

I-81 VIADUCT PROJECT

EXECUTIVE SUMMARY

This Draft Design Report/Draft Environmental Impact Statement (DDR/DEIS) documents the social, economic, and environmental effects of the Interstate 81 Viaduct Project and contains analysis to support a finding by the Federal Highway Administration (FHWA) pursuant to the Section 4(f) of the U.S. DOT Act. The purpose of the I-81 Viaduct Project is to address the structural deficiencies and non-standard highway features while creating an improved corridor through the City of Syracuse that meets the transportation needs and provides the transportation infrastructure to support long-range planning efforts. The project alternatives consist of the No Build Alternative, the Viaduct Alternative, and the Community Grid Alternative, which is recommended as the Preferred Alternative. FHWA and the New York State Department of Transportation (NYSDOT) will consider all comments received on this DDR/DEIS.

S.1 INTRODUCTION

The New York State Department of Transportation (NYSDOT), in cooperation with the Federal Highway Administration (FHWA), has prepared this Draft Design Report/Draft Environmental Impact Statement (DDR/DEIS) 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 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 State Environmental Quality Review Act (SEQRA) regulations, the Project is classified as a “non-Type II” action, indicating that it has the potential for significant environmental impacts or substantial controversy on environmental grounds. 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.

The I-81 Viaduct Project is informed by a three-year planning study (the I-81 Corridor Study) that NYSDOT prepared in partnership with Syracuse Metropolitan Transportation Council and FHWA. The I-81 Corridor Study identified strategies for the long-term viability of approximately 12 miles of

I-81 VIADUCT PROJECT

highway along I-81 between its southern and northern interchanges with I-481 (Exits 16A and 29, respectively), including the I-81 viaduct and the I-81/I-690 interchange in Downtown Syracuse. The I-81 Corridor Study considered the needs of the corridor, along with potential solutions to address these needs. It divided the corridor into three segments: the south outer segment (approximately 2 miles), the viaduct segment (approximately 3.5 miles), and the north outer segment (approximately 6.5 miles). Completed in July 2013, the study concluded that there is a need for the near-term reconstruction or replacement of the travel capacity of I-81 through Downtown Syracuse, leading to the initiation of the I-81 Viaduct Project. The Corridor Study also informed the goals and objectives for the 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. In November 2013, NYSDOT hosted an initial scoping meeting at the Oncenter in Downtown Syracuse. In June 2014 NYSDOT issued a draft scoping report that identified the preliminary list of alternatives and hosted a second scoping meeting in June 2014 in the same location. In April 2015, FHWA and NYSDOT issued the Project Scoping Report, which reflected comments on the Project that had been received from both the public and agencies and identified alternatives for further evaluation in the DDR/DEIS. **Chapter 3, Alternatives** provides a history of the alternatives development for the I-81 Viaduct Project.

Following the release of the Project Scoping Report in 2015, FHWA and NYSDOT continued to refine and evaluate alternatives. Several Viaduct and Community Grid Alternative options were screened and dismissed, resulting in the identification of the alternatives that are studied in this DDR/DEIS. As a result of public input, various tunnel options were developed, evaluated, and dismissed (refer to **Appendices B-2, B-3, and B-4**). FHWA and NYSDOT also continued to enhance the design of the build alternatives to reduce or eliminate their potential adverse environmental effects. In 2019, NYSDOT released a preliminary DDR/DEIS to bring the public up to date on the status of the Project. In that document, NYSDOT recommended the Community Grid Alternative as the Preferred Alternative.

Following the public release of the preliminary DDR/DEIS, NYSDOT carefully considered public comments, which have been summarized and responded to in **Appendix M-5** of this document. The build alternatives were further refined to address particular public concerns. Both the Viaduct and Community Grid alternatives were modified to include improvements along Bear Street, and the Community Grid Alternative also includes improvements at I-481 Interchange 3 (Routes 5/92) and a new northbound BL 81 exit ramp at Colvin Street.

NYSDOT has coordinated with FHWA and Federal and State agencies for the review and release of this DDR/DEIS. Following public review of this DDR/DEIS, including a public hearing, FHWA and NYSDOT will carefully review all public comments and prepare a Final Design Report/Final EIS (FDR/FEIS). NYSDOT will then give full consideration to the FDR/FEIS and will prepare a joint Record of Decision (ROD) with FHWA and in accordance with Section 15.9 of 17 NYCRR Part 15.

S.2 PROJECT PURPOSE, NEEDS, GOALS, AND OBJECTIVES

The purpose of the Project is to address the structural deficiencies and non-standard highway features while creating an improved transportation corridor through the City of Syracuse that meets

I-81 VIADUCT PROJECT

transportation needs and provides the infrastructure to support long-range transportation planning efforts.

I-81 and I-690 are elevated through Downtown Syracuse. Each interstate comprises multiple highway bridges, and many of their components, which were constructed primarily in the 1960s, 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 their structural elements are directly exposed to weather conditions. The I-81 and I-690 corridors are characterized by high traffic volumes and reduced travel speeds. Notable delays and queues are common in some sections near the I-81 and I-690 interchange.

Specifically, the Project would address the following identified needs:

- The need to improve traffic flow and safety;
- The need to address aging infrastructure;
- The need for transportation infrastructure to support long-range planning efforts; and
- The need to improve pedestrian and bicycle infrastructure.
- The need for improved transit amenities.

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.

To meet the Project's purpose, five project objectives were established:

- Address the transportation network structural deficiencies, particularly associated with aging bridge structures and non-standard/non-conforming design features within the project limits along I-81 and I-690.
- Address vehicular, pedestrian, and bicycle geometric and operational deficiencies within the project limits.
- Maintain or enhance vehicle access to the interstate highway network and key destinations (i.e., business districts, hospitals, and institutions) within neighborhoods within and near Downtown Syracuse.
- Maintain or enhance the vehicular, pedestrian, and bicycle connections in the local street network within the project limits in and near Downtown Syracuse to allow for connectivity between neighborhoods, business districts, and other key destinations.
- Maintain access to existing local bus service and enhance transit amenities¹ within the project limits in and near Downtown Syracuse.

¹ Transit amenities that may be explored could include bus stops and shelters, bus turnouts, and layover and turnaround places.

S.3 PROJECT AREA

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.

The Project is located in Onondaga County, New York. The Project Area is within the City of Syracuse and the Towns of DeWitt, Salina, and Cicero. The Project Area is shown on **Figure S-1**, and it includes the southern and northern interchanges of I-81 with I-481 (Interchanges 16A and 29, respectively); the portion of I-81 between approximately East Brighton Avenue and approximately 0.7 miles north of Hiawatha Boulevard, including the I-81 viaduct and the I-81/I-690 interchange in Downtown Syracuse; the portions of I-690 approximately between Leavenworth Avenue and Beech Street and between Hiawatha Boulevard West and Bear Street; and I-481 between New York State Routes 5/92 and the New York State Thruway (I-90). The Project Area also includes selected local roads for improvements in proximity to I-81, I-690, and I-481 in Syracuse.

S.4 PROJECT ALTERNATIVES

As explained in **Chapter 3, Alternatives**, numerous potential alternatives for the I-81 Viaduct Project, including some that were introduced as a result of public input, were evaluated to determine whether they would meet the project purpose and need, objectives, and screening criteria. As a result of this process, two build alternatives have been progressed for detailed evaluation in the DDR/DEIS—the Viaduct and Community Grid Alternatives—in addition to the No Build Alternative.

S.4.1 NO BUILD ALTERNATIVE

The No Build Alternative serves as the baseline against which the build alternatives are compared. Although the No Build Alternative would not meet the Project objectives, NEPA requires the evaluation of a No Build Alternative. The No Build Alternative would maintain the highway in its existing configuration, although ongoing maintenance and repairs to ensure the safety of the traveling public would continue.

S.4.2 VIADUCT ALTERNATIVE

The Viaduct Alternative would involve a full reconstruction of I-81 between approximately Colvin Street and Hiawatha Boulevard and the portions of I-690 from Leavenworth Avenue to Lodi Street and Hiawatha Boulevard West to Bear Street. **Figures S-2 through S-4** identify the key features of the Viaduct Alternative. The new viaduct would provide four to six, 12-foot travel lanes (a minimum of two in each direction), as well as inside shoulders (a minimum of four feet in two-lane sections and 10 feet in three-lane sections) and outside shoulders (a minimum of 10 feet in each direction). The new viaduct would be approximately 10 to 15 feet higher than the existing one at some locations. South of Harrison Street, the new viaduct generally would be approximately 10 to 20 feet wider than the 66-foot-wide existing viaduct. The Viaduct Alternative would reconstruct a portion of I-690 and the existing I-81/I-690 interchange; address nonstandard and nonconforming design features; provide new interchange connections at I-690 and I-81 where these connections do not currently exist;

improve connections to local streets; and implement traffic, bicycle, and pedestrian enhancements. A detailed description of the Viaduct Alternative is presented in **Chapter 3, Alternatives**.

S.4.3 COMMUNITY GRID ALTERNATIVE

Figures S-5 through S-8 identify the key features of the Community Grid Alternative, which is recommended as the Preferred Alternative. The Community Grid Alternative would involve demolition of the existing viaduct between the New York Susquehanna & Western Railway (NYS&W) bridge near Renwick Avenue and the I-81/I-690 interchange. The section of I-81 between the southern I-81/I-481 interchange (Interchange 16A) and the I-81/I-481 northern interchange (Interchange 29) in Cicero would be de-designated as an interstate and re-designated as Business Loop 81 (BL 81), and existing I-481 would be re-designated as the new I-81. BL 81 would be a limited access highway from the southern interchange with the new I-81 (existing Interchange 16A) to a new roundabout at Dr. Martin Luther King, Jr. East (MLK, Jr. East) and from I-690 to the northern interchange with the new I-81 (existing Interchange 29). BL 81 would continue along Almond Street north to Erie Boulevard and along Erie Boulevard from Almond Street to Oswego Boulevard. A portion of Pearl Street, between Erie Boulevard and the northbound Pearl Street on-ramp, and a portion of Oswego Boulevard, between Erie Boulevard and East Willow Street, also would be part of BL 81.

Almond Street, located beneath the existing I-81 viaduct, would be reconstructed. The Community Grid Alternative would also involve reconstruction of the portions of I-690 from Leavenworth Avenue to Beech Street and Hiawatha Boulevard West to Bear Street, new or modified interchanges on I-690 and BL 81, as well as the reconstruction and reconfiguration of local streets in Downtown Syracuse.

The Community Grid Alternative would disperse traffic throughout the city grid, using the existing street network. Access points to and from I-690 and BL 81 would be available at West Street, and Crouse and Irving Avenues (to and from I-690), as well as at Clinton Street, Oswego Boulevard, and Pearl Street (to and from northern BL 81), and numerous at grade intersections along Almond Street between MLK, Jr. East and Erie Boulevard (to and from southern BL 81). North-south vehicular traffic would be channeled through Almond Street and along parallel corridors, such as Crouse Avenue, Irving Avenue, State Street, and Townsend Street, as well as other local streets that would have the capacity to accommodate this traffic. East-west traffic routes would include Erie Boulevard, Harrison Street, and Adams Street. North of I-690, North Clinton Street would be reconstructed and extended to serve as an alternative north-south route to Downtown, with new on- and off-ramps connecting to southbound BL 81 located south of Bear Street.

The westbound I-690 on-ramp from Bear Street would be lengthened, and operational improvements would be made on Bear Street. New interchanges would be constructed from I-690 at Crouse Avenue and Irving Avenue, as well as new entrance and exit ramps to/from the BL 81 connecting with East Willow Street, James Street, and Erie Boulevard; a new exit ramp from BL 81 to Colvin Street also would be constructed. West Street would be lowered to intersect with Genesee Street at grade. Streets incorporated into the Community Grid Alternative would be designed to meet Federal, State, and local design standards consistent with their anticipated function.

I-81 VIADUCT PROJECT

The reconstructed Almond Street would consist of two 12-foot-wide travel lanes in each direction, turning lanes at intersections (where needed), widened sidewalks, a landscaped median, and bicycle facilities. Bicycle facilities would include bicycle lanes, cycle tracks, and shared use (bicycle and pedestrian) paths in various segments along Almond Street, as well as some adjacent streets. Curbside parking lanes would be provided, except in the portion between Taylor Street and MLK, Jr. East.

The new Almond Street would provide vehicular access to all existing intersections. However, only right turns would be possible to Madison Street, and to and from Monroe Street. Vehicles on these streets would be directed to the next available fully controlled intersection, which would be at Adams Street (375 feet to the north) or Jackson Street (430 feet to the south).

Existing I-481, which would be re-designated as I-81, would carry a minimum of four lanes (two in each direction) of through traffic. Interstate re-designation and associated numbering must meet American Association of State Highway Transportation Officials (AASHTO) protocols and receive approval from FHWA. The change in highway designation and associated changes in traffic volumes would require modifications to the re-designated I-81. These modifications would include:

- I-81/I-481 South Interchange (Interchange 16A): Reconstruction of this interchange would involve re-routing existing I-81 to connect with existing I-481, which would serve as the new I-81. The new I-81 would meet 70 MPH design standards. The existing ramps that connect northbound I-81 to northbound I-481 and southbound I-481 to southbound I-81 would be demolished, and these movements would be made on the main line of re-designated I-81. The East Brighton Avenue bridge over the interchange and East Glen Avenue would be reconstructed. The intersection of East Brighton Avenue and Rock Cut Road would be maintained.
- I-81/I-481 North Interchange (Interchange 29): This interchange would be reconstructed to connect the re-designated I-81, which would meet 70 mph design standards, with the existing I-81. Ramps between the re-designated I-81 and BL 81 and between the re-designated I-81 and New York State Route 481 would also be provided. In addition, northbound and southbound auxiliary lanes would be constructed along portions of I-481 in the Project Area.
- Existing I-481 Interchange 3 (New York State Routes 5/92): The existing I-481 southbound to westbound Routes 5/92 exit ramp would be widened and improved to accommodate turns onto both westbound and eastbound Routes 5/92. The existing southbound I-481 to eastbound Routes 5/92 exit ramp would be removed. The improved southbound exit ramp would initially widen from one to two lanes and then transition to four lanes as it approaches Routes 5/92, where a new traffic signal would allow both left and right turns. In addition, the existing I-481 northbound entrance ramp from westbound Routes 5/92 would be lengthened substantially to improve vehicular merges. The intersection of New York State Routes 5 and 92 (Lyndon Corners) also would be improved with the addition of a new traffic signal and a right turn lane. The turn lane would begin approximately 600 feet west of the intersection and end on Route 92, approximately 1,000 feet east of the intersection (see **Figure 3-37**).
- A third southbound (auxiliary) lane would be provided between Kirkville Road (existing Interchange 5 southbound on-ramp) and I-690 (existing Interchange 4 southbound off-ramp) (see **Figure 3-37**).

I-81 VIADUCT PROJECT

- A third northbound (auxiliary) lane would be provided between I-690 (existing Interchange 4 northbound on-ramp) and Kirkville Road (existing Interchange 5 northbound off-ramp), requiring a widening of the bridge over the CSX railroad tracks.
- A third northbound (auxiliary) lane would be added between Kirkville Road and I-90 (existing Interchange 5 northbound on-ramp) and I-90 (existing Interchange 6 northbound off-ramp).
- A third southbound (auxiliary) lane would be added between existing I-481 Interchange 9 (I-81/I-481 north interchange) and Northern Boulevard (existing Interchange 8 southbound off-ramp).
- Signage: I-481 signage would be replaced with I-81 signage, and interchanges would be renumbered to correspond to the sequencing of I-81 interchanges south and north of Syracuse.

NYSDOT has modified the Community Grid Alternative after publication of the preliminary Draft Environmental Impact Statement in April 2019 in response to public input. Specifically, NYSDOT added a northbound exit from BL 81 to Colvin Street, provided a new ramp between southbound BL 81 and I-81, and reconfigured the design of Interchange 3 (New York State Route 5/92). Also, as a result of engineering considerations, NYSDOT converted the intersection of BL 81 and MLK, Jr. East from a signalized intersection to a roundabout and modified the Bear Street interchanges on BL 81 and I-690.

The Community Grid Alternative would entail the addition and removal of a route (I-81) from the National Network. Pursuant to 23 CFR 658.11, a Notice of Proposed Rulemaking is required for the proposed deletion of a Federal-aid interstate from the National Network (see the Designation/De-designation Package in **Appendix B-5**).

Upon the completion of construction, NYSDOT could dispose of potential surplus transportation right-of-way in the Central Study Area in accordance with Federal and State law, or the Contractor may sell staging sites. In total, implementation of the Community Grid Alternative could result in 10 to 12.5 acres of surplus transportation right-of-way, depending on how much land would be needed to accommodate the highway, sidewalk, shared use (bicycle and pedestrian) path, and other transportation features. NYSDOT would determine the size and location of the parcels once construction is complete. The potential surplus transportation right-of-way would consist of several sites near Almond Street and Erie Boulevard where the I-81 and I-690 ramps would be removed; a parcel north of Erie Boulevard between McBride and Catherine Streets where the eastbound I-690 ramp from McBride Street would be removed; a parcel north of Butternut Street between BL 81 and State Street where the existing northbound I-81 entrance ramp from Butternut Street would be removed; a parcel south of Court Street between BL 81 and Sunset Avenue where the existing northbound I-81 ramp to Sunset Avenue would be removed and relocated to Bear Street; and two parcels near MLK, Jr. East where the alignment of BL 81 shifts eastward. The parcels on Almond Street would range from 0.75 to 1.5 acres; those on Erie Boulevard would range from 0.3 to 0.5 acres; the parcel north of Butternut Street would be 1 to 1.5 acres; the parcel south of Court Street would be 0.75 to 1 acre; the parcel north of MLK, Jr. East would be 3 to 3.5 acres; and the parcel south of MLK, Jr. East and east of Leon Street would be 1 to 1.3 acres. The Community Grid Alternative would also result in a total of 2 to 2.5 acres consisting of numerous land strips that would be too small for development but may be of use to adjacent property owners.

NYSDOT will form a land use working group consisting of representatives from the city, the city's school district, economic development and economic opportunity organizations, the business

community, environmental justice communities, neighborhood residents, and other organizations and stakeholders as appropriate to provide input to NYSDOT in establishing a framework for the non-transportation use of each potential surplus parcel. Further details about the formation of and participation in this working group will be presented during continued project public involvement activities. Any new use or development would have to comply with the City of Syracuse's zoning ordinance and its Land Use and Development Plan 2040 currently being updated through its ReZone Syracuse project. Through the ReZone Syracuse project, the City has and continues to solicit community input.

Appendix A includes plans and profiles of the Community Grid Alternative. **Chapter 5, Transportation and Engineering Considerations**, provides an in-depth discussion of the design criteria and nonstandard features as well as roadway characteristics including vehicular traffic and non-motorized transportation.

S.4.4 SUMMARY OF ALTERNATIVES CONSIDERED AND DISMISSED FROM FURTHER STUDY

Twenty-one potential alternatives (NB, V-1, V-2, V-3, V-4, V-5, SL-1, SL-2, SL-3, DH-1, DH-2, T-1, T-2, T-3, T-4, T-5, T-6, T-7, Orange Tunnel Alternative, O-1, and O-2) were developed and evaluated. These include options proposed by the public. Following the initial screening of potential alternatives, which was presented in the Scoping Report, Alternatives V-2, V-3, and V-4 became options of one Viaduct Alternative and the Street-level Alternative was renamed the Community Grid-Alternative with two options, CG-1 and CG-2. A summary of **Section 3.3, Alternatives Considered and Dismissed from Further Study** is provided below:

Viaduct Alternatives (V-1 and V-5) – Scoping Report (April 2015)

Alternative V-1 (Rehabilitation) would involve a long-term program, implemented over multiple years as funding permits, to address the deterioration of I-81. The dimensions of the viaduct and operation of Almond Street would remain much the same as they are today. Alternative V-1 would not correct most nonstandard and nonconforming highway features.

Alternative V-5 (New Stacked Viaduct) would involve replacing the existing viaduct with a new two-level viaduct above Almond Street from Burt Street to East Genesee Street. Since northbound and southbound vehicles would travel on stacked decks, the Alternative V-5 viaduct would be approximately 30 feet taller and approximately 11 feet narrower than the existing viaduct. Alternative V-5 would eliminate east-west travel on East Genesee Street where it crosses Almond Street.

Therefore, Alternatives V-1 and V-5 failed to meet the Project's objectives and were dismissed from further consideration.

Depressed Highway Potential Alternatives - Scoping Report (April 2015)

Potential Alternatives DH-1 and DH-2 failed to address the Project's needs and to meet the Project's purpose and objectives, and would pose difficult constructability considerations. Both alternatives would remove local street connections between Downtown and Northside, and it would not be reasonable to provide connections across the highway at every east-west street. Alternatives DH-1 and DH-2 were not recommended for further study.

Other Potential Alternatives - Scoping Report (April 2015)

Potential Alternative O-1 and O-2 would require a substantial amount of property acquisition. Additionally, Alternative O-2 would substantially diminish local street connections in the West Street corridor, thereby failing to meet the Project's objective to "maintain or enhance the vehicular, pedestrian, and bicycle connections in the local street network within and near Downtown Syracuse to allow for connectivity between neighborhoods, business districts, and other key destinations." Alternatives O-1 and O-2 were dismissed from further consideration.

Potential Tunnel Alternatives - Scoping Report (April 2015)

Potential Alternatives T-1 and T-2 failed to address the Project's needs or meet the purpose and objectives and are considered unreasonable. Both alternatives would eliminate several local street connections between Downtown, Northside, and University Hill. Severing these streets would create about a three-block gap in north-south and east-west vehicular access, which is inconsistent with the objective to "maintain or enhance the vehicular, pedestrian, and bicycle connections in the local street network within and near Downtown Syracuse to allow for connectivity between neighborhoods, business districts, and other key destinations."

Alternative T-3 was not recommended for further study because it has many of the same deficiencies as Alternatives T-1 and T-2: Alternative T-3 failed to address the Project's needs or meet the Project's purpose and objectives, poses difficult constructability considerations, and has an unreasonable cost of \$2.6 billion. In addition, Alternative T-3 would require acquisition of 55 to 70 buildings, which is considered unreasonable.

Alternative T-4 would address the Project's needs and meet the Project's purpose and objectives and constructability considerations. However, Alternative T-4 would acquire more than 100 buildings and would cost more than \$3 billion, which are both considered unreasonable. Therefore, Alternative T-4 was dismissed from further consideration.

Additional Potential Tunnel Alternatives - Tunnel Feasibility Study (October 2016)

In response to public input after the publication of the Scoping Report, FHWA and NYSDOT conducted additional engineering and analyses to determine whether a tunnel alternative that satisfies the Project's needs, meets the Project's purpose and objectives, and meets the established screening criteria could be developed. Three new potential tunnel alternatives (T-5, T-6, and T-7) were developed and studied (see **Appendix B-2**).

Potential Alternative T-5 would eliminate the Colvin Street entrance ramp to northbound I-81; introduce an overpass (East Fayette Street from South Townsend Street to approximately Forman Avenue would need to be elevated); and eliminate the northbound I-81 ramp from Harrison Street, a main access point from University Hill to travel north. Alternative T-5 meets the Project's purpose, need, and objectives.

However, Alternative T-5 would involve constructability difficulties. Community disruptions, including impacts to vehicular, pedestrian, and bicycle traffic, are likely as a result of cut-and-cover tunneling. In addition to relocation of substantial utilities, Alternative T-5 would require the underpinning of the viaduct, which is nearly 60 years old. This would be a risky operation with some unknowns (such as the risk of potential lateral movements), adding difficulty to the construction and

I-81 VIADUCT PROJECT

at least two to three years to the construction duration. In addition, Alternative T-5 would temporarily disrupt 15 major road crossings and a railroad crossing.

Alternative T-5 would require the acquisition of 35 properties (34 buildings and one parking lot). Alternative T-5's property needs are deemed reasonable. Alternative T-5's estimated cost of \$3.1 billion is considered unreasonable. For these reasons, Alternative T-5 was dismissed from further consideration.

Potential Alternative T-6 would eliminate the Colvin Street entrance ramp to northbound I-81 and require the closure of Willow Street. In addition, Alternative T-6 would require the closure of Townsend Street between Genesee Street and Harrison Street to accommodate I-81 ramps to and from the north, and the closure of James Street between Oswego Boulevard and State Street due to insufficient clearance over the interstate-to-interstate ramps. These two closures would substantially sever local street connectivity and are not consistent with the Project's objective to "maintain or enhance the vehicular, pedestrian, and bicycle connections in the local street network within and near Downtown Syracuse to allow for connectivity between neighborhoods, business districts, and other key destinations." Therefore, Alternative T-6 does not meet the Project's purpose, need, and objectives.

Alternative T-6 would require the acquisition of 17 properties (16 buildings and one open space) and would cost \$2.6 billion, both of which are considered unreasonable. For these reasons, Alternative T-6 was dismissed from further consideration.

Potential Alternative T-7 involves the construction of a high-speed, non-interstate tunnel in addition to all of the improvements associated with the Community Grid Alternative. The construction of Alternative T-7 largely would be implemented underground, using a tunnel-boring machine and sequential excavation method. While there are some risks associated with all underground construction, the use of these conventional and known tunneling methods would allow the alternative to pass on constructability. Alternative T-7 would require the acquisition of 11 properties and would cost \$2.5 billion, both of which are considered unreasonable. For these reasons, Alternative T-7 was dismissed from further consideration.

WSP "I-81 Independent Feasibility Study" (December 2017)

In December 2017, NYSDOT released the WSP "I-81 Independent Feasibility Study," which was conducted "to ensure that a tunnel and depressed highway were sufficiently analyzed to assess their feasibility and cost" and to "[examine] alternatives that would adequately provide for vehicular traffic to replace the existing I-81 viaduct through the center of Syracuse" (see **Appendix B-3**). It was a technical engineering report and did not study the social, economic, and environmental effects of the proposed tunnel concepts. Under the study's "Key Findings and Conclusions" it states that "it would be technically feasible to design and construct a tunnel alternative that meets the study goals and improve [sic] the transportation system in the Syracuse Metropolitan Area," and ultimately identified the Orange Alternative as the tunnel option with "greatest benefit."

NYSDOT further developed the "Orange Alternative" and evaluated its social, economic and environmental effects; the modified alternative was called the Orange tunnel concept (see **Appendix B-4**). To accommodate ramps connecting southern Almond Street to BL 81/I-81 (to and from the south) and ramps connecting northern Almond Street to I-690 (to and from the west), local and

through traffic would be severed at Washington, Jackson, and Burt Streets as well as Almond Street between Van Buren Street and Burt Street. Therefore, the Orange tunnel concept would not meet the Project's objective to "maintain or enhance the vehicular, pedestrian, and bicycle connections in the local street network within the project limits in and near Downtown Syracuse to allow for connectivity between neighborhoods, business districts, and other key destinations." The concept would require 17 building acquisitions, and the tunnel's 11-year construction duration and \$4.9 billion cost are considered unreasonable. Therefore, the Orange tunnel concept was dismissed.

S.4.5 IDENTIFICATION OF A PREFERRED ALTERNATIVE

Based on a balanced consideration of the need for safe and efficient transportation; the social, economic, and environmental effects of the Project; and national, state, and local environmental protection goals, the Community Grid Alternative has been identified as the preferred alternative.

S.5 PERMITS AND APPROVALS

Chapter 8, Summary of Alternatives, briefly describes effects associated with the Viaduct and Community Grid Alternatives. **Table S-1** lists the potential permits and approvals required for implementing Community Grid Alternative.

S.6 PROJECT COSTS

The estimated total project costs are shown in **Table S-2**. Costs are in 2018 dollars, escalated to the mid-point of construction, 2023; refer to **Appendix A-5** for more information on the alternative cost estimates). The cost estimates will continue to be refined as design progresses.

S.7 PUBLIC AND AGENCY INVOLVEMENT

S.7.1 PUBLIC INVOLVEMENT ACTIVITIES

Table S-3 lists key milestones and public meetings that have or will occur. The table show large public meetings, which included scoping meetings, project update meetings, and open houses as well as neighborhood meetings. In addition, there have been numerous one-on-one or small group meetings with the interested public, stakeholders, community groups, and elected officials. Refer to **Chapter 9, Agency Coordination and Public Outreach**, for more information on public involvement.

I-81 VIADUCT PROJECT

**Table S-1
Potential Permits and Approvals**

Permit or Approval	Approving Agency	Regulatory Authority
Addition/removal of Route from National Network*	FHWA	23 CFR § 658.11
Interstate Highway Designation*	FHWA	23 CFR § 103(c)(4)(B)
Interstate Access Modification	FHWA	23 USC §§ 109 and 111, 23 CFR § 625.4, and 49 CFR § 1.48(b)(1)
Floodplains Determination	FHWA	Executive Order 11988 of 1977; USDOT Order 5650-2, "Floodplain Management and Protection," April 23, 1979
Wetlands Finding	FHWA	Executive Order 11990 of 1977; USDOT Order 5660.1A, "Preservation of the Nation's Wetlands," August 24, 1978
Section 4(f) Finding pursuant to Section 4(f) of the USDOT Act	FHWA in consultation with DOI and SHPO	49 USC § 303; 23 CFR Part 774
Section 106 Effect Finding pursuant to the National Historic Preservation Act	FHWA in consultation with ACHP and SHPO	54 USC 300101 et seq.; 36 CFR Part 800
New York State Endangered Species Act	NYSDEC	ECL Article 1, Title 5 § 11-0535; 6 NYCRR Part 182
Section 7 Consultation pursuant to the Endangered Species Act	USFWS	16 USC §§ 1531-1544; 50 CFR Part 402
Section 404 Permit pursuant to the Clean Water Act	USACE	33 USC §§ 1251-1387 and 33 CFR §§ 320-330
Section 401 Water Quality Certification pursuant to the Clean Water Act	NYSDEC	33 USC §§ 1251-1387 and 33 CFR §§ 320-330
Environmental Justice Compliance	FHWA	Executive Order 12898 of 1994, 59 CFR Part 7629, February 16, 1994; 1997 USDOT Order 5610.2[a], May 2, 2012; FHWA Order 6640.23A, June 14, 2012
State Pollutant Discharge Elimination System (SPDES) Permit	NYSDEC	State Pollutant Discharge Elimination System (ECL Article 3, Title 3; Article 15; Article 17, Titles 3, 5, 7, and 8; Article 21; Article 70, Title 1; Article 71, Title 19; 6 NYCRR Part 750)
Protection of Waters / Freshwater Wetlands Permit	NYSDEC	NYSDEC/NYS DOT Memorandum of Understanding Regarding ECL Articles 15 and 24 (February 19, 1997); ECL Article 15, Title 5; 6 NYCRR Part 608; ECL Article 24; 6 NYCRR 663
Consistency with Smart Growth Public Infrastructure Policy Act	NYS DOT	ECL § 6-0101 et seq.
<p>Note: * Community Grid Alternative only. FHWA = Federal Highway Administration; NYSDOT = New York State Department of Transportation; NYSDEC = New York State Department of Environmental Conservation; USACE = Army Corps of Engineers; DOI = U.S. Department of Interior; SHPO = New York State Historic Preservation Office; ACHP = Advisory Council on Historic Preservation; USFWS = U.S. Fish and Wildlife Service</p>		

**Table S-2
Estimated Total Project Costs**

	Viaduct Alternative	Community Grid Alternative
Construction Cost	\$1,700,000,000	\$1,500,000,000
To include Force Account, CI, Final Design, QC, Site Mobilization (25%)	\$425,000,000	\$375,000,000
Award Cost	\$2,125,000,000	\$1,875,000,000
Right-of-Way (ROW)	\$43,000,000	\$5,500,000
Total Cost Rounded to Nearest \$100M	\$2,200,000,000	\$1,900,000,000

I-81 VIADUCT PROJECT

**Table S-3
Public Involvement Meetings and Key Milestones**

Milestone	Date
Publication of Notice of Intent	August 26, 2013
Neighborhood Meeting – Toomey Abbott, Syracuse	September 25, 2013
Neighborhood Meeting – Dr. Weeks Elementary School, Syracuse	October 22, 2013
Neighborhood Meeting – Everson Museum, Syracuse	October 23, 2013
Neighborhood Meeting – Fowler High School, Syracuse	October 29, 2013
Community Meeting – DeWitt Community Room, DeWitt	October 30, 2013
Publication of Initial Scoping Packet	November 2013
Scoping Meeting, Oncenter, Syracuse	November 13, 2013
Project Update Presentation, Everson Museum, Syracuse	May 1, 2014
Publication of Draft Scoping Report	June 2014
Stakeholders' Committee Meeting	June 24, 2014
Scoping Meeting, Oncenter, Syracuse	June 26, 2014
Neighborhood Meeting – Southwest Community Center, Syracuse	July 16, 2014
Neighborhood Meeting – The MOST, Syracuse	July 23, 2014
Neighborhood Meeting – HW Smith School, Syracuse	July 24, 2014
Neighborhood Meeting – Toomey Abbott, Syracuse	July 29, 2014
Neighborhood Meeting – St. Lucy's, Syracuse	July 30, 2014
Neighborhood Meeting – Dr. Weeks Elementary School, Syracuse	July 31, 2014
Neighborhood Meeting – St. Peter's Parish Center, Syracuse	July 31, 2014
Publication of Scoping Report	April 2015
Capital for a Day, SkyArmory, Syracuse	September 30, 2015
Community Meeting, Liverpool Middle School, Liverpool	December 3, 2015
Real Property Rights Acquisition Information Sessions 335 Montgomery Street, Syracuse Assumption Church Parish Center, Syracuse Boys and Girls Club, Syracuse	June 1 and 2, 2016
Stakeholders' Committee Meeting	June 9, 2016
Public Open House, Oncenter, Syracuse	October 6, 2016
Neighborhood Meeting – Henninger High School, Syracuse	October 18, 2016
Community Meeting – Skaneateles High School, Skaneateles	October 19, 2016
Neighborhood Meeting – Grant Middle School, Syracuse	October 20, 2016
Neighborhood Meeting – Syracuse Institute of Technology, Syracuse	October 26, 2016
Neighborhood Meeting – Fowler High School, Syracuse	November 1, 2016
Neighborhood Meeting – Dr. King Elementary School, Syracuse	November 3, 2016
Community Meeting – Jamesville-DeWitt High School, DeWitt	November 16, 2016
Community Meeting – Cicero-North Syracuse High School, Cicero	December 6, 2016
Publication of preliminary Draft Design Report / Draft Environmental Impact Statement (DDR/DEIS)	April 22, 2019
Public Open House, Oncenter, Syracuse	June 18, 2019
Neighborhood Meeting – Henninger High School, Syracuse	June 25, 2019
Neighborhood Meeting – Fowler High School, Syracuse	June 26, 2019
Community Meeting – Town of Camillus Gymnasium, Camillus	July 9, 2019

I-81 VIADUCT PROJECT

Table S-3 (cont'd)
Public Involvement Meetings and Key Milestones

Milestone	Date
Community Meeting – ESM High School, East Syracuse	July 10, 2019
Neighborhood Meeting – Dr. King Elementary School, Syracuse	July 11, 2019
Neighborhood Meeting – Syracuse Institute of Technology, Syracuse	July 16, 2019
Neighborhood Meeting – HW Smith Pre-K through 8 School, Syracuse	July 17, 2019
Community Meeting – Grimshaw Elementary School, Lafayette	July 23, 2019
Noise Barriers Meeting – Dr. King Elementary School, Syracuse	July 24, 2019
Community Meeting – Cicero-North Syracuse High School, Cicero	July 25, 2019
Noise Barriers Meeting – Cicero-North Syracuse High School, Cicero	July 30, 2019
Noise Barriers Meeting – Henninger High School, Syracuse	August 14, 2019
Noise Barriers Meeting – DeWitt Community Room, DeWitt	August 15, 2019
Community Meeting – Chestnut Hill Middle School, Liverpool	September 11, 2019
Notice of Availability for publication of DDR/DEIS	July 16, 2021
Virtual DDR/DEIS and EDPL Public Hearing	August 17, 2021
In-person DDR/DEIS and EDPL Public Hearing	August 18, 2021

S.7.2 COOPERATING AND PARTICIPATING AGENCY INVOLVEMENT

Cooperating and Participating Agencies are responsible for identifying, as early as practicable, any issues of concern regarding a project's potential environmental or socioeconomic effects that could substantially delay or prevent an agency from granting a permit or other approval.

The following agencies were invited to serve as Cooperating and/or Participating Agencies on this Project:

- **Cooperating Agencies:**
 - Advisory Council on Historic Preservation
 - U.S. Army Corps of Engineers
 - U.S. Environmental Protection Agency
 - U.S. Fish and Wildlife Service²
 - New York State Department of Environmental Conservation
 - New York State Office of Parks, Recreation, and Historic Preservation – State Historic Preservation Office
- **Participating Agencies:**
 - Onondaga Nation
 - Tuscarora Nation

² Declined the invitation to participate as a Cooperating Agency.

I-81 VIADUCT PROJECT

- Syracuse Metropolitan Transportation Council
- CNY Centro, Inc.
- New York, Susquehanna and Western Railway
- Onondaga County
- City of Syracuse
- Town of Cicero
- Town of DeWitt
- Town of Salina
- Village of East Syracuse
- Village of North Syracuse

FHWA and NYSDOT are collaborating with the Cooperating and Participating Agencies in the preparation of the DDR/DEIS and assessment of effects, including frequent conference calls with the Cooperating Agencies and a meeting with Participating Agencies. The Cooperating and Participating Agencies will be notified of the availability of the signed DDR/DEIS, the FDR/FEIS, and the joint ROD and given appropriate comment opportunities. Following the ROD, NYSDOT would coordinate with the appropriate agencies to complete any necessary permit(s) for the Project.

The Onondaga and Tuscarora Nations are both Participating Agencies and Consulting Parties, the latter for the review of the Project pursuant to Section 106 of the National Historic Preservation Act (NHPA). FHWA and NYSDOT have invited them to participate in stakeholder and Section 106 meetings for the Project and have communicated directly with them on several occasions as noted in **Chapter 9, Agency Coordination and Public Outreach**. This outreach will continue throughout project development, as needed.

S.8 HOW TO COMMENT ON THIS DDR/DEIS

The public comment period will begin with the publication of the Notice of Availability of this DDR/DEIS and extend for a minimum of 45 and maximum of 60 days. NYSDOT will accept comments three ways:

1. Written comments by letter, written comment form provided at in-person meetings or downloaded from the Project website, electronic comment form via the Project website, and e-mail.
2. Oral comments at the Project public hearing(s), which will include in-person and virtual components:
 - a. In front of an audience, through the in-person or virtual components, or
 - b. Privately, dictated one-on-one to a stenographer at the in-person component.
3. Telephone voicemail through the Project's toll-free hotline, 1-855-I81-TALK (855-481-8255). Consistent with the oral comments at the Project public hearing(s), the voice message will ask

I-81 VIADUCT PROJECT

for the person to identify themselves and limit their comments to three minutes. These voicemails will be transcribed by a stenographer.

The comments received during the DDR/DEIS public comment period and responses to substantive comments will be included in the FDR/FEIS for the Project.

All comments must be received by **5:00 PM Eastern Daylight Time on September 14, 2021**.

For more information, contact NYSDOT at 315-428-4351 or via the “Contact Us” link on Project’s website.