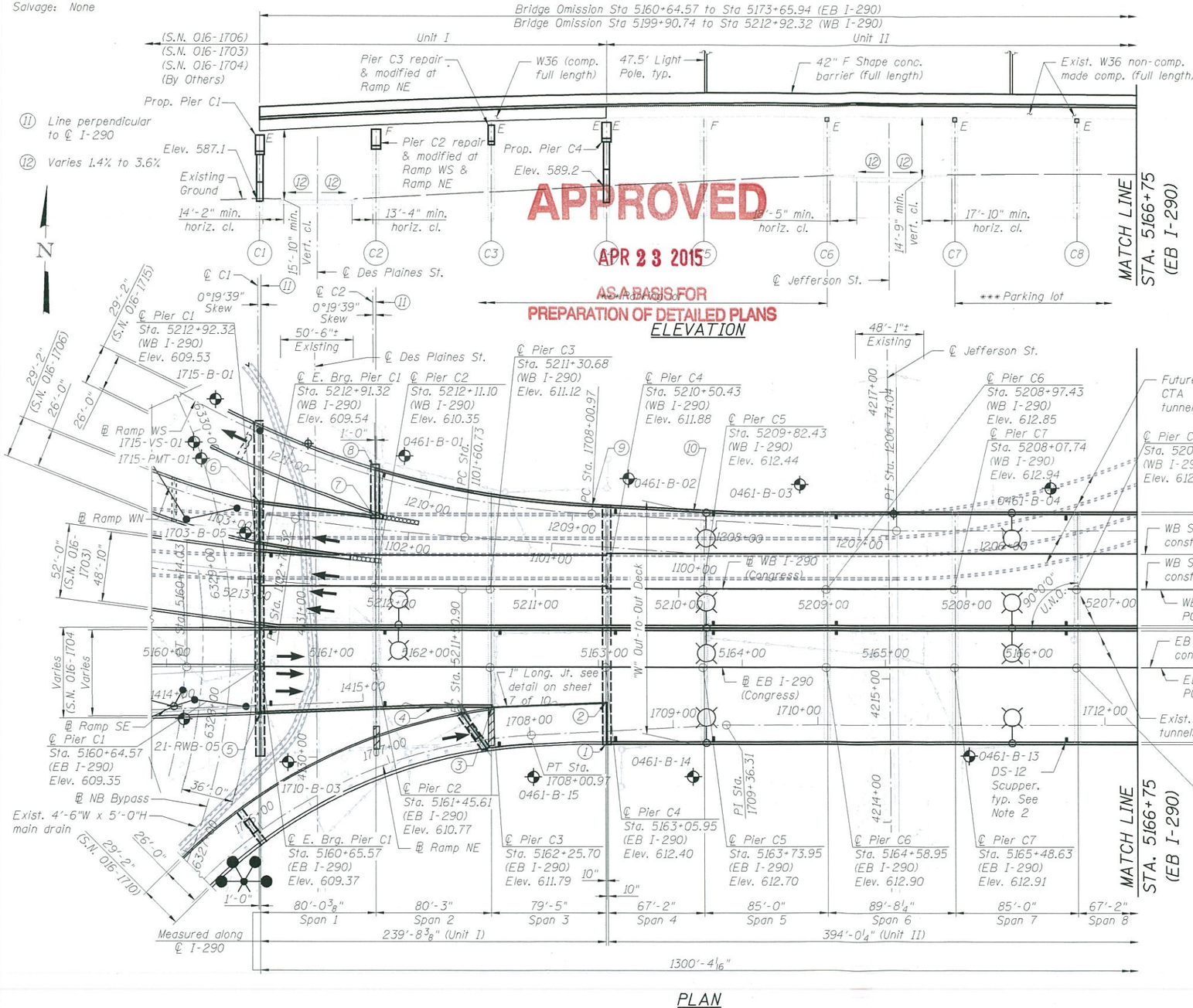
Bench Mark: Square cut at center of door entrance to 707 W. Harrison St; South side of Harrison St. ±90' west of west line of Des Plaines. Elevation 597.47. A + cut in the SE anchor bolt at the 11th street light N. of Roosevelt on the W. side of Halsted. Elev. = 594.06.

Existing Structure: S.N. 016-0461 was originally built in 1952 as F.A. Route Number 131, Section 062-2424.4. The existing structure consists of 16 main spans of multi-unit steel continuous multi-beam superstructures with additional entrance and exit ramp spans along Spans 12 and 13. The existing structure has an overall length of approximately 1301'-4" and an average out-to-out width of approximately 162'-0" for the main spans and 25'-0" for the ramp spans. The substructure units are founded on drilled shafts and consist of 17 multi column piers. The existing bridge is to be rehabilitated through a combination of partial removal and replacement, repairs, and partial infill of ramp spans.

Traffic Control: Two lanes of mainline traffic will be maintained in each direction utilizing stage construction. Canal Street Exit and Entrance Ramps, Ramp WS, Ramp WN and Ramp NE will be closed during stage construction of the respective portions of the outside lanes. Ramp traffic will be detoured via local roads.

Salvage: None



PLAN

APPROVED
APR 23 2015
AS A BASIS FOR PREPARATION OF DETAILED PLANS
ELEVATION

(1) Sta. 5163+05.95 (EB I-290) Offset 53.25' Rt.
(2) Sta. 5163+05.95 (EB I-290) Offset 24.47' Rt.
(3) Sta. 5162+25.79 (EB I-290) Offset 27.58' Rt.
(4) Sta. 5161+85.53 (EB I-290) Offset 27.58' Rt.
(5) Sta. 5160+64.76 (EB I-290) Offset 32.54' Rt.
(6) Sta. 5212+97.56 (WB I-290) Offset 54.69' Rt.
(7) Sta. 5212+13.29 (WB I-290) Offset 49.94' Rt.
(8) Sta. 5212+14.84 (WB I-290) Offset 83.36' Rt.
(9) Sta. 5210+60.50 (WB I-290) Offset 59.31' Rt.
(10) Sta. 5209+61.15 (WB I-290) Offset 54.25' Rt.

"W" OUT TO OUT DECK

148'-1"	@	℄ Pier C1
134'-9 5/8"	@	℄ Pier C2 - Span 1
168'-3 1/8"	@	℄ Pier C2 - Span 2
148'-6 1/8"	@	℄ Pier C3
137'-9 1/2"	@	℄ Pier C4 - Span 3
166'-6 1/2"	@	℄ Pier C4 - SPan 4
162'-0"	@	Point 10

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications
7th Edition (Spans 1-3)
2002 AASHTO Standard Specifications for Highway Bridges (Spans 4-16)

DESIGN STRESSES

FIELD UNITS (New Construction)

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

FIELD UNITS (Exist. Construction)

f'c = 3,500 psi
fy = 60,000 psi (Deck Reinforcement)
fy = 40,000 psi (Pier Reinforcement)
fy = 33,000 psi (ASTM A7)

LOADING HL-93 (SPANS 1-3)
LOADING HS20-44 & ALT. MILITARY (SPANS 4-16)

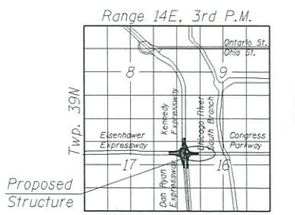
Allow 25#/sq. ft. for future wearing surface

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.125
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.224
Soil Site Class = E

Notes:
1. All structural steel shall be galvanized or metalized (thermal spraying).
2. For Scope of Work and Scupper Table, see Sheet 2 of 10.
3. For ℄ Pier & ℄ I-290 Intersect Stationing, see Sheet 5 of 10.
4. For Curve Data, Geometric Layout, and Highway Classification, see Sheet 9 of 10.
5. For Profile Grades, see Sheet 10 of 10.
6. Skew is taken from a line normal to ℄ I-290.
7. Existing utilities attached to structure will be maintained/relocated during construction.

* 60X75 (EB) or 60X78 & 60X93 (WB)
** 2014-001 R&B (EB) or 2014-004 R&B (WB)
*** Areas underside of structure are utilized as parking lots.
**** Contract 60X93 is for WB Stage IIC only. See Sheets 3 & 4 of 10. Center column of all piers included in contract 60X78.



LOCATION SKETCH

LEGEND:

W	Water Line
E	Electric
T	Telephone line
CTV	Television line
	Combined Sewer
	Storm Sewer
	Point of min. vert. cl.
	Soil Boring Location
	Concrete Pier portion to be removed

GENERAL PLAN & ELEVATION - 1
I-290 (CONGRESS) VIADUCT OVER DES PLAINES ST. TO CANAL ST.
F.A.I. ROUTE 90/94/290
SECTION 2014-001 R&B (EB), 2014-004 R&B (WB)
COOK COUNTY
STATION 5165+03.09
STRUCTURE NO. 016-0461

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03-APR-2015 16:14

PARSONS BRINCKERHOFF	FILE NAME = USER	DESIGNED - PJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE REHABILITATION STRUCTURE NO. 016-0461
		CHECKED - HA	REVISED -		
	PLOT SCALE = NONE	DRAWN - DCP	REVISED -		
	PLOT DATE = 4/3/2015	CHECKED - JIG	REVISED -		SHEET NO. 1 OF 10 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	**	COOK	10	1
		CONTRACT NO. *		
	ILLINOIS FED. AID PROJECT			

Bridge Omission Sta 5160+64.57 to Sta 5173+65.94 (EB I-290)
Bridge Omission Sta 5199+90.74 to Sta 5212+92.32 (WB I-290)

Unit II Cont'd | Unit III | Unit IV

47.5' Light Pole | 42" F Shape conc. barrier (full length) | Exist. W36 non-comp. made comp. (full length) | Canal St. Entrance & Exit Ramps | ℄ S. Canal St.

MATCH LINE STA. 5166+75 (EB I-290)

Prop. Pier C9 Elev. 593.4 | ℄ S. Clinton St. | Prop. Pier C12 Elev. 589.2 | Prop. Abut. | Existing Ground

14'-8" min. horiz. cl. | 14'-0" min. Vert cl. | 14'-2" min. horiz. cl. | MSE Wall (By Others) | 4'-1" min. horiz. cl. | 14'-1" min. Vert cl. | 6'-10" min. horiz. cl.

C9 | C10 | C11 | C12 | C13 | 14N | 14S | C14 | C15 | C16 | C17

① Varies 1.4% to 3.6%

*** Parking lot

Notes:
1. All structural steel shall be galvanized or metalized (thermal spraying).
2. For ℄ Pier & ℄ I-290 Intersect Stationing, see Sheet 5 of 10.
3. For Curve Data, Geometric Layout, and Highway Classification, see Sheet 9 of 10.
4. For Profile Grades, see Sheet 10 of 10.
5. Skew is taken from a line normal to ℄ I-290.
6. Existing utilities attached to structure will be maintained/relocated during construction.

APPROVED
APR 23 2015
AS A BASIS FOR PREPARATION OF DETAILED PLANS

*** Area underside of structure is utilized as parking lot.

**** Contract 60X93 is for WB Stage IIC only. See Sheets 3 & 4 of 10. Center column of all piers included in contract 60X78.

SCOPE OF WORK

1. Replace deck in Spans 1 through 11 with a composite deck.
2. Repair deck in Spans 12 through 15. Clean and/or repair the existing scupper system (grates and pipes) in Spans 12 through 15.
3. Repair superstructure in Spans 4 through 15. (Beam Ends, End diaphragms).
4. Clean and paint existing steel beams with containment and disposal of any existing lead based paint.
5. Remove and replace superstructure between Piers C1 & C4 to accommodate the new geometrics of I-290, Ramp NE, Ramp WN & Ramp WS.
6. Replace bridge deck expansion joints with modular type at Piers C1, C2 (Ramp WS only), C9 & C12 and strip seal type at Piers C4 & C14.
7. Replace high profile rocker bearings with elastomeric bearings at Piers C3, C6, C7, C8, C11, C13, C15 & C16.
8. Replace nested bearings with floating type bearings.
9. Repair all substructure units except Piers C1, C4, C9, C12 & C17.
10. Reconstruct concrete columns and caps of Piers C1, C2 (partially), C4, C9 & C12 and reconfigure beam seats at Piers C1 through C4 to accommodate the proposed deck geometry.
11. Convert Pier C14N & C14S into a semi-integral abutment for the Canal Street Entrance and Exit Ramps. Construct new approach pavement for Canal street bridge.
12. Repair the adjacent concrete stairs and railing.
13. Remove and replace existing Chain Link Fence in span 14 through 16.
14. Remove and replace drainage system in Spans 1 through 11.
15. Remove and replace underpass lighting over the existing roadways.
16. Remove 4-Spans of the existing Canal St. entrance and exit ramps and service drive concrete beams structures.
17. Remove the four existing approach slabs part of Canal St. existing entrance and exit ramps.
18. Reconstruct, modify, and repair the Canal Street West Retaining Wall to accomedate new approach pavement after removal of existing service drive concrete beam structures.

N

ELEVATION

Future CTA tunnels | ℄ Pier C9 Sta. 5206+54.74 (WB I-290) Elev. 612.52 | ℄ Pier C10 Sta. 5205+76.19 (WB I-290) Elev. 612.26 | ℄ Pier C11 Sta. 5204+97.65 (WB I-290) Elev. 612.01 | ℄ Pier C12 Sta. 5204+07.94 (WB I-290) Elev. 611.69 | ℄ Pier C13 Sta. 5203+22.48 (EB I-290) Elev. 611.30 | ℄ Abut. 14N Sta. 1200+62.43 (Ramp WS) Elev. 604.03 | ℄ Pier C14 Sta. 5202+30.12 (WB I-290) Elev. 610.88 | ℄ Pier C15 Sta. 5201+37.77 (WB I-290) Elev. 610.49 | ℄ Pier C16 Sta. 5200+45.56 (WB I-290) Elev. 610.59 | ℄ Pier C17 Sta. 5199+90.74 (WB I-290) Elev. 610.78

50'-10"± Existing | ℄ S. Clinton St. | 128'-4 1/4" Canal St. Entrance Ramp | 57'-0"± Existing | ℄ S. Canal St. | Exist. Canal St. wall to be modified after removing superstructure at both Exist and Entrance Ramps.

1'-7" Parapet | WB Stage II const. line | WB Stage I const. line | WB PGL | EB Stage I const. line | EB PGL | ℄ Ramp NE | ℄ Ramp WS | 0461-B-05 | 0461-B-06 | 0461-B-07 MSE Wall | Exist. appr. slab to be removed, typ. | Bridge appr. slab | 0461-B-08b | 0461-B-08a | Exist. stairway access

162'-0" Out-to-Out Deck | 52'-8" | 25'-1½" | 3'-3" Barrier | 27'-3" | 51'-8" | 24'-6" | 90°00' N.N.O. | 25'-0" | 91'-4" Out-to-Out Deck | 112'-0" Out-to-Out Deck | ℄ I-290 Contract Nos. 60X78 & 60X93 (WB) **** | Contract No. 60X75 (EB) *

1200+00 | 1201+00 | 1202+00 | 1203+00 | 1204+00 | 1205+00 | 1206+00 | 1713+00 | 1714+00 | 1715+00 | 1716+00 | 1717+00 | 5161+00 | 5166+00 | 5169+00 | 5170+00 | 5171+00 | 5172+00 | 5173+00 | 5200+00 | 5201+00 | 5202+00 | 5203+00 | 5204+00 | 5205+00 | 5206+00

PI Sta. 1202+41.36 | PI Sta. 1203+54.39 | PI Sta. 1205+28.11 | 4316+00 | 4317+00 | 4425+00 | PI Sta. 5201+35.63 | PI Sta. 5172+87.56 | 65'-3" typ. | 0°22'8" Skew | 0°22'8" Skew | PI Sta. 1713+35.78 | PI Sta. 1714+56.99 | PI Sta. 5169+48.59 | 0461-B-10 | 0461-B-09 | MSE Wall 41-RWB-01 | MSE Wall SM 016-1828.29 (By Others) | MSE Wall SN 016-1830.31 (By Others)

0461-B-12 | DS-12 Scupper, typ. | 0461-B-11 | ℄ Pier C9 Sta. 5167+01.63 (EB I-290) Elev. 612.53 | ℄ Pier C10 Sta. 5167+80.19 (EB I-290) Elev. 612.30 | ℄ Pier C11 Sta. 5168+58.73 (EB I-290) Elev. 612.06 | ℄ Pier C12 Sta. 5169+48.43 (EB I-290) Elev. 611.79 | ℄ Abut. 14S Sta. 1716+67.22 (Ramp NE) Elev. 603.91 | ℄ Pier C13 Sta. 5170+33.89 (EB I-290) Elev. 611.53 | ℄ Pier C14 Sta. 5171+26.26 (EB I-290) Elev. 611.25 | ℄ Pier C15 Sta. 5172+18.62 (EB I-290) Elev. 610.98 | Exist. appr. slab to be removed, typ. | ℄ Pier C16 Sta. 5173+11.12 (EB I-290) Elev. 610.70 | ℄ Pier C17 Sta. 5173+65.94 (EB I-290) Elev. 610.53

10" | 129'-10 1/4" Canal St. Exit Ramp

MATCH LINE STA. 5166+75 (EB I-290)

67'-2" Span 8 Unit II Cont'd | 77'-8 5/8" Span 9 | 78'-6 1/2" Span 10 | 88'-10 3/8" Span 11 | 84'-7 7/16" Span 12 | 92'-4 1/4" Span 13 | 92'-4 3/16" Span 14 | 92'-4 3/16" Span 15 | 54'-9 7/8" Span 16

245'-1 1/2" (Unit III) | 416'-5 15/16" (Unit IV) | Measured along ℄ I-290

1300'-4 1/16"

PLAN

DS-12 SCUPPER STATIONS WB I-290

5212+85.36 Rt.	
5212+04.97 Rt.	
5210+44.29 Rt.	
5209+76.29 Rt.	
5208+91.29 Rt.	
5207+30.56 Rt.	
5206+62.56 Rt.	
5205+84.00 Rt.	
5205+05.46 Rt.	
5204+17.90 Rt.	
5208+91.29 Lt.	
5209+76.29 Lt.	
5207+30.56 Lt.	
5206+62.56 Lt.	
5205+84.00 Lt.	
5205+05.46 Lt.	
5204+17.90 Lt.	

DS-12 SCUPPER STATIONS EB I-290

5160+72.53 Rt.	5161+51.73 Lt.
5161+51.73 Rt.	5162+31.82 Lt.
5162+31.82 Rt.	5163+12.07 Lt.
5163+12.07 Rt.	5163+80.08 Lt.
5163+80.08 Rt.	5164+65.07 Lt.
5166+25.80 Rt.	5166+25.80 Lt.
5166+93.81 Rt.	5166+93.81 Lt.
5167+72.36 Rt.	5167+72.36 Lt.
5168+50.91 Rt.	5168+50.91 Lt.
5169+40.77 Rt.	5169+40.77 Lt.
5160+72.53 Lt.	

LEGEND:

- W — Water Line
- E — Electric
- T — Telephone line
- CTV — Television line
- Combined Sewer
- Storm Sewer
- Point of min. vert. cl.
- Soil Boring Location

*60X75 (EB) or 60X78 & 60X93 (WB)
**2014-001 R&B (EB) or 2014-004 R&B (WB)

GENERAL PLAN & ELEVATION - 2
I-290 (CONGRESS) VIADUCT OVER DES PLAINES ST. TO CANAL ST.
F.A.I. ROUTE 90/94/290
SECTION 2014-001 R&B (EB), 2014-004 R&B (WB)
COOK COUNTY
STATION 5165+03.09
STRUCTURE NO. 016-0461

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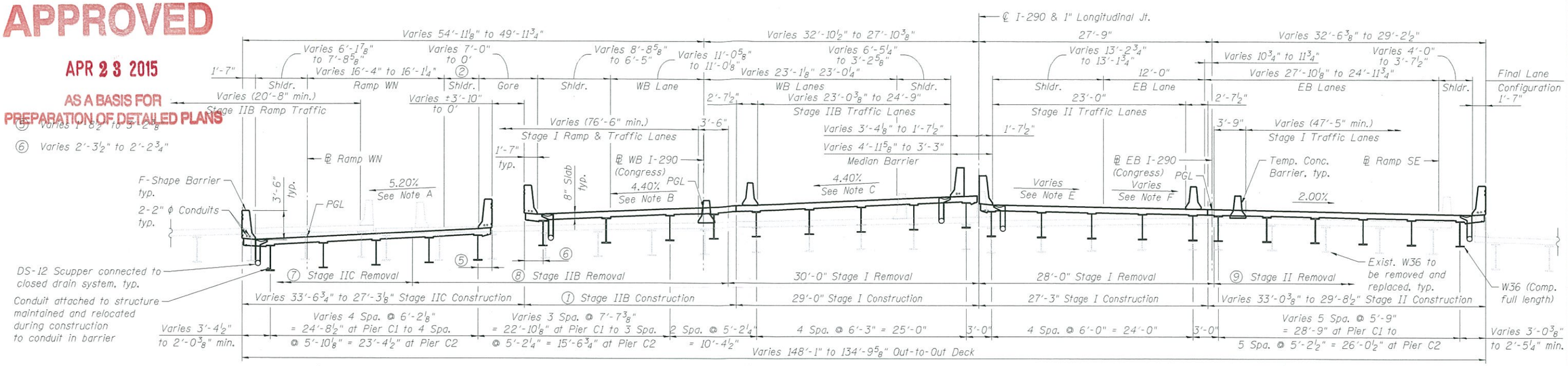
PARSONS BRINCKERHOFF	FILE NAME = USER	DESIGNED - PJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE REHABILITATION STRUCTURE NO. 016-0461
		CHECKED - HA	REVISED -		SHEET NO. 2 OF 10 SHEETS
	PLOT SCALE = NONE	DRAWN - DCP	REVISED -		
	PLOT DATE = 4/3/2015	CHECKED - JIG	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	**	COOK	10	2
			CONTRACT NO. *	
		ILLINOIS FED. AID PROJECT		

APPROVED

APR 23 2015

AS A BASIS FOR PREPARATION OF DETAILED PLANS



CROSS SECTION - UNIT I (SPAN 1)

(Looking East. Horiz. dimensions are measured perpendicular to ℄ I-290)

⑤ Varies 1'-8½" to 3'-2⅝"

⑥ Varies 2'-3½" to 2'-2¾"

① Varies 25'-2¾" to 21'-7"

② Varies 4'-1" to 7'-1¾"

③ Barrier varies 4'-2⅝" to 3'-0" at end at Sta. 5212+07.90 (WB I-290), no barrier for remainder of Unit I

④ Existing conduit attached to structure to be maintained and relocated during construction to conduit in barrier

⑦ Varies 75'-9⅜" to 53'-2½"

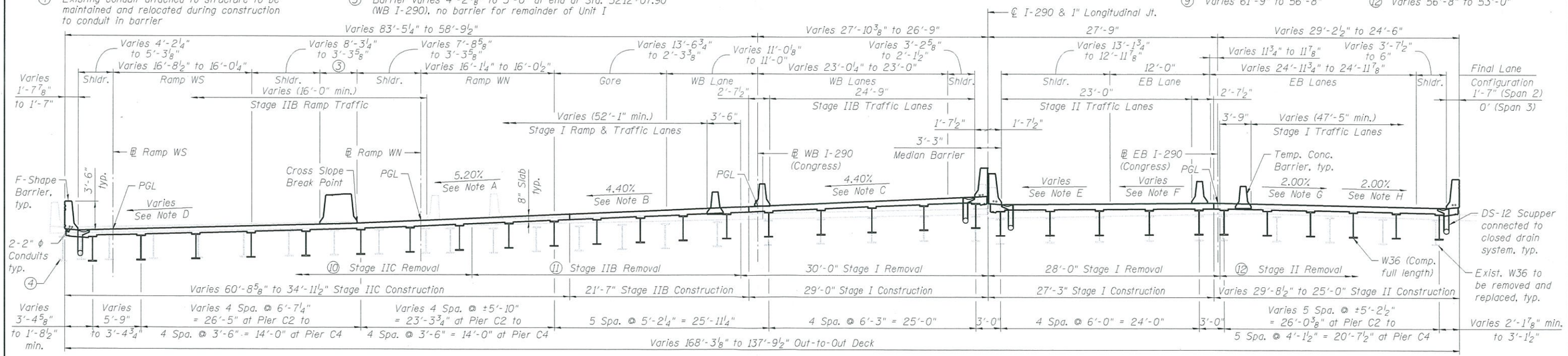
⑧ Varies 37'-6⅞" to 32'-4½"

⑨ Varies 61'-9" to 56'-8"

⑩ Varies 53'-2½" to 33'-4½"

⑪ Varies 32'-4½" to 22'-1½"

⑫ Varies 56'-8" to 53'-0"



CROSS SECTION - UNIT I (SPANS 2 & 3)

(Looking East. Horiz. dimensions are measured perpendicular to ℄ I-290)

NOTES:

Note A: (Direction of slope referenced from left edge of pavement)
Normal (-1.88%) Sta. 1100+61.16 to Sta. 1101+03.34 (Ramp WN)
Transition (-1.88% to -5.20%) Sta. 1101+03.34 to Sta. 1101+40.34 (Ramp WN)

Note B: (Direction of slope referenced from left edge of pavement)
Normal (-1.88%) Sta. 5210+49.79 to 5211+15.79 (WB I-290)
Transition (-1.88% to -4.40%) Sta. 5211+15.79 to Sta. 5211+99.79 (WB I-290)

Note C: (Direction of slope referenced from left edge of pavement)
Normal (0.53%) Sta. 5210+49.79 to Sta. 5210+70.79 (WB I-290)
Transition (0.53% to -4.40%) Sta. 5210+70.79 to Sta. 5211+99.79 (WB I-290)

Note D: (Direction of slope referenced from left edge of pavement)
Normal (-2.66%) Sta. 1208+75.68 to Sta. 1208+81.19 (Ramp WS)
Transition (-2.66% to -5.20%) Sta. 1208+81.19 to Sta. 1209+47.19 (Ramp WS)

Note E: (Direction of slope referenced from left edge of pavement)
Transition (2.00% to -2.00%) Sta. 5160+47.26 to Sta. 5161+91.26 (EB I-290)
Constant cross slope (-2.00%) Sta. 5161+91.26 to Sta. 5163+02.07 (EB I-290)
Transition (-2.00% to -2.08%) Sta. 5163+02.07 to Sta. 5163+05.07 (EB I-290)

Note F: (Direction of slope referenced from ℄ EB I-290 (Congress))
Transition (2.00% to -2.00%) Sta. 5160+47.26 to Sta. 5161+91.26 (EB I-290)
Constant cross slope (-2.00%) Sta. 5161+91.26 to Sta. 5162+58.07 (EB I-290)
Transition (-2.00% to -0.70%) Sta. 5162+58.07 to Sta. 5168+05.07 (EB I-290)

Note G: (Direction of slope referenced from ℄ EB I-290 (Congress))
Constant cross slope (-2.00%)
Sta. 5157+41.36 to Sta. 5162+87.07 (EB I-290)
Transition (-2.00% to -1.50%)
Sta. 5162+87.07 to Sta. 5163+05.07 (EB I-290)

Note H: (Direction referenced from right edge of pavement)
Transition (-2.00% to -2.08%)
Sta. 5163+01.07 to Sta. 5163+05.07 (EB I-290)

*60X75 (EB) or 60X78 & 60X93 (WB)
**2014-001 R&B (EB) or 2014-004 R&B (WB)

SECTIONS
I-290 (CONGRESS) VIADUCT OVER DES PLAINES ST. TO CANAL ST.
F.A.I. ROUTE 90/94/290
SECTION 2014-001 R&B (EB), 2014-004 R&B (WB)
COOK COUNTY
STATION 5165+03.09
STRUCTURE NO. 016-0461

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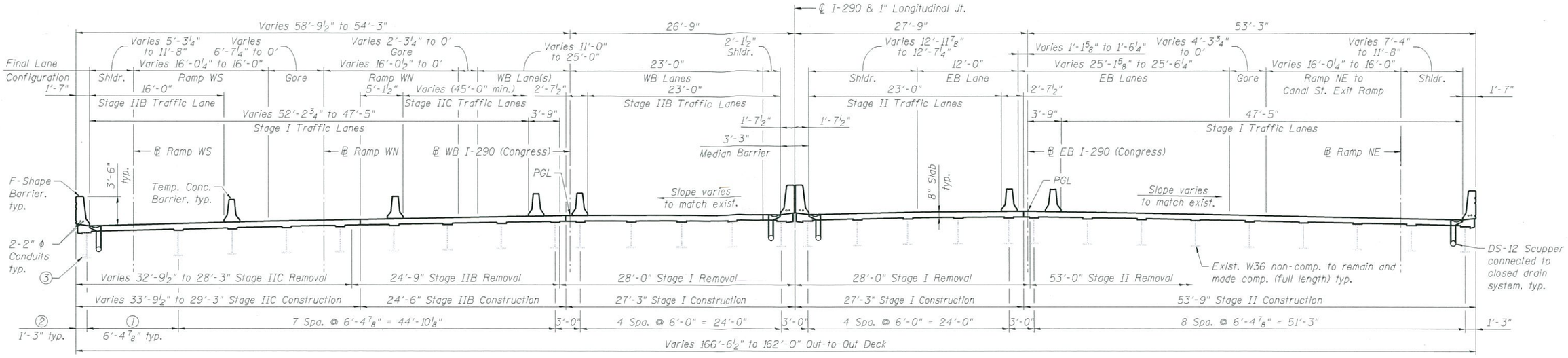
PARSONS BRINCKERHOFF

FILE NAME = USER	DESIGNED - PJL	REVISED -	
	CHECKED - HA	REVISED -	
PLOT SCALE = NONE	DRAWN - DCP	REVISED -	
PLOT DATE = 4/3/2015	CHECKED - JIG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE REHABILITATION
STRUCTURE NO. 016-0461
SHEET NO. 3 OF 10 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	**	COOK	10	3
		CONTRACT NO. *		
	ILLINOIS FED. AID PROJECT			

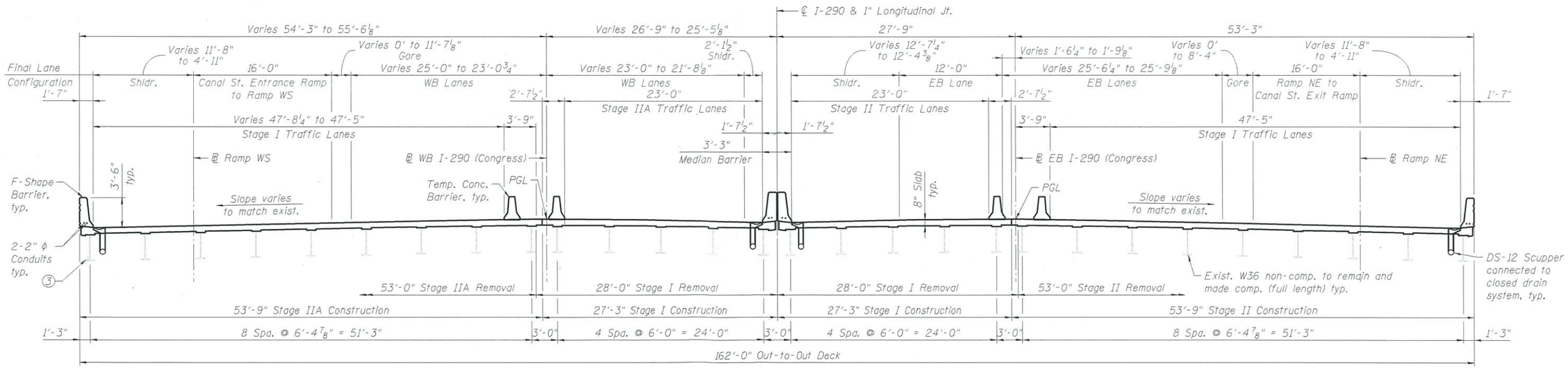


① 2 Spa. @ 5'-5 7/16" = 10'-10⅞" at Pier C4

② 1'-3½" at Pier C4

CROSS SECTION - UNIT II

(Looking East, Horiz. dimensions are measured perpendicular to ℄ I-290)



③ Existing conduit attached to structure to be maintained and relocated during construction to conduit in barrier

CROSS SECTION - UNIT III

(Looking East, Horiz. dimensions are measured perpendicular to ℄ I-290)

APPROVED

APR 23 2015

AS A BASIS FOR PREPARATION OF DETAILED PLANS

*60X75 (EB) or 60X78 & 60X93 (WB)
**2014-001 R&B (EB) or 2014-004 R&B (WB)

SECTIONS
I-290 (CONGRESS) VIADUCT OVER DES PLAINES ST. TO CANAL ST.
F.A.I. ROUTE 90/94/290
SECTION 2014-001 R&B (EB), 2014-004 R&B (WB)
COOK COUNTY
STATION 5165+03.09
STRUCTURE NO. 016-0461

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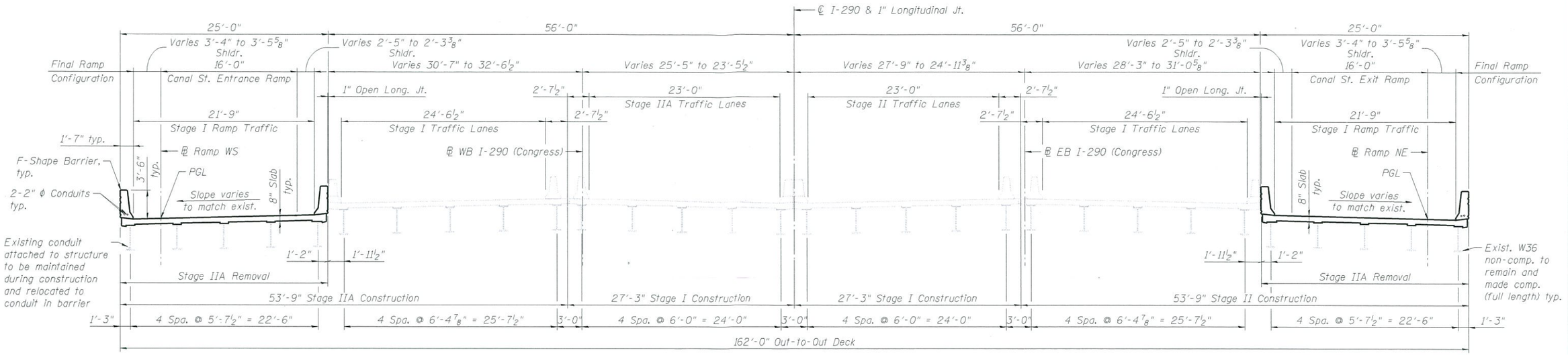
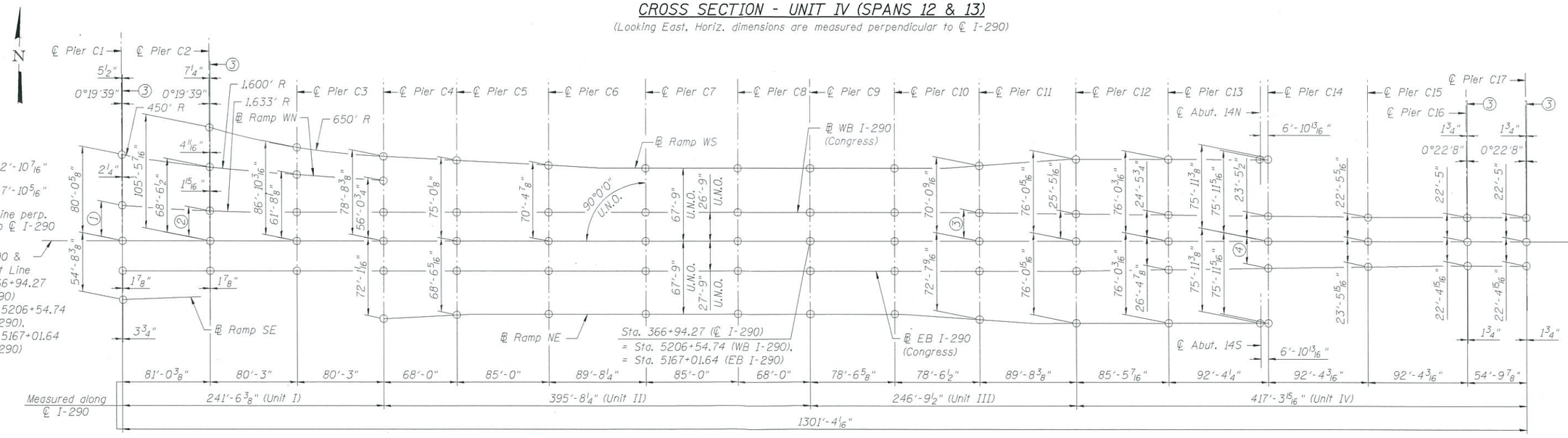
PARSONS BRINCKERHOFF	FILE NAME = USER	DESIGNED - PJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE REHABILITATION STRUCTURE NO. 016-0461
		CHECKED - HA	REVISED -		
	PLOT SCALE = NONE	DRAWN - DCP	REVISED -		
	PLOT DATE = 4/3/2015	CHECKED - JIG	REVISED -		SHEET NO. 4 OF 10 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	**	COOK	10	4
		CONTRACT NO. *		
	ILLINOIS FED. AID PROJECT			



CROSS SECTION - UNIT IV (SPANS 12 & 13)

(Looking East, Horiz. dimensions are measured perpendicular to ℄ I-290)



OFFSET SKETCH

℄ PIER & ℄ I-290 INTERSECT STATIONING

℄ Pier C1	Sta. 360+57.05	℄ Pier C10	Sta. 367+72.82
℄ Pier C2	Sta. 361+38.08	℄ Pier C11	Sta. 368+51.36
℄ Pier C3	Sta. 362+18.33	℄ Pier C12	Sta. 369+41.06
℄ Pier C4	Sta. 362+98.58	℄ Pier C13	Sta. 370+26.51
℄ Pier C5	Sta. 363+66.58	℄ Abut. 14N/14S	Sta. 371+11.96
℄ Pier C6	Sta. 364+51.58	℄ Pier C14	Sta. 371+18.86
℄ Pier C7	Sta. 365+41.27	℄ Pier C15	Sta. 372+11.21
℄ Pier C8	Sta. 366+26.27	℄ Pier C16	Sta. 373+03.56
℄ Pier C9	Sta. 366+94.27	℄ Pier C17	Sta. 373+58.38

Note:

1. Stationing along ℄ I-290 is for information only.

③ 26'-4 15/16"

④ 24'-11 7/16"

APPROVED

APR 23 2015

AS A BASIS FOR PREPARATION OF DETAILED PLANS

*60X75 (EB) or 60X78 & 60X93 (WB)
**2014-001 R&B (EB) or 2014-004 R&B (WB)

SECTION & OFFSET SKETCH I-290 (CONGRESS) VIADUCT OVER DES PLAINES ST. TO CANAL ST. F.A.I. ROUTE 90/94/290 SECTION 2014-001 R&B (EB), 2014-004 R&B (WB) COOK COUNTY STATION 5165+03.09 STRUCTURE NO. 016-0461

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03-APR-2015 16:14

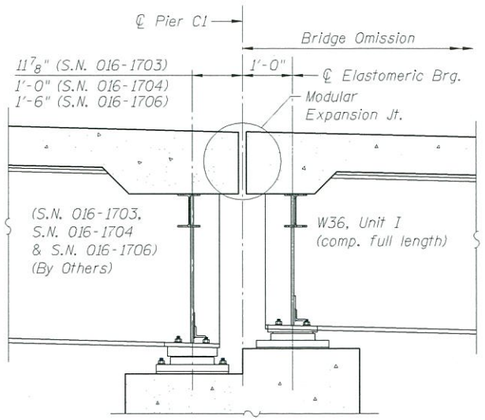
PARSONS BRINCKERHOFF

FILE NAME = USER	DESIGNED - PJL	REVISED -	
	CHECKED - HA	REVISED -	
PLOT SCALE = NONE	DRAWN - DCP	REVISED -	
PLOT DATE = 4/3/2015	CHECKED - JIG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

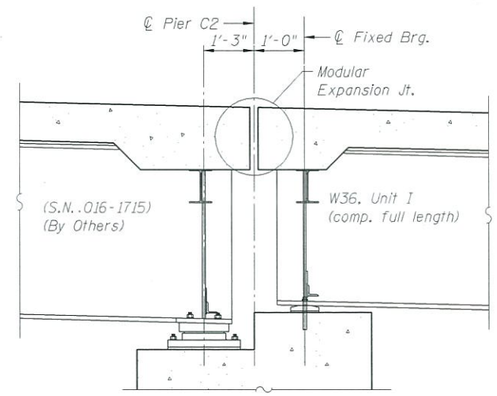
BRIDGE REHABILITATION
STRUCTURE NO. 016-0461
SHEET NO. 5 OF 10 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	**	COOK	10	5
		CONTRACT NO. *		
	ILLINOIS FED. AID PROJECT			



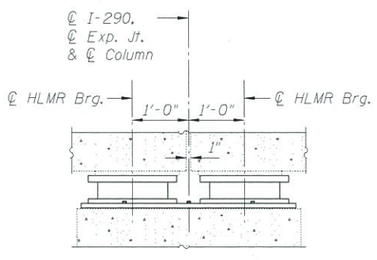
SECTION THRU PIER C1

(Horiz. dim. @ Rt. L's)

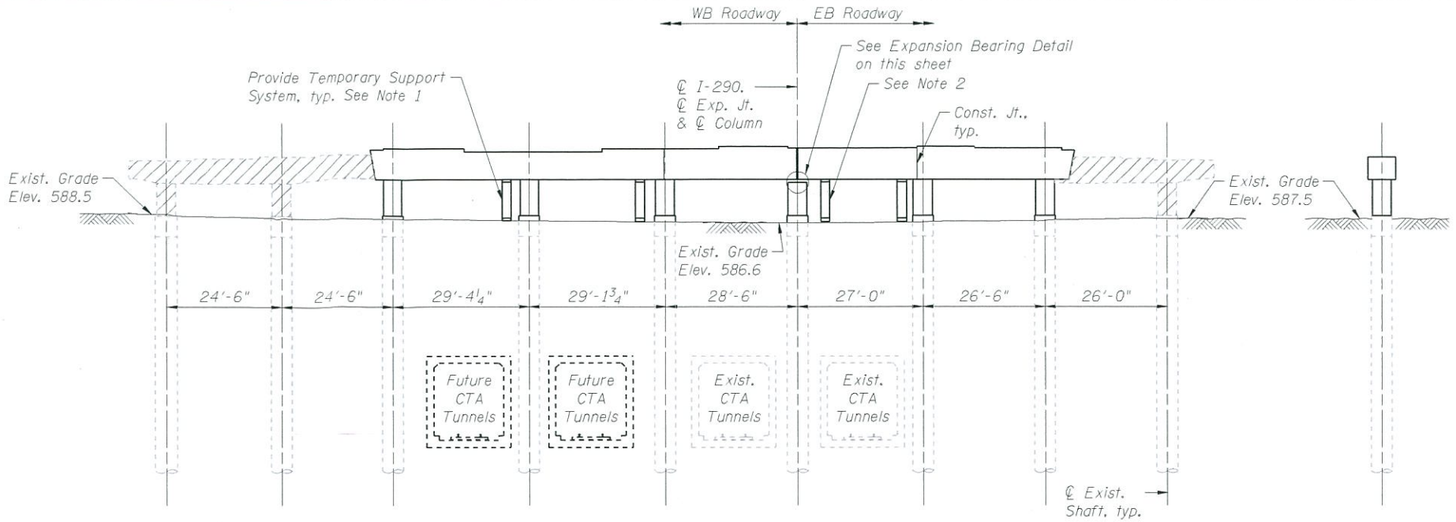


SECTION THRU PIER C2 AT RAMP WS

(Horiz. dim. @ Rt. L's)

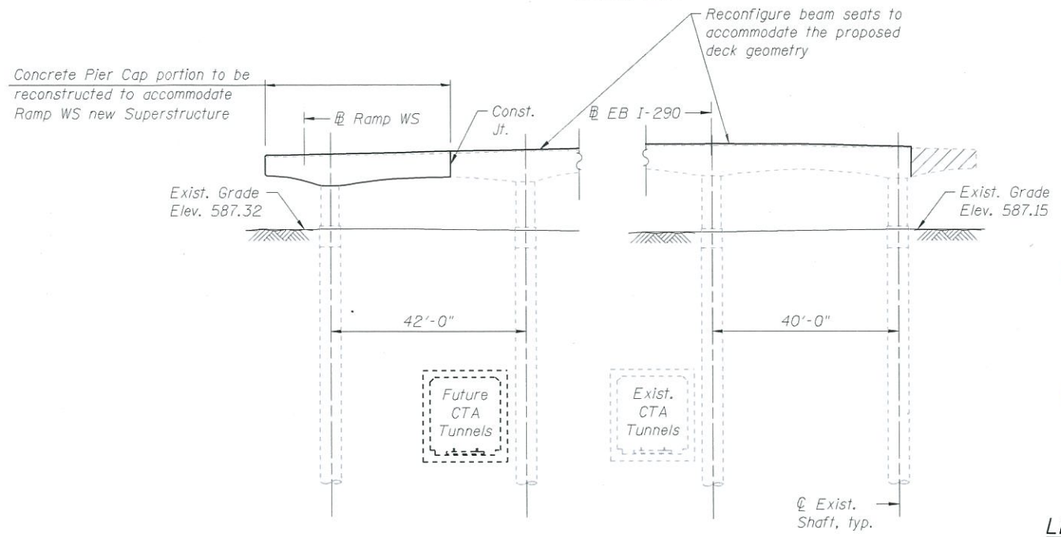


EXPANSION BEARINGS DETAIL FOR PIERS C1 THRU C14



PIER C1 SKETCH

(Looking East)



PIER C2 PARTIAL SKETCH

(Looking East)

Notes:

1. Number, type and location of Temporary Support System to be determined in final design.

2. Support system near ℄ I-290 will remain in place after the completion of the WB contract. Type and size of Support System to be determined in final design.

3. Center column and Suport System near ℄ I-290 of all piers are included in contract 60X78.

*60X75 (EB) or 60X78 & 60X93 (WB)
**2014-001 R&B (EB) or 2014-004 R&B (WB)

APPROVED

APR 23 2015

AS A BASIS FOR PREPARATION OF DETAILED PLANS

LEGEND

Concrete Pier portion to be removed

DETAILS
I-290 (CONGRESS) VIADUCT OVER DES PLAINES ST. TO CANAL ST.
F.A.I. ROUTE 90/94/290
SECTION 2014-001 R&B (EB), 2014-004 R&B (WB)
COOK COUNTY
STATION 5165+03.09
STRUCTURE NO. 016-0461

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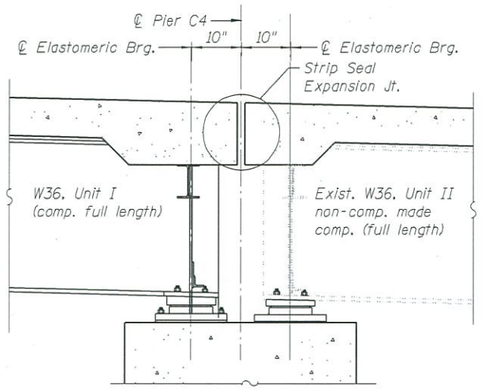
PARSONS BRINCKERHOFF			
FILE NAME = USER	DESIGNED - PJL	REVISED -	
	CHECKED - HA	REVISED -	
PLOT SCALE = NONE	DRAWN - DCP	REVISED -	
PLOT DATE = 4/3/2015	CHECKED - JIG	REVISED -	

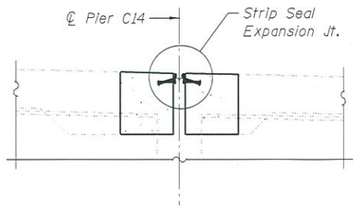
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE REHABILITATION
STRUCTURE NO. 016-0461
SHEET NO. 6 OF 10 SHEETS

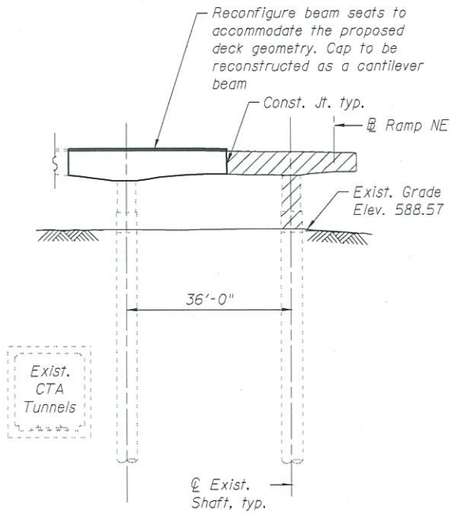
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	**	COOK	10	6
		CONTRACT NO. *		
ILLINOIS	FED. AID PROJECT			



SECTION THRU PIER C4



STRIP SEAL JOINT AT C14



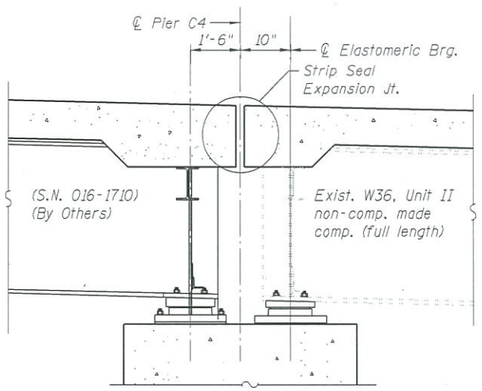
PIER C3 PARTIAL SKETCH

(Looking East)

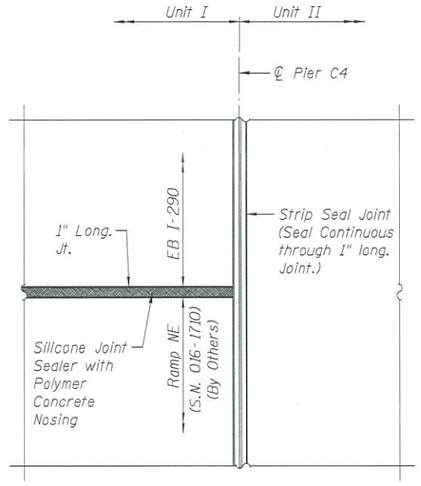
APPROVED

APR 23 2015

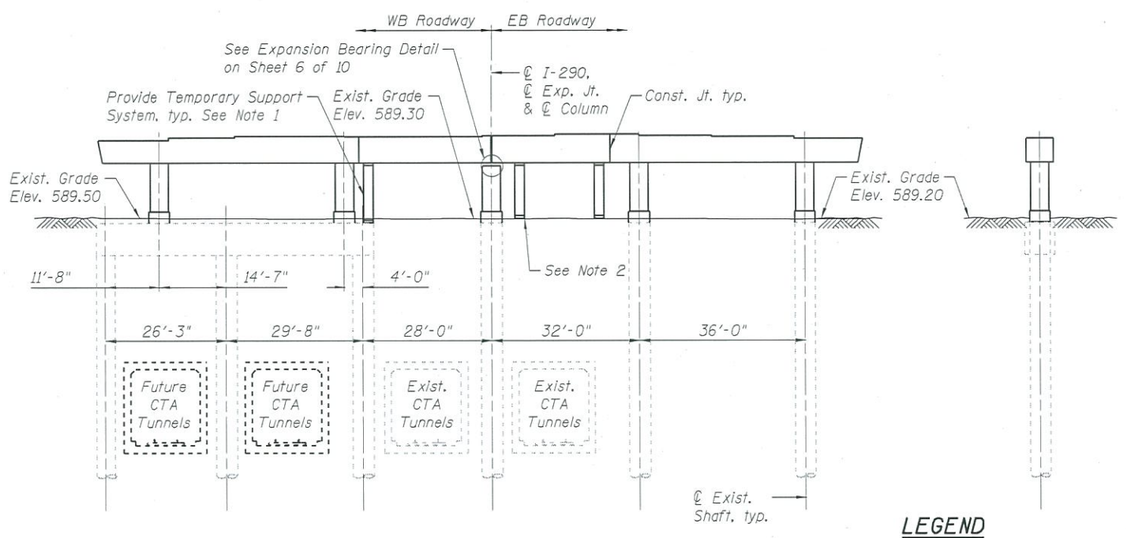
AS A BASIS FOR PREPARATION OF DETAILED PLANS



SECTION THRU PIER C4 AT RAMP NE



PLAN DETAIL AT 1" LONG. JOINT



PIER C4 SKETCH

(Looking East)

LEGEND

Concrete Pier portion to be removed

Notes:

1. Number, type and location of Temporary Support System to be determined in final design.

2. Support system near ℄ I-290 will remain in place after the completion of the WB contract. Type and size of Support System to be determined in final design.

3. Center column and Suport System near ℄ I-290 of all piers are included in contract 60X78.

* 60X75 (EB) or 60X78 & 60X93 (WB)
** 2014-001 R&B (EB) or 2014-004 R&B (WB)

DETAILS
I-290 (CONGRESS) VIADUCT OVER DES PLAINES ST. TO CANAL ST.
F.A.I. ROUTE 90/94/290
SECTION 2014-001 R&B (EB), 2014-004 R&B (WB)
COOK COUNTY
STATION 5165+03.09
STRUCTURE NO. 016-0461

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23-APR-2015 16:24

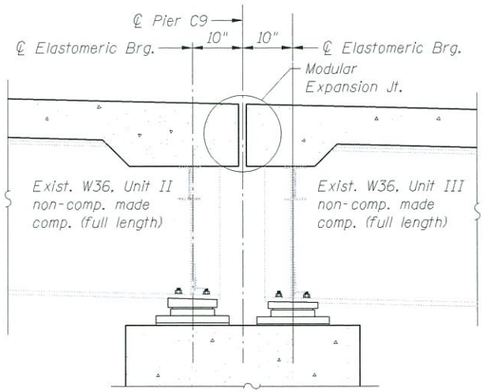
PARSONS BRINCKERHOFF

FILE NAME = USER	DESIGNED - PJL	REVISED -	
	CHECKED - HA	REVISED -	
PLOT SCALE = NONE	DRAWN - DCP	REVISED -	
PLOT DATE = 4/23/2015	CHECKED - JIG	REVISED -	

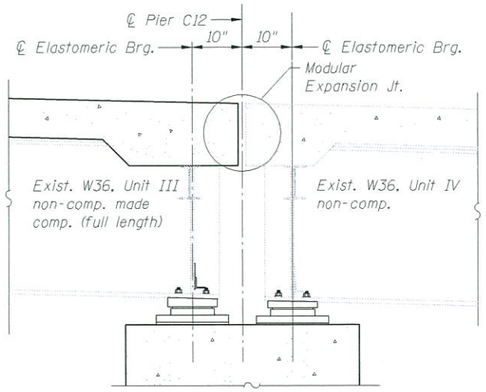
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE REHABILITATION
STRUCTURE NO. 016-0461
SHEET NO. 7 OF 10 SHEETS

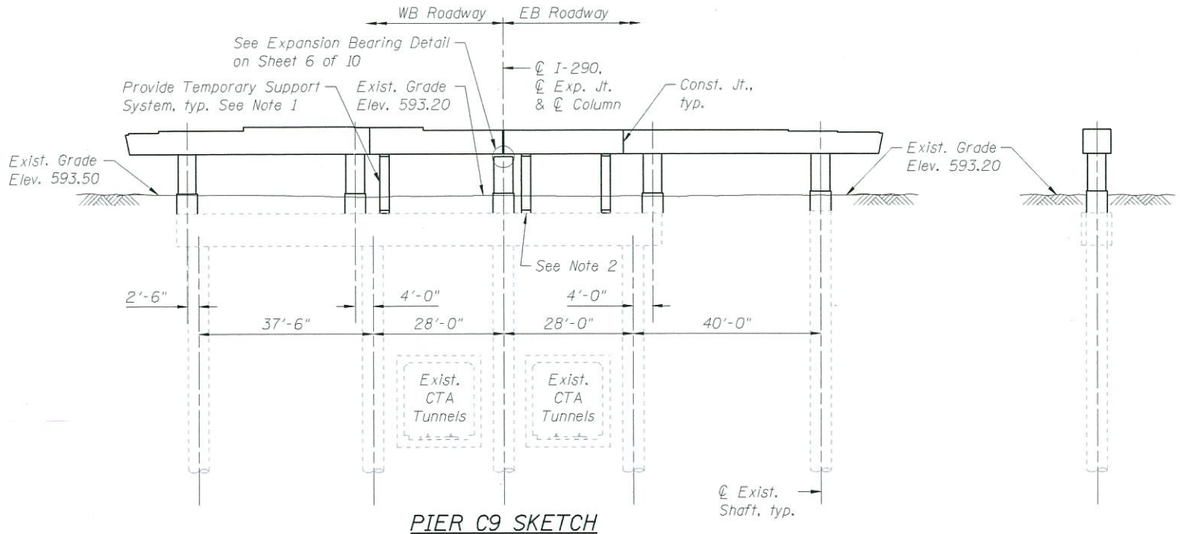
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	**	COOK	10	7
		CONTRACT NO. *		
	ILLINOIS FED. AID PROJECT			



SECTION THRU PIER C9

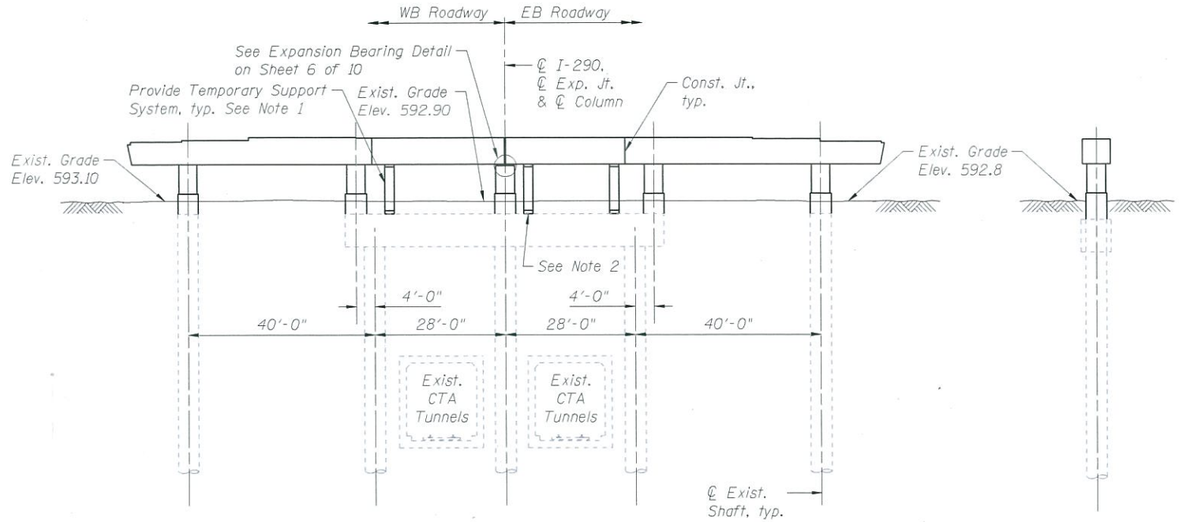


SECTION THRU PIER C12



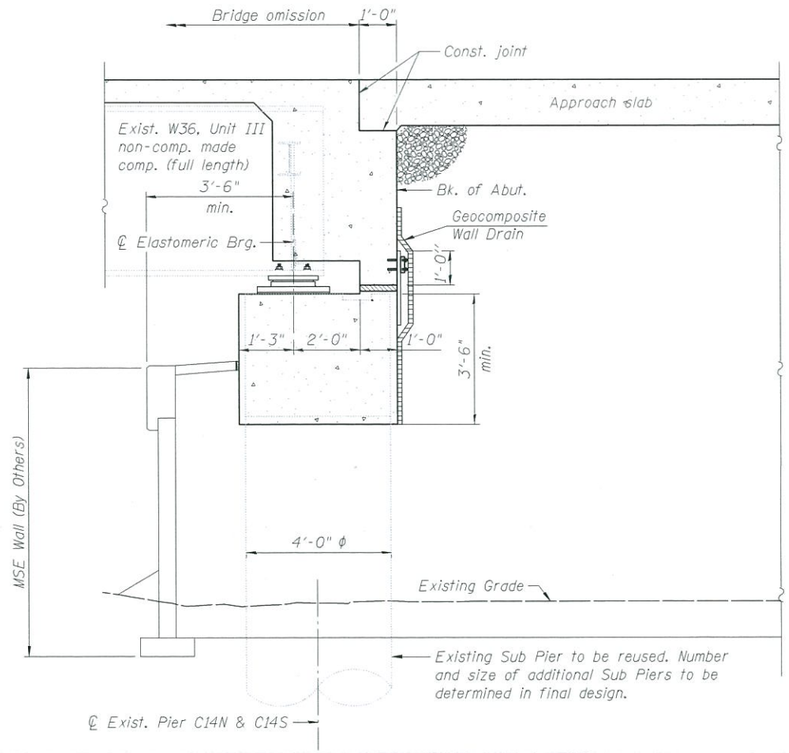
PIER C9 SKETCH

(Looking East)



PIER C12 SKETCH

(Looking East)



SECTION THRU ABUTMENT 14N & 14S

APPROVED

APR 23 2015

AS A BASIS FOR PREPARATION OF DETAILED PLANS

Notes:

1. Number, type and location of Temporary Support System to be determined in final design.

2. Support system near ℄ I-290 will remain in place after the completion of the WB contract. Type and size of Support System to be determined in final design.

3. Center column and Suport System near ℄ I-290 of all piers are included in contract 60X78.

*60X75 (EB) or 60X78 & 60X93 (WB)
**2014-001 R&B (EB) or 2014-004 R&B (WB)

DETAILS
I-290 (CONGRESS) VIADUCT OVER DES PLAINES ST. TO CANAL ST.
F.A.I. ROUTE 90/94/290
SECTION 2014-001 R&B (EB), 2014-004 R&B (WB)
COOK COUNTY
STATION 5165+03.09
STRUCTURE NO. 016-0461

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03-APR-2015 16:14

PARSONS BRINCKERHOFF				STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE REHABILITATION STRUCTURE NO. 016-0461				
	FILE NAME = USER	DESIGNED - PJL	REVISED -			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - HA	REVISED -			90/94/290	**	COOK	10	8
	PLOT SCALE = NONE	DRAWN - DCP	REVISED -		SHEET NO. 8 OF 10 SHEETS				CONTRACT NO. *	
	PLOT DATE = 4/3/2015	CHECKED - JIG	REVISED -				ILLINOIS	FED. AID PROJECT		

CURVE DATA
(EB I-290 (Congress))

PROP. CURVE P-CON-EB-2
PI STA. = 5159+19.48
Δ = 1° 39′ 04" (RT)
D = 0° 52′ 23"
R = 6,562.00′
T = 94.56′
L = 189.11′
E = 0.68′
e = 2.00%
T.R. = 72′
S.E. RUN = 72′
P.C. STA. = 5158+24.92
P.T. STA. = 5160+14.03
DS = 50
PS = 45

PROP. CURVE P-CON-EB-3
PI STA. = 5184+63.84
Δ = 2° 50′ 37" (RT)
D = 1° 02′ 45"
R = 5,478.00′
T = 135.97′
L = 271.88′
E = 1.69′
e = NC
T.R. = NA
S.E. RUN = NA
P.C. STA. = 5183+27.87
P.T. STA. = 5185+99.75
DS = 40
PS = 35

CURVE DATA
(WB I-290 (Congress))

PROP. CURVE P-CON-WB-1
PI STA. = 5212+68.02
Δ = 8° 12′ 18" (RT)
D = 3° 30′ 31"
R = 1,633.00′
T = 117.13′
L = 233.85′
E = 4.20′
e = 4.40%
T.R. = 67′
S.E. RUN = 147′
P.C. STA. = 5211+50.90
P.T. STA. = 5213+84.75
DS = 45
PS = 45

CURVE DATA
(Ramp NE)

PROP. CURVE P-CIR-NE-1
PI STA. = 1706+01.77
Δ = 86° 38′ 23" (RT)
D = 16° 22′ 13"
R = 350.00′
T = 330.05′
L = 529.25′
E = 131.08′
e = 5.60%
T.R. = 48′
S.E. RUN = 136′
P.C. STA. = 1702+71.71
P.T. STA. = 1708+00.97
DS = 30
PS = 30

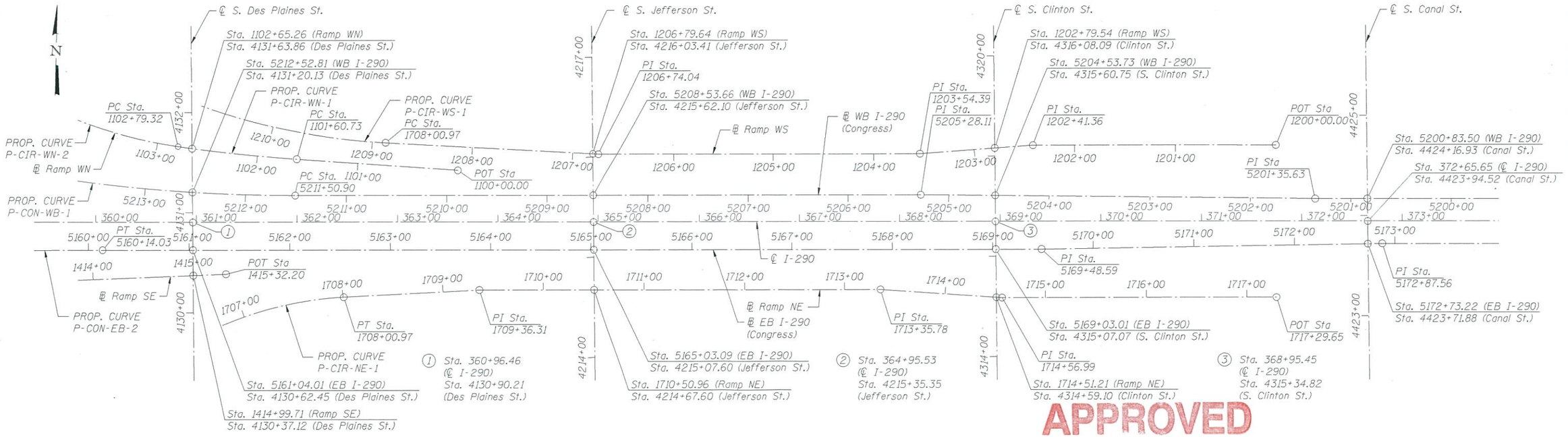
CURVE DATA
(Ramp WN)

PROP. CURVE P-CIR-WN-1
PI STA. = 1102+20.05
Δ = 4° 14′ 49" (RT)
D = 3° 34′ 52"
R = 1,600.00′
T = 59.33′
L = 118.60′
E = 1.10′
e = 4.40%
T.R. = NA
S.E. RUN = 64′
P.C. STA. = 1101+60.73
P.T. STA. = 1102+79.32
DS = 30
PS = 30

PROP. CURVE P-CIR-WN-2
PI STA. = 1105+88.67
Δ = 69° 00′ 44" (RT)
D = 12° 43′ 57"
R = 450.00′
T = 309.35′
L = 542.02′
E = 96.07′
e = 5.20%
T.R. = NA
S.E. RUN = 46′
P.C. STA. = 1102+79.32
P.T. STA. = 1108+21.34
DS = 30
PS = 30

CURVE DATA
(Ramp WS)

PROP. CURVE P-CIR-WS-1
PI STA. = 1210+36.88
Δ = 26° 00′ 07" (RT)
D = 8° 48′ 53"
R = 650.00′
T = 150.08′
L = 294.98′
E = 17.10′
e = 5.20%
T.R. = 52′
S.E. RUN = 134′
P.C. STA. = 1208+86.80
P.T. STA. = 1211+81.78
DS = 35
PS = 25



GEOMETRIC LAYOUT

APPROVED
APR 23 2015
AS A BASIS FOR PREPARATION OF DETAILED PLANS

HIGHWAY CLASSIFICATION

	EB I-290	WB I-290	Ramp NE	Ramp WN	Ramp WS	Ramp SE	S. Des Plaines St.	S. Clinton St.	S. Jefferson St.	S. Canal St.
Functional Class	Interstate	Interstate	Interstate	Interstate	Interstate	Interstate	Principal Arterial	Major Collector	Major Collector	Major Collector
ADT (2012)	35,900	42,300	3,100	7,200	7,200	4,600	5,490	4,880	5,160	N/A
ADT (2040)	37,000	44,000	4,000	9,000	8,000	5,000	N/A	N/A	N/A	N/A
ADTT (2012)	539	541	42	204	114	123	220	558	591	N/A
ADTT (2040)	555	563	55	255	127	134	N/A	N/A	N/A	N/A
DHV (2040)	2,820	3,200	280	790	710	440	N/A	N/A	N/A	N/A
Design Speed	50 m.p.h.	45 m.p.h.	30 m.p.h.	30 m.p.h.	25 m.p.h.	25 m.p.h.	30 m.p.h.	N/A m.p.h.	N/A m.p.h.	30 m.p.h.
Posted Speed	45 m.p.h.	45 m.p.h.	30 m.p.h.	30 m.p.h.	25 m.p.h.	25 m.p.h.	30 m.p.h.	N/A m.p.h.	N/A m.p.h.	30 m.p.h.
	One-Way Traffic									Two-Way Traffic
	Directional Distribution 100:0									Directional Distribution 50:50

Note:
1. Stationing along ℄ I-290 is for information only.

*60X75 (EB) or 60X78 & 60X93 (WB)
**2014-001 R&B (EB) or 2014-004 R&B (WB)

CURVE DATA
I-290 (CONGRESS) VIADUCT OVER DES PLAINES ST. TO CANAL ST.
F.A.I. ROUTE 90/94/290
SECTION 2014-001 R&B (EB), 2014-004 R&B (WB)
COOK COUNTY
STATION 5165+03.09
STRUCTURE NO. 016-0461

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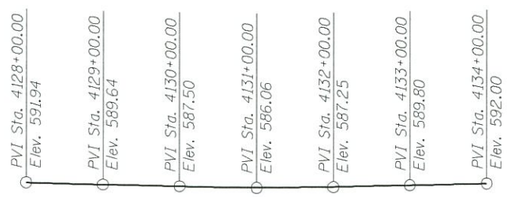
03-APR-2015 16:14

PARSONS BRINCKERHOFF	FILE NAME = USER	DESIGNED - PJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE REHABILITATION STRUCTURE NO. 016-0461
	PLOT SCALE = NONE	CHECKED - HA	REVISED -		SHEET NO. 9 OF 10 SHEETS
	PLOT DATE = 4/3/2015	DRAWN - DCP	REVISED -		
		CHECKED - JIG	REVISED -		

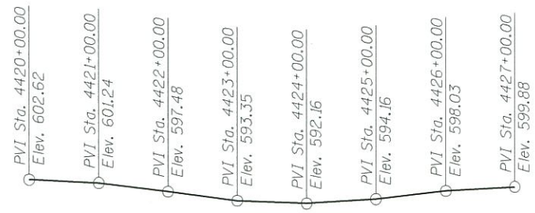
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	**	COOK	10	9
			CONTRACT NO. *	
		ILLINOIS	FED. AID PROJECT	



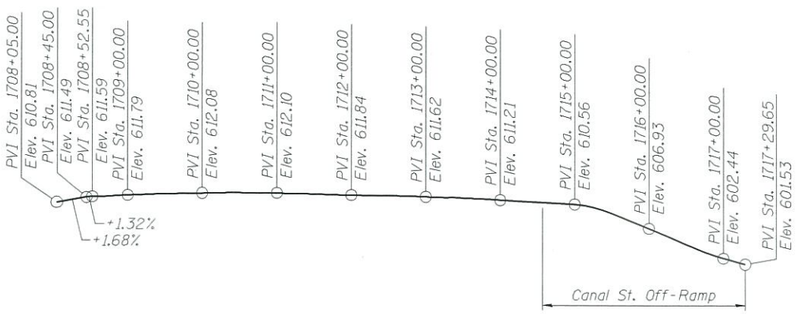
EXISTING PROFILE GRADE
(Along ℄ S. Des Plaines St.)

EXISTING PROFILE GRADE
(Along ℄ S. Jefferson St.)

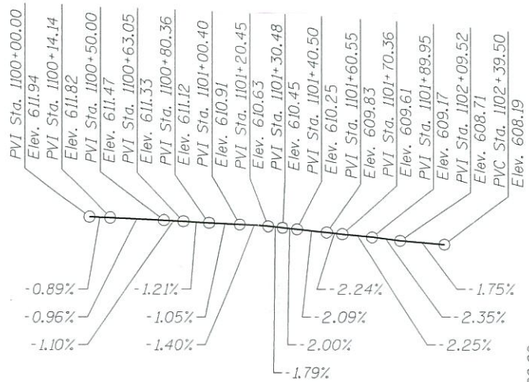
EXISTING PROFILE GRADE
(Along ℄ S. Clinton St.)



EXISTING PROFILE GRADE
(Along ℄ S. Canal St.)

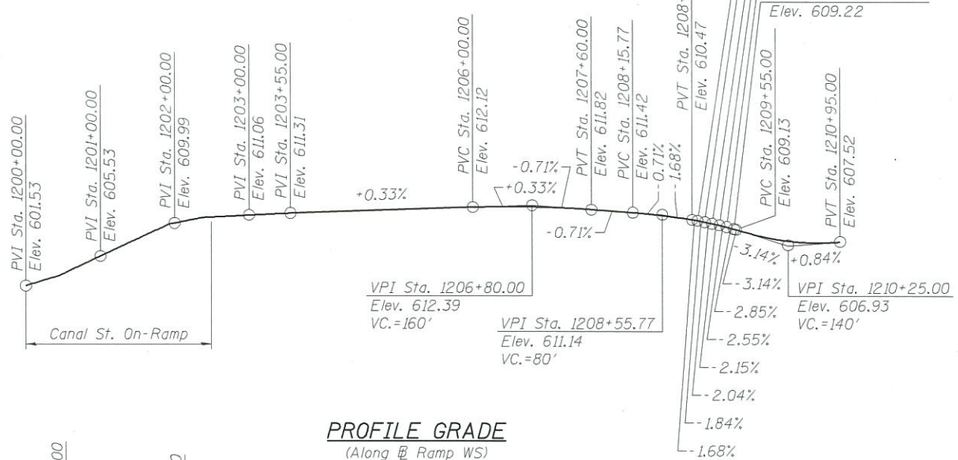


PROFILE GRADE
(Along ℄ Ramp NE)

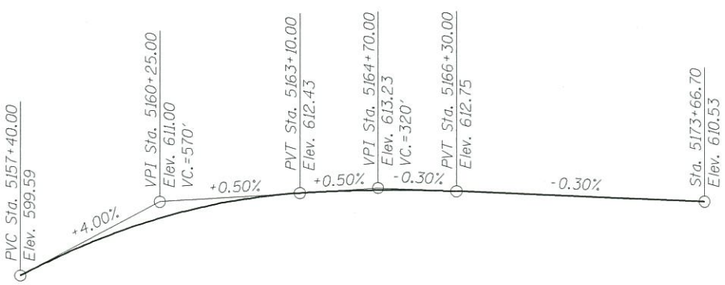


PROFILE GRADE
(Along ℄ Ramp WN)

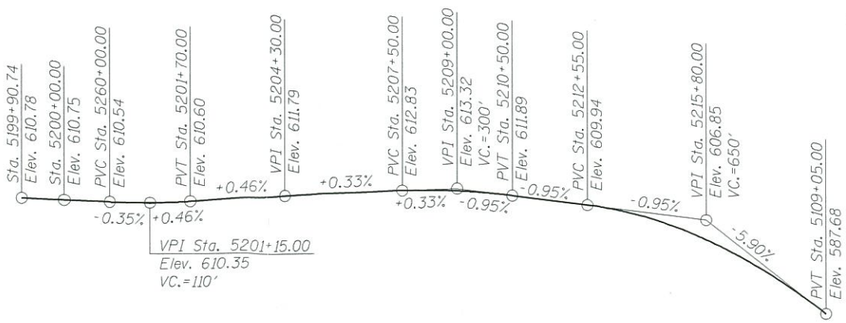
PROFILE GRADE
(Along ℄ Ramp SE)



PROFILE GRADE
(Along ℄ Ramp WS)



PROFILE GRADE
(Along ℄ EB I-290 (Congress))



PROFILE GRADE
(Along ℄ WB I-290 (Congress))

APPROVED

APR 23 2015

AS A BASIS FOR
PREPARATION OF DETAILED PLANS

* 60X75 (EB) or 60X78 & 60X93 (WB)
** 2014-001 R&B (EB) or 2014-004 R&B (WB)

PROFILE GRADES
I-290 (CONGRESS) VIADUCT OVER DES PLAINES ST. TO CANAL ST.
F.A.I. ROUTE 90/94/290
SECTION 2014-001 R&B (EB), 2014-004 R&B (WB)
COOK COUNTY
STATION 5165+03.09
STRUCTURE NO. 016-0461

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PARSONS BRINCKERHOFF	FILE NAME = USER	DESIGNED - PJL	REVISED -
		CHECKED - HA	REVISED -
	PLOT SCALE = NONE	DRAWN - DCP	REVISED -
	PLOT DATE = 4/3/2015	CHECKED - JIG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE REHABILITATION
STRUCTURE NO. 016-0461
SHEET NO. 10 OF 10 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	**	COOK	10	10
		CONTRACT NO. *		
ILLINOIS	FED. AID PROJECT			