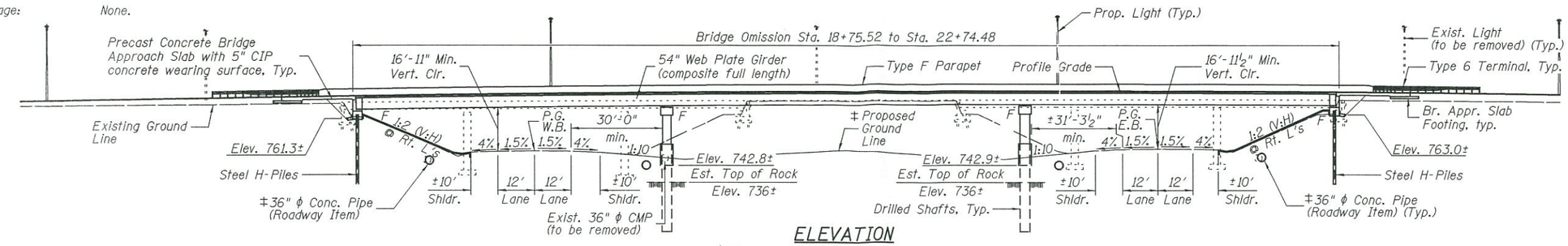
Bench Mark: Control Point 1002 - $\frac{5}{8}$" Iron Rod in southwest quadrant of existing intersection between C.H. 9 and the eastbound off ramp. Located 64.76' right of Station 26+70.01. Elevation = 767.58.

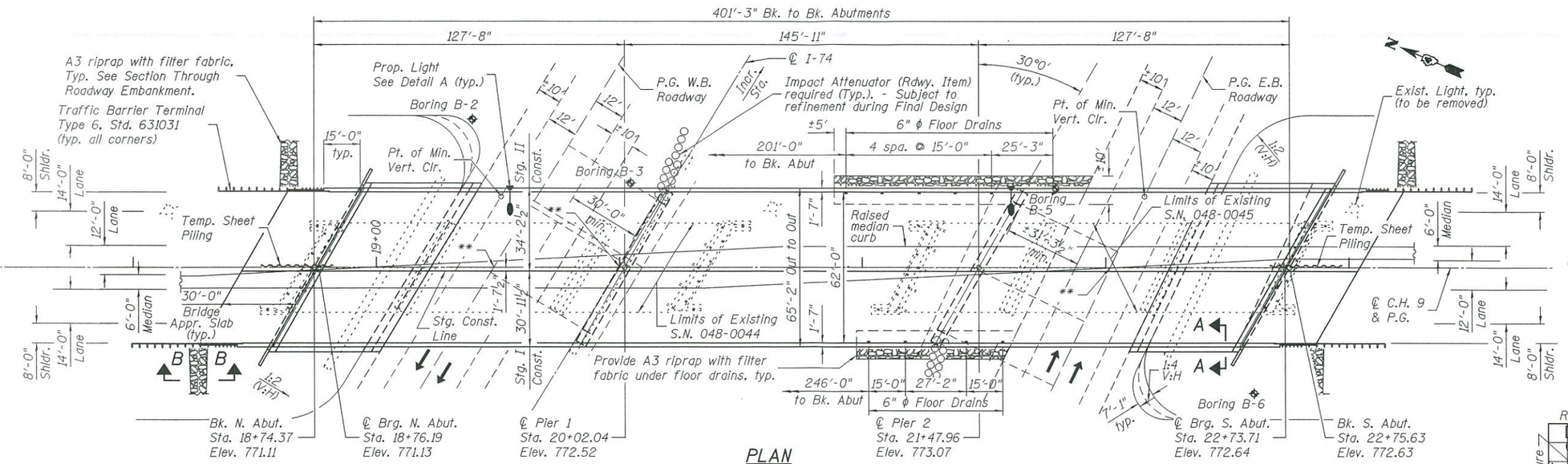
Existing Structures: S.N. 048-0044 (W.B.) and S.N. 048-0045 (E.B.) built in 1962 as S.A. Route 9 over F.A.I. Route 74, Sec. 48-27 HB-3 and HF-5 at Sta. 494+63.13. Existing structures consist of two separate three span rolled steel beam bridges, (49'-64'-49') for S.N. 048-0044 and (47'-61'-47') for S.N. 048-0045. The back to back abutment length of S.N. 048-0044 is 166'-8" and the bridge width is 35'-8" out to out . The back to back of abutment length of S.N. 048-0045 is 158'-7" and the bridge width is 35'-8" out to out. Both structures are supported on pile bent abutments and multiple column piers on spread footings. Both structures are to be replaced using stage construction. One lane of traffic is to be maintained during construction.

Salvage: None.



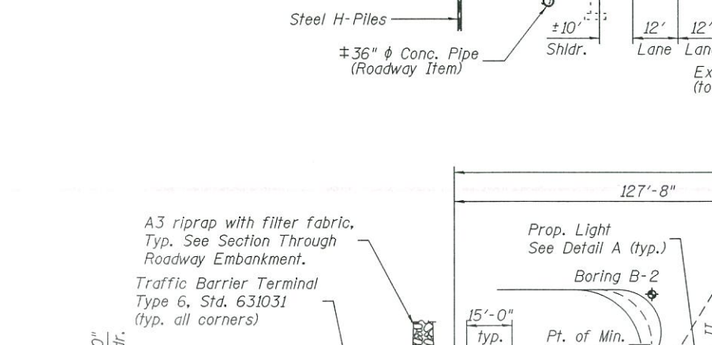
ELEVATION

‡ To be refined during Final Roadway Design.



PLAN

** ℄ C.H. 9 Sta. 19+48.30 = ℄ I-74 Sta. 494+36.26 (Off = 44.05' Lt) (W.B. P.G.)
℄ C.H. 9 Sta. 20+00.00 = ℄ I-74 Sta. 494+63.32
℄ C.H. 9 Sta. 22+01.87 = ℄ I-74 Sta. 495+69.02 (Off. =171.99' Rt.) (E.B. P.G.)



SECTION THRU CONCRETE SLOPEWALL

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.072
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.114
Soil Site Class = C

DESIGN SPECIFICATIONS

AASHTO LRFD Bridge Design Specifications, 6th edition with 2013 interims.

LOADING HL-93

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

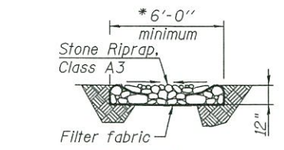
DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)
PRECAST UNITS (APPROACH SLABS)
f'c = 6,000 psi

HIGHWAY CLASSIFICATION

F.A.I. Rte. 74 - I-74
Functional Class: Interstate
ADT: 15700 (2012); 19157 (2035)
ADTT: 4025 (2012); 4911 (2035)
DHV: 1413
Design Speed: 70 m.p.h.
Posted Speed: 65 m.p.h.
Two-Way Traffic
Directional Distribution: 50/50

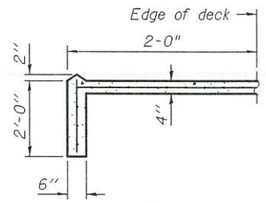
F.A.S. Rte. 1400 - County Highway 9
Functional Class: Major Collector (Non-Urban)
ADT: 4650 (2012); 5674 (2035)
ADTT: 632 (2012); 711 (2035)
DHV: 419
Design Speed: 60 m.p.h.
Posted Speed: 55 m.p.h.
Two-Way Traffic
Directional Distribution: 60 (NB)/40 (SB)



SECTION B-B THRU RDWY. EMBANKMENT

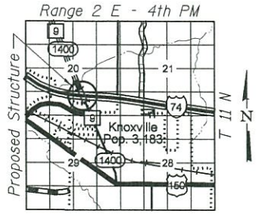
* Provides drainage down embankment from bridge appr. slab.

Riprap under floor drain drip line similar.



SECTION A-A

APPROVED
FEB 11 2014
AS A BASIS FOR PREPARATION OF DETAILED PLANS



LOCATION SKETCH

GENERAL PLAN & ELEVATION
CH-9 OVER I-74
F.A.S. 1400 - SECTION (48-27HB-3) BR
KNOX COUNTY
STA. 20+00.00
STRUCTURE NO. 048-0099

EFK•Moen, LLC
Civil Engineering Design
303 Fountain Parkway, Suite 240
Fairview Heights, IL 62208
Phone 618-206-4250

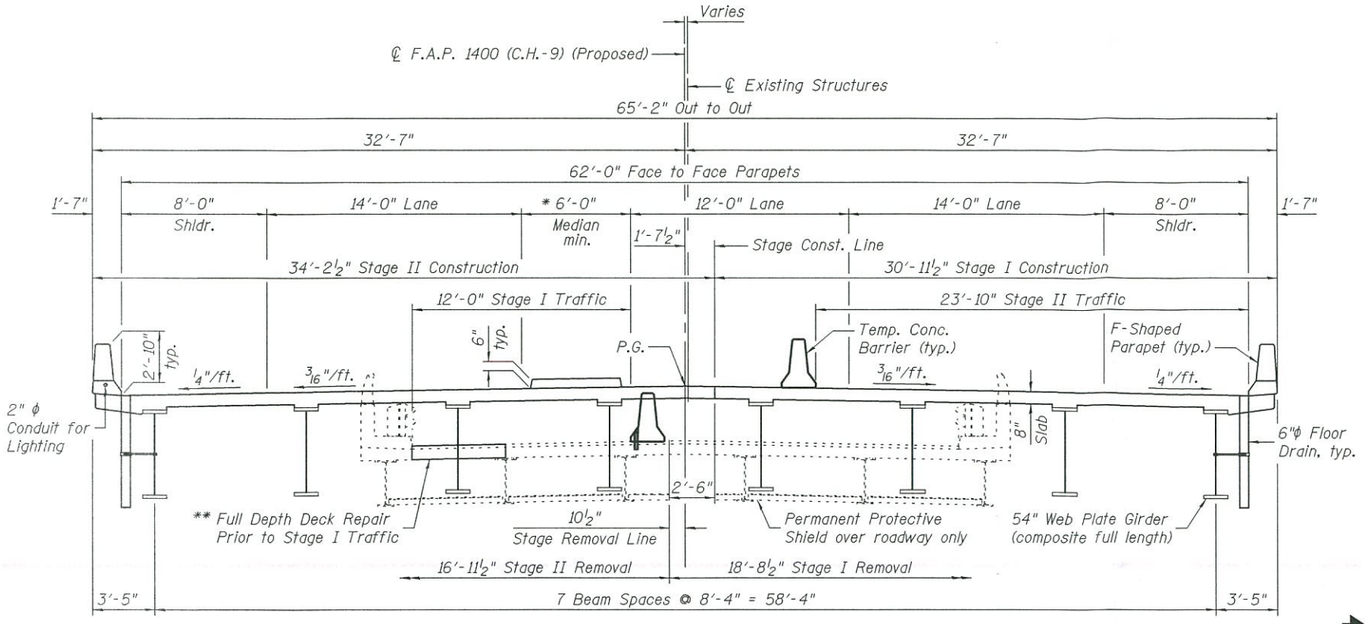
USER NAME = ctw	DESIGNED - CDL	REVISED -	
	CHECKED - CTW	REVISED -	
PLOT SCALE = Ø.2 '/ in.	DRAWN - JAA	REVISED -	
PLOT DATE = 2/6/2014	CHECKED - CTW	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 2 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1400	(48-27HB-3) BR	KNOX		
		CONTRACT NO.		
	ILLINOIS FED. AID PROJECT			

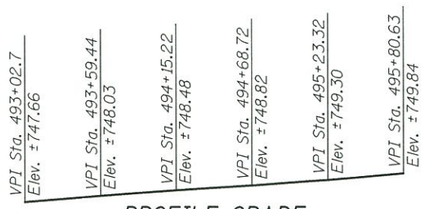
PRINT DATE: 2/6/2014 8:07:04 AM Y:\13078 IDOT I-74 CH-9\GDN\Bridge\prelim\Plotsheets\TSL.dgn



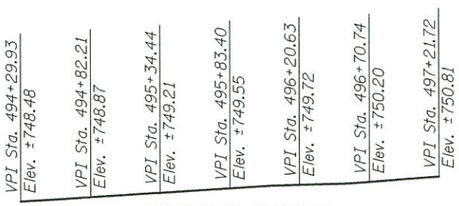
CROSS SECTION
(Looking South)

* Varies 6'-0" to ±16'-4". (Installed during Stage III Construction)

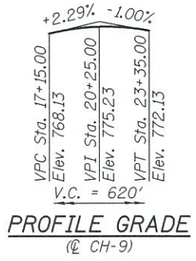
** The condition of the existing deck for the duration of Stage I Traffic should be verified during final design, based on the current Damage Inspection Report. Full Depth Deck Repair is required prior to Stage I Traffic at the direction of the Engineer.



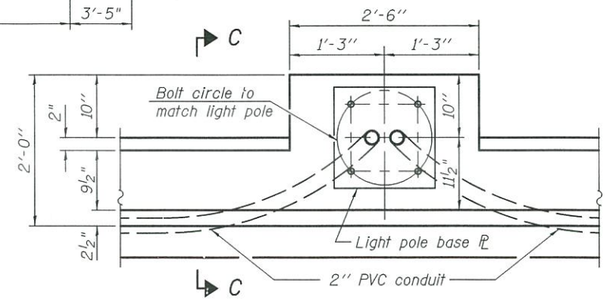
PROFILE GRADE
(along PG W.B. I-74)



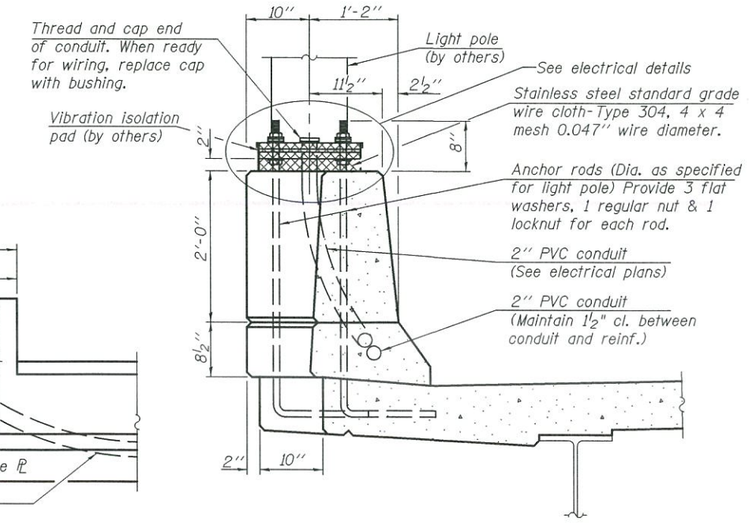
PROFILE GRADE
(along PG E.B. I-74)



PROFILE GRADE
(℄ CH-9)



PART PLAN

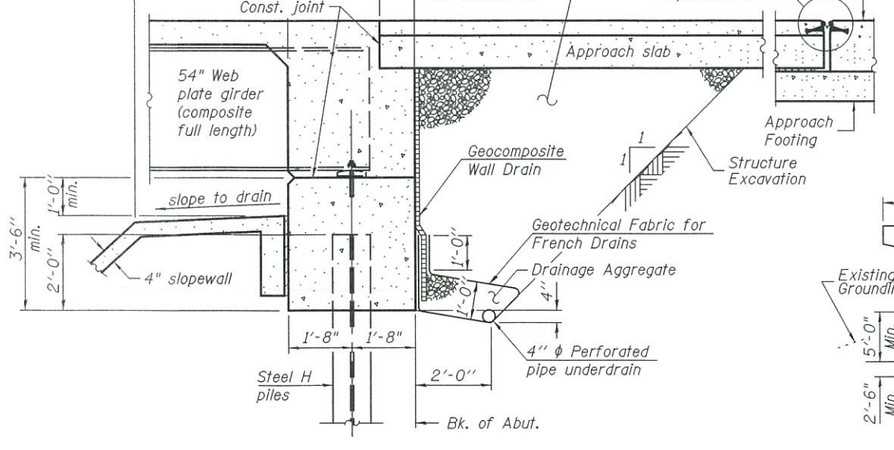


SECTION C-C

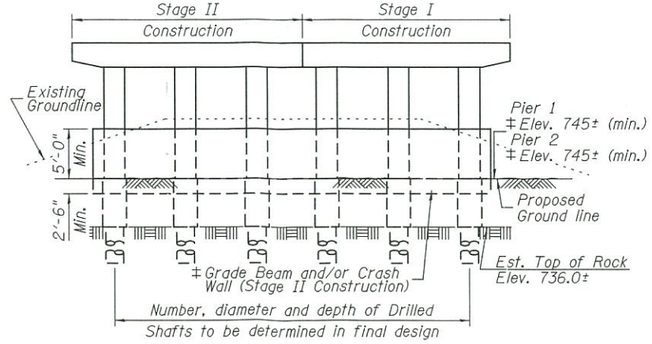
Note: Cost of anchor rods and conduit is included with Concrete Superstructure.

DETAIL A - PARAPET/LIGHTING DETAILS

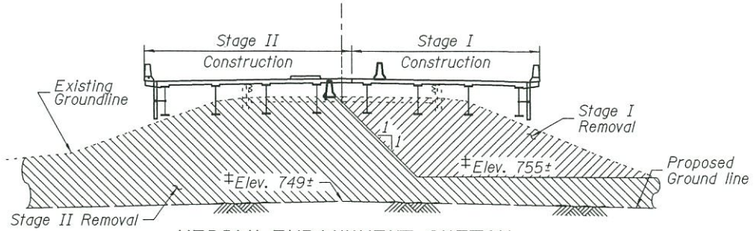
Note: Size and location of lights is subject to refinement by District during Final Roadway Design. Lights shall not be placed at parapet joints.



SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)



PIER SKETCH
‡To be refined during Final Design



MEDIAN EMBANKMENT SKETCH
‡To be refined during Final Design

APPROVED
FEB 11 2014
AS A BASIS FOR PREPARATION OF DETAILED PLANS

DETAILS
CH-9 OVER I-74
F.A.S. 1400 - SECTION (48-27HB-3) BR
KNOX COUNTY
STA. 20+00.00
STRUCTURE NO. 048-0099

PRINT DATE: 2/6/2014 8:07:35 AM V:\13870 IDOT I-74 CH-9\DGN\Bridge\preliun\Plotsheets\TSL.dgn

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USER NAME = ctw	DESIGNED - CDL	REVISED -	
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PLOT SCALE = 0.2 '/ in.	DRAWN - JAA	REVISED -	
PLOT DATE = 2/6/2014	CHECKED - CTW	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 2 OF 2 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1400	(48-27HB-3) BR	KNOX		
		CONTRACT NO.		
	ILLINOIS FED. AID PROJECT			