

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO. S-10
80-74	2626.2-R-2	LAKE COUNTY, INDIANA	1207	701	
CONTRACT NO. 62114 INDOT DES. NO. 0100987					28 SHEETS

**GIRDER 21**

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+741.741	18.667 m	189.773	189.773
CL W Abut	8+742.131	18.664 m	189.764	189.764
A	8+745.101	18.646 m	189.694	189.717
B	8+748.072	18.633 m	189.624	189.667
C	8+751.042	18.624 m	189.553	189.614
D	8+754.012	18.620 m	189.481	189.556
E	8+756.982	18.621 m	189.409	189.492
F	8+759.953	18.627 m	189.336	189.421
G	8+762.923	18.638 m	189.262	189.345
H	8+765.893	18.653 m	189.187	189.262
I	8+768.864	18.673 m	189.112	189.173
J	8+771.834	18.698 m	189.036	189.079
K	8+774.804	18.728 m	188.959	188.981
CL E Abut	8+777.774	18.762 m	188.881	188.881
Back of E Abut	8+778.164	18.767 m	188.871	188.871

**GIRDER 22**

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+742.364	20.892 m	189.825	189.825
CL W Abut	8+742.754	20.890 m	189.816	189.816
A	8+745.720	20.873 m	189.746	189.769
B	8+748.687	20.860 m	189.676	189.720
C	8+751.654	20.853 m	189.605	189.666
D	8+754.621	20.850 m	189.533	189.608
E	8+757.588	20.852 m	189.461	189.544
F	8+760.554	20.859 m	189.388	189.473
G	8+763.521	20.870 m	189.314	189.397
H	8+766.488	20.887 m	189.239	189.314
I	8+769.455	20.908 m	189.164	189.225
J	8+772.421	20.933 m	189.087	189.131
K	8+775.388	20.964 m	189.010	189.033
CL E Abut	8+778.354	21.000 m	188.933	188.933
Back of E Abut	8+778.744	21.005 m	188.923	188.923

**GIRDER 23**

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+742.985	23.118 m	189.878	189.878
CL W Abut	8+743.375	23.116 m	189.868	189.868
A	8+746.338	23.100 m	189.799	189.821
B	8+749.301	23.088 m	189.728	189.772
C	8+752.265	23.082 m	189.657	189.718
D	8+755.228	23.080 m	189.586	189.660
E	8+758.191	23.083 m	189.513	189.596
F	8+761.154	23.091 m	189.440	189.525
G	8+764.118	23.103 m	189.366	189.449
H	8+767.081	23.120 m	189.291	189.365
I	8+770.044	23.142 m	189.215	189.276
J	8+773.007	23.169 m	189.139	189.183
K	8+775.970	23.201 m	189.062	189.085
CL E Abut	8+778.933	23.237 m	188.984	188.984
Back of E Abut	8+779.322	23.242 m	188.974	188.974

**GIRDER 24**

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Back of W Abut	8+743.606	25.345 m	189.930	189.930
CL W Abut	8+743.994	25.342 m	189.921	189.921
A	8+746.954	25.327 m	189.851	189.874
B	8+749.914	25.317 m	189.781	189.824
C	8+752.874	25.311 m	189.710	189.771
D	8+755.834	25.310 m	189.638	189.712
E	8+758.793	25.314 m	189.565	189.648
F	8+761.753	25.323 m	189.492	189.577
G	8+764.713	25.336 m	189.418	189.501
H	8+767.673	25.355 m	189.343	189.417
I	8+770.632	25.377 m	189.267	189.328
J	8+773.592	25.405 m	189.191	189.234
K	8+776.551	25.438 m	189.114	189.136
CL E Abut	8+779.511	25.475 m	189.036	189.036
Back of E Abut	8+779.900	25.480 m	189.026	189.026

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

**NOTES:**

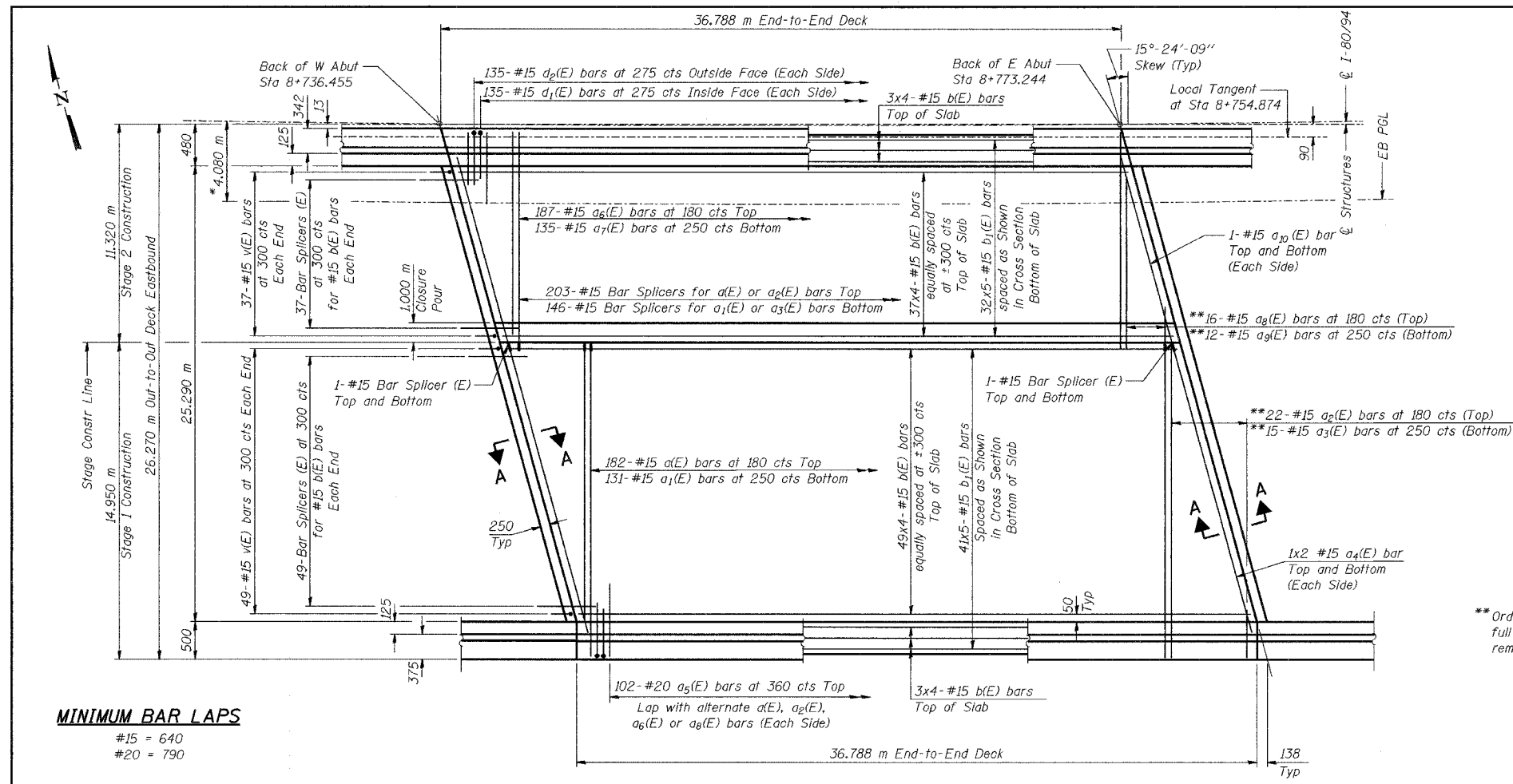
See Sheet No. S-6 for Plan.

All stations, offsets, and elevations are in meters.

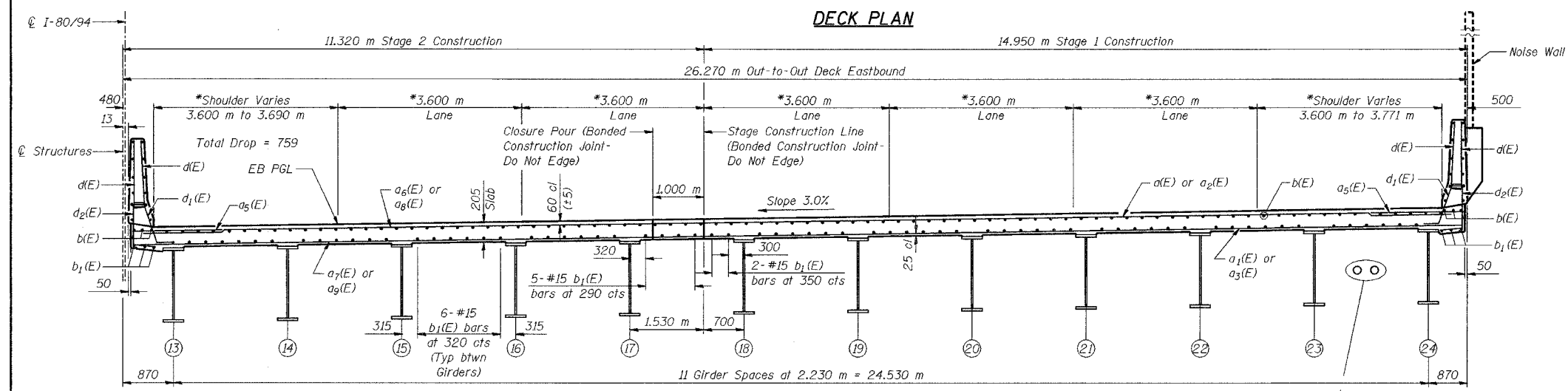
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 I.A.L. ROUTE 80/94 (BORMAN EXPRESSWAY)  
 OVER HARRISON AVENUE

**TOP OF DECK ELEVATIONS (4 OF 4)**  
**SECTION 2626.2-R-2**  
**LAKE COUNTY, INDIANA**  
**STATION 8+754.874**  
**STRUCTURE NO. I-80-1-8461 (EB & WB)**  
 DATE 09/05 (016-1005 & 016-1006)

**AMERICAN**  
 CONSULTING ENGINEERS



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



DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

**CROSS SECTION**  
(Looking East)

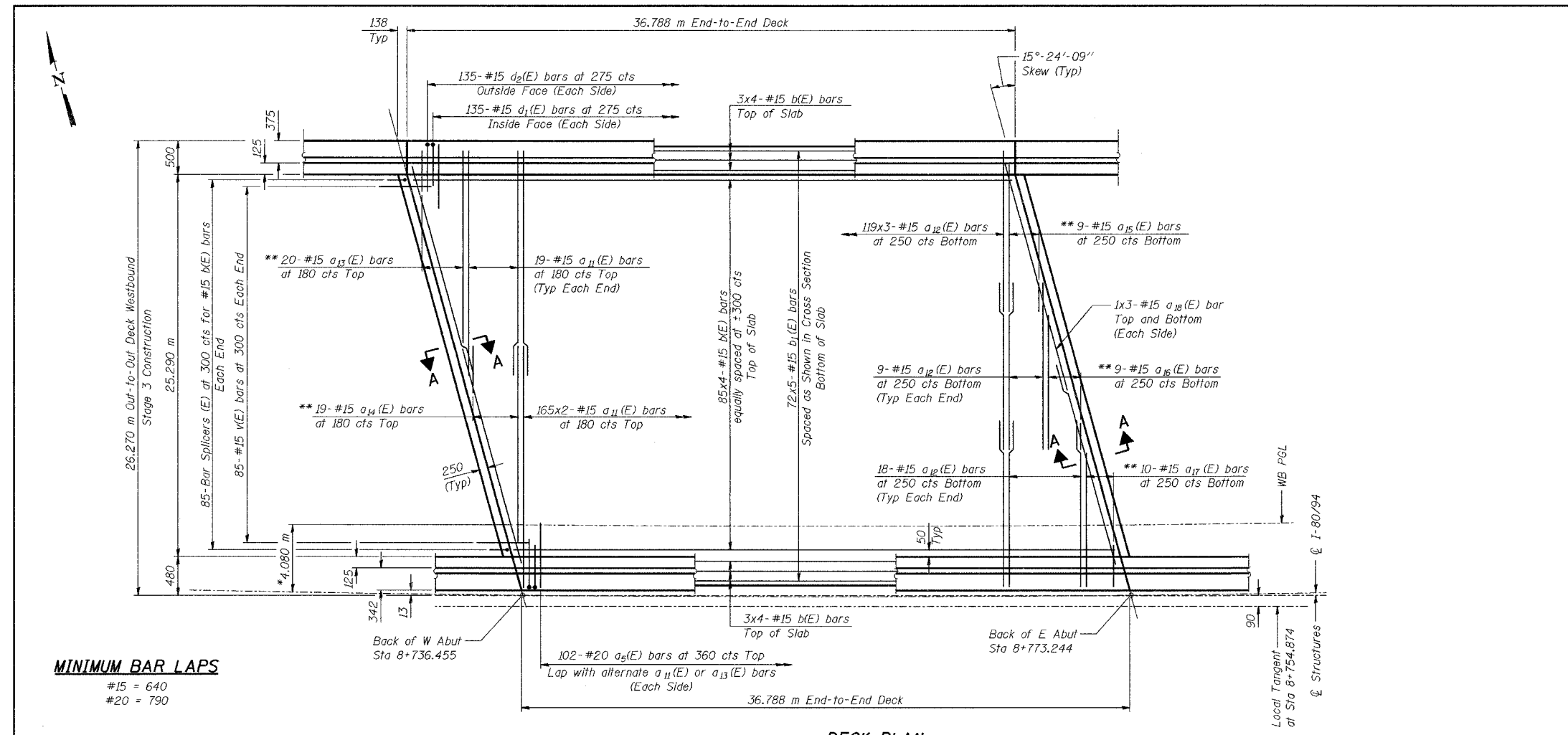
See Conduit Details  
Sheet No S-14

**NOTES:**  
 See Sheet No S-13 for parapet reinforcement.  
 See Sheet No S-14 for Section A-A, superstructure details and Bill of Material.  
 Reinforcement bars designated (E) shall be epoxy coated.  
 Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.  
 Apply Surface Seal to entire top surface of the bridge deck and parapets and the inside vertical faces of the parapets.  
 All dimensions are in millimeters (mm) except as noted.  
 Bar Splicers paid for as "Threaded Tie Bar Assembly, Epoxy Coated."  
 \* Measured Radial to I-80/94

**ILLINOIS DEPARTMENT OF TRANSPORTATION**  
 F.A.L. ROUTE 80/94 (BORMAN EXPRESSWAY)  
 OVER HARRISON AVENUE

**DECK PLAN - EASTBOUND**  
 SECTION 2626.2-R-2  
 LAKE COUNTY, INDIANA  
 STATION 8+754.874  
 STRUCTURE NO. I-80-1-8461 (EB & WB)  
 DATE 09/05 (016-1005 & 016-1006)

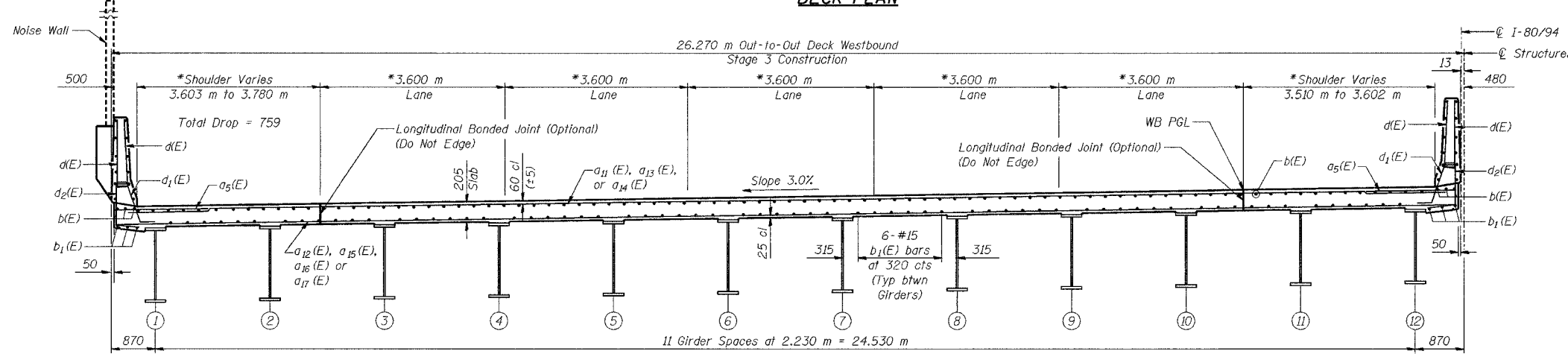
**AMERICAN**  
 CONSULTING ENGINEERS



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

**NOTES:**  
 See Sheet No S-13 for parapet reinforcement.  
 See Sheet No S-14 for Section A-A, superstructure details and Bill of Material.  
 Reinforcement bars designated (E) shall be epoxy coated.  
 Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.  
 Apply Surface Seal to entire top surface of the bridge deck and parapets and the inside vertical faces of the parapets.  
 All dimensions are in millimeters (mm) except as noted.  
 Bar Splicers paid for as "Threaded Tie Bar Assembly, Epoxy Coated."  
 \*Measured radial to  $\varnothing$  I-80/94.  
 \*\*Order  $a_{13}(E)$ ,  $a_{14}(E)$ ,  $a_{15}(E)$ ,  $a_{16}(E)$ , and  $a_{17}(E)$  bars full length. Cut to fit skew and use remainder of bars in opposite end.

**DECK PLAN**



**CROSS SECTION**  
 (Looking East)

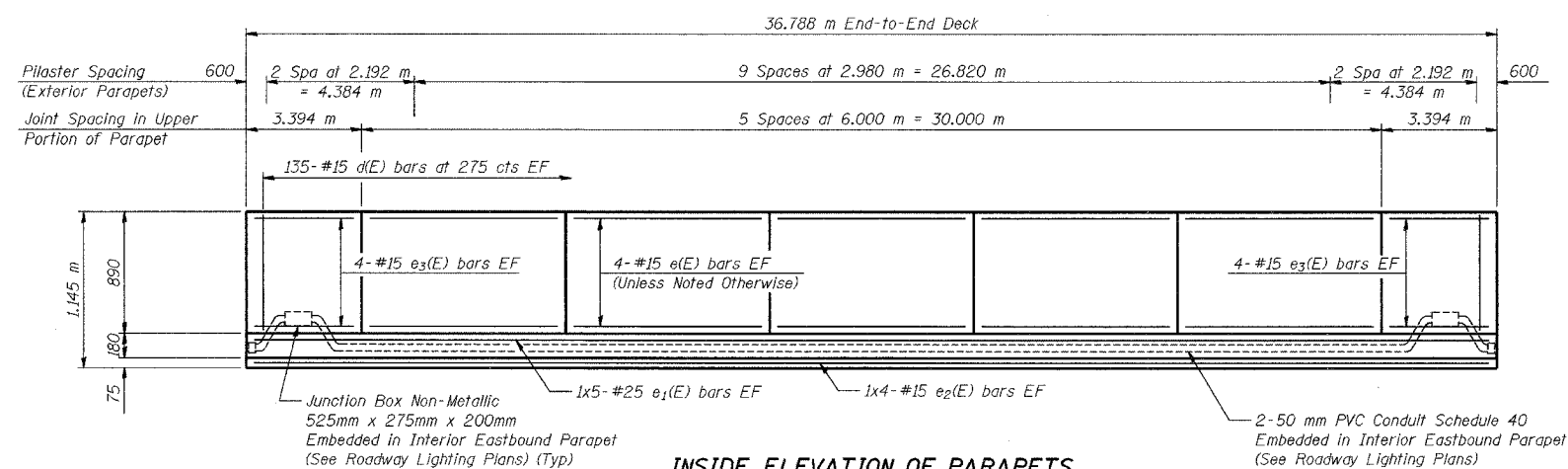
DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.L. ROUTE 80/94 (BORMAN EXPRESSWAY)  
 OVER HARRISON AVENUE

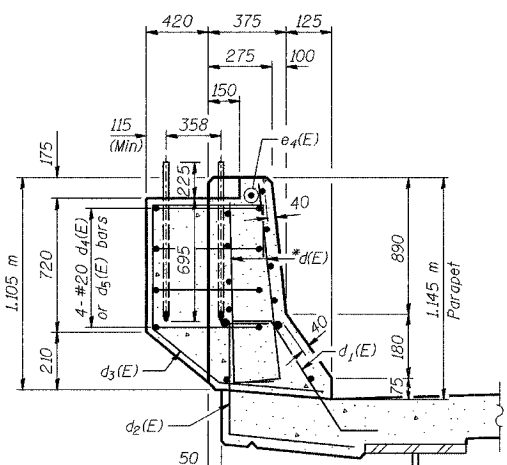
**DECK PLAN - WESTBOUND**  
 SECTION 2626.2-R-2  
 LAKE COUNTY, INDIANA  
 STATION 8+754.874  
 STRUCTURE NO. I-80-1-8461 (EB & WB)  
 DATE 09/05 (016-1005 & 016-1006)

**AMERICAN**  
 CONSULTING ENGINEERS

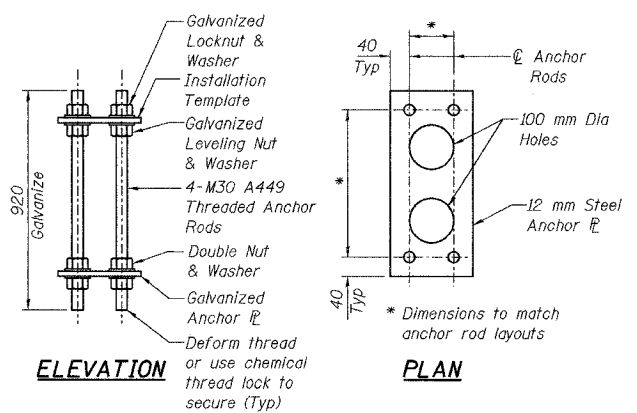
ROUTE NO.	SECTION	COUNTY	SHEET	SHEET	SHEET NO. S-13
F.A.L.	PROJ. NO.	LAKE COUNTY, INDIANA	1207	704	
DRAWN		REVISED		CONTRACT NO. 62114 INDOT DES. NO. 0100987	



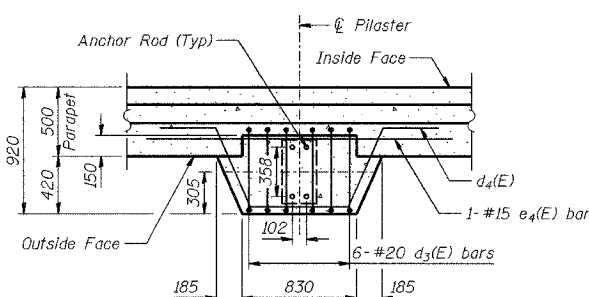
**INSIDE ELEVATION OF PARAPETS**  
(Dimensions measured along inside face of parapet)



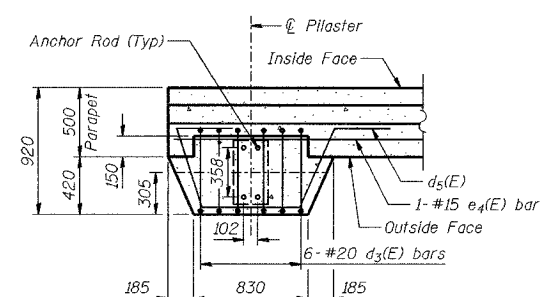
**NOISE WALL PILASTER DETAIL**  
\*Cut d(E) bar on Back Face to fit.



**NOISE ABATEMENT WALL ANCHOR ROD ASSEMBLY**  
(28 Req'd)



**TYPICAL PILASTER SUPPORT - PLAN VIEW**  
(Reinforcement in Parapet not shown)  
(1 Noise Abatement Wall Anchor Rod Assembly per Pilaster)  
(24 Pilasters Req'd)

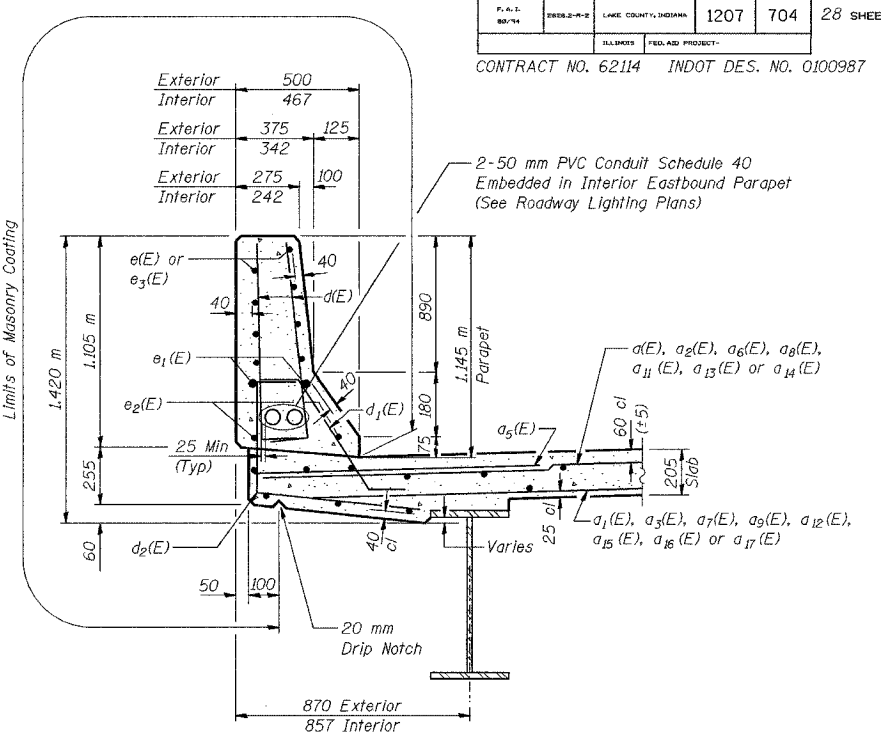


**PILASTER SUPPORT AT END OF PARAPET - PLAN VIEW**  
(Reinforcement in Parapet not shown)  
(1 Noise Abatement Wall Anchor Rod Assembly per Pilaster)  
(4 Pilasters Req'd)

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

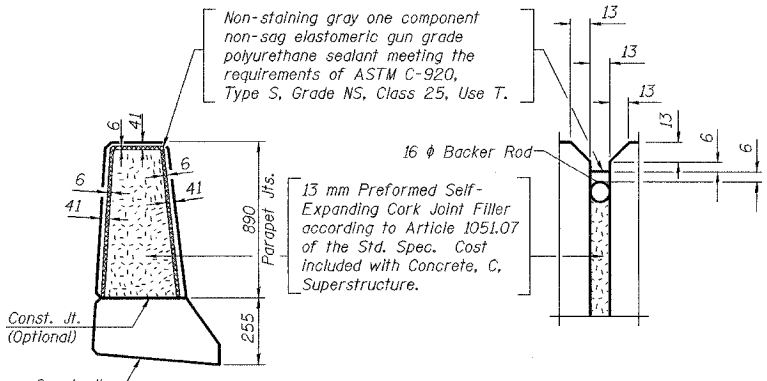
**LEGEND**  
EF - Each Face

**MINIMUM BAR LAPS**  
#15 = 640  
#25 = 1,320 mm



**SECTION THRU PARAPETS**

All concrete edges shall have a 20 mm chamfer.



**PARAPET JOINT DETAILS**

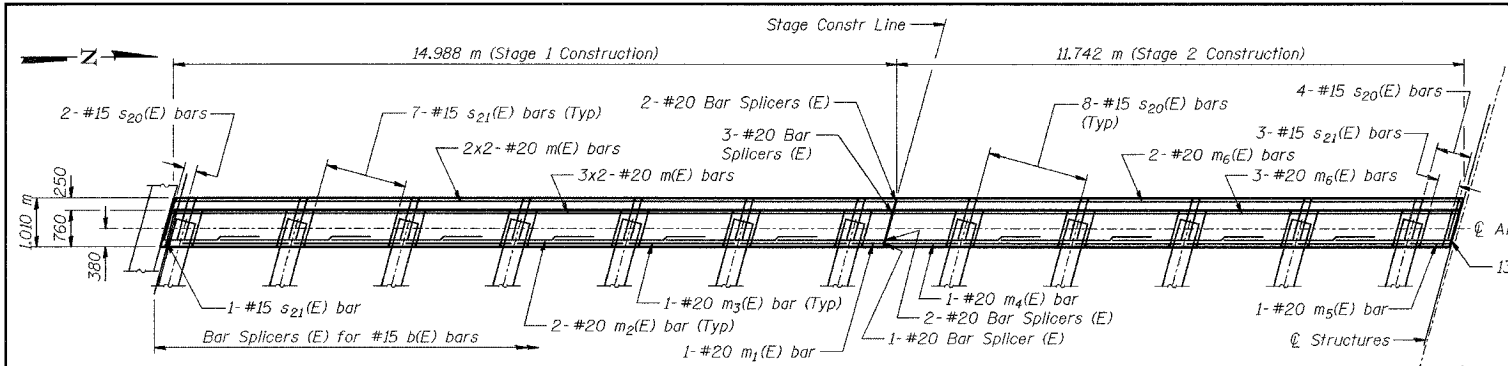
**NOTES:**  
See Sheet No S-14 for Bill of Material.  
Reinforcement bars designated (E) shall be epoxy coated.  
Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.  
All dimensions are in millimeters (mm) except as noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.L. ROUTE 80/94 (BORMAN EXPRESSWAY)  
OVER HARRISON AVENUE

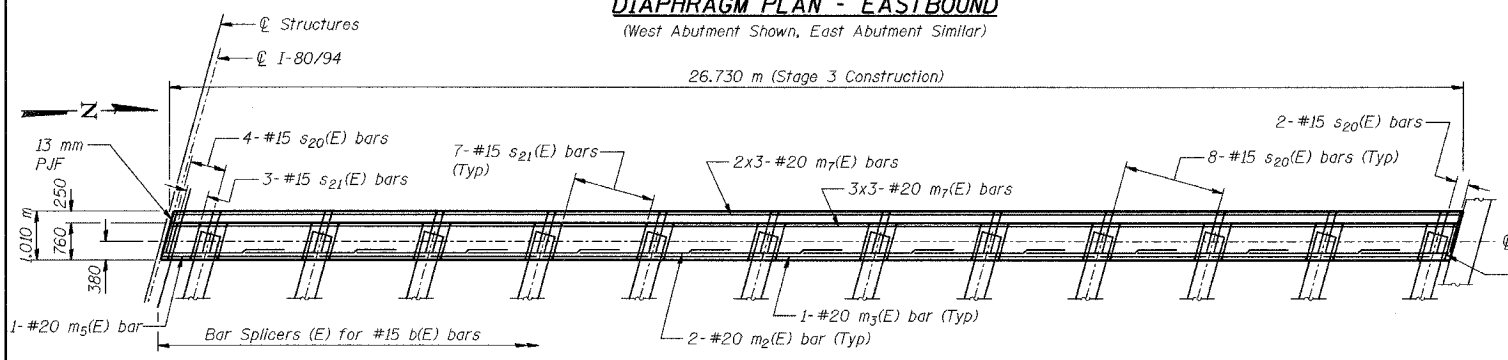
**PARAPET ELEVATIONS**  
SECTION 2626.2-R-2  
LAKE COUNTY, INDIANA  
STATION 8+754.874  
STRUCTURE NO. I-80-1-8461 (EB & WB)  
DATE 09/05 (016-1005 & 016-1006)

**AMERICAN**  
CONSULTING ENGINEERS

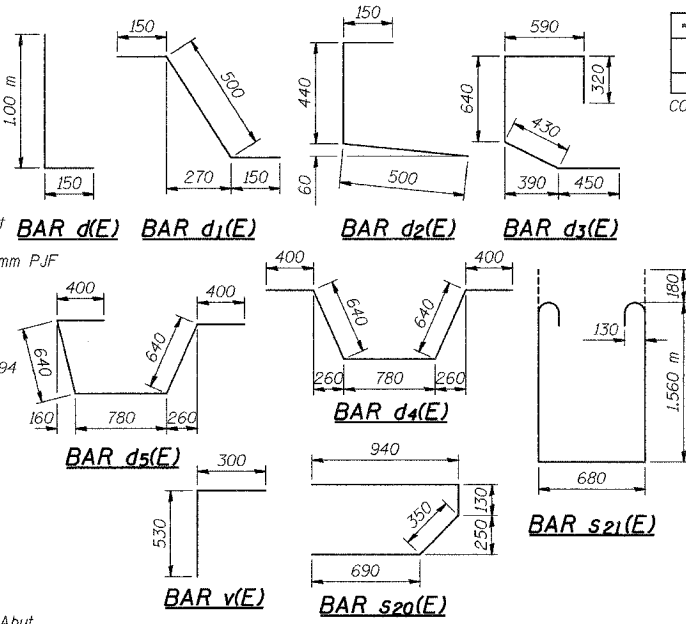




**DIAPHRAGM PLAN - EASTBOUND**  
(West Abutment Shown, East Abutment Similar)



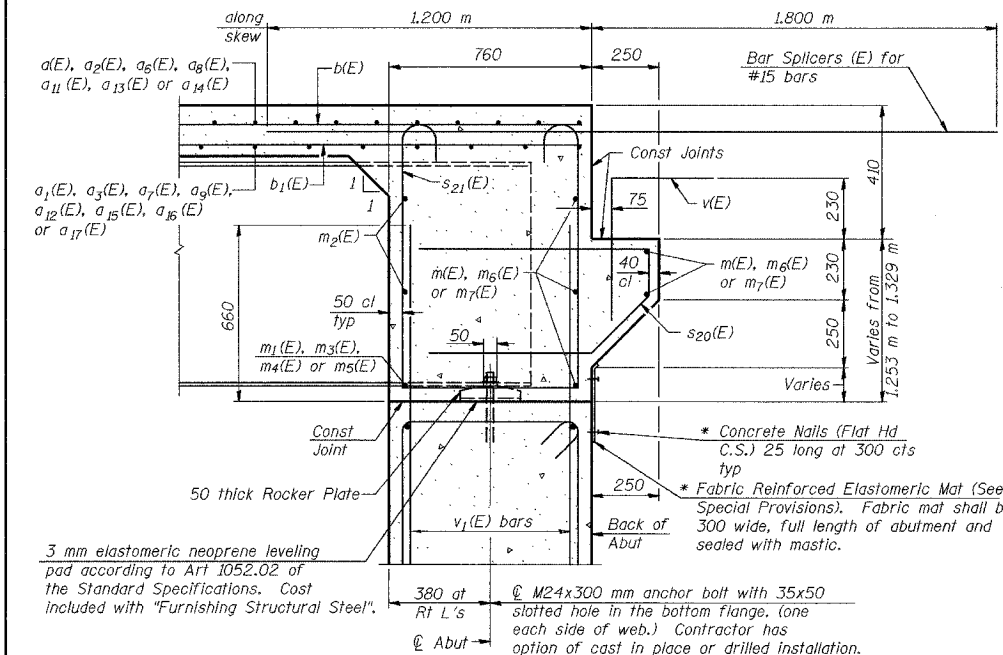
**DIAPHRAGM PLAN - WESTBOUND**  
(West Abutment Shown, East Abutment Similar)



**NOTES:**  
Reinforcement bars designated (E) shall be epoxy coated.  
All concrete edges shall have a 20 mm chamfer.  
Concrete in diaphragm is included with Concrete, C, Superstructure.  
See Sheet No S-17 for anchor bolt details.  
Bar Splicers paid for as "Threaded Tie Bar Assembly, Epoxy Coated."  
Cost of 13 mm PJF included with Concrete, C, Superstructure.  
All dimensions are in millimeters (mm) except as noted.

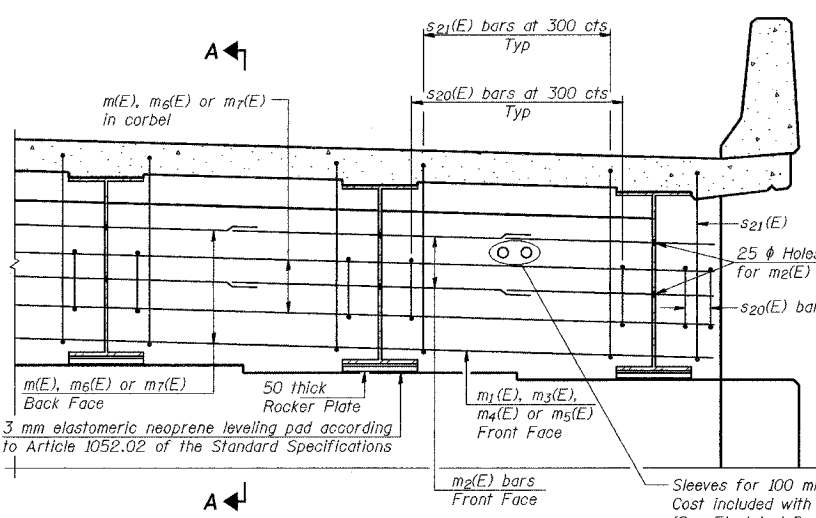
**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
a(E)	182	#15	14.80	—
a1(E)	131	#15	14.70	—
a2(E)	22	#15	14.74	—
a3(E)	15	#15	14.97	—
a4(E)	8	#15	7.86	—
a5(E)	408	#20	1.37	—
a6(E)	187	#15	11.15	—
a7(E)	135	#15	11.05	—
a8(E)	16	#15	11.28	—
a9(E)	12	#15	10.70	—
a10(E)	4	#15	11.32	—
a11(E)	368	#15	13.35	—
a12(E)	411	#15	9.08	—
a13(E)	20	#15	13.78	—
a14(E)	19	#15	13.84	—
a15(E)	9	#15	9.36	—
a16(E)	9	#15	9.98	—
a17(E)	10	#15	9.67	—
a18(E)	12	#15	9.26	—
b(E)	732	#15	9.66	—
b1(E)	725	#15	7.85	—
d(E)	1080	#15	1.15	┌
d1(E)	540	#15	0.80	┌
d2(E)	540	#15	1.09	┌
d3(E)	168	#20	2.43	┌
d4(E)	96	#20	2.86	┌
d5(E)	16	#20	2.86	┌
e(E)	160	#15	5.90	—
e1(E)	40	#25	8.40	—
e2(E)	32	#15	9.66	—
e3(E)	64	#15	3.29	—
e4(E)	28	#15	2.11	—
m(E)	20	#20	7.84	—
m1(E)	2	#20	0.64	—
m2(E)	96	#20	3.11	—
m3(E)	42	#20	2.20	—
m4(E)	2	#20	1.48	—
m5(E)	4	#20	0.79	—
m6(E)	10	#20	11.64	—
m7(E)	30	#20	9.40	—
s20(E)	376	#15	2.11	┌
s21(E)	324	#15	4.16	┌
v(E)	342	#15	0.83	┌
Concrete, C, Superstructure		m <sup>3</sup>	601.6	
Surface Seal (Estimated)		m <sup>2</sup>	2,086	
Reinforcing Bars, Epoxy Coated		kg	65,790	
Threaded Tie Bar Assembly, Epoxy Coated		Each	695	
Noise Abatement Wall Anchor Rod Assembly		Each	28	

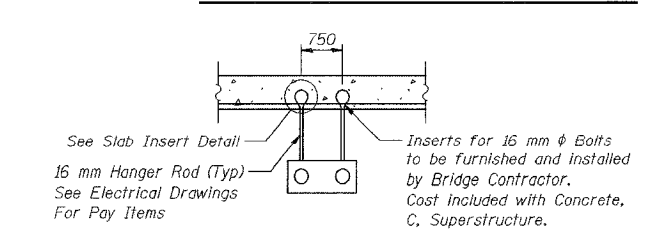


**SECTION A-A**  
Dimensions at right angles to abutment, except as shown.  
\* Cost included with "Concrete, C, Superstructure".

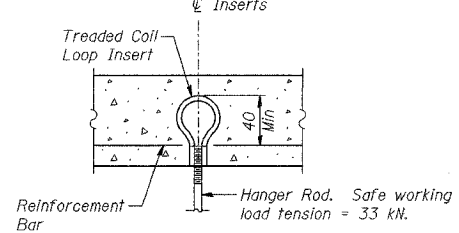
DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP



**DIAPHRAGM ELEVATION AT ABUTMENT**



**2 CONDUITS SUPPORT DETAIL**  
Max Spacing = 1.05 m

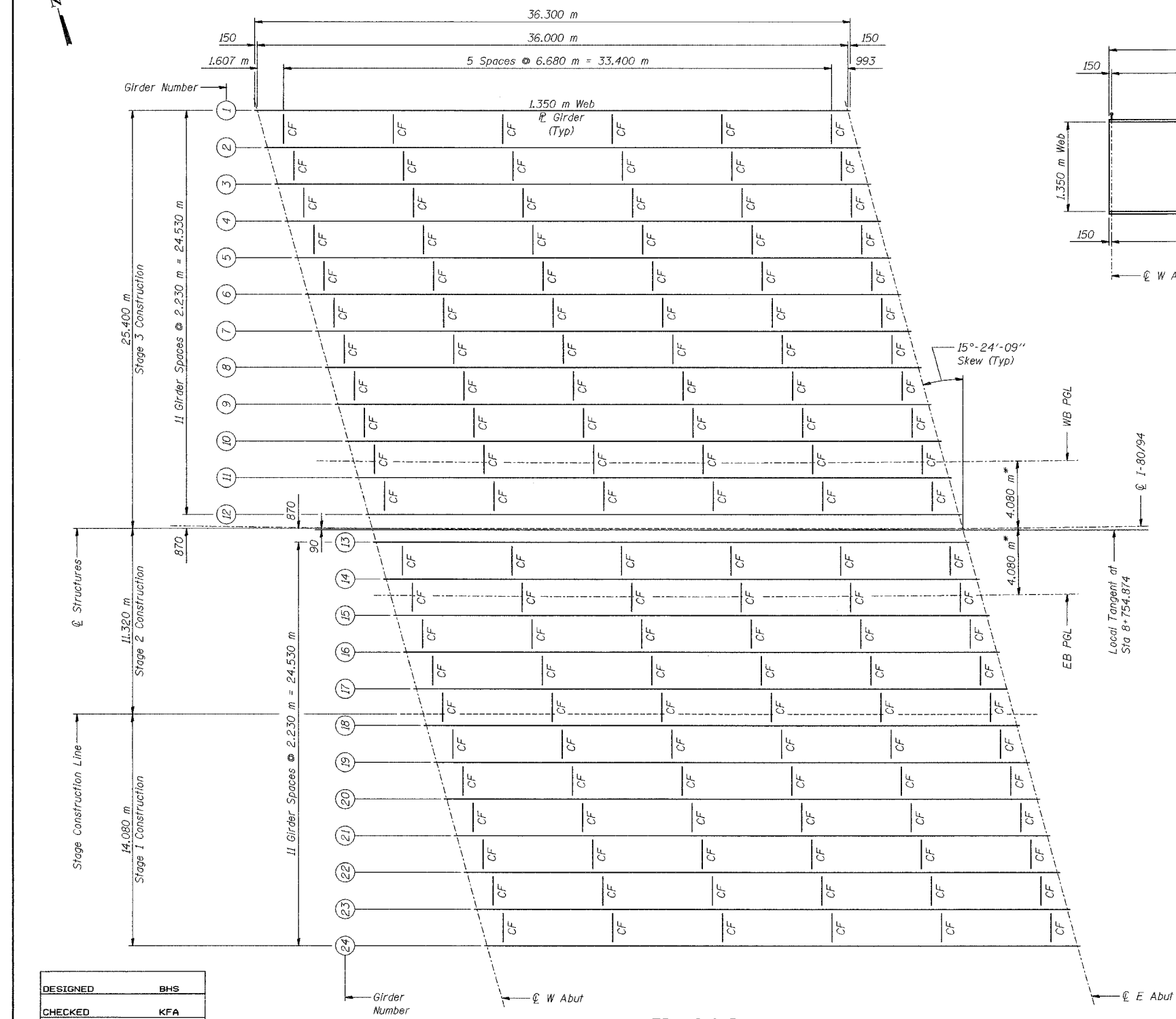


**SLAB INSERT DETAIL**

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)  
OVER HARRISON AVENUE

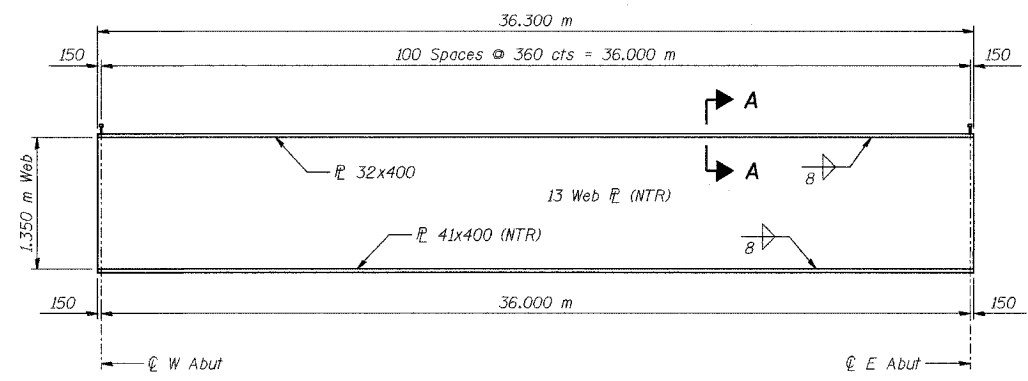
**SUPERSTRUCTURE DETAILS**  
SECTION 2626.2-R-2  
LAKE COUNTY, INDIANA  
STATION 8+754.874  
STRUCTURE NO. I-80-1-8461 (EB & WB)  
DATE 09/05 (016-1005 & 016-1006)

**AMERICAN**  
CONSULTING ENGINEERS



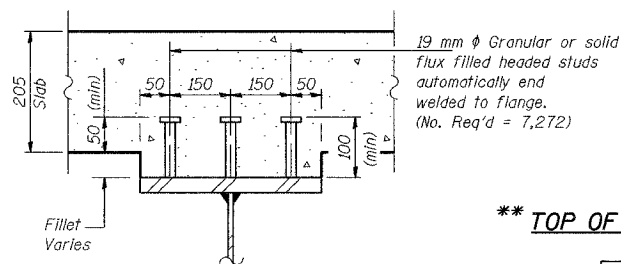
DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

**FRAMING PLAN**



**GIRDER ELEVATION**

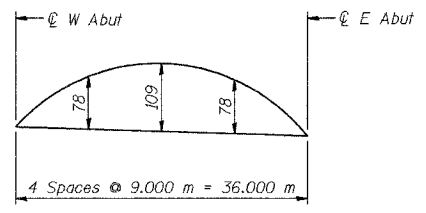
All structural steel on this sheet shall be AASHTO M 270M Grade 345W.



**SECTION A-A**

**\*\* TOP OF WEB ELEVATION TABLE**  
(For Fabrication Use Only)

Girder	℄ W Abut	℄ E Abut
1	189.106	188.236
2	189.159	188.287
3	189.211	188.339
4	189.263	188.390
5	189.315	188.441
6	189.368	188.493
7	189.420	188.544
8	189.472	188.596
9	189.525	188.647
10	189.577	188.699
11	189.629	188.750
12	189.682	188.802
13	189.088	188.211
14	189.140	188.263
15	189.192	188.314
16	189.245	188.366
17	189.297	188.418
18	189.349	188.469
19	189.402	188.521
20	189.454	188.572
21	189.507	188.624
22	189.559	188.676
23	189.611	188.727
24	189.664	188.779



**\*\* CAMBER DIAGRAM**

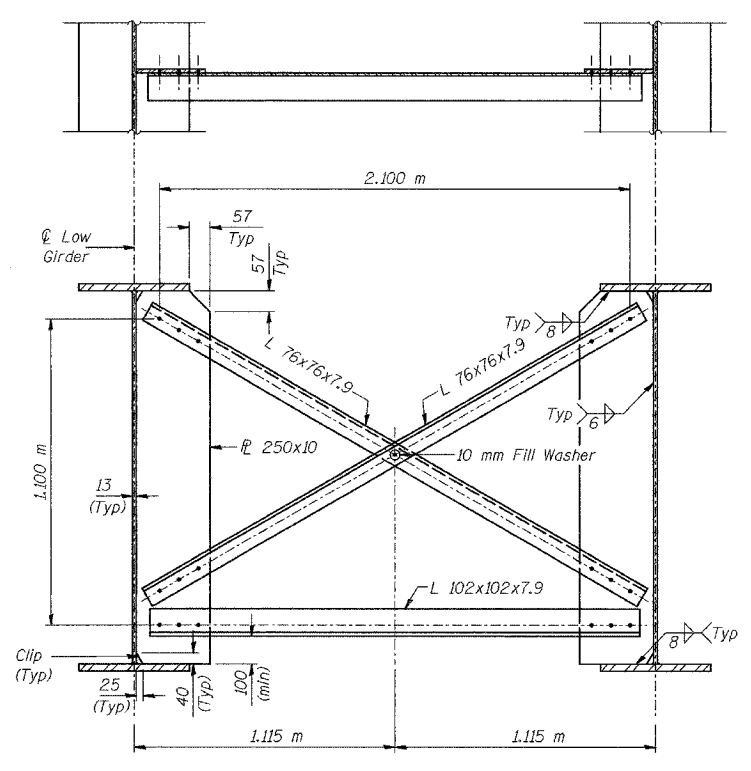
**NOTES:**  
See Sheet No. S-16 for cross frame details and table of moments and shears.  
All dimensions are in millimeters (mm) except as noted.  
NTR denotes notch toughness requirements.  
\* Measured radial to ℄ I-80/94.

**\*\* FOR INFORMATION ONLY**

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.L. ROUTE 80/94 (BORMAN EXPRESSWAY)  
OVER HARRISON AVENUE

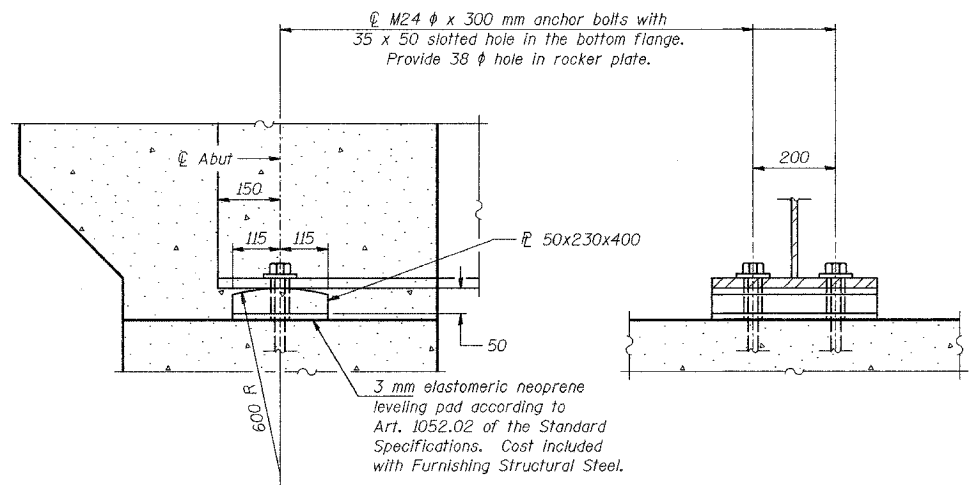
**FRAMING PLAN**  
**SECTION 2626.2-R-2**  
**LAKE COUNTY, INDIANA**  
**STATION 8+754.874**  
**STRUCTURE NO. I-80-1-8461 (EB & WB)**  
DATE 09/05 (016-1005 & 016-1006)

**AMERICAN**  
CONSULTING ENGINEERS

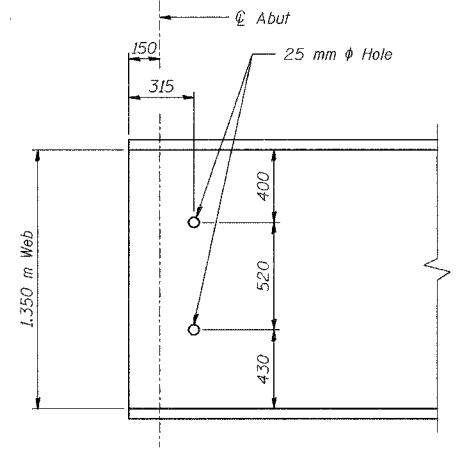


**\* INTERIOR CROSS FRAME CF**  
132 Required

Note: Assemble Cross Frame at Stage Construction Line after closure pour. Field drill holes in Girder 18 stiffeners on the side of Stage Construction Joint only.



**INTEGRAL ABUTMENT ROCKER PLATE**  
48 Required



**\* END OF GIRDER ELEVATION**

INTERIOR BEAM MOMENT TABLE		
0.5 Span		
$I_s$	( $10^6$ mm <sup>4</sup> )	16510
$I_c$ (n)	( $10^6$ mm <sup>4</sup> )	31120
$I_c$ (3n)	( $10^6$ mm <sup>4</sup> )	23385
$S_s$	( $10^3$ mm <sup>3</sup> )	24988
$S_c$ (n)	( $10^3$ mm <sup>3</sup> )	30161
$S_c$ (3n)	( $10^3$ mm <sup>3</sup> )	27985
$Z$	( $10^3$ mm <sup>3</sup> )	—
$D$	(kN/m)	15.06
$M_D$	(kN·m)	2440
$s_D$	(kN/m)	11.42
$M_s D$	(kN·m)	1851
$M_L$	(kN·m)	2128
$M$ (Imp)	(kN·m)	438
${}_2[M_L + M(imp)]$	(kN·m)	4276
$M_a$	(kN·m)	11137
$M_u$	(kN·m)	12258
$f_s D$ (non-comp)	(MPa)	98
$f_s D$ (comp)	(MPa)	66
$f_s S_3$ (L+Imp)	(MPa)	142
$f_s$ (Overload)	(MPa)	306
$f_s$ (Total)	(MPa)	—
VR	(kN)	216

INTERIOR BEAM REACTION TABLE		
	W Abut	E Abut
R <sub>D</sub>	(kN)	477
R <sub>L</sub>	(kN)	241
Imp.	(kN)	50
R (Total)	(kN)	767

$I_s$  and  $S_s$  are the moment of inertia and section modulus of the steel section used in computing  $f_s$  (Total & Overload).  
 $I_c$  (n) and  $S_c$  (n) are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.  
 $I_c$  (3n) and  $S_c$  (3n) are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)  
 VR is the maximum Live Load + Impact shear range in span.  
 $Z$  is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.  
 $M_a$  (Applied Moment) =  $1.3[M_D + M_s D + {}_2_3(M_L + M_{imp})]$ .  
 The Plastic Moment capacity ( $M_u$ ) is computed according to AASHTO 10.48.1 and 10.50.1.1.  
 $f_s$  (Overload) is the sum of the stresses due to  $M_D + M_s D + {}_2_3(M_L + M_{imp})$ .  
 $f_s$  (Total) (Non-compact section) is the sum of the stresses due to  $1.3[M_D + M_s D + {}_2_3(M_L + M_{imp})]$ .

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

NOTES:  
 All open holes shall be 28 mm  $\phi$  for M22 HS bolts  
 All dimensions are in millimeters (mm) except as noted.

**\* FOR INFORMATION ONLY**

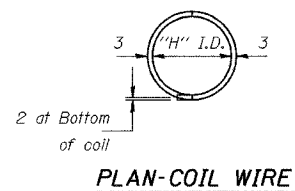
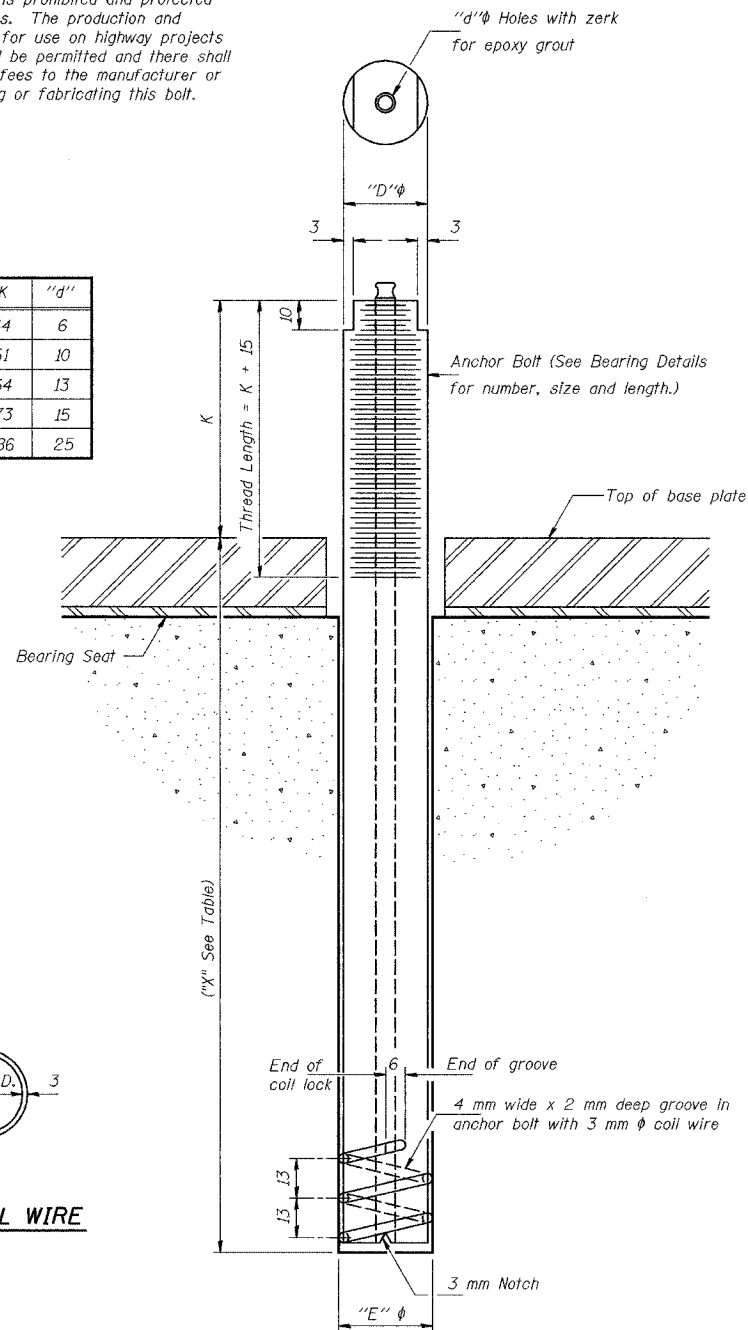
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.L. ROUTE 80/94 (BORMAN EXPRESSWAY)  
 OVER HARRISON AVENUE

**FRAMING DETAILS**  
 SECTION 2626.2-R-2  
 LAKE COUNTY, INDIANA  
 STATION 8+754.874  
 STRUCTURE NO. I-80-1-8461 (EB & WB)  
 DATE 09/05 (016-1005 & 016-1006)

**AMERICAN**  
 CONSULTING ENGINEERS

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
24	27	20	44	6
30	33	26	51	10
36	39	32	54	13
48	51	44	73	15
64	67	60	86	25



**ILLINOIS COIL-LOCK ANCHOR BOLT**

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ABB-1 (M) 4-30-99

**MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT**

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.  
The coil wire shall be made of any suitable soft steel wire.  
The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.  
The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

**INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT**

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

**ALTERNATE ANCHOR BOLTS**

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.  
The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:  
1. A threaded rod stud with nut and washer of the type specified.  
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type	D	X
W Abut	A307	24	256
E Abut	A307	24	256

ASTM F 1554 (Fy = 724 MPa), ASTM A 449 and AASHTO M 314 (Fy = 724 MPa) anchor bolts may be substituted for the anchor bolts shown above.

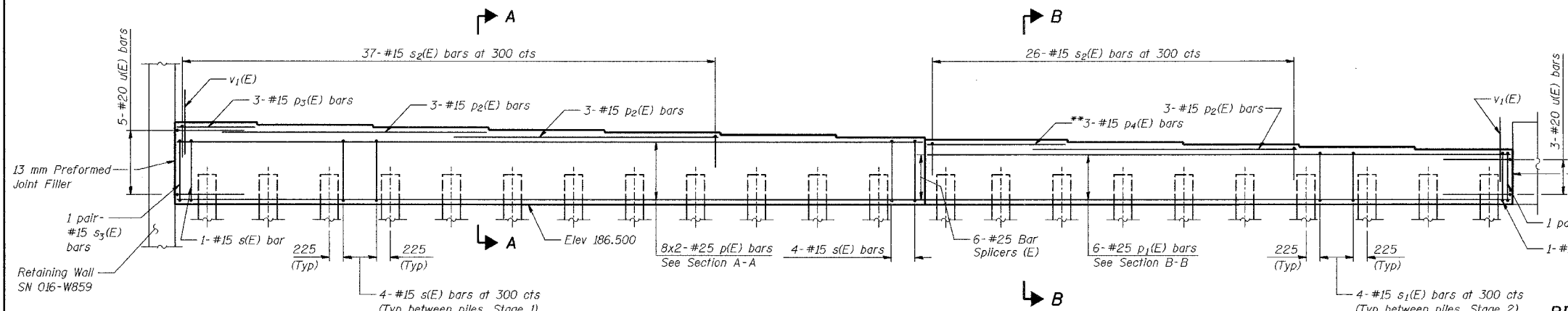
**GENERAL NOTES**

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.  
Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.  
The anchor bolts, furnished and installed including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Anchor Bolt.  
All dimensions are in millimeters (mm) except as noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.L. ROUTE 80/94 (BORMAN EXPRESSWAY)  
OVER HARRISON AVENUE

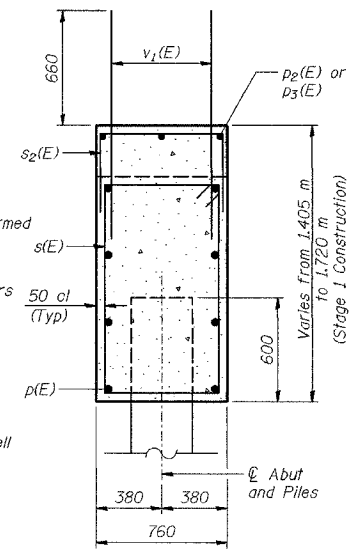
**ANCHOR BOLT DETAILS**  
SECTION 2626.2-R-2  
LAKE COUNTY, INDIANA  
STATION 8+754.874  
STRUCTURE NO. I-80-1-8461 (EB & WB)  
DATE 09/05 (016-1005 & 016-1006)

**AMERICAN**  
CONSULTING ENGINEERS

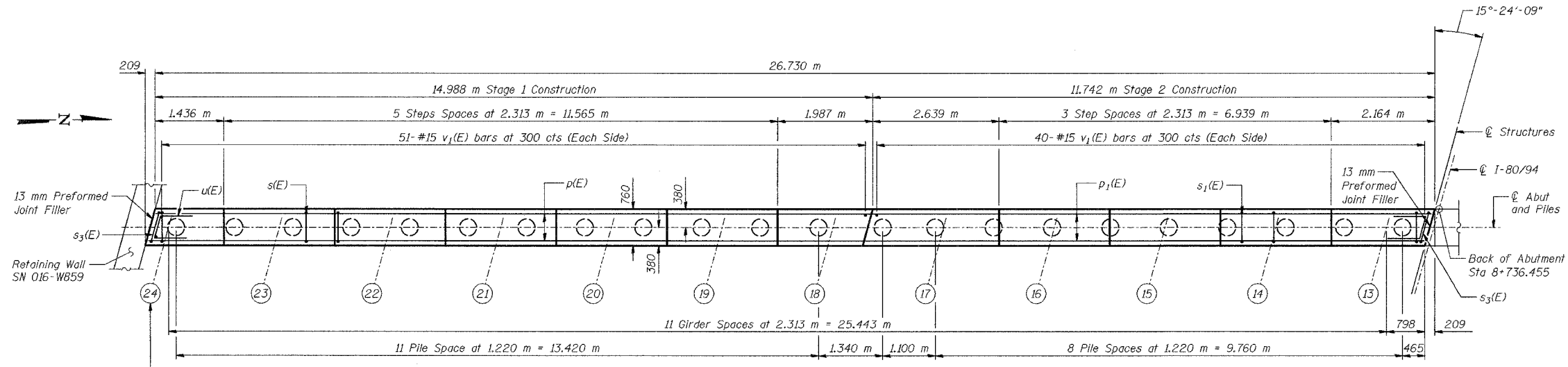


**ELEVATION**  
(Looking West)

**PILE DATA**  
 Type - 356  $\phi$  Metal Shell  
 Capacity - 500 kN  
 Est Length - 18.0 m  
 \*Est Length - 20.0 m  
 No Reqd - 21  
 Test Piles - 1



**SECTION A-A**

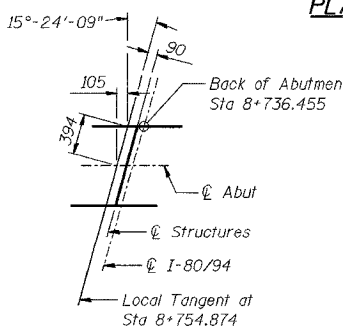


**PLAN**

**BEARING SEAT ELEVATIONS**

Girder	$\phi$ Brg W Abut
13	187.644
14	187.696
15	187.748
16	187.801
17	187.853
18	187.905
19	187.958
20	188.010
21	188.063
22	188.115
23	188.167
24	188.220

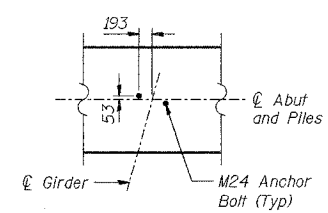
DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP



**OFFSET SKETCH**

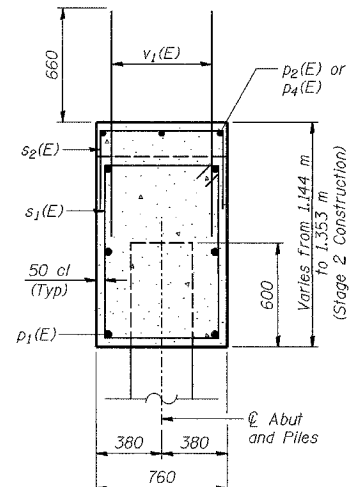
**MINIMUM BAR LAPS**

#15 bars = 640  
 #20 bars = 790  
 #25 bars = 1320



**ANCHOR BOLT LAYOUT**

**NOTES:**  
 See Sheet No S-22 for reinforcement details and Bill of Material.  
 See Sheet No S-24 for concrete pile details.  
 Space reinforcement in cap to miss anchor bolts.  
 Pour steps monolithically with cap.  
 Reinforcement bars designated (E) shall be epoxy coated.  
 Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.  
 All dimensions are in millimeters (mm) except as noted.  
 All edges shall have standard 20 mm chamfers except as noted.  
 Cost of 13 mm Preformed Joint Filler included with Concrete, A, Substructure.  
 \*For the 3 southernmost piles, which are outside the Limits of Existing Structure.  
 \*\*Cut bars to fit in field.

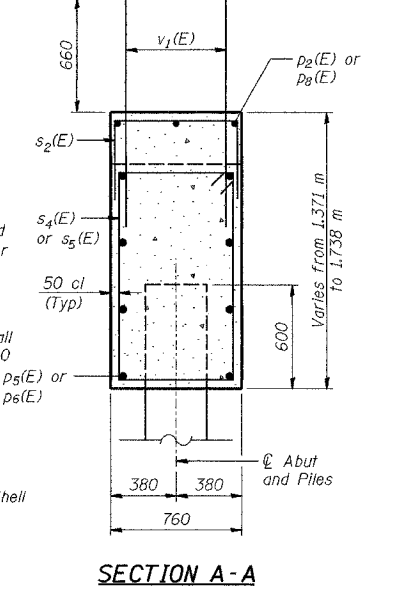
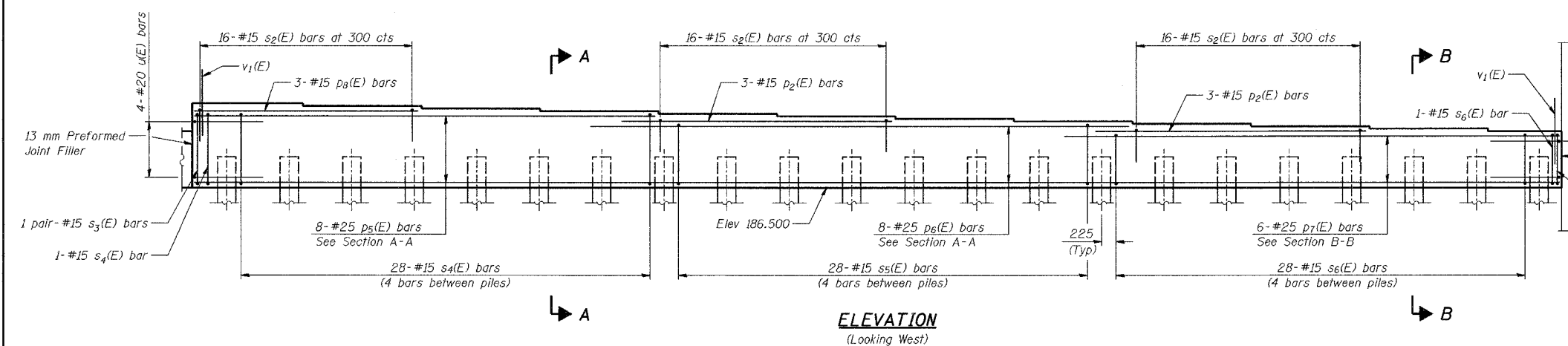


**SECTION B-B**

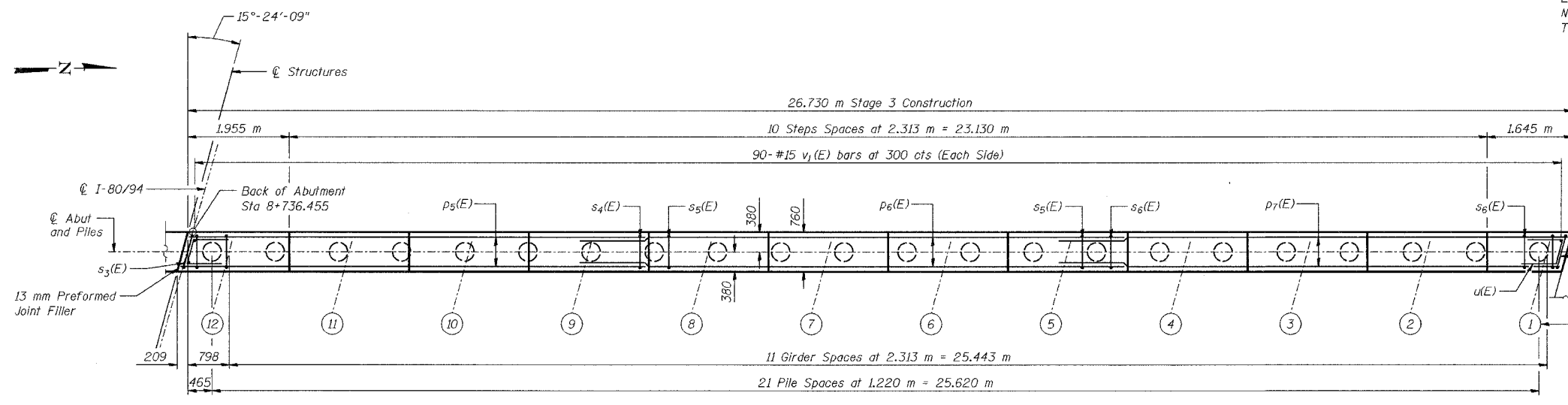
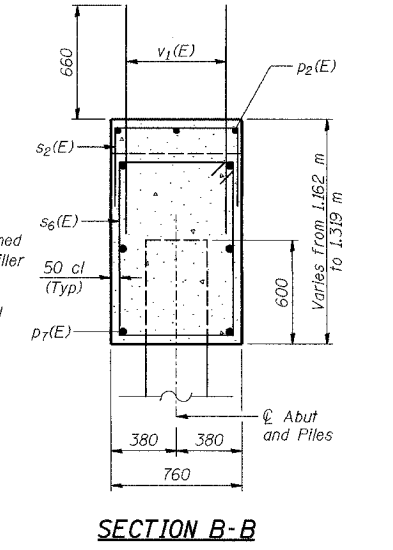
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.L. ROUTE 80/94 (BORMAN EXPRESSWAY)  
 OVER HARRISON AVENUE

**WEST ABUTMENT - EASTBOUND**  
**SECTION 2626.2-R-2**  
**LAKE COUNTY, INDIANA**  
**STATION 8+754.874**  
**STRUCTURE NO. I-80-1-8461 (EB & WB)**  
 DATE 09/05 (016-1005 & 016-1006)

**AMERICAN**  
 CONSULTING ENGINEERS



**PILE DATA**  
 Type - 356  $\phi$  Metal Shell  
 Capacity - 500 kN  
 Est Length - 18.0 m  
 \*Est Length - 20.0 m  
 No Reqd - 22  
 Test Piles - 0



**PLAN**

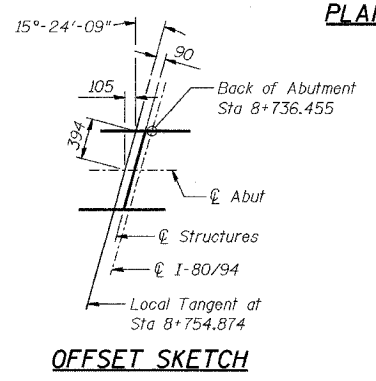
**MINIMUM BAR LAPS**  
 #15 bars = 640  
 #20 bars = 790  
 #25 bars = 1320

**NOTES:**  
 See Sheet No S-22 for reinforcement details and Bill of Material.  
 See Sheet No S-24 for concrete pile details.  
 Space reinforcement in cap to miss anchor bolts.  
 Pour steps monolithically with cap.  
 Reinforcement bars designated (E) shall be epoxy coated.  
 Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.  
 All dimensions are in millimeters (mm) except as noted.  
 All edges shall have standard 20 mm chamfers except as noted.  
 Cost of 13 mm Preformed Joint Filler included with Concrete, A, Substructure.  
 \*For the 3 northernmost piles, which are outside the Limits of Existing Structure.

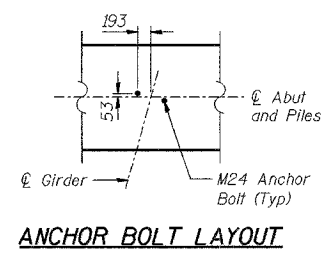
**BEARING SEAT ELEVATIONS**

Girder	℄ Brg W Abut
1	187.662
2	187.715
3	187.767
4	187.819
5	187.871
6	187.924
7	187.976
8	188.028
9	188.081
10	188.133
11	188.185
12	188.238

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP



**OFFSET SKETCH**

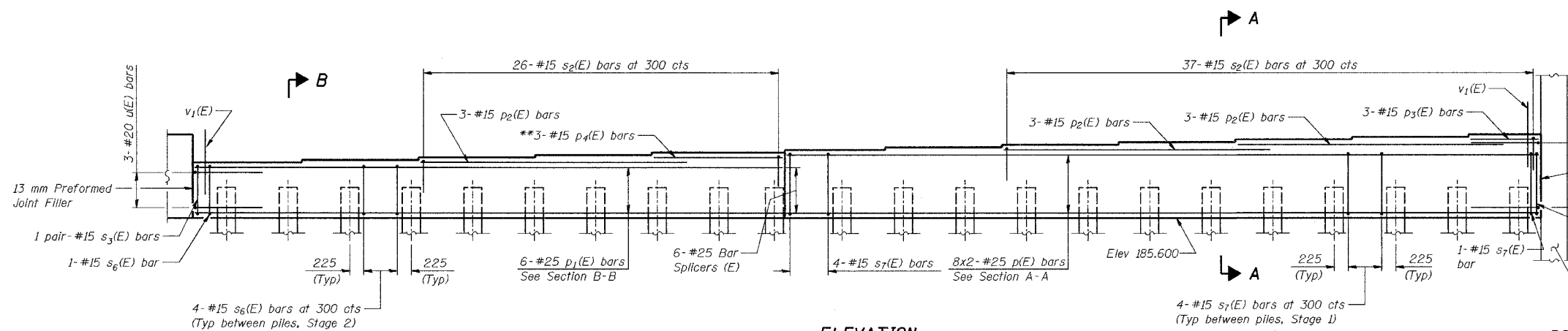


**ANCHOR BOLT LAYOUT**

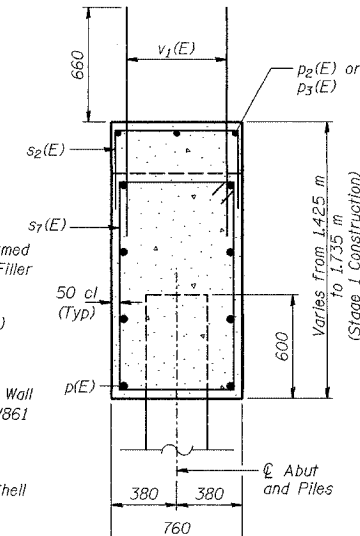
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.L. ROUTE 80/94 (BORMAN EXPRESSWAY)  
 OVER HARRISON AVENUE

**WEST ABUTMENT - WESTBOUND**  
**SECTION 2626.2-R-2**  
**LAKE COUNTY, INDIANA**  
**STATION 8+754.874**  
**STRUCTURE NO. I-80-1-8461 (EB & WB)**  
 DATE 09/05 (016-1005 & 016-1006)

**AMERICAN**  
 CONSULTING ENGINEERS

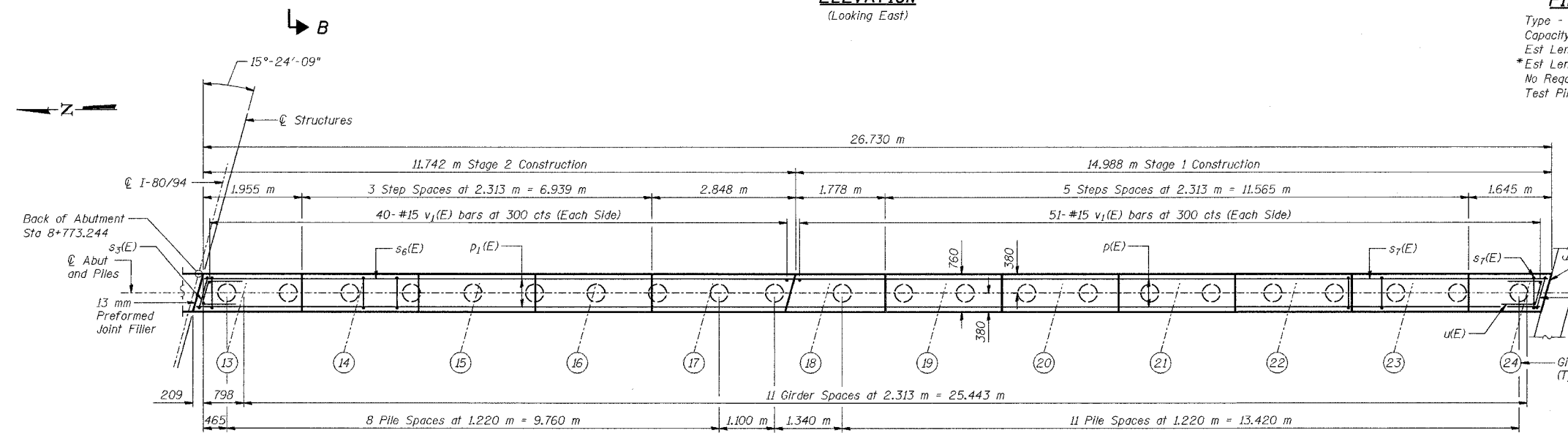


**ELEVATION**  
(Looking East)

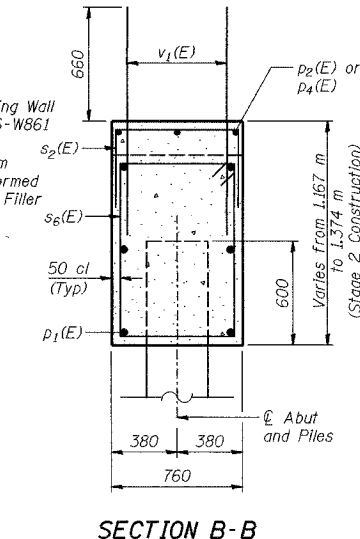


**SECTION A-A**

**PILE DATA**  
 Type - 356 φ Metal Shell  
 Capacity - 500 kN  
 Est Length - 16.9 m  
 \*Est Length - 20.0 m  
 No Reqd - 21  
 Test Piles - 1



**PLAN**

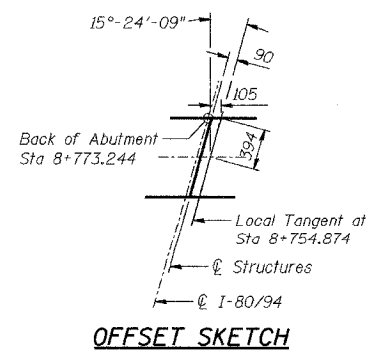


**SECTION B-B**

**BEARING SEAT ELEVATIONS**

Girder	℄ Brg E Abut
13	186.767
14	186.819
15	186.870
16	186.922
17	186.974
18	187.025
19	187.077
20	187.128
21	187.180
22	187.232
23	187.283
24	187.335

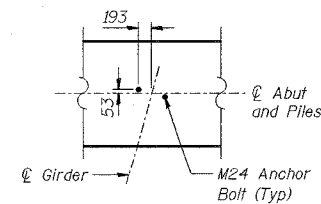
DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP



**OFFSET SKETCH**

**MINIMUM BAR LAPS**

#15 bars = 640  
 #20 bars = 790  
 #25 bars = 1320



**ANCHOR BOLT LAYOUT**

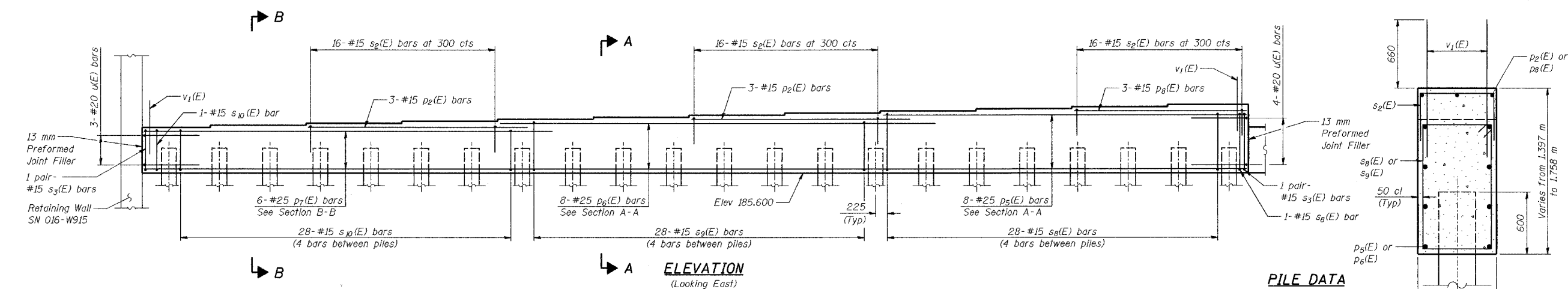
**NOTES:**

- See Sheet No S-22 for reinforcement details and Bill of Material.
- See Sheet No S-24 for concrete pile details.
- Space reinforcement in cap to miss anchor bolts.
- Four steps monolithically with cap.
- Reinforcement bars designated (E) shall be epoxy coated.
- Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.
- All dimensions are in millimeters (mm) except as noted.
- All edges shall have standard 20 mm chamfers except as noted.
- Cost of 13 mm Preformed Joint Filler included with Concrete, A, Substructure.
- \* For the 3 southernmost piles, which are outside the Limits of Existing Structure.
- \*\* Cut bars to fit in field.

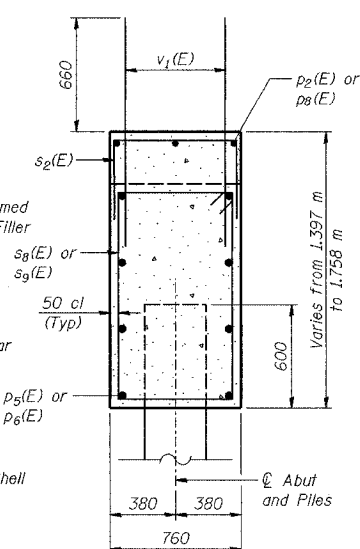
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.L. ROUTE 80/94 (BORMAN EXPRESSWAY)  
 OVER HARRISON AVENUE

**EAST ABUTMENT - EASTBOUND**  
**SECTION 2626.2-R-2**  
**LAKE COUNTY, INDIANA**  
**STATION 8+754.874**  
**STRUCTURE NO. I-80-1-8461 (EB & WB)**  
 DATE 09/05 (016-1005 & 016-1006)

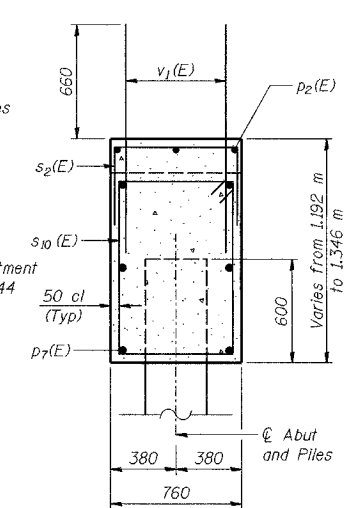
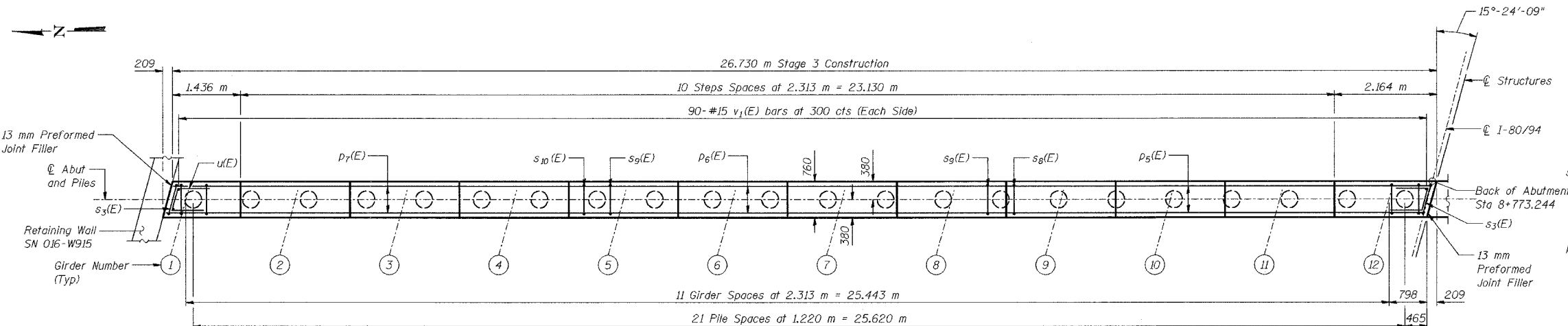
**AMERICAN**  
 CONSULTING ENGINEERS



**PILE DATA**  
 Type - 356  $\phi$  Metal Shell  
 Capacity - 500 kN  
 Est Length - 16.9 m  
 \* Est Length - 20.0 m  
 No Reqd - 22  
 Test Piles - 0



**SECTION A-A**

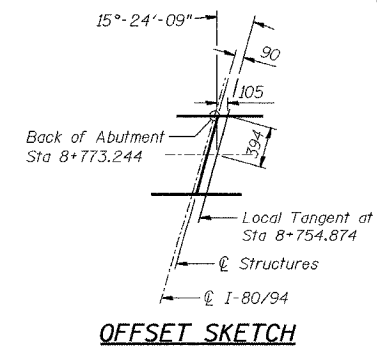


**SECTION B-B**

**BEARING SEAT ELEVATIONS**

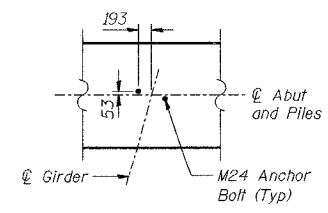
Girder	$\phi$ Brg E. Abut
1	186.792
2	186.843
3	186.895
4	186.946
5	186.997
6	187.049
7	187.100
8	187.152
9	187.203
10	187.255
11	187.306
12	187.358

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP



**OFFSET SKETCH**

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



**ANCHOR BOLT LAYOUT**

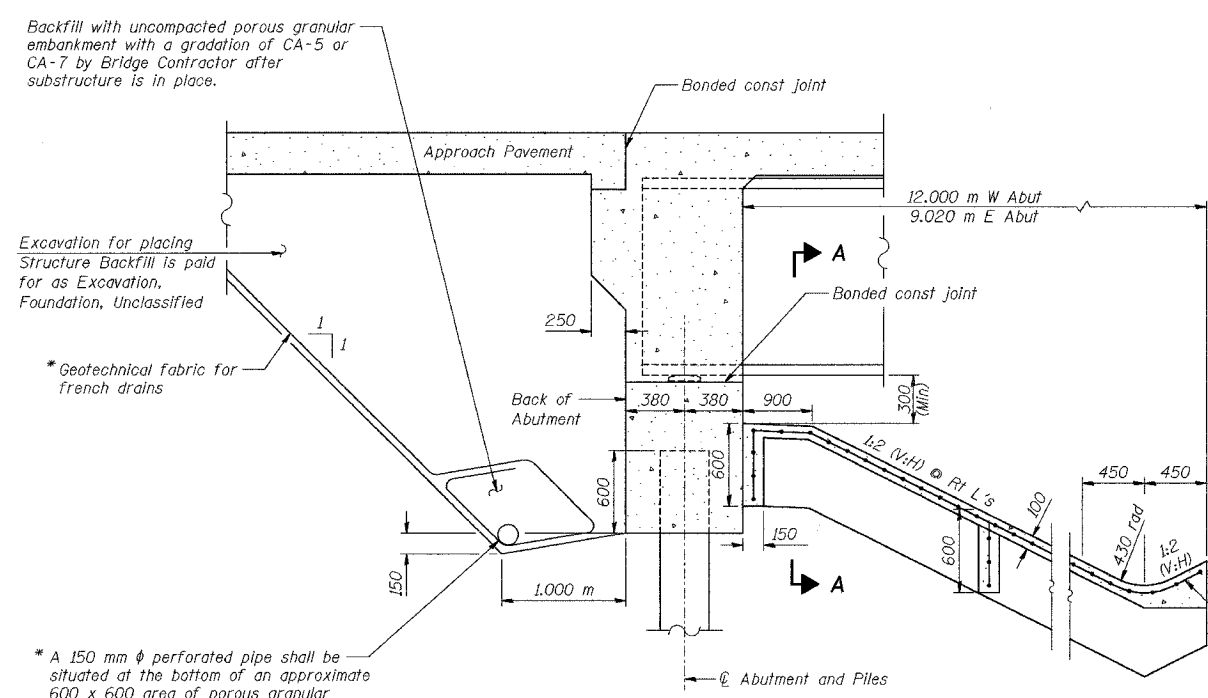
**NOTES:**  
 See Sheet No S-22 for reinforcement details and Bill of Material.  
 See Sheet No S-24 for concrete pile details.  
 Space reinforcement in cap to miss anchor bolts.  
 Pour steps monolithically with cap.  
 Reinforcement bars designated (E) shall be epoxy coated.  
 Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.  
 All dimensions are in millimeters (mm) except as noted.  
 All edges shall have standard 20 mm chamfers except as noted.  
 Cost of 13 mm Preformed Joint Filler included with Concrete, A, Substructure.  
 \* For the 3 northernmost piles, which are outside the Limits of Existing Structure.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.L. ROUTE 80/94 (BORMAN EXPRESSWAY)  
 OVER HARRISON AVENUE

**EAST ABUTMENT - WESTBOUND**  
**SECTION 266.2-R-2**  
**LAKE COUNTY, INDIANA**  
**STATION 8 + 754.874**  
**STRUCTURE NO. I-80-1-8461 (EB & WB)**  
 DATE 09/05 (016-1005 & 016-1006)

**AMERICAN**  
 CONSULTING ENGINEERS

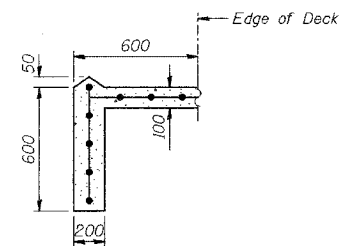




**SECTION THRU INTEGRAL ABUTMENT**

(Dimensions at Right Angles)

\* Included in the cost of Structure Backfill



**SECTION A-A**

(Extend past limits of deck at locations where retaining wall is not present.)

**WEST ABUTMENT  
BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
p(E)	16	#25	8.11	—
p <sub>1</sub> (E)	6	#25	11.64	—
p <sub>2</sub> (E)	15	#15	5.27	—
p <sub>3</sub> (E)	3	#15	1.33	—
p <sub>4</sub> (E)	3	#15	2.74	—
p <sub>5</sub> (E)	8	#25	8.80	—
p <sub>6</sub> (E)	8	#25	10.58	—
p <sub>7</sub> (E)	6	#25	9.91	—
p <sub>8</sub> (E)	3	#15	4.16	—
s(E)	49	#15	4.20	□
s <sub>1</sub> (E)	37	#15	3.68	□
s <sub>2</sub> (E)	111	#15	1.94	□
s <sub>3</sub> (E)	8	#15	2.76	□
s <sub>4</sub> (E)	29	#15	4.56	□
s <sub>5</sub> (E)	28	#15	4.14	□
s <sub>6</sub> (E)	29	#15	3.72	□
u(E)	15	#20	2.26	□
v <sub>1</sub> (E)	362	#15	1.32	—
Test Pile	Each		1	
Structure Backfill		m <sup>3</sup>	396	
Excavation, Foundation, Unclassified		m <sup>3</sup>	249	
Concrete, A, Substructure		m <sup>3</sup>	58.5	
Reinforcing Bars, Epoxy Coated		kg	4,090	
Pile, Concrete, Steel Shell Encased, 6.35 mm, 356 mm		m	786.0	
Threaded Tie Bar Assembly, Epoxy Coated	Each		6	
Slopedwall, Concrete, 100 mm		m <sup>2</sup>	712	

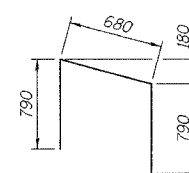
**EAST ABUTMENT  
BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
p(E)	16	#25	8.11	—
p <sub>1</sub> (E)	6	#25	11.64	—
p <sub>2</sub> (E)	15	#15	5.27	—
p <sub>3</sub> (E)	3	#15	1.33	—
p <sub>4</sub> (E)	3	#15	2.74	—
p <sub>5</sub> (E)	8	#25	8.80	—
p <sub>6</sub> (E)	8	#25	10.58	—
p <sub>7</sub> (E)	6	#25	9.91	—
p <sub>8</sub> (E)	3	#15	4.16	—
s <sub>2</sub> (E)	111	#15	1.94	□
s <sub>3</sub> (E)	8	#15	2.76	□
s <sub>6</sub> (E)	37	#15	3.72	□
s <sub>7</sub> (E)	49	#15	4.24	□
s <sub>8</sub> (E)	29	#15	4.60	□
s <sub>9</sub> (E)	28	#15	4.18	□
s <sub>10</sub> (E)	29	#15	3.78	□
u(E)	15	#20	2.26	□
v <sub>1</sub> (E)	362	#15	1.32	—
Test Pile	Each		1	
Structure Backfill		m <sup>3</sup>	400	
Excavation, Foundation, Unclassified		m <sup>3</sup>	218	
Concrete, A, Substructure		m <sup>3</sup>	59.4	
Reinforcing Bars, Epoxy Coated		kg	4,100	
Pile, Concrete, Steel Shell Encased, 6.35 mm, 356 mm		m	745.5	
Threaded Tie Bar Assembly, Epoxy Coated	Each		6	
Slopedwall, Concrete, 100 mm		m <sup>2</sup>	533	

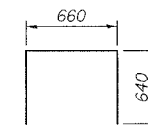
DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

**BAR DIMENSIONS**

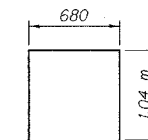
Bar	'A'
s(E)	1.30 m
s <sub>1</sub> (E)	1.04 m
s <sub>4</sub> (E)	1.48 m
s <sub>5</sub> (E)	1.27 m
s <sub>6</sub> (E)	1.06 m
s <sub>7</sub> (E)	1.32 m
s <sub>8</sub> (E)	1.50 m
s <sub>9</sub> (E)	1.29 m
s <sub>10</sub> (E)	1.09 m



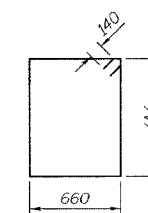
**BAR u(E)**



**BAR s<sub>2</sub>(E)**



**BAR s<sub>3</sub>(E)**



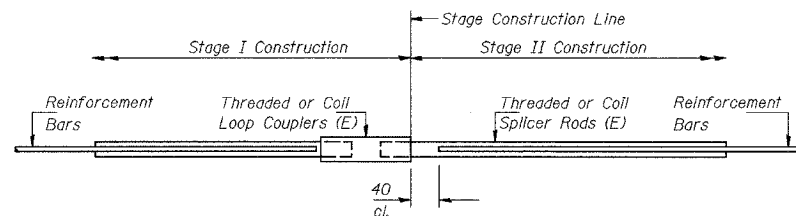
**BARS s(E), s<sub>1</sub>(E), s<sub>4</sub>(E), s<sub>5</sub>(E), s<sub>6</sub>(E), s<sub>7</sub>(E), s<sub>8</sub>(E), s<sub>9</sub>(E) or s<sub>10</sub>(E)**

**NOTES:**  
Reinforcement bars designated (E) shall be epoxy coated.  
All dimensions are in millimeters (mm) except as noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)  
OVER HARRISON AVENUE

**ABUTMENT DETAILS  
SECTION 2626.2-R-2  
LAKE COUNTY, INDIANA  
STATION 8+754.874  
STRUCTURE NO. I-80-1-8461 (EB & WB)  
DATE 09/05 (016-1005 & 016-1006)**

**AMERICAN  
CONSULTING ENGINEERS**

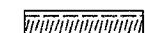


**BAR SPLICER ASSEMBLY DETAIL**

Bar Size	No. Assemblies Required	Location
15	353	Deck
25	6	W Abut
25	6	E Abut

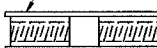
The diameter of this part is the same as the diameter of the bar spliced.

**ROLLED THREAD DOWEL BAR**



**\*\* ONE PIECE**

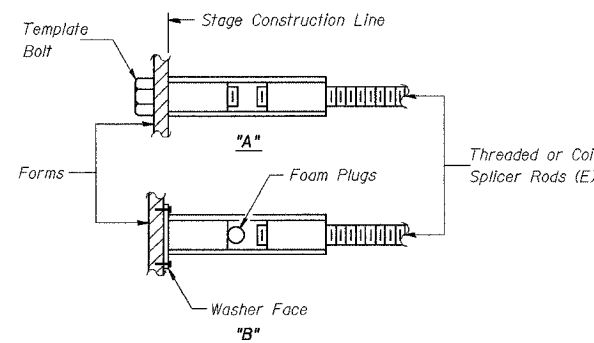
Wire Connector



**WELDED SECTIONS**

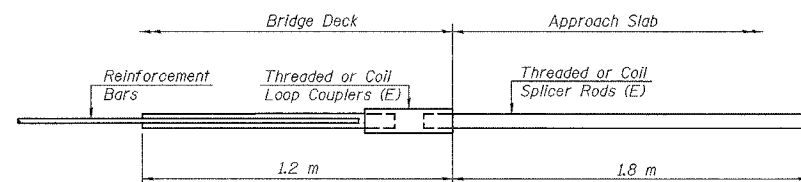
**BAR SPLICER ASSEMBLY ALTERNATIVES**

\*\* Heavy Hex Nuts conforming to ASTM A 563M, Grade C, D or DH may be used.



**INSTALLATION AND SETTING METHODS**

"A" : Set bar splicer assembly by means of a template bolt.  
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
 (E) : Indicates epoxy coating.



**FOR INTEGRAL ABUTMENTS**

Bar Splicer for #15 bar	
Min. Capacity =	100 kN - tension
Min. Pull-out Strength =	40 kN - tension
No. Required =	342

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

BSD-1 9-01-03

**NOTES**

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars. Splicer rods shall be of minimum 400 MPa yield strength, threaded or coiled full length. All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars. Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity =  $1.25 \times 10^{-3} \times f_y \times A_s$   
(Tension in kN)
- ② Minimum \*Pull-out Strength =  $1.25 \times 10^{-3} \times f_{s_{allow}} \times A_s$   
(Tension in kN)

Where  $f_y$  = Yield strength of lapped reinforcement bars in MPa.  
 $f_{s_{allow}}$  = Allowable tensile stress in lapped reinforcement bars in MPa (Service Load)  
 $A_s$  = Tensile stress area of lapped reinforcement bars (mm<sup>2</sup>).  
 \* = 28 day concrete

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kN - tension	Min. Pull-Out Strength kN - tension
#15	640 mm	100	40
#20	790 mm	150	60
#25	1.320 m	250	100
#30	1.850 m	350	140

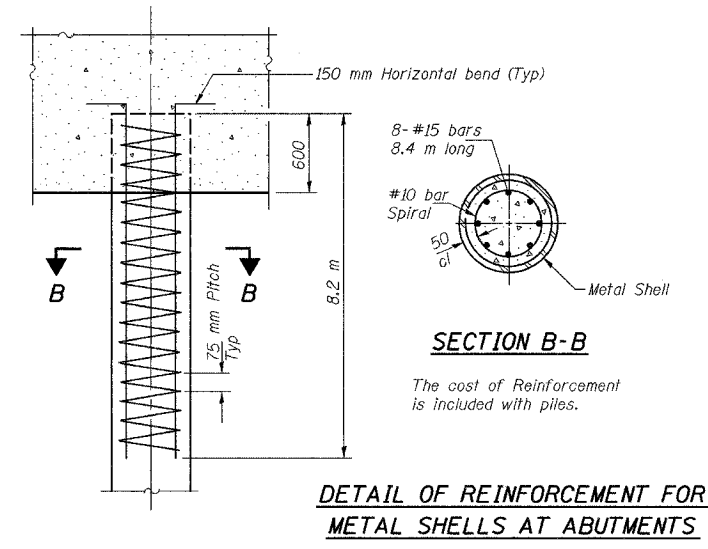
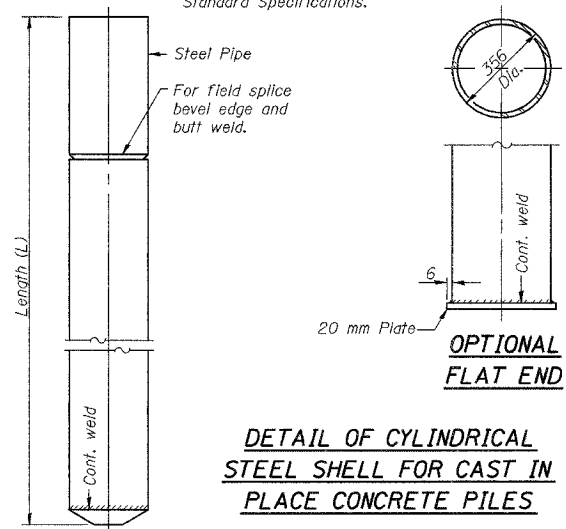
Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for Threaded Tie Bar Assembly, Epoxy Coated. All dimensions are in millimeters (mm) except as noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)  
 OVER HARRISON AVENUE

**BAR SPLICER (COUPLER) DETAILS**  
 SECTION 2626.2-R-2  
 LAKE COUNTY, INDIANA  
 STATION 8+754.874  
 STRUCTURE NO. I-80-1-8461 (EB & WB)  
 DATE 09/05 (016-1005 & 016-1006)

**AMERICAN**  
 CONSULTING ENGINEERS

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	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

X-PB (M) 10-31-02 (All dimensions are in millimeters (mm) except as noted.)

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.L. ROUTE 80/94 (BORMAN EXPRESSWAY)  
OVER HARRISON AVENUE

CONCRETE PILE DETAILS  
SECTION 2626.2-R-2  
LAKE COUNTY, INDIANA  
STATION 8+754.874  
STRUCTURE NO. I-80-1-8461 (EB & WB)  
DATE 09/05 (016-1005 & 016-1006)

**AMERICAN**  
CONSULTING ENGINEERS

**BORING NO. AB-25 (1 OF 2)**

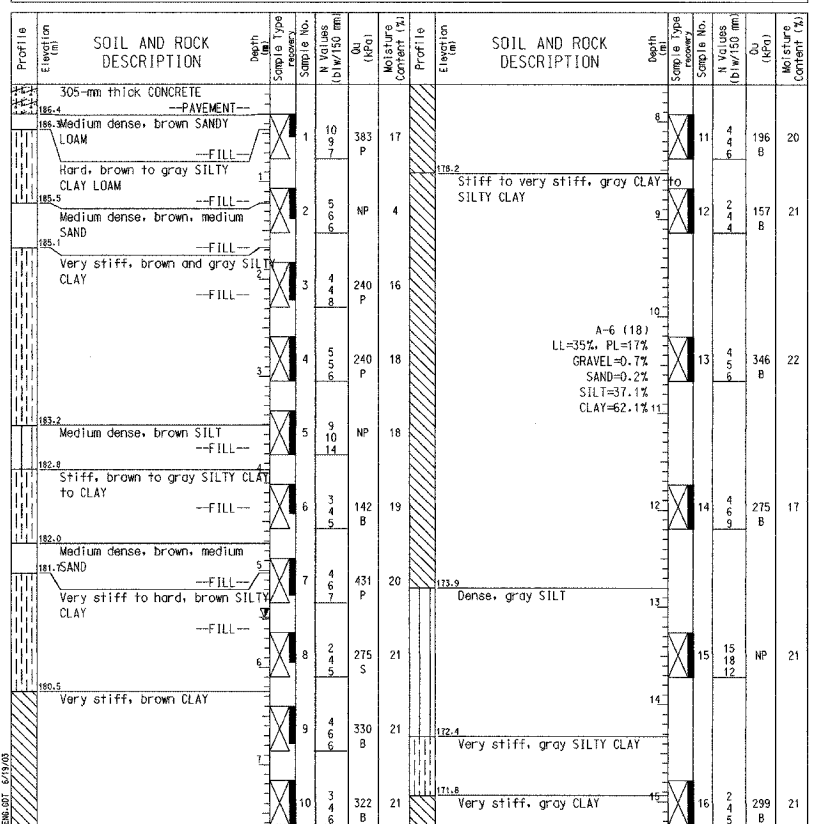
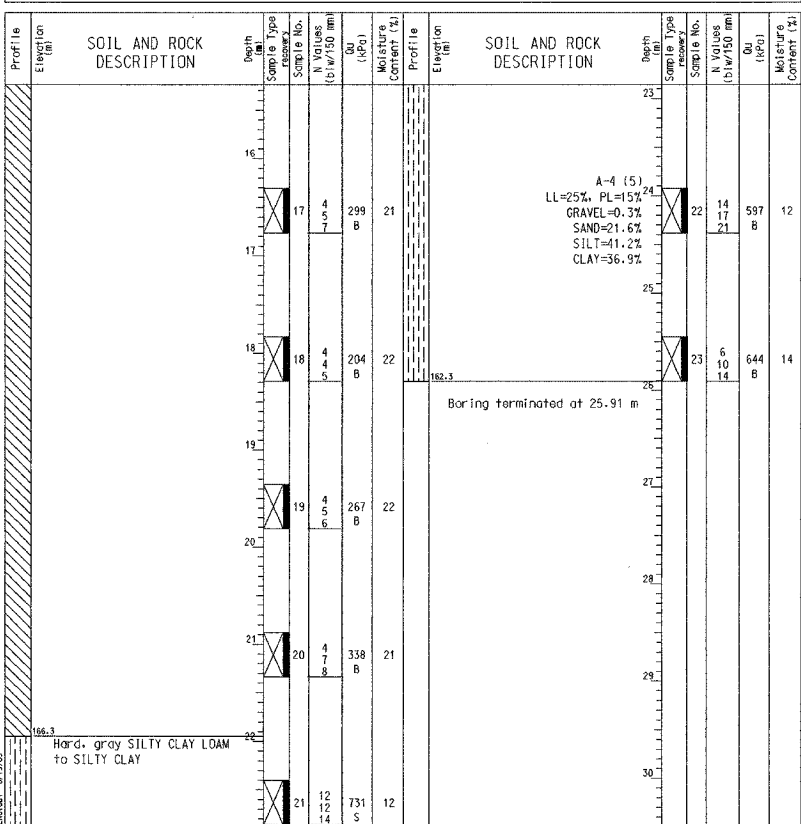
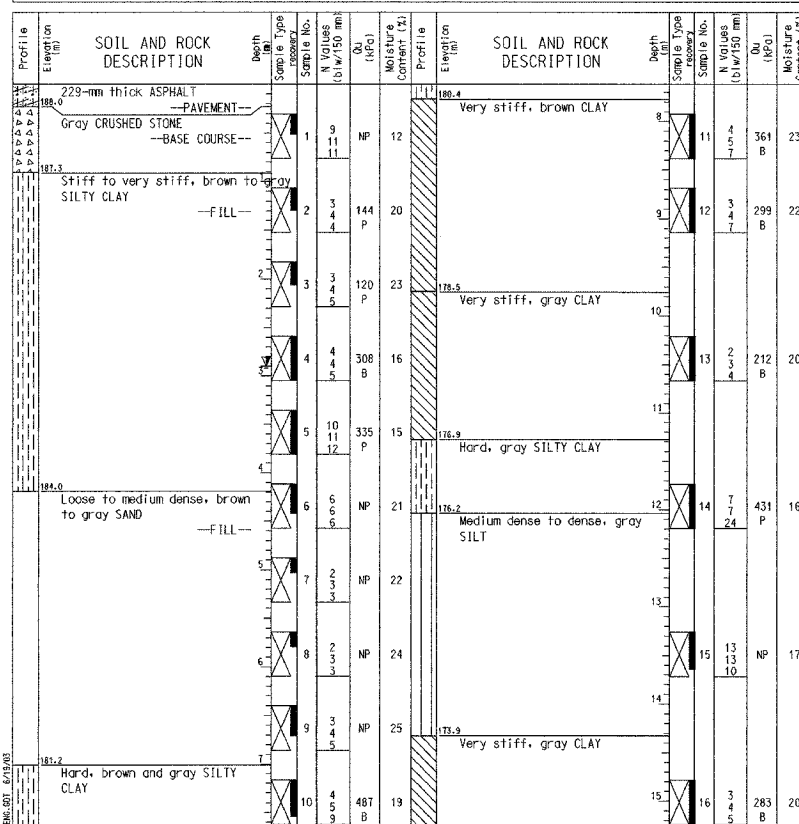
**BORING NO. AB-25 (2 OF 2)**

**BORING NO. AB-26 (1 OF 2)**

<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>	<b>BORING LOG AB-25</b>		Page 1 of 2
	WEI Job No.: 255-08-01		Date: NGVD
	Client: American Consulting Engineers		Elevation: 188.21 m
	Project: FAI 80/94, I-294 to US 41		North: 545213.17 m
Location: S13 T36N R10W & S29 R15E T36N		East: 368115.52 m	Station: 8+722.88
			Offset: 22.22 LT

<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>	<b>BORING LOG AB-25</b>		Page 2 of 2
	WEI Job No.: 255-08-01		Date: NGVD
	Client: American Consulting Engineers		Elevation: 188.21 m
	Project: FAI 80/94, I-294 to US 41		North: 545213.17 m
Location: S13 T36N R10W & S29 R15E T36N		East: 368115.52 m	Station: 8+722.88
			Offset: 22.22 LT

<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>	<b>BORING LOG AB-26</b>		Page 1 of 2
	WEI Job No.: 255-08-01		Date: NGVD
	Client: American Consulting Engineers		Elevation: 186.75 m
	Project: FAI 80/94, I-294 to US 41		North: 545199.41 m
Location: S13 T36N R10W & S29 R15E T36N		East: 368169.43 m	Station: 8+779.19
			Offset: 22.89 LT



<b>GENERAL NOTES</b>		<b>WATER LEVEL DATA</b>	
Begin Drilling: 02-18-2002	Complete Drilling: 02-19-2002	White Drilling: <input checked="" type="checkbox"/>	
Drilling Contractor: TSC	Drill Rig: CME 75	At Completion of Drilling: <input checked="" type="checkbox"/>	
Driller: C&A	Logger: H. Suhail	Time After Drilling: 24 hours	
Checked by: N. Davis		Depth to Water: <input checked="" type="checkbox"/> 2.90 m	
Drilling Method: Mud Rotary; Grouted after final water reading.			
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

<b>GENERAL NOTES</b>		<b>WATER LEVEL DATA</b>	
Begin Drilling: 02-18-2002	Complete Drilling: 02-19-2002	White Drilling: <input checked="" type="checkbox"/>	
Drilling Contractor: TSC	Drill Rig: CME 75	At Completion of Drilling: <input checked="" type="checkbox"/>	
Driller: C&A	Logger: H. Suhail	Time After Drilling: 24 hours	
Checked by: N. Davis		Depth to Water: <input checked="" type="checkbox"/> 2.90 m	
Drilling Method: Mud Rotary; Grouted after final water reading.			
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

<b>GENERAL NOTES</b>		<b>WATER LEVEL DATA</b>	
Begin Drilling: 02-14-2002	Complete Drilling: 02-14-2002	White Drilling: <input checked="" type="checkbox"/>	
Drilling Contractor: TSC	Drill Rig: CME 75	At Completion of Drilling: <input checked="" type="checkbox"/>	
Driller: C&A	Logger: B. Fuglio	Time After Drilling: 24 hours	
Checked by: N. Davis		Depth to Water: <input checked="" type="checkbox"/> 5.49 m	
Drilling Method: Mud Rotary; Grouted after final water reading.			
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

DESIGNED	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

**ILLINOIS DEPARTMENT OF TRANSPORTATION**  
F.A.L. ROUTE 80/94 (BORMAN EXPRESSWAY)  
OVER HARRISON AVENUE

**BORING LOGS (1 OF 4)**  
**SECTION 2626.2-R-2**  
**LAKE COUNTY, INDIANA**  
**STATION 8+754.874**  
**STRUCTURE NO. I-80-1-8461 (EB & WB)**  
**DATE 09/05 (016-1005 & 016-1006)**

**AMERICAN**  
CONSULTING ENGINEERS

**BORING NO. AB-26 (2 OF 2)**

**BORING NO. AB-27 (1 OF 2)**

**BORING NO. AB-27 (2 OF 2)**

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Fax: 630 458-0900

**BORING LOG AB-26** 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: 186.75 m  
North: 545199.41 m  
East: 368169.43 m  
Station: 84733.40  
Offset: 22.89 LT

**W** Wang Engineering, INC.  
Consulting Geotechnical and Environmental Engineers  
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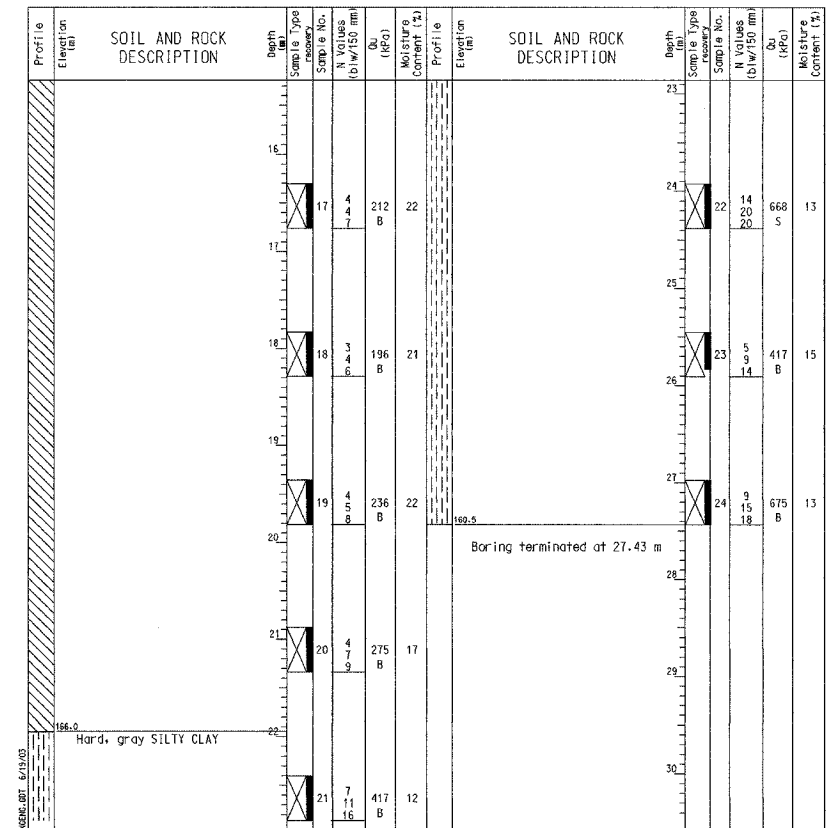
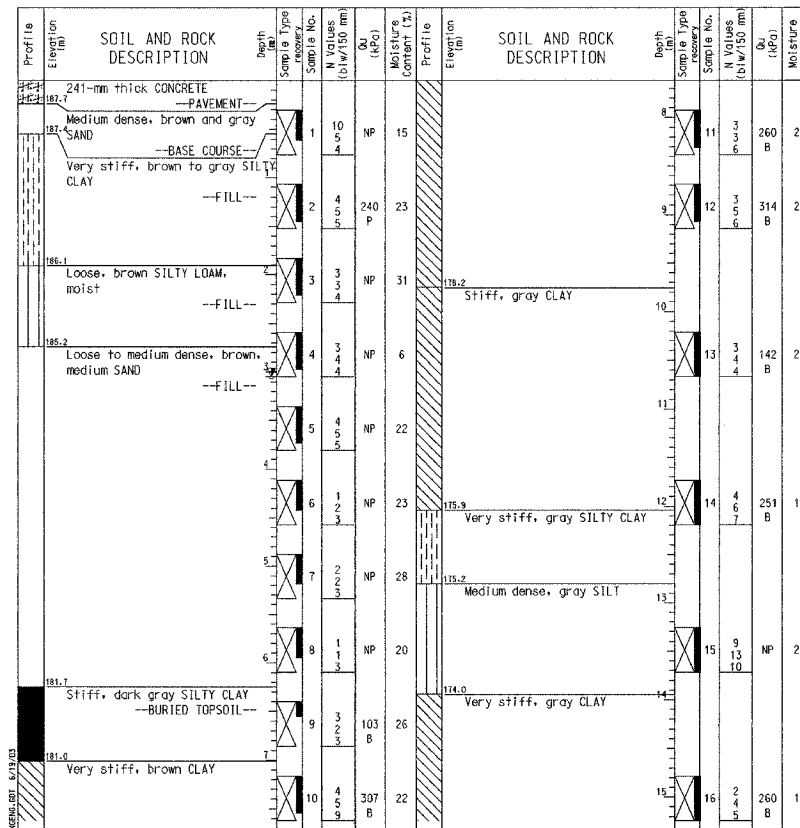
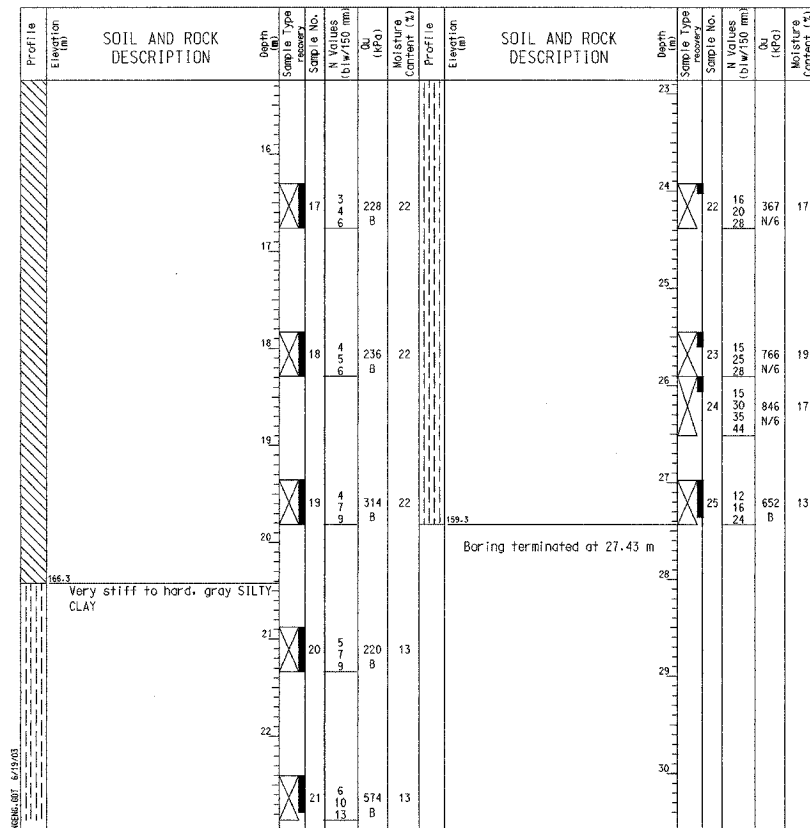
**BORING LOG AB-27** Page 1 of 2  
WEI Job No.: 255-08-01  
Client: American Consulting Engineers  
Project: FAI 80/94, I-294 to US 41  
Location: s13 T36N R10W & s29 R15E T36N

Datum: NGVD  
Elevation: 187.97 m  
North: 545190.61 m  
East: 368120.03 m  
Station: 84733.40  
Offset: 1.73 LT

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**BORING LOG AB-27** 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: 187.97 m  
North: 545190.61 m  
East: 368120.03 m  
Station: 84733.40  
Offset: 1.73 LT



**GENERAL NOTES**

Begin Drilling 02-14-2002 Complete Drilling 02-14-2002  
Drilling Contractor TSC Drill Rig CME 75  
Driller C&A Logger B. Fugiel 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 5.49 m  
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

**GENERAL NOTES**

Begin Drilling 02-12-2002 Complete Drilling 02-12-2002  
Drilling Contractor TSC Drill Rig CME 75  
Driller C&A Logger B. Fugiel 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.

**GENERAL NOTES**

Begin Drilling 02-12-2002 Complete Drilling 02-12-2002  
Drilling Contractor TSC Drill Rig CME 75  
Driller C&A Logger B. Fugiel 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	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.L. ROUTE 80/94 (BORMAN EXPRESSWAY)  
OVER HARRISON AVENUE

**BORING LOGS (2 OF 4)  
SECTION 2626.2-R-2  
LAKE COUNTY, INDIANA  
STATION 8+754.874  
STRUCTURE NO. 1-80-1-8461 (EB & WB)  
DATE 09/05 (016-1005 & 016-1006)**

**AMERICAN  
CONSULTING ENGINEERS**

**BORING NO. AB-28 (1 OF 2)**

**BORING NO. AB-28 (2 OF 2)**

**BORING NO. AB-29 (1 OF 2)**

**Wang Engineering, Inc.**  
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 Telephone: 630 458-0700  
 Fax: 630 458-0900

**BORING LOG AB-28**  
 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

Date: NGVD  
 Elevation: 186.42 m  
 North: 545176.76 m  
 East: 368173.08 m  
 Station: 8+788.27  
 Offset: 1.80 LT

Page 1 of 2

**Wang Engineering, Inc.**  
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 Fax: 630 458-0900

**BORING LOG AB-28**  
 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

Date: NGVD  
 Elevation: 186.42 m  
 North: 545176.76 m  
 East: 368173.08 m  
 Station: 8+788.27  
 Offset: 1.80 LT

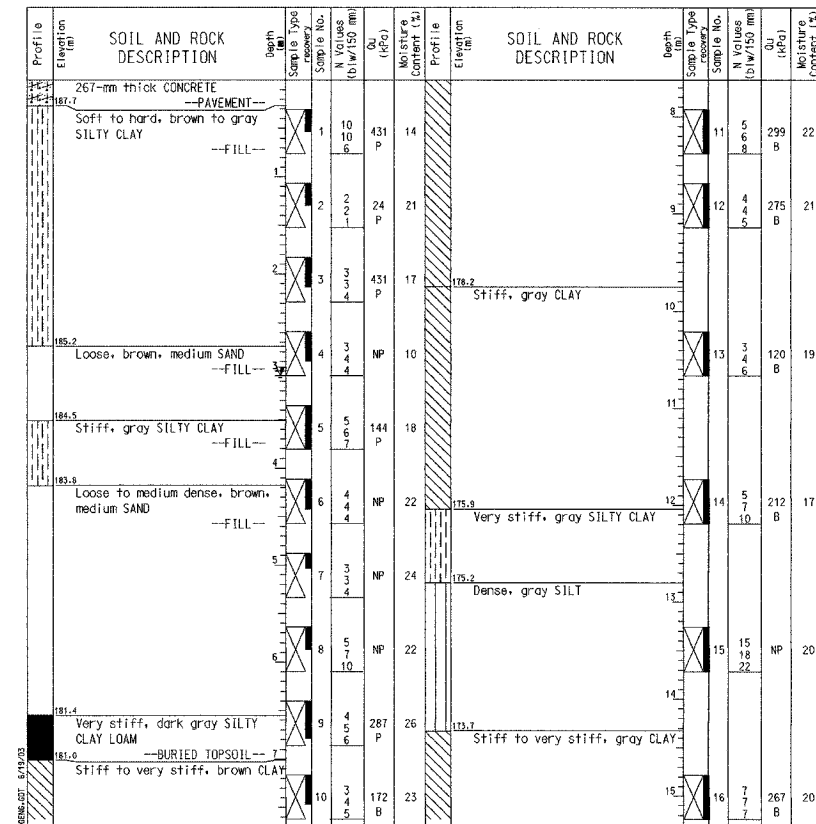
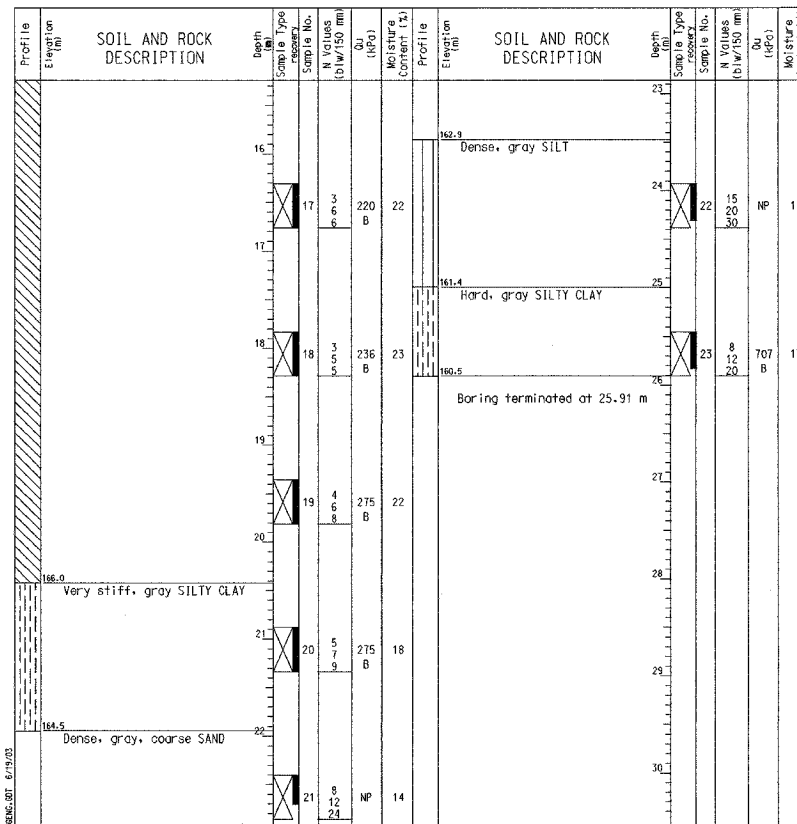
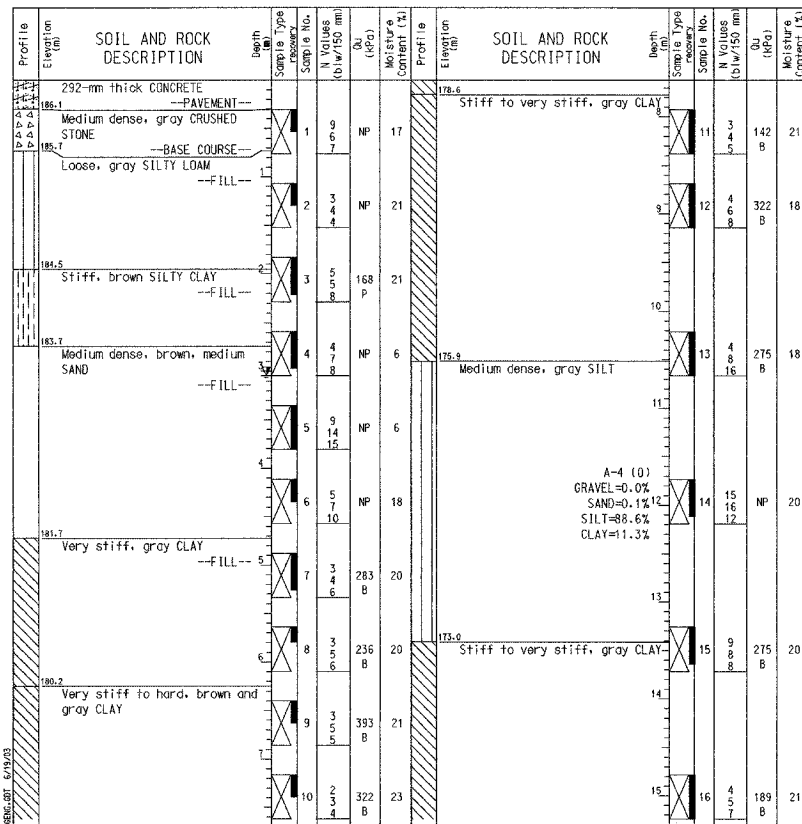
Page 2 of 2

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**BORING LOG AB-29**  
 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

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

Page 1 of 2



**GENERAL NOTES**  
 Begin Drilling 02-13-2002 Complete Drilling 02-14-2002  
 Drilling Contractor TSC Drill Rig CME 75  
 Driller C&A Logger B. Fugiel 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.

**GENERAL NOTES**  
 Begin Drilling 02-13-2002 Complete Drilling 02-14-2002  
 Drilling Contractor TSC Drill Rig CME 75  
 Driller C&A Logger B. Fugiel 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.

**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   
 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	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (BORMAN EXPRESSWAY)  
 OVER HARRISON AVENUE

**BORING LOGS (3 OF 4)**  
**SECTION 266.2-R-2**  
**LAKE COUNTY, INDIANA**  
**STATION 8+754.874**  
**STRUCTURE NO. I-80-1-8461 (EB & WB)**  
 DATE 09/05 (016-1005 & 016-1006)

**AMERICAN**  
 CONSULTING ENGINEERS

**BORING NO. AB-29 (2 OF 2)**

**BORING NO. AB-30 (1 OF 2)**

**BORING NO. AB-30 (2 OF 2)**

**BORING LOG AB-29** Page 2 of 2

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

**BORING LOG AB-30** Page 1 of 2

Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers  
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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

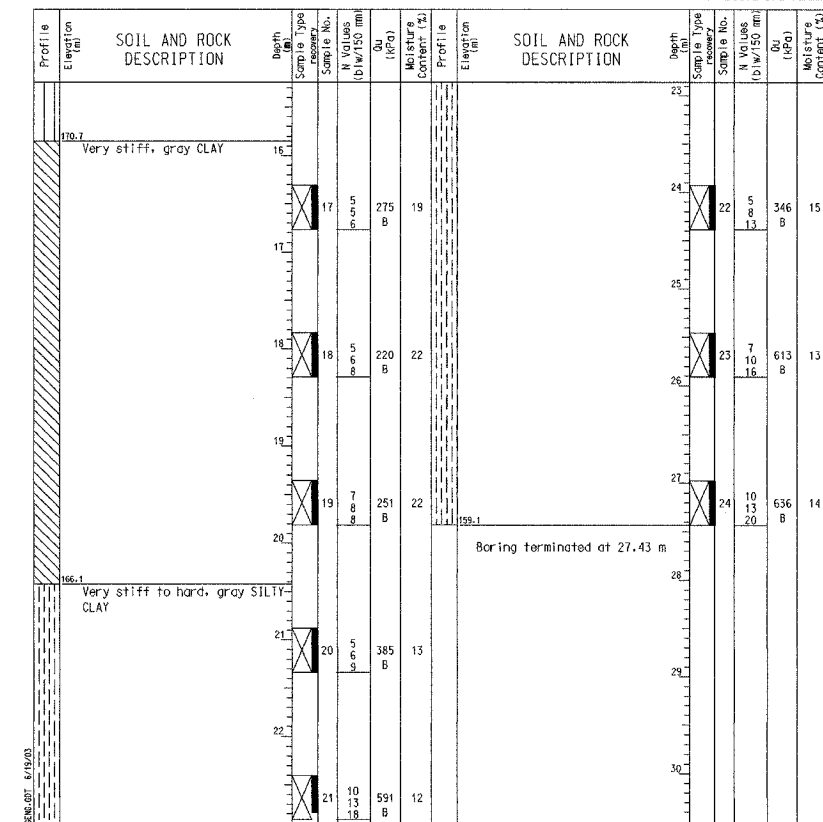
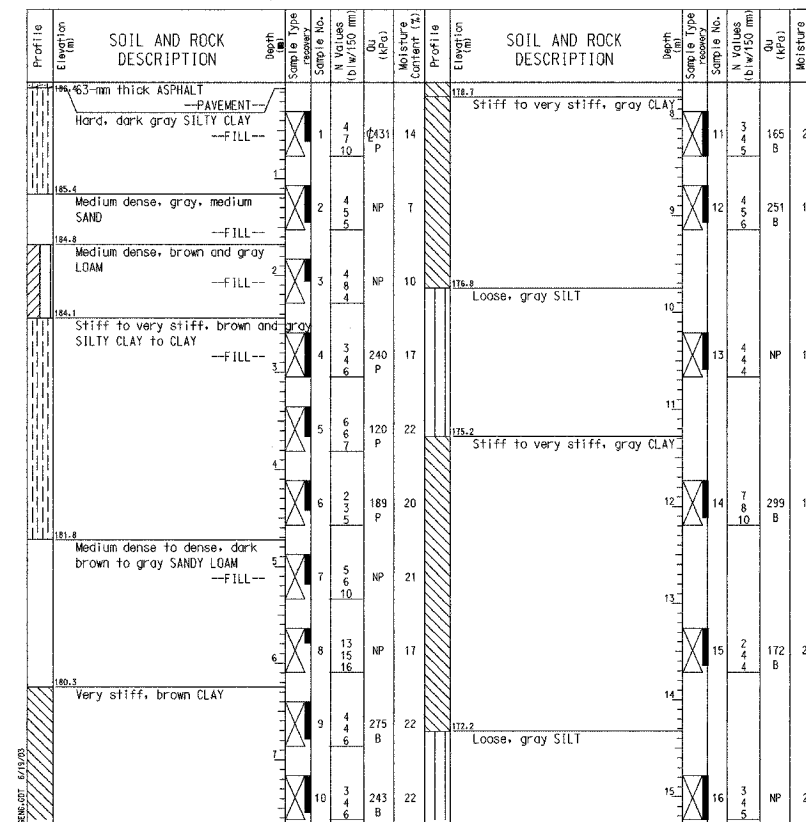
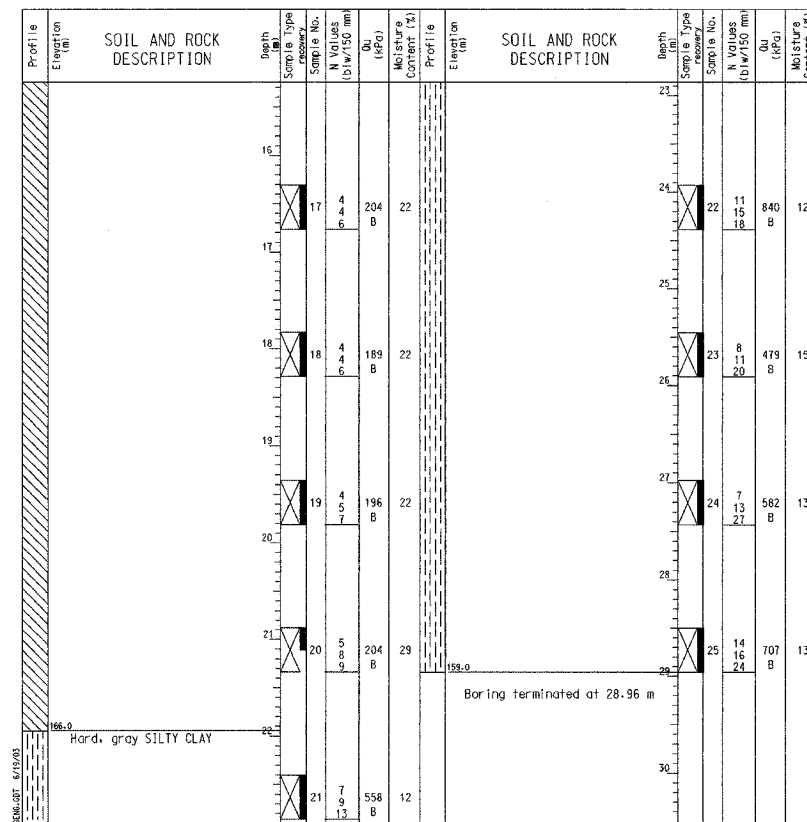
Datum: NGVD  
Elevation: 186.51 m  
North: 545154.89 m  
East: 368164.37 m  
Station: 8+785.10  
Offset: 21.53 RT

**BORING LOG AB-30** Page 2 of 2

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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: 186.51 m  
North: 545154.89 m  
East: 368164.37 m  
Station: 8+785.10  
Offset: 21.53 RT



**GENERAL NOTES**

Begin Drilling 02-05-2002 Complete Drilling 02-06-2002  
Drilling Contractor TSC Drill Rig CME 75  
Driller CAD Logger H. Suhail 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.

**GENERAL NOTES**

Begin Drilling 02-06-2002 Complete Drilling 02-07-2002  
Drilling Contractor TSC Drill Rig CME 75  
Driller CAD Logger H. Suhail 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 02-06-2002 Complete Drilling 02-07-2002  
Drilling Contractor TSC Drill Rig CME 75  
Driller CAD Logger H. Suhail 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	BHS
CHECKED	KFA
DRAWN	MJB
CHECKED	GSP

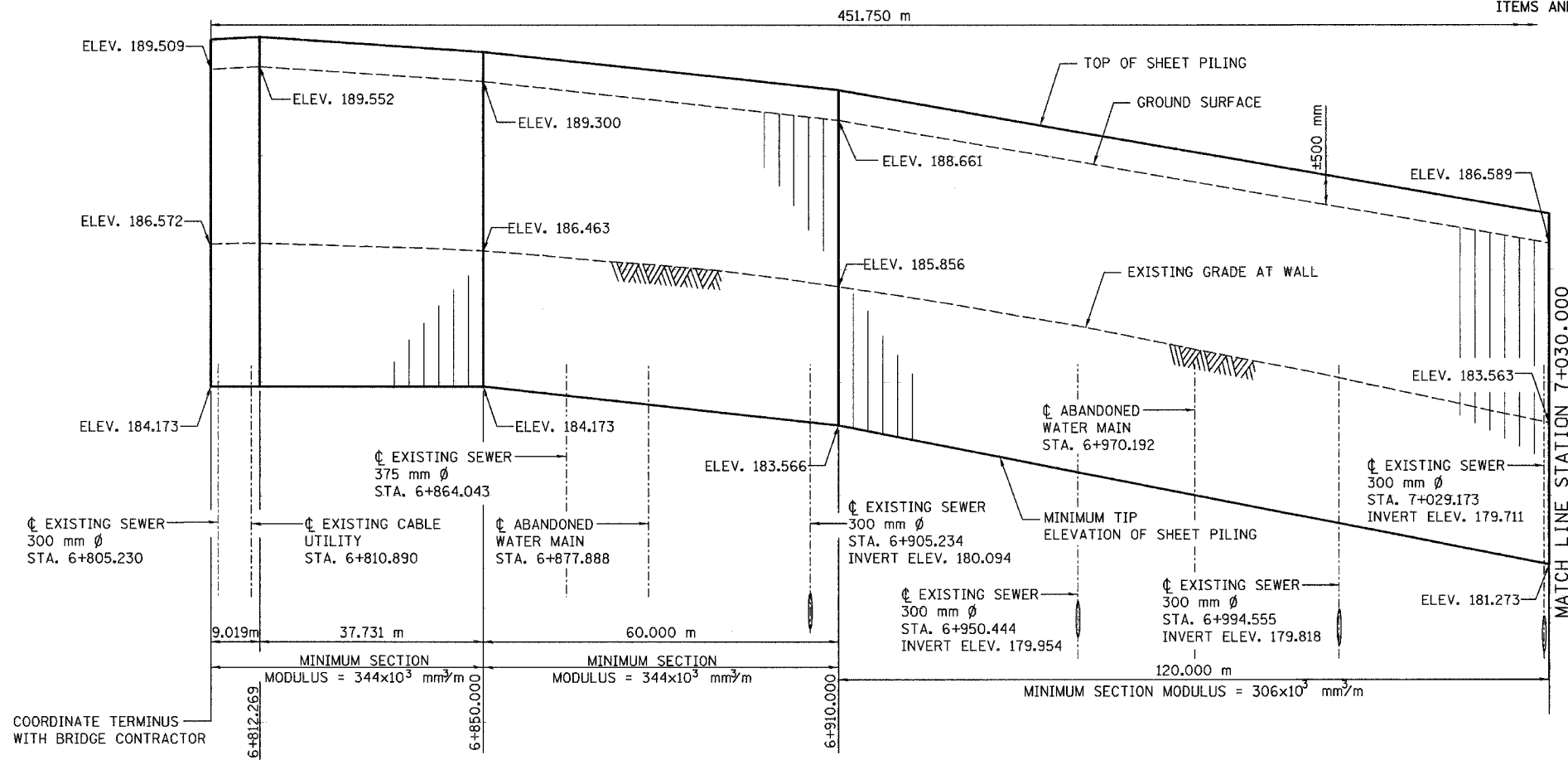
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.L. ROUTE 80/94 (BORMAN EXPRESSWAY)  
OVER HARRISON AVENUE

**BORING LOGS (4 OF 4)**  
**SECTION 2626.2-R-2**  
**LAKE COUNTY, INDIANA**  
**STATION 8+754.874**  
**STRUCTURE NO. I-80-1-8461 (EB & WB)**  
DATE 09/05 (016-1005 & 016-1006)

**AMERICAN**  
CONSULTING ENGINEERS

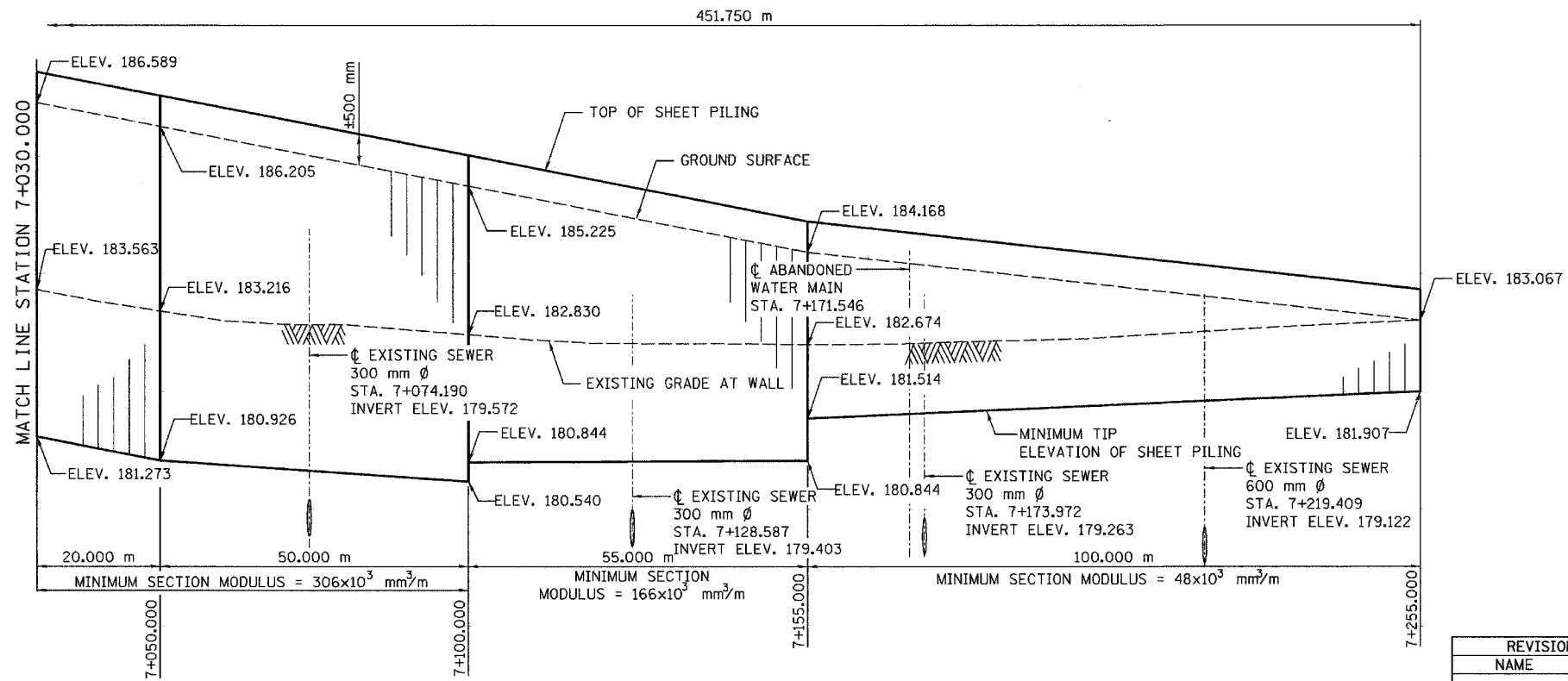
ALL DIMENSIONS IN METERS EXCEPT PAY ITEMS AND UNLESS NOTED OTHERWISE

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-1	COOK	1207	720
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62113	INDOT DES. NO. 0100987			



NOTES:

1. 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.
2. HARD DRIVING MAY BE ENCOUNTERED DURING THE SHEET PILING INSTALLATION. THE CONTRACTOR SHALL PROVIDE THE APPROPRIATE DRIVING EQUIPMENT FOR THE SOIL CONDITIONS INDICATED ON THE BORING LOGS.
3. THE TOP OF SHEET PILING WALL IS EXTENDED TO INDICATE ITS LOCATION TO THE CONTRACTOR DURING ROADWAY CONSTRUCTION. THE SHEET PILING WALL IS NOT DESIGNED FOR IMPACT.
4. SEE SHEETS 37 AND 38 OF 452 FOR PLAN VIEW.



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

REVISIONS	
NAME	DATE

SCALE 1:500  
DATE 07/04  
DRAWN BY MJB  
CHECKED BY BPS





F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	721
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62114

**BENCHMARK**

BM "M" Chiseled square cut in southwest wingwall of existing IL Rte 83 (Torrence Avenue) bridge over I-80. El. 188.209

**DESIGN SPECIFICATIONS**

1996 AASHTO Standard Specifications for Highway Bridges, with 1997 thru 2000 & 2002 Interims.  
1989 AASHTO Guide Specifications for Structural Design of Sound Barriers with 1992 Interims.

**DESIGN STRESSES**

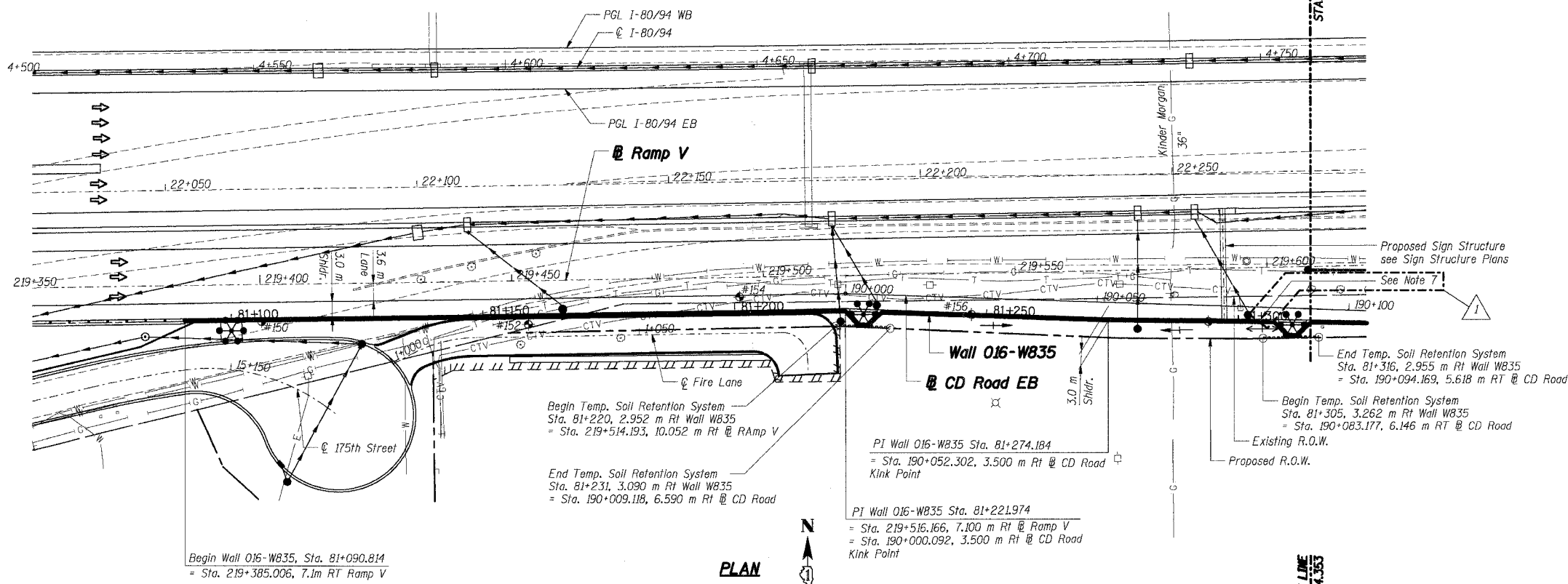
Concrete,  $f'_c = 24 \text{ MPa}$   
Reinforcement,  $f_y = 400 \text{ MPa}$

**DESIGN LOADING**

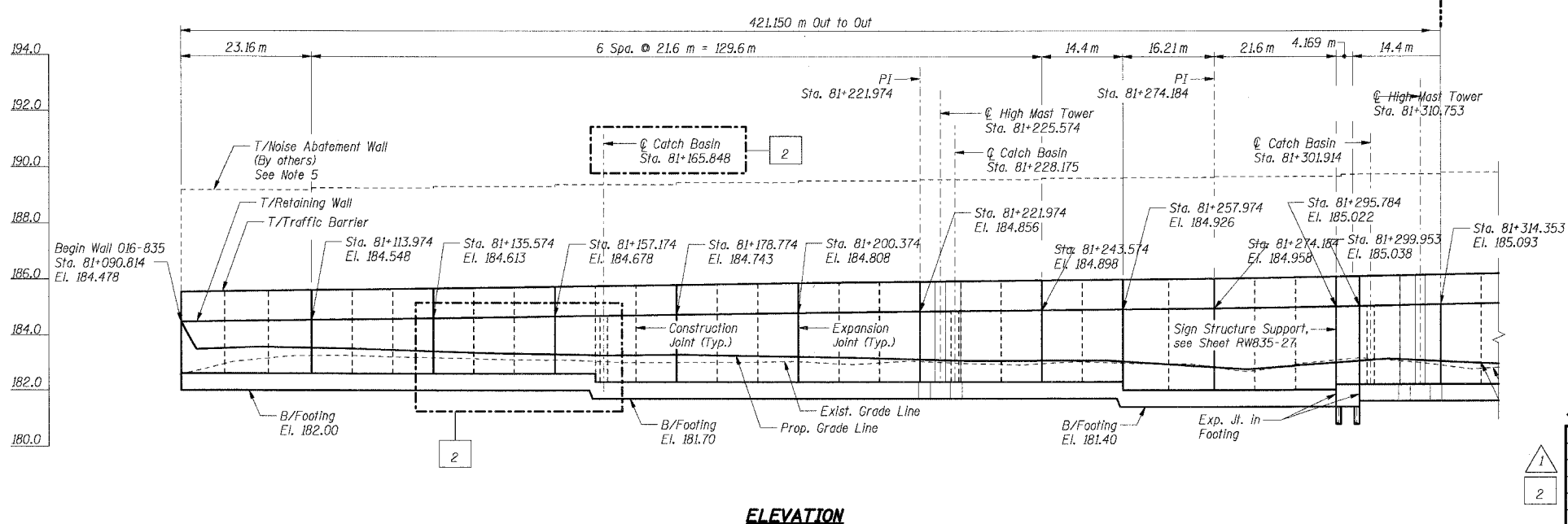
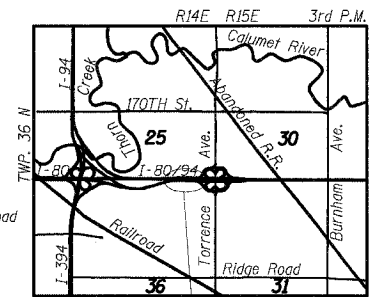
Wind Load On Noise Abatement Wall: 1.7 kPa  
Design height of Noise Abatement Wall: 4.71m (Measured from top of retaining wall)

**EXISTING STRUCTURE**

None



- LEGEND:**
- #5 Soil Boring
  - High Mast Light Tower (by others)
  - Existing Storm Sewer
  - Proposed Storm Sewer
  - Existing Combined Sewer
  - Proposed Catch Basin
  - Drainage Structure
  - Proposed Retaining Wall
  - Proposed Pavement
  - Temporary Soil Retention System
  - Kinder Morgan
  - Exist. Gas Main (to remain)
  - Water Main (to be relocated)
  - Electric (to be relocated)
  - Telephone (to be relocated)
  - Cable Television



**THIS SHEET FOR INFORMATION ONLY**

- Notes:**
1. All dimensions are measured along front face of retaining wall.
  2. Wall alignment offsets are referenced to front face of wall.
  3. Work this sheet with RW835-2 and RW835-3.
  4. See Sht. RW835-3 for Index of Sheets, General Notes, and Bill of Materials.
  5. Noise abatement wall will be furnished and installed by others as part of future mainline reconstruction contract.
  6. See Sht. RW835-3 for Temporary Soil Retention System details.
  7. Provide sleeve for 50 mm diameter line to Chicago Heights water main air/vacuum release valve. Sleeve shall be 75 mm diameter located in wall stem. Location shall be determined by the Engineer in coordination with City of Chicago Heights.

SHT. RW835-1 OF 34

REVISIONS	
NAME	DATE
MJK	4/5/04
MJK	6/21/04

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
IL ROUTE 83 RECONSTRUCTION  
RETAINING WALL - STRUCTURE NO. 016-W835  
SECTION 2425 R-3 & 2425-711B  
COOK COUNTY

**GENERAL PLAN & ELEVATION I**

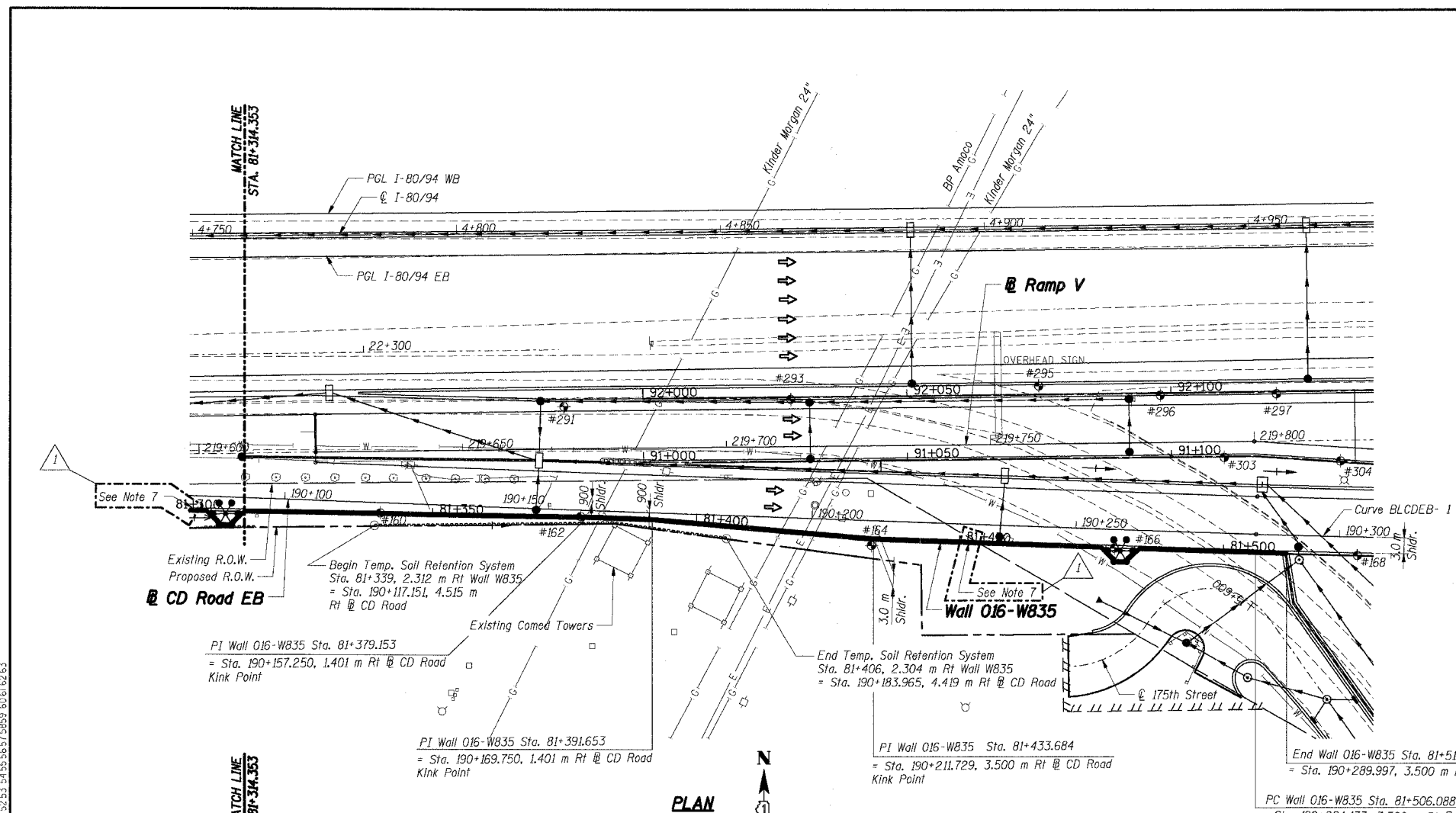
DATE: 02/20/2004  
DRAWN BY: SC  
CHECKED BY: MJK

**TENG**  
ENGINEERS/ARCHITECTS/PLANNERS  
CHICAGO, ILLINOIS

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 BAIZEKJ

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	722
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 62114



**PROP. CURVE BLCDEB-1**  
 PI STA = 190+324.703  
 $\Delta = 2^\circ 39' 22''$  (LT)  
 R = 1,750.000 m  
 T = 40.570 m  
 L = 81.257 m  
 E = 0.470 m  
 P.C. STA = 190+284.133  
 P.T. STA = 190+365.258

**PROP. CURVE W835-1**  
 PI STA = 81+546.739  
 $\Delta = 2^\circ 39' 22''$  (LT)  
 R = 1,753.500 m  
 T = 40.651 m  
 L = 81.287 m  
 E = 0.471 m  
 P.C. STA = 81+506.088  
 P.T. STA = 81+587.376

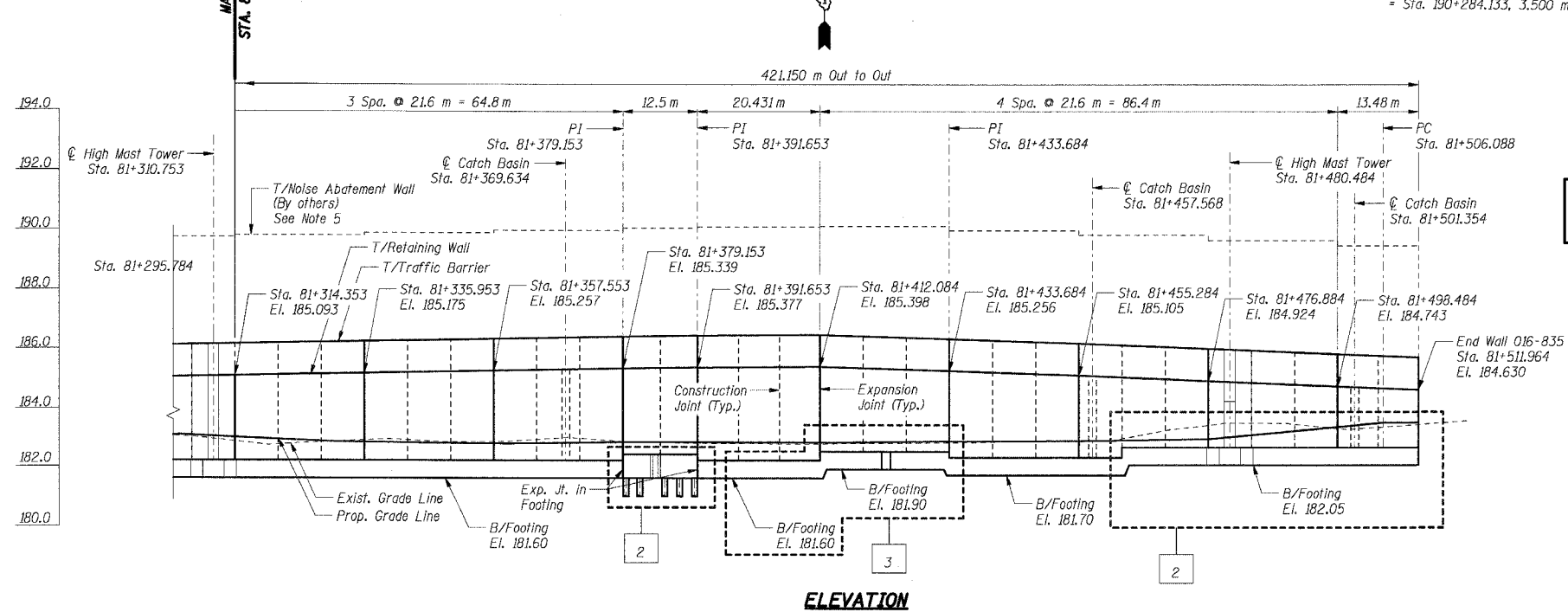
**LEGEND:**

- #5 Soil Boring
- High Mast Light Tower (by others)
- Existing Storm Sewer
- Proposed Storm Sewer
- Existing Combined Sewer
- Proposed Catch Basin
- Drainage Structure
- Proposed Retaining Wall
- Proposed Pavement
- Temporary Soil Retention System
- Kinder Morgan
- Exist. Gas Main (to remain)
- Water Main (to be relocated)
- Electric (to be relocated)
- Telephone (to be relocated)
- Cable Television

**THIS SHEET FOR INFORMATION ONLY**

**Notes:**

1. All dimensions are measured along front face of retaining wall.
2. Wall alignment offsets are referenced to front face of wall.
3. Work this sheet with RW835-2 and RW835-3.
4. See Sht. RW835-3 for Index of Sheets, General Notes, and Bill of Materials.
5. Noise abatement wall will be furnished and installed by others as part of future mainline reconstruction contract.
6. See Sht. RW835-3 for Temporary Soil Retention System details.
7. Provide sleeve for 50 mm diameter line to Chicago Heights water main air/vacuum release valve. Sleeve shall be 75 mm diameter located in wall stem. Location shall be determined by the Engineer in coordination with City of Chicago Heights.



**ELEVATION**

SHT. RW835-2 OF 34

REVISIONS	
NAME	DATE
MJK	4/5/04
MJK	6/21/04
PA	8/3/04

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W835  
 SECTION 2425 R-3 & 2425-711B  
 COOK COUNTY

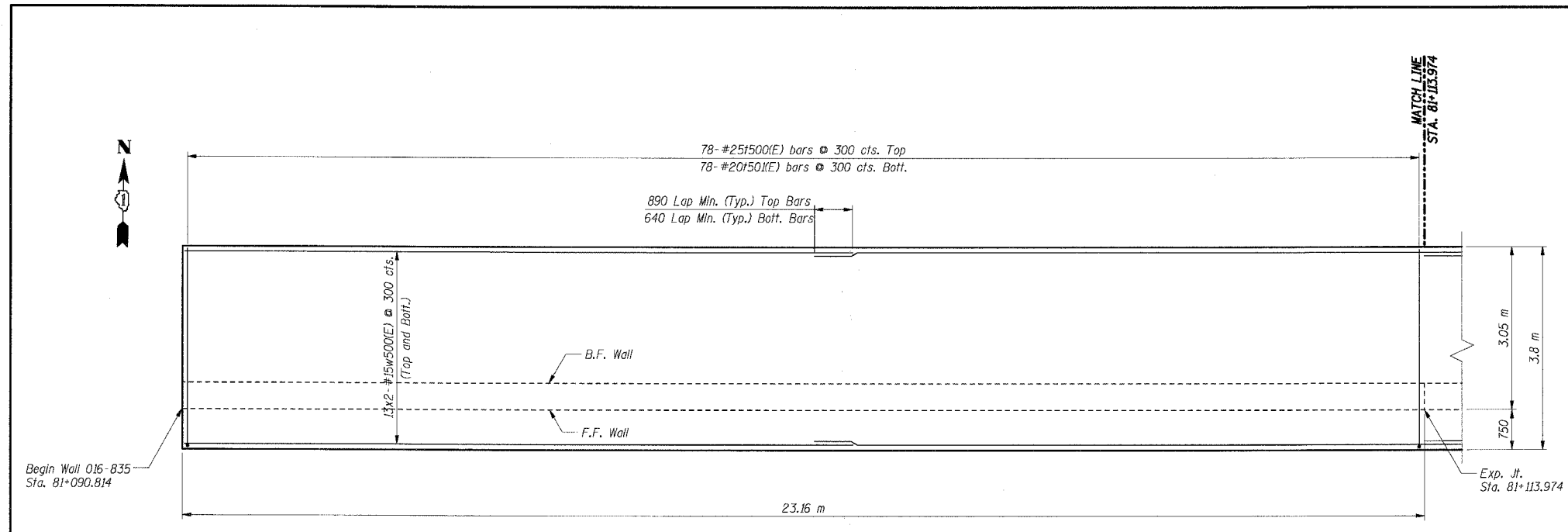
**GENERAL PLAN & ELEVATION II**

DATE: 02/20/2004  
 DRAWN BY: SC  
 CHECKED BY: MJK

**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	723
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				

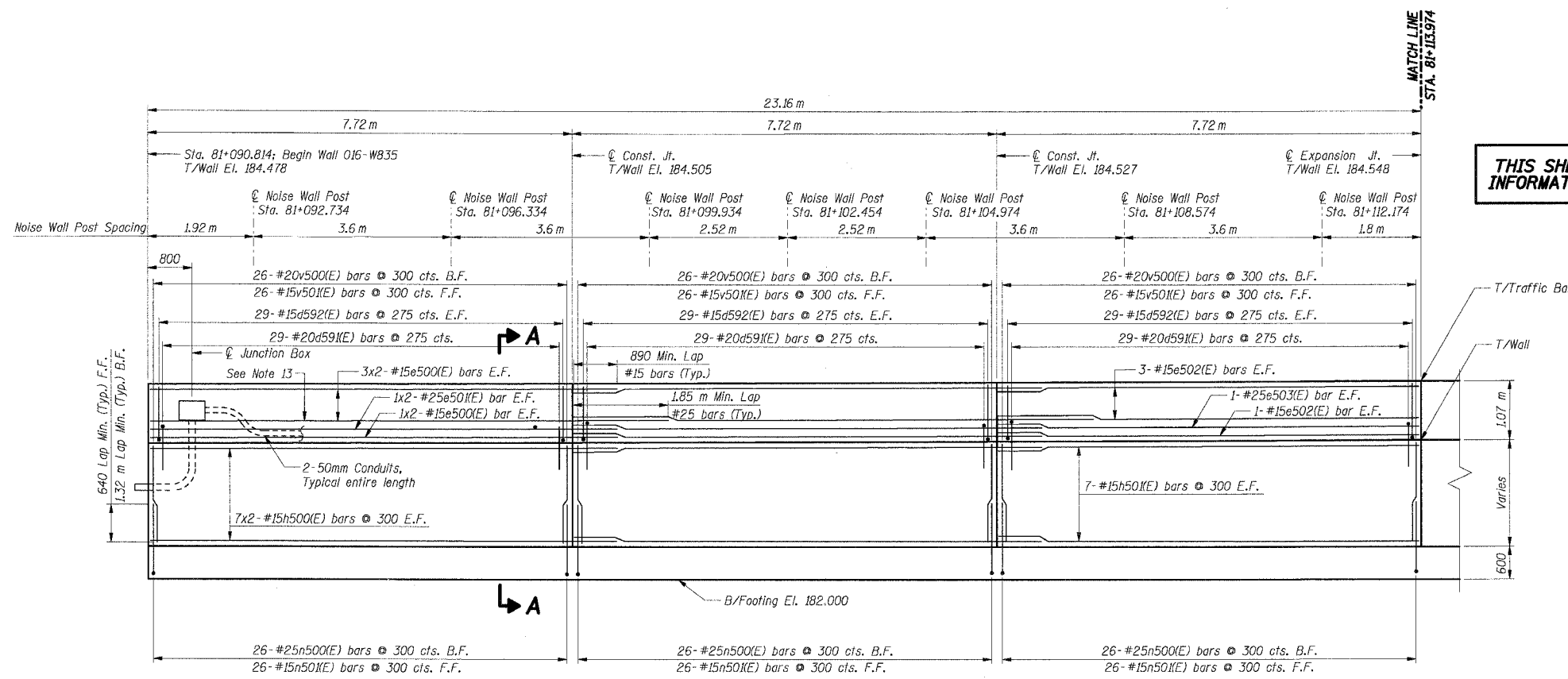


**FOOTING PLAN**

**BAR LIST**

Bar	No.	Size	Length (m)	Shape
d59(E)	87	#20	2.59	□
d592(E)	174	#15	1.22	□
e500(E)	16	#15	8.55	—
e50(E)	4	#25	9.55	—
e502(E)	8	#15	7.65	—
e503(E)	2	#25	7.65	—
h500(E)	28	#15	8.55	—
h50(E)	14	#15	7.65	—
n500(E)	78	#25	2.30	□
n50(E)	78	#15	1.50	□
l500(E)	78	#25	4.20	□
l50(E)	78	#20	3.70	—
v500(E)	78	#20	1.85	—
v50(E)	78	#15	1.85	—
w500(E)	52	#15	12.00	—

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 BALZEKJ



**ELEVATION**

**THIS SHEET FOR INFORMATION ONLY**

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Structures	Cu m	84.0
Reinforcement Bars, Epoxy Coated	kg	6,330

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - For section A-A see Sheet RW835-26.
  - E.F. indicates each face.
  - B.F. indicates back face.
  - F.F. indicates front face.
  - For Noise Abatement Wall pilaster details see sheet RW835-30.
  - For Traffic Barrier details see Sht. RW835-30.
  - For Rustication Finish & joint details see Sht. RW835-32.
  - For Drainage and Reinforcement details see Sht. RW835-31.
  - Maximum Applied Soil Bearing Pressure,  $Q_{max} = 88$  kPa.
  - Bars indicated thus 4x2-#15 etc. indicates 4 lines of bars with 2 lengths per line.
  - Cut e(E) bars in traffic barrier as required to fit at junction box.

SHT. RW835-5 OF 34

REVISIONS	
NAME	DATE

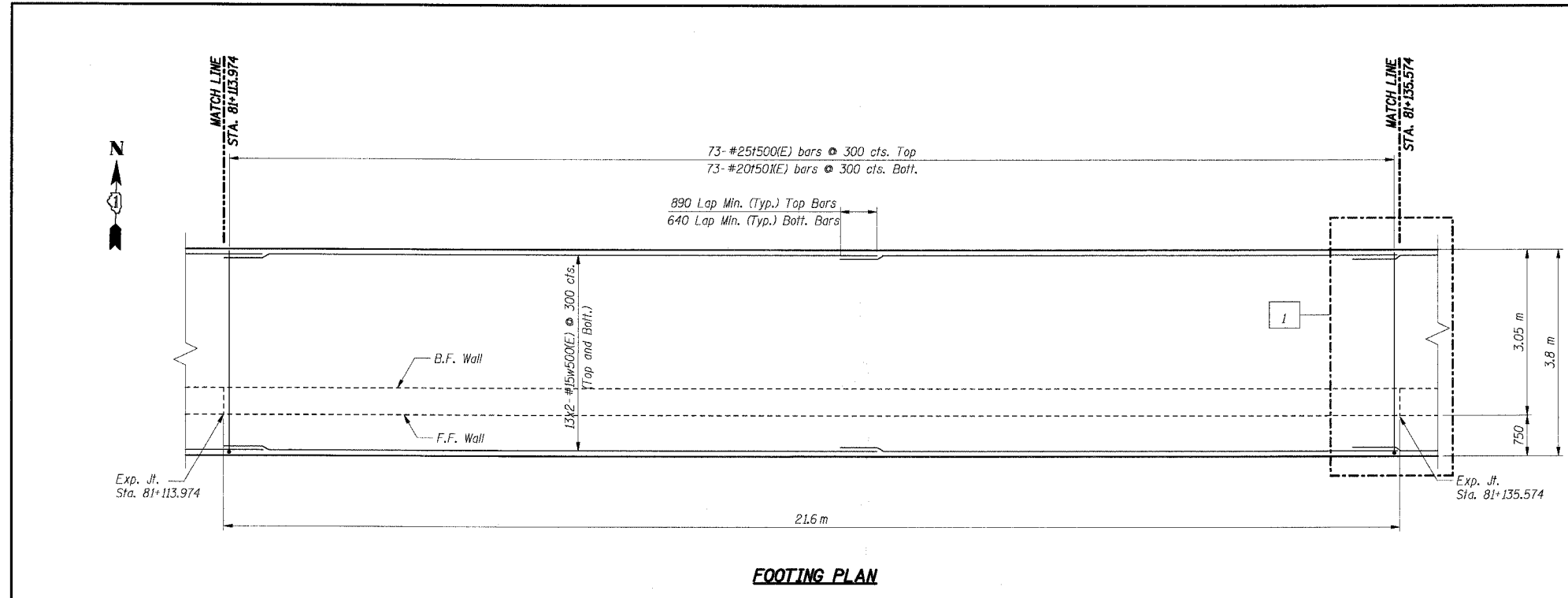
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W835  
 SECTION 2425 R-3 & 2425-711B  
 COOK COUNTY

**FOOTING PLAN & WALL ELEVATION 1**

DATE: 02/20/2004  
 DRAWN BY: DG  
 CHECKED BY: SC

**TENG**  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

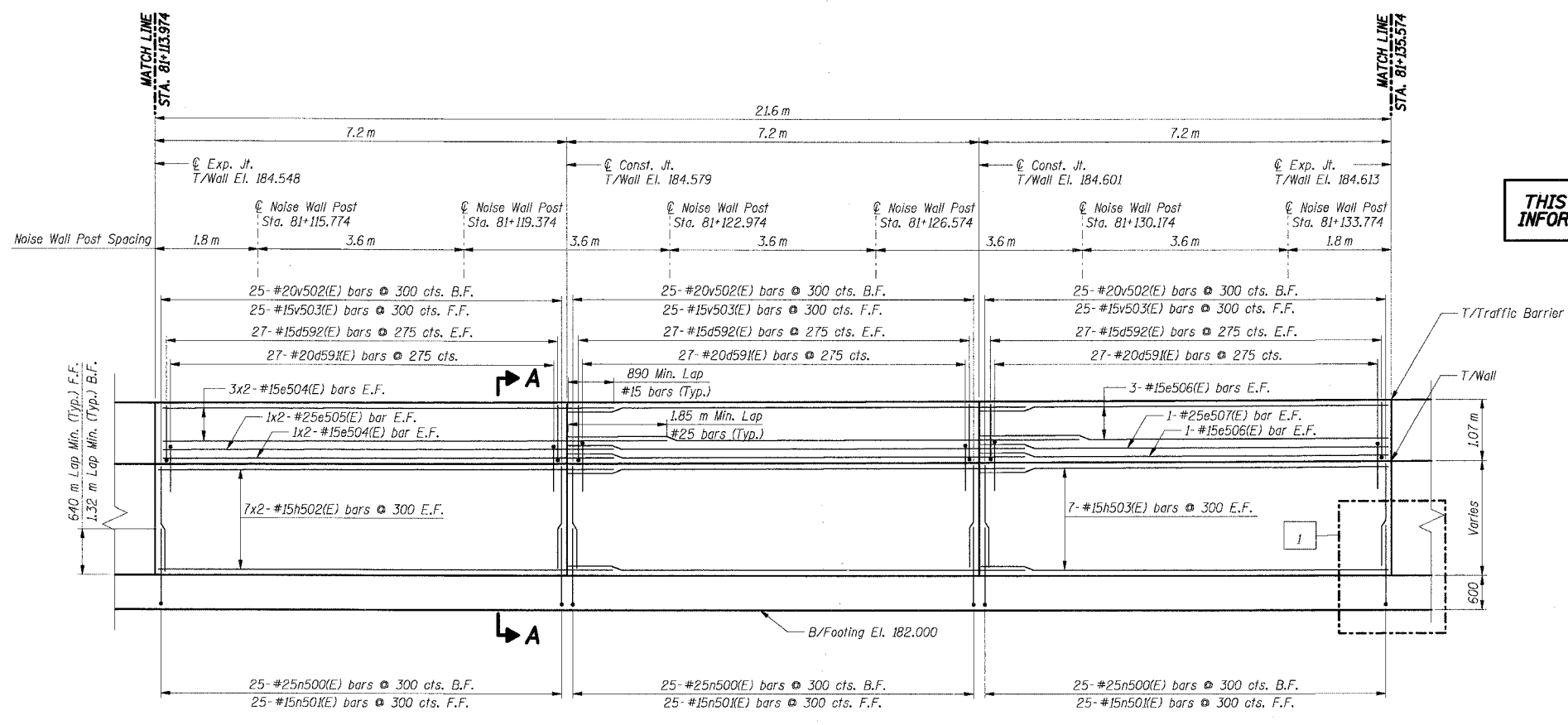
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	724
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				



**FOOTING PLAN**

**BAR LIST**

Bar	No.	Size	Length (m)	Shape
d59(E)	81	#20	2.59	┌┐
d592(E)	162	#15	1.22	┌┐
e504(E)	16	#15	8.05	—
e505(E)	4	#25	9.05	—
e506(E)	8	#15	7.15	—
e507(E)	2	#25	7.15	—
h502(E)	28	#15	8.05	—
h503(E)	14	#15	7.15	—
n500(E)	75	#25	2.30	┌┐
n501(E)	75	#15	1.50	┌┐
f500(E)	73	#25	4.20	┌┐
f501(E)	73	#20	3.70	┌┐
v502(E)	75	#20	1.90	—
v503(E)	75	#15	1.90	—
w500(E)	52	#15	12.00	—



**ELEVATION**

**THIS SHEET FOR INFORMATION ONLY**

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Structures	Cu m	80.0
Reinforcement Bars, Epoxy Coated	kg	6,040

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - For section A-A and section B-B see Sheet RWB35-26.
  - E.F. indicates each face.
  - B.F. indicates back face.
  - F.F. indicates front face.
  - For Noise Abatement Wall pilaster details see sheet RWB35-30.
  - For Traffic Barrier details see Sht. RWB35-30.
  - For Rustication Finish & Joint details see Sht. RWB35-32.
  - For Drainage and Reinforcement details see Sht. RWB35-31.
  - Maximum Applied Soil Bearing Pressure,  $Q_{max} = 88$  kPa.
  - Bars indicated thus 4x2-#15 etc. indicates 4 lines of bars with 2 lengths per line.

**SHT. RWB35-6 OF 34**

REVISIONS	
NAME	DATE
MJK	6/21/04

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-WB35  
 SECTION 2425 R-3 & 2425-711B  
 COOK COUNTY

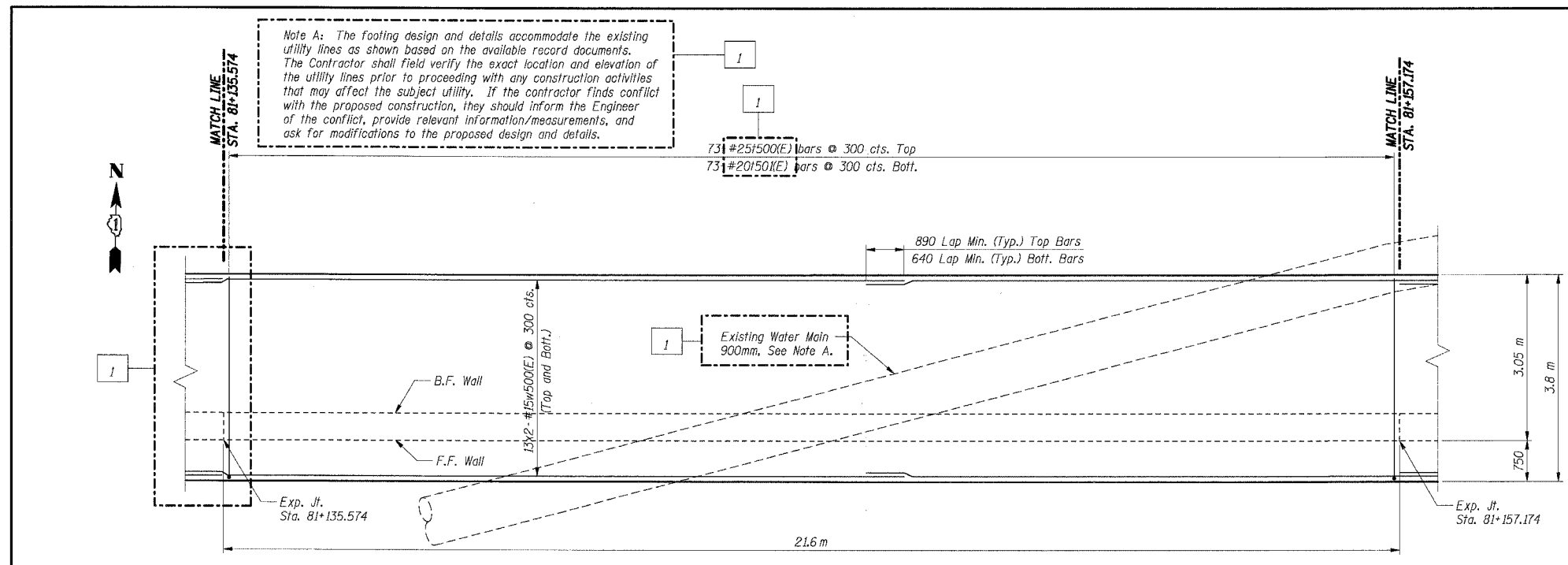
**FOOTING PLAN & WALL ELEVATION 2**

DATE: 02/20/2004  
 DRAWN BY: D6  
 CHECKED BY: SC

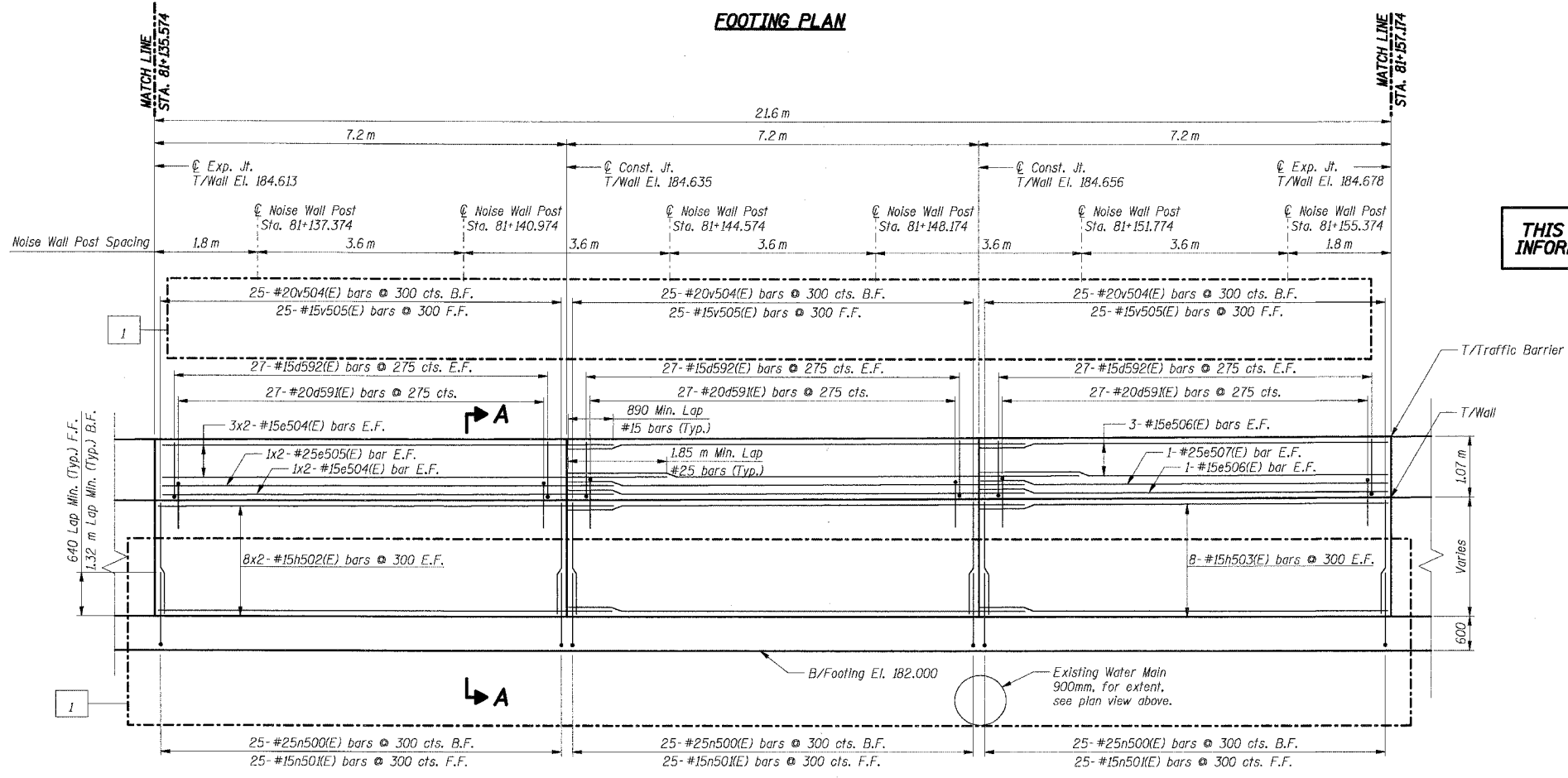
**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	725
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 62114				



**FOOTING PLAN**



**ELEVATION**

**BAR LIST**

Bar	No.	Size	Length (m)	Shape
d59(E)	81	#20	2.59	U
d592(E)	162	#15	1.22	U
e504(E)	16	#15	8.05	—
e505(E)	4	#25	9.05	—
e506(E)	8	#15	7.15	—
e507(E)	2	#25	7.15	—
h502(E)	32	#15	8.05	—
h503(E)	16	#15	7.15	—
n500(E)	75	#25	2.30	—
n501(E)	75	#15	1.50	—
h500(E)	73	#25	4.20	—
h501(E)	73	#20	3.70	—
v504(E)	75	#20	1.95	—
v505(E)	75	#15	1.95	—
w500(E)	52	#15	12.00	—

**THIS SHEET FOR INFORMATION ONLY**

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Structures	Cu m	80.0
Reinforcement Bars, Epoxy Coated	kg	6,130

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - For section A-A and section B-B see Sheet RWB35-26.
  - E.F. indicates each face.
  - B.F. indicates back face.
  - F.F. indicates front face.
  - For Noise Abatement Wall plaster details see sheet RWB35-30.
  - For Traffic Barrier details see Sht. RWB35-30.
  - For Rustication Finish & joint details see Sht. RWB35-32.
  - For Drainage and Reinforcement details see Sht. RWB35-31.
  - Maximum Applied Soil Bearing Pressure,  $Q_{max} = 93$  kPa.
  - Bars indicated thus 4x2-#15 etc. indicates 4 lines of bars with 2 lengths per line.

**SHT. RWB35-7 OF 34**

REVISIONS	
NAME	DATE
MJK	6/21/04

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W835  
 SECTION 2425 R-3 & 2425-711B  
 COOK COUNTY

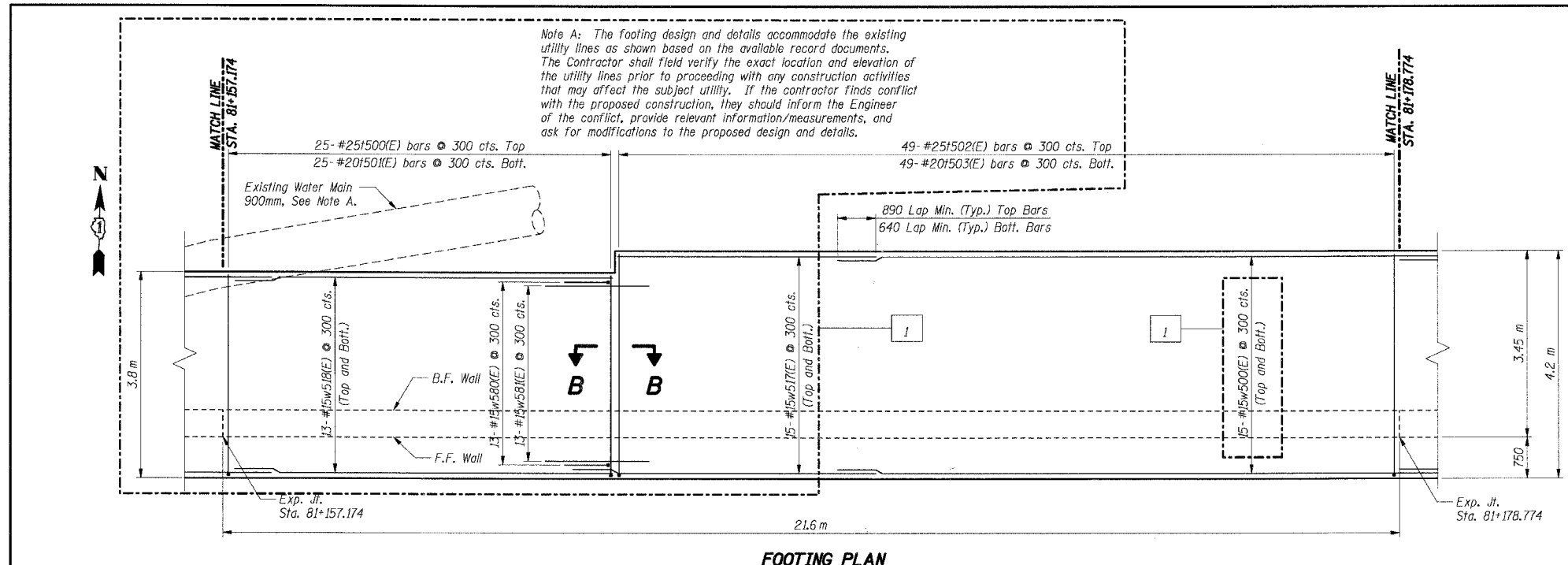
**FOOTING PLAN  
& WALL ELEVATION 3**

DATE: 02/20/2004  
 DRAWN BY: DG  
 CHECKED BY: SC

**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

7-H-2005-1313236  
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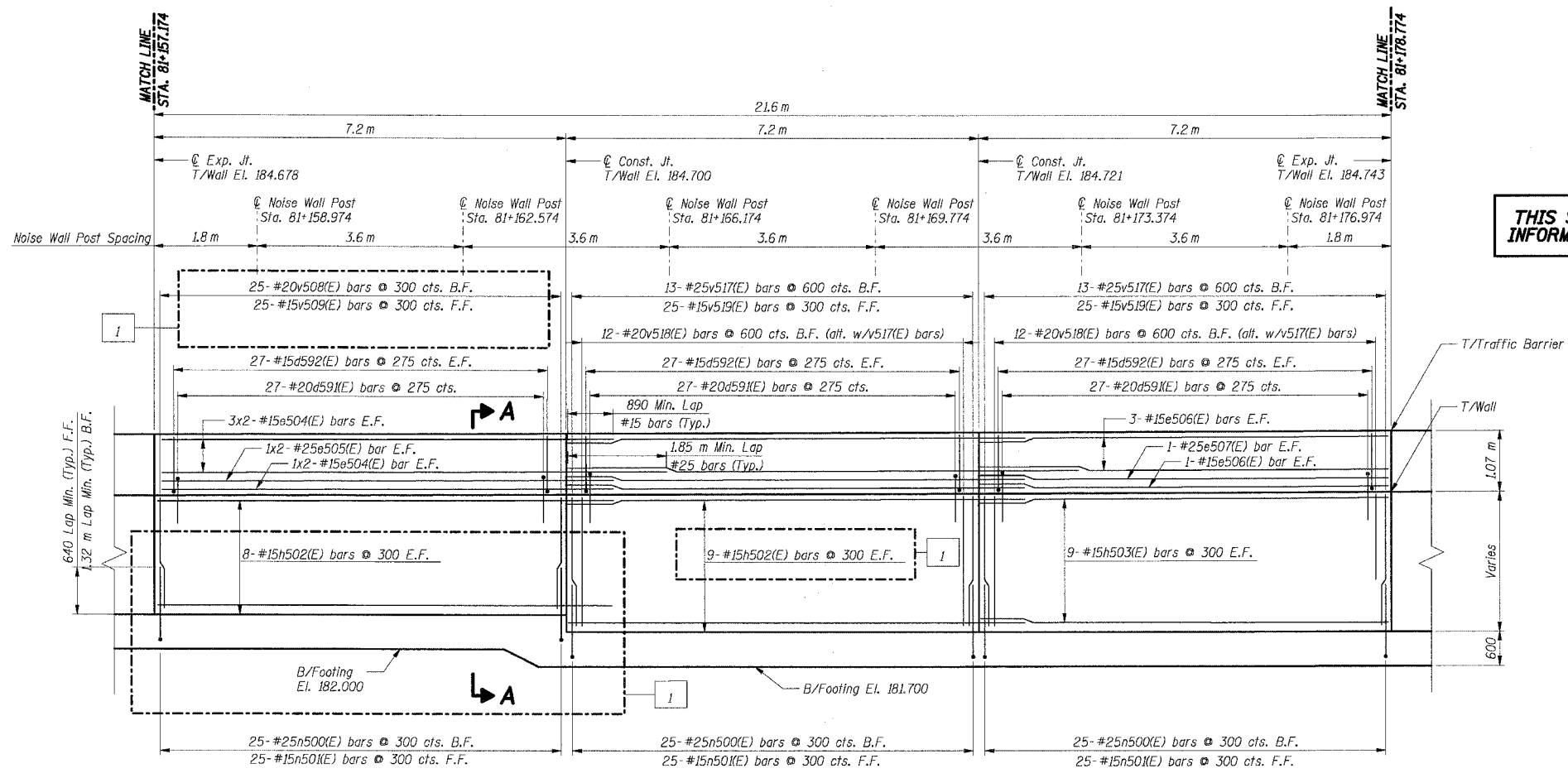
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	726
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				



**BAR LIST**

Bar	No.	Size	Length (m)	Shape
d59(E)	81	#20	2.59	□
d592(E)	162	#15	1.22	□
e504(E)	16	#15	8.05	—
e505(E)	4	#25	9.05	—
e506(E)	8	#15	7.15	—
e507(E)	2	#25	7.15	—
h502(E)	34	#15	8.05	—
h503(E)	18	#15	7.15	—
n500(E)	75	#25	2.30	—
n501(E)	75	#15	1.50	—
1500(E)	25	#25	4.20	—
1501(E)	25	#20	3.70	—
1502(E)	49	#25	4.60	—
1503(E)	49	#20	4.10	—
v508(E)	25	#20	2.05	—
v509(E)	25	#15	2.05	—
v517(E)	26	#25	2.35	—
v518(E)	24	#20	2.35	—
v519(E)	50	#15	2.35	—
w500(E)	30	#15	12.00	—
w517(E)	30	#15	6.00	—
w518(E)	26	#15	9.00	—
w580(E)	13	#15	1.50	—
w581(E)	13	#15	2.20	—

**THIS SHEET FOR INFORMATION ONLY**



**BILL OF MATERIAL**

Item	Unit	Total
Concrete Structures	Cu m	87.0
Reinforcement Bars, Epoxy Coated	kg	6,820

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - For section A-A see Sheet RWB35-26.
  - E.F. indicates each face.
  - B.F. indicates back face.
  - F.F. indicates front face.
  - For Noise Abatement Wall plaster details see sheet RWB35-30.
  - For Traffic Barrier details see Sht. RWB35-30.
  - For Rustication Finish & joint details see Sht. RWB35-32.
  - For Drainage and Reinforcement details see Sht. RWB35-31.
  - Maximum Applied Soil Bearing Pressure,  $q_{max} = 93$  kPa.
  - Bars indicated thus 4x2-#15 etc. indicates 4 lines of bars with 2 lengths per line.

**SHT. RWB35-8 OF 34**

REVISIONS	
NAME	DATE
MJK	6/21/04

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W835  
 SECTION 2425 R-3 & 2425-711B  
 COOK COUNTY

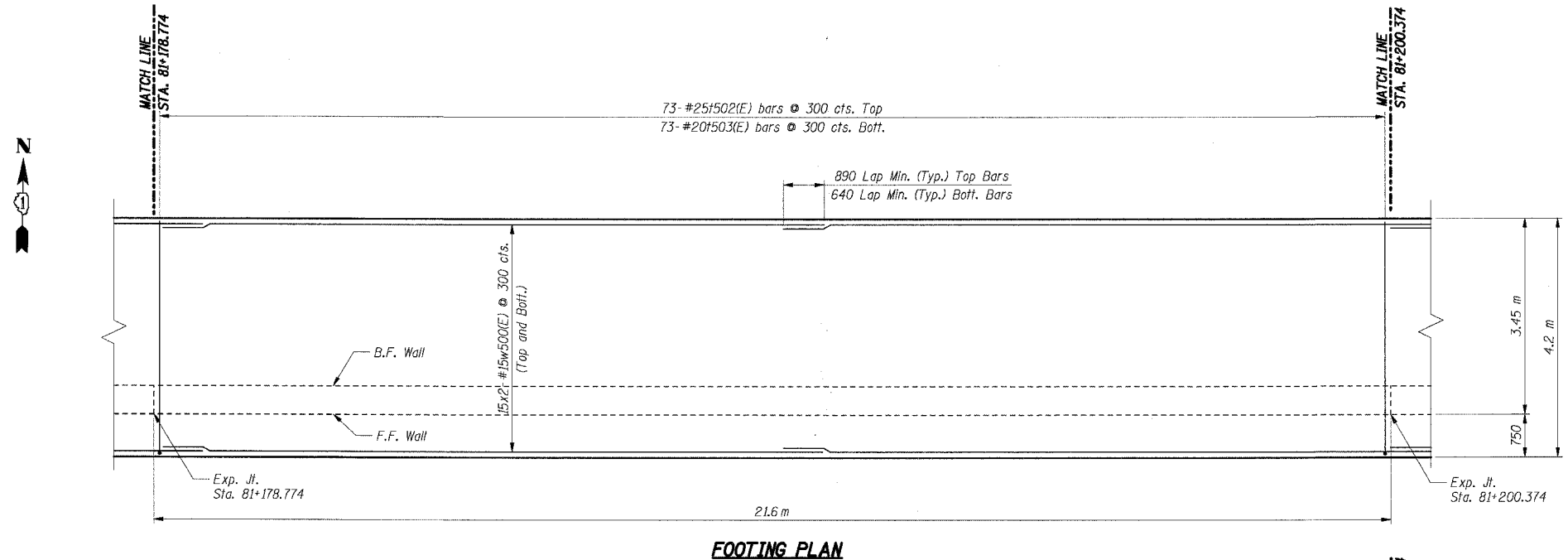
**FOOTING PLAN & WALL ELEVATION 4**

DATE: 02/20/2004  
 DRAWN BY: DG  
 CHECKED BY: SC

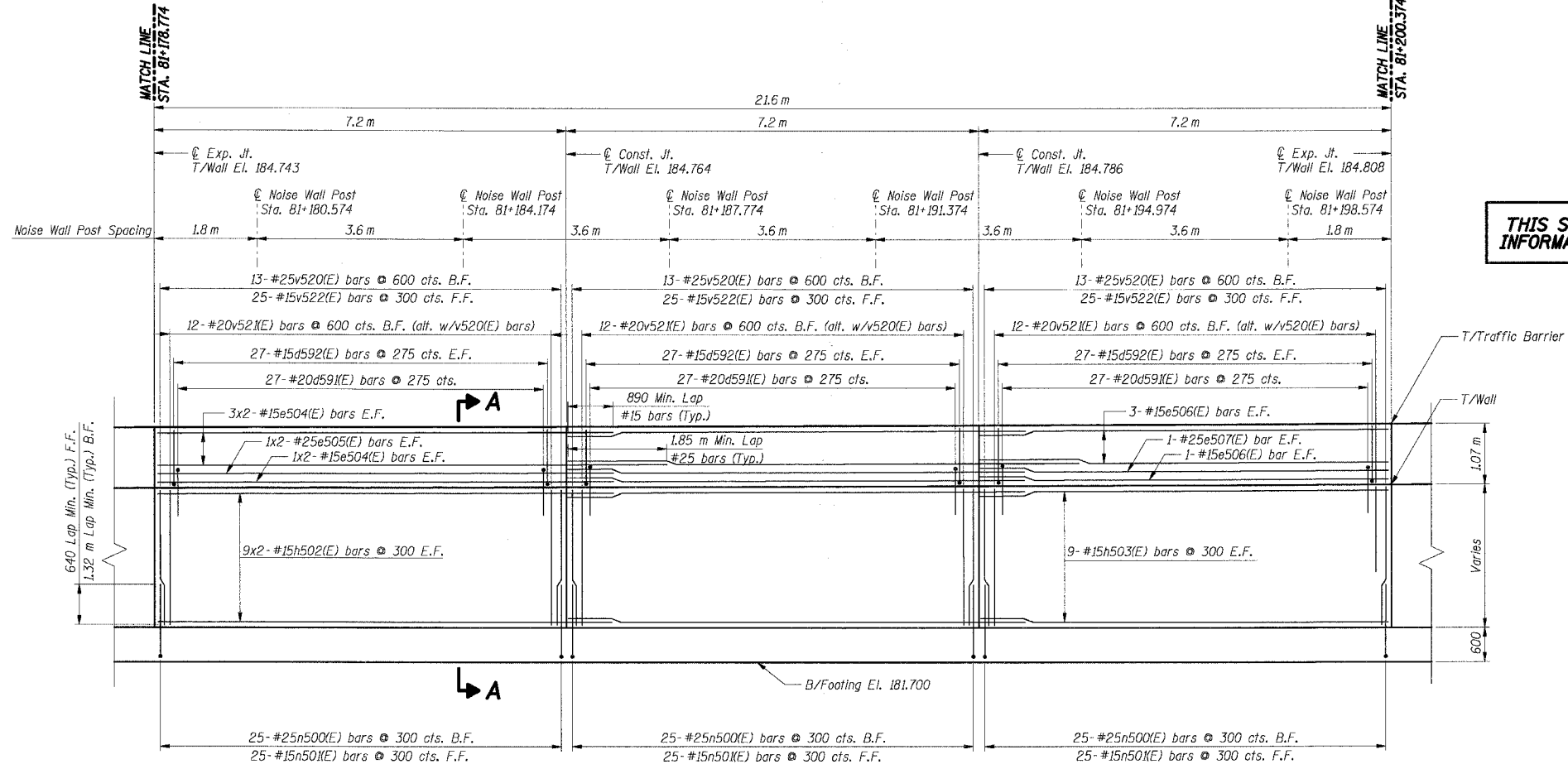
**TENG**  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	727
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				



**FOOTING PLAN**



**ELEVATION**

**BAR LIST**

Bar	No.	Size	Length (m)	Shape
d59#E	81	#20	2.59	□
d59#E	162	#15	1.22	□
e504#E	16	#15	8.05	—
e505#E	4	#25	9.05	—
e506#E	8	#15	7.15	—
e507#E	2	#25	7.15	—
h502#E	36	#15	8.05	—
h503#E	18	#15	7.15	—
n500#E	75	#25	2.30	□
n50#E	75	#15	1.50	□
l502#E	73	#25	4.60	□
l503#E	73	#20	4.10	□
v520#E	39	#25	2.40	—
v52#E	36	#20	2.40	—
v522#E	75	#15	2.40	—
w500#E	60	#15	12.00	—

**THIS SHEET FOR INFORMATION ONLY**

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Structures	Cu m	90.0
Reinforcement Bars, Epoxy Coated	kg	6,810

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - For section A-A see Sheet RWB35-26.
  - E.F. indicates each face.
  - B.F. indicates back face.
  - F.F. indicates front face.
  - For Noise Abatement Wall plaster details see sheet RWB35-30.
  - For Traffic Barrier details see Sht. RWB35-30.
  - For Rustication Finish & joint details see Sht. RWB35-32.
  - For Drainage and Reinforcement details see Sht. RWB35-31.
  - Maximum Applied Soil Bearing Pressure,  $O_{max} = 93 \text{ kPa}$ .
  - Bars indicated thus 4x2-#15 etc. indicates 4 lines of bars with 2 lengths per line.

**SHT. RWB35-9 OF 34**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-WB35  
 SECTION 2425 R-3 & 2425-711B  
 COOK COUNTY

**FOOTING PLAN & WALL ELEVATION 5**

DATE: 02/20/2004

DRAWN BY: DG  
 CHECKED BY: SC

**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

T:\DOCUMENT\130750\STRUCT\CON\RWB35-9.DWG  
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 BAJZEKJ

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	728
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				

**BAR LIST**

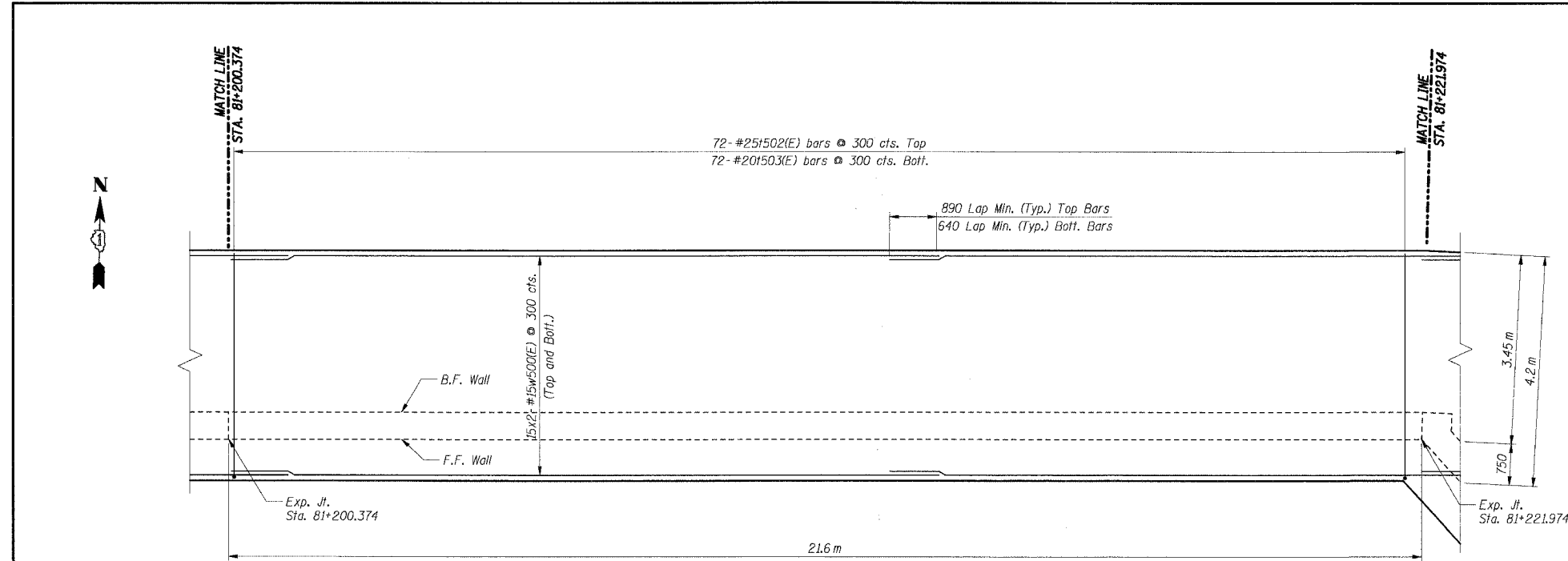
Bar	No.	Size	Length (m)	Shape
d591(E)	81	#20	2.59	□
d592(E)	162	#15	1.22	□
e504(E)	16	#15	8.05	—
e505(E)	4	#25	9.05	—
e506(E)	8	#15	7.15	—
e507(E)	2	#25	7.15	—
h502(E)	36	#15	8.05	—
h503(E)	18	#15	7.15	—
n500(E)	75	#25	2.30	—
n501(E)	75	#15	1.50	—
f502(E)	72	#25	4.60	—
f503(E)	72	#20	4.10	—
v523(E)	39	#25	2.45	—
v524(E)	36	#20	2.45	—
v525(E)	75	#15	2.45	—
w500(E)	60	#15	12.00	—

**BILL OF MATERIAL**

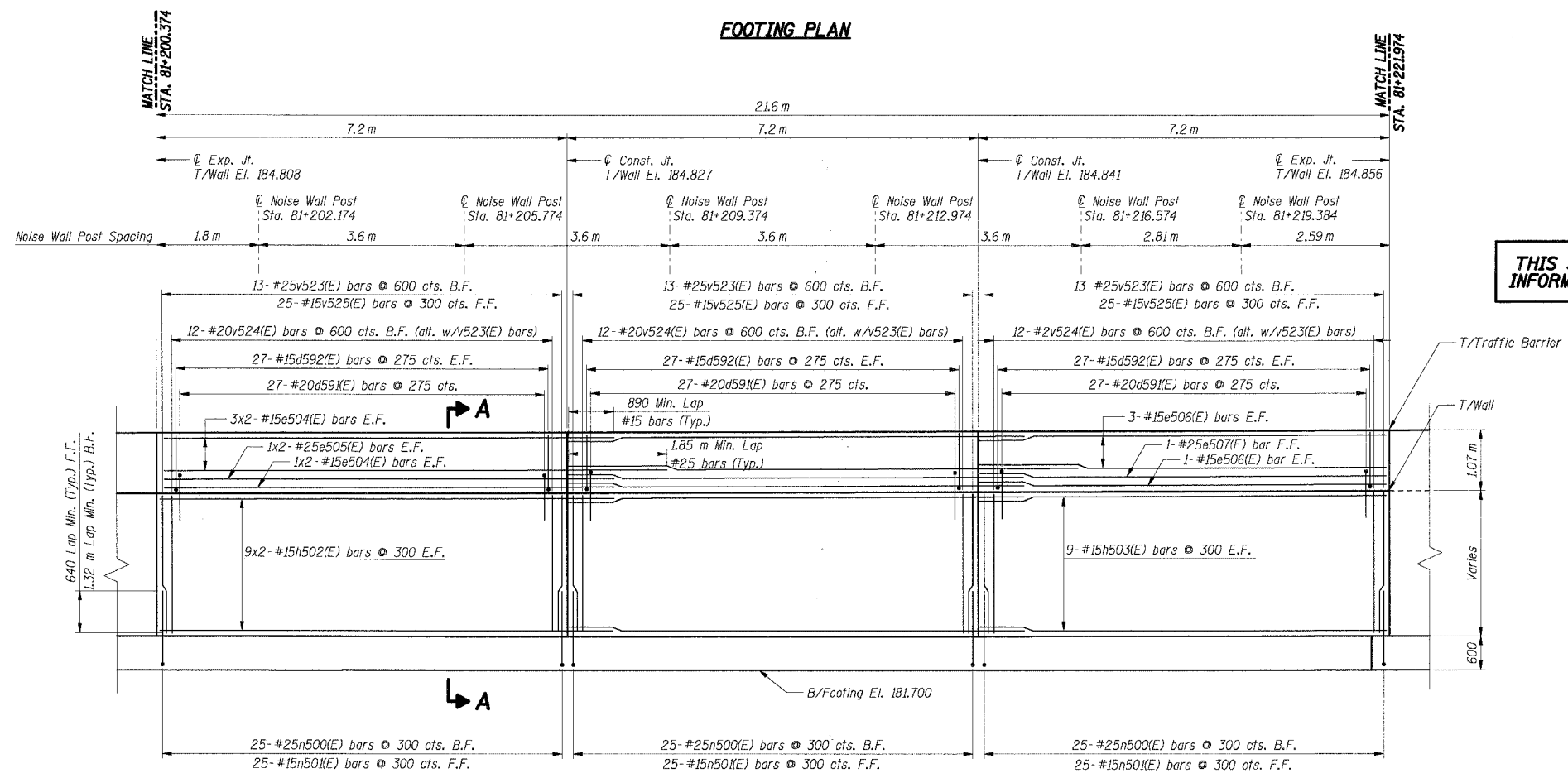
Item	Unit	Total
Concrete Structures	Cu m	91.0
Reinforcement Bars, Epoxy Coated	kg	6,800

**Notes:**

- All dimensions are in millimeters (mm) except as noted.
- Reinforcement bars designated (E) shall be epoxy coated.
- All edges shall have a 20 mm chamfer unless noted otherwise.
- For section A-A see Sheet RWB35-26.
- E.F. indicates each face.
- B.F. indicates back face.
- F.F. indicates front face.
- For Noise Abatement Wall pilaster details see sheet RWB35-30.
- For Traffic Barrier details see Sht. RWB35-30.
- For Rustication Finish & joint details see Sht. RWB35-32.
- For Drainage and Reinforcement details see Sht. RWB35-31.
- Maximum Applied Bearing Pressure,  $Q_{max} = 93$  kPa.
- Bars indicated thus 4x2-#15 etc. indicates 4 lines of bars with 2 lengths per line.



**FOOTING PLAN**



**ELEVATION**

**THIS SHEET FOR INFORMATION ONLY**

SHT. RWB35-10 OF 34

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W835  
 SECTION 2425 R-3 & 2425-711B  
 COOK COUNTY

**FOOTING PLAN & WALL ELEVATION 6**

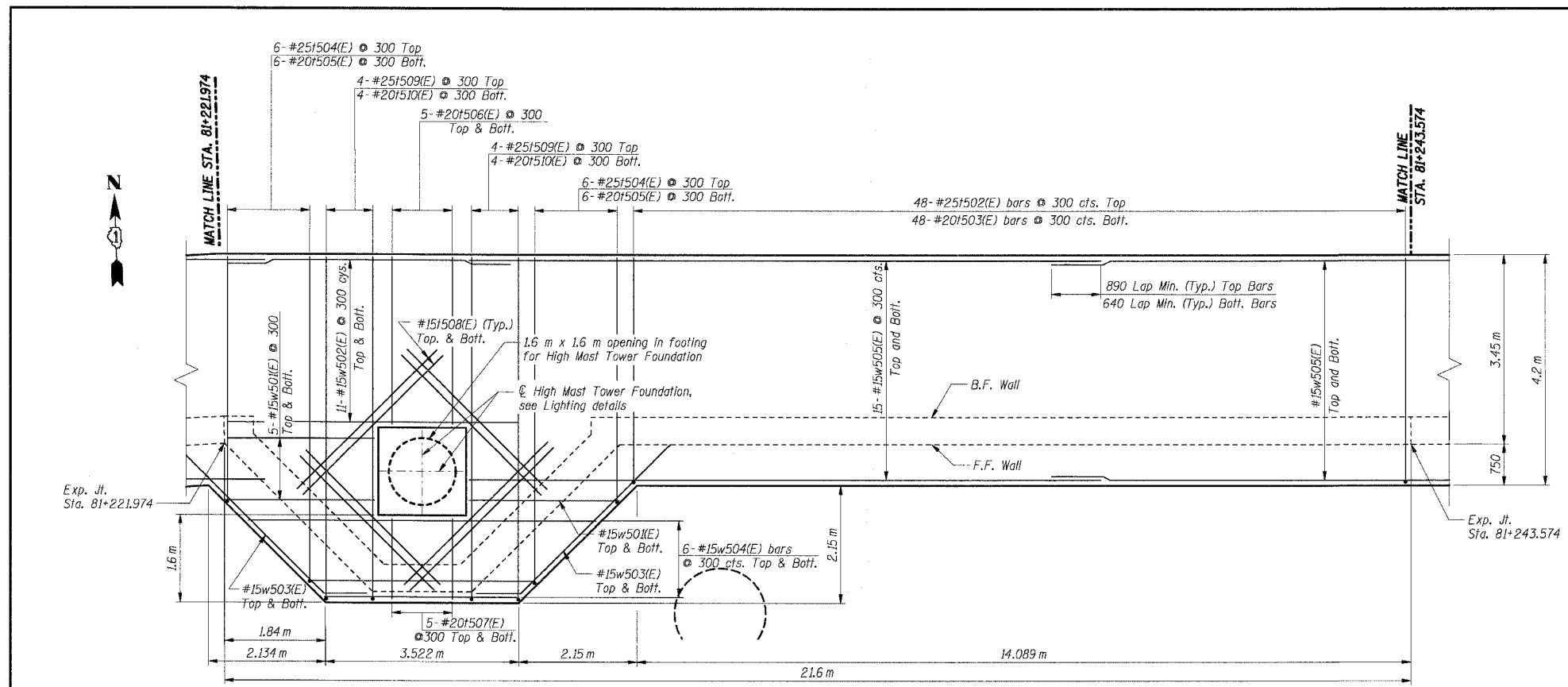
DATE: 02/20/2004  
 DRAWN BY: DG  
 CHECKED BY: SC

**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

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 BALZEKJ



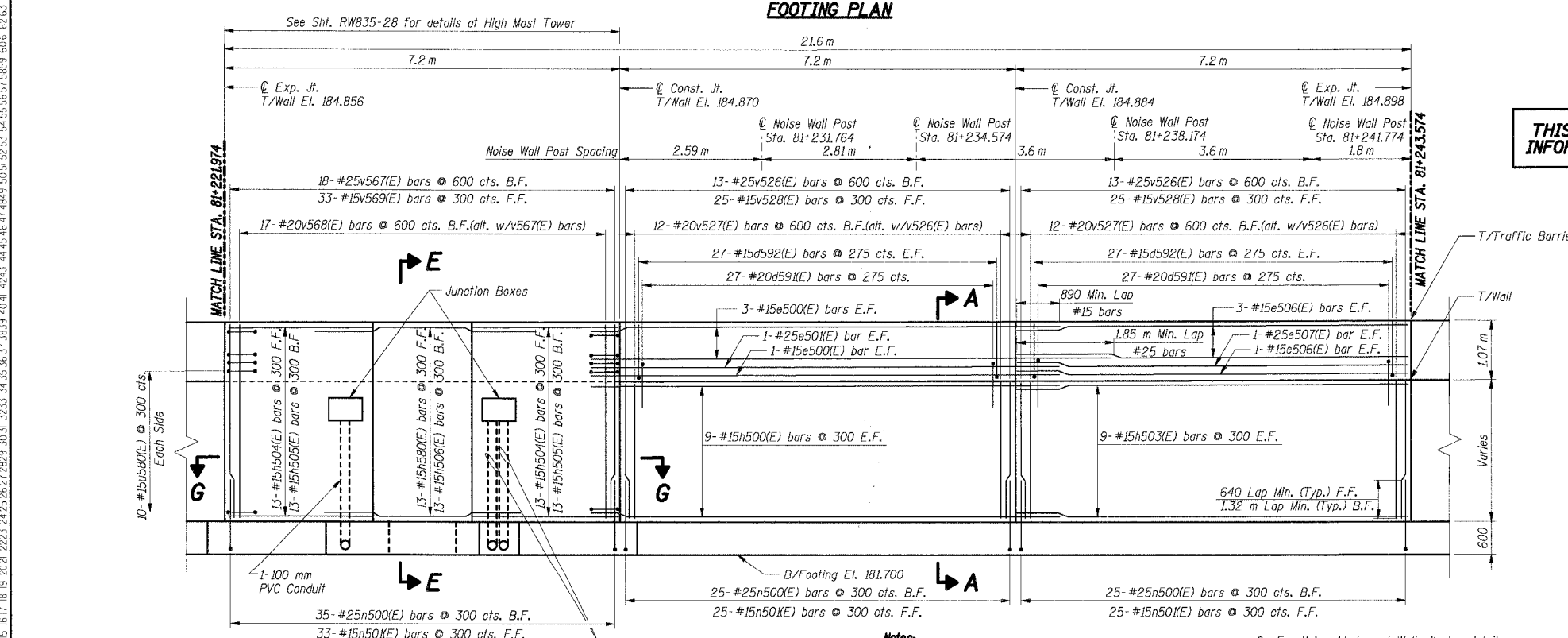
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	729
STA.	TO STA.		ILLINOIS FED. AID PROJECT	
FED. ROAD DIST. NO.	ILLINOIS		CONTRACT NO. 62114	



**BAR LIST**

Bar	No.	Size	Length (m)	Shape
d580(E)	6	#20	1.15	
d591(E)	54	#20	2.59	
d592(E)	108	#15	1.22	
e500(E)	8	#15	8.55	
e501(E)	2	#25	9.55	
e506(E)	8	#15	7.15	
e507(E)	2	#25	7.15	
h500(E)	18	#15	8.55	
h503(E)	18	#15	7.15	
h504(E)	26	#15	3.80	
h505(E)	26	#15	4.40	
h506(E)	13	#15	2.55	
h580(E)	13	#15	2.85	
h581(E)	2	#15	0.75	
h582(E)	4	#15	2.50	
h583(E)	2	#15	0.42	
n500(E)	85	#25	2.30	
n501(E)	83	#15	1.50	
1502(E)	48	#25	4.60	
1503(E)	48	#20	4.10	
1504(E)	6	#25	11.35	
1505(E)	6	#20	10.35	
1506(E)	10	#20	3.05	
1507(E)	10	#20	1.50	
1508(E)	16	#15	3.50	
1509(E)	8	#25	6.70	
1510(E)	8	#20	6.20	
u580(E)	20	#15	2.16	
u581(E)	2	#15	1.91	
u582(E)	2	#15	1.86	
u583(E)	2	#15	1.81	
u584(E)	28	#10	0.81	
v567(E)	18	#25	3.40	
v568(E)	17	#20	3.40	
v569(E)	33	#15	3.40	
v526(E)	26	#25	2.50	
v527(E)	24	#20	2.50	
v528(E)	50	#15	2.50	
w501(E)	12	#15	2.70	
w502(E)	22	#15	5.25	
w503(E)	4	#15	4.90	
w504(E)	6	#15	10.00	
w505(E)	30	#15	11.50	

**THIS SHEET FOR INFORMATION ONLY**



**ELEVATION**

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - For section A-A see Sheet RW835-26.
  - For section E-E and section G-G see Sheet RW835-28.
  - E.F. indicates each face.
  - B.F. indicates back face.
  - F.F. indicates front face.
  - For Noise Abatement Wall pilaster details see sheet RW835-30.
  - For Traffic Barrier details see Sht. RW835-30.
  - For Rustication Finish & joint details see Sht. RW835-32.
  - For Drainage and Reinforcement details see Sht. RW835-31.
  - Maximum Applied Soil Bearing Pressure,  $Q_{max} = 93 \text{ kPa}$ .
  - Bars indicated thus 4x2-#15 etc. indicates 4 lines of bars with 2 lengths per line.

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Structures	Cu m	97.0
Reinforcement Bars, Epoxy Coated	kg	7,160

SHT. RW835-11 OF 34

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W835  
 SECTION 2425 R-3 & 2425-711B  
 COOK COUNTY

**FOOTING PLAN & WALL ELEVATION 7**

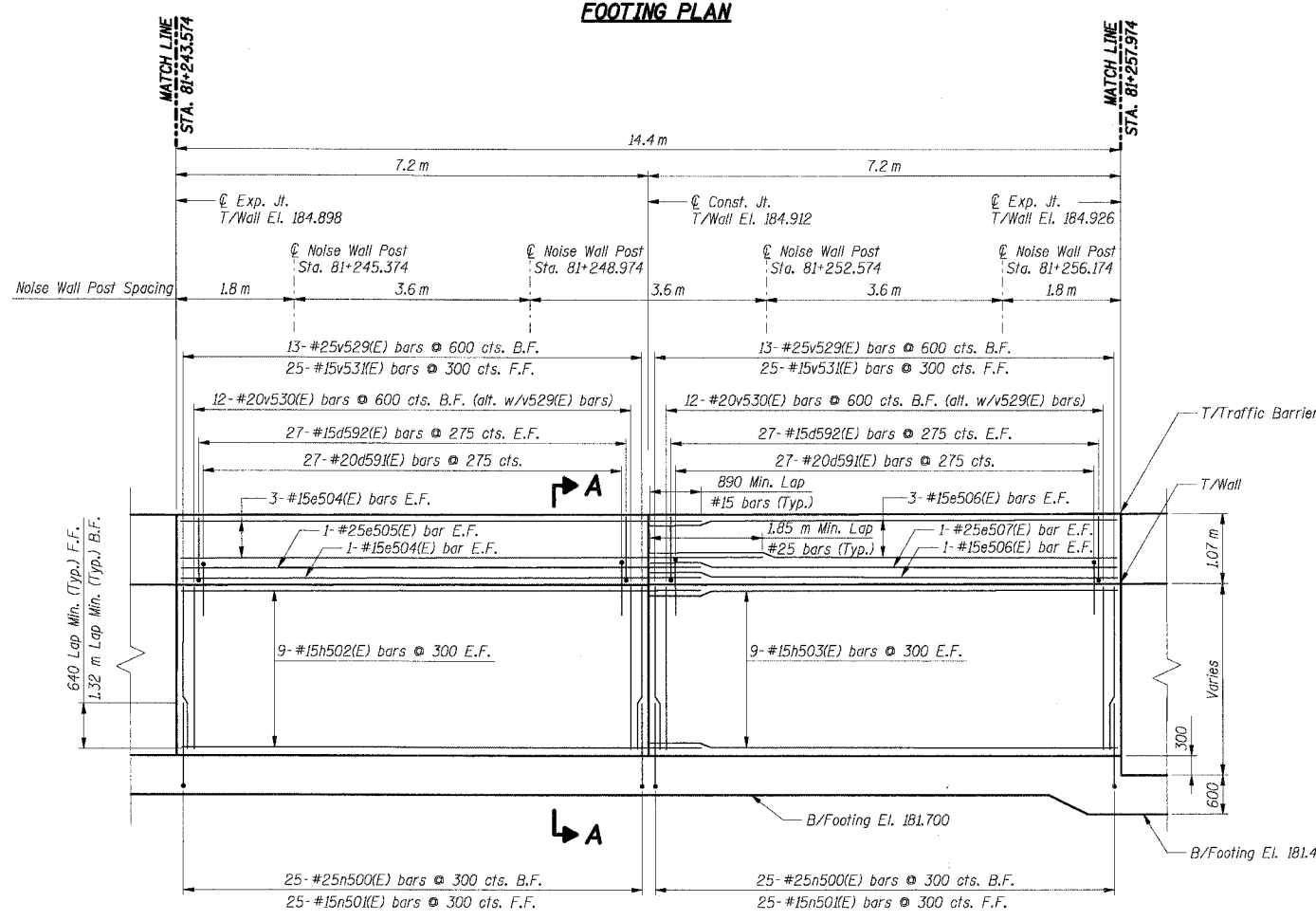
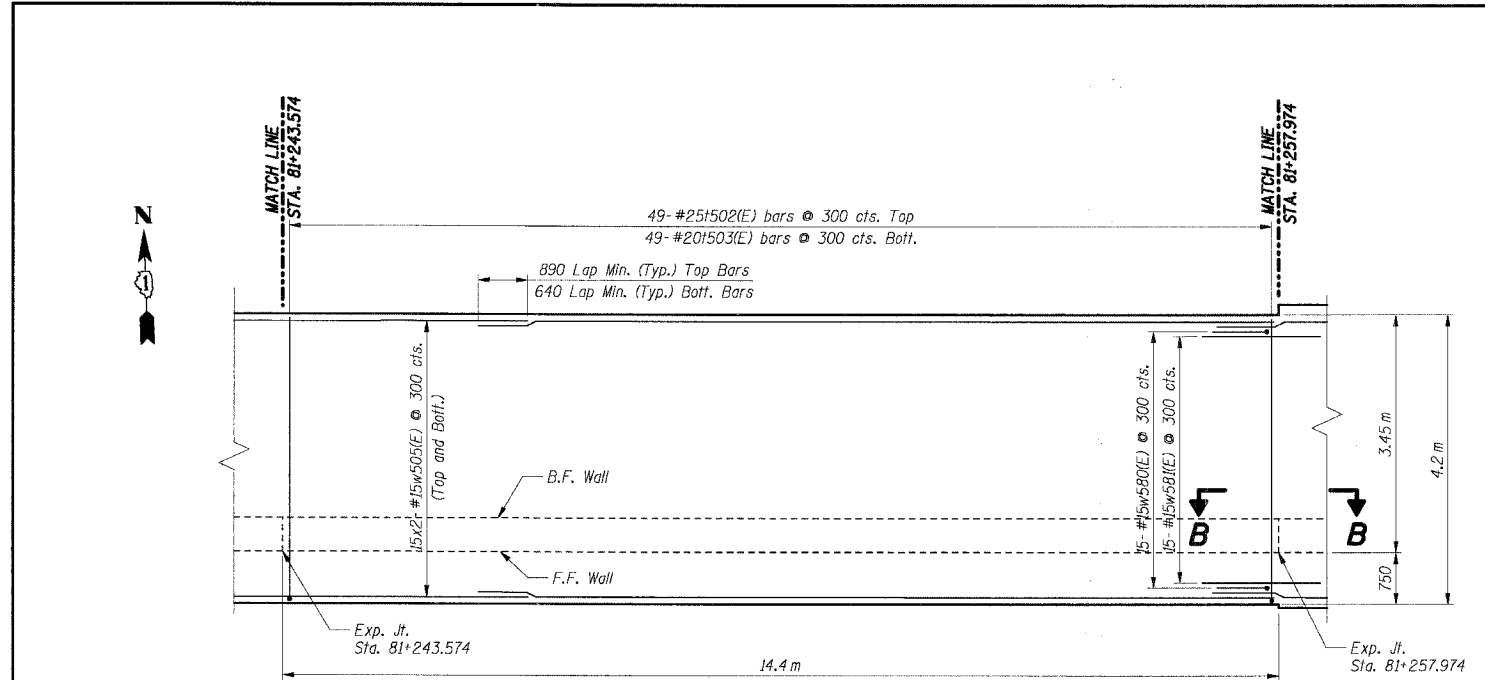
DATE: 02/20/2004  
 DRAWN BY: DG  
 CHECKED BY: SC

**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

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 BAUZERKJ

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	730
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

CONTRACT NO. 62114



**BAR LIST**

Bar	No.	Size	Length (m)	Shape
d59(E)	54	#20	2.59	U
d592(E)	108	#15	1.22	U
e504(E)	8	#15	8.05	—
e505(E)	2	#25	9.05	—
e506(E)	8	#15	7.15	—
e507(E)	2	#25	7.15	—
h502(E)	18	#15	8.05	—
h503(E)	18	#15	7.15	—
n500(E)	50	#25	2.30	U
n501(E)	50	#15	1.50	U
1502(E)	49	#25	4.60	U
1503(E)	49	#20	4.10	—
v529(E)	26	#25	2.55	—
v530(E)	24	#20	2.55	—
v531(E)	50	#15	2.55	—
w505(E)	60	#15	11.50	—
w580(E)	15	#15	1.50	U
w581(E)	15	#15	2.20	U

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Structures	Cu m	62.0
Reinforcement Bars, Epoxy Coated	kg	4,990

THIS SHEET FOR INFORMATION ONLY

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - For section A-A and section B-B see Sheet RW835-26.
  - E.F. indicates each face.
  - B.F. indicates back face.
  - F.F. indicates front face.
  - For Noise Abatement Wall pilaster details see sheet RW835-30.
  - For Traffic Barrier details see Sht. RW835-30.
  - For Rustication Finish & Joint details see Sht. RW835-32.
  - For Drainage and Reinforcement details see Sht. RW835-31.
  - Maximum Applied Soil Bearing Pressure,  $d_{max} = 93$  kPa.
  - Bars indicated thus 4x2-#15 etc. indicates 4 lines of bars with 2 lengths per line.

SHT. RW835-12 OF 34

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
IL ROUTE 83 RECONSTRUCTION  
RETAINING WALL - STRUCTURE NO. 016-W835  
SECTION 2425 R-3 & 2425-711B  
COOK COUNTY

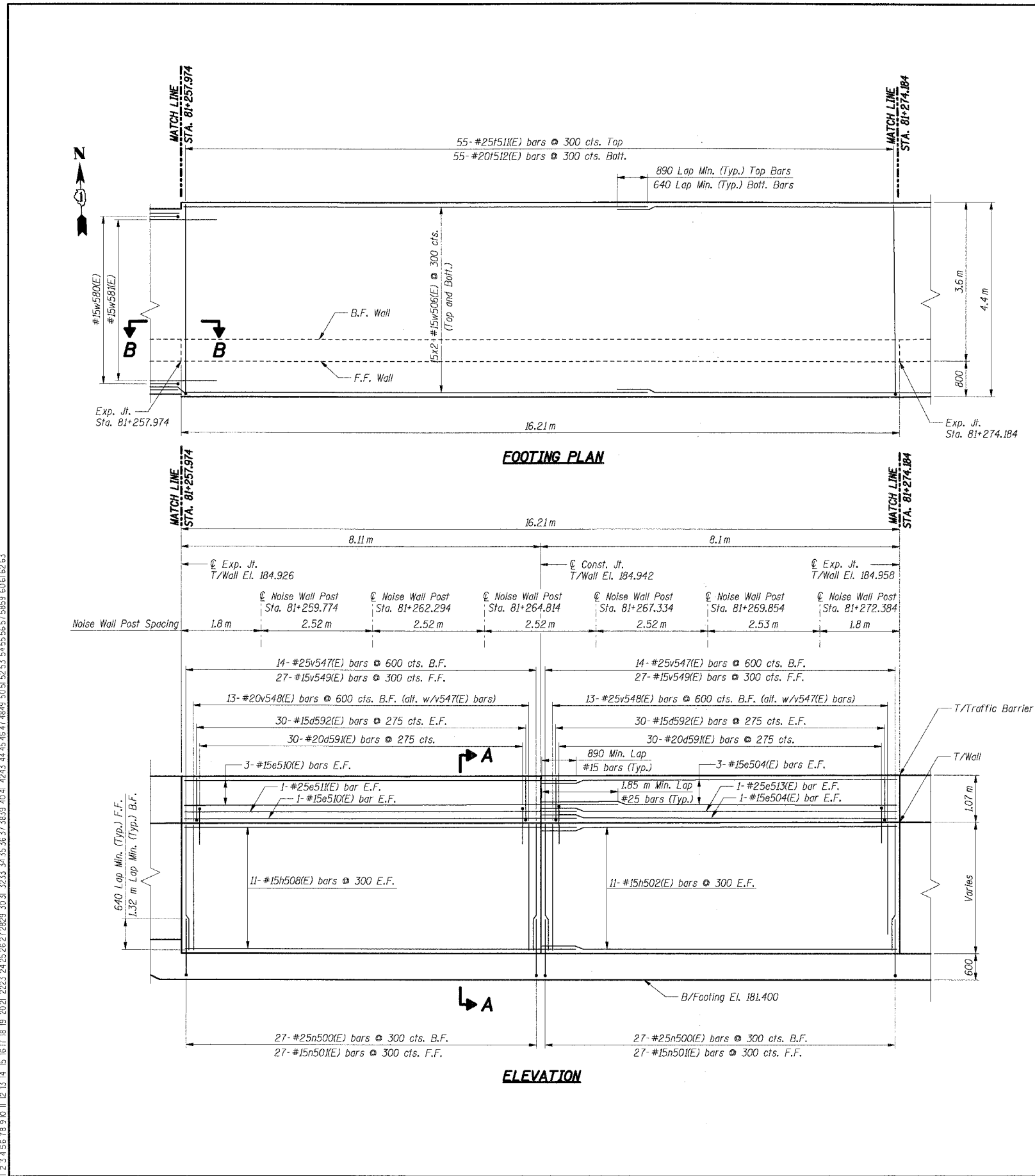
**FOOTING PLAN  
& WALL ELEVATION 8**

DATE: 02/20/2004      DRAWN BY: DG  
CHECKED BY: SC

**TENG**  
TENG & ASSOCIATES, INC.  
ENGINEERS/ARCHITECTS/PLANNERS  
CHICAGO, ILLINOIS

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	731
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 62114				



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**BAR LIST**

Bar	No.	Size	Length (m)	Shape
d59(E)	60	#20	2.59	
d592(E)	120	#15	1.22	
e504(E)	8	#15	8.05	
e510(E)	8	#15	8.95	
e511(E)	2	#25	9.90	
e513(E)	2	#25	8.05	
h502(E)	22	#15	8.05	
h508(E)	22	#15	8.95	
n500(E)	54	#25	2.30	
n501(E)	54	#15	1.60	
1511(E)	55	#25	4.80	
1512(E)	55	#20	4.30	
v547(E)	28	#25	2.85	
v548(E)	26	#20	2.85	
v549(E)	54	#15	2.85	
w506(E)	60	#15	10.50	

THIS SHEET FOR INFORMATION ONLY

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Structures	Cu m	73.0
Reinforcement Bars, Epoxy Coated	kg	5,470

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - E.F. indicates each face.
  - B.F. indicates back face.
  - F.F. indicates front face.
  - For Noise Abatement Wall pilaster details see sheet RWB35-30.
  - For Traffic Barrier details see Sht. RWB35-30.
  - For Rustication Finish & Joint details see Sht. RWB35-32.
  - For Drainage and Reinforcement details see Sht. RWB35-31.
  - Maximum Applied Soil Bearing Pressure,  $Q_{max} = 98$  kPa.
  - Bars indicated thus 4x2-#15 etc. Indicates 4 lines of bars with 2 lengths per line.

SHT. RWB35-13 OF 34

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-WB35  
 SECTION 2425 R-3 & 2425-711B  
 COOK COUNTY  
**FOOTING PLAN & WALL ELEVATION 9**

DATE: 02/20/2004  
 DRAWN BY: DG  
 CHECKED BY: SC  
**TENG**  
TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	732
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62114

Note A: The footing design and details accommodate the existing utility lines as shown based on the available record documents. The Contractor shall field verify the exact location and elevation of the utility lines prior to proceeding with any construction activities that may affect the subject utility. If the Contractor finds conflict with the proposed construction, they should inform the Engineer of the conflict, provide relevant information/measurements, and ask for modifications to the proposed design and details.

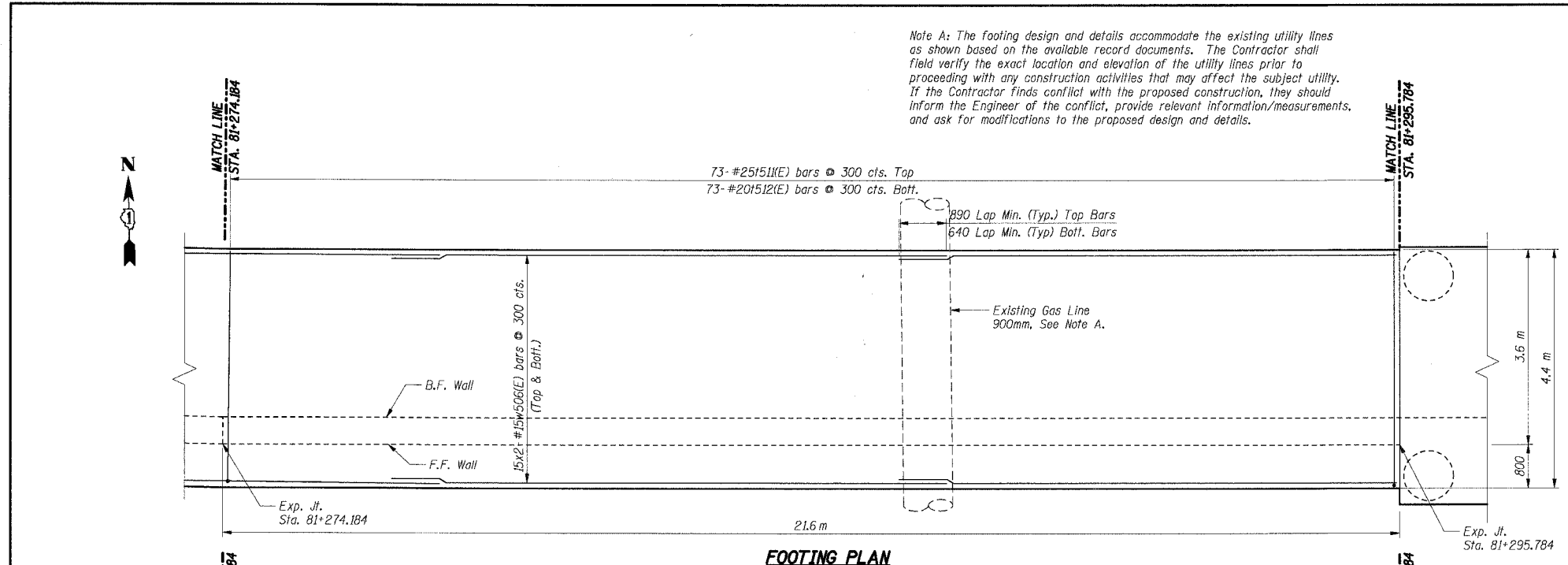
**BAR LIST**

Bar	No.	Size	Length (m)	Shape
d59(E)	81	#20	2.59	U
d592(E)	162	#15	1.22	U
e504(E)	16	#15	8.05	—
e505(E)	4	#25	9.05	—
e506(E)	8	#15	7.15	—
e507(E)	2	#25	7.15	—
h502(E)	44	#15	8.05	—
h503(E)	22	#15	7.15	—
n500(E)	75	#25	2.30	—
n501(E)	75	#15	1.50	—
f511(E)	73	#25	4.80	—
f512(E)	73	#20	4.30	—
v550(E)	39	#25	2.90	—
v551(E)	36	#20	2.90	—
v552(E)	75	#15	2.90	—
w506(E)	60	#15	10.50	—

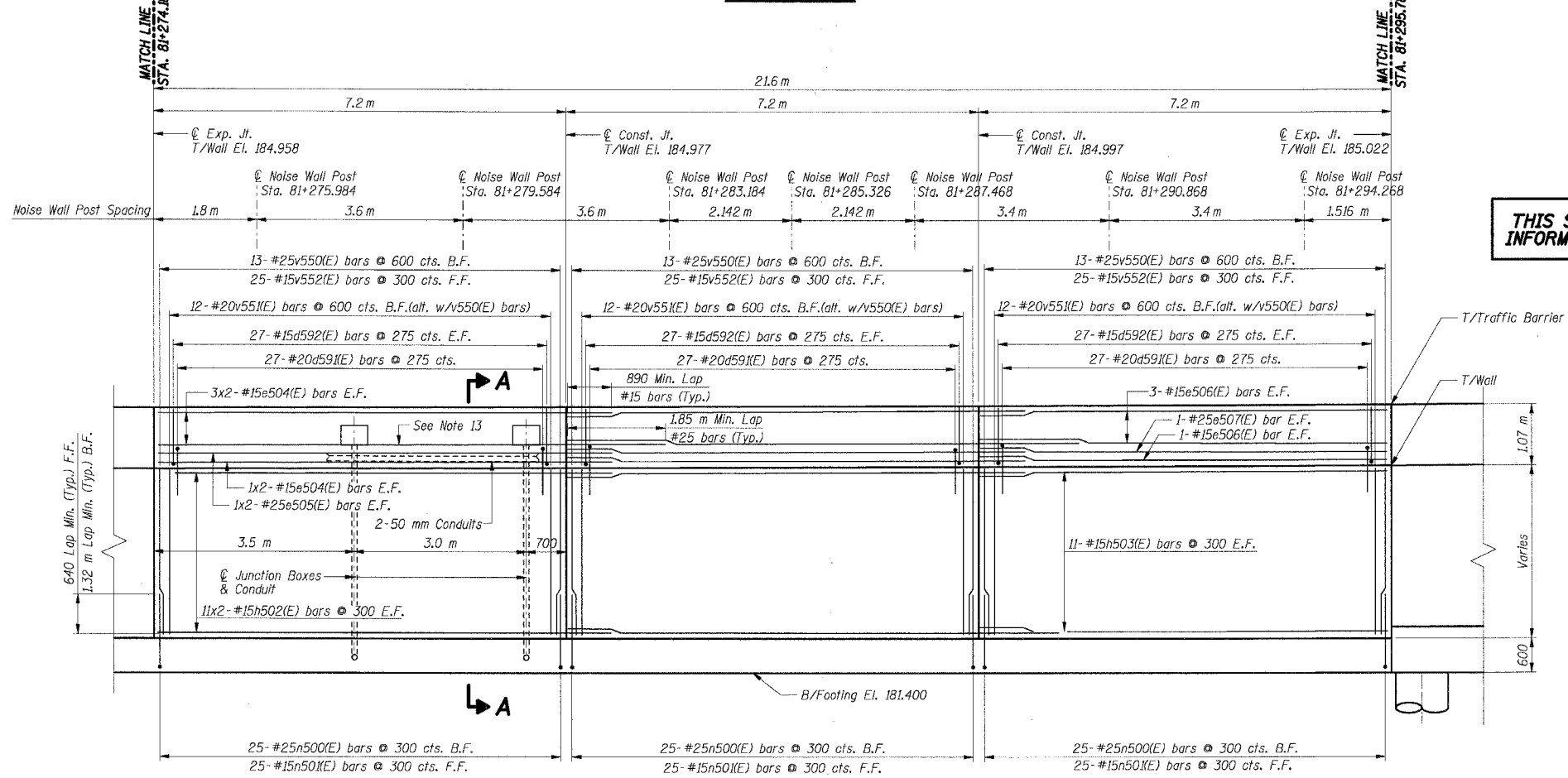
**BILL OF MATERIAL**

Item	Unit	Total
Concrete Structures	Cu m	98.0
Reinforcement Bars, Epoxy Coated	Kg	7,090

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - For section A-A see Sheet RW835-26.
  - E.F. indicates each face.
  - B.F. indicates back face.
  - F.F. indicates front face.
  - For Noise Abatement Wall pilaster details see sheet RW835-30.
  - For Traffic Barrier details see Sht. RW835-30.
  - For Rustication Finish & joint details see Sht. RW835-32.
  - For Drainage and Reinforcement details see Sht. RW835-31.
  - Maximum Applied Soil Bearing Pressure,  $\sigma_{max} = 98 \text{ kPa}$ .
  - Bars indicated thus 4x2-#15 etc. indicates 4 lines of bars with 2 lengths per line.
  - Cut e(E) bars in traffic barrier as required to fit at Junction box.



**FOOTING PLAN**



**ELEVATION**

**THIS SHEET FOR INFORMATION ONLY**

SHT. RW835-14 OF 34

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W835  
 SECTION 2425 R-3 & 2425-711B  
 COOK COUNTY

**FOOTING PLAN & WALL ELEVATION 10**

DATE: 02/20/2004  
 DRAWN BY: DG  
 CHECKED BY: SC

**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

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 BALZEREKJ

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	733
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62114

**BAR LIST**

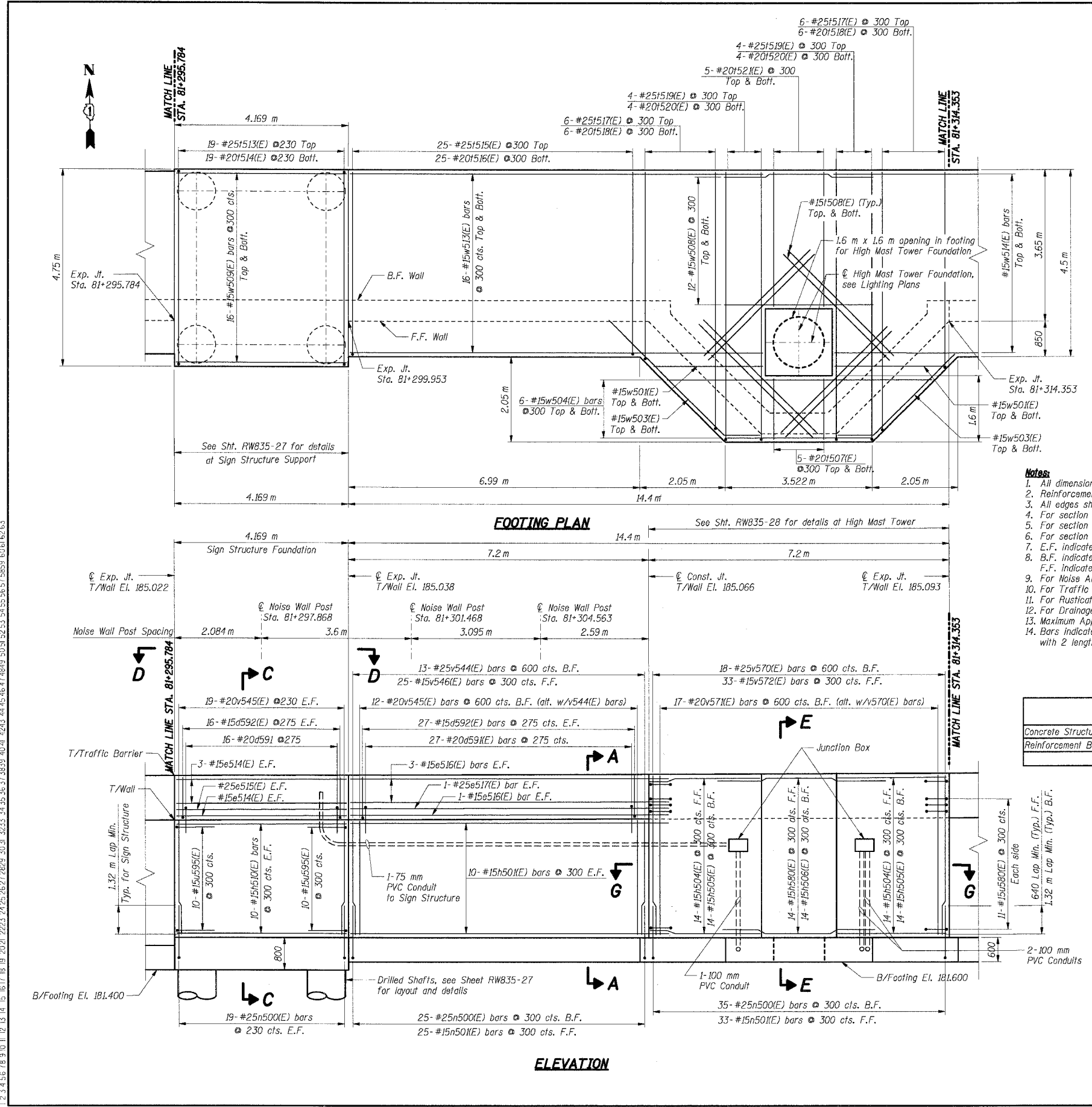
Bar	No.	Size	Length (m)	Shape
d580(E)	6	#20	1.15	
d591(E)	43	#20	2.59	
d592(E)	86	#15	1.22	
e514(E)	8	#15	4.05	
e515(E)	2	#25	4.05	
e516(E)	8	#15	7.65	
e517(E)	2	#25	7.65	
h501(E)	20	#15	7.65	
h504(E)	28	#15	3.80	
h505(E)	28	#15	4.40	
h506(E)	14	#15	2.55	
h510(E)	20	#15	4.05	
h516(E)	4	#15	0.50	
h580(E)	14	#15	2.85	
h581(E)	2	#15	0.75	
h582(E)	4	#15	2.50	
h583(E)	2	#15	0.42	
n500(E)	98	#25	2.30	
n501(E)	58	#15	1.50	
f507(E)	10	#20	1.50	
f508(E)	16	#15	3.50	
f513(E)	19	#25	5.85	
f514(E)	19	#20	5.85	
f515(E)	25	#25	4.90	
f516(E)	25	#20	4.40	
f517(E)	6	#25	11.85	
f518(E)	6	#20	10.85	
f519(E)	8	#25	6.95	
f520(E)	8	#20	6.45	
f521(E)	10	#20	3.25	
u580(E)	22	#15	2.16	
u581(E)	2	#15	1.91	
u582(E)	2	#15	1.96	
u583(E)	2	#15	1.81	
u584(E)	28	#10	0.81	
u595(E)	20	#15	3.30	
u596(E)	12	#15	1.50	
v544(E)	13	#25	2.80	
v545(E)	58	#20	2.80	
v546(E)	25	#15	2.80	
v570(E)	18	#25	3.70	
v571(E)	17	#20	3.70	
v572(E)	33	#15	3.70	
w501(E)	4	#15	2.70	
w503(E)	4	#15	4.90	
w504(E)	6	#15	10.00	
w509(E)	32	#15	4.05	
w508(E)	24	#15	3.50	
w513(E)	32	#15	9.90	

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - For section A-A see Sheet RW835-26.
  - For section C-C and D-D see Sheet RW835-28.
  - For section E-E and section G-G see Sheet RW835-28.
  - E.F. indicates each face.
  - B.F. indicates back face.
  - F.F. indicates front face.
  - For Noise Abatement Wall pilaster details see sheet RW835-30.
  - For Traffic Barrier details see Sht. RW835-30.
  - For Rustication Finish & Joint details see Sht. RW835-32.
  - For Drainage and Reinforcement details see Sht. RW835-31.
  - Maximum Applied Soil Bearing Pressure,  $Q_{max} = 100$  kPa.
  - Bars indicated thus 4x2-#15 etc. indicates 4 lines of bars with 2 lengths per line.

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Structures	Cu m	113.0
Reinforcement Bars, Epoxy Coated	Kg	7,440

**THIS SHEET FOR INFORMATION ONLY**



**SHT. RW835-15 OF 34**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W835  
 SECTION 2425 R-3 & 2425-T11B  
 COOK COUNTY

**FOOTING PLAN & WALL ELEVATION 11**

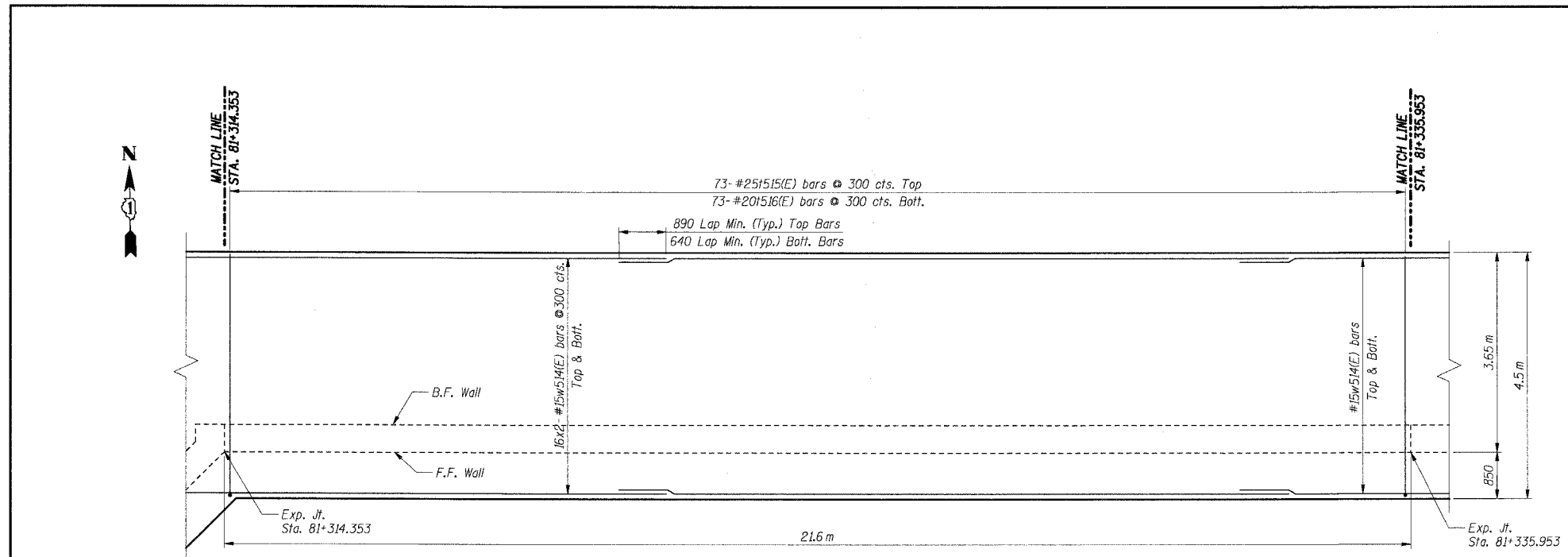
DATE: 02/20/2004

DRAWN BY: DG  
 CHECKED BY: SC

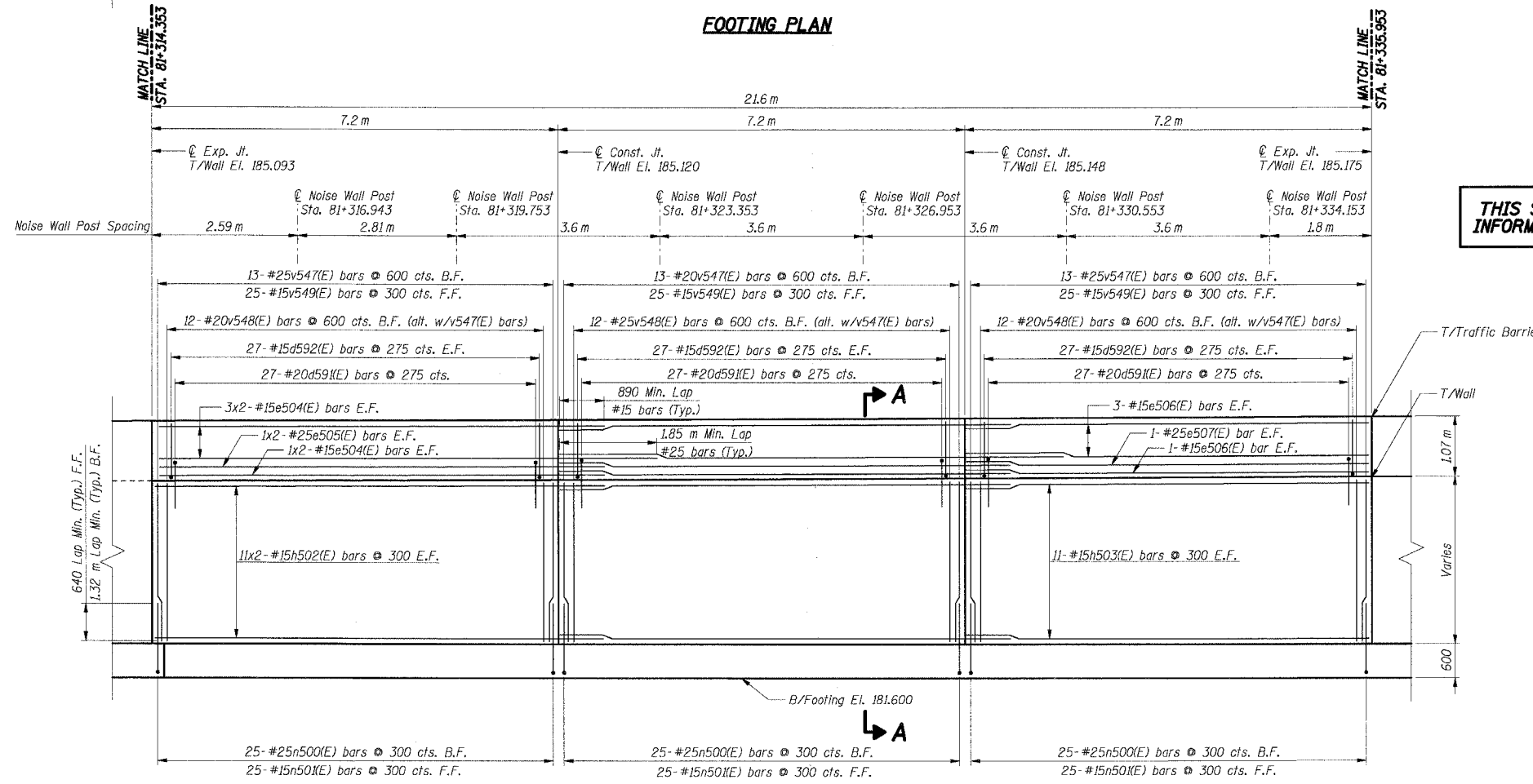
**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	734
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 62114				



**FOOTING PLAN**



**ELEVATION**

**THIS SHEET FOR INFORMATION ONLY**

**BAR LIST**

Bar	No.	Size	Length (m)	Shape
d591(E)	81	#20	2.59	┌
d592(E)	162	#15	1.22	└
e504(E)	16	#15	8.05	—
e505(E)	4	#25	9.05	—
e506(E)	8	#15	7.15	—
e507(E)	2	#25	7.15	—
h502(E)	44	#15	8.05	—
h503(E)	22	#15	7.15	—
n500(E)	75	#25	2.30	└
n501(E)	75	#15	1.50	└
1515(E)	73	#25	4.90	└
1516(E)	73	#20	4.40	└
v547(E)	39	#25	2.85	—
v548(E)	36	#20	2.85	—
v549(E)	75	#15	2.85	—
w514(E)	64	#15	12.40	—

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Structures	Cu m	99.0
Reinforcement Bars, Epoxy Coated	kg	7,370

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - For section A-A see Sheet RW835-26.
  - E.F. indicates each face.
  - B.F. indicates back face.
  - F.F. indicates front face.
  - For Noise Abatement Wall plaster details see sheet RW835-30.
  - For Traffic Barrier details see Sht. RW835-30.
  - For Rustication Finish & joint details see Sht. RW835-32.
  - For Drainage and Reinforcement details see Sht. RW835-31.
  - Maximum Applied Soil Bearing Pressure,  $q_{max} = 100$  kPa.
  - Bars indicated thus 4x2-#15 etc. indicates 4 lines of bars with 2 lengths per line.

SHT. RW835-16 OF 34

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W835  
 SECTION 2425 R-3 & 2425-711B  
 COOK COUNTY

**FOOTING PLAN & WALL ELEVATION 12**

DATE: 02/20/2004  
 DRAWN BY: DG  
 CHECKED BY: SC

**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	735
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62114

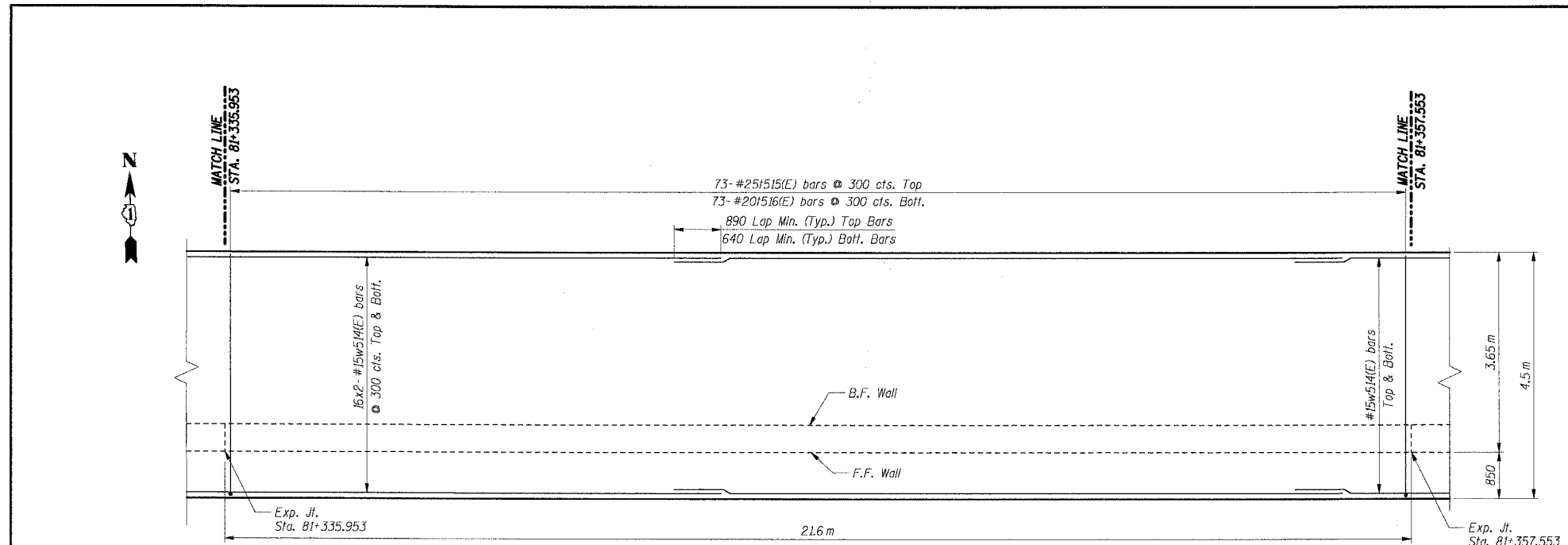
**BAR LIST**

Bar	No.	Size	Length (m)	Shape
d59(E)	81	#20	2.59	┌
d592(E)	162	#15	1.22	└
e504(E)	16	#15	8.05	—
e505(E)	4	#25	9.05	—
e506(E)	8	#15	7.15	—
e507(E)	2	#25	7.15	—
h502(E)	44	#15	8.05	—
h503(E)	22	#15	7.15	—
n500(E)	75	#25	2.30	┌
n501(E)	75	#15	1.50	└
f515(E)	73	#25	4.90	┌
f516(E)	73	#20	4.40	└
v553(E)	39	#25	2.95	—
v554(E)	36	#20	2.95	—
v555(E)	75	#15	2.95	—
w514(E)	64	#15	12.40	—

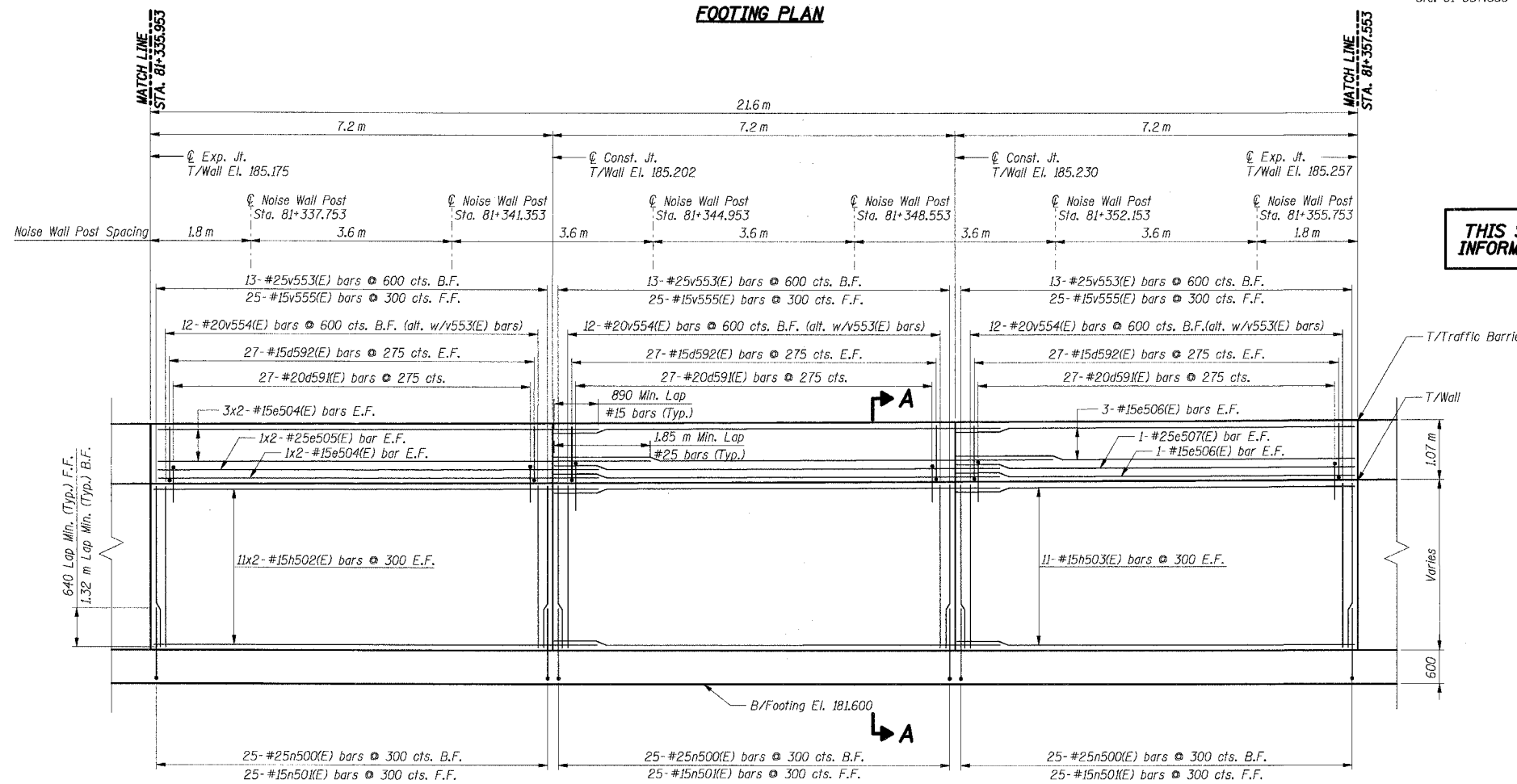
**BILL OF MATERIAL**

Item	Unit	Total
Concrete Structures	Cu m	100.0
Reinforcement Bars, Epoxy Coated	kg	7,410

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - For section A-A see Sheet RW835-26.
  - E.F. indicates each face.
  - B.F. indicates back face.
  - F.F. indicates front face.
  - For Noise Abatement Wall plaster details see sheet RW835-30.
  - For Traffic Barrier details see Sht. RW835-30.
  - For Rustication Finish & joint details see Sht. RW835-32.
  - For Drainage and Reinforcement details see Sht. RW835-31.
  - Maximum Applied Soil Bearing Pressure,  $\sigma_{max} = 100$  kPa.
  - Bars indicated thus 4x2-#15 etc. indicates 4 lines of bars with 2 lengths per line.



**FOOTING PLAN**



**ELEVATION**

**THIS SHEET FOR INFORMATION ONLY**

SHT. RW835-17 OF 34

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W835  
 SECTION 2425 R-3 & 2425-711B  
 COOK COUNTY

**FOOTING PLAN & WALL ELEVATION 13**

DATE: 02/20/2004  
 DRAWN BY: DG  
 CHECKED BY: SC

**TENG**  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

7-I-2005-1533502  
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 BAIZEKJ  
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	736
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				

**BAR LIST**

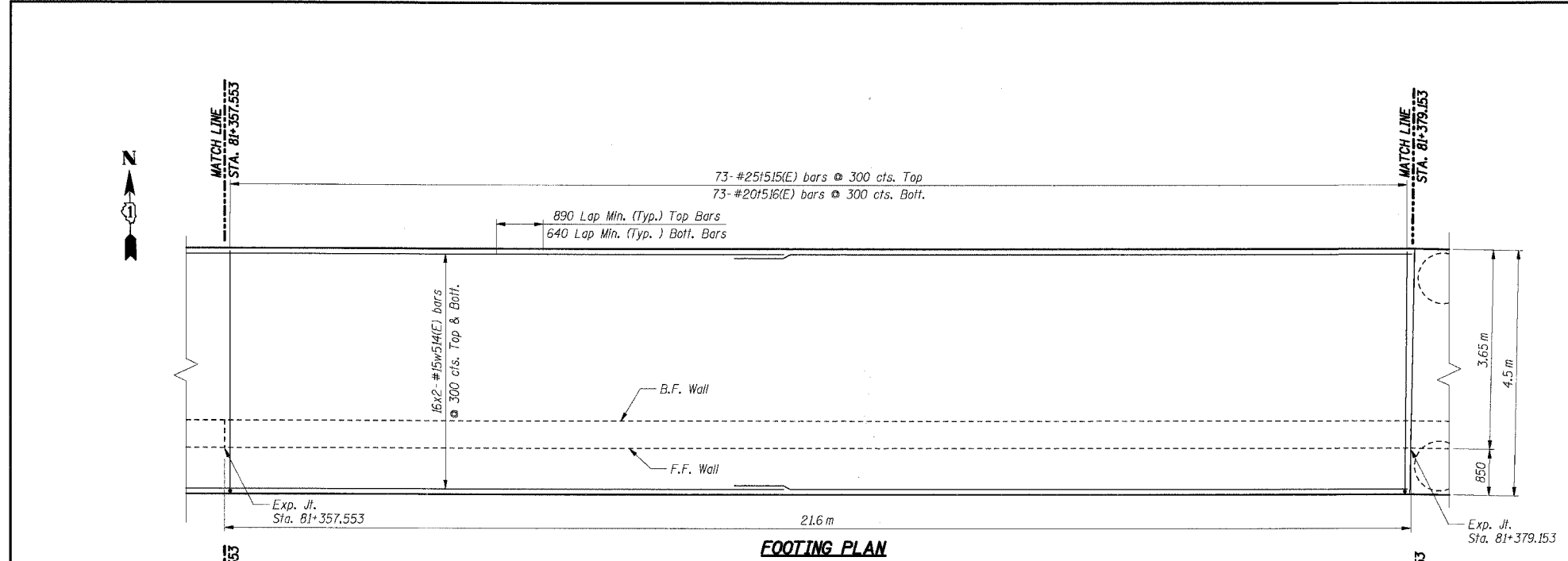
Bar	No.	Size	Length (m)	Shape
d591(E)	81	#20	2.59	┌
d592(E)	162	#15	1.22	└
e504(E)	16	#15	8.05	—
e505(E)	4	#25	9.05	—
e506(E)	8	#15	7.15	—
e507(E)	2	#25	7.15	—
h502(E)	44	#15	8.05	—
h503(E)	22	#15	7.15	—
n500(E)	75	#25	2.30	┌
n501(E)	75	#15	1.60	└
1515(E)	73	#25	4.90	┌
1516(E)	73	#20	4.40	—
v556(E)	39	#25	3.00	—
v557(E)	36	#20	3.00	—
v558(E)	75	#15	3.00	—
w514(E)	64	#15	12.40	—

**BILL OF MATERIAL**

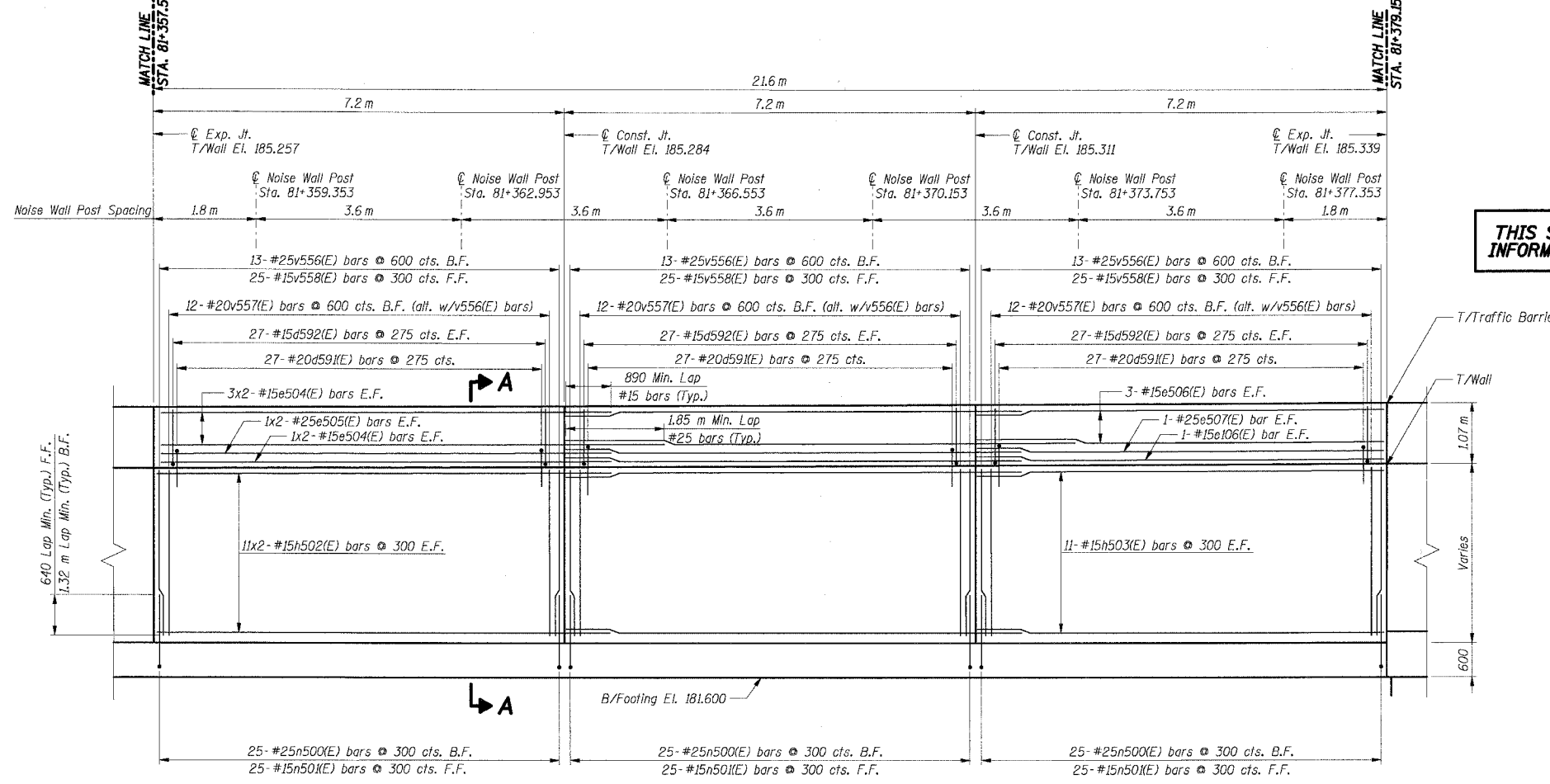
Item	Unit	Total
Concrete Structures	Cu m	101.0
Reinforcement Bars, Epoxy Coated	kg	7,440

**THIS SHEET FOR INFORMATION ONLY**

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - For section A-A see Sheet RW835-26.
  - E.F. indicates each face.
  - B.F. indicates back face.
  - F.F. indicates front face.
  - For Noise Abatement Wall pilaster details see sheet RW835-30.
  - For Traffic Barrier details see Sht. RW835-30.
  - For Rustication Finish & joint details see Sht. RW835-32.
  - For Drainage and Reinforcement details see Sht. RW835-31.
  - Maximum Applied Soil Bearing Pressure,  $\sigma_{max}$  = 100 kPa.
  - Bars indicated thus 4x2-#15 etc. indicates 4 lines of bars with 2 lengths per line.



**FOOTING PLAN**



**ELEVATION**

**SHT. RW835-18 OF 34**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W835  
 SECTION 2425 R-3 & 2425-711B  
 COOK COUNTY

**FOOTING PLAN & WALL ELEVATION 14**

DATE: 02/20/2004  
 DRAWN BY: DG  
 CHECKED BY: SC

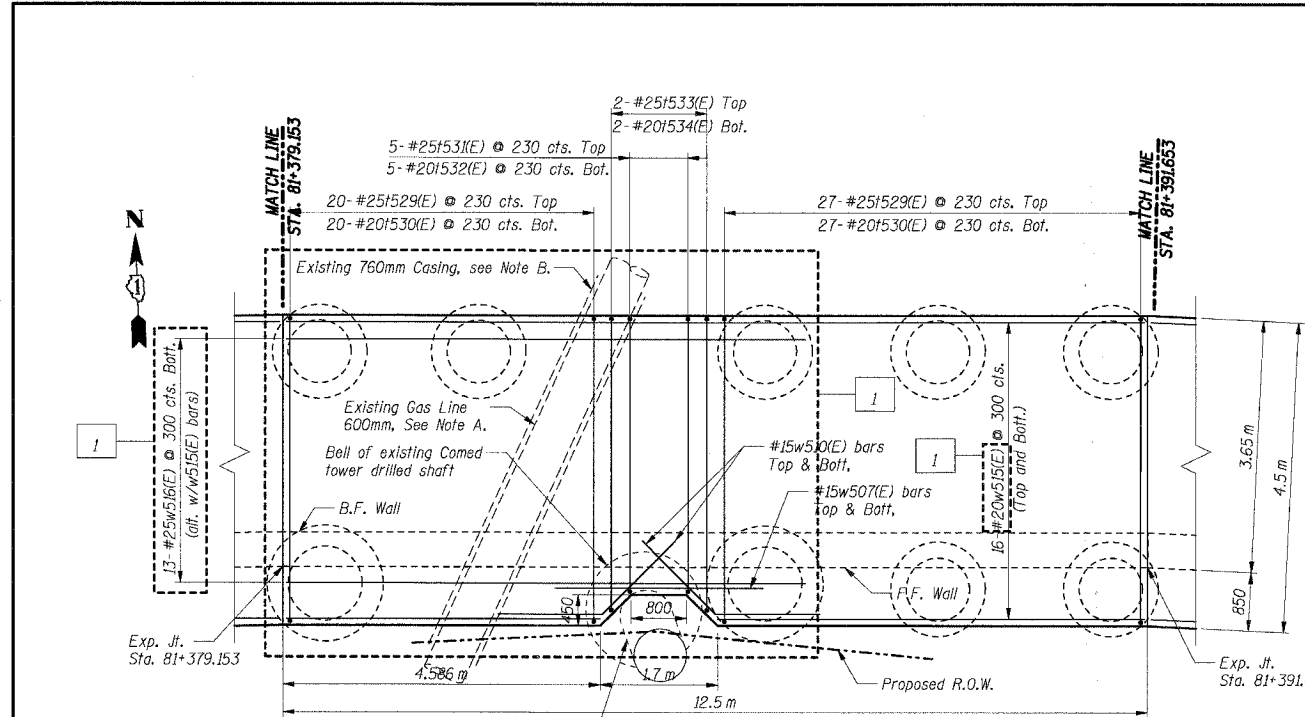
**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	737
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62114



Note A: The footing design and details accommodate the existing utility lines as shown based on the available record documents. The Contractor shall field verify the exact location and elevation of the utility lines prior to proceeding with any construction activities that may affect the subject utility. If the Contractor finds conflict with the proposed construction, they should inform the Engineer of the conflict, provide relevant information/measurements, and ask for modifications to the proposed design and details.

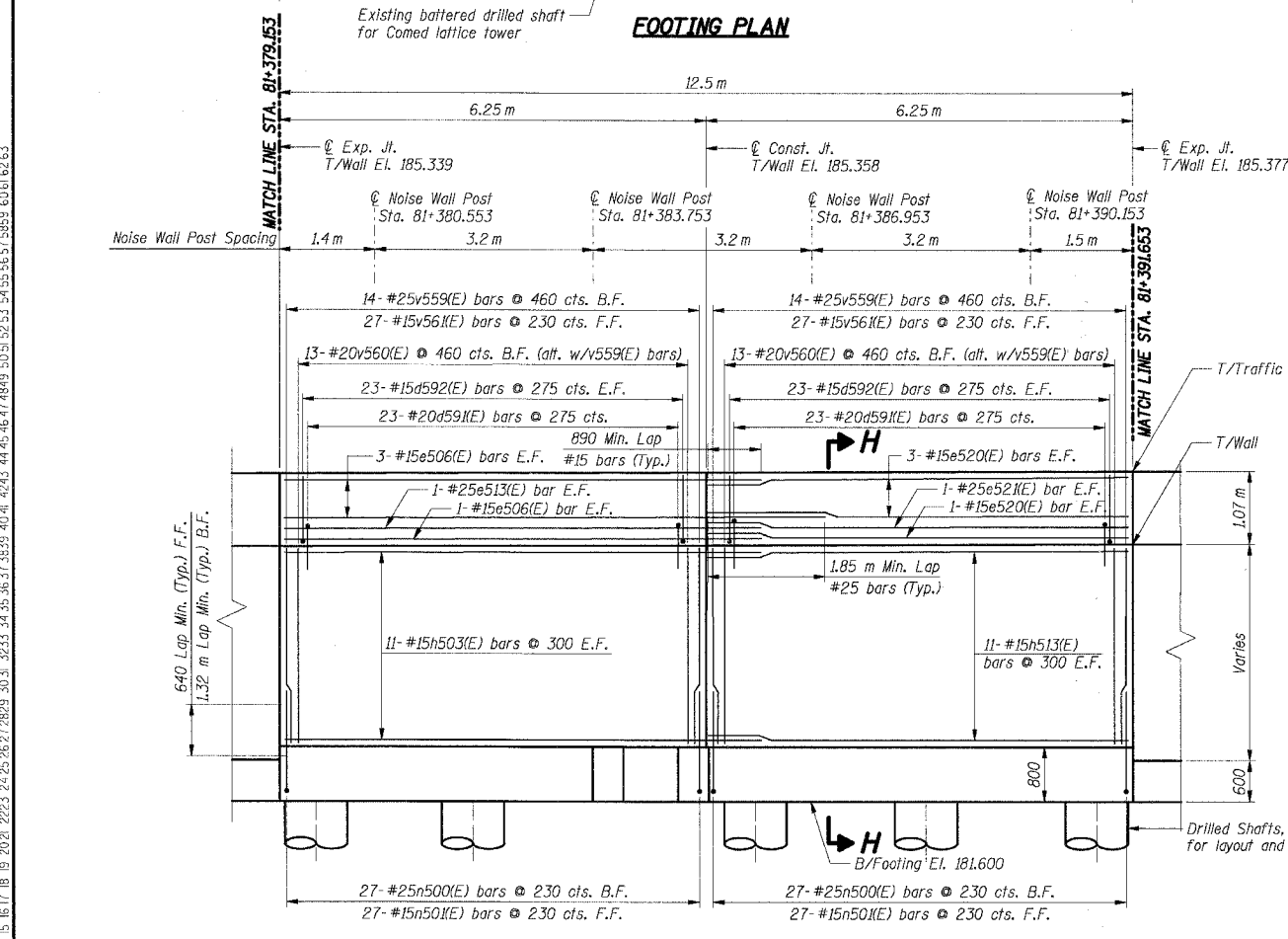
Note B: A minimum of 600mm clearance shall be maintained between drilled shaft and gas main casing.

**BAR LIST**

Bar	No.	Size	Length (m)	Shape
d59(E)	46	#20	2.59	□
d592(E)	92	#15	1.22	□
e506(E)	8	#15	7.15	—
e513(E)	2	#25	8.05	—
e520(E)	8	#15	6.20	—
e52(E)	2	#25	6.20	—
h503(E)	22	#15	7.15	—
h513(E)	22	#15	6.20	—
n500(E)	54	#25	2.30	—
n50(E)	54	#15	1.50	—
v529(E)	47	#25	5.60	—
v530(E)	47	#20	5.60	—
v53(E)	5	#25	5.15	—
v532(E)	5	#20	5.15	—
v533(E)	2	#25	5.40	—
v534(E)	2	#20	5.40	—
v559(E)	28	#25	3.05	—
v560(E)	26	#20	3.05	—
v56(E)	54	#15	3.05	—
w507(E)	2	#15	2.80	—
w510(E)	4	#15	2.65	—
w515(E)	32	#20	12.40	—
w516(E)	13	#25	7.50	—

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Structures	Cu m	68.0
Reinforcement Bars, Epoxy Coated	kg	5,820



**THIS SHEET FOR INFORMATION ONLY**

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - For section H-H see Sheet RW835-26.
  - E.F. indicates each face.
  - B.F. indicates back face.
  - F.F. indicates front face.
  - For Noise Abatement Wall pilaster details see sheet RW835-30.
  - For Traffic Barrier details see Sht. RW835-30.
  - For Rustication Finish & joint details see Sht. RW835-32.
  - For Drainage and Reinforcement details see Sht. RW835-31.
  - Bars indicated thus 4x2-#15 etc. indicates 4 lines of bars with 2 lengths per line.

SHT. RW835-19 OF 34

REVISIONS	
NAME	DATE
MJK	6/21/04

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W835  
 SECTION 2425 R-3 & 2425-711B  
 COOK COUNTY

**FOOTING PLAN & WALL ELEVATION 15**

DATE: 02/20/2004  
 DRAWN BY: DG  
 CHECKED BY: SC

**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	738
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				

**BAR LIST**

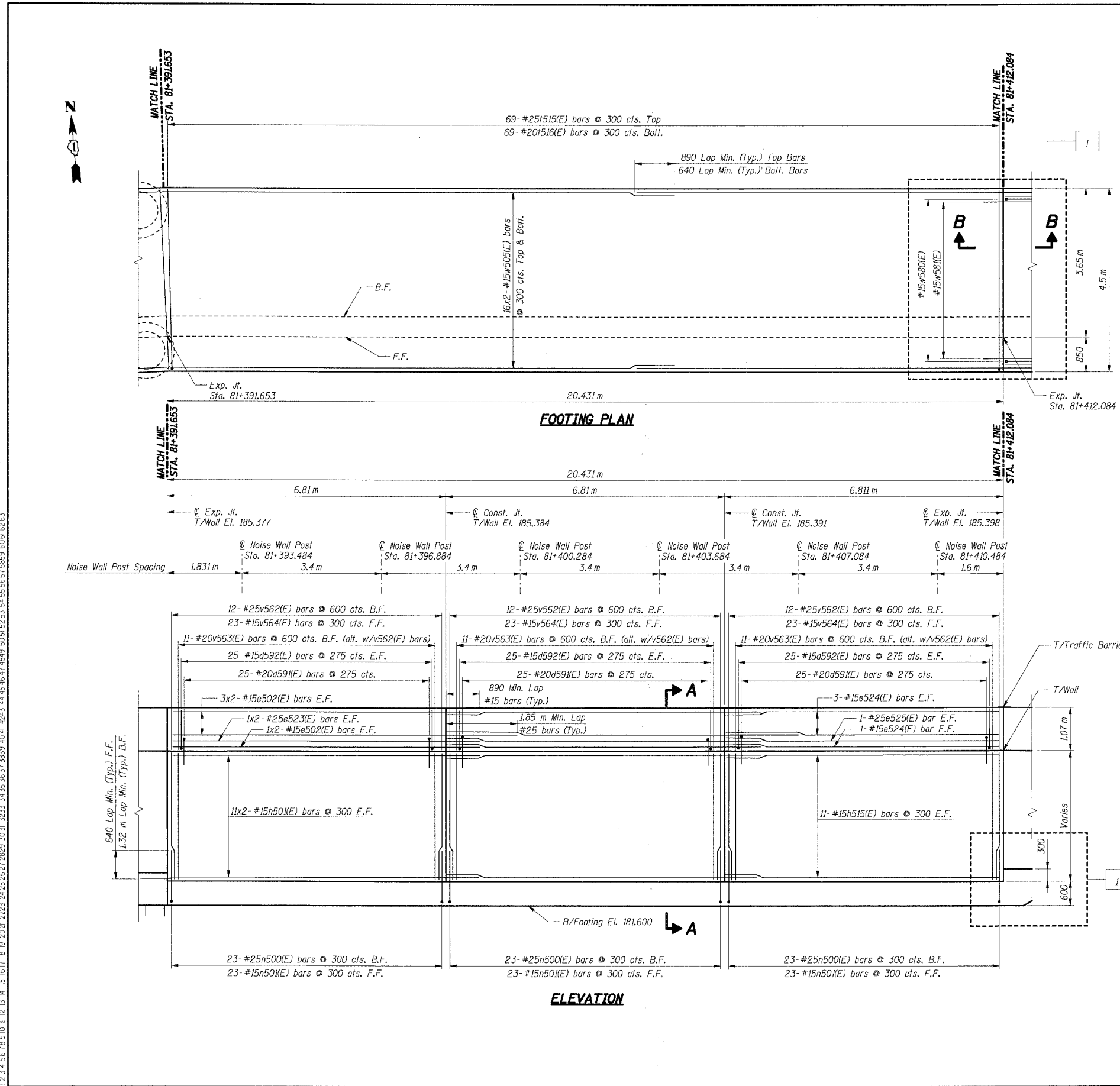
Bar	No.	Size	Length (m)	Shape
d59(E)	75	#20	2.59	U
d592(E)	150	#15	1.22	U
e502(E)	16	#15	7.65	—
e523(E)	4	#25	8.65	—
e524(E)	8	#15	6.75	—
e525(E)	2	#25	6.75	—
h50(E)	44	#15	7.65	—
h515(E)	22	#15	6.75	—
n500(E)	69	#25	2.30	U
n50(E)	69	#15	1.50	U
1515(E)	69	#25	4.90	U
1516(E)	69	#20	4.40	U
v562(E)	36	#25	3.10	—
v563(E)	33	#20	3.10	—
v564(E)	69	#15	3.10	—
w505(E)	64	#15	11.50	—

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Structures	Cu m	96.0
Reinforcement Bars, Epoxy Coated	kg	6,970

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - For section A-A and section B-B, see Sheet RW835-26.
  - E.F. Indicates each face.
  - B.F. Indicates back face.
  - F.F. Indicates front face.
  - For Noise Abatement Wall plaster details see sheet RW835-30.
  - For Traffic Barrier details see Sht. RW835-30.
  - For Rustication Finish & Joint details see Sht. RW835-32.
  - For Drainage and Reinforcement details see Sht. RW835-31.
  - Maximum Applied Soil Bearing Pressure,  $Q_{max} = 100$  kPa.
  - Bars indicated thus 4x2-#15 etc. indicates 4 lines of bars with 2 lengths per line.

**THIS SHEET FOR INFORMATION ONLY**



**SHT. RW835-20 OF 34**

REVISIONS	
NAME	DATE
PA	8/3/04

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W835  
 SECTION 2425 R-3 & 2425-711B  
 COOK COUNTY

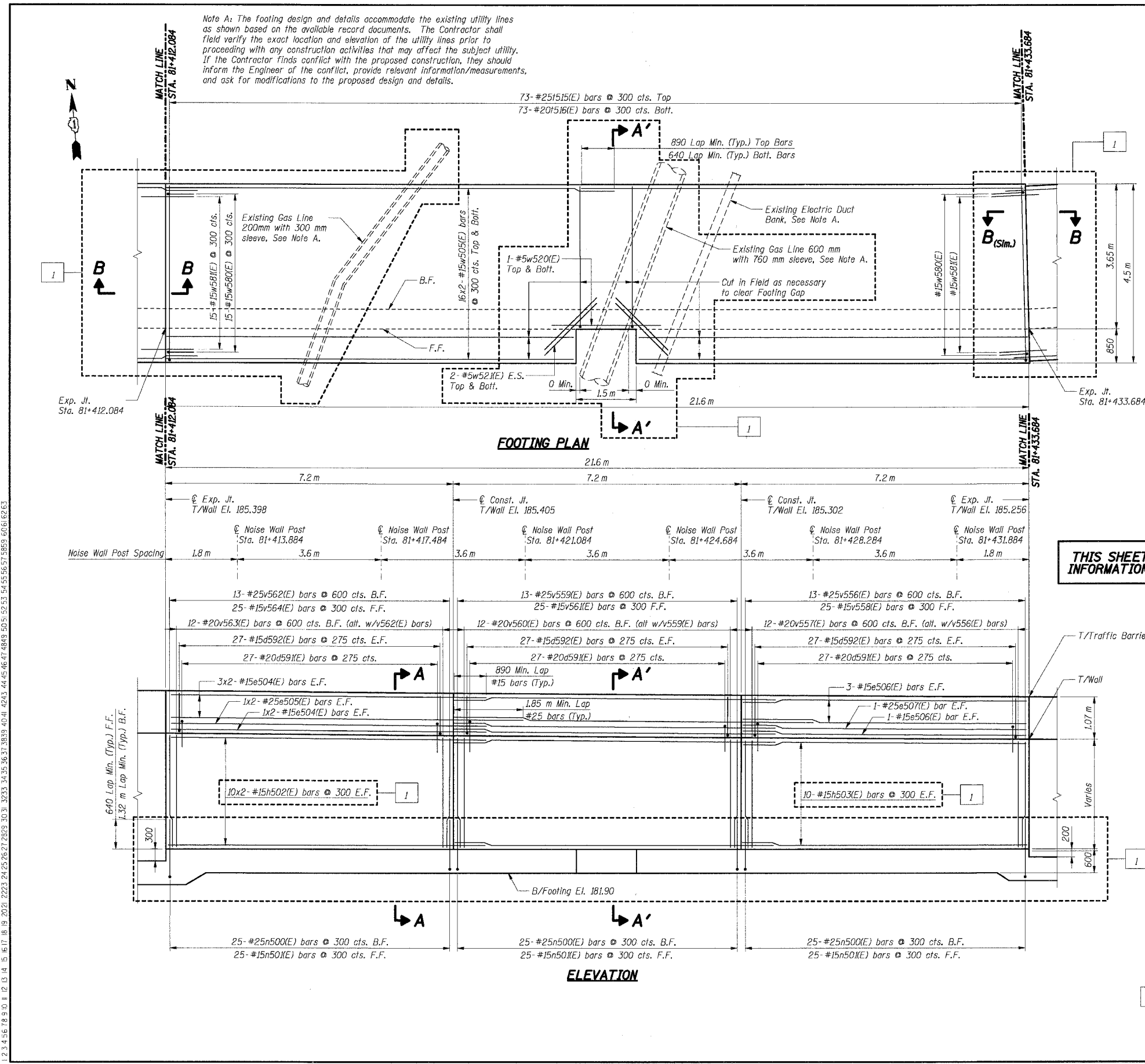
**FOOTING PLAN & WALL ELEVATION 16**

DATE: 02/20/2004  
 DRAWN BY: DG  
 CHECKED BY: SC

**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

7-2005, 0333-0  
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	739
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 62114				



**BAR LIST**

Bar	No.	Size	Length (m)	Shape
a591(E)	81	#20	2.59	U
a592(E)	162	#15	1.22	U
e504(E)	16	#15	8.05	—
e505(E)	4	#25	9.05	—
e506(E)	8	#15	7.15	—
e507(E)	2	#25	7.15	—
h502(E)	40	#15	8.05	—
h503(E)	20	#15	7.15	—
n500(E)	75	#25	2.30	—
n501(E)	75	#15	1.50	—
1515(E)	73	#25	4.90	—
1516(E)	73	#20	4.40	—
v556(E)	13	#25	2.70	—
v557(E)	12	#20	2.70	—
v558(E)	25	#15	2.70	—
v559(E)	13	#25	2.75	—
v560(E)	12	#20	2.75	—
v561(E)	25	#15	2.75	—
v562(E)	13	#25	2.85	—
v563(E)	12	#20	2.85	—
v564(E)	25	#15	2.85	—
w505(E)	64	#15	11.50	—
w520(E)	2	#15	2.72	—
w521(E)	8	#15	1.84	—
w590(E)	15	#15	1.50	—
w581(E)	15	#15	2.20	—

**THIS SHEET FOR INFORMATION ONLY**

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Structures	Cu m	98.0
Reinforcement Bars, Epoxy Coated	kg	7,300

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - For section A-A, section A'-A' and section B-B, see Sheet RW835-26.
  - E.S. indicates each side, E.F. indicates each face, B.F. indicates back face, F.F. indicates front face.
  - For Noise Abatement Wall pilaster details see sheet RW835-30.
  - For Traffic Barrier details see Sht. RW835-30.
  - For Rustication Finish & joint details see Sht. RW835-32.
  - For Drainage and Reinforcement details see Sht. RW835-31.
  - Maximum Applied Soil Bearing Pressure,  $q_{max} = 100$  kPa.
  - Bars indicated thus 4x2-#15 etc. indicates 4 lines of bars with 2 lengths per line.

SHT. RW835-21 OF 34

REVISIONS	
NAME	DATE
PA	8/3/04

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W835  
 SECTION 2425 R-3 & 2425-711B  
 COOK COUNTY

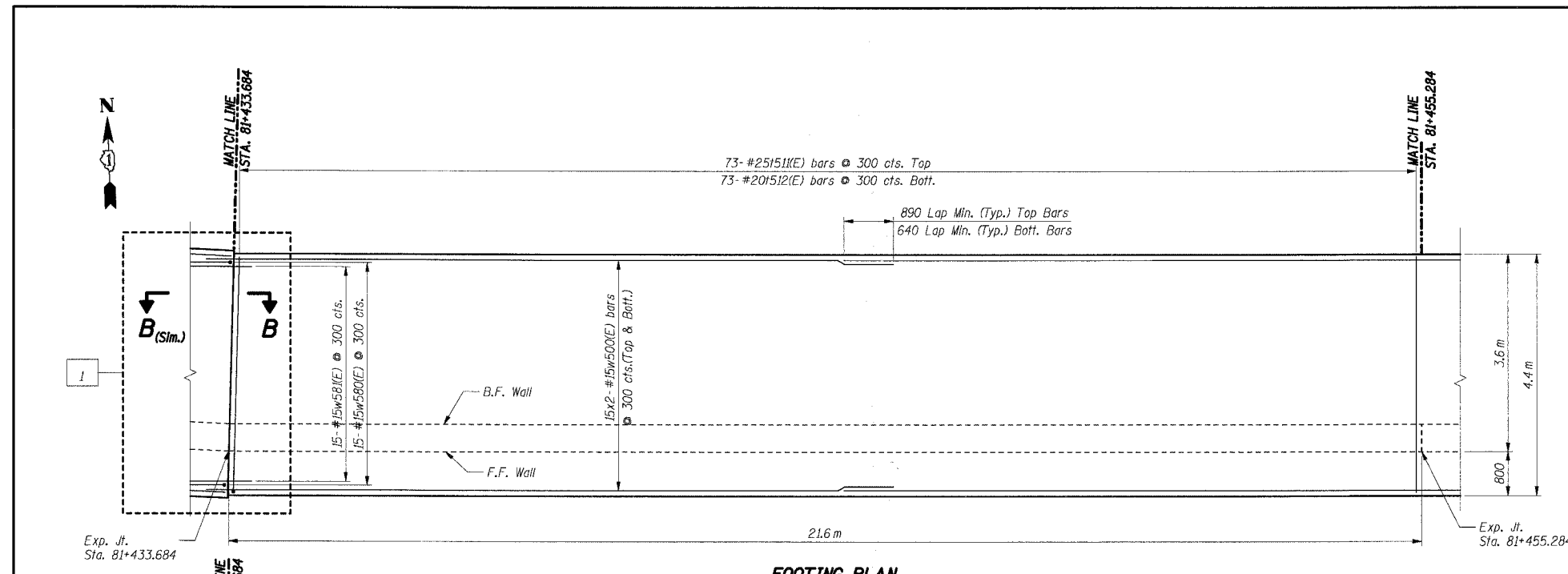
**FOOTING PLAN & WALL ELEVATION 17**

DATE: 02/20/2004  
 DRAWN BY: DG  
 CHECKED BY: SC

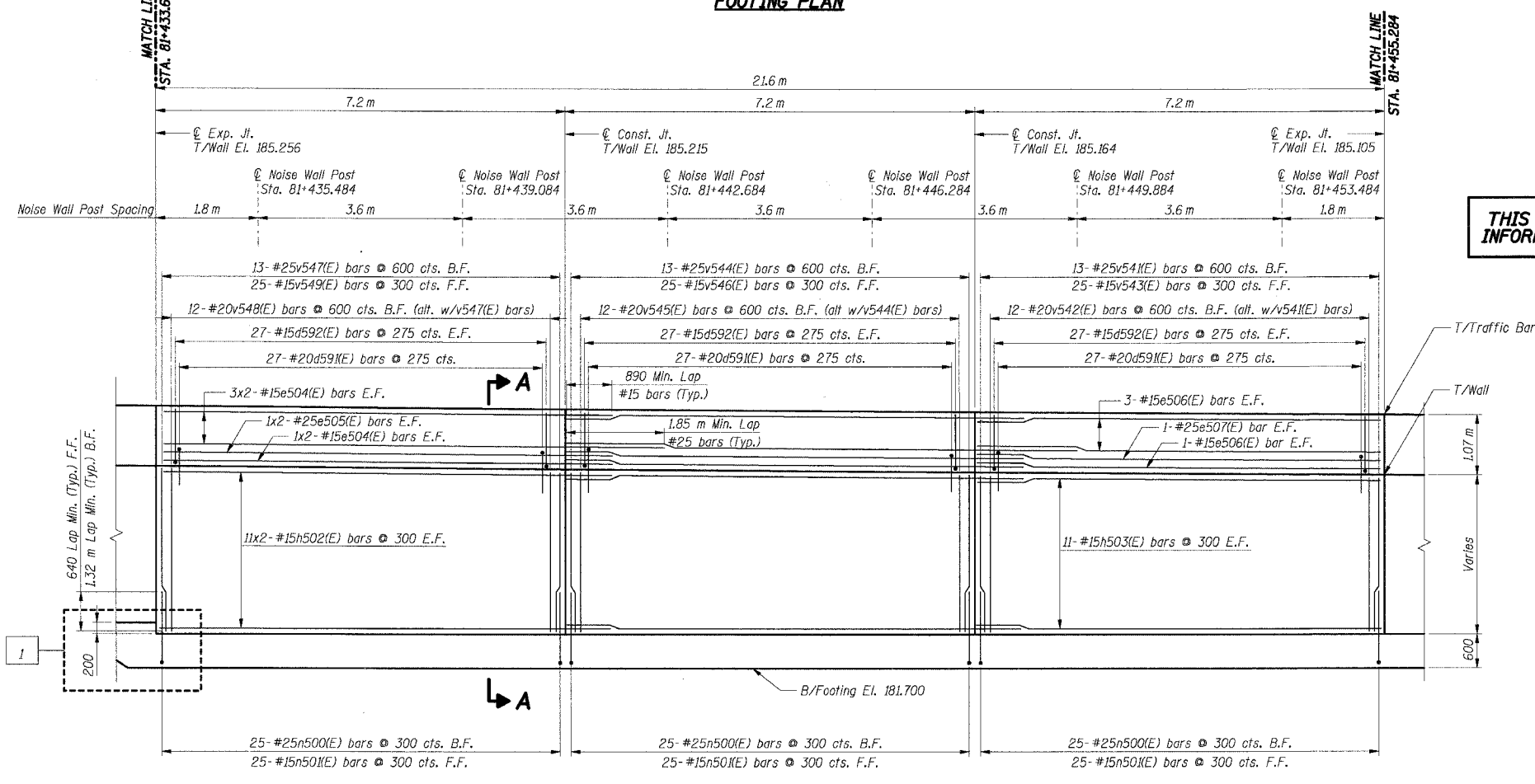
**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

T:\DOCUMENT\831750\STRUCT\CONSTR\82722ADJON  
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	740
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				



**FOOTING PLAN**



**ELEVATION**

**BAR LIST**

Bar	No.	Size	Length (m)	Shape
d59(E)	81	#20	2.59	┌
d592(E)	162	#15	1.22	┌
e504(E)	16	#15	8.05	—
e505(E)	4	#25	9.05	—
e506(E)	8	#15	7.15	—
e507(E)	2	#25	7.15	—
h502(E)	44	#15	8.05	—
h503(E)	22	#15	7.15	—
n500(E)	75	#25	2.30	┌
n501(E)	75	#15	1.50	┌
f511(E)	73	#25	4.80	┌
f512(E)	73	#20	4.30	┌
v541(E)	13	#25	2.75	—
v542(E)	12	#20	2.75	—
v543(E)	25	#15	2.75	—
v544(E)	13	#25	2.80	—
v545(E)	12	#20	2.80	—
v546(E)	25	#15	2.80	—
v547(E)	13	#25	2.85	—
v548(E)	12	#20	2.85	—
v549(E)	25	#15	2.85	—
w500(E)	60	#15	12.00	—
w580(E)	15	#15	1.50	┌
w581(E)	15	#15	2.20	┌

**THIS SHEET FOR INFORMATION ONLY**

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Structures	Cu m	97.0
Reinforcement Bars, Epoxy Coated	kg	7,280

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - For section A-A and section B-B see Sheet RW835-26.
  - E.F. indicates each face.
  - B.F. indicates back face.
  - F.F. indicates front face.
  - For Noise Abatement Wall plaster details see sheet RW835-30.
  - For Traffic Barrier details see Sht. RW835-30.
  - For Rustication Finish & Joint details see Sht. RW835-32.
  - For Drainage and Reinforcement details see Sht. RW835-31.
  - Maximum Applied Soil Bearing Pressure,  $Q_{max} = 98$  kPa.
  - Bars indicated thus 4x2-#15 etc. indicates 4 lines of bars with 2 lengths per line.

**SHT. RW835-22 OF 34**

REVISIONS	
NAME	DATE
PA	8/3/04

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W835  
 SECTION 2425 R-3 & 2425-711B  
 COOK COUNTY

**FOOTING PLAN & WALL ELEVATION 18**

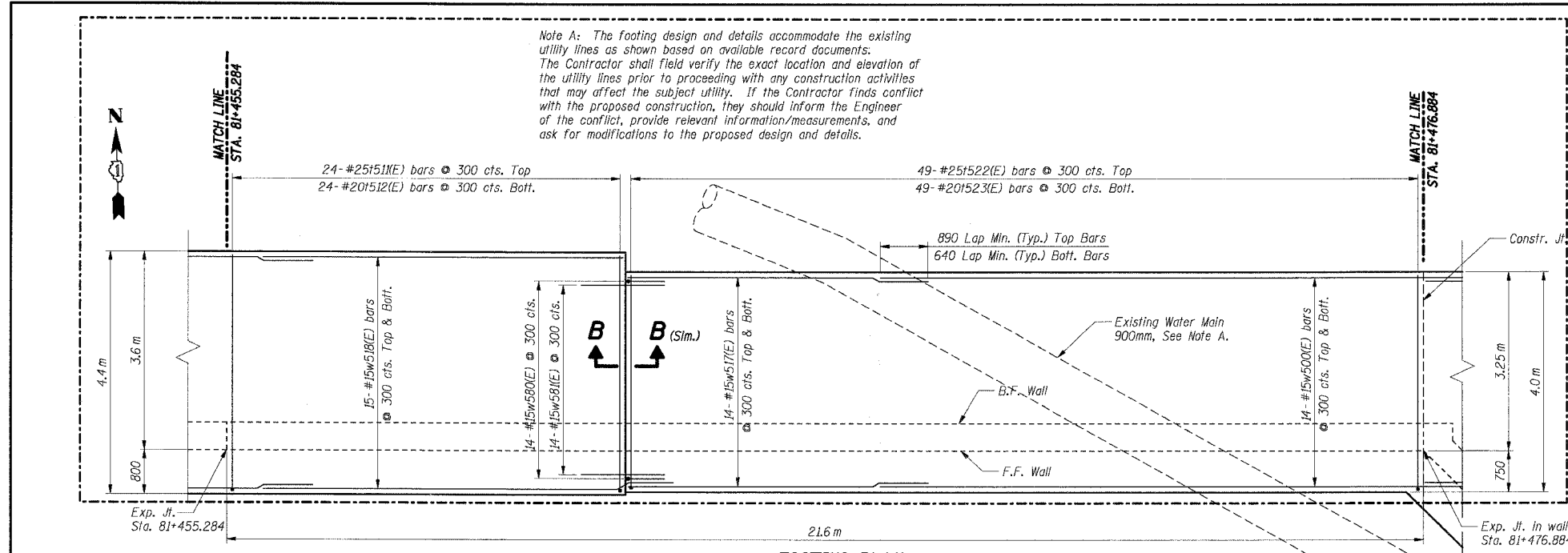
DATE: 02/20/2004  
 DRAWN BY: DG  
 CHECKED BY: SC

**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

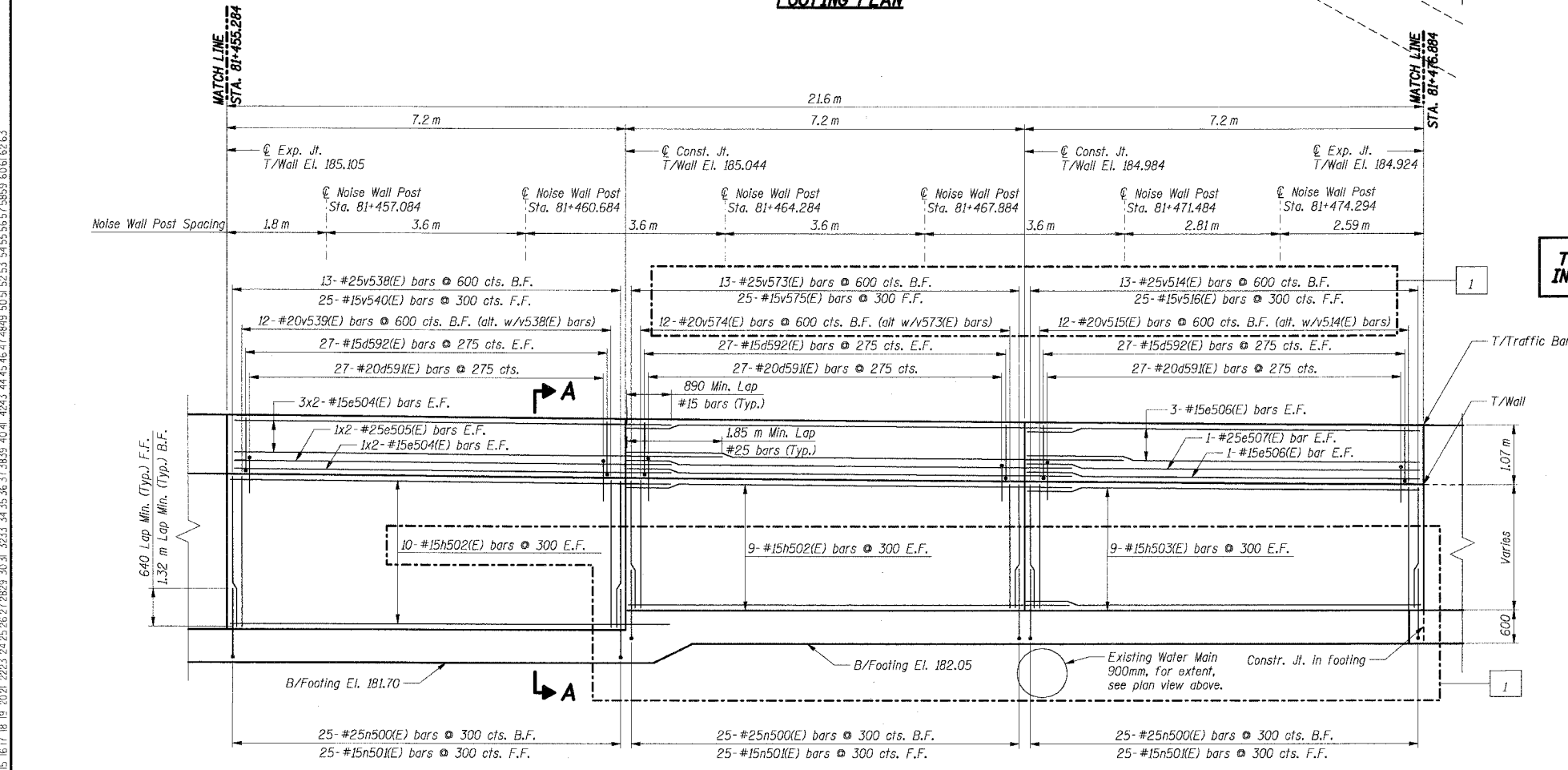
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	741
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 62114				

Note A: The footing design and details accommodate the existing utility lines as shown based on available record documents. The Contractor shall field verify the exact location and elevation of the utility lines prior to proceeding with any construction activities that may affect the subject utility. If the Contractor finds conflict with the proposed construction, they should inform the Engineer of the conflict, provide relevant information/measurements, and ask for modifications to the proposed design and details.



**FOOTING PLAN**



**ELEVATION**

**BAR LIST**

Bar	No.	Size	Length (m)	Shape
d591(E)	81	#20	2.59	U
d592(E)	162	#15	1.22	U
e504(E)	16	#15	8.05	—
e505(E)	4	#25	9.05	—
e506(E)	8	#15	7.15	—
e507(E)	2	#25	7.15	—
h502(E)	38	#15	8.05	—
h503(E)	18	#15	7.15	—
n500(E)	75	#25	2.30	—
n501(E)	75	#15	1.50	—
f511(E)	24	#25	4.80	—
f512(E)	24	#20	4.30	—
f522(E)	49	#25	4.40	—
f523(E)	49	#20	3.90	—
v514(E)	13	#25	2.25	—
v515(E)	12	#20	2.25	—
v516(E)	25	#15	2.25	—
v573(E)	13	#25	2.30	—
v574(E)	12	#20	2.30	—
v575(E)	25	#15	2.30	—
v538(E)	13	#25	2.70	—
v539(E)	12	#20	2.70	—
v540(E)	25	#15	2.70	—
w500(E)	28	#15	12.00	—
w517(E)	28	#15	6.00	—
w518(E)	30	#15	9.00	—
w580(E)	14	#15	1.50	—
w581(E)	14	#15	2.20	—

**THIS SHEET FOR INFORMATION ONLY**

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Structures	Cu m	90.0
Reinforcement Bars, Epoxy Coated	kg	6,980

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - E.F. indicates each face.
  - B.F. indicates back face.
  - F.F. indicates front face.
  - For Noise Abatement Wall plaster details see sheet RWB35-30.
  - For Traffic Barrier details see Sht. RWB35-30.
  - For Rustication Finish & joint details see Sht. RWB35-32.
  - For Drainage and Reinforcement details see Sht. RWB35-31.
  - Maximum Applied Soil Bearing Pressure,  $Q_{max} = 98$  kPa.
  - Bars indicated thus 4x2-#15 etc. indicates 4 lines of bars with 2 lengths per line.

SHT. RWB35-23 OF 34

REVISIONS	
NAME	DATE
MJK	6/21/04

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W835  
 SECTION 2425 R-3 & 2425-711B  
 COOK COUNTY

**FOOTING PLAN & WALL ELEVATION 19**

DATE: 02/20/2004  
 DRAWN BY: DG  
 CHECKED BY: SC

**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

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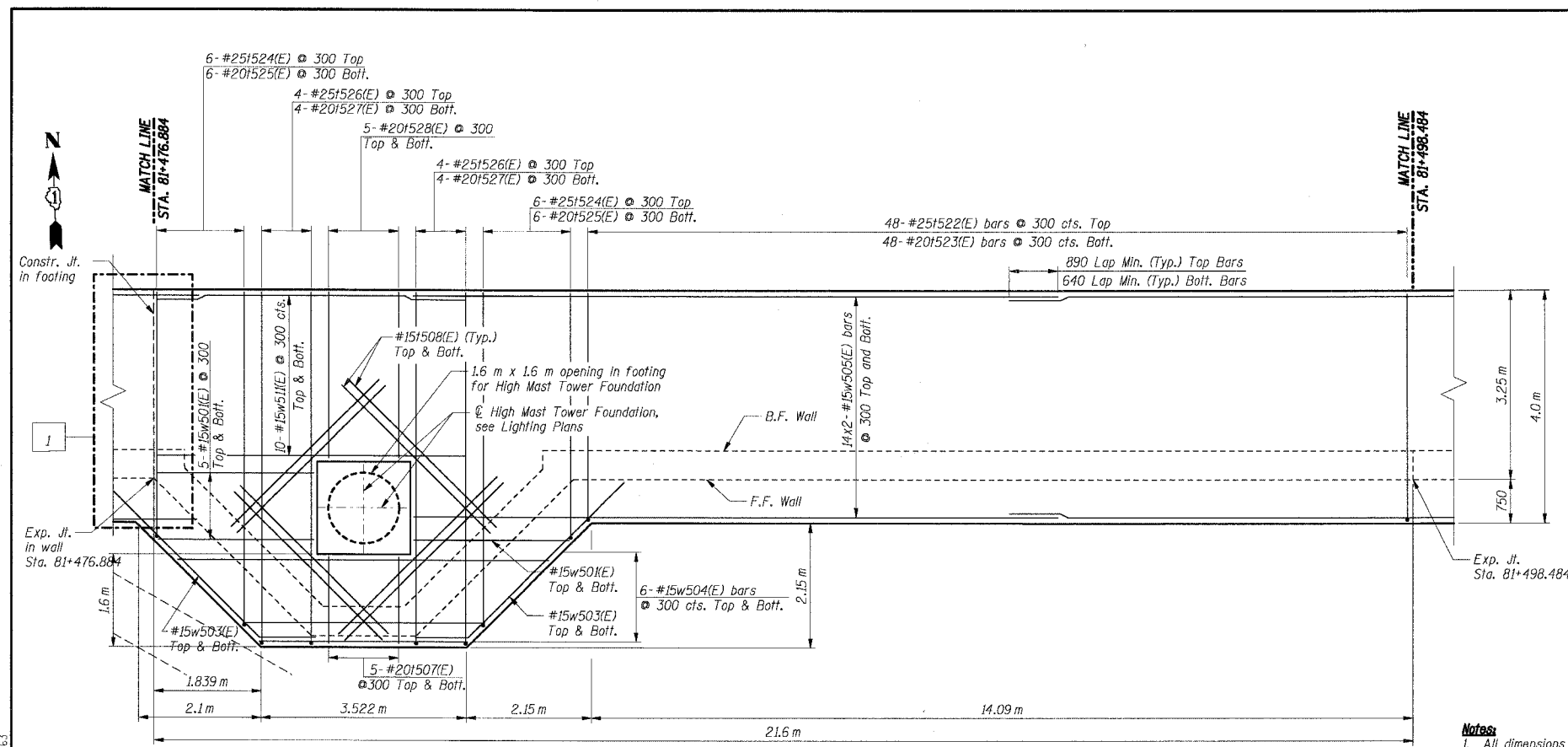
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	742
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				

**BAR LIST**

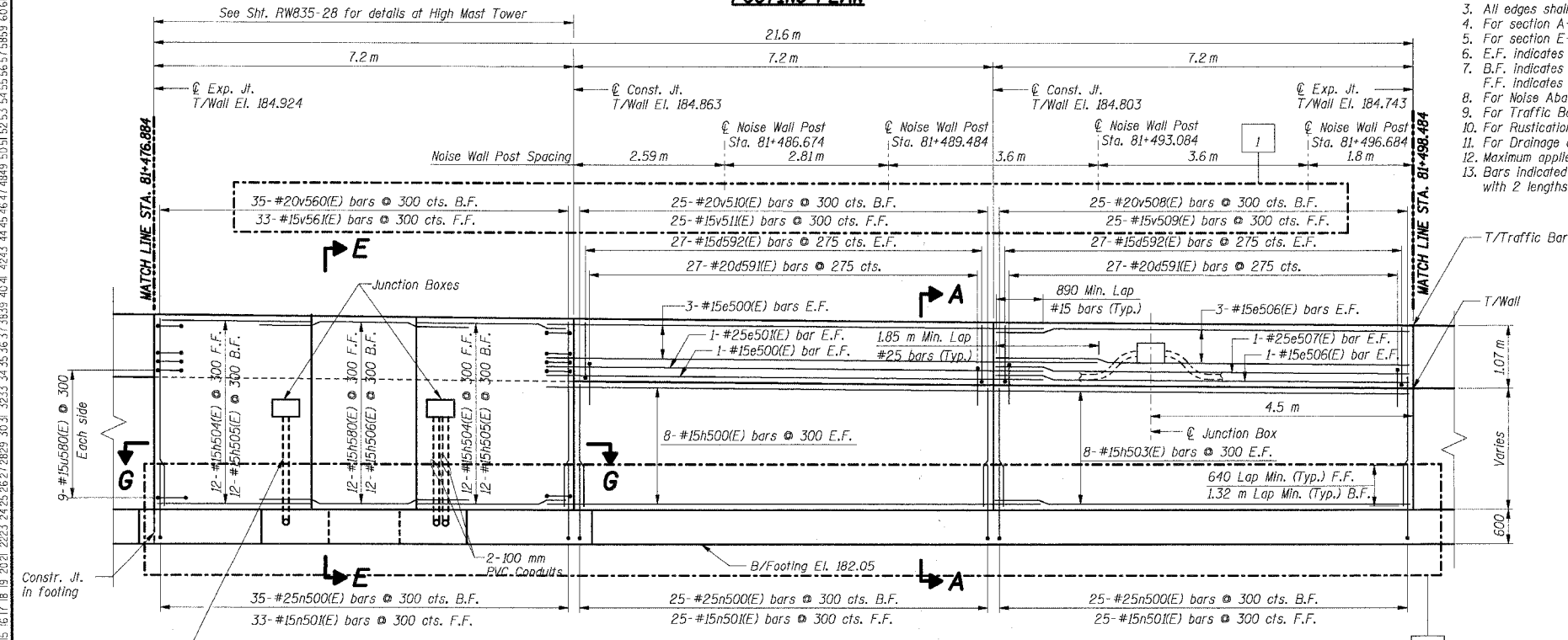
Bar	No.	Size	Length (m)	Shape
d580(E)	6	#20	1.15	
d591(E)	54	#20	2.59	
d592(E)	108	#15	1.22	
e500(E)	8	#15	8.55	
e501(E)	2	#25	9.55	
e506(E)	8	#15	7.15	
e507(E)	2	#25	7.15	
h500(E)	16	#15	8.55	
h503(E)	16	#15	7.15	
h504(E)	24	#15	3.80	
h505(E)	24	#15	4.40	
h506(E)	12	#15	2.55	
h580(E)	12	#15	2.85	
h581(E)	2	#15	0.75	
h582(E)	4	#15	2.50	
h583(E)	2	#15	0.42	
n500(E)	85	#25	2.30	
n501(E)	83	#15	1.50	
1507(E)	10	#20	1.50	
1508(E)	16	#15	3.50	
1521(E)	48	#25	4.40	
1523(E)	48	#20	3.90	
1524(E)	6	#25	10.95	
1525(E)	6	#20	9.95	
1526(E)	8	#25	6.55	
1527(E)	8	#20	6.05	
1528(E)	10	#20	2.85	
u580(E)	18	#15	2.16	
u581(E)	2	#15	1.91	
u582(E)	2	#15	1.86	
u583(E)	2	#15	1.81	
u584(E)	28	#10	0.81	
v560(E)	35	#20	3.05	
v561(E)	33	#15	3.05	
v508(E)	25	#20	2.05	
v509(E)	25	#15	2.05	
v510(E)	25	#20	2.10	
v511(E)	25	#15	2.10	
w501(E)	12	#15	2.70	
w503(E)	4	#15	4.90	
w504(E)	6	#15	10.00	
w505(E)	56	#15	11.50	
w511(E)	20	#15	5.30	

**Notes**

- All dimensions are in millimeters (mm) except as noted.
- Reinforcement bars designated (E) shall be epoxy coated.
- All edges shall have a 20 mm chamfer unless noted otherwise.
- For section A-A and B-B see Sheet RWB35-26.
- For section E-E and section G-G see Sheet RWB35-28.
- E.F. indicates each face.
- B.F. indicates back face.
- F.F. indicates front face.
- For Noise Abatement Wall plaster details see sheet RWB35-30.
- For Traffic Barrier details see Sht. RWB35-30.
- For Rustication Finish & Joint details see Sht. RWB35-32.
- For Drainage and Reinforcement details see Sht. RWB35-31.
- Maximum applied Soil Bearing Pressure,  $\sigma_{max} = 90$  kPa.
- Bars indicated thus 4x2-#15 etc. indicates 4 lines of bars with 2 lengths per line.



**FOOTING PLAN**



**ELEVATION**

**THIS SHEET FOR INFORMATION ONLY**

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Structures	Cu m	101.0
Reinforcement Bars, Epoxy Coated	kg	7,110

**SHT. RWB35-24 OF 34**

REVISIONS	
NAME	DATE
MJK	6/21/04

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W835  
 SECTION 2425 R-3 & 2425-711B  
 COOK COUNTY

**FOOTING PLAN & WALL ELEVATION 20**

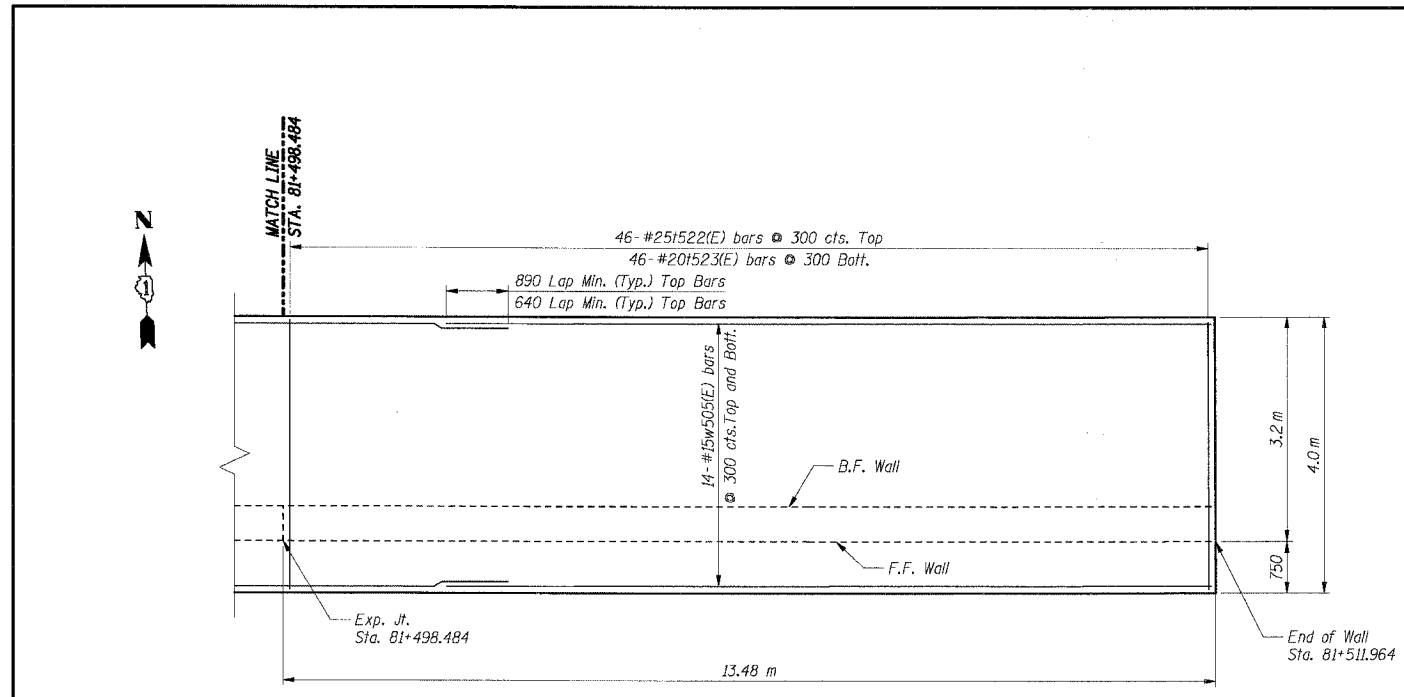
DATE: 02/20/2004  
 DRAWN BY: DG  
 CHECKED BY: SC

**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

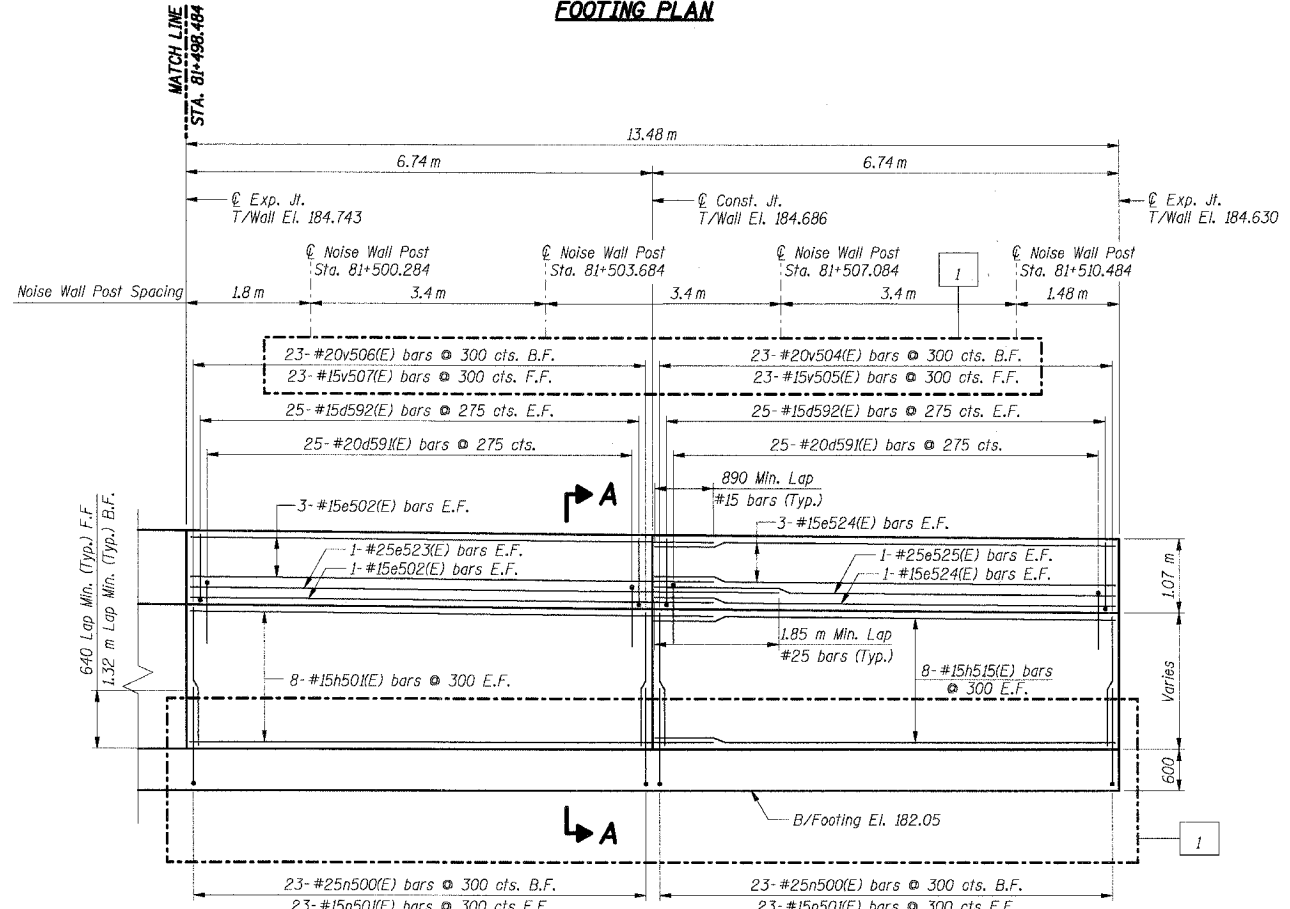
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	743
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62114



**FOOTING PLAN**



**ELEVATION**

**BAR LIST**

Bar	No.	Size	Length (m)	Shape
d59(E)	50	#20	2.59	┌┐
d592(E)	100	#15	1.22	┌┐
e502(E)	8	#15	7.65	—
e523(E)	2	#25	8.65	—
e524(E)	8	#15	6.75	—
e525(E)	2	#25	6.75	—
h50(E)	16	#15	7.65	—
h515(E)	16	#15	6.75	—
n500(E)	46	#25	2.30	┌┐
n50(E)	46	#15	1.50	┌┐
1522(E)	46	#25	4.40	┌┐
1523(E)	46	#20	3.90	┌┐
v504(E)	23	#20	1.95	┌┐
v505(E)	23	#15	1.95	┌┐
v506(E)	23	#20	2.00	┌┐
v507(E)	23	#15	2.00	┌┐
w505(E)	28	#15	11.50	—

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Structures	Cu m	52.0
Reinforcement Bars, Epoxy Coated	kg	3,760

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - For section A-A see Sheet RW835-26.
  - E.F. indicates each face.
  - B.F. indicates back face.
  - F.F. indicates front face.
  - For Noise Abatement Wall pilaster details see sheet RW835-30.
  - For Traffic Barrier details see Sht. RW835-30.
  - For Rustication Finish & joint details see Sht. RW835-32.
  - For Drainage and Reinforcement details see Sht. RW835-31.
  - Maximum Applied Soil Bearing Pressure,  $Q_{max} = 90$  kPa.
  - Bars indicated thus 4x2-#15 etc. indicates 4 lines of bars with 2 lengths per line.

**THIS SHEET FOR INFORMATION ONLY**

SHT. RW835-25 OF 34

REVISIONS	
NAME	DATE
MJK	6/21/04

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W835  
 SECTION 2425 R-3 & 2425-711B  
 COOK COUNTY

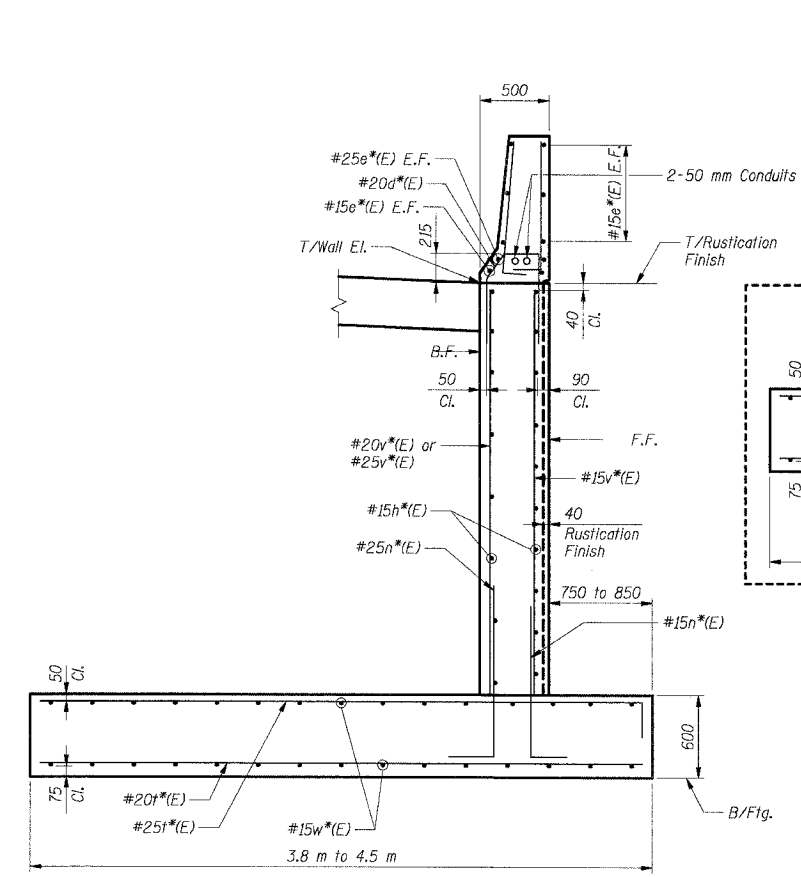
**FOOTING PLAN & WALL ELEVATION 21**

DATE: 02/20/2004  
 DRAWN BY: DG  
 CHECKED BY: SC

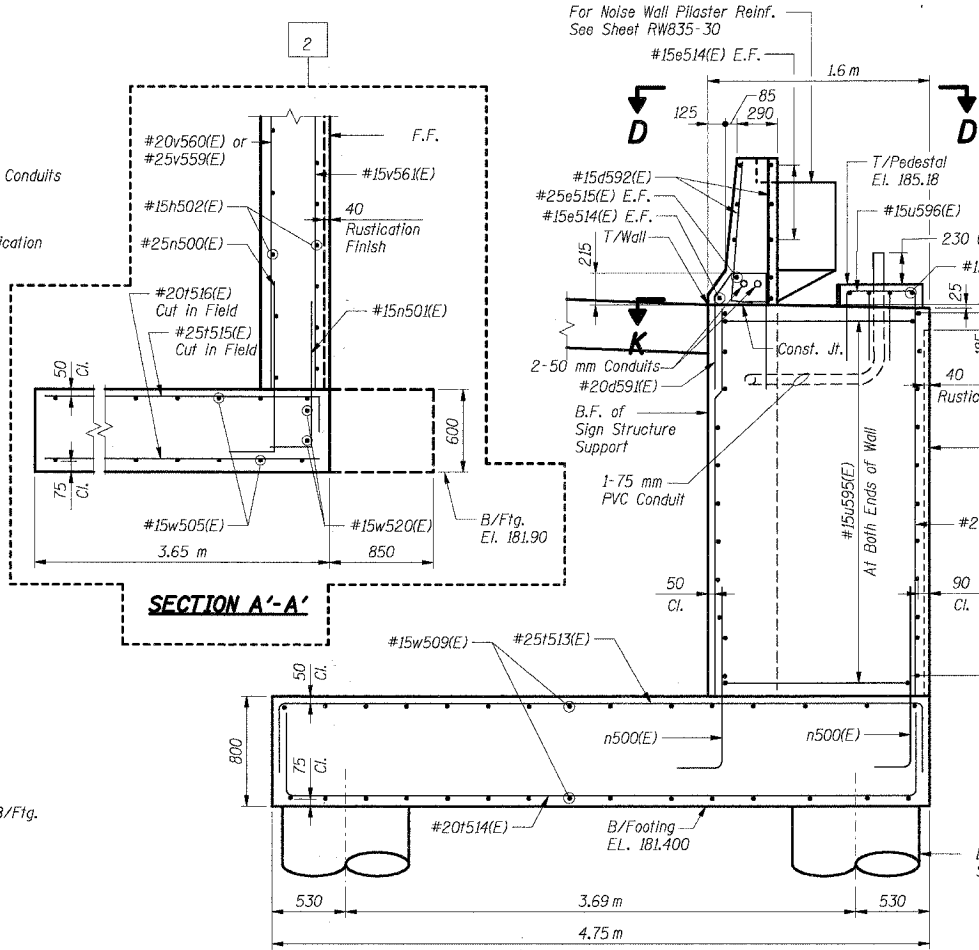
**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

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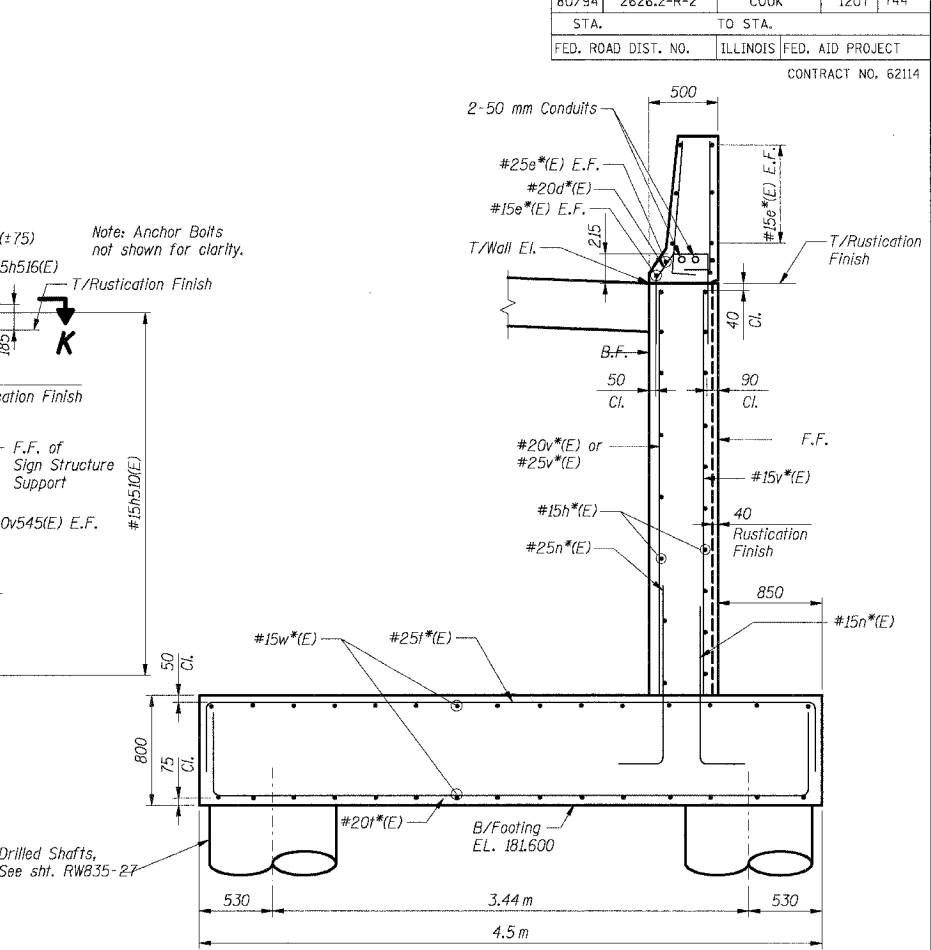
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	744
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				



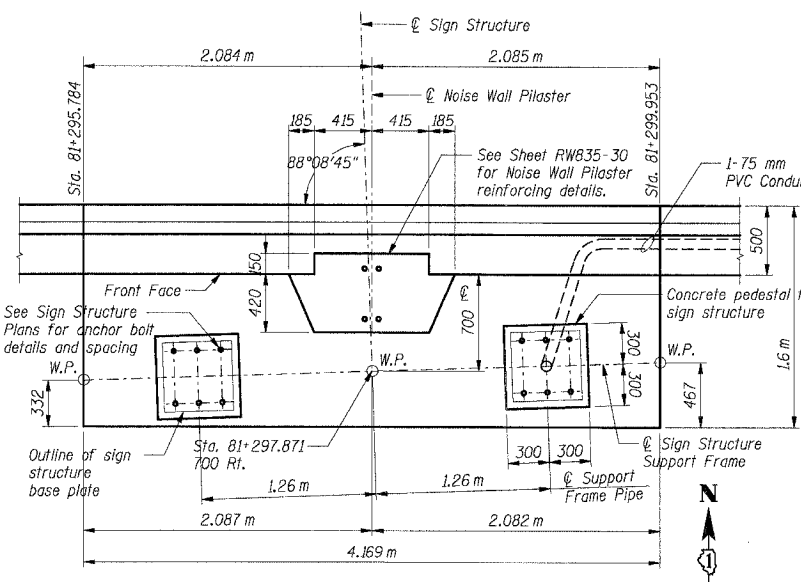
**SECTION A-A**



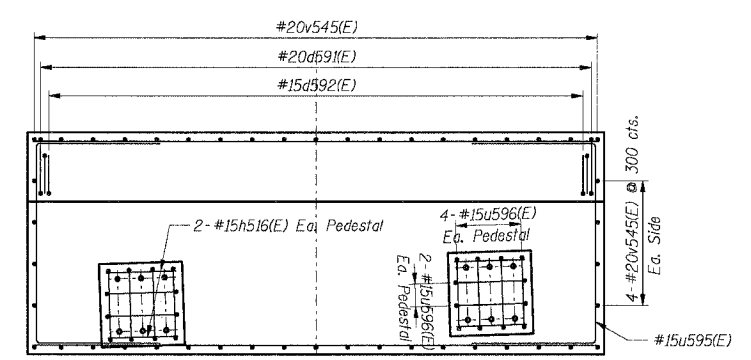
**SECTION C-C**



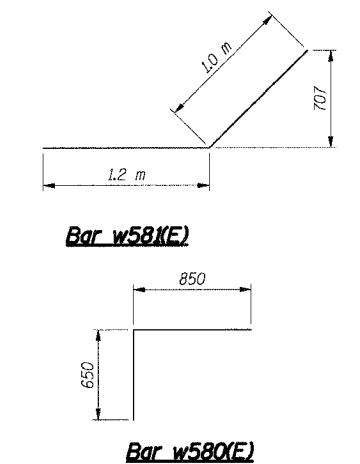
**SECTION H-H**



**TOP VIEW D-D AT SIGN STRUCTURE**



**SECTION K-K**



**THIS SHEET FOR INFORMATION ONLY**

**SHT. RW835-26 OF 34**

REVISIONS	
NAME	DATE
MJK	6/21/04
PA	8/3/04

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - E.F. indicates each face.
  - B.F. indicates back face.
  - F.F. indicates front face.
  - See sheet RW835-30 for Noise Abatement Wall Pilaster details.
  - For Traffic Barrier details see Sht. RW835-30.
  - For Rustication Finish & joint details see Sht. RW835-32.
  - Work this Sheet with Sht. RW835-27.
  - \*Indicates for location of bars, identification and quantity, see Footing Plans & Wall Elevations, RW835-5 thru RW835-25.
  - See Sign Structure Plans for Sign Structure details and Anchor Bolt details.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W835  
 SECTION 2425 R-3 & 2425-711B  
 COOK COUNTY

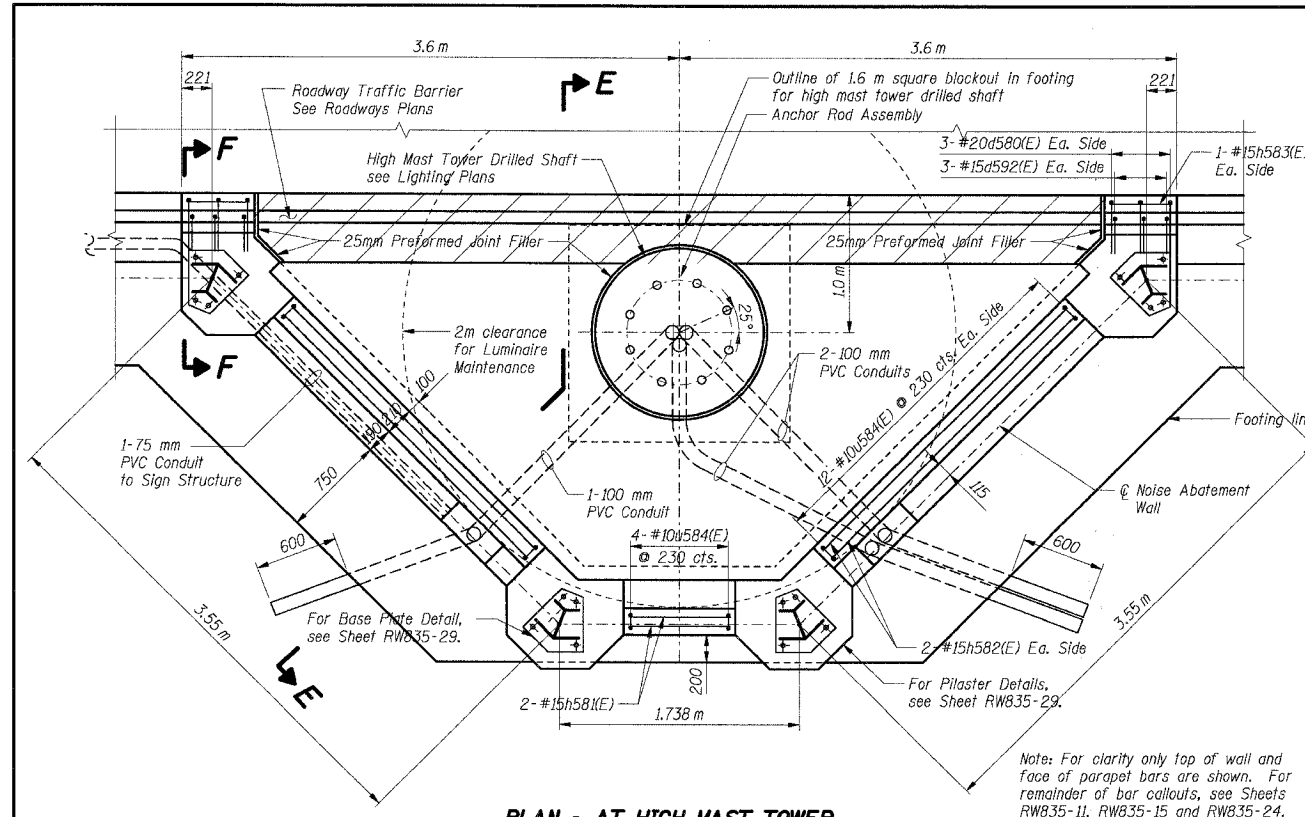
**WALL SECTIONS & DETAILS**

DATE: 02/20/2004  
 DRAWN BY: SC  
 CHECKED BY: MJK  
**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

7-1-2005, 13:53:26  
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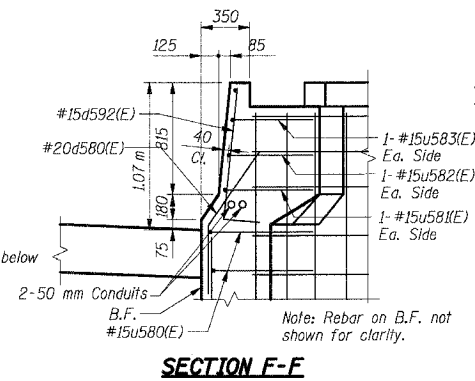


F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	745
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		CONTRACT NO. 62114	

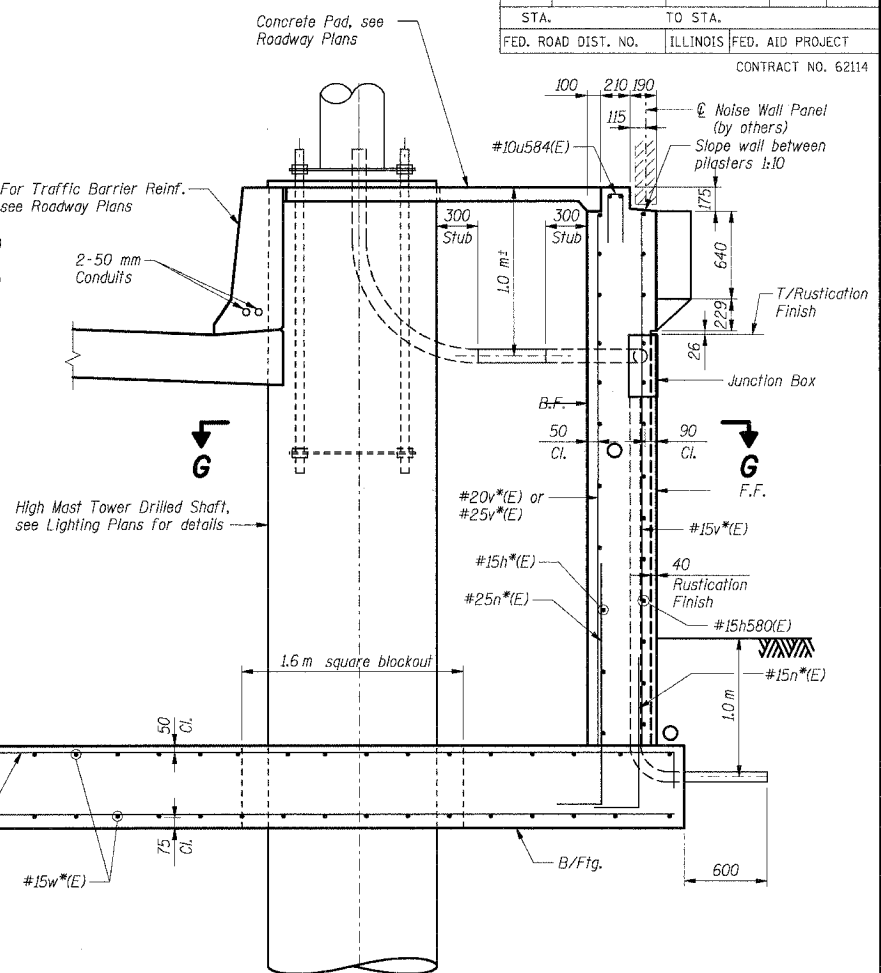


**PLAN - AT HIGH MAST TOWER**

Note: For clarity only top of wall and face of parapet bars are shown. For remainder of bar callouts, see Sheets RW835-11, RW835-15 and RW835-24.



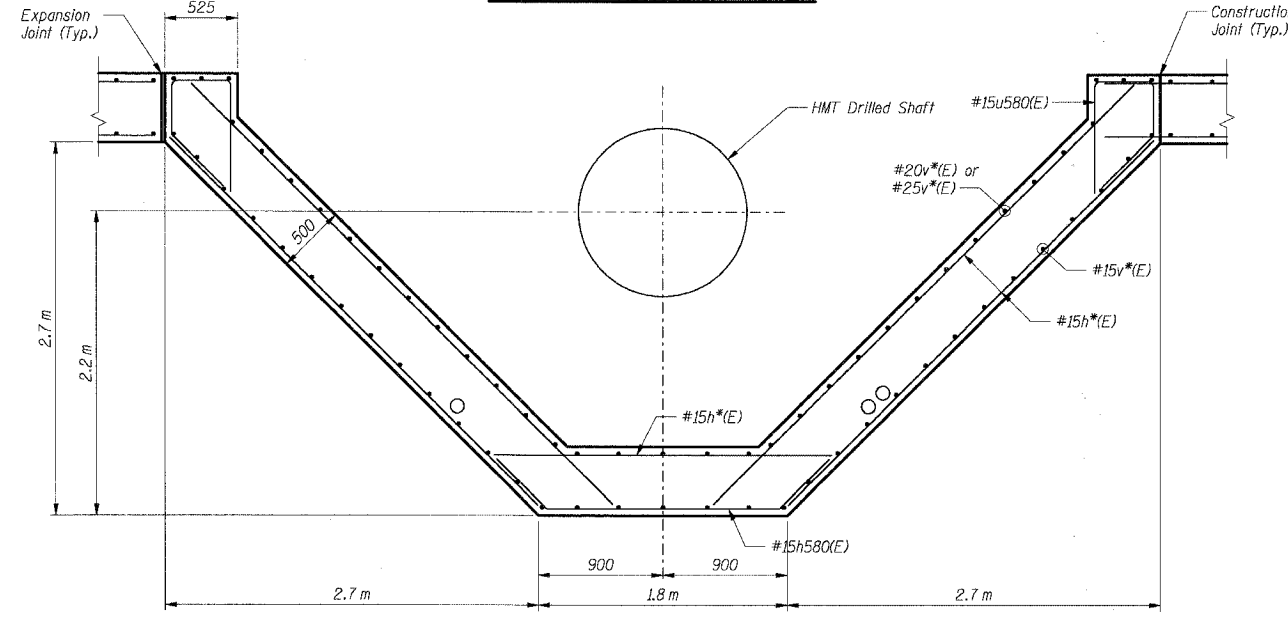
**SECTION F-F**



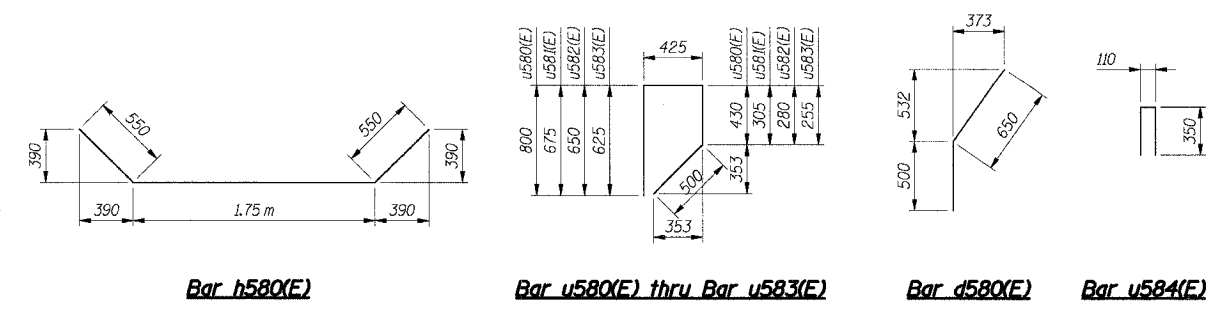
**SECTION E-E**

**THIS SHEET FOR INFORMATION ONLY**

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - E,F. indicates each face.
  - B,F. indicates back face.
  - F,F. indicates front face.
  - \*For bar details, see Footing Plans & Wall Elevations, RW835-11, RW835-15 and RW835-24.



**SECTION G-G**



**SHT. RW835-28 OF 34**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 IL ROUTE 83 RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W835  
 SECTION 2425 R-3 & 2425-711B  
 COOK COUNTY

**WALL SECTIONS & DETAILS AT HIGH MAST TOWER**

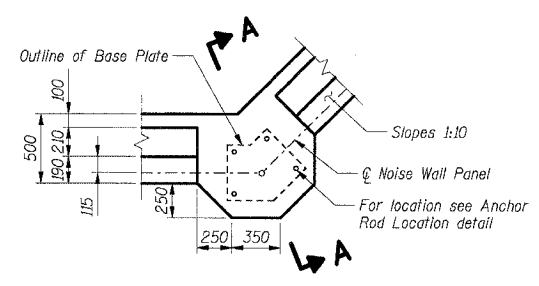
DATE: 02/20/2004  
 DRAWN BY: SC  
 CHECKED BY: MJK

**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

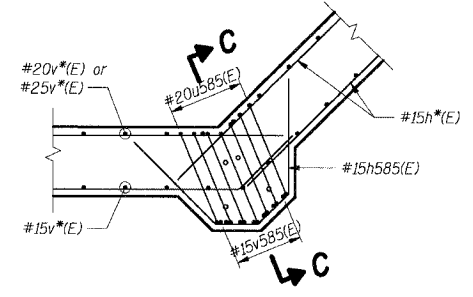
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 BAJZEKJ

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	746
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

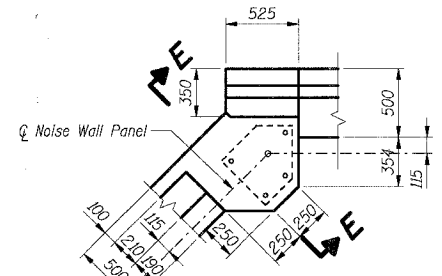
CONTRACT NO. 62114



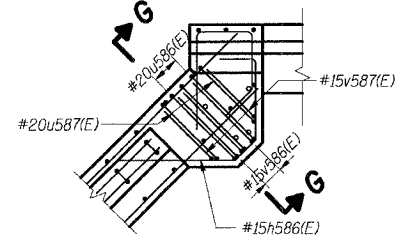
**OUTSIDE CORNER PILASTER**



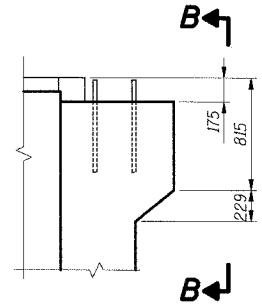
**OUTSIDE CORNER PILASTER**  
(Showing Reinforcement)



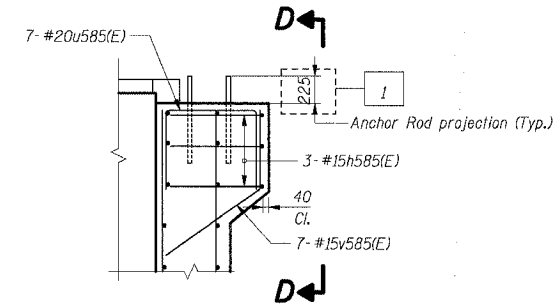
**INSIDE CORNER PILASTER**



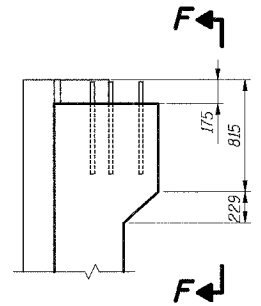
**INSIDE CORNER PILASTER**  
(Showing Reinforcement)



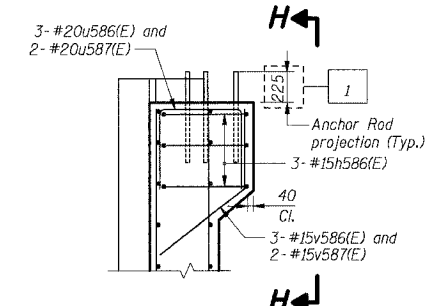
**SECTION A-A**



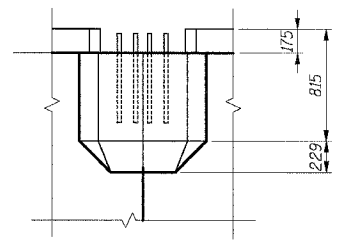
**SECTION C-C**



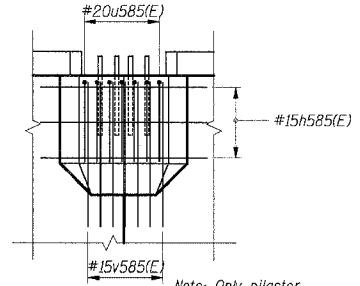
**SECTION E-E**



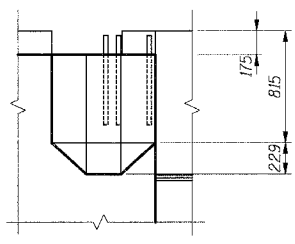
**SECTION G-G**



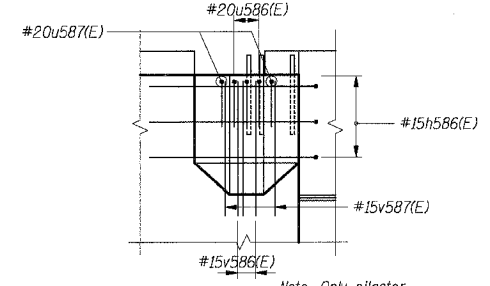
**SECTION B-B**



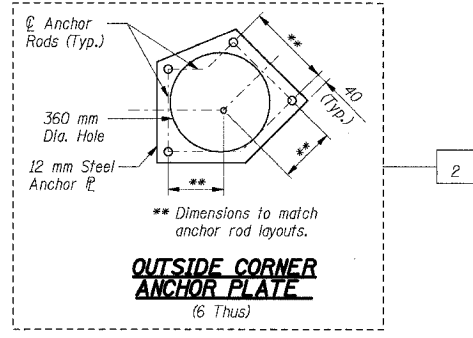
**SECTION D-D**



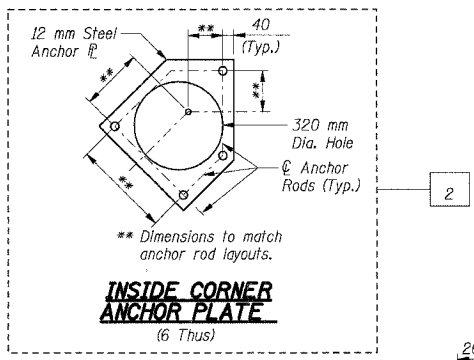
**SECTION F-F**



**SECTION H-H**

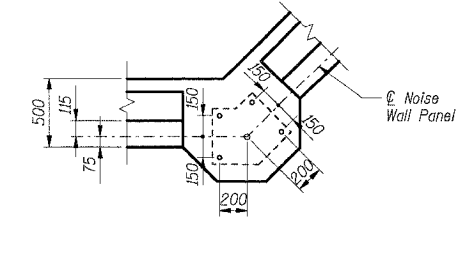


**OUTSIDE CORNER ANCHOR PLATE**  
(6 Thus)

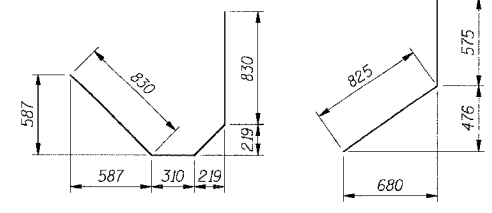


**INSIDE CORNER ANCHOR PLATE**  
(6 Thus)

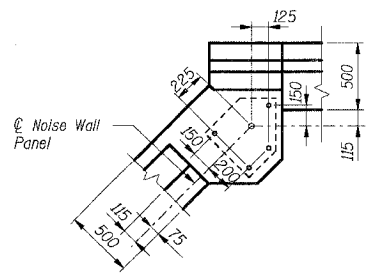
**THIS SHEET FOR INFORMATION ONLY**



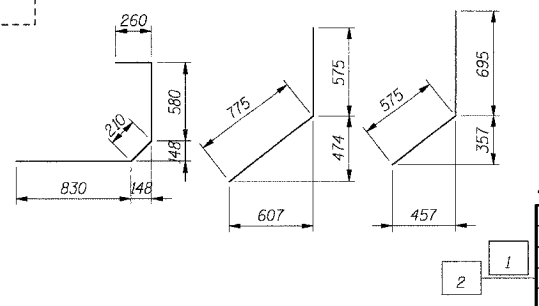
**ANCHOR ROD LOCATIONS**



**Bar h585(E) Bar v585(E)**



**ANCHOR ROD LOCATIONS**



**Bar h586(E) Bar v586(E) Bar v587(E)**

**BAR LIST**  
(Additional bars at each Inside and Outside Corner Pilaster Pair)

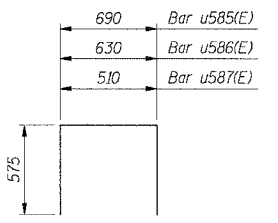
Bar	No.	Size	Length (m)	Shape
h585(E)	3	#15	2.28	U
h586(E)	3	#15	1.88	U
u585(E)	7	#20	1.84	U
u586(E)	3	#20	1.78	U
u587(E)	2	#20	1.66	U
v585(E)	7	#15	1.40	U
v586(E)	3	#15	1.35	U
v587(E)	2	#15	1.27	U

**Additional Reinf. Bar & Concrete**  
Quantity Based on No. of Pilasters as follows:

Wall Elev.	No. of Pilaster Pairs	Reinforcement Sub-Total (kg)	Concrete Sub-Total (Cu m)
7	2	192	0.6
11	2	192	0.6
20	2	192	0.6

**BILL OF MATERIAL FOR PILASTERS**

Item	Unit	Total
Concrete Structures	Cu m	1.8
Reinforcement Bars, Epoxy Coated	kg	580



**Bar u585(E), u586(E) and u587(E)**

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - E.F. indicates each face.  
B.F. indicates back face.  
F.F. indicates front face.
  - \*For bar details, see Footing Plans & Wall Elevations, RW835-5 thru RW835-25.
  - For noise wall anchor rod details, see Sheet RW835-30.

SHT. RW835-29 OF 34

REVISIONS	
NAME	DATE
MJK	6/21/04
PA	8/3/04

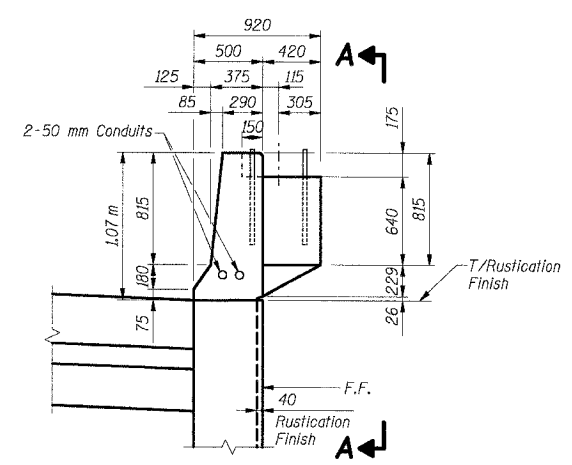
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
IL ROUTE 83 RECONSTRUCTION  
RETAINING WALL - STRUCTURE NO. 016-W835  
SECTION 2425 R-3 & 2425-711B  
COOK COUNTY

**NOISE WALL PILASTER DETAILS AT HIGH MAST TOWER**

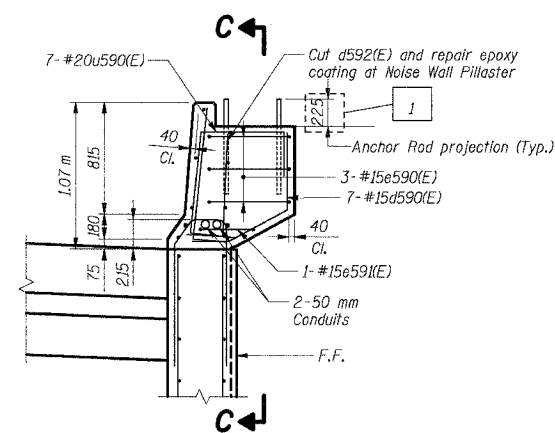
DATE: 02/20/2004  
DRAWN BY: SC  
CHECKED BY: MJK  
**TENG**  
TENG & ASSOCIATES, INC.  
ENGINEERS/ARCHITECTS/PLANNERS  
CHICAGO, ILLINOIS

7:41-2005, 13:33:31 T:\DOCUMENTS\BOSTON\STRUCT\DDN\RSR2822A.DGN BAJZEKJ  
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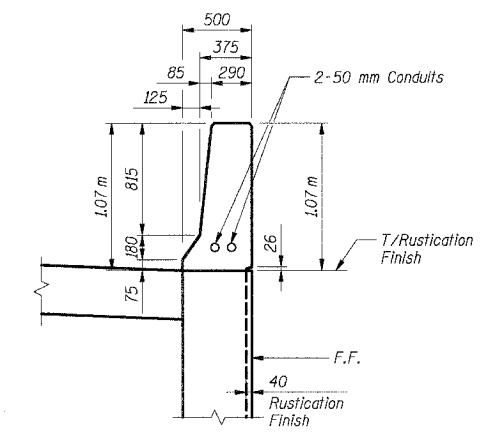
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	747
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				



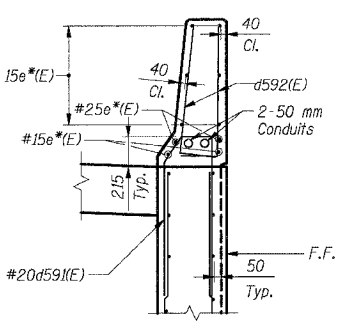
**TRAFFIC BARRIER W/PILASTER**



**TRAFFIC BARRIER W/PILASTER**  
(Showing Reinforcement)



**TYPICAL TRAFFIC BARRIER SECTION**



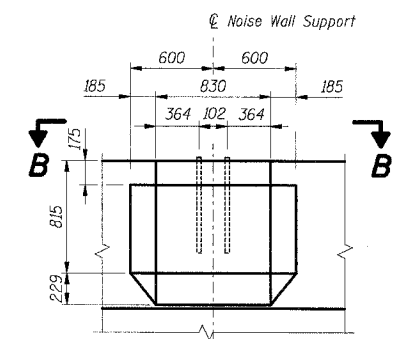
**TYPICAL TRAFFIC BARRIER SECTION**  
(Showing Reinforcement)

**BAR LIST**  
(Additional bars at each Pilaster)

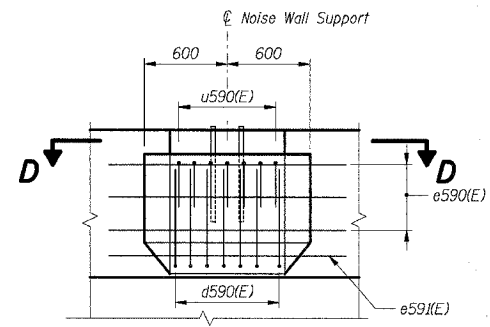
Bar	No.	Size	Length (m)	Shape
d590(E)	7	#15	1.30	J
e590(E)	3	#15	2.56	J
e590(E)	1	#15	2.20	J
u590(E)	7	#20	2.00	J

**Additional Reinf. Bar & Concrete**  
Quantity Based on No. of Pilasters as follows:

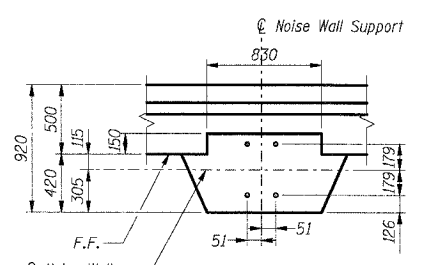
Wall Elev.	No. of Pilasters	Reinforcement Sub-Total (kg)	Concrete Sub-Total (Cu m)
1	7	441	2.1
2	6	378	1.8
3	6	378	1.8
4	6	378	1.8
5	6	378	1.8
6	6	378	1.8
7	4	252	1.2
8	4	252	1.2
9	6	378	1.8
10	7	441	2.1
11	3	189	0.9
12	6	378	1.8
13	6	378	1.8
14	6	378	1.8
15	4	252	1.2
16	6	378	1.8
17	6	378	1.8
18	6	378	1.8
19	6	378	1.8
20	4	252	1.2
21	4	252	1.2



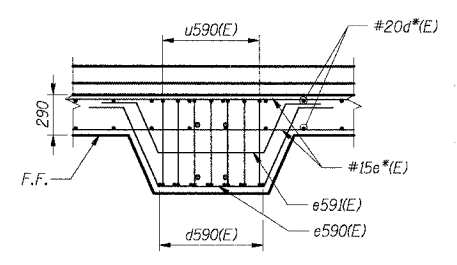
**SECTION A-A**



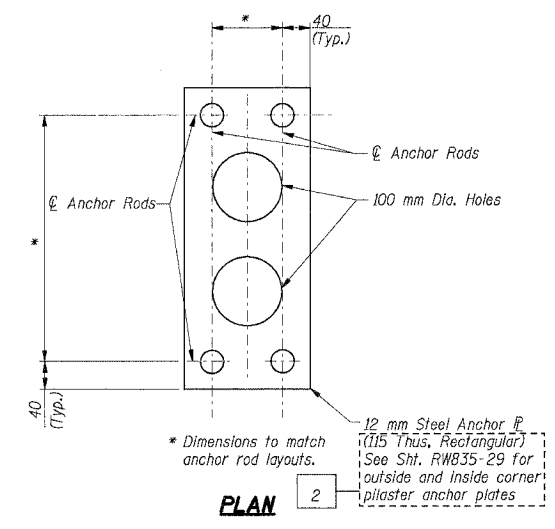
**SECTION C-C**



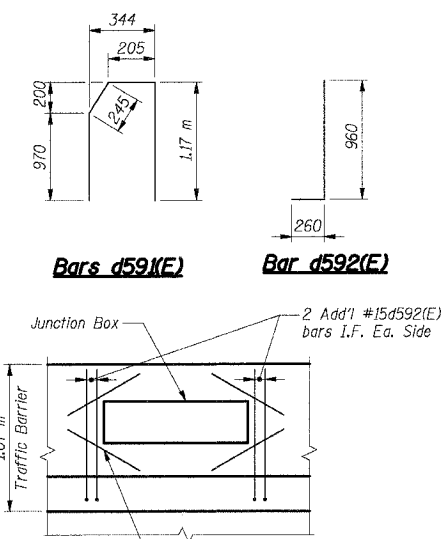
**SECTION B-B**



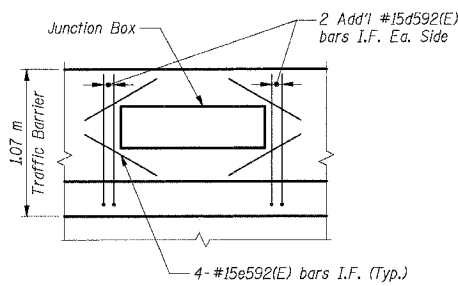
**SECTION D-D**



**PLAN**



**Bars d590(E) Bar d592(E)**



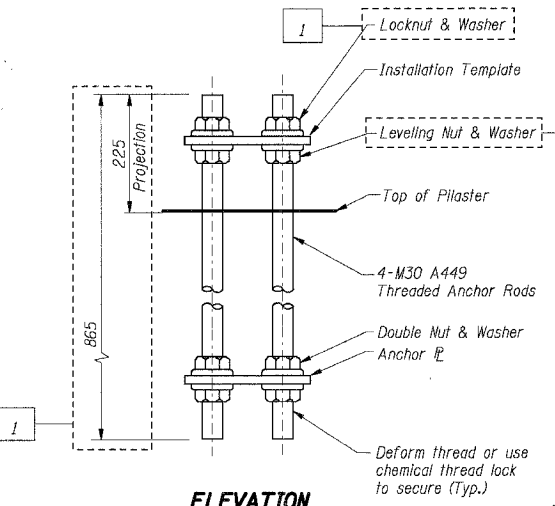
**ADDITIONAL REINFORCEMENT AT JUNCTION BOXES**  
(4 Thus, 6 in Wall Stem)

**BAR LIST**  
(Additional bars at Junction Boxes)

Bar	No.	Size	Length (m)	Shape
d592(E)	16	#15	1.22	J
e592(E)	16	#15	0.84	J
h590(E)	24	#15	0.84	J

**BILL OF MATERIAL**  
(For Additional bars at Junction Boxes)

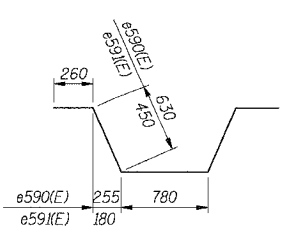
Item	Unit	Total
Reinforcement Bars, Epoxy Coated	kg	80



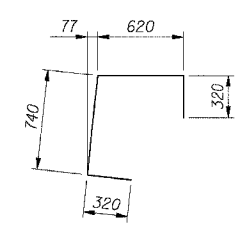
**ELEVATION**

Note: Entire anchor rod assembly including anchor plates shall be hot dip galvanized.

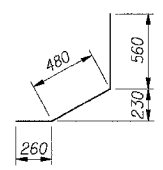
**ANCHOR ROD ASSEMBLY FOR NOISE WALL**  
(127 Required)



**Bars e590(E) & e590(E)**



**Bar u590(E)**



**Bar d590(E)**

**THIS SHEET FOR INFORMATION ONLY**

SHT. RW835-30 OF 34

**REVISIONS**

NAME	DATE
MJK	6/21/04
PA	8/3/04

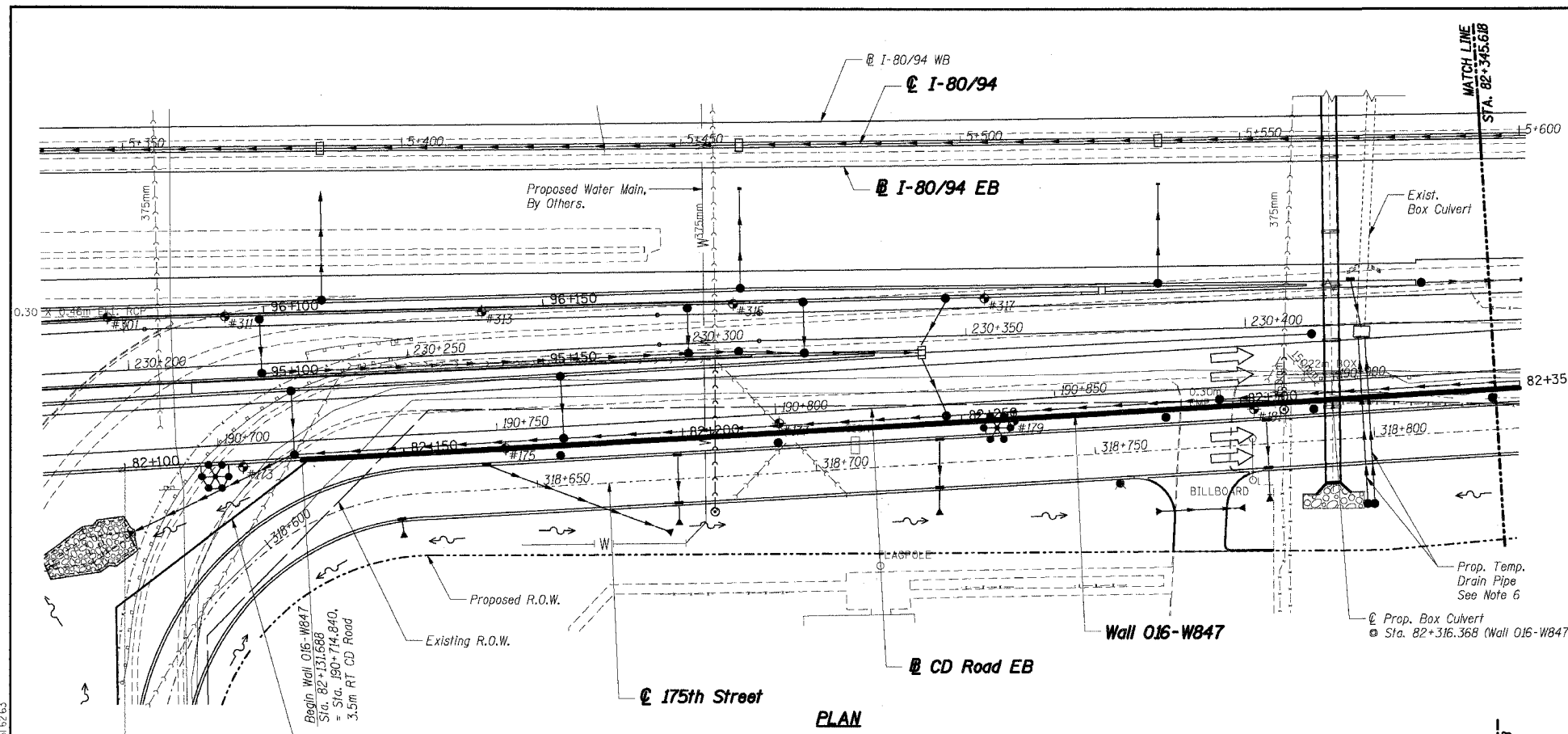
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
IL ROUTE 83 RECONSTRUCTION  
RETAINING WALL - STRUCTURE NO. 016-W835  
SECTION 2425 R-3 & 2425-711B  
COOK COUNTY

**NOISE WALL PILASTER & TRAFFIC BARRIER DETAILS**

DATE: 02/20/2004  
DRAWN BY: SC  
CHECKED BY: MJK  
**TENG**  
TENG & ASSOCIATES, INC.  
ENGINEERS/ARCHITECTS/PLANNERS  
CHICAGO, ILLINOIS

7-11-2005, 10:33:34 T:\DOCUMENT\83750N\STRUCT\WORK\RSR282A.DGN BAL/ZEK/J 12.3.4.56 78 910 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	748
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				



**DESIGN SPECIFICATIONS:**

1989 AASHTO Standard Specifications for Highway Bridges, with 1997 thru 2000 & 2002 Interims.

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

**DESIGN STRESSES:**

Concrete,  $f'_c = 24$  MPa  
Reinforcement,  $f_y = 400$  MPa

**DESIGN LOADING:**

Noise Abatement Wall:  
Wind Load: 1.7 kPa  
Limits: Sta. 82+131.688 to Sta. 82+162.118 & Sta. 82+414.118 to Sta. 82+513.688  
Design Height: 5.1 m measured from Top of Retaining Wall  
Limits: Sta. 82+162.118 to Sta. 82+414.118  
Design Height: 5.4 m measured from Top of Retaining Wall

**EXISTING STRUCTURE:**

None

**BENCHMARK:**

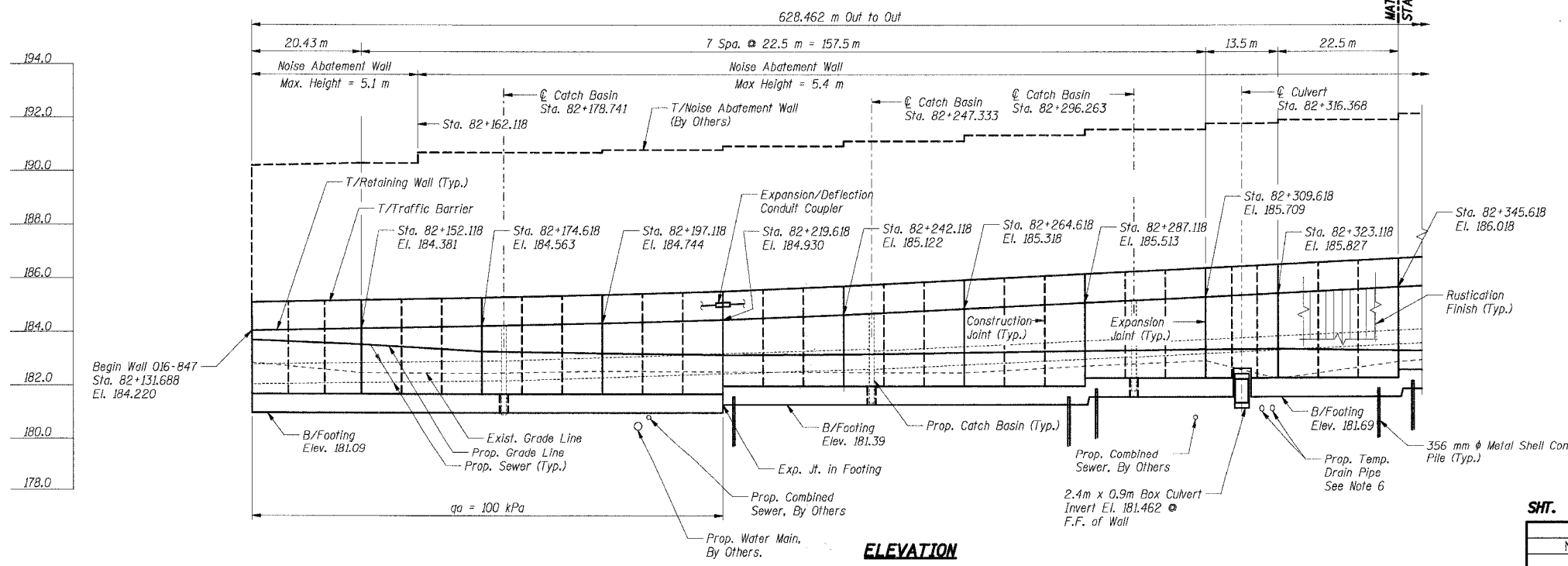
TBM "M" Chiseled square cut in southwest wingwall of existing IL Rte B3 (Torrence Avenue) bridge over I-80. El. 188.209

**LEGEND**

- ✱ High Mast Light Tower (By Others, Contract No. 62664)
- Existing Storm Sewer
- Proposed Storm Sewer
- Existing Combined Sewer, See Note 6.
- Proposed Combined Sewer, By Others. See Note 6.
- W— Proposed Water Main, By Others.
- #5 Soil Boring
- Proposed Manhole
- Proposed Manhole
- Proposed Catch Basin
- Proposed Inlet
- ▨ Rip Rap
- Proposed Retaining Wall
- Proposed Pavement
- W— Existing Water Main, See Notes 6 and 8.
- G— Gas Main, See Note 6.
- T— Telephone, See Note 6.
- Proposed R.O.W.
- Existing R.O.W.

**Notes:**

1. All dimensions are measured along front face of retaining wall.
2. Wall alignment offsets are referenced to front face of wall.
3. Work this sheet with RWB47-2 and RWB47-3.
4. See Sht. RWB47-4 for Index of Sheets.
5. The expansion joints and construction joints are in the traffic barrier and wall stem only, not in footing U.N.O.
6. See Drainage Plans.
7. See Sht. RWB47-2 for Location Map.
8. See Utility Relocation Plans Prepared by Robinson Engineering, Ltd. beginning at Sheet 143 A.



**THIS SHEET FOR INFORMATION ONLY**

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
LOCAL ROADS RECONSTRUCTION  
RETAINING WALL - STRUCTURE NO. 016-W847  
SECTIONS 2001-167R AND (2425 & 2626) R-1  
COOK COUNTY

**GENERAL PLAN & ELEVATION I**

SHT. RWB47-1 OF 54

REVISIONS	
NAME	DATE

**MORCOM, N.V., INC.**  
CONSULTING ENGINEERS  
CHICAGO, ILLINOIS

DATE: 3/10/2004

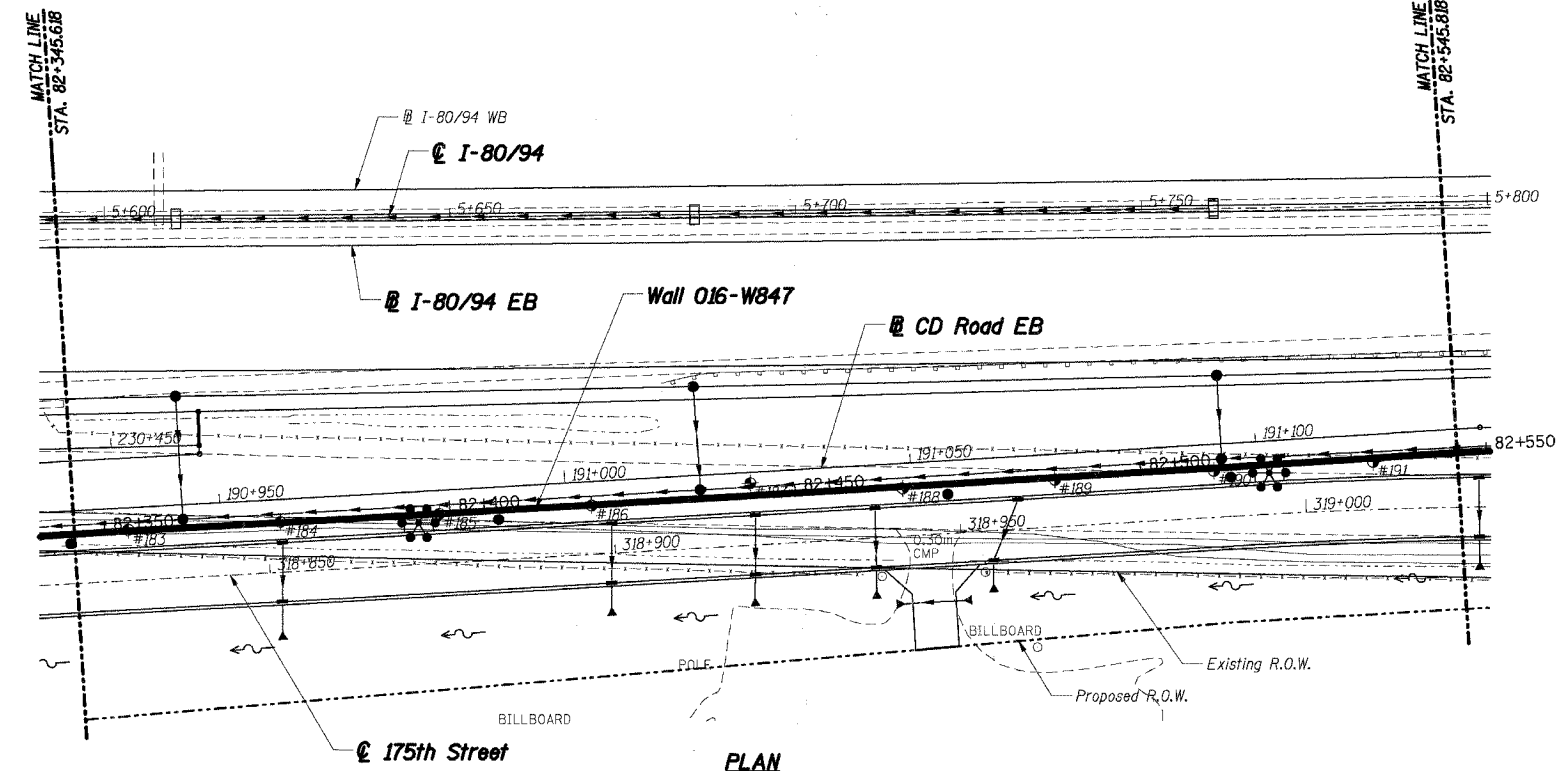
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CHECKED BY: BK

**TENG**

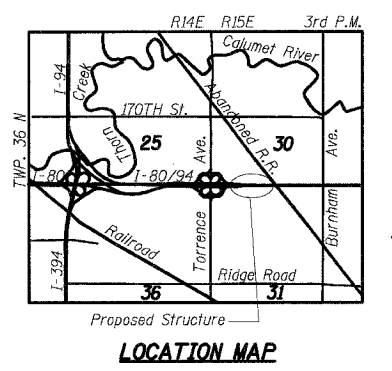
TENG & ASSOCIATES, INC.  
ENGINEERS/ARCHITECTS/PLANNERS  
CHICAGO, ILLINOIS

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	749
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				



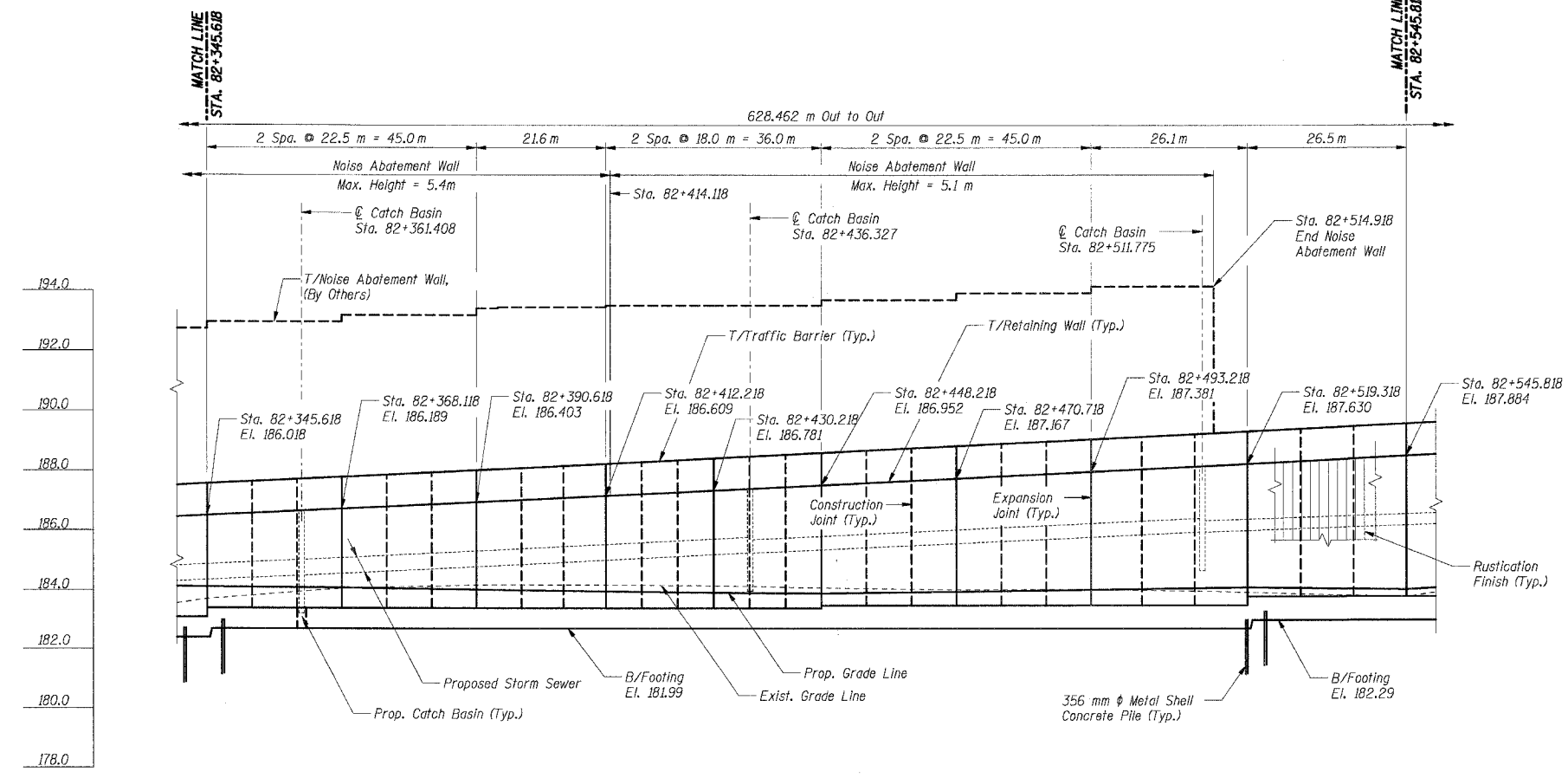
**PLAN**



**LOCATION MAP**

**LEGEND**

- \* High Mast Light Tower (By Others, Contract No. 62664)
- Existing Storm Sewer
- Proposed Storm Sewer
- Existing Combined Sewer, See Note 5.
- Proposed Combined Sewer, See Note 5.
- #5 Soil Boring
- Proposed Manhole
- Proposed Manhole
- Proposed Catch Basin
- Proposed Inlet
- ▨ Rip Rap
- ▬ Proposed Retaining Wall
- Proposed Pavement
- W— Existing Water Main, See Notes 5 and 6.
- G— Gas Main, See Note 5.
- T— Telephone, See Note 5.
- Proposed R.O.W.
- Existing R.O.W.



**ELEVATION**

**THIS SHEET FOR INFORMATION ONLY**

**Notes:**

1. All dimensions are measured along front face of retaining wall.
2. Work this sheet with RWB47-1 and RWB47-3.
3. See Sht. RWB47-4 for Index of Sheets.
4. The expansion joints and construction joints are in the traffic barrier and wall stem only, not in footing U.N.O.
5. See Drainage Plans.
6. See Utility Relocation Plans Prepared by Robinson Engineering, Ltd. beginning at Sheet 143A.

**SHT. RWB47-2 OF 54**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 LOCAL ROADS RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W847  
 SECTIONS 2001-167R AND (2425 & 2626) R-1  
 COOK COUNTY

**GENERAL PLAN & ELEVATION II**

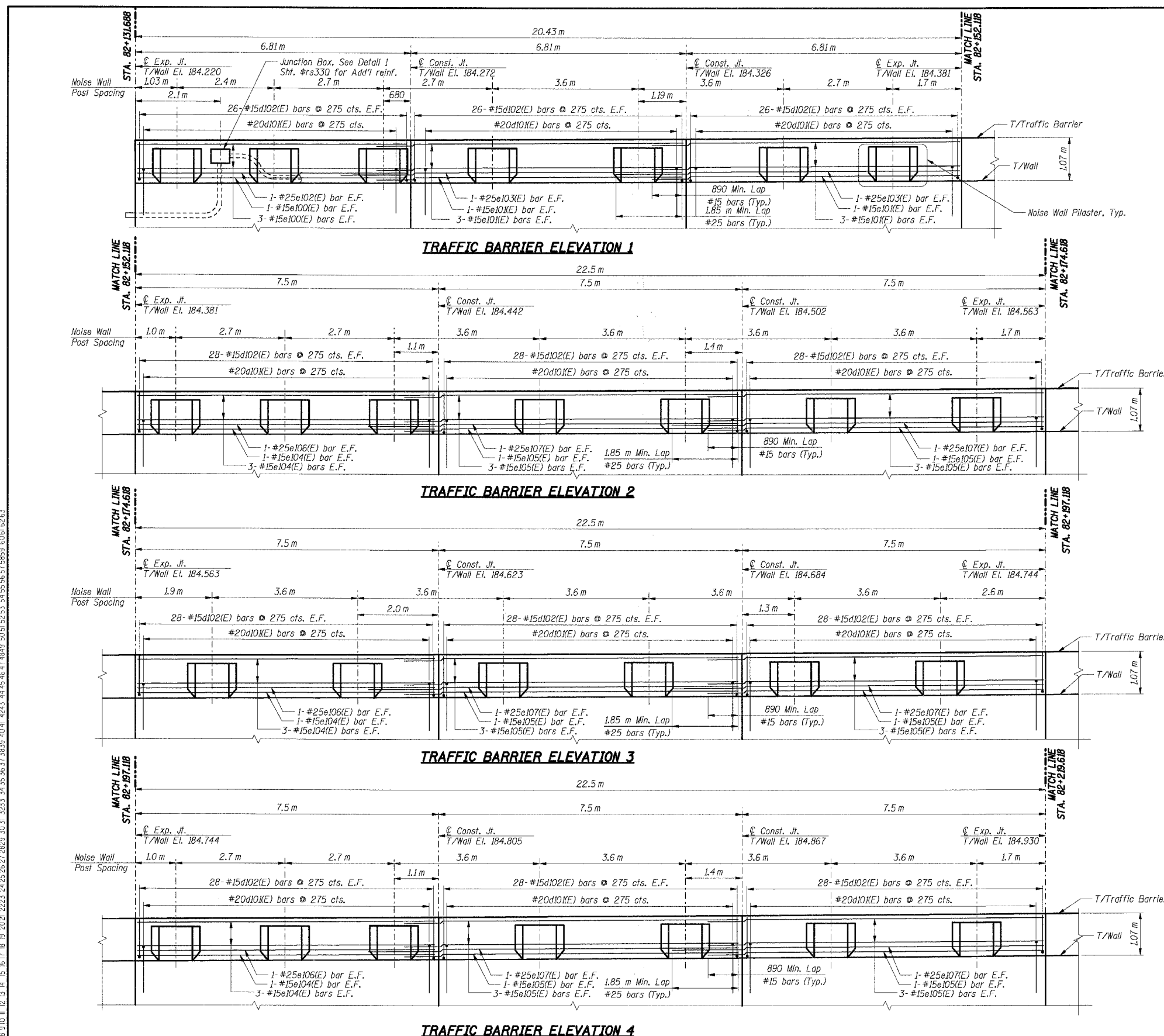
DATE: 3/10/2004  
 DRAWN BY: MS  
 CHECKED BY: BK

**TENG**  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

**MORCOM, N.V., INC.**  
 CONSULTING ENGINEERS  
 CHICAGO, ILLINOIS

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 BAUZEKJ

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	750
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				



**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
d102(E)	676	#15	1.22	┌
d204(E)	189	#15	1.30	┌
e100(E)	8	#15	6.71	—
e101(E)	16	#15	7.70	—
e102(E)	2	#25	6.71	—
e103(E)	4	#25	8.66	—
e104(E)	24	#15	7.42	—
e105(E)	48	#15	8.39	—
e106(E)	6	#25	7.42	—
e107(E)	12	#25	9.35	—
e208(E)	81	#15	2.56	┘
e212(E)	27	#15	2.20	┘
e290(E)	4	#15	0.60	┘
u203(E)	189	#20	2.00	└

Item	Unit	Total
Concrete Structures	Cu m	42.1
Reinforcement Bars, Epoxy Coated	kg	4,990

For Bending Diagrams see Sht. RW847-44.

**THIS SHEET FOR INFORMATION ONLY**

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - All dimensions shown are along the front face of the retaining wall.
  - All vertical bars in wall stem and traffic barrier start at 50 mm from construction and expansion joint, U.N.O.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - E.F. Indicates each face, B.F. Indicates back face, F.F. Indicates front face.
  - For Traffic Barrier details and Noise Wall Pilaster details see Sht. RW847-44.

SHT. RW847-35 OF 54

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 LOCAL ROADS RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-WB47  
 SECTIONS 2001-167R AND (2425 & 2626) R-1  
 COOK COUNTY

**TRAFFIC BARRIER ELEVATION I**

DATE: 3/10/2004

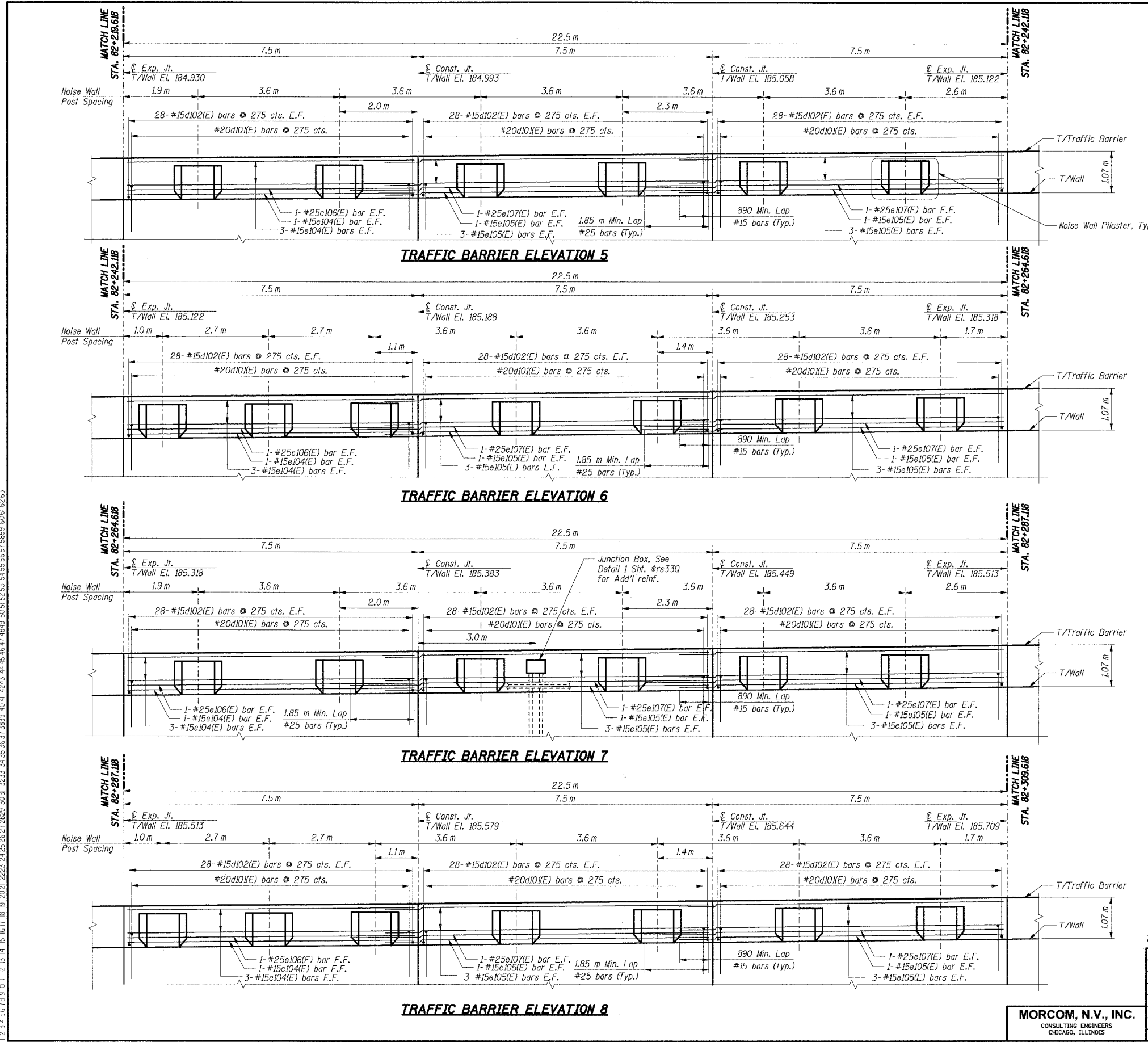
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 CHECKED BY: BK

**TENG**  
 ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

**MORCOM, N.V., INC.**  
 CONSULTING ENGINEERS  
 CHICAGO, ILLINOIS

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 BAUZERKJ

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	751
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				



**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape	
d102(E)	688	#15	1.22	U	
d204(E)	182	#15	1.30	U	
e104(E)	32	#15	7.42	—	
e105(E)	64	#15	8.39	—	
e106(E)	8	#25	7.42	—	
e107(E)	16	#25	9.35	—	
e208(E)	78	#15	2.56	—	
e212(E)	26	#15	2.20	—	
e290(E)	4	#15	0.60	—	
u203(E)	182	#20	2.00	U	
<b>Item</b>				<b>Unit</b>	<b>Total</b>
Concrete Structures				Cu m	42.6
Reinforcement Bars, Epoxy Coated				kg	4,990

For Bending Diagrams see Sht. RW847-44.

**THIS SHEET FOR INFORMATION ONLY**

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - All dimensions shown are along the front face of the retaining wall.
  - All vertical bars in wall stem and traffic barrier start at 50 mm from construction and expansion joint, U.N.O.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - E.F. indicates each face, B.F. indicates back face.
  - F.F. indicates front face.
  - For Traffic Barrier details and Noise Wall Pilaster details see Sht. RW847-44.

SHT. RW847-36 OF 54

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 LOCAL ROADS RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W847  
 SECTIONS 2001-167R AND (2425 & 2626) R-1  
 COOK COUNTY

**TRAFFIC BARRIER ELEVATION II**

DATE: 3/10/2004

DRAWN BY: VV  
 CHECKED BY: BK

**TENG**  
 CONSULTING ENGINEERS  
 CHICAGO, ILLINOIS

**MORCOM, N.V., INC.**  
 CONSULTING ENGINEERS  
 CHICAGO, ILLINOIS

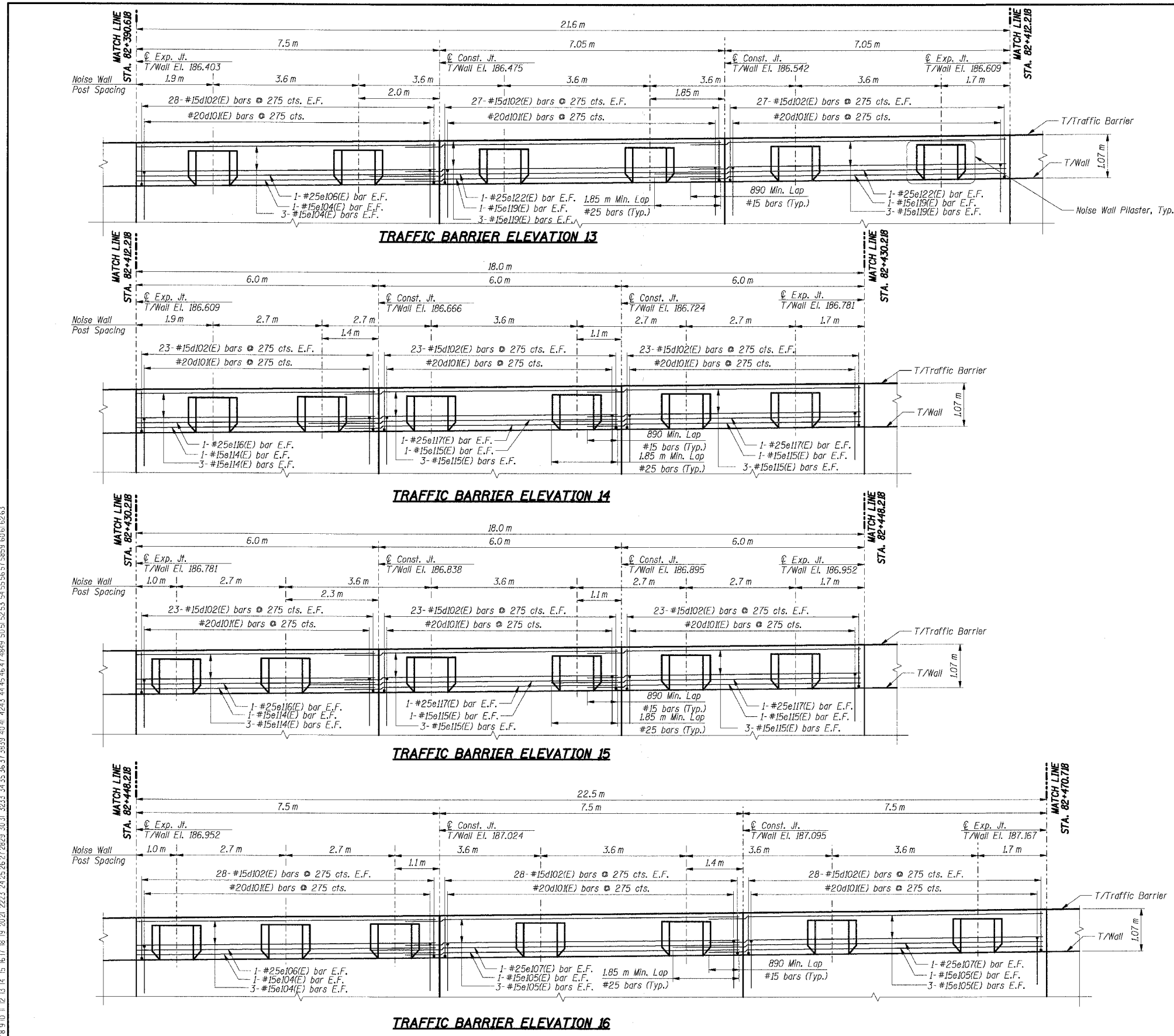
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	753
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				



**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
d102(E)	608	#15	1.22	[U]
d204(E)	175	#15	1.30	[U]
e104(E)	16	#15	7.42	[—]
e105(E)	16	#15	8.39	[—]
e106(E)	4	#25	7.42	[—]
e107(E)	4	#25	9.35	[—]
e114(E)	16	#15	5.92	[—]
e115(E)	32	#15	6.89	[—]
e116(E)	4	#25	5.92	[—]
e117(E)	8	#25	7.85	[—]
e119(E)	16	#15	7.94	[—]
e122(E)	4	#25	8.90	[—]
e208(E)	75	#15	2.56	[W]
e212(E)	25	#15	2.20	[W]
u203(E)	175	#20	2.00	[C]
Item	Unit	Total		
Concrete Structures	Cu m	38.3		
Reinforcement Bars, Epoxy Coated	kg	4,570		

For Bending Diagrams see Sht. RW847-44.

**THIS SHEET FOR INFORMATION ONLY**

- Notes:**
1. All dimensions are in millimeters (mm) except as noted.
  2. All dimensions shown are along the front face of the retaining wall.
  3. All vertical bars in wall stem and traffic barrier start at 50 mm from construction and expansion joint, U.N.O.
  4. Reinforcement bars designated (E) shall be epoxy coated.
  5. All edges shall have a 20 mm chamfer unless noted otherwise.
  6. E.F. indicates each face, B.F. indicates back face, F.F. indicates front face.
  7. For Traffic Barrier details and Noise Wall Pilaster details see Sht. RW847-44.

SHT. RW847-38 OF 54

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 LOCAL ROADS RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W847  
 SECTIONS 2001-167R AND (2425 & 2626) R-1  
 COOK COUNTY

**TRAFFIC BARRIER ELEVATION IV**

DATE: 3/10/2004  
 DRAWN BY: VV  
 CHECKED BY: BK  
**TENG**  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

**MORCOM, N.V., INC.**  
 CONSULTING ENGINEERS  
 CHICAGO, ILLINOIS

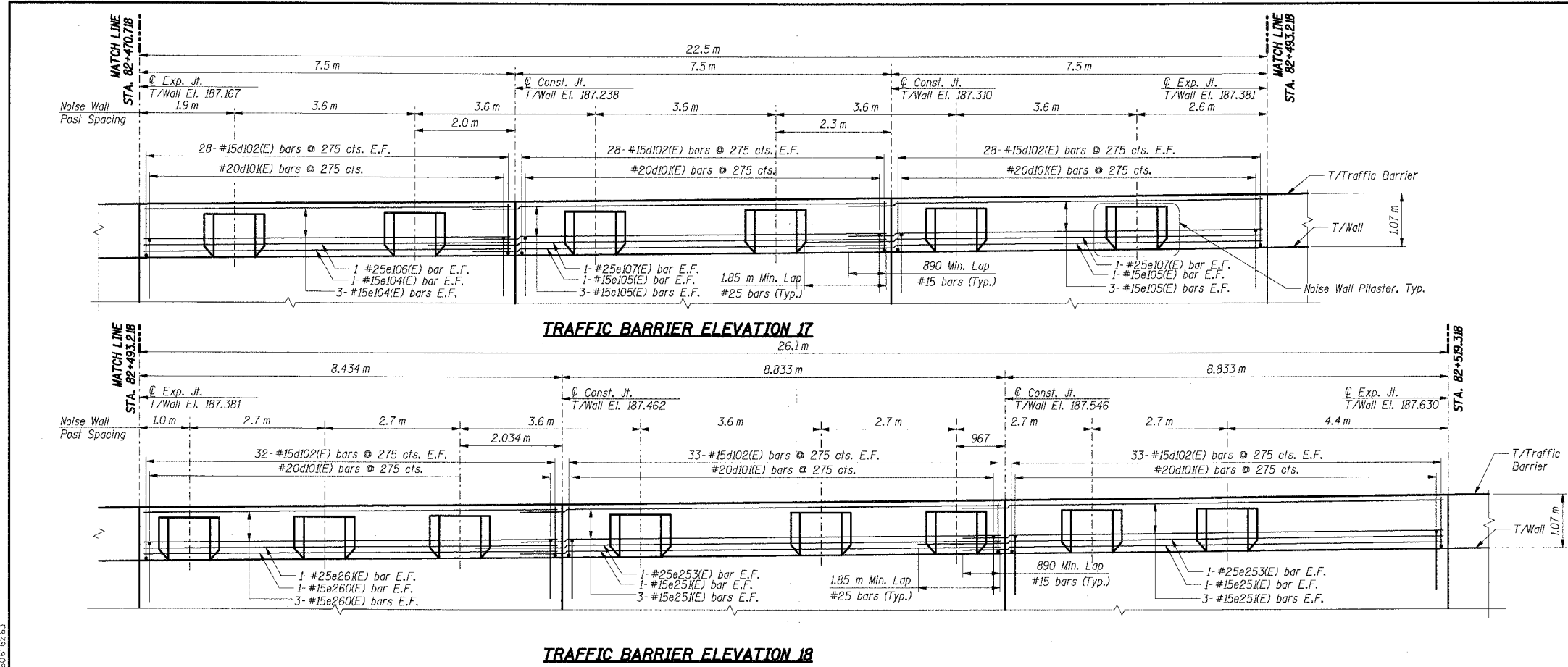
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	754
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 62114				

**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
d102(E)	364	#15	1.22	
d204(E)	98	#15	1.30	
e106(E)	2	#25	7.42	
e104(E)	8	#15	7.42	
e105(E)	16	#15	8.39	
e107(E)	4	#25	9.35	
e261(E)	2	#25	8.33	
e260(E)	8	#15	8.33	
e251(E)	16	#15	9.72	
e253(E)	4	#25	10.68	
e208(E)	42	#15	2.56	
e212(E)	14	#15	2.20	
u203(E)	98	#20	2.00	
Item	Unit	Total		
Concrete Structures	Cu m	23.0		
Reinforcement Bars, Epoxy Coated	kg	2,670		

For Bending Diagrams see Sht. RW847-44.



**THIS SHEET FOR INFORMATION ONLY**

**Notes:**

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- All dimensions shown are along the front face of the retaining wall.
- All vertical bars in wall stem and traffic barrier start at 50 mm from construction and expansion joint, U.N.O.
- Reinforcement bars designated (E) shall be epoxy coated.
- All edges shall have a 20 mm chamfer unless noted otherwise.
- E.F. indicates each face, B.F. indicates back face, F.F. indicates front face.
- For Traffic Barrier details and Noise Wall Pilaster details see Sht. RW847-44.

SHT. RW847-39 OF 54

REVISIONS	
NAME	DATE

**MORCOM, N.V., INC.**  
CONSULTING ENGINEERS  
CHICAGO, ILLINOIS

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
LOCAL ROADS RECONSTRUCTION  
RETAINING WALL - STRUCTURE NO. 016-W847  
SECTIONS 2001-167R AND (2425 & 2626) R-1  
COOK COUNTY

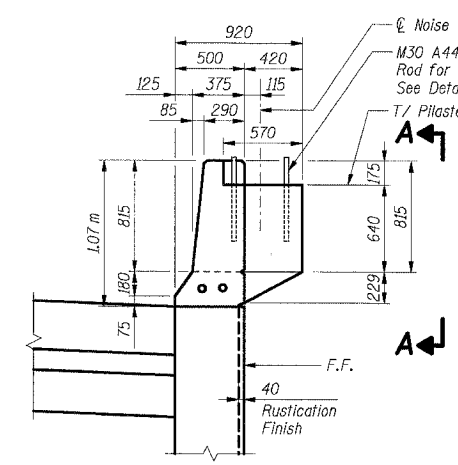
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DATE: 3/10/2004  
DRAWN BY: VV  
CHECKED BY: BK

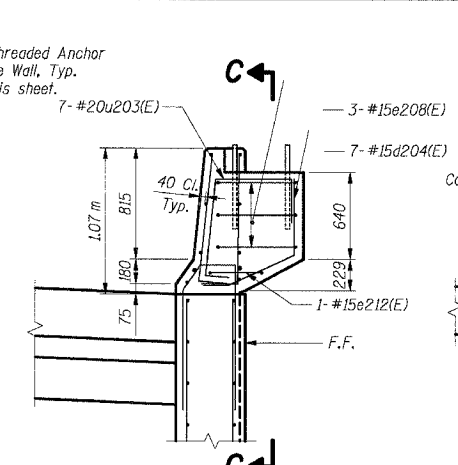
**TENG**  
TENGG & ASSOCIATES, INC.  
ENGINEERS/ARCHITECTS/PLANNERS  
CHICAGO, ILLINOIS

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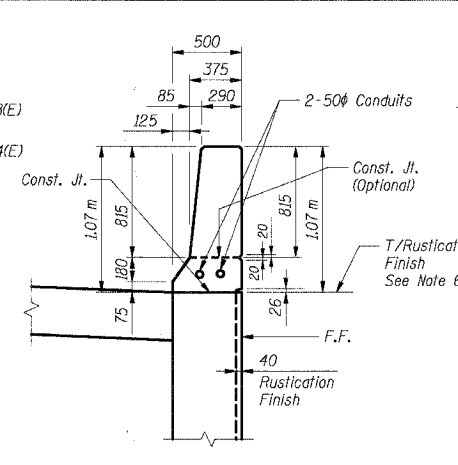
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STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				



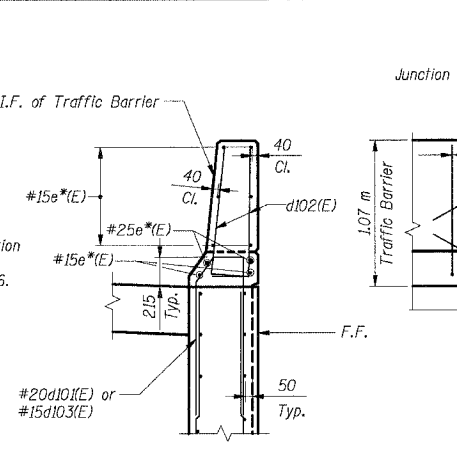
**TRAFFIC BARRIER W/PILASTER**



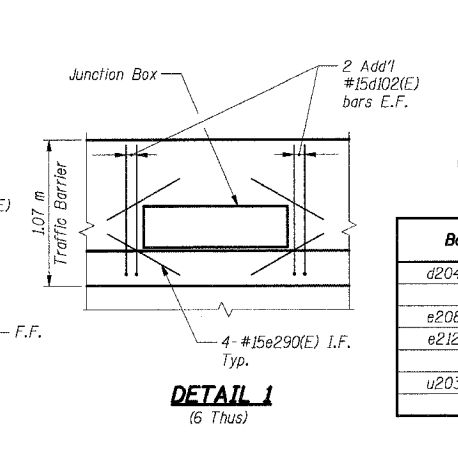
**TRAFFIC BARRIER W/PILASTER (Showing Reinforcement)**



**TYPICAL TRAFFIC BARRIER SECTION**



**TYPICAL TRAFFIC BARRIER SECTION (Showing Reinforcement)**



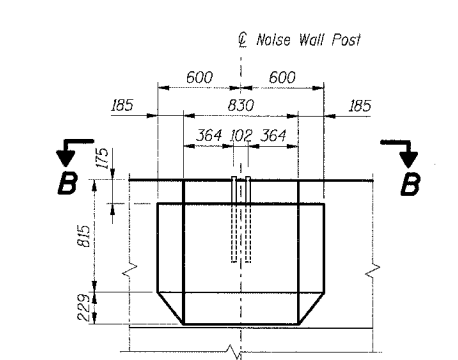
**DETAIL 1 (6 Thus)**

**BAR LIST FOR EACH PILASTER (FOR INFORMATION ONLY)**

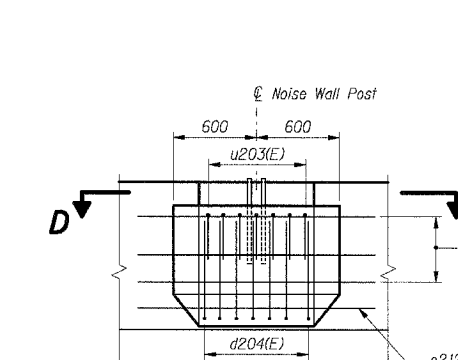
Bar	No.	Size	Length (m)	Shape
d204(E)	7	#15	1.30	U
e208(E)	3	#15	2.56	W
e212(E)	1	#15	2.20	W
u203(E)	7	#20	2.00	U

**BILL OF MATERIAL**

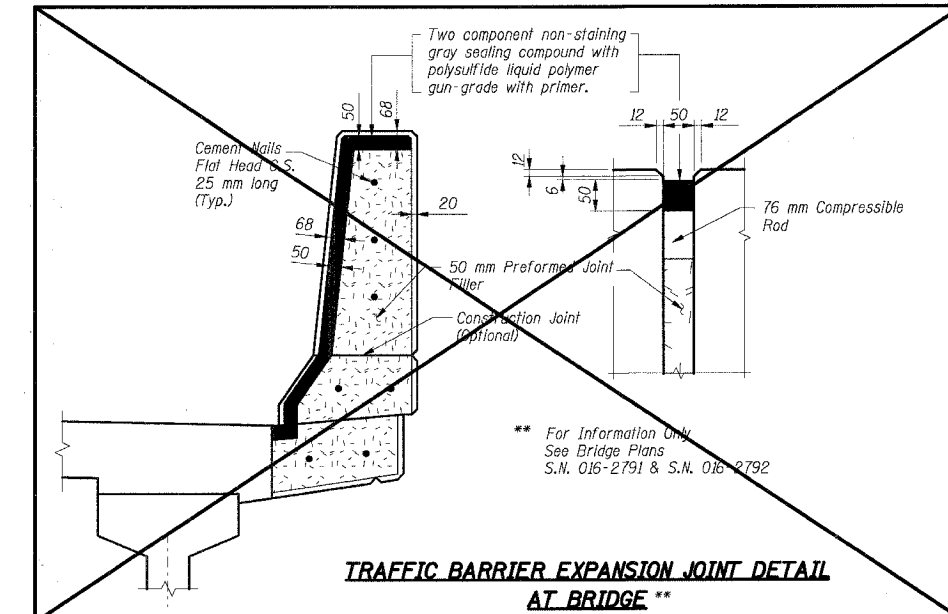
Item	Unit	Total
Noise Abatement Wall Anchor Rod Assembly	Ea	116



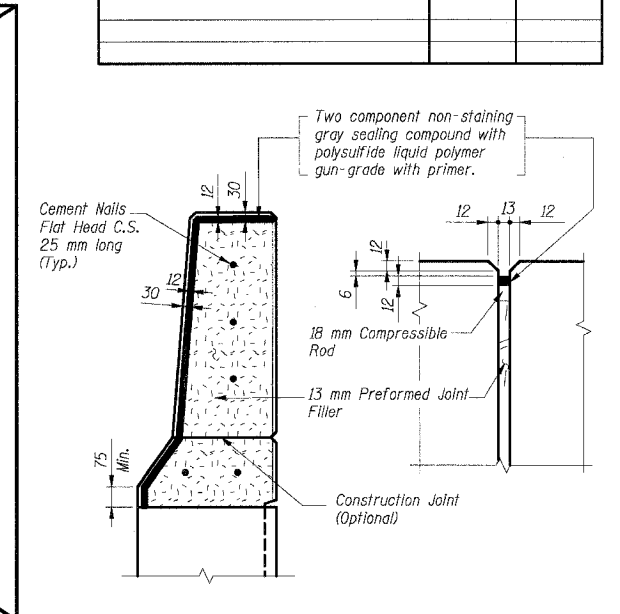
**ELEVATION A-A**



**SECTION C-C**

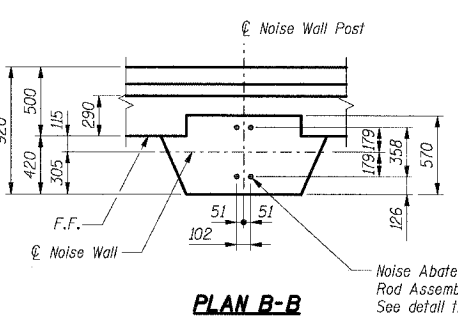


**TRAFFIC BARRIER EXPANSION JOINT DETAIL AT BRIDGE\*\***

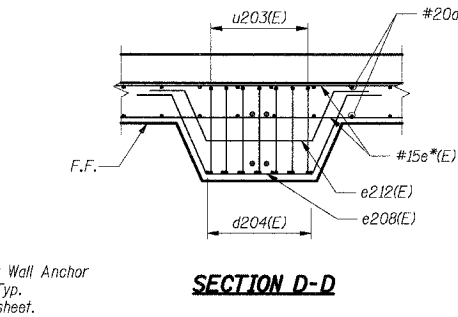


**TYPICAL TRAFFIC BARRIER EXPANSION JOINT DETAIL**

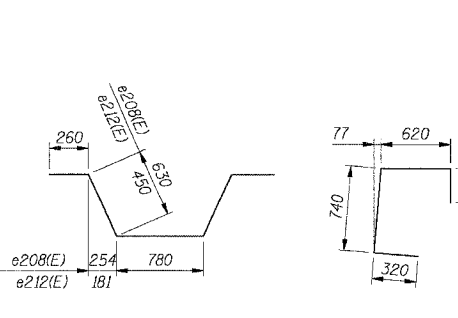
Cost of joint sealant, P.J.F. and cement nails are included with Concrete Structures.



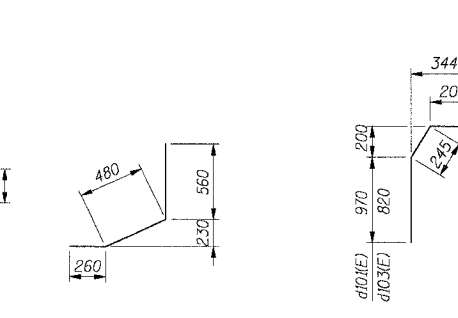
**PLAN B-B**



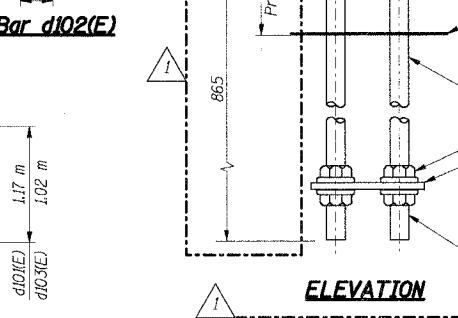
**SECTION D-D**



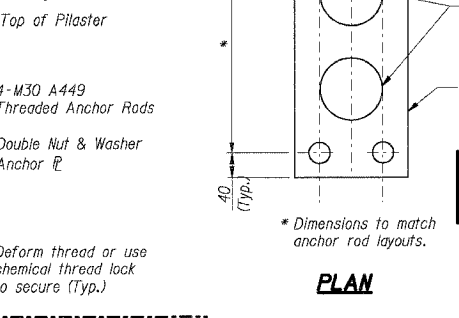
**Bars e208(E) & e212(E)**



**Bar u203(E)**

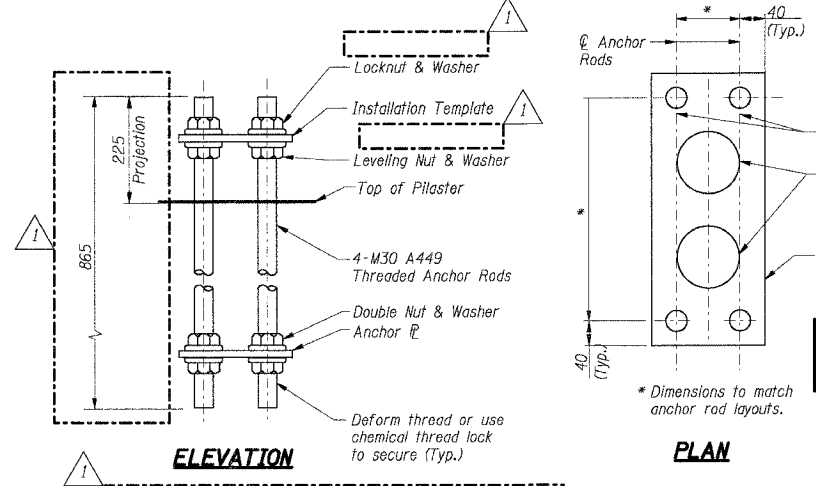


**Bar d204(E)**



**Bars d101(E) & d103(E)**

**Bar d102(E)**



**NOISE ABATEMENT WALL ANCHOR ROD ASSEMBLY (116 Required)**

**THIS SHEET FOR INFORMATION ONLY**

SHT. RW847-44 OF 54

REVISIONS	
NAME	DATE
MJK	5/25/04

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
LOCAL ROADS RECONSTRUCTION  
RETAINING WALL - STRUCTURE NO. 016-W847  
SECTIONS 2001-167R AND (2425 & 2626) R-1  
COOK COUNTY

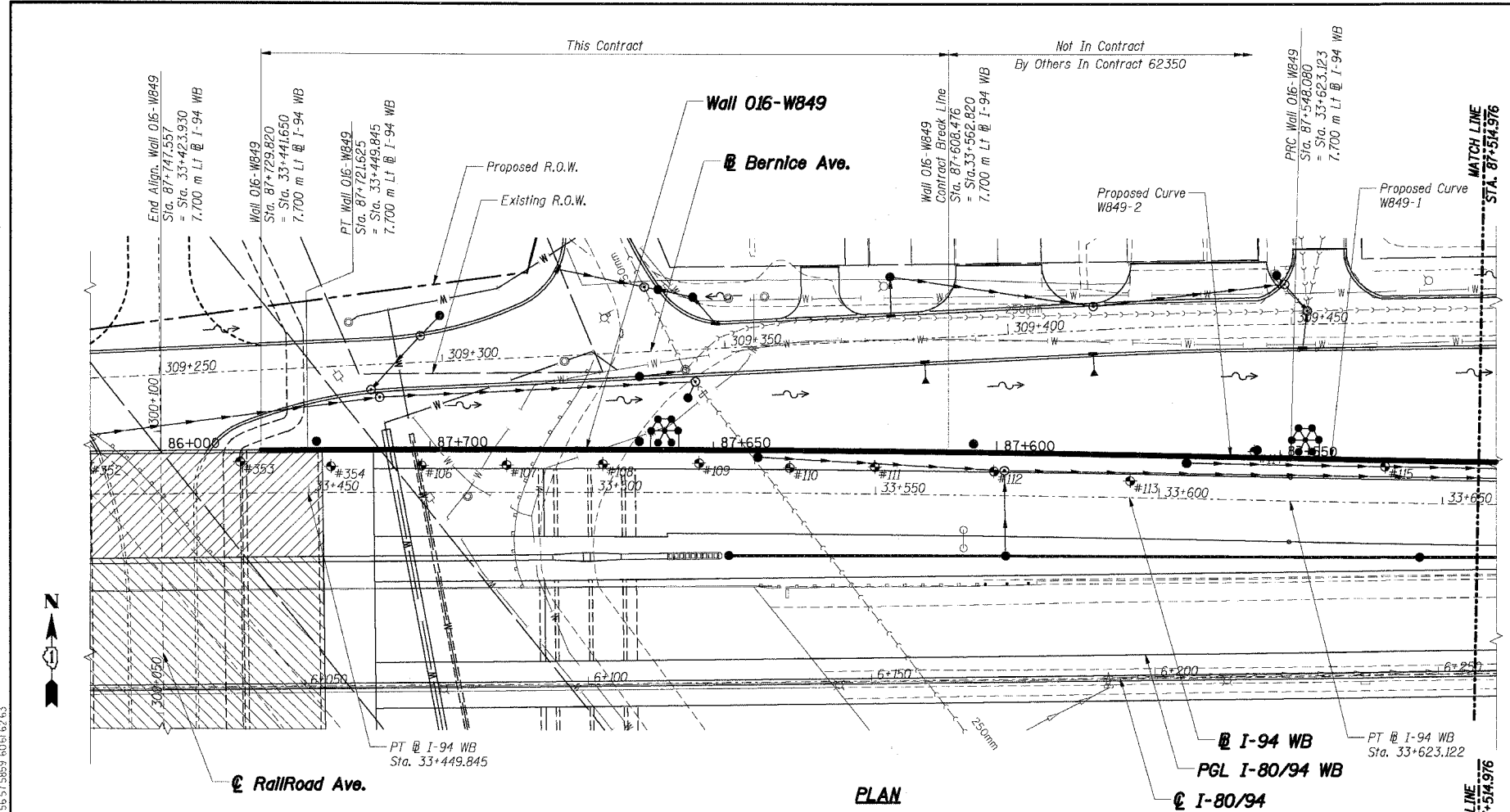
**TRAFFIC BARRIER SECTIONS & DETAILS**

DATE: 3/10/2004  
DRAWN BY: PA  
CHECKED BY: BK  
TENGE & ASSOCIATES, INC.  
ENGINEERS/ARCHITECTS/PLANNERS  
CHICAGO, ILLINOIS

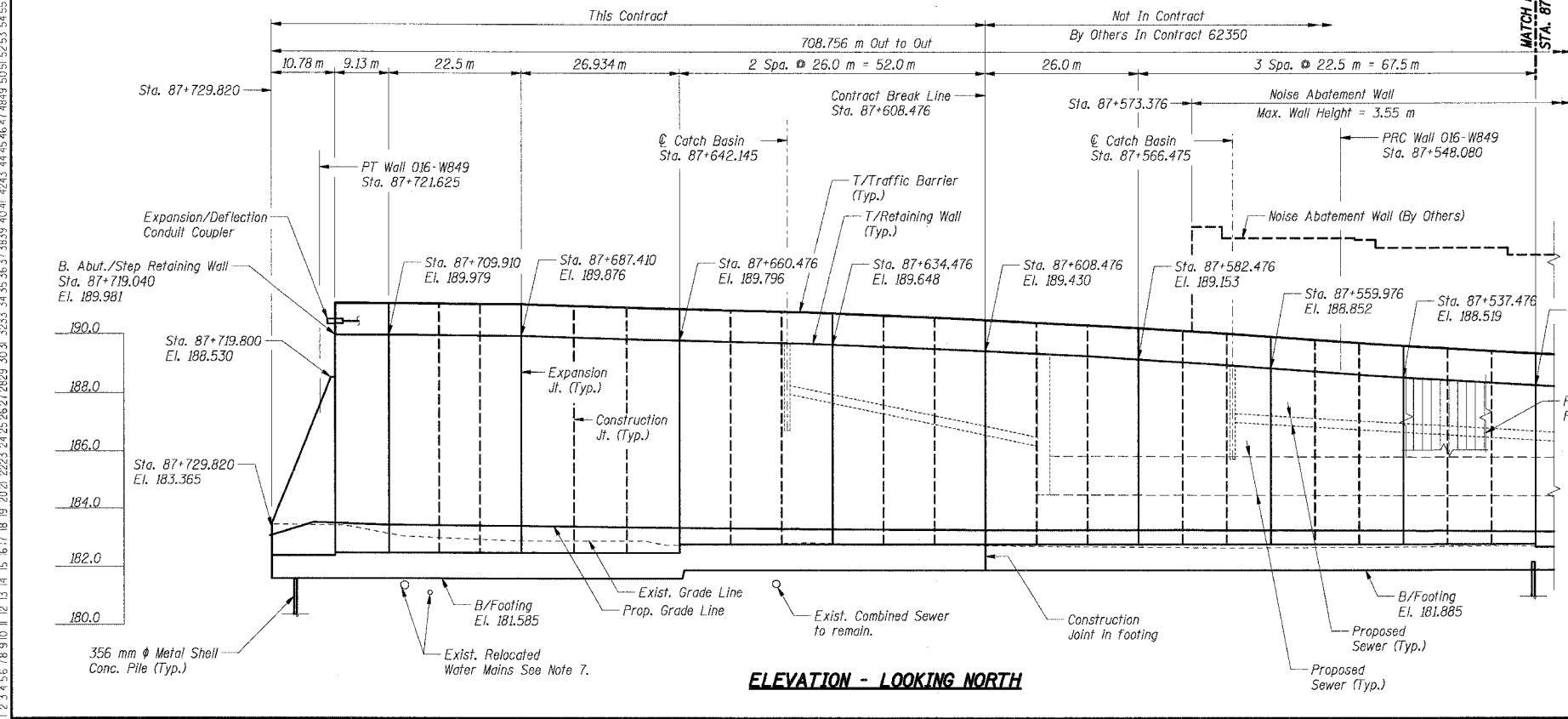
**MORCOM, N.V., INC.**  
CONSULTING ENGINEERS  
CHICAGO, ILLINOIS

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	756
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				



PLAN



ELEVATION - LOOKING NORTH

**DESIGN SPECIFICATIONS:**

1996 AASHTO Standard Specifications for Highway Bridges, with 1997 thru 2000 & 2002 Interims.

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

**DESIGN STRESSES:**

Concrete,  $f'_c = 24 \text{ MPa}$   
Reinforcement,  $f_y = 400 \text{ MPa}$

**DESIGN LOADING:**

Noise Abatement Wall:  
Wind Load: 1.7 kPa  
Limits: Sta. 87+032.974 to Sta. 87+235.276  
Design Height: 4.23 m measured from Top of Retaining Wall  
Limits: Sta. 87+235.276 to Sta. 87+573.376  
Design Height: 3.55 m measured from Top of Retaining Wall

**BENCHMARK:**

BM "5E" Square cut in southeast corner of the southwest crashwall of existing I-80 Bridge over Railroad. El. 192.219

**EXISTING STRUCTURE:**

None

**LEGEND**

- High Mast Light Tower (By Others, Contract No. 62664)
- Existing Storm Sewer
- Proposed Storm Sewer
- Existing Combined Sewer, Note 7
- #5 Soil Boring
- Proposed Manhole
- Proposed Catch Basin
- Proposed Inlet
- Rip Rap
- Proposed Retaining Wall
- Proposed Pavement
- Existing Water Main, Note 7
- Existing Electric, Note 7
- Proposed R.O.W.
- Existing R.O.W.
- Proposed Bridge Structure S.N. 016-2792 Constructed in this Contract.
- Proposed Bridge Structure S.N. 016-2792 Constructed in Future Contract.

**Notes:**

1. All dimensions are measured along front face of retaining wall.
2. Wall alignment offsets are referenced to front face of wall.
3. Work this sheet with RW849-2 and RW849-3.
4. See Sht. RW849-4 for Index of Sheets.
5. See Sht. RW849-2 for Location Map.
6. See Sht. RW849-2 for Curve Data.
7. See Drainage Plans. See Sht. RW849-36 for relocated Water Mains.

**THIS SHEET FOR INFORMATION ONLY**

SHT. RW849-1 OF 61

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
EB & WB OUTSIDE LANES (MAINLINE) CONSTRUCTION  
RETAINING WALL - STRUCTURE NO. 016-W849  
SECTIONS 2001-167R AND (2425 & 2626) R-1  
COOK COUNTY

**GENERAL PLAN & ELEVATION I**

DATE: 8/18/2004

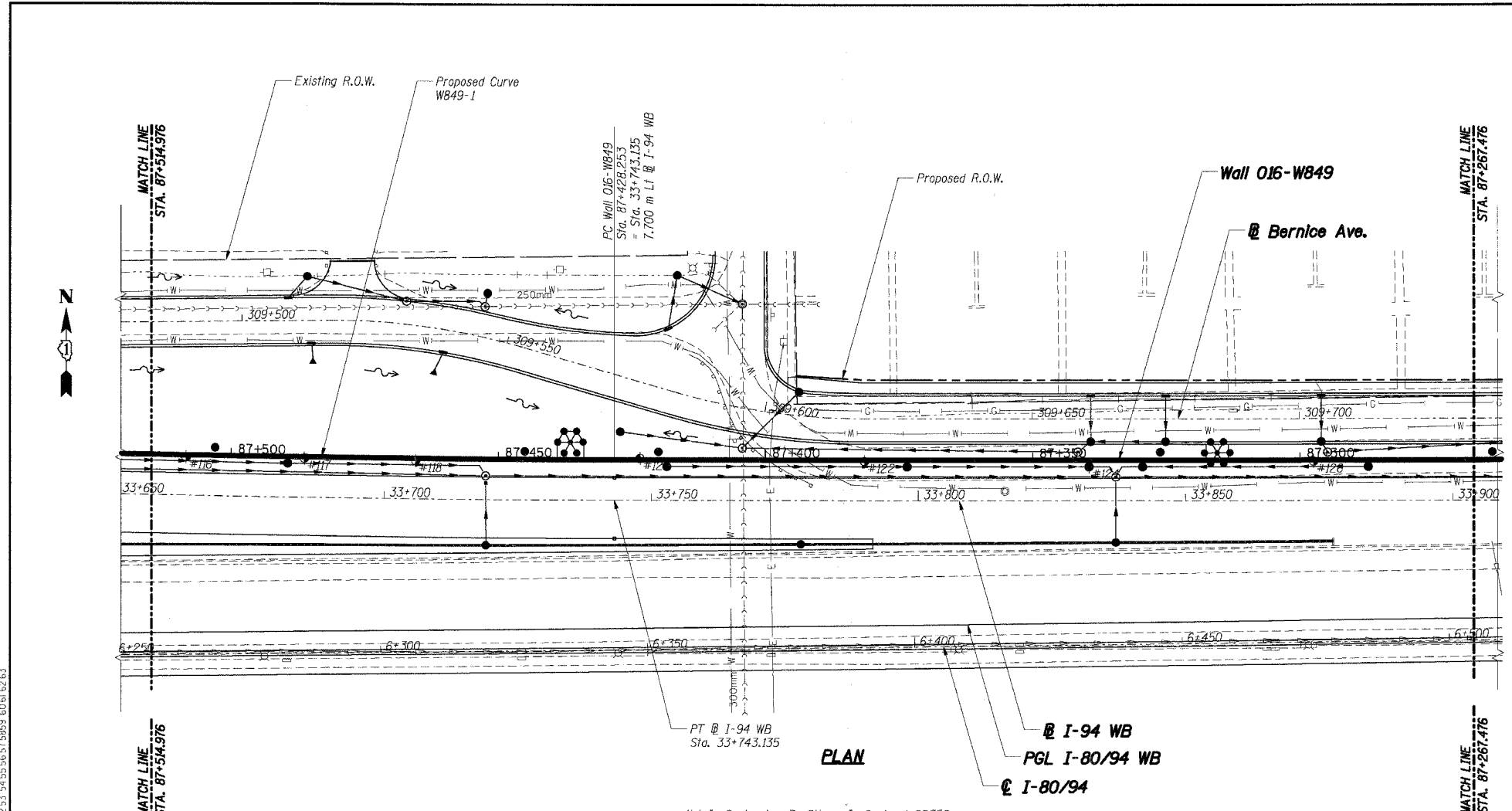
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CHECKED BY: MJK

**TENG**

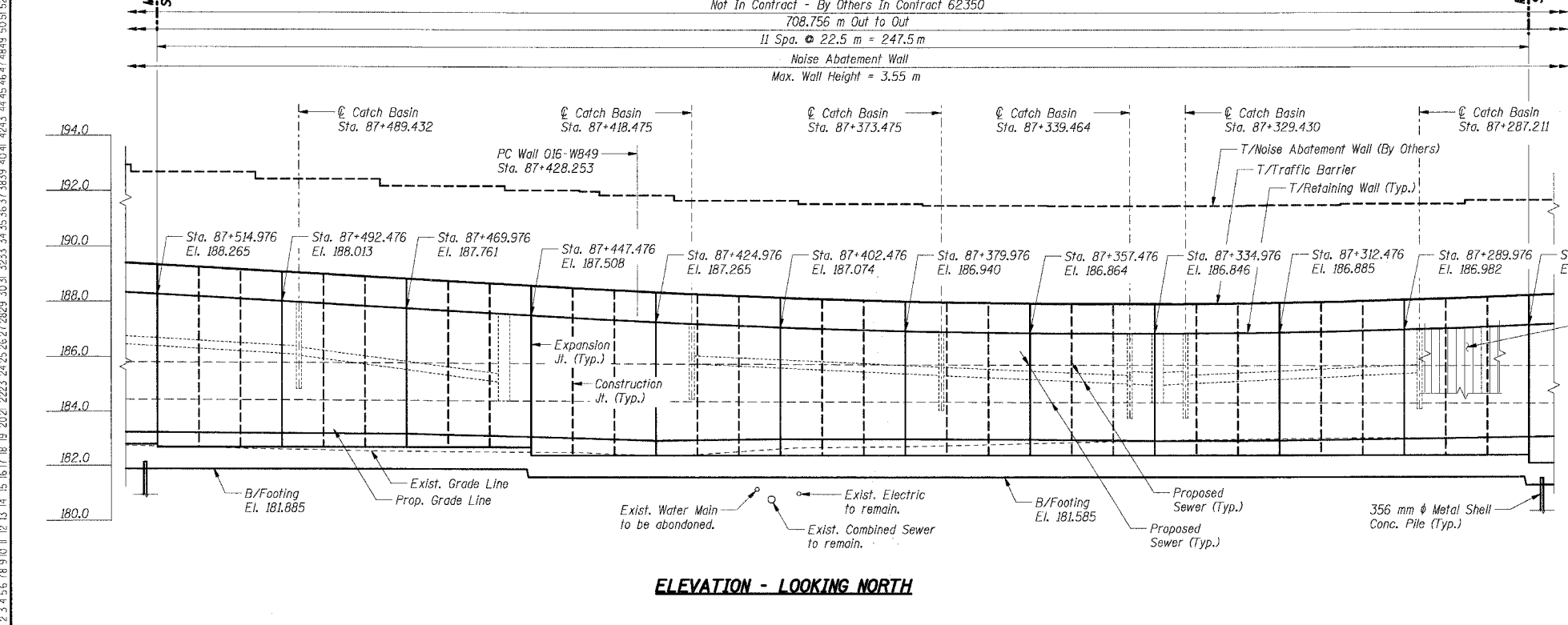
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ENGINEERS/ARCHITECTS/PLANNERS  
CHICAGO, ILLINOIS

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 BALZEEKJ

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	757
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 62114				

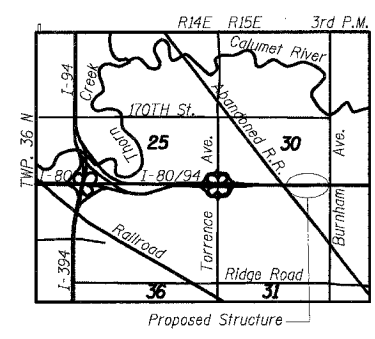


**PLAN**



**ELEVATION - LOOKING NORTH**

<b>PROP. CURVE WB49-1</b>	<b>PROP. CURVE WB49-2</b>
PI STA = 87+488.169	PI STA = 87+634.861
$\Delta = 1^\circ 22' 31''$ (RT)	$\Delta = 1^\circ 59' 08''$ (LT)
R = 4,992.282 m	R = 5,007.700 m
T = 59.917 m	T = 86.781 m
L = 119.828 m	L = 173.545 m
E = 0.360 m	E = 0.752 m
P.C. STA = 87+428.253	P.C. STA = 87+548.080
P.T. STA = 87+548.080	P.T. STA = 87+721.625



**LOCATION MAP**

**LEGEND**

- High Mast Light Tower (By Others, Contract No. 62664)
- Existing Storm Sewer
- Proposed Storm Sewer
- Existing Combined Sewer, See Note 5
- #5 Soil Boring
- Proposed Manhole
- Proposed Catch Basin
- Proposed Inlet
- Rip Rap
- Proposed Retaining Wall
- Proposed Pavement
- Existing Water Main, See Note 5
- Existing Electric, See Note 5
- Proposed R.O.W.
- Existing R.O.W.

**THIS SHEET FOR INFORMATION ONLY**

- Notes:**
- All dimensions are measured along front face of retaining wall.
  - Wall alignment offsets are referenced to front face of wall.
  - Work this sheets with RWB49-1 and RWB49-3.
  - See Sht. RWB49-4 for Index of Sheets.
  - See Drainage Plans.

**SHT. RWB49-2 OF 61**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 EB & WB OUTSIDE LANES (MAINLINE) CONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W849  
 SECTIONS 2001-167R AND (2425 & 2626) R-1  
 COOK COUNTY

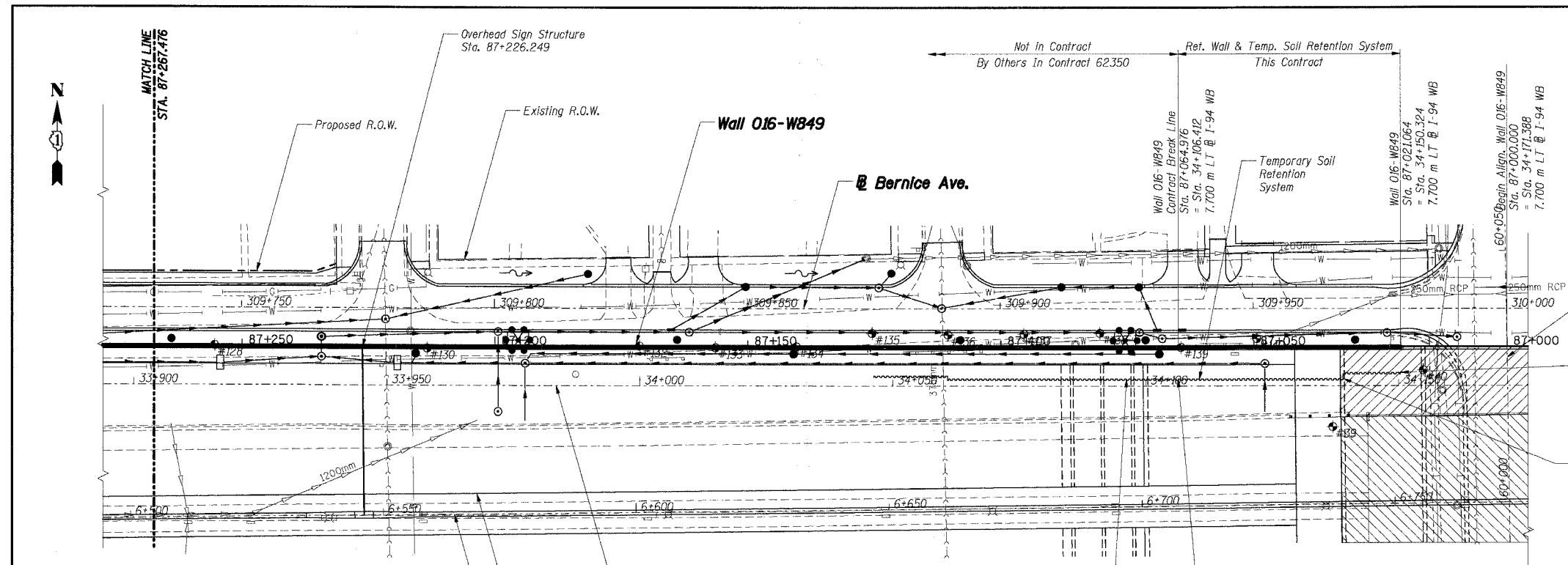
**GENERAL PLAN & ELEVATION II**

DATE: 8/18/2004  
 DRAWN BY: MJK  
 CHECKED BY: MJK

**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	758
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				

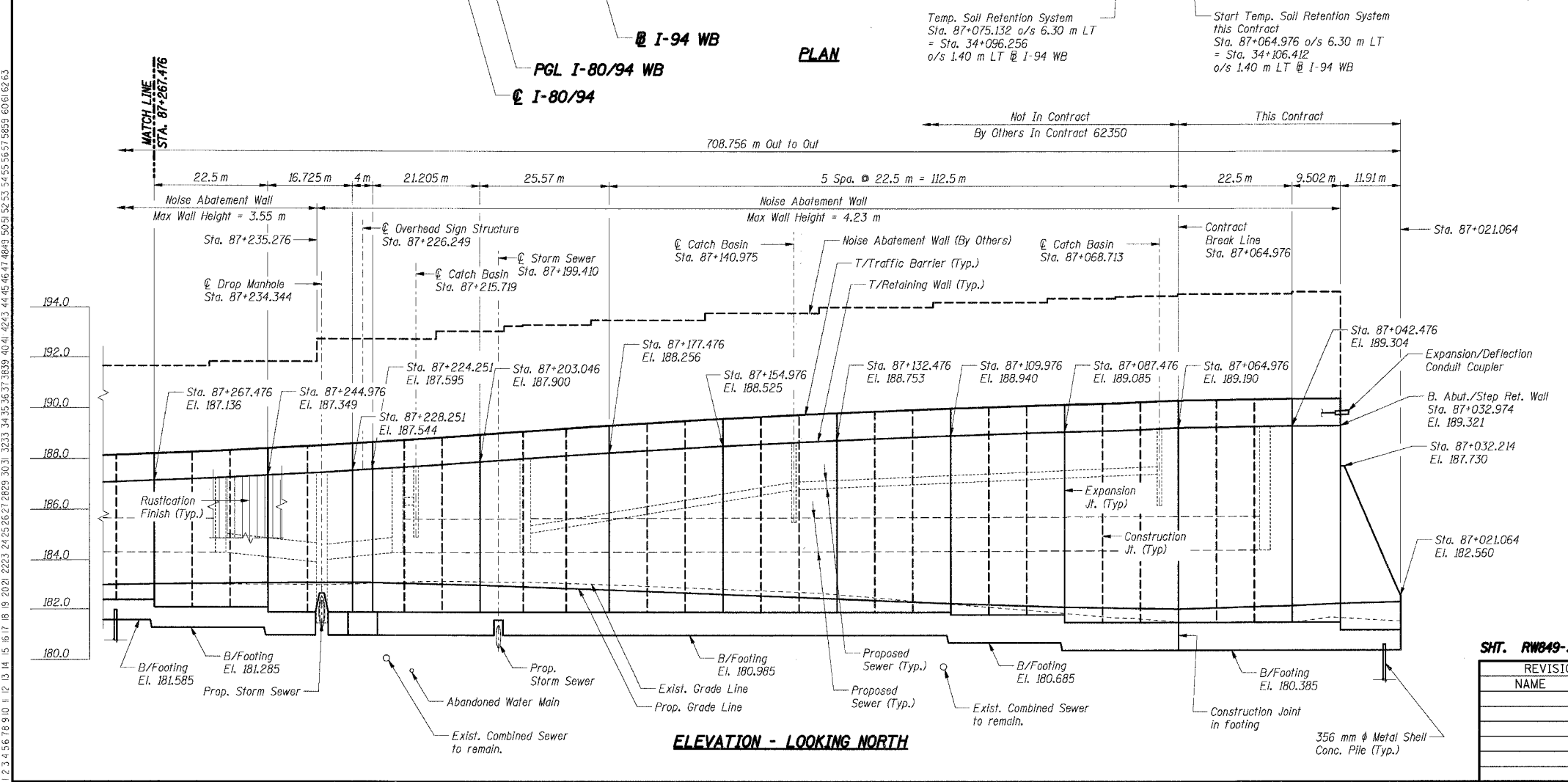


End Temp. Soil Retention System  
Sta. 87+021.064 o/s 5.10 m LT  
= Sta. 34+150.324  
o/s 2.60 m LT @ I-94 WB

Step Temp. Soil Retention System  
Sta. 87+032.374 o/s 6.30 m LT  
= Sta. 34+139.014  
o/s 1.40 m LT @ I-94 WB

Temp. Soil Retention System  
Sta. 87+075.132 o/s 6.30 m LT  
= Sta. 34+096.256  
o/s 1.40 m LT @ I-94 WB

Start Temp. Soil Retention System  
Sta. 87+064.976 o/s 6.30 m LT  
= Sta. 34+106.412  
o/s 1.40 m LT @ I-94 WB



**ELEVATION - LOOKING NORTH**

- LEGEND**
- ⊛ High Mast Light Tower (By Others, Contract No. 62664)
  - ⊙ Existing Storm Sewer
  - ⊙ Proposed Storm Sewer
  - ⊙ Existing Combined Sewer, See Note 6
  - #5 Soil Boring
  - ⊙ Proposed Manhole
  - ⊙ Proposed Manhole
  - ⊙ Proposed Catch Basin
  - ⊙ Proposed Inlet
  - ⊙ Rip Rap
  - ⊙ Proposed Retaining Wall
  - ⊙ Proposed Pavement
  - ⊙ Existing Water Main, See Note 6
  - ⊙ Existing Electric, See Note 6
  - ⊙ Existing Telephone, See Note 6
  - ⊙ Proposed R.O.W.
  - ⊙ Existing R.O.W.
  - ⊙ Temporary Soil Retention System
  - ⊙ Proposed Bridge Structure S.N. 016-2791 Constructed in this Contract.
  - ⊙ Proposed Bridge Structure S.N. 016-2791 Constructed in Future Contract.

**THIS SHEET FOR INFORMATION ONLY**

- Notes:**
- All dimensions are measured along front face of retaining wall.
  - Wall alignment offsets are referenced to front face of wall.
  - Work this sheets with RWB49-1 and RWB49-2.
  - See Sh. RWB49-4 for Index of Sheets.
  - See Sh. RWB49-5 for Temporary Soil Retention System details.
  - See Drainage Plans.

**SHT. RWB49-3 OF 61**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
EB & WB OUTSIDE LANES (MAINLINE) CONSTRUCTION  
RETAINING WALL - STRUCTURE NO. 016-W849  
SECTIONS 2001-167R AND (2425 & 2626) R-1  
COOK COUNTY

**GENERAL PLAN & ELEVATION III**

DATE: 8/18/2004

DRAWN BY: MJK  
CHECKED BY: MJK

**TENG**  
TENG & ASSOCIATES, INC.  
ENGINEERS/ARCHITECTS/PLANNERS  
CHICAGO, ILLINOIS

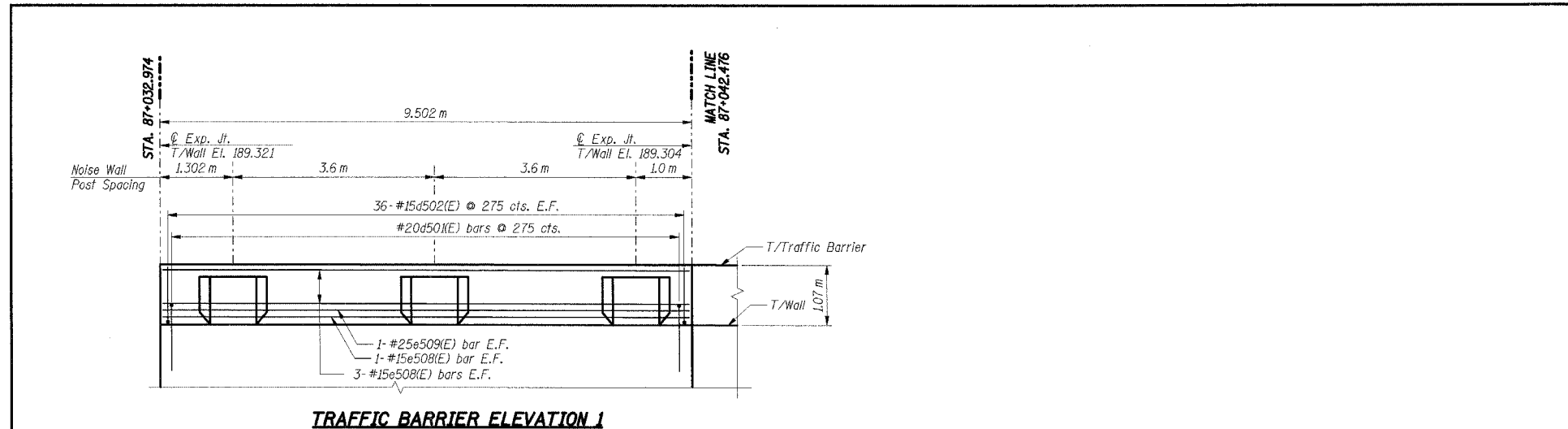
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	759
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				

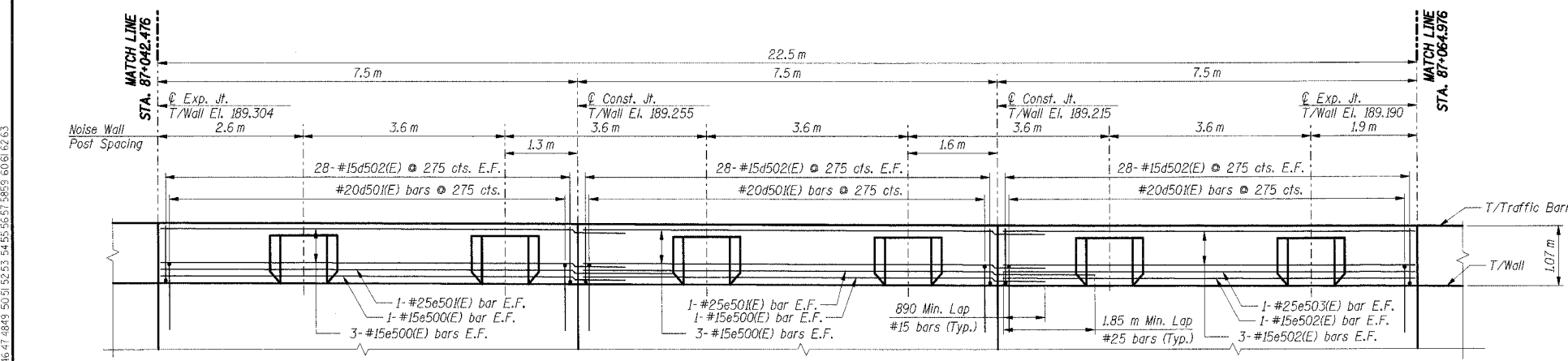
**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
d502(E)	240	#15	1.22	U
d604(E)	63	#15	1.30	U
e500(E)	16	#15	8.39	—
e501(E)	4	#25	9.35	—
e502(E)	8	#15	7.40	—
e503(E)	2	#25	7.40	—
e508(E)	8	#15	9.40	—
e509(E)	2	#25	9.40	—
e608(E)	27	#15	2.56	W
e612(E)	9	#15	2.20	W
e603(E)	63	#20	2.00	L
<b>Item</b>			<b>Unit</b>	<b>Total</b>
Concrete Structures			Cu m	15.1
Reinforcement Bars, Epoxy Coated			kg	1,730

For Bending Diagrams see Sht. RW849-52.



**TRAFFIC BARRIER ELEVATION 1**



**TRAFFIC BARRIER ELEVATION 2**

**THIS SHEET FOR INFORMATION ONLY**

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - All dimensions shown are along the front face of the retaining wall.
  - All vertical bars in wall stem and traffic barrier start at 50 mm from construction and expansion joint, U.N.O.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - E.F. indicates each face, B.F. indicates back face, F.F. indicates front face.
  - For Traffic Barrier details and Noise Wall Plaster details see Sht. RW849-52.

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**SHT. RW849-38 OF 61**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 EB & WB OUTSIDE LANES (MAINLINE) CONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W849  
 SECTIONS 2001-16TR AND (2425 & 2626) R-1  
 COOK COUNTY

**TRAFFIC BARRIER ELEVATION I**

DATE: 8/18/2004  
 DRAWN BY: GS  
 CHECKED BY: MK

**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

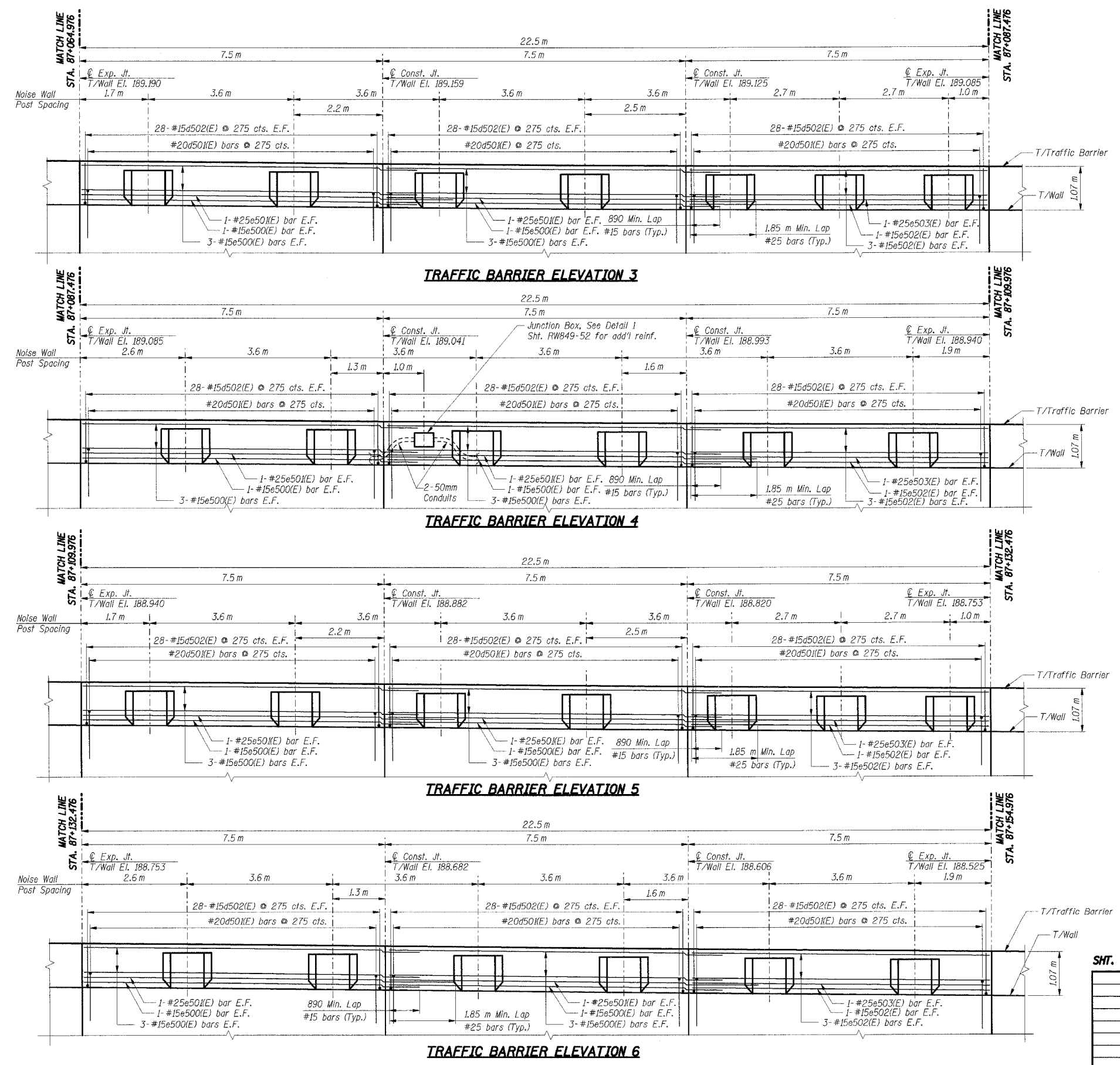


F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	760
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				

**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
d502(E)	680	#15	1.22	┌
d604(E)	182	#15	1.30	┌
e500(E)	64	#15	8.39	—
e501(E)	16	#25	9.35	—
e502(E)	32	#15	7.40	—
e503(E)	8	#25	7.40	—
e608(E)	78	#15	2.56	┌
e612(E)	26	#15	2.20	┌
e690(E)	4	#15	0.60	—
e603(E)	182	#20	2.00	┌
<b>Item</b>			<b>Unit</b>	<b>Total</b>
Concrete Structures			Cu m	42.6
Reinforcement Bars, Epoxy Coated			kg	4,980

For Bending Diagrams see Sht. RW849-52.



**THIS SHEET FOR INFORMATION ONLY**

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - All dimensions shown are along the front face of the retaining wall.
  - All vertical bars in wall stem and traffic barrier start at 50 mm from construction and expansion joint, U.N.O.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - E.F. indicates each face, B.F. indicates back face.
  - F.F. indicates front face.
  - For Traffic Barrier details and Noise Wall Plaster details see Sht. RW849-52.

SHT. RW849-39 OF 61

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 LOCAL ROADS RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W849  
 SECTIONS 2001-167R AND (2425 & 2626) R-1  
 COOK COUNTY

**TRAFFIC BARRIER ELEVATION II**

DATE: 3/10/2004  
 DRAWN BY: GS  
 CHECKED BY: MK  
**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	762
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62114

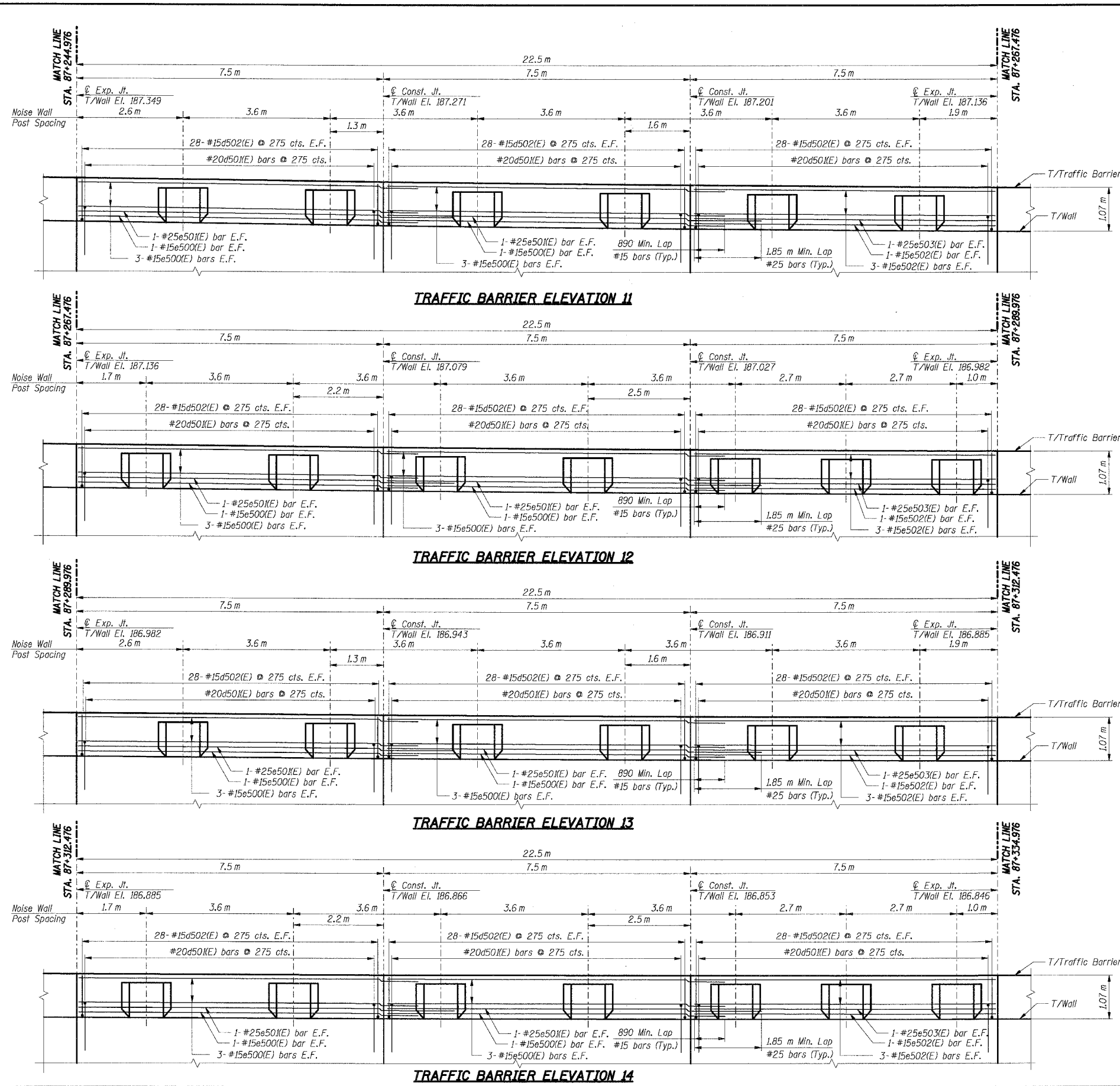
**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
d502(E)	672	#15	1.22	U
d604(E)	182	#15	1.30	U
e500(E)	64	#15	8.39	—
e501(E)	16	#25	9.35	—
e502(E)	32	#15	7.40	—
e503(E)	8	#25	7.40	—
e608(E)	78	#15	2.56	—
e612(E)	26	#15	2.20	—
u603(E)	182	#20	2.00	□

Item	Unit	Total
Concrete Structures	Cu m	42.6
Reinforcement Bars, Epoxy Coated	kg	4,960

For Bending Diagrams see Sht. RW849-52.

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 BAUTZEKJ



**THIS SHEET FOR INFORMATION ONLY**

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - All dimensions shown are along the front face of the retaining wall.
  - All vertical bars in wall stem and traffic barrier start at 50 mm from construction and expansion joint, U.N.O.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - E.F. indicates each face, B.F. indicates back face, F.F. indicates front face.
  - For Traffic Barrier details and Noise Wall Pilaster details see Sht. RW849-52.

SHT. RW849-41 OF 61

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 LOCAL ROADS RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W849  
 SECTIONS 2001-167R AND (2425 & 2626) R-1  
 COOK COUNTY

**TRAFFIC BARRIER ELEVATION IV**

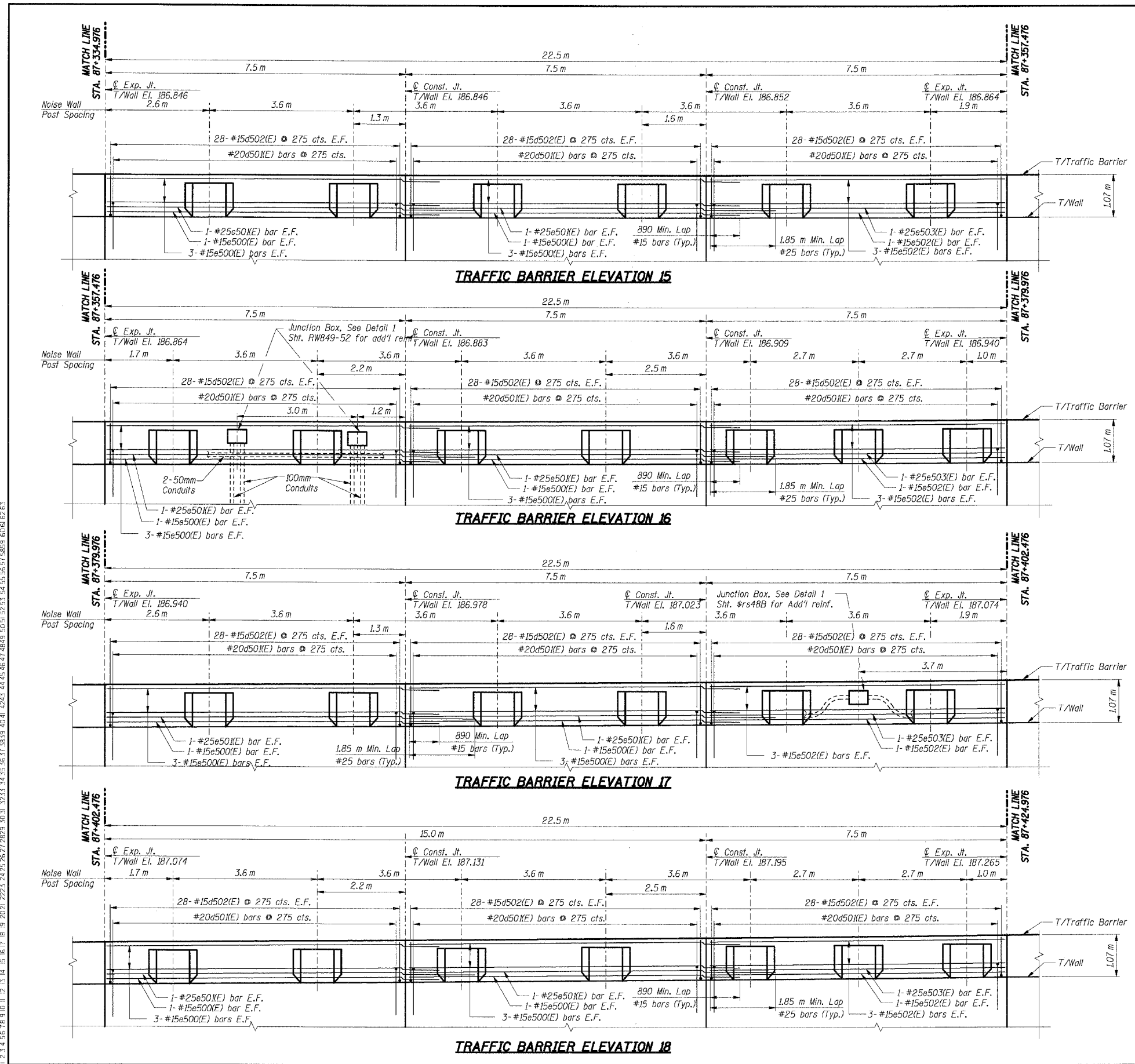
DATE: 3/10/2004  
 DRAWN BY: GS  
 CHECKED BY: MK  
**TENG**  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	763
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				

**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
d502(E)	696	#15	1.22	—
d604(E)	182	#15	1.30	—
e500(E)	64	#15	8.39	—
e501(E)	16	#25	9.35	—
e502(E)	32	#15	7.40	—
e503(E)	8	#25	7.40	—
e608(E)	78	#15	2.56	—
e612(E)	26	#15	2.20	—
e690(E)	12	#15	0.60	—
u603(E)	182	#20	2.00	—
<b>Item</b>			<b>Unit</b>	<b>Total</b>
Concrete Structures			Cu m	42.6
Reinforcement Bars, Epoxy Coated			kg	5,020

For Bending Diagrams see Sht. RWB49-52.



**THIS SHEET FOR INFORMATION ONLY**

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - All dimensions shown are along the front face of the retaining wall.
  - All vertical bars in wall stem and traffic barrier start at 50 mm from construction and expansion joint, U.N.O.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - E.F. indicates each face, B.F. indicates back face, F.F. indicates front face.
  - For Traffic Barrier details and Noise Wall Plaster details see Sht. RWB49-52.

SHT. RWB49-42 OF 61

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 LOCAL ROADS RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W849  
 SECTIONS 2001-167R AND (2425 & 2626) R-1  
 COOK COUNTY

**TRAFFIC BARRIER ELEVATION V**

DATE: 3/10/2004

DRAWN BY: GS  
 CHECKED BY: MK

**TENG**  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

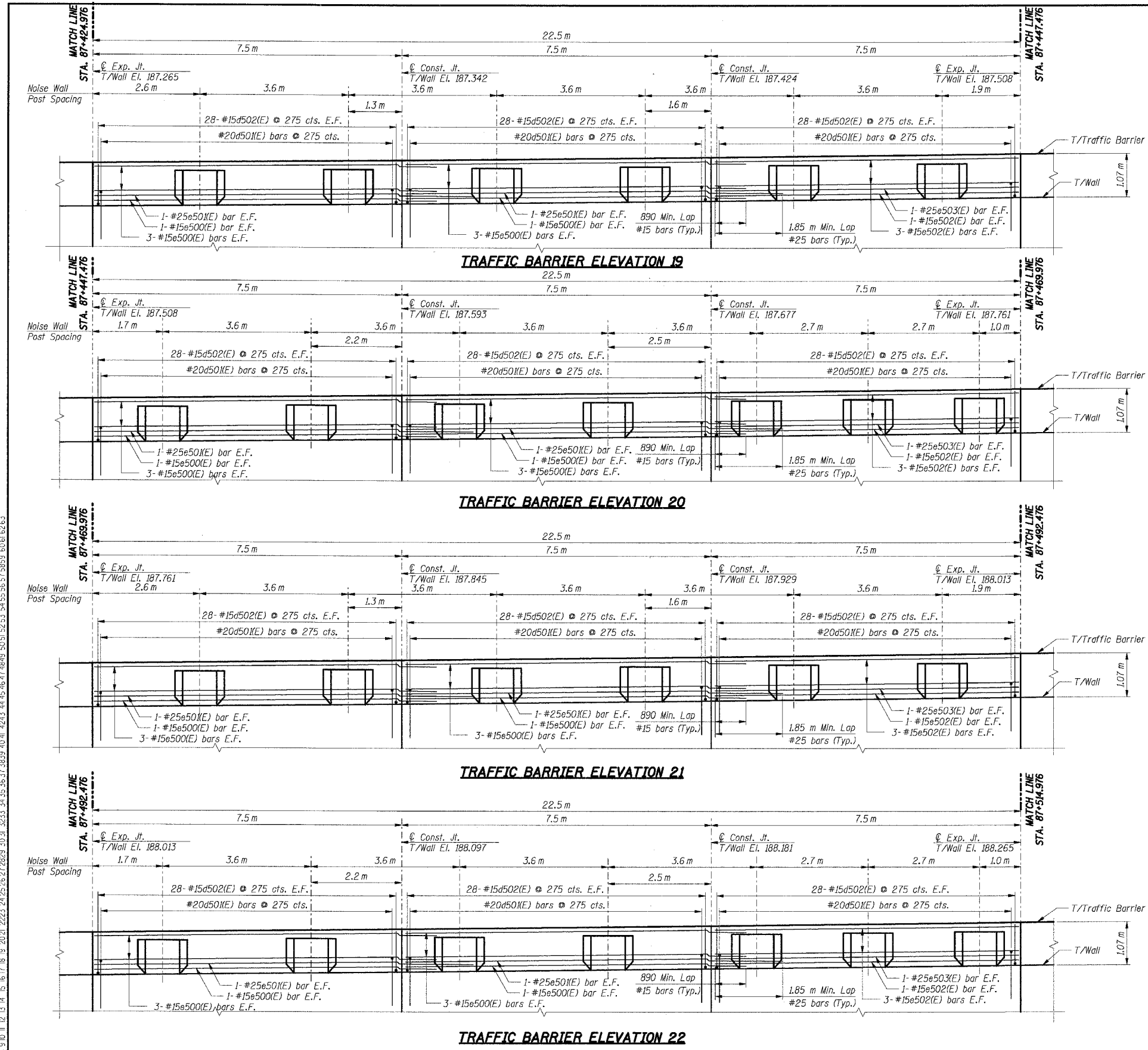
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 BAZZEKJ

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	764
STA.	TO STA.		FED. AID PROJECT	
			CONTRACT NO. 62114	

**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape	
d502(E)	672	#15	1.22	U	
d604(E)	182	#15	1.30	U	
e500(E)	64	#15	8.39	—	
e501(E)	16	#25	9.35	—	
e502(E)	32	#15	7.40	—	
e503(E)	8	#25	7.40	—	
e608(E)	78	#15	2.56	—	
e612(E)	26	#15	2.20	—	
u603(E)	182	#20	2.00	U	
<b>Item</b>				<b>Unit</b>	<b>Total</b>
Concrete Structures				Cu m	42.6
Reinforcement Bars, Epoxy Coated				kg	4,960

For Bending Diagrams see Sht. RW849-52.



**THIS SHEET FOR INFORMATION ONLY**

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - All dimensions shown are along the front face of the retaining wall.
  - All vertical bars in wall stem and traffic barrier start at 50 mm from construction and expansion joint, U.N.O.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - E.F. indicates each face, B.F. indicates back face, F.F. indicates front face.
  - For Traffic Barrier details and Noise Wall Pilaster details see Sht. RW849-52.

SHT. RW849-43 OF 61

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 LOCAL ROADS RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W849  
 SECTIONS 2001-167R AND (2425 & 2626) R-1  
 COOK COUNTY

**TRAFFIC BARRIER ELEVATION VI**

DATE: 3/10/2004      DRAWN BY: GS  
 CHECKED BY: MK

**TENG**  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

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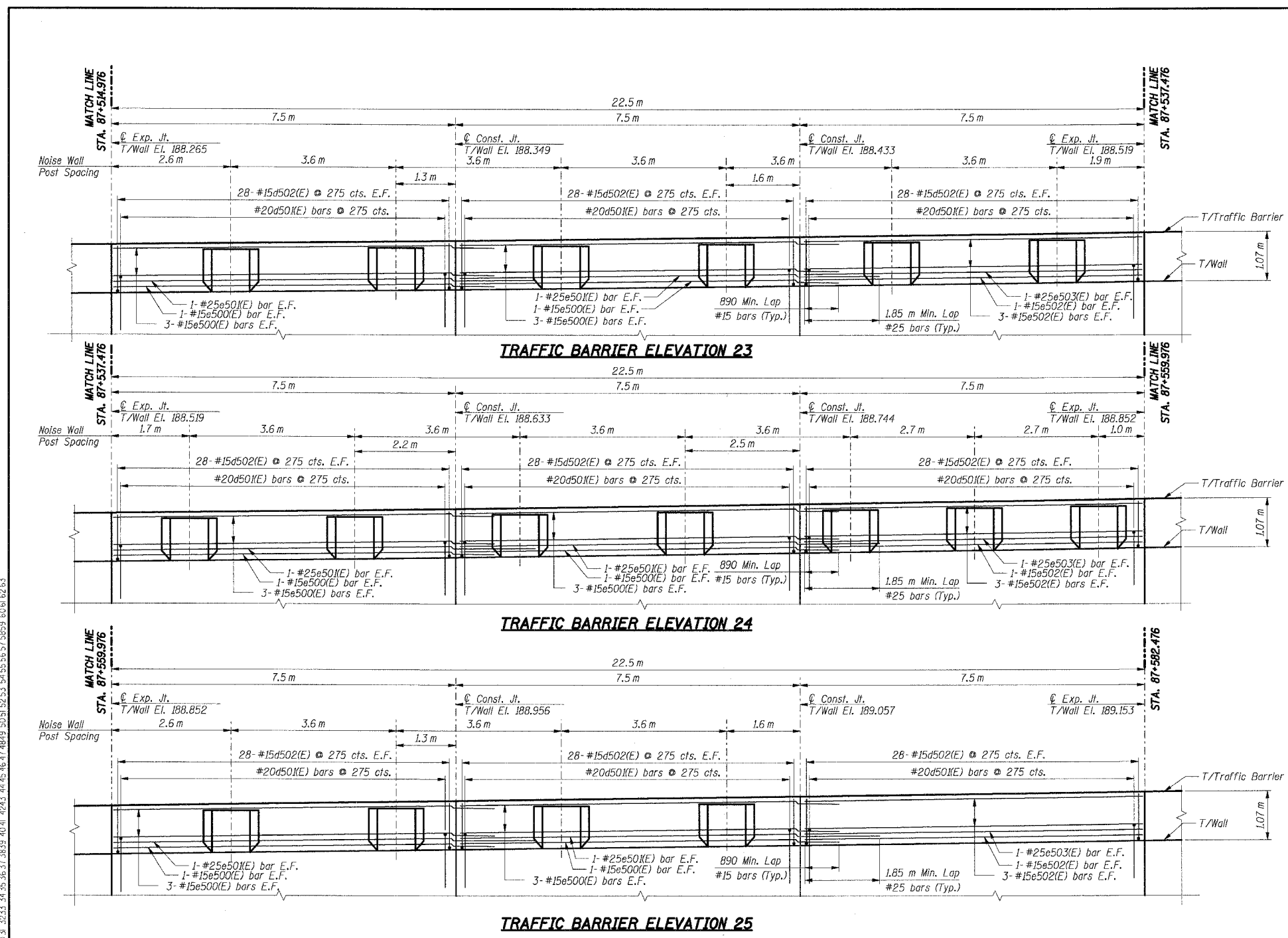
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	765
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				

**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
d502(E)	504	#15	1.22	—
d604(E)	119	#15	1.30	—
e500(E)	48	#15	8.39	—
e501(E)	12	#25	9.35	—
e502(E)	24	#15	7.40	—
e503(E)	6	#25	7.40	—
e608(E)	51	#15	2.56	—
e612(E)	17	#15	2.20	—
u603(E)	119	#20	2.00	—

Item	Unit	Total
Concrete Structures	Cu m	31.2
Reinforcement Bars, Epoxy Coated	kg	3,560

For Bending Diagrams see Sht. RW849-52.



**THIS SHEET FOR INFORMATION ONLY**

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - All dimensions shown are along the front face of the retaining wall.
  - All vertical bars in wall stem and traffic barrier start at 50 mm from construction and expansion joint, U.N.O.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - E.F. indicates each face, B.F. indicates back face, F.F. indicates front face.
  - For Traffic Barrier details and Noise Wall Pilaster details see Sht. RW849-52.

SHT. RW849-44 OF 61

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINCERY EXPRESSWAY)  
 LOCAL ROADS RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W849  
 SECTIONS 2001-167R AND (2425 & 2626) R-1  
 COOK COUNTY

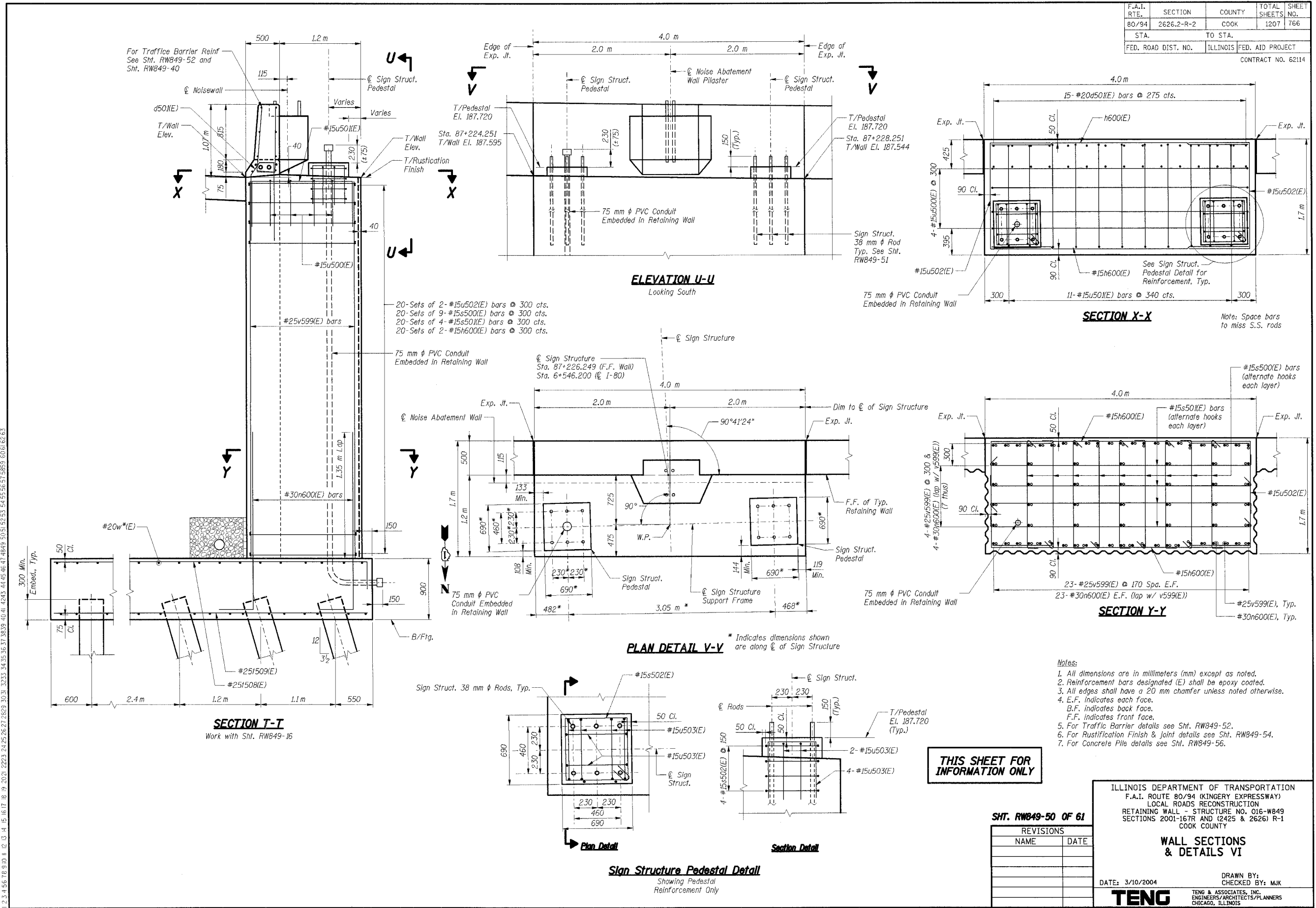
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DATE: 3/10/2004  
 DRAWN BY: GS  
 CHECKED BY: MK

**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	766
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				



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**THIS SHEET FOR INFORMATION ONLY**

SHT. RW849-50 OF 61

REVISIONS	
NAME	DATE

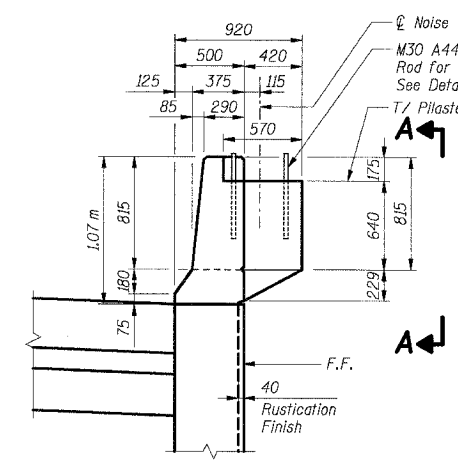
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 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 LOCAL ROADS RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-WB49  
 SECTIONS 2001-167R AND (2425 & 2626) R-1  
 COOK COUNTY

**WALL SECTIONS & DETAILS VI**

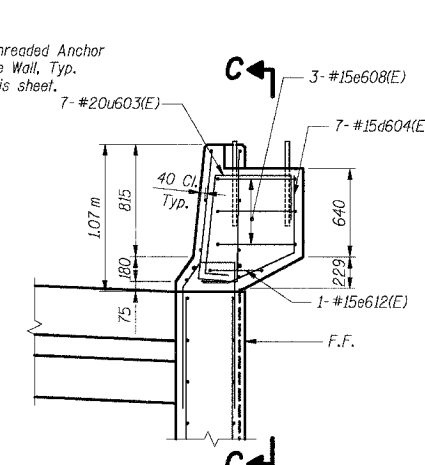
DATE: 3/10/2004  
 DRAWN BY: MJK  
 CHECKED BY: MJK

**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

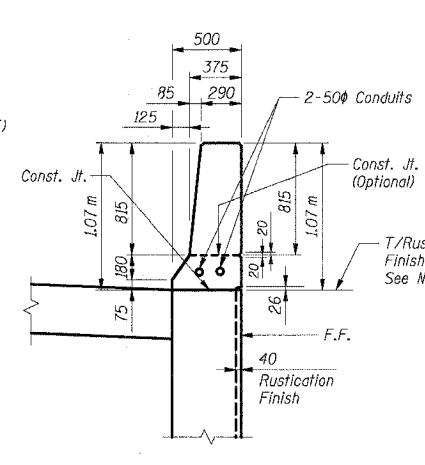
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80/94	2626.2-R-2	COOK	1207	767
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				



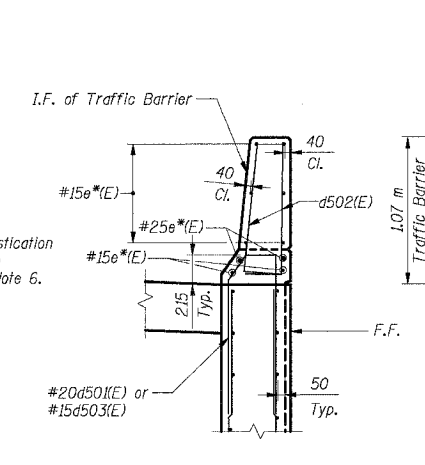
**TRAFFIC BARRIER W/PILASTER**



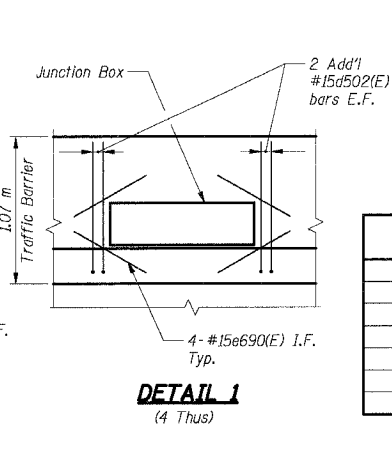
**TRAFFIC BARRIER W/PILASTER (Showing Reinforcement)**



**TYPICAL TRAFFIC BARRIER SECTION**



**TYPICAL TRAFFIC BARRIER SECTION (Showing Reinforcement)**



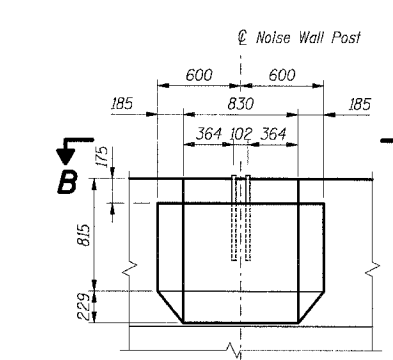
**DETAIL 1 (4 Thus)**

**BAR LIST FOR EACH PILASTER (FOR INFORMATION ONLY)**

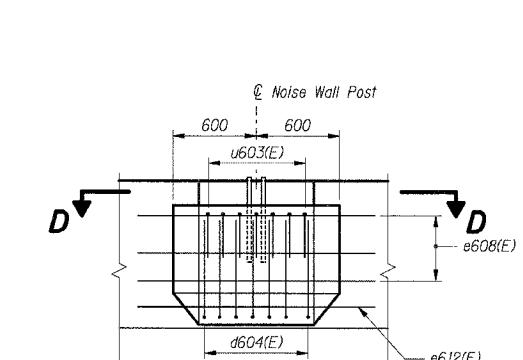
Bar	No.	Size	Length (m)	Shape
d604(E)	7	#15	1.30	U
e608(E)	3	#15	2.56	W
e612(E)	1	#15	2.20	W
u603(E)	7	#20	2.00	C

**BILL OF MATERIAL**

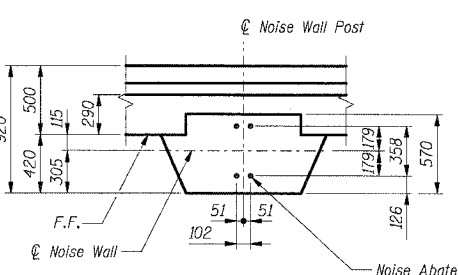
Item	Unit	Total
Noise Abatement Wall Anchor Rod Assembly	Ea	158



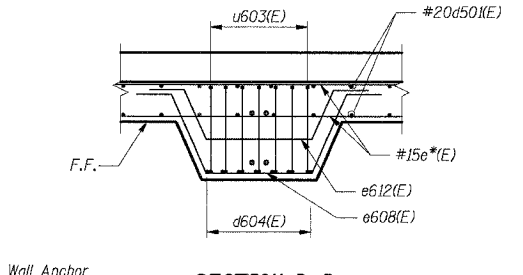
**ELEVATION A-A**



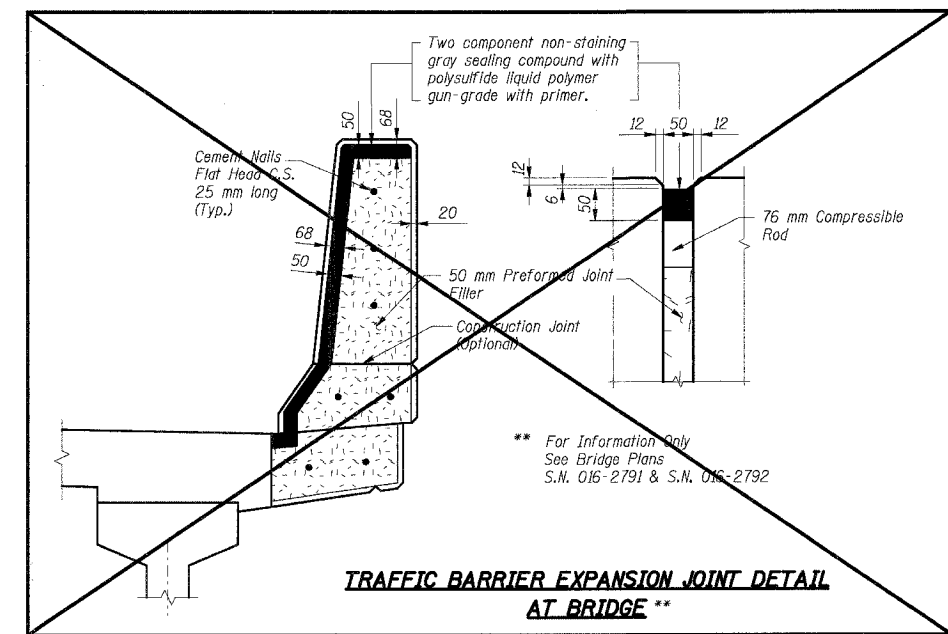
**SECTION C-C**



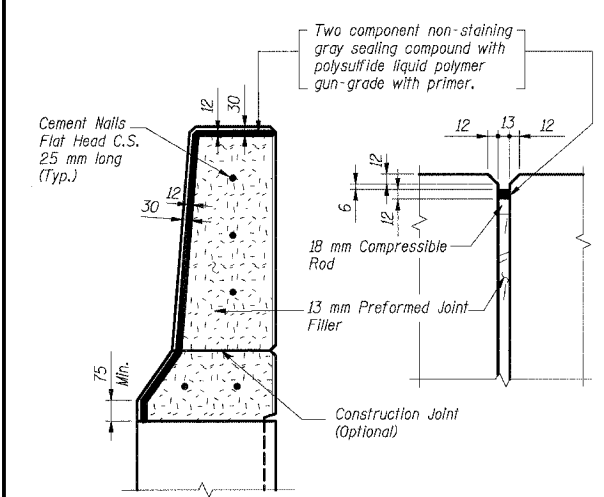
**PLAN B-B**



**SECTION D-D**

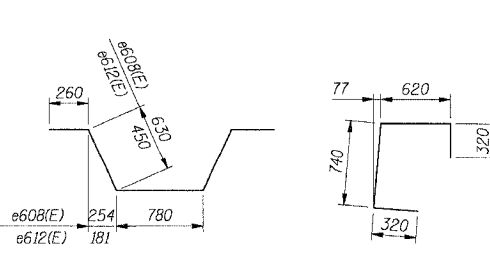


**TRAFFIC BARRIER EXPANSION JOINT DETAIL AT BRIDGE\*\***

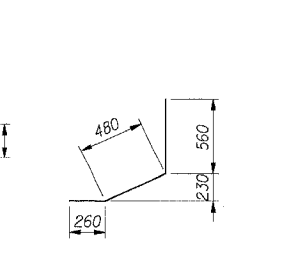


**TYPICAL TRAFFIC BARRIER EXPANSION JOINT DETAIL**

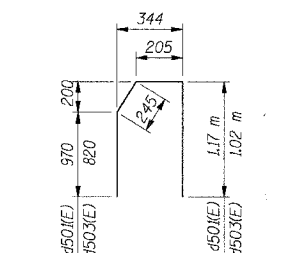
Cost of joint sealant, P.J.F. and cement nails are included with Concrete Structures.



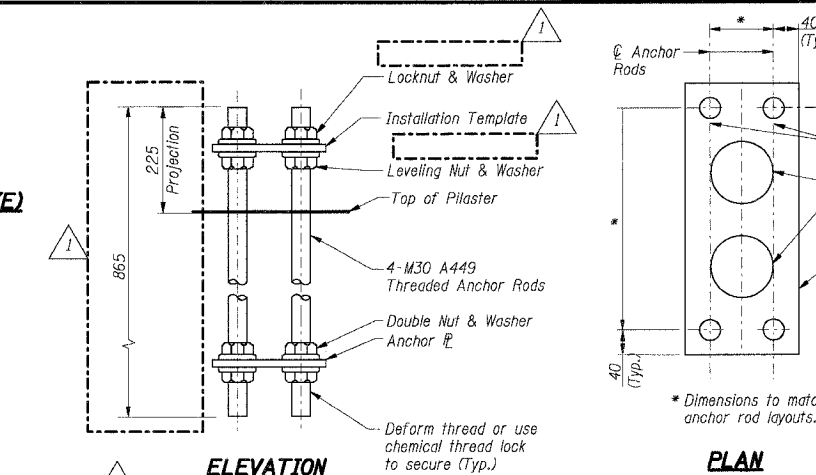
**Bars e608(E) & e612(E)**



**Bar u603(E)**



**Bars d501(E) & d503(E)**



**ELEVATION**

**PLAN**

**NOISE ABATEMENT WALL ANCHOR ROD ASSEMBLY (158 Required)**

**THIS SHEET FOR INFORMATION ONLY**

SHT. RW849-52 OF 61

REVISIONS	
NAME	DATE
MJK	5/25/04

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
LOCAL ROADS RECONSTRUCTION  
RETAINING WALL - STRUCTURE NO. 016-W849  
SECTIONS 2001-167R AND (2425 & 2626) R-1  
COOK COUNTY

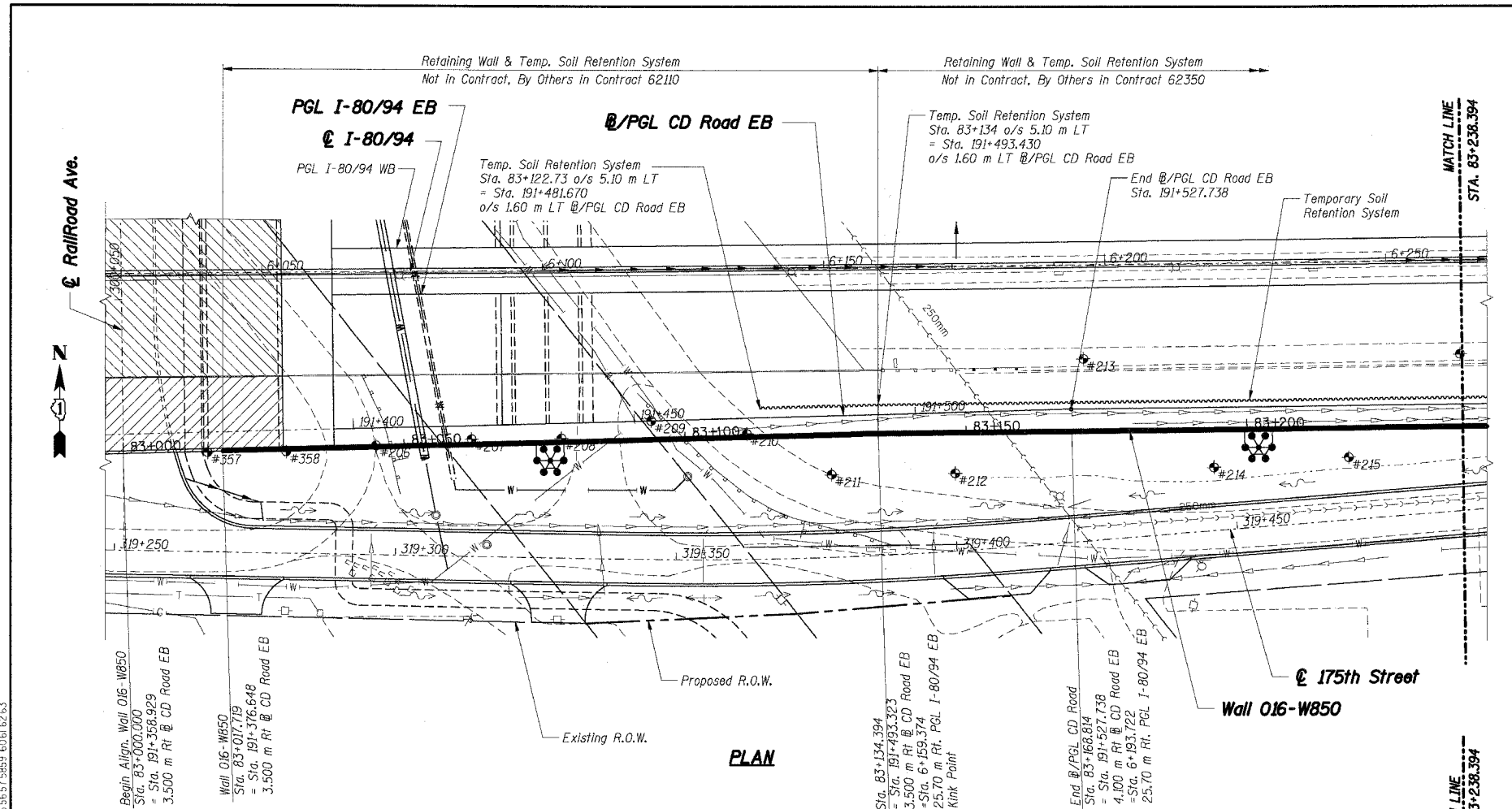
**TRAFFIC BARRIER SECTIONS & DETAILS**

DATE: 3/10/2004  
DRAWN BY: CHECKED BY: MJK  
**TENG**  
TENG & ASSOCIATES, INC.  
ENGINEERS/ARCHITECTS/PLANNERS  
CHICAGO, ILLINOIS

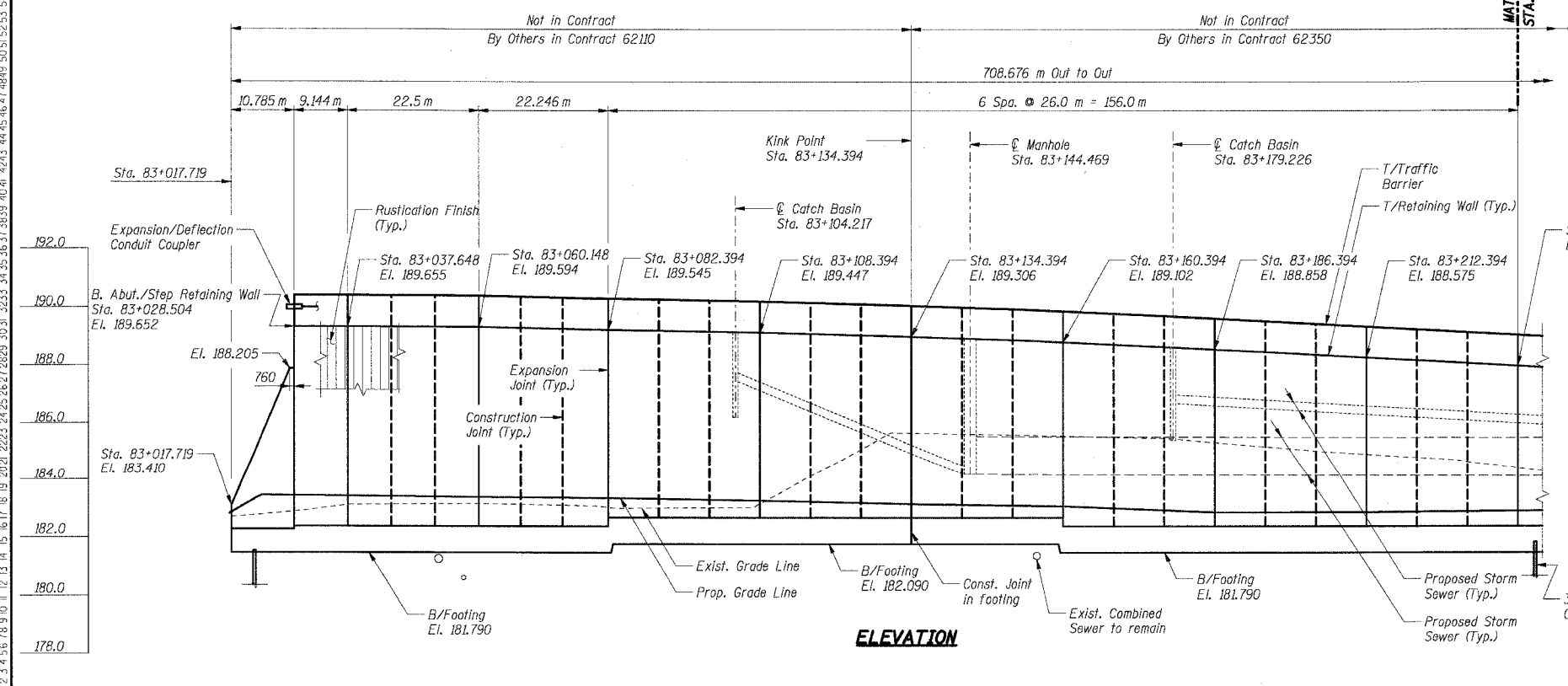
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	768
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				



**PLAN**



**ELEVATION**

**DESIGN SPECIFICATIONS:**

1996 AASHTO Standard Specifications for Highway Bridges, with 1997 thru 2000 & 2002 Interims.

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

**DESIGN STRESSES:**

Concrete,  $f'_c = 24$  MPa  
Reinforcement,  $f_y = 400$  MPa

**DESIGN LOADING:**

Noise Abatement Wall:  
Wind Load: 1.7 kPa  
Design Height: 4.15 m measured from Top of Retaining Wall  
Limits: Sta. 83+353.294 to Sta. 83+714.485

**EXISTING STRUCTURE:**

None

**BENCHMARK:**

TBM "M" Chiseled square cut in southwest wingwall of existing IL Rts 83 (Torrence Avenue) bridge over I-80. El. 188.209

**LEGEND**

- \* High Mast Light Tower, (By Others, Contract No. 62664)
- Existing Storm Sewer
- Proposed Storm Sewer
- - - Existing Combined Sewer, See Note 6
- #5 Soil Boring
- Proposed Manhole
- Proposed Manhole
- Proposed Catch Basin
- Proposed Inlet
- ⊗ Rip Rap
- ▬ Proposed Retaining Wall
- ▬ Proposed Pavement
- W- Water Main, See Note 6
- E- Electric, See Note 6
- - - Proposed R.O.W.
- - - Existing R.O.W.
- ~ Temporary Soil Retention System
- ▨ Proposed Bridge Structure S.N. 016-2792 Constructed in Contract 62110.
- ▨ Proposed Bridge Structure Constructed in this Contract.

**Notes:**

1. All dimensions are measured along front face of retaining wall.
2. Wall alignment offsets are referenced to front face of wall.
3. Work this sheets with RW850-2 and RW850-3.
4. See Sht. RW850-4 for Index of Sheets.
5. See Sht. RW850-2 for Location Map.
6. See Drainage Plans.

**THIS SHEET FOR INFORMATION ONLY**

SHT. RW850-1 OF 58

REVISIONS	
NAME	DATE

\*\*\* 2001-167R, (2425 & 2626) R-1 AND (2425 & 2626) R-2  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
EB & WB INSIDE LANES (MAINLINE) CONSTRUCTION  
RETAINING WALL - STRUCTURE NO. 016-W850  
SECTIONS \*\*\*  
COOK COUNTY

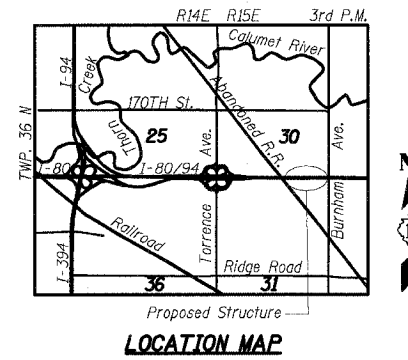
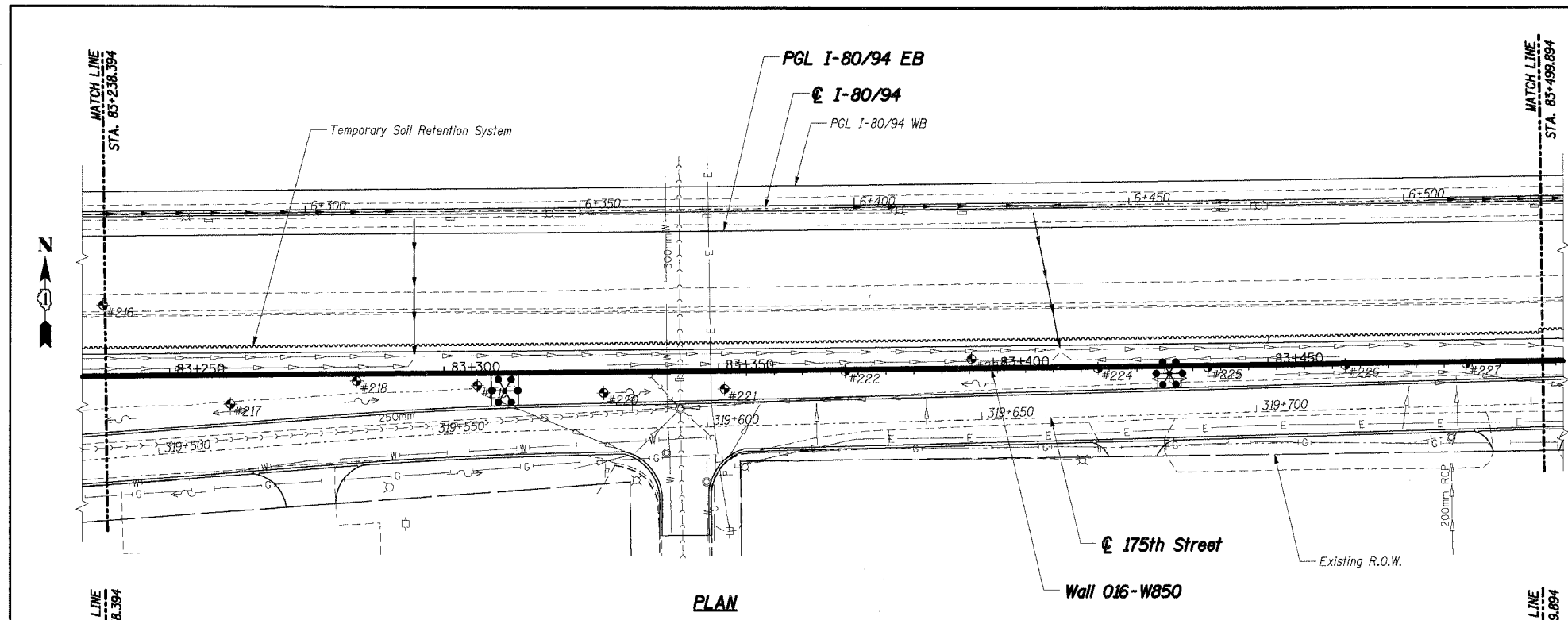
**GENERAL PLAN & ELEVATION I**

DATE: 7/18/2005  
DRAWN BY: CHECKED BY: MJK  
**TENG**  
TENG & ASSOCIATES, INC.  
ENGINEERS/ARCHITECTS/PLANNERS  
CHICAGO, ILLINOIS

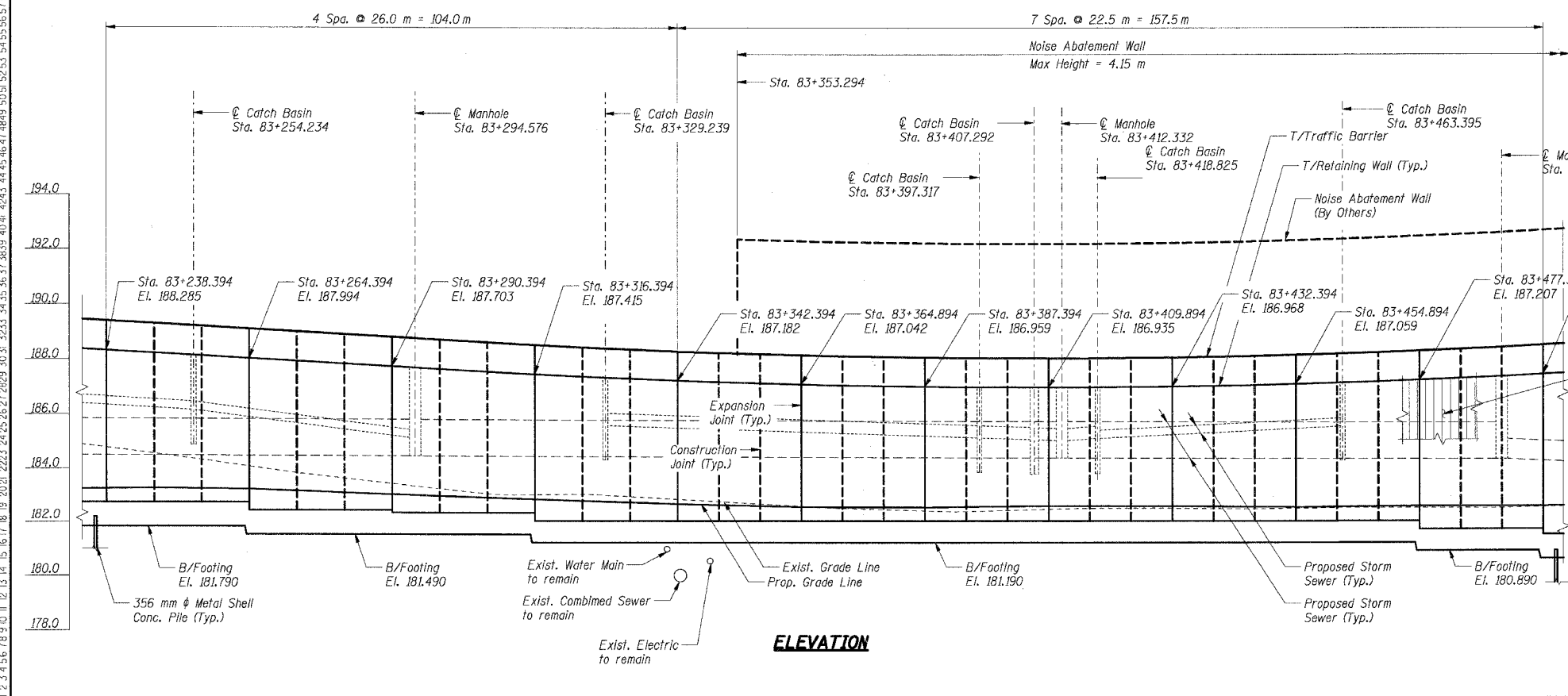
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	769
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				



Not in Contract - By Others in Contract 62350  
708.676 m Out to Out



**LEGEND**

- ✱ High Mast Light Tower (By Others, Contract No. 62664)
- Existing Storm Sewer
- Proposed Storm Sewer
- Existing Combined Sewer, See Note 5
- #5 Soil Boring
- Proposed Manhole
- Proposed Manhole
- Proposed Catch Basin
- Proposed Inlet
- ▨ Rip Rap
- ▬ Proposed Retaining Wall
- Proposed Pavement
- W— Water Main, See Note 5
- E— Electric, See Note 5
- Proposed R.O.W.
- Existing R.O.W.
- ~~~~~ Temporary Soil Retention System

**Notes:**

1. All dimensions are measured along front face of retaining wall.
2. Wall alignment offsets are referenced to front face of wall.
3. Work this sheet with RW850-1 and RW850-3.
4. See Sht. RW850-4 for Index of Sheets.
5. See Drainage Plans.

**THIS SHEET FOR INFORMATION ONLY**

SHT. RW850-2 OF 58

REVISIONS	
NAME	DATE

\*\*\* 2001-167R, (2425 & 2626) R-1 AND (2425 & 2626) R-2

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
EB & WB INSIDE LANES (MAINLINE) CONSTRUCTION  
RETAINING WALL - STRUCTURE NO. 016-W850  
SECTIONS \*\*\*  
COOK COUNTY

**GENERAL PLAN & ELEVATION II**

DATE: 7/18/2005

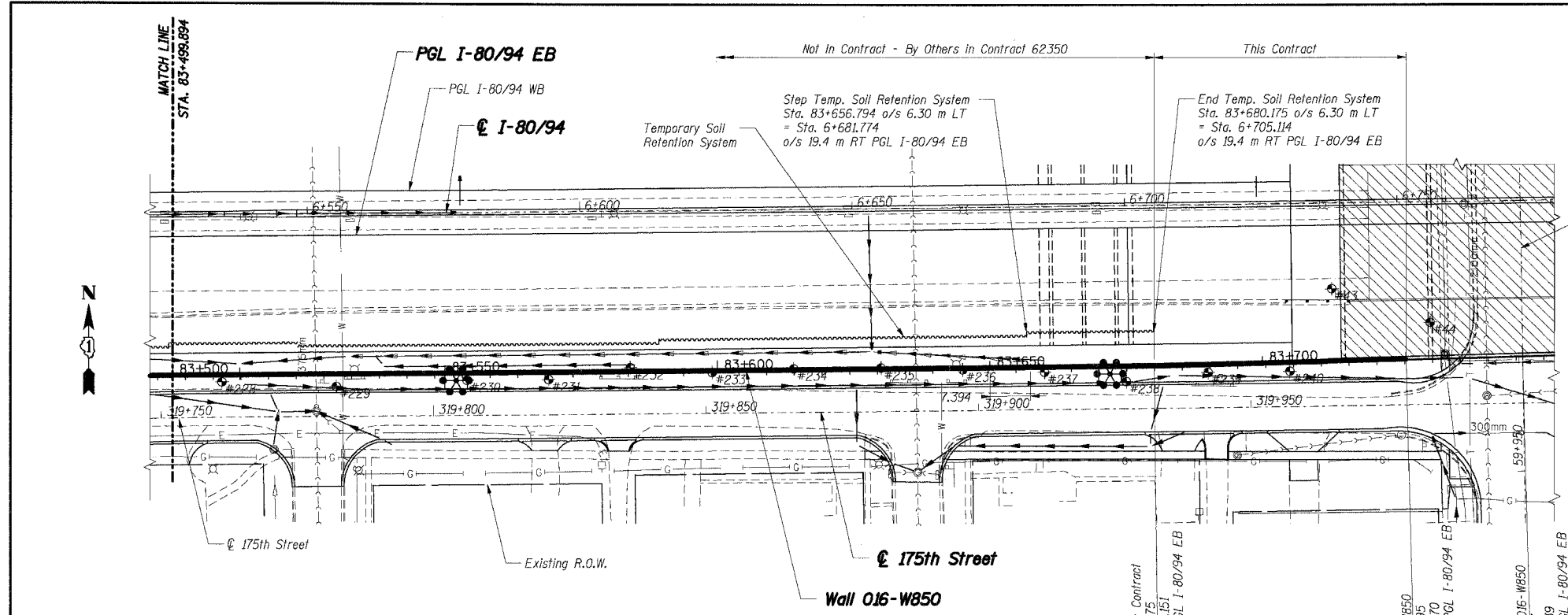
DRAWN BY: CHECKED BY: MJK

**TENG**  
ENGINEERS/ARCHITECTS/PLANNERS  
CHICAGO, ILLINOIS

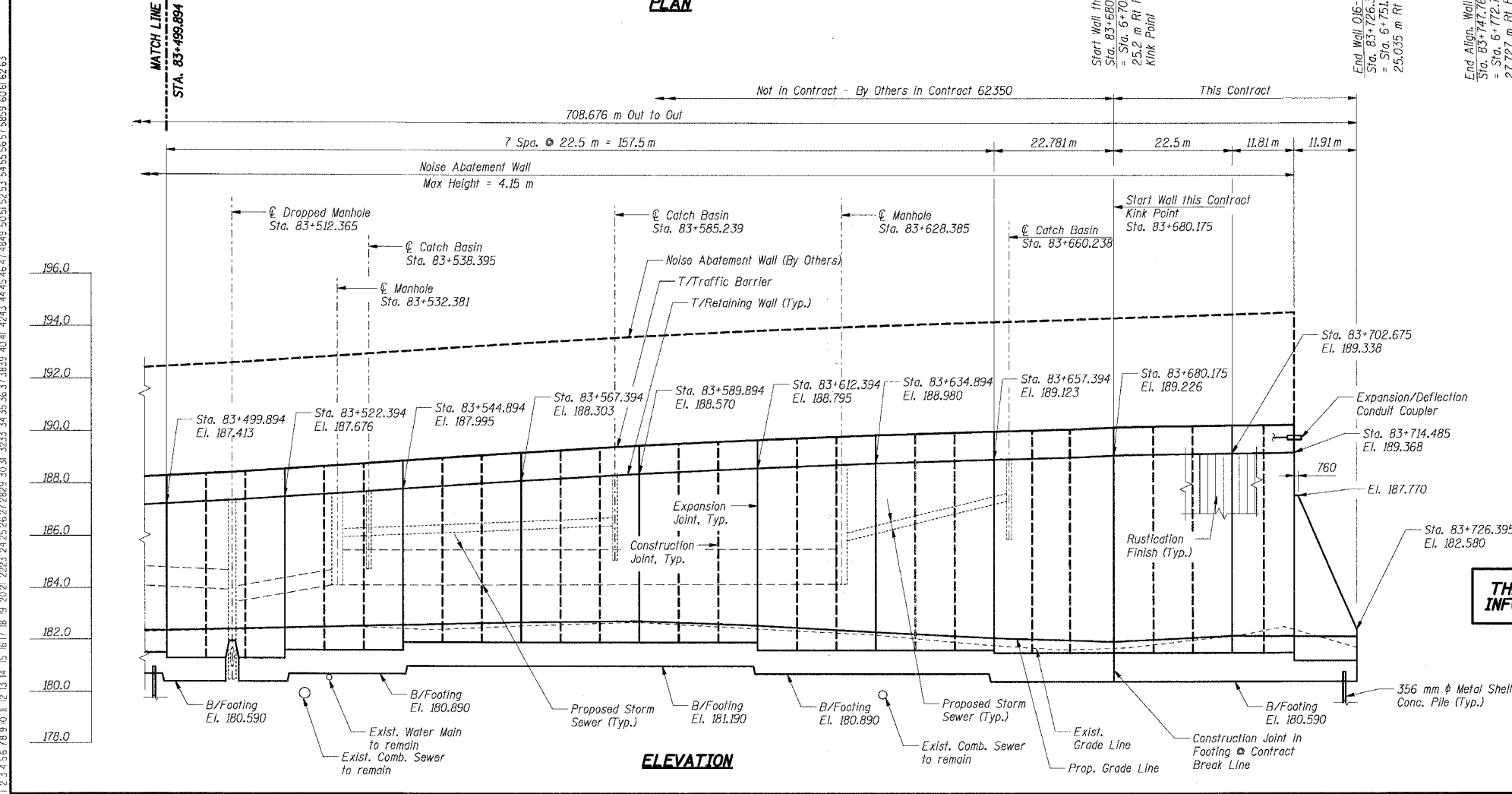
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	770
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62114



PLAN



ELEVATION

LEGEND

- High Mast Light Tower, (By Others, Contract No. 62664)
- Existing Storm Sewer
- Proposed Storm Sewer
- Existing Combined Sewer, See Note 5
- Soil Boring
- Proposed Manhole
- Proposed Catch Basin
- Proposed Inlet
- Rip Rap
- Proposed Retaining Wall
- Proposed Pavement
- Water Main, See Note 5
- Electric, See Note 5
- Telephone, See Note 5
- Proposed R.O.W.
- Existing R.O.W.
- Temporary Soil Retention System
- Proposed Bridge Structure S.N. 016-2791 Constructed in this Contract.

Notes:

1. All dimensions are measured along front face of retaining wall.
2. Wall alignment offsets are referenced to front face of wall
3. Work this sheet with RW850-1 and RW850-2.
4. See Sht. RW850-4 for Index of Sheets.
5. See Drainage Plans.

THIS SHEET FOR INFORMATION ONLY

SHT. RW850-3 OF 58

REVISIONS	
NAME	DATE

\*\*\* 2001-167R, (2425 & 2626) R-1 AND (2425 & 2626) R-2  
 ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 EB & WB INSIDE LANES (MAINLINE) CONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W850  
 SECTIONS \*\*\*  
 COOK COUNTY

GENERAL PLAN & ELEVATION III

DATE: 7/18/2005

DRAWN BY: MJK  
 CHECKED BY: MJK

TENG

TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

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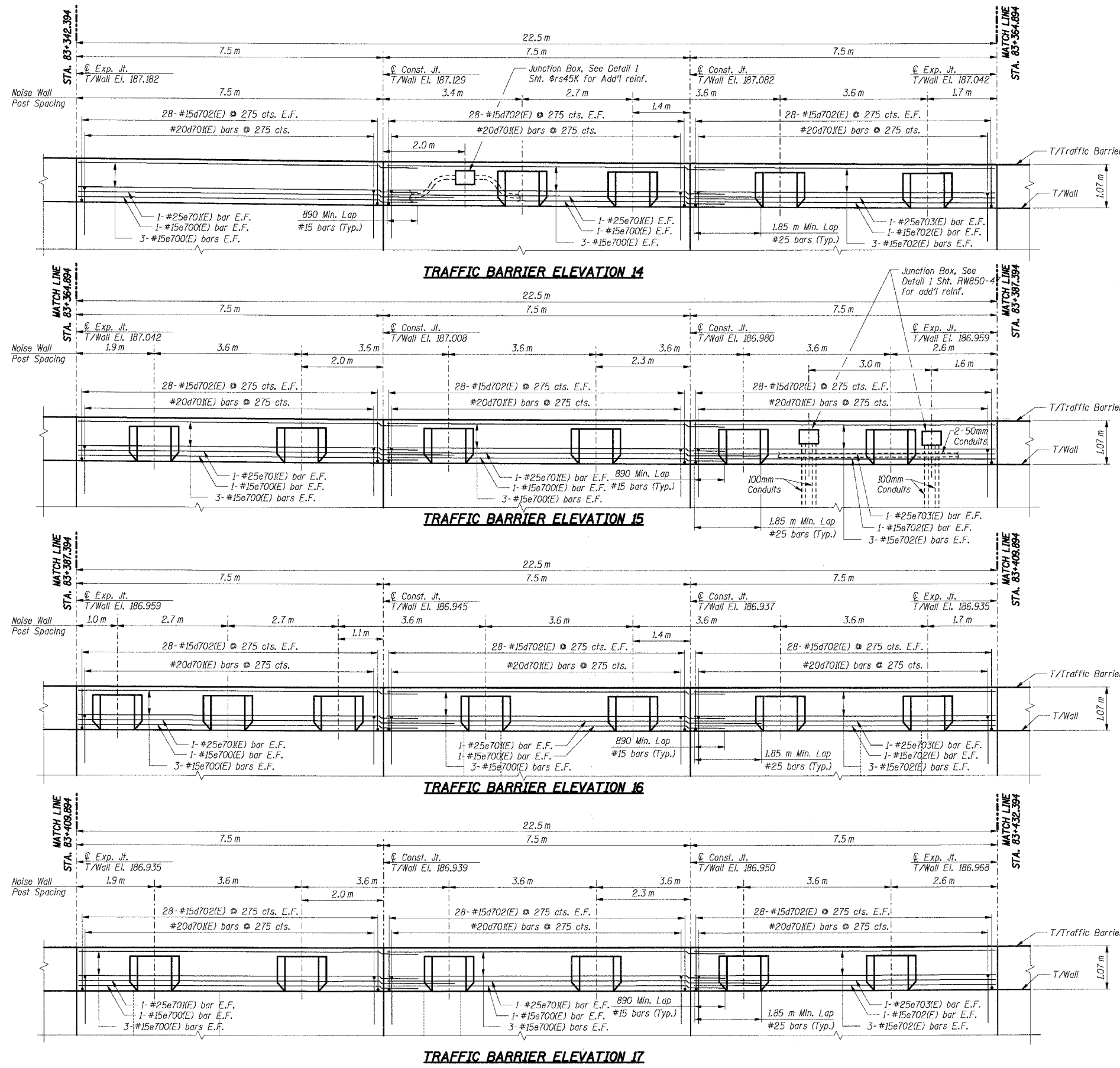
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80/94	2626.2-R-2	COOK	1207	771
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				

**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
d702(E)	696	#15	1.22	
d804(E)	161	#15	1.30	
e700(E)	64	#15	8.39	
e701(E)	16	#25	9.35	
e702(E)	32	#15	7.40	
e703(E)	8	#25	7.40	
e808(E)	69	#15	2.56	
e812(E)	23	#15	2.20	
e890(E)	12	#15	0.60	
u803(E)	161	#20	2.00	
Item	Unit	Total		
Concrete Structures	Cu m	41.7		
Reinforcement Bars, Epoxy Coated	kg	4,830		

For Bending Diagrams see Sht. RW850-47.

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**THIS SHEET FOR INFORMATION ONLY**

- Notes:**
1. All dimensions are in millimeters (mm) except as noted.
  2. All dimensions shown are along the front face of the retaining wall.
  3. All vertical bars in wall stem and traffic barrier start at 50 mm from construction and expansion joint, U.N.O.
  4. Reinforcement bars designated (E) shall be epoxy coated.
  5. All edges shall have a 20 mm chamfer unless noted otherwise.
  6. E.F. indicates each face, B.F. indicates back face.
  7. For Traffic Barrier details and Noise Wall Pilaster details see Sht. RW850-47.

SHT. RW850-37 OF 58

REVISIONS	
NAME	DATE

\*\*\* 2001-167R, (2425 & 2626) R-1 AND (2425 & 2626) R-2  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
LOCAL ROADS RECONSTRUCTION  
RETAINING WALL - STRUCTURE NO. 016-W850  
SECTIONS \*\*\*  
COOK COUNTY

**TRAFFIC BARRIER ELEVATION I**

DATE: 3/10/2004  
DRAWN BY: GS  
CHECKED BY: MK  
**TENG**  
TENG & ASSOCIATES, INC.  
ENGINEERS/ARCHITECTS/PLANNERS  
CHICAGO, ILLINOIS

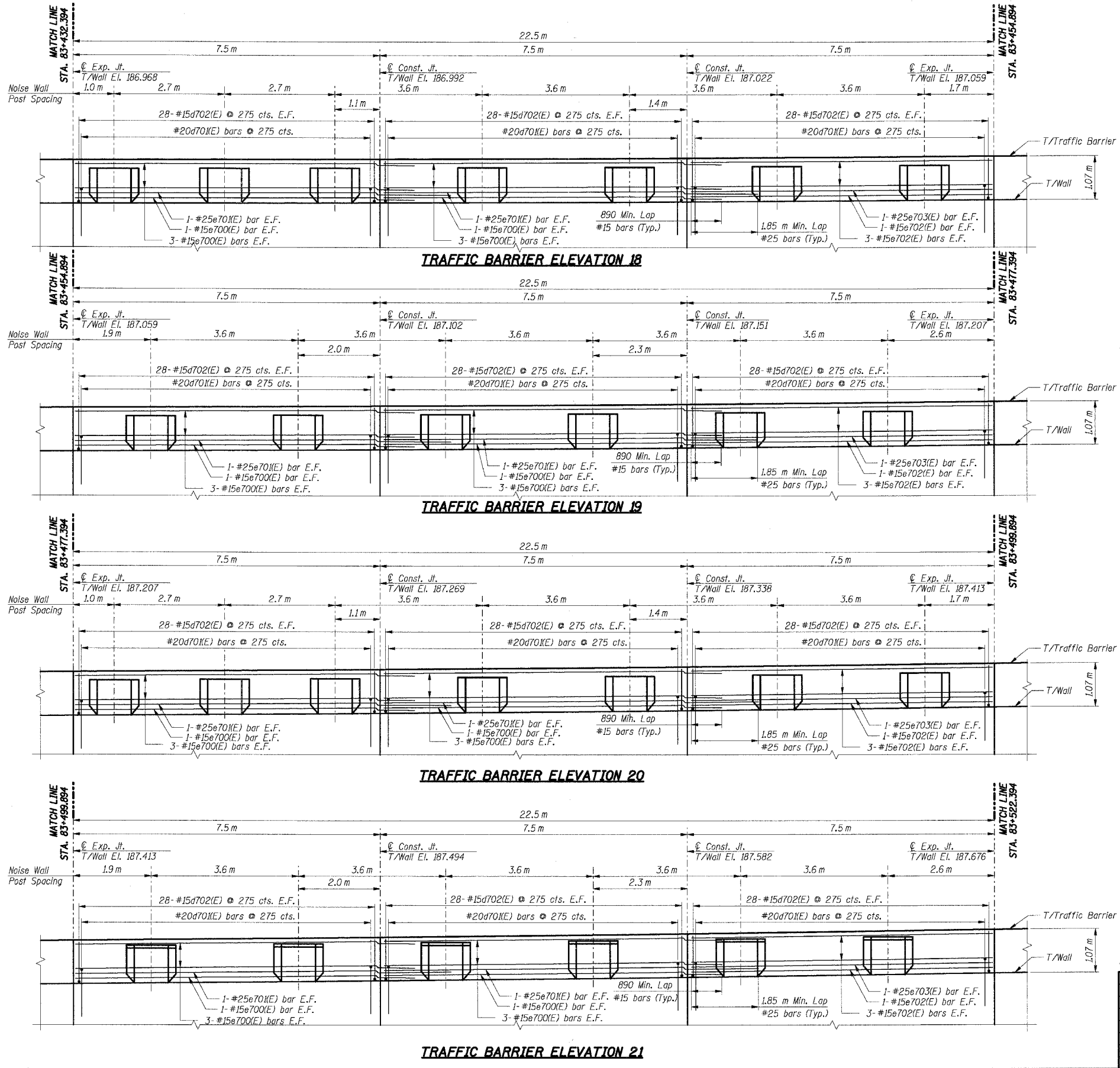
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	772
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				

**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
d702(E)	672	#15	1.22	
d804(E)	182	#15	1.30	
e700(E)	64	#15	8.39	
e701(E)	16	#25	9.35	
e702(E)	32	#15	7.40	
e703(E)	8	#25	7.40	
e808(E)	78	#15	2.56	
e812(E)	26	#15	2.20	
u803(E)	182	#20	2.00	
Item			Unit	Total
Concrete Structures			Cu m	42.6
Reinforcement Bars, Epoxy Coated			kg	4,960

For Bending Diagrams see Sht. RW850-47.



**THIS SHEET FOR  
INFORMATION ONLY**

- Notes:**
- 1. All dimensions are in millimeters (mm) except as noted.
  - 2. All dimensions shown are along the front face of the retaining wall.
  - 3. All vertical bars in wall stem and traffic barrier start at 50 mm from construction and expansion joint, U.N.O.
  - 4. Reinforcement bars designated (E) shall be epoxy coated.
  - 5. All edges shall have a 20 mm chamfer unless noted otherwise.
  - 6. E.F. indicates each face, B.F. indicates back face, F.F. indicates front face.
  - 7. For Traffic Barrier details and Noise Wall details see Sht. RW850-47.

SHT. RW850-38 OF 58

REVISIONS	
NAME	DATE

\*\*\* 2001-167R, (2425 & 2626) R-1 AND (2425 & 2626) R-2  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
LOCAL ROADS RECONSTRUCTION  
RETAINING WALL - STRUCTURE NO. 016-W850  
SECTIONS \*\*\*  
COOK COUNTY

**TRAFFIC BARRIER ELEVATION II**

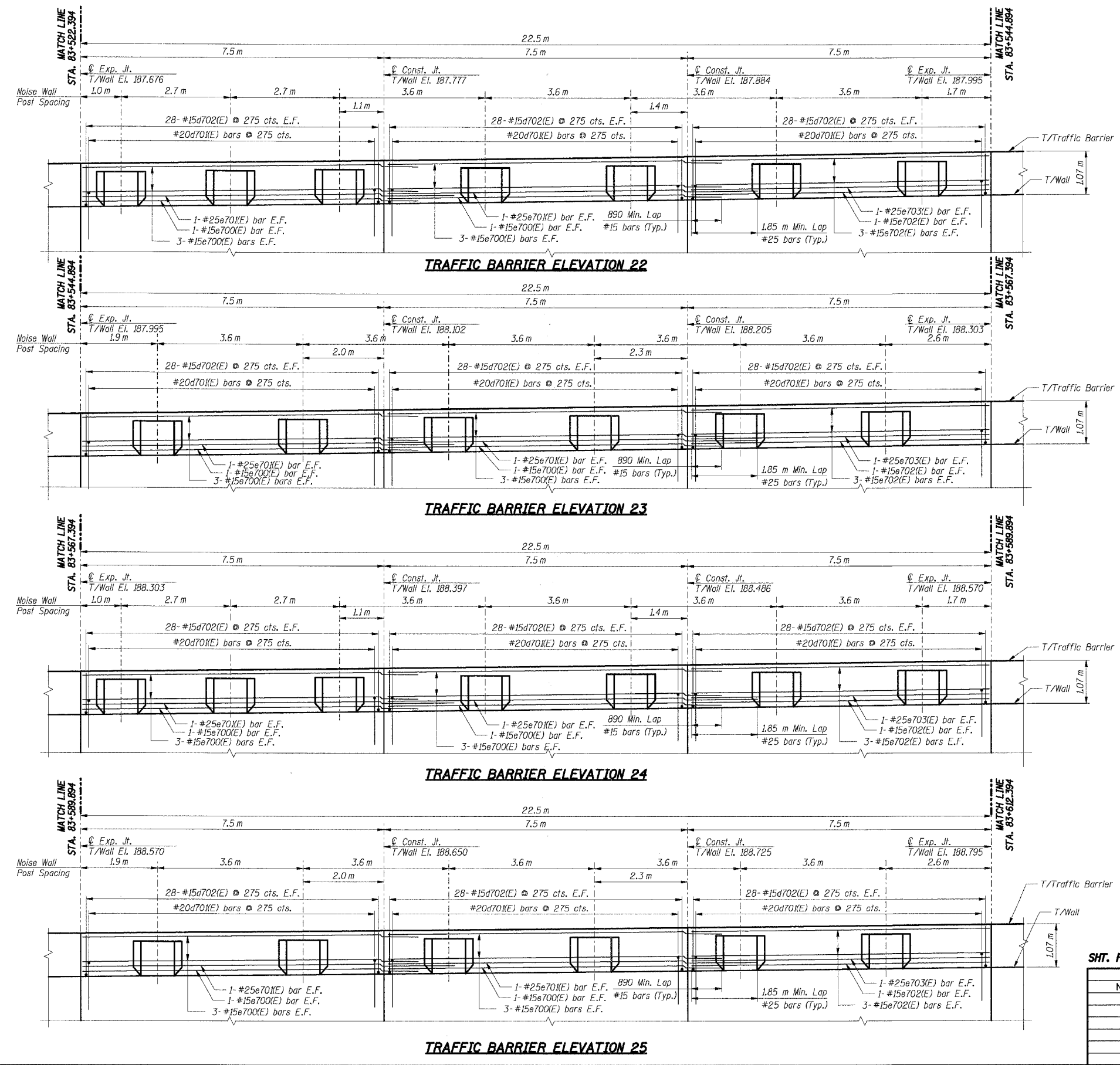
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DRAWN BY: GS  
CHECKED BY: MK  
**TENG**  
TENG & ASSOCIATES, INC.  
ENGINEERS/ARCHITECTS/PLANNERS  
CHICAGO, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	773
STA.	TO STA.		ILLINOIS FED. AID PROJECT	
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		CONTRACT NO. 62114	

**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
d702(E)	672	#15	1.22	┌
d804(E)	182	#15	1.30	┌
e700(E)	64	#15	8.39	—
e701(E)	16	#25	9.35	—
e702(E)	32	#15	7.40	—
e703(E)	8	#25	7.40	—
e808(E)	78	#15	2.56	┐
e812(E)	26	#15	2.20	┐
u803(E)	182	#20	2.00	┌
				<b>Item</b>
Concrete Structures				Cu m
Reinforcement Bars, Epoxy Coated				kg
				<b>Total</b>
				42.6
				4,960

For Bending Diagrams see Sht. RW850-47.



**THIS SHEET FOR INFORMATION ONLY**

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - All dimensions shown are along the front face of the retaining wall.
  - All vertical bars in wall stem and traffic barrier start at 50 mm from construction and expansion joint, U.N.O.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - E.F. indicates each face, B.F. indicates back face.
  - F.F. indicates front face.
  - For Traffic Barrier details and Noise Wall Plaster details see Sht. RW850-47.

SHT. RW850-39 OF 58

REVISIONS	
NAME	DATE

\*\*\* 2001-167R, (2425 & 2626) R-1 AND (2425 & 2626) R-2  
 ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 LOCAL ROADS RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W850  
 SECTIONS \*\*\*  
 COOK COUNTY

**TRAFFIC BARRIER ELEVATION III**

DATE: 3/10/2004  
 DRAWN BY: GS  
 CHECKED BY: MK  
**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

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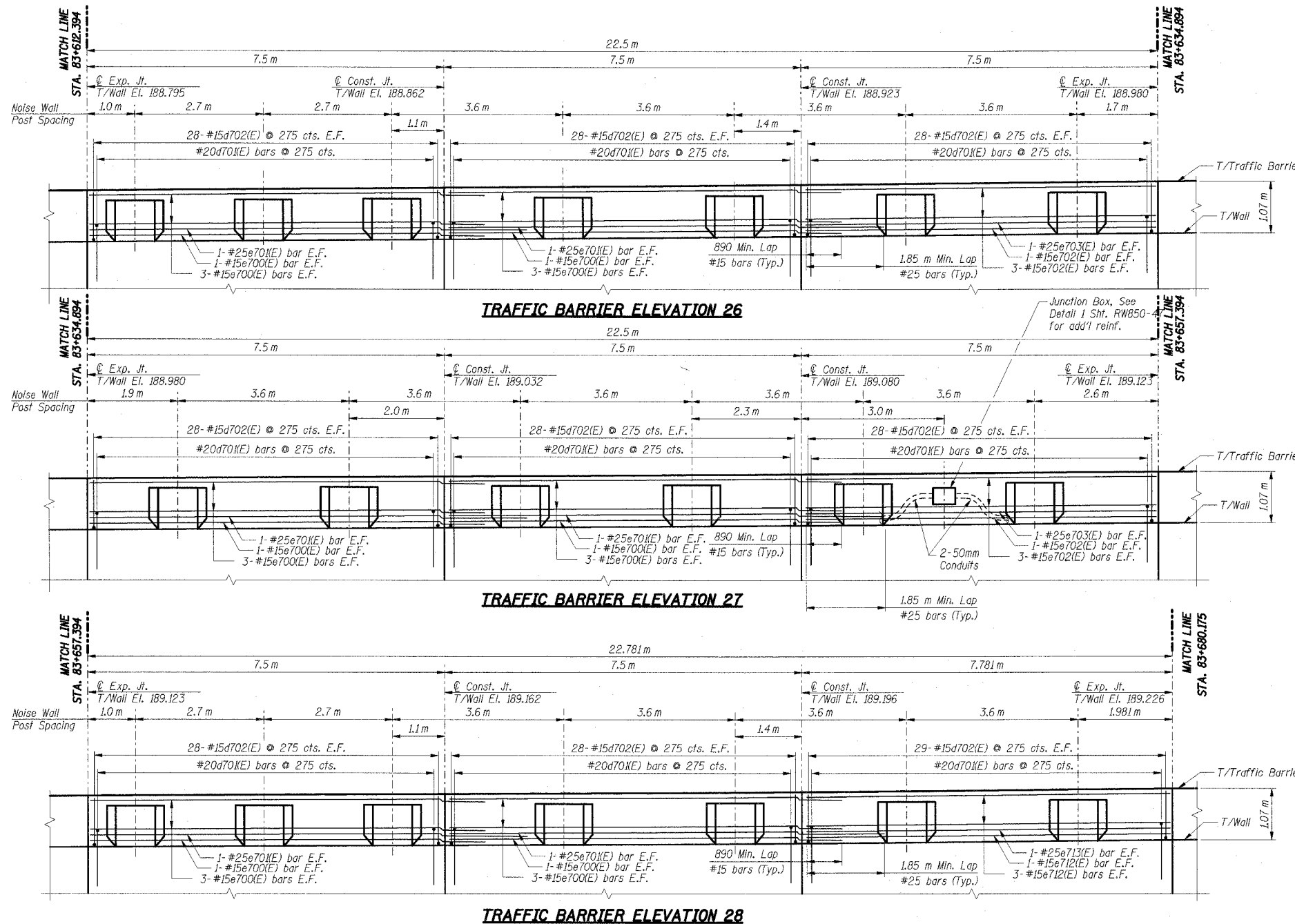
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	774
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62114

**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
d702(E)	514	#15	1.22	
d804(E)	140	#15	1.30	
e700(E)	48	#15	8.39	
e701(E)	12	#25	9.35	
e702(E)	16	#15	7.40	
e703(E)	4	#25	7.40	
e712(E)	8	#15	7.68	
e713(E)	2	#25	7.68	
e808(E)	60	#15	2.56	
e812(E)	20	#15	2.20	
e890(E)	4	#15	0.60	
u803(E)	140	#20	2.00	
<b>Item</b>			<b>Unit</b>	<b>Total</b>
Concrete Structures			Cu m	32.2
Reinforcement Bars, Epoxy Coated			kg	3,780

For Bending Diagrams see Sht. RW850-47.



**THIS SHEET FOR INFORMATION ONLY**

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - All dimensions shown are along the front face of the retaining wall.
  - All vertical bars in wall stem and traffic barrier start at 50 mm from construction and expansion joint, U.M.O.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - E.F. indicates each face, B.F. indicates back face, F.F. indicates front face.
  - For Traffic Barrier details and Noise Wall Pilaster details see Sht. RW850-47.

**SHT. RW850-40 OF 58**

REVISIONS	
NAME	DATE

\*\*\* 2001-167R, (2425 & 2626) R-1 AND (2425 & 2626) R-2

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 LOCAL ROADS RECONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W850  
 SECTIONS \*\*\*  
 COOK COUNTY

**TRAFFIC BARRIER ELEVATION IV**

DATE: 3/10/2004

DRAWN BY: GS  
 CHECKED BY: MK

**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

8115587.caf (sht\_rname) 11/11/04 10:55:56 AM  
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 8/11/2005 10:24:38  
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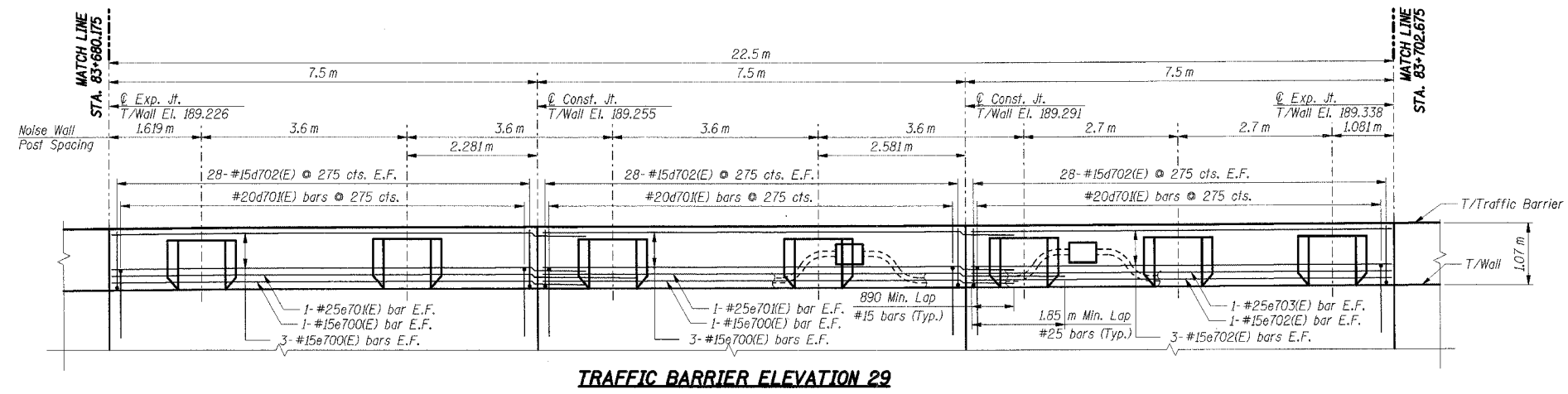
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	775
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62114

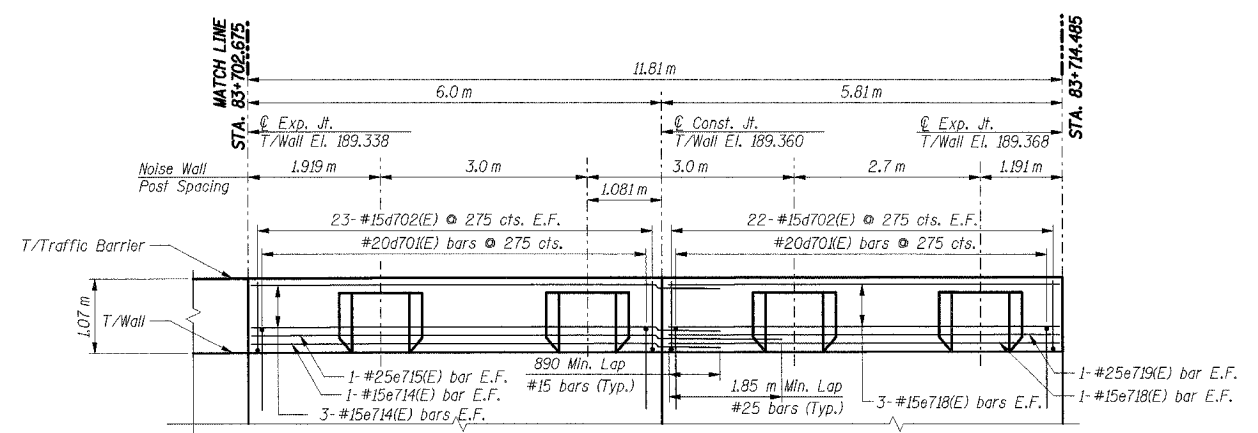
**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
d702(E)	258	#15	1.22	U
d804(E)	77	#15	1.30	U
e700(E)	16	#15	8.39	—
e701(E)	4	#25	9.35	—
e702(E)	8	#15	7.40	—
e703(E)	2	#25	7.40	—
e714(E)	8	#15	5.90	—
e715(E)	2	#25	5.90	—
e718(E)	8	#15	5.71	—
e719(E)	2	#25	5.71	—
e808(E)	33	#15	2.56	—
e812(E)	33	#15	2.20	—
u803(E)	77	#20	2.00	U
<b>Item</b>			<b>Unit</b>	<b>Total</b>
Concrete Structures			Cu m	16.6
Reinforcement Bars, Epoxy Coated			kg	2,010

For Bending Diagrams see Sht. RW850-47.



**TRAFFIC BARRIER ELEVATION 29**



**TRAFFIC BARRIER ELEVATION 30**

**THIS SHEET FOR INFORMATION ONLY**

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - All dimensions shown are along the front face of the retaining wall.
  - All vertical bars in wall stem and traffic barrier start at 50 mm from construction and expansion joint, U.N.O.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - E.F. indicates each face, B.F. indicates back face, F.F. indicates front face.
  - For Traffic Barrier details and Noise Wall Pillaster details see Sht. RW850-47.

SHT. RW850-41 OF 58

REVISIONS	
NAME	DATE

\*\*\* 2001-167R, (2425 & 2626) R-1 AND (2425 & 2626) R-2  
 ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 EB & WB INSIDE LANES (MAINLINE) CONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W850  
 SECTIONS \*\*\*  
 COOK COUNTY

**TRAFFIC BARRIER ELEVATION V**

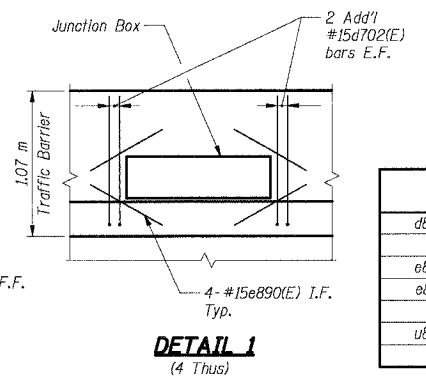
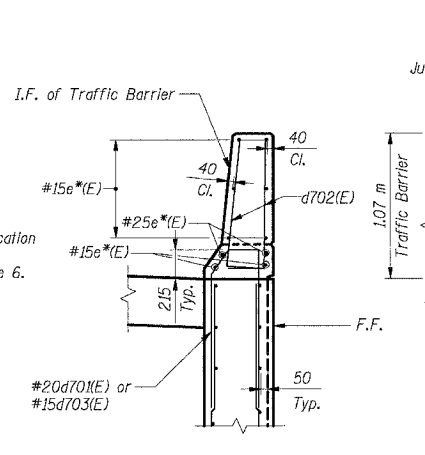
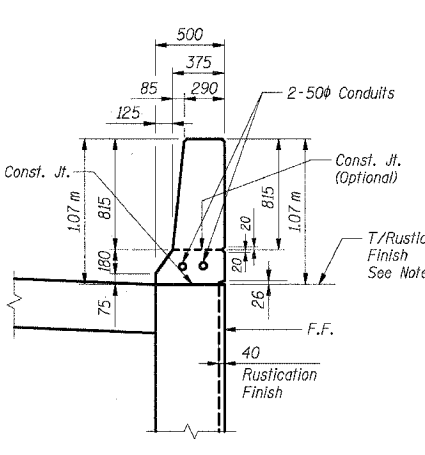
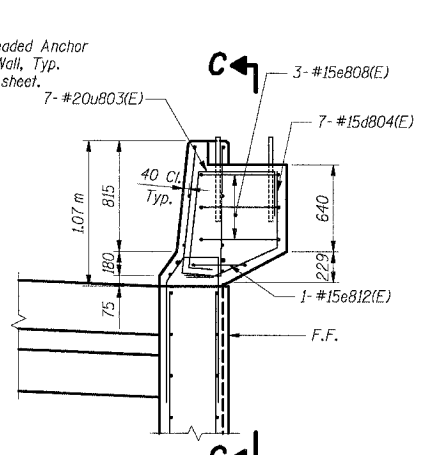
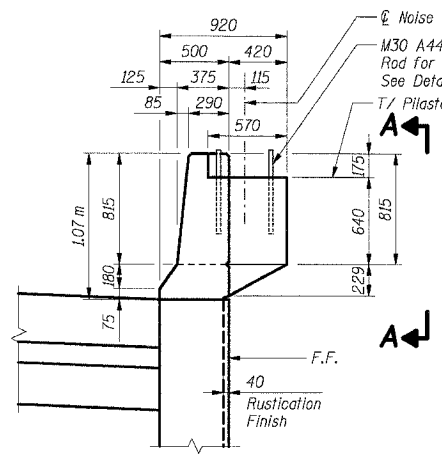
DATE: 7/18/2005  
 DRAWN BY: GS  
 CHECKED BY: MK

**TENG**  
 TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	776
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		CONTRACT NO. 62114	

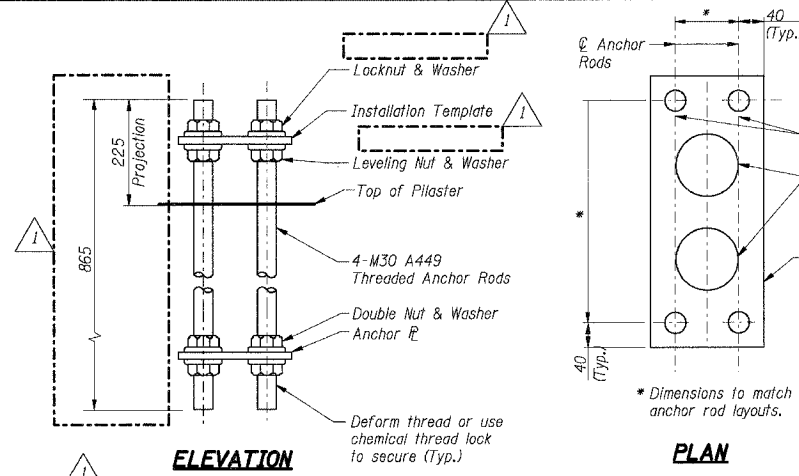
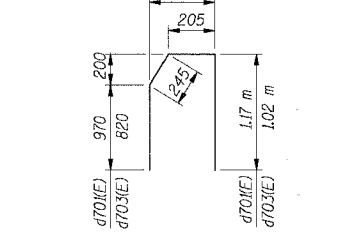
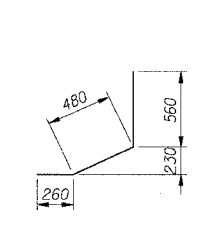
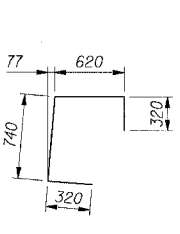
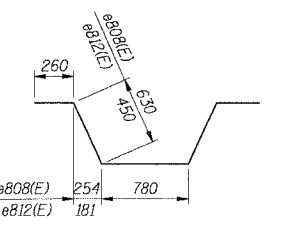
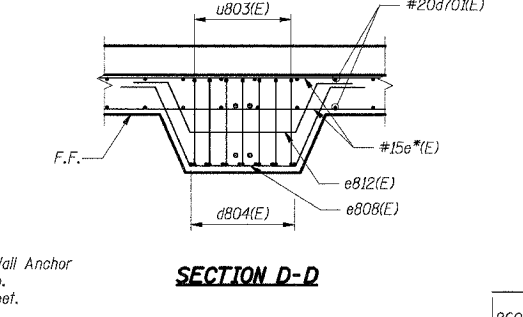
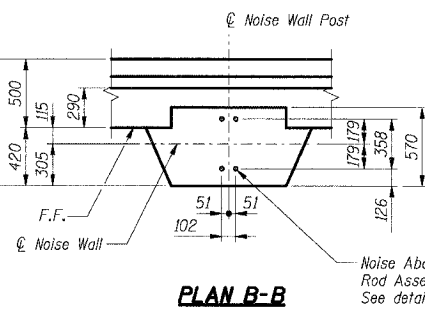
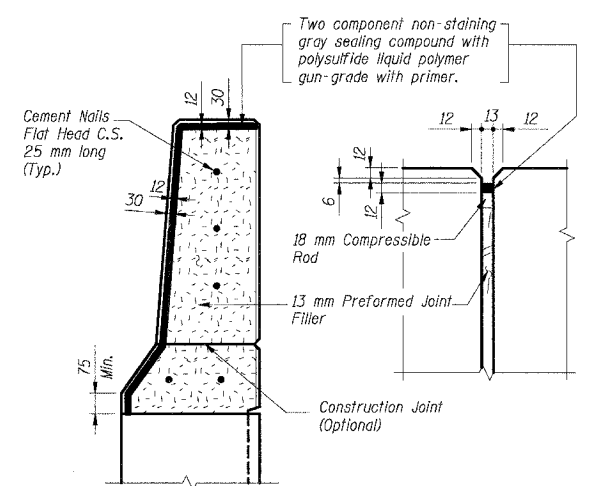
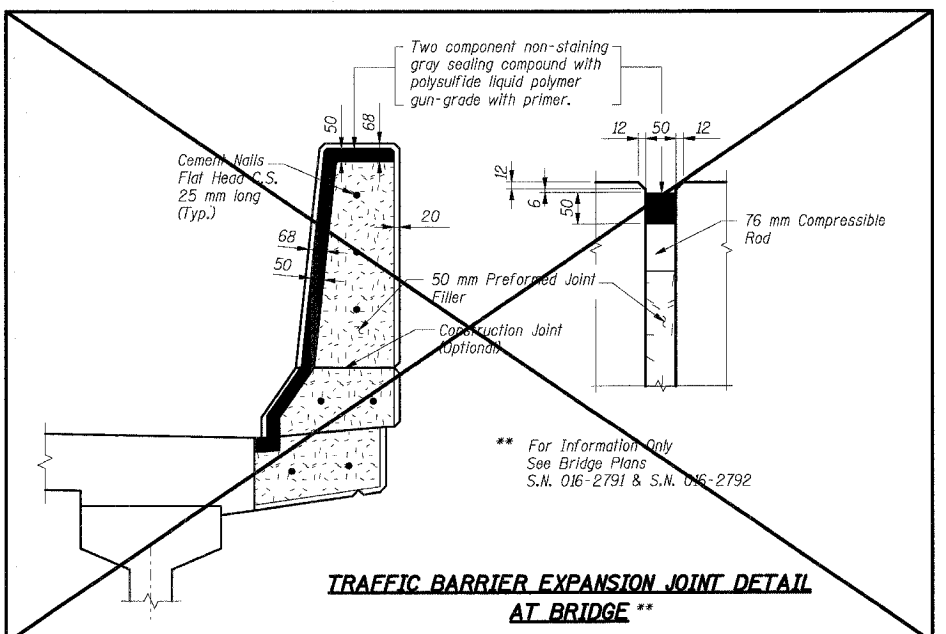
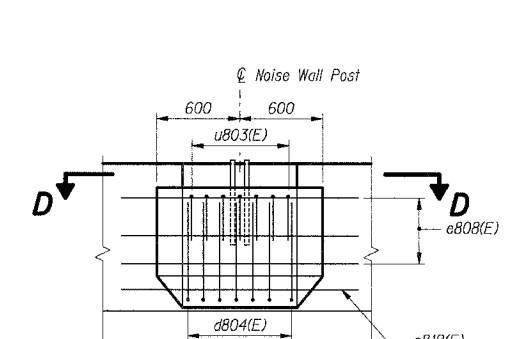
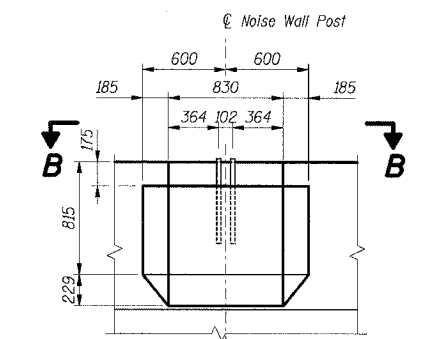


**BAR LIST FOR EACH PILASTER (FOR INFORMATION ONLY)**

Bar	No.	Size	Length (m)	Shape
d804(E)	7	#15	1.30	U
e808(E)	3	#15	2.56	W
e812(E)	1	#15	2.20	W
u803(E)	7	#20	2.00	L

**BILL OF MATERIAL**

Item	Unit	Total
Noise Abatement Wall Anchor Rod Assembly	Ea	95



**THIS SHEET FOR INFORMATION ONLY**

**SHT. RW850-47 OF 58**

REVISIONS	
NAME	DATE
MJK	5/25/04

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - E.F. indicates each face. B.F. indicates back face. F.F. indicates front face.
  - \*Indicates for location of bars, identification and quantity, see Footing Plans & Wall Elevations.
  - For Rustication Finish details, see Sht. RW850-49.

\*\*\* 2001-167R, (2425 & 2626) R-1 AND (2425 & 2626) R-2  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
LOCAL ROADS RECONSTRUCTION  
RETAINING WALL - STRUCTURE NO. 016-W850  
SECTIONS \*\*\*  
COOK COUNTY

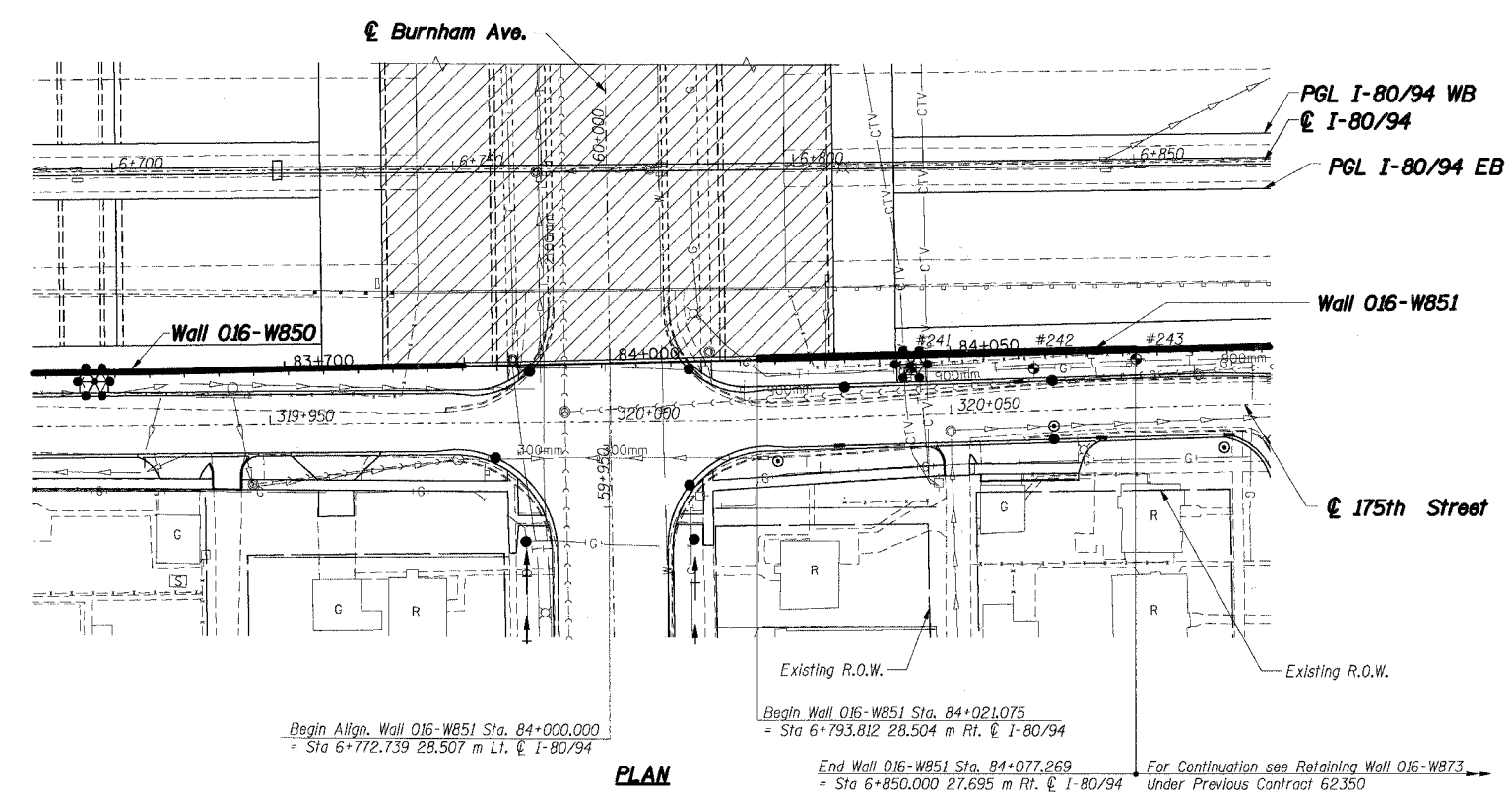
**TRAFFIC BARRIER SECTIONS & DETAILS**

DATE: 3/10/2004  
DRAWN BY: MJK  
CHECKED BY: MJK  
**TENG**  
ENGINEERS/ARCHITECTS/PLANNERS  
CHICAGO, ILLINOIS

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	777
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				



**LEGEND**

- \* High Mast Light Tower (By others, Contract No. 62664)
- Existing Storm Sewer
- Proposed Storm Sewer
- Existing Combined Sewer, see Drainage Plans
- #5 Soil Boring
- Proposed Manhole
- Proposed Manhole
- Proposed Catch Basin
- Proposed Inlet
- Proposed Retaining Wall
- Proposed Pavement
- W- Existing Water Main
- T- Existing Telephone
- G- Existing Gas
- CTV- Existing Cable Television
- Proposed R.O.W.
- Existing R.O.W.
- ▨ Proposed Bridge Structure S.N. 016-2791

**DESIGN SPECIFICATIONS:**  
1996 AASHTO Standard Specifications for Highway Bridges with 1997 thru 2000 and 2002 Interims.  
1989 AASHTO Guide Specifications for Structural Design of Sound Barriers with 1992 Interims.

**DESIGN LOADING:**  
Noise Abatement Wall:  
Wind Load: 1.7 kPa  
Limits: Sta. 84+032.985 to Sta. 84+077.269  
Design Height: 3.36m measured from Top of Retaining Wall

**DESIGN STRESSES:**  
Concrete, f'c: 24 MPa  
Reinforcement, fy: 400 MPa

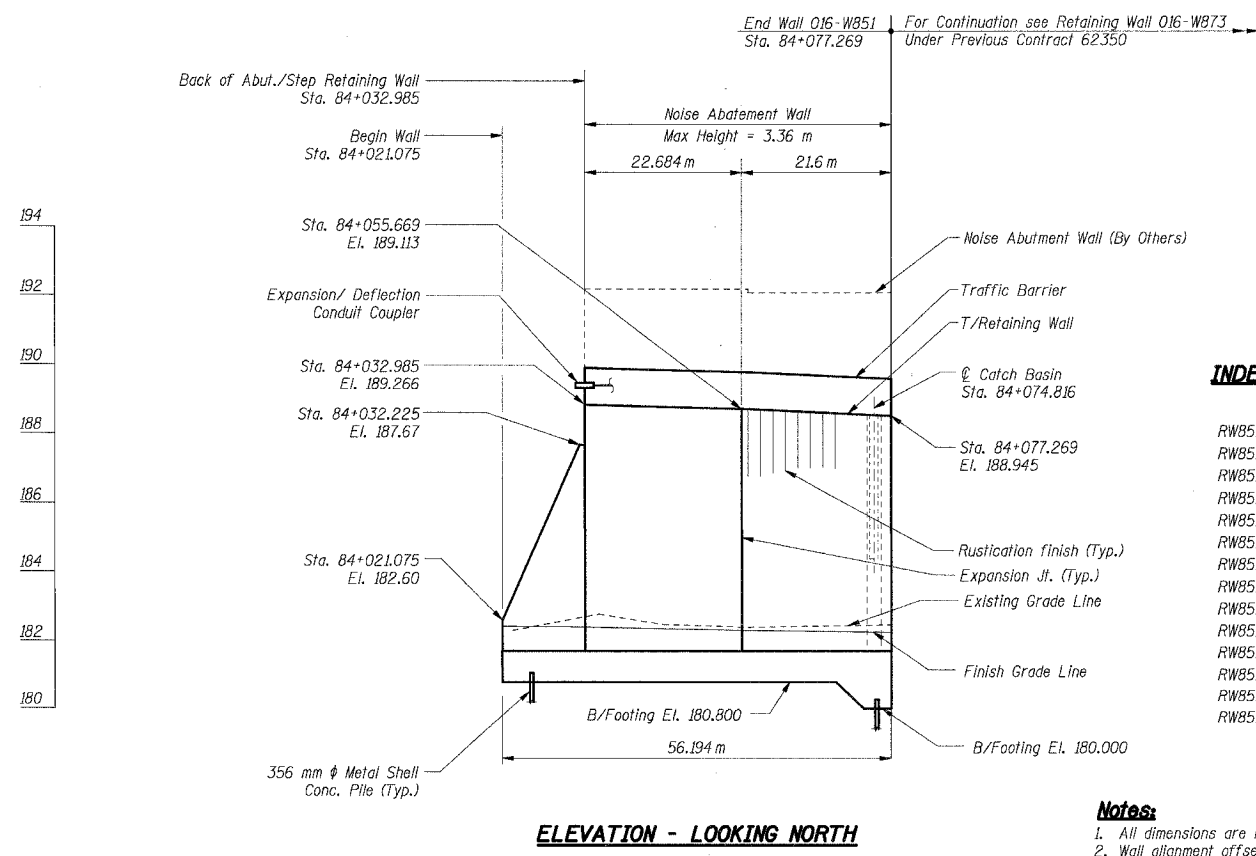
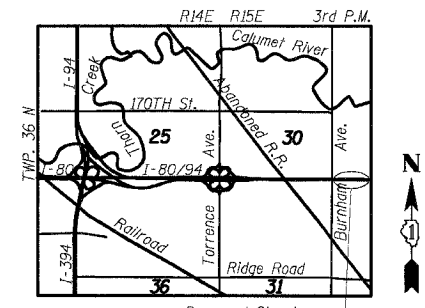
**BENCHMARK:**  
BM "6E" Square cut in northwest corner of the southwest handrail (J-Wall) at the southwest abutment of existing I-80 bridge over Burnham Ave. El. 187.309

**EXISTING STRUCTURE:**  
None

**TOTAL BILL OF MATERIAL**

Item	Unit	Total
Structure Excavation	Cu m	1,011
Test Pile Metal Shells	Each	1
Furnishing Metal Pile Shells 356mm	meter	2179.5
Driving and Filling Shells	meter	2179.5
Concrete Structures	Cu m	516.0
Reinforcement Bars, Epoxy Coated	kg	47,490
Protective Coat **	Sq m	488
Rustication Finish	Sq m	365
Geocomposite Wall Drain	Sq m	290
Pipe Underdrains for Structures 150mm	meter	56.5
Noise Abatement Wall Anchor Rod Assembly	Each	13

\*\*Note: See Shf. RW851-11 for limits of Protective Coat.



**INDEX OF SHEETS**

- RW851-1 GENERAL PLAN & ELEVATION INDEX OF SHEETS & TOTAL BILL OF MATERIAL
- RW851-2 TYPICAL WALL SECTION & GENERAL NOTES
- RW851-3 FOOTING PLAN & WALL ELEVATION 1
- RW851-4 FOOTING PLAN & WALL ELEVATION 2
- RW851-5 FOOTING PLAN & WALL ELEVATION 3
- RW851-6 TRAFFIC BARRIER ELEVATION
- RW851-7 WALL SECTIONS & DETAILS I
- RW851-8 WALL SECTIONS & DETAILS II
- RW851-9 WALL SECTIONS & DETAILS III
- RW851-10 TRAFFIC BARRIER SECTIONS & DETAILS
- RW851-11 DRAINAGE DETAILS & WALL REINFORCEMENT DETAILS
- RW851-12 RUSTICATION FINISH & JOINT DETAILS
- RW851-13 PILE DETAILS
- RW851-14 BORING LOGS

**Notes:**

1. All dimensions are measured along front face of retaining wall.
2. Wall alignment offsets are referenced to front face of wall.

**SHT. RW851-1 OF 14**

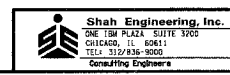
REVISIONS	
NAME	DATE

**THIS SHEET FOR INFORMATION ONLY**

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
EB & WB INSIDE LANES (MAINLINE) CONSTRUCTION  
RETAINING WALL - STRUCTURE NO. 016-W851  
SECTION (2425 & 2626) R-2  
COOK COUNTY

**GENERAL PLAN & ELEVATION INDEX OF SHEETS & TOTAL BILL OF MATERIAL**

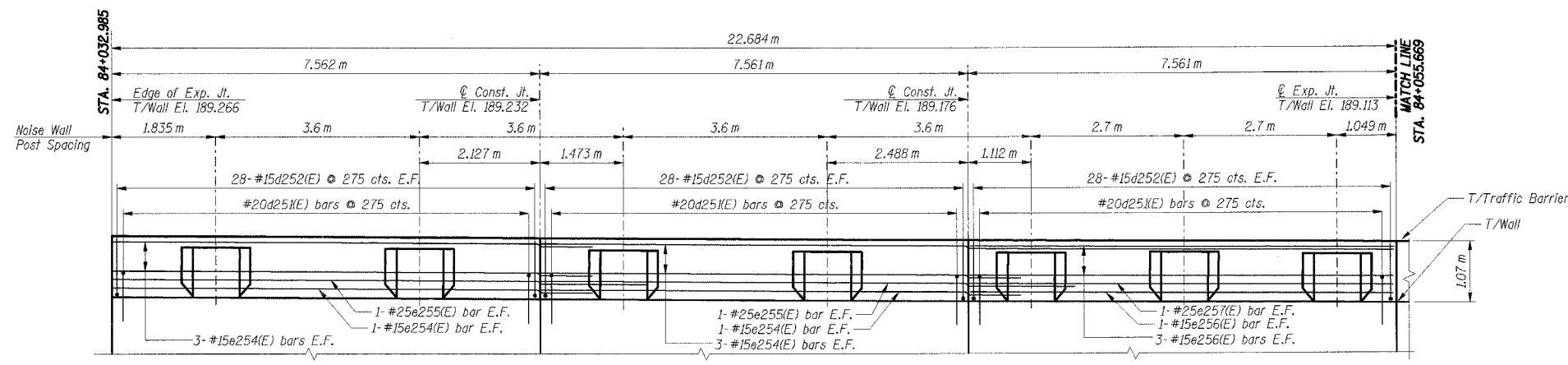
DATE: 7/18/2005  
DRAWN BY: LS  
CHECKED BY: MJK



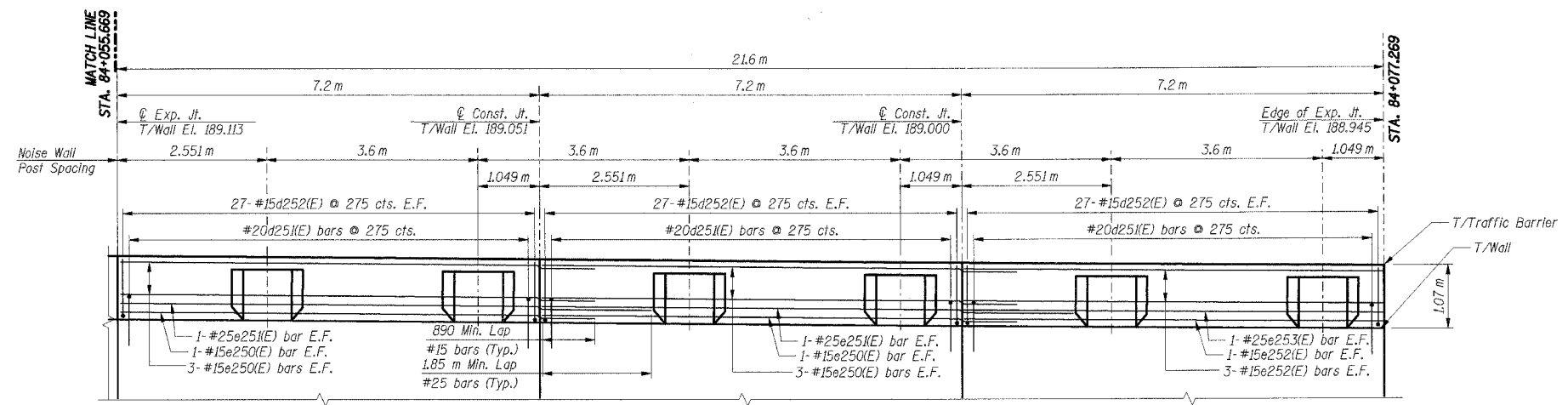
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	778
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62114



**TRAFFIC BARRIER ELEVATION 1 - LOOKING NORTH**



**TRAFFIC BARRIER ELEVATION 2 - LOOKING NORTH**

**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
d252(E)	330	#15	1.22	┌┐
d253(E)	91	#15	1.30	┌┐
e250(E)	16	#15	8.09	—
e251(E)	4	#25	9.05	—
e252(E)	8	#15	7.10	—
e253(E)	2	#25	7.10	—
e254(E)	16	#15	8.45	—
e255(E)	4	#25	9.41	—
e256(E)	8	#15	7.46	—
e257(E)	2	#25	7.46	—
e258(E)	39	#15	2.56	┌┐
e259(E)	13	#15	2.20	┌┐
u250(E)	91	#20	2.00	┌┐
<b>Item</b>		<b>Unit</b>	<b>Total</b>	
Concrete Structures		Cu m	20.9	
Reinforcement Bars, Epoxy Coated		kg	2,460	

For Bending Diagrams see Sht. RW851-10.

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - All dimensions shown are along the front face of the retaining wall.
  - All vertical bars in wall stem and traffic barrier start at 50 mm from construction and expansion joint, U.N.O.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - E.F. indicates each face, B.F. indicates back face, F.F. indicates front face.
  - For Traffic Barrier details and Noise Wall Pilaster details see Sht. RW851-10.

**THIS SHEET FOR INFORMATION ONLY**

SHT. RW851-6 OF 14

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 EB & WB INSIDE LANES (MAINLINE) CONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W851  
 SECTION (2425 & 2626) R-2  
 COOK COUNTY

**TRAFFIC BARRIER ELEVATION**

DATE: 7/18/2005  
 DRAWN BY: LS  
 CHECKED BY: MKJ



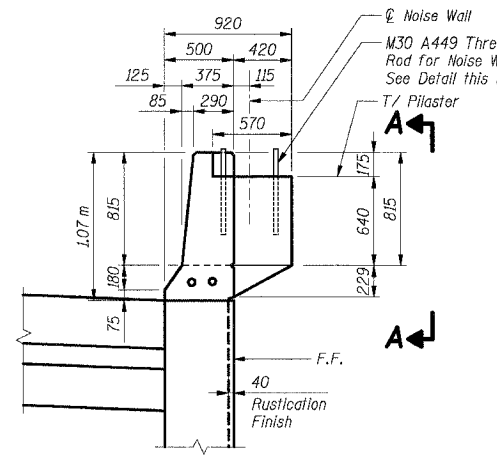
TENG & ASSOCIATES, INC.  
 ENGINEERS/ARCHITECTS/PLANNERS  
 CHICAGO, ILLINOIS



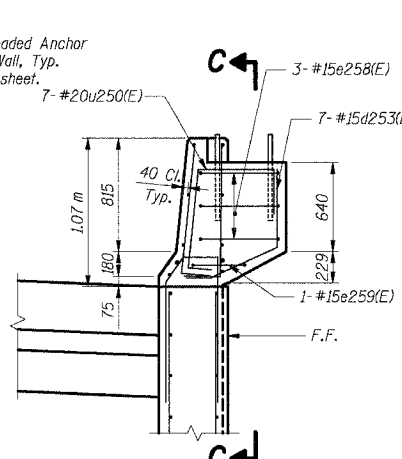
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 KUIENSTAU

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	779
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

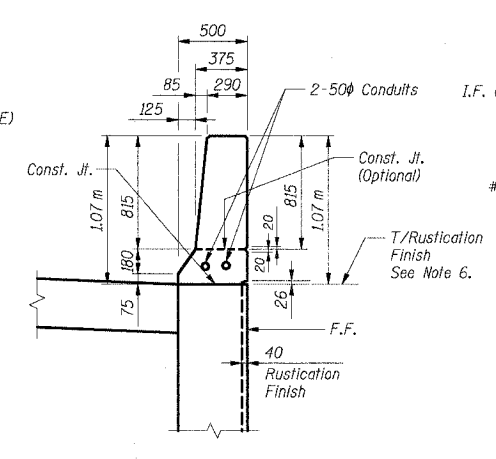
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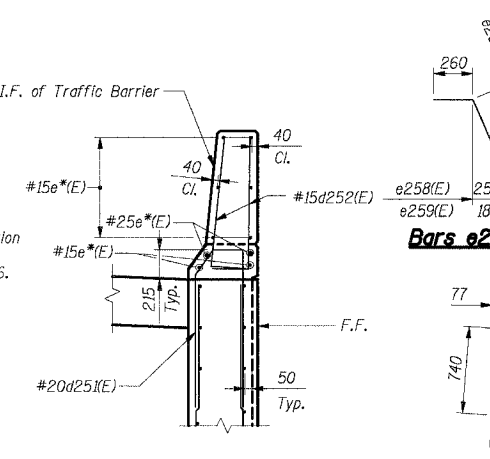
TRAFFIC BARRIER W/PILASTER



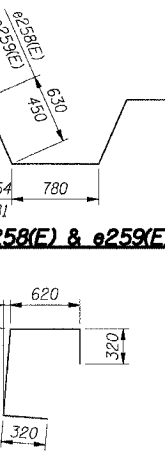
TRAFFIC BARRIER W/PILASTER (Showing Reinforcement)



TYPICAL TRAFFIC BARRIER SECTION



TYPICAL TRAFFIC BARRIER SECTION (Showing Reinforcement)



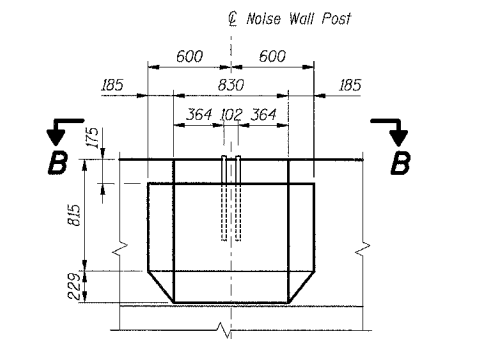
Bar u250(E)

**BAR LIST FOR EACH PILASTER (FOR INFORMATION ONLY)**

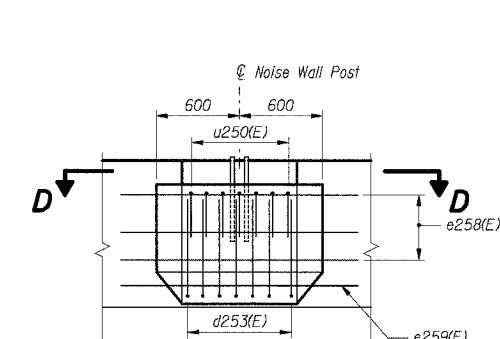
Bar	No.	Size	Length (m)	Shape
d253(E)	7	#15	1.30	U
e258(E)	3	#15	2.56	W
e259(E)	1	#15	2.20	W
u250(E)	7	#20	2.00	C

**BILL OF MATERIAL**

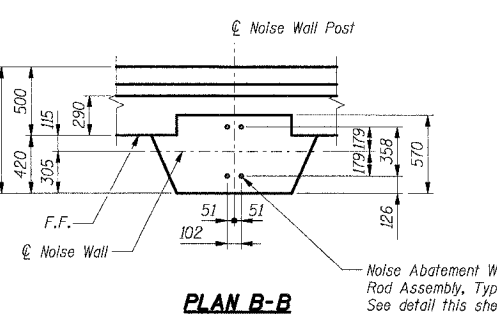
Item	Unit	Total
Noise Abatement Wall Anchor Rod Assembly	Ea	13



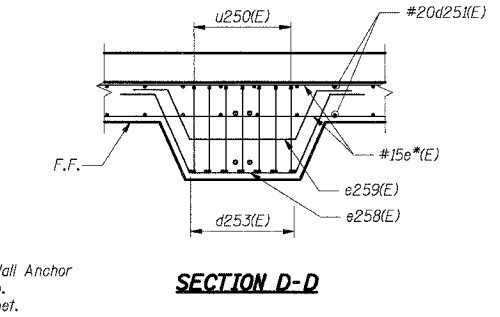
ELEVATION A-A



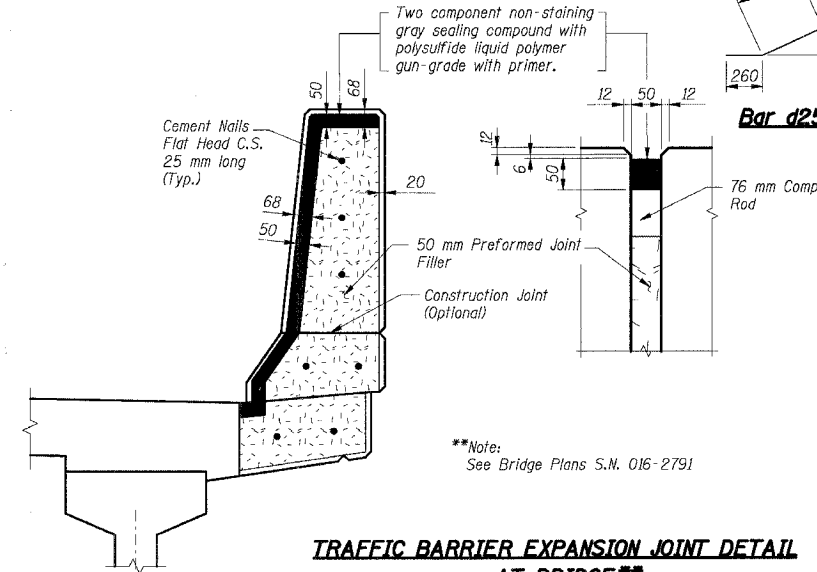
SECTION C-C



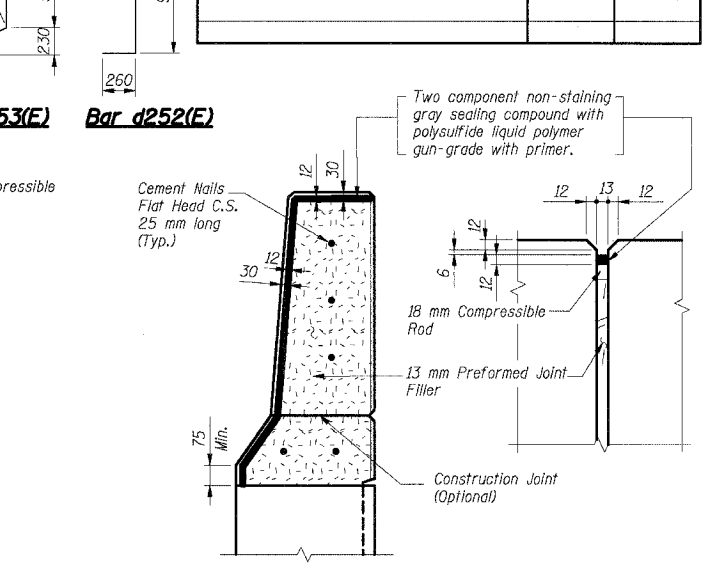
PLAN B-B



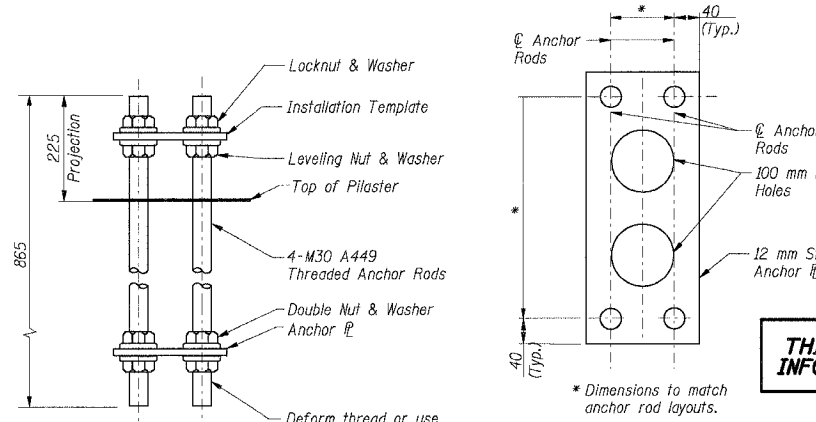
SECTION D-D



TRAFFIC BARRIER EXPANSION JOINT DETAIL AT BRIDGE\*\*



TYPICAL TRAFFIC BARRIER EXPANSION JOINT DETAIL



NOISE ABATEMENT WALL ANCHOR ROD ASSEMBLY (13 Required)

THIS SHEET FOR INFORMATION ONLY

REVISIONS	
NAME	DATE

- Notes:
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - E.F. indicates each face.
  - B.F. indicates back face.
  - F.F. indicates front face.
  - \*Indicates for location of bars, identification and quantity, see Footing Plans & Wall Elevations.
  - For Rustication Finish details, see Shf. #rs4U0.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
EB & WB INSIDE LANES (MAINLINE) CONSTRUCTION  
RETAINING WALL - STRUCTURE NO. 016-W851  
SECTION (2425 & 2626) R-2  
COOK COUNTY

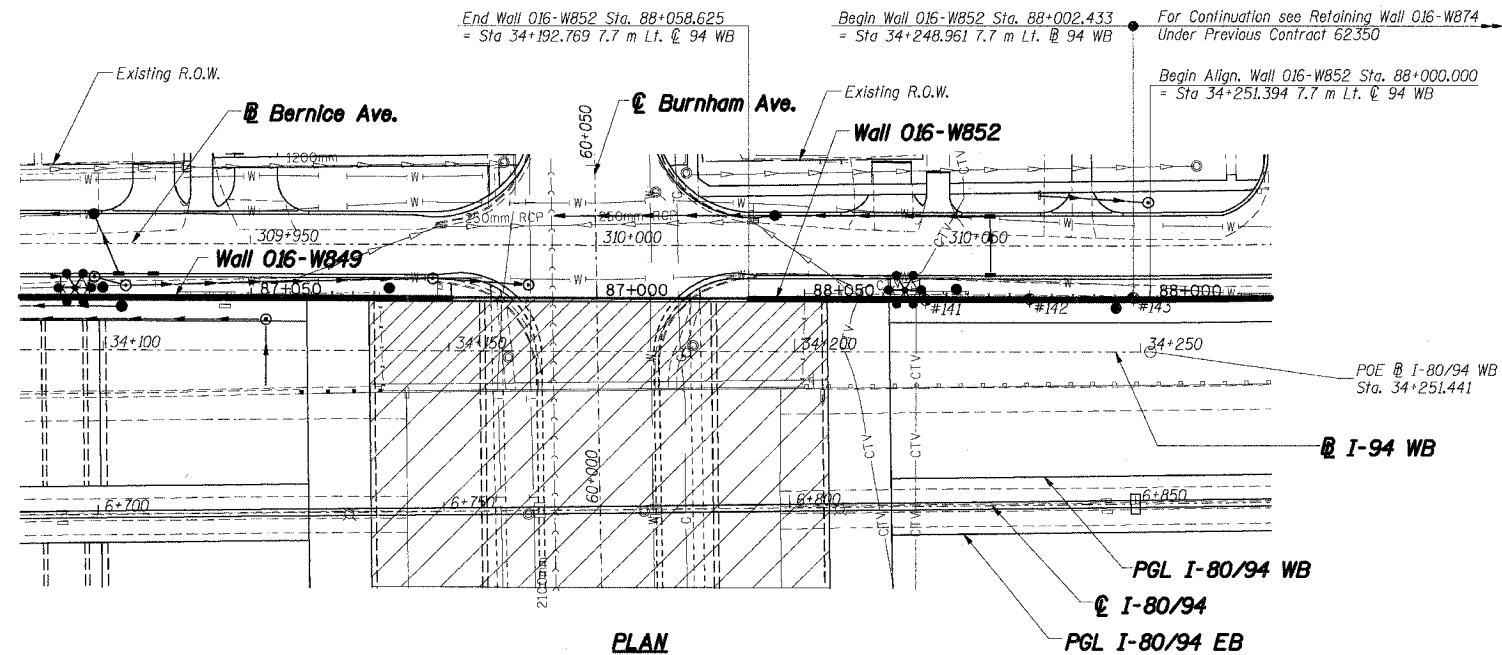
**TRAFFIC BARRIER SECTIONS & DETAILS**

DATE: 7/18/2005  
DRAWN BY: MJK  
CHECKED BY: MJK  
**TENG**  
TENGS & ASSOCIATES, INC.  
ENGINEERS/ARCHITECTS/PLANNERS  
CHICAGO, ILLINOIS



I:\DOCUMENTS\BRIDGE\STRUCT\DOWN\RS0402A.DGN  
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 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	780
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				



**LEGEND**

- \* High Mast Light Tower (By others, Contract No. 62664)
- Existing Storm Sewer
- Proposed Storm Sewer
- #5 Soil Boring
- Proposed Manhole
- Proposed Manhole
- ▭ Proposed Catch Basin
- ▭ Proposed Inlet
- ▭ Proposed Retaining Wall
- ▭ Proposed Pavement
- W- Existing Water Main, See Drainage Plans
- T- Existing Telephone
- G- Existing Gas, See Drainage Plans
- CTV- Existing Cable Television
- Proposed R.O.W.
- Existing R.O.W.
- ▨ Proposed Bridge Structure Constructed in this Contract
- ▨ Proposed Bridge Structure Constructed in Future Contract

**DESIGN SPECIFICATIONS:**

1996 AASHTO Standard Specifications for Highway Bridges with 1997 thru 2000 and 2002 Interims.

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

**DESIGN LOADING:**

Noise Abatement Wall:  
Wind Load: 1.7 kPa  
Limits: Sta. 88+002.433 to Sta. 88+046.715  
Design Height: 2.86m measured from Top of Retaining Wall

**DESIGN STRESSES:**

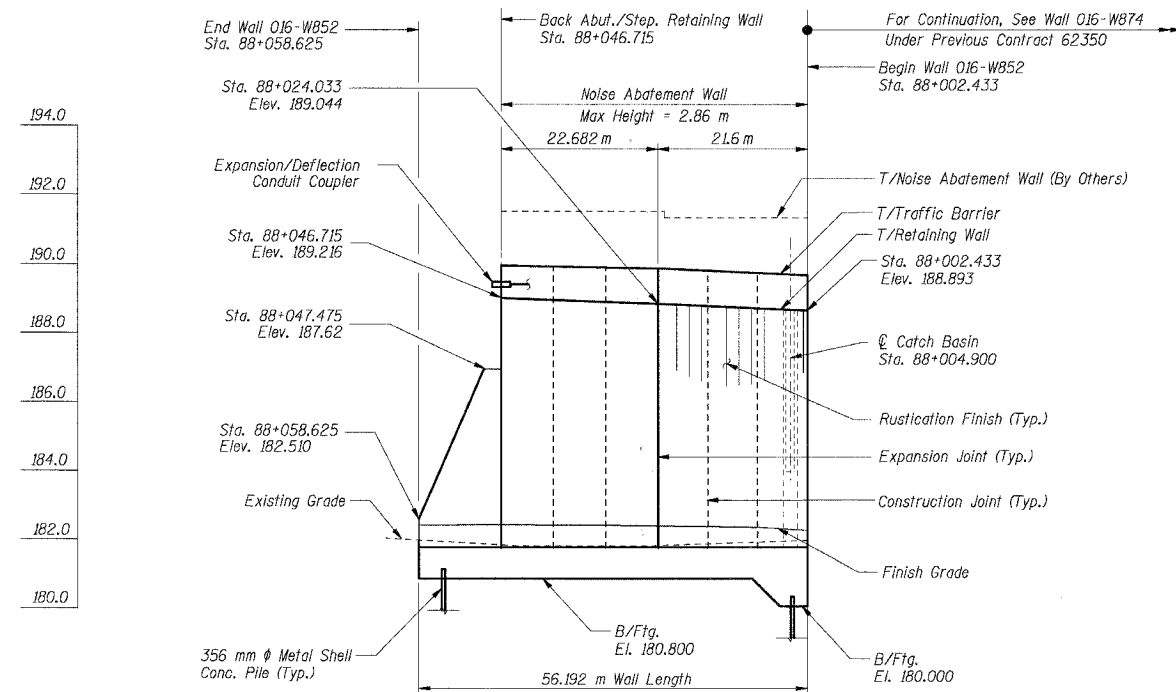
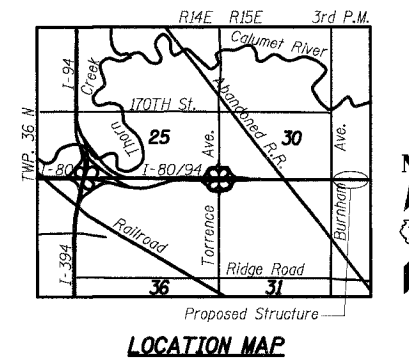
Concrete, f'c: 24 MPa  
Reinforcement, fy: 400 MPa

**BENCHMARK:**

BM "6E" Square cut in northwest corner of the southwest abutment (J-Wall) at the southwest abutment of existing I-80 bridge over Burnham Ave. El. 187.309

**EXISTING STRUCTURE:**

None



**Notes:**

1. All dimensions are measured along front face of retaining wall.
2. Wall alignment offsets are referenced to front face of wall.
3. See Sht. RW852-2 for Index of Sheets.

**THIS SHEET FOR INFORMATION ONLY**

SHT. RW852-1 OF 14

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
EB & WB OUTSIDE LANES (MAINLINE) CONSTRUCTION  
RETAINING WALL - STRUCTURE NO. 016-W852  
SECTION (2425 & 2626) R-1  
COOK COUNTY

**GENERAL PLAN & ELEVATION**

DATE: 8/18/2004

DRAWN BY: MJK  
CHECKED BY: MJK

**TENG**

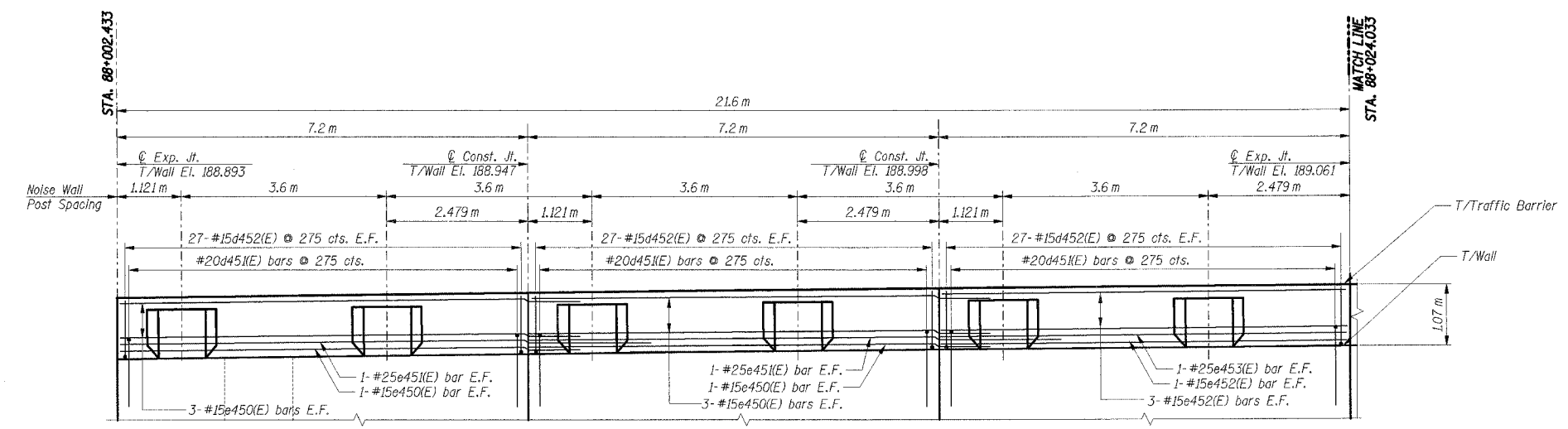
TENG & ASSOCIATES, INC.  
ENGINEERS/ARCHITECTS/PLANNERS  
CHICAGO, ILLINOIS



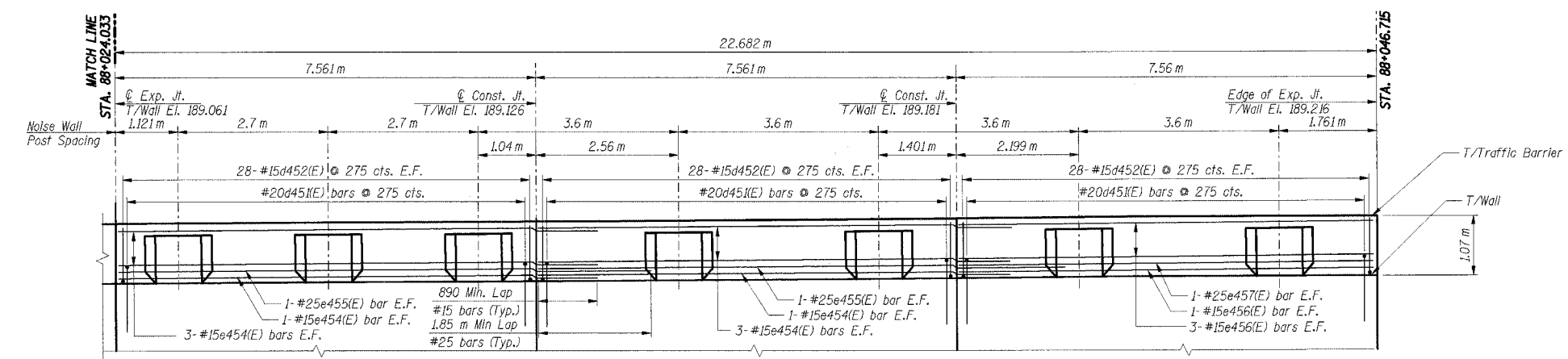
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	781
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 62114



**TRAFFIC BARRIER ELEVATION 1 - LOOKING SOUTH**



**TRAFFIC BARRIER ELEVATION 2 - LOOKING SOUTH**

**BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
d452(E)	330	#15	1.22	U
d453(E)	91	#15	1.30	U
e450(E)	16	#15	8.09	—
e451(E)	4	#25	9.05	—
e452(E)	8	#15	7.10	—
e453(E)	2	#25	7.10	—
e454(E)	16	#15	8.45	—
e455(E)	4	#25	9.41	—
e456(E)	8	#15	7.46	—
e457(E)	2	#25	7.46	—
e458(E)	39	#15	2.56	—
e459(E)	13	#15	2.20	—
u450(E)	91	#20	2.00	U
<b>Item</b>		<b>Unit</b>	<b>Total</b>	
Concrete Structures		Cu m	20.9	
Reinforcement Bars, Epoxy Coated		kg	2,460	

\* For Bending Diagrams see Sheet RW852-10.

K:\ENSTUJ\11\2005\1652\40\1\2\13\14\15\16\17\18\19\2021\2223\2425\2627\2829\30\31\32\33\34\35\36\37\38\39\40\41\42\43\44\45\46\47\48\49\50\51\52\53\54\55\56\57\58\59\60\61\62\63  
 T:\DOCUMENTS\1501\STRUCT\CON\RS0827\A.DOC  
 8/11/2005, 16:26:40

- Notes:**
- All dimensions are in millimeters (mm) except as noted.
  - All dimensions shown are along the front face of the retaining wall.
  - All vertical bars in wall stem and traffic barrier start at 50 mm from construction and expansion joint, U.N.O.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - E.F. Indicates each face, B.F. Indicates back face, F.F. Indicates front face.
  - For Traffic Barrier details and Noise Wall Pilaster details see Sh. RW852-10.

**THIS SHEET FOR INFORMATION ONLY**

SHT. RW852-6 OF 14

REVISIONS	
NAME	DATE

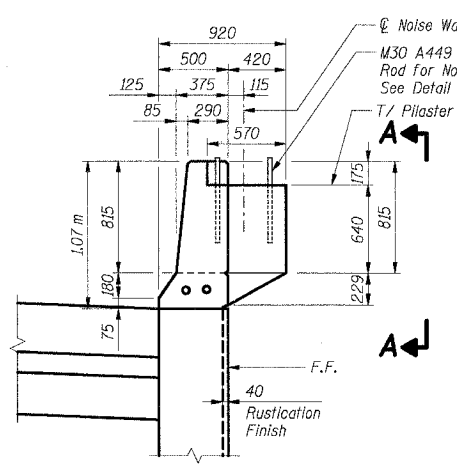
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
 EB & WB OUTSIDE LANES (MAINLINE) CONSTRUCTION  
 RETAINING WALL - STRUCTURE NO. 016-W852  
 SECTION (2425 & 2626) R-1  
 COOK COUNTY

**TRAFFIC BARRIER ELEVATION**

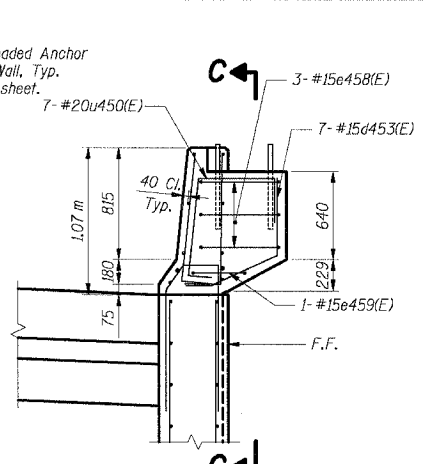
DATE: 8/18/2004  
 DRAWN BY: MJK  
 CHECKED BY: MJK



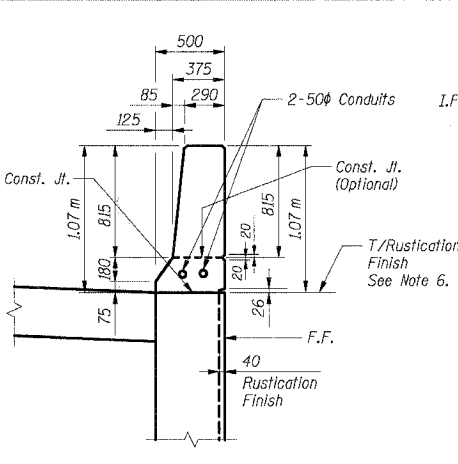
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	2626.2-R-2	COOK	1207	782
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 62114				



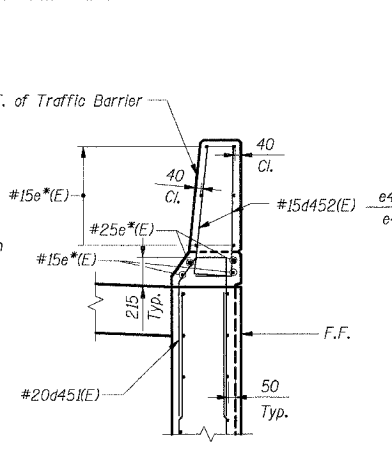
**TRAFFIC BARRIER W/PILASTER**



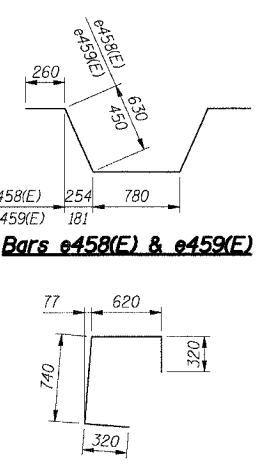
**TRAFFIC BARRIER W/PILASTER**  
(Showing Reinforcement)



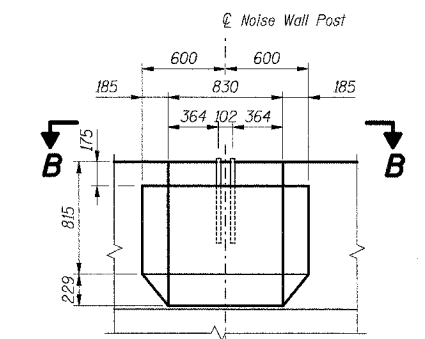
**TYPICAL TRAFFIC BARRIER SECTION**



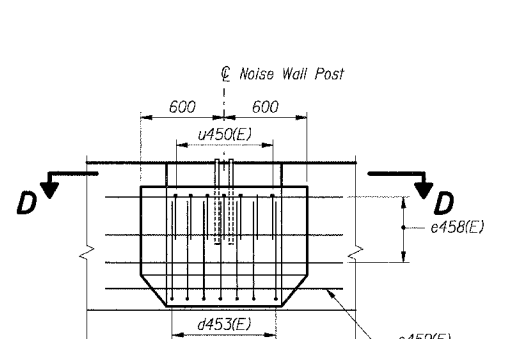
**TYPICAL TRAFFIC BARRIER SECTION**  
(Showing Reinforcement)



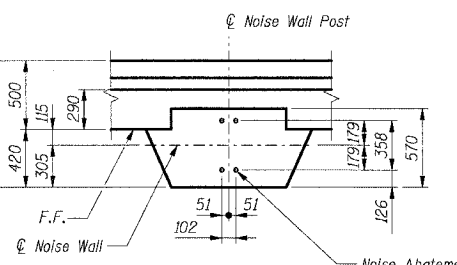
**Bar u450(E)**



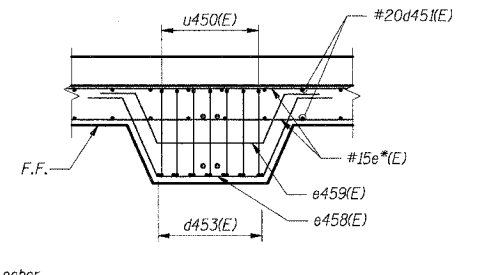
**ELEVATION A-A**



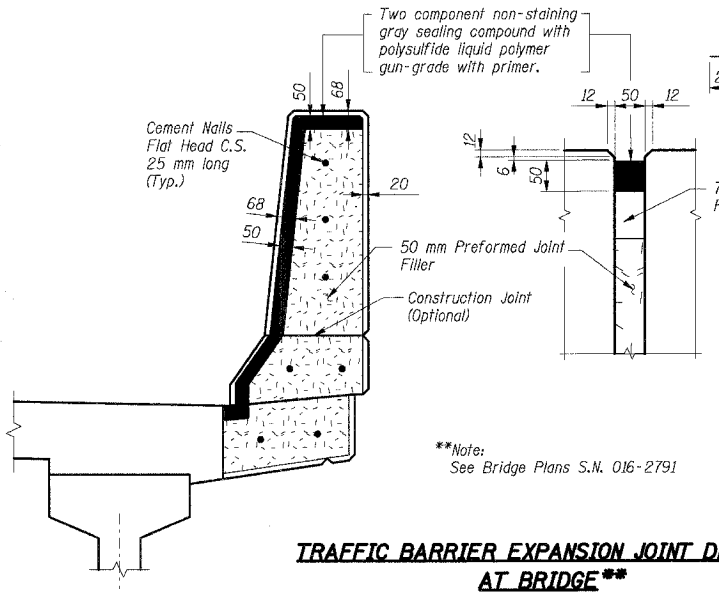
**SECTION C-C**



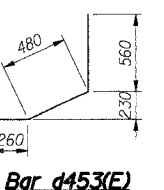
**PLAN B-B**



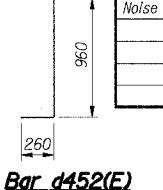
**SECTION D-D**



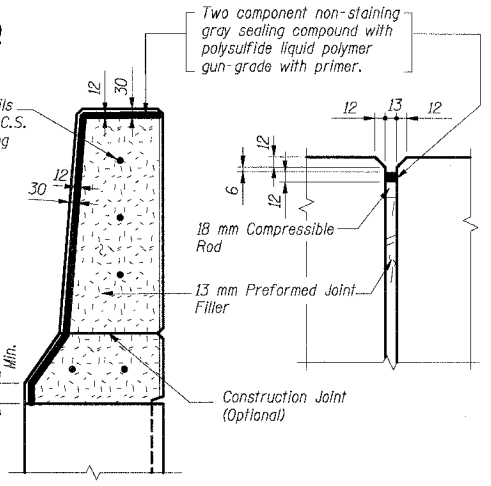
**TRAFFIC BARRIER EXPANSION JOINT DETAIL AT BRIDGE\*\***



**Bar d453(E)**

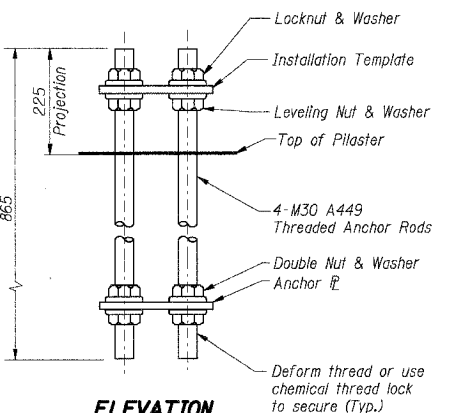


**Bar d452(E)**



**TYPICAL TRAFFIC BARRIER EXPANSION JOINT DETAIL**

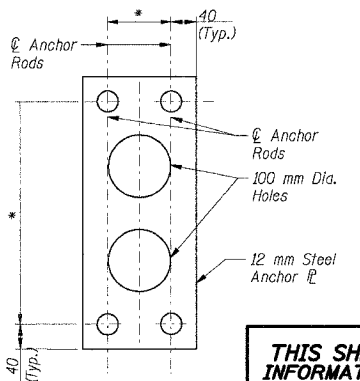
Cost of joint sealant, P.J.F. and cement nails are included with Concrete Structures.



**ELEVATION**

Note: Entire anchor rod assembly shall be hot dip galvanized.

**NOISE ABATEMENT WALL ANCHOR ROD ASSEMBLY**  
( 13 Required)



**PLAN**

\* Dimensions to match anchor rod layouts.

- Notes:
- All dimensions are in millimeters (mm) except as noted.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - All edges shall have a 20 mm chamfer unless noted otherwise.
  - E.F. indicates each face. B.F. indicates back face. F.F. indicates front face.
  - \* Indicates for location of bars, identification and quantity, see Footing Plans & Wall Elevations.
  - For Rustication Finish details, see Sht. RW852-12.

**BAR LIST FOR EACH PILASTER**  
(FOR INFORMATION ONLY)

Bar	No.	Size	Length (m)	Shape
d453(E)	7	#15	1.30	U
e458(E)	3	#15	2.56	W
e459(E)	1	#15	2.20	W
u450(E)	7	#20	2.00	L

**BILL OF MATERIAL**

Item	Unit	Total
Noise Abatement Wall Anchor Rod Assembly	Ea	13

**THIS SHEET FOR INFORMATION ONLY**

SHT. RW852-10 OF 14

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (KINGERY EXPRESSWAY)  
EB & WB OUTSIDE LANES (MAINLINE) CONSTRUCTION  
RETAINING WALL - STRUCTURE NO. 016-W852  
SECTION (2625 & 2626) R-1  
COOK COUNTY

**TRAFFIC BARRIER SECTIONS & DETAILS**

DATE: 8/18/2004

DRAWN BY: CHECKED BY: MJK

**TENG**

TENG & ASSOCIATES, INC.  
ENGINEERS/ARCHITECTS/PLANNERS  
CHICAGO, ILLINOIS

Shah Engineering, Inc.  
ONE IBM PLAZA, SUITE 3000  
CHICAGO, IL 60611  
TELE: 312/836-9000  
Consulting Engineers

T:\DOCUMENTS\9971501\STRUCT\CON\RSIB24024.DGN  
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 BAUZEKJ

Benchmark: Chiseled  $\square$  on southeast corner of concrete base of Illinois Department of Transportation System Control Box, located south side of I-80  $\pm$  200 m west of Wentworth Avenue. Elev = 182.074

Existing Structure: None  
All dimensions in millimeters (mm) except as noted.

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. S-1
F.A.I.	DATE	COOK	1207 783	14 SHEETS
RD/14	187A			
CONTRACT No. 62114				

**CURVE DATA I-80/94**

$\Delta = 20^\circ 11' 25''$   
 $D = 2.979^\circ$   
 $R = 1923.6$   
 $T = 342.476$   
 $L = 677.849$   
 $E = 30.249$   
 $P.C. = 7+386.276$   
 $P.L. = 7+722.751$   
 $P.T. = 8+058.125$   
 $S.E. = 2.9\%$

**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 = 120 kPa

**DESIGN SPECIFICATIONS**

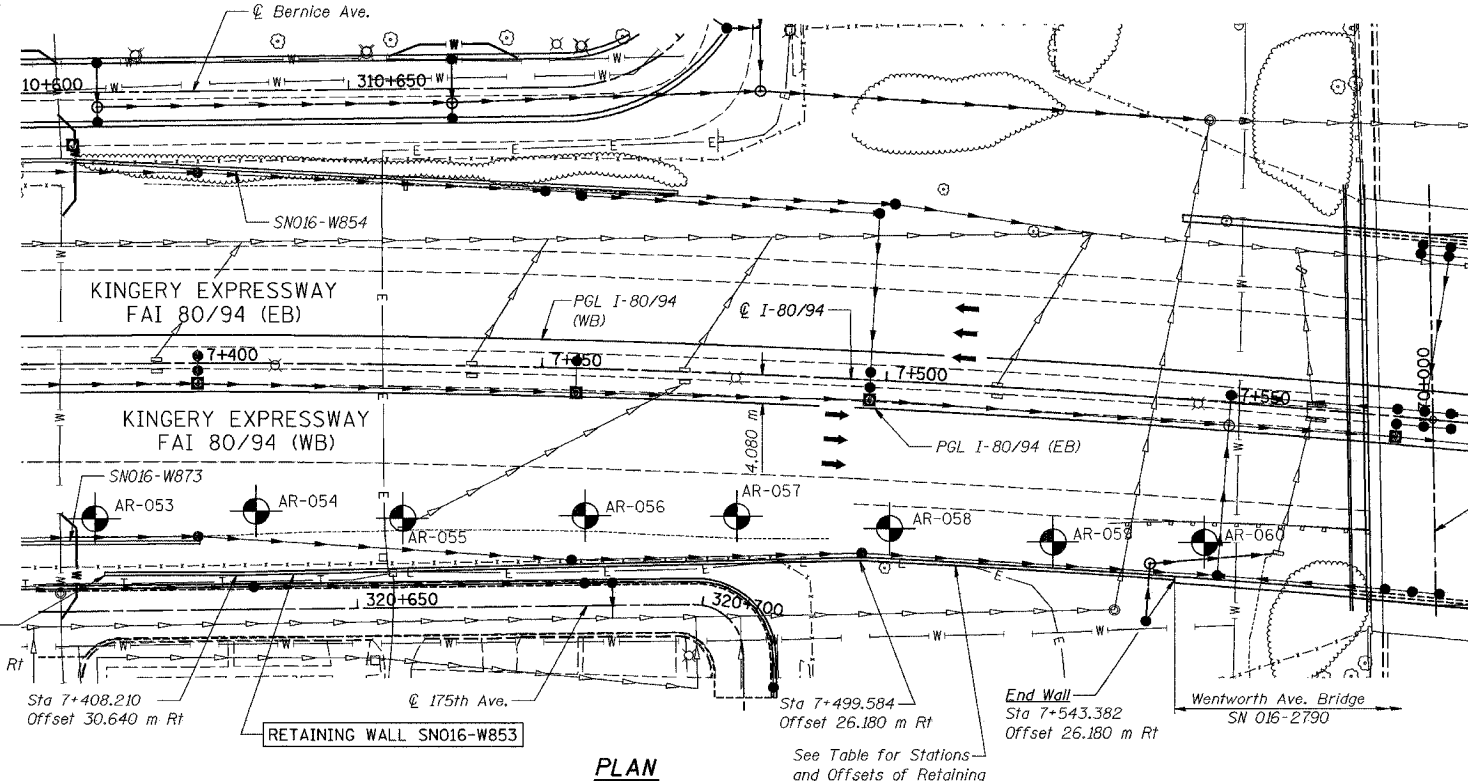
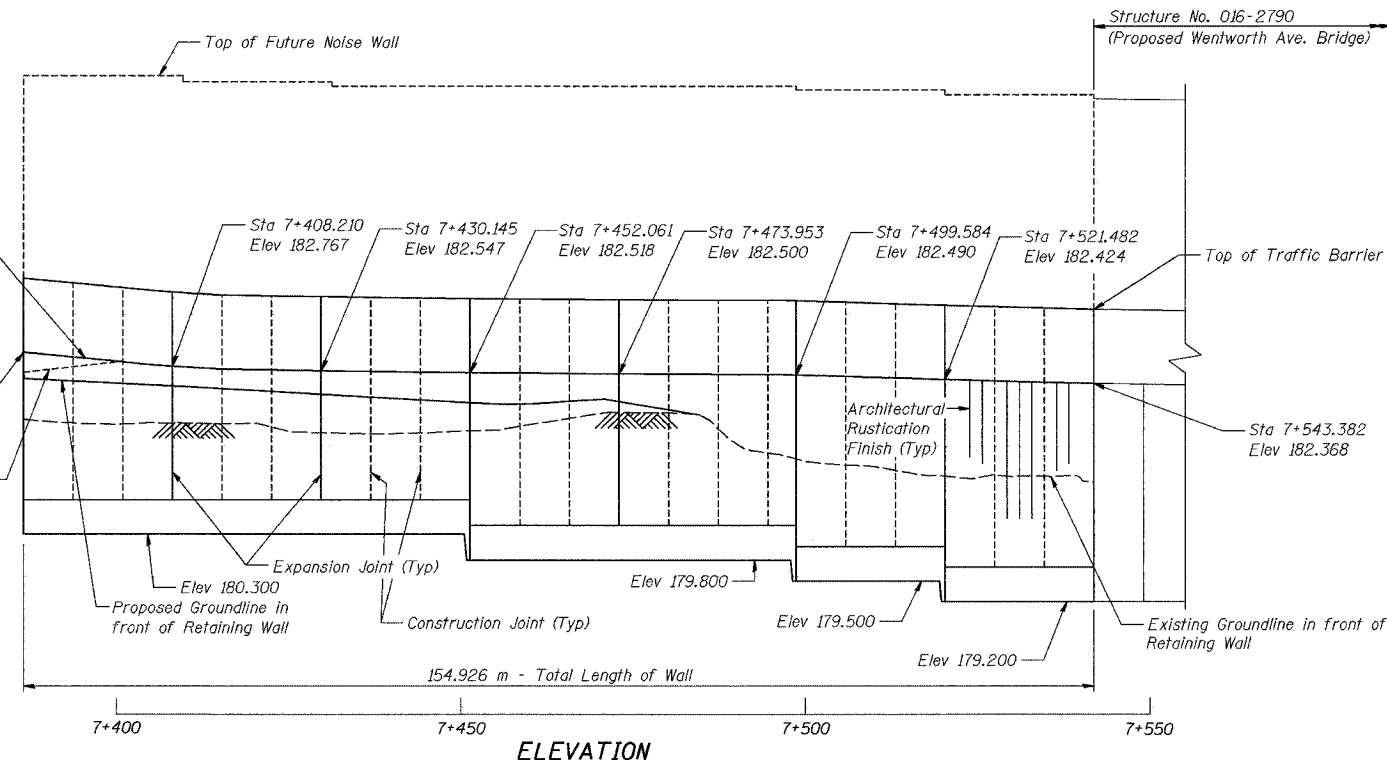
AASHTO 2002 Standard Specifications for Highway Bridges

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

**TABLE**

EXPANSION OR CONSTRUCTION JOINT STATION	OFFSET TO FRONT FACE OF WALL
7+499.584	26.180 Rt
7+506.883	26.180 Rt
7+514.183	26.180 Rt
7+521.482	26.180 Rt
7+528.781	26.180 Rt
7+536.082	26.180 Rt

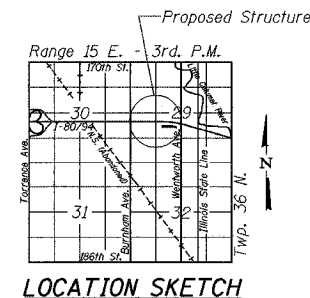
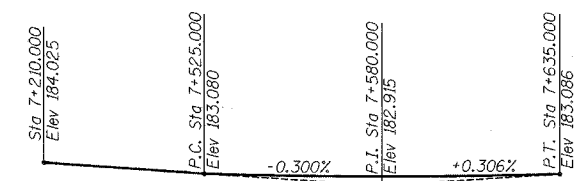
DESIGNED	KFA
CHECKED	MJW
DRAWN	MJW
CHECKED	GSP



- LEGEND**
- Soil Boring Location
  - Existing Roadway/Structure
  - Proposed Roadway/Structure
  - Tree
  - Shrubs/Brush
  - Proposed Storm Sewer
  - Existing Storm Sewer
  - Existing Water Main
  - Existing Electricity Line
  - Existing Telephone Line
  - Storm Sewer by Others



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



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

**GENERAL PLAN SECTION 2001-167R**  
 COOK COUNTY  
 STATION 7+386.260 TO STATION 7+543.382  
 STRUCTURE NO. 016-W853

DATE 07/05

**AMERICAN CONSULTING ENGINEERS**

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.	SHEET NO. S-2
F.A.I. 88/74	2001-167R	COOK	1207	784	14 SHEETS
ILLINOIS			FED. AID PROJECT:	C-41-201-01	
CONTRACT No. 62114					

**GENERAL NOTES**

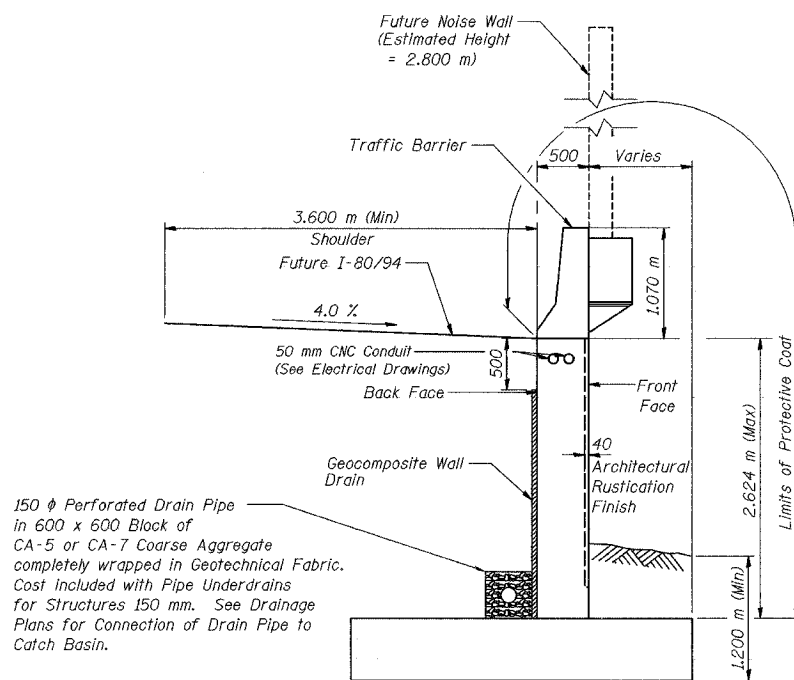
1. Reinforcement bars shall conform to the requirements of AASHTO M 31M or M322M, Grade 400
2. All dimensions are in millimeters (mm) except as noted.
3. All construction joints shall be bonded. 1

**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 4)
S-12	Boring Logs (2 of 4)
S-13	Boring Logs (3 of 4)
S-14	Boring Logs (4 of 4)

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Structure Excavation	m <sup>3</sup>	1,831
Concrete Structures	m <sup>3</sup>	631.4
Rustication Finish	m <sup>2</sup>	160
Protective Coat	m <sup>2</sup>	784
Reinforcement Bars, Epoxy Coated	kg	47,470
Geocomposite Wall Drain	m <sup>2</sup>	320
Pipe Underdrains for Structures 150 mm	m	162.0
Noise Abatement Wall Anchor Rod Assembly	Each	46



**TYPICAL SECTION**

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  
**INDEX OF SHEETS, GENERAL NOTES  
 AND TOTAL BILL OF MATERIAL**  
 SECTION 2001-167R  
 COOK COUNTY  
 STATION 7+386.260 to STATION 7+543.382  
 STRUCTURE NO. 016-W853  
 DATE 07/05

1 REVISED KFA 10-22-04



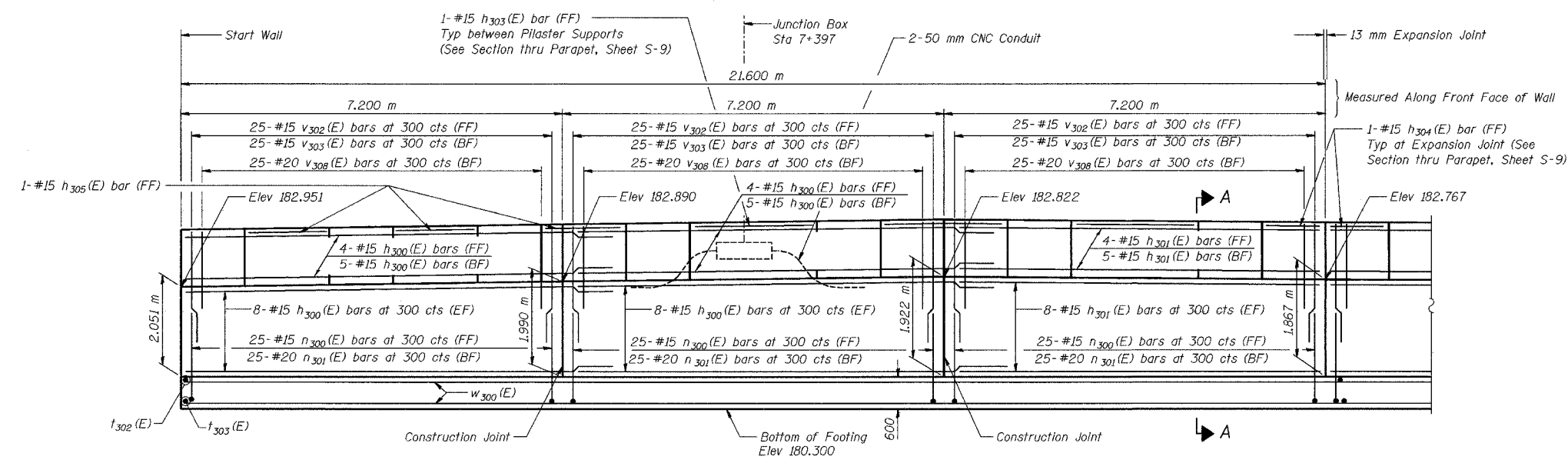
FOR INFORMATION ONLY

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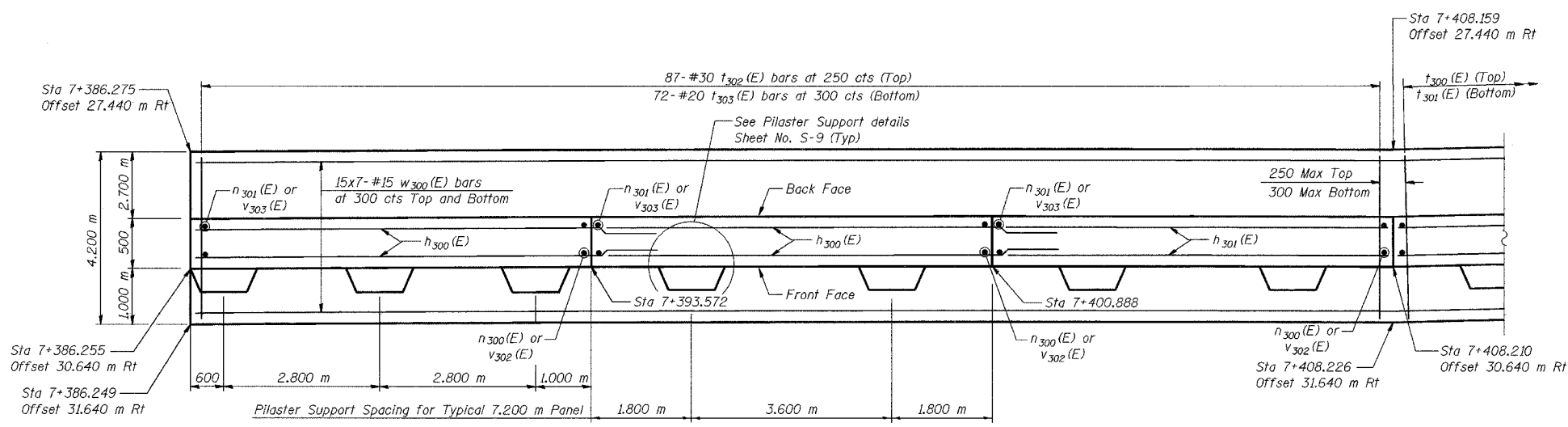


ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET TOTAL
F.A.I.	2001-167R	COOK	1207	785
DATE	08/94	167R		
ILLINOIS		FED. AID PROJECT	C-NUMBER	
CONTRACT No. 62114				

SHEET NO. S-3  
14 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 C 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.  
 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

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

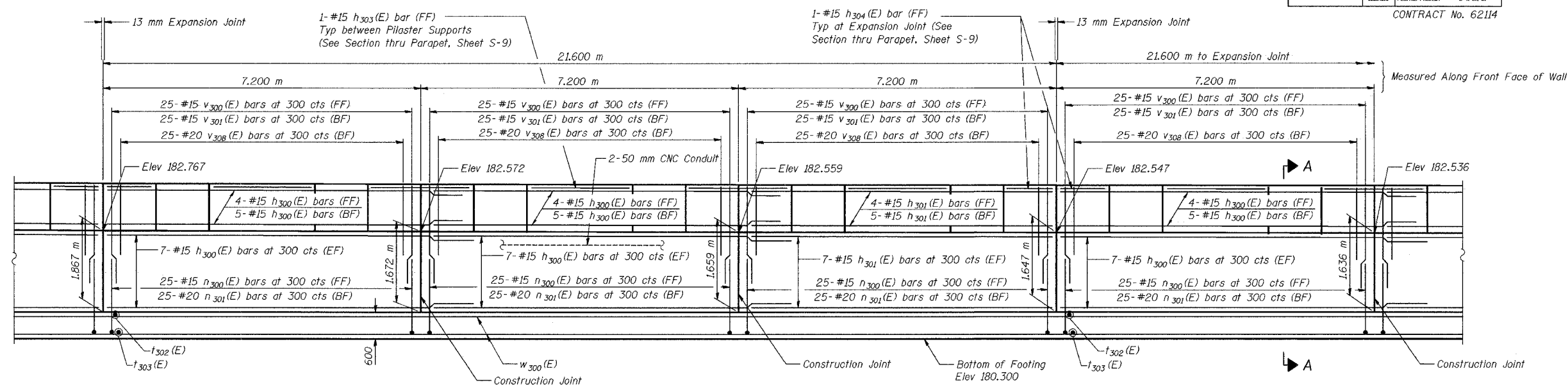
**PLAN AND ELEVATION (1 OF 6)  
 SECTION 2001-167R  
 COOK COUNTY  
 STATION 7+386.260 to STATION 7+543.382  
 STRUCTURE NO. 016-W853**

DATE 07/05

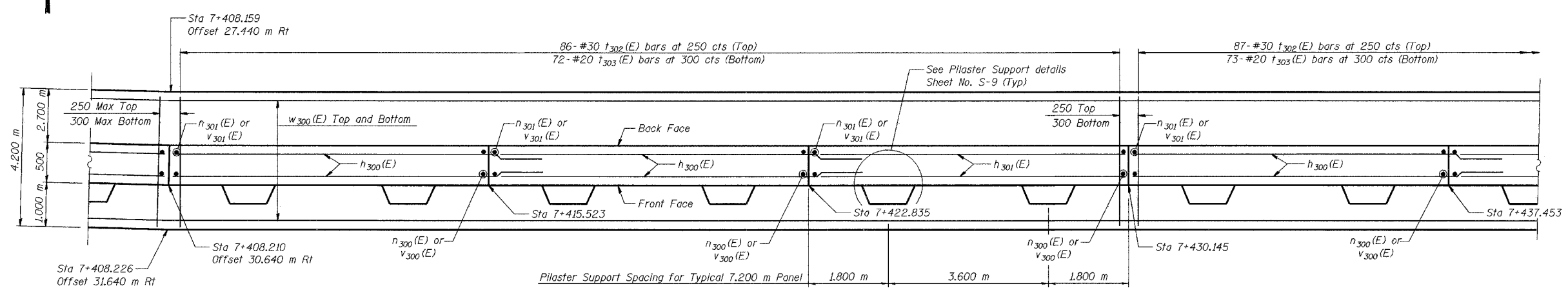
**AMERICAN**  
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET TOTAL
F.A.I.	001-167R	COOK	1207	786
DATE	ISSUE	PROJECT	CONTRACT No. 62114	
06/94	167R	ILLINOIS	SHEET NO. S-4	
			14 SHEETS	



**ELEVATION**



**FOOTING PLAN**

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

**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  $\phi$  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.

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

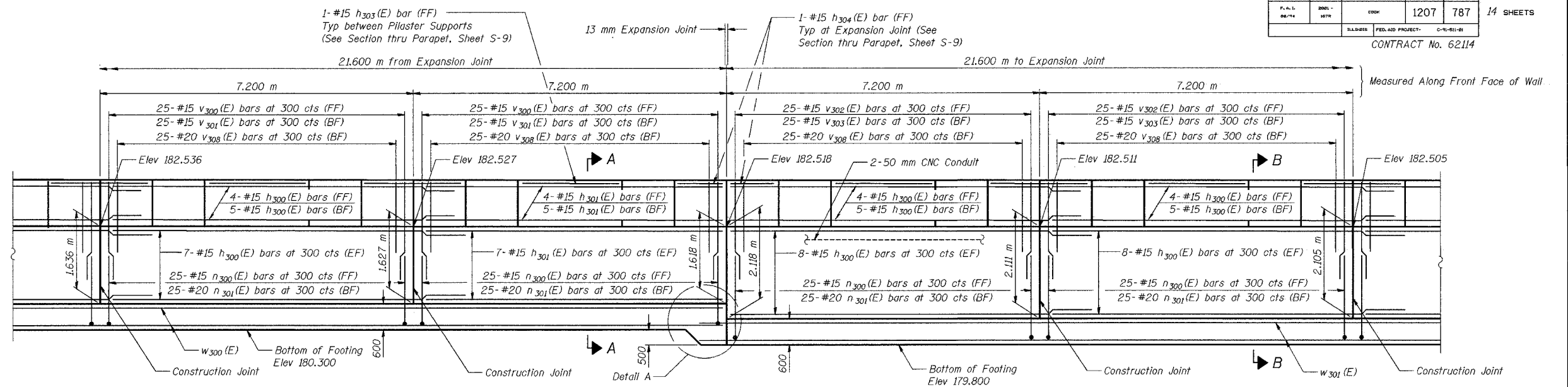
**PLAN AND ELEVATION (2 OF 6)**  
**SECTION 2001-167R**  
**COOK COUNTY**  
**STATION 7+386.260 to STATION 7+543.382**  
**STRUCTURE NO. 016-W853**

DATE 07/05

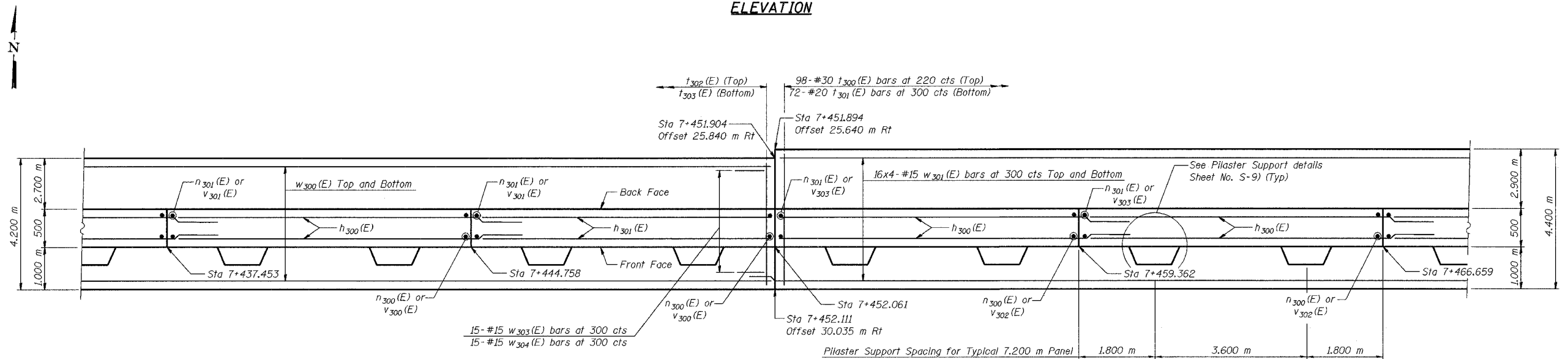
**AMERICAN**  
CONSULTING ENGINEERS

FOR INFORMATION ONLY

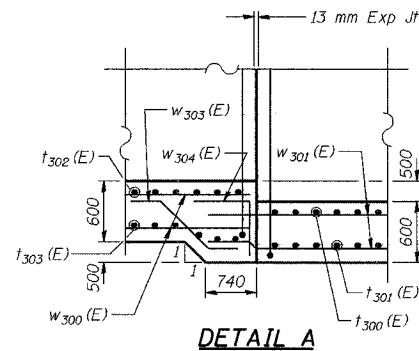
ROUTE NO.	SECTION	COUNTY	SHEET	SHEET	SHEET NO. S-5 14 SHEETS
1207	787				
CONTRACT No. 62114					



**ELEVATION**



**FOOTING PLAN**



**DETAIL A**

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

**NOTES:**

- See Sheet S-9 for Section A-A, Section B-B, Expansion Joint Detail, and Bill of Material.
- See Sheet S-10 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.
- Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

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

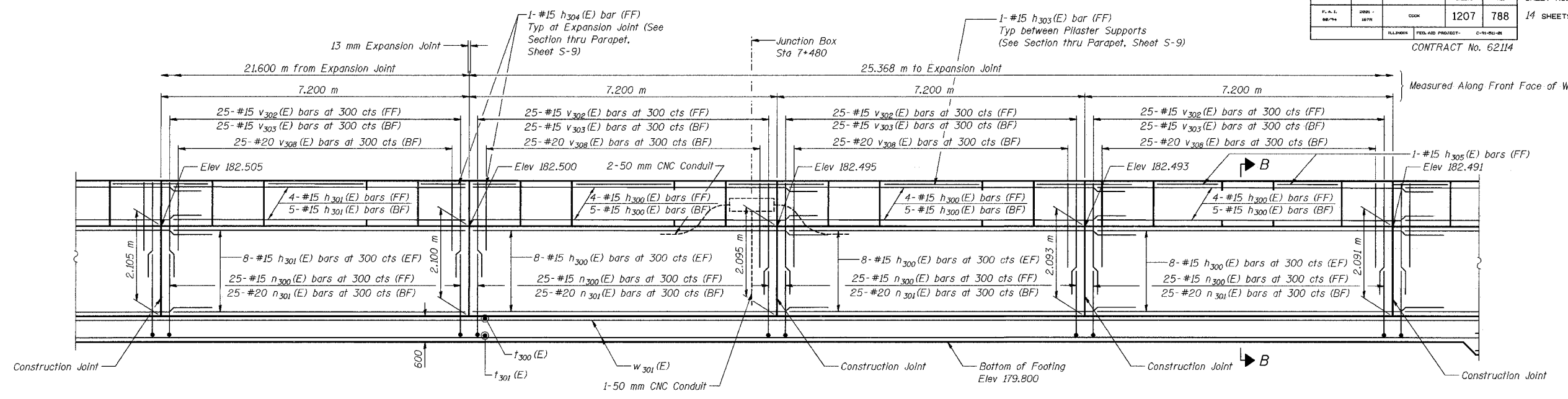
**PLAN AND ELEVATION (3 OF 6)**  
**SECTION 2001-167R**  
**COOK COUNTY**  
**STATION 7+386.260 TO STATION 7+543.382**  
**STRUCTURE NO. 016-W853**

DATE 07/05

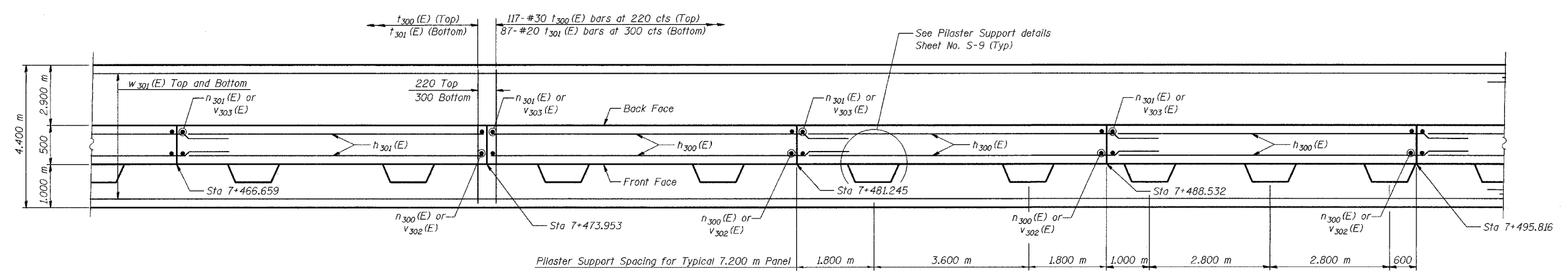
**AMERICAN**  
CONSULTING ENGINEERS

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET	SHEET NO. S-6
F.A.L.	2001-167R	COOK	1207	788	
CONTRACT No. 62114					14 SHEETS



**ELEVATION**



**FOOTING PLAN**

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

**NOTES:**  
 See Sheet S-9 for Section B-B, 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.

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

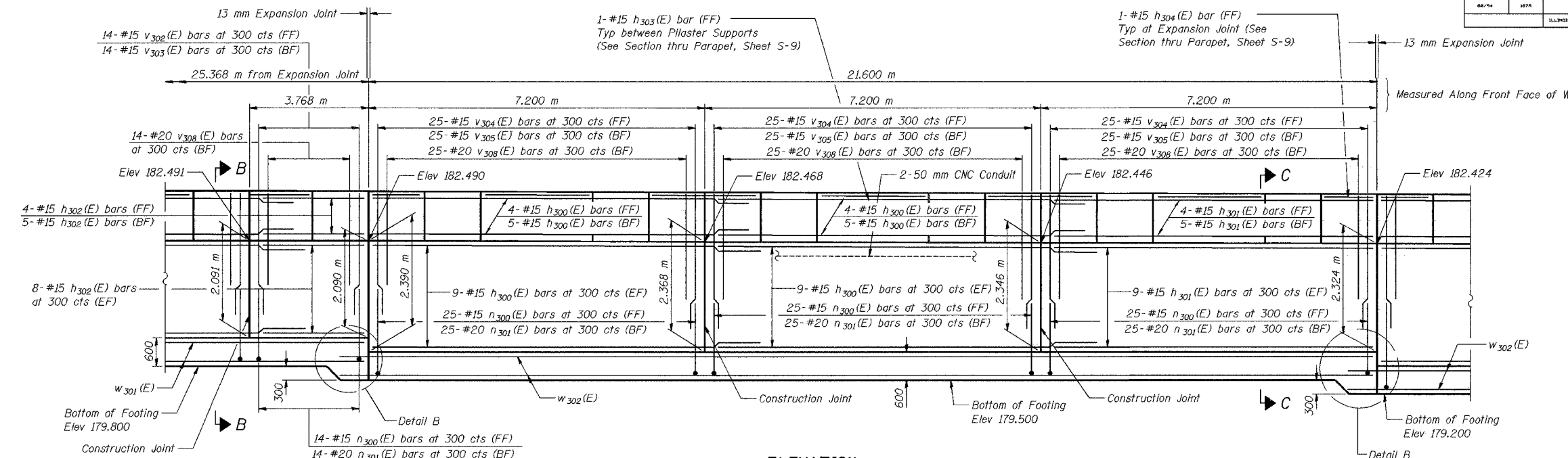
**PLAN AND ELEVATION (4 OF 6)**  
**SECTION 2001-167R**  
**COOK COUNTY**  
**STATION 7+386.260 TO STATION 7+543.382**  
**STRUCTURE NO. 016-W853**

DATE 07/05

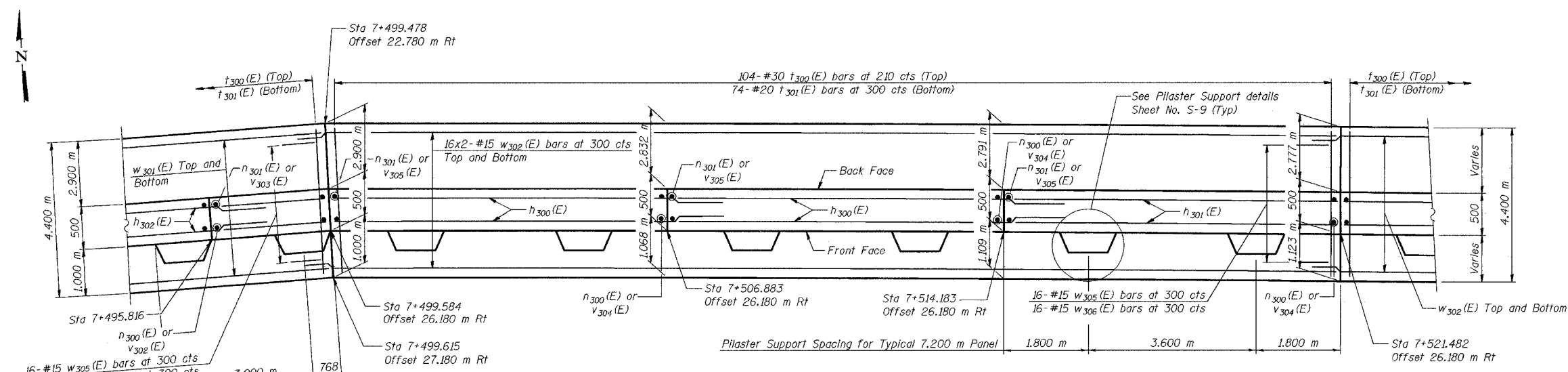
**AMERICAN**  
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

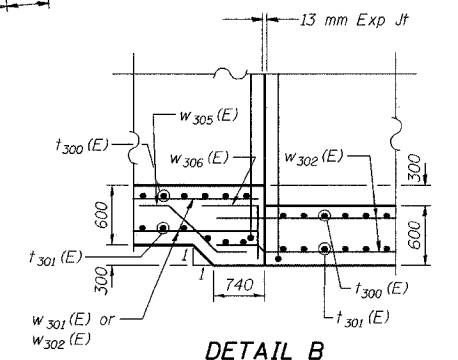
ROUTE NO.	SECTION	COUNTY	SHEET	SHEET	SHEET NO. S-7 14 SHEETS
F.A.I. 88/94	2001-167R	COOK	1207	789	
ILLINOIS			FED. AID PROJECT -		C-94-01-01
CONTRACT No. 62114					



**ELEVATION**



**FOOTING PLAN**



**DETAIL B**

DESIGNED	KFA
CHECKED	MJW
DRAWN	MJW
CHECKED	GSP

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

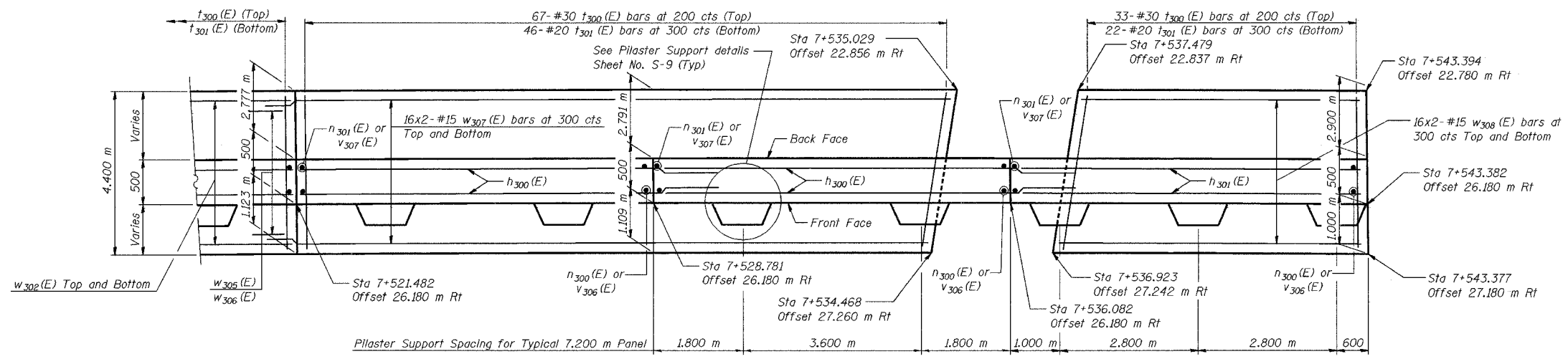
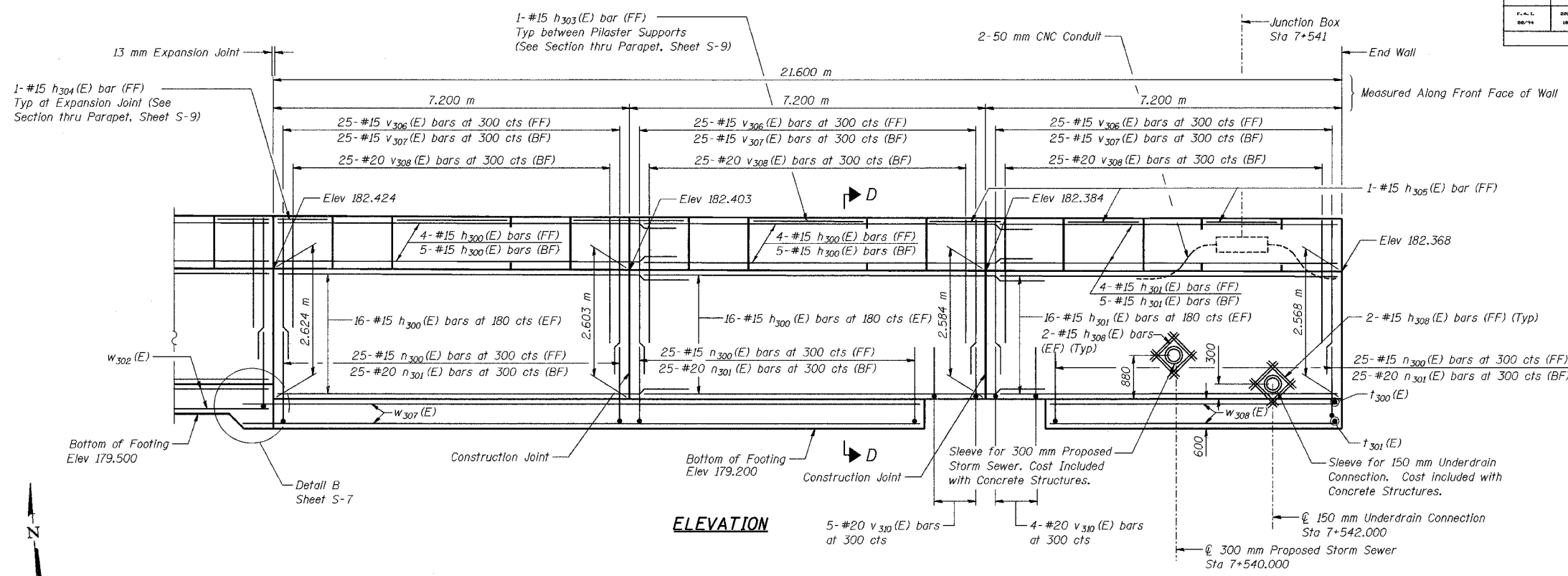
**LEGEND**  
 BF = Back Face  
 FF = Front Face  
 EF = Each Face

**NOTES:**  
 See Sheet S-9 for Section B-B, Section C-C, Expansion Joint Detail, and Bill of Material.  
 See Sheet S-10 for Rustication details.  
 Stations are referenced to Q 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.  
 Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 AND U.S. ROUTE 6  
 LOCAL ROAD RECONSTRUCTION  
**PLAN AND ELEVATION (5 OF 6)**  
**SECTION 2001-167R**  
**COOK COUNTY**  
**STATION 7+386.260 TO STATION 7+543.382**  
**STRUCTURE NO. 016-W853**  
 DATE 07/05  
**AMERICAN**  
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET	SHEET NO. S-8
1207	790	14 SHEETS			
CONTRACT No. 62114					



**NOTES:**  
 See Sheet S-9 for Section D-D, Expansion Joint Detail, and Bill of Material.  
 See Sheet S-10 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.  
 See Electrical Drawings for Junction Box and Conduit Details.  
 See Drainage Drawings for Underdrain Connection to Catch Basin.  
 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

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

**PLAN AND ELEVATION (6 OF 6)**  
 SECTION 2001-167R  
 COOK COUNTY  
 STATION 7+386.260 to STATION 7+543.382  
 STRUCTURE NO. 016-W853  
 DATE 07/05

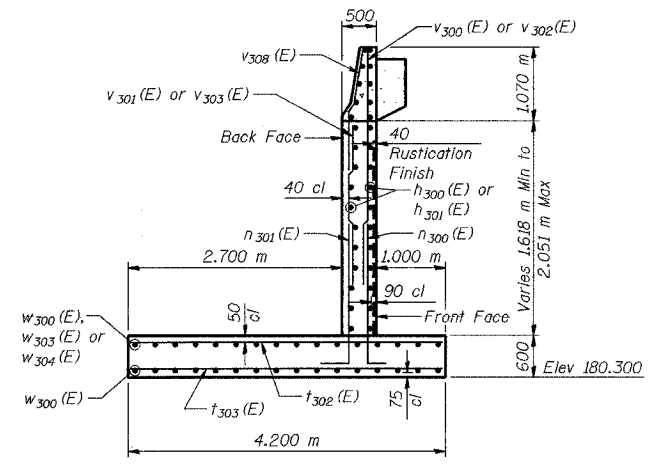
**AMERICAN**  
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

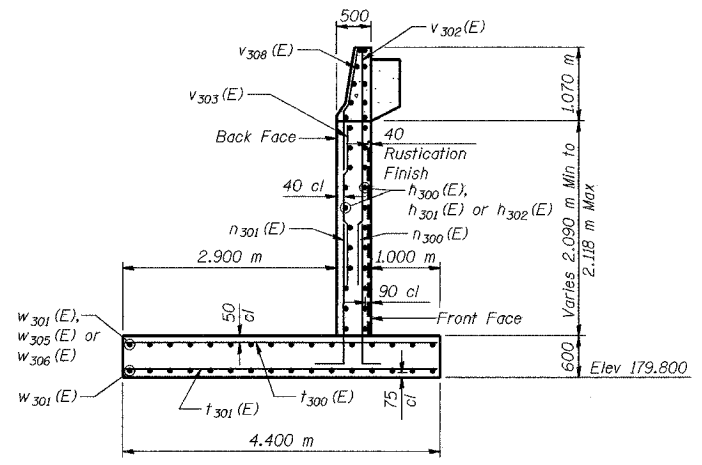
ROUTE NO.	SECTION	COUNTY	SHEET	PIECE	SHEET NO. S-9
F.A.L. 86-74	2001- 167R	COOK	1207	791	
CONTRACT No. 62114					14 SHEETS
BILL OF MATERIAL					

**CONTRACT No. 62114**  
**BILL OF MATERIAL**

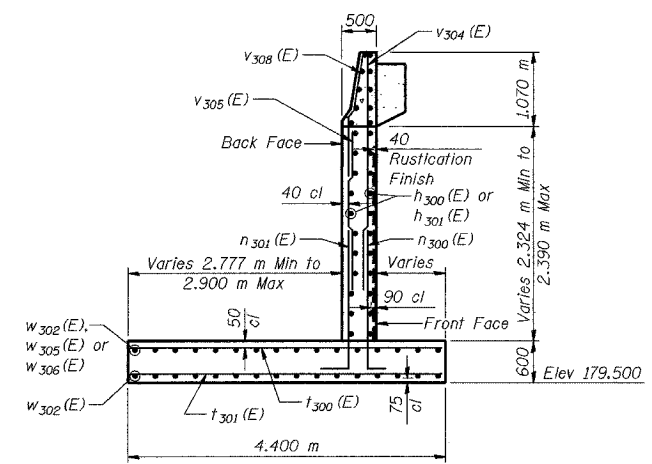
Bar No.	Size	Length (m)	Shape
h <sub>300</sub> (E)	#15	7.84	—
h <sub>301</sub> (E)	#15	7.10	—
h <sub>302</sub> (E)	#15	3.67	—
h <sub>303</sub> (E)	#11	2.30	—
h <sub>304</sub> (E)	#11	1.10	—
h <sub>305</sub> (E)	#8	1.50	—
h <sub>306</sub> (E)	#12	2.86	—
h <sub>307</sub> (E)	#12	2.34	—
h <sub>308</sub> (E)	#15	0.60	—
n <sub>300</sub> (E)	#15	1.84	L
n <sub>301</sub> (E)	#15	1.90	L
t <sub>300</sub> (E)	#30	4.30	—
t <sub>301</sub> (E)	#30	4.30	—
t <sub>302</sub> (E)	#260	4.10	—
t <sub>303</sub> (E)	#218	4.10	—
v <sub>300</sub> (E)	#150	2.36	—
v <sub>301</sub> (E)	#150	1.29	—
v <sub>302</sub> (E)	#239	2.73	—
v <sub>303</sub> (E)	#239	1.66	—
v <sub>304</sub> (E)	#75	3.00	—
v <sub>305</sub> (E)	#75	1.93	—
v <sub>306</sub> (E)	#75	3.24	—
v <sub>307</sub> (E)	#75	2.17	—
v <sub>308</sub> (E)	#539	1.76	—
v <sub>309</sub> (E)	#276	2.39	—
v <sub>310</sub> (E)	#9	3.78	—
w <sub>300</sub> (E)	#210	9.80	—
w <sub>301</sub> (E)	#128	8.49	—
w <sub>302</sub> (E)	#64	7.89	—
w <sub>303</sub> (E)	#15	2.66	—
w <sub>304</sub> (E)	#15	1.96	—
w <sub>305</sub> (E)	#32	2.38	—
w <sub>306</sub> (E)	#32	1.56	—
w <sub>307</sub> (E)	#64	6.97	—
w <sub>308</sub> (E)	#64	3.50	—
Structure Excavation	m <sup>3</sup>	1,831	1
Concrete Structures	m <sup>3</sup>	631.4	
Protective Coat	m <sup>2</sup>	784	
Reinforcement Bars, Epoxy Coated	kg	47,470	
Geocomposite Wall Drain	m <sup>2</sup>	320	
Pipe Underdrains for Structures 150 mm	m	162.0	
Noise Abatement Wall Anchor Rod Assembly	Each	46	



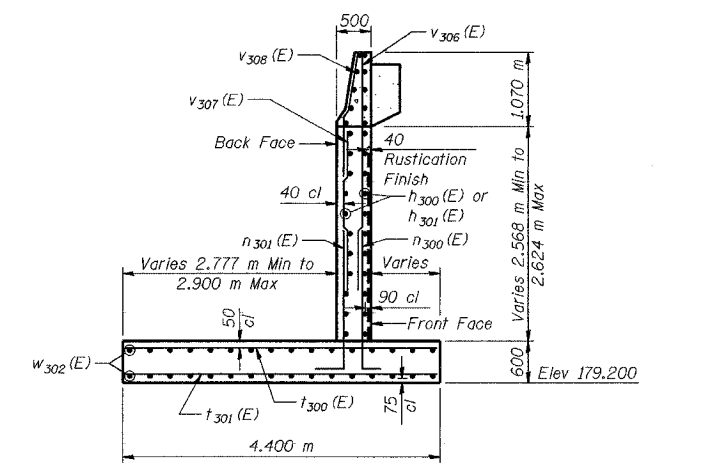
**SECTION A-A**



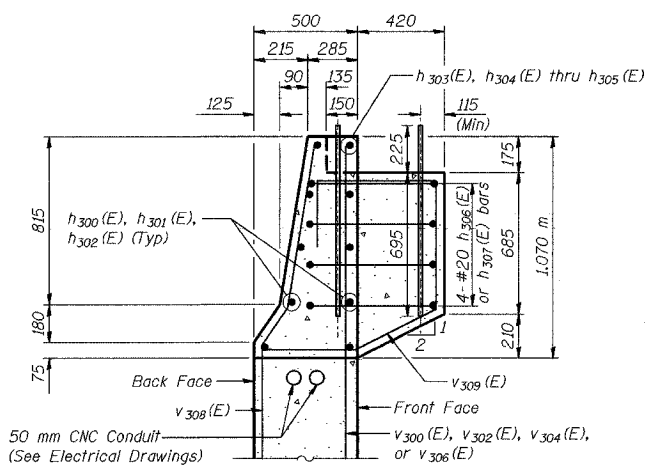
**SECTION B-B**



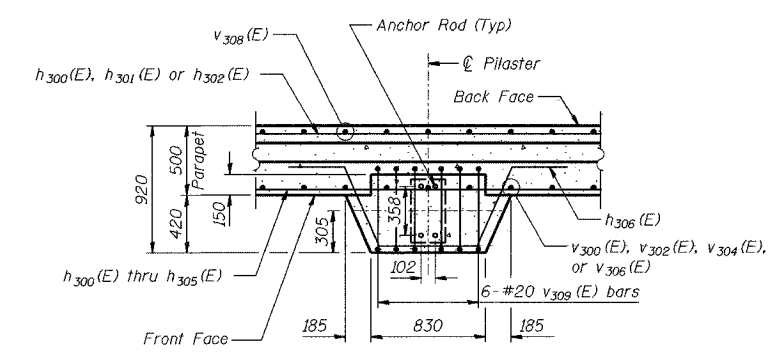
**SECTION C-C**



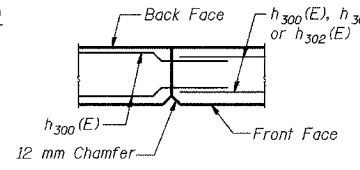
**SECTION D-D**



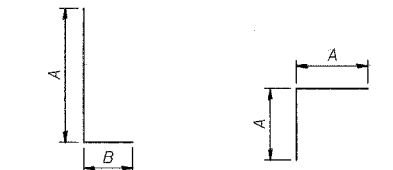
**SECTION THRU PARAPET**



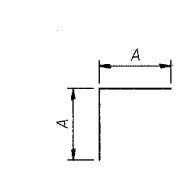
**TYPICAL PILASTER SUPPORT - PLAN VIEW**  
(46 Locations)



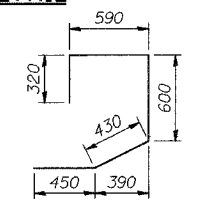
**CONSTRUCTION JOINT DETAIL**



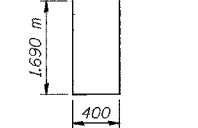
**BARS n<sub>300</sub>(E) and n<sub>301</sub>(E)**



**BARS w<sub>304</sub>(E) and w<sub>306</sub>(E)**

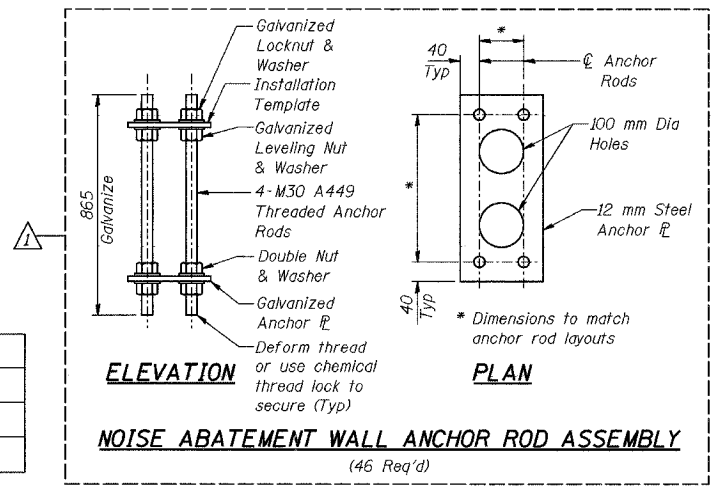


**BAR v<sub>309</sub>(E)**



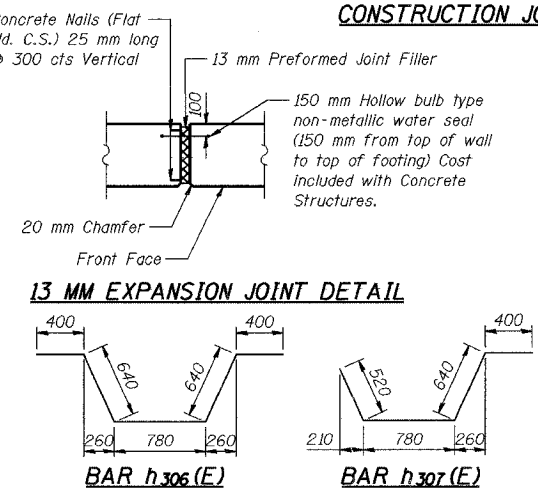
**BAR v<sub>310</sub>(E)**

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



**ELEVATION PLAN**  
**NOISE ABATEMENT WALL ANCHOR ROD ASSEMBLY**  
(46 Req'd)

DESIGNED	KFA
CHECKED	MJW
DRAWN	MJW
CHECKED	GSP



**13 MM EXPANSION JOINT DETAIL**  
REVISD 05-25-04 KFA [1] REVISD KFA 10-22-04

**BAR DIMENSIONS**

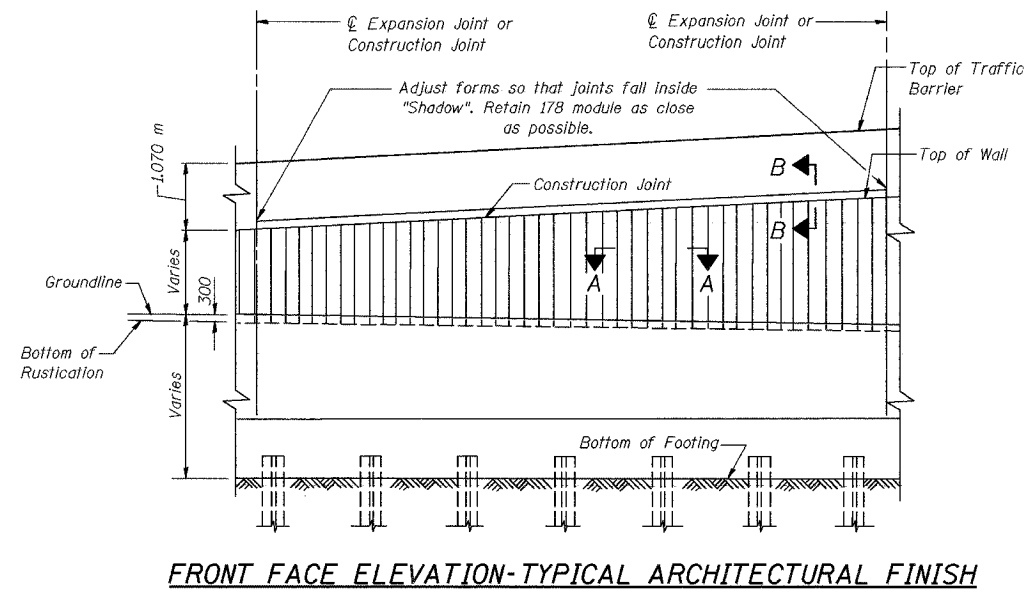
Bar	A	B
n <sub>300</sub> (E)	1.58m	260
n <sub>301</sub> (E)	1.58m	320
w <sub>303</sub> (E)	980	1.38m
w <sub>304</sub> (E)	980	---
w <sub>305</sub> (E)	780	1.10m
w <sub>306</sub> (E)	780	---

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

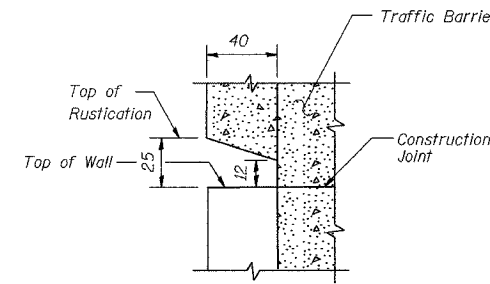
**WALL SECTIONS AND DETAILS**  
**SECTION 2001-167R**  
**COOK COUNTY**  
**STATION 7+386.260 to STATION 7+543.382**  
**STRUCTURE NO. 016-W853**

DATE 07/05  
**AMERICAN CONSULTING ENGINEERS**

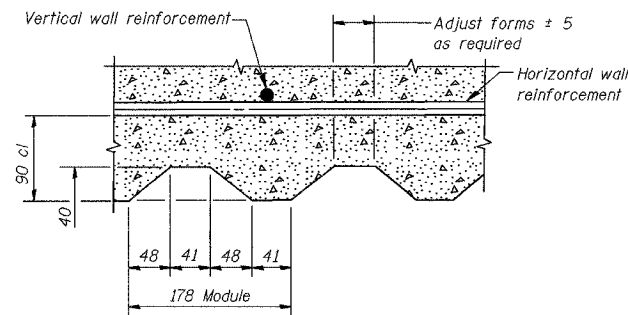
FOR INFORMATION ONLY



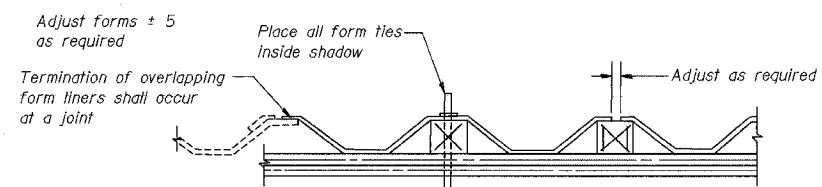
**FRONT FACE ELEVATION-TYPICAL ARCHITECTURAL FINISH**



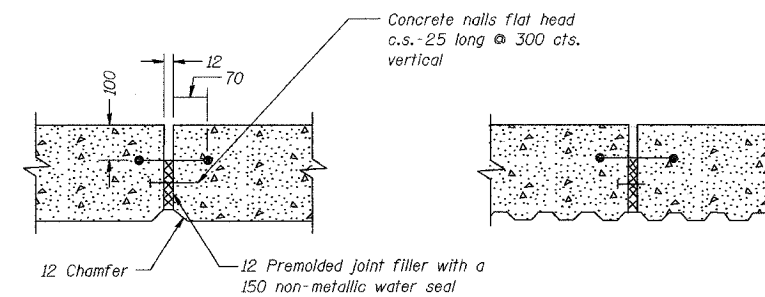
**SECTION B-B**



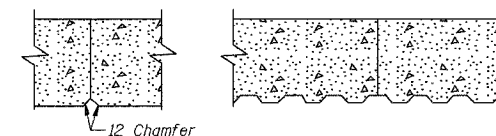
**SECTION A-A**



**SUGGESTED FORMWORK DETAIL**



**EXPANSION JOINT DETAIL**



**CONSTRUCTION JOINT DETAIL**

**RUSTICATION LIMITS**

STATION	TOP OF WALL ELEVATION	BOTTOM OF RUSTICATION ELEVATION
7+386.255	182.951	182.130
7+393.572	182.890	182.095
7+400.888	182.822	182.060
7+408.210	182.767	182.024
7+415.523	182.572	181.986
7+422.835	182.559	181.945
7+430.145	182.547	181.904
7+437.453	182.536	181.863
7+444.758	182.527	181.822
7+452.061	182.518	181.781
7+459.362	182.511	181.774
7+466.659	182.505	181.818
7+473.953	182.500	181.782
7+481.245	182.495	181.663
7+488.532	182.493	181.262
7+495.816	182.491	181.044
7+499.584	182.490	180.977
7+506.883	182.468	180.881
7+514.183	182.446	180.806
7+521.482	182.424	180.731
7+528.781	182.403	180.741
7+536.082	182.384	180.729
7+543.382	182.368	180.638

**BILL OF MATERIAL**

Item	Unit	Total
Rustication Finish	m <sup>2</sup>	160

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

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

**RUSTICATION FINISH DETAILS**  
 SECTION 2001-167R  
 COOK COUNTY  
 STATION 7+386.260 to STATION 7+543.382  
 STRUCTURE NO. 016-W853

DATE 07/05

**AMERICAN**  
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

14-986074-W853.dgn 06/07/2005 09:21:33 AM



**BORING NO. AR-053 (1 OF 2)**

**BORING NO. AR-053 (2 OF 2)**

**BORING NO. AR-054 (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

**BORING LOG AR-053**  
 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: 182.09 m  
 North: 545498.73 m  
 East: 366821.34 m  
 Station: 7 +384.87  
 Offset: 22.40 RT

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

**BORING LOG AR-053**  
 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: 182.09 m  
 North: 545498.73 m  
 East: 366821.34 m  
 Station: 7 +384.87  
 Offset: 22.40 RT

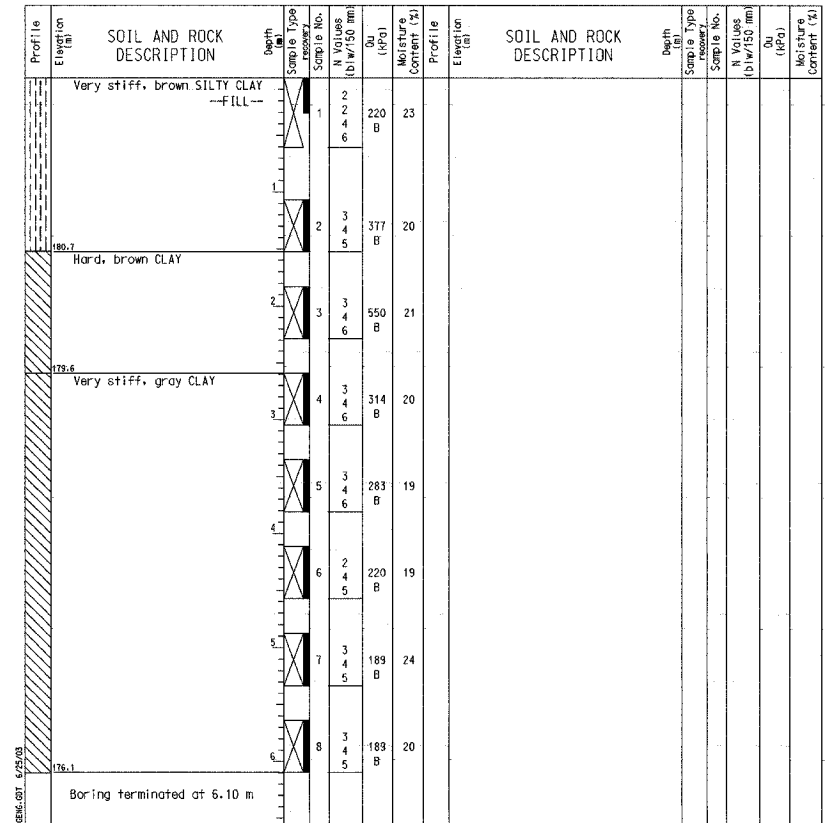
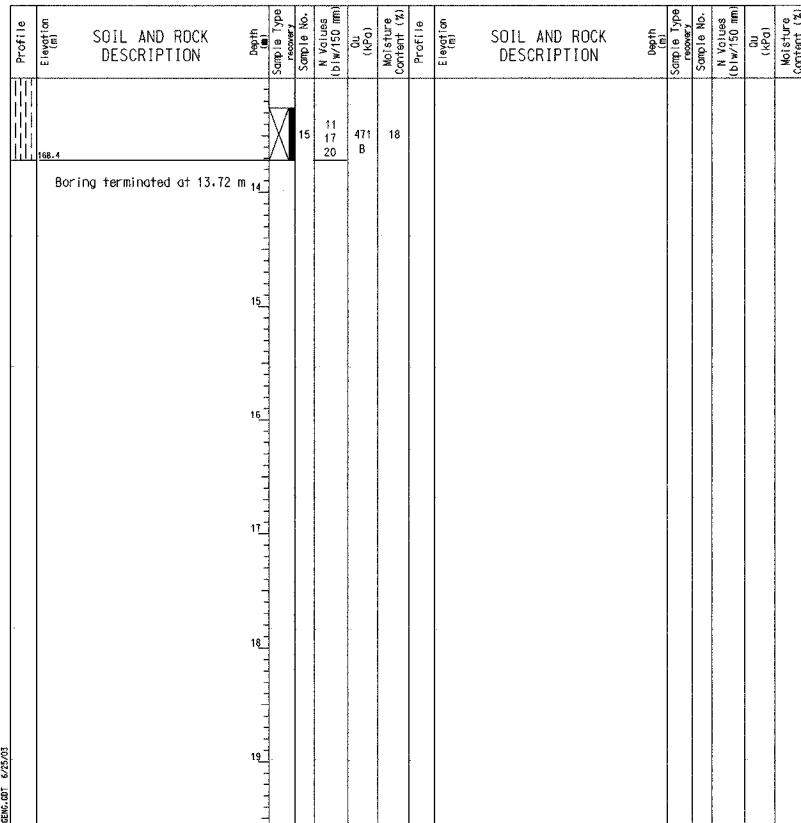
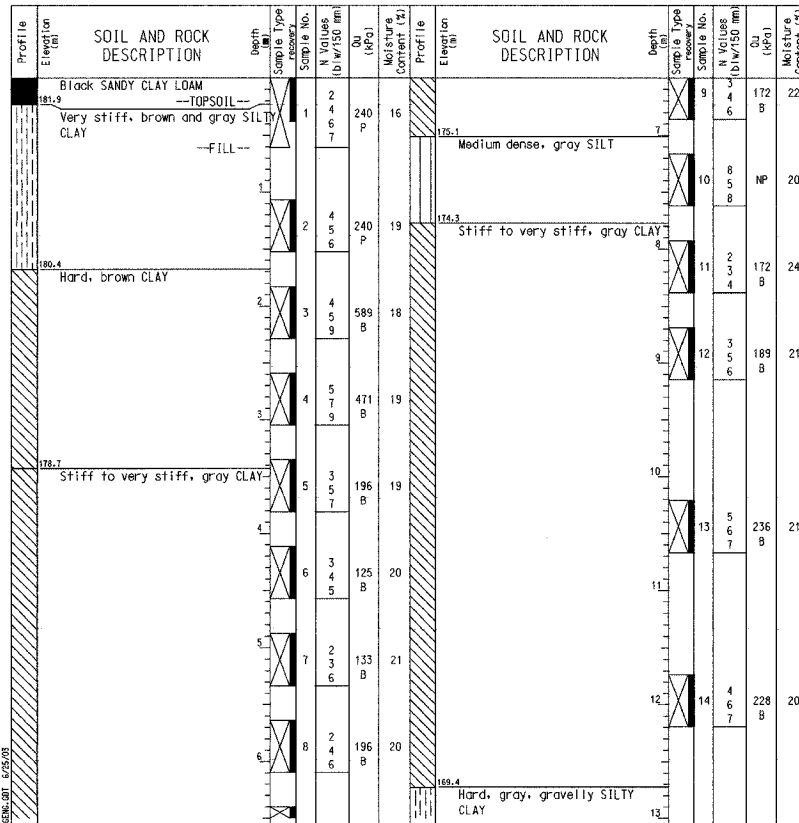
Page 2 of 2

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

**BORING LOG AR-054**  
 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: 182.20 m  
 North: 545499.83 m  
 East: 366844.72 m  
 Station: 7 +408.52  
 Offset: 21.37 RT

Page 1 of 1



**GENERAL NOTES**

Begin Drilling 10-22-2001 Complete Drilling 10-22-2001  
 Drilling Contractor TSC Drill Rig B-61  
 Driller G&F Logger B. Fugiel checked by L. Lardache  
 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 10-22-2001 Complete Drilling 10-22-2001  
 Drilling Contractor TSC Drill Rig B-61  
 Driller G&F Logger B. Fugiel checked by L. Lardache  
 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 10-01-2001 Complete Drilling 10-01-2001  
 Drilling Contractor TSC Drill Rig B-61  
 Driller G&F Logger B. Fugiel checked by L. Lardache  
 Drilling Method 2.75-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.

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 (1 OF 4)**  
**SECTION 2001-167R**  
**COOK COUNTY**  
**STATION 7 + 386.260 to STATION 7 + 543.382**  
**STRUCTURE NO. 016-W853**  
 DATE 07/05  
**AMERICAN CONSULTING ENGINEERS**

FOR INFORMATION ONLY

**BORING NO. AR-055 (1 OF 2)**

**BORING NO. AR-055 (2 OF 2)**

**BORING NO. AR-056 (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

**BORING LOG AR-055**  
 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: 181.74 m  
 North: 545498.83 m  
 East: 366866.01 m  
 Station: 7 +430.06  
 Offset: 22.19 RT

Page 1 of 2

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 Consulting Geotechnical and Environmental Engineers  
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 100 Fairbank Street  
 Addison, IL 60101  
 Telephone: 630 458-0700  
 Fax: 630 458-0900

**BORING LOG AR-055**  
 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: 181.74 m  
 North: 545498.83 m  
 East: 366866.01 m  
 Station: 7 +430.06  
 Offset: 22.19 RT

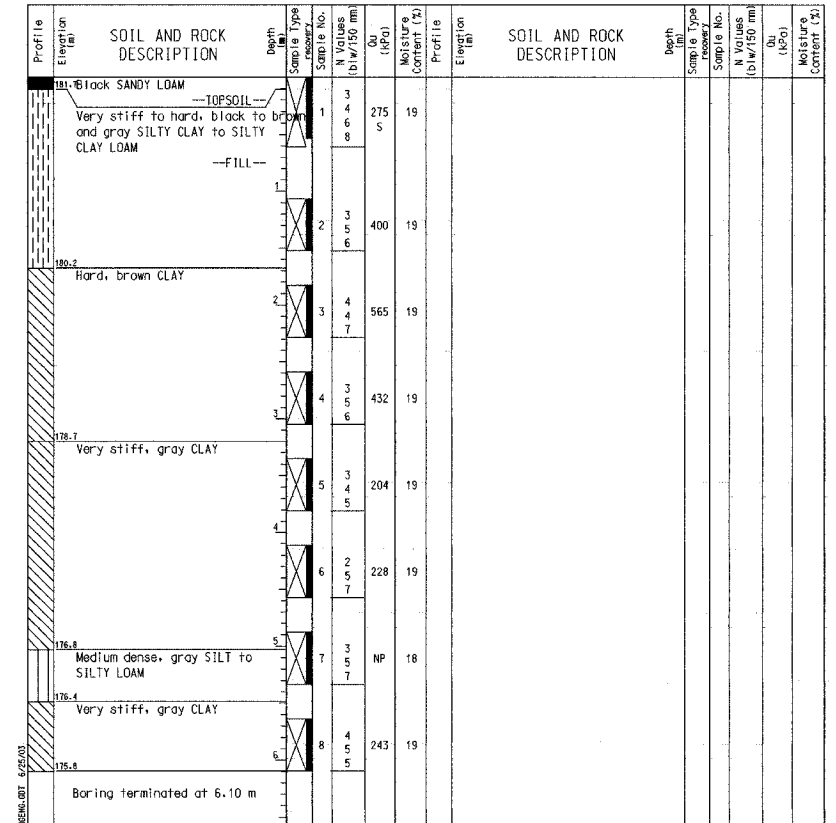
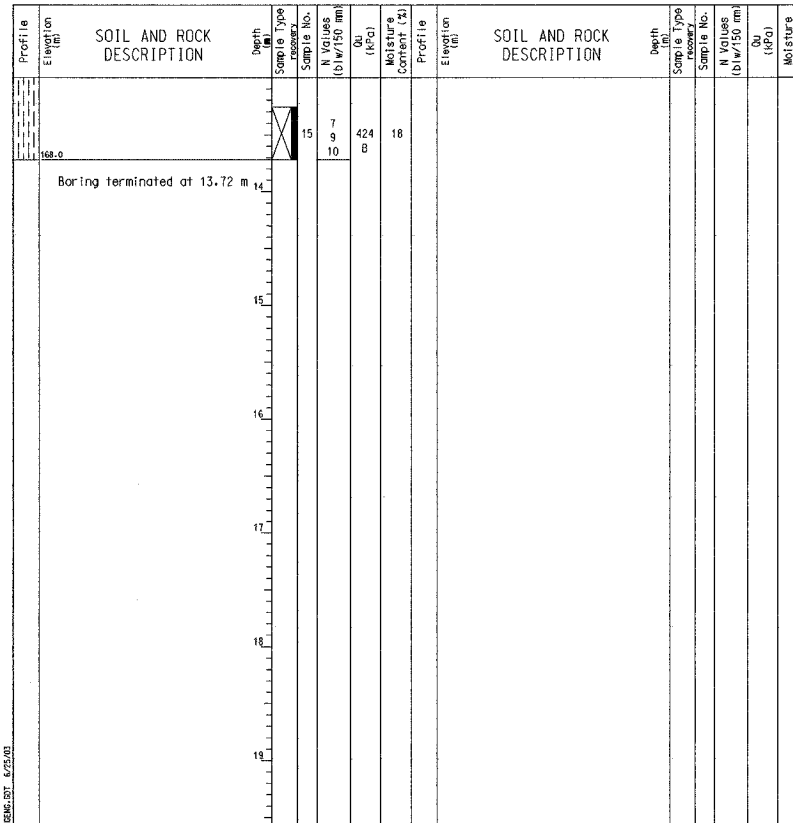
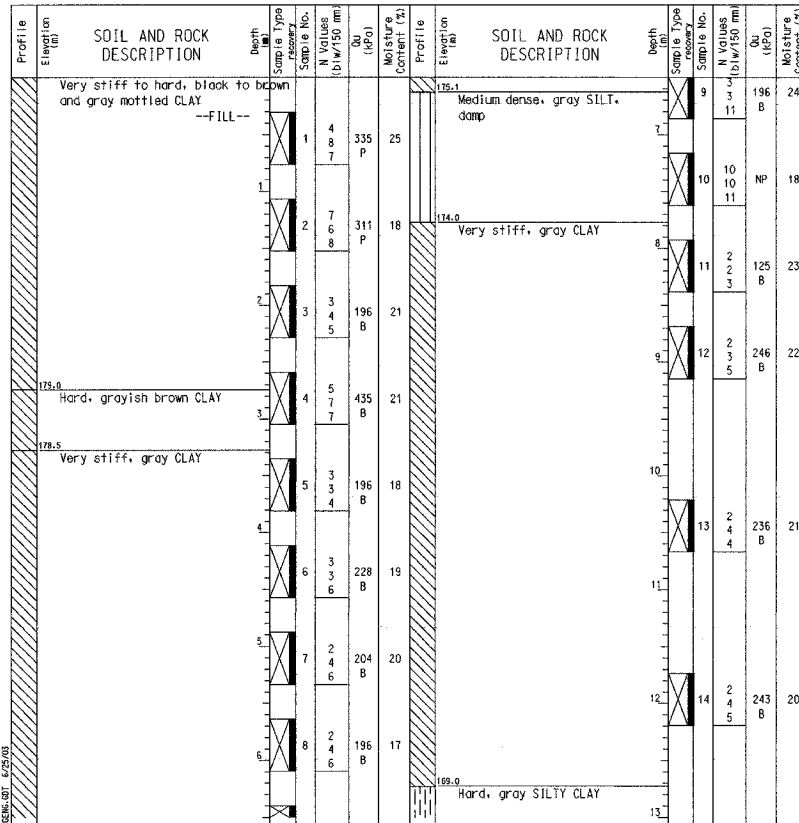
Page 2 of 2

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

**BORING LOG AR-056**  
 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: 181.86 m  
 North: 545499.19 m  
 East: 366892.47 m  
 Station: 7 +456.81  
 Offset: 21.25 RT

Page 1 of 1



**GENERAL NOTES**

Begin Drilling 10-26-2001 Complete Drilling 10-26-2001  
 Drilling Contractor TSC Drill Rig B-61  
 Driller G&F Logger B. Fugiel Checked by L. Lordache  
 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 10-26-2001 Complete Drilling 10-26-2001  
 Drilling Contractor TSC Drill Rig B-61  
 Driller G&F Logger B. Fugiel Checked by L. Lordache  
 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 10-01-2001 Complete Drilling 10-01-2001  
 Drilling Contractor TSC Drill Rig B-61  
 Driller G&F Logger B. Fugiel Checked by L. Lordache  
 Drilling Method 2.75-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.

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 (2 OF 4)**  
 SECTION 2001-167R  
 COOK COUNTY  
 STATION 7+386.260 to STATION 7+543.382  
 STRUCTURE NO. 016-W853

DATE 07/05

**AMERICAN**  
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

**BORING NO. AR-057 (1 OF 2)**

**BORING NO. AR-057 (2 OF 2)**

**BORING NO. AR-058 (1 OF 1)**

**BORING LOG AR-057** 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

Date: USGS  
 Elevation: 181.75 m  
 North: 545499.11 m  
 East: 366914.47 m  
 Station: 7 +479.05  
 Offset: 20.58 RT

**BORING LOG AR-057** 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

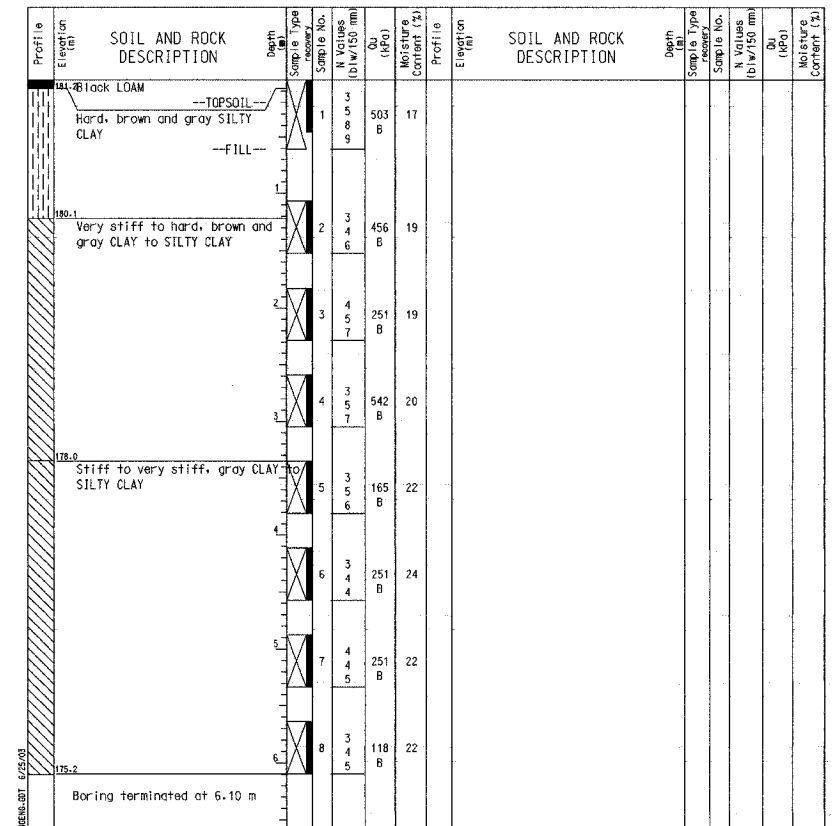
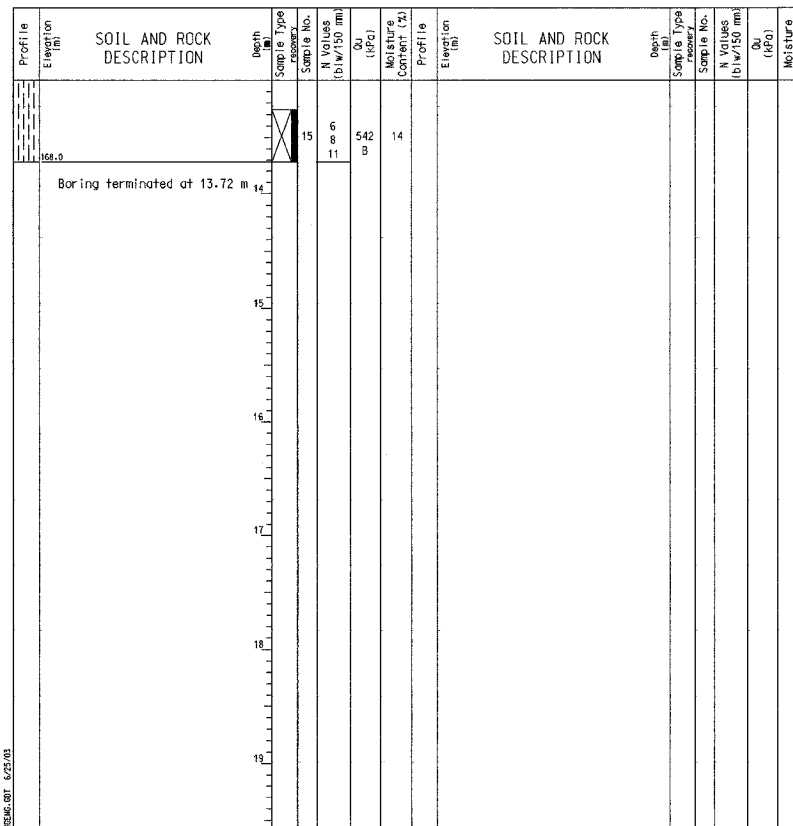
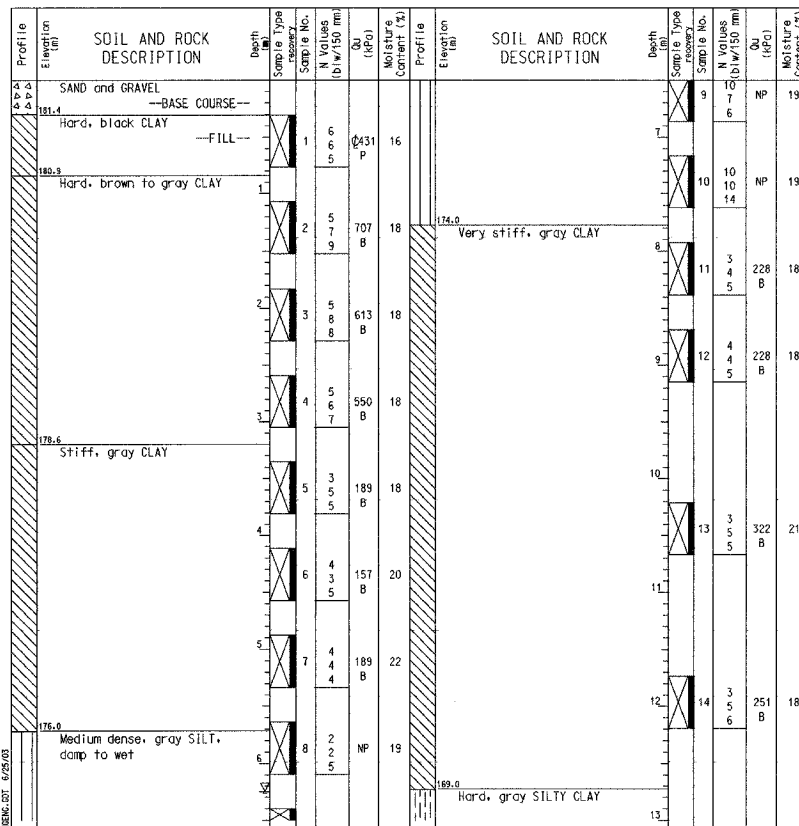
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 Elevation: 181.75 m  
 North: 545499.11 m  
 East: 366914.47 m  
 Station: 7 +479.05  
 Offset: 20.58 RT

**BORING LOG AR-058** 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

Date: USGS  
 Elevation: 181.31 m  
 North: 545497.35 m  
 East: 366936.64 m  
 Station: 7 +501.52  
 Offset: 21.33 RT



**GENERAL NOTES**

Begin Drilling 10-26-2001 Complete Drilling 10-26-2001  
 Drilling Contractor TSC Drill Rig B-61  
 Driller GAF Logger B. Fugiel checked by L. Jardache  
 Drilling Method 3.25-in. HSA Grouted

**WATER LEVEL DATA**

While Drilling  6.25 m  
 At Completion of Drilling  CAVED IN  
 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 10-26-2001 Complete Drilling 10-26-2001  
 Drilling Contractor TSC Drill Rig B-61  
 Driller GAF Logger B. Fugiel checked by L. Jardache  
 Drilling Method 3.25-in. HSA Grouted

**WATER LEVEL DATA**

While Drilling  6.25 m  
 At Completion of Drilling  CAVED IN  
 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 10-01-2001 Complete Drilling 10-01-2001  
 Drilling Contractor TSC Drill Rig B-61  
 Driller GAF Logger B. Fugiel checked by L. Jardache  
 Drilling Method 2.75-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.

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 (3 OF 4)**  
 SECTION 2001-167R  
 COOK COUNTY  
 STATION 7+386.260 to STATION 7+543.382  
 STRUCTURE NO. 016-W853  
 DATE 07/05

**AMERICAN**  
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

**BORING NO. AR-059 (1 OF 2)**

**BORING NO. AR-059 (2 OF 2)**

**BORING NO. AR-060 (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

**BORING LOG AR-059**  
 WEI Job No.: 255-08-01  
 Datum: USGS  
 Elevation: 180.76 m  
 North: 545495.38 m  
 East: 366960.35 m  
 Station: 7 +525.57  
 Offset: 21.92 RT

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

Page 1 of 2

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 wangeng3ewangeng.com  
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 Addison, IL 60101  
 Telephone: 630 458-0700  
 Fax: 630 458-0900

**BORING LOG AR-059**  
 WEI Job No.: 255-08-01  
 Datum: USGS  
 Elevation: 180.76 m  
 North: 545495.38 m  
 East: 366960.35 m  
 Station: 7 +525.57  
 Offset: 21.92 RT

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

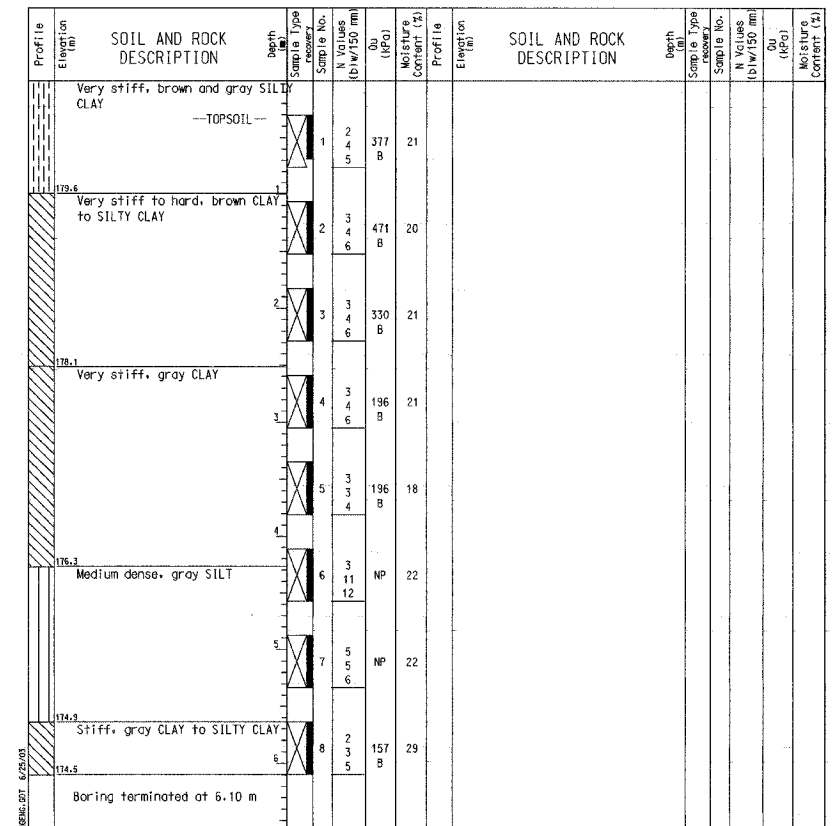
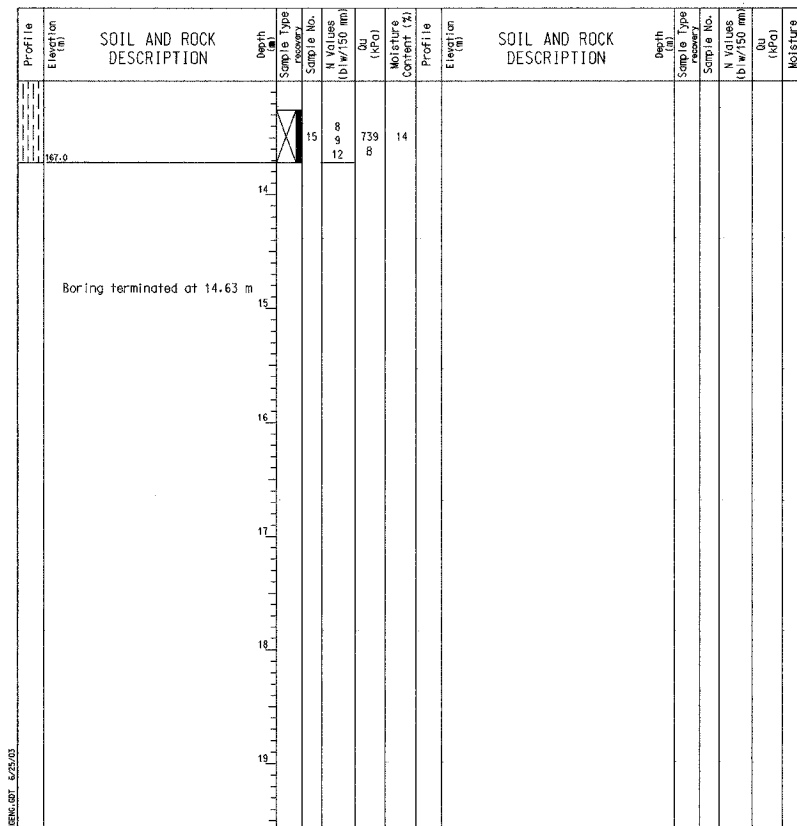
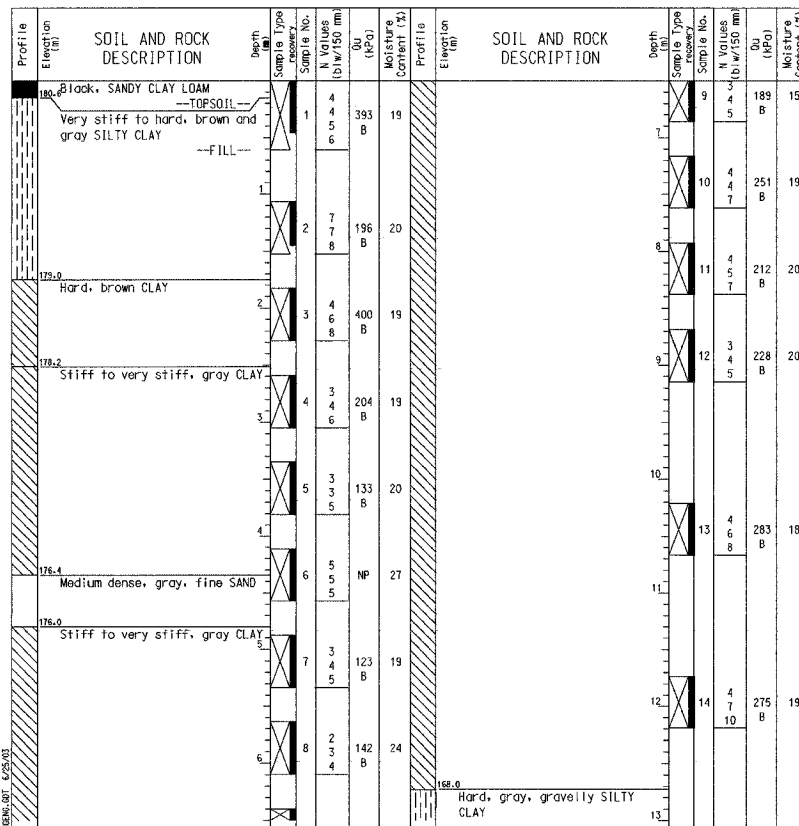
Page 2 of 2

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

**BORING LOG AR-060**  
 WEI Job No.: 255-08-01  
 Datum: USGS  
 Elevation: 180.58 m  
 North: 545495.32 m  
 East: 366982.33 m  
 Station: 7 +547.74  
 Offset: 20.45 RT

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

Page 1 of 1



**GENERAL NOTES**

Begin Drilling 10-16-2001 Complete Drilling 10-16-2001  
 Drilling Contractor TSC Drill Rig B-61  
 Driller G&F Logger B. Fugiel checked by L. Jordache  
 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 10-16-2001 Complete Drilling 10-16-2001  
 Drilling Contractor TSC Drill Rig B-61  
 Driller G&F Logger B. Fugiel checked by L. Jordache  
 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  
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**GENERAL NOTES**

Begin Drilling 10-01-2001 Complete Drilling 10-01-2001  
 Drilling Contractor TSC Drill Rig B-61  
 Driller G&F Logger B. Fugiel checked by L. Jordache  
 Drilling Method 2.75-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.

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 + 386.260 to STATION 7 + 543.382  
 STRUCTURE NO. 016-W853

DATE 07/05

**AMERICAN**  
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

Benchmark: Chiseled "x" on sign bolt (SW). Sign reads "Calumet City Lansing Exit 161" westbound I-80 across from mile marker 163.01. Elev. = 182.212

Existing Structure: None  
All dimensions in millimeters (mm) except as noted.

**DESIGN STRESSES**

**FIELD UNITS**

$f'_c = 24 \text{ MPa}$   
 $f_y = 400 \text{ MPa (Reinf.)}$   
Maximum Applied Soil Bearing Pressure = 140 kPa

**DESIGN SPECIFICATIONS**

AASHTO 2002 Standard Specifications for Highway Bridges

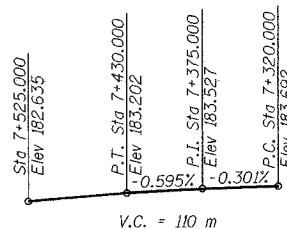
AASHTO 1989 Guide Specifications for Structural Design of Sound Barriers and 1992 Interims

**CURVE DATA I-80/94**

$\Delta = 20^\circ 11' 25"$   
 $D = 2.979^\circ$   
 $R = 1923.6$   
 $T = 342.476$   
 $L = 677.849$   
 $E = 30.249$   
 $P.C. = 7+380.276$   
 $P.I. = 7+722.751$   
 $P.T. = 8+058.125$   
 $S.E. = 2.9\%$

**LOADING**

Wind Load on Future Noise Wall = 1.7 kPa

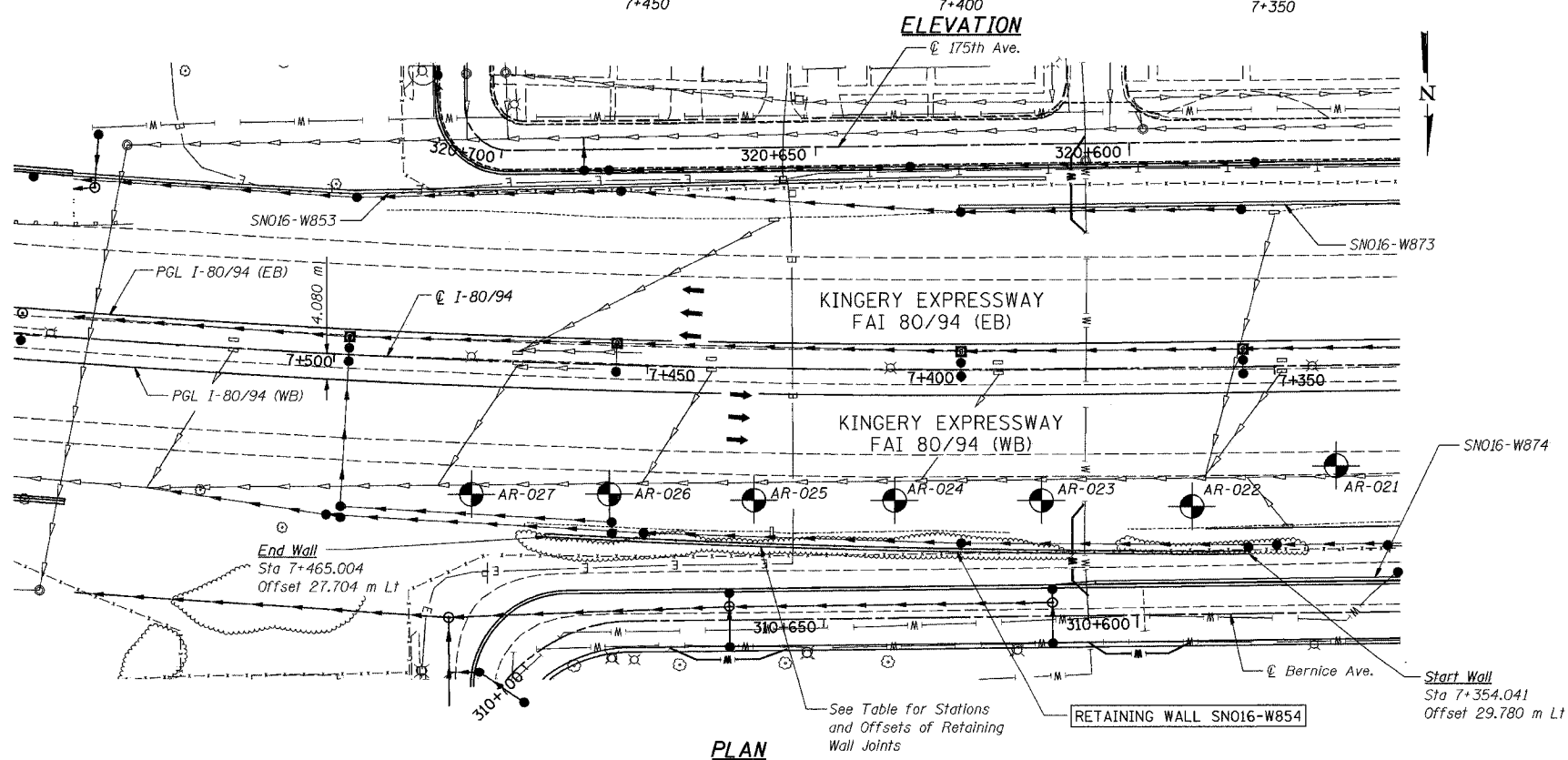
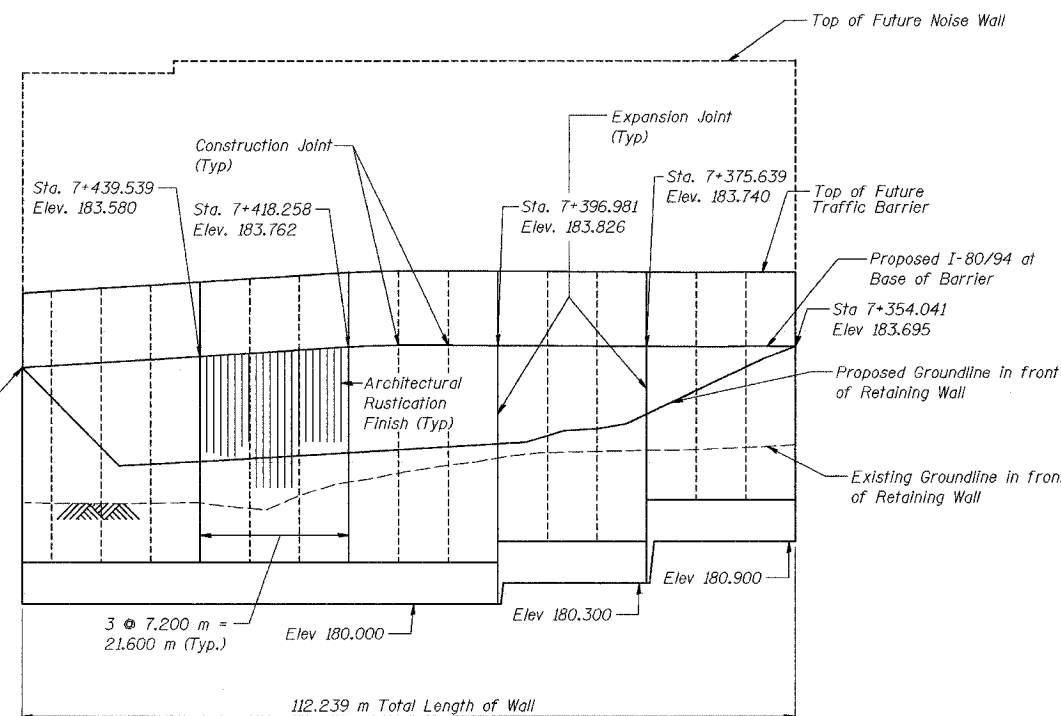


**PROFILE GRADE  
FUTURE I-80/94 WESTBOUND**

**TABLE**

EXPANSION OR CONSTRUCTION JOINT STATION	OFFSET TO FRONT FACE OF WALL
7+354.041	29.780 Lt
7+361.242	29.780 Lt
7+368.441	29.636 Lt
7+375.639	29.492 Lt
7+382.799	29.348 Lt
7+389.890	29.207 Lt
7+396.981	29.065 Lt
7+404.073	28.923 Lt
7+411.165	28.782 Lt
7+418.258	28.639 Lt
7+425.351	28.498 Lt
7+432.445	28.356 Lt
7+439.539	28.214 Lt
7+446.634	28.072 Lt
7+453.730	27.930 Lt
7+460.825	27.787 Lt
7+465.004	27.704 Lt

DESIGNED	KFA
CHECKED	MJW
DRAWN	MJW
CHECKED	GSP



ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
F.A.I. 80/94	SECT 6	COOK	1207 797	S-1

12 SHEETS

CONTRACT No. 62114

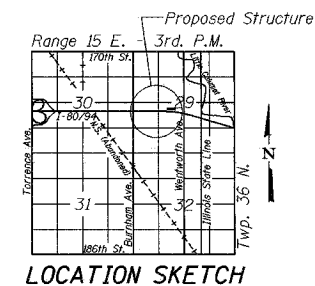
**LEGEND**

- Soil Boring Location
- Existing Roadway/Structure
- Proposed Roadway/Structure
- Tree
- Shrubs/Brush
- Proposed Storm Sewer
- Existing Storm Sewer
- Existing Water Main
- Existing Electricity Line
- Existing Telephone Line
- Storm Sewer by Others



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

EXP \_\_\_\_\_  
DATE \_\_\_\_\_



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

GENERAL PLAN  
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	SHEET	SHEET	SHEET NO. S-2
F.A.L. 88/94	2001- 167R	COOK	1207	798	12 SHEETS
BLANDED			FED-AID PROJECT	C-74(91-01)	CONTRACT No. 62114

**GENERAL NOTES**

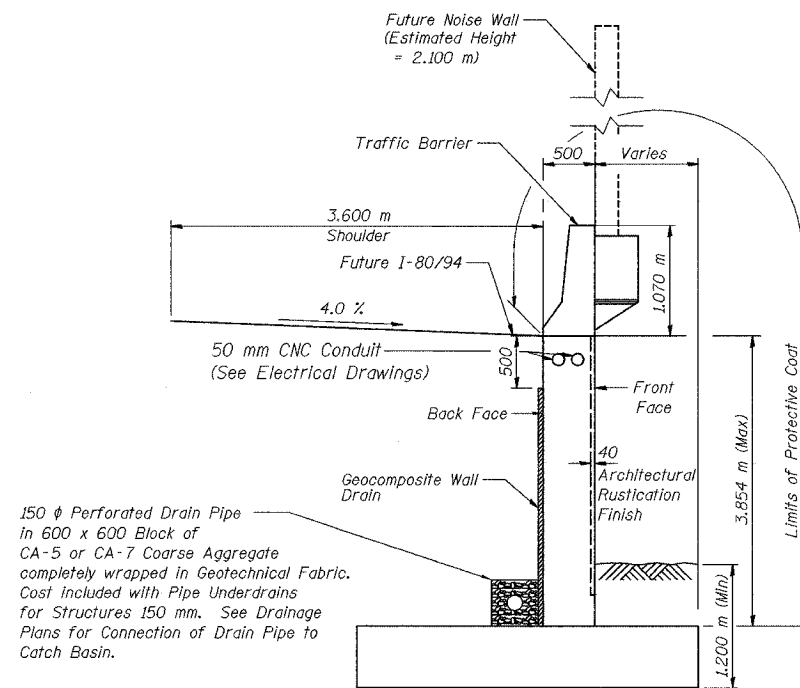
1. Reinforcement bars shall conform to the requirements of AASHTO M 31M or M322M, Grade 400
2. All dimensions are in millimeters (mm) except as noted.
3. All construction joints shall be bonded. [1]

**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 4)
S-4	Plan and Elevation (2 of 4)
S-5	Plan and Elevation (3 of 4)
S-6	Plan and Elevation (4 of 4)
S-7	Wall Sections and Details
S-8	Rustication Finish Details
S-9	Boring Logs (1 of 4)
S-10	Boring Logs (2 of 4)
S-11	Boring Logs (3 of 4)
S-12	Boring Logs (4 of 4)

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Structure Excavation	m <sup>3</sup>	1,467
Concrete Structures	m <sup>3</sup>	466.0
Rustication Finish	m <sup>2</sup>	166
Protective Coat	m <sup>2</sup>	657
Reinforcement Bars, Epoxy Coated	kg	36,130
Geocomposite Wall Drain	m <sup>2</sup>	321
Pipe Underdrains for Structures 150 mm	m	120.5
Noise Abatement Wall Anchor Rod Assembly	Each	33



**TYPICAL SECTION**

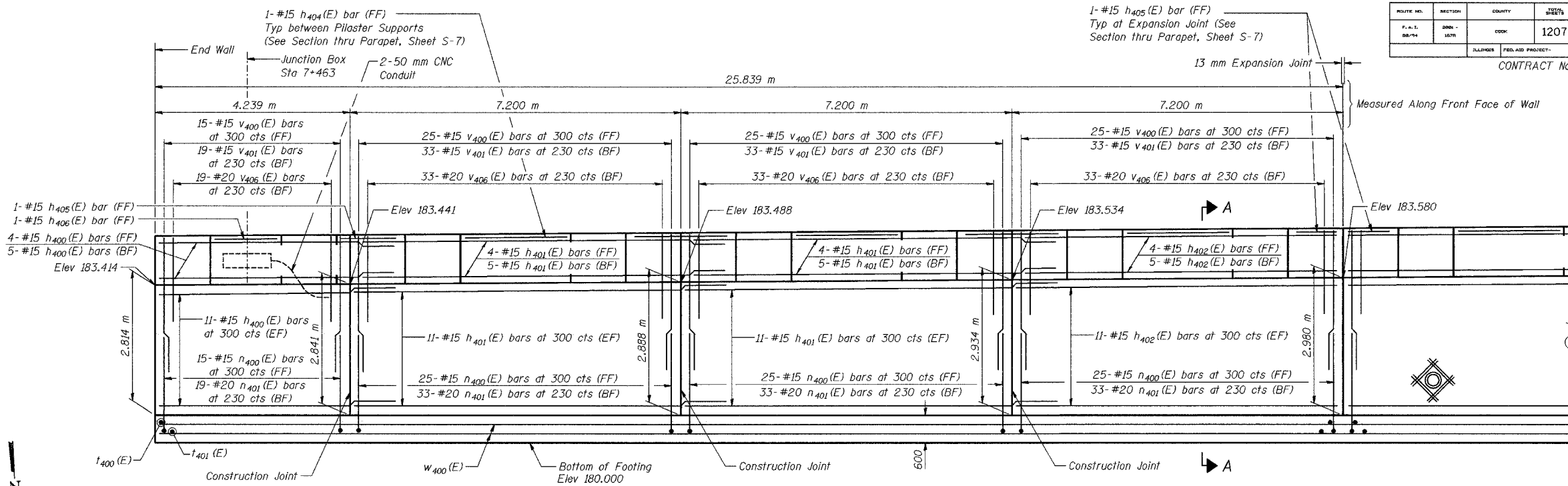
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CHECKED	MJW
DRAWN	MJW
CHECKED	GSP

[1] REVISED KFA 10-22-04

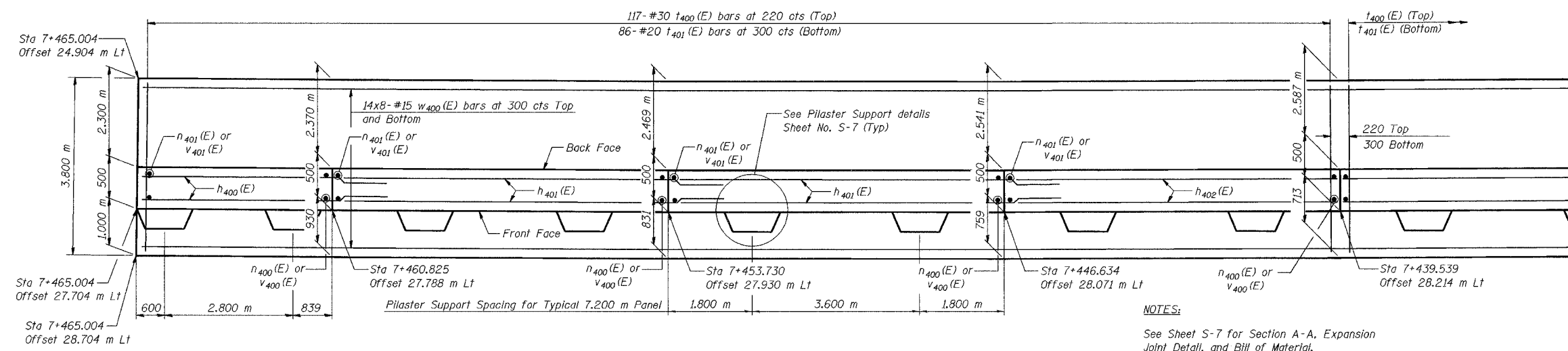
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.L. ROUTE 80/94 AND U.S. ROUTE 6  
 LOCAL ROAD RECONSTRUCTION  
**INDEX OF SHEETS, GENERAL NOTES  
 AND TOTAL BILL OF MATERIAL**  
 SECTION 2001-167R  
 COOK COUNTY  
 STATION 7+354.041 to STATION 7+465.004  
 STRUCTURE NO. 016-W854  
 DATE 07/05

**AMERICAN**  
 CONSULTING ENGINEERS

FOR INFORMATION ONLY



**ELEVATION**



**FOOTING PLAN**

DESIGNED	KFA
CHECKED	MJW
DRAWN	MJW
CHECKED	GSP

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

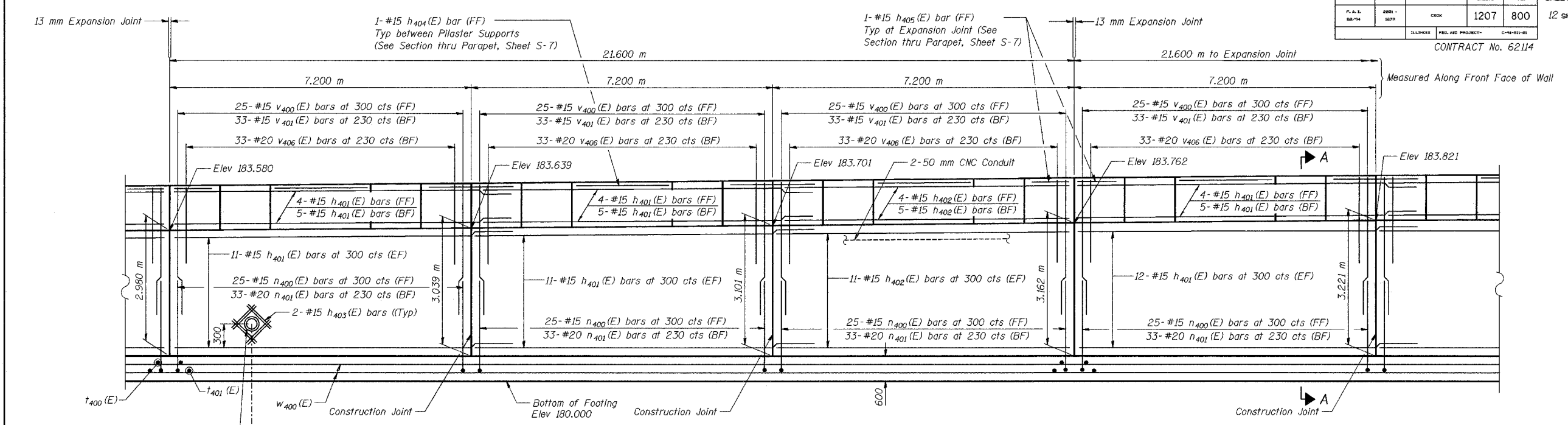
**LEGEND**  
 BF = Back Face  
 FF = Front Face  
 EF = Each Face

**NOTES:**  
 See Sheet S-7 for Section A-A, 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.

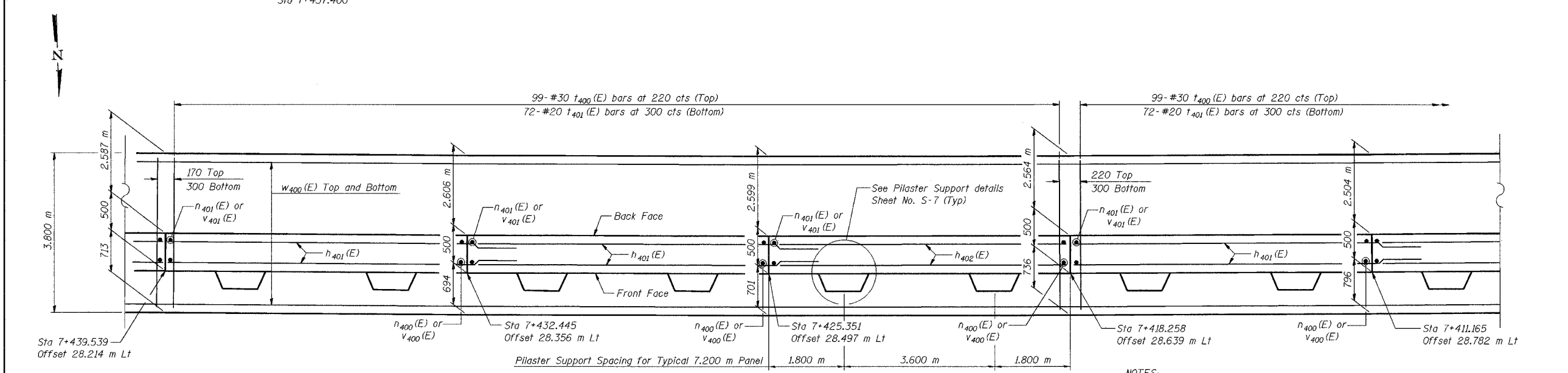
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 AND U.S. ROUTE 6  
 LOCAL ROAD RECONSTRUCTION  
**PLAN AND ELEVATION (1 OF 4)**  
**SECTION 2001-167R**  
**COOK COUNTY**  
**STATION 7+354.041 to STATION 7+465.004**  
**STRUCTURE NO. 016-W854**  
 DATE 07/05  
**AMERICAN**  
 CONSULTING ENGINEERS

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	SHEETS	POST	SHEET NO. S-4 12 SHEETS
F.A.L. 88/94	2001-167R	COOK	1207	800	
CONTRACT No. 62114					



**ELEVATION**



**FOOTING PLAN**

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

**NOTES:**  
 See Sheet S-7 for Section A-A, Expansion Joint Detail, and Bill of Material.  
 See Sheet S-8 for Rustication details.  
 Stations are referenced to  $\text{CL}$  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.  
 See Drainage Drawings for Underdrain Connection to Catch Basin.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 AND U.S. ROUTE 6  
 LOCAL ROAD RECONSTRUCTION  
**PLAN AND ELEVATION (2 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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