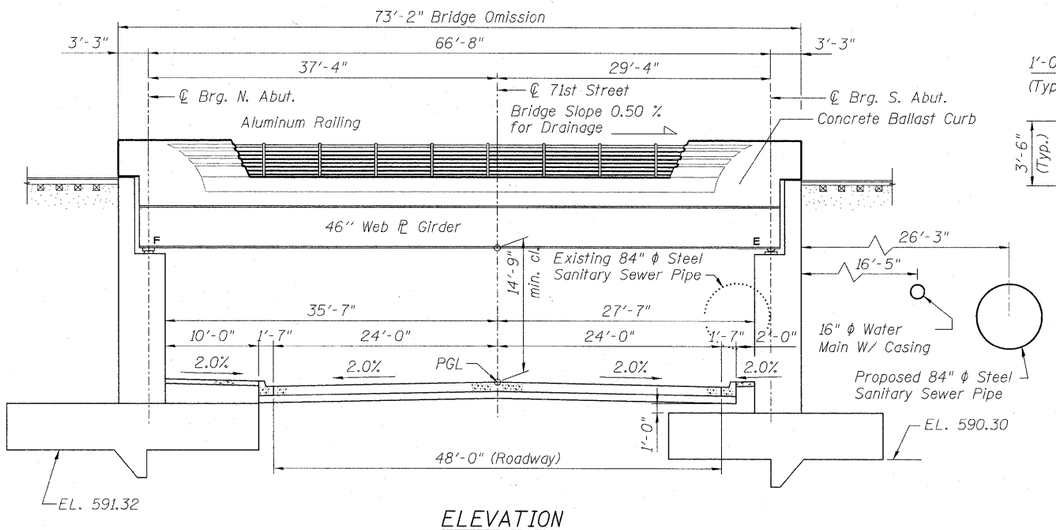
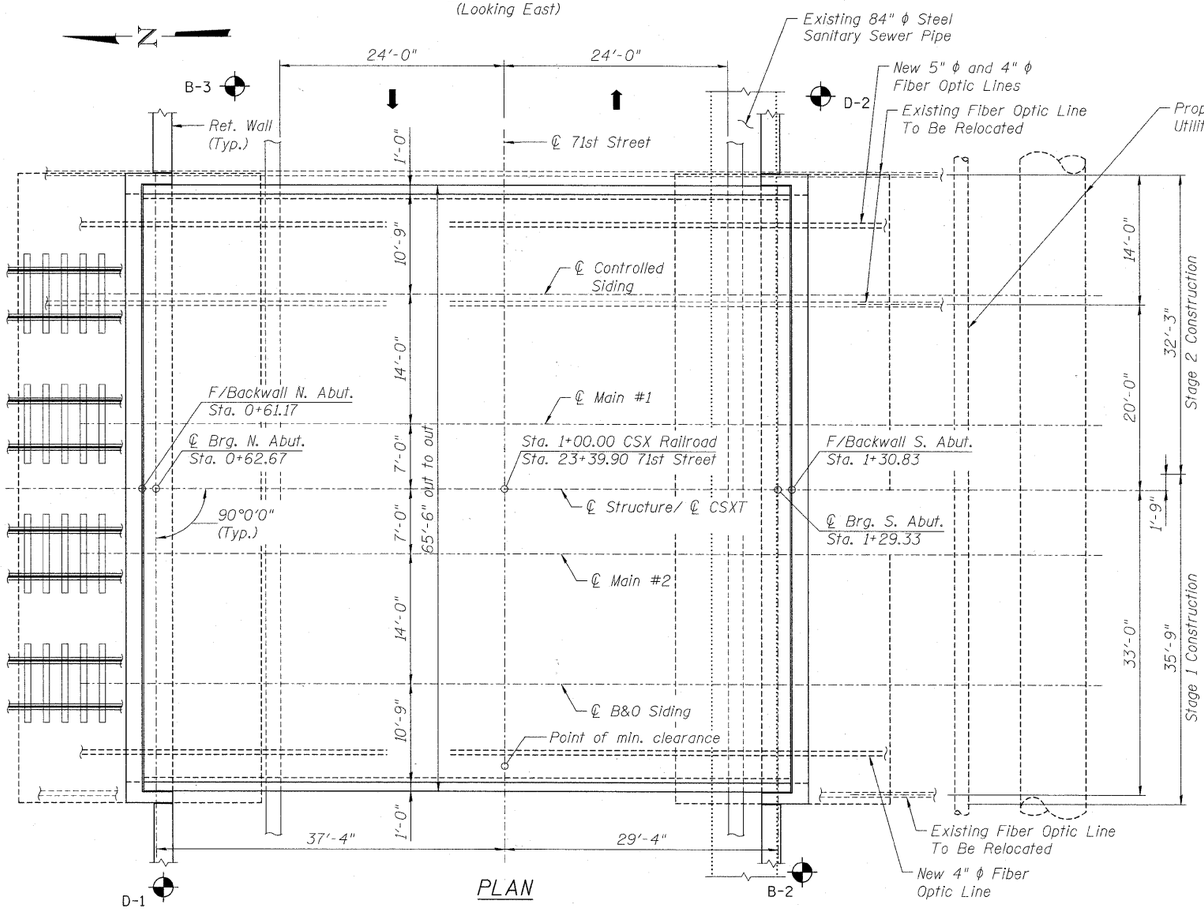
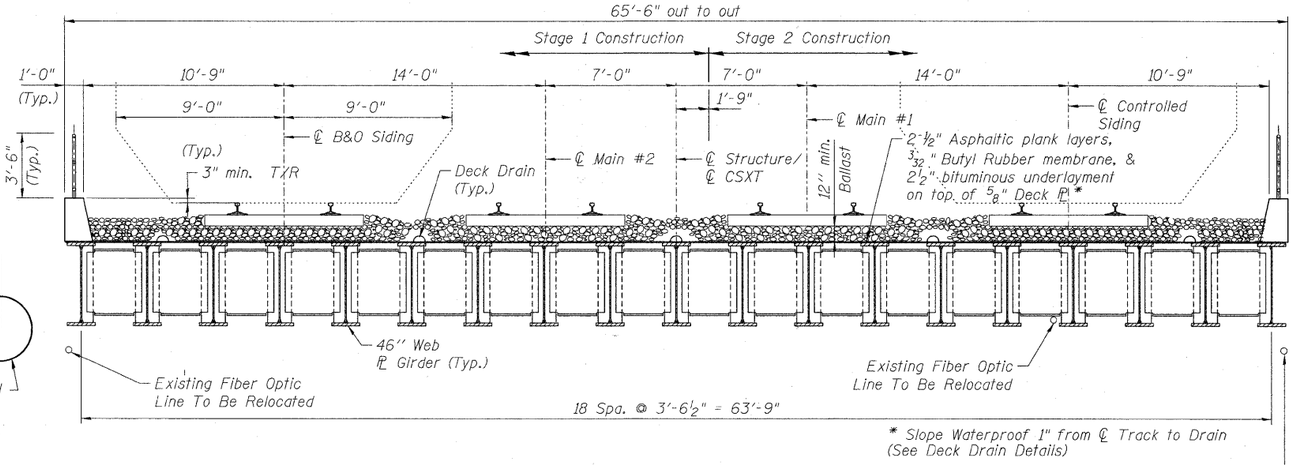


ELEVATION
(Looking East)



PLAN



* Slope Waterproof 1" from ℄ Track to Drain (See Deck Drain Details)

TYPICAL SECTION THRU SUPERSTRUCTURE
(Looking North)

BENCH MARK
BVW249 Square cut on north concrete base of RR signal mast arm base on south row of 71st Street, ½ mile west of Harlem Ave. Elev.= 620.57'.
Existing Structure: None.

BRAD M. RADOVICH 081.005954 REGISTERED STRUCTURAL ENGINEER OF ILLINOIS

Brad M Radovich March 16, 2011
BRAD M. RADOVICH DATE
LICENSE EXPIRES 11/30/2012
SHEET RANGE SHEET 95 - 163

"I certify that to the best of knowledge, information and belief, this bridge/box culvert design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AREMA "Manual for Railway Engineering."

DESIGN SPECIFICATIONS
American Railway Engineering & Maintenance-of-Way Association (AREMA) Manual for Railway Engineering, 2009.
IDOT Standard Specifications for Road and Bridge Construction, Current Edition.
CSX Criteria for Ballast Deck Railroad Bridges, October 1, 1999.
2002 AASHTO - Standard Specifications for Highway Bridges. (Retaining Walls)

DESIGN STRESSES
FIELD UNITS
f'c = 3,500 psi (retaining walls)
f'c = 4,000 psi (substructure)
f'c = 5,000 psi (superstructure)
fy = 60,000 psi (reinforcement)
fy = 50,000 psi (struct.) (ASTM A709 Grade 50)

PRECAST UNITS
f'c = 5,000 psi

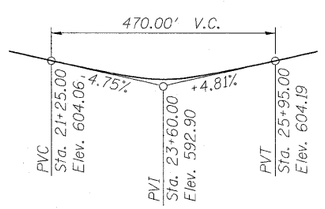
LOADING
Superstructure: Cooper E80 Live Load plus Impact for equipment without hammer blow.
Substructure: Cooper E80 Loading without Impact per AREMA.
Allow for future addition of 12" ballast.
Service Load Design

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04g
Soil Coefficient = 1.0

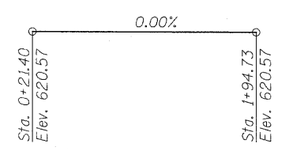
Railroad Crossing ID: 163 586 J
Milepost DIH: 25.83

HIGHWAY CLASSIFICATION

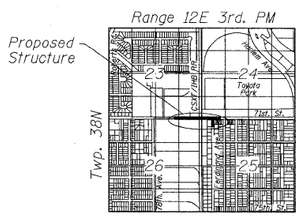
CSX Railroad	71st Street
Class: Railroad	Class: Local Street
	DHV: 735 (2030)
	ADT: 4,400 (2008)
	ADT: 7,000 (2030)
	ADTT: 1,100 (2030)
	Design speed: 35 mph
	Posted speed: 35 mph
	Two-Way Traffic
	Directional
	Distribution 50:50



PROFILE GRADE - 71st STREET



TOP OF RAIL ELEV. - CSX R.R.
(All tracks have the same elevations and grade)



LOCATION SKETCH

AECOM

USER NAME = kritzm	DESIGNED - BMR	REVISED -
PLOT SCALE = 01 '/ in.	DRAWN - CQM	REVISED -
PLOT DATE = 3/15/2011	CHECKED - DD	REVISED -
	DATE - 11/23/2010	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 016-7721

SCALE: | SHEET NO. 1 OF 65 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1537	06-00050-00-GS	COOK	209	95
		CONTRACT NO. 63556		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT CRE-9003(709)		

FILE NAME = P:\GB15B577\000.CAD\001_Drawings\Sheets\Structural\016-7721_IDOT_sh001_GenPlan.dgn