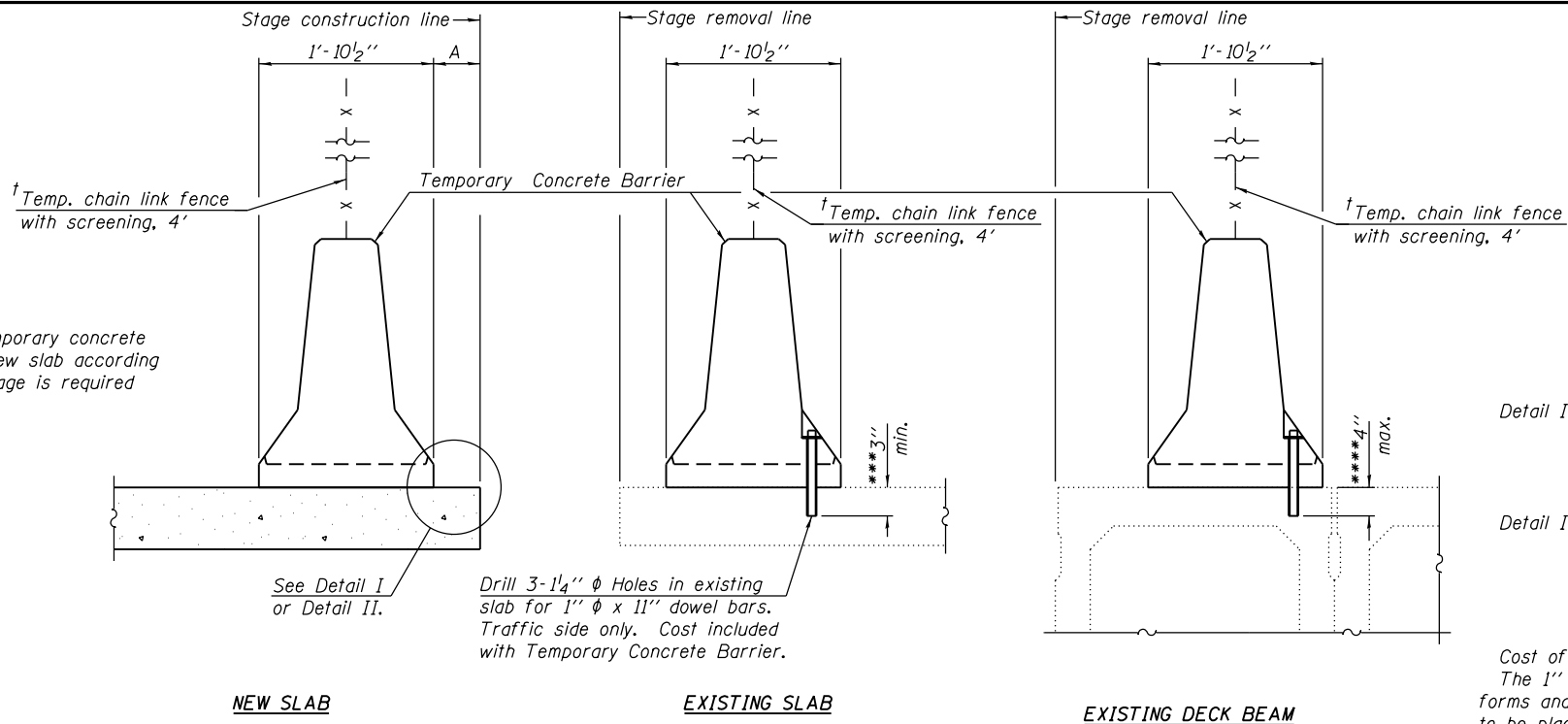


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When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



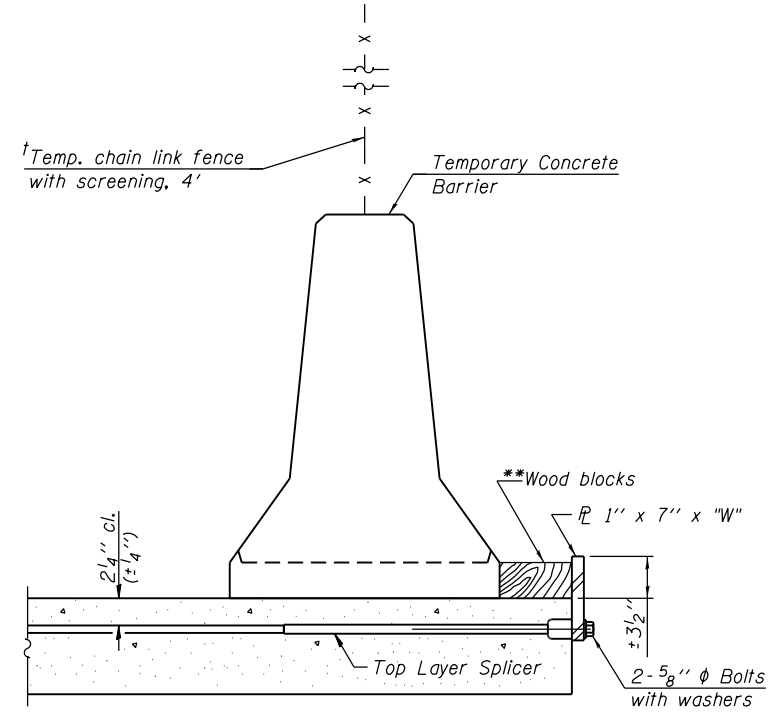
**SECTIONS THRU SLAB OR DECK BEAM**

**NOTES**

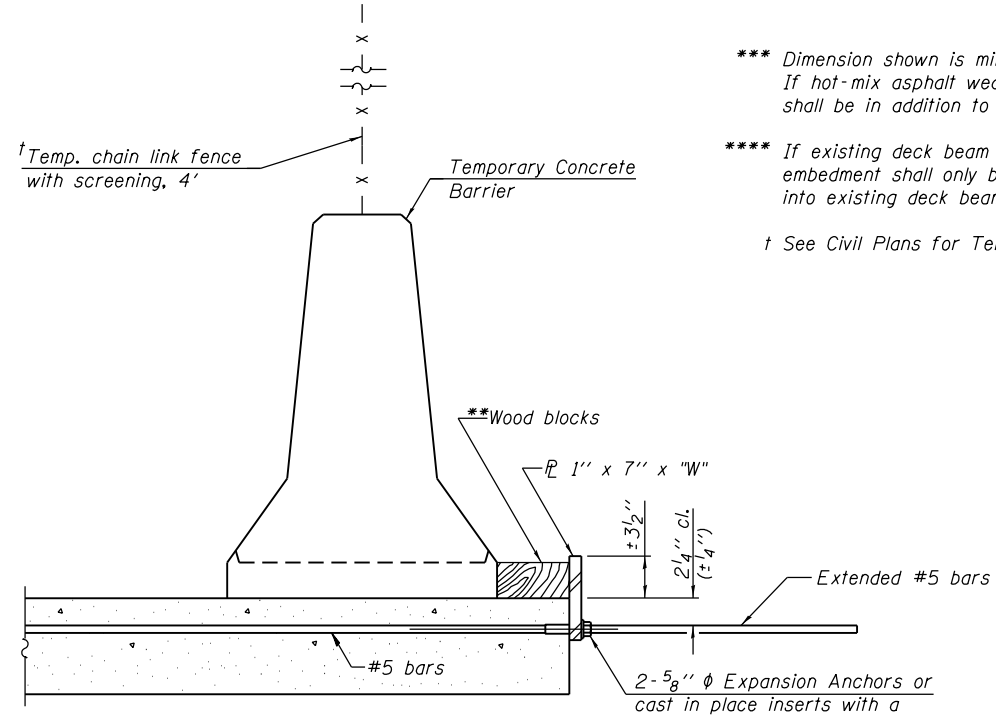
Detail I - With Bar Splicer or Couplers:  
 Connect one (1) 1" x 7" x "W" steel  $\bar{R}$  to the top layer of couplers with 2-5/8"  $\phi$  bolts screwed to coupler at approximate  $\bar{C}$  of each barrier panel.

Detail II - With Extended Reinforcement Bars:  
 Connect one (1) 1" x 7" x "W" steel  $\bar{R}$  to the concrete slab or concrete wearing surface with 2-5/8"  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\bar{C}$  of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



**DETAIL I**



**DETAIL II**

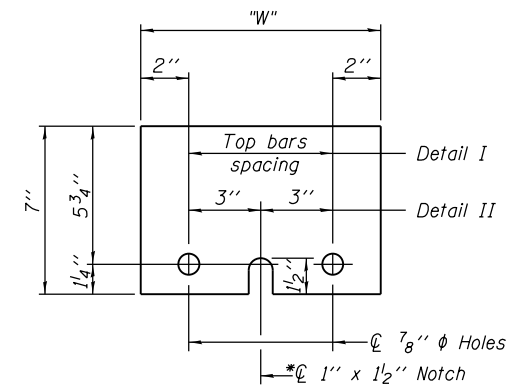
\*\*\* Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

\*\*\*\* If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.

t See Civil Plans for Temporary Chain Link Fence with Screening, 4'

\*\* Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"

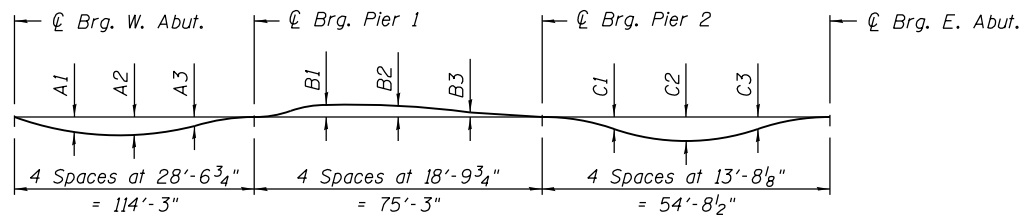
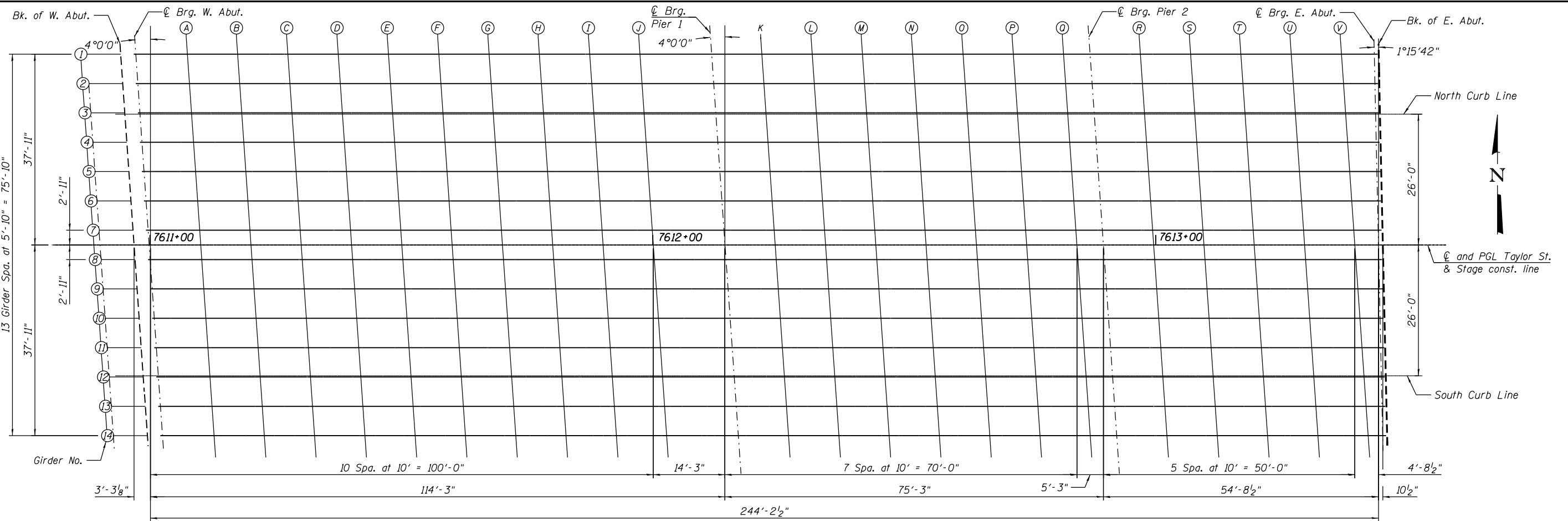


**STEEL RETAINER 1" x 7" x "W"**

\* Required only with Detail II

0161165-60W30-S14-TempConcBarrier	DESIGNED - KJD	REVISED
USER NAME = ahmod.issa	DRAWN - KJD	REVISED
PLOT SCALE = 0:2.0000 1' = 11"	CHECKED - JJS	REVISED
PLOT DATE = 12/16/2014	DATE - 10/24/2014	REVISED

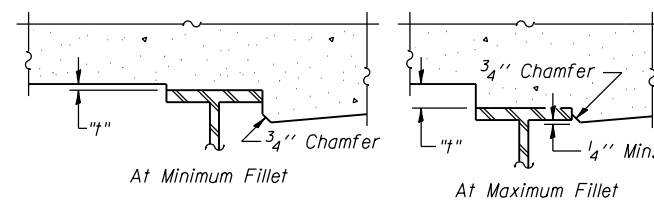
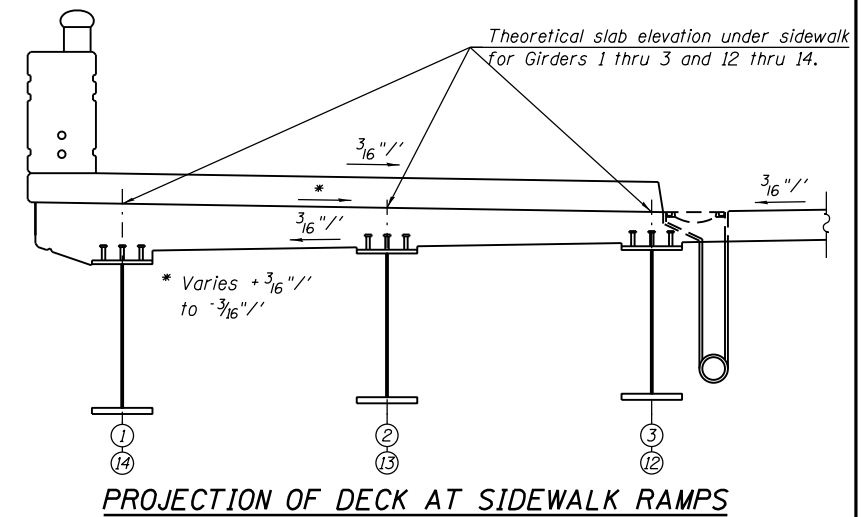
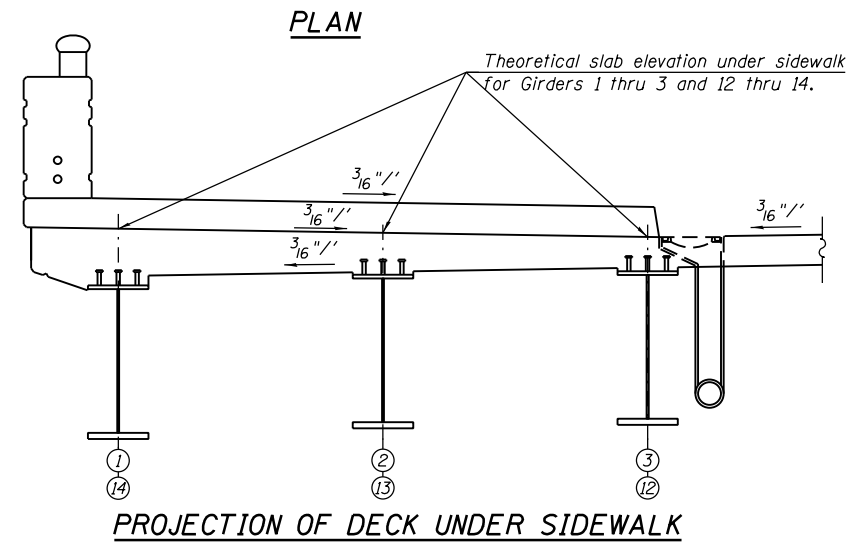
F.A.I. RTE. 90/94	SECTION 2013-012R	COUNTY COOK	TOTAL SHEETS 385	SHEET NO. 201
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	



**DEAD LOAD DEFLECTION DIAGRAM**

(Includes weight of concrete deck, sidewalk, parapet, utilities and railing)  
 Note:  
 The above deflections are not for use in the field if the Engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection", as shown on Sheets S1-16 thru S1-18.

Girder Number	DEAD LOAD DEFLECTIONS								
	Span 1			Span 2			Span 3		
	A1	A2	A3	B1	B2	B3	C1	C2	C3
1	4"	5 1/8"	2 7/8"	-5/8"	-5/8"	-1/4"	3/8"	5/8"	1/2"
2	3 5/8"	4 1/2"	2 5/8"	-1/2"	-1/2"	-1/4"	1/4"	1/2"	3/8"
3	3 3/8"	4"	2 1/4"	-1/2"	-1/2"	-1/4"	1/4"	1/2"	3/8"
4	2 3/4"	3 3/8"	2"	-3/8"	-3/8"	-1/8"	1/4"	3/8"	1/4"
5	2 1/4"	2 7/8"	1 5/8"	-3/8"	-3/8"	-1/8"	1/4"	3/8"	1/4"
6	2"	2 1/2"	1 1/2"	-3/8"	-1/4"	-1/8"	1/8"	1/4"	1/4"
7	1 7/8"	2 3/8"	1 3/8"	-1/4"	-1/4"	-1/8"	1/4"	1/4"	1/4"
8	2"	2 1/2"	1 3/8"	-1/4"	-1/4"	-1/8"	1/8"	1/4"	1/4"
9	2 1/8"	2 5/8"	1 1/2"	-3/8"	-1/4"	-1/8"	1/4"	1/4"	1/4"
10	2 3/8"	2 7/8"	1 5/8"	-3/8"	-1/4"	-1/8"	1/4"	3/8"	1/4"
11	2 5/8"	3 1/4"	1 7/8"	-3/8"	-3/8"	-1/8"	1/8"	1/4"	1/4"
12	2 7/8"	3 5/8"	2 1/8"	-3/8"	-1/4"	-1/8"	1/4"	3/8"	1/4"
13	3 1/8"	3 7/8"	2 1/4"	-3/8"	-1/4"	-1/8"	1/4"	3/8"	3/8"
14	3 3/8"	4 1/4"	2 3/8"	-3/8"	-1/4"	0"	1/4"	3/8"	3/8"



To determine "t": After all structural steel has been erected, elevations of the top flanges of the girders shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets S1-16 thru S1-18, minus slab thickness, equals the fillet heights "t" above top flange of girders.

**FILLET HEIGHTS**

**NOTE:**

Tables for slab thickness at Girders 1-3 and 12-14 are shown on Sheet S1-15A.

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**HBM**  
 ENGINEERING GROUP, LLC.  
 CONSULTING & DESIGN  
 INSPECTION & RATING  
 RESEARCH & TESTING

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 SUITE 231  
 HILLSIDE, IL 60162  
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0161165-60W30-S15-ScreedLayout  
 USER NAME = ahmed.issa  
 PLOT SCALE = 21.1415' / 1" / 1" / 1"  
 PLOT DATE = 12/16/2014  
 DESIGNED - LAB  
 DRAWN - KJD, LAB  
 CHECKED - MI, JJS  
 DATE - 10/24/2014  
 REVISED  
 REVISED  
 REVISED  
 REVISED

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATION LOCATIONS  
 STRUCTURE NO. 016-1165

SCALE: SHEET S1-15 OF S1-63 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	202
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

**GIRDER 1**

Location	Slab Thickness
BK. W. ABUT. THRU CL. BRG. W. ABUT.	6 <sup>3</sup> / <sub>8</sub> " *
A	9 <sup>1</sup> / <sub>2</sub> "
B	11"
C THRU P	12 <sup>1</sup> / <sub>2</sub> "
Q	10 <sup>3</sup> / <sub>8</sub> "
CL. BRG. PIER 2	9 <sup>3</sup> / <sub>4</sub> "
R THRU S	6 <sup>3</sup> / <sub>8</sub> " *
T	8"
U	8 <sup>7</sup> / <sub>8</sub> "
V	9 <sup>3</sup> / <sub>4</sub> "
CL. BRG. E. ABUT.	8 <sup>1</sup> / <sub>8</sub> " *
BK. E. ABUT.	8 <sup>1</sup> / <sub>8</sub> " *

**GIRDER 2**

Location	Slab Thickness
BK. W. ABUT. THRU CL. BRG. W. ABUT.	6 <sup>3</sup> / <sub>8</sub> " *
A	8 <sup>3</sup> / <sub>4</sub> "
B	9 <sup>1</sup> / <sub>2</sub> "
C THRU P	10 <sup>1</sup> / <sub>4</sub> "
Q	9 <sup>3</sup> / <sub>2</sub> "
CL. BRG. PIER 2	8 <sup>7</sup> / <sub>8</sub> "
R	6 <sup>3</sup> / <sub>8</sub> " *
S	8"
T	8"
U	8 <sup>3</sup> / <sub>4</sub> "
V	9 <sup>1</sup> / <sub>2</sub> "
CL BRG. E. ABUT.	9 <sup>1</sup> / <sub>2</sub> "
BK. E. ABUT.	9 <sup>1</sup> / <sub>2</sub> "

**GIRDER 3**

Location	Slab Thickness
BK. W. ABUT. THRU CL. BRG. W. ABUT.	8"
A THRU CL. BRG. PIER 2	8 <sup>1</sup> / <sub>8</sub> "
R THRU S	8"
T	8"
U	8 <sup>5</sup> / <sub>8</sub> "
V	9 <sup>3</sup> / <sub>8</sub> "
CL. BRG. E. ABUT.	9 <sup>1</sup> / <sub>4</sub> "
BK. E. ABUT.	9 <sup>1</sup> / <sub>8</sub> "

**GIRDER 12**

Location	Slab Thickness
BK. W. ABUT. THRU CL. BRG. W. ABUT.	8"
A THRU S	8 <sup>1</sup> / <sub>8</sub> "
T	8"
U	8"
V	8"
W	8"
CL. BRG. E. ABUT.	8"
BK. E. ABUT.	8"

**GIRDER 13**

Location	Slab Thickness
BK. W. ABUT.	6 <sup>3</sup> / <sub>8</sub> " *
CL. BRG. W. ABUT.	8"
A	8 <sup>3</sup> / <sub>4</sub> "
B	9 <sup>5</sup> / <sub>8</sub> "
C THRU CL. BRG. PIER 2	10 <sup>1</sup> / <sub>4</sub> "
R	9 <sup>1</sup> / <sub>2</sub> "
S	8 <sup>3</sup> / <sub>4</sub> "
T	8"
U	6 <sup>3</sup> / <sub>8</sub> " *
V	8"
CL. BRG. E. ABUT.	8"
BK. E. ABUT.	8"

**GIRDER 14**

Location	Slab Thickness
BK. W. ABUT. THRU CL. BRG. W. ABUT.	8"
A	9 <sup>1</sup> / <sub>2</sub> "
B	11"
C THRU CL. BRG. PIER 2	12 <sup>1</sup> / <sub>2</sub> "
R	11"
S	9 <sup>1</sup> / <sub>2</sub> "
T	8"
U	6 <sup>3</sup> / <sub>8</sub> " *
V	8"
CL. BRG. E. ABUT.	8"
BK. E. ABUT.	8"

**NORTH EDGE OF SLAB (VAULTED SPAN)**

Location	Slab Thickness
BK. E. ABUT.	9 <sup>1</sup> / <sub>8</sub> "
CL. BRG. E. ABUT.	9 <sup>3</sup> / <sub>4</sub> "
W	8"
X	9 <sup>3</sup> / <sub>8</sub> "
Y	10 <sup>3</sup> / <sub>4</sub> "
CL. BRG. APP. BENT THRU BK. APP. BENT	12 <sup>5</sup> / <sub>8</sub> "

**NORTH CURTAIN WALL (VAULTED SPAN)**

Location	Slab Thickness
BK. E. ABUT.	9 <sup>5</sup> / <sub>8</sub> "
CL. BRG. E. ABUT.	9 <sup>1</sup> / <sub>2</sub> "
W	8 <sup>1</sup> / <sub>8</sub> "
X	8 <sup>5</sup> / <sub>8</sub> "
Y	9 <sup>1</sup> / <sub>4</sub> "
CL. BRG. APP. BENT THRU BK. APP. BENT	10 <sup>3</sup> / <sub>8</sub> "

**BEAM 2V**

Location	Slab Thickness
BK. E. ABUT.	9 <sup>3</sup> / <sub>8</sub> "
CL. BRG. E. ABUT.	9 <sup>1</sup> / <sub>4</sub> "
W	8 <sup>1</sup> / <sub>8</sub> "
X	8 <sup>1</sup> / <sub>4</sub> "
Y	8 <sup>3</sup> / <sub>8</sub> "
CL. BRG. APP. BENT THRU BK. APP. BENT	9"

**NORTH CURB LINE (VAULTED SPAN)**

Location	Slab Thickness
BK. E. ABUT.	9 <sup>5</sup> / <sub>8</sub> "
CL. BRG. E. ABUT.	9 <sup>3</sup> / <sub>8</sub> "
W THRU X	8"
Y	8"
CL. BRG. APP. BENT THRU BK. APP. BENT	8 <sup>1</sup> / <sub>4</sub> "

**BEAM 3V**

Location	Slab Thickness
BK. E. ABUT.	9 <sup>1</sup> / <sub>4</sub> "
CL. BRG. E. ABUT.	9 <sup>1</sup> / <sub>8</sub> "
W	8"
X	8"
Y	8"
CL. BRG. APP. BENT THRU BK. APP. BENT	8 <sup>1</sup> / <sub>4</sub> "

**BEAM 4V**

Location	Slab Thickness
BK. E. ABUT. THRU CL. BRG. E. ABUT.	8 <sup>1</sup> / <sub>8</sub> "
W THRU Y	8"
CL. BRG. APP. BENT THRU BK. APP. BENT	8 <sup>1</sup> / <sub>4</sub> "

**BEAM 5V**

Location	Slab Thickness
BK. E. ABUT. THRU CL. BRG. E. ABUT.	8 <sup>5</sup> / <sub>8</sub> "
W THRU Y	8"
CL. BRG. APP. BENT THRU BK. APP. BENT	8 <sup>1</sup> / <sub>8</sub> "

**BEAM 6V**

Location	Slab Thickness
BK. E. ABUT.	8 <sup>1</sup> / <sub>2</sub> "
CL. BRG. E. ABUT.	8 <sup>3</sup> / <sub>8</sub> "
W THRU Y	8"
CL. BRG. APP. BENT THRU BK. APP. BENT	8 <sup>1</sup> / <sub>8</sub> "

**BEAM 7V**

Location	Slab Thickness
BK. E. ABUT. THRU CL. BRG. E. ABUT.	8 <sup>1</sup> / <sub>8</sub> "
W THRU CL. BRG. APP. BENT	8"
BK. APP. BENT	8 <sup>1</sup> / <sub>8</sub> "

**NOTE:**

- The slab thickness at the vaulted span Beam 8V thru south edge of slab = 8".

\*Deck recessed 1<sup>5</sup>/<sub>8</sub>" at ADA ramps. See Sheets S1-22 and S1-23.

FILE PATH = p:\617479-P\INT\aeocom\line\loc\101\016-1165-015A-SlabThickness.dwg

**GIRDER 1**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	7610+94.19	-37.92'	593.71*	593.71*
CL. BRG. W. ABUT.	7610+97.44	-37.92'	593.75*	593.75*
A	7611+07.44	-37.92'	594.02	594.16
B	7611+17.44	-37.92'	594.32	594.57
C	7611+27.44	-37.92'	594.63	594.98
D	7611+37.44	-37.92'	594.84	595.25
E	7611+47.44	-37.92'	595.07	595.50
F	7611+57.44	-37.92'	595.31	595.73
G	7611+67.44	-37.92'	595.50	595.87
H	7611+77.44	-37.92'	595.66	595.96
I	7611+87.44	-37.92'	595.76	595.96
J	7611+97.44	-37.92'	595.83	595.93
CL. BRG. PIER 1	7612+11.69	-37.92'	595.85	595.85
K	7612+21.69	-37.92'	595.81	595.77
L	7612+31.69	-37.92'	595.73	595.67
M	7612+41.69	-37.92'	595.61	595.55
N	7612+51.69	-37.92'	595.44	595.39
O	7612+61.69	-37.92'	595.26	595.22
P	7612+71.69	-37.92'	595.08	595.06
Q	7612+81.69	-37.92'	594.75	594.74
CL. BRG. PIER 2	7612+86.94	-37.92'	594.58	594.58
R	7612+96.94	-37.92'	594.25*	594.27*
S	7613+06.94	-37.92'	594.07*	594.11*
T	7613+16.94	-37.92'	593.88	593.93
U	7613+26.94	-37.92'	593.78	593.82
V	7613+36.94	-37.92'	593.68	593.68
CL. BRG. E. ABUT.	7613+43.47	-37.92'	593.57*	593.57*
BK. E. ABUT.	7613+44.35	-37.92'	593.55*	593.55*

**GIRDER 2**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	7610+94.59	-32.08'	593.80*	593.80*
CL. BRG. W. ABUT.	7610+97.85	-32.08'	593.85*	593.85*
A	7611+07.85	-32.08'	594.06	594.18
B	7611+17.85	-32.08'	594.29	594.52
C	7611+27.85	-32.08'	594.55	594.86
D	7611+37.85	-32.08'	594.76	595.12
E	7611+47.85	-32.08'	594.99	595.37
F	7611+57.85	-32.08'	595.23	595.60
G	7611+67.85	-32.08'	595.42	595.75
H	7611+77.85	-32.08'	595.57	595.84
I	7611+87.85	-32.08'	595.68	595.86
J	7611+97.85	-32.08'	595.74	595.84
CL. BRG. PIER 1	7612+12.10	-32.08'	595.76	595.76
K	7612+22.10	-32.08'	595.72	595.69
L	7612+32.10	-32.08'	595.64	595.59
M	7612+42.10	-32.08'	595.51	595.46
N	7612+52.10	-32.08'	595.34	595.30
O	7612+62.10	-32.08'	595.16	595.13
P	7612+72.10	-32.08'	594.98	594.96
Q	7612+82.10	-32.08'	594.73	594.73
CL. BRG. PIER 2	7612+87.35	-32.08'	594.59	594.59
R	7612+97.35	-32.08'	594.34*	594.36*
S	7613+07.35	-32.08'	594.16	594.19
T	7613+17.35	-32.08'	593.97	594.01
U	7613+27.35	-32.08'	593.86	593.89
V	7613+37.35	-32.08'	593.74	593.74
CL. BRG. E. ABUT.	7613+43.60	-32.08'	593.64	593.64
BK. E. ABUT.	7613+44.47	-32.08'	593.62	593.62

**GIRDER 3**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	7610+95.00	-26.25'	593.90	593.90
CL. BRG. W. ABUT.	7610+98.26	-26.25'	593.94	593.94
A	7611+08.26	-26.25'	594.10	594.21
B	7611+18.26	-26.25'	594.27	594.47
C	7611+28.26	-26.25'	594.46	594.73
D	7611+38.26	-26.25'	594.68	595.00
E	7611+48.26	-26.25'	594.91	595.24
F	7611+58.26	-26.25'	595.14	595.46
G	7611+68.26	-26.25'	595.34	595.63
H	7611+78.26	-26.25'	595.48	595.71
I	7611+88.26	-26.25'	595.59	595.75
J	7611+98.26	-26.25'	595.65	595.74
CL. BRG. PIER 1	7612+12.51	-26.25'	595.67	595.67
K	7612+22.51	-26.25'	595.63	595.60
L	7612+32.51	-26.25'	595.54	595.50
M	7612+42.51	-26.25'	595.41	595.37
N	7612+52.51	-26.25'	595.25	595.21
O	7612+62.51	-26.25'	595.07	595.04
P	7612+72.51	-26.25'	594.89	594.88
Q	7612+82.51	-26.25'	594.70	594.69
CL. BRG. PIER 2	7612+87.76	-26.25'	594.61	594.61
R	7612+97.76	-26.25'	594.42	594.44
S	7613+07.76	-26.25'	594.24	594.27
T	7613+17.76	-26.25'	594.06	594.10
U	7613+27.76	-26.25'	593.93	593.96
V	7613+37.76	-26.25'	593.81	593.81
CL. BRG. E. ABUT.	7613+43.72	-26.25'	593.70	593.70
BK. E. ABUT.	7613+44.60	-26.25'	593.68	593.68

**NORTH CURB LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	7610+95.02	-26.00'	593.90	593.90
CL. BRG. W. ABUT.	7610+98.28	-26.00'	593.95	593.95
A	7611+08.28	-26.00'	594.10	594.21
B	7611+18.28	-26.00'	594.27	594.47
C	7611+28.28	-26.00'	594.46	594.73
D	7611+38.28	-26.00'	594.67	594.99
E	7611+48.28	-26.00'	594.91	595.24
F	7611+58.28	-26.00'	595.14	595.46
G	7611+68.28	-26.00'	595.33	595.62
H	7611+78.28	-26.00'	595.48	595.71
I	7611+88.28	-26.00'	595.59	595.75
J	7611+98.28	-26.00'	595.65	595.74
CL. BRG. PIER 1	7612+12.53	-26.00'	595.66	595.66
K	7612+22.53	-26.00'	595.62	595.59
L	7612+32.53	-26.00'	595.54	595.50
M	7612+42.53	-26.00'	595.41	595.37
N	7612+52.53	-26.00'	595.24	595.20
O	7612+62.53	-26.00'	595.06	595.03
P	7612+72.53	-26.00'	594.88	594.87
Q	7612+82.53	-26.00'	594.70	594.69
CL. BRG. PIER 2	7612+87.78	-26.00'	594.61	594.61
R	7612+97.78	-26.00'	594.43	594.45
S	7613+07.78	-26.00'	594.24	594.27
T	7613+17.78	-26.00'	594.06	594.10
U	7613+27.78	-26.00'	593.93	593.96
V	7613+37.78	-26.00'	593.81	593.81
CL. BRG. E. ABUT.	7613+43.73	-26.00'	593.70	593.70
BK. E. ABUT.	7613+44.61	-26.00'	593.69	593.69

**GIRDER 4**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	7610+95.41	-20.42'	593.99	593.99
CL. BRG. W. ABUT.	7610+98.67	-20.42'	594.04	594.04
A	7611+08.67	-20.42'	594.19	594.28
B	7611+18.67	-20.42'	594.36	594.53
C	7611+28.67	-20.42'	594.56	594.79
D	7611+38.67	-20.42'	594.77	595.04
E	7611+48.67	-20.42'	595.00	595.29
F	7611+58.67	-20.42'	595.24	595.51
G	7611+68.67	-20.42'	595.43	595.67
H	7611+78.67	-20.42'	595.57	595.77
I	7611+88.67	-20.42'	595.68	595.81
J	7611+98.67	-20.42'	595.74	595.81
CL. BRG. PIER 1	7612+12.92	-20.42'	595.75	595.75
K	7612+22.92	-20.42'	595.71	595.68
L	7612+32.92	-20.42'	595.62	595.59
M	7612+42.92	-20.42'	595.49	595.46
N	7612+52.92	-20.42'	595.32	595.29
O	7612+62.92	-20.42'	595.14	595.12
P	7612+72.92	-20.42'	594.96	594.95
Q	7612+82.92	-20.42'	594.78	594.78
CL. BRG. PIER 2	7612+88.17	-20.42'	594.69	594.69
R	7612+98.17	-20.42'	594.51	594.52
S	7613+08.17	-20.42'	594.32	594.35
T	7613+18.17	-20.42'	594.14	594.17
U	7613+28.17	-20.42'	594.00	594.03
V	7613+38.17	-20.42'	593.87	593.87
CL. BRG. E. ABUT.	7613+43.85	-20.42'	593.77	593.77
BK. E. ABUT.	7613+44.73	-20.42'	593.75	593.75

**GIRDER 5**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	7610+95.82	-14.58'	594.09	594.09
CL. BRG. W. ABUT.	7610+99.07	-14.58'	594.14	594.14
A	7611+09.07	-14.58'	594.29	594.37
B	7611+19.07	-14.58'	594.46	594.61
C	7611+29.07	-14.58'	594.66	594.85
D	7611+39.07	-14.58'	594.87	595.10
E	7611+49.07	-14.58'	595.11	595.35
F	7611+59.07	-14.58'	595.34	595.57
G	7611+69.07	-14.58'	595.52	595.73
H	7611+79.07	-14.58'	595.67	595.84
I	7611+89.07	-14.58'	595.77	595.89
J	7611+99.07	-14.58'	595.83	595.89
CL. BRG. PIER 1	7612+13.32	-14.58'	595.84	595.84
K	7612+23.32	-14.58'	595.79	595.77
L	7612+33.32	-14.58'	595.71	595.68
M	7612+43.32	-14.58'	595.58	595.55
N	7612+53.32	-14.58'	595.41	595.38
O	7612+63.32	-14.58'	595.22	595.21
P	7612+73.32	-14.58'	595.04	595.03
Q	7612+83.32	-14.58'	594.86	594.86
CL. BRG. PIER 2	7612+88.57	-14.58'	594.77	594.77
R	7612+98.57	-14.58'	594.59	594.60
S	7613+08.57	-14.58'	594.40	594.42
T	7613+18.57	-14.58'	594.23	594.26
U	7613+28.57	-14.58'	594.08	594.11
V	7613+38.57	-14.58'	593.93	593.93
CL. BRG. E. ABUT.	7613+43.98	-14.58'	593.83	593.83
BK. E. ABUT.	7613+44.86	-14.58'	593.82	593.82

\*Deck recessed 1<sup>5</sup>/<sub>8</sub>" at ADA ramps. See Sheets SI-15A, SI-22 and SI-23.

FILE PATH = p:\17179-PM\INT\Jaeconline\local\p\EDM\_DS92\_NA\Documents\01\_Americas\Tr\empcor\station\60265938\_Circle\Phase\_1\1000\_CAD\008\_Structure\Structure\_016-1165-016165-60W30-S16-ScreenTable1

**HBM**  
 ENGINEERING GROUP, LLC  
 4415 WEST HARRISON ST.  
 SUITE 231  
 HILLSIDE, IL 60162  
 PHONE: (708) 236-0900  
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0161165-60W30-S16-ScreenTable1	DESIGNED - LAB	REVISED
USER NAME = ahmed.issa	DRAWN - K.JD, LAB	REVISED
PLOT SCALE = 0:2.0000 "/>	CHECKED - MI, JJS	REVISED
PLOT DATE = 12/16/2014	DATE - 10/24/2014	REVISED

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS (SHEET 1 OF 3)  
 STRUCTURE NO. 016-1165**

SCALE: SHEET SI-16 OF SI-63 SHEETS STA. TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	203
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

**GIRDER 6**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	7610+96.22	-8.75'	594.19	594.19
CL. BRG. W. ABUT.	7610+99.48	-8.75'	594.23	594.23
A	7611+09.48	-8.75'	594.39	594.45
B	7611+19.48	-8.75'	594.56	594.69
C	7611+29.48	-8.75'	594.75	594.93
D	7611+39.48	-8.75'	594.97	595.17
E	7611+49.48	-8.75'	595.21	595.42
F	7611+59.48	-8.75'	595.44	595.64
G	7611+69.48	-8.75'	595.62	595.81
H	7611+79.48	-8.75'	595.76	595.91
I	7611+89.48	-8.75'	595.86	595.96
J	7611+99.48	-8.75'	595.92	595.97
CL. BRG. PIER 1	7612+13.73	-8.75'	595.93	595.93
K	7612+23.73	-8.75'	595.88	595.86
L	7612+33.73	-8.75'	595.79	595.77
M	7612+43.73	-8.75'	595.66	595.63
N	7612+53.73	-8.75'	595.49	595.47
O	7612+63.73	-8.75'	595.31	595.29
P	7612+73.73	-8.75'	595.13	595.12
Q	7612+83.73	-8.75'	594.95	594.95
CL. BRG. PIER 2	7612+88.98	-8.75'	594.85	594.85
R	7612+98.98	-8.75'	594.67	594.68
S	7613+08.98	-8.75'	594.49	594.51
T	7613+18.98	-8.75'	594.31	594.33
U	7613+28.98	-8.75'	594.15	594.17
V	7613+38.98	-8.75'	593.99	593.99
CL. BRG. E. ABUT.	7613+44.11	-8.75'	593.90	593.90
BK. E. ABUT.	7613+44.99	-8.75'	593.88	593.88

**GIRDER 7**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	7610+96.63	-2.92'	594.28	594.28
CL. BRG. W. ABUT.	7610+99.89	-2.92'	594.33	594.33
A	7611+09.89	-2.92'	594.48	594.55
B	7611+19.89	-2.92'	594.66	594.78
C	7611+29.89	-2.92'	594.85	595.02
D	7611+39.89	-2.92'	595.07	595.26
E	7611+49.89	-2.92'	595.31	595.51
F	7611+59.89	-2.92'	595.54	595.73
G	7611+69.89	-2.92'	595.72	595.89
H	7611+79.89	-2.92'	595.86	596.00
I	7611+89.89	-2.92'	595.96	596.05
J	7611+99.89	-2.92'	596.01	596.06
CL. BRG. PIER 1	7612+14.14	-2.92'	596.02	596.02
K	7612+24.14	-2.92'	595.97	595.95
L	7612+34.14	-2.92'	595.88	595.86
M	7612+44.14	-2.92'	595.75	595.72
N	7612+54.14	-2.92'	595.57	595.55
O	7612+64.14	-2.92'	595.39	595.38
P	7612+74.14	-2.92'	595.21	595.20
Q	7612+84.14	-2.92'	595.03	595.03
CL. BRG. PIER 2	7612+89.39	-2.92'	594.94	594.94
R	7612+99.39	-2.92'	594.76	594.77
S	7613+09.39	-2.92'	594.57	594.59
T	7613+19.39	-2.92'	594.40	594.42
U	7613+29.39	-2.92'	594.22	594.24
V	7613+39.39	-2.92'	594.05	594.05
CL. BRG. E. ABUT.	7613+44.24	-2.92'	593.97	593.97
BK. E. ABUT.	7613+45.12	-2.92'	593.95	593.95

**ROADWAY, P.G. & STAGE CONSTRUCTION JOINT**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	7610+96.84	0.00'	594.33	594.33
CL. BRG. W. ABUT.	7611+00.09	0.00'	594.38	594.38
A	7611+10.09	0.00'	594.53	594.60
B	7611+20.09	0.00'	594.71	594.83
C	7611+30.09	0.00'	594.90	595.07
D	7611+40.09	0.00'	595.12	595.31
E	7611+50.09	0.00'	595.36	595.56
F	7611+60.09	0.00'	595.58	595.78
G	7611+70.09	0.00'	595.77	595.94
H	7611+80.09	0.00'	595.91	596.05
I	7611+90.09	0.00'	596.01	596.10
J	7612+00.09	0.00'	596.06	596.11
CL. BRG. PIER 1	7612+14.34	0.00'	596.06	596.06
K	7612+24.34	0.00'	596.02	596.00
L	7612+34.34	0.00'	595.92	595.90
M	7612+44.34	0.00'	595.79	595.76
N	7612+54.34	0.00'	595.61	595.59
O	7612+64.34	0.00'	595.43	595.41
P	7612+74.34	0.00'	595.25	595.24
Q	7612+84.34	0.00'	595.07	595.06
CL. BRG. PIER 2	7612+89.59	0.00'	594.98	594.98
R	7612+99.59	0.00'	594.80	594.81
S	7613+09.59	0.00'	594.62	594.63
T	7613+19.59	0.00'	594.44	594.46
U	7613+29.59	0.00'	594.26	594.28
V	7613+39.59	0.00'	594.08	594.10
CL. BRG. E. ABUT.	7613+44.30	0.00'	594.00	594.00
BK. E. ABUT.	7613+45.18	0.00'	593.99	593.99

**GIRDER 8**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	7610+97.04	2.92'	594.29	594.29
CL. BRG. W. ABUT.	7611+00.30	2.92'	594.34	594.34
A	7611+10.30	2.92'	594.49	594.56
B	7611+20.30	2.92'	594.67	594.79
C	7611+30.30	2.92'	594.86	595.03
D	7611+40.30	2.92'	595.08	595.28
E	7611+50.30	2.92'	595.32	595.53
F	7611+60.30	2.92'	595.54	595.74
G	7611+70.30	2.92'	595.73	595.90
H	7611+80.30	2.92'	595.87	596.01
I	7611+90.30	2.92'	595.96	596.06
J	7612+00.30	2.92'	596.02	596.07
CL. BRG. PIER 1	7612+14.55	2.92'	596.02	596.02
K	7612+24.55	2.92'	595.97	595.95
L	7612+34.55	2.92'	595.88	595.85
M	7612+44.55	2.92'	595.74	595.71
N	7612+54.55	2.92'	595.57	595.54
O	7612+64.55	2.92'	595.39	595.37
P	7612+74.55	2.92'	595.20	595.20
Q	7612+84.55	2.92'	595.02	595.02
CL. BRG. PIER 2	7612+89.80	2.92'	594.93	594.93
R	7612+99.80	2.92'	594.75	594.76
S	7613+09.80	2.92'	594.57	594.59
T	7613+19.80	2.92'	594.39	594.41
U	7613+29.80	2.92'	594.20	594.22
V	7613+39.80	2.92'	594.01	594.01
CL. BRG. E. ABUT.	7613+44.37	2.92'	593.94	593.94
BK. E. ABUT.	7613+45.24	2.92'	593.93	593.93

**GIRDER 9**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	7610+97.45	8.75'	594.21	594.21
CL. BRG. W. ABUT.	7611+00.71	8.75'	594.25	594.25
A	7611+10.71	8.75'	594.41	594.48
B	7611+20.71	8.75'	594.58	594.72
C	7611+30.71	8.75'	594.78	594.96
D	7611+40.71	8.75'	595.00	595.21
E	7611+50.71	8.75'	595.24	595.46
F	7611+60.71	8.75'	595.46	595.68
G	7611+70.71	8.75'	595.64	595.83
H	7611+80.71	8.75'	595.78	595.93
I	7611+90.71	8.75'	595.87	595.98
J	7612+00.71	8.75'	595.93	595.98
CL. BRG. PIER 1	7612+14.96	8.75'	595.93	595.93
K	7612+24.96	8.75'	595.87	595.86
L	7612+34.96	8.75'	595.78	595.75
M	7612+44.96	8.75'	595.64	595.61
N	7612+54.96	8.75'	595.47	595.44
O	7612+64.96	8.75'	595.29	595.27
P	7612+74.96	8.75'	595.11	595.10
Q	7612+84.96	8.75'	594.93	594.92
CL. BRG. PIER 2	7612+90.21	8.75'	594.83	594.83
R	7613+00.21	8.75'	594.65	594.66
S	7613+10.21	8.75'	594.47	594.49
T	7613+20.21	8.75'	594.29	594.31
U	7613+30.21	8.75'	594.08	594.10
V	7613+40.21	8.75'	593.89	593.89
CL. BRG. E. ABUT.	7613+44.50	8.75'	593.82	593.82
BK. E. ABUT.	7613+45.37	8.75'	593.81	593.81

**GIRDER 10**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	7610+97.86	14.58'	594.12	594.12
CL. BRG. W. ABUT.	7611+01.11	14.58'	594.17	594.17
A	7611+11.11	14.58'	594.32	594.40
B	7611+21.11	14.58'	594.50	594.65
C	7611+31.11	14.58'	594.70	594.90
D	7611+41.11	14.58'	594.92	595.15
E	7611+51.11	14.58'	595.16	595.40
F	7611+61.11	14.58'	595.38	595.62
G	7611+71.11	14.58'	595.56	595.77
H	7611+81.11	14.58'	595.69	595.86
I	7611+91.11	14.58'	595.79	595.90
J	7612+01.11	14.58'	595.84	595.90
CL. BRG. PIER 1	7612+15.36	14.58'	595.83	595.83
K	7612+25.36	14.58'	595.78	595.76
L	7612+35.36	14.58'	595.68	595.65
M	7612+45.36	14.58'	595.54	595.52
N	7612+55.36	14.58'	595.37	595.34
O	7612+65.36	14.58'	595.19	595.17
P	7612+75.36	14.58'	595.01	595.00
Q	7612+85.36	14.58'	594.83	594.82
CL. BRG. PIER 2	7612+90.61	14.58'	594.73	594.73
R	7613+00.61	14.58'	594.55	594.57
S	7613+10.61	14.58'	594.37	594.40
T	7613+20.61	14.58'	594.18	594.21
U	7613+30.61	14.58'	593.96	593.98
V	7613+40.61	14.58'	593.76	593.76
CL. BRG. E. ABUT.	7613+44.62	14.58'	593.70	593.70
BK. E. ABUT.	7613+45.50	14.58'	593.69	593.69

FILE PATH = p:\161779-PM\INT\aeomoni\line\loc\p\EDCD\DS92\_NA\Documents\01\_Americas\T\enpger\station\60269938\_Circle\Phase\_1\1600\_CAD\008\_Structure\Structure\_016-1165-01616165-60W30-S17-ScreenTable2



4415 WEST HARRISON ST.  
 SUITE 231  
 HILLSIDE, IL 60162  
 PHONE: (708) 236-0900  
 FAX: (708) 236-0901

DESIGNED - LAB	REVISED
DRAWN - KJD, LAB	REVISED
CHECKED - MI, JJS	REVISED
DATE - 10/24/2014	REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS (SHEET 2 OF 3)**  
**STRUCTURE NO. 016-1165**

SCALE: SHEET S1-17 OF S1-63 SHEETS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2013-012R	COUNTY COOK	TOTAL SHEETS 385	SHEET NO. 204
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

**GIRDER 11**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	7610+98.26	20.42'	594.03	594.03
CL. BRG. W. ABUT.	7611+01.52	20.42'	594.08	594.08
A	7611+11.52	20.42'	594.24	594.33
B	7611+21.52	20.42'	594.42	594.58
C	7611+31.52	20.42'	594.61	594.84
D	7611+41.52	20.42'	594.83	595.10
E	7611+51.52	20.42'	595.07	595.35
F	7611+61.52	20.42'	595.29	595.56
G	7611+71.52	20.42'	595.47	595.71
H	7611+81.52	20.42'	595.61	595.80
I	7611+91.52	20.42'	595.70	595.83
J	7612+01.52	20.42'	595.75	595.81
CL. BRG. PIER 1	7612+15.77	20.42'	595.74	595.74
K	7612+25.77	20.42'	595.69	595.66
L	7612+35.77	20.42'	595.59	595.56
M	7612+45.77	20.42'	595.45	595.42
N	7612+55.77	20.42'	595.27	595.25
O	7612+65.77	20.42'	595.09	595.07
P	7612+75.77	20.42'	594.91	594.90
Q	7612+85.77	20.42'	594.73	594.73
CL. BRG. PIER 2	7612+91.02	20.42'	594.63	594.63
R	7613+01.02	20.42'	594.45	594.46
S	7613+11.02	20.42'	594.27	594.29
T	7613+21.02	20.42'	594.09	594.12
U	7613+31.02	20.42'	593.84	593.86
V	7613+41.02	20.42'	593.63	593.63
CL. BRG. E. ABUT.	7613+44.75	20.42'	593.59	593.59
BK. E. ABUT.	7613+45.63	20.42'	593.58	593.58

**SOUTH CURB LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	7610+98.65	26.00'	593.95	593.95
CL. BRG. W. ABUT.	7611+01.91	26.00'	594.00	594.00
A	7611+11.91	26.00'	594.16	594.26
B	7611+21.91	26.00'	594.34	594.52
C	7611+31.91	26.00'	594.54	594.79
D	7611+41.91	26.00'	594.76	595.05
E	7611+51.91	26.00'	595.00	595.31
F	7611+61.91	26.00'	595.22	595.52
G	7611+71.91	26.00'	595.39	595.65
H	7611+81.91	26.00'	595.52	595.73
I	7611+91.91	26.00'	595.61	595.75
J	7612+01.91	26.00'	595.66	595.74
CL. BRG. PIER 1	7612+16.16	26.00'	595.65	595.65
K	7612+26.16	26.00'	595.60	595.58
L	7612+36.16	26.00'	595.50	595.47
M	7612+46.16	26.00'	595.35	595.32
N	7612+56.16	26.00'	595.18	595.16
O	7612+66.16	26.00'	595.00	594.99
P	7612+76.16	26.00'	594.82	594.81
Q	7612+86.16	26.00'	594.63	594.63
CL. BRG. PIER 2	7612+91.41	26.00'	594.54	594.54
R	7613+01.41	26.00'	594.36	594.37
S	7613+11.41	26.00'	594.18	594.21
T	7613+21.41	26.00'	593.99	594.02
U	7613+31.41	26.00'	593.72	593.75
V	7613+41.41	26.00'	593.51	593.51
CL. BRG. E. ABUT.	7613+44.88	26.00'	593.47	593.47
BK. E. ABUT.	7613+45.75	26.00'	593.46	593.46

**GIRDER 12**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	7610+98.67	26.25'	593.95	593.95
CL. BRG. W. ABUT.	7611+01.93	26.25'	594.00	594.00
A	7611+11.93	26.25'	594.16	594.26
B	7611+21.93	26.25'	594.34	594.52
C	7611+31.93	26.25'	594.54	594.79
D	7611+41.93	26.25'	594.76	595.05
E	7611+51.93	26.25'	595.00	595.31
F	7611+61.93	26.25'	595.22	595.52
G	7611+71.93	26.25'	595.40	595.66
H	7611+81.93	26.25'	595.53	595.74
I	7611+91.93	26.25'	595.62	595.76
J	7612+01.93	26.25'	595.66	595.74
CL. BRG. PIER 1	7612+16.18	26.25'	595.66	595.66
K	7612+26.18	26.25'	595.60	595.58
L	7612+36.18	26.25'	595.50	595.47
M	7612+46.18	26.25'	595.36	595.33
N	7612+56.18	26.25'	595.18	595.16
O	7612+66.18	26.25'	595.00	594.99
P	7612+76.18	26.25'	594.82	594.81
Q	7612+86.18	26.25'	594.64	594.64
CL. BRG. PIER 2	7612+91.43	26.25'	594.54	594.54
R	7613+01.43	26.25'	594.36	594.37
S	7613+11.43	26.25'	594.18	594.21
T	7613+21.43	26.25'	593.99	594.02
U	7613+31.43	26.25'	593.72	593.75
V	7613+41.43	26.25'	593.51	593.51
CL. BRG. E. ABUT.	7613+44.88	26.25'	593.47	593.47
BK. E. ABUT.	7613+45.76	26.25'	593.46	593.46

**GIRDER 13**

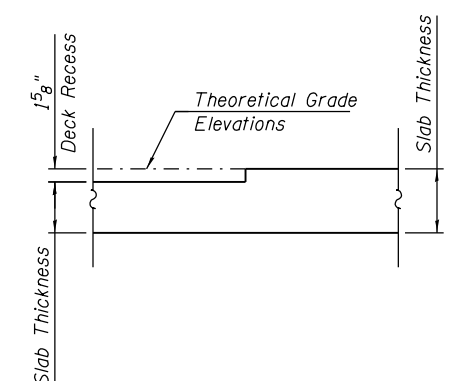
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	7610+99.08	32.08'	593.86*	593.86*
CL. BRG. W. ABUT.	7611+02.34	32.08'	593.91	593.91
A	7611+12.34	32.08'	594.13	594.24
B	7611+22.34	32.08'	594.38	594.58
C	7611+32.34	32.08'	594.64	594.91
D	7611+42.34	32.08'	594.86	595.18
E	7611+52.34	32.08'	595.10	595.43
F	7611+62.34	32.08'	595.32	595.64
G	7611+72.34	32.08'	595.49	595.77
H	7611+82.34	32.08'	595.62	595.84
I	7611+92.34	32.08'	595.71	595.86
J	7612+02.34	32.08'	595.76	595.84
CL. BRG. PIER 1	7612+16.59	32.08'	595.75	595.75
K	7612+26.59	32.08'	595.69	595.67
L	7612+36.59	32.08'	595.59	595.56
M	7612+46.59	32.08'	595.44	595.41
N	7612+56.59	32.08'	595.26	595.24
O	7612+66.59	32.08'	595.08	595.07
P	7612+76.59	32.08'	594.90	594.90
Q	7612+86.59	32.08'	594.72	594.72
CL. BRG. PIER 2	7612+91.84	32.08'	594.63	594.63
R	7613+01.84	32.08'	594.38	594.39
S	7613+11.84	32.08'	594.14	594.17
T	7613+21.84	32.08'	593.89	593.92
U	7613+31.84	32.08'	593.59*	593.62*
V	7613+41.84	32.08'	593.38	593.38
CL. BRG. E. ABUT.	7613+45.01	32.08'	593.35	593.35
BK. E. ABUT.	7613+45.89	32.08'	593.34	593.34

**GIRDER 14**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	7610+99.49	37.92'	593.78	593.78
CL. BRG. W. ABUT.	7611+02.75	37.92'	593.83	593.83
A	7611+12.75	37.92'	594.11	594.22
B	7611+22.75	37.92'	594.42	594.63
C	7611+32.75	37.92'	594.74	595.03
D	7611+42.75	37.92'	594.96	595.30
E	7611+52.75	37.92'	595.20	595.56
F	7611+62.75	37.92'	595.42	595.76
G	7611+72.75	37.92'	595.59	595.89
H	7611+82.75	37.92'	595.72	595.96
I	7611+92.75	37.92'	595.81	595.98
J	7612+02.75	37.92'	595.85	595.94
CL. BRG. PIER 1	7612+17.00	37.92'	595.84	595.84
K	7612+27.00	37.92'	595.78	595.76
L	7612+37.00	37.92'	595.67	595.64
M	7612+47.00	37.92'	595.53	595.50
N	7612+57.00	37.92'	595.35	595.33
O	7612+67.00	37.92'	595.17	595.16
P	7612+77.00	37.92'	594.99	594.99
Q	7612+87.00	37.92'	594.81	594.81
CL. BRG. PIER 2	7612+92.25	37.92'	594.71	594.71
R	7613+02.25	37.92'	594.41	594.43
S	7613+12.25	37.92'	594.10	594.13
T	7613+22.25	37.92'	593.79	593.83
U	7613+32.25	37.92'	593.47*	593.50*
V	7613+42.25	37.92'	593.26	593.26
CL. BRG. E. ABUT.	7613+45.14	37.92'	593.23	593.23
BK. E. ABUT.	7613+46.02	37.92'	593.23	593.23

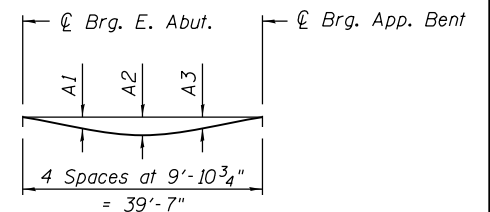
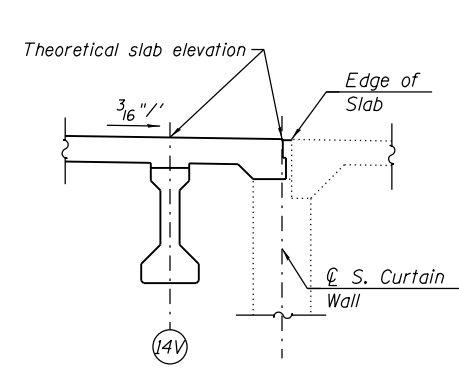
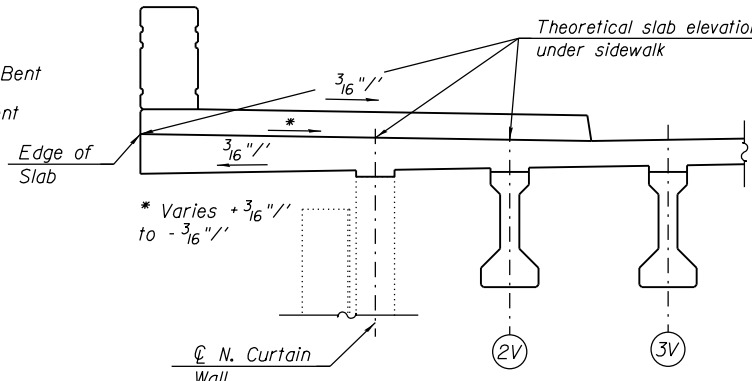
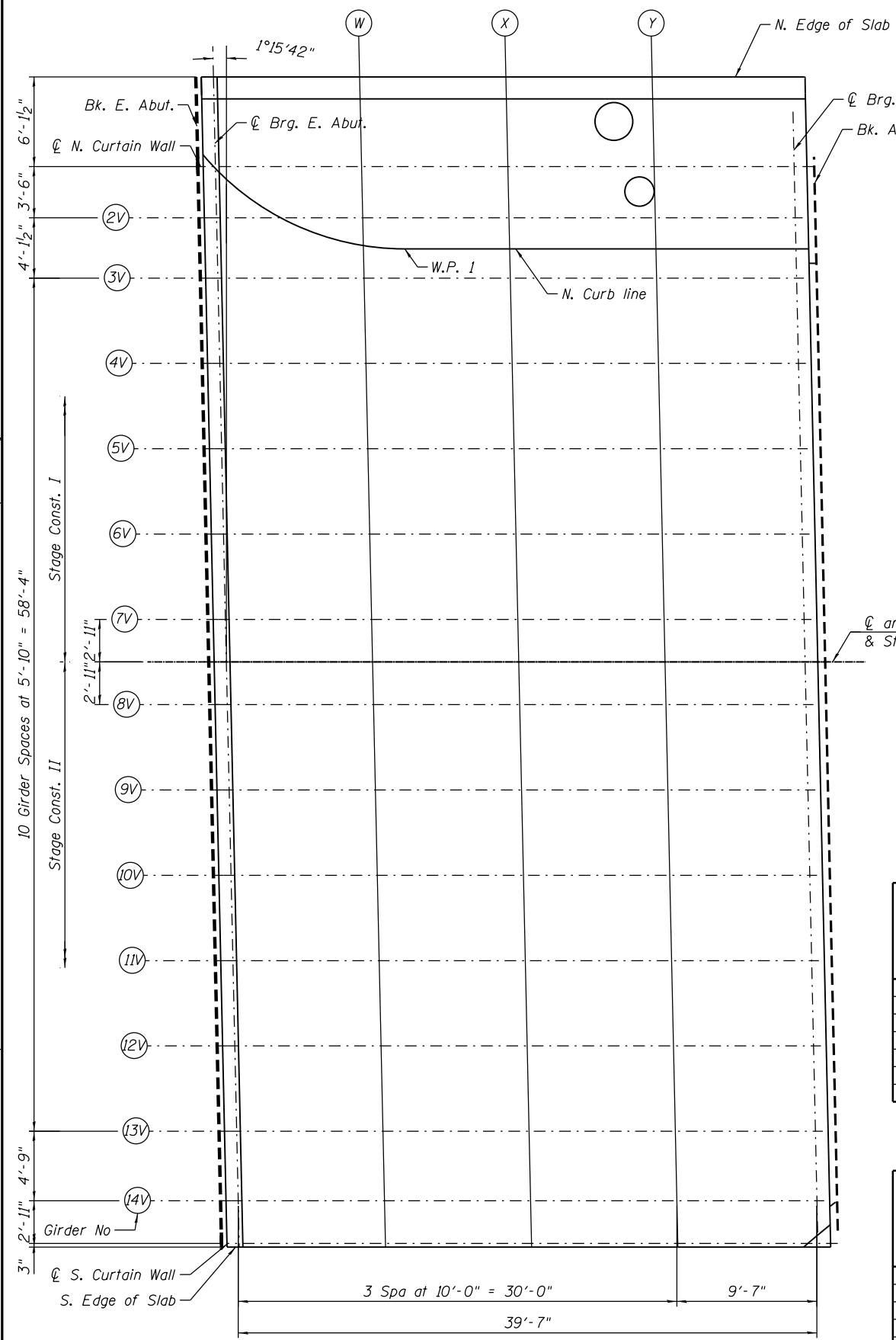
**EDGE OF DECK AT NB I-90/94 ENT. RAMP**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
W.P. 1	7613+08.15	-39.83	594.02	594.06
T	7613+16.81	-39.83	593.85	593.90
U	7613+26.81	-39.83	593.75	593.79
V	7613+36.81	-39.83	593.66	593.66
W.P. 2	7613+41.76	-39.83	593.61	593.61



**NOTE:**  
For plan at edge of deck at NB I-90/94 entrance ramp, see Sheet SI-24.

\*Deck recessed 1 5/8" at ADA ramps. See Sheets SI-15A, SI-22 and SI-23.

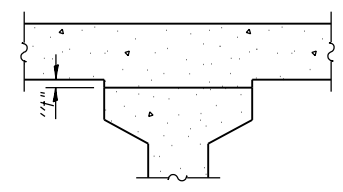


**DEAD LOAD DEFLECTION DIAGRAM**

(Includes weight of concrete deck, sidewalk, parapet, utilities and railing)

Note:  
The above deflections are not for use in the field if the Engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection", as shown on This Sheet and Sheet S1-18B.

Girder Number	DEAD LOAD DEFLECTIONS		
	Span 1		
	A1	A2	A3
2V-14V	1/8"	1/8"	1/8"



To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown on this sheet and on sheet S1-18B, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

**FILLET HEIGHTS**

**NOTE**  
1. For slab thicknesses, see Sheet S1-15A.

**NORTH EDGE OF SLAB**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. E. ABUT.	7613+44.30	-40.00'	593.53	593.53
CL. BRG. E. ABUT.	7613+45.51	-40.00'	593.50	593.50
W	7613+55.51	-40.00'	593.21	593.22
X	7613+65.51	-40.00'	593.20	593.21
Y	7613+75.51	-40.00'	593.21	593.22
CL. BRG. APP. BENT	7613+85.09	-40.00'	593.28	593.28
BK. APP. BENT	7613+86.47	-40.00'	593.27	593.27

**CL. N. CURTAIN WALL**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. E. ABUT.	7613+44.43	-33.88'	593.60	593.60
CL. BRG. E. ABUT.	7613+45.64	-33.88'	593.57	593.57
W	7613+55.64	-33.88'	593.31	593.32
X	7613+65.64	-33.88'	593.23	593.24
Y	7613+75.64	-33.88'	593.18	593.19
CL. BRG. APP. BENT	7613+85.22	-33.88'	593.19	593.19
BK. APP. BENT	7613+86.60	-33.88'	593.18	593.18

**GIRDER 2V**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. E. ABUT.	7613+44.51	-30.38'	593.64	593.64
CL. BRG. E. ABUT.	7613+45.72	-30.38'	593.61	593.61
W	7613+55.72	-30.38'	593.36	593.37
X	7613+65.72	-30.38'	593.25	593.26
Y	7613+75.72	-30.38'	593.16	593.17
CL. BRG. APP. BENT	7613+85.30	-30.38'	593.13	593.13
BK. APP. BENT	7613+86.68	-30.38'	593.12	593.12

**NORTH CURB LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. E. ABUT.	7613+44.41	-35.33'	593.58	593.58
CL. BRG. E. ABUT.	7613+45.64	-33.74'	593.57	593.57
W	7613+55.76	-28.48'	593.39	593.39
W.P. 1	7613+58.58	-28.26'	593.35	593.35
X	7613+65.76	-28.26'	593.26	593.26
Y	7613+75.76	-28.26'	593.15	593.15
CL. BRG. APP. BENT	7613+85.35	-28.26'	593.10	593.10
BK. APP. BENT	7613+86.73	-28.26'	593.09	593.09

**PLAN**

**HBM**  
ENGINEERING GROUP, LLC.  
CONSULTING & DESIGN  
INSPECTION & RATING  
RESEARCH & TESTING

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FAX: (708) 236-0901

DESIGNED - LAB	REVISED
DRAWN - SK	REVISED
CHECKED - MI, JJS	REVISED
DATE - 10/24/2014	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS LOCATIONS - VAULTED SPAN  
STRUCTURE NO. 016-1165

F.A.I. RTE. 90/94	SECTION 2013-012R	COUNTY COOK	TOTAL SHEETS 385	SHEET NO. 205A
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

FILE PATH = p:\617479-P\N\T\aecon\line\loc\1165-60W30-SIBA-VaultedSpanScreedLayout

**GIRDER 3V**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. E. ABUT.	7613+44.60	-26.25'	593.69	593.69
CL. BRG. E. ABUT.	7613+45.81	-26.25'	593.66	593.66
W	7613+55.81	-26.25'	593.42	593.43
X	7613+65.81	-26.25'	593.29	593.30
Y	7613+75.81	-26.25'	593.18	593.19
CL. BRG. APP. BENT	7613+85.39	-26.25'	593.13	593.13
BK. APP. BENT	7613+86.77	-26.25'	593.12	593.12

**GIRDER 4V**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. E. ABUT.	7613+44.73	-20.42'	593.75	593.75
CL. BRG. E. ABUT.	7613+45.94	-20.42'	593.73	593.73
W	7613+55.94	-20.42'	593.51	593.52
X	7613+65.94	-20.42'	593.38	593.39
Y	7613+75.94	-20.42'	593.28	593.29
CL. BRG. APP. BENT	7613+85.52	-20.42'	593.22	593.22
BK. APP. BENT	7613+86.90	-20.42'	593.21	593.21

**GIRDER 5V**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. E. ABUT.	7613+44.86	-14.58'	593.82	593.82
CL. BRG. E. ABUT.	7613+46.07	-14.58'	593.79	593.79
W	7613+56.07	-14.58'	593.60	593.61
X	7613+66.07	-14.58'	593.47	593.48
Y	7613+76.07	-14.58'	593.37	593.38
CL. BRG. APP. BENT	7613+85.65	-14.58'	593.30	593.30
BK. APP. BENT	7613+87.03	-14.58'	593.29	593.29

**GIRDER 6V**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. E. ABUT.	7613+44.99	-8.75'	593.89	593.89
CL. BRG. E. ABUT.	7613+46.19	-8.75'	593.86	593.86
W	7613+56.19	-8.75'	593.69	593.70
X	7613+66.19	-8.75'	593.56	593.57
Y	7613+76.19	-8.75'	593.46	593.47
CL. BRG. APP. BENT	7613+85.78	-8.75'	593.39	593.39
BK. APP. BENT	7613+87.16	-8.75'	593.38	593.38

**GIRDER 7V**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. E. ABUT.	7613+45.12	-2.92'	593.95	593.95
CL. BRG. E. ABUT.	7613+46.32	-2.92'	593.93	593.93
W	7613+56.32	-2.92'	593.78	593.79
X	7613+66.32	-2.92'	593.65	593.66
Y	7613+76.32	-2.92'	593.55	593.56
CL. BRG. APP. BENT	7613+85.91	-2.92'	593.47	593.47
BK. APP. BENT	7613+87.28	-2.92'	593.47	593.47

**ROADWAY, P.G. & STAGE CONSTRUCTION JOINT**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. E. ABUT.	7613+45.18	0.00'	593.99	593.99
CL. BRG. E. ABUT.	7613+46.39	0.00'	593.97	593.97
W	7613+56.39	0.00'	593.82	593.83
X	7613+66.39	0.00'	593.70	593.71
Y	7613+76.39	0.00'	593.60	593.61
CL. BRG. APP. BENT	7613+85.97	0.00'	593.52	593.52
BK. APP. BENT	7613+87.35	0.00'	593.51	593.51

**GIRDER 8V**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. E. ABUT.	7613+45.24	2.92'	593.93	593.93
CL. BRG. E. ABUT.	7613+46.45	2.92'	593.91	593.91
W	7613+56.45	2.92'	593.77	593.78
X	7613+66.45	2.92'	593.65	593.66
Y	7613+76.45	2.92'	593.55	593.56
CL. BRG. APP. BENT	7613+86.03	2.92'	593.47	593.47
BK. APP. BENT	7613+87.41	2.92'	593.46	593.46

**GIRDER 9V**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. E. ABUT.	7613+45.37	8.75'	593.81	593.81
CL. BRG. E. ABUT.	7613+46.58	8.75'	593.79	593.79
W	7613+56.58	8.75'	593.66	593.67
X	7613+66.58	8.75'	593.54	593.55
Y	7613+76.58	8.75'	593.44	593.45
CL. BRG. APP. BENT	7613+86.16	8.75'	593.37	593.37
BK. APP. BENT	7613+87.54	8.75'	593.36	593.36

**GIRDER 10V**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. E. ABUT.	7613+45.50	14.58'	593.69	593.69
CL. BRG. E. ABUT.	7613+46.71	14.58'	593.68	593.68
W	7613+56.71	14.58'	593.55	593.56
X	7613+66.71	14.58'	593.44	593.45
Y	7613+76.71	14.58'	593.34	593.35
CL. BRG. APP. BENT	7613+86.29	14.58'	593.26	593.26
BK. APP. BENT	7613+87.67	14.58'	593.26	593.26

**GIRDER 11V**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. E. ABUT.	7613+45.63	20.42'	593.58	593.58
CL. BRG. E. ABUT.	7613+46.84	20.42'	593.56	593.56
W	7613+56.84	20.42'	593.44	593.45
X	7613+66.84	20.42'	593.33	593.34
Y	7613+76.84	20.42'	593.24	593.25
CL. BRG. APP. BENT	7613+86.42	20.42'	593.16	593.16
BK. APP. BENT	7613+87.80	20.42'	593.16	593.16

**GIRDER 12V**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. E. ABUT.	7613+45.76	26.25'	593.46	593.46
CL. BRG. E. ABUT.	7613+46.97	26.25'	593.45	593.45
W	7613+56.97	26.25'	593.33	593.34
X	7613+66.97	26.25'	593.23	593.24
Y	7613+76.97	26.25'	593.14	593.15
CL. BRG. APP. BENT	7613+86.55	26.25'	593.06	593.06
BK. APP. BENT	7613+87.93	26.25'	593.06	593.06

**GIRDER 13V**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. E. ABUT.	7613+45.89	32.08'	593.34	593.34
CL. BRG. E. ABUT.	7613+47.09	32.08'	593.33	593.33
W	7613+57.09	32.08'	593.22	593.23
X	7613+67.09	32.08'	593.13	593.14
Y	7613+77.09	32.08'	593.04	593.05
CL. BRG. APP. BENT	7613+86.68	32.08'	592.96	592.96
BK. APP. BENT	7613+88.05	32.08'	592.96	592.96

**GIRDER 14V**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. E. ABUT.	7613+45.99	36.83'	593.25	593.25
CL. BRG. E. ABUT.	7613+47.20	36.83'	593.24	593.24
W	7613+57.20	36.83'	593.14	593.15
X	7613+67.20	36.83'	593.04	593.05
Y	7613+77.20	36.83'	592.96	592.97
CL. BRG. APP. BENT	7613+86.78	36.83'	592.88	592.88
BK. APP. BENT	7613+88.16	36.83'	592.87	592.87

**S. CURTAIN WALL**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. E. ABUT.	7613+46.06	39.75'	593.19	593.19
CL. BRG. E. ABUT.	7613+47.26	39.75'	593.18	593.18
W	7613+57.26	39.75'	593.08	593.09
X	7613+67.26	39.75'	592.99	593.00
Y	7613+77.26	39.75'	592.91	592.92
CL. BRG. APP. BENT	7613+86.85	39.75'	592.83	592.83
BK. APP. BENT	7613+88.22	39.75'	592.82	592.82

**SOUTH EDGE OF SLAB**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. E. ABUT.	7613+46.06	40.00'	593.19	593.19
CL. BRG. E. ABUT.	7613+47.27	40.00'	593.18	593.18
W	7613+57.27	40.00'	593.08	593.09
X	7613+67.27	40.00'	592.99	593.00
Y	7613+77.27	40.00'	592.91	592.92
CL. BRG. APP. BENT	7613+86.85	40.00'	592.82	592.82
BK. APP. BENT	7613+88.23	40.00'	592.82	592.82

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**HBM**  
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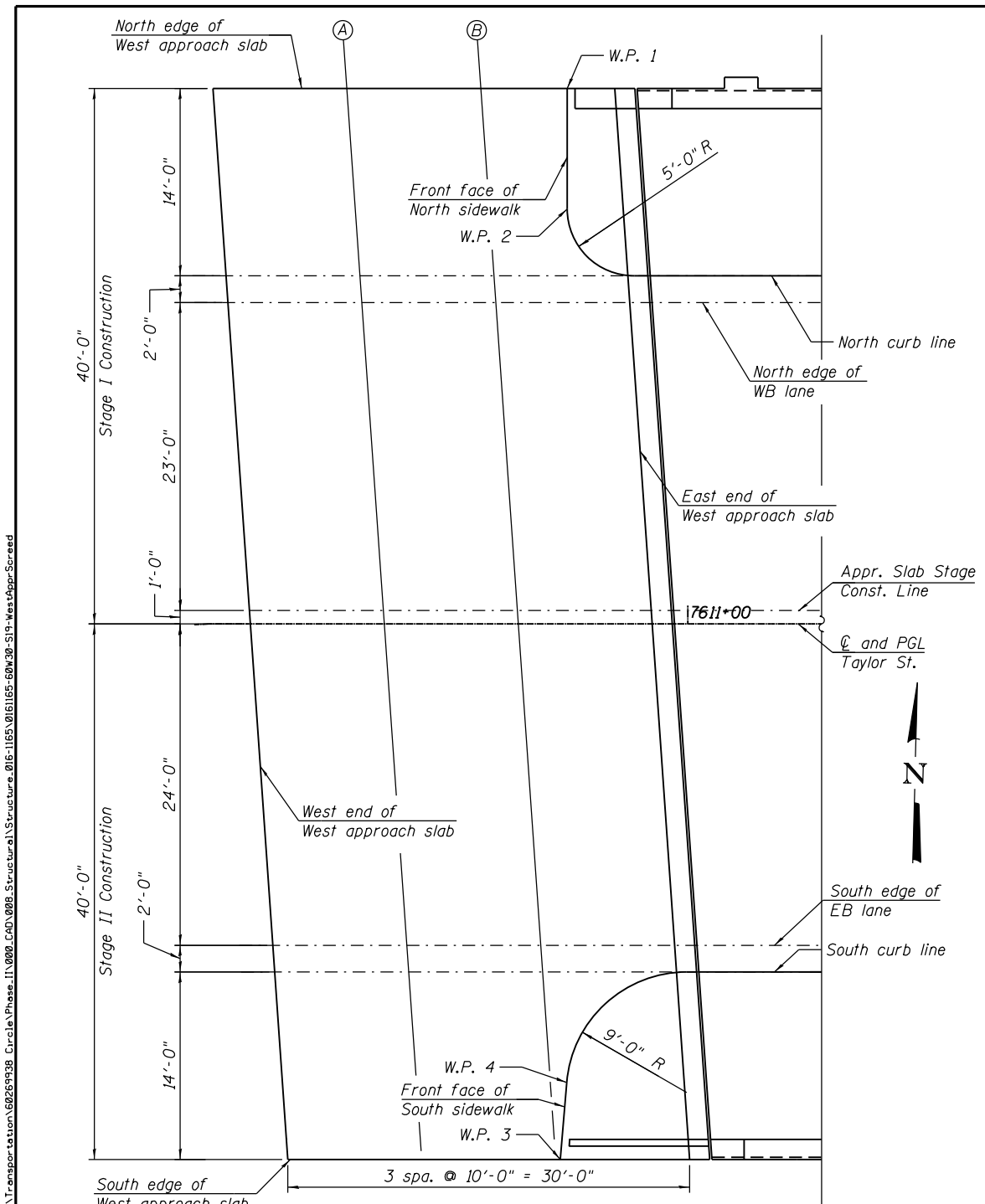
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS - VAULTED SPAN**  
**STRUCTURE NO. 016-1165**

SCALE: SHEET S1-18B OF S1-63 SHEETS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2013-012R	COUNTY COOK	TOTAL SHEETS 385	SHEET NO. 205B
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60W30	





PLAN

**NORTH EDGE OF WEST APPROACH SLAB**

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	7610+64.54	-40.00'	593.38
A	7610+74.54	-40.00'	593.46
B	7610+84.54	-40.00'	593.56
W.P. 1	7610+91.00	-40.00'	593.63
E. End West Appr. Slab	7610+94.54	-40.00'	593.68

**NORTH CURB LINE**

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	7610+65.52	-26.00'	593.60
A	7610+75.52	-26.00'	593.68
B	7610+85.52	-26.00'	593.79
E. End West Appr. Slab	7610+95.52	-26.00'	593.91

**WEST APPROACH SLAB STAGE CONST. LINE**

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	7610+67.27	-1.00'	594.00
A	7610+77.27	-1.00'	594.09
B	7610+87.27	-1.00'	594.20
E. End West Appr. Slab	7610+97.27	-1.00'	594.32

**SOUTH EDGE OF EB LANE**

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	7610+69.02	24.00'	593.66
A	7610+79.02	24.00'	593.75
B	7610+89.02	24.00'	593.86
E. End West Appr. Slab	7610+99.02	24.00'	593.99

**FRONT FACE OF SOUTH SIDEWALK OF WEST APPROACH**

Location	Station	Offset	Theoretical Grade Elevations
W.P. 3	7610+90.47	40.00'	593.63
W.P. 4	7610+90.95	34.25'	593.72
E. End West Appr. Slab	7610+99.16	26.03'	593.96

**FRONT FACE OF NORTH SIDEWALK OF WEST APPROACH**

Location	Station	Offset	Theoretical Grade Elevations
W.P. 1	7610+91.00	-40.00'	593.63
W.P. 2	7610+91.00	-31.00'	593.77
E. End West Appr. Slab	7610+95.52	-26.02'	593.91

**NORTH EDGE OF WB LANE**

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	7610+65.66	-24.00'	593.63
A	7610+75.66	-24.00'	593.72
B	7610+85.66	-24.00'	593.82
E. End West Appr. Slab	7610+95.66	-24.00'	593.94

**CL AND PGL TAYLOR ST. AND DECK STAGE COST. LINE**

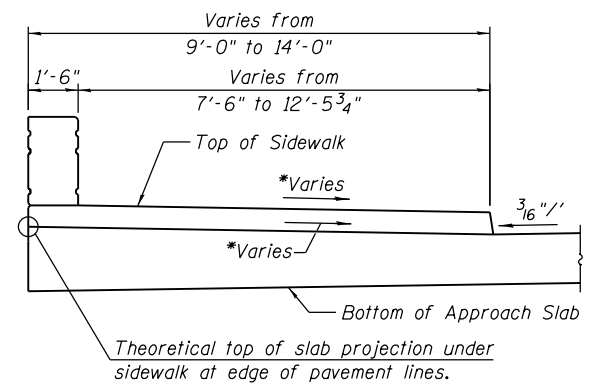
Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	7610+67.34	0.00'	594.02
A	7610+77.34	0.00'	594.11
B	7610+87.34	0.00'	594.21
E. End West Appr. Slab	7610+97.34	0.00'	594.34

**SOUTH CURB LINE**

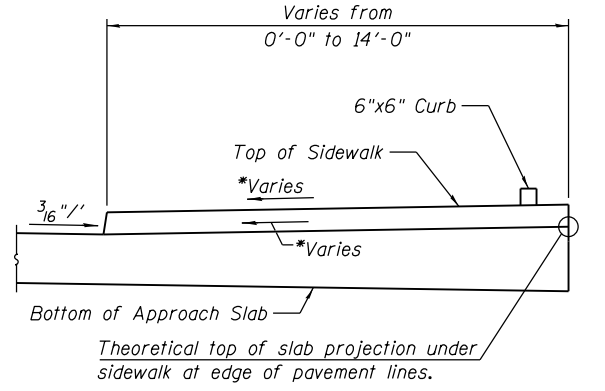
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W. End West Appr. Slab	7610+69.16	26.00'	593.63
A	7610+79.16	26.00'	593.72
B	7610+89.16	26.00'	593.83
E. End West Appr. Slab	7610+99.16	26.00'	593.96

**SOUTH EDGE OF WEST APPROACH SLAB**

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	7610+70.14	40.00'	593.42
A	7610+80.14	40.00'	593.51
B	7610+90.14	40.00'	593.62
W.P. 3	7610+90.47	40.00'	593.63
E. End West Appr. Slab	7611+00.14	40.00'	593.76



**LOCATION OF ELEVATION UNDER NORTH SIDEWALK**



**LOCATION OF ELEVATION UNDER SOUTH SIDEWALK**

\*Varies from +<sup>3</sup>/<sub>16</sub>"/' to -<sup>3</sup>/<sub>16</sub>"/'  
See Civil plans for cross slope transition

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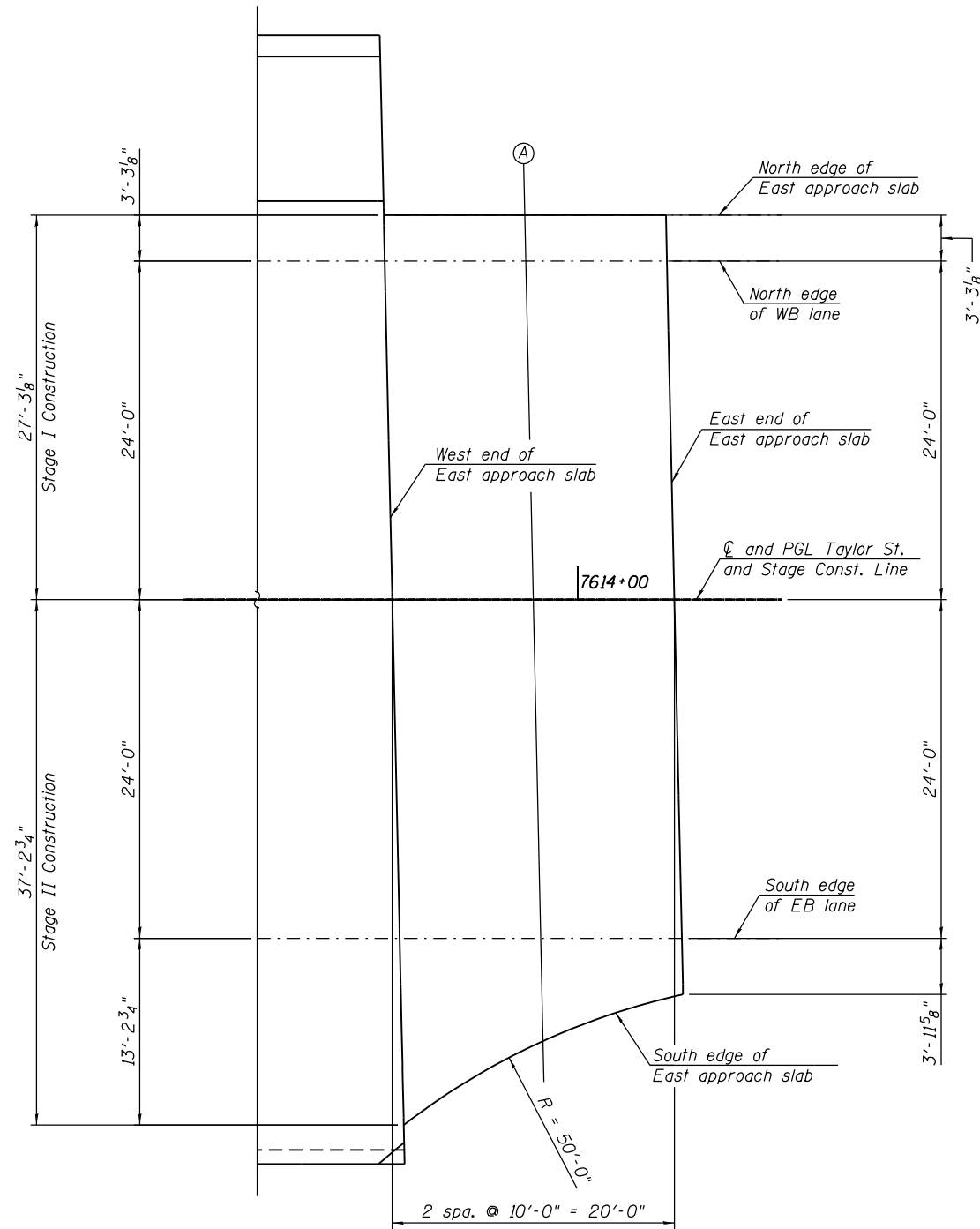
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DEPARTMENT OF TRANSPORTATION

TOP OF WEST APPROACH SLAB ELEVATIONS  
STRUCTURE NO. 016-1165

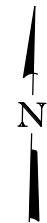
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	206
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**PLAN**



**NORTH EDGE OF EAST APPROACH SLAB**

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	7613+86.25	-27.26'	593.11
A	7613+96.25	-27.26'	593.05
E. End East Appr. Slab	7614+06.25	-27.26'	593.01

**NORTH EDGE OF WB LANE**

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	7613+86.32	-24.00'	593.16
A	7613+96.32	-24.00'	593.10
E. End East Appr. Slab	7614+06.32	-24.00'	593.06

**☉ AND PGL TAYLOR ST. AND STAGE CONST. LINE**

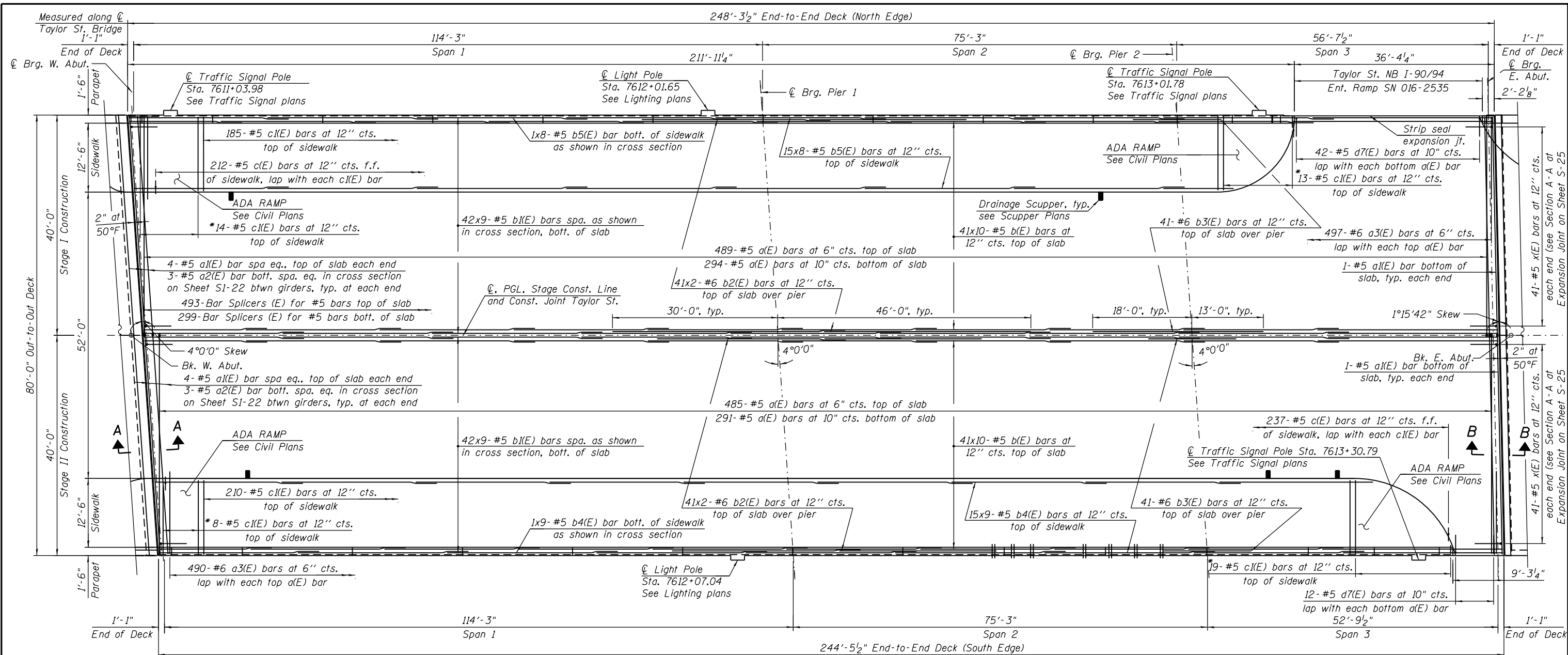
Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	7613+86.85	0.00'	593.51
A	7613+96.85	0.00'	593.45
E. End East Appr. Slab	7614+06.85	0.00'	593.42

**SOUTH EDGE OF EB LANE**

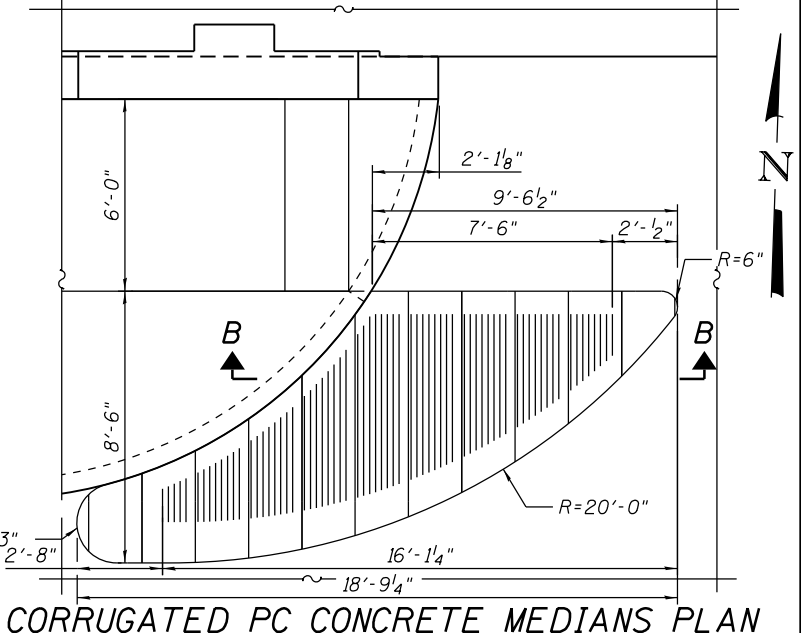
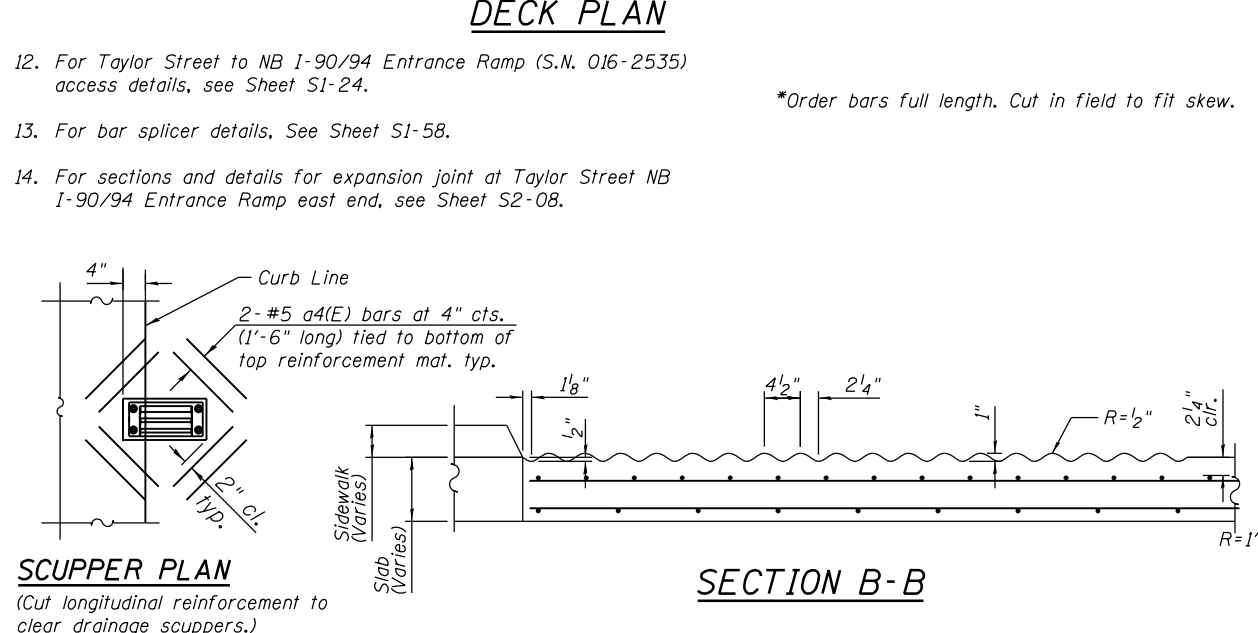
Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	7613+87.38	24.00'	593.10
A	7613+97.38	24.00'	593.04
E. End East Appr. Slab	7614+07.38	24.00'	593.03

**SOUTH EDGE OF EAST APPROACH SLAB**

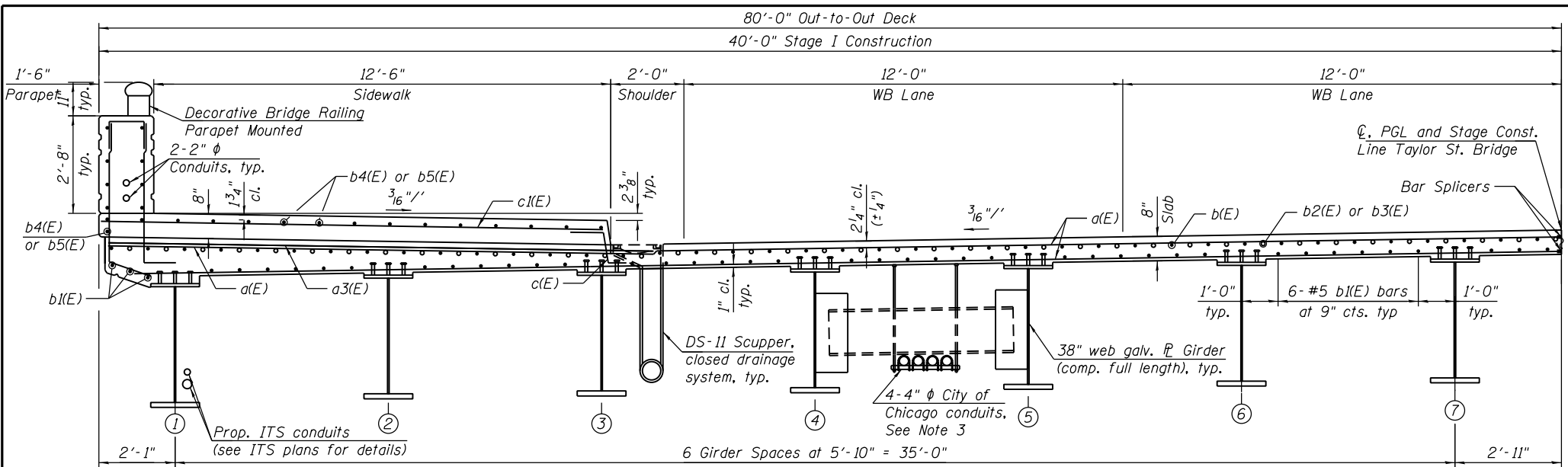
Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	7613+87.67	37.23'	592.87
A	7613+97.54	31.28'	592.91
E. End East Appr. Slab	7614+07.46	27.97'	592.97



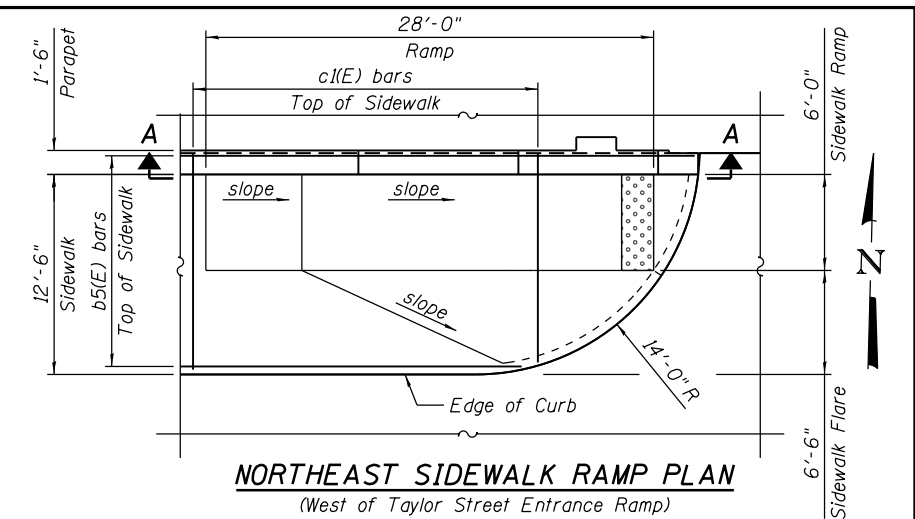
- NOTES:**
- For cross section details and conduit embedded in deck detail, see Sheet S1-22.
  - For section thru parapet, parapet detail at light pole, Section A-A at expansion joint, bar diagrams and bill of material, see Sheet S1-25.
  - For Section B-B, see sheet S1-25B.
  - Parapet reinforcement not shown for clarity. See Sheet S1-24 for parapet elevations and details.
  - For scupper locations, see Sheets S1-01 and S1-33.
  - Bars noted thus, 15x8-#5 etc., indicates 15 lines of bars with 8 bars per line.
  - Dimensions are based on a Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on Sheet S1-32.
  - For the conduits attached to structure and embedded in structure quantities and details, see Civil and Electrical plans.
  - For City of Chicago Hanger Support, see Sheet S1-04.
  - For ITS conduit layout, see ITS Plans.
  - For traffic signal conduit layout, see Traffic Signal Plans.



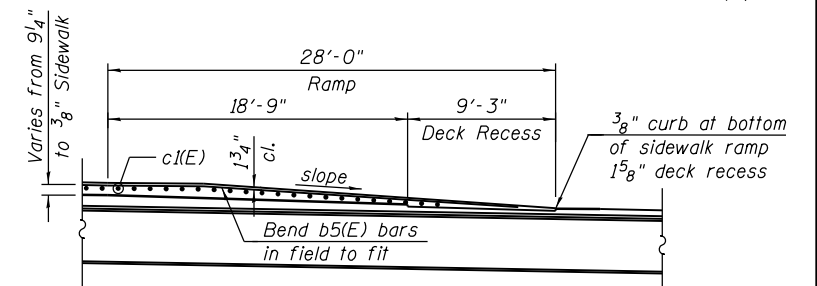
<b>HBM</b> ENGINEERING GROUP, LLC. 4415 WEST HARRISON ST. SUITE 231 HILLSIDE, IL 60162 PHONE: (708) 236-0900 FAX: (708) 236-0901	0161165-60W30-S21-DeckPlan USER NAME = ahmed.issa PLOT SCALE = 1/8"=1'-0" PLOT DATE = 12/16/2014	DESIGNED - MA, MI DRAWN - MA CHECKED - MAI, JJS DATE - 10/24/2014	REVISED REVISED REVISED REVISED	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>DECK PLAN</b> <b>STRUCTURE NO. 016-1165</b>	SCALE: SHEET S1-21 OF S1-63 SHEETS STA. TO STA.	F.A.I. RTE. 90/94 SECTION 2013-012R COUNTY COOK TOTAL SHEETS 385 SHEET NO. 208 CONTRACT NO. 60W30	ILLINOIS FED. AID PROJECT
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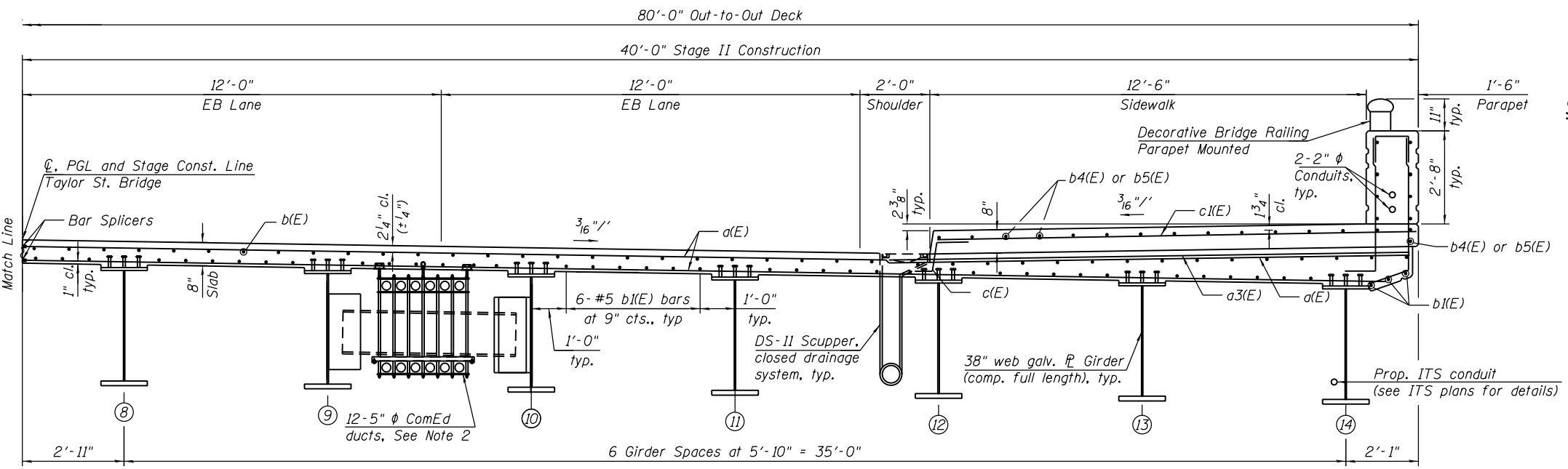
**DECK CROSS SECTION (NEAR PIER)**  
(Looking East)



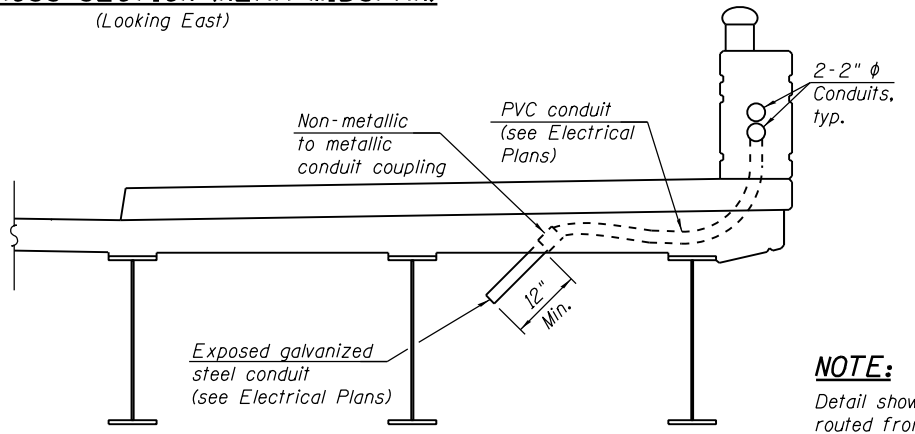
**NORTHEAST SIDEWALK RAMP PLAN**  
(West of Taylor Street Entrance Ramp)



**SECTION A-A: NORTHEAST SIDEWALK RAMP PLAN**  
(West of Taylor Street Entrance Ramp, Looking North)



**DECK CROSS SECTION (NEAR MIDSPAN)**  
(Looking East)



**NOTE:**  
Detail shows the embedded conduits routed from the parapet over the girder and exiting the deck.

**NOTES:**

1. Work this sheet with Sheet S1-21.
2. Proposed conduit support system is shown for information only on Sheets 251 thru 253. The concrete inserts will be provided to the Contractor by ComEd. The Contractor is responsible for placing inserts per layout details and ComEd direction. ComEd may elect to provide support to Contractor for final insert placement in advance of pouring concrete. There is no separate payment for the placement of inserts. The work involved in placing inserts is included within Concrete Superstructure.
3. Space inserts at 10'-0" cts. max. longitudinally, full length of bridge (see Sheet S1-04). Cost of inserts (and placing inserts) for City of Chicago conduits included in Concrete Superstructure. See Electrical plans for conduit support details.
4. For sidewalk ramp cross-slopes and elevations, see Civil Plans.

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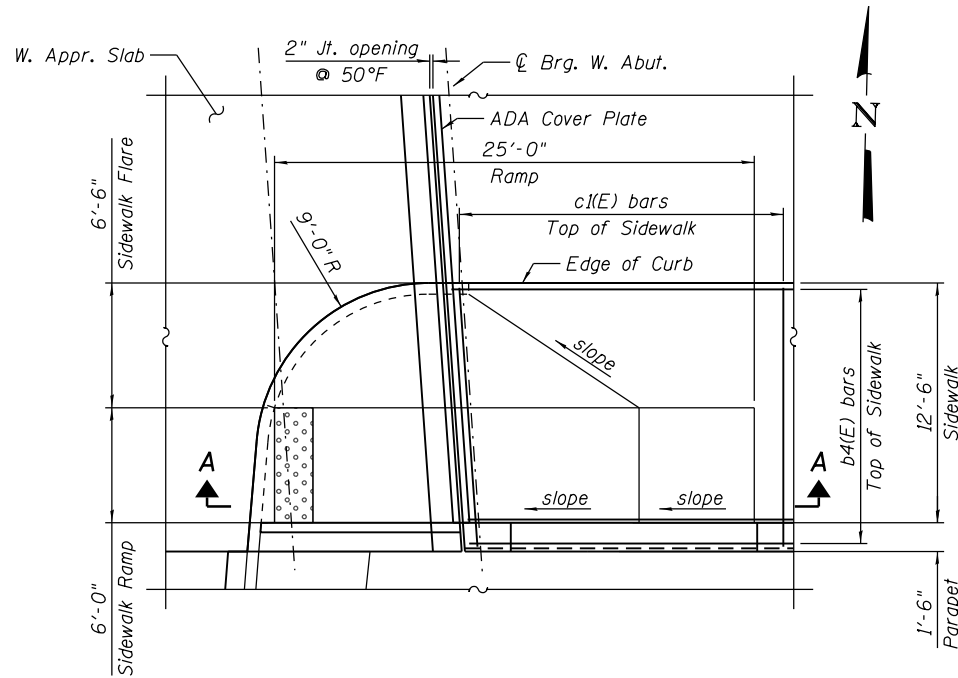
**HBM**  
ENGINEERING GROUP, LLC.  
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INSPECTION & RATING  
RESEARCH & TESTING

4415 WEST HARRISON ST.  
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HILLSIDE, IL 60162  
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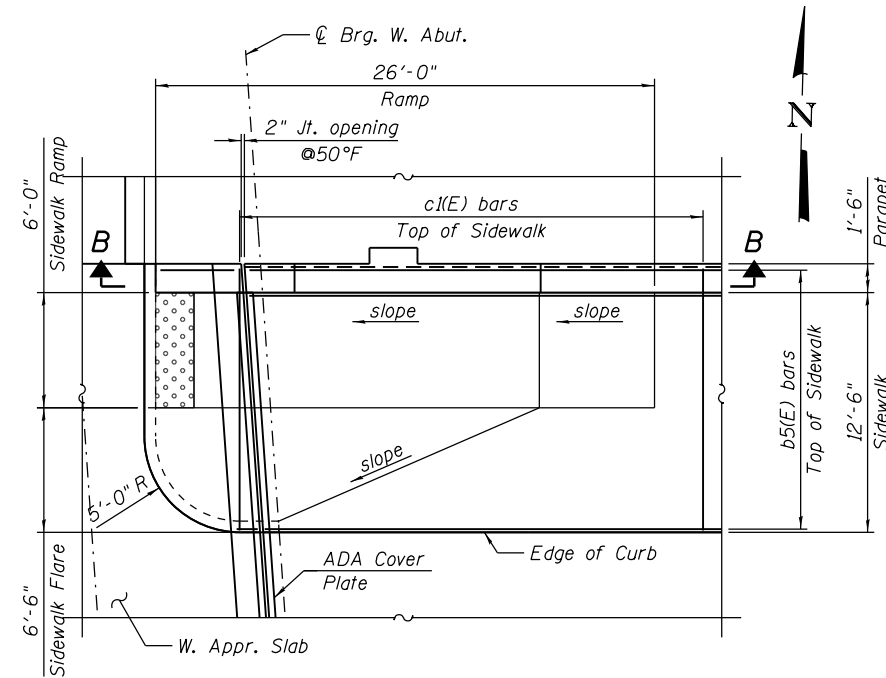
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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

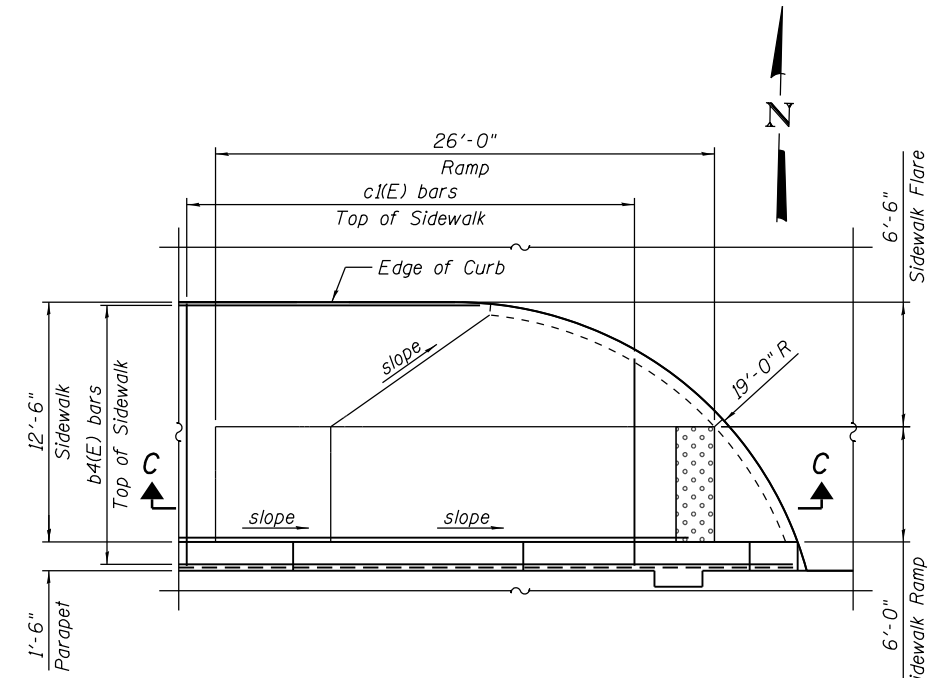
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ILLINOIS FED. AID PROJECT						



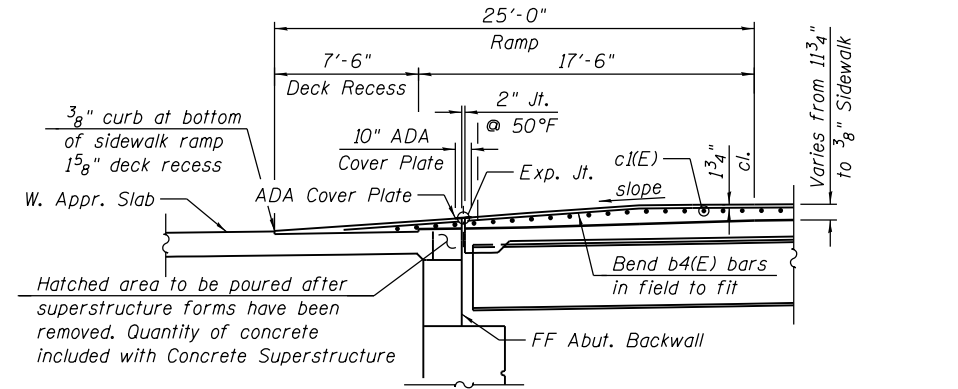
**SOUTHWEST SIDEWALK RAMP PLAN**



**NORTHWEST SIDEWALK RAMP PLAN**

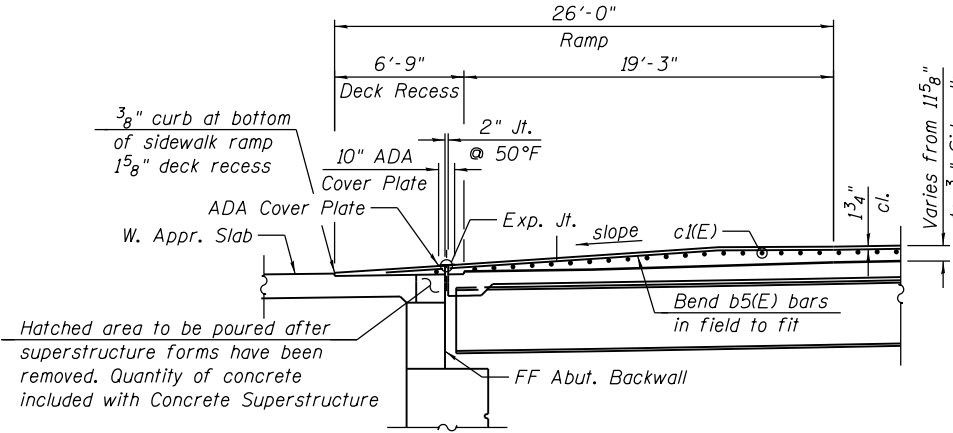


**SOUTHEAST SIDEWALK RAMP PLAN**



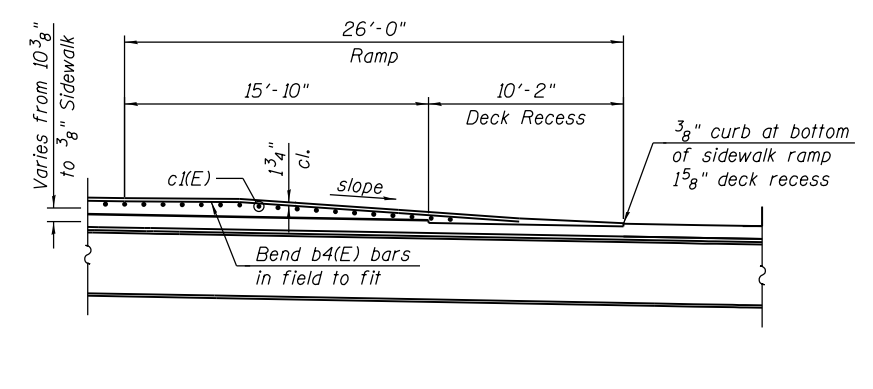
**SECTION A-A: SOUTHWEST SIDEWALK RAMP ELEVATION**

(Looking North)



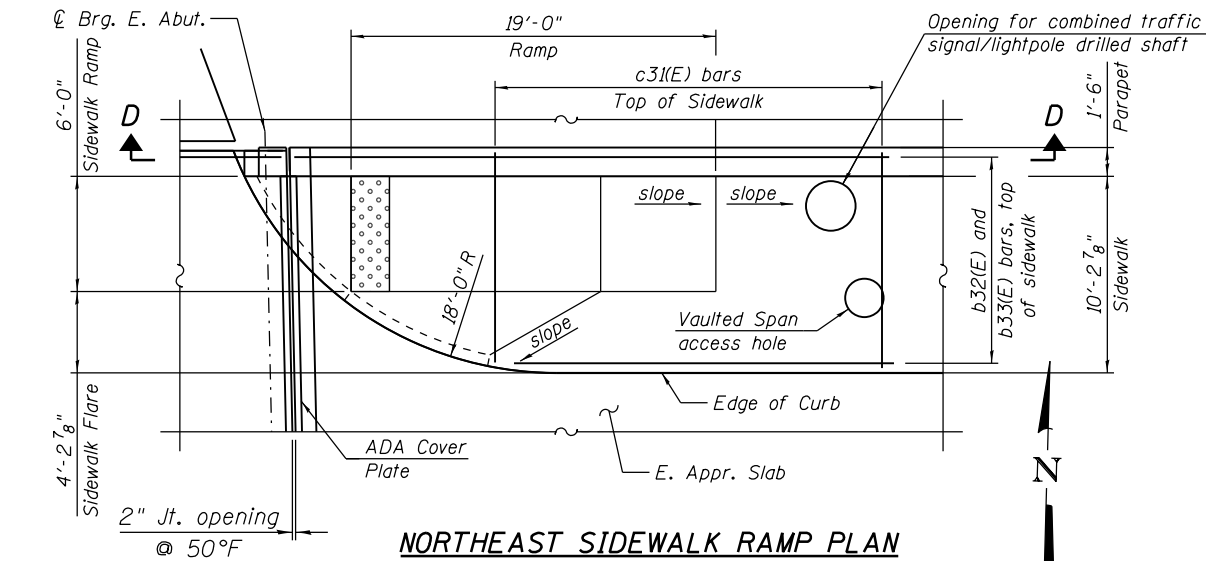
**SECTION B-B: NORTHWEST SIDEWALK RAMP ELEVATION**

(Looking North)



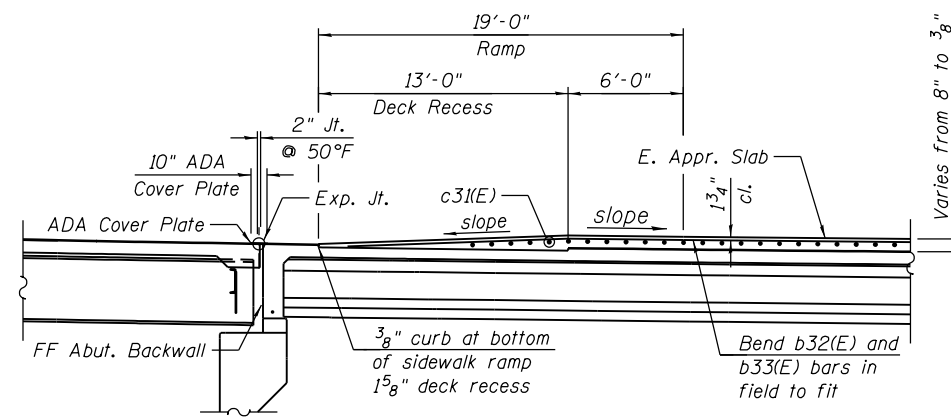
**SECTION C-C: SOUTHEAST SIDEWALK RAMP ELEVATION**

(Looking North)



**NORTHEAST SIDEWALK RAMP PLAN**

(East of Taylor Street Entrance Ramp)



**SECTION D-D: NORTHEAST SIDEWALK RAMP ELEVATION**

(Looking North)

**NOTES:**

- For expansion joint details and ADA cover plate details. See Sheet S1-32
- For cross-slopes and elevations, see Civil Plans.

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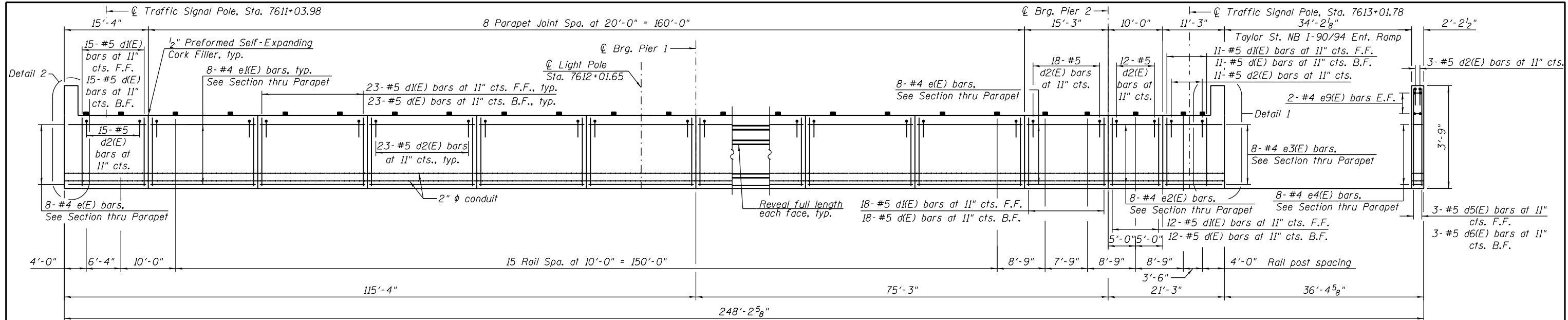
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

ADA RAMP SECTIONS AND DETAILS  
 STRUCTURE NO. 016-1165

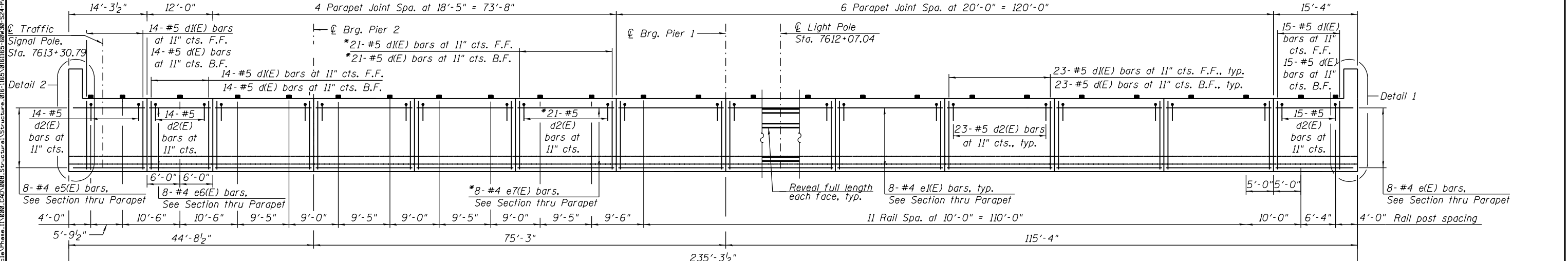
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	210
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	



**INSIDE ELEVATION OF NORTH PARAPET**  
(Looking North)

(Architectural details are not shown for clarity. See Note 3)

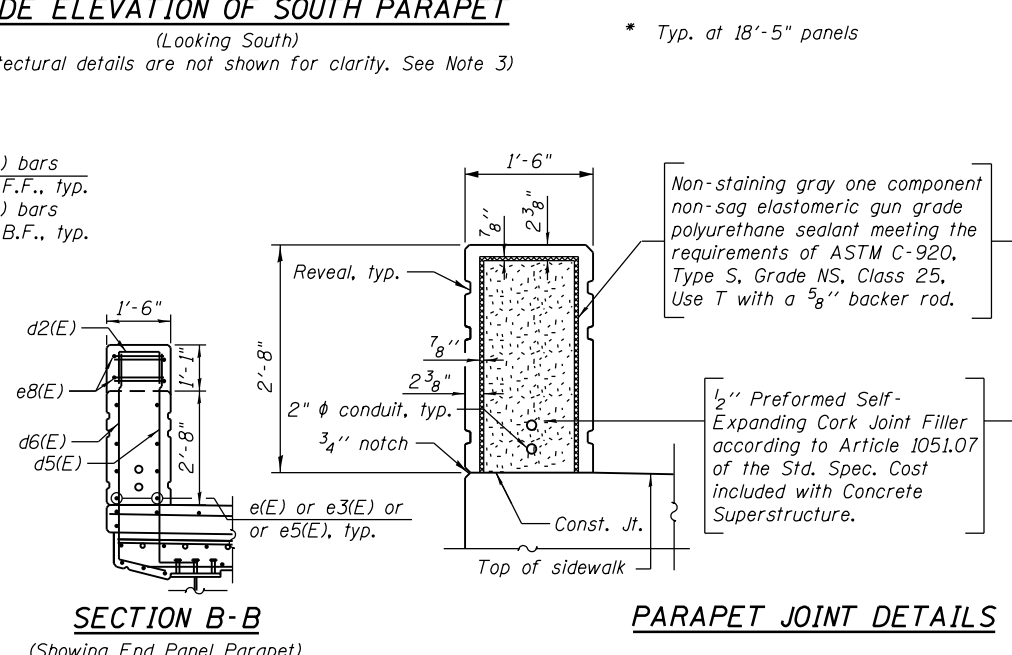
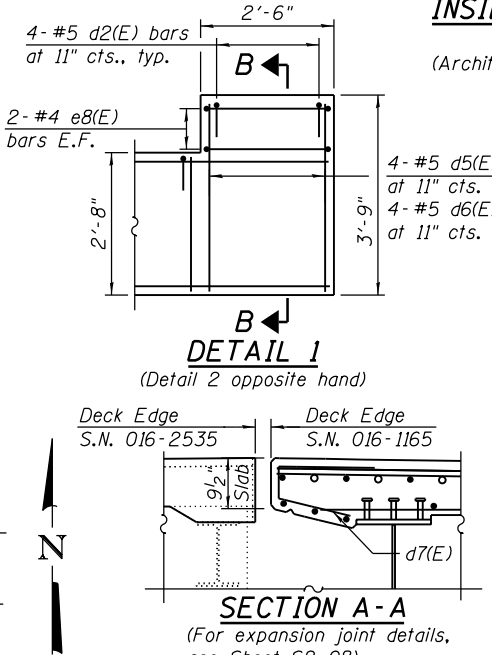
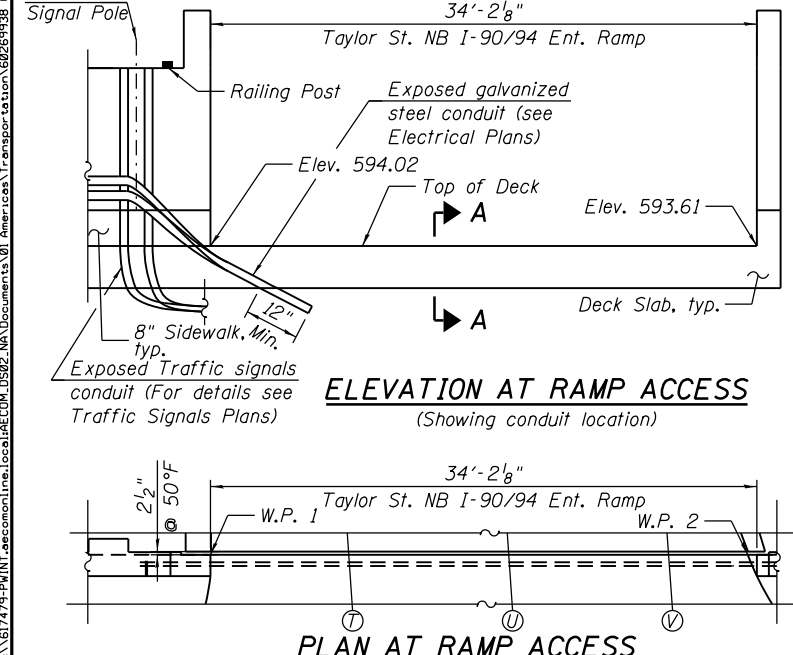


**INSIDE ELEVATION OF SOUTH PARAPET**  
(Looking South)

(Architectural details are not shown for clarity. See Note 3)

\* Typ. at 18'-5" panels

- NOTES:**
- For notes, bar diagrams, sections thru parapet and bill of material, see Sheet S1-25.
  - For approach slab parapet details, see Sheets S1-26 thru S1-29.
  - For architectural details on the parapets and Decorative Railing (Parapet Mounted) details, see Sheet S1-30.
  - For location of light pole and traffic signals on bridge see Electrical and ITS plans.
  - The reveal on the Chicago parapet will not be paid separately and shall be included in the cost of the pay item "Concrete Superstructure".
  - Contractor to provide expansion/deflection conduit fittings at all structural expansion joints. See lighting plans for expansion/deflection fitting installation details.
  - For edge of deck elevations at NBI-90/94 Entrance Ramp, see Sheet S1-18.



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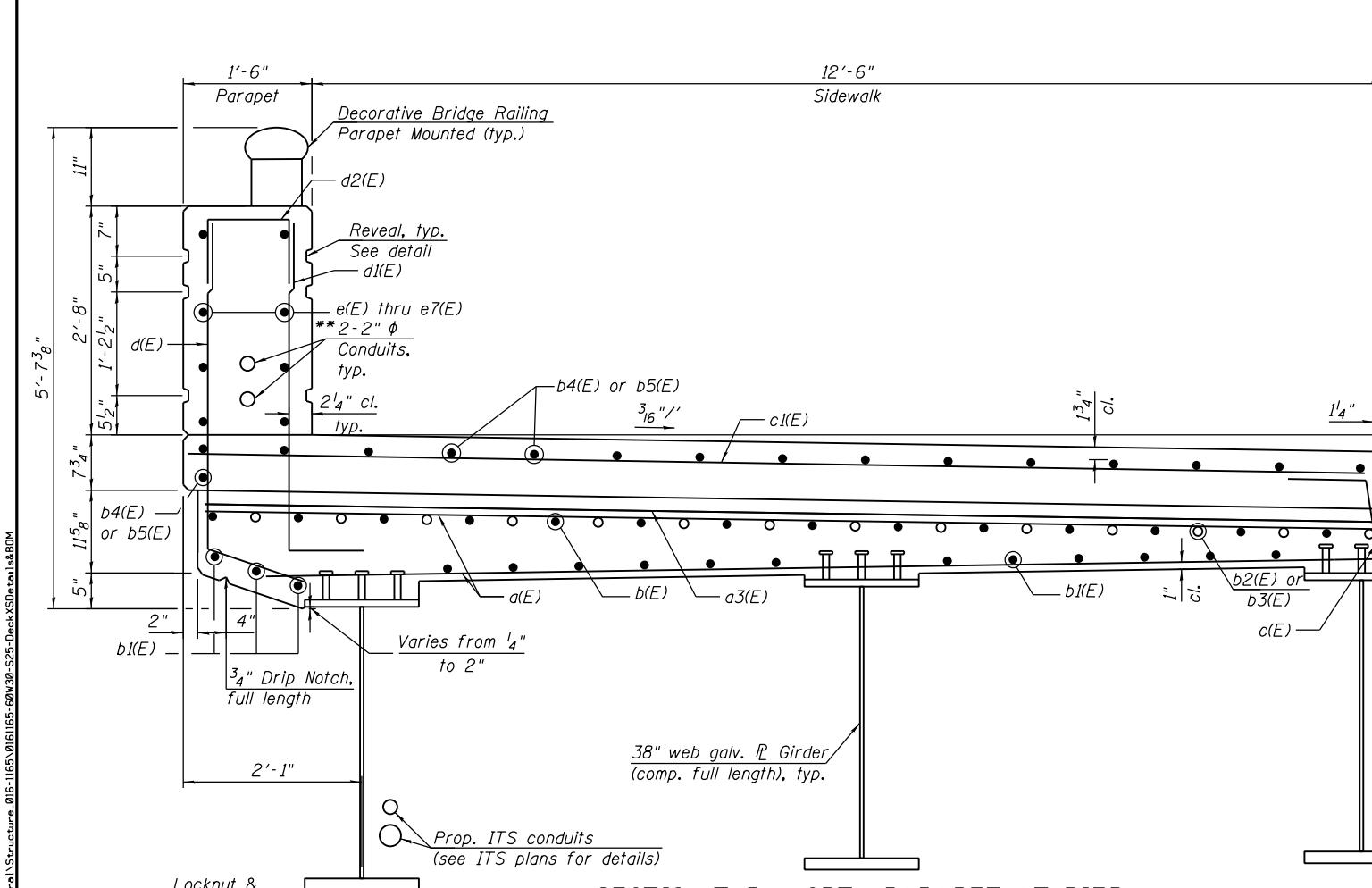
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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

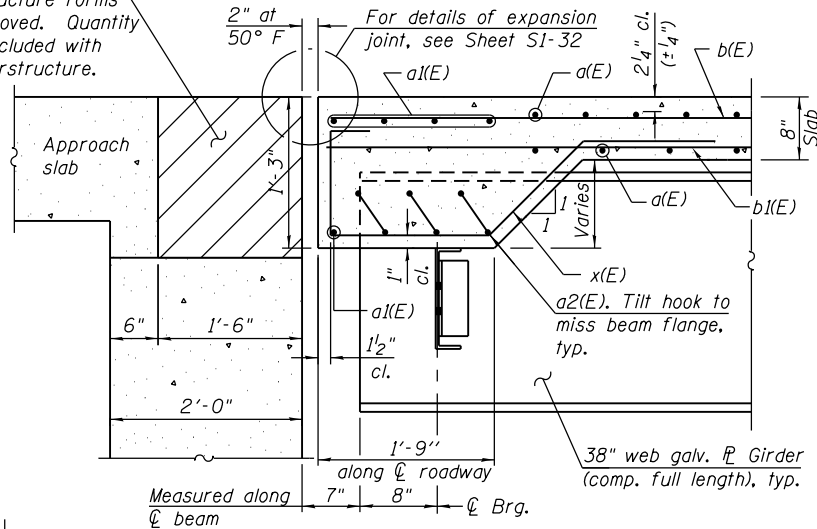
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**STRUCTURE NO. 016-1165**

F.A.I R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.

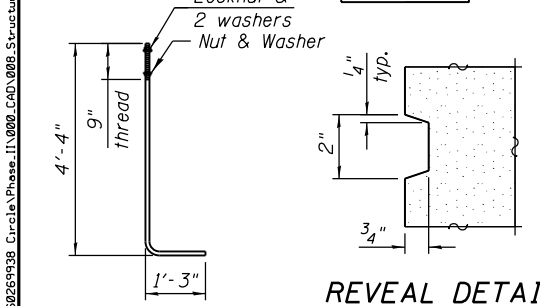


**SECTION A-A AT EXPANSION JOINT**  
(Looking North, West joint shown)

**NOTES:**

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Bars noted thus 15x8-#5 indicates 15 lines of bars with 8 bars per line.
3. For parapet details, see Sheet S1-24.
4. For light pole and combined traffic signal/light pole locations, bolt circles, and quantities of conduits attached to structure, see Electrical/Traffic Signal plans.
5. For ADA ramp locations, layout, elevations and details, see Sheet S1-23 and Civil plans.
6. Bars in the sidewalk interfering with the ADA Ramp Construction shall be bent and/or cut to fit based on the sidewalk depth in these areas.
7. Space e(E) thru e8(E) bars to miss railing anchor bolts.
8. Limits of Rubbed Finish on superstructure include top and inside (roadway side) faces of parapet.

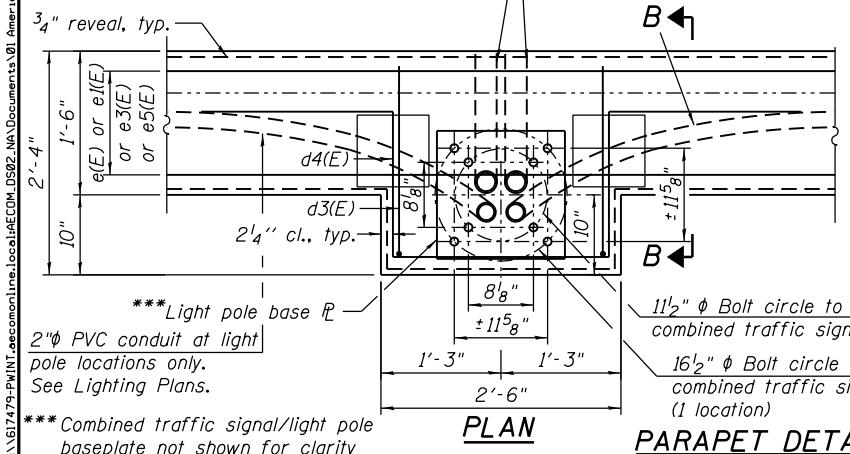
**SECTION THRU NORTH PARAPET AT PIER**  
(Looking Up-Station at Pier, typ. for South Parapet)



**ANCHOR ROD**

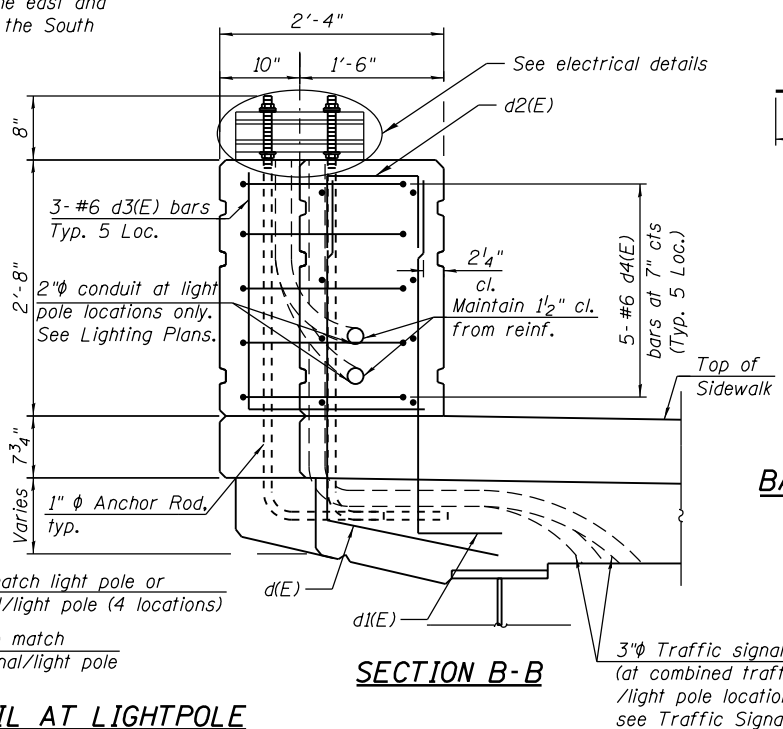
Cost of anchor rods is included with Concrete Superstructure. (ASTM F 1554 Grade 105) Full Length hot dipped galvanized.

\*\* 2" φ City of Chicago lighting conduits embedded in the east and west parapets between the South and North Abutments.

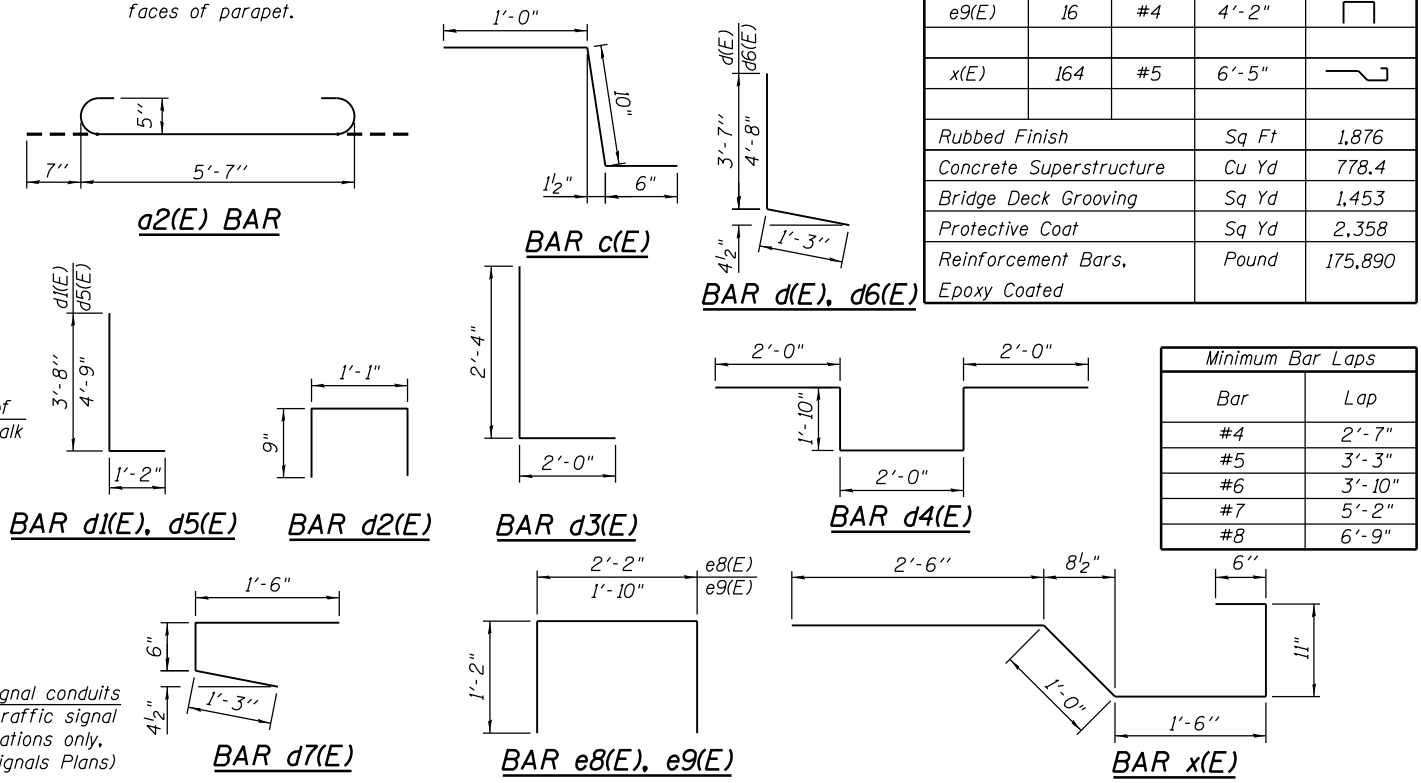


**PLAN**

**PARAPET DETAIL AT LIGHTPOLE**



**SECTION B-B**



**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	1559	#5	39'-7"	—
a1(E)	20	#5	39'-7"	—
a2(E)	78	#5	6'-9"	—
a3(E)	987	#6	15'-0"	—
a4(E)	40	#5	1'-6"	—
b(E)	820	#5	27'-8"	—
b1(E)	756	#5	30'-3"	—
b2(E)	164	#6	39'-11"	—
b3(E)	82	#6	31'-0"	—
b4(E)	144	#5	29'-1"	—
b5(E)	128	#5	29'-4"	—
c(E)	449	#5	2'-4"	—
c1(E)	449	#5	13'-8"	—
d(E)	505	#5	4'-10"	—
d1(E)	505	#5	4'-10"	—
d2(E)	524	#5	2'-7"	—
d3(E)	15	#6	4'-4"	—
d4(E)	25	#6	9'-8"	—
d5(E)	19	#5	5'-11"	—
d6(E)	19	#5	5'-11"	—
d7(E)	54	#5	3'-3"	—
e(E)	24	#4	14'-11"	—
e1(E)	112	#4	19'-8"	—
e2(E)	8	#4	9'-8"	—
e3(E)	8	#4	10'-11"	—
e4(E)	8	#4	1'-10"	—
e5(E)	8	#4	13'-11"	—
e6(E)	8	#4	11'-8"	—
e7(E)	32	#4	18'-1"	—
e8(E)	8	#4	4'-6"	—
e9(E)	16	#4	4'-2"	—
x(E)	164	#5	6'-5"	—
Rubbed Finish			Sq Ft	1,876
Concrete Superstructure			Cu Yd	778.4
Bridge Deck Grooving			Sq Yd	1,453
Protective Coat			Sq Yd	2,358
Reinforcement Bars, Epoxy Coated			Pound	175,890

Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"

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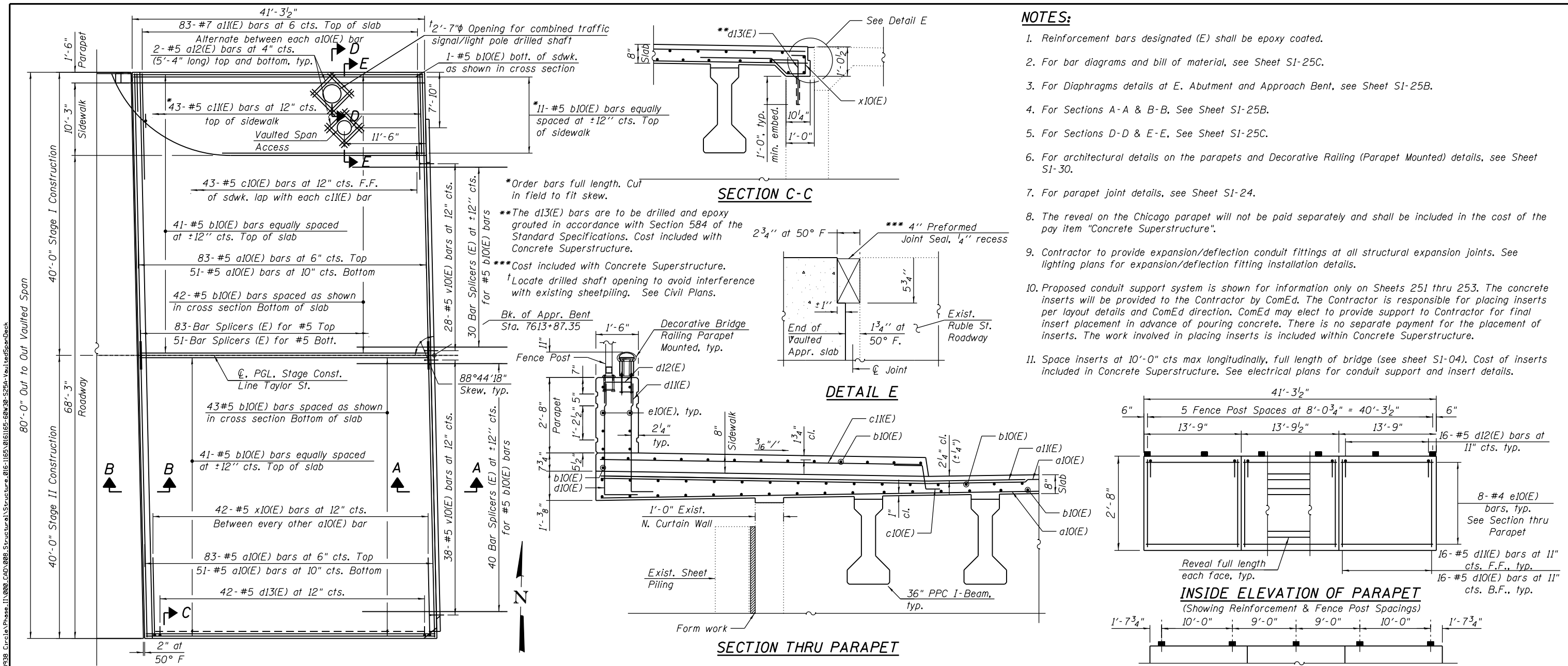
4415 WEST HARRISON ST.  
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HILLSIDE, IL 60162  
PHONE: (708) 236-0900  
FAX: (708) 236-0901

0161165-60W30-S25-DeckXSDetails&BOM  
USER NAME = ahmod.issa  
PLOT SCALE = 2:0.0000 1" = 1'-0"  
PLOT DATE = 12/17/2014

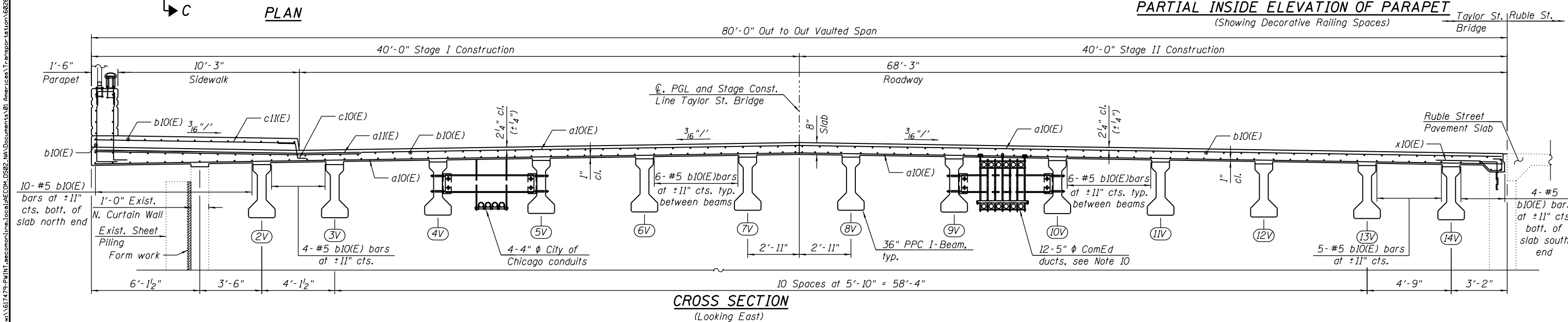
DESIGNED - MI, MA  
DRAWN - MA  
CHECKED - MAI, JJS  
DATE - 10/24/2014

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**DECK CROSS SECTIONS, DETAILS AND BILL OF MATERIAL**  
**STRUCTURE NO. 016-1165**  
SCALE: SHEET S1-25 OF S1-63 SHEETS STA. TO STA.  
F.A.I. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.  
90/94 2013-012R COOK 385 212  
CONTRACT NO. 60W30  
ILLINOIS FED. AID PROJECT



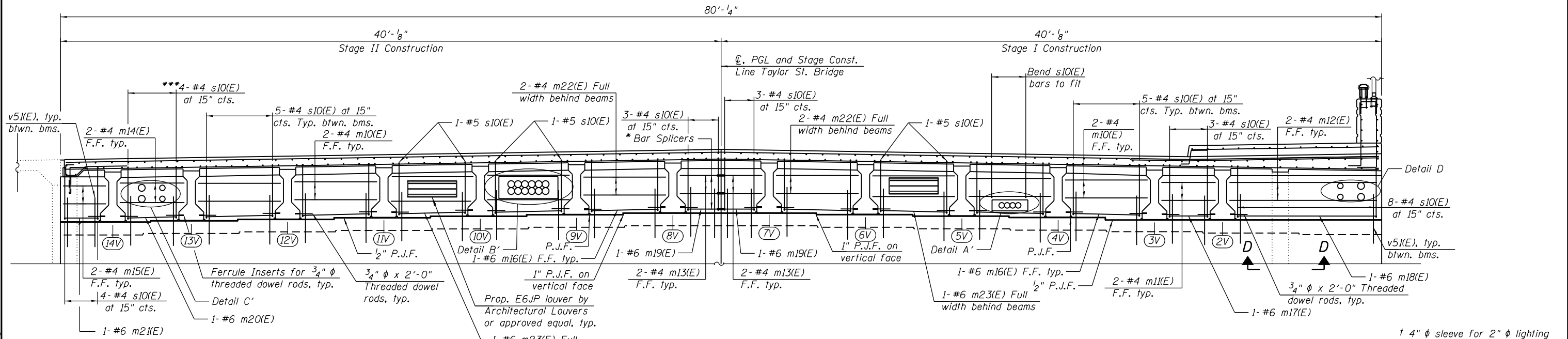
- NOTES:**
1. Reinforcement bars designated (E) shall be epoxy coated.
  2. For bar diagrams and bill of material, see Sheet S1-25C.
  3. For Diaphragms details at E. Abutment and Approach Bent, see Sheet S1-25B.
  4. For Sections A-A & B-B, See Sheet S1-25B.
  5. For Sections D-D & E-E, See Sheet S1-25C.
  6. For architectural details on the parapets and Decorative Railing (Parapet Mounted) details, see Sheet S1-30.
  7. For parapet joint details, see Sheet S1-24.
  8. The reveal on the Chicago parapet will not be paid separately and shall be included in the cost of the pay item "Concrete Superstructure".
  9. Contractor to provide expansion/deflection conduit fittings at all structural expansion joints. See lighting plans for expansion/deflection fitting installation details.
  10. Proposed conduit support system is shown for information only on Sheets 251 thru 253. The concrete inserts will be provided to the Contractor by ComEd. The Contractor is responsible for placing inserts per layout details and ComEd direction. ComEd may elect to provide support to Contractor for final insert placement in advance of pouring concrete. There is no separate payment for the placement of inserts. The work involved in placing inserts is included within Concrete Superstructure.
  11. Space inserts at 10'-0" cts max longitudinally, full length of bridge (see sheet S1-04). Cost of inserts included in Concrete Superstructure. See electrical plans for conduit support and insert details.



<b>HBM</b> ENGINEERING GROUP, LLC. CONSULTING & DESIGN INSPECTION & RATING RESEARCH & TESTING 4415 WEST HARRISON ST. SUITE 231 HILLSIDE, IL 60162 PHONE: (708) 236-0900 FAX: (708) 236-0901	0161165-60W30-S25A-VaultedSpanDeck USER NAME = ahmed.issa PLOT SCALE = 1/4" = 1'-0" PLOT DATE = 12/16/2014	DESIGNED - MA, MI DRAWN - MA CHECKED - MAI, JJS DATE - 10/24/2014	REVISED REVISED REVISED REVISED	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>DECK PLAN AND CROSS SECTION - VAULTED SPAN</b> <b>STRUCTURE NO. 016-1165</b>		F.A.I. R.T.E. 90/94 SECTION 2013-012R COUNTY COOK TOTAL SHEETS 385 SHEET NO. 212A	CONTRACT NO. 60W30 ILLINOIS FED. AID PROJECT
	SCALE: SHEET S1-25A OF S1-63 SHEETS		STA. TO STA.					

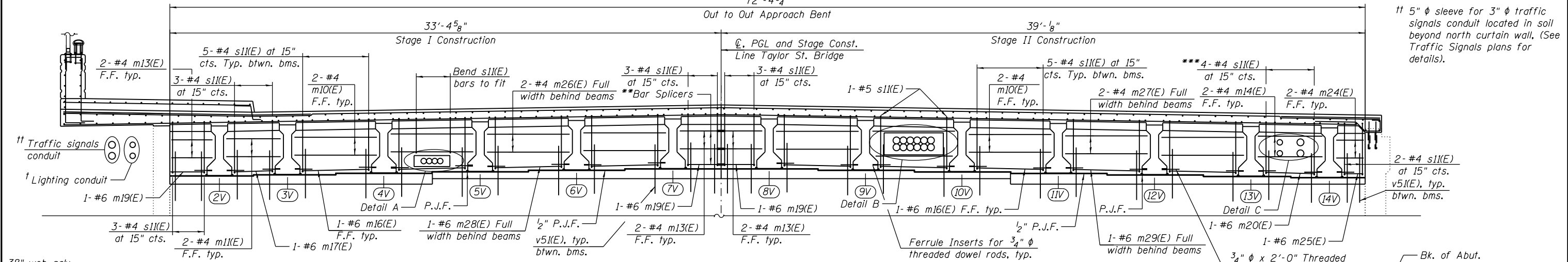


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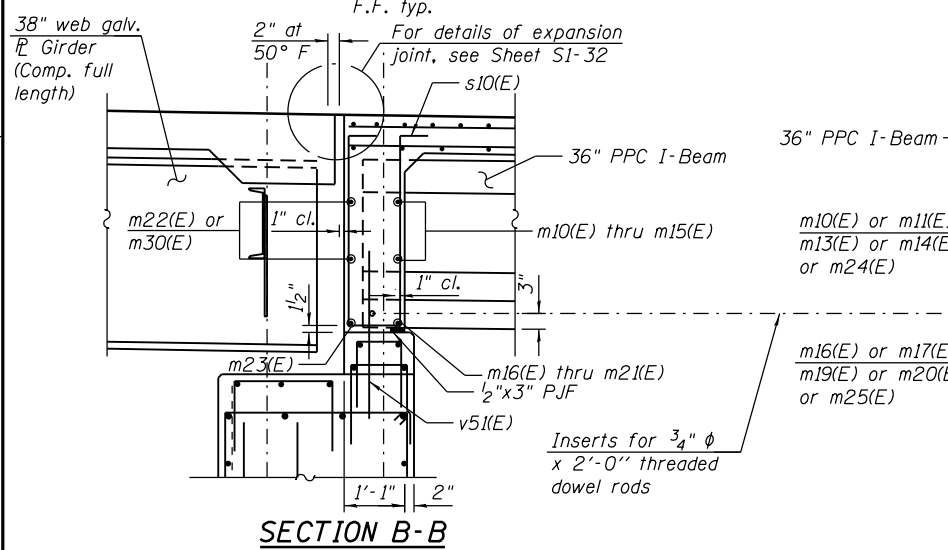
**DIAPHRAGM AT ABUTMENT**

(Looking West, For Location of Bars, See Section B-B)  
72'-4 3/4"

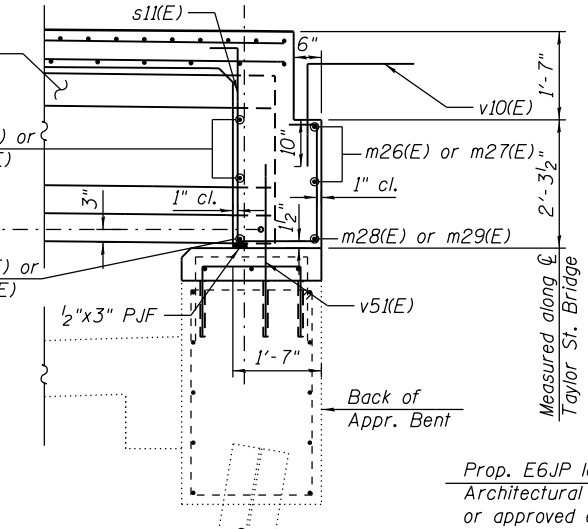


**DIAPHRAGM AT APPROACH BENT**

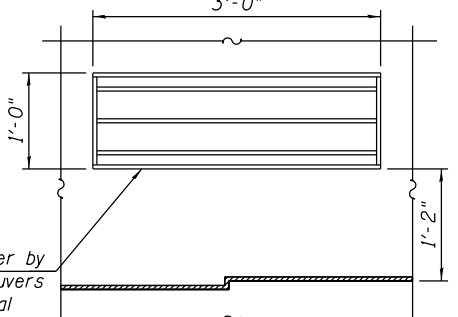
(Looking East, For Location of Bars, See Section A-A)



**SECTION B-B**



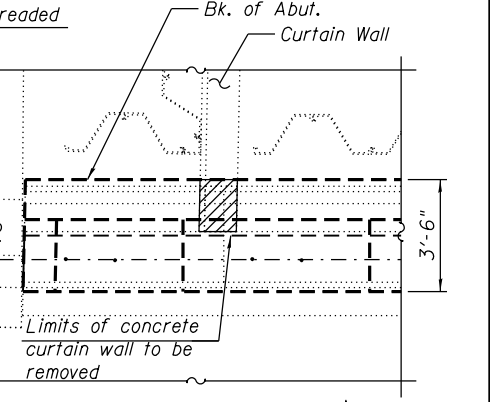
**SECTION A-A**



**LOUVER ELEVATION**

**NOTES:**

- For additional notes, Bill of Material and conduit details, see Sheet S1-25C.
- Removal cost for curtain wall that is in conflict with construction of top part of east abutment and diaphragm is included with Removal of Existing Structures No. 1. Existing reinforcement bars extending from curtain wall into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Removal of Existing Structures No. 1.
- Cost of Ferrule Inserts and 3/4" threaded dowel rods shall be included with Concrete Superstructure. The work shall be performed in accordance with Section 504 of the Standard Specifications.



**SECTION D-D**

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FAX: (708) 236-0901

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USER NAME = ahmed.issa	DRAWN - MA	REVISED
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PLOT DATE = 12/16/2014	DATE - 10/24/2014	REVISED

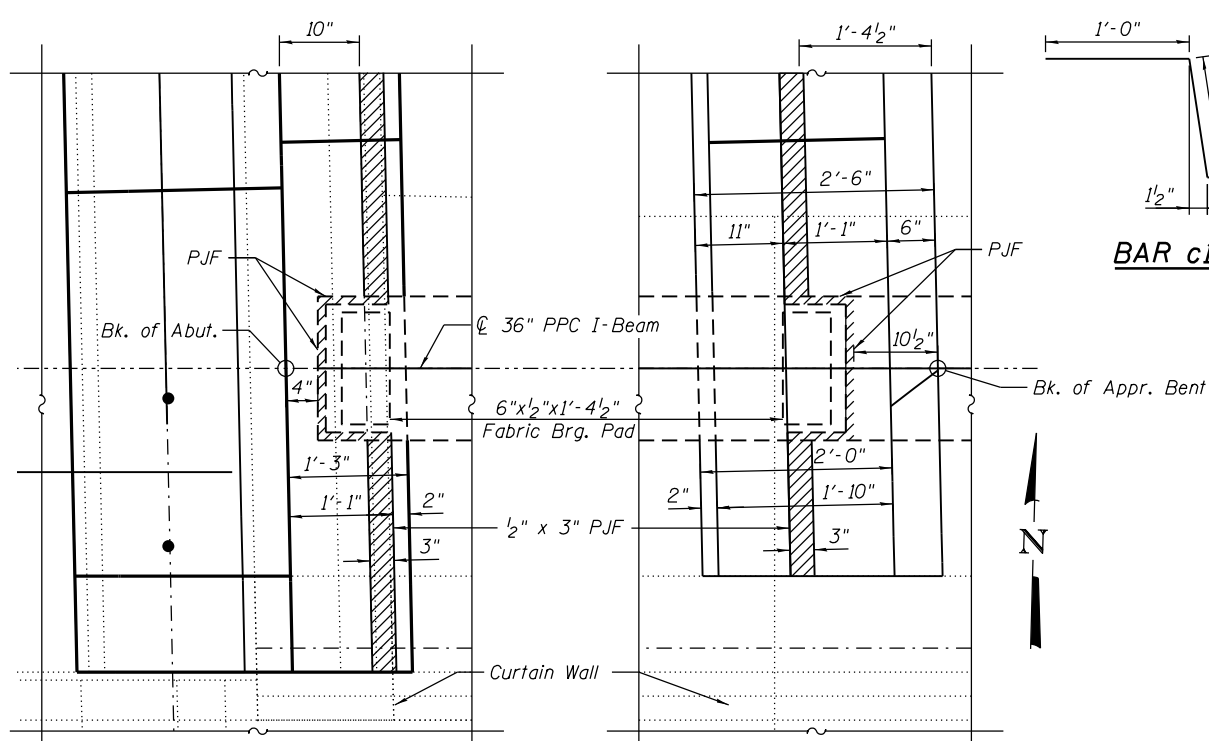
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**DIAPHRAGM DETAILS - VAULTED SPAN**  
**STRUCTURE NO. 016-1165**

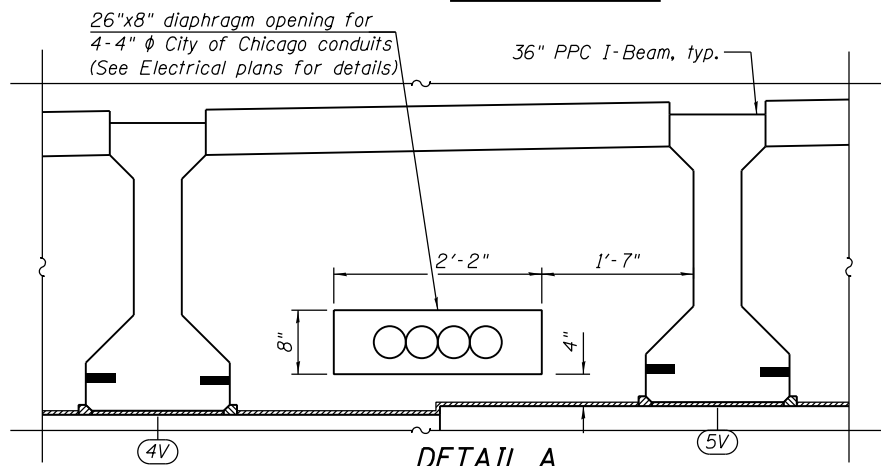
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CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

SCALE: SHEET S1-25B OF S1-63 SHEETS STA. TO STA.

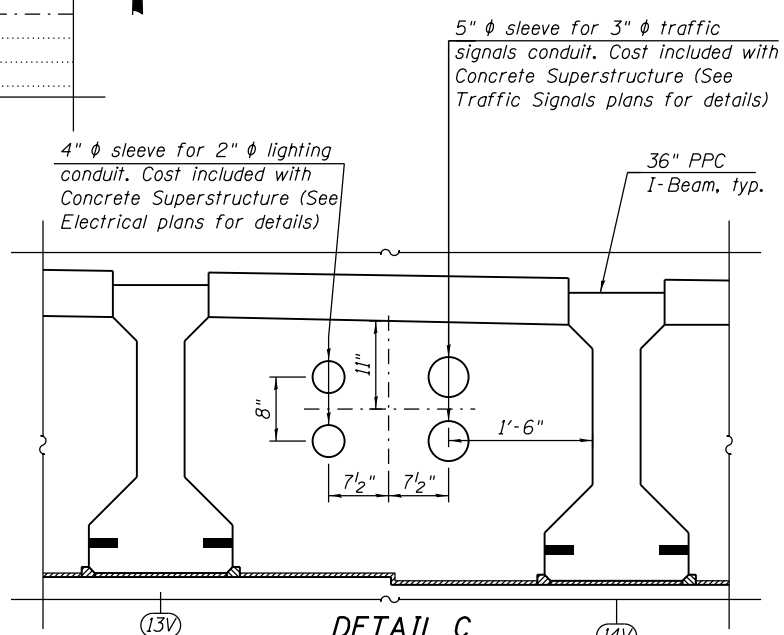
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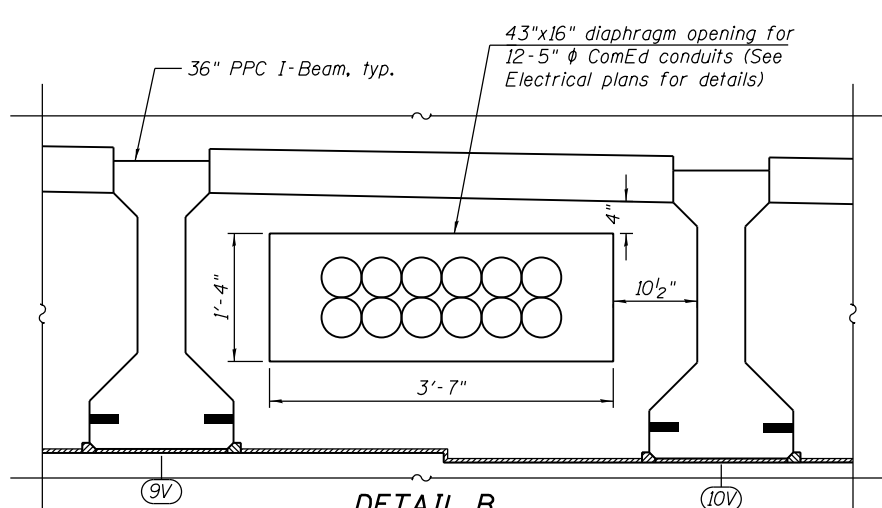
**PARTIAL PLAN**



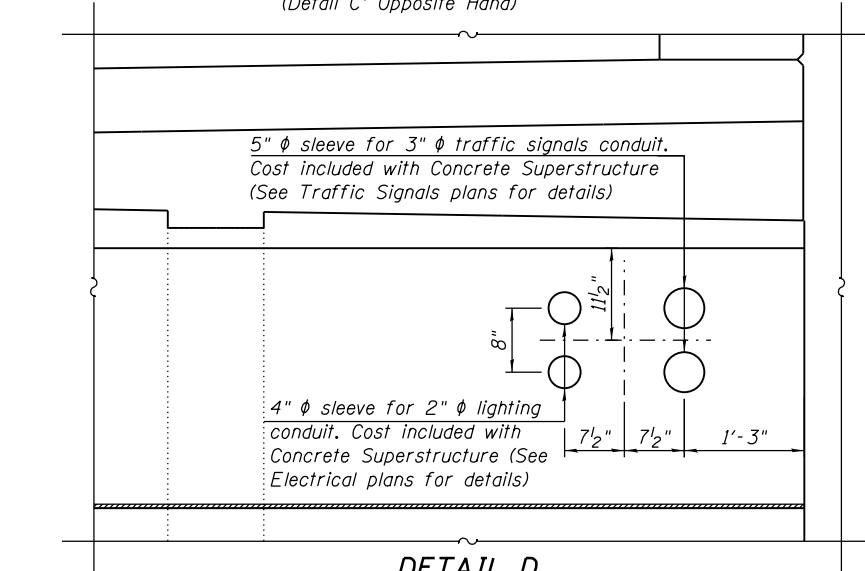
**DETAIL A**  
(Detail A' Opposite Hand)



**DETAIL C**  
(Detail C' Opposite Hand)



**DETAIL B**  
(Detail B' Opposite Hand)



**DETAIL D**

**BAR c10(E)**

**BAR d10(E) and d11(E)**

**BAR d12(E)**

**BARS d13(E) & v10(E)**

**BAR s10(E)**

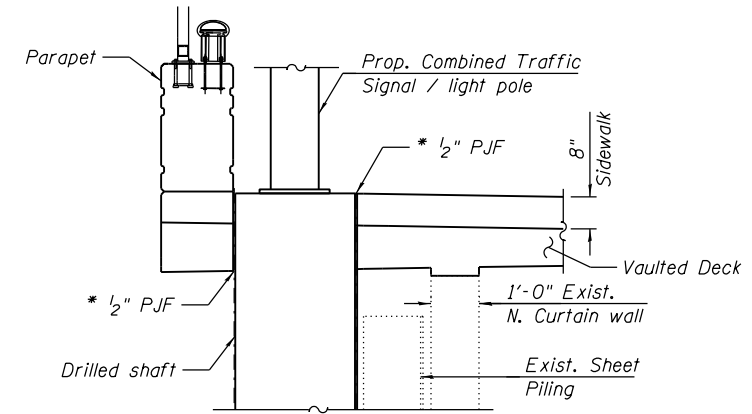
**BAR s11(E)**

**BAR x10(E)**

Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"

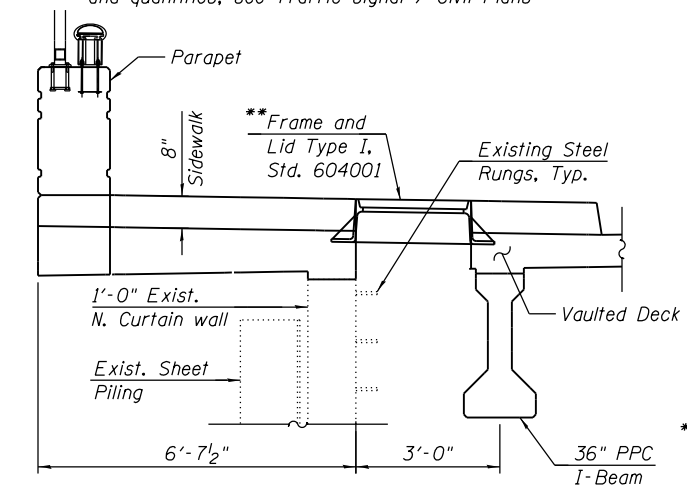
**NOTES:**

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Conduit/ductbank openings in concrete diaphragms to be sealed by Contractor with State-approved sealant. Cost included with Concrete Superstructure.
3. Conduit provide by others Contractor to coordinate with utility owner for location and size of the utility. Cost of utility blockouts included in Concrete Superstructure (See Electrical Plans).



**SECTION D-D**

For combined traffic signal / light pole and supporting drilled shaft dimensions, details and quantities, see Traffic signal / Civil Plans



**SECTION E-E**

**BILL OF MATERIAL**

(For Vaulted Span)

Bar	No.	Size	Length	Shape
a10(E)	268	#5	39'-9"	—
a11(E)	83	#7	15'-0"	—
a12(E)	32	#5	5'-4"	—
b10(E)	179	#5	41'-0"	—
c10(E)	43	#5	2'-4"	┌
c11(E)	43	#5	11'-5"	—
d10(E)	48	#5	4'-10"	┌
d11(E)	48	#5	4'-10"	┌
d12(E)	48	#5	2'-7"	┌
d13(E)	42	#5	3'-9"	┌
e10(E)	24	#4	13'-5"	—
s10(E)	61	#4	5'-2"	┌
s11(E)	60	#4	7'-9"	┌
m10(E)	36	#4	5'-0"	—
m11(E)	4	#4	3'-4"	—
m12(E)	2	#4	9'-1"	—
m13(E)	10	#4	2'-5"	—
m14(E)	4	#4	3'-11"	—
m15(E)	2	#4	2'-7"	—
m16(E)	18	#6	4'-1"	—
m17(E)	2	#6	2'-4"	—
m18(E)	1	#6	8'-7"	—
m19(E)	5	#6	1'-11"	—
m20(E)	2	#6	3'-0"	—
m21(E)	1	#6	2'-2"	—
m22(E)	4	#4	39'-9"	—
m23(E)	2	#6	39'-9"	—
m24(E)	2	#4	1'-7"	—
m25(E)	1	#6	1'-2"	—
m26(E)	2	#4	33'-1"	—
m27(E)	2	#4	38'-9"	—
m28(E)	1	#6	33'-1"	—
m29(E)	1	#6	38'-9"	—
v10(E)	66	#5	3'-9"	┌
x10(E)	42	#5	5'-5"	┌
Rubbed Finish		Sq Ft	173	
Concrete Superstructure		Cu Yd	211.2	
Bridge Deck Grooving		Sq Yd	314	
Protective Coat		Sq Yd	390	
Reinforcement Bars, Epoxy Coated		Pound	24,880	
Frames and Lids, Type I, Closed Lid		Each	1	
Louvers		Each	2	

\* Cost included with Concrete Superstructure.  
\*\* Cast Closed Lid required.

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FAX: (708) 236-0901

0161165-60W30-S25C-VaultDeckDetails  
USER NAME = ahmed.issa  
PLOT SCALE = 2:0.0000 1/4" = 1'-0"  
PLOT DATE = 12/16/2014

DESIGNED - MI, MA  
DRAWN - MA  
CHECKED - MAI, JJS  
DATE - 10/24/2014

REVISED  
REVISED  
REVISED  
REVISED

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

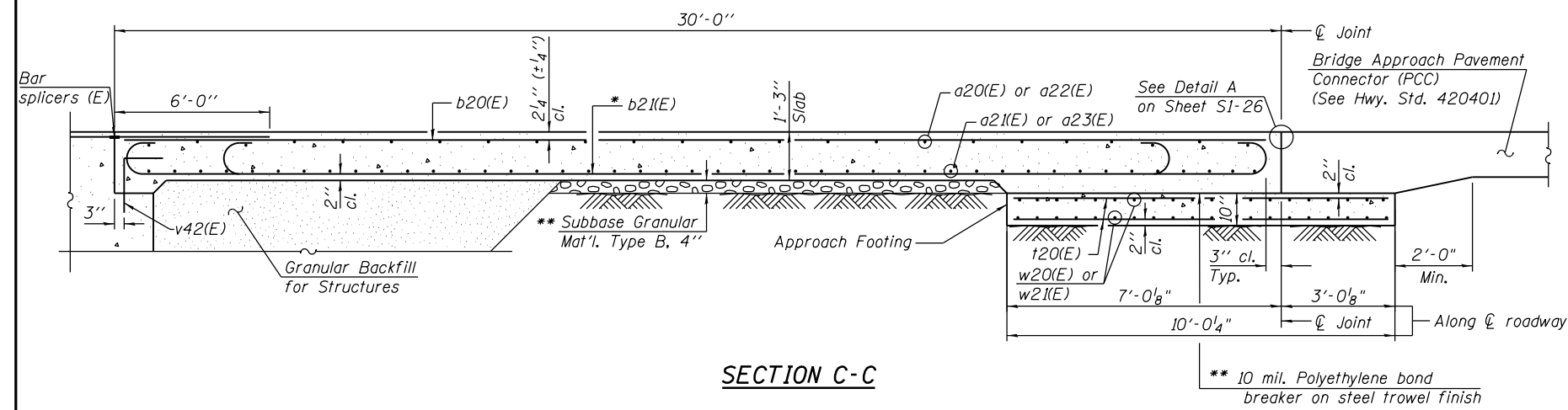
**DECK SECTIONS AND DETAILS - VAULTED SPAN  
STRUCTURE NO. 016-1165**

SCALE: SHEET S1-25C OF S1-63 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	212C
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

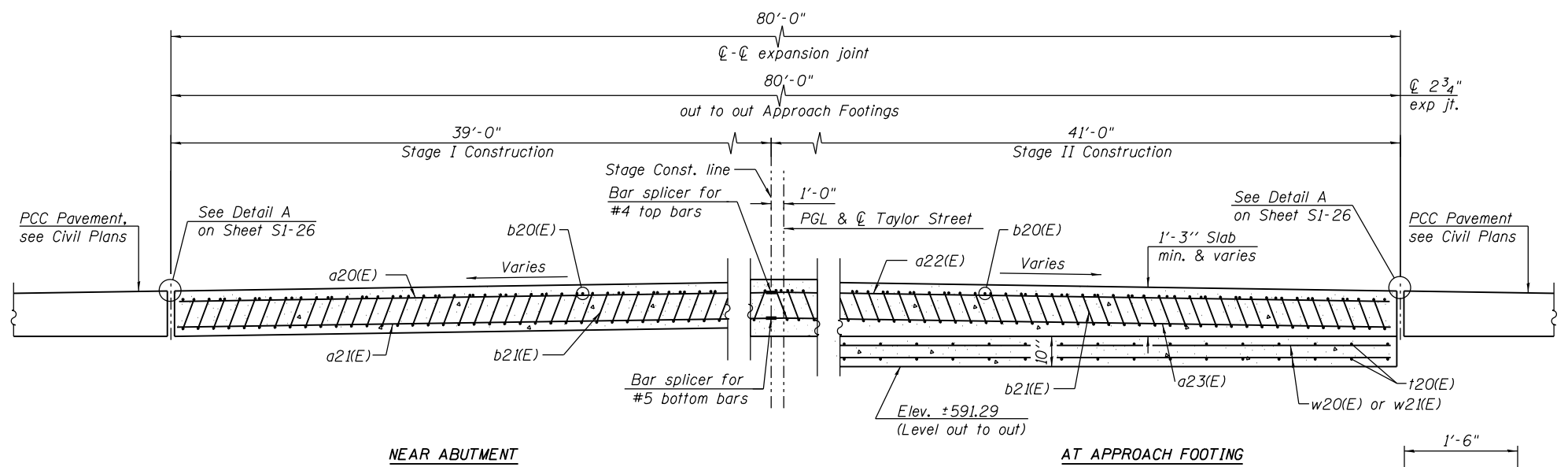


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**SECTION C-C**

\* Tilt bars as required to maintain clearance.  
 \*\* Cost included with Concrete Superstructure.



**NEAR ABUTMENT**

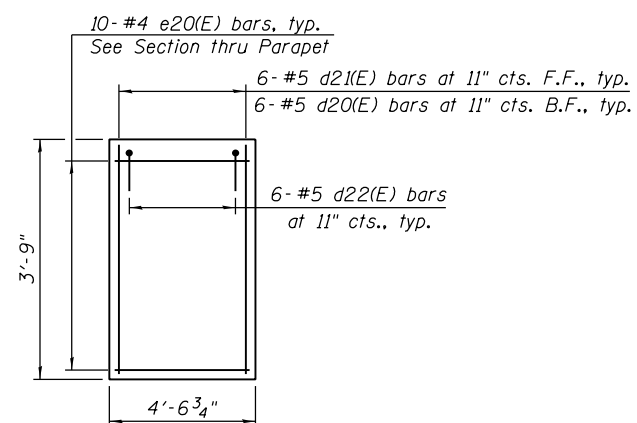
**AT APPROACH FOOTING**

**SECTION D-D**

(See Plan on Sheet S1-26 for dimensions not shown)

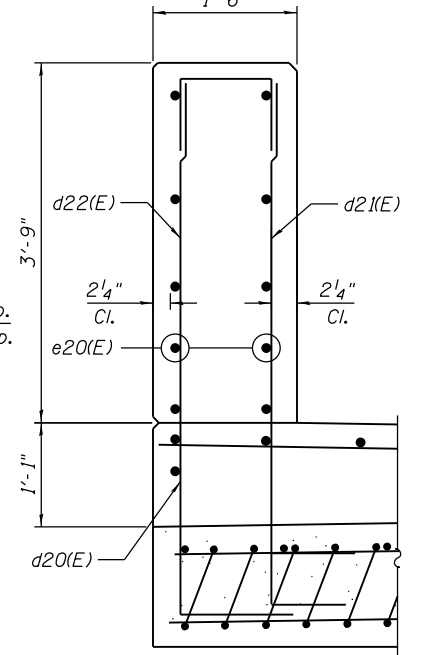
**NOTES:**

1. For Detail A, see Sheet S1-26.
2. Approach slab and sidewalk concrete shall be paid for as Concrete Superstructure.
3. Approach footing concrete shall be paid as Concrete Structures.
4. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
5. For v42(E) bar details, see Sheet S1-44.
6. The approach footing maximum applied bearing pressure (Omax) = 2.0 ksf.
7. For bar splicer details, see Sheet S1-58.
8. For Granular Backfill for Structures and drainage treatment details, see Sheet S1-45.
9. For ADA ramp locations, layout, elevations and details, see Civil plans.

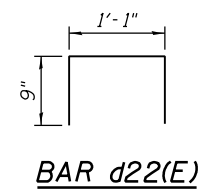


**INSIDE ELEVATION OF NORTH PARAPET**

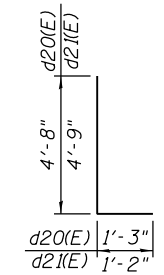
(Looking North)  
 (Architectural details are not shown for clarity, see Sheet S1-29)



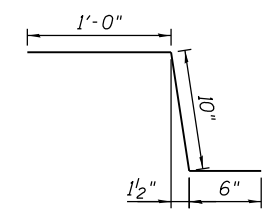
**SECTION THROUGH PARAPET**



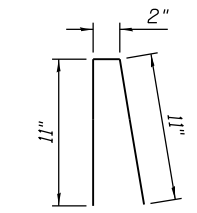
**BAR d22(E)**



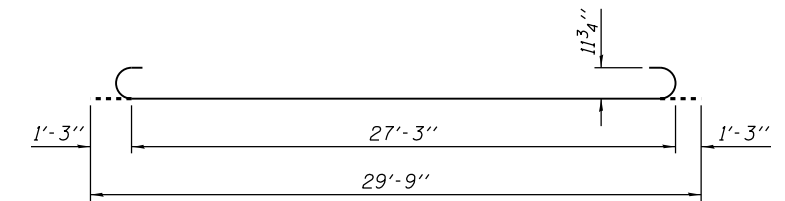
**BAR d20(E), d21(E)**



**BAR c20(E)**



**BAR d23(E)**



**BAR b21(E)**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a20(E)	25	#4	38'-9"	—
a21(E)	46	#5	38'-9"	—
a22(E)	25	#4	40'-9"	—
a23(E)	46	#5	40'-9"	—
a24(E)	4	#6	6'-6"	—
b20(E)	66	#4	29'-8"	—
b21(E)	194	#9	29'-9"	—
b22(E)	6	#5	13'-7"	—
b23(E)	11	#5	13'-7"	—
b24(E)	2	#4	8'-8"	—
c20(E)	38	#5	2'-4"	—
c21(E)	15	#5	3'-3"	—
c22(E)	15	#5	9'-4"	—
d20(E)	6	#5	5'-11"	—
d21(E)	6	#5	5'-11"	—
d22(E)	6	#5	2'-7"	—
d23(E)	10	#4	2'-0"	—
e20(E)	10	#4	4'-1"	—
t20(E)	164	#4	9'-8"	—
w20(E)	40	#5	38'-9"	—
w21(E)	40	#5	40'-9"	—
Concrete Structures		Cu Yd	24.6	
Rubbed Finish		Sq Ft	28	
Concrete Superstructure		Cu Yd	120.5	
Bridge Deck Grooving		Sq Yd	250	
Protective Coat		Sq Yd	272	
Reinforcement Bars, Epoxy Coated		Pound	31,160	

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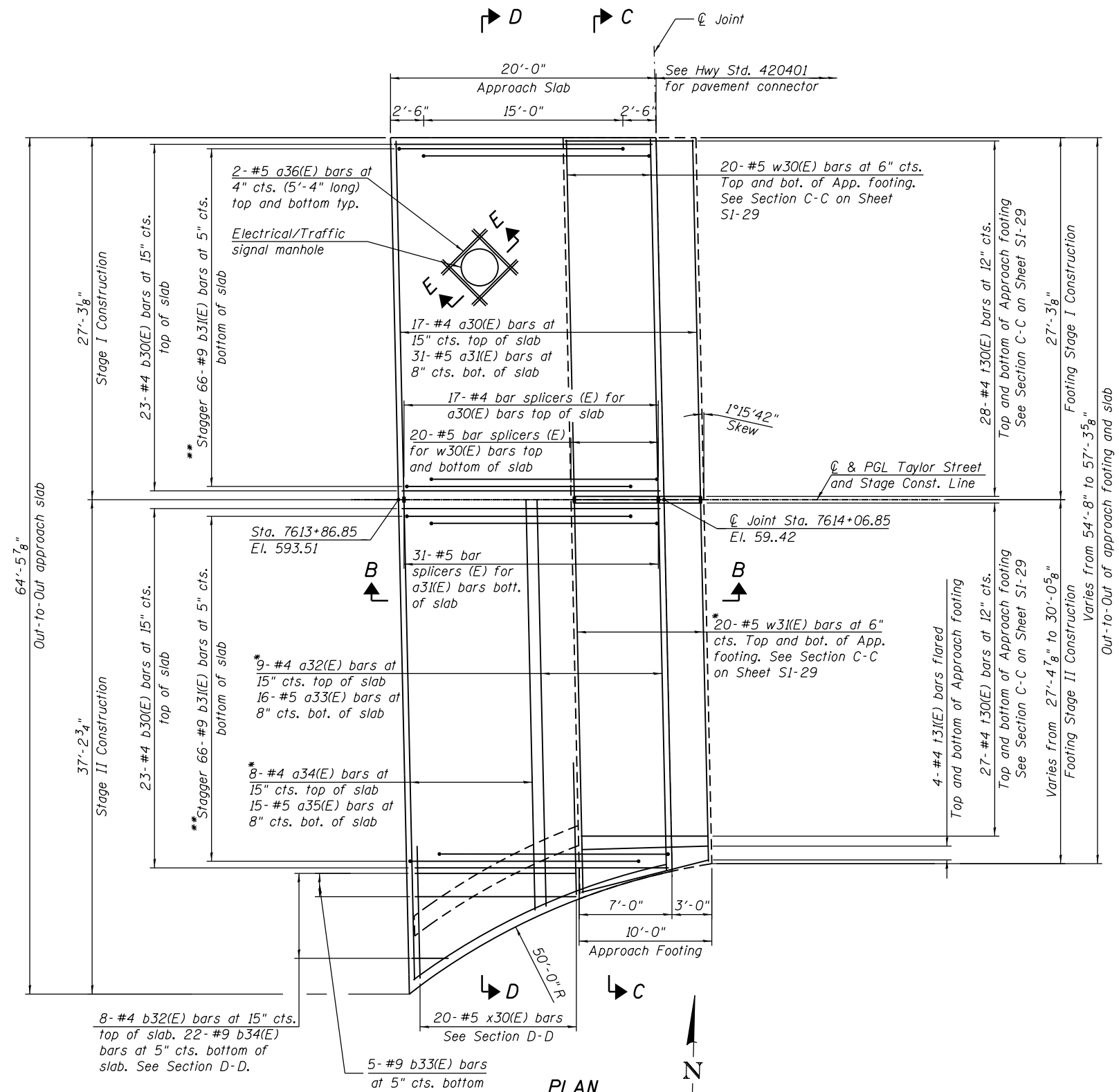
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**WEST APPROACH SLAB SECTION AND DETAILS**  
**STRUCTURE NO. 016-1165**

SCALE: SHEET S1-27 OF S1-63 SHEETS STA. TO STA.

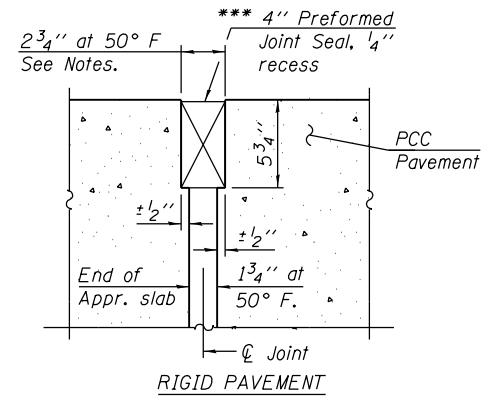
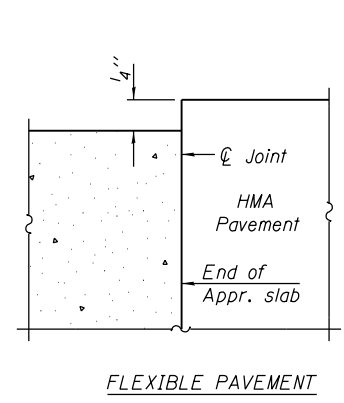
F.A.I R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	214
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

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- NOTES:**
- \* Order bars at full length and cut in field to fit
  - \*\* Tilt bars as required to maintain clearance.
  - \*\*\* Cost included with Concrete Superstructure.

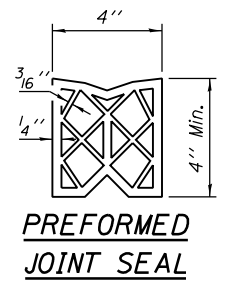
1. For Sections B-B, C-C and D-D, see Sheet S1-29.
2. a30(E) and a31(E) bar spacings measured along C Rdwy.



**DETAIL A**

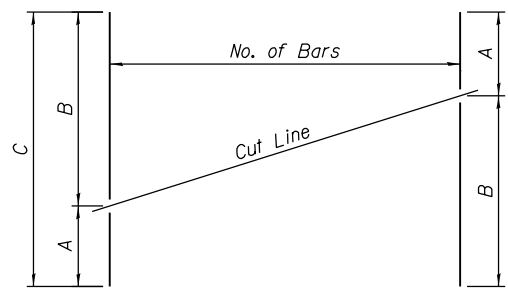
Traffic Signal/Electrical manhole frame and cover (Cost of casting frame into approach slab included with Concrete Superstructure)

Adjusting Rings  
 Approach Slab, Typ.  
 1'-3" Typ.



**SECTION E-E**

(For Traffic Signal/Electrical manhole, Adjusting rings, Frame and cover dimensions, details and quantities, see Traffic Signal/Electrical and Civil plans)



See table for dimensions. Make all cuts normal to bar axis

**BAR TABLE SCHEDULE**

Bar	No. of Sets Req'd	Bar No.	No. of Bars Per Set	A	B	C
b32(E)	1	#4	4	12'-8"	1'-0"	13'-8"
b34(E)	1	#9	11	12'-8"	1'-0"	13'-8"

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 FAX: (708) 236-0901

0161165-60W30-528-EstAppr-SlabPlan	DESIGNED - MI, EAH	REVISED
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PLOT SCALE = 10:0.0000 '1' / 1"	CHECKED - MI, JJS	REVISED
PLOT DATE = 12/16/2014	DATE - 10/24/2014	REVISED

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

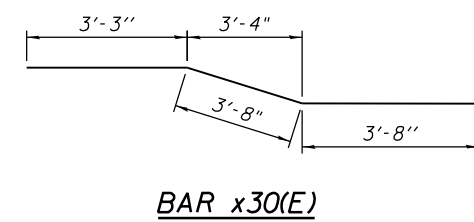
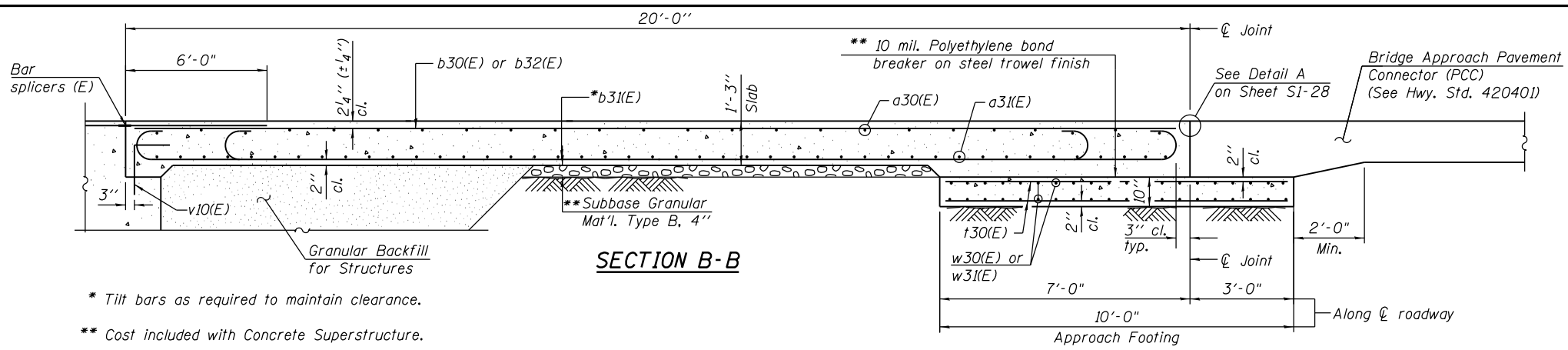
**EAST APPROACH SLAB PLAN  
 STRUCTURE NO. 016-1165**

SCALE: SHEET S1-28 OF S1-63 SHEETS STA. TO STA.

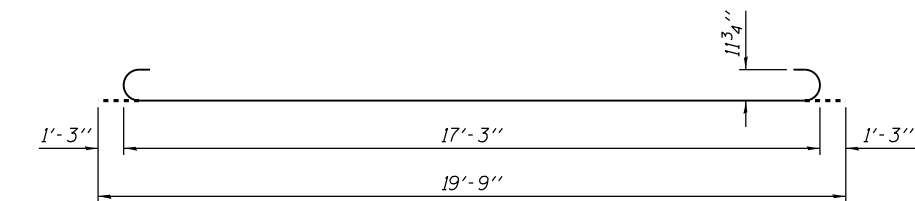
F.A.I. RTE. 90/94	SECTION 2013-012R	COUNTY COOK	TOTAL SHEETS 385	SHEET NO. 215
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

**BILL OF MATERIAL**

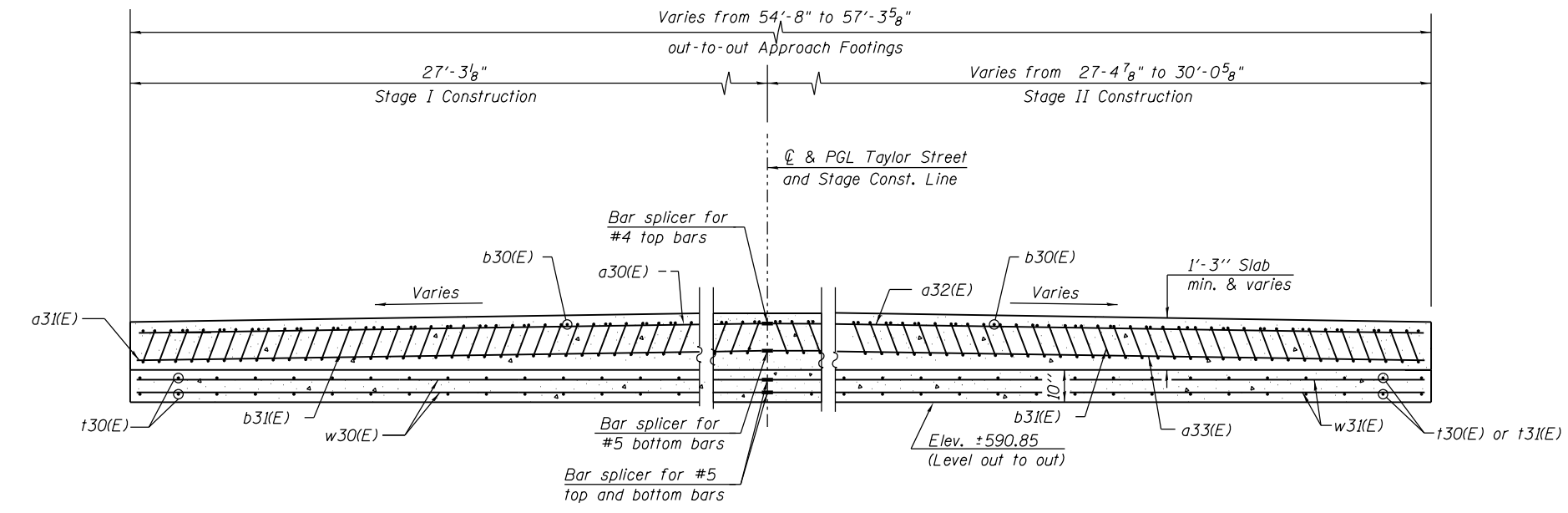
Bar	No.	Size	Length	Shape
a30(E)	17	#4	27'-0"	—
a31(E)	31	#5	27'-0"	—
a32(E)	9	#4	30'-11"	—
a33(E)	16	#5	30'-11"	—
a34(E)	8	#4	37'-0"	—
a35(E)	15	#5	37'-0"	—
a36(E)	16	#5	5'-4"	—
b30(E)	46	#4	19'-8"	—
b31(E)	132	#9	19'-9"	—
b32(E)	4	#4	13'-8"	—
b33(E)	5	#9	16'-8"	—
b34(E)	11	#9	13'-8"	—
t30(E)	110	#4	9'-8"	—
t31(E)	8	#4	10'-0"	—
w30(E)	40	#5	27'-0"	—
w31(E)	40	#5	29'-8"	—
x30(E)	20	#5	10'-7"	—
Concrete Structures			Cu. Yd.	17.2
Concrete Superstructure			Cu. Yd.	54.9
Bridge Deck Grooving			Sq. Yd.	132
Protective Coat			Sq. Yd.	132
Reinforcement Bars, Epoxy Coated			Pound	16,400



**BAR x30(E)**

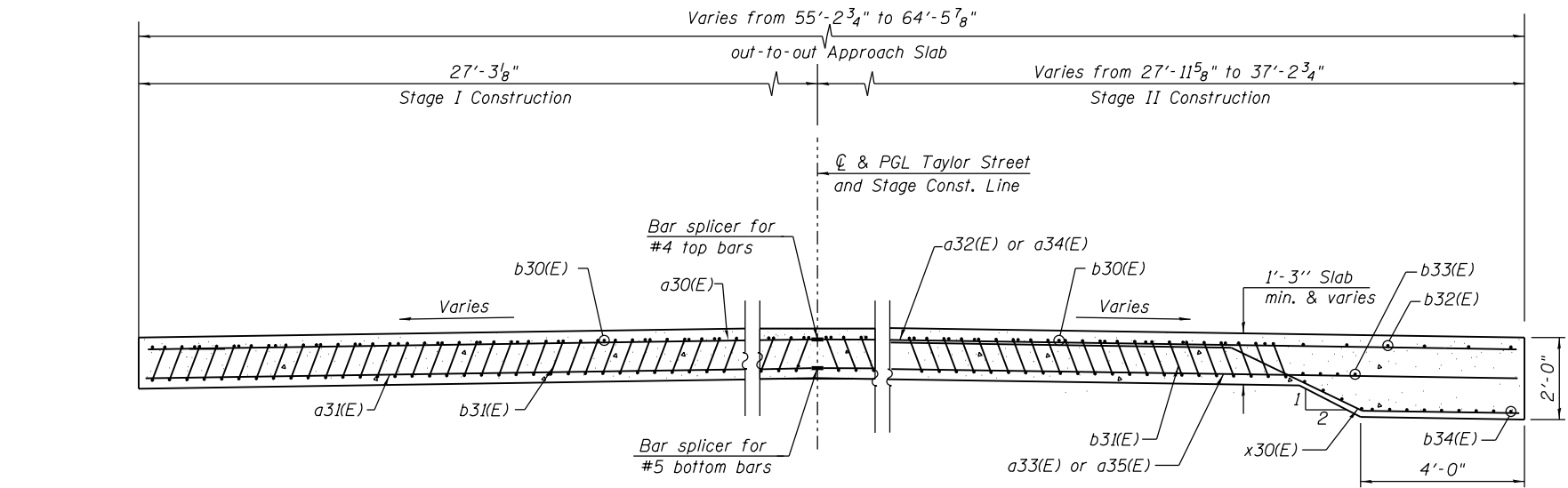


**BAR b31(E)**



**SECTION C-C**

(See Plan on Sheet S1-28 for dimensions not shown)



**SECTION D-D**

(See Plan on Sheet S1-28 for dimensions not shown)

**NOTES:**

1. For Detail A, see Sheet S1-28.
2. Approach slab shall be paid for as Concrete Superstructure.
3. Approach footing concrete shall be paid as Concrete Structures.
4. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
5. For v10(E) bar details, see Sheet S1-25A.
6. The approach footing maximum applied bearing pressure (Qmax) = 2.0 ksf.
7. For bar splicer details, see Sheet S1-58.
8. For Granular Backfill for Structures and drainage treatment details, see Sheet S1-50.

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 I:\000\_CAD\008\_Structure\Structure\_016-1165-016165-60W30-S29-EastApprSlabSects&Det

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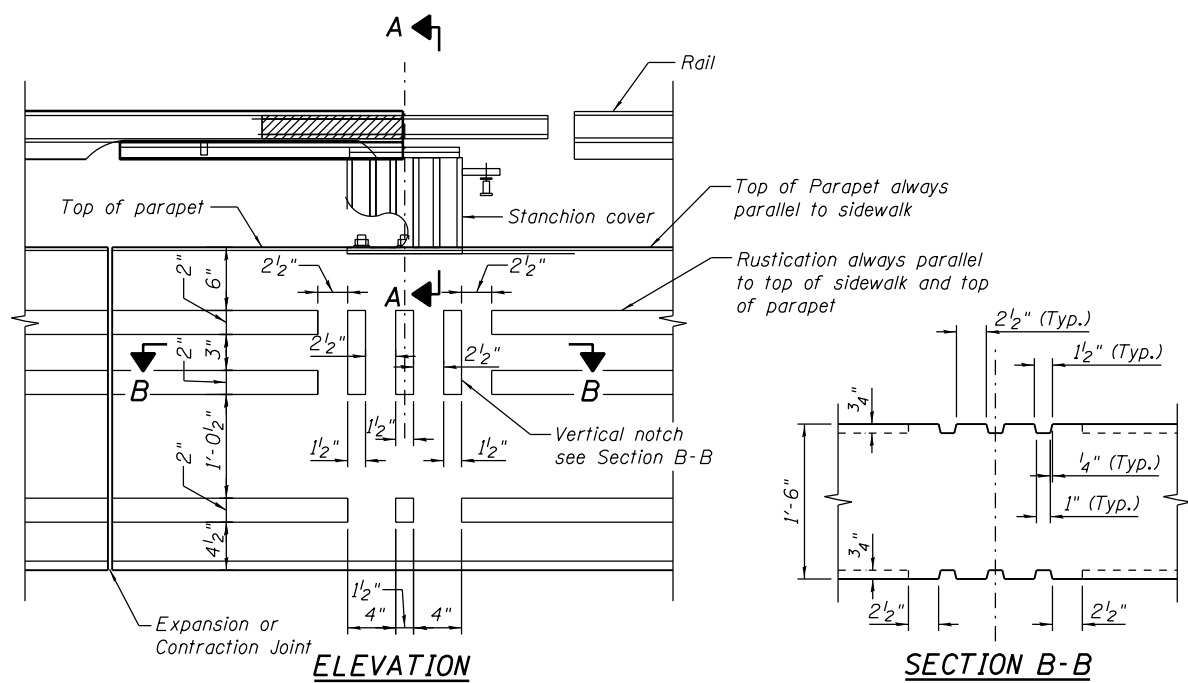
4415 WEST HARRISON ST.  
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 HILLSIDE, IL 60162  
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 FAX: (708) 236-0501

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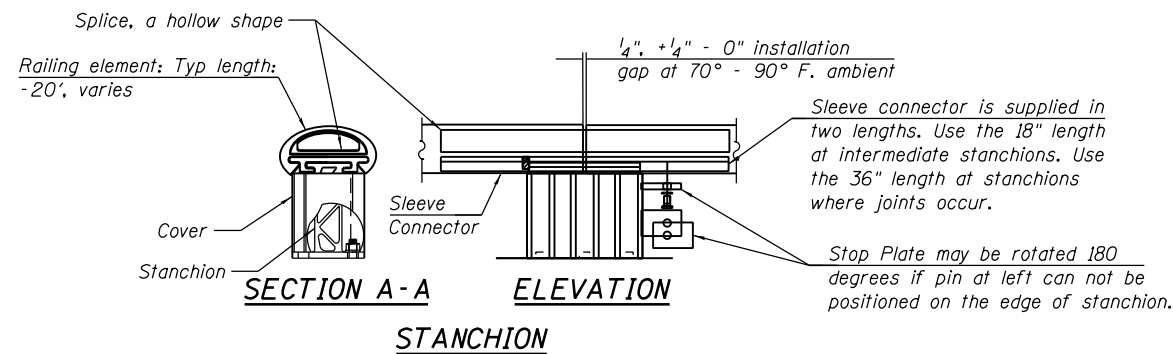
<b>EAST APPROACH SLAB SECTIONS AND DETAILS</b>	
<b>STRUCTURE NO. 016-1165</b>	
SCALE:	SHEET S1-29 OF S1-63 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	216
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	



**ELEVATION**

**SECTION B-B**

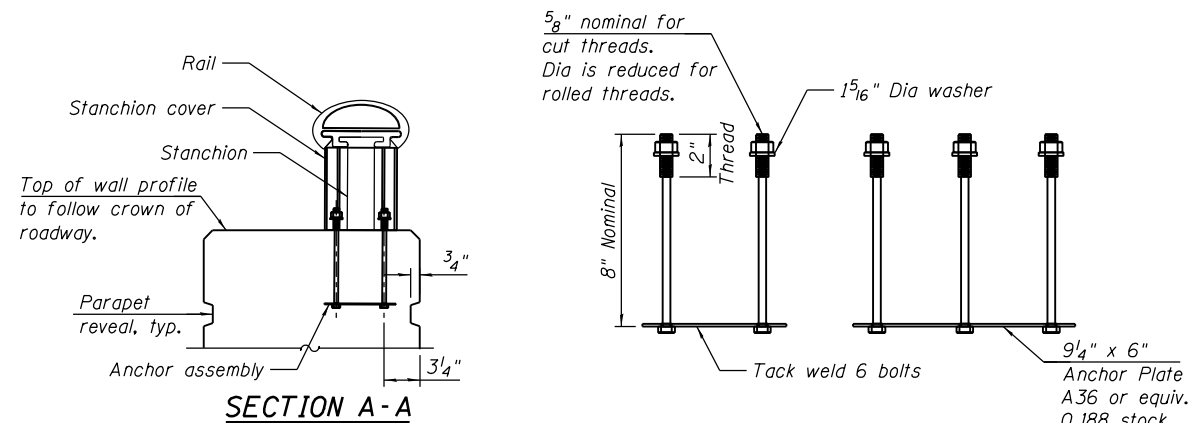


**SECTION A-A**

**ELEVATION**

**STANCHION**

**TYPICAL CHICAGO PARAPET DETAIL**



**SECTION A-A**

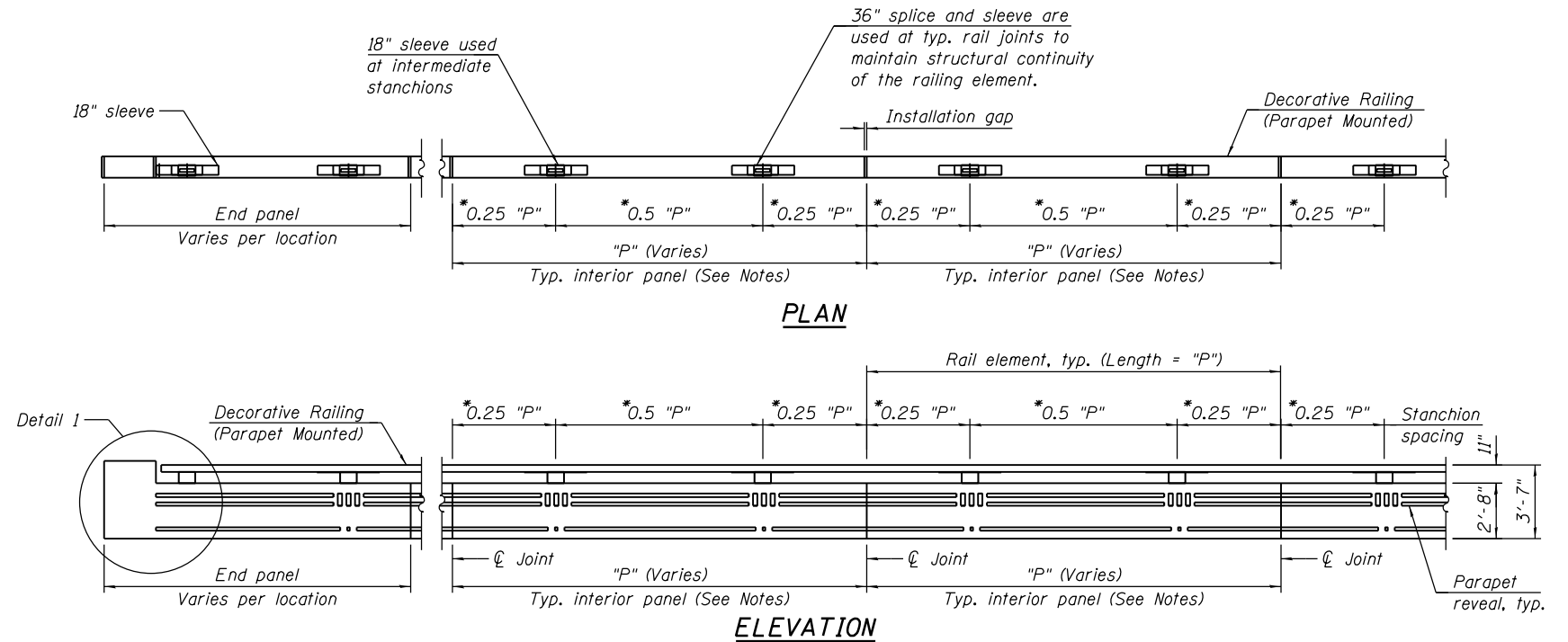
**ANCHOR ASSEMBLY**

**NOTES:**

1. All fasteners to meet, or exceed, A-307 strength requirements.
2. Galvanize per A-153 after fabrication.
3. The size and position of parapet reinforcing must be consistent with capture of the anchor assembly. See Sheet S1-24.

**BILL OF MATERIAL**

Item	Unit	Total
Decorative Railing (Parapet Mounted)	Foot	478

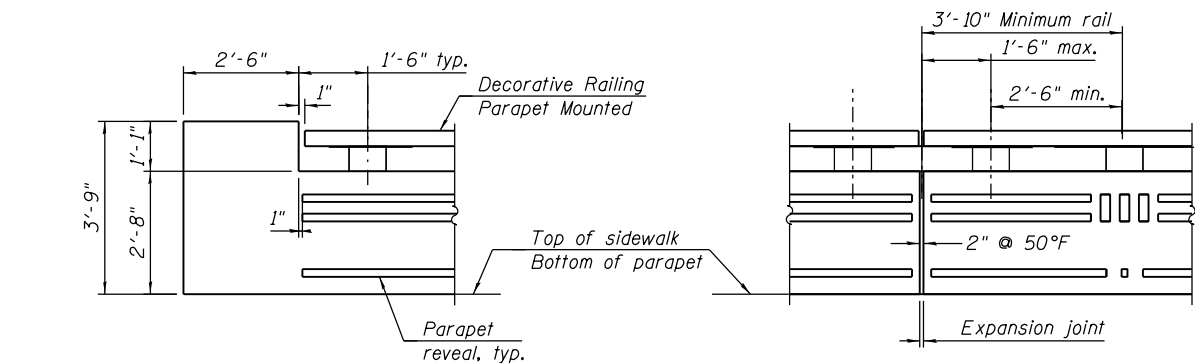


**PLAN**

**ELEVATION**

**RAIL DETAIL - STANCHION LOCATION AND SPACING**

\* Unless otherwise noted on plans

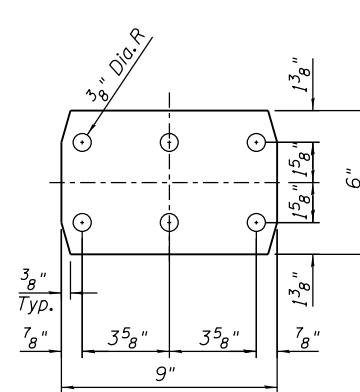


**RAIL DETAIL 1 - AT END OF PARAPET**

**RAIL DETAIL 2 - AT EXPANSION JOINT**

**NOTES:**

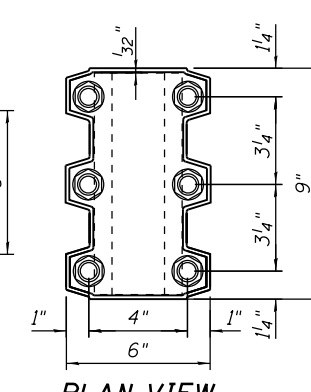
1. When walls without rail are adjacent to Chicago wall with rail, their traffic face, or the terminus of their traffic face, must be in the same plane as Chicago wall with rail.
2. Rustication may vary at terminal ends and is subject to site conditions and site approval. In all other situations, the middle 2.5" x 1.5" rustication is aligned with the center of the stanchion.
3. Wall details above show that portion of the wall above the gutter break, the substructure is not shown. Note that substructure(s) depth variations could significantly alter the required top of wall profile.
4. Field cutting of rail elements is acceptable. The cut edge will no longer be anodized. Saw cut only, flame cut not allowed. Grind smooth all exposed edges.
5. End caps shall be used at all rail terminals.
6. Railing system to be produced using extruded aluminum that can be clear anodized.
7. Alloy selection is based upon the above color requirement and the engineering sufficiency analysis which must be supplied by the Contractor.
8. The reveal on the bridge parapet Chicago wall will not be paid separately and shall be included in the cost of the pay item "Concrete Superstructure." Shop drawings shall be submitted including layout of the Chicago wall pattern, Chicago rail and light poles.
9. For decorative railing parapet mounted post spacing, see Sheets S1-24 and S1-25A.



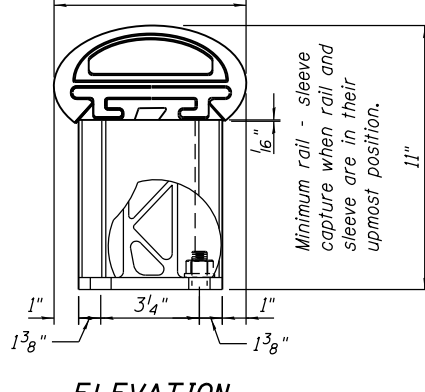
**ELASTOMERIC PAD**

**NOTES:**

1. Elastomeric pad for stanchion made from 1/16" thick stock.
2. One required per stanchion.



**PLAN VIEW**



**ELEVATION**

**STANCHION COVER**

**NOTES:**

1. Cover is shown superimposed over stanchion with anchors in place.
2. The stanchion cover is a non-structural element, serving an aesthetic function. It rests on the flange of the stanchion, without fasteners and is captured in place by the rail and stanchion.

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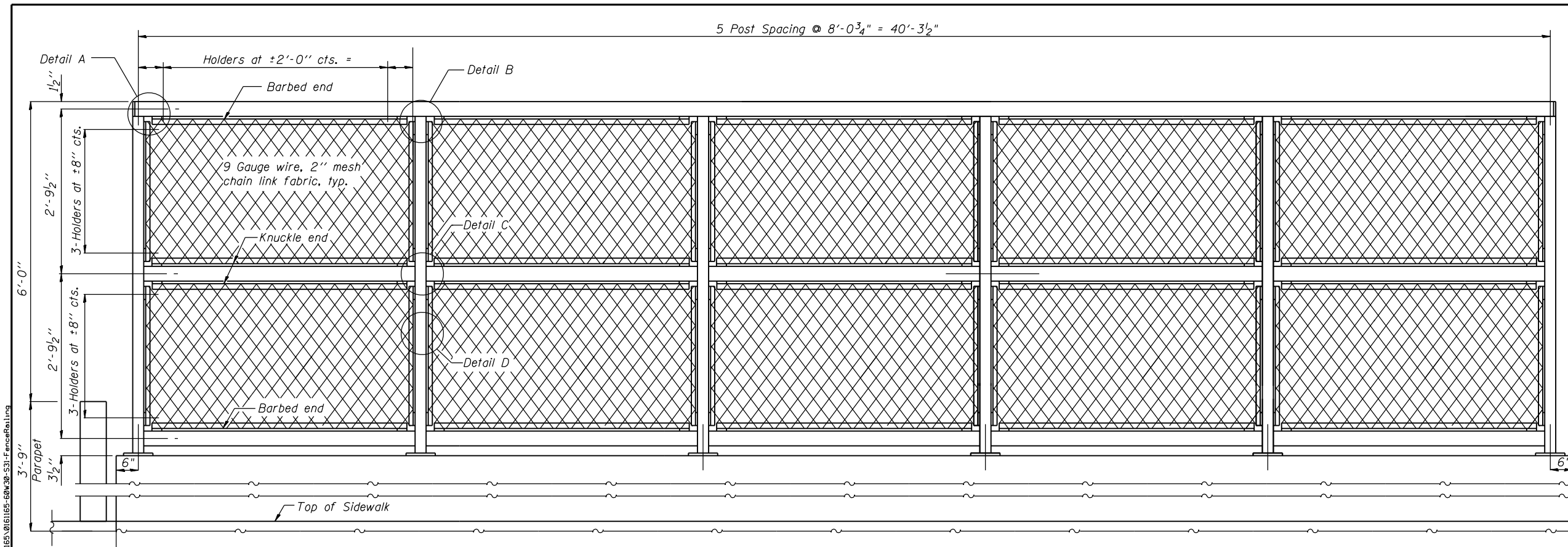
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PLOT DATE = 12/16/2014	DATE - 10/24/2014	REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

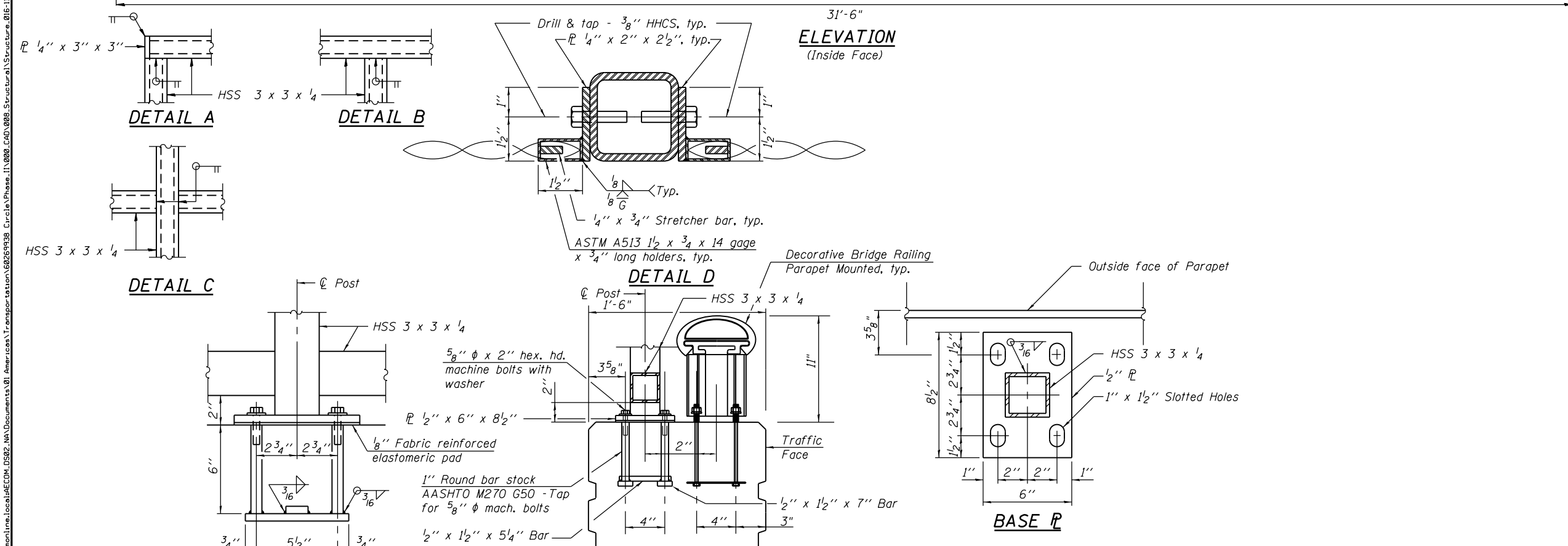
**DECORATIVE RAILING PARAPET MOUNTED DETAILS**  
**STRUCTURE NO. 016-1165**

SCALE: SHEET S1-30 OF S1-63 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	217
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60W30	



**NOTES:**  
 1. All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.



**ANCHOR BOLT DETAILS**

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8"  $\phi$  anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

(10'-0" Maximum Post Spacing)

**BILL OF MATERIAL**

Item	Unit	Quantity
Bridge Fence Railing	Foot	41

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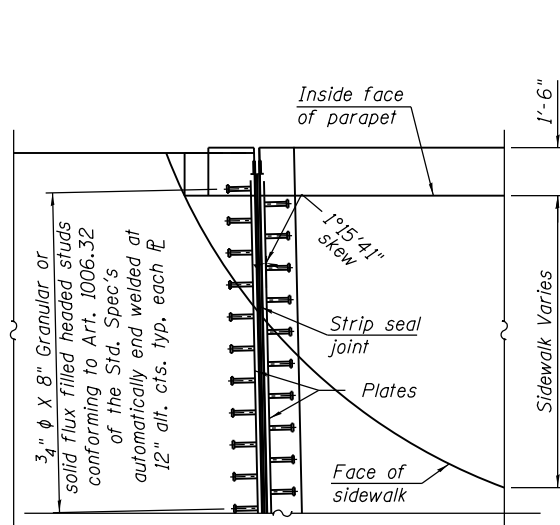
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**BRIDGE FENCE RAILING, PARAPET MOUNTED**  
**STRUCTURE NO. 016-1165**

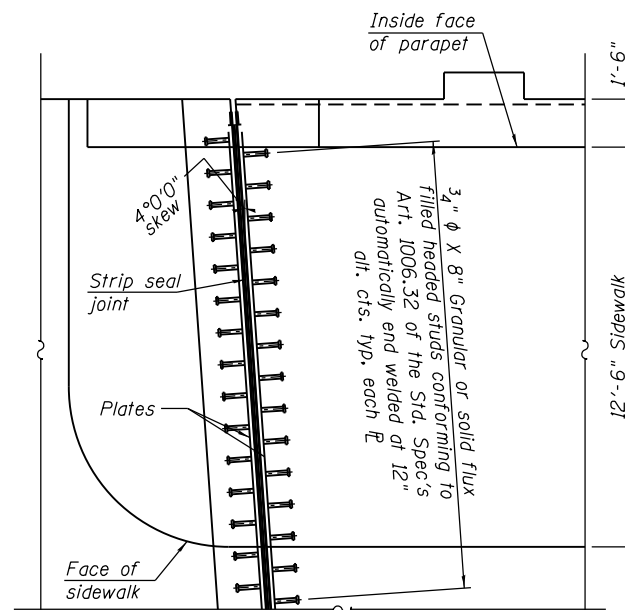
SCALE: SHEET S1-31 OF S1-63 SHEETS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2013-012R	COUNTY COOK	TOTAL SHEETS 385	SHEET NO. 218
CONTRACT NO. 60W30				ILLINOIS FED. AID PROJECT

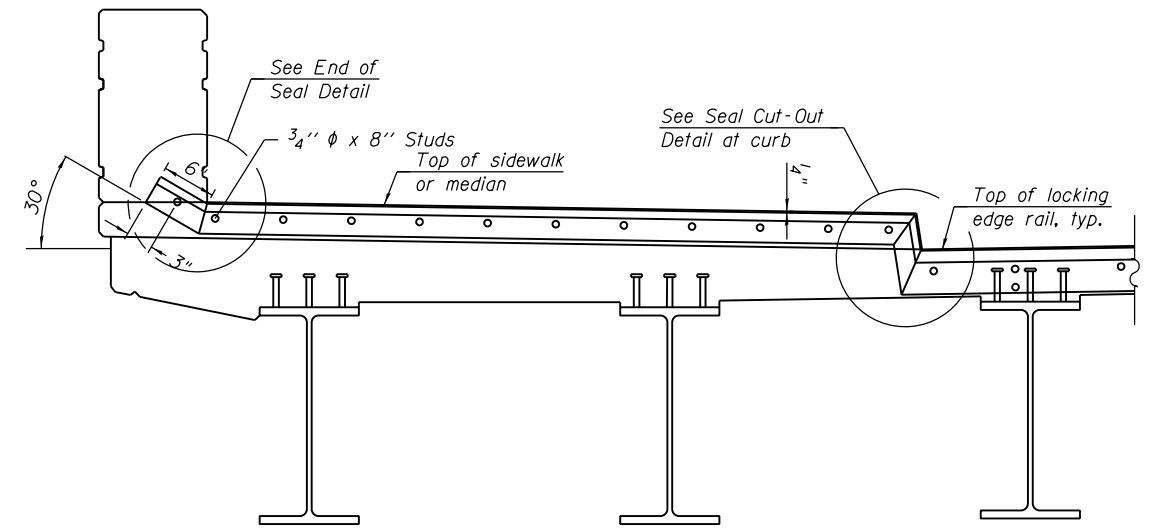




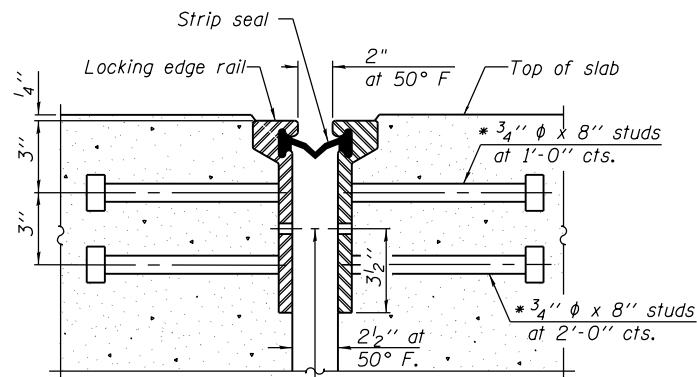
**PLAN AT E. ABUTMENT SIDEWALK**  
(SE End of joint)



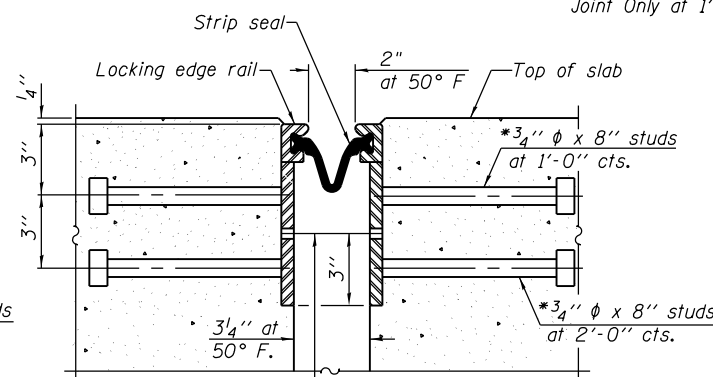
**PLAN AT W. ABUTMENT SIDEWALK**  
NW Shown, SW opposite hand



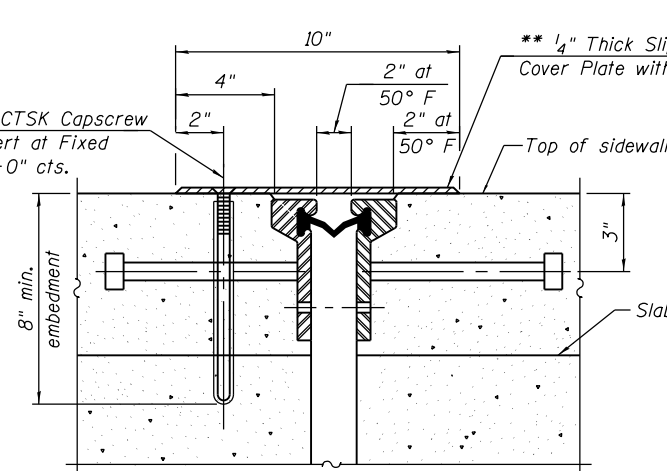
**TYPICAL END TREATMENT AT SIDEWALK**  
Shorter plates with a single row of studs at 12" cts. are necessary on sidewalks



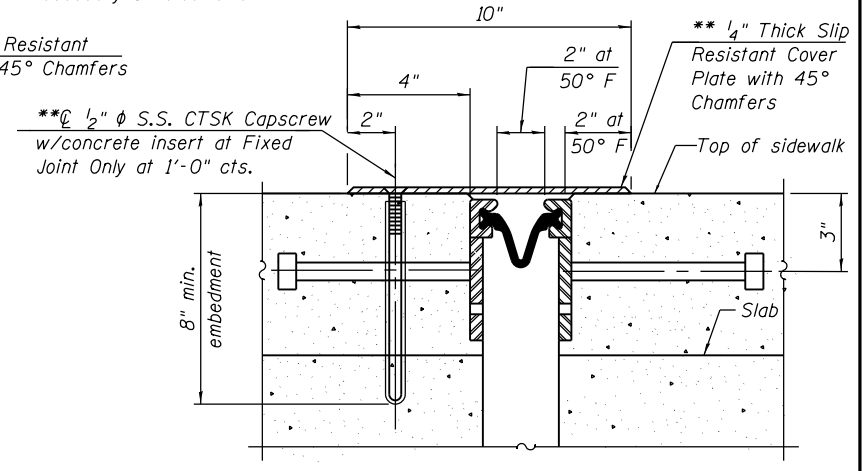
**SECTION THRU ROLLED RAIL JOINT**



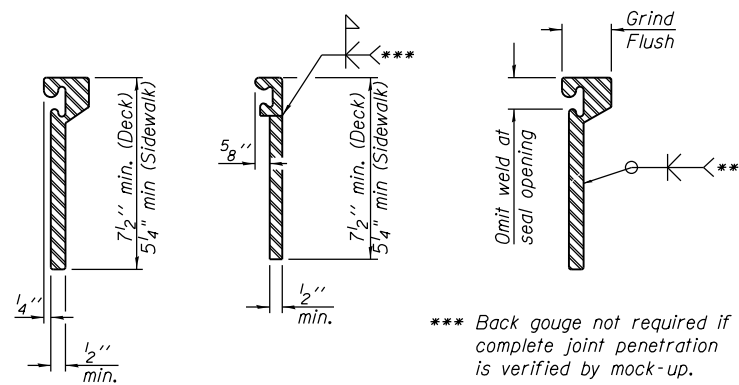
**SECTION THRU WELDED RAIL JOINT**



**SECTION THRU ROLLED RAIL JOINT AT ADA RAMP**



**SECTION THRU WELDED RAIL JOINT AT ADA RAMP**



**ROLLED EXTRUDED RAIL LOCKING EDGE RAILS**  
**WELDED RAIL LOCKING EDGE RAILS**

**LOCKING EDGE RAIL SPLICE**

The inside of the locking edge rail groove shall be free of weld residue.  
Rolled rail shown, welded rail similar.

\*\*At East Abut. and West Abut., attach cover plate to the Ramp Pavement with 1/2" S.S. CTSK capscrew with concrete insert at 1'-0" cts. Cost shall be included with Preformed Joint Strip Seal.

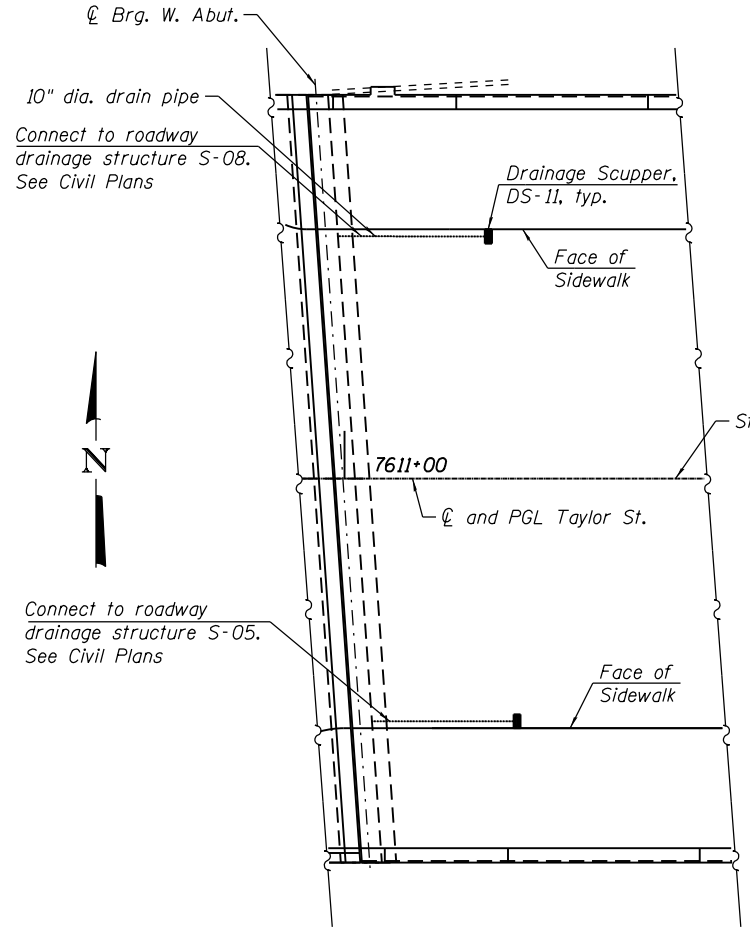
**NOTES:**

- The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.
- The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. 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.
- The manufacturer's recommended installation methods shall be followed.
- The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion 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 steel components (except expansion joint plates and attached bars, see General Notes) shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
- Maximum space between rail segments shall be 3/16", sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.

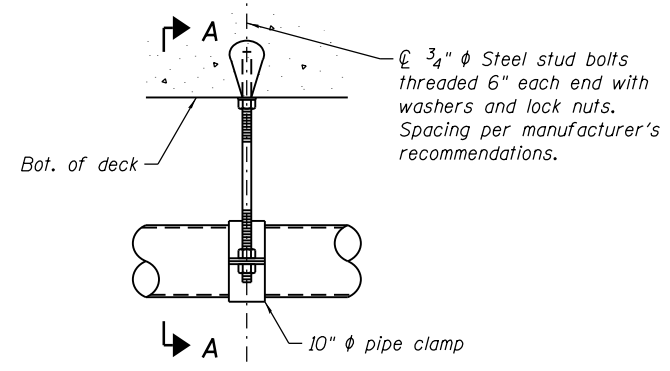
\* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

**BILL OF MATERIAL**

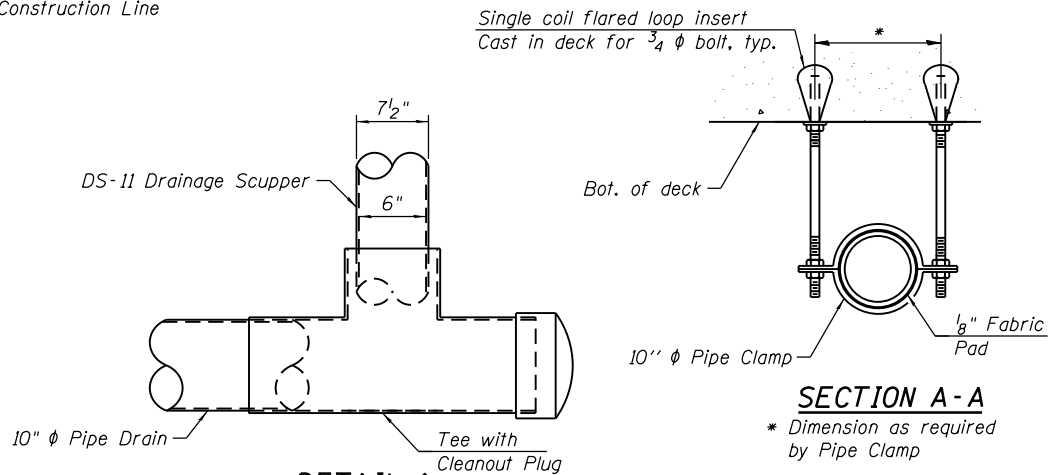
Item	Unit	Total
Preformed Joint Strip Seal	Foot	160



**PLAN SPAN 1**



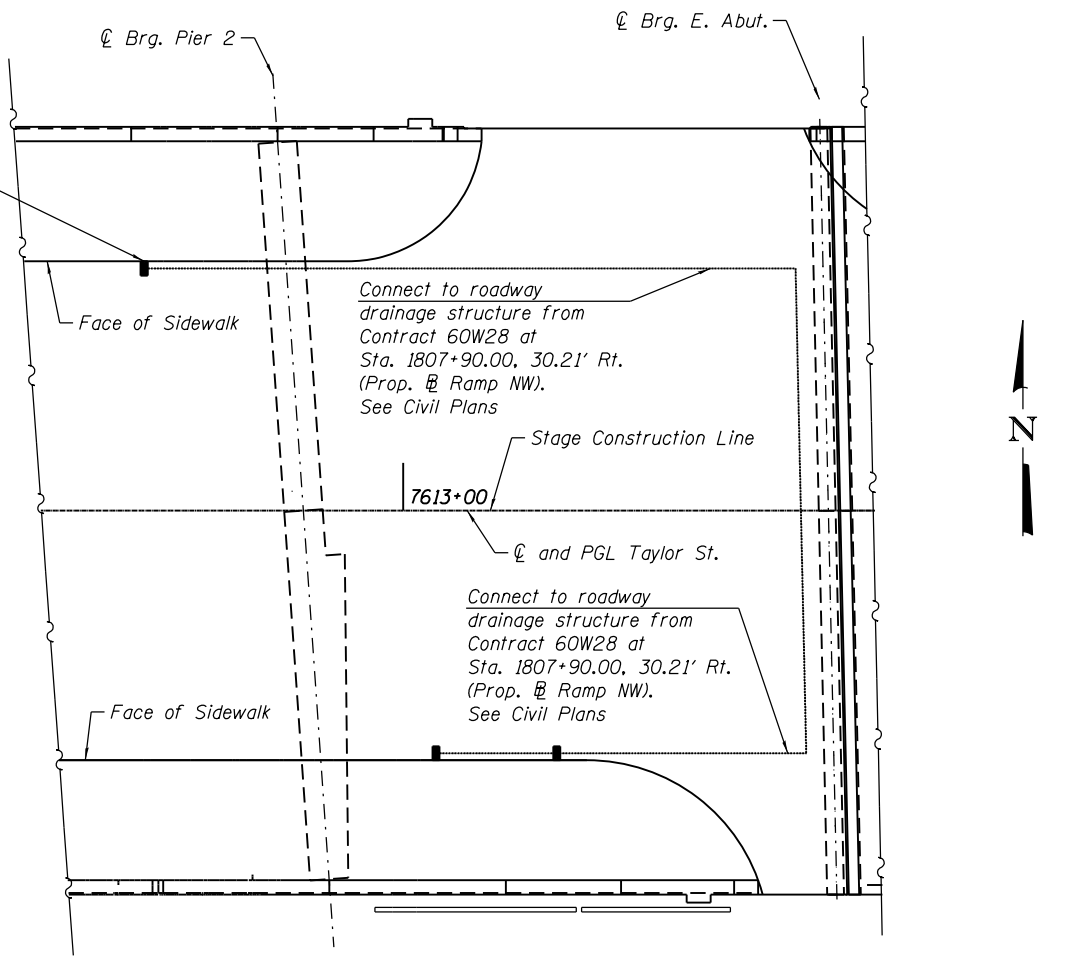
**PIPE BRACKET DETAIL**



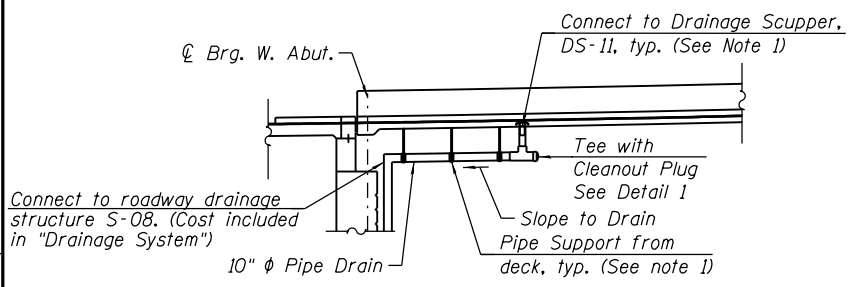
**DETAIL 1**

**SECTION A-A**

\* Dimension as required by Pipe Clamp

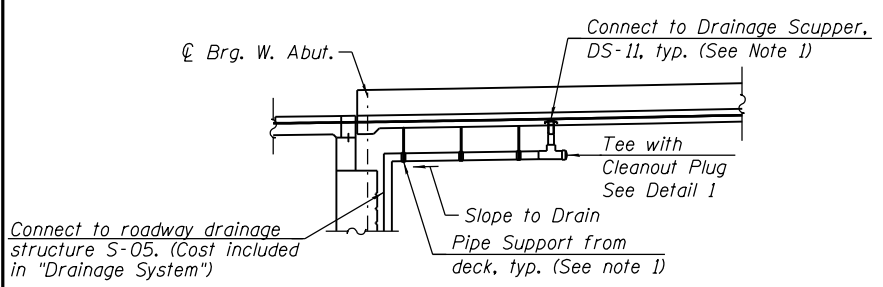


**PLAN SPAN 3**



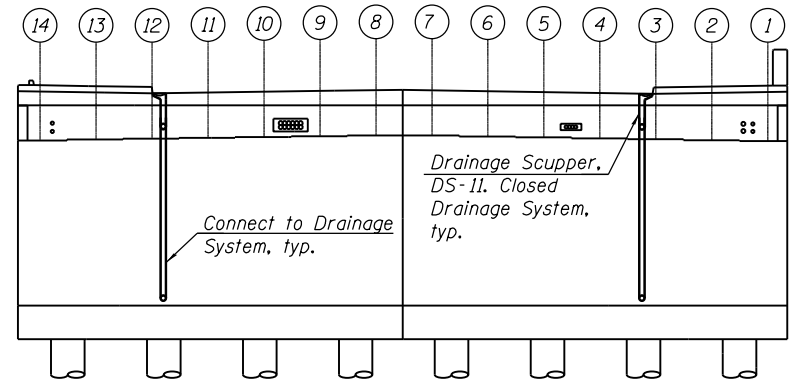
**ELEVATION SPAN 1**

(By North Sidewalk Face)  
(Drainage System is located between Girders 3 and 4)



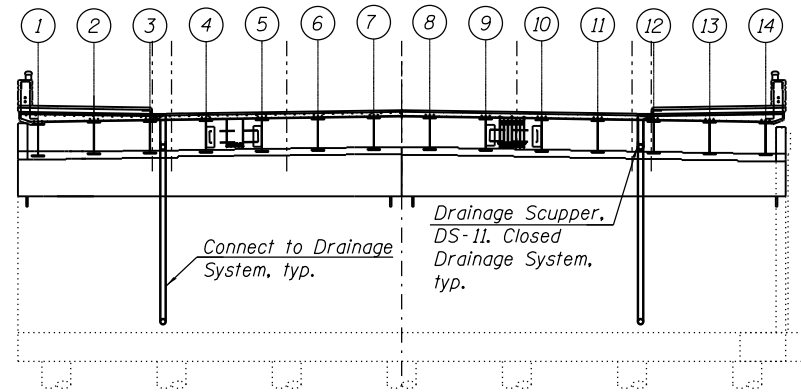
**ELEVATION SPAN 1**

(By South Sidewalk Face)  
(Drainage System is located between Girders 11 and 12)



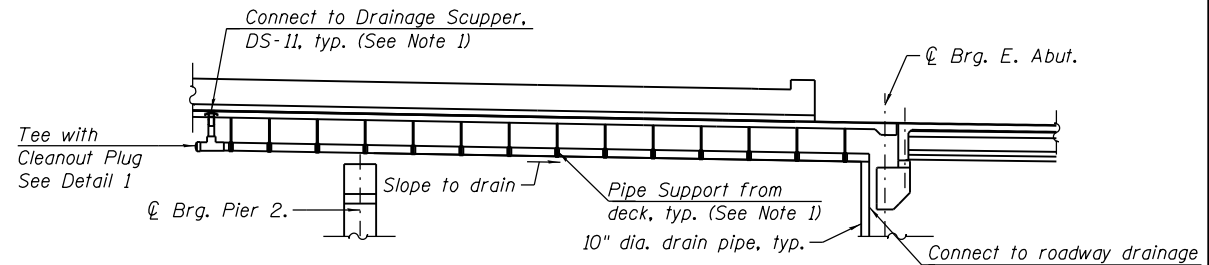
**WEST ABUTMENT**

(Looking West)



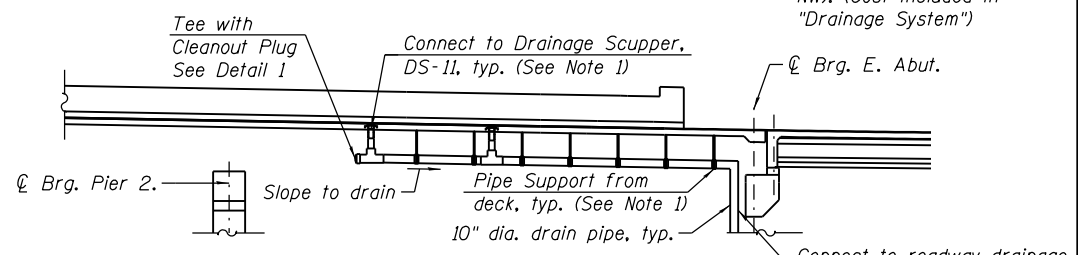
**EAST ABUTMENT**

(Looking East)



**ELEVATION SPAN 3**

(By North Sidewalk Face)  
(Drainage System is located between Girders 3 and 4)



**ELEVATION SPAN 3**

(By South Sidewalk Face)  
(Drainage System is located between Girders 11 and 12)

**NOTES:**

1. Provide structural support from proposed deck slab for drain pipe per manufacturer's recommendation, not to exceed 6' cts. Cost included with "Drainage System".
2. All pipes, pipe fittings and brackets needed shall be included with cost of "Drainage System".

**BILL OF MATERIAL**

Item	Unit	Quantity
Drainage System	L. Sum	1

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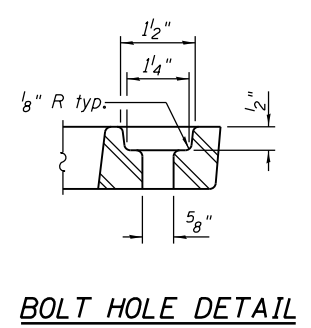
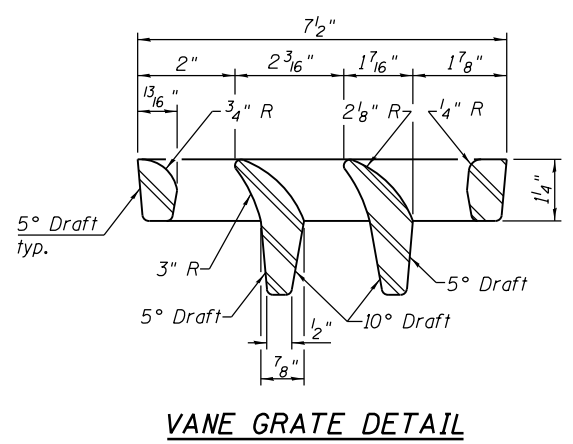
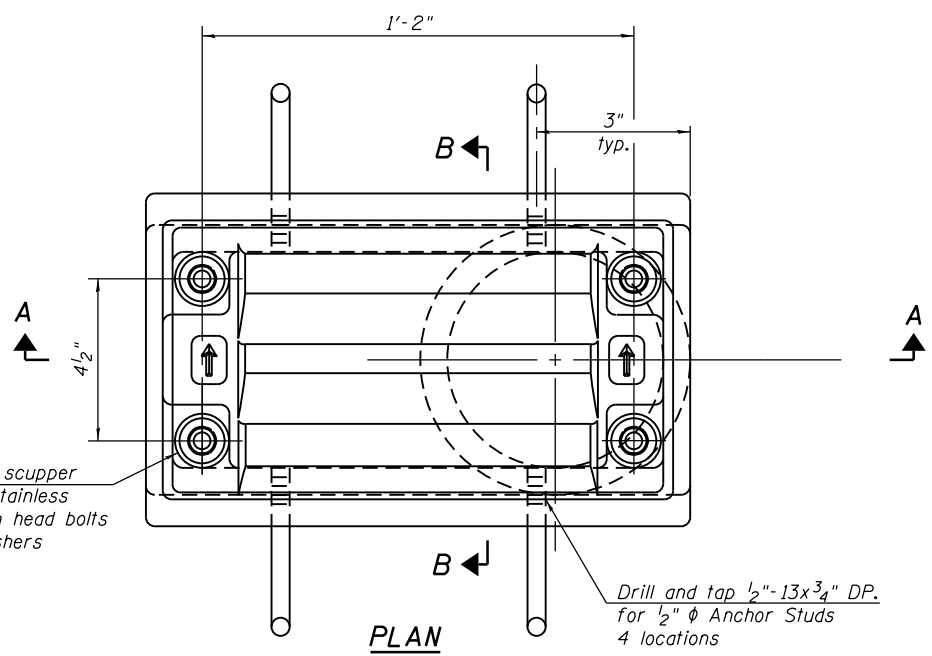
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**BRIDGE DRAINAGE SYSTEM**  
**STRUCTURE NO. 016-1165**

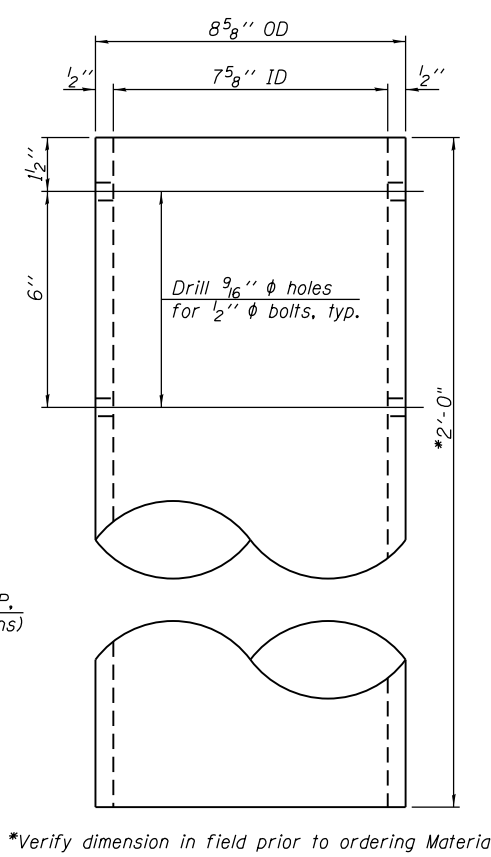
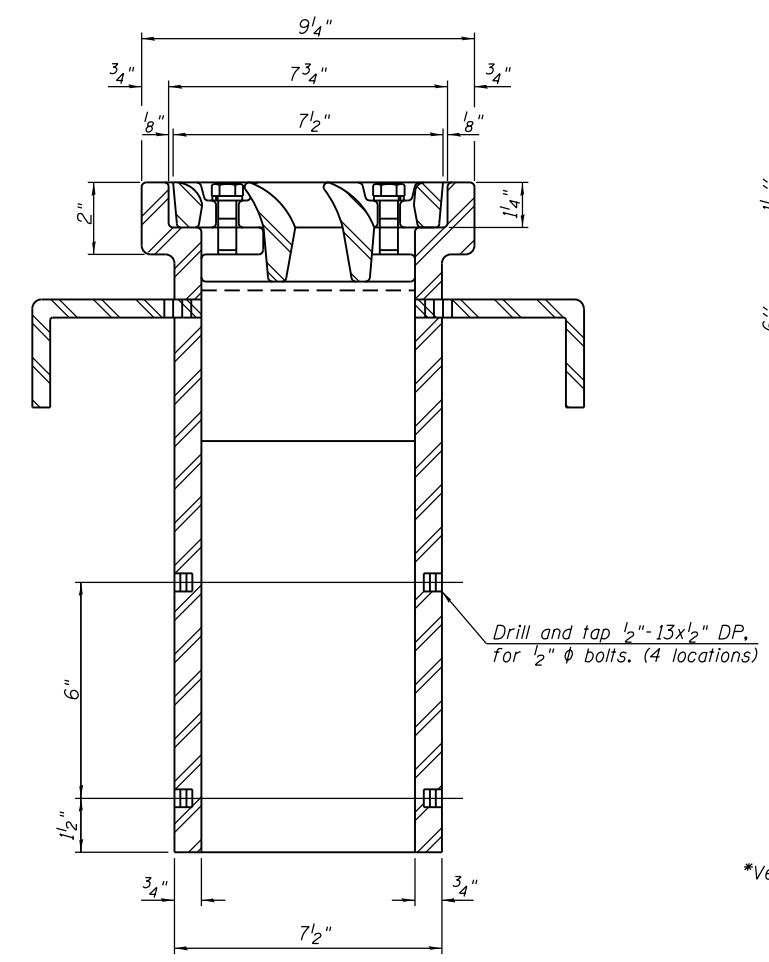
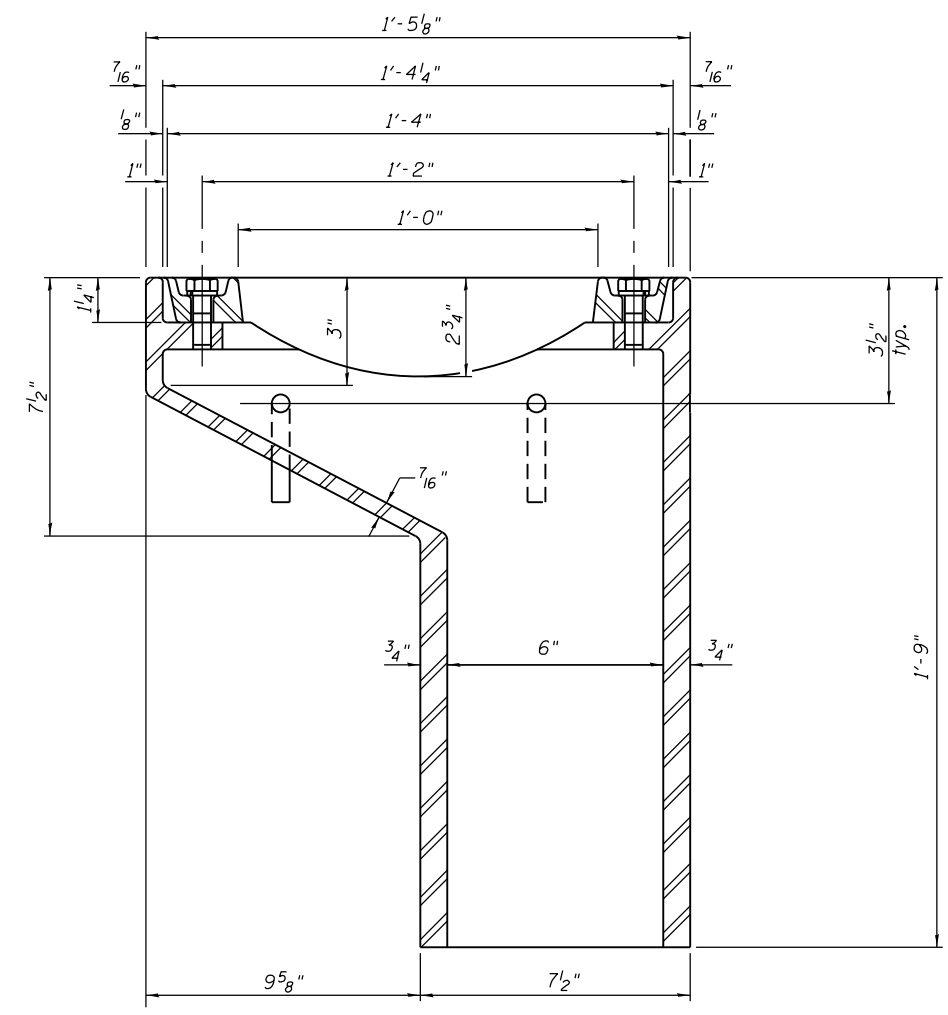
SCALE: SHEET S1-33 OF S1-63 SHEETS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2013-012R	COUNTY COOK	TOTAL SHEETS 385	SHEET NO. 220
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60W30	

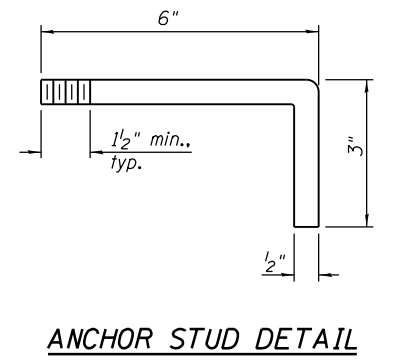
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**Notes:**  
All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.  
Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.  
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 the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.  
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.  
Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.



\*Verify dimension in field prior to ordering Material.



**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	5

DS-11 7-1-10

**HBM**  
ENGINEERING GROUP, LLC.  
CONSULTING & DESIGN  
INSPECTION & RATING  
RESEARCH & TESTING

4415 WEST HARRISON ST.  
SUITE 231  
HILLSIDE, IL 60162  
PHONE: (708) 236-0900  
FAX: (708) 236-0901

0161165-60W30-S34-DrainageScupper	DESIGNED - EAH	REVISED
USER NAME = ahmed.issa	DRAWN - EAH	REVISED
PLOT SCALE = 0:2.0000 1' = 1"	CHECKED - MI	REVISED
PLOT DATE = 12/16/2014	DATE - 10/24/2014	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DRAINAGE SCUPPER, DS-11  
STRUCTURE NO. 016-1165

SCALE: SHEET S1-34 OF S1-63 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	221
CONTRACT NO. 60W30				
ILLINOIS FED. AID PROJECT				

**GIRDER DIMENSIONS**

**DIAPHRAGM SPACING**

Girder	A	B	C
1	246'-0 <sup>5</sup> / <sub>16</sub> "	56'-6 <sup>5</sup> / <sub>16</sub> "	48'-8 <sup>5</sup> / <sub>16</sub> "
2	245'-8 <sup>15</sup> / <sub>16</sub> "	56'-2 <sup>15</sup> / <sub>16</sub> "	48'-4 <sup>15</sup> / <sub>16</sub> "
3	245'-5 <sup>9</sup> / <sub>16</sub> "	55'-11 <sup>9</sup> / <sub>16</sub> "	48'-1 <sup>9</sup> / <sub>16</sub> "
4	245'-1 <sup>4</sup> / <sub>8</sub> "	55'-8 <sup>4</sup> / <sub>8</sub> "	47'-10 <sup>4</sup> / <sub>8</sub> "
5	244'-10 <sup>7</sup> / <sub>8</sub> "	55'-4 <sup>7</sup> / <sub>8</sub> "	47'-6 <sup>7</sup> / <sub>8</sub> "
6	244'-7 <sup>2</sup> / <sub>2</sub> "	55'-1 <sup>2</sup> / <sub>2</sub> "	47'-3 <sup>2</sup> / <sub>2</sub> "
7	244'-4 <sup>3</sup> / <sub>16</sub> "	54'-10 <sup>3</sup> / <sub>16</sub> "	47'-0 <sup>3</sup> / <sub>16</sub> "
8	244'-0 <sup>13</sup> / <sub>16</sub> "	54'-6 <sup>13</sup> / <sub>16</sub> "	46'-8 <sup>13</sup> / <sub>16</sub> "
9	243'-9 <sup>2</sup> / <sub>2</sub> "	54'-3 <sup>2</sup> / <sub>2</sub> "	46'-5 <sup>2</sup> / <sub>2</sub> "
10	243'-6 <sup>8</sup> / <sub>8</sub> "	54'-0 <sup>8</sup> / <sub>8</sub> "	46'-2 <sup>8</sup> / <sub>8</sub> "
11	243'-2 <sup>3</sup> / <sub>4</sub> "	53'-8 <sup>3</sup> / <sub>4</sub> "	45'-10 <sup>3</sup> / <sub>4</sub> "
12	242'-11 <sup>7</sup> / <sub>16</sub> "	53'-5 <sup>7</sup> / <sub>16</sub> "	45'-7 <sup>7</sup> / <sub>16</sub> "
13	242'-8 <sup>1</sup> / <sub>16</sub> "	53'-2 <sup>1</sup> / <sub>16</sub> "	45'-4 <sup>1</sup> / <sub>16</sub> "
14	242'-4 <sup>1</sup> / <sub>16</sub> "	52'-10 <sup>1</sup> / <sub>16</sub> "	45'-0 <sup>1</sup> / <sub>16</sub> "

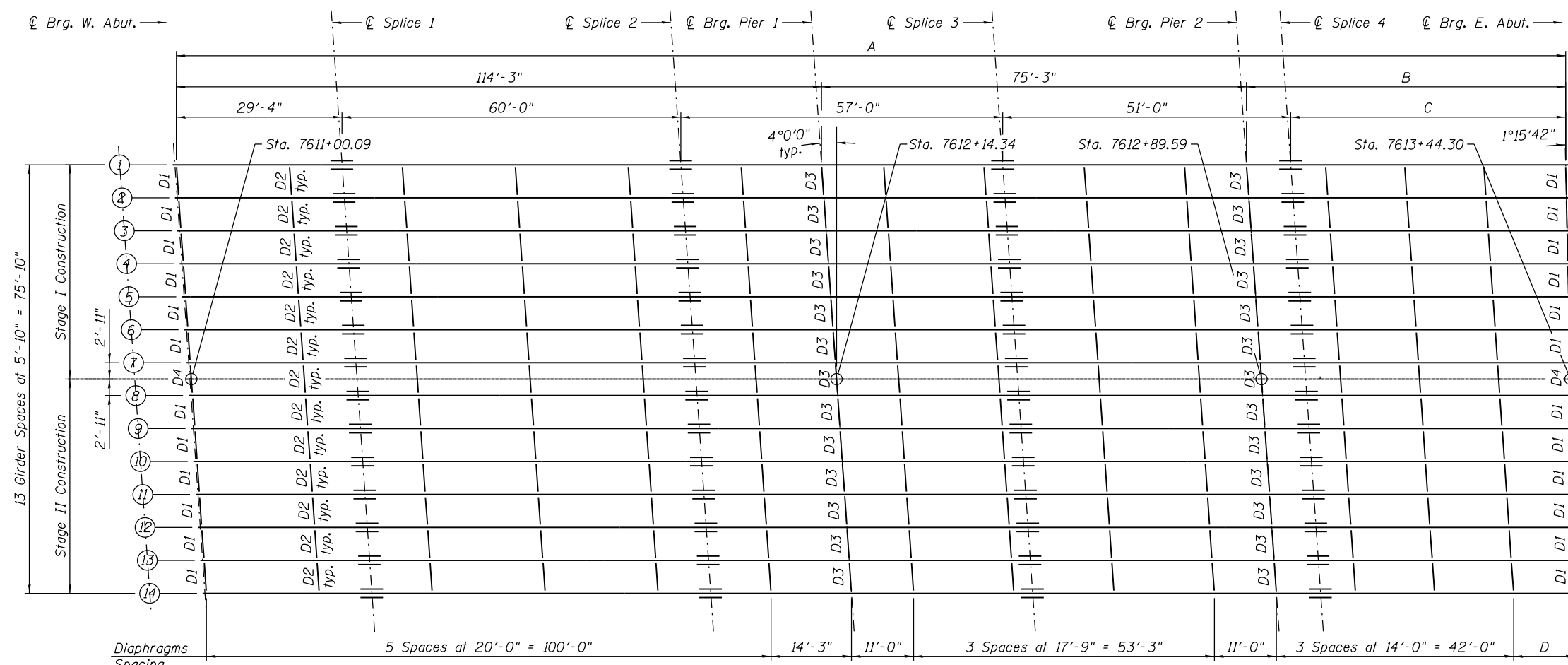
Girder	D
1	14'-6 <sup>5</sup> / <sub>16</sub> "
2	14'-2 <sup>15</sup> / <sub>16</sub> "
3	13'-11 <sup>9</sup> / <sub>16</sub> "
4	13'-8 <sup>4</sup> / <sub>8</sub> "
5	13'-4 <sup>7</sup> / <sub>8</sub> "
6	13'-1 <sup>2</sup> / <sub>2</sub> "
7	12'-10 <sup>3</sup> / <sub>16</sub> "
8	12'-6 <sup>13</sup> / <sub>16</sub> "
9	12'-3 <sup>2</sup> / <sub>2</sub> "
10	12'-0 <sup>8</sup> / <sub>8</sub> "
11	11'-8 <sup>3</sup> / <sub>4</sub> "
12	11'-5 <sup>7</sup> / <sub>16</sub> "
13	11'-2 <sup>1</sup> / <sub>16</sub> "
14	10'-10 <sup>1</sup> / <sub>16</sub> "

**SHEAR CONNECTOR SCHEDULE**

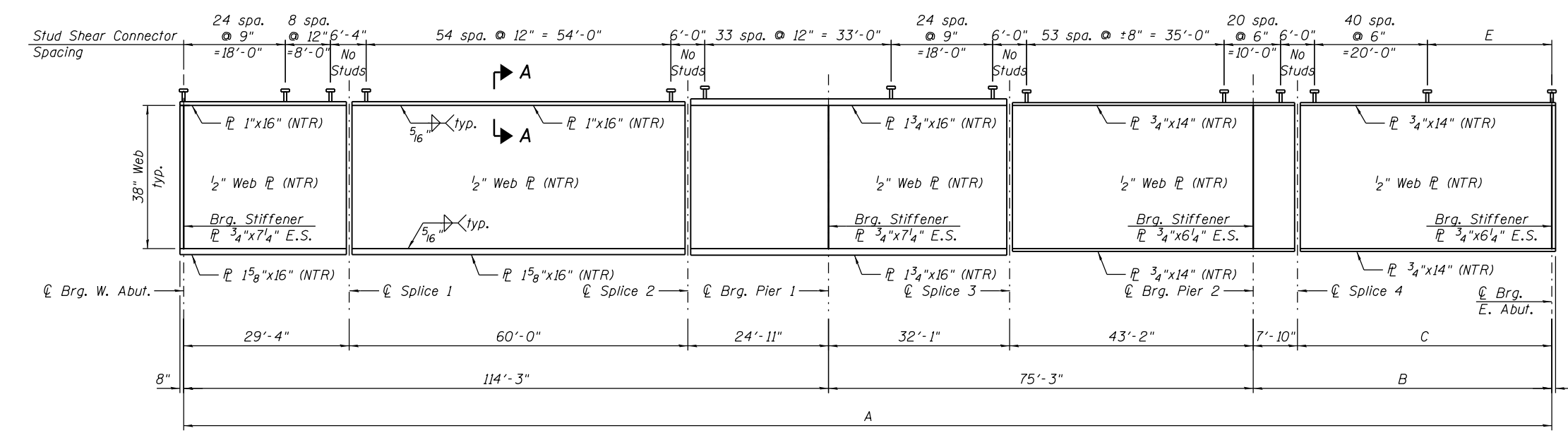
Girder	E
1	39 spa. @ ±8" = 25'-8 <sup>5</sup> / <sub>16</sub> "
2	39 spa. @ ±8" = 25'-4 <sup>15</sup> / <sub>16</sub> "
3	38 spa. @ ±8" = 25'-1 <sup>9</sup> / <sub>16</sub> "
4	38 spa. @ ±8" = 24'-10 <sup>4</sup> / <sub>8</sub> "
5	37 spa. @ ±8" = 24'-6 <sup>7</sup> / <sub>8</sub> "
6	37 spa. @ ±8" = 24'-3 <sup>2</sup> / <sub>2</sub> "
7	37 spa. @ ±8" = 24'-0 <sup>3</sup> / <sub>16</sub> "
8	36 spa. @ ±8" = 23'-8 <sup>1</sup> / <sub>16</sub> "
9	36 spa. @ ±8" = 23'-5 <sup>2</sup> / <sub>2</sub> "
10	35 spa. @ ±8" = 23'-2 <sup>8</sup> / <sub>8</sub> "
11	35 spa. @ ±8" = 22'-10 <sup>3</sup> / <sub>4</sub> "
12	34 spa. @ ±8" = 22'-7 <sup>7</sup> / <sub>16</sub> "
13	34 spa. @ ±8" = 22'-4 <sup>1</sup> / <sub>16</sub> "
14	34 spa. @ ±8" = 22'-0 <sup>1</sup> / <sub>16</sub> "

**NOTES:**

- All plates of the girder, including bearing stiffeners and splice plates, shall be AASHTO M270, Grade 50.
- All diaphragms, angles, fill plates may be AASHTO, Grade 36.
- Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
- All structural steel shall be hot-dipped galvanized. Cost included with Furnishing and Erecting Structural Steel.
- Girders have bearing stiffeners and connection plates as required by design. Additional stiffeners may be added at the Contractor's expense as necessary to prevent distortion of the girders during galvanizing. The contractor shall coordinate with the fabricator and the galvanizer to determine if additional stiffeners are necessary, and where these should be placed. Any proposed changes shall be submitted to the Engineer for approval prior to making any changes.
- Temporary stiffener angles shall be bolted to each side of the splice ends of each girder segment to prevent distortion during galvanizing. Temporary stiffeners angles shall bolt or fit tight against top & bottom flanges and include spacer tubes to minimize damage to galvanizing during removal. Cost included with Furnishing and Erecting Structural Steel.
- All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
- For Field Splice details, see Sheet S1-37.
- For diaphragm details, see sheet S1-38.
- E.S. denotes each side.
- For bridge mounted sign structures locations and details, see Civil Plans.
- For Section A-A see Sheet S1-36.



**FRAMING PLAN**



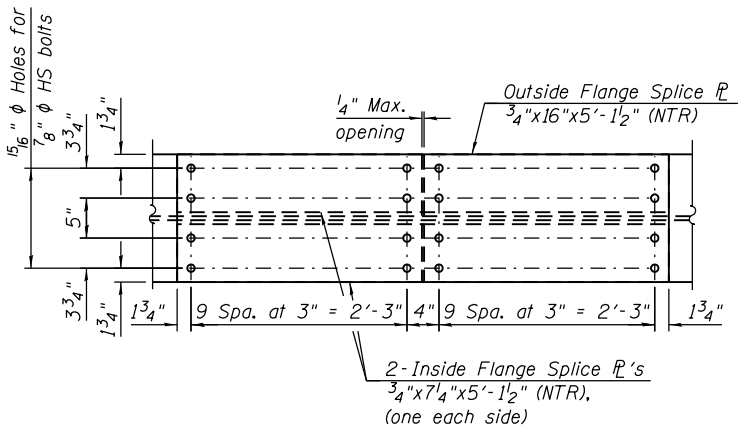
**GIRDER ELEVATION**

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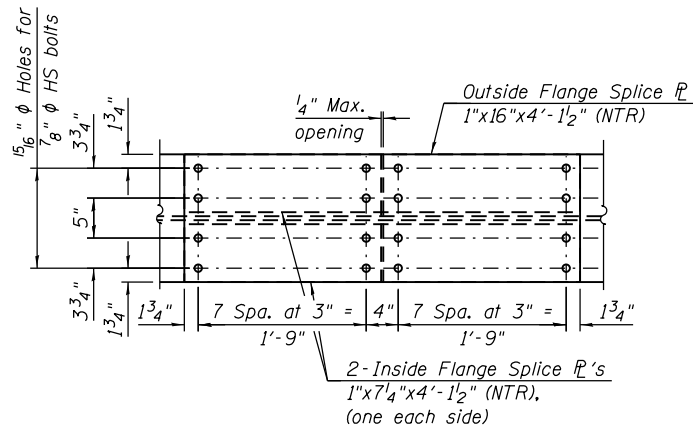
<b>HBM</b> ENGINEERING GROUP, LLC. CONSULTING & DESIGN INSPECTION & RATING RESEARCH & TESTING 4415 WEST HARRISON ST. SUITE 231 HILLSIDE, IL 60162 PHONE: (708) 236-0900 FAX: (708) 236-0901	0161165-60W30-S35-FramePlan USER NAME = ahmod.issa PLOT SCALE = 24x0 1/2" / 1"	DESIGNED - MI, JJS DRAWN - JJS CHECKED - MI, MAI DATE - 10/24/2014	REVISED REVISED REVISED REVISED	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>FRAMING PLAN AND GIRDER ELEVATION</b> <b>STRUCTURE NO. 016-1165</b>		F.A.I. R.T.E. 90/94 SECTION 2013-012R	COUNTY COOK CONTRACT NO. 60W30	TOTAL SHEETS 385 SHEET NO. 222
	SCALE: SHEET S1-35 OF S1-63 SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT						



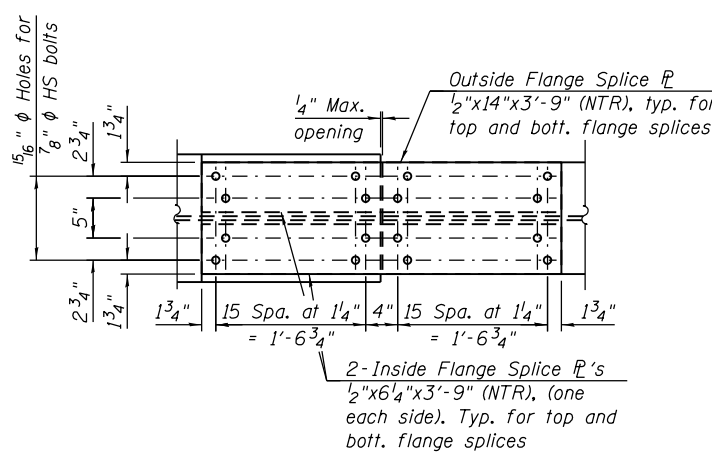
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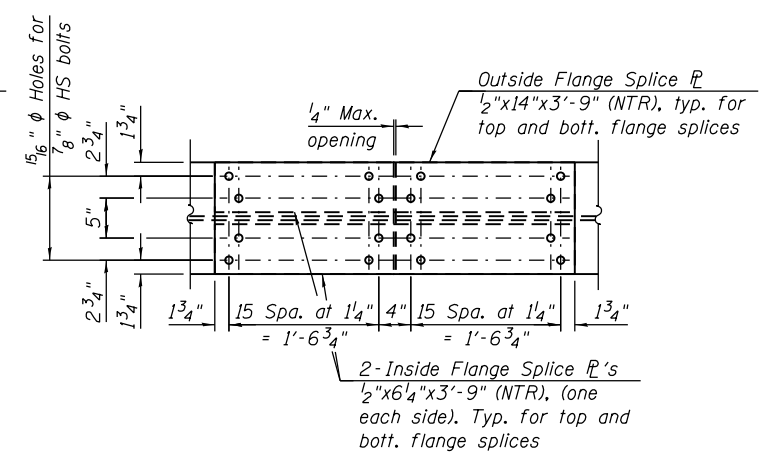
**TOP FLANGE PLAN**



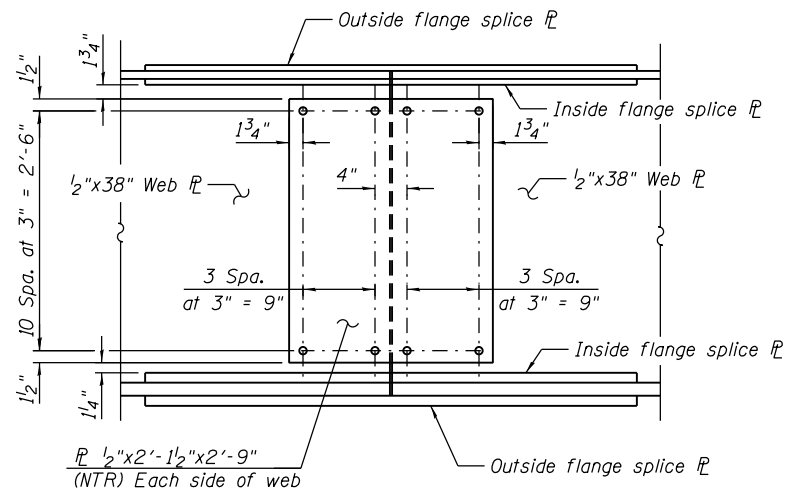
**TOP FLANGE PLAN**



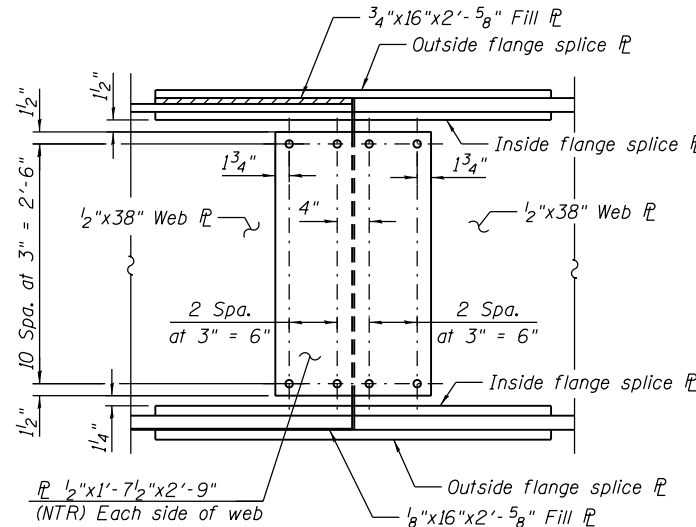
**TOP & BOTTOM FLANGE PLAN**



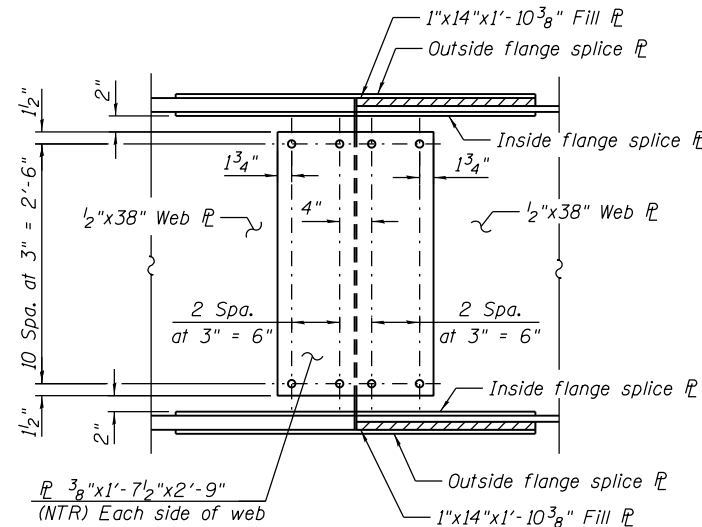
**TOP & BOTTOM FLANGE PLAN**



**ELEVATION**

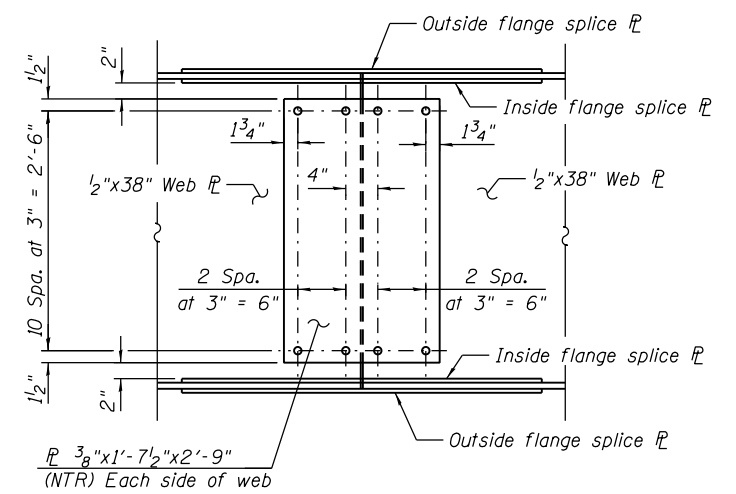


**ELEVATION**



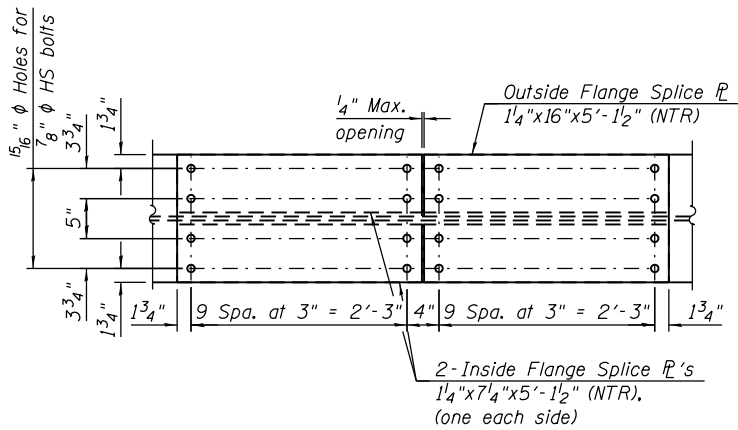
**ELEVATION**

**FIELD SPLICE 3 DETAIL**



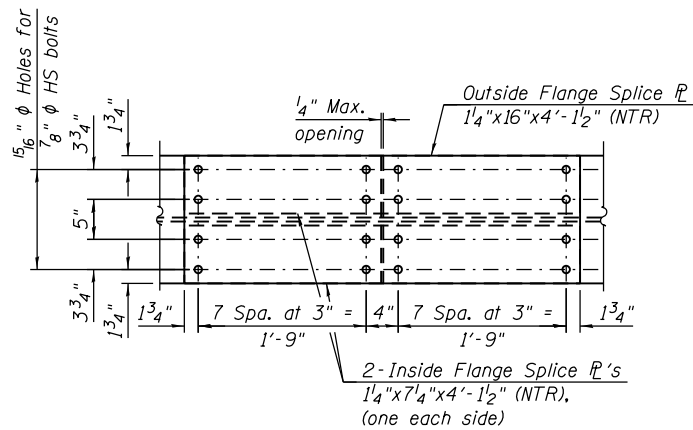
**ELEVATION**

**FIELD SPLICE 4 DETAIL**



**BOTTOM FLANGE PLAN**

**FIELD SPLICE 1 DETAIL**

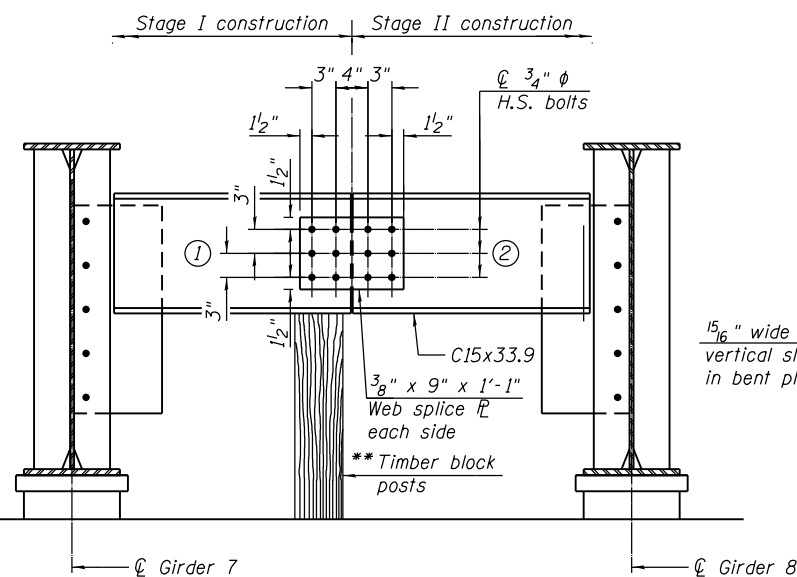
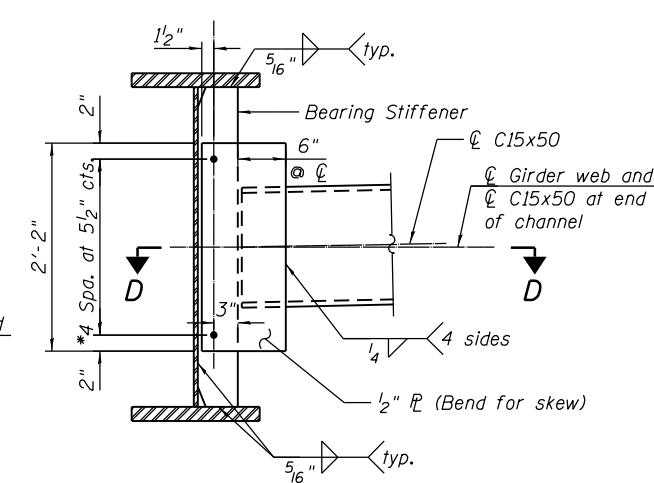
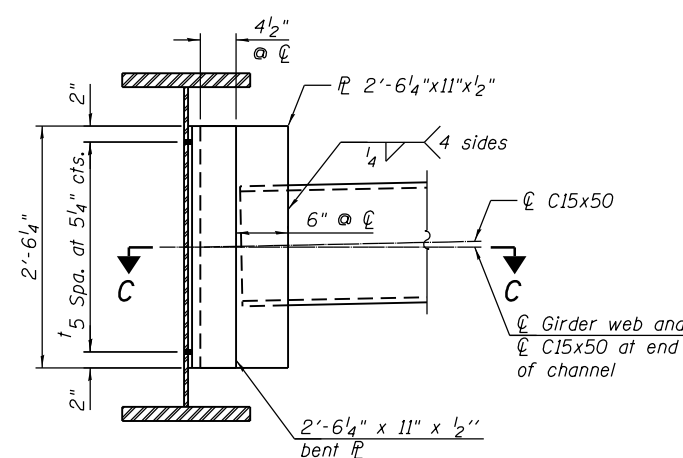
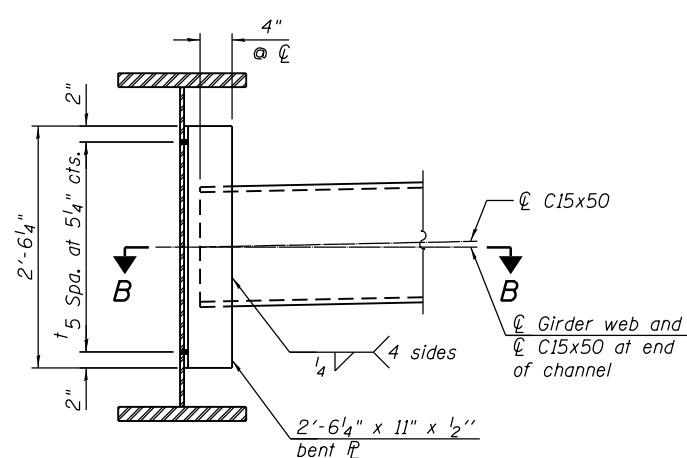
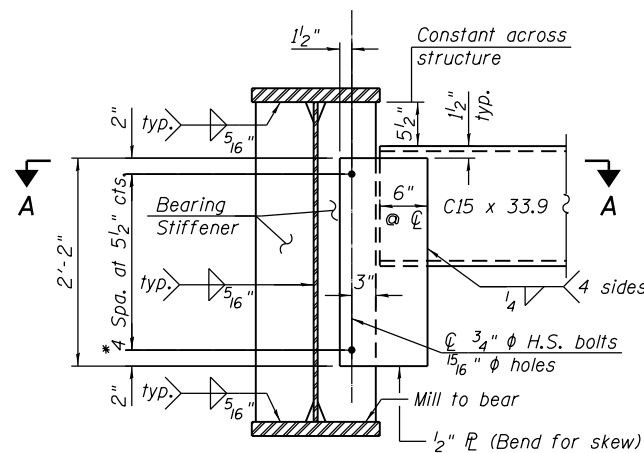
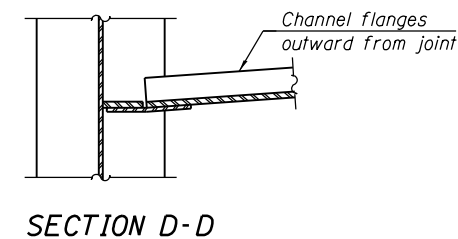
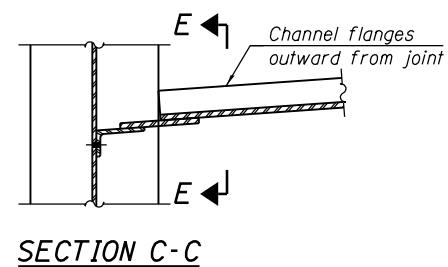
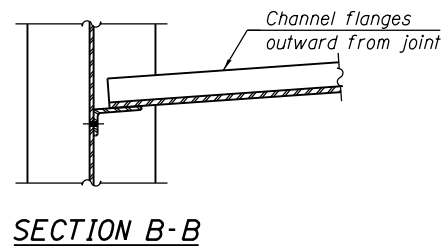
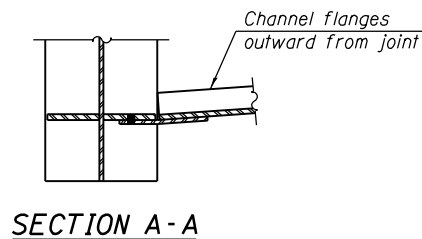


**BOTTOM FLANGE PLAN**

**FIELD SPLICE 2 DETAIL**

**NOTES:**

- All splice plates, including fill plates, shall be AASHTO M270, Grade 50- galvanized.
- Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
- HS bolts shall be 7/8"  $\phi$  ASTM A325.
- All splices are symmetrical about  $\phi$  splice except for fill plates.

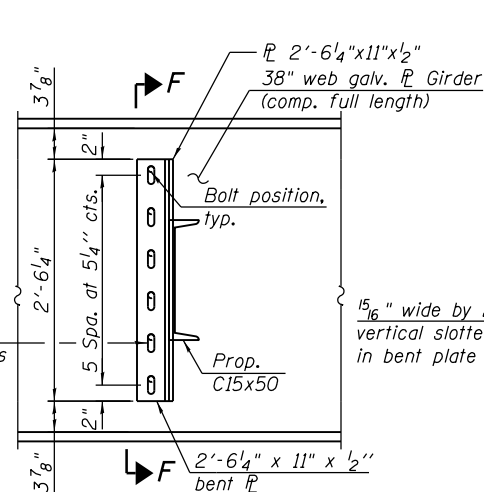


**END DIAPHRAGM D4**  
(Looking East, 2 required)

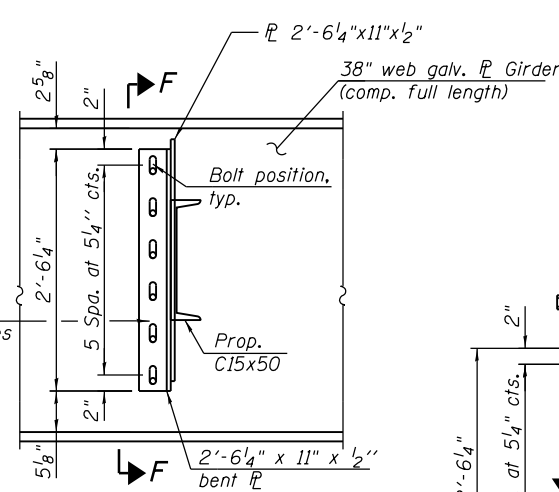
\*\*Cost of Timber Block Posts is included with Structural Steel.

**END DIAPHRAGM STAGE CONSTRUCTION SEQUENCE**

- Order diaphragm in two sections.
- Attach section ① of diaphragm to girder 7.
- Place timber block posts between section ① of diaphragm and abutment bearing section.
- Attach section ② of diaphragm to both girder 8 and section ① of diaphragm during stage II construction with splice plates.
- Remove timber block posts.



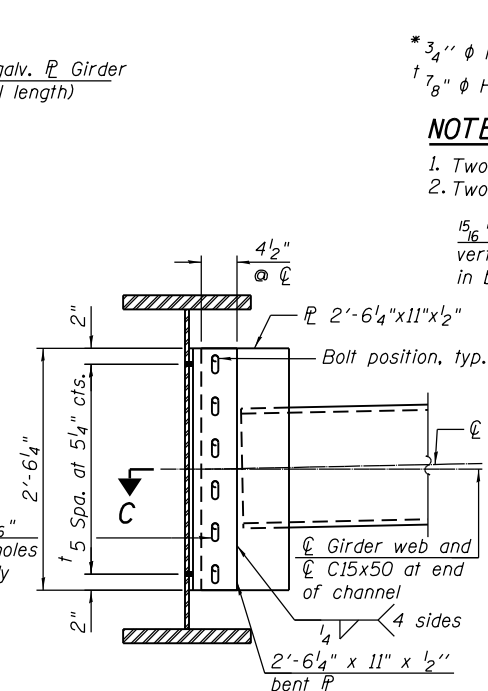
**SECTION E-E**  
At Beam 8 only before placing Stage II concrete slab



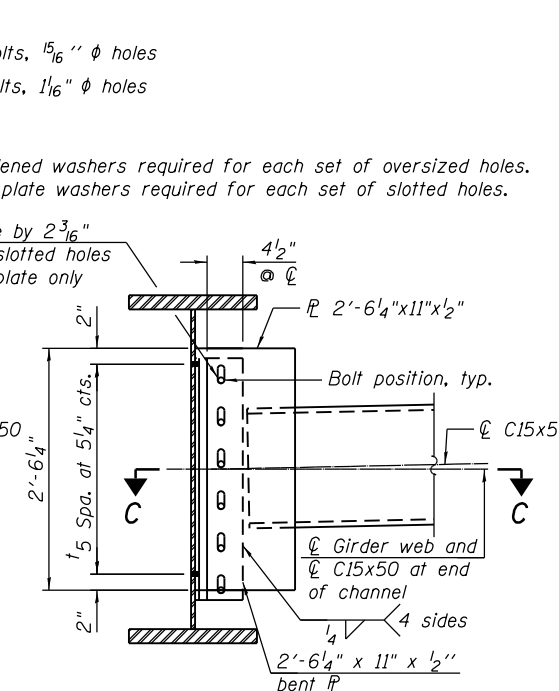
**SECTION E-E**  
At Beam 8 only after placing Stage II concrete slab

**SUGGESTED SEQUENCE OF CONSTRUCTION FOR INTERIOR DIAPHRAGMS AT STAGE CONSTRUCTION**

- Prior to Stage II deck work, connect diaphragm to Beam 7. Bolts in slots of Beam 8 and in diaphragm connection plate shall be finger tight until the Stage II pour is complete. Position slots so bolts start at one end with no concrete load and finish near the opposite end under deck load.
- Set slab forms and place reinforcement.
- Place Stage II concrete slab. Once Beam 8 deflects, tighten bolts as required.



**SECTION F-F**  
At Beam 8 only before placing Stage II concrete slab



**SECTION F-F**  
At Beam 8 only after placing Stage II concrete slab

\* 3/4" φ HS bolts, 1 5/16" φ holes  
† 7/8" φ HS Bolts, 1 1/16" φ holes

**NOTES:**

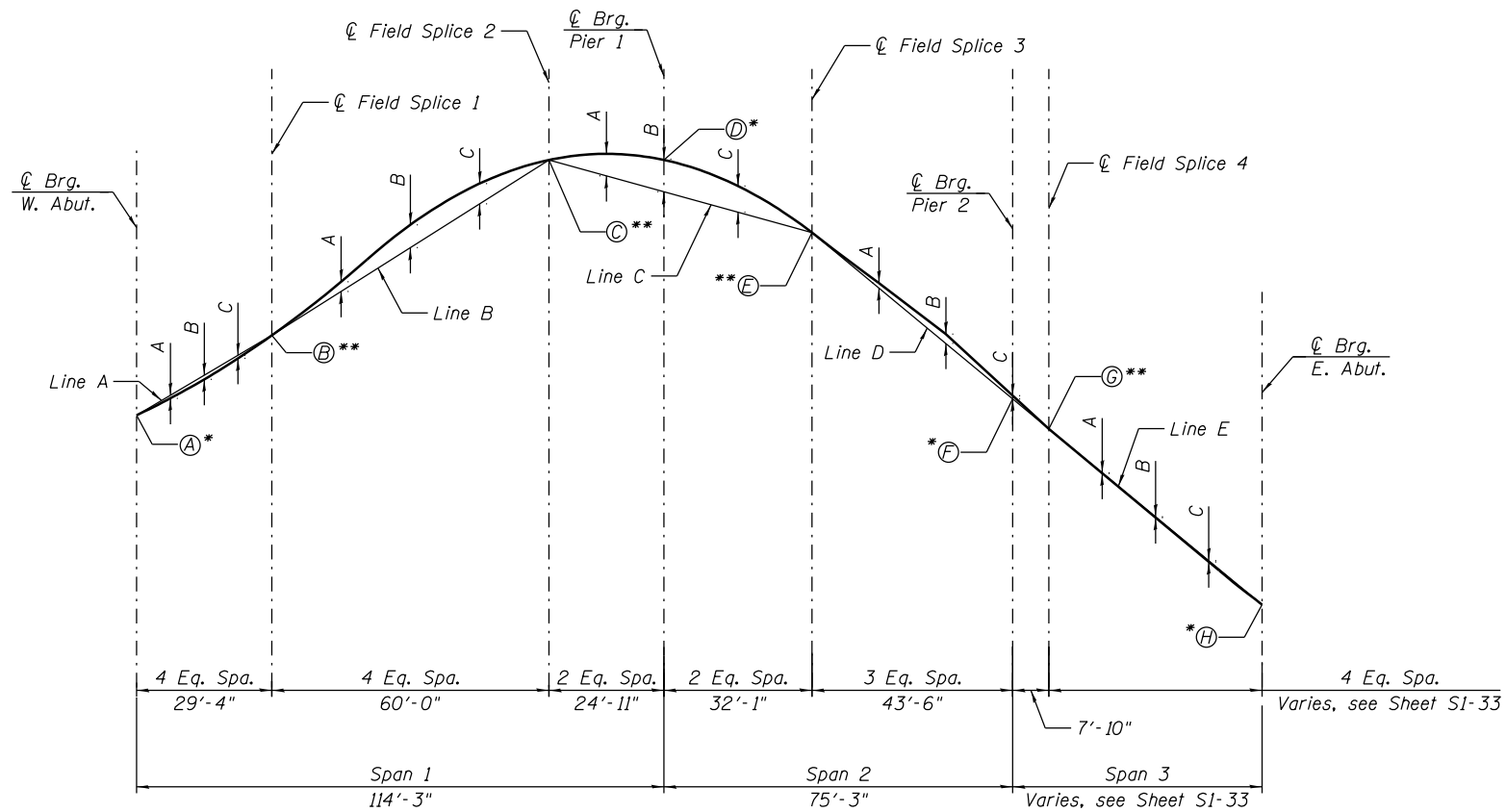
- Two hardened washers required for each set of oversized holes.
- Two 5/16" plate washers required for each set of slotted holes.

1 5/16" wide by 2 3/16" vertical slotted holes in bent plate only

\*\*\* Applicable to Interior D2 Diaphragms Only

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\* Final top of web elevations to be used in computing the bearing seat elevation.  
 \*\* Theoretical elevations before dead load deflection.

**TOP OF WEB ELEVATIONS**  
(for fabrication only)

Girder	℄ Brg. W. Abut.	F.S. 1	F.S. 2	Pier 1	F.S. 3	Pier 2	F.S. 4	℄ Brg. E. Abut.
1	592.83	593.53	594.48	594.50	594.15	593.54	593.37	592.52
2	592.93	593.62	594.57	594.59	594.23	593.62	593.45	592.61
3	593.03	593.71	594.66	594.68	594.32	593.71	593.54	592.70
4	593.12	593.81	594.76	594.77	594.40	593.79	593.62	592.87
5	593.22	593.90	594.85	594.86	594.49	593.87	593.70	592.93
6	593.32	594.00	594.95	594.95	594.57	593.96	593.79	593.00
7	593.41	594.10	595.04	595.04	594.65	594.04	593.87	593.07
8	593.42	594.11	595.04	595.04	594.65	594.03	593.86	593.04
9	593.33	594.03	594.95	594.95	594.55	593.93	593.77	592.92
10	593.25	593.95	594.87	594.85	594.45	593.84	593.67	592.80
11	593.16	593.86	594.78	594.76	594.35	593.74	593.57	592.69
12	593.08	593.78	594.69	594.67	594.26	593.64	593.47	592.57
13	592.99	593.71	594.60	594.58	594.16	593.54	593.37	592.45
14	592.91	593.63	594.53	594.48	594.06	593.44	593.27	592.33

**CAMBER VALUES**

GIRDER NO.	LINE A			LINE B			LINE C			LINE D			LINE E		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
1-5	0"	0"	0"	2 1/2"	3 3/4"	2 3/4"	1 1/2"	2"	1 1/2"	3/4"	1"	1 1/2"	0"	0"	0"
6-8	0"	0"	0"	2 1/2"	4"	3"	1 1/2"	2"	1 1/2"	3/4"	1"	1 1/2"	0"	0"	0"
9-10	0"	0"	0"	2 3/4"	4"	3"	1 1/2"	2"	1 1/2"	3/4"	1"	1 1/2"	0"	0"	0"
11-12	0"	0"	0"	2 3/4"	4"	3"	1 1/2"	2"	1 1/2"	3/4"	1"	1 1/2"	3/4"	1"	0"
13-14	0"	0"	0"	2 3/4"	4 1/4"	3"	1 1/2"	2"	1 1/2"	3/4"	1"	1 1/2"	3/4"	1 1/4"	0"

**HBM**  
ENGINEERING GROUP, LLC  
CONSULTING & DESIGN  
INSPECTION & RATING  
RESEARCH & TESTING

0161165-60W30-S39-CamberDiagram  
 USER NAME = ahmod.issa  
 PLOT SCALE = 40:0.0000 1" = 40'  
 PLOT DATE = 12/16/2014

DESIGNED - MI, LAB  
 DRAWN - LAB  
 CHECKED - MI, MAI  
 DATE - 10/24/2014

REVISED  
 REVISED  
 REVISED  
 REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

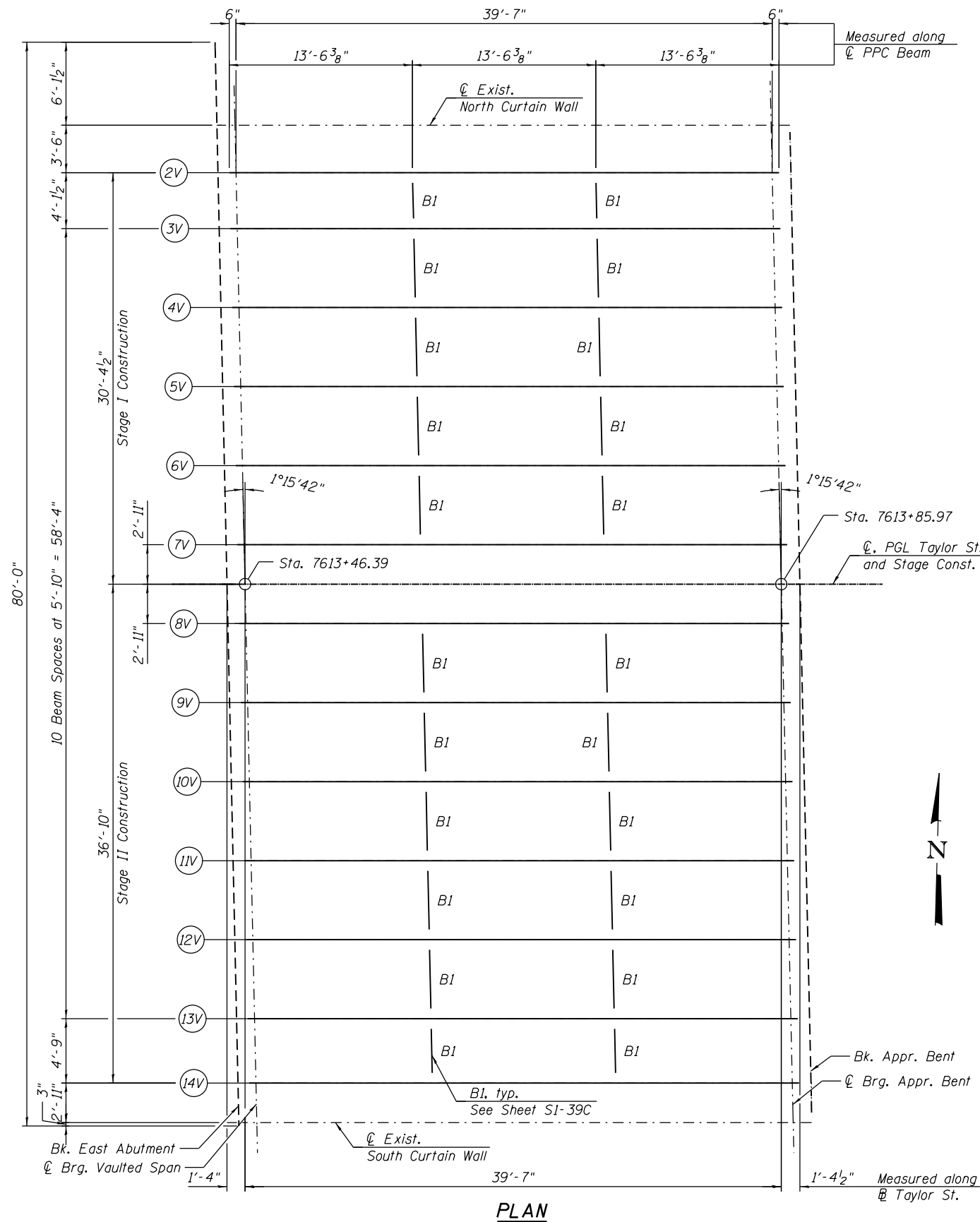
**CAMBER DIAGRAM AND TOP OF WEB ELEVATIONS**  
**STRUCTURE NO. 016-1165**

SCALE: SHEET S1-39 OF S1-63 SHEETS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2013-012R	COUNTY COOK	TOTAL SHEETS 385	SHEET NO. 226
CONTRACT NO. 60W30				
ILLINOIS FED. AID PROJECT				



FILE PATH = p:\61779-PMINT\aecononline\local\HEDM\_D5922\_Ma\Documents\01\_Americas\T\enepor\ation\602659238\_Circle\Phase\_1\1000\_CAD\008\_Structural\Structure\_016-1165-016165-60W30-539A-VaultFramePlan



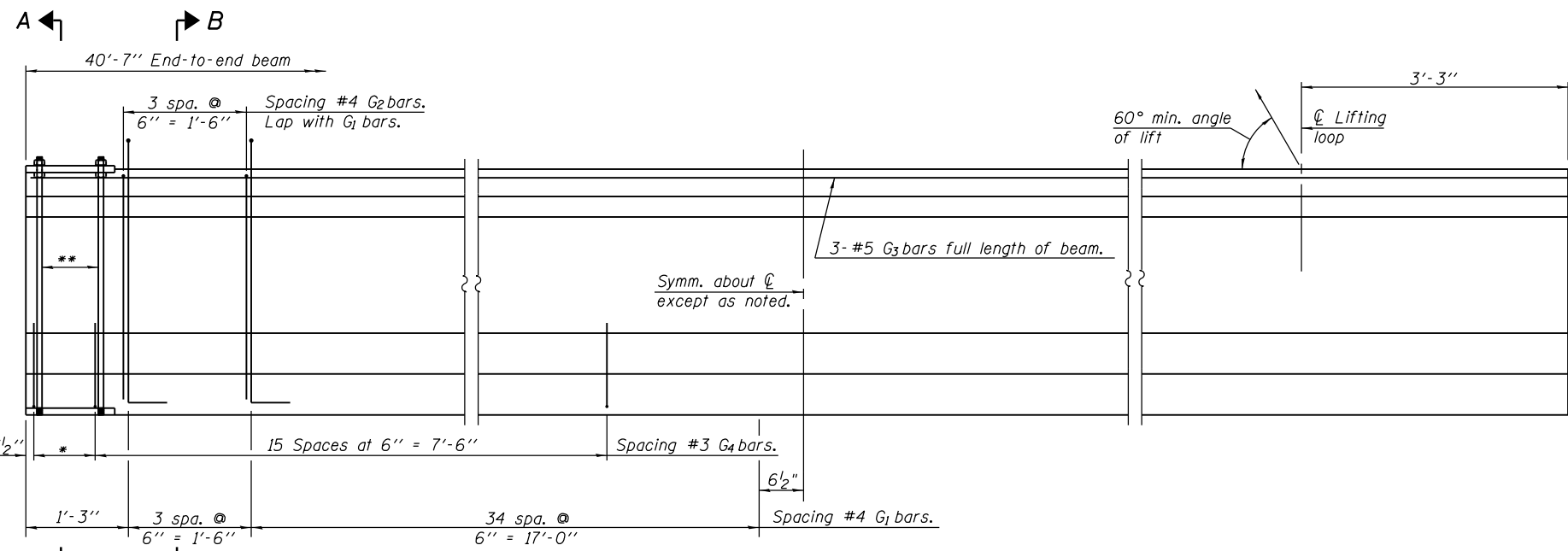
PLAN

INTERIOR BEAM MOMENT TABLE		
		0.5 Sp.
$I$	(in <sup>4</sup> )	48,647
$I'$	(in <sup>4</sup> )	179,215
$S_b$	(in <sup>3</sup> )	3,165
$S_b'$	(in <sup>3</sup> )	6,091
$S_t$	(in <sup>3</sup> )	2,358
$S_t'$	(in <sup>3</sup> )	27,246
$DC1$	(k/')	0.97
$M_{DC1}$	(k)	190
$DC2$	(k/')	0.05
$M_{DC2}$	(k)	9.04
$DW$	(k/')	0.29
$M_{DW}$	(k)	57.1
$M_{\xi} + 1M$	(k)	434

INTERIOR BEAM REACTION TABLE			
		Abut.	Appr. Bent
$R_{DC1}$	(k)	11.79	11.79
$R_{DC2}$	(k)	0.91	0.91
$R_{DW}$	(k)	5.77	5.77
$R_{\xi} + 1M$	(k)	55.66	55.66
$R_{Total}$	(k)	74.13	74.13

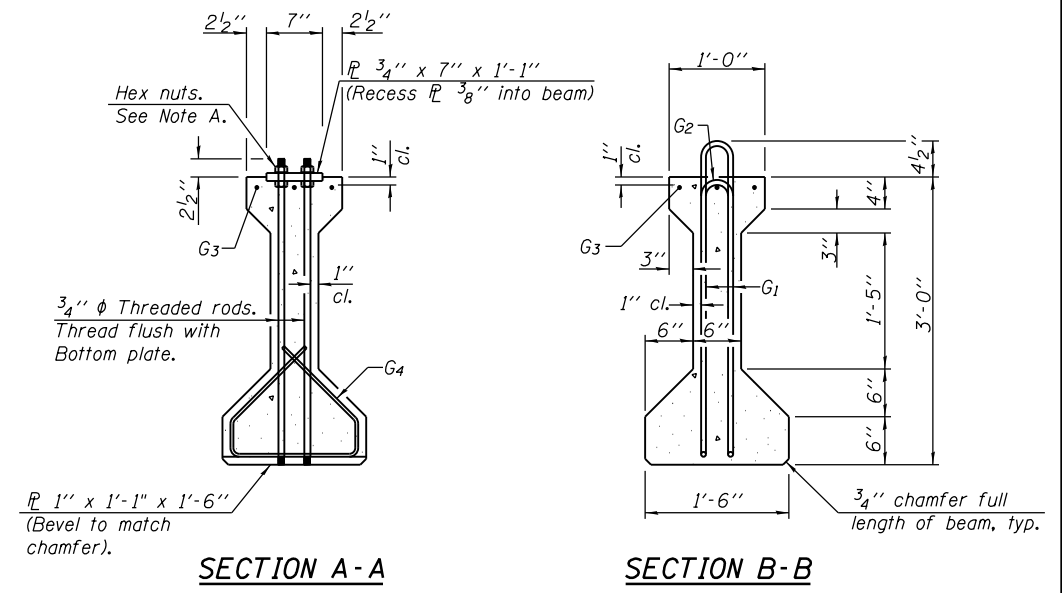
- $I$ : Non-composite moment of inertia of beam section (in<sup>4</sup>).
- $I'$ : Composite moment of inertia of beam section (in<sup>4</sup>).
- $S_b$ : Non-composite section modulus for the bottom fiber of the prestressed beam (in<sup>3</sup>).
- $S_b'$ : Composite section modulus for the bottom fiber of the prestressed beam (in<sup>3</sup>).
- $S_t$ : Non-composite section modulus for the top fiber of the prestressed beam (in<sup>3</sup>).
- $S_t'$ : Composite section modulus for the top fiber of the prestressed beam (in<sup>3</sup>).
- $DC1$ : Un-factored non-composite dead load (kips/ft.).
- $M_{DC1}$ : Un-factored moment due to non-composite dead load (kip-ft.).
- $DC2$ : Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
- $M_{DC2}$ : Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
- $DW$ : Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
- $M_{DW}$ : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- $M_{\xi} + 1M$ : Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

FILE PATH = p:\61779-P\INT\aecon\line\local\IPE\CDN\_D592\_NA\Documents\01\_Americas\Tr\_engeper\ation\60265938\_Circle\Phase\_1\1000\_CAD\008\_Structural\Structure\_016-1165-016165-60W30-S39B-PPCBBeamElev

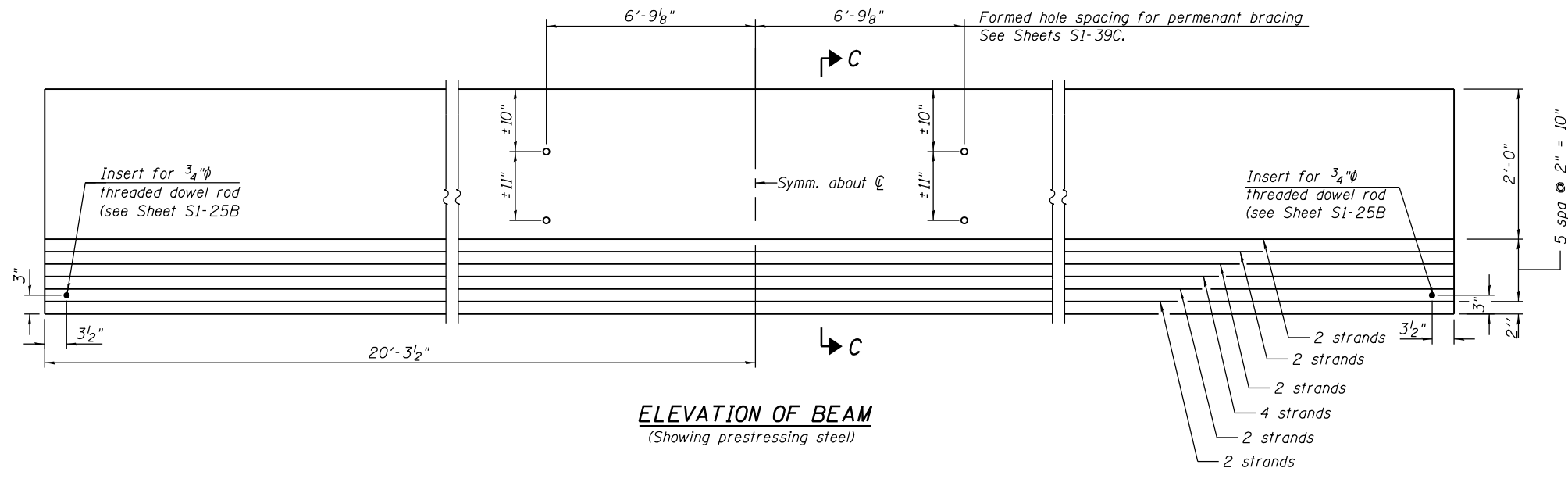


**ELEVATION OF BEAM**  
(Showing reinforcement & dimensions)

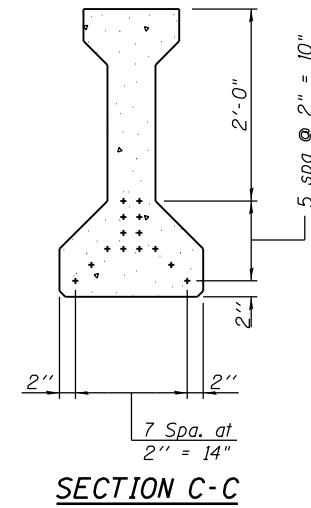
\* 3 spaces at 3" = 9"  
 \*\* 4-3/4"  $\phi$  threaded dowel rods at 3" cts., Each Face



Note A:  
 Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



**ELEVATION OF BEAM**  
(Showing prestressing steel)



**\*\*\*BAR LIST**  
**ONE BEAM ONLY**

Bar	No.	Size	Length	Shape
G1	78	#4	7'-5"	$\bar{N}$ L
G2	8	#4	5'-8"	$\bar{N}$
G3	3	#5	40'-3"	$\bar{N}$
G4	38	#3	4'-1"	$\bar{N}$

\*\*\*For information only

Notes:  
 See sheet S1-39C for additional details and Bill of Material.  
 Required release strength,  $f'ci$ , shall be 5,000 psi.

PI-4-36

7-1-10

**HBM**  
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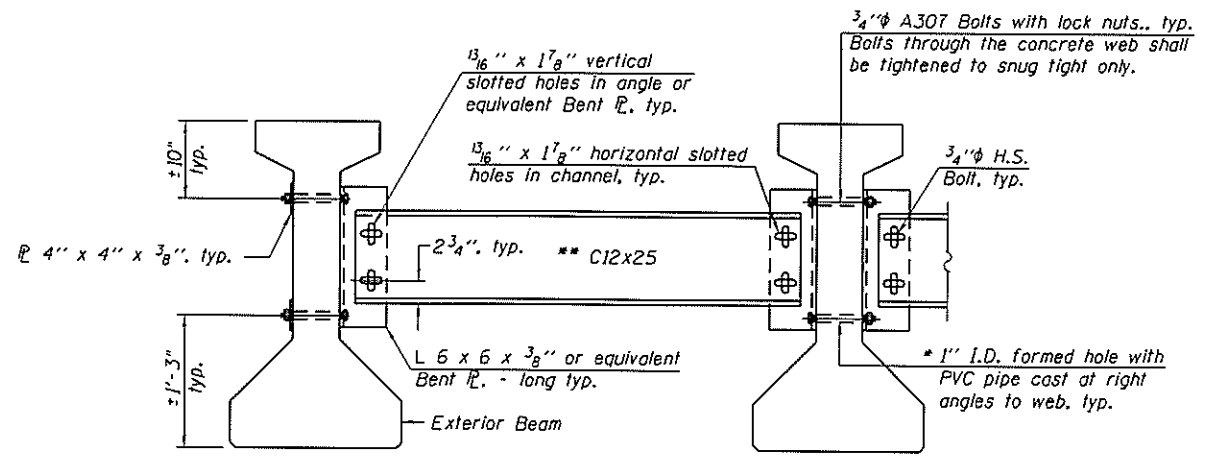
0161165-60W30-S39B-PPCBBeamElev	DESIGNED - KJD, LAB	REVISED
USER NAME = ahmod.issa	DRAWN - KJD	REVISED
PLOT SCALE = 2:0.0000 1' = 11"	CHECKED - MI, MAI	REVISED
PLOT DATE = 12/16/2014	DATE - 10/24/2014	REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**36" PPC I-BEAM - VAULTED SPAN**  
**STRUCTURE NO. 016-1165**

SCALE: SHEET S1-39B OF S1-63 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	226B
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

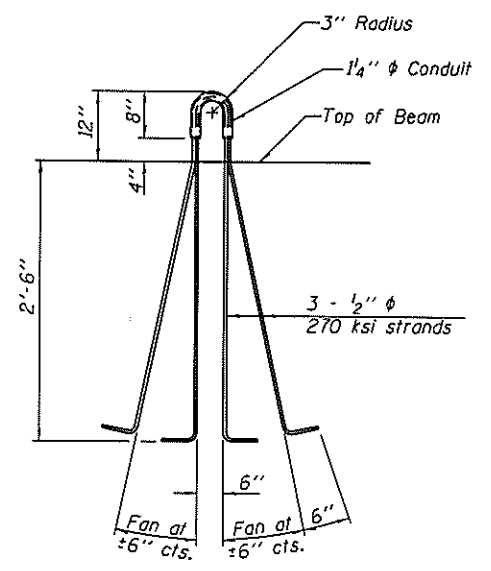


**Notes:**

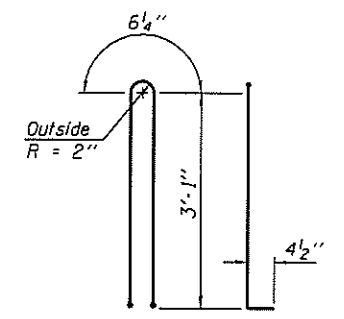
- All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.
- Two hardened washers are required for each set of oversized holes.
- All holes shall be 1/16 inch unless otherwise noted.
- 5/16 inch x 3 inch x 3 inch plate washers are required over all slotted holes.
- All bolts shall be galvanized according to AASHTO M232.
- Bracing shall be installed as beams are erected and tightened as soon as possible during erection.
- Permanent bracing shall not be paid for separately, but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete I-Beams.

- Fabricator shall locate to miss strands within permissible tolerances.
- Alternate C12x30 channels are permitted to facilitate material acquisition.

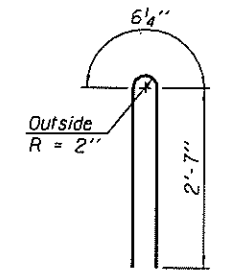
**PERMANENT BRACING DETAILS FOR 36" PPC I-BEAMS (BI)**



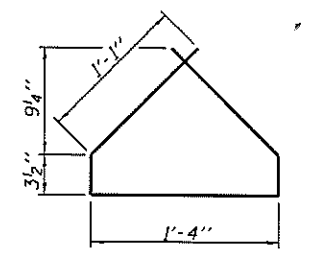
**LIFTING LOOP DETAIL**



**BAR G1**



**BAR G2**



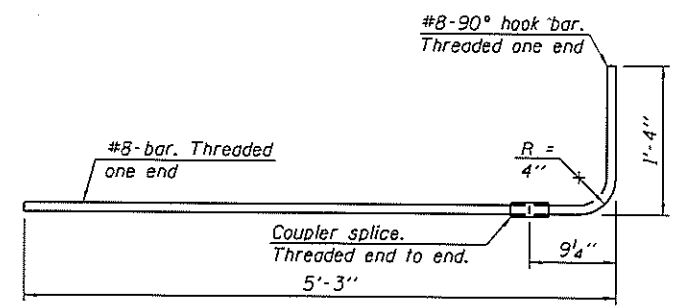
**BAR G4**

**NOTES**

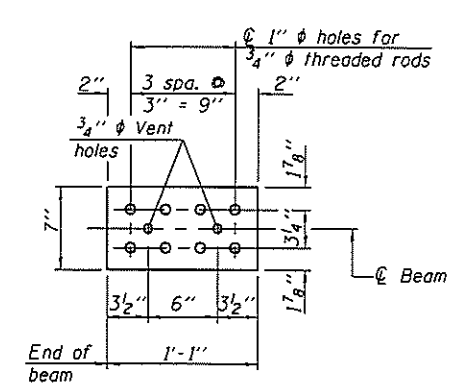
Inserts for 3/4 inch threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2 inch and the nominal cross-sectional area shall be 0.153 sq. in.

Reinforcement bars shall conform to ASTM A 706, Grade 60. A minimum 2 1/2 inch diameter lifting pin shall be used to engage the lifting loops during handling. Tilt G6 bars when necessary to maintain 1/2 inch clearance. The top and bottom plates shall be AASHTO M270 Grade 50. The bottom plates shall be galvanized according to AASHTO M111. Top plates and threaded rods need not be galvanized.

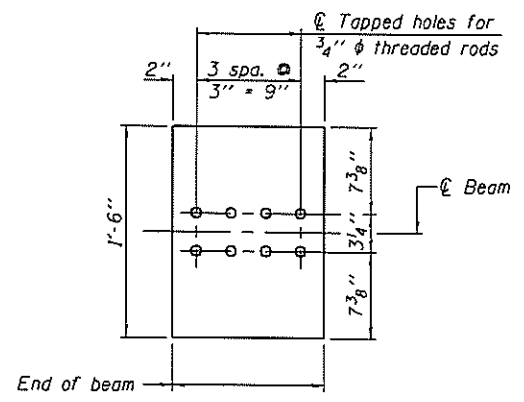
Threaded rods shall be ASTM F 1554 Grade 55. The G6 bar assembly shall be capable of developing 125 percent of the yield strength of the grade 60 reinforcement bar components. The assembly shall allow completion of the splice without turning of the hook bar. The hook bar shall be threaded such that the entire coupler can be threaded onto the hook bar. Beams requiring G6 bar assemblies shall not be released from the fabricator until they have attained 45 days of age or older.



**G6 BAR ASSEMBLY**



**TOP PLATE**



**BOTTOM PLATE**  
See bearing details for pintle hole locations when required.

**BILL OF MATERIAL**

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36"	Foot	528

PI-4-36D

1-28-11

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4415 WEST HARRISON ST.  
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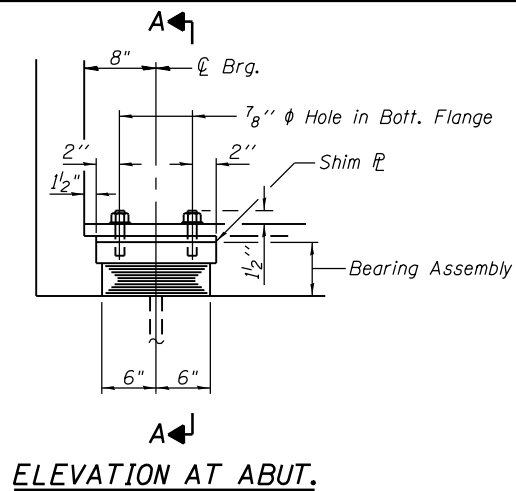
0161165-60W30-S39C-PPCBeamDetails	DESIGNED - KJD	REVISED
USER NAME = ahmed.issao	DRAWN - KJD	REVISED
PLOT SCALE = 2x8.8800 1/1 in.	CHECKED - MI, MAI	REVISED
PLOT DATE = 12/2/2014	DATE - 10/24/2014	REVISED

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

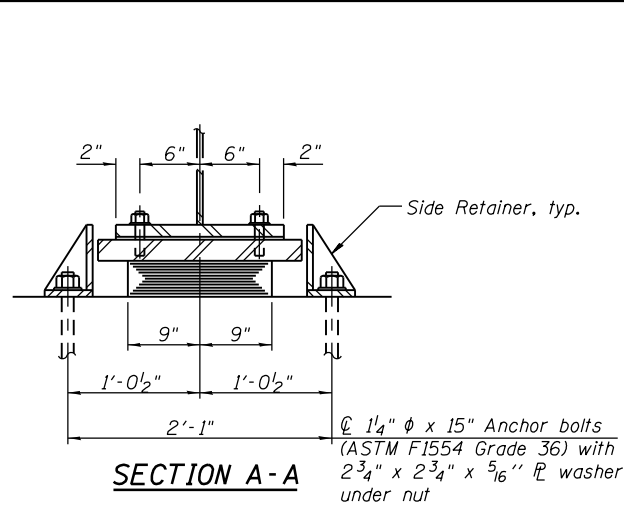
**36" PPC I-BEAM DETAILS - VAULTED SPAN  
STRUCTURE NO. 016-1165**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	226C
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

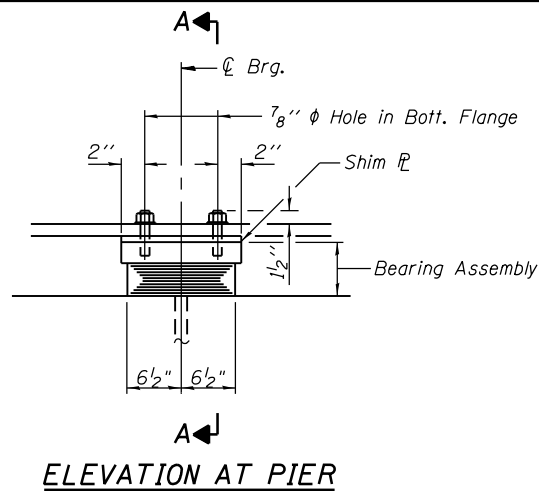
SCALE: SHEET S1-39C OF S1-63 SHEETS STA. TO STA.



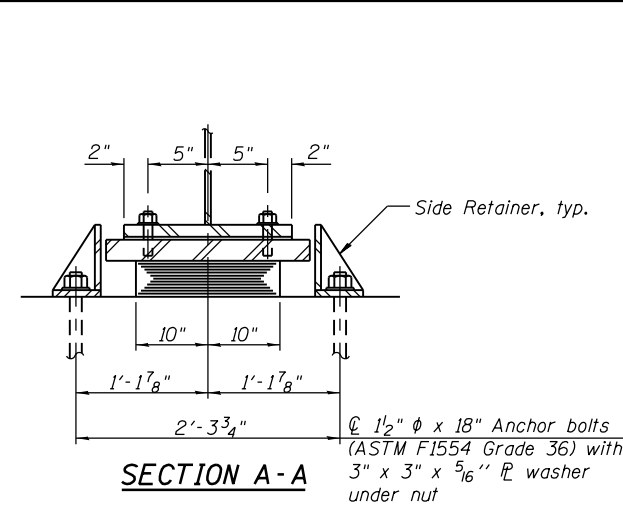
ELEVATION AT ABUT.



SECTION A-A



ELEVATION AT PIER



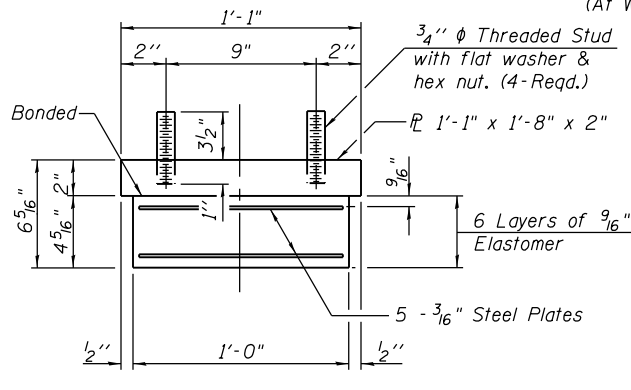
SECTION A-A

**TYPE I ELASTOMERIC EXP. BRG.**

(At West Abutment)

**TYPE I ELASTOMERIC EXP. BRG.**

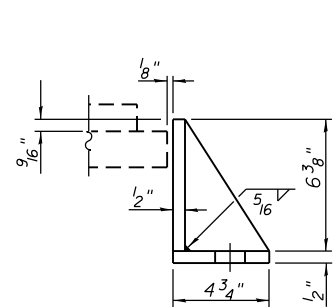
(At Pier 2)



**BEARING ASSEMBLY**

(At West Abutment)

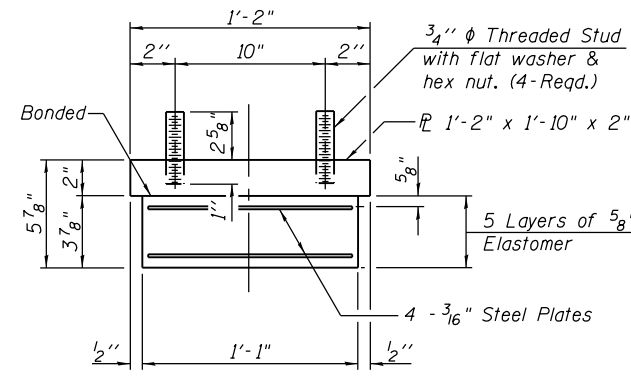
Note:  
Shim plates shall not be placed under Bearing Assembly.



**SIDE RETAINER**

(At West Abutment)

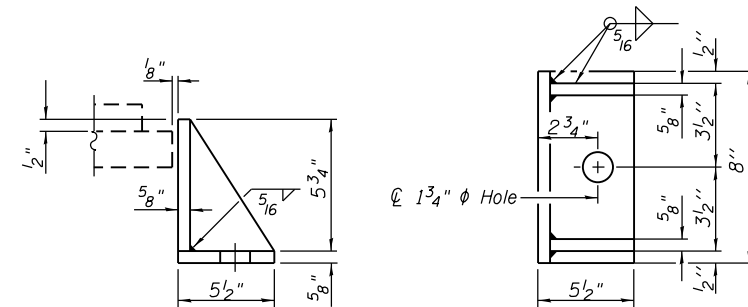
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



**BEARING ASSEMBLY**

(At Pier 2)

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



**SIDE RETAINER**

(At Pier 2)

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

**SHIM PLATE TABLE**

(For W. Abut. & Pier 2)

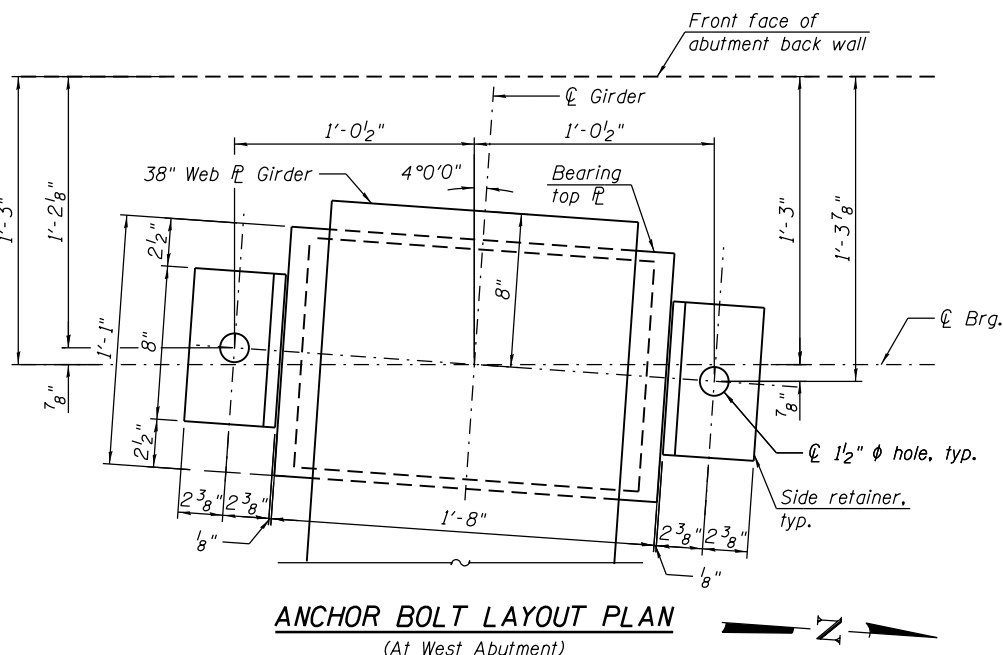
Girder	W. Abut.	Pier 2
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	1/8"
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-

**NOTES:**

- Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
- Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.
- Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
- Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
- The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 50.
- Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details. See shim plate table.
- All (embedded and separate) bearing plates, side retainers, anchor bolts, nuts and washers shall be galvanized according to AASHTO M111 or M232 as applicable.

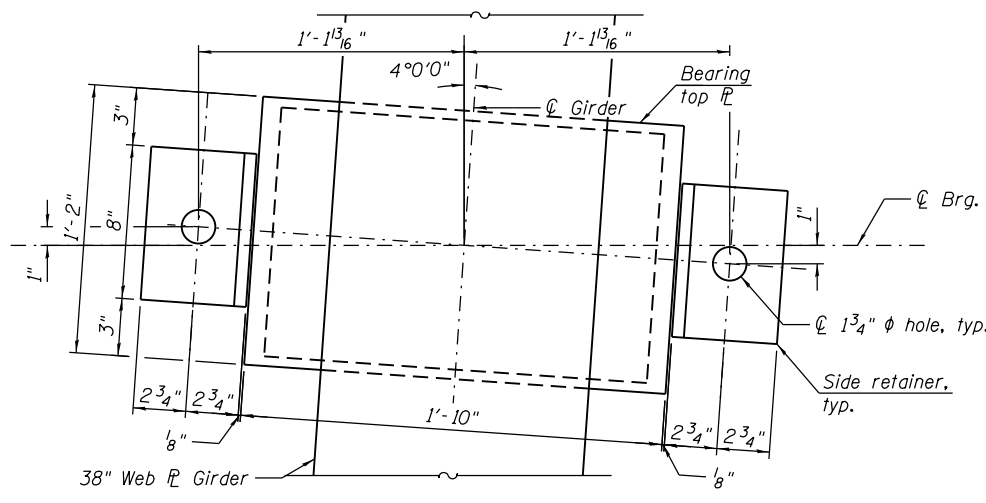
**BILL OF MATERIAL**

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	28
Anchor Bolts, 1/4"	Each	28
Anchor Bolts, 1/2"	Each	28



**ANCHOR BOLT LAYOUT PLAN**

(At West Abutment)



**ANCHOR BOLT LAYOUT PLAN**

(At Pier 2)

I-2E-1

I-27-12

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FAX: (708) 236-0901

DESIGNED - JJS  
DRAWN - JJS  
CHECKED - MI, MAI  
DATE - 10/24/2014

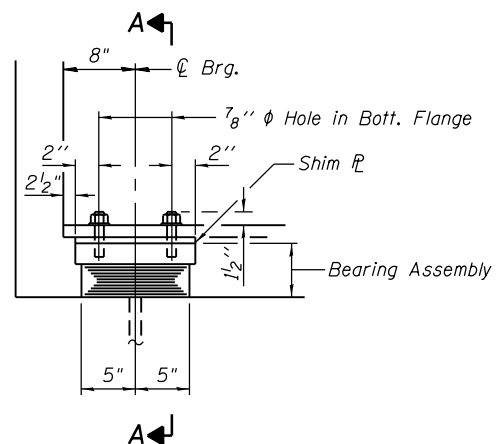
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ELASTOMERIC BEARING TYPE I  
STRUCTURE NO. 016-1165**

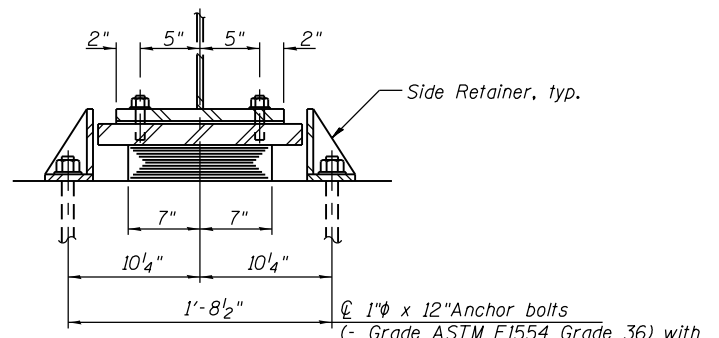
SCALE: SHEET 51-40 OF 51-63 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	227

CONTRACT NO. 60W30  
ILLINOIS FED. AID PROJECT

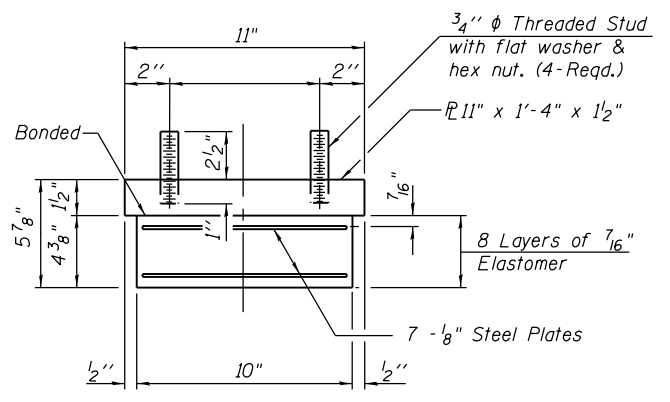


**ELEVATION AT ABUT.**



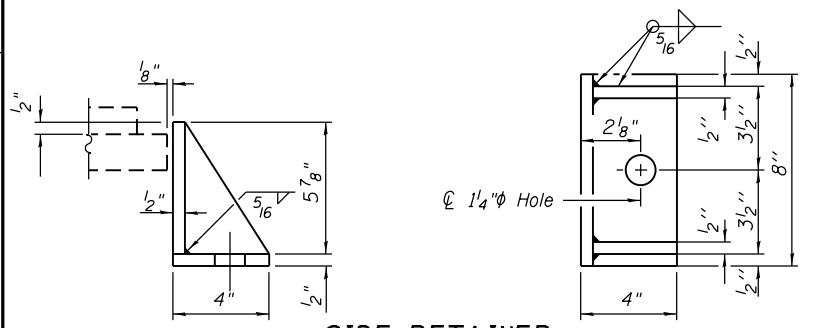
**SECTION A-A**

**TYPE I ELASTOMERIC EXP. BRG.**  
(At East Abutment)



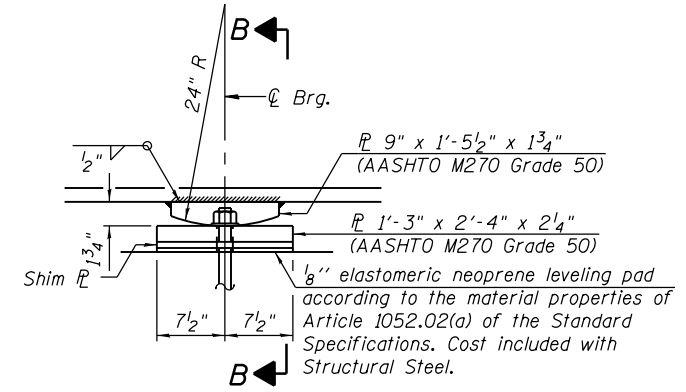
**BEARING ASSEMBLY**  
(At East Abutment)

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



**SIDE RETAINER**  
(At East Abutment)

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

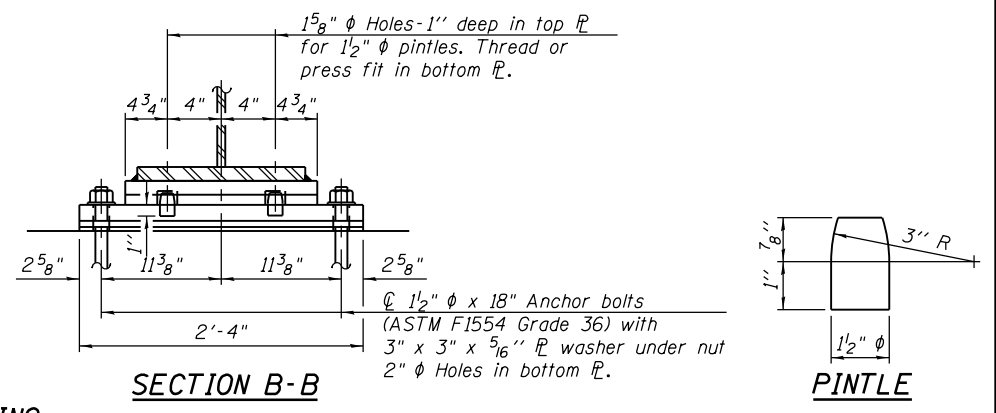


**ELEVATION AT PIER**

**FIXED BEARING**  
(At Pier 1)

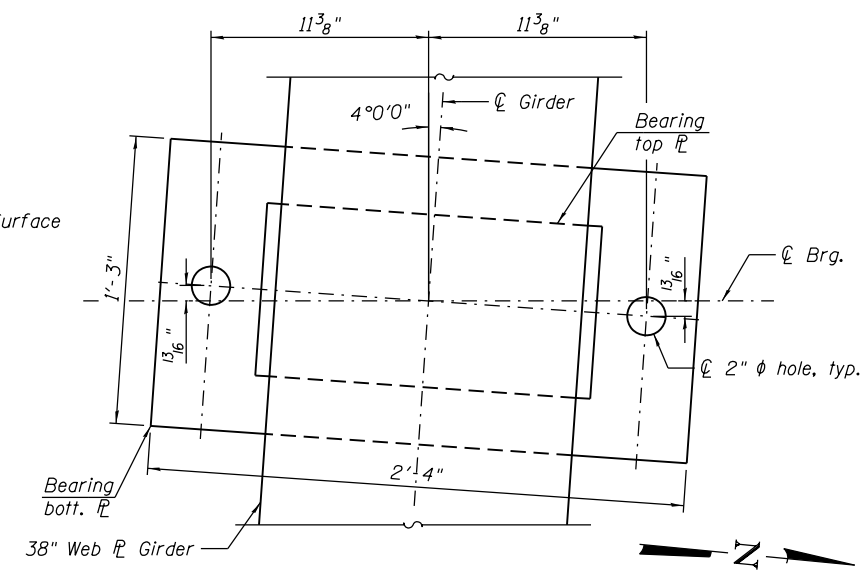
**NOTES:**

- Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
- Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
- Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.
- Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
- The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 50.
- Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
- Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details. See shim plate table.
- Cost of fixed bearings shall be included with Furnishing and Erecting Structural Steel.
- All (embedded and separate) bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable.

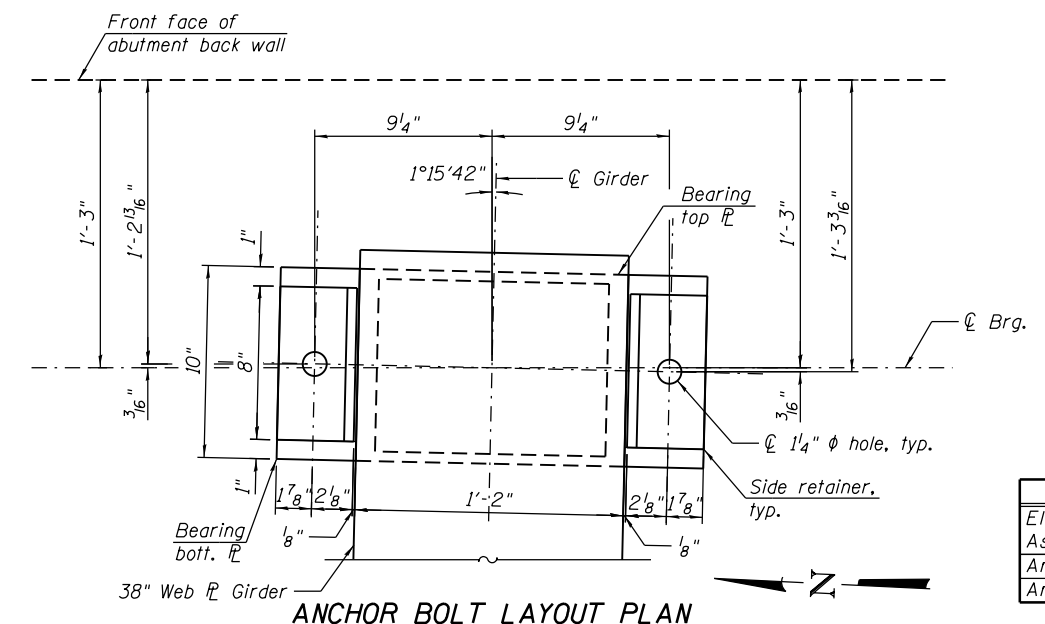


**SECTION B-B**

**PINTLE**



**ANCHOR BOLT LAYOUT PLAN**  
(At Pier 1)



**ANCHOR BOLT LAYOUT PLAN**  
(At East Abutment)

**BILL OF MATERIAL**

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	14
Anchor Bolts, 1"	Each	28
Anchor Bolts, 1 1/2"	Each	28

**HBM**  
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HILLSIDE, IL 60162  
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FAX: (708) 236-0901

DESIGNED - JJS	REVISED
DRAWN - JJS	REVISED
CHECKED - MI, MAI	REVISED
DATE - 10/24/2014	REVISED

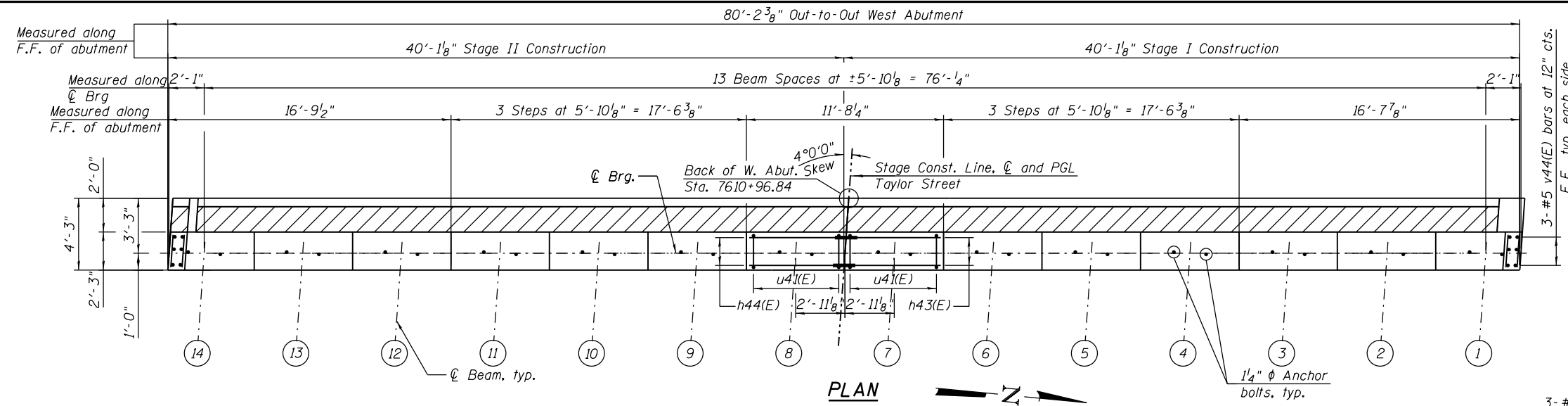
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**ELASTOMERIC BEARING TYPE I AND FIXED BEARING**  
**STRUCTURE NO. 016-1165**

SCALE: SHEET S1-41 OF S1-63 SHEETS STA. TO STA.

F.A.I R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	228
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60W30	

FILE PATH = p:\617479-P\INT\aecon\line\local\BECM\_D592\_NA\Documents\01\_Americas\Tr\enqer\action\60269938 Circle\Phase 1\1000\_CAD\008\_Structural\Structure\_016-1165-016165-60W30-S41-Bearing2

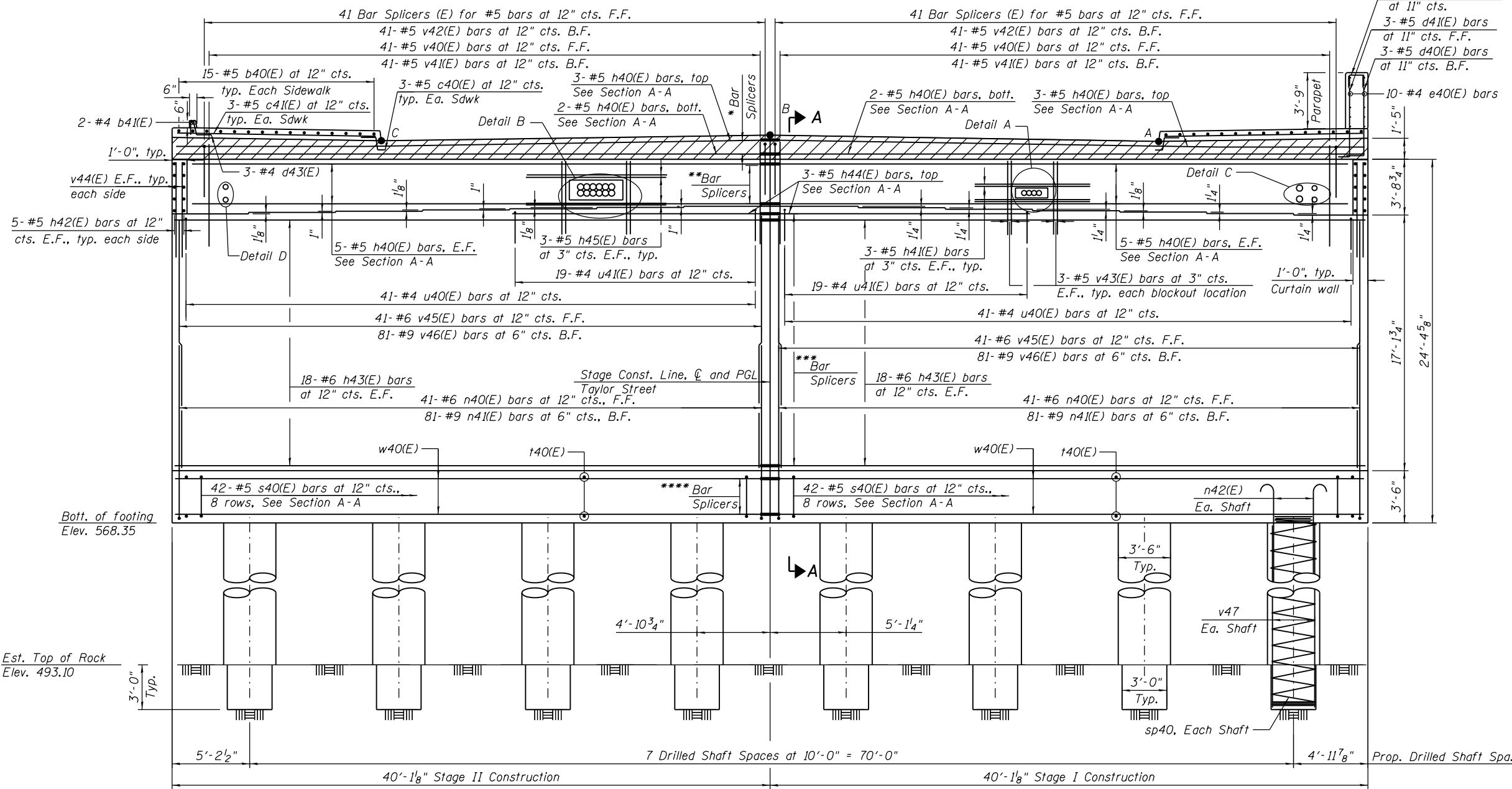


**PLAN**  
(Looking West)

**NOTES:**

1. For Section A-A, see Sheet S1-44.
2. For Details A, B, C and D, see Sheet S1-45.
3. For anchor bolt layout plan, see Sheet S1-40.
4. For location of ITS, lighting and City of Chicago conduits, see lighting plans. The Contractor shall coordinate the locations of ComEd conduits with the ComEd plans and ComEd Contractor.
5. Reinforcement bars designated (E) shall be epoxy coated.

- \* 3-Bar Splicers (E) for h40(E) bars Top, 2-Bar Splicers (E) for h40(E) bars Bottom.
- \*\* 5-Bar Splicers (E) for h40(E) bars E.F.
- \*\*\* 18-Bar Splicers (E) for h43(E) bars E.F., 3-Bar Splicers (E) for h44(E) bars Top.
- \*\*\*\* 16-Bar Splicers (E) for w40(E) bars top & bott.



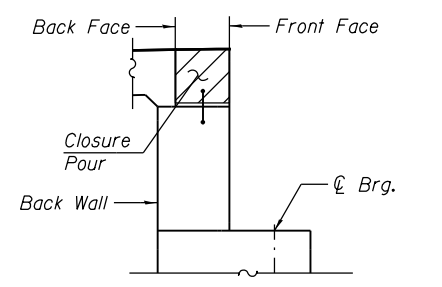
**ELEVATION**  
(Looking West)

**TOP OF SEAT ELEVATION**

Girder No.	Seat Elevation
1	589.00
2	589.10
3	589.20
4	589.29
5	589.39
6	589.49
7	589.59
8	589.59
9	589.51
10	589.42
11	589.34
12	589.25
13	589.17
14	589.08

**TOP OF BACKWALL (CLOSURE POUR) ELEVATIONS**

POINTS	FRONT FACE	BACK FACE
A - North Curb Line	593.93	593.91
B - Crown	594.36	594.34
C - South Curb Line	593.98	593.96



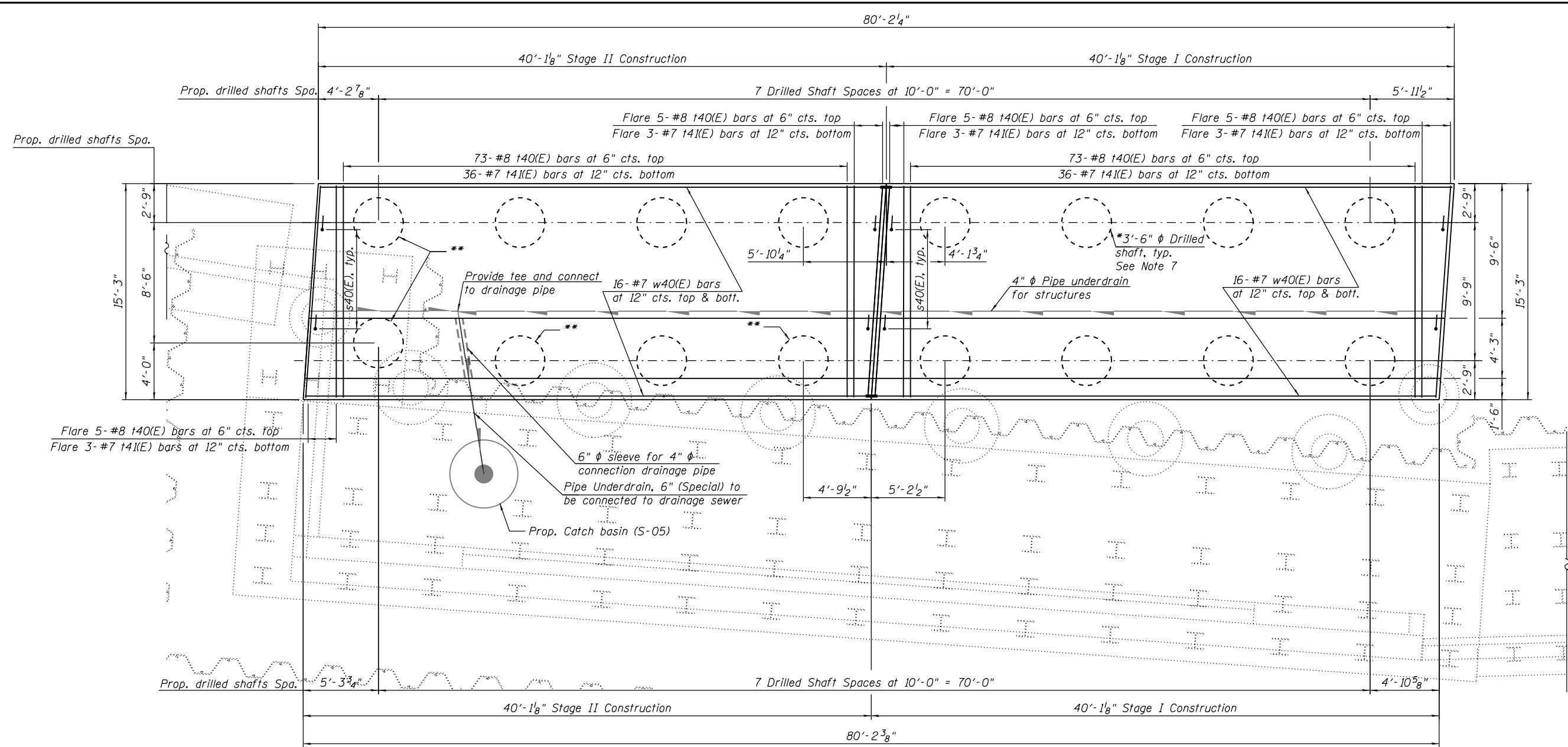
**HBM**  
ENGINEERING GROUP, LLC.  
CONSULTING & DESIGN  
INSPECTION & RATING  
RESEARCH & TESTING

0161165-60W30-S42--WestAbutPlan&Elev	DESIGNED - MI, WM	REVISED
USER NAME = ahmod.issa	DRAWN - WM, MA	REVISED
PLOT SCALE = 8:0.00 "/td> <td>CHECKED - MAI, MI</td> <td>REVISED</td>	CHECKED - MAI, MI	REVISED
PLOT DATE = 12/16/2014	DATE - 10/24/2014	REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**WEST ABUTMENT PLAN AND ELEVATION**  
**STRUCTURE NO. 016-1165**  
SCALE: SHEET S1-42 OF S1-63 SHEETS STA. TO STA.

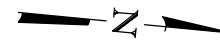
F.A.I R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	229
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60W30	



**NOTES:**

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Driving piles and temporary sheet piling are not allowed.
3. For Bill of Materials, see Sheet S1-44.
4. For existing abutments removal details, see Sheet S1-10 and S1-11.
5. Space footing reinforcement to miss extended reinforcement from drilled shaft.
6. The locations of the existing drilled shafts shall be field verified by the Contractor and coordinated with the Engineer prior to construction of the proposed shafts.
7. Existing plans indicate that manmade obstructions are present at the locations of the proposed drilled shafts as shown. Any additional effort required in the construction of the drilled shafts shall not be paid separately but shall be included in Foundation Construction at Existing Obstructions.
8. Portions of Existing Sheet Piling No. 2 interfering with new drilled shafts construction shall be extracted by the Contractor prior to drilling the drilled shafts. Cost shall be included with Removal of Existing Structures No. 1.
9. For Temporary Soil Retention System details, see Sheets S1-07 and S1-08.

**FOOTING PLAN**



\* When Contractor's means and methods include initiating drilling for shafts at elevations higher than the final top of shaft elevation (e.g. Existing Ground Elevation), the costs for drilling, disposing of excavation, providing casing and backfilling of drilled shafts or other appurtenant work activities in the areas between the elevation where drilling is initiated and the proposed elevation of the top of shaft shall not be paid for separately but shall be included in the cost of Drilled Shaft in Soil.

\*\* Drilled Shaft included with Foundation Construction at Existing Obstructions.

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0161165-60W30-S43-WestAbutFooting	DESIGNED - MI, WM	REVISED
USER NAME = ahmod.issa	DRAWN - WM, MA	REVISED
PLOT SCALE = 8:0.0009' = 1" = 11'	CHECKED - MAJ, MI	REVISED
PLOT DATE = 12/16/2014	DATE - 10/24/2014	REVISED

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**WEST ABUTMENT FOOTING PLAN AND SECTIONS  
STRUCTURE NO. 016-1165**

SCALE: SHEET S1-43 OF S1-63 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	230
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

**NOTES:**

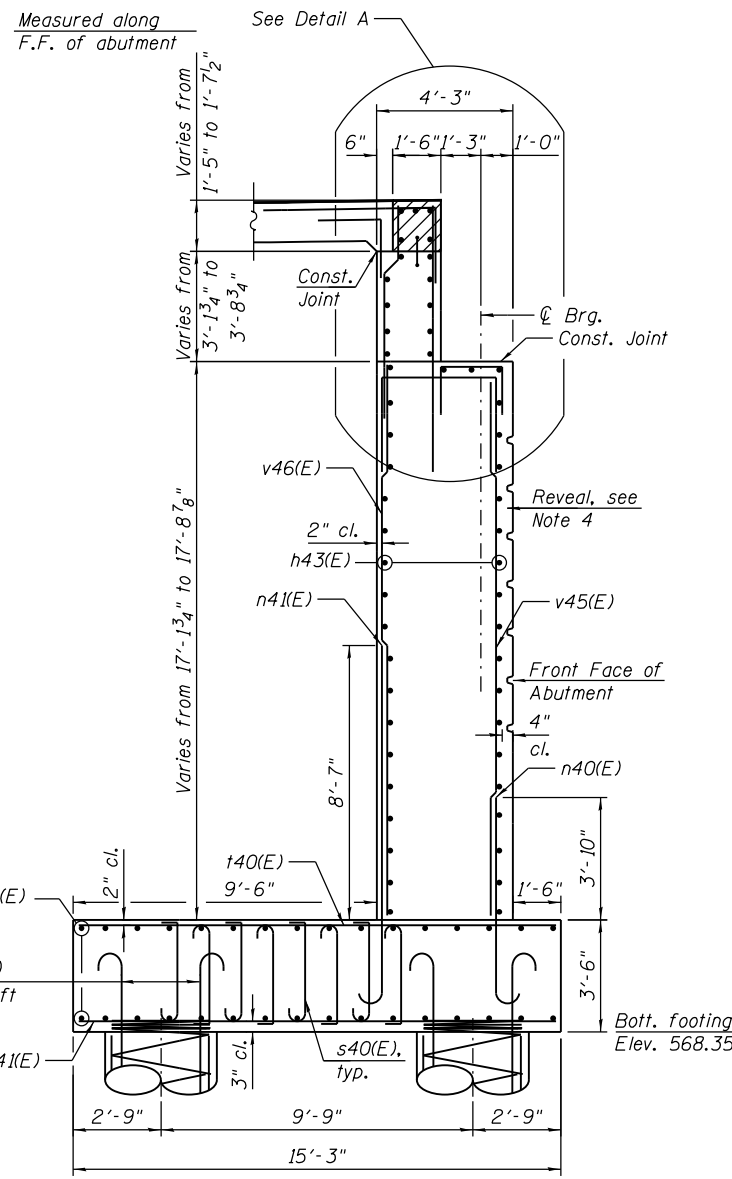
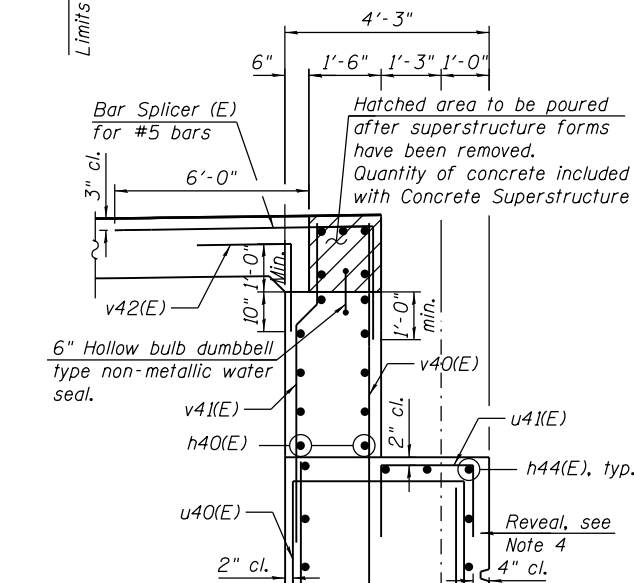
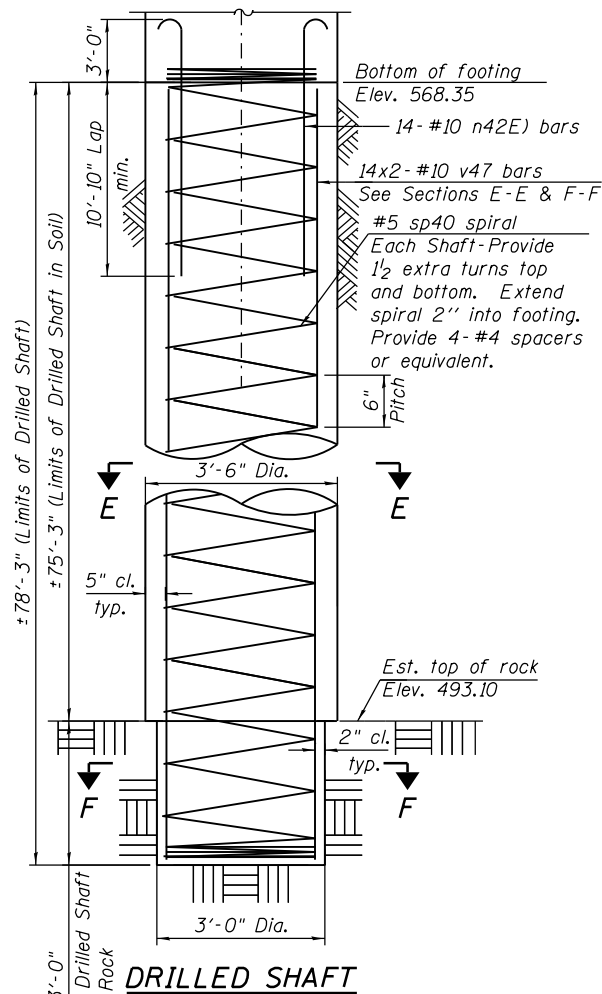
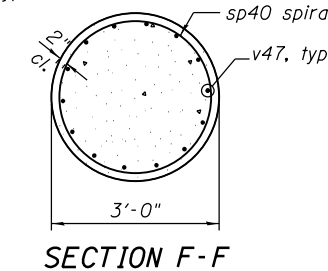
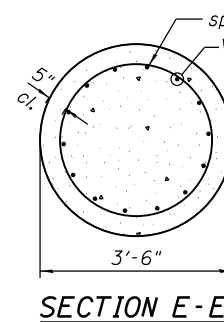
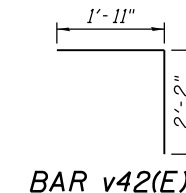
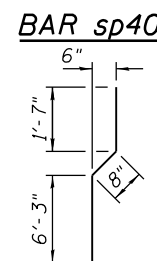
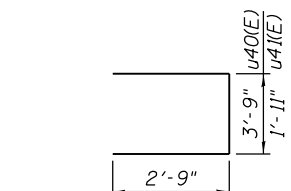
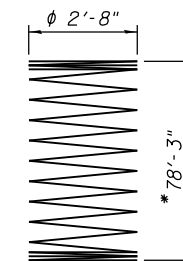
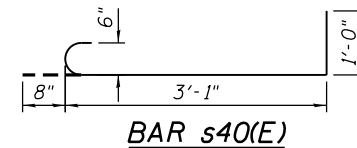
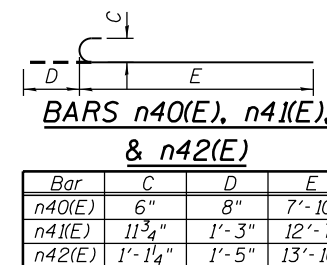
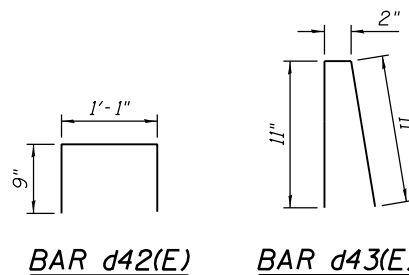
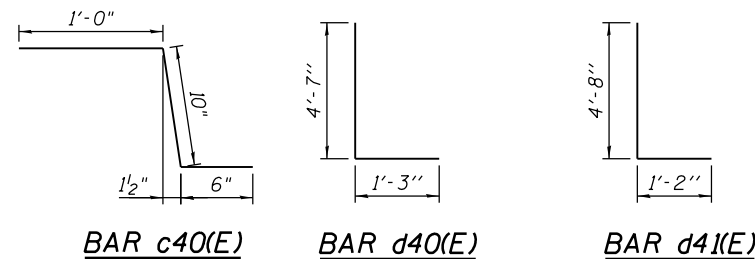
1. Reinforcement bars designated (E) shall be epoxy coated.
2. Apply concrete sealer to all exposed concrete surfaces of the abutment.
3. All edges shall have standard 3/4" chamfer.
4. For reveal details, see Sheet S1-46.
5. Bars noted thus, 18x2-#14 indicates 18 lines of bars with 2 lengths of bars per line.

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
b40(E)	28	#5	1'-6"	—
b41(E)	2	#4	1'-6"	—
c40(E)	3	#5	2'-4"	—
c41(E)	3	#5	13'-8"	—
d40(E)	3	#5	5'-10"	L
d41(E)	3	#5	5'-10"	L
d42(E)	3	#5	2'-7"	—
d43(E)	3	#4	2'-0"	—
e40(E)	10	#4	1'-6"	—
h40(E)	30	#5	39'-10"	—
h41(E)	12	#5	7'-9"	—
h42(E)	20	#5	1'-11"	—
h43(E)	72	#6	39'-10"	—
h44(E)	6	#5	17'-3"	—
h45(E)	12	#5	9'-5"	—
n40(E)	82	#6	8'-6"	—
n41(E)	162	#9	13'-10"	—
n42(E)	224	#10	15'-3"	—
s40(E)	672	#5	4'-9"	—
sp40	16	#5	78'-3"	—
t40(E)	166	#8	14'-11"	—
t41(E)	84	#7	14'-11"	—
u40(E)	82	#4	9'-3"	—
u41(E)	38	#4	7'-5"	—
v40(E)	82	#5	8'-3"	—
v41(E)	82	#5	8'-6"	—
v42(E)	82	#5	4'-1"	—
v43(E)	24	#5	4'-4"	—
v44(E)	12	#5	7'-1"	—
v45(E)	82	#6	16'-10"	—
v46(E)	162	#9	16'-10"	—
v47	448	#10	44'-4"	—
w40(E)	64	#7	39'-10"	—
Structure Excavation		Cu Yd	2,707	
Concrete Structures		Cu Yd	400.2	
Concrete Superstructure		Cu Yd	7.6	
Protective Coat		Sq Yd	18	
Reinforcement Bars		Pound	107,670	
Reinforcement Bars, Epoxy Coated		Pound	61,170	
Drilled Shaft in Soil		Cu Yd	429	
Drilled Shaft in Rock		Cu Yd	13	
Concrete Sealer		Sq Ft	2,029	
Geocomposite Wall Drain		Sq Yd	187	
Crosshole Sonic Logging		Each	1	
Foundation Construction at Existing Obstructions		Each	4	
Granular Backfill for Structures		Cu Yd	269	
Pipe Underdrains for Structures 4"		Foot	92	

\*Length is height of spiral

Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"
#10	10'-10"
#11	13'-4"



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DESIGNED - MI, WM	REVISED
DRAWN - WM, MA	REVISED
CHECKED - MAI, MI	REVISED
DATE - 10/24/2014	REVISED

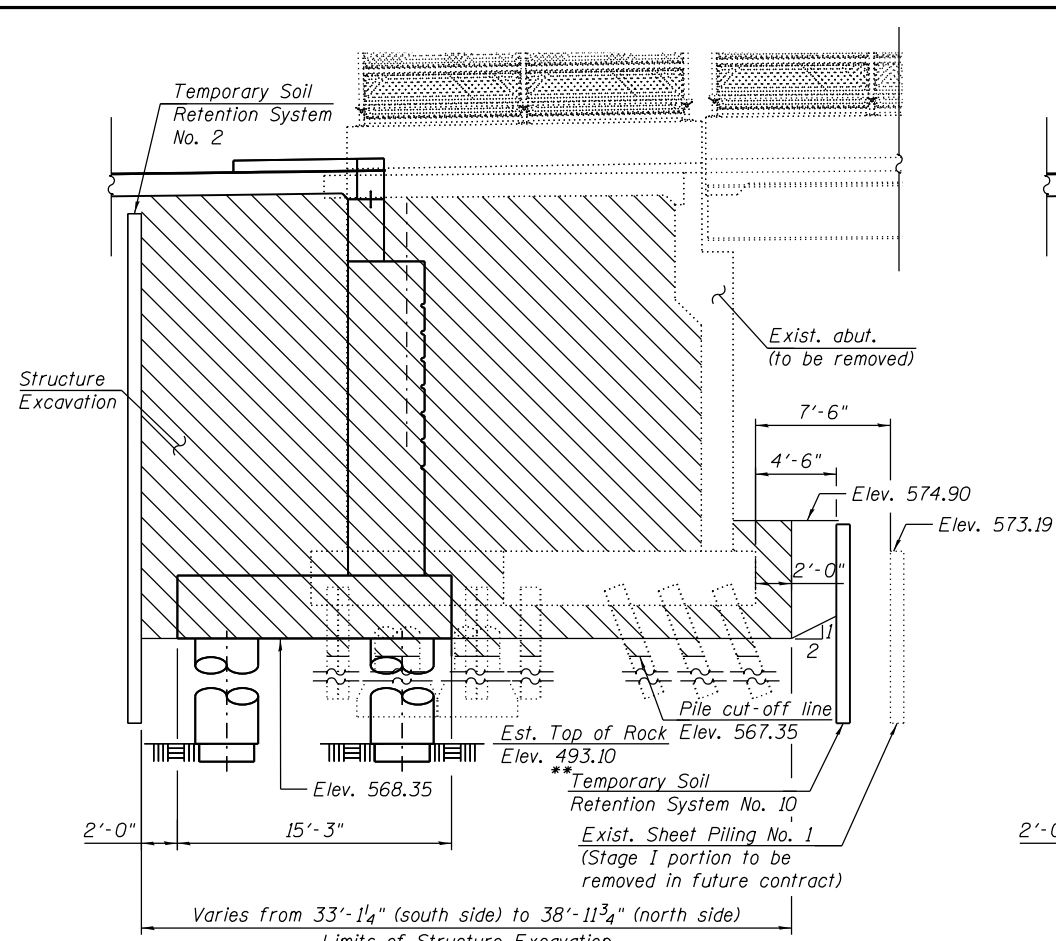
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 DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT SECTIONS AND DETAILS (SHEET 1 OF 2)  
 STRUCTURE NO. 016-1165

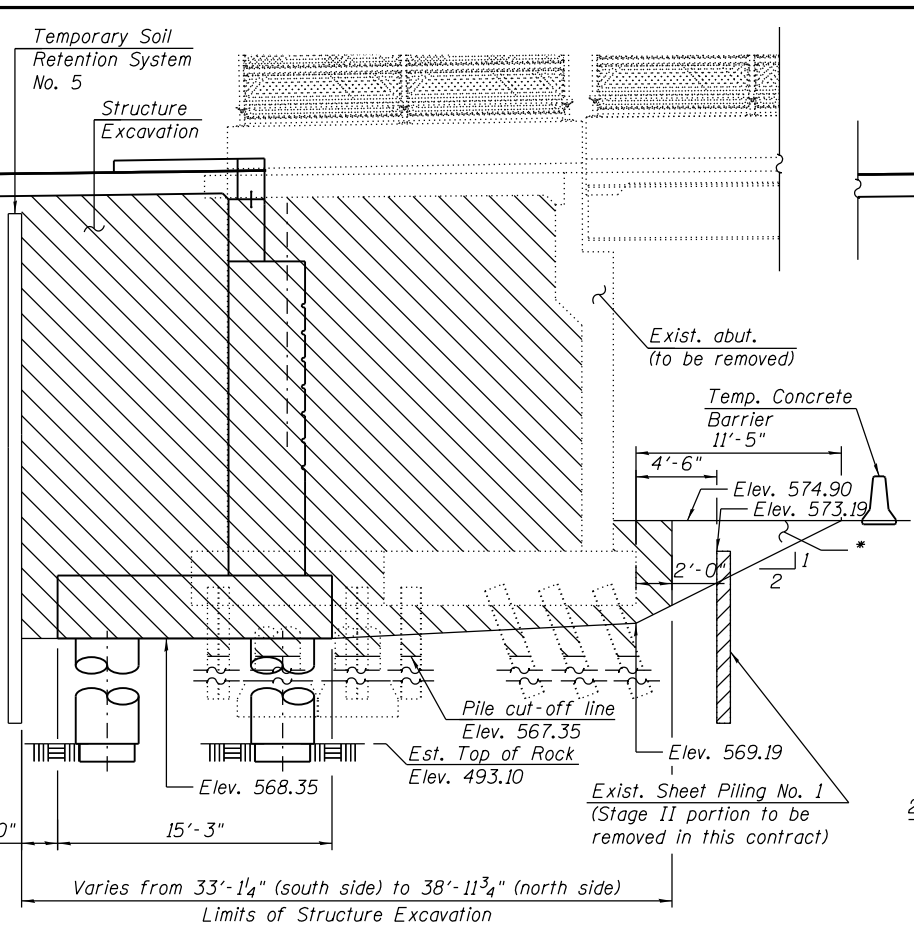
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F.A.I. RTE. 90/94	SECTION 2013-012R	COUNTY COOK	TOTAL SHEETS 385	SHEET NO. 231
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

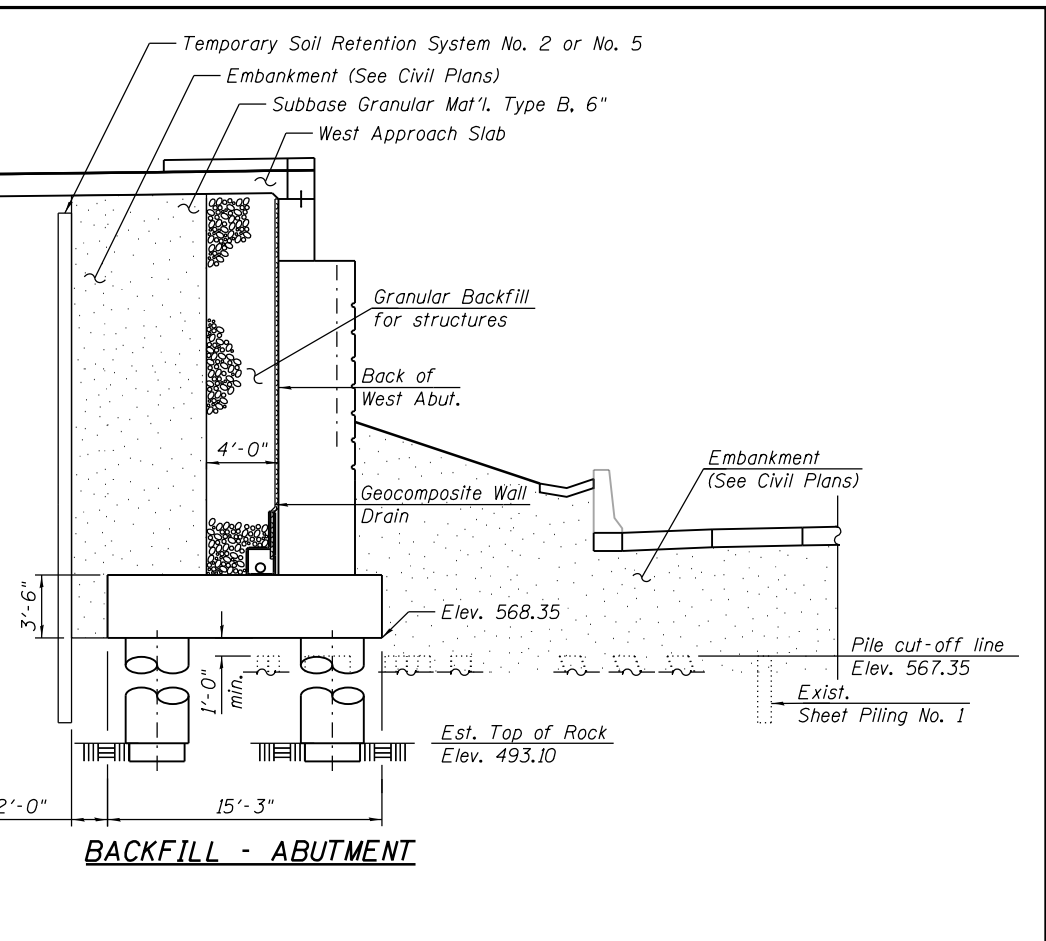




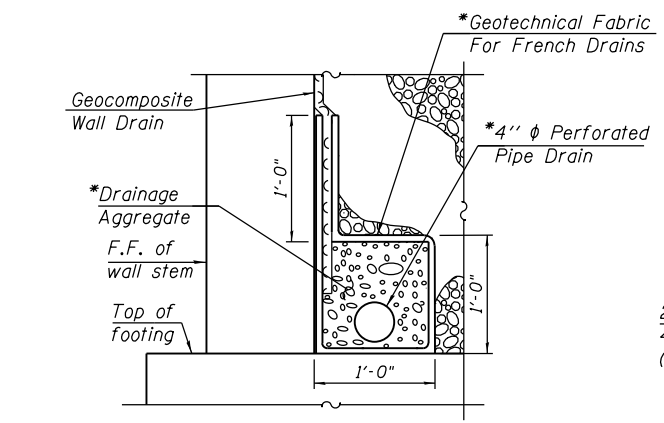
**STRUCTURE EXCAVATION - ABUTMENT**  
(Stage I Construction)



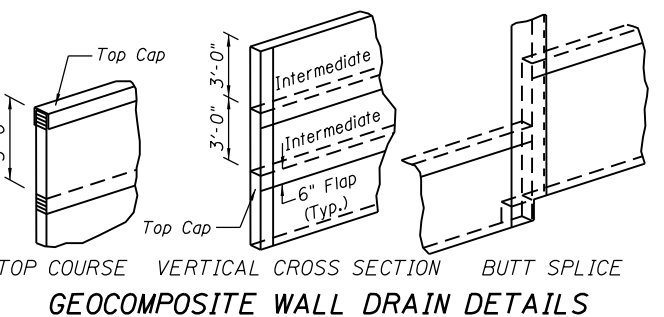
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(Stage II Construction)



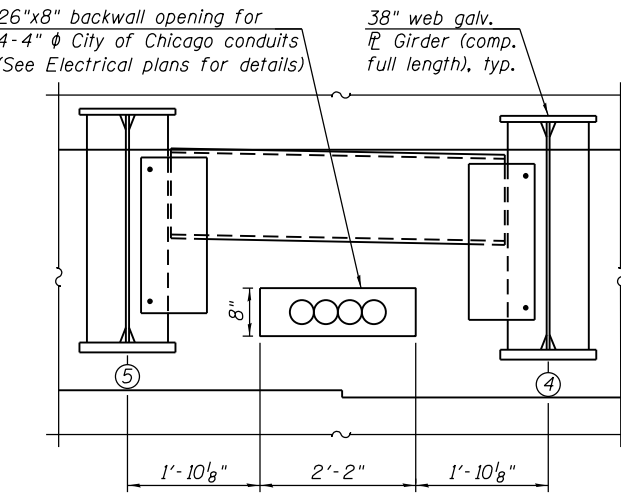
**BACKFILL - ABUTMENT**



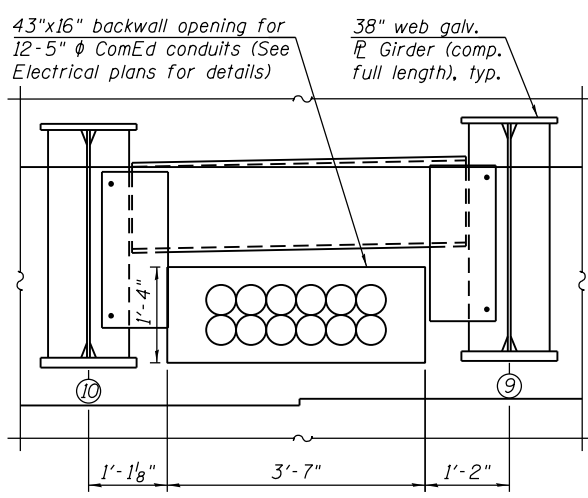
**PIPE UNDERDRAIN DETAIL**  
\*Included in the cost of Pipe Underdrains for Structures, 4"



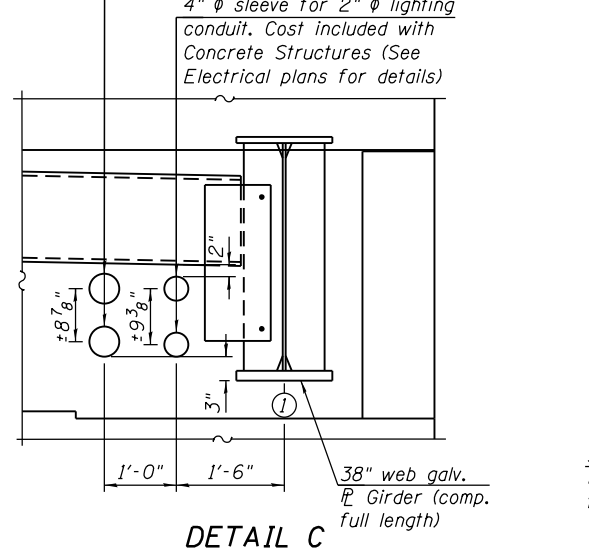
\* The structure excavation area in front of the existing abutment footing shall not impact the existing CRC pavement.  
\*\* See Sheet S1-11 for Existing Sheet Piling No. 1 removal limits in conflict with Temporary Soil Retention System No. 10.



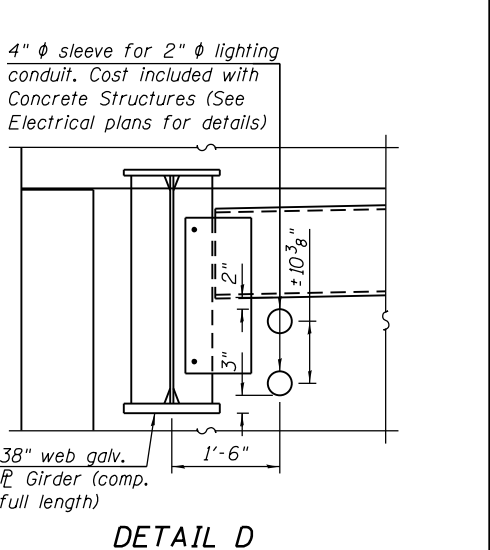
**DETAIL A**



**DETAIL B**



**DETAIL C**



**DETAIL D**

**NOTES:**

1. Conduit provide by others Contractor to coordinate with utility owner for location and size of the utility. Cost of utility blockouts included in Concrete Structures (See Electrical Plans).
2. Conduit/ductbank openings in backwall to be sealed by Contractor, with State-approved sealant, to prevent spill-through of backfill. Cost included with Concrete Structures.  
5" φ sleeve for 3" φ traffic signals conduit. Cost included with Concrete Structures (See Traffic Signals plans for details)

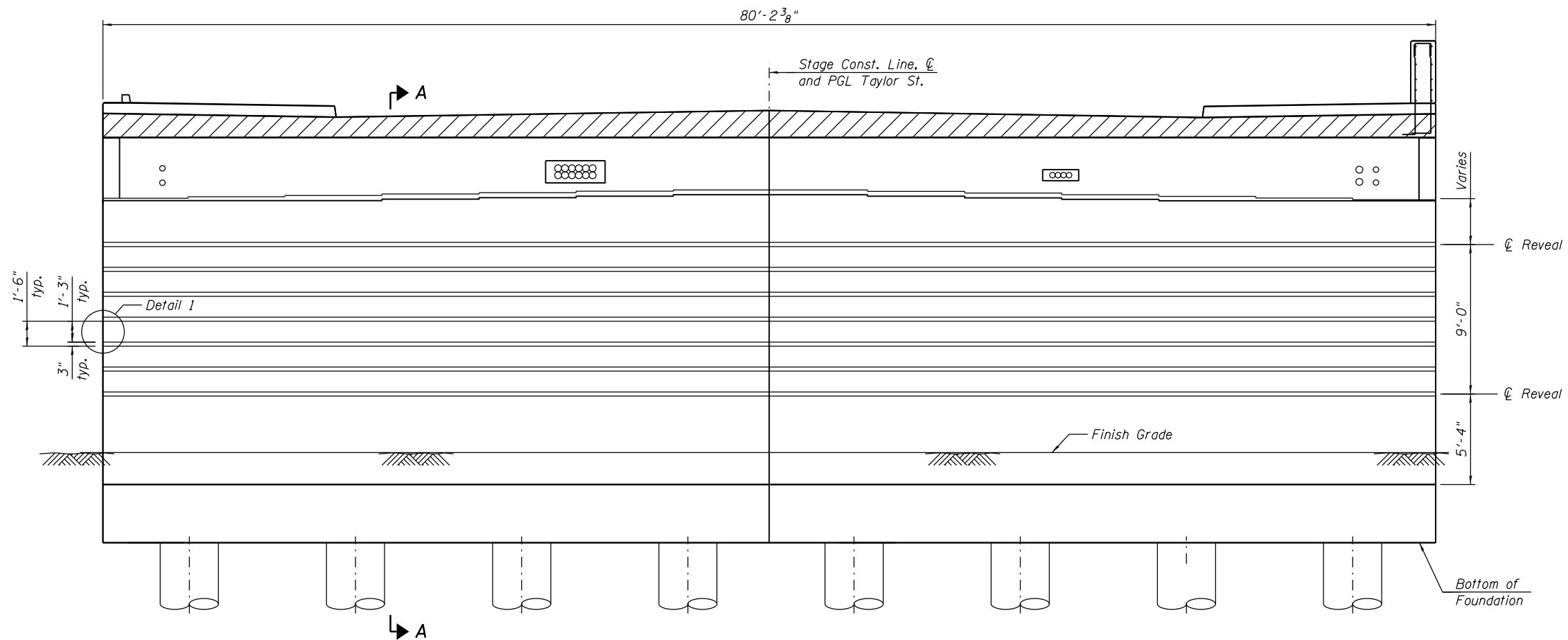
**LEGEND:**

- Granular Backfill for Structures
- Structure Excavation
- Embankment
- Existing Sheet Piling to be removed (Cost included in Removal of Existing Structures No. 1)

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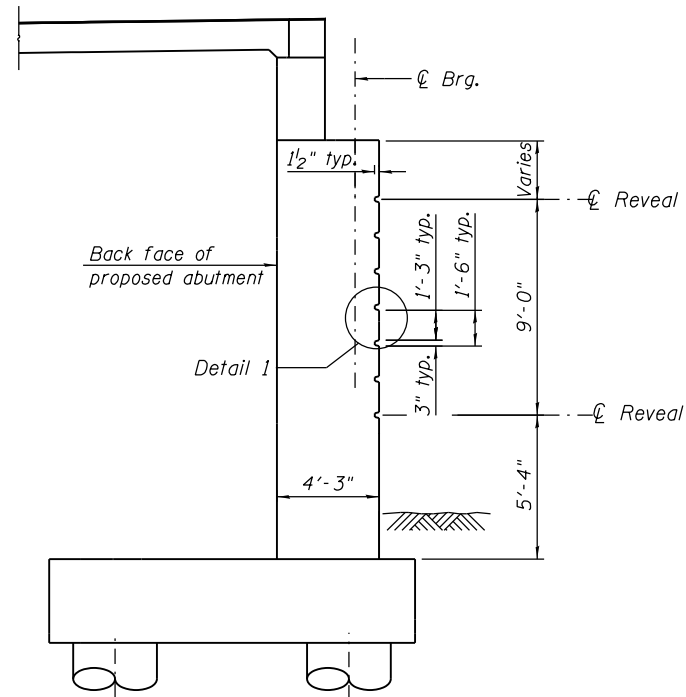
<b>HBM</b> ENGINEERING GROUP, LLC. CONSULTING & DESIGN INSPECTION & RATING RESEARCH & TESTING 4415 WEST HARRISON ST. SUITE 231 HILLSIDE, IL 60162 PHONE: (708) 236-0900 FAX: (708) 236-0901	0161165-60W30-545-WestAbutSects&Det2 USER NAME = ahmed.issa PLOT SCALE = 10x.0000 1' / 16" PLOT DATE = 12/16/2014	DESIGNED - MI, WM DRAWN - WM, MA CHECKED - MAI, MI DATE - 10/24/2014	REVISED REVISED REVISED REVISED	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>WEST ABUTMENT SECTIONS AND DETAILS (SHEET 2 OF 2)</b> <b>STRUCTURE NO. 016-1165</b>	F.A.I R.T.E. 90/94	SECTION 2013-012R	COUNTY COOK	TOTAL SHEETS 385	SHEET NO. 232	CONTRACT NO. 60W30 ILLINOIS FED. AID PROJECT
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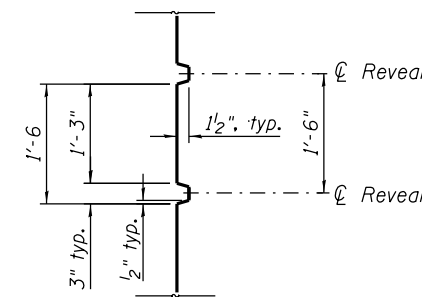


**WEST ABUTMENT ELEVATION - ARCHITECTURAL DETAILS**

(Looking West)



**SECTION A-A**



**DETAIL 1**

(Typical Reveal Detail)

**NOTE:**

The 3" x 1/2" reveal will not be paid separately and shall be included in the cost of the pay item "Concrete Structures".

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0161165-60W30-546-WestAbutArchDet  
 USER NAME = ahmod.issa  
 PLOT SCALE = 8:0.0000 '1' = 11"  
 PLOT DATE = 12/16/2014

DESIGNED - MR  
 DRAWN - MR, AI  
 CHECKED - MI, JJS  
 DATE - 10/24/2014

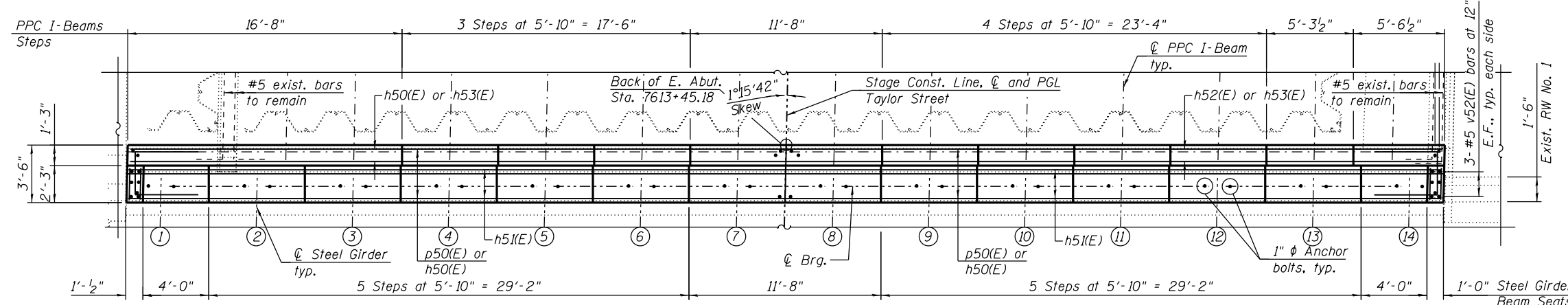
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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**WEST ABUTMENT ARCHITECTURAL DETAILS**  
**STRUCTURE NO. 016-1165**

SCALE: SHEET S1-46 OF S1-63 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	233
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

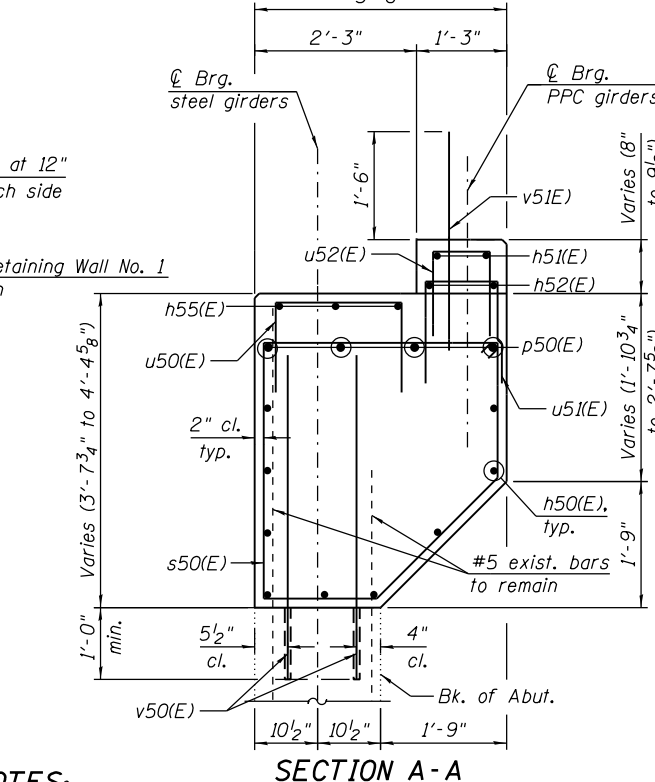
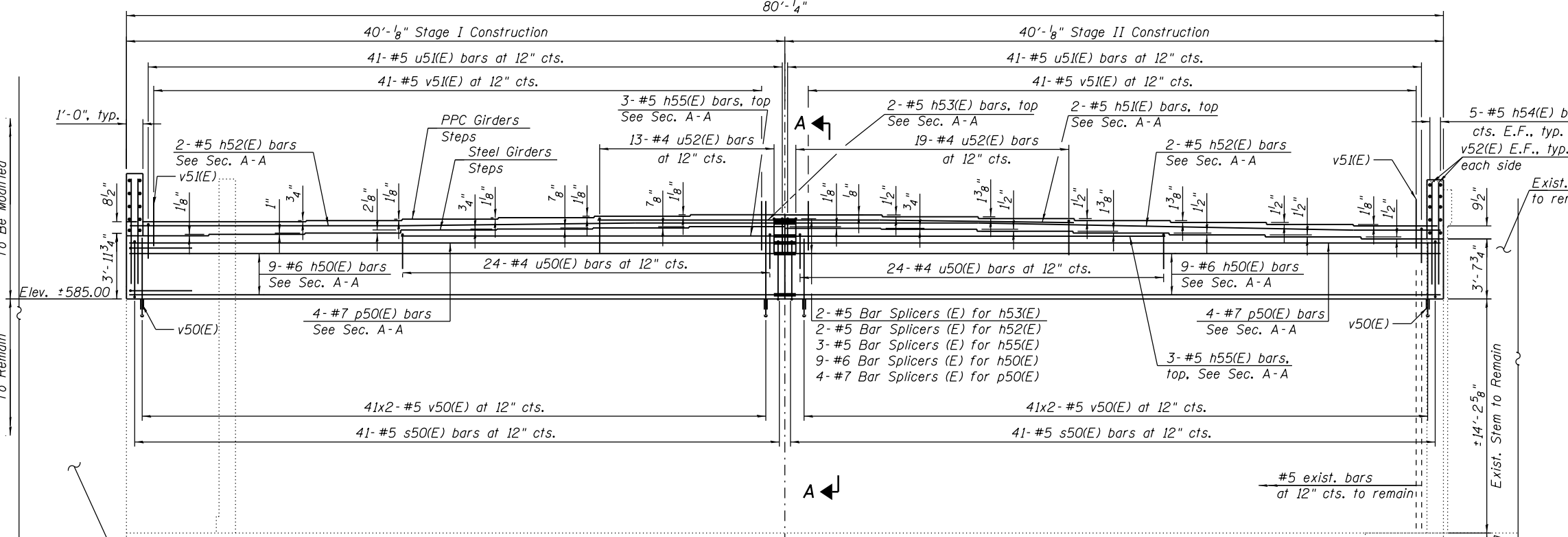


**PLAN**  
80'-1/4"

**TOP OF SEAT ELEVATION**

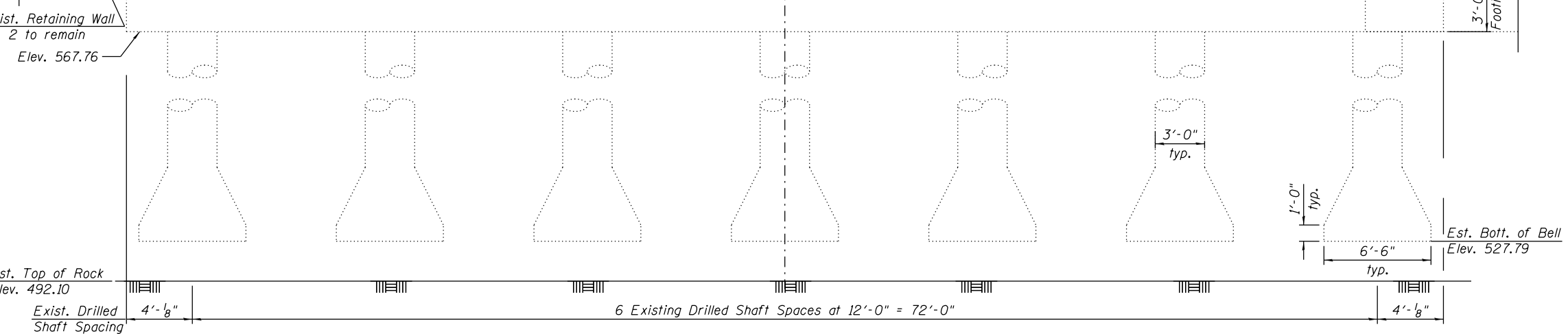
(For Steel Girders) (For PPC I-Beams) at E. Abut.

Girder No.	Seat Elevation	Girder No.	Seat Elevation
1	588.81	2V	589.67
2	588.90	3V	589.73
3	588.98	4V	589.82
4	589.16	5V	589.91
5	589.22	6V	590.00
6	589.29	7V	590.09
7	589.36	8V	590.08
8	589.27	9V	589.96
9	589.21	10V	589.85
10	589.09	11V	589.73
11	588.98	12V	589.62
12	588.86	13V	589.50
13	588.74	14V	589.41
14	588.62		



**SECTION A-A**

- NOTES:**
- For anchor bolts layout plan, see Sheet S1-41.
  - Removal cost for curtain wall that is in conflict with construction of top part of east abutment and diaphragm is included with Removal of Existing Structures No. 1. Existing reinforcement bars extending from curtain wall into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Removal of Existing Structures No. 1.
  - A discrepancy exists between the As-Built Drawings and the survey data in the location of the front face of East Abutment. It is the Contractor's responsibility to verify all dimensions in the field and inform the Engineer of any variations prior to construction, fabrication and ordering materials.
  - Space reinforcement in cap to miss anchor bolts.
  - Pour steps monolithically with cap.
  - For bar diagrams, bill of material, see Sheet S1-49.
  - The v50(E) bars are to be drilled and epoxy grouted in accordance with Section 584 of the Standard Specifications. Cost included with Concrete Structures.



**ELEVATION**  
(Looking East)

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0161165-60W30-547-EastAbutPlan&Elev	DESIGNED - MI, MA	REVISED
USER NAME = ahmed.issa	DRAWN - MA, SK	REVISED
PLOT SCALE = 8.0000' / 1"	CHECKED - MAI, MI	REVISED
PLOT DATE = 12/16/2014	DATE - 10/24/2014	REVISED

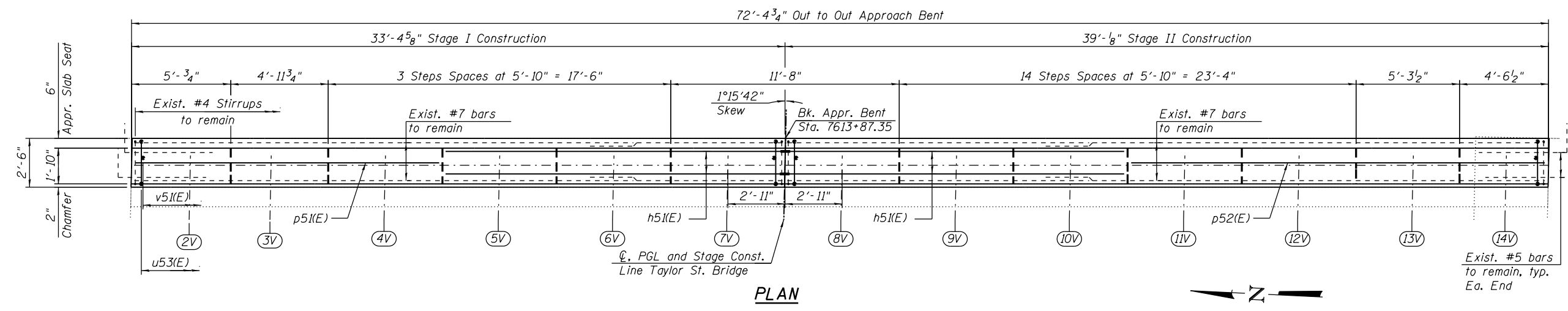
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**EAST ABUTMENT PLAN AND ELEVATION**  
**STRUCTURE NO. 016-1165**

SCALE: SHEET S1-47 OF S1-63 SHEETS STA. TO STA.

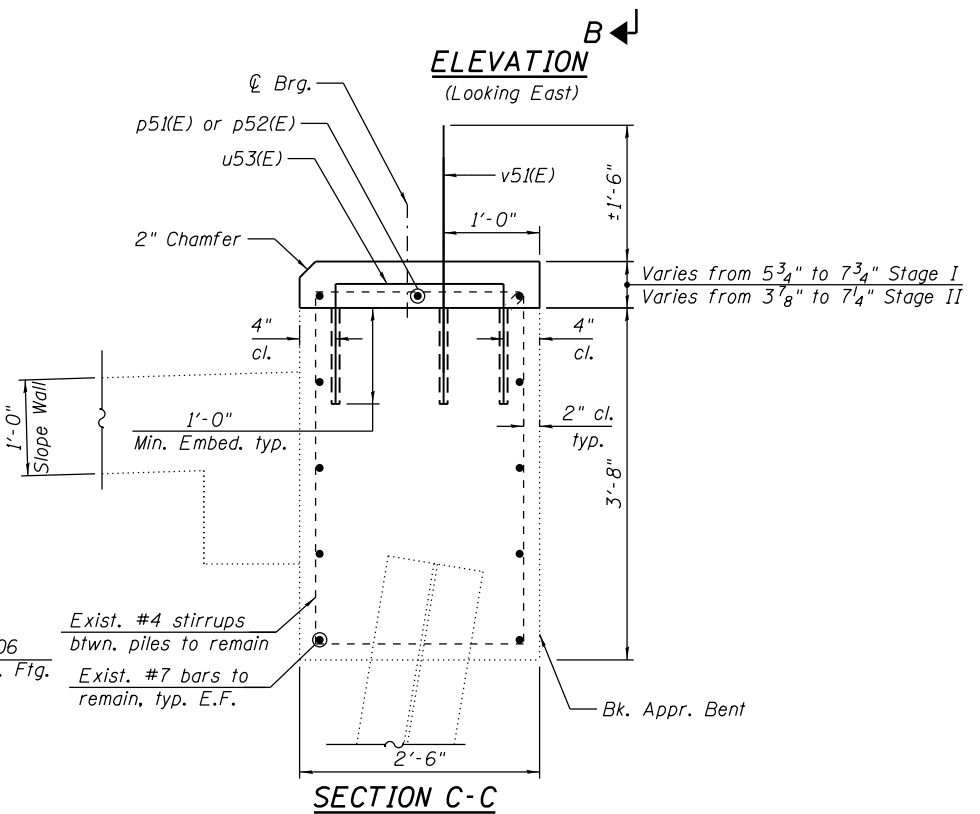
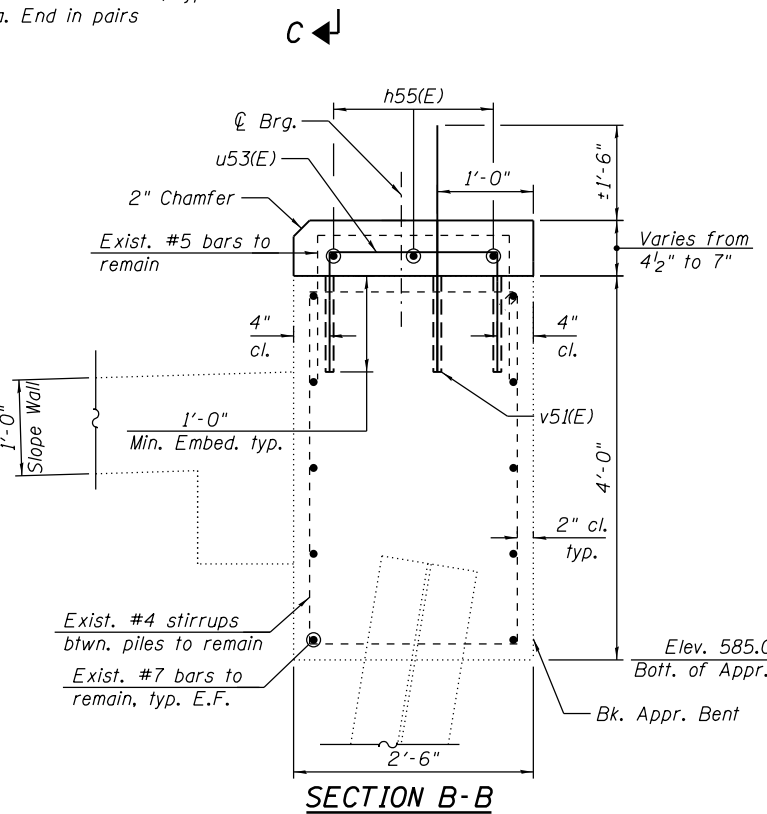
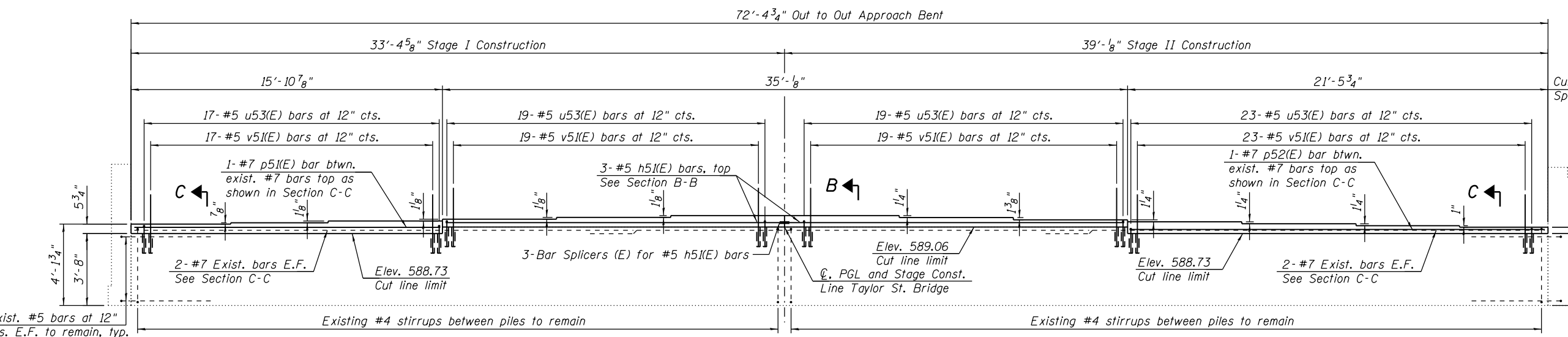
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CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

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**TOP OF SEAT ELEVATION**  
(For PPC I-Beams at Approach Bent)

Girder No.	Seat Elevation
V2	589.21
V3	589.28
V4	589.37
V5	589.46
V6	589.55
V7	589.64
V8	589.64
V9	589.54
V10	589.43
V11	589.33
V12	589.23
V13	589.13
V14	589.05



**NOTES:**

- Reinforcement bars designated (E) shall be epoxy coated.
- For bar diagrams, bill of material and Backfill and Structure Excavation limits, see Sheet S1-49.
- For Diaphragms details at East Abutment and Approach Bent, see Sheet S1-25B.
- The u53(E) & v51(E) bars are to be drilled and epoxy grouted in accordance with Section 584 of the Standard Specifications. Cost included with Concrete Structures.
- Space reinforcement to miss existing extended reinforcement from approach bent.
- Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Removal of Existing Structures No. 1.
- The presented elevations and limits of the existing approach bent shall be field verified by the Contractor and coordinated with the Engineer prior to ordering materials, fabrication and construction of the proposed upper portion.
- Pour steps monolithically with cap.

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0161165-60W30-548-EastApprPlan&Elev	DESIGNED - MI, MA	REVISED
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PLOT DATE = 12/16/2014	DATE - 10/24/2014	REVISED

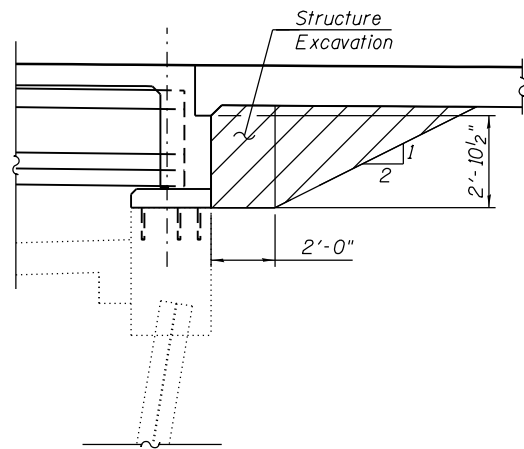
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**EAST ABUTMENT APPROACH BENT PLAN AND ELEVATION  
STRUCTURE NO. 016-1165**

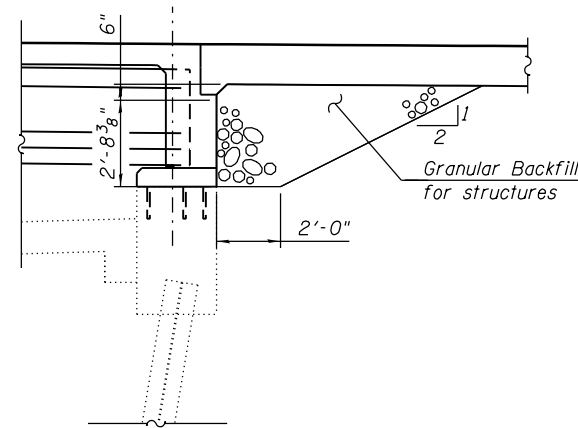
SCALE: SHEET S1-48 OF S1-63 SHEETS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2013-012R	COUNTY COOK	TOTAL SHEETS 385	SHEET NO. 235
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60W30	

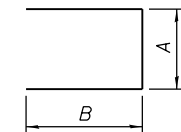
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**STRUCTURE EXCAVATION - VAULTED ABUTMENT**

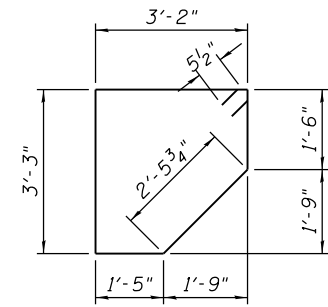


**BACKFILL - VAULTED ABUTMENT**



**BAR u50(E), u51(E), u52(E) & u53(E)**

Bar	A	B
u50(E)	1'-8"	2'-9"
u51(E)	1'-0"	2'-9"
u52(E)	1'-0"	2'-9"
u53(E)	1'-8"	1'-3"



**BAR s50(E)**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h50(E)	18	#6	39'-9"	————
h51(E)	8	#5	17'-3"	————
h52(E)	4	#5	39'-9"	————
h53(E)	2	#5	11'-4"	————
h54(E)	20	#5	1'-11"	————
h55(E)	6	#5	23'-0"	————
p50(E)	8	#7	39'-9"	————
p51(E)	1	#7	15'-7"	————
p52(E)	1	#7	21'-2"	————
s50(E)	82	#5	12'-9"	D
u50(E)	48	#4	7'-5"	□
u51(E)	82	#5	6'-6"	□
u52(E)	32	#4	6'-6"	□
u53(E)	78	#5	4'-2"	□
v50(E)	164	#5	4'-5"	————
v51(E)	160	#5	3'-0"	————
v52(E)	12	#5	6'-8"	————
Structure Excavation		Cu Yd	54	
Concrete Structures		Cu Yd	49.3	
Reinforcement Bars, Epoxy Coated		Pound	6,020	
Concrete Sealer		Sq Ft	1,792	
Granular Backfill for Structures		Cu Yd	54	

**NOTES:**

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Apply concrete sealer to all exposed concrete surfaces of the abutment.
3. All edges shall have standard 3/4" chamfer.

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 FAX: (708) 236-0901

0161165-60W30-S49-EastAbutSects&Det1	DESIGNED - MI, MA	REVISED
USER NAME = ahmod.issa	DRAWN - MA, SK	REVISED
PLOT SCALE = 2.0000' / 1"	CHECKED - MAI, MI	REVISED
PLOT DATE = 12/16/2014	DATE - 10/24/2014	REVISED

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**EAST ABUTMENT SECTIONS AND DETAILS  
 STRUCTURE NO. 016-1165**

SCALE: SHEET S1-49 OF S1-63 SHEETS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2013-012R	COUNTY COOK	TOTAL SHEETS 385	SHEET NO. 236
			CONTRACT NO. 60W30	
ILLINOIS FED. AID PROJECT				

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0161165-60W30-S50-EastAbutSects&Det2	DESIGNED -	REVISED
USER NAME = ahmod.issa	DRAWN - JJS	REVISED
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PLOT DATE = 12/16/2014	DATE - 10/24/2014	REVISED

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

STRUCTURE NO. 016-1165

SCALE: SHEET S1-50 OF S1-63 SHEETS STA. TO STA.

F.A.I RTE. 90/94	SECTION 2013-012R	COUNTY COOK	TOTAL SHEETS 385	SHEET NO. 237
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

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4415 WEST HARRISON ST.  
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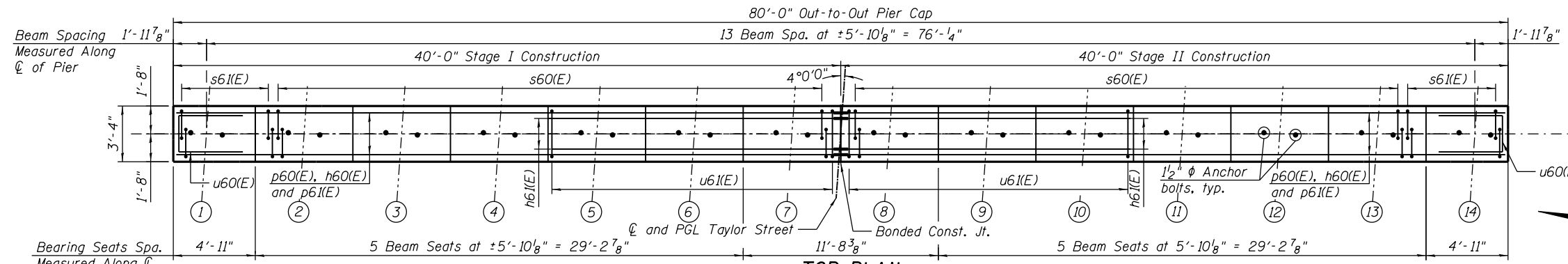
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PLOT DATE = 12/16/2014	DATE - 10/24/2014	REVISED

STATE OF ILLINOIS  
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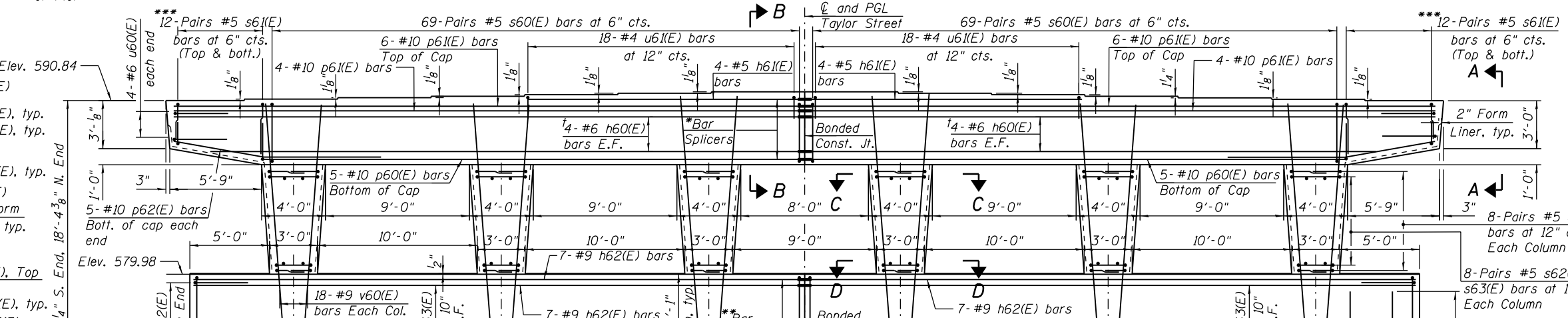
STRUCTURE NO. 016-1165

SCALE: SHEET S1-51 OF S1-63 SHEETS STA. TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

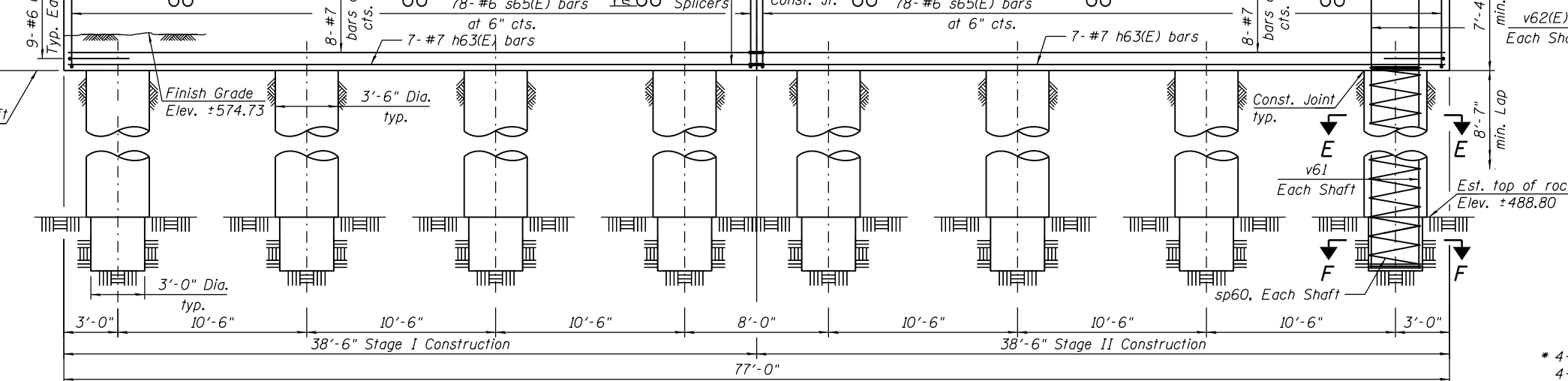


**TOP PLAN**

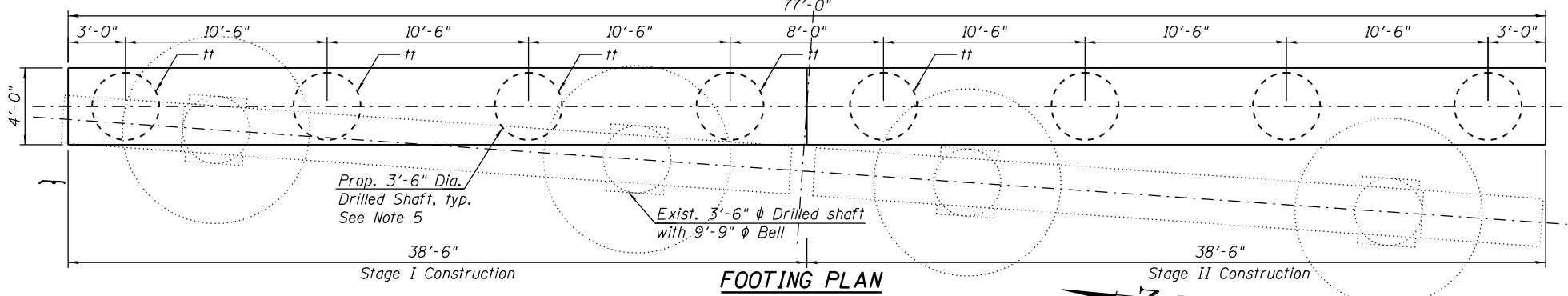


**TOP OF SEAT ELEVATION**

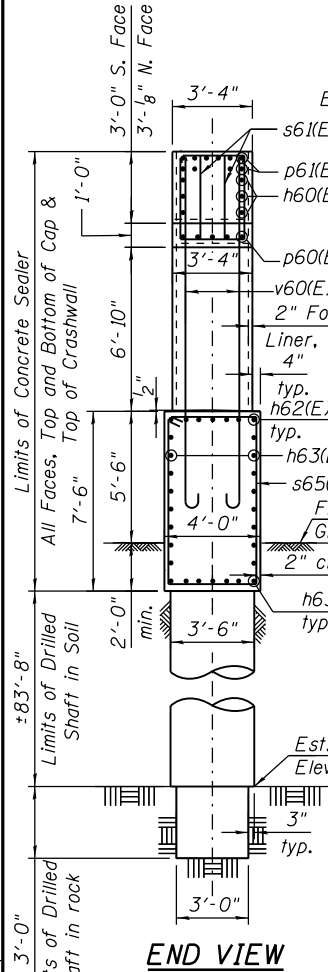
Girder No.	Seat Elevation
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2	590.93
3	591.02
4	591.11
5	591.20
6	591.29
7	591.38
8	591.38
9	591.29
10	591.20
11	591.11
12	591.01
13	590.92
14	590.83



**ELEVATION**  
(Looking East)



**FOOTING PLAN**  
(Reinforcement not Shown for clarity)



**END VIEW**

- NOTES:**
1. Pour steps monolithically with cap.
  2. Space reinforcement in cap to miss anchor bolts.
  3. For sections A-A, B-B, C-C, D-D, E-E, F-F and bill of material, see Sheet S1-52.
  4. For anchor bolts layout, see Sheet S1-41.
  5. Existing plans indicate that obstructions are present at the location of the proposed drilled shaft. Any additional effort required in the construction of the drilled shaft shall not be paid separately but shall be included in Foundation Construction at Existing Obstructions.
  6. For removal of existing barrier walls under the bridge, see Civil Plans.

- \* 4-Bar Splicers (E) for h60(E) bars E.F., 4-Bar Splicers (E) for h6(E) bars Top, 5-Bar Splicers (E) for p60(E) bars Bottom, 10-Bar Splicers (E) for p6(E) bars Top.
- \*\* 7-Bar Splicers (E) for h62(E) bars Top, 7-Bar Splicers (E) for h63(E) bars Bottom, 8-Bar Splicers (E) for h63(E) bars E.F.
- \*\*\* Cut vertical legs of bars to fit.

- † Order bars full length. Cut in field to fit pier cap ends.
- †† Drilled Shaft included with Foundation Construction at Existing Obstructions.

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PHONE: (708) 236-0900  
FAX: (708) 236-0901

0161165-60W30-S52-PierPlan&Elev	DESIGNED - WM, ARA	REVISED
USER NAME = ahmod.issa	DRAWN - MAA, WM	REVISED
PLOT SCALE = 8.0000'' / 1''	CHECKED - MAI, MI	REVISED
PLOT DATE = 12/16/2014	DATE - 10/24/2014	REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**PIER 1 PLAN AND ELEVATION**  
**STRUCTURE NO. 016-1165**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	239
CONTRACT NO. 60W30				
ILLINOIS FED. AID PROJECT				

SCALE: SHEET S1-52 OF S1-63 SHEETS STA. TO STA.

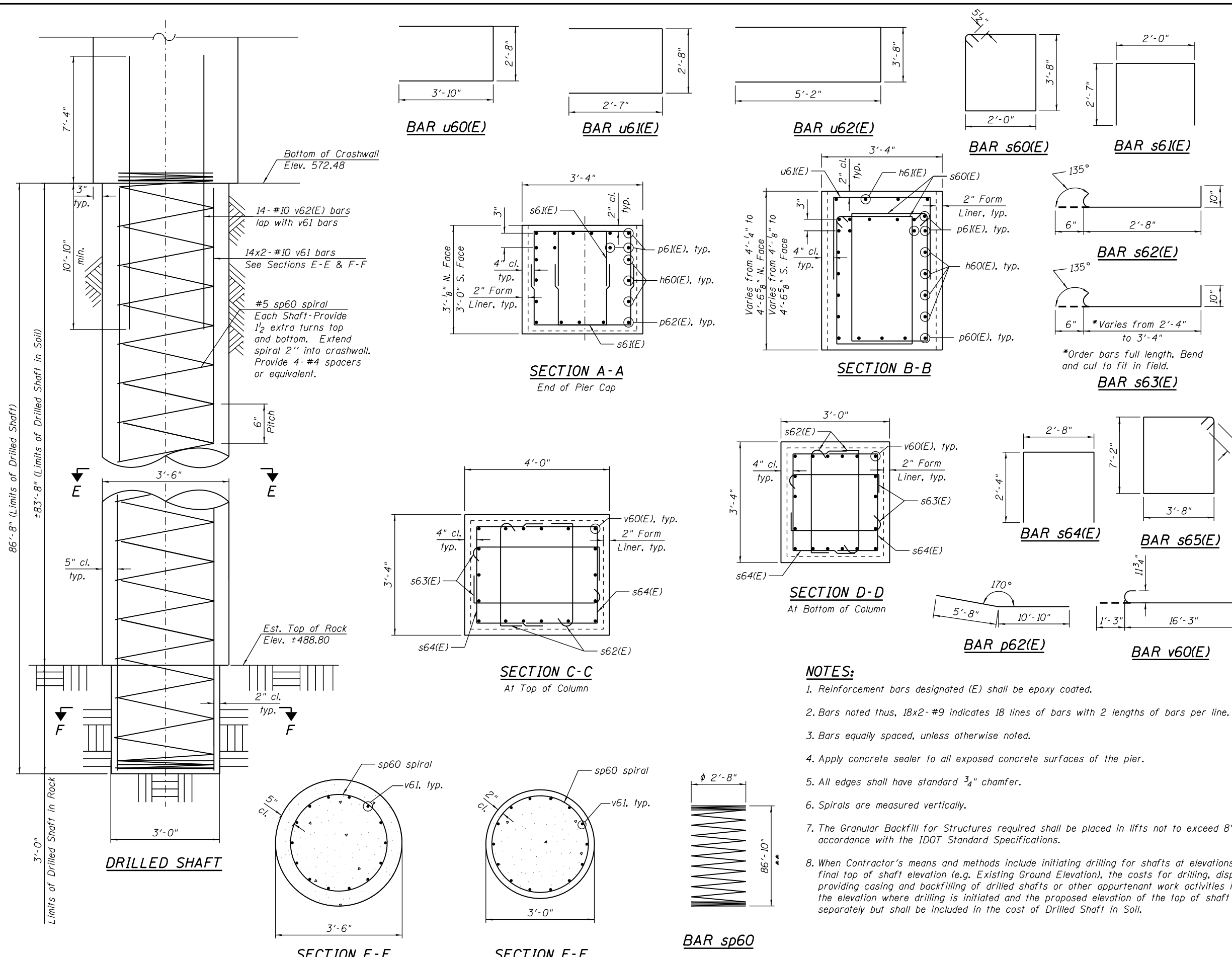


**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h60(E)	16	#6	39'-6"	—
h61(E)	8	#5	17'-4"	—
h62(E)	14	#9	38'-3"	—
h63(E)	46	#7	38'-3"	—
p60(E)	10	#10	33'-8"	—
p61(E)	20	#10	39'-6"	—
p62(E)	10	#10	16'-6"	—
s60(E)	276	#5	12'-3"	□
s61(E)	96	#5	7'-2"	□
s62(E)	96	#5	4'-0"	□
s63(E)	96	#5	4'-8"	□
s64(E)	96	#5	7'-4"	□
s65(E)	156	#6	23'-0"	□
sp60	8	#5	86'-10"	⋮
u60(E)	8	#6	10'-4"	□
u61(E)	36	#4	7'-10"	□
u62(E)	18	#6	17'-2"	□
v60(E)	108	#9	17'-6"	—
v61	224	#10	48'-6"	—
v62(E)	112	#10	18'-2"	—
Structure Excavation			Cu Yd	138.5
Concrete Structures			Cu Yd	145
Reinforcement Bars			Pound	59,030
Reinforcement Bars, Epoxy Coated			Pound	39,150
Drilled Shaft in Soil			Cu Yd	238.5
Drilled Shaft in Rock			Cu Yd	6.5
Concrete Sealer			Sq Ft	3,155
Crosshole Sonic Logging			Each	1
Foundation Construction at Existing Obstruction			Each	5
Granular Backfill for Structures			Cu Yd	197

\*\*Length is height of spiral

Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"
#10	10'-10"



**NOTES:**

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Bars noted thus, 18x2-#9 indicates 18 lines of bars with 2 lengths of bars per line.
3. Bars equally spaced, unless otherwise noted.
4. Apply concrete sealer to all exposed concrete surfaces of the pier.
5. All edges shall have standard 3/4" chamfer.
6. Spirals are measured vertically.
7. The Granular Backfill for Structures required shall be placed in lifts not to exceed 8" and compacted in accordance with the IDOT Standard Specifications.
8. When Contractor's means and methods include initiating drilling for shafts at elevations higher than the final top of shaft elevation (e.g. Existing Ground Elevation), the costs for drilling, disposing of excavation, providing casing and backfilling of drilled shafts or other appurtenant work activities in the areas between the elevation where drilling is initiated and the proposed elevation of the top of shaft shall not be paid for separately but shall be included in the cost of Drilled Shaft in Soil.

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 FAX: (708) 236-0901

DESIGNED - WM, ARA	REVISIONS
DRAWN - MAA, WM	REVISIONS
CHECKED - MAI, MI	REVISIONS
DATE - 10/24/2014	REVISIONS

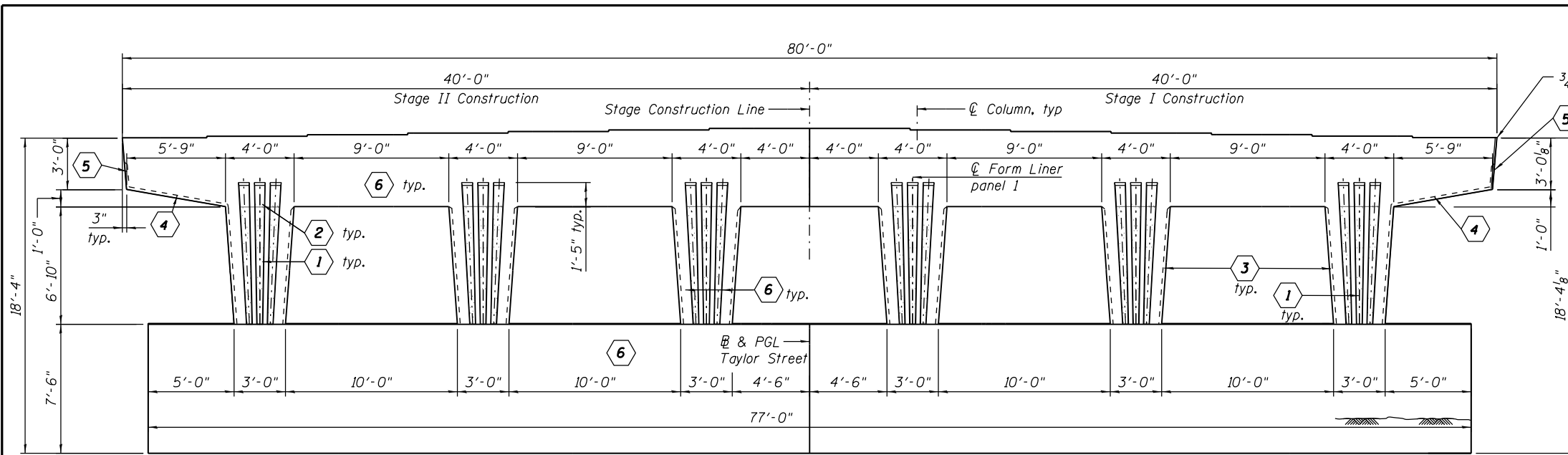
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**PIER 1 SECTIONS AND DETAILS**  
**STRUCTURE NO. 016-1165**

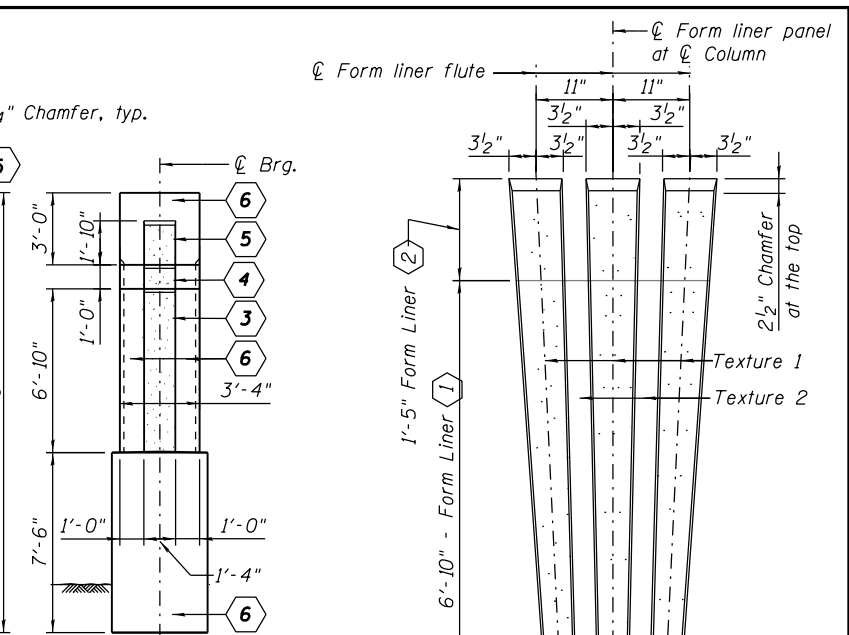
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90/94	2013-012R	COOK	385	240
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

SCALE: SHEET S1-53 OF S1-63 SHEETS STA. TO STA.

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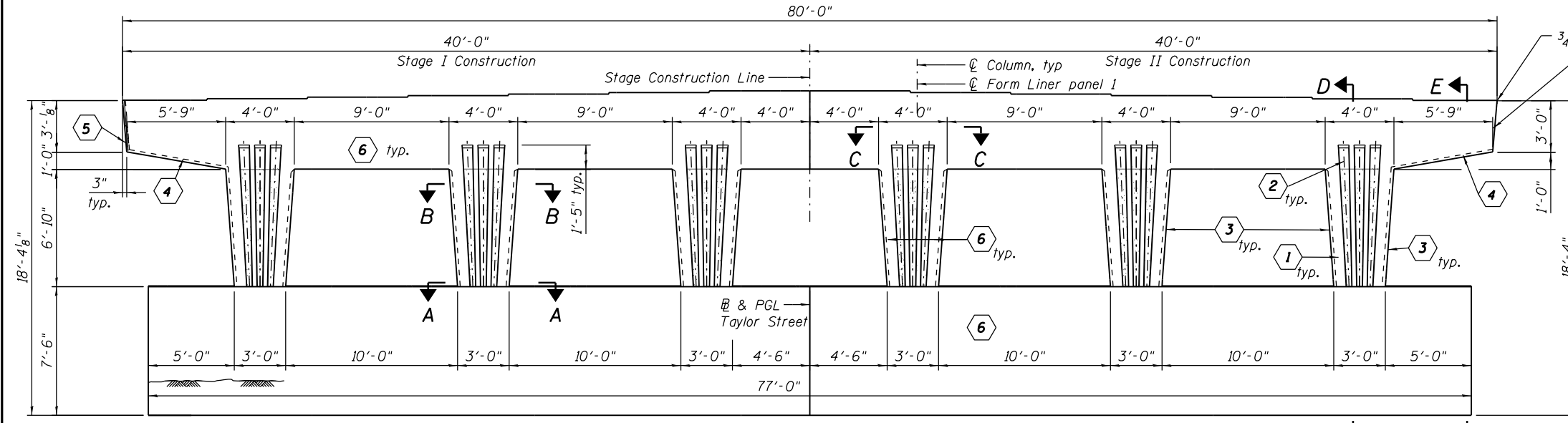


**PIER 1 ELEVATION**  
(Looking West)

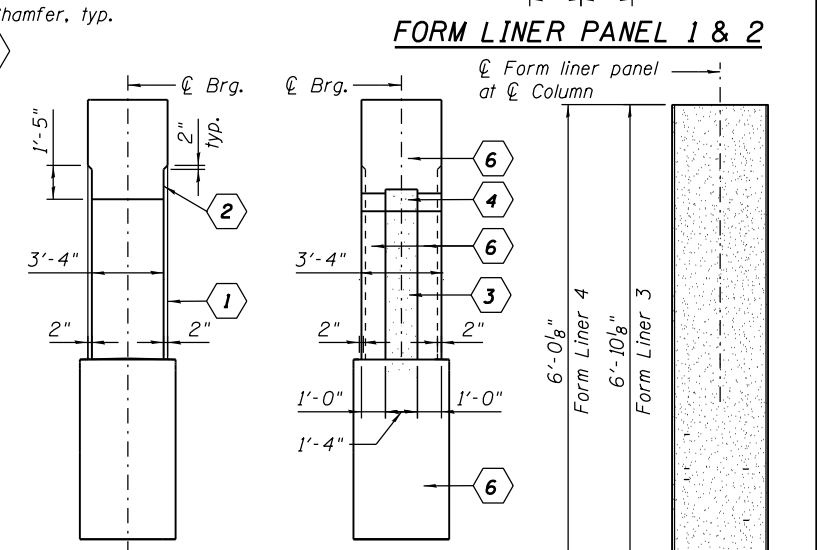


**PIER 1 END VIEW**  
(Looking North)

**FORM LINER PANEL 1 & 2**



**PIER 1 ELEVATION**  
(Looking East)

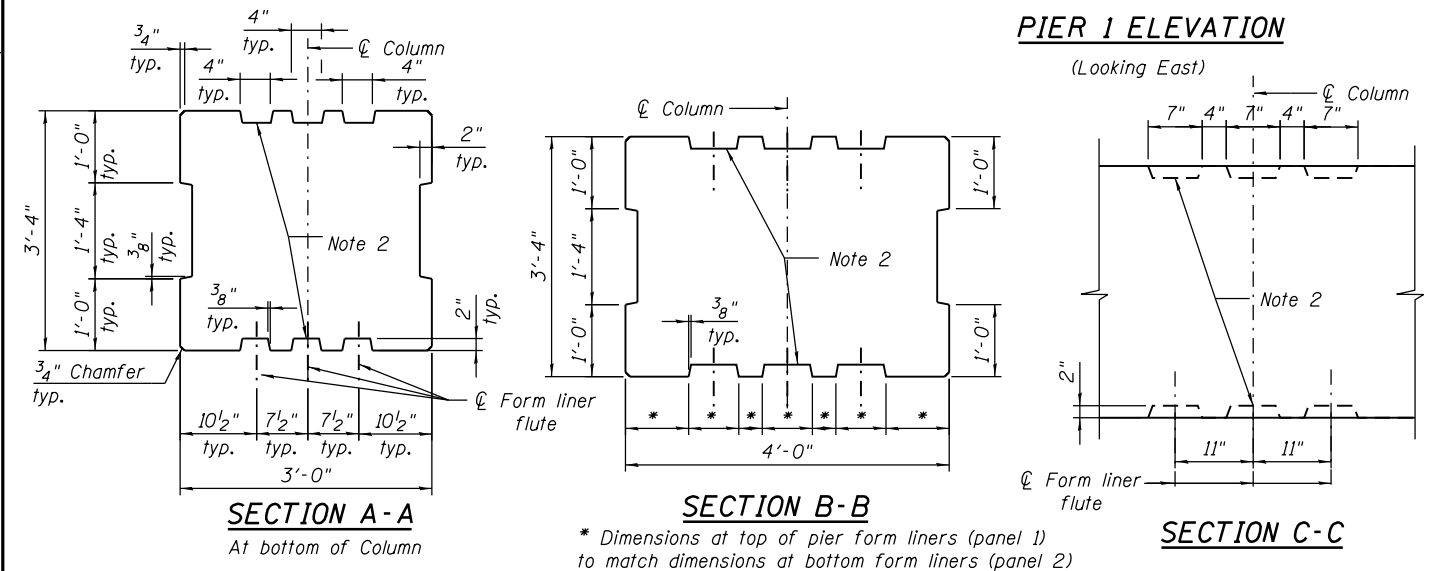


**FORM LINER 3 & 4**

**FORM LINER 5**

**BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Rubbed Finish	SQ FT	3,317
Form Liner Textured Surface	SQ FT	332



- NOTES:**
- All exposed surface not receiving Form Liner - surface noted as (6), shall be contractor's form with smooth rubbed finish. Cost included with Rubbed Finish.
  - Tapered fluting - dimensions vary, see elevation profile.
  - Form liner panel (2) is continuation of panel (1). Keep adjacent form liners aligned.
  - Hand clean and smooth the surface of the construction joint between the pier and cap.
  - Texture 1: Light Sandblast, to be selected after reviewing the samples. Texture 2: Smooth
  - Verify and coordinate all dimensions with structural and civil drawings.

**LEGEND**

- (1) (2) (3) (4) (5) Textured Form Liner
- (6) - Contractor's form to receive Rubbed Finish

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FAX: (708) 236-0901

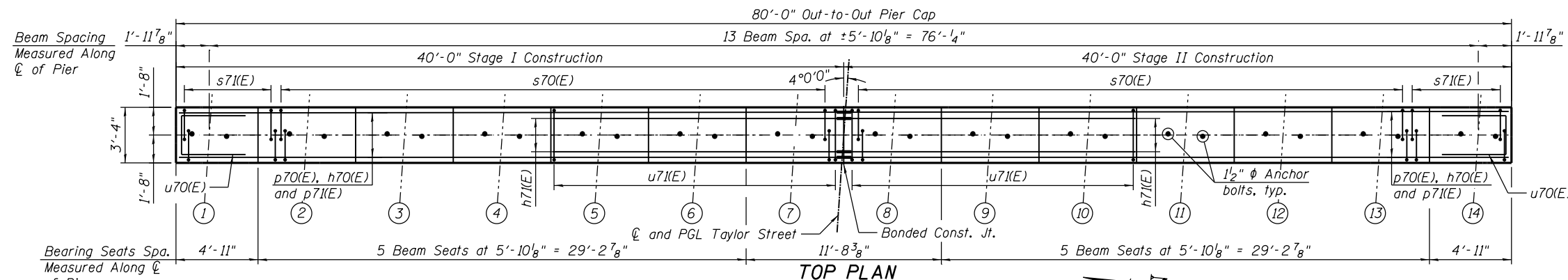
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PLOT DATE = 12/16/2014	DATE - 10/24/2014	REVISED

**STATE OF ILLINOIS**  
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**PIER 1 ARCHITECTURAL DETAILS**  
**STRUCTURE NO. 016-1165**

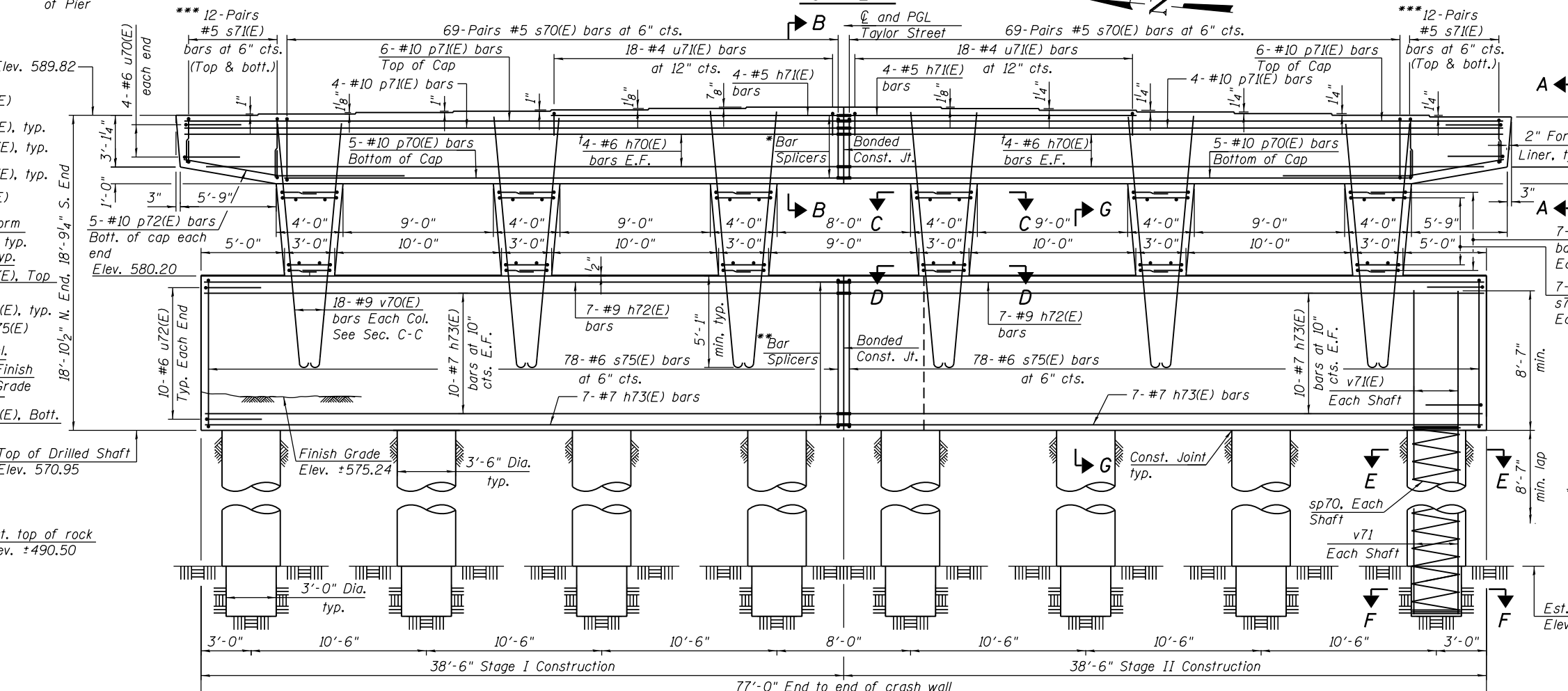
SCALE: SHEET 51-54 OF 51-63 SHEETS STA. TO STA.

F.A.I R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	241
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

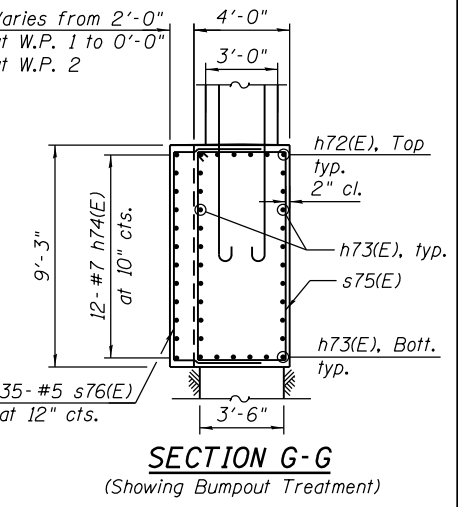
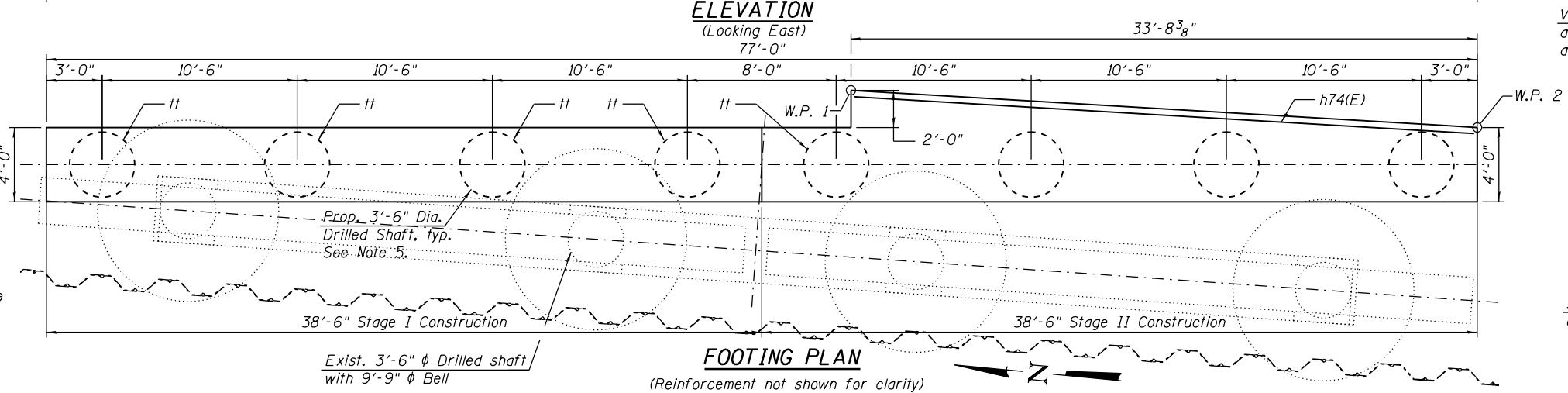
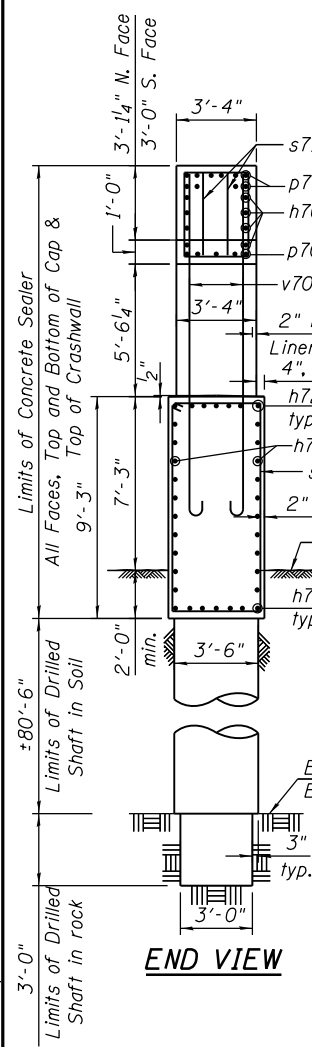


TOP OF SEAT ELEVATION

Girder No.	Seat Elevation
1	589.82
2	589.90
3	589.99
4	590.07
5	590.15
6	590.24
7	590.31
8	590.31
9	590.22
10	590.12
11	590.02
12	589.92
13	589.82
14	589.72



- 7-Pairs #5 s74(E) bars at 12" cts. Each Column
- 7-Pairs #5 s72(E) and s73(E) bars at 12" cts. Each Column
- \* 4-Bar Splicers (E) for h70(E) bars E.F., 4-Bar Splicers (E) for h71(E) bars Top, 10-Bar Splicers (E) for p71(E) bars Top, 5-Bar Splicers (E) for p70(E) bars Bottom.
- \*\* 7-Bar Splicers (E) for h72(E) bars Top, 7-Bar Splicers (E) for h73(E) bars Bottom, 10-Bar Splicers (E) for h73(E) bars E.F..
- \*\*\* Cut vertical legs of bars to fit.
- † Order bars full length. Cut in field to fit pier cap ends.
- †† Drilled Shaft included with Foundation Construction at Existing Obstructions.



- NOTES:**
- Pour steps monolithically with Cap.
  - Space reinforcement in Cap to miss anchor bolts.
  - For sections A-A, B-B, C-C, D-D, E-E, F-F and bill of material, see Sheet S1-56.
  - For anchor bolts layout, see Sheet S1-40.
  - Existing plans indicate that obstructions are present at the location of the proposed drilled shaft. Any additional effort required in the construction of the drilled shaft shall not be paid separately but shall be included in Foundation Construction at Existing Obstruction.
  - For removal of existing barrier walls under the bridge, see Civil Plans.

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0161165-60W30-555-Pier2Plan&Elev  
 USER NAME = ahmod.issa  
 PLOT SCALE = 8.000' / 1" =  
 PLOT DATE = 12/16/2014

DESIGNED - WM, ARA  
 DRAWN - MAA, WM  
 CHECKED - MAI, MI  
 DATE - 10/24/2014

REVISED  
 REVISED  
 REVISED  
 REVISED

STATE OF ILLINOIS  
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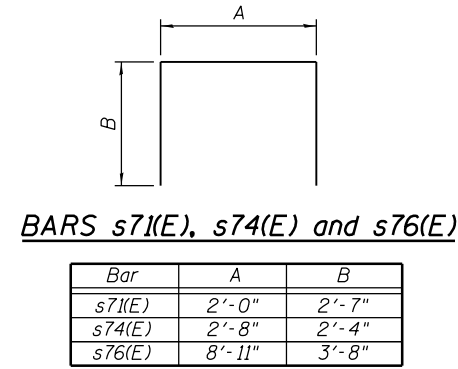
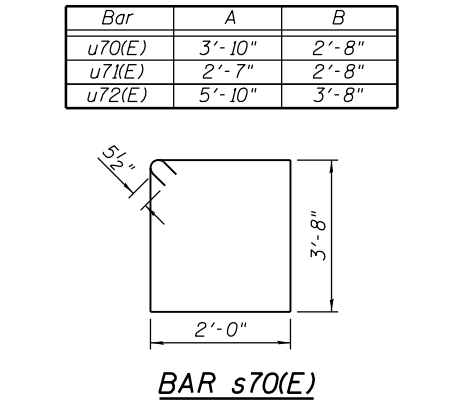
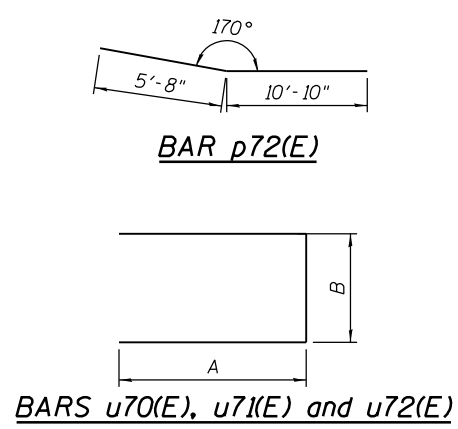
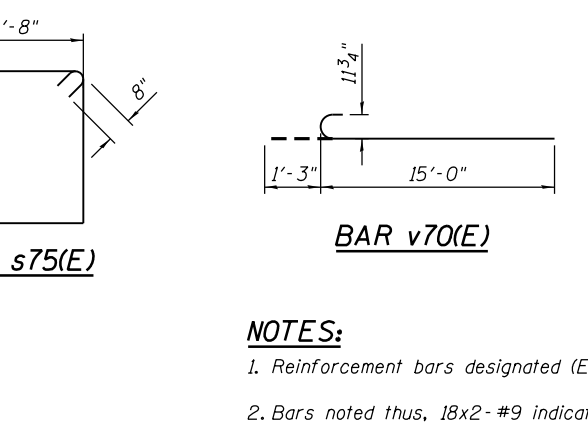
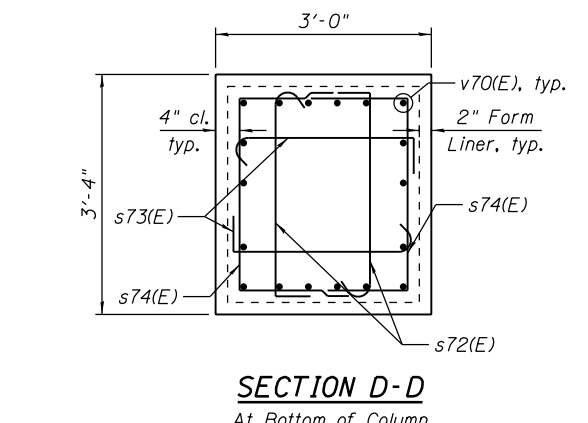
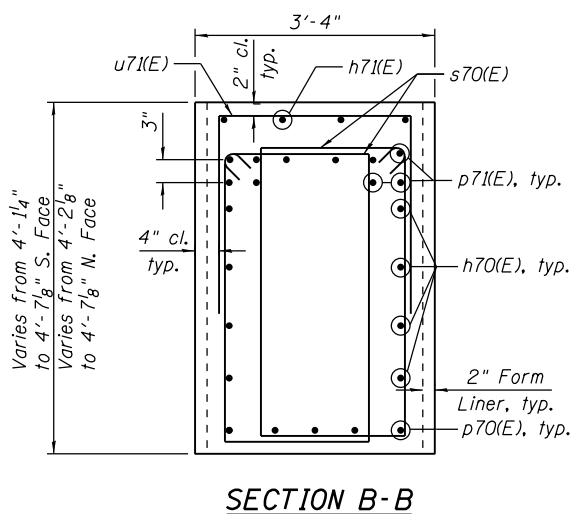
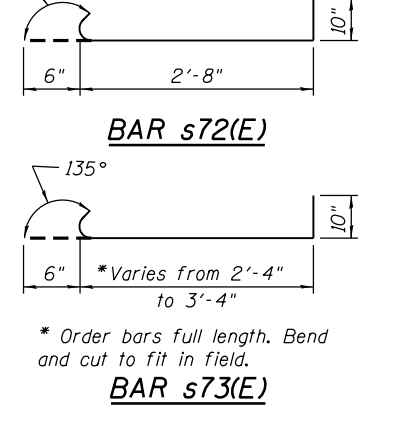
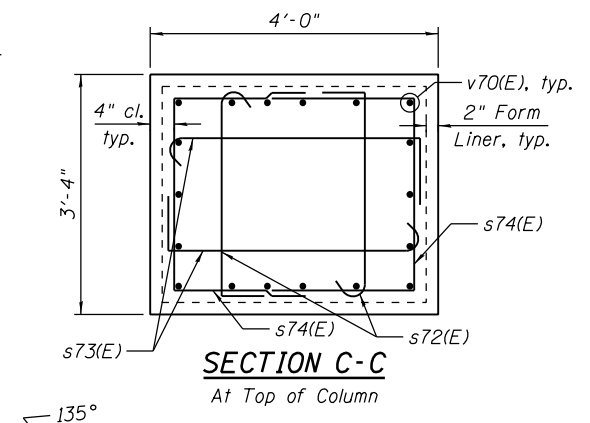
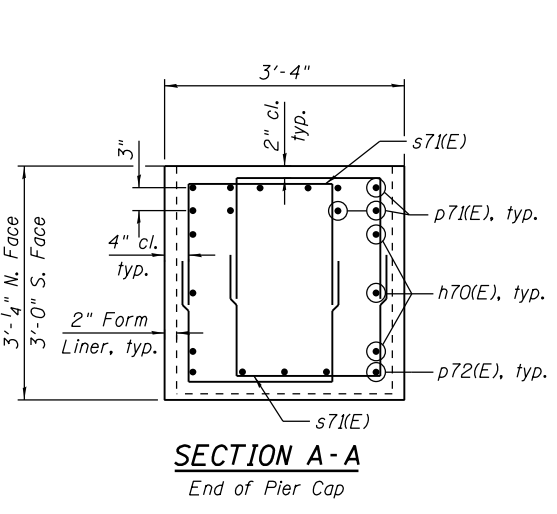
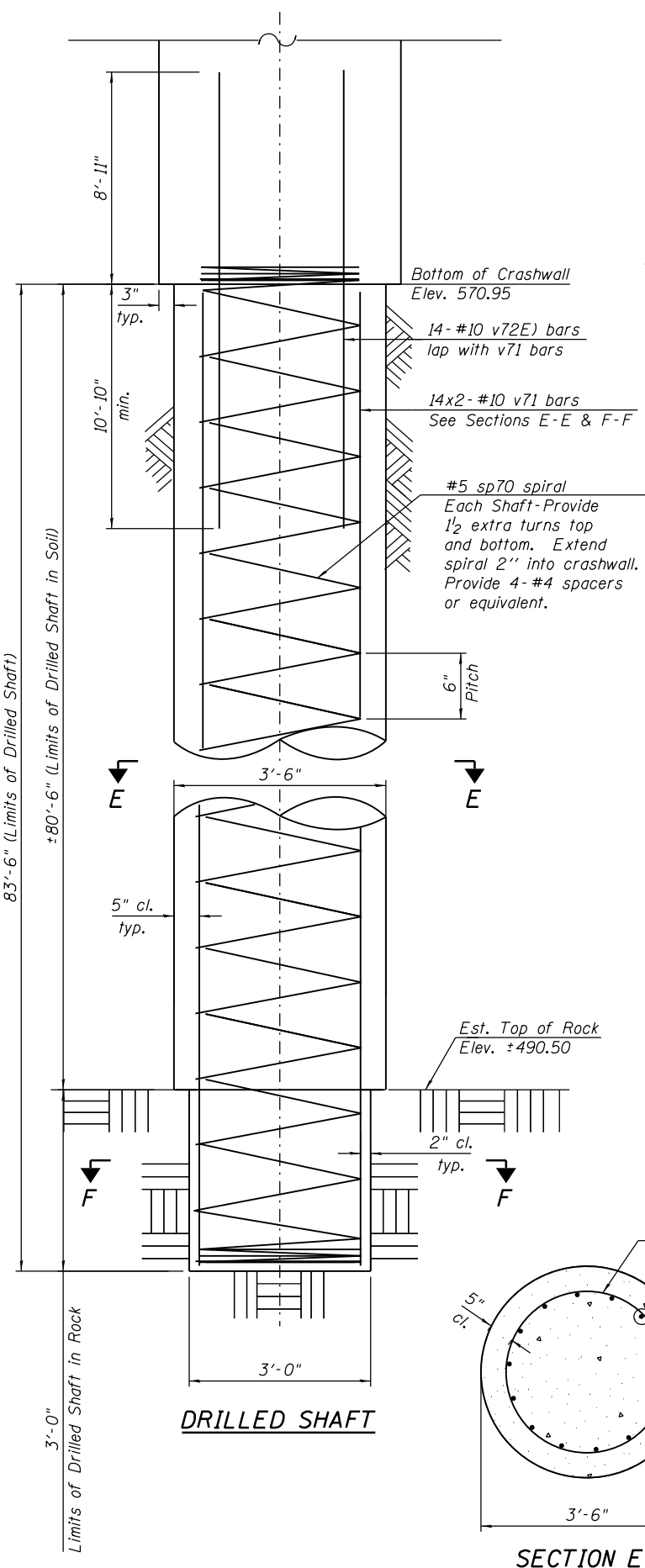
PIER 2 PLAN AND ELEVATION  
 STRUCTURE NO. 016-1165

SCALE: SHEET S1-55 OF S1-63 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	242

CONTRACT NO. 60W30  
 ILLINOIS FED. AID PROJECT

FILE PATH = p:\617479-P\INT\aecon\line\local\p2\CDM\_D592\_Ma\Documents\01\_Americas\Tr\emp\station\60269938\_Circle\Phase\_1\1000\_CAD\008\_Structural\Structure\_016-1165-016165-60W30-556-Pier2Details



- NOTES:**
1. Reinforcement bars designated (E) shall be epoxy coated.
  2. Bars noted thus, 18x2- #9 indicates 18 lines of bars with 2 lengths of bars per line.
  3. Bars equally spaced, unless otherwise noted.
  4. Apply concrete sealer to all exposed concrete surfaces of the pier.
  5. All edges shall have standard 3/4" chamfer.
  6. Spirals are measured vertically.
  7. The quantities and reinforcement detailing for drilled shafts are based on the footing elevation and estimated top of rock elevation shown and may change depending on the actual top of rock encountered at each shaft. It is the Contractor's responsibility to make necessary, approved adjustments.
  8. The Granular Backfill for Structures required shall be placed in lifts not to exceed 8" and compacted in accordance with the IDOT Standard Specifications.
  9. When Contractor's means and methods include initiating drilling for shafts at elevations higher than the final top of shaft elevation (e.g. Existing Ground Elevation), the costs for drilling, disposing of excavation, providing casing and backfilling of drilled shafts or other appurtenant work activities in the areas between the elevation where drilling is initiated and the proposed elevation of the top of shaft shall not be paid for separately but shall be included in the cost of Drilled Shaft in Soil.

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h70(E)	16	#6	39'-6"	—
h71(E)	8	#5	17'-4"	—
h72(E)	14	#9	38'-3"	—
h73(E)	54	#7	38'-3"	—
h74(E)	12	#7	33'-5"	—
p70(E)	10	#10	33'-8"	—
p71(E)	20	#10	39'-6"	—
p72(E)	10	#10	16'-6"	—
s70(E)	276	#5	12'-3"	□
s71(E)	96	#5	7'-2"	□
s72(E)	84	#5	4'-0"	□
s73(E)	84	#5	4'-8"	□
s74(E)	84	#5	7'-4"	□
s75(E)	156	#6	26'-6"	□
s76(E)	35	#7	16'-3"	□
sp70	8	#5	83'-8"	⊞
u70(E)	8	#6	10'-4"	□
u71(E)	36	#4	7'-10"	□
u72(E)	20	#6	14'-0"	□
v70(E)	108	#9	16'-3"	—
v71	224	#10	47'-1"	—
v72(E)	112	#10	19'-9"	—
Structure Excavation		Cu Yd	142.8	
Concrete Structures		Cu Yd	173.9	
Reinforcement Bars		Pound	57,220	
Reinforcement Bars, Epoxy Coated		Pound	42,750	
Drilled Shaft in Soil		Cu Yd	229.5	
Drilled Shaft in Rock		Cu Yd	6.5	
Concrete Sealer		Sq Ft	3,363	
Crosshole Sonic Logging		Each	1	
Foundation Construction at Existing Obstructions		Each	5	
Granular Backfill for Structures		Cu Yd	139	

\*\*Length is height of spiral

**Minimum Bar Laps**

Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"
#10	10'-10"

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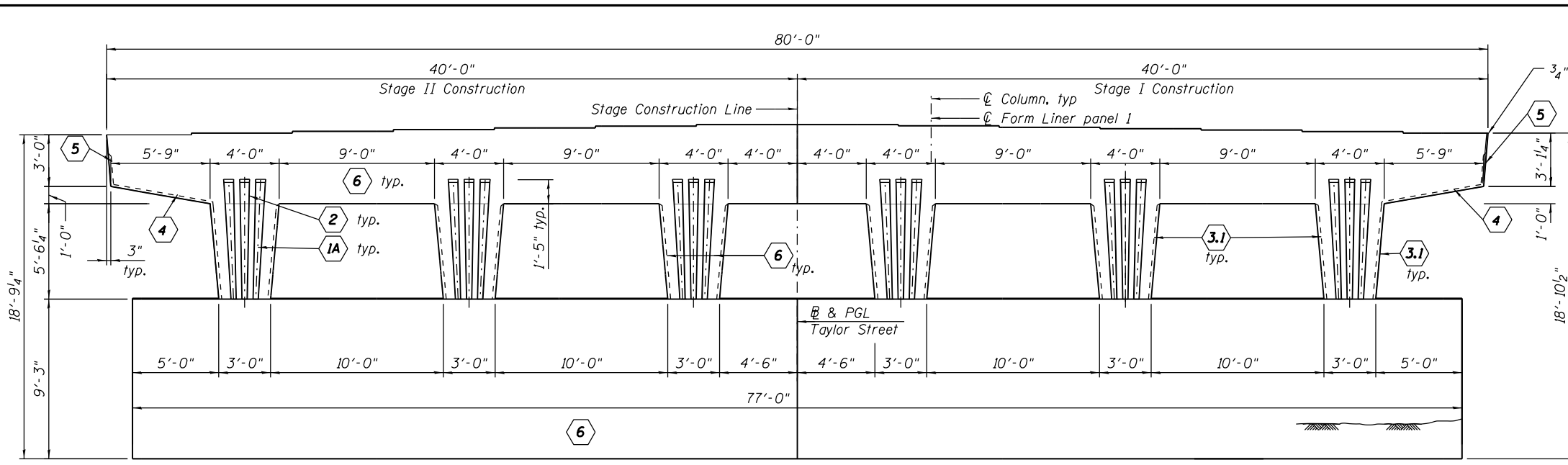
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USER NAME = ahmod.issa	DRAWN - MA, WM	REVISED
PLOT SCALE = 2:8.0000 1" = 16'	CHECKED - MAI, MI	REVISED
PLOT DATE = 12/17/2014	DATE - 10/24/2014	REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

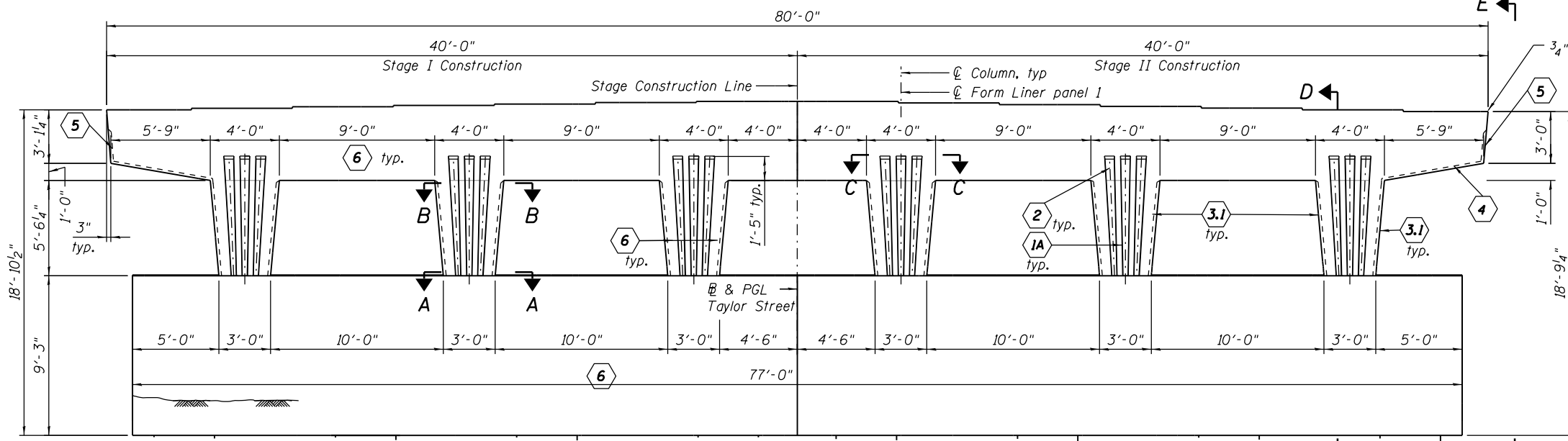
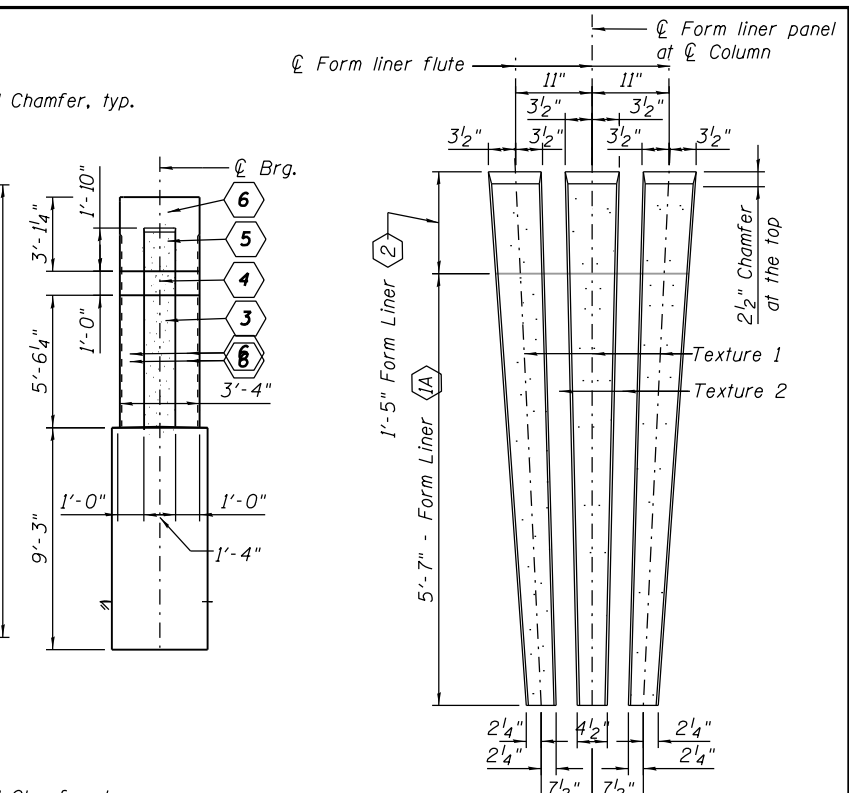
**PIER 2 SECTIONS AND DETAILS**  
**STRUCTURE NO. 016-1165**

SCALE: SHEET S1-56 OF 51-63 SHEETS STA. TO STA.

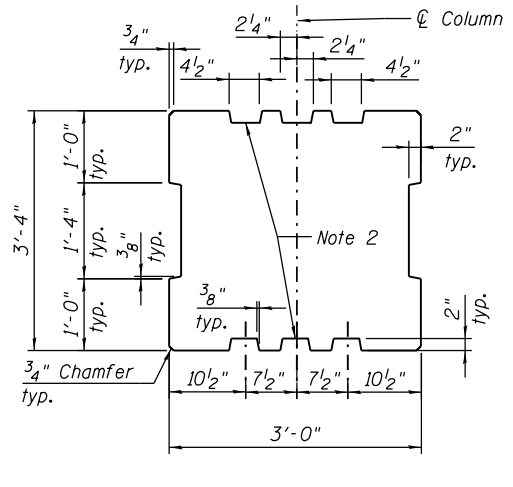
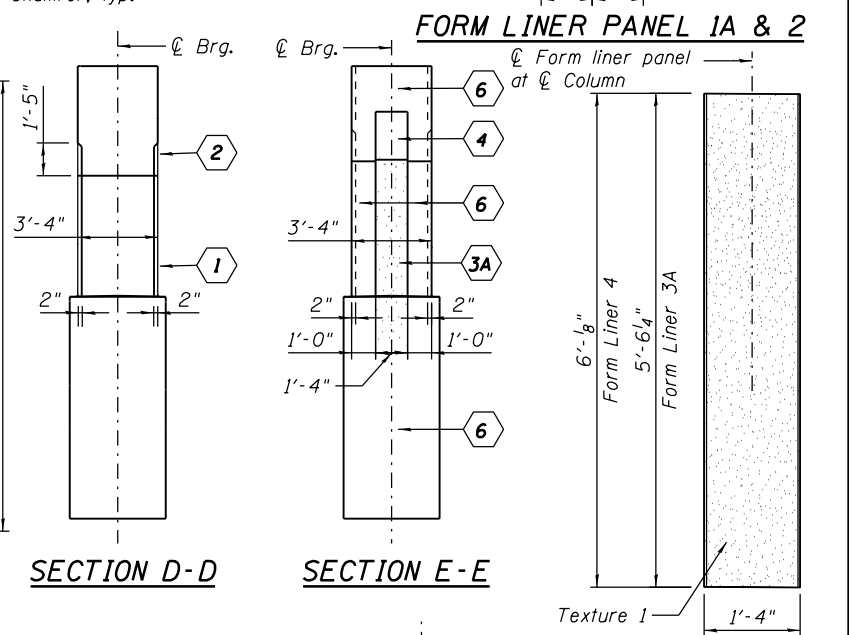
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	243
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60W30	



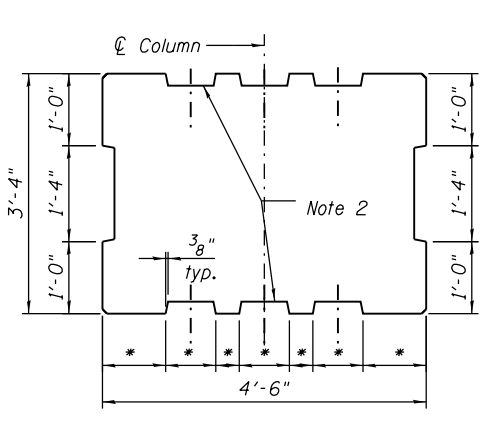
**PIER 2 ELEVATION**  
(Looking West)



**PIER 2 ELEVATION**  
(Looking East)

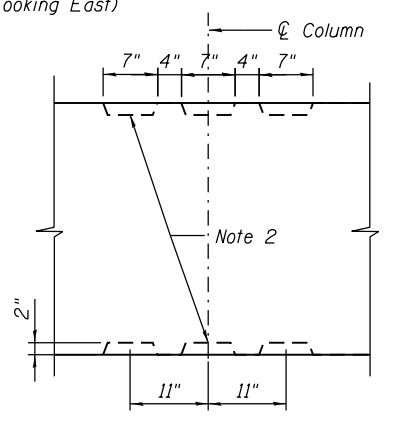


**SECTION A-A**  
At bottom of Column



**SECTION B-B**

\* Dimensions at top of pier form liners (panel 1) to match dimensions at bottom form liners (panel 2)



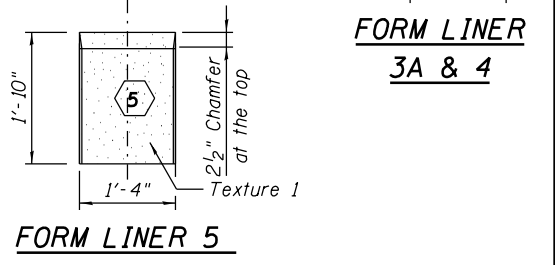
**SECTION C-C**

**NOTES:**

- All exposed surface not receiving Form Liner - surface noted as 6 shall be contractor's form with smooth rubbed finish. Cost included with Rubbed Finish.
- Tapered fluting - dimensions vary, see elevation profile.
- Form liner panel 2 is continuation of panel 1A. Keep adjacent form liners aligned.
- Hand clean and smooth the surface of the construction joint between the pier and cap.
- Texture 1: Light Sandblast, to be selected after reviewing the samples.  
Texture 2: Smooth
- Form Liner Panel 1A and 3A are similar to Form Liner Panel 1 and 3, but shorter.
- Verify and coordinate all dimensions with structural and civil drawings.

**LEGEND**

- 1 2 3 4 5  
Textured Form Liner
- 6 - Contractor's form to receive Rubbed Finish



**BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Rubbed Finish	SQ FT	3,413
Form Liner Textured Surface	SQ FT	278

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**PIER 2 ARCHITECTURAL DETAILS**  
**STRUCTURE NO. 016-1165**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	244

SCALE: SHEET 51-57 OF 51-63 SHEETS STA. TO STA.

ILLINOIS FED. AID PROJECT CONTRACT NO. 60W30

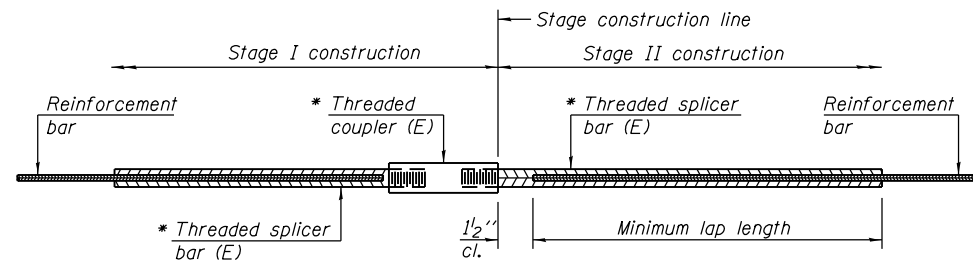
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DESIGNED	DRAWN	CHECKED	DATE
MR	MR, AI	MI, JJS	10/24/2014

REVISION	DATE
REVISOR	10/24/2014
REVISOR	REVISOR
REVISOR	REVISOR



**STANDARD BAR SPLICER ASSEMBLY**

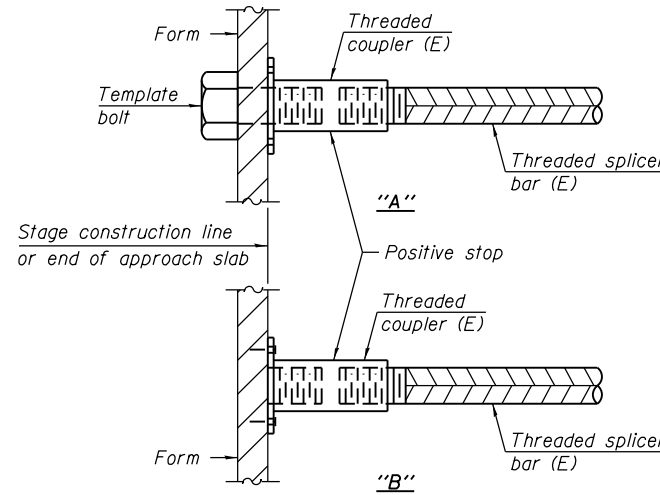
Bar size to be spliced	Minimum Lap Lengths					
	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"	6'-5"	6'-10"	7'-9"	8'-7"	9'-8"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Class C
- Table 6: Epoxy bar, Top bar top, Class C

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

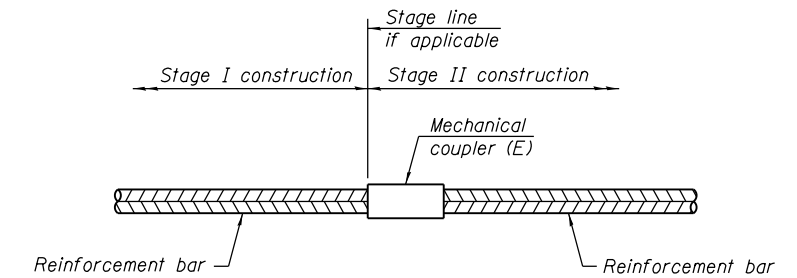
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck (Spans 1-3)	#5	792	Table 5
Deck (Vaulted Span)	#4	8	Table 5
Deck (Vaulted Span)	#5	204	Table 5
Deck (Vaulted Span)	#6	4	Table 5
West Approach Slab	#4	25	Table 5
West Approach Slab	#5	46	Table 5
East Approach Slab	#4	17	Table 5
East Approach Slab	#5	31	Table 5
West Appr. Footing	#5	40	Table 5
East Appr. Footing	#5	40	Table 5
West Abutment	#5	54	Table 5
West Abutment	#7	32	Table 5
East Abutment	#5	7	Table 5
East Abutment	#6	9	Table 5
East Abutment	#7	4	Table 5
East Appr. Bent	#5	3	Table 5
Pier 1	#5	4	Table 5
Pier 1	#6	8	Table 5
Pier 1	#7	23	Table 5
Pier 1	#9	7	Table 5
Pier 1	#10	15	Table 5
Pier 2	#5	4	Table 5
Pier 2	#6	8	Table 5
Pier 2	#7	27	Table 5
Pier 2	#9	7	Table 5
Pier 2	#10	15	Table 5



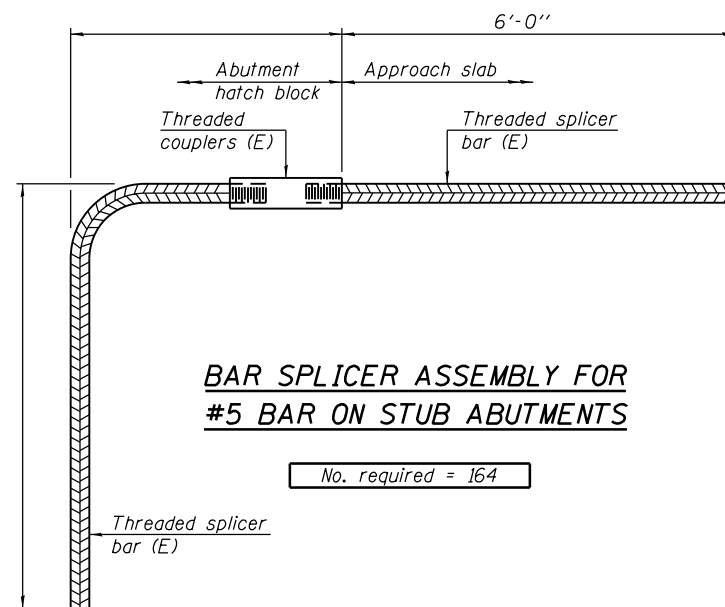
**INSTALLATION AND SETTING METHODS**

- "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.



**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required



**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

No. required = 164

**NOTES**

- Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
- All reinforcement shall be lapped and tied to the splicer bars.
- Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
- See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

8-31-12

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BORING LOG 1165-B-01A

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Fax: 630 953-9938

WEI Job No.: 1100-04-01
Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 593.51 ft
North: 1895827.58 ft
East: 1171662.31 ft
Station: 7611+03.49
Offset: 23.1545 RT

Table with columns: Profile Elevation (ft), SOIL AND ROCK DESCRIPTION, Depth (ft), Sample No., SPT Values (blw/6 in), Qu (tsf), Moisture Content (%), Profile Elevation (ft), SOIL AND ROCK DESCRIPTION, Depth (ft), Sample No., SPT Values (blw/6 in), Qu (tsf), Moisture Content (%). Rows include concrete, crushed stone, gravelly sand, and silty clay.

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling 05-07-2013 Complete Drilling 05-07-2013
Drilling Contractor Wang Testing Services Drill Rig CME-55 TMR
Driller P&N Logger D. Wind Checked by C. Marin
Drilling Method 2.25" SSA to 18.5', mud rotary thereafter, boring backfilled upon completion

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



BORING LOG 1165-B-01B

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WEI Job No.: 1100-04-01
Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 593.12 ft
North: 1895767.18 ft
East: 1171637.52 ft
Station: 6246+95.15 (7610+77.12)
Offset: 102.32 RT (82.8781 RT)

Table with columns: Profile Elevation (ft), SOIL AND ROCK DESCRIPTION, Depth (ft), Sample No., SPT Values (blw/6 in), Qu (tsf), Moisture Content (%), Profile Elevation (ft), SOIL AND ROCK DESCRIPTION, Depth (ft), Sample No., SPT Values (blw/6 in), Qu (tsf), Moisture Content (%). Rows include asphalt, concrete, gravelly sand, silty clay, and silt.

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling 05-23-2013 Complete Drilling 05-29-2013
Drilling Contractor Wang Testing Services Drill Rig CME-55 TMR
Driller P&N Logger F. Bozga Checked by C. Marin
Drilling Method 2.25" SSA to 16', mud rotary thereafter, boring backfilled upon completion

While Drilling [Symbol] Rotary wash
At Completion of Drilling [Symbol] unable to measure
Time After Drilling NA
Depth to Water [Symbol] NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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FAX: (708) 236-0901

Table with columns: DESIGNED, DRAWN, CHECKED, DATE and values: WM, WM, JJS, 10/24/2014

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS I
STRUCTURE NO. 016-1165
SCALE: SHEET 51-59 OF 51-63 SHEETS STA. TO STA.

Table with columns: F.A.I. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., CONTRACT NO. 60W30



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### BORING LOG 1165-B-01B

WEI Job No.: 1100-04-01

Client: AECOM  
Project: Circle Interchange Reconstruction  
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88  
Elevation: 593.12 ft  
North: 1895767.18 ft  
East: 1171637.52 ft  
Station: 6246+95.15 (7610+77.12)  
Offset: 102.32 RT (82.8781 RT)

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
541.4	Hard, gray CLAY to SILTY CLAY, trace gravel	55	17	8 10 12	6.48 B	18	516.4	Hard, gray SILTY CLAY LOAM, trace gravel	55	22	28 27 50/4"	10.25 B	13
		60	18	15 22 29	7.05 S	14		--HARD DRILLING from 79.5' to 80'-- --Possible cobbles--	85	23	48 50/3"	NP	12
		65	19	7 14 21	6.07 B	20	511.4	Very dense, gray SILTY LOAM, trace gravel	90	24	32 50/5"	6.64 S	12
	--LL(%)=40, PL(%)=16-- --%Gravel=1.2-- --%Sand=5.3-- --%Silt=49.0-- --%Clay=44.5-- --A-6 (23)--	70	20	7 11 16	6.64 B	13		--HARD DRILLING from 93.5' to 98.5'-- --Possible cobbles--	95	25	50/5"	NP	14
		75	21	16 17 18	NP	15		--HARD DRILLING from 99' to 100'-- --Possible cobbles-- --AUGER REFUSAL--	100	26	50/3"	NP	14

#### GENERAL NOTES

Begin Drilling 05-23-2013 Complete Drilling 05-29-2013  
Drilling Contractor Wang Testing Services Drill Rig CME-55 TMR  
Driller P&N Logger F. Bozga Checked by C. Marin  
Drilling Method 2.25" SSA to 16', mud rotary thereafter, boring backfilled upon completion

#### WATER LEVEL DATA

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



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### BORING LOG 1165-B-02

WEI Job No.: 1100-04-01

Client: AECOM  
Project: Circle Interchange Reconstruction  
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88  
Elevation: 578.19 ft  
North: 1895901.50 ft  
East: 1171749.50 ft  
Station: 7611+92.60  
Offset: 48.4479 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
576.8	17-inch thick, ASPHALT --PAVEMENT--						549.2						
	Medium dense, brown SANDY GRAVEL --BASE COURSE--	11	1	7 7 9	NP	15			11	3 4 3	0.75 P	23	
574.4	Stiff, gray SILTY CLAY, trace gravel	18	2	5 3 4	1.39 B	18		Stiff to hard, gray SILTY CLAY to SILTY CLAY LOAM, trace gravel	30	12	3 10 9	1.80 B	19
572.7	Very soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel	24	3	0 0 0	0.25 B	24			35	13	7 11 12	1.80 B	19
		27	4	0 0 1	0.08 B	25			40	14	5 8 15	4.92 B	19
	--LL(%)=36, PL(%)=15-- --%Gravel=4.1-- --%Sand=13.8-- --%Silt=50.0-- --%Clay=32.1-- --A-6 (16)--	27	5	0 0 1	0.08 B	27			45	15	7 11 18	5.49 B	19
		27	6	0 0 1	0.08 B	27			50	16	4 8 17	2.95 B	22
		27	7	0 0 1	0.08 B	27							
		30	8	0 1 1	0.50 P	30							
		26	9	0 1 1	0.50 P	26							
		24	10	1 1 2	0.41 B	24							

#### GENERAL NOTES

Begin Drilling 05-08-2013 Complete Drilling 05-08-2013  
Drilling Contractor Wang Testing Services Drill Rig CME-55 TMR  
Driller P&N Logger D. Wind Checked by C. Marin  
Drilling Method 2.25" SSA to 16', mud rotary thereafter, boring backfilled upon completion

#### WATER LEVEL DATA

While Drilling  18.50 ft  
At Completion of Drilling  18.50 ft  
Time After Drilling NA  
Depth to Water  NA  
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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FAX: (708) 236-0901

DESIGNED - WM	REVISED
DRAWN - WM	REVISED
CHECKED - JJS	REVISED
DATE - 10/24/2014	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BORING LOGS II  
STRUCTURE NO. 016-1165

SCALE: SHEET 51-60 OF 51-63 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	247
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	





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### BORING LOG 1165-B-02

WEI Job No.: 1100-04-01

Client: AECOM  
Project: Circle Interchange Reconstruction  
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88  
Elevation: 578.19 ft  
North: 1895901.50 ft  
East: 1171749.50 ft  
Station: 7611+92.60  
Offset: 48.4479 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
591.4	12-inch thick, CONCRETE --PAVEMENT--						591.4	--A-4 (3)--					
589.4	Dense, gray SANDY GRAVEL --BASE COURSE--	15 19 11	1		NP	4	589.4	--HARD DRILLING-- --Possible cobbles--	80	22	17 50/5	4.50 P	21
586.4	Medium dense, gray, coarse SAND --AUGER REFUSAL--	4 6 5	2		NP	7	586.4		85	23	32 50/2	4.50 P	14
511.4	Very dense, gray SILTY LOAM, little to some gravel, possible cobbles						492.2	Strong, good rock quality, grayish white, fresh, slightly to moderately fractured, joint breaks with little to no infill, highly vuggy DOLOSTONE Run#1: 86 to 96 feet --RECOVERY=100%-- --RQD=70%--	90				
							482.2		95				
								Boring terminated at 96.00 ft	100				
55			17	12 17 20	1.64 B	22							
60	--LL%=29, PL%=14-- --%Gravel=7.2-- --%Sand=22.8-- --%Silt=47.3-- --%Clay=22.7-- --A-6 (8)--		18	9 13 21	8.12 B	13							
65			19	8 14 36	3.69 B	22							
70			20	48 50/3	4.00 P	12							
75	--LL%=22, PL%=12-- --%Gravel=8.4-- --%Sand=26.3-- --%Silt=53.9-- --%Clay=11.4--		21	19 25 38	5.00 S	10							

#### GENERAL NOTES

Begin Drilling 05-08-2013 Complete Drilling 05-08-2013  
Drilling Contractor Wang Testing Services Drill Rig CME-55 TMR  
Driller P&N Logger D. Wind Checked by C. Marin  
Drilling Method 2.25" SSA to 16', mud rotary thereafter, boring backfilled upon completion

#### WATER LEVEL DATA

While Drilling 18.50 ft  
At Completion of Drilling 18.50 ft  
Time After Drilling NA  
Depth to Water NA  
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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### BORING LOG 1165-B-03A

WEI Job No.: 1100-04-01

Client: AECOM  
Project: Circle Interchange Reconstruction  
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88  
Elevation: 592.45 ft  
North: 1895802.21 ft  
East: 1171924.75 ft  
Station: 7613+65.17  
Offset: 55.4184 RT

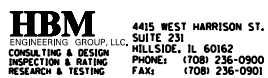
Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
591.4	12-inch thick, CONCRETE --PAVEMENT--						591.4						
589.4	Dense, gray SANDY GRAVEL --BASE COURSE--	15 19 11	1		NP	4	589.4		80	22	17 50/5	4.50 P	21
586.4	Medium dense, gray, coarse SAND --AUGER REFUSAL--	4 6 5	2		NP	7	586.4		85	23	32 50/2	4.50 P	14
	Boring terminated at 5.50 ft								90				
									95				
									100				

#### GENERAL NOTES

Begin Drilling 05-16-2013 Complete Drilling 05-16-2013  
Drilling Contractor Wang Testing Services Drill Rig CME-55 TMR  
Driller P&N Logger F. Bozga Checked by C. Marin  
Drilling Method 2.25" SSA, boring backfilled upon completion

#### WATER LEVEL DATA

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



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FAX: (708) 236-0901

DESIGNED - WM	REVISED
DRAWN - WM	REVISED
CHECKED - JJS	REVISED
DATE - 10/24/2014	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BORING LOGS III  
STRUCTURE NO. 016-1165

SCALE: SHEET S1-61 OF S1-63 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	248
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)
96.00	12-inch thick CONCRETE						
80.0	Blind Drill						
586.0	Very loose to medium dense, gray, coarse SAND,	22	17	50/5	4.50	21	5
85.0	Stiff, gray CLAY	23	32	50/2	4.50	14	10
	Stiff, brown SILTY LOAM to SILTY CLAY LOAM, trace gravel						
	Very soft to stiff, gray CLAY to SILTY CLAY, trace gravel						
571.5	Stiff, gray LOAM, trace gravel						

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	05-16-2013	While Drilling	DRY
Complete Drilling	05-16-2013	At Completion of Drilling	DRY
Drilling Contractor	Wang Testing Services	Time After Drilling	NA
Drill Rig	CME-55 TMR	Depth to Water	NA
Checked by	C. Marin	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)
582.8	4-inch thick ASPHALT						
581.9	10-inch thick CONCRETE						
584.0	Loose to medium dense, brown FINE SAND	1	7	6/7	NP	14	11
582.6	Stiff, gray CLAY	2	4	7/6	NP	9	12
580.1	Stiff, brown SILTY LOAM to SILTY CLAY LOAM, trace gravel	3	3	3/3	NP	9	13
	Very soft to stiff, gray CLAY to SILTY CLAY, trace gravel						
	Stiff, gray LOAM, trace gravel						

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	05-29-2013	While Drilling	Rotary wash
Complete Drilling	05-30-2013	At Completion of Drilling	unable to measure
Drilling Contractor	Wang Testing Services	Time After Drilling	NA
Drill Rig	CME-55 TMR	Depth to Water	NA
Checked by	C. Marin	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	

FILE PATH: p:\17179-P\INT\aeom\line\local\BECOM\_D592\_NA\Documents\01\_Americas\Tr\eng\station\B2269938\_Circle\Phase\_1\1000\_CAD\008\_Structure\016-1165-01\1165-60W30-562-Boring4



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### BORING LOG 1165-B-03C

WEI Job No.: 1100-04-01

Client: AECOM  
Project: Circle Interchange Reconstruction  
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88  
Elevation: 593.08 ft  
North: 1895883.69 ft  
East: 1171989.42 ft  
Station: 7614+31.96  
Offset: 24.3273 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
536.3	--LL%=20, PL%=11-- --%Gravel=5.8-- --%Sand=41.7-- --%Silt=40.4-- --%Clay=12.1-- --A-4 (1)--	55	X	17	4 6 9	2.79 B	12	511.3	--%Silt=49.1-- --%Clay=20.4-- --A-6 (7)--  --HARD DRILLING from 80.5' to 81.5'-- --Possible cobbles--	80	X	22	23 33 36	10.00 S	13
521.3	Very stiff to hard, gray SILTY CLAY to SILTY CLAY LOAM, trace gravel	60	X	18	12 11 13	7.05 B	19		Very dense, gray SILTY LOAM, trace gravel and rock fragments --HARD DRILLING from 82.5' to 83.5'-- --Possible cobbles--	85	X	23	50/5"	NP	11
		65	X	19	7 13 19	2.25 P	23			90	X	24	46 50/2"	NP	8
	--LL%=35, PL%=15-- --%Gravel=1.1-- --%Sand=7.4-- --%Silt=57.3-- --%Clay=34.2-- --A-6 (18)--	70	X	20	5 9 13	3.28 B	22			95	X	25	24 50/3"	6.81 S	11
	Hard, gray SILTY CLAY LOAM, trace gravel	75	X	21	8 10 15	5.00 B	14		--HARD DRILLING from 99.0' to 101'--	100	X	26	20/5"	NP	10

#### GENERAL NOTES

Begin Drilling 05-29-2013 Complete Drilling 05-30-2013  
 Drilling Contractor Wang Testing Services Drill Rig CME-55 TMR  
 Driller R&J Logger F. Bozga Checked by C. Marin  
 Drilling Method 2.25" SSA to 15', mud rotary thereafter, boring backfilled upon completion

#### WATER LEVEL DATA

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



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### BORING LOG 1165-B-03C

WEI Job No.: 1100-04-01

Client: AECOM  
Project: Circle Interchange Reconstruction  
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88  
Elevation: 593.08 ft  
North: 1895883.69 ft  
East: 1171989.42 ft  
Station: 7614+31.96  
Offset: 24.3273 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
492.1	Strong, good rock quality, grayish white, fresh, slightly to moderately fractured, joint breaks with little to no infill, highly vuggy DOLOSTONE Run#1: 101 to 111 feet --RECOVERY=99%-- --RQD=85%--J05	105		1											
		115		2											
472.1	Run#2: 111 to 121 feet --RECOVERY=100%-- --RQD=88.3%--J15	121													
	Boring terminated at 121.00 ft	125													

#### GENERAL NOTES

Begin Drilling 05-29-2013 Complete Drilling 05-30-2013  
 Drilling Contractor Wang Testing Services Drill Rig CME-55 TMR  
 Driller R&J Logger F. Bozga Checked by C. Marin  
 Drilling Method 2.25" SSA to 15', mud rotary thereafter, boring backfilled upon completion

#### WATER LEVEL DATA

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

FILE PATH = p:\16179-P\INT\aecon\line\local\BECOM\_D592\_NA\Documents\01\_Americas\T\enp\station\60269938 Circle\Phase\_1\1000\_CAD\008\_Structure\Structure\_016-1165-01\1165-60W30-562A-Boring5



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DESIGNED - WM	REVISED
DRAWN - WM	REVISED
CHECKED - JJS	REVISED
DATE - 10/24/2014	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BORING LOGS V  
STRUCTURE NO. 016-1165

SCALE: SHEET S1-62A OF S1-63 SHEETS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2013-012R	COUNTY COOK	TOTAL SHEETS 385	SHEET NO. 249A
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	



# BORING LOG 1165-B-01B-PMT

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WEI Job No.: 1100-04-01  
 Client: AECOM  
 Project: Circle Interchange Reconstruction  
 Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88  
 Elevation: 593.02 ft  
 North: 1895762.60 ft  
 East: 1171638.50 ft  
 Station: 7610+77.98  
 Offset: 87.4824 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	--Drilled without sampling to 73.5'--														
		5								30					
		10								35					
		15								40					
		20								45					
		25								50					

### GENERAL NOTES

Begin Drilling 09-11-2013 Complete Drilling 09-11-2013  
 Drilling Contractor Wang Testing Services Drill Rig B-57 TMR  
 Driller P&N Logger E. Datz Checked by C. Marin  
 Drilling Method 2.25" SSA to 20', mud rotary thereafter, boring backfilled upon completion

### WATER LEVEL DATA

While Drilling  Rotary wash  
 At Completion of Drilling  unable to measure  
 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 1165-B-01B-PMT

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WEI Job No.: 1100-04-01  
 Client: AECOM  
 Project: Circle Interchange Reconstruction  
 Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88  
 Elevation: 593.02 ft  
 North: 1895762.60 ft  
 East: 1171638.50 ft  
 Station: 7610+77.98  
 Offset: 87.4824 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		55							--Pressure Meter Test--	80		1			
		51.3							Very dense, gray SILTY LOAM to SILTY CLAY LOAM, trace gravel	85		2	64	NP	
									--Pressure Meter Test--	90		1			
										90		3	65/5	3.58 S	
									Boring terminated at 90.00 ft						
		75							Dense, gray SILT						
									Very stiff, gray SILTY CLAY, some gravel			1	12/40/47	2.05 B	

### GENERAL NOTES

Begin Drilling 09-11-2013 Complete Drilling 09-11-2013  
 Drilling Contractor Wang Testing Services Drill Rig B-57 TMR  
 Driller P&N Logger E. Datz Checked by C. Marin  
 Drilling Method 2.25" SSA to 20', mud rotary thereafter, boring backfilled upon completion

### WATER LEVEL DATA

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

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BORING LOGS VI  
 STRUCTURE NO. 016-1165

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	249B
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

SCALE: SHEET S1-62B OF S1-63 SHEETS STA. TO STA.

HBM  
 ENGINEERING GROUP, LLC  
 CONSULTING & DESIGN  
 INSPECTION & RATING  
 RESEARCH & TESTING

DESIGNED - WM	REVISED
DRAWN - WM	REVISED
CHECKED - MI, JJS	REVISED
DATE - 10/24/2014	REVISED

FILE PATH = p:\617479-P\INT\AECOM\Line\Local\AECOM\_D592\_NA\Documents\01\_Americas\Tr\engor\ation\60269938\_Circle\Phase\_1\1000\_CAD\008\_Structure\Structure\_016-1165-01\1165-60W30-562B-Boring6



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### BORING LOG 1165-B-03-PMT

WEI Job No.: 1100-04-01

Client: AECOM  
Project: Circle Interchange Reconstruction  
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88  
Elevation: 593.02 ft  
North: 1895883.86 ft  
East: 1172001.98 ft  
Station: 7614+44.53  
Offset: 24.1685 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	Drilled without sampling from 0' to 73.5'														

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	09-12-2013	Complete Drilling	09-12-2013	While Drilling	<input checked="" type="checkbox"/> Rotary wash		
Drilling Contractor	Wang Testing Services	Drill Rig	B-57 TMR	At Completion of Drilling	<input checked="" type="checkbox"/> unable to measure		
Driller	P&N	Logger	E. Datz	Checked by	C. Marin	Time After Drilling	NA
Drilling Method	2.25" SSA to 20', mud rotary thereafter, boring backfilled upon completion			Depth to Water	<input checked="" type="checkbox"/> NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							



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### BORING LOG 1165-B-03-PMT

WEI Job No.: 1100-04-01

Client: AECOM  
Project: Circle Interchange Reconstruction  
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88  
Elevation: 593.02 ft  
North: 1895883.86 ft  
East: 1172001.98 ft  
Station: 7614+44.53  
Offset: 24.1685 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	Hard, gray SILTY LOAM to SILTY CLAY LOAM, trace gravel														
	--Pressure Meter Test--			1											
	--HARD DRILLING-- --Possible Cobbles--			2											
	--Pressure Meter Test--			2											
	--HARD DRILLING-- --Possible Boulder--			3											
	--Pressure Meter Test--			3											
	Hard, gray SILTY CLAY LOAM, trace gravel			1	13 13 15	5.67 B	12								
	Boring terminated at 98.00 ft														

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	09-12-2013	Complete Drilling	09-12-2013	While Drilling	<input checked="" type="checkbox"/> Rotary wash		
Drilling Contractor	Wang Testing Services	Drill Rig	B-57 TMR	At Completion of Drilling	<input checked="" type="checkbox"/> unable to measure		
Driller	P&N	Logger	E. Datz	Checked by	C. Marin	Time After Drilling	NA
Drilling Method	2.25" SSA to 20', mud rotary thereafter, boring backfilled upon completion			Depth to Water	<input checked="" type="checkbox"/> NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

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**HBM**  
ENGINEERING GROUP, LLC.  
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RESEARCH & TESTING

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DESIGNED - WM	REVISED
DRAWN - WM	REVISED
CHECKED - MI, JJS	REVISED
DATE - 10/24/2014	REVISED

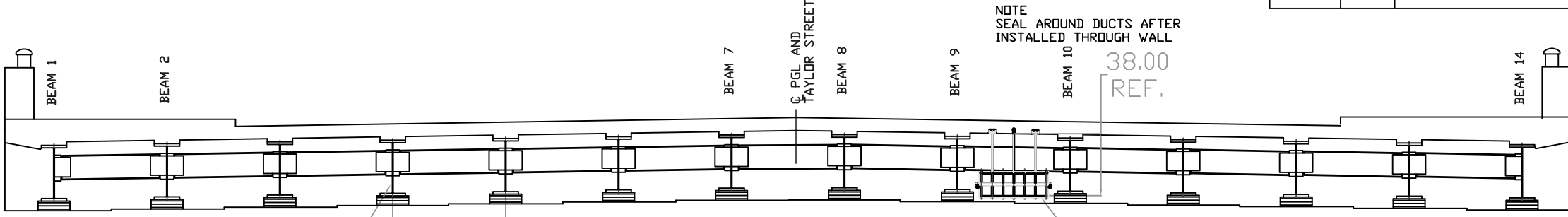
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BORING LOGS VII  
STRUCTURE NO. 016-1165

SCALE: SHEET 51-63 OF 51-63 SHEETS STA. TO STA.

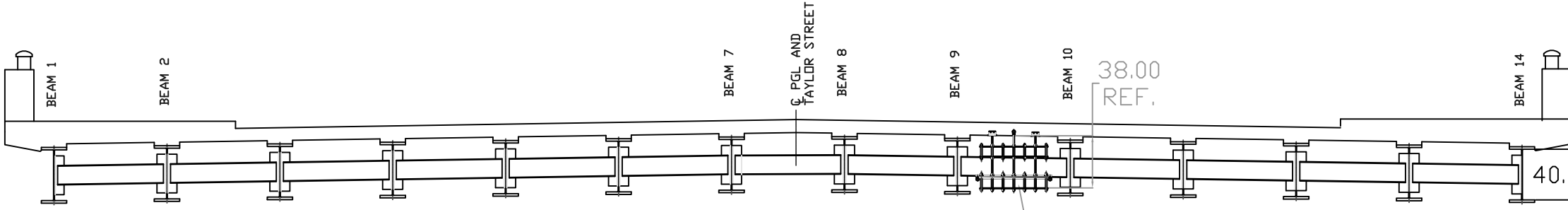
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	250
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

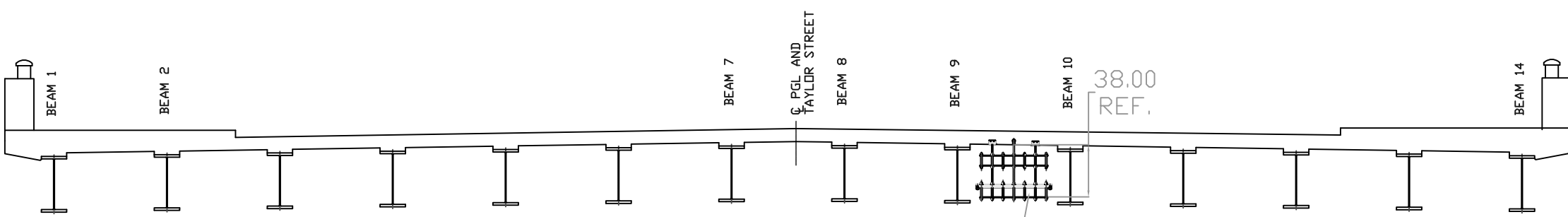


GIRDER 40 WEB TYP. 5'-10" TYPICAL  
 TYPICAL CROSS SECTION DIAPHRAGM D1  
 LOOKING UP STATION AT NORTH ABUTMENT  
 TYPICAL BLOCK OUT MINIMUM SIZE 16" X 43"

NOTE  
 SEAL AROUND DUCTS AFTER  
 INSTALLED THROUGH WALL



TYPICAL CROSS SECTION DIAPHRAGM D2  
 LOOKING UP STATION  
 COMED DUCT BANK TWELVE 5' FIBERGLASS DUCTS  
 NO PART OF THE DUCT BANK CAN EXTEND BELOW THE I-BEAMS



TYPICAL CROSS SECTION LOOKING UP STATION  
 COMED DUCT BANK TWELVE 5' FIBERGLASS DUCTS  
 NO PART OF THE DUCT BANK CAN EXTEND BELOW THE I-BEAMS

FOR INFORMATION ONLY  
 WORK TO BE PERFORMED BY OTHERS  
 WITH THE EXCEPTION OF PLACEMENT  
 OF INSERTS INTO SUPERSTRUCTURE

NOTE  
 NO PART OF THE CONDUIT SUPPORT HANGER CAN  
 EXTEND BELOW THE BRIDGE DECK GIRDER  
 EXTENDED RODS MAY NEED TO BE ALTERED

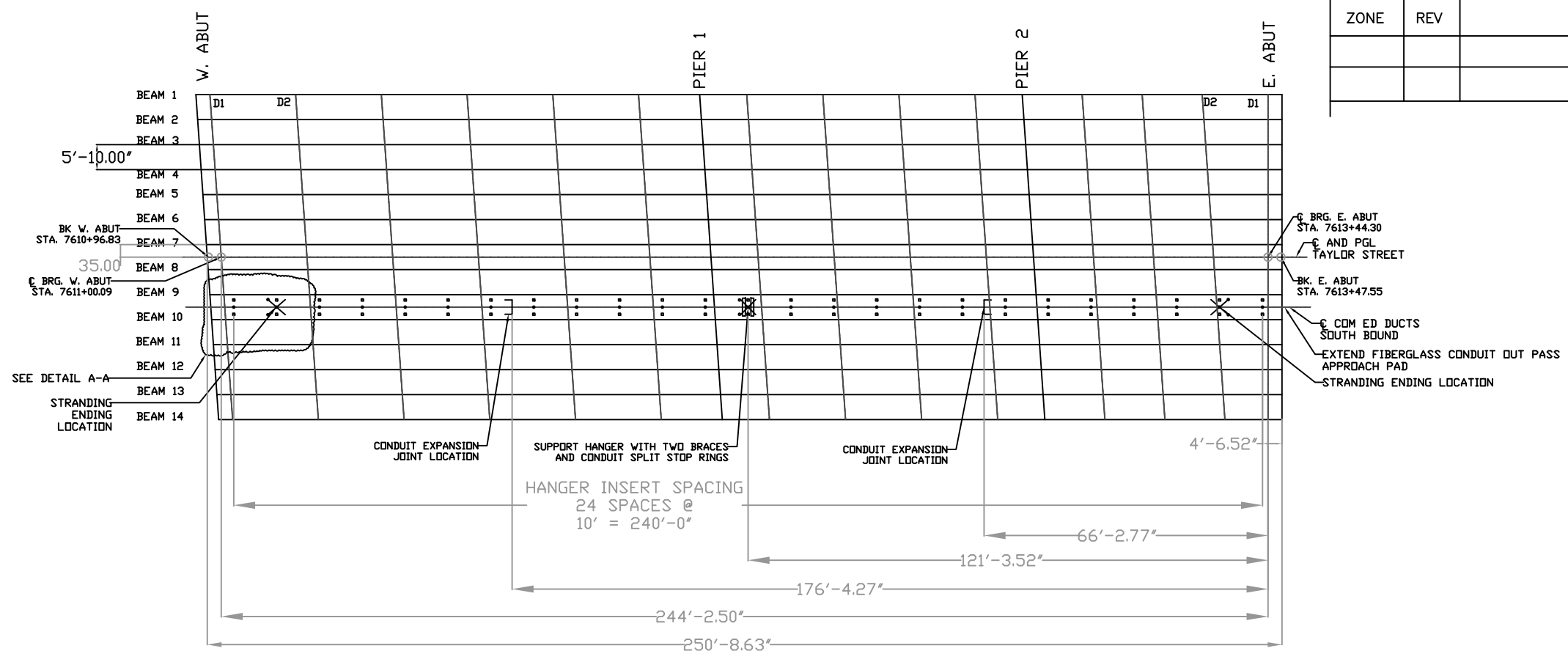
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Note:  
 ALL MEASUREMENTS ARE IN INCHES UNLESS NOTED OTHERWISE

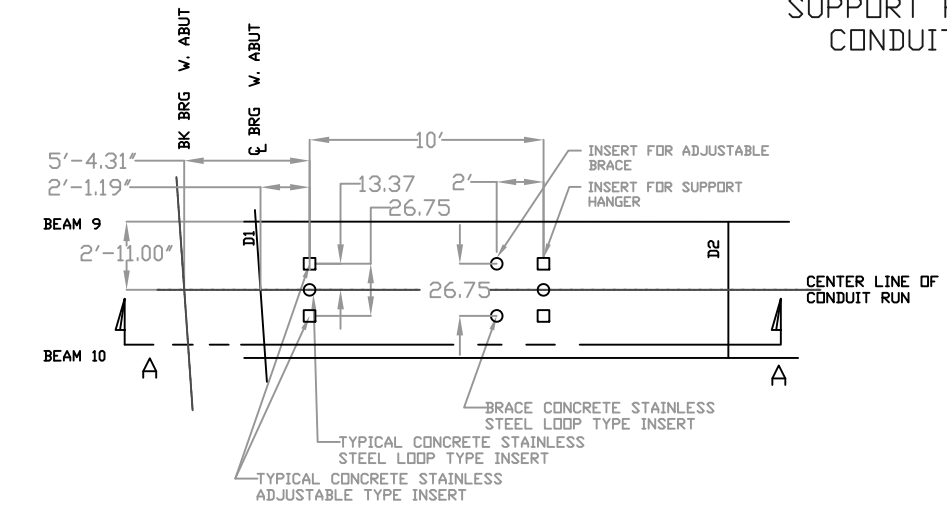
DRAWING APPROVAL  
 I APPROVE THIS DRAWING FOR MANUFACTURING  
 DATE: \_\_\_\_\_

Bridge Deck Cross Section	CONDUX INTERNATIONAL, INC. MANKATO MN PH. 800-533-2077			
	Project: Com Ed Taylor Street Cook County Illinois			
WEIGHT: 0.0 LBS EA	SIZE	FSCM NO.	DWG NO. TBA	REV 0.0
QUOTE NO. 3985226671	SCALE 1/2	DATE: 07-25-2014	SHEET 251	CONDUX 1 of 3

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

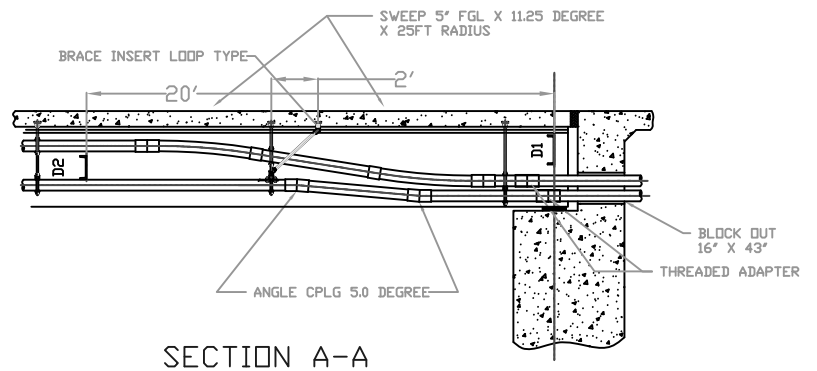


SUPPORT HANGER AND CONDUIT LAYOUT



DETAIL A-A  
CONCRETE INSERT LAYOUT DETAIL  
SCALE 4:1

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WORK TO BE PERFORMED BY OTHERS  
WITH THE EXCEPTION OF PLACEMENT  
OF INSERTS INTO SUPERSTRUCTURE



SECTION A-A

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Note:  
ALL MEASUREMENTS ARE IN INCHES UNLESS NOTED OTHERWISE

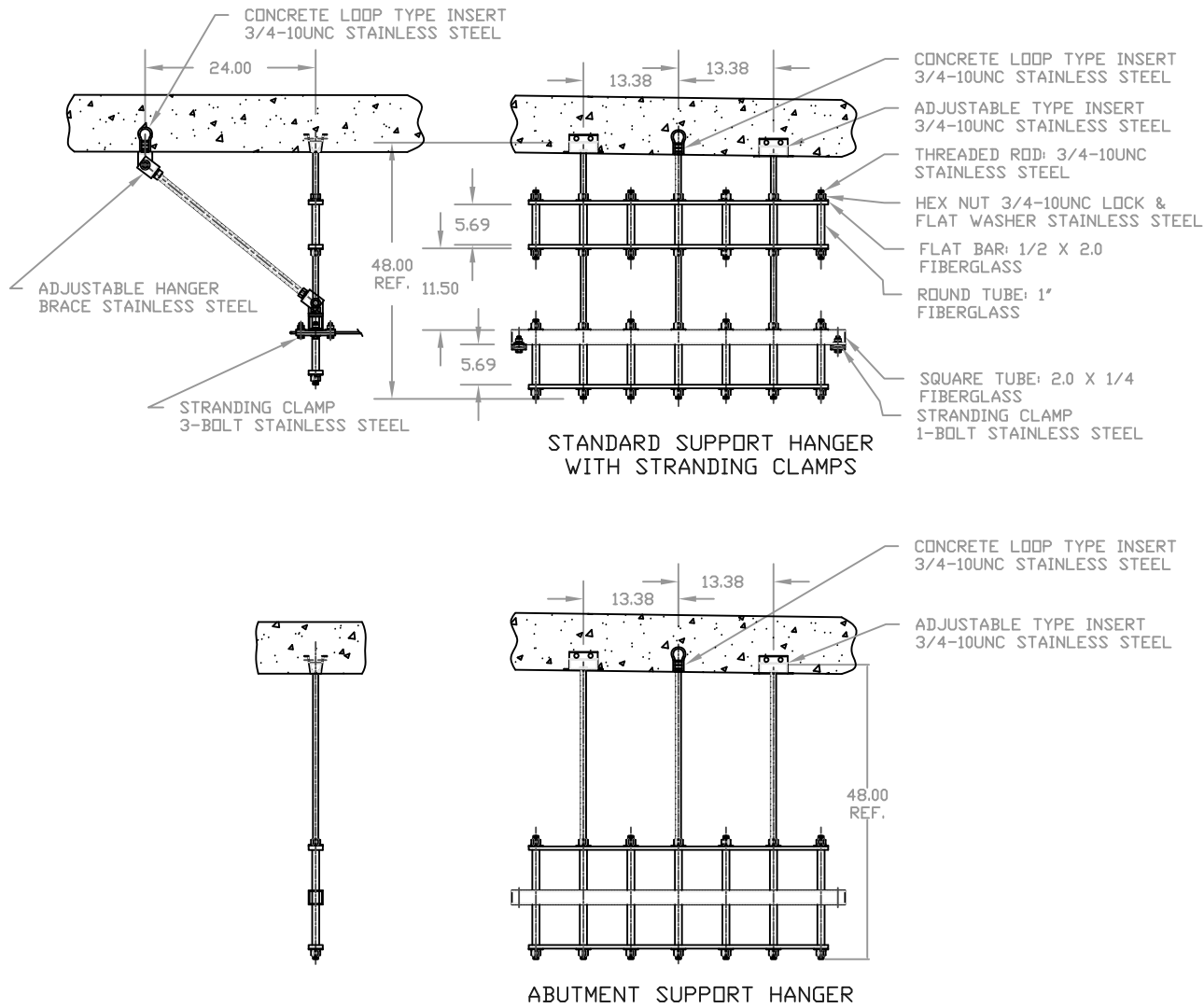
DRAWING APPROVAL  
I \_\_\_\_\_  
APPROVE THIS DRAWING FOR MANUFACTURING  
DATE: \_\_\_\_\_

CONDUIT SUPPORT AND CONDUIT LAYOUT		CONDUX INTERNATIONAL, INC. MANKATO MN PH. 800-533-2077		
WEIGHT: 0.0 LBS EA		SIZE	FSCM NO.	DWG NO. TBA
QUOTE NO. 3985226671		SCALE 1/2	DATE: 07-25-2014	REV 0.0
		CONDUX 2 of 3		SHEET 252



This drawing is the property of Condux International, Inc. and the information thereon is to be treated as confidential. It is not to be used, copied or disclosed to outside parties without our written consent

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



CURRENT BILL OF MATERIAL

ITEM NO.	PART NO.	DESCRIPTION	QTY	UNIT
1	26125F3S24	ABUTMENT CONDUIT SUPPORT HANGER: 2 HIGH X 6 WIDE FIBERGLASS AND STAINLESS STEEL, OPENING FOR TWELVE 5" FGL DUCTS THREADED RODS THREE @ 3/4-10UNC X 48.00 LONG	2	EA.
2	TBA	STANDARD CONDUIT SUPPORT HANGER: 2 HIGH X 6 WIDE FIBERGLASS AND STAINLESS STEEL, OPENING FOR TWELVE 5" FGL DUCTS THREADED RODS THREE @ 3/4-10UNC X 48.00 LONG	23	EA.
3	08610236	HANGER BRACE ADJUSTABLE: 3/6 INCH STAINLESS STEEL	6	EA.
4	08409990	CONCRETE INSERT: 3/4-10 LOOP TYPE, STAINLESS STEEL	31	EA.
5	08558300	CONCRETE INSERT SETTING PLUG: 3/4-10	31	EA.
6	TBA	CONCRETE INSERT ADJUSTABLE: 3/4-10 STAINLESS STEEL	50	EA.
7	08408950	STRANDING WIRE: 1/2 X 500 FT., STAINLESS STEEL	2	EA.
8	08409404	GUY STRAND CLAMP: 3-BOLT, STAINLESS STEEL	6	EA.
9	08409504	GUY STRAND CLAMP: 1-BOLT, STAINLESS STEEL	40	EA.
10	08460053	CONDUIT FIBERGLASS: 5" IPS, MW (5.57 O.D. X .096 WALL) MEETING NEMA TC-14A	3120	FT.
11	08460153	CONDUIT STOP COUPLING: 5" IPS MW	40	EA.
12	08460453	CONDUIT EXPANSION JOINT O-RING TYPE: 5" IPS MW	24	EA.
13	08460953	CONDUIT SPLIT STOP RING: 5" IPS MW	24	EA.
14	08461553	CONDUIT ADAPTER: 5" IPS MW TO 5" GRC	24	EA.
15	TBA	CONDUIT SWEEP: 5" IPS MW 11.25 DEGREE X 25FT RADIUS	24	EA.
16	08460253	CONDUIT 5 DEG. ANGLE COUPLING: 5" IPS MW	24	EA.
17	08463402	CONDUIT EPOXY ADHESIVE CARTRIDGE	30	EA.
18	02288990	CONDUIT EPOXY ADHESIVE GUN	1	EA.

General Construction, Hanger and Conduit Notes

- 1.0 Recommended spacing between Support is 10 foot.
- 2.0 Support Hanger Material shall be manufactured using 316 stainless steel and fiberglass components.
- 3.0 Conduit is 5 inch Fiberglass with minimum wall thickness of .096 inch meeting NEMA TC-14A Specs.
- 4.0 Conduit joints shall be positive locking adhesive bonded bell and spigot.
- 5.0 Conduit expansion joints shall be sliding sleeve with provision for 8 inch of travel.
- 6.0 Bridge abutments must have a block out or be sleeved to allow the fiberglass conduit to pass through. After conduit is placed through abutment seal up opening with state approved sealant.
- 7.0 Place concrete inserts for future support system. Hangers will be installed at a later date.
- 8.0 Conduit support hangers weight 1160.00 LBS total  
Fiberglass conduit weight 4150.00 LBS total  
cable weight weight 25,370.00 LBS total

Grand total being placed on the bridge is 30,681 LBS.

FOR INFORMATION ONLY  
WORK TO BE PERFORMED BY OTHERS  
WITH THE EXCEPTION OF PLACEMENT  
OF INSERTS INTO SUPERSTRUCTURE

NOTE  
NO PART OF THE CONDUIT SUPPORT HANGER  
CAN EXTEND BELOW THE BRIDGE DECK  
GIRDER  
EXTENDED RODS MAY NEED TO BE ALTERED

Condux International, Inc. Support hanger meet the following specifications

- Fiberglass Items  
Flat Bar: 1/2 x 2.0  
Round Tube: 1.0" O.D. .105 wall  
Square Tube: 2 x 2 x 1/4  
Fiberglass reinforced with polyester resin with surface veil for better weathering, resin shall contains u.v. inhibitor. Fiberglass is made with continuous strand mat and uni-directional roving, gray in color  
Tensile Strength (ASTM D 638) 30,000 PSI  
Tensile Modulus (ASTM D 638) 2.3E6 PSI  
Flexural Strength (ASTM D 790) 30,000 PSI  
Flexural Modulus (ASTM D 790) 2.3E6 PSI  
Compressive Strength (ASTM D 695) 20,000 PSI  
Compressive Modulus 1.4E6 PSI  
Yield shear strength 2000 PSI  
Barcol hardness 50  
Dielectric strength (ASTM D 149) 200 VPM Min.

- Stainless steel Hardware Items  
Threaded Rod  
Threaded rod meets (ASTM/ASME B1.1) (ASTM A307 Grade A) (Tensile Strength 60,000 PSI)  
Hexnut  
Hexnut meets (ANSI/ASME B18.2.2) Material: 316 Stainless steel (ASTM F594)  
Flatwasher  
Flatwasher meets (ANSI/ASME B18.22.1) Material: 316 stainless steel (ASTM F436)  
Lockwasher  
Lockwasher meets (ANSI/ASME B18.21.1) Material: 316 Stainless steel (ASTM F436)  
Stranding Items  
Stranding Clamps (1-Bolt & 3-Bolt)  
Material: 1/4 x 1.5 (316 Stainless Steel)  
Stranding Wire  
Cable: 1/4" Dia (7 X 19 Steel Aircraft) 304 Stainless Steel  
Bracing  
Adjustable hanger attachment brackets  
Material: angle 2.5 x 2.5 x .25 (316 Stainless steel)

DRAWING APPROVAL  
I \_\_\_\_\_  
APPROVE THIS DRAWING FOR MANUFACTURING  
DATE: \_\_\_\_\_  
Note:  
ALL MEASUREMENTS ARE IN INCHES UNLESS NOTED OTHERWISE

CONDUIT SUPPORT HANGER DETAIL AND BILL OF MATERIALS		CONDUX INTERNATIONAL, INC. MANKATO MN PH. 800-533-2077			
WEIGHT: 0.0 LBS EA		Project: Com Ed Taylor Street Cook County Illinois		REV 0.0	
QUOTE NO. 3985226671	SCALE 1/2	DATE: 07-25-2014	TBA	CONDUX 3 of 3	SHEET 253



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

**Existing Structure:** S.N. 016-2535 was originally constructed in 1988 as a five-span ramp structure carrying 1 lane of traffic from Taylor Street to I-90/94 northbound under IDOT Contract C-91-433-85 (F.A.I. Route 90/94; Section 1985-080R) with plans dated August 14, 1987. The bridge has not been rehabilitated. The structure has an overall length of approximately 428'-5 1/16" (back of abutment-to-centerline expansion joint; 9'-5 5/16" / 87'-0 3/8" / 118'-0" / 117'-0" / 94'-6") and an overall width of 25'-2" (out-to-out superstructure). The bridge is oriented in the north-south direction with no skew and carries 1 traffic lane from Taylor Street to I-90/94 northbound. The bridge superstructure consists of a 7 1/2"-thick (typ.) reinforced concrete deck with no overlay supported on four (4) 42"-web plate girders. According to the existing plans, these girders have been made composite except for a portion of their lengths above the piers. Stage construction on the bridge will not be allowed. The ramp must be closed during construction and scheduling of the work should coincide with Stage I Construction of the Taylor Street over I-90/94 structure (S.S. 016-1165) located immediately to the south.

No Salvage.

**LOADING**

HS20-44 & ALTERNATE  
 ORIGINAL CONSTRUCTION (1988)  
 Allow 25 #/sq. ft. for future wearing surface

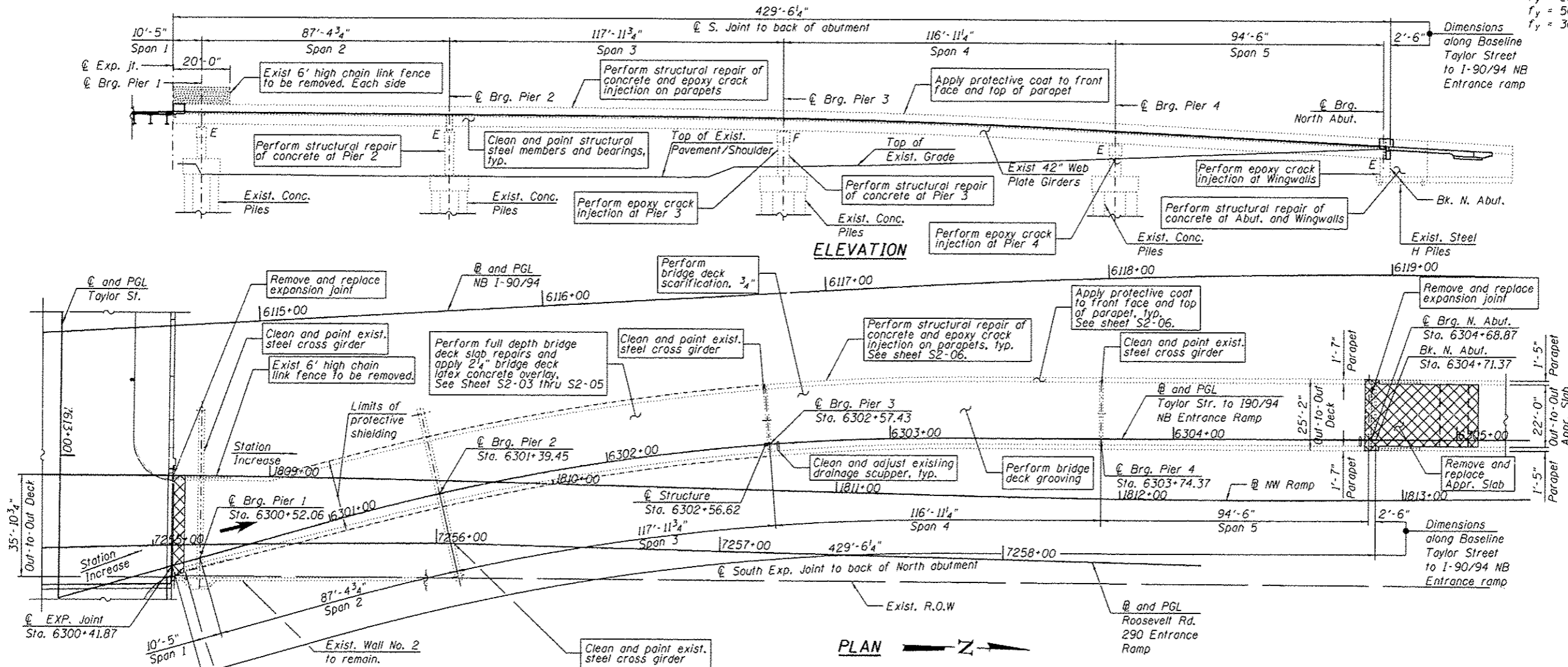
**DESIGN SPECIFICATIONS**

2002 AASHTO Standard Specifications for Highway Bridges  
 ORIGINAL CONSTRUCTION (1988)  
 1982 AASHTO Standard Specifications for Highway Bridges with 1984, 1985 and 1986 Interior Specifications.

**DESIGN STRESSES**

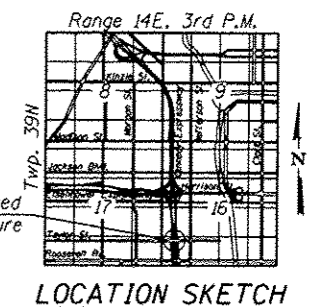
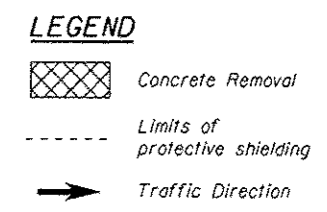
**FIELD UNITS**  
 f'c = 3,500 psi (Concrete)  
 fy = 60,000 psi (Reinforcement)

**ORIGINAL CONSTRUCTION (1988)**  
 f'c = 3,500 psi (Concrete)  
 fy = 60,000 psi (Reinforcement)  
 fy = 50,000 psi (M270 Grade 50)  
 fy = 36,000 psi (M270 Grade 36)



**SCOPE OF WORK:**

1. Provide protective shielding within limits as indicated on the plans.
2. Remove 3/4" from the existing bridge deck slab, using scarfification.
3. Perform full-depth deck slab repairs.
4. Raise the existing grate on the existing drainage scuppers by adding a fabricated ring.
5. Remove and replace transverse expansion joints at the North Abutment and at the south end of the bridge with preformed joint strip seals.
6. Apply a 2 1/4" bridge deck latex concrete overlay to the bridge deck slab.
7. Perform bridge deck grooving for the 2 1/4" bridge deck latex concrete overlay and reconstructed transverse expansion joint areas.
8. Remove and replace portions of parapets and deck below as shown on sheets S2-03 and S2-07.
9. Remove existing 6' high chain link fence, perform structural repairs and epoxy crack injection for the east and west parapet.
10. Apply protective coat for the parapets entire length, both sides and reconstructed transverse expansion joint areas.
11. Clean and paint existing structural steel cross girders members, and bearings as shown on Sheets, S2-14 and S2-15.
12. Perform structural concrete repairs for the North Abutment, Piers 2 and 3, and the parapets.
13. Perform epoxy crack injection for the North Abutment and Wingwalls, Piers 3 and 4 and the Parapets.
14. Remove and replace North Abutment Approach Slab with a standard 30' Approach Slab.
15. Repaint pavement markings on the top of deck. See Civil Plans.



Signed Moussa A. Issa  
 Moussa A. Issa, HBM Il. Lic. No. 081-005738 Expires 11-30-2016

Date 10/24/2014 For Sheets S2-01 Thru S2-18 (Total of 18 Sheets)

**GENERAL PLAN & ELEVATION**  
**TAYLOR ST. TO F.A.I. RTE. 90/94**  
**NORTHBOUND ENTRANCE RAMP.**  
**(DAN RYAN EXPRESSWAY)**  
**F.A.I. RTE. 90/94 - SECTION 2013-012R**  
**COOK COUNTY**  
**STATION 6302+56.62**  
**STRUCTURE NO. 016-2535**

<b>HBM</b> ENGINEERING GROUP, LLC CONSULTING & DESIGN INSPECTION & TESTING RESEARCH & TESTING 4415 WEST HARRISON ST. SUITE 231 HILLSDALE, IL 60142 PHONE: (708) 238-0900 FAX: (708) 238-0901	0162535-60W30-S01-GPE USER NAME = kendrabant PLOT SCALE = 480 1/2" / in. PLOT DATE = 10/23/2014	DESIGNED - WM, MI DRAWN - WM, JJS CHECKED - MAJ, MI DATE - 10/24/2014	REVISED REVISED REVISED REVISED	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>  <b>STRUCTURE NO. 016-2535</b>	F.A.I. RTE. 90/94 SECTION 2013-012R COUNTY COOK TOTAL SHEETS 385 SHEET NO. 254 CONTRACT NO. 60W30
	SCALE: SHEET S2-01 OF S2-18 SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT		

**GENERAL NOTES:**

- Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- Reinforcement bars designated (E) shall be epoxy coated.
- Concrete Sealer shall be applied to the exposed areas of the piers, north abutment and wingwalls.
- The Contractor shall take all necessary precautions for the protection of passing vehicles from falling objects and/or materials until completion of the work.
- Prior to pouring the new concrete deck for expansion joints reconstruction and deck slab repairs, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by method that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be interstate green.

**INDEX OF SHEETS**

- S2-01 General Plan and Elevation
- S2-02 General Notes, Index of Sheets, Total Bill of Materials & PG Lines
- S2-03 Bridge Deck Repair Plan (Spans 1 Thru 3)
- S2-04 Bridge Deck Repair Plan (Spans 4 and 5)
- S2-05 Top of Deck Scarification and Overlay Sections
- S2-06 Parapet Repairs
- S2-07 Parapet Repair Sections and Details
- S2-08 South End of Bridge Joint Removal and Replacement
- S2-09 North Abutment Joint Removal and Replacement
- S2-10 North Approach Slab Plan
- S2-11 North Approach Slab Section and Details
- S2-12 Performed Joint Strip Seal
- S2-13 Adjusting Drainage Scupper Details
- S2-14 Framing Plan
- S2-15 Painting Details
- S2-16 North Abutment Repairs
- S2-17 Piers 2, 3 and 4 Repairs
- S2-18 Bar Splicer Assembly and Mechanical Splicer Details

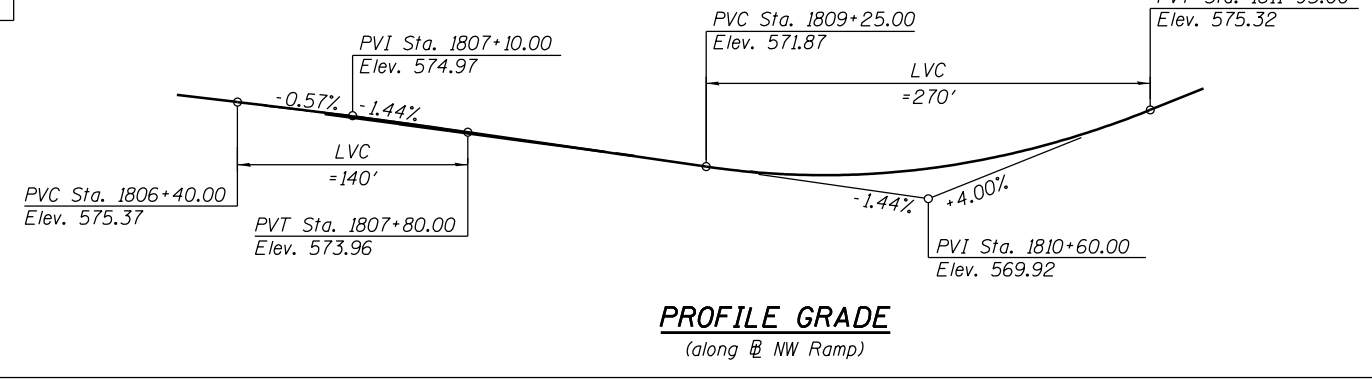
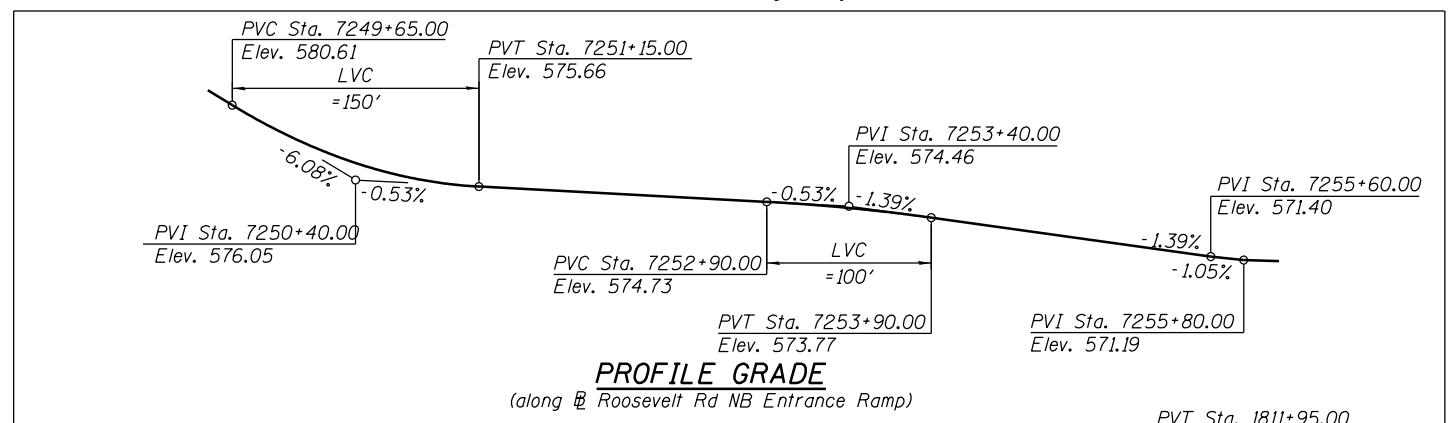
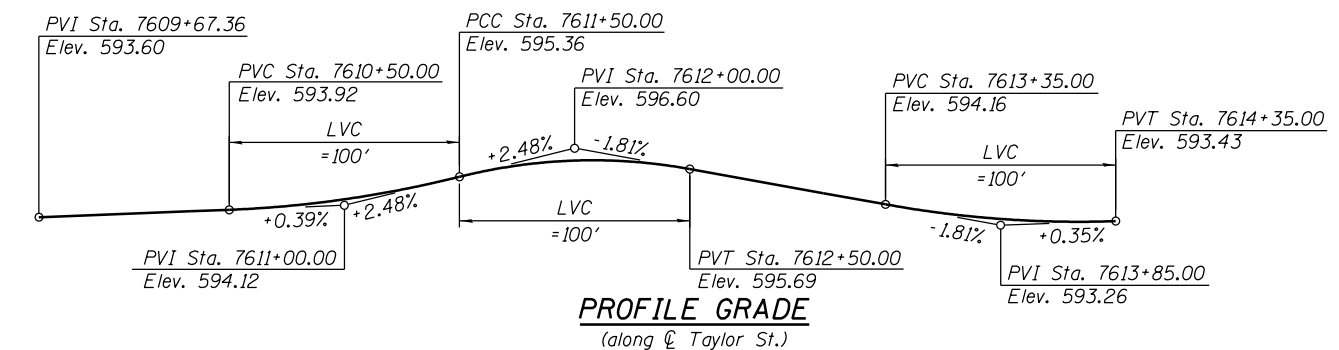
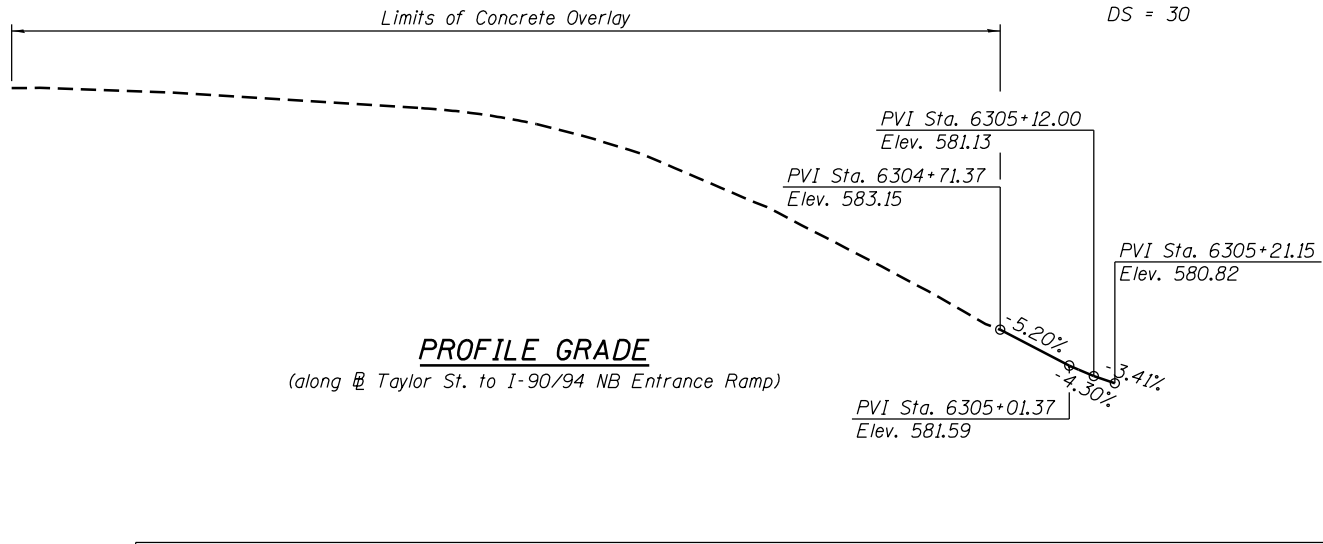
**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER.	SUB.	TOTAL QUANTITY
Concrete Removal	CU YD	12.4		12.4
Protective Shield	SQ YD	640		640
Concrete Structures	CU YD		6.8	6.8
Concrete Superstructure	CU YD	44.3		44.3
Bridge Deck Grooving	SQ YD	1,044		1,044
Protective Coat	SQ YD	479		479
Cleaning and Painting Structural Steel, Location 1	L. SUM	1		1
Reinforcement Bars, Epoxy Coated	POUND	10,330		10,330
Bar Splicers	EACH	23		23
Preformed Joint Strip Seal	FOOT	62		62
Concrete Sealer	SQ FT		430	430
Epoxy Crack Injection	FOOT	648	36	684
Chain Link Fence Removal	FOOT	40		40
Bridge Deck Latex Concrete Overlay, 2 1/4 Inches	SQ YD	1,042		1,042
Containment and Disposal of Lead Paint	L SUM	0.5		0.5
Cleaning Residues				
Bridge Deck Scarification, 3/4"	SQ YD	1,042		1,042
Structural Repair of Concrete (Depth equal to or less than 5")	SQ FT	6	51	57
Structural Repair of Concrete (Depth greater than 5")	SQ FT		12	12
Deck Slab Repair (Full Depth, Type II)	SQ YD	86		86
Drainage Scuppers to be Adjusted	EACH	2		2

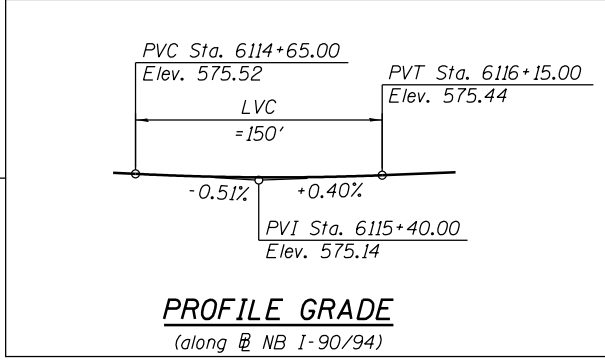
**CURVE DATA**

(Taylor St. to I-90/94 NB Entrance Ramp)  
(Prop. Curve P-TAY-NT-1)

P.I. Sta. = 6302+08.82  
 $\Delta = 15^\circ 46' 18''$  (RT)  
 $D = 7^\circ 16' 15''$   
 $R = 788.01'$   
 $T = 109.15$   
 $L = 216.92'$   
 $E = 7.52'$   
 $e =$  Match Existing  
 $T.R. = NA$   
 $S.E. Run = NA$   
 $P.C. Sta. = 6300+99.68$   
 $P.T. Sta. = 6303+16.59$   
 $DS = 30$



For Information Only  
(Part of Future Contract)



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, INDEX OF SHEETS, TOTAL BILL OF MATERIAL & PG LINES  
STRUCTURE NO. 016-2535

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	255
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

**HBM**  
ENGINEERING GROUP, LLC.  
CONSULTING & DESIGN  
INSPECTION & RATING  
RESEARCH & TESTING

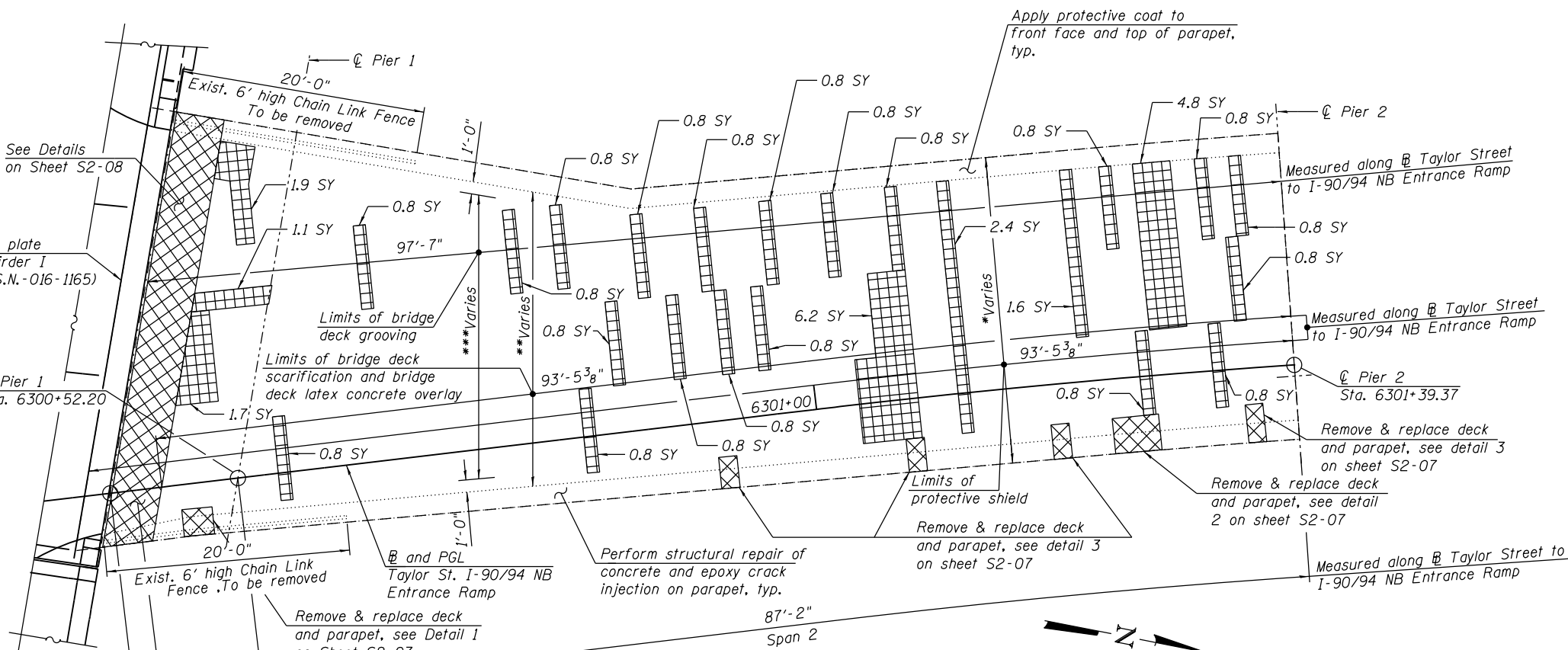
4415 WEST HARRISON ST.  
SUITE 231  
HILLSIDE, IL 60162  
PHONE: (708) 236-0900  
FAX: (708) 236-0901

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PLOT DATE = 12/2/2014	DATE - 10/24/2014	REVISED

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**NOTES:**

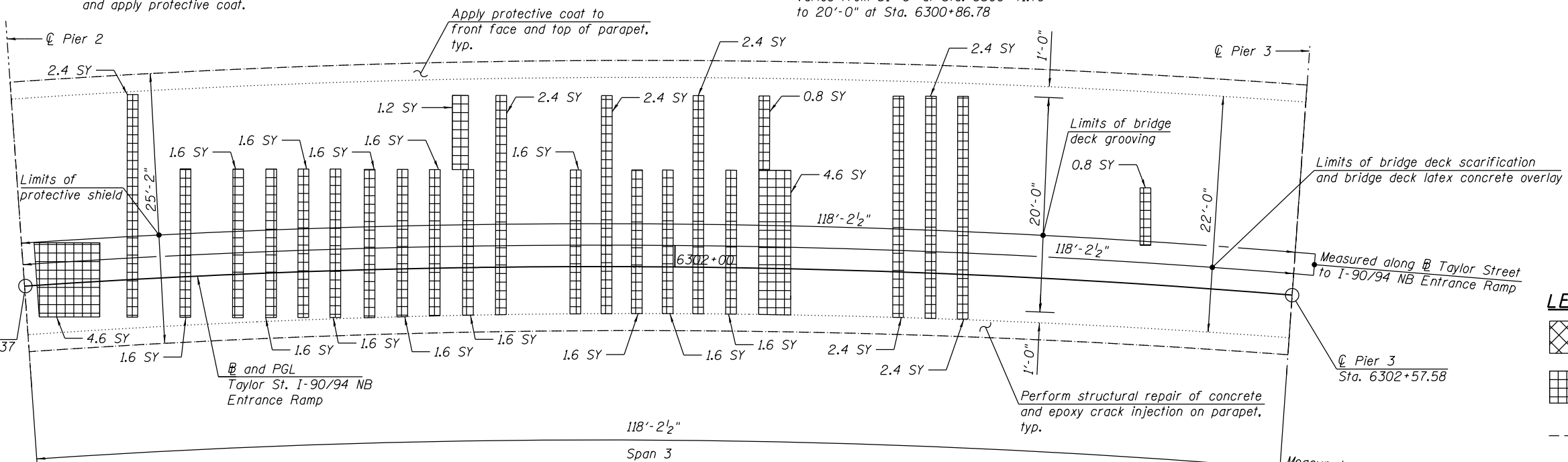
1. Areas of deck repair shown are estimated. The Engineer shall show actual locations of deck repairs at the time of construction.
2. For General Notes and Total Bill of Material, see Sheet S2-02.
3. For bridge deck final cross sections, see Sheet S2-05.
4. For transverse joints reconstruction at South end of bridge and at North abutment, see Sheets S2-08 and S2-09.
5. For repairs on the parapet, see sheets S2-06 and S2-07.
6. Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.
7. Perform bridge deck grooving for the bridge deck latex concrete the reconstructed transverse expansion joint at South end of bridge and North abutment.
8. Protective coat shall be applied to top and inside faces of parapets and reconstructed transverse joint areas.
9. The minimum thickness of the bridge deck latex concrete overlay shall be 2 1/4" and varies as required to adjust for the existing profile grade and beam camber.
10. Raise the existing grate on the existing drainage scuppers by adding a fabricated adjusting ring. For details, see Sheet S2-13.



\* Varies from 36'-6 1/8" at Sta. 6300+39.53 to 25'-2" at Sta. 6300+86.78

\*\* Varies from 32'-0 3/8" at Sta. 6300+45.91 to 22'-0" at Sta. 6300+86.78

\*\*\* Varies from 31'-6" at Sta. 6300+41.79 to 20'-0" at Sta. 6300+86.78



**LEGEND**

	Concrete Removal
	Deck Slab Repair (Full Depth, Type II)
	Limits of protective shielding
SY	- Square Yard

**HBM**  
ENGINEERING GROUP, LLC.  
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INSPECTION & RATING  
RESEARCH & TESTING

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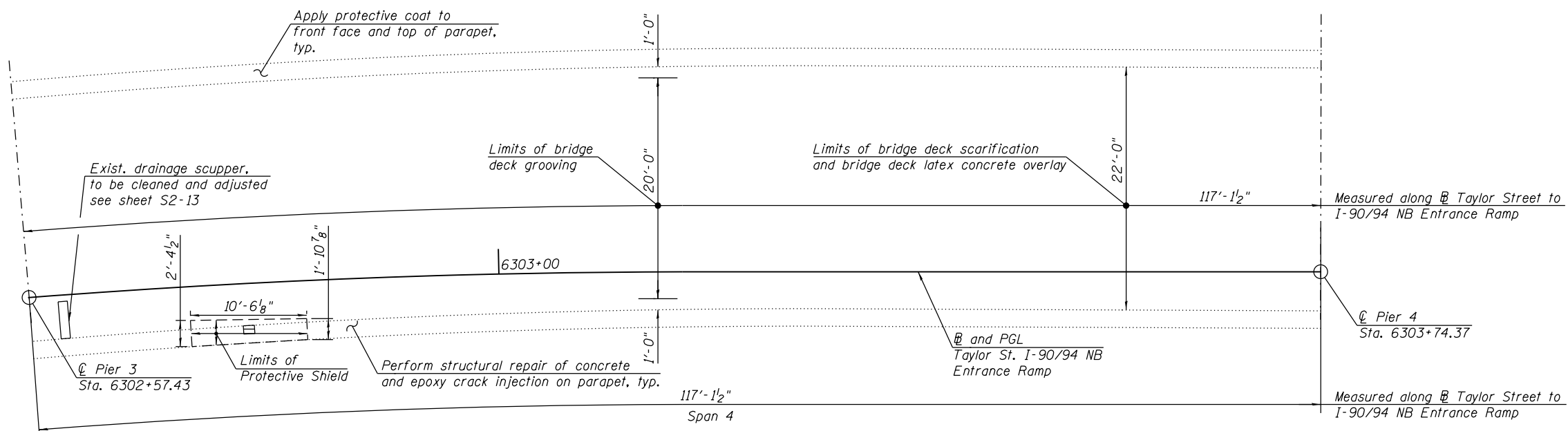
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PLOT DATE = 12/2/2014	DATE - 10/24/2014	REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

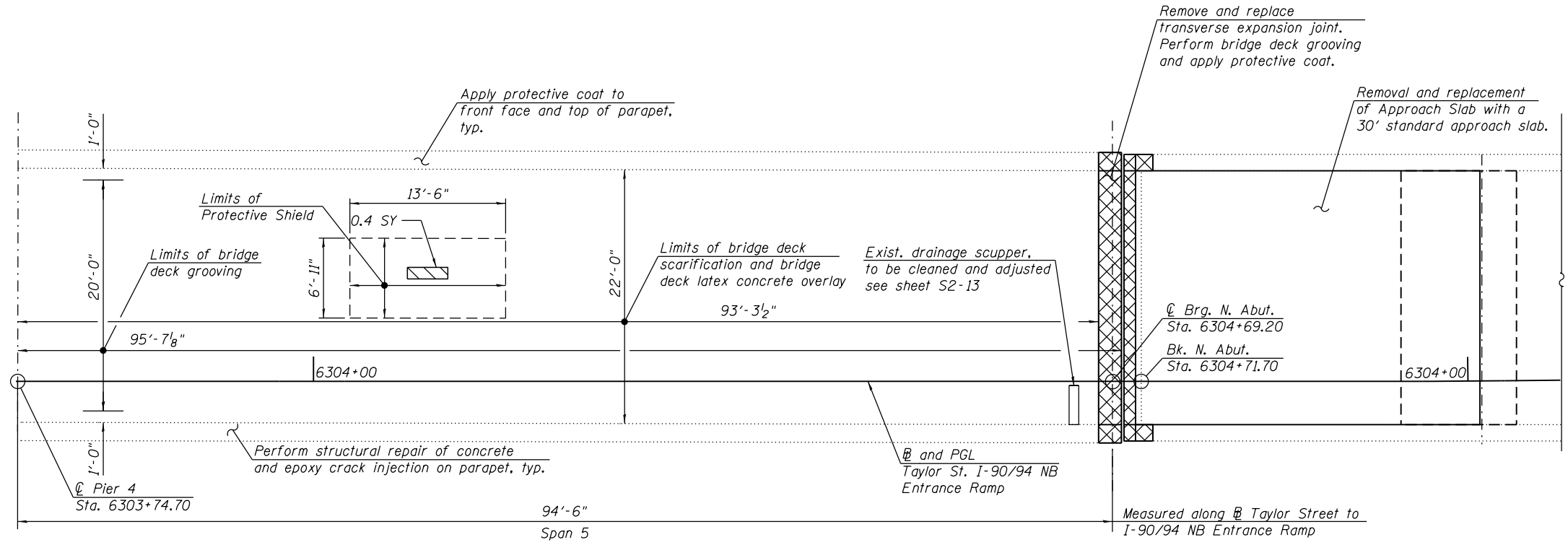
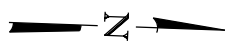
<b>BRIDGE DECK REPAIR PLAN (SPANS 1 THRU 3)</b>	
<b>STRUCTURE NO. 016-2535</b>	
SCALE:	SHEET S2-03 OF S2-18 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	256
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

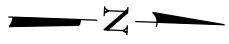
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**DECK PLAN (SPAN 4)**



**DECK PLAN (SPAN 5)**



**NOTE:**  
1. For Notes, see Sheet S2-03.

**LEGEND**

- Concrete Removal
- Deck Slab Repair (Partial) \*
- Structural Repair of Concrete (depth Equal to or Less than 5")
- Limits of protective shielding
- SY - Square Yard
- \* Approximately 0.4 Sq. Yd. for estimating purposes only.

**HBM**  
ENGINEERING GROUP, LLC.  
CONSULTING & DESIGN  
INSPECTION & RATING  
RESEARCH & TESTING

4415 WEST HARRISON ST.  
SUITE 231  
HILLSDALE, IL 60162  
PHONE: (708) 236-0900  
FAX: (708) 236-0901

0162535-60W30-504-BridgeDeckRep_(Spans 4-5)	DESIGNED - JJS, KJD	REVISED
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PLOT DATE = 12/2/2014	DATE - 10/24/2014	REVISED

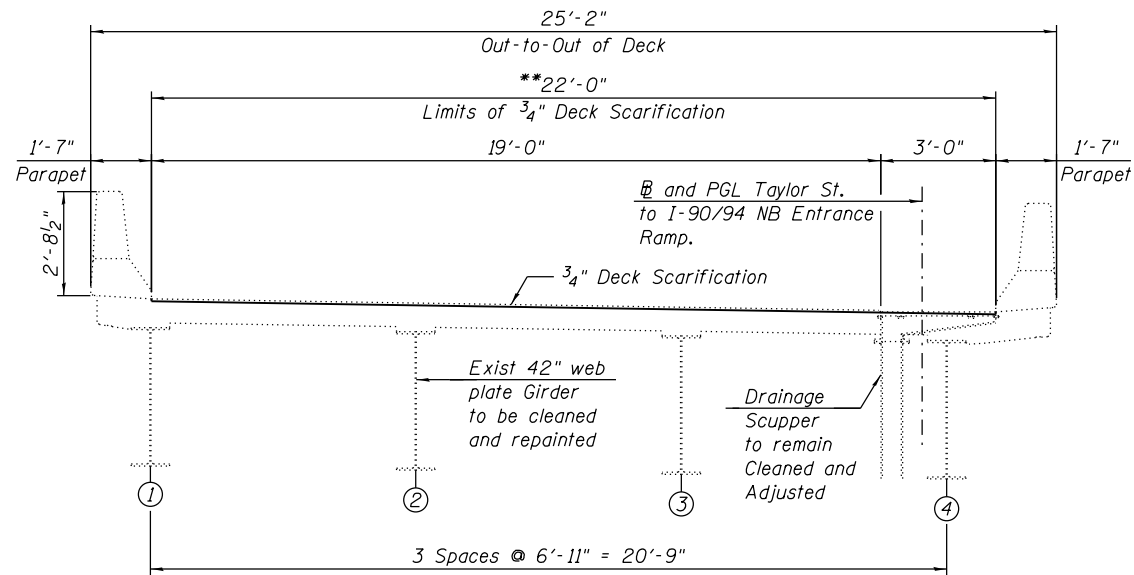
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**BRIDGE DECK REPAIR PLAN (SPANS 4 AND 5)  
STRUCTURE NO. 016-2535**

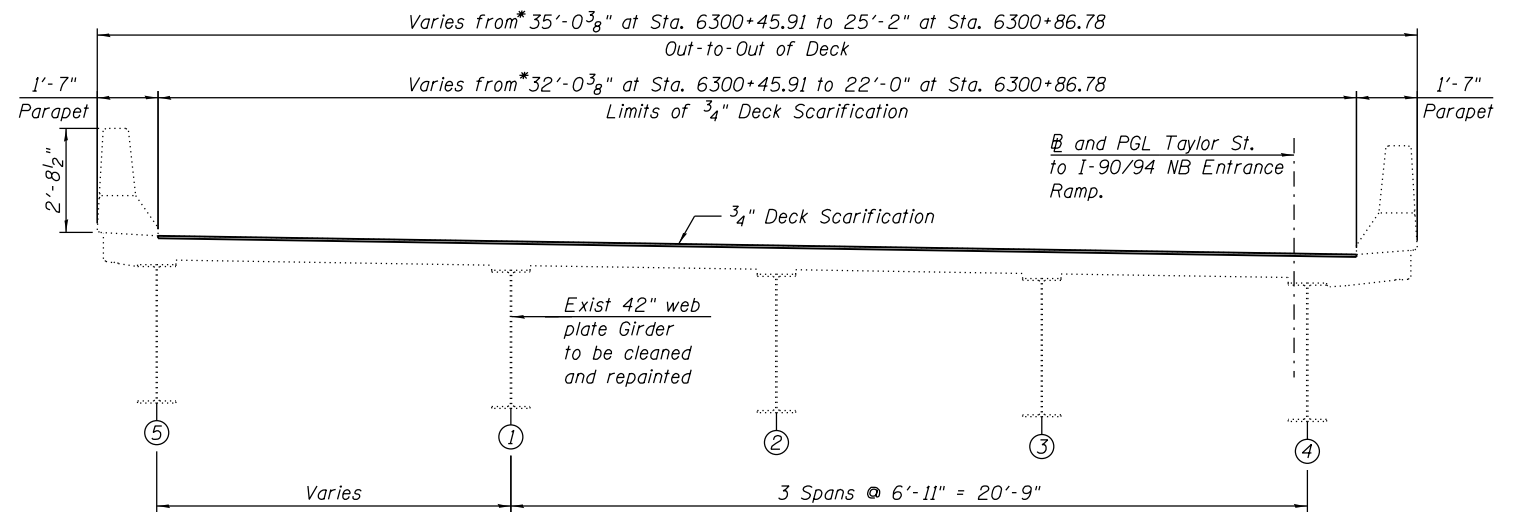
SCALE: SHEET S2-04 OF S2-18 SHEETS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2013-012R	COUNTY COOK	TOTAL SHEETS 385	SHEET NO. 257
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

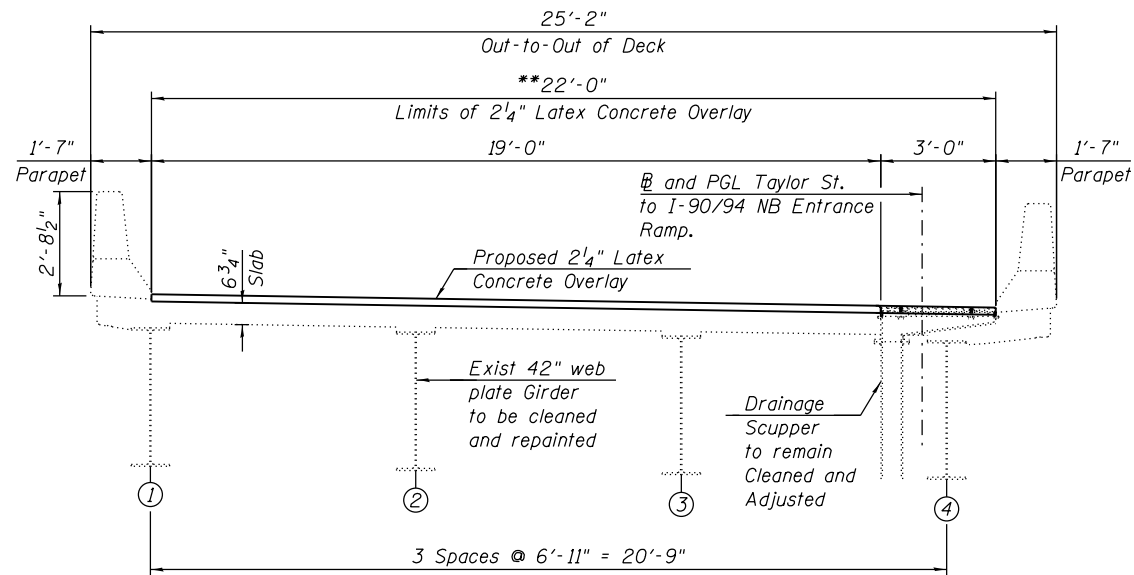
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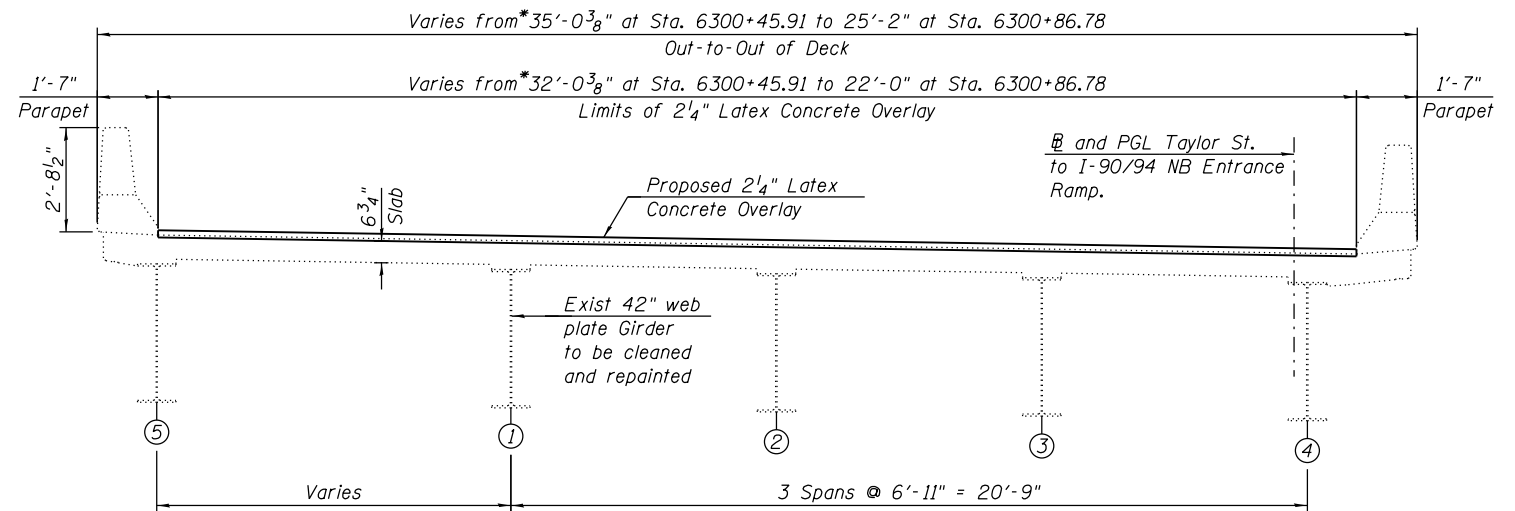
**REMOVAL**  
 (Station 6300+86.78 to Station 6304+68.00)  
 (Looking Upstation)



**REMOVAL**  
 (Station 6300+45.91 to Station 6300+86.78)  
 (Looking Upstation)



**CONSTRUCTION**  
 (Station 6300+86.78 to Station 6304+68.00)  
 (Looking Upstation)



**CONSTRUCTION**  
 (Station 6300+45.91 to Station 6300+86.78)  
 (Looking Upstation)

\* Measured along North edge of bridge south end expansion joint repair.

\*\* Limits of Deck Scarification and Latex Concrete Overlay shall not include areas over the existing drainage scuppers

**NOTES:**

1. For notes, see Sheet S2-03.
2. For drainage scupper locations, see Sheets S2-01 and S2-04.
3. For adjusted drainage scupper details, see Sheet S2-13.

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 HILLSIDE, IL 60162  
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 FAX: (708) 236-0901

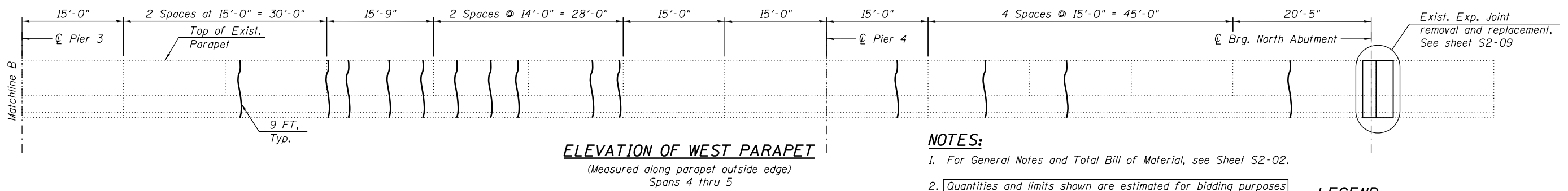
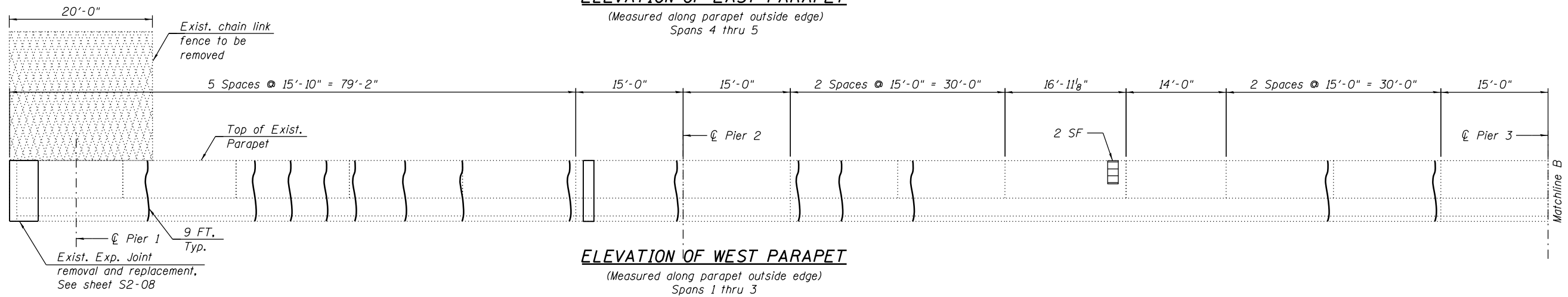
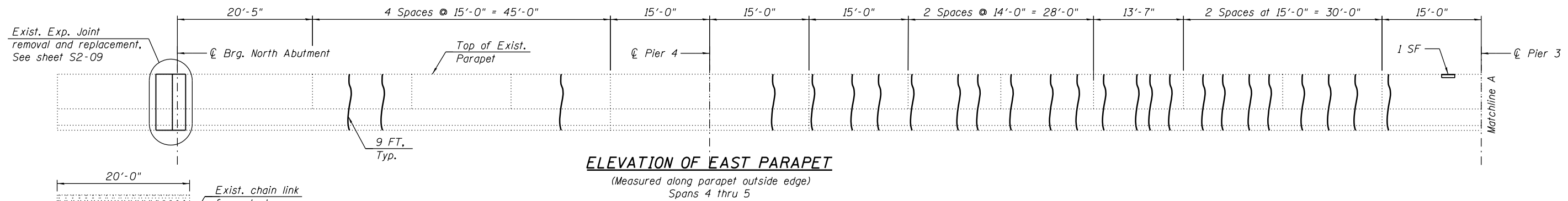
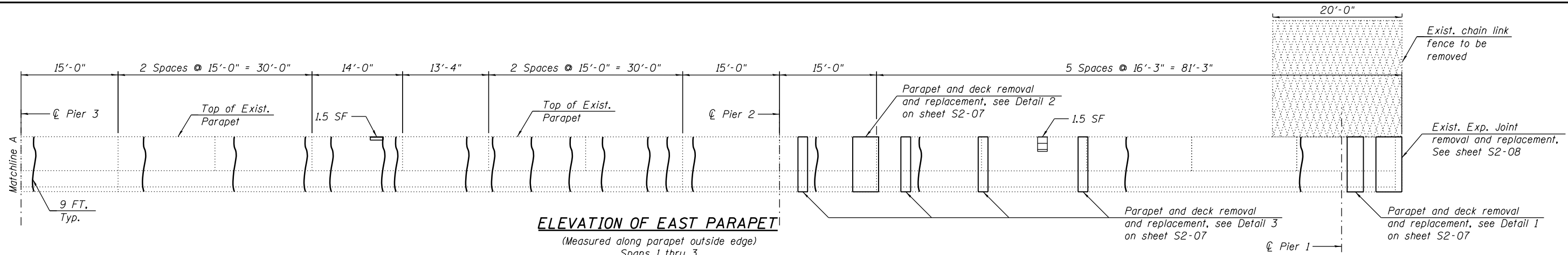
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PLOT DATE = 12/2/2014	DATE - 10/24/2014	REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**TOP OF DECK SCARIFICATION AND OVERLAY SECTIONS**  
**STRUCTURE NO. 016-2535**

SCALE: SHEET S2-05 OF S2-18 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	258
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	



**NOTES:**

- For General Notes and Total Bill of Material, see Sheet S2-02.
- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired and the type(s) of repairs to be used will be determined by the Engineer in the field at the time of construction.
- The Contractor is responsible to remove, support and reinstall all existing utilities interfering with the work. Cost shall be included with Structural Repair of Concrete (Depth Equal to or Less Than 5").
- For Parapet repair section and details, see Sheet S2-07
- For additional Notes, see Sheet S2-03

**LEGEND**

- Structural Repair of Concrete (Depth Equal to or Less Than 5")
- Low Pressure Epoxy Injection (Width > 0.06")
- SF - Square Foot
- LF - Linear Foot

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FAX: (708) 236-0901

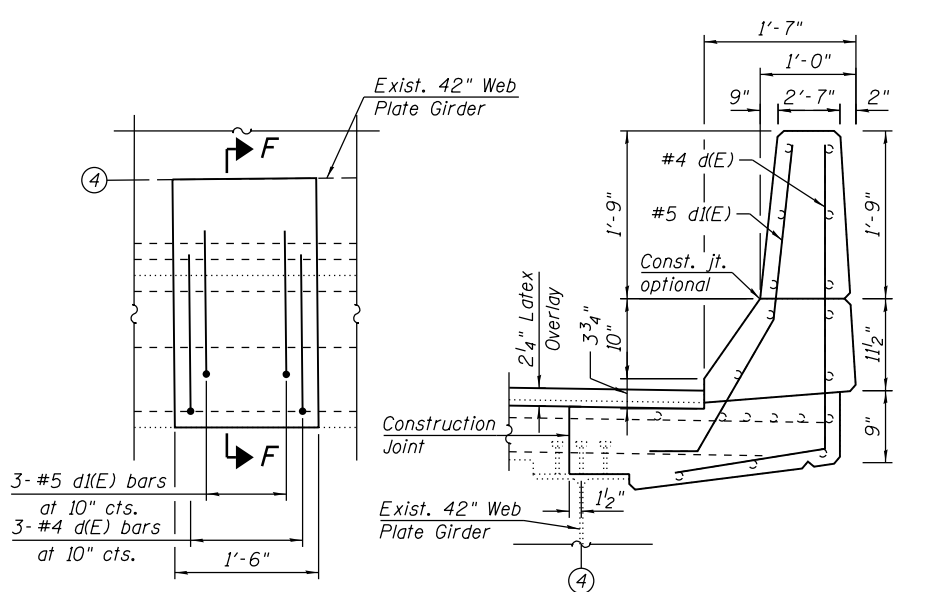
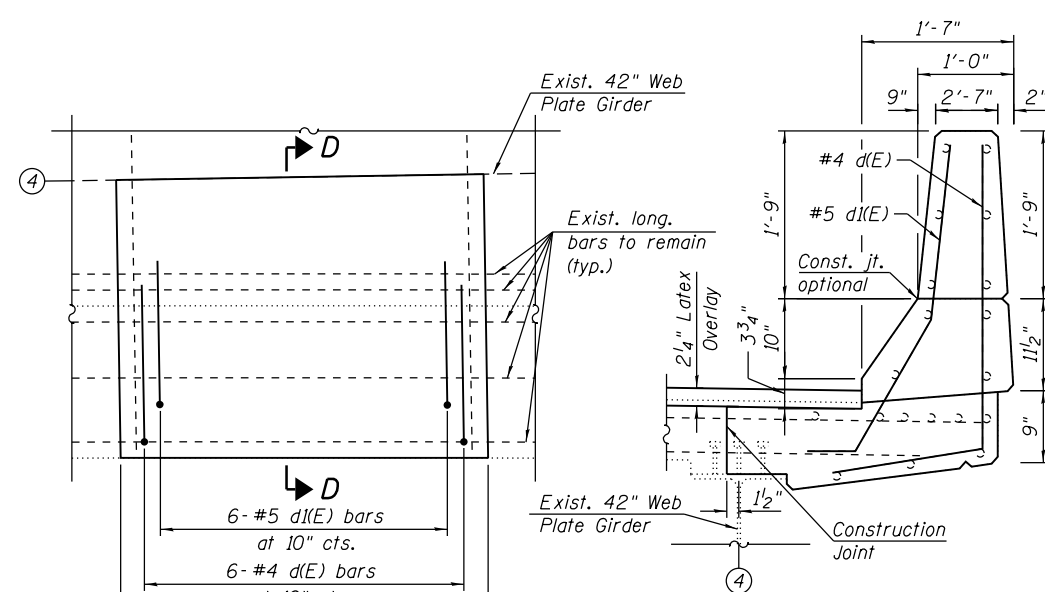
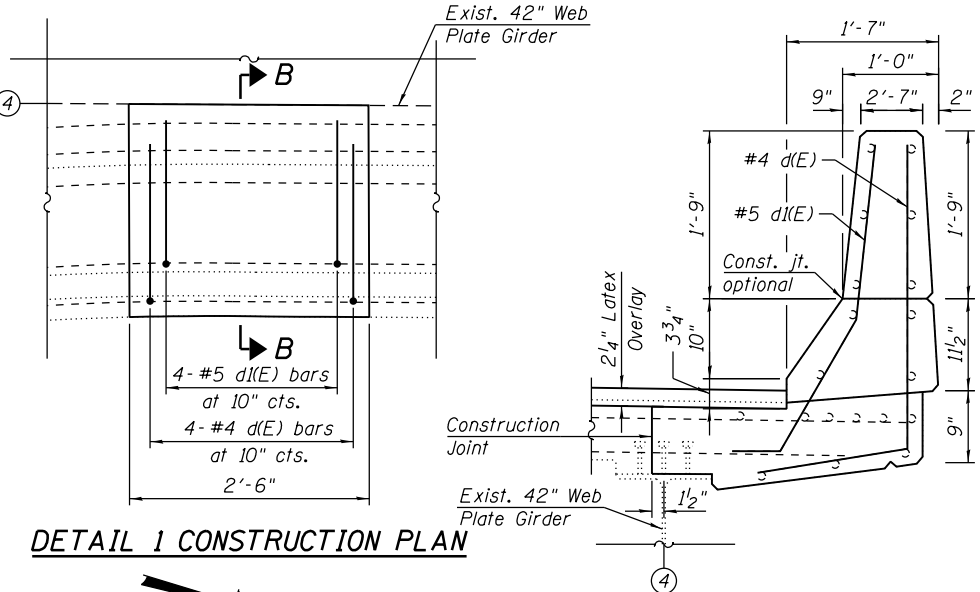
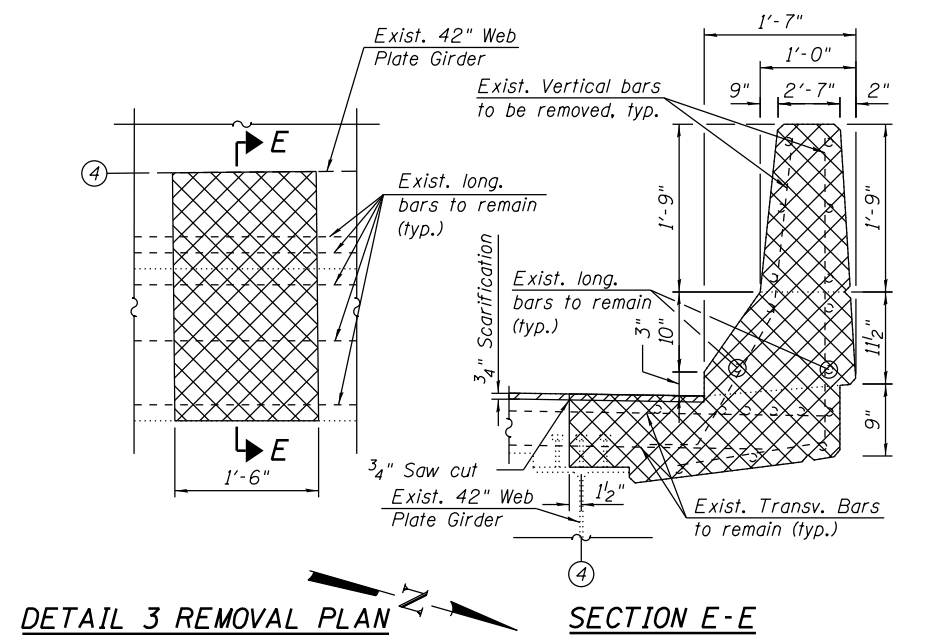
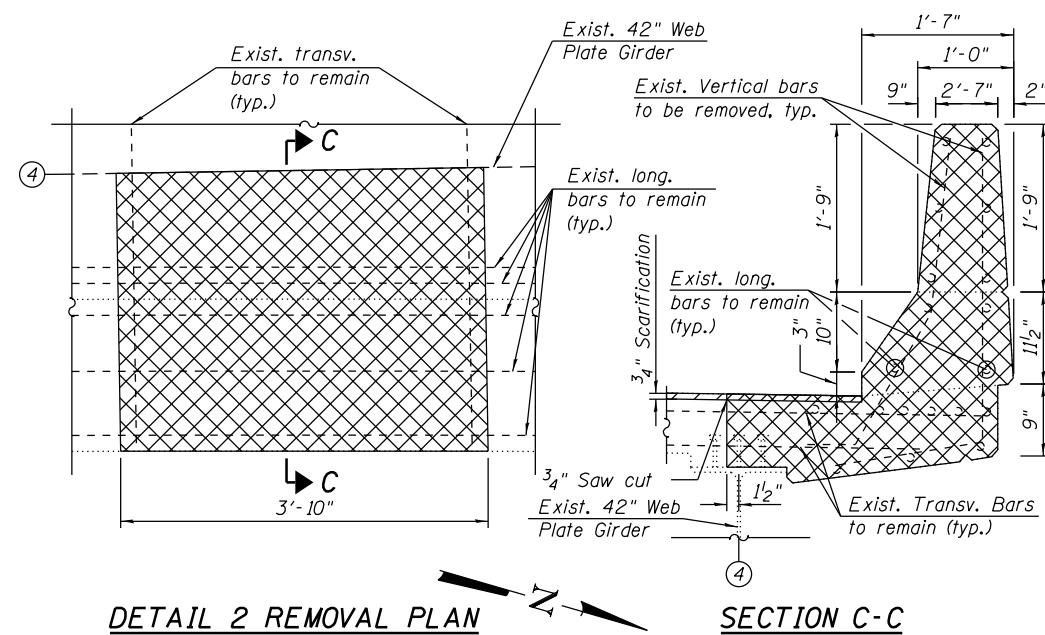
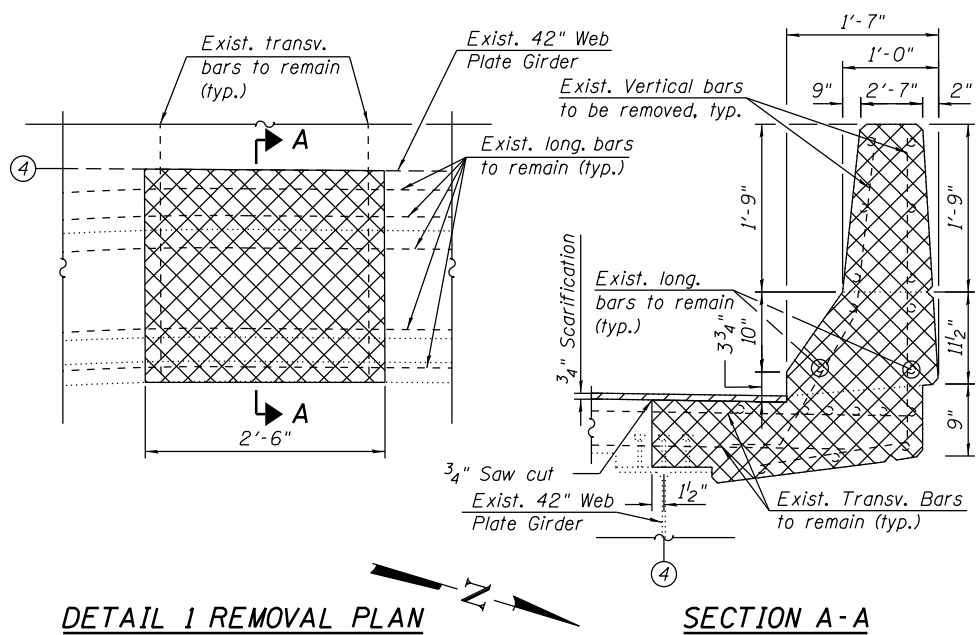
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PLOT DATE = 12/2/2014	DATE - 10/24/2014	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PARAPET REPAIRS	
STRUCTURE NO. 016-2535	
SCALE:	SHEET S2-06 OF S2-18 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

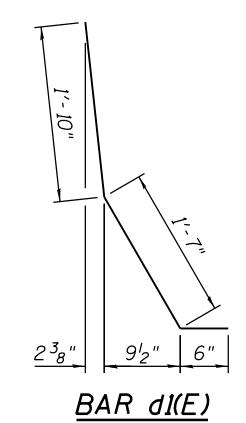
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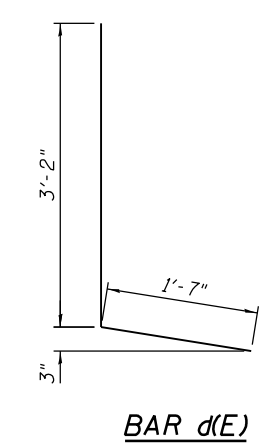
Bar	No.	Size	Length	Shape
d(E)	22	#4	4'-9"	L
d(I(E)	22	#5	3'-11"	L
Concrete Removal			Cu. Yd.	3
Concrete Superstructure			Cu. Yd.	3
Bridge Deck Grooving			Sq. Yd.	955
Protective Coat			Sq. Yd.	347
Reinforcement Bars, Epoxy Coated			Pound	160
Epoxy Crack Injection			Foot	648
Chain Link Fence Removal			Foot	40
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)			Sq. Ft.	6

**SECTION B-B**



**DETAIL 2 CONSTRUCTION PLAN**

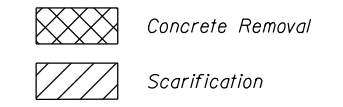
**SECTION D-D**



**NOTE:**

1. For Notes, see Sheet S2-03.

**LEGEND**



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4415 WEST HARRISON ST.  
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FAX: (708) 236-0901

DESIGNED - KJD	REVIS
USER NAME = lisa.kellemeyn	REVIS
PLOT SCALE = 8:0 1/2" = 1"	REVIS
PLOT DATE = 12/2/2014	REVIS
DRAWN - KJD	REVIS
CHECKED - MAI, MI	REVIS
DATE - 10/24/2014	REVIS

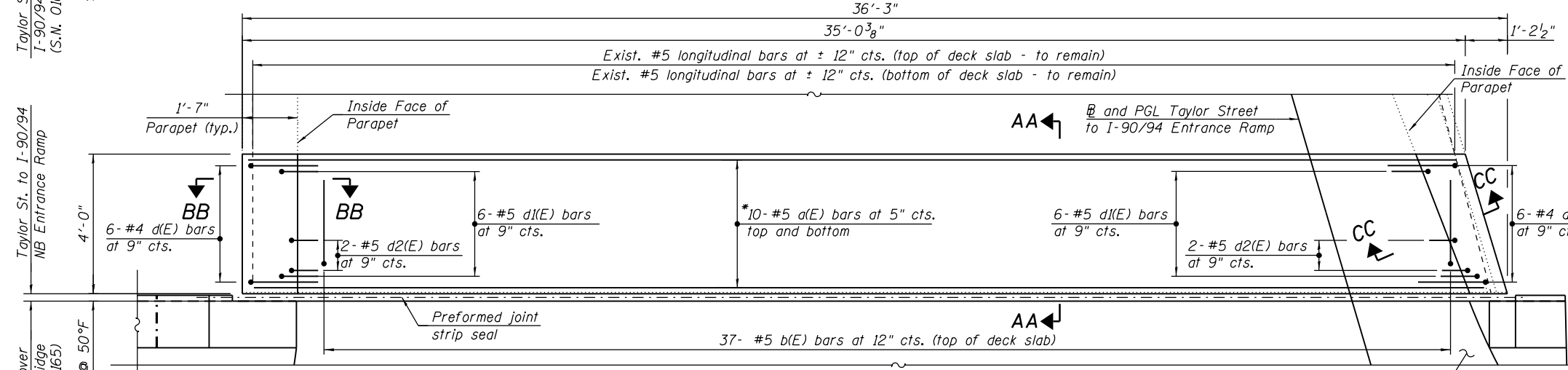
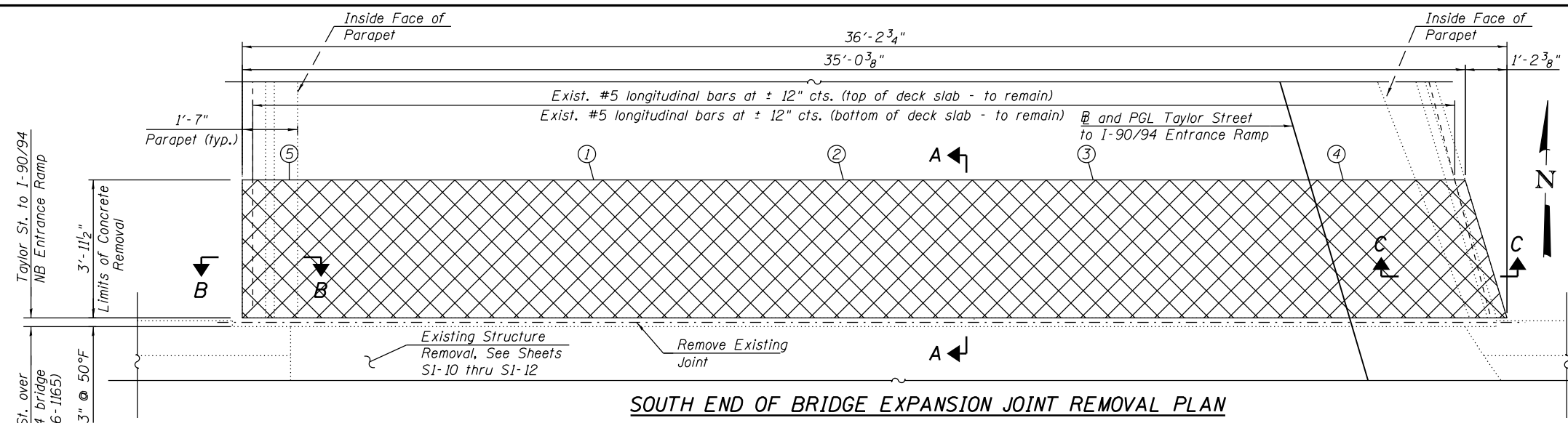
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PARAPET REPAIR SECTIONS AND DETAILS  
STRUCTURE NO. 016-2535**

SCALE: SHEET S2-07 OF S2-18 SHEETS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2013-012R	COUNTY COOK	TOTAL SHEETS 385	SHEET NO. 260
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60W30	

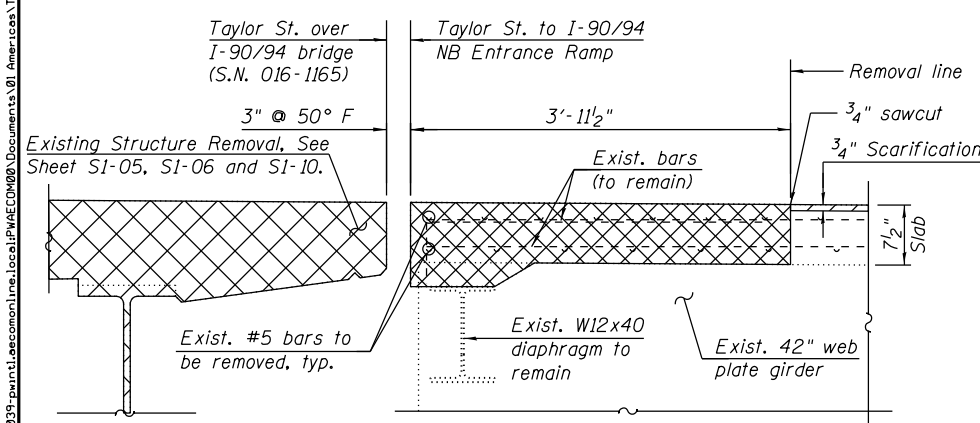
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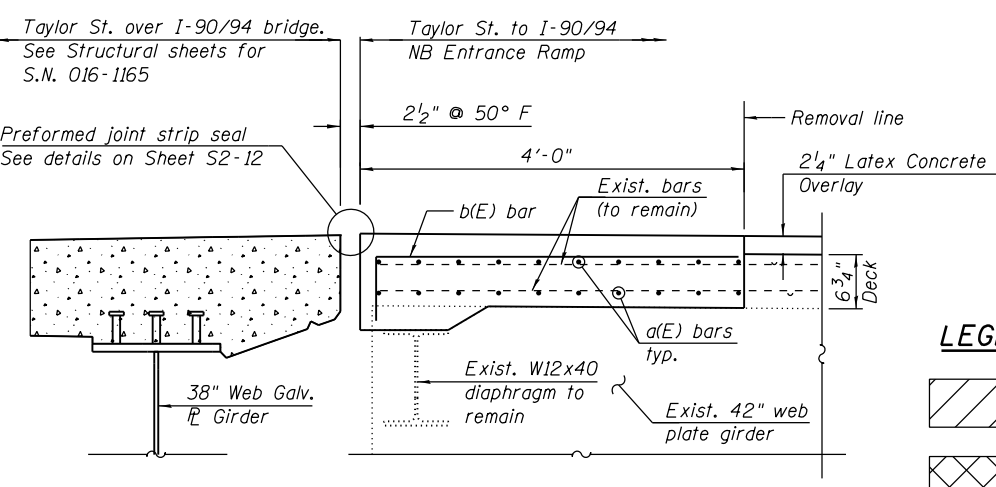
- NOTES:**
- For General Notes and Total Bill of Material, see Sheet S2-02.
  - For preformed joint strip seal, see Sheet S2-12.
  - Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

\* Order bar full length. Cut to fit.  
 \*\* Reinforcement not shown for clarity.

\*\* 8" Deck  
 See Structural Sheets for S.N. 016-1165



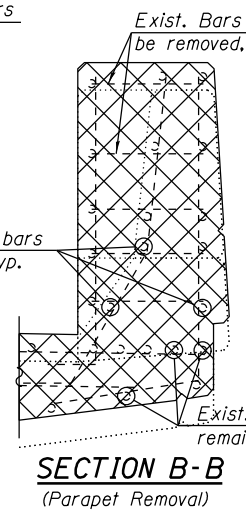
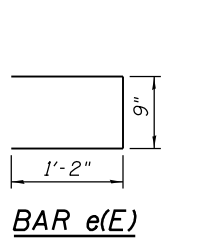
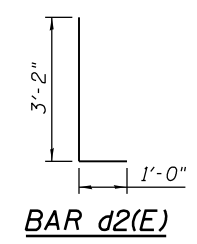
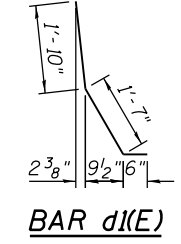
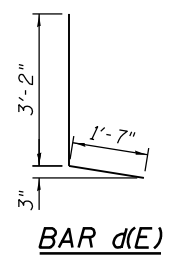
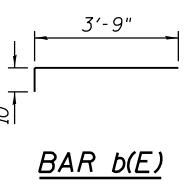
**SECTION A-A**



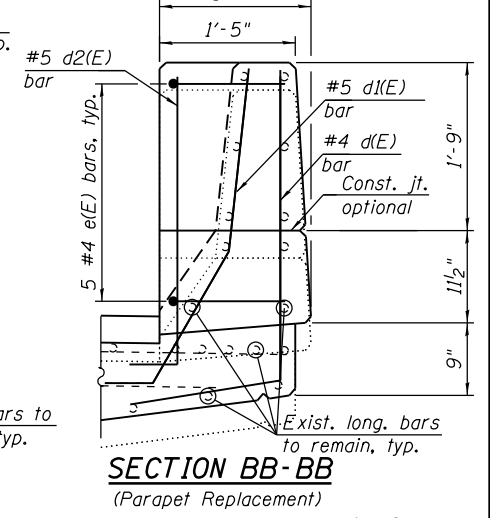
**SECTION AA-AA**

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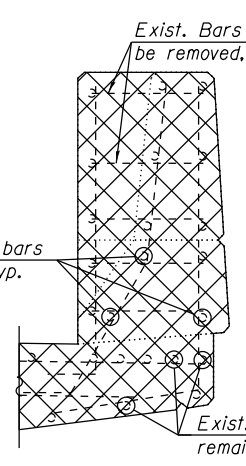
- Scarification
- Concrete Removal



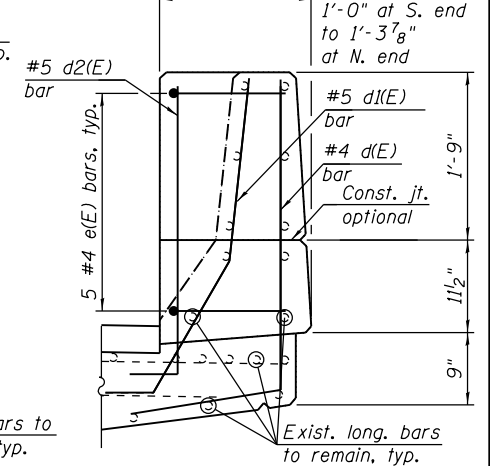
**SECTION B-B**  
(Parapet Removal)



**SECTION BB-BB**  
(Parapet Replacement)



**SECTION C-C**  
(Parapet Removal)



**SECTION CC-CC**  
(Parapet Replacement)

BILL OF MATERIAL				
Bar	No.	Size	Length	Shape
a(E)	20	#5	35'-7"	—
b(E)	37	#5	4'-7"	┌
d(E)	12	#4	4'-9"	└
d1(E)	12	#5	3'-11"	┌
d2(E)	4	#5	4'-2"	└
e(E)	10	#4	3'-1"	└
Concrete Removal		Cu. Yd.	4.9	
Concrete Superstructure		Cu. Yd.	4.9	
Bridge Deck Grooving		Sq. Yd.	14	
Protective Coat		Sq. Yd.	20	
Reinforcement Bars, Epoxy Coated		Pound	1,050	

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USER NAME	DESIGNED	REVISIONS
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	KJD, SK	REVISIONS
	MI, JJS	REVISIONS
		REVISIONS

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**SOUTH END OF BRIDGE JOINT REMOVAL AND REPLACEMENT**  
**STRUCTURE NO. 016-2535**

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	261

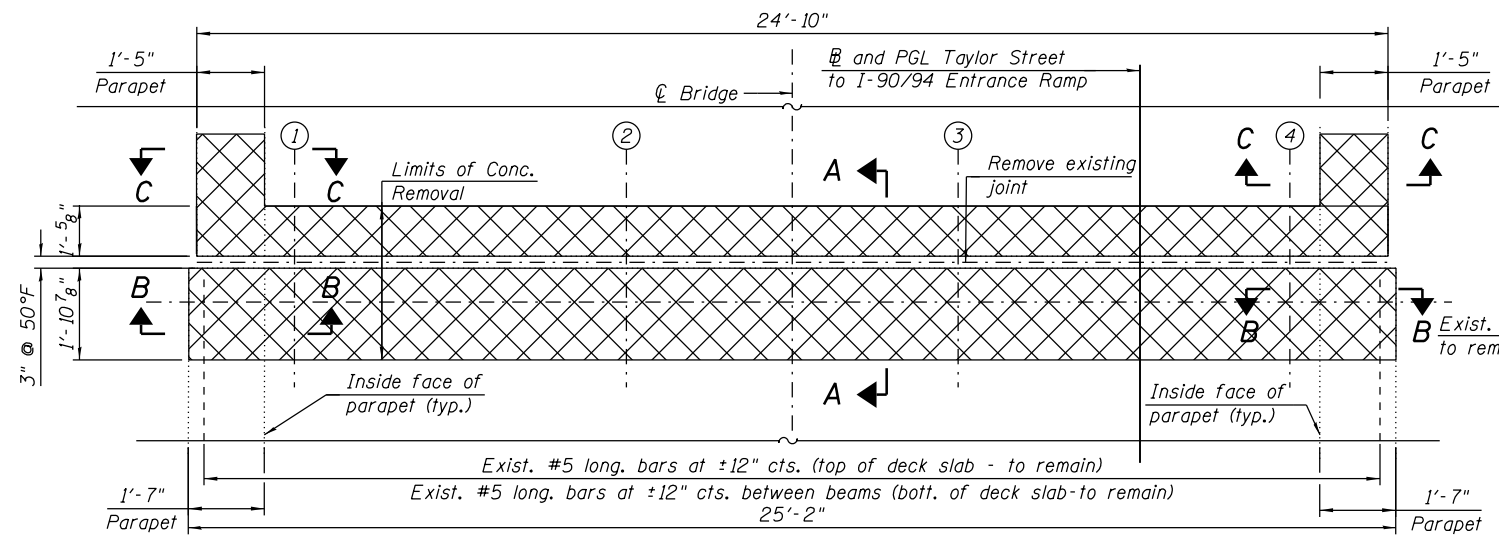
CONTRACT NO. 60W30

SCALE: SHEET S2-08 OF S2-18 SHEETS STA. TO STA. ILLINOIS FED. AID PROJECT

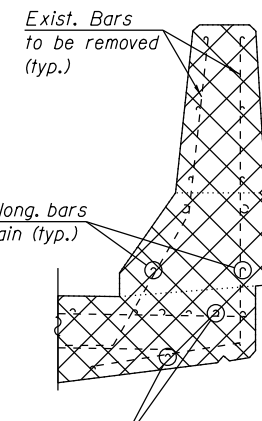


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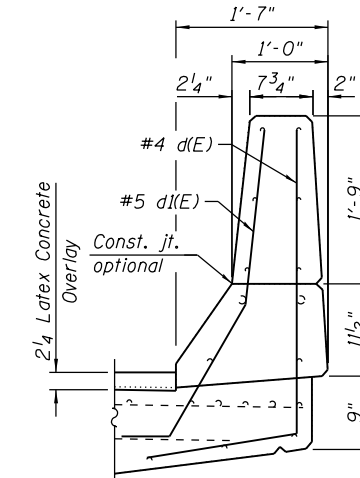
Bar	No.	Size	Length	Shape
a(E)	10	#5	24'-6"	—
b(E)	28	#5	2'-7"	┌
d(E)	10	#4	4'-9"	└
d(E)	10	#5	3'-11"	└
h(E)	6	#5	24'-6"	—
u(E)	6	#4	2'-10"	┌
s(E)	26	#5	3'-11"	└
v(E)	23	#5	4'-3"	└
Concrete Removal		Cu. Yd.	4.5	
Concrete Superstructure		Sq. Yd.	4.5	
Bridge Deck Grooving		Sq. Yd.	8	
Protective Coat		Pound	14	
Reinforcement Bars, Epoxy Coated		Each	780	



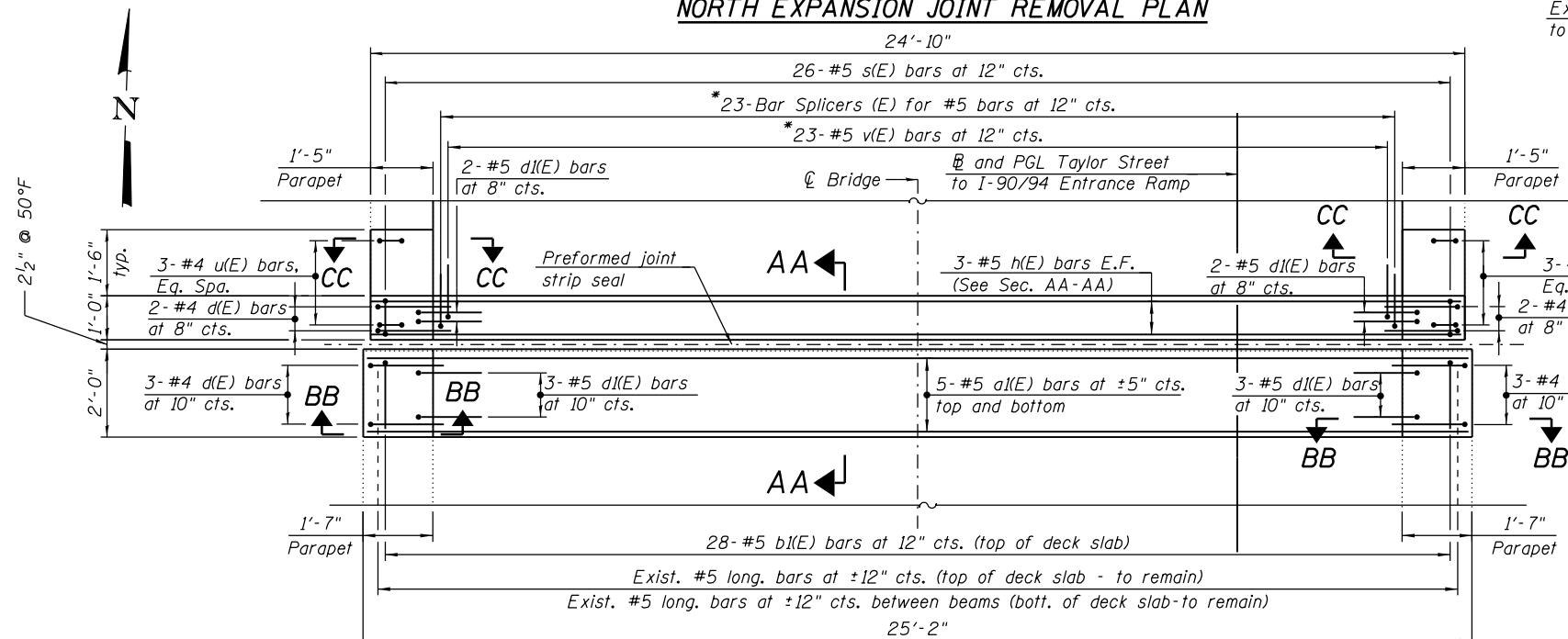
**NORTH EXPANSION JOINT REMOVAL PLAN**



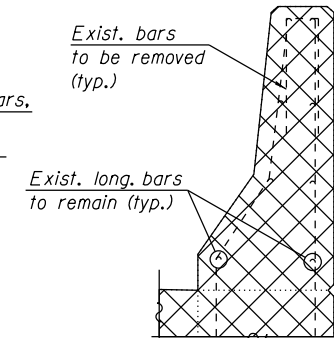
**SECTION B-B**  
(Parapet Removal)



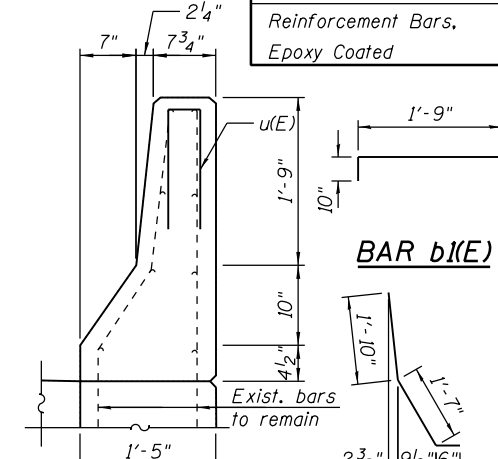
**SECTION BB-BB**  
(Parapet Replacement)



**NORTH EXPANSION JOINT REPLACEMENT PLAN**



**SECTION C-C**  
(Parapet Removal)



**SECTION CC-CC**  
(Parapet Replacement)

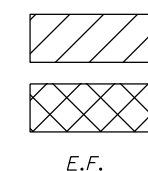
**BAR b(E)**

**BAR d(E)**

**BAR d(E)**

**BAR u(E)**

**LEGEND:**



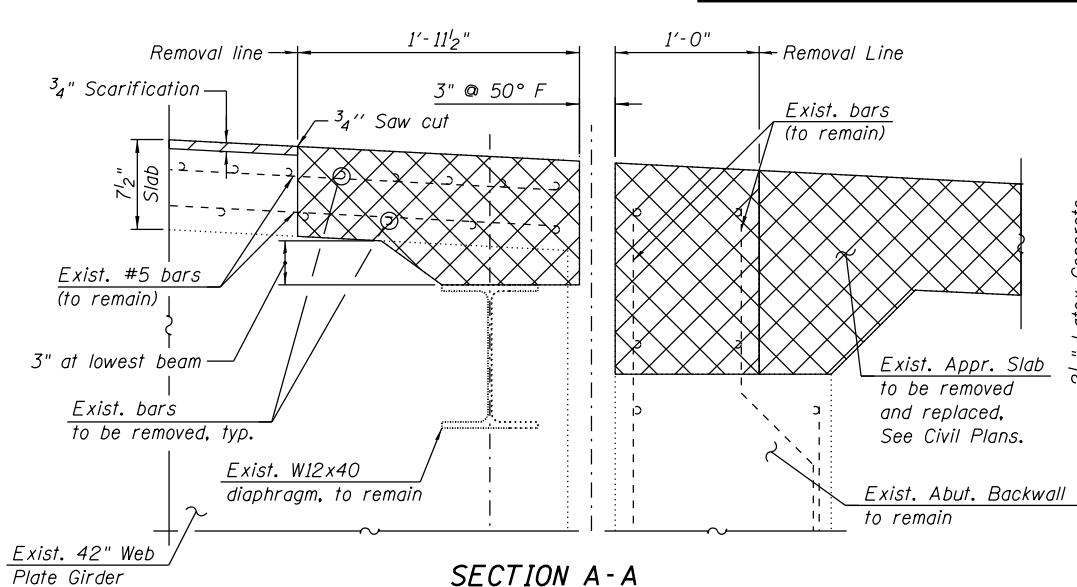
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Concrete Removal

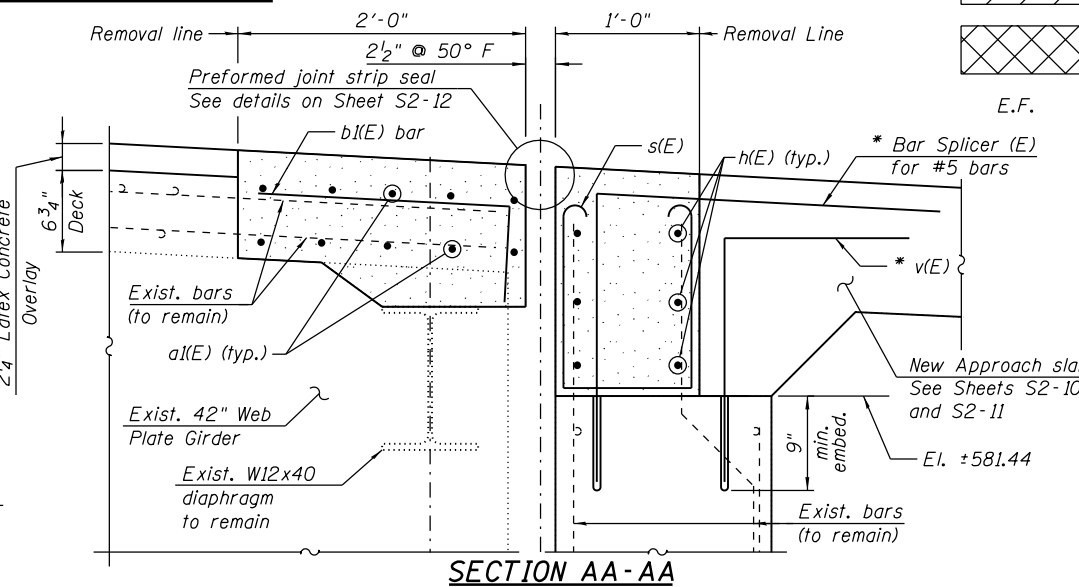
E.F. Each Face

**BAR v(E)**

**BAR s(E)**



**SECTION A-A**



**SECTION AA-AA**

\* Bars are to be drilled and epoxy grouted in accordance with Article 584 of the Standard Specifications.

**NOTES:**

- For General Notes and Total Bill of Material, see Sheet S2-02.
- For preformed joint strip seal, see Sheet S2-12.
- Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.
- For bar splicers, see Sheet S2-18.

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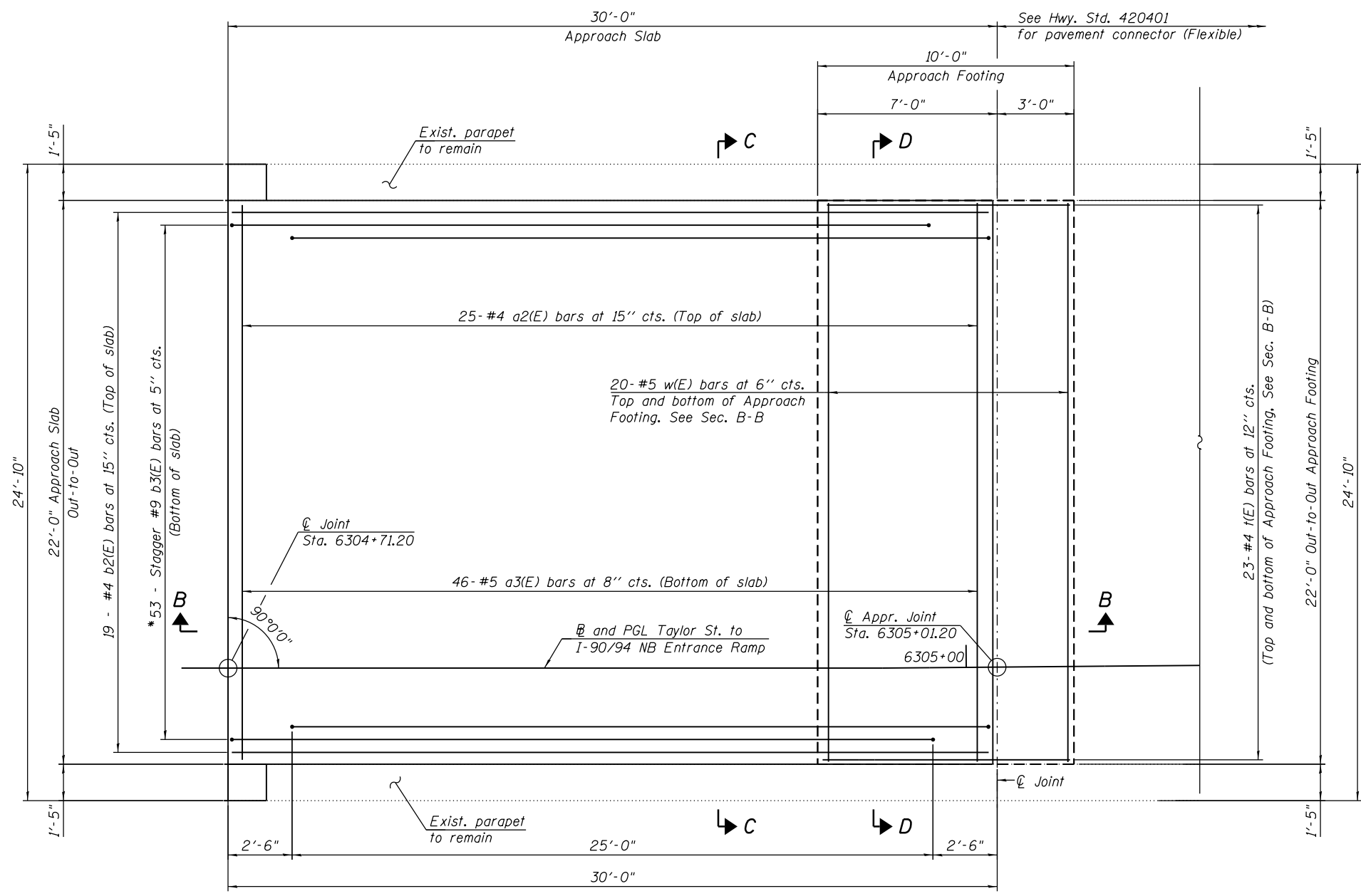
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**NORTH ABUTMENT JOINT REMOVAL AND REPLACEMENT**  
**STRUCTURE NO. 016-2535**

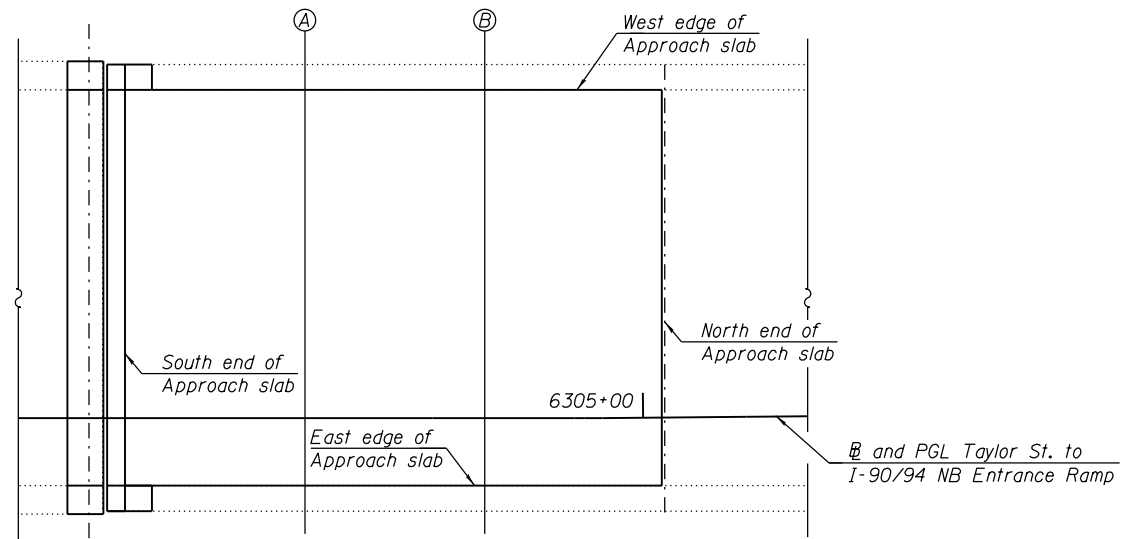
SCALE: SHEET S2-09 OF S2-18 SHEETS STA. TO STA.

F.A.I. RTE. 90/94	SECTION 2013-012R	COUNTY COOK	TOTAL SHEETS 385	SHEET NO. 262
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60W30	

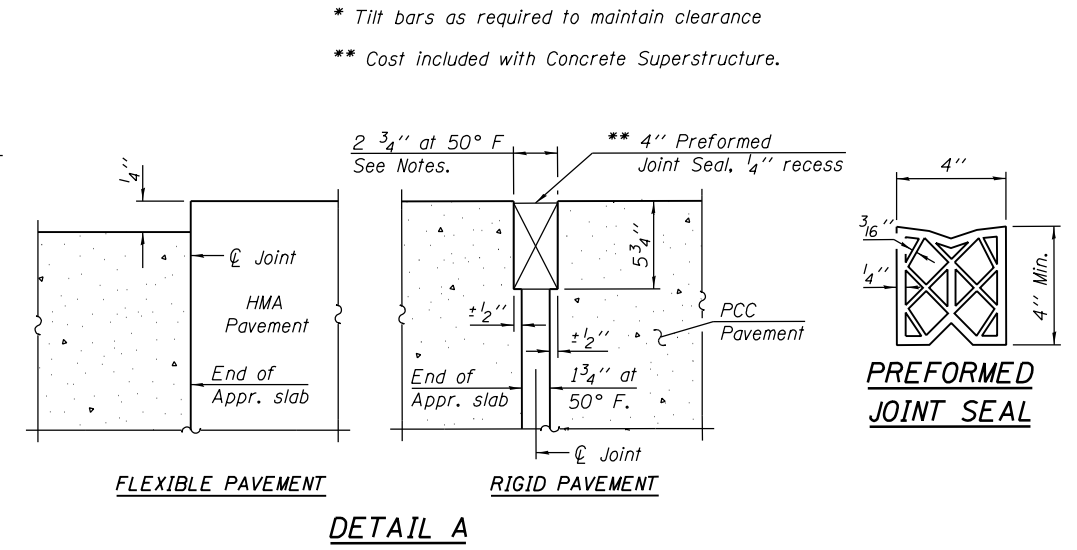
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**APPROACH PLAN**



**TOP OF NORTH APPROACH SLAB ELEVATIONS PLAN**



**WEST EDGE OF NORTH APPROACH SLAB**

Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Slab	6304+71.20	-18.25'	583.91
A	6304+81.20	-18.25'	583.17
B	6304+91.20	-18.25'	582.42
N. End North Appr. Slab	6305+1.36	-18.21'	581.68

**AND PGL TAYLOR ST. TO I-90/94 NB ENTRANCE RAMP**

Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Slab	6304+71.20	0.00'	583.15
A	6304+81.20	0.00'	582.64
B	6304+91.20	0.00'	582.12
N. End North Appr. Slab	6305+1.20	0.00'	581.60

**EAST EDGE OF NORTH APPROACH SLAB**

Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Slab	6304+71.20	3.75'	583.07
A	6304+81.20	3.75'	582.55
B	6304+91.20	3.75'	582.01
N. End North Appr. Slab	6305+1.17	3.79'	581.48

**NOTES:**

- For Sections B-B, C-C, and D-D, see Sheet S2-11.
- a2(E) and a3(E) bar spacings measured along  $\hat{C}$  Roadway.
- For parapet replacement details, see Sheet S2-09.

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0162535-60W30-S10-NApr-SlabPlan  
USER NAME = lisa.kallemejn  
PLOT SCALE = 5.33' / in.  
PLOT DATE = 12/2/2014

DESIGNED - MI, KJD  
DRAWN - KJD  
CHECKED - MAI, MI  
DATE - 10/24/2014

REVISED  
REVISED  
REVISED  
REVISED

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**NORTH APPROACH SLAB PLAN  
STRUCTURE NO. 016-2535**

SCALE: SHEET S2-10 OF S2-18 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	263
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60W30	

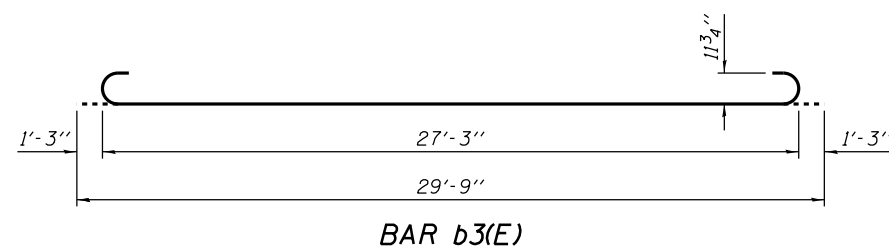
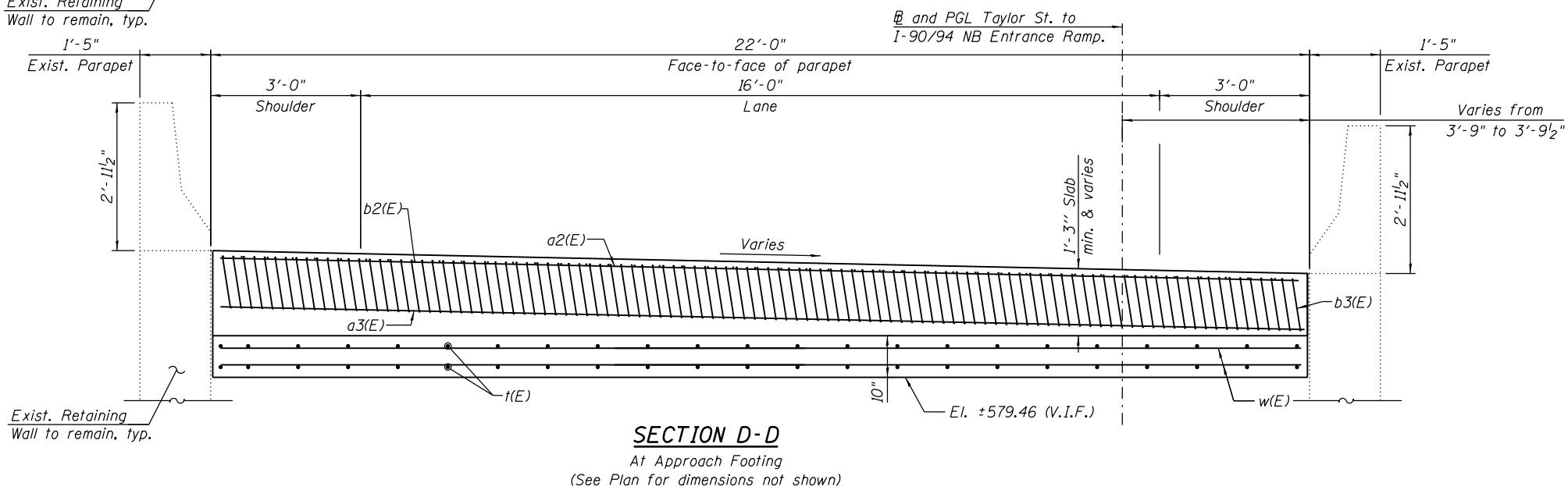
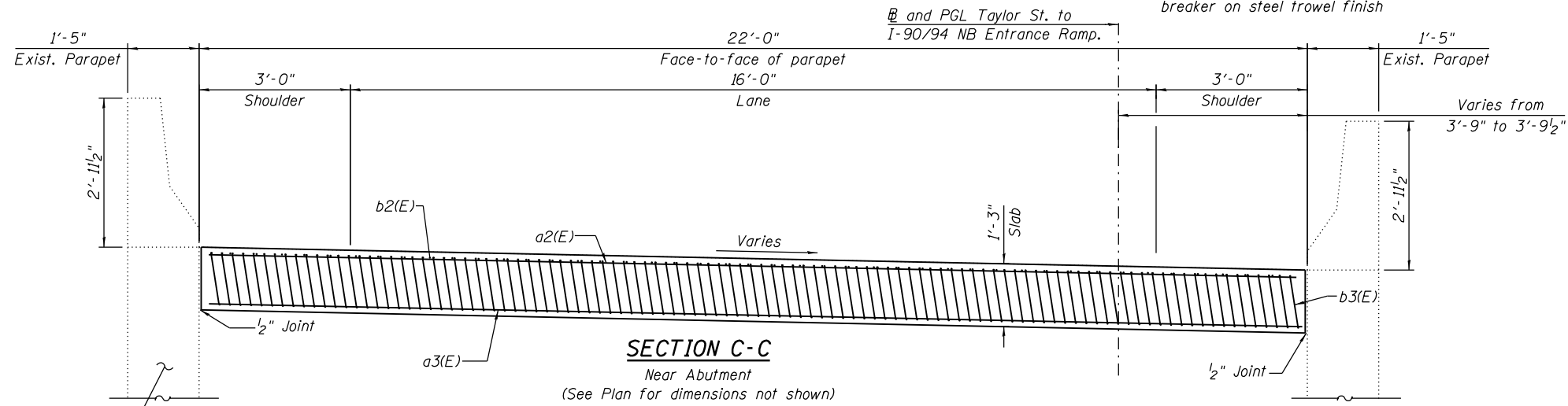
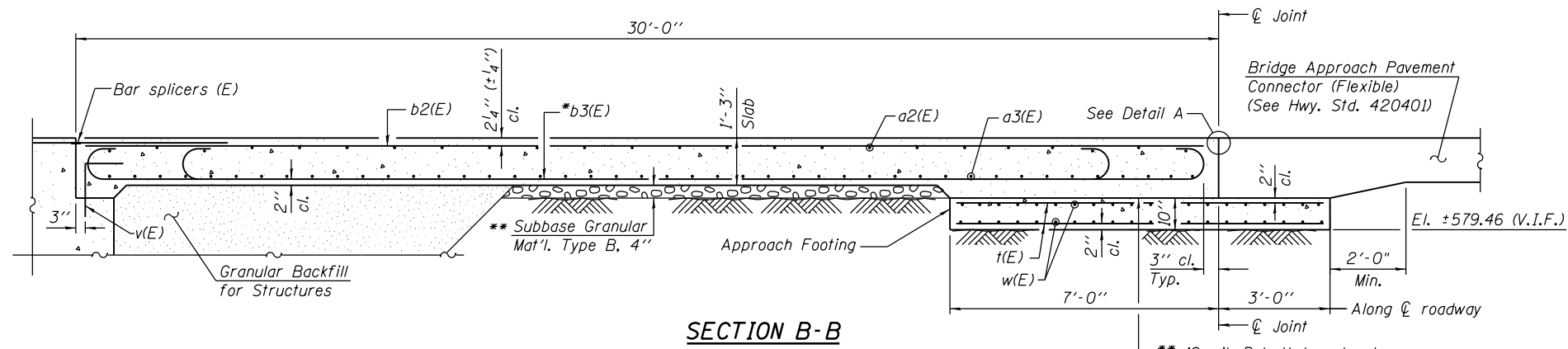
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a2(E)	25	#4	21'-7"	
a3(E)	46	#5	21'-7"	
b2(E)	19	#4	29'-8"	
b3(E)	53	#9	29'-9"	
t(E)	46	#4	9'-8"	
w(E)	40	#5	21'-7"	
Concrete Structures		Cu. Yd.	6.8	
Concrete Superstructure		Cu. Yd.	31.9	
Bridge Deck Grooving		Sq. Yd.	67	
Protective Coat		Sq. Yd.	98	
Reinforcement Bars, Epoxy Coated		Pound	8,340	

\* Tilt #9 b3(E) bars as required to maintain clearance.  
 \*\* Cost included with Concrete Superstructure.

**NOTES:**

- For Detail A, see Sheet S2-10.
- Approach slab concrete shall be paid for as Concrete Superstructure.
- Approach footing concrete shall be paid as Concrete Structures.
- Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
- The approach footing maximum applied bearing pressure (Qmax) = 2.0 ksf.
- For bar splicer details, see Sheets S2-09 and S2-18.
- Cost of excavation for Approach Footing included with Concrete Structures.
- For v(e) bar details, see Sheet S2-09.



BA-0 12-12-12

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0162535-60W30-S11-NApproachSectionsDetails	DESIGNED - MI, KJD	REVISED
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PLOT DATE = 12/2/2014	DATE - 10/24/2014	REVISED

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

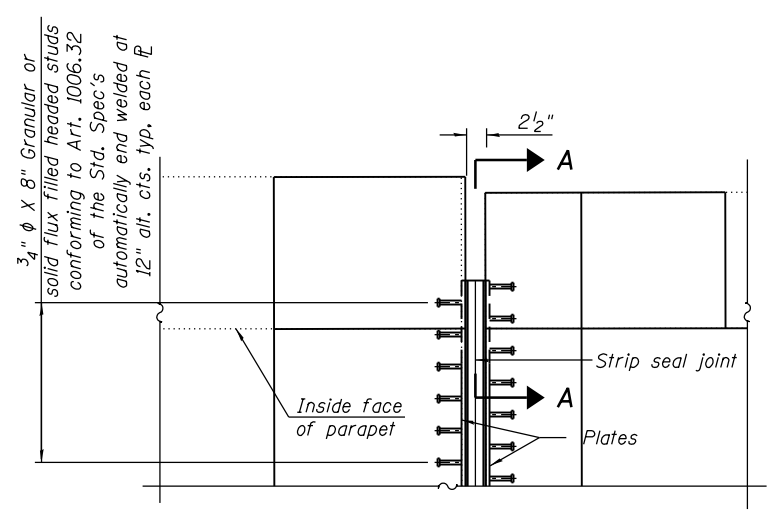
NORTH APPROACH SLAB SECTION AND DETAILS  
 STRUCTURE NO. 016-2535

SCALE: SHEET S2-11 OF S2-18 SHEETS STA. TO STA.

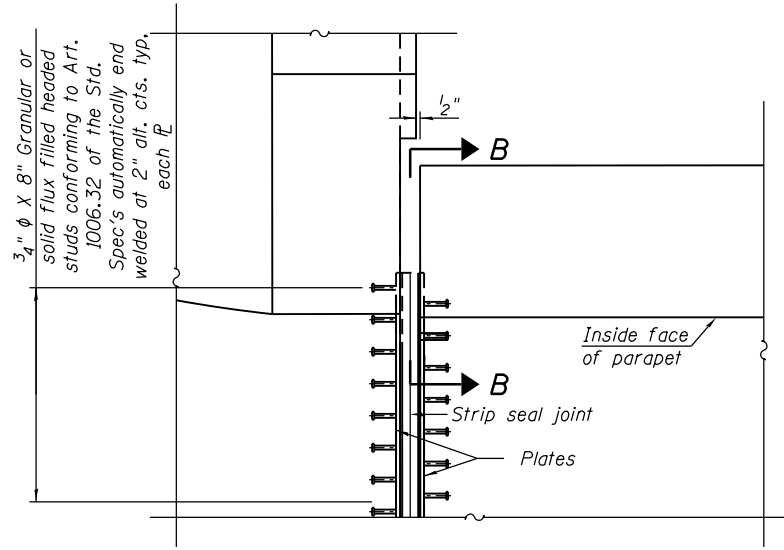
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CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

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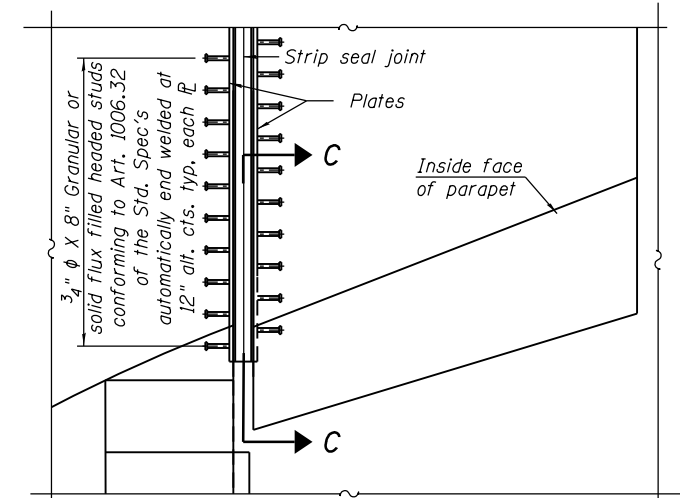
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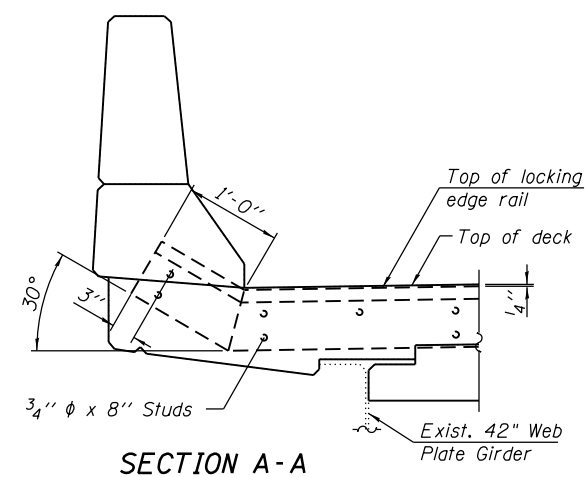
PLAN AT NORTH ABUTMENT



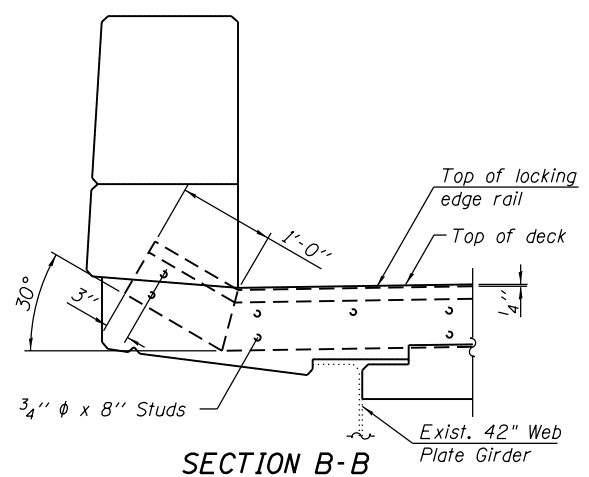
PLAN AT SW END OF BRIDGE JOINT



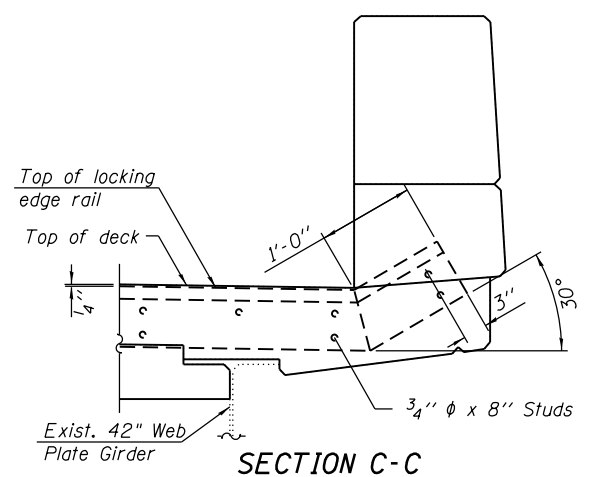
PLAN AT SE END OF BRIDGE JOINT



SECTION A-A



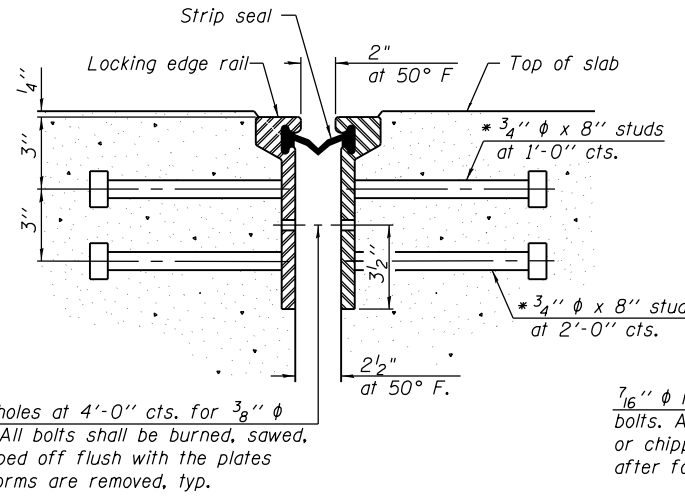
SECTION B-B



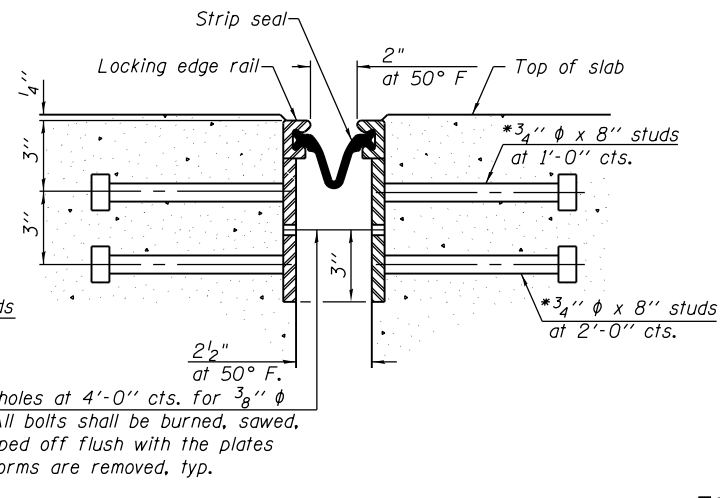
SECTION C-C

**NOTES:**

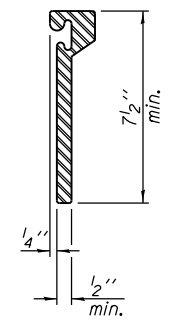
- The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.
- The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. 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.
- The manufacturer's recommended installation methods shall be followed.
- The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion 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 steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
- Maximum space between rail segments shall be 3/16", sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.
- Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.



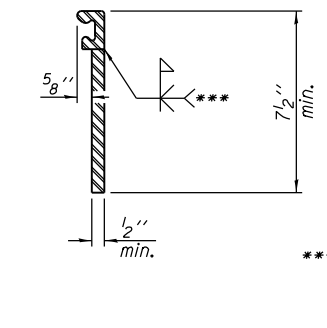
SECTION THRU ROLLED RAIL JOINT



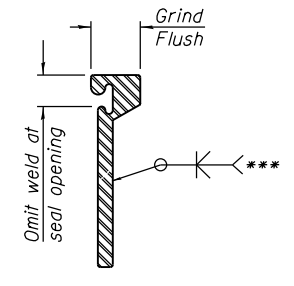
SECTION THRU WELDED RAIL JOINT



ROLLED EXTRUDED RAIL



WELDED RAIL



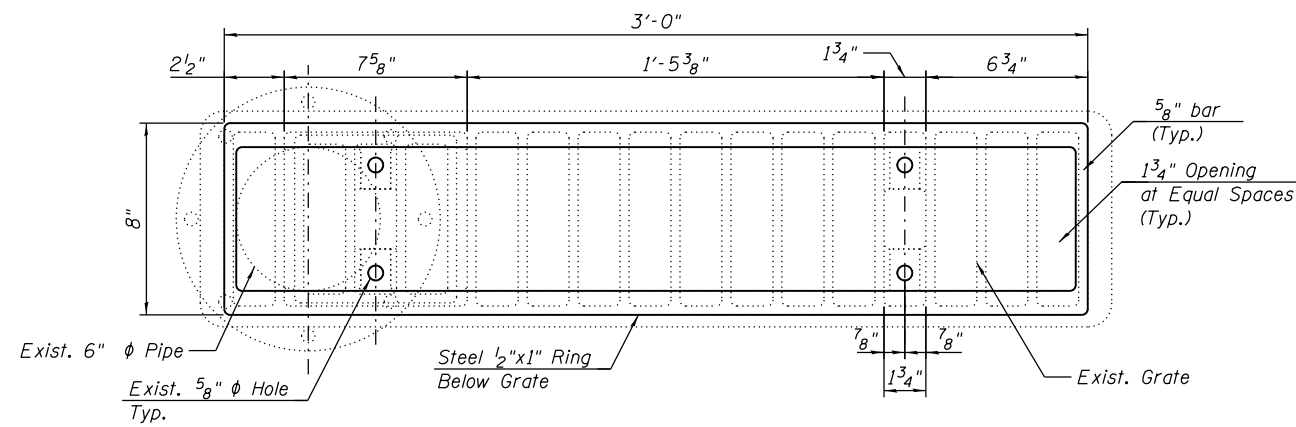
LOCKING EDGE RAIL SPLICE

\*\*\* Back gouge not required if complete joint penetration is verified by mock-up.

**LOCKING EDGE RAILS**

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	62

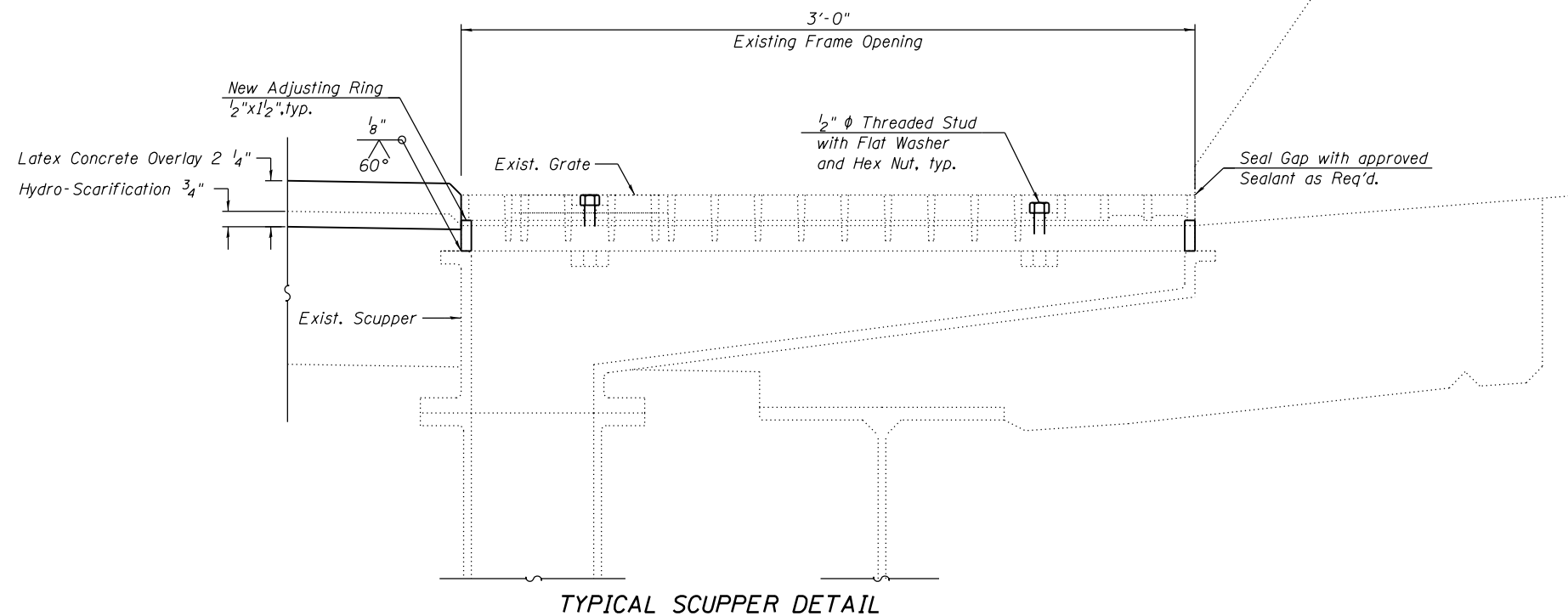


**TYPICAL PLAN AT SIDE CURBS**  
(2 Locations)

**NOTES:**

1. The Contractor shall field verify Existing Dimensions and Details of the Existing Scuppers and make necessary adjustments prior to construction of New Adjusting Ring or ordering of material for Adjusting Drainage Scuppers.
2. All Cast Iron Parts shall be Grey Iron conforming to the requirements of AASHTO M 105, Class 35B.
3. Bolts, Anchor Studs, Washers and Nuts shall conform to the requirements of ASTM A 307 and shall be Galvanized according to the requirements of AASHTO M 232.
4. Cast Iron Parts shall be unfinished.
5. The contractor shall take appropriate measures to assure that Protective Coat is not applied to the Scuppers.
6. Adjusting Ring shall be from Neenah and approved equal. Structural Steel weldments or equal sections and of the same configuration may be submitted for Cast Iron. Fillet or Full Penetration Welds may be used for weldments. Details shall be submitted to the Engineer for approval.
7. Provide a 1/8" Fillet Weld around perimeter of new Adjusting Ring to secure to existing Scupper. Electrode shall be compatible with cast Iron.

Cost of all labor and materials necessary to clean existing scuppers, install adjusting scupper rings, remove and re-install grates is included in the cost for Drainage Scupper to be Adjusted.



**TYPICAL SCUPPER DETAIL**

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Drainage Scuppers to be Adjusted	Each	2

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FAX: (708) 236-0901

0162535-60W30-S13-AdjScupper	DESIGNED - KJD, JJS	REVISED
USER NAME = lisa.kallemejn	DRAWN - KJD	REVISED
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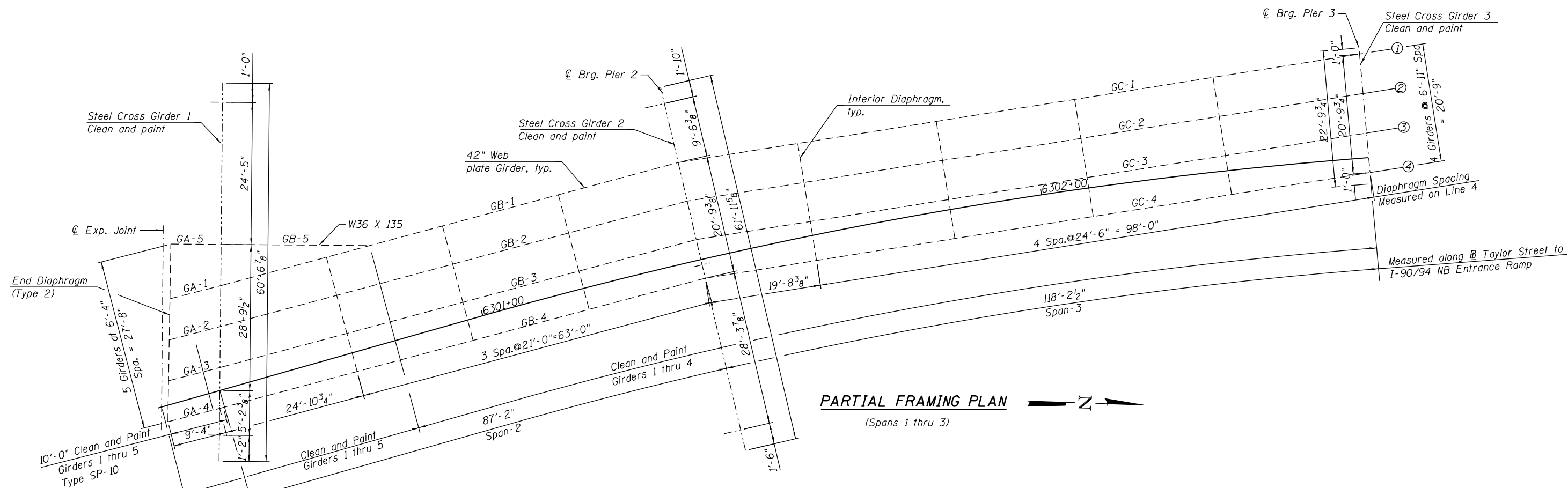
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**ADJUSTING DRAINAGE SCUPPER DETAILS**  
**STRUCTURE NO. 016-2535**

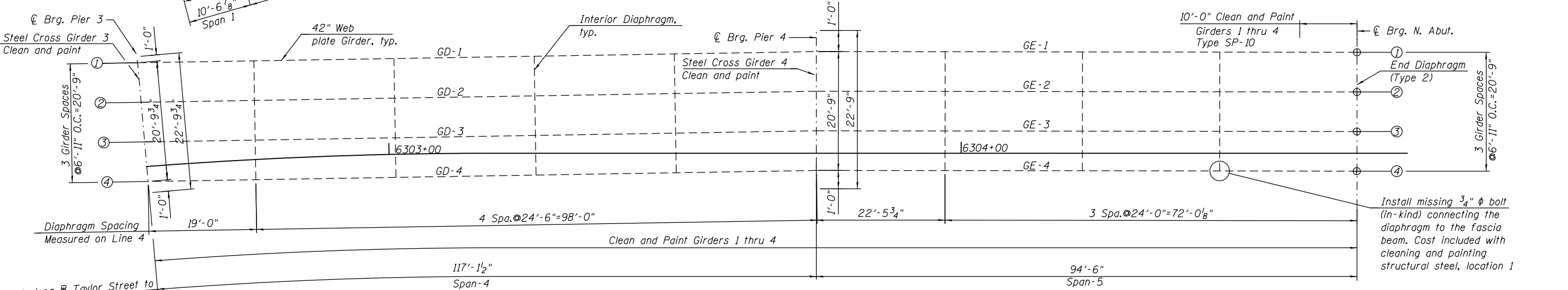
SCALE: SHEET S2-13 OF S2-18 SHEETS STA. TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	

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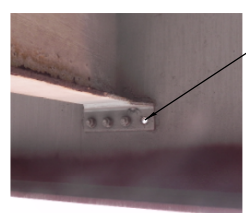


**PARTIAL FRAMING PLAN** (Spans 1 thru 3)



**PARTIAL FRAMING PLAN** (Spans 4 thru 5)

**NOTE:**  
For Painting Procedure, see Sheet S2-15.



**MISSING BOLT**  
Missing Bolt on Northern most Interior Diaphragm at Beam 4

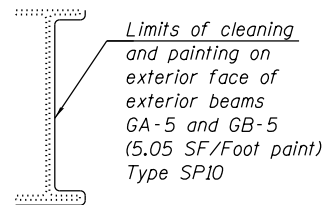
Install missing 3/4" φ bolt (in-kind) connecting the diaphragm to the fascia beam

**BILL OF MATERIAL**

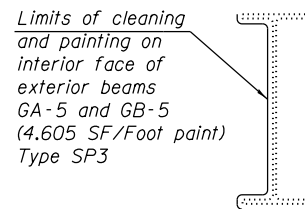
ITEM	UNIT	QUANTITY
Cleaning and Painting Structural Steel, Location 1	L Sum	1
Containment and Disposal of Lead Paint Cleaning Residues	L Sum	0.5

GIRDER LINE - SPAN LENGTH					
Line	①	②	③	④	⑤
GA-	9'-5 3/16"	9'-5 7/8"	9'-6 5/8"	9'-7 5/16"	9'-0"
GB-	82'-8 1/2"	84'-4"	85'-11 1/2"	87'-7 1/16"	26'-10"
GC-	120'-8 3/8"	119'-8 3/8"	118'-8 3/8"	117'-8 1/2"	--
GD-	118'-7 3/16"	118'-0"	117'-4 13/16"	116'-9 5/8"	--
GE-	94'-6"	94'-6"	94'-6"	94'-6"	--

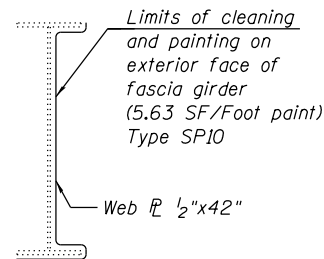
\* This dimension is from @Pier 1 to W.P. on Girder Line 1



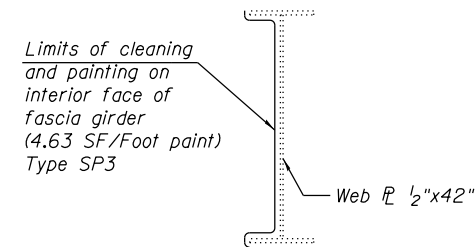
**W36x135 BEAM FOR EXTERIOR PORTION**  
(GA-5 and GB-5)



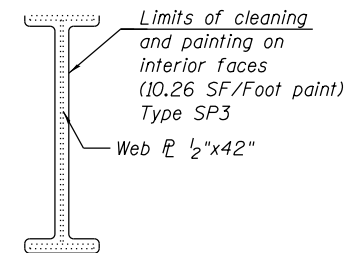
**W36x135 BEAM FOR INTERIOR PORTION**  
(GA-5 and GB-5)



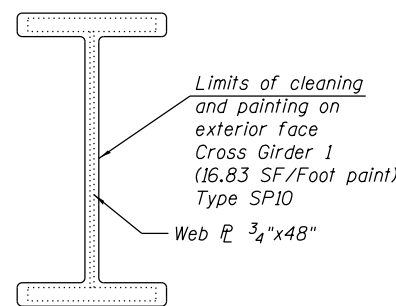
**EXTERIOR P GIRDER FOR EXTERIOR PORTION**  
(Girder 1 Sta. 6300+84.52 to Sta. 6302+57.27, and Girder 4)



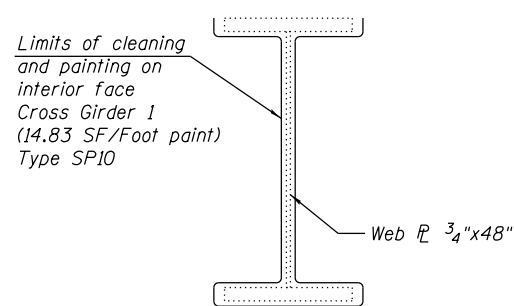
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(Girder 1 Sta. 6300+84.52 to Sta. 6302+57.27, and Girder 4)



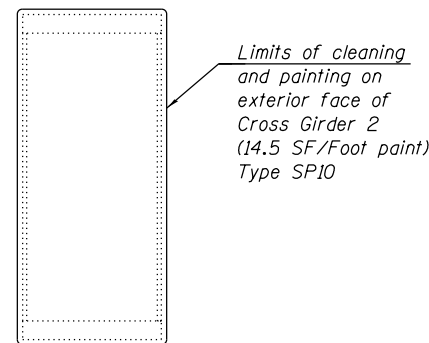
**INTERIOR P GIRDER**  
(Girder 1 Sta. 6300+48.39 to Sta. 6300+84.52, Girder 2 and 3)



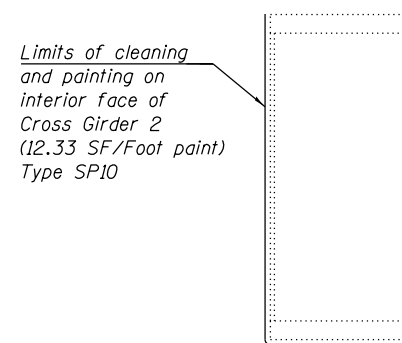
**CROSS GIRDER 1 FOR EXTERIOR PORTION**



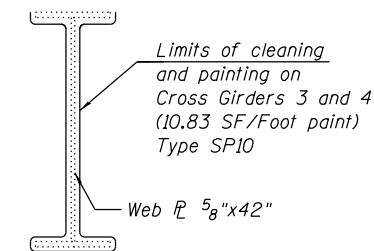
**CROSS GIRDER 1 FOR INTERIOR PORTION**



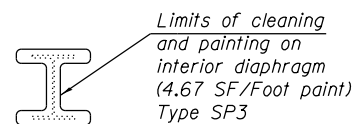
**CROSS GIRDER 2 FOR EXTERIOR PORTION**



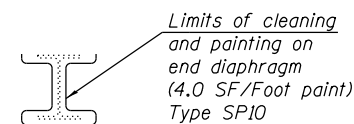
**CROSS GIRDER 2 FOR INTERIOR PORTION**



**CROSS GIRDERS 3 and 4**



**INTERIOR DIAPHRAGM**



**END DIAPHRAGM**

**NOTE:**

1. For cleaning and painting limits, see Sheet S2-14.

**PAINTING PROCEDURE:**

Painting Type SSPC-SP10 (Type SP10) applies to:  
 - Outside and bottom of fascia girders.  
 - All structural steel within 10 ft of the expansion joints.  
 - All cross girders.

Painting Type SSPC-SP3 (Type SP3) applies to:  
 - All interior girders.

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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

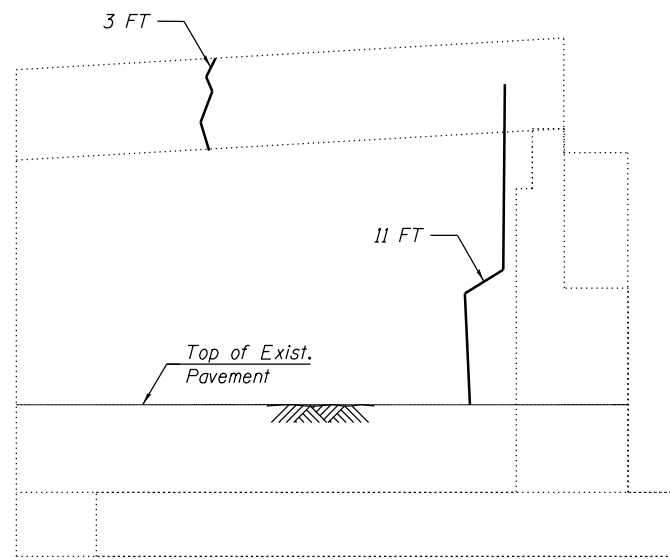
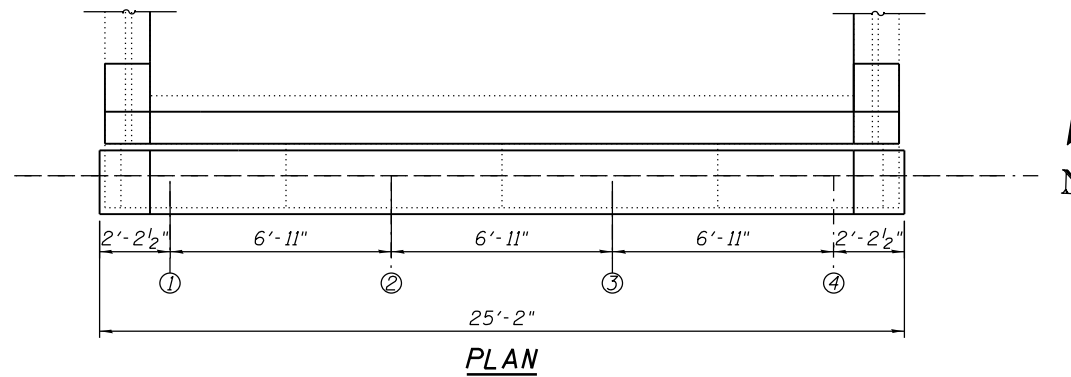
PAINTING DETAILS  
 STRUCTURE NO. 016-2535

SCALE: SHEET S2-15 OF S2-18 SHEETS STA. TO STA.

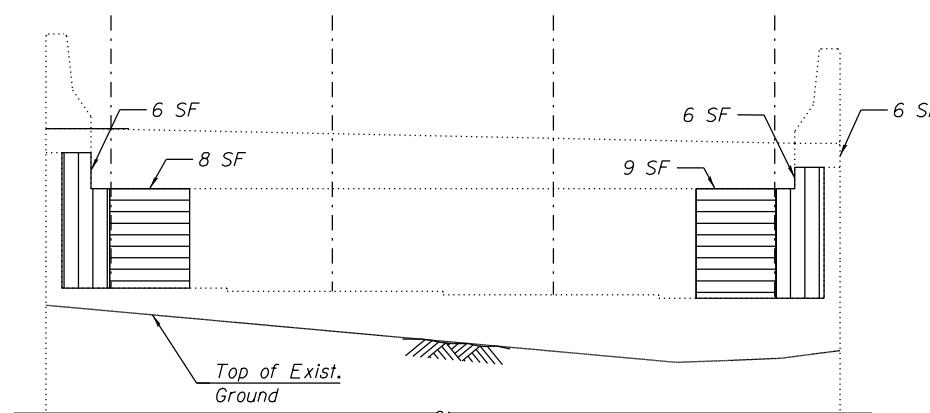
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90/94	2013-012R	COOK	385	268
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60W30	

**BILL OF MATERIAL**

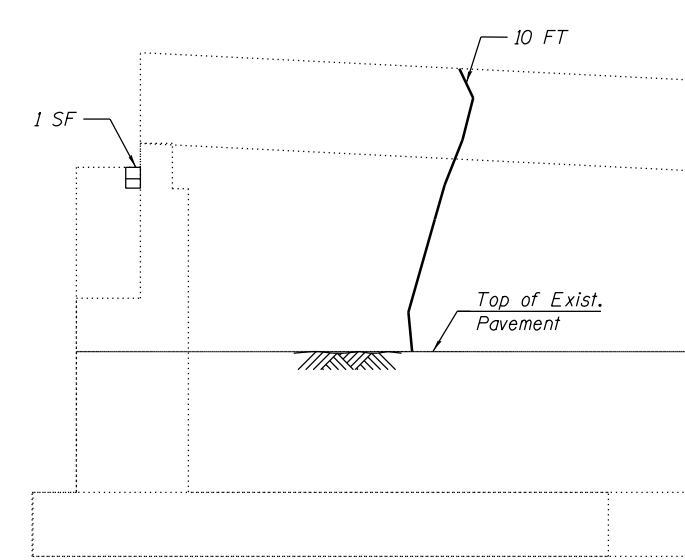
ITEM	UNIT	QUANTITY
Concrete Sealer	SQ FT	167
Epoxy Crack Injection	FOOT	24
Structural Repair of Concrete (Depth Equal to or Less Than 5")	SQ FT	18
Structural Repair of Concrete (Depth Greater Than 5")	SQ FT	12



**NW WINGWALL**



**ELEVATION**



**NE WINGWALL**

**NOTES:**

1. For General Notes and Total Bill of Material, see Sheet S2-02.
2. Hairline cracks are not to be sealed.
3. Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired and the type(s) of repairs to be used will be determined by the engineer in the field at the time of construction.
4. The Contractor is responsible to remove, support and reinstall all existing utilities interfering with the work. Cost shall be included with Structural Repair of Concrete (Depth Equal to or Less Than 5").
5. Concrete Sealer shall be applied to the bearing seats and all exposed south face and ends of abutment.

**LEGEND**

- Structural Repair of Concrete (Depth Equal to or Less Than 5")
- Structural Repair of Concrete (Depth Greater Than 5")
- Low Pressure Epoxy Injection (Width > 0.06")
- SF - Square Foot
- LF - Linear Foot

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0162535-60W30-S16-NAbutRepairs	DESIGNED - JJS, KJD	REVISED
USER NAME = lisa.kallemejn	DRAWN - JJS, KJD	REVISED
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

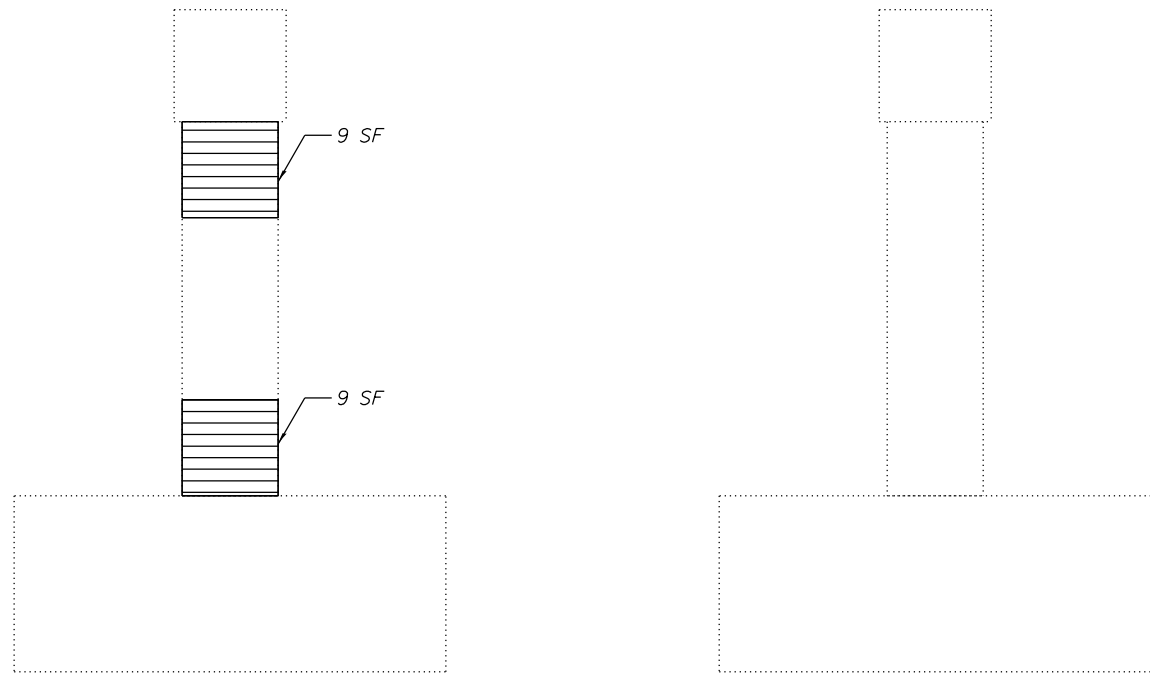
**NORTH ABUTMENT REPAIRS  
STRUCTURE NO. 016-2535**

SCALE: SHEET S2-16 OF S2-18 SHEETS STA. TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	269
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	



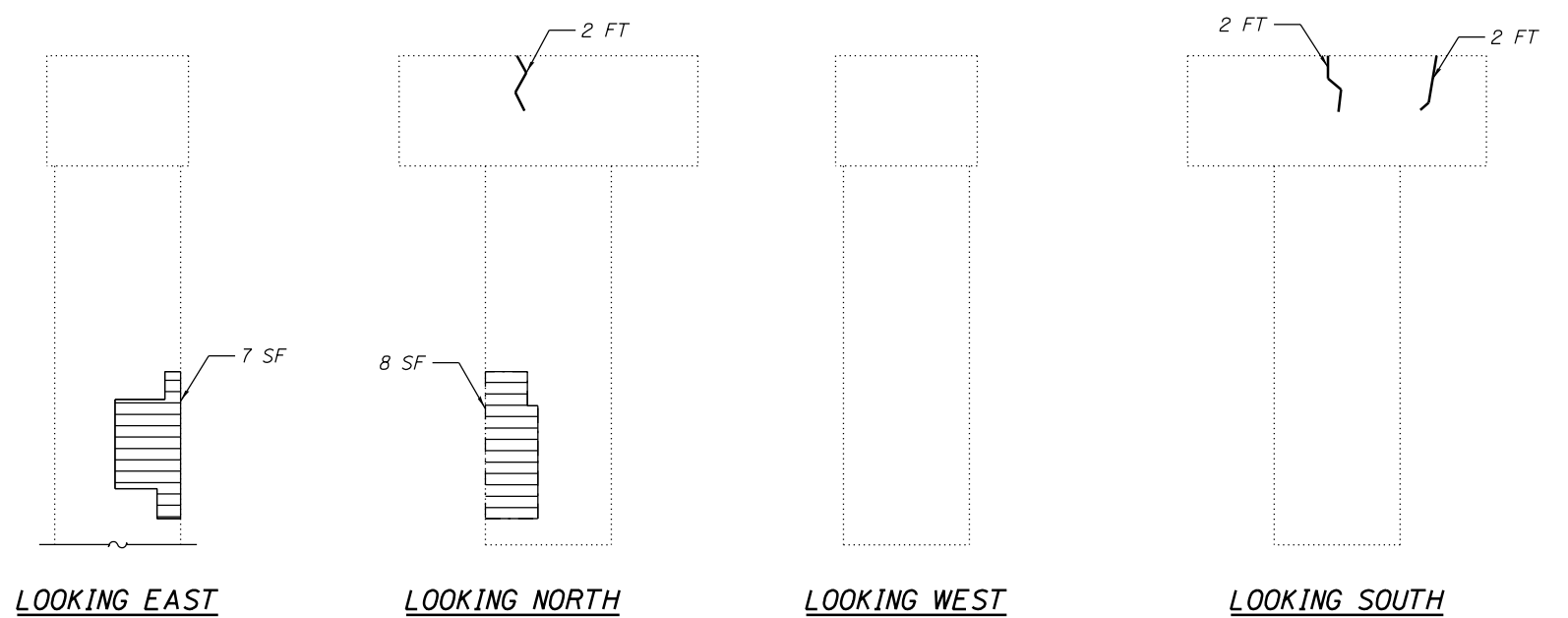
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LOOKING EAST

LOOKING WEST

PIER 2 ELEVATIONS



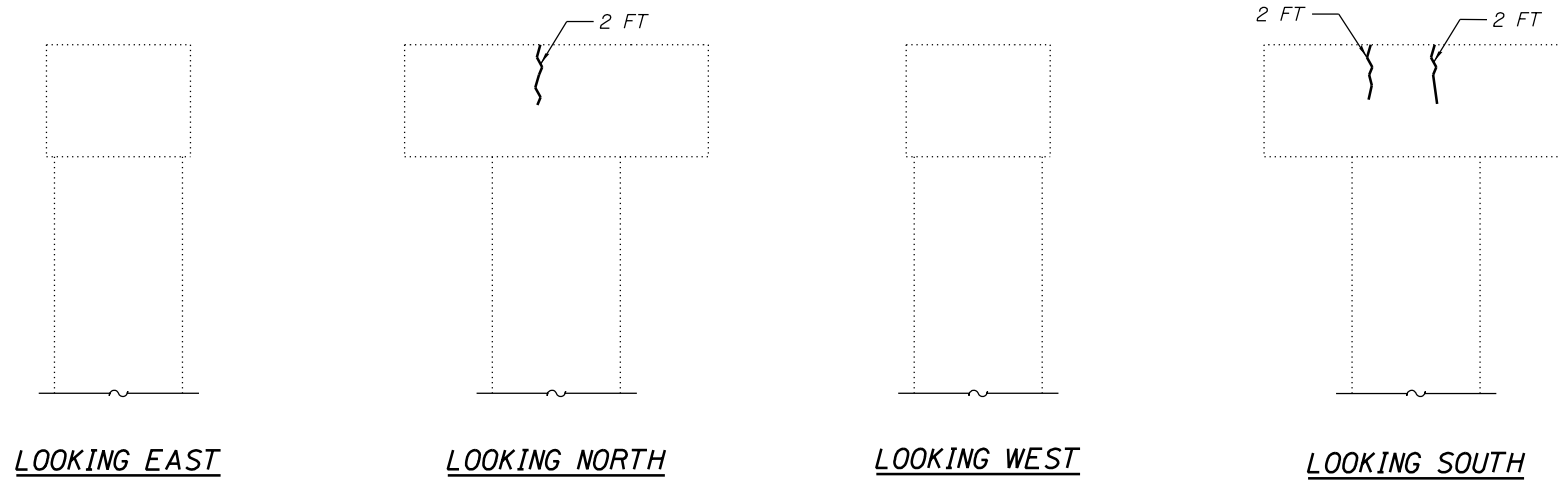
LOOKING EAST

LOOKING NORTH

LOOKING WEST

LOOKING SOUTH

PIER 3 ELEVATIONS



LOOKING EAST

LOOKING NORTH

LOOKING WEST

LOOKING SOUTH

PIER 4 ELEVATION



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Sealer	Sq. Ft.	263
Epoxy Crack Injection	Foot	12
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	33

NOTES:

- For General Notes and Total Bill of Material, see Sheet S2-02.
- Hairline cracks are not to be sealed.
- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired and the type(s) of repairs to be used will be determined by the Engineer in the field at the time of construction.
- The Contractor is responsible to remove, support and reinstall all existing utilities interfering with the work. Cost shall be included with Structural Repair of Concrete (Depth Equal to or Less Than 5").

LEGEND

-  Structural Repair of Concrete (Depth Equal to or Less Than 5")
-  Low Pressure Epoxy Injection (Width > 0.06")
- SF - Square Foot
- LF - Linear Foot

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FAX: (708) 236-0901

0162535-60W30-S17-Piers2\_3and4Repairs  
DESIGNED - JJS, KJD  
DRAWN - JJS, KJD  
CHECKED - MAI, MI  
DATE - 10/24/2014

REVIS  
REVISED  
REVISED  
REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PIERS 2, 3 AND 4 REPAIRS  
STRUCTURE NO. 016-2535

SCALE: SHEET S2-17 OF S2-18 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2013-012R	COOK	385	270
CONTRACT NO. 60W30			ILLINOIS FED. AID PROJECT	



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
**PLANS FOR PROPOSED  
FEDERAL AID INTERSTATE HIGHWAY**

**INDEX OF VOLUMES**

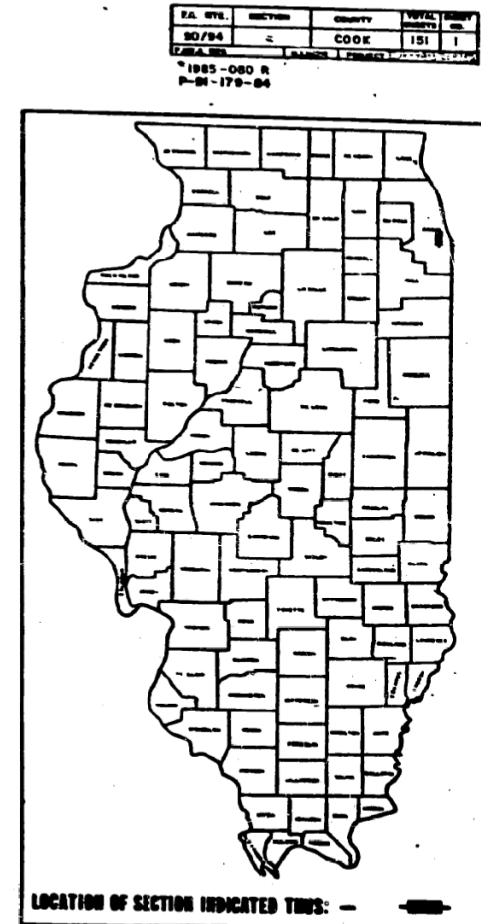
VOL. NO.	DESCRIPTION	NO. OF SHEETS
1	ROADWAY PLANS & GENERAL SHEETS	151
2	MAINTENANCE OF TRAFFIC & ROADWAY CROSS SECTIONS	81
3	BRIDGES & ASSOCIATED STRUCTURES	79
4	RETAINING WALLS	38
5	ROADWAY LIGHTING & SURVEILLANCE	36
TOTAL		385

NOTE: FOR INDEX OF SHEETS SEE SHEET NO. 2

PLAN 1 INCH = 50 FEET  
PROFILE VERT. 1 INCH = 50 FEET  
PROFILE VERT. 1 INCH = 5 FEET  
CROSS SECTIONS 1 INCH = 10 FEET HORIZONTAL  
1 INCH = 5 FEET VERTICAL

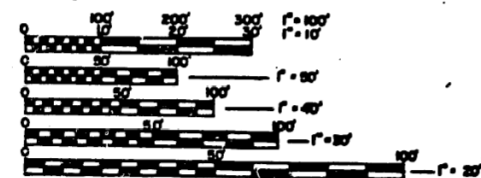
**VOLUME NO. 1**

F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1985 - 080 R  
PROJECT IDR-94-3 (268) 52  
COOK COUNTY  
C-91-433-85



**DESIGN DESIGNATION**

DAN RYAN EXPRESSWAY (MAINLINE S.B. & N.B.) 163,700 (2000) TRUNK 18.41 (11" CRPCC - 20) Δ  
COLLECTOR-DISTRIBUTOR (S.B. & N.B.)  
N.E. ROOSEVELT RD./RUBLE ST. } 19,300 (2000) AREA SERVICE 1608 (12" PCC - 20)  
S.B. ROOSEVELT RD./UNION AVE. }  
N.E. TAYLOR ST. ENTRANCE RAMP }  
TAYLOR ST. MAINLINE EXIT } 7,700 (2000) AREA SERVICE 467 (10" PCC - 20)  
AND RAMP W-S }



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES, IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

CONTRACT NO. **80063**

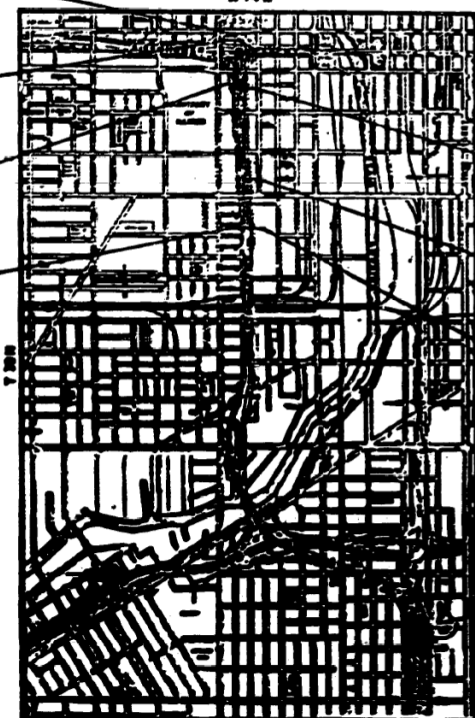
**ROADWAY GRADING AND PAVING  
MAXWELL STREET TO I-290**

PROJECT ENDS  
STA. 17+90 (S.B.)  
STA. 14+75 (N.B.)  
DAN RYAN EXPRESSWAY

STA. EQ. 99 DAN RYAN EXPRESSWAY  
STA. 16+57.95 BK + STA. 16+57.67 AMD.

STA. EQ. 98 DAN RYAN EXPRESSWAY  
STA. 200+97.18 BK + STA. 3+11.66 AMD

PROJECT BEGINS  
STA. 183+13.36  
DAN RYAN EXPRESSWAY



STA. EQ. NB. DAN RYAN EXPRESSWAY  
STA. 233+89.95 BK + STA. 3+06.94 AMD

STA. EQ. NB. DAN RYAN EXPRESSWAY  
STA. 186+40.07 BK + STA. 196+39.94 AMD

STA. EQ. SB. DAN RYAN EXPRESSWAY  
STA. 183+87.10 BK + STA. 183+13.36 AMD



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

DESIGNED: August 15, 1987  
DRAWN: 10-26-87  
CHECKED: 10/20/87  
APPROVED: 8-22-87

DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

DIVISION ADMINISTRATOR \_\_\_\_\_ DATE \_\_\_\_\_

NET LENGTH = 4,122.32 LIN. FT. (0.78 MILES)  
GROSS LENGTH = 4,122.32 LIN. FT. (0.78 MILES)

COUNTY COOK SECTION 1985 - 080 R ROUTE 190/94 (DAN RYAN EXPRESSWAY)

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PLOT DATE = 10/24/2014	DATE - 10/24/2014	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING TAYLOR STREET ENTRANCE RAMP  
BRIDGE PLANS (FOR INFORMATION ONLY)

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-077R	COOK	385	272

CONTRACT NO. 60X61  
ILLINOIS FED. AID PROJECT

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
**PLANS FOR PROPOSED  
FEDERAL AID INTERSTATE HIGHWAY**

**INDEX OF VOLUMES**

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PROFILE VERT. 1 INCH = 5 FEET  
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**VOLUME NO. 1**

F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1985 - 080 R  
PROJECT IDR-94-3 (268) 52  
COOK COUNTY  
C-91-433-85

**ROADWAY GRADING AND PAVING  
MAXWELL STREET TO I-290**

PROJECT ENDS  
STA. 17+90 (S.B.)  
STA. 14+75 (N.B.)  
DAN RYAN EXPRESSWAY

STA. EQ. 99 DAN RYAN EXPRESSWAY  
STA. 16+57.95 BK + STA. 16+57.67 AMD.

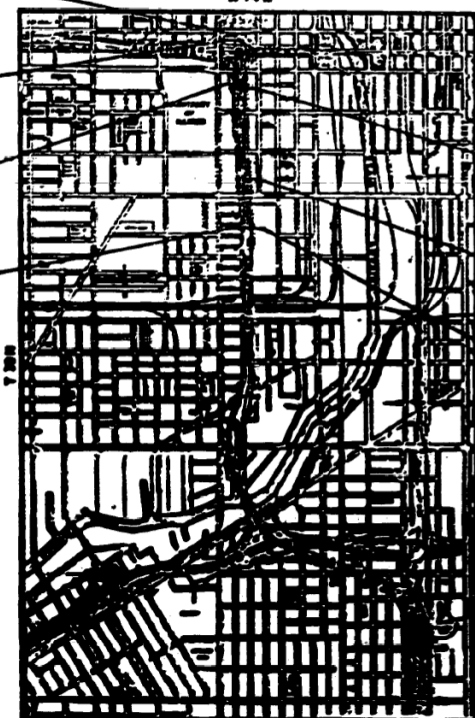
STA. EQ. 98 DAN RYAN EXPRESSWAY  
STA. 200+97.18 BK + STA. 3+11.66 AMD

PROJECT BEGINS  
STA. 183+13.36  
DAN RYAN EXPRESSWAY

STA. EQ. NB. DAN RYAN EXPRESSWAY  
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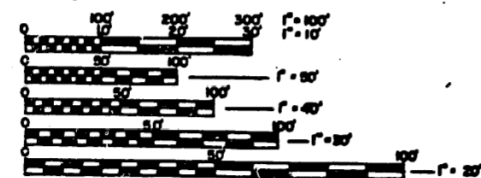
STA. EQ. NB. DAN RYAN EXPRESSWAY  
STA. 186+40.07 BK + STA. 196+39.94 AMD

STA. EQ. SB. DAN RYAN EXPRESSWAY  
STA. 183+87.10 BK + STA. 183+13.36 AMD



**DESIGN DESIGNATION**

DAN RYAN EXPRESSWAY (MAINLINE S.B. & N.B.) 63,700 (2000) TRUNK 18.41 (11' CRPC - 20) Δ  
COLLECTOR-DISTRIBUTOR (S.B. & N.B.)  
N.E. ROOSEVELT RD./RUBLE ST. 19,300 (2000) AREA SERVICE 1608 (12' PCC - 20)  
S.B. ROOSEVELT RD./UNION AVE.  
N.E. TAYLOR ST. ENTRANCE RAMP  
TAYLOR ST. MAINLINE EXIT AND RAMP W-S 7,700 (2000) AREA SERVICE 467 (10' PCC - 20)



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES, IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

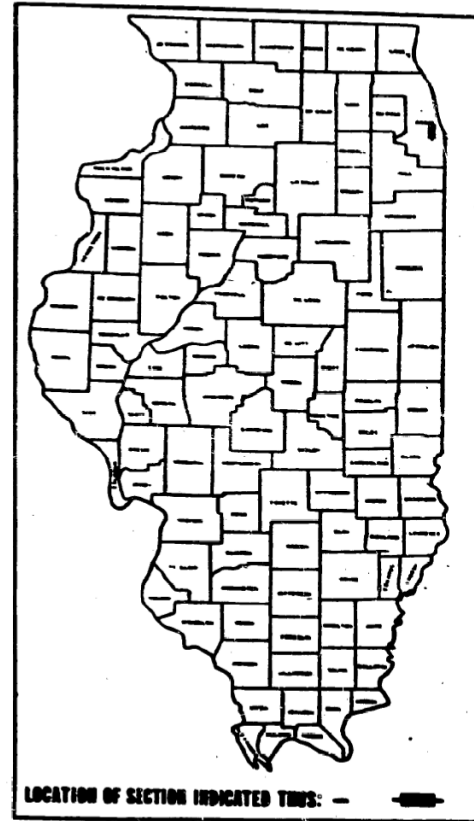
CONTRACT NO. **80063**



*Thomas Allan Smith*  
8-15-87

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2	COOK	151	1

\* 1985-080 R  
P-91-178-84



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

DESIGNED: *August 15, 87* ALL  
DRAWN: *16-26-87*  
CHECKED: *10/20/87*  
APPROVED: *8-22-87*

DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

DIVISION ADMINISTRATOR \_\_\_\_\_ DATE \_\_\_\_\_

NET LENGTH = 4,122.32 LIN. FT. (0.78 MILES)  
GROSS LENGTH = 4,122.32 LIN. FT. (0.78 MILES)

COURTY COOK SECTION 1985 - 080 R ROUTE 190/94 (DAN RYAN EXPRESSWAY)



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PLOT SCALE = 2,0000' / in.  
PLOT DATE = 10/24/2014

DESIGNED - OPS  
DRAWN - OPS  
CHECKED - DBM  
DATE - 10/24/2014

REVISED -  
REVISED -  
REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING TAYLOR STREET ENTRANCE RAMP  
BRIDGE PLANS (FOR INFORMATION ONLY)

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-077R	COOK	385	273

CONTRACT NO. 60X61  
ILLINOIS FED. AID PROJECT

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DATE	REVISED	BY	DATE	REVISED
09/04	0	COOK	79	2
TO				
DATE				
DATE				
DATE				

INDEX OF SHEETS

SHEET NO.	TITLE SHEET	SHEET NO.	TITLE SHEET
1	G1	53	S 11
2	G2	54	S 12
		55	S 13
		56	S 14
3	EXIT 1	57	S 15
4	EXIT 2	58	S 16
5	EXIT 3	59	S 17
6	EXIT 4		
7	EXIT 5		
8	EXIT 6	60	EX 1
9	EXIT 7	61	EX 2
10	EXIT 8	62	EX 3
11	EXIT 9	63	EX 4
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15	EXIT 13	67	EX 8
16	EXIT 14	68	EX 9
17	EXIT 15	69	EX 10
18	EXIT 16	70	EX 11
19	EXIT 17	71	EX 12
		72	EX 13
		73	EX 14
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21	ENT 2	75	MD 2
22	ENT 3	76	MD 3
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36	ENT 17		
37	ENT 18		
38	BAR 1		
39	BAR 2		
40	BAR 3		
41	BAR 4		
42	BAR 5		
42A	BAR 5A		
43	S 1		
44	S 2		
45	S 3		
46	S 4		
47	S 5		
48	S 6		
49	S 7		
50	S 8		
51	S 9		
52	S 10		

**EAST-SOUTH RAMP (STRUCTURE NO. 016-2453)**

EX 1	GENERAL PLAN AND ELEVATION
EX 2	GENERAL NOTES AND FOUNDATION DETAILS
EX 3	DECK ELEVATION LOCATION PLAN
EX 4	DECK DETAILS
EX 5	PARAPET AND MISCELLANEOUS DECK DETAILS
EX 6	TRAINING PLAN AND DETAILS
EX 7	STEEL DETAILS
EX 8	BEARING DETAILS - I
EX 9	BEARING DETAILS - II
EX 10	ENT 26
EX 11	ENT 27
EX 12	ENT 28
EX 13	ENT 29
EX 14	ENT 30

**MISCELLANEOUS DETAILS - ALL STRUCTURES**

MD 1	ANCHOR BOLT DETAILS
MD 2	EXPANSION JOINTS 2", 2-1/2", AND 4"
MD 3	PRECAST JOINT SEAL 2-1/2" AND 4"
MD 4	BEARING SURFACE, STEEL
MD 5	BEARING SURFACE, ALUMINUM - CAST IRON
MD 6	PEDESTRIAN BALKING
MD 7	DECK DRAINAGE DETAILS AND SECTIONS
MD 8	TYPICAL CURBON DETAILS

△ TOTAL BILL OF MATERIAL - S.B.

ITEM	UNIT	QUANTITY
STRUCTURE REMOVAL	CU. YD.	1,250
PROTECTIVE CURB	SG. YD.	634
CLASS X CONCRETE	CU. YD.	674.9
CLASS X CONCRETE SUPERSTRUCTURE	CU. YD.	209.9
FOUNDATIONS AND EXISTING STRUCTURAL STEEL	L. S.W.	0.49
STEEL BEAM CONNECTIONS	EACH	5,134
REINFORCEMENT BARS	LBS.	33,400
REINFORCEMENT BARS (EPOXY COATED)	LBS.	144,090
BASE PLATE	EACH	2
FASTENING STEEL PILES (HP 12 X 53)	LIN. FT.	3,038
TRIP PILE (HP 12 X 53)	EACH	4
DRIVING STEEL PILES	LIN. FT.	5,038
CALSON SHEETS 36"	CU. FT.	1,328
CALSON SHEETS 48"	CU. FT.	855
CALSON BELLS	CU. FT.	1,307
ELASTOMERIC BEARING ASSEMBLY TYPE II	EACH	20
FRONTING BEARING - GROUND EXPOSURE - 400K	EACH	6
FRONTING BEARING - PILES - 100K	EACH	1
FRONTING BEARING - PILES - 100K	EACH	1
PIPE UNDERDRAIN - 6" DIAMETER	LIN. FT.	900
GEOTECHNICAL WALL BULKHEAD	SG. YD.	275
EXPANSION JOINT, 4"	LIN. FT.	25
PRECAST JOINT SEAL, 2-1/2"	LIN. FT.	48
DRAINAGE SCUPPERS	EACH	2
DOWNSPOUT DRAINAGE SYSTEM	LIN. FT.	94
CONCRETE REMOVAL	CU. YD.	33.0
PROTECTIVE SHIELD	SG. YD.	65
ELASTOMERIC BEARING ASSEMBLY TYPE I	EACH	12
PEDESTRIAN BALKING - 6 FT.	LIN. FT.	325
PRECAST JOINT SEAL 4"	LIN. FT.	143

△ TOTAL BILL OF MATERIAL - N.B.

ITEM	UNIT	QUANTITY
STRUCTURE REMOVAL	CU. YD.	2,202
CONCRETE REMOVAL	CU. YD.	179.7
REMOVAL OF EXISTING SUPERSTRUCTURE-NO. 1	L. S.W.	1
REMOVAL OF EXISTING SUPERSTRUCTURE-NO. 2	L. S.W.	1
PROTECTIVE CURB	SG. YD.	2,419
PROTECTIVE SHIELD	SG. YD.	9,020
CLASS X CONCRETE	CU. YD.	1,071.4
CLASS X CONCRETE SUPERSTRUCTURE	CU. YD.	948.0
FOUNDATIONS AND EXISTING STRUCTURAL STEEL	L. S.W.	0.57
DRAINAGE SCUPPERS	EACH	2
DOWNSPOUT DRAINAGE SYSTEM	LIN. FT.	33
EXPOSED CONCRETE SURFACE COURSE-CLASS I	TON	41
EPoxy CRACK SEALING	LIN. FT.	80
FORMED CONCRETE REPAIR (DEPTH IS 1-1/2 IN.)	SG. FT.	80
STEEL BEAM CONNECTIONS	EACH	12,616
REINFORCEMENT BARS	LBS.	145,000
REINFORCEMENT BARS (EPOXY COATED)	LBS.	21,710
BASE PLATE	EACH	9
ELASTOMERIC BEARING ASSEMBLY TYPE I	EACH	46
ELASTOMERIC BEARING ASSEMBLY TYPE II	EACH	0
FRONTING BEARING, EXPOSURE - 100K	EACH	1
FRONTING BEARING, EXPOSURE - 400K	EACH	1
FRONTING BEARING, GROUND EXPOSURE - 100K	EACH	2
FRONTING BEARING, GROUND EXPOSURE - 400K	EACH	2
FRONTING BEARING, PILES - 100K	EACH	2
FRONTING BEARING, PILES (HP 12 X 53)	LIN. FT.	3,114
TRIP PILE (HP 12 X 53)	EACH	2
DRIVING STEEL PILES	LIN. FT.	3,114
CALSON SHEETS 36"	CU. FT.	4,321
CALSON SHEETS 48"	CU. FT.	1,385
CALSON BELLS	CU. FT.	2,000
WATERPROOFING MEMBRANE SYSTEM	SG. YD.	478
EXPANSION JOINT, 1/4" DIAMETER	EACH	347
FRONTING BALKING - 6"	LIN. FT.	964
GEOTECHNICAL WALL BULKHEAD	SG. YD.	335
PIPE UNDERDRAIN - 6" DIAMETER	LIN. FT.	444
EXPANSION JOINT 4"	LIN. FT.	88
PRECAST JOINT SEAL 2-1/2"	LIN. FT.	100
PRECAST JOINT SEAL 4"	LIN. FT.	77

△ TOTAL BILL OF MATERIALS - S.B. (CONT.)

ITEM	UNIT	QUANTITY
ELASTOMERIC BEARING ASSEMBLY TYPE II	SG. YD.	1,311
EXPOSED CONCRETE SURFACE REMOVAL	SG. YD.	1,311
CONCRETE BEARING BACK REIFICATION (1/8")	SG. YD.	1,390
BASE PLATE	LIN. FT.	325
DECK BEARING (PARTIAL)	SG. YD.	60
DECK BEARING (FULL DEPTH, TYPE I)	SG. YD.	10
BEARING SURFACE REPAIR (PARTIAL DEPTH)	SG. FT.	500
BEARING SURFACE REPAIR (FULL DEPTH)	SG. FT.	60
FORMED CONCRETE REPAIR (DEPTH = 1-1/2 IN.)	SG. FT.	80
EPoxy CRACK SEALING	LIN. FT.	80
FORMED CONCRETE REPAIR (DEPTH IS 1-1/2 IN.)	SG. FT.	80
CLEANING AND PAINTING	L. S.W.	1

SHEET 02 OF 2

REVISION	DATE
1	09/25/07
2	09/25/07

Revision - Nov. 25, 1907

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (I-55) RYAN EXPANSION  
SECTION 1000-0000 - COOK COUNTY  
ROADWAY GRADING AND CURBS  
VOLUME NO. 3  
INDEX OF SHEETS  
AND TOTAL BILL OF MATERIAL

Drawn: NONE  
Checked: ALBERT H. BAY  
Checked By: BAY

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PLOT DATE = 10/24/2014

DESIGNED - OPS  
DRAWN - OPS  
CHECKED - DBM  
DATE - 10/24/2014

REVISED -  
REVISED -  
REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING TAYLOR STREET ENTRANCE RAMP  
BRIDGE PLANS (FOR INFORMATION ONLY)

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-077R	COOK	385	274
CONTRACT NO. 60X61				
ILLINOIS FED. AID PROJECT				

DATE	BY	CHECKED	DATE	BY
09/04	0	COOK	78	2
TO				
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11	EXIT 9	63	EX 4
12	EXIT 10	64	EX 5
13	EXIT 11	65	EX 6
14	EXIT 12	66	EX 7
15	EXIT 13	67	EX 8
16	EXIT 14	68	EX 9
17	EXIT 15	69	EX 10
18	EXIT 16	70	EX 11
19	EXIT 17	71	EX 12
		72	EX 13
		73	EX 14
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21	ENT 2	75	MD 2
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35	ENT 16		
36	ENT 17		
37	ENT 18		
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39	BAR 2		
40	BAR 3		
41	BAR 4		
42	BAR 5		
42A	BAR 5A		
43	S 1		
44	S 2		
45	S 3		
46	S 4		
47	S 5		
48	S 6		
49	S 7		
50	S 8		
51	S 9		
52	S 10		

**EAST-SOUTH RAMP (STRUCTURE NO. 016-2453)**

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EX 10	ENT 26
EX 11	ENT 27
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EX 13	ENT 29
EX 14	ENT 30

**MISCELLANEOUS DETAILS - ALL STRUCTURES**

MD 1	ANCHOR BOLT DETAILS
MD 2	EXPANSION JOINTS 2", 2-1/2", AND 4"
MD 3	PRECAST JOINT SEAL 2-1/2" AND 4"
MD 4	BEARING SURFACE, STEEL
MD 5	BEARING SURFACE, ALUMINUM - CAST IRON
MD 6	PEDESTRIAN BAILING
MD 7	DECK DRAINAGE DETAILS AND SECTIONS
MD 8	TYPICAL CURB DETAILS

△ TOTAL BILL OF MATERIAL - S.B.

ITEM	UNIT	QUANTITY
STRUCTURE REMOVAL	CU. YD.	1,250
PROTECTIVE CURB	SG. YD.	634
CLASS X CONCRETE	CU. YD.	674.9
CLASS X CONCRETE SUPERSTRUCTURE	CU. YD.	209.9
FOUNDATIONS AND EXISTING STRUCTURAL STEEL	L. SUM	0.49
STEEL BEAR CONNECTIONS	EACH	5,134
REINFORCEMENT BARS	LBS.	33,400
REINFORCEMENT BARS (EPOXY COATED)	LBS.	144,090
BASE PLATE	EACH	2
FURNISHING STEEL FILLS (HP 12 X 53)	LIN. FT.	3,038
TRIP FILLS (HP 12 X 53)	EACH	4
DRIVING STEEL FILLS	LIN. FT.	5,038
CALSON STRIPS 36"	CU. FT.	1,328
CALSON STRIPS 48"	CU. FT.	855
CALSON BELLS	CU. FT.	1,307
ELASTOMERIC BEARING ASSEMBLY TYPE II	EACH	20
FLANGING BEARING - GROUND EXPANSION - 400K	EACH	6
FLANGING BEARING - FIXED - 100K	EACH	1
FLANGING BEARING - FIXED - 1000K	EACH	1
PIPE UNDERDRAIN - 6" DIAMETER	LIN. FT.	900
GEOTECHNICAL WALL DRAIN	SG. YD.	275
EXPANSION JOINT, 4"	LIN. FT.	25
PRECAST JOINT SEAL, 2-1/2"	LIN. FT.	48
DRAINAGE SCUPPERS	EACH	2
DOWNSPOUT DRAINAGE SYSTEM	LIN. FT.	94
CONCRETE REMOVAL	CU. YD.	33.0
PROTECTIVE SHIELD	SG. YD.	65
ELASTOMERIC BEARING ASSEMBLY TYPE I	EACH	12
PEDESTRIAN BAILING - 6 FT.	LIN. FT.	325
PRECAST JOINT SEAL, 6"	LIN. FT.	143

△ TOTAL BILL OF MATERIAL - N.B.

ITEM	UNIT	QUANTITY
STRUCTURE REMOVAL	CU. YD.	2,202
CONCRETE REMOVAL	CU. YD.	179.7
REMOVAL OF EXISTING SUPERSTRUCTURE - NO. 1	L. SUM	1
REMOVAL OF EXISTING SUPERSTRUCTURE - NO. 2	L. SUM	1
PROTECTIVE CURB	SG. YD.	2,419
PROTECTIVE SHIELD	SG. YD.	9,020
CLASS X CONCRETE	CU. YD.	1,071.4
CLASS X CONCRETE SUPERSTRUCTURE	CU. YD.	948.0
FOUNDATIONS AND EXISTING STRUCTURAL STEEL	L. SUM	0.57
DRAINAGE SCUPPERS	EACH	2
DOWNSPOUT DRAINAGE SYSTEM	LIN. FT.	33
EXISTING CONCRETE SURFACE COURSE - CLASS I	TON	41
EPoxy CRACK SEALING	LIN. FT.	80
FORMED CONCRETE REPAIR (DEPTH IS 1-1/2 IN.)	SG. FT.	80
STEEL BEAR CONNECTIONS	EACH	12,616
REINFORCEMENT BARS	LBS.	145,000
REINFORCEMENT BARS (EPOXY COATED)	LBS.	21,710
BASE PLATE	EACH	9
ELASTOMERIC BEARING ASSEMBLY TYPE I	EACH	46
ELASTOMERIC BEARING ASSEMBLY TYPE II	EACH	0
FLANGING BEARING, EXPANSION - 100K	EACH	1
FLANGING BEARING, EXPANSION - 400K	EACH	1
FLANGING BEARING, GROUND EXPANSION - 100K	EACH	2
FLANGING BEARING, GROUND EXPANSION - 400K	EACH	2
FLANGING BEARING, FIXED - 100K	EACH	2
FURNISHING STEEL FILLS (HP 12 X 53)	LIN. FT.	3,114
TRIP FILLS (HP 12 X 53)	EACH	2
DRIVING STEEL FILLS	LIN. FT.	3,114
CALSON STRIPS 36"	CU. FT.	4,321
CALSON STRIPS 48"	CU. FT.	1,385
CALSON BELLS	CU. FT.	2,000
WATERPROOFING MEMBRANE SYSTEM	SG. YD.	478
EXPANSION JOINT, 1/4" DIAMETER	EACH	347
FURNISHING BAILING - 6"	LIN. FT.	944
GEOTECHNICAL WALL DRAIN	SG. YD.	335
PIPE UNDERDRAIN - 6" DIAMETER	LIN. FT.	444
EXPANSION JOINT, 4"	LIN. FT.	80
PRECAST JOINT SEAL, 2-1/2"	LIN. FT.	100
PRECAST JOINT SEAL, 6"	LIN. FT.	77

△ TOTAL BILL OF MATERIALS - S.B. (CONT.)

ITEM	UNIT	QUANTITY
FLANGING BEARING DECK CONCRETE OVERLAY	SG. YD.	1,511
EXISTING CONCRETE SURFACE REMOVAL	SG. YD.	1,311
CONCRETE BEARING DECK RECONSTRUCTION (1/8")	SG. YD.	1,390
BASE PLATE	LIN. FT.	325
DECK BEARING (PARTIAL)	SG. YD.	60
DECK BEARING (FULL DEPTH, TYPE I)	SG. YD.	10
BEARING SURFACE REPAIR (PARTIAL DEPTH)	SG. FT.	500
BEARING SURFACE REPAIR (FULL DEPTH)	SG. FT.	60
FORMED CONCRETE REPAIR (DEPTH IS 1-1/2 IN.)	SG. FT.	80
EPoxy CRACK SEALING	LIN. FT.	80
FORMED CONCRETE REPAIR (DEPTH IS 1-1/2 IN.)	SG. FT.	80
CLEANING AND PAINTING	L. SUM	1

SHEET 02 OF 2

REVISION	DATE
(2) Revisions	2-5-80

Revision - Nov. 25, 1987

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (DAN RYAN EXPRESSWAY)  
 SECTION 1000-0000 - COOK COUNTY  
 ROADWAY GRADING AND CURBS  
 VOLUME NO. 3  
 INDEX OF SHEETS  
 AND TOTAL BILL OF MATERIAL

Drawn: NONE  
 Check: ALBERT H. BRY  
 Checked By: SAJ  
 Checked By: WUP  
 CONTRACTING ENGINEER INC.  
 CHICAGO, ILL.

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PLOT DATE = 10/24/2014	DATE - 10/24/2014	REVISED -

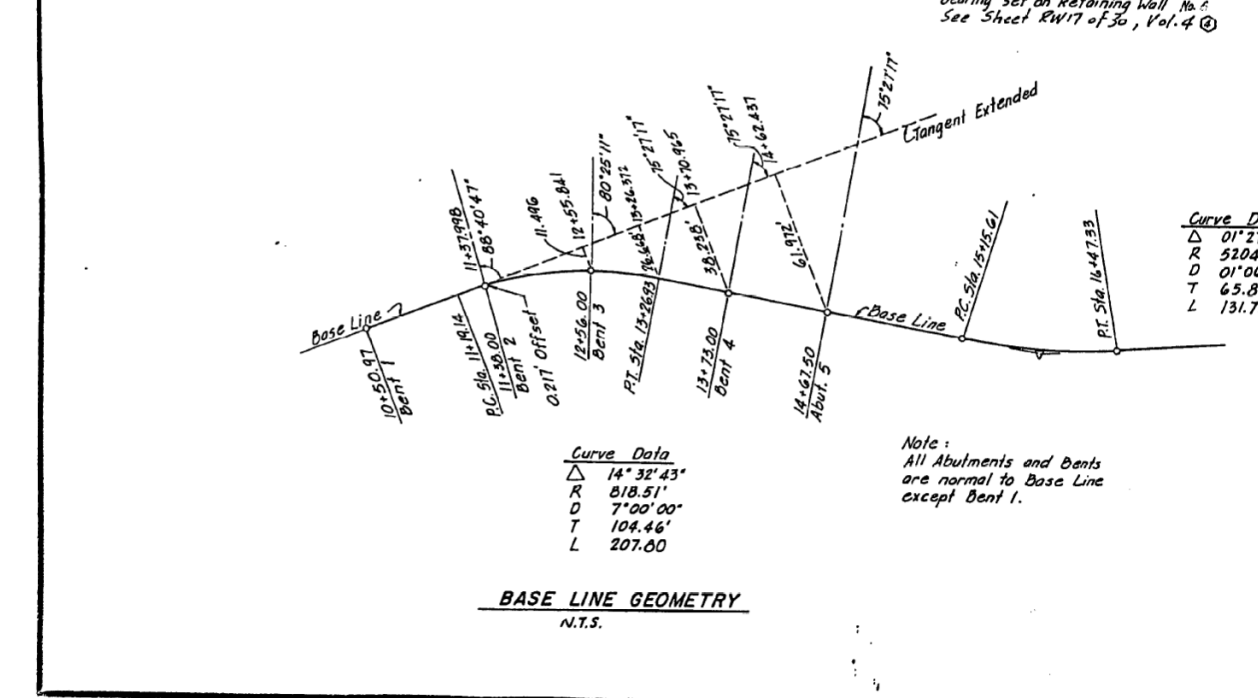
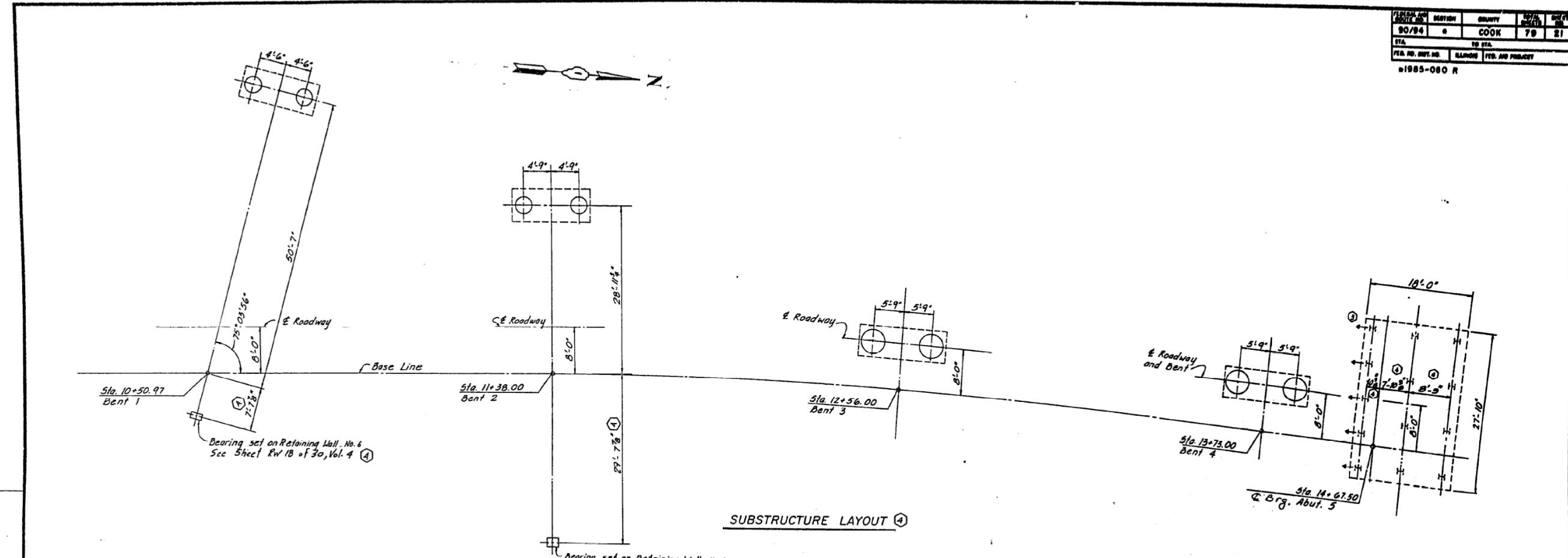
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING TAYLOR STREET ENTRANCE RAMP  
 BRIDGE PLANS (FOR INFORMATION ONLY)

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

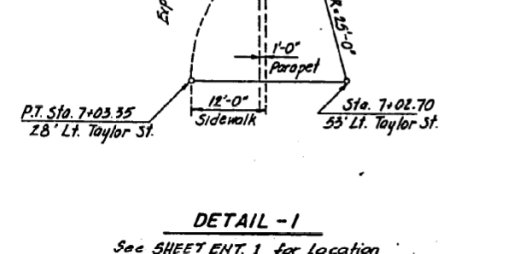
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-077R	COOK	385	275
CONTRACT NO. 60X61				
ILLINOIS FED. AID PROJECT				

SECTION NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	0	COOK	79	21
STA.	TO STA.			
STA. NO. DIST. NO.	ALIGNMENT	FILE AND PROJECT		
1985-080 R				



**LOCATION OF CONSTRUCTION AND EXPANSION JOINTS**

Station	Offset to Back of Wall	Type of Joint
14+40.00 (& Taylor St. Ent. Ramp)	8.00' R	Beginning of Wall
16+15.44	6.78' R	Construction
15+40.50	5.65' R	Expansion
15+65.54	4.64' R	Construction
15+40.58	3.76' R	Construction
15+15.61	3.00' R	Expansion
14+85.61	3.00' R	End of Wall
16+34.44 (& Taylor St. Ent. Ramp)	19.00' L	Beginning of Wall
16+15.44	19.00' L	Construction
15+40.50	19.00' L	Expansion
15+65.54	19.00' L	Construction
15+40.58	19.00' L	Construction
15+15.61	19.00' L	Expansion
14+85.61	19.00' L	End of Wall



SHEET ENT. 2 OF 18

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1985-080 R COOK COUNTY  
ROADWAY GRADING AND PAVING  
TAYLOR ST. ENTRANCE RAMP OVER N.B. COLL. DIST  
SUBSTRUCTURE LAYOUT

Scale: 1" = 10'-0"  
Date: 7-16-87  
Drawn By: D.C.  
Checked By: J.W.W.

ENVIRONMENTAL ENGINEERS INC.  
Chicago, Illinois

REVISIONS	
Name	Date
③ Revision	3-11-88
④ Revision	4-27-88

FILE PATH = C:\Users\pmsarno\Desktop\AS BUILT\15 68W30-D160W30-sht-AsBuilt-05.dgn



D160W30-sht-AsBuilt-05.dgn  
USER NAME = pmsarno  
PLOT SCALE = 2.0000" / in.  
PLOT DATE = 10/24/2014

DESIGNED - OPS	REVISED -
DRAWN - OPS	REVISED -
CHECKED - DBM	REVISED -
DATE - 10/24/2014	REVISED -

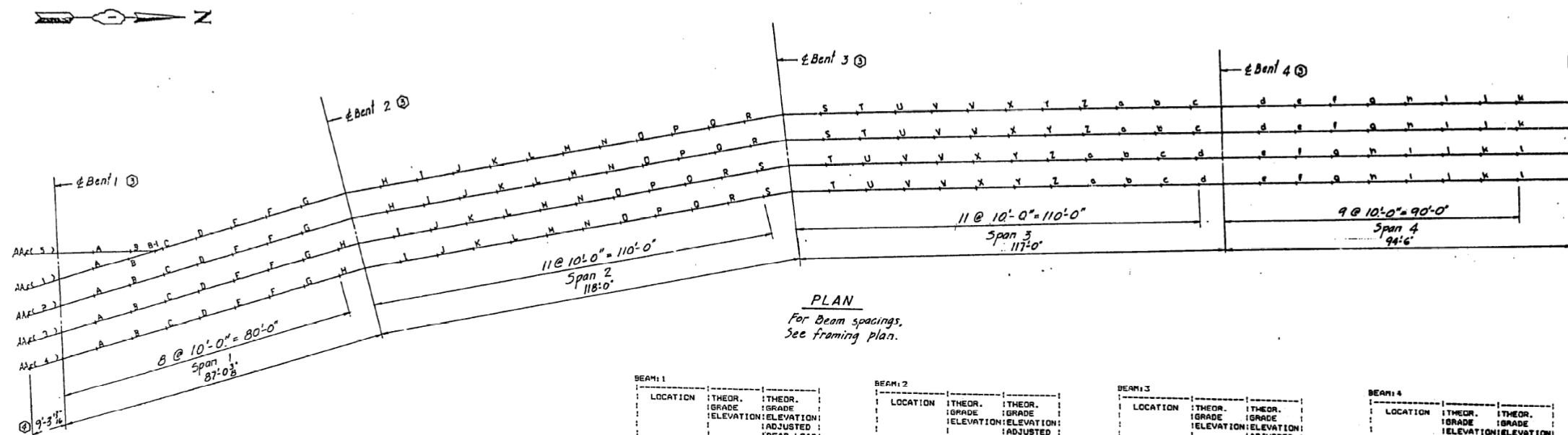
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING TAYLOR STREET ENTRANCE RAMP  
BRIDGE PLANS (FOR INFORMATION ONLY)

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-077R	COOK	385	276
CONTRACT NO. 60X61				
ILLINOIS FED. AID PROJECT				

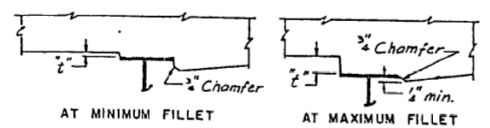
SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	COOK	79	88
F.A.I. R.T.E.		SECTION	
90/94/290		2013-077R	
COUNTY		COOK	
TOTAL SHEETS		385	
SHEET NO.		277	
CONTRACT NO. 60X61			



PLAN  
For Beam spacings,  
See framing plan.

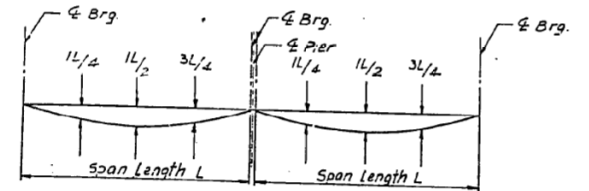
DEAD LOAD DEFLECTION  
(inches)

BEAM	L/4	L/2	3L/4
1	-0.49	-0.55	-0.22
1	-0.47	-1.10	-0.62
1	-0.50	-0.92	-0.63
1	-0.40	-0.85	-0.72
1	-0.49	-0.55	-0.22
1	-0.47	-1.10	-0.62
1	-0.50	-0.92	-0.63
1	-0.40	-0.85	-0.72
4	-0.49	-0.55	-0.22
4	-0.47	-1.10	-0.62
4	-0.50	-0.92	-0.63
4	-0.40	-0.85	-0.72
5	0.00	0.00	0.00



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

FILLET HEIGHTS



LOCATION	THEOR. GRADE ELEVATION	THEOR. GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECT.
AA	14.430	14.430
PIER#_1	14.408	14.408
A	14.402	14.425
B	14.297	14.437
C	14.290	14.439
D	14.284	14.421
E	14.277	14.414
F	14.272	14.394
G	14.372	14.378
H	14.284	14.386
I	14.277	14.349
J	14.290	14.221
K	14.252	14.308
L	14.209	14.284
M	14.169	14.257
N	14.123	14.225
O	14.082	14.195
P	14.012	14.085
Q	13.930	13.973
R	13.805	13.825
S	12.670	13.680
PIER#_2	13.524	13.524
T	13.277	13.283
U	13.030	13.052
V	12.762	12.805
W	12.468	12.529
X	12.132	12.205
Y	11.775	11.852
Z	11.205	11.068
a	10.984	11.048
b	10.548	10.590
c	10.084	10.106
d	9.592	9.599
e	9.149	9.149
f	8.609	8.617
g	8.042	8.048
h	7.491	7.527
i	6.921	6.984
j	6.340	6.433
k	5.801	5.873
l	5.258	5.319
m	4.734	4.777
n	4.215	4.215
PIER#_3	4.015	4.015

LOCATION	THEOR. GRADE ELEVATION	THEOR. GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECT.
AA	14.329	14.329
PIER#_1	14.299	14.299
A	14.283	14.305
B	14.267	14.307
C	14.251	14.299
D	14.234	14.282
E	14.218	14.256
F	14.197	14.195
G	14.202	14.225
H	14.187	14.195
I	14.171	14.171
J	14.134	14.146
K	14.091	14.124
L	14.044	14.100
M	14.001	14.076
N	13.924	14.016
O	13.873	13.960
P	13.799	13.871
Q	13.704	13.755
R	13.587	13.616
S	13.448	13.457
T	13.293	13.293
U	13.067	13.073
V	12.818	12.841
W	12.547	12.590
X	12.252	12.313
Y	11.922	11.995
Z	11.570	11.647
a	11.196	11.269
b	10.794	10.854
c	10.365	10.406
d	9.909	9.920
e	9.426	9.431
f	9.021	9.021
g	8.491	8.499
h	7.932	7.959
i	7.373	7.419
j	6.813	6.876
k	6.257	6.326
l	5.693	5.763
m	5.120	5.211
n	4.628	4.669
PIER#_4	4.015	4.015

LOCATION	THEOR. GRADE ELEVATION	THEOR. GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECT.
AA	14.227	14.227
PIER#_1	14.195	14.195
A	14.148	14.190
B	14.141	14.180
C	14.113	14.163
D	14.089	14.137
E	14.063	14.102
F	14.037	14.062
G	14.011	14.021
H	13.989	13.989
I	13.977	13.977
J	13.971	13.943
K	13.983	13.916
L	13.876	13.892
M	13.792	13.868
N	13.752	13.841
O	13.714	13.806
P	13.662	13.748
Q	13.586	13.657
R	13.489	13.529
S	13.249	13.296
T	13.227	13.233
U	13.085	13.085
V	12.837	12.863
W	12.604	12.629
X	12.332	12.374
Y	12.025	12.096
Z	11.712	11.796
a	11.366	11.443
b	10.998	11.070
c	10.602	10.662
d	10.182	10.222
e	9.728	9.725
f	9.261	9.266
g	8.892	8.897
h	8.372	8.380
i	7.825	7.851
j	7.265	7.311
k	6.705	6.768
l	6.145	6.218
m	5.588	5.637
n	5.042	5.107
PIER#_5	4.520	4.561
o	3.900	3.900

LOCATION	THEOR. GRADE ELEVATION	THEOR. GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECT.
AA	14.125	14.125
PIER#_1	14.093	14.092
A	14.056	14.078
B	14.019	14.058
C	13.983	14.031
D	13.947	13.993
E	13.911	13.952
F	13.875	13.902
G	13.840	13.852
H	13.806	13.807
I	13.784	13.784
J	13.727	13.729
K	13.675	13.708
L	13.627	13.684
M	13.609	13.686
N	13.587	13.674
O	13.554	13.646
P	13.492	13.577
Q	13.293	13.463
R	13.272	13.221
S	13.150	13.173
T	13.004	13.010
U	12.877	12.877
V	12.647	12.653
W	12.394	12.417
X	12.128	12.176
Y	11.867	11.929
Z	11.573	11.647
a	11.242	11.320
b	10.874	10.948
c	10.479	10.537
d	10.056	10.093
e	9.606	9.625
f	9.150	9.134
g	8.792	8.782
h	8.271	8.279
i	7.725	7.751
j	7.157	7.203
k	6.597	6.660
l	6.027	6.110
m	5.478	5.550
n	4.924	4.992
PIER#_5	4.412	4.432
o	3.692	3.692

Dimensions measured along & girder  
Dimensions measured along @ Taylor St. Exit Ramp

SHEET ENT. 3 OF 18

REVISIONS	Name	Date
① Revision		3-11-88
② Revision		4-21-88

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1885-080 R COOK COUNTY  
ROADWAY GRADING AND PAVING  
TAYLOR ST. ENTRANCE RAMP OVER H.B. COLL. DIST.  
DECK ELEVATIONS  
Scale: 1" = 10'-0"  
Date: 7-16-87  
Drawn By: DC  
Checked By: WW  
ENVIROTECH ENGINEERS INC.  
Chicago, Illinois



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USER NAME = pimsarno  
PLOT SCALE = 2.0000' / in.  
PLOT DATE = 10/24/2014

DESIGNED - OPS  
DRAWN - OPS  
CHECKED - DBM  
DATE - 10/24/2014

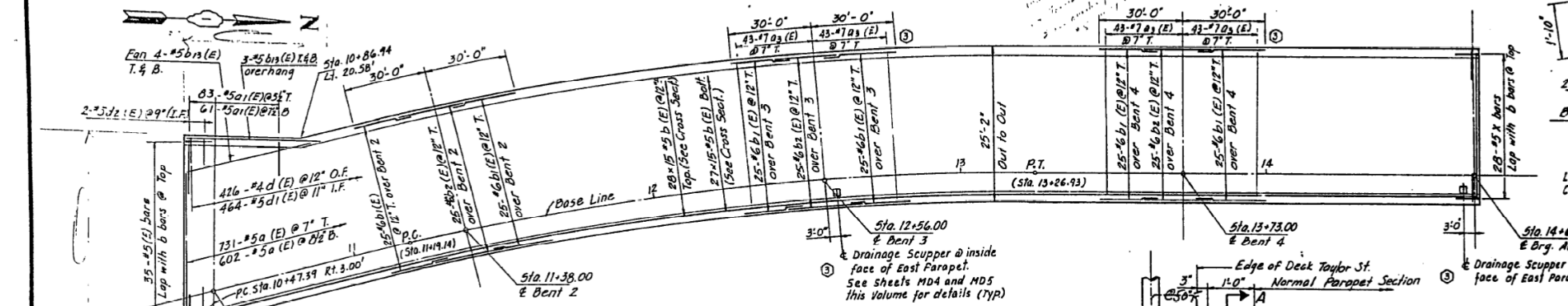
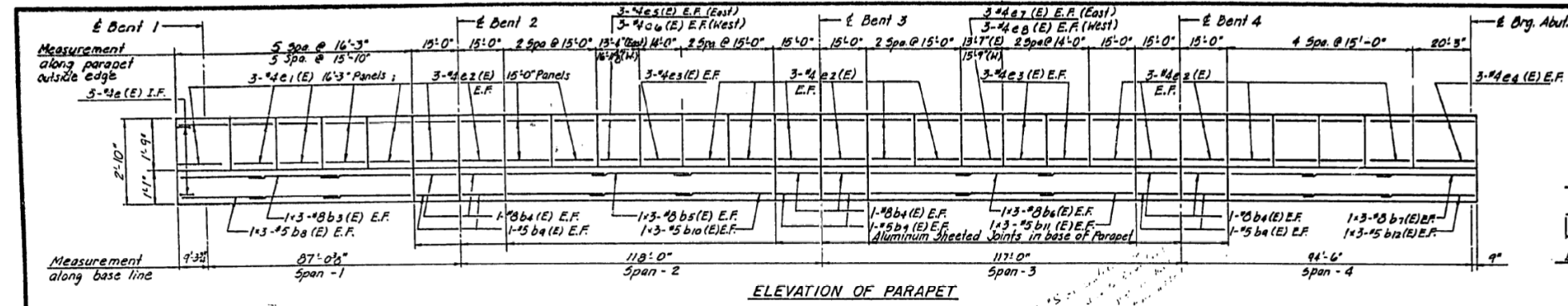
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING TAYLOR STREET ENTRANCE RAMP  
BRIDGE PLANS (FOR INFORMATION ONLY)  
SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. R.T.E. SECTION COUNTY TOTAL SHEETS SHEET NO.  
90/94/290 2013-077R COOK 385 277  
CONTRACT NO. 60X61  
ILLINOIS FED. AID PROJECT





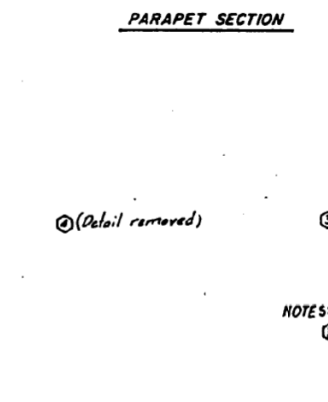
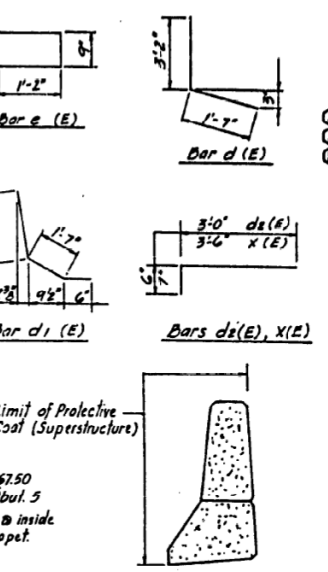
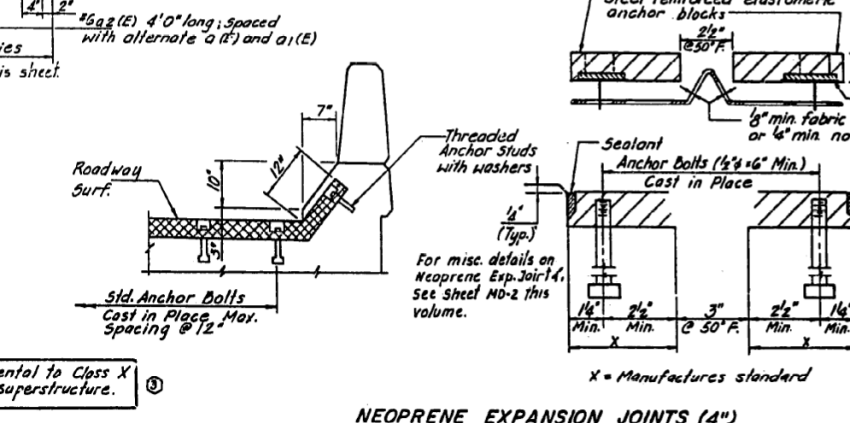
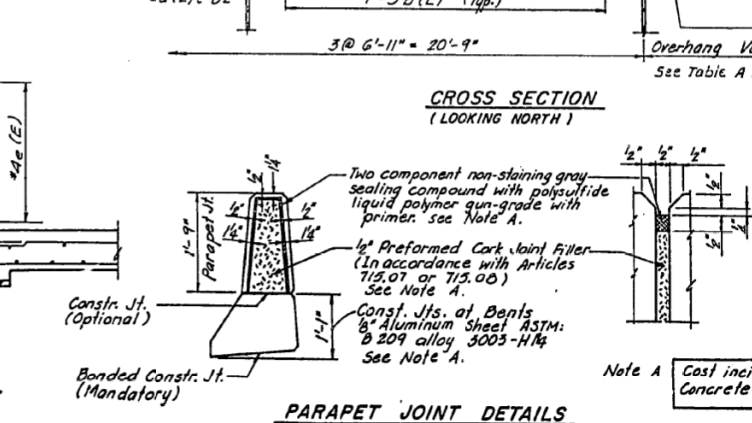
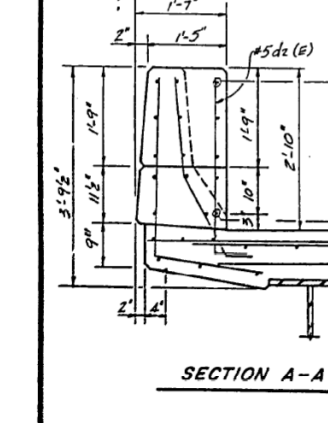


**TABLE A**

DECK OVERHANG	West		East	
	Bent 1	Bent 2	Bent 3	Bent 4
Bent 1	2.99	2.20	1.17	3.25
Bent 2	1.17	3.25	1.17	3.25
Bent 3	3.12	1.30	2.21	2.21
Abut 5	2.21	2.21	2.21	2.21
Taylor St Bridge	2.21	2.12		

**TABLE A**

DECK OVERHANG	West		East	
	Bent 1	Bent 2	Bent 3	Bent 4
Bent 1	2.99	2.20	1.17	3.25
Bent 2	1.17	3.25	1.17	3.25
Bent 3	3.12	1.30	2.21	2.21
Abut 5	2.21	2.21	2.21	2.21
Taylor St Bridge	2.21	2.12		



SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	COOK	78	83

**SUPERSTRUCTURE BILL OF MATERIAL**

Bar No.	Size	Length	Shape
a	1353	#5(E)	24'-6"
a1	144	#5(E)	13'-0"
a2	1460	#6(E)	4'-0"
a3	172	#7(E)	34'-8"
a1	32	#9(E)	8'-0"
a2	24	#9(E)	8'-0"
b	225	#5(E)	30'-0"
b1	150	#6(E)	17'-0"
b2	75	#6(E)	30'-0"
b3	12	#8(E)	29'-5"
b4	24	#8(E)	14'-10"
b5	12	#8(E)	32'-8"
b6	12	#8(E)	32'-8"
b7	12	#8(E)	29'-1"
b8	12	#5(E)	20'-1"
b9	24	#5(E)	14'-10"
b10	12	#5(E)	31'-4"
b11	12	#5(E)	30'-7"
b12	12	#5(E)	27'-10"
b13	14	#5(E)	40'-2"
c	4	#5(E)	3'-2"
d	852	#4(E)	4'-9"
d1	9'-8	#5(E)	3'-11"
e	1	#4(E)	3'-7"
e1	30	#4(E)	16'-0"
e2	254	#4(E)	14'-9"
e3	34	#4(E)	13'-9"
e4	12	#4(E)	20'-0"
e5	6	#4(E)	13'-1"
e6	6	#4(E)	16'-9"
e7	6	#4(E)	13'-5"
e8	6	#4(E)	13'-6"
x	63	#5(E)	4'-1"

Reinforcement Bars (Epoxy Coated) Lbs. 87,480

Class X Concrete C.Yds. 382

Protective Coat Sq. Yds. 348

Neoprene Exp. Jt. (4") Lin.Ft. 60

NOTES:

Cut and bend bars to fit conditions in the field as required.

Bars designated 2b, 15, 15 etc. indicate 28 lines of #5 bars with 15 lengths per line.

Bar designated (E) shall be Epoxy Coated.

**Minimum Bar Laps**

#4	1'-4"
#5	1'-8"
#6	2'-0"
#8	3'-8"

See Sheet MD-7 for Drainage System Details.

SHEET ENT 4 OF 18

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1985-080 R COOK COUNTY  
ROADWAY GRADING AND PAVING  
TAYLOR ST. ENTRANCE RAMP OVER N.S. COLL. DIST.  
SUPERSTRUCTURE

Scale: 1" = 10'-0"  
Date: 7-16-07

Drawn By: D.C.  
Checked By: W.W.

ENVIRODYNE ENGINEERS INC.  
Chicago, Illinois

**REVISIONS**

Name	Date
Revision	3-11-88
Revision	4-21-88

FILE PATH = p:\388035-p\m\1\esc\com\line\local\p\AEC\MD\0\Documents\01\_Americas\Transportation\62629938\_Circle Phase\_1\1000\_CAD\005\_Roadway\Sheets\60W30\_Contract\016W30-sht-AsBuilt-08.dgn  
 303 EAST WACKER DRIVE, SUITE 1400  
 CHICAGO, IL 60601-5276  
 PHONE: (312) 373-7700 FAX: (312) 373-6800



D160W30-sht-AsBuilt-08.dgn  
 USER NAME = pimsarno  
 PLOT SCALE = 2.0000' / 1" IN.  
 PLOT DATE = 10/24/2014

DESIGNED - OPS  
 DRAWN - OPS  
 CHECKED - DBM  
 DATE - 10/24/2014

REVISED -  
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 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

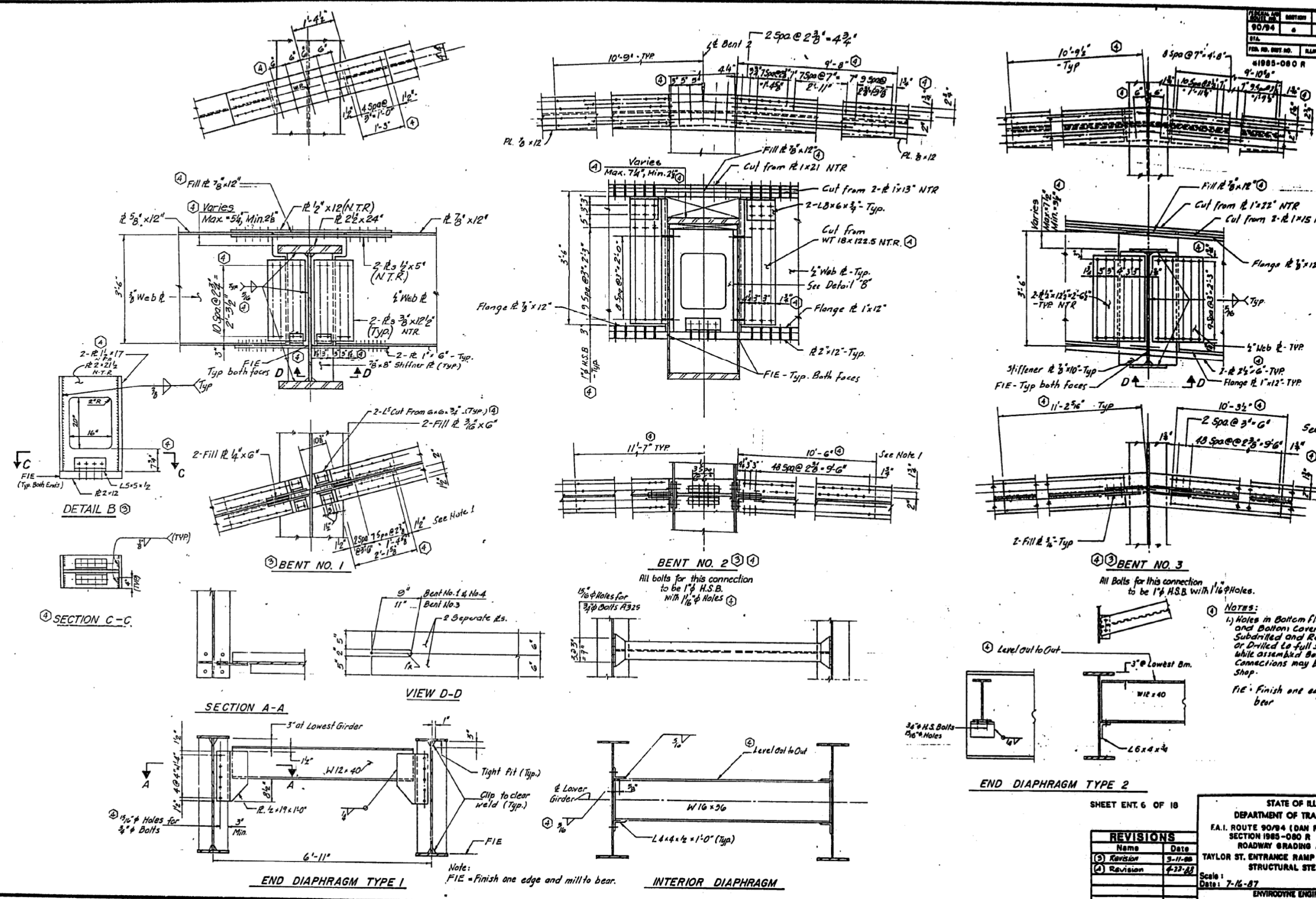
EXISTING TAYLOR STREET ENTRANCE RAMP  
 BRIDGE PLANS (FOR INFORMATION ONLY)

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-077R	COOK	385	279

CONTRACT NO. 60X61  
 ILLINOIS FED. AID PROJECT

PROJECT NO.	SHEET NO.	COUNTY	SECTION	DATE
90/94	6	COOK	79	88
F.I.L. ROUTE 90/94 (DAN RYAN EXPRESSWAY)				
SECTION 1985-080 R COOK COUNTY				
ROADWAY GRADING AND PAVING				
TAYLOR ST. ENTRANCE RAMP OVER N.B. COLL. DIST.				
STRUCTURAL STEEL DETAILS				
Scale: 1/8" = 1'-0"				
Date: 7-16-87				
Checked By: W.W.				
ENVIRONMENTAL ENGINEERS INC.				
Chicago, Illinois				



**NOTES:**

1) Holes in bottom flange of girder and bottom cover plate shall be subdrilled and reamed to full size or drilled to full size from said side while assembling bottom flange connections may be fully bolted in shop.

2) F.I.E. Finish one edge and mill to bear.

REVISIONS	
Name	Date
(3) Revisor	9-11-88
(4) Revision	4-22-89

FILE PATH = C:\Users\pmsarno\Desktop\AS BUILT\5 68\30-D160W30-sht-AsBuilt-09.dgn



D160W30-sht-AsBuilt-09.dgn  
 USER NAME = pmsarno  
 PLOT SCALE = 2.0000' / in.  
 PLOT DATE = 10/24/2014

DESIGNED - OPS	REVISED -
DRAWN - OPS	REVISED -
CHECKED - DBM	REVISED -
DATE - 10/24/2014	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

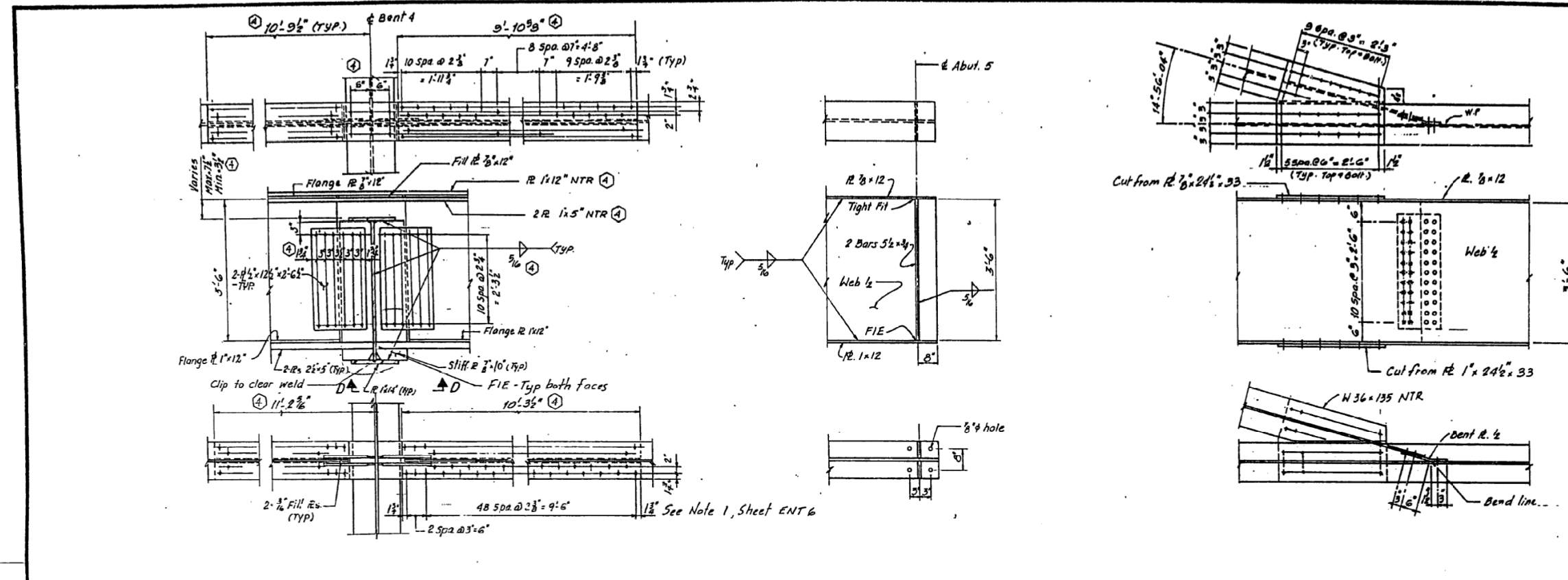
EXISTING TAYLOR STREET ENTRANCE RAMP  
 BRIDGE PLANS (FOR INFORMATION ONLY)

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. R.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-077R	COOK	385	280
CONTRACT NO. 60X61				
ILLINOIS FED. AID PROJECT				



SECTION NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94		COOK	79	28
STA.	TO STA.			
FED. RD. DIST. NO.	ALIGNMENT	FED. AID PROJECT		
		#1985-080 R		



**BENT NO. 4** (3)(4)  
 All Bolts for this connection to be 1" H.S.B. with 1/8" holes

EDGE OF DECK TAYLOR STREET	GIRDER LINE					
	LINE	(1)	(2)	(3)	(4)	(5)
± Bent No.1	GA-	9'-5 3/8"	9'-5 1/8"	9'-6 5/8"	9'-7 5/8"	9'-10"
± Bent No.2	GB-	82'-8 1/2"	84'-4"	85'-11 1/2"	87'-7 1/8"	26'-10"
± Bent No.3	GC-	120'-8 3/8"	119'-8 3/8"	118'-8 3/8"	117'-8 1/2"	
± Bent No.4	GD-	118'-7 3/16"	118'-0"	117'-4 1/8"	116'-9 5/8"	
± Brqs., Abut. 5	GE-	94'-6"	94'-6"	94'-6"	94'-6"	

\*This dimension is from ± Bent No.1 to W.P. on Girder Line (1)

SKEW ANGLE	GIRDER LINE				
	1	2	3	4	5
α 1	74°-34'-42"	74°-35'-48"	74°-35'-08"	74°-34'-42"	89°-28'-57"
α 2	75°-03'-56"	75°-05'-02"	75°-04'-22"	75°-03'-56"	89°-58'-11"
α 3	75°-03'-56"	75°-05'-02"	75°-04'-22"	75°-03'-56"	90°-00'-00"
α 4	88°-11'-33"	88°-12'-38"	88°-11'-59"	88°-11'-33"	
α 5	94°-07'-48"	94°-06'-58"	95°-55'-24"	95°-56'-27"	
α 6	85°-52'-12"	85°-51'-22"	85°-51'-47"	85°-52'-12"	
α 7	94°-25'-00"	94°-24'-51"	94°-24'-55"	94°-25'-00"	
α 8	89°-27'-05"	89°-26'-56"	89°-27'-00"	89°-27'-05"	
α 9	89°-27'-02"	89°-27'-02"	89°-27'-02"	89°-27'-02"	
α 10	89°-27'-02"	89°-27'-02"	89°-27'-02"	89°-27'-02"	

**SHORT GIRDER CONNECTION**  
 SPAN 1

Note: F.I.E. = Finish one edge and mill to bear.  
 For Wen. D.D. See SHEET ENT. 6

SHEET ENT. 7. OF 18

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
 SECTION 1985-080 R COOK COUNTY  
 ROADWAY GRADING AND PAVING  
 TAYLOR ST. ENTRANCE RAMP OVER N.B. COLL. DIST.  
 STRUCTURAL STEEL DETAILS

Scale: 7-16-87  
 Drawn By: D.C.  
 Checked By: W.W.

ENVIRODYNE ENGINEERS INC.  
 Chicago, Illinois

REVISIONS	
Name	Date
Revision	3-11-88
Revision	4-23-88

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D160W30-sht-AsBuilt-11.dgn  
 USER NAME = pimsarno  
 PLOT SCALE = 2.0000' / in.  
 PLOT DATE = 10/24/2014

DESIGNED - OPS  
 DRAWN - OPS  
 CHECKED - DBM  
 DATE - 10/24/2014

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

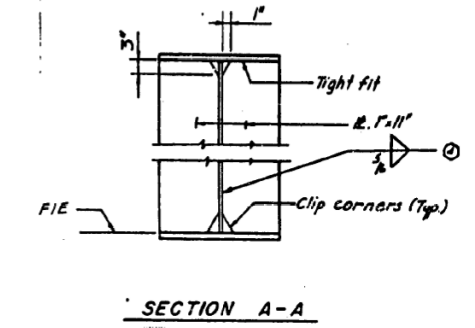
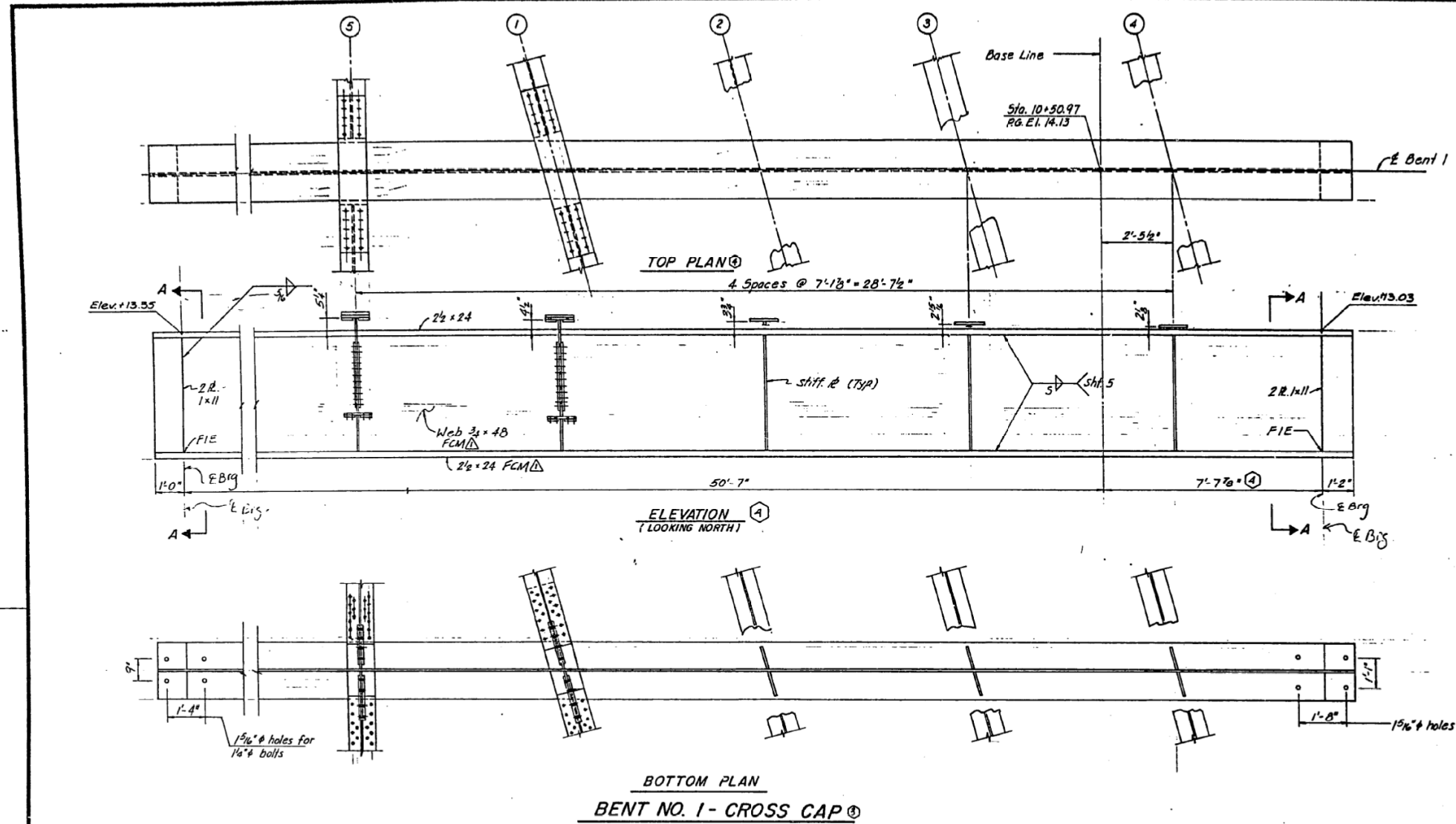
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING TAYLOR STREET ENTRANCE RAMP  
 BRIDGE PLANS (FOR INFORMATION ONLY)

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-077R	COOK	385	282
CONTRACT NO. 60X61				
ILLINOIS FED. AID PROJECT				

SECTION	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2	COOK	79	87
SIA TO STA.				
FED. RD. DIST. NO. ALABAMA FED. AID PROJECT				
1985-080 R				



**BENT NO. 1 MOMENT TABLE**

	MAX @ 0.50 SPAN
I <sub>g</sub> (in <sup>4</sup> )	85,482
S <sub>x</sub> (in <sup>3</sup> )	3150
DL (KIF)	0.53
PDL (K)max	39.9
M <sub>DL</sub> (ft-k)	1610
P <sub>SOL</sub> (K)max	18.0
M <sub>SOL</sub> (ft-k)	590
P <sub>LL</sub> (K)max	58.9
M <sub>LL</sub> (ft-k)	2011
P <sub>IMP</sub> (K)max	14.9
M <sub>IMP</sub> (ft-k)	524
3/4 M (LL+IMP) (ft-k)	422.5
M <sub>0</sub> (ft-k)	835.3
f <sub>s DL</sub> (KSI)	6.1
f <sub>s SOL</sub> (KSI)	2.2
f <sub>s 3/4(LL+IMP)</sub> (KSI)	16.1
f <sub>s OVERLOAD</sub> (KSI)	24.5
f <sub>s TOTAL</sub> (KSI)	31.8

**BENT NO. 1 REACTION TABLE**

	EAST BEARING ON RET. WALL NO.	WEST COLUMN
R <sub>DL</sub> (K)	166	100
R <sub>LL</sub> (K)	136	77
R <sub>IMP</sub> (K)	35	21
R <sub>TOTAL</sub> (K)	337	200

Notes:  
 FIE = Finish one edge and mill to bear.  
 For Connection Details see Sheet ENT6  
 Steel Plates designated FCM indicate Fracture Critical Material. Material and Fabrication shall conform to AASHTO Guide Specifications for Fracture Critical Members

SHEET ENT 8 OF 18

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
 SECTION 1985-080 R COOK COUNTY  
 ROADWAY GRADING AND PAVING  
 TAYLOR ST. ENTRANCE RAMP OVER N.B. COLL. DIST.  
 STRUCTURAL STEEL DETAILS

Scale: 1/4" = 1'-0"  
 Date: 7-16-87  
 Drawn By: D.C.  
 Checked By: W.W.  
 ENVIRONMENTAL ENGINEERS INC.  
 Chicago, Illinois

REVISIONS	
Name	Date
(3) Revision	7-17-87
(2) Revision	7-17-87

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 CHICAGO, IL 60601-5276  
 PHONE: (312) 373-1700 FAX: (312) 373-6800



D160W30-sht-AsBuilt-12.dgn  
 USER NAME = pimsarno  
 PLOT SCALE = 2.0000' / in.  
 PLOT DATE = 10/24/2014

DESIGNED - OPS  
 DRAWN - OPS  
 CHECKED - DBM  
 DATE - 10/24/2014

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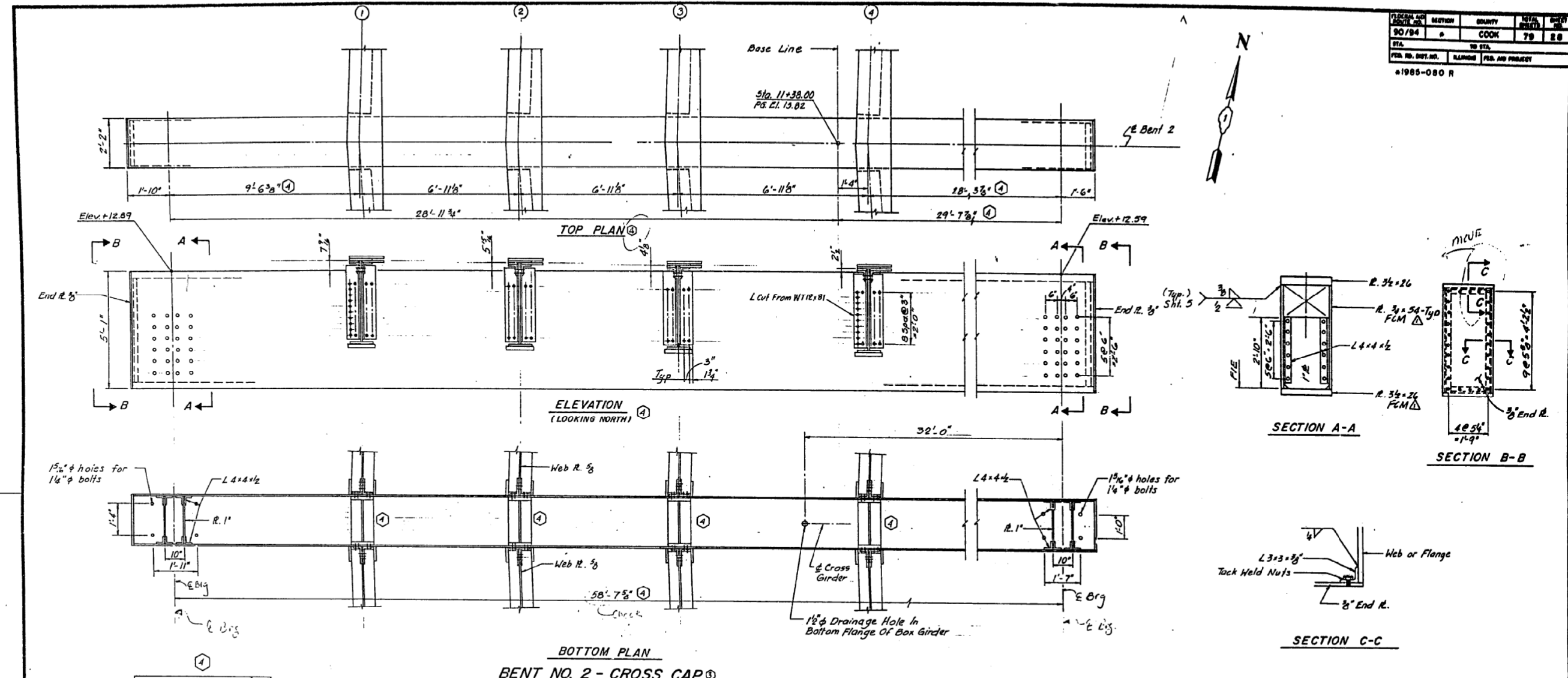
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING TAYLOR STREET ENTRANCE RAMP  
 BRIDGE PLANS (FOR INFORMATION ONLY)

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-077R	COOK	385	283
CONTRACT NO. 60X61				
ILLINOIS FED. AID PROJECT				

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94		COOK	79	28
STA.	NO STA.			
FED. RD. DIST. NO.	ALIGNED	FED. AID PROJECT		
			*1985-080 R	



**BENT NO. 2 MOMENT TABLE**

	Max @ 0.40 SPAN
I <sub>s</sub> (in <sup>4</sup> )	170,503
S <sub>s</sub> (in <sup>3</sup> )	5584
D <sub>L</sub> (K/ft)	0.89
P <sub>DL</sub> (K)	108.1
M <sub>DL</sub> (ft-K)	4752
P <sub>SOL</sub> (K)	45.1
H <sub>SOL</sub> (ft-K)	1832
P <sub>LL</sub> (K)	64.9
M <sub>LL</sub> (ft-K)	2636
P <sub>Imp</sub> (K)	9.0
M <sub>Imp</sub> (ft-K)	366
S <sub>1/2</sub> M <sub>Dist</sub> (ft-K)	5003
M <sub>0</sub> (ft-K)	15063
F <sub>s DL</sub> (Ksi)	10.2
F <sub>s SOL</sub> (Ksi)	3.9
F <sub>s 1/2</sub> (Ksi)	10.8
F <sub>s overload</sub> (Ksi)	24.9
F <sub>s TOTAL</sub> (Ksi)	32.4

**BENT NO. 2 REACTION TABLE**

	EAST BEARING ON R.S.P. WALL NO. 6	WEST COLUMN
R <sub>DL</sub> (K)	237	428
R <sub>LL</sub> (K)	74	141
R <sub>Imp</sub> (K)	10	20
R <sub>TOTAL</sub> (K)	321	589

Notes: F.I.E. = Finish one edge and mill to bear.  
 For Connection Details see Sheet ENT 6  
 Steel Plates designated F.C.M. indicate Fracture Critical Material. Material and Fabrication shall conform to AASHTO Guide Specifications for Fracture Critical Members

SHEET ENT 9 OF 18

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
 SECTION 1985-080 R COOK COUNTY  
 ROADWAY GRADING AND PAVING  
 TAYLOR ST. ENTRANCE RAMP OVER N.B. COLL. DIST.  
 STRUCTURAL STEEL DETAILS

Scale: 1/4" = 1'-0"  
 Date: 7-16-87  
 Drawn By: D.C.  
 Checked By: W.W.

ENVIRONMENTAL ENGINEERS INC.  
 Chicago, Illinois

REVISIONS	Name	Date
③	Revision	3-11-81
④	Revision	4-22-80

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 CHICAGO, IL 60601-5276  
 PHONE: (312) 373-1700 FAX: (312) 373-6800



D160W30-sht-AsBuilt-13.dgn  
 USER NAME = pimsarno  
 PLOT SCALE = 2.0000' / in.  
 PLOT DATE = 10/24/2014

DESIGNED - OPS  
 DRAWN - OPS  
 CHECKED - DBM  
 DATE - 10/24/2014

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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

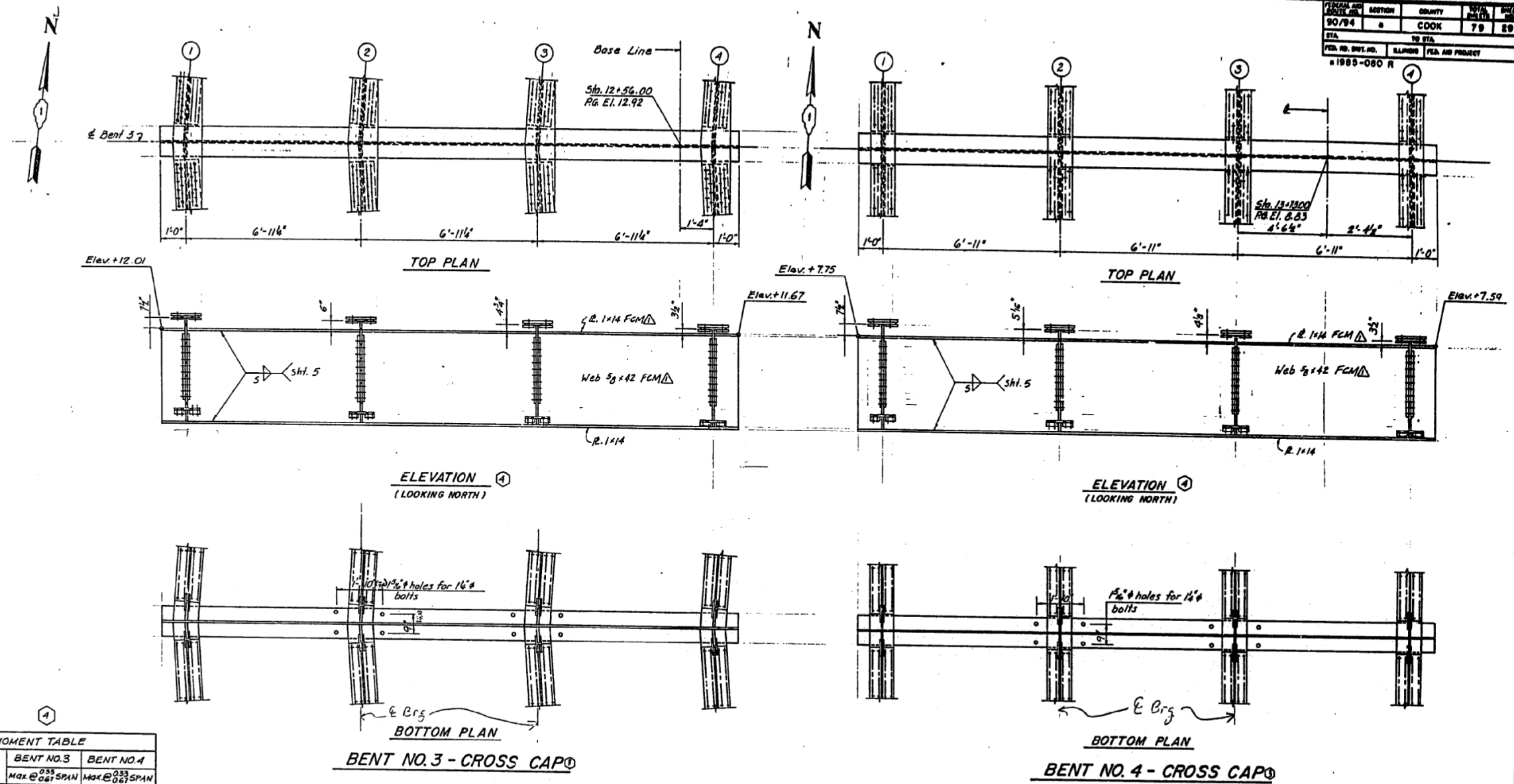
EXISTING TAYLOR STREET ENTRANCE RAMP  
 BRIDGE PLANS (FOR INFORMATION ONLY)

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-077R	COOK	385	284
CONTRACT NO. 60X61				
ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	COOK	385	285
SECTION 1985-080 R		CONTRACT NO. 60X61	



MOMENT TABLE

	BENT NO. 3	BENT NO. 4
Is (in <sup>4</sup> )	30,982	30,982
Ss (in <sup>3</sup> )	1408	1408
Dl (Klf)	0.18	0.18
Pdl (K)	111.8	111.7
Mdl (ft-K)	778	777
PsdL (K)	47.7	46.3
MsdL (ft-K)	330	320
Pll (K)	68.8	66.4
Mll (ft-K)	476	459
Pimp (K)	10.3	9.9
Mimp (ft-K)	71	69
S <sub>3</sub> Mlws (ft-K)	912	880
Ma (ft-K)	2626	2570
fs ol (Ksi)	6.6	6.6
fs sol (Ksi)	2.8	2.7
fs 3/8 (Ksi)	7.8	7.5
fs overload (Ksi)	17.2	16.8
fs TOTAL (Ksi)	22.4	21.9

REACTION TABLE

	BENT NO. 3	BENT NO. 4
Rdl (K)	355	318
Rll (K)	138	133
Rimp (K)	21	20
RTOTAL (K)	494	471

Notes: FIE = Finish one edge and mill to bear. For Connection Details see Sheet ENT 6 and ENT 7. Steel Plates designated FCM indicate Fracture Critical Material. Material and Fabrication shall conform to AASHTO Guide Specifications for Fracture Critical Members.

... SHEET ENT. 10 OF 18 ...

REVISIONS	
Name	Date
Revision	3-11-88
Revision	4-22-88

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1985-080 R COOK COUNTY  
ROADWAY GRADING AND PAVING  
TAYLOR ST. ENTRANCE RAMP OVER N.B. COLL. DIST.  
STRUCTURAL STEEL DETAILS  
Scale: 7-16-87  
Date: 7-16-87  
Checked By: W W  
ENVIRODYNE ENGINEERS INC.  
Chicago, Illinois

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PLOT SCALE = 2.0000' / in.  
PLOT DATE = 10/24/2014

DESIGNED - OPS  
DRAWN - OPS  
CHECKED - DBM  
DATE - 10/24/2014

REVISED -  
REVISED -  
REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING TAYLOR STREET ENTRANCE RAMP  
BRIDGE PLANS (FOR INFORMATION ONLY)

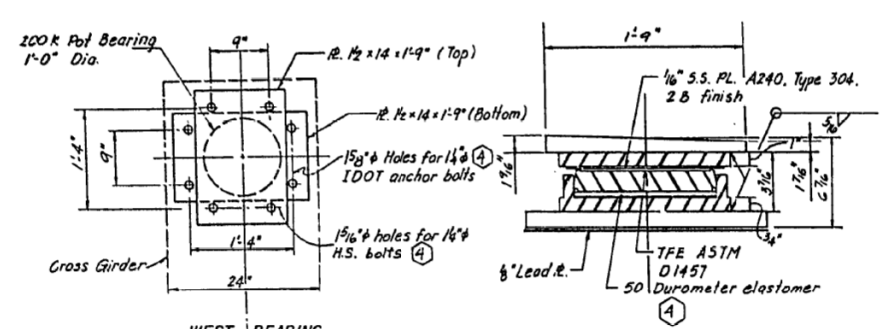
SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-077R	COOK	385	285
CONTRACT NO. 60X61				

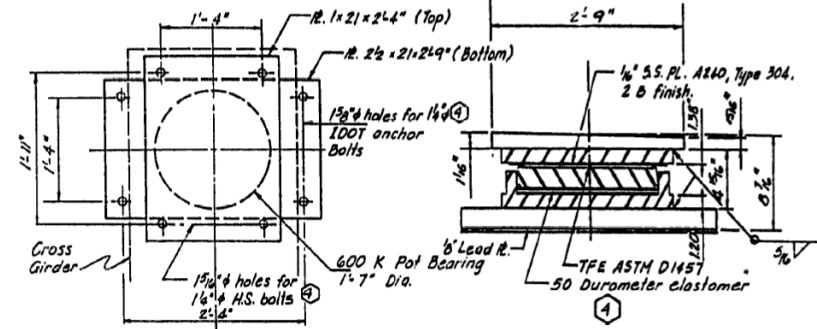
ILLINOIS FED. AID PROJECT



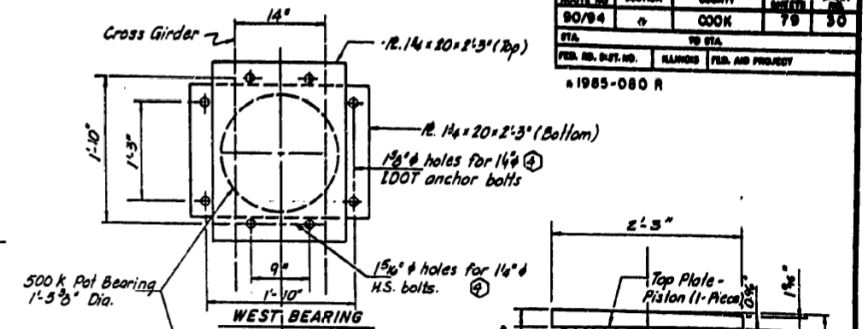
PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	COOK	79	80	
STA.	TO STA.			
FILE NO. (PLOT NO.)	ISSUES	FILED AND PROJECT		
		1985-080 R		



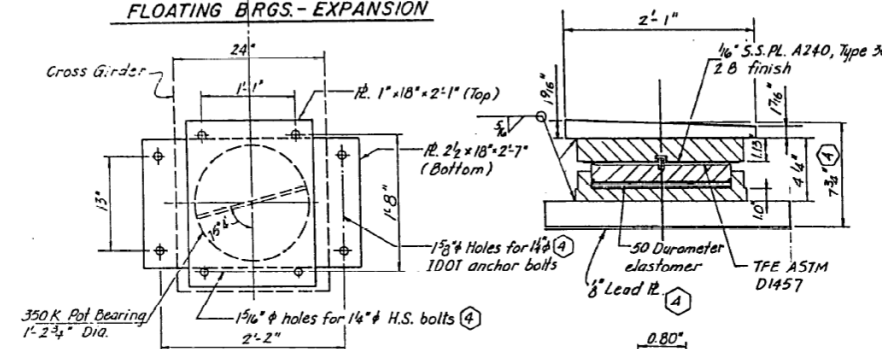
WEST BEARING (200 K) FLOATING BRGS.-EXPANSION



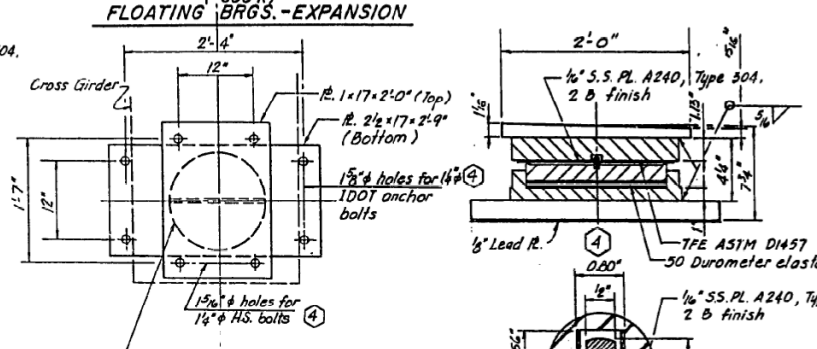
WEST BEARING (600 K) FLOATING BRGS.-EXPANSION



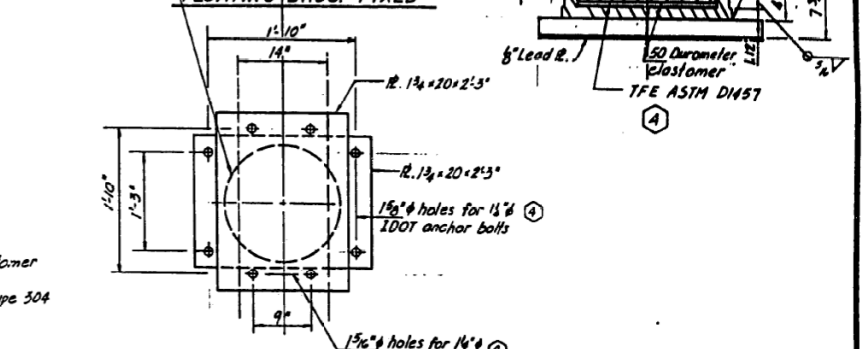
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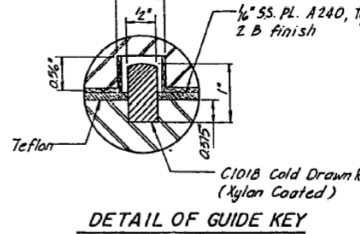
EAST BEARING (350 K) FLOATING BRGS.-GUIDED EXP.



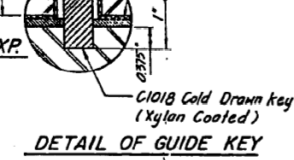
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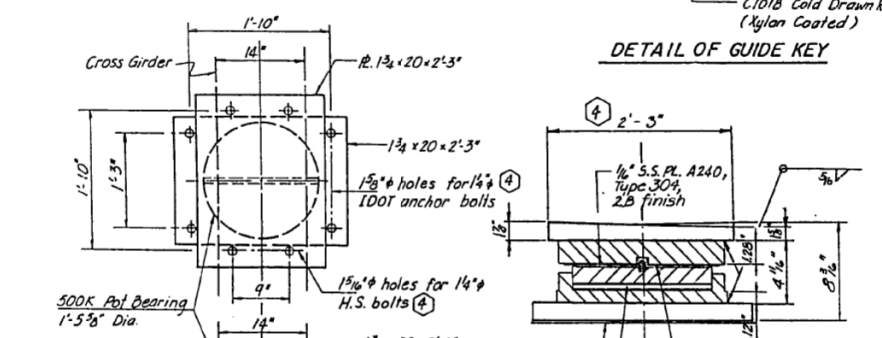
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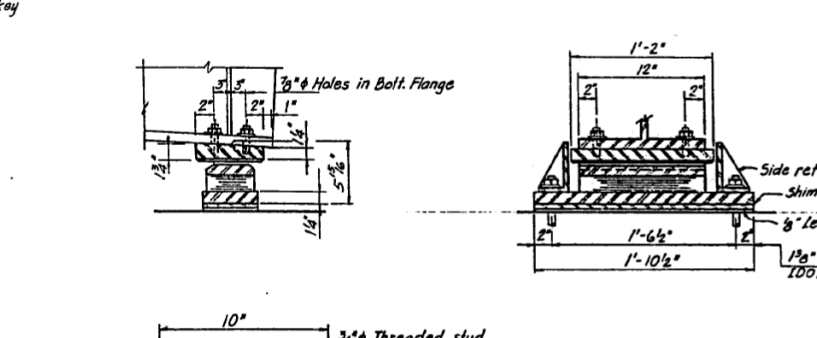
DETAIL OF GUIDE KEY



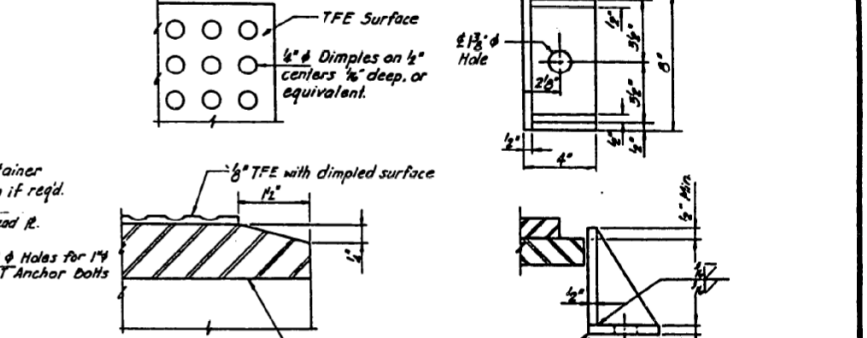
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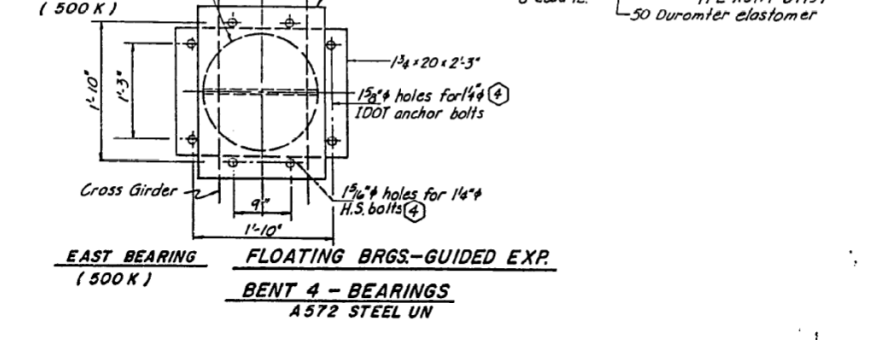
WEST BEARING (500 K) BENT 4 - BEARINGS A572 STEEL UN



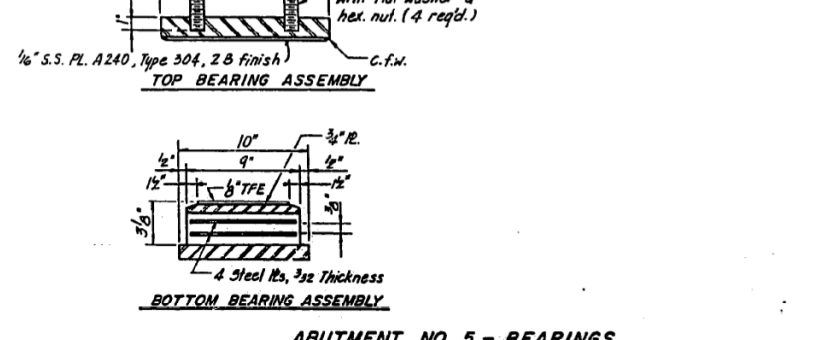
TOP BEARING ASSEMBLY



MISCELLANEOUS DETAILS



EAST BEARING (500 K) BENT 4 - BEARINGS A572 STEEL UN



BOTTOM BEARING ASSEMBLY

ABUTMENT NO. 5 - BEARINGS ELASTOMERIC BEARING ASSEMBLY TYPE II

SHEET ENT. II OF 18

REVISIONS	
Name	Date
(4) Revision	4-23-87

STATE OF ILLINOIS	
DEPARTMENT OF TRANSPORTATION	
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)	
SECTION 1985-080 R COOK COUNTY	
ROADWAY GRADING AND PAVING	
TAYLOR ST ENTRANCE RAMP OVER N.B. COLL. DIST.	
BEARINGS	
Scale:	Drawn By: DC
Date: 7-16-87	Checked By: WW
ENVIRONMENTAL ENGINEERS INC.	
Chicago, Illinois	

FILE PATH = p:\388035-p\m\l\escomon\me\local\p\ae\cdm\Documents\01\_Americas\Transportation\62629938\_Circle Phase II\000\_CAD\005\_Roadway\Sheets\60W30\_Contract\0160W30-sht-A5Built-15.dgn



D160W30-sht-A5Built-15.dgn  
 USER NAME = pimsarno  
 PLOT SCALE = 2.0000' / in.  
 PLOT DATE = 10/24/2014

DESIGNED - OPS	REVISED -
DRAWN - OPS	REVISED -
CHECKED - DBM	REVISED -
DATE - 10/24/2014	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING TAYLOR STREET ENTRANCE RAMP  
 BRIDGE PLANS (FOR INFORMATION ONLY)

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-077R	COOK	385	286
				CONTRACT NO. 60X61
ILLINOIS FED. AID PROJECT				

PLAN AND SECTION NO.	SECTION	QUANTITY	TOTAL QUANTITY	SHEET NO.
90/94	a	COOK	79	31
STA. TO STA.				
FED. NO. DIST. NO. ILLINOIS FED. AID PROJECT				
# 1985-080 R				

**BILL OF MATERIAL**

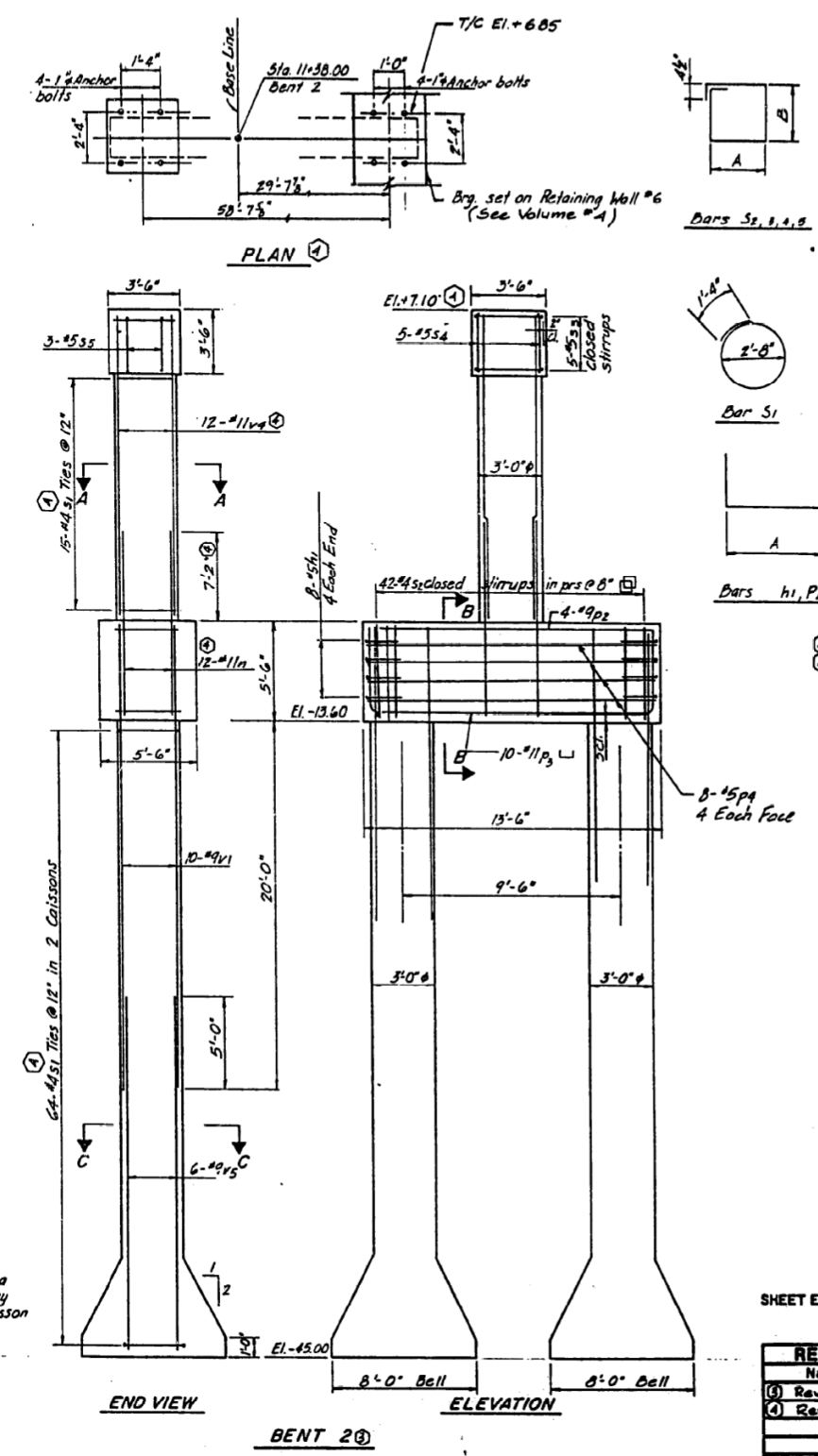
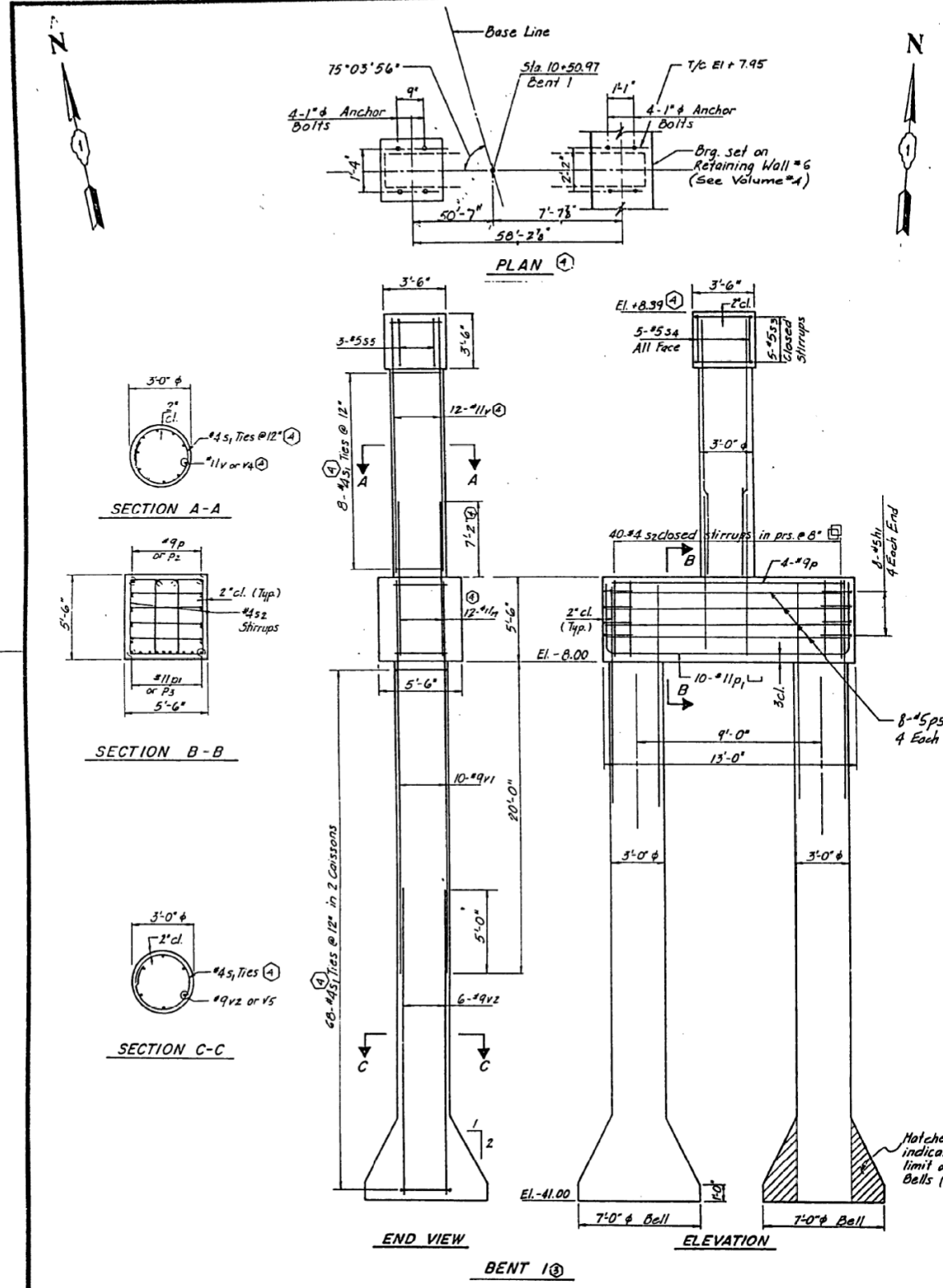
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n	24	#11	18'-0"	—
P	4	#9	12'-9"	—
P1	10	#11	22'-10"	—
P2	4	#9	18'-3"	—
P3	10	#11	23'-4"	—
P4	8	#5	17'-3"	—
P5	8	#5	12'-9"	—
S1	155	#4	4'-9"	○
S2	82	#4	17'-11"	□
S3	10	#5	13'-5"	□
S4	10	#5	13'-2"	□
S5	6	#5	12'-0"	□
V	12	#11	10'-6"	—
V1	40	#9	25'-3"	—
V2	12	#9	18'-0"	—
Y4	12	#11	14'-11"	—
Y5	12	#9	16'-3"	—

Bar	A	B
P1	12'-0"	5'-1"
P2	13'-2"	3'-1"
h1	5'-0"	1'-2"

Class X Concrete	Cu. Yd.	#
Reinforcement Bars	Pound	12,780
Caisson Shell 36"	Cu. Ft.	911
Caisson Balls	Cu. Ft.	490



SHEET ENT 12: OF 18

**REVISIONS**

Name	Date
Revision	3-11-87
Revision	4-22-87

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1985-080 R COOK COUNTY  
ROADWAY GRADING AND PAVING  
TAYLOR ST. ENTRANCE RAMP OVER N.B. COLL. DIST.  
BENT 1 AND BENT 2  
Scale: \_\_\_\_\_  
Date: 7-16-87  
Drawn By: DC  
Checked By: ww  
ENVIRONMENTAL ENGINEERS INC.  
Chicago, Illinois

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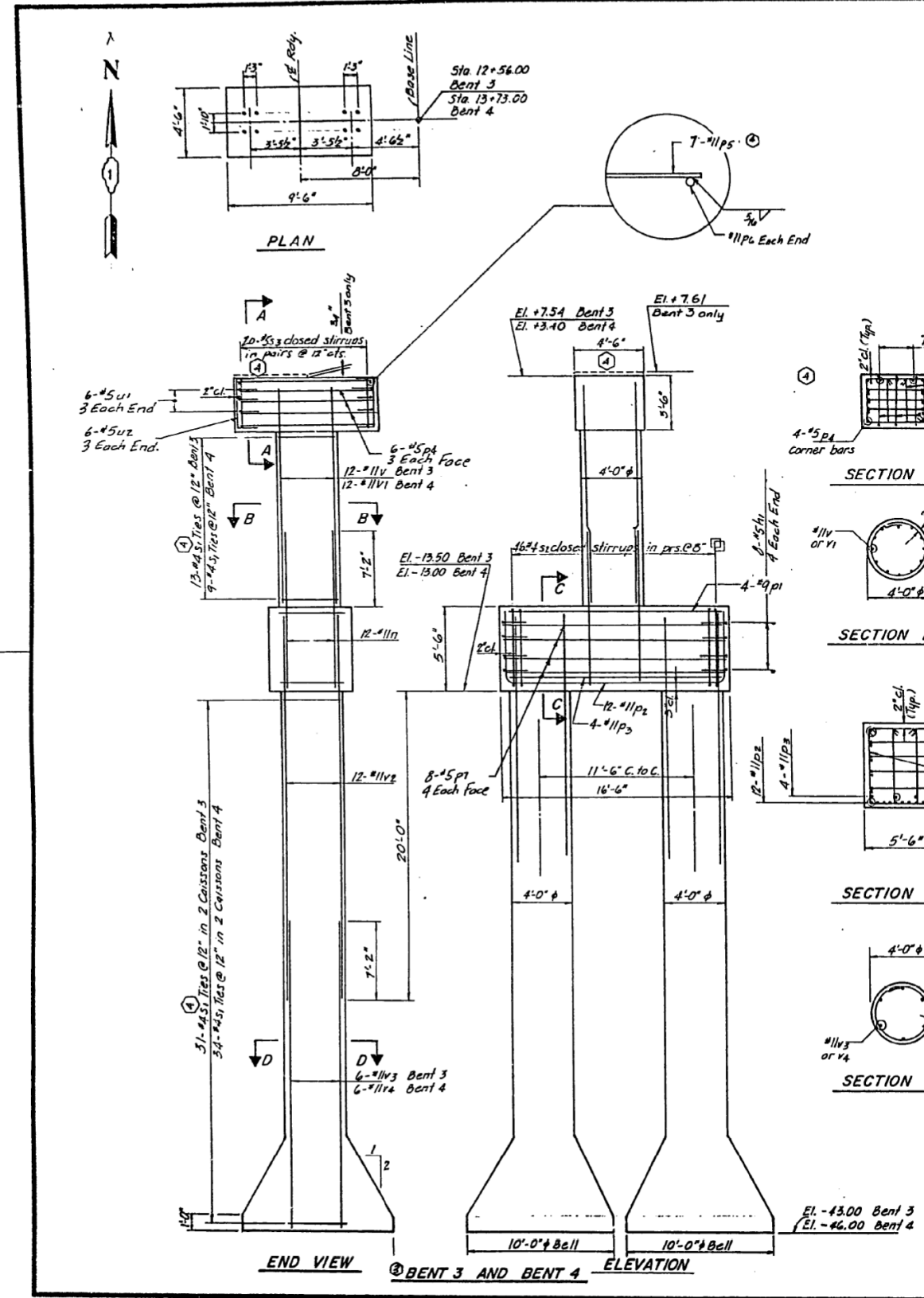
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CHECKED - DBM  
DATE - 10/24/2014

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING TAYLOR STREET ENTRANCE RAMP  
BRIDGE PLANS (FOR INFORMATION ONLY)  
SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-077R	COOK	385	287
CONTRACT NO. 60X61				
ILLINOIS FED. AID PROJECT				



Bar	A	B
h1	5'-0"	1'-6"
p3	16'-2"	5'-1"
u1	4'-2"	1'-0"
u2	3'-3"	1'-6"

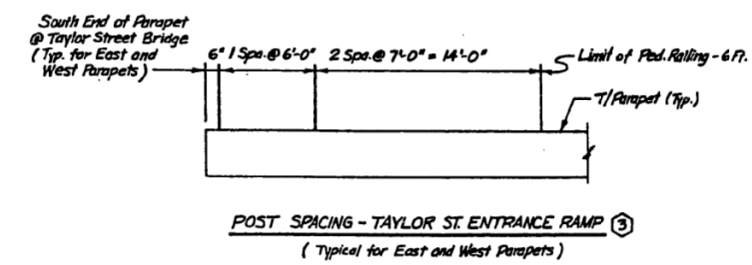
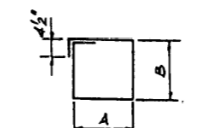
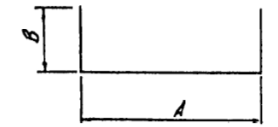
SECTION	COUNTY	NO. OF SHEETS	SHEET NO.
90/94	COOK	79	82

1985-080 R

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h1	16	#3	8'-0"	L
n	24	#11	12'-8"	—
P1	8	#9	16'-3"	—
P2	28	#11	26'-8"	L
P3	8	#11	16'-3"	—
P4	10	#5	9'-3"	—
P5	14	#11	9'-3"	—
P6	2	#11	2'-0"	—
P7	16	#5	16'-3"	—
S1	152	#4	12'-11"	O
S2	92	#4	17'-11"	O
S3	40	#5	12'-2"	O
u1	12	#5	7'-2"	L
u2	12	#5	6'-3"	L
V	12	#11	15'-4"	—
V1	12	#11	10'-8"	—
V2	48	#11	25'-3"	—
V3	12	#11	16'-8"	—
V4	12	#11	20'-2"	—

Bar	A	B
S1	3'-6"	5'-1"
S3	2'-5"	3'-2"



SHEET ENT. 13 OF 18

**REVISIONS**

Name	Date
Revision	3-11-88
Revision	4-23-88

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1985-080 R COOK COUNTY  
ROADWAY GRADING AND PAVING  
TAYLOR ST. ENTRANCE RAMP OVER N.B. COLL. DIST.  
BENT 3 AND BENT 4

Scale: 1" = 10'-0"  
Date: 7-16-87

Drawn By: DC  
Checked By: WW

ENVIRONMENTAL ENGINEERS INC.  
Chicago, Illinois

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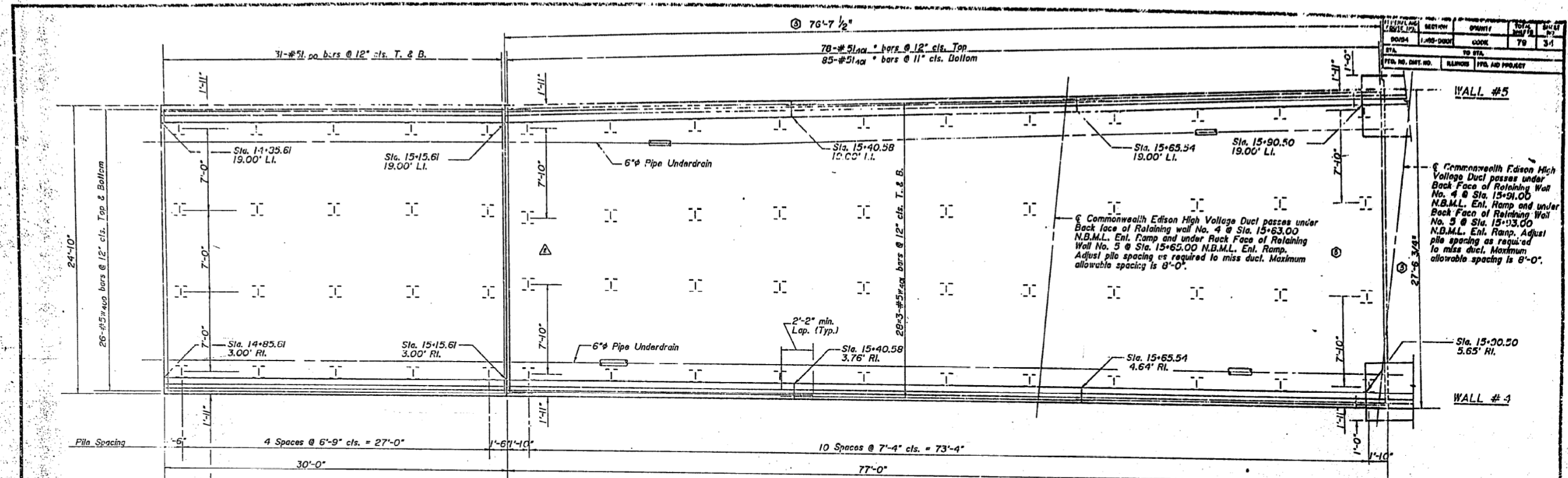
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DEPARTMENT OF TRANSPORTATION

EXISTING TAYLOR STREET ENTRANCE RAMP  
BRIDGE PLANS (FOR INFORMATION ONLY)

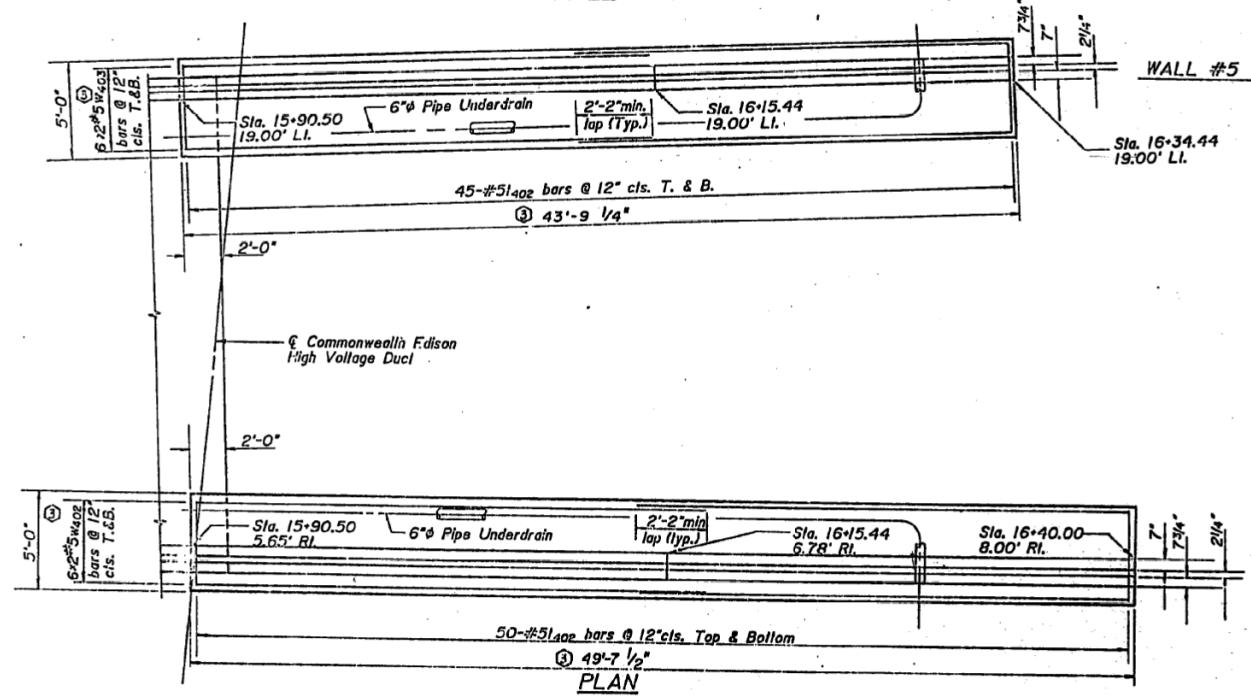
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F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-077R	COOK	385	288

CONTRACT NO. 60X61  
ILLINOIS FED. AID PROJECT



PLAN



PLAN

SECTION	QUANTITY	TOTAL	UNIT
DOOR	1	1	EA
COOK	79	79	EA

STA.	TO STA.	PRO. NO.	PRO. AND PROJECT

**WALL #5**

Commonwealth Edison High Voltage Duct passes under Back Face of Retaining Wall No. 4 @ Sta. 15+91.00 N.B.M.L. Ent. Ramp and under Back Face of Retaining Wall No. 5 @ Sta. 15+93.00 N.B.M.L. Ent. Ramp. Adjust pile spacing as required to miss duct. Maximum allowable spacing is 8'-0".

**WALL #4**

Sta. 15+90.50 5.65' RI.

**PILE DATA**

Type: Steel HP 12x33  
 Capacity: 33 Ton Drive to 50 Ton Bearing (S)  
 Est. Length: 33 Ft.  
 Number Required: 63 Plus 1 Test Pile

Maximum Calculated Soil Pressure Under Spread Footings = 1,450 psf

For Notes, see Sheet ENT 16



SHEET ENT 15 OF 18

REVISIONS	DATE
3 Revision	3-11-88

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 20194 (DAN RYAN EXPRESSWAY)  
 SECTION 1985-030R COOK COUNTY  
 ROADWAY GRADING AND PAVING  
 TAYLOR ST. ENTRANCE RAMP OVER N.B. COLL. DIST.  
 RETAINING WALL Nos. 4 & 5  
 PLAN

Scale: NONE  
 Date: 8-14-87  
 Drawn By: P.V.V.  
 Checked By: G.S.P.  
 ENVIRONMENTAL ENGINEERS INC.  
 Chicago, Illinois

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DATE - 10/24/2014	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

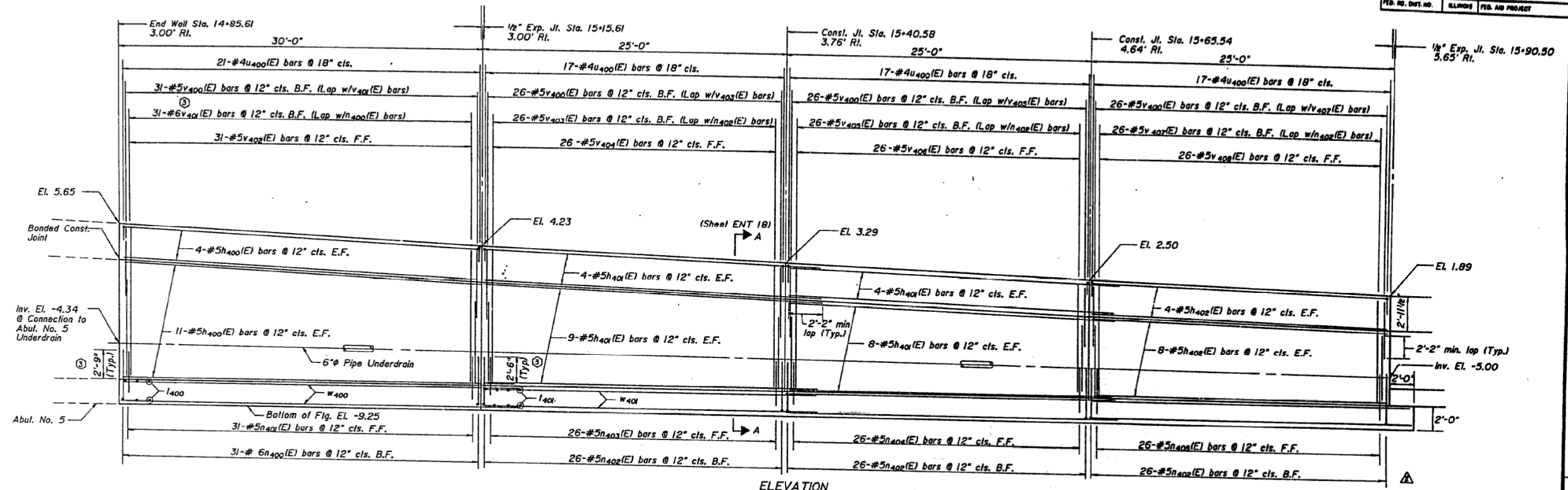
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 BRIDGE PLANS (FOR INFORMATION ONLY)

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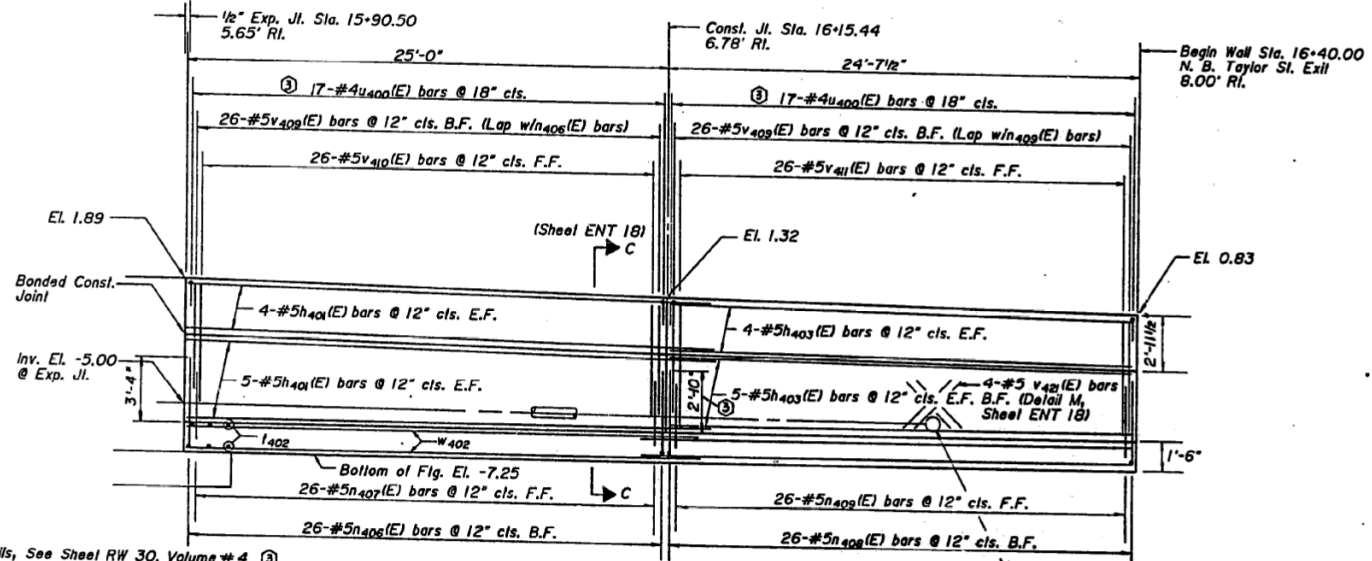
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-077R	COOK	385	289

CONTRACT NO. 60X61  
 ILLINOIS FED. AID PROJECT

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	1985-0808	COOK	79	38
STA.	TO STA.	PROJECT		
15+00	15+50	EXISTING TAYLOR STREET ENTRANCE RAMP BRIDGE PLANS (FOR INFORMATION ONLY)		



ELEVATION



ELEVATION

- NOTES:**
1. For joint details, architectural finish details and elevations, underdrains and backfill details, See Sheet RW 30, Volume # 4
  2. Refer to Alignment and Ties sheet for horizontal Alignment.
  3. All longitudinal dimensions shown are measured along the Back Face of the wall.
  4. Bars indicated thus: 20-3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
  5. Bars designated (E) shall be Epoxy Coated.
  6. For General Plan, see Sheet GEN 3, Vol. No. 4
  7. For General Elevation, see Sheet GEN 4, Vol. No. 4

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

SHEET ENT 16 OF 18

REVISIONS	
Name	Date
① RWS/ST	5-11-88
② RWS/ST	4-22-88

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1985-0808 COOK COUNTY  
ROADWAY GRADING AND PAVING  
TAYLOR ST. ENTRANCE RAMP OVER N.B. COLL. DIST.  
RETAINING WALL No. 4  
ELEVATION

Scale: NONE  
Date: 8-14-87

Drawn By: Pvy  
Checked By: GSP

ENVIRODYNE ENGINEERS INC.  
Chicago, Illinois

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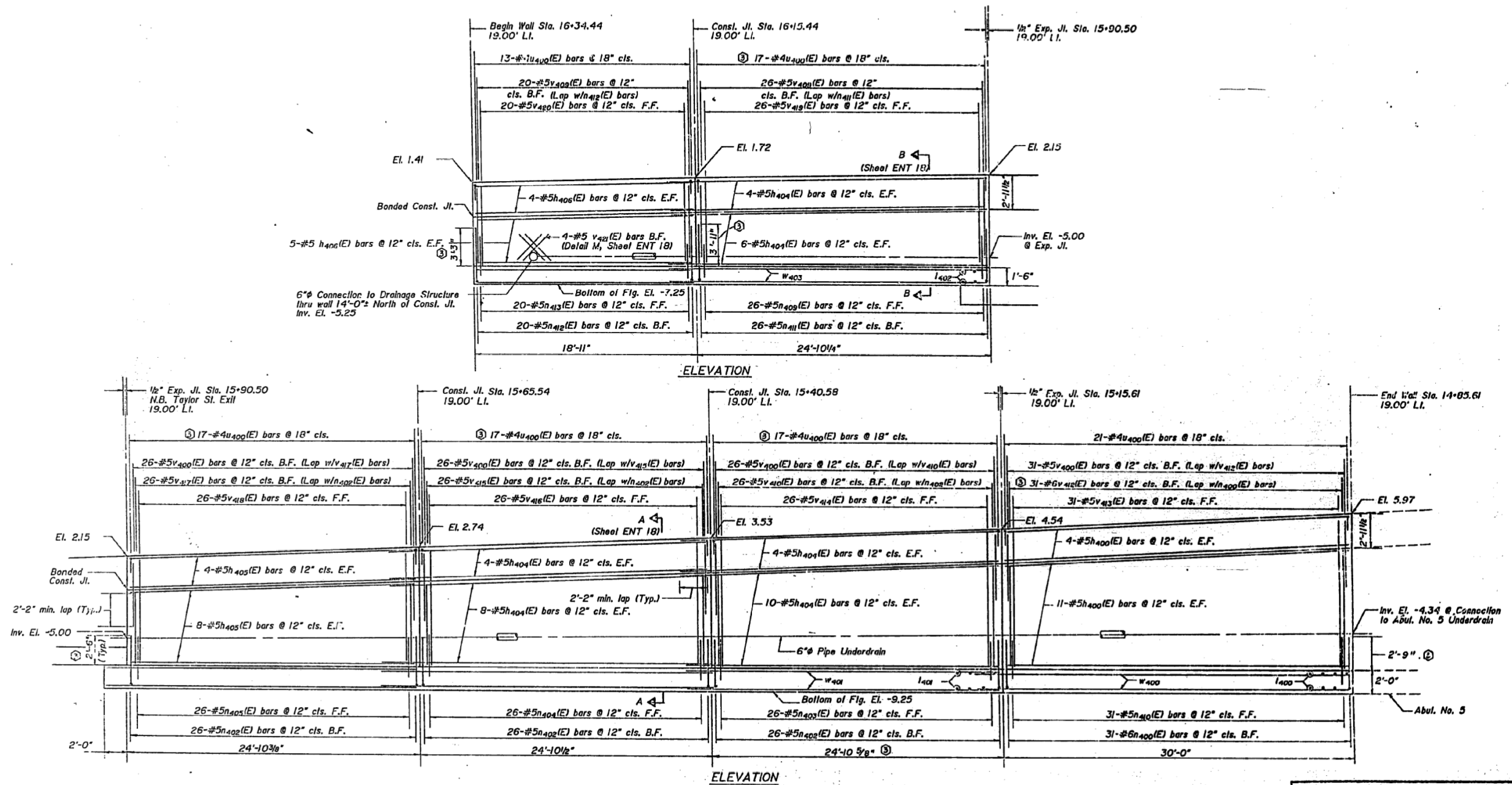
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING TAYLOR STREET ENTRANCE RAMP  
BRIDGE PLANS (FOR INFORMATION ONLY)

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-077R	COOK	385	290
CONTRACT NO. 60X61				
ILLINOIS FED. AID PROJECT				

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1905-0808	COOK	79	50
PROJECT		CONTRACT NO.	
TAYLOR ST. ENTRANCE RAMP OVER N.S. COLL. DIST. RETAINING WALL No. 5		60X61	



B.F. = Back Face  
 F.F. = Front Face  
 E.F. = Each Face  
 See notes on Sheet ENT 16.

SHEET ENT 17 OF 18

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
 SECTION 1905-0808 COOK COUNTY  
 ROADWAY GRADING AND PAVING  
 TAYLOR ST. ENTRANCE RAMP OVER N.S. COLL. DIST.  
 RETAINING WALL No. 5  
 ELEVATION

Scale: NONE  
 Date: 8-14-87  
 Drawn By: PVV  
 Checked By: GSP

ENVIRONMENTAL ENGINEERS INC.  
 Chicago, Illinois

REVISIONS	Name	Date
1	Revision	3-11-88

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 CHECKED - DBM  
 DATE - 10/24/2014

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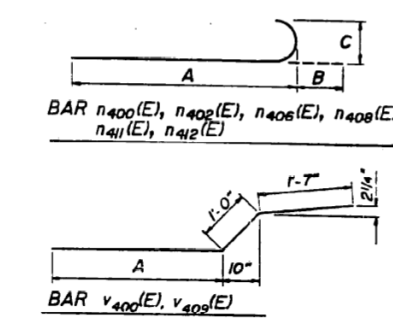
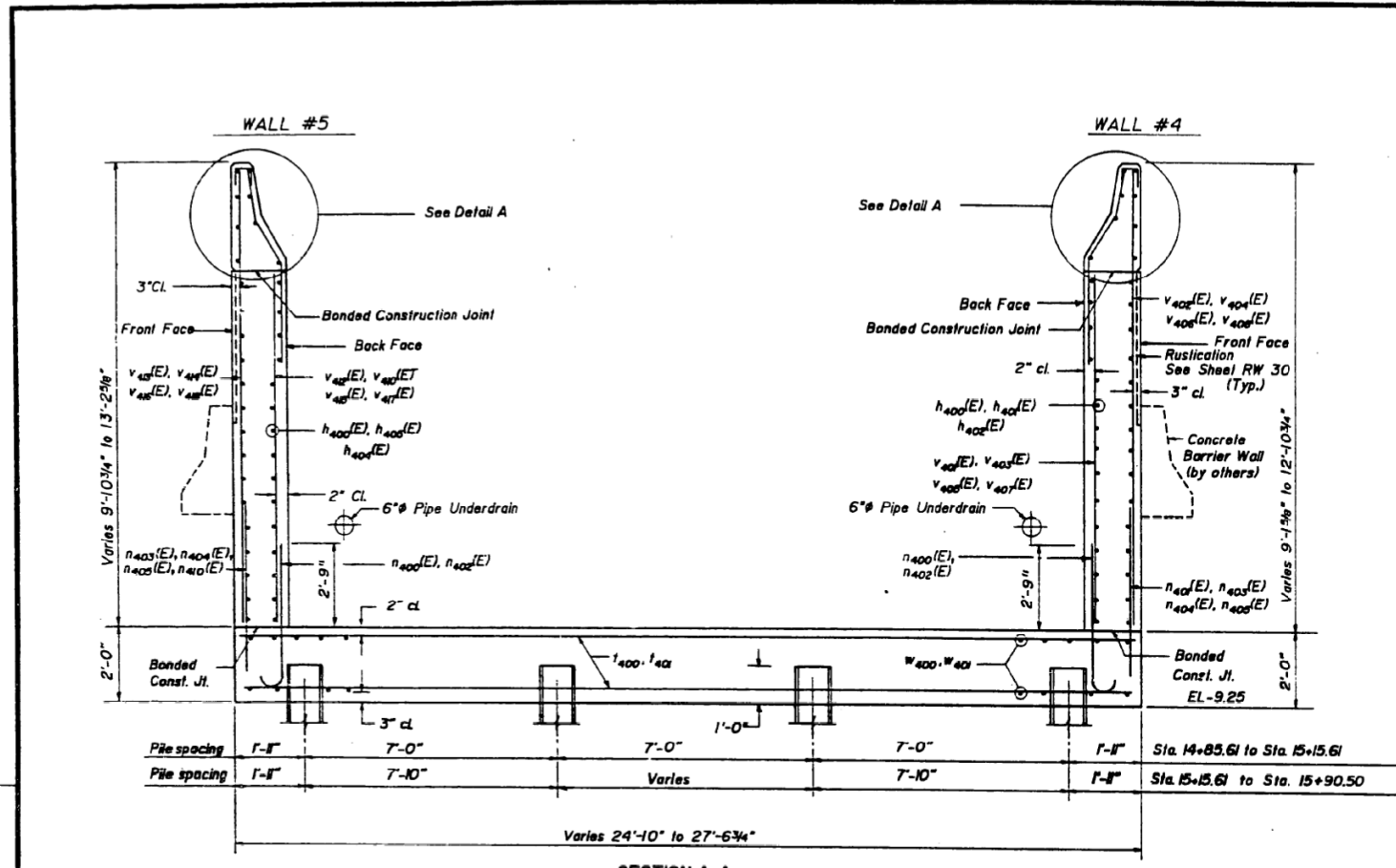
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING TAYLOR STREET ENTRANCE RAMP  
 BRIDGE PLANS (FOR INFORMATION ONLY)

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-077R	COOK	385	291
CONTRACT NO. 60X61				ILLINOIS FED. AID PROJECT

FEDERAL AID DISTRICT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/34	1885-CR08	COOK	79	37
STA.	TO STA.			
FED. PROJ. NO.	ILLINOIS	FED. AID PROJECT		

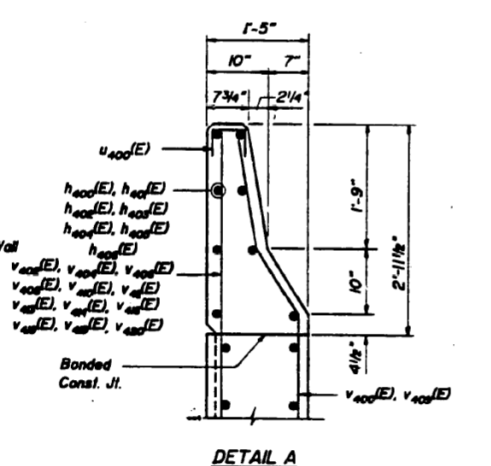
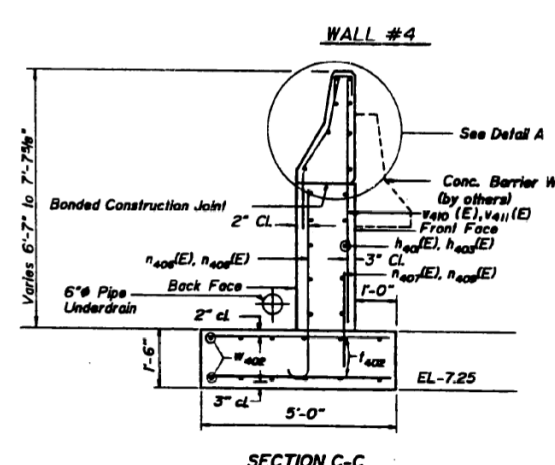
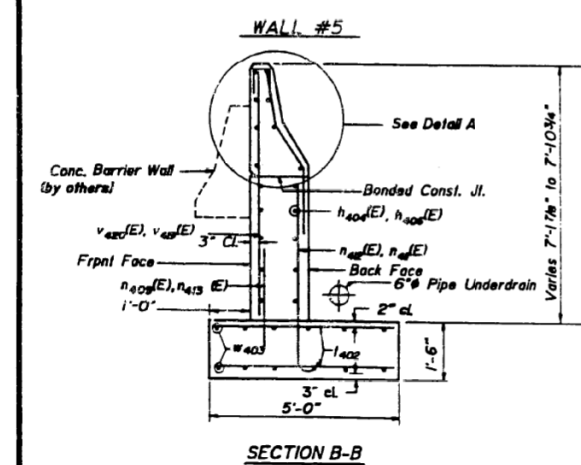


RETAINING WALL NOS. 4 & 5 BILL OF MATERIAL

Bar No.	Size	Length	Shape	Bar No.	Size	Length	Shape
n400(E)	#6	51'-2"		v402(E)	#5	11'-1"	
n402(E)	#5	3'-1"		v403(E)	#5	6'-7"	
n406(E)	#5	4'-10"		v404(E)	#5	10'-2"	
n411(E)	#5	3'-5"		v405(E)	#5	5'-7"	
n412(E)	#5	3'-5"		v406(E)	#5	9'-5"	
u400(E)	#5	3'-3"		v407(E)	#5	4'-10"	
u400(E)	#5	3'-3"		v408(E)	#5	8'-9"	
u400(E)	#5	5'-3"		v409(E)	#5	6'-5"	
u400(E)	#5	2'-9"		v410(E)	#5	6'-9"	
u400(E)	#5	2'-9"		v411(E)	#5	6'-3"	
u400(E)	#5	4'-8"		v412(E)	#5	8'-5"	
u400(E)	#5	2'-8"		v413(E)	#5	8'-5"	
u400(E)	#5	4'-0"		v414(E)	#5	5'-0"	
u400(E)	#5	5'-9"		v415(E)	#5	9'-0"	
u400(E)	#5	5'-2"		v416(E)	#5	7'-1"	
u400(E)	#5	2'-6"		v417(E)	#5	6'-10"	
u400(E)	#5	2'-6"		v418(E)	#5	3'-0"	
u400(E)	#5	24'-6"		w401	#5	32'-2"	
u400(E)	#5	27'-4"		w402	#5	27'-0"	
u400(E)	#5	4'-8"		w403	#5	25'-9"	
u400(E)	#4	2'-10"		w404	#5	22'-10"	
v400(E)	#8	6'-10"					
v402(E)	#6	8'-3"					

Item	Unit	Quantity
Structure Excavation	Sq. Ft.	1,258
Class X Concrete	Cu. Yd.	409.2
Reinforcement Bars	Lbs.	14,850
Reinforcement Bars Epoxy Coated	Lbs.	17,790
Steel Piles (HP 12x53)	Ln. Ft.	2,394
Test Pile (HP 12x53)	Each	1
Protective Coat	Sq. Yd.	112.7
Pipe Underdrain 6"	Ln. Ft.	280
Geocomposite Wall Drain	Sq. Yd.	195
Driving Steel Piles	Ln.Ft.	2,394



Bar	A	B	C
n400(E)	4'-6"	8"	6"
n402(E)	4'-3"	7"	5"
n406(E)	4'-7"	7"	5"
n411(E)	4'-1"	7"	5"
n412(E)	5'-2"	7"	5"
u400(E)	4'-6"	7"	5"
v400(E)	4'-3"		
v402(E)	3'-10"		

SHEET ENT 18 OF 18

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/34 (DAN RYAN EXPRESSWAY)  
SECTION 1885-CR08 COOK COUNTY  
ROADWAY GRADING AND PAVING  
TAYLOR ST. ENTRANCE RAMP OVER N.B. COLL. DIST.  
RETAINING WALL NOS. 4 & 5  
SECTIONS & BILL OF MATERIALS

Scale: NONE  
Date: 8-14-87  
Drawn By: PVV  
Checked By: GSP

ENVIRODYNE ENGINEERS INC.  
Chicago, Illinois

REVISIONS

Name	Date

Revision - Nov. 23, 1987

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING TAYLOR STREET ENTRANCE RAMP  
BRIDGE PLANS (FOR INFORMATION ONLY)

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

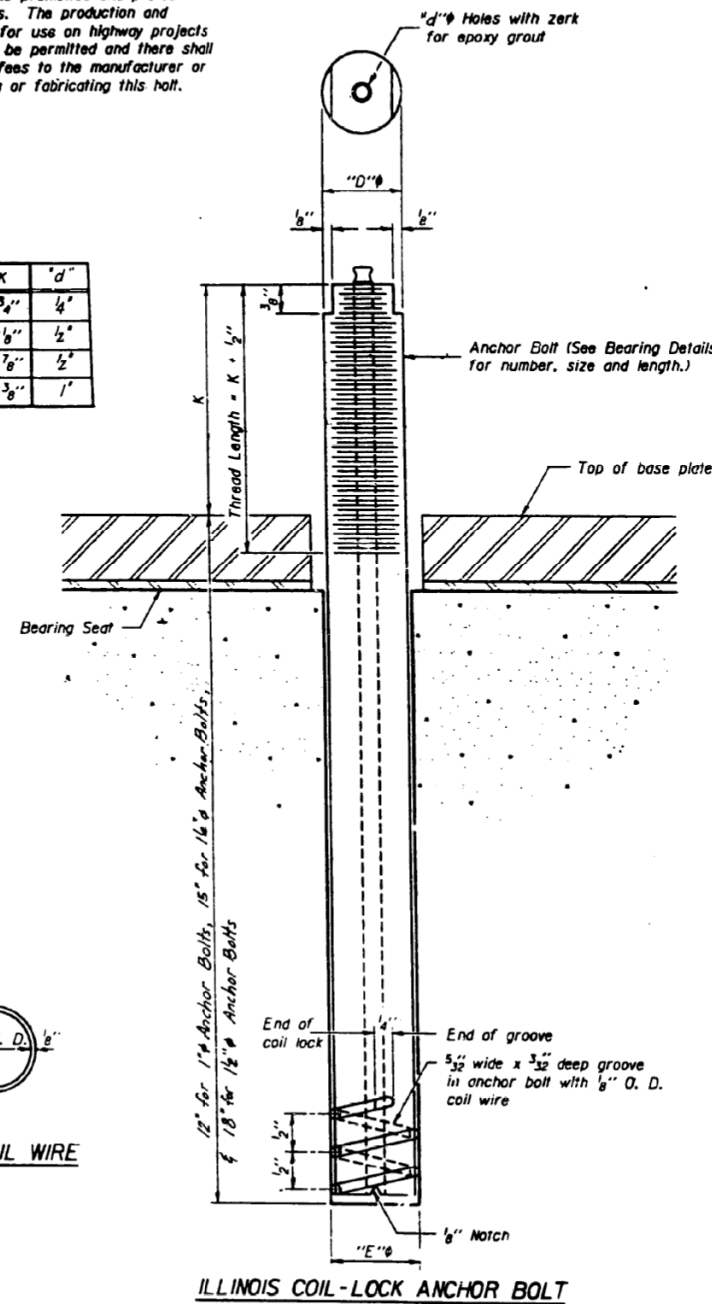
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-07TR	COOK	385	292
				CONTRACT NO. 60X61
ILLINOIS FED. AID PROJECT				

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.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

FEDERAL AID DISTRICT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2	COOK	79	74
STA.	TO STA.			
FED. AID DIST. NO.	ILLINOIS	FED. AID PROJECT		
* 1985-080 R				

D	E	H	K	"d"
1"	1 1/8"	1 1/4"	1 3/4"	1/4"
1 1/2"	1 5/8"	1 5/8"	2 1/8"	1/2"
2"	2 1/8"	1 3/8"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/8"	3 3/8"	1"



**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 A515, Grade K25 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 C881, Type I, Grade I 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.

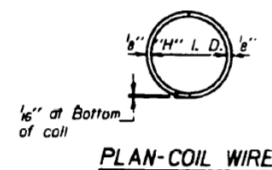
**ALTERNATE ANCHOR BOLTS**

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 in accordance with 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 conforming to ASTM A307. (Unless Noted)  
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

**GENERAL NOTES**

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or in accordance with 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 dirt 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 each for "Expansion and Fixed Bearings".  
Anchor bolt as shown on this drawing to be used at all locations, unless shown otherwise.

Anchor bolts, nuts and washers shall be completely coated by either the hot-dipped process conforming with AASHTO M232 or the mechanical plating method conforming to ASTM B495, Class 50. Zinc Coated nuts shall be tapered oversize in accordance with the requirements of AASHTO M291 and shall meet the supplementary requirements S1.1 thru S1.21 of the same specification for lubricant and testing.



SHEET NO. 1 OF 6

REVISIONS	
Name	Date

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1985-080 R - COOK COUNTY  
ROADWAY GRADING AND PAVING  
MISCELLANEOUS DETAILS - ALL STRUCTURES  
ANCHOR BOLT DETAILS  
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Date: AUGUST 14, 1987  
Checked By: WPK  
DRAWN BY: REP  
EVERDYNE ENGINEERS INC.  
Chicago, Illinois

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CHECKED - DBM  
DATE - 10/24/2014

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING TAYLOR STREET ENTRANCE RAMP  
BRIDGE PLANS (FOR INFORMATION ONLY)  
SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-077R	COOK	385	293
CONTRACT NO. 60X61				
ILLINOIS FED. AID PROJECT				



JOINT SIZE	"C" AT 50°F	"D" AT 50°F
2"	2"	1 1/2" MIN.
2 1/2"	2 1/2"	1 3/4" MIN.
4"	3"	2 1/2" MIN.

**INSTALLATION NOTES**

USE ANCHOR BLOCKS AND CONTINUOUS SEAL AS ANCHOR BOLT LOCATION TEMPLATES.

- INSTALL SPONGE MANDRELS INTO POSITIONS SHOWN TO FORM FLAP CONVOLUTION.
- INSTALL PARAPET OR SIDEWALK PIECE (TRIM ROADWAY FLAP TO FIT BEFORE APPLYING EPOXY).
- INSTALL CONTINUOUS SEAL IN ROADWAY.
- INSTALL ANCHOR BLOCKS AS INDICATED.

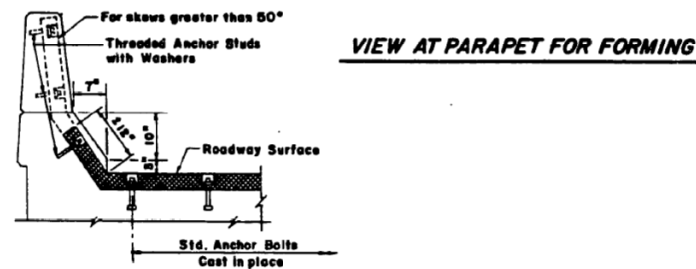
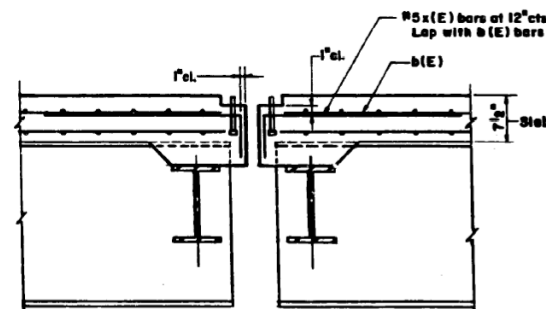
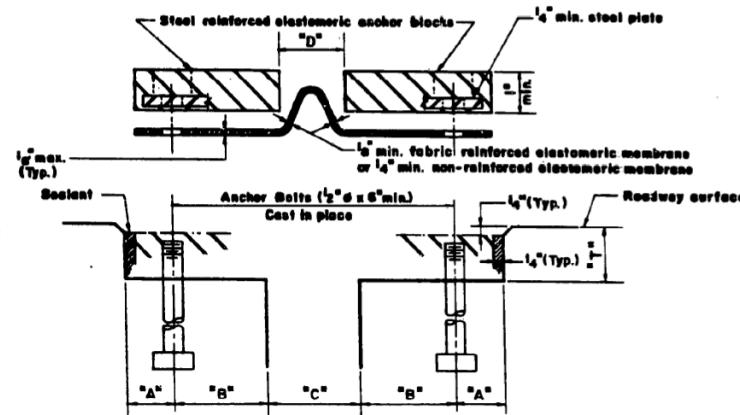
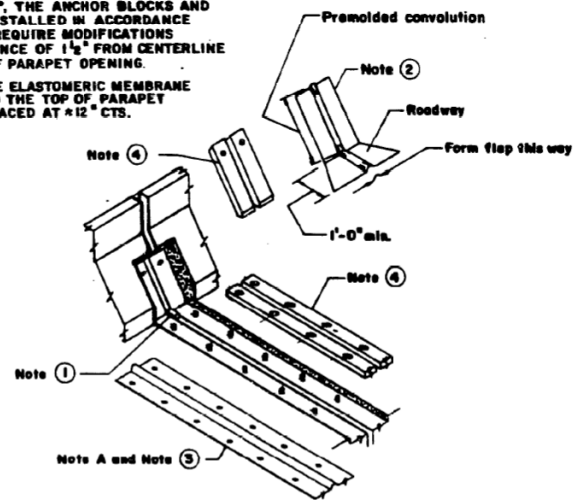
NOTE A: MAXIMUM SPACING OF ANCHOR BOLTS SHALL BE 12" CENTERS.

**SKEW LIMITATIONS**

THE DETAILS OF THE ANCHOR BLOCKS AND THE ELASTOMERIC MEMBRANE IN THE PARAPET, AS SHOWN, ARE FOR UP TO 50° SKEWS.

FOR SKEWS GREATER THAN 50°, THE ANCHOR BLOCKS AND ELASTOMERIC MEMBRANE, INSTALLED IN ACCORDANCE WITH DIMENSION "D" MIGHT REQUIRE MODIFICATIONS TO INSURE A MINIMUM CLEARANCE OF 1 1/2" FROM CENTERLINE OF ANCHOR STUDS TO EDGE OF PARAPET OPENING.

THE ANCHOR BLOCKS AND THE ELASTOMERIC MEMBRANE SHALL ALSO BE INSTALLED TO THE TOP OF PARAPET WITH THE ANCHOR STUDS SPACED AT #12" CTS.



**TYPICAL END TREATMENT**

**GENERAL NOTES**

CONTINUOUS SEAL NEOPRENE EXPANSION JOINT SHALL CONSIST OF MOLDED ANCHOR BLOCKS OF ELASTOMER AND STEEL, HELD ASSEMBLED OVER CONTINUOUS LENGTHS OF ELASTOMERIC MEMBRANE. SEE SPECIAL PROVISIONS.

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 STEEL REINFORCEMENT MUST EXTEND UP THE BACK FACE OF ANCHOR BLOCKS WHEN ASPHALT SURFACES ARE USED BUT IS OPTIONAL IN CONCRETE BLOCKOUT.

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 IN ACCORDANCE WITH ARTICLE 603.07(c) OF THE STANDARD SPECIFICATIONS WHEN THE DECK IS POURED AT AN AMBIENT TEMPERATURE OTHER THAN 50°F.

THE PARAPET FLAPS MAY BE FURNISHED FACTORY VULCANIZED TO THE ROADWAY MEMBRANE PROVIDED THE CENTERLINE OF THE CONVOLUTION IS MAINTAINED AND THE PROCESS AND METHOD MEET THE APPROVAL OF THE ENGINEER.

ANCHOR BOLTS, WASHERS AND NUTS, TO BE PLATED AGAINST CORROSION IN ACCORDANCE WITH THE SPECIAL PROVISIONS, SHALL BE ZINC-COATED BY THE MECHANICAL PLATING METHOD CONFORMING TO ASTM B 695, CLASS 50. ZINC-COATED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO M291 AND SHALL MEET THE SUPPLEMENTARY REQUIREMENTS S1.1 THRU S1.2.1 OF THE SAME SPECIFICATIONS FOR LUBRICANT AND TESTING.

REVISION	SECTION	QUANTITY	TOTAL SHEETS	SHEET NO.
90/94	0	COOK	79	75

DATE: AUGUST 14, 1987  
 DRAWN BY: J.R.  
 CHECKED BY: M.M.  
 ENVIRONMENTAL ENGINEERS INC.  
 Chicago, Illinois

SHEET NO 2 OF 6

REVISIONS	
Name	Date

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
 SECTION 1985-080 R - COOK COUNTY  
 ROADWAY GRADING AND PAVING  
 MISCELLANEOUS DETAILS - ALL STRUCTURES  
 NEOPRENE EXPANSION JOINTS, 2", 2 1/2" & 4"  
 Scale: NONE  
 Date: AUGUST 14, 1987  
 Drawn By: J.R.  
 Checked By: M.M.  
 ENVIRONMENTAL ENGINEERS INC.  
 Chicago, Illinois

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D160W30-sht-AsBuilt-23.dgn  
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 PLOT SCALE = 2.0000' / 1"  
 PLOT DATE = 10/24/2014

DESIGNED - OPS  
 DRAWN - OPS  
 CHECKED - DBM  
 DATE - 10/24/2014

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 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

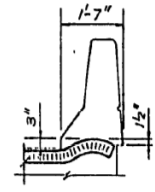
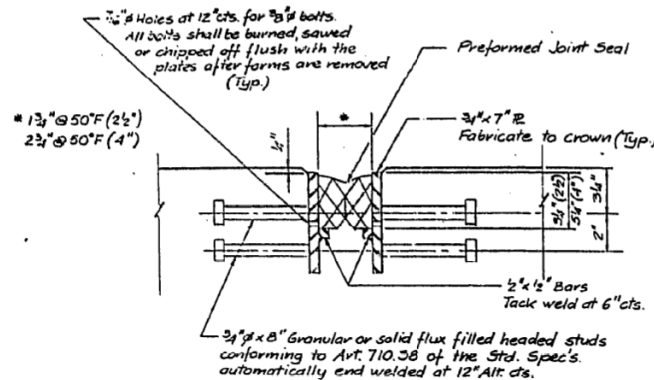
EXISTING TAYLOR STREET ENTRANCE RAMP  
 BRIDGE PLANS (FOR INFORMATION ONLY)

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-077R	COOK	385	294

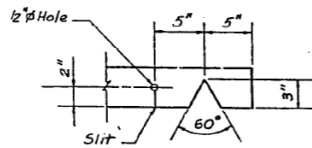
CONTRACT NO. 60X61  
 ILLINOIS FED. AID PROJECT

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80/94	8	COOK	79	78
STA.	TO STA.			
FED. RD. DIST. NO.	ILLINOIS	FED. AID PROJECT		
* 1085-080 R				

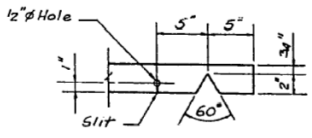


TYPICAL END OF SEAL TREATMENT

TYPICAL CROSS SECTION



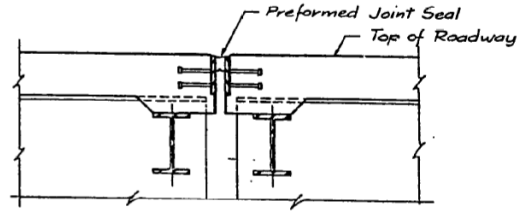
SEAL CUT-OUT (4")



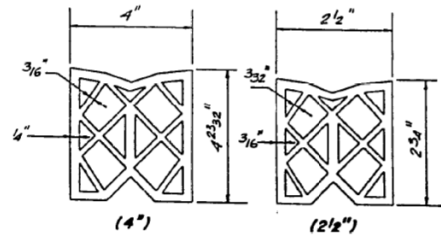
SEAL CUT-OUT (2 1/2")

Note:  
Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50°F.

⊙ Section Deleted



SECTION AT PREFORMED SEAL JOINT



PREFORMED JOINT SEAL

SHEET NO 3 OF 8

REVISIONS	
Name	Date
Revision	4-22-88

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1985-080 R - COOK COUNTY  
ROADWAY GRAVING AND PAVING  
MISCELLANEOUS DETAILS - ALL STRUCTURES  
PREFORMED JOINT SEAL 2 1/2" & 4"

Scale: NONE  
Date: AUGUST 14, 1987

Drawn By: J.R.  
Checked By: M.M.

ENVIRONMENTAL ENGINEERS INC.  
Chicago, Illinois

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D160W30-sht-AsBuilt-24.dgn  
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PLOT DATE = 10/24/2014

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CHECKED - DBM  
DATE - 10/24/2014

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REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING TAYLOR STREET ENTRANCE RAMP  
BRIDGE PLANS (FOR INFORMATION ONLY)

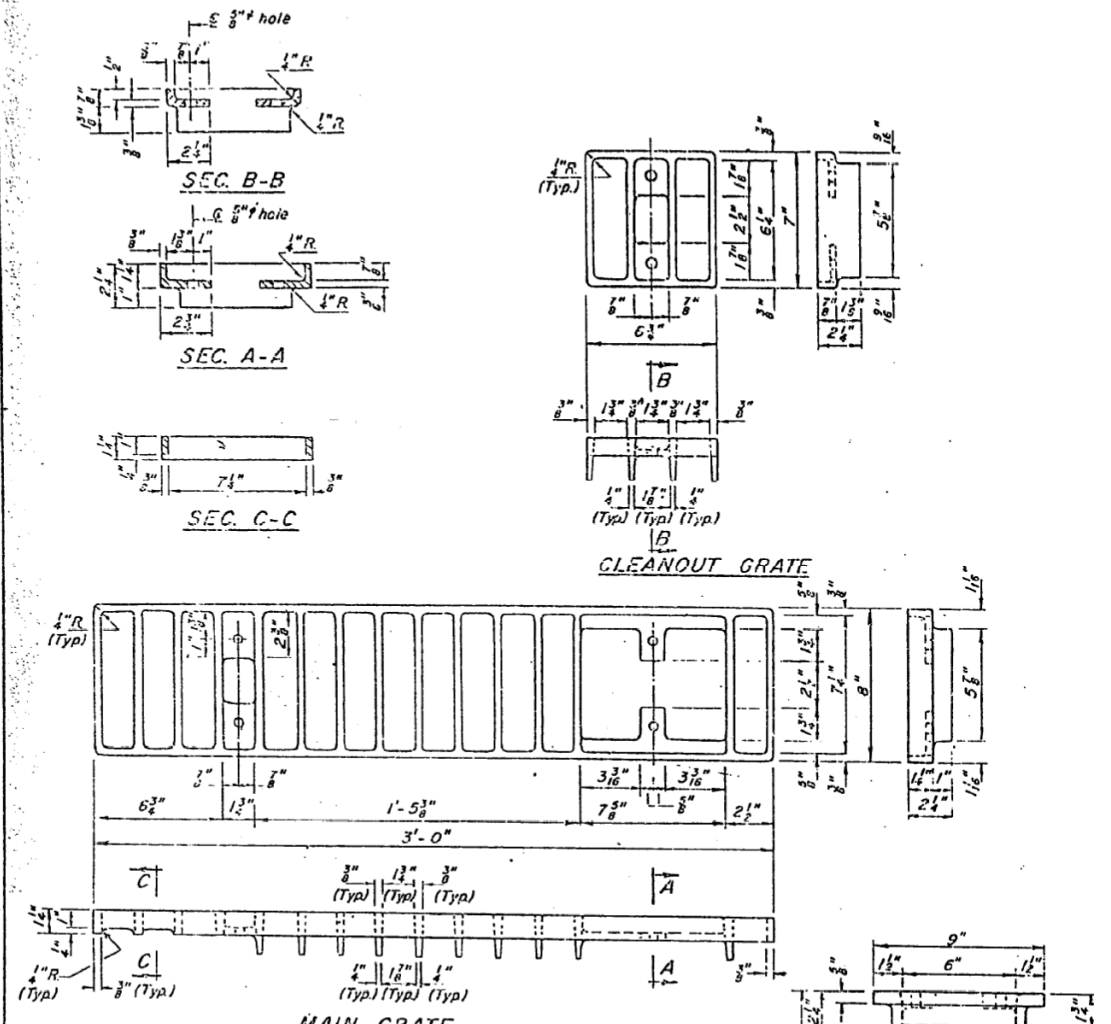
SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

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90/94/290	2013-077R	COOK	385	295
CONTRACT NO. 60X61				
ILLINOIS FED. AID PROJECT				

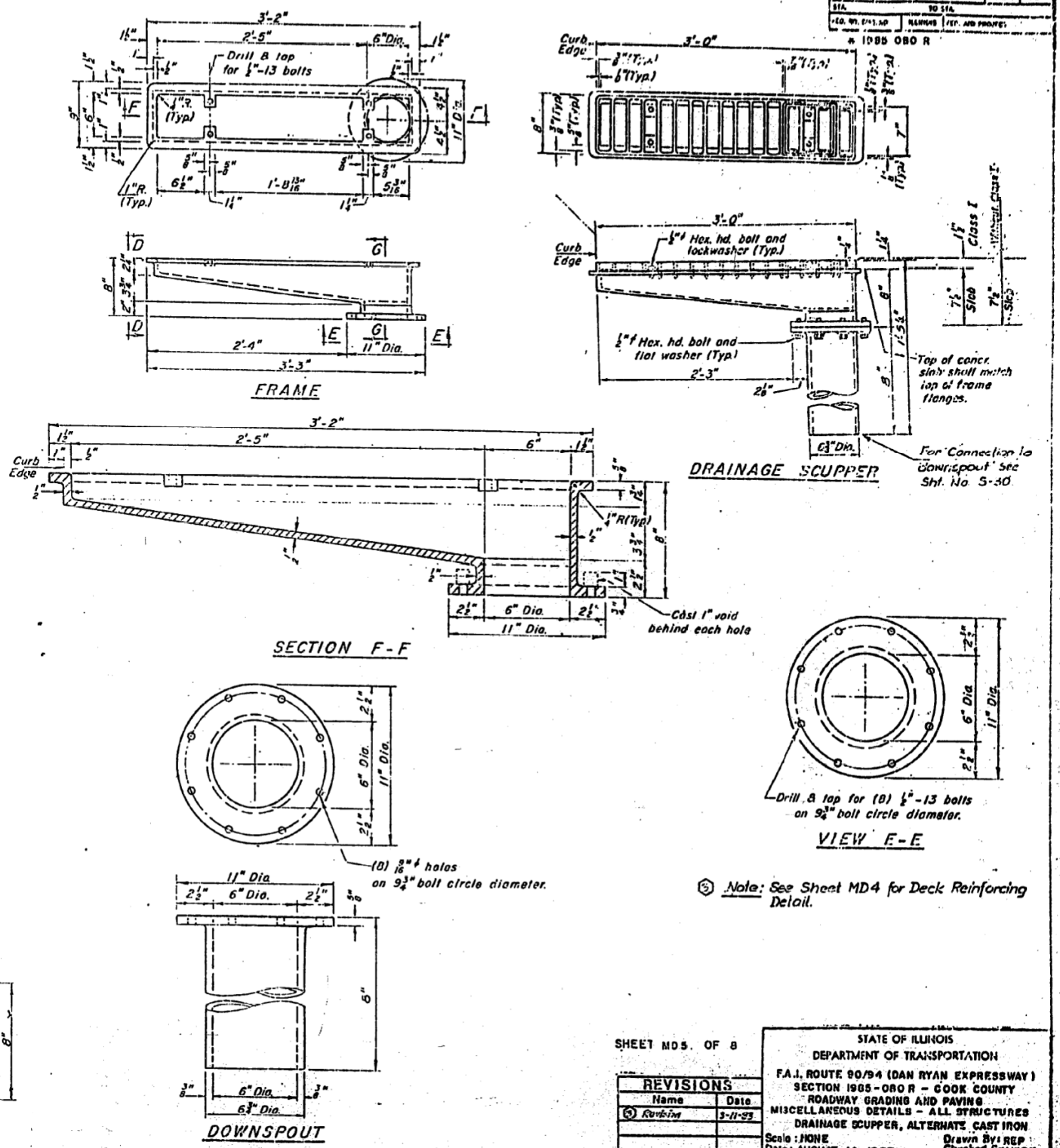


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-90/94		COOK	76	78
STA.	TO STA.	ALIGNED (REF. AND PROPOSED)		
10+00.00 TO 10+15.00		* 1000 OBO R		



**NOTES:**  
 All cast iron parts shall be gray iron conforming to the requirements of AASHTO M105, Class 30.  
 Bolts, washers and nuts shall conform to the requirements of ASTM A-307.  
 All bolts, washers and nuts shall be galvanized in accordance with AASHTO M 232.  
 The waterproofing membrane system shall be installed such that the membrane covers the frame flanges and extends down into the frame with the grates placed on top of the membrane.  
 Cast of the Main Grate, Cleanout Grate, Frame, Downspout, Bolts, Washers and Nuts including complete installation of Scupper shall be paid for at the unit bid price for "DRAINAGE SCUPPERS".  
 The Contractor may use at his option steel frames and steel grates or cast frames and cast grates, but will not be allowed to use steel grates with cast frames nor cast grates with steel frames.



SHEET MD5 OF 8

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1905-OBO R - COOK COUNTY  
ROADWAY GRADING AND PAVING  
MISCELLANEOUS DETAILS - ALL STRUCTURES  
DRAINAGE SCUPPER, ALTERNATE CAST IRON

REVISIONS	
Name	Date
⑤ Runkin	3-11-93

Scale: NONE  
 Date: AUGUST 14, 1997  
 Drawn By: REP  
 Checked By: WPK  
 ENVIRONMENTAL ENGINEERS INC.  
 CHICAGO, ILLINOIS

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CHECKED - DBM	REVISED -
DATE - 10/24/2014	REVISED -

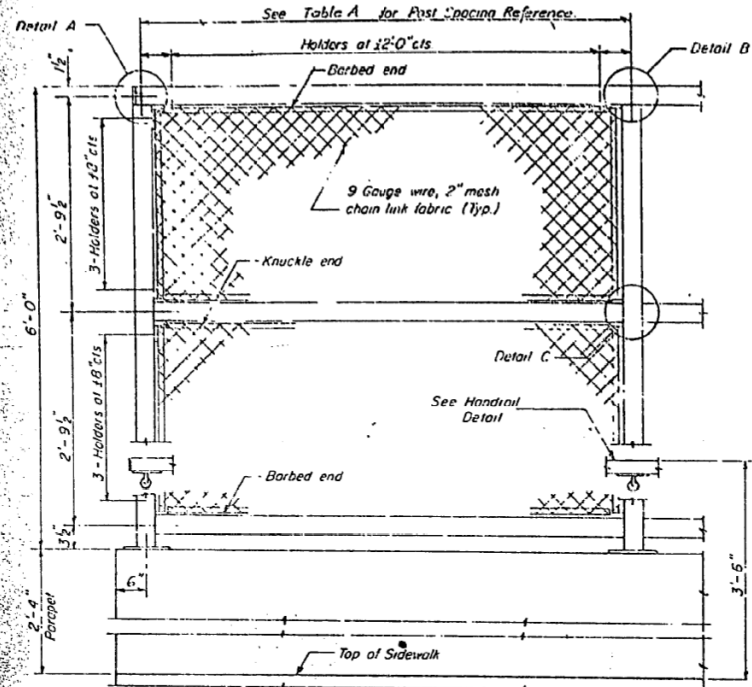
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING TAYLOR STREET ENTRANCE RAMP  
BRIDGE PLANS (FOR INFORMATION ONLY)  
 SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

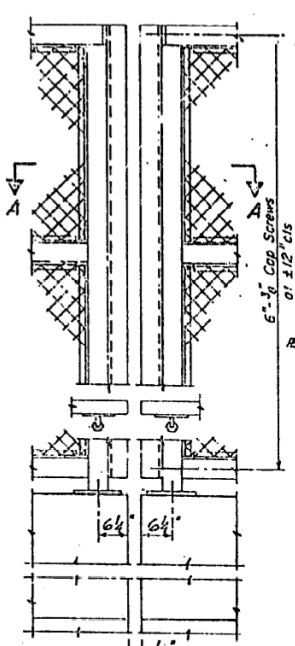
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-077R	COOK	385	297
CONTRACT NO. 60X61				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

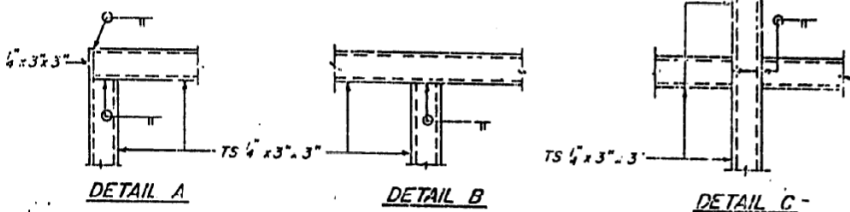
PROJECT NO.	SECTION	DATE	BY	CHKD
90/94	8	COOK	79	79
STA.	TO STA.			
174.100-100	11000	174.120 PROJECT		
1985-080 R				



ELEVATION  
(Inside Face)



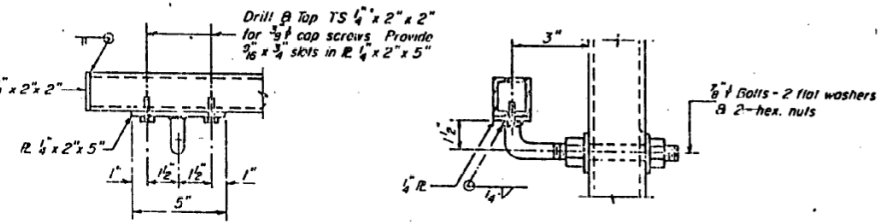
ELEVATION  
(At Expansion Joint)



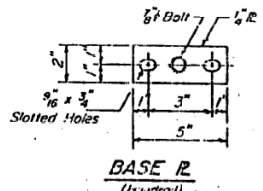
DETAIL A

DETAIL B

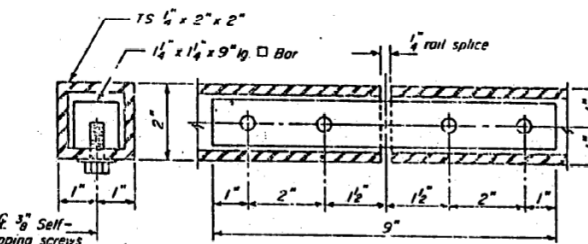
DETAIL C



HANDRAIL DETAIL



BASE R  
(Handrail)



HANDRAIL SPLICE

**NOTES**  
Railing shall be in accordance with Section 306 of the Standard Specifications, except as noted, and shall be paid for at the Contract Unit Price per linear foot for Pedestrian Railing. The 9 gauge fabric ties shall be in accordance with Article 710.33(1) of the Standard Specifications.

Installation of the chain link fabric shall be in accordance Section 629 of the Standard Specifications. Hollow structural steel tubing shall conform to the requirements of ASTM designation A 500, Grade B, structural steel tubing. All other steel shapes and plates shall conform to the requirements of AASHTO M183.

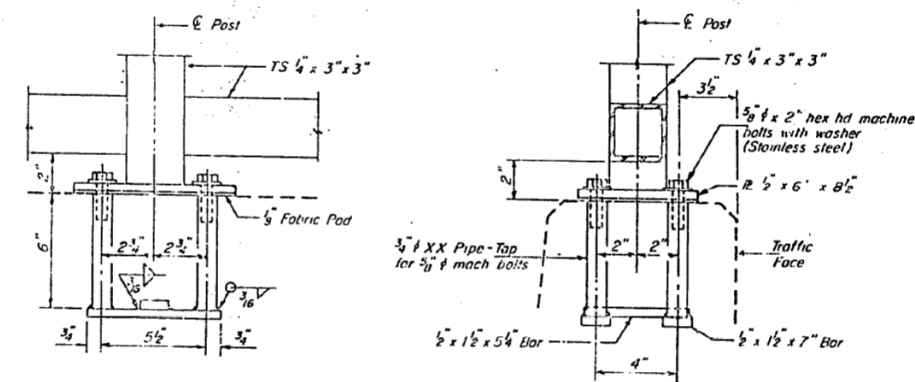
**Notes**  
All posts, railing, splices, anchor details and bent plates shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-305. All bolts, nuts and washers shall be galvanized in accordance with AASHTO M-232. Vent holes for galvanizing shall be placed in the posts and rails at locations that will not allow the accumulation of moisture in the members. The chain link fabric shall conform to the requirements of Article 710.33(1)(2)(a)(3) of the Std. Spec.

BILL OF MATERIAL

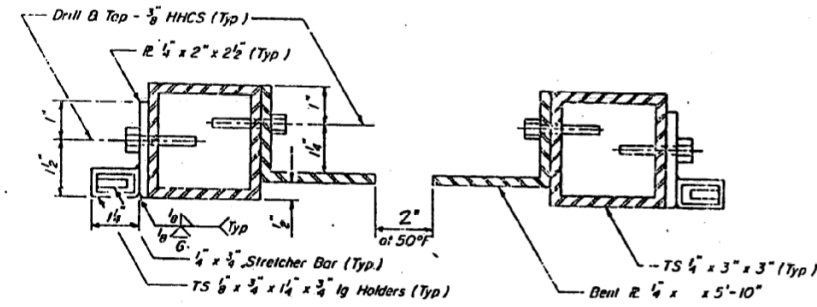
ITEM	UNIT	QUANTITY
Pedestrian Railing	L.F.	679

TABLE A - POST SPACING REFERENCE

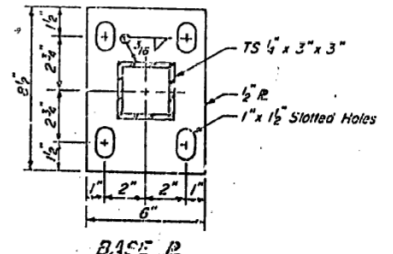
STRUCTURE	SEE SHEET No.
Taylor Street Entrance Ramp	ENT 13
Harrison Street over S.B. DAN RYAN EXP.	HAR-5B
Harrison Street over N.B. DAN RYAN EXP.	S-9 & S-15



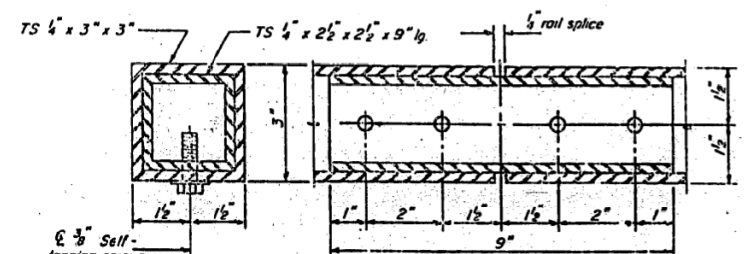
ANCHOR BOLT DETAILS



SECTION A-A



BASE R



RAIL SPLICE

SHEET MD 6 OF 8

REVISIONS	
Name	Date
(3) Revision	3-11-82

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1985-080 R - COOK COUNTY  
ROADWAY GRADING AND PAVING  
MISCELLANEOUS DETAILS - ALL STRUCTURES  
PEDESTRIAN RAILING - 6  
Scale: NONE  
Date: AUGUST 14, 1987  
Checked By: W P K  
DRAWN BY: REP  
ENVIROVITE ENGINEERS INC.  
Chicago, Illinois



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DATE - 10/24/2014	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

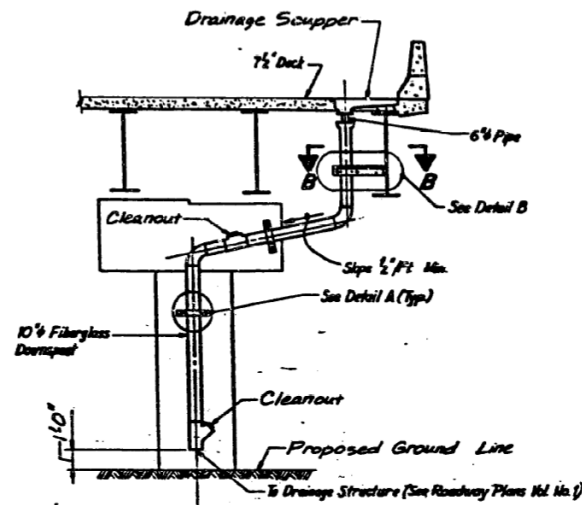
EXISTING TAYLOR STREET ENTRANCE RAMP  
BRIDGE PLANS (FOR INFORMATION ONLY)

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-07TR	COOK	385	298
CONTRACT NO. 60X61				
ILLINOIS FED. AID PROJECT				

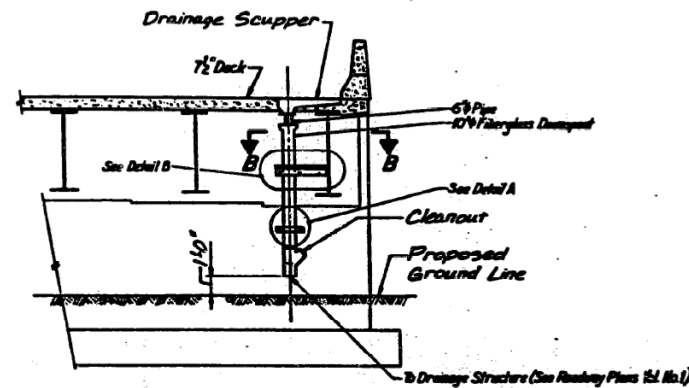
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NO.	DATE	BY	CHKD.	APP'D.
90/94	8	COOK	79	TBA
TO: EIT				
FOR: DIST. NO. 243888				
FOR: AID PROJECT				
SECTION 1986-080 R				



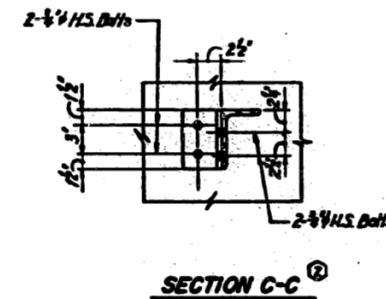
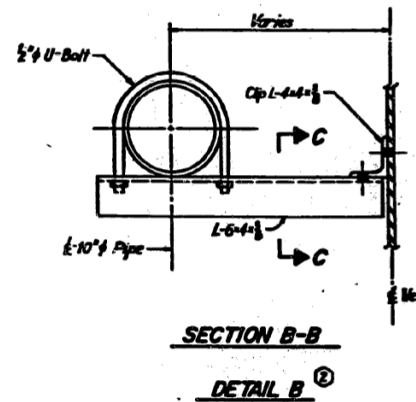
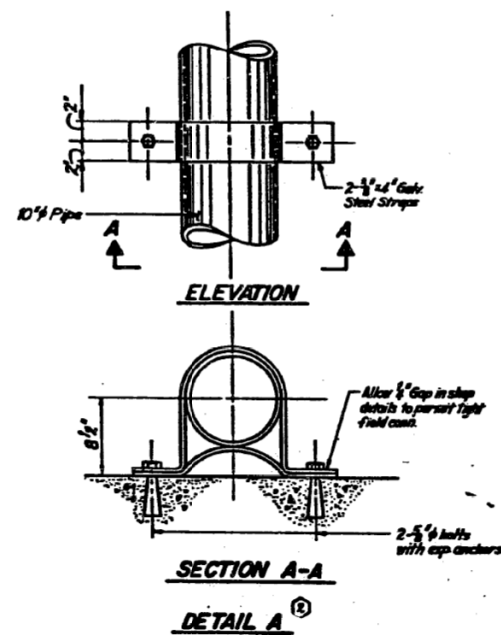
**TYPICAL SECTION OF SCUPPERS<sup>2</sup>**  
**AT PIER LOCATIONS**

Taylor St. Exit Ramp Bent No. 4  
Taylor St. Entrance Ramp Bent No. 3



**TYPICAL SECTION OF SCUPPERS<sup>2</sup>**  
**AT ABUTMENT LOCATIONS**

Taylor St. Exit Ramp Abutment No. 1  
Taylor St. Entrance Ramp Abutment No. 5



- NOTES:**
- For Scupper Details, see Slits MD 1 and MD 2 in this volume.
  - For Scupper Locations, see Slits Exit 3 (Taylor St. Exit Ramps) and Exit 4 (Taylor St. Entrance Ramps).

**BILL OF MATERIAL**

Item	Unit	Quantity		
		Taylor St. Exit	Taylor St. Entrance	Total
Downspout Drainage System	L.in. Ft.	34	33	67

SHEET MD7 OF 7

REVISIONS	
NO.	DATE
1	8-23-87

Δ New Sheet - Nov. 23, 1987

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RIVER EXPRESSWAY)  
SECTION 1986-080 R COOK COUNTY  
ROADWAY GRADING AND PAVING  
DECK DRAWINGS  
TYPICAL DETAILS AND SECTIONS  
Scale: NONE  
Date: AUG. 14, 1987  
Checked By: W.R.L.  
DRAWN BY: J.E.H.  
CHICAGO, ILL.



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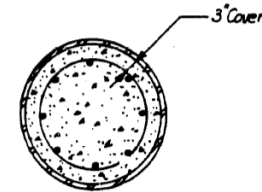
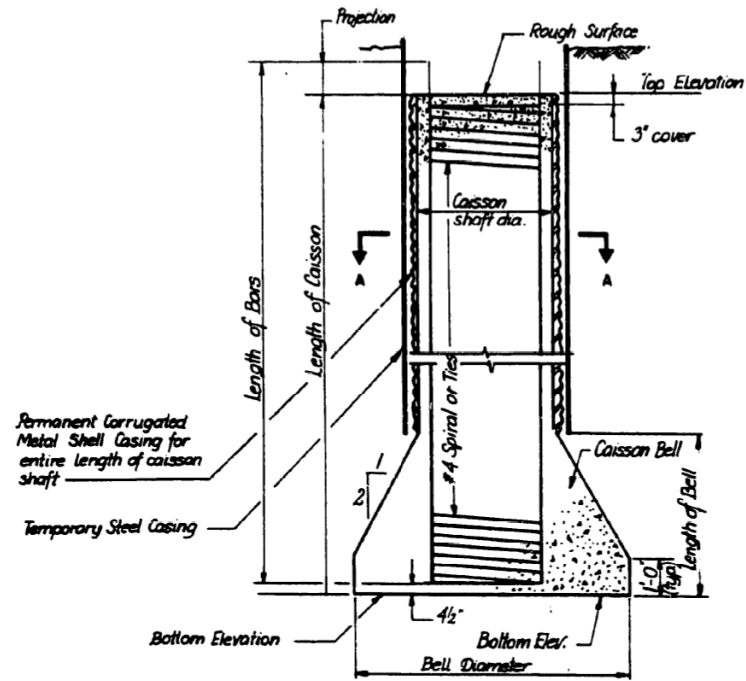
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING TAYLOR STREET ENTRANCE RAMP  
BRIDGE PLANS (FOR INFORMATION ONLY)

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-077R	COOK	385	299
CONTRACT NO. 60X61				
ILLINOIS FED. AID PROJECT				

FEDERAL AID DISTRICT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	79	78 B
STA.		TO STA.		
FED. RD. DIST. NO.	ALIGNMENT	FED. AID PROJECT		
* 1985 - 080 R				



SECTION A-A  
(Temporary Steel Casing not shown in section A-A)

CAISSON SECTION

Notes:

- Specific details for caissons as shown in the caisson section can be found on the following sheets:  
 Sheet Ent 12 for Taylor Street Entrance Ramp Bent Nos. 3 & 4  
 Sheet ENT 12 for Taylor Street Entrance Ramp Bent Nos. 1 & 2  
 Sheet ENT 13 for Taylor Street Entrance Ramp Bent Nos. 3 & 4  
 Sheet S4 for Harrison Street Bridge Pier Nos. 1 & 2  
 Sheet EN 2 for Ramp E-N Pier Nos. 27 & 28
- Annular space between the temporary casing and permanent metal shell shall be back filled with grout before removing the temporary casing

SHEET MD 8 OF 8

REVISIONS	
Name	Date

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1985-080 R - COOK COUNTY  
ROADWAY GRADING AND PAVING  
MISCELLANEOUS DETAILS - ALL STRUCTURES  
TYPICAL CAISSON DETAILS  
Scale: NONE Drawn By: D.S.  
Date: AUG. 14, 1987 Checked By: W.P.K.  
ENVIRODYNE ENGINEERS INC.  
Chicago, Illinois

△ New sheet 12-7-87

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DATE - 10/24/2014

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REVISED -  
REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING TAYLOR STREET ENTRANCE RAMP  
BRIDGE PLANS (FOR INFORMATION ONLY)

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-077R	COOK	385	300
CONTRACT NO. 60X61				
ILLINOIS FED. AID PROJECT				