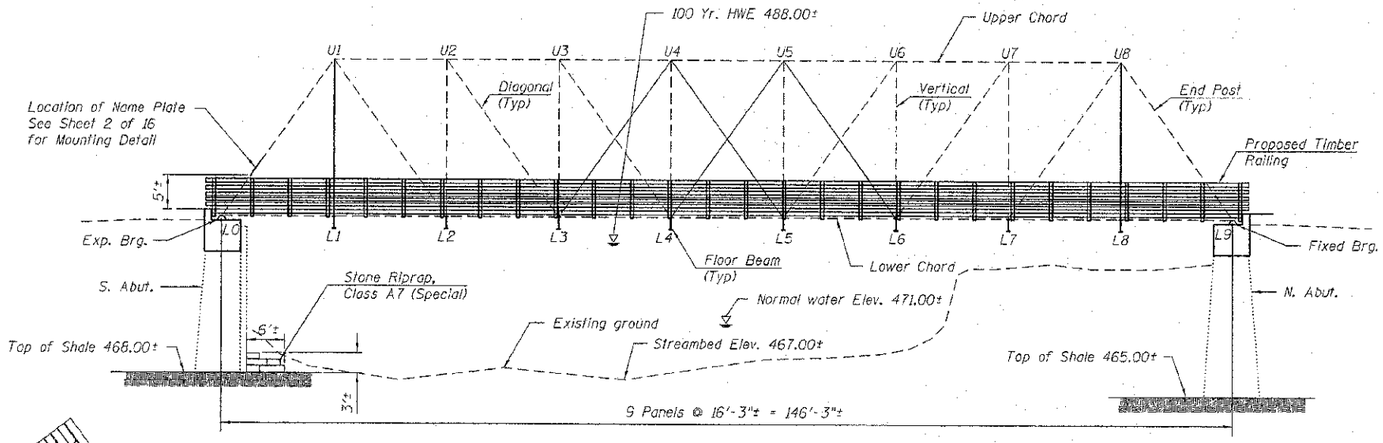
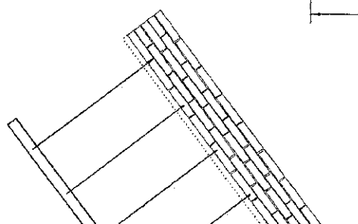
Bench Mark: BM#5. North rim of manhole. 175.3' RT, Sta 150+72.7. Elev 493.13

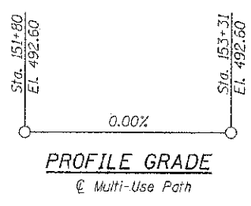
Existing Structure: S.N. 040-3084 built in 1890.
The current structure is a Single Span Thru Pratt Truss Bridge constructed on masonry abutments of large limestone blocks. It has a length of 146'-3" C-C of bearings and a width of ±16'-6" inside to inside of trusses. The floor for the truss consists of treated timber planks resting on 8 steel floor stringers running the length of the bridge.
The existing structure will be rehabilitated to carry pedestrian traffic.

Salvaged Materials:
1. Existing Limestone removed from abutments shall be salvaged and used as Riprap at the South Abutment and Wingwall.
2. Existing barricades and signage shall be stockpiled on site and will be removed by the City of Newton.

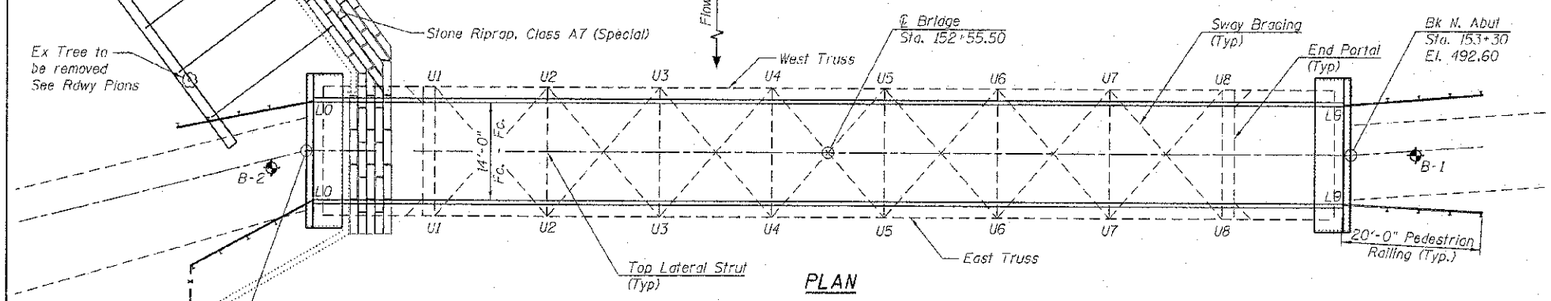


ELEVATION





PROFILE GRADE
℄ Multi-Use Path



PLAN

STATE OF ILLINOIS
DAVID BOOHER
4775
SPRINGFIELD, ILL.
LICENSED STRUCTURAL ENGINEER

I certify that to the best of my knowledge, information and belief, this bridge 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 "AASHTO Guide Specifications for Design of Pedestrian Bridges".

4-11-2013
Date

David Booher, Illinois S.E. 081-004775
Expires 11-30-2014

EMBARRAS RIVER
RE-BUILT 20 BY
CITY OF NEWTON
SEC. 10-00045-00-BT
LOADING H-10
STR. NO. 040-3084

NAME PLATE
See Sta. 515001

INDEX OF SHEETS

1. General Plan & Elevation
2. General Notes & Bill of Material
3. Construction Details
4. Truss Layout
5. Timber Deck & Railing Plan
6. Timber Deck Framing Detail
7. Timber Details
8. Steel Framing Plan
9. Replacement Counter Details
10. Pin & Pin Plate Details
11. Bearing Details
12. North Abutment Details
13. South Abutment Details
14. Southwest Wingwall Details
15. Bridge Approach Railing
16. Soil Boring Logs

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	N. Abut.	S. Abut.
	465.00±	468.00±

LOADING

Vehicle Load: H-10 Truck
Pedestrian Load: 65 psf uniform load (Primary Members)
85 psf uniform load (Secondary Members)

DESIGN SPECIFICATIONS

AASHTO 2002 Standard Specifications for Highway Bridges, 17th Edition
AASHTO 1997 Guide Specifications for Design of Pedestrian Bridges

DESIGN STRESSES

FIELD UNITS (NEW CONSTRUCTION)

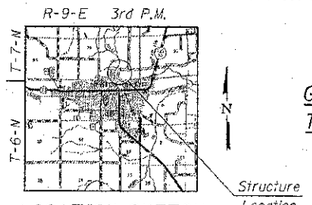
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 36,000 psi (Steel Members)
fb = 1,600 psi (Timber)
fb = 1,850 psi (Timber Planking)

FIELD UNITS (EXISTING CONSTRUCTION)

fy = 14,000 psi (Wrought Iron members)

SEISMIC DATA

Seismic Performance Category (SPC) A
Bedrock Acceleration Coeffecient (A) = 0.075g
Site Coeffecient (S) = 2.0



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
TR 164 OVER EMBARRAS RIVER
SECTION 10-00045-00-BT
JASPER COUNTY
STATION 152+55.50
STRUCTURE NO. 040-3084

FILE NAME = S:\Projects\2012 JOBS\12-15-5181 M&G Newton Bike Path\CAD\FADD Sheets\0403084-xxxxx-201-GPE.dgn
MODEL = PRINTSET
PLOT DRIVER = $PLTDRV$

QUIGG ENGINEERING INC

USER NAME = kchapman	DESIGNED -	REVISED	
FILE NAME = 0403084-xxxxx-201-GPE.dgn	CHECKED -	REVISED	
PLOT SCALE = 42.0000 '/ in.	DRAWN -	REVISED	
PLOT DATE = 4/11/2013	CHECKED -	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 040-3084
SHEET NO. 1 OF 16 SHEETS

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
164	10-00045-00-BT	JASPER	16	16
		CONTRACT NO.		
		ILLINOIS FED. AID PROJECT		