ATC Pedestrian Bridge Project Status & Update
February 28, 2020
Souts Thavong, City of Aurora Public Work Division

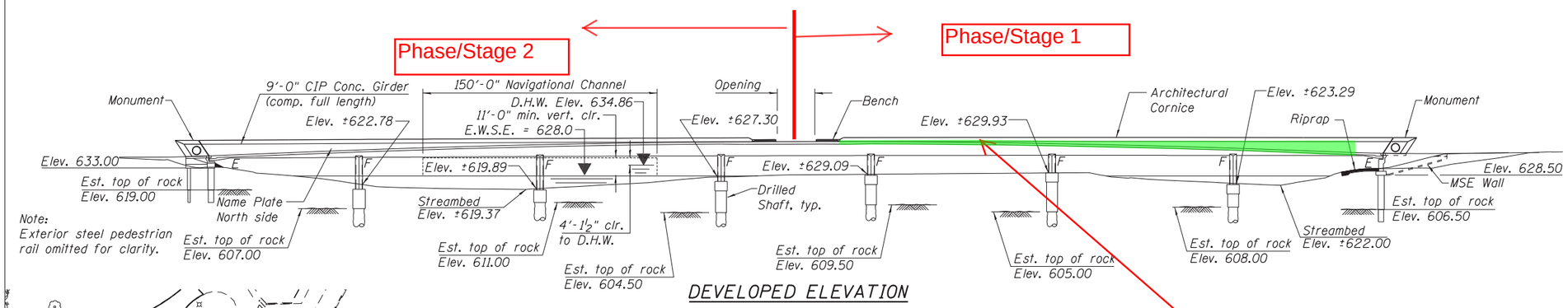
Bridge Construction

Contractors continue working through the winter months. Phase 1 falsework, formwork, decking platform and causeway stones are being remove in preparation of Phase 2 construction. Contractors continue assembling reinforcement cages for drilled shafts for Phase 2 and installing electrical conduits on top of upper box and installing under bridge lightings. Looking to start west causeway in the coming weeks. Addition information and construction updates are available on the City website at: https://www.aurora-il.org/1928/Aurora-Transportation-Center-ATC

Construction Pictures (see below):

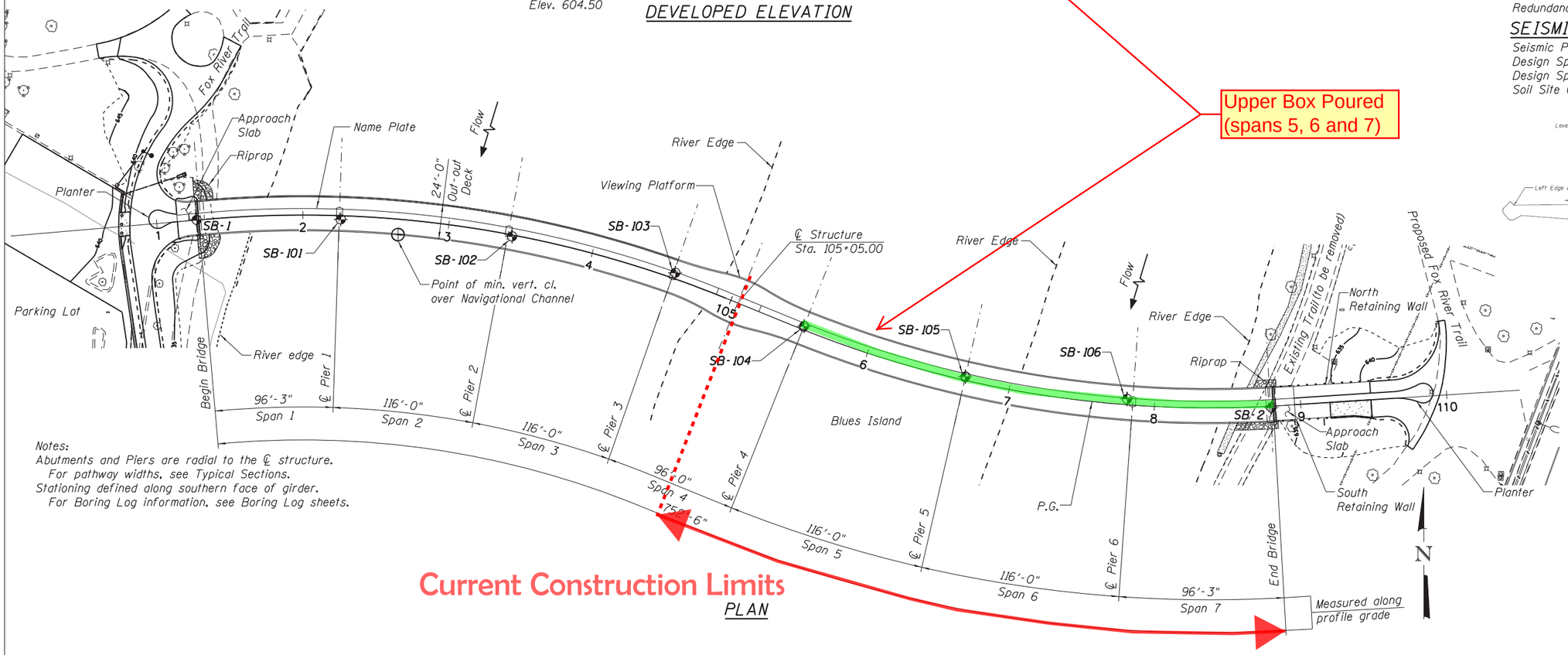
Bench Mark: Aurora Benchmark #13N. N: 1857347.747, E: 991419.405; Elev. = 638.39

Existing Structure: None



DEVELOPED ELEVATION

Upper Box Poured (spans 5, 6 and 7)



Current Construction Limits

PLAN

Notes:
Abutments and Piers are radial to the ℄ structure.
For pathway widths, see Typical Sections.
Stationing defined along southern face of girder.
For Boring Log information, see Boring Log sheets.

DESIGN STRESSES

FIELD UNITS:
f'c = 6,000 psi (Superstructure)
f'c = 4,000 psi (Substructure)
fy = 60,000 psi (Reinforcement)

DESIGN LOADING

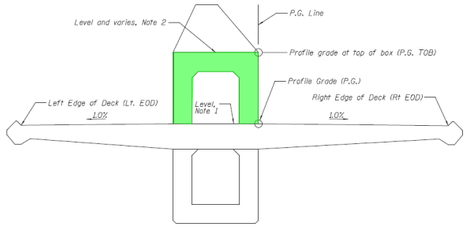
Pedestrian Live Load: 90 PSF
Truck Loads: H-10
Future Wearing Surface: 12.5 PSF
Snow Load: 4' @ 20 PCF
Ice Flow: 18" Depth
Temp. Range = 0° F - 80° F
Ambient Temp. = 50° F

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications 7th Ed., with 2015 and 2016 Interims.
2009 AASHTO LRFD Guide Specifications for Design of Pedestrian Bridges, with 2015 Interims.
Ductility Factor: η_D = 1.0
Importance Factor: η_I = 0.95
Redundancy Factor: η_R = 1.05

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) =0.064
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.123
Soil Site Class = C



TYPICAL SECTION
Looking Upstation

DESIGN SCOUR ELEVATION TABLE

Event/Limit State	Design Scour Elevations (ft.)								Item 113
	W. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	Pier 6	E. Abut.	
Q100									
Q500	623.90	619.50	619.00	617.50	618.00	619.00	612.50	619.50	5
Design									
Check									

Pier scour elevations are to top of weathered rock.
Top of rock elevation shown in elevation view is to top of competent rock.

WATERWAY INFORMATION

Drainage Area = 1,705 mi²
Exist. Low Grade Elev. N/A @ Sta.
Prop. Low Grade Elev. 639.38 @ Sta. 102+66.00

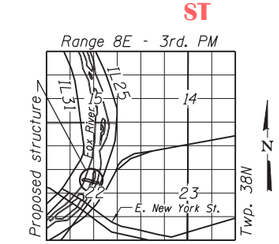
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	12,100	-	5,353	633.60	-	0.04	-	633.64
	30	15,000	-	5,903	634.34	-	0.04	-	633.38
Design	50	17,000	-	6,289	634.86	-	0.04	-	634.90
Base	100	18,600	-	6,594	635.27	-	0.04	-	635.31
Max. Calc.	500	24,100	-	7,580	636.34	-	0.04	-	636.38

10 year velocity through existing bridge = N/A
10 year velocity through prop. bridge = 1.32 fps

STATE OF ILLINOIS
PHILLIP D. FREY
081-004826
CHICAGO, ILLINOIS
LICENSED STRUCTURAL ENGINEER

Signed Phillip D. Frey
Phillip D. Frey, S.E. Il. Lic. No. 081-004826
Expires 11-30-2018.
Date 10/12/2017

02/28/2020
ST



LOCATION SKETCH

FILE NAME = 045P008-XXXXX-001-GENPLAN&EL.dgn

T·Y·LIN INTERNATIONAL	USER NAME = imartin	DESIGNED - B. Sokolowski	REVISED - -
		CHECKED - P. Frey	REVISED - -
	PLOT SCALE = NO SCALE	DRAWN - R. Stone	REVISED - -
	PLOT DATE = 10/12/2017	CHECKED - D. Fitzwilliam	REVISED - -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 045-P008
SHEET NO. S-1 OF S-69 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2503	16-00313-00-MS	KANE	-	
		CONTRACT NO.		
		ILLINOIS FED. AID PROJECT		

02/03/2020- Pouring upper box in spans 5, 6 and 7

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02/03/2020- Pouring upper box in spans 5, 6 and 7

02/11/2020- Upper Box, after concrete pouring.

02/18/2020- Upper Box, after concrete pouring.

02/18/2020- Starting removal of formwork/platform. Looking NE.

02/11/2020- Starting removal of false and form work.

02/25/2020- Removal of false and form work and installation of under bridge lighting system- Looking SW.

02/25/2020- Removal of false and form work and installation of under bridge lighting system- Looking SW.

02/25/2020- Removal of false and form work and installation of under bridge lighting system- Looking SW.

02/25/2020- Bridge Deck- Looking East. Cold weather protection of upper box.

02/03/2020- Poured deck at viewing platform area-Span 4. Looking west

02/18/2020- Poured deck at viewing platform area-Span 4. Looking west

02/18/2020- Poured deck at viewing platform area-Span 4. Looking East

12/23/2019. Aerial view. Looking west

Photo taken by Matt Hampton - with Without

Photo taken by Matt Springman - with AirDrop