

DRAFT FOR AGENCY REVIEW

CHAPTER 1 INTRODUCTION

This chapter describes the Project Area and the limitations and deficiencies of its transportation infrastructure and identifies the Project’s purpose, goals, and objectives.

The New York State Department of Transportation (NYSDOT), in cooperation with the Federal Highway Administration (FHWA), have prepared this Draft Design Report/Draft Environmental Impact Statement (DDR/Draft EIS) for the Interstate 81 (I-81) Viaduct Project (the “Project”) in accordance with the requirements of the Council on Environmental Quality’s regulations for implementing the procedural provisions of the National Environmental Policy Act (NEPA) (40 CFR §1500-1508), the FHWA’s *Environmental Impact and Related Procedures: Final Rule* (23 CFR §771), the NYSDOT *Procedures for Implementation of the State Environmental Quality Review Act* (17 NYCRR Part 15), and the NYSDOT Project Development Manual.

The Project is classified as a NEPA Class I project in accordance with 23 CFR 771. NEPA Class I projects require the preparation of an Environmental Impact Statement (EIS) to determine the likely impact that Project alternatives would have on the environment. FHWA, serving as the Federal Lead Agency, and NYSDOT, serving as Joint Lead Agency, are progressing the development of the EIS. In accordance with NYSDOT’s SEQRA regulations, the Project is classified as a “non-Type II” action, indicating that its potential for environmental impacts should be evaluated under SEQRA. In accordance with 17 NYCRR Part 15, given that a Federal EIS is being prepared, NYSDOT and other New York State agencies undertaking a discretionary action for the Project have no obligation to prepare a separate EIS under SEQRA. NYSDOT will give full consideration to the Federal Final EIS and will prepare a Record of Decision (ROD) in accordance with Section 15.9 of 17 NYCRR Part 15.

1.1 PROJECT LOCATION

The Project is located entirely within Onondaga County, New York and will involve segments of I-81, Interstate 690 (I-690), NYS Route 370 (Onondaga Lake Parkway), and local streets and may include Interstate 481 (I-481), depending on the selected alternative.

I-81 is an approximately 850-mile-long highway in the eastern United States. It begins at Interstate 40 in Dandridge, Tennessee, and extends northeasterly through Tennessee, Virginia, Maryland, West Virginia, Pennsylvania, and New York, terminating at Highway 401 in Ontario, Canada. It is the primary north-south highway through Central New York, serving Binghamton, Cortland, Syracuse, and Watertown, and provides an international crossing into Canada at the Thousand Islands Bridge.

I-81 provides access to many of the Syracuse region's destinations and employment centers. It serves Downtown Syracuse; the State University of New York (SUNY) Upstate Medical Center and SUNY Upstate Medical University; Syracuse Veterans Administration (VA) Medical Center; Crouse Hospital; Syracuse University; SUNY College of Environmental Science and Forestry (SUNY ESF); the Carrier Dome; St. Joseph's Hospital; Destiny USA; and Syracuse Hancock International Airport. I-81 also connects to the east-west interstates that pass through Syracuse (Interstate 90/New York State Thruway and I-690) as well as I-481 (see **Figures 1-1 and 1-2**).

The Project Area, which is shown on **Figure 1-2**, consists of portions of I-81, I-690, and I-481 where Project elements may be implemented. It includes the southern and northern interchanges of I-81 with I-481 (Exits 16A and 29, respectively); the portion of I-81 between Colvin Street and Hiawatha Boulevard, including the I-81 viaduct and the I-81/I-690 interchange in Downtown Syracuse; I-690 between Leavenworth Street and Beech Street; and I-481 between I-690 and the New York State Thruway (I-90). It also includes some local roads in Downtown Syracuse.

1.2 PROJECT NEEDS

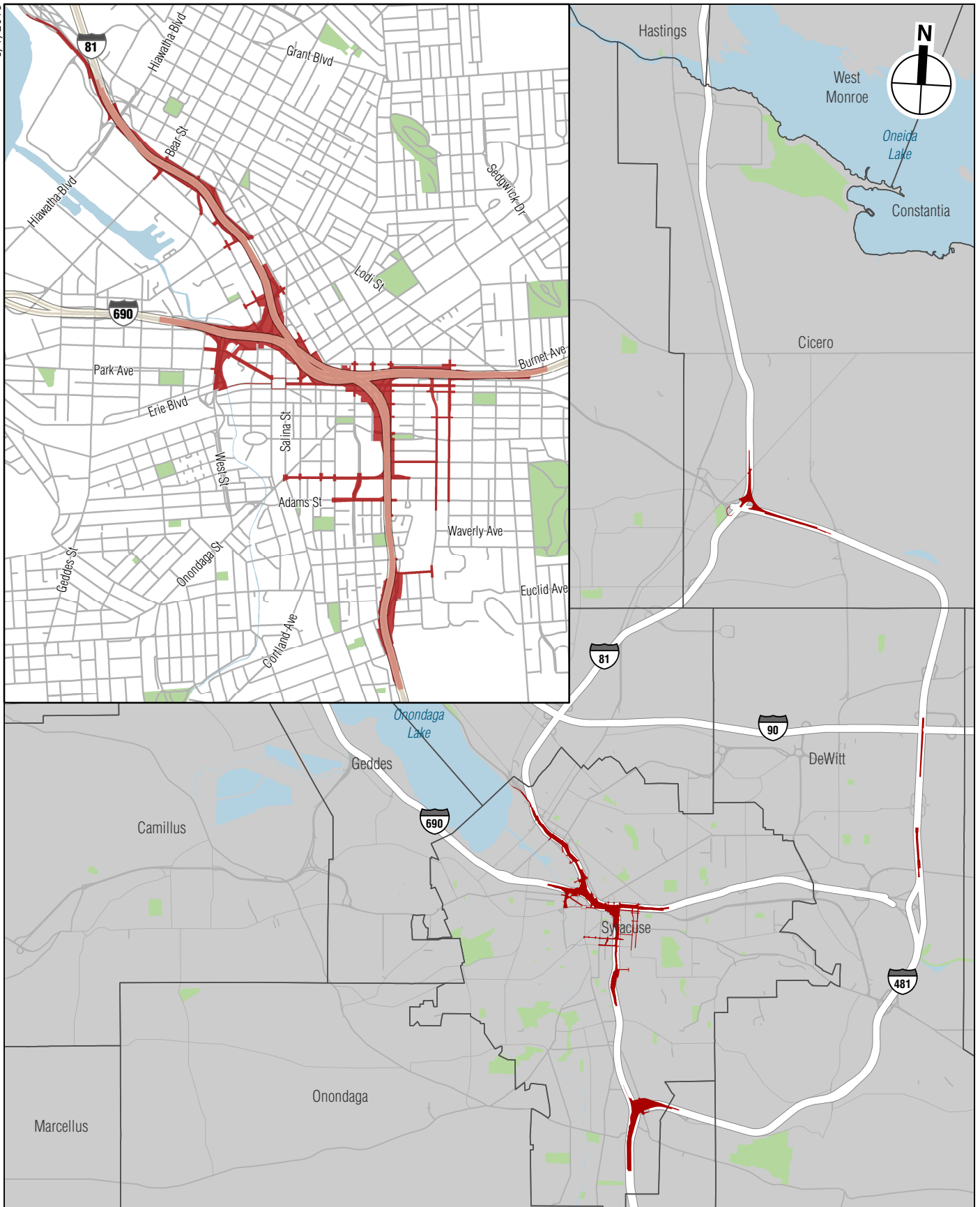
The I-81 corridor is important to the efficient movement of people and goods in and around greater Syracuse and is also crucial to the integrity of the national transportation network. Within greater Syracuse, I-81 is an important north-south transportation route for commuters, travelers, and commercial vehicles and provides direct access to Downtown. Nationally, I-81 is a major north-south corridor that extends from Tennessee to Canada, providing links to major cities, such as Washington, D.C., Philadelphia, and New York City, via east-west connections.

As evidenced by the I-81 Corridor Study (NYSDOT, July 2013) that preceded this Project, the I-81 viaduct and I-81/I-690 interchange have been the subject of community and agency concern because of ongoing congestion, safety issues, and aging infrastructure. The I-81 Corridor Study identified an "I-81 viaduct priority area," which included the 12-mile I-81 corridor between Exits 16A and 29, along with the segment of I-690 from the West Street interchange to the Teall Avenue interchange. The I-81 Corridor Study also addressed a "Capacity and Safety Study Limit" that included I-81 through Onondaga County, I-481, I-690 (Thruway to I-481) and Thruway Exits 39, 36, and 34A.

Highway design features within the I-81 viaduct priority area (such as shoulder widths, median widths, interchange spacing, etc.) pre-date current design standards and, coupled with heavy traffic volumes, have led to recurring congestion and high accident rates. In addition, the highway infrastructure is nearing the end of its intended design life, and the viaduct and other highway bridges have deteriorated due to age, wear, and harsh winter weather conditions. The I-81 viaduct priority area exhibits a high concentration of traffic incidents and many non-standard and non-conforming features (these are further described below). Although the infrastructure is maintained in a state-of-good repair to ensure the highway remains safe for the traveling public, continued deterioration will lead to increased maintenance costs, and weight and speed restrictions on bridges.



8/1/2016



 Project Limits

I-81 Viaduct Project

Project Area
Figure 1-2

I-81 and I-690 are not only vital to the movement of people and goods in greater Syracuse but also, as major highways passing through a dense urban center, have a considerable influence on the character and economic vitality of the city and region. Syracuse is the region's largest economic center, and I-81 and I-690 in Downtown Syracuse and adjacent neighborhoods have influenced development, vehicular and pedestrian connectivity between neighborhoods, and community character.

To ensure safety and conformity throughout the national highway system, the American Association of State Highway and Transportation Officials (AASHTO) has established interstate highway design standards, which are implemented by FHWA and NYSDOT. Infrastructure that pre-dates or does not meet current design standards is considered "non-standard" or "non-conforming." Non-standard design features include geometric aspects that are considered critical design elements, such as lane and shoulder widths, sight-line distances, and grades (i.e., slopes or steepness). Non-conforming design features include design elements that do not conform to accepted engineering practice but are not considered critical design elements, such as the spacing between interchanges and the lengths of acceleration and deceleration lanes.

The limitations and deficiencies of the transportation infrastructure, as well as the Project's relevance to long-term planning visions, are discussed in the sections below.

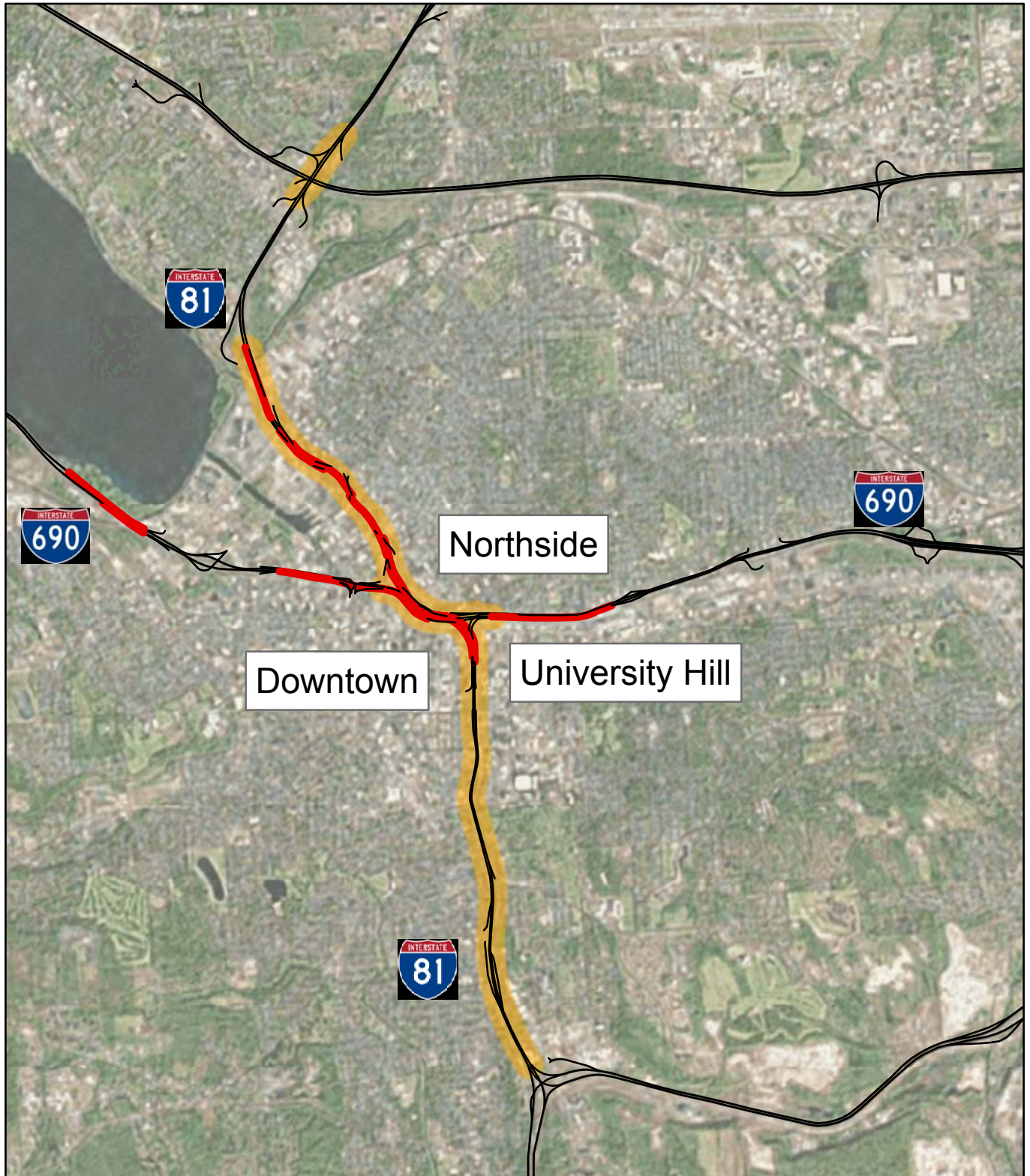
IMPROVE TRAFFIC FLOW AND SAFETY

Important indicators of the functionality of a highway network are level of service (LOS) and accident rates.



- **Level of service (LOS)** is a measurement of the operating performance of a roadway segment, based on such factors as speed, freedom to maneuver, traffic interruptions, comfort, and convenience. The 2010 Highway Capacity Manual (HCM) defines six LOS ratings (letters A through F), with LOS A representing free-flow conditions and LOS F signifying highly congested conditions. LOS is a critical design element for Interstate highways.
- **Accident rates** represent the number of accidents per million vehicle miles traveled. The I-81 viaduct priority area is prone to congestion and high accident rates, largely due to high traffic volumes combined with capacity deficiencies and non-standard and non-conforming features on the expressways.

According to the NYSDOT Highway Design Manual criteria, interstate highways should function at LOS C or better. However, LOS D is allowed for in heavily developed metropolitan areas.

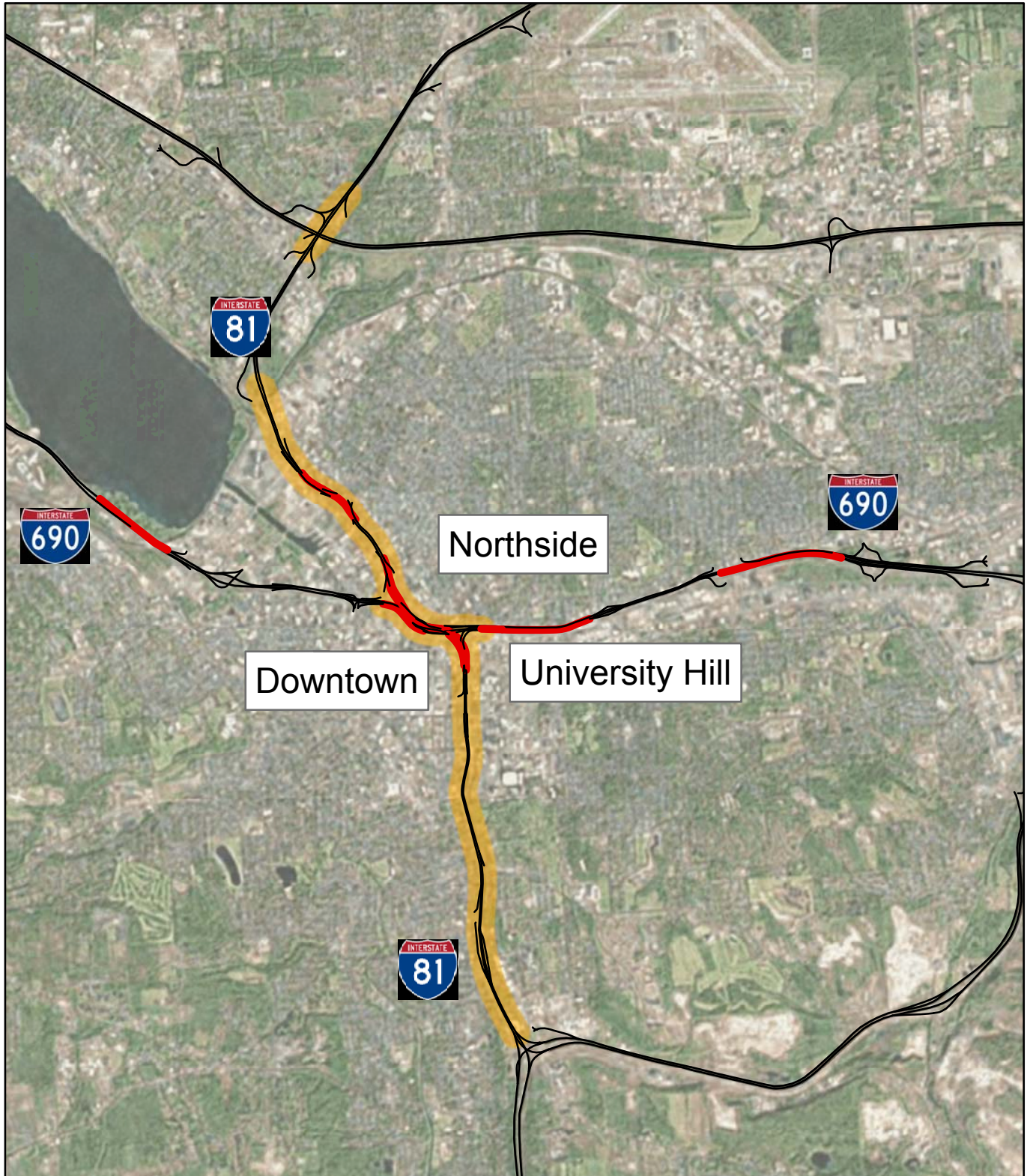
During the AM and PM peak hours, traffic congestion is a frequent occurrence in certain sections of I-81, with ratings below LOS C (see **Figures 1-3 and 1-4**). Traffic volumes on many roadway and ramp segments in these areas are near capacity (LOS D to E) or exceed capacity (LOS F). In particular, the I-81 and I-690 corridors accommodate heavy traffic volumes, with upwards of 95,000 vehicles per day in the highway section just north of the I-81/I-690 interchange. This often results in reduced travel speeds in the range of 20 mph (well below the posted 45 mph speed limit), as well as delays and queues.





Legend

-  Above average accident rates
-  Level of Service D or worse





Legend

-  Above average accident rates
-  Level of Service D or worse



Frequent peak hour congestion is a result of high traffic volumes combined with numerous highway design features that do not meet current standards, such as narrow (or non-existent) shoulders, poor sight-line distances, and short spacing between ramps. These non-standard and non-conforming features also contribute to high accident rates in the project area. As shown in **Figures 1-3 and 1-4**, most of the viaduct segments have accident rates that are above statewide averages for similar facilities. More specifically, accident rates near the I-81/I-690 interchange and viaduct area are more than three times higher than the statewide average in some locations. In addition, the non-standard features may diminish the ability to manage or respond to incidents. For example, disabled vehicles have limited space to avoid impeding travel lanes, and emergency response vehicles have limited access during incidents. During the winter, the added space requirements of snow storage and removal can exacerbate constrictions created by non-standard features.

NON-STANDARD AND NON-CONFORMING DESIGN FEATURES

In New York State, highway design is guided by AASHTO design standards and NYSDOT's Highway Design Manual. These standards vary based on design speed and include criteria for grades and roadway curvatures, lane widths, shoulder dimensions, median design, and interchange spacing, among many others. Design standards have evolved over time as engineering and safety practices have improved. As such, highway infrastructure systems that were constructed in the 1950s and 1960s do not always meet current standards.

A survey of the "Capacity and Safety Study Limit" defined for the I-81 Corridor Study identified over 200 non-standard and non-conforming features along the sections of I-81, I-690, and I-481, as shown in **Table 1-1**.

The I-81/I-690 interchange is a complex intersection of two elevated highways with multiple entrance and exit ramps. The intricacies through which drivers must navigate combined with the abundance of non-standard and non-conforming features create limited margins of error and further contribute to the diminished safety of this corridor. As indicated in **Table 1-1**, within the viaduct and I-81/I-690 interchange areas, there are a host of existing non-standard features, including inadequate sight-distances, shoulder widths, lane widths, median widths, grades, curve radii, and superelevations. In some areas, shoulders are non-existent and medians are narrow, with only enough space for concrete barriers that separate opposing traffic lanes. In addition, a number of ramps have inadequate acceleration/deceleration length and ramps are too closely spaced and fail to conform to AASHTO's recommended design standards. Some examples include:

- The distance between the northbound on-ramp from Harrison Street to northbound I-81 and the I-81 exit ramp to eastbound I-690 is only 725 feet long, but the recommended spacing is 2,000 feet.
- On northbound I-81, the distance between the westbound I-690 entrance ramp and the entrance ramp at Pearl Street is only 75 feet, which is substantially less than the recommended 1,000 feet. In addition, the acceleration lane for the Pearl Street ramp is only 250 feet long, whereas the minimum recommended length is 910 feet.

Table 1-1
Summary of Existing Non-Standard and Non-Conforming Features

Highway Segment ¹	Non-Standard Features						Non-Conforming Features		Total
	Shoulder Width	Grade	Horizontal Curve	Sight ² Distance	Super-elevation (Banking)	Median Width	Ramp Spacing	Accel/ Decel Length	
Viaduct	13	0	0	12	4	1	0	0	30
I-81/I-690 Interchange	21	2	8	25	7	0	5	2	70
I-81 Northern Segment	4	0	2	21	10	0	5	2	44
I-690 / West Street	9	0	2	7	2	0	2	0	22
I-690 Eastern Segment	5	0	0	2	4	1	0	0	12
I-481 Segment	6	3	1	1	19	0	3	0	33
TOTAL	58	5	13	68	46	2	15	4	211

Notes:

¹ For the purposes of **Table 1-1**, the Highway Segments are generally described as follows:

Viaduct is the highway segment between Dr. Martin Luther King, Jr. East and Genesee Street.

I-81/I-690 Interchange includes I-81 between Genesee St. and Butternut St. and I-690 between Franklin St. and Almond St.

I-81 Northern Segment is the highway section between Butternut St. and Hiawatha Blvd.

I-690/West Street is the highway section between Leavenworth Ave. and Franklin St.

I-690 Eastern Segment is the highway section between Catherine St. and Beech St.

The I-481 Segment includes the southern and northern I-81/I-481 interchanges and the highway section between the two interchanges.

² For the purposes of **Table 1-1**, sight distance includes horizontal stopping sight distance (HSSD) and vertical stopping sight distance for crest vertical curves. Headlight sight distance for sag vertical curves is not included.

- Only 1,200 feet separate the junction of the eastbound I-690 ramp/southbound I-81 and the southbound I-81 exit to Harrison Street. The recommended spacing is 2,000 feet. In addition, the acceleration lane for the eastbound I-690 ramp is 230 feet long rather than the recommended length of 550 feet.

Moreover, the I-81/I-690 interchange is missing connections from eastbound I-690 to northbound I-81, and southbound I-81 to westbound I-690. Therefore, it does not provide complete and seamless transitions between the two highways. Except in extreme cases, partial interchanges are inconsistent with FHWA's "Interstate System Access Informational Guide" (August 2010), which states "not providing for all movements violates driver expectation and may lead to 'wrong-way' movements on ramps." Therefore, alternatives for the construction of partial interchanges should generally be avoided¹. Based on traffic modeling forecasts for the Project alternatives, it is estimated that in 2050, which is the design year (i.e., the estimated time of completion plus 30 years), use of the missing connector ramps would be between approximately 1,700 and 1,900 vehicles during the AM peak hour and 2,300 and 2,700 vehicles during the PM peak hour. Absent the missing

¹ "A Policy on Design Standards Interstate System", AASHTO, dated January 2005.

connectors, these vehicles would continue to be routed to local streets, such as Bear Street and Hiawatha Boulevard.

An important consideration in Syracuse is snowfall, which can amplify the effects of non-standard and non-conforming features, particularly the lack of adequate shoulders and medians. Syracuse is subject to lake effect snow due to its proximity to Lake Ontario; this results in heavy yearly snowfall accumulations. Syracuse routinely receives annual snow totals in excess of 100 inches.² The lack of adequate shoulders and paved and unpaved medians makes snow removal difficult since space is limited for snow storage. Because of these conditions, heavy snowfall affects traffic congestion and emergency access to a great degree.

IMPROVE HIGHWAY BRIDGE INFRASTRUCTURE

I-81 and I-690 are elevated through Downtown Syracuse. Their interchange and viaducts comprise 33 highway bridges, with 17 more bridges located along the interchange approaches. These bridge structures were constructed primarily in the 1960s, and many of their components are nearing the end of their design service life. Over time, these structures have experienced varying levels of deterioration from exposure to weather, de-icing salts, and heavy vehicle use. Bridges are particularly susceptible to wear and tear because many of the structural elements are directly exposed to weather conditions.

These interstate highway bridges are regulated by FHWA and are owned and maintained by NYSDOT. To monitor the structural adequacy of highway bridges, FHWA has established a National Bridge Inventory (NBI) condition rating system. A bridge that is considered “structurally deficient” has a condition rating of 4 or less (based on a scale from 0 [failing condition] to 9 [excellent condition]) for the deck, superstructure, or substructure; or an appraisal rating of 2 or less (based on a scale from 0 [closure] to 9 [superior]) for structural condition or waterway adequacy. Similarly, NYSDOT uses a bridge inspection program to rate structural conditions of bridges on a scale of 1 (failing condition) to 7 (new condition). Based on its system, NYSDOT considers bridges with a condition rating of less than 5 to be “deficient.” NYSDOT inspects highway bridges at least every two years to assess their structural conditions, which informs the FHWA NBI ratings and NYSDOT condition ratings. Condition ratings that are deficient do not necessarily indicate unsafe traveling conditions in the near term, but are used to prioritize areas of repair and maintenance and identify areas that may need more extensive measures to address future deterioration.

FHWA uses an additional classification system to identify bridges as “functionally obsolete” based on dimensional aspects—such as deck geometry (e.g., lane widths) and vertical clearances—that do not meet current design standards. The functionality of a bridge is a measure of its effectiveness to carry traffic on or under the structure. Bridges that are functionally obsolete are not necessarily in poor structural condition but may not operate with optimal efficiency. A bridge on which the deck geometry, load carrying capacity, clearance, or approach roadway alignment no longer meets the present standards may also be considered functionally obsolete.

² <http://www.city-data.com/top2/c464.html>. Accessed September 12, 2013.

Considering the level of capital investment needed where more long-term solutions are deemed necessary to correct structural deficiencies, NYSDOT determines whether bridges can achieve desirable lifespans through rehabilitation or whether replacement is required. The evaluation of the bridges within the I-81 viaduct priority area identified the need to replace all of the bridges in the viaduct and I-81/I-690 interchange (except for one recently constructed bridge) and the six bridges in the approach sections. All others, with the exception of several recently constructed bridges, were recommended for rehabilitation.

Table 1-2 summarizes the structural conditions of the bridges within the I-81 viaduct priority area, which for the purposes of this study are those bridges that have NYSDOT condition ratings of less than 5 or meet FHWA criteria for being structurally deficient or functionally obsolete. Three bridges are classified as structurally deficient and 10 bridges are classified as functionally obsolete per FHWA standards.

The Strategic Highway Network (STRAHNET) was established by the U.S. Department of Defense to identify a highway network important for military purposes during both peacetime and wartime. All interstate highways are part of the network. The minimum vertical clearance on STRAHNET routes is 16 feet, but sections of the interstate in urban areas have been exempt from the vertical clearance requirements. It was previously determined that the north-south STRAHNET routing through the Syracuse area would not be along I-81, but rather loop around Syracuse using I-481 since there are several bridges over I-81 that do not meet 16-foot clearance. The minimum clearance could be addressed with reconstruction of the highways.

Since initiating the Project in 2013, inspections identified severe deficiencies on I-690 along the 1,500-foot segment of bridge that spans Beech Street, calling for a more immediate replacement. Thus, NYSDOT is undertaking the I-690 over Teall Avenue and Beech Street Bridge Replacement Project and upgrades to the adjacent interchange at Teall Avenue as a separate project. This project will reconstruct a $\frac{3}{4}$ -mile section of highway including replacement of a 1,500-foot viaduct spanning Beech Street, replacement of the bridge over Teall Avenue, and improvements to the Teall Avenue interchange (Exit 14). This separate project has independent utility, connects logical termini, is of sufficient length to address environmental matters on a broad scope, and would not restrict consideration of alternatives for other reasonably foreseeable transportation improvements. This separate project and the I-81 Viaduct Project are not dependent upon each other and each can proceed prior to, concurrently with, or subsequent to, the completion of the other.

Table 1-2

Structurally Deficient or Functionally Obsolete Bridges in I-81 Viaduct Priority Area

BIN	Bridge	Length (ft.)	NYSDOT Rating*	FHWA Structurally Deficient	FHWA Functionally Obsolete	Bridge Inspection Date
I-81 Corridor Bridges						
1008489	NB & SB I-81 over North Salina Street	163	4.569	✓		2014
1031569	I-81 over East Adams Street (Viaduct)	4,097	4.083		✓	2015
1053840	NB I-81 over Erie Boulevard (I-81/ I-690 Interchange)	1,169	4.153		✓	2015
1053860	SB I-81 over North Townsend Street (I-81/I-690 Interchange)	1,425	4.319		✓	2015
1064590	Ramp from WB I-690 to SB I-81 (I-81/ I-690 Interchange)	1,723	4.493		✓	2014
1053881	SB I-81 over North State Street	1,780	4.486		✓	2015
1053882	N I-81 over North State Street	1,787	4.772		✓	2015
I-690 Corridor Bridges						
1050780	Ramp from West Street to WB I-690 over I-690	269	5.250		✓	2015
1050790	Ramp from WB I-690 to West Street over I-690	360	5.609		✓	2015
1050800	Ramp from N. Franklin Street to West Street over Onondaga Creek	200	5.639		✓	2014
1051000	I-690 EB over I-81	3,147	4.085		✓	2014
105100A	I-690 EB ramp to I-81 SB over North State Street	622	4.148	✓		2014
1095510	I-690 WB over I-81	198	4.268	✓		2014
Source: NYSDOT, October 2016						

TRANSPORTATION TO SUPPORT LONG-RANGE PLANNING EFFORTS

Several local and regional long-range plans have established goals for the regional transportation network and/or have identified I-81, particularly the I-81 viaduct, as an influential feature within Downtown Syracuse and adjacent neighborhoods. The I-81 viaduct and I-81/I-690 interchange are prominent elevated features that have affected adjacent land uses and connectivity between land uses, thereby influencing the livability, sustainability, and economic vitality of the City of Syracuse. In addition, as described in several regional long-range plans and through comments received during the Project's scoping process, I-81 is considered an important asset to the region's economic vitality. As such, in addition to the structural and design needs previously described, regional and community planning initiatives will continue to be considered.

I-81 Corridor Study

The Project stems from the three-year I-81 Corridor Study prepared by NYSDOT in partnership with FHWA and the Syracuse Metropolitan Transportation Council (SMTC), the region's metropolitan planning organization (MPO), and the public involvement effort entitled the "I-81 Challenge," led by NYSDOT and SMTC. The I-81 Corridor Study evaluated the 12-mile section of I-81 through greater Syracuse between its interchanges with I-481 and identified the I-81 viaduct priority area as an area with substantial structural and geometric deficiencies, thereby prompting the I-81 Viaduct Project. The I-81 Corridor Study included engineering evaluation of highway infrastructure conditions and public outreach initiatives. The engineering studies, along with the extensive public input, provided the initial basis for developing potential alternatives for the I-81 Viaduct Project (alternatives development is described further in **Chapter 3, Alternatives**).

The I-81 Corridor Study was guided by a set of goals and objectives grouped into four broad categories, which informed the goals and objectives established for the I-81 Viaduct Project (described below in Sections 1-3 and 1-4). The goals presented in the I-81 Corridor Study include:

- Transportation:
 - Enhance the Transportation Network
 - Enhance Region-wide Mobility
 - Improve Public Safety
- Economic Competitiveness:
 - Maintain or Improve Economic Opportunities
 - Exercise Fiscal Responsibility
- Social Equity/Quality of Life:
 - Support Community Quality of Life
 - Share Burdens and Benefits
- Environmental Stewardship:
 - Preserve or Enhance Environmental Health.

SMTC Long-Range Transportation Plan (LRTP)

SMTC is responsible for transportation planning in the Syracuse metropolitan area and develops a Long-Range Transportation Plan (LRTP) to guide development and evolution of the region's transportation system. The current 2050 LRTP (approved September 2015) identifies goals for the region's transportation system, both in terms of how it operates and how it affects the surrounding communities. Key goals in the LRTP include:

- To support smart growth development patterns while supporting economic development and minimizing impacts to historic resources and community landmarks;

- To provide convenient connections to intercity transportation facilities;
- To maintain adequate infrastructure on primary freight corridors and to maintain existing pavement and bridges;
- To reduce serious injuries and fatalities from vehicle, bicycle, and pedestrian crashes;
- To improve the reliability of the transportation system, with an emphasis on primary commuter routes;
- To enhance the existing transit system and expand the regional trail network; and
- To advance a solution that addresses the transportation needs within the I-81 viaduct priority area identified in the I-81 Corridor Study that supports the goals of the LRTP.

SMTC also states that the 2050 LRTP does not determine an outcome for the I-81 Viaduct Project, but rather that the plan will be updated once NYSDOT identifies a Preferred Alternative for the Project.

City of Syracuse Comprehensive Plan 2040

The City of Syracuse prepared its Comprehensive Plan 2040 to establish policies to meet its vision for the future, some of which involve transportation infrastructure. The role of transportation in Downtown Syracuse is identified as an important consideration in the Comprehensive Plan. Key priorities of the City of Syracuse Comprehensive Plan 2040 include:

- Establishing future land uses and zoning that expand Syracuse’s Urban Core beyond Downtown to the Near Eastside and portions of University Hill east of I-81, and to the Southside.
- Smoothing transitions and improving connectivity between Downtown and the surrounding neighborhoods by removing, minimizing, or mitigating visual barriers and barriers to circulation—for example, physical barriers such as the highways and major arterials and visual barriers such as large expanses of surface parking;
- Reinforcing and prioritizing University Hill and Downtown for economic growth as the core of regional employment and business;
- Facilitating revitalization of Syracuse’s neighborhood business corridors;
- Ensuring that transportation options Downtown are compatible with its function as the regional urban core; and
- Providing predictability and clarity for new and expanding business ventures.

The Comprehensive Plan also includes the Syracuse Bicycle Plan, which indicates continued efforts to promote non-motorized modes of transportation in the City of Syracuse. As stated in the plan, “in 2010, the demand for more bicycle infrastructure remained strong, and the City administration determined a need to create a plan for a cohesive and connected bicycle network, or a blueprint for future growth.” This plan identifies various roadway treatments

and improvements needed in the city to enhance bicycle travel, including on some streets that pass under I-81.

The City of Syracuse is also in the process of updating its zoning ordinance and zoning map to reflect the goals of its Comprehensive Plan 2040, which includes the Land Use and Development Plan 2040. The citywide zoning update, “ReZone Syracuse,” includes the following objectives that relate to transportation:

- To implement the recommendations from the Comprehensive Plan 2040, including the Land Use and Development Plan 2040;
- To transition from the use-focused, Euclidean Zoning Ordinance to an updated ordinance that incorporates principals of Form Based Codes, Smart Growth, Traditional Neighborhood Development, and Transit Oriented Development, among other current best practices;
- Develop and/or improve standards regulating urban design, urban agriculture, lighting, signage, landscaping, parking, site design, infill development, and vacant land management;
- Increase protection of natural resources, including open space, water bodies, topography, and tree protection; and
- Facilitate increased public awareness of, and participation in, zoning review and processes.

The City plans to implement ReZone Syracuse in 2017.

Central New York Regional Economic Development Corporation (CNYREDC) Five Year Strategic Plan: 2012-2016

The Central New York Regional Economic Development Corporation (CNYREDC) developed its Five Year Strategic Plan: 2012–2016 as an economic strategy to build a solid foundation for sustainable growth and prosperity in the region. The goals of the Strategic Plan are to:

- Improve competitiveness in, and connections to, the regional, national, and global economies;
- Invest in outdated infrastructure to support economic drivers;
- Strengthen targeted industry concentrations that leverage unique economic assets;
- Revitalize the region’s urban core;
- Increase density and create vibrant main streets; and
- Preserve and enhance municipal centers for future growth.

The Strategic Plan identifies building 21st century infrastructure—including air service, port access, roads, and railways—as one of the critical mechanisms to fuel economic growth and improve connectivity between regional goods and wider markets. The Strategic Plan states

that economic development efforts must include regional infrastructure projects, such as waterfront revitalization and the I-81 Viaduct Project in Downtown Syracuse to help Central New York achieve its vision.

VisionCNY Regional Sustainability Plan

Led by the Central New York Regional Planning and Development Board (CNYRPDB), the Central New York Regional Sustainability Plan (VisionCNY) (June 2013) was developed to serve as a foundation for investments to advance a sustainable future in the Central New York region. The plan promotes expansion of the region's pedestrian and bicycle infrastructure; implementation of green infrastructure for stormwater management; improved connectivity between parks and other public spaces; a decrease in the number of roads and bridges that are rated "deficient" or "poor"; infrastructure that revitalizes existing communities and improves quality of life; and reductions in greenhouse gas emissions to support the state's long-term goals. VisionCNY characterizes I-81 as a structure nearing the end of its useful life, where innovative solutions will need to be implemented to redefine the Downtown Syracuse area and create an iconic image for the community.

Onondaga County Settlement Plan

The Onondaga County Settlement Plan (2001) was developed by the Syracuse-Onondaga County Planning Agency (SOCPA) and stresses the importance of improving quality of life within the 35 municipalities of Onondaga County through an emphasis on neighborhoods. The Settlement Plan describes several transportation policies to achieve a higher quality of life, emphasizing transportation infrastructure that supports healthy neighborhoods through the encouragement of pedestrian life. Some of the Settlement Plan's regional transportation policies focus on attaining a healthy balance between transportation modes; improving pedestrian and bicycle accessibility; and minimizing effects of highways and roadways on neighborhood character.

Onondaga County Sustainable Development Plan

Onondaga County is currently developing a new Sustainable Development Plan. Focusing on nine areas of interest, the draft Sustainable Development Plan provides a basis from which sustainable development decisions can be made through recommended policies and practices. One of these areas of interest includes transportation and land use, where the plan points towards Complete Streets policy and practice to incorporate multi-modal design and function for social, economic and environmental community benefits.

SMART 1 Study

SMTC is developing the Syracuse Metropolitan Area Regional Transit Study Phase 1 (SMART 1). SMART 1 will identify options for enhanced transit service along two corridors in the City of Syracuse: (1) the Regional Transportation Center to Syracuse University; and (2) Eastwood to Onondaga Community College. The study builds on the recommendations of NYSDOT's Syracuse Transit System Analysis (STSA), which was completed in January 2014. The goals of the SMART 1 study are organized around three topics:

- Consensus Building, which aims to: (1) involve a large and diverse mix of community members through an unbiased, transparent, and meaningful outreach program; (2) support the planning goals of SMTC, Centro, City of Syracuse, NYSDOT, and other important stakeholders; (3) adopt a Locally Preferred Alternative that is technically feasible, includes a sound financial plan, and has the broad support of the SMTC, Centro, City of Syracuse, and other key stakeholders; and (4) follow standard Federal Transit Administration (FTA) procedures to facilitate the transition to the project development process and assure project competitiveness in the Small Starts program.
- Transportation, which includes: (1) build on the analysis and conclusions of the Syracuse Transit System Analysis and confirm the selection of the preliminary corridors; (2) improve the utility of transit service for riders by reducing travel time, improving headways, expanding route coverage, and generally increasing travel options; and (3) develop a plan for a high-intensity transit investment that is preferred for trips to and within Downtown Syracuse.
- Development, which includes: (1) supporting revitalization of Syracuse and key neighborhoods along the selected corridors by encouraging transit-oriented development and infill; (2) using transit to improve connectivity between key locations in Syracuse supporting economic, cultural, social, and health-related development opportunities; and (3) planning to increase the effectiveness of transit in Syracuse, providing a vision for how it could contribute to a vibrant, inclusive, and prosperous city.

The SMART 1 study will determine the feasibility of enhanced transit services in its study corridors, establish the preferred mode and routing, and may recommend a Locally Preferred Alternative. SMTC plans to complete the study in 2017.

The SMART 1 Study is an independent undertaking from the I-81 Viaduct Project, but SMTC and NYSDOT are closely coordinating their efforts. As stated in “Syracuse Metropolitan Area Rapid Transit Study Phase 1: Frequently Asked Questions” (SMTC, February 2016):

The SMART 1 study will focus solely on the assessment of an enhanced transit system (Bus Rapid Transit or Light Rail Transit) operating along two corridors that may have the conditions necessary to sustain high ridership. The I-81 Viaduct Project is focused on a select area of the interstate that is nearing the end of its lifespan. In addition to recommending pursuing higher-intensity transit services, the 2014 STSA also recommended a commuter express service for Interstate 81. Although interstate express bus service is not included in SMART 1, the planning study does not preclude Centro or NYSDOT from advancing the express bus concept. As plans for both I-81 and an enhanced transit system progress, SMTC, Centro, and NYSDOT will continue to communicate frequently. Both Centro and NYSDOT are members of the SMART 1 Study Advisory Committee, while SMTC and Centro are members of NYSDOT’s I-81 Viaduct Project Stakeholders’ Advisory Working Groups.

Other Local and/or Neighborhood Plans

A number of municipalities and community planning organizations have established visions for neighborhoods and communities near the I-81, I-690, and I-481 corridors. These include the University Hill Corporation, Northside Urban Partnership (Northside UP), the Downtown Committee of Syracuse, the Syracuse Housing Authority, Syracuse University, and the Town of DeWitt. Aspects of these organizations or their plans include:

- **The University Hill Corporation:** The University Hill Corporation, a consortium of businesses and institutions aimed at guiding growth and development in University Hill, released the final recommendations of the University Hill Transportation Study in September 2007. The study was the first to specifically recommend the I-81 Corridor boulevard concept and notes that replacing the viaduct with a surface boulevard would improve accessibility of all transportation modes, would increase connectivity between Downtown and areas east of I-81 (e.g., University Hill and Near Eastside), and create opportunities to improve the neighborhood landscape.
- **Northside Urban Partnership:** Northside Urban Partnership is a collaboration of businesses and community organizations, whose mission is to improve the quality of life for residents of Syracuse, particularly those within the Near Northside neighborhoods. The focus area of Northside UP generally forms a triangle bounded by I-81 to the west, I-690 to the south, and Lodi Street to the north/east, and includes St. Joseph's Hospital Health Center. The Northside Tomorrow's Neighborhoods Today Five-Year Plan (2010–2015) states “redesign I-81 to incorporate Northside into the urban fabric.”
- **Downtown Committee:** The Downtown Committee of Syracuse represents property owners and tenants in the Downtown area. It promotes growth and economic development through planning and local programs, and its 2015 Annual Report lists two goals for the future of I-81:
 - Restore connections to Downtown Syracuse and University Hill neighborhoods by eliminating physical and visual barriers; and
 - Disperse traffic onto multiple routes by ensuring this is not a one-road solution to present a functional, safe, and efficient solution.
- **Syracuse Housing Authority Master Plan:** The Syracuse Housing Authority is developing a master plan for its facilities, including approximately 20 city blocks that abut either side of I-81. The plan will identify a program of housing development over the next several years as well as new administrative spaces, retail and medical space, community facilities, and parkland and recreational buildings for residents. The plan also seeks to establish a street grid where one does not currently exist, as well as to improve vehicular and non-vehicular (bicycle and pedestrian) circulation and mobility within the master plan area and in adjacent parts of the City of Syracuse. The Syracuse Housing Authority is considering alternatives for the I-81 Viaduct Project as part of its planning efforts.
- **Fast Forward Syracuse Campus Framework.** Syracuse University released its draft 20-year campus plan in June of 2016. The purpose of the plan is to reinvigorate the

University with “a more robust, connected academic core campus offering many different experiences.” The plan’s objectives seek to create a higher density, more connected, urban campus and include improving connections between the main campus and the growing West Campus Area, surrounding neighborhoods, and Downtown.

- **Town of DeWitt:** The Town of DeWitt 2014 Sustainability Plan identifies concerns with respect to the I-81 Viaduct Project. Specifically, it states that motorists could potentially be diverted along I-481 and I-690 through DeWitt if I-81 were removed from Downtown Syracuse.

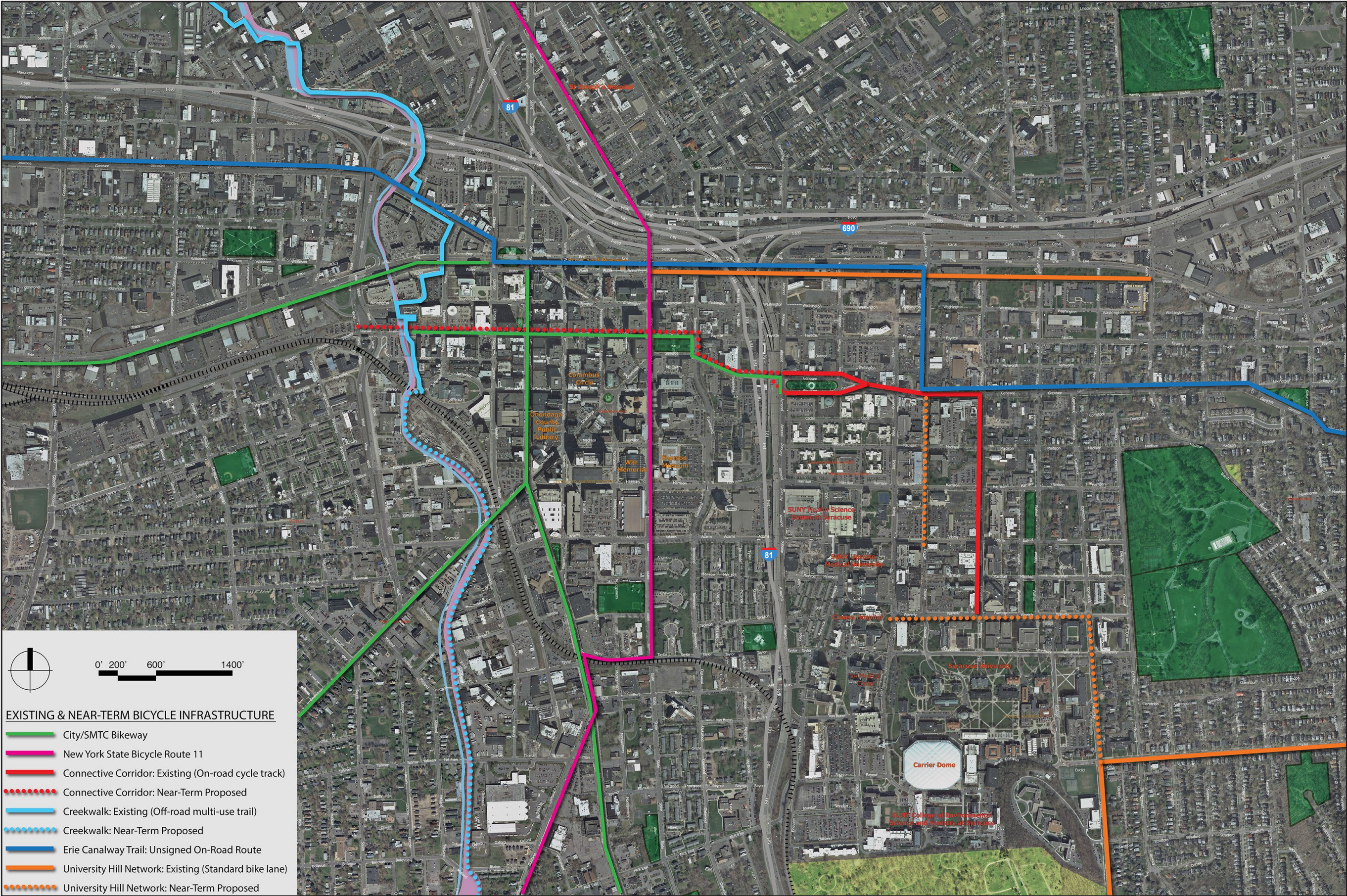
IMPROVE PEDESTRIAN AND BICYCLE INFRASTRUCTURE

While pedestrian and bicycle facilities are common considerations in the long-range vision plans noted above, more near-term efforts have also focused on identifying the existing conditions of pedestrian and bicycle infrastructure in and near the I-81 corridor and improvements to those facilities. SMTC has conducted several pedestrian- and bicycle-related studies to identify existing conditions and to look for solutions to improve pedestrian and bicycle facilities. Some of these studies focused on University Hill (just east of the I-81 viaduct) where several educational institutions and hospitals generate high levels of pedestrian activity, and some have focused on Almond Street along the I-81 viaduct.

As part of its University Hill Transportation Study, SMTC provided an overview of existing pedestrian and bicycle conditions and made recommendations for potential improvements. The University Hill Transportation Study focused on conditions within University Hill and considered connectivity between University Hill and Downtown. The study identified I-81 as a barrier to pedestrian and bicyclist mobility, noting as concerns the width of Almond Street, its inadequate pedestrian infrastructure, and its multiple vehicular turning movements.

In 2010, SMTC released the Almond Street Corridor Pedestrian Study to address potential increasing pedestrian activity associated with anticipated growth in the University Hill area. This growth was expected to result in an increase of pedestrians crossing Almond Street between East Genesee Street and Adams Street (under the I-81 viaduct), which is within the I-81 viaduct priority area. The Almond Street Corridor Pedestrian Study identified various constraints in this corridor, such as incomplete or inadequate pedestrian infrastructure, uninviting pedestrian environment, and poor pedestrian visibility at certain crosswalks. In addition, the study noted that there are no designated bike lanes along Almond Street, which requires bicyclists to use general travel lanes.

Several initiatives have been underway in the City of Syracuse to enhance bicycle and pedestrian connectivity. As shown in **Figure 1-5**, designated bicycle infrastructure has been established or is planned throughout the city. Some of these routes are part of local bicycle and pedestrian initiatives, such as the City/SMTC Bikeway and Creekwalk, while others are part of larger regional routes, such as the New York State Bicycle Route 11 and the Erie Canalway Trail. Syracuse University has also worked to enhance bicycle and pedestrian infrastructure by developing the Connective Corridor between University Hill and Downtown with designated bike lanes on local streets, including Genesee Street, which passes under the I-81 viaduct.



Existing and Near-Term Bicycle Infrastructure
Figure 1-5

With respect to enhanced bicycle and pedestrian connectivity and safety, NYSDOT has identified the need to address the following:

- Incomplete routes, missing or inadequate crosswalks, and pedestrian signals under and near the I-81 viaduct, and compliance with the Americans with Disabilities Act (ADA);
- A lack of connectivity between pedestrian and bicycle generators and their destinations; and
- Inadequate lighting and pedestrian refuge locations under and near the I-81 viaduct.

1.3 PROJECT GOALS

Because of the needs described in the preceding sections, NYSDOT is pursuing the I-81 Viaduct Project. While it is important that the highway fulfill its primary charge of moving people and goods safely and efficiently, it is also important for the project to consider the extent to which the transportation infrastructure can enhance economic growth and vitality in the city.

With the project needs and local plans in mind, NYSDOT has developed the following goals for the I-81 Viaduct Project:

- Improve safety and create an efficient regional and local transportation system within and through greater Syracuse; and
- Provide transportation solutions that enhance the livability, visual quality, sustainability, and economic vitality of greater Syracuse.

1.4 PROJECT PURPOSE AND OBJECTIVES

The purpose of the I-81 Viaduct Project is to address the structural deficiencies and non-standard highway features in the I-81 corridor while creating an improved corridor through the City of Syracuse that meets transportation needs and provides the transportation infrastructure to support long-range planning efforts.

The Project's purpose statement is intended to address the needs identified throughout this section. To meet the Project's purpose, the objectives are to:

- Address vehicular, pedestrian, and bicycle geometric and operational deficiencies in the I-81 viaduct priority area.
- Maintain or enhance vehicle access to the interstate highway network and key destinations (i.e., Downtown business district, hospitals, and institutions) within neighborhoods along the I-81 viaduct priority area.
- Address structural deficiencies in the I-81 viaduct priority area.
- Maintain or enhance the vehicular, pedestrian, and bicycle connections in the local street network within the Project Area to allow for connectivity between neighborhoods, the Downtown business district, and other key destinations.

- Maintain access to existing local bus service and enhance transit amenities within and adjacent to the I-81 viaduct priority area.

The purpose, need, and objectives are the basis for determining the reasonable range of alternatives that have been developed for the I-81 Viaduct Project (see **Chapter 3, Alternatives**).

1.5 PROJECT BACKGROUND AND HISTORY

As previously discussed, the I-81 Viaduct Project is informed by a three-year planning study (the I-81 Corridor Study) that NYSDOT prepared in partnership with SMTc and FHWA. The I-81 Corridor Study identified strategies for the long-term viability of the 12-mile I-81 corridor between its southern and northern interchanges with Interstate 481 (I-481) (Exits 16A and 29, respectively), including the I-81 viaduct and the I-81/I-690 interchange in Downtown Syracuse. The study evaluated the needs of and potential solutions for the corridor, dividing it into three segments—south outer segment (approximately 2 miles), viaduct segment (approximately 3.5 miles), and north outer segment (approximately 6.5 miles). The I-81 Corridor Study was completed in July 2013 and concluded that there is a need for the near-term reconstruction or replacement of I-81 through Downtown Syracuse, which is the purpose of this I-81 Viaduct Project.

FHWA issued a Notice of Intent to prepare an EIS for the I-81 Viaduct Project in the *Federal Register* in August 2013, and in November of that year, NYSDOT hosted an initial scoping meeting at the On-Center in Downtown Syracuse. NYSDOT hosted a second scoping meeting in June of 2014. In April 2015, FHWA and NYSDOT issued the Scoping Report, which reflected comments on the Project that had been received from the public and identified alternatives for further evaluation. **Chapter 3, Alternatives** provides a history of the alternatives development for the I-81 Viaduct Project and identifies the alternatives that are studied in this DDR/Draft EIS.

1.6 PROJECT SCHEDULE AND CONTACT INFORMATION

A Record of Decision for the Project is anticipated in 2017. Design is anticipated to take approximately 18 months, and construction is expected to last approximately six years. It is estimated that Project completion would be in 2024 or 2025. **Chapter 4, Construction Means and Methods** provides more detail about the anticipated construction schedule for the Project alternatives.

For further information on the Project, please visit the Project website at www.i81opportunities.com or contact:

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