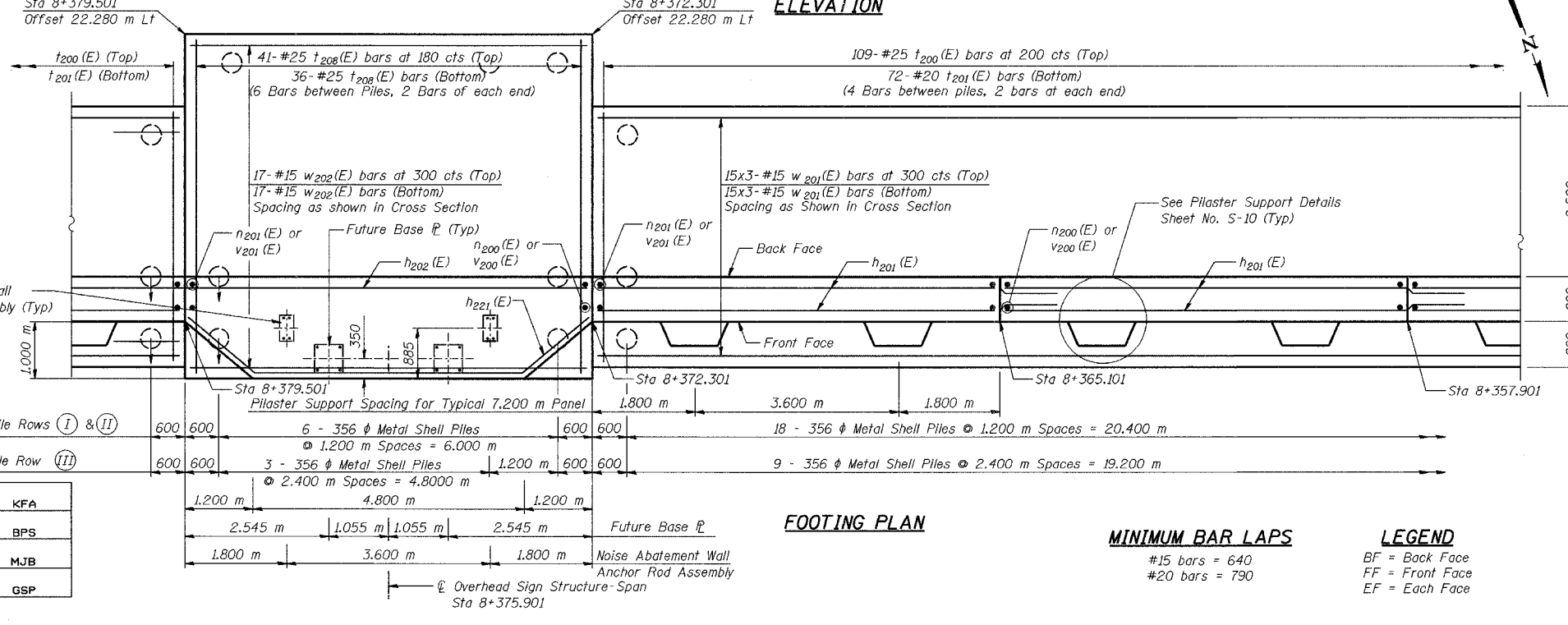


ANCHOR ROD DETAIL
(Overhead Sign Structure - Span, Anchor Rod Assembly, 2 Req'd)

ANCHOR BOLT LAYOUT

ANCHOR ROD NOTE:
Anchor rods conform to AASHTO M314M Grade 250 or 380 (36 or 55) and meet Charpy V-Notch (CVN) energy of 20 J at 5°C. Galvanize per AASHTO M232. No welding shall be permitted on rods.

NOTES:
See Sheet S-10 for Section A-A and Section E-E. See Sheet S-11 for Expansion Joint Detail and Bill of Material.
See Sheet S-12 for Rustication details.
Stations are referenced to \pm I-80/94.
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.
Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.



FOOTING PLAN

MINIMUM BAR LAPS
#15 bars = 640
#20 bars = 790

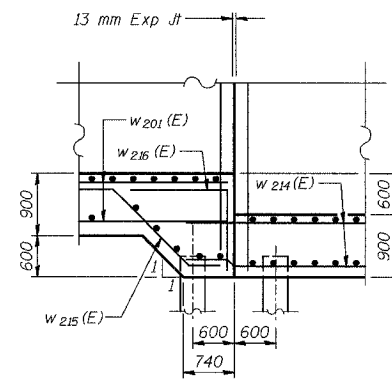
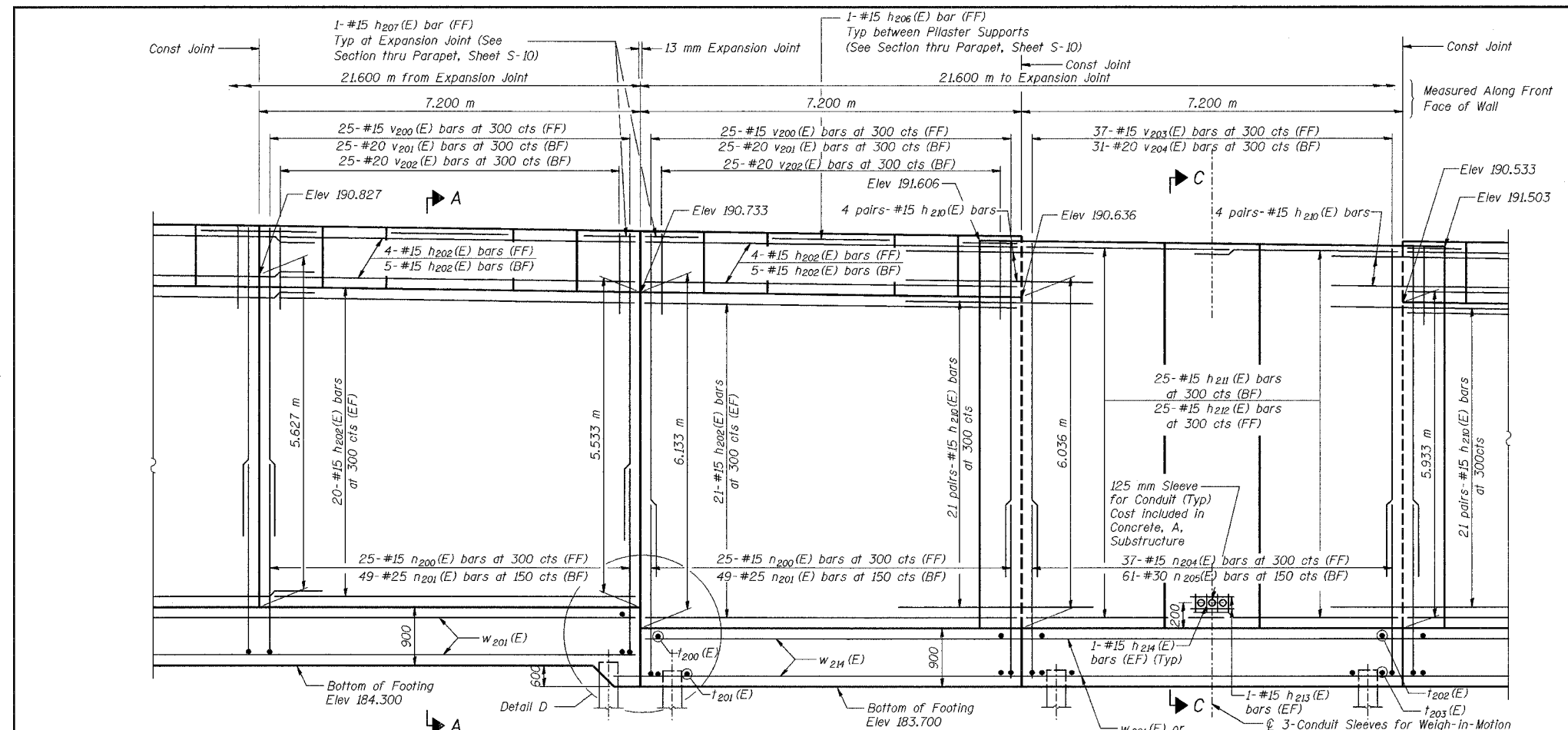
LEGEND
BF = Back Face
FF = Front Face
EF = Each Face

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/JUS 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41
PLAN AND ELEVATION (2 OF 7)
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+235.100 TO STATION 8+412.491
STRUCTURE NO. 016-W858
DATE 09/05
AMERICAN
CONSULTING ENGINEERS

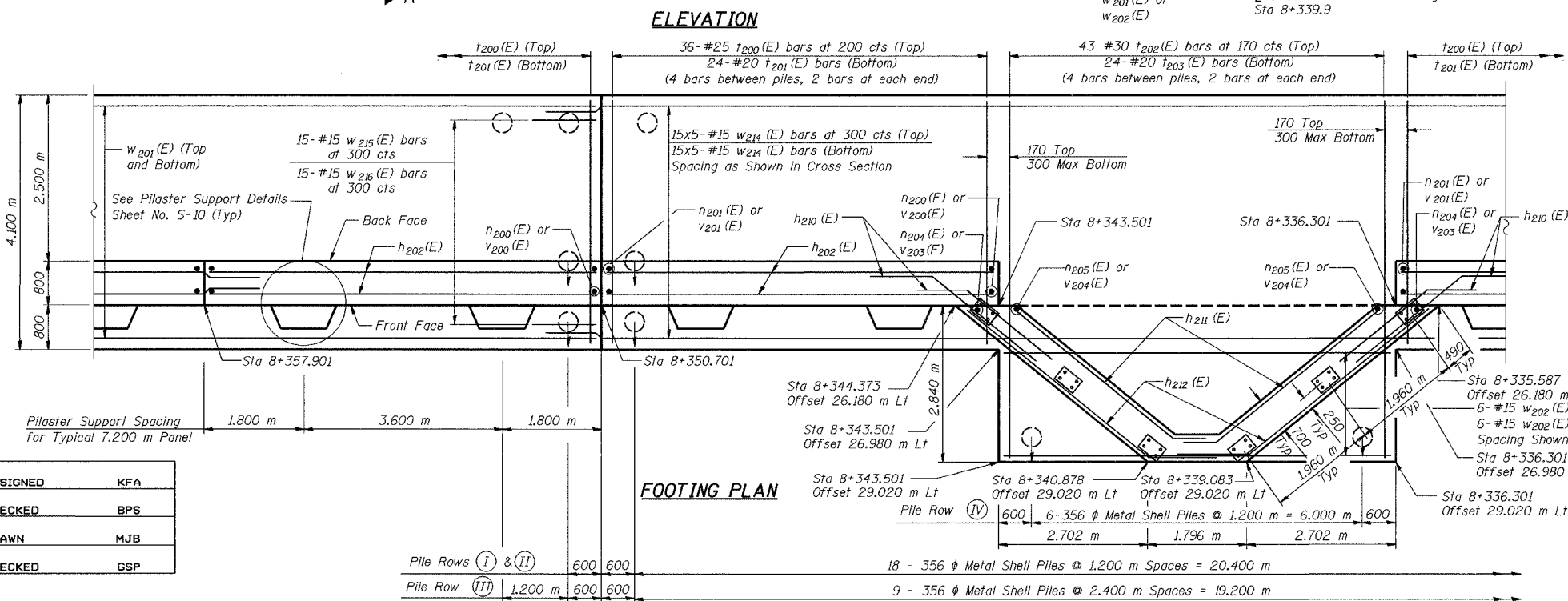
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66/74	2626.2-R-2	LAKE COUNTY, INDIANA	1207	865	
ILLINOIS		DESIGNED PROJECT			

CONTRACT NO. 62114 INDOT DES. NO. 0100987



DETAIL D

NOTES:
 See Sheet S-10 for Section A-A and Section C-C.
 See Sheet S-11 for Expansion Joint Detail and Bill of Material.
 See Sheet S-12 for Rustication details.
 Stations are referenced to \pm 1-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.



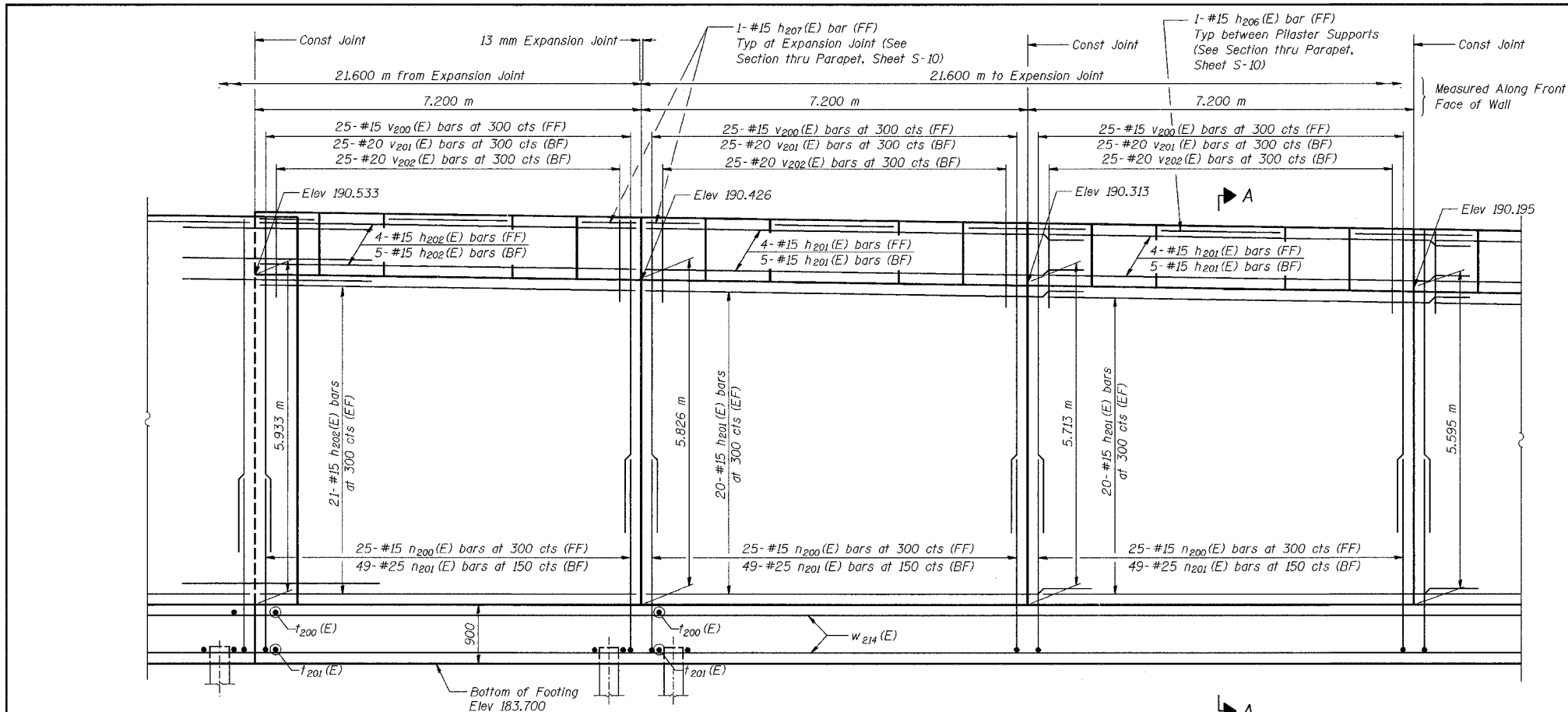
MINIMUM BAR LAPS
 #15 bars = 640
 #20 bars = 790

LEGEND
 BF = Back Face
 FF = Front Face
 EF = Each Face

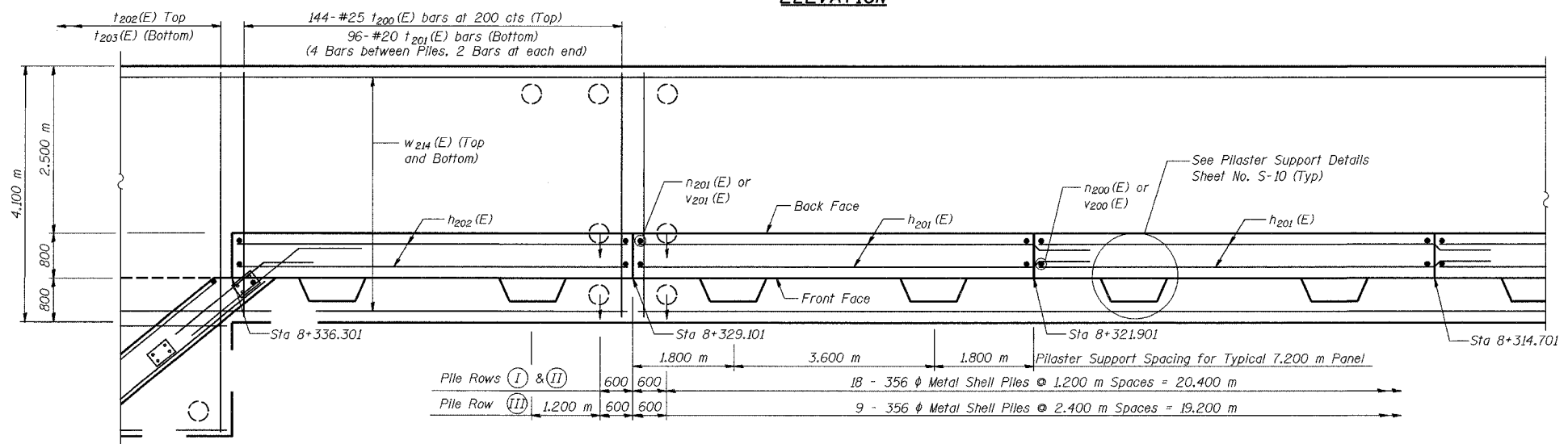
DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41
PLAN AND ELEVATION (3 OF 7)
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+235.100 TO STATION 8+412.491
STRUCTURE NO. 016-W858
 DATE 09/05
AMERICAN
 CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO. S-6 20 SHEETS
F.A.L. 08/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	866	
ILLINOIS		FED. AID PROJECT		CONTRACT NO. 62114 INDOT DES. NO. 0100987	



ELEVATION



FOOTING PLAN

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790

LEGEND

BF = Back Face
FF = Front Face
EF = Each Face

NOTES:

See Sheet S-10 for Section A-A.
See Sheet S-11 for Expansion Joint Detail and Bill of Material.
See Sheet S-12 for Rustication details.
Stations are referenced to \mathcal{C} I-80/94.
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.
Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

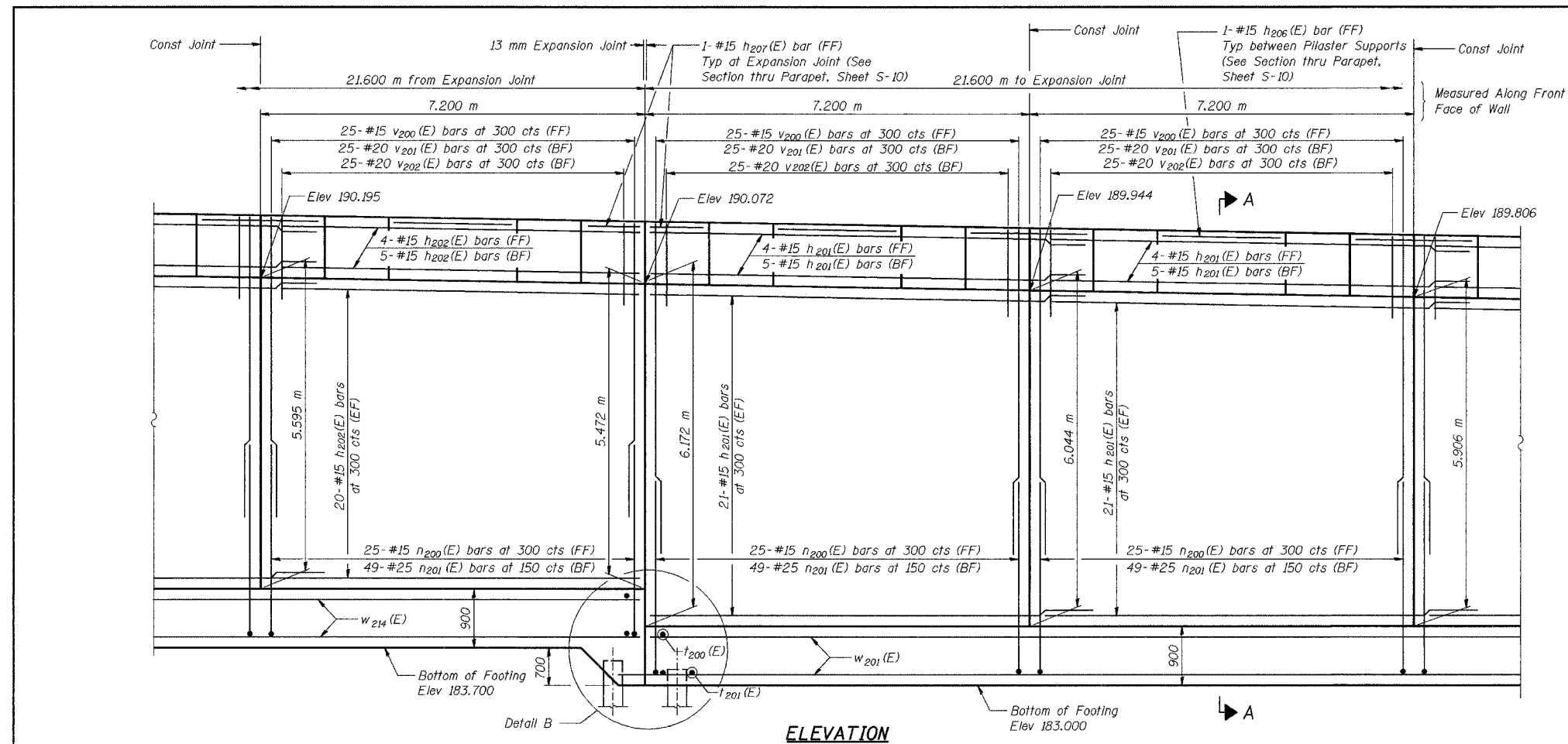
PLAN AND ELEVATION (4 OF 7)
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+235.100 TO STATION 8+412.491
STRUCTURE NO. 016-W858

DATE 09/05

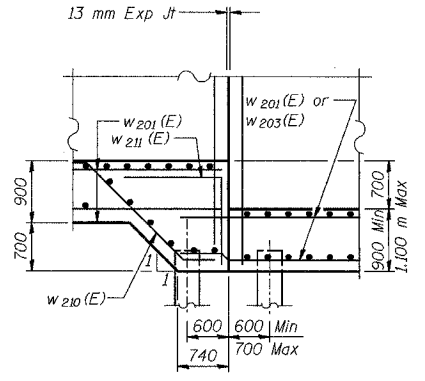
AMERICAN
CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO. S-7
P.A.L.	2626.2-R-2	LAKE COUNTY, INDIANA	1207	867	20 SHEETS
DATE: 08/14		SUNSHINE PREG-ADO PROJECT			

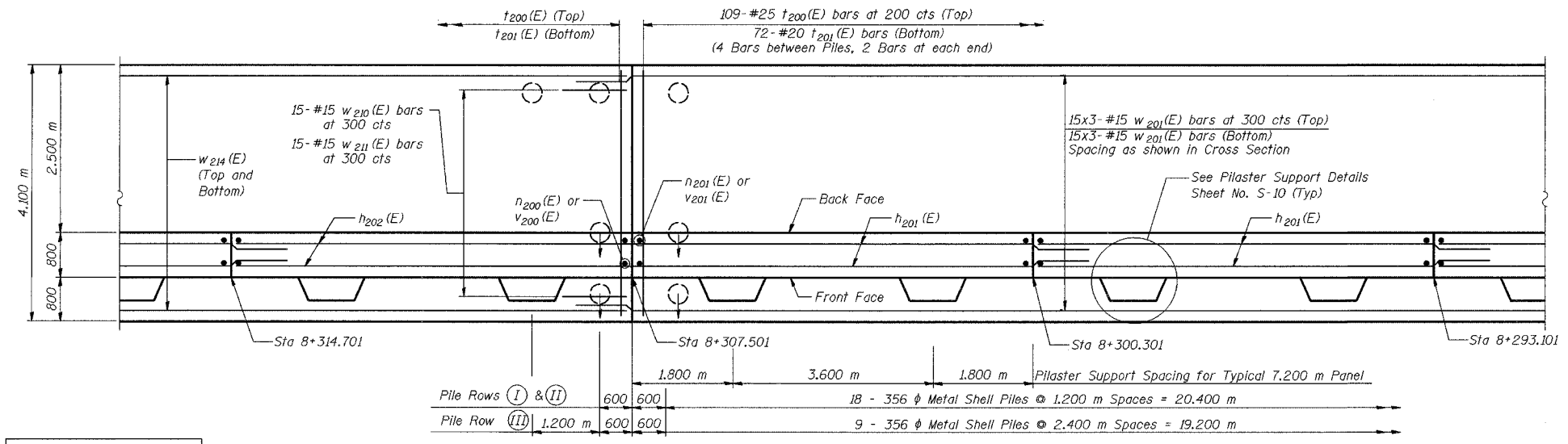
CONTRACT NO. 62114 INDOT DES. NO. 0100987



ELEVATION



DETAIL B



FOOTING PLAN

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790

LEGEND

BF = Back Face
FF = Front Face
EF = Each Face

NOTES:

See Sheet S-10 for Section A-A.
See Sheet S-11 for Expansion Joint Detail and Bill of Material.
See Sheet S-12 for Rustication details.
Stations are referenced to @ I-80/94.
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.
Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

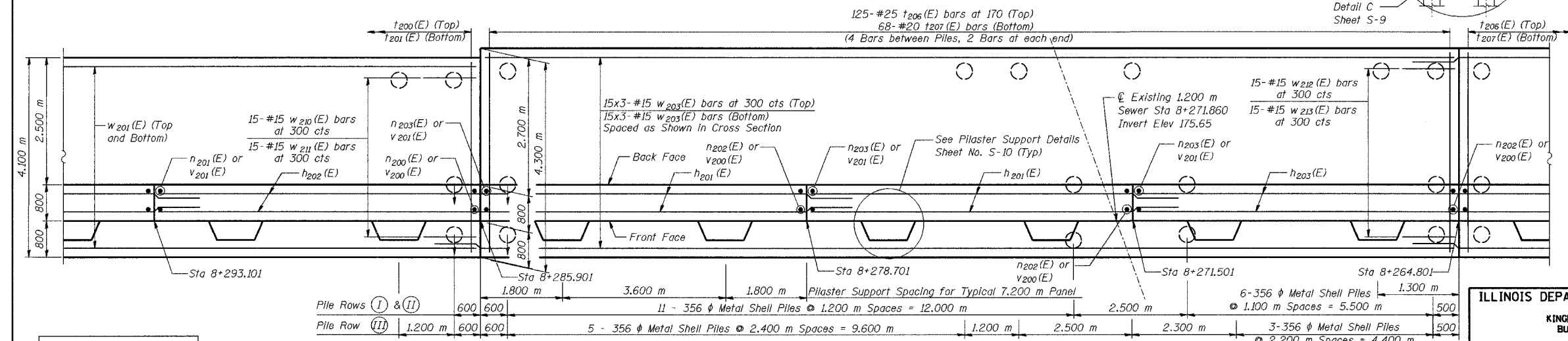
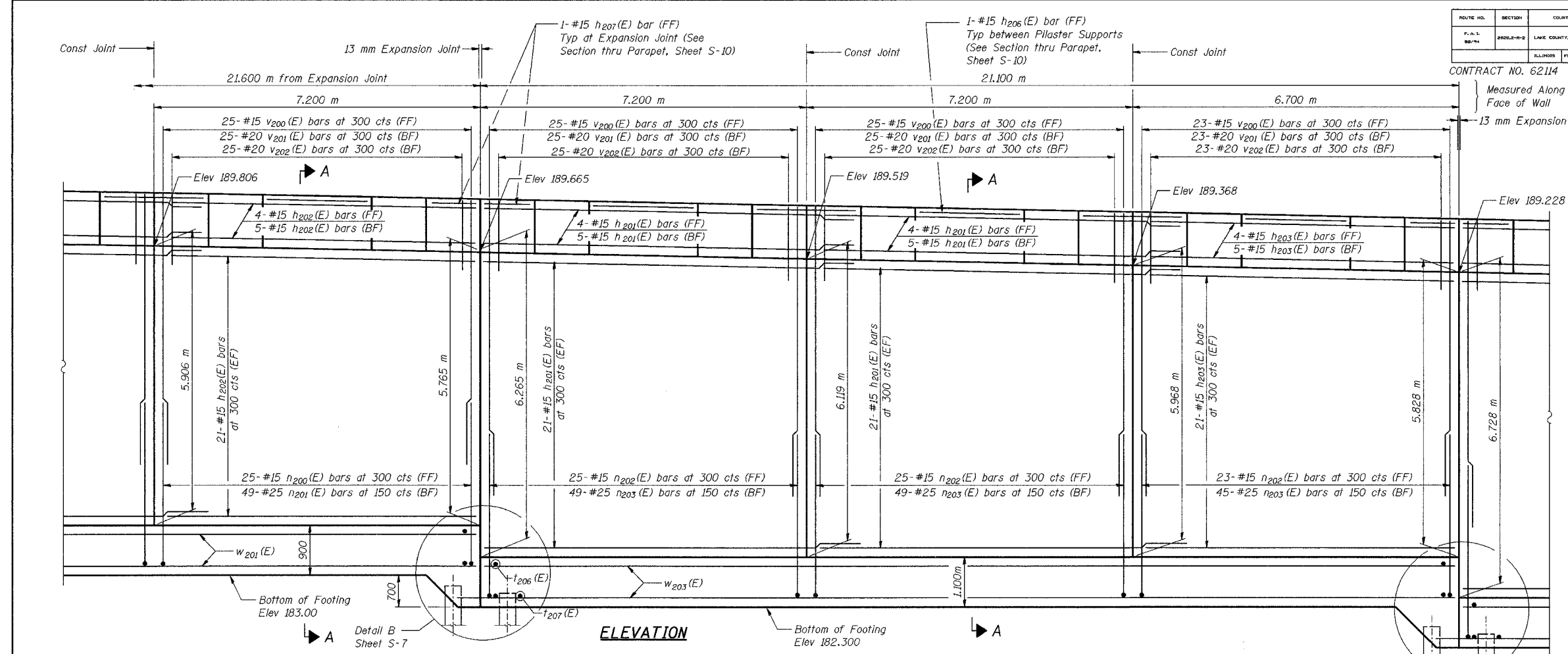
PLAN AND ELEVATION (5 OF 7)
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+235.100 TO STATION 8+412.491
STRUCTURE NO. 016-W858

DATE 09/05

AMERICAN
CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. S-8
F.A.L. 80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	868
SHEET		20 SHEETS		

CONTRACT NO. 62114 INDOT DES. NO. 0100987



MINIMUM BAR LAPS
 #15 bars = 640
 #20 bars = 790

LEGEND
 BF = Back Face
 FF = Front Face
 EF = Each Face

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

The Contractor shall locate all utilities (existing and new) prior to driving piles, by exploratory test pits and/or probes. The cost of locating utilities shall be included with Pile, Concrete, Steel Shell Encased, 6,35 mm, 356 mm. Any conflicts between the utilities and the proposed piles shall be reported in writing to the Bureau of Bridges and Structures for further disposition. Piles within 3 meters horizontally of actual utility

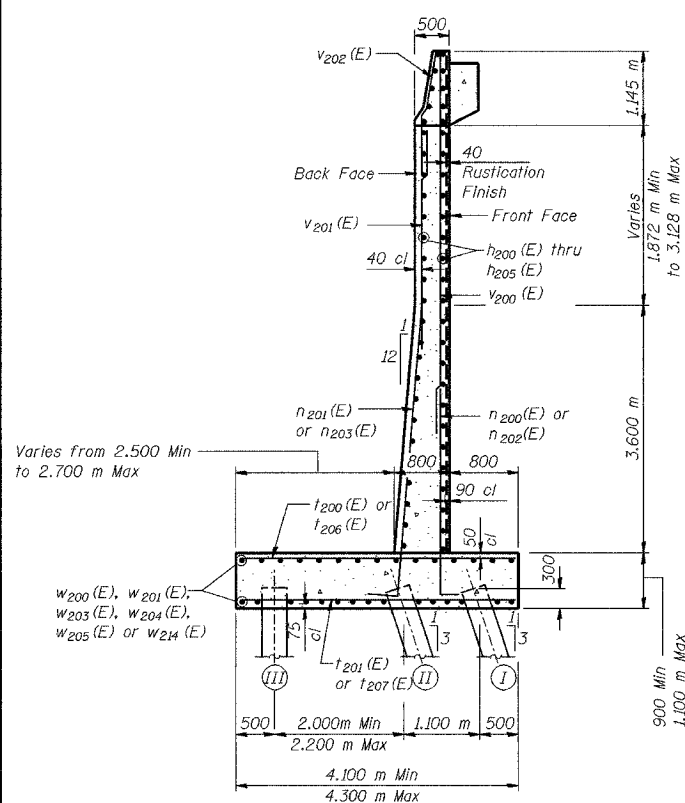
location shall be preaugered/precored to the greater of bottom of the utility or 3 meter depth to maintain utility in original vertical and horizontal position. The diameter of preaugered/precored hole shall be the same diameter as outside diameter of pile. The cost of the preaugering/precoreing shall be included with Pile, Concrete, Steel Shell Encased, 6,35 mm, 356 mm.

FOOTING PLAN

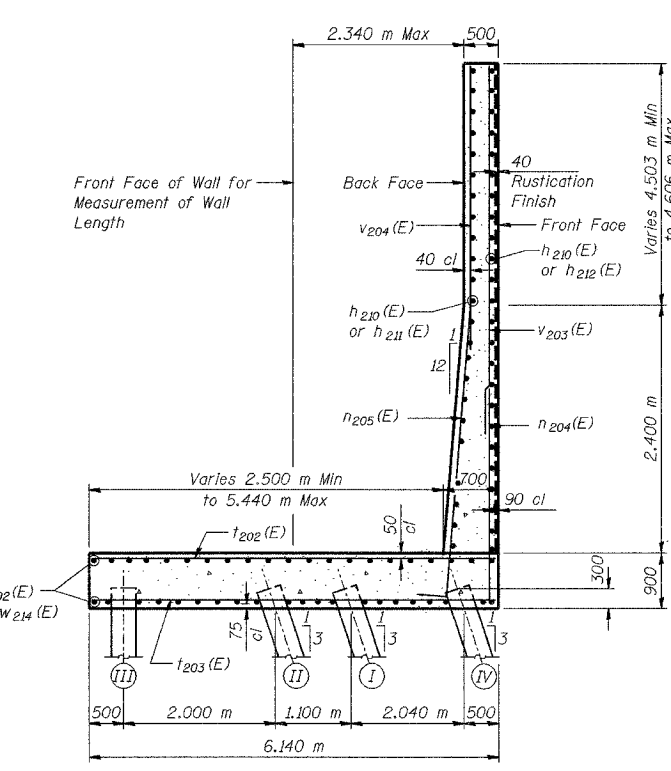
NOTES:
 See Sheet S-10 for Section A-A.
 See Sheet S-11 for Expansion Joint Detail and Bill of Material.
 See Sheet S-12 for Rustication details.
 Stations are referenced to @ I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.

All dimensions are in millimeters (mm) except as noted.
 Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

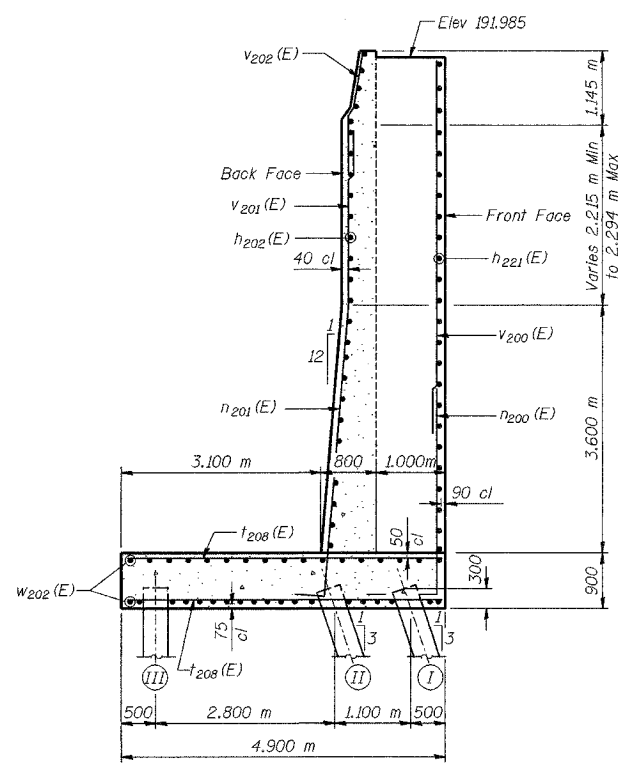
ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41
PLAN AND ELEVATION (6 OF 7)
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+235.100 TO STATION 8+412.491
STRUCTURE NO. 016-W858
 DATE 09/05
AMERICAN
 CONSULTING ENGINEERS



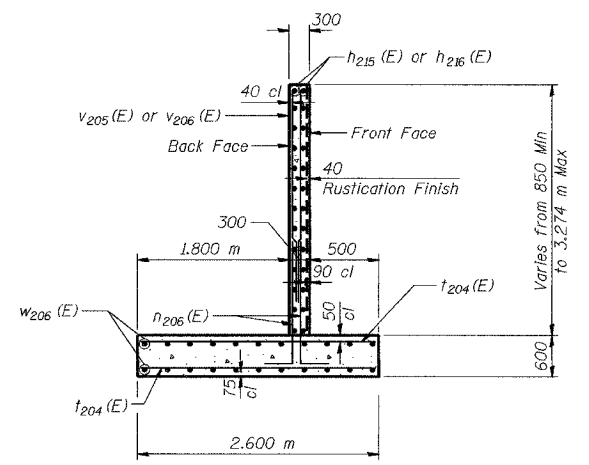
SECTION A-A



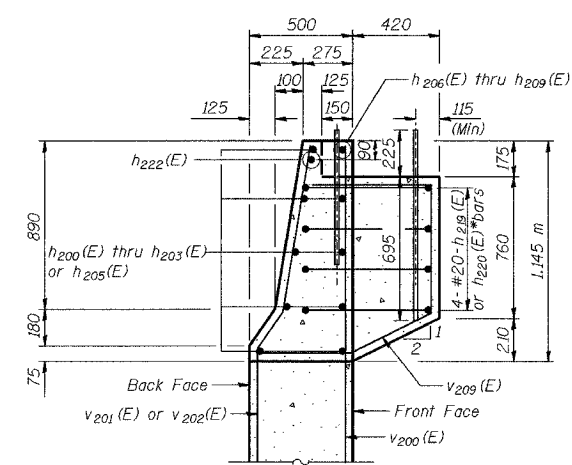
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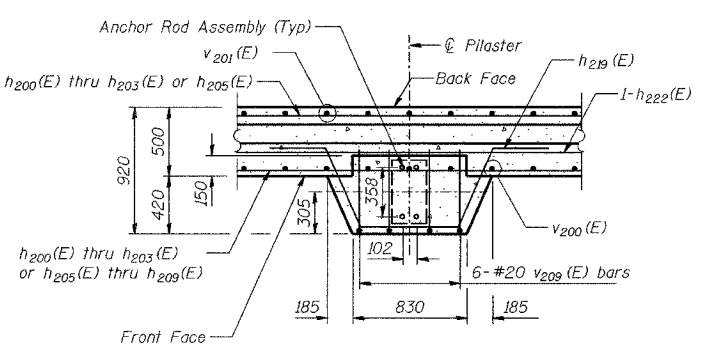
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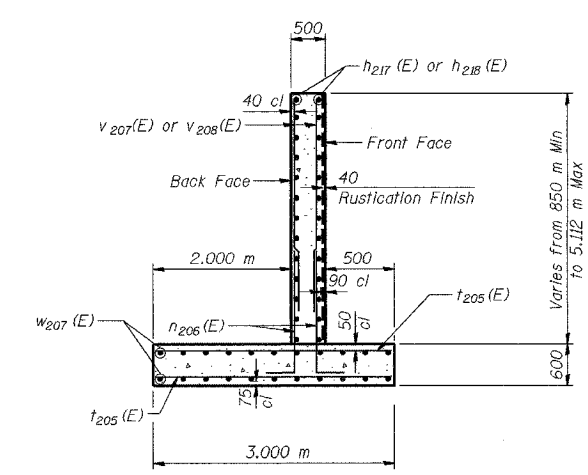
SECTION B-B



SECTION THRU PARAPET



PILASTER SUPPORT - PLAN VIEW
(42 Locations)



SECTION D-D

PILE DATA

Type - 356 ϕ Metal Shell
Capacity - 500 kN
Est. Length - 19.0 m from Sta 8+243.000
to Sta 8+286.000
16.0 m from Sta 8+286.000
to Sta 8+402.000
No. Req'd. - 347
Test Piles - 4

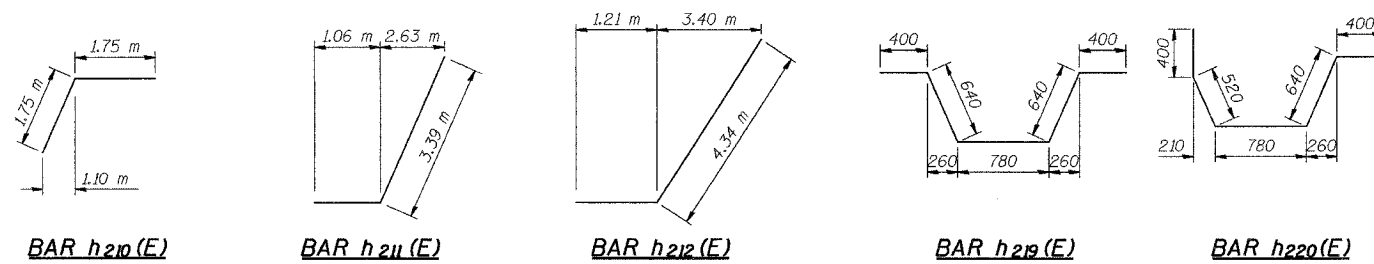
DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

NOTES:
See Sheet S-11 for Expansion Joint details, Anchor Rod Assembly details and Bill of Material
See Sheet S-12 for Rustication details.
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.
See Typical Section on Sheet S-2 for Drainage Details and Surface Seal Limits.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41
WALL SECTIONS AND DETAILS (1 OF 2)
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+235.100 TO STATION 8+412.491
STRUCTURE NO. 016-W858
DATE 09/05
AMERICAN
CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO. S-11
F.A.L. 80/74	2626.2-R-2	LAKE COUNTY, INDIANA	1207	871	20 SHEETS
SHEET NO.		SHEET		SHEET NO.	
871		1207		S-11	

CONTRACT NO. 62114 INDOT DES. NO. 0100987



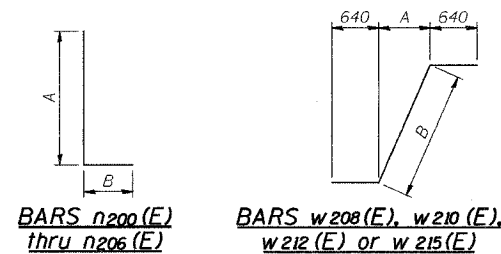
BAR h210(E)

BAR h211(E)

BAR h212(E)

BAR h219(E)

BAR h220(E)



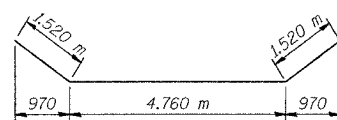
BARS n200(E) thru n206(E)

BARS w208(E), w210(E), w212(E) or w215(E)

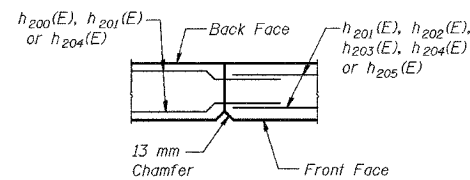
BARS w209(E), w211(E), w213(E) or w216(E)

BARS v202(E)

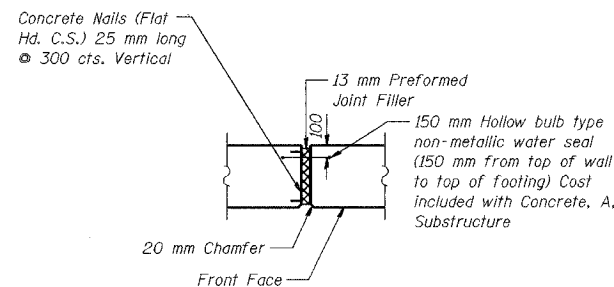
BAR v209(E)



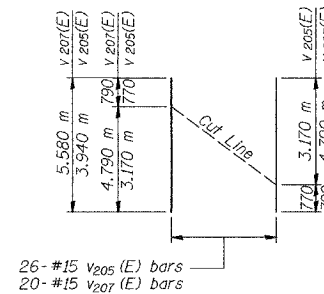
BAR h221(E)



CONSTRUCTION JOINT DETAIL



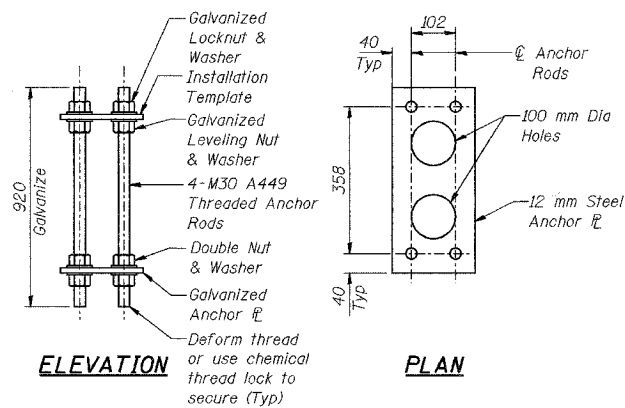
13 MM EXPANSION JOINT DETAIL



26- #15 v205(E) bars
20- #15 v207(E) bars

FIELD CUTTING DIAGRAM

Order v205(E) and v207(E) bars full length. Cut as shown and use remainder of bars in opposite face.



ELEVATION

PLAN

NOISE ABATEMENT WALL ANCHOR ROD ASSEMBLY

(50 Req'd)

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

BAR DIMENSIONS

Bar	A	B
n200(E)	4.82 m	260
n201(E)	4.82 m	400
n202(E)	5.02 m	260
n203(E)	5.02 m	400
n204(E)	3.62 m	260
n205(E)	3.62 m	500
n206(E)	1.21 m	320
w208(E)	1.17 m	1.65 m
w209(E)	1.17 m	-
w210(E)	1.47 m	2.08 m
w211(E)	1.47 m	-
w212(E)	1.87 m	2.64 m
w213(E)	1.87 m	-
w215(E)	1.37 m	1.94 m
w216(E)	1.37 m	-

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h200(E)	49	#15	9.33	—
h201(E)	513	#15	7.84	—
h202(E)	325	#15	7.10	—
h203(E)	51	#15	6.60	—
h204(E)	134	#20	7.84	—
h205(E)	55	#15	7.60	—
h206(E)	30	#15	2.30	—
h207(E)	14	#15	1.10	—
h208(E)	2	#15	1.85	—
h209(E)	2	#15	1.65	—
h210(E)	100	#15	3.50	—
h211(E)	50	#15	4.45	—
h212(E)	50	#15	5.55	—
h213(E)	4	#15	0.90	—
h214(E)	8	#15	0.60	—
h215(E)	22	#15	9.80	—
h216(E)	2	#15	8.17	—
h217(E)	34	#15	7.50	—
h218(E)	2	#15	7.01	—
h219(E)	160	#20	2.86	—
h220(E)	8	#20	2.74	—
h221(E)	25	#15	7.80	—
h222(E)	42	#15	2.11	—
n200(E)	383	#15	5.08	—
n201(E)	745	#25	5.22	—
n202(E)	150	#15	5.28	—
n203(E)	294	#25	5.42	—
n204(E)	37	#15	3.88	—
n205(E)	61	#25	4.02	—
n206(E)	120	#20	1.53	—
t200(E)	514	#25	4.00	—
t201(E)	340	#20	4.00	—
t202(E)	43	#30	6.04	—
t203(E)	24	#20	6.04	—
t204(E)	78	#20	2.50	—
t205(E)	77	#20	2.90	—
t206(E)	251	#25	4.20	—
t207(E)	142	#20	4.20	—
t208(E)	77	#25	4.80	—
v209(E)	533	#15	4.47	—
v201(E)	530	#20	3.48	—
v202(E)	530	#20	1.99	—
v203(E)	37	#15	4.08	—
v204(E)	31	#20	4.95	—
v205(E)	26	#15	3.94	—
v206(E)	16	#15	3.18	—
v207(E)	20	#15	5.58	—
v208(E)	12	#15	4.83	—
v209(E)	252	#20	2.47	—

Bar	No.	Size	Length (m)	Shape
W200(E)	90	#15	8.09	—
W201(E)	180	#15	7.84	—
W202(E)	46	#15	7.10	—
W203(E)	90	#15	7.68	—
W204(E)	30	#15	4.94	—
W205(E)	60	#15	8.67	—
W206(E)	20	#15	9.80	—
W207(E)	22	#15	7.50	—
W208(E)	15	#15	2.93	—
W209(E)	15	#15	2.34	—
W210(E)	30	#15	3.36	—
W211(E)	30	#15	2.94	—
W212(E)	15	#15	3.92	—
W213(E)	15	#15	3.74	—
W214(E)	150	#15	9.28	—
W215(E)	15	#15	3.22	—
W216(E)	15	#15	2.74	—
Test Pile, 356 mm	Each		4	
Excavation, Foundation, Unclassified		m ³	3,995.0	
Concrete, A, Substructure		m ³	1,385.6	
Reinforcing Bars, Epoxy Coated		kg	89,250	
Surface Seal		L Sum	0.02	
Pile, Concrete, Steel Shell Encased, 6.35 mm, 356 mm		m	5,907.0	
Geocomposite Wall Drain		m ²	921	
Pipe, Underdrain, Perf. 1.63 mm, 150 mm		m	177.4	
Noise Abatement Wall Anchor Rod Assembly		Each	50	
Overhead Sign Structure - Span, Anchor Rod Assembly		Each	2	
B Borrow		m ³	350.9	
Structural Backfill		m ³	4,114.5	
Masonry Coating		L Sum	0.04	

The estimated Surface Seal area is 276.7 m²
The estimated Masonry Coating area is 276.7 m²

NOTES:

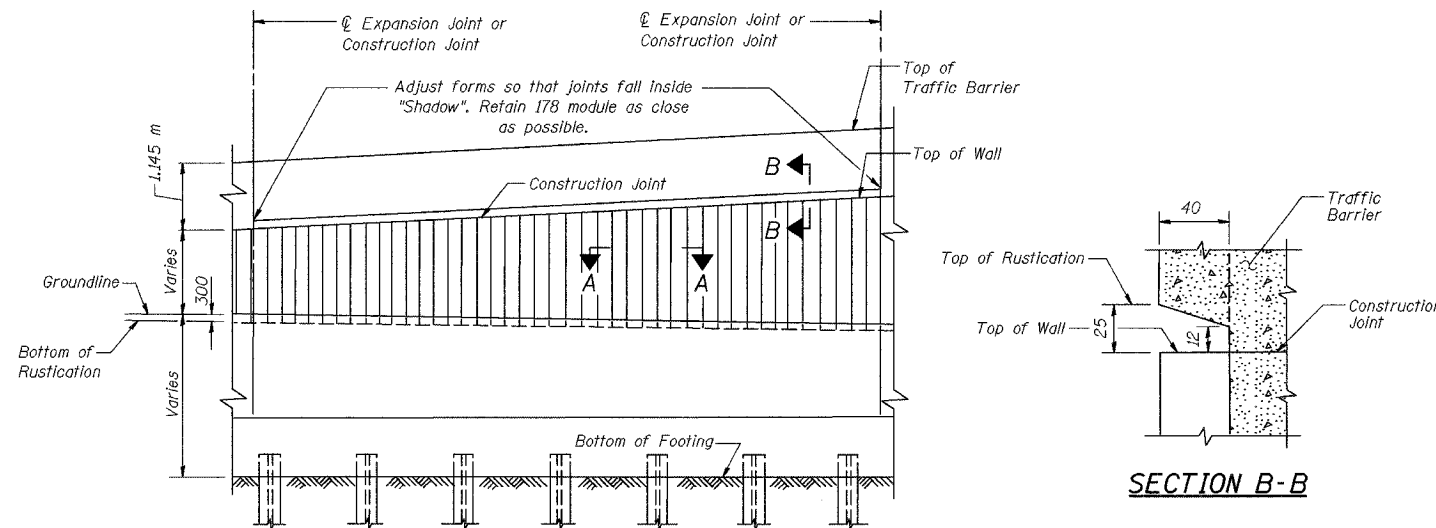
- See Sheet S-10 for Wall and Parapet Sections
- See Sheet S-12 for Rustication details.
- Reinforcement bars designated (E) shall be epoxy coated.
- All dimensions are in millimeters (mm) except as noted.
- See Typical Section on Sheet S-2 for Drainage Details and Surface Seal Limits.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

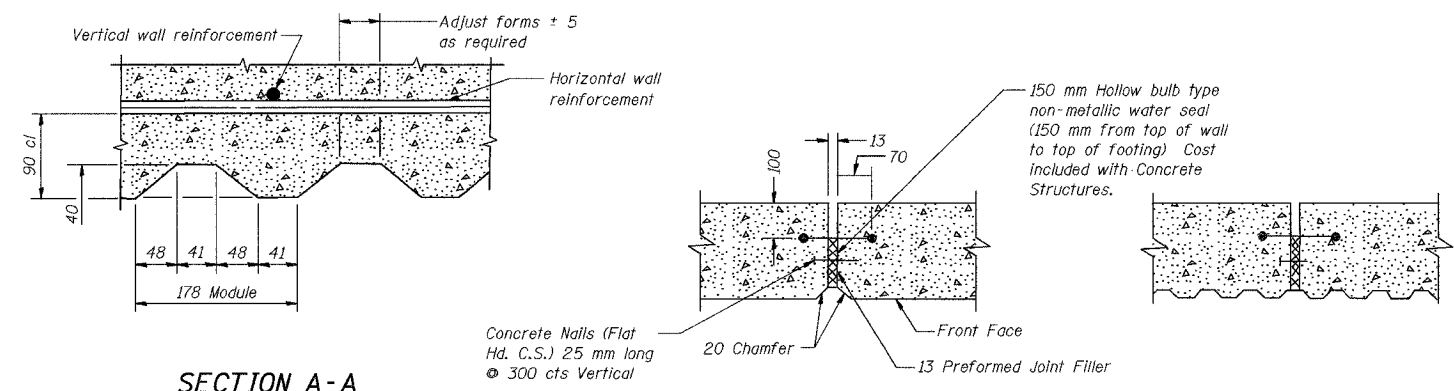
WALL SECTIONS AND DETAILS (2 OF 2)
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+235.100 TO STATION 8+412.491
STRUCTURE NO. 016-W858

DATE 09/05

AMERICAN
CONSULTING ENGINEERS

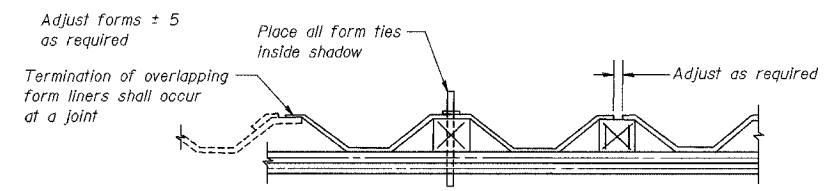


FRONT FACE ELEVATION-TYPICAL ARCHITECTURAL FINISH



SECTION A-A

EXPANSION JOINT DETAIL



SUGGESTED FORMWORK DETAIL

CONSTRUCTION JOINT DETAIL

RUSTICATION LIMITS

STATION	TOP OF WALL ELEVATION	BOTTOM OF RUSTICATION ELEVATION
8+235.100	183.050	182.500
8+240.900	187.312	182.500
8+242.700	187.312	182.500
8+242.700	188.753	182.800
8+250.401	188.925	182.800
8+257.601	189.077	182.800
8+264.801	189.228	182.800
8+264.801	189.228	183.700
8+271.501	189.368	183.700
8+278.701	189.519	183.700
8+285.901	189.665	183.700
8+285.901	189.665	184.200
8+293.101	189.806	184.200
8+300.301	189.944	184.200
8+307.501	190.072	184.200
8+307.501	190.072	184.900
8+314.701	190.195	184.900
8+321.901	190.313	184.900
8+329.101	190.426	184.900
8+329.101	190.426	184.900
8+336.301	190.533	184.900
8+343.501	190.636	184.900
8+350.701	190.733	184.900
8+350.701	190.733	185.500
8+357.901	190.827	185.500
8+365.101	190.924	185.500
8+372.301	191.015	185.500
8+379.501	191.094	185.500
8+379.501	191.094	185.900
8+386.701	191.166	185.900
8+393.901	191.222	185.900
8+402.591	191.288	185.900
8+402.591	189.474	186.500
8+404.591	189.474	186.500
8+412.491	187.050	186.500

BILL OF MATERIAL

Item	Unit	Total
Rustication Finish	m ²	959

Note: All dimensions are in millimeters (mm) unless otherwise noted.

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

RUSTICATION FINISH DETAILS
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+235.100 TO STATION 8+412.491
STRUCTURE NO. 016-W858

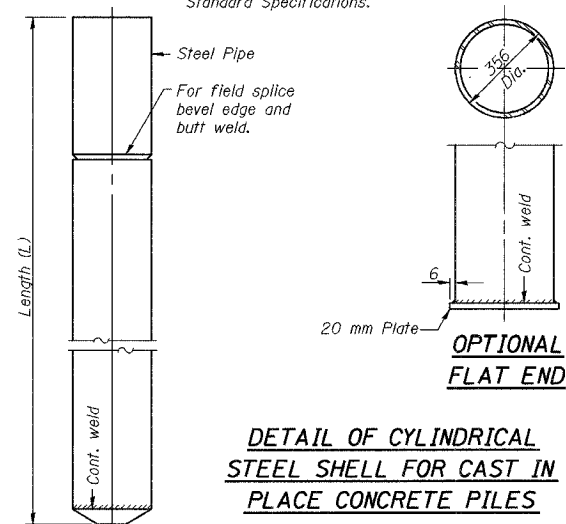
DATE 09/05

AMERICAN
CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO. S-13
F. A. I. 66/74	2626.2-R-2	LAKE COUNTY, INDIANA	1207	873	20 SHEETS
BALANCE		FED. AID PROJECT			

CONTRACT NO. 62114 INDOT DES. NO. 0100987

Notes: Driving and bearing ends of pipe shall be cut square. The thickness of the shell shall be 6.35 mm with a tolerance of 5%. The shell shall be according to Article 1006.05(a) of the Standard Specifications.



DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

X-PB (M) 4-30-97 (All dimensions are in millimeters (mm) except as noted.)

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

CONCRETE PILE DETAILS
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+235.100 TO STATION 8+412.491
STRUCTURE NO. 016-W858

DATE 09/05

AMERICAN
CONSULTING ENGINEERS

BORING NO. AB-08 (1 OF 2)

BORING NO. AB-08 (2 OF 2)

BORING NO. AR-088 (1 OF 2)

BORING LOG AB-08 Page 1 of 2

Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers
wangeng3ewangeng.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 188.31 m
North: 545359.39 m
East: 367674.07 m
Station: 8+256.45
Offset: 16.17 LT

BORING LOG AB-08 Page 2 of 2

Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers
wangeng3ewangeng.com
100 Fairbank Street
Addison, IL 60101
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WEI Job No.: 255-08-01
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BORING LOG AR-088 Page 1 of 2

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100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 188.72 m
North: 545353.37 m
East: 367691.24 m
Station: 8+274.64
Offset: 16.24 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/150 mm)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/150 mm)	Moisture Content (%)
188.3	356-mm thick ASPHALT over 152-mm thick CONCRETE --PAVEMENT--	0	1	9	14	188.5	Hard, brown and gray CLAY	8	11	5	542
187.8	Gray, CRUSHED STONE --BASE COURSE--	1	2	6	7	187.4	Very stiff, brown and gray SILTY CLAY	2	3	12	11
187.4	Very stiff, brown and gray SILTY CLAY	2	4	4	6	186.6	Very stiff, gray CLAY	10	13	4	5
185.1	Loose, brown, medium SAND	5	5	3	3	185.5	Medium dense, gray SILT	11	14	3	4
184.4	Stiff, brown and gray SILTY CLAY	6	6	2	3	182.1	Dense, gray, medium SAND	14	15	4	6
183.5	Medium dense to dense, brown, medium SAND	7	7	8	12	181.3	Very stiff, brown and gray CLAY	15	16	4	5
182.1	Dense, gray, medium SAND	9	8	7	15						
181.3	Very stiff, brown and gray CLAY	10	9	10	12						
			10	4	4						

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/150 mm)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/150 mm)	Moisture Content (%)
188.3	356-mm thick ASPHALT over 152-mm thick CONCRETE --PAVEMENT--	0	17	4	5	186.8	Very dense, gray SANDY LOAM	19	19	6	7
187.8	Gray, CRUSHED STONE --BASE COURSE--	1	18	4	4	186.9	Boring terminated at 27.43 m	20	20	9	14
187.4	Stiff to hard, brown to gray SILTY CLAY	2	19	6	7	182.9	Very stiff to hard, gray SILTY CLAY	21	21	9	14
185.1	Loose, brown, medium SAND	5	20	7	15						
184.4	Stiff, brown and gray SILTY CLAY	6	21	9	15						
183.5	Medium dense to dense, brown, medium SAND	7	22	9	15						
182.1	Dense, gray, medium SAND	9	23	7	15						
181.3	Very stiff, brown and gray CLAY	10	24	40	55						
			21	9	15						
			22	9	15						

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/150 mm)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw/150 mm)	Moisture Content (%)
188.3	457-mm thick ASPHALT over 152-mm thick CONCRETE --PAVEMENT--	0	11	4	4	188.9	Stiff to very stiff, brown and gray CLAY	8	11	4	96
187.8	Gray, CRUSHED STONE --BASE COURSE--	1	12	12	10	187.4	Very stiff, gray CLAY	2	12	3	354
187.4	Stiff to hard, brown to gray SILTY CLAY	2	13	10	10	186.6	Very stiff, gray CLAY	10	13	4	5
185.1	Loose, brown, medium SAND	5	14	8	10	185.5	Medium dense, gray SILT	11	14	4	6
184.4	Stiff, brown and gray SILTY CLAY	6	15	7	8	182.1	Dense, gray, medium SAND	14	15	4	6
183.5	Medium dense to dense, brown, medium SAND	7	16	8	10	181.3	Very stiff, brown and gray CLAY	15	16	3	4
182.1	Dense, gray, medium SAND	9	17	6	7						
181.3	Very stiff, brown and gray CLAY	10	18	4	4						
			19	5	5						

GENERAL NOTES

Begin Drilling 04-04-2002 Complete Drilling 04-05-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger H. Suhail Checked by N. Davis
Drilling Method Mud Rotary; Grouted upon completion.

WATER LEVEL DATA

While Drilling
At Completion of Drilling 24.08 m
Time After Drilling -- hours
Depth to Water -- m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES

Begin Drilling 04-04-2002 Complete Drilling 04-05-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger H. Suhail Checked by N. Davis
Drilling Method Mud Rotary; Grouted upon completion.

WATER LEVEL DATA

While Drilling
At Completion of Drilling 24.08 m
Time After Drilling -- hours
Depth to Water -- m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES

Begin Drilling 04-25-2002 Complete Drilling 04-25-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger H. Suhail Checked by B. Fugiel
Drilling Method Mud Rotary; Grouted after final water reading.

WATER LEVEL DATA

While Drilling
At Completion of Drilling --
Time After Drilling 24 hours
Depth to Water 2.44 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

BORING LOGS (1 OF 7)
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+235.100 TO STATION 8+412.491
STRUCTURE NO. 016-W858

DATE 09/05

AMERICAN
CONSULTING ENGINEERS

BORING NO. AR-088 (2 OF 2)

BORING NO. AR-089 (1 OF 2)

BORING NO. AR-089 (2 OF 2)

BORING LOG AR-088 Page 2 of 2
 Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers
 wongeng@wongeng.com
 100 Fairbank Street
 Addison, IL 60101
 Telephone: 630 458-0700
 Fax: 630 458-0900

WEI Job No.: 255-08-01
 Client: American Consulting Engineers
 Project: FAI 80/94, I-294 to US 41
 Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
 Elevation: 188.72 m
 North: 545353.37 m
 East: 367691.24 m
 Station: 84274.64
 Offset: 16.24 LT

BORING LOG AR-089 Page 1 of 2
 Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers
 wongeng@wongeng.com
 100 Fairbank Street
 Addison, IL 60101
 Telephone: 630 458-0700
 Fax: 630 458-0900

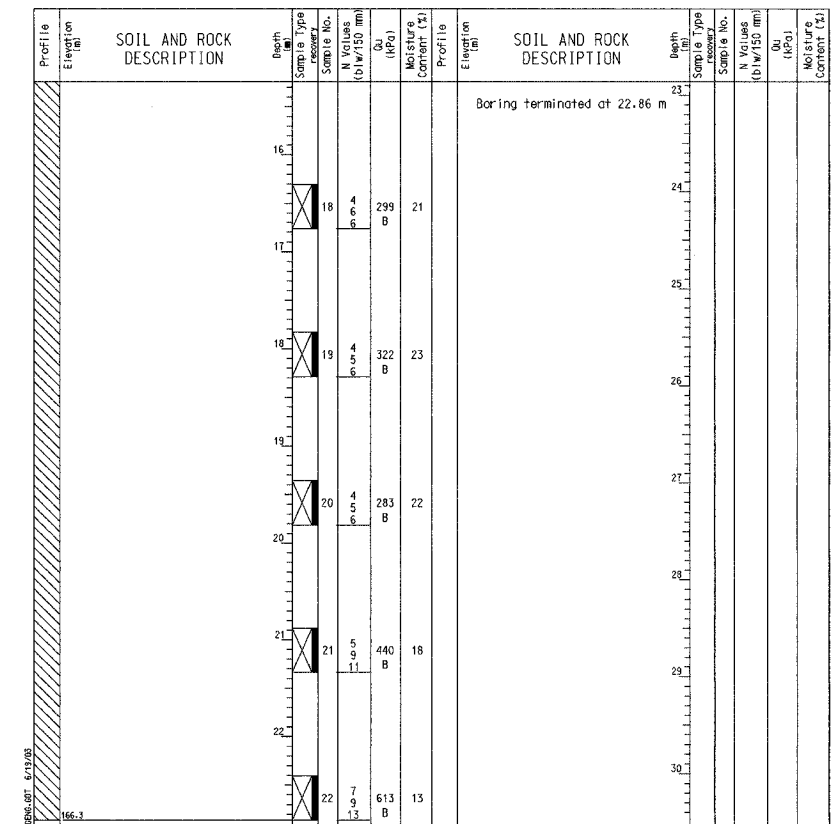
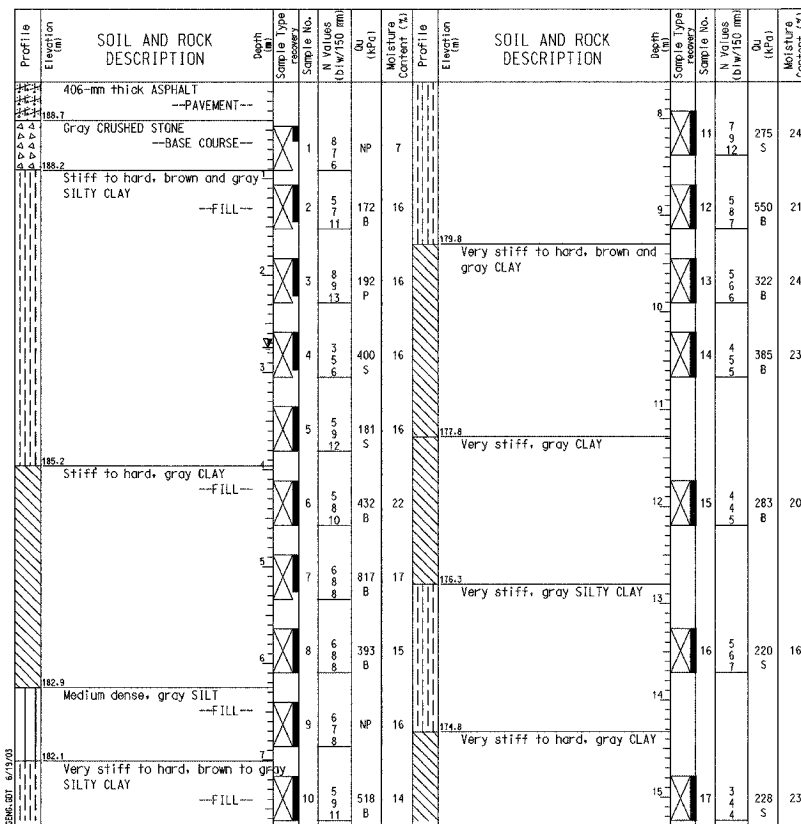
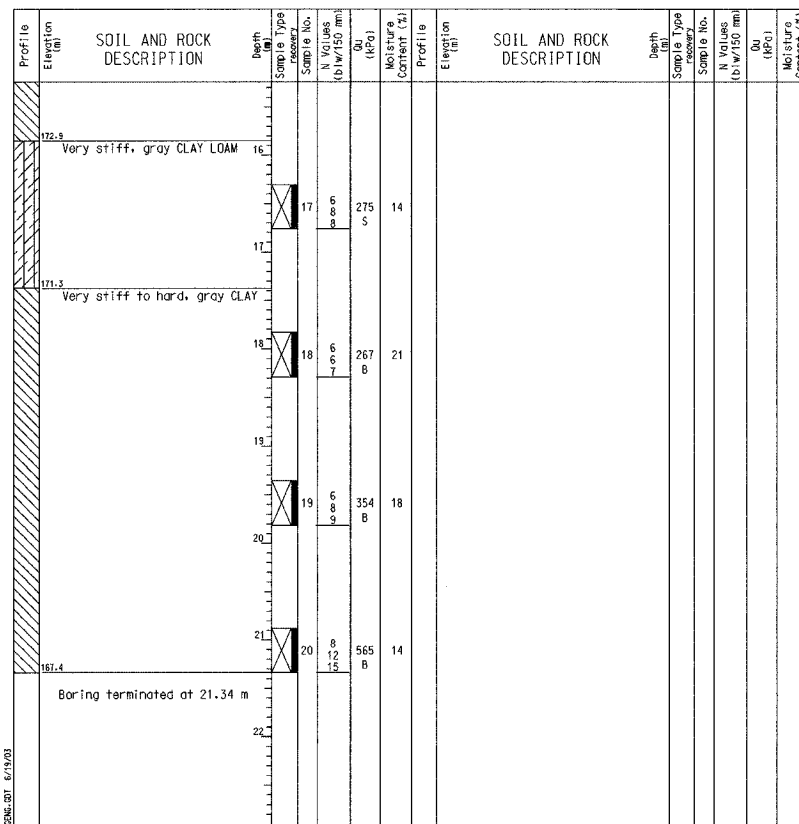
WEI Job No.: 255-08-01
 Client: American Consulting Engineers
 Project: FAI 80/94, I-294 to US 41
 Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
 Elevation: 189.11 m
 North: 545347.48 m
 East: 367708.18 m
 Station: 84282.57
 Offset: 16.35 LT

BORING LOG AR-089 Page 2 of 2
 Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers
 wongeng@wongeng.com
 100 Fairbank Street
 Addison, IL 60101
 Telephone: 630 458-0700
 Fax: 630 458-0900

WEI Job No.: 255-08-01
 Client: American Consulting Engineers
 Project: FAI 80/94, I-294 to US 41
 Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
 Elevation: 189.11 m
 North: 545347.48 m
 East: 367708.18 m
 Station: 84282.57
 Offset: 16.35 LT



GENERAL NOTES

Begin Drilling 04-25-2002 Complete Drilling 04-25-2002
 Drilling Contractor TSC Drill Rig CME 75
 Driller C&J Logger H. Suhail checked by B. Fugiel
 Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling
 At Completion of Drilling
 Time After Drilling 24 hours
 Depth to Water 2.44 m
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES

Begin Drilling 04-24-2002 Complete Drilling 04-24-2002
 Drilling Contractor TSC Drill Rig CME 75
 Driller C&J Logger H. Suhail checked by B. Fugiel
 Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling
 At Completion of Drilling
 Time After Drilling 24 hours
 Depth to Water 2.74 m
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES

Begin Drilling 04-24-2002 Complete Drilling 04-24-2002
 Drilling Contractor TSC Drill Rig CME 75
 Driller C&J Logger H. Suhail checked by B. Fugiel
 Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling
 At Completion of Drilling
 Time After Drilling 24 hours
 Depth to Water 2.74 m
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	KFA
CHECKED	BPS
DRAWN	CAK/JB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

BORING LOGS (2 OF 7)
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+235.100 TO STATION 8+412.491
STRUCTURE NO. 016-W858

DATE 09/05

AMERICAN
 CONSULTING ENGINEERS

BORING NO. AR-090 (1 OF 2)

BORING NO. AR-090 (2 OF 2)

BORING NO. AR-091 (1 OF 2)

W Wang Engineering, INC.
Consulting Geotechnical and Environmental Engineering
wangeng3@wangeng.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

BORING LOG AR-090 Page 1 of 2
WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 189.56 m
North: 545341.21 m
East: 367726.59 m
Station: 8+312.02
Offset: 16.60 LT

W Wang Engineering, INC.
Consulting Geotechnical and Environmental Engineering
wangeng3@wangeng.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

BORING LOG AR-090 Page 2 of 2
WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 189.56 m
North: 545341.21 m
East: 367726.59 m
Station: 8+312.02
Offset: 16.60 LT

W Wang Engineering, INC.
Consulting Geotechnical and Environmental Engineering
wangeng3@wangeng.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

BORING LOG AR-091 Page 1 of 2
WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 189.89 m
North: 545335.67 m
East: 367745.34 m
Station: 8+329.66
Offset: 16.98 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blows/150 mm)	Dr (in)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blows/150 mm)	Dr (in)	Moisture Content (%)
189.2	381-mm thick ASPHALT --PAVEMENT--	0					189.2		0				
188.5	Gray CRUSHED STONE --BASE COURSE--	1	11	5	11	447	188.5		1	11	5	11	447
188.6	Stiff to hard, brown to gray SILTY CLAY --FILL--	2	12	8	8	243	188.6		2	12	8	8	243
		3	13	7	11				3	13	7	11	
		4	14	2	3	283	179.5	Very stiff to hard, brown gray CLAY	4	14	5	6	283
		5	15	3	8	417			5	15	3	8	417
		6	16	4	7	361			6	16	4	7	361
		7	17	5	6	275			7	17	3	6	275
		8	18	4	6	267	176.1	Dense, gray SILT	8	18	5	15	18
		9	19	5	6	212	175.2	Very stiff, gray CLAY	9	19	3	4	212
		10	20	6	9	212			10	20	3	4	212

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blows/150 mm)	Dr (in)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blows/150 mm)	Dr (in)	Moisture Content (%)
168.2	Boring terminated at 21.34 m	21	21	4	7	346	168.2		21	21	4	7	346

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blows/150 mm)	Dr (in)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blows/150 mm)	Dr (in)	Moisture Content (%)
189.5	432-mm thick ASPHALT --PAVEMENT--	0					189.5		0				
189.0	Gray CRUSHED STONE --BASE COURSE--	1	5	13	11	518	189.0		1	5	13	11	518
189.0	Stiff to very stiff, brown to gray SILTY CLAY --FILL--	2	6	7	8	346	189.0		2	6	7	8	346
		3	7	8	11	287			3	7	8	11	287
		4	8	4	7	196	188.6	Very stiff to hard, brown and gray CLAY	4	8	4	7	196
		5	9	3	8	275			5	9	3	8	275
		6	10	3	4	307			6	10	3	4	307
		7	11	3	5	157	177.1	Very stiff, gray CLAY	7	11	3	5	157
		8	12	6	7	314			8	12	6	7	314
		9	13	6	7	479	175.6	Very stiff, gray SILTY CLAY	9	13	6	7	479
		10	14	6	7	263			10	14	6	7	263

GENERAL NOTES

Begin Drilling 04-23-2002 Complete Drilling 04-23-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger H. Suhail checked by B. Fugiel
Drilling Method Mud Rotary; Grouted after final water reading.

WATER LEVEL DATA

While Drilling ∇
At Completion of Drilling ∇
Time After Drilling 24 hours
Depth to Water ∇ 2.59 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES

Begin Drilling 04-23-2002 Complete Drilling 04-23-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger H. Suhail checked by B. Fugiel
Drilling Method Mud Rotary; Grouted after final water reading.

WATER LEVEL DATA

While Drilling ∇
At Completion of Drilling ∇
Time After Drilling 24 hours
Depth to Water ∇ 2.59 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES

Begin Drilling 04-22-2002 Complete Drilling 04-22-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger H. Suhail checked by B. Fugiel
Drilling Method Mud Rotary; Grouted after final water reading.

WATER LEVEL DATA

While Drilling ∇
At Completion of Drilling ∇
Time After Drilling 24 hours
Depth to Water ∇ 3.05 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	KFA
CHECKED	BPS
DRAWN	CAK/JS
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

BORING LOGS (3 OF 7)
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+235.100 TO STATION 8+412.491
STRUCTURE NO. 016-W858

DATE 09/05

AMERICAN
CONSULTING ENGINEERS

BORING NO. AR-091 (2 OF 2)

BORING NO. AR-092 (1 OF 2)

BORING NO. AR-092 (2 OF 2)

BORING LOG AR-091 Page 2 of 2

Wang Engineering, INC.
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 189.89 m
North: 545335.67 m
East: 367743.34 m
Station: 8+348.84
Offset: 16.96 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blows/150 mm)	Q _u (kPa)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blows/150 mm)	Q _u (kPa)	Moisture Content (%)
172.6	Very stiff, gray CLAY	16	18	3 4 4	142	19	165.5	Boring terminated at 24.38 m	23	11	16	23	12
167.8	Very stiff to hard, gray SILTY CLAY	22	22	7 11 16	440	14							

GENERAL NOTES

Begin Drilling 04-22-2002 Complete Drilling 04-22-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger H. Suhail Checked by B. Fugate
Drilling Method Mud Rotary; Grouted after final water reading.

WATER LEVEL DATA

While Drilling --
At Completion of Drilling --
Time After Drilling 24 hours
Depth to Water 3.05 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

BORING LOG AR-092 Page 1 of 2

Wang Engineering, INC.
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 190.15 m
North: 545329.51 m
East: 367761.50 m
Station: 8+348.84
Offset: 17.24 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blows/150 mm)	Q _u (kPa)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blows/150 mm)	Q _u (kPa)	Moisture Content (%)
189.7	457-mm thick ASPHALT PAVEMENT	8	11	5 10 11	636	23							
189.2	Gray CRUSHED STONE BASE COURSE	13	13	7 7 5	NP	6							
189.2	Stiff to hard, brown to gray SILTY CLAY FILL	2	2	5 6 7	260	15							
186.1	very stiff to hard, brown and gray CLAY	10	14	7 10 12	550	21							
177.3	Medium stiff to very stiff, gray CLAY	17	17	3 3 4	118	23							

GENERAL NOTES

Begin Drilling 04-18-2002 Complete Drilling 04-18-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger H. Suhail Checked by B. Fugate
Drilling Method Mud Rotary; Grouted after final water reading.

WATER LEVEL DATA

While Drilling --
At Completion of Drilling --
Time After Drilling 24 hours
Depth to Water 3.96 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

BORING LOG AR-092 Page 2 of 2

Wang Engineering, INC.
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 190.15 m
North: 545329.51 m
East: 367761.50 m
Station: 8+348.84
Offset: 17.24 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blows/150 mm)	Q _u (kPa)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blows/150 mm)	Q _u (kPa)	Moisture Content (%)
188.2	Hard, gray SILTY CLAY	26	22	9 14 17	542	13							

GENERAL NOTES

Begin Drilling 04-18-2002 Complete Drilling 04-18-2002
Drilling Contractor TSC Drill Rig CME 75
Driller C&J Logger H. Suhail Checked by B. Fugate
Drilling Method Mud Rotary; Grouted after final water reading.

WATER LEVEL DATA

While Drilling --
At Completion of Drilling --
Time After Drilling 24 hours
Depth to Water 3.96 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	KFA
CHECKED	BPS
DRAWN	CAK/JB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

BORING LOGS (4 OF 7)
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8 + 235.100 TO STATION 8 + 412.491
STRUCTURE NO. 016-W858

DATE 09/05

AMERICAN
CONSULTING ENGINEERS

BORING NO. AR-093 (1 OF 2)

BORING NO. AR-093 (2 OF 2)

BORING NO. AR-094 (1 OF 2)

Wang Engineering, INC.
 Consulting Geotechnical and Environmental Engineers
 wangeng3@wangeng.com
 100 Fairbank Street
 Addison, IL 60101
 Telephone: 630 458-0700
 Fax: 630 458-0900

BORING LOG AR-093
 WEI Job No.: 255-08-01
 Client: American Consulting Engineers
 Project: FAI 80/94, I-294 to US 41
 Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
 Elevation: 190.39 m
 North: 545323.55 m
 East: 367779.18 m
 Station: 8+367.49
 Offset: 17.53 LT

Page 1 of 2

Wang Engineering, INC.
 Consulting Geotechnical and Environmental Engineers
 wangeng3@wangeng.com
 100 Fairbank Street
 Addison, IL 60101
 Telephone: 630 458-0700
 Fax: 630 458-0900

BORING LOG AR-093
 WEI Job No.: 255-08-01
 Client: American Consulting Engineers
 Project: FAI 80/94, I-294 to US 41
 Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
 Elevation: 190.39 m
 North: 545323.55 m
 East: 367779.18 m
 Station: 8+367.49
 Offset: 17.53 LT

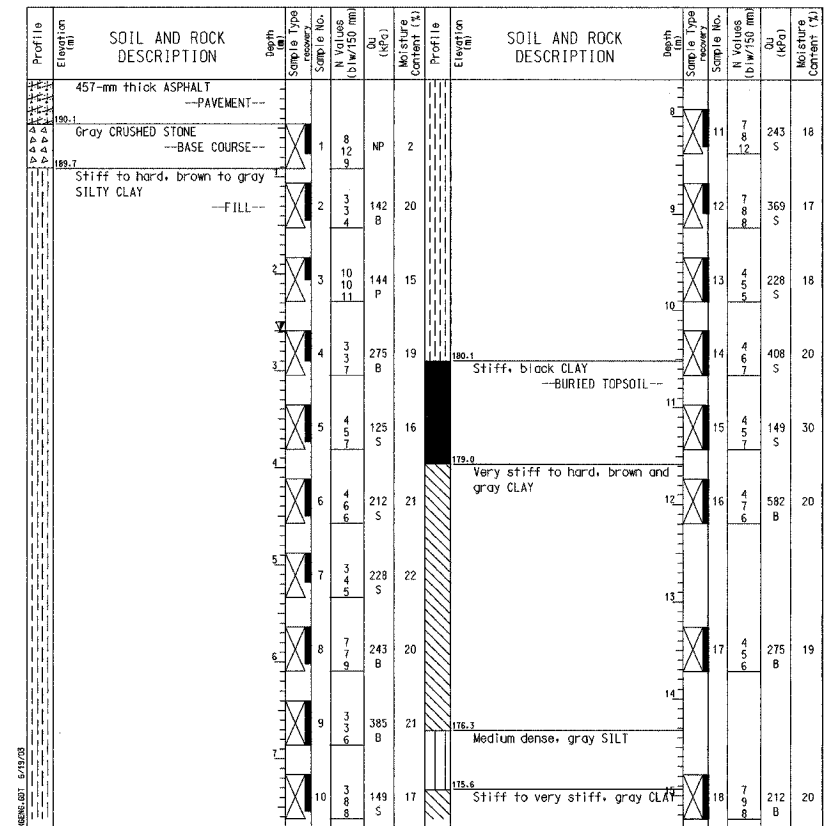
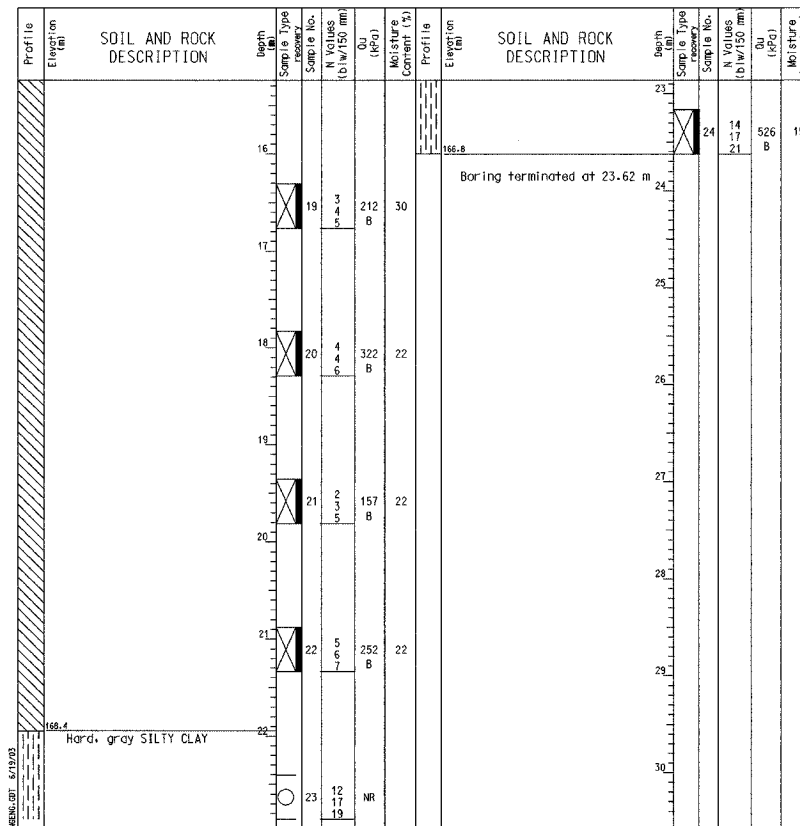
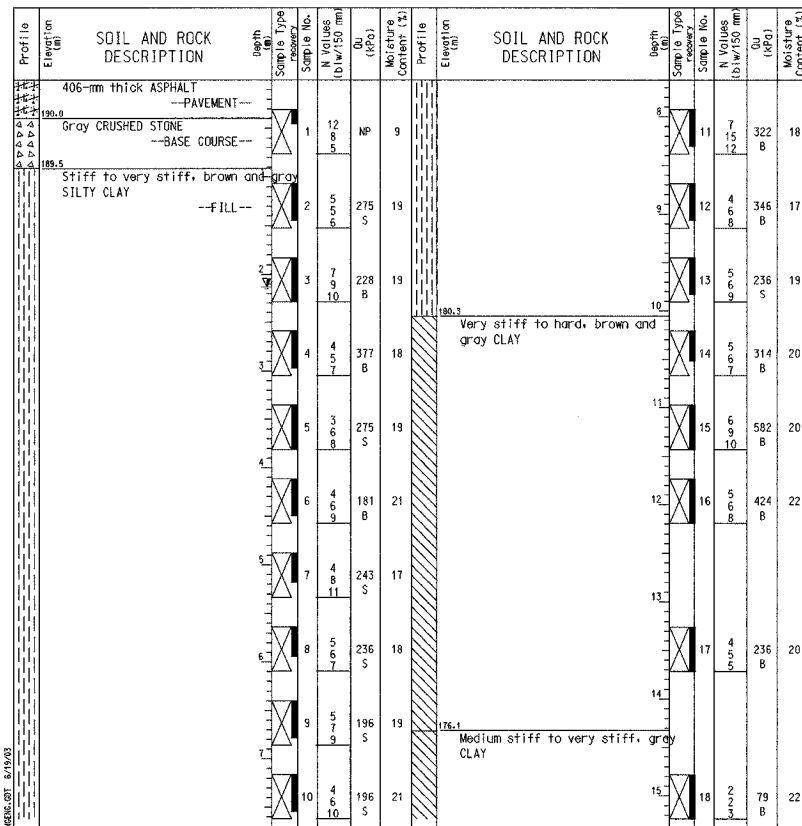
Page 2 of 2

Wang Engineering, INC.
 Consulting Geotechnical and Environmental Engineers
 wangeng3@wangeng.com
 100 Fairbank Street
 Addison, IL 60101
 Telephone: 630 458-0700
 Fax: 630 458-0900

BORING LOG AR-094
 WEI Job No.: 255-08-01
 Client: American Consulting Engineers
 Project: FAI 80/94, I-294 to US 41
 Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
 Elevation: 190.58 m
 North: 545317.97 m
 East: 367795.95 m
 Station: 8+385.16
 Offset: 17.88 LT

Page 1 of 2



GENERAL NOTES	WATER LEVEL DATA
Begin Drilling 04-18-2002 Complete Drilling 04-18-2002	While Drilling <input checked="" type="checkbox"/> --
Drilling Contractor TSC Drill Rig CME 75	At Completion of Drilling <input type="checkbox"/> --
Driller C&A Logger H. Suhail Checked by B. Fugiel	Time After Drilling 24 hours
Drilling Method Mud Rotary; Grouted after final water reading	Depth to Water 2.13 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	

GENERAL NOTES	WATER LEVEL DATA
Begin Drilling 04-18-2002 Complete Drilling 04-18-2002	While Drilling <input checked="" type="checkbox"/> --
Drilling Contractor TSC Drill Rig CME 75	At Completion of Drilling <input type="checkbox"/> --
Driller C&A Logger H. Suhail Checked by B. Fugiel	Time After Drilling 24 hours
Drilling Method Mud Rotary; Grouted after final water reading	Depth to Water 2.13 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	

GENERAL NOTES	WATER LEVEL DATA
Begin Drilling 04-17-2002 Complete Drilling 04-17-2002	While Drilling <input checked="" type="checkbox"/> --
Drilling Contractor TSC Drill Rig CME 75	At Completion of Drilling <input type="checkbox"/> --
Driller C&A Logger H. Suhail Checked by B. Fugiel	Time After Drilling 24 hours
Drilling Method Mud Rotary; Grouted after final water reading	Depth to Water 2.59 m
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	

DESIGNED	KFA
CHECKED	BPS
DRAWN	CAK/JB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

BORING LOGS (5 OF 7)
 SECTION 2626.2-R-2
 LAKE COUNTY, INDIANA
 STATION 8+235.100 TO STATION 8+412.491
 STRUCTURE NO. 016-W858

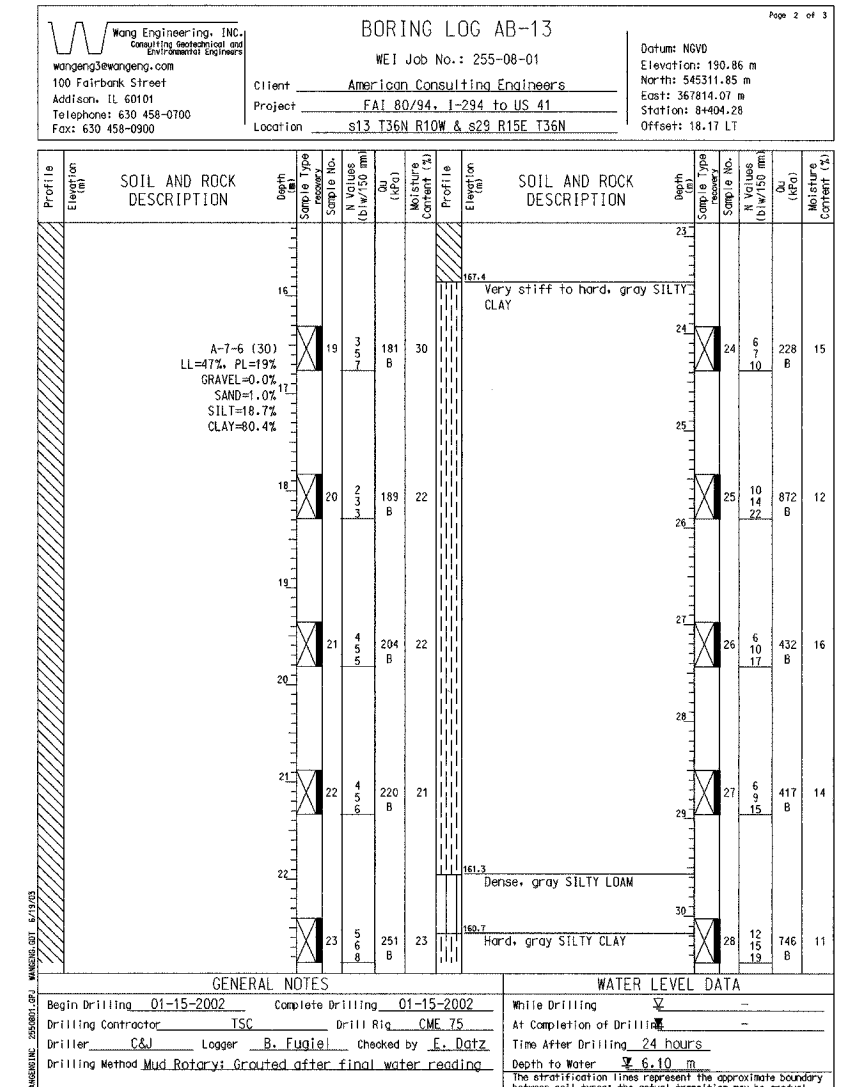
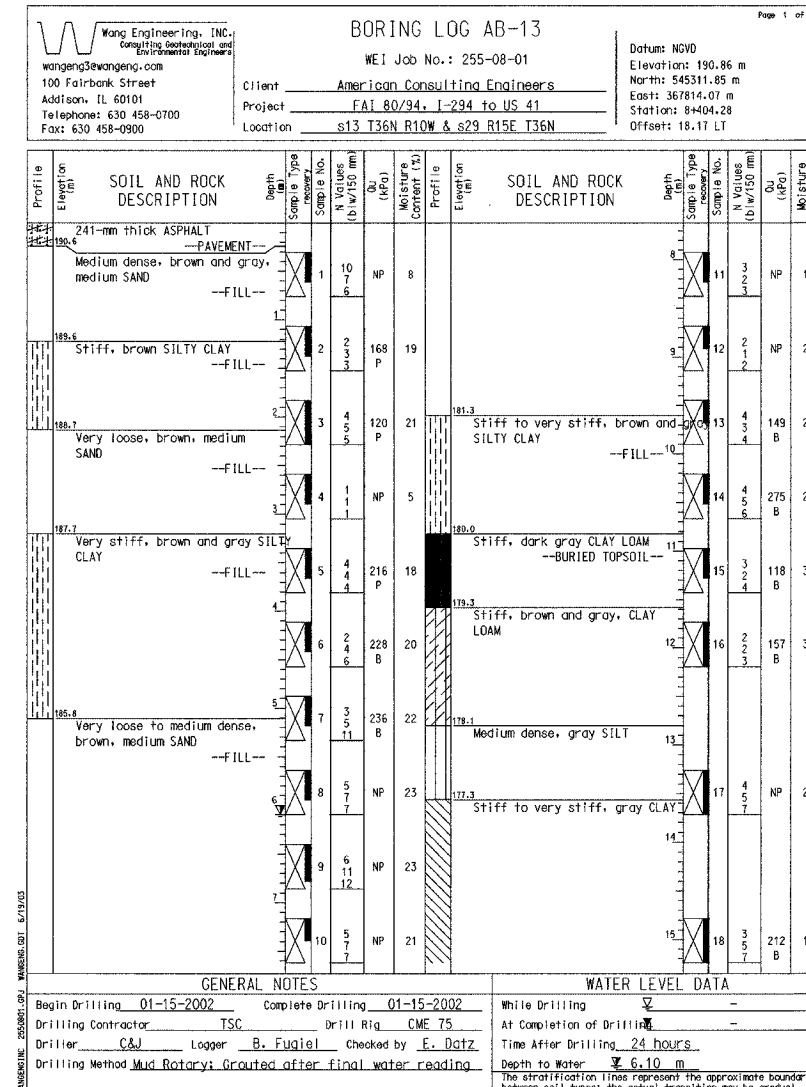
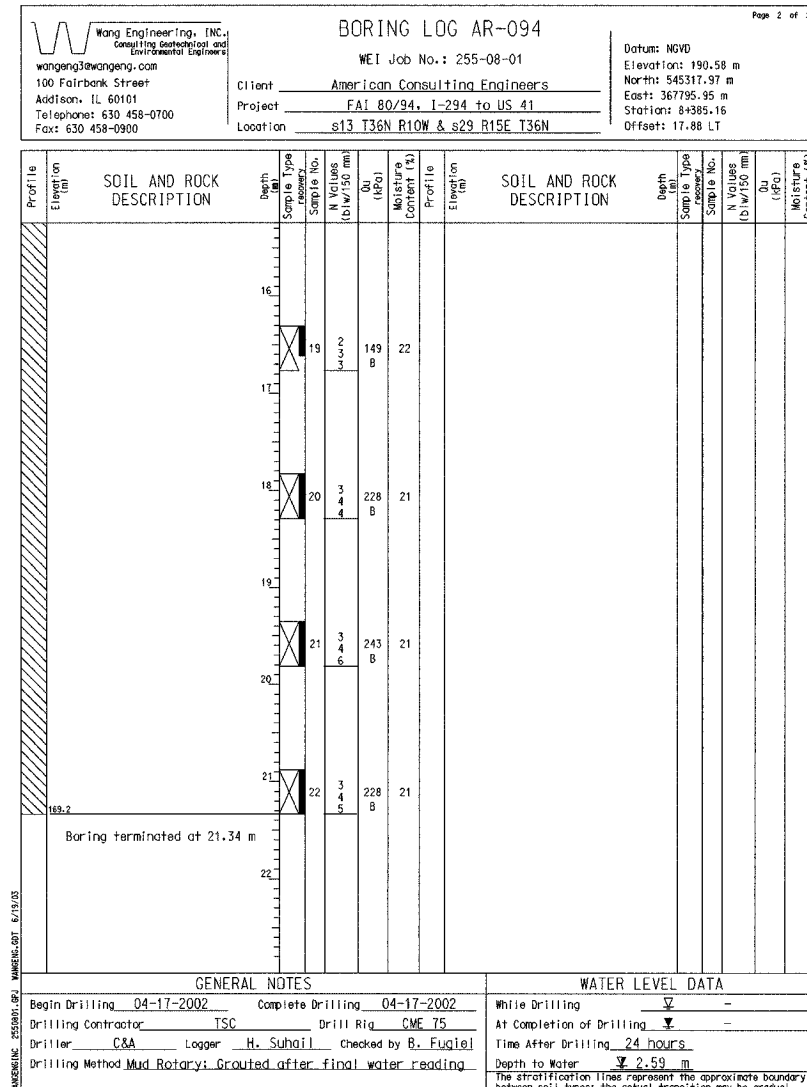
DATE 09/05

AMERICAN
 CONSULTING ENGINEERS

BORING NO. AR-094 (2 OF 2)

BORING NO. AB-13 (1 OF 3)

BORING NO. AB-13 (2 OF 3)



DESIGNED	KFA
CHECKED	BPS
DRAWN	CAK/JB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

BORING LOGS (6 OF 7)
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+235.100 TO STATION 8+412.491
STRUCTURE NO. 016-W858

DATE 09/05

AMERICAN
CONSULTING ENGINEERS

BORING NO. AB-13 (3 OF 3)

<p>Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers wangeng@wangeng.com 100 Fairbank Street Addison, IL 60101 Telephone: 630 458-0700 Fax: 630 458-0900</p>	BORING LOG AB-13		Page 3 of 3
	WEI Job No.: 255-08-01		Datum: NGVD
	Client: <u>American Consulting Engineers</u>		Elevation: 190.86 m
	Project: <u>FAI 80/94, I-294 to US 41</u>		North: 545311.85 m
Location: <u>s13 T36N R10W & s29 R15E T36N</u>		East: 367814.07 m	Station: 64404.28
		Offset: 16.17 LT	

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blows/150 mm)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blows/150 mm)	Moisture Content (%)
31.0													
32.0		29	B	15 23 32	982	12							
33.0		30	B	15 27 35	982	11							
33.53	Boring terminated at 33.53 m												
34.0													
35.0													
36.0													
37.0													
38.0													

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling <u>01-15-2002</u>	Complete Drilling <u>01-15-2002</u>	While Drilling <u>✓</u>	-
Drilling Contractor <u>TSC</u>	Drill Rig <u>CME 75</u>	At Completion of Drilling <u>✓</u>	-
Driller <u>CAJ</u>	Logger <u>B. Fugiel</u>	Time After Drilling <u>24 hours</u>	-
Checked by <u>E. Datz</u>		Depth to Water <u>6.10 m</u>	-
Drilling Method <u>Mud Rotary; Grouted after final water reading</u>		The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

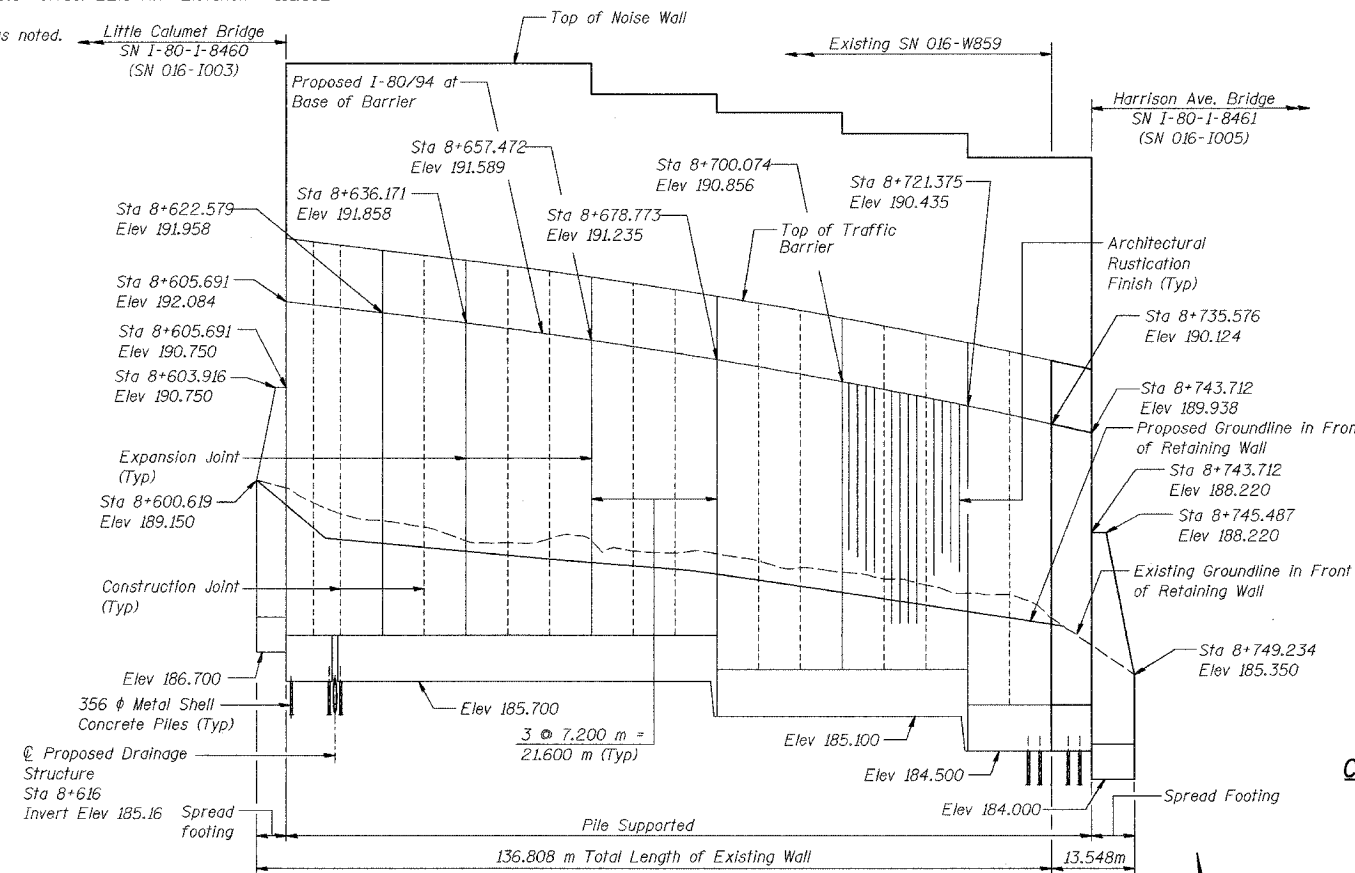
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

BORING LOGS (7 OF 7)
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+235.100 TO STATION 8+412.491
STRUCTURE NO. 016-W858

DATE 09/05

Benchmark: Chiseled box on Northeast corner of Crashwall on I-80 over Little Calumet River Bridge on Eastbound I-80. Station 8+603.3 Offset 22.3 Rt. Elevation = 191.392
 Existing Structure: None
 All dimensions in millimeters (mm) except as noted.

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO. S-1 17 SHEETS
I-80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	881	
CONTRACT NO. 62114 INDOT DES. NO. 0100987					



LEGEND

- ⊙ - Soil Boring Location
- - - Existing Roadway/Structure
- Proposed Roadway/Structure
- ⊙ - Tree
- Shrubs/Brush
- Proposed Storm Sewer
- Existing Sanitary Sewer
- Existing Storm Sewer
- CTV - Existing Cable TV
- G - Existing Gas Line
- W - Existing Water Main
- A - Electrical Aerial Cable
- Temporary Sheet Piling

LOADING

Wind Load on Future Noise Wall = 1.7 kPa

DESIGN STRESSES

FIELD UNITS

f'c = 24 MPa
 fy = 400 MPa (Reinf.)
 Maximum Applied Soil Bearing Pressure = 59 kPa (Phase 2)
 75 kPa (Phase 3)

DESIGN SPECIFICATIONS

AASHTO 2002 Standard Specifications for Highway Bridges

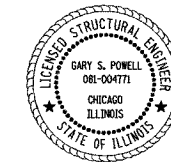
AASHTO 1989 Guide Specifications for Structural Design of Sound Barriers and 1992 Interlms

APPROVED FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
 ENGINEER OF BRIDGES AND STRUCTURES

CURVE DATA I-80/94

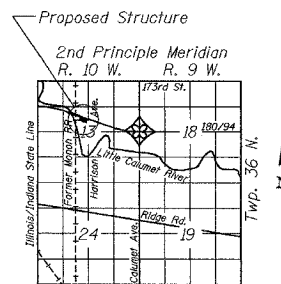
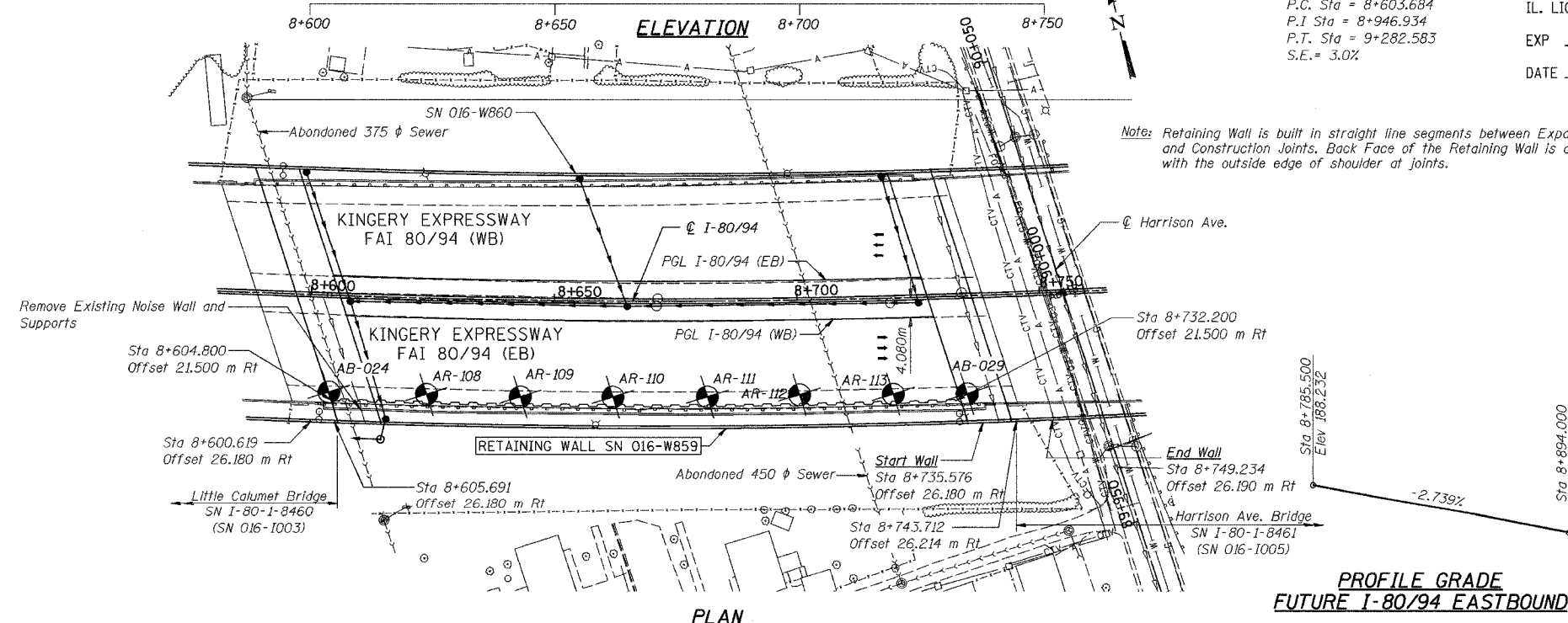
Δ = 20°-51'-41"
 R = 1,864.600 m
 T = 343.250 m
 L = 678.899 m
 E = 33.331 m
 P.C. Sta = 8+603.684
 P.I. Sta = 8+946.934
 P.T. Sta = 9+282.583
 S.E. = 3.0%



Gary S. Powell
 GARY S. POWELL, S.E.
 IL. LIC. NO. 081-004771
 EXP 11-30-2006
 DATE 09-12-2005

Gary S. Powell
 GARY S. POWELL, P. E.
 IN. LIC. NO. 10403944
 EXP 07-31-2006
 DATE 09-12-2005

Note: Retaining Wall is built in straight line segments between Expansion and Construction Joints. Back Face of the Retaining Wall is aligned with the outside edge of shoulder at joints.



DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

PROFILE GRADE FUTURE I-80/94 EASTBOUND

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41
GENERAL PLAN SECTION 2626.2-R-1
 LAKE COUNTY, INDIANA
 STATION 8+735.576 TO STATION 8+748.936
 STRUCTURE NO. 016-W859
 DATE 09/05
AMERICAN CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET	SHEET NO. S-2
P.A.L. 88/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	882	17 SHEETS
SHEET		TOTAL SHEETS			
SHEET NO.		TOTAL SHEETS			

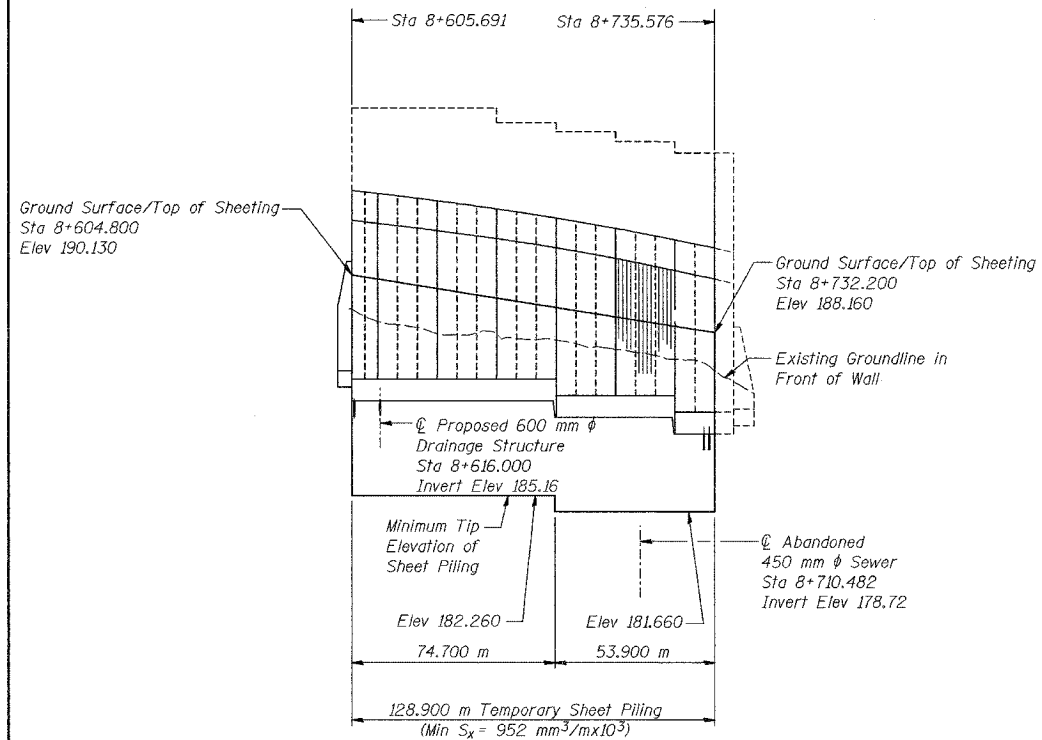
CONTRACT NO. 62114 INDOT DES. NO. 0100987

GENERAL NOTES

- Reinforcement bars shall conform to the requirements of AASHTO M 31M or M322M Grade 400.
- The Contractor shall drive 3 test piles in permanent locations spaced approximately 60 m apart, as directed by the Engineer before ordering the remainder of the piles.
- All dimensions are in millimeters (mm) except as noted.
- If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.
- All construction joints shall be bonded.
- Construction for Retaining Wall SN016-W859 will be let in separate contracts (Phase 2 and Phase 3), with each contract responsible for construction to the limits shown.
- Masonry Coating should be applied from Sta 8+605.691 to Sta 8+743.712.

INDEX OF SHEETS

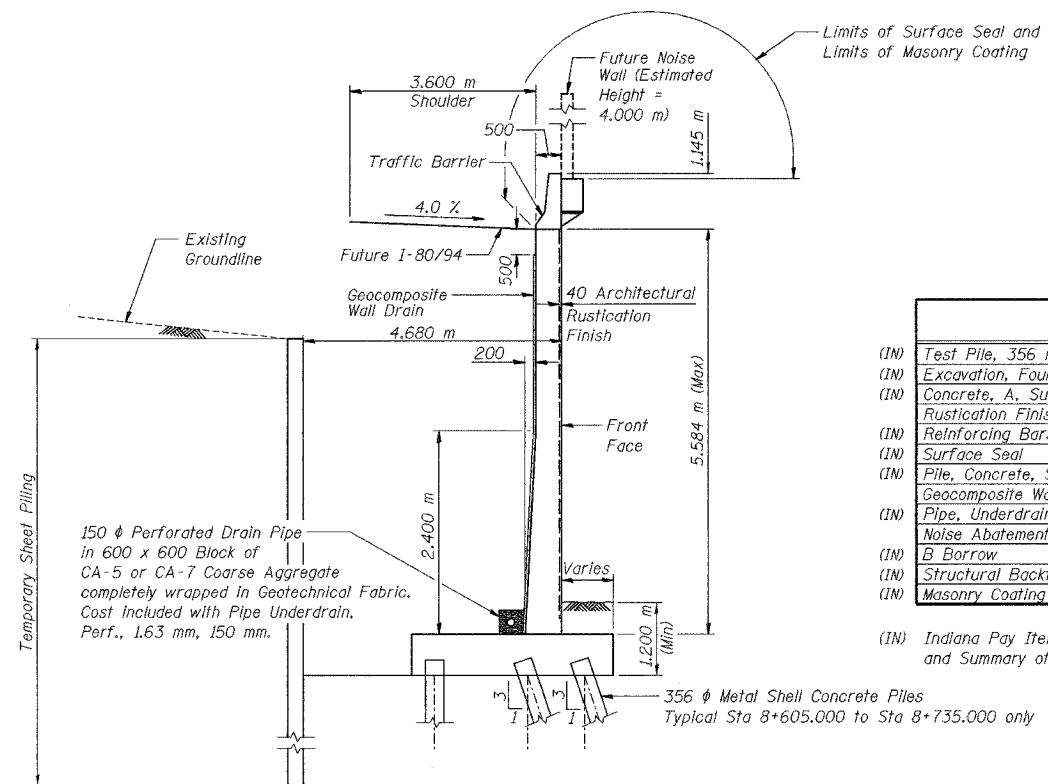
SHEET NO.	TITLE
S-1	General Plan
S-2	Index of Sheets, General Notes and Total Bill of Material
* S-3	Plan and Elevation (1 of 6)
* S-4	Plan and Elevation (2 of 6)
* S-5	Plan and Elevation (3 of 6)
* S-6	Plan and Elevation (4 of 6)
* S-7	Plan and Elevation (5 of 6)
S-8	Plan and Elevation (6 of 6)
S-9	Wall Sections and Details
S-10	Rustication Finish Details
S-11	Concrete Pile Details
S-12	Boring Logs (1 of 6)
S-13	Boring Logs (2 of 6)
S-14	Boring Logs (3 of 6)
S-15	Boring Logs (4 of 6)
S-16	Boring Logs (5 of 6)
S-17	Boring Logs (6 of 6)



* TEMPORARY SHEET PILING - ELEVATION

Estimated Area = 941 m²

The cost of Temporary Sheet Piling is included with Excavation, Foundation, Unclassified.



TYPICAL SECTION

TOTAL BILL OF MATERIAL

ITEM	UNIT	PHASE 2 QUANTITY	PHASE 3 QUANTITY
(IN) Test Pile, 356 mm	Each	3	-
(IN) Excavation, Foundation, Unclassified	m ³	1,801	213.7
(IN) Concrete, A, Substructure	m ³	849.1	64.8
Rustication Finish	m ²	647	50
(IN) Reinforcing Bars, Epoxy Coated	kg	59,570	3,980
(IN) Surface Seal	L Sum	0.06	0.01
(IN) Pile, Concrete, Steel Shell Encased, 6.35 mm, 356 mm	m	2,834.0	156.0
Geocomposite Wall Drain	m ²	620	47
(IN) Pipe, Underdrain, Perf., 1.63 mm, 150 mm	m	145.0	14.0
Noise Abatement Wall Anchor Rod Assembly	Each	37	3
(IN) B Borrow	m ³	-	24.2
(IN) Structural Backfill	m ³	-	203.7
(IN) Masonry Coating	L Sum	-	0.03

(IN) Indiana Pay Items, denoted by "(Indiana)" in Special Provisions and Summary of Quantities.

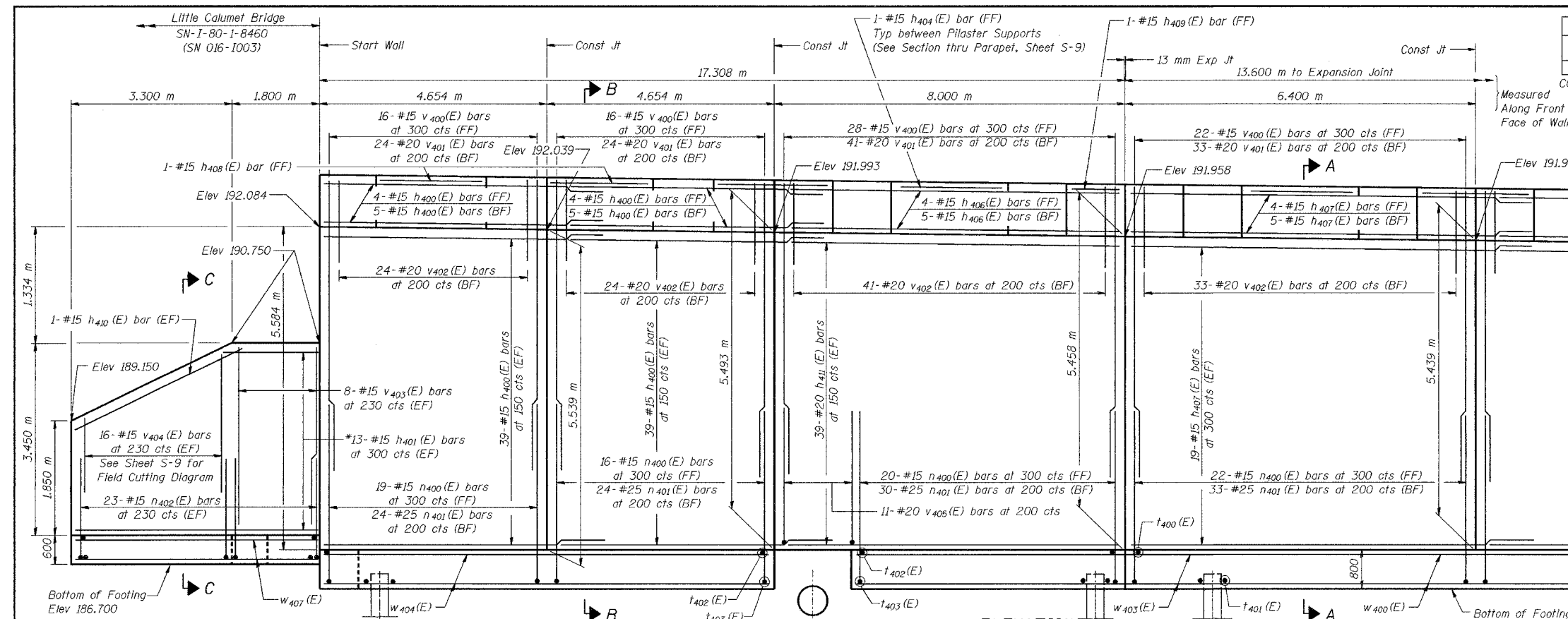
DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41
**INDEX OF SHEETS, GENERAL NOTES
AND TOTAL BILL OF MATERIAL**
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+735.576 TO STATION 8+748.936
STRUCTURE NO. 016-W859
DATE 09/05

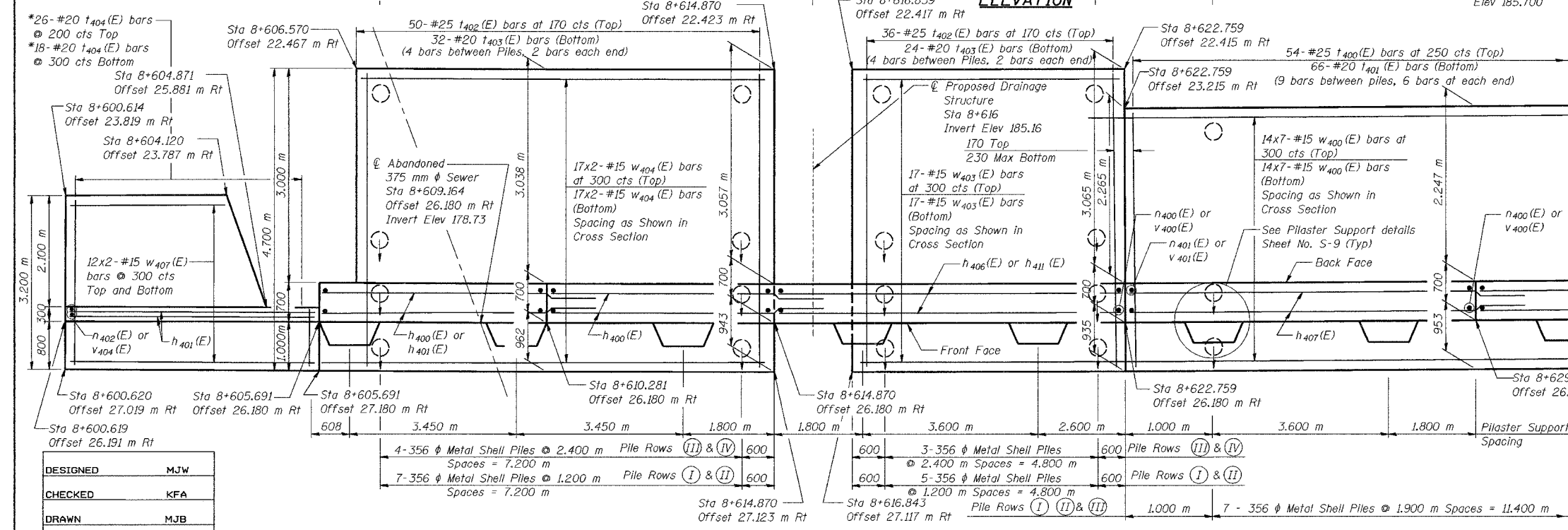
AMERICAN
CONSULTING ENGINEERS

* FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. S-3
I-80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	883
CONTRACT NO. 62114				INDOT DES. NO. 0100987



NOTES:
 See Sheet S-9 for Section A-A, Section B-B, Section C-C, Expansion Joint Detail and Bill of Material.
 See Sheet S-10 for Rustication details.
 Stations are referenced to \pm I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.
 The Contractor shall locate all utilities (existing and new) prior to driving piles, by exploratory test pits and/or probes. The cost of locating utilities shall be included with Pile, Concrete, Steel Shell Encased, 6.35 mm, 356 mm. Any conflicts between the utilities and the proposed piles shall be reported in writing to the Bureau of Bridges and Structures for further disposition. Piles within 3 meters horizontally of actual utility location shall be preaugered/precaored to the greater of bottom of the utility or 3 meter depth to maintain utility in original vertical and horizontal position. The diameter of preaugered/precaored hole shall be the same diameter as outside diameter of pile. The cost of the preaugering/precaoring shall be included with Pile, Concrete, Steel Shell Encased, 6.35 mm, 356 mm.
 * Cut bars to fit in field.



ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

PLAN AND ELEVATION (1 OF 6)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+600.619 TO STATION 8+735.576
STRUCTURE NO. 016-W859

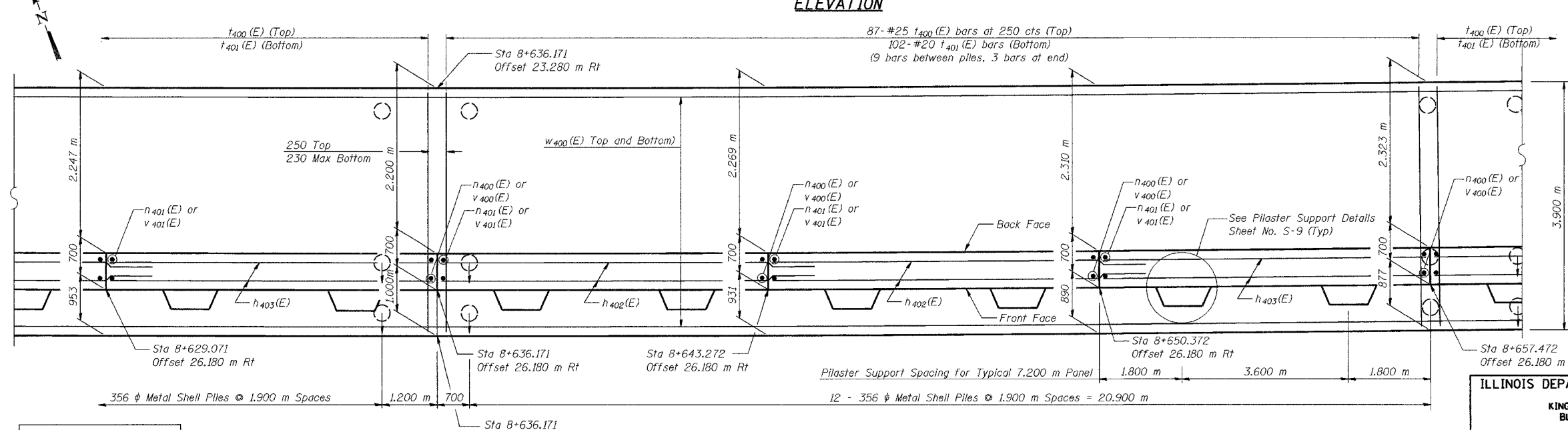
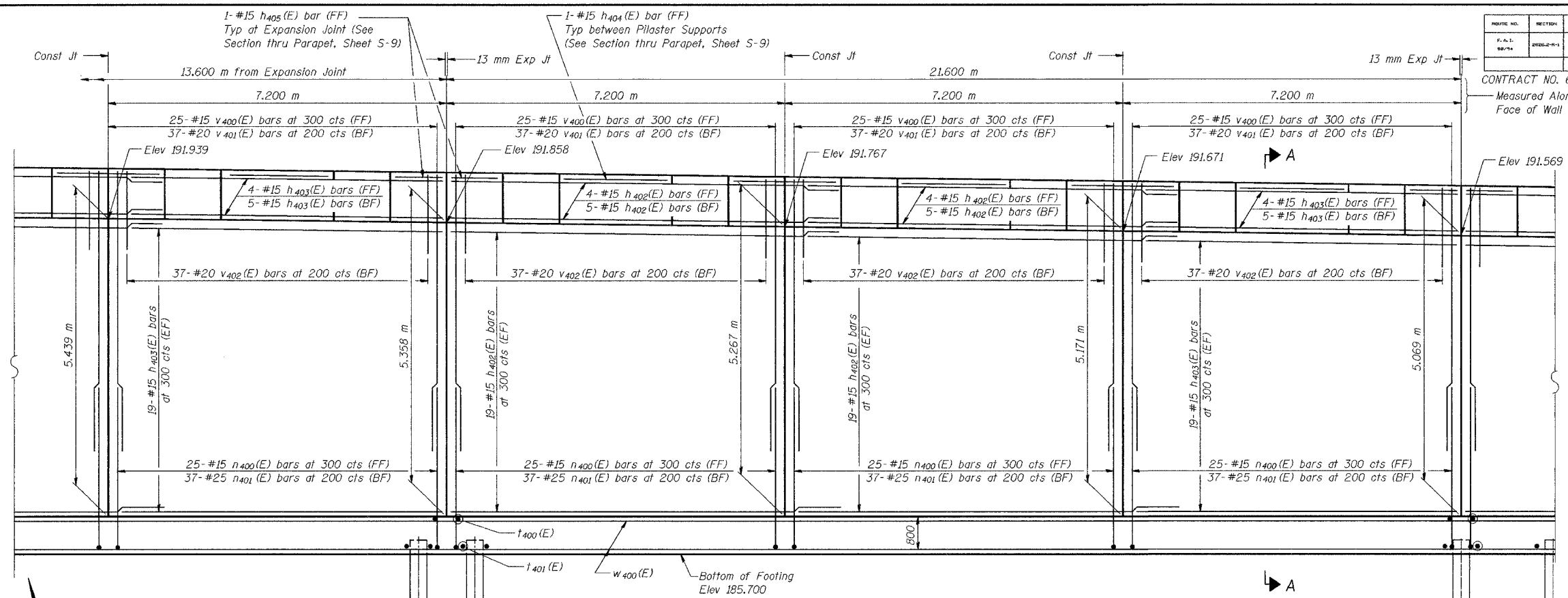
DATE 07/05

AMERICAN
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. S-4
1-80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	884	17 SHEETS
ILLINOIS		FED. AID PROJECT			

CONTRACT NO. 62114 INDOT DES. NO. 0100987
Measured Along Front Face of Wall



DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

NOTES:
See Sheet S-9 for Section A-A, Expansion Joint Detail, and Bill of Material.
See Sheet S-10 for Rustication details. Stations are referenced to \odot I-80/94.
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.

MINIMUM BAR LAPS
#15 bars = 640
#20 bars = 790

LEGEND
BF = Back Face
FF = Front Face
EF = Each Face

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

PLAN AND ELEVATION (2 OF 6)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+600.619 TO STATION 8+735.576
STRUCTURE NO. 016-W859

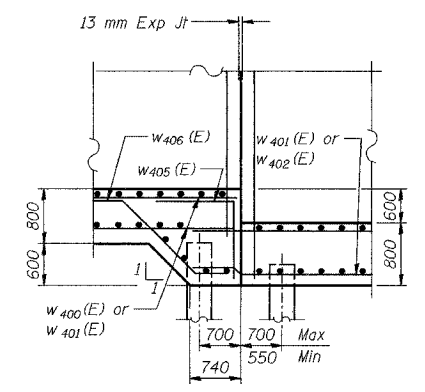
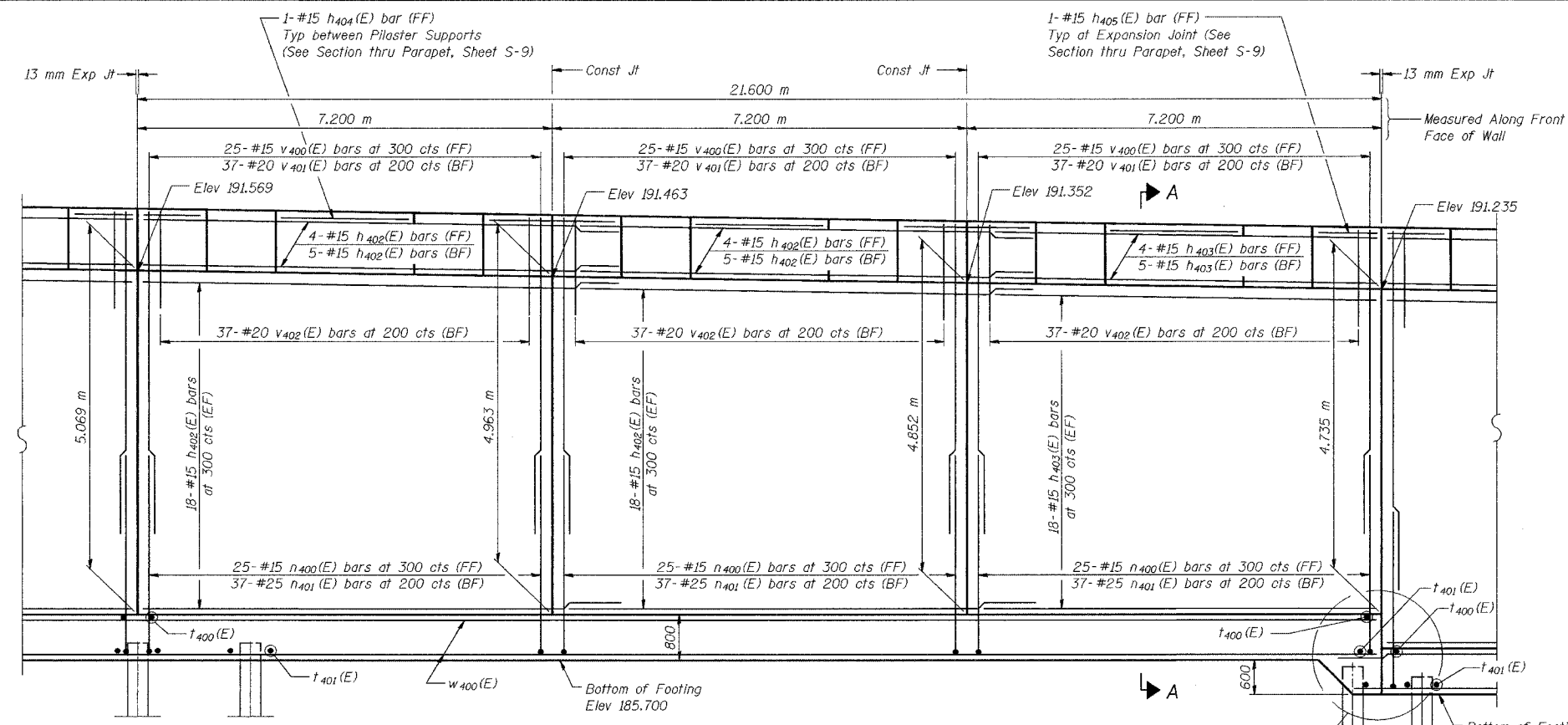
DATE 07/05

AMERICAN
CONSULTING ENGINEERS

FOR INFORMATION ONLY

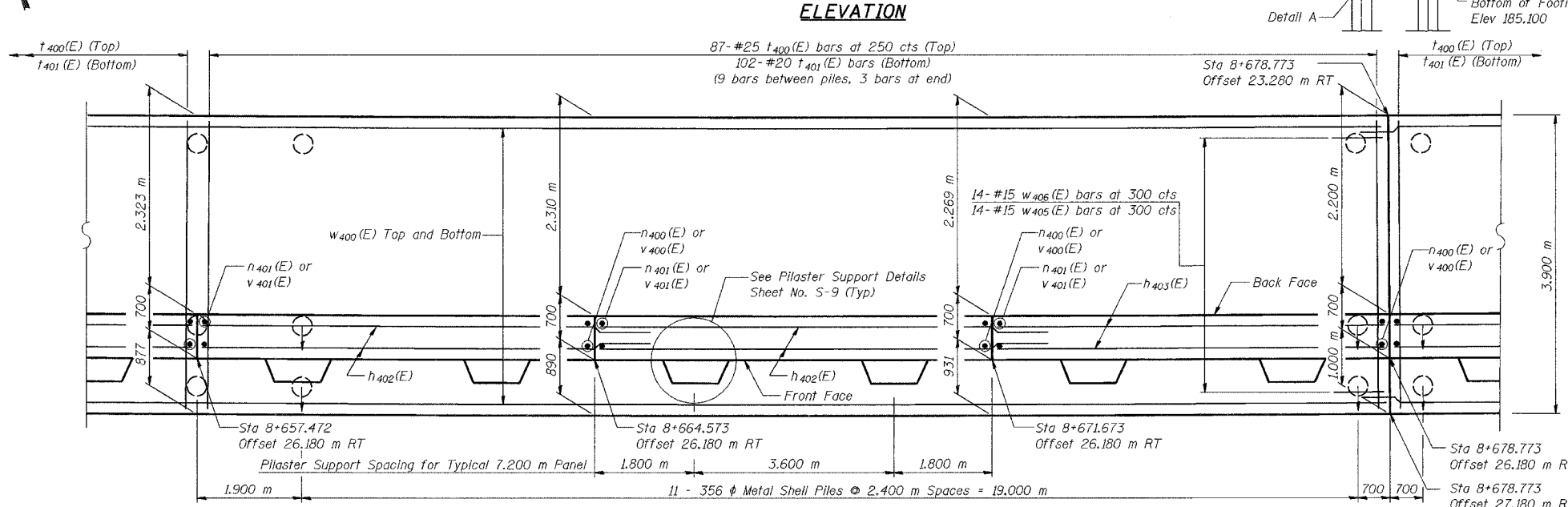
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1-80/94	R-1	LAKE COUNTY, INDIANA	1207	885	17 SHEETS
DRAWN		REVISED PROJECT			

CONTRACT NO. 62114 INDOT DES. NO. 0100987



DETAIL A

NOTES:
 See Sheet S-9 for Section A-A, Expansion Joint Detail, and Bill of Material.
 See Sheet S-10 for Rustication details.
 Stations are referenced to \bar{C} I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.



FOOTING PLAN

MINIMUM BAR LAPS

#15 bars = 640
 #20 bars = 790

LEGEND

BF = Back Face
 FF = Front Face
 EF = Each Face

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

PLAN AND ELEVATION (3 OF 6)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+600.619 TO STATION 8+735.576
STRUCTURE NO. 016-W859

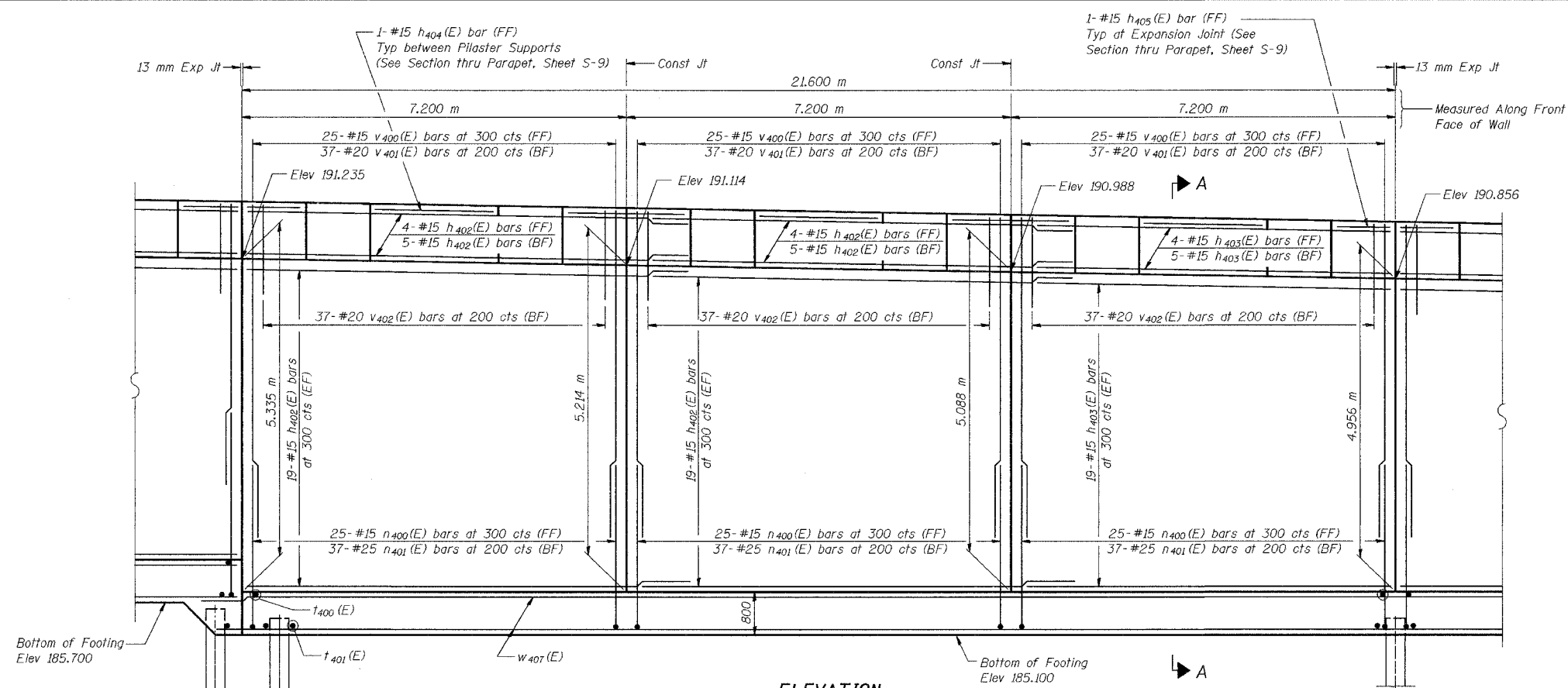
DATE 07/05

AMERICAN
 CONSULTING ENGINEERS

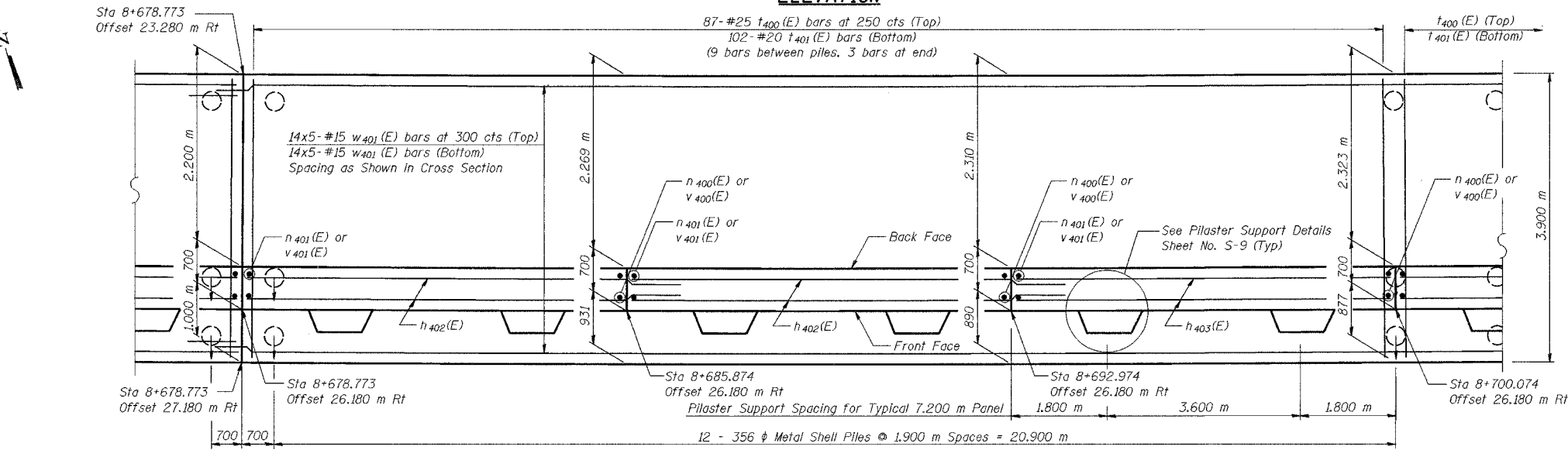
FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO.
I-80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	886	17 SHEETS
BLANKET		PERM. NO. PROJECT			

CONTRACT NO. 62114 INDOT DES. NO. 0100987



ELEVATION



FOOTING PLAN

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790

LEGEND

BF = Back Face
FF = Front Face
EF = Each Face

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

NOTES:

See Sheet S-9 for Section A-A. Expansion Joint Detail, and Bill of Material.
See Sheet S-10 for Rustication details.
Stations are referenced to \bar{C} I-80/94.
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.
Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

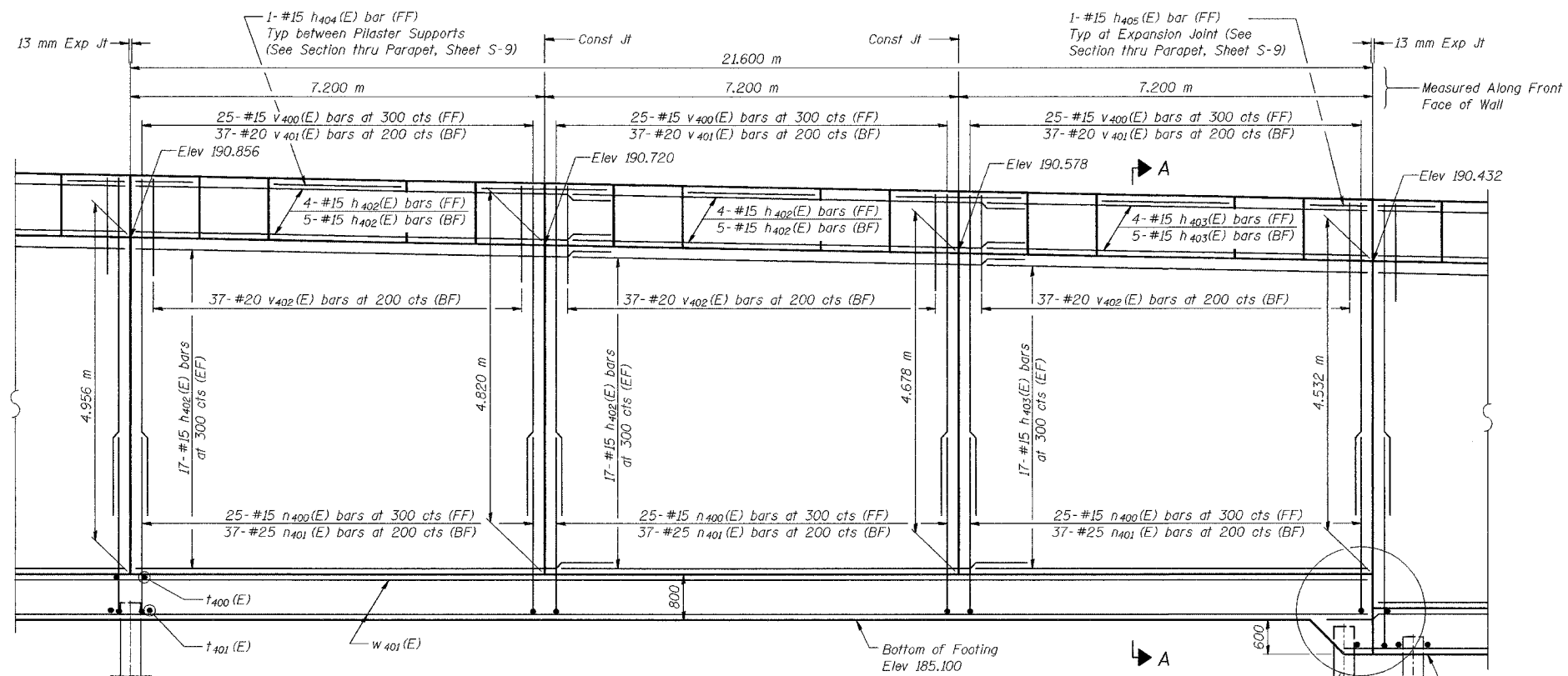
PLAN AND ELEVATION (4 OF 6)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+600.619 TO STATION 8+735.576
STRUCTURE NO. 016-W859

DATE 07/05

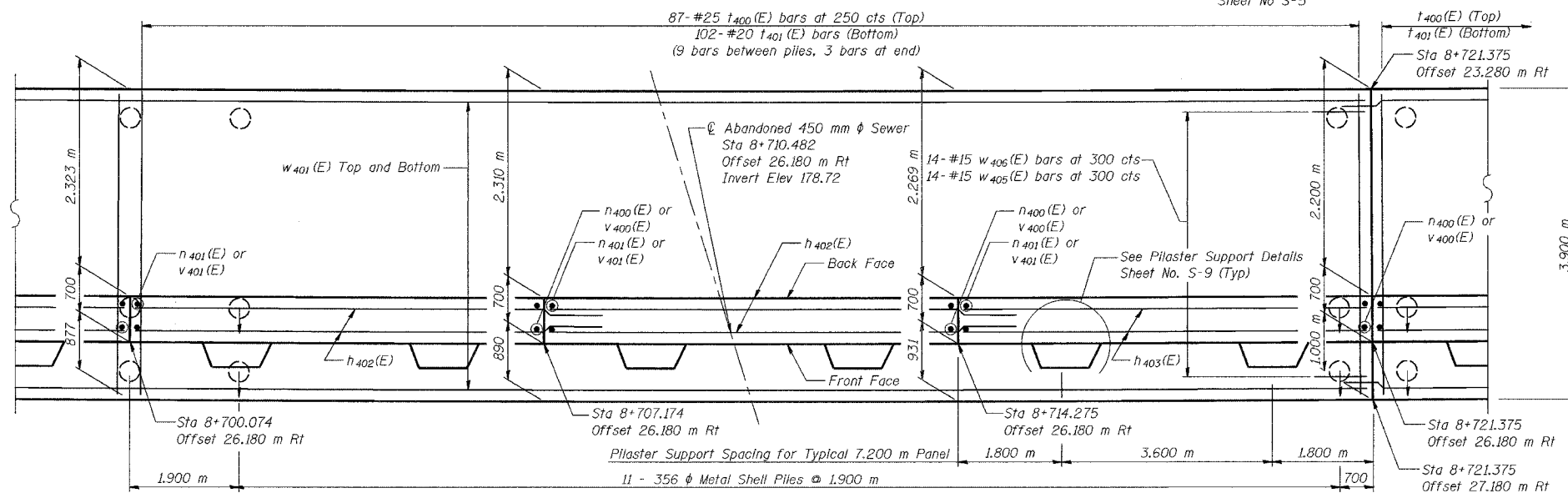
AMERICAN
CONSULTING ENGINEERS

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.	SHEET NO.
I-80/94	2626.2-R-1	LAKE COUNTY, INDIANA	1207	887	17 SHEETS
CONTRACT NO. 62114		INDOT DES. NO. 0100987			



ELEVATION



FOOTING PLAN

MINIMUM BAR LAPS

#15 bars = 640
#20 bars = 790

LEGEND

BF = Back Face
FF = Front Face
EF = Each Face

NOTES:

See Sheet S-9 for Section A-A. Expansion Joint Detail, and Bill of Material.
See Sheet S-10 for Rustication details.
Stations are referenced to E I-80/94 .
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

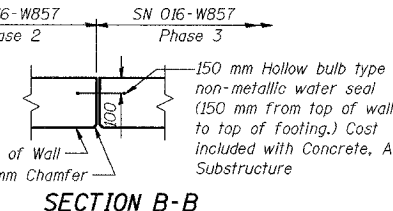
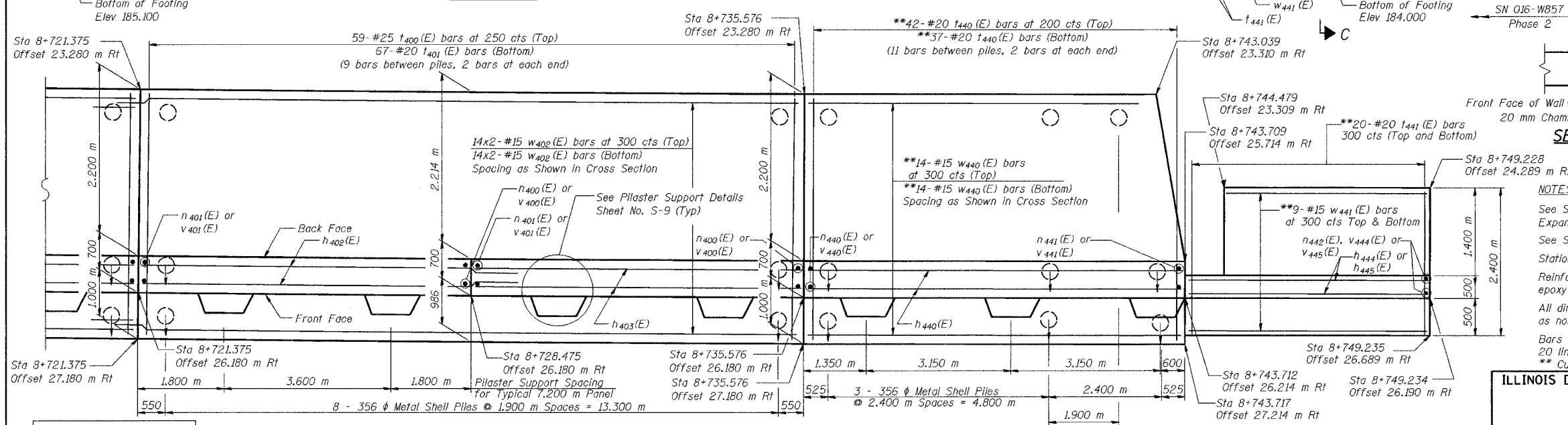
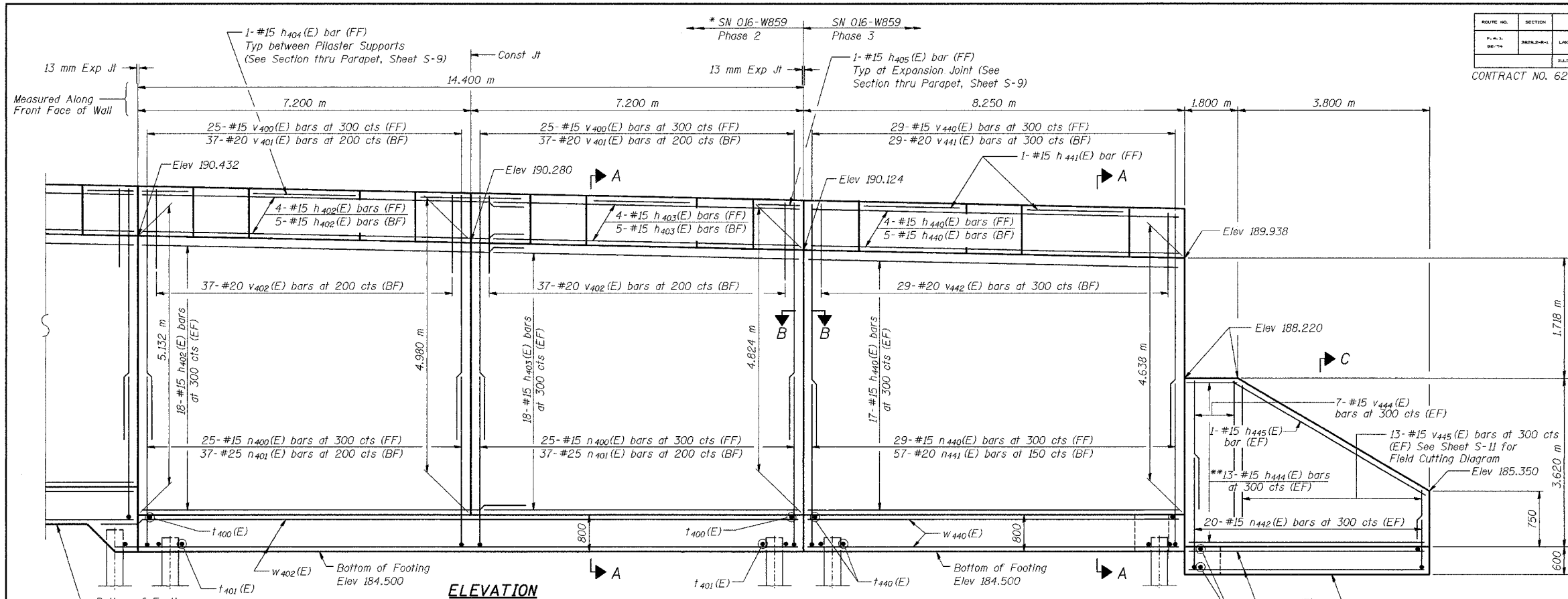
PLAN AND ELEVATION (5 OF 6)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+600.619 TO STATION 8+735.576
STRUCTURE NO. 016-W859

DATE 07/05

AMERICAN
CONSULTING ENGINEERS

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEET	SET	SHEET NO. S-8
1207	888	LAKE COUNTY, INDIANA	1207	888	17 SHEETS
CONTRACT NO. 62114					INDOT DES. NO. 0100987



NOTES:
 See Sheet S-9 for Section A-A, Section C-C, Expansion Joint Detail and Bill of Material.
 See Sheet S-10 for Rustication details.
 Stations are referenced to CL I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.
 ** Cuf to fit.

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

FOOTING PLAN

MINIMUM BAR LAPS
 #15 bars = 640
 #20 bars = 790

LEGEND
 BF = Back Face
 FF = Front Face
 EF = Each Face

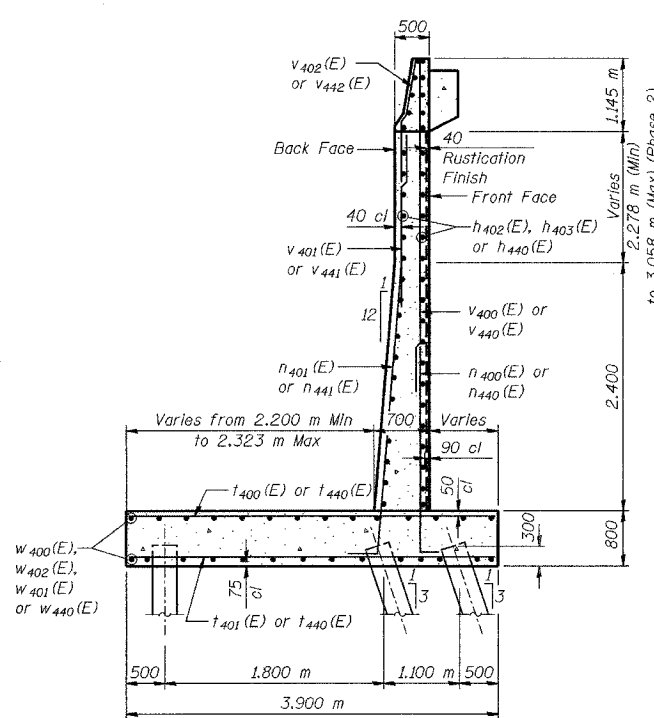
ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

PLAN AND ELEVATION (6 OF 6)
 SECTION 2626.2-R-1
 LAKE COUNTY, INDIANA
 STATION 8+735.576 TO STATION 8+748.936
 STRUCTURE NO. 016-W859

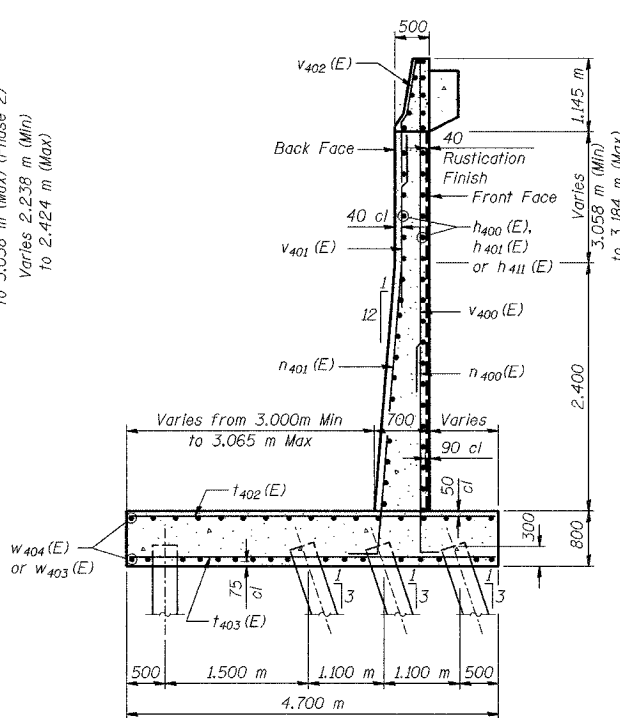
DATE 09/05

AMERICAN
 CONSULTING ENGINEERS

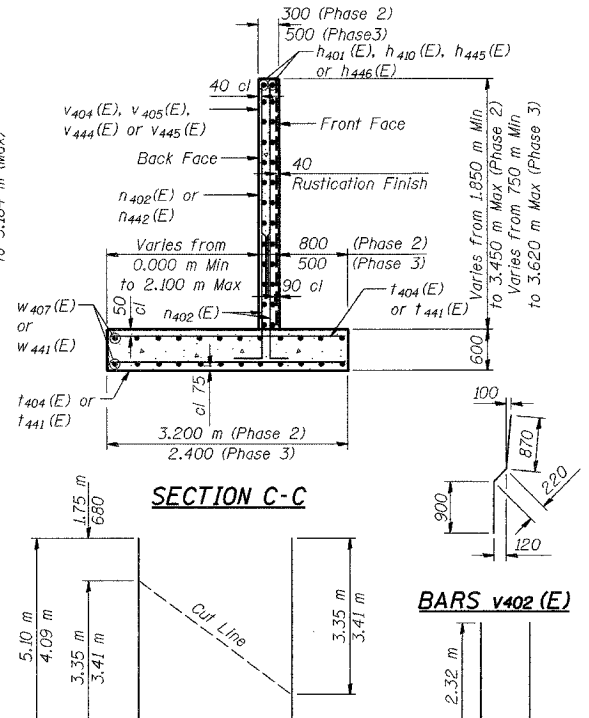
* FOR INFORMATION ONLY



SECTION A-A

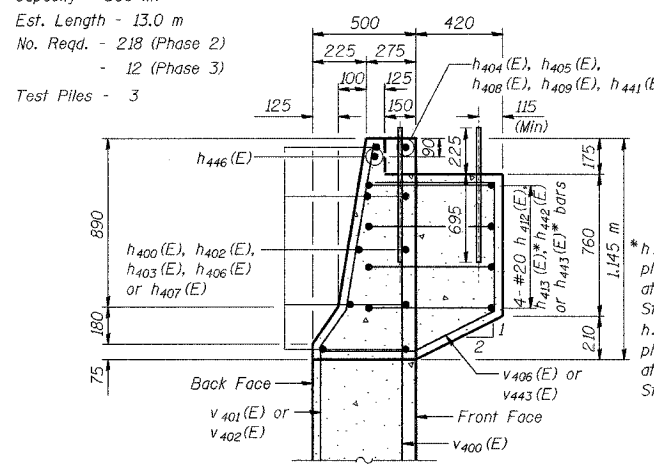


SECTION B-B

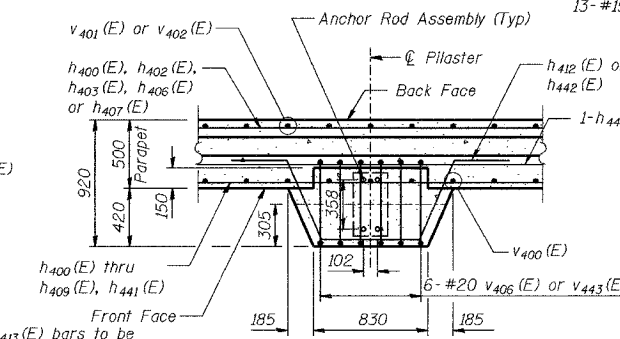


SECTION C-C

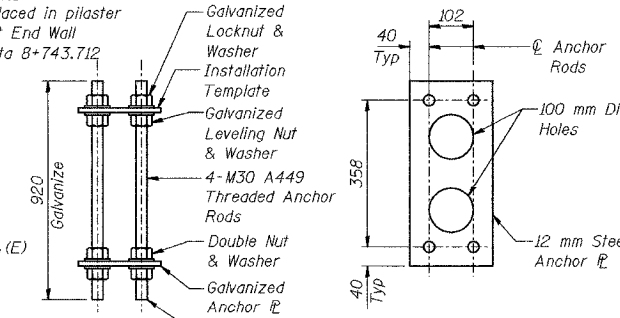
PILE DATA
 Type - 356 φ Metal Shell
 Capacity - 500 kN
 Est. Length - 13.0 m
 No. Req'd - 218 (Phase 2)
 - 12 (Phase 3)
 Test Piles - 3



SECTION THRU PARAPET



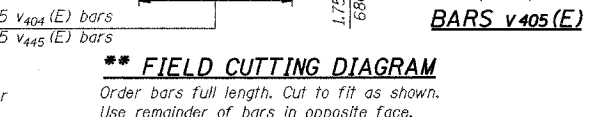
PILASTER SUPPORT - PLAN VIEW



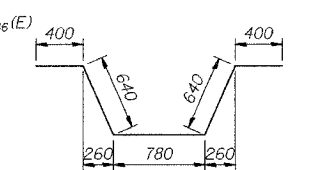
ELEVATION

PLAN

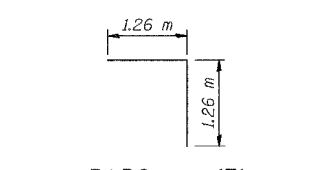
NOISE ABATEMENT WALL ANCHOR ROD ASSEMBLY
 (37 Req'd Phase 2)
 (3 Req'd Phase 3)



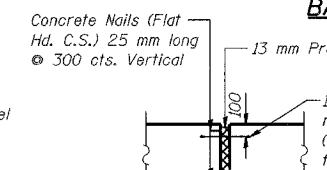
FIELD CUTTING DIAGRAM



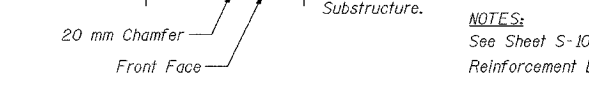
BARS n400(E) and n402(E), n440(E) thru n443(E)



BARS w405(E)



BARS w406(E)



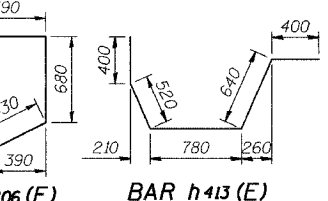
13 MM EXPANSION JOINT DETAIL

(PHASE 3) BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h440(E)	43	#15	8.15	—
h441(E)	2	#15	1.85	—
h442(E)	8	#20	2.86	—
h443(E)	4	#20	2.74	—
h444(E)	26	#15	5.50	—
h445(E)	2	#15	4.69	—
h446(E)	3	#15	2.11	—
n440(E)	29	#15	3.78	—
n441(E)	57	#20	3.84	—
n442(E)	40	#15	1.47	—
t440(E)	79	#20	3.80	—
t441(E)	40	#20	2.30	—
v440(E)	29	#15	3.76	—
v441(E)	29	#20	2.77	—
v442(E)	29	#20	1.99	—
v443(E)	18	#20	2.47	—
v444(E)	14	#15	3.42	—
v445(E)	13	#15	4.09	—
w440(E)	28	#20	7.24	—
w441(E)	18	#15	5.50	—

Excavation, Foundation, Unclassified	m ³	213.7
Concrete, A, Substructure	m ³	64.8
Reinforcing Bars, Epoxy Coated	kg	3,980
Surface Seal	L Sum	0.01
Pile, Concrete, Steel Shell Encased, 6.35 mm, 356 mm	m	156.0
Geocomposite Wall Drain	m ²	47
Pipe, Underdrain, Perf. 1.63 mm, 150 mm	m	14.0
Noise Abatement Wall Anchor Rod Assembly	Each	3
B Borrow	m ³	24.2
Structural Backfill	m ³	203.7
Masonry Coating	L Sum	0.03

The estimated Phase 3 Masonry Coating area is 222.0 m²
 The estimated Phase 3 Surface Seal area is 15.0 m²



BAR DIMENSIONS

Bar	A	B
n400(E)	3.20 m	260
n401(E)	3.20 m	400
n402(E)	2.33 m	260
n440(E)	3.52 m	260
n441(E)	3.52 m	320
n442(E)	1.21 m	260

(PHASE 2) BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h400(E)	174	#15	5.30	—
h401(E)	26	#15	5.00	—
h402(E)	409	#15	7.84	—
h403(E)	274	#15	7.10	—
h404(E)	28	#15	2.30	—
h405(E)	11	#15	1.10	—
h406(E)	9	#15	7.90	—
h407(E)	47	#15	7.04	—
h408(E)	2	#15	2.15	—
h409(E)	1	#15	1.90	—
h410(E)	2	#15	3.58	—
h411(E)	78	#20	7.90	—
h412(E)	144	#20	2.86	—
h413(E)	4	#20	2.74	—
n400(E)	452	#15	3.46	—
n401(E)	666	#25	3.60	—
n402(E)	46	#15	2.59	—
t400(E)	461	#25	3.80	—
t401(E)	541	#20	3.80	—
t402(E)	86	#25	4.60	—
t403(E)	56	#20	4.60	—
t404(E)	44	#20	3.10	—
v400(E)	457	#15	3.71	—
v401(E)	677	#20	3.86	—
v402(E)	677	#20	1.99	—
v403(E)	16	#15	3.35	—
v404(E)	16	#15	5.10	—
v405(E)	11	#20	5.04	—
v406(E)	222	#20	2.47	—
w400(E)	196	#15	8.76	—
w401(E)	140	#15	9.29	—
w402(E)	56	#15	7.85	—
w403(E)	34	#15	5.90	—
w404(E)	68	#15	4.98	—
w405(E)	28	#15	2.52	—
w406(E)	28	#15	3.06	—
w407(E)	48	#15	2.82	—

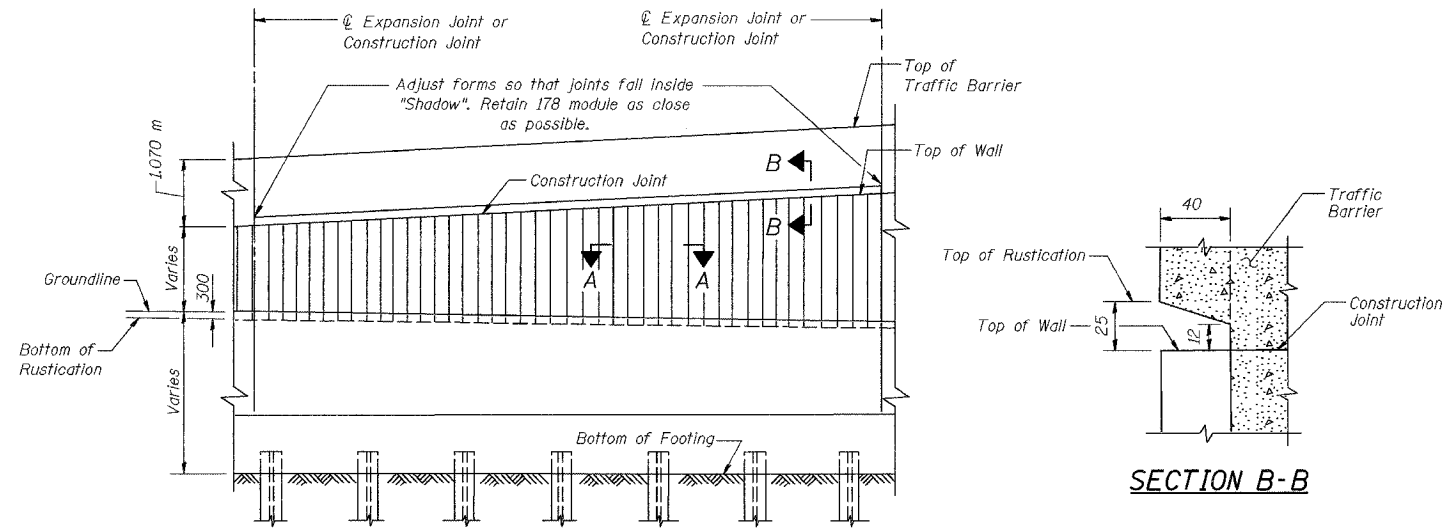
Test Pile, 356 mm	Each	3
Excavation, Foundation, Unclassified	m ³	1,801
Concrete, A, Substructure	m ³	849.1
Reinforcing Bars, Epoxy Coated	kg	59,570
Surface Seal	L Sum	0.06
Pile, Concrete, Steel Shell Encased, 6.35 mm, 356 mm	m	2,834.0
Geocomposite Wall Drain	m ²	620
Pipe, Underdrain, Perf. 1.63 mm, 150 mm	m	145.0
Noise Abatement Wall Anchor Rod Assembly	Each	37

The estimated Phase 2 Surface Seal area is 207 m²

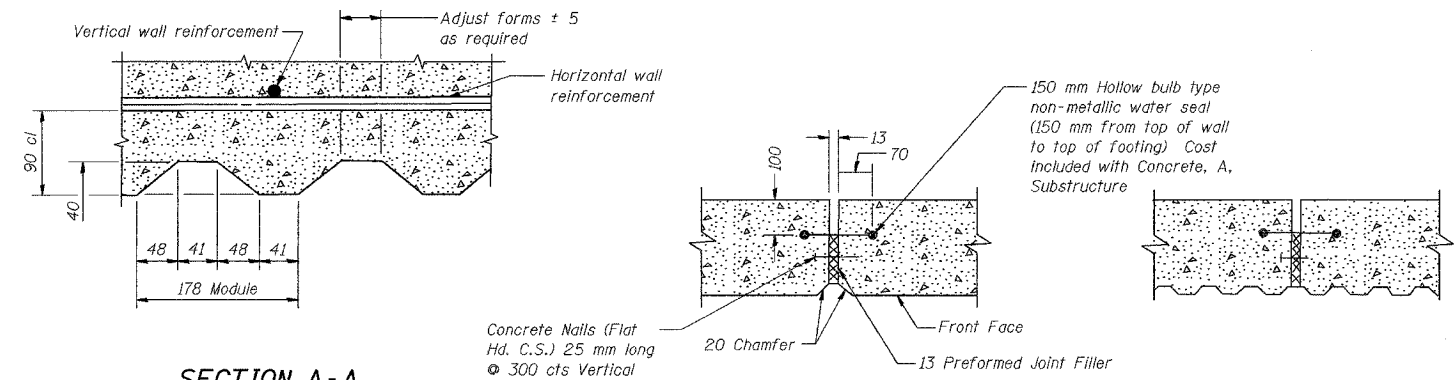
DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

CONSTRUCTION JOINT DETAIL

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41
WALL SECTIONS AND DETAILS
 SECTION 2626.2-R-1
 LAKE COUNTY, INDIANA
 STATION 8 + 735.576 TO STATION 8 + 748.936
 STRUCTURE NO. 016-W859
 DATE 09/05
AMERICAN
 CONSULTING ENGINEERS

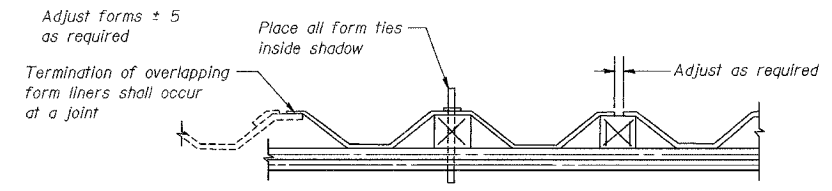


FRONT FACE ELEVATION-TYPICAL ARCHITECTURAL FINISH



SECTION A-A

EXPANSION JOINT DETAIL



SUGGESTED FORMWORK DETAIL

CONSTRUCTION JOINT DETAIL

**PHASE 2
RUSTICATION LIMITS**

STATION	TOP OF WALL ELEVATION	BOTTOM OF RUSTICATION ELEVATION
8+600.619	189.150	187.600
8+603.916	190.750	187.600
8+605.691	190.750	187.600
8+605.691	192.084	186.800
8+610.281	192.039	186.800
8+614.870	191.993	186.800
8+622.759	191.958	186.800
8+629.071	191.939	186.800
8+636.171	191.858	186.800
8+643.272	191.767	186.800
8+650.372	191.671	186.800
8+657.472	191.569	186.800
8+664.573	191.463	186.800
8+671.673	191.352	186.800
8+678.773	191.235	186.800
8+678.773	191.235	186.200
8+685.874	191.114	186.200
8+692.974	190.988	186.200
8+700.074	190.856	186.200
8+707.174	190.720	186.200
8+714.275	190.578	186.200
8+721.375	190.432	186.200
8+721.375	190.432	185.600
8+728.475	190.280	185.600
8+735.576	190.124	185.600

**PHASE 3
RUSTICATION LIMITS**

STATION	TOP OF WALL ELEVATION	BOTTOM OF RUSTICATION ELEVATION
8+735.576	190.124	185.600
8+743.712	189.938	185.600
8+743.712	188.220	184.900
8+745.487	188.220	184.900
8+749.234	185.350	184.900

BILL OF MATERIAL

Item	Unit	Phase 2		Phase 3	
		Total	Total	Total	Total
Rustication Finish	m ²	647	50		

Note: All dimensions are in millimeters (mm) unless otherwise noted.

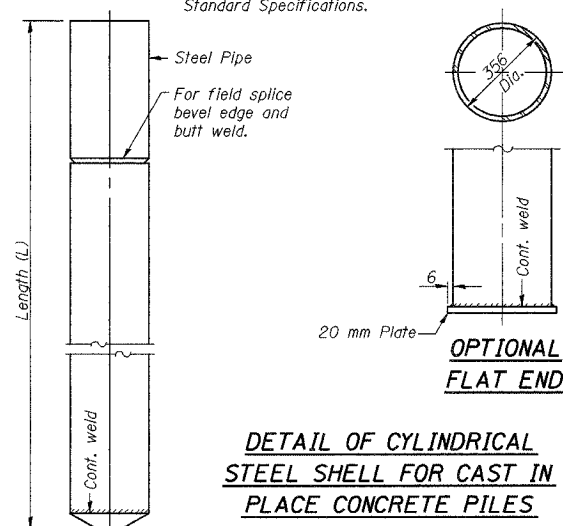
DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41
RUSTICATION FINISH DETAILS
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+735.576 TO STATION 8+748.936
STRUCTURE NO. 016-W859
DATE 09/05
AMERICAN
CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET TOTAL	SHEET NO.
F.A.S. 06/14	2626.2-R-1	LAKE COUNTY, INDIANA	1207	891	17 SHEETS
ILLINOIS		FED. AID PROJECT			

CONTRACT NO. 62114 INDOT DES. NO. 0100987

Notes: Driving and bearing ends of pipe shall be cut square. The thickness of the shell shall be 6.35 mm with a tolerance of 5%. The shell shall be according to Article 1006.05(a) of the Standard Specifications.



DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

X-PB (M) 4-30-97 (All dimensions are in millimeters (mm) except as noted.)

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

CONCRETE PILE DETAILS
 SECTION 2626.2-R-1
 LAKE COUNTY, INDIANA
 STATION 8+600.619 TO STATION 8+735.576
 STRUCTURE NO. 016-W859

DATE 07/05

AMERICAN
 CONSULTING ENGINEERS

BORING NO. AB-024 (1 OF 2)

BORING NO. AB-024 (2 OF 2)

BORING NO. AR-108 (1 OF 2)

BORING LOG AB-24 Page 1 of 2

Wang Engineering, INC.
wangeng3@wangen.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 190.57 m
North: 545209.11 m
East: 367989.76 m
Station: 8+604.21
Offset: 19.89 RT

BORING LOG AB-24 Page 2 of 2

Wang Engineering, INC.
wangeng3@wangen.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

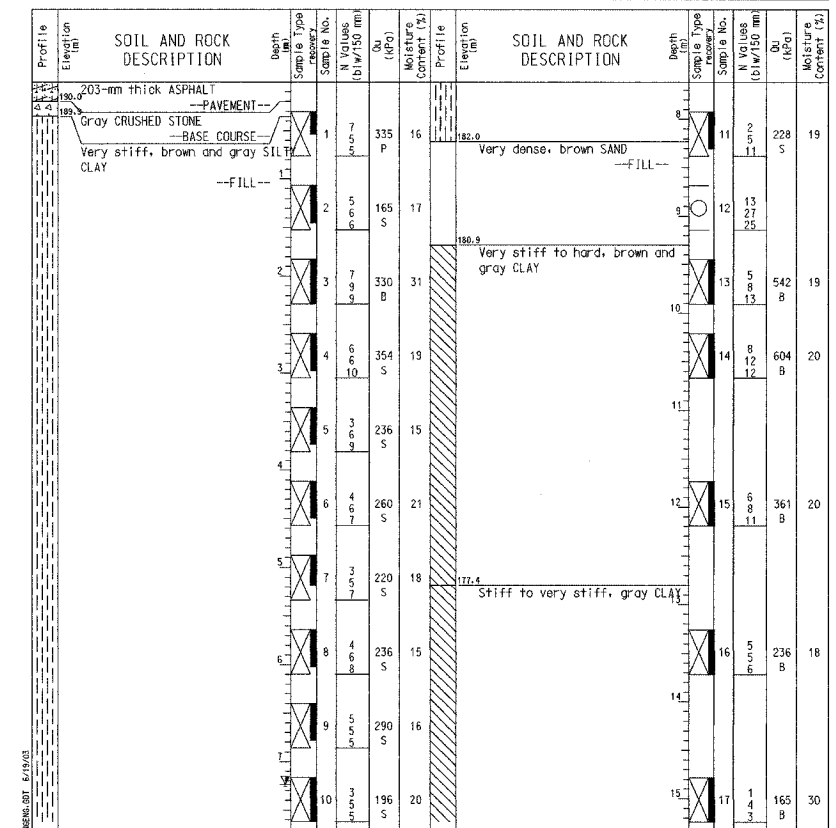
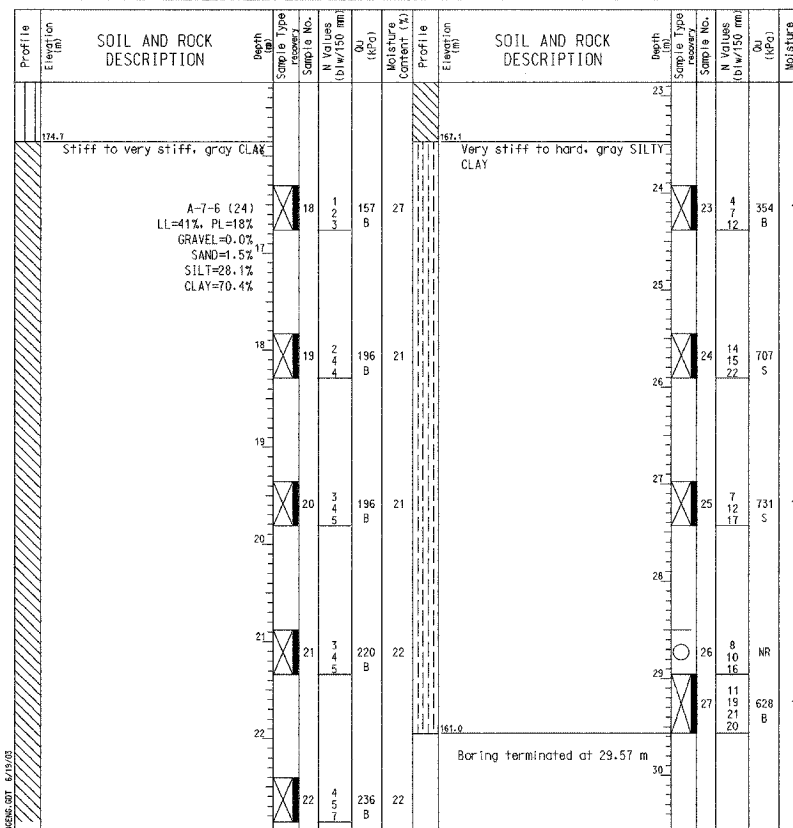
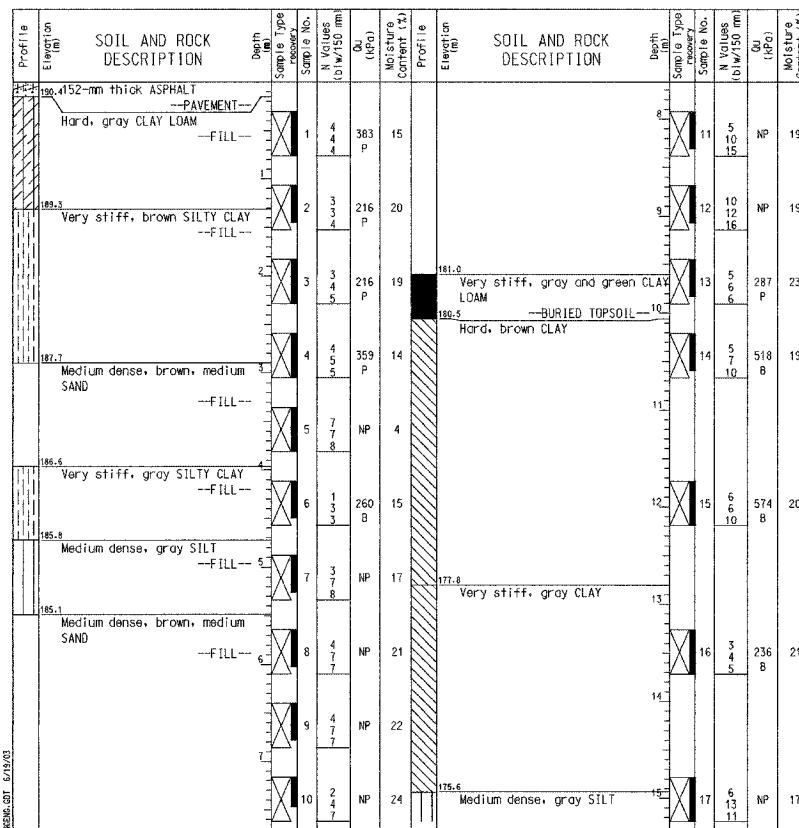
Datum: NGVD
Elevation: 190.57 m
North: 545209.11 m
East: 367989.76 m
Station: 8+604.21
Offset: 19.89 RT

BORING LOG AR-108 Page 1 of 2

Wang Engineering, INC.
wangeng3@wangen.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 190.23 m
North: 545202.62 m
East: 368008.80 m
Station: 8+624.11
Offset: 19.76 RT



GENERAL NOTES

Begin Drilling 01-23-2002 Complete Drilling 01-23-2002
 Drilling Contractor TSC Drill Rig CME 75
 Driller C&J Logger B. Fugiel Checked by N. Davis
 Drilling Method Mud Rotary; Grouted upon completion

WATER LEVEL DATA

While Drilling
 At Completion of Drilling
 Time After Drilling 0 HOURS
 Depth to Water 0 m
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES

Begin Drilling 01-23-2002 Complete Drilling 01-23-2002
 Drilling Contractor TSC Drill Rig CME 75
 Driller C&J Logger B. Fugiel Checked by N. Davis
 Drilling Method Mud Rotary; Grouted upon completion

WATER LEVEL DATA

While Drilling
 At Completion of Drilling
 Time After Drilling 0 HOURS
 Depth to Water 0 m
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES

Begin Drilling 05-02-2002 Complete Drilling 05-02-2002
 Drilling Contractor TSC Drill Rig CME 75
 Driller C&A Logger H. Subail Checked by B. Fugiel
 Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling
 At Completion of Drilling
 Time After Drilling 24 HOURS
 Depth to Water 7.24 m
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	MJW
CHECKED	KFA
DRAWN	CAK/MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

BORING LOGS (1 OF 6)
 SECTION 2626.2-R-1
 LAKE COUNTY, INDIANA
 STATION 8+600.619 TO STATION 8+735.576
 STRUCTURE NO. 016-W859

DATE 07/05

AMERICAN
 CONSULTING ENGINEERS

BORING NO. AR-108 (2 OF 2)

BORING NO. AR-109 (1 OF 2)

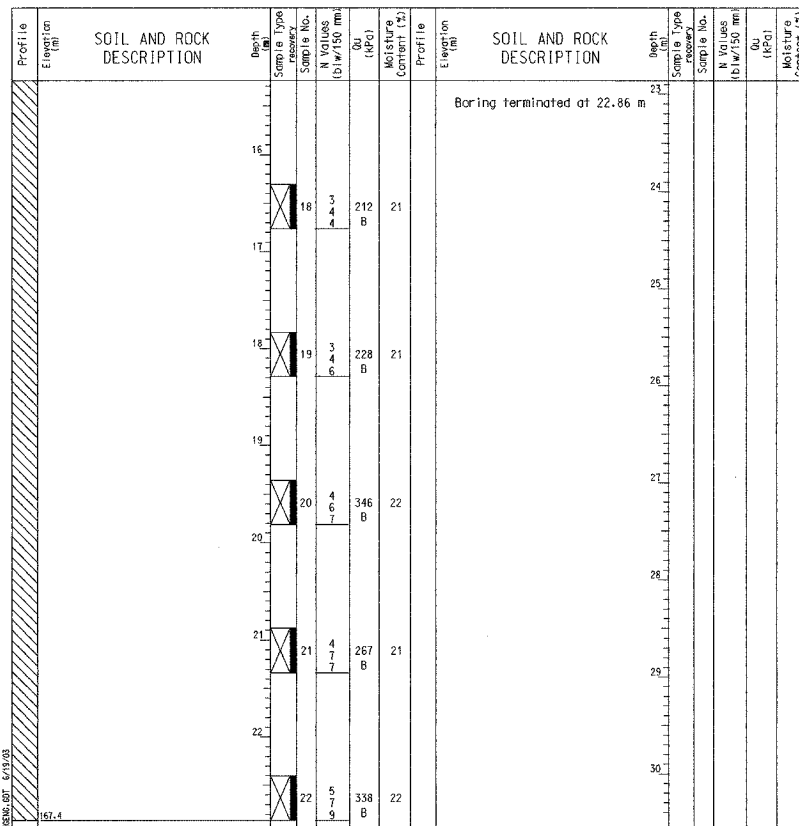
BORING NO. AR-109 (2 OF 2)

BORING LOG AR-108 Page 2 of 2

Wang Engineering, INC.
wangeng3@wengeng.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W A s29 R15E T36N

Datum: NGVD
Elevation: 190.23 m
North: 545202.62 m
East: 368008.80 m
Station: 8+624.11
Offset: 19.76 RT



GENERAL NOTES

Begin Drilling 05-02-2002 Complete Drilling 05-02-2002
 Drilling Contractor TSC Drill Rig CME 75
 Driller CAA Logger H. Suhail checked by B. Fugiel
 Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

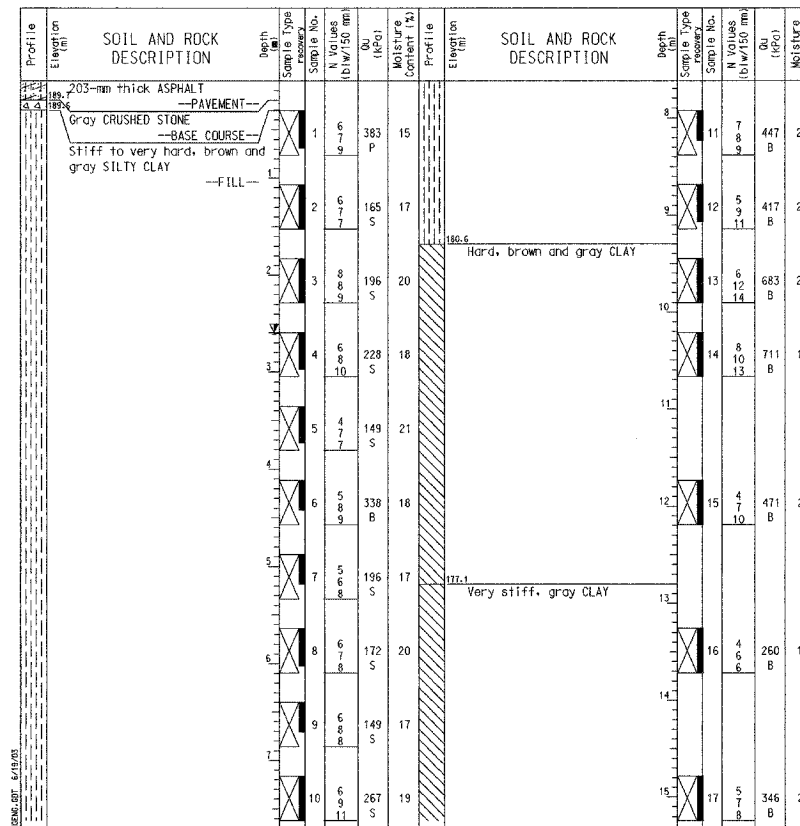
While Drilling
 At Completion of Drilling
 Time After Drilling 24 hours
 Depth to Water 7.24 m
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

BORING LOG AR-109 Page 1 of 2

Wang Engineering, INC.
wangeng3@wengeng.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W A s29 R15E T36N

Datum: NGVD
Elevation: 189.87 m
North: 545196.30 m
East: 368027.07 m
Station: 8+643.24
Offset: 19.92 RT



GENERAL NOTES

Begin Drilling 05-01-2002 Complete Drilling 05-02-2002
 Drilling Contractor TSC Drill Rig CME 75
 Driller CAA Logger H. Suhail checked by B. Fugiel
 Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

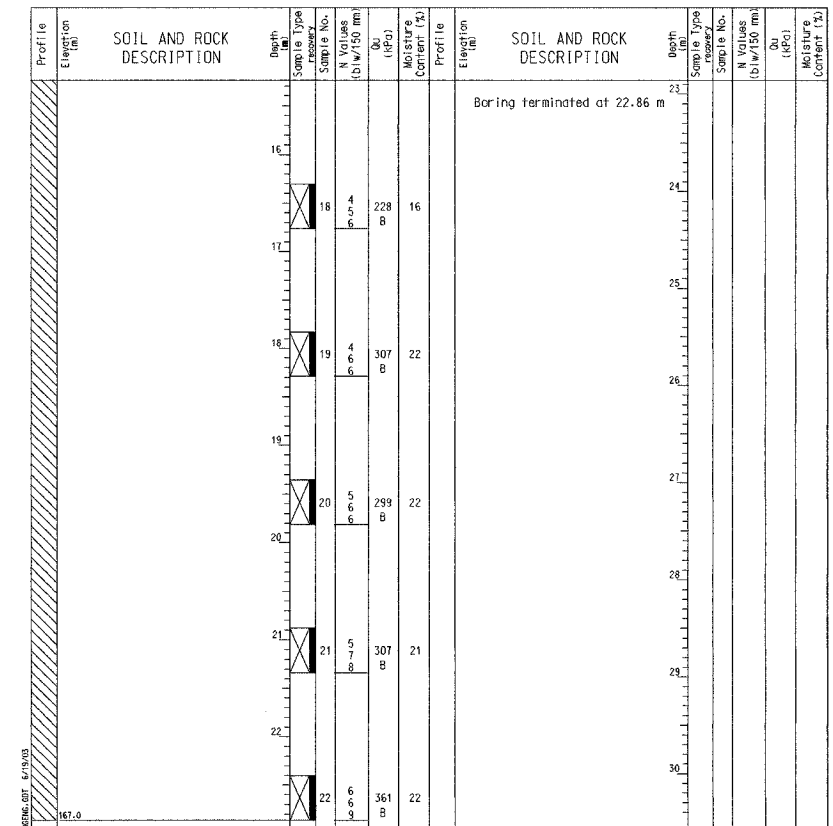
While Drilling
 At Completion of Drilling
 Time After Drilling 24 hours
 Depth to Water 2.59 m
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

BORING LOG AR-109 Page 2 of 2

Wang Engineering, INC.
wangeng3@wengeng.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W A s29 R15E T36N

Datum: NGVD
Elevation: 189.87 m
North: 545196.30 m
East: 368027.07 m
Station: 8+643.24
Offset: 19.92 RT



GENERAL NOTES

Begin Drilling 05-01-2002 Complete Drilling 05-02-2002
 Drilling Contractor TSC Drill Rig CME 75
 Driller CAA Logger H. Suhail checked by B. Fugiel
 Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling
 At Completion of Drilling
 Time After Drilling 24 hours
 Depth to Water 2.59 m
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	MJW
CHECKED	KFA
DRAWN	CAKJJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

BORING LOGS (2 OF 6)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+600.619 TO STATION 8+735.576
STRUCTURE NO. 016-W859

DATE 07/05

AMERICAN
CONSULTING ENGINEERS

BORING NO. AR-110 (1 OF 2)

BORING NO. AR-110 (2 OF 2)

BORING NO. AR-111 (1 OF 2)

BORING LOG AR-110 Page 1 of 2

Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers
wangeng3@wangen.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 189.51 m
North: 545190.55 m
East: 368045.26 m
Station: 8+662.12
Offset: 19.75 RT

BORING LOG AR-110 Page 2 of 2

Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers
wangeng3@wangen.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

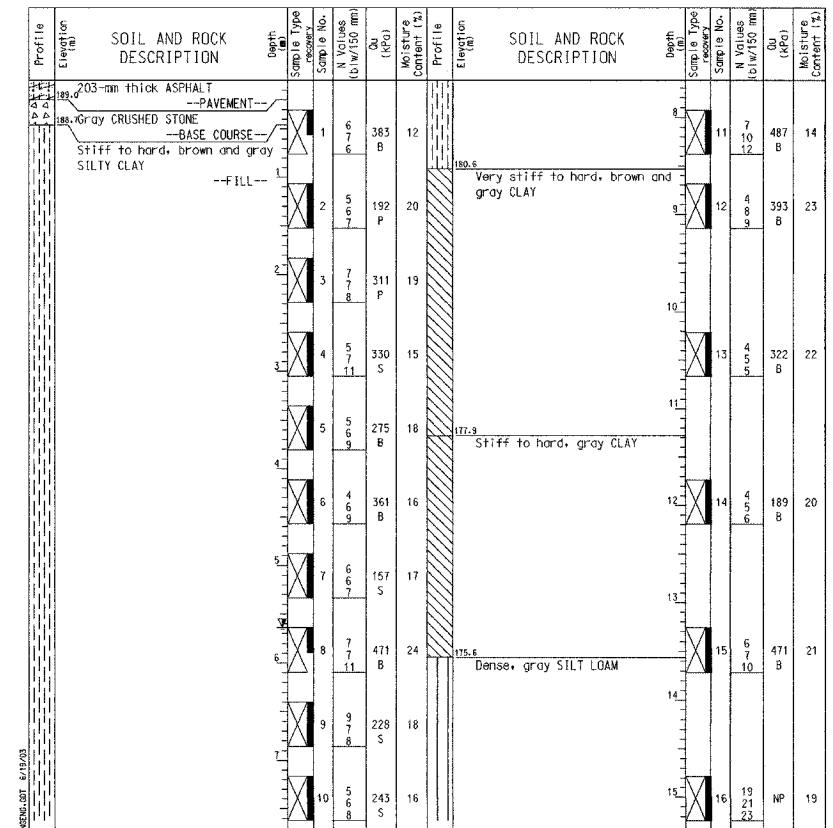
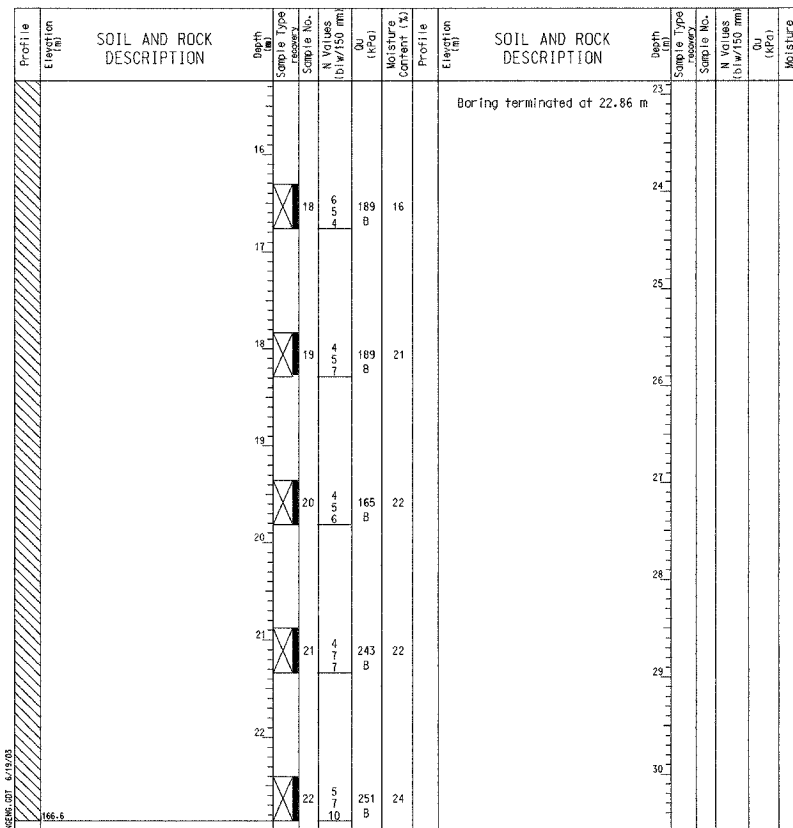
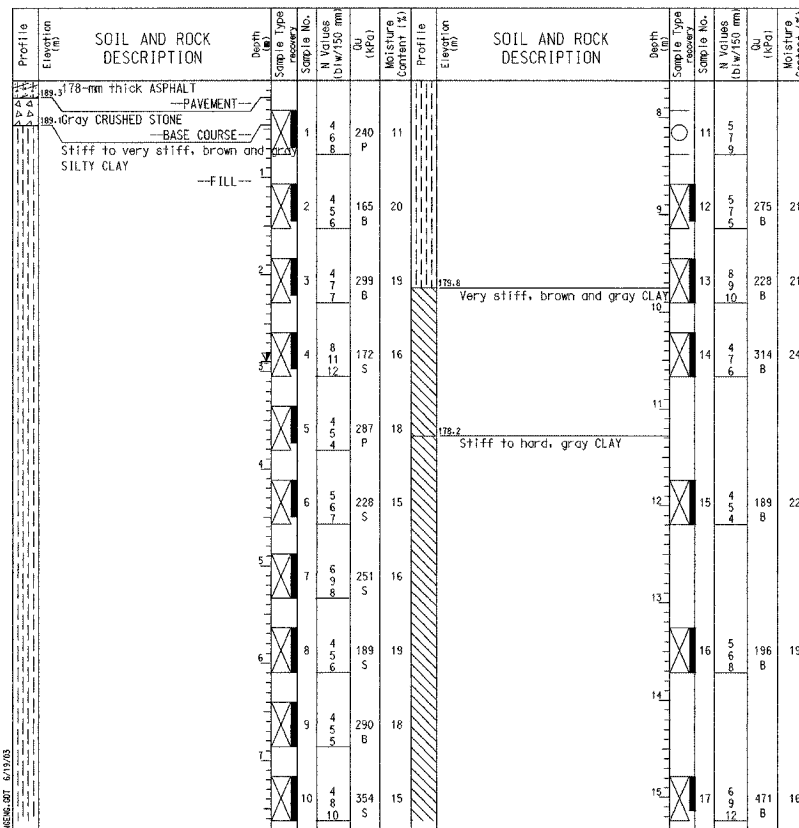
Datum: NGVD
Elevation: 189.51 m
North: 545190.55 m
East: 368045.26 m
Station: 8+662.12
Offset: 19.75 RT

BORING LOG AR-111 Page 1 of 2

Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers
wangeng3@wangen.com
100 Fairbank Street
Addison, IL 60101
Telephone: 630 458-0700
Fax: 630 458-0900

WEI Job No.: 255-08-01
Client: American Consulting Engineers
Project: FAI 80/94, I-294 to US 41
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
Elevation: 189.17 m
North: 545184.76 m
East: 368063.86 m
Station: 8+681.39
Offset: 19.71 RT



GENERAL NOTES

Begin Drilling 05-02-2002 Complete Drilling 05-02-2002

Drilling Contractor TSC Drill Rig CME 75

Driller CAA Logger E. Datz Checked by B. Fugiel

Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling

At Completion of Drilling

Time After Drilling 24 hours

Depth to Water 2.90 m

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES

Begin Drilling 05-02-2002 Complete Drilling 05-02-2002

Drilling Contractor TSC Drill Rig CME 75

Driller CAA Logger E. Datz Checked by B. Fugiel

Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling

At Completion of Drilling

Time After Drilling 24 hours

Depth to Water 2.90 m

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES

Begin Drilling 05-05-2002 Complete Drilling 05-05-2002

Drilling Contractor TSC Drill Rig CME 75

Driller CAA Logger E. Datz Checked by B. Fugiel

Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling

At Completion of Drilling

Time After Drilling 24 hours

Depth to Water 5.64 m

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	MJW
CHECKED	KFA
DRAWN	CAK/MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

BORING LOGS (3 OF 6)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+600.619 TO STATION 8+735.576
STRUCTURE NO. 016-W859

DATE 07/05

AMERICAN
CONSULTING ENGINEERS

BORING NO. AR-111 (2 OF 2)

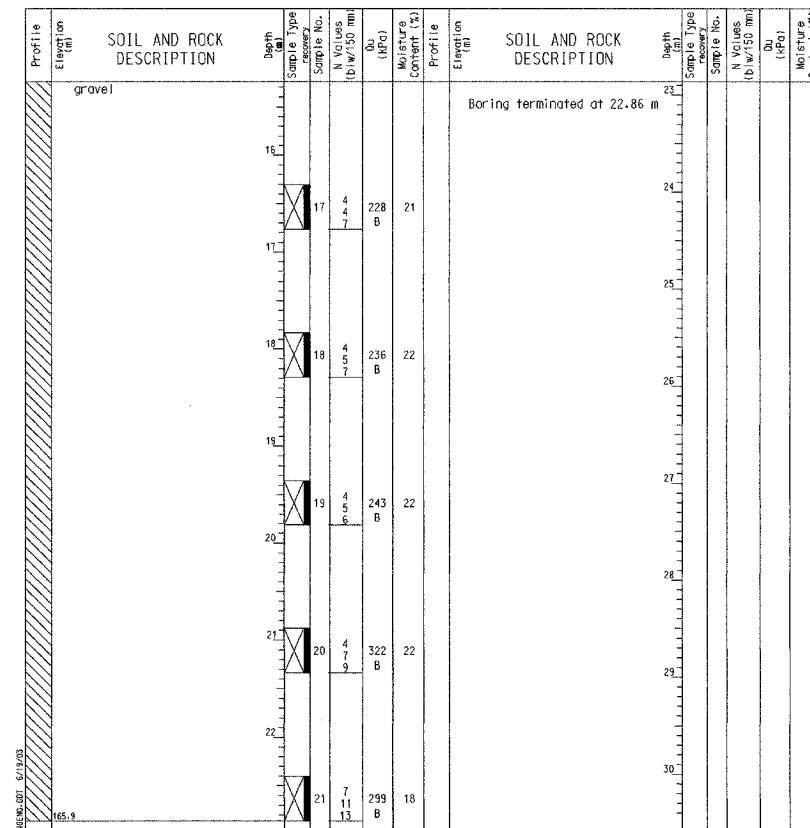
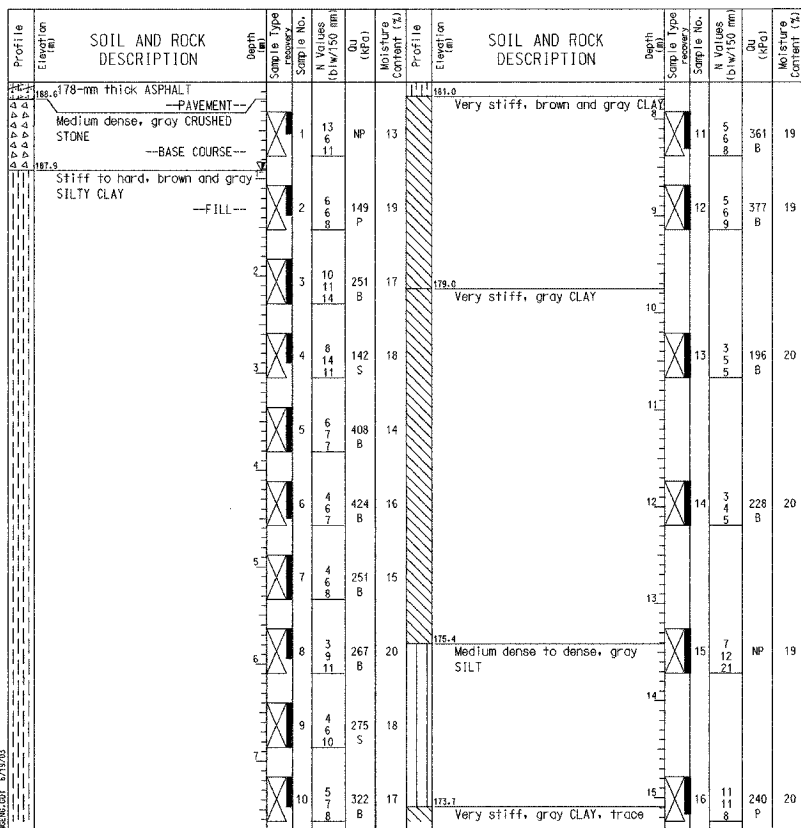
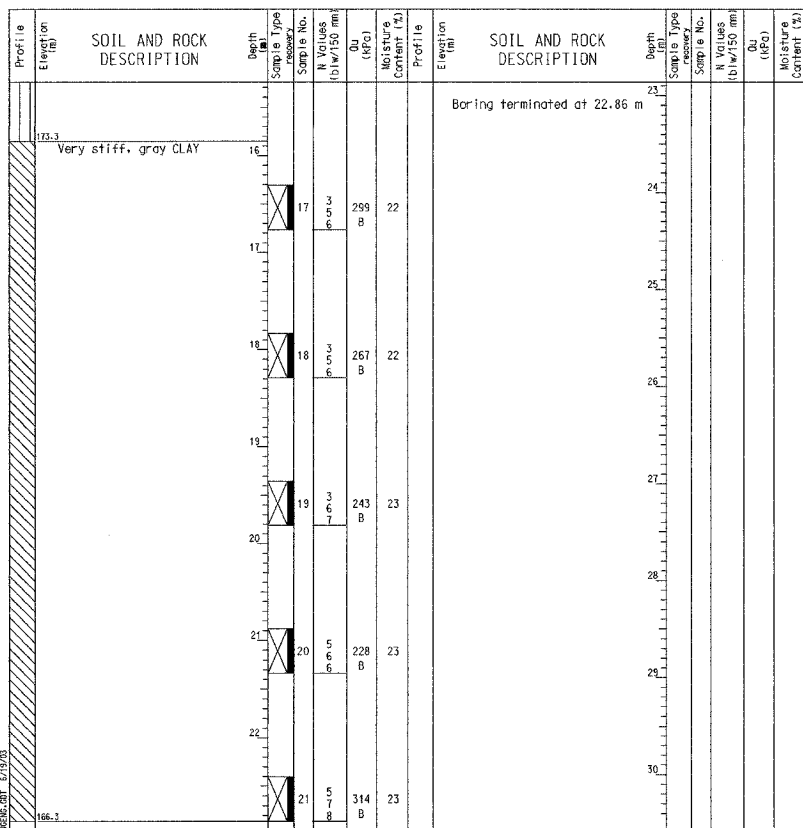
BORING NO. AR-112 (1 OF 2)

BORING NO. AR-112 (2 OF 2)

BORING LOG AR-111 Page 2 of 2
 Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers
 Client: American Consulting Engineers
 Project: FAI 80/94, I-294 to US 41
 Location: s13 T36N R10W & s29 R15E T36N
 Datum: NGVD
 Elevation: 189.17 m
 North: 545194.76 m
 East: 368063.86 m
 Station: 8+700.19
 Offset: 19.71 RT

BORING LOG AR-112 Page 1 of 2
 Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers
 Client: American Consulting Engineers
 Project: FAI 80/94, I-294 to US 41
 Location: s13 T36N R10W & s29 R15E T36N
 Datum: NGVD
 Elevation: 188.79 m
 North: 545179.49 m
 East: 368082.10 m
 Station: 8+700.19
 Offset: 19.46 RT

BORING LOG AR-112 Page 2 of 2
 Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers
 Client: American Consulting Engineers
 Project: FAI 80/94, I-294 to US 41
 Location: s13 T36N R10W & s29 R15E T36N
 Datum: NGVD
 Elevation: 188.79 m
 North: 545179.49 m
 East: 368082.10 m
 Station: 8+700.19
 Offset: 19.46 RT



GENERAL NOTES
 Begin Drilling 05-05-2002 Complete Drilling 05-05-2002
 Drilling Contractor TSC Drill Rig CME 75
 Driller C&A Logger E. Datz Checked by B. Fugale
 Drilling Method Mud Rotary; Grouted after final water reading.

WATER LEVEL DATA
 While Drilling -
 At Completion of Drilling -
 Time After Drilling 24 hours
 Depth to Water 5.64 m
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES
 Begin Drilling 04-14-2002 Complete Drilling 04-15-2002
 Drilling Contractor TSC Drill Rig CME 75
 Driller C&J Logger H. Subail Checked by B. Fugale
 Drilling Method Mud Rotary; Grouted after final water reading.

WATER LEVEL DATA
 While Drilling -
 At Completion of Drilling -
 Time After Drilling 24 hours
 Depth to Water 0.91 m
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES
 Begin Drilling 04-14-2002 Complete Drilling 04-15-2002
 Drilling Contractor TSC Drill Rig CME 75
 Driller C&J Logger H. Subail Checked by B. Fugale
 Drilling Method Mud Rotary; Grouted after final water reading.

WATER LEVEL DATA
 While Drilling -
 At Completion of Drilling -
 Time After Drilling 24 hours
 Depth to Water 0.91 m
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	MJW
CHECKED	KFA
DRAWN	CAK/JB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41
 BORING LOGS (4 OF 6)
 SECTION 2626.2-R-1
 LAKE COUNTY, INDIANA
 STATION 8+600.619 TO STATION 8+735.756
 STRUCTURE NO. 016-W859
 DATE 07/05
AMERICAN
 CONSULTING ENGINEERS

BORING NO. AR-113 (1 OF 2)

BORING NO. AR-113 (2 OF 2)

BORING NO. AB-029 (1 OF 2)

BORING LOG AR-113 Page 1 of 2

Wang Engineering, INC.
 Consulting Geotechnical and Environmental Engineers
 wangeng@wangeng.com
 100 Fairbank Street
 Addison, IL 60101
 Telephone: 630 458-0700
 Fax: 630 458-0900

WEI Job No.: 255-08-01
 Client: American Consulting Engineers
 Project: FAI 80/94, I-294 to US 41
 Location: s13 T36N R10W A s29 R15E T36N

Datum: NGVD
 Elevation: 188.35 m
 North: 545173.80 m
 East: 368100.56 m
 Station: 8+719.29
 Offset: 19.75 RT

BORING LOG AR-113 Page 2 of 2

Wang Engineering, INC.
 Consulting Geotechnical and Environmental Engineers
 wangeng@wangeng.com
 100 Fairbank Street
 Addison, IL 60101
 Telephone: 630 458-0700
 Fax: 630 458-0900

WEI Job No.: 255-08-01
 Client: American Consulting Engineers
 Project: FAI 80/94, I-294 to US 41
 Location: s13 T36N R10W & s29 R15E T36N

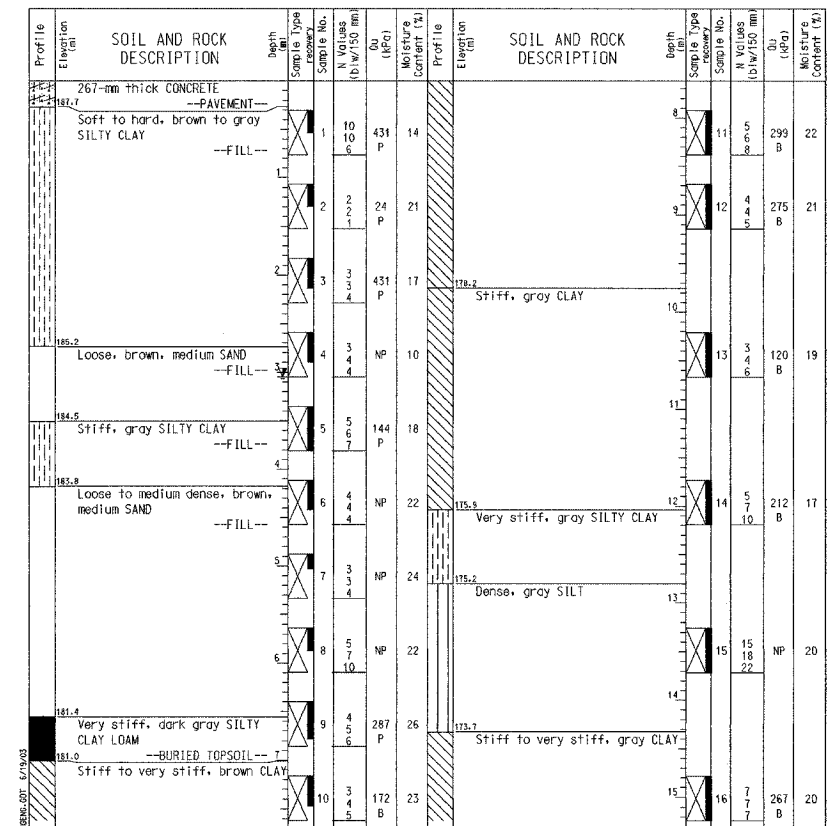
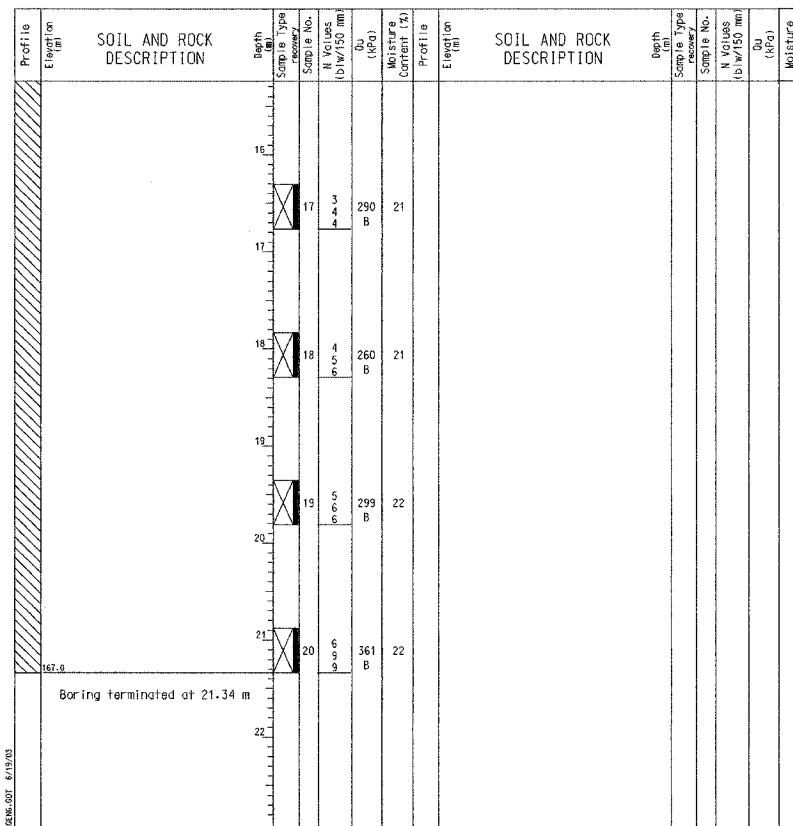
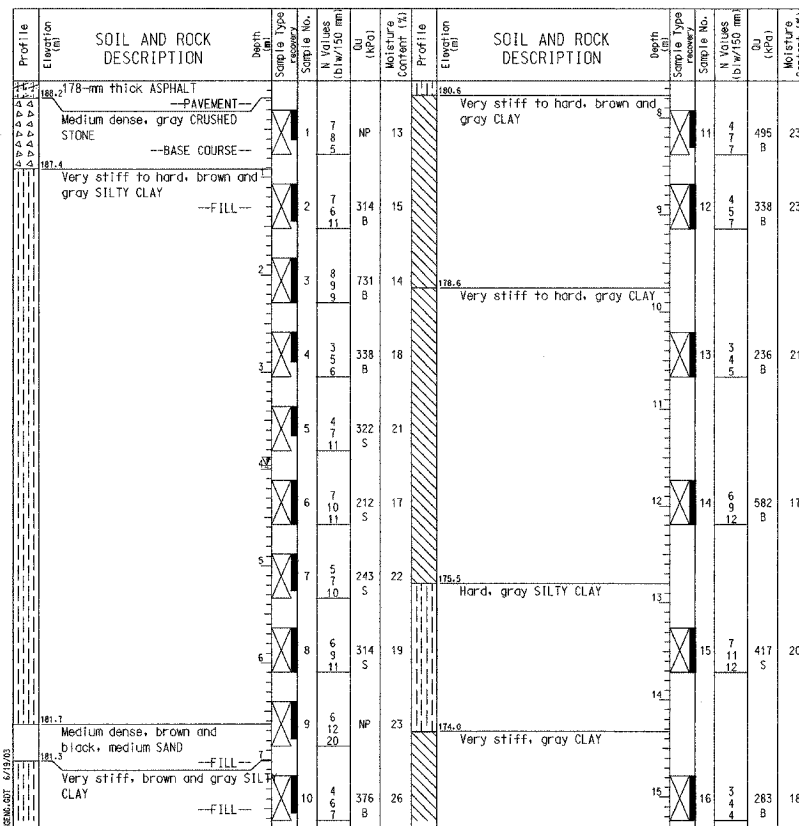
Datum: NGVD
 Elevation: 188.35 m
 North: 545173.80 m
 East: 368100.56 m
 Station: 8+719.29
 Offset: 19.75 RT

BORING LOG AB-29 Page 1 of 2

Wang Engineering, INC.
 Consulting Geotechnical and Environmental Engineers
 wangeng@wangeng.com
 100 Fairbank Street
 Addison, IL 60101
 Telephone: 630 458-0700
 Fax: 630 458-0900

WEI Job No.: 255-08-01
 Client: American Consulting Engineers
 Project: FAI 80/94, I-294 to US 41
 Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD
 Elevation: 187.99 m
 North: 545169.29 m
 East: 368115.09 m
 Station: 8+734.37
 Offset: 20.14 RT



GENERAL NOTES

Begin Drilling 04-28-2002 Complete Drilling 04-28-2002
 Drilling Contractor TSC Drill Rig CME 75
 Driller C&A Logger H. Suhail checked by B. Fugiel
 Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling
 At Completion of Drilling
 Time After Drilling 24 hours
 Depth to Water 3.95 m
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES

Begin Drilling 04-28-2002 Complete Drilling 04-28-2002
 Drilling Contractor TSC Drill Rig CME 75
 Driller C&A Logger H. Suhail checked by B. Fugiel
 Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling
 At Completion of Drilling
 Time After Drilling 24 hours
 Depth to Water 3.95 m
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

GENERAL NOTES

Begin Drilling 02-05-2002 Complete Drilling 02-06-2002
 Drilling Contractor TSC Drill Rig CME 75
 Driller C&D Logger N. Davis checked by N. Davis
 Drilling Method Mud Rotary; Grouted after final water reading

WATER LEVEL DATA

While Drilling
 At Completion of Drilling
 Time After Drilling 24 hours
 Depth to Water 3.05 m
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

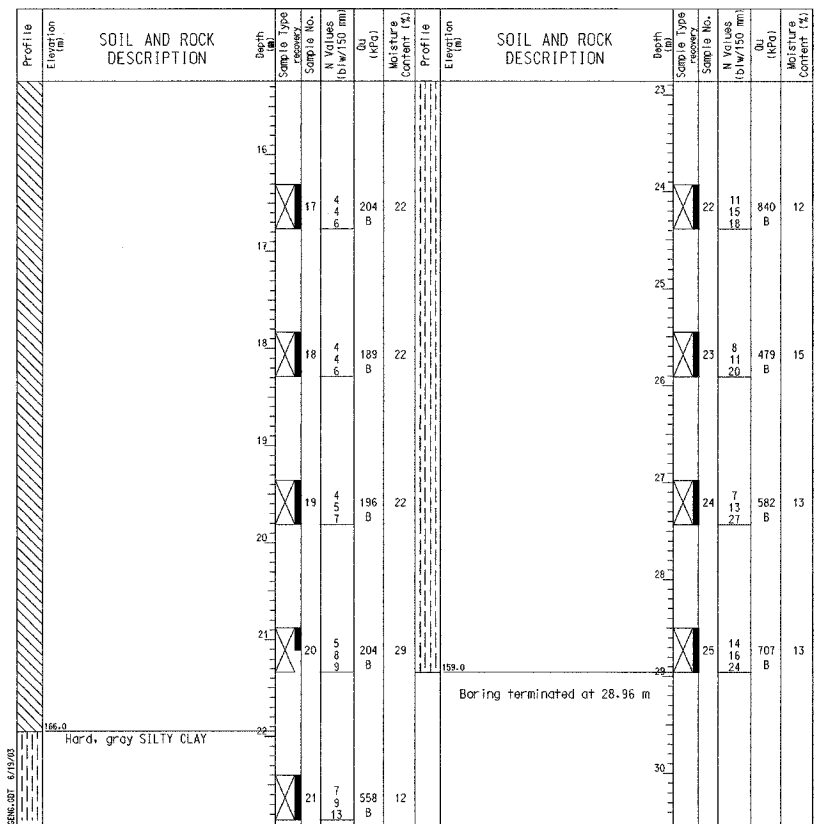
BORING LOGS (5 OF 6)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+600.619 TO STATION 8+735.576
STRUCTURE NO. 016-W859

DATE 07/05

AMERICAN
 CONSULTING ENGINEERS

BORING NO. AB-029 (2 OF 2)

<p>Wang Engineering, Inc. Consulting Geotechnical and Environmental Engineers wangeng3@wangeng.com 100 Fairbank Street Addison, IL 60101 Telephone: 630 458-0700 Fax: 630 458-0900</p>	BORING LOG AB-29		Page 2 of 2
	WEI Job No.: 255-08-01		Datum: NGVD
	Client: American Consulting Engineers		Elevation: 187.99 m
	Project: I-80/94, I-294 to US 41		North: 545169.29 m
Location: s13 T36N R10W & s29 R15E T36N		East: 369115.09 m	Station: 8+734.37
		Offset: 20.14 RT	



GENERAL NOTES Begin Drilling 02-05-2002 Complete Drilling 02-06-2002 Drilling Contractor TSC Drill Rig CME 75 Driller C&D Logger H. Suhail Checked by N. Davis Drilling Method Mud Rotary; Grouted after final water reading		WATER LEVEL DATA While Drilling 3.05 m At Completion of Drilling - Time After Drilling 24 hours Depth to Water 3.05 m <small>The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.</small>	
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DESIGNED	MJW
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

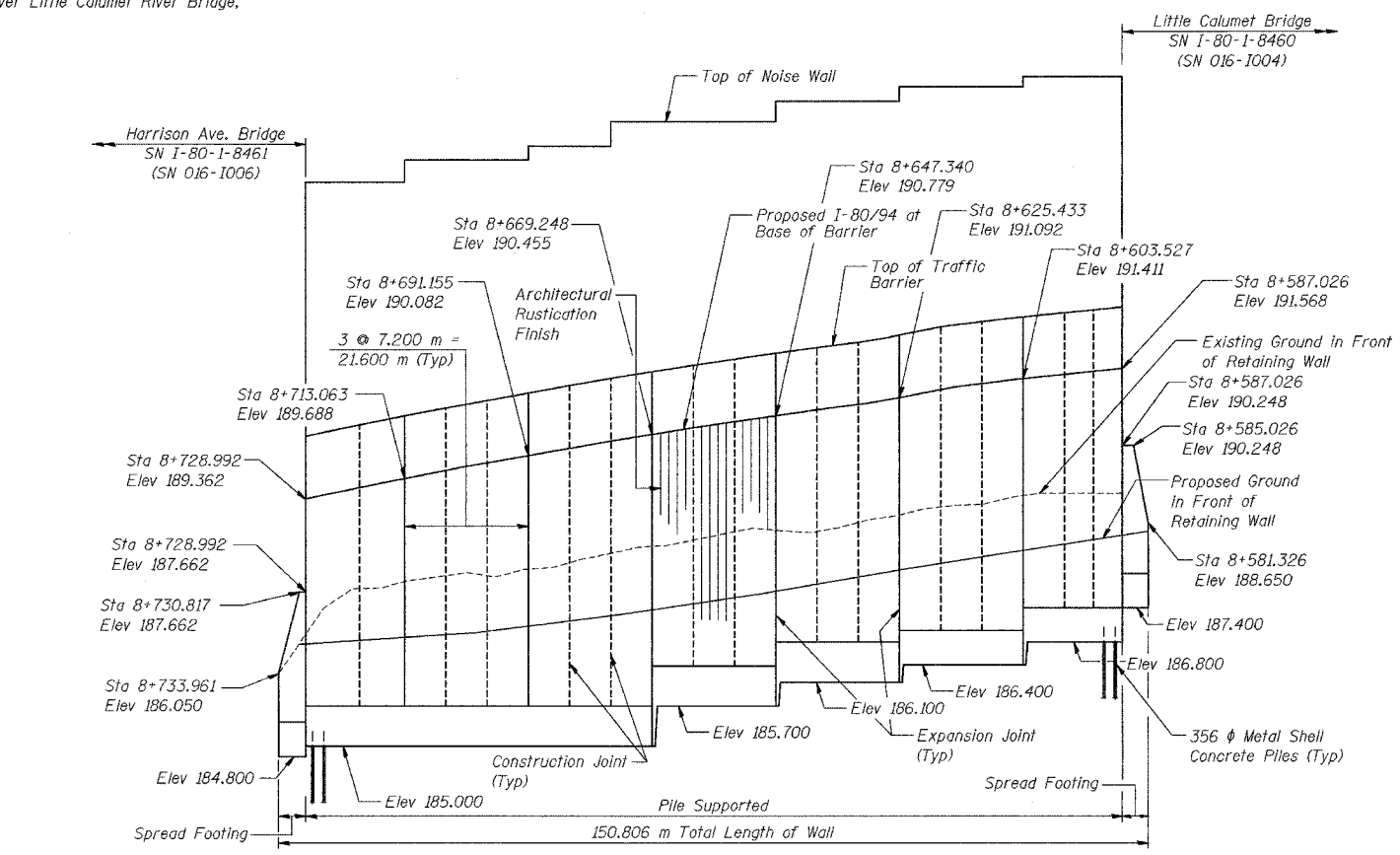
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-80/94/US 6
KINGERY-BORMAN EXPRESSWAY
BURNHAM ROAD TO US 41

BORING LOGS (6 OF 6)
SECTION 2626.2-R-1
LAKE COUNTY, INDIANA
STATION 8+600.619 TO STATION 8+735.576
STRUCTURE NO. 016-W859

DATE 07/05

Benchmark: Chiseled box at NE corner of NE wingwall over Little Calumet River Bridge.
 Westbound I-80 mile marker 0.4.
 Elevation = 191.619
 Existing Structure: None
 All dimensions in millimeters (mm) except as noted.

ROUTE NO.	SECTION	COUNTY	POST MILES	SHEET	SHEET NO. S-1 19 SHEETS
I-80	2626.2-R-2	LAKE COUNTY, INDIANA	1207	898	
CONTRACT NO. 62114		INDOT DES. NO. 0100987			



CURVE DATA I-80/94

$\Delta = 20^\circ-51'-41''$
 $R = 1,864.600 \text{ m}$
 $T = 343.250 \text{ m}$
 $L = 678.899 \text{ m}$
 $E = 33.331 \text{ m}$
 P.C. Sta = 8+603.684
 P.I. Sta = 8+946.934
 P.T. Sta = 9+282.583
 S.E. = 3.0%

LOADING

Wind Load on Noise Wall = 1.7 kPa

DESIGN STRESSES

FIELD UNITS
 $f'_c = 24 \text{ MPa}$
 $f_y = 400 \text{ MPa (Reinf.)}$
 Maximum Applied Soil Bearing Pressure = 55 kPa
 From Sta 8+729.0 to Sta 8+734.0
 50 kPa from Sta 8+581.3 to Sta 8+587.1

DESIGN SPECIFICATIONS

AASHTO 2002 Standard Specifications for Highway Bridges
 AASHTO 1989 Guide Specifications for Structural Design of Sound Barriers and 1992 Interims

APPROVED
 FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
 ENGINEER OF BRIDGES AND STRUCTURES



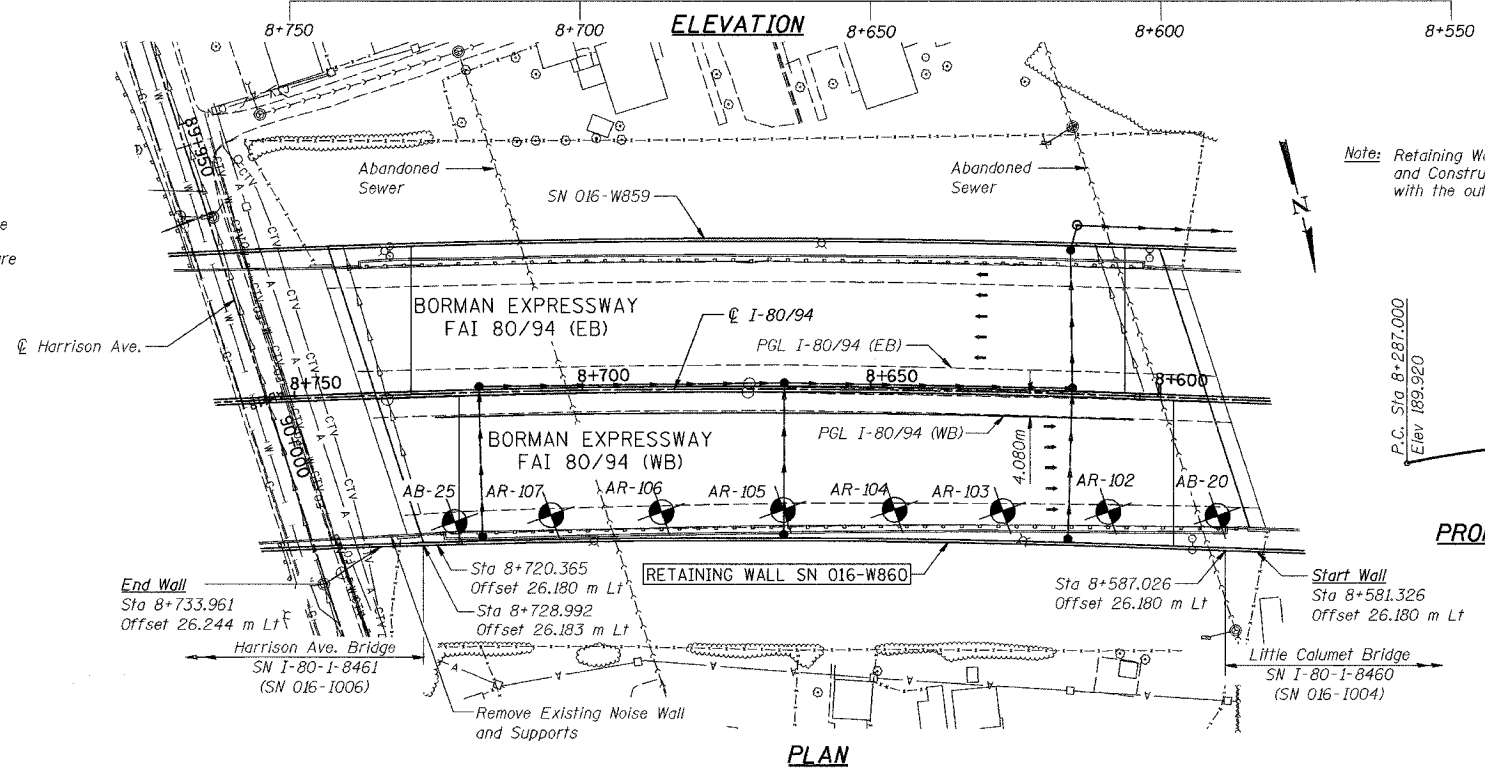
Gary S. Powell
 GARY S. POWELL, S.E.
 IL. LIC. NO. 081-00471
 EXP 11-30-2006
 DATE 09-12-2005



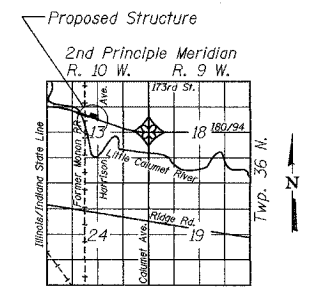
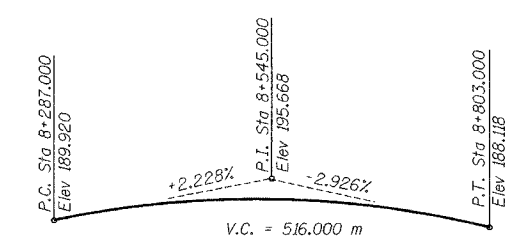
Gary S. Powell
 GARY S. POWELL, P. E.
 IN. LIC. NO. 10403944
 EXP 07-31-2006
 DATE 09-12-2005

- LEGEND**
- ⊙ - Soil Boring Location
 - - - Existing Roadway/Structure
 - Proposed Roadway/Structure
 - ⊙ - Tree
 - Shrubs/Brush
 - Proposed Storm Sewer
 - - - Existing Sanitary Sewer
 - Existing Storm Sewer
 - CTV - Existing Cable TV
 - Existing Gas Line
 - Existing Water Main
 - A - Electrical Aerial Cable

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP



Note: Retaining Wall is built in straight line segments between Expansion and Construction Joints. Back Face of the Retaining Wall is aligned with the outside edge of shoulder at joints.



ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

GENERAL PLAN
 SECTION 2626.2-R-2
 LAKE COUNTY, INDIANA
 STATION 8+581.326 TO STATION 8+733.961
 STRUCTURE NO. 016-W860
 DATE 09/05

AMERICAN
 CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET	SHEET NO. S-2
F.A.L. 88/14	2626.2-R-2	LAKE COUNTY, INDIANA	1207	899	19 SHEETS
BLDG. NO.		FED. AID PROJECT			

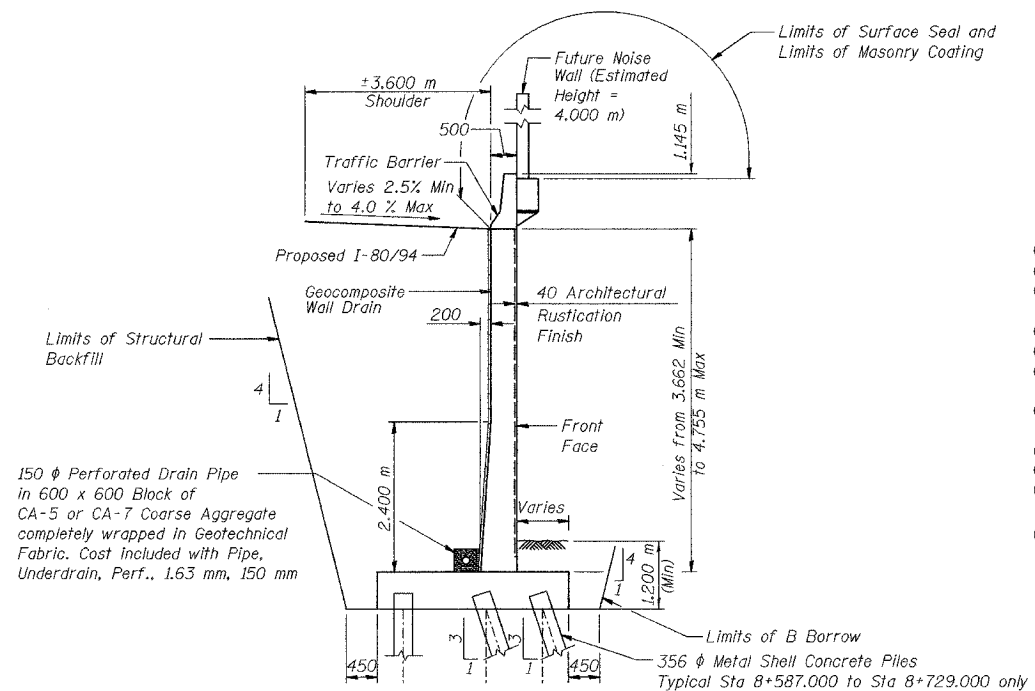
CONTRACT NO. 62114 INDOT DES. NO. 0100987

GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of AASHTO M 31M or M322M Grade 400.
2. The Contractor shall drive 4 test piles in permanent locations spaced approximately 60 m apart, as directed by the Engineer before ordering the remainder of the piles.
3. All dimensions are in millimeters (mm) except as noted.
4. All construction joints shall be bonded.

INDEX OF SHEETS

SHEET NO.	TITLE
S-1	General Plan
S-2	Index of Sheets, General Notes and Total Bill of Material
S-3	Plan and Elevation (1 of 7)
S-4	Plan and Elevation (2 of 7)
S-5	Plan and Elevation (3 of 7)
S-6	Plan and Elevation (4 of 7)
S-7	Plan and Elevation (5 of 7)
S-8	Plan and Elevation (6 of 7)
S-9	Plan and Elevation (7 of 7)
S-10	Wall Sections and Details (1 of 2)
S-11	Wall Sections and Details (2 of 2)
S-12	Rustication Finish Details
S-13	Concrete Pile Details
S-14	Boring Logs (1 of 6)
S-15	Boring Logs (2 of 6)
S-16	Boring Logs (3 of 6)
S-17	Boring Logs (4 of 6)
S-18	Boring Logs (5 of 6)
S-19	Boring Logs (6 of 6)



TYPICAL SECTION

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

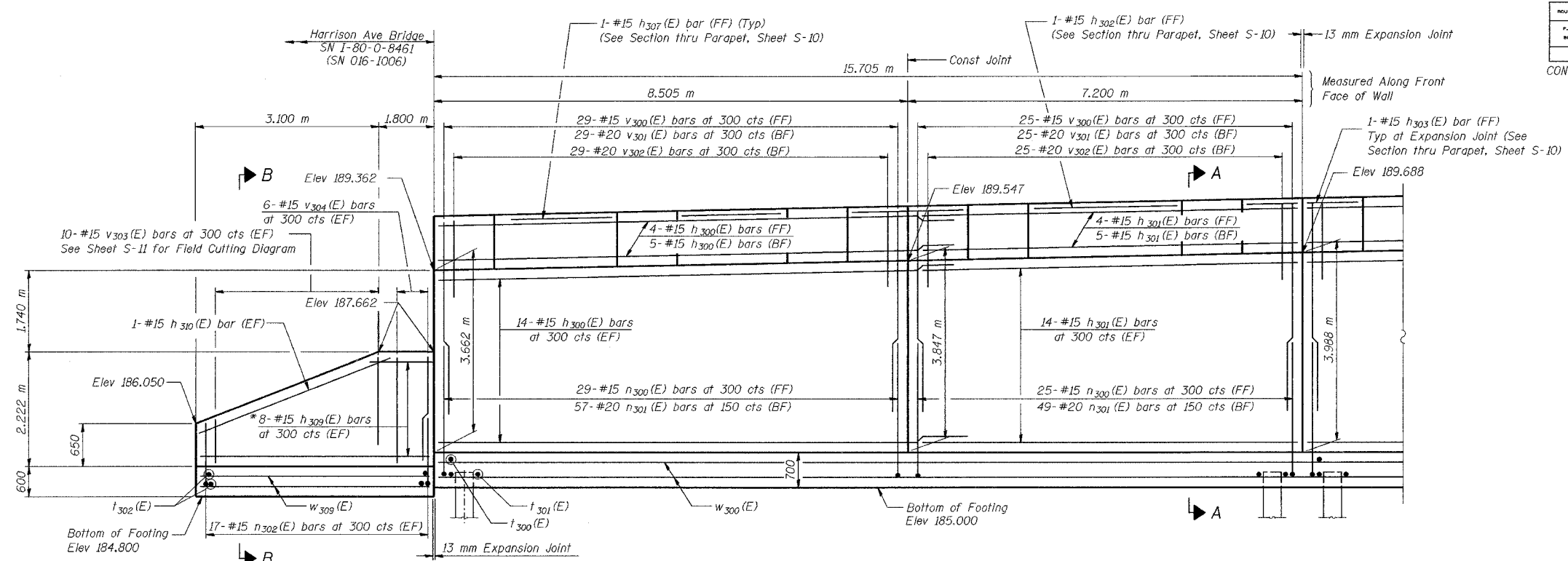
TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
(IN) Test Pile, 356 mm	Each	4
(IN) Excavation, Foundation, Unclassified	m ³	2,475.5
(IN) Concrete, A, Substructure	m ³	791.6
(IN) Rustication Finish	m ²	559
(IN) Reinforcing Bars, Epoxy Coated	kg	53,100
(IN) Surface Seal	L Sum	0.02
(IN) Pile, Concrete, Steel Shell Encased, 6.35 mm, 356 mm	m	2,670.0
(IN) Geocomposite Wall Drain	m ²	529
(IN) Pipe, Underdrain, Perf., 1.63 mm, 150 mm	m	151.0
(IN) Noise Abatement Wall Anchor Rod Assembly	Each	40
(IN) B Borrow	m ³	276.3
(IN) Structural Backfill	m ³	1,762.3
(IN) Masonry Coating	L Sum	0.04

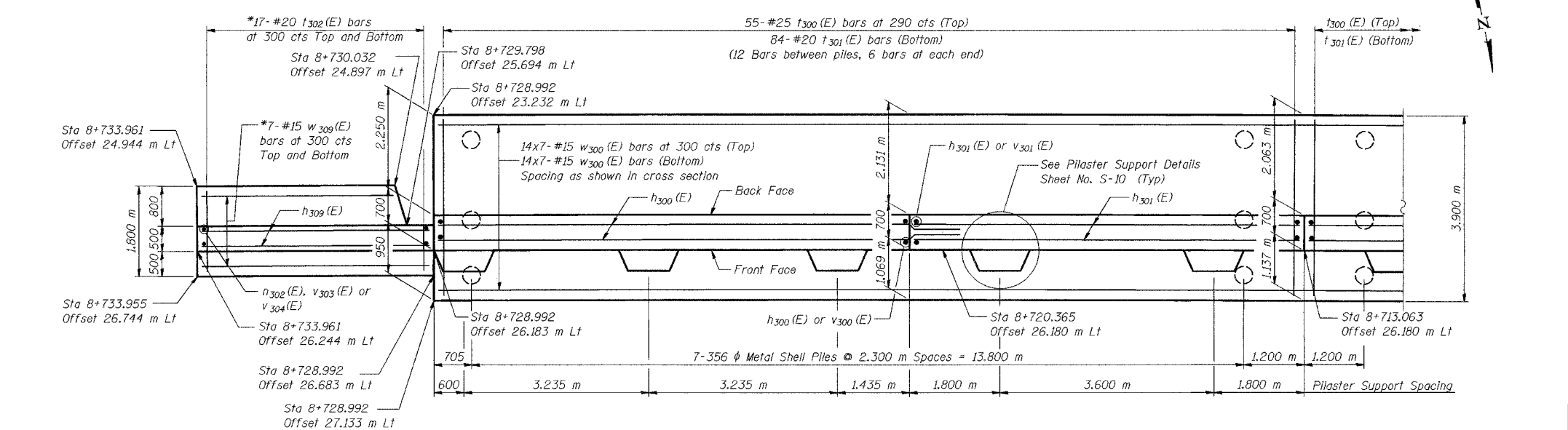
(IN) Indiana Pay Items, denoted by "(Indiana)" in Special Provisions and Summary of Quantities.

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/US 6
 KINGERY-BORMAN EXPRESSWAY
 BURINHAM ROAD TO US 41
**INDEX OF SHEETS, GENERAL NOTES
 AND TOTAL BILL OF MATERIAL**
 SECTION 2626.2-R-2
 LAKE COUNTY, INDIANA
 STATION 8+581.326 TO STATION 8+733.961
 STRUCTURE NO. 016-W860
 DATE 09/05
AMERICAN
 CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET TOTAL	SHEET NO.
I-80/94	2626.2-R-2	LAKE COUNTY, INDIANA	1207	900	19 SHEETS
CONTRACT NO. 62114			INDOT DES. NO. 0100987		



ELEVATION



FOOTING PLAN

DESIGNED	KFA
CHECKED	BPS
DRAWN	MJB
CHECKED	GSP

MINIMUM BAR LAPS
 #15 bars = 640
 #20 bars = 790

LEGEND
 BF = Back Face
 FF = Front Face
 EF = Each Face

NOTES:
 See Sheet S-10 for Section A-A and Section B-B.
 See Sheet S-11 for Expansion Joint Detail and Bill of Material.
 See Sheet S-12 for Rustication details.
 Stations are referenced to \odot I-80/94.
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 Bars indicated thus 20 x 3-#15 etc. Indicates 20 lines of bars with 3 lengths per line.
 * Cut to fit

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80/94/LUS 6
 KINGERY-BORMAN EXPRESSWAY
 BURNHAM ROAD TO US 41

PLAN AND ELEVATION (1 OF 7)
SECTION 2626.2-R-2
LAKE COUNTY, INDIANA
STATION 8+581.326 TO STATION 8+733.961
STRUCTURE NO. 016-W860

DATE 09/05

AMERICAN
 CONSULTING ENGINEERS