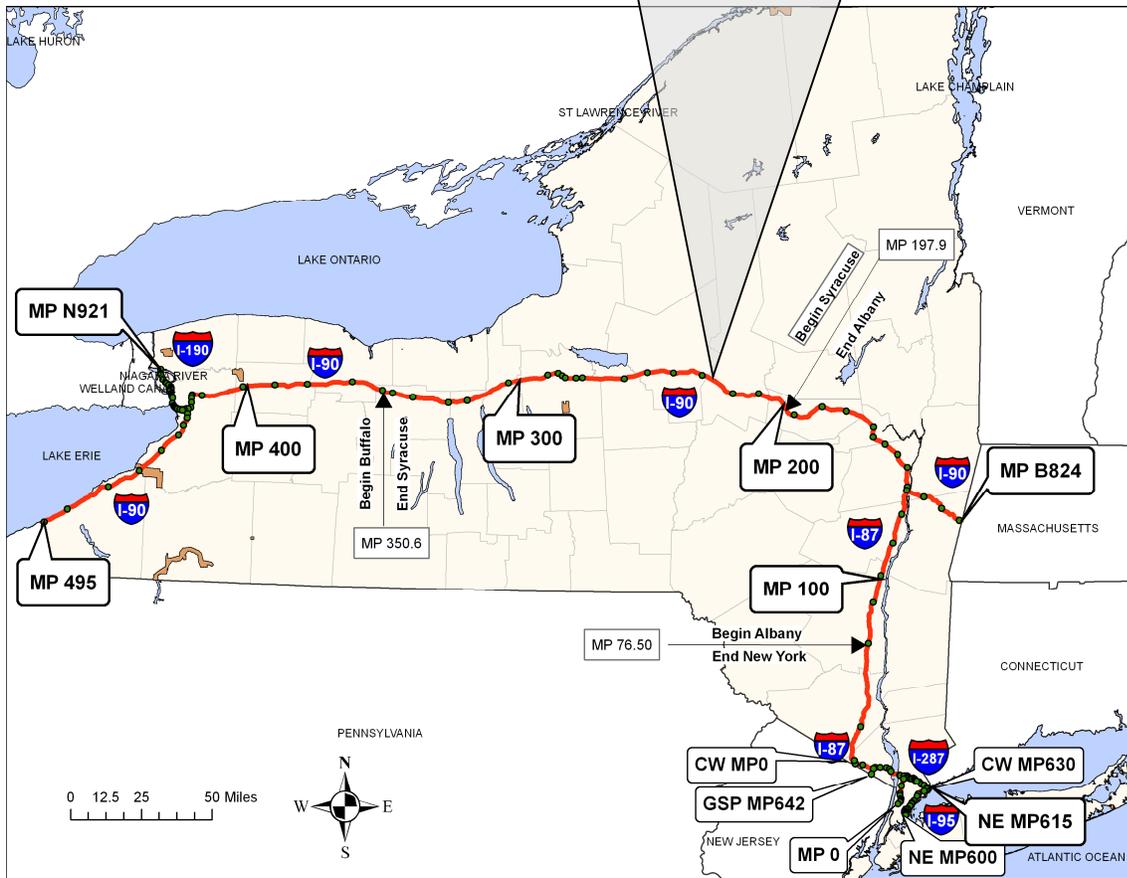


# TRANSPORTATION

## FINAL DESIGN REPORT

June 2017

Bridge Project  
 NYSTA D214386  
 PIN S52886 B571.1  
 MP 225.48 & 225.49, BIN: 5516072 & 5516071  
 Interstate 90 over Millers Grove Road (CR 53)  
 Herkimer County  
 Town of Schuyler



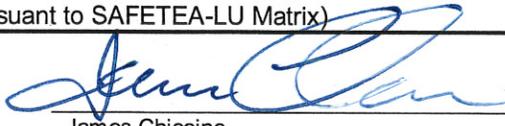
# PROPOSED

# PROJECT APPROVAL SHEET

(Pursuant to SAFETEA-LU Matrix)

**A. Capital Plan Project Proposal Approved**

The project is ready to be added to the NYSTA Capital Program



James Chicoine,  
Director of Program Capital Management

7/24/17  
Date

**B. Scope Approval**

The project cost, schedule, and scope of work are consistent with the NYSTA Capital Program

Scoping Concurrent w/ Design (Approved by):



Thomas A. Mahar, P.E.  
Director of Engineering Support Services

8/1/17  
Date

**C. Public Hearing Certification (23 USC 128):**

A public hearing was not required.



David T. Vosburgh, P.E.  
Preliminary Design Project Manager

7/24/17  
Date

**D. Recommendation for Design Approval**

This Project Design Report has been reviewed and meets my approval. The report documents the project needs and has evaluated appropriate alternatives.



Patrick Hoehn, P.E.  
Division Director

7/21/17  
Date



Mark A. Hixson, P.E.  
Director, Maintenance and Operations

7/24/17  
Date



Timothy R. Conway, P.E.  
Director, Office of Design

7/24/2017  
Date

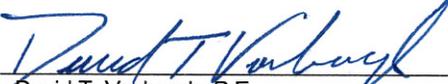
**E. Recommendation for Design and Nonstandard Feature Approval**

All requirements requisite to these actions and approvals have been met, the required independent quality control reviews separate from the functional group reviews have been accomplished, and the work is consistent with established standards, policies, regulations and procedures, except as otherwise noted and explained.



Albert S. Mastroianni, P.E.  
Director, Highway Design Bureau

7-24-17  
Date

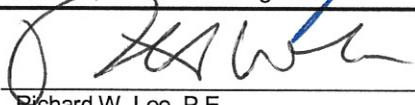


David T. Vosburgh, P.E.  
Director, Structures Design Bureau

7/24/17  
Date

**D. Nonstandard Feature Approval**

No nonstandard features have been created or will be retained.

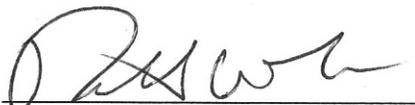


Richard W. Lee, P.E.  
Chief Engineer

8/9/17  
Date

**E. Design Approval**

The project cost, schedule, and scope of work are consistent with the NYSTA Capital Program. The required environmental determinations have been made and the preferred alternative for this project is ready for final design.



Richard W. Lee, P.E.  
Chief Engineer

8/9/17  
Date

## LIST OF PREPARERS

**This report was prepared by the following Consultant staff:**

Mark Laistner, P.E., Project Manager, Popli Design Group

**Description of Work Performed:**

Prepared all report chapters and appendices for the Design Approval Document in accordance with established standards, policies, regulations and procedures, except as otherwise explained in this document.



**Note:** *It is a violation of law for any person, unless they are acting under the direction of a licensed professional engineer, architect, landscape architect, or land surveyor, to alter an item in any way. If an item bearing the stamp of a licensed professional is altered, the altering engineer, architect, landscape architect, or land surveyor shall stamp the document and include the notation "altered by" followed by their signature, the date of such alteration, and a specific description of the alteration.*

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B.	Environmental Agency Correspondences
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D.	Structures Information
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**Separate Reports**

Cultural Resource Survey Report (PSP), February 2017
Hazardous Waste / Contaminated Materials Screening Report, February 2017
Hazardous Waste / Contaminated Materials Technical Memorandum, February 2017
Wetland Delineation Letter Report, February 10, 2017

## CHAPTER 1 – EXECUTIVE SUMMARY

### 1.1. Introduction

This project proposes to replace the existing bridges carrying Interstate 90 (I-90) eastbound (EB) and westbound (WB) over Millers Grove Road (CR 53), BINS 5516072 and 5516071, located at milepost 225.48 and 225.49 in the Town of Schuyler, Herkimer County, New York.

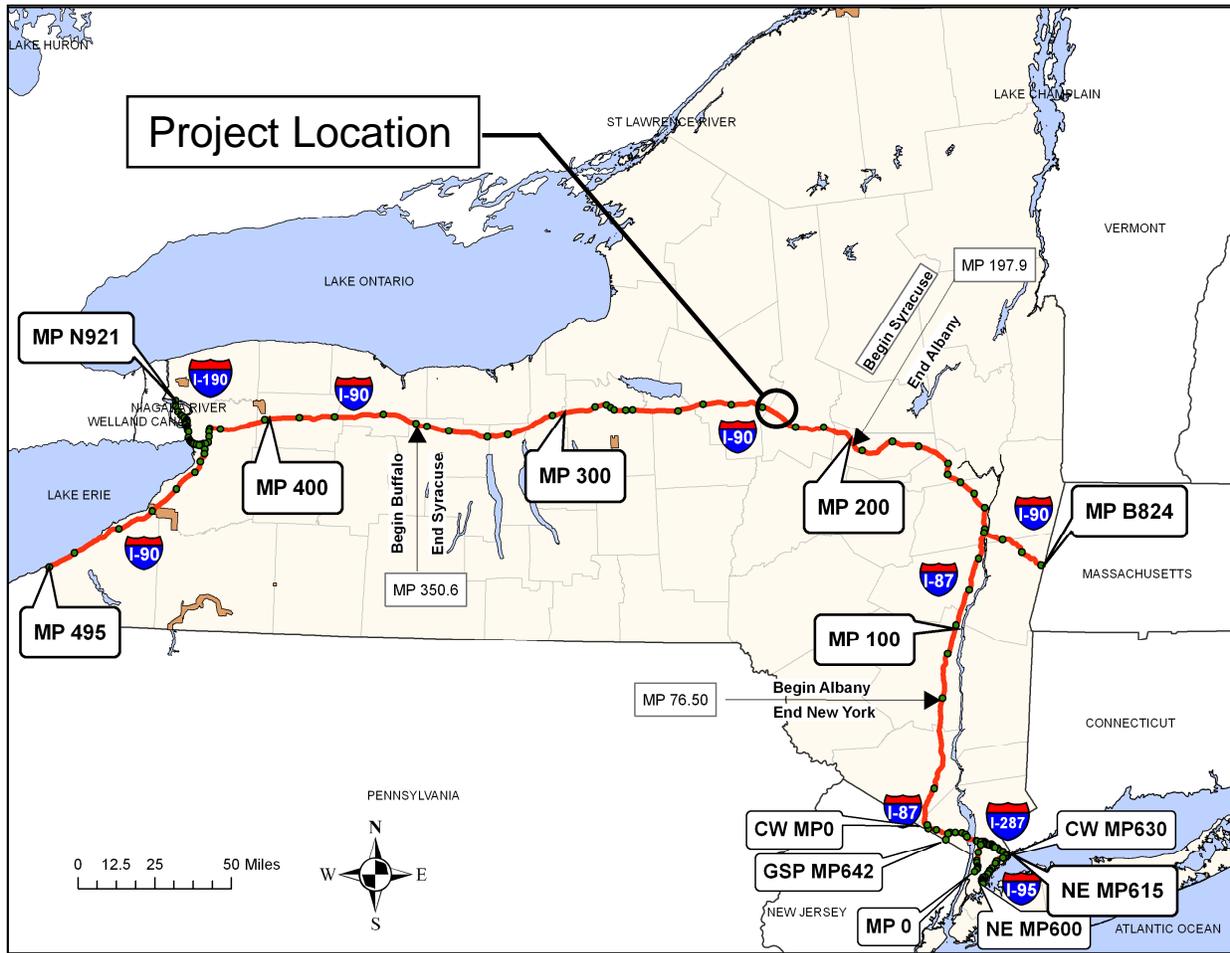
This report will assess existing conditions, identify the overall project objectives, analyze alternative solutions, and discuss the social, economic and environmental effects on the community resulting from the implementation of the feasible alternative under consideration.

### 1.2. Purpose and Need

#### 1.2.1. Where is the Project Located?

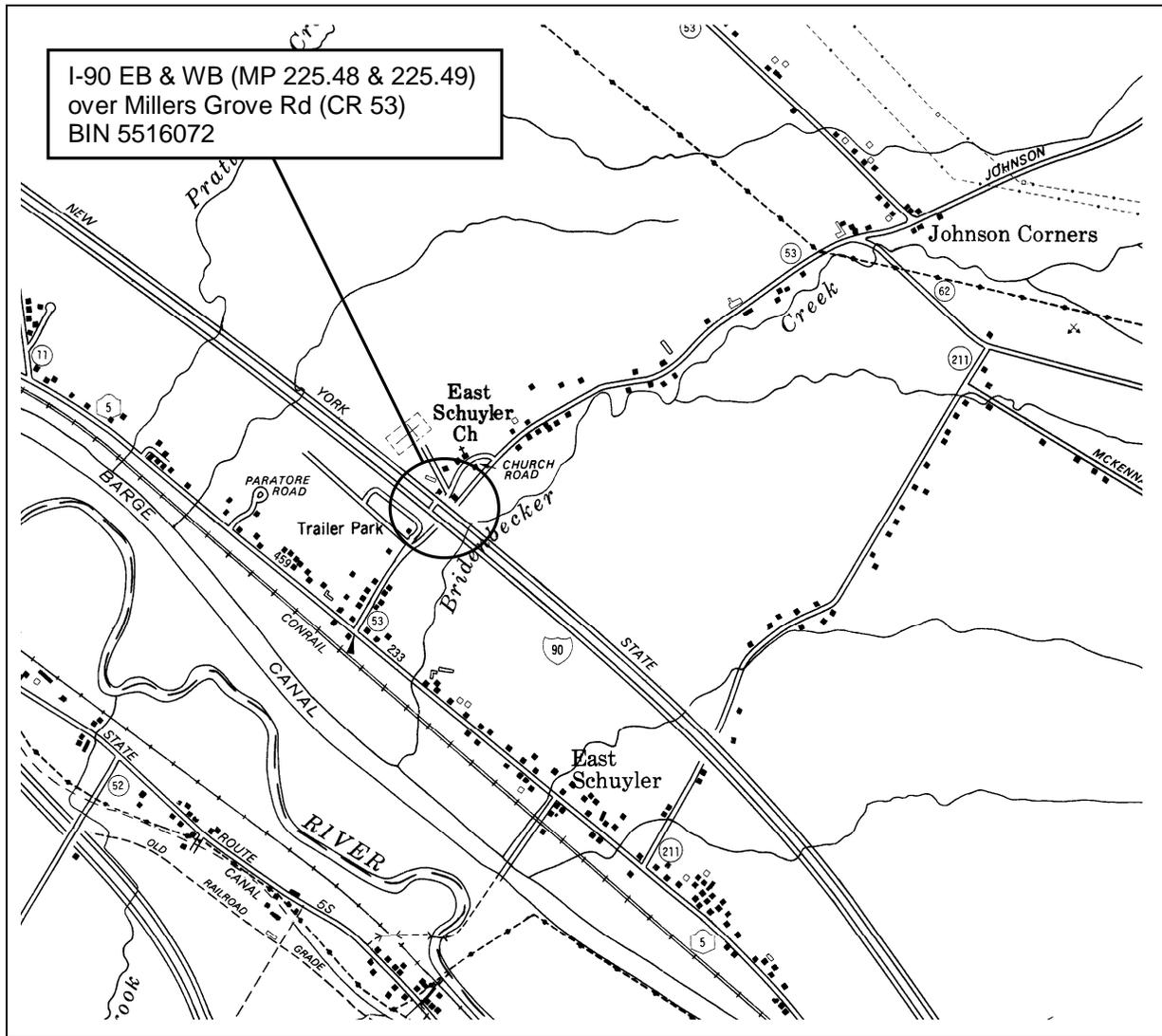
This project is located within the Town of Schuyler, Herkimer County. For more information, see Figure 1 – General Location Map and Figure 2 – Project Location Map.

- (1) Route number - I-90
- (2) Route name – Interstate 90
- (3) SH number and official highway description - N/A
- (4) BIN number and feature crossed – 5516072 & 5516071, Millers Grove Road (CR 53)
- (5) City/Village/Township – Town of Schuyler
- (6) County - Herkimer
- (7) Length – 960 feet
- (8) Project Termini –  
Begin – 385 feet west of Millers Grove Road (MP 225.56 +/-)  
End – 550 feet east of Millers Grove Road (MP 225.37 +/-)



**FIGURE 1 - GENERAL LOCATION MAP**

NEW YORK STATE THRUWAY AUTHORITY  
I-90 EB & WB over Millers Grove Road Bridge Replacement  
Town of Schuylers



**FIGURE 2 - PROJECT LOCATION MAP**

NEW YORK STATE THRUWAY AUTHORITY  
I-90 EB & WB over Millers Grove Road Bridge Replacement  
Town of Schuyler

### 1.2.2. Why is the Project Needed?

The need for a bridge replacement project was identified by the New York State Thruway Authority after review of Biennial Inspection Reports. The existing I-90 EB and I-90 WB bridges have current NYS General Recommendations of 4. The bridges are categorized as “Deficient” according to the NYS definition of having a NYS Condition Rating of less than 5.

### 1.2.3. What are the Objectives/Purposes of the Project?

The following project objectives have been identified:

- (1) Eliminate structural deficiencies and provide a safe crossing over Millers Grove Road with a service life of at least 75 years.
- (2) Meet the objective above in a socially, economically and environmentally sensitive manner.

### 1.3. What Alternative(s) Are Being Considered?

The following alternatives representing possible engineering solutions are presented in this report:

- Null or No Build Alternative
- Rehabilitation Alternative
- Reconstruction Alternative

**Null or No Build Alternative** – Under this alternative the existing structures would remain and continue to deteriorate until load postings, or eventually closures, would be required. NYSTA maintenance forces would continue routine maintenance and repairs on the structures, as required, and the existing vertical clearances would be maintained. This alternative does not meet the project objectives, therefore has been eliminated from further review.

**Rehabilitation Alternative** – Under this alternative the existing structures would be rehabilitated to current standards. The superstructure repair scopes would include concrete repairs, jacking of the I-90 WB bridge to achieve the Thruways desired 14'-6" min clearance, approach work to achieve the required profile, bearing and pedestal replacements, replacement of bridge railing and transitions, full deck replacements, approach slab replacements and metalizing of structural steel.

The estimated cost of the rehabilitation of both bridges is \$ 7,700,000, which is approximately 74% of the bridge replacement cost of \$ 10,411,000 for both bridges. However, the rehabilitation estimate assumes that the bridges will be rehabilitated at their current width, whereas the replacement option would widen the bridges to pave the median between the two structures. If the bridges were widened to cover the existing median, an additional approximately \$ 1,240,000 would be required, which would take the rehabilitation cost to approximately 86% of the replacement cost. The NYSDOT Bridge Manual suggests replacement of a bridge when the rehabilitation cost exceeds 85% of replacement, and also suggests that replacement should be considered when rehabilitation cost exceeds 65%. Based on this information it is not considered cost effective to rehabilitate the bridges.

This alternative will not meet the project objective of 75-year design life without further rehabilitation. In particular, the abutments will almost certainly require additional significant repairs in the future.

This alternative does not provide the NYSTA preferences for 12'-0" wide right shoulders and a paved median between the bridges. It also would maintain the non-standard shoulders on Millers Grove Rd.

**Reconstruction Alternative – Bridge Replacement** – This alternative would include complete removal and replacement of the existing structures with new bridges on the existing alignments. The replacement structures would each accommodate a 66'-10" clear-roadway width, providing for two 12'-0" travel lanes,

12'-0" right shoulders, and 30'-10" left shoulders/medians. The proposed sections allow for the provision of future 12'-0" third lanes and future 18'-10" left shoulders/medians. The new bridges would utilize a single-span superstructure. Concrete abutments would be placed so that adequate shoulder widths could be provided at the under roadway, and the over roadway profiles would be raised as necessary to accommodate any increase in structure depth, while still meeting the desired vertical clearance requirements. Roadway work would include reconstructing the approach roadways adjacent to the bridges to accommodate the new bridge section and guide railing. This alternative meets all of the project objectives.

For a more in-depth discussion of the design criteria see Section 3.2.3. Design Criteria for Feasible Alternative.

#### 1.4. How will the Alternative(s) Affect the Environment?

Exhibit 1.4-A Environmental Summary			
NEPA Classification	No Federal Action	BY	NYSTA
SEQR Type:	Type II	BY	NYSTA

Anticipated Permits/Certifications/Coordination:

Permits

NYSDEC

- State Pollutant Discharge Elimination System (SPDES) General Permit (GP-0-15-002) will be required because the project includes more than one acre of soil disturbance. A Stormwater Pollution Prevention Plan (SWPPP) with the appropriate sediment and erosion control measures will be developed.

NYSDOT

- Highway Work Permit

Coordination

- NYSDEC
- Herkimer County
- New York Natural Heritage Program (NYNHP)
- U.S. Fish and Wildlife Service (USFWS)
- NYSDOT
- State Historic Preservation Office (SHPO)

#### 1.5. What Are The Costs & Schedules?

The estimated construction cost for the preferred alternative is \$10.41 million. This cost includes the replacement of both bridges. The project will be funded solely by the New York State Thruway Authority. See Section 3.2, Exhibit 3.2.1 for a summary of alternative costs.

Design Approval is scheduled for July 2017. Construction is scheduled to last 30 months beginning in July 2018.

<b>Exhibit 1.5 Project Schedule</b>	
<b>Activity</b>	<b>Date Occurred/Tentative</b>
Letter of Intent	March 1, 2017
Request for Qualifications	April 1, 2017
Statement of Qualifications	May 1, 2017
Request for Proposal Date	July 1, 2017
Proposal Due Date	September 27, 2017

### 1.6. Which Alternative is Preferred?

The preferred alternative is the bridge replacement.

### 1.7. Who Will Decide Which Alternative Will Be Selected and How Can I Be Involved In This Decision?

The New York State Thruway Authority is responsible for making the decision on the preferred alternative for the project. When making the decision, the Thruway will consider all comments received from the various review agencies.

<b>Exhibit 1.7 Schedule of Milestone Dates</b>	
<b>Activity</b>	<b>Date Occurred/Tentative</b>
Design Approval	July 2017
Proposal Due Date	September 27, 2017

For further information, questions or comments contact:

Timothy Conway NYSTA  
 200 Southern Boulevard  
 Albany, NY 12209  
 Phone: (518) 436-2988  
 email: Timothy.Conway@thruway.ny.gov

The remainder of this report is a detailed technical evaluation of the existing conditions, the proposed alternatives, the impacts of the alternatives, copies of technical reports and plans and other supporting information.

## **CHAPTER 2 – PROJECT CONTEXT: HISTORY, TRANSPORTATION PLANS, CONDITIONS AND NEEDS**

This chapter addresses the history and existing context of the project site including the existing conditions, deficiencies, and needs for this part of the Interstate 90 corridor including the bridges carrying Interstate 90 over Millers Grove Road at MP 225.48 and 225.49.

### **2.1. Project History**

Interstate 90, in the vicinity of MP 225.48 and 225.49 is a full access controlled four-lane divided highway originally funded and constructed by the New York State Thruway Authority. The Thruway was constructed to serve as the primary transportation connecting link of the metropolitan region of New York City with upstate urbanized areas northerly to Albany, westerly to Buffalo, and eventually termination at the Pennsylvania State Line. The highway became part of the Eisenhower Interstate System following passage of the Federal-Aid Highway Act of 1956 and subsequent construction of its highway network. Currently the highway continues to serve its New York based patrons along with interstate and international travelers.

The I-90 bridges over Millers Grove Road at MP 225.48 and MP 225.49 were constructed with the original highway in 1954. The bridges were rehabilitated under contract TAS 87-16BP (bridge painting) and under contract TAS 92-74B (strip, repair, seal and overlay the deck). Substructure repairs have also been undertaken by the Division Bridge Maintenance forces.

The project was initially conceived in 2008 due to advancing deterioration to various bridge components observed in routine biennial inspections. The recommended course of action was to replace the bridges in 5 years to utilize the remaining service lives. This was determined to be the most cost effective long-term solution to the issues identified at the time. A recent decision was made to advance the project utilizing a design-build procurement package bundled with 7 other structures in the area.

### **2.2. Transportation Plans and Land Use**

#### **2.2.1. Local Plans for the Project Area**

##### **2.2.1.1. Local Master Plan**

No local master plans will be affected by this project.

##### **2.2.1.2. Local Private Development Plans**

There are no approved developments planned within the project area that will impact traffic operations.

#### **2.2.2. Transportation Corridor**

##### **2.2.2.1. Importance of the Project Route Segment**

The New York State Thruway serves as one of the major connecting transportation network links within New York State and the Northeast. The highway is the primary mobility link between the New York metropolitan area and transportation links in northern and western New York. Millers Grove Road connects County Route 5 (Col. Chandler Drive) with Steuben Hill Road, running in a north/south direction, and provides access to several local rural roadways.

##### **2.2.2.2. Alternate Routes**

There are no alternative routes that would be suitable as a permanent detour.

### **2.2.2.3. Corridor Deficiencies and Needs**

The existing bridges are classified as structurally deficient and the I-90 WB bridge does not meet the current vertical clearance requirements. Replacement of this infrastructure is necessary to maintain mobility of all operators using this segment of the interstate system. Continued deterioration and eventual load posting of the bridges and roadways would have a detrimental impact on motorists using the NYS Thruway.

### **2.2.2.4. Transportation Plans**

This project is being progressed as a bridge replacement project which when bundled with seven other bridges within the Syracuse Division to be replaced will be let as a Design Build project. Since this project is 100% Thruway funded it has not been added to the Statewide Transportation Improvement Program (STIP).

### **2.2.2.5. Abutting Highway Segments and Future Plans for Abutting Highway Segments -**

The existing I-90 highway sections to the northwest and southeast of the project bridges include two (2) 12 ft. wide travel lanes in each direction, separated by an approximately 21 ft. wide grassed median area with w-beam barrier. There is a U-turn area located northwest of the bridges, in which there are 20 ft. wide left highway shoulders/paved medians within the project limits. Away from the project limits, the left shoulders are 4 ft. wide in the EB direction and 6 ft. wide in the WB direction. The right shoulders are 10 ft. wide in both directions of travel. A future third lane and shoulders on the EB and WB roadways can be accommodated in the median if necessary. Speed limits are regulatory posted at 65 mph for Interstate 90 within the project corridor.

The existing Millers Grove Road highway section to the north and south of the project area include one (1) 9 ft. wide travel lanes in each direction and 3 ft. wide shoulders. The lane and shoulder widths are from the record plans, as there is no striping to delineate the lane from the shoulder. A 2.5 ft. wide raised curb section separates the travelway from the bridge substructures. The posted regulatory speed limit on Millers Grove Road is 40 mph.

There are no current plans to reconstruct the adjacent sections of Interstate 90 or Millers Grove Road.

## **2.3. Transportation Conditions, Deficiencies and Engineering Considerations**

### **2.3.1. Operations (Traffic and Safety) & Maintenance**

#### **2.3.1.1. Functional Classification and National Highway System (NHS)**

<b>Exhibit - 2.3.1.1 Classification Data</b>		
<b>Route(s)</b>	<b>I-90</b>	<b>Millers Grove Road</b>
Functional Classification	Urban Principal Arterial – Interstate	Rural Minor Collector
National Highway System (NHS)	Yes	No
Designated Truck Access Route	Yes	No
Qualifying Highway	Yes	No
Within 0.25 miles of a Qualifying Highway	N/A	Yes
Within the 16 ft. vertical clearance network	Yes	N/A

### 2.3.1.2. Control of Access

Access to I-90 is fully-controlled. The highway is a toll facility with access limited via toll booths at interchanges. Millers Grove Road has uncontrolled access.

### 2.3.1.3. Traffic Control Devices

There are no traffic signals within the project limits. All signs, pavement markings, delineators, mile markers and rumble strips conform to current standards.

### 2.3.1.4. Intelligent Transportation Systems (ITS)

The Thruway fiber optic ITS line is located north of the I-90 westbound travel lanes.

### 2.3.1.5. Speeds and Delay

Refer to Exhibit 2.3.1.5 for existing speed data along Interstate 90 and Millers Grove Road within the project limits:

<b>Exhibit - 2.3.1.5 Speed Data</b>		
<b>Route</b>	<b>Interstate 90</b>	<b>Millers Grove Road</b>
Existing Speed Limit	65 MPH	40 MPH
Operating Speed and Method Used for Measurement	70 MPH <sup>1</sup> (Estimated)	40 MPH <sup>1</sup> (Estimated)
Travel Speed and Delay Runs for Existing Conditions	N/A <sup>1</sup>	N/A <sup>1</sup>
Travel Time and Delay Runs Estimates	N/A <sup>1</sup>	N/A <sup>1</sup>

<sup>1</sup> A speed study was not required for operational studies or for use in accident investigations since the project is a bridge replacement project and does not contain a high accident location.

### 2.3.1.6. Traffic Volumes

2.3.1.6. (1) Existing traffic volumes

Refer to Exhibit 2.3.1.6-1 for a summary of the traffic data:

<b>Exhibit - 2.3.1.6-1 Existing and Forecast Traffic Volumes</b>				
Route	Interstate 90			
Year	AADT	DHV	DDHV	% Trucks
Existing (2016)	12,108 EB	1,514 EB	1,514 EB	24
	12,114 WB	1,676 WB	1,676 WB	
ETC (2020)	12,851 EB	1,607 EB	1,607 EB	24
	12,857 WB	1,779 WB	1,779 WB	
ETC+10 (2030)	14,914 EB	1,865 EB	1,865 EB	24
	14,921 WB	2,064 WB	2,064 WB	
ETC+20 (2040)	17,308 EB	2,164 EB	2,164 EB	24
	17,317 WB	2,396 WB	2,396 WB	
ETC+30 (2050)	20,087 EB	2,512 EB	2,512 EB	24
	20,097 WB	2,780 WB	2,780 WB	
Route	Millers Grove Road			
Year	AADT	DHV	DDHV	% Trucks
Existing (2008)	337	N/A	N/A	N/A
ETC (2020)	400	N/A	N/A	N/A
ETC+10 (2030)	421	N/A	N/A	N/A
ETC+20 (2040)	442	N/A	N/A	N/A
ETC+30 (2050)	465	N/A	N/A	N/A

An assumed annual growth rate of 1.5% and 0.5% was used for future traffic volume projections for Interstate 90 and Millers Grove Road, respectively.

#### 2.3.1.6. (2) Future no-build design year traffic volume forecasts

The Estimated Time of Completion, ETC+30 design year was selected per PDM Appendix 5. An ETC+30 year projection was completed as the project involves the replacement of the bridges.

#### 2.3.1.7. Level of Service and Mobility

##### 2.3.1.7. (1) Existing level of service and capacity analysis

Level of Service (LOS) defines traffic operating conditions in which "A" represents the best conditions (traffic that is free flowing with minimal delay) and "F" which represents the condition where upstream demand exceeds capacity on a regular basis (results in reduction in free flow speed and unacceptable delay). The results of the LOS analysis for the 30<sup>th</sup> highest hourly volume (30 HV), based on the 2000 Highway Capacity Manual indicates that the existing system operates at a LOS B.

##### 2.3.1.8. (2) Future no-build design year level of service

Exhibit - 2.3.1.7-1 Thruway Mainline Service Summary	
YEAR	LOS
Existing (2016)	B
ETC (2020)	B
ETC+10 (2030)	B
ETC+20 (2040)	C
ETC+30 (2050)	C

### 2.3.1.9. Safety Considerations, Accident History and Analysis

The accident analysis was conducted for the time period of 1/1/13 – 12/31/15.

There was a total of 9 accidents during the analysis period, with no fatalities. All the accidents occurred on the I-90 mainline, including seven accidents in the EB direction and two accidents in the WB direction.

The 3 year accident rates of 81.0 acc/100 MVM in the EB direction and 23.1 acc/100 MVM in the WB direction are significantly lower than the 2013-2015 system-wide rate of 110.1 acc/100 MVM.

### 2.3.1.10. Existing Police, Fire Protection and Ambulance Access

The New York State Police "Troop T" is responsible for enforcement along Interstate 90 within the project limits. Access is available for enforcement and emergency responders via periodic gated connections with local roadways and directionally on the system via U-turns. The Herkimer County Sheriff's department is responsible for enforcement along Millers Grove Road.

### 2.3.1.11. Parking Regulations and Parking Related Conditions

Parking on Interstate highways is restricted by law. There are no regulations restricting parking on Millers Grove Road.

### 2.3.1.12. Lighting

There is no street lighting on Interstate 90 or Millers Grove Road within the project limits.

### 2.3.1.13. Ownership and Maintenance Jurisdiction

The New York State Thruway Authority operates and maintains the Thruway and the bridges carrying I-90 over Millers Grove Road within the project limits. Herkimer County owns and maintains the remaining portions of Millers Grove Road within the project limits.

## 2.3.2. Multimodal

### 2.3.2.1. Pedestrians

Pedestrians are prohibited on Interstate Highways by state law. Pedestrians utilizing Millers Grove Road within the project limits are required to use the travelway on approaches to the bridges, and may use the 2.5 ft. wide raised curbs when under the bridges. A Complete Streets Checklist can be found in Appendix D.

### 2.3.2.2. Bicyclists

Bicyclists are prohibited on Interstate Highways by state law. Bicyclists utilizing Millers Grove Road within the project limits are required to use the roadway section.

### 2.3.2.3. Transit

There are no transit providers with operating facilities within the project limits.

### 2.3.2.4. Airports, Railroad Stations, and Ports

There are no airports, railroad stations, or port entrances within or in the vicinity of the project limits.

### 2.3.2.5. Access to Recreation Areas (Parks, Trails, Waterways, State Lands)

There are no entrances to recreation areas within the project limits.

## 2.3.3. Infrastructure

### 2.3.3.1. Existing Highway Section

Typical sections, plans and profile sheets showing the existing I-90 highway sections can be found in Appendix E. The existing I-90 roadway appears to have had at least one (1) asphalt overlay. The pavement consists of two (2) 12 ft. wide travel lanes separated by an approximately 21 ft. wide grassed median area with w-beam barrier. There is a U-turn area located northwest of the bridges, in which there are 20 ft. wide left highway shoulders/paved medians within the project limits. Away from the project limits, the left shoulders are 4 ft. wide in the EB direction and 6 ft. wide in the WB direction. The right shoulders are 10 ft. wide in both directions of travel. The pavement consists of a 9-inch concrete slab on a 9-inch subbase course. The right and left shoulders/paved medians were not constructed as full depth pavement.

The existing Millers Grove Road roadway consist of two (2) 9 ft. travel lanes and 3 ft. shoulders. The structure of the existing Millers Grove Road highway section is unknown.

### 2.3.3.2. Geometric Design Elements Not Meeting Standards

#### 2.3.3.2.(1) Critical Design Elements

The following non-standard features have been identified within the project corridor:

<u>Roadway</u>	<u>Feature</u>	<u>Existing</u>	<u>Standard</u>
I-90	Right Shoulder Width	8'-6"	10'-0" (min.), 12'-0" (desirable)

#### 2.3.3.2.(2) Other Design Parameters

The existing bridge rail is non-conforming on both bridges, it is comprised of four rail non-continuous steel railing with thrie-beam upgrade attachments on top of a curbed safety walk. Current Thruway policy requires a TL-5 concrete barrier on all replacement bridges on, or over the Thruway. Concrete barrier has been deemed practical and therefore will be specified on the new superstructures of both bridges. After project completion, all features will be conforming.

### 2.3.3.3. Pavement and Shoulder

A pavement evaluation was not completed for this project as this is a bridge replacement project.

#### 2.3.3.4. Drainage Systems

Stormwater runoff from within the project area is generally collected by shallow median and roadside swales, with exception to a minor closed system that consists of a drainage inlet and pipes. The closed system is located within the median of I-90, east of the bridges, and drains into a concrete box culvert east of the project limits. The pipes are 24-inch reinforced concrete. The condition of the closed drainage system is unknown.

#### 2.3.3.5. Geotechnical

Soil borings were taken as a part of the Syracuse Division 2017 Design-Build Replacements Project in January 2017.

The soil below the existing I-90 EB & WB bridges consists mainly of brown/gray silty-sand and sand, ranging from very-loose to very-dense. At FHB-3, up to 25% gravel was encountered from 1 to 26 feet and up to 40% gravel from 40 to 46 feet. At FHB-4, gravel was encountered from 1 to 31 feet, with values ranging from 30% to 3%. The borings were terminated between 70 and 86 feet. No rock was encountered.

#### 2.3.3.6. Structure

##### 2.3.3.6.(1) Description

There are two structures located within the project limits that carry Interstate 90 over Millers Grove Road.

- (a) BIN – 5516072 & 5516071
- (b) Feature carried and crossed – Interstate 90 EB & WB over Millers Grove Road (CR 53).
- (c) Type of bridge, number and length of spans, etc. – The structures are single span, steel multi-girder superstructures with span lengths of 32'-3" (measured CL to CL of bearings). The bridges have 7.5" reinforced concrete deck slabs overlaid with a 2.5" to 3" asphalt wearing surface. The bridge railings are "older"-style, painted 4-rail, welded steel tubular panels, with a galvanized thrie-beam retrofit bolted to the face of railings. The superstructures are supported on tall reinforced concrete abutments, which are founded on piles.
- (d) Width of travel lanes and shoulders – The bridges have a curb-to-curb width of 54 feet. Over each bridge there are two (2) 12 ft. wide travel lanes, 8.5 ft. wide right shoulders and 21.5 ft. wide left shoulders/paved medians, which can accommodate a future lane and shoulder. The bridges are separated by a 21 ft wide open area.
- (e) Sidewalks – There are no sidewalks on the bridges.
- (f) Utilities carried – There are no utilities on the bridges.

##### 2.3.3.6.(2) Clearances (Horizontal/Vertical)

The minimum horizontal clearance for the I-90 bridges is 8'-6", measured from the right travel lanes to the bridge rail and curbing.

As Millers Grove Road passes under I-90, the roadway is 24 ft. wide and includes two (2) 9 ft. wide travel lanes and non-striped 3 ft. wide outside shoulders. There are 2.5 ft. raised curb sections that separate the edge of the travelway from the face of the substructures units.

The minimum vertical clearance for I-90 EB over Millers Grove Road is 15'-1½". The minimum vertical clearance for I-90 WB over Millers Gove Road is 14'-3½", which meets the minimum vertical clearance requirement of 14'-0", but does not meet NYSTA's desired vertical clearance of 14'-6".

### 2.3.3.6.(3) History & Deficiencies

The bridges were constructed in 1954 with the original highway. The bridges were rehabilitated under contract TAS 87-16BP (bridge painting) and under contract TAS 92-74B (strip, repair, seal and overlay the deck). Substructure repairs have also been undertaken by the Division Bridge Maintenance forces.

The bridges are considered to be "Deficient" according to the NYS definition, which means that deterioration levels are at a point where corrective maintenance, or rehabilitation, is necessary to restore the bridges to a fully functional condition. The bridges also have nonstandard and nonconforming features including, but not limited to, narrow shoulders, vertical clearances which do not meet the minimum requirements, and bridge and highway approach rail.

The inventory rating is HS19 (35.4 tons) and the operating rating is HS32 (59.1 tons) for the EB bridge at MP 225.48. The inventory rating is HS19 (34.9 tons) and the operating rating is HS32 (58.2 tons) for the WB bridge at MP 225.49. Neither bridge is posted for load restrictions.

### 2.3.3.6.(4) Inspection

The bridges were last inspected on 04/16/2015. Full copies of the 2015 Biennial Bridge Inspection Reports and the current bridge inventories can be found in Appendix E.

#### **MP 225.48 – I-90 EB over Millers Grove Road (BIN 5516072):**

- (a) NYS Condition Rating – 3.83
- (b) NYS General Recommendation – 4
- (c) Summary of Condition and Inspection Reports – The 2015 Biennial Bridge Inspection Report has assigned a condition rating of 3 out of 7 for a majority of the abutment items, which indicates serious deterioration, or that the items are not functioning as originally designed. Concrete substructure elements exhibit deep spalls, and large areas of delaminated and hollow sounding concrete. All the bearings show signs of corrosion, with thicker delaminations at the fascia bearings. Bearing 3 at the end abutment is in contact with the backwall, thus preventing any further expansion. Bearing 7 at the end appears to be frozen in place. Joints at both ends of the bridge are actively leaking and accelerating the deterioration to the substructure elements below.

The structural steel is rated 5 out of 7, which indicates minor deterioration, but functioning as originally designed. The worst section loss occurs along the bottom of the girder webs, with the fascia girders displaying 20% section loss at the ends, around the bearing areas. Section loss to the flanges is less severe.

The concrete structural deck is severely deteriorated and is rated 3 out of 7. Cracks, spalls and areas of damp concrete cover approximately 70% of the deck area. Spalling above the girders has created voids between the primary members and the structural deck. The voided areas allow the deck to "actively pump" under load, which generates an impact force on the girders. Wood shoring has been installed in areas to prevent deteriorated concrete from falling into the travelway below.

The bridge railing is considered a non-conforming feature and is rated 3 out of 7 due to its poor condition state. Numerous holes and areas of section loss, to both the posts and the rails, have been documented at various locations along the rail system. The worst location is the end 18 inches at the right, in which the top rail has completely rusted through.

#### **MP 225.49 – I-90 WB over Millers Grove Road (BIN 5516071):**

- (a) NYS Condition Rating – 3.77

- (b) NYS General Recommendation – 4
- (c) Summary of Condition and Inspection Reports – The 2015 Biennial Bridge Inspection Report has assigned a condition rating recommendation of 4 out of 7 for the begin and end abutment items, which indicates moderate levels of deterioration. Concrete substructure elements exhibit deep spalls, and large areas of delaminated and hollow sounding concrete. All the bearings show signs of corrosion, with thicker delaminations at the fascia bearings. All of the bearings at the end are in an overextended position, with exception to fascia bearing 7. Formwork from previous backwall repairs is still in place at the end abutment. The formwork is wedged between the end backwall and the girders ends, and is hindering thermal movements. Joints at both ends of the bridge are actively leaking and accelerating the deterioration to the substructure elements below. There are numerous locations where there is no joint material present.

The structural steel is rated 5 out of 7, which indicates minor deterioration, but functioning as originally designed. Section loss, up to 20%, is reported around the bearing area of girder G1. Section loss occurring elsewhere is less severe.

The concrete structural deck is severely deteriorated and is rated 3 out of 7. Cracks, spalls and areas of damp concrete cover approximately 20% of the deck area. Spalling above the girders has created voids between the primary members and the structural deck. The voided areas allow the deck to “actively pump” under load, which generates an impact force on the girders.

The bridge railing is considered a non-conforming feature and is rated 3 out of 7 due to its poor condition state. Numerous holes and areas of section loss, to both the posts and the rails, have been documented at various locations along the rail system. Due to the severity of the deterioration, a maintenance report was submitted during the inspection for the repair of cracked/split railing posts.

#### **2.3.3.6.(5) Restrictions**

There are currently no load restrictions on the bridges.

#### **2.3.3.6.(6) Future Conditions**

If no maintenance actions are taken to address the conditions of the bridges the areas of deterioration will continue to a point where continued and more frequent maintenance will be necessary. In addition, steel deterioration may progress to a point where load restrictions may be necessary.

#### **2.3.3.6.(7) Waterway**

There is no waterway associated with these bridges.

#### **2.3.3.7. Hydraulics of Bridges and Culverts**

There is no waterway associated with these bridges.

#### **2.3.3.8. Guide Railing, Median Barriers and Impact Attenuators**

Corrugated W-beam guide rail is present on the left and right approaches to the bridges on I-90. The bridges include a four-rail bridge rail. All of the approach guide railing is in good condition for both bridges, however the bridge railing is in poor condition. The transition from W-beam to bridge rail does not meet current standards.

### **2.3.3.9. Utilities**

There are no utilities located on the bridges.

An underground fiber optic line (owned by Windstream) runs parallel to I-90 approximately 60 ft. north of the I-90 Westbound roadway. An overhead electric line and an underground electric line (owned by National Grid) run across I-90 approximately 170 ft. west of the bridges.

An underground telecom line (owned by Verizon) runs across I-90 approximately 170 ft. west of the bridges.

### **2.3.3.10. Railroad Facilities**

There are no railroads within the project limits and no at-grade crossings within 1 mile that could impact traffic conditions.

## **2.3.4. Landscape and Environmental Enhancement Opportunities**

This section focuses on the critical existing areas to identify potential enhancement opportunities related to the project and to help avoid and minimize impacts. Chapter 4 focuses on the impacts, enhancements, and mitigation.

### **2.3.4.1. Landscape**

#### **2.3.4.1.(1) Terrain**

The terrain throughout the project corridor is classified as rolling.

#### **2.3.4.1.(2) Unusual Weather Conditions**

There are no unusual weather conditions within the project area.

#### **2.3.4.1.(3) Visual Resources**

The areas adjacent to the bridges on the north and south side of the interstate can be mainly characterized as grassed / wooded side slopes. A church is located to the northwest of the bridges and a residential area is located to the southwest of the bridges.

The area within the Thruway right-of-way consists of a divided, limited access highway, separated by a grassed median and grassed areas on either side.

### **2.3.4.2. Opportunities for Environmental Enhancements**

There are no practical opportunities for environmental enhancements in the project limits.

## CHAPTER 3 – ALTERNATIVES

This chapter discusses the alternatives considered and examines the engineering aspects for all feasible alternatives to address project objectives outlined in Chapter 1 of this report.

### 3.1. Alternatives Considered and Eliminated from Further Study

The following alternatives have been considered as possible solutions, but eliminated from further study, since they did not satisfy objectives of the project.

#### 3.1.1. Null / No Build Alternative

The Null alternative would leave the existing structures in place and would not take any action beyond normal maintenance operations. Work required to correct current structural deficiencies is beyond the scope of normal maintenance. As the structures continue to deteriorate, and are deemed unsafe for normal traffic, the bridges will be posted for reduced loading and eventually closed to all traffic.

This alternative will not satisfy the project objectives, but will be considered further for comparative purposes.

#### 3.1.2. Rehabilitation Alternative

Under this alternative, the existing structures would be rehabilitated to current standards. The structure repair scopes would include:

- Concrete repairs to abutments, backwalls and wingwalls
- Jacking of I-90 WB bridge to achieve 14'-6" desired vertical clearance
- Bearing replacements
- Repairs to bridge seats and reconstruction of the pedestals to accommodate new bearings and raised profile
- Replacement of curbs
- Replacement of bridge railing and transitions to meet current standards.
- Full deck replacements
- Repairs to approach roadway on I-90 WB
- Metalizing of structural steel

The estimated cost of the rehabilitation of both bridges is \$ 7,700,000, which is approximately 74% of the bridge replacement cost of \$ 10,411,000 for both bridges. However, the rehabilitation estimate assumes that the bridges will be rehabilitated at their current width, whereas the replacement option would widen the bridges to pave the median between the two structures. If the bridges were widened to cover the existing median, an additional approximately \$ 1,240,000 would be required, which would take the rehabilitation cost to approximately 86% of the replacement cost. The NYSDOT Bridge Manual suggests replacement of the bridges when the rehabilitation cost exceeds 85% of replacement, and also suggests that replacement should be considered when rehabilitation cost exceeds 65%. Based on this information it is not considered cost effective to rehabilitate the bridges.

This alternative will not meet the project objective of 75 year design life without further major rehabilitation. In particular, the abutments will almost certainly require additional significant repairs in the future.

This alternative also does not provide the NYSTA preferences for 12' wide right shoulders, a paved median between the bridges without significantly more cost and would maintain the non-standard shoulders on Millers Grove Rd.

This alternative will not satisfy the project objectives therefore it will be removed from further consideration.

### 3.2. Feasible Build Alternatives

#### 3.2.1. Description of Feasible Alternatives

##### 3.2.1.1. Reconstruction Alternative – Bridge Replacement

This alternative consists of a complete replacement of the existing bridges, while essentially maintaining the existing horizontal alignments. The new structures will be single span. Key elements of this alternative include:

- |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Geometry          | <ul style="list-style-type: none"><li>• This alternative would include complete removal and replacement of the existing structures with new bridges on the existing alignments. The replacement structures would each accommodate a 66'-10" clear-roadway width, providing for two 12'-0" travel lanes, 12'-0" right shoulders, and 30'-10" left shoulders/medians. The proposed sections allow for the provision of future 12'-0" third lanes and future 18'-10" left shoulders/medians. The bridge centerline will essentially be maintained at the existing location and all roadway approaches will remain unchanged. The new vertical alignment will be raised to achieve vertical clearance of 14'-6" over local roads. The I-90 mainline approaches will be re-graded as necessary to achieve the required profile at the bridges and the shoulders on the approach will transition to tie in to the proposed shoulders over the bridges.</li></ul> |
| Operational       | <ul style="list-style-type: none"><li>• This alternative does not affect operations.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Control of Access | <ul style="list-style-type: none"><li>• This alternative does not affect control of access.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Right of Way      | <ul style="list-style-type: none"><li>• No acquisition of right of way will be required.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Environmental     | <ul style="list-style-type: none"><li>• There are no significant environmental impacts from this project.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Project Costs     | <ul style="list-style-type: none"><li>• Total estimated cost of this alternative is \$10.39 M (includes both bridges).</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Project Goals     | <ul style="list-style-type: none"><li>• This alternative will meet all the project objectives of eliminating structural deficiencies, provide a safe crossing over Millers Grove Road with a service life of at least 75 years, and do so in a socially, economically and environmentally sensitive manner.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

Activities		
		Reconstruction Alternative
Construction	Bridge (includes both bridges)	\$ 2,954,204
	Highway	\$ 1,980,675
Subtotal (2017)		\$ 4,934,879
Incidentals (2017) 20%		\$ 986,976
Subtotal (2017)		\$ 5,921,855
Contingencies 15%		\$ 888,278
Subtotal (2017)		\$ 6,810,133
Potential Field Change Order 5%		\$ 340,507
Subtotal (2017)		\$ 7,150,640
Mobilization (4%)		\$ 286,026
Subtotal (2017)		\$ 7,436,665
Inflation @ 5%/yr to midpoint of Construction (2019)		\$ 743,666
Design and Construction Inspection (30%)		\$ 2,230,999
<b>Total Cost (includes both bridges)</b>		<b>\$ 10,411,331</b>

### 3.2.2. Preferred Alternative

The preferred alternative is Reconstruction Alternative – Bridge Replacement. See Appendix A for proposed concept plans.

### 3.2.3. Design Criteria for Feasible Alternative(s)

#### 3.2.3.1. Design Standards

Design criteria for this project are based on the NYSDOT *Highway Design Manual* (HDM) and the NYSDOT *Bridge Manual* (BM).

### 3.2.3.2. Critical Design Elements

The following table identifies critical design elements applicable to this project.

<b>Exhibit 3.2.3.2.a</b>				
<b>Interstate 90 – NYSTA Mainline</b>				
PIN:	S52886	NHS (Y/N):	Yes	
Route No. & Name:	I-90, Syracuse Section Subdivision 8A, BIN 5516072 & 5516071	Functional Classification:	Urban Principal Arterial – Interstate (Code 11)	
Project Type:	Bridge Replacement & New Construction	Design Classification:	Interstate – HDM Section 2.7.1.1	
% Trucks:	24%	Terrain:	Rolling	
ADT:	20,097	Truck Access/Qualifying Hwy.	Access-Yes; Qualifying-Yes	
Element		Standard	Existing Condition	Proposed Condition *
1	Design Speed <sup>1</sup>	70 mph HDM Section 2.7.1.1 A	65 mph (Posted)	70 mph
2	Lane Width	12'-0" HDM Section 2.7.1.1 B	12 ft.	12 ft.
3	Shoulder Width	Left – 4 ft min, 8' desired Right – 10 ft. min., 12' desirable w/ barrier HDM Section 2.7.1.1 C	Right: 8'-6" Left: 4'-0" EB 6'-0" WB	Right: 12'-0" Left: 4'-0" EB 6'-0" WB
4	Horizontal Curve Radius	1810 ft. @ e=8.0% HDM Section 2.7.1.1 D, Exhibit 2-2	N/A	N/A
5	Superelevation	8% Maximum HDM Section 2.7.1.1 E	Normal Crown	Normal Crown
6	Stopping Sight Distance	730 ft Minimum (Crest) HDM Section 2.7.1.1 F, Exhibit 2-2	906 ft.	1124 ft.
7	Grade	4% HDM Section 2.7.1.1 G, Exhibit 2-2	0.75%	1.50%
8	Travel Cross Slope	Minimum 1.5% Maximum 2.5% HDM Section 2.7.1.1 H	2%	2%
9	Vertical Clearance	14'-6" rehabilitation; 16'-6" replacement (Minimum) NYSTA, NYSDOT Bridge Manual, Section 2	N/A	N/A
10	Design Loading Structural Capacity	NYSDOT LRFD Specifications AASHTO HL-93 Live Load and NYSDOT Design Permit Vehicle NYSDOT Bridge Manual, Section 2	HS-20	HL-93 and the NYS Design Permit Vehicle

**Notes:**

- The Divisional Traffic Engineer has concurred that the use of a Design Speed of **70** mph is consistent with the anticipated off-peak 85th percentile speed within the range of functional class speeds for the terrain and volume.

<b>Exhibit 3.2.3.2.b Millers Grove Road</b>					
PIN:		S52886		NHS (Y/N):	No
Route No. & Name:		Millers Grove Road – County Route 53		Functional Classification:	Urban Major Collector (Code 17)
Project Type:		Bridge Replacement & New Construction		Design Classification:	Rural Collectors – Non-NHS HDM Section 2.7.3.2
% Trucks:		N/A		Terrain:	Rolling
ADT:		465		Truck Access/Qualifying Hwy.	Access-No; Qualifying-No
Element		Standard		Existing Condition	Proposed Condition *
1	Design Speed	30 mph Minimum 60 mph Maximum HDM Section 2.7.3.1 A		40 mph (Posted)	60 mph
2	Lane Width	11 ft. Minimum HDM Section 2.7.3.1 A, Exhibit 2-5		9 ft.	11 ft.
3	Shoulder Width	4 ft. Minimum 5 ft. Desirable HDM Section 2.7.3.1 C, Exhibit 2-5		3 ft.	4 ft.
4	Horizontal Curvature	801 ft. @ e=8% HDM Section 2.7.3.1 D, Exhibit 2-5		N/A	N/A
5	Superelevation	8% Maximum HDM Section 2.7.3.1 E		Normal Crown	Normal Crown
6	Stopping Sight Distance	522 ft. Minimum (Crest) HDM Section 2.7.3.1 F, Exhibit 2-5		N/A	N/A
7	Grade	6% HDM Section 2.7.3.1 G, Exhibit 2-5		N/A	N/A
8	Cross Slope	1.5% Minimum 3% Maximum HDM Section 2.7.3.1 H		2%	2%
9	Vertical Clearance	14'-6" (Minimum) NYSDOT Bridge Manual, Section 2		14'-3½"	14'-6"
10	Pedestrian Accommodations	Complies with HDM Chapter 18		3' shoulder	4' shoulder

\* Information on the local road (Proposed Conditions) shall be used to establish the bridge replacement length that would be needed to accommodate future local road improvements (including widening). No work on the local under passing road is proposed at this time.

### 3.2.3.3. Other Design Parameters

Exhibit 3.2.3.3.c Other Design Parameters Interstate 90 – NYSTA Mainline			
Element	Standard	Existing Conditions	Proposed Condition
Level of Service	Min. "C"	B	B
Drainage Design Storm	10 Year	10 Year	10 Year
Horizontal Clearance	15'-0" with no barrier Shoulder width or 4'-0" min. with barrier HDM § 2.7.1.1 I	8'-6"	12 ft.
Rollover	Between parallel lanes: 5% maximum At pavement edge: 8.5% maximum HDM § 3.2.5.1	4%/8%	4%/8%

## 3.3. Engineering Considerations

### 3.3.1. Operations (Traffic and Safety) & Maintenance

#### 3.3.1.1. Functional Classification and National Highway System

This project will not change the functional classification of either roadway.

#### 3.3.1.2. Control of Access

Access control will remain unchanged on both roadways.

#### 3.3.1.3. Traffic Control Devices

Traffic Signals: No new traffic signals are proposed.

Roadway Striping and Signage: Will be replaced within the project limits.

#### 3.3.1.4. Intelligent Transportation Systems (ITS)

No additional ITS measures are proposed.

#### 3.3.1.5. Speeds and Delay

The existing posted speed limits of both roadways will remain unchanged. Travel time estimates are not applicable for a bridge replacement project.

#### 3.3.1.6. Traffic Volumes

No changes in traffic volumes are anticipated (see Section 2.3.1.6 for existing and future traffic volumes).

#### 3.3.1.7. Level of Service and Mobility

There are no anticipated changes in Levels of Service (see Section 2.3.1.7 for existing and future Levels of Service).

### **3.3.1.8. Work Zone Safety & Mobility**

Interstate 90 will remain open during the work by utilizing staged construction. When one bridge is closed, traffic will be diverted across the median and onto the other bridge via a temporary mainline crossover. Response times for emergency vehicles using Interstate 90 may be increased during the construction operations due to the work zone traffic control measures.

It is anticipated that Millers Grove Road will remain open during construction. Millers Grove Road will be narrowed down to a single lane during construction using temporary barriers to allow construction. Access will be controlled by temporary traffic signals at either end.

The details for the work zone traffic control will be prepared and evaluated during final design. The Herkimer County Department of Public Works will be contacted to discuss the proposed work zone traffic control plan.

### **3.3.1.9. Safety Considerations, Accident History and Analysis**

No accident reduction or preventative needs have been identified for this project. As part of the replacement scope existing substandard approach guide railing and bridge rail will be replaced and will meet current standards.

### **3.3.1.10. Impacts on Police, Fire Protection and Ambulance Access**

It is anticipated that Millers Grove Road will remain open during construction. As such, response times for emergency vehicles will not be significantly increased during construction operations. Close coordination with emergency service providers will be required during final design and construction.

I-90 will remain open during the work. It is anticipated that response times for emergency vehicles using I-90 will not be affected.

No significant impacts to emergency vehicle access through the project site are anticipated upon project completion.

### **3.3.1.11. Parking Regulations and Parking Related Issues**

No changes are proposed.

### **3.3.1.12. Lighting**

No changes are proposed.

### **3.3.1.13. Ownership and Maintenance Jurisdiction**

No changes are proposed. Refer to section 2.3.1.12.

### **3.3.1.14. Constructability Review**

A review by the NYSTA Constructability review team of the NYSTA will take place during final design phases.

### **3.3.2. Multimodal**

#### **3.3.2.1. Pedestrians**

Pedestrians are prohibited on Interstate Highways by state law. Within the project limits, pedestrians will be accommodated along Millers Grove Road on the roadway shoulders. See Appendix D for the Complete Streets Checklist.

#### **3.3.2.2. Bicyclists**

Bicyclists are prohibited on Interstate Highways by state law. No special provisions are proposed to accommodate bicyclists on Millers Grove Road. Within the project limits, bicyclists will be accommodated along Millers Grove Road on the roadway shoulders.

#### **3.3.2.3. Transit**

No changes are proposed.

#### **3.3.2.4. Airports, Railroad Stations, and Ports**

No changes are proposed.

#### **3.3.2.5. Access to Recreation Areas (Parks, Trails, Waterways, and State Lands)**

No changes are proposed.

### **3.3.3. Infrastructure**

#### **3.3.3.1. Proposed Highway Section**

Interstate 90 EB and WB within the project limits will be reconstructed to current standards for an Urban Principal Arterial – Interstate. Two 12'-0" lanes, 12'-0" right shoulders and varying left shoulders/paved medians will be provided in each direction. Shoulders and paved medians will taper beyond the bridges to meet the existing paved roadways. Refer to Appendix A for typical sections.

The existing 24'-0" roadway on Millers Grove Road will be retained and the shoulders will be reconstructed to accommodate the minimum 4'-0" shoulder widths. Millers Grove Road within the project limits will be reconstructed to current standards for a Rural Minor Collector. 10'-0" wide lanes travel lane and a minimum 4'-0" wide shoulder will be provided in each direction of travel.

##### **3.3.3.1. (1) Right of Way**

No right of way acquisitions will be required.

##### **3.3.3.1. (2) Curb**

To facilitate drainage of the bridge decks, short segments of curb will be provided at the four approach quadrants of I-90 adjacent to the bridges. Millers Grove Road will not have curbs.

##### **3.3.3.1. (3) Grades**

The roadway grade of Interstate 90 over the bridges will be altered as necessary to accommodate the required raise in profile over the bridges. The approach to the bridges will be regraded to meet the required vertical profile.

The roadway grade of Millers Grove Road will be maintained.

#### **3.3.3.1. (4) Intersection Geometry and Conditions**

There are no intersections within the project limits.

#### **3.3.3.1. (5) Roadside Elements**

(a) Snow Storage, Sidewalks, Utility Strips, Bikeways, Bus Stops – There are no special roadside elements within the project limits. Snow storage will be accommodated in the roadway shoulder.

(b) Driveways – There are no driveways located within the project limits. There are access tracks along Millers Grove Road that are located approximately 45 feet south of the EB bridge and 90 feet north of the WB bridge that must be maintained throughout construction. These tracks provide access to adjacent farmlands and to a culvert located east of the structures.

(c) Clear Zone - The clear zone width at the bridges along Interstate 90 will be set based on the current NYSTA standard of 30.0' from the outside edge of travel lane. The required clear zone along Millers Grove Road cannot be obtained due to embankment slopes. These areas will be protected by the installation of guide railing.

#### **3.3.3.2. Special Geometric Design Elements**

##### **3.3.3.2. (1) Non-Standard Features**

All the non-standard features will be eliminated as part of the bridge reconstruction.

##### **3.3.3.2. (2) Non-Conforming Features**

Per current NYSTA policy, concrete barrier will be provided on both replacement structures, which will eliminate the existing non-conforming rail.

#### **3.3.3.3. Pavement and Shoulder**

A pavement evaluation is not required for a bridge replacement project. Approach roadway sections will utilize a conventional pavement design section in accordance with their functional classification.

#### **3.3.3.4. Drainage Systems**

The existing system of median and roadside swales, along with the minor closed drainage system, will require modifications to accommodate the proposed bridge and highway sections, but all drainage patterns within the project limits will be maintained.

#### **3.3.3.5. Geotechnical**

Based on the boring information available and Record Plans, the proposed abutments are likely to be founded on steel H-piles. Details will be established during final design with the preparation of the Foundation Design Report.

#### **3.3.3.6. Structures**

The existing bridges will be completely removed and replaced with new structures. The new bridges will be constructed along the same horizontal alignment. The vertical alignments will be increased so that the clearance to the under roadway is 14'-6" minimum.

**3.3.3.6. (1) Description of Work**

(a) The new bridges will be single-span. The design-build team will determine the most efficient structure types.

(b) This alternative would include complete removal and replacement of the existing structures with new bridges on the existing alignments. The replacement structures would each accommodate a 66'-10" clear-roadway width, providing for two 12'-0" travel lanes, 12'-0" right shoulders, and 30'-10" left shoulders/medians. The proposed sections allow for the provision of future 12'-0" third lanes and future 18'-10" left shoulders/medians, for future NYSTA needs. The EB and WB bridges will be separated by single slope barriers and a longitudinal joint.

(c) No utilities will be carried by the bridges.

**3.3.3.6. (2) Clearances**

Horizontal clearances for I-90 and Millers Grove Road will be equal to the new shoulder widths. 14'-6" vertical clearance will be provided over Millers Grove Road.

**3.3.3.6. (3) Live Load**

The new bridges will be designed to carry HL-93 and the NYS Design Permit Vehicle.

**3.3.2.6. (4) Associated Work**

The existing bridges will be removed down to the foundation level below grade. No special considerations have been identified and the construction of the new bridges is assumed to be routine.

**3.3.3.6. (5) Waterway**

There are no waterways within the project limits.

**3.3.3.7. Hydraulics of Bridges and Culverts**

There are no waterways within the project limits.

**3.3.3.8. Guide Railing, Median Barriers and Impact Attenuators**

All of the approach guide rail and bridge railing will be upgraded to meet current standards.

**3.3.3.9. Utilities**

All utilities should be unaffected by the proposed work.

Coordination with the existing utility companies will be required during final design.

**3.3.3.10. Railroad Facilities**

No railroad facilities will be affected by the project.

**3.3.4. Landscape and Environmental Enhancements****3.3.4.1. Landscape Development and Other Aesthetic Improvements**

No significant landscape or other aesthetic enhancements are planned for this project.

### **3.3.5. Miscellaneous**

There are no other special or unique aspects to this project.

## CHAPTER 4 – SOCIAL, ECONOMIC AND ENVIRONMENTAL CONDITIONS AND CONSEQUENCES

### 4.1. Introduction

#### 4.1.1. Environmental Classification

##### 4.1.1.1. NEPA Classification -

This project is 100% Thruway funded; therefore, NEPA does not apply.

##### 4.1.1.2. SEQR Classification -

In accordance with 6 NYCRR, Part 617, "State Environmental Quality Review", the Thruway has determined that this project is a SEQR Type II Action. No further SEQR processing is required. The New York State Thruway Authority is the SEQR lead agency. The project has been identified as a Type II action, per 6 NYCRR Part 617.5, Subdivision (c), Item 2. This permits the project to be classified as Type II since the project does not meet or exceed any of the thresholds in Section 617.4, and is of a scale and scope illustrated by the following:

- (2) replacement, rehabilitation or reconstruction of a structure or facility, in kind, on the same site, including upgrading buildings to meet building or fire codes, unless such action meets or exceeds any of the thresholds in Section 617.4 of this Part.

As stated in Section 617.4 (b), actions that meet the thresholds listed below are Type I if they are to be directly undertaken, funded or approved by an agency.

The proposed project does not include or result in:

- (1) the adoption of a municipality's land use plan, the adoption by any agency of a comprehensive resource management plan or the initial adoption of a municipality's comprehensive zoning regulations;
- (2) the adoption of changes in the allowable uses within any zoning district, affecting 25 or more acres of the district;
- (3) the granting of a zoning change, at the request of an applicant, for an action that meets or exceeds one or more of the thresholds given elsewhere in this list;
- (4) the acquisition, sale, lease, annexation or other transfer of 100 or more contiguous acres of land by a state or local agency;
- (5) construction of new residential units that meet or exceed the following thresholds:
  - (i) 10 units in municipalities that have not adopted zoning or subdivision regulations;
  - (ii) 50 units not to be connected (at the commencement of habitation) to existing community or public water and sewerage systems including sewage treatment works;
  - (iii) in a city, town or village having a population of less than 150,000, 250 units to be connected (at the commencement of habitation) to existing community or public water and sewerage systems including sewage treatment works;
  - (iv) in a city, town or village having a population of greater than 150,000 but less than 1,000,000, 1,000 units to be connected (at the commencement of habitation) to existing community or public water and sewerage systems including sewage treatment works; or
  - (v) in a city or town having a population of greater than 1,000,000, 2,500 units to be connected (at the commencement of habitation) to existing community or public water and sewerage systems including sewage treatment works;
- (6) activities, other than the construction of residential facilities, that meet or exceed any of the following thresholds; or the expansion of existing nonresidential facilities by more than 50 percent of any of the following thresholds:

- (i) a project or action that involves the physical alteration of 10 acres;
  - (ii) a project or action that would use ground or surface water in excess of 2,000,000 gallons per day;
  - (iii) parking for 1,000 vehicles; (iv) in a city, town or village having a population of 150,000 persons or less, a facility with more than 100,000 square feet of gross floor area;
  - (v) in a city, town or village having a population of more than 150,000 persons, a facility with more than 240,000 square feet of gross floor area;
- (7) any structure exceeding 100 feet above original ground level in a locality without any zoning regulation pertaining to height;
  - (8) any Unlisted action that includes a nonagricultural use occurring wholly or partially within an agricultural district (certified pursuant to Agriculture and Markets Law, article 25AA, sections 303 and 304) and exceeds 25 percent of any threshold established in this section;
  - (9) any Unlisted action (unless the action is designed for the preservation of the facility or site) occurring wholly or partially within, or substantially contiguous to, any historic building, structure, facility, site or district or prehistoric site that is listed on the National Register of Historic Places, or that has been proposed by the New York State Board on Historic Preservation for a recommendation to the State Historic Preservation Officer for nomination for inclusion in the National Register, or that is listed on the State Register of Historic Places (The National Register of Historic Places is established by 36 *Code of Federal Regulations* [CFR] parts 60 and 63, 1994 [see section 617.17 of this Part]);
  - (10) any Unlisted action, that exceeds 25 percent of any threshold in this section, occurring wholly or partially within or substantially contiguous to any publicly owned or operated parkland, recreation area or designated open space, including any site on the Register of National Natural Landmarks pursuant to 36 CFR part 62, 1994 (see section 617.17 of this Part); or
  - (11) any Unlisted action that exceeds a Type I threshold established by an involved agency pursuant to section 617.14 of this Part.

#### **4.1.2. Coordination with Agencies**

##### **4.1.2.1. NEPA Cooperating and Participating Agencies -**

This project is 100% State funded; therefore, the FHWA NEPA requirements for Cooperating and Participating Agencies do not apply.

##### **4.1.2.2. SEQR Cooperating and Participating Agencies -**

The following agencies have been identified as involved and Interested Agencies under SEQR:

The New York State Department of Environmental Conservation (NYSDEC)

#### **4.2. Social**

The purpose of this section is to discuss the social environment of the site. This project involves the replacement of the New York State Thruway (I-90) mainline bridges over County Road 53 (Millers Grove Road) at MP 225.48 and 225.49. This project involves the replacement of the existing bridges on the existing alignment. Based on the scope of the project, no adverse effects to the surrounding social environment are anticipated as a result of this project.

##### **4.2.1. Land Use**

###### **4.2.1.1. Demographics and Affected Population -**

The project is located in the Town of Schuyler in Herkimer County. The project vicinity is generally rural, with undeveloped land and agricultural fields located in much of the surrounding area. A prefabricated

home residential development is located southwest of the Study Area, and scattered residences are located along County Road 53.

The 2010 US Census reports that the Town has a population of 3,420 persons. The median reported age was 45.6, with 19.1% of the population being reported at age 65 or older. 97.8% of the population was identified as white. Additional information regarding town demographics was not available from the US Census' American Community Survey.

This project is not located in a potential NYSDEC Environmental Justice Area.

#### **4.2.1.2. Comprehensive Plans and Zoning -**

Replacement of the existing bridges on the same general alignment will not conflict with any local community's comprehensive plans, nor will it affect local zoning.

#### **4.2.2. Neighborhoods and Community Cohesion**

##### **4.2.2.1. Community Cohesion -**

The project will not divide neighborhoods, isolate part of a neighborhood, generate new development or otherwise affect community cohesion. During construction, Millers Grove Road will remain open, and there will be no significant increase in travel times. There will be no permanent effect on neighborhoods or community cohesion.

##### **4.2.2.2. Home and Business Relocations -**

Since this project involves the replacement of an existing bridges on the existing alignment, the proposed project would require no displacement of residences or businesses and there would be no relocation impacts.

#### **4.2.3. Social Groups Benefited or Harmed**

##### **4.2.3.1. Elderly and/or Disabled Persons or Groups -**

As the project is the replacement of existing bridges on the existing alignment, no social groups will be benefited or harmed as a result of this project.

##### **4.2.3.2. Transit Dependent -**

This project involves the replacement of existing bridges on the existing alignment and does not involve existing transit facilities such as bus or train stations, nor park and ride lots.

##### **4.2.3.3. Low Income, Minority and Ethnic Groups (Environmental Justice) -**

The project is not located in or near a potential NYSDEC environmental justice area.

#### **4.2.4. 4.2.4 School Districts, Recreational Areas, and Places of Worship**

##### **4.2.4.1. School Districts -**

The proposed project is within the Frankfort-Schuyler Central School District. There are no schools or school properties within or near the project corridor. During construction, Millers Grove Road will remain open, and there will be no significant increase in travel times. The NYS Thruway Authority will coordinate the construction schedule and work zone traffic control details with the Frankfort-Schuyler Central School District.

#### **4.2.4.2. Recreational Areas -**

There are no parks or recreational properties within or near the Study Area. Thus, this project will have no impacts to existing recreational areas.

#### **4.2.4.3. Places of Worship –**

There are no places of worship within the Study Area. However, the East Schuyler Church is located on Church Road, approximately 200 feet west of the Study Area. The proposed project is not expected to have a direct impact on this church. During construction, Millers Grove Road will remain open, and there will be no significant increase in travel times. This project will have no permanent impacts on existing places of worship.

### **4.3. Economic Guidance from FHWA Technical Advisory T6640.8A:**

#### **4.3.1. Regional and Local Economies**

There will be no measurable or apparent adverse impact on the general economic conditions, tax base, employment opportunities, economic development zones, or property values within the project limits or surrounding area as a result of this project.

#### **4.3.2. Business District Impacts**

This project is not located within a defined business district. There will be no permanent adverse impact on businesses as a result of this project. During construction, Millers Grove Road will remain open, and there will be no significant increase in travel times.

#### **4.3.3. Specific Business Impacts**

There will be no permanent measurable or known adverse impacts to established businesses as a result of this project.

### **4.4. Environmental**

#### **4.4.1. Wetlands**

A site visit was conducted on November 2, 2016, which identified wetlands within and adjacent to the Study Area. Refer to the Wetland Delineation Letter Report for further information.

##### **4.4.1.1. State Freshwater Wetlands -**

There are no NYSDEC regulated freshwater wetlands or regulated adjacent areas (100-feet) within the Study Area, as per the NYSDEC Environmental Resource Mapper. A site visit was performed to verify this. No further investigation is required and Environmental Conservation Law (ECL), Article 24 is satisfied.

##### **4.4.1.2. State Tidal Wetlands -**

A review of the NYSDEC GIS wetland data files indicates that there are no NYSDEC jurisdictional tidal wetlands or regulated adjacent areas within or near the project limits, and ECL Article 25 does not apply.

##### **4.4.1.3. Federal Jurisdiction Wetlands -**

A review of existing wetland and stream databases (National Wetland Inventory [NWI], New York State Department of Environmental Conservation [NYSDEC] mapped wetlands, and NYSDEC mapped streams) indicates the presence of one NWI riverine resource within the Study Area, Bridenbecker Creek. This creek is a NYSDEC Class C unprotected stream (see Wetland Delineation Letter Report, Appendix B).

The Study Area has been reviewed for wetlands in accordance with the criteria defined in the 1987 US Army Corps of Engineers Wetland Delineation Manual. The Wetland Delineation Letter Report concluded:

Based on field investigations, wetlands and other waters (i.e., a stream) are present within the Study Area. EDR delineated three palustrine emergent (PEM) wetlands, one palustrine scrub-shrub (PSS) wetland, and two streams within the Study Area. The wetlands were identified based on the presence of hydrophytic vegetation, hydric soils, and wetland hydrology, and total approximately 0.27 acre within the Study Area. Portions of Bridenbecker Creek were also delineated as Stream 1, which is a NYSDEC Class C unprotected stream. Stream 2 is an unnamed intermittent drainage with connections to Wetland D and Bridenbecker Creek. The streams total approximately 782 linear feet within the Study Area. Total surface area of wetlands and streams within the Study Area is approximately 0.50 acre. The wetlands and streams appear to have a surface water connection to other waters of the United States, and therefore are likely to be considered jurisdictional by the USACE under Section 404 of the Clean Water Act. However, final determination of the jurisdictional status must be made by the USACE. Due to the distance from the nearest NYSDEC regulated wetland (approximately 0.7 mile), and the small area of each delineated wetland, in EDR's opinion these wetlands should not be regulated under Article 24 of the Environmental Conservation Law.

Based on the presence of wetlands and a stream within the Study Area, the proposed project has the potential to impact wetlands. Wetland permitting through the USACE is expected to be authorized under a Nationwide Permit. If the project proceeds under a USACE Nationwide Permit, it is anticipated that a Blanket Section 401 Water Quality Certification (WQC) will also apply to this project. If wetland permits are necessary, work will not commence until the permits are acquired, and work will adhere to all permit conditions.

#### **4.4.1.4. Executive Order 11990 -**

Federal funding will not be used in the design or construction of this project. Therefore, the requirements of Executive Order 11990 do not apply to this project.

#### **4.4.1.5. Mitigation Summary -**

If necessary, depending on the final project design, appropriate measures will be taken to avoid and minimize wetland impacts. Note that if impacts to wetlands are 1/10 of an acre or less and a Nationwide Permit applies to the proposed activities, no wetland mitigation/monitoring plan would be required.

### **4.4.2. Surface Waterbodies and Watercourses**

#### **4.4.2.1. Surface Waters –**

Bridenbecker Creek, a tributary to the Mohawk River, is located at the center of the Study Area. This creek is a mapped NWI riverine resource, and is also a NYSDEC Class C unprotected stream.

If the final project design will include impact to surface waters or wetlands, it is anticipated that this work will be authorized under a USACE Nationwide Permit.

A Blanket Section 401 Water Quality Certification is also expected to apply to this project since the work required is anticipated to meet the requirements of a USACE Nationwide Permit.

The permit(s) will be obtained once the location and the extent of the impacts are ascertained. Mitigation to minimize impacts may be required. Work will not commence until the permits are acquired, and will adhere to any conditions set forth by the permit requirements.

#### **4.4.2.2. Surface Water Classification and Standards –**

Based upon a review of the NYSDEC GIS data maps for regulated streams, there are no protected streams within the Study Area.

Bridenbecker Creek, a mapped Class C unprotected stream, flows through the Study Area. Additionally, an unnamed intermittent stream flows along the eastern edge of County Road 53, in the central portion of the Study Area. This unnamed stream has connections to a delineated wetland and Bridenbecker Creek. The streams total approximately 782 linear feet within the Study Area.

The best usage for Class/Standard “C” waters is fishing. Water quality is suitable for fish propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.

#### **4.4.2.3. Stream Bed and Bank Protection -**

Based on the classification of Bridenbecker Creek and the unnamed intermittent stream located within the Study Area, a NYSDEC Protection of Waters permit is not required for this project. Although a permit is not required, this project should not diminish the water quality standards of the streams within the Study Area. During construction, precautions should be taken to prevent contamination of Bridenbecker Creek and the unnamed stream by silt, sediment, fuels, solvents, lubricants, or any other pollutants. Promptly after construction, care will be taken to stabilize all disturbed areas.

#### **4.4.3. Wild, Scenic, and Recreational Rivers**

##### **4.4.3.1. State Wild, Scenic and Recreational Rivers -**

There are no NYSDEC Designated, Study or Inventory State Wild, Scenic or Recreational Rivers within or adjacent to the Study Area. No further review is required.

##### **4.4.3.2. National Wild and Scenic Rivers -**

The project does not involve a National Wild and Scenic River as shown by the Nationwide Rivers Inventory List of National Wild and Scenic Rivers. No further review is required.

#### **4.4.4. Navigable Waters**

##### **4.4.4.1. State Regulated Waters -**

There are no state regulated navigable waters located within the Study Area that will be impacted by the project.

##### **4.4.4.2. Office of General Services Lands and Navigable Waters -**

There are no OGS underwater holdings located within the Study Area that will be impacted by the project.

##### **4.4.4.3. Rivers and Harbors Act – Section 9 -**

Since the project does not involve the construction or modification of any bridge, dam, dike, or causeway over any navigable water of the United States, Section 9 is not applicable.

#### **4.4.4.4. Rivers and Harbors Act – Section 10 -**

Since the project does not involve the creation of any obstruction to the navigable capacity of any of the waters of the United States, or in any manner alter or modify the course, location, condition, or capacity of any navigable water of the United States, Section 10 is not applicable.

#### **4.4.5. Floodplains**

##### **4.4.5.1. State Flood Insurance Compliance Program -**

The portion of the Study Area bordering Bridenbecker Creek within the Study Area is within the 100 year floodplain, as indicated by the FEMA Flood Insurance Rate Map. In accordance with the provisions of 6 NYCRR 502 - Flood Plain Management for State Projects, this action has considered and evaluated the practicality of alternatives to any floodplain encroachments. As a result of this evaluation, it is concluded that: (1) a significant encroachment does not exist, (2) there is no significant potential for interruption or termination of a transportation facility which is needed for emergency vehicles, (3) there are no significant impacts on natural beneficial floodplain values.

If work is proposed within the floodplain, it is expected that a floodplain hydraulic analysis will be performed by during the advance detail plan phase.

##### **4.4.5.2. Executive Order 11988 -**

In order to comply with EO 11988, there will be an evaluation of potential effects of any actions taken within the floodplain, and alternatives to avoid any adverse effects shall be considered. If the project alternatives require the use of a floodplain, there will be an attempt to minimize potential impacts, and consistent with the regulations issued in accord with section 2(d) of this Order, a notice containing an explanation of why the action is proposed to be located within the floodplain will be prepared and circulated.

#### **4.4.6. Coastal Resources**

##### **4.4.6.1. State Coastal Zone Management Program –**

The proposed project is not located in a State Coastal Zone Management (CZM) area, according to the Coastal Zone Area Map from the NYS Department of State's Coastal Zone Management Unit.

##### **4.4.6.2. State Coastal Erosion Hazard Area -**

The proposed project is not located in or near a Coastal Erosion Hazard Area.

##### **4.4.6.3. Waterfront Revitalization and Coastal Resources Program -**

According to NYS DOS "List of Approved Coastal Local Waterfront Revitalization Programs (LWRPs)," dated July 2016, the proposed project is not located in a Local Waterfront Revitalization Area. No further action is required.

##### **4.4.6.4. Federal Coastal Barrier Resources Act (CBRA) and Coastal Barrier Improvement Act (CBIA) -**

The proposed project is not located in, or near a coastal area under the jurisdiction of the Coastal Barrier Resources Act (CBRA) or the Coastal Barrier Improvement Act (CBIA).

#### **4.4.7. Groundwater Resources, Aquifers, and Reservoirs**

#### **4.4.7.1. Aquifers -Topics may include, but are not limited to:**

NYSDEC aquifer GIS data files have been reviewed, and it has been determined that the proposed project is not located in an identified Primary Water Supply or Principal Aquifer Area. No further investigation for NYSDEC designated aquifers is required.

#### **4.4.7.2. Drinking Water Supply Wells (Public and Private Wells) and Reservoirs -**

There are no wellhead influence zones, or reservoirs within or near the project area, according to the *NYS Atlas of Community Water System Sources*, dated 1982, issued by the NYS Department of Health and the NYS Department of Environmental Conservation Water Wells GIS data.

In December 2016, Environmental Data Resource, Inc. was contracted by EDR to provide a listing of published databases of hazardous waste sites in the vicinity of the Study Area. These databases also include a listing of physical setting sources, such as water wells and public water supply wells as identified by a review of Federal, State and local databases. The environmental database report indicates that two wells are located within 0.25 mile of the Study Area. These wells are mapped approximately 0.2 mile southwest in the Millers Grove Trailer Park. A public water supply well also associated with the Millers Grove Trailer Park is mapped on the database report to be located just over 0.25 mile from the Study Area.

During the design phase, measures to avoid, minimize or mitigate adverse impacts to these wells will be identified. Best Management Practices (BMPs) to protect the well will be employed, including Erosion and Sediment Control, Stormwater Management and Construction Chemical Storage and Handling.

#### **4.4.8. Stormwater Management**

A SPDES General Permit GP-0-15-002 will be required because the project includes more than one acre of soil disturbance. A Stormwater Pollution Prevention Plan (SWPPP) with the appropriate sediment and erosion control measures will be developed. Based on the SWPPP, permanent stormwater management practices may be required depending on the total amount of disturbance and changes in total impervious area.

#### **4.4.9. General Ecology and Wildlife Resources**

The Study Area encompasses a portion of the New York State Thruway mainline and a portion of County Road 53 (Millers Grove Road). The Study Area includes primarily paved roadways and mowed grassy areas within and adjacent to the Thruway right of way, which provides limited habitat opportunities for wildlife. As discussed in Section 4.4.1 and 4.4.2, Bridenbecker Creek, an intermittent stream, and delineated wetlands are also located in and adjacent to the Study Area.

##### **4.4.9.1. Fish, Wildlife, and Waterfowl –**

A cursory review of the Study Area indicates that there is not a special habitat or breeding area for certain species of plants or animals at or adjacent to the project.

##### **4.4.9.2. Habitat Areas, Wildlife Refuges, and Wildfowl Refuges -**

The proposed project is 100% State funded; therefore, Section 4(f) of the US Department of Transportation Act does not apply.

##### **4.4.9.3. Endangered and Threatened Species -**

Information regarding the occurrence of rare, threatened, and endangered species and significant natural communities in the project area was solicited from the New York Natural Heritage Program (NYNHP) and the U.S. Fish and Wildlife Service (USFWS). Consultation with the USFWS through the Information, Planning, and Conservation (IPaC) decision support system was conducted. The USFWS Official Species List (see Appendix B) indicated that one Federally Threatened species could potentially be present in the vicinity of the Study Area: the northern long-eared bat (*Myotis septentrionalis*).

No clearing of trees greater than 3 inches in diameter at breast height is expected to be required for this project. Further, no evidence of bats was noted under the bridges during the site reconnaissance (guano, staining, etc.). As such, the project is not expected to impact habitat suitable for the northern long-eared bat. If it is determined during detailed design that clearing of trees greater than 3 inches in diameter at breast height is required, clearing activities will only be permitted during the winter clearing period of October 31<sup>st</sup> and March 31<sup>st</sup>.

According to the NYNHP, this office does not have any records of known occurrences of rare, or state-listed animals or plants, or significant natural communities within or immediately in the vicinity of the proposed project site.

#### **4.4.9.4. Invasive Species -**

This project includes interstate highway bridges over County Road 53 (Millers Grove Road), and associated rights of way. During the site reconnaissance for the project, typical roadside invasive species were identified including, but not limited to: common reed (*Phragmites australis*), purple loosestrife (*Lythrum salicaria*), mugwort (*Artemisia vulgaris*), garlic mustard (*Alliaria petiolata*), and bush honeysuckle (*Lonicera* sp.).

Precautions will be taken to prevent the spread of invasive species, intentionally or accidentally, during project design and construction,

#### **4.4.9.5. Roadside Vegetation Management -**

Existing roadside vegetation consists primarily of maintained lawn areas and shrubs. Efforts will be made to replace wildlife-supporting vegetation that is removed in the course of construction.

#### **4.4.10. Critical Environmental Areas**

##### **4.4.10.1. State Critical Environmental Areas –**

According to information obtained from NYSDEC, the proposed project does not involve work in or near a Critical Environmental Area.

##### **4.4.10.2. State Forest Preserve Lands -**

According to information obtained from NYSDEC, the proposed project does not involve work in or near state forest preserve lands.

#### **4.4.11. Historic and Cultural Resources**

##### **4.4.11.1. National Heritage Areas Program -**

The proposed project will not impact areas identified as National Heritage Areas.

##### **4.4.11.2. National Historic Preservation Act – Section 106 / State Historic Preservation Act – Section 14.09 -**

A Project Submittal Package (PSP) has been prepared for the proposed project. The PSP will be submitted to the Thruway's Preservation Officer for review.

#### **4.4.11.3. Architectural Resources -**

As stated in the PSP, the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP) Cultural Resources Information System (CRIS) website was reviewed to determine the location of properties listed on the National Register of Historic Places (NRHP) within and immediately adjacent to the Area of Potential Effect (APE). No properties previously listed on, or determined eligible for the NRHP are located within the APE.

#### **4.4.11.4. Archaeological Resources -**

As stated in the PSP, review of the NYSOPRHP CRIS website determined that the APE is not located in an archaeologically sensitive area, and there are no previously reported archaeological sites in the APE. In addition, no previous cultural resources surveys have been conducted within or immediately adjacent to the proposed APE.

Bridenbecker Creek, a tributary of New York State Barge Canal and the Mohawk River, is located within the Study Area. Areas along rivers and major water ways are often highly sensitive for historic-period and prehistoric archaeological resources for several reasons:

- Rivers and large streams served as prehistoric and historic-period transportation routes.
- River valleys were concentrated areas for floral and faunal resources valuable to prehistoric foragers and horticulturalists.
- Water power, and the Erie Canal (NYS Barge Canal, located 2400 feet to the southwest of the Project), were important factors in settlement and development during the nineteenth century.

The APE for the current Project is limited to the existing ROWs for the NYSTA ROW and Herkimer County Road 53, Millers Grove Road. Although the APE is located in an area that is sensitive for archaeological resources, the APE has been heavily disturbed by the construction of the New York State Thruway and associated bridges. Therefore, the APE for the proposed Project is considered to have low archaeological sensitivity for historic-period and prehistoric cultural resources.

#### **4.4.11.5. Historic Bridges -**

The 2002 New York State Department of Transportation (NYSDOT) *Evaluation of National Register Eligibility: Task C3 of the Historic Bridge Inventory and Management Plan* does not identify BIN 5516071 or BIN 5516072 as eligible for listing on the NRHP.

#### **4.4.11.6. Historic Parkways -**

This project does not have the potential to impact Historic Parkways.

#### **4.4.11.7. Native American Involvement -**

The proposed project does not lie within Federal or Native-American-owned property. Further, the project is 100% State funded; therefore, the Act for the Preservation of American Antiquities does not apply.

#### **4.4.11.8. Section 4(f) Involvement -**

The proposed project is 100% State funded, therefore Section 4(f) of the U.S. Department of Transportation Act does not apply.

#### **4.4.12. Parks and Recreational Resources**

##### **4.4.12.1. State Heritage Area Program -**

The proposed project will not impact areas identified as State Heritage Areas.

##### **4.4.12.2. National Heritage Areas Program -**

The proposed project will not impact areas identified as National Heritage Areas.

##### **4.4.12.3. National Registry of Natural Landmarks -**

There are no listed nationally significant natural areas within, or adjacent to, the project area.

##### **4.4.12.4. Section 4(f) Involvement -**

The proposed project is 100% State funded. This section does not apply.

##### **4.4.12.5. Section 6(f) Involvement -**

The project does not impact parklands or facilities that have been partially or fully federally funded through the Land and Water Conservation Act. No further consideration under Section 6(f) is required.

##### **4.4.12.6. Section 1010 Involvement -**

This project does not involve the use of land from a park to which Urban Park and Recreation Recovery Program funds have been applied.

#### **4.4.13. Visual Resources**

The project will involve a temporary disturbance to the visual environment through the establishment of a project construction staging area. The staging area will be in place during construction and will be removed upon project completion. The bridge replacements will have a similar appearance in terms of span, design, and materials as the existing bridges. No significant permanent visual impacts are anticipated from the project.

#### **4.4.14. Farmlands**

##### **4.4.14.1. State Farmland and Agricultural Districts -**

Based on a review of the Agricultural District Maps for Herkimer County, the Study Area is located within an Agricultural District. However, the proposed project is the replacement of existing bridges on the same alignment within existing rights of way, and is not expected to acquire land from an actively operated farm. Therefore, the notification requirements of the NYS Agriculture and Markets Law do not apply.

Note that if the final project plans include the acquisition of land of land from an active farm outside existing rights of way, the Agriculture and Market Law, Article 25-AA, requires prior notice to the Commissioner of Agriculture and Markets for these right-of-way acquisitions in an Agricultural District.

##### **Federal Prime and Unique Farmland -**

The proposed project is 100% State funded; therefore, the Federal Farmland Protection Policy Act does not apply.

#### **4.4.15. Air Quality**

##### **4.4.15.1. Transportation Conformity –**

The project is not located within a non-attainment area; therefore, the transportation conformity regulations, published by the EPA on August 15, 1997 (40 CFR Parts 51 and 93), do not apply.

##### **4.4.15.2. Carbon Monoxide (CO) Microscale Analysis -**

An air quality analysis for CO is not required since this project will not increase traffic volumes, reduce source-receptor distances by 10% or more, or change other existing conditions to such a degree as to jeopardize attainment of the National Ambient Air Quality Standards. The project does not require a project-level conformity determination.

##### **4.4.15.3. Mesoscale Analysis -**

A Mesoscale Analysis is not required for this project since it does not significantly affect air quality conditions over a large area and is not a regionally significant project.

##### **4.4.15.4. Mobile Source Air Toxics (MSATs) Analysis -**

This project modifies existing highway infrastructure and does not add capacity or new interchanges that would contribute to additional vehicular usage. It can therefore be concluded that the project will have no significant adverse impact on ambient MSAT levels.

##### **4.4.15.5. Particulate Matter (PM) Analysis -**

This project has been classified as a SEQRA Type II project and has been determined to result in no significant increase in traffic volumes. The project actions do not individually or cumulatively have a significant effect on PM emissions. It can therefore be concluded that the project will have no significant adverse impact on ambient PM levels.

##### **4.4.15.6. Greenhouse Gas Analysis –**

This project will not add capacity or new interchanges that will result in additional vehicular usage. It can therefore be concluded that the project will have no significant adverse impact on ambient greenhouse gas levels.

#### **4.4.16. Energy**

Construction of the project will involve the use of energy in the form of fuel for construction equipment. The completed project involves no direct energy consumption.

#### **4.4.17. Noise**

Construction equipment operation will cause noise levels to temporarily increase. The completed project will not significantly change either the horizontal or vertical alignment of the bridges, or increase the number of through-traffic lanes. Therefore, no long-term noise impact will occur as a result of the project.

#### **4.4.18. Asbestos**

##### **4.4.18.1. Screening**

An asbestos screening has been performed for this project which reviewed the “as-builts” of the utilities and the bridges. Based on the materials revealed from the review it has been determined that there are no positively identified asbestos materials. An Asbestos Assessment was performed to verify these findings. See the Hazardous Materials Screening Report for sampling and laboratory results.

#### **4.4.19. Lead**

##### **4.4.19.1. Screening**

A screening for lead has been performed for this project which reviewed the “as-builts” for the bridges to identify the potential for lead containing materials. It has been determined from the review that there are areas of positively identified lead material: pad under the bridge bearings. See the Hazardous Materials Screening Report for sampling and laboratory results.

#### **4.4.20. PCBs**

##### **4.4.20.1. Screening**

A screening for PCBs has been performed for this project and it has been determined that there are no positively identified PCB containing materials. See the Hazardous Materials Screening Report for sampling and laboratory results.

#### **4.4.21. Hazardous Waste and Contaminated Materials**

A Hazardous Waste/Contaminated Materials Site Screening has been conducted in accordance with the NYSDOT Environmental Procedures Manual, Chapter 5, to document the likely presence or absence of hazardous/contaminated environmental conditions. A hazardous/contaminated environmental condition is the presence or likely presence of any hazardous substances or petroleum products (including products currently in compliance with applicable regulations) on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property.

This assessment included a walkover reconnaissance of the Study Area on November 2, 2016, a review of existing information about past and current land use, and a review of published databases and government records, including Inactive Hazardous Waste Site Registry, Chemical and Petroleum Bulk Storage records, waste incident/chemical releases reports, and other federal, state, county, and local sources of information. In December 2016, Environmental Data Resource, Inc. was contracted by EDR to provide a listing of published databases of hazardous waste sites in the vicinity of the Study Area. These databases provide a listing of sites of potential concern as identified by a review of Federal, State and local databases. This database review was supplemented with a review of published databases available through the NYSDEC web site. The environmental database report is available upon request.

No significant hazardous waste/contaminated materials were identified within or adjacent to the Study Area during the course of the Hazardous Waste/Contaminated Materials Site Screening.

#### **4.5. Construction Effects** This section may contain the following unnumbered subsections:

##### **4.5.1. Construction Impacts**

Construction of the proposed project is expected to include traditional construction methods and products. The impacts of construction can therefore be reasonably anticipated and mitigated by using conventional methods. Construction impacts are temporary in nature. Temporary soil erosion and increased dust may occur from disturbance of soils during construction activities. Soil erosion and runoff can impact the water

quality of nearby surface water bodies. A site-specific Stormwater Pollution Prevention Plan (SWPPP) will be developed that will include soil erosion control, dust control, and runoff control measures.

Construction of the proposed project may also have temporary noise impacts. The proposed project is a portion of the mainline of the NYS Thruway, and surrounding properties are largely residential and/or agricultural in nature. Temporary noise impacts are not expected to have a significant adverse impact on nearby residences.

#### **4.6. Indirect and Secondary Effects**

##### **4.6.1. Indirect Socioeconomic Effects**

The proposed project is a replacement of existing bridges in the same location; therefore, the project is not expected to have indirect social or economic effects.

##### **4.6.2. Social Consequences**

The proposed project is a replacement of existing bridge in the same location; therefore, the project will not affect land use, planning, or zoning. Existing adjacent properties will be minimally affected and no social groups will be harmed.

##### **4.6.3. Economic Consequences**

The proposed project is a replacement of existing bridges in the same location; therefore, the project will not affect the regional or local economies. No business districts will be impacted, and no businesses will be relocated. Any economic impacts associated with the project will be minimal and temporary, resulting from construction impacts

#### **4.7 Cumulative Effects**

No adverse cumulative effects are anticipated to result from the proposed project.



## **Appendix A Concept Plans**



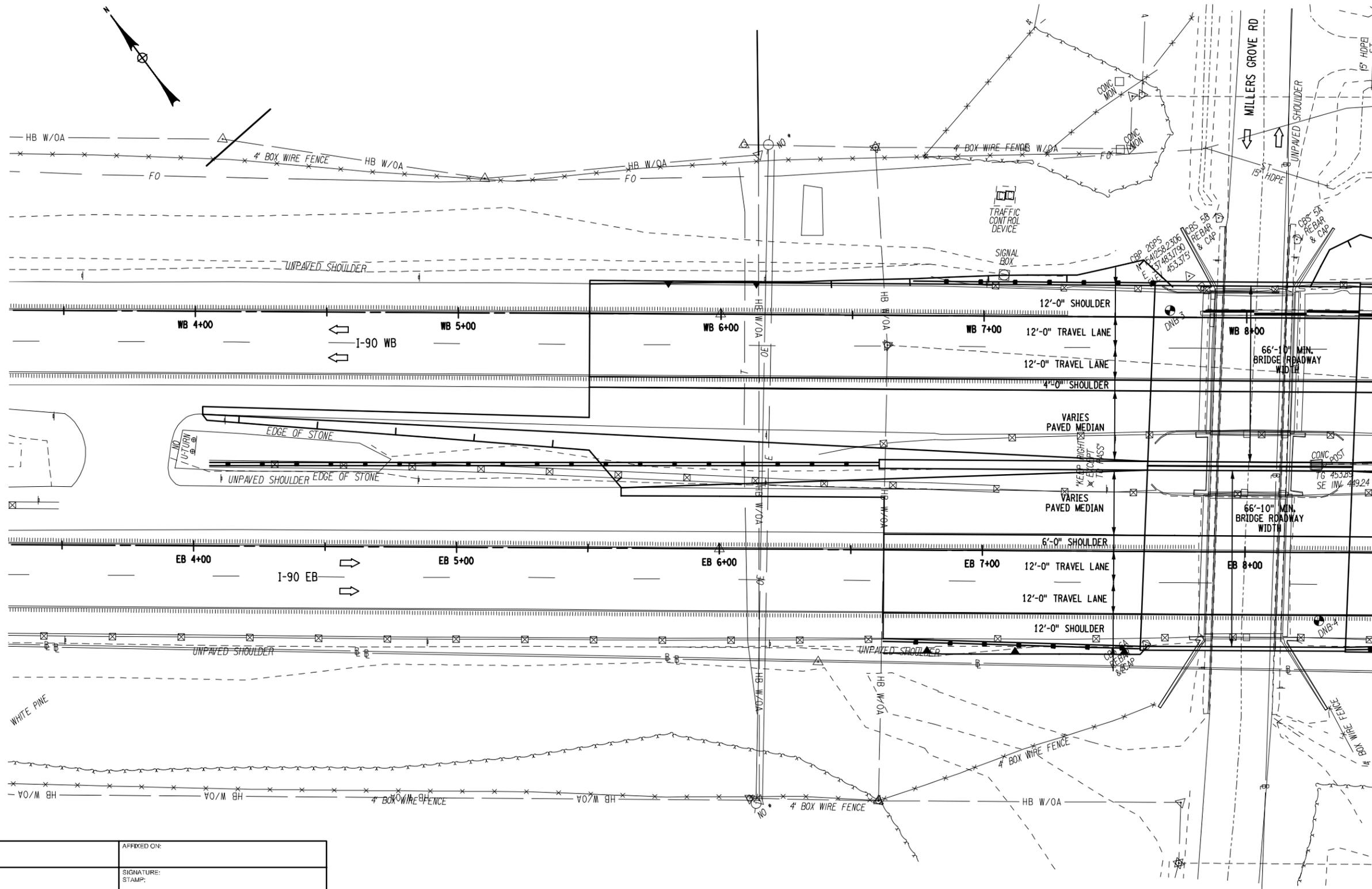
CHECKED BY:

DRAFTED BY:

CHECKED BY:

DESIGNED BY:

DESIGN SUPERVISOR: M. LAISTNER



MATCHLINE DRAWING NO. RWP-2  
STA. 8+50



ALTERED ON:	AFFIXED ON:
SIGNATURE: STAMP:	SIGNATURE: STAMP:

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.


**Thruway Authority**  


TITLE OF PROJECT I-90 OVER MILLERS GROVE ROAD	CONTRACT NUMBER: TAB 17-X
LOCATION OF PROJECT TOWN OF SCHUYLER HERKIMER COUNTY, NY	DATE: JUNE 2017
TITLE OF DRAWING ROADWAY PLAN (1 OF 2)	DRAWING NUMBER: RWP-1

CHECKED BY:

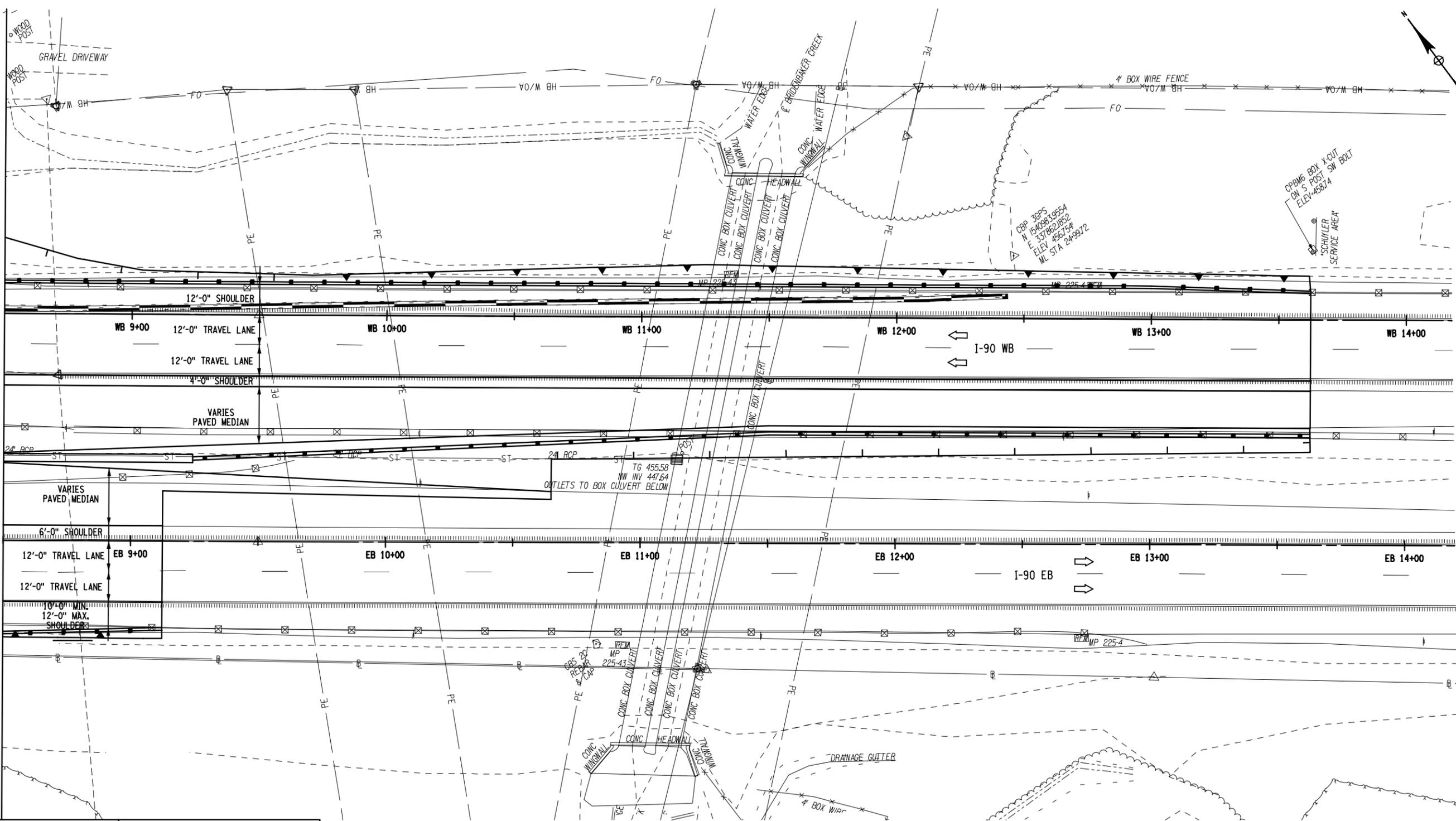
DRAFTED BY:

CHECKED BY:

DESIGNED BY:

DESIGN SUPERVISOR: M. LAISTNER

MATCHLINE DRAWING NO. RWP-1  
STA. 8+50



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REVISIONS			
DATE	DESCRIPTION	BY	SYM.



TITLE OF PROJECT: I-90 OVER MILLERS GROVE ROAD  
 LOCATION OF PROJECT: TOWN OF SCHUYLER, HERKIMER COUNTY, NY  
 TITLE OF DRAWING: ROADWAY PLAN (2 OF 2)

CONTRACT NUMBER: TAB 17-X  
 DATE: MAY 2017  
 DRAWING NUMBER: RWP-2

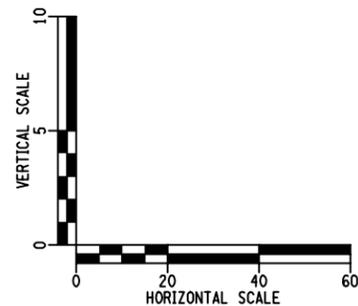
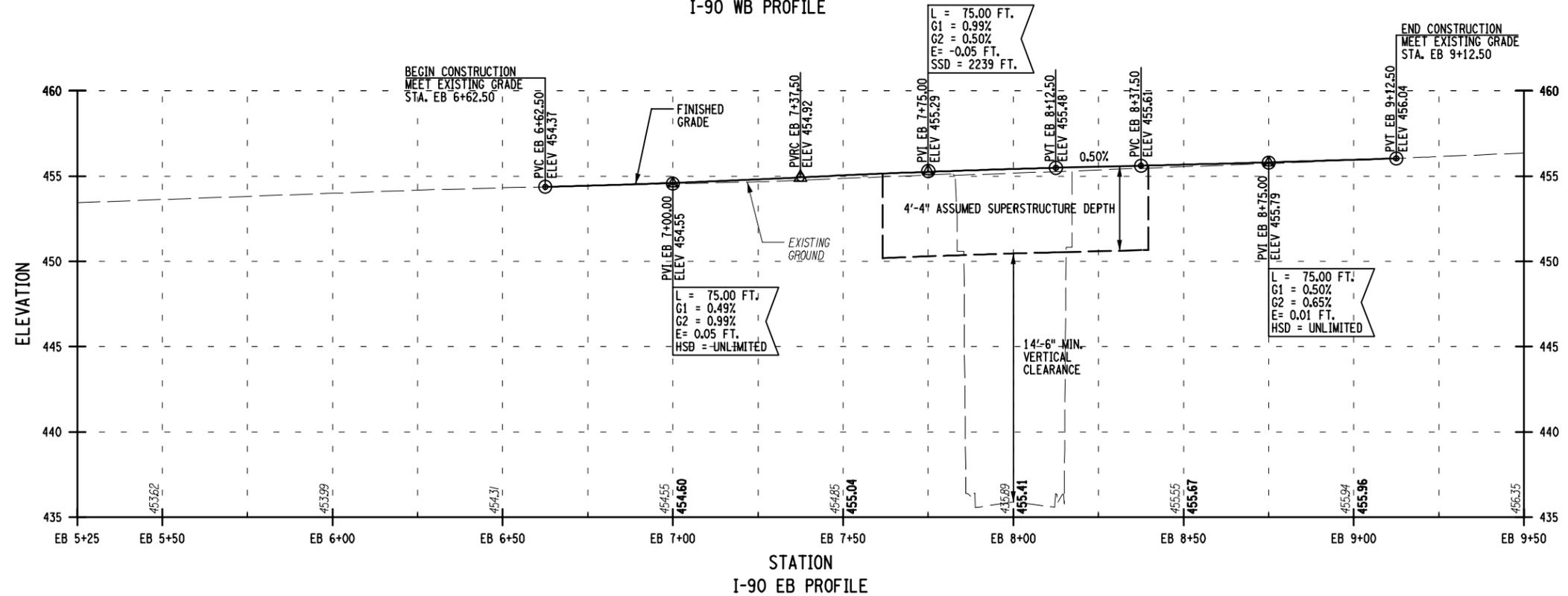
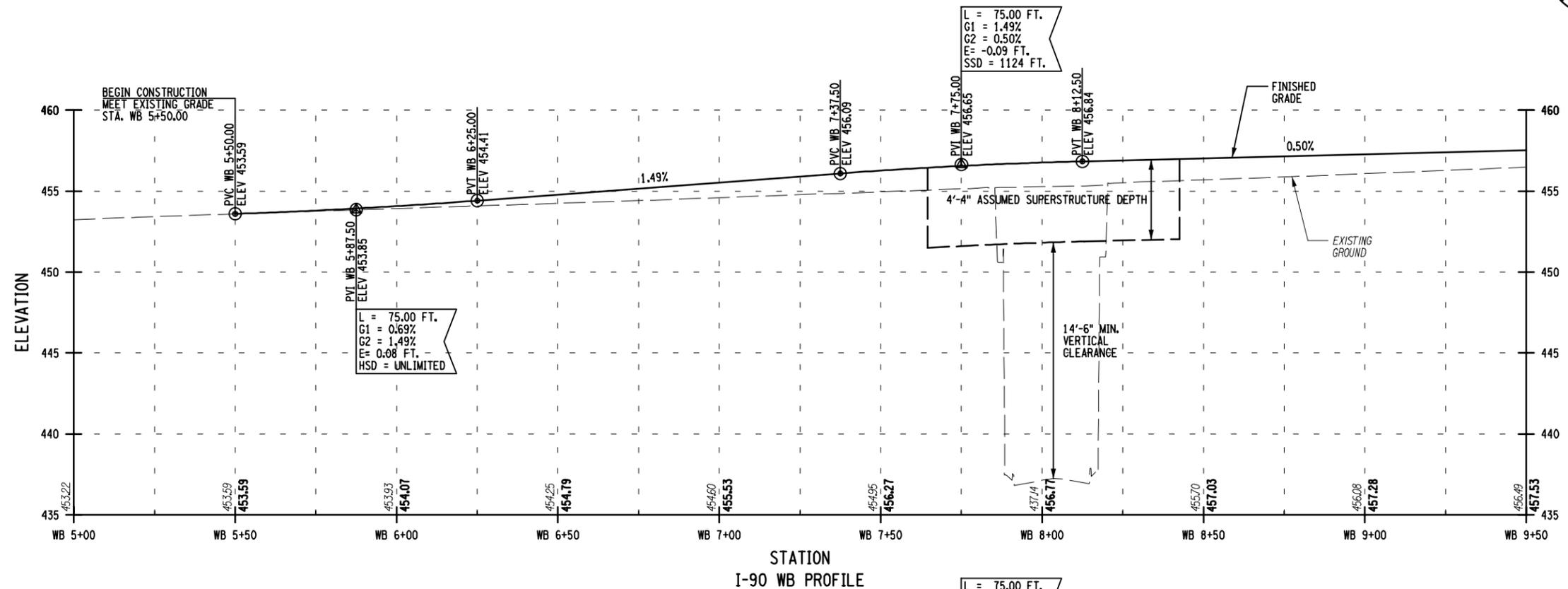
CHECKED BY:

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DESIGNED BY:

DESIGN SUPERVISOR: M. LAISTNER



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REVISIONS			
DATE	DESCRIPTION	BY	SYM.


**Thruway Authority**  


TITLE OF PROJECT I-90 OVER MILLERS GROVE ROAD	CONTRACT NUMBER: TAB 17-X
LOCATION OF PROJECT TOWN OF SCHUYLER HERKIMER COUNTY, NY	DATE: MAY 2017
TITLE OF DRAWING PROFILE STA. 5+00 TO STA. 9+50 (1 OF 2)	DRAWING NUMBER: PRO-1

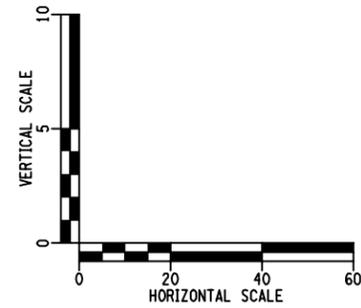
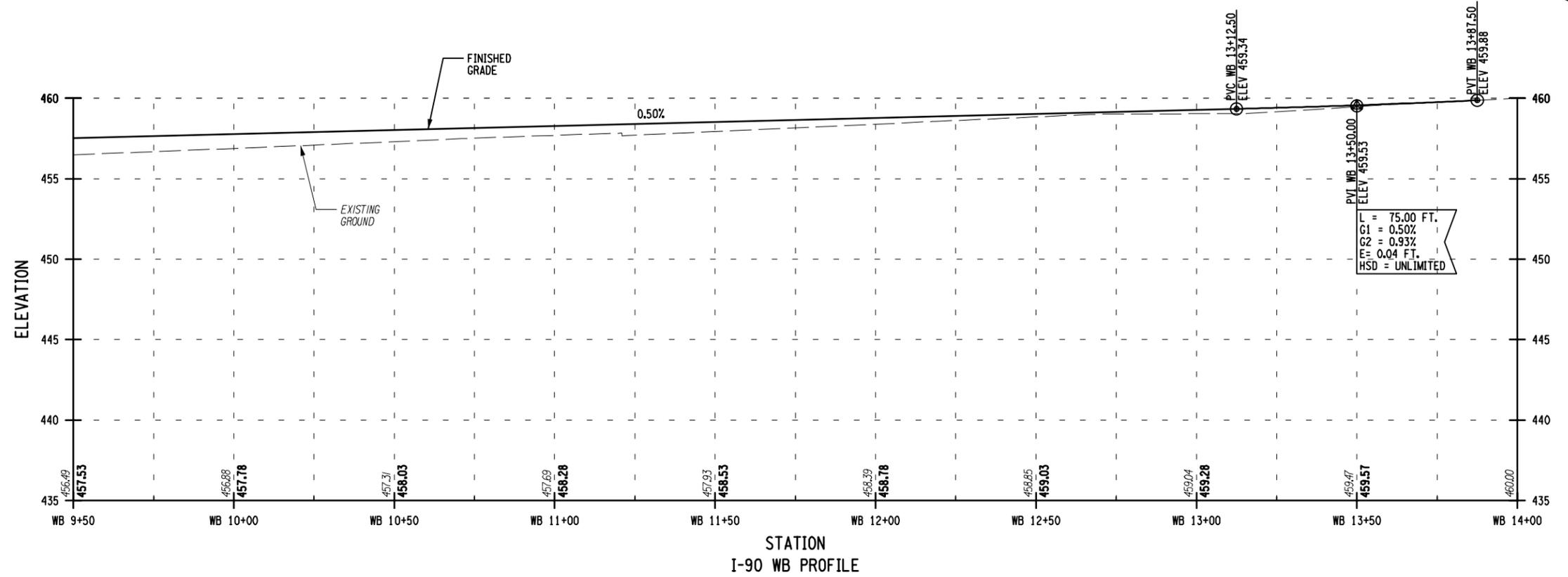
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DRAFTED BY:

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DESIGNED BY:

DESIGN SUPERVISOR: M. LAISTNER



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REVISIONS			
DATE	DESCRIPTION	BY	SYMBOL

TITLE OF PROJECT I-90 OVER MILLERS GROVE ROAD	CONTRACT NUMBER: TAB 17-X
LOCATION OF PROJECT TOWN OF SCHUYLER HERKIMER COUNTY, NY	DATE: MAY 2017
TITLE OF DRAWING PROFILE STA. 9+50 TO STA. 14+00 (2 OF 2)	DRAWING NUMBER: PRO-2

CHECKED BY:

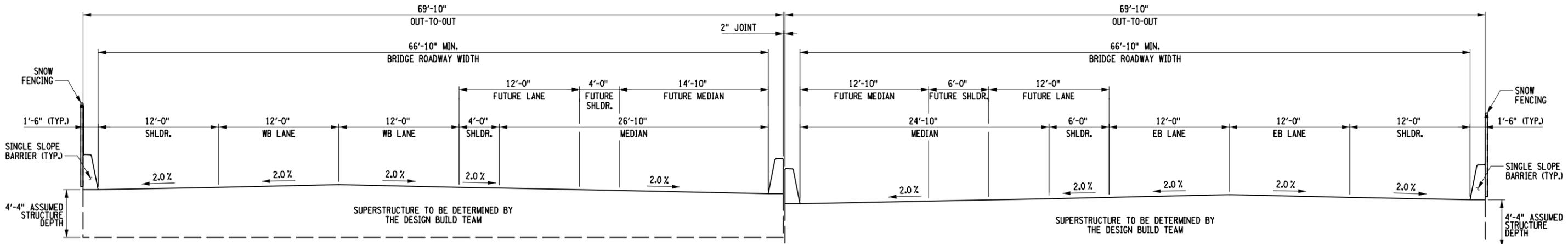
M. SAVINO

DRAFTED BY:

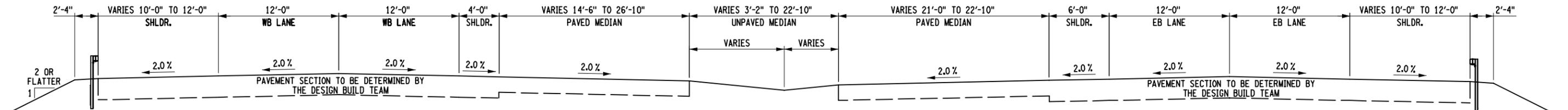
CHECKED BY:

M. SAVINO

DESIGNED BY: M. LAISTNER



BRIDGE TYPICAL SECTIONS  
SCALE: 1" = 10'-0"



TYPICAL SECTION AT APPROACH  
SCALE: 1" = 10'-0"

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REVISIONS			
DATE	DESCRIPTION	BY	SYML



TITLE OF PROJECT I-90 OVER MILLERS GROVE ROAD	CONTRACT NUMBER: TAB 17-X
LOCATION OF PROJECT TOWN OF SCHUYLER, HERKIMER COUNTY, NY	DATE: JUNE 2017
TITLE OF DRAWING TYPICAL SECTIONS	DRAWING NUMBER: TS-1



## **Appendix B Environmental Agency Correspondence**





# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
New York Ecological Services Field Office  
3817 LUKER ROAD  
CORTLAND, NY 13045  
PHONE: (607)753-9334 FAX: (607)753-9699  
URL: [www.fws.gov/northeast/nyfo/es/section7.htm](http://www.fws.gov/northeast/nyfo/es/section7.htm)

Consultation Code: 05E1NY00-2017-SLI-0230

November 07, 2016

Event Code: 05E1NY00-2017-E-00600

Project Name: NYSTA MP 225.48 & 225.49 Co. Road 53

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

## To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This list can also be used to determine whether listed species may be present for projects without federal agency involvement. New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list.

Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list. If listed, proposed, or candidate species were identified as potentially occurring in the project area, coordination with our office is encouraged. Information on the steps involved with assessing potential impacts from projects can be found at: <http://www.fws.gov/northeast/nyfo/es/section7.htm>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (

[http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)). Additionally, wind energy projects should follow the Services wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the ESA. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment



United States Department of Interior  
Fish and Wildlife Service

Project name: NYSTA MP 225.48 & 225.49 Co. Road 53

## Official Species List

### Provided by:

New York Ecological Services Field Office

3817 LUKER ROAD

CORTLAND, NY 13045

(607) 753-9334

<http://www.fws.gov/northeast/nyfo/es/section7.htm>

**Consultation Code:** 05E1NY00-2017-SLI-0230

**Event Code:** 05E1NY00-2017-E-00600

**Project Type:** BRIDGE CONSTRUCTION / MAINTENANCE

**Project Name:** NYSTA MP 225.48 & 225.49 Co. Road 53

**Project Description:** The purpose of this environmental review is to facilitate the preliminary design for the rehabilitation or replacement of an existing bridge.

**Please Note:** The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior  
Fish and Wildlife Service

Project name: NYSTA MP 225.48 & 225.49 Co. Road 53

### Project Location Map:



**Project Coordinates:** MULTIPOLYGON (((-75.08300185203552 43.0649374103588, -75.07873177528381 43.06259372103741, -75.07774472236633 43.063463796760956, -75.0774335861206 43.063275673326494, -75.07842063903809 43.062460465106454, -75.07409691810608 43.06006964772008, -75.07454752922058 43.05965418469911, -75.07886052131653 43.06202150234421, -75.08008360862732 43.06119843869386, -75.08031964302063 43.061410084687836, -75.0791823863983 43.06221746825142, -75.08349537849426 43.06447495033086, -75.08300185203552 43.0649374103588)))

**Project Counties:** Herkimer, NY



United States Department of Interior  
Fish and Wildlife Service

Project name: NYSTA MP 225.48 & 225.49 Co. Road 53

## Endangered Species Act Species List

There are a total of 1 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Mammals	Status	Has Critical Habitat	Condition(s)
Northern long-eared Bat ( <i>Myotis septentrionalis</i> ) Population: Wherever found	Threatened		



United States Department of Interior  
Fish and Wildlife Service

Project name: NYSTA MP 225.48 & 225.49 Co. Road 53

## **Critical habitats that lie within your project area**

There are no critical habitats within your project area.

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**  
**Division of Fish & Wildlife**  
**New York Natural Heritage Program**  
625 Broadway, 5<sup>th</sup> Floor, Albany, New York 12233-4757  
**Phone:** (518) 402-8935 • **Fax:** (518) 402-8925  
**Website:** [www.dec.ny.gov](http://www.dec.ny.gov)



December 14, 2016

Caitlin Graff  
Environmental Design & Research  
217 Montgomery Street, Suite 1000  
Syracuse, NY 13202

Re: NYSTA MP 225.48 & 225.49, New York State Thruway Bridge East-Bound and West-Bound over  
County Road 53, BIN 5516072/5516071, EDR No. 16134-2

Town/City: Schuylers.

County: Herkimer.

Dear Ms. Graff:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

We have no records of rare or state-listed animals or plants, or significant natural communities at the project site or in its immediate vicinity.

The absence of data does not necessarily mean that rare or state-listed species, significant natural communities, or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information that indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities, and other significant habitats maintained in the Natural Heritage Database. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 6 Office, Division of Environmental Permits, as listed at [www.dec.ny.gov/about/39381.html](http://www.dec.ny.gov/about/39381.html).

Sincerely,

A handwritten signature in black ink that reads "Nick Conrad".

Nicholas Conrad  
Information Resources Coordinator  
New York Natural Heritage Program



## **Appendix C Complete Streets Checklist**



## CAPITAL PROJECTS COMPLETE STREETS CHECKLIST

<b>PIN:</b>	<input type="text" value="N/A"/>	<b>Project Location:</b>	<input type="text" value="Herkimer County, Town of Schuyler"/>
<b>Context:</b>	<input type="radio"/> Urban / Village <input type="radio"/> Suburban <input checked="" type="radio"/> Rural		
<b>Project Title:</b>	<input type="text" value="NYSTA D214386, Interstate 90 over Millers Grove Road (CR 53)"/>		
<b>STEP 1- APPLICABILITY OF CHECKLIST</b>			
1.1	Is the project located entirely on a facility where bicyclists and pedestrians are prohibited by law and the project does not involve a shared use path or pedestrian/bicycle structure? <i>If <b>no</b>, continue to question 1.2. If <b>yes</b>, <u>stop here</u>.</i>		<input type="radio"/> Yes <input checked="" type="radio"/> No
1.2	a. Is this project a 1R* Maintenance project? <i>If <b>no</b>, continue to question 1.3. If <b>yes</b>, go to part b of this question.</i>		<input type="radio"/> Yes <input checked="" type="radio"/> No
1.2	b. Are there opportunities on the 1R project to improve safety for bicyclists and pedestrians with the following Complete Street features? <ul style="list-style-type: none"> <li>Sidewalk curb ramps and crosswalks</li> <li>Shoulder condition and width</li> <li>Pavement markings</li> <li>Signing</li> </ul> <i>Document opportunities or deficiencies in the IPP and <u>stop here</u>.</i>		<input type="radio"/> Yes <input type="radio"/> No
<small>* Refer to Highway Design Manual (HDM) Chapter 7, Exhibit 7-1 "Resurfacing ADA and Safety Assessment Form" under ADA, Pavement Markings and Shoulder Resurfacing for guidance.</small>			
1.3	Is this project a Cyclical Pavement Marking project? <i>If <b>no</b>, continue to question 1.4. If <b>yes</b>, review <a href="#">EI 13-021</a>* and identify opportunities to improve safety for bicyclists and pedestrians with the following Complete Streets features:</i> <ul style="list-style-type: none"> <li>Travel lane width</li> <li>Shoulder width</li> <li>Markings for pedestrians and bicyclists</li> </ul> <i>Document opportunities or deficiencies in the IPP and <u>stop here</u>.</i>		<input type="radio"/> Yes <input checked="" type="radio"/> No
<small>* EI 13-021, "Requirements and Guidance for Pavement Marking Operations - Required Installation of CARDS and Travel Lane and Shoulder Width Adjustments".</small>			
1.4	Is this a Maintenance project (as described in the "Definitions" section of this checklist) and different from 1.2 and 1.3 projects? <i>If <b>no</b>, continue to Step 2. If <b>yes</b>, the Project Development Team should continue to look for opportunities during the Design Approval process to improve existing bicycle and pedestrian facilities within the scope of project. Identify the project type in the space below and <u>stop here</u>.</i>		<input type="radio"/> Yes <input checked="" type="radio"/> No
<input style="width: 100%; height: 80px;" type="text"/>			
<b>STEP 1 prepared by:</b>		<input type="text" value="Mike Savino"/>	<b>Date:</b> <input type="text" value="02/20/2017"/>
<b>STEP 2 - IPP LEVEL QUESTIONS (At Initiation)</b>			<b>Comment / Action</b>

## CAPITAL PROJECTS COMPLETE STREETS CHECKLIST

<b>2.1</b>	<p>Are there public policies or approved known development plans (e.g., community Complete Streets policy, Comprehensive Plan, MPO Long Range and/or Bike/Ped plan, Corridor Study, etc.) that call for consideration of pedestrian, bicycle or transit facilities in, or linking to, the project area? <i>Contact municipal planning office, Regional Planning Group and Regional Bicycle/Pedestrian Coordinator.</i></p>	<input checked="" type="radio"/> Yes <input type="radio"/> No	<p>"2002 Herkimer-Oneida Counties Bicycle and Pedestrian Plan" completed by HOCTS.</p>
<b>2.2</b>	<p>Is there an existing or planned sidewalk, shared use path, bicycle facility, pedestrian-crossing facility or transit stop in the project area?</p>	<input type="radio"/> Yes <input checked="" type="radio"/> No	
<b>2.3</b>	<p>a. Is the highway part of an existing or planned State, regional or local bicycle route? <i>If no, proceed to question 2.4. If yes, go to part b of this question.</i></p> <p>b. Do the existing bicycle accommodations meet the minimum standard guidelines of <a href="#">HDM Chapter 17</a> or the AASHTO "Guide for the Development of Bicycle Facilities"? * <i>Contact Regional Bicycle/Pedestrian Coordinator</i></p> <p><small>* Per HDM Chapter 17- Section 17.4.3, Minimum Standards and Guidelines.</small></p>	<p><input type="radio"/> Yes   <input checked="" type="radio"/> No</p> <p><input type="radio"/> Yes   <input type="radio"/> No</p>	<p>NYS Bike Route 5 is located approximately 1600 feet south of the proposed bridge replacement, along New York State Route 5.</p>
<b>2.4</b>	<p>Is the highway considered important to bicycle tourism by the municipality or region?</p>	<input type="radio"/> Yes <input checked="" type="radio"/> No	
<b>2.5</b>	<p>Is the highway affected by special events (e.g., fairs, triathlons, festivals) that might influence bicycle, pedestrian or transit users? <i>Contact Regional Traffic and Safety</i></p>	<input type="radio"/> Yes <input checked="" type="radio"/> No	
<b>2.6</b>	<p>Are there existing or proposed generators within the project area (<i>refer to the "Guidance" section</i>) that have the potential to generate pedestrian or bicycle traffic or improved transit accommodations? <i>Contact the municipal planning office, Regional Planning Group, and refer to the CAMCI Viewer, described in the "Definitions" section.</i></p>	<input type="radio"/> Yes <input checked="" type="radio"/> No	
<b>2.7</b>	<p>Is the highway an undivided 4 lane section in an urban or suburban setting, with narrow shoulders, no center turn lanes, and existing Annual Average Daily Traffic (AADT) &lt; 15,000 vehicles per day? <i>If yes, consider a road diet evaluation for the scoping/design phase. Refer to the "Definitions" section for more information on road diets.</i></p>	<input type="radio"/> Yes <input checked="" type="radio"/> No	

## CAPITAL PROJECTS COMPLETE STREETS CHECKLIST

<b>2.8</b>	Is there evidence of pedestrian activity (e.g., a worn path) and no or limited pedestrian infrastructure?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
------------	-----------------------------------------------------------------------------------------------------------	---------------------------------------------------------------	--

**STEP 2** prepared by:       Date:

Bicycle/Pedestrian Coordinator has been provided an opportunity to comment:     Yes    No

**ATTACH TO IPP AND INCLUDE RECOMMENDATIONS FOR SCOPING/DESIGN.**

<b>STEP 3 - PROJECT DEVELOPMENT LEVEL QUESTIONS (Scoping/Design Stage)</b>			Comment / Action
<b>3.1</b>	Is there an identified need for bicycle/pedestrian/transit or "way finding" signs that could be incorporated into the project?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
<b>3.2</b>	Is there history of bicycle or pedestrian crashes in the project area for which improvements have not yet been made?	<input type="radio"/> Yes <input checked="" type="radio"/> No	A request for information has been sent to the applicable parties. No information has been received at this time.
<b>3.3</b>	Are there existing curb ramps, crosswalks, pedestrian traffic signal features, or sidewalks that don't meet ADA standards per <a href="#">HDM Chapter 18</a> ?	<input type="radio"/> Yes <input checked="" type="radio"/> No	There are no curb ramps, crosswalks, pedestrian traffic signal features, or sidewalks within the proposed project area.
<b>3.4</b>	Is the posted speed limit is 40 mph or more and the paved shoulder width less than 4' (1.2 m) (6' in the Adirondack or other State Park)? Refer to <a href="#">EI 13-021</a> .	<input checked="" type="radio"/> Yes <input type="radio"/> No	
<b>3.5</b>	Is there a perceived pedestrian safety or access concern that could be addressed by the use of traffic calming tools (e.g., bulb outs, raised pedestrian refuge medians, corner islands, raised crosswalks, mid-block crossings)?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
<b>3.6</b>	Are there conflicts among vehicles (moving or parked) and bike, pedestrian or transit users which could be addressed by the project?	<input checked="" type="radio"/> Yes <input type="radio"/> No	See additional comments section at the end of this document.
<b>3.7</b>	Are there opportunities (or has the community expressed a desire) for new/improved pedestrian-level lighting, to create a more inviting or safer environment?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
<b>3.8</b>	Does the community have an existing street furniture program or a desire for street appurtenances (e.g., bike racks, benches)?	<input type="radio"/> Yes <input checked="" type="radio"/> No	

## CAPITAL PROJECTS COMPLETE STREETS CHECKLIST

<b>3.9</b>	Are there gaps in the bike/pedestrian connections between existing/planned generators? <i>Consider locations within and in close proximity of the project area. (Within 0.5 mi (800 m) for pedestrian facilities and within 1.0 mi (1600 m) for bicycle facilities.)</i>	<input type="radio"/> Yes <input checked="" type="radio"/> No	
<b>3.10</b>	Are existing transit route facilities (bus stops, shelters, pullouts) inadequate or in inconvenient locations? (e.g., not near crosswalks) <i>Consult with Traffic and Safety and transit operator, as appropriate</i>	<input type="radio"/> Yes <input checked="" type="radio"/> No	
<b>3.11</b>	Are there opportunities to improve vehicle parking patterns or to consolidate driveways, (which would benefit transit, pedestrians and bicyclists) as part of this project?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
<b>3.12</b>	Is the project on a "local delivery" route and/or do area businesses rely upon truck deliveries that need to be considered in design?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
<b>3.13</b>	Are there opportunities to include green infrastructure which may help reduce stormwater runoff and/or create a more inviting pedestrian environment?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
<b>3.14</b>	Are there opportunities to improve bicyclist operation through intersections and interchanges such as with the use of bicycle lane width and/or signing?	<input type="radio"/> Yes <input checked="" type="radio"/> No	

**STEP 3** prepared by:  Date:

Additional comments, supporting documentation and clarifications for answers in step 1, 2 or 3:

**STEP 3.6:** Millers Grove Road has limited horizontal clearance at the existing structure. Wider roadway shoulders could better accommodate pedestrian and bicycle traffic within the proposed project area.

## **Appendix D Structures Information**



**BIN:** 5516072 **MP:** 225.48

**Region:** 2 **County:** 3 HERKIMER

**Feature Carried:** 90IX EB

**Feature Crossed:** CR 53 MILLERS GROVE RD

**General Recommendation:** 4

**Condition Rating:** 3.83

**Inspect Date:** 04/16/2015



**New York State Thruway Authority - Bridge Inspection Report**

# 2015 INSPECTION

FLAGS	<input type="checkbox"/> RED	<input type="checkbox"/> YELLOW	<input type="checkbox"/> SAFETY	<input checked="" type="checkbox"/> NONE
	<input type="checkbox"/> PIA		<input type="checkbox"/> PIA	<input type="checkbox"/> REMOVE / INACTIVE

**REVIEWED BY:** Michael Sullivan  
Michael Sullivan

**TITLE:** Quality Control Engineer PE# 72693

# NEW YORK STATE THRUWAY AUTHORITY



**BIN: 5516072**

**MP: 225.48**

## LOCATION MAP

**Feature Carried: 90IX EB**

**Feature Crossed: CR 53 Millers Grove Rd**



# INSPECTION

TP349

NYS DEPT OF TRANSPORTATION  
BRIDGE INSPECTION REPORT

SHEET 1 OF 12

DATE: MO DAY YEAR  
04 16 15  
13 14 15 16 17 18

RC - BIN: 

2	3	-	5	5	1	6	0	7	2
---	---	---	---	---	---	---	---	---	---

 MP: 225.48

TEAM LEADER: Douglas Hilleges  
Signature: *Douglas Hilleges*

P.E. NUMBER: 63759 STATE: NY

ASST. TEAM LEADER: Michael Jauch

RAMP BRIDGE ATTACHED TO SPAN: \_\_\_\_\_ BIN: \_\_\_\_\_

INSPECTION AGENCY: 21 TYPE OF INSPECTION: 1  
19 20 21 1-BIENNIAL 3- IN DEPTH 5- SPECIAL  
2- INTERIM 4- NONE (UNDER CONTRACT)

STATE HWY. NO: \_\_\_\_\_ MILEPOINT: \_\_\_\_\_ POLIT. UNIT: Schuyler

FEATURE(S) CARRIED: 90IX EB

FEATURE(S) CROSSED: CR 53 MILLERS GROVE RD

TOTAL SPANS: 1 BRIDGE ORIENTED: Southeast YEAR BUILT: 1954

BRIDGE TYPE: Steel Stringer/Multi-Beam or Girder AADT/YEAR: 10940/2012

VERTICAL CLEARANCE AND LOAD POSTINGS	ON: <u>NOT POSTED</u>	Under: <u>NOT POSTED</u>	Loading: _____	<u>06</u> <u>2</u> <small>118 120</small>
	<u>0</u> Ft <u>0</u> In <small>19 20 21 22</small>	<u> </u> Ft <u> </u> In <small>23 24 25 26</small>	<u> </u> TONS <small>27 28</small>	

	Begin	End	WINGWALLS:	Begin	End	APPROACHES:
Joint with deck	<u>3</u> <small>22</small>	<u>3</u> <small>23</small>	Walls	<u>4</u> <small>40</small>	<u>3</u> <small>41</small>	Drainage <u>4</u> <small>53</small>
Bearings, anchors bolts, pads	<u>3</u> <small>24</small>	<u>3</u> <small>25</small>	Footings	<u>9</u> <small>42</small>	<u>9</u> <small>43</small>	Embankment <u>6</u> <small>54</small>
Bridge seat and pedestals	<u>4</u> <small>26</small>	<u>4</u> <small>27</small>	Erosion or scour	<u>5</u> <small>44</small>	<u>5</u> <small>45</small>	Settlement <u>5</u> <small>55</small>
Backwall	<u>3</u> <small>28</small>	<u>3</u> <small>29</small>	Piles	<u>9</u> <small>46</small>	<u>9</u> <small>47</small>	Erosion <u>5</u> <small>56</small>
Stem (breastwall)	<u>3</u> <small>30</small>	<u>4</u> <small>31</small>	<b>STREAM CHANNEL:</b>			Pavement <u>5</u> <small>57</small>
Erosion or scour	<u>5</u> <small>32</small>	<u>5</u> <small>33</small>	Stream Alignment	<u>8</u> <small>48</small>		Guide Railing <u>5</u> <small>58</small>
Footings	<u>9</u> <small>34</small>	<u>9</u> <small>35</small>	Erosion And Scour	<u>8</u> <small>49</small>		GENERAL RECOMMEND <u>4</u> <small>60</small>
Piles	<u>9</u> <small>36</small>	<u>9</u> <small>37</small>	Waterway Opening	<u>8</u> <small>50</small>		
Recommendation	<u>3</u> <small>38</small>	<u>4</u> <small>39</small>	Bank Protection	<u>8</u> <small>51</small>		

ACCESS CATEGORY:

Walk-Up  
Lift Small (<= 30 ft.)

FLAG ISSUED?

NONE:   
YELLOW:   
RED:   
SAFETY:

BRIEF REASON

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Vulnerability Reassessment Review Recommended?

HYD OVL STL COL CON SMC  
3 X 2 X X X  
65 70  
1 = YES  
2 = NO  
3 = NA  
X = NOT USED THIS CYCLE

REVIEWED BY: Michael Sullivan  
Michael Sullivan  
P.E. NUMBER: 72693  
DATE: 06/10/2015

RC - BIN: 

2	3	-	5	5	1	6	0	7	2
1	2		3	4	5	6	7	8	9

NYS DEPT OF TRANSPORTATION  
BRIDGE INSPECTION REPORT

SHEET 2 OF 12

TEAM LEADER: Douglas Hilleges

ASST. TEAM LEADER: Michael Jauch

DATE: MO 04 DAY 16 YEAR 15  
13 14 15 16 17 18

OTHERS: \_\_\_\_\_

FEATURE(S) CARRIED: 90IX EB

FEATURE(S) CROSSED: CR 53 MILLERS GROVE RD

SPAN NO.	DECK ELEMENTS						SUPERSTRUCTURE						PIER						UTILITIES										
	Wearing surface	Curbs	Sidewalk & Fascias	Railings & Parapets	Scuppers	Gratings	Median	Mono Deck Surface	Deck Structural	Primary Members	Secondary Members	Paint	Joints	Recommendation	Brgs., Anchor Bolts, Pads	Pedestals	Top of Pier Cap Beam	Stem Solid Pier	Capbeam	Pier Columns	Footings	Erosion or Scour	Piles	Recommendation	Lighting Standards and Fixtures	Sign Structures	Utilities and Utilities Supports		
10	11	12	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
0	0	1	5	3	5	3	8	8	8	8	3	5	6	3	8	4	8	8	8	8	8	8	8	8	8	8	8	6	8

DIVING INSPECTION REQUIRED?  Yes  No If yes, indicate year of last diving inspection.

SPECIAL EMPHASIS INSPECTION REQUIRED:  Yes  No  
If yes, indicate type below

- NON-REDUNDANT/FRACTURE CRITICAL
- PIN AND HANGERS
- FATIGUE-PRONE WELDS (AASHTO D, E, OR E')  Cat E field welds at jacking stiff, 100% hands-on insp. performed.
- NON-CATEGORIZED FATIGUE-PRONE DETAILS
- OTHERS (SPECIFY) Out-of-plane bending  100% hands-on inspection performed.

RECOMMEND FURTHER INVESTIGATION  1 = NO  2 = YES

REMARKS

FIELD NOTES

DATE	TIME OF ARRIVAL	TIME OF DEPARTURE	TEMP (F/C)	WEATHER CONDITIONS / ACCESS EQUIPMENT	Field Notes
04/14/2015	11:00:00 am	12:45:00 pm	61/16	Sunny/Walking	
04/16/2015	9:15:00 am	11:30:00 am	61/16	Sunny/Bucket Truck	Inspection Complete

# FEDERAL RATING FORM

**NYS DEPT OF TRANSPORTATION**  
**BRIDGE INSPECTION REPORT**

**MP:** 225.48

**RC - BIN:**

1	2	3	4	5	6	7	8	9	
2	3	-	5	5	1	6	0	7	2

**SHEET** 3 **OF** 12

**TEAM LEADER:** Douglas Hilleges

**DATE:**

MO	DAY	YEAR
04	16	15
13 14	15 16	17 18

**ASST. TEAM LEADER:** Michael Jauch

**FEATURE(S) CARRIED:** 90IX EB

**FEATURE(S) CROSSED:** CR 53 MILLERS GROVE RD

Description	Deck	Superstructure	Substructure	Channel	Culvert
Fed. Item #	58	59	60	61	62
RATING	4	6	4	N	N
	19	20	21	22	23

**Notes:**

- 1) See attached explanations for Federal Item Nos. a) 58- Deck, 59- Superstructure, 60- Substructure; b) 61- Channel and Channel Protection; c) 62- Culverts.
  
- 2) Item Nos. 58, 59, and 60 shall be coded N for all culverts.
  
- 3) A rating or an N must be entered for all Federal Items. Blanks are not acceptable.

INSPECTED BY: Douglas Hilleges TITLE: Syracuse BSIE

FEATURE(S) CARRIED: 901X EB

FEATURE(S) CROSSED: CR 53 MILLERS GROVE RD

**BRIDGE INSPECTION AND CONDITION REPORT**  
**SUPPLEMENTARY INSPECTION ACTIVITIES**

<b>BIN PLATE LOCATION/ CONDITION</b>	<input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Missing <input type="checkbox"/> Damaged/Defaced <input checked="" type="checkbox"/> End Abutment <input type="checkbox"/> Begin Abutment
	Located near toe of end right wingwall.
<b>FLOOD ELEVATION MARKINGS</b>	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Satisfactory <input type="checkbox"/> Missing <input type="checkbox"/> Damaged/Illegible (described below)
<b>ELECTRICAL</b>	<input checked="" type="checkbox"/> Class A (Caution) <input type="checkbox"/> Class B (Warning) <input type="checkbox"/> Class C (Danger)
<b>SPECIAL EMPHASIS</b>	<input type="checkbox"/> Not Required <input checked="" type="checkbox"/> A 100% Hands-On Inspection                    Given To: See General Comments below.
	<input checked="" type="checkbox"/> No Defects Found <input type="checkbox"/> Defects Described Below
<b>UPGRADES REPORT</b>	<input type="checkbox"/> None <input checked="" type="checkbox"/> Minor (see below) <input type="checkbox"/> Major Rehab (see below)                    (Contract #:                      )

The following work was completed (explain to the right of any item checked: repaired, replaced, begin, end, left, right, etc. Use space below to explain complex or unusual situations or other work):

- |                                                                                                            |                                                                                                                 |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Superstructure                                                                    | <input type="checkbox"/> Curb, Sidewalk, Fascia                                                                 |
| <input checked="" type="checkbox"/> Deck<br>Delaminated area of concrete removed by maintenance personnel. | <input checked="" type="checkbox"/> Bridge Rail<br>Split left railing post 3 repaired by maintenance personnel. |
| <input type="checkbox"/> Wearing Surface                                                                   | <input type="checkbox"/> Approach Rail                                                                          |
| <input type="checkbox"/> Appr. Pavement                                                                    | <input type="checkbox"/> Signage                                                                                |
| <input type="checkbox"/> Substructure                                                                      | <input type="checkbox"/> Other (explain below)                                                                  |

**GENERAL COMMENTS/UNUSUAL CONDITIONS:**     Unusual Conditions (explain below)

**SPECIAL EMPHASIS:**

1. Web gap at diaphragm connections to fascia girders is < 4Tw, however detail is not vulnerable to out-of-plane fatigue cracking as skew < 30 degrees and structure has no history of cracking. 100% hands-on inspection was performed. No defects found.
2. Category E field welds at jacking stiffeners received 100% hands-on inspection, no defects found.

INSPECTED BY: Douglas Hilleges TITLE: Syracuse BSIE

FEATURE(S) CARRIED: 90IX EB

FEATURE(S) CROSSED: CR 53 MILLERS GROVE RD

BRIDGE INSPECTION MPT REQUIREMENTS

Instructions: Circle Thruway direction, then check yes or no for each lane/shoulder closure.  
Comment on reason for each closure. Examples: cover plates, impact damage, etc.

EAST BOUND	LANE CLOSURE			
Driving lane shoulder	<input type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Comments: None
Driving lane	<input type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Comments: None
Center lane	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments: N/A
Mall lane	<input type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Comments: None
Mall lane shoulder	<input type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Comments: None
Ramp lane	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments: N/A

	LANE CLOSURE			
Driving lane shoulder	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments: N/A
Driving lane	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments: N/A
Center lane	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments: N/A
Mall lane	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments: N/A
Mall lane shoulder	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments: N/A
Ramp lane	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments: N/A

**NOTES:**

No MPT needed on Thruway. Lane closures with flaggers are required on CR 53 Millers Grove Rd where traffic volumes are very low. Traffic control performed by bridge inspection crew.

RATING FORM: TP349				
ITEM:	TITLE:	RATINGS		
	REMARKS:	NEW:	PRE:	PHOTO #:

<b>22</b>	<b>Joint With Deck (Begin)</b>			
	Saw & seal of asphalt over joint with deck was placed across only the passing lane at both joints; asphalt is transversely cracked atop the remainder of the joint area at both abutments. Both joints have leakage below causing deterioration; leakage is more extensive at begin in bays 1, 2, & 6 and at end in bays 1, 2, 3 & 6.	3	3	1, 2
<b>23</b>	<b>Joint With Deck (End)</b>			
	Saw & seal of asphalt over joint with deck was placed across only the passing lane at both joints; asphalt is transversely cracked atop the remainder of the joint area at both abutments. Both joints have leakage below causing deterioration; leakage is more extensive at begin in bays 1, 2, & 6 and at end in bays 1, 2, 3 & 6.	3	3	1, 2
<b>24</b>	<b>Bearings, Anchor Bolts, Pads (Begin)</b>			
	All begin fixed bearings have minor rusting, fascias are worst having minor delamination building. Begin right fascia bearing is buried with backwall spillings; bearing 1 has minor build up of spillings. Remainder of begin bearings are clear.	3	3	3
<b>25</b>	<b>Bearings, Anchor Bolts, Pads (End)</b>			
	End expansion bearings 3 thru 7 are overextended and cantilevered off back of masonry plate by up to 1/2". End of girder 3 is in contact with backwall preventing further expansion of bearing. End bearing 2 is even with back of masonry plate; end bearing 1 is in good position. Bearing 7 is delaminated and appears frozen.	3	3	4, 5
<b>26</b>	<b>Bridge Seat and Pedestals (Begin)</b>			
	Begin seat area in bay 6 is partially covered with wet backwall spillings. Where exposed, top of seat is hollow, soft, and spalled 3" to 4" deep; spalling extends to 5" deep along front edge of seat in bay 6. Remainder of seat and all begin pedestals are solid having areas of minor surface scale.	4	4	6
<b>27</b>	<b>Bridge Seat and Pedestals (End)</b>			
	End seat between pedestals 3 & 4 is surface scaled, hollow and spalling 1 1/2" deep. Front edge of seat for a 4' length at pedestal 6 (incorrectly noted at ped 5 in 2013) is cracked with minor hollowness. End pedestal 4 on right side and end pedestal 6 on right side each have a hairline to 1/16" open vertical crack extending from anchor bolt, concrete remains solid. End pedestals 4 & 5 both have hairline vertical crack on left side at 1" +/- from backwall. Remainder of seat and end pedestals are good, having minor areas of surface scale/spall.	4	4	5, 7

RATING FORM: TP349					
ITEM:	TITLE:	RATINGS			
	REMARKS:	NEW:	PRE:	PHOTO #:	

<b>28</b>	<b>Backwall (Begin)</b> Begin backwall has minor honeycombed concrete in upper 1/2 +/- of all bays with random vertical cracks and areas of hollowness as follows: bay 1, 10% hollow with minor 1" deep spalling behind G1; bay 2, 60% hollow with 1" deep spalling to 6" wide along top edge; bay 3, 40% hollow; bay 4, 15% hollow; bay 5, 0; bay 6 has honeycombed concrete with efflorescence and hollowness throughout, the upper 3/4 for a 4 1/2' length behind G7 is spalled 6" to 9" deep (total depth of backwall is 15") with reinforcing bars exposed; remaining concrete in spall area is wet and soft.	3	3	8, 9
<b>29</b>	<b>Backwall (End)</b> End backwall, bay 3 has a horizontal/diagonal crack/fracture near mid-height with concrete spalled to 18" wide x 4" deep along crack; area above crack is hollow. Remainder of end backwall has minor honeycombed concrete throughout bays 3, 4, 5 & 6 and random hairline vertical cracks. Backwall has full height hairline to 1/8" open vertical crack above construction joint in stem just left of pedestal 5. Additionally, at 3" to 6" from each side, backwall has a vertical/diagonal crack open 1/4" to 1/2".	3	4	10
<b>30</b>	<b>Stem (Breastwall) (Begin)</b> Begin stem has map cracked/hollow concrete leaching efflorescence full height for 5' to 9' wide at left side. 15' wide, full height at right side has honeycombed concrete with upper half leaching efflorescence, very hollow, soft and spalling to 5" deep. Remainder of begin stem is solid with random hairline vertical cracks.	3	3	11
<b>31</b>	<b>Stem (Breastwall) (End)</b> Lower 6' of end stem is very hollow for 10' at left side with 3" to 4" deep spalling for 1' adjacent to end left wingwall. Delaminated concrete to 3' wide extends full height adjacent to previous repair at both sides. 6sf area of delaminated concrete is also present at base adjacent to construction joint at left of G5. Remainder of end stem is solid with minor areas of honeycombed concrete, worst area is upper 1/3 between pedestals 3 & 4.	4	4	12
<b>32</b>	<b>Erosion or Scour (Begin)</b> Area around bridge has a high water table and significant runoff in wet weather. In the past, ground water flow has been evident through vertical construction joints of end abutment stem. Sidewalk areas in front of both abutments and right side wingwalls have sidewalk slab units settled to 6" due to water flow and wash out of underlying fine material. In 2009 the County installed an underdrain beneath Millers Grove Road. The end abutment weep drain, which outlets in front of the end right wingwall, was exposed and cleaned out by Thruway personnel. These procedures continue to alleviate the problem as no water problems are evident during this inspection. Piles exist at structure.	5	5	

RATING FORM: TP349					
ITEM:	TITLE:	RATINGS			
	REMARKS:	NEW:	PRE:	PHOTO #:	

**33 Erosion or Scour (End)**

Area around bridge has a high water table and significant runoff in wet weather. In the past, ground water flow has been evident through vertical construction joints of end abutment stem. Sidewalk areas in front of both abutments and right side wingwalls have sidewalk slab units settled to 6" due to water flow and wash out of underlying fine material. In 2009 the County installed an underdrain beneath Millers Grove Road. The end abutment weep drain, which outlets in front of the end right wingwall, was exposed and cleaned out by Thruway personnel. These procedures continue to alleviate the problem as no water problems are evident during this inspection. Piles exist at structure.

5 5

**40 Walls (Begin)**

Begin right wingwall has cracking with efflorescence and hollow concrete full height for 4' to 5' wide adjacent to stem; remainder has fine damp tight pattern cracking for 70% area. Begin left wingwall is okay.

4 4 11

**41 Walls (End)**

End left wingwall has cracking with hollow to very hollow concrete for 80% +/- of its area; 3' to 6' wide adjacent to stem is leaching efflorescence and starting to spall 2" to 3" deep.  
End right wingwall has delaminated concrete for 60% +/- of its area. 4' to 6' wide full height adjacent to stem has cracking with efflorescence and very hollow concrete; upper 6' in this area is spalled to 4" deep with reinforcing exposed.

3 3 13, 14

**44 Erosion and Scour (Begin)**

Area around bridge has a high water table and significant runoff in wet weather. In the past, ground water flow has been evident through vertical construction joints of end abutment stem. Sidewalk areas in front of both abutments and right side wingwalls have sidewalk slab units settled to 6" due to water flow and wash out of underlying fine material. In 2009 the County installed an underdrain beneath Millers Grove Road. The end abutment weep drain, which outlets in front of the end right wingwall, was exposed and cleaned out by Thruway personnel. These procedures continue to alleviate the problem as no water problems are evident during this inspection. Piles exist at structure.

5 5

**45 Erosion And Scour (End)**

Area around bridge has a high water table and significant runoff in wet weather. In the past, ground water flow has been evident through vertical construction joints of end abutment stem. Sidewalk areas in front of both abutments and right side wingwalls have sidewalk slab units settled to 6" due to water flow and wash out of underlying fine material. In 2009 the County installed an underdrain beneath Millers Grove Road. The end abutment weep drain, which outlets in front of the end right wingwall, was exposed and cleaned out by Thruway personnel. These procedures continue to alleviate the problem as no water problems are evident during this inspection. Piles exist at structure.

5 5

RATING FORM: TP349					
ITEM:	TITLE:			RATINGS	
	REMARKS:			NEW:	PRE:
				PHOTO #:	

**53 Drainage**

Median shoulder areas of both approaches are settled 3" to 4" adjacent to bridge allowing water to pond; end approach is slightly worse having a 10' diameter depressed area allowing water ponding to reach within 5' +/- from edge of passing lane. Very minimal settlement is evident in travel lanes. Per 2014 inspection manual, condition of approach curb is now included with the rating of curb element on the structure.

4 4 15

**55 Settlement**

Median shoulder areas of both approaches are settled 3" to 4" adjacent to bridge allowing water to pond; end approach is slightly worse having a 10' diameter depressed area. Very minimal settlement is evident in travel lanes.

5 5

RATING FORM: TP350				
ITEM:	TITLE:		RATINGS	
	REMARKS:	SPAN:	NEW:	PRE:
				PHOTO #:

**20 Curbs**

Approach curbs are settled, displaced, and uneven to varying degrees in all quads. Begin right is worst as first 6' section of curb adjacent to bridge is broken, separated 3", and very loose in place.  
Granite curb on both sides of bridge remains solidly in place.

1 3 5 16

**22 Railings & Parapets**

Rail and posts of 4 rail bridge rail have areas of pitting and delamination. Worst post locations are outside leg of right railing posts 3, 5, & 6 having pitting to 1/8" deep resulting in 50% loss to outside leg of these posts. Worst rail location is end 18" of right side top rail which is rusted completely through.  
Right post 1 has a 1 1/2" x 3" rust through hole located on begin face at 5" above base just below bottom rail end cap.  
Previous split post at left railing post 3 has been weld repaired.  
Post remains bulged at base.

1 3 4 17, 18, 19

**27 Deck Structural**

70% +/- of overall deck area has damp and discolored concrete with cracking and efflorescence. Bays 1, 3, 5 & 6 are worse with deterioration full length of bridge. Bays 4, 5, & 6 have extensive areas of 2" +/- deep spalling with delaminated reinforcing bars exposed; worst are full length for 1' to 3' wide along each side of G5 top flange and a 15sf area near midspan of both bay 5 & bay 6. Previous small delaminated area near midspan of bay 5 has been removed by maintenance personnel.  
Bay 3 has wood shoring installed to prevent deteriorated loose deck concrete from falling onto traffic, timbers are becoming discolored from water penetration.  
Water and efflorescence are actively leaking along full length of right fascia girder top flange. Rusting and deck leakage is also evident along top flange for full length of G1 and end half of G3. See deck sketch.  
Deck actively pumps under load causing impact to and deflection of girders. Full length of right 3 girders is worst where areas of deck spall expose up to 1/4" gaps between deck and girder top flanges. Plans indicate no shear studs.

1 3 3 20, 21, 22

**28 Primary Members**

Fascia girders have delamination and minor section loss of flanges; outside leg of right fascia girder is worst having 10% to 15% section loss randomly throughout bottom flange; remaining girders have < 5% bottom flange loss.  
Fascia girders also have random areas of delamination and 1/8" deep pitting to lower 2" to 6" of girder webs resulting in locations of 15% to 20% section loss to the lower 6" of web.  
Lower 6" of web in bearing area at end of girders 1 & 7 (fascia girders) are worst having pitting to 3/16" deep across entire width of web "column" bearing area resulting in an overall web loss of 20% in the bearing area.  
Girders have minor deflection from live load impact.

1 5 5 23, 24, 25

RATING FORM: TP350

ITEM:	TITLE:		RATINGS			
	REMARKS:	SPAN:	NEW:	PRE:	PHOTO #:	

**30 Paint**

Paint failure with surface rust and delamination with minor section loss along fascia girder flanges and lower areas of webs. Interior girder flanges in areas of deck leakage have paint failure and minor surface rust, minimal section loss. 5% to 10% overall paint failure. Right fascia girder is worst having 70% paint failure to flanges and outside of web.

1 3 3 22, 24

**44 Sign Structure**

New horizontal clearance signs have been installed on existing posts at right (south) side of bridge on CR 53, Millers Grove Road.

1 6 5 26



NYS THRUWAY AUTHORITY  
BRIDGE INSPECTION REPORT  
SHEET 12 OF 12

BIN: 5516072

M.P.: 225.48

TEAM

ASST. TEAM

LEADER: Douglas R. Hilleges, P.E.

LEADER: Michael Jauch, P.E.

DATE: 04/16/2015

Feature Carried: 90IX EB

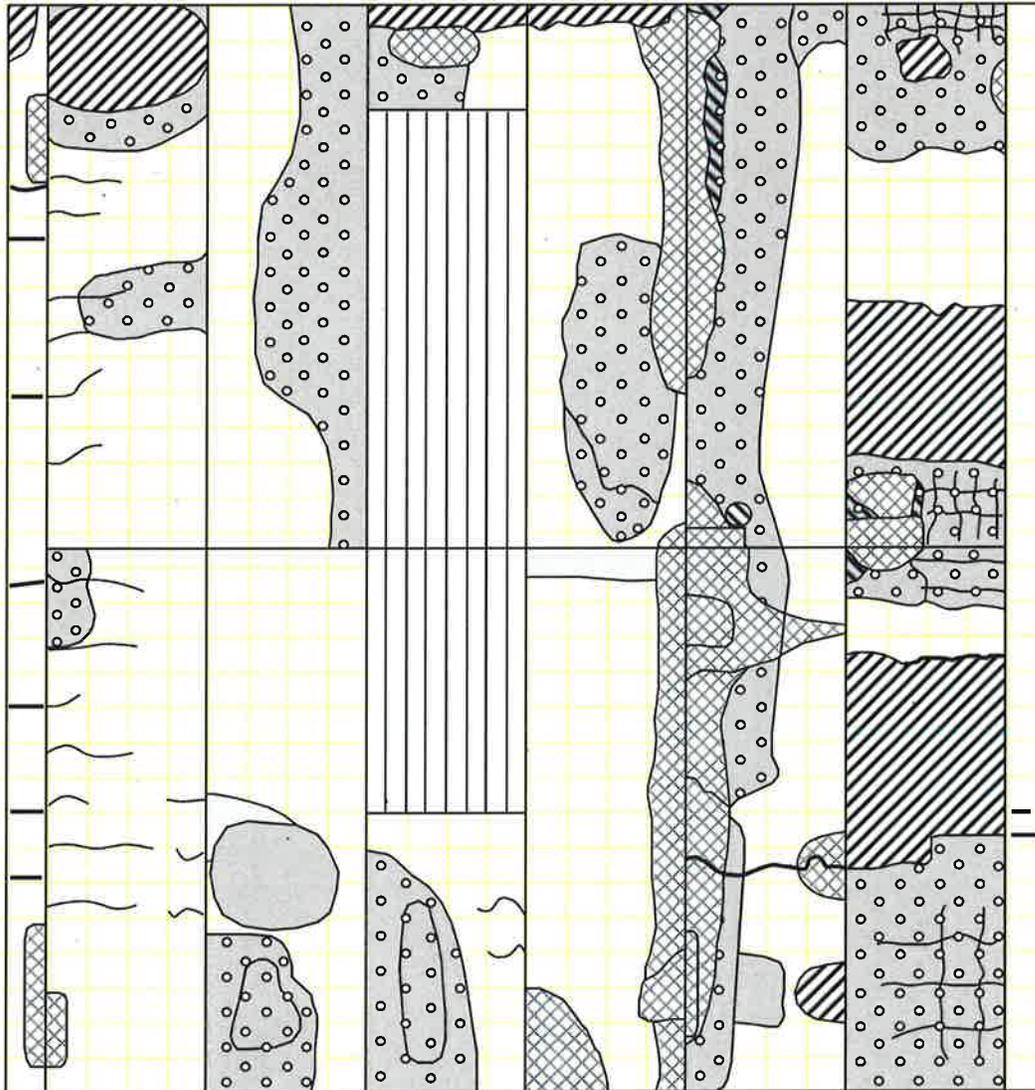
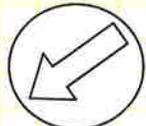
Feature Crossed: CR 53 MILLERS GROVE RD

DECK UNDERSIDE SKETCH

END

N.T.S.

N



G-1

G-7

BEGIN

LEGEND:

- |  |                              |  |                                |  |                   |  |                     |  |                 |
|--|------------------------------|--|--------------------------------|--|-------------------|--|---------------------|--|-----------------|
|  | DELAMINATED/<br>HOLLOW CONC. |  | SPALL WITH<br>EXPOSED REBAR    |  | SPALL             |  | REPAIR              |  | WOOD<br>SHORING |
|  | DISCOLORED/<br>DAMP CONC.    |  | HONEYCOMBED,<br>DAMP W/EFFLOR. |  | CHALKY<br>EFFLOR. |  | CRACK W/<br>EFFLOR. |  | CRACK           |

# PHOTOGRAPHS



# NYS THRUWAY AUTHORITY BRIDGE INSPECTION REPORT SHEET 1 OF 15

**BIN:** 5516072

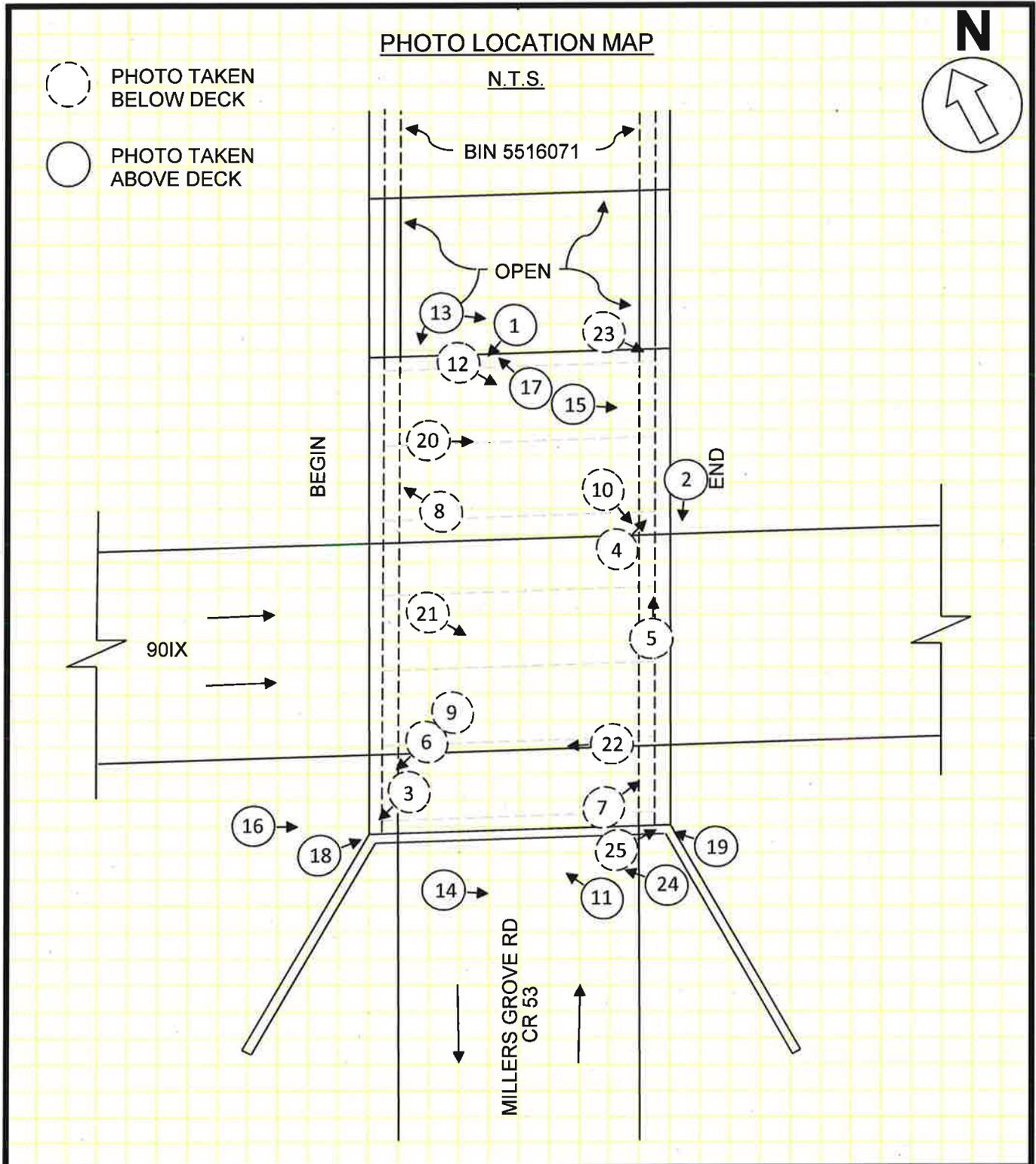
**M.P.:** 225.48

**TEAM:** \_\_\_\_\_ **ASST. TEAM:** \_\_\_\_\_

**LEADER:** Douglas R. Hilleges, P.E. **LEADER:** Michael Jauch **DATE:** 04/16/2015

**Feature Carried:** 90IX EB

**Feature Crossed:** CR 53 MILLERS GROVE RD



<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Begin abutment.	225.48-349-22-00-15BegLt_.JPG	1

**Description(s):**

- Wet and stained due to joint leakage (typ of end joint).

**Reference:**

Form:	Item:	Item Desc:	Rate:
349	22	Joint With Deck (Begin)	3
349	23	Joint With Deck (End)	3



<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Top of end joint.	225.48-349-23-00-15EnJtLt.JPG	2

**Description(s):**

- Saw cut placed only in passing lane, remainder of asphalt has transverse crack (typ of beg).

**Reference:**

Form:	Item:	Item Desc:	Rate:
349	22	Joint With Deck (Begin)	3
349	23	Joint With Deck (End)	3



<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Begin bearing 7.	225.48-349-24-00-15BgBrg7.JPG	3

**Description(s):**

- Fixed bearing rusted and covered with backwall spallings.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	24	Bearings, Anchor Bolts, Pads (Begin)	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
End expansion bearing 3.	225.48-349-25-00-15EnBrg3.JPG	4

**Description(s):**

- Bearing overextended; girder in contact with backwall preventing further expansion.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	25	Bearings, Anchor Bolts, Pads (End)	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
End bearing & pedestal 4, right side.	225.48-349-27-00-15EnPed4.JPG	5

**Description(s):**

- Bearing overextended 1/2" beyond masonry plate.
- 1/16" open vertical crack at anchor bolt; concrete rings solid.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	25	Bearings, Anchor Bolts, Pads (End)	3
349	27	Bridge Seat and Pedestals (End)	4

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Begin seat, bay 6.	225.48-349-26-00-15Bay6_.JPG	6

**Description(s):**

- Seat area soft and spalled to 5" deep.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	26	Bridge Seat and Pedestals (Begin)	4

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
End seat and pedestal 6.	225.48-349-27-00-15EnPed6.JPG	7

**Description(s):**

- Seat area cracked with minor delamination; vertical crack in pedestal.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	27	Bridge Seat and Pedestals (End)	4

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Begin backwall, bay 2.	225.48-349-28-00-15Bay2_.JPG	8

**Description(s):**

- Delaminated area of backwall (typ in most bays).



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	28	Backwall (Begin)	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Begin backwall, bay 6.	225.48-349-28-00-15Bay6_.JPG	9

**Description(s):**

- Soft, severely spalled area of backwall.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	28	Backwall (Begin)	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
End backwall, bay 3.	225.48-349-29-00-15Bay3_.JPG	10

**Description(s):**

- Diagonal crack/fracture of backwall.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	29	Backwall (End)	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Begin stem, right side.	225.48-349-30-00-15BgStem.JPG	11

**Description(s):**

- Delaminated, very soft/spalled area of concrete.
- Begin right wingwall is cracked/delaminated adjacent to stem.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	30	Stem (Breastwall) (Begin)	3
349	40	Walls (Begin)	4

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
End stem, left half.	225.48-349-31-00-15EnStem.JPG	12

**Description(s):**

- Delaminated concrete at base and full height adjacent to repair.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	31	Stem (Breastwall) (End)	4

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
End left wingwall.	225.48-349-41-00-15EnLtWW.JPG	13

**Description(s):**

- Delaminated across 80% of face; spalling adjacent to stem.



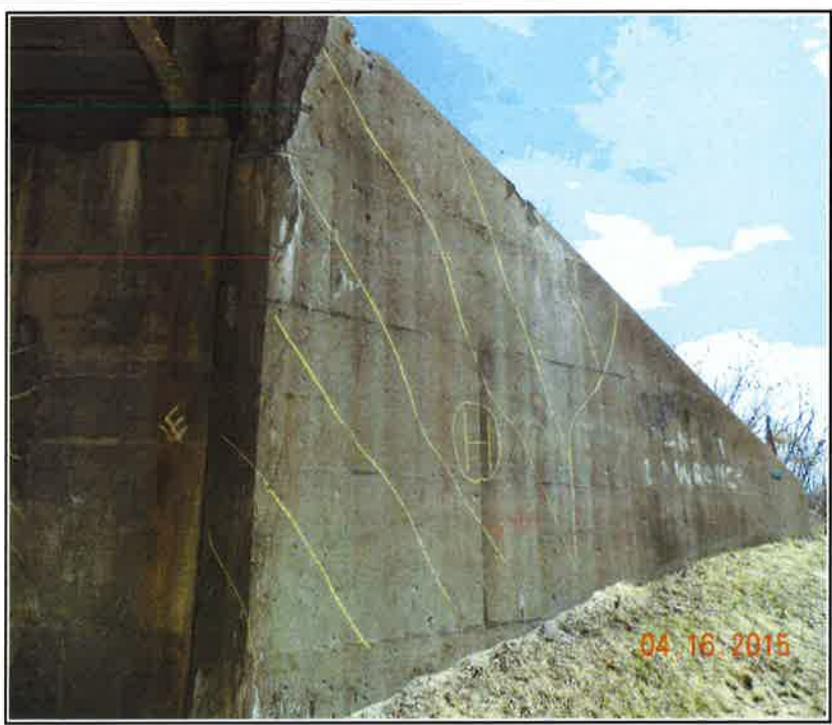
**Reference:**

Form:	Item:	Item Desc:	Rate:
349	41	Walls (End)	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
End right wingwall.	225.48-349-41-00-15EnRtWW.JPG	14

**Description(s):**

- Delaminated across 60% of face; spalling at top adjacent to stem.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	41	Walls (End)	3

NYS THRUWAY AUTHORITY  
BRIDGE INSPECTION REPORT

MILEPOST: 225.48  
RC: 23 BIN: 5516072

SHEET 9 OF 15  
INSPECT DATE: 04/16/2015

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Median shoulder on end approach.	225.48-349-53-00-15EnLtPd.JPG	15

**Description(s):**  
- Depressed area which ponds water.

**Reference:**

Form:	Item:	Item Desc:	Rate:
349	53	Drainage	4



<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Right side curb line.	225.48-350-20-00-15BegRt_.JPG	16

**Description(s):**

- Approach curbs settled, displaced, and loosely in place.



**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	20	Curbs	1	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Left railing, post 3.	225.48-350-22-00-15LtP3Rp.JPG	17

**Description(s):**

- Split corner of post repaired.



**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	22	Railings & Parapets	1	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Right railing, post 1.	225.48-350-22-00-15RtP1_.JPG	18

**Description(s):**

- 1 1/2" x 3" rust through hole near base of post.



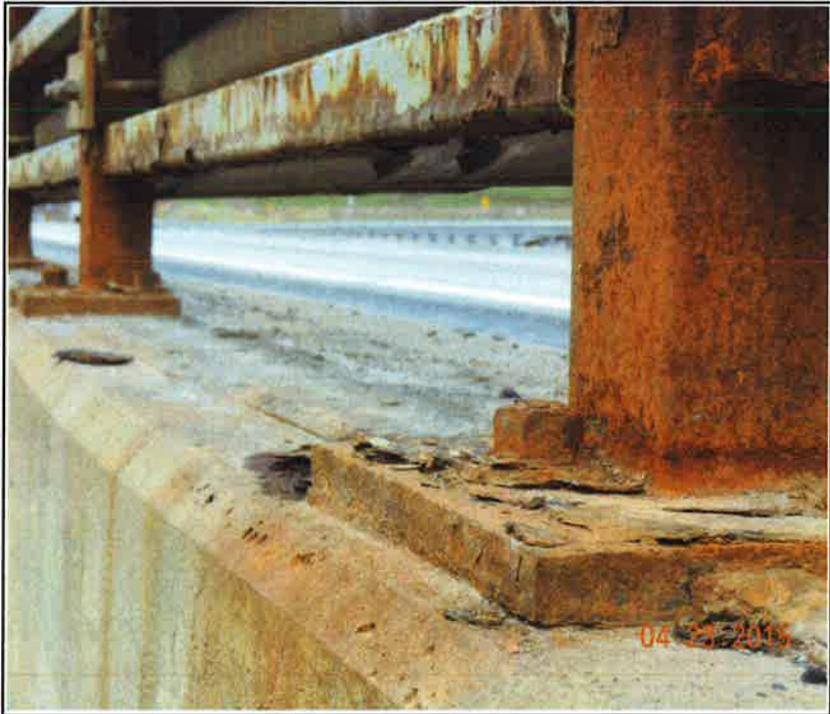
**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	22	Railings & Parapets	1	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Right railing, post 6.	225.48-350-22-00-15RtP6Pt.JPG	19

**Description(s):**

- Pitted at base; 50% section loss to outside leg of post (typ of right posts 3 & 5).



**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	22	Railings & Parapets	1	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Underside of deck, bays 1 & 2 from begin.	225.48-350-27-00-15Bay1&2.JPG	20

**Description(s):**

- Chalky, damp, discolored areas of deck leakage.



**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	27	Deck Structural	1	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Underside of deck, bay 4 along G5.	225.48-350-27-00-15Bay4G5.JPG	21

**Description(s):**

- Spalled deck along G5 due to leakage.



**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	27	Deck Structural	1	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Underside of deck, bays 5 & 6 from end.	225.48-350-27-00-15Bay5&6.JPG	22

**Description(s):**

- Deteriorated areas of deck; active water/efflorescence along G7 top flange.
- Fascia girder has significant paint failure; 5% paint failure elsewhere.



**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	27	Deck Structural	1	3
350	30	Paint	1	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
End of girder 1.	225.48-350-28-00-15G1WbEn.JPG	23

**Description(s):**

- Lower 6" of web pitted to 3/16" deep; 20% overall web loss in bearing area.



**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	28	Primary Members	1	5

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Outside face of girder 7.	225.48-350-28-00-15G7EnBg.JPG	24

**Description(s):**

- Delaminated girder; 15% loss to outside leg of bottom flange.
- 70% paint failure to outside of girder.



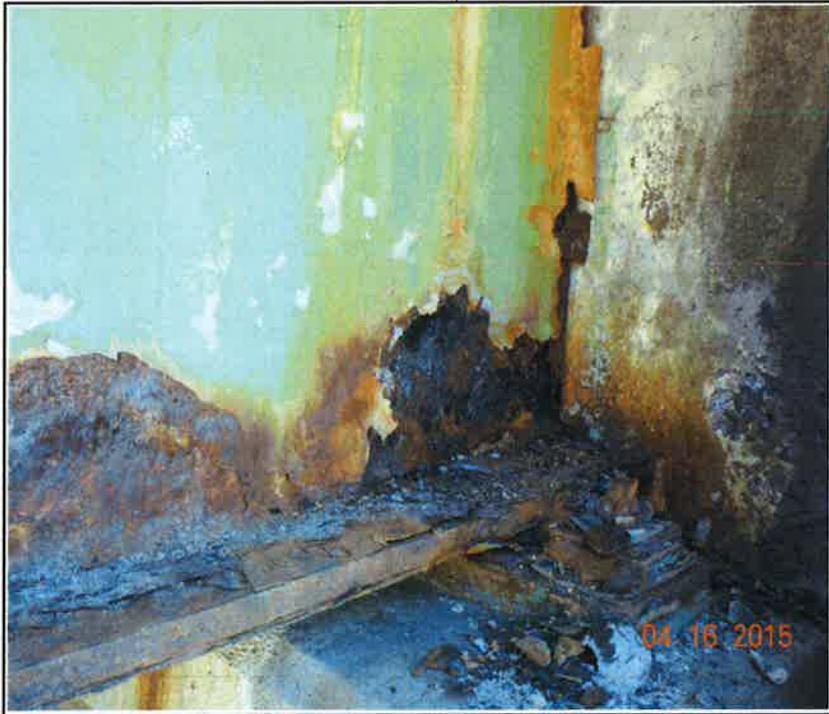
**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	28	Primary Members	1	5
350	30	Paint	1	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
End of girder 7.	225.48-350-28-00-15G7WbEn.JPG	25

**Description(s):**

- Lower 6" of web pitted to 3/16" deep; 20% overall web loss in bearing area.



**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	28	Primary Members	1	5

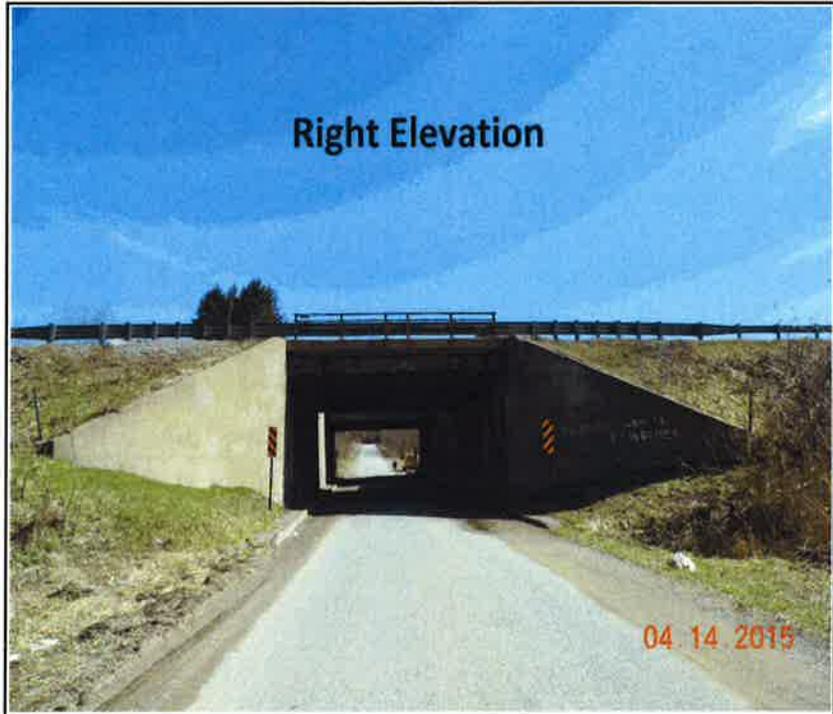
<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Right elevation.	225.48-350-44-00-15RtElev.JPG	26

**Description(s):**

- New horizontal clearance markers on existing posts.

**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	44	Sign Structure	1	6



# INVENTORY

184

# INVENTORY FIELD VERIFICATION FORM

The accuracy and completeness of the data in the BIMS data base has been compared to field observation of elements that appear to have been improved and to current underclearance measurements recorded during this year's inspection.

**NO CHANGES ARE REQUIRED**

**BIN:** 5516072

**MP:** 225.48

DATE	PREPARED BY	REVIEWED BY	REMARKS
4/16/15	M. Jauch	D. Hilleges	done



**MINIMUM BRIDGE UNDERCLEARANCE  
MAINLINE BRIDGES  
SYRACUSE DIVISION  
NEW YORK STATE THRUWAY AUTHORITY**

MP: 225.48 SHEET 2 OF 4  
 BIN: 5516072 DATE: 04/16/2015

Bridge Orientation: Southeast  
 TWY Traffic Direction: EAST

Feature Crossed: Millers Grove Road (Co Rd 53)

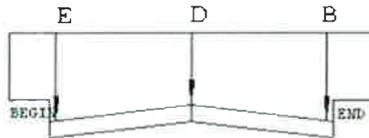
Date	A	B	C	D	E	F	G	H	A'	B'	C'	D'	E'	F'	G'	H'
04/16/2013		15.47		15.27	15.29											
04/16/2015		15.34		15.14	15.24											

REMARKS: 90IX EB over CR 53 Millers Grove

NOTES:

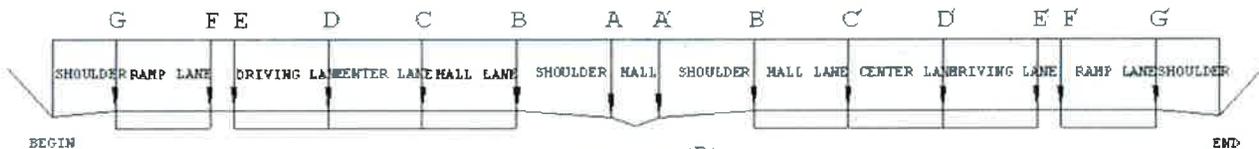
- 1) Use appropriate profile sketch 'A' or 'B'
- 2) When using sketch 'B' use points E, D & B and E', D' & B' to record measurements for 2 lane sections.
- 3) When using sketch 'B', use point F for detached ramps only
- 4) H and H' measurements taken at any other needed location or NA. Note location in remarks.
- 5) Only one row of measurements should be recorded (i.e. only the lowest measurements of each point should be recorded)
- 6) For thruway ramp over other roadway use this form and specify "ramp" under thruway traffic direction column.  
The measurement and recording should be done in the same manner as stated in '4' above.
- 7) For riveted construction stringers, Dimensions shall be taken to the bottom of the rivet heads.

THRUWAY MAINLINE BRIDGE



SKETCH 'A'  
(NON-DIVIDED HIGHWAY UNDER TWY)  
PROFILE VIEW

THRUWAY MAINLINE BRIDGE



SKETCH 'B'  
(DIVIDED HIGHWAY UNDER TWY)  
PROFILE VIEW



**MINIMUM BRIDGE UNDERCLEARANCE  
MAINLINE BRIDGES  
SYRACUSE DIVISION  
NEW YORK STATE THRUWAY AUTHORITY**

MP: 225.48 SHEET 3 OF 4  
 BIN: 5516072 DATE: 04/16/2015

**Bridge Orientation:** Southeast  
**TWY Traffic Direction:** EAST

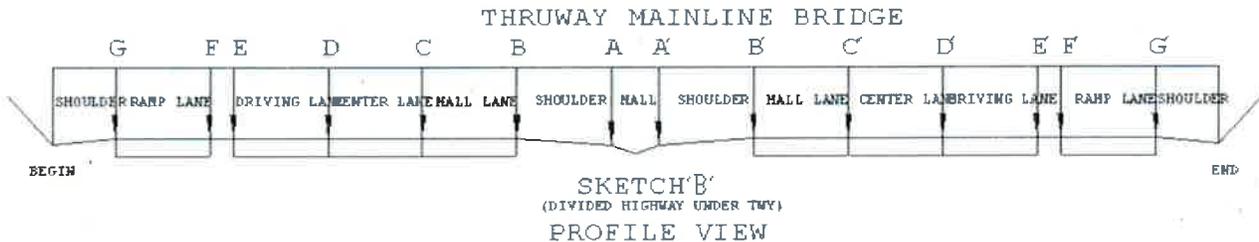
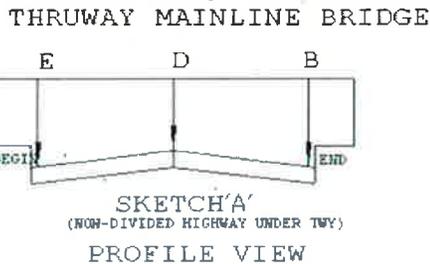
**Feature Crossed:** Millers Grove Road

Date	A	B	C	D	E	F	G	H	A'	B'	C'	D'	E'	F'	G'	H'
04/13/2009		15.42		15.24	15.28											
04/12/2011		15.42		15.24	15.27											

**REMARKS:** 90I X EB over CR 53 Millers Grove Rd.  
 Clearances taken along left fascia girder. Clearances at B and E were taken at edge of travel lane, not the curb line.

**NOTES:**

- 1) Use appropriate profile sketch 'A' or 'B'
- 2) When using sketch 'B' use points E, D & B and E', D' & B' to record measurements for 2 lane sections.
- 3) When using sketch 'B', use point F for detached ramps only
- 4) H and H' measurements taken at any other needed location or NA. Note location in remarks.
- 5) Only one row of measurements should be recorded (i.e. only the lowest measurements of each point should be recorded)
- 6) For thruway ramp over other roadway use this form and specify "ramp" under thruway traffic direction column.  
 The measurement and recording should be done in the same manner as stated in '4' above.
- 7) For riveted construction stringers, Dimensions shall be taken to the bottom of the rivet heads.



**NEW YORK STATE DEPARTMENT OF TRANSPORTATION  
BRIDGE INVENTORY AND INSPECTION SYSTEM  
ACCESS CATEGORY CODING FORM**

MP: 225.48  
SHEET 4 OF 4

RC - BIN: 

2	3
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5	5	1	6	0	7	2
---	---	---	---	---	---	---

INSPECT DATE: 04/16/2015  
TEAM LEADER: Douglas Hilleges

Span No			Walking	Step Ladder	Extension	40' UBIU	60' UBIU	LGWT - UBIU	<= 30' Lift	30 -90' Lift	> 90' Lift	Row Boat	Barge	Diving	RR Flagging	Electric RR	Scaffolding	Lane Closure	W/Shad Veh	Other	Contractor Code	Record Code	Tx Code	
10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		116	118	120
B	R	I	X						X													63	17	2
0	0	1	X						X													63	17	2

INSTRUCTIONS: - Only a single BIN will be addressed on any single sheet -

- a) Complete the date, preparer, and sheet number headings.
- b) Enter the region, county and BIN number.
- c) In the first line of the form, having a span number of "BRI", place an "X" in each access category necessary for a proper inspection of the entire bridge and enter the contractor code.
- d) In all subsequent rows, WITH ONE SPAN PER LINE AND USING AS MANY LINES AS THERE ARE SPANS FOR THE ENTIRE BRIDGE STRUCTURE, enter the span number being addressed (columns 10-12, right justified and zero filled) place an "X" in each access category necessary for a proper inspection of that span (and the two substructure faces facing that span) and enter the contractor code.
- e) IF DIVING ACCESS IS REQUIRED (as directed by Inspection TA 87-012) FOR EITHER OF THE TWO SUBSTRUCTURE FACES FACING THE SPAN BEING CODED, INDICATE SO WITH AN "X", THIS MUST BE DONE EVEN IF A DIVING INSPECTION IS NOT REQUIRED DURING THE CURRENT INSPECTION SEASON. NOTE that some NYSDOT documents refer to bridges requiring diving inspection as having an "I" ACCESS CATEGORY.
- f) Recode the entire bridge if ANY UPDATING of the Access Category is necessary.
- g) Use col. 28 for situations requiring lane closure WITHOUT a shadow vehicle and col. 29 for lane closure WITH a shadow vehicle.

# LOAD RATING

**LEVEL 2 LOAD RATING (VIRTIS LFD)**

MILEPOST: 225.48 BIN: 5516072

REGION: 2 COUNTY: HERKIMER

FEATURE CARRIED: 90IX EASTBOUND

FEATURE CROSSED: MILLERS GROVE ROAD (CR 53)

**LEVEL 2 LOAD RATING REVIEW**

VIRTIS RUN DATE: 5/2/2013

CHANGES TO INPUT DATA:

*4/16/15*  
*✓ Daylis it better*  
*no changes to dead loads or configuration;*  
*Increase fascia girder web loss in bearing area to 20% overall.*  
Member load added to G2 for timber shoring.  
Section loss updated per 2013 report.  
See list of changes on page 2 of VIRTIS  
load rating in BIN folder.

LOADING	INVENTORY RATING (TONS)	OPERATING RATING (TONS)
HS-20	35.4 (HS-19)	59.1 (HS-32)
H-20	23.0 (H-23)	38.4 (H-38)

\* ANALYSIS METHOD: LOAD FACTOR

**CONTROLLING MEMBER FOR RATING**

LOCATION: MIDSPAN

COMPONENT: FASCIA GIRDER G7

FAILURE TYPE: FLEXURAL CAPACITY

EFFECTIVE SPAN LENGTH: 32' ✓

H EQUIVALENT OF LEGAL LOAD: H22

PRIMARY MEMBER RATING: 5

SAFE LOAD CAPACITY: H32 ✓

SLC COMPUTATION USED (IN BOLD)				
0.60 HOR	0.70 HOR	0.80 HOR	<b>0.85 HOR</b>	HOR

ACTION TAKEN: NONE REQUIRED X

RECOMMEND LEVEL 1 \_\_\_\_\_

UNRATABLE \_\_\_\_\_

COMPLETED BY

Michael Gaskill  
 MICHAEL GASKILL  
 LOAD RATING ENGINEER

REVIEWED BY

Garret Hoffmann 7/1/13  
 GARRET HOFFMANN  
 PE # 070686  
 QUALITY CONTROL ENGINEER

NEW YORK STATE THRUWAY AUTHORITY  
BRIDGE INSPECTION FIELD VERIFICATION OF LOAD RATING DATA

Date: 4/16/15

MP/BIN: 225.48 / 5516072

Feature Carried / Crossed: 90IX EB / CR 53 MILLERS GROVE RD

Dead Load:  
WS Thickness & Material Shown on Plans - 3' Asphalt  
Changes Noted in Field: None ✓

Railing Type Shown on Plans - 4 Rail Steel with Thrie Beams Upgrade  
Changes Noted in Field: None ✓

Other DL Contributions (e.g. utilities) on Plans - \_\_\_\_\_  
Changes Noted in Field: None

Section Loss:  
Existing Documentation (sketches, etc.)? - None Yes - fascia girder bottom flange  
and web loss

Location of Documentation (previous report, blue folder, etc.)? - Previous Report

New Section Loss noted? - None Yes  
Brief Description (attach sketches if helpful) - no changes to noted bottom flange loss.  
Increase fascia girder web loss in bearing area to 20% overall.

Additional Notes: None

Attachments:            yes     no    (please circle)

Team Leader: DOUGLAS R. HILLEGES, P.E.

Signature: Douglas R Hilleges

Date: 4/16/15

**BIN:** 5516071 **MP:** 225.49

**Region:** 2 **County:** 3 HERKIMER

**Feature Carried:** 90IX WB

**Feature Crossed:** CR 53 MILLERS GROVE RD

**General Recommendation:** 4

**Condition Rating:** 3.77

**Inspect Date:** 04/16/2015



**New York State Thruway Authority - Bridge Inspection Report**

# 2015 INSPECTION

FLAGS	<input type="checkbox"/> RED	<input type="checkbox"/> YELLOW	<input type="checkbox"/> SAFETY	<input checked="" type="checkbox"/> NONE
	<input type="checkbox"/> PIA		<input type="checkbox"/> PIA	<input type="checkbox"/> REMOVE / INACTIVE

**REVIEWED BY:** Michael Sullivan  
Michael Sullivan

**TITLE:** Quality Control Engineer PE# 72693

# NEW YORK STATE THRUWAY AUTHORITY



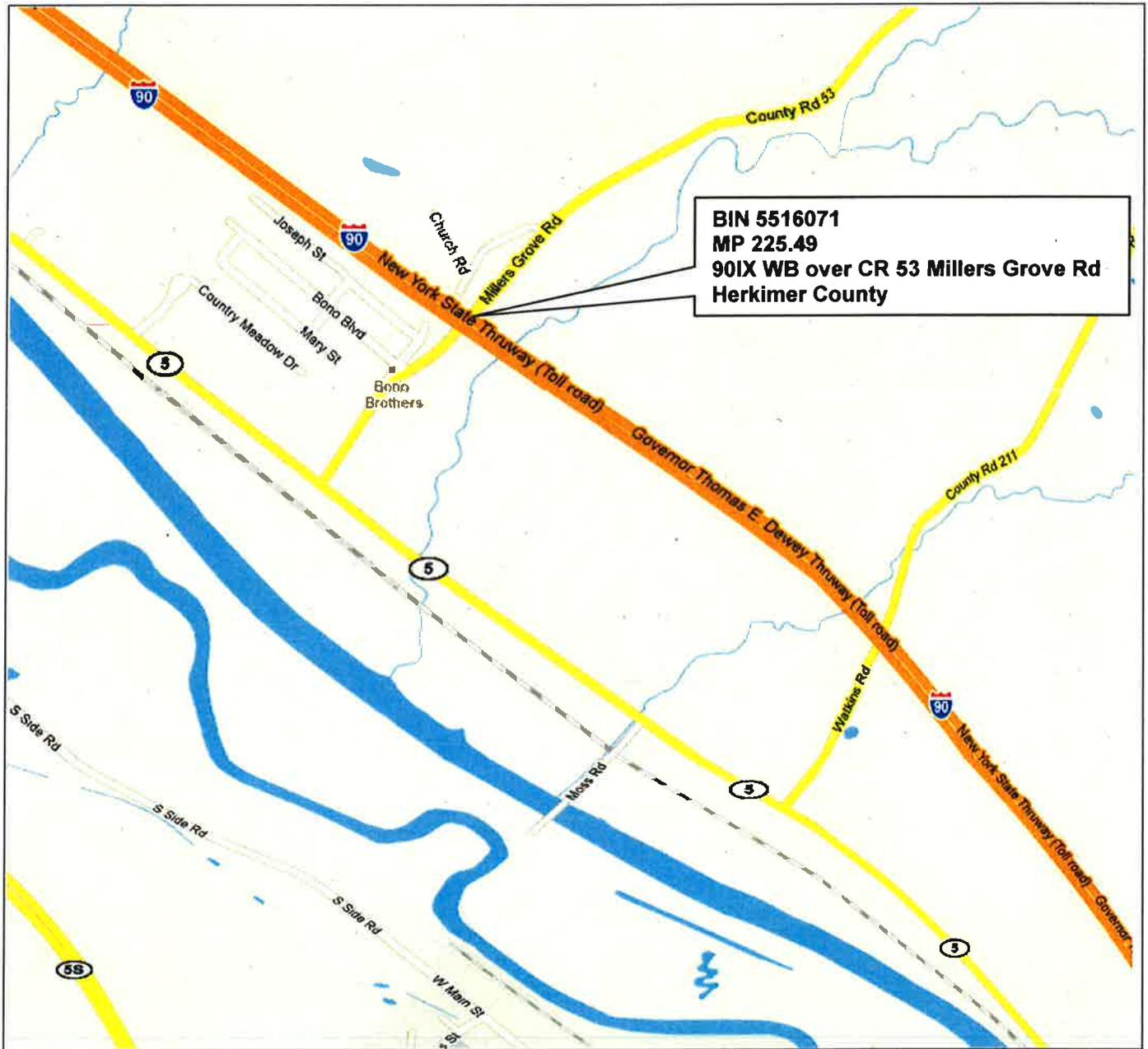
**BIN: 5516071**

**MP: 225.49**

## LOCATION MAP

**Feature Carried: 90IX WB**

**Feature Crossed: CR 53 Millers Grove Rd**



# INSPECTION

TP349

NYS DEPT OF TRANSPORTATION  
BRIDGE INSPECTION REPORT

SHEET 1 OF 12

DATE: MO DAY YEAR  
04 16 15  
13 14 15 16 17 18

RC - BIN: 2 3 - 5 5 1 6 0 7 1 MP: 225.49  
1 2 3 4 5 6 7 8 9

TEAM LEADER: Douglas Hilleges

Signature: Douglas Hilleges

P.E. NUMBER: 63759 STATE: NY

ASST. TEAM LEADER: Michael Jauch

RAMP BRIDGE ATTACHED TO SPAN: \_\_\_\_\_ BIN: \_\_\_\_\_

INSPECTION AGENCY: 21 TYPE OF INSPECTION: 1  
19 20 21 1-BIENNIAL 3- IN DEPTH 5- SPECIAL  
2- INTERIM 4- NONE (UNDER CONTRACT)

STATE HWY. NO: \_\_\_\_\_ MILEPOINT: \_\_\_\_\_ POLIT. UNIT: Schuyler

FEATURE(S) CARRIED: 90IX WB

FEATURE(S) CROSSED: CR 53 MILLERS GROVE RD

TOTAL SPANS: 1 BRIDGE ORIENTED: Southeast YEAR BUILT: 1954

BRIDGE TYPE: Steel Stringer/Multi-Beam or Girder AADT/YEAR: 10940/2012

VERTICAL CLEARANCE AND LOAD POSTINGS	ON: <u>NOT POSTED</u>	Under: <u>NOT POSTED</u>	NONE	<u>06</u> <u>2</u> <small>118 120</small>
	<u>0</u> Ft <u>0</u> In <small>19 20 21 22</small>	<u> </u> Ft <u> </u> In <small>23 24 25 26</small>	Loading: <u> </u> TONS <small>27 28</small>	

ABUTMENTS:	Begin	End	WINGWALLS:	Begin	End	APPROACHES:
Joint with deck	<u>3</u> <small>22</small>	<u>2</u> <small>23</small>	Walls	<u>4</u> <small>40</small>	<u>3</u> <small>41</small>	Drainage <u>5</u> <small>53</small>
Bearings, anchors bolts, pads	<u>4</u> <small>24</small>	<u>3</u> <small>25</small>	Footings	<u>9</u> <small>42</small>	<u>9</u> <small>43</small>	Embankment <u>6</u> <small>54</small>
Bridge seat and pedestals	<u>4</u> <small>26</small>	<u>4</u> <small>27</small>	Erosion or scour	<u>5</u> <small>44</small>	<u>5</u> <small>45</small>	Settlement <u>5</u> <small>55</small>
Backwall	<u>4</u> <small>28</small>	<u>4</u> <small>29</small>	Piles	<u>9</u> <small>46</small>	<u>9</u> <small>47</small>	Erosion <u>6</u> <small>56</small>
Stem (breastwall)	<u>3</u> <small>30</small>	<u>3</u> <small>31</small>	<b>STREAM CHANNEL:</b>		Pavement <u>3</u> <small>57</small>	
Erosion or scour	<u>5</u> <small>32</small>	<u>5</u> <small>33</small>	Stream Alignment	<u>8</u> <small>48</small>	Guide Railing <u>5</u> <small>58</small>	
Footings	<u>9</u> <small>34</small>	<u>9</u> <small>35</small>	Erosion And Scour	<u>8</u> <small>49</small>	GENERAL RECOMMEND <u>4</u> <small>60</small>	
Piles	<u>9</u> <small>36</small>	<u>9</u> <small>37</small>	Waterway Opening	<u>8</u> <small>50</small>		
Recommendation	<u>4</u> <small>38</small>	<u>4</u> <small>39</small>	Bank Protection	<u>8</u> <small>51</small>		

ACCESS CATEGORY:

Walk-Up  
Lift Small (<= 30 ft.)

FLAG ISSUED?

NONE:   
YELLOW:   
RED:   
SAFETY:

BRIEF REASON

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Vulnerability Reassessment Review Recommended?

HYD 3 OVL X STL 2 COL X CON X SMC X  
65 70 1 = YES  
2 = NO  
3 = NA  
X = NOT USED THIS CYCLE

REVIEWED BY: Michael Sullivan  
Michael Sullivan  
P.E. NUMBER: 72693  
DATE: 06/10/2015

RC - BIN: 

2	3	-	5	5	1	6	0	7	1
1	2		3	4	5	6	7	8	9

NYS DEPT OF TRANSPORTATION  
BRIDGE INSPECTION REPORT

SHEET 2 OF 12

TEAM LEADER: Douglas Hilleges

ASST. TEAM LEADER: Michael Jauch

DATE: 

MO	DAY	YEAR
04	16	15
13	14	15
16	17	18

OTHERS: \_\_\_\_\_

FEATURE(S) CARRIED: 90IX WB

FEATURE(S) CROSSED: CR 53 MILLERS GROVE RD

SPAN NO.	DECK ELEMENTS						SUPERSTRUCTURE						PIER						UTILITIES										
	Wearing surface	Curbs	Sidewalk & Fascias	Railings & Parapets	Scuppers	Gratings	Median	MONO Deck Surface	Deck Structural	Primary Members	Secondary Members	Paint	Joints	Recommendation	Brgs., Anchor Bolts, Pads	Pedestals	Top of Pier CapBeam	Stem Solid Pier	Capbeam	Pier Columns	Footings	Erosion or Scour	Piles	Recommendation	Lighting Standards and Fixtures	Sign Structures	Utilities and Utilities Supports		
10	11	12	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
0	0	1	5	2	3	3	8	8	8	8	3	5	6	4	8	5	8	8	8	8	8	8	8	8	8	8	8	6	8

DIVING INSPECTION REQUIRED?  Yes  No If yes, indicate year of last diving inspection.

SPECIAL EMPHASIS INSPECTION REQUIRED:  Yes  No  
If yes, indicate type below

- NON-REDUNDANT/FRACTURE CRITICAL
- PIN AND HANGERS
- FATIGUE-PRONE WELDS (AASHTO D, E, OR E')  Cat E field welds at jacking stiff, 100% hands-on insp. performed.
- NON-CATEGORIZED FATIGUE-PRONE DETAILS
- OTHERS (SPECIFY) Out-of-plane bending  100% hands-on inspection performed.

RECOMMEND FURTHER INVESTIGATION  1 = NO  2 = YES

REMARKS

FIELD NOTES

DATE	TIME OF ARRIVAL	TIME OF DEPARTURE	TEMP (F/C)	WEATHER CONDITIONS / ACCESS EQUIPMENT	Field Notes
04/14/2015	9:15:00 am	11:00:00 am	61/16	Sunny/Walking	
04/16/2015	11:30:00 am	1:45:00 pm	61/16	Sunny/Bucket Truck	Inspection Complete



INSPECTED BY: Douglas Hilleges TITLE: Syracuse BSIE

FEATURE(S) CARRIED: 90IX WB

FEATURE(S) CROSSED: CR 53 MILLERS GROVE RD

**BRIDGE INSPECTION AND CONDITION REPORT**  
**SUPPLEMENTARY INSPECTION ACTIVITIES**

<b>BIN PLATE LOCATION/ CONDITION</b>	<input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Missing <input type="checkbox"/> Damaged/Defaced <input type="checkbox"/> End Abutment <input checked="" type="checkbox"/> Begin Abutment
	Begin stem at right side.
<b>FLOOD ELEVATION MARKINGS</b>	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Satisfactory <input type="checkbox"/> Missing <input type="checkbox"/> Damaged/Illegible (described below)
<b>ELECTRICAL</b>	<input checked="" type="checkbox"/> Class A (Caution) <input type="checkbox"/> Class B (Warning) <input type="checkbox"/> Class C (Danger)
<b>SPECIAL EMPHASIS</b>	<input type="checkbox"/> Not Required <input checked="" type="checkbox"/> A 100% Hands-On Inspection                    Given To: See General Comments below.
	<input checked="" type="checkbox"/> No Defects Found <input type="checkbox"/> Defects Described Below
<b>UPGRADES REPORT</b>	<input type="checkbox"/> None <input checked="" type="checkbox"/> Minor (see below) <input type="checkbox"/> Major Rehab (see below)                    (Contract #: )

The following work was completed (explain to the right of any item checked: repaired, replaced, begin, end, left, right, etc. Use space below to explain complex or unusual situations or other work):

- |                                                                                                     |                                                                                   |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| <input type="checkbox"/> Superstructure                                                             | <input type="checkbox"/> Curb, Sidewalk, Fascia                                   |
| <input type="checkbox"/> Deck                                                                       | <input checked="" type="checkbox"/> Bridge Rail      Split railing posts repaired |
| <input type="checkbox"/> Wearing Surface                                                            | <input type="checkbox"/> Approach Rail                                            |
| <input type="checkbox"/> Appr. Pavement                                                             | <input type="checkbox"/> Signage                                                  |
| <input checked="" type="checkbox"/> Substructure      Deteriorated area of begin backwall repaired. | <input type="checkbox"/> Other (explain below)                                    |

**GENERAL COMMENTS/UNUSUAL CONDITIONS:**       Unusual Conditions (explain below)

**SPECIAL EMPHASIS:**

1. Web gap < 4Tw, however detail is not vulnerable to out-of-plane fatigue cracking as skew < 30 degrees and structure has no history of cracking. 100% hands-on inspection was performed, no defects found.
2. Category E field welds at jacking stiffeners received 100% hands-on inspection, no defects found.

INSPECTED BY: Douglas Hilleges TITLE: Syracuse BSIE

FEATURE(S) CARRIED: 90IX WB

FEATURE(S) CROSSED: CR 53 MILLERS GROVE RD

BRIDGE INSPECTION MPT REQUIREMENTS

Instructions: Circle Thruway direction, then check yes or no for each lane/shoulder closure.  
Comment on reason for each closure. Examples: cover plates, impact damage, etc.

N/A	LANE CLOSURE				
Driving lane shoulder	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments:	N/A
Driving lane	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments:	N/A
Center lane	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments:	N/A
Mall lane	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments:	N/A
Mall lane shoulder	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments:	N/A
Ramp lane	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments:	N/A

WEST BOUND	LANE CLOSURE				
Driving lane shoulder	<input type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Comments:	None
Driving lane	<input type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Comments:	None
Center lane	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments:	N/A
Mall lane	<input type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Comments:	None
Mall lane shoulder	<input type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Comments:	None
Ramp lane	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Comments:	N/A

**NOTES:**

No MPT needed on Thruway. Lane closures with flaggers are required on CR 53 Millers Grove Rd where traffic volumes are very low. Traffic control performed by bridge inspection crew.

RATING FORM: TP349					
ITEM:	TITLE:	RATINGS			
	REMARKS:	NEW:	PRE:	PHOTO #:	

**22 Joint With Deck (Begin)**

Both joints leak throughout as both stems and backwalls are damp and stained. 3 3 1, 2

There is no joint material present in the median shoulder area at either abutment, only foam backer board.

In travel lanes, begin joint header has surface scaling and 1" deep spalling along edge of seal.

End joint header is worse as previous concrete repairs are cracked and breaking up 2" to 3" wide along seal for majority of travel lane widths; header in passing lane also has several asphalt patches to 2sf in area.

Seal is loose, debonded and/or torn for majority of both joint widths.

Begin joint rate 3; end joint rate 2 due to header spall.

**23 Joint With Deck (End)**

Both joints leak throughout as both stems and backwalls are damp and stained. 2 3 2, 3

There is no joint material present in the median shoulder area at either abutment, only foam backer board.

In travel lanes, begin joint header has surface scaling and 1" deep spalling along edge of seal.

End joint header is worse as previous concrete repairs are cracked and breaking up 2" to 3" wide along seal for majority of travel lane widths; header in passing lane also has several asphalt patches to 2sf in area.

Seal is loose, debonded and/or torn for majority of both joint widths.

Begin joint rate 3; end joint rate 2 due to header spall.

**24 Bearings, Anchor Bolts, Pads (Begin)**

Begin fixed bearings have minor rusting and delamination, fascias are slightly worse with minor flowering of anchor bolt nuts. Right side anchor bolt at begin bearing 3 has rusted/sheared off at top of sole plate. Bearings 1, 6, & 7 have minor accumulations of backwall spallings; extensive build up of spallings at bearings 6 & 7 have been cleaned with backwall repair in this area. 4 4 4, 5

**25 Bearings, Anchor Bolts, Pads (End)**

All end sliding expansion bearings are rusting with minor delamination. All except bearing 7 are overextended to 3/4" beyond masonry plate at 55 degrees F. Formwork from past backwall rehab is wedged between ends of girders and backwall hindering movement. Expansion bearing at G6 is partially buried with concrete spall from backwall. 3 3 6, 7

**26 Bridge Seat and Pedestals (Begin)**

Front edge and top of begin seat is cracked, hollow and spalled to 1 1/2" deep from pedestal 3 to two feet right of pedestal 6; seat spalling extends to 5" deep for the 2' length in bay 6. 4 4 8, 9

Seat area has been cleared of spallings in bays 5 & 6; top of seat is typically spalled 1" deep in bay 5 with spalling typically 3" deep in bay 6 and extending to 5" deep at edge.

A hairline to 1/16" open vertical crack extends from anchor bolt on both sides of pedestal 4; concrete remains solid.

Remainder of seat & concrete pedestals are good.

RATING FORM: TP349					
ITEM:	TITLE:	RATINGS			
	REMARKS:	NEW:	PRE:	PHOTO #:	

<b>27</b>	<b>Bridge Seat and Pedestals (End)</b> Front edge of seat in bays 3, 4, 5, & 6 has cracking with areas of minor hollowness; worst area of delamination is 4' each side of pedestal 4. Face of pedestal 4 is delaminated and spalled 1" deep and right side has a hairline vertical crack extending from right side anchor bolt; concrete remains solid. Pedestal 6 has 1" deep spalling on left and right sides. Remainder of pedestals are good.	4	4	7, 10
<b>28</b>	<b>Backwall (Begin)</b> Previous severe (12" deep) spalling at the right (outside) of G7 has been repaired by maintenance. Lower half +/- of begin backwall in bay 6 and extending 2' into bay 5 is spalled 4" to 5" deep typical. Remainder of begin backwall is solid. Rating upgraded to 4.	4	3	5, 11, 12
<b>29</b>	<b>Backwall (End)</b> End backwall is in fairly good condition with the exception of a 6' length behind G6 that is very hollow and spalled to 3" deep; concrete within spall area is loose and crumbly. 30% of area in bay 6 is delaminated, remainder of end backwall is solid.	4	4	13, 14
<b>30</b>	<b>Stem (Breastwall) (Begin)</b> 30% +/- of begin stem (mainly right 1/3 of stem) has honeycombed concrete that is hollow to very hollow; Upper half for a 10' width below pedestal 6 is extremely hollow, soft, and spalling 3" to 4" deep.	3	3	9
<b>31</b>	<b>Stem (Breastwall) (End)</b> Right 2/3 of end stem remains deteriorated having surface scaling and areas of delamination throughout. Worst is 13' wide x full height at right side having hollow to very hollow concrete throughout; 1' to 3' wide at right end is soft and spalling to 8" deep. Overall, 20% to 25% of end stem area is very delaminated and/or spalled.	3	3	10
<b>32</b>	<b>Erosion or Scour (Begin)</b> Area around bridge has a high water table and significant runoff in wet weather. In the past, ground water flow has been evident through base of vertical construction joints of end abutment stem. Sidewalk areas in front of both abutments and right side wingwalls have slabs of sidewalk settled to 6" due to water flow and wash out of underlying fine material. In 2009 the County installed an underdrain beneath Millers Grove Road. The end abutment weep drain which outlets in front of the end right wingwall of eastbound structure (MP 225.48) was exposed and the weep pipe was cleaned by Thruway personnel. These procedures continue to alleviated the problem as no water problems are evident during this inspection. Piles exist at structure.	5	5	

RATING FORM: TP349					
ITEM:	TITLE:	RATINGS			
	REMARKS:	NEW:	PRE:	PHOTO #:	

<b>33</b>	<b>Erosion or Scour (End)</b> Area around bridge has a high water table and significant runoff in wet weather. In the past, ground water flow has been evident through base of vertical construction joints of end abutment stem. Sidewalk areas in front of both abutments and right side wingwalls have slabs of sidewalk settled to 6" due to water flow and wash out of underlying fine material. In 2009 the County installed an underdrain beneath Millers Grove Road. The end abutment weep drain which outlets in front of the end right wingwall of eastbound structure (MP 225.48) was exposed and the weep pipe was cleaned by Thruway personnel. These procedures continue to alleviated the problem as no water problems are evident during this inspection. Piles exist at structure.	5	5		
<b>40</b>	<b>Walls (Begin)</b> Begin left wingwall is cracked, hollow and spalled 2" to 5" deep full height for up to 5' wide adjacent to stem. Remainder has fine, damp pattern cracking for 30% area but concrete is solid. Begin right wingwall is good.	4	4	15	
<b>41</b>	<b>Walls (End)</b> End left wingwall has light pattern cracking and hollow to very hollow concrete for 70% to 75% total area. A 2' to 3' width adjacent to stem is spalled to 6" deep for majority of height. Inside of curtain wall area adjacent to backwall is spalled to 8" deep with delaminated reinforcing bars exposed. End right wingwall has tight pattern cracking throughout. Concrete is delaminated 4' high along base and to 6' wide full height adjacent to stem; 2' wide adjacent to stem is soft and spalled to 4" deep.	3	3	16, 17	
<b>44</b>	<b>Erosion and Scour (Begin)</b> Area around bridge has a high water table and significant runoff in wet weather. In the past, ground water flow has been evident through base of vertical construction joints of end abutment stem. Sidewalk areas in front of both abutments and right side wingwalls have slabs of sidewalk settled to 6" due to water flow and wash out of underlying fine material. In 2009 the County installed an underdrain beneath Millers Grove Road. The end abutment weep drain which outlets in front of the end right wingwall of eastbound structure (MP 225.48) was exposed and the weep pipe was cleaned by Thruway personnel. These procedures continue to alleviated the problem as no water problems are evident during this inspection. Piles exist at structure.	5	5		

RATING FORM: TP349					
ITEM:	TITLE:	RATINGS			
	REMARKS:	NEW:	PRE:	PHOTO #:	

**45 Erosion And Scour (End)**

Area around bridge has a high water table and significant runoff in wet weather. In the past, ground water flow has been evident through base of vertical construction joints of end abutment stem. Sidewalk areas in front of both abutments and right side wingwalls have slabs of sidewalk settled to 6" due to water flow and wash out of underlying fine material. In 2009 the County installed an underdrain beneath Millers Grove Road. The end abutment weep drain which outlets in front of the end right wingwall of eastbound structure (MP 225.48) was exposed and the weep pipe was cleaned by Thruway personnel. These procedures continue to alleviated the problem as no water problems are evident during this inspection. Piles exist at structure.

5 5

**53 Drainage**

Per 2014 inspection manual, condition of approach curb is now included with the rating of curb element on the structure. Minor berm beneath rail in end left quad impedes drainage slightly, no ponding evident. Drainage in other quads is very good.

5 5

**57 Pavement**

Asphalt pavement on both approaches has minor wheel path rutting with centerline and random transverse alligator cracking to 18" wide, condition would rate 4. Begin approach driving lane at 70' from structure has a 60sf area that is depressed 1' +/- with alligator cracking that is near breaking up, rate 3.

3 4 18

**58 Guide Railing**

Concrete mounted strong steel post in end left quad adjacent to bridge rail has 2 of 4 anchor bolts that are slightly loose; remainder of posts and rail in other quads are solid, rate 5.

5 6

RATING FORM: TP350				
ITEM:	TITLE:		RATINGS	
	REMARKS:	SPAN:	NEW:	PRE: PHOTO #:

**20 Curbs**

Both curbs are losing mortar bond along base and at back with safety walk. Begin 7' of both curbs and end 11' of left curb are loose and displaced to 1 1/2". The end 11' of the right curb is broken out and missing.

Approach curbs in all quads are settled, separated, and tilted to varying degrees, last section of curb in end right quad is totally displaced. Rating lowered to 2 due to large section of missing curb.

1 2 3 19, 20

**21 Sidewalks & Fascias**

Left fascia has full length longitudinal crack actively leaching water and leaching efflorescence 6" +/- above lower edge; the end 10' has 2" to 3" deep spalling along crack. Lower edge of left fascia has minor hollowness and should be removed prior to another winter season of freeze/thaw cycles. A bridge maintenance report has been submitted to have area chipped off. The end half of the right fascia has two 2' to 3' lengths of 3" deep lower edge spalling, all concrete is solid.

Top of left sidewalk has areas of 1" to 2" deep spalling beneath rail undermining numerous railing post base plates. Top of right sidewalk remains good.

1 3 4 21, 22

**22 Railings & Parapets**

Right Railing:

Previous cracks at base of right railing posts 1 & 4 have been weld repaired; posts remain bulged at base. Right post 1 now has a 6" vertical split on end right corner and a 1" high x 3" wide rust through hole on begin face just below bottom rail end cap.

Remainder of right railing posts have areas of pitting/delamination at base with up to 20% section loss; right side top rail has underside rusted through for 2' length at begin and 1' each side of post 2.

Right railing rates 4.

Left Railing:

Base plates of left railing posts 2, 3, 4, & 5 are undermined by sidewalk spalling exposing anchor bolts to weathering and lessening embedment depth; all ring solid.

Anchor bolt nuts and washers are delaminated with up to 50% section loss typical; outside nut at post 6 is worst having 100% section loss. At left posts 4 & 5, several nuts are raised slightly due to complete loss of washers; nuts do not lend complete connection to base plate and railing is slightly loose.

Left post 1 welded connection at base plate has a cracked weld on begin right corner extending 1" each direction from corner of post.

Last 10' of left side top rail has underside completely rusted through; inside face of top rail has a 1" diameter hole near post 5 and top of post 5 is very thin and has a 1" diameter hole on inside face.

Left railing rates 3.

A bridge maintenance report has been submitted for repair of cracked/split railing posts.

1 3 4 22, 23, 24, 25, 26, 27, 28, 29

RATING FORM: TP350				
ITEM:	TITLE:		RATINGS	
	REMARKS:	SPAN:	NEW:	PRE: PHOTO #:

**27 Deck Structural**

Deck has random spalled areas to 2" deep with delaminated reinforcing exposed; worst areas are bays 1 & 2 near midspan adjacent to previous full depth repairs and 1' wide at each side of G5 top flange for begin half of span.  
Deck is damp and discolored from leakage along top flanges of the following: both fascia girders; end 3/4 of G3; full length of G5, end 1/4 of G7, and other random localized areas.  
20% of total deck area has chalky, damp pattern cracking, right fascia bay is worst. See deck sketch.  
Deck can be seen pumping under load causing impact to and noticeable deflection of girders. Left half worse with squeaking evident. Shear studs are not indicated on plans.

1 3 3 30, 31

**28 Primary Members**

Some deflection in girders is observed from traffic impacts and deck deflection.  
Fascia girders have delamination and minor section loss of bottom flanges; G1 is worst having areas of 5% overall bottom flange loss.  
Fascia girders also have random areas of delamination and pitting to lower 2" to 4" of girder webs (including the end 4" to 5" in the bearing areas [1/2 width of total web column bearing area]). Begin of G1 web is worst where end 5" of web measures 5/16" +/- (40% section loss) for an overall bearing area web loss of 20%.  
G4 & G5 have minor kinks to bottom flanges near end bearings

1 5 5 32

**30 Paint**

10% +/- overall paint failure with surface rust typical at: fascia girder flanges, top and bottom flanges of girders in areas of deck leakage, outside face of fascia girder webs, and end diaphragms in areas of joint leakage.

1 4 4 30

**44 Sign Structure**

New horizontal clearance signs have been installed on existing posts at left (north) side of bridge on CR 53, Millers Grove Road.

1 6 5 33



BIN: 5516071

M.P.: 225.49

NYS THRUWAY AUTHORITY  
BRIDGE INSPECTION REPORT  
SHEET 12 OF 12

TEAM LEADER: Douglas R. Hilleges, P.E. ASST. TEAM LEADER: Michael Jauch, P.E. DATE: 04/16/2015

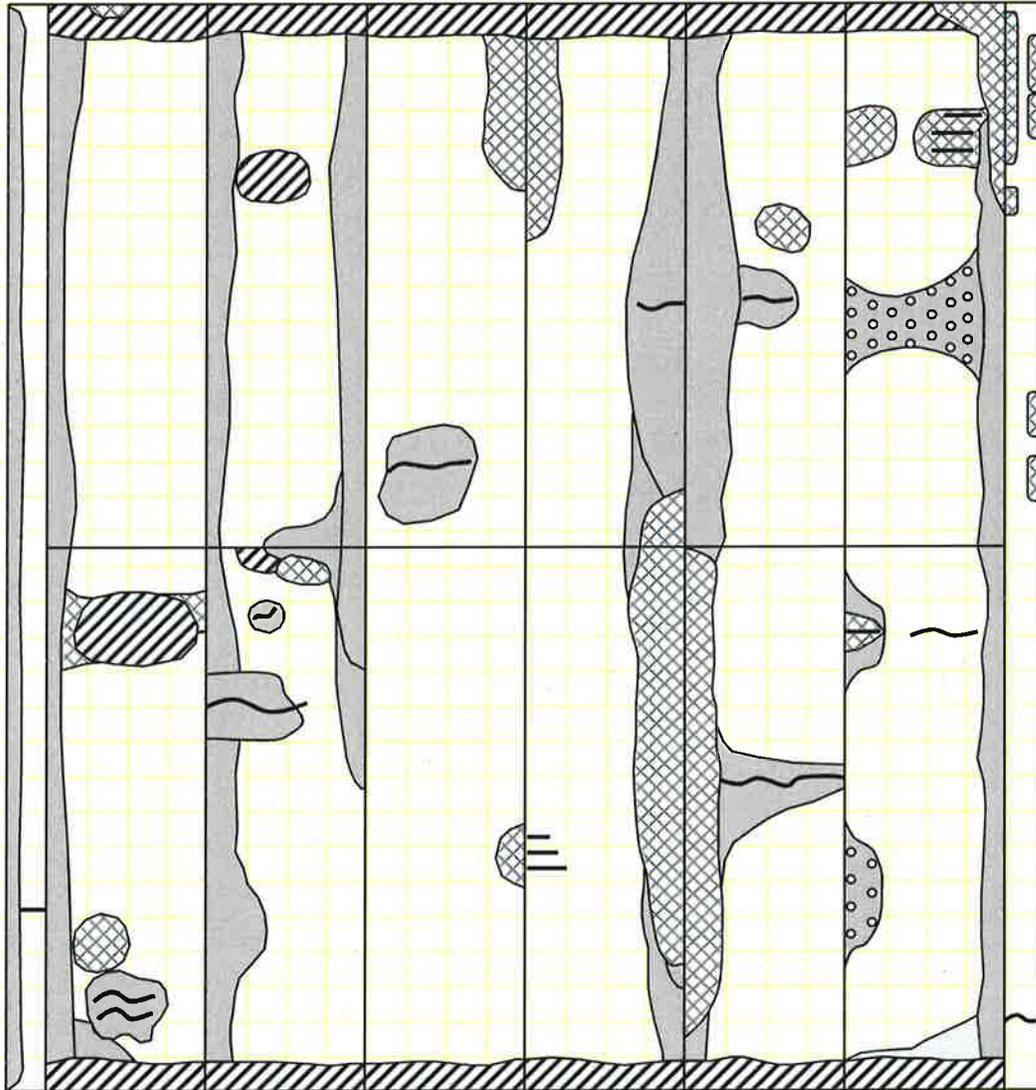
Feature Carried: 90IX WB

Feature Crossed: CR 53 MILLERS GROVE RD

DECK UNDERSIDE SKETCH

END

N.T.S.



G-1

G-7

BEGIN

LEGEND:

- |  |                              |  |                                |  |                   |  |                     |  |                 |
|--|------------------------------|--|--------------------------------|--|-------------------|--|---------------------|--|-----------------|
|  | DELAMINATED/<br>HOLLOW CONC. |  | SPALL WITH<br>EXPOSED REBAR    |  | SPALL             |  | REPAIR              |  | WOOD<br>SHORING |
|  | DISCOLORED/<br>DAMP CONC.    |  | HONEYCOMBED,<br>DAMP W/EFFLOR. |  | CHALKY<br>EFFLOR. |  | CRACK W/<br>EFFLOR. |  | CRACK           |

# PHOTOGRAPHS



NYS THRUWAY AUTHORITY  
BRIDGE INSPECTION REPORT  
SHEET 1 OF 18

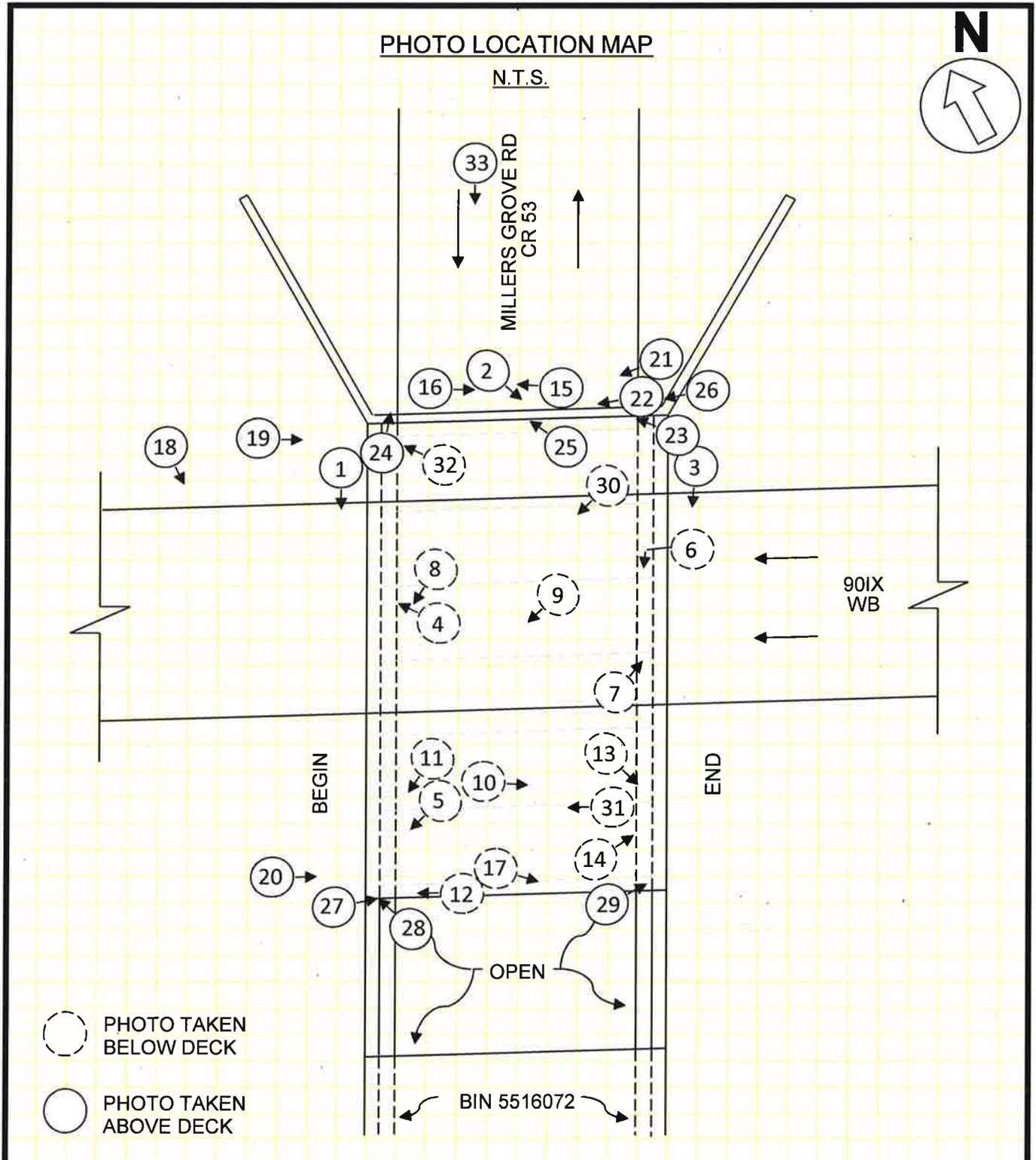
BIN: 5516071

M.P.: 225.49

TEAM ASST. TEAM  
LEADER: Douglas R. Hilleges, P.E. LEADER: Michael Jauch DATE: 04/16/2015

Feature Carried: 90IX WB

Feature Crossed: CR 53 MILLERS GROVE RD



<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Top of begin joint from left side.	225.49-349-22-00-15BgLtRt.JPG	1

**Description(s):**

- 1" spall of header along seal; seal loose, torn and debonded.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	22	Joint With Deck (Begin)	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
End stem left side.	225.49-349-23-00-15EndLt_.JPG	2

**Description(s):**

- Extensive stains on stem due to joint leakage (typ of begin stem).



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	22	Joint With Deck (Begin)	3
349	23	Joint With Deck (End)	2

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Top of end joint from left side.	225.49-349-23-00-15EnLtRt.JPG	3

**Description(s):**

- Header spalled to 3" wide along seal with asphalt patches in passing lane; seal torn, debonded or missing.



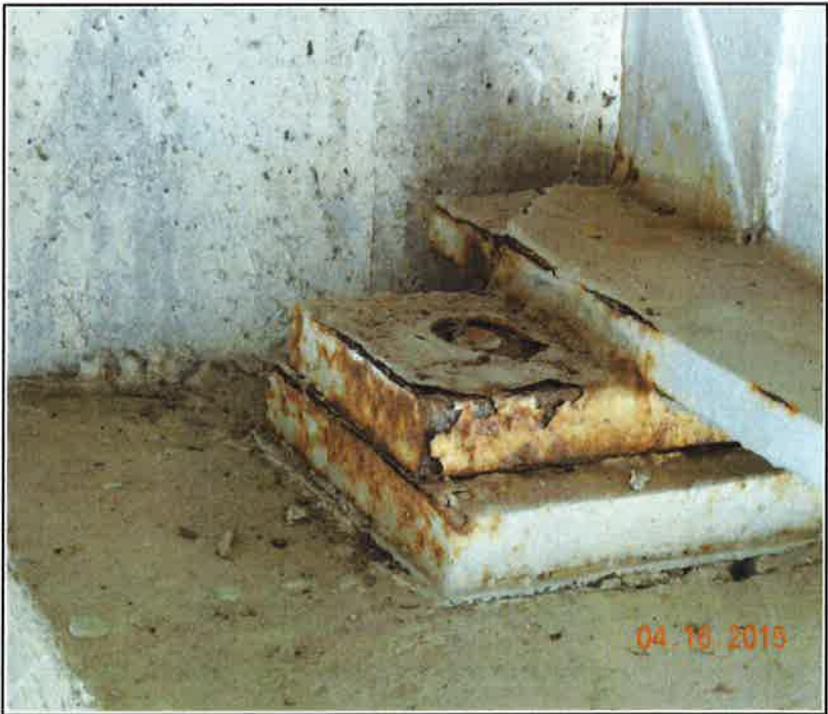
**Reference:**

Form:	Item:	Item Desc:	Rate:
349	23	Joint With Deck (End)	2

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Begin bearing 3.	225.49-349-24-00-15Brg3Rt.JPG	4

**Description(s):**

- Anchor bolt rusted/sheared off at top of sole plate.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	24	Bearings, Anchor Bolts, Pads (Begin)	4

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Begin backwall, bay 6.	225.49-349-28-00-15Bay6_.JPG	5

**Description(s):**

- Bearing 7 delaminated; backwall spallings cleared.
- Backwall spalled to 5" deep.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	24	Bearings, Anchor Bolts, Pads (Begin)	4
349	28	Backwall (Begin)	4

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
End bearing 3.	225.49-349-25-00-15Brg3Lt.JPG	6

**Description(s):**

- Bearing overextended 3/4" beyond masonry plate.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	25	Bearings, Anchor Bolts, Pads (End)	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
End pedestal & bearing 4.	225.49-349-27-00-15Ped4Rt.JPG	7

**Description(s):**

- Bearing overextended.
- Pedestal spalled on front; vertical crack at anchor bolt.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	25	Bearings, Anchor Bolts, Pads (End)	3
349	27	Bridge Seat and Pedestals (End)	4

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Begin seat, bay 3 and pedestal 4.	225.49-349-26-00-15Ped4Lt.JPG	8

**Description(s):**

- Seat cracked and delaminated; vertical crack in pedestal at anchor bolt.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	26	Bridge Seat and Pedestals (Begin)	4

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Begin stem; right side.	225.49-349-30-00-15RtSide.JPG	9

**Description(s):**

- Bridge seat area is cracked and delaminated; spalled 5" deep in bay 6.
- Right side of stem delaminated having spalled/soft concrete for upper half.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	26	Bridge Seat and Pedestals (Begin)	4
349	30	Stem (Breastwall) (Begin)	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
End stem, right side.	225.49-349-31-00-15RtSide.JPG	10

**Description(s):**

- Seat concrete delaminated at pedestal 4 & 6.
- Delaminated/spalled area of stem



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	27	Bridge Seat and Pedestals (End)	4
349	31	Stem (Breastwall) (End)	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Begin backwall, bays 5 & 6.	225.49-349-28-00-15Bay5&6.JPG	11

**Description(s):**  
- Backwall spalled to 5" deep.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	28	Backwall (Begin)	4

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Begin backwall right of girder 7.	225.49-349-28-00-15RtSdG7.JPG	12

**Description(s):**  
- Area of severely spalled backwall repaired.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	28	Backwall (Begin)	4

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
End backwall, bay 5 behind G6.	225.49-349-29-00-15Bay5G6.JPG	13

**Description(s):**

- Concrete delaminated, spalled 3" deep and soft.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	29	Backwall (End)	4

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
End backwall, bay 6.	225.49-349-29-00-15Bay6_.JPG	14

**Description(s):**

- Delaminated area of backwall; spalled, soft concrete behind G6.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	29	Backwall (End)	4

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Begin left wingwall.	225.49-349-40-00-15BgLtWW.JPG	15

**Description(s):**

- Delaminated/spalled to 5" deep full height adjacent to stem.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	40	Walls (Begin)	4

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
End left wingwall.	225.49-349-41-00-15EnLtWW.JPG	16

**Description(s):**

- Very delaminated across 75% area; spalled to 5" deep adjacent to stem.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	41	Walls (End)	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
End right wingwall.	225.49-349-41-00-15EnRtWW.JPG	17

**Description(s):**

- Delaminated concrete along base and abutment stem; soft spalling concrete adjacent to stem



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	41	Walls (End)	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Begin approach pavement.	225.49-349-57-00-15BegApp.JPG	18

**Description(s):**

- 60sf area of alligator cracking near to breaking up.



**Reference:**

Form:	Item:	Item Desc:	Rate:
349	57	Pavement	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Left curb line.	225.49-350-20-00-15LtBgEn.JPG	19

**Description(s):**

- Curb loose and displaced at begin and end of span.



**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	20	Curbs	1	2

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Right curb line.	225.49-350-20-01-15RtBgEn.JPG	20

**Description(s):**

- Curb displaced at begin of span and 11' length missing at end.



**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	20	Curbs	1	2

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Left fascia.	225.49-350-21-00-15LtFsEn.JPG	21

**Description(s):**

- Horizontal crack along fascia; active water, efflorescence and minor hollowness.



**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	21	Sidewalks & Fascias	1	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Left railing, posts 5 & 4.	225.49-350-22-00-15LtP5&4.JPG	22

**Description(s):**

- Sidewalk spalled 1" to 2" deep beneath rail undermining railing base plates.



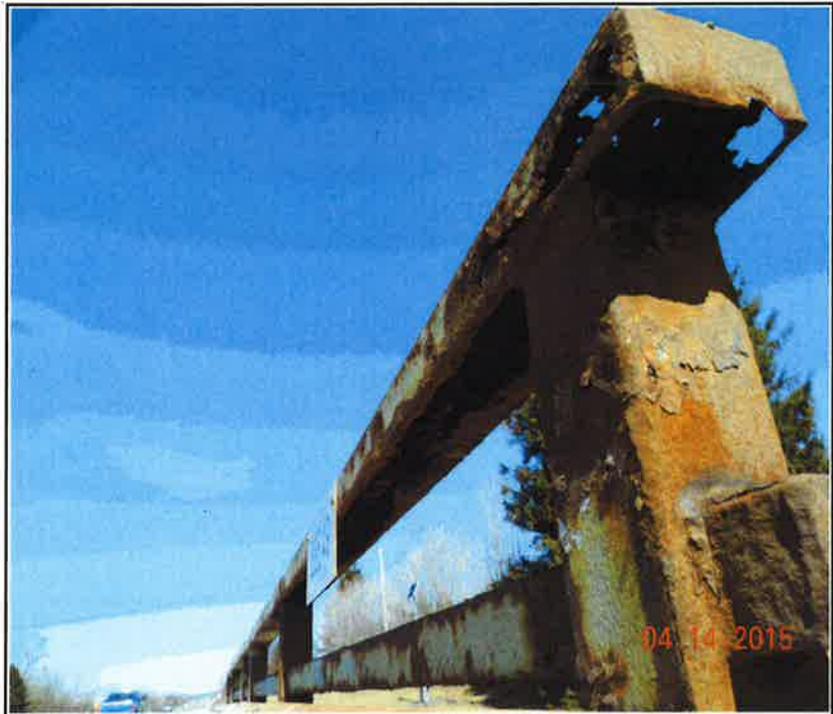
**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	21	Sidewalks & Fascias	1	3
350	22	Railings & Parapets	1	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Left railing at end of span.	225.49-350-22-00-15LtEnd_.JPG	23

**Description(s):**

- Underside of top rail rusted through.



**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	22	Railings & Parapets	1	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Left railing, post 1.	225.49-350-22-00-15LtP1_.JPG	24

**Description(s):**

- Cracked weld at base plate connection.



**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	22	Railings & Parapets	1	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Left railing, posts 4 & 3.	225.49-350-22-00-15LtP4&3.JPG	25

**Description(s):**

- Sidewalk spall exposing anchor bolts; Bolt washers rusted completely away.



**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	22	Railings & Parapets	1	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Left railing, posts 6 & 5.	225.49-350-22-00-15LtP6&5.JPG	26

**Description(s):**

- Anchor bolt nut rusted away; anchor bolts exposed by sidewalk spall.



**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	22	Railings & Parapets	1	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Right railing post 1,	225.49-350-22-00-15RtP1Bg.JPG	27

**Description(s):**

- Previous split corner weld repaired; 1" x 3" rust through beneath bottom rail end cap.



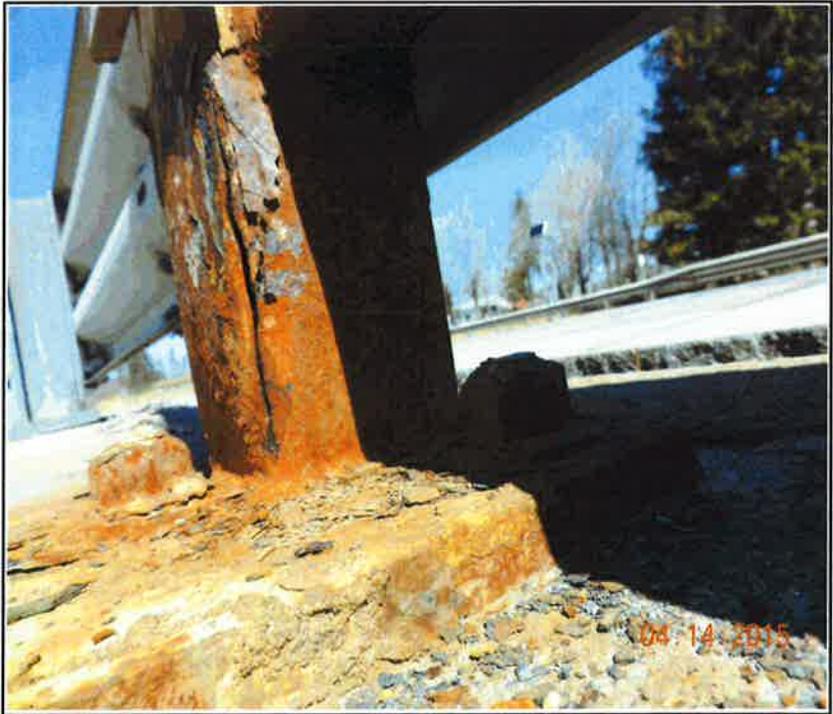
**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	22	Railings & Parapets	1	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Right railing post 1, end right corner.	225.49-350-22-00-15RTP1En.JPG	28

**Description(s):**

- 6" vertical split on corner of post.



**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	22	Railings & Parapets	1	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Right railing post 5.	225.49-350-22-00-15RtP5Pt.JPG	29

**Description(s):**

- Pitting at base of post.



**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	22	Railings & Parapets	1	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Underside of deck, bays 2, 3, & 4 looking from end.	225.49-350-27-00-15Bay234.JPG	30

**Description(s):**

- Areas of deck leakage evident along girder top flanges.
- Paint failure to girder flanges in areas of deck leakage.



**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	27	Deck Structural	1	3
350	30	Paint	1	4

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Underside of deck, bays 5 & 6 looking from end.	225.49-350-27-00-15Bay5&6.JPG	31

**Description(s):**

- Chalky efflorescence in bay 6; areas of deck leakage in bay 5.



**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	27	Deck Structural	1	3

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Begin of girder 1.	225.49-350-28-00-15G1WbBg.JPG	32

**Description(s):**

- 40% web loss for end 5" of girder (1/2 of web bearing width).



**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	28	Primary Members	1	5

<b>Location:</b>	<b>Photo Name:</b>	<b>Photo #:</b>
Left elevation.	225.49-350-44-00-15LtElev.JPG	33

**Description(s):**

- New signs installed.

**Reference:**

Form:	Item:	Item Desc:	Span:	Rate:
350	44	Sign Structure	1	6



# INVENTORY





**MINIMUM BRIDGE UNDERCLEARANCE  
MAINLINE BRIDGES  
SYRACUSE DIVISION  
NEW YORK STATE THRUWAY AUTHORITY**

MP: 225.49 SHEET 2 OF 3  
 BIN: 5516071 DATE: 04/16/2015

Bridge Orientation: Southeast  
 TWY Traffic Direction: WEST

Feature Crossed: Millers Grove Road (Co Rd 53)

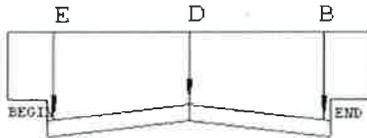
Date	A	B	C	D	E	F	G	H	A'	B'	C'	D'	E'	F'	G'	H'
04/13/2009		14.49		14.34	14.46											
04/12/2011		14.49		14.34	14.46											
04/16/2013		14.54		14.37	14.48											
04/16/2015		14.43		14.30	14.45											

REMARKS: 90IX WB over CR 53 Millers Grove

NOTES:

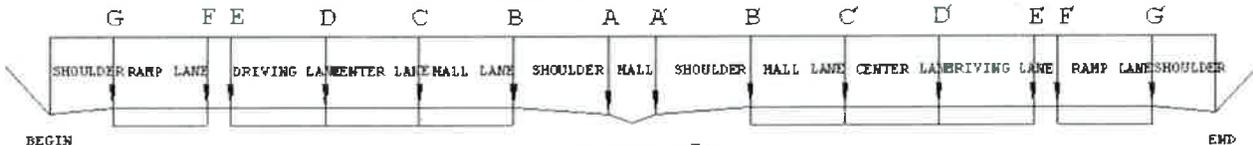
- 1) Use appropriate profile sketch 'A' or 'B'
- 2) When using sketch 'B' use points E,D & B and E', D' & B' to record measurements for 2 lane sections.
- 3) When using sketch 'B', use point F for detached ramps only
- 4) H and H' measurements taken at any other needed location or NA. Note location in remarks.
- 5) Only one row of measurements should be recorded(i.e. only the lowest measurements of each point should be recorded)
- 6) For thruway ramp over other roadway use this form and specify "ramp" under thruway traffic direction column.  
The measurement and recording should be done in the same manner as stated in '4' above.
- 7) For riveted construction stringers, Dimensions shall be taken to the bottom of the rivet heads.

THRUWAY MAINLINE BRIDGE



SKETCH 'A'  
(NOW-DIVIDED HIGHWAY UNDER TWY)  
PROFILE VIEW

THRUWAY MAINLINE BRIDGE



SKETCH 'B'  
(DIVIDED HIGHWAY UNDER TWY)  
PROFILE VIEW

ACCESS CATEGORY CODING FORM

RC - BIN: 

2	3
---	---

 - 

5	5	1	6	0	7	1
---	---	---	---	---	---	---

INSPECT DATE: 04/16/2015

TEAM LEADER: Douglas Hilleges

Span No	Walking	Step Ladder	Extension	40' UBIU	60' UBIU	LGWT - UBIU	<= 30' Lift	30 -90' Lift	> 90' Lift	Row Boat	Barge	Diving	RR Flagging	Electric RR	Scaffolding	Lane Closure	W/Shad Veh	Other	Contractor Code	Record Code	Tx Code		
10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	116	118	120
B	R	I	X						X												63	17	2
0	0	1	X						X												63	17	2

INSTRUCTIONS: - Only a single BIN will be addressed on any single sheet -

- a) Complete the date, preparer, and sheet number headings.
- b) Enter the region, county and BIN number.
- c) In the first line of the form, having a span number of "BRI", place an "X" in each access category necessary for a proper inspection of the entire bridge and enter the contractor code.
- d) In all subsequent rows, WITH ONE SPAN PER LINE AND USING AS MANY LINES AS THERE ARE SPANS FOR THE ENTIRE BRIDGE STRUCTURE, enter the span number being addressed (columns 10-12, right justified and zero filled) place an "X" in each access category necessary for a proper inspection of that span (and the two substructure faces facing that span) and enter the contractor code.
- e) IF DIVING ACCESS IS REQUIRED (as directed by Inspection TA 87-012) FOR EITHER OF THE TWO SUBSTRUCTURE FACES FACING THE SPAN BEING CODED, INDICATE SO WITH AN "X". THIS MUST BE DONE EVEN IF A DIVING INSPECTION IS NOT REQUIRED DURING THE CURRENT INSPECTION SEASON. NOTE that some NYSDOT documents refer to bridges requiring diving inspection as having an "I" ACCESS CATEGORY.
- f) Recode the entire bridge if ANY UPDATING of the Access Category is necessary.
- g) Use col. 28 for situations requiring lane closure WITHOUT a shadow vehicle and col. 29 for lane closure WITH a shadow vehicle.

# LOAD RATING

**LEVEL 2 LOAD RATING (VIRTIS LFD)**

MILEPOST: 225.49

BIN: 5516071

REGION: 2

COUNTY: HERKIMER

FEATURE CARRIED: 90IX WESTBOUND

FEATURE CROSSED: MILLERS GROVE ROAD (CR 53)

**LEVEL 2 LOAD RATING REVIEW**

VIRTIS RUN DATE: 5/2/2013

*✓ Douglas L. Heller 4/16/15  
No changes to configuration, dead loads,  
or previously noted section losses.*

CHANGES TO INPUT DATA: Section loss updated per 2013 report.

See list of changes on page 2 of VIRTIS

load rating in BIN folder.

LOADING	INVENTORY RATING (TONS)	OPERATING RATING (TONS)
HS-20	34.9 (HS-19)	58.2 (HS-32)
H-20	22.6 (H-22)	37.8 (H-37)

\* ANALYSIS METHOD: LOAD FACTOR

**CONTROLLING MEMBER FOR RATING**

LOCATION: MIDSPAN

COMPONENT: FASCIA GIRDERS G1 & G7

FAILURE TYPE: FLEXURAL CAPACITY

EFFECTIVE SPAN LENGTH: 32'

H EQUIVALENT OF LEGAL LOAD: H22

PRIMARY MEMBER RATING: 5

SAFE LOAD CAPACITY: H32

SLC COMPUTATION USED (IN BOLD)				
0.60 HOR	0.70 HOR	0.80 HOR	<b>0.85 HOR</b>	HOR

ACTION TAKEN: NONE REQUIRED X

RECOMMEND LEVEL 1 \_\_\_\_\_

UNRATABLE \_\_\_\_\_

COMPLETED BY

*Michael Gaskill*

MICHAEL GASKILL  
LOAD RATING ENGINEER

REVIEWED BY

*Garret Hoffmann 2/1/13*

GARRET HOFFMANN  
PE # 070686  
QUALITY CONTROL ENGINEER

NEW YORK STATE THRUWAY AUTHORITY

BRIDGE INSPECTION FIELD VERIFICATION OF LOAD RATING DATA

Date: 4/16/15

MP/BIN: 225.49 / 5516071

Feature Carried / Crossed: 90IX WB / CR 53 MILLERS GROVE RD

Dead Load:

WS Thickness & Material Shown on Plans - 4" concrete wearing surface + 2 1/2" Asp. overlay  
Changes Noted in Field: None ✓

Railing Type Shown on Plans - 4 Rail steel w/ Thrie Beam  
Changes Noted in Field: None ✓

Other DL Contributions (e.g. utilities) on Plans - \_\_\_\_\_  
Changes Noted in Field: None

Section Loss:

Existing Documentation (sketches, etc.)? - None fascia beam: 20% overall web loss in bearing area.

Location of Documentation (previous report, blue folder, etc.)? - Previous Report

New Section Loss noted? - None ✓ no changes  
Brief Description (attach sketches if helpful) - \_\_\_\_\_

Additional Notes: None ✓

Attachments:            yes     **no**    (please circle)

Team Leader:            DOUGLAS R. HILLEGES, P.E.

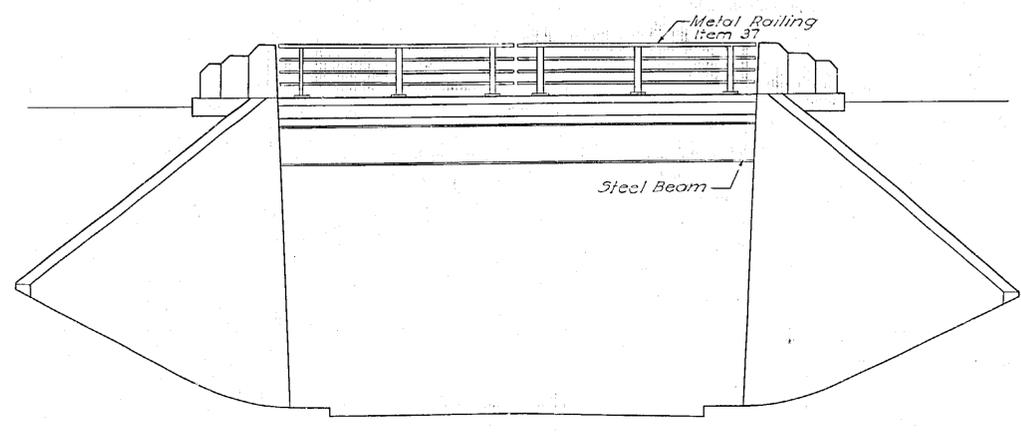
Signature: Douglas R. Hilleges

Date: 4/16/15

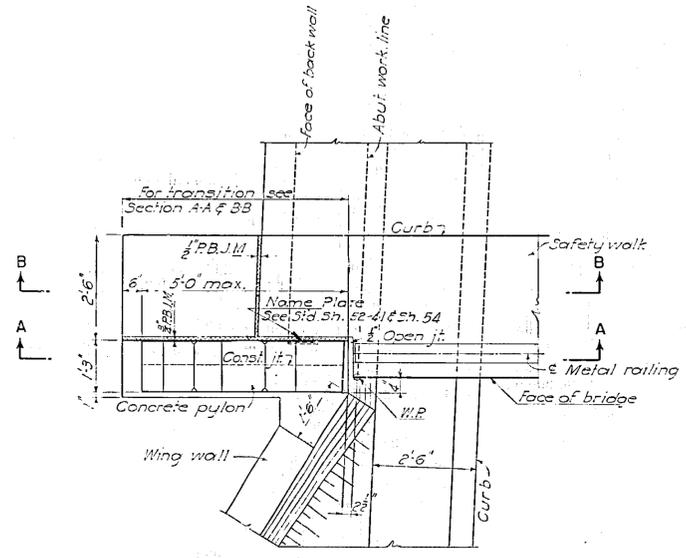


FED. RD. DIV. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
				HERKIMER	36	90

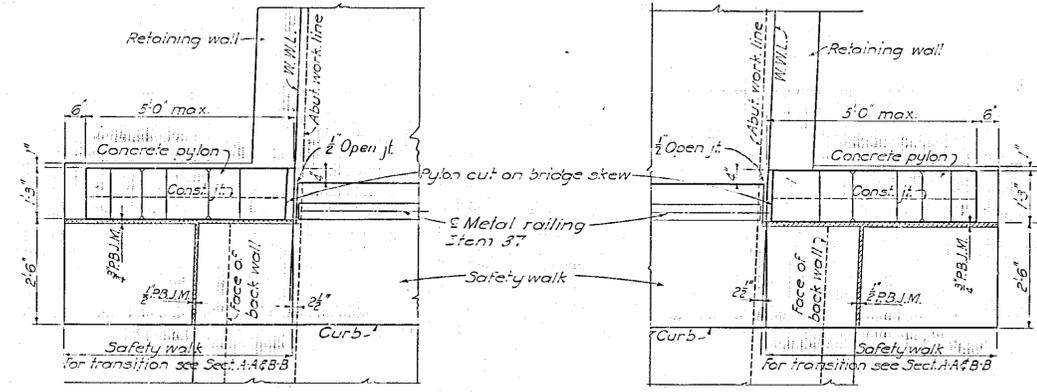
NEW YORK STATE THRUWAY - MOHAWK SECTION  
SUBDIV. 10-A



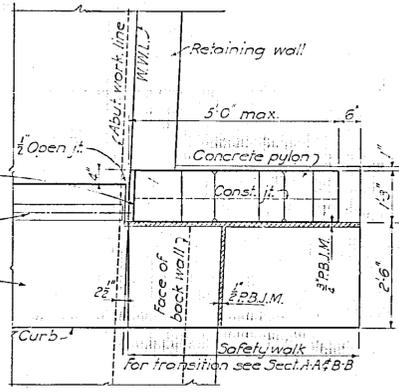
ELEVATION  
Scale 1/8" = 1'-0"



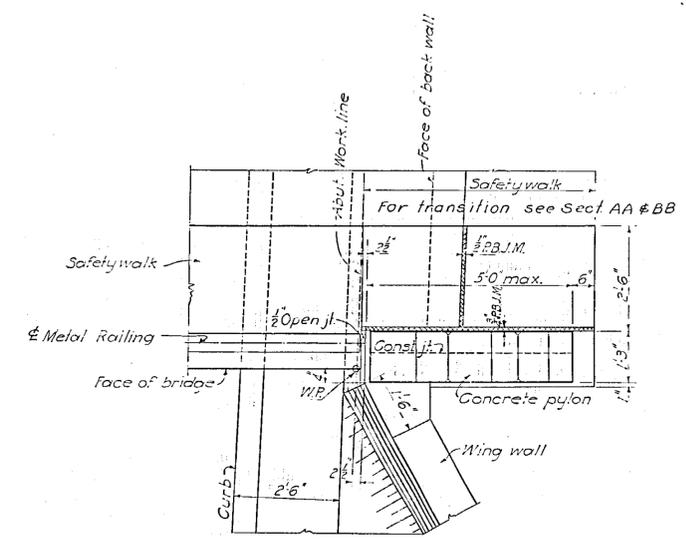
DETAIL PLAN  
S.W. & N.E. PYLONS



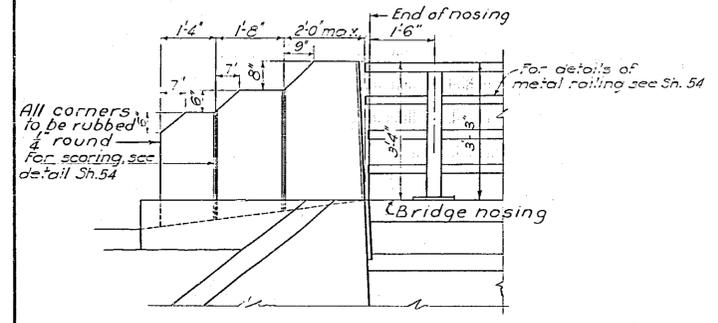
DETAIL PLAN  
S.W. & N.E. INTERIOR PYLONS



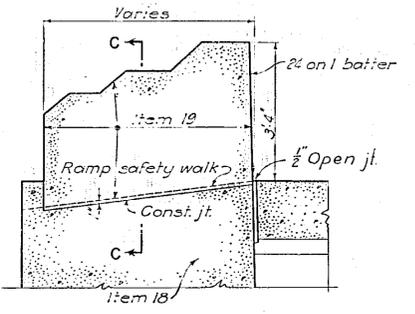
DETAIL PLAN  
N.W. & S.E. INTERIOR PYLONS



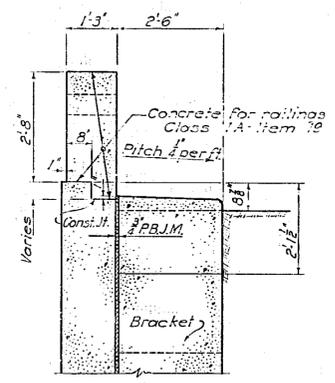
DETAIL PLAN  
N.W. & S.E. PYLONS



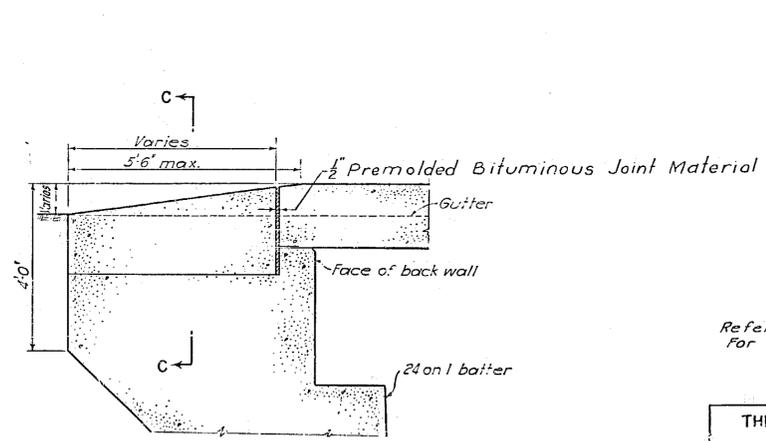
TYPICAL ELEVATION



TYPICAL SECTION A-A



TYPICAL SECTION C-C



TYPICAL SECTION B-B

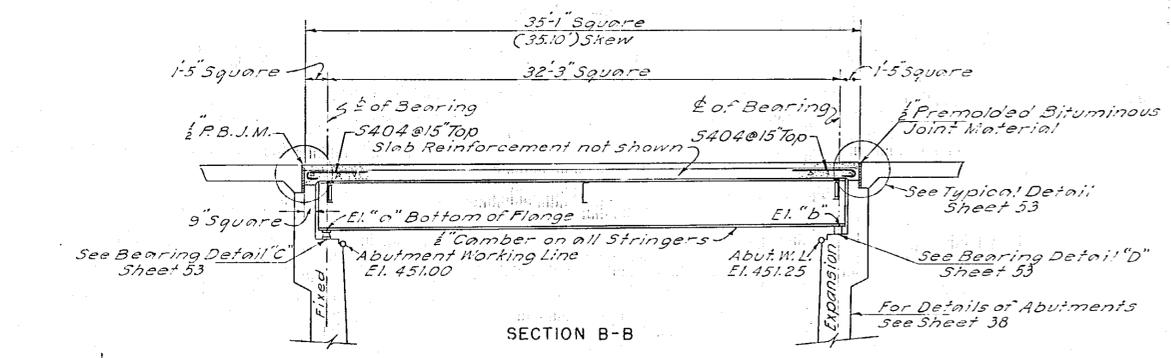
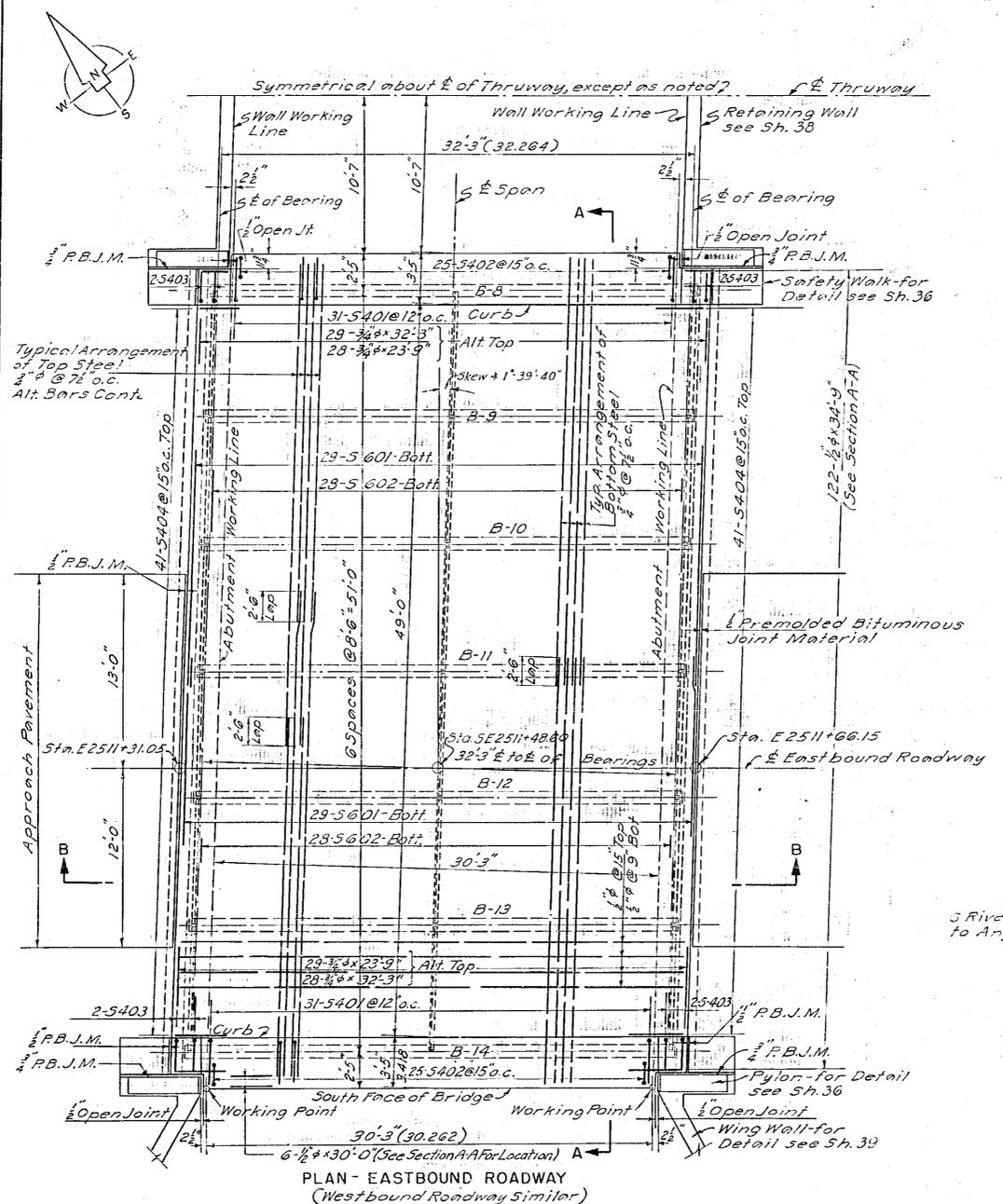
References:  
For General Notes, see Sh. 3

In charge of *Harold A. Blauvelt*  
Made by *S. E. ...*  
Traced by *S. V. ...*  
Checked by *C. B. ...*

Francis L. Brown P.E. 13144  
Prepared and recommended by *Francis L. Brown & Harold A. Blauvelt* N.Y.S.P.E. Lic. No. 19032 DATE 6-30-38  
FRANCIS L. BROWN - HAROLD A. BLAUVELT CONSULTING ENGINEERS

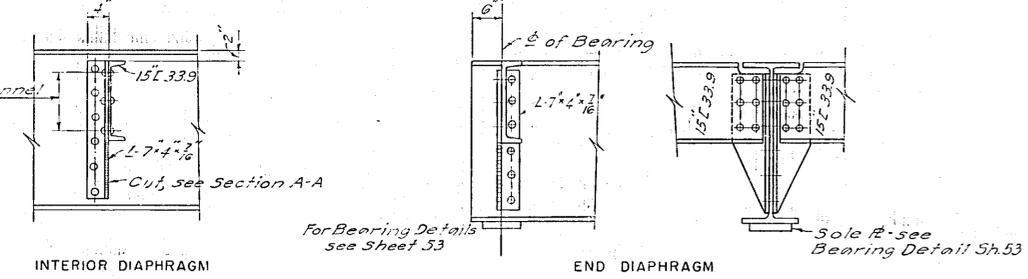
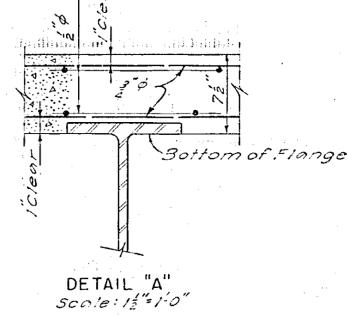
THRUWAY OVER COUNTY ROAD NO. 53 STRUCTURE NO. 5			
ARCHITECTURAL ELEVATIONS & DETAILS			
DWG. NO.	SCALE	DATE	FRANCIS L. HAROLD A. BROWN - BLAUVELT CONSULTING ENGINEERS
13B-35	1/8" = 1'-0" as shown	4-1-52	

FED. RD. DIV. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
				HERKIMER	37	90
NEW YORK STATE THRUWAY - MOHAWK SECTION						
SUBDIV. 10-A						

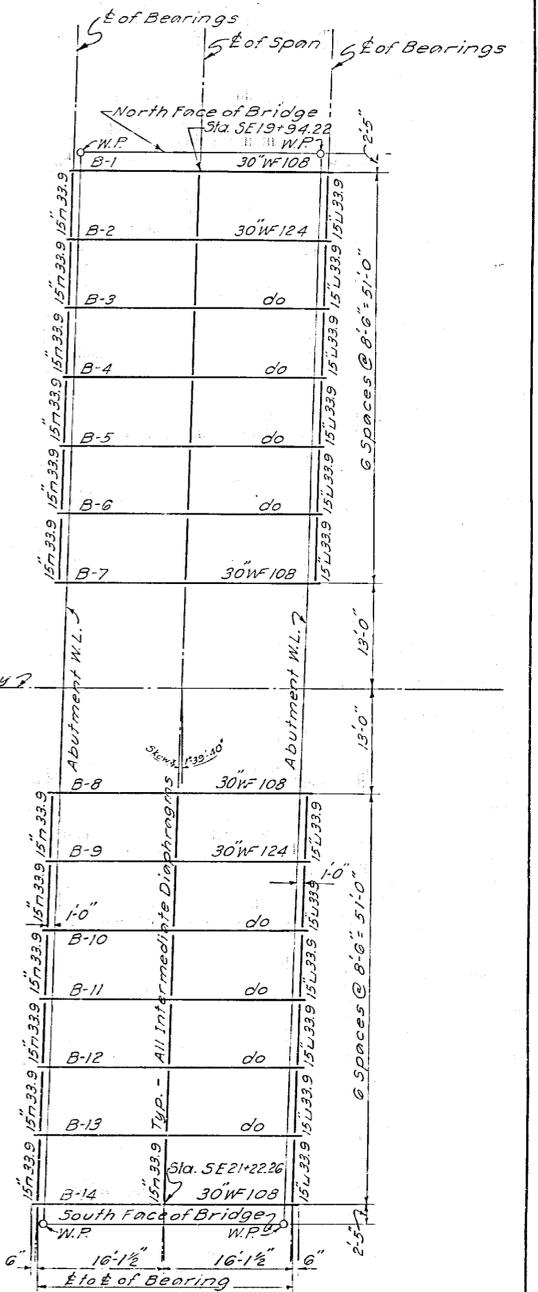
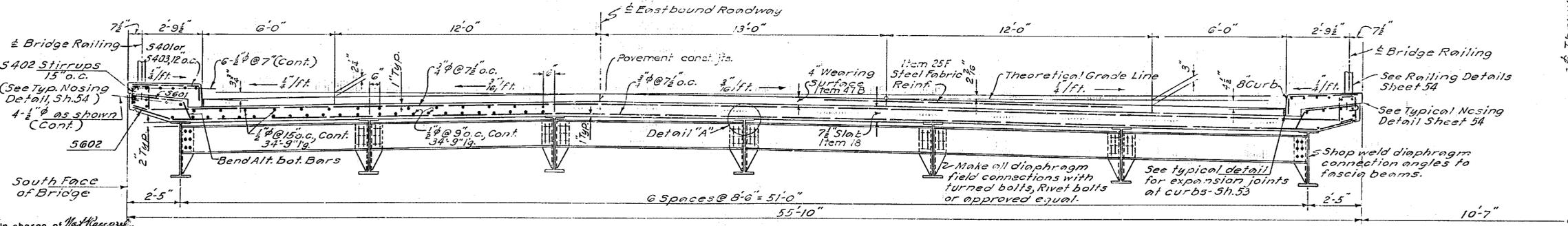


ELEVATIONS

Stringer Mark	West Abut. El. "a"	East Abut. El. "b"
B-1	451.93	452.17
B-2	452.10	452.34
B-3	452.23	452.47
B-4	452.15	452.39
B-5	452.01	452.25
B-6	451.88	452.12
B-7	451.66	451.90
B-8	451.65	451.89
B-9	451.87	452.11
B-10	452.00	452.24
B-11	452.14	452.38
B-12	452.21	452.45
B-13	452.07	452.31
B-14	451.90	452.14



Note: Immediately before placing the pavement concrete, the concrete surface or surfaces upon which it is to be placed shall be thoroughly wetted down continuously for one hour, if the air temperature is above 50°F



References: For General Notes see Sheet 3

In charge of *W. H. Brown*  
 Made by *P.L.*  
 Traced by *W.H.*  
 Checked by *W.H.*

SECTION A-A  
 EASTBOUND ROADWAY  
 (Westbound Similar)  
 Scale: 3/8" = 1'-0"

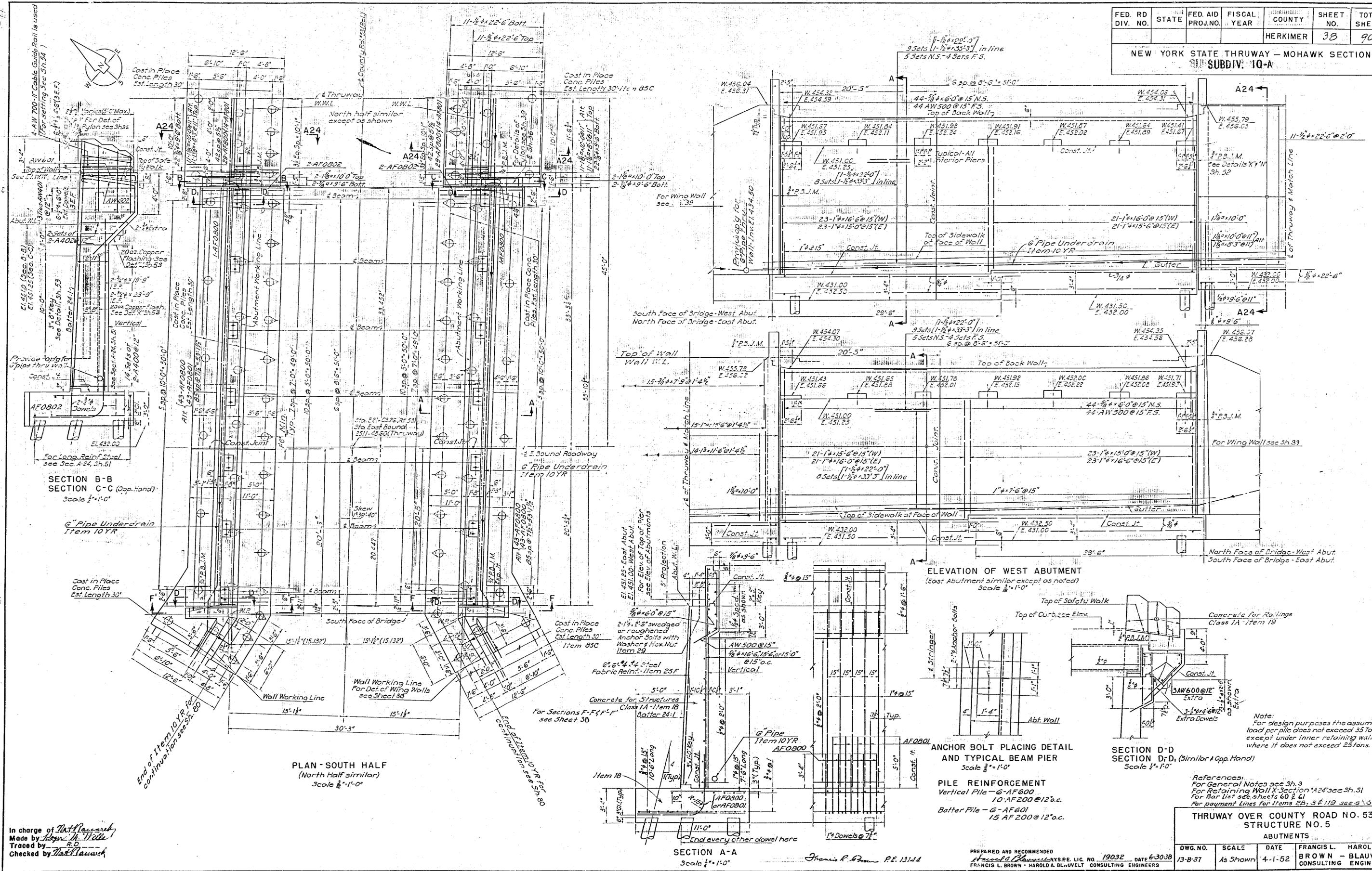
*Francis L. Brown* P.E. 13111

PREPARED AND RECOMMENDED BY:  
*Francis L. Brown* NYS REG. LIC. NO. 19032  
 FRANCIS L. BROWN - HAROLD A. BLAUVELT CONSULTING ENGINEERS

THRUWAY OVER COUNTY ROAD NO. 53 STRUCTURE NO. 5 FRAMING PLAN & DECK SLAB			
DWG. NO.	SCALE	DATE	BY
13B-36	3/8" = 1'-0" as noted	4-1-52	FRANCIS L. BROWN - HAROLD A. BLAUVELT CONSULTING ENGINEERS

FED. RD. DIV. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	COUNTY	SHEET NO.	TOTAL SHEETS
				HERKIMER	38	90

NEW YORK STATE THRUWAY - MOHAWK SECTION  
SUBDIV. 10-A



In charge of *W.H. Ransaw*  
Made by *W.H. Ransaw*  
Traced by *R.D.*  
Checked by *W.H. Ransaw*

Francis R. Brown P.E. 13144

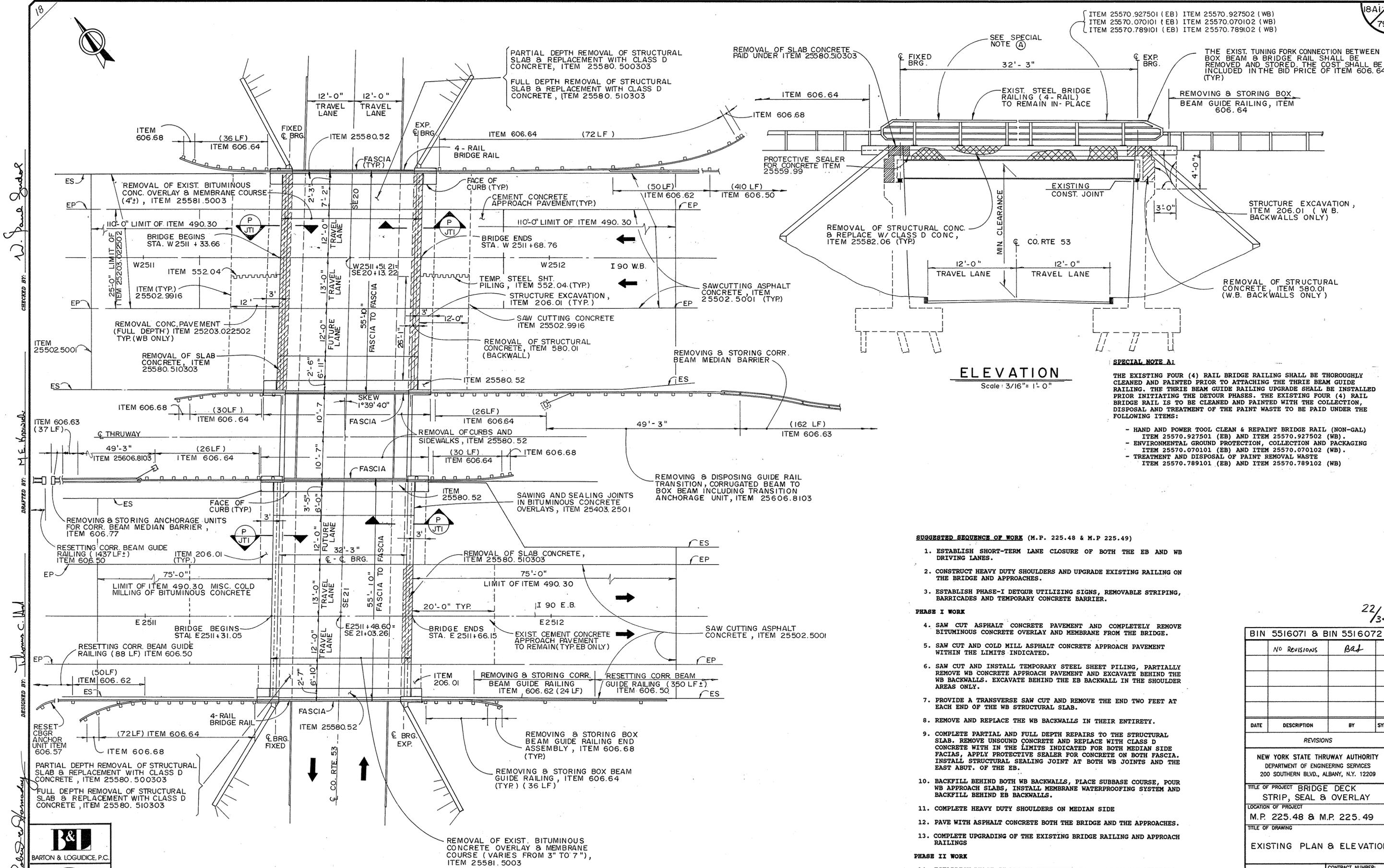
PREPARED AND RECOMMENDED  
Francis R. Brown NYS. P.E. LIC. NO. 19032 DATE 6-30-38  
FRANCIS L. BROWN - HAROLD A. BLAUVELT CONSULTING ENGINEERS

DWG. NO.	SCALE	DATE	ENGINEER
13-B-37	As Shown	4-1-52	FRANCIS L. BROWN & HAROLD A. BLAUVELT CONSULTING ENGINEERS

Note:  
For design purposes the assumed load per pile does not exceed 35 tons, except under inner retaining walls where it does not exceed 25 tons.

References:  
For General Notes see Sh. 3  
For Retaining Wall X-Section "A24" see Sh. 51  
For Bar List see sheets 60 & 61  
For payment lines for items 2B, 5 & 119 see 9-30-38





**SPECIAL NOTE A:**

THE EXISTING FOUR (4) RAIL BRIDGE RAILING SHALL BE THOROUGHLY CLEANED AND PAINTED PRIOR TO ATTACHING THE THREE BEAM GUIDE RAILING. THE THREE BEAM GUIDE RAILING UPGRADE SHALL BE INSTALLED PRIOR INITIATING THE DETOUR PHASES. THE EXISTING FOUR (4) RAIL BRIDGE RAIL IS TO BE CLEANED AND PAINTED WITH THE COLLECTION, DISPOSAL AND TREATMENT OF THE PAINT WASTE TO BE PAID UNDER THE FOLLOWING ITEMS:

- HAND AND POWER TOOL CLEAN & REPAINT BRIDGE RAIL (NON-GAL) ITEM 25570.927501 (EB) AND ITEM 25570.927502 (WB).
- ENVIRONMENTAL GROUND PROTECTION, COLLECTION AND PACKAGING ITEM 25570.070101 (EB) AND ITEM 25570.070102 (WB).
- TREATMENT AND DISPOSAL OF PAINT REMOVAL WASTE ITEM 25570.789101 (EB) AND ITEM 25570.789102 (WB)

BIN 5516071 & BIN 5516072

No REVISIONS	By
	Bas

DATE	DESCRIPTION	BY	SYM.
REVISIONS			

NEW YORK STATE THRUWAY AUTHORITY  
DEPARTMENT OF ENGINEERING SERVICES  
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT BRIDGE DECK STRIP, SEAL & OVERLAY

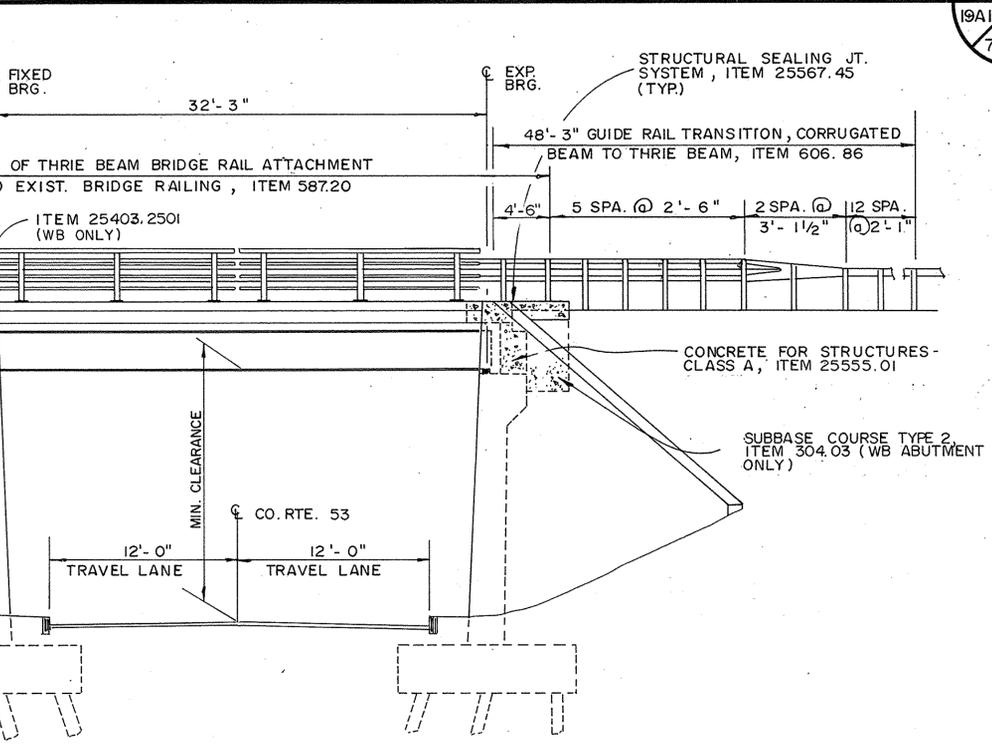
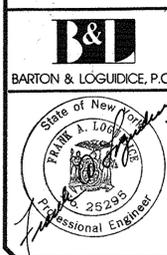
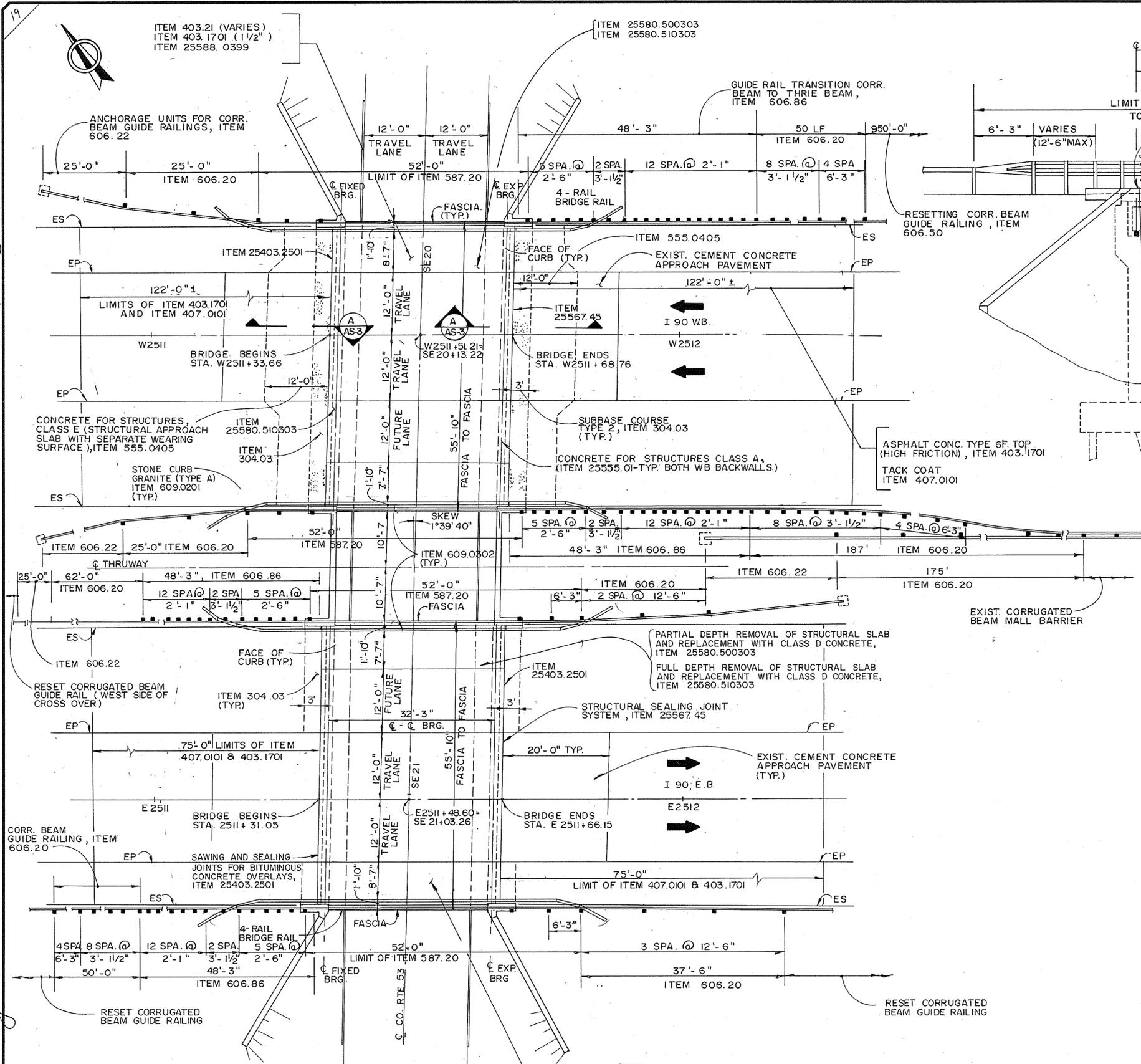
LOCATION OF PROJECT M.P. 225.48 & M.P. 225.49

TITLE OF DRAWING EXISTING PLAN & ELEVATION

CONTRACT NUMBER: TAS 92-74B  
DATE: SEPT, 1992  
DRAWING NUMBER: EP-3

CHECKED BY: W. Paul Gubel  
 DRAFTED BY: M.E. Kowalski  
 DESIGNED BY: Thomas C. Mad  
 IN CHARGE OF: Robert J. Hernandez  
 BARTON & LOGUIDICE, P.C.  
 State of New York  
 Robert J. Hernandez  
 Professional Engineer  
 No. 25295

CHECKED BY: W. Jane Sydor  
 DRAFTED BY: M. E. H. [unclear]  
 DESIGNED BY: [unclear]  
 IN CHARGE OF: [unclear]



- NOTES:**
- FOR LIMITS OF SHOULDER RECONSTRUCTION, SEE DWG. MPT-3.
  - FOR SHOULDER RECONSTRUCTION DETAIL, SEE DWG. MIS-1.
  - FOR FULL AND PARTIAL DEPTH REPAIR, SEE DWG. MIS-1.
  - FOR DETAILS OF THRIE BEAM TRANSITION TO CORRUGATED BEAM, SEE DWG. TBR-2.
  - REFER TO DWG. MIS-4 FOR APPROACH CURB DETAILS.

PROPOSED LOAD RATINGS		
MEMBER	BIN 5516072 (M.P. 225.48 EB)	
	INVENTORY	OPERATING
INTERIOR	HS 19.7 (35.5 TON)	HS 31.1 (56.0 TON)
	H 22.2 (22.2 TON)	H 35.1 (35.1 TON)
* EXTERIOR FASCIA	HS 17.9 (32.2 TON)	HS 28.6 (51.5 TON)
	H 20.0 (20.0 TON)	H 32.2 (32.2 TON)
** MEDIAN FASCIA	HS 17.9 (32.2 TON)	HS 28.6 (51.5 TON)
	H 20.0 (20.0 TON)	H 32.2 (32.2 TON)
SAFE LOAD CAPACITY	32.2 TONS	
MEMBER	BIN 5516071 (M.P. 225.49 WB)	
	INVENTORY	OPERATING
INTERIOR	HS 17.1 (30.8 TON)	HS 28.5 (51.3 TON)
	H 19.3 (19.3 TON)	H 32.2 (32.2 TON)
* EXTERIOR FASCIA	HS 14.6 (26.3 TON)	HS 25.3 (45.5 TON)
	H 16.5 (16.5 TON)	H 28.5 (28.5 TON)
** MEDIAN FASCIA	HS 14.6 (26.3 TON)	HS 25.3 (45.5 TON)
	H 16.5 (16.5 TON)	H 28.5 (28.5 TON)
SAFE LOAD CAPACITY	28.5 TONS	

\* MEMBER SHOWS NO SIGNS OF DISTRESS.  
 \*\* MEMBER IS NOT CURRENTLY SUBJECTED TO DIRECT LIVE LOADING.

**BIN 5516071 & BIN 5516072**

NO REVISIONS	Bar
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DATE: \_\_\_\_\_ DESCRIPTION: \_\_\_\_\_ BY: \_\_\_\_\_ SYM: \_\_\_\_\_

REVISIONS

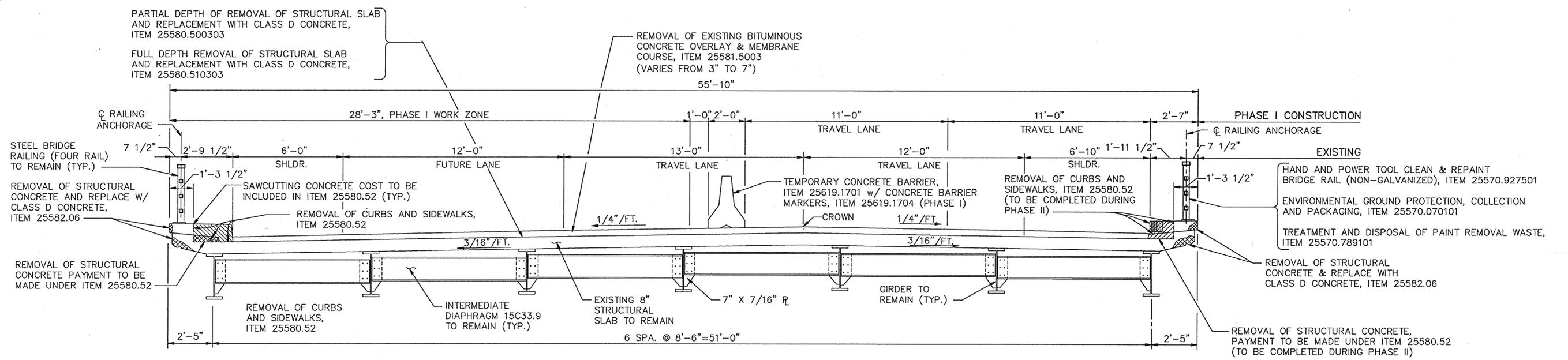
NEW YORK STATE THRUWAY AUTHORITY  
 DEPARTMENT OF ENGINEERING SERVICES  
 200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT: BRIDGE DECK STRIP, SEAL & OVERLAY  
 LOCATION OF PROJECT: M.P. 225.48 & M.P. 225.49  
 TITLE OF DRAWING: PROPOSED PLAN & ELEVATION

CONTRACT NUMBER: TAS 92-74 B  
 DATE: SEPT, 1992  
 DRAWING NUMBER: PP-3

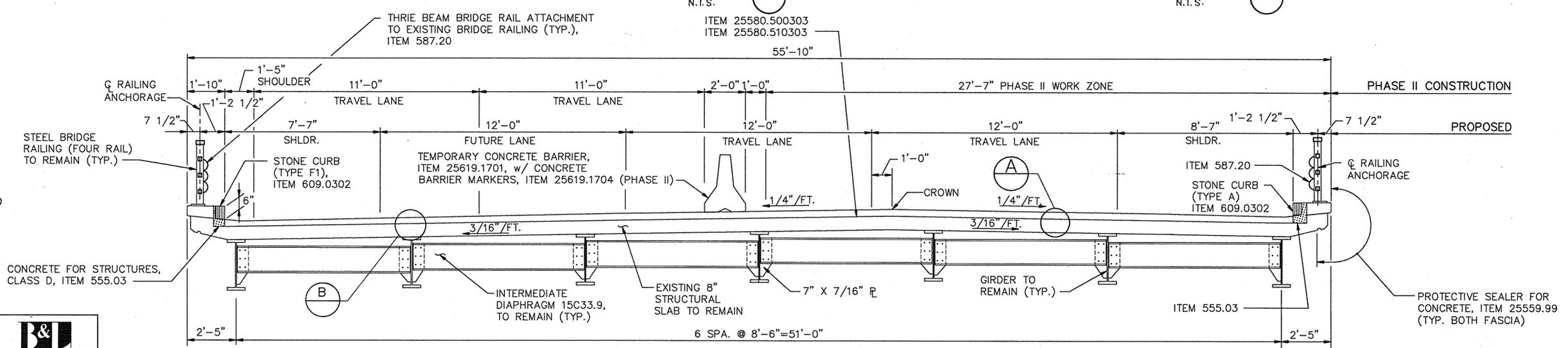
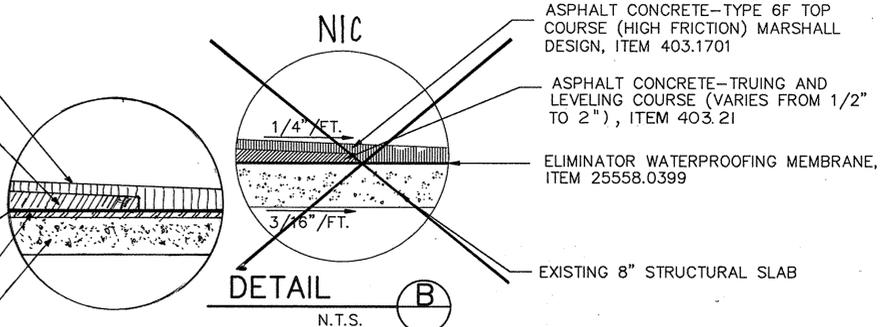
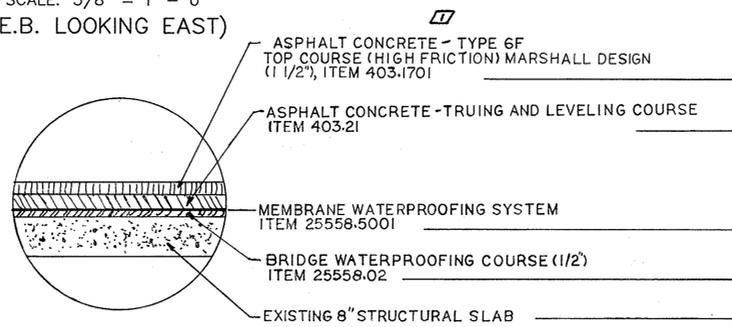
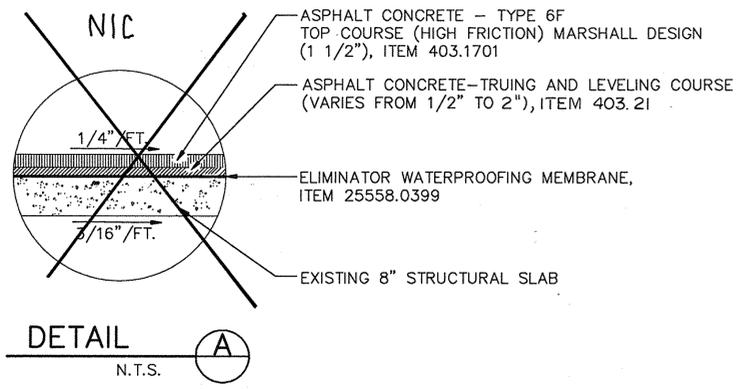
23/34





**EXISTING BRIDGE SECTION**

SCALE: 3/8" = 1' - 0"  
(E.B. LOOKING EAST)



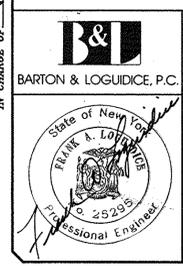
**PROPOSED BRIDGE SECTION**

SCALE: 3/8" = 1' - 0"  
(E.B. LOOKING EAST)

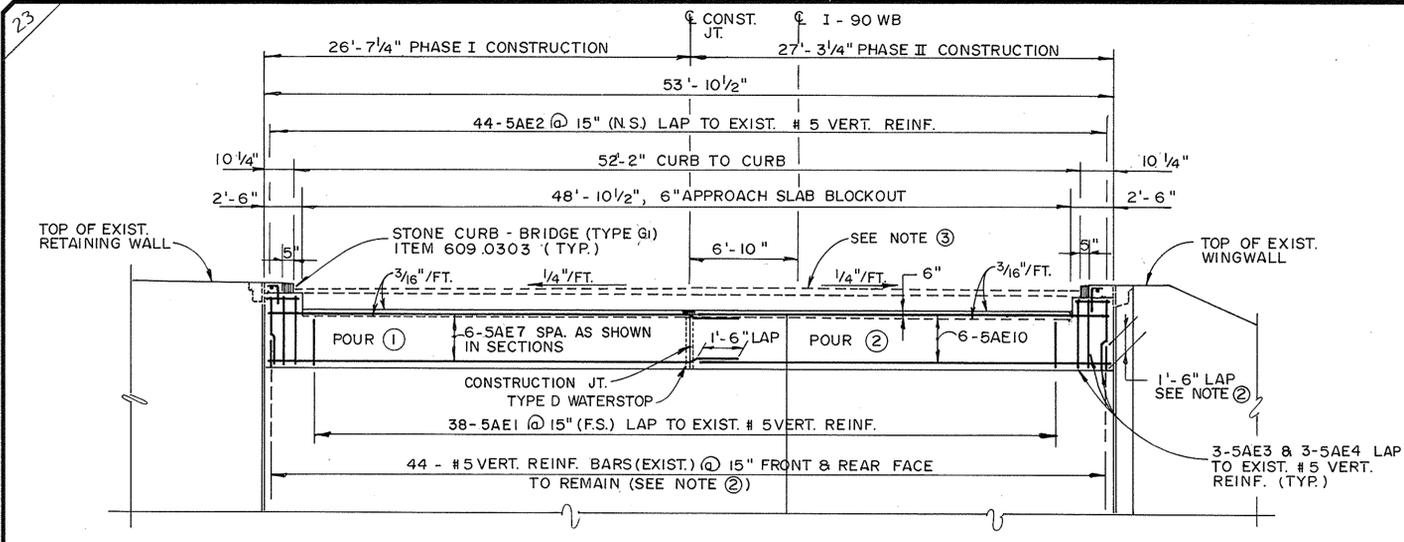
- NOTE: 1. REFER TO DWG. MIS -2 FOR CURB RECONSTRUCTION DETAILS.  
2. THE THRIE BEAM RAILING SHALL BE ATTACHED PRIOR TO SHIFTING THE TRAVEL LANES OVER FOR PHASE I CONSTRUCTION.

BIN 5516072			
12-23-94	WATERPROOFING & DETAIL	Bel	□
DATE	DESCRIPTION	BY	SYM.
REVISIONS			
NEW YORK STATE THRUWAY AUTHORITY DEPARTMENT OF ENGINEERING SERVICES 900 SOUTHERN BLVD., ALBANY, N.Y. 12209			
TITLE OF PROJECT: BRIDGE DECK STRIP, SEAL & OVERLAY			
LOCATION OF PROJECT: M.P. 225.48			
TITLE OF DRAWING: TYPICAL SECTIONS			
CONTRACT NUMBER: TAS 92-74B		DATE: SEPT. 1992	
DRAWING NUMBER: TS-3BR		IN CHARGE OF: Professional Engineer	

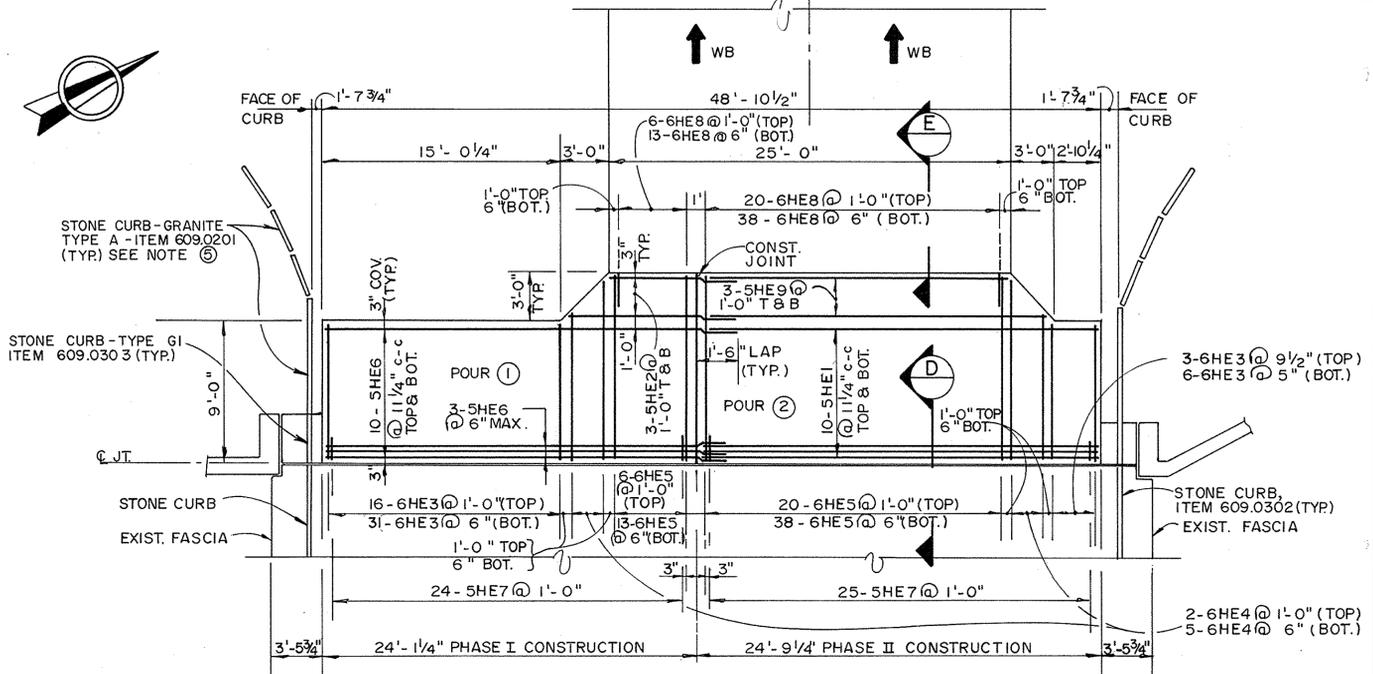
CHECKED BY: M. E. ...  
 DRAFTED BY: M. E. ...  
 DESIGNED BY: ...  
 IN CHARGE OF: ...



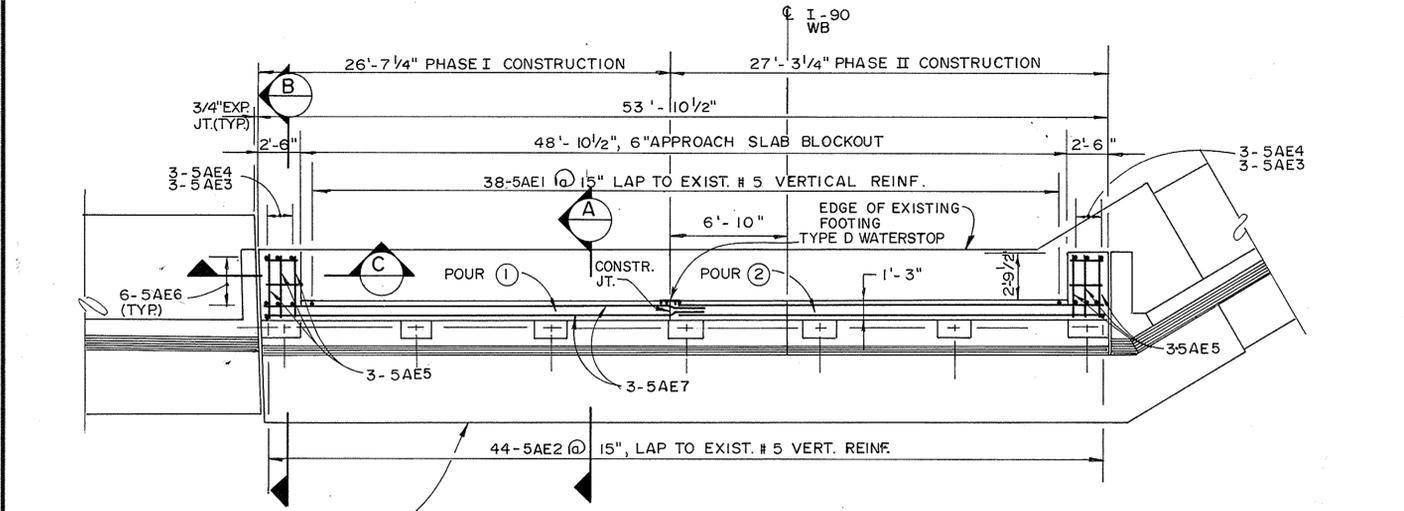




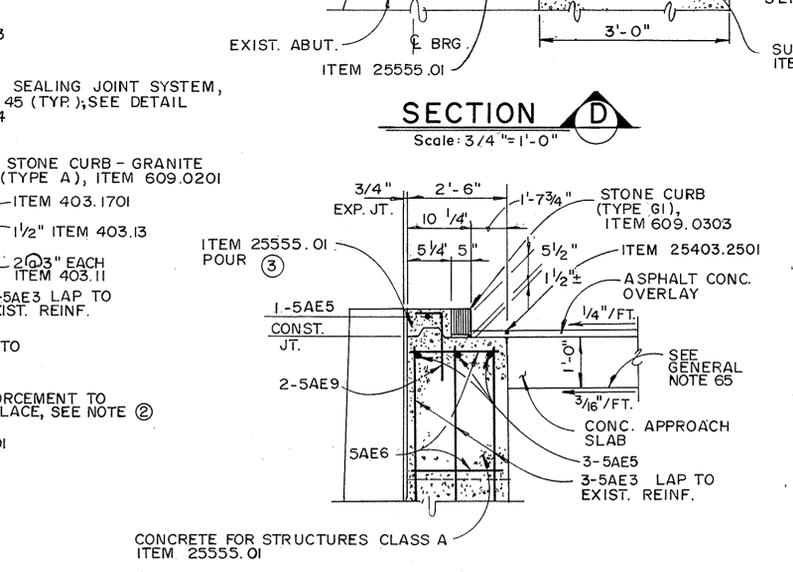
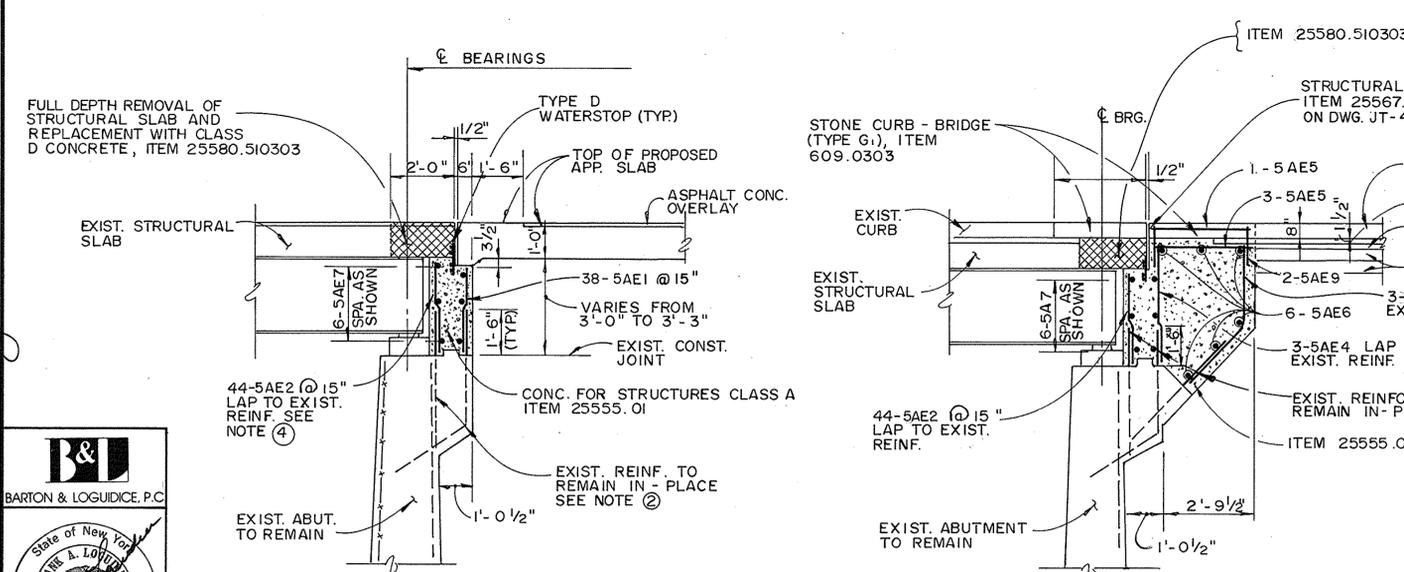
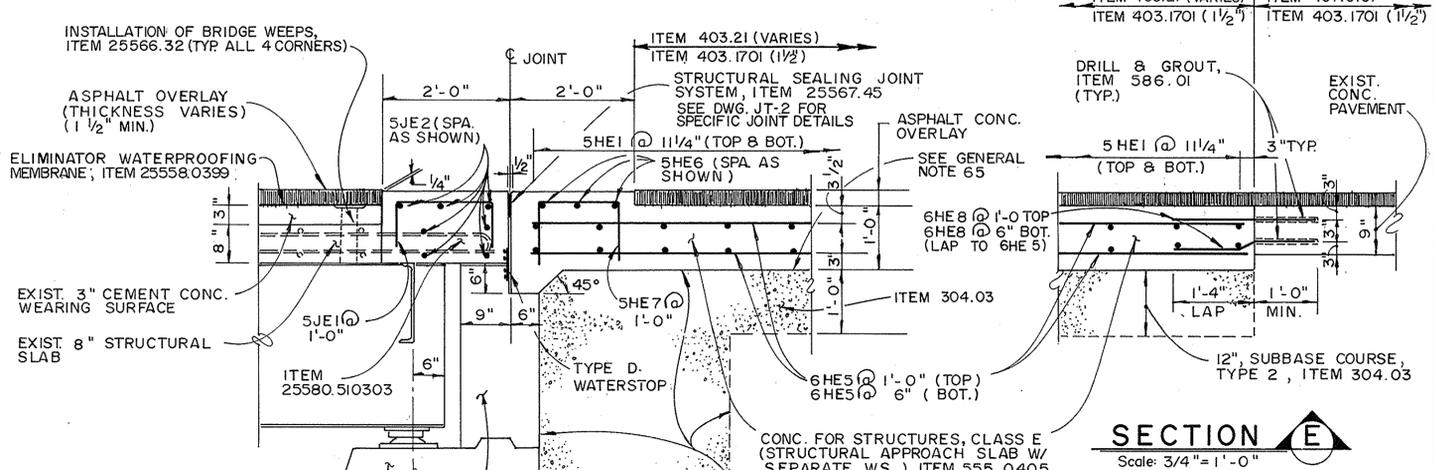
**W.B. BACKWALL ELEVATION**  
Scale: 3/16" = 1'-0"



**APPROACH SLAB PLAN**  
Scale: 3/16" = 1'-0"



**W.B. BACKWALL PLAN**  
Scale: 3/16" = 1'-0"



- NOTE ①  
BOTH THE EAST AND WEST ABUTMENTS FOR THE W.B. BRIDGE ARE SIMILAR.
- NOTE ②  
THE EXISTING VERTICAL REINFORCING BARS WITHIN THE BACKWALL SHALL BE FLAME-CUT; PROVIDE A 1'-6" MIN. LAP THE EXISTING REINFORCEMENT SHALL BE THOROUGHLY CLEANED. ALL EXISTING HORIZONTAL REINFORCING BARS SHALL BE DISPOSED OF UNDER ITEM 580.01.
- NOTE ③  
THE APPROACH SLAB SHALL BE POURED AT 3/16" /FT. THE CONCRETE JOINT HEADER AND CORRESPONDING ASPHALT OVERLAY SHALL BE CONSTRUCTED AT 1/4" /FT.
- NOTE ④  
REINFORCING BARS TO BE PAID UNDER ITEM 556.0202
- NOTE ⑤  
REFER TO DWG. MIS-2 FOR ADDITIONAL APPROACH CURB DETAILS
- NOTE ⑥  
BACKWALL SHALL BE RECONSTRUCTED TO ORIGINAL ELEVATIONS.

BIN 5516071			
No REVISIONS	bat		
DATE	DESCRIPTION	BY	SYM.
REVISIONS			
NEW YORK STATE THRUWAY AUTHORITY DEPARTMENT OF ENGINEERING SERVICES 200 SOUTHERN BLVD., ALBANY, N.Y. 12209			
TITLE OF PROJECT	BRIDGE DECK STRIP SEAL & OVERLAY		
LOCATION OF PROJECT	M.P. 225.49		
TITLE OF DRAWING	BACKWALL AND APPROACH SLAB DETAILS		
CONTRACT NUMBER:	TAS 92-74B		
DATE:	SEPT, 1992		
DRAWING NUMBER:	AS-3		

CHECKED BY: W. Paul Jordan  
 DRAFTED BY: M.E. Kowal  
 DESIGNED BY: Thomas C. Wood  
 IN CHARGE OF: Robert S. Hamady



\* BACK REFERENCE TO DWG. PP-3 ALSO.

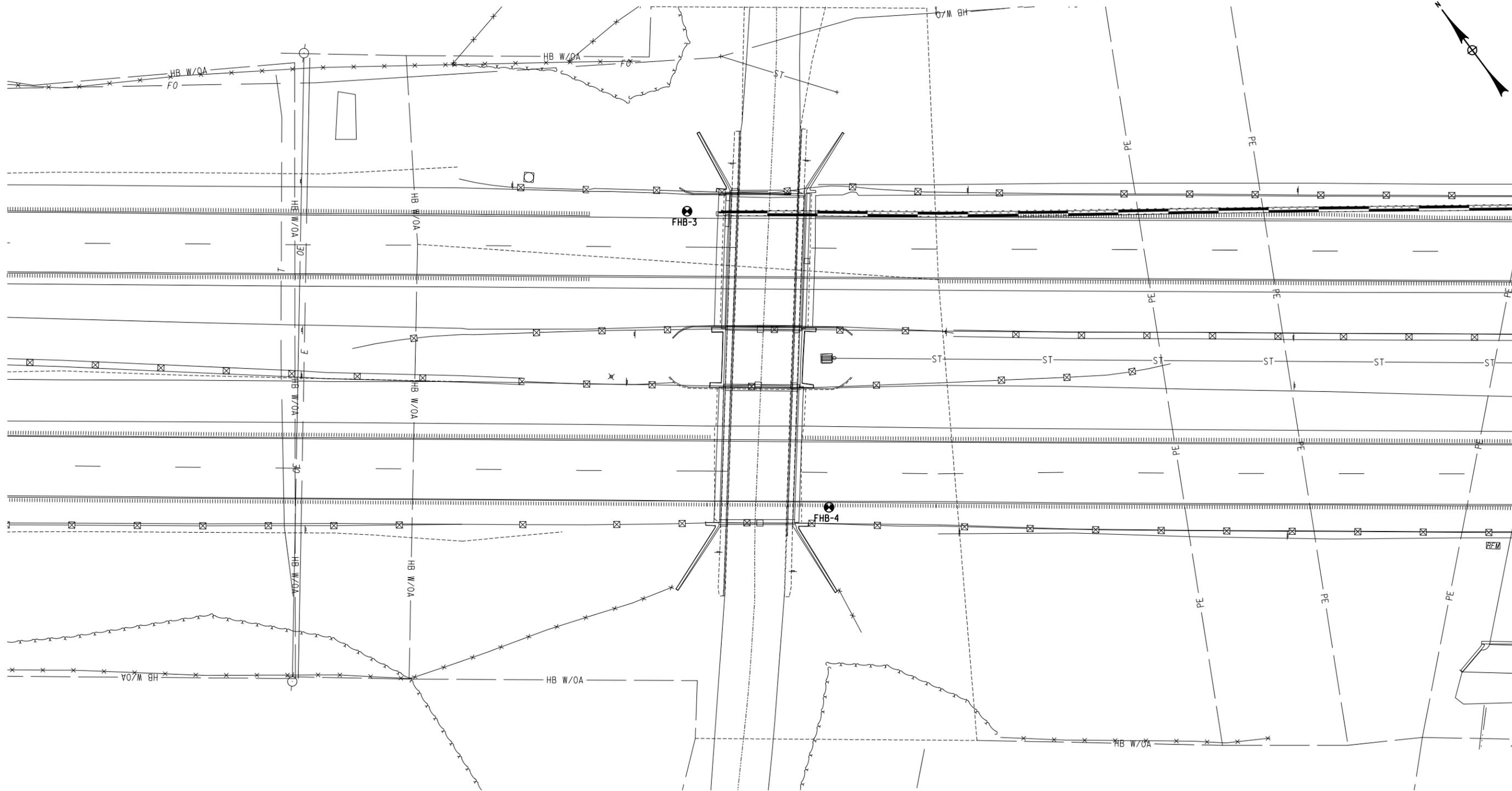
CHECKED BY: D. JENKINSON

DRAFTED BY: M. SAVINO

CHECKED BY: D. JENKINSON

DESIGNED BY: M. SAVINO

DESIGN SUPERVISOR: M. LAISTNER



### SOIL BORING LOCATION PLAN

SCALE: 1" = 40'

SOIL BORING LOCATION		
BORING	LATITUDE	LONGITUDE
FHB-3	43.062477 N	-75.078747 E
FHB-4	43.062125 N	-75.078837 E



SCALE: 1" = 40'

ALTERED ON:

AFFIXED ON:

SIGNATURE:  
STAMP:

SIGNATURE:  
STAMP:

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.



TITLE OF PROJECT  
INTERSTATE 90 OVER MILLERS GROVE ROAD  
MP 225.48 & 225.49 / BINS 5516072 & 5516071

LOCATION OF PROJECT  
TOWN OF SCHUYLER  
HERKIMER COUNTY, NY

CONTRACT NUMBER:  
TAB 17-X

DATE:  
APRIL 2017

TITLE OF DRAWING  
BORING LOCATION PLAN

DRAWING NUMBER:  
BP-02

SM 282 E 12/02

PSN BORNUM FHB-3  
 DIVISION Syracuse  
 COUNTY Herkimer  
 PIN S52886  
 ROUTE Thruway Mainline  
 MILEPOST 225.48  
 PROJECT Syracuse Division 2017 Design-Build Bridge Replacements



NEW YORK STATE THRUWAY AUTHORITY  
 NEW YORK STATE CANAL CORPORATION  
**SUBSURFACE EXPLORATION LOG**



HOLE LINE STA FH-B  
 OFFSET ft  
 SURF. ELEV. 455.0402, NAD 88  
 DEPTH TO WATER 34.0

COORDINATES (Lat) 43.062477°N (Long) 75.078747°W

DATE START 1/5/2017 DATE FINISH 1/5/2017

AUGER 4 1/4" I.D. HOLLOW STEM FLIGHT AUGER WT OF HAMMER-CASING lb HAMMER FALL-CASING in  
 CASING O. D. in I. D. in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in  
 SAMPLER O. D. 2 in I. D. 1-3/8 in HAMMER TYPE Safety

CASING BLOWS/ft	DEPTH (ft.) BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER (in.)				MOIST. CONT. (%)	Soil Recovery (in.)	Rock Recovery (ft.)	DESCRIPTION OF SOIL AND ROCK
			0-6	6-12	12-18	18-24				
0.0									Dark gray asphalt pavement to 0.9 feet.	
5.0		SS1	12	12	5	10	20.2%	14	Brown to black (SAND-SILT-CLAY) fill with 15 to 25% gravel, little clay, trace to little sand, very stiff, massive soil structure, (ML-CL). M - PL	
10.0		SS2	4	11	7	5	19.4%	9	Light brown to brown (SILTY-CLAY) fill with 5 to 15% gravel, trace sand, very stiff, massive soil structure, (CL). M - PL	
15.0		SS3	4	5	7	8	13.2%	19	14.0-15.0' Brown (SILTY-SAND) with mostly very fine to fine size sand, trace to little silt, compact, weakly thinly bedded, (SM). 15.0-16.0' Grayish brown (SILTY-SAND) with 3 to 7% gravel, mostly very fine to fine size sand, trace silt, compact, (SP). M - NPL	
20.0		SS4	9	6	7	8	3.7%	18	Same as 15.0-16.0' M - NPL	
25.0		SS5	9	8			4.9%	20	Same as 15.0-16.0' M - NPL	

The subsurface information shown here was obtained for design and estimate purposes. It is made available so that users may have access to the same information available to the State. It is presented in good faith. By the nature of the exploration process, the information represents only a small fraction of the total volume of the material at the site. Interpolation between data samples may not be indicative of the actual material encountered.

DRILL RIG OPERATOR Philip Bence  
 SOIL & ROCK DESCRIPTION Brandon Mikolin  
 INSPECTOR Matthew Conley (Stantec)  
 BIN 5516071 & 5516072  
 STRUCTURE NAME Thruway/Millers Grove Rd. (C.R. 53)

CONTRACT \_\_\_\_\_ CONTRACTOR Earth Dimensions, Inc.

SHEET 1 OF 4 HOLE FH-B

TWWY-CAN SUBSURF EXPLORATION 6K16\_BIN-5516071&5516072-DRAFTS.GPJ TWWYSETMPL\_V05.GDT 3/31/17

SM 282 E 12/02

PSN                      BORNUM FHB-3  
 DIVISION Syracuse  
 COUNTY Herkimer  
 PIN S52886  
 ROUTE Thruway Mainline  
 MILEPOST 225.48  
 PROJECT Syracuse Division 2017 Design-Build Bridge Replacements



NEW YORK STATE THRUWAY AUTHORITY  
 NEW YORK STATE CANAL CORPORATION  
**SUBSURFACE EXPLORATION LOG**



HOLE LINE FH-B  
 STA                       
 OFFSET ft  
 SURF. ELEV. 455.0402, NAD 88  
 DEPTH TO WATER 34.0

COORDINATES (Lat) 43.062477°N (Long) 75.078747°W  
 DATE START 1/5/2017 DATE FINISH 1/5/2017

AUGER 4 1/4" I.D. HOLLOW STEM FLIGHT AUGER WT OF HAMMER-CASING                      lb HAMMER FALL-CASING                      in  
 CASING O. D.                      in I. D.                      in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in  
 SAMPLER O. D. 2 in I. D. 1-3/8 in HAMMER TYPE Safety

CASING BLOWS/ft	DEPTH (ft.) BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER (in.)				MOIST. CONT. (%)	Soil Recovery (in.)	Rock Recovery (ft.)	DESCRIPTION OF SOIL AND ROCK
			0-6	6-12	12-18	18-24				
25.0					10	10				
30.0		SS6	5	3	4	5	10.0%	17	Grayish brown (SILTY-SAND) with mostly very fine to fine M - NPL size sand, trace silt, loose, (SP).	
35.0		SS7	1	1	1	2	33.7%	15	Light brown to brown (SILTY-SAND) with mostly very fine S - NPL to fine size sand, trace to little silt, very loose, weakly thinly bedded, (SM).	
40.0		SS8	WR	1	6	7	20.8%	20	39.0-40.0' Same as 34.0-36.0' S - NPL 40.0-41.0' Brown (SILTY-SAND) with 10 to 20% gravel, mostly very fine to coarse size sand, trace to little silt, loose, stratified, (SW).	
45.0		SS9	10	16	50/5		10.9%	16	Brown gravelly (SILTY-SAND) with 15 to 40% gravel, mostly very fine to coarse size sand, little silt, very dense, stratified, (SW). S - NPL	
50.0		SS10	50/2				-%	0	No recovery.	

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DRILL RIG OPERATOR Philip Bence  
 SOIL & ROCK DESCRIPTION Brandon Mikolin  
 INSPECTOR Matthew Conley (Stantec)  
 BIN 5516071 & 5516072  
 STRUCTURE NAME Thruway/Millers Grove Rd. (C.R. 53)

CONTRACT                      CONTRACTOR Earth Dimensions, Inc.

SHEET 2 OF 4

HOLE FH-B

TWWY-CAN SUBSURF EXPLORATION 6K16\_BIN-5516071&5516072-DRAFTS.GPJ TWWYSETMPL\_V05.GDT 3/31/17



PSN BORNUM FHB-3  
 DIVISION Syracuse  
 COUNTY Herkimer  
 PIN S52886  
 ROUTE Thruway Mainline  
 MILEPOST 225.48  
 PROJECT Syracuse Division 2017 Design-Build Bridge Replacements

NEW YORK STATE THRUWAY AUTHORITY  
 NEW YORK STATE CANAL CORPORATION  
**SUBSURFACE EXPLORATION LOG**

HOLE LINE FH-B  
 STA \_\_\_\_\_  
 OFFSET ft  
 SURF. ELEV. 455.0402, NAD 88  
 DEPTH TO WATER 34.0

COORDINATES (Lat) 43.062477°N (Long) 75.078747°W  
 DATE START 1/5/2017 DATE FINISH 1/5/2017

AUGER 4 1/4" I.D. HOLLOW STEM FLIGHT AUGER WT OF HAMMER-CASING \_\_\_\_\_ lb HAMMER FALL-CASING \_\_\_\_\_ in  
 CASING O. D. \_\_\_\_\_ in I. D. \_\_\_\_\_ in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in  
 SAMPLER O. D. 2 in I. D. 1-3/8 in HAMMER TYPE Safety

CASING BLOWS/ft	DEPTH (ft.) BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER (in.)				MOIST. CONT. (%)	Soil Recovery (in.)	Rock Recovery (ft.)	DESCRIPTION OF SOIL AND ROCK
			0-6	6-12	12-18	18-24				
50.0										
55.0		SS11	27	29	44	44	18.1%	21	54.0-55.0' Gray (SILTY-SAND) with mostly very fine to fine size sand, trace silt, very dense, (SP). 55.0-56.0' Gray (SILTY-CLAY) hard, thinly laminated with very thin silt lenses, (CL).	
60.0		SS12	7	24	46	50/4	19.8%	18	Gray (SILTY-SAND) with mostly very fine to fine size sand, trace silt, very dense, (SP).	
65.0		SS13	3	21	40	50/4	22.5%	20	Same as 59.0-61.0'	
70.0		SS14	4	27		50/5	19.7%	15	Same as 59.0-61.0'	

BOTTOM OF HOLE AT 70.40 ft

*Note:*  
 Advanced bore hole with 4 1/4" ID x 8" OD hollow stem auger casing with 5.0-foot interval sampling to 70.4 feet. Bore hole was backfilled with cuttings and ground surface was repaired with an asphalt patch.

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DRILL RIG OPERATOR Philip Bence  
 SOIL & ROCK DESCRIPTION Brandon Mikolin  
 INSPECTOR Matthew Conley (Stantec)  
 BIN 5516071 & 5516072  
 STRUCTURE NAME Thruway/Millers Grove Rd. (C.R. 53)

CONTRACT \_\_\_\_\_ CONTRACTOR Earth Dimensions, Inc.

SHEET 3 OF 4

HOLE FH-B

SM 282 E 12/02



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HOLE LINE FH-B  
 STA                       
 OFFSET ft  
 SURF. ELEV. 455.0402, NAD 88  
 DEPTH TO WATER 34.0

COORDINATES (Lat) 43.062477°N (Long) 75.078747°W  
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AUGER 4 1/4" I.D. HOLLOW STEM FLIGHT AUGER WT OF HAMMER-CASING                      lb HAMMER FALL-CASING                      in  
 CASING O. D.                      in I. D.                      in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in  
 SAMPLER O. D. 2 in I. D. 1-3/8 in HAMMER TYPE Safety

CASING BLOWS/ft	DEPTH (ft.) BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER (in.)					MOIST. CONT. (%)	Soil Recovery (in.)	Rock Recovery (ft.)	DESCRIPTION OF SOIL AND ROCK
			0-6	6-12	12-18	18-24	24-30				

DATE	TIME	DEPTH (ft.)			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
05-Jan-17	10:00	35.00	34.00	34.00	NO	No
05-Jan-17	13:00	70.40	69.00	35.00	NO	No

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 SOIL & ROCK DESCRIPTION Brandon Mikolin  
 INSPECTOR Matthew Conley (Stantec)  
5516071 & 5516072  
 STRUCTURE NAME Thruway/Millers Grove Rd. (C.R. 53)

CONTRACT                      CONTRACTOR Earth Dimensions, Inc.

SHEET 4 OF 4 HOLE FH-B

SM 282 E 12/02



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NEW YORK STATE THRUWAY AUTHORITY  
 NEW YORK STATE CANAL CORPORATION  
**SUBSURFACE EXPLORATION LOG**

HOLE LINE FH-B  
 STA \_\_\_\_\_  
 OFFSET ft  
 SURF. ELEV. 455.1163, NAD 88  
 DEPTH TO WATER 32.0

COORDINATES (Lat) 43.062125°N (Long) 75.078837°W  
 DATE START 1/9/2017 DATE FINISH 1/10/2017

AUGER 4 1/4" I.D. HOLLOW STEM FLIGHT AUGER WT OF HAMMER-CASING \_\_\_\_\_ lb HAMMER FALL-CASING \_\_\_\_\_ in  
 CASING O. D. \_\_\_\_\_ in I. D. \_\_\_\_\_ in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in  
 SAMPLER O. D. 2 in I. D. 1-3/8 in HAMMER TYPE Safety

CASING BLOWS/ft	DEPTH (ft.) BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER (in.)				MOIST. CONT. (%)	Soil Recovery (in.)	Rock Recovery (ft.)	DESCRIPTION OF SOIL AND ROCK
			0-6	6-12	12-18	18-24				
0.0									Dark gray asphalt pavement to 0.8 feet.	
5.0		SS1	15	10	10	10	6.2%	17	Dark brown gravelly (SANDY-SILT) fill with 15 to 30% gravel, some sand, compact to dense, massive soil structure, (ML). M - NPL	
10.0		SS2	16	19	13	19	7.5%	12	Same as 4.0-6.0' M - NPL	
15.0		SS3	15	15	18	16	8.0%	8	Same as 4.0-6.0' M - NPL	
20.0		SS4	15	6	15	9	12.0%	10	Dark brown gravelly (SANDY-SILT) fill with 10 to 20% gravel, little to some sand, trace clay, compact, massive soil structure, (ML). M - NPL	
25.0		SS5	WR	1			21.1%	22	24.0-25.0' Brown (SILTY-SAND) with 3 to 7% gravel, mostly very fine to fine size sand, trace silt, organic matter, M - PL	

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DRILL RIG OPERATOR Philip Bence  
 SOIL & ROCK DESCRIPTION Kyle Shearing  
 INSPECTOR Matthew Conley (Stantec)  
 BIN 5516071 & 5516072  
 STRUCTURE NAME Thruway/Millers Grove Rd. (C.R. 53)

CONTRACT \_\_\_\_\_ CONTRACTOR Earth Dimensions, Inc.

SHEET 1 OF 4 HOLE FH-B

TWAY-CAN SUBSURF EXPLORATION 6K16\_BIN-5516071&5516072-DRAFTS.GPJ TWYSETMPL\_V05.GDT 3/31/17

SM 282 E 12/02

PSN                      BORNUM FHB-4  
 DIVISION Syracuse  
 COUNTY Herkimer  
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 ROUTE Thruway Mainline  
 MILEPOST 225.48  
 PROJECT Syracuse Division 2017 Design-Build Bridge Replacements



NEW YORK STATE THRUWAY AUTHORITY  
 NEW YORK STATE CANAL CORPORATION  
**SUBSURFACE EXPLORATION LOG**



HOLE FH-B  
 LINE                       
 STA                       
 OFFSET ft  
 SURF. ELEV. 455.1163, NAD 88  
 DEPTH TO WATER 32.0

COORDINATES (Lat) 43.062125°N (Long) 75.078837°W  
 DATE START 1/9/2017 DATE FINISH 1/10/2017

AUGER 4 1/4" I.D. HOLLOW STEM FLIGHT AUGER WT OF HAMMER-CASING                      lb HAMMER FALL-CASING                      in  
 CASING O. D.                      in I. D.                      in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in  
 SAMPLER O. D. 2 in I. D. 1-3/8 in HAMMER TYPE Safety

CASING BLOWS/ft	DEPTH (ft.) BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER (in.)				MOIST. CONT. (%)	Soil Recovery (in.)	Rock Recovery (ft.)	DESCRIPTION OF SOIL AND ROCK
			0-6	6-12	12-18	18-24				
	25.0				4	4			very loose, weakly thinly bedded to massive soil structure, (SM). 25.0-26.0' Faintly mottled grayish brown (CLAYEY-SILT) with 5 to 10% gravel, some clay, trace sand, firm, weakly thinly laminated to massive soil structure, (CL).	
	30.0	SS6	7	12	16	19	28.8%	22	Faintly mottled brown to grayish brown (CLAYEY-SILT) with 0 to 3% gravel, little clay, trace sand and organic matter, very stiff, weakly thinly laminated, (ML-CL). M - LPL	
	35.0	SS7	2	3	4	4	29.4%	20	Brown (SAND) mostly very fine to fine size, very loose to loose, weakly thinly bedded, (SP). S - NPL	
	40.0	SS8	WR	1	3	5	31.0%	24	Same as 34.0-36.0' S - NPL	
	45.0	SS9	WR	1	1	3	24.5%	24	Same as 34.0-36.0' S - NPL	
	50.0	SS10	2	10			22.8%	24	49.0-49.5' Same as 34.0-36.0' S - NPL 49.5-51.0' Brown (SANDY-SILT) with trace mostly very fine	

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 SOIL & ROCK DESCRIPTION Kyle Shearing  
 INSPECTOR Matthew Conley (Stantec)  
 BIN 5516071 & 5516072  
 STRUCTURE NAME Thruway/Millers Grove Rd. (C.R. 53)

CONTRACT                      CONTRACTOR Earth Dimensions, Inc.

SHEET 2 OF 4 HOLE FH-B

TWWY-CAN SUBSURF EXPLORATION 6K16\_BIN-5516071&5516072-DRAFTS.GPJ TWWYSETMPL\_V05.GDT 3/31/17

SM 282 E 12/02



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HOLE LINE FH-B  
 STA \_\_\_\_\_  
 OFFSET ft  
 SURF. ELEV. 455.1163, NAD 88  
 DEPTH TO WATER 32.0

COORDINATES (Lat) 43.062125°N (Long) 75.078837°W  
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 CASING O. D. in I. D. in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in  
 SAMPLER O. D. 2 in I. D. 1-3/8 in HAMMER TYPE Safety

CASING BLOWS/ft	DEPTH (ft.) BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER (in.)				MOIST. CONT. (%)	Soil Recovery (in.)	Rock Recovery (ft.)	DESCRIPTION OF SOIL AND ROCK
			0-6	6-12	12-18	18-24				
50.0					15	11			size sand, compact, weakly thinly bedded, (ML).	
55.0		SS11	40	25	22	50/4	13.6%	20	Brown gravelly (SILTY-SAND) with 15 to 30% gravel, trace to little silt, occasional cobble, dense to very dense, weakly stratified to massive soil structure, (SM). S - NPL	
60.0		SS12	6	31	50/4		18.6%	16	Gray (SAND) with mostly very fine to fine size, trace silt, very dense, (SP). S - NPL	
65.0		SS13	30	50/3			22.7%	8	Same as 59.0-61.0' S - NPL	
70.0		SS14	50/4				20.0%	4	Gray (SANDY-SILT) with some mostly very fine size sand, very dense, weakly thinly bedded, (ML). S - NPL	
75.0		SS15	50/3				21.9%	3	Same as 69.0-71.0' S - NPL	

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CONTRACT \_\_\_\_\_ CONTRACTOR Earth Dimensions, Inc.

SHEET 3 OF 4 HOLE FH-B

TWWY-CAN SUBSURF EXPLORATION 6K16\_BIN-5516071&5516072-DRAFTS.GPJ TWWSETMPL\_V05.GDT 3/31/17

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**SUBSURFACE EXPLORATION LOG**

HOLE LINE STA FH-B  
 OFFSET ft  
 SURF. ELEV. 455.1163, NAD 88  
 DEPTH TO WATER 32.0

COORDINATES (Lat) 43.062125°N (Long) 75.078837°W  
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 CASING O. D. in I. D. in WT OF HAMMER-SAMPLER 140 lb HAMMER FALL-SAMPLER 30 in  
 SAMPLER O. D. 2 in I. D. 1-3/8 in HAMMER TYPE Safety

CASING BLOWS/ft	DEPTH (ft.) BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER (in.)					MOIST. CONT. (%)	Soil Recovery (in.)	Rock Recovery (ft.)	DESCRIPTION OF SOIL AND ROCK
			0-6	6-12	12-18	18-24	24-30				
	75.0										
	80.0	SS16	38	48	50/5		17.7%	17		Moist gray (SILTY-CLAY) hard, thinly laminated with very thin silt lenses, (CL). M - PL	
	85.0	SS17	50/4				20.2%	4		Gray (SILTY-SAND) with mostly very fine to fine size sand, trace to little silt, very dense, weakly thinly bedded, (SM) tending toward (SP). S - NPL	

BOTTOM OF HOLE AT 86.00 ft

Note:  
 Advanced bore hole with 4 1/4" ID x 8" OD hollow stem auger casing with 5.0-foot of interval to end of boring at 86.0 feet. Bore hole was backfilled with cuttings and ground surface repaired with a cold patch.

DATE	TIME	DEPTH (ft.)			ARTESIAN HEAD HEIGHT ABOVE GROUND	FILLED WITH WATER AT END OF DAY
		HOLE	CASING	WATER		
09-Jan-17	11:30	36.00	34.00	32.00	NO	No
10-Jan-17	08:15	84.30	84.00	43.00	NO	No

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CONTRACT \_\_\_\_\_ CONTRACTOR Earth Dimensions, Inc.

SHEET 4 OF 4

HOLE FH-B

TWY-CAN SUBSURF EXPLORATION 6K16\_BIN-5516071&5516072-DRAFTS.GPJ TWYSETT.MPL\_V05.GDT 3/31/17

## **Appendix E Stakeholder/Public Input**



## Appendix F Cost Estimate



# **Replacement Estimate**

## **Bridge and Highway**



**NEW YORK STATE THRUWAY AUTHORITY  
MAINLINE BRIDGE REPLACEMENT  
TAB 17-X  
ESTIMATE OF HIGHWAY QUANTITIES**

ITEM #	DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	TOTAL
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	\$20.00	2,000	\$40,000
203.03	EMBANKMENT IN PLACE	CY	\$15.00	850	\$12,750
304.12	SUBBASE COURSE, TYPE 2	CY	\$60.00	3,700	\$222,000
402.000013	PLANT PRODUCTION QUALITY ADJUSTMENT TO HMA ITEMS	QU	\$85.00	65	\$5,525
402.127303	12.5 F3 TOP COURSE HMA, 70 SERIES COMPACTION	TON	\$85.00	770	\$65,450
402.197903	19 F9 BINDER COURSE HMA, 70 SERIES COMPACTION	TON	\$75.00	960	\$72,000
402.377903	37.5 F9 BASE COURSE HMA, 70 SERIES COMPACTION	TON	\$65.00	2,091	\$135,915
407.0102	DILUTED TACK COAT	GAL	\$3.00	500	\$1,500
605.0901	UNDERDRAIN FILTER TYPE 1	CY	\$45.00	155	\$6,975
605.1702	OPTIONAL UNDERDRAIN PIPE, 6 INCH DIAMETER	LF	\$5.00	1,820	\$9,100
606.18	MODIFIED G2 WEAK-POST, CORRUGATED BEAM GUIDE RAIL	LF	\$15.00	780	\$11,700
606.22	ANCHORAGE UNITS FOR CORRUGATED BEAM GUIDE RAILING	EACH	\$1,200.00	1	\$1,200
606.61	REMOVING AND STORING CORRUGATED BEAM GUIDE RAILING	LF	\$4.00	780	\$3,120
610.1402	TOPSOIL - ROADSIDE	CY	\$60.00	200	\$12,000
610.1601	TURF ESTABLISHMENT - ROADSIDE	SY	\$1.50	1,800	\$2,700
619.01	BASIC WORK ZONE TRAFFIC CONTROL	LS	\$1,161,600.00	1	\$1,161,600
619.1704	TEMPORARY CONCRETE BARRIER, (PINNED) WITH WARNING LIGHTS	LF	\$35.00	5,000	\$175,000
625.01	SURVEY OPERATIONS	LS	\$40,000.00	1	\$40,000
685.11	WHITE EPOXY REFLECTORIZED PAVEMENT STRIPES - 20 MILS	LF	\$1.00	1,070	\$1,070
685.12	YELLOW EPOXY REFLECTORIZED PAVEMENT STRIPES - 20 MILS	LF	\$1.00	1,070	\$1,070

**TOTAL                    \$1,980,675.00**

U.S. CUSTOMARY UNITS **PRELIMINARY COST ESTIMATE WORKSHEET (NEW AND REPLACEMENT BRIDGES)**

P.I.N. \_\_\_\_\_ B.I.N. 5516072 PS&E 5/17/17 Anticipated Year of Construction 2017  
 BRIDGE NYSTA MP 225.48 & 225.49 OVER Millers Grove Road  
 NUMBER of SPANS: 1 SPAN ARRANGEMENT 77.5 WIDTH 69.833 ft  
 ABUTMENT TYPE: semi-integral SKEW 0.00 DEG CURVED GIRDERS no RADIUS 0.00 ft  
 SUPERSTRUCTURE: steel straight  
 Alternate Design: Timber  Inverset  Slab   
 WZTC By: on twin bridge  
 PREPARED BY: D. Jenkinson DATE: 02/01/17

**Shoulder Break Area Calculation Data** \* See Shoulder Break Area Diagram for dimensions.

	<u>0</u>	<u>19.33</u>	<u>32.66</u>	<u>69.833</u>	<u>7,680</u>
	<b>Average Skew (Degrees)</b>	<b>* Over Roadway Height (ft)</b> <small>(From Roadway to to bottom of culvert)</small>	<b>* Bottom Angle Length (ft)</b> <small>(Length of barrel for culvert)</small>	<b>Bridge Width (ft)</b> <small>(Width of opening for culvert)</small>	<b>* Shoulder Break Area (Square Feet)</b>
1A.) Base: (\$ / ft <sup>2</sup> SB AREA)	<u>\$115</u>	DOT Regions 1 - 7 & 9 = \$115 steel, Multi-Span Add \$15; Regions 8 & 10 = \$173, Multi-Span Add \$27. DOT Regions 1 - 7 & 9 = \$129 adjacent concrete box, Multi-Span Add \$31; Regions 8 & 10 = \$149, Multi-Span Add \$43. DOT Regions 1 - 7 & 9 = \$165 next beam or spread box, Multi-Span Add \$31; Regions 8 & 10 = \$190, Multi-Span Add \$43. DOT Regions 1 - 7 & 9 = \$117 concrete I-beam or N.E. bulb-T, Multi-Span Add \$31; Regions 8 & 10 = \$135, Multi-Span Add \$43. RR Bridge = \$317. THIS IS NOT A BID PRICE PER SHOULDER BREAK AND SHOULD NOT BE THE SOLE FACTOR IN DETERMINING TYPE OF BRIDGE Notes: 1) Base costs are based on single span bridge designs with integral abutments with average pile lengths. 2) RR Bridge cost estimates based on a limited amount of in house data.			
1B.) Culverts & three sided structures with horizontal openings	<u>\$0</u>	Culvert - DOT Regions 1 - 7 & 9 = \$166 Regions 8 & 10 = \$249; 3 Sided Frame - DOT Regions 1 - 7 & 9 = \$176 Regions 8 & 10 = \$264. NO "BASE BRIDGE" COST SHOULD BE ENTERED IN SECTION 1 IF USING THESE COSTS.			
2.) Foundations:	<u>\$31</u>	Spread footing, add \$14. All abutment types footings on rock subtract \$20. 3 sided frame average pile length add \$3; Poor soil or pile length > 39 ft add \$17. Integral abutments average pile length add \$10; Poor soil or pile length > 39 ft add \$20. All other abutments & piers with average pile length add \$6; Poor soil or pile length > 39 ft add \$31.			
3.) Abutments:	<u>\$0</u>	Abutments 20 to 30 ft add \$8. MSE Walls supporting CIP stub abutments are addressed as contingencies below.			
4.) Cofferdams: Water depths based on bottom of footing Divide cost on right by shoulder break ft <sup>2</sup> &	<u>\$0</u>	Costs based on bridges up to 49 ft wide. Minor Water Diversion (Sand Bags) \$3500 per bridge. Abutments in 4 ft to 6 ft of water \$6,000 per unit. Substructure in 5 ft to 8 ft water \$15,000; 8 ft to 12 ft of water \$24,000; 12 ft to 14 ft of water \$26,000. Canal Pier Protection Cofferdam System \$145,000 per unit (Max Water Height Retained to 13 feet). Tremie Seals And Associated Forms \$200,000 per unit.			
5.) Span Adjustment:	<u>\$5</u>	Each foot > average span length of 66 feet add - Concrete 0.31 or Steel 0.46 \$/ Ft (Ex. 138 ft Conc. -> 72Ft *0.31\$/Ft). Thru Truss add \$226. Use the span adjustment with trusses also.			
6.) Curved Girders:	<u>\$0</u>	1601 ft radius or less add \$16; 1601 ft to 2499 ft add \$3; 2499 ft to 3001 ft add \$3.			
7.) Long Wing Walls:	<u>\$0</u>	For total combined wingwall length > 60 ft calculate adjustment using the LongWingWallCosts worksheet.			
8.) Stage Construct.:	<u>\$0</u>	Minor wingwall \$12; WZTC On superstructure staged with sheet piling or GRES add \$15. WZTC On superstructure staged with H-Pile wall lagging add \$75. Down state multiply factor by 1.5.			
9.) Miscellaneous:	<u>\$20</u>	Bridge width less than 30 ft add \$50; Paint or galvanize steel girders add \$20; Paint steel trusses add \$50. Protection walls other than for staging.			
<b>TOTAL BRIDGE COST</b>					
<b>\$ / ft<sup>2</sup> SB AREA =</b>	<u>\$171</u>				

Shoulder Break Area (ft <sup>2</sup> )	<u>7,680</u>	X Cost / ft <sup>2</sup>	<u>\$171</u>	= BRIDGE ONLY COST	<u>\$1,315,547</u>
				Cost of Both Bridges:	<u>\$2,631,094</u>
<b>Contingencies:</b>	Remove existing bridges				<u>\$263,109</u>
	Work Zone Traffic Control (WZTC)				<u>\$0</u>
	Detour structure				<u>\$0</u>
	Channel work				<u>\$50,000</u>
	Slope protection, other than for channel work				<u>\$0</u>
	Utilities				<u>\$0</u>
	Aesthetics (e.g. Form liners, decorative railing, lights & stone facades)				<u>\$0</u>
	MSE for abutments. Specified "Plain" \$53, "As Shown" \$102 per ft <sup>2</sup> of MSE				<u>\$0</u>
	Overhead (e.g. Construction office, computer software & hardware, office supplies)				<u>\$10,000</u>
	Input as decimal for anticipated year of letting:				
<b>Simple Inflation Rate For SFY:</b>	<u>13/14 to 14/15 - 3.0%; 14/15 to 15/16 - 3.0%; 15/16 to 16/17 - 3.0%;</u>				<u>0.000</u>
	<b>TOTAL BRIDGE SHARE</b>			= \$	<u>2,954,204</u>

# **Rehabilitation Estimate**

## **Bridge and Highway**



**PRELIMINARY COST ESTIMATE WORKSHEET (BRIDGE REHABILITATION) - REGION 5**

BIN:	<b>5516072</b>	
Location Description:	<b>I-90 over Millers Grove Road</b>	
Record Plans:	<b>MT 52-7, TAS 92-74B</b>	
Bridge Type:	<b>Steel Multi-Girder with Concrete Deck</b>	
Estimate Date:	<b>February 1, 2017</b>	Instruction: Change values in white cells (blue text). Check box for work to be included in estimate. When selecting primary member replacement type, select the white cell then use the pulldown menu button that appears to the right of the cell.
Let Date:	<b>September 1, 2019</b>	
Project Description:	<b>Rehabilitation of BIN 5516072 - Two bridges at MP 225.48 and 225.49 Bridges carry I-90 EB and WB over Millers Grove Road</b>	

**Bridge Configuration & Data:** The user only needs to enter applicable information, guidance regarding what is applicable can be found in the Region 5 Preliminary Cost Guidance Manual under Appendix B.3.

		<b>Calculated Values (FOR <u>PRELIMINARY ESTIMATING PURPOSES ONLY</u>):</b>
<b>56</b>	ft - Out-Out Deck Width	
<b>54</b>	ft - Clear Width between curbs or barrier	<b>1,742</b> ft <sup>2</sup> - overlay area (portion of deck)
<b>2.42</b>	ft - Overhang Width (each or average width)	<b>156</b> ft <sup>2</sup> - overhang area (portion of deck)
<b>32.25</b>	ft - Begin-End Deck Length	<b>1,806</b> ft <sup>2</sup> - deck area
<b>20</b>	ft - Approach Slab Length (each or average length)	<b>2,160</b> ft <sup>2</sup> - approach slab area <b>TOTAL</b>
<b>0</b>	ft - U-Wall Length (each or average length)	<b>0.0</b> ft. - U-wall length <b>TOTAL</b>
<b>0</b>	Skew <sup>o</sup> from normal line projecting from centerline	<b>57.0</b> ft - joint length <b>EACH</b>

**Cost of Rehabilitation Work for Various Structural Elements:**

<b>\$ 88,200</b>	<b>Bearing Replacement</b>	Note: Does <u>not</u> include concrete sealing.
<b># Locations</b>	<b>Work Type (Note: Add Structural Lifting later, minor steel modifications (stiffener) included)</b>	
<b>14</b>	<i>\$4,400/ea. to replace with LAMINATED ELASTOMERIC Bearings (common), DOES NOT include pedestal reconstruction</i>	
<b>0</b>	<i>\$5,300/ea. to replace with MULTI-ROTATIONAL Bearings, DOES NOT include pedestal reconstruction</i>	
<b>14</b>	<i>\$1,900/ea. to reconstruct pedestal if necessary (structure lifting not included, add cost in other part of worksheet)</i>	

<b>\$ 18,810</b>	<b>Deck Joint Replacement</b>
<b># Joints</b>	<b>Work Type</b>
<b>0</b>	<i>JOINT SEAL ONLY: use \$55/linear feet (Item 567.51--09 only)</i>
<b>2</b>	<i>ARMORLESS: use \$165/linear feet of joint on new decks, overlays, superstructure replacement (Item 567.60 price only)</i>
<b>0</b>	<i>ARMORLESS: use \$370/linear feet of joint if remove/replace existing joint header (assumes 5 in. x 12 in. joint header)</i>
<b>0</b>	<i>ARMORLESS: use \$650/linear feet of joint if end-of-deck reconstruction is required, where deck is bad in area of joints</i>
<b>0</b>	<i>MODULAR (1-Cell): use \$1,010/linear feet of joint..... add \$400/ft for each additional joint-cell (ex. 4-cell = \$2,210/ft)</i>
	<b>&lt;=== IF APPLICABLE, Enter No. of Joint-Cells in Modular Joint (Min. = 1)</b>
<b>0</b>	<i>Install JOINTLESS detail where there was a joint: use \$1,300/linear feet of joint</i>
	Note: Includes headwall removal/replacement, joint removal, portion of deck removal/brush curb and replacement, partial approach slab remove/replace, short length of rail remove/reinstall, new precast sleeper slab, armorless joint

<b>\$ -</b>	<b>Concrete Overlay (concrete sealing included)</b>
	Overlay removal accomplished by <input type="checkbox"/> 100% Rebar Exposure OR <input type="checkbox"/> Scarification
	<b>If Scarifying, Enter Anticipated Number Scarification layers (1/2" each) ==&gt;</b> <input type="text"/>
	<i>\$37/sq.ft. of overlay area (overhang separate) for 100% REBAR EXPOSURE with 'METHOD 3' SINGLE-LIFT OVERLAY</i>
	<i>\$11/sq.ft. of overlay area (overhang separate) for SCARIFICATION - 1/2 in. single pass scarification; \$2/sf each extra pass</i>

Note: Deck joint replacement, approach slab work and approach paving not included, add costs in appropriate section. Typically old steel bridge rail will not meet crash test requirements, add costs for rail upgrade, overhang replacement, barrier/rail as necessary (Bridge Manual App. 6A & 6B).

<b>\$ -</b>	<input type="checkbox"/> <b>HMA Overlay/Membrane (only used when AADT &lt; 5000)</b>
	<i>use \$6/sq.ft. &amp; add deck repair area costs</i>
	<b>Enter Area of Deck Repair Anticipated ==&gt;</b> <input type="text"/>
	<i>\$42/sq.ft. for deck repair areas (not the whole deck area) needed prior to placing the HMA overlay</i>

Note: Wearing surface removal/milling, deck joint replacement, approach slab work and approach paving not included, add costs in appropriate section if necessary.

\$ -  **Deck Overhang Replacement** use \$70/sq.ft. of overhang area

Note: This is usually necessary when upgrading railing system to concrete barrier. Includes deck removal, deck concrete installation (bottom-form-req'd), rebar, grooving. Does not include barrier/rail removal, barrier installation or concrete sealing (costs can be added below).

\$ **66,960**  **Approach Slab Replacement** use \$31/sq.ft. of approach slab area

**Approach Slab Overlay** use \$00/sq.ft. of approach slab area

Note: Approach slab overlay cost is the same as concrete overlay/100% rebar exposure, concrete overlay/scarification or HMA Overlay used earlier.

\$ **102,942**  **Deck Replacement**  **Bottom forms not req'd (only for Adjacent Prestressed Box Beams)**

use \$57/sq.ft. if bottom form required... deduct 20.0% when bottom formwork IS NOT req'd (ex. adjacent box beam bridges)

Note: Only items for deck removal, deck installation and sawcutting included. Deck joint replacement, deck sealing, approach slab work, approach paving, barrier-rail removal/installation not included, add costs in appropriate section as necessary. Often U-Wall/Wingwall modification is necessary to accomodate deck replacement, add costs where necessary.

\$ **38,329** **Bridge Barrier/Rail Upgrade Replacement (add quantity on U-walls as necessary)**

Left Side	Right Side or Median		Subtotal
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	use \$212/ft for single slope 1/2 shape	\$ 13,674
<input type="checkbox"/>	<input type="checkbox"/>	use \$293/ft vertical concrete parapet (w/sidewalk & curb)	\$ -
<input type="checkbox"/>	<input type="checkbox"/>	use \$369/ft for Texas concrete barrier (w/sidewalk & curb)	\$ -
<input type="checkbox"/>	<input type="checkbox"/>	use \$255/ft median single slope concrete barrier	\$ -
<input type="checkbox"/>	<input type="checkbox"/>	use \$117/ft for 2 rail/brush curb	\$ -
<input type="checkbox"/>	<input type="checkbox"/>	use \$107/ft for 3 rail/curbless	\$ -
<input type="checkbox"/>	<input type="checkbox"/>	use \$156/ft for 4 rail/curbless	\$ -
<input type="checkbox"/>	<input type="checkbox"/>	use \$169/ft for 5 rail/curbless	\$ -
<input type="checkbox"/>	<input type="checkbox"/>	use \$211/ft for 4 rail (w/sidewalk & curb)	\$ -
<input type="checkbox"/>	<input type="checkbox"/>	Barrier/Rail on U-walls?	\$ -

**- Bridge Rail & Brush Curb Removal**

add \$125/ft for rail & brush curb removal if not part of superstructure or overhang removal items

**- Bridge Rail Transition**

add \$122/ft for rail/barrier transition to guide rail

# of transitions (4 typical) ==> **4 transitions**

Each/Average Transition Length (see comment to obtain bridge rail/barrier/parapet transition lengths) ==> **34 feet**

**- Approach Rail Work (remove and replace)**

add \$37/ft for approach guide rail (box beam assumed)

Length of Approach Rail ==> **feet**

\$4,300 added for each guide rail terminal (Type III), assumed to be same quantity as number of transitions

\$ -  **Fence** use \$65/ft (snow or pedestrian fence)

**Fencing on U-Walls also?**

\$ - **Primary Member System Replacement**

**Not Applicable**

<---- Select Beam Type (pull down menu)

Costs include composite deck, beams/primary members, survey, sawcut, superstructure removal, joint headwall.

DOES NOT include approach paving, approach slabs, bearings/pedestals, rail/barrier or u-wall modification.

Primary Member System	Remove Super-Structure Cost	Req'd Weight of Steel	Unit Cost of Steel	Cost of Deck (From Estimator)	Cost of Beams \$/sq.ft.	Superstructure Replacement Unit Cost
Steel Plate Girder	\$09/sq.ft.	25 lb/sq.ft.	\$2.10 per lb	\$39.0/sq.ft.	\$52.5	Steel \$100.50/sq.ft.
Adjacent Prestressed Box Beam	\$18/sq.ft.	n/a	n/a	\$22.0/sq.ft.	\$75.0	Box \$115.00/sq.ft.
Prestressed Concrete Bulb-T	\$18/sq.ft.	n/a	n/a	\$37.0/sq.ft.	\$47.0	Bulb-T \$102.00/sq.ft.
Prestressed Concrete I-Beam	\$18/sq.ft.	n/a	n/a	\$29.0/sq.ft.	\$55.0	I-Beam \$102.00/sq.ft.

Note: For Prestressed Concrete beam bridges, only enter the costs for Superstructure Removal (assume \$15 to \$20/sq.ft. if uncomplicated removal, higher if complicated). For Steel Weight: short spans up to 60' use 20-25 lb/sqft; medium spans use 25-30 lb/sqft; long spans use 30-45 lb/sqft; truss use 80-110 lb/sqft. Adjust unit cost of steel as site conditions require, the more difficult erection is the higher the cost will be.

**Substructure Work**

\$ -  **U-Wall or Culvert Headwall Rehab to Upgrade Barrier**  
*\$430/ft (feet of wall upgraded)*

\$ **157,500**  **Substructure - Minor Repairs - Surface/Shotcrete-Type Repairs**  
*\$175/sq.ft. of repair area* Note: Concrete sealing not included  
**Substructure Repair Area ==>**

\$ -  **Substructure - Major Repairs - Large Scale Concrete Repairs to piers and abutments**  
*\$5,400/cu.yd.* Note: Concrete sealing not included  
**Substructure Repair Volume ==>**

\$ **6,163** **Concrete Sealing**

- New Concrete sealed (otherwise cost of sealing existing concrete used)
- Sealing the deck (out-to-out)
- Sealing the Concrete Barrier/sidewalk
- Sealing the Approach Slab
- Seal some other surface (enter area below)

Prices:  
*\$0.75/sq.ft. for NEW bridge decks, appr. slab, sidewalk, barrier*  
*\$1.35/sq.ft. for EXISTING decks, appr. slab, sidewalk, barrier*  
*\$1.90/sq.ft. for surfaces not shown above*

**"Other" Surface Area ==>**

***MUST add Structure Lifting costs when remove/install bearings, remove/install pedestals, major substructure repairs (ex. column replacement), certain steel/superstructure repairs or superstructure replacement***

\$ **70,000**  **Structural Lifting**

Structural lifting can sometimes add significant costs depending on the type of lifting and height of lifting structure. There is no generic or average cost that covers most situations. Choose the category(ies) of lifting and enter unit prices based on the guidance provided.

- Category 1: \$1,500 to \$3,000 each lift point - Lowest Cost Category: Ex. Lift an end floorbeam or end-of-through-girder of a through-girder bridge from a bridge seat, medium-low capacity jack, very short column/wood cribbing w/shims (for steel repairs/brg replacement).
- Category 2: \$3,000 to \$10,000 each lift point - Lifting structure 5' to 15' tall or if work is somewhat more complicated than Category 1.
- Category 3: \$10,000 to \$50,000 each lift point - Lifting Structure 15' to 30' or if somewhat more complicated than Category 2. Ex. Short-span strongback to support floorbeams while thru-girder rehab'd
- Category 4: \$50,000 to \$100,000+ each lift point - Lifting over 30' tall, complicated work, long span strongbacks

0	<== Enter Number Lifting Points in Category 1	Category 1 Cost ==>	\$ 2,500 / lift point
14	<== Enter Number Lifting Points in Category 2	Category 2 Cost ==>	\$ 5,000 / lift point
0	<== Enter Number Lifting Points in Category 3	Category 3 Cost ==>	\$ 15,000 / lift point
0	<== Enter Number Lifting Points in Category 4	Category 4 Cost ==>	\$ 60,000 / lift point

**Maintenance Work**

\$ **100,000**  **Metalizing Structural Steel (GENERAL)**  
*use \$40/sq.ft. metalized, includes containment & paint disposal*

**Painting Structural Steel (LOCALIZED)**  
*use \$65/sq.ft. LOCALIZED painting, includes containment & disposal*

**Enter Painted Area of Steel ==>**

\$ **450**  **Bridge Washing** *\$450 per span*

**Enter # of Bridges Washed ==>**   
**Enter # of Spans Washed ==>**

**ENTER Other Required Work Items:**

\$ **50,000** **Approach Work (approach paving, drainage, curbing/stone ditch, excavation, topsoil etc.)**

\$	-	Erosion Protection (Stream and/or Embankment)
\$	-	Piles
\$	25,000	Utility Work
\$	10,000	SHPO/Aesthetic/Environmental Protection/Asbestos/Lead Related Work

\$	56,400	Overhead (Engineer's Office, Supplies, Training, Partnering, CPM Scheduling, etc.)
Time to Construct	24 Months	
<input checked="" type="checkbox"/>		\$2,100/month for Office, add \$5k supplies, \$1k cylinder box
<input type="checkbox"/>		IF PROJECT EXPECTED TO BE AT LEAST \$5M, add \$2,000 for Training & Partnering Items
<input type="checkbox"/>		IF LARGE PROJECT OVER \$20M OR COMPLEX, add \$15,000 for CPM Scheduling Item

\$	819,675	Miscellaneous (add description of work below)
Miscellaneous work =	Cost for highway work including raising profile.	

Number of Bridges

\$2,401,182 Subtotal

\$	1,161,000	LS	Work Zone Traffic Control (Basic WZTC, Temporary Barrier/Signals/Markings, etc.)
			see WZTC chapter in Manual for percentage to use. Ensure that the percentage used covers usual WZTC items like \$15k/bridge for basic setup, \$25k per temporary signal system, \$20/ft temporary concrete barrier

**\$3,562,182 Subtotal of Project Cost, need to add Incidentals, Contingency, Field Change Payment, Mobilization...**

REQUIRED COSTS			
			\$3,562,182
\$	712,437	20%	Incidentals (10% typical but less can be used for larger projects, PDM App7 DDR Shell, Section 1.5) Covers small work items, work that is incidental to larger work items (small work not categorized in this worksheet)
			\$4,274,619
\$	641,193	15%	Contingency (25% @ Scoping, 15% @ DA typical but can vary; PDM App7 DDR Shell, Section 1.5) Covers unknowns/errors in quantity and cost estimating that occur during scoping/preliminary design
			\$4,915,812
\$	246,000		Field Change Payment (FCP) (HDM Table 21-3, 5% (max.) for most projects) This is an item <u>REQUIRED</u> in all NYSDOT contracts to cover unexpected addition of work items during construction
			\$5,161,812
\$	206,473		Mobilization (4% of Subtotal (including FCP) for Item 699.040001, rounded up) This is an item <u>REQUIRED</u> in all NYSDOT contracts to cover contractor mobilization
\$	720,370	5%	Annual Inflation Rate (5% but may vary, PDM App7 DDR Shell, Section 1.5)
\$	1,610,486	30%	Design & Construction Inspection (30%) <input type="checkbox"/> Check off if Project is located on the Seneca Nation (3% TERO Surcharge applies)

**\$7,700,000 TOTAL** rounded to nearest \$10,000, rehab is about \$4264/sq. ft. deck area

**Rehabilitation Estimate  
Estimate for Additional  
Bridge Width across  
Median**



U.S. CUSTOMARY UNITS **PRELIMINARY COST ESTIMATE WORKSHEET (NEW AND REPLACEMENT BRIDGES)**

P.I.N. \_\_\_\_\_ B.I.N. 5516072 PS&E 5/17/17 Anticipated Year of Construction 2017  
 BRIDGE NYSTA MP 225.48 & 225.49 OVER Millers Grove Road  
 NUMBER OF SPANS: 1 SPAN ARRANGEMENT 32.33 WIDTH 24 ft  
 ABUTMENT TYPE solid catilever SKEW 0.00 DEG CURVED GIRDERS no RADIUS 0.00 ft  
 SUPERSTRUCTURE: steel straight  
 Alternate Design: Timber  Inverset  Slab   
 WZTC By: on twin bridge   
 PREPARED BY: D. Jenkinson DATE: 02/01/17

**Shoulder Break Area Calculation Data** \* See Shoulder Break Area Diagram for dimensions.

	<u>0</u>	<u>19.33</u>	<u>32.33</u>	<u>24</u>	<u>2.632</u>
	<b>Average Skew (Degrees)</b>	<b>* Over Roadway Height (ft)</b> <small>(From Roadway to to bottom of culvert)</small>	<b>* Bottom Angle Length (ft)</b> <small>(Length of barrel for culvert)</small>	<b>Bridge Width (ft)</b> <small>(Width of opening for culvert)</small>	<b>* Shoulder Break Area (Square Feet)</b>
1A.) Base: (\$ / ft <sup>2</sup> SB AREA)	<u>\$115</u>	DOT Regions 1 - 7 & 9 = \$115 steel, Multi-Span Add \$15; Regions 8 & 10 = \$173, Multi-Span Add \$27. DOT Regions 1 - 7 & 9 = \$129 adjacent concrete box, Multi-Span Add \$31; Regions 8 & 10 = \$149, Multi-Span Add \$43. DOT Regions 1 - 7 & 9 = \$165 next beam or spread box, Multi-Span Add \$31; Regions 8 & 10 = \$190, Multi-Span Add \$43. DOT Regions 1 - 7 & 9 = \$117 concrete I-beam or N.E. bulb-T, Multi-Span Add \$31; Regions 8 & 10 = \$135, Multi-Span Add \$43. RR Bridge = \$317. THIS IS NOT A BID PRICE PER SHOULDER BREAK AND SHOULD NOT BE THE SOLE FACTOR IN DETERMINING TYPE OF BRIDGE Notes: 1) Base costs are based on single span bridge designs with integral abutments with average pile lengths. 2) RR Bridge cost estimates based on a limited amount of in house data.			
1B.) Culverts & three sided structures with horizontal openings	<u>\$0</u>	Culvert - DOT Regions 1 - 7 & 9 = \$166 Regions 8 & 10 = \$249; 3 Sided Frame - DOT Regions 1 - 7 & 9 = \$176 Regions 8 & 10 = \$264. NO "BASE BRIDGE" COST SHOULD BE ENTERED IN SECTION 1 IF USING THESE COSTS.			
2.) Foundations:	<u>\$31</u>	Spread footing, add \$14. All abutment types footings on rock subtract \$20. 3 sided frame average pile length add \$3; Poor soil or pile length > 39 ft add \$17. Integral abutments average pile length add \$10; Poor soil or pile length > 39 ft add \$20. All other abutments & piers with average pile length add \$6; Poor soil or pile length > 39 ft add \$31.			
3.) Abutments:	<u>\$8</u>	Abutments 20 to 30 ft add \$8. MSE Walls supporting CIP stub abutments are addressed as contingencies below.			
4.) Cofferdams: Water depths based on bottom of footing Divide cost on right by shoulder break ft <sup>2</sup>	<u>\$0</u>	Costs based on bridges up to 49 ft wide. Minor Water Diversion (Sand Bags) \$3500 per bridge. Abutments in 4 ft to 6 ft of water \$6,000 per unit. Substructure in 5 ft to 8 ft water \$15,000; 8 ft to 12 ft of water \$24,000 ; 12 ft to 14 ft of water \$26,000. Canal Pier Protection Cofferdam System \$145,000 per unit (Max Water Height Retained to 13 feet). Tremie Seals And Associated Forms \$200,000 per unit.			
5.) Span Adjustment:	<u>\$0</u>	Each foot > average span length of 66 feet add - Concrete 0.31 or Steel 0.46 \$/ Ft (Ex. 138 ft Conc. -> 72Ft *0.31\$/Ft). Thru Truss add \$226. Use the span adjustment with trusses also.			
6.) Curved Girders:	<u>\$0</u>	1601 ft radius or less add \$16; 1601 ft to 2499 ft add \$3; 2499 ft to 3001 ft add \$3.			
7.) Long Wing Walls:	<u>\$0</u>	For total combined wingwall length > 60 ft calculate adjustment using the LongWingWallCosts worksheet.			
8.) Stage Construct.:	<u>\$0</u>	Minor wingwall \$12; WZTC On superstructure staged with sheet piling or GRES add \$15. WZTC On superstructure staged with H-Pile wall lagging add \$75. Down state multiply factor by 1.5.			
9.) Miscellaneous:	<u>\$50</u>	Bridge width less than 30 ft add \$50; Paint or galvanize steel girders add \$20; Paint steel trusses add \$50. Protection walls other than for staging.			

**TOTAL BRIDGE COST**  
**\$ / ft<sup>2</sup> SB AREA =** \$204

Shoulder Break Area (ft <sup>2</sup> )	<u>2,632</u>	X Cost / ft <sup>2</sup>	<u>\$204</u>	= BRIDGE ONLY COST	<u>\$536,846</u>
<b>Contingencies:</b>		Remove existing bridge			<u>\$26,842</u>
		Work Zone Traffic Control (WZTC)			<u>\$0</u>
		Detour structure			<u>\$0</u>
		Channel work			<u>\$25,000</u>
		Slope protection, other than for channel work			<u>\$0</u>
		Utilities			<u>\$0</u>
		Aesthetics (e.g. Form liners, decorative railing, lights & stone facades)			<u>\$0</u>
		MSE for abutments. Specified "Plain" \$53, "As Shown" \$102 per ft <sup>2</sup> of MSE			<u>\$0</u>
		Overhead (e.g. Construction office, computer software & hardware, office supplies)			<u>\$0</u>
		Input as decimal for anticipated year of letting:			<u>0.000</u>
<b>Simple Inflation Rate For SFY:</b>		13/14 to 14/15 - 3.0%; 14/15 to 15/16 - 3.0%; 15/16 to 16/17 - 3.0%;			<u>0.000</u>
		<b>TOTAL BRIDGE SHARE</b> (Includes additional 4 % for mobilization)		= \$	<u>588,689</u>

Incidentals (2017) 20%	<u>\$117,738</u>
Contingencies 15%	<u>\$105,964</u>
Potential Field Change Order 5%	<u>\$40,700</u>
Mobilization (4%)	<u>\$34,200</u>
Inflation @ 5%/yr to midpoint of Construction (2019)	<u>\$88,800</u>
Design & Construction Inspection (30%)	<u>\$266,200</u>
<b>Total Cost</b>	<u>1,242,291</u>