Bench Mark: Cut "X" on ℄ of East Pier at ℄ Van Buren. Elev. 582.68.

Existing Structure: SN 016-2055. Constructed in 1958 under F.A.I. Route 2, Section 0101.2-1B. The bridge was extended to the east and west in 1999 under Section 0202.2-4B-R. Nine span bridge that measures 514'-0" from back to back of abutments. Out-to-out width of 60'-2". The spans are supported by 36" wide flange beams. Substructure is reinforced concrete stub abutments and multi-column piers founded on Drilled Shafts. The existing bridge is to be removed and replaced.

The existing bridge will be closed to traffic and detoured during construction.

No Salvage.

HIGHWAY CLASSIFICATION

F.A.U. Rte. 1423 (Van Buren Street)
Functional Class: Collector (Urban)
ADT: 4,600 (2012); 5,000 (2040)
ADTT: 115 (2012); 125 (2040)
DHV: 500 (One-Way)
Design Speed: 30 m.p.h.
Posted Speed: 30 m.p.h.
Two-Way Traffic
•Directional Distribution: 25 : 75

Ramp SW
Functional Class: Interstate
ADT: 24,500 (2012); 23,000 (2040)
ADTT: 907 (2012); 851 (2040)
DHV: 1,720 (2040)
Design Speed: 35 m.p.h.
Posted Speed: 35 m.p.h.
One-Way Traffic
Directional Distribution: NA

SB Taylor Exit
Functional Class: Interstate
ADT: NA (2012); 8,000 (2040)
ADTT: NA (2012); 240 (2040)
DHV: 590 (2040)
Design Speed: 25 m.p.h.
Posted Speed: 25 m.p.h.
One-Way Traffic
Directional Distribution: NA

Ramp SE
Functional Class: Interstate
ADT: 4,600 (2012); 5,000 (2040)
ADTT: 123 (2012); 134 (2040)
DHV: 440 (2040)
Design Speed: 25 m.p.h.
Posted Speed: 25 m.p.h.
One-Way Traffic
Directional Distribution: NA

F.A.I. Rte. 90/94 SB
Functional Class: Interstate
ADT: 100,100 (2012); 98,000 (2040)
ADTT: 11,351 (2012); 11,113 (2040)
DHV: 6,340 (2040)
Design Speed: 60 m.p.h.
Posted Speed: 45 m.p.h.
One-Way Traffic
Directional Distribution: NA

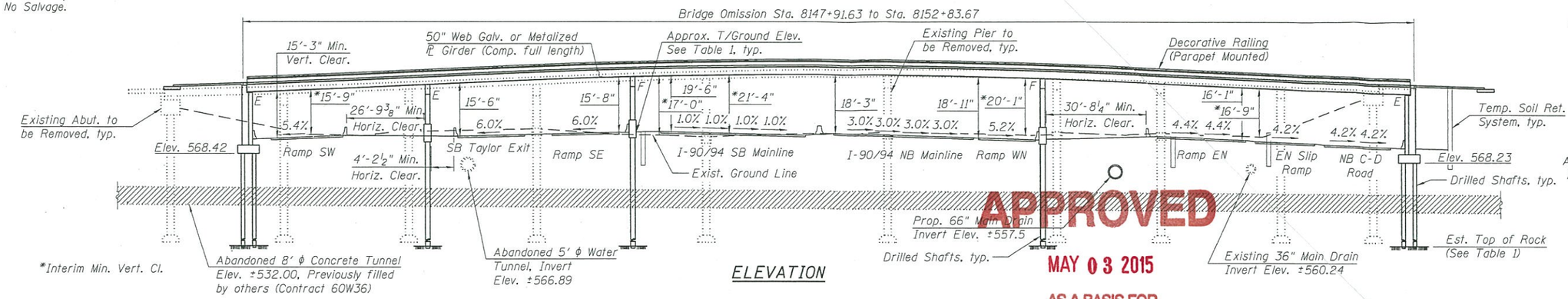
F.A.I. Rte. 90/94 NB
Functional Class: Interstate
ADT: 96,700 (2012); 81,000 (2040)
ADTT: 11,217 (2012); 9,396 (2040)
DHV: 4,780 (2040)
Design Speed: 60 m.p.h.
Posted Speed: 45 m.p.h.
One-Way Traffic
Directional Distribution: NA

Ramp WN
Functional Class: Interstate
ADT: 7,200 (2012); 9,000 (2040)
ADTT: 204 (2012); 255 (2040)
DHV: 790 (2040)
Design Speed: 30 m.p.h.
Posted Speed: 30 m.p.h.
One-Way Traffic
Directional Distribution: NA

Ramp EN
Functional Class: Interstate
ADT: 26,600 (2012); 31,000 (2040)
ADTT: 1,032 (2012); 1,203 (2040)
DHV: 1,910 (2040)
Design Speed: 30 m.p.h.
Posted Speed: 30 m.p.h.
One-Way Traffic
Directional Distribution: NA

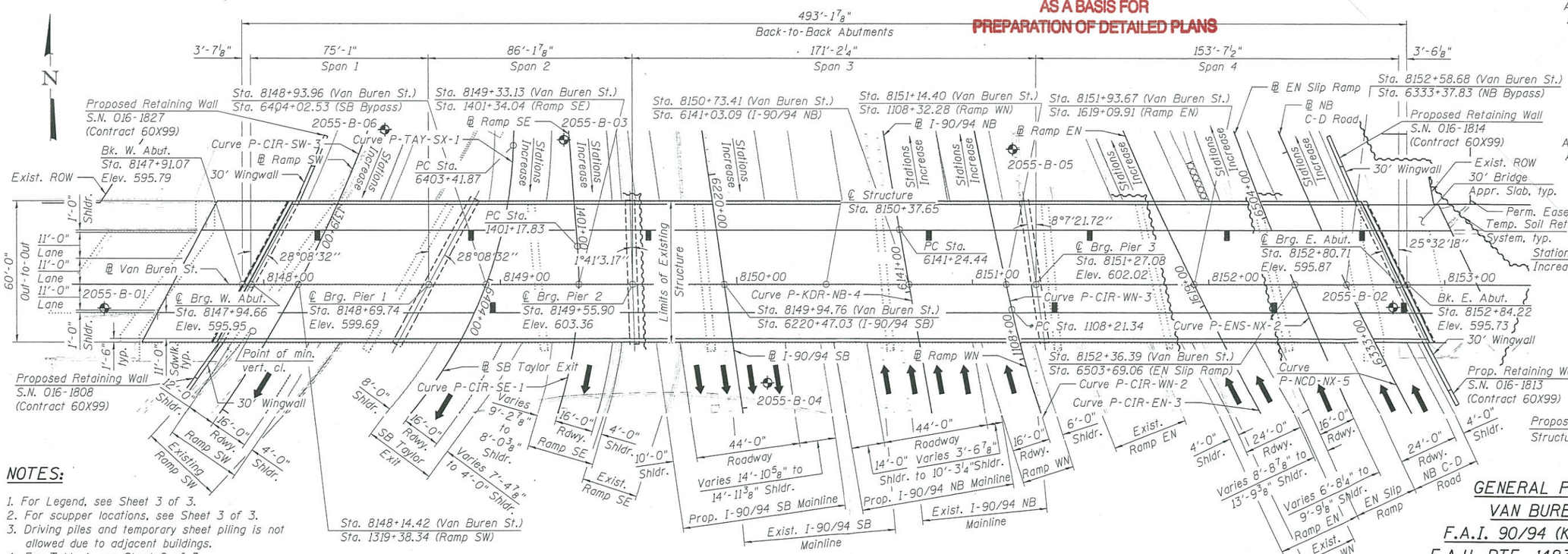
EN Slip Ramp
Functional Class: Interstate
ADT: NA (2012); 5,000 (2040)
ADTT: NA (2012); 195 (2040)
DHV: 360 (2040)
Design Speed: 40 m.p.h.
Posted Speed: 35 m.p.h.
One-Way Traffic
Directional Distribution: NA

NB C-D Road
Functional Class: Interstate
ADT: NA (2012); 17,000 (2040)
ADTT: NA (2012); 440 (2040)
DHV: 1,680 (2040)
Design Speed: 30 m.p.h.
Posted Speed: 30 m.p.h.
One-Way Traffic
Directional Distribution: NA

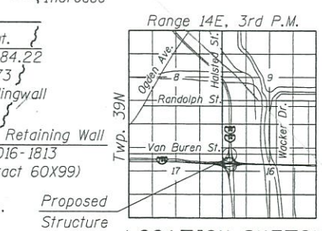


ELEVATION

APPROVED
MAY 03 2015
AS A BASIS FOR PREPARATION OF DETAILED PLANS



PLAN



LOCATION SKETCH

NOTES:

1. For Legend, see Sheet 3 of 3.
2. For scupper locations, see Sheet 3 of 3.
3. Driving piles and temporary sheet piling is not allowed due to adjacent buildings.
4. For Table 1, see Sheet 2 of 3.
5. All structural steel shall be galvanized or metalized (thermal spraying).
6. Three traffic lanes must be maintained in each direction at all times along I-90/94.
7. All ramps will remain open with temporary pavement if necessary.

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition

DESIGN STRESSES

FIELD UNITS

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

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.085g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.144g
Soil Site Class = D

GENERAL PLAN & ELEVATION
VAN BUREN STREET OVER
F.A.I. 90/94 (KENNEDY EXPRESSWAY)
F.A.U. RTE. 1423 - SECTION XXXX-XXXX
COOK COUNTY
STATION 8150+37.65
STRUCTURE NO. 016-1707

TranSystems

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	CHECKED - KAH/DL	REVISED	
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PLOT DATE = 5/14/2015	CHECKED - KAH/DL	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 3 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1423	XXXX-XXXX	COOK	3	1
		CONTRACT NO. 60X99		
		ILLINOIS FED. AID PROJECT		

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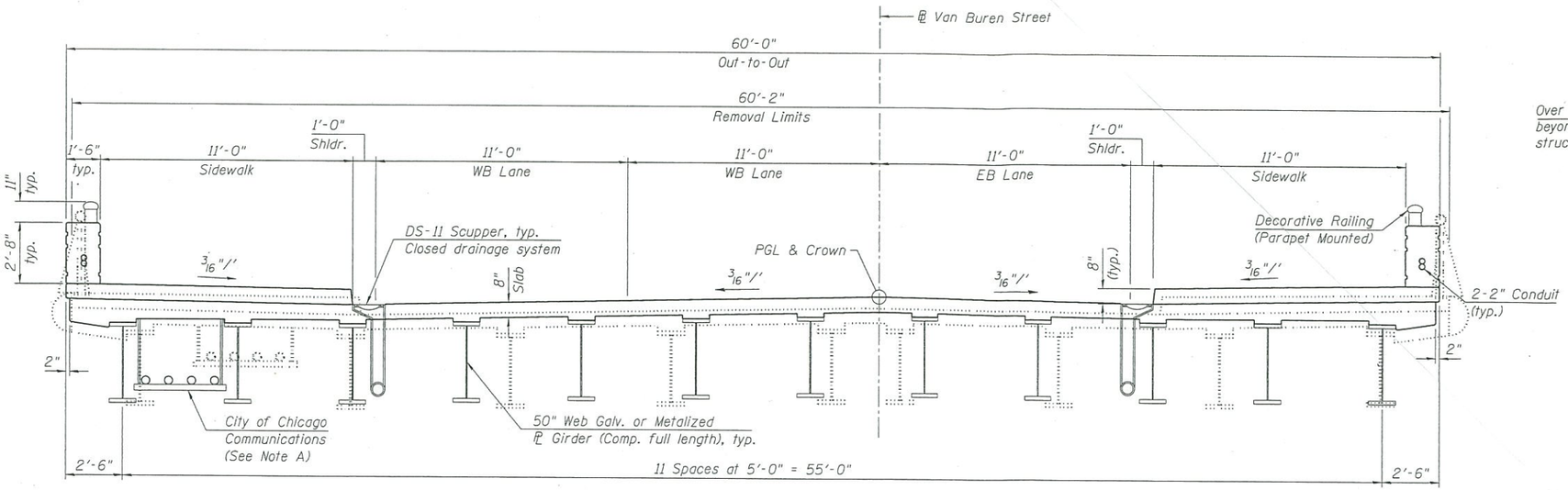
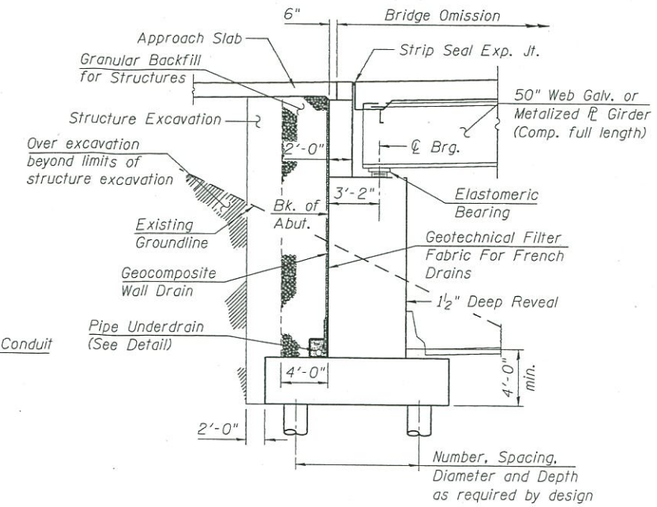


CROSS SECTION

(Looking East)



SECTION THRU WEST ABUTMENT

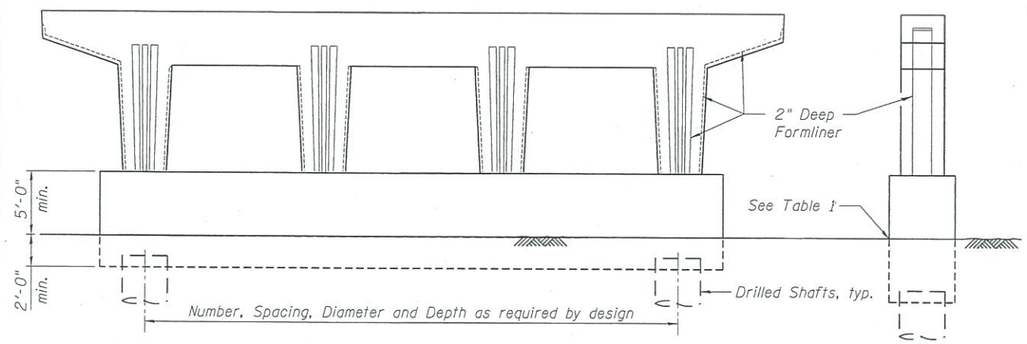
(Formliner not shown for clarity)
(Horiz. dim. at Rt. L's)

Note A:
Existing utilities between girders will be relocated to provide uninterrupted service during construction. Provisions will be made to accomodate the existing utilities into the proposed structure.

APPROVED

MAY 03 2015

AS A BASIS FOR PREPARATION OF DETAILED PLANS

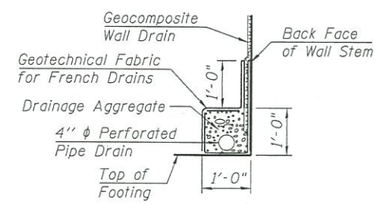


PIER SKETCH

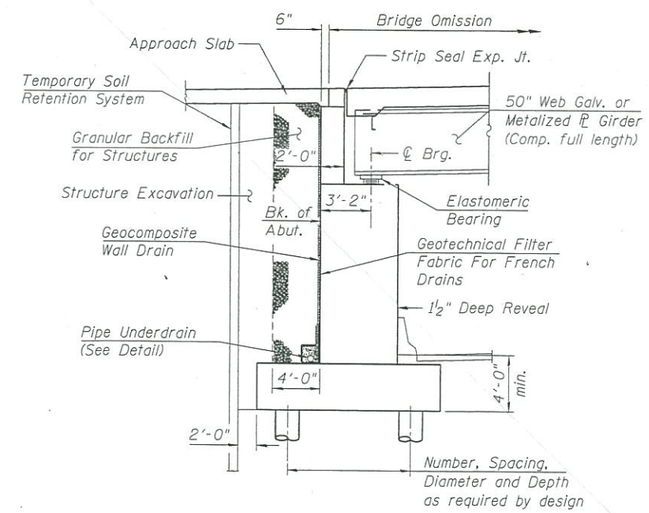
END VIEW

TABLE 1

Location	Approx. T/Ground Elev.	Approx. T/Rock Elev.
W. Abut.	574.42	480.00
Pier 1	577.84	480.00
Pier 2	577.18	480.00
Pier 3	577.17	480.00
E. Abut.	574.23	480.00



PIPE UNDERDRAIN DETAIL



SECTION THRU EAST ABUTMENT

(Formliner not shown for clarity)
(Horiz. dim. at Rt. L's)

CURVE DATA
(℄ Ramp SW)

P-CIR-SW-3
P.I. Sta. = 1322+16.98
Δ = 83°35'08" (RT)
D = 10°03'07"
R = 570.00'
T = 509.51'
L = 831.54'
E = 194.53'
e = 5.40%
T.R. = NA
S.E. Run = 101'
P.C. Sta. = 1317+07.47
P.T. Sta. = 1325+39.01

CURVE DATA
(℄ SB Taylor Exit)

P-TAY-SX-1
P.I. Sta. = 6404+16.60
Δ = 43°59'21" (RT)
D = 30°58'14"
R = 185.00'
T = 74.72'
L = 142.03'
E = 14.52'
e = 6.00%
T.R. = NA
S.E. Run = 91'
P.C. Sta. = 6403+41.87
P.T. Sta. = 6404+83.91

CURVE DATA
(℄ Ramp SE)

P-CIR-SE-1
P.I. Sta. = 1401+94.82
Δ = 45°11'30" (RT)
D = 30°58'14"
R = 185.00'
T = 76.99'
L = 145.92'
E = 15.38'
e = 6.00%
T.R. = NA
S.E. Run = 91'
P.C. Sta. = 1401+17.83
P.T. Sta. = 1402+63.75

CURVE DATA
(℄ I-90/94 NB)

P-KDR-NB-4
P.I. Sta. = 6143+87.92
Δ = 12°26'15" (RT)
D = 2°22'10"
R = 2,418.00'
T = 263.48'
L = 524.89'
E = 14.31'
e = 5.00%
T.R. = 80'
S.E. Run = 268'
P.C. Sta. = 6141+24.44
P.T. Sta. = 6146+49.33

CURVE DATA
(℄ Ramp WN)

P-CIR-WN-2
P.I. 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

P-CIR-WN-3
P.I. Sta. = 1108+60.30
Δ = 1°51'47" (RT)
D = 2°23'29"
R = 2,396.00'
T = 38.96'
L = 77.91'
E = 0.32'
e = 5.00%
T.R. = NA
S.E. Run = NA
P.C. Sta. = 1108+21.34
P.T. Sta. = 1108+99.25

CURVE DATA
(℄ Ramp EN)

P-CIR-EN-3
P.I. Sta. = 1621+50.17
Δ = 28°56'55" (RT)
D = 4°48'53"
R = 1,190.00'
T = 307.19'
L = 601.25'
E = 39.01'
e = 4.40%
T.R. = NA
S.E. Run = 50'
P.C. Sta. = 1618+42.98
P.T. Sta. = 1624+44.23

CURVE DATA
(℄ EN Slip Ramp)

P-ENS-NX-2
P.I. Sta. = 6504+42.53
Δ = 11°16'16" (RT)
D = 4°13'09"
R = 1,358.00'
T = 134.00'
L = 267.14'
E = 6.60'
e = 4.20%
T.R. = NA
S.E. Run = 61'
P.C. Sta. = 6503+08.53
P.T. Sta. = 6505+75.67

CURVE DATA
(℄ NB C-D Road)

P-NCD-NX-5
P.I. Sta. = 6336+57.47
Δ = 35°13'31" (RT)
D = 4°12'24"
R = 1,362.00'
T = 432.42'
L = 837.42'
E = 67.00'
e = 4.20%
T.R. = 41'
S.E. Run = 87'
P.C. Sta. = 6332+25.05
P.T. Sta. = 6340+62.48

DETAILS
VAN BUREN STREET OVER
F.A.I. 90/94 (KENNEDY EXPRESSWAY)
F.A.U. RTE. 1423 - SECTION XXXX-XXXX
COOK COUNTY
STATION 8150+37.65
STRUCTURE NO. 016-1707

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 2 OF 3 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		CONTRACT NO. 60X99		
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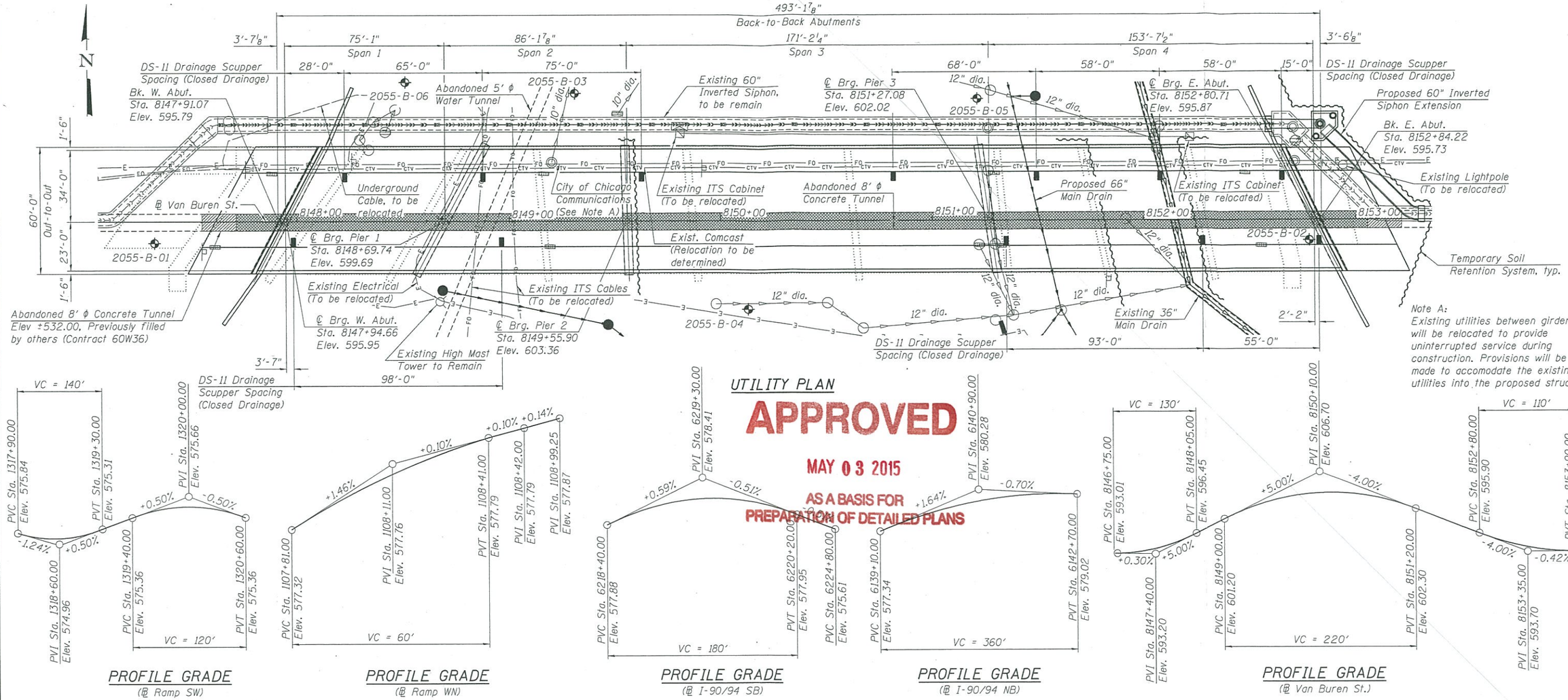


Note A:
Existing utilities between girders will be relocated to provide uninterrupted service during construction. Provisions will be made to accomodate the existing utilities into the proposed structure.

UTILITY PLAN

APPROVED
MAY 03 2015
AS A BASIS FOR PREPARATION OF DETAILED PLANS

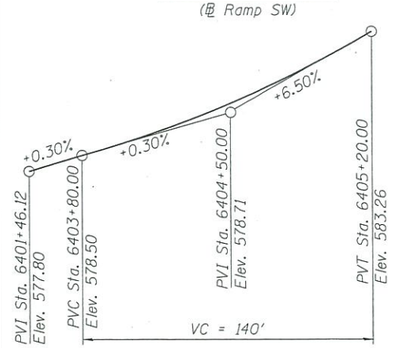
PROFILE GRADE
(℄ Ramp SW)

PROFILE GRADE
(℄ Ramp WN)

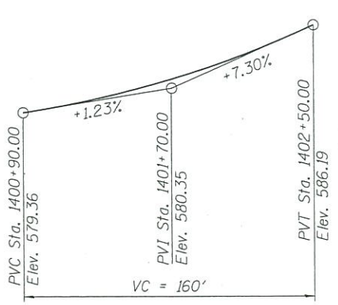
PROFILE GRADE
(℄ I-90/94 SB)

PROFILE GRADE
(℄ I-90/94 NB)

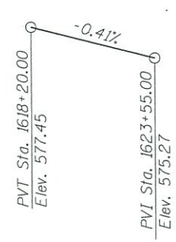
PROFILE GRADE
(℄ Van Buren St.)



PROFILE GRADE
(℄ SB Taylor Exit)



PROFILE GRADE
(℄ Ramp SE)



PROFILE GRADE
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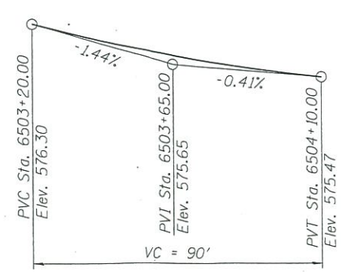
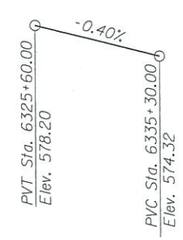


PROFILE GRADE
(℄ EN Slip Ramp)



PROFILE GRADE
(℄ NB C-D Road)

LEGEND:

- Electric — E —
- Prop. Storm Sewer
- Exist. Storm Sewer
- ITS Fiber Optic — FO —
- Underground Cable
- Light Pole
- Soil Boring
- Bulkhead and area filled with grout Previously filled by others (Contract 60W36)

Note:
The existing siphon layout at the northeast corner is to be revised to accommodate the wingwall footing.

UTILITY PLAN & PROFILES
VAN BUREN STREET OVER
F.A.I. 90/94 (KENNEDY EXPRESSWAY)
F.A.U. RTE. 1423 - SECTION XXXX-XXXX
COOK COUNTY
STATION 8150+37.65
STRUCTURE NO. 016-1707

TranSystems

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	CHECKED - KAH/DL	REVISED	
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PLOT DATE = 5/14/2015	CHECKED - KAH/DL	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 3 OF 3 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1423	XXXX-XXXX	COOK	3	3
		CONTRACT NO.	60X99	
		ILLINOIS FED. AID PROJECT		

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