Bridge Project
P.I.N. 711516
BIN: 1000500
NYS Route 3 over CSX Railroad
City of Watertown
Jefferson County
PROJECT APPROVAL SHEET  
(Pursuant to SAFETEA-LU Matrix)

A. IPP Approval: 
The project is ready to be added to the Regional Capital Program and project scoping can begin.

The IPP was approved by:

Mark E. Frechette 
Acting Regional Director  5/31/12

B. Scope Approval: 
The project cost and schedule are consistent with the Regional Capital Program.

The scope was approved by:

Regional Director, Steven G. Kokkoris

C. Public Hearing 
Certification (23 USC 128):

A public hearing will be held on March 1st 2017

Project Manager, Jeffrey L. Grill

D. Recommendation for 
Design Approval:

The project cost and schedule are consistent with the Regional Capital Program.

Regional Program Manager

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.

Regional Design Engineer, Robert H. Curtis

F. Nonstandard Feature 
Approval:

The nonstandard features have been adequately justified and it is not prudent to eliminate them as part of this project.

Deputy Chief Engineer

G. Design Approval:

The required environmental determinations have been made and the preferred alternative for this project is ready for final design.

Deputy Chief Engineer
LIST OF PREPARERS

Group Director Responsible for Production of the Design Approval Document:

Scott A. Docteur, P.E., Regional Planning & Program Management Office, NYSDOT Region 7
Description of Work Performed by Firm: Directed the preparation of 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.

This report was prepared by the following NYSDOT staff:

David W. Hart, P.E., Project Development, NYSDOT
Description of Work Performed:
Directly supervised the preparation of the Design Approval Document in accordance with established standards, policies, regulations and procedures, except as otherwise explained in this document.

Jeffrey L. Grill, P.E., Project Manager, NYSDOT
Description of Work Performed:
Directly supervised the preparation of plans and profiles for the Design Approval Document in accordance with established standards, policies, regulations and procedures, except as otherwise explained in this document.
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<td>Plans, Profiles &amp; Typical Sections</td>
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<td>B</td>
<td>Environmental Information</td>
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<td>C</td>
<td>Traffic Information</td>
</tr>
<tr>
<td>D</td>
<td>Structure Information</td>
</tr>
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<td>Public Involvement (PI) Plan and Input from Stakeholders including Public</td>
</tr>
<tr>
<td>F</td>
<td>Misc.</td>
</tr>
</tbody>
</table>
CHAPTER 1 - EXECUTIVE SUMMARY

1.1. Introduction
This report was prepared in accordance with the NYSDOT Project Development Manual, 17 NYCRR Part 15 NYSDOT Procedures for Implementation of State Environmental Quality Review Act, and 23 CFR Part 771 FHWA Environmental Impact and Related Procedures

1.2. Purpose and Need

1.2.1. Where is the Project Located?
1.2.2. Why is the Project Needed?
The continuous deterioration of the bridge deck will affect its ability to carry traffic if not addressed. The pavement surface on the approaches of the bridge exhibits cracking, raveling and wheel rutting. The structural deck has areas of map cracking with light efflorescence, damp areas, and staining. There is also an isolated area (18 in. diameter) of exposed corroded reinforcing steel. The steel diaphragms and ends of girders below joints at the piers continue to exhibit moderate corrosion. The pier bearings are showing moderate to heavy corrosion and expansion bearings are overextended. The steel superstructure in all spans, along with painted steel columns at all piers, exhibits missing and peeling paint throughout allowing surface rust to form along with areas of moderate corrosion to steel below leaking pier joints.

This portion of NYS Route 3 (Arsenal Street) in Watertown NY is a connecting route to Interstate 81 (AADT: 22,520). In addition to the traffic to and from I-81, NYS Route 3 is also a well traveled corridor for local residents going to the Salmon Run Mall and surrounding shopping centers.

This is the primary corridor for persons traveling east/west that is unimpeded by the passage of trains. Refer to Appendix C for crossing inventory.

1.2.3. What are the Objectives/Purposes of the Project?
The objectives of this project will be to address the deficiencies associated with this bridge using cost effective measures to provide long term unrestricted travel along the NYS Route 3 corridor.

1.3. What Alternative(s) Are Being Considered?
Alternative I - Do Nothing -
This alternative does not provide any capital improvements and relies only on continued maintenance by State Forces. Although this is not a feasible alternative, it will be carried through the report for comparison purposes.

Alternative II - Major Rehabilitation
This alternative consists of replacing the bridge deck as well as the following:
- New bearings and pedestals
- Paint
- Substructure repairs
- Steel Repairs

The cost for this alternative is estimated to be $5.304 M.

Alternative III - Superstructure Replacement
This alternative consists of removing the existing steel superstructure, replacing it with a new superstructure and modernizing the piers. The cost for this alternative is estimated to be $6.864 M.

Alternative IV - Bridge Replacement -
This alternative would involve the removal of the existing structure, and replacing it with a new structure on the same horizontal alignment. This alternative is estimated to cost $9.256 M.

For a more in-depth discussion of the design criteria and nonstandard features see Section 3.2.3. Design Criteria for Feasible Alternative.
1.4 How will the Alternative(s) Affect the Environment?

Environmental Summary

<table>
<thead>
<tr>
<th>NEPA Classification</th>
<th>C list Categorical Exclusion</th>
<th>BY NYSDOT</th>
<th>Date 05/14/2015</th>
</tr>
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<tr>
<td>SEQR Type:</td>
<td>Type II</td>
<td>BY NYSDOT</td>
<td>Date 05/14/2015</td>
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Exhibit 1.4-B
Comparison of Alternatives

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<td></td>
<td>Null</td>
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<tr>
<td>Wetland impacts</td>
<td>None</td>
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<tr>
<td>100 year floodplain impact</td>
<td>None</td>
</tr>
<tr>
<td>Archeological Sites Impacted</td>
<td>None</td>
</tr>
<tr>
<td>Impact to forested areas</td>
<td>None</td>
</tr>
<tr>
<td>Noise Impacts</td>
<td>None</td>
</tr>
<tr>
<td>Property impacts</td>
<td>None</td>
</tr>
<tr>
<td>Construction Cost</td>
<td>None</td>
</tr>
</tbody>
</table>

Anticipated Permits/Certifications/Coordination:

Coordination
- NYSDEC
- Federal Highway Administration (FHWA)
- New York State Historic Preservation Officer (SHPO)
- US Fish and Wildlife Service
- City of Watertown
- MPO - Watertown Jefferson County Area Transportation Council (WJCTC)

Permits: (None anticipated)

Certifications
- NYSDOL: Asbestos Variance BV-14

Others
- Hazardous Material Investigation
1.5. What Are The Costs & Schedules?

Design Approval is scheduled for March of 2017 with Construction scheduled to begin in January of 2019.

### Project Schedule

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date Occurred/Tentative</th>
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</thead>
<tbody>
<tr>
<td>Scope Approval</td>
<td>06/2012 (Actual)</td>
</tr>
<tr>
<td>Design Approval</td>
<td>05/2017</td>
</tr>
<tr>
<td>Construction Start</td>
<td>03/2018</td>
</tr>
<tr>
<td>Construction Complete</td>
<td>12/2020</td>
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</table>

### Summary of Alternative Costs - Million Dollars (2014)

<table>
<thead>
<tr>
<th>Activities</th>
<th>Alternative 1</th>
<th>Alternative 2</th>
<th>Alternative 3</th>
<th>Alternative 4</th>
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<tr>
<td>Subtotal (2014 Dollars)</td>
<td>$0.000</td>
<td>$0.000</td>
<td>$0.000</td>
<td>$0.000</td>
</tr>
<tr>
<td>Construction Costs</td>
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<td>$3.701 M</td>
<td>$4.442 M</td>
<td>$4.227 M</td>
</tr>
<tr>
<td>WZTC</td>
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<td>$0.327 M</td>
<td>$0.682 M</td>
<td>$0.970 M</td>
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<tr>
<td>Contingency (15% @ Design Approval)</td>
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<td>$0.620 M</td>
<td>$0.780 M</td>
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<td>Subtotal (2014 Dollars)</td>
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<td>$4.700 M</td>
<td>$6.000 M</td>
<td>$8.200 M</td>
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<tr>
<td>Field Change Order</td>
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<td>$0.240 M</td>
<td>$0.290 M</td>
<td>$0.380 M</td>
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<tr>
<td>Subtotal (2014 Dollars)</td>
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<td>$4.900 M</td>
<td>$6.300 M</td>
<td>$8.600 M</td>
</tr>
<tr>
<td>Mobilization (4%)</td>
<td>$0.000</td>
<td>$0.200 M</td>
<td>$0.250 M</td>
<td>$0.340 M</td>
</tr>
<tr>
<td>Mobilization (4%)</td>
<td>$0.000</td>
<td>$0.200 M</td>
<td>$0.250 M</td>
<td>$0.340 M</td>
</tr>
<tr>
<td>Subtotal (2014 Dollars)</td>
<td>$0.000</td>
<td>$5.100 M</td>
<td>$6.600 M</td>
<td>$8.900 M</td>
</tr>
<tr>
<td>Expected Award Amount</td>
<td>$0.000</td>
<td>$5.304 M</td>
<td>$6.864 M</td>
<td>$9.256 M</td>
</tr>
</tbody>
</table>

### Notes:
1. NYSDOT recommends standard contingencies: 25% Scoping stage, 15% Design Approval stage, 5% Advanced Detail Plans stage.
2. According to HDM Chapter 21 Section 21.3.9.4, EB 03-029 & EB 06-057.
3. The total inflation rate is obtained from tables contained within PSS for the time period between the estimate year and the mid-point of construction.
1.6. Which Alternative is Preferred?
The alternative that best meets the project objectives is Alternative 4 (Bridge Replacement). See Section 3.2.2 for a discussion of this alternative.

1.7. What are the Opportunities for Public Involvement?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date Occurred/Tentative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Scope Environmental findings</td>
<td>06/29/2012</td>
</tr>
<tr>
<td>Public Hearing</td>
<td>03/01/2017</td>
</tr>
<tr>
<td>Current Project Letting date</td>
<td>06/07/2018</td>
</tr>
</tbody>
</table>

Refer to Appendix E for Public Involvement (PI) Plan and Input from Stakeholders including Public.

You may offer your comments in a variety of ways.

There will be a Public hearing scheduled on 03/01/2017.

After consideration of all financial, engineering, socio-economic, and environmental issues, NYSDOT’s preferred alternative is bridge replacement.

- You can contact:

  Jeffrey L. Grill, Project Manager
  Please include the six digit Project Identification Number (PIN) 711516
  Questions or comments email: jeff.grill@dot.ny.gov
  Telephone: (315) 785-2345

  Mailing Address
  New York State Department of Transportation
  Region 7 Planning
  317 Washington St
  Watertown, NY 13601

The deadline for submitting comments on this report circulation is 3/17/17.
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 NYS Route 3 over CSX railroad (BIN 1000500).

2.1. Project History
BIN 1000500 was built in 1953 under contract number FAC 52-04. In 1971, the bridge was rehabilitated under contract number C71-03. This structure is a multi-girder steel superstructure with a concrete deck and asphalt concrete overlay. The bridge has 4 spans with a total length of 284 ft. The bridge received a biennial inspection on October 2016 and received a General Recommendation rating of “4”.

2.2. Transportation Plans and Land Use

2.2.1. Local Plans for the Project Area

2.2.1.1. Local Comprehensive Plans (“Master Plan”) -
According to Jeff Urda, City Planner (in a phone conversation on January 19th 2017), The City of Watertown has not adopted a comprehensive plan.

2.2.1.2. Local Private Development Plans -
Within the City of Watertown private and local development is regulation through the City Zoning Law. Based on conversation with the City of Watertown Planning staff there are no approved developments planned within the project area that will impact traffic operations.

The land use associated with the Microtel Hotel at the northwest corner of the bridge is now operating as a hotel and apartment accommodations.

2.2.2. Transportation Corridor

2.2.2.1. Importance of the Project Route Segment -
BIN 1000500 carries NYS Route 3 (Arsenal Street). NYS Route 3 is a heavily traveled route that connects I-81 to downtown Watertown. BIN 1000500 is expected to carry approximately 1500 cars/hour in the design year.

NYS Route 3 is one of the most significant transportation corridors in the Region. It is projected to carry 26,410 cars/day at ETC within the project limits.

This segment of NYS Route 3 is a designated Access Highway on the National Network of Designated Truck Access Highways. An Access Highway is a highway designated for use by STAA vehicles and 53’ trailers.

2.2.2.2. Alternate Routes -
There are no alternative routes that would be suitable as a permanent detour. One potential alternative route for circumventing the project site in the event the bridge is closed would entail the use of Coffeen Street; which is one block to the north of the bridge site and runs parallel to Arsenal Street.

Although Coffeen Street is one block to the north of the bridge, it is not considered a suitable detour because it lacks sufficient capacity to carry the additional traffic and experiences heavy
traffic during peak hours. Coffeen St. also has an at grade railroad crossing which potentially slows traffic as well as emergency response.

2.2.2.3. Corridor Deficiencies and Needs -
This section of NYS Route 3 currently does not limit the mobility of people or goods. However, if the deficiencies are not addressed, the bridge would continue to deteriorate and would warrant closure. Closure would cause significant hardship to Arsenal Street users in the form of added travel time, excessive delays, distance, and cost.

2.2.2.4. Transportation Plans -
This project is on the approved State Transportation Improvement Program (STIP) as project No. 711516.

2.2.2.5. Abutting Highway Segments and Future Plans for Abutting Highway Segments -
The west side of the bridge (from Breen Ave to Bellew Ave) has a project scheduled for letting in November 2024 under PIN 711510. This project is a reconstruction project to address drainage issues.

In 2014, the western and eastern sections score had a pavement of “9”. A rating of “9” indicates excellent condition with no significant surface distress. The western and eastern sections of the bridge were last paved in 2013.

The abutting highway on both ends of the structure consists of one 12 ft outside travel lane with a 10 ft inside lane in each direction.

There is a closed drainage system in poor condition that will need continued maintenance along with the rest of the system around the immediate bridge approaches. The clear zone width along SH 52-4 vary. The speed limit along the abutting highway segments on SH 52-4 is 30 MPH. No non-standard sight distances were noted along the abutting highway segments on SH 52-4.

Refer to Appendix A for complete lane configuration.

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) -

<table>
<thead>
<tr>
<th>Classification Data</th>
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<tbody>
<tr>
<td>NYS Route</td>
</tr>
<tr>
<td>Functional Classification</td>
</tr>
<tr>
<td>National Highway System (NHS)</td>
</tr>
<tr>
<td>Designated Truck Access Route</td>
</tr>
<tr>
<td>Qualifying Highway</td>
</tr>
<tr>
<td>Within 1 mile of a Qualifying Highway</td>
</tr>
<tr>
<td>Within the 16 ft. vertical clearance network</td>
</tr>
</tbody>
</table>
2.3.1.2. Control of Access -
Access along this highway is uncontrolled. This project will not change the control of access.

2.3.1.3. Traffic Control Devices -
There are no traffic signals within the project limits and there are none proposed. The signs and pavement markings within the work limits will be replaced as necessary.
There is a traffic signal at the intersection of Arsenal Street and North & South Meadow Streets. This intersection is approximately 540 ft east of the bridge project. No change is proposed for the signal at this intersection as part of this project.

2.3.1.4. Intelligent Transportation Systems (ITS) -
There is a traffic cabinet for permanent traffic counter on the south east side of the bridge.

2.3.1.5. Speeds and Delay -
Exhibit 2.3.1.5

<table>
<thead>
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<th>SPEED DATA</th>
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<tbody>
<tr>
<td>BIN</td>
</tr>
<tr>
<td>Existing Speed Limit</td>
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<tr>
<td>85th Percentile Speed</td>
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</table>

NOTE: Speed data was obtained through the use of Pro Laser III equipment with infrared LIDAR (Light Detection And Ranging) system.

2.3.1.6. Traffic Volumes -
The most recent traffic counts (class, volume, & speed) available along NYS Route 3 over CSX within the project limits were taken in 2012. Copies of the traffic count data utilized in this report are available upon request. See Appendix “C” of this document for a description of the traffic forecasting methodology employed for this project.

2.3.1.6. (1) Existing traffic volumes -
Refer to Exhibit 2.3.1.6-2

2.3.1.6. (2) Refer to Exhibits 2.3.1.6-1 through 2.3.1.6-2 for a summary of the traffic data. All traffic volume and class data in these figures were generated via the use of tube counters.

Exhibit 2.3.1.6-1

<table>
<thead>
<tr>
<th>Traffic Data</th>
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<tbody>
<tr>
<td>BIN</td>
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<tr>
<td>Directional Distribution</td>
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<tr>
<td>Peak Hour Factor</td>
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<tr>
<td>% Daily Trucks</td>
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</table>

NOTE: The PHF values utilized in the LOS calculations contained in 2.3.1.7 were not determined based on field data; they were selected based on the guidance contained in the Highway Capacity Manual Chapters 12 & 13.
Exhibit 2.3.1.6-2

<table>
<thead>
<tr>
<th>YEAR</th>
<th>AADT</th>
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<td></td>
<td>Eastbound</td>
<td>Westbound</td>
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<tr>
<td>Existing (2015)</td>
<td>11165</td>
<td>11210</td>
</tr>
<tr>
<td>ETC (2019)</td>
<td>11360</td>
<td>11400</td>
</tr>
<tr>
<td>ETC+30 (2049)</td>
<td>12800</td>
<td>12850</td>
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</table>

Note: ETC is the Estimated Time of Completion

Exhibit 2.3.1.6-3

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<tr>
<td>Existing (2016)</td>
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</table>

Note: This is only the existing traffic volume for Cedar and Exchange Streets. The projection was not completed as this information is only used for Maintenance and Protection of Traffic (M&PT) purpose. Cedar and Exchange Streets are located under BIN 1000500.

2.3.1.6. (3) Future no-build design year traffic volume forecasts - The Estimated Time of Completion (ETC) + 30 years was selected per PDM Appendix 5. An ETC+30 year projection was completed as this is a bridge replacement project.

2.3.1.7. Level of Service and Mobility -

Exhibit 2.3.1.7-1

<table>
<thead>
<tr>
<th>YEAR</th>
<th>LOS</th>
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<tbody>
<tr>
<td></td>
<td>Eastbound</td>
</tr>
<tr>
<td>Existing (2015)</td>
<td>C</td>
</tr>
<tr>
<td>ETC (2019)</td>
<td>C</td>
</tr>
<tr>
<td>ETC+30 (2049)</td>
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</tbody>
</table>
Exhibit 2.3.1.7-2

<table>
<thead>
<tr>
<th>Level of Service on Bellew Avenue</th>
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</thead>
<tbody>
<tr>
<td>YEAR</td>
</tr>
<tr>
<td>Existing (2012)</td>
</tr>
<tr>
<td>ETC (2019)</td>
</tr>
<tr>
<td>ETC+30 (2049)</td>
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Exhibit 2.3.1.7-3

<table>
<thead>
<tr>
<th>South &amp; North Meadow St. &amp; Arsenal St. (Rte 3) Synchro</th>
</tr>
</thead>
<tbody>
<tr>
<td>YEAR</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Existing (2012)</td>
</tr>
<tr>
<td>ETC (2019)</td>
</tr>
<tr>
<td>ETC+30 (2049)</td>
</tr>
</tbody>
</table>

2.3.1.8. Safety Considerations, Accident History and Analysis -

During the study period (4/1/08 – 6/30/12) there were 42 accidents on NYS Route 3 between RM s 3 7302 2011 and 2013 (Complete accident history was only available to December 2011 and partial accident history from January 2012 to June 2012). The accident rate is 3.95 acc/mvm; which is lower than the statewide accident rate of 4.47 acc/mvm for a four-lane urban highway. 45% of the 42 accidents were related to slippery pavement; 14 accidents occurred on wet pavement and 5 on snow, slush and/or icy pavement. The posted speed limit is 30 mph and the 85th percentile speed is 38 mph.

The predominant accident patterns identified were rear-ends and lane change. Twenty four accidents involved vehicles being rear ended while either stopped or slowed on NYS Route 3. Fourteen accidents involved lane changes. The remaining 4 accidents were: left turn, right turn, u-turn, and hit a dog.

Of the 42 accidents, there were:
- Twenty two at Breen Avenue/Sand Street intersection – 16 rear-end (10 eastbound, 6 westbound), 4 lane change to avoid turning/stopped vehicles (2 eastbound, 2 westbound), 1 left turn and 1 right turn.
- Eleven between Breen Avenue/Sand Street and Scio Street intersections – 1 eastbound vehicle changed lanes to avoid an emergency vehicle and hit the bridge curb, 3 westbound lane change (1 on the bridge), 4 rear-end (3 eastbound vehicles stopped for traffic and were rear ended and 1 westbound vehicle stopped for a left turning vehicle
and was rear-ended), 1 westbound lane change avoiding a traffic cone, 1 U-turn and 1 dog.

- Four at the Scio Street intersection – 2 eastbound lane change, 1 eastbound rear-end, and 1 westbound rear-end.
- The remaining accidents were 1 westbound vehicle rear-ended a right turning vehicle west of Breen Avenue; four east of Scio Street (1 westbound vehicle hit a disabled vehicle, 1 eastbound lane change and 2 westbound lane change).

The predominate accident types are:

Exhibit 2.3.1.8

<table>
<thead>
<tr>
<th>Type of Collision</th>
<th>Number</th>
<th>Percentage</th>
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<tr>
<td>Animal</td>
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<td>2</td>
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<tr>
<td>Rear End</td>
<td>24</td>
<td>57</td>
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<tr>
<td>Lane Change</td>
<td>14</td>
<td>33</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>7</td>
</tr>
</tbody>
</table>

Constructing left turn lanes on NYS Route 3 at Breen Avenue and/or Sand Street would reduce rear end and lane change accidents.

2.3.1.9. Existing Police, Fire Protection and Ambulance Access -

The closest City of Watertown Fire Department is located at 224 South Massey Street Watertown, NY 13601; approximately one block southeast of the bridge.

The City of Watertown Police Department and Jefferson County Sheriff’s Department are located at 751 Waterman Drive Watertown, NY 13601; approximately a quarter mile west from BIN 1000500.

Guilfoyle emergency and ambulance respond unit is located at 438 Newell Street in Watertown, NY 13601; approximately 5 minute away from the project site.

The project site at BIN 1000500 is under the jurisdiction of the City of Watertown Police Department.

2.3.1.10. Parking Regulations and Parking Related Conditions -

Parking on BIN 1000500 and on Arsenal Street around the project site is restricted.

2.3.1.11. Lighting -

There are some street lights on BIN 1000500 and on Arsenal Street. The City of Watertown owns the lights and National Grid maintains them.

2.3.1.12. Ownership and Maintenance Jurisdiction -

See Exhibit 2.3.1.12 for the Maintenance Jurisdiction table from the record plans for the contract which constructed the bridge.
2.3.2. Multimodal

2.3.2.1. Pedestrians -
Pedestrians are being accommodated on the existing 4’.11 sidewalks on both side of the highway.

2.3.2.2. Bicyclists -
NYS Route 3 (Arsenal Street) is a designated bicycle route and an Olympic Trail Scenic Byway. However, there are no separate provisions for bicycles. The occasional bicyclists use the travel lane on NYS Route 3.

The highway is considered important to bicycle tourism by the city and county. Therefore, there is an identified need for bicycle, pedestrian, transit or “way finding” signs that could be incorporated into the project.

2.3.2.3. Transit -
Watertown City Bus Company operates buses that use the bridge. However, there are no bus stops within the project limits.
2.3.2.4. Airports, Railroad Stations, and Ports -
There are no airports or port entrances within the vicinity of the project limits. The bridge passes over CSX railroad; however, there are no railroad stations within 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 -
The abutting highway on both ends of the structure consists of one 12 ft outside travel lane with a 10 ft inside lane in each direction. Refer to the Typical Sections, Plan and Profile sheets in Appendix A.

2.3.3.2. Geometric Design Elements Not Meeting Minimum Standards -

2.3.3.2.(1) Critical Design Elements -
The vertical clearance over the Railroad is non-standard (21.3 ft over railroad spur line and 21.7 ft over CSX mainline). Refer to section 3.2.3 for the standard vertical clearance.

2.3.3.2.(2) Other Design Parameters -
The approach railing of the bridge consists of W-beam with railroad rail post on the south and north sides of the bridge. The bridge rail consists of an older style four rail system on both sides. The W-Beam and the transition from W-Beam approach rail to the bridge rail is non-conforming. Additionally, guiderail runs are broken abruptly for light standard and have terminations which are non-conforming. Refer to exhibit 2.3.3.8 for details about guiderails.

2.3.3.3. Pavement and Shoulder -
The pavement condition rating of NYS Route 3 at RM 3 7302 2012 is “9”. A rating of “9” indicates excellent condition with no significant surface distress.

2.3.3.4. Drainage Systems -
The existing closed drainage system within the project limit is in very poor condition and will need continued maintenance. The drainage system around the immediate bridge approaches also need to be addressed as part of this project.

2.3.3.5. Geotechnical -
The following recommendations are based on a preliminary geotechnical evaluation for the subject project.

Preliminary Recommendations
Additional borings may be taken (in-house) for light pole foundations if specifically not in an existing engineered fill area.

- GEB assistance will be required for recommendations adjacent to railroad facilities.
- GEB evaluation will be required for foundation and wall design (temporary/permanent) and any change in embankment geometry.
- Fill slope gradients are recommended at 1:2 (V:H) maximum with slope protection needs. Site drainage and grading improvements may be addressed.

Refer to Appendix F for a complete geotechnical report.
2.3.3.6. Structure -

2.3.3.6. (1) Description:

Exhibit 2.3.3.6-1

<table>
<thead>
<tr>
<th>DATA</th>
<th>EXISTING STRUCTURE</th>
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</thead>
<tbody>
<tr>
<td>Feature Carried/Crossed</td>
<td>NYS Route 3</td>
</tr>
<tr>
<td>Type of Bridge</td>
<td>Stringer /Multi Beam or Girder</td>
</tr>
<tr>
<td>Number and Length of Spans</td>
<td>4 spans</td>
</tr>
<tr>
<td>Lane Width(s)</td>
<td>Four 11 ft. lanes</td>
</tr>
<tr>
<td>Shoulder Width(s)</td>
<td>0 ft.</td>
</tr>
<tr>
<td>Sidewalk(s)</td>
<td>Two 4.1 ft sidewalk</td>
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<tr>
<td>Utilities Carried</td>
<td>Verizon cables, City of Watertown Lights, City of Watertown Water Line.</td>
</tr>
<tr>
<td>Federal Sufficiency Rating</td>
<td>54.6</td>
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<tr>
<td>State Condition Rating</td>
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2.3.3.6.(2)  Clearances (Horizontal/Vertical) -

Exhibit 2.3.3.6-2

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<thead>
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<tr>
<td>Horizontal Clearance(s)</td>
<td>4.9 ft NYS Route 3</td>
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<tr>
<td></td>
<td>13.6 ft. railroad spur line</td>
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<tr>
<td></td>
<td>26.9 ft. CSX Mainline</td>
</tr>
<tr>
<td>Vertical Clearance(s)</td>
<td>21.3 ft. railroad spur line</td>
</tr>
<tr>
<td></td>
<td>21.7 ft. CSX Mainline</td>
</tr>
<tr>
<td></td>
<td>23.3 ft. over the bridge</td>
</tr>
</tbody>
</table>
2.3.3.6.(3) History & Deficiencies -
See Section 2.3.3.6 (4) Inspection below for deficiencies.
Note:
Flags 3A140020 and 3A140021 for spalled or delaminated concrete in span 4, over roadways were removed because the conditions are not in a PIA state.
### 2.3.3.6.(4) Inspection -
This is a stringer /multi beam or girder with a maximum span of 81 ft. The following information is based on 2016 Biennial inspection report.

#### Element Assessment By Span *

<table>
<thead>
<tr>
<th>Element **</th>
<th>Total Quantity</th>
<th>Unit</th>
<th>CS-1</th>
<th>CS-2</th>
<th>CS-3</th>
<th>CS-4</th>
<th>CS-5</th>
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<td></td>
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<td>234-Reinforced Concrete Pier Cap</td>
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<td>ft</td>
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#### Element Assessment Summary Table

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<tr>
<th>Element</th>
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<th>CS-1</th>
<th>CS-2</th>
<th>CS-3</th>
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<tr>
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<td>515 - Steel Protective Coating</td>
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<td>each</td>
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<tr>
<td>515 - Steel Protective Coating</td>
<td>14</td>
<td>each</td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PR852 - Pier Pedestal</td>
<td>7</td>
<td>each</td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 - Reinforced Concrete Deck</td>
<td>4617</td>
<td>ft²</td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>510 - Wearing Surfaces</td>
<td>3608</td>
<td>ft²</td>
<td>2526</td>
<td>1082</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>107 - Steel Open Girder/Beam</td>
<td>571</td>
<td>ft</td>
<td>571</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>515 - Steel Protective Coating</td>
<td>5171</td>
<td>ft²</td>
<td>4396</td>
<td>775</td>
<td>0</td>
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<tr>
<td>810 - Sidewalk</td>
<td>820</td>
<td>ft²</td>
<td>735</td>
<td>85</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Span Number 4</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EA220 - Reinforced Concrete Pile/Cap Footing</td>
<td>109</td>
<td>ft</td>
<td></td>
<td></td>
<td>109</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EA225 - Steel Pile</td>
<td>35</td>
<td>each</td>
<td></td>
<td></td>
<td>35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EA302 - Compression Joint Seal</td>
<td>69</td>
<td>ft</td>
<td>69</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EA311 - Movable Bearing</td>
<td>7</td>
<td>each</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>515 - Steel Protective Coating</td>
<td>14</td>
<td>each</td>
<td>4</td>
<td>7</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EA321 - Reinforced Concrete Approach Slab</td>
<td>2420</td>
<td>ft²</td>
<td>2420</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PR313 - Fixed Bearing</td>
<td>7</td>
<td>each</td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>515 - Steel Protective Coating</td>
<td>14</td>
<td>each</td>
<td>4</td>
<td>7</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 - Reinforced Concrete Deck</td>
<td>3941</td>
<td>ft²</td>
<td>3941</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>510 - Wearing Surfaces</td>
<td>3080</td>
<td>ft²</td>
<td>2156</td>
<td>924</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>107 - Steel Open Girder/Beam</td>
<td>487</td>
<td>ft</td>
<td>487</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>515 - Steel Protective Coating</td>
<td>4385</td>
<td>ft²</td>
<td>3725</td>
<td>660</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>810 - Sidewalk</td>
<td>700</td>
<td>ft²</td>
<td>625</td>
<td>75</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Span 1: 12 - Reinforced Concrete Deck
The structural deck in each span has areas of dampness, cracking, hollow sounding concrete, spalling and/or delamination. Safety Flags 3A140020 and 3A140021 for spalled or delaminated concrete in span 4, over roadways were removed because the conditions are not in a PIA state. The general and extensive nature of the deck deterioration gives all areas a CS3 rating.
The deck wearing surface has transverse cracking over all pier joints and all spans have isolated areas of wheel rutting with asphalt patching, cracking and raveling. The ride quality is slightly diminished.

Span 1: 107 - Steel Open Girder/Beam
The bearing stiffeners of the right fascia girder at the begin abutment has up to 50% section loss in the lower 6 inches. The lower 3 inches of the fascia girder webs have up to 15% section loss at the abutments and piers, extending up to 1.5 feet from the bearings.

Span 1: BA215 - Reinforced Concrete Abutment
The begin abutment bridge seat has a 1/4 inch open crack for the full width of bay 1 which has separated and spalled off at the top. A full height mostly diagonal crack is present in bay 1 of the begin abutment backwall and there is up to 3 inch wide spalling along the crack. Bay 6 of the begin abutment backwall has a 6 square foot area of deterioration with up to 2 inch deep spalling and this area is covered with efflorescence from leakage through the joint. There is no apparent loss of embankment backwall at either location.

Span 1: BA220 - Reinforced Concrete Pile/Cap Footing
Span 4: EA220 - Reinforced Concrete Pile/Cap Footing
The begin and end concrete footings are not visible.

Span 1: PR234 - Reinforced Concrete Pier Cap
The concrete cap beam at pier 1 has cracking, delamination and spalling with exposed corroded reinforcement along the bottom and on the underside between columns 4 & 5 at the begin and end faces and between columns 1 & 2 at the end face. An area of spalling with rust staining has occurred on the begin face of the pier 1 cap beam beneath girder G7 (photo 19). A full width by up to 4 foot long by up to 3 inch deep area of severe deterioration and spalling with exposed corroded reinforcement has occurred on the underside of the pier 1 cap beam midway between columns 2 & 3 (photo 22). The exposed longitudinal reinforcing is beginning to reach structurally significant section loss. Also, the longitudinal and transverse exposed reinforcing may be losing its bond with the concrete. The right face of pedestal 2 and the left face of pedestal 4 on Pier 1 have cracking and rust staining. The begin face of pedestal 7 on Pier 1 has deep spalling with exposed corroded reinforcement (photo 20). Other pedestals have variable amounts of rust staining, mostly on the left and right faces. The cap beam is given both condition states 3 and 4 quantities.

Span 1: PR234 - Reinforced Concrete Pier Cap
The concrete cap beam at pier 1 has cracking, delamination and spalling with exposed corroded reinforcement along the bottom and on the underside between columns 4 & 5 at the begin and end faces and between columns 1 & 2 at the end face. An area of spalling with rust staining has occurred on the begin face of the pier 1 cap beam beneath girder G7 (photo 19). A full width by up to 4 foot long by up to 3 inch deep area of severe deterioration and spalling with exposed corroded reinforcement has occurred on the underside of the pier 1 cap beam midway between columns 2 & 3 (photo 22). The exposed longitudinal reinforcing is beginning to reach structurally significant section loss. Also, the longitudinal and transverse exposed reinforcing may be losing its bond with the concrete. The begin face of pedestal 7 on Pier 1 has deep spalling with exposed corroded reinforcement (photo 20). Other pedestals have variable amounts of rust staining, mostly on the left and right faces. The cap beam is given both condition states 3 and 4 quantities.
Span 1: BA302 - Compression Joint Seal
Both the begin and end abutment joints with deck have transverse cracks in the asphalt along the joints allowing water to leak onto substructure elements below. The undersides of both abutment joints have rust, corrosion, rust staining and cracked concrete with efflorescence and dripping efflorescence full width of the bridge. Because the joints are paved over, they are only partially functional for expansion.

Span 1: PR302 - Compression Joint Seal
All superstructure joints have been overlaid with asphalt concrete. The asphalt concrete wearing surface over superstructure joints at all piers has transverse cracking along the joints allowing significant water leakage onto substructure elements below. The concrete supporting the superstructure joints above each pier is deteriorated with cracking, efflorescence and spalling with exposed corroded reinforcement.

Span 1: BA800 – Scour
Bank erosion from 6 to 12 inches deep has occurred on an up to 80 square foot areas of the embankment in front of the begin abutment. This embankment consists of a gravel to cobble sized material that is somewhat loose.

Span 1: 810 – Sidewalk
A percentage of right sidewalk is spalled shallowly, generally just inside the curb line.

Span 1: BA831 - Steel Beam End
The bearing stiffeners of the right fascia girder at the begin abutment has up to 50% section loss in the lower 6 inches. The lower 3 inches of the fascia girder webs have up to 15% section loss at the abutments and piers, extending up to 1.5 feet from the bearings.

Span 1: BA850 – Backwall
A full height mostly diagonal crack is present in bay 1 of the begin abutment backwall and there is up to 3 inch wide spalling along the crack. Bay 6 of the begin abutment backwall has a 6 square foot area of deterioration with up to 2 inch deep spalling and this area is covered with efflorescence from leakage through the joint. There is no apparent loss of embankment backwall at either location.

Span 1: PR852 - Pier Pedestal
The right face of pedestal 2 and the left face of pedestal 4 on Pier 1 have cracking and rust staining. The begin face of pedestal 7 on Pier 1 has deep spalling with exposed corroded reinforcement. Other pedestals have variable amounts of rust staining, mostly on the left and right faces.

Span 2: 12 - Reinforced Concrete Deck
Refer to the deck condition sketches for spans 1 - 4. The structural deck in each span has areas of dampness, cracking, hollow sounding concrete, spalling and/or delamination. Safety Flags 3A140020 and 3A140021 for spalled or delaminated concrete in span 4, over roadways were removed. The general and extensive nature of the deck deterioration gives all areas a CS3 rating.

Span 2: 12 - Reinforced Concrete Deck
The structural deck in each span has areas of dampness, cracking, hollow sounding concrete, spalling and/or delamination. Safety Flags 3A140020 and 3A140021 for spalled or delaminated concrete in span 4, over roadways were removed because the conditions are not in a PIA state. The general and extensive nature of the deck deterioration gives all areas a CS3 rating.
Span 2: 510 - Wearing Surfaces (12 - Reinforced Concrete Deck)
The deck wearing surface has transverse cracking over all pier joints and all spans have isolated areas of wheel rutting with asphalt patching, cracking and raveling. The ride quality is slightly diminished.

Span 2: PR234 - Reinforced Concrete Pier Cap
The pier 2 cap beam has been refaced with concrete at several locations. Cracking and shallow delamination is beginning to show at the repaired locations. The right face of pedestal 2, the left face of pedestal 3 and the begin face of pedestal 7 on pier 2 have been re-faced, but the repaired areas are hollow sounding and delaminating from the base concrete. In addition, the begin face of pedestal 1 on pier 2 has minor spalling with rust staining. The other pedestals have similar, but less extensive defects.

Span 2: PR302 - Compression Joint Seal
All superstructure joints have been overlaid with asphalt concrete. The asphalt concrete wearing surface over superstructure joints at all piers has transverse cracking along the joints allowing significant water leakage onto substructure elements below. The concrete supporting the superstructure joints above each pier is deteriorated with cracking, efflorescence and spalling with exposed corroded reinforcement.

Span 2: PR313 - Fixed Bearing
Span 3: PR313 - Fixed Bearing
Span 4: PR313 - Fixed Bearing
The pier fixed bearings are heavily rusted and the rotational function has been lost from continued and long term joint leakage.

Span 2: PR852 - Pier Pedestal
The right face of pedestal 2, the left face of pedestal 3 and the begin face of pedestal 7 on pier 2 have been re-faced, but the repaired areas are hollow sounding and delaminating from the base concrete. In addition, the begin face of pedestal 1 on pier 2 has minor spalling with rust staining. The other pedestals have similar, but less extensive defects.

Span 3: 12 - Reinforced Concrete Deck
The structural deck in each span has areas of dampness, cracking, hollow sounding concrete, spalling and/or delamination. Safety Flags 3A140020 and 3A140021 for spalled or delaminated concrete in span 4, over roadways were removed because the conditions are not in a PIA state. The general and extensive nature of the deck deterioration gives all areas a CS3 rating.

Span 3: 510 - Wearing Surfaces (12 - Reinforced Concrete Deck)
The deck wearing surface has transverse cracking over all pier joints and all spans have isolated areas of wheel rutting with asphalt patching, cracking and raveling. The ride quality is slightly diminished.

Span 3: PR234 - Reinforced Concrete Pier Cap
The end face of the pier 3 concrete cap beam below pedestal 7 and the begin face lower corner between Girders G1 & G2 were re-faced previously with concrete. The repair to the Begin face between Girders G1 & G2 has failed. A 6 foot long open horizontal crack has occurred near the top of the end face of the Pier 3 cap beam between Columns 2 & 3. An additional 6 foot long open horizontal crack has occurred near the bottom of the end face of the pier 3 cap beam at column 5. Other areas of the Pier 3 cap beam have more minor scattered hairline cracks with rust staining along upper corners of the begin and end faces. The right face of pedestal 6 on Pier 3 has deterioration with spalling and exposed corroded
reinforcement. The spalling does not extend under the bearing plate. The left face of pedestal 4 has rust staining. Pedestal 7 has minor cracking.

Span 3: PR302 - Compression Joint Seal
All superstructure joints have been overlaid with asphalt concrete. The asphalt concrete wearing surface over superstructure joints at all piers has transverse cracking along the joints allowing significant water leakage onto substructure elements below. The concrete supporting the superstructure joints above each pier is deteriorated with cracking, efflorescence and spalling with exposed corroded reinforcement.

Span 3: PR852 - Pier Pedestal
The right face of pedestal 6 on Pier 3 has deterioration with spalling and exposed corroded reinforcement. The spalling does not extend under the bearing plate. The left face of pedestal 4 has rust staining. Pedestal 7 has minor cracking.

Span 4: 12 - Reinforced Concrete Deck
The structural deck in each span has areas of dampness, cracking, hollow sounding concrete, spalling and/or delamination. Safety Flags 3A140020 and 3A140021 for spalled or delaminated concrete in span 4, over roadways were removed because the conditions are not in a PIA state. The general and extensive nature of the deck deterioration gives all areas a CS3 rating.

Span 4: 510 - Wearing Surfaces (12 - Reinforced Concrete Deck)
The deck wearing surface has transverse cracking over all pier joints and all spans have isolated areas of wheel rutting with asphalt patching, cracking and raveling. The ride quality is slightly diminished.

Span 4: EA302 - Compression Joint Seal
Both the begin and end abutment joints with deck have transverse cracks in the asphalt along the joints allowing water to leak onto substructure elements below. The undersides of both abutment joints have rust, corrosion, rust staining and cracked concrete with efflorescence and dripping efflorescence full width of the bridge. Because the joints are paved over, they are only partially functional for expansion.

A complete 2016 inspection report can be found on the ProjectWise (Planning folder) under PIN 711516.

Bridge Safety Assurance Report -
The Bridge Safety Assurance (BSA) found that the bridge capacity does not require posting; however, it is well below the current HL-93 standard for new bridges. The bridge is already composite and gaining capacity without a superstructure replacement may be difficult. The detour length is relatively short using city streets. The overload classification is low and is rated “3”.

The bridge is over railroad and two roadways. There is no evidence of impact damage. The minimum vertical clearance over the railroad is 21.3 ft; which is less than the current standards. The vertical clearance for the roadways under the bridge is greater than current design standards. The collision classification is low and is rated “4”.

The piers on this structure are no more vulnerable to failure due to concrete details than a structure built to current standards. The concrete classification is low and is rated “5”.

The bridge is automatically given a vulnerability rating of “4” for seismic. Inspection action is not required because the bridge is located in Jefferson County; which is a Seismic Performance
Category A; which means that a full assessment is not required due to a low probability of earthquake damage in the useful life of the bridge.

Both Steel and Overload vulnerability have capital program actions required. A capital project will be required to address the capacity of structure and reduce the fatigue details in the structure.

2.3.3.6.(5) Restrictions -
The bridge is still functioning correctly. There are no travel restrictions as of October 20, 2014 inspection.

Based on Virtis: BIN 1000500 was rated using the Department’s Level 2 load rating analysis program (Virtis) and the results are given in the table below:

<table>
<thead>
<tr>
<th>Exhibit: 2.3.3.6(5)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Virtis Level II Rating</td>
<td></td>
</tr>
<tr>
<td>Year</td>
<td>2015</td>
</tr>
<tr>
<td>H Inventory</td>
<td>25 tons</td>
</tr>
<tr>
<td>H Operating</td>
<td>42 tons</td>
</tr>
<tr>
<td>HS Inventory</td>
<td>34 tons</td>
</tr>
<tr>
<td>HS Operating</td>
<td>57 tons</td>
</tr>
</tbody>
</table>

Load Rating: The bridge for the replacement alternatives will be designed for HL-93 live load and the New York State Design Permit Vehicle. The most recent load rating on file for BIN 1000500 was a Level 2 rating performed in 2015. No restriction has been issued.

2.3.3.6.(6) Future Conditions -
The condition of the bridge (multi-beam) will continue to deteriorate until it requires posting and ultimate closure. The continuous deterioration of the bridge deck will affect its ability to carry traffic if not addressed.

2.3.3.6.(7) Waterway -
The structure is not located over navigable waterway; therefore, a Coast Guard Jurisdiction Checklist is not required.

2.3.3.7. Hydraulics of Bridges and Culverts -
There are no bridges or large culverts over water within the project limits. Hydraulics evaluation is not required.
### 2.3.3.8. Guide Railing, Median Barriers and Impact Attenuators -

Exhibit 2.3.3.8

<table>
<thead>
<tr>
<th>Type</th>
<th>Location/Side</th>
<th>Length</th>
<th>Condition</th>
</tr>
</thead>
</table>
| W-Beam (with Railroad Rail Post) | South- West           | 454’   | • Old style w-beam  
 • Painted Post (some corrosion )  
 • Galvanization worn  
 • Some of the runs are lapped in the wrong direction  
 • Run broken abruptly for light standard |
| Bridge Rail (4 rail)    | South side of bridge   | 325’   | • Tuning Fork transition on both quadrants  
 • Height from 22 ¾ to 26 ¾ (slightly low)  
 • Transition from W-beam approach rail to the bridge rail is slightly non-conforming |
| W-Beam (with Railroad Rail Post) | South-East            | 116’   | • Old style w-beam  
 • Painted Post (some corrosion )  
 • Galvanization worn  
 • Abrupt termination |
| W-Beam (with Railroad Rail Post) | North-East            | 172’   | • Old style w-beam  
 • Painted Post (some corrosion )  
 • Galvanization worn  
 • Some of the runs are lapped in the wrong direction  
 • Height 24” to 26” (relative to the sidewalk)  
 • Abrupt termination |
| Bridge Rail (4 rail)    | North side of bridge   | 325’   | • True corrosion on the top rail  
 • Galvanization is worn  
 • Tuning Fork transition on both quadrants |
| W-Beam (with Railroad Rail Post) | North-West            | 505’   | • Old style w-beam  
 • Painted Post (some corrosion )  
 • Galvanization worn  
 • Height between 20” and 26”  
 • Run broken abruptly for light standard |
2.3.3.9. Utilities -
Verizon has multiple cables in the existing sidewalk on the south side of the bridge. There is also street lighting and an electric cable in conduit cast into the bridge deck presently located on state Right-of-Way. The bridge also carries the City of Watertown's waterline.

Exhibit 2.3.3.9

<table>
<thead>
<tr>
<th>Owner</th>
<th>Type</th>
<th>Location</th>
<th>Conflict</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Watertown</td>
<td>On Structure - Water</td>
<td>There is an existing Water main carried along the northern side of the structure</td>
<td>Could be temporarily rerouted during construction.</td>
</tr>
<tr>
<td>Niagara Mohawk d/b/a National Grid</td>
<td>Aerial Sub Transmission</td>
<td>Overhead - The high voltage sub transmission lines run directly overhead on the western side of the structure</td>
<td>These lines will be in conflict of any lifting operation.</td>
</tr>
<tr>
<td>Niagara Mohawk d/b/a National Grid</td>
<td>Aerial Distribution</td>
<td>Overhead - The high voltage distribution lines run directly overhead on the eastern side of the structure</td>
<td>These lines will be in conflict of any lifting operation.</td>
</tr>
<tr>
<td>City of Watertown</td>
<td>On Structure - Street Lighting</td>
<td>There is currently street lighting on both sides of the structure. There is an existing Street Lighting Electrical Box Under the structure on the ground.</td>
<td>The existing street lighting on the structure will be removed &amp; will be replaced by a wooden utility pole with cobra head light on each end of the structure. The existing street lighting electrical box on the ground under the structure will be removed &amp; not replaced.</td>
</tr>
<tr>
<td>Verizon New York, Inc</td>
<td>In Structure Telecommunication</td>
<td>There are existing Telecommunication lines in the sidewalk of the structure on the South side</td>
<td>These lines will need to be relocated out of the sidewalk</td>
</tr>
</tbody>
</table>

2.3.3.10. Railroad Facilities -
The existing structure crosses over a single railroad track at crossing number 512939J. The railroad is owned by CSX Transportation Inc, Albany Division and operates as a freight train service. The track speed at the project site is 40 miles per hour. The structure also goes over a spur line that ends at Bellew Street, west of the bridge.

The construction plans will require review and approval by CSX Transportation. A NYS Railroad Agreement will be required. The contractor will need to coordinate operations with CSX. CSX may have an inspector present to make sure the project is not adversely affecting the railroad’s property and operations.
2.3.3.10 Existing Railroad Track

<table>
<thead>
<tr>
<th>Owner</th>
<th>Location</th>
<th>Crossing</th>
<th>Side</th>
<th>Length</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSX Transportation</td>
<td>Cedar Street</td>
<td>NYS Route 3</td>
<td>Under the Bridge</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Under the Bridge</td>
<td>Arsenal St.</td>
<td>Under Bridge</td>
<td>project</td>
<td></td>
</tr>
</tbody>
</table>

2.3.4. Potential Enhancement Opportunities
There are no practical opportunities for environmental enhancements within the project limits.

2.3.4.1. Landscape -

2.3.4.1. (1) Terrain -
The terrain within this project limit is 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 -
A small metal rail and a home entrance are at a close proximity to the bridge.

The visual environment includes residences, businesses, and a cemetery.

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 in Chapter 1 of this report.

3.1. Alternatives Considered and Eliminated from Further Study

**Alternative I - The No Build “Null” Alternative**

The no-build/maintenance alternative will result in the continued deterioration of the structure, resulting in increased maintenance and eventually requiring the structure to be closed to traffic. This alternative will not satisfy the project objective or the programming goal and therefore will not be considered further. This alternative will be carried through the report for comparison purpose only.

**Alternative II – Major Rehabilitation – Deck Replacement**

This alternative would require replacing the deck, putting new bearings and pedestals, repairing the substructure and steel as well as painting. This alternative meets all the project objectives stated in section 1.2.3. The cost for this alternative is estimated to be $5.304 M. The cost for this alternative will include a pier crash protection for the train under the existing bridge. The bridge costs include the Accelerated Bridge Construction methods (precast deck panels). Based on the bridge estimate only (bridge deck $3.701 and bridge replacement is $4.227), this alternative meets the project objectives, but at a cost higher than 70% of the replacement cost with an estimated life cycle of approximately 25 years; therefore, this alternative will be dismissed from further consideration.

**Alternative III – Superstructure Replacement**

This alternative consists of removing the existing steel superstructure, replacing it with a new superstructure and modernizing the piers. The cost for this alternative is estimated to be $6.864 M. The bridge costs include the Accelerated Bridge Construction methods (precast superstructure units/inverset type units). Based on the bridge estimate only (superstructure replacement is $4.442 and bridge replacement is $4.227), this alternative meets the project objectives, but at a cost exceeding the replacement cost with an estimated life cycle of approximately 35 years; therefore, this alternative will be dismissed from further consideration.

3.2. Feasible Build Alternatives

3.2.1. Description of Feasible Alternatives

**Alternative IV - Bridge Replacement**

This alternative would involve the complete removal of the existing structure, and replacing it with a new structure on the same horizontal alignment. This alternative accommodates two 11’ lanes adjacent to center line and two 14’ lanes adjacent to the curb. This alternative would also involve performing any highway work required to tie the proposed structure in with the existing abutting highway segments. The new structure is anticipated to have multi span structure. The cost for this alternative is estimated to be $9.256 M.
Key elements of this alternative include:

Exhibit 3.2.1 (1)

<table>
<thead>
<tr>
<th>Geometry</th>
<th>This alternative accommodates two 11' lanes adjacent to center line and two 14' lanes adjacent to curb.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational</td>
<td>This alternative does not significantly affect operations.</td>
</tr>
<tr>
<td>Control of Access</td>
<td>All control of access components for this alternative will meet AASHTO’s Policy on Design Standards for Urban Arterial Route.</td>
</tr>
<tr>
<td>Right of Way</td>
<td>It is anticipated that approximately fifteen temporary easements will be required for overall site access and construction of an on-site diversion that would be necessary to maintain traffic around the site during the construction of the new bridge.</td>
</tr>
<tr>
<td>Cost</td>
<td>The estimated cost of this alternative from the table in Section 1.5 of this report is $8.900M.</td>
</tr>
<tr>
<td>Project Goals</td>
<td>This alternative meets all project objectives.</td>
</tr>
</tbody>
</table>

Exhibit 3.2.1 (2)

<table>
<thead>
<tr>
<th>Activities</th>
<th>Comparison of Alternatives</th>
<th>Project Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alternative 1</td>
<td>Alternative 2</td>
</tr>
<tr>
<td>Construction Costs</td>
<td>Null</td>
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<tr>
<td>WZTC</td>
<td>$0.000</td>
<td>$3.701 M</td>
</tr>
<tr>
<td>Highway</td>
<td>$0.000</td>
<td>$0.327 M</td>
</tr>
<tr>
<td>Subtotal (2014 Dollars)</td>
<td>$0.000</td>
<td>$4.100 M</td>
</tr>
<tr>
<td>Contingency (15% @ Design Approval)&lt;sup&gt;3&lt;/sup&gt;</td>
<td>$0.000</td>
<td>$0.620 M</td>
</tr>
<tr>
<td>Subtotal (2014 Dollars)</td>
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<td>$4.700 M</td>
</tr>
<tr>
<td>Field Change Order&lt;sup&gt;2&lt;/sup&gt;</td>
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<td>$0.240 M</td>
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<tr>
<td>Subtotal (2014 Dollars)</td>
<td>$0.000</td>
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<td>Mobilization (4%)</td>
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<td>$0.200 M</td>
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<td>Subtotal (2014 Dollars)</td>
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<tr>
<td>Expected Award Amount&lt;sup&gt;5&lt;/sup&gt;</td>
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<td>$5.304 M</td>
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<tr>
<td>Total Inflation Rate: 4.00%</td>
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<td></td>
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<tr>
<td>Estimate Year: 2017</td>
<td></td>
<td></td>
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<tr>
<td>Mid-Point of Construction Year: 2019</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction Inspection (10%)</td>
<td>$0.000</td>
<td>$0.530 M</td>
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<tr>
<td>ROW Costs (2009 Dollars)</td>
<td>$0.000</td>
<td>$0.689 M</td>
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<tr>
<td>Total Project Costs</td>
<td>$0.000</td>
<td>$6.500 M</td>
</tr>
</tbody>
</table>

Notes:
1. NYSDOT recommends standard contingencies: 25% Scoping stage, 15% Design Approval stage, 5% Advanced Detail Plans stage.
2. According to HDM Chapter 21 Section 21.3.9.4, EB 03-029 & EB 06-057.
3. The total inflation rate is obtained from tables contained within PSS for the time period between the estimate year and the mid-point of construction.
3.2.2 Preferred Alternative
While Alternative 4 (Bridge Replacement) is identified as the preferred alternative, all feasible alternatives are under consideration. The selection of the preferred alternative will not be finalized until the alternatives' impacts and comments on the draft design approval document have been fully evaluated.

3.2.3. Design Criteria for Feasible Alternative(s)

3.2.3.1. Design Standards -
3.2.3.2. Critical Design Elements -

<table>
<thead>
<tr>
<th>Exhibit 3.2.3.2 / Critical Design Elements</th>
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<tbody>
<tr>
<td>PIN: 7115.16</td>
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<tr>
<td>Route No. &amp; Name:</td>
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<tr>
<td>Project Type:</td>
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<td>% Trucks:</td>
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<td>ADT:</td>
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<table>
<thead>
<tr>
<th>Element</th>
<th>Standard</th>
<th>Existing Condition</th>
<th>Proposed Condition</th>
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<tbody>
<tr>
<td>1 Design Speed</td>
<td>40 mph¹</td>
<td>30 mph posted</td>
<td>40 mph</td>
</tr>
<tr>
<td>2 Lane Width</td>
<td>11 ft. min</td>
<td>12 ft. adjacent to curbing to accommodate bicyclists in low speed</td>
<td>Four at 11 ft.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Two at 11 ft. lanes adjacent to center line.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Two at 14 ft. lanes adjacent to curb</td>
</tr>
<tr>
<td>3 Shoulder Width</td>
<td>0 ft. (HDM section 2.7.2.2.c)</td>
<td>0 ft.</td>
<td>0 ft.²</td>
</tr>
<tr>
<td>Approach Shoulder Width</td>
<td>0 ft.</td>
<td>0 ft.</td>
<td>0 ft.²</td>
</tr>
<tr>
<td>4 Bridge Roadway Width</td>
<td>46 ft. min (HDM section 2.7.2.2.d)</td>
<td>44 ft.</td>
<td>50 ft.</td>
</tr>
<tr>
<td>Approach Roadway Width</td>
<td>46 ft. min (HDM section 2.7.2.2.d)</td>
<td>44 ft.</td>
<td>50 ft.</td>
</tr>
<tr>
<td>5 Maximum Grade</td>
<td>8%</td>
<td>(HDM section 2.7.2.2.e)</td>
<td>6.5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6.5%</td>
</tr>
<tr>
<td>6 Horizontal Curvature</td>
<td>533 ft. (HDM section 2.7.2.2.f)</td>
<td>11,459 ft</td>
<td>11,451 ft</td>
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<tr>
<td>7 Super-elevation Rate</td>
<td>4% Maximum</td>
<td>HDM Section 2.7.2.2. G</td>
<td>Normal Crown</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Normal Crown</td>
</tr>
<tr>
<td>8 Stopping Sight Distance</td>
<td>305 ft. (HDM section 2.7.2.2.h)</td>
<td>337 ft.</td>
<td>308 ft.</td>
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<tr>
<td>9 Horizontal Clearance</td>
<td>0.0 ft. with barrier (HDM section 2.7.2.2.i)</td>
<td>5.2 ft.</td>
<td>5.2 ft.</td>
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<tr>
<td>10 Vertical Clearance (above Traveled way)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over NYS Route 3</td>
<td>14 ft. Min</td>
<td>14 ft. 6 in. Desirable</td>
<td>23.3 ft</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BM Table 2.2</td>
<td>22.7 ft</td>
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<tr>
<td>Over Railroad</td>
<td>22 ft. Min</td>
<td>23 ft. Desirable</td>
<td>21.3 ft. railroad spur line³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BM 2.4.2</td>
<td>21.7 ft. CSX Mainline³</td>
</tr>
<tr>
<td>Over Cedar &amp; Exchange Streets</td>
<td>14 ft. Min</td>
<td>14 ft. 6 in.</td>
<td>21.4 ft. Cedar Street</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>15.4 ft. Exchange Street</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>21.4 ft. Cedar Street</td>
</tr>
<tr>
<td>11 Travel Lane Cross Slope</td>
<td>1.5% Min. to 2% Max.</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HDM Section 2.7.2.2. K</td>
</tr>
<tr>
<td>12 Rollover</td>
<td>4% between travel lanes; 8% at edge of traveled way;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HDM Section 2.7.2.2 L</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Varies</td>
</tr>
<tr>
<td>13 Structural Capacity</td>
<td>HL- 93 &amp;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NYS DOT Design Permit Vehicle</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>BM Section 2.6.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HS-18.9 (34 tons)</td>
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<tr>
<td>14 Level of Service</td>
<td>N/A</td>
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3.2.3.3. Other Design Parameters -

<table>
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<tr>
<th>Exhibit 3.2.3.3 (2) / Other Design Parameters – BIN 1000500</th>
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<tbody>
<tr>
<td><strong>Element</strong></td>
</tr>
<tr>
<td>a Design Vehicle</td>
</tr>
<tr>
<td>b Level of Service (non-Interstate)</td>
</tr>
<tr>
<td>c Design Storm:</td>
</tr>
<tr>
<td>Culverts =</td>
</tr>
<tr>
<td>Storm Drainage Systems =</td>
</tr>
<tr>
<td>Ditches =</td>
</tr>
</tbody>
</table>

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 the highway.

3.3.1.2. Control of Access -
There is no control of access. This project will not change the control of access.

3.3.1.3. Traffic Control Devices -

3.3.1.3. (1) Traffic Signals:
There is a traffic signal at the intersection of Arsenal Street and North & South Meadow Streets. This intersection is approximately located 540 ft east of the BIN 1000500. No change is proposed for the signal at this intersection as part of this project.

3.3.1.3. (2) Signs:
All signs within the project limits will be analyzed in the final design phases for condition and compliance with current standards and replaced if required.

3.3.1.4. Intelligent Transportation Systems (ITS) -
No ITS measures are proposed.
3.3.1.5. Speeds and Delay -

3.3.1.5. (1) Proposed Speed Limit -
The posted speed limit within the project limits will be 30 mph.

3.3.1.5. (2) Travel Time Estimates -
Travel time estimates are not applicable for a bridge replacement project.

<table>
<thead>
<tr>
<th>Exhibit - 3.3.1.5 Speed Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route</td>
</tr>
<tr>
<td>Existing Speed Limit</td>
</tr>
<tr>
<td>Actual Operating Speed and Method Used</td>
</tr>
</tbody>
</table>

3.3.1.6. Traffic Volumes -
Since there are no anticipated changes in traffic volumes see Section 2.3.1.6 for existing traffic volumes. Refer to Appendix C for traffic flow diagrams. Refer to Exhibits 2.3.1.6-1 and 2.3.1.6-2 for a summary of the traffic data.

3.3.1.7. Level of Service and Mobility -

3.3.1.7 (1) At Project Completion & Design Year -
This project is not anticipated to significantly alter capacity within the project limits. See Exhibits 2.3.1.7-1 & 2.3.1.7-2 for the existing and projected level of service.

3.3.1.7 (2) Work Zone Safety & Mobility -

A. Work Zone Traffic Control Plan – WZTC Plan will be in conformance with the Manual of Uniform Traffic Control Devices (MUTCD) and all applicable supplements. The preferred WZTC is a temporary 4 lane bridge that would be installed on the north side of the existing bridge. The WZTC cost for this alternative is $1.877 M as estimated by Regional Structures personnel. There should be no delay associated with this WZTC option; therefore, no user costs would be applied as per HDM chapter 16. This use of a four lane temporary on-site diversion structure has been deemed a feasible WZTC option. See Exhibit 3.3.1.7 (2).

The option of stage construction, using one lane of traffic in each direction of traffic will not provide sufficient capacity for anticipated traffic volumes and is not anticipated to be feasible at this site.

One potential alternative route for circumventing the project using existing roads in the event the bridge is closed would entail the use of Coffeen Street; which is 1 block to the north of the bridge. Coffeen Street is however not considered a suitable detour because it lacks sufficient capacity and experiences heavy traffic during peak hours.
Exhibit 3.3.1.7 (2)

B. Special Provisions - Due to the ability to maintain traffic with acceptable delays during the daylight hours, night time construction will not be utilized. The use of time related provisions will be evaluated during final design. The work zone traffic control will need to be coordinated with local officials and residents.

C. Significant Projects (per 23 CFR 630.1010) - Region 7 has determined that the subject project is not significant per 23 CFR 630.1010. The project is not anticipated to cause sustained work zone impacts (as defined in 630.1004) that are greater than what is considered tolerable based on State policy and/or engineering judgment.

A Transportation Management Plan (TMP) will be prepared for the project consistent with 23 CFR 630.1012. The TMP will consist of a Temporary Traffic Control (TTC) plan. Transportation Operations (TO) and Public Information (PI) components of a TMP will be considered during final design.
**3.3.1.8. Safety Considerations, Accident History and Analysis -**

The NYSDOT Region 7 Traffic Safety and Mobility Office recommended construction of left turn lanes on NYS Route 3 at Breen Ave and/or Sand Street that would reduce rear-end and lane change accidents.

Traffic also recommended the improvement of driver's sight distance by flattening the vertical curve.

The guiderail and other appurtenances within the project limits will be replaced as required.

Drivers are braking on both downgrades on the crest vertical curve, whether or not there are stopped vehicles ahead. Decision and stopping sight distances should be long enough for drivers to perceive and react with time to either stop or change lanes behind potential queuing vehicles. Refer to section 3.3.3.1(3).

Several alternatives were investigated to address the Breen Ave/Sand St. accident pattern. The installation of left turn lanes were investigated and do to the lack of future planning for the adjacent highway segments and the impacts to occupied dwellings and existing cemeteries this alternative was dismissed. See figures 3.3.1.8.(1) and 3.3.1.8.(2) for preliminary layouts.

The alternative of converting the four lane section with two lanes in each direction into a section with three travel lanes and a “center two way left turn lane” was investigated. This section would be carried from Massy Street to the Breen Ave intersection. This would have two lanes of traffic in the eastbound direction and one lane of traffic in the westbound direction with the inner westbound lane of traffic being converted to the “center two way left turn lane”. The westbound traffic was studied to indicate the impact to the LOS and the congestion created. The result of this would be an unacceptable drop in operational efficiency. Congestion at the Meadow Street intersection would be well below acceptable standards. Therefore this alternative was dismissed.

The last alternative to address the accidents at the Breen Ave intersection was to implement a “Road Diet” and replace the four lane section from Massy Street to Breen Ave with one lane in each direction of travel, A “center two way left turn Lane” and a bicycle lane in each direction.

The current volume of traffic on Route 3 would cause considerable congestion and a drop in highway efficiency.

The City of Watertown is currently pursuing the option of a complimentary roadway parallel to Arsenal Street, located south of this project. If this connection is built there is the possibility of traffic volumes currently using Arsenal Street reduce to the point the “Road Diet” concept could be a feasible solution to the safety issues.

The current project does not include the Breen Ave intersection within the project work limits. The future plans to address this location are directly tied to the city’s plans for a parallel road to reduce traffic on Arsenal Street and to the future highway project for this section of Arsenal Street. This would allow for a design that would have the proper continuity with the remainder of the corridor.
3.3.1.9. Impacts on Police, Fire Protection and Ambulance Access -
This project is not anticipated to have a significant impact on police, fire protection, and ambulance service both during and after completion of construction. However, they will be notified before construction starts.

3.3.1.10. Parking Regulations and Parking Related Issues -
No changes are proposed.

3.3.1.11. Lighting -
The current lighting will be retained or replaced as deemed necessary. The City of Watertown owns the lights and National Grid maintains them.

3.3.1.12. Ownership and Maintenance Jurisdiction -
New York State and the NYSDOT will respectively continue ownership and maintenance responsibilities for BIN 1000500 and the highway.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Bridge/Highway</th>
<th>Limits</th>
<th>Feature(s) being Maintained</th>
<th>Project Length</th>
<th>Agency</th>
<th>Authority</th>
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<tbody>
<tr>
<td>1</td>
<td>BIN 1000500</td>
<td>RM 3 7302 2012</td>
<td>BIN 1000500</td>
<td>284'</td>
<td>NYSDOT</td>
<td>NYSDOT</td>
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<td>NYS Route 3</td>
<td>RM 3 7302 2011 - RM 3 7302 2013</td>
<td>BIN 1000500</td>
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<td>NYSDOT</td>
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<td>3</td>
<td>Railroad</td>
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<td>BIN 1000500</td>
<td>500’ from BIN 1000500</td>
<td>CSX Transportation</td>
<td>CSX Transportation</td>
</tr>
<tr>
<td>4</td>
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<td>BIN 1000500</td>
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<td>Scio St.</td>
<td>RM 3 7302 2012</td>
<td>BIN 1000500</td>
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<tr>
<td>6</td>
<td>Breen St.</td>
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<td>BIN 1000500</td>
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<td>City of Watertown</td>
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<td>BIN 1000500</td>
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<td>City of Watertown</td>
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<td>Sidewalks</td>
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<td>City of Watertown</td>
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<td>9</td>
<td>Drainage</td>
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<td>500’ from BIN 1000500</td>
<td>City of Watertown</td>
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<td>500’ from BIN 1000500</td>
<td>National Grid</td>
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<td>500’ from BIN 1000500</td>
<td>Verizon</td>
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</table>

3.3.1.13. Constructability Review -
The Regional Construction Group has reviewed the project and their concerns have been addressed.
3.3.2. Multimodal

3.3.2.1. Pedestrians -
Pedestrians will be accommodated on the new sidewalks (Two 5.2 ft. sidewalks). A Complete Streets Checklist is included in Appendix B.

3.3.2.2. Bicyclists -
Bicyclists will be accommodated on the 14 ft outside lanes on both directions.

3.3.2.3. Transit -
No changes are proposed.

3.3.2.4. Airports, Railroad Stations, and Ports -
There are no airports, railroad stations, or ports within the project limits.

3.3.2.5. Access to Recreation Areas (Parks, Trails, Waterways, and State Lands) -
There is no access to recreation areas around the project area.

3.3.3. Infrastructure

3.3.3.1. Proposed Highway Section -
The structure is on the state highway Right-Of-Way. The ROW width for the typical section of BIN 1000500 is approximately 56.4’.
The proposed bridge will consist of two 14 ft outside travel lanes, two 11 ft inside travel lanes with 0 ft shoulders and 5.2 ft sidewalk on both sides.
Refer to Appendix A for the typical section.

3.3.3.1. (1) Right of Way -
See figure below for the approximate location of the existing highway boundary and the potential associated impacts. The existing right-of-way width varies in the vicinity of the structure. It is anticipated that no permanent right-of-way acquisitions will be required for the preferred alternative (Alternative No. 4). It is anticipated that approximately fifteen temporary easements will be required for overall site access and construction of an on-site diversion that would be necessary to maintain traffic around the site during the construction of the new bridge.
The cost (to the Dept.) of the proposed ROW acquisitions is approximately $0.700 M.
3.3.3.1. (2) Curb -
New curb will be installed where disturbed.

3.3.3.1. (3) Grades -
The existing and proposed maximum grades will remain the same with a maximum grade of 6.5%. To increase the clearance between the railroad and the bridge girders the length of crest vertical curve is reduced which decreases the stopping sight distance (SSD) from 337 ft to 316 ft. The decrease in SSD still maintains a more than standard SSD (min 305 ft).

The Traffic Safety Report recommended increasing the SSD by flattening the grades approaching the bridge. To accomplish this while still raising the bridge to obtain the standard clearance for the railroad tracks would require extensive road reconstruction and the acquisition of two businesses, a garage and several occupied residential structures. However, the project is designed to allow this alternative in the future.

3.3.3.1. (4) Intersection Geometry and Conditions -
There is no intersection within the project limits. The intersection of Arsenal Street and N. & S. Meadow Streets is approximately located at 540 ft from the bridge. The intersection of Arsenal Street and Scio Street is approximately located at 295 ft from the bridge. The intersection of Arsenal Street and Breen Avenue is approximately 205 ft from the bridge. No change is proposed for these intersections as part of this project.
3.3.3.1. (5) Roadside Elements:
(a) Snow Storage, Sidewalks, Utility Strips, Bikeways, Bus Stops -
Pedestrians will be accommodated on the new sidewalks (Two 5.2 ft. sidewalks).
Verizon has multiple cables in the existing sidewalk on the south side of the bridge.
There are also street lighting and electric cables in conduit cast into the bridge deck
presently located on State Right-of-Way. The bridge also carries the City of Watertown's
waterline.

Bicyclists will be accommodated on the 14 ft outside lanes on both sides. There are no
bus stops within the project limits. The project will not significantly affect snow removal
within the project limits.

(b) Driveways -
There is a driveway at the southeast end of BIN 1000500. The driveway is a few feet
from the bridge abutment and is 11’ wide.

(c) Clear Zone -
The width of the clear zone to be maintained will be determined during final design.

3.3.3.2. Special Geometric Design Elements -

3.3.3.2. (1) Non-Standard Features -
The non-standard headlight stopping sight distance at station 44+17 will be retained.

3.3.3.2. (2) Non-Conforming Features -
There are no non-conforming features to be retained.
### Exhibit 3.3.3.2

**NON-STANDARD FEATURE JUSTIFICATION**

(in accordance with [HDM §2.8](#))

<table>
<thead>
<tr>
<th>PIN:</th>
<th>711516</th>
<th>NHS (Y/N):</th>
<th>Yes</th>
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<tbody>
<tr>
<td>Route No. &amp; Name:</td>
<td>NYS Route 3/ CSX</td>
<td>Functional Class:</td>
<td>Urban Principal Arterial Other</td>
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<tr>
<td>Project Type:</td>
<td>Bridge Replacement</td>
<td>Design Class:</td>
<td>Urban Arterial</td>
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<tr>
<td>% Trucks:</td>
<td>7</td>
<td>Terrain:</td>
<td>Rolling</td>
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<tr>
<td>ADT:</td>
<td>31,610 <em>(ETC + 30)</em></td>
<td>Truck Access/Qualifying Hwy:</td>
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</tbody>
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#### a. Description of Non-Standard Feature

<table>
<thead>
<tr>
<th>Type of Feature (e.g., horizontal curve radius):</th>
<th>Stopping Sight Distance</th>
</tr>
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<tbody>
<tr>
<td>Location:</td>
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<tr>
<td>Standard Value:</td>
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<tr>
<td>Existing Value:</td>
<td>146 ft</td>
</tr>
<tr>
<td>Proposed Value:</td>
<td>146 ft</td>
</tr>
</tbody>
</table>

#### b. Accident Analysis

| Current Accident Rate: | 3.95 acc/mvm |
| Statewide Rate: | 4.47 acc/mvm |

The June 2012 Safety Evaluations did not attribute an accident pattern to the non-standard sight distance (which is proposed to be retained) during the time period studied (4/1/08 – 6/30/12).

The anticipated accident rate/severity/cost is not anticipated to significantly increase as a result of this project.

#### c. Cost Estimates

| Cost to Fully Meet Standards: | Obtaining the current standard would require an additional 430 feet of reconstruction and result in an increase of the vertical alignment for the length of the project. A building would need to be acquired as well. This cost is estimated at $0.937 Million. |
| Cost(s) For Incremental Improvements: | Incremental improvements associated with a non-standard sag vertical curve would not be feasible. |

#### d. Mitigation (e.g., increased superelevation and speed change lane length for a non-standard ramp radius):

The need for mitigation measures will be evaluated in the final design phases.

#### e. Compatibility with Adjacent Segments & Future Plans:

This project entails only the bridge and its immediate vicinity. This NSF will be addressed in a future highway project.

#### f. Other Factors (e.g., Social, Economic & Environmental):

N/A

#### g. Proposed Treatment (i.e., Recommendation):

Given the cost to bring the sight distance up to meet standard; and the scope of the work which is limited on the bridge and bridge approaches to what is required to match the new bridge profile to the abutting highway segments, the proposed treatment under the Replacement Alternative is to retain the existing sag vertical curve.
3.3.3.3. Pavement and Shoulder -
NYS Route 3 at the project site was originally constructed in 1952. According to road history information the pavement section under the travel lanes consists of asphalt concrete type 1A on macadam base applied in 1989. Refer to 2.3.3.3 for pavement condition rating.

The NYS Route 3 pavement selection will consist of full depth reconstruction with three courses (base, binder and top) of asphalt concrete. Refer to Appendix A for the proposed pavement section of the bridge approaches.

3.3.3.4. Drainage Systems -
The existing closed drainage structures will not be addressed as part of all feasible alternatives.

3.3.3.5. Geotechnical -
As already stated in 2.3.3.5 Geotechnical section “from the borings obtained there is a potential for weak layers in the foundation areas”, it’s probable that a pile design will be implemented again to avoid any issues with the existing subsurface materials. The underlying bedrock is 22 feet from railroad grade. The remaining borings taken show bedrock are varying approximately 3 feet elevation in the entire bridge area. Further evaluation for the structure will be determined in final design. The onsite diversion utilizing the temporary 4-lane bridge will likely require stage walls (GRES) to limit required embankments. Refer to Appendix F for a complete geotechnical report.

3.3.3.6. Structures -
A bridge replacement will be performed for BIN 1000500.

3.3.3.6. (1) Description of Work - Bridge replacement

(a) Type of bridge, number of spans, etc. - Multi-Beam, 4 span bridge

(b) Width of travel lanes, shoulders, and sidewalks - As part of the bridge replacement, there will be two 11 ft inside and two 14 ft outside travel lanes. There will be a 5.2 ft sidewalk on each side. Refer to the typical section included in Appendix A.

(c) Utilities carried - It is anticipated that the proposed structure will carry several utilities. Refer to Exhibit 3.3.3.9 for the utilities carried.

3.3.3.6. (2) Clearances (Horizontal/Vertical) -
The horizontal clearance on the bridge deck from the edge of the traveled way to the bridge rail will be 5.2’. The vertical clearance over the Railroad is 21.3 ft over railroad spur line and 21.7 ft over CSX mainline. As part of this project, the vertical clearance for the main and the spur lines will be increased to 23 ft.

3.3.3.6. (3) Live Load -
The bridge for the replacement alternatives will be designed for HL-93 live load and the New York State Design Permit Vehicle.

3.3.3.6. (4) Associated Work -
The proposed project will also include the necessary approach work required to bring the existing roadways up to the elevation of the structure.
3.3.3.6. (5) Waterway -
The bridge does not pass over a waterway; therefore, no Coast Guard involvement is required.

3.3.3.7. Hydraulics of Bridges and Culverts -
No hydraulic evaluation is necessary for this project since there are no bridges or large culverts over water within the project site.

3.3.3.8. Guide Railing, Median Barriers and Impact Attenuators -
All guiderail within the project limits including bridge railing will be replaced.

3.3.3.9. Utilities -

<table>
<thead>
<tr>
<th>Owner</th>
<th>Type</th>
<th>Permanent Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Watertown</td>
<td>On Structure -Water</td>
<td>Northern side of the structure along the beam</td>
</tr>
<tr>
<td>Niagara Mohawk d/b/a National Grid</td>
<td>Aerial Sub Transmission</td>
<td>Overhead – the high voltage sub transmission lines run directly overhead on the western side of the structure</td>
</tr>
<tr>
<td>Niagara Mohawk d/b/a National Grid</td>
<td>Aerial Distribution</td>
<td>Overhead – the high voltage distribution lines run directly overhead on the eastern side of the structure</td>
</tr>
<tr>
<td>City of Watertown</td>
<td>Street Lighting</td>
<td>Street light poles at both ends of the structure on both sides of the roadway</td>
</tr>
<tr>
<td>Verizon New York, Inc</td>
<td>On or In Structure</td>
<td>South side of the structure in the sidewalk or between the beams</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Owner</th>
<th>Location of Proposed Railroad Tracks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner</td>
<td>Location</td>
</tr>
<tr>
<td>CSX Railroad</td>
<td>Main line Cedar St./City of Watertown</td>
</tr>
<tr>
<td>CSX Railroad</td>
<td>Spur line Cedar St./City of Watertown</td>
</tr>
</tbody>
</table>
3.3.4. Landscape and Environmental Enhancements -
Refer to Chapter 4 for complete discussion.

3.3.4.1. Landscape Development and Other Aesthetics Improvements -
The Department will provide/replace landscaping as a part of the overall enhancement and aesthetic improvement efforts for this project. Refer to Chapter 4 for a more detailed discussion.

3.3.4.2. Environmental Enhancements -
Refer to Chapter 4 for complete discussion.

3.3.5. Miscellaneous

NYS Smart Growth Public Infrastructure Policy Act (SGPIPA)
This project is replacing the existing bridge with a 4 lane bridge. The replacement will be on the same horizontal alignment utilizing a four lane temporary on-site diversion structure.

The proposed bridge will consist of two 14 ft outside travel lanes, two 11 ft inside travel lanes with 0 ft shoulders and 5.2 ft sidewalk on both sides.

Pursuant to ECL Article 6, this project is compliant with the New York State Smart Growth Public Infrastructure Policy Act (SGPIPA).

To the extent practicable this project has met the relevant criteria as described in ECL § 6-0107 The Smart Growth Screening Tool was used to assess the project’s consistency and alignment with relevant Smart Growth criteria; the tool was completed by the Region's Planning and Program Management group and reflects the current project scope.
CHAPTER 4 - SOCIAL, ECONOMIC and ENVIRONMENTAL CONDITIONS and CONSEQUENCES

4.1 Introduction
The purpose of this chapter is to:

1. Identify the social, economic, and environmental consequence of the alternatives under consideration;
2. Identify the feasible alternative avoidance and mitigation measures;
3. Satisfy the requirements of the National Environmental Policy Act, (NEPA), the State Environmental Quality Review Act, (SEQRA) and other federal and state environmental regulations and review requirements; and
4. To identify all permits and approvals needed for the preferred alternative.

For the purposes of this Chapter the following alternatives are evaluated:

Alternative 1: Do Nothing (See section 3.1)

Alternative 4: Bridge Replacement (See Section 3.1)

4.1.1 Environmental Classification

4.1.1.1 NEPA Classification -
This project is being progressed as a Class II action (Categorical Exclusion) because it does not individually or cumulatively have a significant environmental impact and is excluded from the requirement to prepare an Environmental Impact Statement (EIS) or an Environmental Assessment (EA) as documented in the Federal Environmental Approvals Worksheet (FEAW) and following discussion in this chapter.

Specifically, in accordance with the Federal Highway Administration’s, (FHWA) regulations in 23 CFR 771.117(c), this project is one of the project types described in the ‘C’ list as primarily bridge rehabilitation, reconstruction or replacement or the construction of grade separation to replace existing at-grade railroad crossings and does not significantly impact the environment. Refer to Appendix B for the FEAW. Documentation that supports the C List Categorical Exclusion determination is included in Appendix B, (see Peck to Ricard memo of 2-02-2017).

4.1.1.2 SEQR Classification -
In accordance with 17 NYCRR, Part 15, “Procedures for Implementation of State Environmental Quality Review Act”, The Department has determined that this project is a SEQR Type II Action. No further SEQR processing is required. The project has been identified as a Type II action, per 17 NYCRR, Part 15, Section 15.14, Subdivision (e), Item 37, Paragraph iv. This permits the project to be classified as Type II since the project does not violate any of the criteria contained in subdivision (d) of Section 15.14, and is of a scale and scope illustrated by the following:

(iv) replacement, reconstruction or rehabilitation, at present site or immediately adjacent thereto, of existing bridges, culverts or other transportation structures, including railroad crossing structures, not involving substantial expansion of the structure.
4.1.2 Coordination with Agencies

4.1.2.1 NEPA Cooperating and Participating Agencies -
The following agencies are Cooperating Agencies in accordance with 23 CFR 771.111(d):

- New York State Department of Environmental Conservation (NYSDEC)
- US Fish and Wildlife Service (USFWS)
- Federal Highway Administration (FHWA)

4.2 Social
Alternative 4 Bridge Replacement involves the NYS Route 3 (Arsenal Street) over Cedar Street and CSX Railroad in the City of Watertown. This portion of NYS Route 3 is located within the Jefferson County Metropolitan Planning Organization area, (MPO). This portion of NYS Route 3 (Arsenal Street) is a primary transportation corridor than conveys east – west traffic and is the busiest road within this portion of Region 7.

The replacement of the bridge will not affect any social issues in this portion of the City of Watertown.

Under the Null Alternative there would be an eventual change in the condition of the structure to a point where closure of the bridge would need to be considered.

4.2.1 Land Use -
The City of Watertown has adopted zoning regulations/ordinance to control land use within the City of Watertown. Governmental uses, including Federal and State transportation actions are exempt from local zoning provisions.

As such, since Alternative 4 Bridge Replacement will replace the current bridge and its existing location it is considered consistent with the current City Zoning ordinance which designates the land uses adjoining the project area as Heavy Industry and Commercial. This was confirmed based on review of the City of Watertown 2015 Zoning Ordinance and Zoning Map. There are no known planned developments being proposed by the City of Watertown in the area of this project.

Under the Null Alternative the new bridge will remain a dedicated transportation feature along this important highway corridor.

A map that illustrates the zoning districts relative to the project area is included in Appendix B.

4.2.1.1 Demographics and Affected Population -
The City of Watertown had a 2010 population of 27,023 people. The central urbanized population within Jefferson County lies within the City of Watertown with the exception of the Fort Drum Military base located east of the City.

Alternative 4 Bridge Replacement will not negatively impact long-term quality of life issues. Short-term quality of life will be slightly affected during construction activities as a result of the construction and on –site diversion which are expected to occur over a two year period.

Under Alternative 1 Null Alternative, the bridge would see limited maintenance and the rate of deterioration on the structure would continue to a point where closure would need to be considered. Closure of the structure would cause a severe impact on the traveling public and emergency services.
4.2.1.2 Comprehensive Plans and Zoning -
As previously noted the City of Watertown has adopted zoning regulations to control land use. The project study area below the bridge is zoned Heavy Industry – see Zoning map included in Appendix B. The Heavy Industry zone promotes industrial uses relating to the railroad corridor and restricts residential use.

The land use regulations adjoining the structure are designated Commercial District where medical offices, clinics, storage garages, gas stations, auto sales, multi-family dwellings, mobile home and snowmobile sales and animal hospitals are permitted pursuant to planning board site plan review.

Recently the City Planning Board revised the zoning ordinance to require a 20 foot front setback from the highway. Due to this change many of the properties in the vicinity of the bridge are now non-conforming lots of record. Although these lots are now non-conforming uses, they are “grandfathered” and may remain non-conforming until the use ceases to exist.

Given the information above, Alternative 4 bridge replacement of BIN 1000500 will maintain the economic potential for commercial businesses to locate along this segment of NYS Route 3. Additionally, this alternative will provide an improved transportation system within this portion of the City of Watertown area.

Under the Null Alternative, there would be no change to the bridge and given the advancing deterioration the bridge eventually would qualify for closure thus severing any future transportation dependent land use opportunities in the immediate project setting.

4.2.2 Neighborhoods and Community Cohesion
Alternative 4 Bridge Replacement will have no short or long term negative impact on the immediate neighborhood or the cohesion of the community. Long term, and once the bridge is replaced, the neighborhood and community will benefit from a reliable transportation structure that affords and promotes access along this highway corridor.

4.2.2.1 Community Cohesion -
Alternative 4 will not divide neighborhoods, isolate part of a neighborhood, generate new development or otherwise affect community cohesion. The land use adjoining the project corridor is composed of older homes with some scattered commercial buildings along with the Industrial use relating to the railroad. Commercial and Retail land uses along the corridor are vehicle oriented. There is a large mall (Salmon Run) west of the project located within the Town of Watertown which is a large draw for retail consumers. Automobile use is the primary mode of transportation along this portion of the NYS Route 3 Arsenal Street corridor. There are no schools located along NYS Route 3 within the project site.

Under the Null Alternative, Community Cohesion would remain the same until such time that an action to close the structure would need to be considered. If the structure were to be close an important segment of the NYS Route 3 Arsenal Street corridor would be severed.

4.2.2.2 Home and Business Relocations -
Alternative 4 involves the replacement of an existing bridge at its current location and does not require the acquisition of occupied dwellings/businesses.

It can be expected under Alternative 4 that there will be short-term access impacts to four businesses affected during construction activities.
This alternative will not cause long term adverse impacts upon home or business character and stability, as once the bridge is replaced, access to and from business will return to that which existed prior to the contract. The proposed alternative would require no displacement of residences or businesses and there would be no relocation impacts.

Under the Null Alternative, the structure would remain in place with minimal provisions for maintenance. If the structure were closed, homes and business immediately adjoining the project area would be severely affected.

4.2.3 Social Groups Benefited or Harmed

4.2.3.1 Elderly and/or Disabled Persons or Groups -
A review of US Census data for the city of Watertown indicates that there is no significant concentration of elderly or disabled persons in the project area. This project proposes new sidewalks (two 5.2 ft sidewalks) and will improve accessibility accommodations for these user groups.

4.2.3.2 Transit Dependent, Pedestrians, and Bicyclists -
Alternative 4 Bridge Replacement will allow transit dependent, pedestrians and bicyclist to use the bridge. Currently, there is City bus service that uses the structure, (Watertown City Bus Company).

Since the bridge is a major connecting link in the NYS Route 3 Arsenal Street corridor a closure of the structure under the Null Alternative would severely affect these user groups. There are no transit stops within the project limits. No changes are proposed.

See also discussion found in Section 3.3.2.2.

4.2.3.3 Low Income, Minority and Ethnic Groups (Environmental Justice) -
Title VI Environmental Justice requires a review of the proposed project on disproportionally high and adverse effects on minority and low income populations. Based on a review of NYSDOT Graphic Information System, (GIS) database, it has been determined that portions of the City of Watertown are within an designated Environmental Justice, (EJ) area. However, the portion of NYS Route 3 Arsenal Street to be addressed as part of Alternative # 4 is not within the E.J. area.

Consistent with Executive Order 12898 and FHWA Guidance on Environmental Justice, the project has not directly or indirectly used criteria, methods or practices that discriminate on the basis of race, color, national origin or income level. Coordination of the project with the Jefferson County Planning Board and the City of Watertown has been undertaken for both the Null and Bridge Replacement Alternatives. Correspondence from the County and the City is included in Appendix B.

Based on the coordination with the aforementioned parties it has been determined that Alternative 4 Bridge Replacement will not result in a disproportionately high and adverse effects to low income and/or minority groups.
4.2.4 School Districts, Recreational Areas, and Places of Worship

4.2.4.1 School Districts -
The proposed project is within the Watertown City School District. There are no schools or school properties within or near the project corridor. NYS Route 3 (Arsenal Street) is used as school bus route. Traffic will be maintained onsite so there will be minimal impact.

4.2.4.2 Recreational Areas -
Under the Null and Bridge Replacement Alternative there will be no impact on recreational areas as there are none close or within the project study area.

4.2.4.3 Places of Worship -
There is a church (St. Anthony) located at the west end of the project site, approximately 0.390 mile. Under Alternative 4, there would be a slight traffic delay for patrons using NYS Route 3 Arsenal street to gain access to the church. During construction pedestrians using the temporary diversion sidewalks will be able to access the east or west sides of the structure to gain access to the church.

Under the Null Alternative, the end scenario would result in closure of the bridge and severing the sidewalk which allows walkers to reach St. Anthony’s church.

4.3 Economic

4.3.1 Regional and Local Economies
NYS Route 3 Arsenal street is the prime Commercial - Business land use corridor within the City of Watertown. As such, Alternative 4 Bridge Replacement is a critical link in the continuity of this important transportation facility. As mentioned in Chapter One, the project was added to the Region’s Capital Program due to the deterioration associated with the deck. It is also included as part of the Department’s Statewide Transportation Improvement Program, (STIP). Upon completion of this project, the movement of the vehicular traffic will remain the same. It is believed that the economic benefits of this project are greater than the social and environmental consequences of constructing it.

Under the Null Alternative there would be no improvement and the Regional and Local Economies that is co-dependent on maintaining a sound transportation corridor would be severely impacted if the structure were to be closed.

4.3.2 Business Districts
Alternative 4 Bridge Replacement is located within an area that is zoned Commercial. As such business is encouraged subsequent to site plan review approval by the City of Watertown. The project study area is also located within the urbanized Metropolitan Planning Area, (MPO) boundary.

The replacement of the structure will result in an improved reliable access to the businesses that are located near the bridge and for motorists using this segment of NYS Route 3.

Under the Null Alternative there would be no improvement and conditions associated with the structure would continue to deteriorate to a point where closure would need to be considered.
4.3.2.1 Established Business Districts –

As noted and shown on the City of Watertown Zoning map included in Appendix B, much of NYS Route 3 Arsenal Street is zoned Commercial. As such, the zoning classification promotes commercial and retail land uses.

Neither Alternative (the Null or Bridge Replacement) will result in any long term negative effect on the established business district. Once the project is complete the continuity for motorist along this segment of NYS Route 3 will be improved.

A short term impact associated with the Bridge Replacement alternative is included in 4.3.3 below.

4.3.2.2 Effects on Business Districts –

Under the Bridge Replacement Alternative there will be temporary impacts as a result of the on-site diversion and closure of segment of the Cedar and Exchange streets. As such the diversions are considered minimal and the adjoining streets of Breen and Meadow can support the small AADT, (under 126 cars per day that would be affected by the temporary closure of portions of Cedar and Exchange streets).

Under the Null Alternative there would be no project and conditions on the structure would worsen to a point where closure of the structure would need to be considered, thus permanently impacting the single highest volume transportation corridor in the City of Watertown.

4.3.3 Specific Business Impacts

As noted in 4.3.3.1 there are several businesses that adjoin the structure. Under Alternative 4 Bridge Replacement there will be temporary impacts as a result of construction delays to these businesses.

Following construction, access to these facilities will be improved.

Under the Null Alternative, the bridge would eventually need to be closed and access to these businesses would result in a permanent access impact.

4.3.3.1 Established Businesses -

The businesses around the project site consist of:
- One bar on the northeast side of the bridge
- One closed bar on the southeast side of the bridge
- One furniture store on the south side of the bridge
- One electronic service store on the south of the bridge
- One motel/apartment building on the north side of the bridge

Pedestrians will be accommodated on the new sidewalks (Two 5.2 ft. sidewalks). There are no separate provisions for bicyclists.

Delays due to construction activities can be expected.

4.3.3.2 Effects Assessment -

As part of the Bridge Replacement Alternative there will be minor (delay) impacts to the City Bus service. This is due to the fact that a high percentage of elderly people use the bus services to get back and forth to Salmon Run Mall, doctor’s visit...etc... There will be a temporary 4 lane...
bridge to the north side of the existing bridge during construction; however, the bus service will need to make minor adjustments in their schedules and services. The businesses located on either side of the bridge may see lower levels of traffic and experience minor losses in business during the construction operations. Other than these minor impacts, the business climate along NYS Route 3 should not have any appreciable changes.

Under the Null Alternative there would be long term permanent effects due to the eventual closure of the bridge.

4.4 Environmental

4.4.1 Wetlands

4.4.1.1 State Freshwater Wetlands -
NYSDOT Regional Environmental staff conducted an environmental screening of the project study area. As a result of the screening it was determined that there are no New York State Department of Environmental Conservation regulated freshwater wetlands or regulated adjacent areas (100 ft) within the project area, as per the NYSDEC Freshwater Wetlands Maps for Jefferson County. No further investigation is required and Environmental Conservation Law, Article 24 is satisfied.

4.4.1.3 Federal Jurisdiction Wetlands -
NYSDOT Regional Environmental staff have screened the project site for Federal Jurisdictional wetlands. Based on the screening it was determined that there are no Federal Wetlands that meet the criteria defined in the 1987 US Army Corps of Engineers Wetland Delineation Manual.

4.4.1.4 Executive Order 11990 -
A Programmatic Executive Order 11990 Wetland Finding does not apply to this project as there are no wetlands present and therefore no wetland impacts.

4.4.2 Surface Waterbodies and Watercourses

4.4.2.1 Surface Waters -
Neither the Null or Bridge Replacement Alternative involve excavation or the discharge of dredged or fill material into "Waters of the U.S."\(^1\). No permits under this Section are anticipated.

4.4.2.2 Surface Water Classification and Standards -
Based upon a review of the NYSDOT GIS data maps for regulated streams, there are no surface waterways or regulated waterways within the proposed project limits.

Neither the Null, or the Bridge Replacement Alternative will result in impact to Surface Water Classifications and Standards.

4.4.2.3 Stream Bed and Bank Protection -
Based upon a review of the NYSDOT GIS database, and as verified by a site visit, there are no protected streams, nor 50-foot regulated stream banks (on either side of a regulated stream) in the project area.

\(^1\) “Waters of the U.S. are generally defined as waters under the jurisdiction of the Department of the Army – Corps of Engineer and United States Environmental Protection Agency – see Part 230 – Section 404 (b) (1) Guidelines for inclusive list of waters regulated.
Neither the Null or Bridge Replacement Alternative will result in any stream bed or bank protection issues.

4.4.2.4 Airport and Airway Improvement -
The closest airport, Watertown International Airport located in Dexter, NY is approximately 7 miles from the project site. The Null and Bridge Replacement Alternatives will not impact the airport activities.

4.4.2.5 Mitigation Summary -
There is no need for efforts to mitigate impacts for either the Null or Bridge Replacement Alternatives.

4.4.3 Wild, Scenic, and Recreational Rivers

4.4.3.1 State Wild, Scenic and Recreational Rivers -
Based on a review of the NYSDOT GIS, there are no NYSDEC Designated, Study or Inventory State Wild, Scenic or Recreational Rivers within or adjacent to the proposed project site. No further review is required.

4.4.3.2 National Wild and Scenic Rivers -
The Null or Bridge Replacement Alternatives do 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.

4.4.3.3 Section 4(f) Involvement -
The Null and Bridge Replacement Alternatives do not involve work in or adjacent to a wildlife or waterfowl refuge. No further consideration is required.

4.4.3.4 Mitigation Summary -
No mitigation effort in regard to the Null or Bride Replacement alternatives is required.

4.4.4 Navigable Waters

4.4.4.1 State Regulated Waters -
There are no state regulated navigable waters located within the project’s area of potential effect that will be impacted by the work.

4.4.4.2 Office of General Services Lands and Navigable Waters -
There are no OGS underwater holdings located within the project’s area of potential effect that will be impacted by the work.

4.4.4.3 Rivers and Harbors Act - Section 9 -
The project alternatives including the Null and Bridge Replacement do 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 -
Neither the Null or the Bridge Replacement Alternatives involve the creation of any obstruction to the navigable waterways under the authority of the Department of the Army – Corps of Engineers. Accordingly, Section 10 of the Rivers and Harbors Act does not apply.
4.4.5 Floodplains

4.4.5.1 State Flood Insurance Compliance Program -
The bridge is not over a waterway and there is no requirement for compliance with Floodplain Management Criteria for State Projects of 6 NYCRR Part 502.

4.4.5.2 Executive Order 11988 -
The Null and Bridge Replacement Alternatives will not impact any floodplains therefore there are no requirements to meet associated with Executive Order 11988 Floodplain Management does not apply.

4.4.6 Coastal Resources

4.4.6.1 State Coastal Zone Management Program -
The Null and Bridge Replacement Alternative are 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 Null and Bridge Replacement Alternatives are not located in or near a NYS listed 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 March 2007, neither the Null or Bridge Replacement Alternatives are located within the approved State Coastal Zone Management Boundary, or within an area with an approved Local Waterfront Revitalization Area, or within a Community that is an approved In – land Waterway.

4.4.6.4 Federal Coastal Barrier Resources Act (CBRA) and Coastal Barrier Improvement Act (CBIA) -
The Null and Bridge Replacement Alternatives are 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 -
NYSDOT Regional Environmental staff have reviewed Statewide GIS data for the presence of any known aquifers. Based on the review it was determined that the Null and Bridge Replacement Alternatives are 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 municipal drinking water wells, wellhead influence zones, or reservoirs within or near the project study area that includes the Null or Bridge Replacement Alternatives. , and as referenced in the NYS Atlas of Community Water System Sources, dated 1982, issued by the NYS Department of Health.

4.4.8 Stormwater Management
Based on calculations undertaken by NYSDOT Regional structures staff the project will disturb less than one acre and will not require a State Pollution Discharge Elimination System,
As part of the Bridge Replacement Alternative, the contract documents will include site specific measure to minimize or reduce the potential for erosion. This items will include silt fence, seeding and mulching and as appropriate check dams. The project will be designed in accordance with the approved NYSDOT specifications of Section 209 Soil Erosion and Sediment control.

Under the Null Alternative there would be no provisions for implementation of an Storm Water Management measures.

4.4.9 General Ecology and Wildlife Resources

**Fish, Wildlife, and Waterfowl**

A review of the project’s area of potential effect indicates that there is no special habitat or breeding area for certain species of plants or animals. The U.S. Fish and Wildlife Service, (USFWS) reviewed the proposed project for threatened and endangered species, as well as proposed and final designated critical habitat that may occur within the boundary of the project or be affect by the proposed project. The USFWS has identified two mammals on the endangered species list, the Indiana Bat, (Myotis sodalist) listed as endangered and the Northern Long Eared Bat, (Myotis septentrionalis) listed as threatened, may be present in the vicinity of the project. A copy of the correspondence in included in Appendix B.

NYSDOT Environmental staff conducted a Biological evaluation for the project study area and found that the potential habitat for these two species of bats does existing with the project action area in the form of trees. The Bridge Replacement alternative will involve the removal of up to five trees on less than 1/10 acre of land. Therefore, to minimize the likelihood of adverse impacts , and as a conservative measure, the USFWS and FHWA require that the tree cutting be completed during the bat hibernation period. The NYSDEC has been consulted regarding this and indicated that the tree removal activities associated with the project are to occur between November 1st and March 31st.

**4.4.9.2 Habitat Areas, Wildlife Refuges, and Wildfowl Refuges**

The proposed alternatives do not involve work in, or adjacent to, a wildlife or waterfowl refuge. No further consideration is required.

**4.4.9.3 Endangered and Threatened Species**

A letter was sent to the NYSDEC on January 16, 2015 to request information concerning endangered and threatened species that may be in the project study area. Based on a review of the New York Natural Heritage database identified a vascular plant Lake Cress, (Rorippa aquatic). Based on the industrial nature of the site and the fact that there are no surface waters present and in conjunction with a site investigation it was determined that the plant does not exist with the project study area.

Further based on the NYSDEC correspondence it was their finding that indicated that the project will not result in the take of state listed endangered or threatened species, and therefore no permit per 6 New York Codes Rules and Regulations, (NYCRR) Part 182 of the New York State Endangered Species Act, (Article 11-0535) is required for the Bridge Replacement Alternative.
As a result of the above correspondence NYSDOT Environmental staff sent a Biological Evaluation and concurrence request the FHWA on September 30, 2015.

Based on FHWA review it was determined that the Bridge Replacement Alternative will result in a May Affect, but Not Likely to Adversely Affect the Federally listed Indiana Bat and Northern Long Eared bat as long as the trees are cut between November 1st to March 31st.

A copy of the above referenced correspondence with NYSDEC, FHWA, and USFWS are included in Appendix B of this report. The NYSDOT will take the appropriate measures during design and construction to ensure that impacts to any of these species are avoided and if not avoided minimized. If at any time during construction the presence of listed species, or their habitat, is discovered or suspected, construction activities will be halted until FHWA and the USFWS are consulted.

4.4.9.4 Invasive Species -
Based on a site screening by NYSDOT Regional Environmental staff it was determined that there is no presence of invasive species within the right-of-way. NYSDOT specification require that the contractor take precautions to prevent the introduction of invasive species during project design and construction.

Under the Null Alternative there is no need for any Invasive Species management associated with the project study area.

4.4.9.5 Roadside Vegetation Management -
Vegetation grassed embankment slopes along with less than five trees will be removed as part of the Bridge Replacement alternative. After the contract is complete the new embankment slopes will be revegetated.

Under the Null Alternative there is no need for vegetation management

4.4.10 Critical Environmental Areas

4.4.10.1 State Critical Environmental Areas -
According to information obtained from NYSDEC, neither the Null or Bridge Replacement Alternative involve work in or near a Critical Environmental Area.

4.4.10.2 State Forest Preserve Lands -
Based on a review of the project study area and after review of the NYSDOT GIS there are no Article 14 State Forest Preserve lands that would be affected by either the Bridge Replacement or Null Alternatives.

4.4.11 Historic and Cultural Resources

4.4.11.1 National Heritage Areas Program -
The Null and Bridge Replacement Alternatives 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 -

According to the National Register (NR) of Historic Places, there are no historic properties eligible, or listed, within the project’s area of potential effect.

The Bridge Replacement Alternative will require earth moving activities in prior disturbed areas. Based on a review of the project scope of Bridge Replacement on existing alignment it was determined that the Bridge is not historic and the proposed undertaking has no potential to cause effect on properties on or eligible for inclusion on the National Register of Historic Places. In accordance with 26 CFR Part 800.3(a) there are no further obligations for compliance with Section 106 of the National Historic Preservation Act. A letter dated August 3, 2015 concluding the aforementioned is included in Appendix B.

Based on the conclusions reached, the requirements of both Section 14.09 of the State Historic Preservation Act and 36 CFR Part 8000 of the National Historic Preservation Act have been met.

4.4.11.3 Architectural Resources -

The Null and Bridge Replacement Alternatives do not involve federally owned, jurisdictional or controlled property that is eligible for inclusion in the National Register of Historic Places. Therefore, Section 110 does not apply.

4.4.11.4 Archaeological Resources -

The Null and Bridge Replacement Alternatives will not require project activities within previously undisturbed areas that have the potential to contain archeological resources. Thus, a 4(f) evaluation will not be required for archaeological resources.

4.4.11.5 Historic Bridges -

The bridge was reviewed for its historic significance. Based on the Cultural Resource screening it was determined that the bridge is not historic.

4.4.11.6 Historic Parkways -

This Null and Bridge Replacement Alternatives do not have potential to impact any Historic Parkways.

4.4.11.7 Native American Involvement -

The Department/FHWA have followed the Section 106 Process of the National Historic Preservation Act (36 CFR 800). This ensures compliance with this Act. In addition, places or artifacts of religious importance to Native Americans were not found within the project impact area.

4.4.11.8 Section 4(f) Involvement -

The NYSDOT Regional Cultural Resources coordinator has determined that there are no properties on, or eligible for, the National Register of Historic Places, or properties over 50 years old that may be eligible within the project’s area of potential effect. Therefore, a Section 4(f) evaluation for historical resources is not required.

The Null Alternative does not require an assessment under the Section 4(f) statutes.
4.4.12 Parks and Recreational Resources

4.4.12.1 State Heritage Area Program -
Neither the Null or Bridge Replacement Alternatives will cause an impact or effect on areas identified as State Heritage Areas or 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 study area. Accordingly, the null alternative will have no affect on National Registry of Natural Landmarks.

4.4.12.4 Section 4(f) Involvement -
There are no publicly owned parks or recreational facilities, protected under Section 4(f) of the USDOT Act, in or adjacent to the project area. No further action is required under this section.

4.4.12.5 Section 6(f) Involvement -
The Null and Bridge Replacement Alternatives do 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 Null and Bridge Replacement Alternatives do 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

4.4.13.1 Introduction -

4.4.13.2 Effects Assessment -
The Bridge Replacement Alternative will have negligible effects on the existing visual corridor. NYS Route 3/CSX is classified as an Urban Principal Arterial Other, with a mix of commercial and residential development. As part of the Bridge design concept architectural treatments of the bridge rail are being developed.

Within the project study area, there are several distinct visual characteristics; older residential houses and a mix of commercial buildings adjoining the highway and an industrial setting associated with the presence of the railroad. The overall existing visual quality is moderate in the residential commercial sections. The project corridor has very little landscaping.

Under the Null Alternative there will be no change in the visual resources other than the continued deterioration of the bridge with minimal maintenance.

4.4.14 Farmlands

4.4.14.1 State Farmland and Agricultural Districts -
Based on a review of the NYS Agricultural District Maps for Jefferson County, the proposed project is not located in or adjacent to an Agricultural District. Accordingly, there is no requirement for either the Bridge Replacement or the Null Alternative to meet the requirements of New York State Agriculture and Markets Law Article 25 - AA.
4.4.14.2 Federal Prime and Unique Farmland -
The proposed project activities will not convert any prime or unique farmland, or farmland of state or local importance, as defined by the USDA Natural Resources Conservation Service, to a nonagricultural use. Accordingly, there is no requirement for either the Bridge Replacement of the Null Alternative to meet the requirements of the United State Department of Agriculture Natural Resources Conservation Service Farmland Protection Policy Act of Part 658.

4.4.15 Air Quality

4.4.15.1 Regulatory Framework -
Under the Bridge Replacement Alternative and per 40 CFR Part 81 Designations of Areas for Air Quality Planning purposes. Jefferson County, was classified as nonattainment for the 1997 ozone standard. However, based on the State Air Quality revisions, Jefferson County is classified as attainment for the 2008 ozone standard.

4.4.15.2 Transportation Conformity -
Per 40 CFR Part 81, effective April 6, 2015, the 1997 ozone standard was revoked for all purposes except for certain “anti-backsliding” emissions control requirements. Conformity is not included the “anti-backsliding” requirements of 40 CFR Part 81. Conformity for transportation project in Jefferson County is not required in any part of Region 7.

4.4.15.3 Carbon Monoxide (CO) Microscale Analysis -
An air quality analysis is not required for either the Null or Bridge Replacement Alternative since neither will 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.

4.4.15.4 Microscale Analysis -
A Microscale Analysis is not required for the Null or Bridge Replacement Alternative since it does not significantly affect air quality conditions over a large area and is not a regionally significant project.

4.4.16 Energy

Per the Federal Environmental Approvals Worksheet, the Bridge Replacement Alternative is classified as a C List Categorical Exclusion based on Title 23 Code For Regulations, (SFR) Part 771.117c and as described in Section 4.1.1.1 of this Chapter.

The Bridge Replacement Alternative will maintain the bridge at its present alignment and since the project does not involve potential changes in vehicle delay, (normally associated with intersection type highway project) an energy analysis is not required.

Under the Null Alternative there is no requirement to commence an Energy Analysis.

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2 Refers to Title 40 Chapter 1 U.S Environmental Protection Agency Subchapter C Air Programs Part 81 Designation of Areas for Air Quality Planning Purposes.
4.4.17 Noise

Under the Bridge Replacement Alternative, the project is classified as a Type III pursuant to the U.S. Department of Transportation and the Federal Highway Administration – Highway Traffic Noise: Analysis and Abatement Guidance. Type III projects are those categories of projects that do not require a noise analysis.

4.4.18 Asbestos

An Asbestos screening has been performed for the Bridge Replacement Alternative as noted below:

4.4.18.1 Screening -

The following steps were taken:
1. Conduct a site visit and a visual inspection to identify suspect asbestos containing materials (SACMs),

2. Collect bulk samples of the SAXCM during the inspection

3. Submit samples to a laboratory approved by the New York State Department of Health.

4. Prepare a report for BIN 1000500 which shall:
   a. Summarize the data collection technique and analysis procedures,
   b. Identify the location, type and quantity of ACM,
   c. Ascertain the applicability of Department of Labor “Blanket Variances”,
   d. Recommend which specifications to use for each type of ACM encountered. If necessary supplement the specifications and appropriate notes.
   e. The report shall include any NYSDOT item numbers in US Customary Units.

4.4.18.2 Assessment and Quantification -

Asbestos Containing Material (ACM) was identified at this bridge. Masonry coating located on concrete substructures, tar paper/tar on the outer layer of a suspended utility waterline, and roofing on a utility building below the west span is ACM. As part of the bridge replacement project, masonry coating must be handled as an ACM. The tar paper/tar on the outer layer of a suspended utility waterline and roofing on a utility building must be protected (temporary hardwall enclosure) to prevent damage to the ACM.

Accordingly, given the above, the Bridge Replacement Alternative and contract documents developed for the project will include Asbestos removal and disposal items.

Under the Null Alternative, the structure would remain in place on the structure and no removal or disposal of Asbestos items would occur.

An executive summary of the Asbestos Report is included in Appendix B.

4.4.18.3 Mitigation Summary -

Under the Bridge Replacement Alternative there are no special site specific variances required for the project. Existing Departmental Asbestos blanket variances or existing variances will be in effect for this project.

Under the Null Alternative there would be no mitigation of the Asbestos on the structure.
4.4.19 Hazardous Waste and Contaminated Materials

4.4.19.1 Screening –
NYSDOT Regional Environmental staff conducted a hazardous waste/contaminated site review based on the use of the NYSDOT GIS database for area within or adjacent to the project boundaries. The findings are as follows:

- No documented spill sites
- No toxic release inventory locations for the NYSDEC or U.S. E.P.A.
- And no hazardous substance disposal sights.

A Hazardous Waste/Contaminated Materials screening is required in accordance with the NYSDOT Environmental Procedures Manual, Chapter 5 in order to document the likely presence or absence of hazardous/contaminated environmental conditions. A hazardous/contaminated environmental condition is the likely presence of any hazardous substances or petroleum, (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 on the property.

Based on an on-site screening conducted by NYSDOT Regional Environmental staff it was noted that the girders on the structure are suspect for lead based paint. The bridge has a current U.S. Environmental Protection Agency Identification Number, (ID # NYR 000122234).

Given the above, the contract relating to Alternative 4 Bridge Replacement will include lead removal and disposal items in the contract.

The potential risk for involvement with documented or undocumented inactive hazardous waste/contaminated materials is low. No additional studies or further geophysical investigation are warranted.

Under the Null Alternative there would be no project and therefore no potential for the removal of lead items associated with the superstructure of the bridge.

A map that illustrates the Hazardous/Contaminated Screening conducted for Alternative 4 Bridge Replacement is included in Appendix B.

4.5 Construction Effects

4.5.1 Construction Impacts
Alternative 4 Bridge Replacement will result in temporary traffic delays and access degradation associated with two year construction activities. In addition, it can be expected that Alternative 4 will generate nuisance impacts such as noise, dust, and vibration as part of the construction activities.

Reasonable measures to control these nuisance impacts will be implemented based on need and where required. The project will employ a Storm Water Pollution Prevention Plan, (SWPPP) with the appropriate sediment and erosion control measures.

Under the Null Alternative there would be no impacts.
4.5.2 Mitigation Measures
As noted in Chapter 4, Alternative 4 will result in mitigation measures including a reduced time of year tree cutting restriction, inclusion of SPDES Erosion and Sediment Control practices along with the removal and disposal of any lead containing appurtenances on the structure.

4.6 Indirect and Secondary Effects

4.6.1 Indirect Socioeconomic Effects

Under Alternative 1 and 4, the project is not anticipated to substantially impact social, economic or environmental conditions by impacting land use, community character, the local economy or by spurring growth… The Indirect (Secondary Effects) of this project are anticipated to be minimal and specific discussion of these topics are found in the preceding text.

4.6.2 Social Consequences

Affected Population: According to the 2010 Census, the City of Watertown had a population of 27,000 of which 89.13% were White, 4.95% were Black, 0.54% were American Indian or Alaska native, and 1.16% were Asian. The median age was 34 years.

Local Planning: The growth in the city of Watertown is expected to stay the same during and after the project is accomplished. This project is consistent with the land use plans of the City and will have overall positive impacts on the area.

Community Cohesion: The Bridge Replacement Alternative will not negatively impact long-term quality of life issues. Short-term quality of life will be affected during construction activities. Due to likely traffic delays and access degradation associated with construction activities, short-term perceptions may be negative.

Changes in Travel Patterns or Accessibility: Upon Replacement of the Bridge, traffic volume is expected to remain the same. Traffic patterns will be temporarily affected along NYS Route 3 (Arsenal St.) during construction. However, these will be minimized through the use of a temporary 4 lane bridge that would be installed on the south side of the existing bridge.

Impacts on School Districts, Recreational Areas, Churches or Businesses: Delays due to construction activities can be expected to schools, churches and businesses within the project area. Following construction, access to these facilities will remain the same.

Impacts on Police, Fire Protection and Ambulance Access: Police responsibility for the project area is provided by the City of Watertown Police Department and the Jefferson County Sheriffs Office both located at 751 Waterman Drive in the city (0.350 miles from the project site). Primary fire and rescue response for the project area is provided by the City of Watertown Fire Department located at 224 South Massey Street in Watertown; a block away from the project site. The overall impacts will be minimal and temporary in nature while construction takes place. Traffic along NYS Route 3 will stay open to traffic at all times.

Impacts on Highway Safety, Traffic Safety and Overall Public Safety: The removal of the existing structure and its replacement with a new structure on the same horizontal alignment will be a positive benefit to highway safety and overall public safety.

General Social Groups Benefited or Harmed: The Bridge Replacement Alternative has been assessed for compliance with the requirements of 49 CFR Non Discrimination in Federally Assisted Programs of the Department of Transportation and for compliance with Title VI of the Civil Rights Act. Based on a review of NYSDOT GIS database, there are no Title VI areas that
would be impacted or affected by this project. Accordingly, no particular social group will be uniquely benefited or harmed by this project. This project will not have a disproportionately high and adverse human health and environmental effect on the elderly, disabled persons, minorities or low-income populations.

(1) Effects on Elderly & Disabled Persons - No effects to these groups are anticipated.
(2) Effects on Low Income, Minority and Ethnic Groups - This project will not have a disproportionately high and adverse health and environmental effect on minority or low income-income populations.

4.6.3 Economic Consequences

Impacts on Recreational and Local Economies: Upon completion of the Bridge Replacement Alternative, the effect on the recreational or local economies will remain the same.

Impacts on Existing Highway / Related Businesses: Upon completion of the Bridge Replacement Alternative, the effect on the highway related businesses will remain the same.