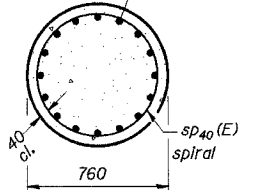
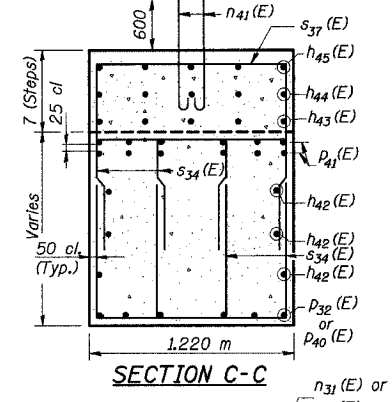
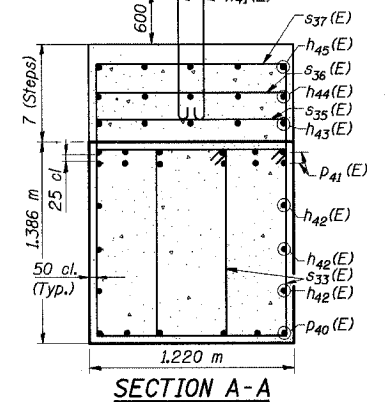
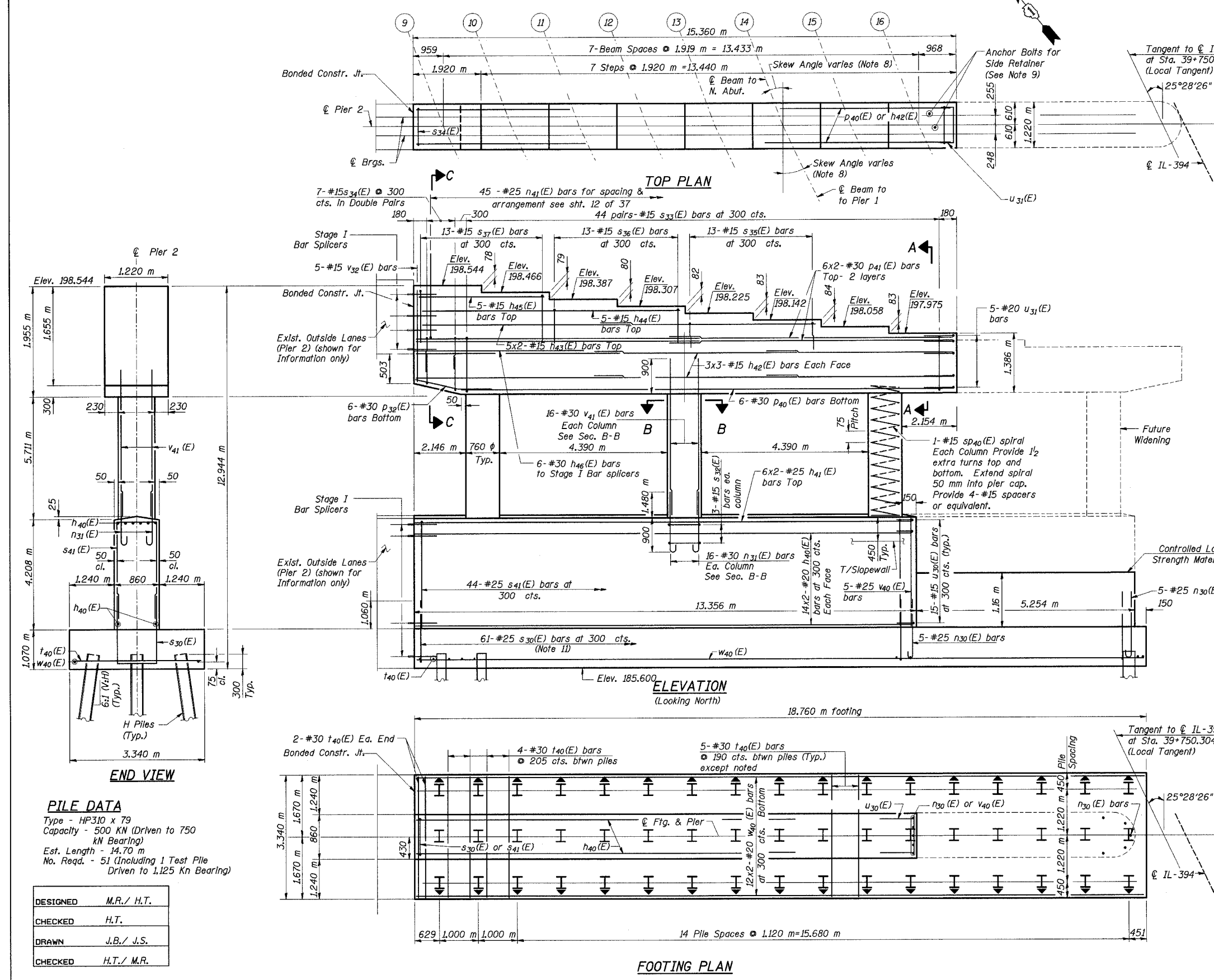


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 29
F.A.L. 80/94		COOK	870	502	37 SHEETS
ILLINOIS FED. AID PROJECT-					
SECTION 0203.1 & 0312-708(R) R-3 CONTRACT # 62108					



- NOTES:**
1. Work this sheet with Sheet No. 4 of 37 Sheets.
 2. Reinf. bars designated (E) shall be epoxy coated.
 3. Bars indicated thus 3x2-#15 etc. indicates 3 lines of bars with 2 lengths per line.
 4. Min. bar laps:
#15 bars - 510 mm #20 bars - 640 mm
#25 bars - 1060 mm #30 bars - 1480 mm
 5. Space reinforcement in cap to miss anchor bolts.
 6. Pour steps monolithically with cap.
 7. For Bar Splicer Assemblies, see Sheet No. 31 of 37.
 8. For Beam Skew Angle Table, see Sheet No. 30 of 37.
 9. For Anchor Bolt Locations, see Sheet No. 12 of 37, Fixed Pier Details.
 10. For Anchor Bolt Details, see Sheet No. 23 of 37.
 11. Space s(E) bars to clear piles.
 12. All dimensions are in millimeters (mm) except as noted.
- *For additional information see Bar Splicer details on sheet 31 of 37.

PILE DATA
Type - HP310 x 79
Capacity - 500 KN (Driven to 750 KN Bearing)
Est. Length - 14.70 m
No. Req'd. - 51 (Including 1 Test Pile Driven to 1,125 Kn Bearing)

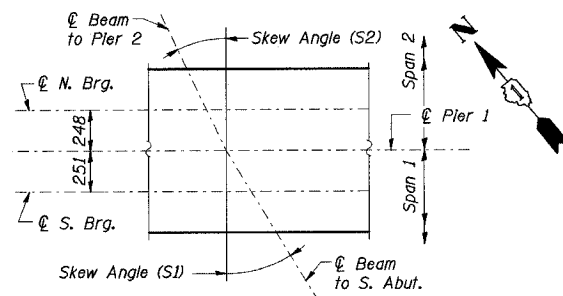
DESIGNED	M.R./ H.T.
CHECKED	H.T.
DRAWN	J.B./ J.S.
CHECKED	H.T./ M.R.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
PIER 2 (FIXED PIER)
SB IL. ROUTE 394 OVER CANADIAN NATIONAL RR
F.A.P. 332 SECTION (0203.1 & 0312-708(R) R-3
COOK COUNTY
STA. 39+752.246 S.N. 016-2798 (INSIDE LANES)
DATE: July 18, 2005
SCALE: NONE

Soodan & Associates, Inc.
100 North LaSalle Street, Suite 1800
Chicago, Illinois 60602

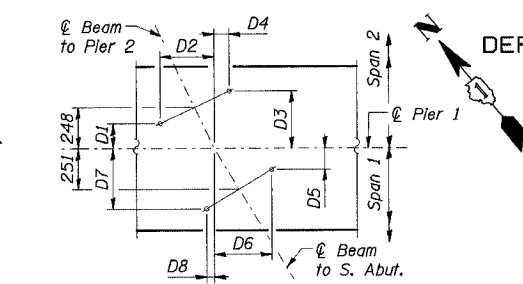
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 30
F.A.L. 80/94		COOK	870	503	37 SHEETS
SECTION (0203.1 & 0312-708W) R-3 CONTRACT # 62108					



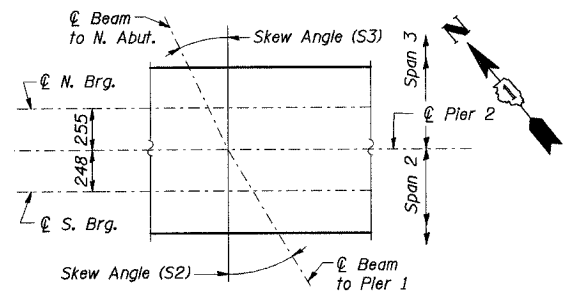
BEAM NO.	Skew Angle (S1)	Skew Angle (S2)
9	27°45'14"	26°26'30"
10	27°36'25"	26°17'32"
11	27°27'34"	26°08'33"
12	27°18'42"	25°59'33"
13	27°09'48"	25°50'31"
14	27°00'53"	25°41'28"
15	26°51'56"	25°32'23"
16	26°42'58"	25°23'18"

BEAM SKEW ANGLES
AT PIER 1



D1	D2	D3	D4	D5	D6	D7	D8
91	439	405	192	87	444	415	179
92	438	404	193	88	443	414	181
93	438	403	194	89	443	413	182
94	437	402	195	89	442	413	183
95	437	401	197	90	442	412	184
95	437	401	198	91	442	411	186
96	436	400	199	92	441	410	187
97	436	399	200	93	441	409	188

ANCHOR BOLT LOCATION DETAILS
AT PIER 1



BEAM NO.	Skew Angle (S2)	Skew Angle (S3)
9	26°26'30"	25°08'21"
10	26°17'32"	24°59'15"
11	26°08'33"	24°50'09"
12	25°59'33"	24°41'01"
13	25°50'31"	24°31'51"
14	25°41'28"	24°22'40"
15	25°32'23"	24°13'52"
16	25°23'18"	24°04'39"

BEAM SKEW ANGLES
AT PIER 2

BILL OF MATERIAL PIER 1

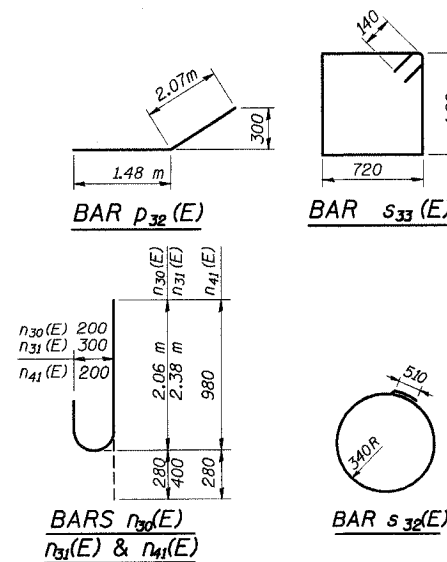
Bar	No.	Size	Length (m)	Shape
h30(E)	56	# 20	6.64	—
h31(E)	12	# 25	6.87	—
h32(E)	18	# 15	5.22	—
h33(E)	10	# 15	5.72	—
h34(E)	5	# 15	7.25	—
h35(E)	5	# 15	3.59	—
h36(E)	6	# 30	4.83	—
n30(E)	10	# 25	2.34	U
n31(E)	36	# 30	2.78	U
p30(E)	6	# 30	12.58	—
p31(E)	12	# 30	14.59	—
p32(E)	6	# 30	3.55	—
s30(E)	58	# 25	4.88	L
s31(E)	42	# 25	8.76	L
s32(E)	9	# 15	2.65	O
s33(E)	84	# 15	4.30	□
s34(E)	14	# 15	2.92	L
s35(E)	12	# 15	2.46	L
s36(E)	12	# 15	2.78	L
s37(E)	12	# 15	3.12	L
sp30(E)	3	# 15	160.74	~
t30(E)	52	# 30	2.94	—
u30(E)	30	# 15	1.78]
u31(E)	5	# 20	2.40]
v30(E)	5	# 25	3.98	—
v31(E)	36	# 30	6.46	—
v32(E)	5	# 15	1.57	—
w30(E)	22	# 20	9.16	—
ITEM UNIT QUANTITY				
Concrete Structures	m³	138.5		
Reinforcement Bars, Epoxy Coated	kg	10,710		
Structure Excavation	m³	329		
Furnishing Steel Piles HP310X79	m	800		
Driving Steel Piles	m	800		
Test Pile Steel HP310X79	Each	1		
Controlled Low-Strength Material	m³	4.7		

BILL OF MATERIAL PIER 2

Bar	No.	Size	Length (m)	Shape
h40(E)	56	# 20	6.96	—
h41(E)	12	# 25	7.19	—
h42(E)	18	# 15	5.44	—
h43(E)	10	# 15	5.98	—
h44(E)	5	# 15	7.63	—
h45(E)	5	# 15	3.79	—
h46(E)	6	# 30	5.11	—
n30(E)	10	# 25	2.34	U
n31(E)	48	# 30	2.78	U
n41(E)	45	# 25	1.26	U
p40(E)	6	# 30	13.21	—
p41(E)	24	# 30	8.38	—
p32(E)	6	# 30	3.55	—
s30(E)	61	# 25	4.88	L
s41(E)	44	# 25	9.12	L
s32(E)	9	# 15	2.65	O
s33(E)	88	# 15	4.30	□
s34(E)	14	# 15	2.92	L
s35(E)	13	# 15	2.46	L
s36(E)	13	# 15	2.78	L
s37(E)	13	# 15	3.12	L
sp40(E)	3	# 15	165.07	~
t40(E)	82	# 30	3.24	—
u30(E)	30	# 15	1.78]
u31(E)	5	# 20	2.40]
v40(E)	5	# 25	4.18	—
v41(E)	48	# 30	6.61	—
v32(E)	5	# 15	1.57	—
w40(E)	24	# 20	10.05	—
ITEM UNIT QUANTITY				
Concrete Structures	m³	154.1		
Reinforcement Bars, Epoxy Coated	kg	12,790		
Structure Excavation	m³	460		
Furnishing Steel Piles HP310X79	m	735		
Driving Steel Piles	m	735		
Test Pile Steel HP310X79	Each	1		
Controlled Low-Strength Material	m³	5.2		

Bar	A	B
s30(E)	760	2.06 m
s31(E)	760	4.00 m
s34(E)	1.12 m	900
s35(E)	1.12 m	670
s36(E)	1.12 m	830
s37(E)	1.12 m	1,000
s41(E)	760	4.18 m
u30(E)	760	510
u31(E)	1.12 m	640

BARS s30(E), s31(E),
s34(E) thru s37(E) & s41(E)
u30(E) & u31(E)



DESIGNED	M.R./ H.T.
CHECKED	H.T.
DRAWN	J.B./ J.S.
CHECKED	H.T./ M.R.

- Notes:
1. Work this sheet with Sheet No. 27 & 28 of 37 Sheets.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
PIER DETAILS
SB IL. ROUTE 394 OVER CANADIAN NATIONAL RR
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 39+752.246 S.N. 016-2798 (INSIDE LANES)
DATE: July 18, 2005
SCALE: NONE
Soodan & Associates, Inc.
100 North LaSalle Street, Suite 1800
Chicago, Illinois 60602

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94		COOK	870	504
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		
SECTION (0203.1 & 0312-708W) R-3			CONTRACT # 62108	

SHEET NO. 31
37 SHEETS

NOTES

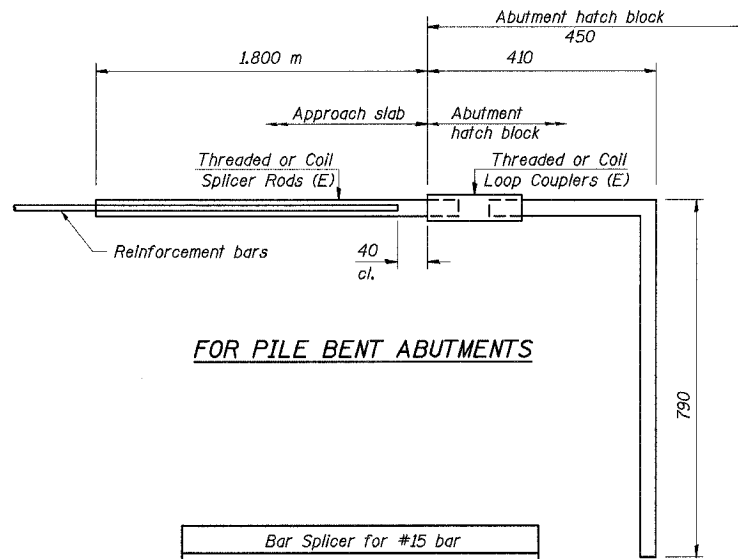
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 400 MPa yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the 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 = $1.25 \times 10^{-3} \times f_y \times A_t$
(Tension in kN)
- ② Minimum *Pull-out Strength = $1.25 \times 10^{-3} \times f_{s\ allow} \times A_t$
(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_t = Tensile stress area of lapped reinforcement bars (mm^2).
* = 28 day concrete

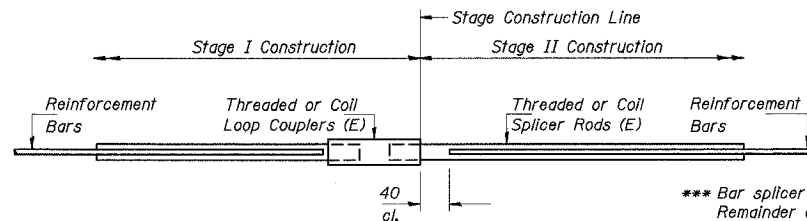
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kN - tension	Min. Pull-Out Strength kN - tension
#15	610 mm	100	40
#20	790 mm	150	60
#25	1.04 m	250	100
#30	1.37 m	350	140

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



FOR PILE BENT ABUTMENTS

Bar Splicer for #15 bar	
Min. Capacity = 100 kN - tension	
Min. Pull-out Strength = 40 kN - tension	
No. Required S. Abut. = 42	
N. Abut. = 47	
Total = 89	



***** STANDARD**

Bar Size	No. Assemblies Required	Location
# 15	712	Deck slab + Diaph.
# 20	12	Diaph.
# 25	12	Deck slab
# 15	10	S. Abut.
# 20	5	S. Abut.
# 25	10	S. Abut.
# 15	10	N. Abut.
# 20	5	N. Abut.
# 25	10	N. Abut.
# 15	6	Pier 1
# 20	39	Pier 1
# 25	6	Pier 1
# 30	12	Pier 1
# 15	6	Pier 2
# 20	40	Pier 2
# 25	6	Pier 2
# 30	12	Pier 2
	913	Total

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

ROLLED THREAD DOWEL BAR



**** ONE PIECE**

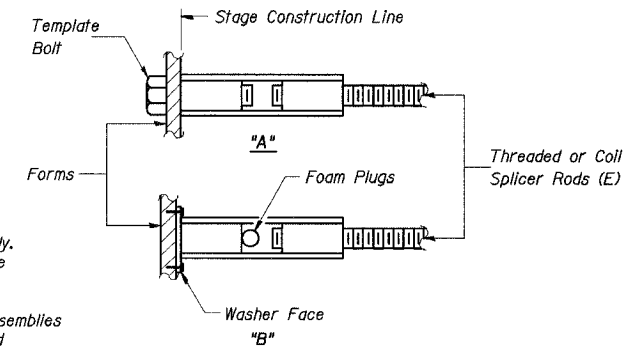
Wire Connector



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.

DESIGNED	M.R./ H.T.
CHECKED	H.T.
DRAWN	J.B./ J.S.
CHECKED	H.T./ M.R.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND

BAR SPLICER DETAILS

SB IL. ROUTE 394 OVER CANADIAN NATIONAL RR
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 39+752.246 S.N. 016-2798 (INSIDE LANES)

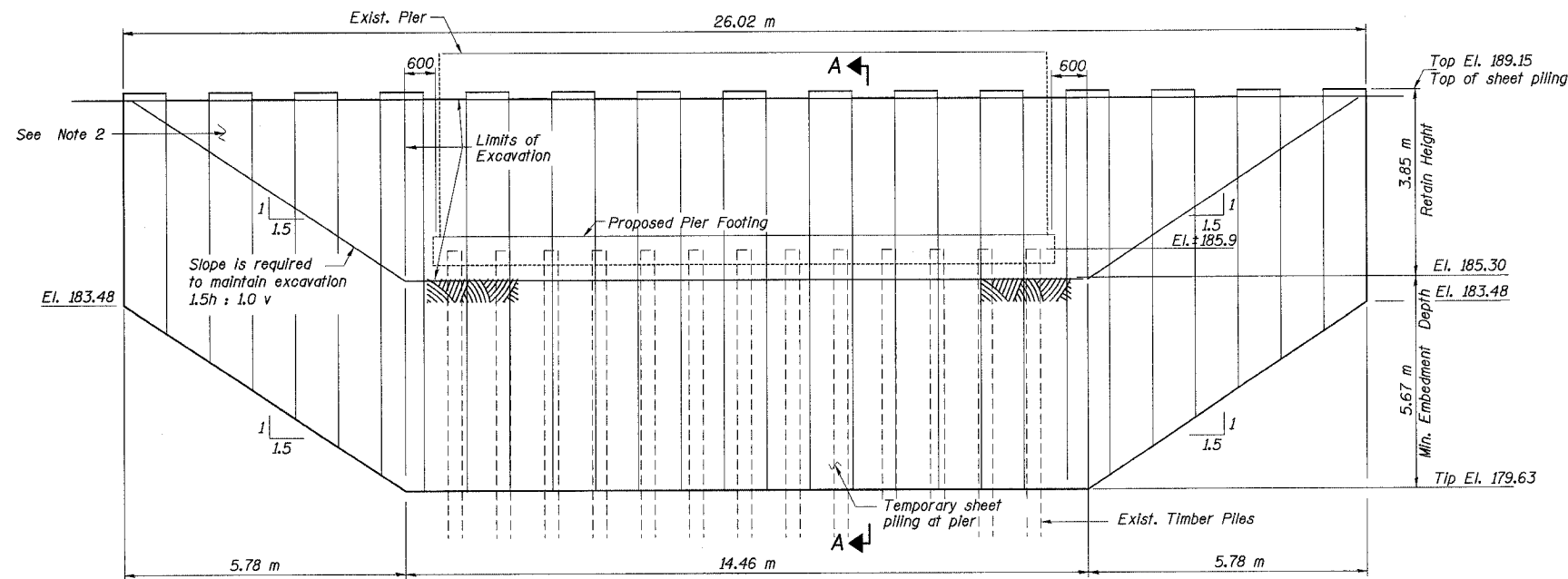
DATE: July 18, 2005
SCALE: NONE

Soodan

Soodan & Associates, Inc.
100 North LaSalle Street, Suite 1800
Chicago, Illinois 60602

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 32
F.A.P. 80/94		COOK	870	505	37 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-			
SECTION (0203.1 & 0312-708W) R-3		CONTRACT # 62108			

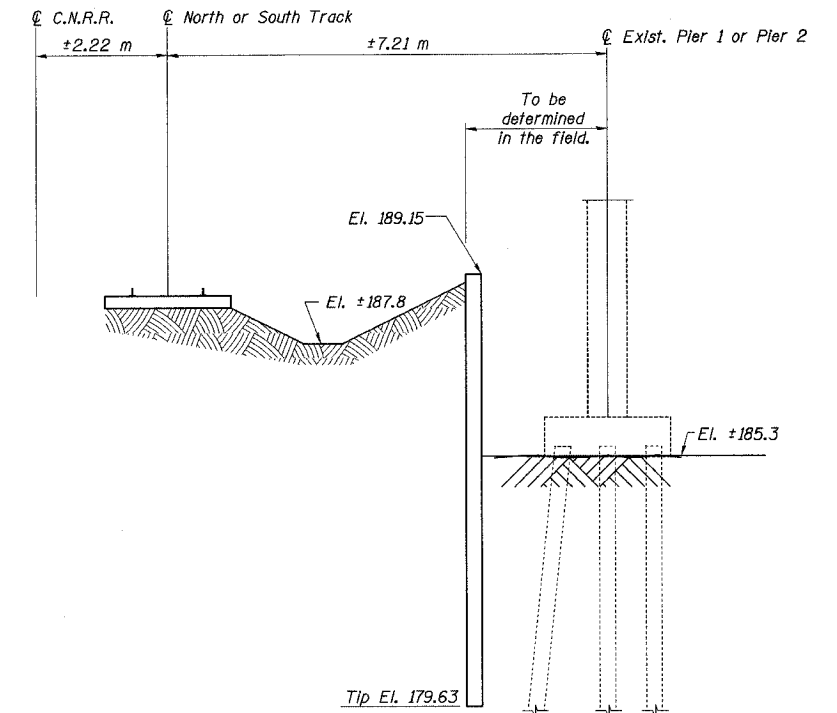


ELEVATION
(Looking South, Pier 1)
(Looking North, Pier 2)
Min. Section Modulus Required = $2040 \text{ mm}^3 \times 10^{-3}/\text{m}$

NOTES:

- The sheet piling shall be entirely removed. The cutting of sheet piling 300 mm below grade will not be permitted.
- If the contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans for lesser design requirements, then full design submittals with the required seals will be expected by the Department, for review & approval.
- All dimensions are in millimeters (mm) unless noted.
- Contractor is to coordinate operations with Canadian National Railroad during sheet pile installation.
- Backfill to be included for payment with Removal of Existing Structures No. 2. Backfill material and placing and compacting requirements shall meet the requirements of Article 502.10 of the Standard Specifications.

DESIGNED	M.R./ H.T.
CHECKED	H.T.
DRAWN	J.B./ J.S.
CHECKED	H.T./ M.R.



SECTION A-A

**BILL OF MATERIAL
FOR PIER 1 & PIER 2**

Item	Unit	Quantity
Temporary Sheet Piling	Sq.m	451

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
TEMPORARY SHEET PILING AT
PIER 1 & PIER 2
SB IL. ROUTE 394 OVER CANADIAN NATIONAL RR
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 39+752.246 S.N. 016-2798 (INSIDE LANES)
DATE: July 18, 2005
SCALE: NONE

Soodan
Soodan & Associates, Inc.
100 North LaSalle Street, Suite 1800
Chicago, Illinois 60602

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 33 37 SHEETS
F.A.I. 80/94		COOK	870	506	
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-		SECTION (0203.1 & 0312-708W) R-3 CONTRACT # 62108	

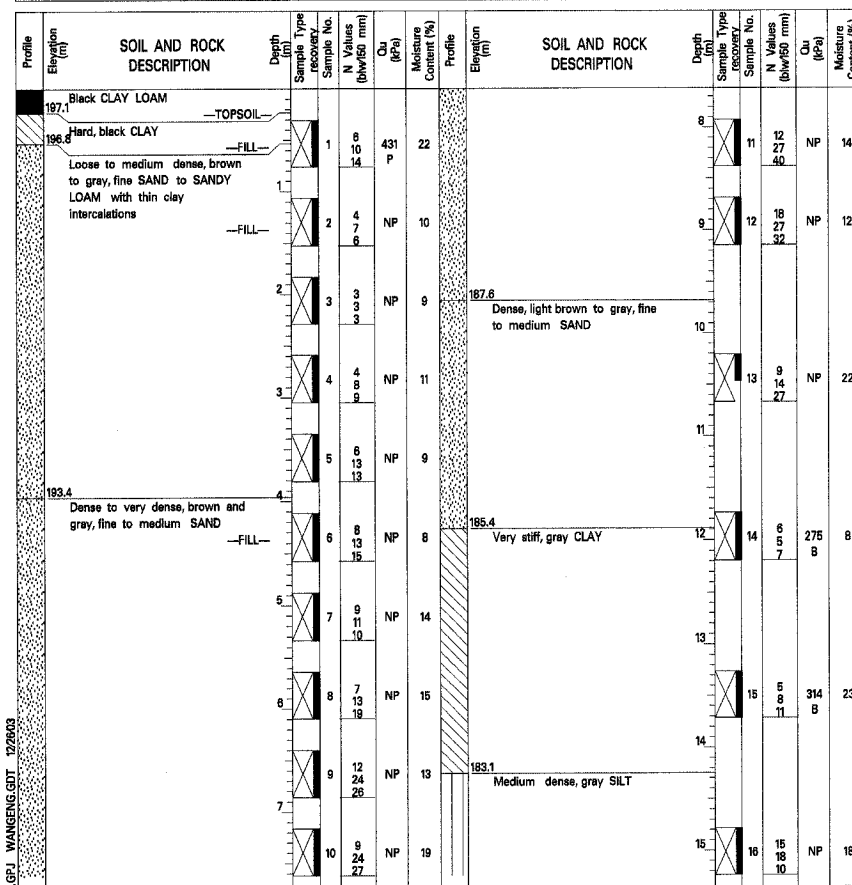
BORING LOGS HB-05 Page 1 of 2

BORING LOG HB-05 Page 1 of 2

Wang Engineering, Inc. Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

Datum: NGVD
Elevation: 197.32 m
North: 545003.31 m
East: 362559.58 m
Station: 39 + 715.91
Offset: 1.19 RT



GENERAL NOTES

Begin Drilling 10-09-2001 Complete Drilling 10-09-2001
Drilling Contractor Patrick Drilling Drill Rig CME 75
Driller K&C Logger E. Datz Checked by L. Iordache
Drilling Method 3.25-inch ID HSA, Boring grouted after completion, mud rotary after 30 feet

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	M.R./ H.T.
CHECKED	H.T.
DRAWN	J.B./ J.S.
CHECKED	H.T./ M.R.

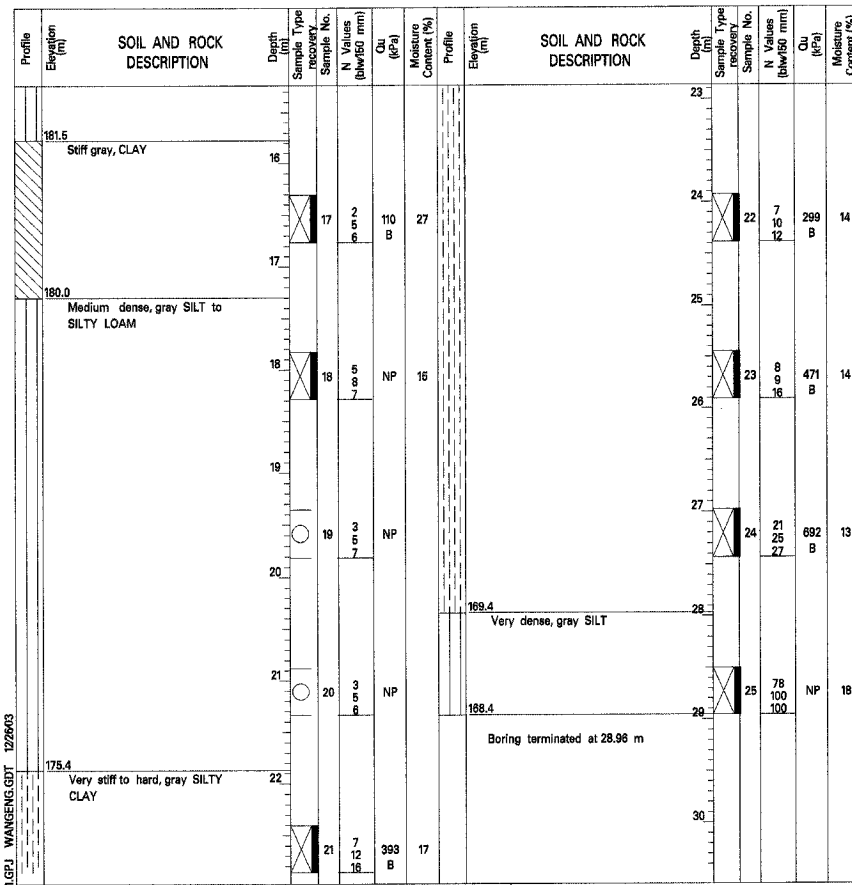
BORING LOGS HB-05 Page 2 of 2

BORING LOG HB-05 Page 2 of 2

Wang Engineering, Inc. Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

Datum: NGVD
Elevation: 197.32 m
North: 545003.31 m
East: 362559.58 m
Station: 39 + 715.91
Offset: 1.19 RT



GENERAL NOTES

Begin Drilling 10-08-2001 Complete Drilling 10-08-2001
Drilling Contractor Patrick Drilling Drill Rig CME 75
Driller K&C Logger E. Datz Checked by L. Iordache
Drilling Method 3.25-inch ID HSA, Boring grouted after completion, mud rotary after 30 feet

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.

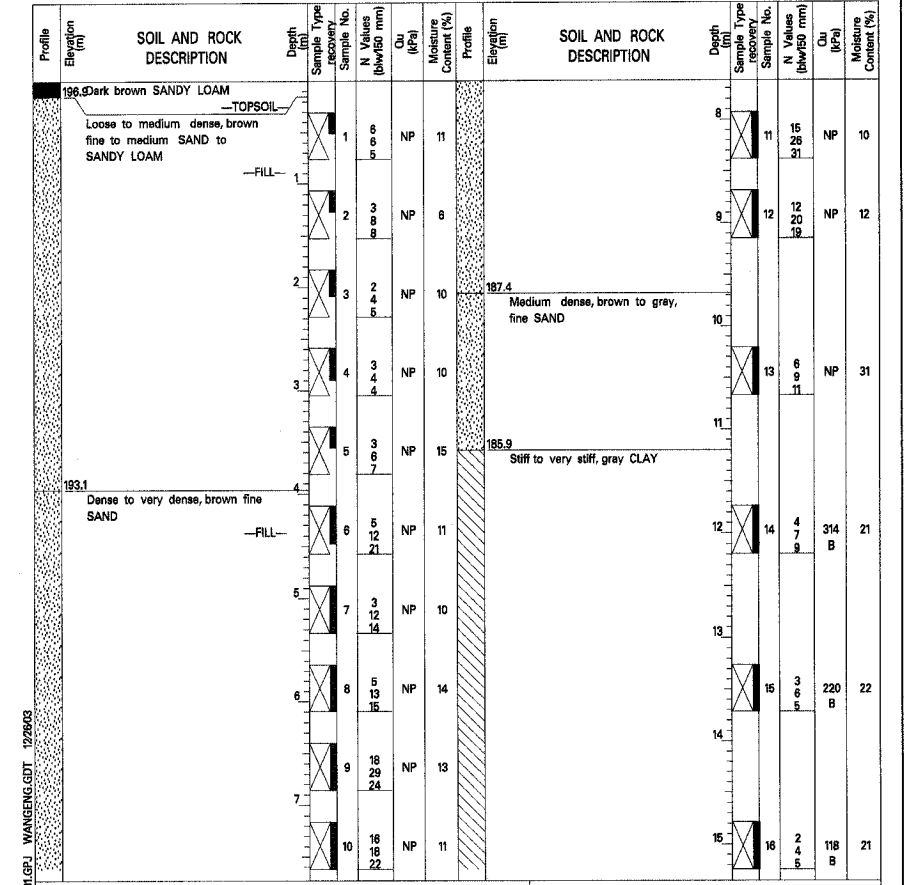
BORING LOGS HB-06 Page 1 of 2

BORING LOG HB-06 Page 1 of 2

Wang Engineering, Inc. Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

Datum: NGVD
Elevation: 197.09 m
North: 545027.06 m
East: 362535.99 m
Station: 39 + 750.12
Offset: 10.81 LT



GENERAL NOTES

Begin Drilling 10-11-2001 Complete Drilling 10-11-2001
Drilling Contractor Patrick Drilling Drill Rig CME 75
Driller K&C Logger E. Datz Checked by L. Iordache
Drilling Method 3.25-inch ID HSA, Boring grouted after completion

WATER LEVEL DATA

While Drilling 9.91 m
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.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
BORING LOGS 1 OF 5

SB IL ROUTE 394 OVER CANADIAN NATIONAL RR
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 39+752.246 S.N. 016-2798 (INSIDE LANES)
DATE: July 18, 2005
SCALE: NONE

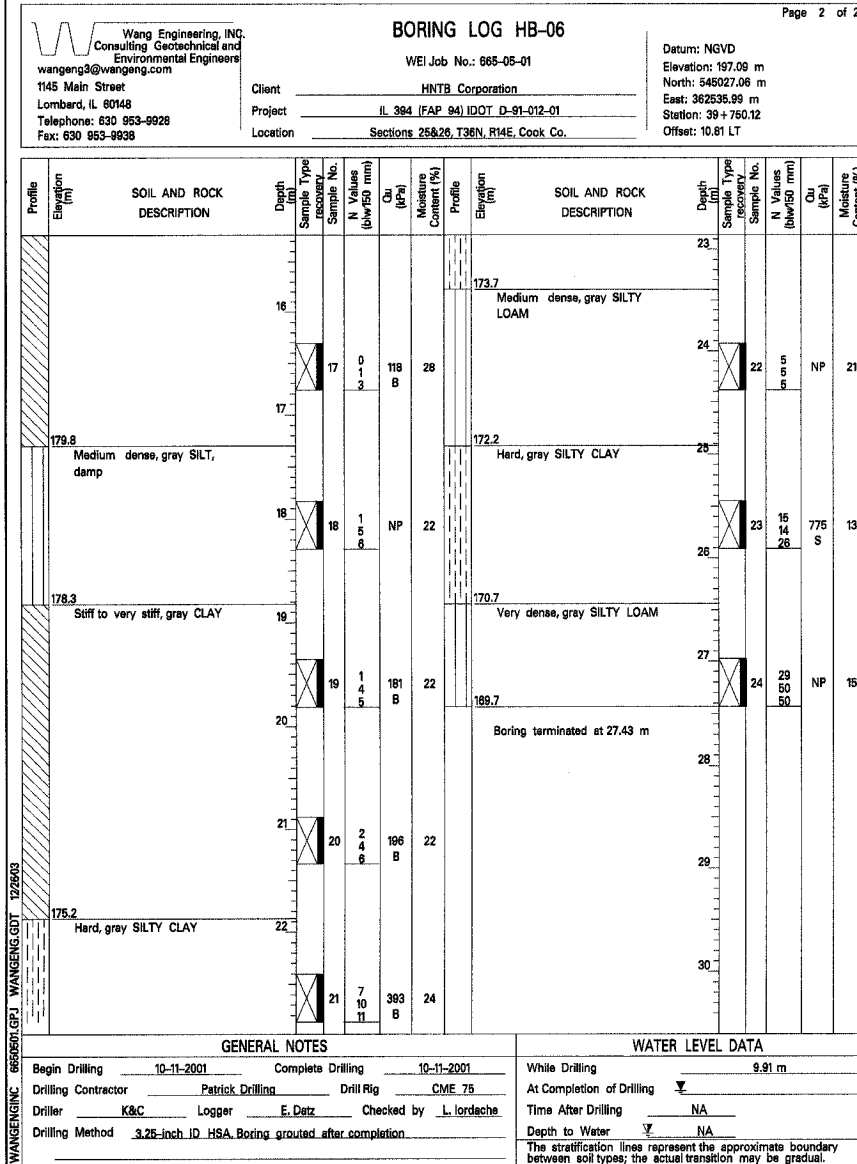
Soodan
Soodan & Associates, Inc.
100 North LaSalle Street, Suite 1800
Chicago, Illinois 60602

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

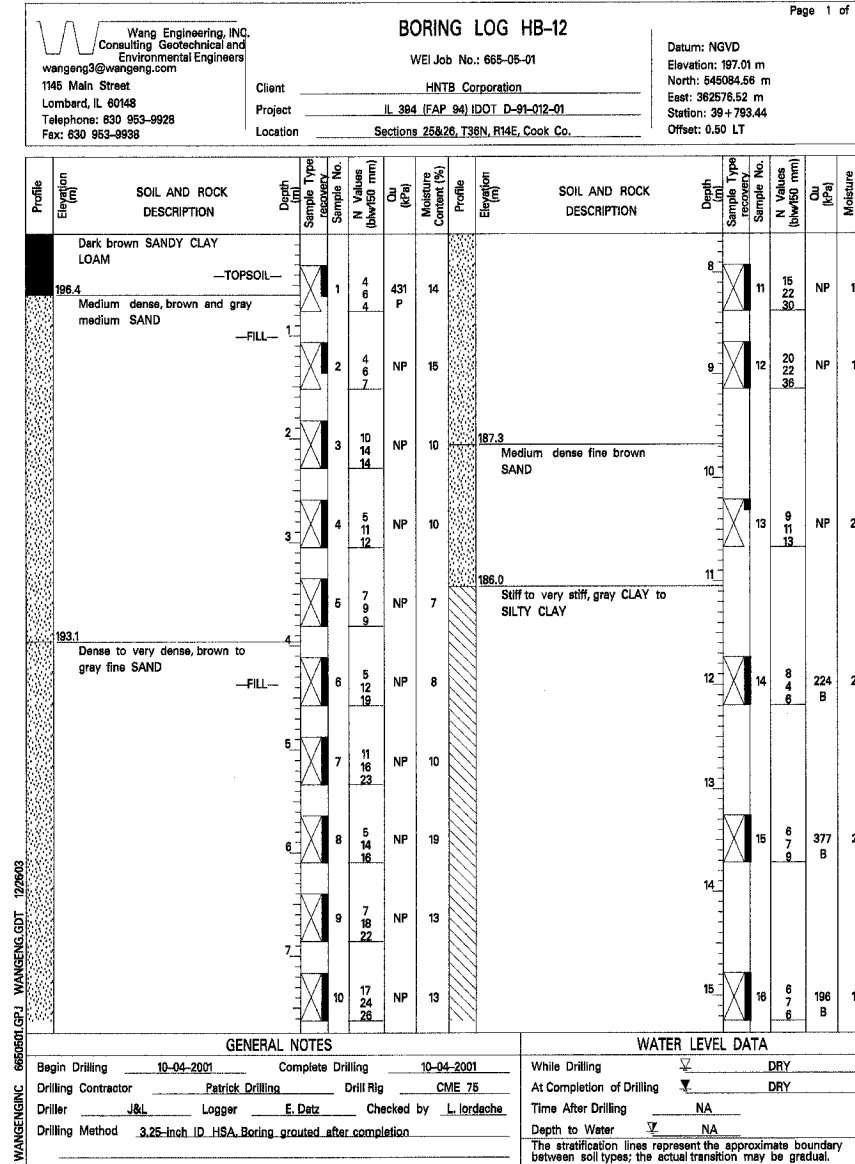
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94		COOK	870	507
SECTION 0203.1 & 0312-708W R-3 CONTRACT # 62108				

SHEET NO. 34
37 SHEETS

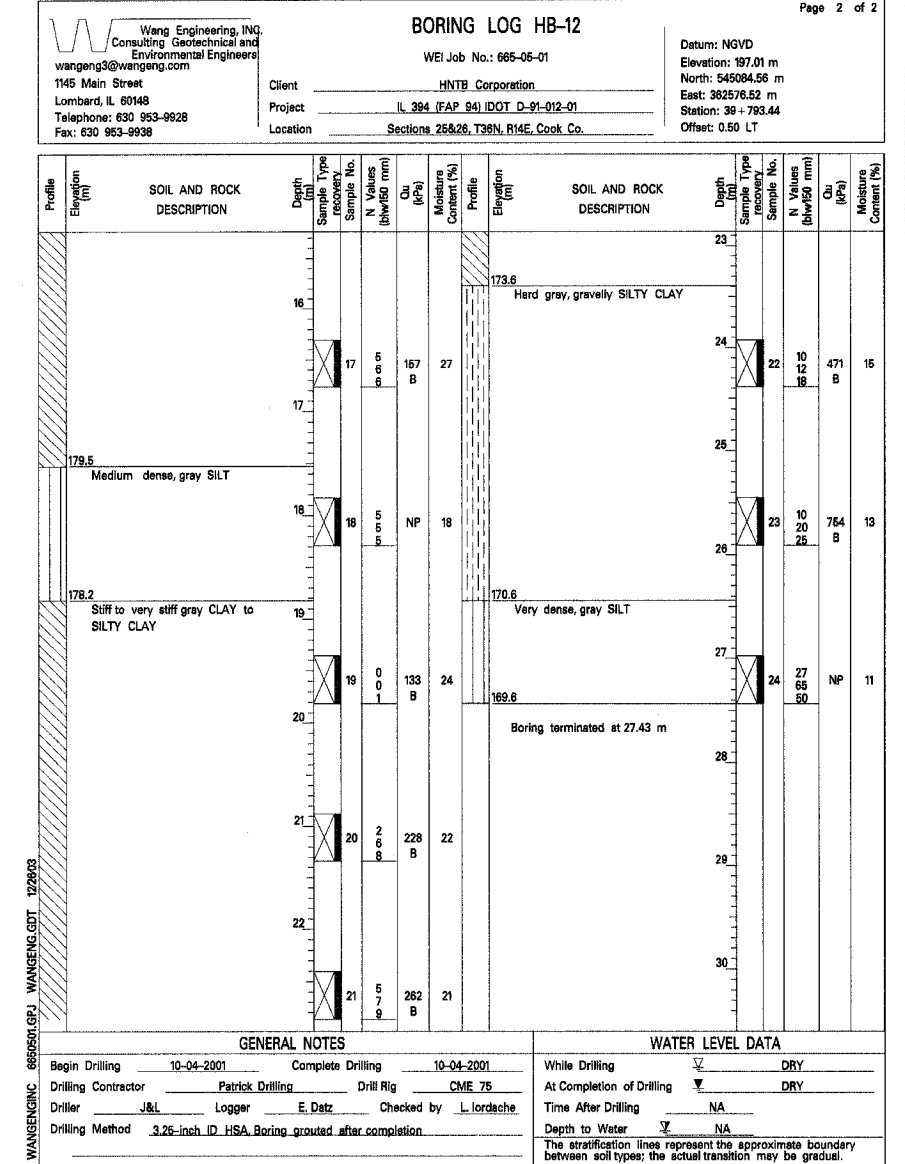
BORING LOG HB-06 Page 2 of 2



BORING LOG HB-12 Page 1 of 2



BORING LOG HB-12 Page 2 of 2



DESIGNED	M.R./ H.T.
CHECKED	H.T.
DRAWN	J.B./ J.S.
CHECKED	H.T./ M.R.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
BORING LOGS 2 OF 5
SB IL ROUTE 394 OVER CANADIAN NATIONAL RR
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 39+752.246 S.N. 016-2798 (INSIDE LANES)
DATE: July 18, 2005
SCALE: NONE
Soodan
Soodan & Associates, Inc.
100 North LaSalle Street, Suite 1800
Chicago, Illinois 60602

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94		COOK	870	508
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT-				
SECTION 0203.1 & 0312-708W R-3 CONTRACT # 62108				

SHEET NO. 35
37 SHEETS

BORING LOG HB-13 Page 1 of 2

BORING LOG HB-13 Page 1 of 2

Wang Engineering, Inc.
Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 26&28, T39N, R14E, Cook Co.

WEI Job No.: 665-05-01
Datum: NGVD
Elevation: 196.95 m
North: 545101.61 m
East: 362552.31 m
Station: 39+802.78
Offset: 27.60 LT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Values (blows/50 mm)	Cu (kPa)	Moisture Content (%)	Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Values (blows/50 mm)	Cu (kPa)	Moisture Content (%)
196.7	ASPHALT												
	Hard, brown SANDY CLAY	8	1	431	19				8	11	19	NP	7
196.0	Loose to medium dense, brown and gray SANDY LOAM with clay intercalations	9	2	7	11				9	12	23	NP	7
		10	3	5	13		187.8	Loose to medium dense, greenish gray SANDY LOAM	10	13	9	NP	17
		11	4	1	15				11	14	11	NP	17
		12	5	1	21				12	15	12	NP	21
		13	6	2	26		185.1	Very stiff to stiff, gray CLAY	13	16	1	354	30
192.2	Medium dense to very dense, gray, fine SAND with clay intercalations	14	7	12	15				14	17	3	157	21
		15	8	10	12				15	18	3	148	21
		16	9	10	14		182.7	Medium dense, gray SILT	16	19	10	8	18
		17	10	15	5				17	20	10	8	18

GENERAL NOTES

Begin Drilling 10-09-2001 Complete Drilling 10-09-2001

Drilling Contractor Patrick Drilling Drill Rig CME 75

Driller T&L Logger E. Datz Checked by

Drilling Method 3.25-inch ID HSA Boring grouted after completion

WATER LEVEL DATA

While Drilling 11.58 m

At Completion of Drilling

Time After Drilling NA

Depth to Water NA

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

BORING LOG HB-13 Page 2 of 2

BORING LOG HB-13 Page 2 of 2

Wang Engineering, Inc.
Consulting Geotechnical and Environmental Engineers
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1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 26&28, T39N, R14E, Cook Co.

WEI Job No.: 665-05-01
Datum: NGVD
Elevation: 196.95 m
North: 545101.61 m
East: 362552.31 m
Station: 39+802.78
Offset: 27.60 LT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Values (blows/50 mm)	Cu (kPa)	Moisture Content (%)	Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Values (blows/50 mm)	Cu (kPa)	Moisture Content (%)
191.2	Very stiff, gray CLAY	18	17	5	196	22			18	22	5	471	22
190.3	Medium dense gray SILT	17	18	5	196	22			17	23	7	536	12
179.7	Stiff to very stiff, gray CLAY	19	19	2	172	21			19	24	6	104	18
		20	20	2	196	21			20	25	2	81	18
		21	21	6	471	20			21	26	6	8	18
175.1	Hard, gray SILTY CLAY	22	22	6	471	20			22	27	6	8	18

Boring terminated at 25.91 m

GENERAL NOTES

Begin Drilling 10-09-2001 Complete Drilling 10-09-2001

Drilling Contractor Patrick Drilling Drill Rig CME 75

Driller T&L Logger E. Datz Checked by

Drilling Method 3.25-inch ID HSA Boring grouted after completion

WATER LEVEL DATA

While Drilling 11.58 m

At Completion of Drilling

Time After Drilling NA

Depth to Water NA

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

BORING LOG HR-37 Page 1 of 2

BORING LOG HR-37 Page 1 of 2

Wang Engineering, Inc.
Consulting Geotechnical and Environmental Engineers
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1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 26&28, T39N, R14E, Cook Co.

WEI Job No.: 665-05-01
Datum: NGVD
Elevation: 188.05 m
North: 545042.64 m
East: 362523.96 m
Station: 100+676.50
Offset: 12.63 RT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Values (blows/50 mm)	Cu (kPa)	Moisture Content (%)	Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Values (blows/50 mm)	Cu (kPa)	Moisture Content (%)
187.7	Black SILTY LOAM												
	Medium dense, brown to gray SAND	8	1	1	NP	30			8	2	2	89	26
		9	2	3	NP	29			9	3	3	164	20
		10	3	6	NP	27			10	4	2	186	21
		11	4	3	NP	20			11	5	3	176	20
185.6	Very stiff, gray CLAY	12	5	3	320	18			12	6	3	141	21
		13	6	3	231	19			13	7	14	9	19
183.3	Medium dense, gray SILT	14	7	7	NP	19			14	8	3	104	18
182.6	Medium stiff to very stiff, gray CLAY	15	8	3	104	18			15	9	2	81	18
		16	9	2	81	18			16	10	3	238	20

GENERAL NOTES

Begin Drilling 03-15-2002 Complete Drilling 03-15-2002

Drilling Contractor Patrick Drilling Drill Rig CME 75 ATV

Driller K&C Logger M. Stewart Checked by B. Fugle

Drilling Method 3.25-inch ID HSA Boring grouted after completion

WATER LEVEL DATA

While Drilling 1.07 m

At Completion of Drilling

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	M.R./ H.T.
CHECKED	H.T.
DRAWN	J.B./ J.S.
CHECKED	H.T./ M.R.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
BORING LOGS 3 OF 5
SB IL. ROUTE 394 OVER CANADIAN NATIONAL RR
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 39+752.246 S.N. 016-2798 (INSIDE LANES)
DATE: July 18, 2005
SCALE: NONE
Soodan
Soodan & Associates, Inc.
100 North LaSalle Street, Suite 1800
Chicago, Illinois 60602

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80/94		COOK	870	509
SECTION (0203.1 & 0312-708W) R-3 CONTRACT # 62108				

SHEET NO. 36
37 SHEETS

BORING LOG HR-37 Page 2 of 2

BORING LOG HR-37 Page 2 of 2

Wang Engineering, INC.
Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T38N, R14E, Cook Co.

WEI Job No.: 665-05-01
Datum: NGVD
Elevation: 188.05 m
North: 545042.64 m
East: 382523.96 m
Station: 100+876.50
Offset: 12.63 RT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Values (blw/50 mm)	Cu (kPa)	Moisture Content (%)	Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Values (blw/50 mm)	Cu (kPa)	Moisture Content (%)
173.8	Very stiff to hard, gray SILTY CLAY	15	16	5 9 11	379	13							
170.7	Very dense, gray SILTY LOAM	18	18	25	NP	15							
188.4	Boring terminated at 19.63 m	19	19	48	NP	17							

GENERAL NOTES

Begin Drilling 03-15-2002 Complete Drilling 03-15-2002
 Drilling Contractor Patrick Drilling Drill Rig CME 75 ATV
 Driller K&C Logger M. Stewart Checked by B. Fugiel
 Drilling Method 3.25-inch ID HSA Boring grouted after completion

WATER LEVEL DATA

While Drilling 1.07 m
 At Completion of Drilling NA
 Time After Drilling NA
 Depth to Water NA

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

BORING LOG MR-31 Page 1 of 2

BORING LOG MR-31 Page 1 of 2

Wang Engineering, INC.
Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T38N, R14E, Cook Co.

WEI Job No.: 665-05-01
Datum: NGVD
Elevation: 187.62 m
North: 545107.84 m
East: 382535.87 m
Station: 100+810.94
Offset: 15.1795 RT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Values (blw/50 mm)	Cu (kPa)	Moisture Content (%)	Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Values (blw/50 mm)	Cu (kPa)	Moisture Content (%)
187.2	Black CLAY LOAM --TOPSOIL--	1	1	3 4 3	NP	23	179.6	Stiff to very stiff, gray CLAY	8	11	3 3 2	149	22
185.8	Loose to medium dense, brown and gray SAND	2	2	8 6 9	NP	28			9	12	3 3 3	181	22
185.2	Stiff, brown and gray CLAY	3	3	2 3 5	181	18			10	13	3 4 5	133	21
184.4	Very stiff, brown and gray SILTY CLAY LOAM	4	4	2 3 9	361	19			11	14	3 4 5	196	20
180.4	Stiff, gray CLAY	5	5	2 3 5	118	24			12	15	4 6 9	361	21
		6	6	3 4 4	125	22			13	16	6 7 10	447	20
		7	7	2 3 4	118	24			14				
		8	8	2 3 2	157	22	173.4	Hard, gray SILTY CLAY	15				
		9	9	2 3 2	157	22			16				
		10	10	4 8 9	NP	21							

GENERAL NOTES

Begin Drilling 03-07-2002 Complete Drilling 03-07-2002
 Drilling Contractor Patrick Drilling Drill Rig CME 75 ATV
 Driller K&C Logger H. Suhail Checked by L. Jordeche
 Drilling Method 3.25-inch HSA Boring backfilled upon completion

WATER LEVEL DATA

While Drilling 1.07 m
 At Completion of Drilling NA
 Time After Drilling NA
 Depth to Water NA

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

BORING LOG MR-31 Page 2 of 2

BORING LOG MR-31 Page 2 of 2

Wang Engineering, INC.
Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T38N, R14E, Cook Co.

WEI Job No.: 665-05-01
Datum: NGVD
Elevation: 187.62 m
North: 545107.84 m
East: 382535.87 m
Station: 100+810.94
Offset: 15.1795 RT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Values (blw/50 mm)	Cu (kPa)	Moisture Content (%)	Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	N Values (blw/50 mm)	Cu (kPa)	Moisture Content (%)
169.6	Boring terminated at 18.06 m	17	17	15 33	>431	10			18	18	40	>431	11

GENERAL NOTES

Begin Drilling 03-07-2002 Complete Drilling 03-07-2002
 Drilling Contractor Patrick Drilling Drill Rig CME 75 ATV
 Driller K&C Logger H. Suhail Checked by L. Jordeche
 Drilling Method 3.25-inch HSA Boring backfilled upon completion

WATER LEVEL DATA

While Drilling 1.07 m
 At Completion of Drilling NA
 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	<u>M.R./ H.T.</u>
CHECKED	<u>H.T.</u>
DRAWN	<u>J.B./ J.S.</u>
CHECKED	<u>H.T./ M.R.</u>

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
BORING LOGS 4 OF 5

SB IL. ROUTE 394 OVER CANADIAN NATIONAL RR
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY

STA. 39+752.246 S.N. 016-2798 (INSIDE LANES)
DATE: July 18, 2005
SCALE: NONE

Soodan
Soodan & Associates, Inc.
107 North LaSalle Street, Suite 1800
Chicago, Illinois 60602

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 37 37 SHEETS
F.A.I. 80/94		COOK	870	510	
SECTION 0203.1 & 0312-708W R-3 CONTRACT # 62108					

BORING LOG MR-31 ST Page 1 of 1

<p>Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers wangeng3@wangeng.com 1145 Main Street Lombard, IL 60148 Telephone: 630 953-9928 Fax: 630 953-9938</p>	BORING LOG MR-31 ST		Datum: NGVD		
	WEI Job No.: 685-05-01		Elevation: 187.01 m		
	Client: HNTB Corporation		North: 545104.18 m		
	Project: IL 394 (FAP 94) IDOT D-91-012-01		East: 362540.75 m		
Location: Sections 25&26, T36N, R14E, Cook Co.		Station: 100+814.69		Offset: 10.3027 RT	

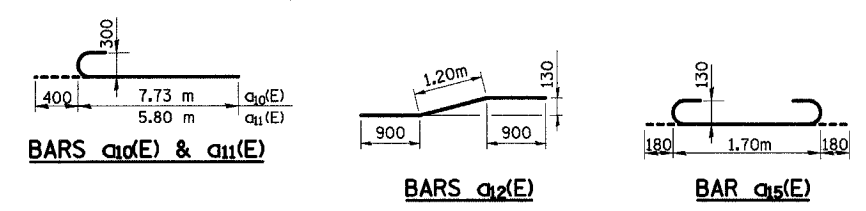
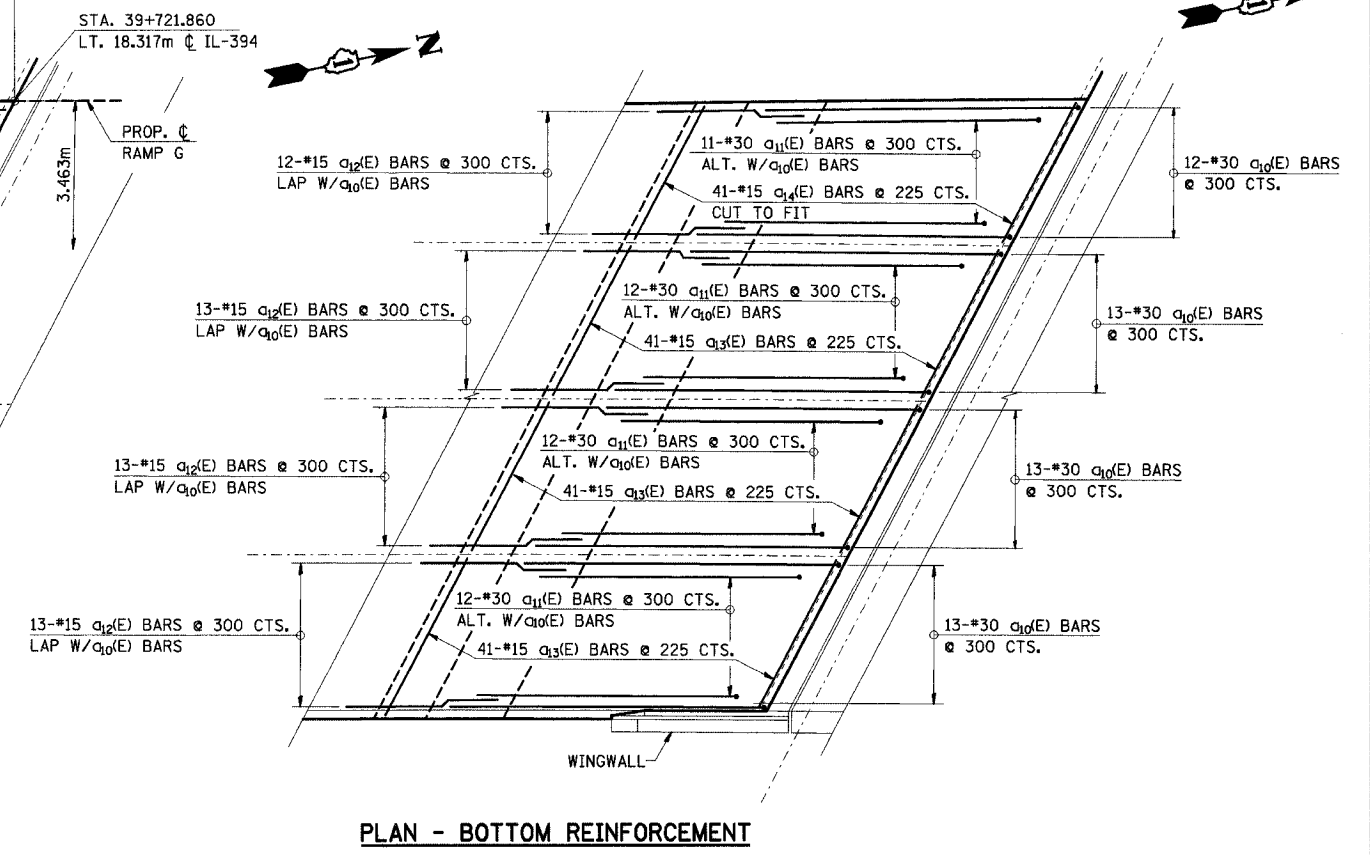
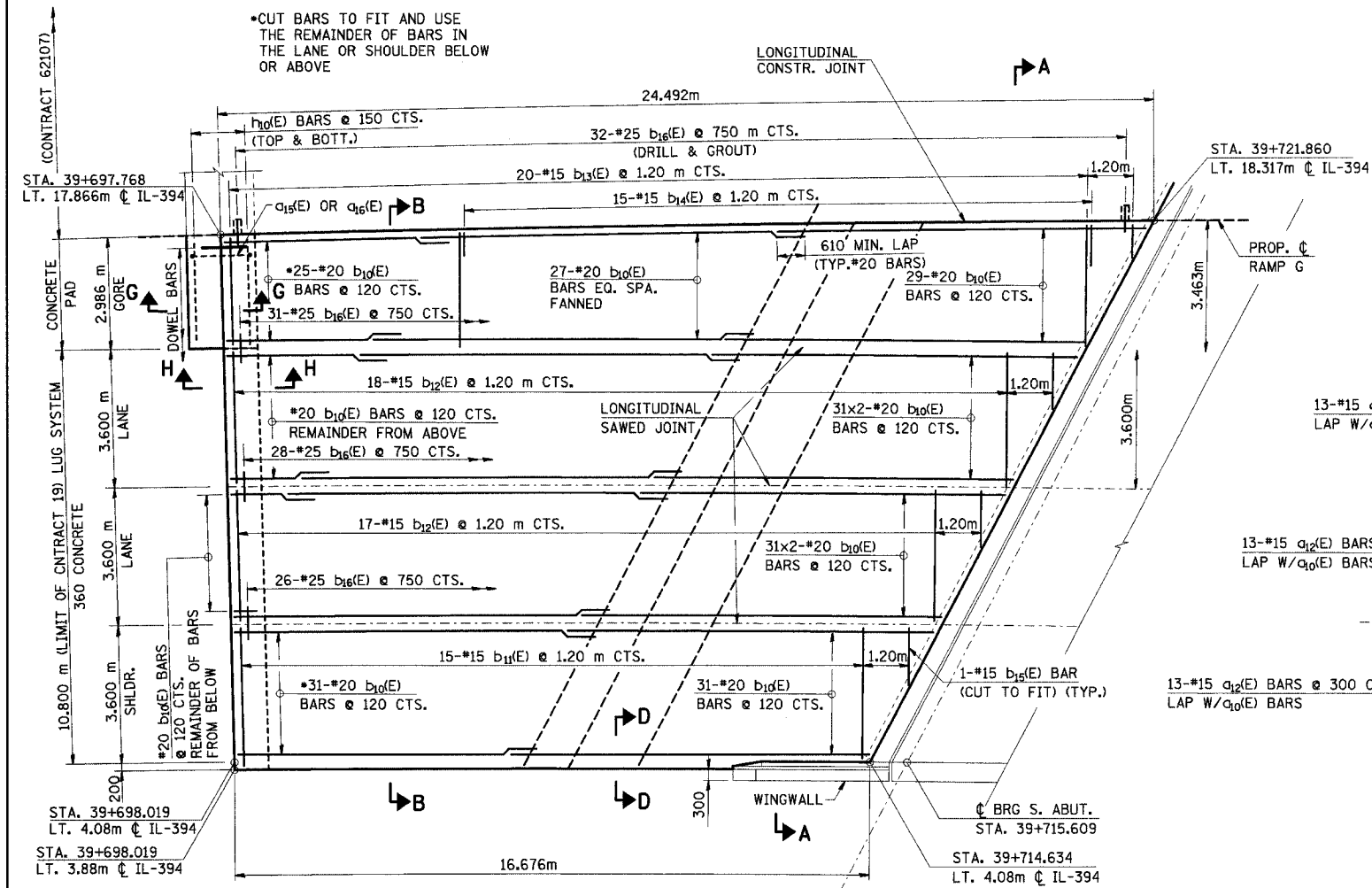
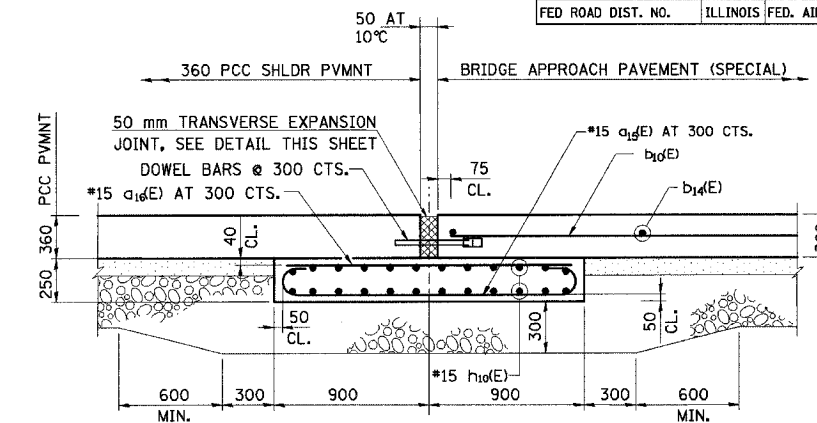
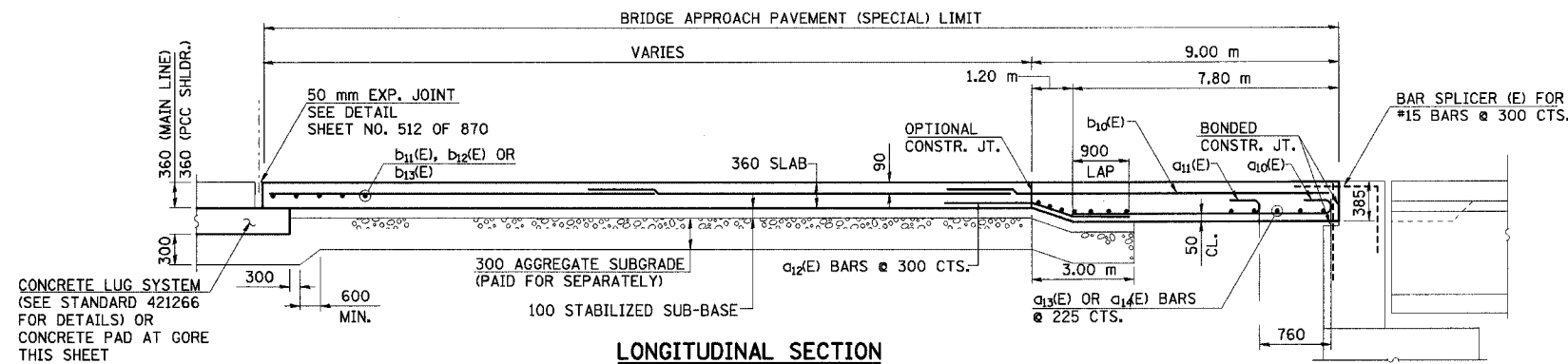
Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	Sample recovery (%)	N Value (blows/300 mm)	Moisture Content (%)	Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	Sample recovery (%)	N Value (blows/300 mm)	Moisture Content (%)
186.6	Black CLAY LOAM —TOPSOIL—	0					186.6		0				
	Loose to medium dense, brown and gray SAND	1							1				
186.2	Stiff, brown and gray CLAY	2							2				
184.8	Hard, gray SILTY CLAY LOAM	1	PUSH		163	19			10				
184.6	Vary stiff, gray CLAY, with silt interbeds	2	PUSH		263	18			11				
184.2	Stiff to hard, gray SILTY CLAY	3	PUSH		217	20			12				
183.7	Gray SILTY LOAM	3	PUSH		232	22			13				
183.2	Vary stiff, gray SILTY CLAY	4	PUSH		163	20			14				
182.7	Stiff, gray CLAY	5	PUSH		121	21			15				
182.1	Gray SILT	6	PUSH		178	21			16				
181.5	Stiff to very stiff, gray SILTY CLAY	7	PUSH				174.8	Boring terminated at 12.19 m	17				
179.7	Stiff to very stiff, gray CLAY	9	PUSH						18				

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	03-07-2002	Complete Drilling	03-07-2002	While Drilling	1.07 m		
Drilling Contractor	Patrick Drilling	Drill Rig	CME 75 ATV	At Completion of Drilling	NA		
Driller	K&C	Logger	N. Davis	Checked by	E. Datz		
Drilling Method	3.25-in. HSA; Boring backfilled upon completion			Depth to Water	NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

DESIGNED	M.R./ H.T.
CHECKED	H.T.
DRAWN	J.B./ J.S.
CHECKED	H.T./ M.R.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
BORING LOGS 5 OF 5
SB IL. ROUTE 394 OVER CANADIAN NATIONAL RR
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 39+752.246 S.N. 016-2798 (INSIDE LANES)
DATE: July 18, 2005
SCALE: NONE
Soodan
Soodan & Associates, Inc.
100 North LaSalle Street, Suite 1800
Chicago, Illinois 60602

FBI RTE	SECTION	COUNTY	TOTAL SHEETS NO.	SHEET NO.
80/94	*	COOK	870	511
STA.		TO STA.		
FED ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



- NOTES:**
- WORK THIS SHEET WITH SHEET NO. 512 OF 870.
 - BARS INDICATED THUS "31x2-*20 ETC." INDICATE 31 LINES OF BARS WITH 2 LENGTHS PER LINE.
 - REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY COATED.
 - ALL DIMENSIONS ARE IN MILLIMETERS (mm) EXCEPT AS NOTED.
 - DRILL AND GROUTING OF BARS SHALL BE IN ACCORDANCE WITH SECTION 584. COST OF DRILLING AND GROUTING OF THE STANDARD SPECIFICATIONS IS INCLUDED FOR PAYMENT UNDER REINFORCEMENT BARS, EPOXY COATED.

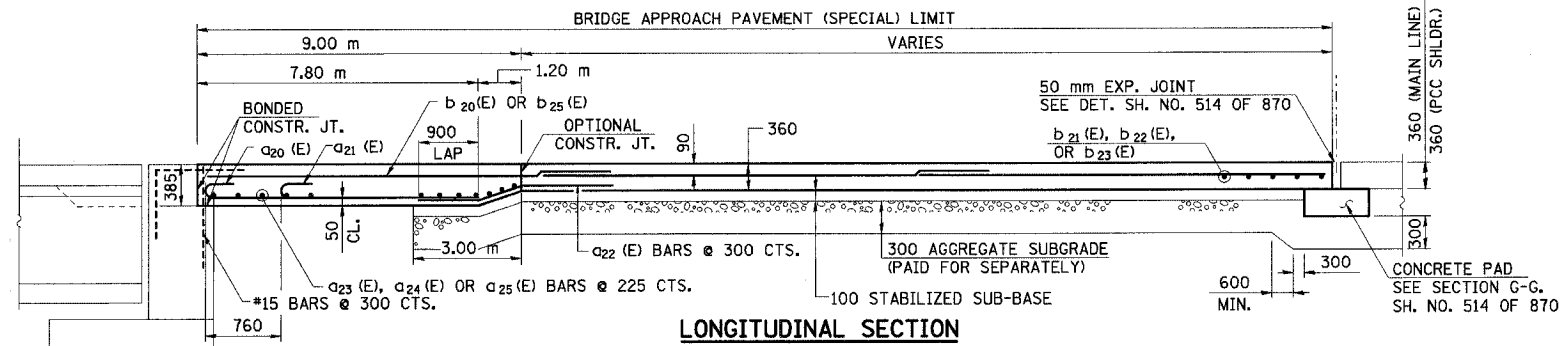
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-94 EAST BOUND / IL 394 SOUTH BOUND
BRIDGE APPROACH PAVEMENT (SPECIAL)
 SB IL ROUTE 394 OVER
 CANADIAN NATIONAL RR
 STRUCTURE NO. 016-2798
 SOUTH APPROACH - 1 OF 2

HORIZ SCALE:
 VERT SCALE:
 DATE: JUL 18, 2005
 DRAWN BY: LK
 CHECKED BY: PY

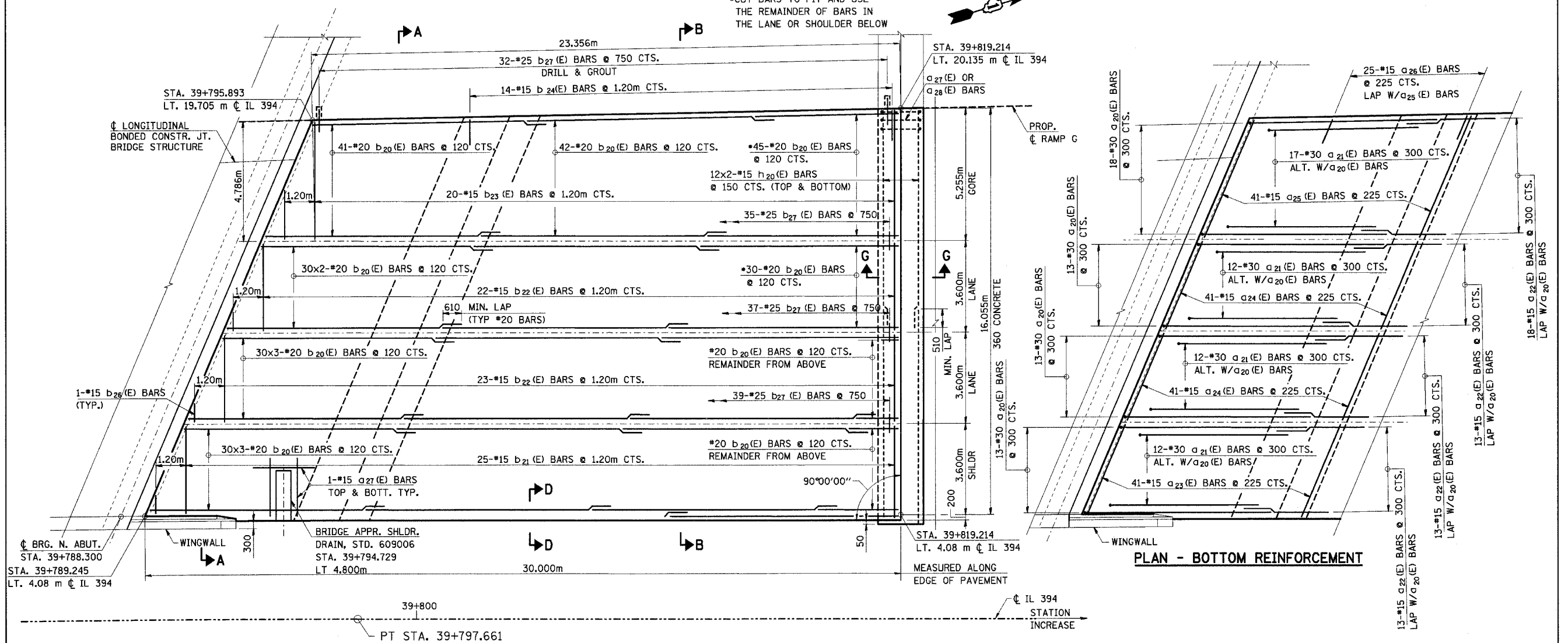
HNTB

FAL RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	•	COOK	870	513
STA.		TO STA.		
FED ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



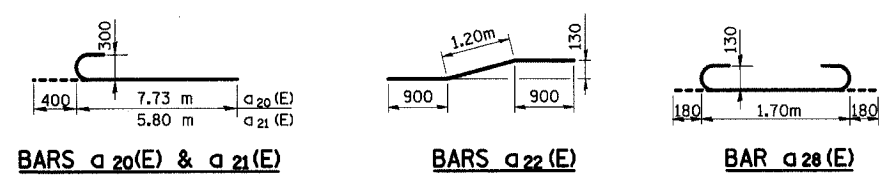
LONGITUDINAL SECTION

• CUT BARS TO FIT AND USE THE REMAINDER OF BARS IN THE LANE OR SHOULDER BELOW



PLAN - TOP REINFORCEMENT

PLAN - BOTTOM REINFORCEMENT



NOTES:

1. WORK THIS SHEET WITH SHEET NO. 514 OF 870.
2. BARS INDICATED THUS "12x2-#15 ETC." INDICATE 12 LINES OF BARS WITH 2 LENGTHS PER LINE.
3. REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY COATED.
4. ALL DIMENSIONS ARE IN MILLIMETERS (mm) EXCEPT AS NOTED.

REVISIONS	
NAME	DATE

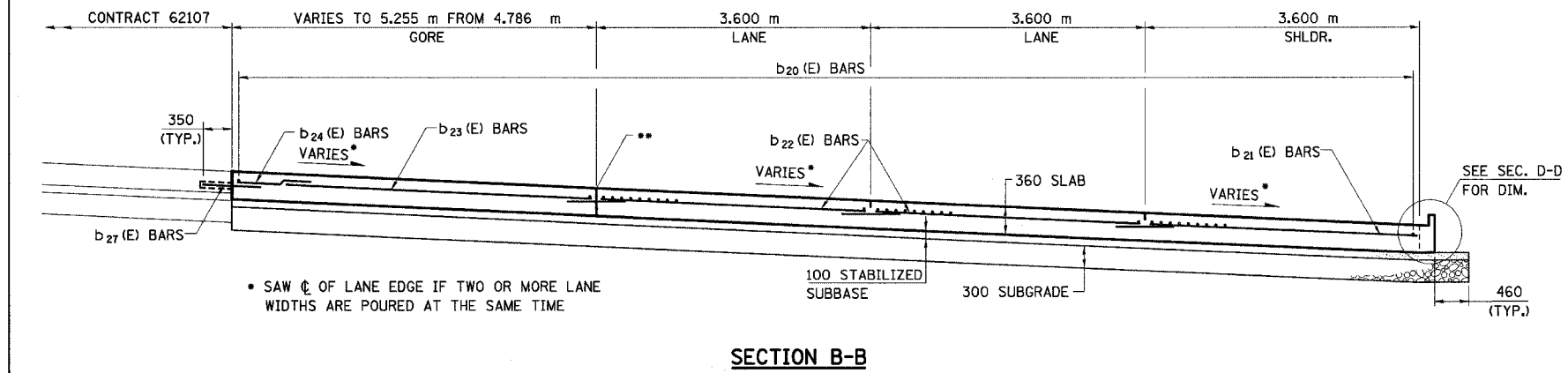
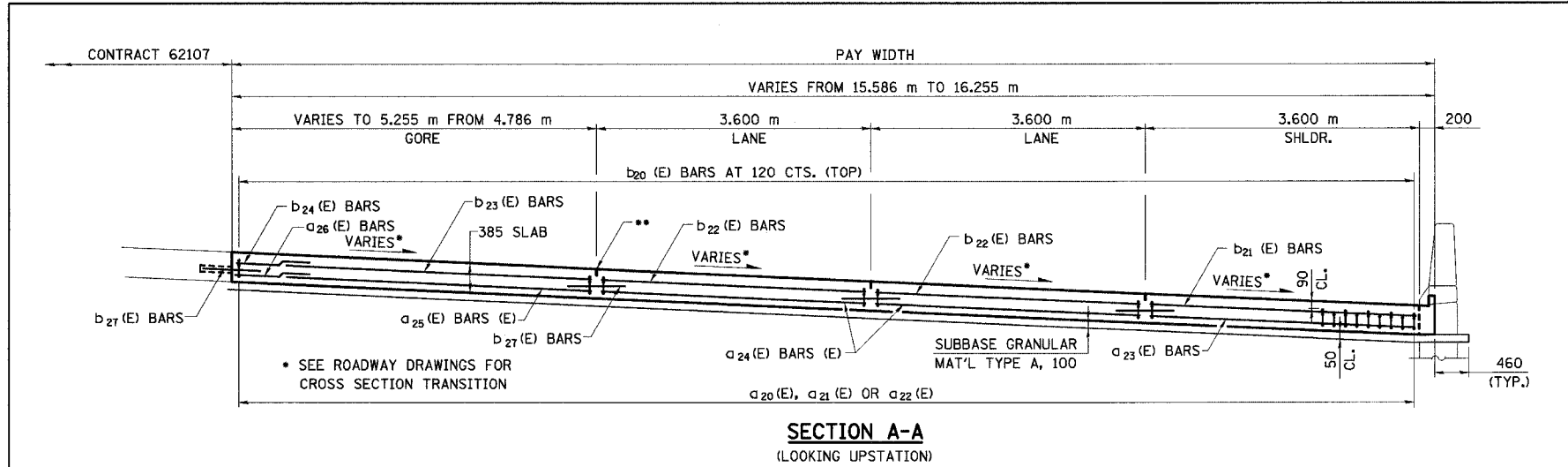
ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-94 EAST BOUND / IL 394 SOUTH BOUND
BRIDGE APPROACH PAVEMENT (SPECIAL)
SB IL ROUTE 394 OVER
CANADIAN NATIONAL RR
STRUCTURE NO. 016-2798
NORTH APPROACH - 1 OF 2

HORIZ SCALE:
 VERT SCALE:
 DATE: JUL 18, 2005

DRAWN BY: LK
 CHECKED BY: PY

HNTB

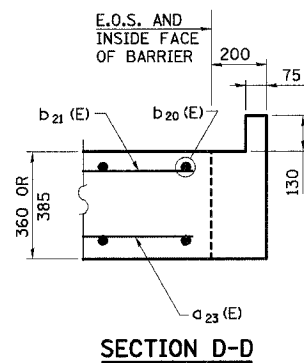
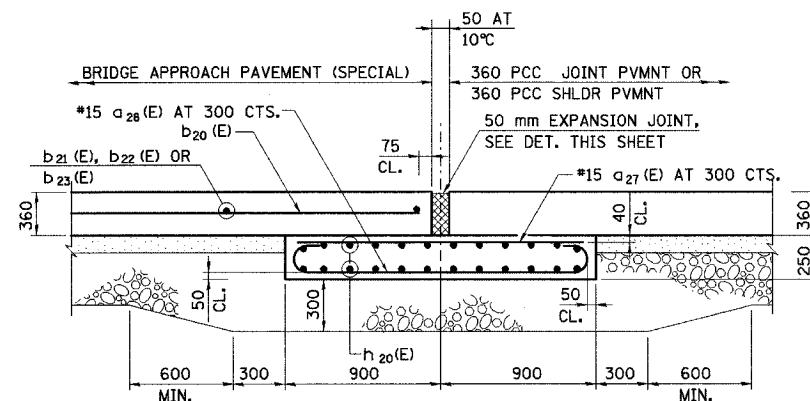
FAY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	•	COOK	870	514
STA.		TO STA.		
FED ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



BILL OF MATERIAL BRIDGE APPROACH PAVEMENT (SPECIAL)

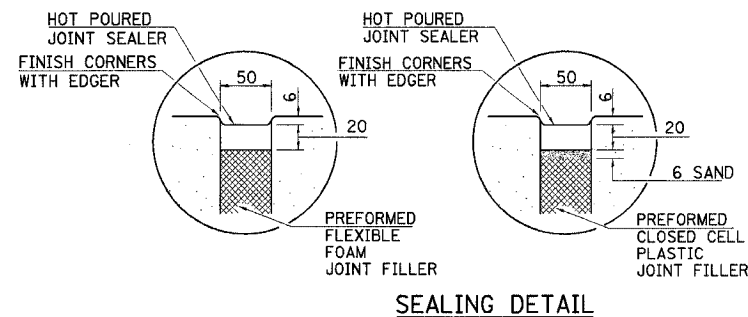
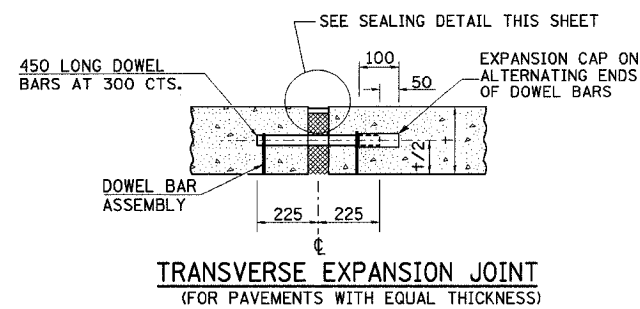
BAR	NO.	SIZE	LENGTH (M)	SHAPE
a_{20} (E)	57	#30	8.13	U
a_{21} (E)	53	#30	6.19	U
a_{22} (E)	57	#15	3.00	U
a_{23} (E)	41	#15	3.90	U
a_{24} (E)	82	#15	3.90	U
a_{25} (E)	41	#15	5.20	U
a_{26} (E)	25	#15	1.00	U
a_{27} (E)	61	#15	1.70	U
a_{28} (E)	55	#15	2.06	U
b_{20} (E)	398	#20	9.39	U
b_{21} (E)	25	#15	3.53	U
b_{22} (E)	45	#15	3.55	U
b_{23} (E)	20	#15	4.74	U
b_{24} (E)	14	#15	1.00	U
b_{26} (E)	4	#15	2.10	U
b_{27} (E)	143	#25	0.75	U
h_{20} (E)	48	#15	8.42	U
ITEM		UNIT	QUANTITIES	
REINFORCEMENT BARS, EPOXY COATED (1)		KG	16515	
BRIDGE APPROACH PAVEMENT (SPECIAL)		M ²	425	

(1) SEE NOTE 2.



NOTE:

1. WORK THIS SHEET WITH SHEET NO. 513 OF 870.
2. ALL WORK AND MATERIALS INCLUDED FOR PAYMENT UNDER "BRIDGE APPROACH PAVEMENT (SPECIAL)".



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
BRIDGE APPROACH PAVEMENT (SPECIAL)
SB IL ROUTE 394 OVER
CANADIAN NATIONAL RR
STRUCTURE SN. 016-2798
NORTH APPROACH - 2 OF 2

HORIZ SCALE:
VERT SCALE:
DATE: JUL 18, 2005

DRAWN BY: LK
CHECKED BY: PY

HNTB

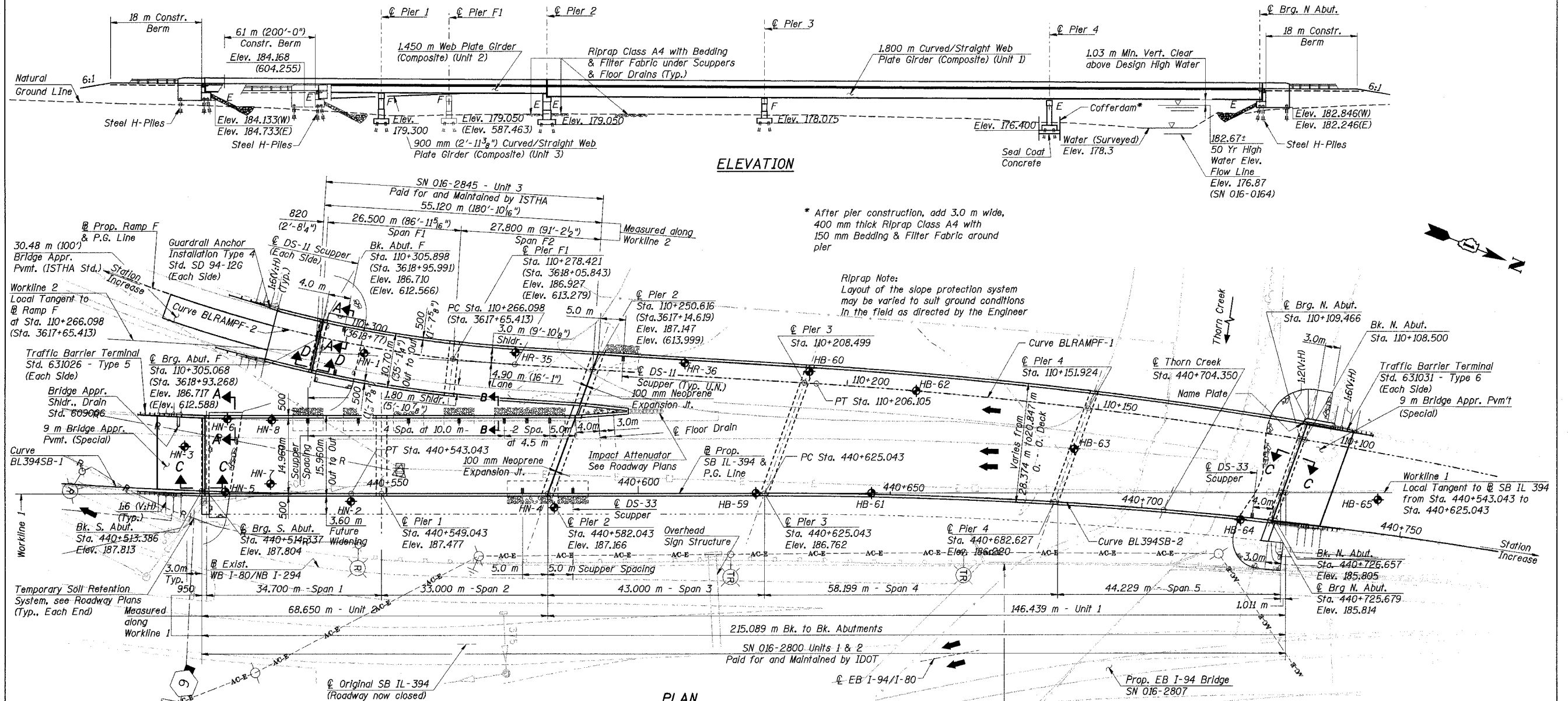
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Staging:
New bridge to be constructed while WB I-80/NB I-294 and EB I-94/I-80 traffic is maintained on existing bridge (SN 016-0164) and while SB IL-394 traffic has been detoured off the existing bridge to new NB IL-394 pavement.

ROUTE NO. F. A. I. 80/94	SECTION •	COUNTY COOK	TOTAL SHEETS 870	SHEET NO. 515	SHEET NO. 1 91 SHEETS
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT- (0203.1 & 0312-708) R-3			CONTRACT NO. 62108		

Benchmark: TBM #316 Set cut box on foundation of overhead sign truss (C3) NE corner of exit ramp to I-80 westbound; approximately mile marker 74.30 Elev. = 183.274
Existing Structure: S.N. 016-0164, three-span continuous 39.49 m Bk. to Bk. abutments, variable width from 21.60 m to 23.4 m O. to O. Haunched R.C. slab on multicolumn piers and closed abutments. Built as S.A. Route 66, Sec. 066-0303.1-MFT at Station 4+61.67 (English) in 1945. Bridge was widened in 1969 and deck was rehabilitated in 1995.

Salvage: No salvage.
Note: All dimensions are in millimeters (mm) except as noted.
(Dimensions, Stations and Elevations in parenthesis are in English Units.)



ELEVATION

PLAN

WATERWAY INFORMATION
Drainage Area = 274.43 km² Prop. Low Grade Elev. 184.80 @ Sta. 440+750

Freq. Yr.	Q m ³ /s	Opening m ²		Nat. Head-m.		Headwater El.	
		Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
10	124.6		208.7	181.97	0.01	181.98	
Design	50	188.3	276.1	182.67	0.01	182.68	
Base	100	213.5	307.8	182.98	0.01	182.99	
Overtop	100	213.5	---	182.98	---	---	
Max. Calc.	500	280.3	339.6	183.77	0.03	183.82	

LOADING MS18 & ALT.
Allow 2.4 kN/m² for future wearing surface.

DESIGN SPECIFICATIONS
2002 AASHTO
2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges
Bridge Design Criteria: IDOT except Illinois State Toll Highway Authority, June 2000 with Approved Revisions-Unit 3 only (Ramp F South of Pier 2, excluding Pier 2 Joint)

DESIGNED	DD
CHECKED	PCA
DRAWN	LK/JRB
CHECKED	PCA

DESIGN STRESSES
FIELD UNITS
f_c = 24 MPa
f_s = 400 MPa (reinforcement)
f_s = 345 MPa (structural steel) (M270M Grade 345)
f_s = 250 MPa (structural steel) (M270M Grade 250)

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = .04
Site Coefficient (S) = 1.0

LEGEND

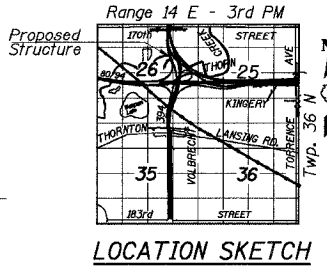
- ◆ Boring
- Exist. Guardrail
- Exist. Manhole
- Exist. Inlet
- Exist. Light Pole
- Exist. Drainage
- Exist. Elec. Conduit
- Exist. Utility Power Pole
- Exist. Fence

PHILIP C. AZZARELLO
081-004245
CHICAGO, ILLINOIS
REGISTERED STRUCTURAL ENGINEER

Philip C. Azzarello 9.9.05
Ill. Reg. No. 081-004245
Expires 11-30-06

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

- Notes:
- All Work shown on this drawing related to the fabrication of the structural steel and bearings is for information only.
 - Work this sheet with Sheet No. 3 of 91.



ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND

GENERAL PLAN & ELEVATION
SB IL ROUTE 394 / RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800/2845
DATE JUL 18, 2005
SCALE ---

HNTB

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
INDEX OF DRAWINGS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2
F. A. I. 80/94	*	COOK	870	516	91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 62108	
(0203.1 & 0312-708W) R-3					

GENERAL NOTES

THE FABRICATION OF THE STRUCTURAL STEEL AND BEARINGS FOR THIS BRIDGE WAS INCLUDED IN CONTRACT NO. 62898. ALL WORK SHOWN THAT IS RELATED TO THE FABRICATION IS FOR INFORMATION ONLY AND IS NOT INCLUDED IN THIS CONTRACT.

- All dimensions are in millimeters (mm) except as noted.
- Fasteners shall be high strength bolts. Bolts M 22, open holes 24 mm ϕ , unless otherwise noted.
- Calculated mass of structural steel:
For SN 016-2800 (Units 1&2): 999,240 kg for M 270M Grade 345 and 5,660 kg for M 270M Grade 250.
For SN 016-2845 (Unit 3): 140,620 kg for M 270M Grade 345 and 690 kg for M 270M Grade 250.
- The same organic zinc rich primer / epoxy / urethane Paint System used for the fabrication contract shall be used for painting of structural steel left partially or fully unpainted in the fabrication contract due to construction requirements. This includes, but is not necessarily limited to, masked off connection surfaces and field installed fasteners. Any structural steel that was painted under the fabrication contract whose paint system may have been damaged during the fabrication contract shall be spot cleaned and touched up in the field. For SN 016-2800 (Units 1 & 2), the color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1; and the color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Reddish Brown, Munsell No. 2.5YR 3/4. For SN 016-2845 (Unit 3), the color of the final finish coat for all interior and exterior steel surfaces shall be Interstate Green Munsell No. 7.5G 4/8. See Special Provision for "Cleaning and Painting New Metal Structures." The cost is included for payment under Erecting Structural Steel.
- Field welding of construction accessories will not be permitted to the beams or girders.
- Anchor bolts shall be set before bolting cross frames / diaphragms over supports.
- The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the tension flanges and webs, the cross frames and connection plates, diaphragms and connection plates, and all splice plate material except fill plates.
- Reinforcement bars shall conform to the requirements of AASHTO M 31M or M 322M Grade 400.
- The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.
- The Contractor shall drive one steel test pile in a permanent location at the South Abutment, Abutment F, Pier 1, and Pier F1; and two steel test piles in a permanent location at the North Abutment, Pier 2, Pier 3 and Pier 4 as directed by the Engineer before ordering the remainder of piles.
- Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 3 mm. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 3 mm adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, two 3mm adjusting shims shall be provided for each bearing and placed as detailed.
- Bridge Seat Sealer shall be applied to the seat area of the Abutments and Pier 2, including future widening.
- All construction joints shall be bonded.
- When the deck pour is stopped for the day at one or more of the transverse Bonded Construction Joints in the deck Pouring Sequence as shown, the next pour shall not be made until both of the following requirements are met:
1. At least 72 hours shall have elapsed from the end of the previous pour.
2. The concrete strength shall have attained a minimum flexural strength of 4.5 MPa or a minimum compressive strength of 24 MPa.
- The stability of the partially erected structural steel is the Contractor's responsibility during all phases of construction. The Contractor shall submit for review and approval by the Engineer an erection plan with calculations for the erection of the structural steel. The plan must address as a minimum subassembly of the girders, erection of the girders, placement of cross frames/diaphragms, bolting of cross frames/diaphragms, and removal of temporary supports. See Special Provisions for "Erecting Structural Steel". The cost of this work is included in the pay item "Erecting Structural Steel" or "Erecting Structural Steel (Girder Spans)".

Sht. No.	Sht. Title
1	General Plan & Elevation
2	General Notes & Quantities
3	Offset Sketch, Profiles, Curve Data, & Miscellaneous Details
4	Footing Layout
5	Top of Slab Elevations, Grid & Details, Spans 3-5 - Unit 1
6	Top of Slab Elevations - 1 - Spans 3-5 - Unit 1
7	Top of Slab Elevations - 2 - Spans 3-5 - Unit 1
8	Top of Slab Elevations - 3 - Spans 3-5 - Unit 1
9	Top of Slab Elevations - 4 - Spans 3-5 - Unit 1
10	Top of Slab Elevations - 5 - Spans 3-5 - Unit 1
11	Top of Slab Elevations, Grid & Details, Spans 1 & 2 - Unit 2
12	Top of Slab Elevations - 1 - Spans 1 & 2 - Unit 2
13	Top of Slab Elevations - 2 - Spans 1 & 2 - Unit 2
14	Top of Slab Elevations, Grid & Details, Spans F1 & F2 - Unit 3
15	Top of Slab Elevations - 1 - Spans F1 & F2 - Unit 3
16	Top of Slab Elevations - 2 - Spans F1 & F2 - Unit 3
17	Deck Plan Span 3 - Unit 1
18	Deck Plan Span 4 - Unit 1
19	Deck Plan Span 5 - Unit 1
20	Deck Cross Section and Details - Spans 3-5 - Unit 1
21	Parapet Elevation - Spans 3-5 - Unit 1
22	Cross Slope Transition & Parapet Sections - Unit 1
23	Deck Plan - Spans 1 & 2 - Unit 2
24	Deck Cross Section & Details - Spans 1 & 2 - Unit 2
25	Parapet Elevation - Spans 1 & 2 - Unit 2
26	Deck Plan - Spans F1 & F2 - Unit 3
27	Deck Cross Section - Spans F1 & F2 - Unit 3
28	Parapet Elevation - Span F1 & 2 - Unit 3
29	Gore Details
30	Deck Details & Bill of Material
31	Drainage Scupper DS-11
32	Drainage Scupper DS-33
33	Expansion Joint at Abutment F
33a	Expansion Joint at South Abutment
34	Neoprene Expansion Joint at Pier 2 and North Abutment
35	General Framing Plan - Spans 3-5 - Unit 1
36	Girder Layout - Spans 3-5 - Unit 1
37	Framing Plan - Span 3
38	Girder Elevation and Details - Span 3
39	Framing Plan - Span 4
40	Girder Elevation and Details - Span 4
41	Framing Plan - Span 5
42	Girder Elevation and Details - Span 5
43	Connection Details - 1 - Spans 3-5 - Unit 1
44	Connection Details - 2 - Spans 3-5 - Unit 1
45	Cross Frame Details - Spans 3-5 - Unit 1
46	Camber and Top of Web Elevations - 1 - Spans 3-5 - Unit 1
47	Camber and Top of Web Elevations - 2 - Spans 3-5 - Unit 1
48	Moment & Reaction Tables & Field Splice, Spans 3-5 - Unit 1
49	Framing Plan - Spans 1 & 2 - Unit 2
50	Girder Elevation & Details - Span 1 & 2 - Unit 2
51	Camber, Top of Web Elevations & Cross Frame Details - Unit 2
52	Framing Plan - Spans F1 & F2 - Unit 3
53	Girder Elevation & Details - Span F1 & F2 - Unit 3
54	Camber, Top of Web Elevations & Diaphragm Details - Unit 3
55	Elastomeric Exp. Brgs. Type 1 & Low Profile Fixed Brgs.
56	Elastomeric Expansion Bearings Type III
57	Floating Expansion Bearings
58	Floating Fixed Bearings
59	Bearing Orientation Details - Spans 3-5 - Unit 1
60	Anchor Bolt Details
61	South Abutment Plan
62	South Abutment Elevation
63	South Abutment Details
64	North Abutment Plan
65	North Abutment Elevation
66	North Abutment Details
67	North & South Abutments Bill of Material
68	Abutment F
69	Abutment F Details
70	Pier 1 Plan & Elevation
71	Pier 1 Sections & Details
72	Pier 2 Plan & Elevation (West)
73	Pier 2 Plan & Elevation (East)
74	Pier 2 Section & Details
75	Pier 3 Plan & Elevation (West)
76	Pier 3 Plan & Elevation (East)
77	Pier 3 Footing Plan
78	Pier 3 Section & Details
79	Pier 4 Plan & Elevation
80	Pier 4 Section & Details
81	Pier F1
82	Bar Splicer Assembly Details
83	Pile Driving Records - Abutment F and Pier F1
84-91	Soll Boring Logs

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu M	-	266	266
Structure Excavation	Cu M	-	918	918
Cofferdam (Pier 4)	Each	-	1	1
Cofferdam Excavation	Cu M	-	470	470
Seal Coat Concrete	Cu M	-	133	134
Concrete Structures	Cu M	-	935.6	935.6
Concrete Superstructure	Cu M	1,078.4	-	1,078.4
Bridge Deck Grooving	Sq M	4,287	-	4,287
Protective Coat	Sq M	4,943	-	4,943
Furnishing & Erecting Structural Steel	KG	-	874	874
Erecting Structural Steel	L Sum	0.55	-	0.55
Erecting Floating Bearings, Gilded Expansion 2000 KN	Each	-	10	10
Erecting Floating Bearings, Fixed 2250 KN	Each	-	12	12
Erecting Elastomeric Bearing Assembly, Type I	Each	-	24	24
Erecting Elastomeric Bearing Assembly, Type III	Each	-	9	9
Stud Shear Connectors	Each	11,531	-	11,531
Reinforcement Bars, Epoxy Coated	KG	195,380	96,300	291,680
Stone Riprap, Class A4	Sq M	-	802	802
Filter Fabric	Sq M	-	1,040	1,040
Furnishing Steel Piles HP 360x108	M	-	3,201.2	3,201.2
Driving Steel Piles	M	-	3,201.2	3,201.2
Test Pile Steel HP 360x108	Each	-	10	10
Name Plates	Each	1	-	1
Drainage Scuppers, DS-11	Each	9	-	9
Drainage Scuppers, DS-33	Each	2	-	2
Floor Drain	Each	2	-	2
Strip Seal Expansion Joint Assembly	M	15.3	-	15.3
Neoprene Expansion Joint, 100 mm	M	36.9	-	36.9
Bridge Seat Sealer	Sq M	-	79	79
Bar Splicers	Each	-	120	120
Controlled Low-Strength Material	Cu M	-	31	31
Structure Excavation, Common	Cu M	-	154	154
Porous Granular Backfill	Cu M	-	46	46
Structural Subdrain (Filter Fabric) (6")	M	-	21	21
High Performance Concrete for Bridges & Drainage Structures (Class DK - HPC)	Cu M	126.4	-	126.4
Concrete for Bridges & Drainage Structures (Class SD)	Cu M	32.9	-	32.9
Concrete for Bridges & Drainage Structures (Class SP)	Cu M	-	89.9	89.9
Bridge Deck Grooving	Sq M	494	-	494
Furnishing & Erecting Structural Steel (Miscellaneous)	KG	-	111	111
Erecting Structural Steel (Girder Spans)	L Sum	1	-	1
Stud-Type Shear Connectors	Each	6,093	-	6,093
Reinforcing Steel, Epoxy Coated	KG	21,470	8,330	29,800
Furnishing Steel Piles	M	-	425	425
Driving Steel Piles	Each	-	199	199
Test Piles	M	-	31	31
Scupper	Each	2	-	2
Erecting Elastomeric Bearing, Type I (800 In3<V<1000 In3)	Each	-	12	12
Geocomposite Wall Drain	Sq M	-	20	20
Bridge Expansion Joint Closure Preformed Joint Seal 4	M	10.7	-	10.7
Bridge Expansion Joint Closure Neoprene Seal and Anchor Blocks 4	M	10.5	-	10.5
Riprap, Hand-Laid	Sq M	-	148	148
Apply Concrete Sealant	Sq M	664	12	676

Bill of Material Note:

IDOT pay item - Unit 1, Unit 2, Pier 2, and Unit 2 Joint at Pier 2.
ISTHA pay item - Unit 3 and Unit 3 Joint at Pier 2

DESIGNED	PCA
CHECKED	MEA
DRAWN	LK
CHECKED	MEA

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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND

GENERAL NOTES & QUANTITIES

SB IL ROUTE 394 / RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800/2845
DATE JUL 18, 2005
SCALE ---

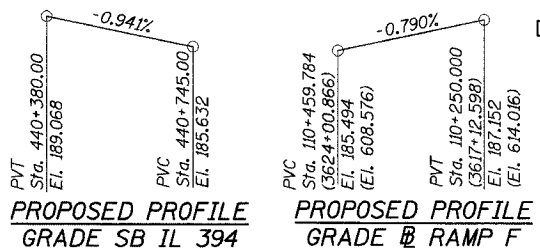
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3
F. A. I. 80/94	*	COOK	870	517	91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		
(0203.1 & 0312-708W) R-3		CONTRACT NO. 62108			

STATION 440+704.350
BUILT 200_ BY
STATE OF ILLINOIS
F.A.P. RT. 332 SEC. (0203.1 & 0312-708W) R-3
LOADING MS18
STR. NO. 016-2800

NAME PLATE
See Std. 515001



CURVE DATA BL394SB-1

PI STA. = 440+282.451
Δ = 38° 53' 33.20"
D = 7° 09' 43"
R = 800.000 m
T = 282.451 m
L = 543.043 m
E = 48.398 m
PC STA. = 440+000.000
PT STA. = 440+543.043
S.E. = 5.40%
SE IN = Sta. 440+000 to 440+028
SE OUT = Sta. 440+506 to 440+601

CURVE DATA BL394SB-2

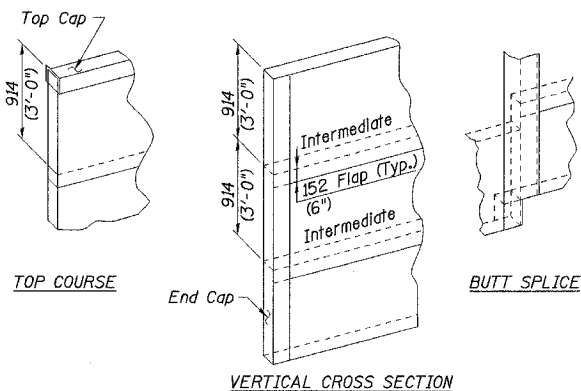
PI STA. = 440+806.211
Δ = 22° 09' 47.12"
D = 6° 11' 39"
R = 925.000 m
T = 181.168 m
L = 357.807 m
E = 17.575 m
PC STA. = 440+625.043
PT STA. = 440+982.850
S.E. = 5.10%
SE IN = Sta. 440+601 to 440+651
SE OUT = Sta. 440+961 to 441+095

CURVE DATA BLRAMPF-1

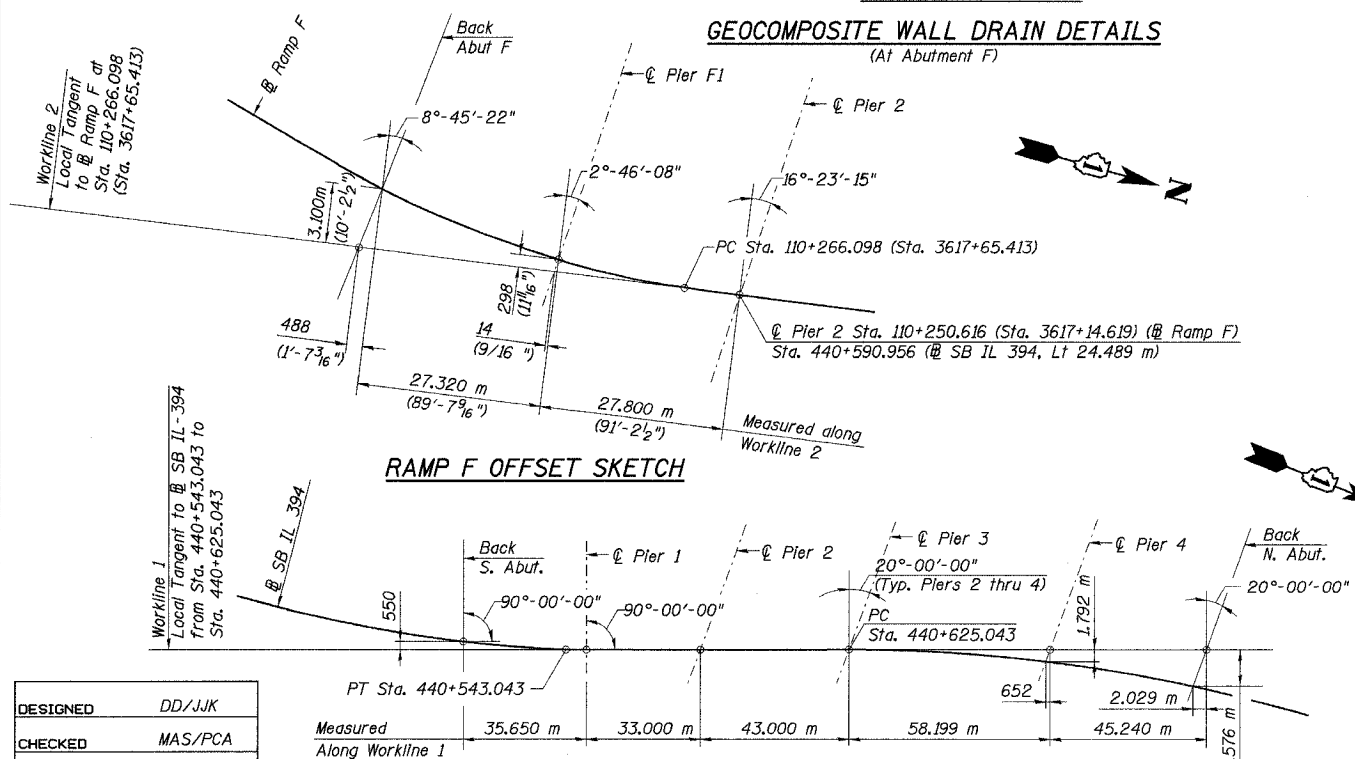
PI STA. = 110+103.471
Δ = 12° 36' 57.24"
D = 6° 07' 16"
R = 936.039 m
T = 103.471 m
L = 206.105 m
E = 5.702 m
PC STA. = 110+000.000
PT STA. = 110+206.105
S.E. = ---
SE IN = ---
SE OUT = ---

CURVE DATA BLRAMPF-2

PI STA. = 110+306.544 (3618+98.110)
Δ = 18° 01' 32.77"
D = 22° 28' 08"
R = 255.000 m (836.614')
T = 40.447 m (132.700')
L = 80.225 m (263.205')
E = 3.188 m (10.459')
PC STA. = 110+266.098 (3617+65.413)
PT STA. = 110+346.323 (3620+28.619)
S.E. = 6%
SE IN = Sta. --- to 110+286 (3618+30.709)
SE OUT = Sta. 110+710 to 110+766 (3632+21.785 to 3634+05.512)

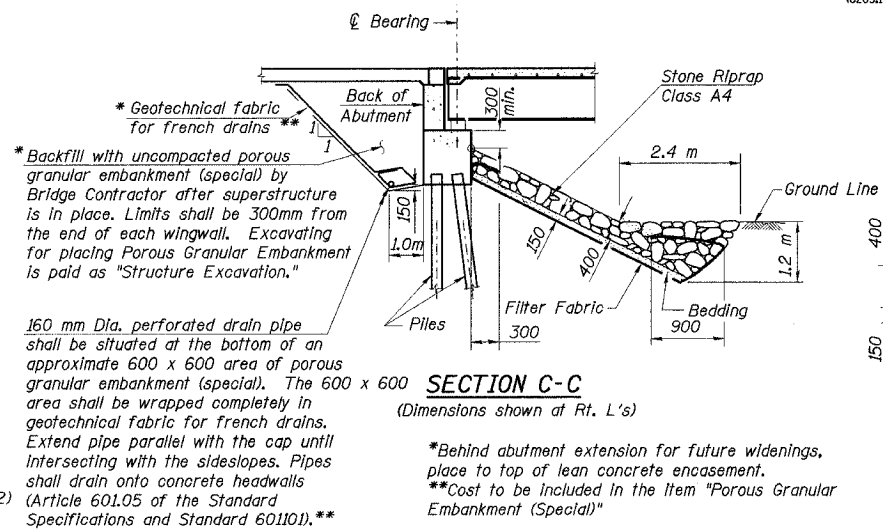


GEOCOMPOSITE WALL DRAIN DETAILS
(At Abutment F)



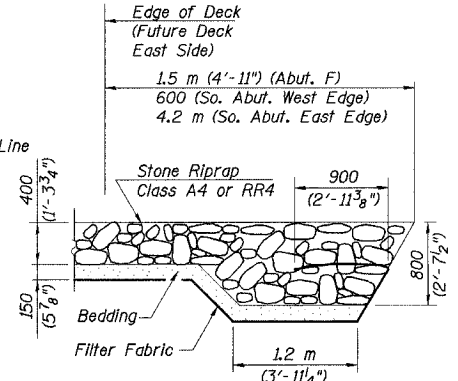
SB IL-394 OFFSET SKETCH

DESIGNED	DD/JJK
CHECKED	MAS/PCA
DRAWN	LK
CHECKED	PCA

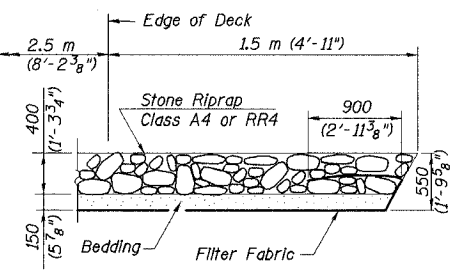


SECTION C-C
(Dimensions shown at Rt. L's)

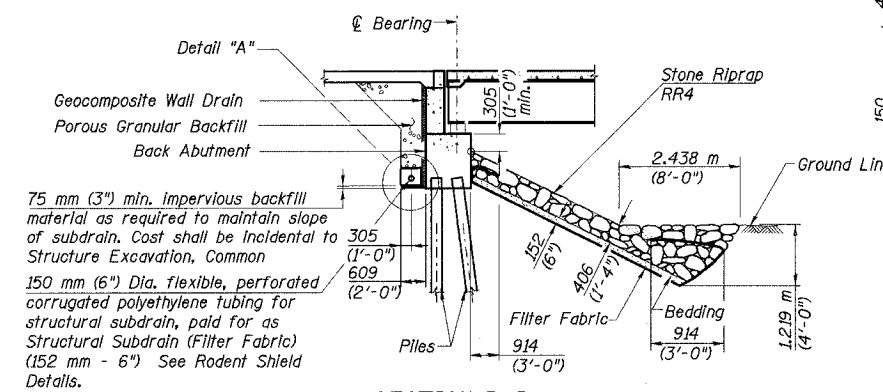
160 mm Dia. perforated drain pipe shall be situated at the bottom of an approximate 600 x 600 area of porous granular embankment (special). The 600 x 600 area shall be wrapped completely in geotechnical fabric for french drains. Extend pipe parallel with the cap until intersecting with the sideslopes. Pipes shall drain onto concrete headwalls (Article 601.05 of the Standard Specifications and Standard 601101). **



SECTION A-A
(Typ. So. Abut. and Abut. F)

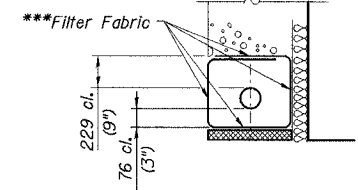


SECTION B-B
Length = 5m (16'-4 7/8")
Centered about @ Scupper

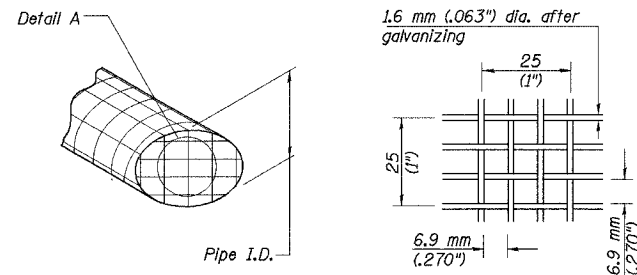


SECTION D-D
(Dimensions shown at Rt. L's)

75 mm (3") min. impervious backfill material as required to maintain slope of subdrain. Cost shall be incidental to Structure Excavation, Common
150 mm (6") Dia. flexible, perforated corrugated polyethylene tubing for structural subdrain, paid for as Structural Subdrain (Filter Fabric) (152 mm - 6") See Rodent Shield Details.



DETAIL A



RODENT SHIELD DETAILS
(At Abutment F)

- Notes:
- For locations of Sections A-A, B-B, C-C & D-D see Sht. No. 1 of 91.
 - All dimensions are in millimeters (mm) except as noted. Information in parenthesis are in English units.

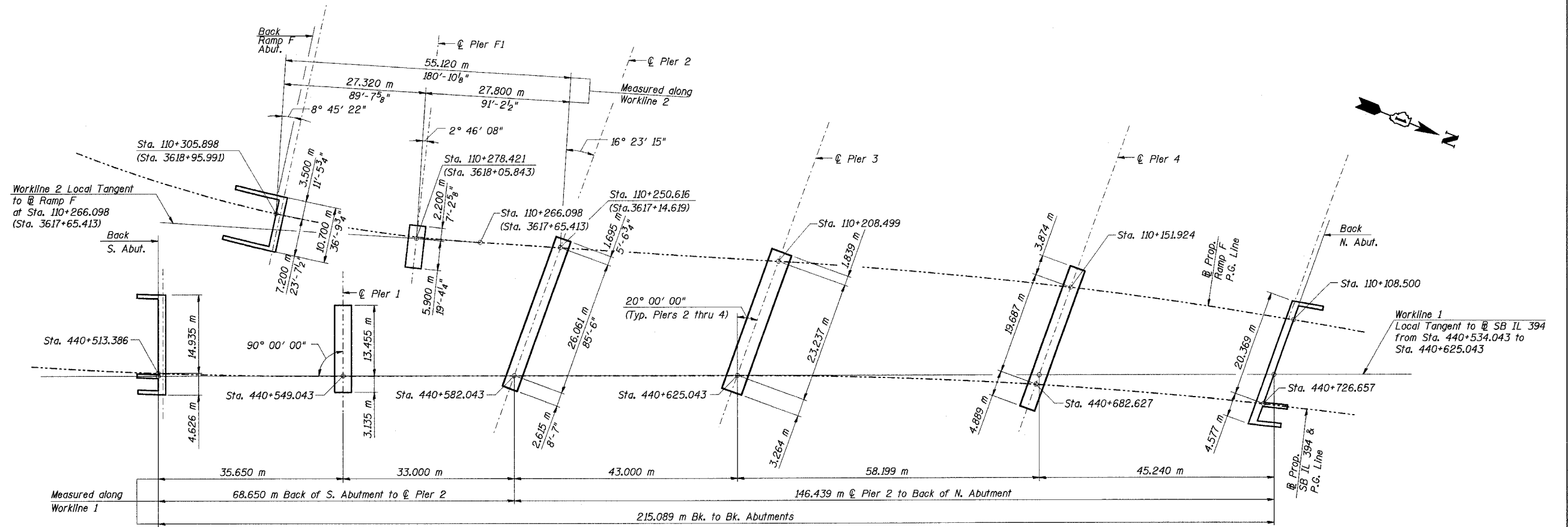
Rodent shield shall be constructed from hot dip galvanized steel industrial wire cloth 3x3 mesh. 0.063" x 0.063" wire size in accordance with AASHTO m232 (ASTM A153).

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
OFFSET SKETCH, PROFILES, CURVED DATA & MISCELLANEOUS DETAILS
SB IL ROUTE 394 / RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800/2845
DATE JUL 18, 2005
SCALE ---
HNTB

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 4
F. A. I. 80/94	*	COOK	870	518	91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS FND. AID PROJECT-		CONTRACT NO. 62108	
(0203.1 & 0312-708W) R-3					



FOOTING LAYOUT

Notes:

1. All dimensions are in millimeters (mm) except as noted.
2. Stations in parantheses are in English units.

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DESIGNED	DBT
CHECKED	BDL
DRAWN	LK
CHECKED	DBT

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND

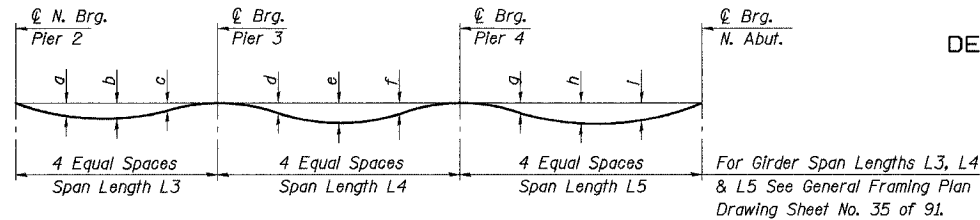
FOOTING LAYOUT

SB IL ROUTE 394 / RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800/2845
DATE JUL 18, 2005
SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 5
F. A. I. 80/94	*	COOK	870	519	91 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
(0203.1 & 0312-T08) R-3		CONTRACT NO. 62108			



DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of slab & parapet-no future wearing surface)

DEAD LOAD DEFLECTION TABLE

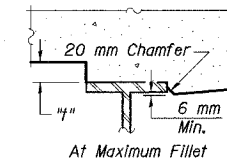
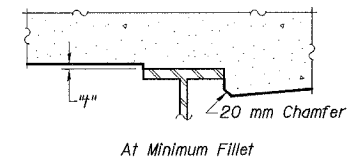
Girder No.	Deflection	Span 3 (L3)			Span 4 (L4)			Span 5 (L5)		
		a	b	c	d	e	f	g	h	i
1		21	23	8	28	50	27	10	26	25
2		21	24	9	23	46	26	11	29	27
3 **		19	21	8	3	8	14	-	-	-
4		22	25	10	23	47	28	6	19	20
5 **		24	26	9	31	56	33	-2	3	11
6		23	25	8	36	64	38	2	15	17
7		24	25	9	33	61	34	7	22	22
8		22	25	10	23	46	26	12	30	28
9 **		20	23	8	2	8	14	-	-	-
10		24	26	11	22	46	26	12	30	28
11		25	27	10	31	58	32	11	29	28
12		22	24	8	30	54	30	9	26	24

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown in the "Top of Slab Elevations" tables. All offsets shown in the "Top of Slab Elevations" tables are in meters.

** Last span for girders 3, 5, & 9 is from Pier 3 or Pier 4 to Head Beam.

END OF SPAN DIMENSIONS
(Values in Meters)

Location	D1	D2	D3
Girder 1	2.743	2.635	3.393
Girder 2	2.743	2.643	3.411
Girder 3	2.944	2.318	-
Girder 4	3.154	2.960	3.302
Girder 5	3.154	3.091	1.567
Girder 6	3.154	3.240	3.900
Girder 7	3.154	3.300	4.045
Girder 8	3.154	3.303	4.050
Girder 9	3.381	2.467	-
Girder 10	3.617	3.666	3.891
Girder 11	3.617	3.680	3.920
Girder 12	3.617	3.692	3.948
@ SB IL 394 & PGL	3.617	3.584	4.052
@ Ramp F	2.742	2.575	3.458



To determine "f": After all structural steel has been erected, elevations of the top flanges of the girders shall be taken at intervals shown in the elevation tables. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown, minus slab thickness, equals the fillet heights "f" above top flange of girders.

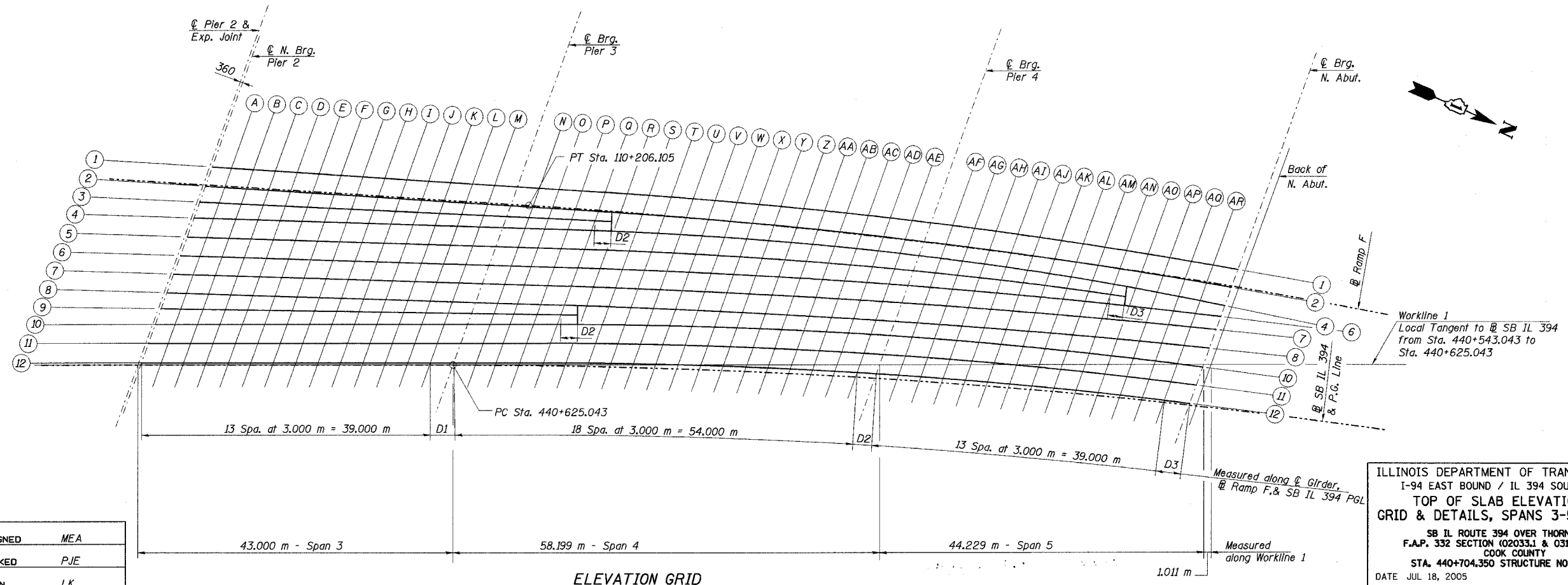
FILLET HEIGHTS

Notes:

1. Work this sheet with Sheet Nos. 6 - 10 of 91.
2. For Girder Framing Layout see Sheets Nos. 35, 37, 39 & 41 of 91.
3. All dimensions are in millimeters (mm) unless otherwise noted.

HAND FINISH NOTE

Hand finish gore area and slope to drain. See Sheet No. 29 of 91 for additional information.



DESIGNED	MEA
CHECKED	PJE
DRAWN	LK
CHECKED	PJE

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
**TOP OF SLAB ELEVATIONS,
GRID & DETAILS, SPANS 3-5 - UNIT 1**
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-T08) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

HNTB

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6 91 SHEETS
F. A. I. 80/94	*	COOK	870	520	
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-			
(02033.1 & 0312-708W) R-3		CONTRACT NO. 62108			

GIRDER 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier 2	440+591.820	-26.864	187.115	187.115
℄ N. Brg. Pier 2	440+592.200	-26.841	187.118	187.118
A	440+595.190	-26.652	187.149	187.156
B	440+598.180	-26.463	187.178	187.191
C	440+601.180	-26.274	187.207	187.226
D	440+604.170	-26.085	187.235	187.258
E	440+607.170	-25.896	187.262	187.287
F	440+610.160	-25.707	187.288	187.312
G	440+613.150	-25.518	187.314	187.337
H	440+616.150	-25.329	187.338	187.359
I	440+619.140	-25.140	187.362	187.377
J	440+622.140	-24.951	187.385	187.396
K	440+625.130	-24.762	187.407	187.413
L	440+628.040	-24.573	187.429	187.431
M	440+630.960	-24.403	187.449	187.449
℄ Pier 3	440+633.630	-24.252	187.467	187.467
N	440+636.550	-24.095	187.486	187.489
O	440+639.470	-23.948	187.506	187.514
P	440+642.390	-23.810	187.525	187.540
Q	440+645.310	-23.682	187.544	187.567
R	440+648.240	-23.556	187.562	187.592
S	440+651.160	-23.427	187.570	187.747
T	440+654.080	-23.296	187.538	187.581
U	440+657.010	-23.162	187.501	187.547
V	440+659.930	-23.026	187.464	187.513
W	440+662.850	-22.887	187.426	187.474
X	440+665.780	-22.746	187.389	187.434
Y	440+668.700	-22.602	187.352	187.394
Z	440+671.630	-22.456	187.315	187.350
AA	440+674.550	-22.307	187.278	187.306
AB	440+677.480	-22.156	187.242	187.263
AC	440+680.410	-22.002	187.205	187.219
AD	440+683.330	-21.846	187.169	187.176
AE	440+686.260	-21.687	187.133	187.135
℄ Pier 4	440+688.830	-21.545	187.102	187.102
AF	440+691.760	-21.382	187.065	187.066
AG	440+694.690	-21.216	187.030	187.033
AH	440+697.620	-21.048	186.994	187.002
AI	440+700.540	-20.877	186.959	186.971
AJ	440+703.470	-20.703	186.924	186.941
AK	440+706.400	-20.527	186.889	186.912
AL	440+709.330	-20.349	186.854	186.880
AM	440+712.260	-20.168	186.819	186.848
AN	440+715.190	-19.985	186.787	186.815
AO	440+718.120	-19.799	186.755	186.781
AP	440+721.060	-19.610	186.723	186.746
AQ	440+723.990	-19.419	186.690	186.707
AR	440+726.920	-19.226	186.657	186.667
℄ Brg. N. Abut.	440+730.240	-19.004	186.620	186.620
Back of N. Abut.	440+731.181	-18.941	186.610	186.610

GIRDER 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier 2	440+590.890	-24.318	187.149	187.149
℄ N. Brg. Pier 2	440+591.270	-24.294	187.152	187.152
A	440+594.260	-24.105	187.176	187.183
B	440+597.260	-23.916	187.200	187.214
C	440+600.250	-23.727	187.222	187.241
D	440+603.240	-23.538	187.244	187.267
E	440+606.240	-23.349	187.265	187.290
F	440+609.230	-23.160	187.285	187.310
G	440+612.230	-22.971	187.304	187.328
H	440+615.220	-22.782	187.323	187.344
I	440+618.210	-22.593	187.340	187.357
J	440+621.210	-22.404	187.357	187.369
K	440+624.200	-22.215	187.373	187.380
L	440+627.150	-22.028	187.388	187.391
M	440+630.070	-21.851	187.402	187.402
℄ Pier 3	440+632.750	-21.697	187.414	187.414
N	440+635.670	-21.538	187.428	187.430
O	440+638.600	-21.388	187.441	187.448
P	440+641.530	-21.247	187.454	187.466
Q	440+644.460	-21.116	187.466	187.484
R	440+647.390	-20.987	187.478	187.503
S	440+650.320	-20.857	187.490	187.522
T	440+653.250	-20.723	187.463	187.501
U	440+656.190	-20.588	187.425	187.466
V	440+659.120	-20.450	187.386	187.430
W	440+662.050	-20.311	187.349	187.394
X	440+664.980	-20.169	187.311	187.354
Y	440+667.920	-20.024	187.274	187.315
Z	440+670.850	-19.878	187.237	187.271
AA	440+673.780	-19.730	187.199	187.226
AB	440+676.720	-19.579	187.162	187.182
AC	440+679.650	-19.426	187.126	187.140
AD	440+682.580	-19.271	187.089	187.096
AE	440+685.520	-19.113	187.053	187.055
℄ Pier 4	440+688.110	-18.973	187.021	187.021
AF	440+691.040	-18.812	186.984	186.985
AG	440+693.980	-18.648	186.949	186.953
AH	440+696.910	-18.482	186.913	186.922
AI	440+699.850	-18.314	186.877	186.891
AJ	440+702.790	-18.144	186.842	186.861
AK	440+705.730	-17.972	186.807	186.832
AL	440+708.660	-17.797	186.771	186.800
AM	440+711.600	-17.621	186.737	186.768
AN	440+714.540	-17.442	186.704	186.736
AO	440+717.480	-17.261	186.672	186.703
AP	440+720.420	-17.078	186.638	186.662
AQ	440+723.360	-16.892	186.605	186.625
AR	440+726.300	-16.705	186.572	186.572
℄ Brg. N. Abut.	440+729.650	-16.489	186.534	186.534
Back of N. Abut.	440+730.591	-16.427	186.523	186.523

GIRDER 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier 2	440+590.110	-22.176	187.182	187.182
℄ N. Brg. Pier 2	440+590.490	-22.158	187.184	187.184
A	440+593.490	-22.016	187.203	187.209
B	440+596.480	-21.875	187.220	187.232
C	440+599.480	-21.733	187.237	187.254
D	440+602.480	-21.592	187.253	187.274
E	440+605.470	-21.450	187.270	187.293
F	440+608.470	-21.309	187.284	187.306
G	440+611.470	-21.167	187.299	187.320
H	440+614.460	-21.025	187.313	187.332
I	440+617.460	-20.884	187.327	187.342
J	440+620.460	-20.742	187.340	187.351
K	440+623.450	-20.601	187.352	187.359
L	440+626.420	-20.460	187.364	187.367
M	440+629.350	-20.328	187.375	187.375
℄ Pier 3	440+632.230	-20.207	187.385	187.385
N	440+635.160	-20.094	187.397	187.400
O	440+638.100	-19.990	187.407	187.414
P	440+641.030	-19.895	187.417	187.429
Q	440+643.970	-19.810	187.429	187.447

- Notes:
1. Work this sheet with Sheet No. 5 of 91.
 2. All elevations and offsets are in meters (m).

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DESIGNED	MEA
CHECKED	PJE
DRAWN	LK
CHECKED	PJE

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
TOP OF SLAB ELEVATIONS-1
SPANS 3-5 - UNIT 1
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7 91 SHEETS
F. A. I. 80/94	.	COOK	870	521	
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		
(02033.1 & 0312-706W) R-3			CONTRACT NO. 62108		

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier 2	440+589.330	-20.033	187.217	187.217
☉ N. Brg. Pier 2	440+589.710	-20.022	187.218	187.218
A	440+592.710	-19.927	187.230	187.238
B	440+595.710	-19.833	187.242	187.257
C	440+598.710	-19.738	187.253	187.273
D	440+601.710	-19.643	187.265	187.289
E	440+604.710	-19.549	187.276	187.302
F	440+607.700	-19.454	187.286	187.312
G	440+610.700	-19.360	187.297	187.322
H	440+613.700	-19.265	187.306	187.328
I	440+616.700	-19.171	187.316	187.334
J	440+619.700	-19.076	187.325	187.339
K	440+622.700	-18.981	187.333	187.341
L	440+625.680	-18.887	187.342	187.346
M	440+628.620	-18.799	187.350	187.351
☉ Pier 3	440+631.710	-18.717	187.358	187.358
N	440+634.650	-18.649	187.366	187.368
O	440+637.590	-18.591	187.375	187.382
P	440+640.530	-18.541	187.383	187.395
Q	440+643.470	-18.502	187.392	187.410
R	440+646.410	-18.461	187.399	187.424
S	440+649.350	-18.412	187.407	187.438
T	440+652.300	-18.355	187.396	187.434
U	440+655.240	-18.289	187.359	187.400
V	440+658.180	-18.215	187.323	187.368
W	440+661.120	-18.133	187.287	187.333
X	440+664.060	-18.043	187.251	187.295
Y	440+667.000	-17.944	187.214	187.256
Z	440+669.940	-17.837	187.178	187.213
AA	440+672.880	-17.721	187.142	187.171
AB	440+675.820	-17.597	187.105	187.127
AC	440+678.770	-17.465	187.069	187.084
AD	440+681.710	-17.325	187.032	187.040
AE	440+684.650	-17.176	186.996	186.999
☉ Pier 4	440+687.550	-17.021	186.960	186.960
AF	440+690.490	-16.856	186.923	186.922
AG	440+693.440	-16.682	186.887	186.887
AH	440+696.380	-16.500	186.850	186.854
AI	440+699.320	-16.310	186.813	186.821
AJ	440+702.260	-16.111	186.776	186.788
AK	440+705.200	-15.905	186.740	186.756
AL	440+708.150	-15.690	186.703	186.722
AM	440+711.090	-15.466	186.666	186.688
AN	440+714.030	-15.234	186.631	186.653
AO	440+716.970	-14.994	186.595	186.616
AP	440+719.910	-14.746	186.560	186.578
AQ	440+722.860	-14.490	186.524	186.538
AR	440+725.800	-14.225	186.487	186.495
☉ Brg. N. Abut.	440+729.040	-13.924	186.447	186.447
Back of N. Abut.	440+729.980	-13.834	186.435	186.435

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier 2	440+588.400	-17.461	187.206	187.206
☉ N. Brg. Pier 2	440+588.780	-17.449	187.208	187.208
A	440+591.780	-17.355	187.218	187.226
B	440+594.770	-17.261	187.225	187.240
C	440+597.770	-17.166	187.232	187.253
D	440+600.770	-17.072	187.240	187.266
E	440+603.770	-16.977	187.247	187.275
F	440+606.770	-16.883	187.254	187.282
G	440+609.770	-16.788	187.260	187.287
H	440+612.770	-16.693	187.267	187.290
I	440+615.760	-16.599	187.272	187.290
J	440+618.760	-16.504	187.278	187.291
K	440+621.760	-16.410	187.283	187.290
L	440+624.760	-16.315	187.287	187.289
M	440+627.710	-16.224	187.291	187.291
☉ Pier 3	440+630.810	-16.139	187.294	187.294
N	440+633.760	-16.068	187.299	187.303
O	440+636.710	-16.007	187.303	187.312
P	440+639.650	-15.955	187.307	187.324
Q	440+642.600	-15.912	187.312	187.337
R	440+645.550	-15.871	187.315	187.347
S	440+648.500	-15.826	187.320	187.360
T	440+651.450	-15.778	187.317	187.365
U	440+654.400	-15.724	187.283	187.335
V	440+657.350	-15.667	187.248	187.302
W	440+660.300	-15.606	187.212	187.267
X	440+663.250	-15.541	187.177	187.230
Y	440+666.200	-15.472	187.140	187.190
Z	440+669.150	-15.399	187.105	187.148
AA	440+672.100	-15.321	187.069	187.104
AB	440+675.050	-15.240	187.034	187.062
AC	440+678.000	-15.155	186.999	187.019
AD	440+680.950	-15.065	186.964	186.975
AE	440+683.900	-14.972	186.929	186.934
☉ Pier 4	440+686.940	-14.872	186.893	186.893
AF	440+689.890	-14.770	186.858	186.856
AG	440+692.840	-14.664	186.823	186.821
AH	440+695.790	-14.555	186.789	186.789
AI	440+698.750	-14.441	186.755	186.757
AJ	440+701.700	-14.323	186.720	186.725
AK	440+704.650	-14.202	186.686	186.695
AL	440+707.600	-14.076	186.652	186.665
AM	440+710.550	-13.946	186.618	186.633
AN	440+713.510	-13.812	186.585	186.604

GIRDER 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier 2	440+587.470	-14.920	187.190	187.190
☉ N. Brg. Pier 2	440+587.850	-14.908	187.190	187.190
A	440+590.850	-14.813	187.194	187.202
B	440+593.850	-14.719	187.197	187.211
C	440+596.850	-14.624	187.200	187.220
D	440+599.850	-14.530	187.201	187.226
E	440+602.840	-14.435	187.203	187.229
F	440+605.840	-14.340	187.205	187.231
G	440+608.840	-14.246	187.206	187.231
H	440+611.840	-14.151	187.207	187.229
I	440+614.840	-14.057	187.207	187.223
J	440+617.840	-13.962	187.206	187.217
K	440+620.840	-13.868	187.206	187.212
L	440+623.830	-13.773	187.204	187.206
M	440+626.810	-13.680	187.203	187.203
☉ Pier 3	440+629.910	-13.592	187.202	187.202
N	440+632.870	-13.518	187.200	187.204
O	440+635.830	-13.454	187.199	187.210
P	440+638.780	-13.399	187.198	187.217
Q	440+641.740	-13.354	187.196	187.225
R	440+644.700	-13.313	187.195	187.233
S	440+647.650	-13.272	187.193	187.239
T	440+650.610	-13.232	187.192	187.246
U	440+653.570	-13.193	187.164	187.222
V	440+656.530	-13.154	187.133	187.195
W	440+659.480	-13.116	187.101	187.164
X	440+662.440	-13.078	187.070	187.129
Y	440+665.400	-13.040	187.038	187.094
Z	440+668.360	-13.004	187.007	187.056
AA	440+671.320	-12.968	186.976	187.017
AB	440+674.270	-12.932	186.945	186.977
AC	440+677.230	-12.897	186.914	186.936
AD	440+680.190	-12.862	186.882	186.896
AE	440+683.150	-12.828	186.852	186.858
☉ Pier 4	440+686.350	-12.792	186.819	186.819
AF	440+689.310	-12.759	186.787	186.785
AG	440+692.260	-12.726	186.757	186.755
AH	440+695.220	-12.695	186.726	186.726
AI	440+698.180	-12.663	186.696	186.700
AJ	440+701.140	-12.632	186.665	186.672
AK	440+704.100	-12.602	186.635	186.646
AL	440+707.060	-12.573	186.604	186.619
AM	440+710.020	-12.543	186.575	186.592
AN	440+712.980	-12.515	186.545	186.563
AO	440+715.940	-12.487	186.517	186.535
AP	440+718.900	-12.459	186.488	186.504
AQ	440+721.860	-12.432	186.459	186.472
AR	440+724.820	-12.406	186.431	186.439
☉ Brg. N. Abut.	440+728.670	-12.372	186.394	186.394
Back of N. Abut.	440+729.631	-12.364	186.385	186.385

- Notes:
1. Work this sheet with Sheet No. 5 of 91.
 2. All elevations and offsets are in meters (m).

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DESIGNED	MEA
CHECKED	PJE
DRAWN	LK
CHECKED	PJE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-94 EAST BOUND / IL 394 SOUTH BOUND
 TOP OF SLAB ELEVATIONS-2
 SPANS 3-5 - UNIT 1
 SB IL ROUTE 394 OVER THORN CREEK
 F.A.P. 332 SECTION (02033.1 & 0312-706W) R-3
 COOK COUNTY
 STA. 440+704.350 STRUCTURE NO. 016-2800
 DATE JUL 18, 2005
 SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 8
F. A. I. 80/94	*	COOK	870	522	91 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS FED. AID PROJECT-				
(0203.1 & 0312-708W) R-3			CONTRACT NO. 62108		

GIRDER 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier 2	440+586.550	-12.378	187.178	187.178
☉ N. Brg. Pier 2	440+586.930	-12.366	187.177	187.177
A	440+589.930	-12.271	187.173	187.181
B	440+592.920	-12.177	187.173	187.187
C	440+595.920	-12.082	187.170	187.191
D	440+598.920	-11.987	187.167	187.193
E	440+601.920	-11.893	187.163	187.190
F	440+604.920	-11.798	187.159	187.187
G	440+607.920	-11.704	187.155	187.181
H	440+610.910	-11.609	187.150	187.172
I	440+613.910	-11.515	187.144	187.161
J	440+616.910	-11.420	187.139	187.151
K	440+619.910	-11.325	187.132	187.139
L	440+622.910	-11.231	187.126	187.128
M	440+625.900	-11.137	187.119	187.119
☉ Pier 3	440+629.010	-11.046	187.112	187.112
N	440+631.980	-10.969	187.104	187.108
O	440+634.940	-10.901	187.098	187.108
P	440+637.900	-10.844	187.091	187.109
Q	440+640.870	-10.796	187.084	187.111
R	440+643.830	-10.753	187.077	187.112
S	440+646.800	-10.712	187.071	187.114
T	440+649.770	-10.674	187.064	187.115
U	440+652.730	-10.638	187.044	187.099
V	440+655.700	-10.605	187.014	187.073
W	440+658.660	-10.574	186.984	187.044
X	440+661.630	-10.545	186.955	187.011
Y	440+664.600	-10.518	186.926	186.978
Z	440+667.560	-10.494	186.897	186.942
AA	440+670.530	-10.472	186.868	186.905
AB	440+673.490	-10.453	186.839	186.868
AC	440+676.460	-10.436	186.810	186.831
AD	440+679.430	-10.421	186.782	186.794
AE	440+682.390	-10.408	186.752	186.756
☉ Pier 4	440+685.660	-10.397	186.721	186.721
AF	440+688.620	-10.389	186.693	186.692
AG	440+691.590	-10.384	186.665	186.665
AH	440+694.560	-10.381	186.637	186.641
AI	440+697.520	-10.380	186.609	186.618
AJ	440+700.490	-10.381	186.581	186.595
AK	440+703.460	-10.385	186.553	186.571
AL	440+706.420	-10.392	186.525	186.547
AM	440+709.390	-10.400	186.498	186.522
AN	440+712.360	-10.411	186.471	186.495
AO	440+715.320	-10.424	186.444	186.467
AP	440+718.290	-10.440	186.417	186.438
AQ	440+721.260	-10.458	186.389	186.406
AR	440+724.220	-10.478	186.362	186.372
☉ Brg. N. Abut.	440+728.220	-10.509	186.326	186.326
Back of N. Abut.	440+729.192	-10.517	186.318	186.318

GIRDER 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier 2	440+585.620	-9.835	187.169	187.169
☉ N. Brg. Pier 2	440+586.000	-9.823	187.168	187.168
A	440+589.000	-9.729	187.161	187.168
B	440+592.000	-9.634	187.153	187.166
C	440+595.000	-9.540	187.144	187.163
D	440+598.000	-9.445	187.136	187.160
E	440+600.990	-9.351	187.126	187.151
F	440+603.990	-9.256	187.117	187.143
G	440+606.990	-9.162	187.107	187.132
H	440+609.990	-9.067	187.096	187.118
I	440+612.990	-8.973	187.086	187.104
J	440+615.990	-8.878	187.074	187.088
K	440+618.990	-8.783	187.063	187.071
L	440+621.980	-8.689	187.051	187.055
M	440+624.980	-8.594	187.038	187.039
☉ Pier 3	440+628.110	-8.500	187.025	187.025
N	440+631.080	-8.420	187.013	187.015
O	440+634.050	-8.350	187.000	187.007
P	440+637.020	-8.289	186.988	187.000
Q	440+640.000	-8.238	186.975	186.993
R	440+642.970	-8.193	186.963	186.988
S	440+645.940	-8.150	186.951	186.983
T	440+648.920	-8.109	186.939	186.977
U	440+651.890	-8.071	186.921	186.963
V	440+654.860	-8.035	186.891	186.935
W	440+657.840	-8.001	186.861	186.906
X	440+660.810	-7.970	186.831	186.874
Y	440+663.790	-7.941	186.802	186.843
Z	440+666.760	-7.915	186.773	186.808
AA	440+669.740	-7.891	186.743	186.771
AB	440+672.710	-7.869	186.714	186.735
AC	440+675.680	-7.850	186.686	186.701
AD	440+678.660	-7.834	186.656	186.664
AE	440+681.630	-7.819	186.627	186.630
☉ Pier 4	440+684.910	-7.806	186.596	186.596
AF	440+687.880	-7.797	186.568	186.569
AG	440+690.860	-7.790	186.540	186.544
AH	440+693.830	-7.786	186.511	186.520
AI	440+696.810	-7.784	186.483	186.498
AJ	440+699.780	-7.784	186.455	186.475
AK	440+702.760	-7.787	186.427	186.453
AL	440+705.730	-7.792	186.400	186.430
AM	440+708.710	-7.799	186.372	186.404
AN	440+711.680	-7.809	186.344	186.376
AO	440+714.660	-7.822	186.317	186.347
AP	440+717.630	-7.836	186.290	186.317
AQ	440+720.610	-7.854	186.262	186.283
AR	440+723.580	-7.873	186.236	186.248
☉ Brg. N. Abut.	440+727.600	-7.903	186.199	186.199
Back of N. Abut.	110+728.570	-7.911	186.191	186.191

GIRDER 9

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier 2	440+584.830	-7.665	187.164	187.164
☉ N. Brg. Pier 2	440+585.210	-7.659	187.163	187.163
A	440+588.210	-7.612	187.150	187.157
B	440+591.210	-7.565	187.139	187.152
C	440+594.210	-7.518	187.126	187.144
D	440+597.210	-7.471	187.113	187.135
E	440+600.210	-7.425	187.101	187.125
F	440+603.210	-7.378	187.088	187.113
G	440+606.210	-7.331	187.075	187.098
H	440+609.210	-7.284	187.062	187.082
I	440+612.210	-7.237	187.048	187.064
J	440+615.210	-7.190	187.035	187.047
K	440+618.210	-7.143	187.021	187.028
L	440+621.210	-7.096	187.007	187.011
M	440+624.210	-7.049	186.992	186.993
☉ Pier 3	440+627.570	-7.000	186.976	186.976
N	440+630.550	-6.966	186.961	186.963
O	440+633.520	-6.942	186.948	186.954
P	440+636.500	-6.927	186.934	186.946
Q	440+639.480	-6.922	186.921	186.939

- Notes:
1. Work this sheet with Sheet No. 5 of 91.
 2. All elevations and offsets are in meters (m).

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DESIGNED	MEA
CHECKED	PJE
DRAWN	LK
CHECKED	PJE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-94 EAST BOUND / IL 394 SOUTH BOUND
TOP OF SLAB ELEVATIONS-3
 SPANS 3-5 - UNIT 1
 SB IL ROUTE 394 OVER THORN CREEK
 F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
 COOK COUNTY
 STA. 440+704.350 STRUCTURE NO. 016-2800
 DATE JUL 18, 2005
 SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10 91 SHEETS
F. A. I. 80/94	*	COOK	870	524	
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-			
(0203.1 & 0312-708W) R-3		CONTRACT NO. 62108			

S.B. IL 394 & P.G. LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier 2	440+582.043	0.000	187.166	187.166
☉ N. Brg. Pier 2	440+582.426	0.000	187.163	187.163
A	440+585.426	0.000	187.135	187.142
B	440+588.426	0.000	187.106	187.119
C	440+591.426	0.000	187.078	187.097
D	440+594.426	0.000	187.050	187.074
E	440+597.426	0.000	187.022	187.047
F	440+600.426	0.000	186.993	187.019
G	440+603.426	0.000	186.965	186.989
H	440+606.426	0.000	186.937	186.958
I	440+609.426	0.000	186.909	186.925
J	440+612.426	0.000	186.880	186.891
K	440+615.426	0.000	186.852	186.859
L	440+618.426	0.000	186.824	186.827
M	440+621.426	0.000	186.796	186.797
☉ Pier 3	440+625.043	0.000	186.762	186.762
N	440+628.043	0.000	186.733	186.736
O	440+631.043	0.000	186.705	186.714
P	440+634.043	0.000	186.677	186.693
Q	440+637.043	0.000	186.649	186.673
R	440+640.043	0.000	186.620	186.652
S	440+643.043	0.000	186.592	186.631
T	440+646.043	0.000	186.564	186.610
U	440+649.043	0.000	186.536	186.585
V	440+652.043	0.000	186.507	186.559
W	440+655.043	0.000	186.479	186.532
X	440+658.043	0.000	186.451	186.501
Y	440+661.043	0.000	186.423	186.470
Z	440+664.043	0.000	186.394	186.434
AA	440+667.043	0.000	186.366	186.399
AB	440+670.043	0.000	186.338	186.363
AC	440+673.043	0.000	186.310	186.328
AD	440+676.043	0.000	186.282	186.292
AE	440+679.043	0.000	186.253	186.256
☉ Pier 4	440+682.627	0.000	186.220	186.220
AF	440+685.627	0.000	186.191	186.191
AG	440+688.627	0.000	186.163	186.165
AH	440+691.627	0.000	186.135	186.141
AI	440+694.627	0.000	186.107	186.119
AJ	440+697.627	0.000	186.078	186.095
AK	440+700.627	0.000	186.050	186.071
AL	440+703.627	0.000	186.022	186.048
AM	440+706.627	0.000	185.994	186.021
AN	440+709.627	0.000	185.965	185.993
AO	440+712.627	0.000	185.937	185.963
AP	440+715.627	0.000	185.909	185.932
AQ	440+718.627	0.000	185.881	185.899
AR	440+721.627	0.000	185.852	185.863
☉ Brg. N. Abut.	440+725.679	0.000	185.814	185.814
Back of N. Abut.	440+726.657	0.000	185.805	185.805

RAMP F

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier 2	440+590.956	-24.489	187.407	187.407
☉ N. Brg. Pier 2	440+591.331	-24.465	187.150	187.150
A	440+594.325	-24.276	187.174	187.181
B	440+597.319	-24.087	187.198	187.212
C	440+600.313	-23.898	187.221	187.240
D	440+603.307	-23.709	187.243	187.266
E	440+606.301	-23.520	187.264	187.289
F	440+609.295	-23.331	187.285	187.310
G	440+612.289	-23.142	187.304	187.328
H	440+615.283	-22.953	187.323	187.344
I	440+618.277	-22.764	187.341	187.358
J	440+621.271	-22.575	187.358	187.370
K	440+624.265	-22.386	187.375	187.382
L	440+627.207	-22.200	187.390	187.393
M	440+630.132	-22.022	187.405	187.405
☉ Pier 3	440+632.806	-21.869	187.418	187.418
N	440+635.733	-21.709	187.432	187.434
O	440+638.661	-21.553	187.445	187.452
P	440+641.589	-21.396	187.458	187.470
Q	440+644.517	-21.240	187.470	187.488
R	440+647.446	-21.083	187.481	187.506
S	440+650.375	-20.926	187.492	187.524
T	440+653.305	-20.769	187.464	187.502
U	440+656.236	-20.612	187.425	187.466
V	440+659.166	-20.455	187.386	187.430
W	440+662.098	-20.298	187.348	187.393
X	440+665.029	-20.140	187.310	187.353
Y	440+667.962	-19.983	187.272	187.313
Z	440+670.894	-19.825	187.234	187.268
AA	440+673.828	-19.667	187.197	187.224
AB	440+676.761	-19.509	187.160	187.180
AC	440+679.696	-19.351	187.123	187.137
AD	440+682.630	-19.193	187.086	187.093
AE	440+685.565	-19.035	187.050	187.052
☉ Pier 4	440+688.085	-18.899	187.018	187.018
AF	440+691.021	-18.741	186.982	186.983
AG	440+693.958	-18.583	186.947	186.951
AH	440+696.895	-18.424	186.911	186.920
AI	440+699.832	-18.266	186.876	186.890
AJ	440+702.770	-18.107	186.841	186.860
AK	440+705.709	-17.948	186.806	186.831
AL	440+708.648	-17.789	186.771	186.800
AM	440+711.588	-17.631	186.737	186.768
AN	440+714.528	-17.472	186.705	186.737
AO	440+717.468	-17.312	186.673	186.704
AP	440+720.409	-17.153	186.641	186.665
AQ	440+723.350	-16.994	186.609	186.629
AR	440+726.292	-16.835	186.577	186.577
☉ Brg. N. Abut.	440+729.684	-16.651	186.540	186.540
Back of N. Abut.	440+730.582	-16.602	186.530	186.530

- Notes:
1. Work this sheet with Sheet No. 5 of 91.
 2. All elevations and offsets are in meters (m).

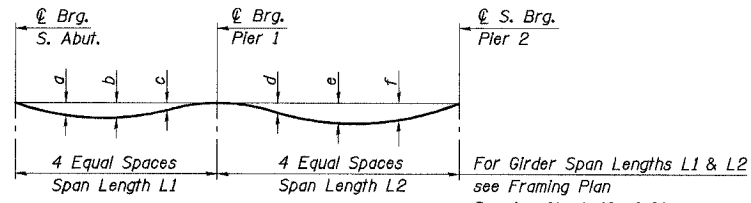
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DESIGNED	MEA
CHECKED	PJE
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CHECKED	PJE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-94 EAST BOUND / IL 394 SOUTH BOUND
 TOP OF SLAB ELEVATIONS-5
 SPANS 3-5 UNIT 1
 SB IL ROUTE 394 OVER THORN CREEK
 F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
 COOK COUNTY
 STA. 440+704.350 STRUCTURE NO. 016-2800
 DATE JUL 18, 2005
 SCALE ---
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 11 91 SHEETS
F. A. I. 80/94	*	COOK	870	525	
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		
(02033.1 & 0312-708W) R-3			CONTRACT NO. 62108		



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of slab & parapet-no future wearing surface)

DEAD LOAD DEFLECTION TABLE

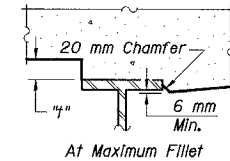
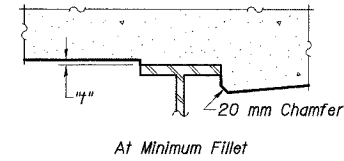
Girder No.	Deflection	Span 1 (L1)			Span 2 (L2)		
		a	b	c	d	e	f
1		24	26	10	25	51	44
2		27	29	12	23	46	39
3		28	32	13	18	39	34
4		29	33	15	15	34	29
5		29	35	16	13	28	25
6		30	36	17	9	24	21

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown in the "Top of Slab Elevations" tables. All offsets shown in the "Top of Slab Elevations" tables are in meters.

END OF SPAN DIMENSIONS

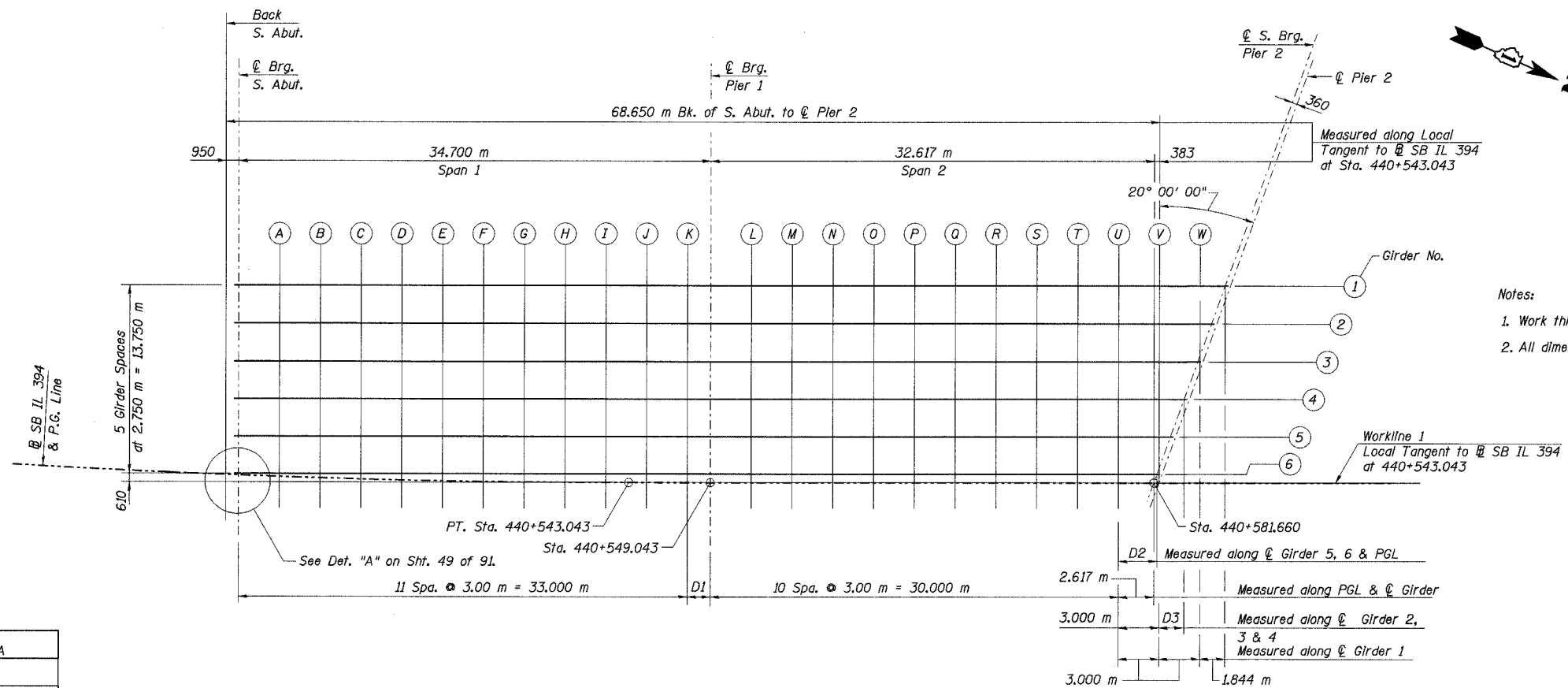
(Values in Meters)

Location	D1	D2	D3
Girder 1	1.700	N/A	N/A
Girder 2	1.700	N/A	3.843
Girder 3	1.700	N/A	2.842
Girder 4	1.700	N/A	1.841
Girder 5	1.700	3.840	N/A
Girder 6	1.700	2.839	N/A
@ SB IL 394 & PGL	1.706	2.617	N/A



To determine "y": After all structural steel has been erected, elevations of the top flanges of the girders shall be taken at intervals shown in the elevation tables. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown, minus slab thickness, equals the fillet heights "y" above top flange of girders.

FILLET HEIGHTS



Notes:
1. Work this sheet with Sheet Nos. 12 & 13 of 91.
2. All dimensions are in millimeters (mm) unless otherwise noted.

DESIGNED	MEA
CHECKED	JY
DRAWN	LK
CHECKED	JY

ELEVATION GRID

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
TOP OF SLAB ELEVATIONS, GRID & DETAILS, SPANS 1 & 2 - UNIT 2
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

HNTB

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 12 91 SHEETS
F. A. I. 80/94	*	COOK	870	526	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			

02033.1 & 0312-708W R-3 CONTRACT NO. 62108

GIRDER 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of S. Abut.	440+512.865	-13.810	187.140	187.140
⊕ Brg. S. Abut.	440+513.831	-13.845	187.139	187.139
A	440+516.883	-13.947	187.136	187.146
B	440+519.935	-14.038	187.135	187.153
C	440+522.987	-14.117	187.134	187.159
D	440+526.040	-14.186	187.133	187.161
E	440+529.094	-14.243	187.134	187.162
F	440+532.148	-14.288	187.135	187.160
G	440+535.203	-14.323	187.137	187.158
H	440+538.257	-14.346	187.139	187.153
I	440+541.312	-14.358	187.142	187.149
J	440+544.343	-14.360	187.144	187.146
K	440+547.343	-14.360	187.147	187.147
⊕ Pier 1	440+549.043	-14.360	187.149	187.149
L	440+552.043	-14.360	187.152	187.157
M	440+555.043	-14.360	187.155	187.169
N	440+558.043	-14.360	187.158	187.182
O	440+561.043	-14.360	187.161	187.195
P	440+564.043	-14.360	187.164	187.208
Q	440+567.043	-14.360	187.167	187.217
R	440+570.043	-14.360	187.170	187.223
S	440+573.043	-14.360	187.173	187.225
T	440+576.043	-14.360	187.176	187.222
U	440+579.043	-14.360	187.179	187.217
V	440+582.043	-14.360	187.182	187.207
W	440+585.043	-14.360	187.185	187.194
⊕ S. Brg. Pier 2	440+586.887	-14.360	187.186	187.186
⊕ Pier 2	440+587.270	-14.360	187.187	187.187

GIRDER 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of S. Abut.	440+512.971	-11.060	187.275	187.275
⊕ Brg. S. Abut.	440+513.933	-11.095	187.272	187.272
A	440+516.974	-11.197	187.263	187.274
B	440+520.015	-11.288	187.255	187.275
C	440+523.057	-11.367	187.248	187.275
D	440+526.100	-11.436	187.242	187.272
E	440+529.143	-11.493	187.236	187.268
F	440+532.186	-11.538	187.231	187.259
G	440+535.230	-11.573	187.227	187.250
H	440+538.274	-11.596	187.223	187.239
I	440+541.318	-11.608	187.220	187.229
J	440+544.343	-11.610	187.217	187.220
K	440+547.343	-11.610	187.214	187.214
⊕ Pier 1	440+549.043	-11.610	187.212	187.212
L	440+552.043	-11.610	187.209	187.213
M	440+555.043	-11.610	187.206	187.217
N	440+558.043	-11.610	187.203	187.225
O	440+561.043	-11.610	187.200	187.232
P	440+564.043	-11.610	187.197	187.237
Q	440+567.043	-11.610	187.194	187.240
R	440+570.043	-11.610	187.191	187.239
S	440+573.043	-11.610	187.188	187.235
T	440+576.043	-11.610	187.185	187.225
U	440+579.043	-11.610	187.182	187.213
V	440+582.043	-11.610	187.179	187.198
⊕ S. Brg. Pier 2	440+585.886	-11.610	187.175	187.175
⊕ Pier 2	440+586.269	-11.610	187.174	187.174

GIRDER 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of S. Abut.	440+513.075	-8.310	187.409	187.409
⊕ Brg. S. Abut.	440+514.034	-8.345	187.404	187.404
A	440+517.064	-8.447	187.390	187.401
B	440+520.095	-8.538	187.376	187.397
C	440+523.126	-8.617	187.362	187.390
D	440+526.158	-8.686	187.350	187.383
E	440+529.191	-8.743	187.339	187.372
F	440+532.224	-8.788	187.328	187.359
G	440+535.257	-8.823	187.317	187.342
H	440+538.290	-8.846	187.307	187.325
I	440+541.324	-8.858	187.298	187.308
J	440+544.343	-8.860	187.289	187.294
K	440+547.343	-8.860	187.280	187.280
⊕ Pier 1	440+549.043	-8.860	187.275	187.275
L	440+552.043	-8.860	187.266	187.269
M	440+555.043	-8.860	187.257	187.267
N	440+558.043	-8.860	187.248	187.266
O	440+561.043	-8.860	187.239	187.266
P	440+564.043	-8.860	187.230	187.265
Q	440+567.043	-8.860	187.221	187.261
R	440+570.043	-8.860	187.212	187.254
S	440+573.043	-8.860	187.203	187.242
T	440+576.043	-8.860	187.194	187.228
U	440+579.043	-8.860	187.185	187.210
V	440+582.043	-8.860	187.176	187.188
⊕ S. Brg. Pier 2	440+584.885	-8.860	187.167	187.167
⊕ Pier 2	440+585.268	-8.860	187.166	187.166

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of S. Abut.	440+513.179	-5.560	187.543	187.543
⊕ Brg. S. Abut.	440+514.135	-5.595	187.536	187.536
A	440+517.154	-5.697	187.516	187.527
B	440+520.175	-5.788	187.496	187.517
C	440+523.195	-5.867	187.476	187.505
D	440+526.217	-5.936	187.458	187.492
E	440+529.239	-5.993	187.441	187.476
F	440+532.261	-6.038	187.424	187.457
G	440+535.284	-6.073	187.407	187.434
H	440+538.307	-6.096	187.391	187.410
I	440+541.330	-6.108	187.376	187.389
J	440+544.343	-6.110	187.361	187.367
K	440+547.343	-6.110	187.346	187.347
⊕ Pier 1	440+549.043	-6.110	187.337	187.337
L	440+552.043	-6.110	187.323	187.325
M	440+555.043	-6.110	187.308	187.316
N	440+558.043	-6.110	187.293	187.309
O	440+561.043	-6.110	187.278	187.302
P	440+564.043	-6.110	187.263	187.294
Q	440+567.043	-6.110	187.248	187.283
R	440+570.043	-6.110	187.233	187.269
S	440+573.043	-6.110	187.218	187.252
T	440+576.043	-6.110	187.203	187.230
U	440+579.043	-6.110	187.188	187.206
V	440+582.043	-6.110	187.173	187.181
⊕ S. Brg. Pier 2	440+583.884	-6.110	187.164	187.164
⊕ Pier 2	440+584.267	-6.110	187.162	187.162

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of S. Abut.	440+513.282	-2.810	187.677	187.677
⊕ Brg. S. Abut.	440+514.234	-2.845	187.668	187.668
A	440+517.244	-2.947	187.641	187.653
B	440+520.253	-3.038	187.615	187.637
C	440+523.264	-3.117	187.590	187.620
D	440+526.275	-3.186	187.566	187.601
E	440+529.287	-3.243	187.543	187.579
F	440+532.299	-3.288	187.520	187.554
G	440+535.311	-3.323	187.497	187.525
H	440+538.323	-3.346	187.476	187.498
I	440+541.336	-3.358	187.454	187.468
J	440+544.343	-3.360	187.433	187.439
K	440+547.343	-3.360	187.412	187.413
⊕ Pier 1	440+549.043	-3.360	187.400	187.400
L	440+552.043	-3.360	187.379	187.381
M	440+555.043	-3.360	187.358	187.365
N	440+558.043	-3.360	187.337	187.351
O	440+561.043	-3.360	187.317	187.337
P	440+564.043	-3.360	187.296	187.322
Q	440+567.043	-3.360	187.275	187.304
R	440+570.043	-3.360	187.254	187.284
S	440+573.043	-3.360	187.233	187.260
T	440+576.043	-3.360	187.212	187.233
U	440+579.043	-3.360	187.191	187.204
⊕ S. Brg. Pier 2	440+582.883	-3.360	187.164	187.164
⊕ Pier 2	440+583.266	-3.360	187.161	187.161

GIRDER 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of S. Abut.	440+513.384	-0.060	187.810	187.810
⊕ Brg. S. Abut.	440+514.333	-0.095	187.799	187.799
A	440+517.332	-0.197	187.766	187.778
B	440+520.332	-0.288	187.735	187.757
C	440+523.332	-0.367	187.704	187.734
D	440+526.333	-0.436	187.674	187.709
E	440+529.334	-0.493	187.644	187.681
F	440+532.335	-0.538	187.615	187.650
G	440+535.337	-0.573	187.587	187.617
H	440+538.339	-0.596	187.559	187.582
I	440+541.342	-0.608	187.532	187.547
J	440+544.343	-0.610	187.505	187.512
K	440+547.343	-0.610	187.478	187.479
⊕ Pier 1	440+549.043	-0.610	187.463	187.463
L	440+552.043	-0.610	187.436	187.437
M	440+555.043	-0.610	187.409	187.415
N	440+558.043	-0.610	187.382	187.393
O	440+561.043	-0.610	187.355	187.372
P	440+564.043	-0.610	187.328	187.351
Q	440+567.043	-0.610	187.302	187.326
R	440+570.043	-0.610	187.275	187.299
S	440+573.043	-0.610	187.248	187.270
T	440+576.043	-0.610	187.221	187.238
U	440+579.043	-0.610	187.194	187.203
⊕ S. Brg. Pier 2	440+581.882	-0.610	187.168	187.168
⊕ Pier 2	440+582.265	-0.610	187.165	187.165

Notes:

1. Work this sheet with Sheet No. 11 of 91.
2. All elevations and offsets are in meters (m).

DESIGNED	MEA
CHECKED	JY
DRAWN	LK
CHECKED	JY

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ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-94 EAST BOUND / IL 394 SOUTH BOUND
TOP OF SLAB ELEVATIONS-1
SPANS 1 & 2 - UNIT 2
 SB IL ROUTE 394 OVER THORN CREEK
 F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
 COOK COUNTY
 STA. 440+704.350 STRUCTURE NO. 016-2800
 DATE JUL 18, 2005
 SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 13 91 SHEETS
F. A. I. 80/94	•	COOK	870	527	
FED. ROAD DIST. NO. 1		ILLINOIS		FED. AID PROJECT-	
(0203.1 & 0312-708W) R-3		CONTRACT NO. 62108			

SB IL 394 & PGL

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of S. Abut.	440+513.386	0.000	187.813	187.813
⊕ Brg. S. Abut.	440+514.337	0.000	187.804	187.804
A	440+517.339	0.000	187.775	187.787
B	440+520.340	0.000	187.747	187.770
C	440+523.341	0.000	187.719	187.750
D	440+526.342	0.000	187.691	187.726
E	440+529.342	0.000	187.662	187.699
F	440+532.343	0.000	187.634	187.669
G	440+535.343	0.000	187.606	187.636
H	440+538.343	0.000	187.578	187.600
I	440+541.343	0.000	187.549	187.564
J	440+544.343	0.000	187.521	187.528
K	440+547.343	0.000	187.493	187.494
⊕ Pler 1	440+549.043	0.000	187.477	187.477
L	440+552.043	0.000	187.449	187.450
M	440+555.043	0.000	187.420	187.426
N	440+558.043	0.000	187.392	187.403
O	440+561.043	0.000	187.364	187.381
P	440+564.043	0.000	187.336	187.359
Q	440+567.043	0.000	187.308	187.332
R	440+570.043	0.000	187.279	187.304
S	440+573.043	0.000	187.251	187.273
T	440+576.043	0.000	187.223	187.240
U	440+579.043	0.000	187.195	187.203
⊕ S. Brg. Pler 2	440+581.660	0.000	187.170	187.170
⊕ Pler 2	440+582.043	0.000	187.166	187.166

Notes:

1. Work this sheet with Sheet No. 11 of 91.
2. All elevations and offsets are in meters (m).

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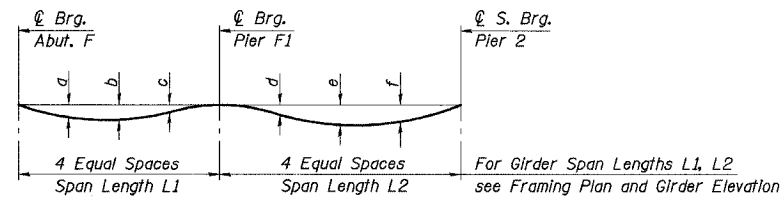
DESIGNED	MEA
CHECKED	JY
DRAWN	LK
CHECKED	JY

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-94 EAST BOUND / IL 394 SOUTH BOUND
 TOP OF SLAB ELEVATIONS-2
 SPANS 1 & 2 UNIT 2
 SB IL ROUTE 394 OVER THORN CREEK
 F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
 COOK COUNTY
 STA. 440+704.350 STRUCTURE NO. 016-2800
 DATE JUL 18, 2005
 SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 14 91 SHEETS
F. A. I. 80/94	.	COOK	870	528	
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		
0203.1 & 0312-708W		R-3	CONTRACT NO. 62108		



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of slab & parapet-no future wearing surface)

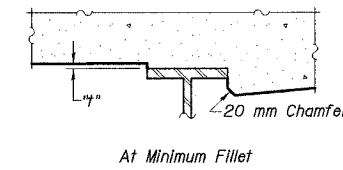
DEAD LOAD DEFLECTION TABLE

Girder No.	Deflection	Span F1 (L1)			Span F2 (L2)		
		a	b	c	d	e	f
1		10	11	4	10	20	17
2		12	13	6	9	18	16
3		13	15	7	8	17	14
4		14	16	7	7	15	13
5		15	18	9	5	13	11
6		17	20	10	4	11	10

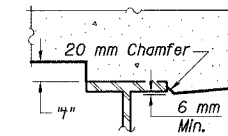
Note: The above deflections are not to be used in the field if the Engineer is working from the grade elevations adjusted for dead load deflections as shown in the "Top of Slab Elevations" tables. All offsets shown in the "Top of Slab Elevations" tables are in meters.

END OF SPAN DIMENSIONS
(Values in Meters)

Location	D1	D2
Girder 1	2.373	4.074
Girder 2	2.560	3.635
PGL & BL Ramp F	2.647	3.430
Girder 3	2.747	3.194
Girder 4	2.934	2.755
Girder 5	3.121	2.315
Girder 6	3.308	1.875



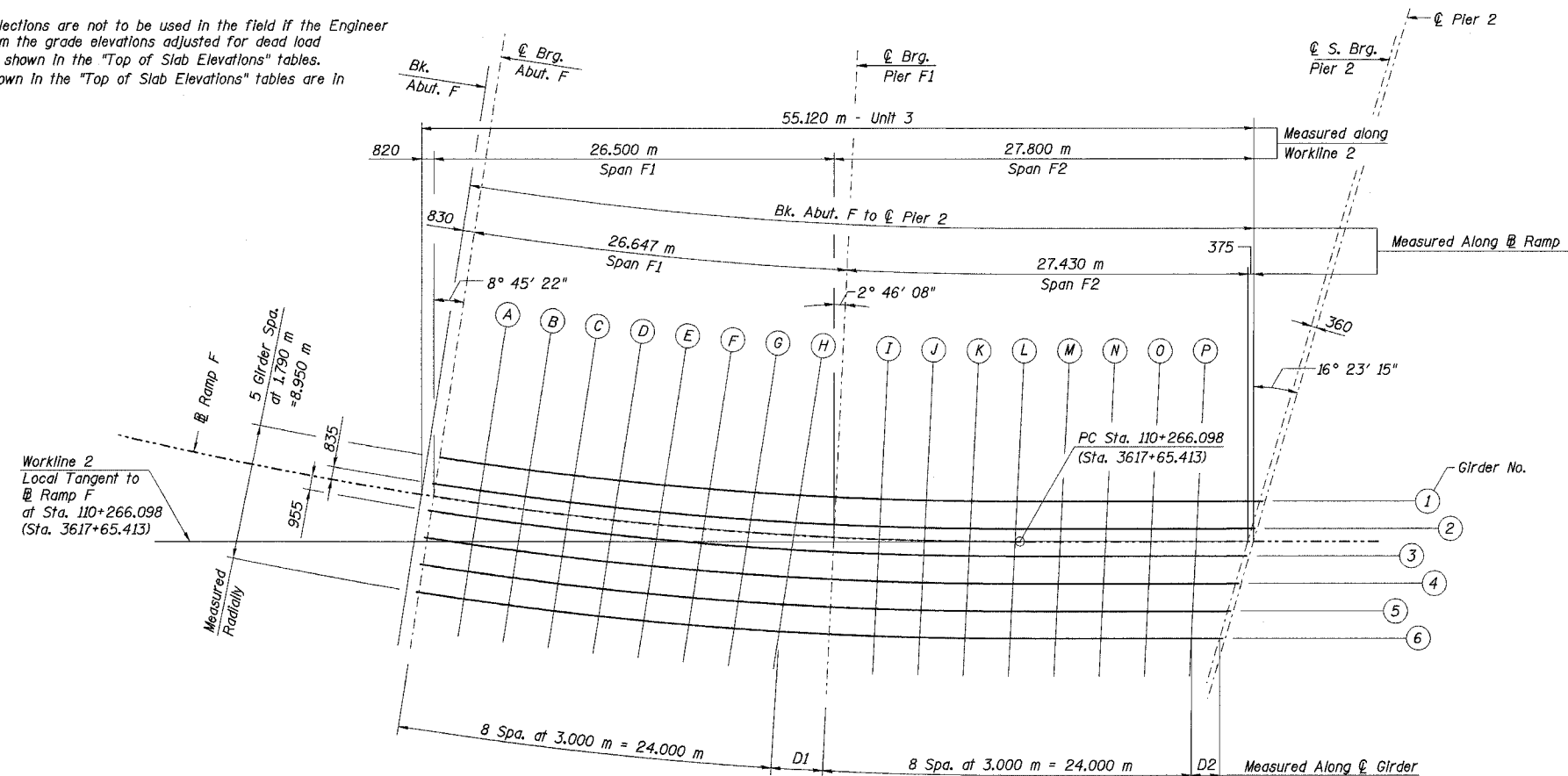
At Minimum Fillet



At Maximum Fillet

To determine "t": After all structural steel has been erected, elevations of the top flanges of the girders shall be taken at intervals shown in the elevation tables. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown, minus slab thickness, equals the fillet heights "t" above top flange of girders.

FILLET HEIGHTS



- Notes:
1. Work this sheet with Sheet Nos. 15-16 of 91.
 2. All dimensions are in millimeters (mm) unless otherwise noted.
 3. Stations shown in parentheses are in English units.

DESIGNED	PJE
CHECKED	JJK
DRAWN	LK
CHECKED	JJK

ELEVATION GRID

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
TOP OF SLAB ELEVATIONS, GRID & DETAILS, SPANS F1 & F2 - UNIT 3
RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2845
DATE JUL 18, 2005
SCALE ---



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 15 91 SHEETS
F. A. I. 80/94	*	COOK	870	529	
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-	CONTRACT NO. 62108		

GIRDER 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. Abut. F	110+305.898	2.625	186.553	186.553
CL Brg. Abut. F	110+305.068	2.625	186.559	186.559
A	110+302.037	2.625	186.583	186.589
B	110+299.006	2.625	186.607	186.617
C	110+295.974	2.625	186.631	186.642
D	110+292.943	2.625	186.655	186.667
E	110+289.912	2.625	186.679	186.689
F	110+286.881	2.625	186.703	186.710
G	110+283.850	2.625	186.734	186.737
H	110+280.818	2.625	186.768	186.768
CL Pier F1	110+278.421	2.625	186.794	186.794
I	110+275.390	2.625	186.828	186.831
J	110+272.359	2.625	186.862	186.870
K	110+269.327	2.625	186.896	186.910
L	110+266.296	2.625	186.929	186.948
M	110+263.264	2.625	186.963	186.984
N	110+260.234	2.625	186.996	187.017
O	110+257.204	2.625	187.030	187.047
P	110+254.174	2.625	187.063	187.074
CL S. Brg. Pier 2	110+250.220	2.625	187.107	187.107
CL Pier 2	110+249.845	2.625	187.111	187.111

GIRDER 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. Abut. F	110+305.898	0.835	186.660	186.660
CL Brg. Abut. F	110+305.068	0.835	186.667	186.667
A	110+302.058	0.835	186.690	186.697
B	110+299.048	0.835	186.714	186.725
C	110+296.038	0.835	186.738	186.751
D	110+293.029	0.835	186.762	186.776
E	110+290.019	0.835	186.786	186.797
F	110+287.009	0.835	186.809	186.818
G	110+283.999	0.835	186.835	186.839
H	110+280.989	0.835	186.862	186.863
CL Pier F1	110+278.421	0.835	186.885	186.885
I	110+275.411	0.835	186.912	186.914
J	110+272.401	0.835	186.939	186.946
K	110+269.391	0.835	186.966	186.979
L	110+266.382	0.835	186.993	187.010
M	110+263.381	0.835	187.019	187.039
N	110+260.381	0.835	187.046	187.065
O	110+257.381	0.835	187.073	187.088
P	110+254.381	0.835	187.100	187.109
CL S. Brg. Pier 2	110+250.746	0.835	187.132	187.132
CL Pier 2	110+250.371	0.835	187.135	187.135

PGL & B RAMP F

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. Abut. F	110+305.898	0.000	186.710	186.710
CL Brg. Abut. F	110+305.068	0.000	186.717	186.717
A	110+302.068	0.000	186.740	186.747
B	110+299.068	0.000	186.764	186.776
C	110+296.068	0.000	186.788	186.801
D	110+293.068	0.000	186.812	186.826
E	110+290.068	0.000	186.835	186.848
F	110+287.068	0.000	186.859	186.868
G	110+284.068	0.000	186.883	186.887
H	110+281.068	0.000	186.906	186.908
CL Pier F1	110+278.421	0.000	186.927	186.927
I	110+275.421	0.000	186.951	186.953
J	110+272.421	0.000	186.975	186.982
K	110+269.421	0.000	186.999	187.011
L	110+266.421	0.000	187.022	187.039
M	110+263.421	0.000	187.046	187.064
N	110+260.421	0.000	187.070	187.087
O	110+257.421	0.000	187.093	187.108
P	110+254.421	0.000	187.117	187.126
CL S. Brg. Pier 2	110+250.991	0.000	187.144	187.144
CL Pier 2	110+250.616	0.000	187.147	187.147

GIRDER 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. Abut. F	110+305.898	-0.955	186.768	186.768
CL Brg. Abut. F	110+305.068	-0.955	186.774	186.774
A	110+302.079	-0.955	186.798	186.805
B	110+299.090	-0.955	186.821	186.833
C	110+296.102	-0.955	186.845	186.859
D	110+293.113	-0.955	186.869	186.884
E	110+290.124	-0.955	186.892	186.905
F	110+287.135	-0.955	186.916	186.926
G	110+284.146	-0.955	186.937	186.942
H	110+281.158	-0.955	186.957	186.959
CL Pier F1	110+278.421	-0.955	186.976	186.976
I	110+275.432	-0.955	186.996	186.998
J	110+272.443	-0.955	187.016	187.022
K	110+269.455	-0.955	187.036	187.048
L	110+266.466	-0.955	187.056	187.072
M	110+263.467	-0.955	187.076	187.094
N	110+260.467	-0.955	187.097	187.113
O	110+257.467	-0.955	187.117	187.130
P	110+254.467	-0.955	187.137	187.144
CL S. Brg. Pier 2	110+251.273	-0.955	187.159	187.159
CL Pier 2	110+250.898	-0.955	187.161	187.161

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. Abut. F	110+305.898	-2.745	186.875	186.875
CL Brg. Abut. F	110+305.068	-2.745	186.881	186.881
A	110+302.100	-2.745	186.905	186.912
B	110+299.132	-2.745	186.928	186.941
C	110+296.164	-2.745	186.952	186.967
D	110+293.196	-2.745	186.975	186.992
E	110+290.228	-2.745	186.999	187.013
F	110+287.260	-2.745	187.022	187.033
G	110+284.292	-2.745	187.040	187.046
H	110+281.324	-2.745	187.053	187.055
CL Pier F1	110+278.421	-2.745	187.066	187.066
I	110+275.453	-2.745	187.080	187.082
J	110+272.485	-2.745	187.093	187.099
K	110+269.517	-2.745	187.107	187.117
L	110+266.549	-2.745	187.120	187.134
M	110+263.554	-2.745	187.134	187.149
N	110+260.554	-2.745	187.147	187.159
O	110+257.554	-2.745	187.161	187.168
P	110+254.554	-2.745	187.174	187.175
CL S. Brg. Pier 2	110+251.799	-2.745	187.187	187.187
CL Pier 2	110+251.424	-2.745	187.189	187.189

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. Abut. F	110+305.898	-4.535	186.982	186.982
CL Brg. Abut. F	110+305.068	-4.535	186.989	186.989
A	110+302.120	-4.535	187.012	187.020
B	110+299.173	-4.535	187.035	187.049
C	110+296.225	-4.535	187.059	187.075
D	110+293.278	-4.535	187.082	187.101
E	110+290.330	-4.535	187.105	187.122
F	110+287.383	-4.535	187.129	187.141
G	110+284.435	-4.535	187.143	187.151
H	110+281.487	-4.535	187.150	187.153
CL Pier F1	110+278.421	-4.535	187.157	187.157
I	110+275.473	-4.535	187.164	187.165
J	110+272.526	-4.535	187.171	187.175
K	110+269.578	-4.535	187.178	187.186
L	110+266.631	-4.535	187.184	187.196
M	110+263.640	-4.535	187.191	187.205
N	110+260.640	-4.535	187.198	187.211
O	110+257.640	-4.535	187.205	187.215
P	110+254.640	-4.535	187.212	187.217
CL S. Brg. Pier 2	110+252.325	-4.535	187.218	187.218
CL Pier 2	110+251.950	-4.535	187.219	187.219

- Notes:
1. Work this sheet with Sheet No. 14 of 91
 2. All elevations and offsets are in meters (m).

DESIGNED	PJE
CHECKED	JJK
DRAWN	LK
CHECKED	JJK

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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
TOP OF SLAB ELEVATIONS-1
SPANS F1 & F2 - UNIT 3
RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2845
DATE JUL 18, 2005
SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F. A. I. 80/94	SECTION •	COUNTY COOK	TOTAL SHEETS 870	SHEET NO. 530	SHEET NO. 16 91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		
(0203.1 & 0312-708W) R-3			CONTRACT NO. 62108		

GIRDER 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. Abut. F	110+305.898	-6.325	186.996	186.996
CL Brg. Abut. F	110+305.068	-6.325	187.003	187.003
A	110+302.141	-6.325	187.026	187.034
B	110+299.213	-6.325	187.049	187.064
C	110+296.286	-6.325	187.072	187.091
D	110+293.358	-6.325	187.095	187.116
E	110+290.431	-6.325	187.118	187.137
F	110+287.504	-6.325	187.142	187.156
G	110+284.576	-6.325	187.156	187.165
H	110+281.649	-6.325	187.162	187.165
CL Pier F1	110+278.421	-6.325	187.168	187.168
I	110+275.494	-6.325	187.173	187.174
J	110+272.566	-6.325	187.178	187.182
K	110+269.639	-6.325	187.184	187.191
L	110+266.711	-6.325	187.189	187.200
M	110+263.727	-6.325	187.195	187.207
N	110+260.727	-6.325	187.201	187.212
O	110+257.727	-6.325	187.206	187.214
P	110+254.727	-6.325	187.212	187.215
CL S. Brg. Pier 2	110+252.852	-6.325	187.215	187.215
CL Pier 2	110+252.477	-6.325	187.216	187.216

Notes:

1. Work this sheet with Sheet No. 14 of 91.
2. All elevations and offsets are in meters (m).

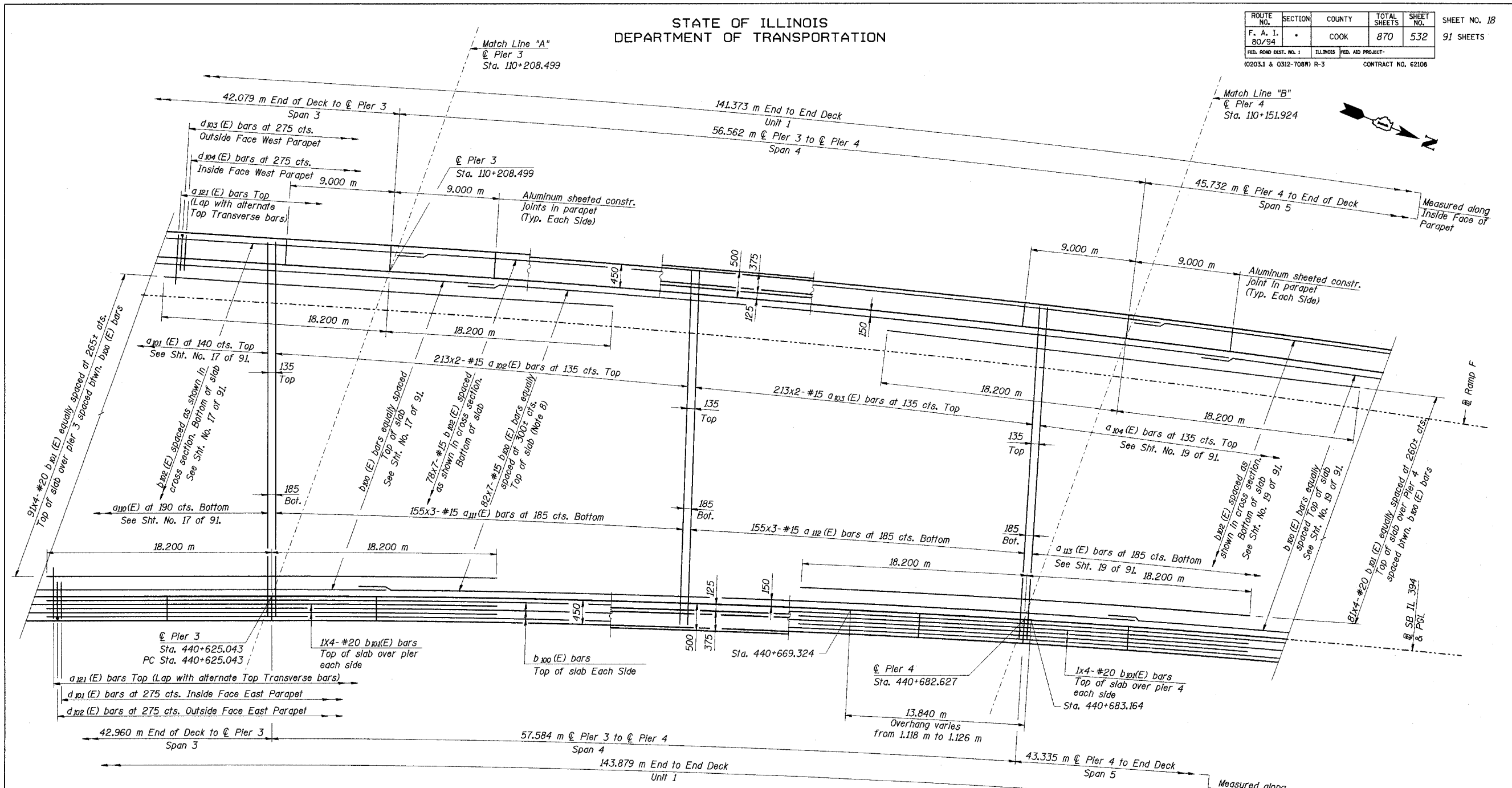
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DESIGNED	PJE
CHECKED	JJK
DRAWN	LK
CHECKED	JJK

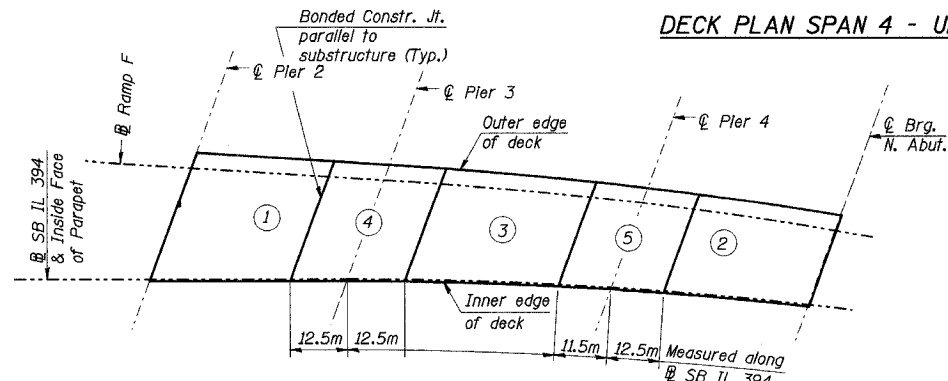
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 18
F. A. I. 80/94	*	COOK	870	532	91 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
			(0203.1 & 0312-708W) R-3	CONTRACT NO. 62108	



DECK PLAN SPAN 4 - UNIT 1



DECK POURING SEQUENCE

Notes:

1. Work this sheet with Sheet No. 17, 19 - 22 & 30 of 91 Sheets.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. Bars indicated thus "213 x 2 - #15 etc." indicates 213 lines of bars with 2 lengths per line.
4. All dimensions are in millimeters (mm) except as noted.
5. Place bars $a_{101}(E)$, $a_{102}(E)$, $a_{103}(E)$ & $a_{104}(E)$ to miss the Aluminum Sheeted Joint Location in Parapets.
6. In curved portion of deck, transverse reinforcement shall be placed radially along SB IL 394. Spacing shown on plan is at east edge of deck. Spacing at west edge of deck for radially placed reinforcement is approximately 140 mm at Top and 190 mm at Bottom.
7. Min. Lap Splice Length for Deck Reinforcement:
#15 bars - 640 #20 bars - 790
8. Place longitudinal bars parallel to nearest ϕ of girders. Spacing shown is perpendicular to longitudinal bars. $b_{100}(E)$ bars shall have maximum spacing shown at the wider end of deck and gradually reduced spacing at the narrower end of deck.

DESIGNED	JY
CHECKED	ML
DRAWN	LK
CHECKED	ML

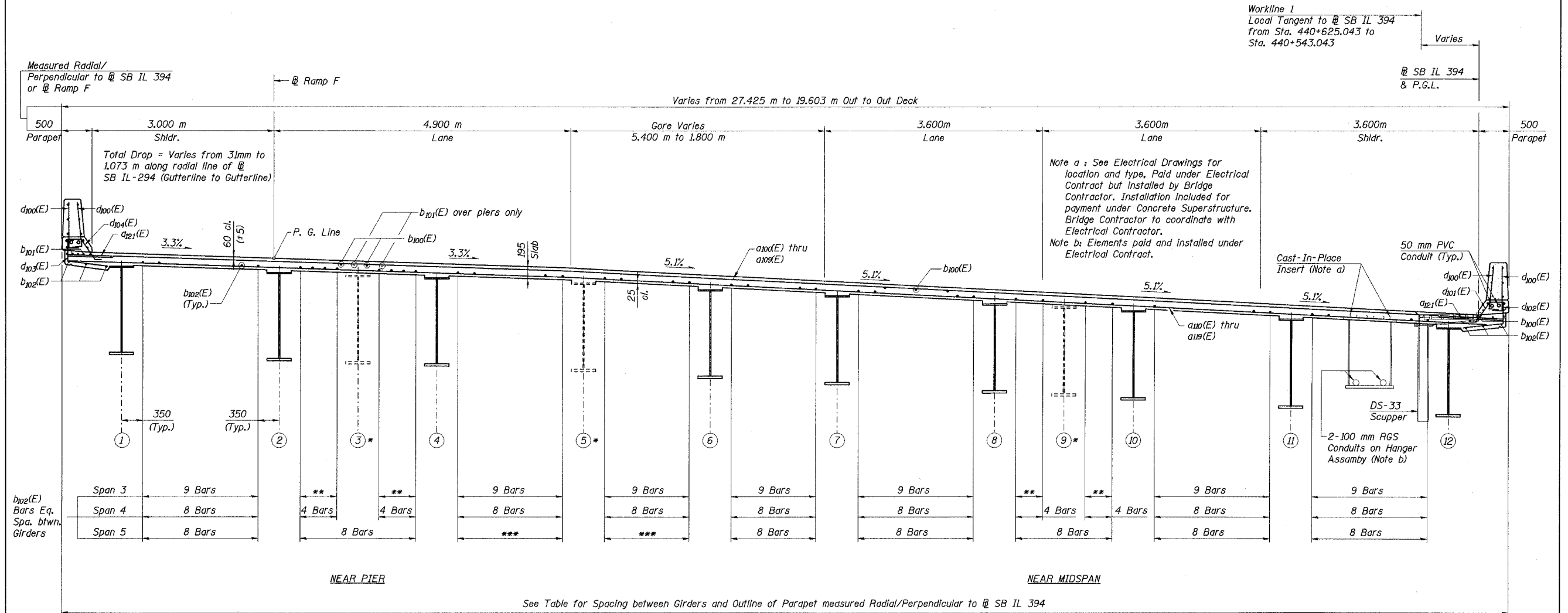
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
DECK PLAN
SPAN 4 - UNIT 1
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

HNTB

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 20 91 SHEETS
F. A. I. 80/94	*	COOK	870	534	
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-			
(02033.1 & 0312-708W) R-3		CONTRACT NO. 62108			



CROSS SECTION - UNIT 1

(Looking Up Station along SB IL 394)
Cross Slopes Shown at Sta. 440+651.000

Overhang and Girder Spacing measured Radial/Perpendicular to @ SB IL 394 at Intersection of Substructures (Meters)

Location	℄ N. Brg Pier 2	℄ Pier 3	℄ Pier 4	℄ Brg. N. Abut.
West Overhang	1.053	1.053	0.805	1.106
G1-G2	2.547	2.547	2.568	2.513
G2-G3	2.136	1.485	1.949*	2.563*
G3-G4	2.136	1.486		
G4-G5	2.572	2.572	2.146	1.550*
G5-G6	2.542	2.542	2.077	
G6-G7	2.542	2.542	2.392	1.862
G7-G8	2.542	2.542	2.588	2.604
G8-G9	2.165	1.498	1.959*	2.611*
G9-G10	2.165	1.502		
G10-G11	2.600	2.600	2.611	2.529
G11-G12	2.600	2.600	2.614	2.539
East Overhang	0.794	0.794	1.118	0.722

- * Girders 3 & 9 terminate within span 4.
Glrder 5 terminates within span 5.
- ** 8 Bars x 3 Lengths From Pier 2 to Midspan
6 Bars x 3 Lengths from Midspan to Pier 3.
- *** 8 Bars x 4 Lengths from Pier 4 to 2/3 of span
4 Bars x 2 Lengths from 2/3 of span to N. Abut.

Notes:

1. Work this sheet with Sheets Nos. 17, 18, 19, 21, 22 & 30 of 91.
2. See Sheets Nos. 31 & 32 of 91 for drainage scupper.
3. All dimension are in millimeters (mm) except as noted.

DESIGNED	JY
CHECKED	ML
DRAWN	LK
CHECKED	ML

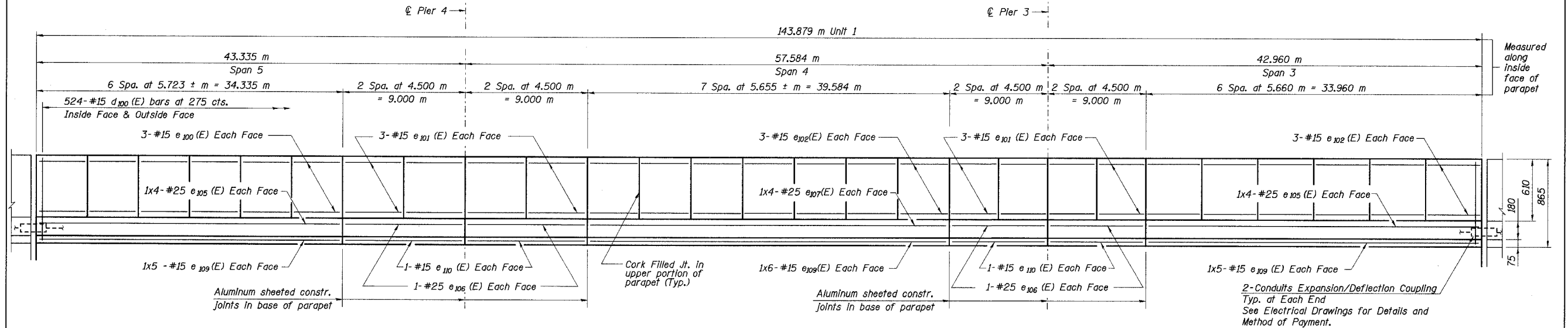
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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
DECK CROSS SECTION AND DETAILS
SPANS 3-5 - UNIT 1
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

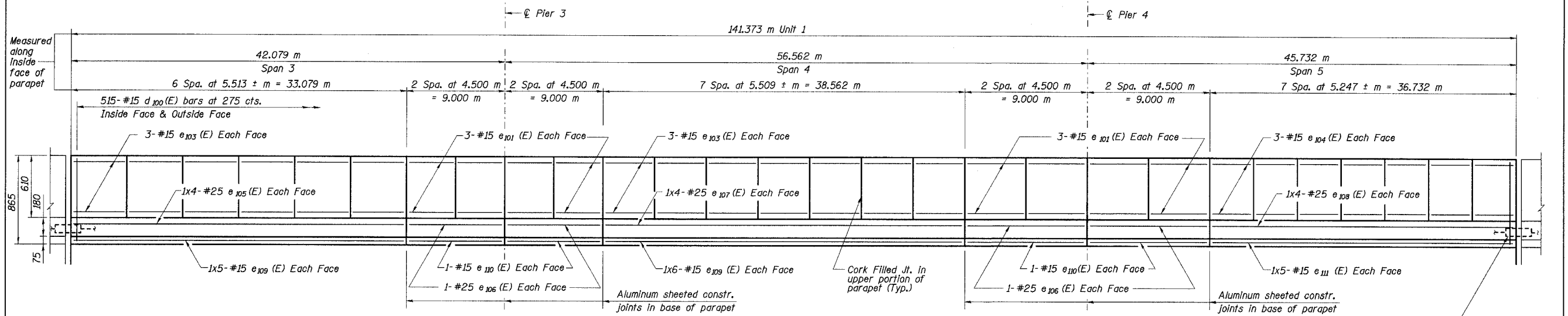
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

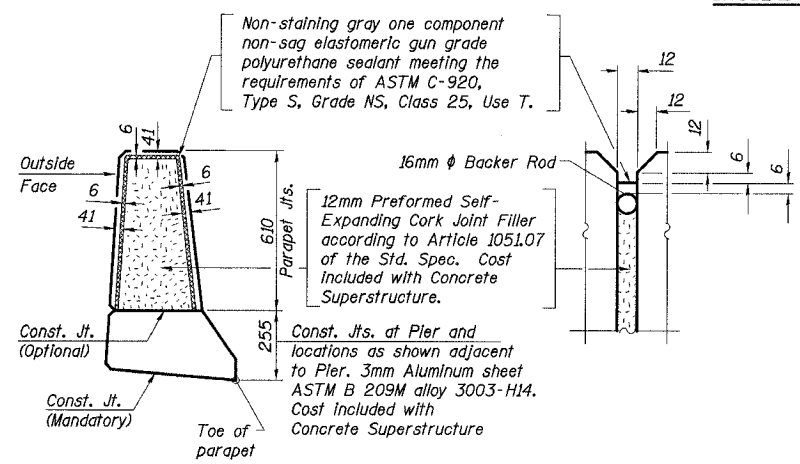
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F. A. I. 80/94	*	COOK	870	535	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
(0203.1 & 0312-708W) R-3			CONTRACT NO. 62108		



INSIDE ELEVATION OF EAST PARAPET
(Looking East)



INSIDE ELEVATION OF WEST PARAPET
(Looking West)



PARAPET JOINT DETAIL

- Notes:
1. Work this sheet with Sheet Nos. 17-20, 22 and 30 of 91 Sheets.
 2. For details and method of payment of conduit, see Electrical Drawings.
 3. All horizontal dimension shown taken at toe of parapet.
 4. Reinforcement bars designated (E) shall be epoxy coated.
 5. Bars indicated thus 4x6-#15 etc. indicates 4 lines of bars with 6 lengths per line.
 6. All dimension are in millimeters (mm) except as noted.
 7. Place Parapet Joints radially at curved portion of bridge.
 8. Minimum lap splice length for parapet reinforcement :
15 - 640
20 - 790
25 - 1320

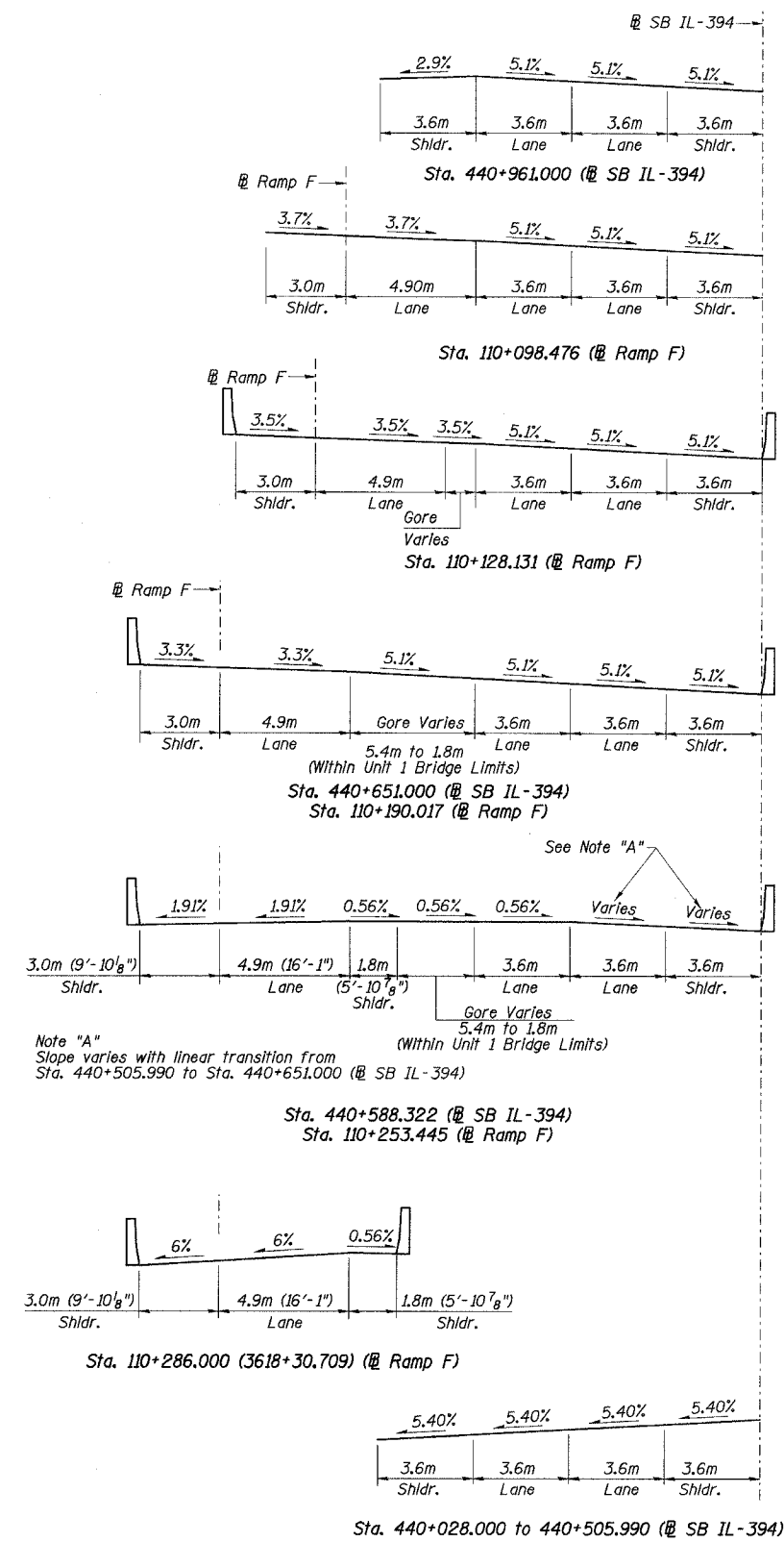
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DRAWN	LK
CHECKED	MAS

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
PARAPET ELEVATION
SPANS 3-5 - UNIT 1
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---
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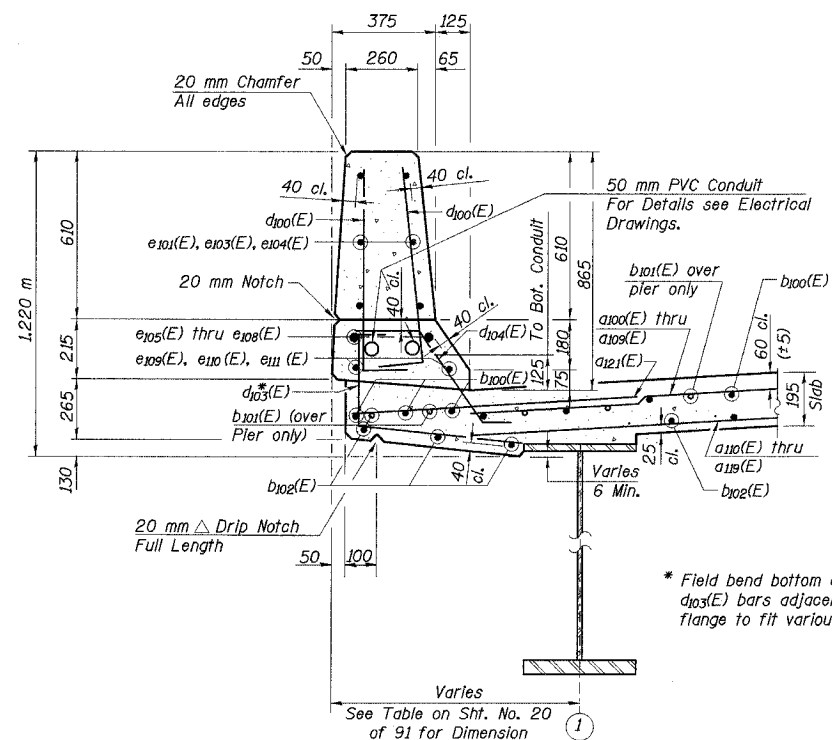
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 22
F. A. I. 80/94		COOK	870	536	91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-			
0203.1 & 0312-708W) R-3		CONTRACT NO. 62108			

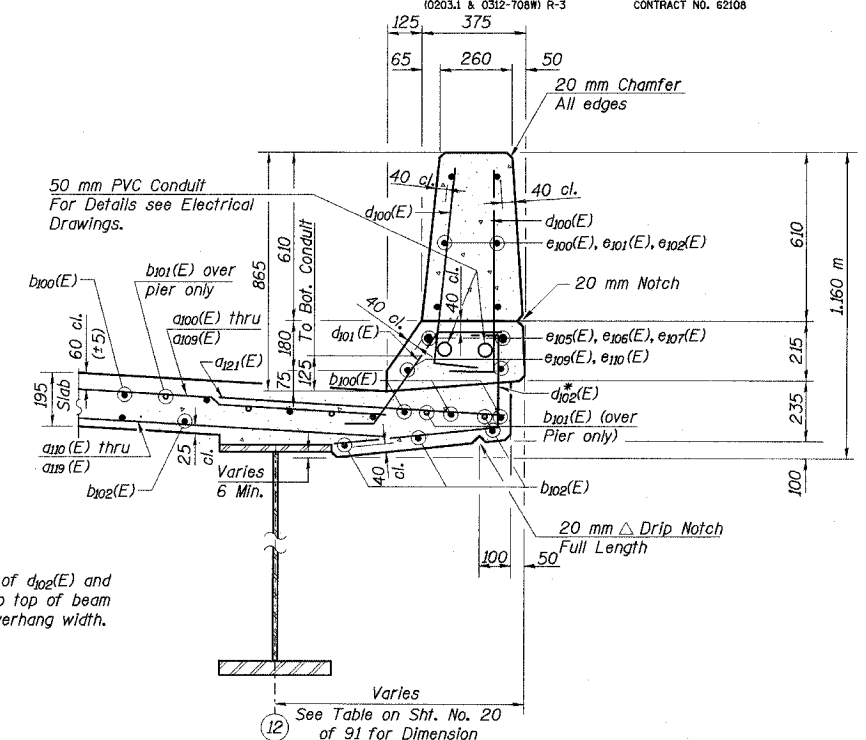


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CHECKED	MAS
DRAWN	LK
CHECKED	MAS

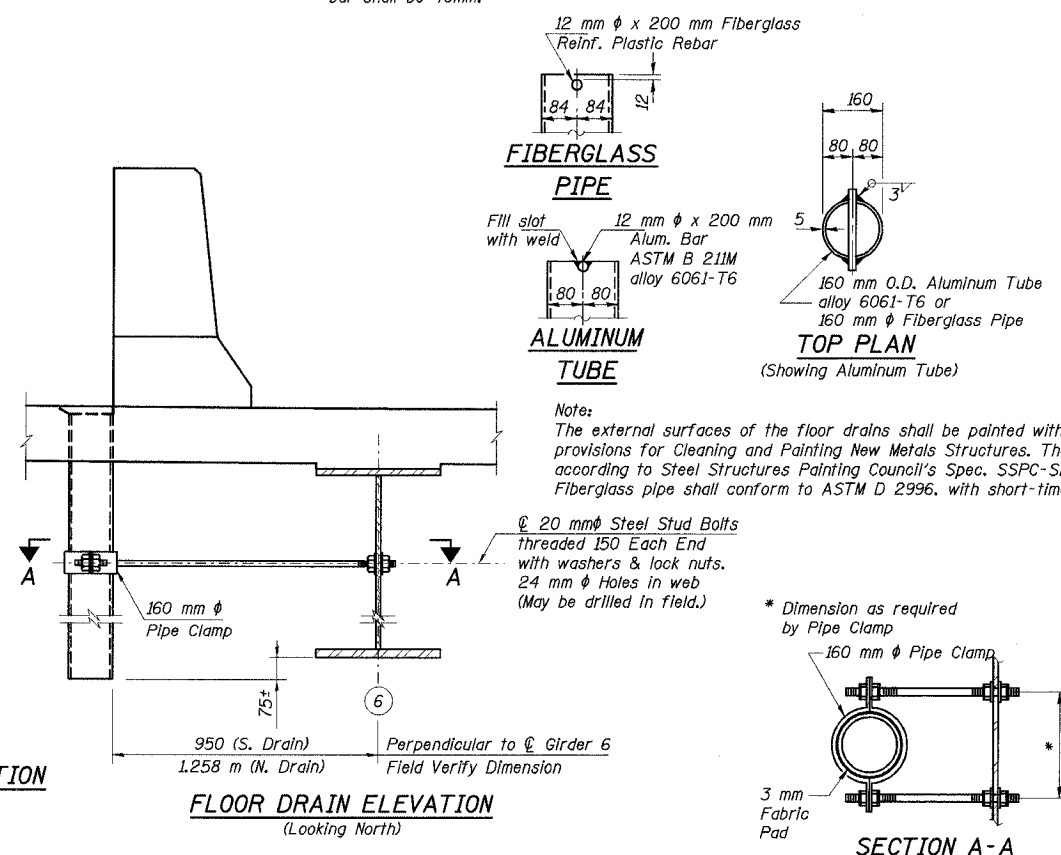
CROSS SLOPE & SUPERELEVATION TRANSITION
Looking North



SECTION THRU WEST PARAPET - UNIT 1



SECTION THRU EAST PARAPET - UNIT 1



- Notes:
1. Work this Sheet with Sheets Nos. 17-21, 29 and 30 of 91 sheets.
 2. Reinforcement bars designated (E) are epoxy coated.
 3. All dimensions are in millimeters (mm) except as noted.
 4. See Sheet No. 29 of 91 for Floor Drain Location.

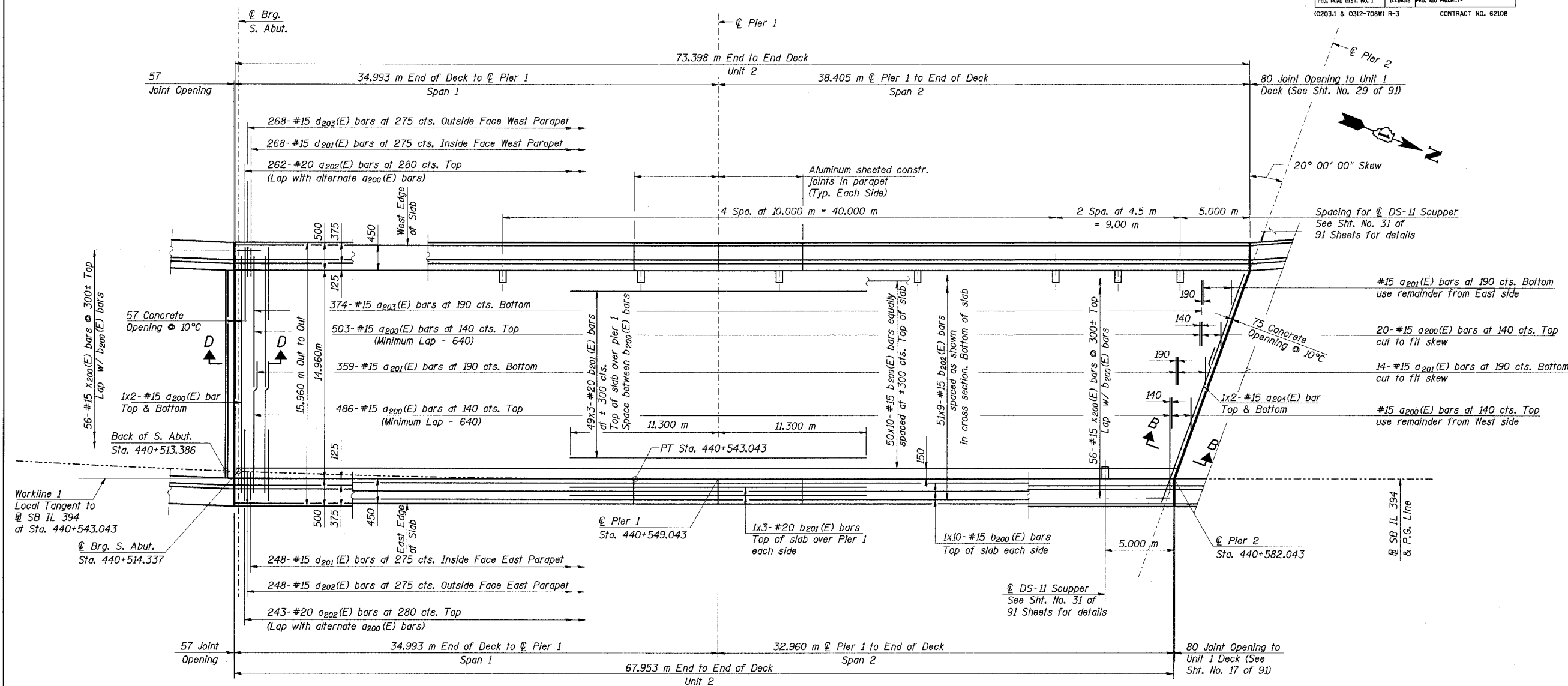
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
CROSS SLOPE TRANSITION & PARAPET SECTION - UNIT 1
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

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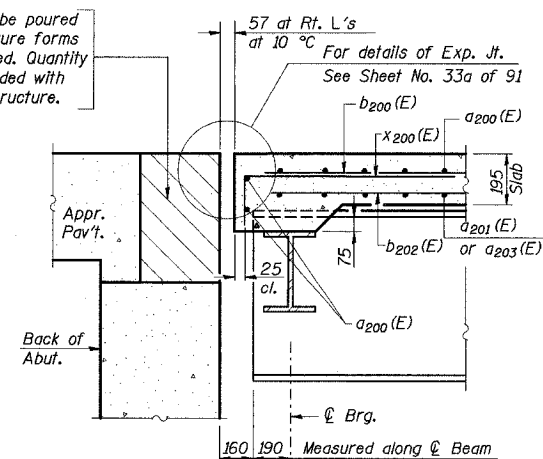
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 23
F. A. I. 80/94	*	COOK	870	537	91 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
(02033.1 & 0312-708W) R-3		CONTRACT NO. 62108			

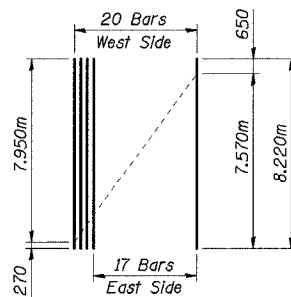


DECK PLAN - UNIT 2

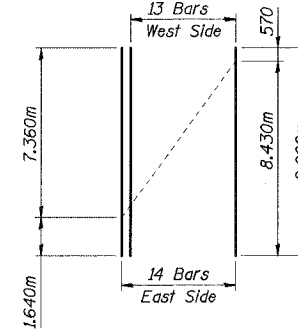
Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.



SECTION D-D



$a_{200}(E)$ BAR CUT DIAGRAM



$a_{201}(E)$ BAR CUT DIAGRAM

Notes:

1. Work this sheet with Sheet Numbers 24, 25, and 30 of 91.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. Bars indicated thus "48 x 9 - #15 etc." indicates 48 lines of bars with 9 lengths per line.
4. Order $a_{200}(E)$ & $a_{201}(E)$ bars full length. Cut to fit skew and use remainder of bars at other side.
5. All dimensions are in millimeters (mm) except as noted.
6. Place bars $d_{201}(E)$, $d_{202}(E)$, $d_{203}(E)$ to miss the Aluminum Sheeted Joint Location in Parapets.
7. For Section B-B see Sht. No. 17 of 91 Sheets.
8. Min. bar lap for deck reinforcement: (Unless otherwise shown)
#15 - 510
#20 - 640

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
DECK PLAN
SPANS 1 & 2 - UNIT 2
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

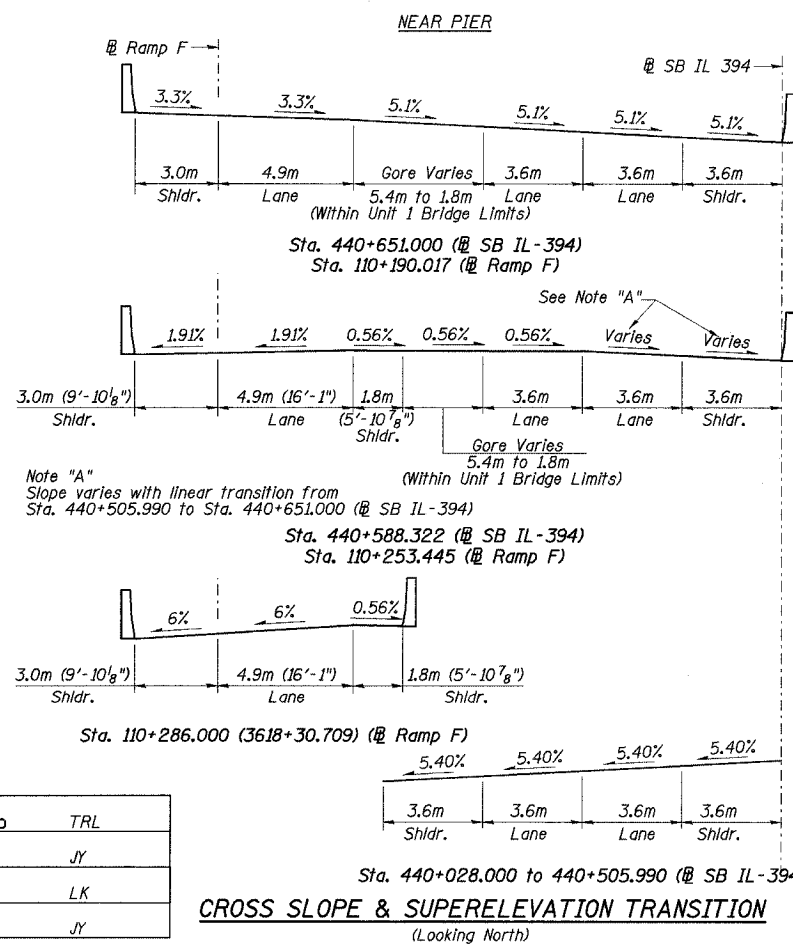
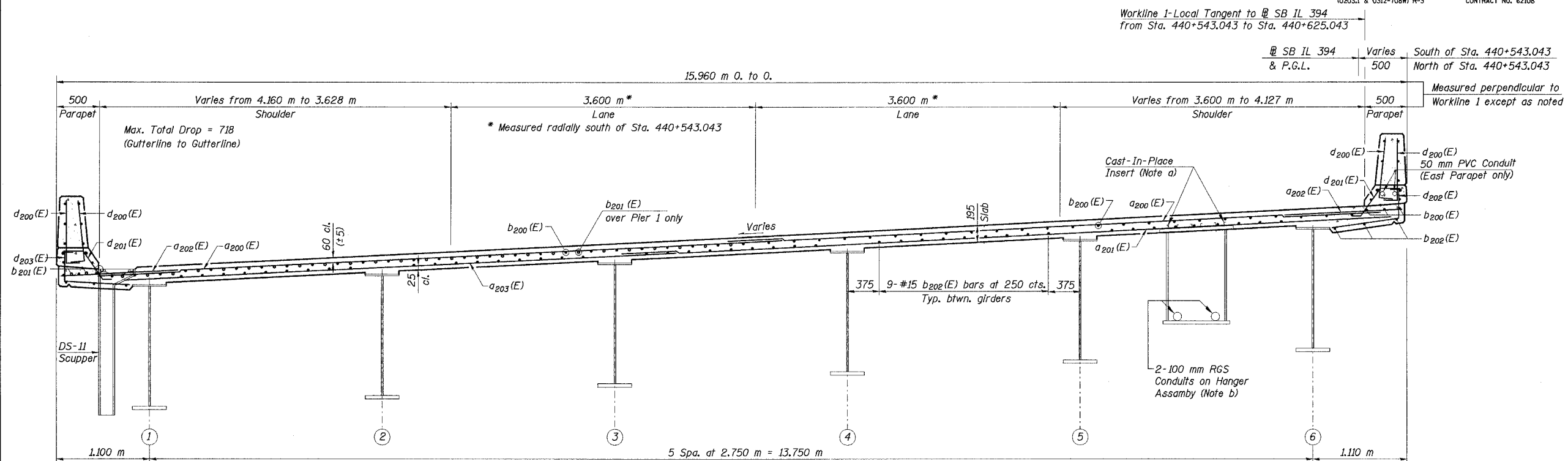
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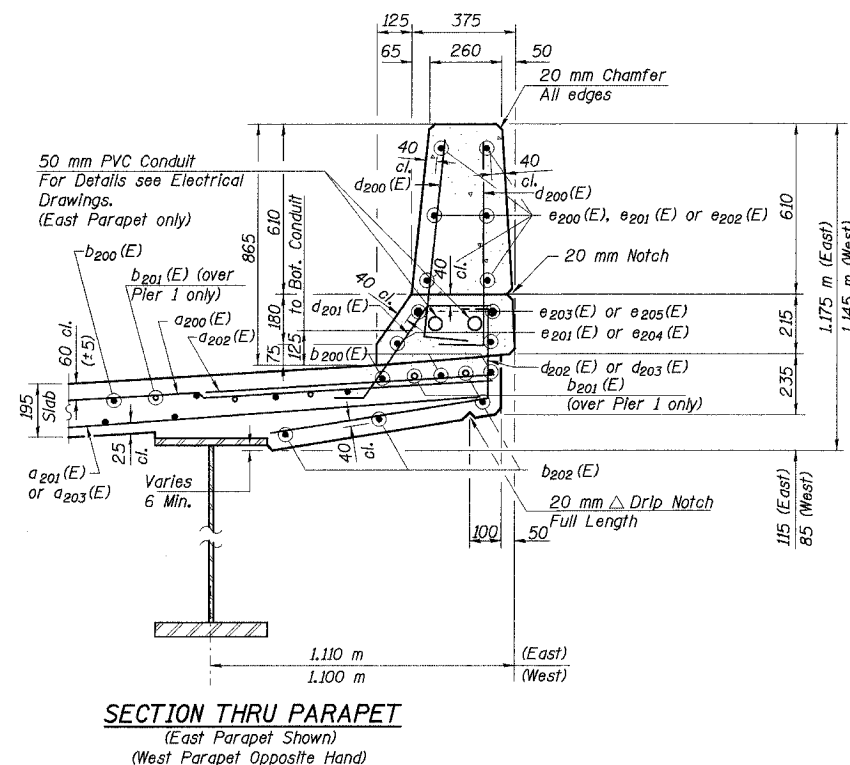
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DRAWN	LK
CHECKED	JY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 24
F. A. I. 80/94		COOK	870	538	91 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS FED. AID PROJECT-				
(0203.1 & 0312-708W) R-3		CONTRACT NO. 62108			



CROSS SECTION - UNIT 2
(Looking Up Station along SB IL 394)



Note a : See Electrical Drawings for location and type. Paid under Electrical Contract but Installed by Bridge Contractor. Installation included for payment under Concrete Superstructure. Bridge Contractor to coordinate with Electrical Contractor.

Note b : Elements paid and installed under Electrical Contract.

- Notes:
1. Work this Sheet with Sheets Nos. 23, 25 and 30 of 91.
 2. See Sht. No. 31 of 91 for drainage scupper.
 3. All dimension are in millimeters (mm) except as noted.
 4. Reinforcement bars designated (E) shall be epoxy coated.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
DECK CROSS SECTION & DETAILS
SPANS 1 & 2 - UNIT 2
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

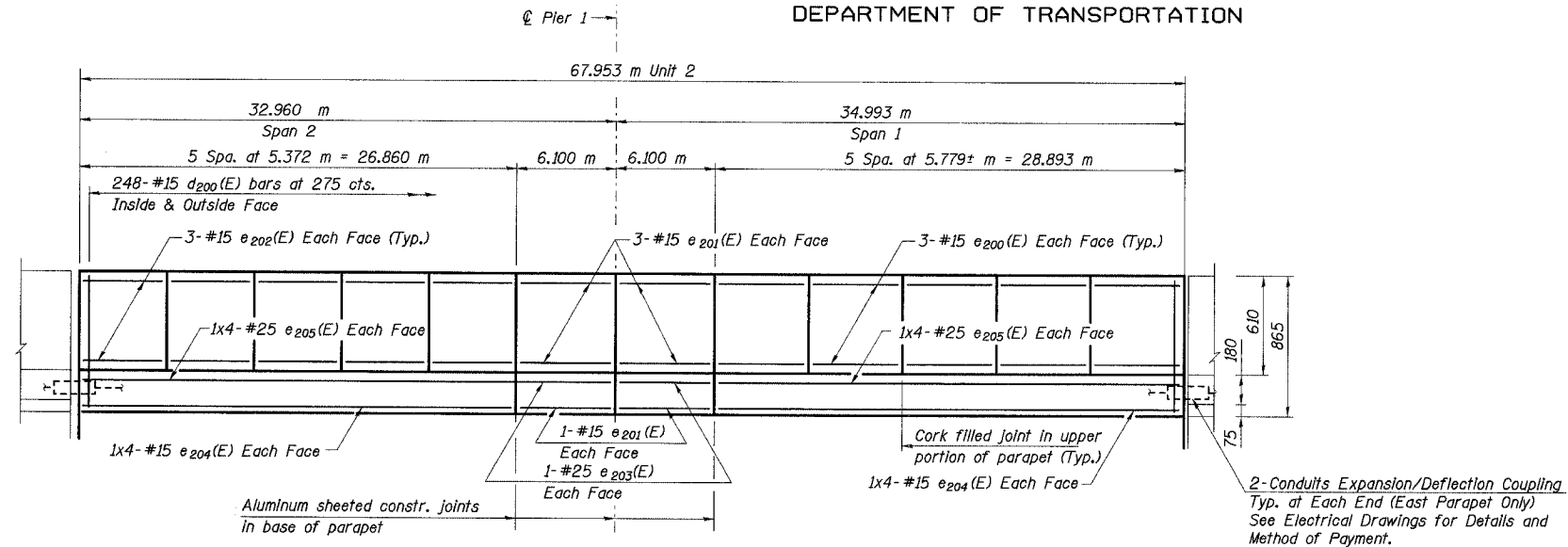
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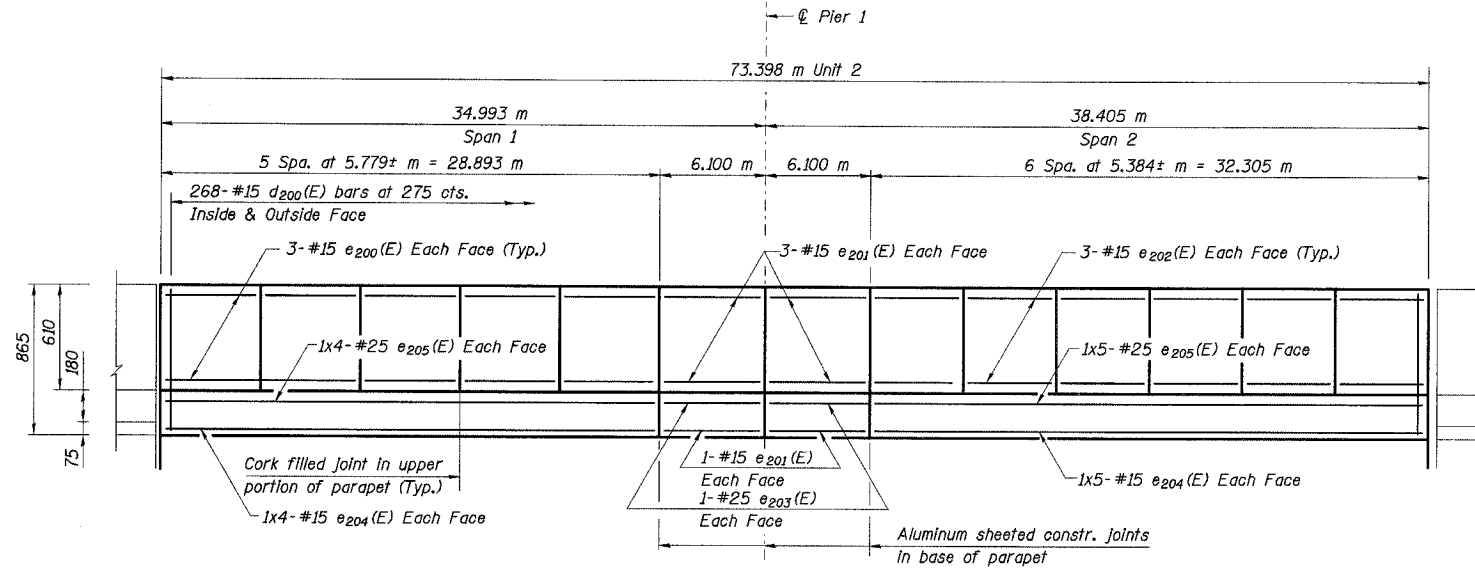
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DRAWN	LK
CHECKED	JY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

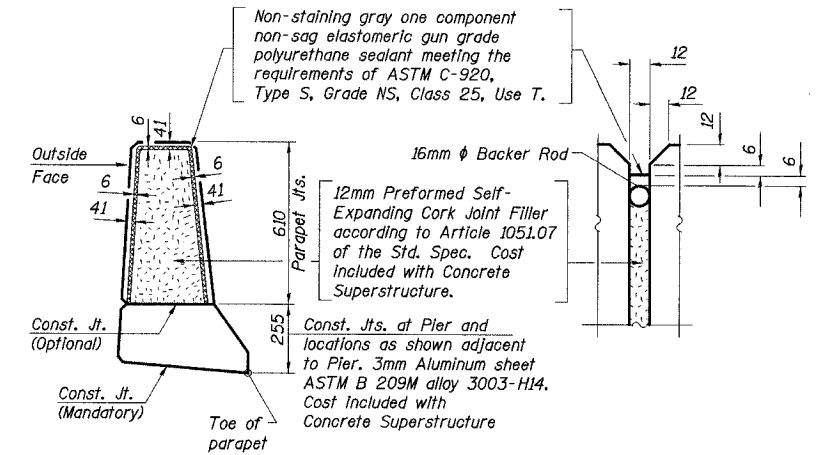
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F. A. I. 80/94	.	COOK	870	539	
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		
0203.1 & 0312-708# R-3		CONTRACT NO. 62108			



INSIDE ELEVATION OF EAST PARAPET
(Looking East)



INSIDE ELEVATION OF WEST PARAPET
(Looking West)



PARAPET JOINT DETAIL

Notes:

1. Work this sheet with Sheet Nos. 23, 24, and 30 of 91 Sheets.
2. For details and method of payment of conduit, see Electrical Drawings.
3. All horizontal dimension shown taken at toe of parapet.
4. Reinforcement bars designated (E) shall be epoxy coated.
5. Bars indicated thus 4x6-#15 etc. Indicates 4 lines of bars with 6 lengths per line.
6. All dimension are in millimeters (mm) except as noted.
7. Min. bar lap for parapet reinforcement:
#15 - 640
#20 - 790
#25 - 1320

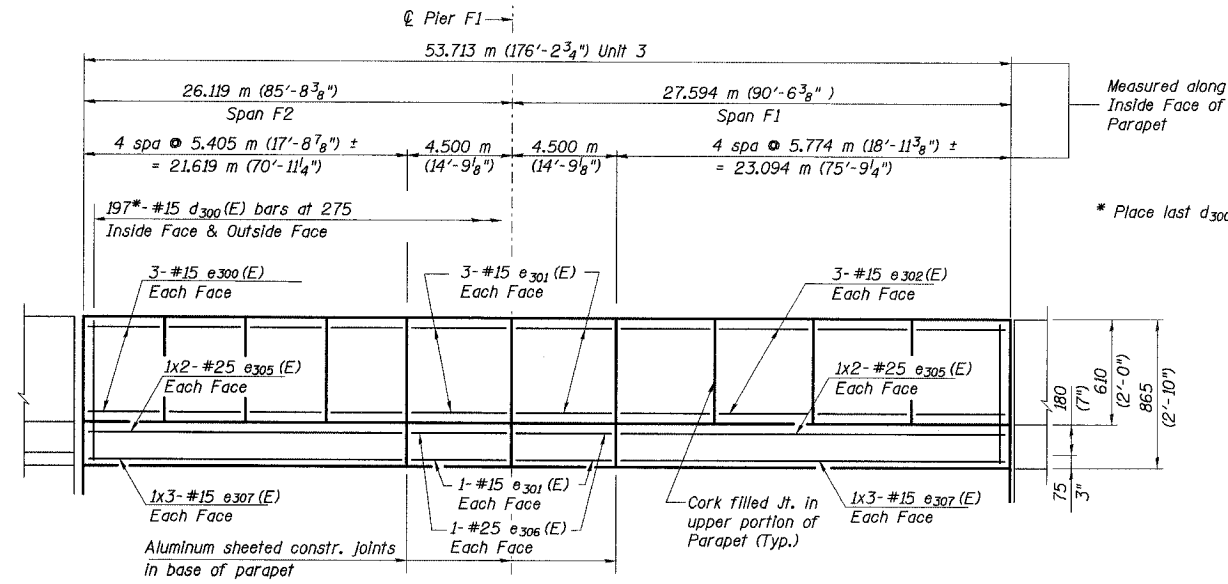
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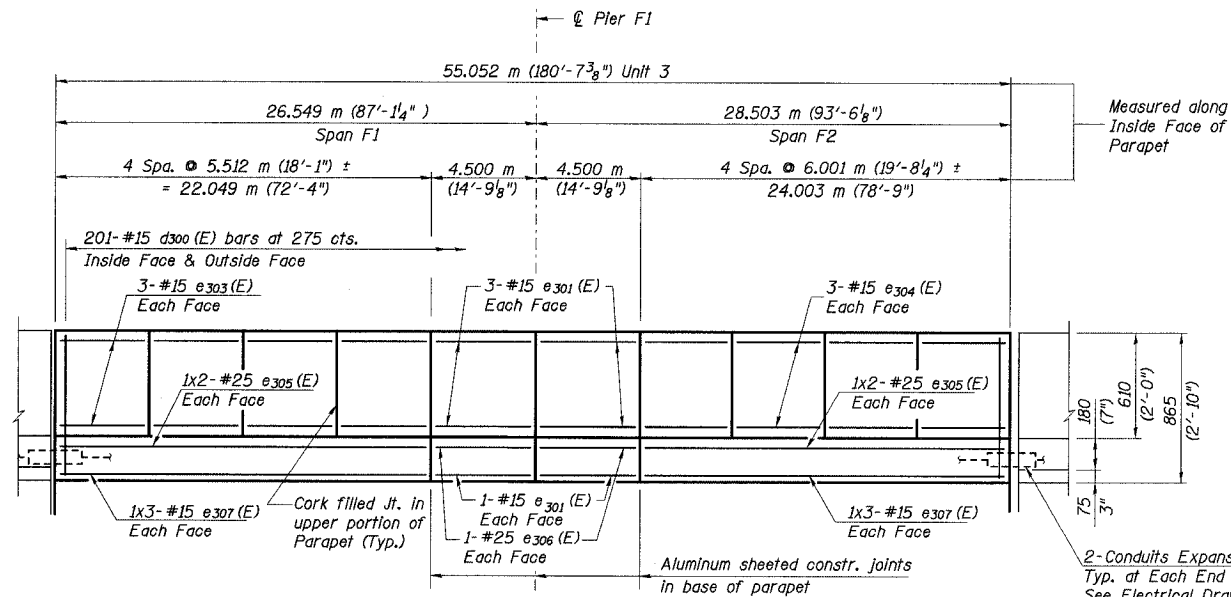
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
PARAPET ELEVATION
SPANS 1 & 2 - UNIT 2
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708#) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 28 91 SHEETS
F. A. I. 80/94	*	COOK	870	542	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
(0203.1 & 0312-708W) R-3		CONTRACT NO. 62108			



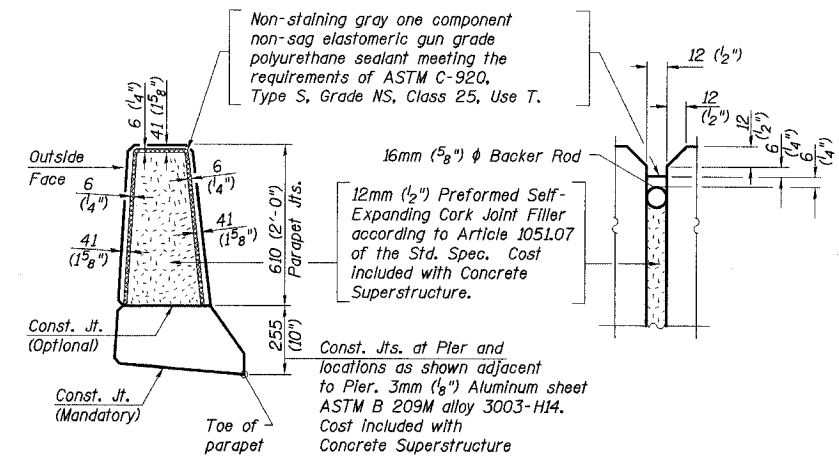
INSIDE ELEVATION OF EAST PARAPET
(Looking East)



INSIDE ELEVATION OF WEST PARAPET
(Looking West)

Measured along
Inside Face of
Parapet

* Place last d₃₀₀(E) bar at NE Corner parallel to Pler 2.



PARAPET JOINT DETAIL

Notes:

1. Work this sheet with Sheet Nos. 26, 27 & 30 of 91 Sheets.
2. Min. lap splice length for parapet reinforcement :
#15 - 640
#20 - 790
#25 - 1320
3. For details and method of payment of conduit, see Electrical Drawings.
4. All horizontal dimensions shown are taken at toe of parapet.
5. Reinforcement bars designated (E) shall be epoxy coated.
6. Bars indicated thus 4x6-#15 etc. indicates 4 lines of bars with 6 lengths per line.
7. All dimensions are in millimeters (mm) except as noted.

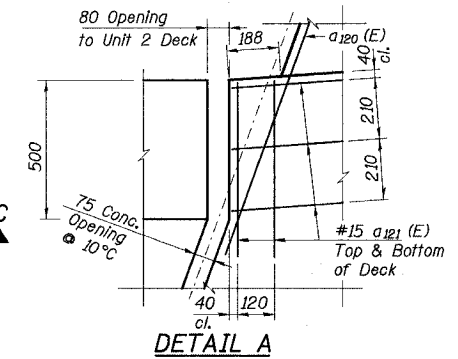
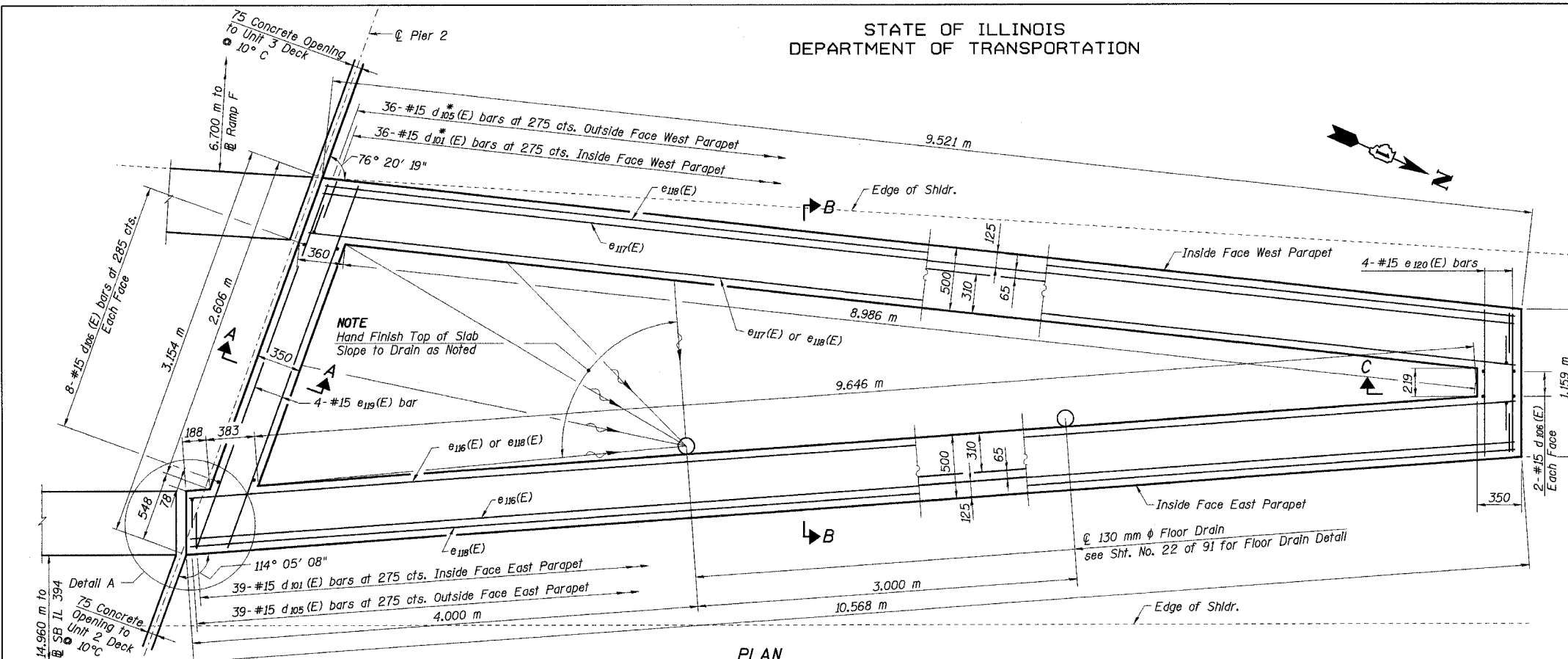
DESIGNED	JAP
CHECKED	JY
DRAWN	LK
CHECKED	JY

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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
PARAPET ELEVATION
SPANS F1 & F2 - UNIT 3
RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2845
DATE JUL 18, 2005
SCALE ---
HNTB

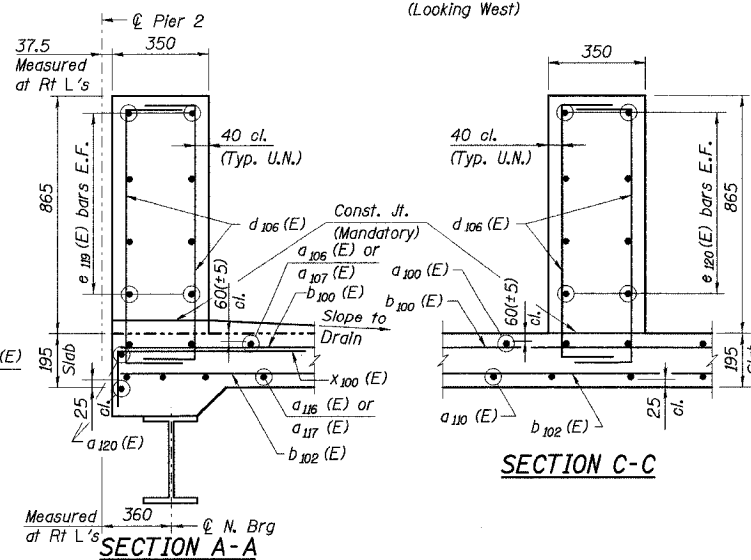
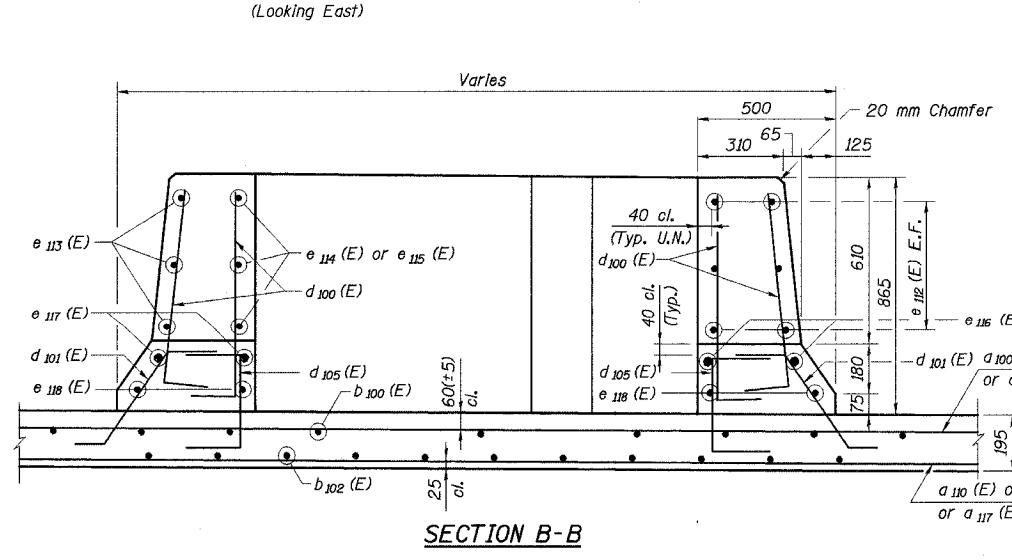
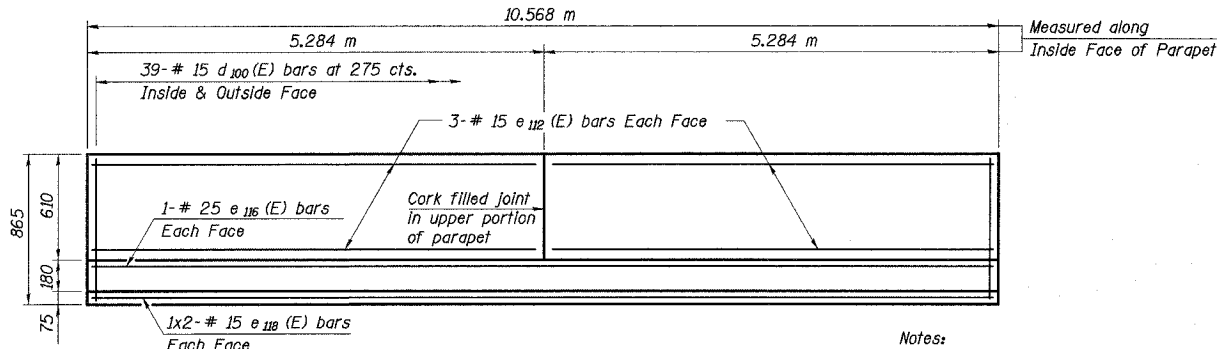
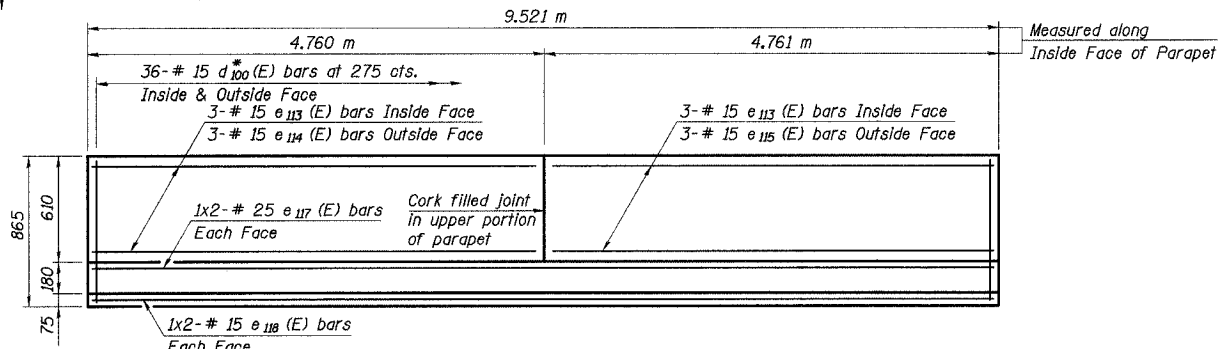
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 29
F. A. I. 80/94	*	COOK	870	543	91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		
(0203.1 & 0312-708) R-3				CONTRACT NO. 62108	



* In west parapet, place d₁₀₀(E), d₁₀₁(E), d₁₀₅(E) bars parallel to e₁₁₉(E) bar at south end and e₁₂₀(E) bar at north end, then place the remaining rebar transitionally perpendicular to parapet longitudinal direction.

PLAN



- Notes:
1. Work this sheet with Sht. No. 17, 20, 21 & 30 of 91.
 2. Bars indicated thus "1x2 - #15 etc" indicates 1 line of bars with 2 lengths per line.
 3. Min. Lap Splice Length for Gore Parapet: #15 - 640 #20 - 790
 4. Reinforcement bars designated (E) shall be epoxy coated.
 5. All dimensions are in millimeters (mm) except as noted.
 6. See Plan view for top of slab finish requirements.

DESIGNED	JY
CHECKED	MAS
DRAWN	LK
CHECKED	MAS

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
GORE DETAILS

SB IL ROUTE 394 / RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800/2845
DATE JUL 18, 2005
SCALE ---

HNTB

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 30
F. A. I.		COOK	870	544	91 SHEETS
80/94					
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 62108		
0203.1 & 0312-T08W R-3					

BILL OF MATERIAL UNIT 1

Bar	No.	Size	Length (m)	Shape
a100(E)	170	#15	14.440	—
a101(E)	314	#15	14.100	—
a102(E)	426	#15	13.400	—
a103(E)	426	#15	12.600	—
a104(E)	480	#15	8.100	—
a105(E)	483	#15	7.710	—
a106(E)	38	#15	14.390	—
a107(E)	37	#15	15.040	—
a108(E)	17	#15	10.900	—
a109(E)	18	#15	11.530	—
a110(E)	537	#15	9.800	—
a111(E)	465	#15	9.110	—
a112(E)	465	#15	8.580	—
a113(E)	234	#15	11.770	—
a114(E)	236	#15	11.190	—
a115(E)	56	#15	7.890	—
a116(E)	21	#15	10.730	—
a117(E)	20	#15	11.390	—
a118(E)	13	#15	10.260	—
a119(E)	12	#15	10.900	—
a120(E)	10	#15	10.940	—
a121(E)	1044	#15	1.400	—
a122(E)	10	#15	1.000	—
a123(E)	16	#15	0.600	—
a124(E)	8	#15	0.450	—
b100(E)	1589	#15	8.600	—
b101(E)	720	#20	9.700	—
b102(E)	1580	#15	8.180	—
d100(E)	2228	#15	0.910	┌
d101(E)	599	#15	0.730	└
d102(E)	524	#15	1.230	┌
d103(E)	515	#15	1.270	└
d104(E)	515	#15	0.760	┌
d105(E)	75	#15	0.780	└
d106(E)	20	#15	1.500	┌
e100(E)	36	#15	5.630	—
e101(E)	96	#15	4.400	—
e102(E)	78	#15	5.560	—
e103(E)	78	#15	5.410	—
e104(E)	42	#15	5.150	—
e105(E)	24	#25	9.560	—
e106(E)	16	#25	8.920	—
e107(E)	16	#25	10.870	—
e108(E)	8	#25	10.160	—
e109(E)	54	#15	7.360	—
e110(E)	16	#15	8.920	—
e111(E)	10	#15	7.850	—
e112(E)	12	#15	5.200	—
e113(E)	6	#15	4.680	—
e114(E)	3	#15	4.740	—
e115(E)	3	#15	4.800	—
e116(E)	2	#25	10.490	—
e117(E)	4	#25	5.570	—
e118(E)	8	#15	5.570	—
e119(E)	8	#15	3.000	—
e120(E)	8	#15	5.570	—
e121(E)	8	#15	3.000	—
e122(E)	8	#15	1.080	—
x100(E)	168	#15	1.280	┌
ITEM	UNIT	QUANTITY		
Reinforcement Bars, Epoxy Coated	kg	148,350		
Concrete Superstructure	m ³	804.6		
Bridge Deck Grooving	m ²	3273		
Protective Coat	m ²	3,708		

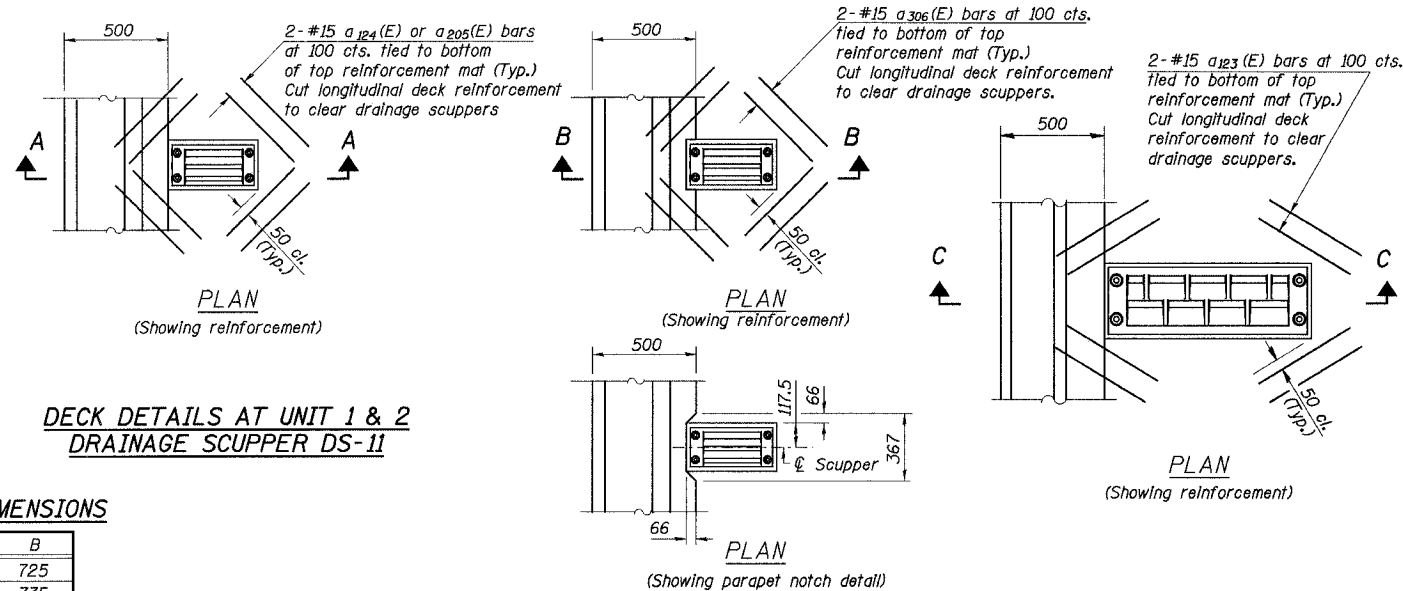
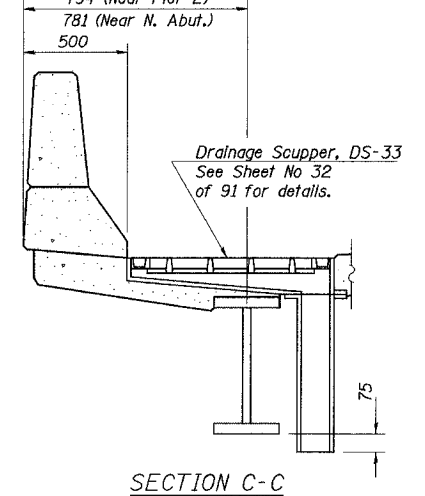
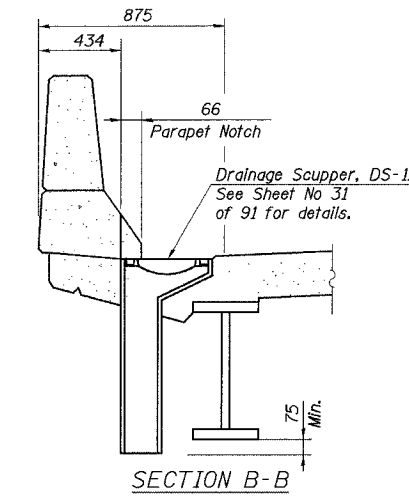
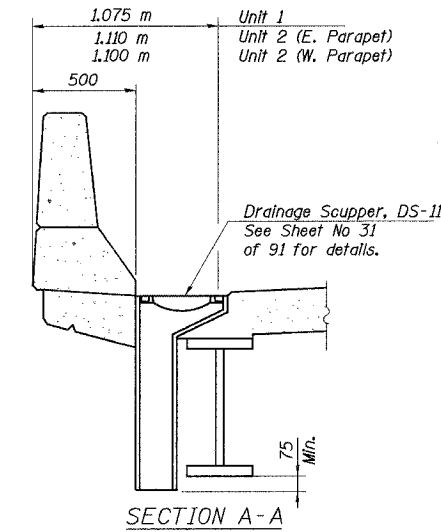
DESIGNED	JY/TRL
CHECKED	ML/MAS
DRAWN	LK
CHECKED	ML/MAS

BILL OF MATERIAL UNIT 2

Bar	No.	Size	Length (m)	Shape
a200(E)	1013	#15	8.220	—
a201(E)	373	#15	9.000	—
a202(E)	505	#20	1.400	—
a203(E)	374	#15	7.300	—
a204(E)	4	#15	8.750	—
a205(E)	64	#15	0.450	—
b200(E)	560	#15	7.910	—
b201(E)	159	#20	8.060	—
b202(E)	459	#15	8.720	—
d200(E)	1032	#15	0.910	┌
d201(E)	516	#15	0.730	└
d202(E)	248	#15	1.250	┌
d203(E)	268	#15	1.240	└
e200(E)	60	#15	5.680	—
e201(E)	32	#15	6.010	—
e202(E)	66	#15	5.280	—
e203(E)	8	#25	6.010	—
e204(E)	34	#15	7.690	—
e205(E)	34	#25	8.200	—
x200(E)	112	#15	1.280	┌
ITEM	UNIT	QUANTITY		
Reinforcement Bars, Epoxy Coated	kg	47,030		
Concrete for Bridges and Drainage Structures (Class DK-HPC)	m ³	126.4		
Concrete for Bridges and Drainage Structures (Class SD)	m ³	32.9		
Bridge Deck Grooving	m ²	494		
Apply Concrete Sealant	m ²	664		

BILL OF MATERIAL UNIT 3

Bar	No.	Size	Length (m)	Shape
a300(E)	269	#15	10.520	—
a301(E)	215	#15	10.400	—
a302(E)	277	#20	1.400	—
a303(E)	7	#15	10.160	—
a304(E)	6	#15	10.720	—
a305(E)	2	#15	10.600	—
a306(E)	16	#15	0.450	—
b300(E)	273	#15	8.310	—
b301(E)	72	#20	7.220	—
b302(E)	248	#15	7.330	—
d300(E)	796	#15	0.910	┌
d301(E)	398	#15	0.730	└
d302(E)	197	#15	1.020	┌
d303(E)	201	#15	1.020	└
e300(E)	24	#15	5.310	—
e301(E)	32	#15	4.400	—
e302(E)	24	#15	5.680	—
e303(E)	24	#15	5.420	—
e304(E)	24	#15	5.900	—
e305(E)	16	#25	12.620	—
e306(E)	8	#25	4.400	—
e307(E)	24	#15	8.400	—
x300(E)	78	#15	1.280	┌
ITEM	UNIT	QUANTITY		
Reinforcement Bars, Epoxy Coated	kg	21,470		
Concrete for Bridges and Drainage Structures (Class DK-HPC)	m ³	126.4		
Concrete for Bridges and Drainage Structures (Class SD)	m ³	32.9		
Bridge Deck Grooving	m ²	494		
Apply Concrete Sealant	m ²	664		

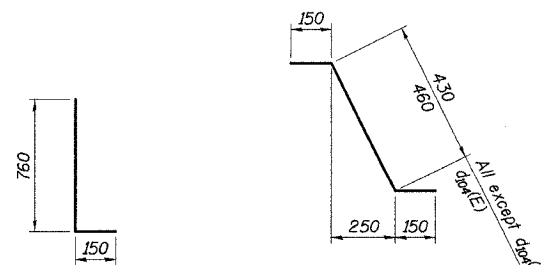
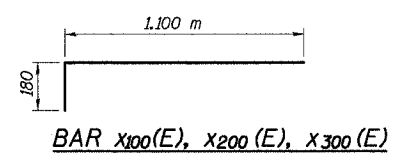


DECK DETAILS AT UNIT 1 & 2
DRAINAGE SCUPPER DS-II

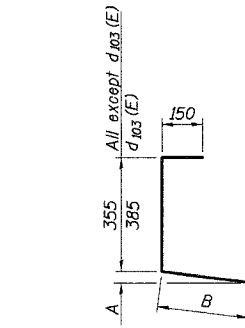
DECK DETAILS AT UNIT 3
DRAINAGE SCUPPER DS-33

TABLE OF DIMENSIONS

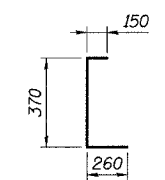
Rebar	A	B
d102(E)	100	725
d103(E)	130	735
d202(E)	115	745
d203(E)	85	735
d302(E)	110	545
d303(E)	90	535



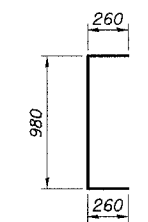
BAR d100(E), d200(E), d300(E), BAR d101(E), d104(E), d201(E), d301(E)



BAR d102(E), d103(E), d202(E), d203(E), d302(E) or d303(E)



BAR d105(E)



BAR d106(E)

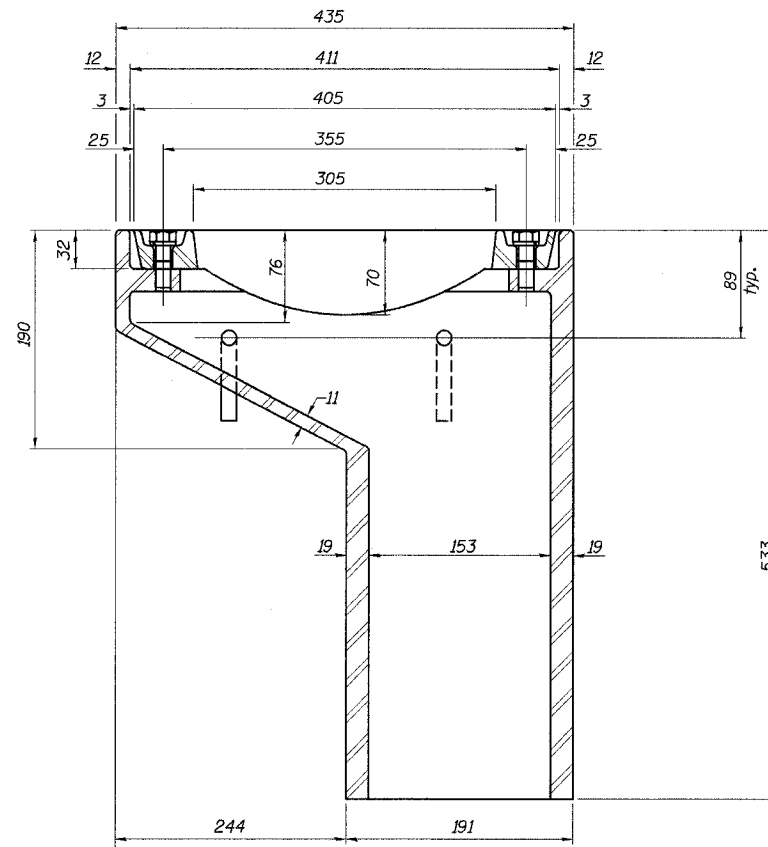
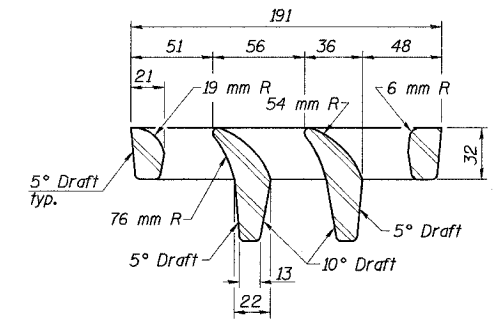
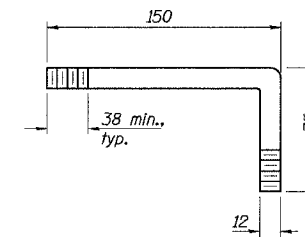
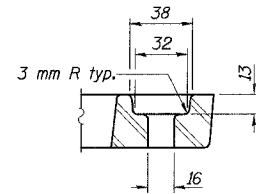
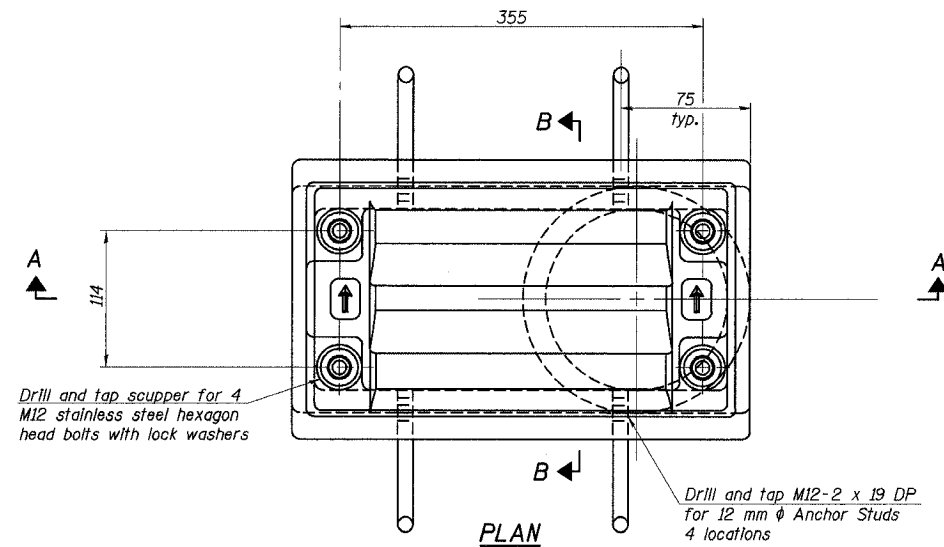
- Notes:
1. Work this sheet with Sheet Nos. 17- 29 of 91 sheets.
 2. All dimensions are in millimeters (mm) except as noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
DECK DETAILS & BILL OF MATERIALS
SB IL ROUTE 394 / RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-T08W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800/2845
DATE JUL 18, 2005
SCALE ---
HNTB

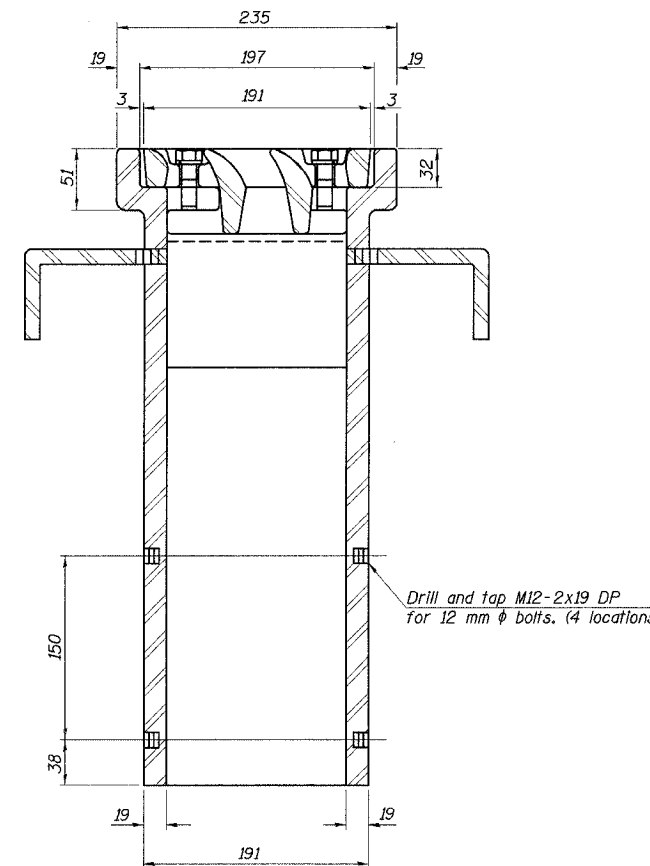
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F. A. I. 80/94	SECTION •	COUNTY COOK	TOTAL SHEETS 870	SHEET NO. 545	SHEET NO. 31 91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		CONTRACT NO. 62108
(0203.1 & 0312-708W) R-3					



See Sheet 30 of 91 for scupper location relative to parapet.



Notes:

- All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
- Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232M.
- The grate, frame and downspout shall be galvanized according to AASHTO M 111 and ASTM A 385. Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.
- As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.
- Structural steel weldments of equal sections and of the same configuration may be substituted for cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.
- The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.
- Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.
- All dimensions are in millimeters (mm) except as noted.

BILL OF MATERIAL (IDOT)

ITEM	UNIT	QUANTITY		
		UNIT 1	UNIT 2	TOTAL
Drainage Scupper, DS-11	Each	1	8	9

BILL OF MATERIAL (ISTHA)

ITEM	UNIT	QUANTITY	
		UNIT 3	TOTAL
Scupper	Each	2	2

DESIGNED	MEA
CHECKED	PJE
DRAWN	LK
CHECKED	PJE

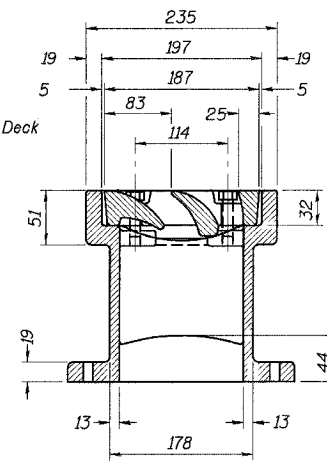
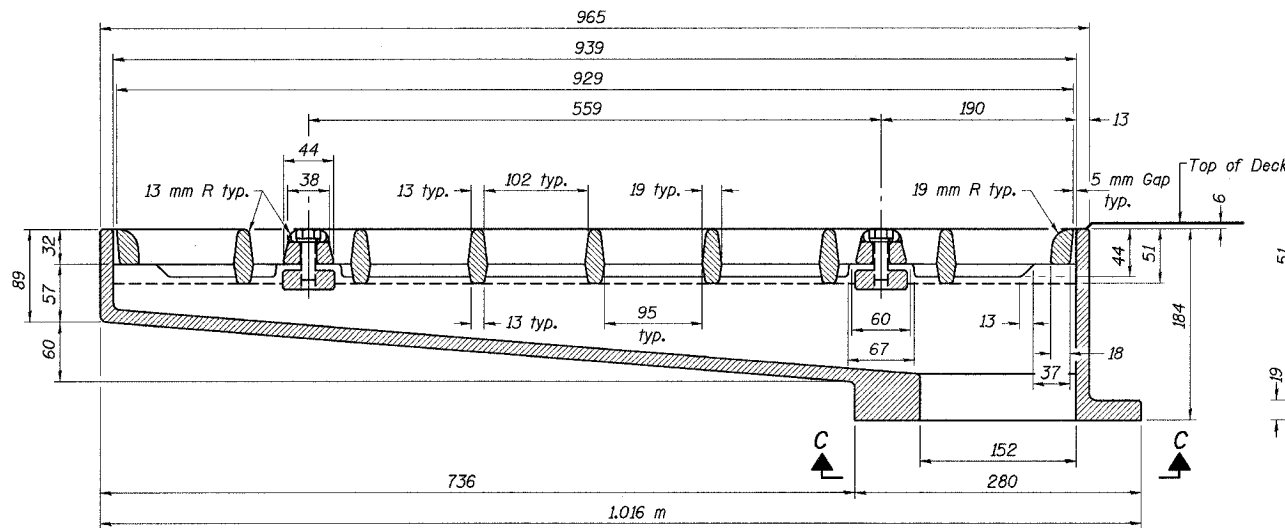
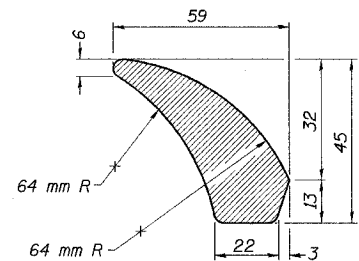
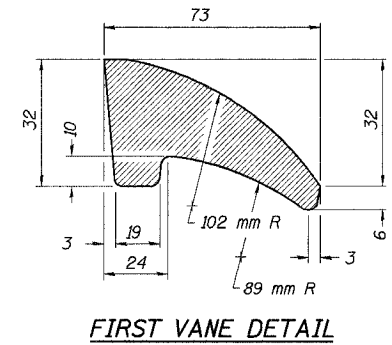
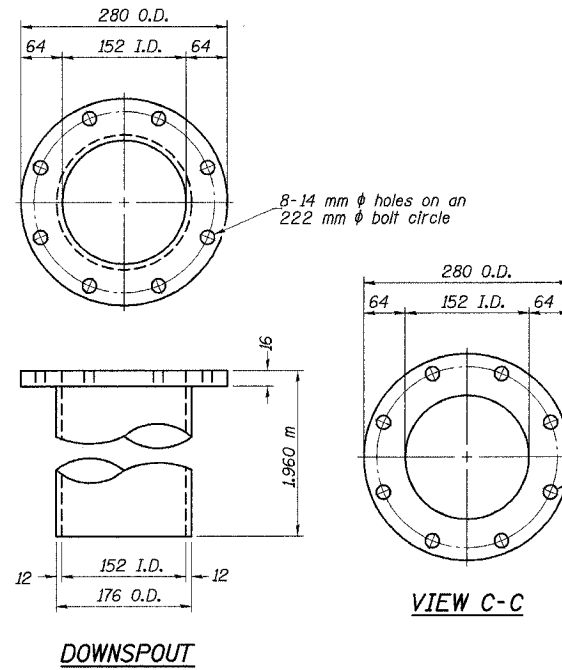
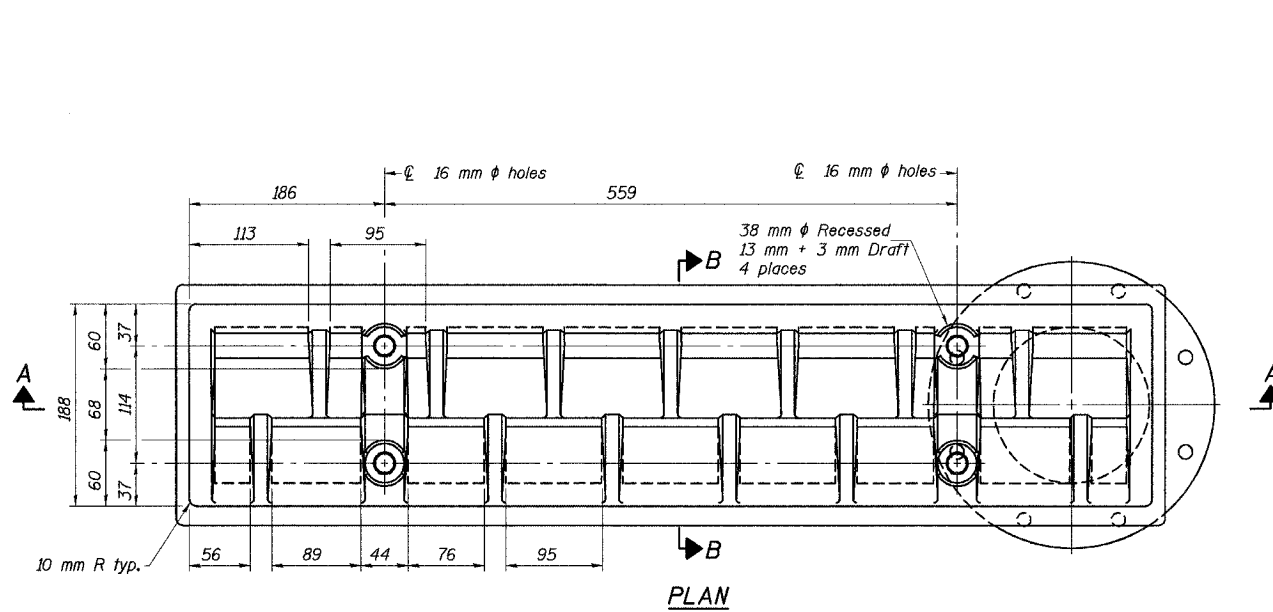
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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
DRAINAGE SCUPPER DS-11
SB IL ROUTE 394 / RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800/2845
DATE JUL 18, 2005
SCALE ---
HNTB

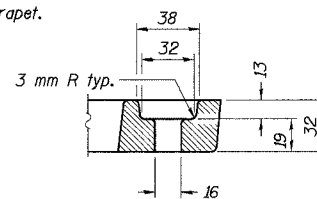
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 32 91 SHEETS
F. A. I. 80/94	*	COOK	870	546	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
(0203.1 & 0312-708W) R-3		CONTRACT NO. 62108			



Notes: All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.
The grate, frame and downspout shall be galvanized according to AASHTO M 111 and ASTM A 385. Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.
Structural steel weldments of equal sections and of the same configuration may be substituted for cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.
The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.
Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-33.
All Dimensions are in millimeters (mm) except as noted.

See sheet 30 of 91 for scupper location relative to parapet.



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-33	Each	2

DESIGNED	MEA
CHECKED	PJE
DRAWN	LK
CHECKED	PJE

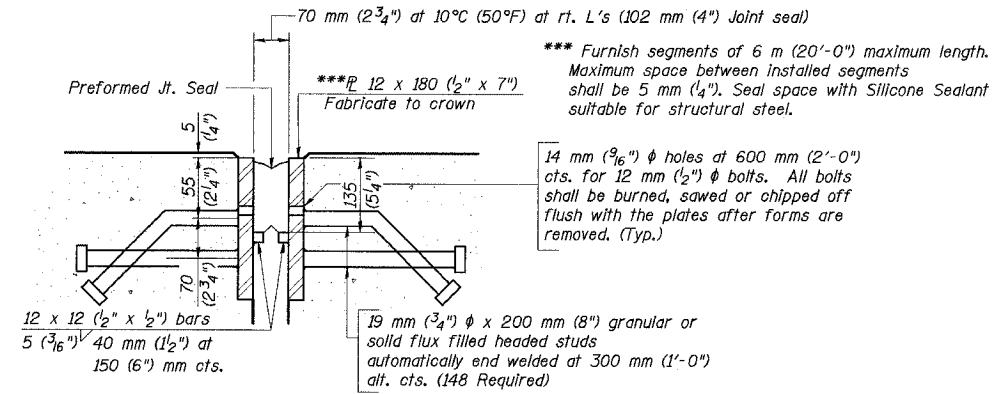
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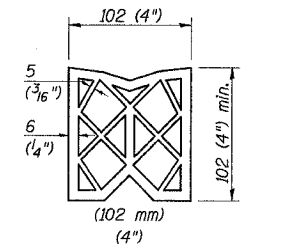
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
DRAINAGE SCUPPER DS-33
SB IL ROUTE 394 / RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800/2845
DATE JUL 18, 2005
SCALE ---
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

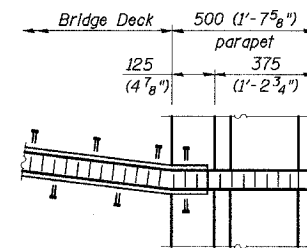
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 33
F. A. I. 80/94	.	COOK	870	547	91 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
(0203.1 & 0312-708W) R-3			CONTRACT NO. 62108		



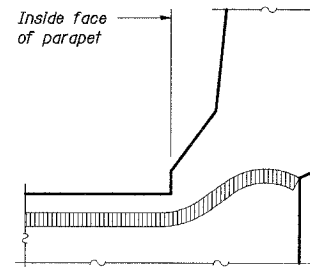
SECTION THRU EXPANSION JOINT



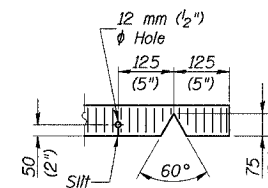
PREFORMED JOINT SEAL



PLAN AT PARAPET



TYPICAL END TREATMENT AT PARAPET
(Showing seal)



SEAL CUT-OUT

BILL OF MATERIAL

Item	Unit	Total
Bridge Expansion Joint Closure	meter	10.7
Preformed Joint Seal 4"		

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND

EXPANSION JOINT AT ABUTMENT F

SB IL ROUTE 394 / RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800/2845
DATE JUL 18, 2005
SCALE ---

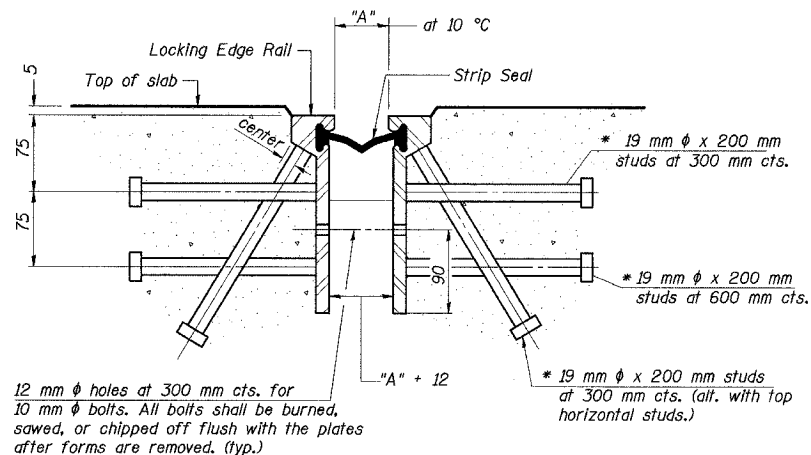
HNTB

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15-AUG-2005 12:41

DESIGNED	PCA
CHECKED	TRL
DRAWN	LK
CHECKED	TRL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

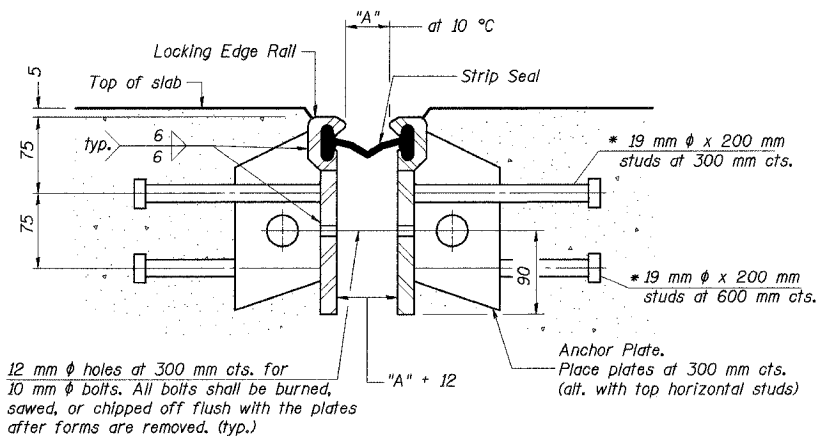
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 33a
F. A. I. 80/94	.	COOK	870	547a	91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-		CONTRACT NO. 62108	
(0203.1 & 0312-708W) R-3					



SECTION THRU ROLLED RAIL EXP. JOINT
(262 Studs Required)

Required Strip Seal rated movement	"A"
25	29
50	45

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

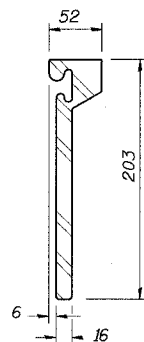


SECTION THRU WELDED RAIL EXP. JOINT
(158 Studs Required)
(104 Anchor Plates Required)

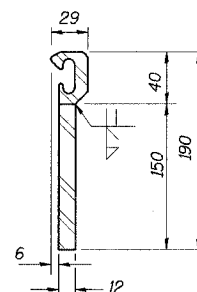
GENERAL NOTES

The strip seal shall be made continuous and shall have a minimum thickness of 6 mm. The configuration of the strip seal shall match the configuration of the Locking Edge Rails.
The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.
Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.
The manufacturer's recommended installation methods shall be followed.
The joint opening and deck dimensions detailed on the superstructure are based on a preformed joint seal. If the contractor elects to use the alternate strip seal joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

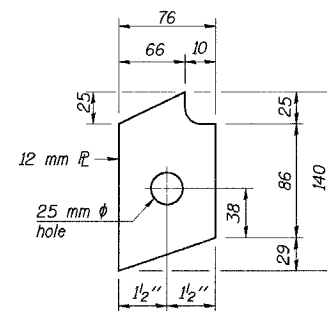
All dimensions in millimeters (mm) except as noted.



ROLLED (EXTRUDED) RAIL

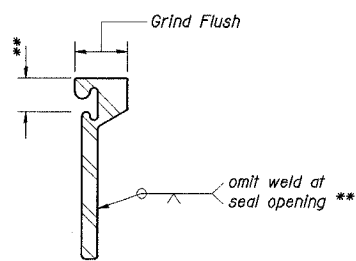


WELDED RAIL



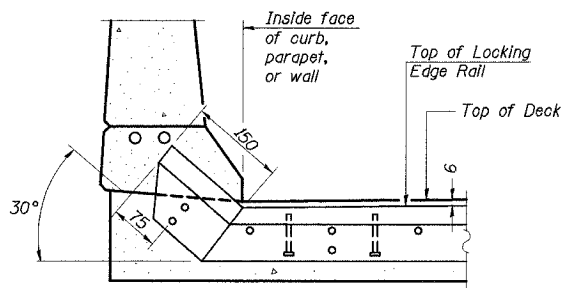
ANCHOR PLATE
(for welded rail)

LOCKING EDGE RAILS

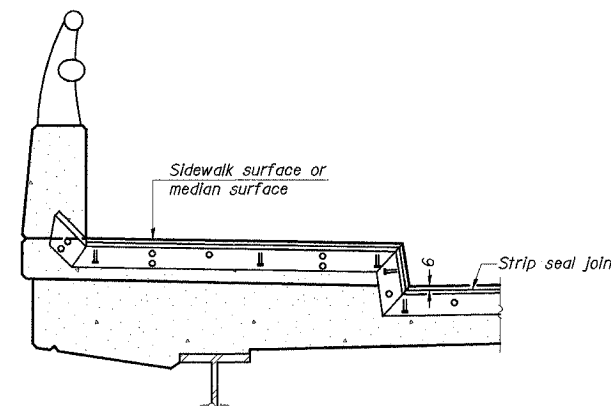


LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.



AT CURB, PARAPET, OR WALL



AT SIDEWALK OR MEDIAN*

* Shorter plates with a single row of studs at 300 mm centers may be necessary on medians which are shallower than 230 mm. See manufacturer's recommendation.

TYPICAL END TREATMENTS

BILL OF MATERIAL

Item	Unit	Total
Strip Seal Expansion Joint Assembly	meter	15.3

Required Strip Seal rated movement for this abutment for this project: 50 mm

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
EXPANSION JOINT AT SOUTH ABUTMENT

SB IL ROUTE 394 / RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800/2845

DATE JUL 18, 2005
SCALE ---

HNTB

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DESIGNED	PCA
CHECKED	TRL
DRAWN	LK
CHECKED	TRL

EJ-BJS(M) 9-01-03

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

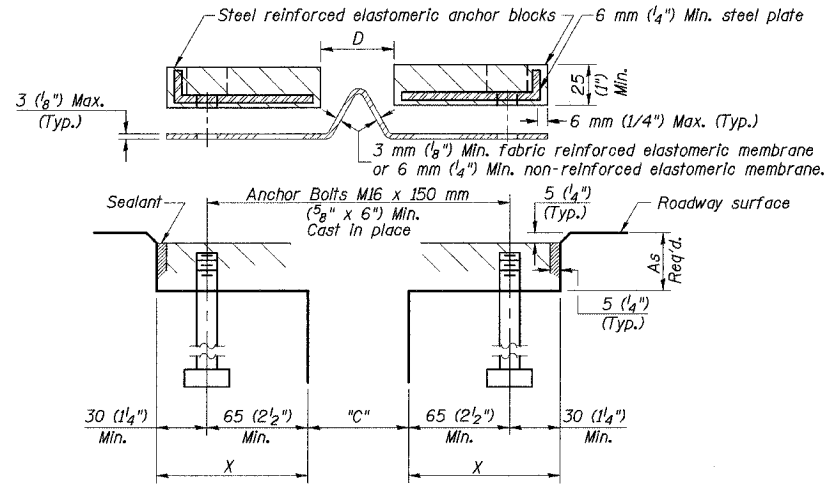
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 34
F. A. I. 80/94	*	COOK	870	548	91 SHEETS
FEL. ROAD DIST. NO. 1		ILLINOIS FEL. AID PROJECT-			
(0203.1 & 0312-708W) R-3		CONTRACT NO. 62108			

Joint Size	"C" at 10 °C (50 °F)	"D" at 10 °C (50 °F)
100 (4")	75 (3")	65 (2½") Min.

INSTALLATION NOTES

- Install continuous seal in roadway and parapet.
- Install anchor blocks as indicated.

NOTE A: Maximum spacing of anchor bolts shall be 300 (1'-0") centers.



CROSS SECTION

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane.

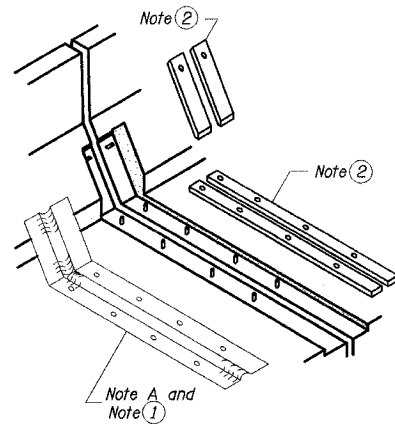
The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

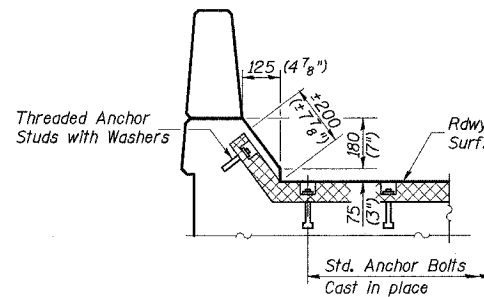
Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 10° C (50° F).

The parapet and roadway membrane shall be made continuous by an approved vulcanizing process. Lapping will not be permitted.

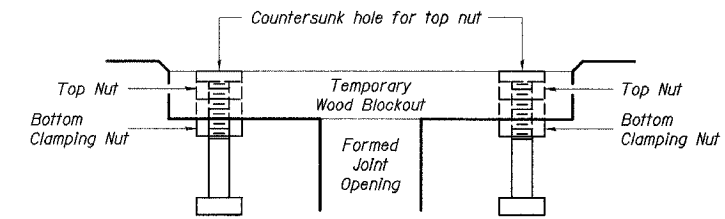
All dimensions are in millimeters (mm) except as noted.



AT PARAPET



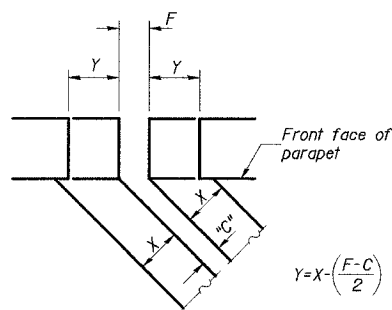
AT PARAPET



Note: Stud needs to be threaded lower to allow for use of clamping nut.

Anchor studs should be stainless

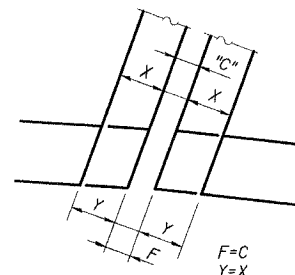
RECOMMENDED BLOCKOUT DETAIL



For dimension "F" see Sheet No. 17, 19, 23, 26, & 29 of 91.

FORMING BLOCKOUT SKETCH

(At all locations except Unit 3 Pier 2 East Parapet)



For dimensions "F" see Sheet No. 26 & 29 of 91.

FORMING BLOCKOUT SKETCH

(At Unit 3 Pier 2 East Parapet)

BILL OF MATERIAL (ISTHA)

ITEM	UNIT	QUANTITY
		Pier 2 (Unit 3)
Bridge Expansion Joint Closure Neoprene Seal and Anchor Blocks 4"	m	10.5

BILL OF MATERIAL (IDOT)

ITEM	UNIT	QUANTITY	
		Pier 2 (Unit 2)	N. Abut.
Neoprene Expansion Joint, 100 mm	m	16.3	20.6

Notes:

- Dimensions in parenthesis are English Units for Neoprene Expansion Joint at Pier 2 Unit 3. Metric Dimensions are for Neoprene Expansion Joint at Pier 2 Unit 2 and N. Abutment.
- Work this Sheet with Sheet No. 17, 19, 23, 26 & 29 of 91.

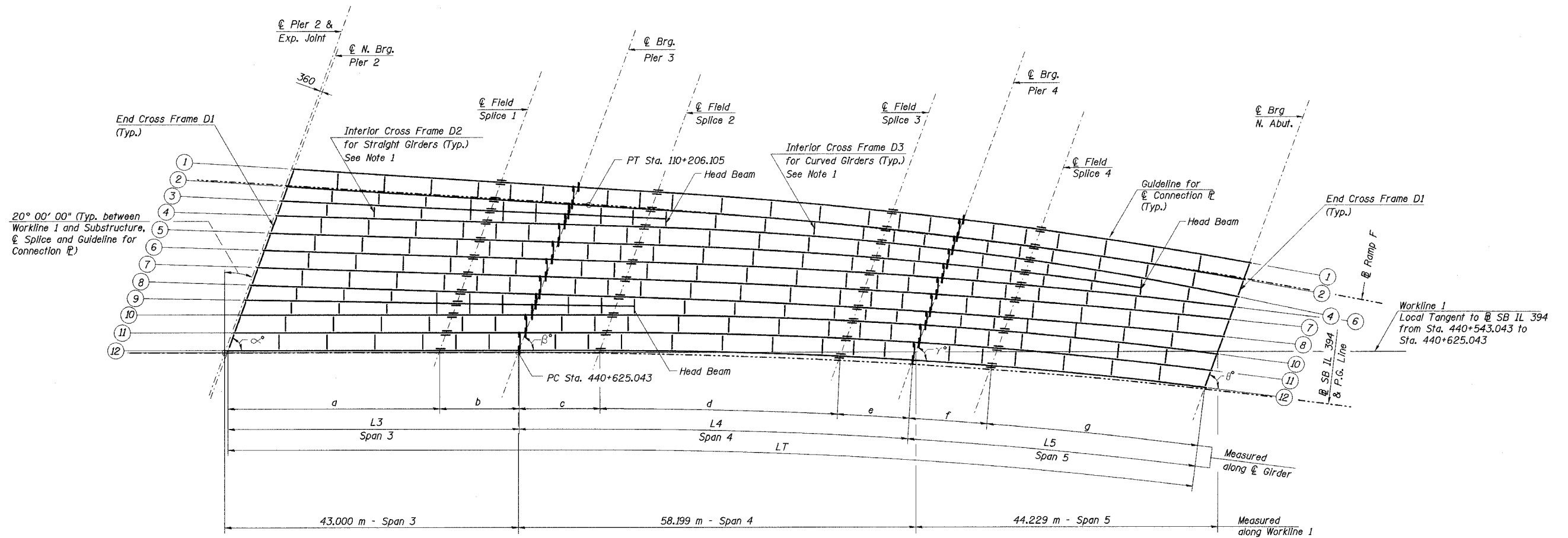
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
NEOPRENE EXPANSION JOINT AT PIER 2 & N. ABUTMENT
SB IL ROUTE 394 / RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800/2845
DATE JUL 18, 2005
SCALE ---
HNTB

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DESIGNED	JY
CHECKED	TRL
DRAWN	LK
CHECKED	TRL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 35
F. A. I. 80/94	*	COOK	870	549	91 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
(0203.1 & 0312-708W) R-3			CONTRACT NO. 62108		



FRAMING PLAN

GIRDER GENERAL DIMENSIONS (Length in meters)

Girder	Span 3			Span 4				Span 5			Total LT = L3+L4+L5	Radius R	Angle of Girder Orientation			
	a	b	L3=a+b	c	d	e	L4=c+d+e	f	g	L5=f+g			α°	β°	γ°	θ°
1	30.381	11.362	41.743	11.607	34.550	10.478	56.635	11.407	30.986	42.393	140.771	750.377	73° 36' 46"	73° 36' 46"	77° 03' 03"	80° 17' 17"
2	30.381	11.362	41.743	11.607	34.555	10.481	56.643	11.411	31.000	42.411	140.797	768.670	73° 36' 46"	73° 36' 46"	76° 58' 11"	80° 07' 52"
3	30.527	11.417	41.944	14.318	-	-	14.318	-	-	-	56.262	-	72° 42' 18"	72° 42' 18"	-	-
4	30.680	11.474	42.154	11.721	34.748	10.491	56.960	11.403	30.899	42.302	141.416	503.863	71° 48' 23"	71° 48' 23"	76° 57' 03"	81° 45' 40"
5	30.680	11.474	42.154	11.721	34.829	10.541	57.091	11.466	17.101	28.567	127.812	661.475	71° 48' 23"	71° 48' 23"	75° 44' 11"	-
6	30.680	11.474	42.154	11.721	34.920	10.599	57.240	11.542	31.358	42.900	142.294	993.453	71° 48' 23"	71° 48' 23"	74° 25' 54"	76° 54' 21"
7	30.680	11.474	42.154	11.721	34.956	10.623	57.300	11.574	31.471	43.045	142.499	1233.121	71° 48' 23"	71° 48' 23"	73° 55' 27"	75° 55' 27"
8	30.680	11.474	42.154	11.721	34.958	10.624	57.303	11.575	31.475	43.050	142.507	1242.425	71° 48' 23"	71° 48' 23"	73° 54' 30"	75° 53' 37"
9	30.845	11.536	42.381	14.467	-	-	14.467	-	-	-	56.848	-	70° 53' 45"	70° 53' 45"	-	-
10	31.017	11.600	42.617	11.850	35.181	10.635	57.666	11.562	31.329	42.891	143.174	672.128	70° 00' 00"	70° 00' 00"	73° 54' 20"	77° 33' 43"
11	31.017	11.600	42.617	11.850	35.189	10.641	57.680	11.569	31.351	42.920	143.217	690.950	70° 00' 00"	70° 00' 00"	73° 48' 01"	77° 21' 34"
12	31.017	11.600	42.617	11.850	35.197	10.645	57.692	11.575	31.373	42.948	143.257	709.488	70° 00' 00"	70° 00' 00"	73° 42' 07"	77° 10' 13"

Notes:

- Girder 3 and 9 are straight Girders. All the remaining Girders are straight from Pier 2 to Field Splice 2 and curved from Field Splice 2 to N. Abut. with their Radli shown in the table.
- Angle of Girder Orientation is the Angle between \hat{C} Brg and Local Tangent to \hat{C} Girder at the intersection of \hat{C} Brg and \hat{C} Girder.
- Dimension "c" for G3 and G9, Dimension "g" for G5 are measured to \hat{C} Head Beams.
- Work this sheet with Sheet Nos. 36 - 42 of 91.

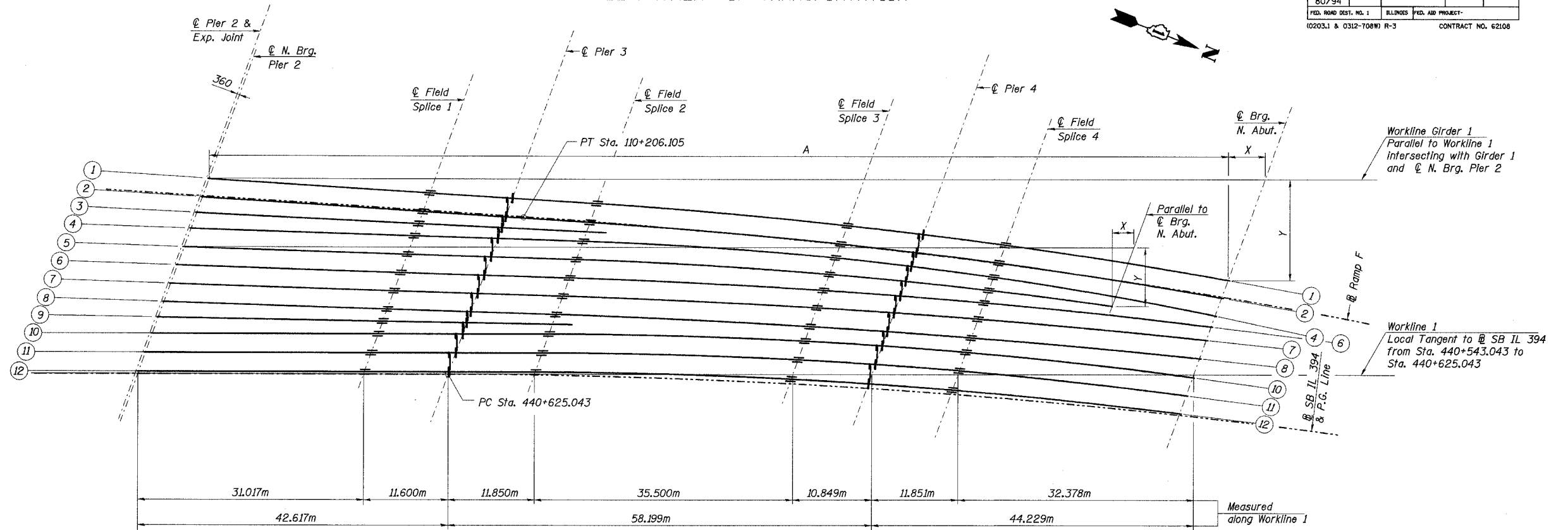
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DESIGNED	JY
CHECKED	MEA
DRAWN	LK
CHECKED	MEA

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
GENERAL FRAMING PLAN
SPANS 3-5 - UNIT 1
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 36 91 SHEETS
F. A. I. 80/94		COOK	870	550	
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-			
(02033.1 & 0312-708W) R-3		CONTRACT NO. 62108			



GIRDER LAYOUT

LAYOUT DIMENSIONS (Length in Meters)

Girder	Station**	N. Brg. Pier 2			FS 1			Pier 3			FS 2			FS 3			Pier 4			FS 4			Brg. N. Abut. or End of G5		
		Sta. 440+582.426			Sta. 440+613.443			Sta. 440+625.043			Sta. 440+636.866			Sta. 440+671.980			Sta. 440+682.627			Sta. 440+694.217			Sta. 440+725.679		
		Radius*	A	X	Y	A	X	Y	A	X	Y	A	X	Y	A	X	Y	A	X	Y	A	X	Y	A	X
1	750.377	0.000	0.000	0.000	31.017	0.697	1.914	42.617	0.957	2.630	54.467	1.224	3.362	89.967	2.305	6.332	100.816	2.746	7.545	112.667	3.287	9.032	145.045	5.072	13.935
2	768.670	0.000	0.000	0.000	31.017	0.697	1.914	42.617	0.957	2.630	54.467	1.224	3.362	89.967	2.298	6.313	100.816	2.735	7.514	112.667	3.270	8.983	145.045	5.030	13.819
3	-	0.000	0.000	0.000	31.017	0.524	1.441	42.617	0.721	1.979	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	503.863	0.000	0.000	0.000	31.017	0.352	0.967	42.617	0.484	1.329	54.467	0.618	1.698	89.967	1.452	3.990	100.816	1.875	5.151	112.667	2.424	6.659	145.045	4.377	12.026
5	661.475	0.000	0.000	0.000	31.017	0.352	0.967	42.617	0.484	1.329	54.467	0.618	1.698	89.967	1.351	3.712	100.816	1.704	4.682	112.667	2.157	5.927	127.465	2.966	8.150
6	993.453	0.000	0.000	0.000	31.017	0.352	0.967	42.617	0.484	1.329	54.467	0.618	1.698	89.967	1.242	3.412	100.816	1.520	4.175	112.667	1.868	5.133	145.045	3.062	8.412
7	1233.121	0.000	0.000	0.000	31.017	0.352	0.967	42.617	0.484	1.329	54.467	0.618	1.698	89.967	1.199	3.295	100.816	1.447	3.977	112.667	1.755	4.823	145.045	2.792	7.671
8	1242.425	0.000	0.000	0.000	31.017	0.352	0.967	42.617	0.484	1.329	54.467	0.618	1.698	89.967	1.198	3.292	100.816	1.445	3.970	112.667	1.752	4.813	145.045	2.784	7.648
9	-	0.000	0.000	0.000	31.017	0.176	0.482	42.617	0.241	0.663	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	672.128	0.000	0.000	0.000	31.017	0.000	0.000	42.617	0.000	0.000	54.467	0.000	0.000	89.967	0.335	0.921	100.816	0.568	1.561	112.667	0.891	2.600	145.045	2.128	5.845
11	690.950	0.000	0.000	0.000	31.017	0.000	0.000	42.617	0.000	0.000	54.467	0.000	0.000	89.967	0.326	0.896	100.816	0.553	1.519	112.667	0.867	2.383	145.045	2.072	5.692
12	709.488	0.000	0.000	0.000	31.017	0.000	0.000	42.617	0.000	0.000	54.467	0.000	0.000	89.967	0.318	0.873	100.816	0.539	1.481	112.667	0.845	2.322	145.045	2.020	5.549

DESIGNED	JY
CHECKED	MEA
DRAWN	LK
CHECKED	MEA

* Girder 3 and 9 are straight Girders. All the remaining Girders are straight from Pier 2 to Field Splice 2 and curved from Field Splice 2 to N. Abut. with their Radial shown in the table.

** Station along @ SB IL 394.

Note:

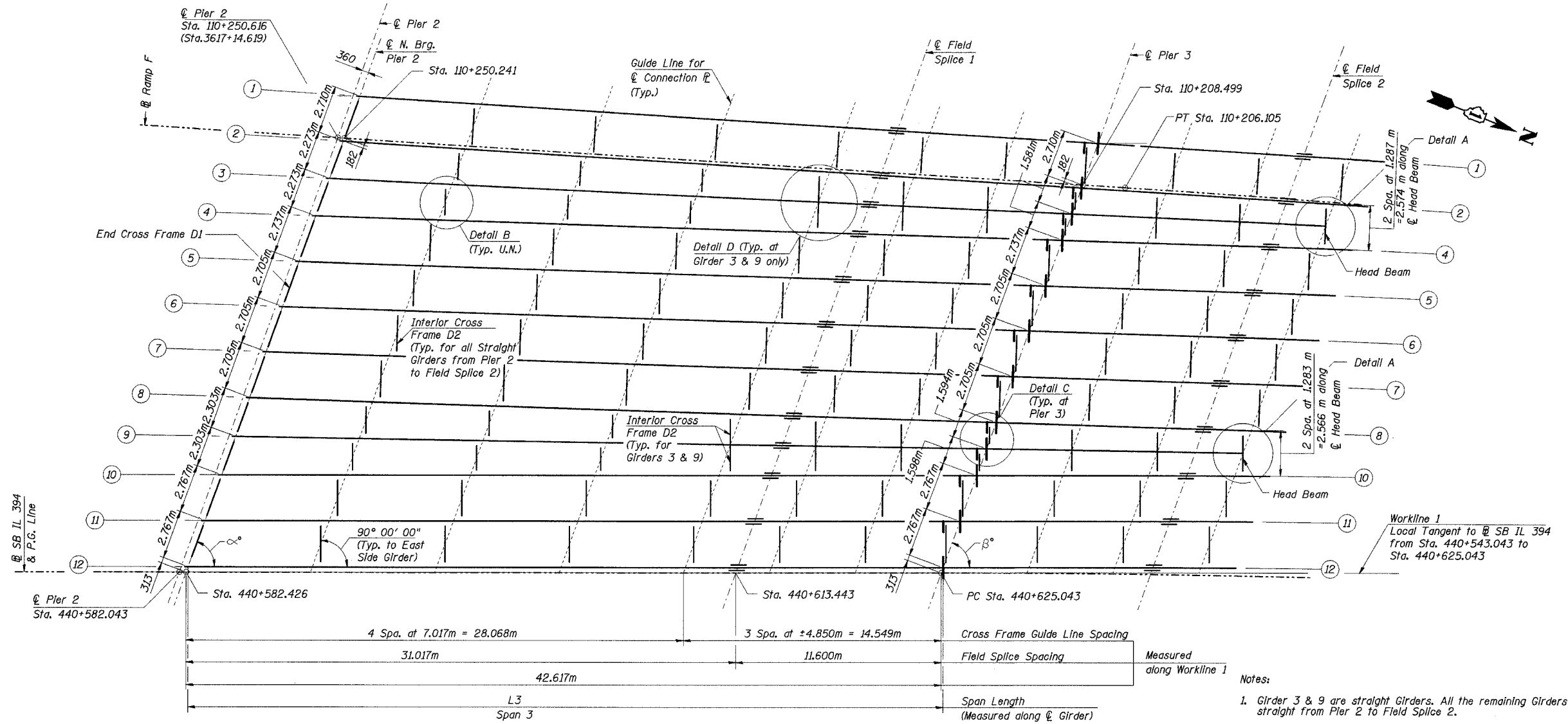
- Coordinate system shown for Girder 1. Typical for all Girders with parallel worklines with Workline 1 intersecting with @ Girders and @ N. Brg. Pier 2.
- Work this sheet with Sheet No. 35 of 91.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
GIRDER LAYOUT
SPANS 3-5 - UNIT 1
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---
HNTB

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 37 91 SHEETS
F. A. I. 80/94	-	COOK	870	551	
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-			
02033.1 & 0312-708W R-3		CONTRACT NO. 62108			



FRAMING PLAN - SPAN 3

Notes:

- Girder 3 & 9 are straight Girders. All the remaining Girders are straight from Pier 2 to Field Splice 2.
- Place all interior cross frames perpendicular to centerlines of east side Girders.
- See Sht. 35 of 91 for Girder General Dimensions.
- See Sht. 43 & 44 of 91 for Details A - D
- Work this Sheet with sheet Nos. 38 & 45 of 91.

DESIGNED	JY
CHECKED	MEA
DRAWN	LK
CHECKED	MEA

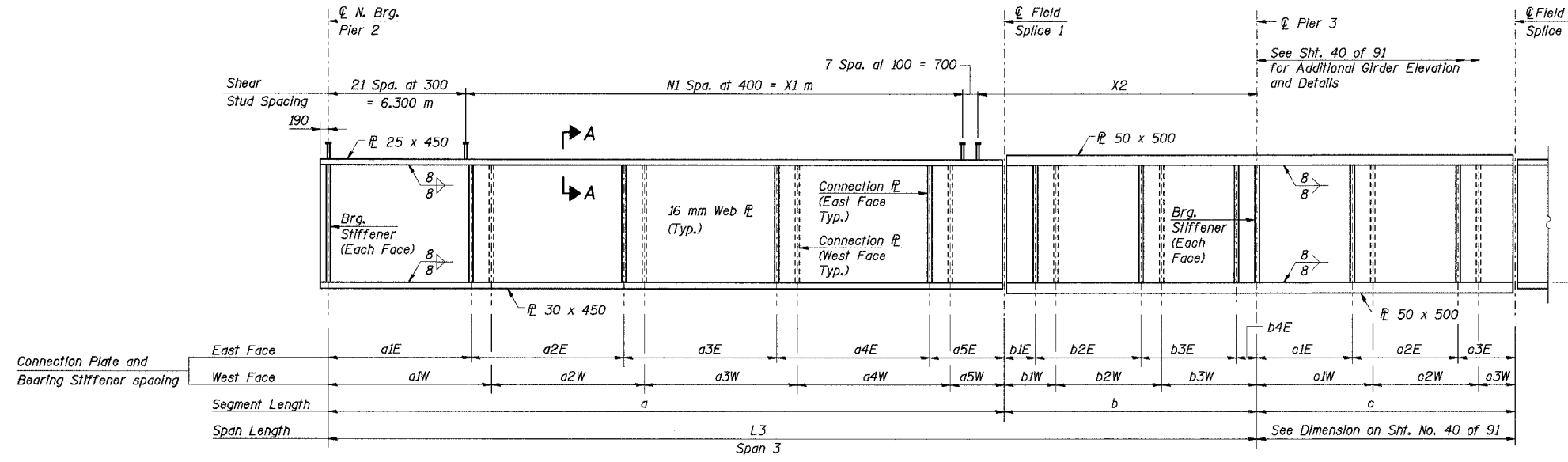
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
FRAMING PLAN
SPAN 3
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

HNTB

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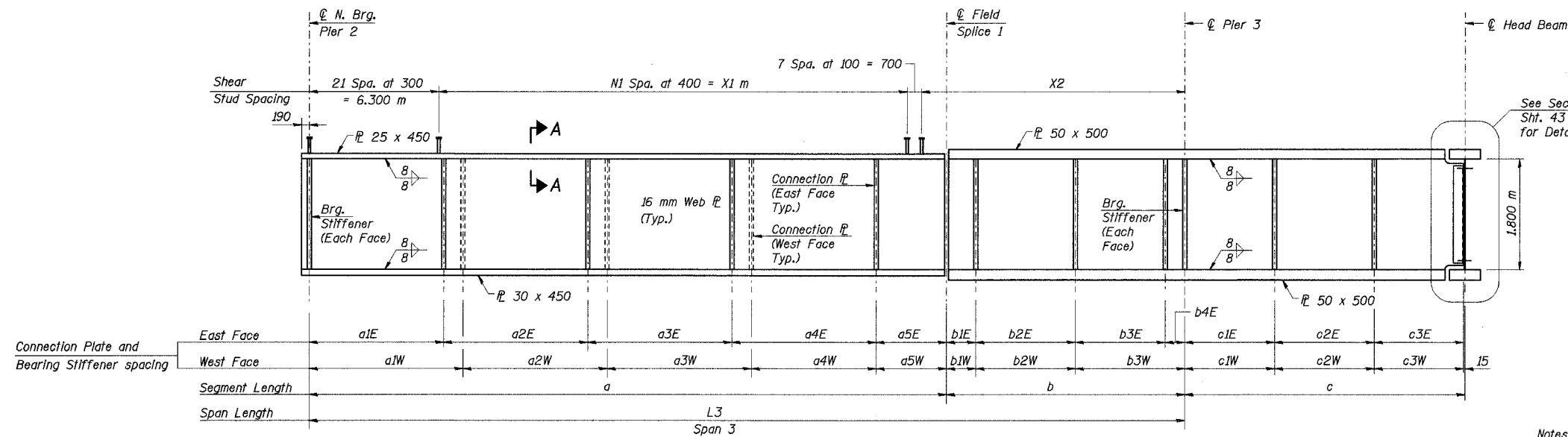
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 38 91 SHEETS
F. A. I. 80/94	*	COOK	870	552	
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		
(0203.1 & 0312-708W) R-3		CONTRACT NO. 62108			



ELEVATION - GIRDERS 1 THRU 12 EXCEPT 3 & 9

(All Plates AASHTO M270M Grade 345, N.T.R.)
Looking West, Girder East Face shown



ELEVATION - GIRDERS 3 & 9

(All Plates AASHTO M270M Grade 345, N.T.R.)
Looking West, Girder East Face shown

GIRDER CONNECTION PLATE & BEARING STIFFENER SPACING (Meters)

Girder No.	Girder East Side										Girder West Side												
	a1E	a2E	a3E	a4E	a5E	b1E	b2E	b3E	b4E	c1E	c2E	c3E	a1W	a2W	a3W	a4W	a5W	b1W	b2W	b3W	c1W	c2W	c3W
1	6.491	6.873	6.873	6.873	3.271	1.480	4.750	4.373	0.759	-	-	-	7.255	6.873	6.873	6.873	2.507	2.244	4.750	4.368	-	-	-
2	6.552	6.890	6.890	6.592	3.457	1.319	4.775	4.804	0.464	-	-	-	7.227	6.889	6.889	6.619	2.903	1.871	4.773	4.773	4.773	4.690	4.840
3	6.569	6.924	6.924	7.208	2.902	1.871	4.773	4.285	0.488	4.773	4.690	4.840	7.227	6.889	6.889	6.619	2.903	1.871	4.773	4.773	4.773	4.690	4.840
4	6.514	6.941	6.941	6.941	3.343	1.453	4.797	4.375	0.849	-	-	-	7.278	6.923	6.923	7.207	2.349	2.423	4.773	4.278	-	-	-
5	6.518	6.941	6.941	6.941	3.339	1.458	4.797	4.380	0.839	-	-	-	7.368	6.941	6.941	6.941	2.489	2.308	4.797	4.369	-	-	-
6	6.518	6.941	6.941	6.941	3.339	1.458	4.797	4.380	0.839	-	-	-	7.363	6.941	6.941	6.941	2.494	2.303	4.797	4.374	-	-	-
7	6.518	6.941	6.941	6.941	3.339	1.458	4.797	4.380	0.839	-	-	-	7.363	6.941	6.941	6.941	2.494	2.303	4.797	4.374	-	-	-
8	6.583	6.960	6.960	6.632	3.545	1.280	4.825	4.854	0.515	-	-	-	7.363	6.941	6.941	6.941	2.494	2.303	4.797	4.374	-	-	-
9	6.604	6.998	6.998	7.313	2.932	1.890	4.823	4.281	0.542	4.823	4.823	4.806	7.336	6.959	6.959	6.659	2.932	1.890	4.823	4.823	4.823	4.823	4.806
10	6.544	7.017	7.017	7.017	3.422	1.428	4.850	4.377	0.945	-	-	-	7.391	6.997	6.997	7.312	2.320	2.503	4.823	4.274	-	-	-
11	6.544	7.017	7.017	7.017	3.422	1.428	4.850	4.382	0.940	-	-	-	7.490	7.017	7.017	7.017	2.476	2.374	4.850	4.376	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	7.490	7.017	7.017	7.017	2.476	2.374	4.850	4.376	-	-	-

DESIGNED	JY
CHECKED	MEA
DRAWN	LK
CHECKED	MEA

SHEAR CONNECTOR NUMBERS

Girder No.	N1
1	54
2	56
3	56
4	56
5	55
6	54
7	54
8	57
9	57
10	57
11	57
12	57

SHEAR CONNECTOR LOCATIONS (Meters)

Girder No.	X1	X2
1	21.600	12.343
2	22.400	11.943
3	22.400	12.144
4	22.400	11.954
5	22.000	12.754
6	21.600	13.154
7	21.600	12.754
8	22.800	11.954
9	22.800	12.181
10	22.800	12.017
11	22.800	12.817
12	22.800	12.817

Notes:

- All dimensions are in millimeters (mm) except as noted.
- See Sht. No. 43 of 91 for Section A-A.
- See Sht. No. 35 of 91 for Dimension a, b, c and L3.
- Work this sheet with Sheet Nos. 37, 45 - 48 of 91.
- N.T.R. denotes notch toughness requirements are applicable.

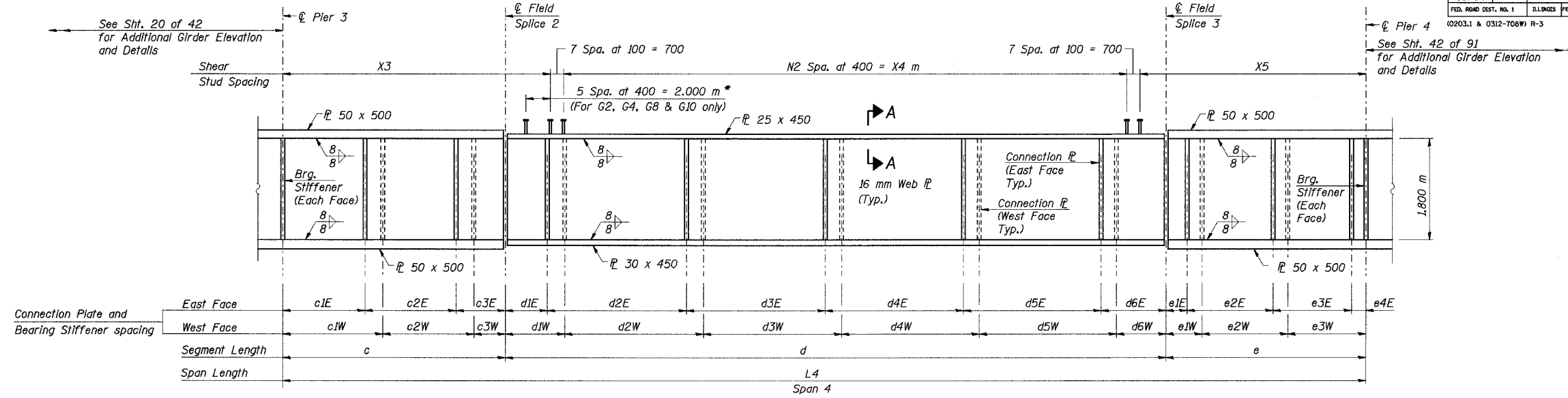
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
GIRDER ELEVATION AND DETAILS
SPAN 3
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

HNTB

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F. A. I. 80/94	SECTION •	COUNTY COOK	TOTAL SHEETS 870	SHEET NO. 554	SHEET NO. 40 91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT (0203.1 & 0312-708W) R-3		CONTRACT NO. 62108	



ELEVATION - GIRDERS 1 THRU 12 EXCEPT 3 & 9
(All Plates AASHTO M270M Grade 345, N.T.R.)
Looking West, Girder East Face shown

* Adjust shear connector spacing to miss top connection \bar{R} to head beams.

GIRDER CONNECTION PLATE & BEARING STIFFENER SPACING (Meters)

Girder No.	Girder East Side													Girder West Side											
	c1E	c2E	c3E	d1E	d2E	d3E	d4E	d5E	d6E	e1E	e2E	e3E	e4E	c1W	c2W	c3W	d1W	d2W	d3W	d4W	d5W	d6W	e1W	e2W	e3W
1	4.368	4.750	2.489	2.266	7.268	7.248	7.230	7.212	3.326	1.181	4.501	4.198	0.598	-	-	-	-	-	-	-	-	-	-	-	
2	4.281	4.692	2.634	2.231	7.304	7.277	7.251	7.227	3.265	1.249	4.506	4.273	0.453	5.133	4.750	1.724	3.020	7.243	7.224	7.205	7.187	2.676	1.817	4.486	4.178
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4	4.370	4.797	2.554	2.247	7.333	7.304	7.276	7.250	3.338	1.189	4.518	4.238	0.546	5.266	4.689	1.766	3.081	7.266	7.242	7.219	7.197	2.743	1.752	4.488	4.251
5	4.375	4.797	2.549	2.251	7.340	7.318	7.297	7.277	3.346	1.202	4.540	4.224	0.575	5.225	4.797	1.699	3.090	7.304	7.275	7.248	7.223	2.689	1.822	4.502	4.217
6	4.375	4.797	2.549	2.250	7.340	7.325	7.309	7.295	3.401	1.160	4.555	4.199	0.685	5.220	4.797	1.704	3.087	7.311	7.290	7.270	7.252	2.710	1.823	4.525	4.251
7	4.375	4.797	2.549	2.250	7.340	7.326	7.312	7.299	3.429	1.135	4.560	4.186	0.742	5.220	4.797	1.704	3.089	7.321	7.306	7.291	7.276	2.673	1.876	4.544	4.203
8	4.279	4.825	2.617	2.212	7.381	7.358	7.337	7.317	3.353	1.219	4.565	4.279	0.561	5.220	4.797	1.704	3.090	7.324	7.311	7.297	7.284	2.652	1.903	4.550	4.171
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	4.377	4.850	2.623	2.231	7.414	7.386	7.360	7.334	3.456	1.124	4.571	4.187	0.753	5.369	4.823	1.658	3.156	7.351	7.332	7.313	7.294	2.735	1.823	4.552	4.260
11	4.377	4.850	2.623	2.231	7.414	7.387	7.361	7.336	3.460	1.122	4.573	4.186	0.760	5.323	4.850	1.677	3.165	7.386	7.358	7.332	7.306	2.642	1.922	4.554	4.165
12	-	-	-	-	-	-	-	-	-	-	-	-	-	5.323	4.850	1.677	3.165	7.387	7.360	7.334	7.309	2.642	1.924	4.556	4.165

SHEAR CONNECTOR NUMBERS

Girder No.	N2
1	74
2	72
3	-
4	72
5	76
6	76
7	76
8	72
9	-
10	72
11	76
12	76

SHEAR CONNECTOR LOCATIONS (Meters)

Girder No.	X3	X4	X5
1	12.753	29.600	12.882
2	14.499	28.800	11.944
3	-	-	-
4	15.157	28.800	11.603
5	13.078	30.400	12.213
6	13.177	30.400	12.263
7	12.956	30.400	12.544
8	14.747	28.800	12.356
9	-	-	-
10	15.004	28.800	12.462
11	12.925	30.400	12.955
12	12.951	30.400	12.941

Notes:

- All dimensions are in millimeters (mm) except as noted.
- See Sht. No. 43 of 91 for Section A-A.
- See Sht. No. 35 of 91 for Dimension c, d, e and L4.
- Work this sheet with Sheet Nos. 39, 45 - 48 of 91.
- N.T.R. denotes notch toughness requirements are applicable.

DESIGNED	JY
CHECKED	MEA
DRAWN	LK
CHECKED	MEA

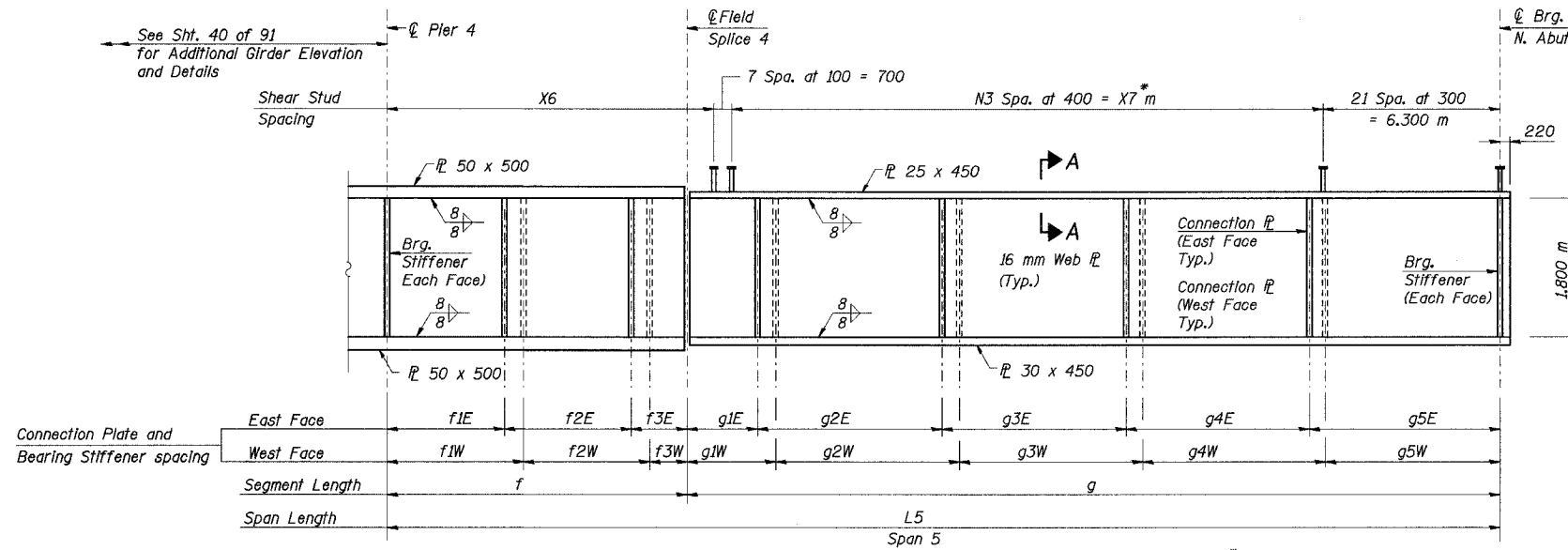
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
GIRDER ELEVATION AND DETAILS
SPAN 4
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

HNTB

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

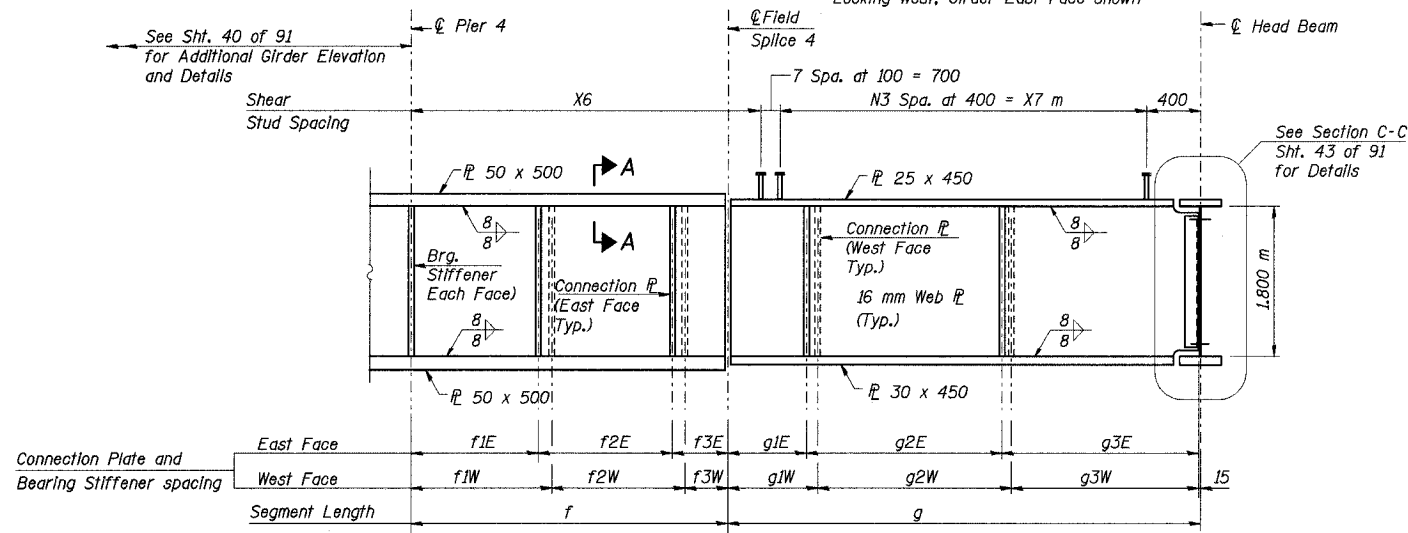
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 42 91 SHEETS
F. A. I. 80/94	*	COOK	870	556	
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-	CONTRACT NO. 62108		



ELEVATION - GIRDERS 1 THRU 12 EXCEPT 3, 5 & 9

(All Plates AASHTO M270M Grade 345, N.T.R.)
Looking West, Girder East Face shown

* Adjust shear connector spacing to miss top connection P to head beams at Girder 4 & Girder 6.



ELEVATION - GIRDER 5

(All Plates AASHTO M270M Grade 345, N.T.R.)
Looking West, Girder East Face shown

GIRDER CONNECTION PLATE & BEARING STIFFENER SPACING (Meters)

Girder No.	Girder East Side								Girder West Side							
	f1E	f2E	f3E	g1E	g2E	g3E	g4E	g5E	f1W	f2W	f3W	g1W	g2W	g3W	g4W	g5W
1	4.526	4.820	2.061	2.752	7.022	7.009	6.997	7.206	-	-	-	-	-	-	-	-
2	4.600	4.820	1.991	2.820	7.018	7.004	6.991	7.167	5.112	4.803	1.496	3.301	6.999	6.986	6.973	6.741
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	4.556	4.837	2.010	2.811	7.028	6.812	7.093	7.155	5.039	4.800	1.564	3.229	6.989	6.972	6.957	6.752
5	4.599	4.857	2.010	2.844	7.069	7.173	-	-	5.090	4.821	1.555	3.250	7.006	6.830	-	-
6	4.552	4.880	2.110	2.764	7.112	7.100	7.088	7.294	5.120	4.845	1.577	3.265	7.055	7.223	6.971	6.844
7	4.519	4.887	2.168	2.713	7.124	7.113	7.102	7.419	5.211	4.869	1.494	3.369	7.097	7.085	7.074	6.846
8	4.612	4.886	2.077	2.801	7.117	7.103	7.089	7.365	5.257	4.876	1.442	3.430	7.109	7.098	7.087	6.751
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	4.518	4.886	2.158	2.717	7.109	7.090	7.072	7.341	5.163	4.871	1.528	3.335	7.094	7.078	7.063	6.759
11	4.517	4.888	2.164	2.715	7.114	7.095	7.077	7.350	5.257	4.867	1.445	3.413	7.083	7.064	7.046	6.745
12	-	-	-	-	-	-	-	-	5.263	4.870	1.442	3.419	7.088	7.069	7.052	6.745

DESIGNED	JY
CHECKED	MEA
DRAWN	LK
CHECKED	MEA

SHEAR CONNECTOR NUMBERS

Girder No.	N3
1	57
2	57
3	-
4	53
5	27
6	51
7	57
8	58
9	-
10	58
11	58
12	58

SHEAR CONNECTOR LOCATIONS (Meters)

Girder No.	X6	X7
1	12.593	22.800
2	12.611	22.800
3	-	-
4	14.102	21.200
5	16.667	10.800
6	15.500	20.400
7	13.245	22.800
8	12.850	23.200
9	-	-
10	12.691	23.200
11	12.720	23.200
12	12.748	23.200

Notes:

- All dimensions are in millimeters (mm) except as noted.
- See Sht. No. 43 of 91 for Section A-A.
- See Sht. No. 35 of 91 for Dimensions f, g and L5.
- Work this sheet with Sheet Nos. 41, 45 - 48 of 91.
- N.T.R. denotes notch toughness requirements are applicable.

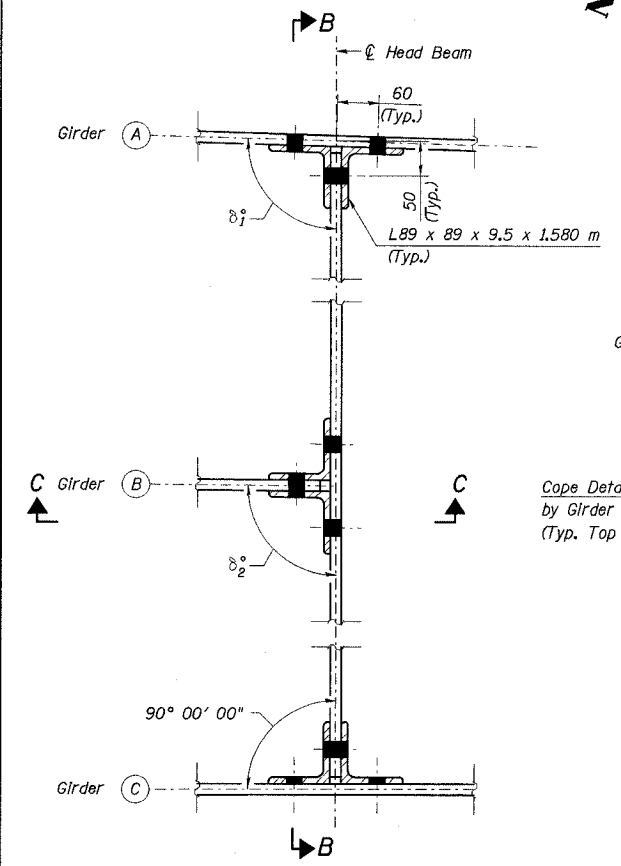
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
GIRDER ELEVATION AND DETAILS
SPAN 5
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

HNTB

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 43
F. A. I. 80/94		COOK	870	557	91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-			
(02033.1 & 0312-708W) R-3		CONTRACT NO. 62108			

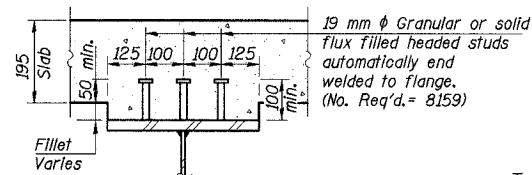


DETAIL A

ANGLE BETWEEN HEAD BEAM AND GIRDERS

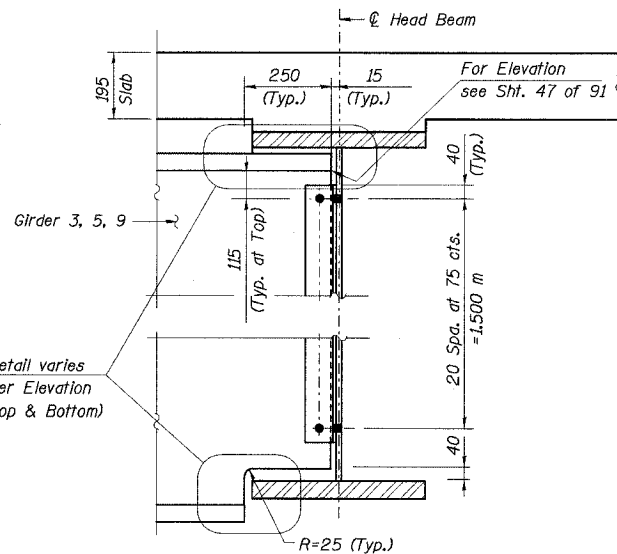
A-B-C	δ_1°	δ_2°
2-3-4	91° 37' 21"	90° 32' 54"
4-5-6	94° 01' 54"	92° 06' 06"
8-9-10	91° 38' 22"	90° 37' 36"

Angles shown in the table are between \bar{C} Head Beam and Girder Tangent Line at Intersection of \bar{C} Girder and \bar{C} Head Beam.

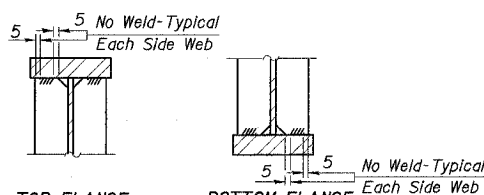


SECTION A-A

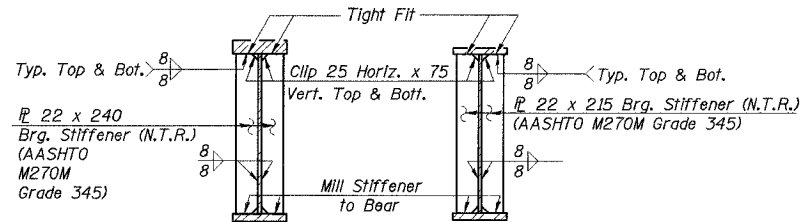
DESIGNED	JY
CHECKED	MEA
DRAWN	LK
CHECKED	MEA



SECTION C-C

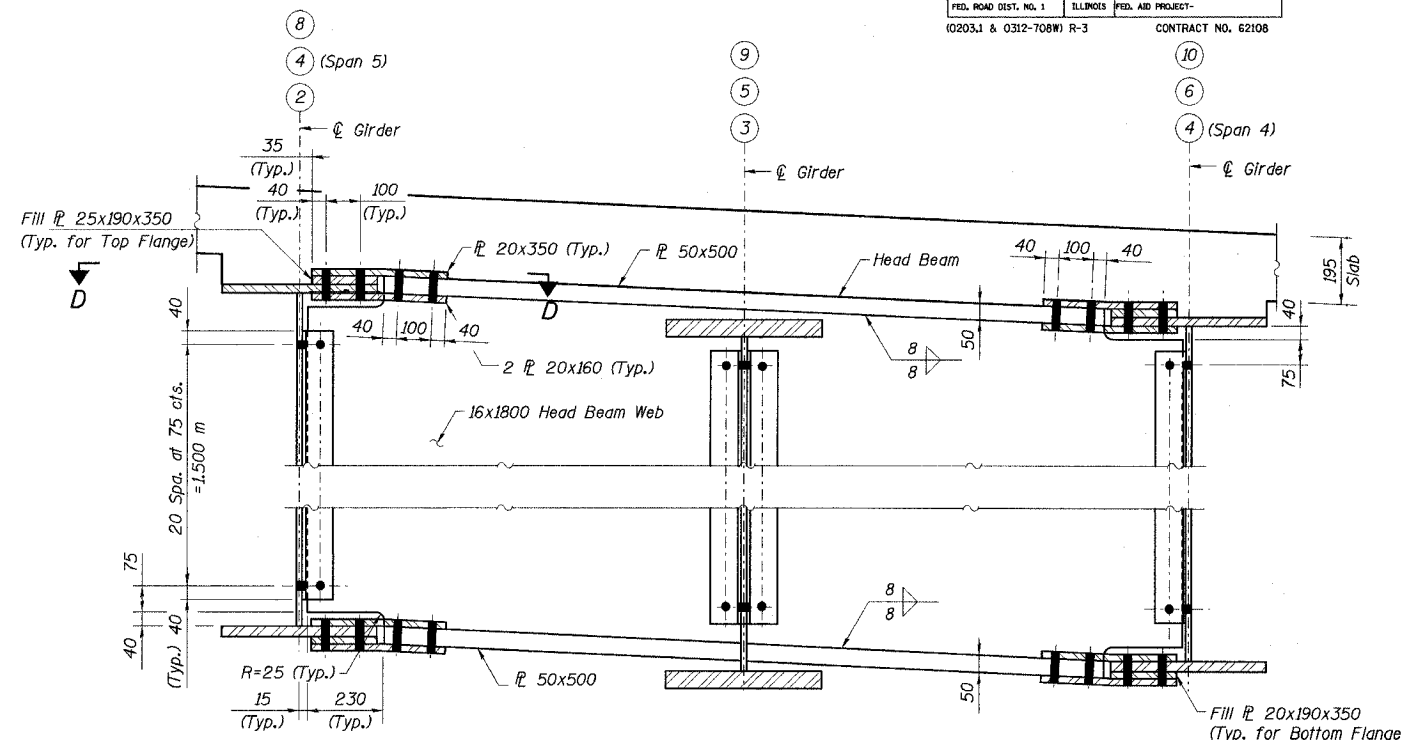


TOP FLANGE BOTTOM FLANGE
STIFFENER TO FLANGE WELD
Typical for Bearing Stiffeners

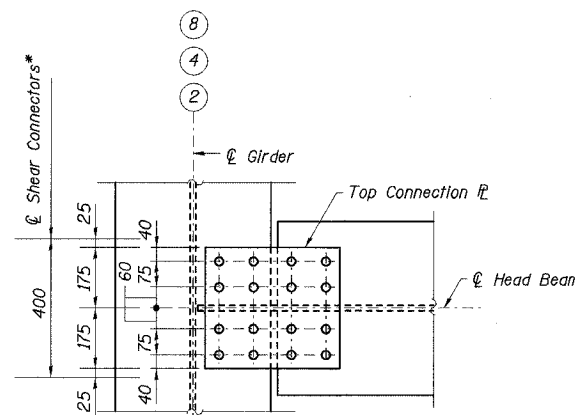


AT PIER 3 & 4 AT N. ABUT. & Pier 2

BEARING STIFFENERS



SECTION B-B



SECTION D-D

Notes:

- All dimensions are in millimeters (mm) except as noted.
- All Head Beam Connections to have 28 mm ϕ oversized holes for M22 H.S. Bolts. Two hardened washers shall be required over each oversized hole.
- All Head Beams and Connection Angles to be AASHTO M270M, Grade 345 and meet N.T.R.
- N.T.R. denotes plates to which notch toughness requirements are applicable.
- Work this sheet with Sheets Nos. 37 - 42 & 45 of 91.

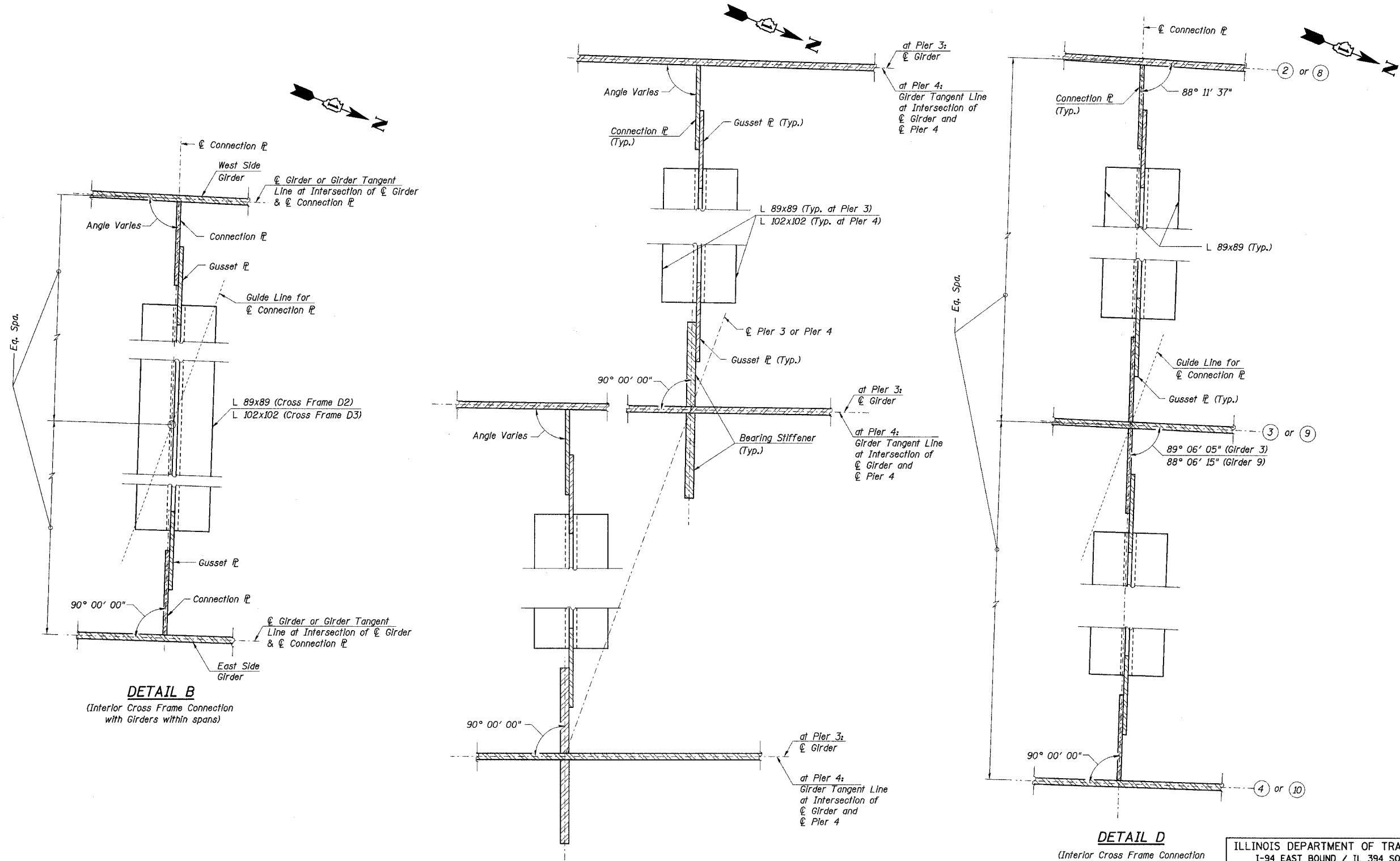
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
CONNECTION DETAILS - 1
SPANS 3-5 - UNIT 1
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

HNTB

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 44 91 SHEETS
F. A. I. 80/94	.	COOK	870	558	
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		
02033.1 & 0312-708W R-3			CONTRACT NO. 62108		



DESIGNED	JY
CHECKED	MEA
DRAWN	LK
CHECKED	MEA

- Notes:
1. Work this sheet with sheet No. 37, 39 & 41 of 91.
 2. See sheet 45 of 91 for Cross Frame Details.

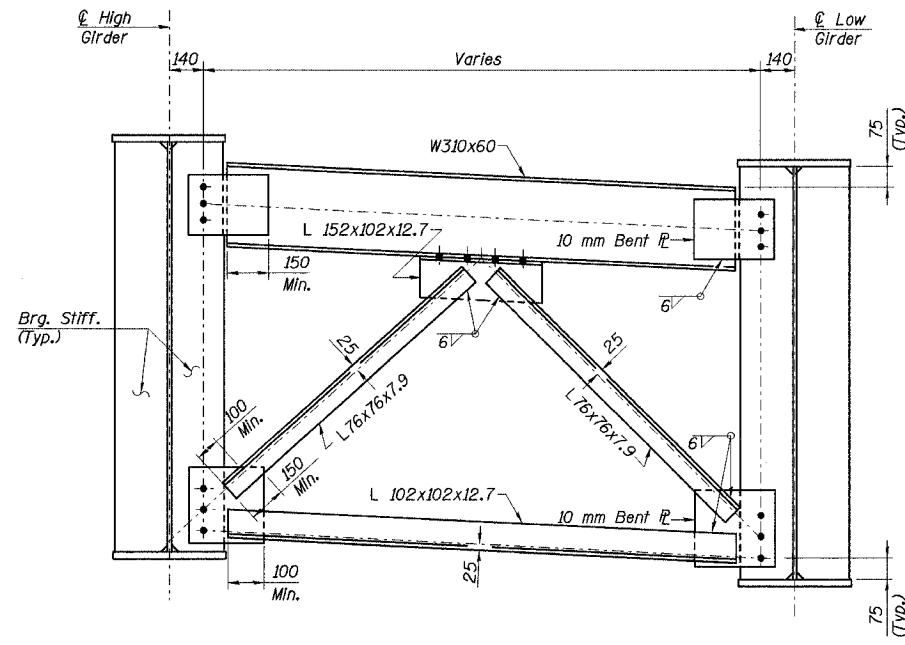
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
CONNECTION DETAILS - 2
SPANS 3-5 - UNIT 1
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

HNTB

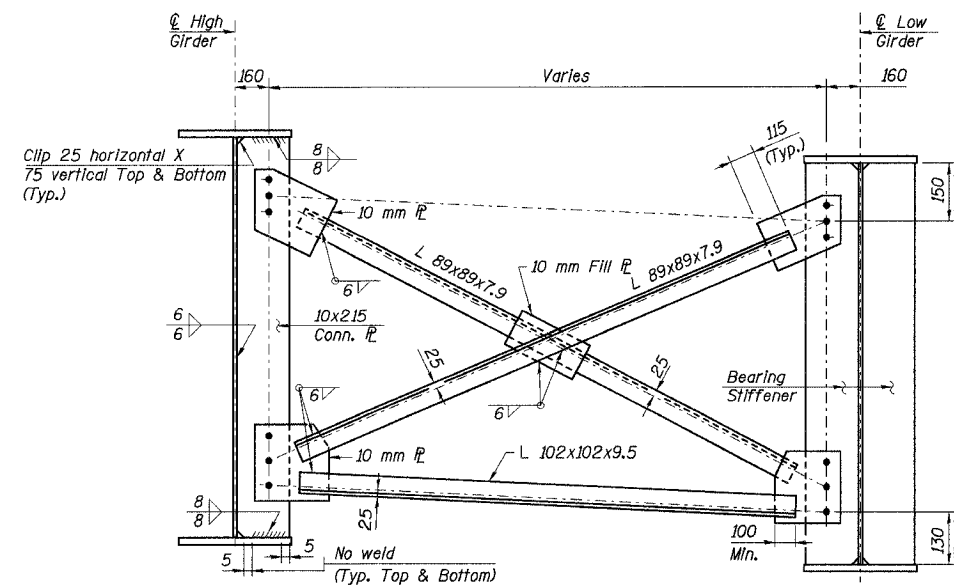
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 45 91 SHEETS
F. A. I. 80/34	.	COOK	870	559	
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-		CONTRACT NO. 62108	
0203.1 & 0312-708W) R-3					



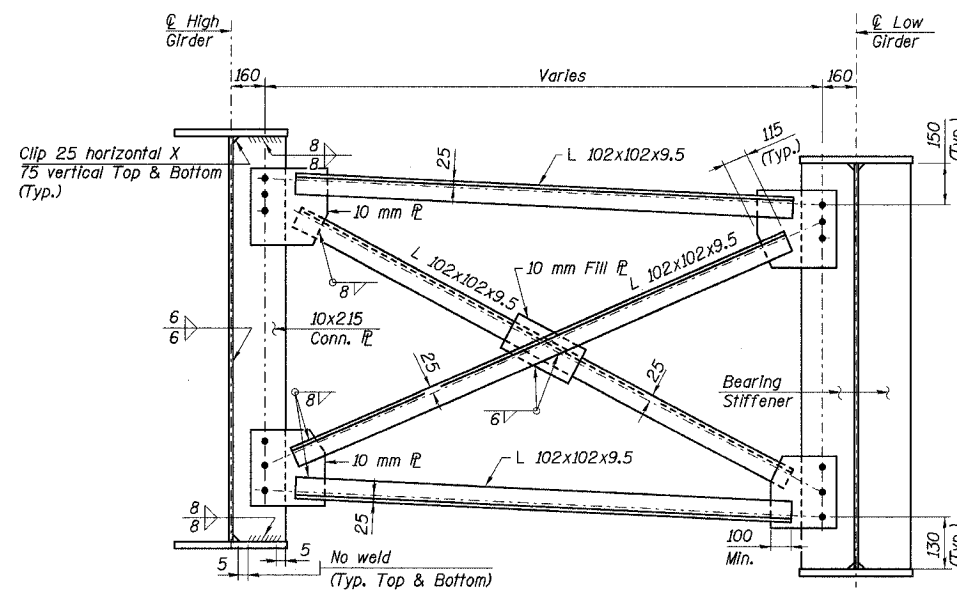
END CROSS FRAME D1
(All Materials AASHTO M270M Grade 345, N.T.R.)



AT CONNECTION PLATE **AT BEARING STIFFENER**

INTERIOR CROSS FRAME D2

(For Straight Girders)
(All Materials AASHTO M270M Grade 345, N.T.R. except Fill PL)



AT CONNECTION PLATE **AT BEARING STIFFENER**

INTERIOR CROSS FRAME D3

(For Curved Girders)
(All Material AASHTO M270M Grade 345, N.T.R. except Fill PL)

- Notes:
1. All dimensions are in millimeters (mm) except as noted.
 2. All cross frame connections to have 28 mm ϕ oversized holes for all M22 H.S. Bolts.
 3. Two hardened washers shall be required over each oversized hole.
 4. See Sheet No. 43 of 91 for bearing stiffener details.
 5. N.T.R. denotes members to which notch toughness requirements are applicable.

DESIGNED	JY
CHECKED	MEA
DRAWN	LK
CHECKED	MEA

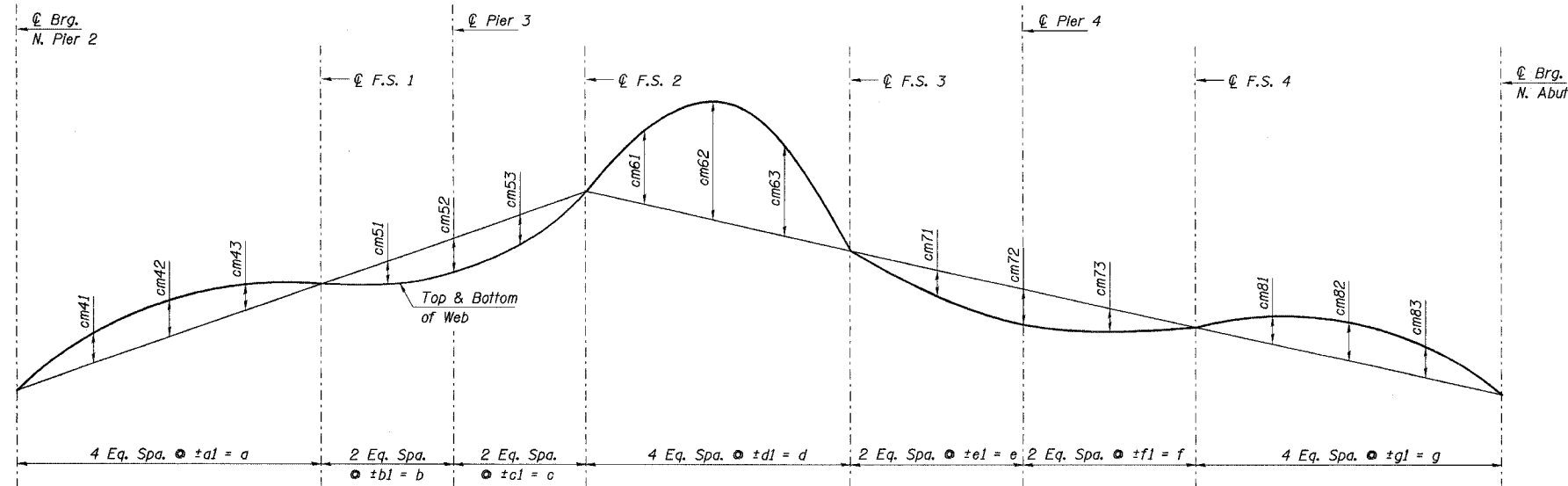
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ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-94 EAST BOUND / IL 394 SOUTH BOUND
CROSS FRAMING DETAILS
 SPANS 3-5 - UNIT 1
 SB IL ROUTE 394 OVER THORN CREEK
 F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
 COOK COUNTY
 STA. 440+704.350 STRUCTURE NO. 016-2800
 DATE JUL 18, 2005
 SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 46 91 SHEETS
F. A. I. 80/94		COOK	870	560	
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-		CONTRACT NO. 62108	
0203.1 & 0312-708W		R-3			



CAMBER DIAGRAM- GIRDERS 1 THRU 12 EXCEPT 3, 9 & 5
(For dimensions a, b, c, d, e, f, g see Sheet No. 35 of 91.)

CAMBER VALUES

Girder	cm41	cm42	cm43	cm51	cm52	cm53	cm61	cm62	cm63	cm71	cm72	cm73	cm81	cm82	cm83
1	18	25	18	14	20	14	96	128	94	13	20	13	21	30	22
2	18	26	18	12	18	13	92	126	93	13	20	13	22	34	25
4	19	28	19	13	19	13	95	130	96	12	18	13	17	27	19
6	19	27	19	16	23	16	96	131	96	13	20	14	16	24	18
7	20	28	19	16	23	16	89	122	88	14	22	15	19	28	21
8	18	27	19	13	19	13	78	107	78	14	21	15	22	33	24
10	20	29	21	12	19	13	77	106	77	13	20	14	23	33	24
11	21	29	20	15	23	16	76	103	74	15	22	15	23	33	24
12	19	27	19	14	21	14	66	89	64	14	21	15	20	30	22

CAMBER SPACING (Meters)

Girder	a1	b1	c1	d1	e1	f1	g1
1	7.595	5.681	5.804	8.638	5.239	5.704	7.747
2	7.595	5.681	5.804	8.639	5.241	5.706	7.750
4	7.670	5.737	5.861	8.687	5.246	5.702	7.725
6	7.670	5.737	5.861	8.730	5.300	5.771	7.840
7	7.670	5.737	5.861	8.739	5.312	5.787	7.868
8	7.670	5.737	5.861	8.740	5.312	5.788	7.869
10	7.754	5.800	5.925	8.795	5.318	5.781	7.832
11	7.754	5.800	5.925	8.797	5.321	5.785	7.838
12	7.754	5.800	5.925	8.799	5.323	5.788	7.843

TOP OF WEB ELEVATIONS FOR FABRICATION (Meters)

(Elevations are before any deflections and are to be used for fabrication only)

Girder	℄ N. Brg. Pier 2	℄ F.S. 1	℄ Pier 3	℄ F.S. 2	℄ F.S. 3	℄ Pier 4	℄ F.S. 4	℄ Brg. N. Abut.
1	186.874	187.114	187.172	187.273	186.953	186.805	186.686	186.370
2	186.908	187.088	187.120	187.189	186.872	186.725	186.606	186.285
4	186.973	187.056	187.067	187.115	186.813	186.663	186.537	186.197
6	186.949	186.926	186.904	186.930	186.660	186.520	186.411	186.144
7	186.936	186.859	186.815	186.817	186.551	186.421	186.326	186.073
8	186.926	186.796	186.729	186.698	186.419	186.296	186.207	185.946
10	186.918	186.716	186.634	186.588	186.322	186.200	186.109	185.819
11	186.918	186.655	186.553	186.497	186.201	186.074	185.981	185.696
12	186.921	186.597	186.476	186.396	186.075	185.948	185.854	185.572

BEARING SEAT ELEVATIONS (Meters)

Girder	℄ N. Brg. Pier 2	℄ Pier 3	℄ Pier 4	℄ Brg. N. Abut.
1	184.861	185.081	184.647	184.346
2	184.895	185.032	184.567	184.261
4	184.960	184.979	184.507	184.173
6	184.936	184.816	184.364	184.120
7	184.905	184.727	184.265	184.049
8	184.905	184.641	184.140	183.922
10	184.905	184.543	184.044	183.795
11	184.905	184.462	183.918	183.672
12	184.905	184.385	183.792	183.548

Notes:

- 1 Work this Sheet with Sheets Nos. 35, 38, 40 & 42 of 91.
2. All dimensions are in millimeters (mm) except as noted.

DESIGNED	PJE/TL
CHECKED	MA
DRAWN	LK
CHECKED	MA

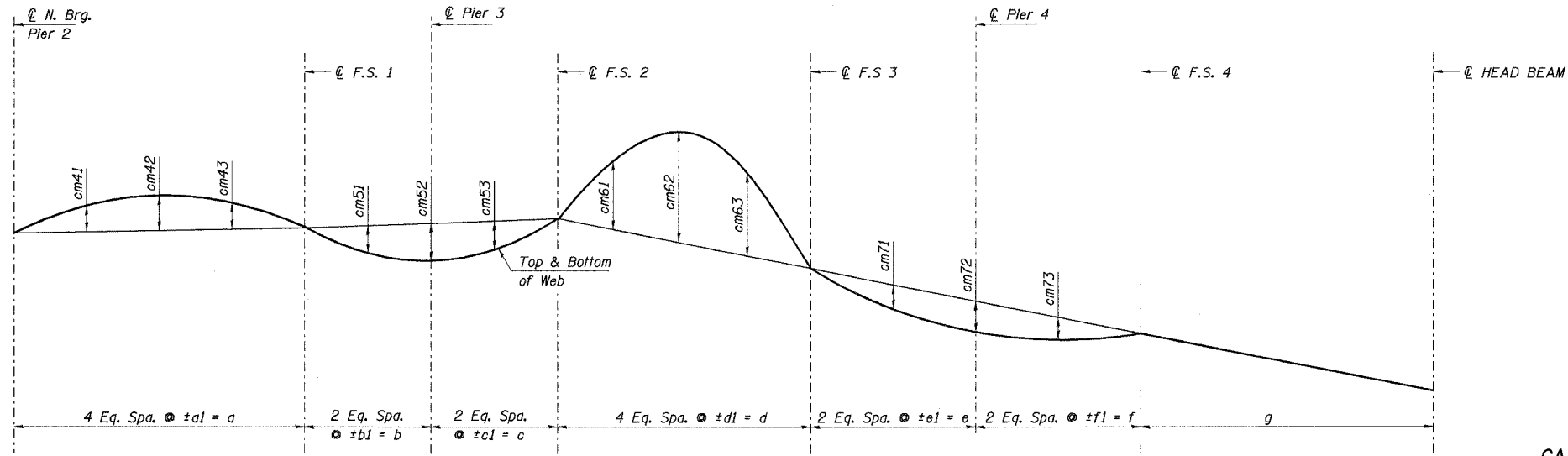
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ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-94 EAST BOUND / IL 394 SOUTH BOUND
CAMBER AND TOP OF WEB ELEVATIONS-1
 SPANS 3-5 - UNIT 1
 SB IL ROUTE 394 OVER THORN CREEK
 F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
 COOK COUNTY
 STA. 440+704.350 STRUCTURE NO. 016-2800
 DATE JUL 18, 2005
 SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 47 91 SHEETS
F. A. I. 80/94	.	COOK	870	561	
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		
(0203.1 & 0312-708W) R-3		CONTRACT NO. 62108			

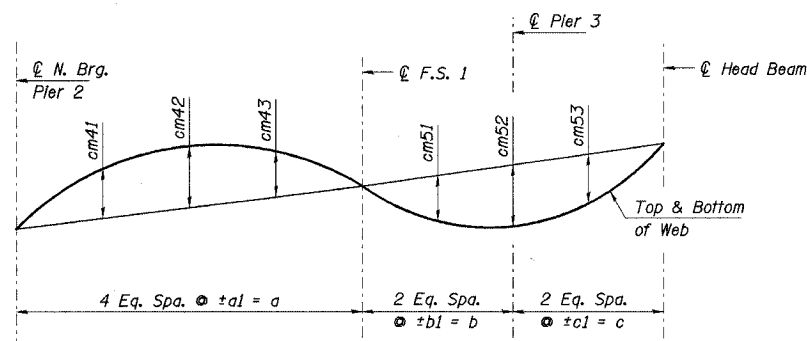


CAMBER DIAGRAM - GIRDER 5

(For dimensions a, b, c, d, e, f, g see Sheet No. 35 of 91)

CAMBER SPACING (Meters)

Girder	a1	b1	c1	d1	e1	f1
3	7.632	5.709	7.159	-	-	-
5	7.670	5.737	5.861	8.707	5.271	5.733
9	7.711	5.768	7.234	-	-	-



CAMBER DIAGRAM - GIRDERS 3 & 9

(For dimensions a, b, c see Sheet No. 35 of 91)

CAMBER VALUES

Girder	cm41	cm42	cm43	cm51	cm52	cm53	cm61	cm62	cm63	cm71	cm72	cm73
3	16	24	17	12	18	14	-	-	-	-	-	-
5	19	29	20	15	21	15	99	135	101	11	16	12
9	17	24	18	12	18	15	-	-	-	-	-	-

TOP OF WEB ELEVATIONS FOR FABRICATION (Meters) - GIRDERS 3 & 9

(Elevations are before any deflections and are to be used for fabrication only)

Girder	℄ N. Brg. Pier 2	℄ F.S. 1	℄ Pier 3	℄ Head Beam*
3	186.939	187.072	187.090	187.155
9	186.920	186.756	186.675	186.618

TOP OF WEB ELEVATIONS FOR FABRICATION (Meters) - GIRDER 5

(Elevations are before any deflections and are to be used for fabrication only)

Girder	℄ N. Brg. Pier 2	℄ F.S. 1	℄ Pier 3	℄ F.S. 2	℄ F.S. 3	℄ Pier 4	℄ F.S. 4	℄ Head Beam*
5	186.965	187.000	186.997	187.037	186.752	186.597	186.469	186.295

*Top of web elevations given at intersection of ℄ of girder and ℄ of head beam.
Dimension does not take into account coping at girder interface with head beam

BEARING SEAT ELEVATIONS (Meters)

Girder	℄ N. Brg. Pier 2	℄ Pier 3	℄ Pier 4
3	184.926	185.002	-
5	184.936	184.909	184.441
9	184.905	184.584	-

Notes:

- 1 Work this Sheet with Sheets Nos. 35, 38, 40, 42 & 43 of 91.
2. All dimensions are in millimeters (mm) except as noted.

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DESIGNED	PJE/TL
CHECKED	MA
DRAWN	LK
CHECKED	MA

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
CAMBER AND TOP OF WEB ELEVATION-2
SPAN 3-5 - UNIT 1
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 48
F. A. I. 80/94		COOK	870	562	91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		
(02033.1 & 0312-708W) R-3			CONTRACT NO. 62108		

GIRDER MOMENT TABLE					
GIRDER 11*					
	0.4 Sp.3	Pier 3	0.5 Sp.4	Pier 4	0.6 Sp.5
Is (10 ⁶ mm ⁴)	28366	50568	28366	50568	28366
Ic (n) (10 ⁶ mm ⁴)	60990	-	60990	-	60990
Ic (3n) (10 ⁶ mm ⁴)	44432	-	44432	-	44432
Ss (10 ³ mm ³)	31835	53229	31835	53229	31835
Sc (n) (10 ³ mm ³)	42531	-	42531	-	42531
Sc (3n) (10 ³ mm ³)	38342	-	38342	-	38342
Sb _l (10 ³ mm ³)	-	-	1013	2083	1013
Z (10 ³ mm ³)	-	59210	-	-	-
D (kN/m)	17.50	28.49	17.50	28.49	17.50
M _D (kN-m)	1878	7345	1729	7463	1913
s _D (kN/m)	8.55	-	8.55	-	8.55
M _{sD} (kN-m)	989	-	1130	-	997
M _l (kN-m)	2057	2508	2345	2701	1867
M (Imp) (kN-m)	387	434	469	540	467
³ S [M _l + M (Imp)] (kN-m)	4073	4903	4691	5401	3889
Ma (kN-m)	9021	15921	10335	16723	8839
M _b (kN-m)	-	-	47	34	40
Mu (kN-m)	11502	-	-	-	-
f _{sD} (non-comp) (MPa)	59	138	67	140	60
f _{sD} (comp) (MPa)	26	-	29	-	26
f _{s³S} [M _l + M (Imp)] (MPa)	96	92	110	101	91
f _l (MPa)	-	-	46	16	39
f _s (Overload) (MPa)	181	230	206	241	177
f _s (Total) (MPa)	-	299	268	313	230
F _{cr} (Overload) (MPa)	-	-	328	311	328
VR (kN)	298	-	312	-	302
F _{cr} (MPa)	-	-	283	327	283

GIRDER MOMENT TABLE					
GIRDER 5					
	0.4 Sp.3	Pier 3	0.5 Sp.4	Pier 4	0.4 Sp.5
Is (10 ⁶ mm ⁴)	28366	50568	28366	50568	28366
Ic (n) (10 ⁶ mm ⁴)	60990	-	60990	-	53680
Ic (3n) (10 ⁶ mm ⁴)	44432	-	44432	-	39632
Ss (10 ³ mm ³)	31835	53229	31835	53229	31835
Sc (n) (10 ³ mm ³)	42531	-	42531	-	40893
Sc (3n) (10 ³ mm ³)	38342	-	38342	-	36734
Sb _l (10 ³ mm ³)	-	-	1013	2083	1013
Z (10 ³ mm ³)	-	59210	-	-	-
D (kN/m)	17.50	27.56	16.35	22.11	12.71
M _D (kN-m)	1794	7028	2003	5808	68
s _D (kN/m)	12.26	-	6.73	-	4.80
M _{sD} (kN-m)	1073	-	1007	-	38
M _l (kN-m)	1955	2309	1755	1915	1067
M (Imp) (kN-m)	368	393	439	383	213
³ S [M _l + M (Imp)] (kN-m)	3872	4503	3656	3829	2134
Ma (kN-m)	8759	14990	8666	12528	2913
M _b (kN-m)	-	-	41	26	14
Mu (kN-m)	11502	-	-	-	-
f _{sD} (non-comp) (MPa)	56	132	63	109	2
f _{sD} (comp) (MPa)	28	-	26	-	1
f _{s³S} [M _l + M (Imp)] (MPa)	91	85	86	72	52
f _l (MPa)	-	-	40	13	14
f _s (Overload) (MPa)	175	217	175	181	55
f _s (Total) (MPa)	-	282	228	235	72
F _{cr} (Overload) (MPa)	-	-	328	309	328
VR (kN)	289	-	266	-	220
F _{cr} (MPa)	-	-	283	327	283

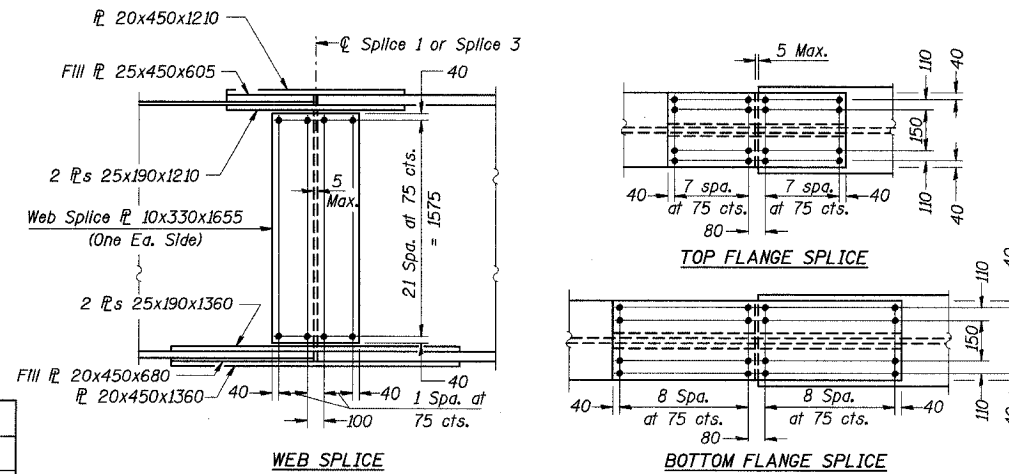
GIRDER MOMENT TABLE		
GIRDER 3 & 9		
	0.4 Sp.3	Pier 3
Is (10 ⁶ mm ⁴)	28366	50568
Ic (n) (10 ⁶ mm ⁴)	53680	-
Ic (3n) (10 ⁶ mm ⁴)	39632	-
Ss (10 ³ mm ³)	31835	53229
Sc (n) (10 ³ mm ³)	40893	-
Sc (3n) (10 ³ mm ³)	36734	-
Z (10 ³ mm ³)	-	59210
D (kN/m)	14.05	20.78
M _D (kN-m)	1648	5640
s _D (kN/m)	6.63	-
M _{sD} (kN-m)	735	-
M _l (kN-m)	1264	1027
M (Imp) (kN-m)	238	175
³ S [M _l + M (Imp)] (kN-m)	2503	2002
Ma (kN-m)	6350	9935
Mu (kN-m)	14227	-
f _{sD} (non-comp) (MPa)	52	106
f _{sD} (comp) (MPa)	20	-
f _{s³S} [M _l + M (Imp)] (MPa)	61	38
f _s (Overload) (MPa)	133	144
f _s (Total) (MPa)	-	187
VR (kN)	182	-

GIRDER REACTION TABLE				
GIRDER 11*				
	Pier 2	Pier 3	Pier 4	N. Abut.
R _D (kN)	432	1495	1462	380
R _l (kN)	234	512	528	226
Imp. (kN)	44	96	132	68
R (Total) (kN)	710	2103	2122	674

GIRDER REACTION TABLE				
GIRDER 5				
	Pier 2	Pier 3	Pier 4	Head Beam
R _D (kN)	428	1455	1172	58
R _l (kN)	228	483	361	118
Imp. (kN)	43	92	90	35
R (Total) (kN)	699	2030	1623	211

GIRDER REACTION TABLE			
GIRDER 3 & 9			
	Pier 2	Pier 3	Head Beam
R _D (kN)	317	1105	342
R _l (kN)	179	273	101
Imp. (kN)	34	51	25
R (Total) (kN)	530	1429	468

* Girder 11 has the largest forces among all girders. Parapet weight is distributed evenly among 3 exterior girders at each side although interior girders are designed with uniformly distributed parapet load.



DESIGNED	JY
CHECKED	MEA
DRAWN	LK
CHECKED	MEA

FIELD SPLICE 1, 2, 3 & 4
(Splice 1, 3 shown, Splice 2, 4 opposite hand)

F_{cr} - Critical average flange stress (smaller of F_{cr1} or F_{cr2} for partially braced flanges and F_y for continuously braced flanges) computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges (Sections 5.2, 5.3 and 5.4).

F_{cr} (Overload) - Critical average flange stress at overload computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges Section 9.5.

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total and 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 load (see AASHTO 10.38).

VR is the maximum ℓ + Impact shear range in span.

Sb_l is the section modulus for one flange plate for lateral bending.

M_D - Moment due to dead loads on non-composite section.

M_{sD} - Moment due to dead loads on composite section.

M_l - Moment due to live load on non-composite or composite section.

M (Imp) - Moment due to live load impact on non-composite or composite section

M_b is the lateral bending moment for flange plate (factored).

Ma (Applied Moment) = 1.3 [M_D + M_{sD} + 5/3 (M_l + M (Imp))]

f_s (Overload) is the sum of stresses due to M_D + M_{sD} + 5/3 (M_l + M (Imp))

f_s (Total) is the sum of stresses due to 1.3 [M_D + M_{sD} + 5/3 (M_l + M (Imp))]

f_l is the calculated normal stress at the edge of flange due to lateral bending (factored).

M_l and R_l include the effects of centrifugal force and superelevation.

Z is the plastic section modulus used to determine the Fully Plastic Moments in the non-composite areas.

The Plastic Moment capacity (Mu) is computed according to AASHTO 10.48.1 & 10.50.1.1.

Notes:

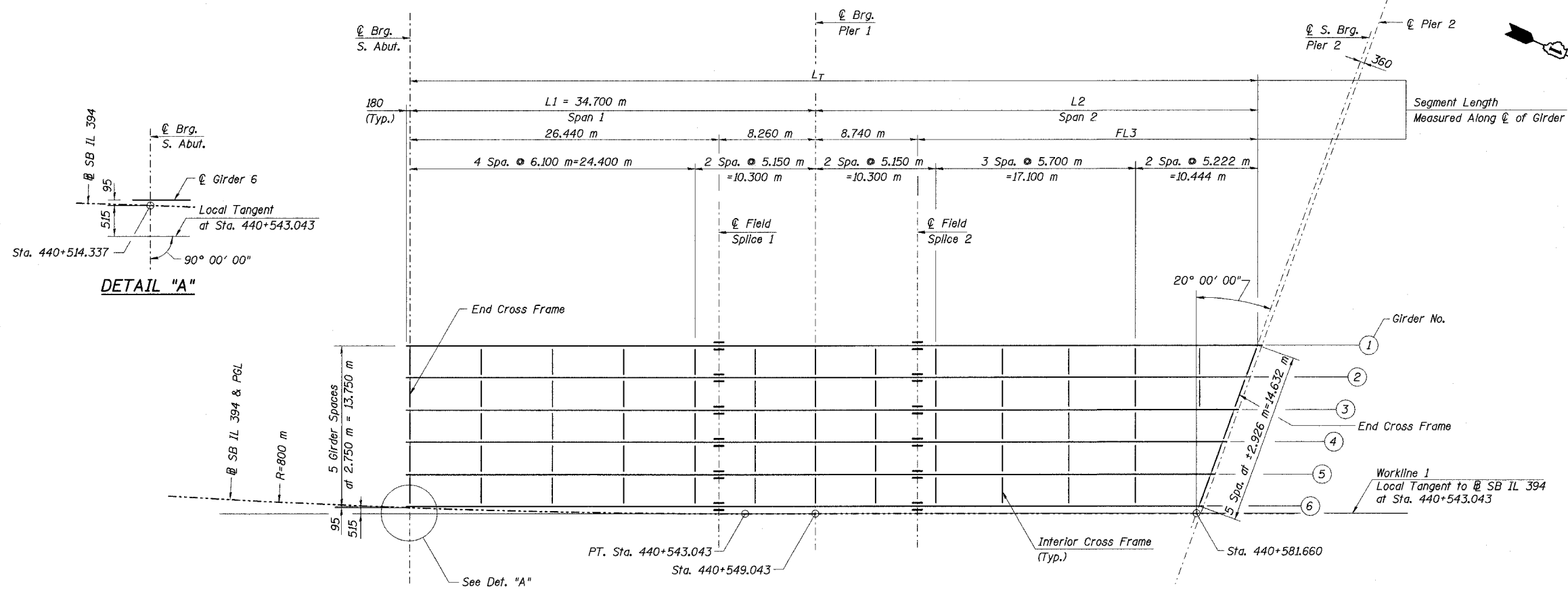
- All field splice plates, except fill plates to be AASHTO M270M, Grade 345 and meet N.T.R.
- N.T.R. denotes plates to which notch toughness requirements are applicable.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
MOMENT & REACTION TABLES & FIELD SPLICES, SPANS 3-5 - UNIT 1
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 49
F. A. I. 80/94	*	COOK	870	563	91 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
02033.1 & 0312-708W R-3			CONTRACT NO. 62108		



FRAMING PLAN

GIRDER DIMENSIONS (Meters)

Girder	Span 2		LT
	FL3	L2	
1	29.104	37.844	72.544
2	28.103	36.843	71.543
3	27.102	35.842	70.542
4	26.101	34.841	69.541
5	25.100	33.840	68.540
6	24.099	32.839	67.539

Notes:

- All dimensions are in millimeters (mm) except noted otherwise.
- Work this sheet with Sheets Nos. 50, & 51 of 91.

DESIGNED	MEA
CHECKED	JY
DRAWN	LK
CHECKED	JY

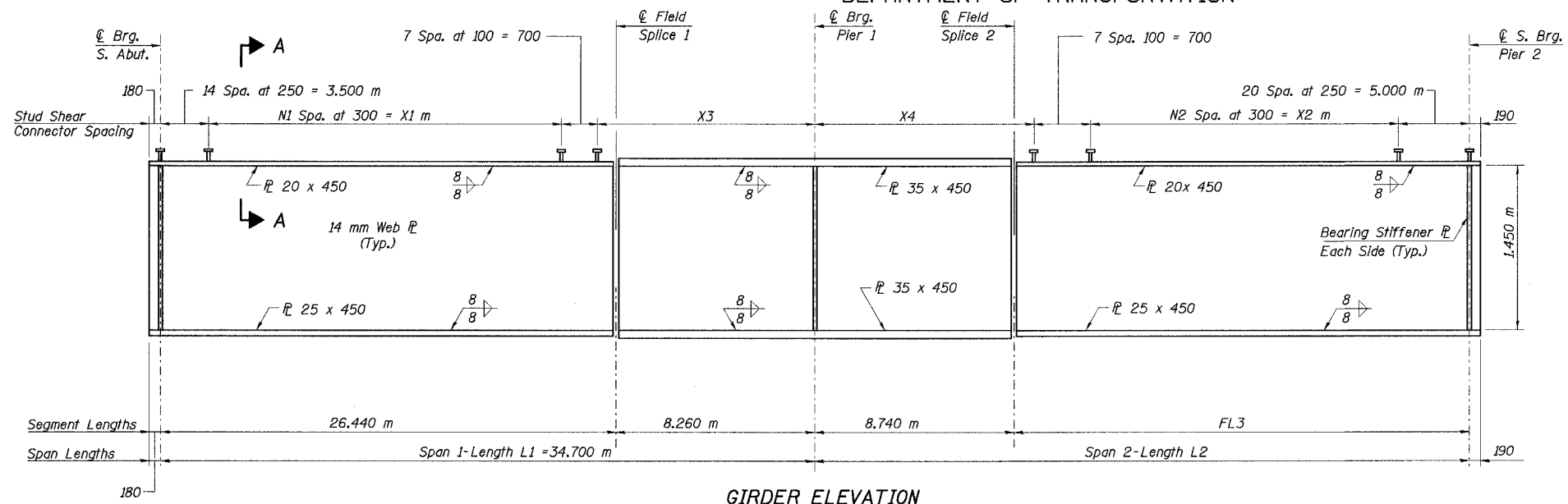
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
FRAMING PLAN
SPANS 1 & 2 - UNIT 2
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

HNTB

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 50
F. A. I. 80/94		COOK	870	564	91 SHEETS
FILL ROAD DIST. NO. 1		ILLINOIS FILL AID PROJECT-			
102033.1 & 0312-708W R-3			CONTRACT NO. 62108		



GIRDER ELEVATION

(All Plates AASHTO M270M Grade 345, N.T.R.)
"N.T.R." denotes notch toughness requirements are applicable

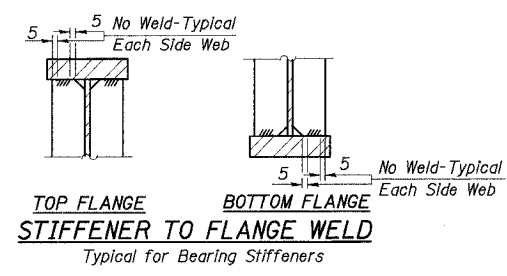
INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp.1	Pier	0.6 Sp.2
I_s	(10 ⁶ mm ⁴)	14,469	20,926	14,469
$I_c(n)$	(10 ⁶ mm ⁴)	33,450	---	33,450
$I_c(3n)$	(10 ⁶ mm ⁴)	24,487	---	24,487
S_s	(10 ³ mm ³)	20,421	27,534	20,421
$S_c(n)$	(10 ³ mm ³)	27,501	---	27,501
$S_c(3n)$	(10 ³ mm ³)	25,053	---	25,053
Z	(10 ³ mm ³)	---	30,747	---
D	(kN·m)	17.51	27.42	17.51
$M\bar{Q}$	(kN·m)	1,215	4,183	1,503
$s\bar{Q}$	(kN·m)	8.91	---	8.91
$M_s\bar{Q}$	(kN·m)	687	---	848
$M\bar{L}$	(kN·m)	1,652	1,435	1,769
$M(Imp)$	(kN·m)	347	301	371
$\bar{S}_s[M\bar{L} + M(Imp)]$	(kN·m)	3,332	2,893	3,567
M_a	(kN·m)	6,804	9,199	7,693
M_u	(kN·m)	8,544	---	8,544
$f_s\bar{Q}(non-comp)$	(MPa)	59	152	74
$f_s\bar{Q}(comp)$	(MPa)	27	---	34
$f_s\bar{S}_s[M\bar{L} + M(Imp)]$	(MPa)	121	105	130
$f_s(Overload)$	(MPa)	207	257	238
$f_s(Total)$	(MPa)	---	334	---
VR	(kN)	295	---	302

SHEAR CONNECTOR NUMBERS

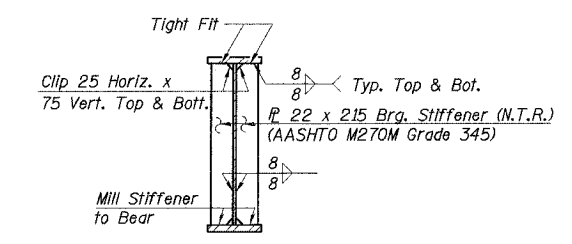
Girder	N1	N2
1	69	76
2	69	72
3	69	69
4	71	66
5	71	62
6	71	59

SHEAR CONNECTOR LOCATIONS (Meters)

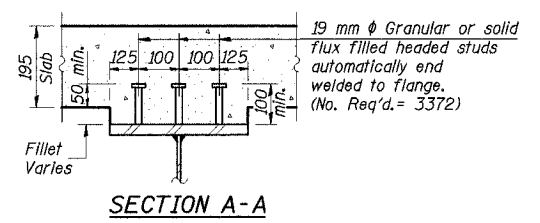
Girder	X1	X2	X3	X4
1	20.700	22.800	9.800	9.344
2	20.700	21.600	9.800	9.543
3	20.700	20.700	9.800	9.442
4	21.300	19.800	9.200	9.341
5	21.300	18.600	9.200	9.540
6	21.300	17.700	9.200	9.439



TOP FLANGE STIFFENER TO FLANGE WELD
(Typical for Bearing Stiffeners)



BEARING STIFFENERS
(At Piers 1 & 2 & S. Abut.)



- Notes:
- For Dimensions L2 & FL3, see Sheet No. 49 of 91.
 - All Field Splice Plates, except Fill Plates, shall be AASHTO M270M Grade 345 and shall meet the Notch Toughness Requirements (N.T.R.).
 - All dimensions are in millimeters (mm) except noted otherwise.

INTERIOR GIRDER REACTION TABLE				
	S. Abut.	Pier 1	Pier 2	
$R\bar{Q}$	(kN)	310	1,124	353
$R\bar{L}$	(kN)	247	453	251
$Imp.$	(kN)	52	63	53
$R(Total)$	(kN)	609	1,640	657

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total and 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 load (see AASHTO 10.38).

VR is the maximum $L + Impact$ shear range within the composite portion of the span.

Z is the plastic section modulus used to determine the Fully Plastic Moments in the non-composite areas.

The Plastic Moment capacity (M_u) is computed according to AASHTO 10.48.1 & 10.50.1.1.

$f_s(Total)$ is the sum of stresses due to $1.3[M\bar{Q} + M_s\bar{Q} + 5/3(M\bar{L} + M(Imp))]$

$f_s(Overload)$ is the sum of the stressed due to $M\bar{Q} + M_s\bar{Q} + 5/3(M\bar{L} + M(Imp))$

$M\bar{Q}$ - Moment due to dead loads on non-composite section.

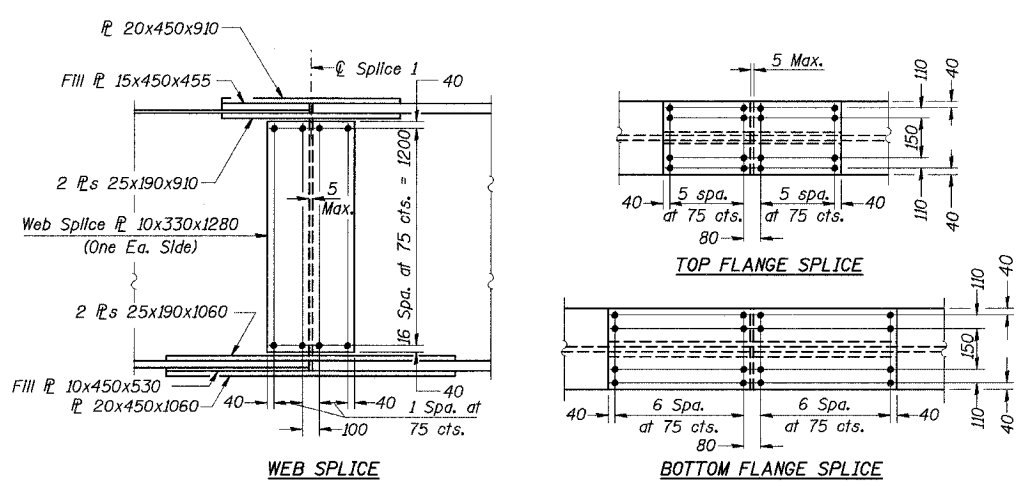
$M_s\bar{Q}$ - Moment due to dead loads on composite section

$M\bar{L}$ - Moment due to live load on non-composite or composite section

$M(Imp)$ - Moment due to live load impact on non-composite or composite section

M_a (Applied Moment) = $1.3[M\bar{Q} + M_s\bar{Q} + 5/3(M\bar{L} + M(Imp))]$

Forces in Moment Table are taken from the Girder producing the maximum forces. (Girder 2).



FIELD SPLICE 1 & 2
(Splice 1 shown, Splice 2 opposite hand)

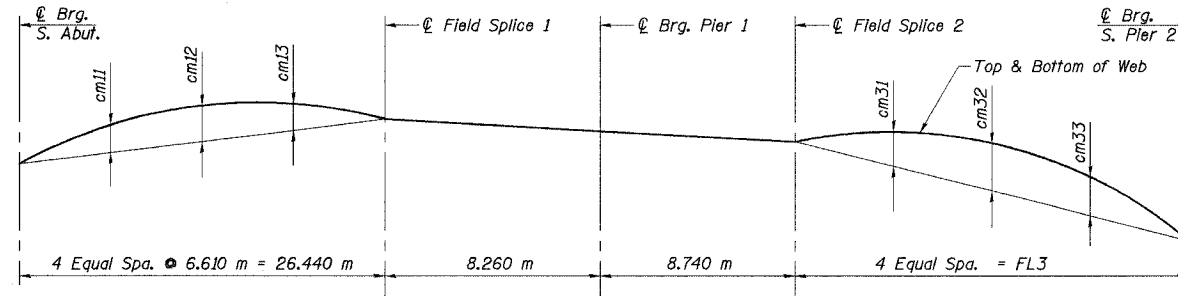
DESIGNED	MEA
CHECKED	JY
DRAWN	LK
CHECKED	JY

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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
GIRDER ELEVATION & DETAILS
SPANS 1 & 2 - UNIT 2
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 51 91 SHEETS
F. A. I. 80/94		COOK	870	565	
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		CONTRACT NO. 62108	



CAMBER DIAGRAM

CAMBER VALUES

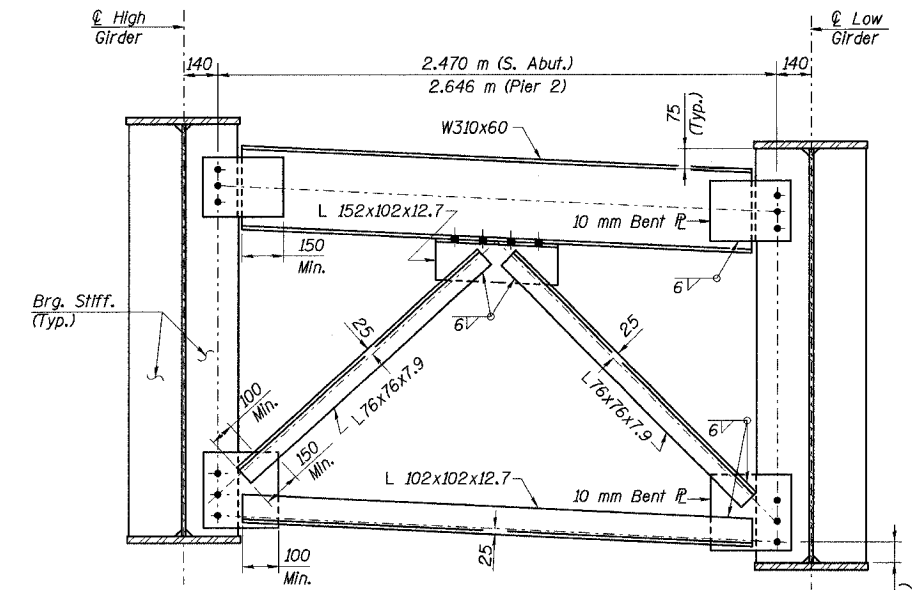
Girder	from C. Brg. S. Abut. to C. Sp. 1			from C. Splice 2. to C. S. Brg. Pier 2		
	cm11	cm12	cm13	cm31	cm32	cm33
1	15	20	14	31	47	35
2	16	23	15	28	43	31
3	17	24	16	24	35	26
4	17	24	17	22	32	22
5	18	25	17	19	27	19
6	19	25	18	16	21	16

TOP OF WEB ELEVATIONS FOR FABRICATION (Meters)
(Elevations are before any deflections and are to be used for fabrication only)

Girder	C. Brg. S. Abut.	C. F.S. 1	C. Pier 1	C. F.S. 2	C. Brg. S. Pier 2
1	186.891	186.868	186.886	186.901	186.938
2	187.024	186.950	186.949	186.944	186.927
3	187.156	187.030	187.012	186.987	186.919
4	187.288	187.112	187.074	187.029	186.916
5	187.420	187.193	187.137	187.071	186.916
6	187.551	187.272	187.200	187.114	186.920

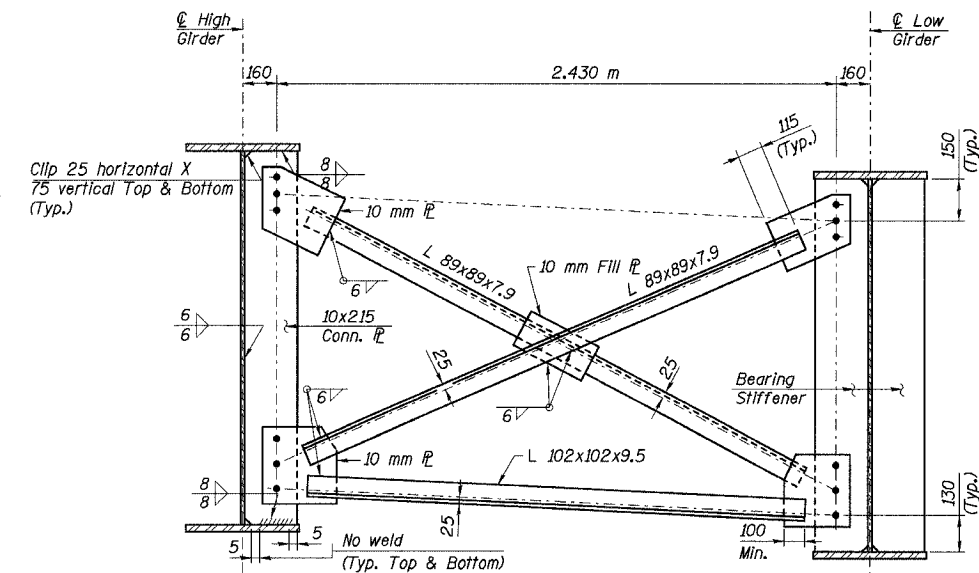
BEARING SEAT ELEVATIONS (Meters)

Girder	C. Brg. S. Abut.	C. Pier 1	C. S. Brg. Pier 2
1	185.273	185.273	185.282
2	185.406	185.336	185.282
3	185.538	185.399	185.282
4	185.670	185.461	185.282
5	185.802	185.524	185.282
6	185.933	185.587	185.282



END CROSS FRAME

(At South Abutment and Pier 2)
(All Materials AASHTO M270M Grade 345, N.T.R.)



AT CONNECTION PLATE

AT BEARING STIFFENER

INTERIOR CROSS FRAME

(At Pier 1 and within span)
(All Materials AASHTO M270M Grade 345, N.T.R. except Fill P)

- Notes:
- All dimensions are in millimeters (mm) except as noted.
 - All cross frame connections to have 28 mm ϕ oversized holes for all M22 H.S. Bolts.
 - Two hardened washers shall be required over each oversized hole.
 - See Sheet No. 50 of 91 for bearing stiffener details.
 - N.T.R. denotes members to which notch toughness requirements are applicable.
 - For Dimension FL3 see Sht. No. 49 of 91.

DESIGNED	MEA
CHECKED	JY
DRAWN	LK
CHECKED	JY

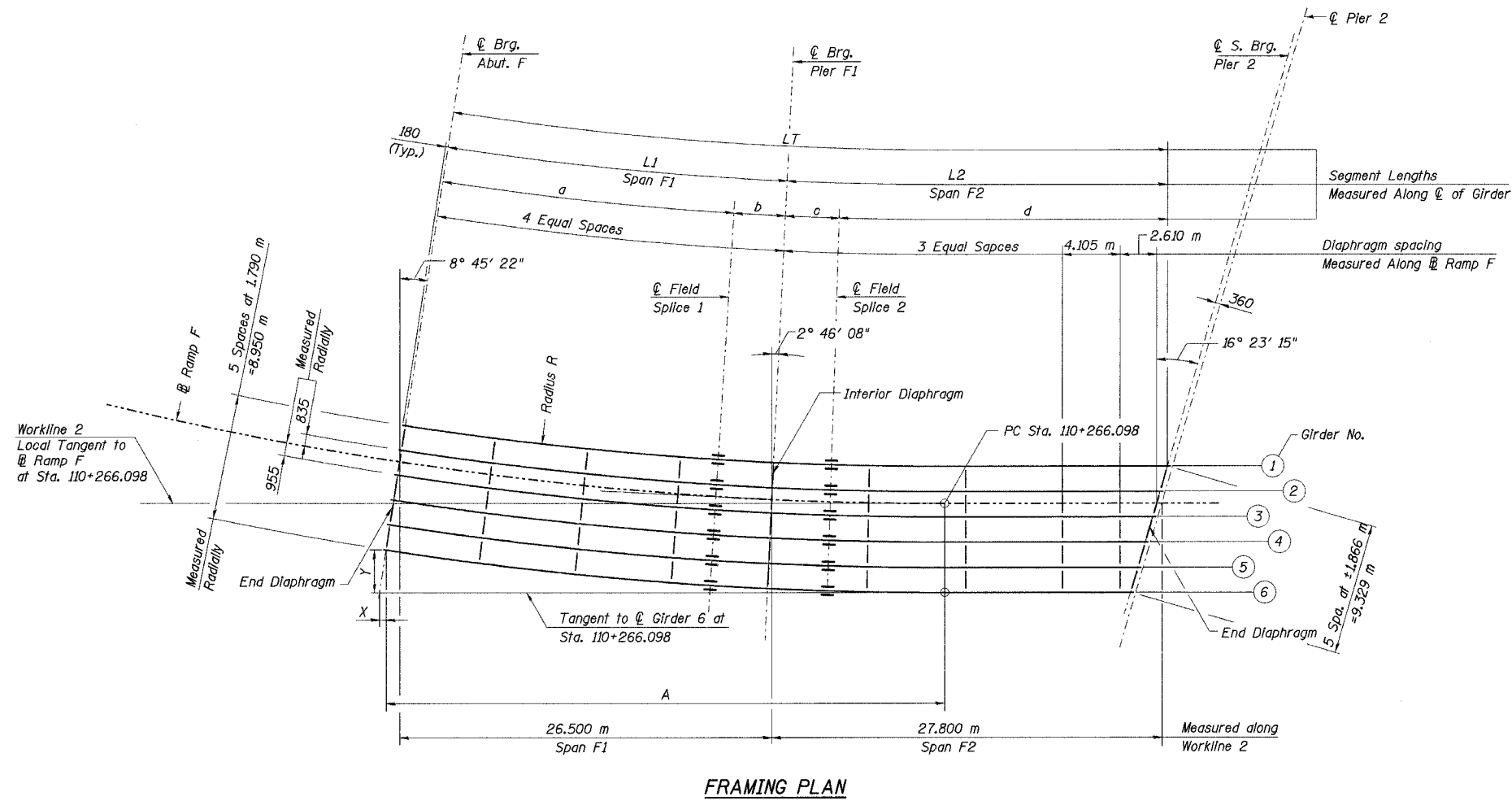
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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
CAMBER, TOP OF WEB ELEVATIONS & CROSS FRAME DETAILS - UNIT 2
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 52
F. A. 1.	*	COOK	870	566	91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-		CONTRACT NO. 62108	
(0203.1 & 0312-708W) R-3					



GIRDER DIMENSIONS (Meters)

Girder	Radius R	A	Span F1		Span F2		LT		
			a	b	c	d			
1	252.375	38.419	22.431	3.942	26.373	4.130	23.945	28.075	54.448
2	254.165	38.692	22.590	3.970	26.560	4.159	23.475	27.634	54.194
3	255.955	38.964	22.749	3.998	26.747	4.188	23.006	27.194	53.941
4	257.745	39.237	22.908	4.026	26.934	4.217	22.538	26.755	53.689
5	259.535	39.509	23.067	4.054	27.121	4.247	22.068	26.315	53.436
6	261.325	39.782	23.226	4.082	27.308	4.276	21.599	25.875	53.183
Ramp F	255.000	-	-	-	26.647	-	-	27.429	54.076

LAYOUT DIMENSIONS (Meters)

Girder	C. Brg. Pier 2		Splice 2		C. Pier F1		Splice 1		C. Brg. Abut. F	
	X	Y	X	Y	X	Y	X	Y	X	Y
1	0.000	0.000	0.004	0.129	0.014	0.295	0.033	0.516	0.453	2.941
2	0.000	0.000	0.004	0.130	0.014	0.297	0.033	0.519	0.456	2.962
3	0.000	0.000	0.004	0.131	0.014	0.299	0.033	0.523	0.459	2.983
4	0.000	0.000	0.004	0.132	0.015	0.301	0.034	0.527	0.463	3.004
5	0.000	0.000	0.004	0.133	0.015	0.303	0.034	0.530	0.466	3.025
6	0.000	0.000	0.004	0.133	0.015	0.305	0.034	0.534	0.469	3.046

Notes:

- Coordinate system (x, y) shown in Framing Plan is for Girder 6. Typical for all Girders with local tangent to each girder at Sta. 110+266.098 @ Ramp F.
- Place all interior diaphragms radially.
- All dimensions are in millimeters (mm) except noted otherwise.
- Work this Sheet with Sheet Nos. 53, & 54 of 91.

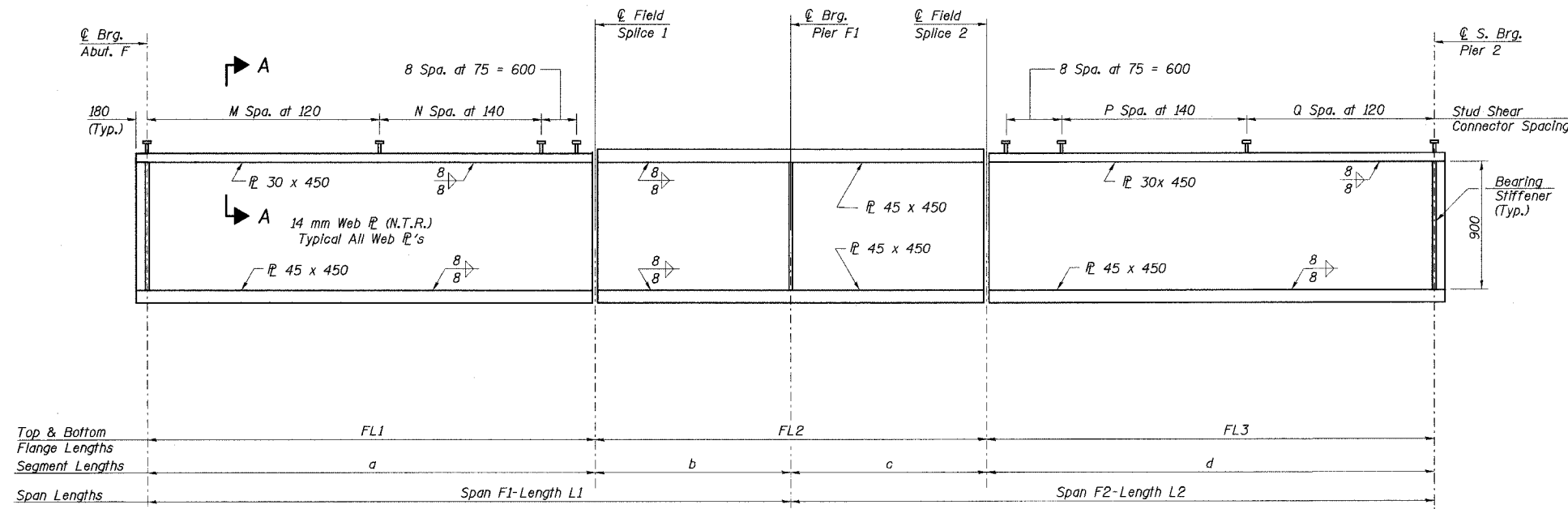
DESIGNED	ML
CHECKED	MAS
DRAWN	LK
CHECKED	MAS

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
FRAMING PLAN
SPANS F1 & F2 - UNIT 3
RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2845
DATE JUL 18, 2005
SCALE ---
HNTB

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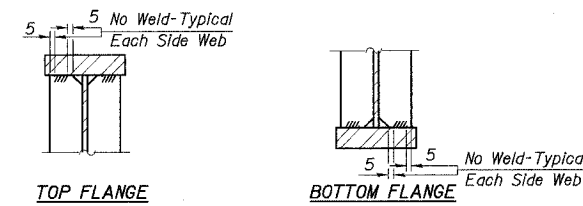
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 53 91 SHEETS
F. A. I. 80/94	.	COOK	870	567	
ILLINOIS FED. AID PROJECT-					
CONTRACT NO. 62108					



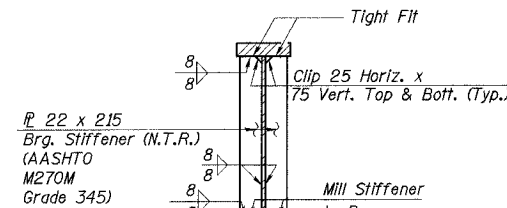
GIRDER ELEVATION

(All Plates shall be N.T.R.)
"N.T.R." denotes notch
toughness requirements are applicable



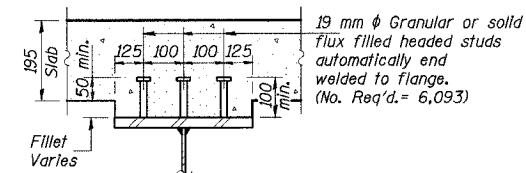
STIFFENER TO FLANGE WELD

Typical for Bearing Stiffeners



AT PIERS F1 & 2 & ABUTMENT F

BEARING STIFFENERS



Notes:

- For Span Lengths L1, L2 & Segment Lengths a thru d, see Sheet No. 52 of 91.
- All Flange Plates & Web Plates shall be AASHTO M270M Grade 345.
- All Field Splice Plates, except Fill Plates, shall be AASHTO M270M Grade 345 and shall meet the Notch Toughness Requirements (N.T.R.).
- All dimensions are in millimeters (mm) except noted otherwise.

	INTERIOR GIRDER MOMENT TABLE			
		0.4 Sp.F1	Pier	0.6 Sp.F2
I_s	(10^6 mm ⁴)	8,116	9,885	8,116
I_c (n)	(10^6 mm ⁴)	19,602	-	19,602
I_c (3n)	(10^6 mm ⁴)	13,621	-	13,621
S_s	(10^3 mm ³)	19,075	19,976	19,075
S_c (n)	(10^3 mm ³)	25,859	-	25,859
S_c (3n)	(10^3 mm ³)	23,270	-	23,270
S_{b1}	(10^3 mm ³)	1,516	-	1,516
ρ	(kN/m)	12.6	17.4	12.6
M_R	(kN-m)	701	1,751	730
s_R	(kN/m)	5.3	-	5.3
M_{sR}	(kN-m)	309	-	346
M_L	(kN-m)	1,153	911	1,114
M (Imp)	(kN-m)	289	228	279
$S_2[M_L + M(\text{Imp})]$	(kN-m)	2,403	1,897	2,322
M_a	(kN-m)	4,436	4,742	4,417
M_{b1}	(kN-m)	3	-	-
f_{sR} (non-comp)	(MPa)	37	88	38
f_{sR} (comp)	(MPa)	13	-	15
f_{s2} [$M_L + M(\text{Imp})$]	(MPa)	93	95	90
f_t	(MPa)	1.8	-	-
f_s (Overload)	(MPa)	143	183	143
f_s (Total)	(MPa)	186	238	186
F_{cr} (Overload)	(MPa)	327	223	327
VR	(kN)	498	-	498
F_{cr}	(MPa)	345	305	345

	INTERIOR GIRDER REACTION TABLE			
	Ramp F Abut.	Pier F1	Pier 2	
R_R	(kN)	180	605	198
R_L	(kN)	225	285	208
$Imp.$	(kN)	67	86	62
R (Total)	(kN)	472	976	468

For - Critical average flange stress (smaller of F_{cr1} or F_{cr2} for partially braced flanges and F_y for continuously braced flanges) computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges (Sections 5.2, 5.3 and 5.4).

For (Overload) - Critical average flange stress at overload computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges Section 9.5.

I_s and S_s are the moment of Inertia and section modulus of the steel section used in computing f_s (Total and 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 load (see AASHTO 10.38).

VR is the maximum \pm impact shear range in span.

M_a (Applied Moment) = $1.3 [M_R + M_{sR} + 5/3 (M_L + M (\text{Imp}))]$

f_s (Overload) is the sum of stresses due to $M_R + M_{sR} + 5/3 (M_L + M (\text{Imp}))$

f_s (Total) is the sum of stresses due to $1.3 [M_R + M_{sR} + 5/3 (M_L + M (\text{Imp}))]$

S_{b1} is the section modulus for one flange plate for lateral flange bending.

M_{b1} is the lateral bending moment for flange plate (factored).

f_t is the calculated normal stress at the edge of flange due to lateral bending (factored).

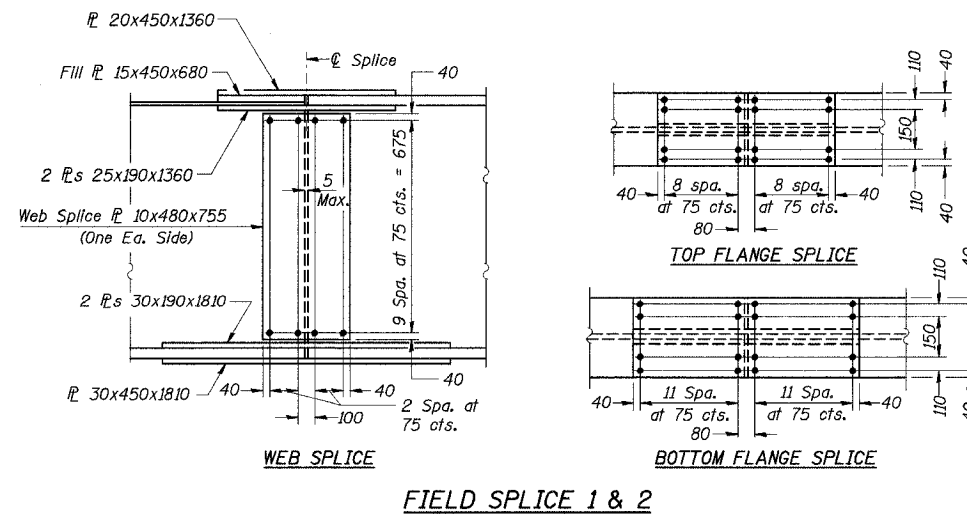
M_L and R_L include the effects of centrifugal force and superelevation.

SHEAR CONNECTOR NUMBERS

Girder	Span F1		Span F2	
	M	N	P	Q
1	64	93	100	69
2	65	94	98	68
3	65	94	95	66
4	66	95	93	65
5	67	97	90	64
6	67	97	88	63

GIRDER TOP AND BOTTOM FLANGE LENGTHS (Meters)

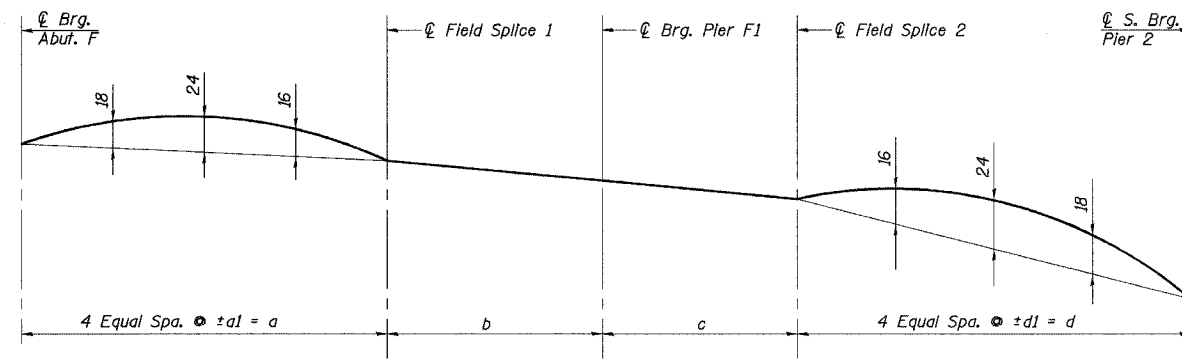
Girder	FL1	FL2	FL3
	1	22.431	8.072
2	22.590	8.129	23.475
3	22.749	8.186	23.006
4	22.908	8.243	22.538
5	23.067	8.301	22.068
6	23.226	8.358	21.599



DESIGNED	ML
CHECKED	MAS
DRAWN	LK
CHECKED	MAS

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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
GIRDER ELEVATION & DETAILS
SPAN F1 & F2 - UNIT 3
RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2845
DATE JUL 18, 2005
SCALE ---
HNTB



CAMBER DIAGRAM
(For dimensions a, b, c, and d, see Sheet No. 52 of 91).

TOP OF WEB ELEVATIONS FOR FABRICATION (Meters)
(Elevations are before any deflections and are to be used for fabrication only)

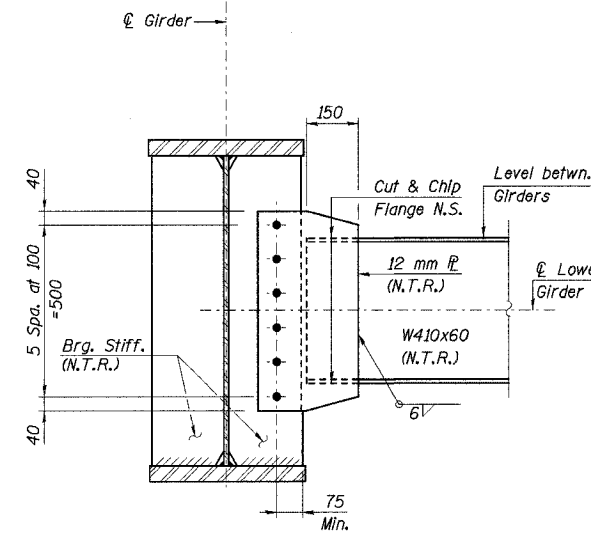
Girder	℄ Brg. Abut. F	℄ F.S. 1	℄ Pier F1	℄ F.S. 2	℄ S. Brg. Pier 2
1	186.307	186.454	186.500	186.548	186.862
2	186.415	186.555	186.591	186.629	186.886
3	186.522	186.656	186.683	186.710	186.913
4	186.629	186.757	186.774	186.792	186.941
5	186.737	186.856	186.864	186.873	186.972
6	186.759	186.868	186.875	186.882	186.969

CAMBER SPACING (Meters)

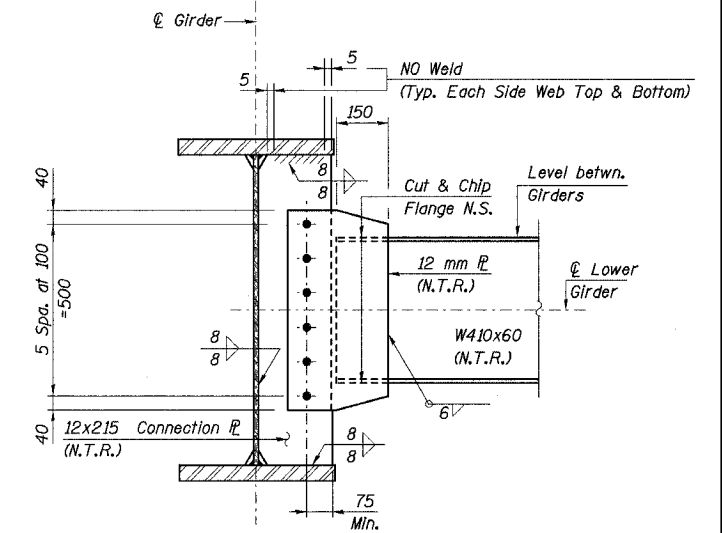
Girder	a1	d1
1	5.608	5.986
2	5.648	5.869
3	5.687	5.752
4	5.727	5.635
5	5.767	5.517
6	5.807	5.400

BEARING SEAT ELEVATIONS (Meters)

Girder	℄ Brg. Abut. F	℄ Pier F1	℄ S. Brg. Pier 2
1	185.235	185.457	185.790
2	185.343	185.548	185.814
3	185.450	185.640	185.841
4	185.557	185.731	185.869
5	185.665	185.821	185.897
6	185.687	185.821	185.897



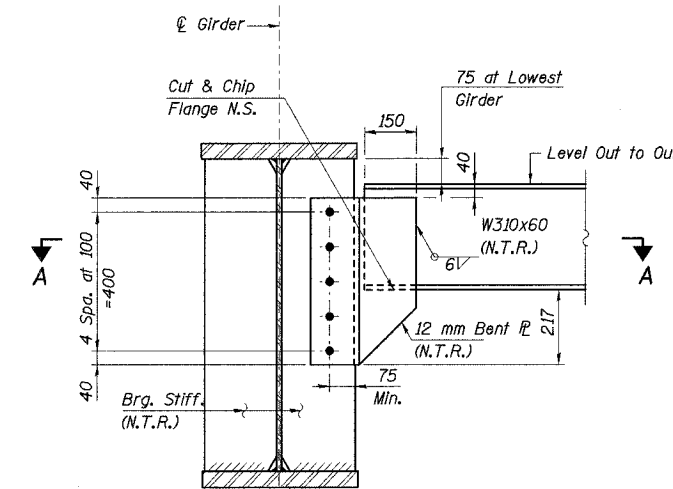
AT BEARING STIFFENER



AT CONNECTION PLATE

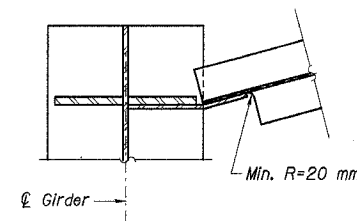
INTERIOR DIAPHRAGM

(At Pier F1 and within Span F1 & F2)
(AASHTO M270M Grade 345, N.T.R.)



END DIAPHRAGM

(At Pier 2 and Abut. F)
(AASHTO M270M Grade 345, N.T.R.)



SECTION A-A

(At Pier 2)

Notes:

- All dimensions are in millimeters (mm) except as noted.
- See Sheet No. 53 of 91 for bearing stiffener details and weld requirements.
- N.T.R. denotes members to which notch toughness requirements are applicable.
- All diaphragm connections to have 28 mm φ oversized holes for all M22 H.S. bolts.
- Two hardened washers shall be required over all oversized holes.

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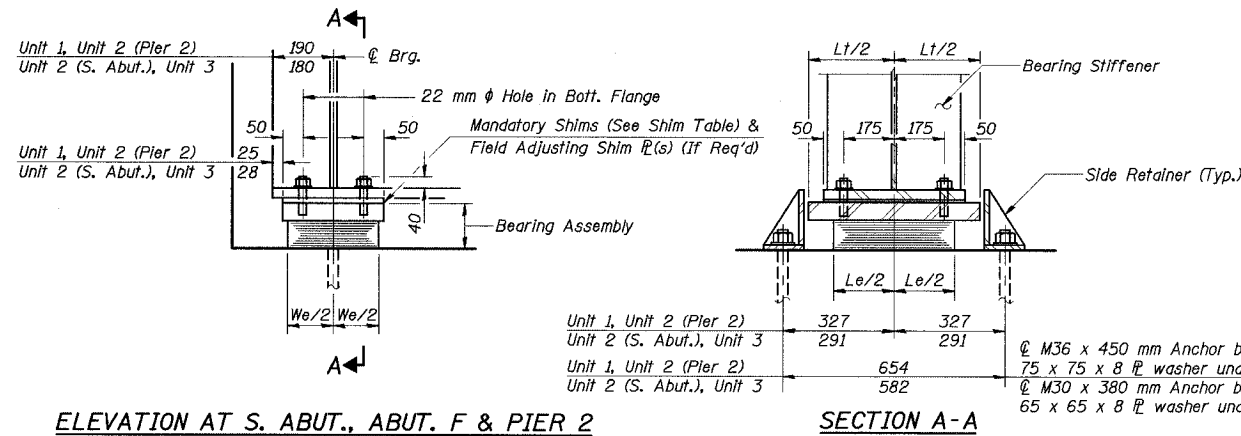
DESIGNED	ML/PJE
CHECKED	MAS
DRAWN	LK
CHECKED	MAS

ILLINOIS DEPARTMENT OF TRANSPORTATION
1-94 EAST BOUND / IL 394 SOUTH BOUND
**CAMBER, TOP OF WEB ELEVATIONS,
& DIAPHRAGM DETAILS - UNIT 3**
RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-T08W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2845
DATE JUL 18, 2005
SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 55 91 SHEETS
F. A. I. 80/94	.	COOK	870	569	
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		CONTRACT NO. 62108
(0203.1 & 0312-708W) R-3					

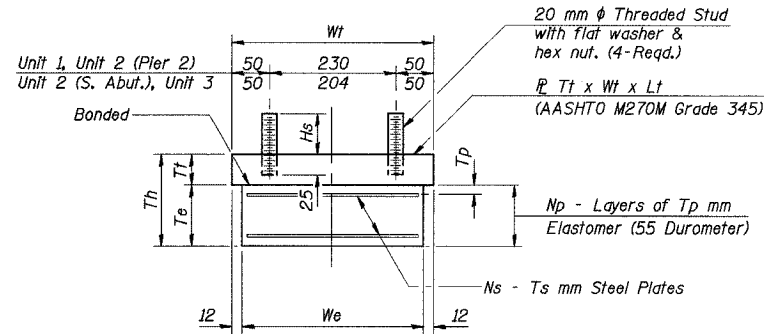


ELEVATION AT S. ABUT., ABUT. F & PIER 2
(Looking West)
(Bearings at Abutments shown, Bearings at Piers similar)

SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

(S. Abut., Abut. F, Pier 2)



BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.

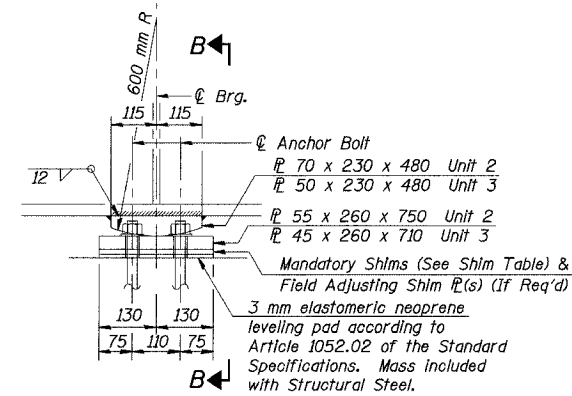
Notes: Anchor bolts at fixed bearings may be built into the masonry. See sheet No. 60 of 91 sheets for Anchor Bolt Installation. All dimensions are in millimeters (mm) except as noted.

TYPE I ELASTOMERIC EXP. BRG. LOCATIONS

Unit	Location	No. of Brgs. Req'd
1	Pier 2, G5	12
2	S. Abut.	6
2	Pier 2	6
3	Abut. F	6
3	Pier 2	6

SHIM TABLE

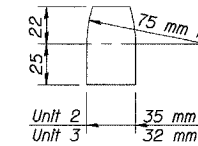
Unit	Location	Shim
1	Pier 2, G5	16
1	Pier 2, G7	18
1	Pier 2, G8	8
1	Pier 2, G9	2
1	Pier 2, G12	3
2	Pier 2, G1	22
2	Pier 2, G2	11
2	Pier 2, G3	3
2	Pier 2, G6	4
3	Pier F1, G6	11
3	Pier 2, G5	3



ELEVATION AT PIERS 1 & F1

FIXED BEARING

(Pier 1, Pier F1)
(Structural Steel AASHTO M 270M Grade 345, Mass Included with Erecting Structural Steel)



PINTLE

LOW PROFILE FIXED BRG. LOCATIONS

Unit	Location	No. of Brgs. Req'd
2	Pier 1	6
3	Pier F1	6

ELASTOMERIC BEARING ASSEMBLY DIMENSIONS

Member	Dimension	Unit				
		1 Pier 2	2 S. Abut.	2 Pier 2	3 Abut. F	3 Pier 2
Top Plate	Lt	508	456	508	456	456
	Wt	330	304	330	304	304
	Tt	55	50	50	50	50
Bearing	Le	458	406	458	406	406
	We	306	280	306	280	280
	Te	128	93	109	77	77
	Tp	14	13	14	13	13
	Np	7	6	6	5	5
	Ts	5	3	5	3	3
	Ns	6	5	5	4	4
Side Retainer	Th	183	143	159	127	127
	y	70	60	70	60	60
	z	140	120	140	120	120
	t	16	14	16	14	14
	h	44	38	44	38	38
Threaded Stud	Hr	179	141	155	125	125
	Hs	76	71	71	91	91

BILL OF MATERIAL

Item	Unit	Quantity
Erecting Elastomeric Bearing Assembly, Type I (IDOT)	Each	24
Erecting Elastomeric Bearing Type I (800 In ³ < V < 1000 In ³) (ISTHA)	Each	12

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
ELASTOMERIC EXP. BRGS. TYPE I & LOW PROFILE FIXED BRGS.
SB IL ROUTE 394 / RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800/2845
DATE JUL 18, 2005
SCALE ---

HNTB

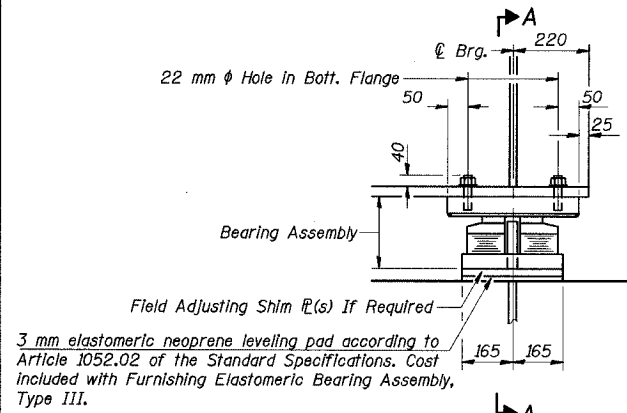
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DESIGNED	TRL
CHECKED	JJK
DRAWN	LK
CHECKED	JJK

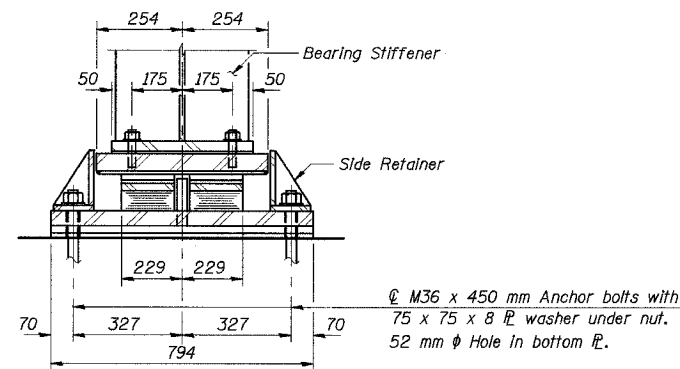
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
Mass Included with Erecting Structural Steel for Units 1 and 2.
Mass Included with Erecting Elastomeric Bearing Type I (800 In³ < V < 1000 In³) for Unit 3.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 56
F. A. I. 80/94		COOK	870	570	91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		
(0203.1 & 0312-708W) R-3			CONTRACT NO. 62108		



ELEVATION AT N. ABUT.
(Looking West)

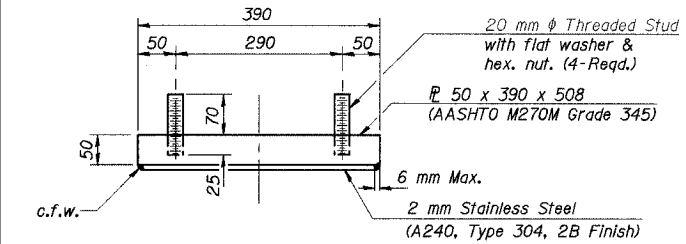


SECTION A-A

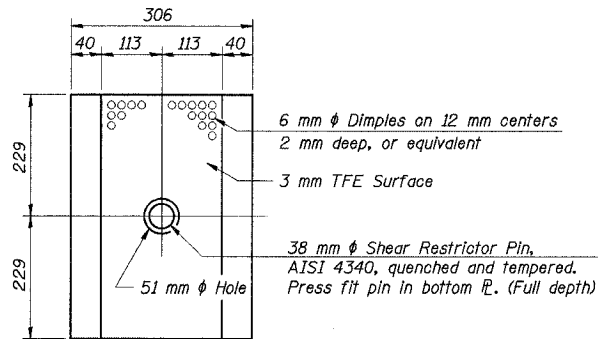
3 mm elastomeric neoprene leveling pad according to Article 1052.02 of the Standard Specifications. Cost included with Furnishing Elastomeric Bearing Assembly, Type III.

TYPE III ELASTOMERIC EXP. BRG.
(N. Abut.)

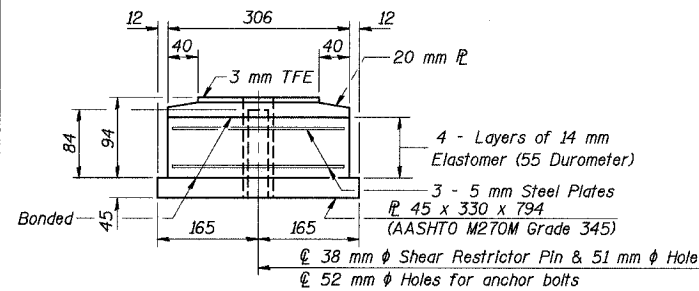
Notes: See sheet No. 60 of 91 for Anchor Bolt installation.
All dimensions are in millimeters (mm) except as noted.



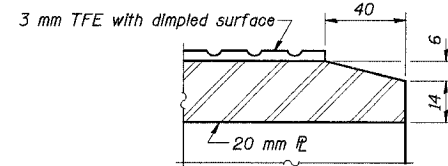
TOP BEARING ASSEMBLY



PLAN-TFE ELASTOMERIC BRG.

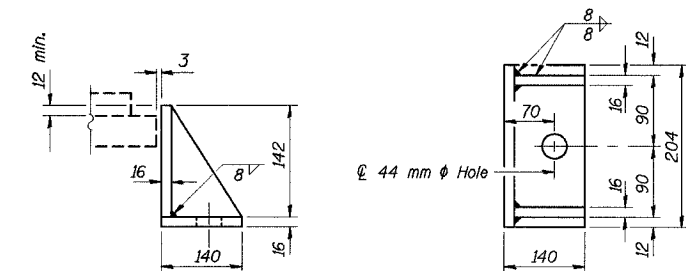


BOTTOM BEARING ASSEMBLY



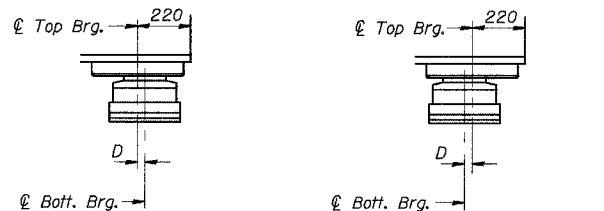
SECTION THRU TFE

Notes: The 3 mm TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces. Bonding of 3 mm TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.
All dimensions are in millimeters (mm) except as noted.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Mass included with Erecting Structural Steel.



TYPE III ELASTOMERIC EXP. BRG. LOCATIONS

Unit	Location	No. of Brgs. Req'd
1	N. Abut.	9

BELOW 10 °C (Looking West)
(Move bott. brg. away from fixed brg.)

ABOVE 10 °C (Looking West)
(Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D = 1 mm per each 10 m of expansion for every 8 °C temp. change from the normal temp. of 10 °C.

DESIGNED	TRL
CHECKED	JJK
DRAWN	LK
CHECKED	JJK

BILL OF MATERIAL

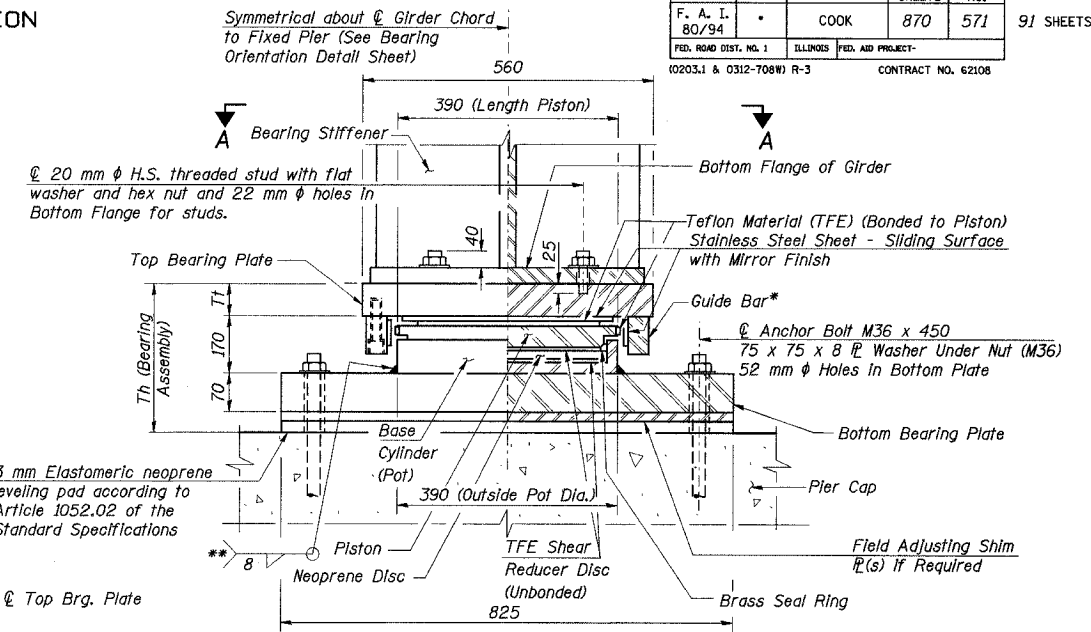
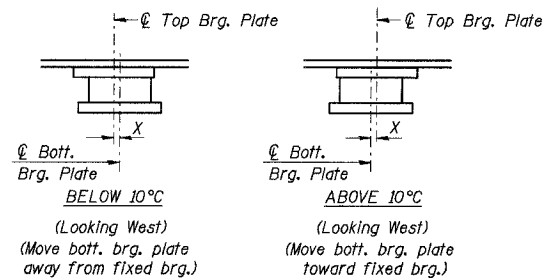
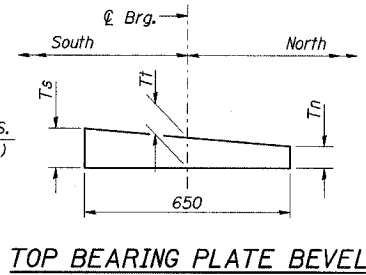
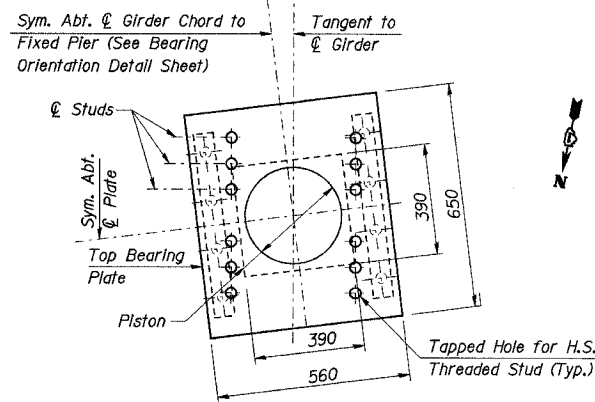
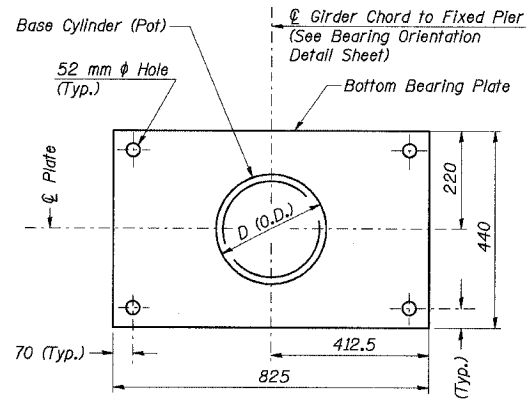
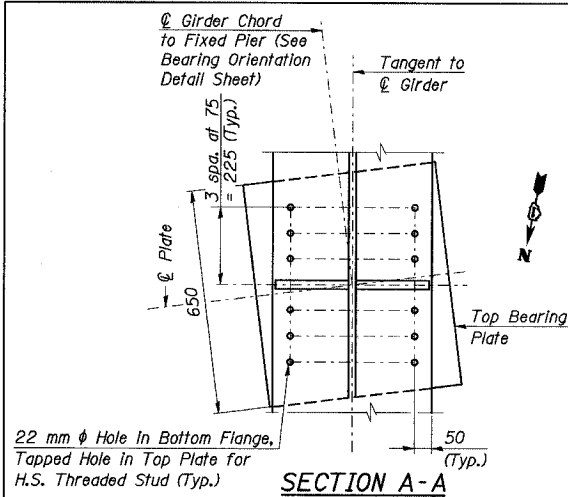
Item	Unit	Quantity
Erecting Elastomeric Bearing Assembly, Type III	Each	9

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
ELASTOMERIC EXPANSION BEARINGS TYPE III
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---
HNTB

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 57
F. A. I. 80/94	*	COOK	870	571	91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-		CONTRACT NO. 62108	
02033.1 & 0312-708W R-3					



HALF SECTION THRU GUIDED EXPANSION BEARING
(Pier 4)

Note: T_t and T_h are measured at \bar{C} Bearing
 T_h includes 3 mm elastomeric neoprene mat.

* As alternatives to the bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds or the guide bars and top bearing plate may be fabricated as a single piece.

** Weld may be omitted if base cylinder is recessed into bottom bearing plate.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Erecting Floating Bearings, Guided Expansion, 2000 kN	Each	10

- Notes:
- All dimensions are in millimeters (mm) except as shown.
 - The structural steel for the top and bottom bearing plates shall be AASHTO M 270M Grade 345.
 - Cost of top and bottom bearing plates, 3mm Elastomeric Neoprene, shim plates and threaded studs with washer shall be included with Floating Bearings.
 - See sheet No. 60 of 91 sheets for Anchor Bolt Installation.

BEARING ASSEMBLY DIMENSIONS

Member	Dimension	Location - Pier 4									
		Girder 1	Girder 2	Girder 4	Girder 5	Girder 6	Girder 7	Girder 8	Girder 10	Girder 11	Girder 12
Top Plate	T_n	60	60	60	60	60	60	60	60	60	60
	T_t	65	65	63	63	63	63	63	63	63	63
	T_s	70	70	65	65	65	65	65	65	65	65
Bearing Assembly	T_h	308	308	306	306	306	306	306	306	306	306

FLOATING EXP. BRG. LOCATIONS

Unit	Location	No. of Brgs. Req'd
1	Pier 4	10

BEARING DESIGN INFORMATION

Design Information	Location Pier 4
Vertical Design Load (kN)	1985
Pay Item Size (kN)	2000
Total Required Movement (mm)	104

Note:
Vertical Design Load = Total Vertical Dead Load + Live Load (No Impact)

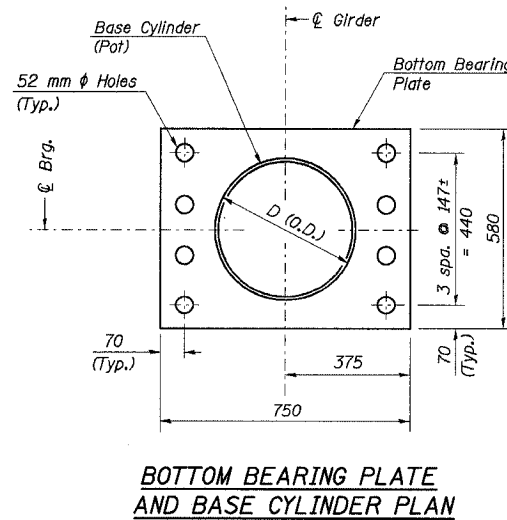
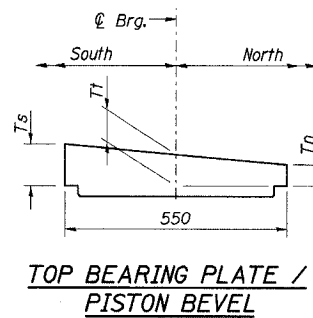
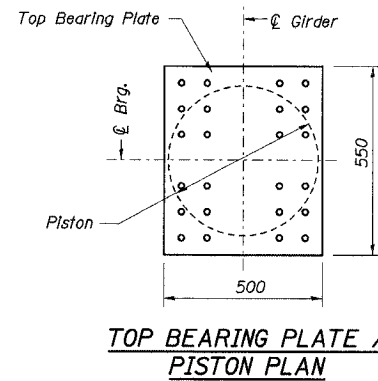
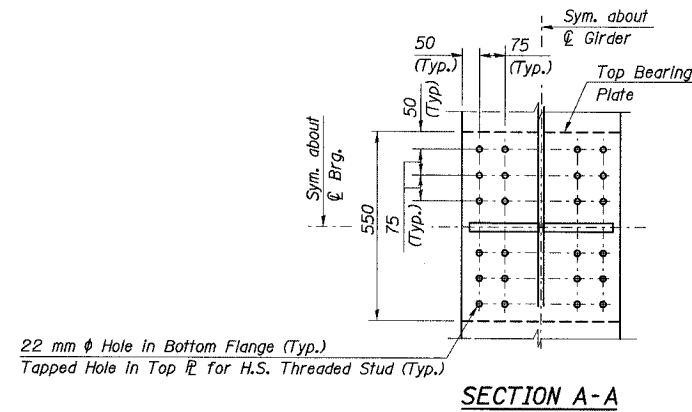
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
FLOATING EXPANSION BEARINGS
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---
HNTB

DESIGNED	TRL
CHECKED	JJK
DRAWN	LK
CHECKED	JJK

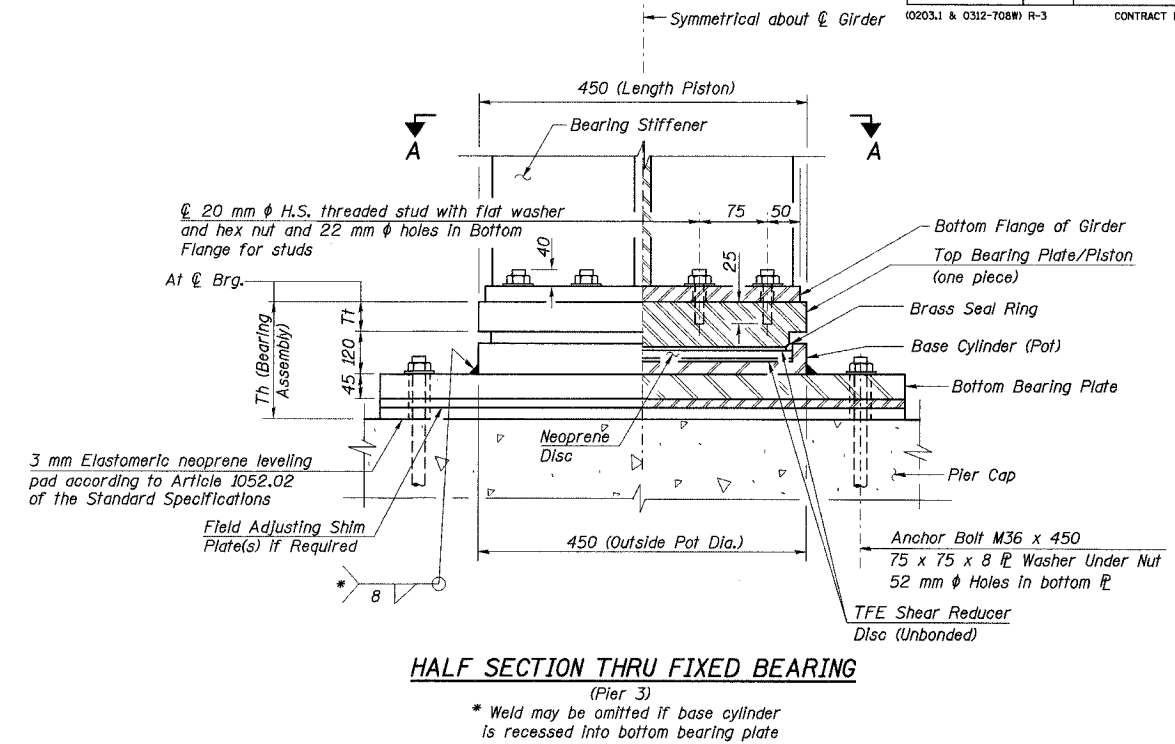
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 58 91 SHEETS
F. A. I. 80/94	-	COOK	870	572	
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-	CONTRACT NO. 62108		
02033.1 & 0312-708W R-3					



DESIGNED	TRL
CHECKED	JJK
DRAWN	LK
CHECKED	JJK



BEARING ASSEMBLY DIMENSIONS

Member	Dimension	Location - Pier 3											
		Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6	Girder 7	Girder 8	Girder 9	Girder 10	Girder 11	Girder 12
Top Plate	Tn	75	70	70	70	70	70	70	70	70	70	70	70
	Tt	73	70	70	70	70	70	70	70	73	73	73	73
	Ts	70	70	70	70	70	70	70	70	75	75	75	75
Bearing Assembly	Th	241	238	238	238	238	238	238	238	241	241	241	241

BEARING DESIGN INFORMATION

Design Information	Location
Vertical Design Load (kN)	Pier 3
Pay Item Size (kN)	2250
Longitudinal Lateral Load (kN)	735

Notes:
Vertical Design Load=Total Vertical Dead Load +Live Load
(No Impact)

- Notes:
- All dimensions are in millimeters (mm) except as shown.
 - The structural steel for the top bearing plate/piston and bottom bearing plate shall be AASHTO M 270M Grade 345.
 - Cost of top and bottom bearing plates, 3 mm elastomeric neoprene, and threaded studs with washer shall be included in Floating Bearings.
 - For anchor bolt type and details, see Sht. No. 60 of 91 sheets.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Erecting Floating Bearings, Fixed, 2250 kN	Each	12

FLOATING FIXED BRG. LOCATIONS

Unit	Location	No. of Brgs. Req'd
1	Pier 3	12

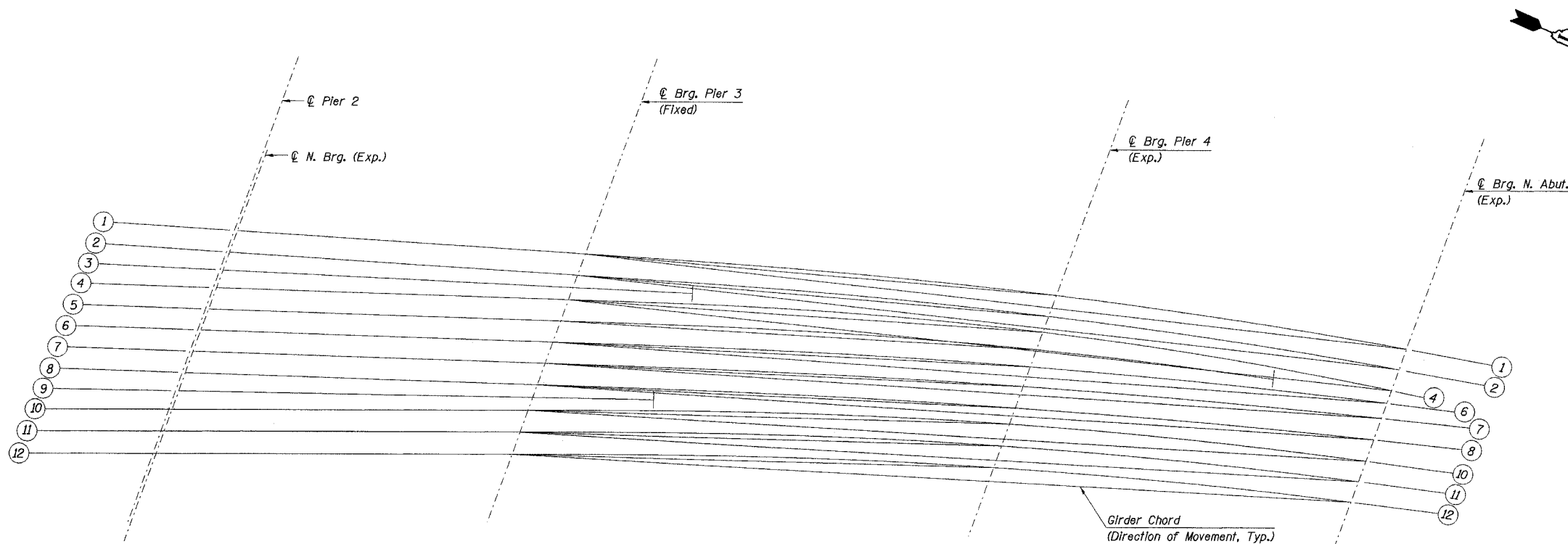
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
FLOATING FIXED BEARINGS
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE

HNTB

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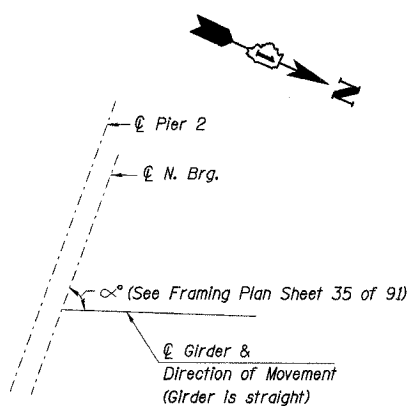
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F. A. I. 80/94	SECTION •	COUNTY COOK	TOTAL SHEETS 870	SHEET NO. 573	SHEET NO. 59 91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		CONTRACT NO. 62108

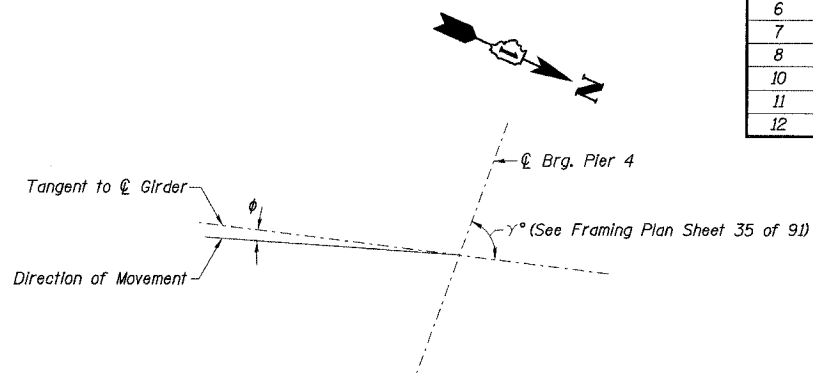


BEARING LAYOUT PLAN - UNIT 1

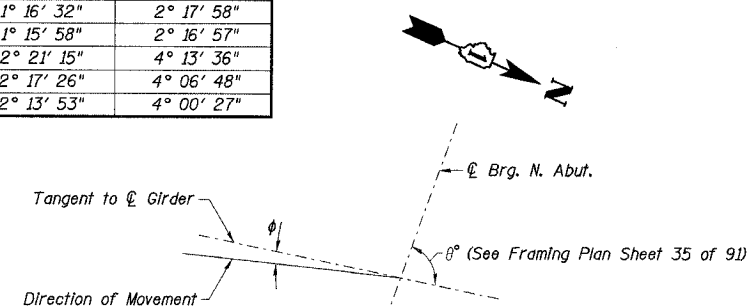
Girder	ϕ	
	Pier 4	N. Abut.
1	2° 04' 17"	3° 43' 44"
2	2° 01' 21"	3° 38' 28"
4	3° 06' 05"	5° 33' 55"
5	2° 22' 06"	---
6	1° 34' 53"	2° 50' 53"
7	1° 16' 32"	2° 17' 58"
8	1° 15' 58"	2° 16' 57"
10	2° 21' 15"	4° 13' 36"
11	2° 17' 26"	4° 06' 48"
12	2° 13' 53"	4° 00' 27"



PIER 2



PIER 4



N. ABUT.

BEARING ORIENTATION

DESIGNED	TRL
CHECKED	JJK
DRAWN	LK
CHECKED	JJK

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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
BEARING ORIENTATION DETAILS
SPANS 3-5 - UNIT 1
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

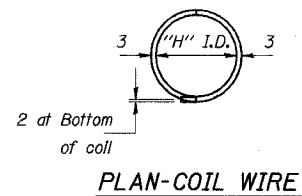
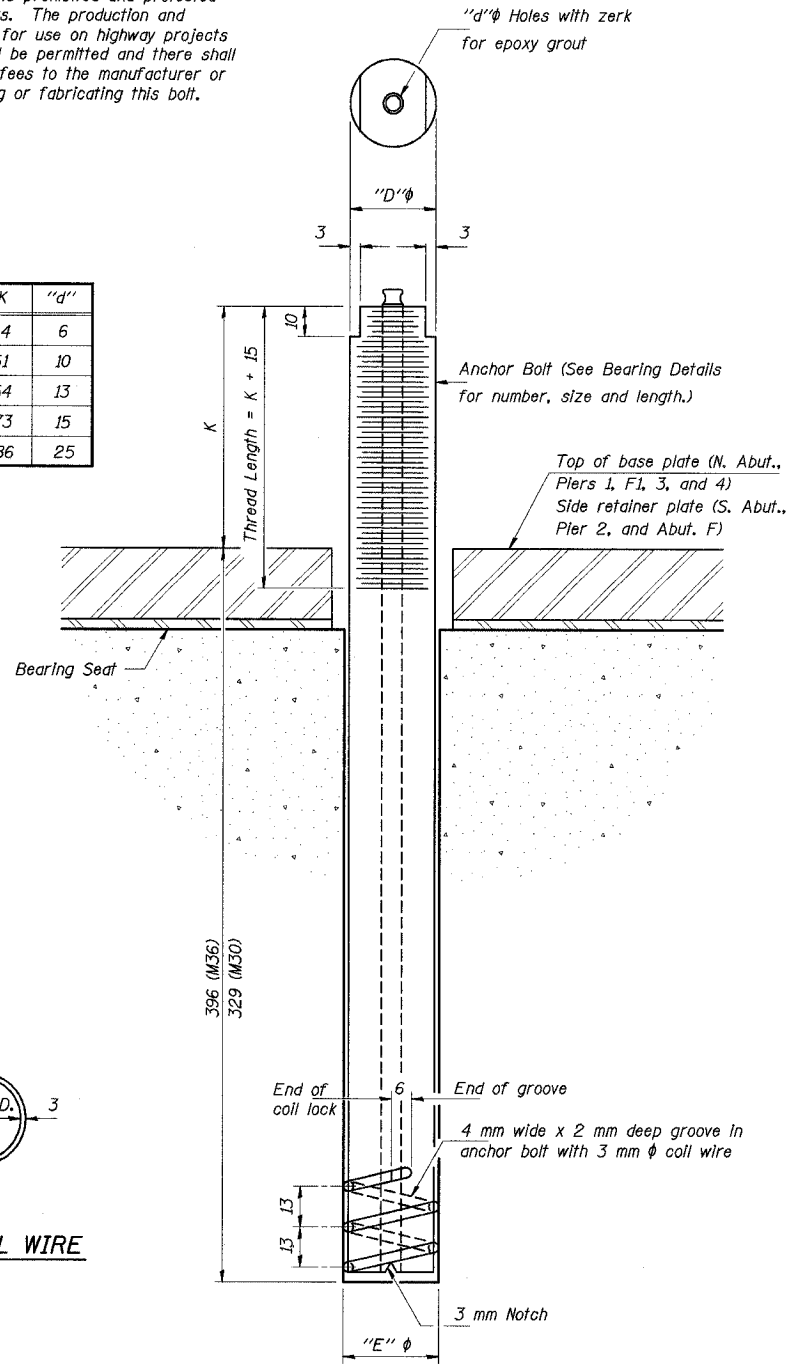
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 60
F. A. I. 80/94	*	COOK	870	574	91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		
(0203.1 & 0312-708W) R-3		CONTRACT NO. 62108			

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

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
Unit 1 Pler 2	M36 x 450mm (A307)
Pler 3	M36 x 450mm (A307)
Pler 4	M36 x 450mm (A307)
N. Abut.	M36 x 450mm (A307)
Unit 2 S. Abut.	M30 x 380mm (A307)
Pler 1	M36 x 450mm (A307)
Pler 2	M36 x 450mm (A307)
Unit 3 Abut. F	M30 x 380mm (A307)
Pler F1	M30 x 380mm (A307)
Pler 2	M30 x 380mm (A307)

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 "Furnishing and Erecting Structural Steel".
All dimensions are in millimeters (mm) except as noted.

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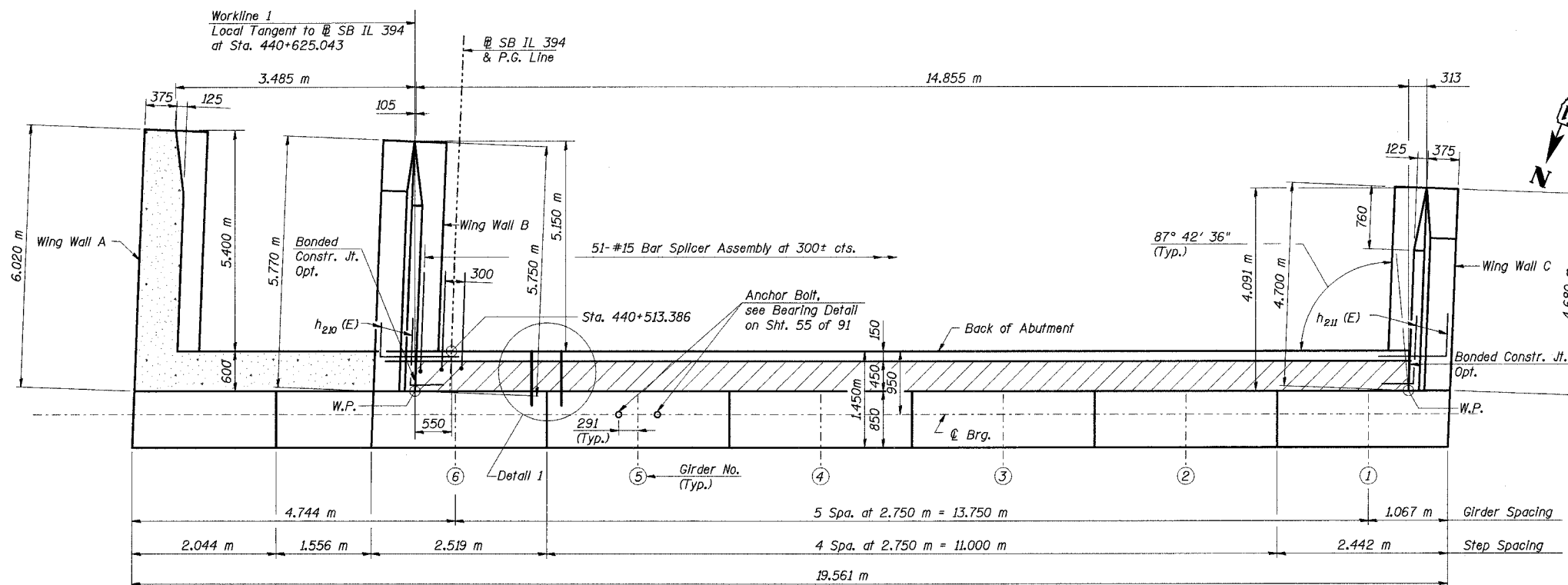
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DRAWN	LK
CHECKED	JJK

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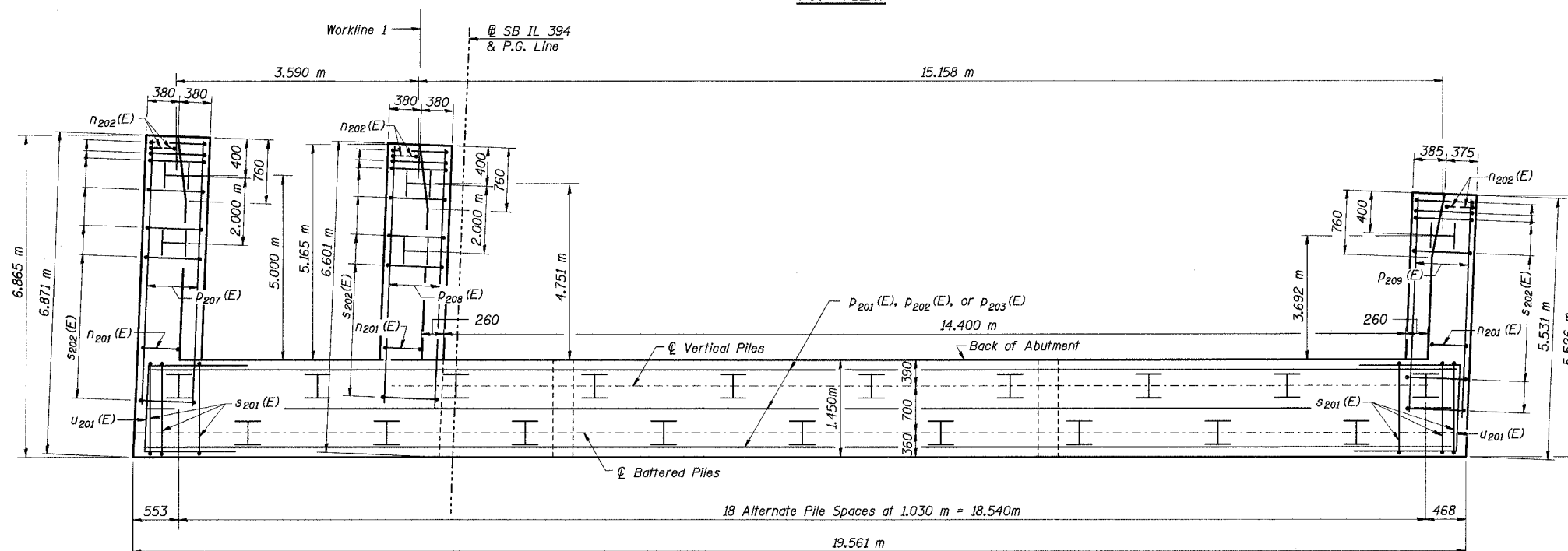
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
ANCHOR BOLT DETAILS
SB IL ROUTE 394 / RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800/2845
DATE JUL 18, 2005
SCALE ---
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 61
F. A. I. 80/94	*	COOK	870	575	91 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
(0203.1 & 0312-708W) R-3			CONTRACT NO. 62108		



TOP VIEW



PLAN-PILE CAP

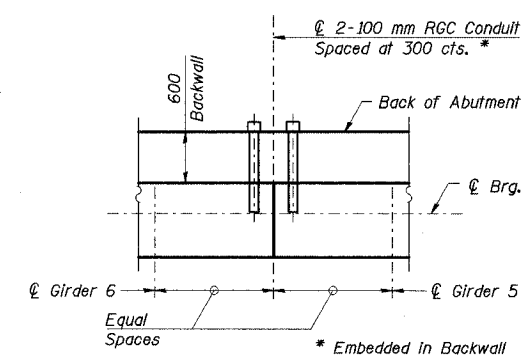
PILE DATA

Type: HP 360 x 108
Capacity: 650 kN (Driven to 975 kN)
Est. Length: 18.4 m (East)
17.7 m (West)
No. Required 24 (Includes 1 Test Pile)
Test Piles driven to 1460 kN

DESIGNED	TRL
CHECKED	MEA
DRAWN	LK
CHECKED	MEA



- Notes:
1. Work this sheet with Sheets 62, 63, and 67 of 91.
 2. Reinforcement bars designated (E) shall be epoxy coated.
 3. All dimensions are in millimeters (mm) except as noted.
 4. Min. bar laps (Unless otherwise shown):
#15 bars - 710
#20 bars - 890
#25 bars - 1480
 5. For Anchor Bolt Installation Details See Sheet 60 of 91.
 6. See Sheet 63 of 91 for placement of dowel bars.
 7. All piles shall be encased in concrete. See Detail on Sheet 67 of 91.



DETAIL 1

General Contractor to coordinate with the Electrical Contractor before embedding the conduits.

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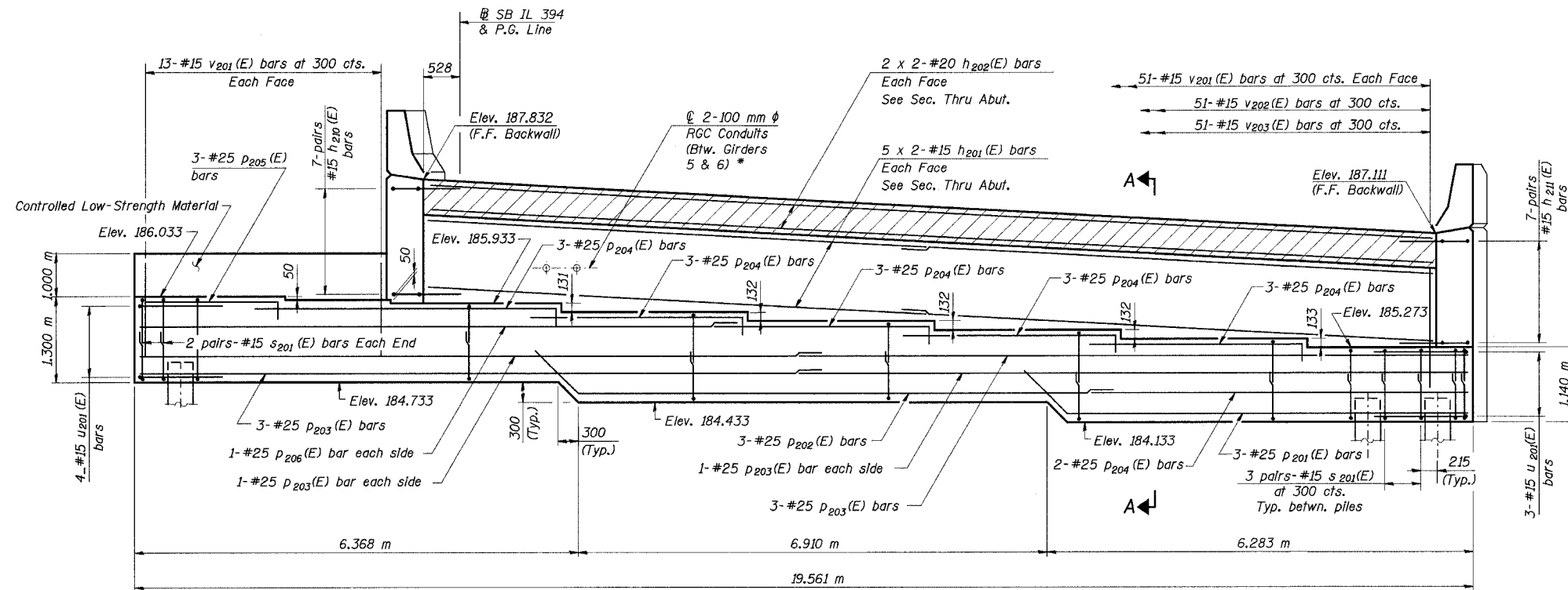
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
SOUTH ABUTMENT PLAN
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 62 91 SHEETS
F. A. I. 80/94	*	COOK	870	576	
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		
02033.1 & 0312-708W R-3		CONTRACT NO. 62108			

BEARING SEAT ELEVATION

GIR.	ELEV.
1	185.273
2	185.406
3	185.538
4	185.670
5	185.802
6	185.933



ELEVATION
(Looking South)

* General Contractor to coordinate with Electrical Contractor for location of embedded conduits. Paid under electrical work but installed by Bridge Contractor. Installation included for payment under Concrete Structures.

- Notes:
1. Work this sheet with Sheets 61, 63, and 67 of 91.
 2. Reinforcement bars designated (E) shall be epoxy coated.
 3. All dimensions are in millimeters (mm) except as noted.
 4. Min. bar laps (Unless otherwise shown):
#15 bars - 710
#20 bars - 890
#25 bars - 1480
 5. For Anchor Bolt Installation Details See Sheet 60 of 91.
 6. See Sheet 63 of 91 for placement of dowel bars.
 7. All piles shall be encased in concrete. See Detail on Sheet 67 of 91.
 8. Bars indicated thus "5 x 2-#15" indicates 5 lines bars with 2 lengths per line.

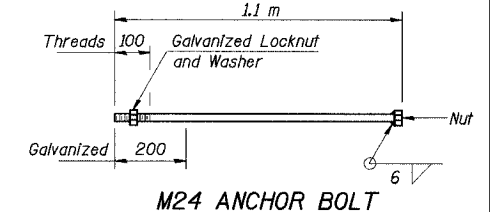
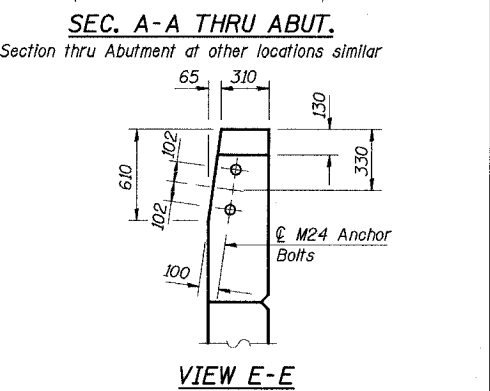
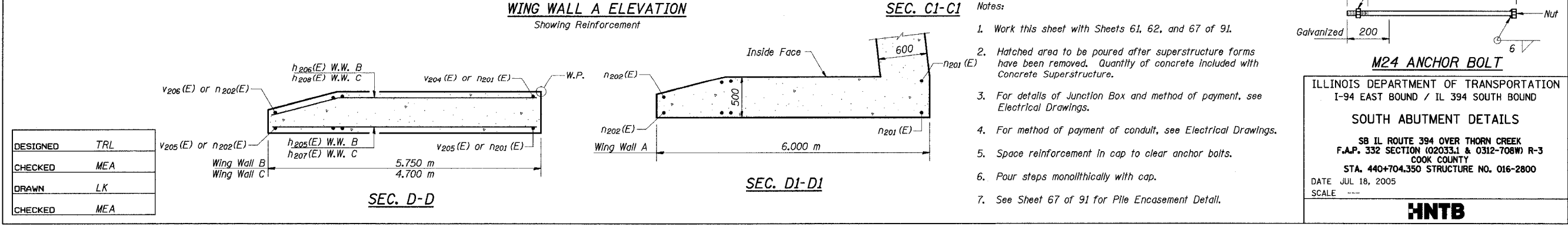
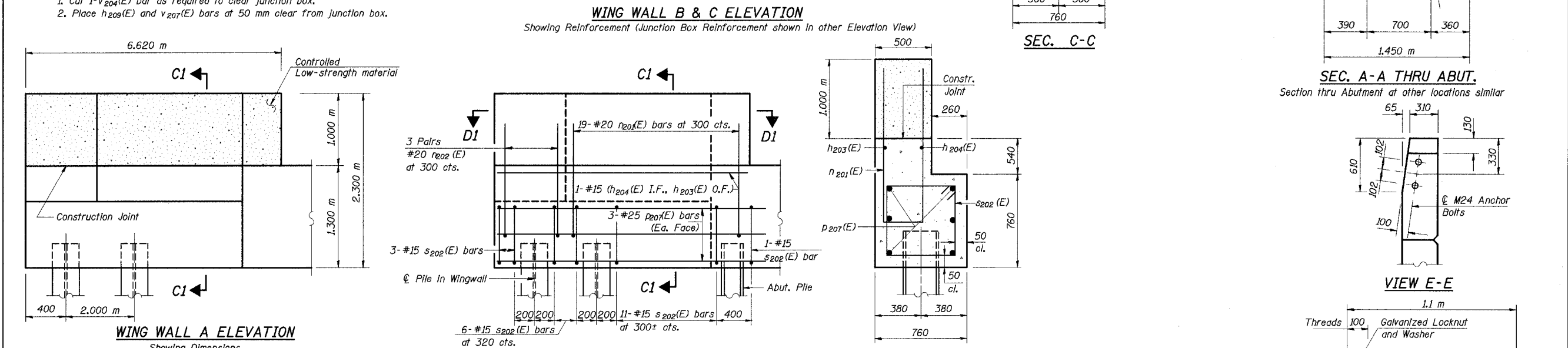
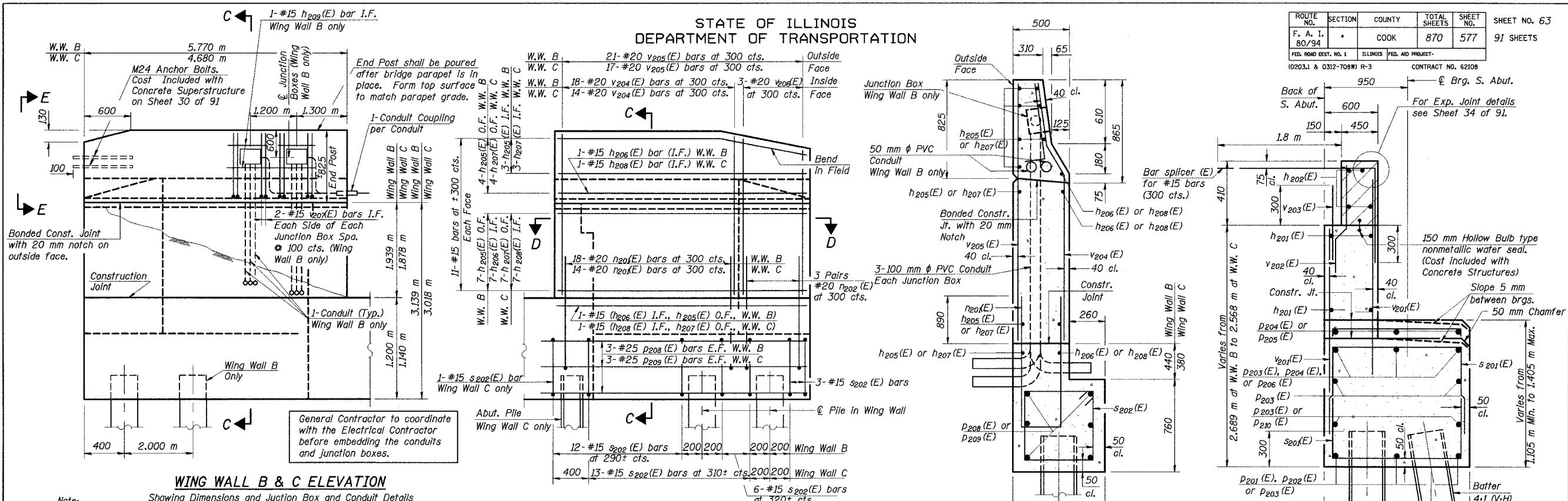
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CHECKED	MEA
DRAWN	LK
CHECKED	MEA

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
SOUTH ABUTMENT ELEVATION
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F. A. I. 80/94	SECTION COOK	COUNTY COOK	TOTAL SHEETS 870	SHEET NO. 577	SHEET NO. 63 91 SHEETS
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT- (02033.1 & 0312-708W) R-3			CONTRACT NO. 62108		



M24 ANCHOR BOLT

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND

SOUTH ABUTMENT DETAILS

SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

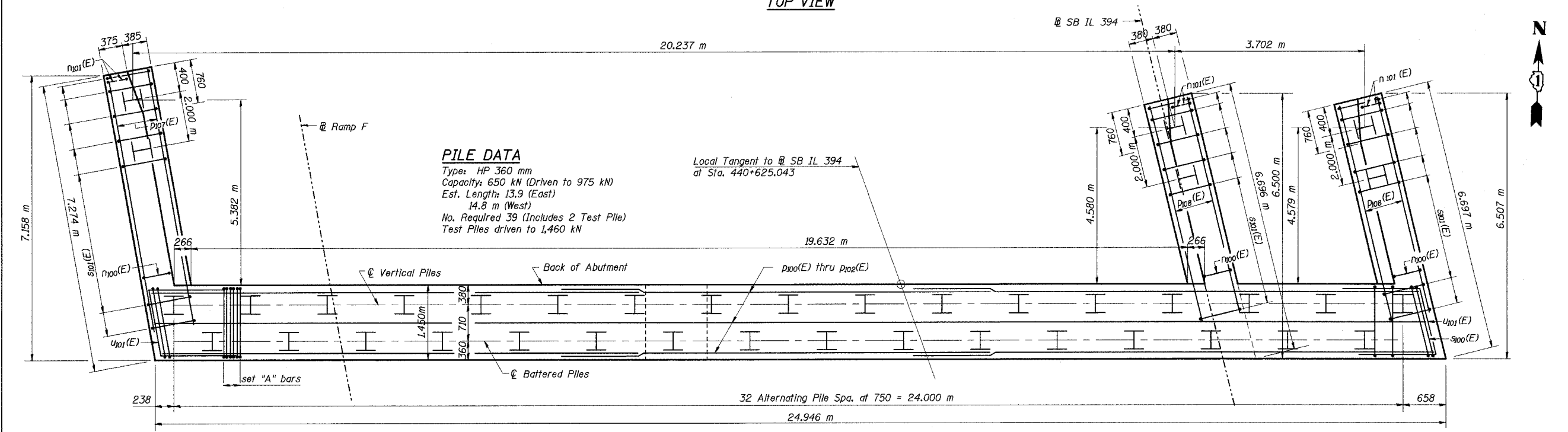
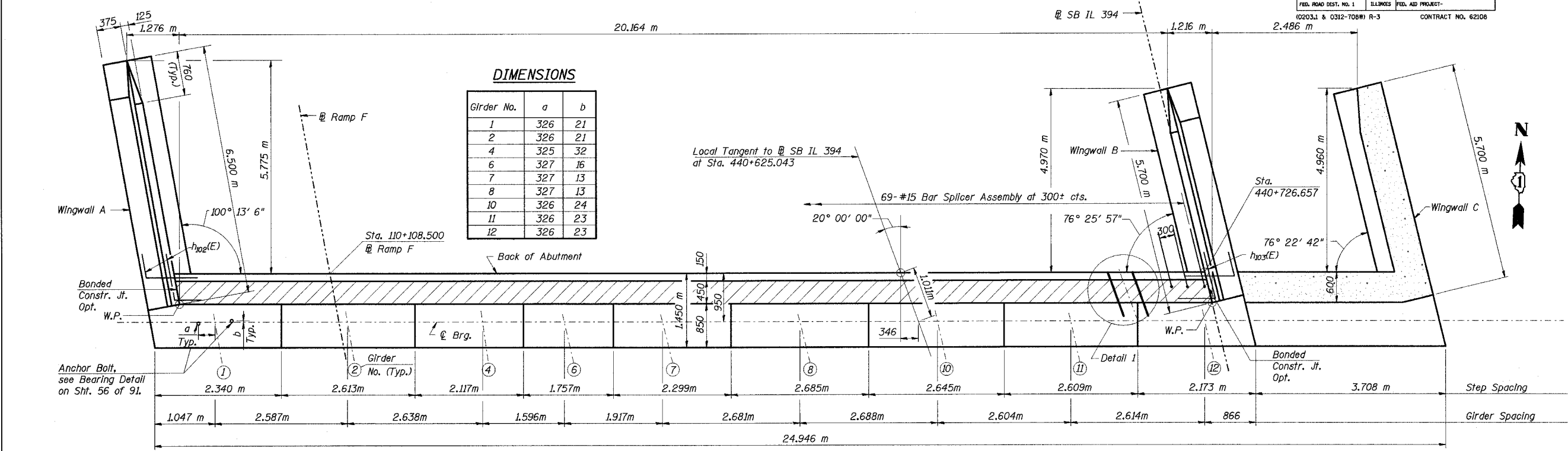
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DRAWN	LK
CHECKED	MEA

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 64
F. A. I. 80/94	*	COOK	870	578	91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-	CONTRACT NO. 62108		



- Notes:
1. Work this Sheet with Sheet No. 65, 66, & 67 of 91
 2. Reinforcement bars designated (E) shall be epoxy coated.
 3. All dimensions are in millimeters except as noted.
 4. For Anchor Bolt Installation details see Sheet No. 60 of 91.
 5. For placement of dowel bars see Sheet 66 of 91.
 6. All piles shall be enclosed in concrete. See detail of Sheet No. 67 of 91.
 7. Min bar laps (Unless otherwise shown):
#15 bars - 710
#20 bars - 890
#25 bars - 1480

DESIGNED	MEA
CHECKED	TRL
DRAWN	LK
CHECKED	MEA

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
NORTH ABUTMENT PLAN

SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800

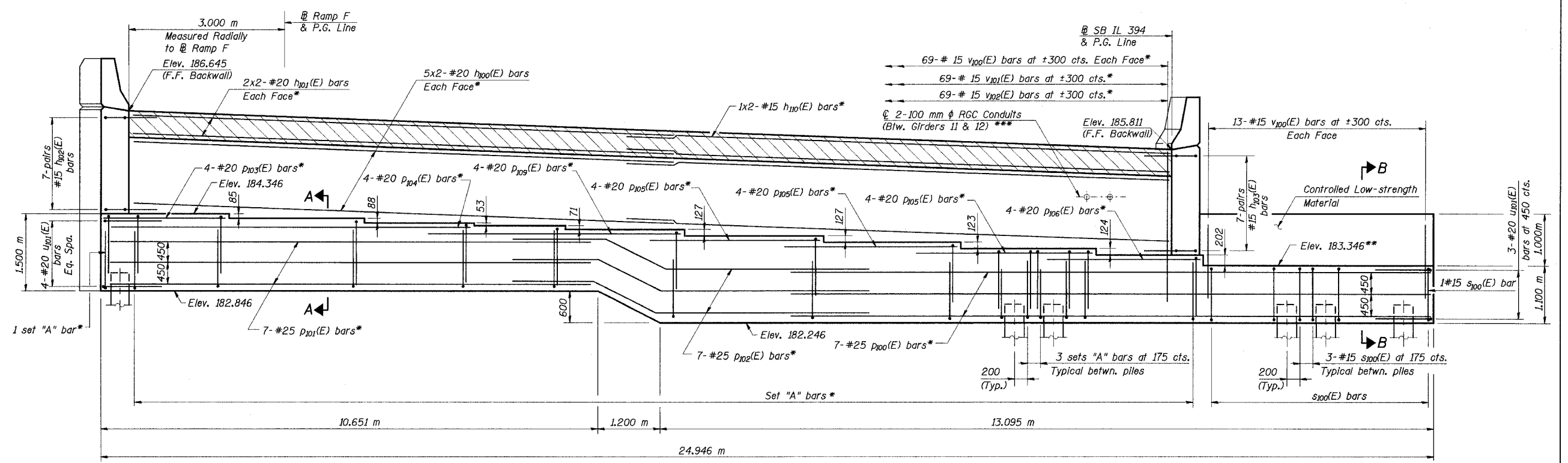
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 65
F. A. I. 80/94	.	COOK	870	579	91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-			
(0203.1 & 0312-708W) R-3		CONTRACT NO. 62108			



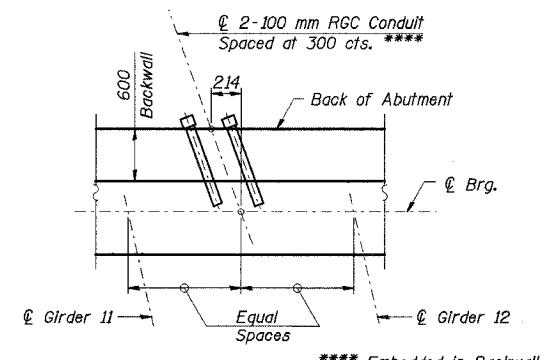
Bar Set "A" - 2-#15 u100(E) bars

ELEVATION
(Looking North)

- * See section thru Abutment on Sht. 66 for reinforcement placement details
- ** Bearing Elevation for Future girders
- *** General Contractor to coordinate with Electrical Contractor for location of embedded conduits. Paid under electrical work but installed by Bridge Contractor. Installation included for payment under Concrete Structures.

BEARING SEAT ELEVATION

Girder No.	Elevation [m]
1	184.346
2	184.261
4	184.173
6	184.120
7	184.049
8	183.922
10	183.795
11	183.672
12	183.548



DETAIL 1

General Contractor to coordinate with the Electrical Contractor before embedding the conduits.

Notes:

1. Work this Sheet with Sheet No. 64, 66, & 67 of 91.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. All dimensions are in millimeters except as noted.
4. For placement of dowel bars see Sheet 66 of 91.
5. All piles shall be enclosed in concrete. See detail of Sheet No. 67 of 91.
6. Min bar laps (Unless otherwise shown):
 - #15 bars - 710
 - #20 bars - 890
 - #25 bars - 1480

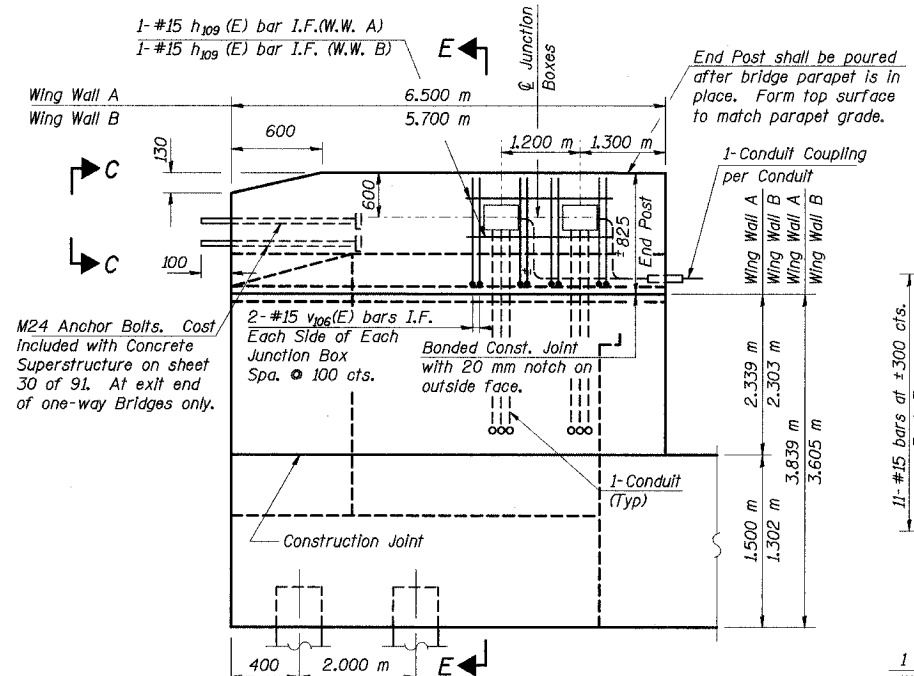
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CHECKED	MEA

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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
NORTH ABUTMENT ELEVATION
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 66
F. A. I. 80/94		COOK	870	580	91 SHEETS
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT-			CONTRACT NO. 62108		
02033.1 & 0312-708W R-3					



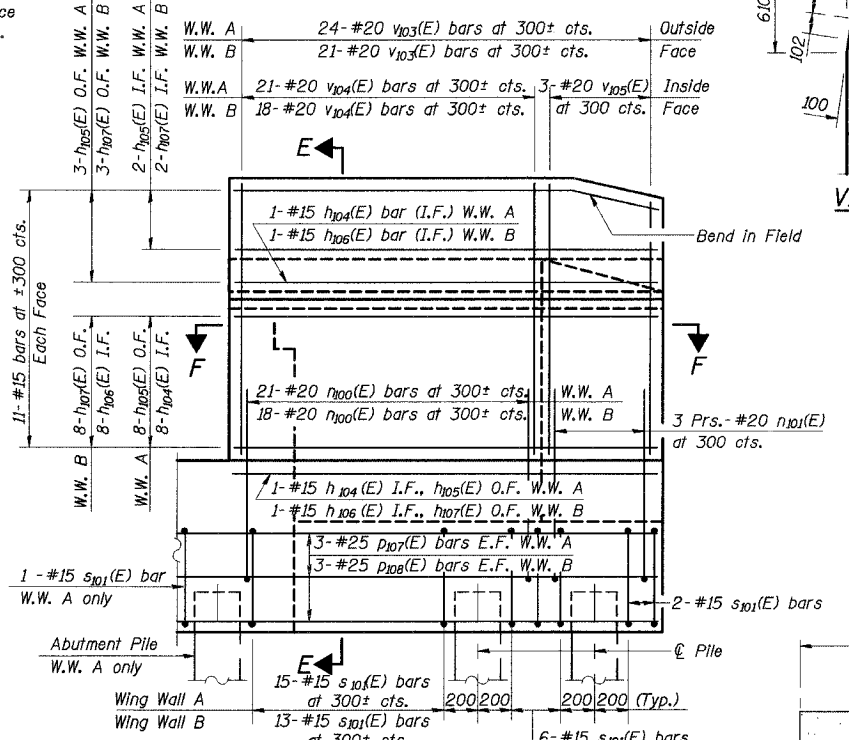
WING WALL A & B ELEVATION

General Contractor to coordinate with the Electrical Contractor before embedding the conduits and junction boxes.

Showing Dimensions and Junction Box and Conduit Details

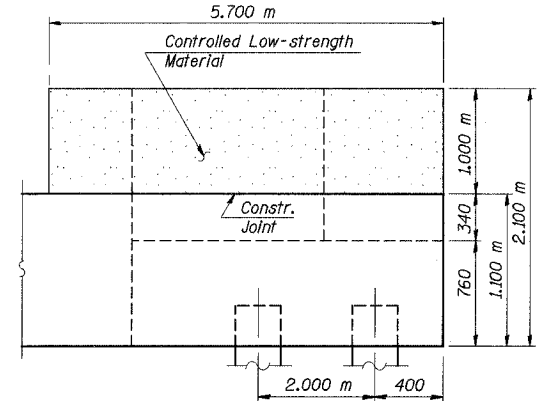
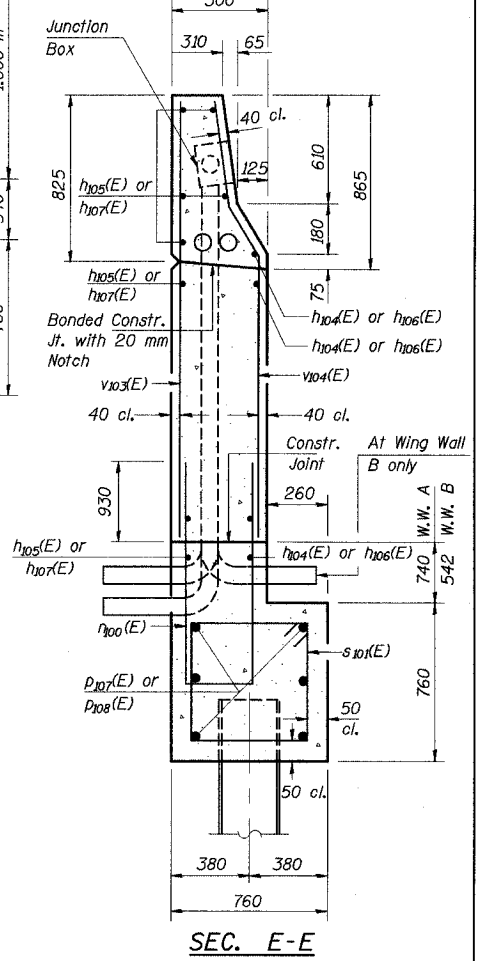
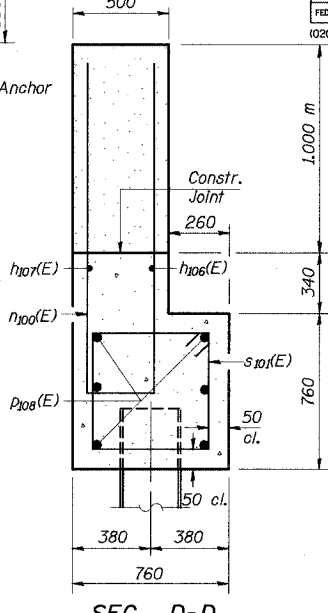
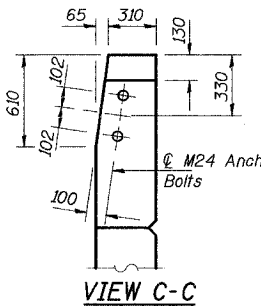
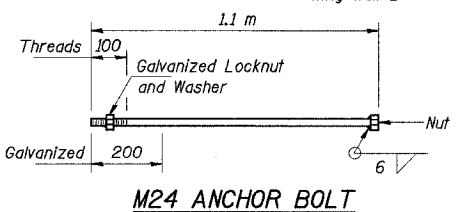
Note: Number of Junction Boxes in each Wing Wall:
Wing Wall A - 2 Junction Boxes
Wing Wall B - 2 Junction Boxes

Number of Conduits per Junction Box:
Wing Wall A - 2 Conduits
Wing Wall B - 3 Conduits



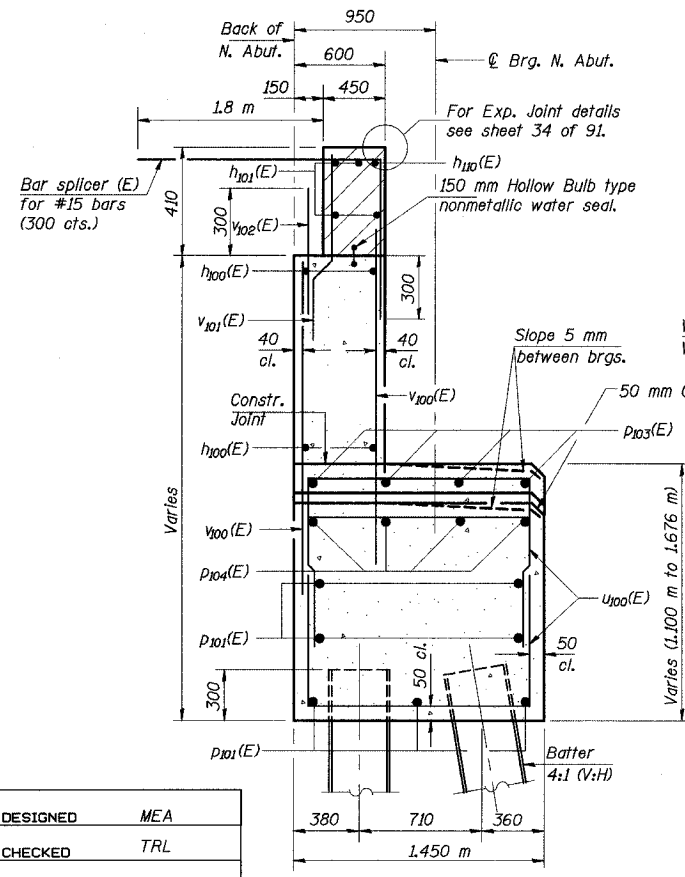
WING WALL A & B ELEVATION

Showing Reinforcement

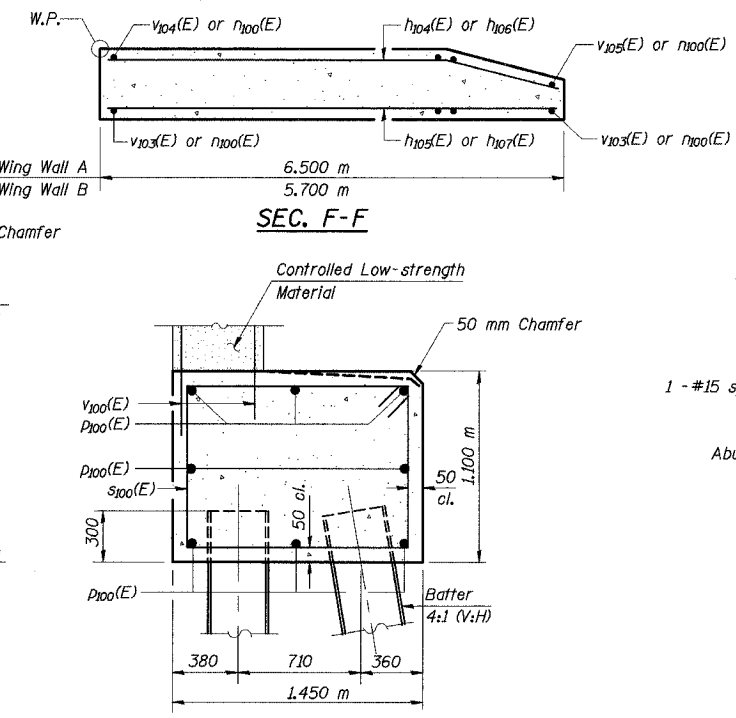


WING WALL C ELEVATION

Showing Dimensions

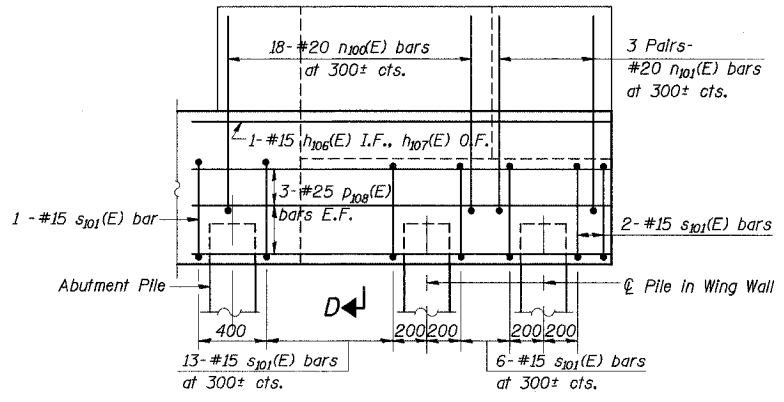


SECTION A-A



SECTION B-B

SEC. THRU ABUT.



WING WALL C ELEVATION

Showing Reinforcement

- Notes:
1. Work this sheet with Sheets 64, 65, & 67 of 91.
 2. Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.
 3. For details of Junction Box and method of payment, see Electrical Drawings.
 4. For method of payment of conduit, see Electrical Drawings.
 5. Space reinforcement in cap to clear anchor bolts.
 6. Pour steps monolithically with cap.
 7. See Sheet 67 of 91 for Pile Encasement Detail.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND

NORTH ABUTMENT DETAILS

SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

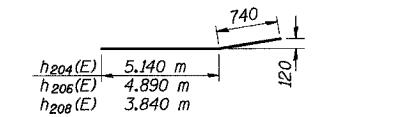
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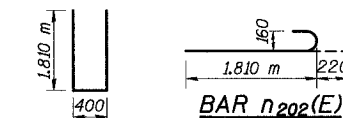
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CHECKED	MEA

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

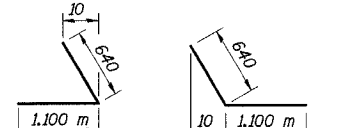
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 67
F. A. I. 80/94		COOK	870	581	91 SHEETS
ILLINOIS FED. AID PROJECT-			CONTRACT NO. 62108		
FED. ROAD DIST. NO. 1			02033.1 & 0312-708W R-3		



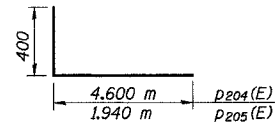
BAR h204(E), h206(E) or h208(E)



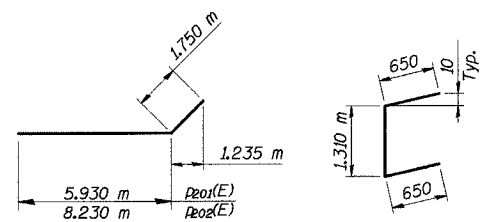
BAR n201(E) BAR n202(E)



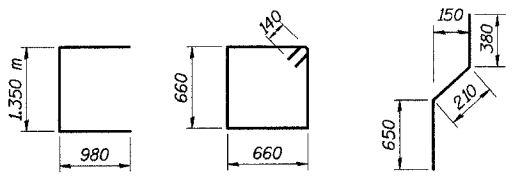
BAR h210(E) BAR h211(E)



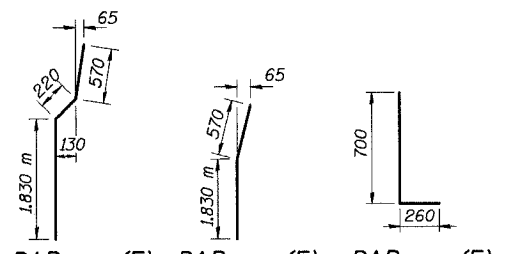
BAR p204(E), p205(E)



BAR p201(E) or p202(E) BAR u201(E)



BAR s201(E) BARS s202(E) BAR v202(E)



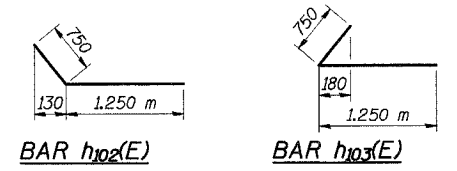
BAR v204(E) BAR v206(E) BAR v207(E)

SOUTH ABUTMENT
BILL OF MATERIAL

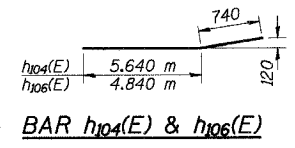
Bar	No.	Size	Length (m)	Shape
h201(E)	20	#15	7.770	
h202(E)	8	#20	7.850	
h203(E)	1	#15	5.900	
h204(E)	1	#15	5.880	
h205(E)	15	#15	5.650	
h206(E)	9	#15	5.630	
h207(E)	15	#15	4.600	
h208(E)	9	#15	4.580	
h209(E)	2	#15	2.400	
h210(E)	14	#15	1.740	
h211(E)	14	#15	1.740	
n201(E)	51	#20	4.020	
n202(E)	18	#20	2.030	
p201(E)	3	#25	7.680	
p202(E)	3	#25	9.980	
p203(E)	10	#25	10.400	
p204(E)	15	#25	5.000	
p205(E)	3	#25	2.340	
p206(E)	2	#25	8.770	
p207(E)	6	#25	6.000	
p208(E)	6	#25	5.750	
p209(E)	6	#25	4.700	
p210(E)	2	#25	6.240	
s201(E)	116	#15	3.310	
s202(E)	58	#15	2.920	
u201(E)	7	#15	2.610	
v201(E)	128	#15	2.130	
v202(E)	51	#15	1.240	
v203(E)	51	#15	0.950	
v204(E)	32	#20	2.620	
v205(E)	38	#20	2.650	
v206(E)	6	#20	2.400	
v207(E)	8	#15	0.960	

ITEM	UNIT	QUANTITY
Structure Excavation	m ³	226
Concrete Structures	m ³	74.8
Controlled Low-Strength Material	m ³	4.9
Reinforcement Bars, Epoxy Coated	kg	4,880
Furnishing Steel Piles HP 360x108	m	416
Driving Steel Piles	m	416
Test Pile Steel HP 360x108	Each	1
Bar Splicers	Each	51
Porous Granular Embankment (Special)	m ³	94.5

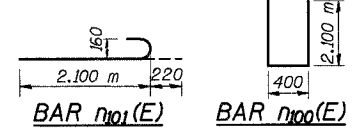
Reinforcement bars designated (E) shall be epoxy coated.



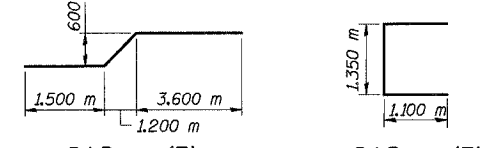
BAR h102(E) BAR h103(E)



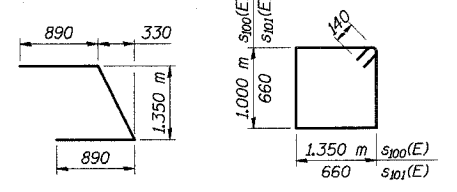
BAR h104(E) & h106(E)



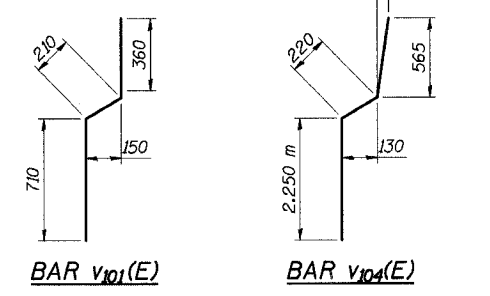
BAR n101(E) BAR n102(E)



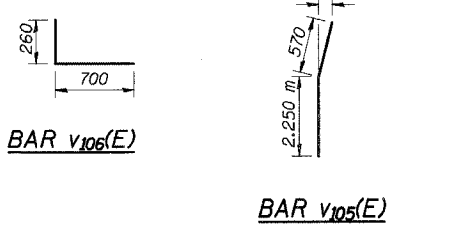
BAR p102(E) BAR p103(E)



BAR u101(E) BAR s100(E) & s101(E)



BAR v101(E) BAR v104(E)



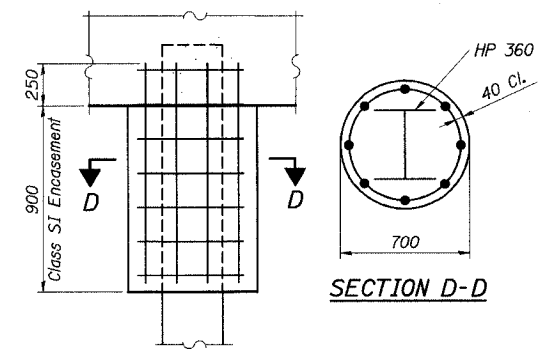
BAR v106(E) BAR v105(E)

NORTH ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h100(E)	20	#15	10.500	
h101(E)	8	#20	10.500	
h102(E)	14	#15	2.000	
h103(E)	14	#15	2.000	
h104(E)	10	#15	6.380	
h105(E)	14	#15	6.400	
h106(E)	11	#15	5.580	
h107(E)	15	#15	5.600	
h108(E)	4	#15	2.400	
h109(E)	2	#15	10.500	
n100(E)	57	#20	4.600	
n101(E)	18	#20	2.320	
p100(E)	7	#25	11.000	
p101(E)	7	#25	10.620	
p102(E)	7	#25	6.440	
p103(E)	4	#20	2.300	
p104(E)	4	#20	6.970	
p105(E)	12	#20	4.200	
p106(E)	4	#20	3.600	
p107(E)	6	#25	6.850	
p108(E)	12	#25	6.050	
p109(E)	4	#20	5.000	
s100(E)	13	#15	4.980	
s101(E)	67	#15	2.920	
u100(E)	170	#15	3.550	
u101(E)	7	#20	3.170	
v100(E)	164	#15	2.700	
v101(E)	69	#15	1.280	
v102(E)	69	#15	1.000	
v103(E)	45	#20	3.090	
v104(E)	39	#20	3.040	
v105(E)	6	#20	2.820	
v106(E)	16	#15	0.960	

ITEM	UNIT	QUANTITY
Structure Excavation	m ³	171
Concrete Structures	m ³	105.4
Controlled Low-Strength Material	m ³	5.1
Reinforcement Bars, Epoxy Coated	kg	6,380
Furnishing Steel Piles HP 360x108	m	531
Driving Steel Piles	m	531
Test Pile Steel HP 360x108	Each	2
Bar Splicers	Each	69
Porous Granular Embankment (Special)	m ³	171.2

Reinforcement bars designated (E) shall be epoxy coated.



PILE ENCASEMENT DETAIL

Welded wire fabric 152x152-MW25.8xMW25.8 with a mass of 2.91 kg/m². The cost of Excavation, Class SI Concrete Encasement and Reinforcement is included with Furnishing Piles. Forms for encasement may be omitted when soil conditions permit.

- Notes:
1. Work this Sheet with Sheets 61 thru 66 of 91 Sheets.
 2. All dimensions are in millimeters except as noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
NORTH & SOUTH ABUTMENTS
BILL OF MATERIAL
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE



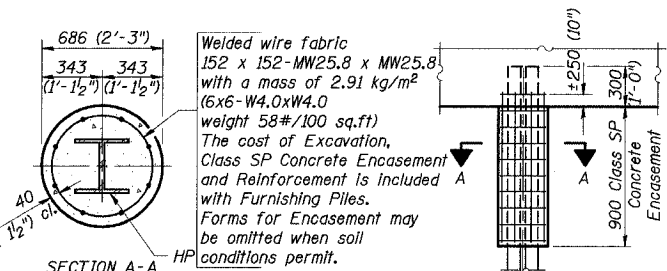
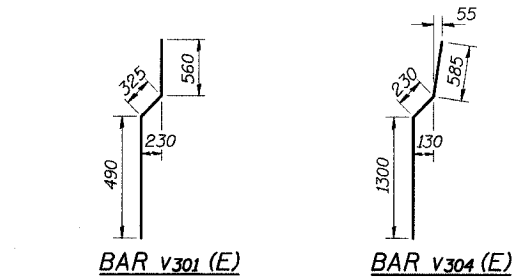
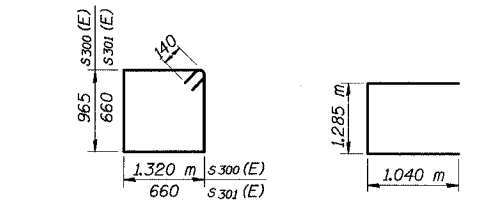
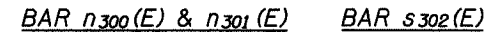
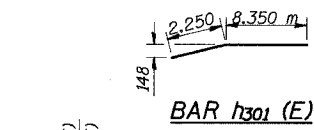
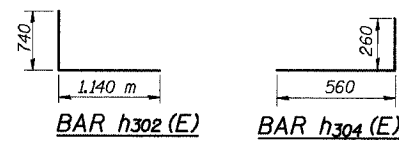
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22-AUG-2005 10:51

DESIGNED	TRL/MEA
CHECKED	MEA/TRL
DRAWN	LK
CHECKED	TRL/MEA

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

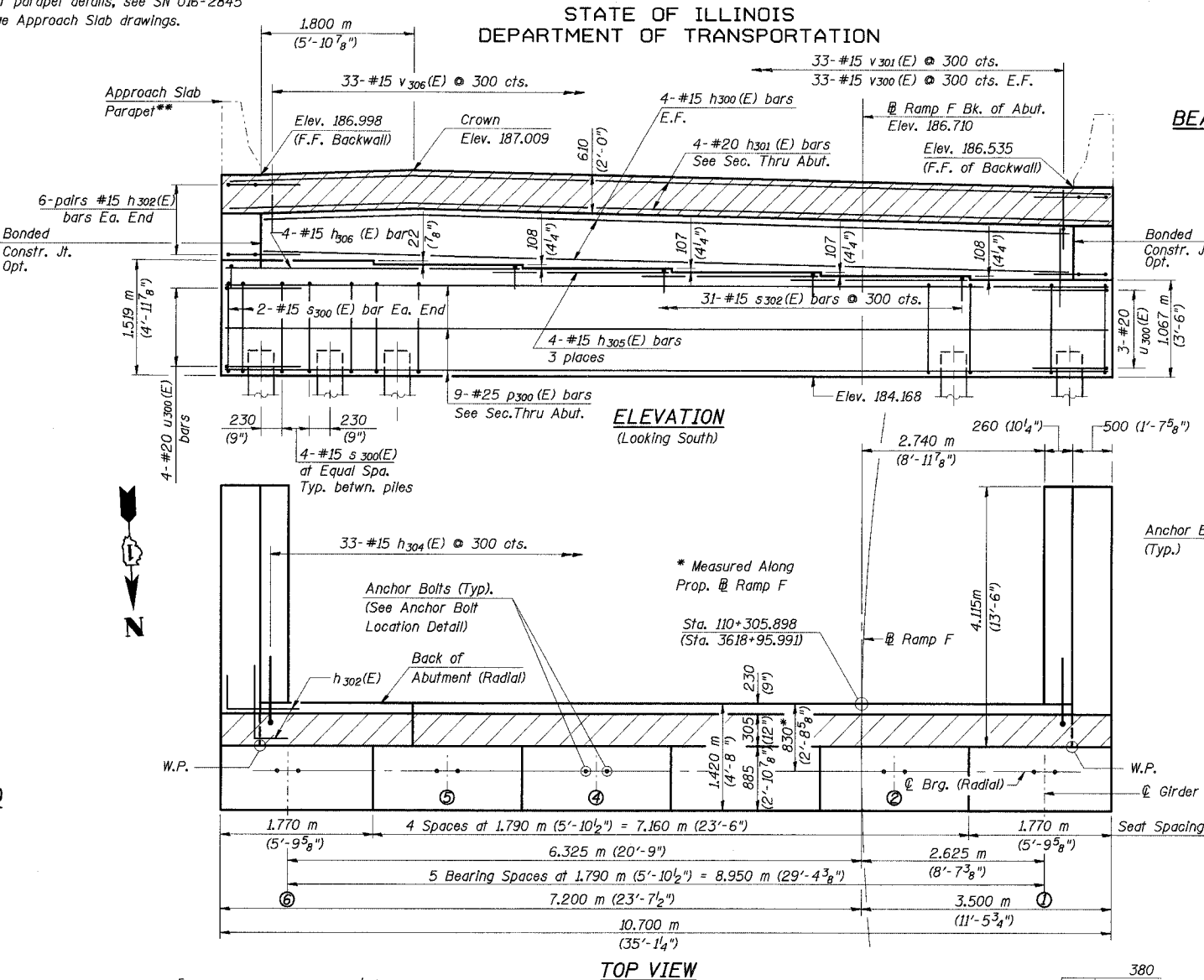
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 68
F. A. I. 80/94		COOK	870	582	91 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
10203.1 & 0312-708W	R-3	CONTRACT NO. 62108			

**For parapet details, see SN 016-2845
Bridge Approach Slab drawings.

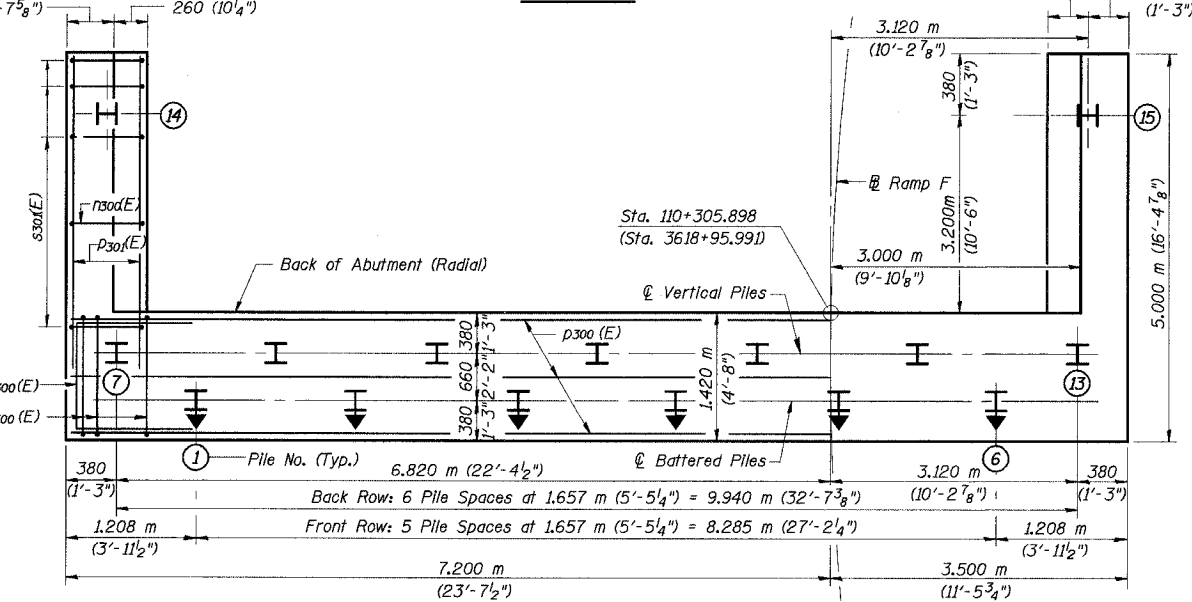


PILE ENCASEMENT DETAIL

DESIGNED	JM
CHECKED	JFA/MEA
DRAWN	JM / LK
CHECKED	JFA/MEA



TOP VIEW



PLAN-PILE CAP

BEARING SEAT ELEVATIONS (Meters)

Girder	Ø Brg. Abut. F
1	185.235
2	185.343
3	185.450
4	185.557
5	185.665
6	185.687

ABUTMENT F
BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h300(E)	8	#15	9.600	
h301(E)	4	#20	10.600	
h302(E)	24	#15	1.800	
h303(E)	20	#15	4.015	
h304(E)	33	#15	0.820	
h305(E)	12	#15	2.400	
h306(E)	4	#15	3.460	
n300(E)	15	#20	4.020	
n301(E)	15	#20	3.120	
p300(E)	9	#25	10.600	
p301(E)	6	#25	4.015	
s300(E)	52	#15	4.850	
s301(E)	36	#15	2.920	
s302(E)	31	#15	2.220	
u300(E)	7	#20	3.365	
v300(E)	66	#15	1.650	
v301(E)	33	#15	1.375	
v302(E)	4	#20	2.050	
v303(E)	26	#20	0.950	
v304(E)	4	#20	2.115	
v305(E)	33	#15	0.600	

Item	Unit	Quantity
Structure Excavation, Common	m ³	108
Geocomposite Wall Drain	m ²	20
Porous Granular Backfill	m ³	47
Concrete for Bridges and Drainage Structure (Class SP)	m ³	32.9
Reinforcement Steel, Epoxy Coated	kg	2,350
Furnishing Steel Piles	m	240.0
Driving Steel Piles	Each	14
Test Piles	m	17.0

PILE DATA

Type: HP 360x108 (HP14x73)
Capacity: 650 kN (146 kips)
(Driven to 965 kN (219 kips) Bearing)
Est. Length: 17.02 m (55'-10 1/8")
No. Required: 15 (Includes 1 test pile)

- Notes:
1. Work this sheet with Sheet 69 of 91.
 2. All dimensions are in millimeters (mm) except as noted.
 3. Reinforcement bars designated (E) shall be epoxy coated.
 4. Information shown in parentheses is in English units.
 5. For Anchor Bolt Installation Detail see Sheet 60 of 91.
 6. For Ramp F base line curve data see sheet 3 of 91.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND

ABUTMENT F

RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2845

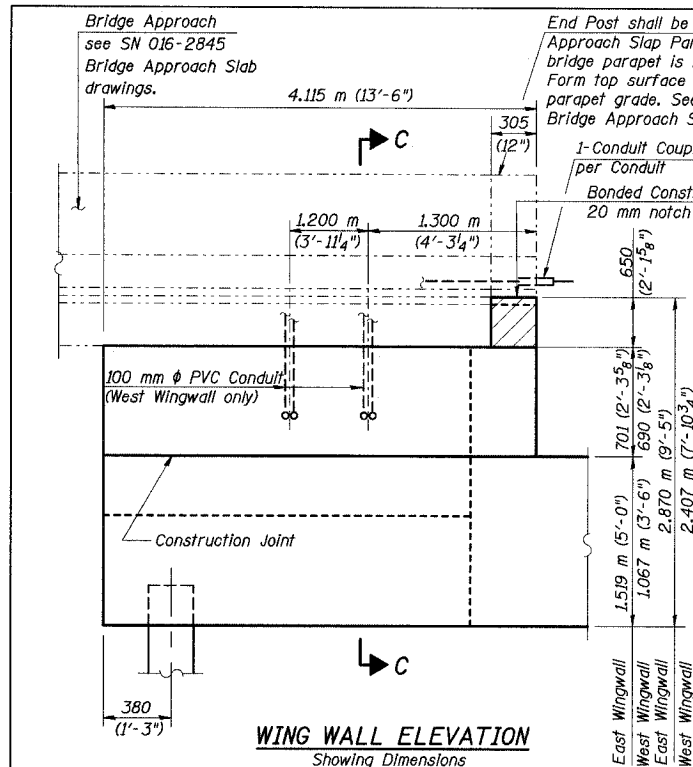
DATE JUL 18, 2005
SCALE ---

HNTB

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18-RUG-2805 1746

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

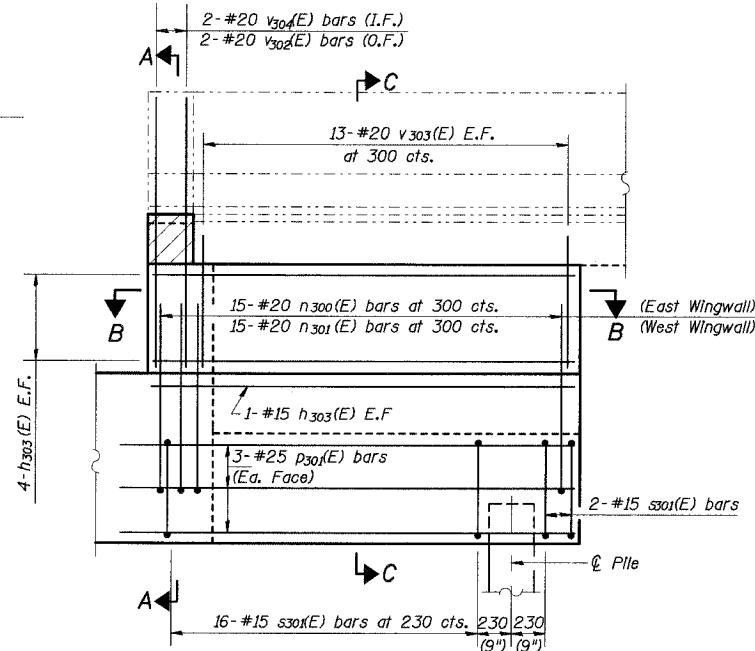
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 69 91 SHEETS
F. A. I. 80/94	.	COOK	870	583	
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-		CONTRACT NO. 62108	
0203.1 & 0312-708W R-3					



WING WALL ELEVATION

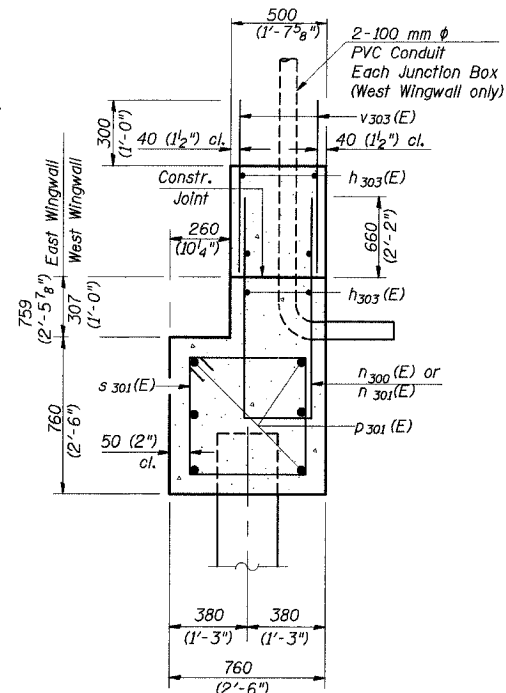
Showing Dimensions and Conduit detail

General Contractor to coordinate with the electrical contractor before embedding the conduits.

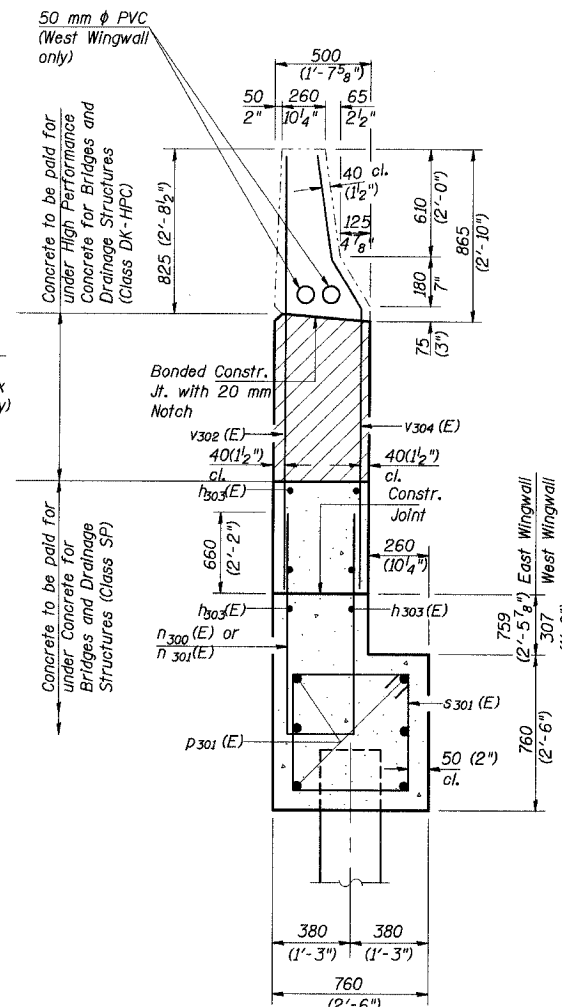


WING WALL ELEVATION

Showing Reinforcement

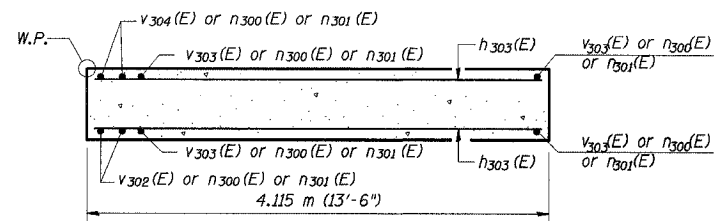


SEC. C-C

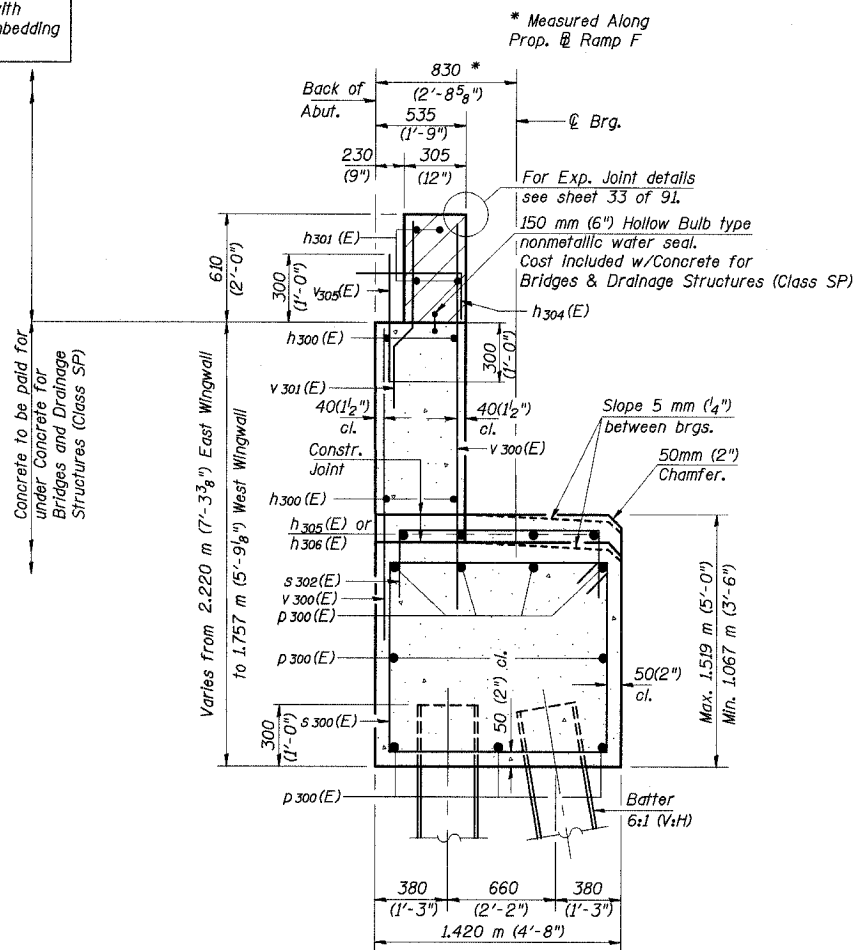


SEC. A-A

- Notes:
- All dimensions are in millimeters (mm) except as noted.
 - Work this sheet with Sheet 68 of 91.
 - Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with High Performance Concrete for Bridges and Drainage Structures (Class DK - HPC).
 - For details of Conduits for Junction Boxes and method of payment, see Electrical Drawings.
 - Space reinforcement in cap to clear anchor bolts.
 - Pour steps monolithically with cap.
 - Information shown in Parentheses is English units.



SEC. B-B



SEC. THRU ABUT.

DESIGNED	JM
CHECKED	JFA/MEA
DRAWN	JM
CHECKED	JFA/MEA

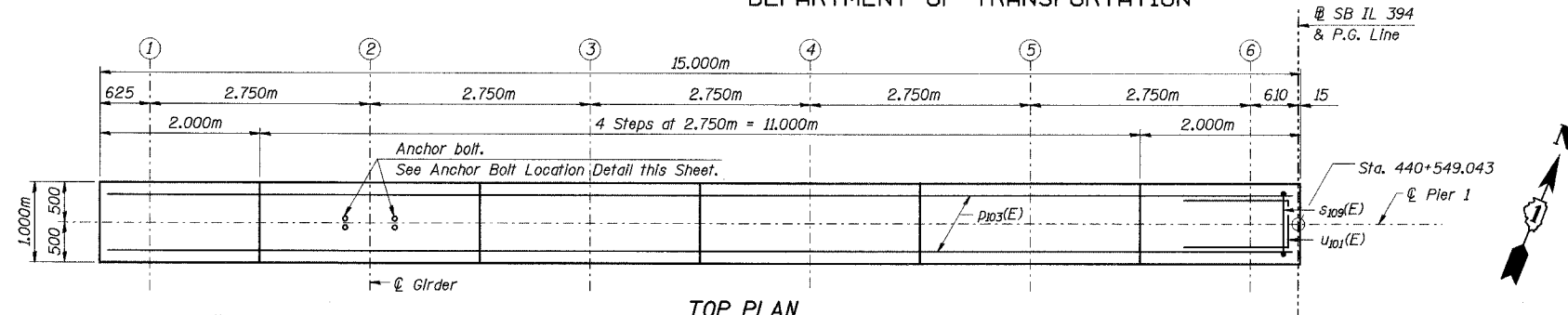
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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
ABUTMENT F DETAILS
RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2845
DATE JUL 18, 2005
SCALE ---

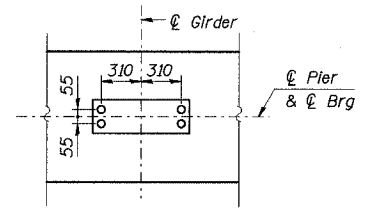
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

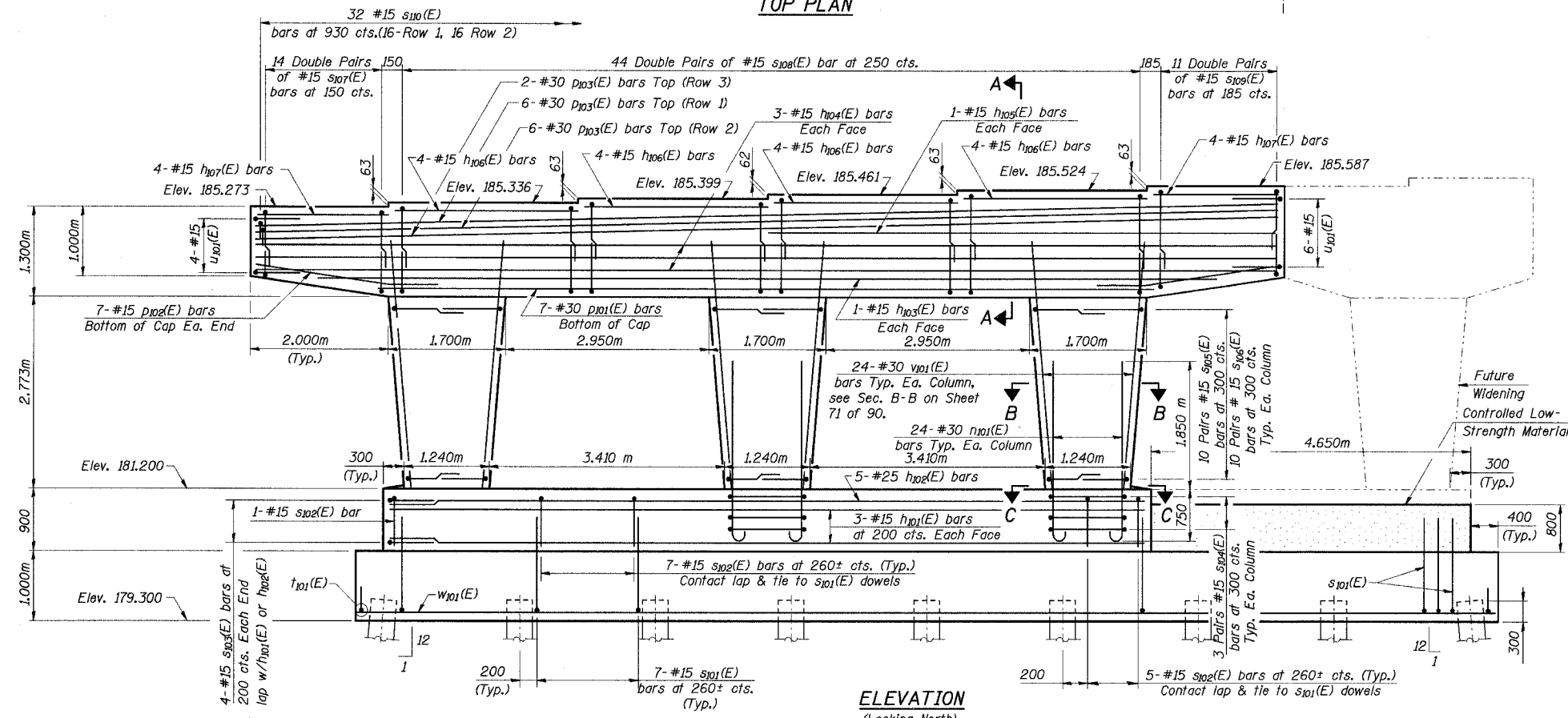
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 70 91 SHEETS
F. A. I. 80/94	*	COOK	870	584	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
(02033.1 & 0312-708W) R-3		CONTRACT NO. 62108			



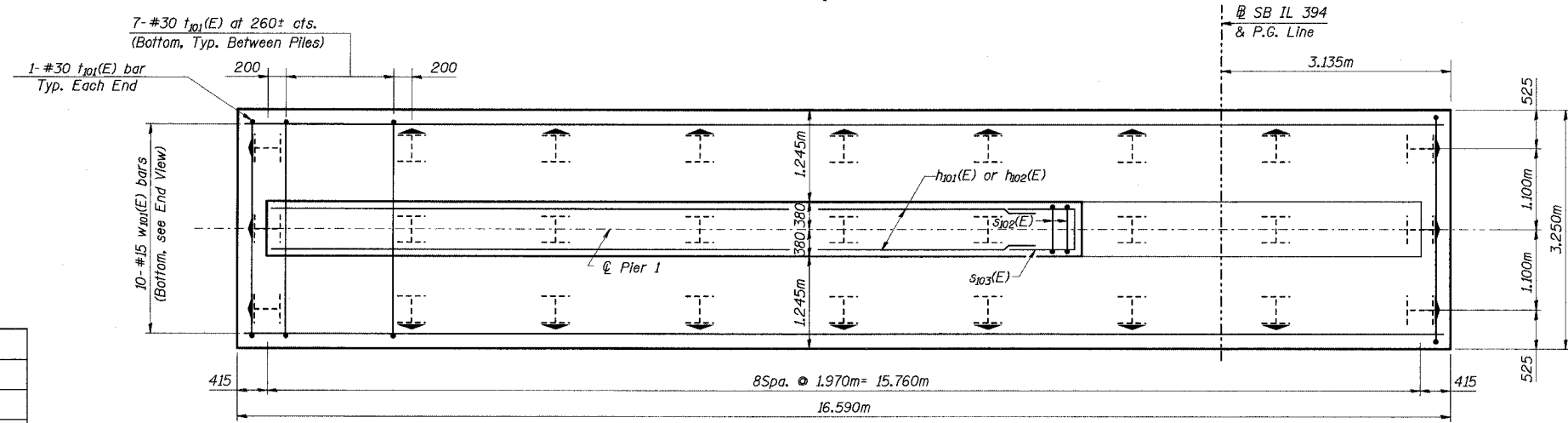
TOP PLAN



ANCHOR BOLT LOCATION DETAIL (TYP.)



ELEVATION
(Looking North)



FOOTING PLAN

- Notes:
1. Work this Sheet with Sheet No. 71 of 91.
 2. Space reinforcement in cap to miss anchor bolts.
 3. Pour steps monolithically with cap.
 4. All dimensions are in millimeters (mm) except as noted.
 5. Min bar laps (Unless otherwise shown):
#15 bars - 710 mm
#20 bars - 890 mm
#25 bars - 1480 mm
#30 bars - 2070 mm
 6. Reinforcement Bars Designated (E) shall be epoxy coated.

↑ Indicate Pile Batter.

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DESIGNED	MAS
CHECKED	JFA
DRAWN	LK
CHECKED	JFA

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
**PIER 1
PLAN & ELEVATION**
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

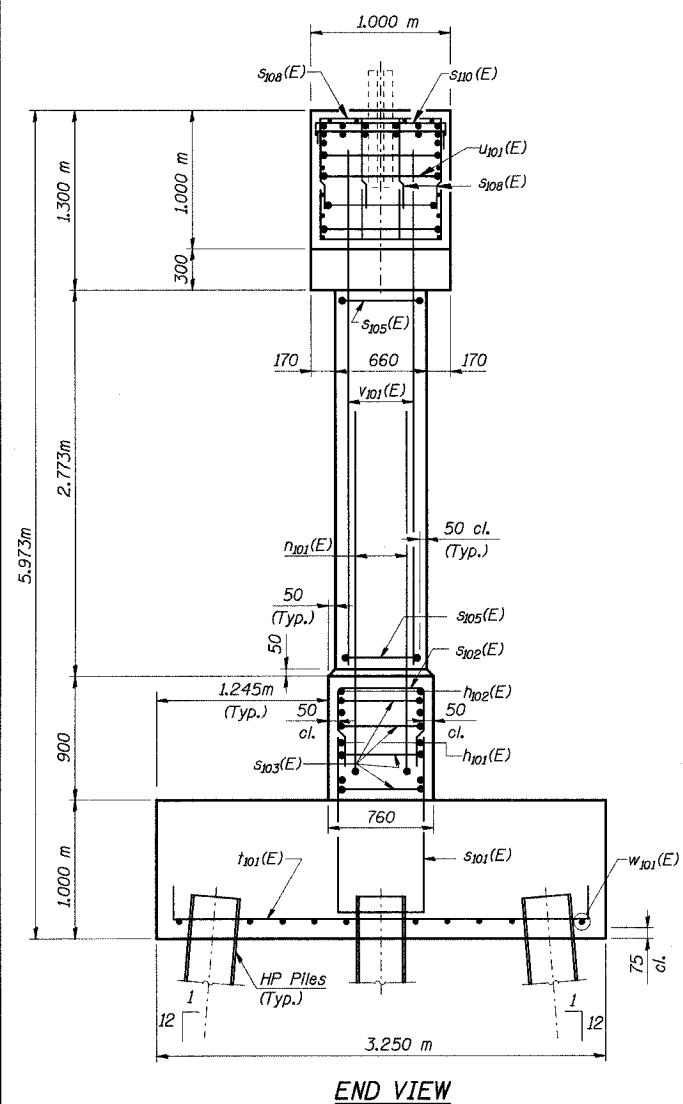
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 71
F. A. I. 80/94	*	COOK	870	585	91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-			
(02033.1 & 0312-708W) R-3		CONTRACT NO. 62108			

BILL OF MATERIAL

Bar No.	Size	Length (m)	Shape
$\eta_{101}(E)$	6 #15	11.040	—
$\eta_{102}(E)$	5 #25	11.040	—
$\eta_{103}(E)$	2 #15	14.450	—
$\eta_{104}(E)$	6 #15	14.900	—
$\eta_{105}(E)$	2 #15	8.000	—
$\eta_{106}(E)$	16 #15	2.750	—
$\eta_{107}(E)$	8 #15	1.900	—
$\eta_{101}(E)$	72 #30	3.000	—
$\rho_{101}(E)$	7 #30	11.000	—
$\rho_{102}(E)$	14 #15	3.820	—
$\rho_{103}(E)$	14 #30	14.950	—
$s_{101}(E)$	56 #15	3.960	—
$s_{102}(E)$	41 #15	2.260	—
$s_{103}(E)$	8 #15	2.05	—
$s_{104}(E)$	18 #15	2.310	—
$s_{105}(E)$	60 #15	2.800	—
$s_{106}(E)$	60 #15	1.000	—
$s_{107}(E)$	56 #15	2.460	—
$s_{108}(E)$	176 #15	2.720	—
$s_{109}(E)$	44 #15	2.780	—
$s_{110}(E)$	32 #15	1.420	—
$v_{101}(E)$	58 #30	4.150	—
$u_{101}(E)$	10 #15	2.370	—
$v_{101}(E)$	72 #30	3.880	—
$w_{101}(E)$	10 #15	16.490	—
ITEM	UNIT	QUANTITY	
Structure Excavation	m ³	95.0	
Concrete Structures	m ³	90.9	
Reinforcement Bars, Epoxy Coated	kg	8800	
Furnishing Steel Piles HP 360x108	m	309	
Driving Steel Piles	m	309	
Test Pile Steel HP 360x108	Each	1	
Controlled Low Strength Material	m ³	2.8	

Reinforcement bars designated (E) shall be epoxy coated.

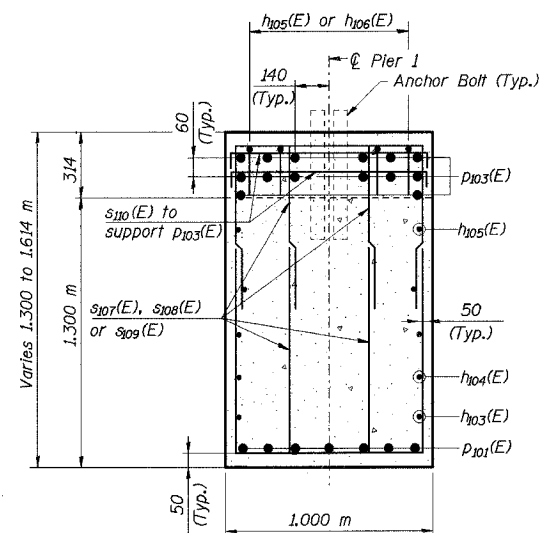
- Notes:
1. Work this Sheet with Sheet No. 70 of 91.
 2. All dimensions are in millimeters (mm) except as noted.



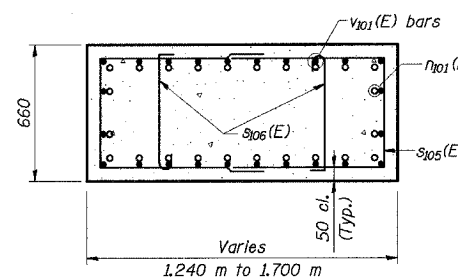
PILE DATA

Type: HP 360x108
Capacity: 650 kN (Driven to 975 kN Bearing)
Est. Length: 11.90 m
No. Req'd.: 27 (Includes 1 test pile)
Test Pile driven to 1460N

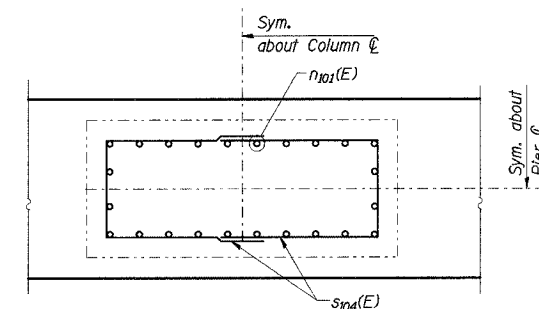
DESIGNED	MAS
CHECKED	JFA
DRAWN	LK
CHECKED	JFA



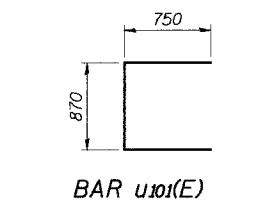
SECTION A-A



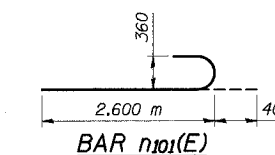
SECTION B-B



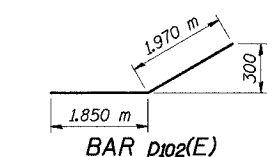
SECTION C-C



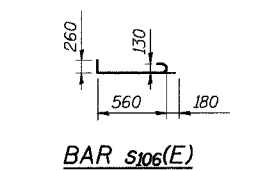
BAR $u_{101}(E)$



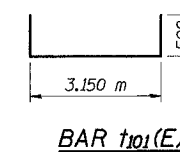
BAR $n_{101}(E)$



BAR $p_{102}(E)$



BAR $s_{106}(E)$



BAR $t_{101}(E)$

BARS $s_{101}(E)$, $s_{102}(E)$, $s_{103}(E)$, $s_{104}(E)$, $s_{105}(E)$, $s_{107}(E)$, $s_{108}(E)$, $s_{109}(E)$ & $s_{110}(E)$

A & B DIMENSIONS

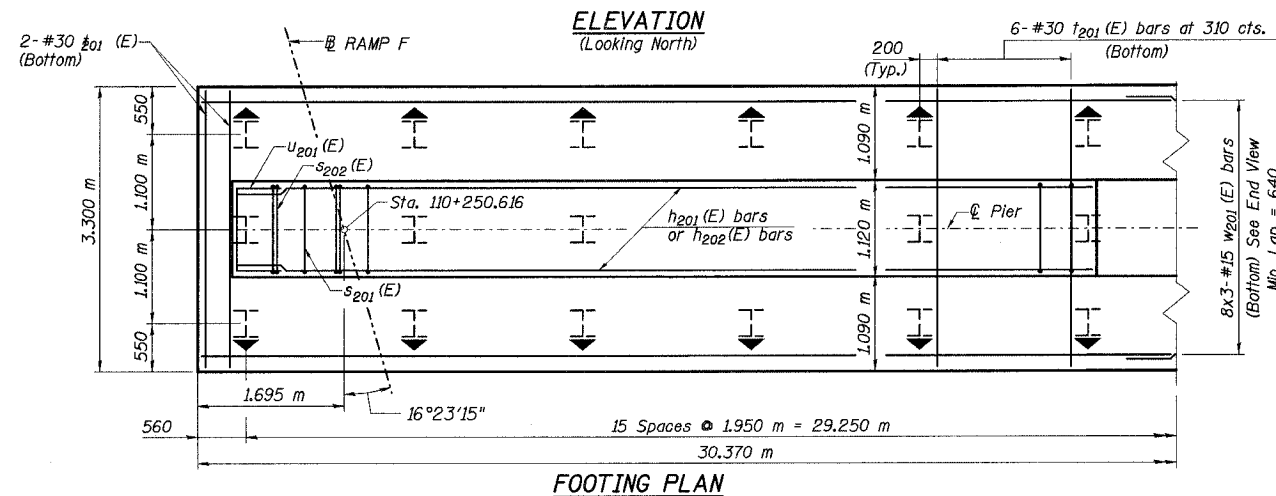
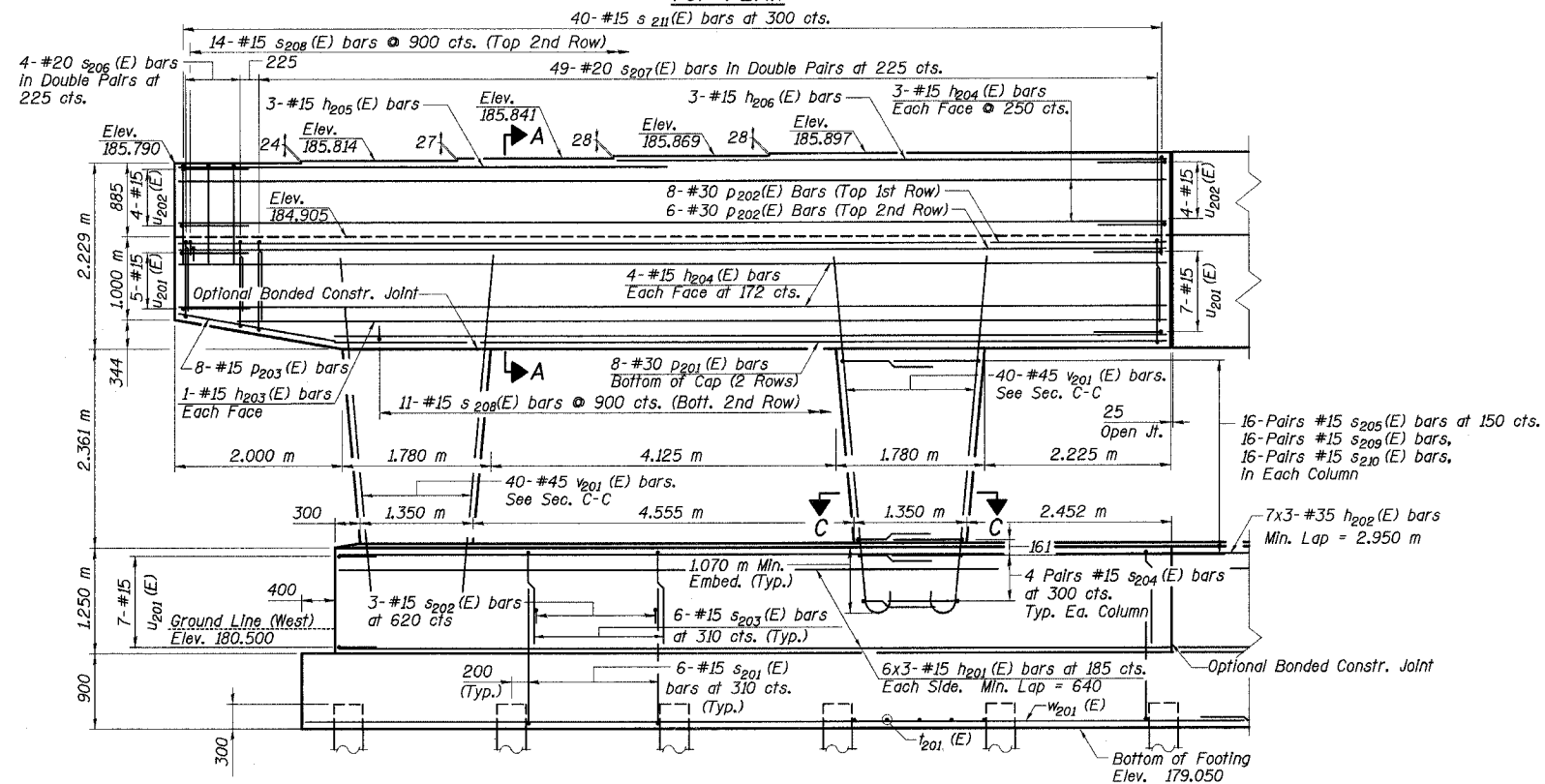
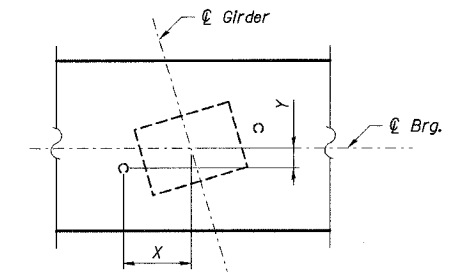
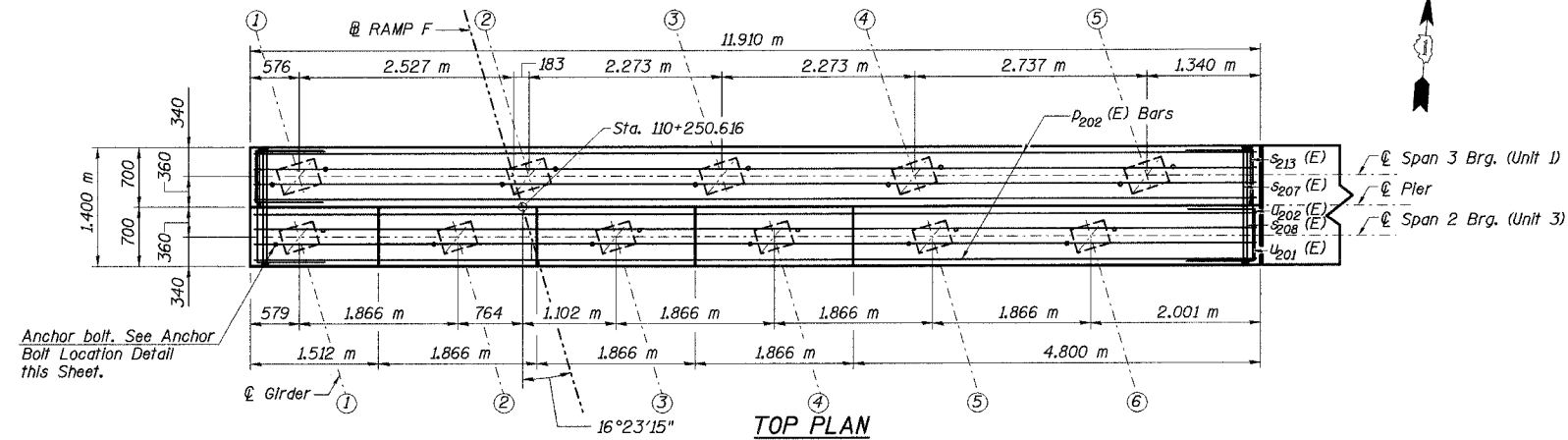
Bar	A	B
$s_{101}(E)$	0.66	1.65
$s_{102}(E)$	0.66	0.80
$s_{103}(E)$	0.63	0.71
$s_{104}(E)$	0.53	0.89
$s_{105}(E)$	0.56	1.12
$s_{107}(E)$	0.62	0.92
$s_{108}(E)$	0.62	1.05
$s_{109}(E)$	0.62	1.08
$s_{110}(E)$	0.90	0.26

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
PIER 1
SECTIONS & DETAILS
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---
HNTB

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 72 91 SHEETS
F. A. I. 80/94	*	COOK	870	586	
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		
02033.1 & 0312-708W		R-3	CONTRACT NO. 62108		



ANCHOR BOLT LOCATION DETAILS

Gir.	Span 2 Brg.		Span 3 Brg.	
	X	Y	Gir.	Y
1	279	82	1	314
2	279	82	2	314
3	279	82	3	312
4	279	82	4	311
5	279	82	5	311
6	279	82	-	-

Notes:

1. Work this sheet with No. 73, & 74 of 91.
2. Space reinforcement in cap to miss anchor bolts.
3. Pour steps monolithically with cap.
4. All dimensions are in millimeters (mm) except as noted.
5. Reinforcement Bars designated (E) shall be epoxy coated.
6. For Bill of Materials and bar bending diagrams, See Sheet No. 74 of 91 Sheets.
7. Bars indicated thus "11x3-#15 cts." indicates 11 lines of bars with 3 lengths per line.
8. For bearing orientation, see Sheet No. 59 of 91.

↑ Indicates Battered Pile

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
PIER 2 PLAN & ELEVATION (WEST)

SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800

DATE JUL 18, 2005
SCALE ---

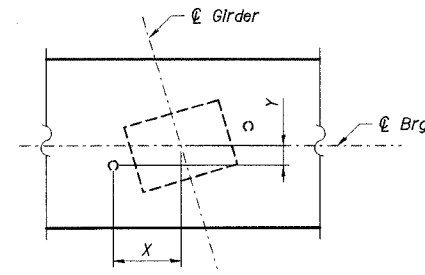
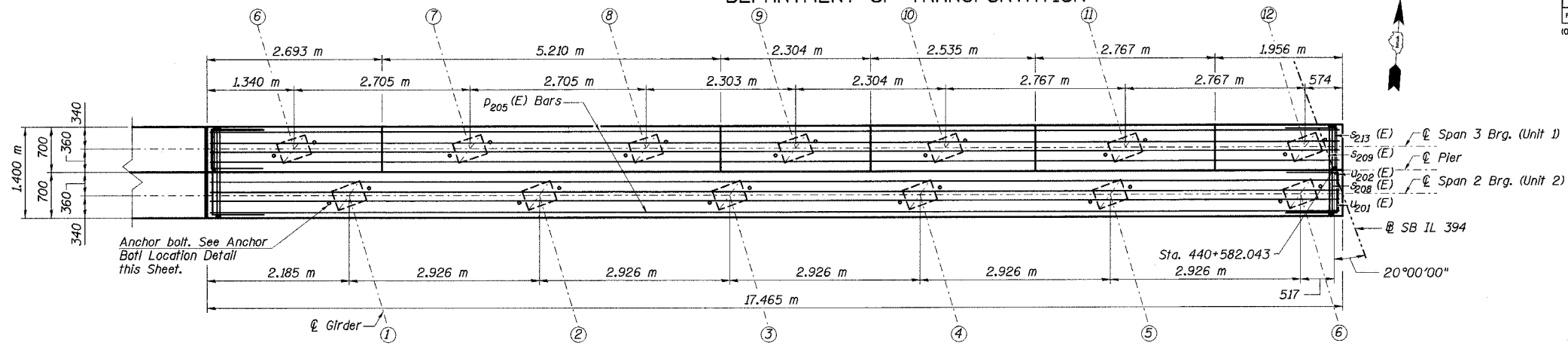
HNTB

DESIGNED	DBT
CHECKED	BDL
DRAWN	CAB
CHECKED	DBT

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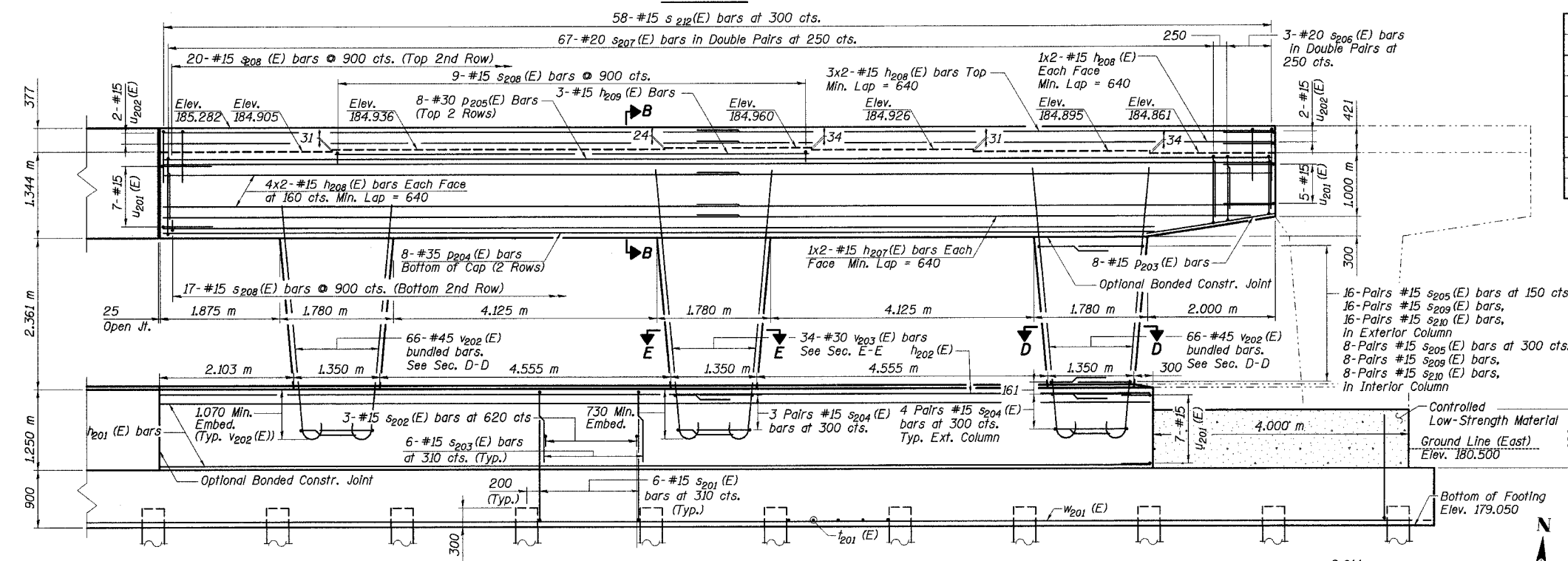
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 73
F. A. I. 80/94	-	COOK	870	587	91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		
02033.1 & 0312-708W R-3		CONTRACT NO. 62108			

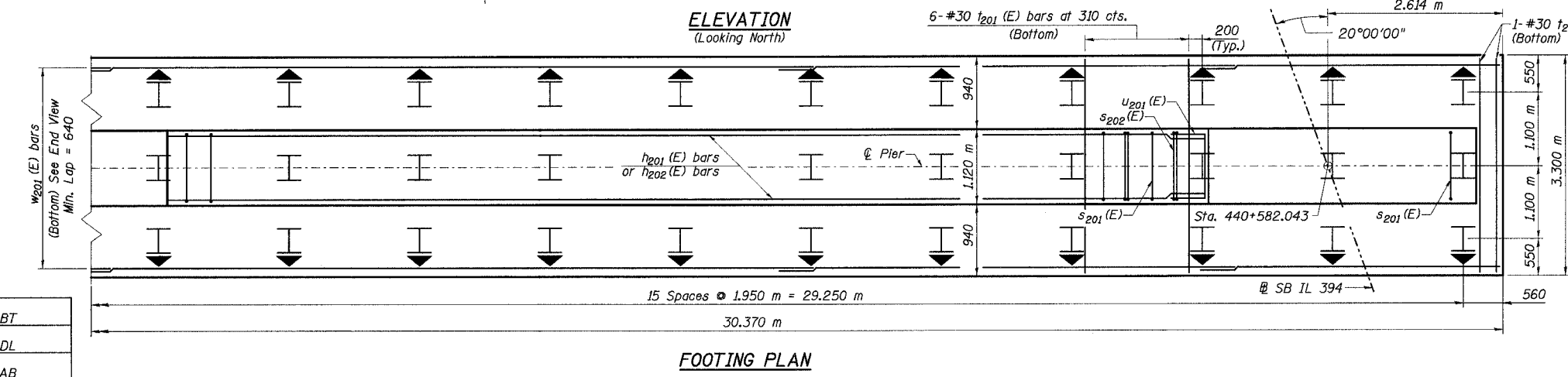


ANCHOR BOLT LOCATION DETAILS

Gir.	Span 2 Brg.		Span 3 Brg.	
	X	Y	X	Y
1	307	112	6	311 102
2	307	112	7	311 102
3	307	112	8	311 102
4	307	112	9	309 107
5	307	112	10	307 112
6	307	112	11	307 112
-	-	-	12	307 112



- Notes:**
1. Work this sheet with No. 73, & 74 of 91.
 2. Space reinforcement in cap to miss anchor bolts.
 3. Four steps monolithically with cap.
 4. All dimensions are in millimeters (mm) except as noted.
 5. Reinforcement Bars designated (E) shall be epoxy coated.
 6. For Bill of Materials and bar bending diagrams, See Sheet No. 74 of 91 Sheets.
 7. Bars Indicated thus "11x3-#15 cts." Indicates 11 lines of bars with 3 lengths per line.
 8. For bearing orientation, see Sheet No. 59 of 91.
- ↑ Indicates Battered Pier



DESIGNED	DBT
CHECKED	BDL
DRAWN	CAB
CHECKED	DBT

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ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
PIER 2 PLAN & ELEVATION (EAST)
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

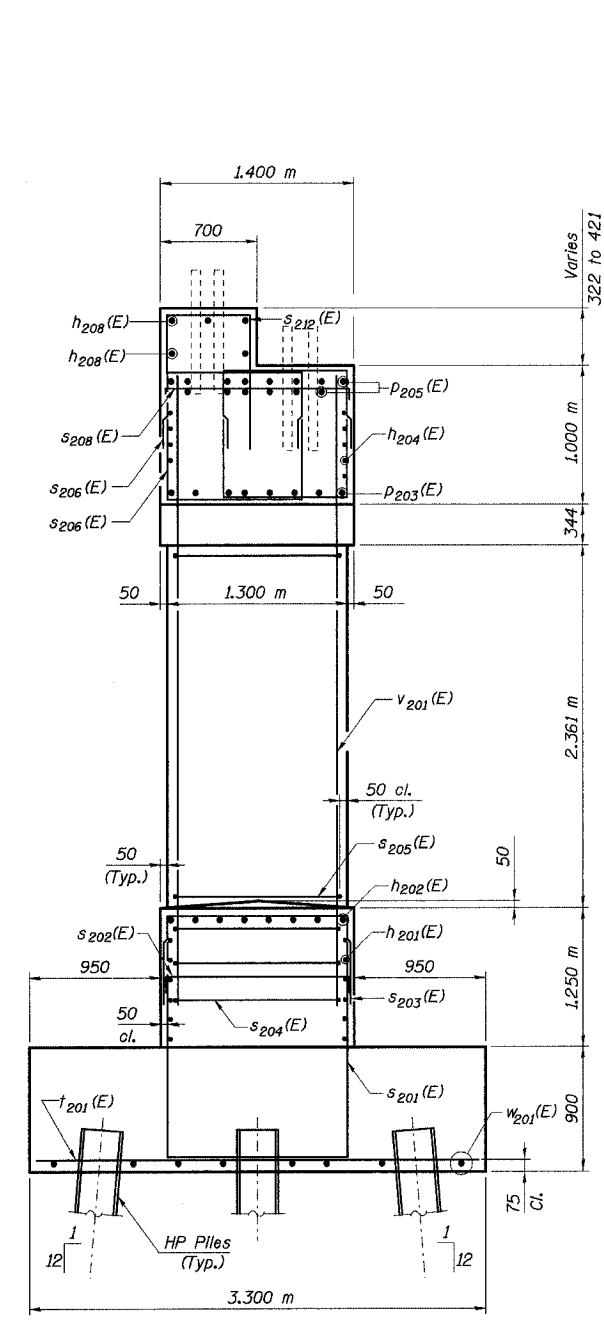
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 74
F. A. I. 80/94	*	COOK	870	588	91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS		CONTRACT NO. 62108	
		MED. AID PROJECT-			

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h ₂₀₁ (E)	36	#15	8,920	—
h ₂₀₂ (E)	21	#35	10,460	—
h ₂₀₃ (E)	2	#15	10,860	—
h ₂₀₄ (E)	14	#15	11,810	—
h ₂₀₅ (E)	3	#15	5,580	—
h ₂₀₆ (E)	3	#15	6,560	—
h ₂₀₇ (E)	4	#15	8,530	—
h ₂₀₈ (E)	26	#15	9,010	—
h ₂₀₉ (E)	3	#15	7,410	—
p ₂₀₁ (E)	16	#30	9,810	—
p ₂₀₂ (E)	14	#30	11,810	—
p ₂₀₃ (E)	16	#15	1,900	—
p ₂₀₄ (E)	16	#35	15,360	—
p ₂₀₅ (E)	16	#30	17,360	—
s ₂₀₁ (E)	90	#15	4,340	□
s ₂₀₂ (E)	39	#15	1,820	□
s ₂₀₃ (E)	78	#15	3,600	□
s ₂₀₄ (E)	38	#15	3,100	□
s ₂₀₅ (E)	144	#15	3,520	□
s ₂₀₆ (E)	28	#20	2,770	□
s ₂₀₇ (E)	464	#20	2,990	□
s ₂₀₈ (E)	71	#15	1,820	□
s ₂₀₉ (E)	144	#15	2,640	□
s ₂₁₀ (E)	144	#15	1,640	□
s ₂₁₁ (E)	40	#15	3,260	□
s ₂₁₂ (E)	58	#15	2,120	□
t ₂₀₁ (E)	94	#30	3,200	—
u ₂₀₁ (E)	38	#15	2,580	□
u ₂₀₂ (E)	12	#15	1,880	□
v ₂₀₁ (E)	80	#45	5,220	□
v ₂₀₂ (E)	132	#45	5,190	□
v ₂₀₃ (E)	34	#30	4,520	□
w ₂₀₁ (E)	24	#15	10,520	—

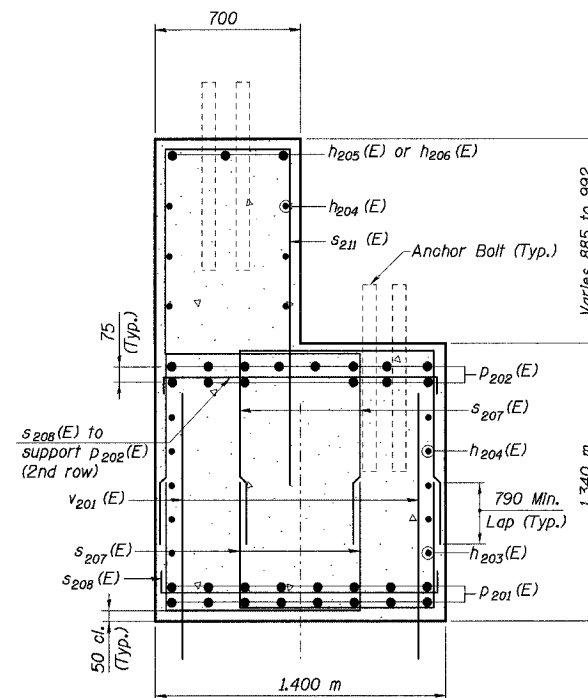


END VIEW

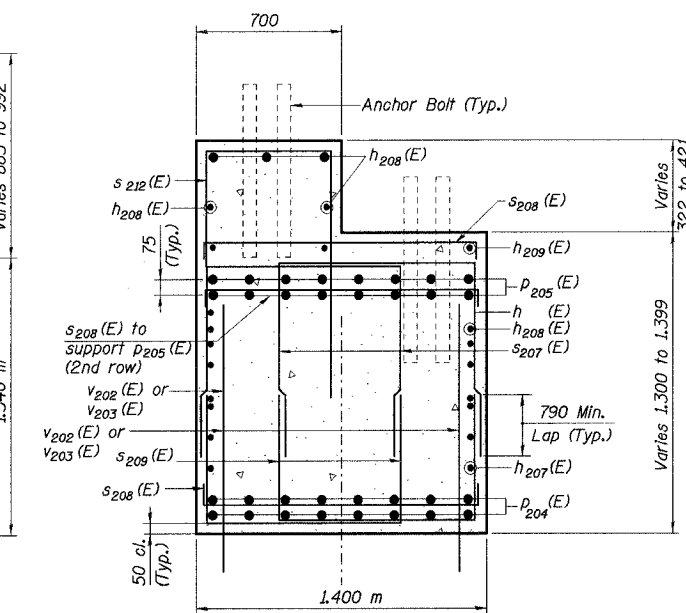
PILE DATA

Type: HP 360x108
Capacity: 650 kN (Driven to 975 kN Bearing)
Est. Length: 14.0 m
No. Req'd.: 48 (Includes 2 test piles)
Test Piles driven to 1460 kN

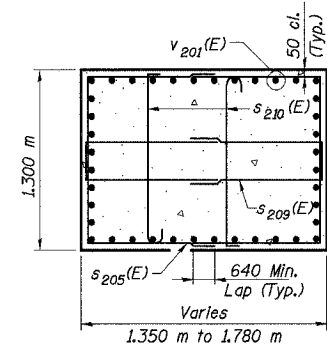
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CHECKED	BDL
DRAWN	CPM
CHECKED	DBT



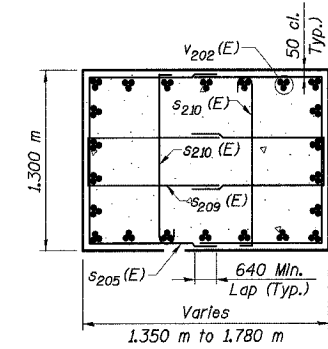
SECTION A-A



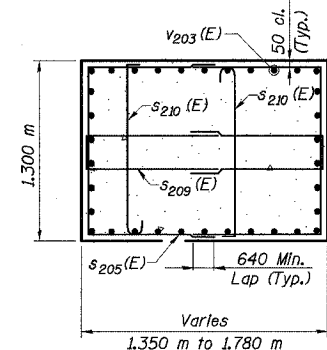
SECTION B-B



SECTION C-C



SECTION D-D



SECTION E-E

BARS s₂₀₁(E) thru s₂₀₉(E), s₂₁₁(E), s₂₁₂(E), u₂₀₁(E), u₂₀₂(E)

BAR v₂₀₁(E), v₂₀₂(E), v₂₀₃(E)

C, D & E DIMENSIONS

Bar	C	D	E
v ₂₀₁ (E)	4560	660	520
v ₂₀₂ (E)	4530	660	520
v ₂₀₃ (E)	4120	400	300

A & B DIMENSIONS

Bar	A	B
s ₂₀₁ (E)	1300	1520
s ₂₀₂ (E)	1300	260
s ₂₀₃ (E)	1300	1150
s ₂₀₄ (E)	1200	950
s ₂₀₅ (E)	1200	1160
s ₂₀₆ (E)	950	910
s ₂₀₇ (E)	950	1020
s ₂₀₈ (E)	1300	260
s ₂₀₉ (E)	320	1160
s ₂₁₁ (E)	600	1330
s ₂₁₂ (E)	600	760
u ₂₀₁ (E)	1300	640
u ₂₀₂ (E)	600	640

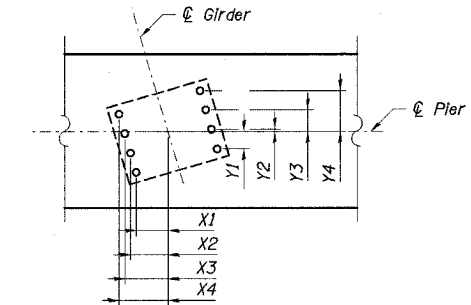
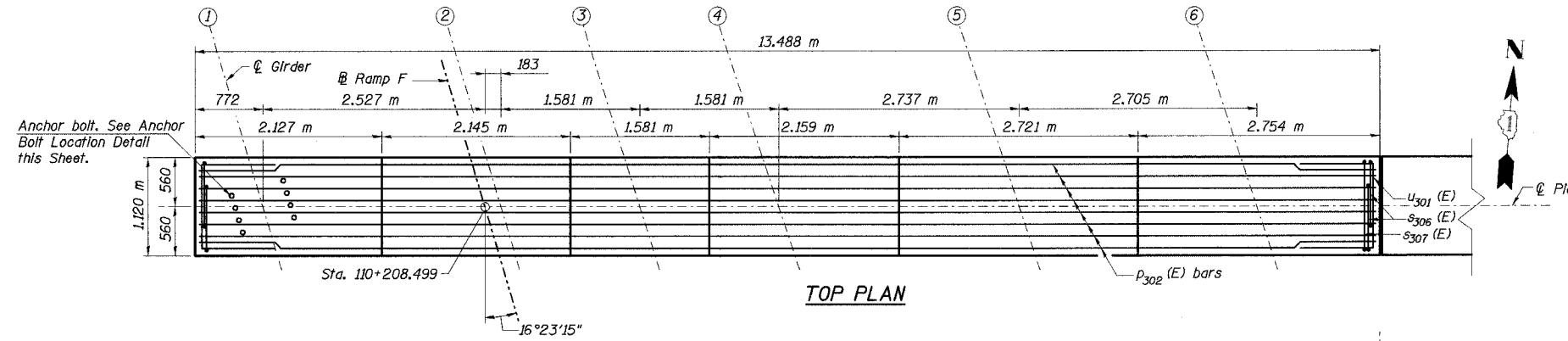
- Notes:
1. Work this Sheet with Sheet No. 72 & 73 of 91.
 2. All dimensions are in millimeters (mm) except as noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
PIER 2 SECTION & DETAILS
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---
HNTB

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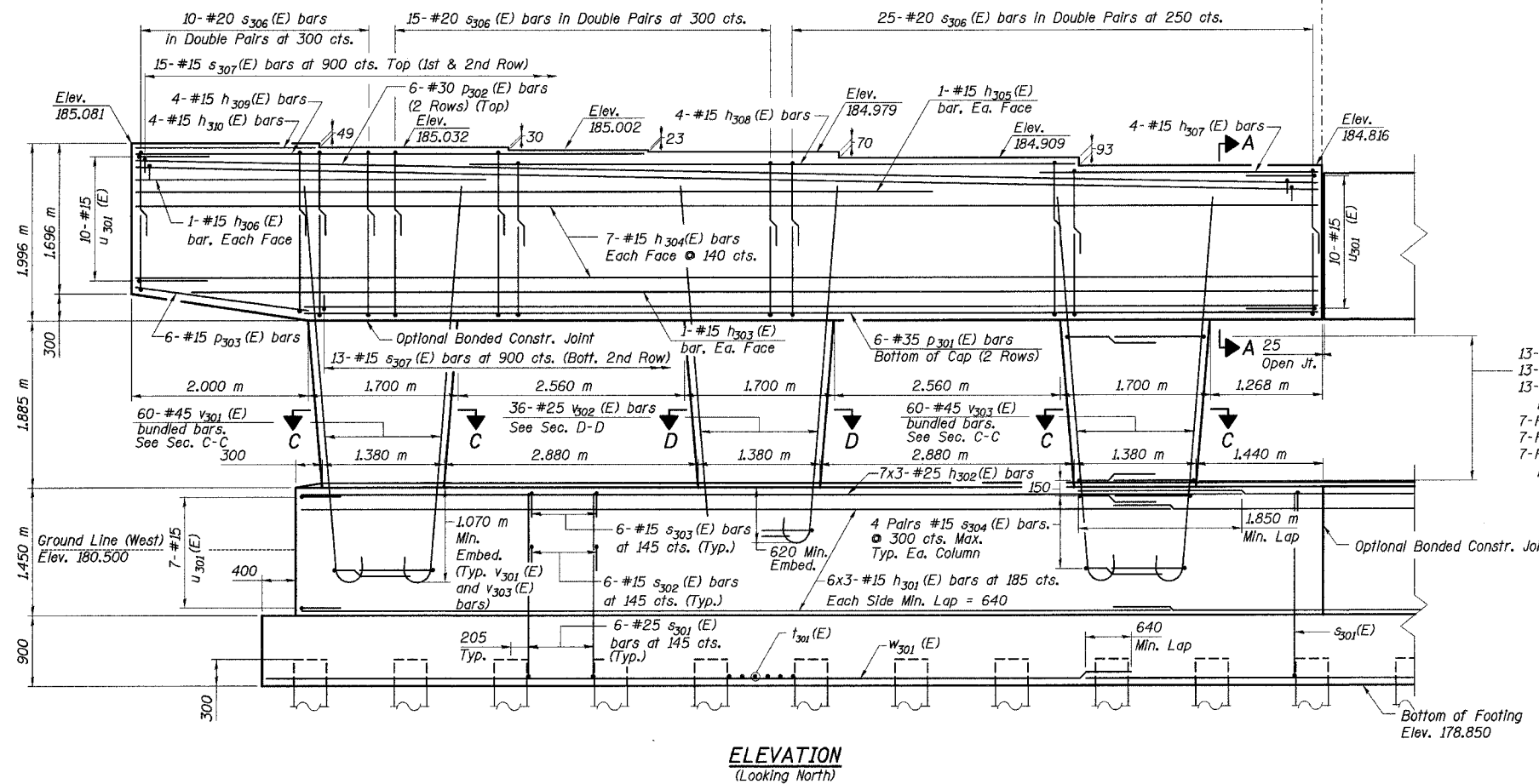
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 75
F. A. I. 80/94	*	COOK	870	589	91 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
02033.1 & 0312-708W R-3			CONTRACT NO. 62108		



ANCHOR BOLT LOCATION DETAILS

Gir.	X1	X2	X3	X4	Y1	Y2	Y3	Y4
1	231	272	313	355	125	16	157	297
2	231	272	313	355	125	16	157	297
3	226	270	313	357	119	21	161	301
4	221	267	313	358	114	26	166	304
5	221	267	313	358	114	26	166	304
6	221	267	313	358	114	26	166	304



13-Pairs #15 s305 (E) bars at 150 cts.
13-Pairs #15 s310 (E) bars
13-Pairs #15 s311 (E) bars
in Exterior Columns
7-Pairs #15 s305 (E) bars at 300 cts.
7-Pairs #15 s310 (E) bars
7-Pairs #15 s311 (E) bars
in Interior Column

Notes:

1. Work this sheet with No. 76, 77, & 78 of 91.
2. Space reinforcement in cap to miss anchor bolts.
3. Pour steps monolithically with cap.
4. All dimensions are in millimeters (mm) except as noted.
5. Reinforcement Bars designated (E) shall be epoxy coated.
6. For Bill of Materials and bar bending diagrams, See Sheet No. 78 of 91 Sheets.
7. Bars indicated thus "11x3-#15 cts." indicates 11 lines of bars with 3 lengths per line.
8. For bearing orientation see Sheet No. 59 of 91.

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DESIGNED	DBT
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DRAWN	CAB
CHECKED	DBT

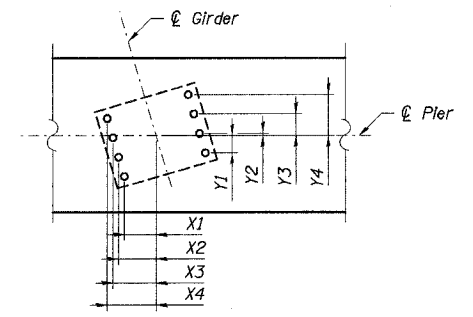
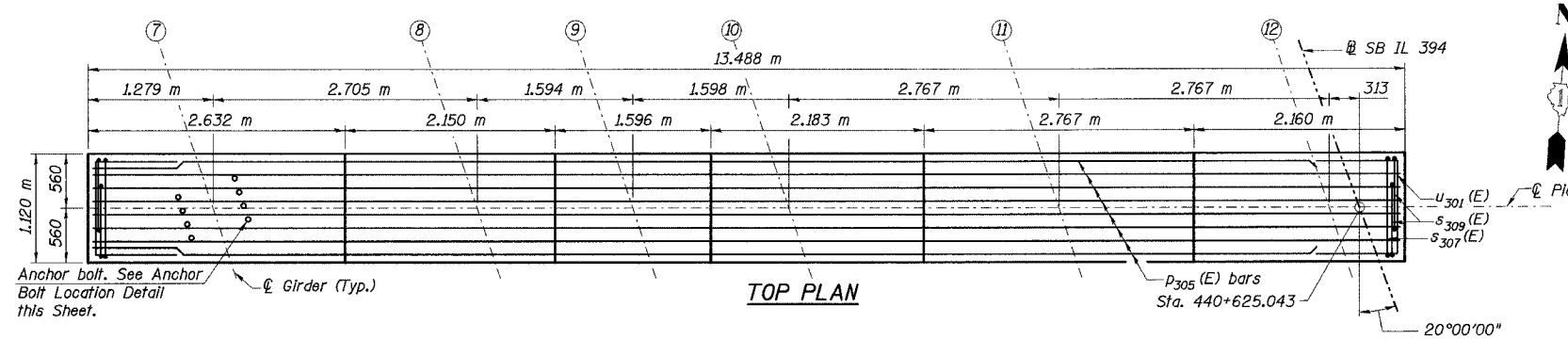
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
PIER 3 PLAN & ELEVATION (WEST)

SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

HNTB

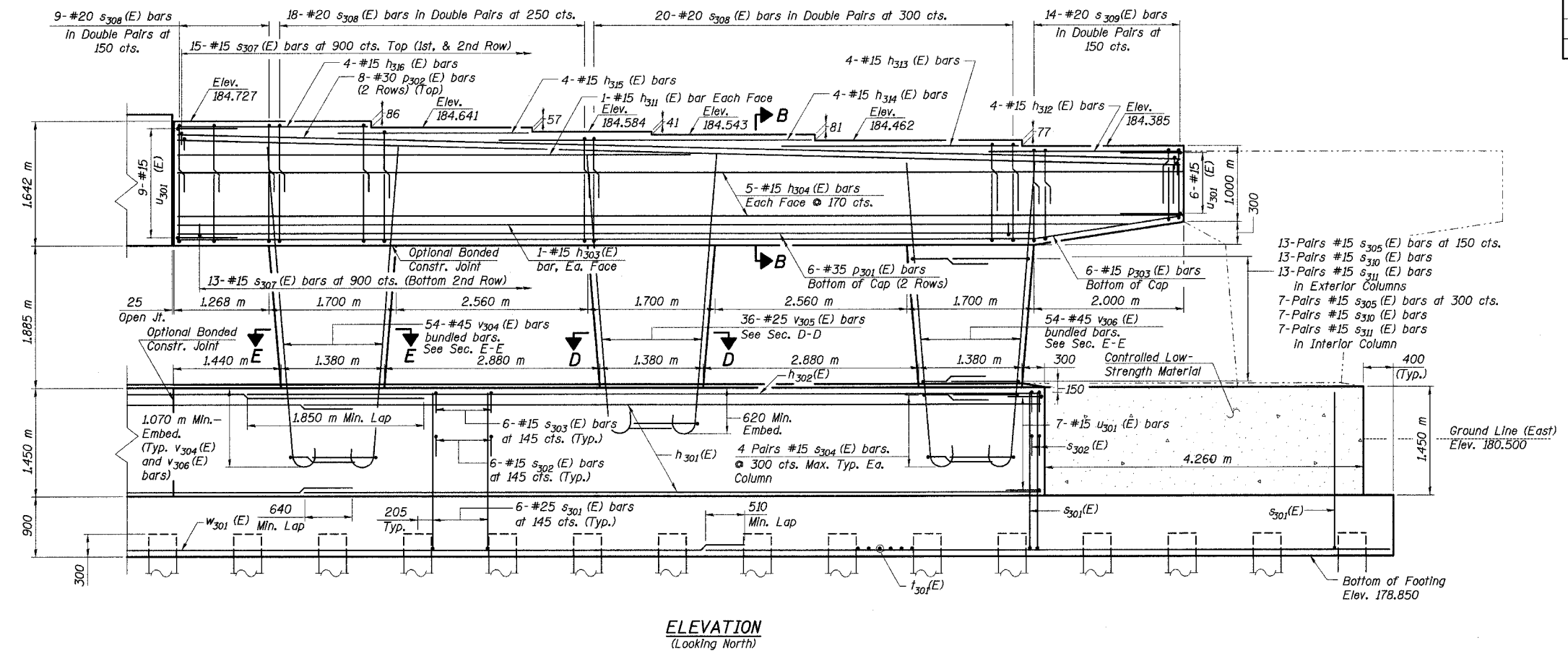
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 76
F. A. I. 80/94	-	COOK	870	590	91 SHEETS
FED. ROAD DIST. NO. 1 ILLINOIS			CONTRACT NO. 62108		



ANCHOR BOLT LOCATION DETAILS

Gr.	X1	X2	X3	X4	Y1	Y2	Y3	Y4
7	221	267	313	358	114	26	166	304
8	221	267	313	358	114	26	166	304
9	216	264	312	360	108	31	170	308
10	211	262	312	362	102	36	174	311
11	211	262	312	362	102	36	174	311
12	211	261	311	362	102	36	174	311



- Notes:
1. Work this sheet with No. 75, 77, & 78 of 91.
 2. Space reinforcement in cap to miss anchor bolts.
 3. Four steps monolithically with cap.
 4. All dimensions are in millimeters (mm) except as noted.
 5. Reinforcement Bars designated (E) shall be epoxy coated.
 6. For Bill of Materials and bar bending diagrams, See Sheet No. 78 of 91 Sheets.
 7. Bars indicated thus "11x3-#15 cts." indicates 11 lines of bars with 3 lengths per line.
 8. For bearing orientation, see Sheet No. 59 of 91.

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DESIGNED	DBT
CHECKED	BDL
DRAWN	CAB
CHECKED	DBT

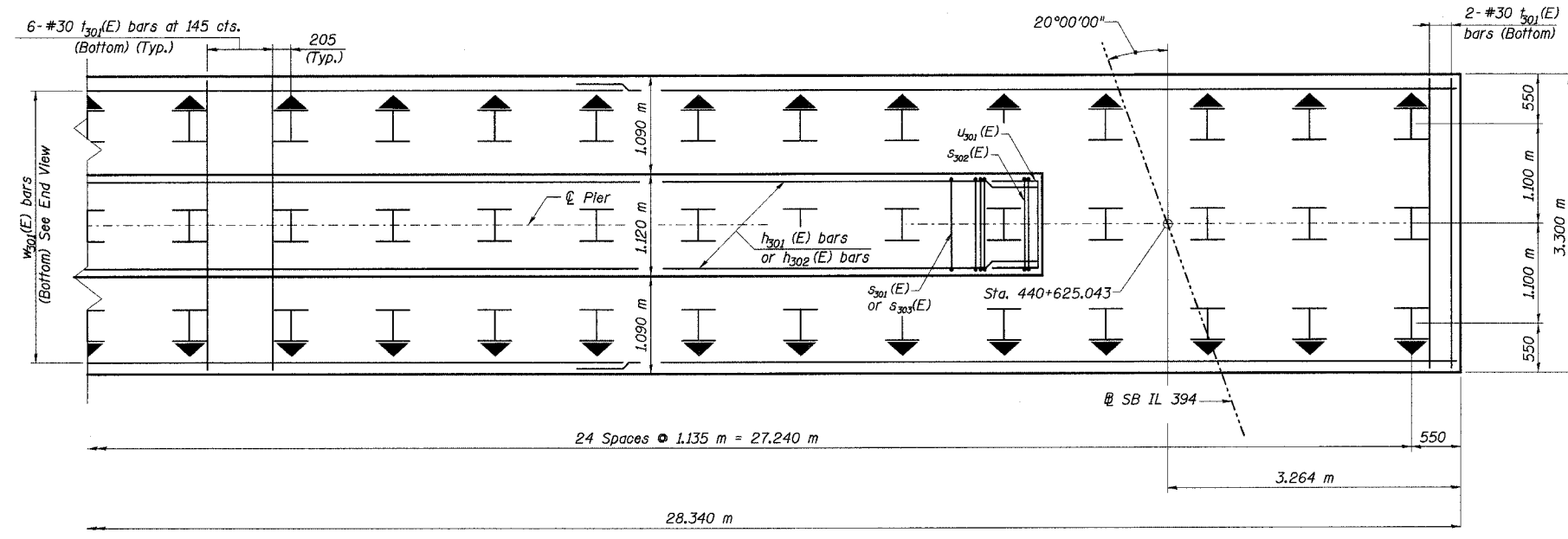
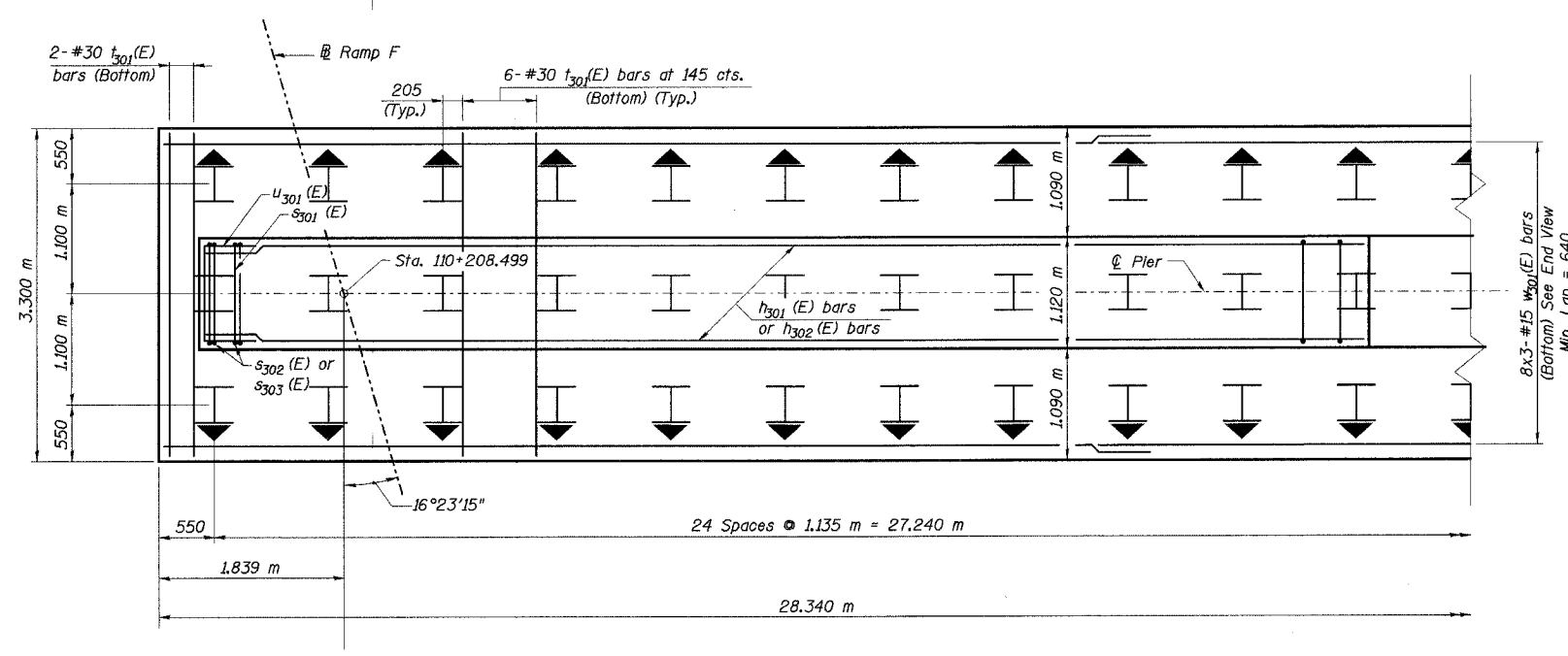
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
PIER 3 PLAN & ELEVATION (EAST)

SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 77 91 SHEETS
F. A. I. 80/94	-	COOK	870	591	
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		
02033.1 & 0312-708W		R-3	CONTRACT NO. 62108		



- Notes:
1. Work this sheet with No. 75, 76, & 78 of 91.
 2. All dimensions are in millimeters (mm) except as noted.
 3. Reinforcement Bars designated (E) shall be epoxy coated.
 4. For bill of Materials and bar bending diagrams, See Sheet No. 78 of 91 Sheets.
 5. Bars Indicated thus "11x3-#15 cts." indicates 11 lines of bars with 3 lengths per line.

Indicates Battered Pile

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DESIGNED	DBT
CHECKED	BDL
DRAWN	CAB
CHECKED	DBT

FOOTING PLAN

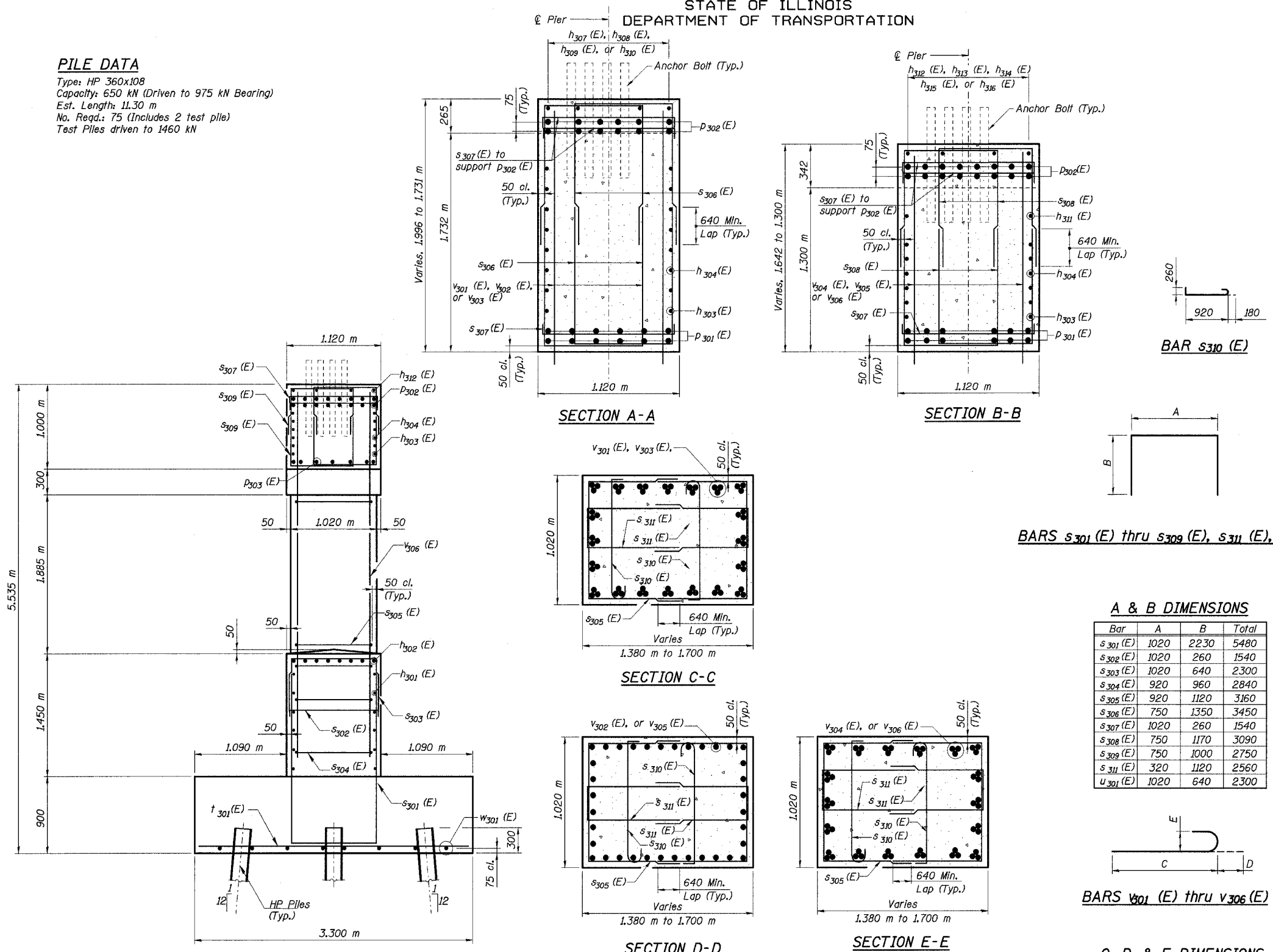
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
PIER 3 FOOTING PLAN
SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 78
F. A. I. 80/94	*	COOK	870	592	91 SHEETS
FED. ROAD DIST. NO. 1			ILLINOIS FED. AID PROJECT-		
(02033.1 & 0312-708W) R-3			CONTRACT NO. 62108		

PILE DATA
 Type: HP 360x108
 Capacity: 650 kN (Driven to 975 kN Bearing)
 Est. Length: 11.30 m
 No. Req'd.: 75 (Includes 2 test pile)
 Test Piles driven to 1460 kN



BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h ₃₀₁ (E)	36	#15	8.160	—
h ₃₀₂ (E)	21	#25	8.960	—
h ₃₀₃ (E)	4	#15	12.440	—
h ₃₀₄ (E)	24	#15	13.380	—
h ₃₀₅ (E)	2	#15	8.350	—
h ₃₀₆ (E)	2	#15	3.150	—
h ₃₀₇ (E)	4	#15	3.090	—
h ₃₀₈ (E)	4	#15	6.800	—
h ₃₀₉ (E)	4	#15	5.750	—
h ₃₁₀ (E)	4	#15	2.020	—
h ₃₁₁ (E)	2	#15	6.710	—
h ₃₁₂ (E)	4	#15	2.490	—
h ₃₁₃ (E)	4	#15	3.100	—
h ₃₁₄ (E)	4	#15	4.110	—
h ₃₁₅ (E)	4	#15	2.480	—
h ₃₁₆ (E)	4	#15	2.530	—
p ₃₀₁ (E)	24	#35	11.390	—
p ₃₀₂ (E)	28	#30	13.390	—
p ₃₀₃ (E)	12	#15	1.900	—
s ₃₀₁ (E)	144	#25	5.320	□
s ₃₀₂ (E)	122	#15	1.540	□
s ₃₀₃ (E)	122	#15	2.560	□
s ₃₀₄ (E)	48	#15	2.840	□
s ₃₀₅ (E)	132	#15	3.160	□
s ₃₀₆ (E)	200	#20	3.470	□
s ₃₀₇ (E)	86	#15	1.540	□
s ₃₀₈ (E)	188	#20	3.090	□
s ₃₀₉ (E)	56	#20	2.750	□
s ₃₁₀ (E)	132	#15	1.360	□
s ₃₁₁ (E)	132	#15	2.560	□
u ₃₀₁ (E)	49	#15	2.300	□
v ₃₀₁ (E)	60	#45	5.210	⌋
v ₃₀₂ (E)	36	#25	4.290	⌋
v ₃₀₃ (E)	60	#45	5.040	⌋
v ₃₀₄ (E)	54	#45	4.870	⌋
v ₃₀₅ (E)	36	#25	3.930	⌋
v ₃₀₆ (E)	54	#45	4.650	⌋
w ₃₀₁ (E)	54	#15	9.840	—

A & B DIMENSIONS

Bar	A	B	Total
s ₃₀₁ (E)	1020	2230	5480
s ₃₀₂ (E)	1020	260	1540
s ₃₀₃ (E)	1020	640	2300
s ₃₀₄ (E)	920	960	2840
s ₃₀₅ (E)	920	1120	3160
s ₃₀₆ (E)	750	1350	3450
s ₃₀₇ (E)	1020	260	1540
s ₃₀₈ (E)	750	1170	3090
s ₃₀₉ (E)	750	1000	2750
s ₃₁₁ (E)	320	1120	2560
u ₃₀₁ (E)	1020	640	2300

C, D, & E DIMENSIONS

Bar	C	D	E
v ₃₀₁ (E)	4550	660	520
v ₃₀₂ (E)	4010	280	200
v ₃₀₃ (E)	4380	660	520
v ₃₀₄ (E)	4210	660	520
v ₃₀₅ (E)	3650	280	200
v ₃₀₆ (E)	3990	660	520

- Notes:
1. Work this Sheet with Sheet No. 75, 76, & 77 of 91.
 2. All dimensions are in millimeters (mm) except as noted.

DESIGNED	DBT
CHECKED	BDL
DRAWN	CAB
CHECKED	DBT

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND

PIER 3 SECTION & DETAILS

SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800

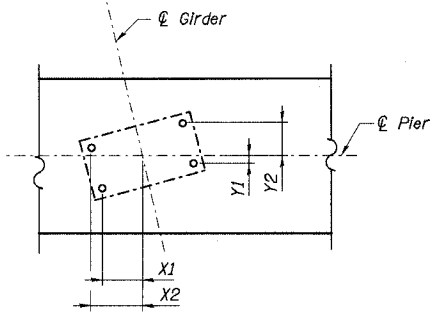
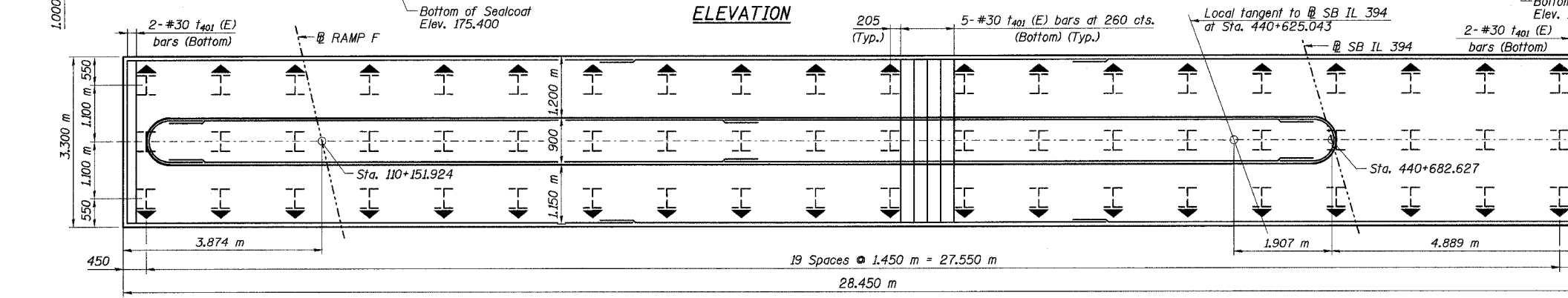
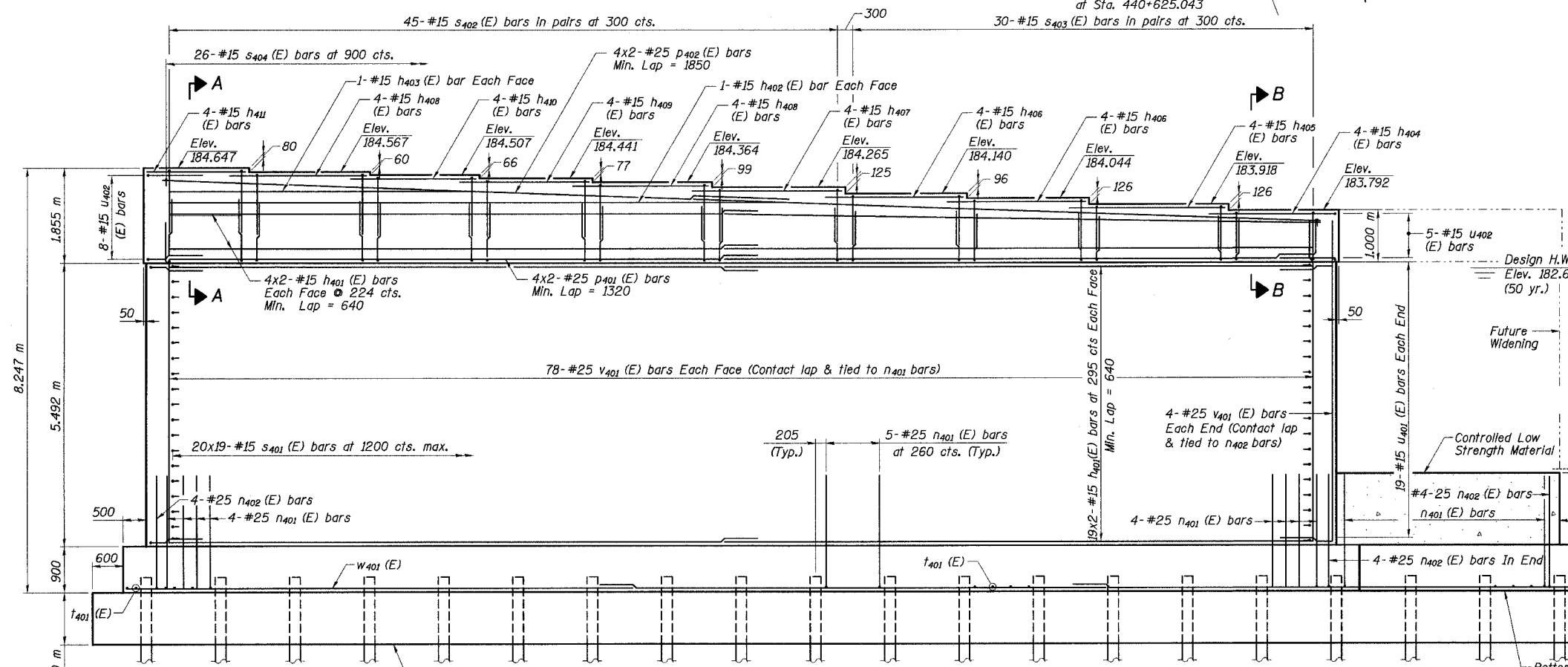
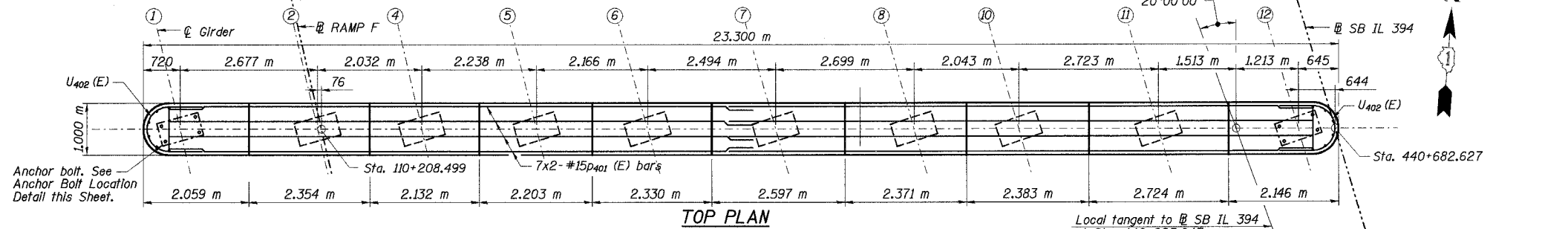
DATE JUL 18, 2005
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 79 91 SHEETS
F. A. I. 80/94	*	COOK	870	593	
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		
(02033.1 & 0312-708W) R-3		CONTRACT NO. 62108			



ANCHOR BOLT
LOCATION DETAILS

Gir.	X1	X2	Y1	Y2
1	292	370	56	234
2	292	370	56	234
4	287	371	49	239
5	285	371	46	242
6	283	372	42	244
7	282	372	41	245
8	282	372	41	245
10	277	372	34	251
11	277	372	34	251
12	277	372	33	251

- Notes:
1. Work this sheet with No. 80 of 91.
 2. Space reinforcement in cap to miss anchor bolts.
 3. Pour steps monolithically with cap.
 4. All dimensions are in millimeters (mm) except as noted.
 5. Reinforcement Bars designated (E) shall be epoxy coated.
 6. For Bill of Materials and bar bending diagrams, See Sheet No. 74 of 91 Sheets.
 7. Bars indicated thus "11x3-#15 cts." indicates 11 lines of bars with 3 lengths per line.
 8. For bearing orientation, see Sheet No. 55 of 91.

Indicates Battered Pile

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DESIGNED	DBT
CHECKED	BDL
DRAWN	SKM
CHECKED	DBT

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND

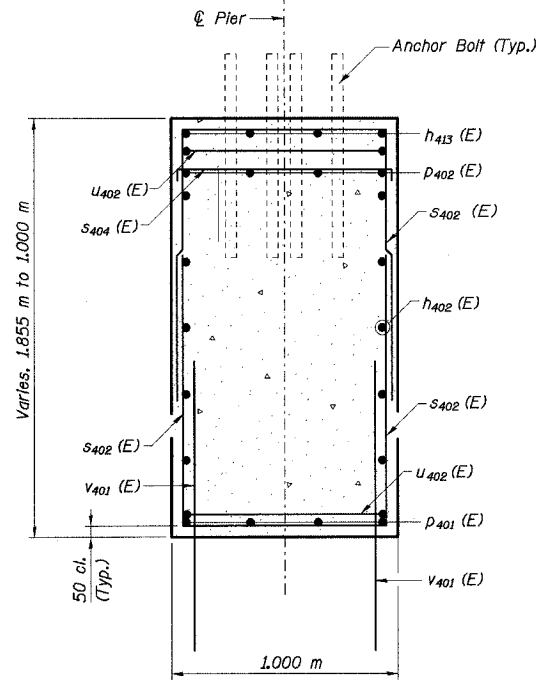
PIER 4 PLAN & ELEVATION

SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800
DATE JUL 18, 2005
SCALE ---

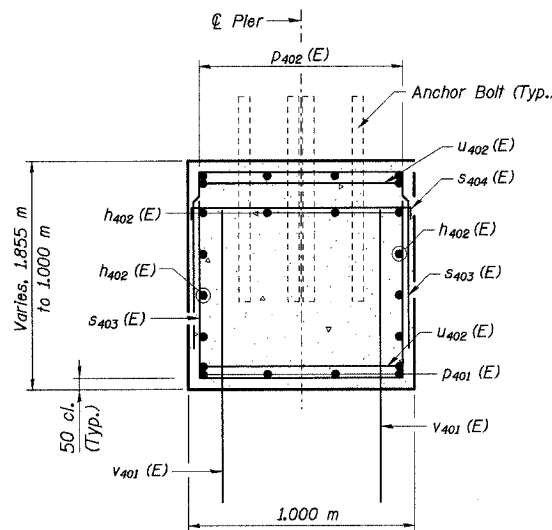
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 80
F. A. I. 80/94	*	COOK	870	594	91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 62108	
02033.1 & 0312-708W		R-3			



SECTION A-A

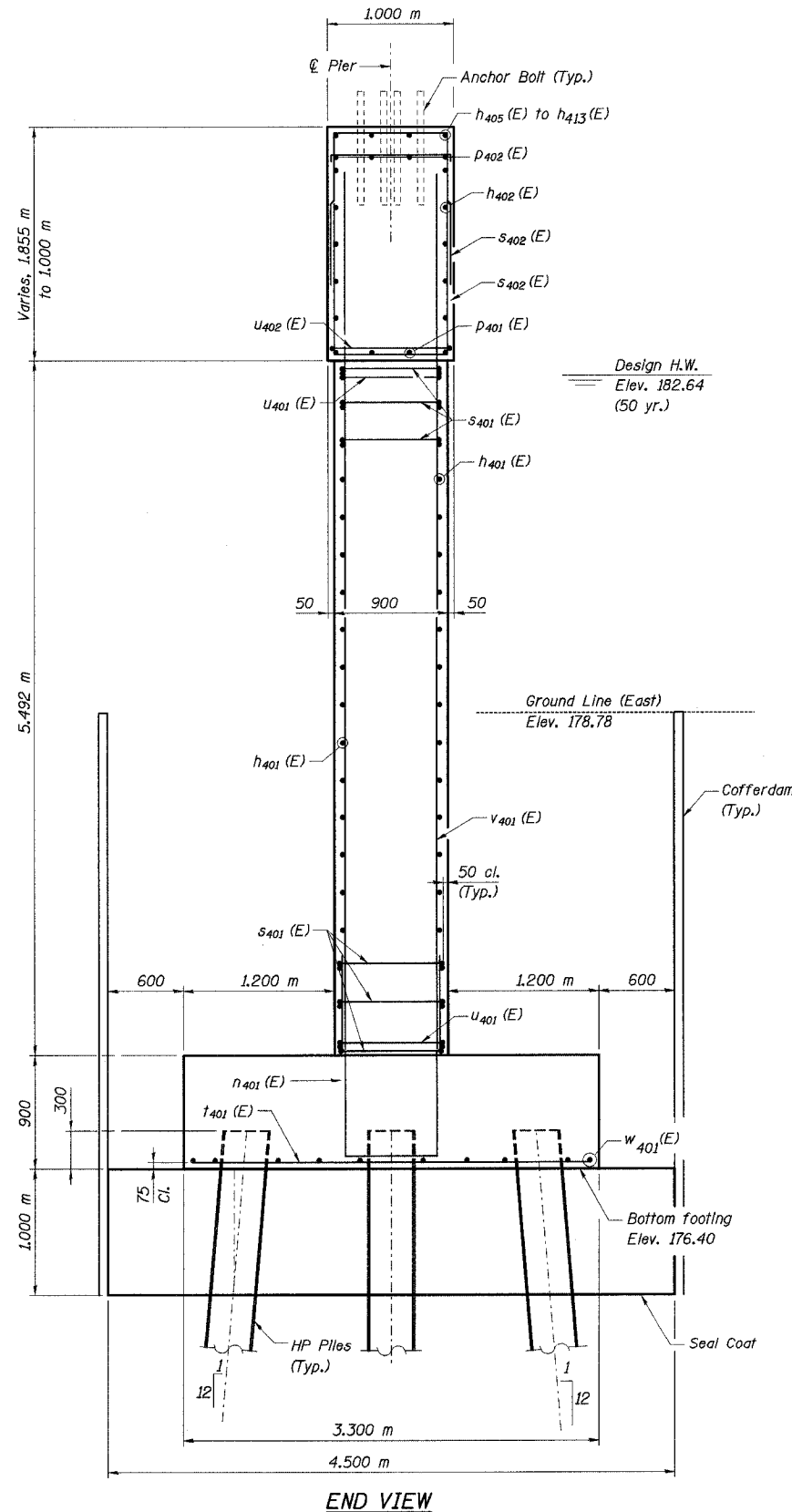


SECTION B-B

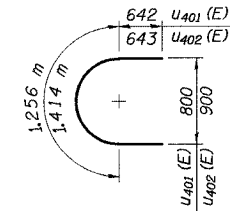
PILE DATA

Type: HP 360x108
Capacity: 650 kN (Driven to 975 kN Bearing)
Est. Length: 8.2 m
No. Req'd: 60 (Includes 2 test piles)
Test Piles driven to 1460 kN

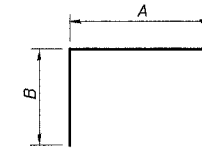
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CHECKED	BDL
DRAWN	SKM
CHECKED	DBT



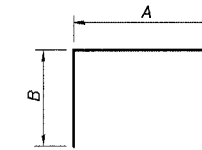
END VIEW



BAR U401 (E) & U402 (E)



BARS S401 (E) - S404 (E) & n401 (E)



BARS n402 (E)

A & B DIMENSIONS

Bar	A	B
S401 (E)	800	260
S402 (E)	900	1200
S403 (E)	900	950
S404 (E)	900	260
n401 (E)	800	2200
n402 (E)	400	2200

Notes:

1. Work this Sheet with Sheet No. 79 of 91.
2. All dimensions are in millimeters (mm) except as noted.

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h401 (E)	92	#15	11.470	—
h402 (E)	2	#15	11.980	—
h403 (E)	2	#15	5.600	—
h404 (E)	4	#15	2.030	—
h405 (E)	4	#15	3.060	—
h406 (E)	8	#15	2.720	—
h407 (E)	4	#15	2.930	—
h408 (E)	8	#15	2.690	—
h409 (E)	4	#15	2.540	—
h410 (E)	4	#15	2.470	—
h411 (E)	4	#15	1.510	—
n401 (E)	92	#25	5.180	L
n402 (E)	12	#25	2.600	L
P401 (E)	8	#25	11.810	—
P402 (E)	8	#25	12.180	—
S401 (E)	380	#15	1.320	□
S402 (E)	90	#15	3.300	□
S403 (E)	60	#15	2.800	□
S404 (E)	26	#15	1.420	□
t401 (E)	99	#30	3.100	—
U401 (E)	38	#15	2.540	U
U402 (E)	13	#15	2.700	U
V401 (E)	164	#25	6.230	—
W401 (E)	30	#15	9.880	—
ITEM	UNIT	QUANTITY		
Cofferdam Excavation	m ³	470		
Cofferdam	Each	1		
Concrete Structures	m ³	236.8		
Reinforcement Bars, Epoxy Coated	kg	12,570		
Furnishing Steel Piles HP 360x108	m	476.0		
Driving Steel Piles	m	476.0		
Test Pile Steel HP 360x108	Each	2		
Controlled Low Strength Material	m ³	6.9		
Seal Coat Concrete	m ³	133.4		

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
PIER 4 SECTION & DETAILS

SB IL ROUTE 394 OVER THORN CREEK
F.A.P. 332 SECTION (02033.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800

DATE JUL 18, 2005
SCALE ---

HNTB

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 81 91 SHEETS
F. A. I. 80/94		COOK	870	595	
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-	CONTRACT NO. 62108		
(0203.1 & 0312-708W) R-3					

BILL OF MATERIAL

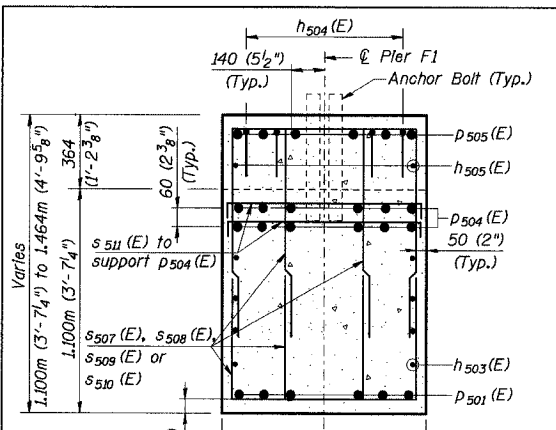
Bar No.	Size	Length (m)	Shape	
h ₅₀₁ (E)	8	#15	7.300	—
h ₅₀₂ (E)	5	#20	7.300	—
h ₅₀₃ (E)	8	#20	9.000	—
h ₅₀₄ (E)	12	#15	2.560	—
h ₅₀₅ (E)	2	#20	5.650	—
n ₅₀₁ (E)	60	#30	3.000	—
p ₅₀₁ (E)	6	#25	7.400	—
p ₅₀₂ (E)	4	#15	3.640	—
p ₅₀₃ (E)	4	#15	4.050	—
p ₅₀₄ (E)	12	#30	11.500	—
p ₅₀₅ (E)	6	#15	3.930	—
s ₅₀₁ (E)	24	#15	4.200	—
s ₅₀₂ (E)	26	#15	2.850	—
s ₅₀₃ (E)	18	#15	2.140	—
s ₅₀₄ (E)	36	#15	2.500	—
s ₅₀₅ (E)	36	#15	2.800	—
s ₅₀₆ (E)	72	#15	1.140	—
s ₅₀₇ (E)	8	#15	2.025	—
s ₅₀₈ (E)	16	#15	2.225	—
s ₅₀₉ (E)	92	#15	2.545	—
s ₅₁₀ (E)	56	#15	2.675	—
s ₅₁₁ (E)	27	#15	1.420	—
t ₅₀₁ (E)	26	#25	4.000	—
u ₅₀₁ (E)	10	#15	2.350	—
u ₅₀₂ (E)	10	#20	4.060	—
v ₅₀₁ (E)	60	#30	4.200	—
w ₅₀₁ (E)	10	#15	8.000	—
ITEM	UNIT	QUANTITY		
Structure Excavation, Common	m ³	51.5		
Concrete for Bridges & Drainage Structures (Class SP)	m ³	57		
Reinforcing Steel, Epoxy Coated	kg	5990		
Furnishing Steel Piles	m	185		
Driving Steel Piles	Each	14		
Test Piles	m	14		

- Notes:
- Space reinforcement in cap to miss anchor bolts.
 - Pour steps monolithically with cap.
 - All dimensions are in millimeters (mm) except as noted.
 - Min bar laps (Unless otherwise shown):
#15 bars - 710 mm
#20 bars - 880 mm
#25 bars - 1480 mm
#30 bars - 2070 mm
 - Reinforcement Bars Designated (E) shall be epoxy coated.
 - Information in parentheses in English Units
- ↑ Indicates Pile Batter.

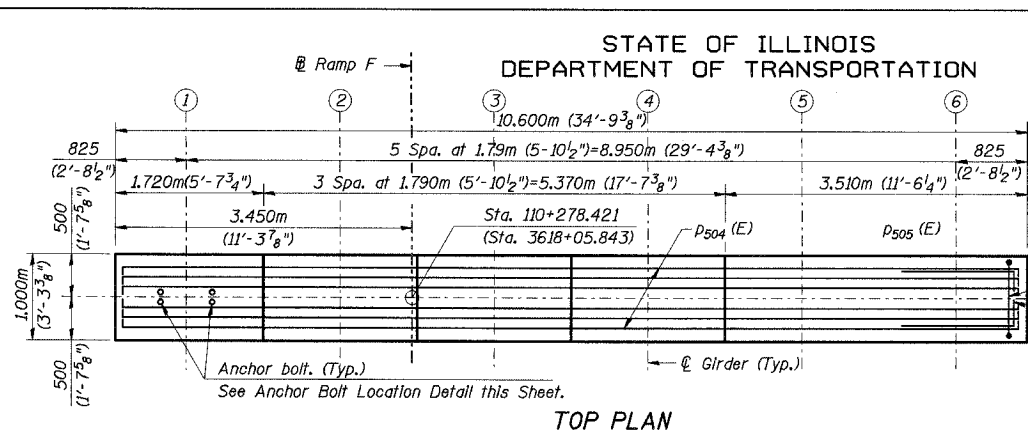
ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND

PIER F1
RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2845
DATE JUL 18, 2005
SCALE ---

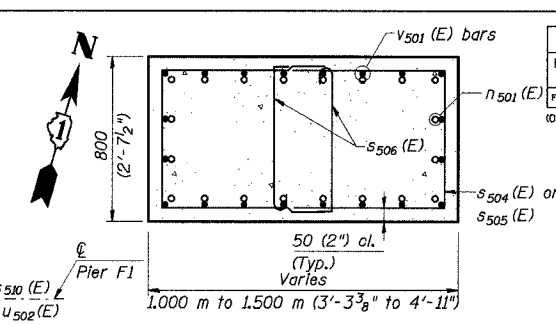
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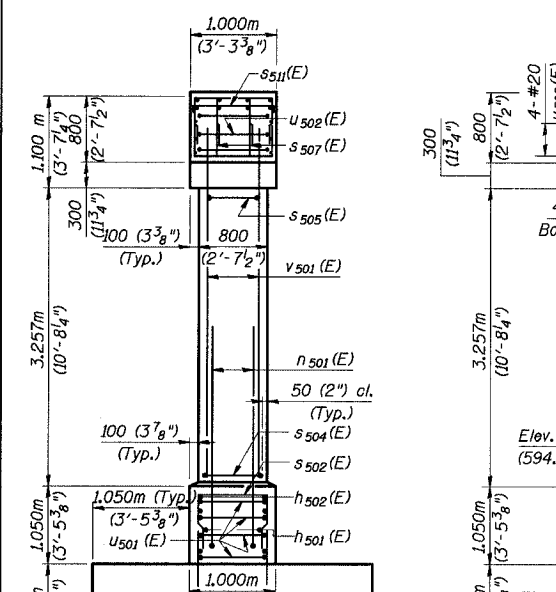
SECTION A-A



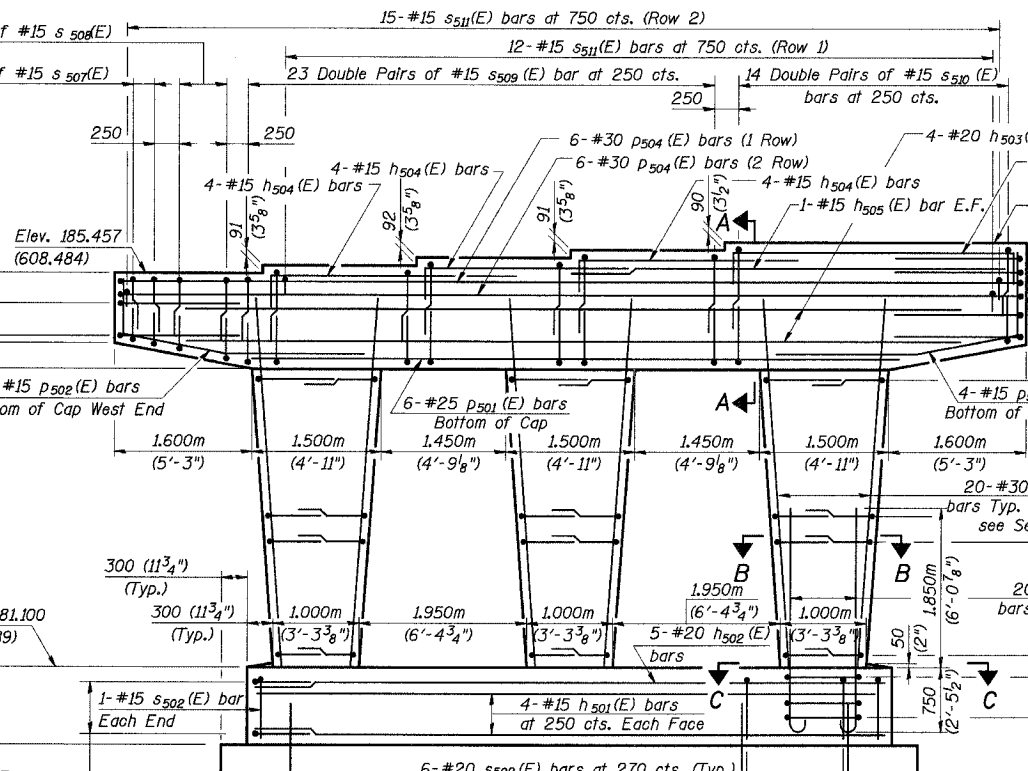
TOP PLAN



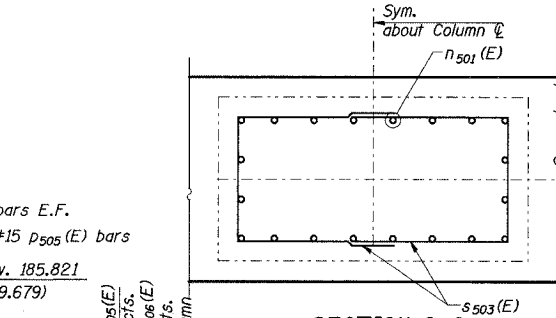
SECTION B-B



END VIEW



ELEVATION (Looking North)



SECTION C-C

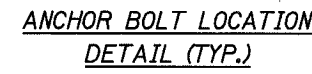
PILE DATA

Type: HP 360 x 108 (HP 14 x 73)
Capacity: 650 kN (146 kips)
(Driven to 975 kN (219 kip) Bearing)
Est. Length 13.2m (43.3ft)
Test Piles driven to 1460 kN (328 kip)
No. Required: 15 (Includes 1 test pile)

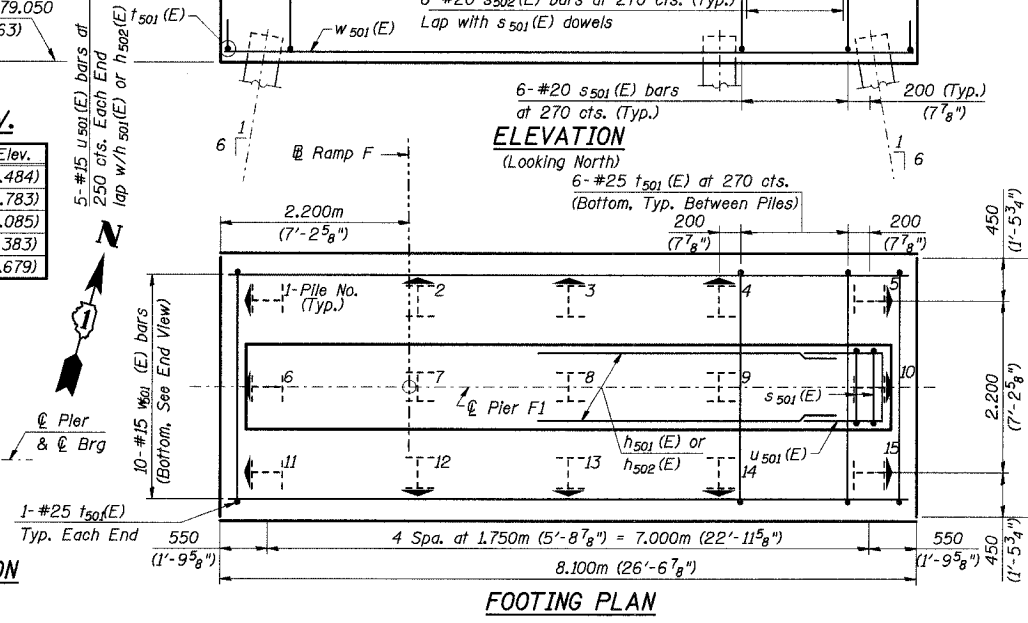
Girder	Elev. Elev.
1	185.457 (608.484)
2	185.548 (608.783)
3	185.640 (609.085)
4	185.731 (609.383)
5, 6	185.821 (609.679)

Girder	Elev. Elev.
1	185.457 (608.484)
2	185.548 (608.783)
3	185.640 (609.085)
4	185.731 (609.383)
5, 6	185.821 (609.679)

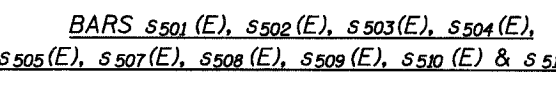
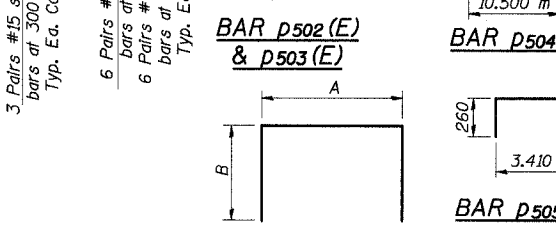
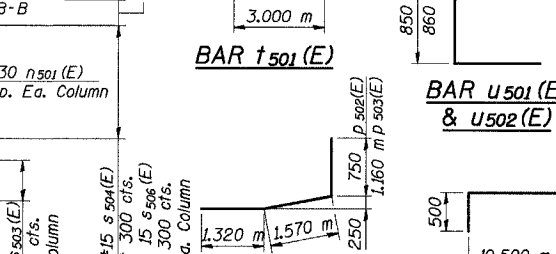
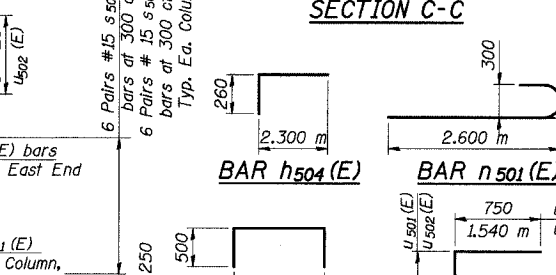
DESIGNED	JFA
CHECKED	MEA
DRAWN	LK
CHECKED	MEA



ANCHOR BOLT LOCATION DETAIL (TYP.)



FOOTING PLAN



A & B DIMENSIONS

Bar	A (m)	B (m)
s ₅₀₁ (E)	0.900	1.650
s ₅₀₂ (E)	0.900	0.975
s ₅₀₃ (E)	0.640	0.750
s ₅₀₄ (E)	0.700	0.900
s ₅₀₅ (E)	0.700	1.050
s ₅₀₇ (E)	0.625	0.700
s ₅₀₈ (E)	0.625	0.800
s ₅₀₉ (E)	0.625	0.960
s ₅₁₀ (E)	0.625	1.025
s ₅₁₁ (E)	0.900	0.260

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 82
F. A. I. 80/94	*	COOK	870	596	91 SHEETS
FED. ROAD DIST. NO. 1		ILLINOIS FEEL. AID PROJECT-		CONTRACT NO. 62108	
(0203.1 & 0312-708W) R-3					

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 (Tension in kN) = $1.25 \times 10^{-3} \times f_y \times A_t$
- ② Minimum *Pull-out Strength (Tension in kN) = $1.25 \times 10^{-3} \times f_{s,allow} \times A_t$

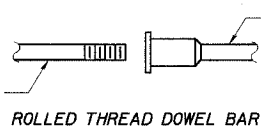
Where f_y = Yield strength of lapped reinforcement bars in MPa.
 $f_{s,allow}$ = Allowable tensile stress in lapped reinforcement bars in MPa (Service Load)
 A_t = Tensile stress area of lapped reinforcement bars (mm²)
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kN - tension	Min. Pull-Out Strength kN - tension
#15	610 mm	100	40
#20	790 mm	150	60
#25	1.04 m	250	100
#30	1.37 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 "BAR SPLICERS."

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

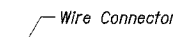
The diameter of this part is the same as the diameter of the bar spliced.



ROLLED THREAD DOWEL BAR



** ONE PIECE

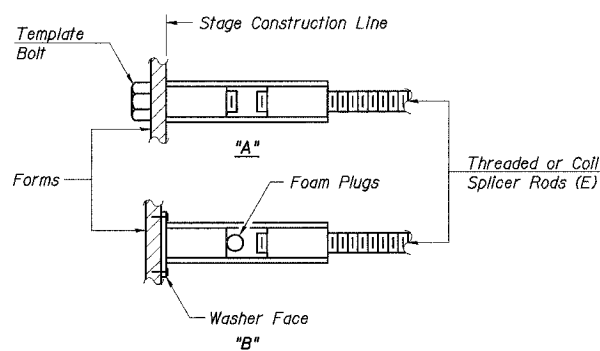


Wire Connector

WELDED SECTIONS

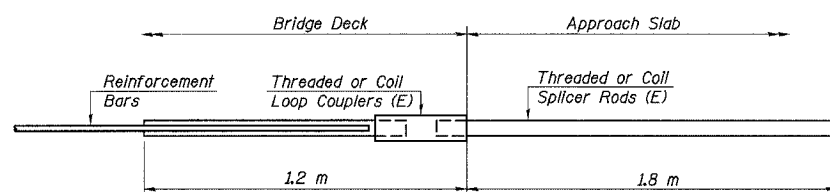
BAR SPLICER ASSEMBLY ALTERNATIVES

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



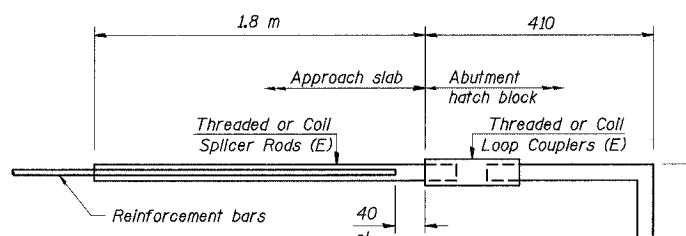
INSTALLATION AND SETTING METHODS

"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.



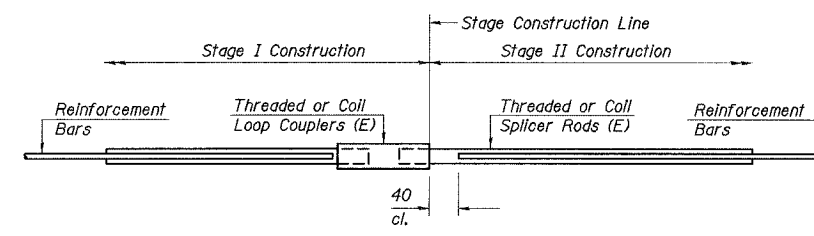
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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



FOR PILE BENT ABUTMENTS

Bar Splicer for #15 bar	
Min. Capacity =	100 kN - tension
Min. Pull-out Strength =	40 kN - tension
No. Required =	51 (S. Abut) 69 (N. Abut)



STANDARD

Bar Size	No. Assemblies Required	Location

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DESIGNED	MEA
CHECKED	PCA
DRAWN	LK
CHECKED	MEA

BSD-1(M) 9-01-03

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
BAR SPLICER ASSEMBLY DETAILS
SB IL ROUTE 394 / RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800/2845
DATE JUL 18, 2005
SCALE ---
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 83 91 SHEETS
F. A. I. 80/94	*	COOK	870	597	
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-			
(0203.1 & 0312-708W) R-3			CONTRACT NO. 62108		

ABUTMENT F

PILE DRIVING RECORD

TYPE & SIZE OF PILE USED: _____ DATE PILES DRIVEN _____ MONTH YEAR
 PILE DRIVING EQUIPMENT USED: _____
 ENERGY RATING: _____
 HAMMER USED: TYPE: _____ STROKE: _____ WEIGHT: _____
 FORMULA USED TO CALCULATE CAPACITY: _____
 PILE DRIVING CONTRACTOR: _____ CSE: _____

PILE LOCATION	PILE NO.	GROUND SURFACE ELEV.	CUT-OFF ELEV.	PENE-TRATED LENGTH (M)	DRIVING DATA FOR FINAL 1.524 METER - BLOWS							CAPACITY TOOLS	REMARKS
					1.524m to 1.219m	1.219m to 0.914m	0.914m to 0.610m	0.610m to 0.305m	0.305m to 0.000m	0.305m to 0.152m *	0.152m to 0.000m *		
ABUTMENT F	1												
	2												
	3												
	4												
	5												
	6												
	7												
	8												
	9												
	10												
	11												
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	61												
	62												
	63												

Note:
 * For piles driven to refusal, blow count for the last foot shall be recorded in 6 Inches increments.
 Pile damage, obstruction, pile rejection, test piles etc. shall be recorded in Remarks column.

DESIGNED	PCA
CHECKED	MEA
DRAWN	LK
CHECKED	MEA

PIER F1

PILE DRIVING RECORD

TYPE & SIZE OF PILE USED: _____ DATE PILES DRIVEN _____ MONTH YEAR
 PILE DRIVING EQUIPMENT USED: _____
 ENERGY RATING: _____
 HAMMER USED: TYPE: _____ STROKE: _____ WEIGHT: _____
 FORMULA USED TO CALCULATE CAPACITY: _____
 PILE DRIVING CONTRACTOR: _____ CSE: _____

PILE LOCATION	PILE NO.	GROUND SURFACE ELEV.	CUT-OFF ELEV.	PENE-TRATED LENGTH (M)	DRIVING DATA FOR FINAL 1.524 METER - BLOWS							CAPACITY TOOLS	REMARKS
					1.524m to 1.219m	1.219m to 0.914m	0.914m to 0.610m	0.610m to 0.305m	0.305m to 0.000m	0.305m to 0.152m *	0.152m to 0.000m *		
PIER F1	1												
	2												
	3												
	4												
	5												
	6												
	7												
	8												
	9												
	10												
	11												
	12												
	13												
	14												
	15												

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-94 EAST BOUND / IL 394 SOUTH BOUND
 PILE DRIVING RECORDS
 ABUTMENT F AND PIER F1
 RAMP F OVER THORN CREEK
 F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
 COOK COUNTY
 STA. 440+704.350 STRUCTURE NO. 016-2845
 DATE JUL 18, 2005
 SCALE ---

HNTB

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F. A. I. 80/94	SECTION •	COUNTY COOK	TOTAL SHEETS 870	SHEET NO. 598	SHEET NO. 84 91 SHEETS
FED. ROAD DIST. NO. 1 ILLINOIS			FED. AID PROJECT- 0203.1 & 0312-708W R-3		
				CONTRACT NO. 62108	

Wang Engineering, Inc.
Consulting Geotechnical and Environmental Engineers
wangeng@wengeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG HB-59 Page 1 of 1
WEI Job No.: 665-05-01
Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

Datum: NGVD
Elevations 180.90 m
North: 545890.20 m
East: 362577.84 m
Station: 440+623.32
Offset: 0.03 LT

Profile Elevation	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample Type	Sample No.	SPT Values (blows/150 mm)	N Values (blows/150 mm)	Moisture Content (%)	Qu (kPa)	Moisture Content (%)
186.7	Dark brown to black SILTY CLAY LOAM								
	--TOPSOIL--								
	Very stiff to hard, brown to dark gray to black CLAY LOAM with organic matter	1	1	3	393	0	42	57	
		2	2	2	290	0	32	42	
178.2	Medium stiff, gray CLAY LOAM with organic matter	3	3	1	55	0	24	37	
		4	4	1	55	0	24	37	
177.7	Very soft to medium stiff, dark gray to dark olive, organic CLAY LOAM to SILTY CLAY LOAM	5	5	1	55	0	24	37	
		6	6	0	63	0	24	37	
		7	7	0	55	0	24	37	
		8	8	0	55	0	24	37	
		9	9	0	55	0	24	37	
		10	10	0	39	0	24	37	
		11	11	0	39	0	24	37	
		12	12	14	34	30	50/76	13	
	Very dense, gray SAND and GRAVEL	13	13	14	34	30	50/76	13	
		14	14	0	58	0	24	37	
		15	15	0	57	0	24	37	
		16	16	0	55	0	24	37	
		17	17	0	55	0	24	37	
		18	18	0	55	0	24	37	
		19	19	0	55	0	24	37	
		20	20	0	55	0	24	37	
		21	21	0	55	0	24	37	
		22	22	0	55	0	24	37	
		23	23	0	55	0	24	37	
		24	24	0	55	0	24	37	
		25	25	0	55	0	24	37	
		26	26	0	55	0	24	37	
		27	27	0	55	0	24	37	
		28	28	0	55	0	24	37	
		29	29	0	55	0	24	37	
		30	30	0	55	0	24	37	
		31	31	0	55	0	24	37	
		32	32	0	55	0	24	37	
		33	33	0	55	0	24	37	
		34	34	0	55	0	24	37	
		35	35	0	55	0	24	37	
		36	36	0	55	0	24	37	
		37	37	0	55	0	24	37	
		38	38	0	55	0	24	37	
		39	39	0	55	0	24	37	
		40	40	0	55	0	24	37	
		41	41	0	55	0	24	37	
		42	42	0	55	0	24	37	
		43	43	0	55	0	24	37	
		44	44	0	55	0	24	37	
		45	45	0	55	0	24	37	
		46	46	0	55	0	24	37	
		47	47	0	55	0	24	37	
		48	48	0	55	0	24	37	
		49	49	0	55	0	24	37	
		50	50	0	55	0	24	37	
		51	51	0	55	0	24	37	
		52	52	0	55	0	24	37	
		53	53	0	55	0	24	37	
		54	54	0	55	0	24	37	
		55	55	0	55	0	24	37	
		56	56	0	55	0	24	37	
		57	57	0	55	0	24	37	
		58	58	0	55	0	24	37	
		59	59	0	55	0	24	37	
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		61	61	0	55	0	24	37	
		62	62	0	55	0	24	37	
		63	63	0	55	0	24	37	
		64	64	0	55	0	24	37	
		65	65	0	55	0	24	37	
		66	66	0	55	0	24	37	
		67	67	0	55	0	24	37	
		68	68	0	55	0	24	37	
		69	69	0	55	0	24	37	
		70	70	0	55	0	24	37	
		71	71	0	55	0	24	37	
		72	72	0	55	0	24	37	
		73	73	0	55	0	24	37	
		74	74	0	55	0	24	37	
		75	75	0	55	0	24	37	
		76	76	0	55	0	24	37	
		77	77	0	55	0	24	37	
		78	78	0	55	0	24	37	
		79	79	0	55	0	24	37	
		80	80	0	55	0	24	37	
		81	81	0	55	0	24	37	
		82	82	0	55	0	24	37	
		83	83	0	55	0	24	37	
		84	84	0	55	0	24	37	
		85	85	0	55	0	24	37	
		86	86	0	55	0	24	37	
		87	87	0	55	0	24	37	
		88	88	0	55	0	24	37	
		89	89	0	55	0	24	37	
		90	90	0	55	0	24	37	
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		99	99	0	55	0	24	37	
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		129	129	0	55	0	24	37	
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		136	136	0	55	0	24	37	
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		140	140	0	55	0	24	37	
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		142	142	0	55	0	24	37	
		143	143	0	55	0	24	37	
		144	144	0	55	0	24	37	
		145	145	0	55	0	24	37	
		146	146	0	55	0	24	37	
		147	147	0	55	0	24	37	
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		149	149	0	55	0	24	37	</

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

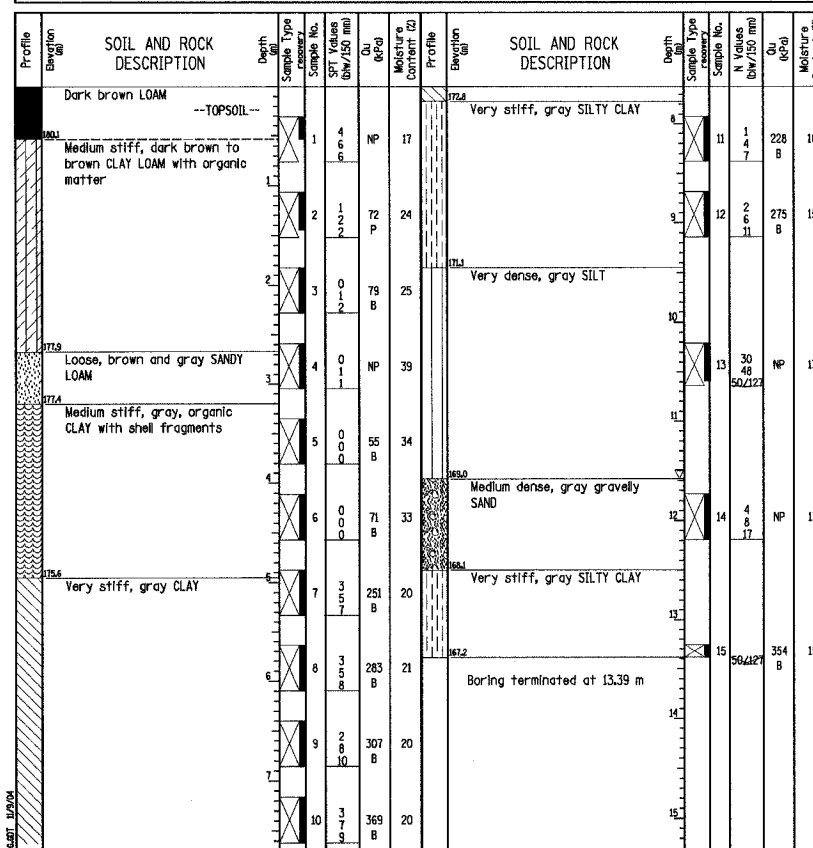
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F. A. I. 80/94	*	COOK	870	599	
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT-		CONTRACT NO. 62108	
(0203.1 & 0312-708W) R-3					

BORING LOG HB-61 Page 1 of 1

Wang Engineering, Inc.
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

WEI Job No.: 665-05-01
Datum: NGVD
Elevations 180.59 m
North: 545911.43 m
East: 362563.14 m
Station: 440+646.29
Offset: 0.29 LT



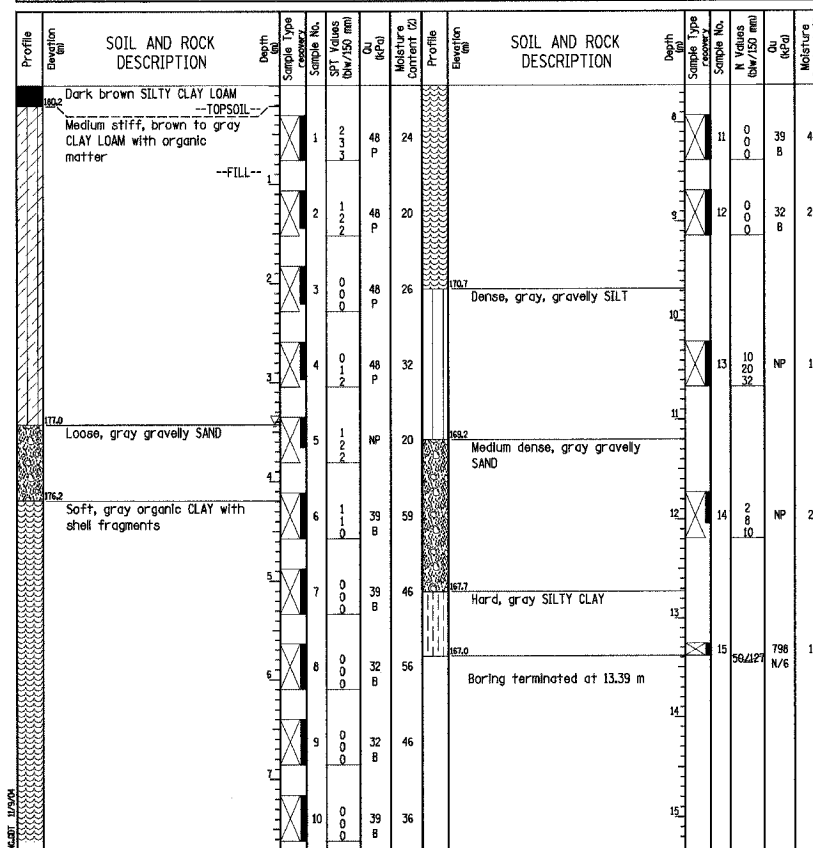
GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	11-27-2001	Complete Drilling	11-27-2001
Drilling Contractor	Patrick Drilling	Drill Rig	CME 75
Driller	K & C	Logger	B. Fugiel
Checked by	L. Iordache	Time After Drilling	NA
Drilling Method	3.25-inch ID HSA, Boring grouted after completion.	Depth to Water	NA
The stratification lines represent the approximate boundary between soil types. The actual transition may be gradual.			

BORING LOG HB-62 Page 1 of 1

Wang Engineering, Inc.
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

WEI Job No.: 665-05-01
Datum: NGVD
Elevations 180.41 m
North: 545911.11 m
East: 362546.09 m
Station: 110+186.26
Offset: 0



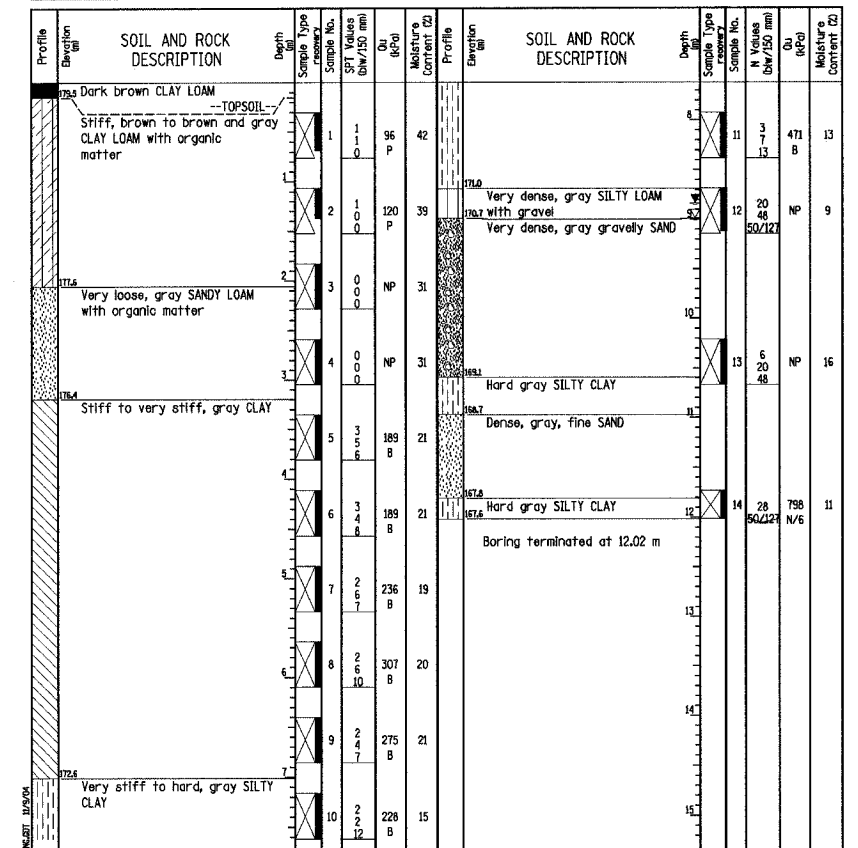
GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	11-26-2001	Complete Drilling	11-26-2001
Drilling Contractor	Patrick Drilling	Drill Rig	CME 75
Driller	K & C	Logger	B. Fugiel
Checked by	E. Datz	Time After Drilling	NA
Drilling Method	3.25-inch ID HSA, Boring grouted after completion.	Depth to Water	NA
The stratification lines represent the approximate boundary between soil types. The actual transition may be gradual.			

BORING LOG HB-63 Page 1 of 1

Wang Engineering, Inc.
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

WEI Job No.: 665-05-01
Datum: NGVD
Elevations 179.65 m
North: 545945.24 m
East: 362550.35 m
Station: 440+646.53
Offset: 10.71 LT



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	11-26-2001	Complete Drilling	11-26-2001
Drilling Contractor	Patrick Drilling	Drill Rig	CME 75
Driller	K & C	Logger	B. Fugiel
Checked by	E. Datz	Time After Drilling	NA
Drilling Method	3.25-inch ID HSA, Boring grouted after completion.	Depth to Water	NA
The stratification lines represent the approximate boundary between soil types. The actual transition may be gradual.			

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DESIGNED	PCA
CHECKED	MEA
DRAWN	LK
CHECKED	MEA

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
SOIL BORING LOGS
HB-61, HB-62 & HB-63
SB IL ROUTE 394 / RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800/2845
DATE JUL 18, 2005
SCALE ---
HNTB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 86 91 SHEETS
F. A. I. 80/94	*	COOK	870	600	
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-		

(0203.1 & 0312-708W) R-3 CONTRACT NO. 62108

BORING LOG HB-64 Page 1 of 2

Wang Engineering, Inc.
wangeng3ewangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 665-05-01
Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

Datum: NGVD
Elevations 182.09 m
North: 545986.62 m
East: 362945.01 m
Station: 440+718.24
Offset: 0.38 LT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	SPT Values (blows/150 mm)	Moisture Content (%)	Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	SPT Values (blows/150 mm)	Moisture Content (%)
182.09	Dark brown SILTY CLAY LOAM --TOPSOIL--	0				182.09		0			
182.09	Very stiff, brown CLAY to SILTY CLAY	1	2, 4, 6	359	19	182.09		1	4, 5, 8		18
182.09		2	2, 4, 6	243	18	182.09		2	3, 7, 7		19
182.09		3	3, 4, 8	196	19	182.09	Very stiff, gray SILTY CLAY	10	5, 10, 15		15
182.09		4	2, 7	243	19	182.09		11	20, 25, 24		15
182.09	Very stiff, gray CLAY	5	1, 2, 3	157	21	182.09	Dense, gray SILT	12	12, 21		11
182.09		6	1, 2, 4	118	21	182.09		13			
182.09		7	3, 4, 4	125	21	182.09	Very dense, gray gravelly SAND	14			
182.09		8	2, 4, 4	142	22	182.09		15			
182.09		9	2, 4, 5	196	21	182.09		16			
182.09		10	2, 4, 6	212	20	182.09		17			

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	11-28-2002	Complete Drilling	11-28-2002	While Drilling	12.65 m		
Drilling Contractor	Patrick Drilling	Drill Rig	CME 75	At Completion of Drilling	12.50 m		
Driller	K & C	Logger	B. Fugiel	Time After Drilling	NA		
Drilling Method	3.25-inch ID HSA, Boring grouted after completion.			Depth to Water	NA		

BORING LOG HB-64 Page 2 of 2

Wang Engineering, Inc.
wangeng3ewangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 665-05-01
Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

Datum: NGVD
Elevations 182.09 m
North: 545986.62 m
East: 362945.01 m
Station: 440+718.24
Offset: 0.38 LT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	SPT Values (blows/150 mm)	Moisture Content (%)	Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	SPT Values (blows/150 mm)	Moisture Content (%)
182.09		16				182.09		16			
182.09	Boulder-size DOLOSTONE clast	17				182.09		17			
182.09	Hard, gray SILTY CLAY with cobbles	18				182.09		18			
182.09	Boring terminated at 18.19 m	18.19				182.09		19			
182.09		19				182.09		20			
182.09		20				182.09		21			
182.09		21				182.09		22			

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	11-28-2002	Complete Drilling	11-28-2002	While Drilling	12.65 m		
Drilling Contractor	Patrick Drilling	Drill Rig	CME 75	At Completion of Drilling	12.50 m		
Driller	K & C	Logger	B. Fugiel	Time After Drilling	NA		
Drilling Method	3.25-inch ID HSA, Boring grouted after completion.			Depth to Water	NA		

BORING LOG HB-65 Page 1 of 2

Wang Engineering, Inc.
wangeng3ewangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 665-05-01
Client: HNTB Corporation
Project: IL 394 (FAP 94) IDOT D-91-012-01
Location: Sections 25&26, T36N, R14E, Cook Co.

Datum: NGVD
Elevations 182.89 m
North: 546003.31 m
East: 362533.09 m
Station: 440+744.66
Offset: 1.23 LT

Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	SPT Values (blows/150 mm)	Moisture Content (%)	Profile Elevation (m)	SOIL AND ROCK DESCRIPTION	Depth (m)	Sample No.	SPT Values (blows/150 mm)	Moisture Content (%)
182.89	Dark brown LOAM --TOPSOIL--	0				182.89		0			
182.89	Medium dense, light brown SILTY LOAM to SILT	1	3, 7, 8	NP	19	182.89		10	2, 3, 5		22
182.89		2	7, 7, 7	NP	16	182.89		11	2, 4, 6		20
182.89	Very stiff, light brown CLAY	3	3, 7, 9	207 B	19	182.89		12	1, 4, 8		20
182.89		4	3, 6, 9	346 B	13	182.89	Very stiff to hard, gray SILTY CLAY	13	4, 6, 10		14
182.89	Stiff to very stiff, gray CLAY	5	2, 3, 5	118 B	19	182.89		14	5, 10, 13		14
182.89		6	2, 4, 4	142 B	20	182.89		15	20, 32, 31		12
182.89		7	1, 3, 6	157 B	20	182.89		16			
182.89		8	2, 4, 3	142 B	21	182.89		17			
182.89		9	2, 4, 4	142 B	22	182.89	Very dense, gray gravelly SAND	18			

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	11-28-2001	Complete Drilling	11-28-2001	While Drilling	13.41 m		
Drilling Contractor	Patrick Drilling	Drill Rig	CME 75	At Completion of Drilling	13.18 m		
Driller	K&C	Logger	E. Datz	Time After Drilling	NA		
Drilling Method	3.25-inch ID HSA, Boring grouted after completion.			Depth to Water	NA		

Notes:
1. For Page 2 of 2 of Boring Log HB-65, see Sheet No. 87 of 91 Sheets.

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J:\34562\CADD\B\SWI_2800\cads\CTR_19_2800\lsp190214c_2800.dgn
18-AUG-2005 08:36

DESIGNED	PCA
CHECKED	MEA
DRAWN	LK
CHECKED	MEA

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94 EAST BOUND / IL 394 SOUTH BOUND
SOIL BORING LOGS
HB-64 & HB-65
SB IL ROUTE 394 / RAMP F OVER THORN CREEK
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 440+704.350 STRUCTURE NO. 016-2800/2845
DATE JUL 18, 2005
SCALE ---
HNTB