

# I-81 VIADUCT PROJECT

## CHAPTER 8

### SUMMARY OF ALTERNATIVES

This chapter summarizes the social, economic, and environmental considerations for the Viaduct and Community Grid Alternatives. It also identifies the Community Grid Alternative as the Preferred Alternative for the Project.

**Chapter 5, Transportation and Engineering Considerations**, and **Chapter 6, Social, Economic, and Environmental Considerations**, detail the potential effects of the Viaduct and Community Grid Alternatives. For each topic area, future conditions with the project alternative in place (i.e., build condition) were compared with future conditions without implementation of the alternative (i.e., no build condition). Where adverse effects were identified, measures to minimize or otherwise mitigate the effects to the extent practicable were discussed. This chapter provides a summary of the effects of the build alternatives.

#### 8.1 DESCRIPTION OF BUILD ALTERNATIVES

FHWA and NYSDOT considered multiple potential alternatives to meet the Project's purpose and objectives and to address the identified needs for the Project. **Chapter 3, Alternatives** and **Appendix B-1** present the potential alternatives and their evaluation and screening. The following sections describe the two build alternatives that FHWA and NYSDOT considered in the Draft Design Report/Draft Environmental Impact Statement (DDR/DEIS) and in this Final Design Report/Final Environmental Impact Statement (FDR/FEIS).

As noted in **Chapter 1, Introduction**, the purpose of the Project is to address the structural deficiencies and non-standard/non-conforming highway features in the I-81 corridor while creating an improved transportation corridor through the City of Syracuse that meets the transportation needs and provides the infrastructure to support long-range transportation planning efforts. 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 amenities<sup>1</sup> within the project limits in and near Downtown Syracuse.

### 8.1.1 VIADUCT ALTERNATIVE

The Viaduct Alternative would involve a full reconstruction of I-81 between approximately Colvin Street and Hiawatha Boulevard and along portions of I-690 between Leavenworth Avenue and Lodi Street and between Hiawatha Boulevard West and Bear Street. 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 each direction and 10 feet in three-lane sections) and outside shoulders (a minimum of 10 feet in each direction). The Viaduct Alternative also includes operational and safety improvements at multiple interchanges and new sidewalks and bicycle routes on local streets (see **Chapter 3, Alternatives**, for further details).

From the south, the Viaduct Alternative alignment would begin as I-81 approaches Colvin Street. Near Van Buren Street, the interstate would pass over the New York, Susquehanna and Western (NYS&W) Railway, at approximately the same elevation as the existing I-81 viaduct, and then begin to descend until East Adams Street, where it would be approximately 10 to 15 feet higher than the existing viaduct, which is approximately 20 feet tall. This increased height generally would be maintained throughout the length of the new viaduct. South of Harrison Street, the new viaduct generally would be approximately 10 to 20 feet wider, depending on the section, than the 66-foot-wide existing viaduct. Between Harrison and East Genesee Streets, the viaduct would begin to split into two separate bridges, with the bridge on the west carrying two southbound I-81 through lanes, as well as additional lanes for ramp connections, and the bridge on the east carrying a similar number of lanes for northbound I-81. As a result of these connections, separate bridges, and wider shoulders, and other improvements, the transportation footprint above Almond Street would be substantially wider than the existing viaduct footprint, ranging from approximately 84 feet at Harrison Street (20 feet wider than existing) to 280 feet north of East Genesee Street (150 feet wider than existing).

From East Genesee Street to the I-690 interchange, I-81 would continue on separate bridges, which would join and end around Salina Street (for comparison, the existing I-81 viaduct rejoins at approximately State Street). From Salina Street northward, the interstate would be carried on an embankment. Elevations would match those of the existing interstate near existing Butternut Street.

The Viaduct Alternative would provide connecting ramps from southbound I-81 to westbound I-690 and from eastbound I-690 to northbound I-81, which are currently not available, and it would correct most non-standard and non-conforming highway features within the project limits. The alternative would meet 60 mph design standards except for horizontal stopping sight distance<sup>2</sup> at five curves. Three curves would meet 55 mph design standards and two curves would meet 50 mph design standards. The sight distance restriction would apply to only the inside lane of the five curves. The

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

<sup>2</sup> As defined by FHWA, “stopping sight distance is the distance needed for drivers to see an object on the roadway ahead and bring their vehicles to a safe stop before colliding with the object.” “Horizontal stopping sight distance” refers to the distance that a motorist needs to see around horizontal curves at a given speed.

posted speed limit on the viaduct would be 55 mph but warning signs to encourage motorists to reduce speed would be installed at the five curves.

The Viaduct Alternative would take approximately seven years to construct, which would involve closure of portions of I-81 and I-690 during various stages of construction (see **Chapter 4** for more information about construction). At these times, traffic would be routed to other highways or local streets. The estimated cost of the Viaduct Alternative would be approximately \$2.42 billion (see **Appendix A-5**).

### 8.1.2 COMMUNITY GRID ALTERNATIVE

The Community Grid Alternative would involve demolition of the existing viaduct between the NYS&W Railway bridge and the I-81/I-690 interchange. The section of I-81 between the southern I-81/I-481 interchange (Interchange 16A) and the northern I-81/I-481 interchange (Interchange 29) in Cicero would be de-designated as an interstate, and existing I-481 would be re-designated as the new I-81. The portion of existing I-81 between its northern and southern intersections with I-481 would be re-designated as a business loop of I-81 (BL 81). BL 81 would be designated as a Qualifying Highway and designed to handle buses, recreational vehicles, and trucks, including large, heavy vehicles with a width limit of 102 inches. The Community Grid Alternative would also involve 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), from existing and new connections at Colvin Street, and numerous at grade intersections along Almond Street between the Van Buren Street roundabout 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; new on- and off-ramps would connect to southbound BL 81 at North Clinton Street, just south of Bear Street, and the existing northbound BL 81 on- and off-ramps would be replaced by new ramps connecting to Bear Street. 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 BL 81 connecting with East Willow Street, James Street, and Erie Boulevard. West Street would be lowered to intersect with West 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.

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, raised cycle tracks, and shared use (bicycle and pedestrian) paths in various segments along Almond Street, as well as some adjacent streets (see **Chapter 3, Alternatives** for further details). Curbside parking lanes would be provided, except in the segments between Adams Street and Monroe Street on the east side, between Jackson Street and

Taylor Street on the east side, and between Taylor Street and the Van Buren Street roundabout on both sides.

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-directing existing I-81 along the existing I-481 route, which would then become the re-designated I-81. The re-designated I-81 would meet 70 MPH design standards. The existing interchange ramps that connect existing I-81 and I-481 would be demolished and replaced with main line roadway for the 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.
- Interchange 3 (New York State Routes 5/92): The existing southbound I-481 to westbound Route 5 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) would also 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 Routes 5/92 intersection and end on Route 92, approximately 1,000 feet east of the intersection.
- 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:
  - A third southbound (auxiliary) lane would be provided between Kirkville Road (Interchange 5 southbound on-ramp) and I-690 (Interchange 4 southbound off-ramp).
  - A third northbound (auxiliary) lane would be provided between I-690 (Interchange 4 northbound on-ramp) and Kirkville Road (Interchange 5 northbound off-ramp), requiring widening of the bridge over the CSX railroad tracks.
  - A third northbound (auxiliary) lane would be added between Kirkville Road and I-90 (Interchange 5 northbound on-ramp) and I-90 (Interchange 6 northbound off-ramp).
  - A third southbound (auxiliary) lane would be added between Interchange 9 (I-81/I-481 north interchange) and Northern Boulevard (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.

The Community Grid Alternative would entail the removal and withdrawal of a segment of 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 and for the proposed addition of BL 81 to the National Network (see Designation/De-Designation Package in **Appendix B-5**).

The Community Grid Alternative would take approximately six years to construct, which would involve closure of portions of I-81 and I-690 at various stages of construction (see **Chapter 4** for more information about construction). A plan has been developed to sequence project elements to reroute traffic as various phases of the Project are completed. The estimated cost of the Community Grid Alternative would be approximately \$2.25 billion (see **Appendix A-5**).

## 8.2 SOCIAL, ECONOMIC, AND ENVIRONMENTAL CONSIDERATIONS

**Table 8-1** briefly describes the affected environment and the social, economic, and environmental considerations for the Viaduct and Community Grid Alternatives. It provides an overview of conditions in the study areas (“affected environment”) for each topic and briefly describes effects associated with the Viaduct and Community Grid Alternatives. The information presented in Table 8-1 reflects the incremental change as compared to the No Build Alternative. For more information about the No Build Alternative, refer to **Chapter 5, Transportation and Engineering Considerations** and **Chapter 6, Social, Economic, and Environmental Considerations**.

While study areas vary by technical topic, four general study areas were established to encompass the Project:

- **Central Study Area.** The “Central Study Area” refers to the section of I-81 between approximately East Brighton Avenue and 0.7 miles north of Hiawatha Boulevard and the portions of I-690 approximately between Leavenworth Avenue and Beech Street and Hiawatha Boulevard West and Bear Street. It also includes some local roads in proximity to I-81 and I-690 in Syracuse. This area includes neighborhoods south and west of I-690 and I-81, respectively, including Downtown, the Southside, Near West Side, and Brighton; neighborhoods south and east of I-690 and I-81, respectively, including the Near Eastside and University Hill; and neighborhoods north of I-690 including Franklin Square and Lakefront to the west of I-81, and Northside neighborhoods including Washington Square, Prospect Hill/Little Italy, Hawley-Green, and Lincoln Hill. For descriptions of each neighborhood’s land uses and general characteristics, see **Section 6-2-1.1.2**. Physical improvements may also occur between the southern I-81 interchange and Hiawatha Boulevard.
- **I-481 South Study Area.** The I-481 South Study Area is located around the I-481 southern interchange with I-81. The majority of the I-481 South Study Area is in the City of Syracuse; however, the easternmost reach is in the Town of Onondaga.
- **I-481 East Study Area.** The I-481 East Study Area includes land within one-quarter mile of the two segments of I-481 where auxiliary lanes would be added or street improvements may occur, which is roughly between the I-690 and I-90 interchanges in the Town of DeWitt.

- **I-481 North Study Area.** The I-481 North Study Area includes all areas within one-quarter mile of the I-481 northern interchange with I-81 in the Town of Cicero and the Village of North Syracuse.

The study areas are shown in **Figure 6-1-1**. For more detailed information about a specific environmental topic, refer to the appropriate section of **Chapter 6, Social, Economic, and Environmental Considerations**.

### 8.3 IDENTIFICATION OF THE PREFERRED ALTERNATIVE

Based on a balanced consideration of the need for safe and efficient transportation; the social, economic, and environmental effects of the project alternatives; and national, state, and local environmental protection goals, the Community Grid Alternative has been identified as the Project's preferred alternative. This decision is based on the following information and conclusions regarding the Community Grid Alternative.

- The Community Grid Alternative would generally improve traffic operations as compared to the No Build Alternative. The Community Grid Alternative would eliminate many substandard features of those sections of I-81 and I-690 that would remain under the No Build Alternative, and it would correct congested conditions along I-481 and some of its interchanges. Overall, the Community Grid Alternative would result in a safe and efficient transportation system.
- The Community Grid Alternative would remove the I-81 viaduct, which is recognized in City of Syracuse and Onondaga County land use plans as a physical and visual barrier between neighborhoods, and it has negatively influenced community cohesion in the Central Study Area. Rezone Syracuse envisions a higher density, mixed use pattern of development, without building setbacks in the Central Study Area. The Community Grid Alternative aligns with this framework.
- The reconstruction of Almond Street with wider sidewalks, cycle tracks and shared use (bicycle and pedestrian) paths, bumped-out curbs to reduce pedestrian crossing distance, and a median for pedestrian refuge would improve mobility and accessibility for pedestrians and cyclists as compared to the No Build Alternative. Elderly and transit-dependent populations would also benefit from these new amenities. The removal of the viaduct and its associated ramps would eliminate several vehicle-pedestrian conflict movements that currently exist. As compared to the existing conditions and the Viaduct Alternative, the Community Grid Alternative would create the opportunity for greater bike connectivity in the Central Study Area.
- The Community Grid Alternative would result in the acquisition and demolition of four buildings in the Central Study Area, whereas the Viaduct Alternative would result in the acquisition and demolition of 24 buildings in the Central Study Area. Neither alternative would require demolition of buildings in the I-481 South, I-481 East, or I-481 North Study Areas.
- The Community Grid Alternative would not displace any residents, whereas the Viaduct Alternative would displace 95 dwelling units.
- All four buildings that would be acquired and demolished under the Community Grid Alternative are commercial buildings, housing three businesses that together employ a total of 35 people; whereas the Viaduct Alternative would result in the acquisition of 22 commercial buildings, displacing 555 employees.

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- The Community Grid Alternative would not result in the removal of any historic properties, whereas the Viaduct Alternative would result in the removal of 11 historic buildings (10 historic properties).
- Under the Community Grid Alternative, the removal of transportation infrastructure associated with I-81 and its interchanges would allow the creation of gateways to neighborhoods in the Central Study Area at West Street near I-690, near the BL 81 exit ramp to Clinton Street, at Oswego Boulevard, and at Van Buren Street. The addition of an I-690 interchange at Crouse and Irving Avenues would also create a new point of access and gateway to University Hill. In addition, the Community Grid Alternative would create a potential Canal District, which would not be possible with the Viaduct Alternative. The Community Grid Alternative would also result in more street trees and landscaping, as well as streetscapes, than the No Build and the Viaduct Alternative.
- 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 (see **Figure 6-2-1-12**). 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. There would be additional surplus right-of-way within a portion of the existing MLK Jr., East roadway right-of-way where the roadway would be removed between the rear driveway of Dr. King Elementary School and the existing I-81. NYSDOT would identify the specific boundaries of the surplus parcels and their acreages after the construction phases, and NYSDOT's Property Evaluation Review Group would determine the next steps to dispose of the right-of-way once it concludes that the land is no longer needed for transportation purposes.

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.

- The removal of the existing viaduct would benefit views of viewer groups in the Central Study Area. While the Community Grid Alternative would result in minor adverse effects on six of the

32 views assessed and documented in the DDR/DEIS and in this FDR/FEIS, the Viaduct Alternative would result in 13 adversely affected views. The Community Grid Alternative would also result in more visual benefits to viewer groups than the Viaduct Alternative. The Community Grid Alternative would not introduce the new ramp connections between I-690 and I-81 that would be included in the Viaduct Alternative. These new ramp connections would be very tall structures that would be visible from many locations within the Central Study Area and would adversely affect view sheds. Because the Community Grid Alternative would remove the viaduct, it would allow daylighting of Almond Street, benefiting viewers along and near Almond Street.

- The Community Grid Alternative would not result in adverse effects on air quality.
- The Community Grid Alternative would result in adverse noise impacts, but perceptible noise increases, compared to existing conditions, would occur at 5 fewer receivers under the Community Grid Alternative than for the Viaduct Alternative. While abatement measures would reduce noise at fewer locations under the Community Grid Alternative, it would still result in less noise impacts overall (338 impacts with abatement for the Community Grid Alternative versus 389 impacts with abatement for the Viaduct Alternative).
- The Community Grid Alternative would affect more wetlands and other habitat areas than the Viaduct Alternative, but these effects can be mitigated, including stream and culvert restoration projects that would not be incorporated into the Viaduct Alternative.
- Construction of the Community Grid Alternative would take one year less than the Viaduct Alternative, resulting in much less intensive construction activity in the Central Study Area.
- The Community Grid Alternative costs less than the Viaduct Alternative (\$2.25 billion versus \$2.42 billion). (Costs are in 2021 dollars, escalated to the mid-point of construction; refer to **Appendix A-5** for more information on the alternative cost estimates). The cost estimates will continue to be refined as design progresses.
- The Final Section 4(f) Evaluation demonstrates that the Community Grid Alternative is the least harm alternative in terms of its overall effects on Section 4(f) properties.



Table 8-1  
Summary of Alternatives

Topic	Effects	
	Viaduct Alternative	Community Grid Alternative
<b>CONSTRUCTION DURATION AND COST</b> (See Chapter 3)	<b>Construction duration:</b> 7 years <b>Total project cost:</b> \$2.42 billion (in 2021 dollars, escalated to the mid-point of construction; refer to <b>Appendix A-5</b> for more information on the alternative cost estimates). The cost estimates will continue to be refined as design progresses.	<b>Construction duration:</b> 6 years <b>Total project cost:</b> \$2.25 billion (in 2021 dollars, escalated to the mid-point of construction; refer to <b>Appendix A-5</b> for more information on the alternative cost estimates). The cost estimates will continue to be refined as design progresses.
<b>TRANSPORTATION</b>		
<b>Traffic</b> (See Chapter 5)	Traffic signal coordination, signage, and pavement markings would be improved.	Traffic signal coordination, signage, and pavement markings would be improved.
	Improved traffic flow on the viaduct would attract more vehicles, and traffic volumes would increase on some segments of I-81 and I-690. Travel times between certain origins and destinations in the Project Area are shown in <b>Table 8-2</b> .	The Community Grid Alternative would disperse traffic throughout the city grid by promoting broader use of 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); Clinton Street, Oswego Boulevard, and Pearl Street (to and from northern BL 81); existing and new connections at Colvin Street, and numerous at grade intersections along Almond Street between the new Van Buren Street roundabout and Erie Boulevard (to and from southern BL 81). Posted speeds would be lower with I-81 removed. Traffic volumes would increase on former I-481 and I-690. Changes in travel times between various origins and destinations are provided in <b>Table 8-2</b> .
	The Viaduct Alternative would relieve congestion issues on southbound I-81, the Harrison/Adams Street interchange, and Almond Street by providing additional capacity to relieve bottlenecks, as well as establishing alternative access points that redirect demand from the congested areas. The Viaduct Alternative would accomplish this by providing the following improvements: <ul style="list-style-type: none"><li>▪ Reconstructing the existing two-lane section of southbound I-81 between the entrance-ramp from eastbound I-690 and the Harrison Street exit to provide an additional auxiliary lane.</li><li>▪ Reconstructing the existing single-lane Harrison Street exit-ramp to provide two lanes.</li><li>▪ Widening the Harrison Street exit-ramp approach to Almond Street from one to two lanes.</li><li>▪ Reconfiguring the Harrison and Almond Streets intersection to provide an exclusive right-turn lane that would accommodate the continuous movement from westbound Harrison Street to the northbound I-81 on-ramp.</li><li>▪ Constructing a new partial interchange on I-81 south of Adams Street at MLK, Jr. East. This new access point would accommodate commuting traffic traveling from locations south of the City to University Hill and would relieve some traffic demand currently served by Almond Street and the Harrison/Adams Street interchange.</li><li>▪ Relocating primary access from University Hill to eastbound I-690 from the Harrison/Adams Street interchange to a new entrance-ramp north of Erie Boulevard on Almond Street.</li></ul>	The Community Grid Alternative would relieve congestion issues on southbound I-81, the Harrison Street/Adams Street interchange, and Almond Street by removing the I-81 interchange at Harrison/Adams Streets, as well as dispersing traffic along many roadways with existing surplus capacity and providing more-direct access to the City's major activity centers. The Community Grid Alternative would provide interstate access at alternative locations and provide capacity improvements on the local street system, in addition to the freeway system. The Community Grid Alternative would accomplish this by providing the following improvements: <ul style="list-style-type: none"><li>▪ Redesigning I-481 to accommodate additional traffic currently served by I-81 and re-designating I-481 as I-81.</li><li>▪ Constructing a new I-690 interchange at Crouse/Irving Avenues to provide direct access between University Hill and locations to the north, east, and west. Substantial local street improvements would be provided on Crouse Avenue and Irving Avenue to accommodate increased traffic.</li><li>▪ Establishing additional, more-direct access to University Hill and the Southside from points south of the City by providing access to multiple east-west cross streets south of Adams Street, such as Van Buren Street, Burt Street, and Taylor Street, as well as an exit ramp from northbound BL 81 to Colvin Street.</li><li>▪ Providing geometric and capacity improvements on local streets to accommodate the new travel patterns established by removing the I-81 viaduct and creating improved access and connectivity to major activity centers.</li></ul>
<b>Level of Service</b> (See Chapter 5)	<b>LOS (freeway):</b> <ul style="list-style-type: none"><li>▪ LOS would generally improve, but some freeway segments would operate at LOS E or F during AM and PM peak periods.</li></ul> <b>LOS (intersections):</b> LOS E or F operations: <ul style="list-style-type: none"><li>▪ 2026 AM peak hour: 1 intersection</li><li>▪ 2026 PM peak hour: 2 intersections</li><li>▪ 2056 AM peak hour: 2 intersections</li><li>▪ 2056 PM peak hour: 4 intersections</li></ul> Some locations could be mitigated with a traffic signal and other minor improvements when appropriate.	<b>LOS (freeway):</b> <ul style="list-style-type: none"><li>▪ LOS would generally improve, but one freeway segment would operate at LOS E during PM peak periods.</li></ul> <b>LOS (intersections):</b> LOS E or F operations: <ul style="list-style-type: none"><li>▪ 2026 AM peak hour: 1 intersection</li><li>▪ 2026 PM peak hour: 1 intersection</li><li>▪ 2056 PM peak hour: 2 intersections</li></ul> Most locations could be mitigated with a traffic signal and other easily implementable improvements when appropriate.
<b>Crashes</b> (See Chapter 5)	<ul style="list-style-type: none"><li>▪ Rear-end conflicts: 12 percent reduction (-)</li><li>▪ Lane change conflicts: 3 percent reduction (-)</li><li>▪ Crossing conflicts: less than 1 percent reduction (-)</li><li>▪ Overall: 4 percent reduction</li></ul> Crash Cost Benefit: \$3,045,772	<ul style="list-style-type: none"><li>▪ Rear-end conflicts: 42 percent reduction (-)</li><li>▪ Lane change conflicts: 10 percent reduction (-)</li><li>▪ Crossing conflicts: 15 percent reduction (-)</li><li>▪ Overall: 20 percent reduction</li></ul> Crash Cost Benefit: \$3,080,537
<b>Parking</b> (See Chapter 5)	Parking under the existing viaduct would be removed and other lots would be affected. Impacts would be mitigated by replacing and creating parking lots beneath the viaducts and transportation demand management measures.	Parking under the existing viaduct would be removed and other lots would be affected. Impacts would be mitigated by replacing or creating parking lots beneath I-690 and transportation demand management measures.

Table 8-1 (cont'd)  
Summary of Alternatives

Topic	Effects	
	Viaduct Alternative	Community Grid Alternative
TRANSPORTATION, cont'd		
<b>Pedestrians</b> (See Chapter 5)	Narrower Almond Street crossing width compared to the No Build Alternative.	Improved pedestrian refuges in the median along Almond Street would be provided. Narrower Almond Street crossing width, in the area of heaviest pedestrian traffic between Genesee Street and Adams Street, compared to the No Build Alternative.
	New pedestrian facilities: <ul style="list-style-type: none"><li>▪ West side of Onondaga Creek from Evans Street to Erie Boulevard.</li><li>▪ Almond Street from Water Street (Empire State Trail) south to Van Buren Street.</li><li>▪ Some of these new pedestrian facilities would be shared-use (pedestrian and bicycle) paths.</li></ul>	New pedestrian facilities: <ul style="list-style-type: none"><li>▪ West side of Onondaga Creek from Evans Street to Erie Boulevard.</li><li>▪ Almond Street from Erie Boulevard south to MLK, Jr. East.</li><li>▪ Some of these new pedestrian facilities would be shared-use (pedestrian and bicycle) paths.</li></ul>
<b>Bicyclists</b> (See Chapter 5)	New on-road bicycle lanes: <ul style="list-style-type: none"><li>▪ Almond Street from Water Street (Empire State Trail) to Fineview Place;</li><li>▪ New Butternut Street bridge from State Street to Franklin Street;</li><li>▪ New Spencer Street bridge from Catawba Street to Clinton Street;</li><li>▪ McBride Street from Water Street (Empire State Trail) to Burnet Avenue; and</li><li>▪ Lodi Street from Burnet Avenue to Canal Street.</li></ul>	New on-road bicycle lanes: <ul style="list-style-type: none"><li>▪ New Butternut Street bridge from State Street to Franklin Street;</li><li>▪ New Spencer Street bridge from Catawba Street to North Clinton Street;</li><li>▪ Almond Street between Erie Boulevard and Burnet Avenue;</li><li>▪ Lodi Street via Walnut Avenue and Canal Street; and</li><li>▪ East Brighton Avenue north-bound from East Glen Avenue to Rock Cut Road.</li></ul>
	New shared (for vehicles and bicycles) lanes: <ul style="list-style-type: none"><li>▪ Fineview Place from Van Buren Street to Raynor Avenue;</li><li>▪ Walnut Avenue and Canal Street to Water Street;</li><li>▪ Salina Street from East Laurel Street to State Street;</li><li>▪ State Street from Salina Street to Butternut Street;</li><li>▪ North Clinton Street from Spencer Street to Franklin Street;</li><li>▪ Franklin Street from Butternut Street to Herald Place; and</li><li>▪ Evans Street from Franklin Street to Plum Street.</li></ul>	New shared (for vehicles and bicycles) lanes: <ul style="list-style-type: none"><li>▪ Walnut Avenue and Canal Street to Water Street;</li><li>▪ Salina Street from East Laurel Street to State Street;</li><li>▪ State Street from Salina Street to Butternut Street;</li><li>▪ North Clinton Street from Spencer Street to Butternut Street;</li><li>▪ Franklin Street from Evans Street to Herald Place; and</li><li>▪ Evans Street from Franklin Street to Plum Street.</li></ul>
	New shared-use (bicycle / pedestrian) paths: <ul style="list-style-type: none"><li>▪ Almond Street from Genesee Street to Fineview Place;</li><li>▪ Along Onondaga Creek (west side) from Evans Street to Erie Boulevard;</li><li>▪ Franklin Street to the existing Creekwalk, immediately north of Evans Street;</li><li>▪ Bear Street to Hiawatha Boulevard and Lodi Street east of BL-81; and</li><li>▪ Van Rensselaer Street to the existing Creekwalk, immediately north of Bear Street.</li></ul>	New shared-use (bicycle / pedestrian) paths: <ul style="list-style-type: none"><li>▪ Almond Street between Adams Street and MLK, Jr. East;</li><li>▪ Almond Street between Van Buren Street and Raynor Avenue;</li><li>▪ MLK, Jr. East between Almond Street and Leon Street;</li><li>▪ Crouse Avenue between Water Street (Empire State Trail) and Burnet Avenue;</li><li>▪ East Glen Avenue bridge to East Brighton Avenue;</li><li>▪ Along Onondaga Creek (west side) from Evans Street to Erie Boulevard;</li><li>▪ Franklin Street to the existing Creekwalk immediately north of Evans Street;</li><li>▪ Bear Street to Hiawatha Boulevard and Lodi Street east of BL 81; and</li><li>▪ Van Rensselaer Street to the existing Creekwalk, immediately north of Bear Street.</li></ul>
	Two-way raised cycle track: <ul style="list-style-type: none"><li>▪ Almond Street from Water Street (Empire State Trail) to Genesee Street; and</li><li>▪ Salina Street (west side) from Herald Place to East Laurel Street.</li></ul>	One-way raised cycle track: <ul style="list-style-type: none"><li>▪ Almond Street (both sides) from Erie Boulevard to Adams Street;</li><li>▪ Harrison Street from Almond Street to Townsend Street; and</li><li>▪ Southbound East Brighton Avenue from East Glen Avenue to Rock Cut Road.</li></ul> Two-way raised cycle track: <ul style="list-style-type: none"><li>▪ Salina Street (west side) from Herald Place to East Laurel Street; and</li><li>▪ State Street from Water Street (Empire State Trail) to James Street.</li></ul>

Table 8-1 (cont'd)  
Summary of Alternatives

Topic	Effects	
	Viaduct Alternative	Community Grid Alternative
SOCIAL CONSIDERATIONS		
<b>Neighborhood Character</b> (See Section 6-2-1)	Convert 21.74 acres of land to State right-of-way.	Convert 20.44 acres of land to State right-of-way.
	Buildings Acquisitions: 24 (commercial/industrial) and a smokestack and displacing 91 residents.	Buildings Acquisitions: 4 (commercial)
	Viaduct would stay in place. I-81/I-690 interchange reconstructed to provide full connections.	Signalized surface roadway with planted median. I-81/I-690 interchange reconstructed as a partial interchange
	Affected properties include: <ul style="list-style-type: none"><li>▪ Vacant parcels and structures;</li><li>▪ Surface parking areas; and</li><li>▪ Mixed-use (commercial and residential), commercial, and industrial buildings.</li></ul>	Affected properties include: <ul style="list-style-type: none"><li>▪ Vacant parcels and structures;</li><li>▪ Surface parking areas; and</li><li>▪ Commercial and industrial land uses.</li></ul>
	Pedestrian and bicycle improvements, including a shared use (bicycle and pedestrian) path along the west side of Almond Street from Fineview Place to Harrison Street, and distinctive pavement markings or materials to define space for bicyclists and pedestrians, would have a positive effect on pedestrian and bicyclist safety.	Pedestrian and bicycle improvements, including a shared use (bicycle and pedestrian) path along the west side of Almond Street from MLK, Jr. East to Adams Street; a cycle track from Adams Street to Erie Boulevard; shared use path connection from Almond Street/Van Buren Street to Fineview Place, as well as from Water Street to Burnet Avenue along Crouse Avenue; a cycle track connection from Almond Street to Townsend Street along Harrison Street; and distinctive pavement markings or materials to define space for bicyclists and pedestrians would have a positive effect on pedestrian and bicyclist safety.
	Some new development may be attracted to the Northern Neighborhoods Subarea (north of I-690) associated with the Clinton Street improvements and to the Southwest Neighborhoods Subarea (Near Westside and Downtown) associated with the removal of the West Street ramps.	Some new development may be attracted to the Northern Neighborhoods Subarea (north of I-690) associated with the Clinton Street improvements and to the Southwest Neighborhoods Subarea (Near Westside and Downtown) associated with the removal of the West Street ramps. BL 81 would come to grade just south of MLK, Jr. East and shift eastward to pass beneath the NYS&W Railway. The removal of the viaduct would also open new land for potential development in areas south of I-690, near MLK, Jr. East, and east and west of West Street at the intersection of West Genesee Street.
	Removal of the elevated West Street overpass and ramps to and from I-690 would improve community cohesion; removal would re-establish connections between Downtown and the Near Westside, provide an opportunity to expand the Creekwalk, and relocate a portion of the trail to be adjacent to Onondaga Creek.  In total, the alternative would result in approximately 5.4 miles of new or reconstructed sidewalks, 2.1 miles of new or reconstructed shared use (bicycle and pedestrian) paths, 0.2 miles of new cycle track (a separate track for bicyclists only), and 0.2 miles of new or reconstructed shared vehicle and bicycle lanes.	Removal of the elevated West Street overpass and ramps to and from I-690 would improve community cohesion; removal would re-establish connections between Downtown and the Near Westside, provide an opportunity to expand the Creekwalk, and relocate a portion of the trail to be adjacent to Onondaga Creek.  The alternative would result in improved connectivity on several local streets (e.g., Irving Avenue would be extended to I-690 from East Fayette Street, Crouse Avenue would connect to I-690, West Street would be connected to West Genesee Street, Oswego Boulevard would be extended between East Willow Street and James Street, Pearl Street would be extended from East Willow Street to Erie Boulevard, North Clinton Street would be extended to Butternut Street/North Franklin Street, etc.). A new interchange between I-690 and Crouse and Irving Avenues would establish a new entry corridor to the Near Eastside and University Hill.  In total, the alternative would result in approximately 12.5 miles of new or reconstructed sidewalks, 2.0 miles of new or reconstructed shared use (bicycle and pedestrian) paths, one mile of new cycle track (a separate track for bicyclists only), and 1.7 miles of new or reconstructed shared vehicle and bicycle lanes.
	Overall land use conditions would not change.	Overall land use conditions would not change.
<b>Social Groups Benefited or Harmed</b> (See Section 6-2-2)	Elderly individuals and individuals with disabilities would benefit from the safety and mobility improvements and new facilities compliant with the Public Right-of-Way Accessibility Guidelines (PROWAG) in the Almond Street corridor and adjacent streets, and the east side of West Street.	Elderly individuals and individuals with disabilities would benefit from the safety and mobility improvements and new facilities compliant with PROWAG on Almond Street and adjacent streets, and the east side of West Street.
	Transit-dependent individuals, pedestrians, and bicyclists would benefit from improved pedestrian and bicycle facilities on Almond Street and other local streets, as well as potential transit amenities that could be incorporated into the Project in coordination with Centro (such as bus stops, bus shelters, and roadway features to improve bus maneuvering).	Transit-dependent individuals, pedestrians, and bicyclists would benefit from improved pedestrian and bicycle facilities on Almond Street and other local streets, as well as potential transit amenities that could be incorporated into the Project in coordination with Centro (such as bus stops, bus shelters, and roadway features to improve bus maneuvering).
<b>Environmental Justice</b> (See Section 6-2-3)	While there would be improvements to the roadways beneath the viaduct as well as the pedestrian and bicycle facilities, the viaduct would continue to be a prominent feature of the Central Study Area and could be perceived as a division between neighborhoods.  While there would be adverse effects to environmental justice communities related to visual resources and traffic noise, most would be mitigated, and these adverse effects would not be disproportionately high. Thus, the Viaduct Alternative would not result in disproportionately high and adverse effects on environmental justice communities.	The existing I-81 viaduct, a perceived barrier, would be removed from the railway bridge near Renwick Avenue to I-690. The removal of highway infrastructure and reduction in the transportation footprint, along with related transportation and urban design improvements, would help reconnect neighborhoods on both sides of I-81 and I-690. <ul style="list-style-type: none"><li>▪ Adverse effects to environmental justice communities related to visual resources, traffic noise, and construction effects are expected. However, these adverse effects would not be disproportionately high. Thus, the Community Grid Alternative would not result in disproportionately high and adverse effects on environmental justice communities.</li></ul>

Table 8-1 (cont'd)  
Summary of Alternatives

Topic	Effects	
	Viaduct Alternative	Community Grid Alternative
<b>ECONOMIC CONSIDERATIONS</b>		
<b>Land Acquisition, Displacement, and Relocation</b> (See Section 6-3-1)	<ul style="list-style-type: none"><li>Full/Partial Land Acquisition: 21.74 acres</li><li>Full Acquisitions: 31 properties</li><li>Partial Acquisitions: 88 properties</li><li>Buildings Acquired: 23 (occupied); 1 (vacant)</li><li>Displaced Dwelling Units: 95</li><li>Displaced Employees: 555</li><li>Approximate Loss in Annual Tax Revenue: \$754,063</li></ul>	<ul style="list-style-type: none"><li>Full/Partial Land Acquisition: 20.41 acres</li><li>Full Acquisitions: 13 properties</li><li>Partial Acquisitions: 138 properties</li><li>Buildings Acquired: 3 (occupied); 1 (vacant)</li><li>Displaced Households: 0</li><li>Displaced Employees: 35</li><li>Approximate Loss in Annual Tax Revenue: \$130,794</li></ul>
<b>Local and Regional Economy</b> (See Section 6-3-2)	Displacement: <ul style="list-style-type: none"><li>24 buildings with 555 employees, representing 0.7 percent of total Central Study Area employment.</li></ul>	Displacement: <ul style="list-style-type: none"><li>4 buildings with 35 employees, representing less than 0.1 percent of total Central Study Area employment.</li></ul> Changes in travel patterns and travel times would neither adversely affect specific industries nor result in indirect displacement.
<b>ENVIRONMENTAL CONSIDERATIONS</b>		
<b>Historic and Cultural Resources</b> (See Section 6-4-1)	<p>Removal of eleven (11) historic buildings, representing 10 historic properties (National Register-Eligible / Listed). Nine of these are individually NRHP-listed or eligible for NRHP-listing and two contribute to a historic district, which is considered one historic property.</p> <p>Construction of the Viaduct Alternative would involve ground disturbance, which has the potential affect archaeological resources. Approximately 19.1 acres within the APE for direct effects is undisturbed, or disturbance cannot be documented, and therefore potentially sensitive for archaeological resources. The Project's effects on historic properties cannot be fully determined at this time. As such, the final identification and evaluation of historic properties will be deferred as provided for in a Programmatic Agreement (PA), developed pursuant to 36 CFR §800.14(b)(1)(ii) (see Appendix E-6).</p>	<p>The Community Grid Alternative would not result in adverse effects to National Register-Eligible / Listed properties:</p> <p>Construction of the Community Grid Alternative would involve ground disturbance, which has the potential to affect archaeological resources. Approximately 19.1 acres within the APE for direct effects is undisturbed, or disturbance cannot be documented, and therefore potentially sensitive for archaeological resources. The Project's effects on historic properties cannot be fully determined at this time. As such, the final identification and evaluation of historic properties will be deferred as provided for in a Programmatic Agreement (PA), developed pursuant to 36 CFR §800.14(b)(1)(ii) (see Appendix E-6).</p>
<b>Parks and Recreational Resources</b> (See Section 6-4-2)	The Viaduct Alternative would not result in permanent adverse effects to parks and recreational resources. A portion of Wilson Park (0.12 acres) would not be publicly accessible for two years during construction to provide a safety buffer between the operating sections of the park and the construction zone. NYSDOT would coordinate this temporary closure through an agreement with the Syracuse Housing Authority and the City of Syracuse Department of Parks, Recreation, and Youth Programs. This buffer area would be fenced off from the remainder of the park.	The Community Grid Alternative would not result in permanent adverse effects to parks and recreational resources A portion of Wilson Park (0.12 acres) would not be publicly accessible for less than one year during construction to provide a safety buffer between the operating sections of the park and the construction zone. NYSDOT would coordinate this temporary closure through an agreement with the Syracuse Housing Authority and the City of Syracuse Department of Parks, Recreation, and Youth Programs. This buffer area would be fenced off from the remainder of the park.
	Mitigation to include: <ul style="list-style-type: none"><li>Construction of a new court prior to start of construction;</li><li>Reconstruction of old court upon construction completion; and</li><li>Other improvements including new shade trees, regrading and seeding of lawn area, a new water fountain, new pavement for access from Jackson Street, and fence, pedestrian gates, and parking improvements.</li></ul>	Mitigation to include: <ul style="list-style-type: none"><li>Construction of a new court prior to start of construction;</li><li>Reconstruction of old court upon construction completion; and</li><li>Other improvements including new shade trees, regrading and seeding of lawn area, a new water fountain, new pavement for access from Jackson Street, and fence, pedestrian gates, and parking improvements.</li></ul>
<b>Visual Resources and Aesthetic Considerations</b> (See Section 6-4-3)	<ul style="list-style-type: none"><li>Minor adverse effects: 13 viewpoints</li><li>Neutral effects: 11 viewpoints</li><li>Minor beneficial/beneficial effects: 8 viewpoints</li></ul>	<ul style="list-style-type: none"><li>Minor adverse effects: 6 viewpoints</li><li>Neutral effects: 4 viewpoints</li><li>Minor beneficial/beneficial effects: 22 viewpoints</li></ul>
<b>Air Quality</b> (See Section 6-4-4)	Mesoscale: <ul style="list-style-type: none"><li>No adverse effects in area wide emissions.</li><li>Lower emissions of all modeled pollutants in all analysis years when compared to No Build.</li></ul>	Mesoscale: <ul style="list-style-type: none"><li>No adverse effects in area wide emissions.</li><li>Lower emissions of all modeled pollutants in all analysis years when compared to No Build.</li></ul>
	Microscale: <ul style="list-style-type: none"><li>PM concentrations would be below the NAAQS and similar to conditions under the No Build Alternative.</li></ul>	Microscale: <ul style="list-style-type: none"><li>PM concentrations would be below the NAAQS and similar to conditions under the No Build Alternative.</li></ul>
	Construction: <ul style="list-style-type: none"><li>Pollutant concentrations would not exceed the NAAQS.</li></ul>	Construction: <ul style="list-style-type: none"><li>Pollutant concentrations would not exceed the NAAQS.</li></ul>

Table 8-1 (cont'd)  
Summary of Alternatives

Topic	Effects	
	Viaduct Alternative	Community Grid Alternative
ENVIRONMENTAL CONSIDERATIONS, cont'd		
Energy and Climate Change (See Section 6-4-5)	Reduction of electricity use and associated emissions with grid power to be used for lighting, message boards, and signals.	Reduction of electricity use and associated emissions with grid power to be used for lighting, message boards, and signals.
	Decrease in operational GHG emissions and energy use.	Decrease in operational GHG emissions and energy use.
	The Project would be designed to achieve certification at the Silver level under NYSDOT's GreenLITES project design certification program.	The Project would be designed to achieve certification at the Silver level under NYSDOT's GreenLITES project design certification program.
Noise (See Section 6-4-6)	Impacted receivers: 675 (1,196 receptors) of the 2,817 receiver sites without abatement.	Impacted receivers: 557 (representing 963 receptors) of the 2,817 receiver sites without abatement.
	Additional 95 receivers would exceed the NACs compared to existing conditions without abatement.	23 fewer receivers would exceed the NACs compared to existing conditions without abatement.
	Perceptible (>3dB(A)) traffic noise level increases at 38 receivers (94 receptors) compared to existing conditions without abatement.	Perceptible (>3dB(A)) traffic noise level increases at 33 receivers (86 receptors) compared to existing conditions without abatement.
	Recommended noise barriers: 15	Recommended noise barriers: 15
Water Resources (See Section 6-4-7)	Decreased overall impervious surface.	Increased overall impervious surface.
	EO 11990 wetland impacts: 0.06 acres (0.06 vegetated wetlands)	EO 11990 wetland impacts: 0.98 acres (0.89 vegetated wetlands and 0.07 open surface waters)
	NYSDEC wetland impacts 0.00 acres. NYSDEC-regulated freshwater wetland adjacent area impacts: 0.71 acres of permanent new pavement and 2.12 acres of permanent cut/fill (pervious).	NYSDEC wetland impacts: 0.35 acres. NYSDEC-regulated freshwater wetland adjacent area impacts: 2.22 acres of permanent new pavement and 6.71 acres of permanent cut/fill (pervious).
	Onondaga Creek (Central Study Area): <ul style="list-style-type: none"><li>Permanent impacts: 0</li><li>Temporary impacts: 65 linear feet</li></ul>	Onondaga Creek (Central Study Area): <ul style="list-style-type: none"><li>Permanent impacts: 0</li><li>Temporary impacts: 65 linear feet</li></ul>
		North Branch Ley Creek (I-481 East Study Area): <ul style="list-style-type: none"><li>Permanent impacts: 10 linear feet</li><li>Temporary impacts: 15 linear feet</li></ul>
		Mud Creek: <ul style="list-style-type: none"><li>Net increase of 81 linear feet of previously culverted stream</li><li>Temporary impacts: 0</li></ul>
	USACE Wetland and Surface water mitigation: Not anticipated.	USACE Wetland and Surface water mitigation: In-lieu fee program.
	NYSDEC Wetland and Surface water mitigation: Not anticipated.	NYSDEC Wetland and Surface water mitigation: Improvements to Mud Creek (including streambed restoration, habitat connectivity, floodplain enhancements, and riparian corridor enhancements).
General Ecology and Wildlife Resources (See Section 6-4-8)	Habitat removed: 305 acres <ul style="list-style-type: none"><li>275.7 acres of terrestrial cultural communities</li><li>22.6 acres of successional southern hardwood communities</li><li>4.0 acres of successional old field communities</li><li>2.0 acres of successional shrubland communities</li><li>0.6 acres of floodplain forest communities</li><li>0.06 acres wetland impacts</li><li>Trees removed: 10.3 acres</li></ul>	Habitat removed: 1,050.4 acres <ul style="list-style-type: none"><li>771.4 acres of terrestrial cultural communities</li><li>69.4 acres of successional southern hardwood communities</li><li>91.7 acres of successional old field communities</li><li>42.9 acres of successional shrubland communities</li><li>74.0 acres of floodplain forest communities</li><li>0.89 acres of freshwater wetland communities</li><li>0.07 acres of open surface water communities</li><li>Trees removed: 17.9 acres</li></ul>
	State threatened and endangered species: "Take Not Likely" – All species	State threatened and endangered species: "Take Not Likely" – All species
	Federal threatened and endangered species: <ul style="list-style-type: none"><li>Indiana bat: "May Affect, Not Likely to Adversely Affect"</li><li>Northern long-eared bat: "May Affect, Not Likely to Adversely Affect"</li><li>Eastern massasauga: "No Effect – No Habitat"</li><li>American hart's-tongue fern: "No Effect"</li></ul>	Federal threatened and endangered species: <ul style="list-style-type: none"><li>Indiana bat: "May Affect, Not Likely to Adversely Affect"</li><li>Northern long-eared bat: "May Affect, Not Likely to Adversely Affect"</li><li>Eastern massasauga: "No Effect – No Habitat"</li><li>American hart's-tongue fern: "No Effect"</li></ul>



Table 8-1 (cont'd)  
Summary of Alternatives

Topic	Effects	
	Viaduct Alternative	Community Grid Alternative
ENVIRONMENTAL CONSIDERATIONS cont'd		
<b>Asbestos and Lead</b> (See Section 6-4-9)	Implementation of the Viaduct Alternative would require the acquisition and demolition of twenty-four (24) buildings, one associated structure, and 52 ramps/bridges. The preliminary asbestos assessment indicates that these structures and bridges affected by this alternative have lead based paints (LBPs). Asbestos surveys and lead sampling is recommended at 24 buildings and 52 ramps/bridges, prior to construction, to identify any asbestos containing materials (ACMs) or lead based paints (LBP).	Implementation of the Community Grid Alternative would require the acquisition and demolition of four (4) buildings. In addition, a total of approximately 64 ramp and bridge structures would be affected. The preliminary asbestos assessment indicates that these structures and bridges affected by this alternative have lead based paints (LBP). Asbestos surveys and lead sampling is recommended at the buildings and ramps/bridges, prior to construction, to identify any asbestos containing materials (ACMs) or LBPs.
<b>Hazardous Waste and Contaminated Materials</b> (See Section 6-4-10)	Detailed assessment of each structure to be removed or reconstructed would be completed prior to its acquisition and/or removal. A hazardous waste and contaminated materials assessment is recommended for 68 sites proposed for full or partial property acquisition and should focus on areas of anticipated construction, particularly areas that have potential for or have been identified as locations with recognized environmental concerns (RECs). Groundwater sampling is also recommended in locations where anticipated construction would extend below the water table. A site-wide Soil Management Plan would be prepared outlining procedures to be followed any time contamination and/or evidence of potential contamination is suspected or identified.	Detailed assessment of each structure to be removed or reconstructed would be completed prior to its acquisition and/or removal. A hazardous waste and contaminated materials assessment is recommended for 68 sites proposed for full or partial property acquisition and should focus on areas of anticipated construction, particularly areas that have potential for or have been identified as locations with recognized environmental concerns (RECs). Groundwater sampling is also recommended in locations where anticipated construction would extend below the water table. A site-wide Soil Management Plan would be prepared outlining procedures to be followed any time contamination and/or evidence of potential contamination is suspected or identified.
<b>Farmlands</b> (See Section 6-4-11)	No effect on farmland.	No effect on farmland.

Table 8-2  
Sample Travel Times (Minutes) in 2056

Origin	Destination	AM				PM			
		Existing	No Build	Viaduct	Community Grid	Existing	No Build	Viaduct	Community Grid
Baldwinsville	Cicero	22	23	23	23	23	23	23	23
	Destiny USA	23	23	24	24	20	21	22	22
	Downtown	21	22	22	21	20	21	21	21
	Fairmount	18	18	18	18	18	18	18	18
	Fayetteville/Manlius	30	32	31	31	32	38	31	32
	Lafayette	32	34	32	37	31	32	31	36
	Liverpool	15	15	15	15	15	16	16	16
	St. Joseph's Hospital	22	23	22	22	20	21	21	22
Cicero	University Hill	24	27	25	24	23	23	23	22
	Baldwinsville	21	21	21	21	23	23	23	23
	Destiny USA	11	11	11	11	12	11	10	11
	Downtown	16	15	13	12	13	13	12	13
	Fairmount	22	21	20	21	23	22	21	22
	Fayetteville/Manlius	19	18	18	18	20	24	19	19
	Lafayette	28	27	23	27	25	24	24	27
	Liverpool	13	13	13	13	14	13	13	13
Destiny USA	St. Joseph's Hospital	15	15	12	12	12	12	13	12
	University Hill	21	20	17	17	17	16	15	15
	Baldwinsville	22	22	23	23	24	26	26	27
	Cicero	11	10	10	11	12	11	11	12
	Downtown	9	7	8	7	8	8	8	9
	Fairmount	12	12	12	12	15	15	14	15
	Fayetteville/Manlius	18	17	18	18	20	25	19	21
	Lafayette	20	19	19	24	19	19	19	25
Downtown	Liverpool	8	8	9	9	9	9	10	11
	St. Joseph's Hospital	8	7	7	7	7	7	8	8
	University Hill	12	12	12	11	11	11	11	11
	Baldwinsville	20	19	21	21	21	21	24	23
	Cicero	15	13	14	14	16	14	14	15
	Destiny USA	5	5	5	5	5	5	5	6
	Fairmount	13	12	14	14	14	13	16	15
	Fayetteville/Manlius	15	15	15	17	18	23	17	19

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Table 8-2 (cont'd)  
Sample Travel Times (Minutes) in 2056

Origin	Destination	AM				PM			
		Existing	No Build	Viaduct	Community Grid	Existing	No Build	Viaduct	Community Grid
Fairmount	Baldwinsville	17	18	18	18	18	19	19	19
	Cicero	22	22	21	22	23	22	21	23
	Destiny USA	13	13	13	13	13	13	12	13
	Downtown	13	14	14	13	12	13	13	13
	Fayetteville/Manlius	22	24	22	22	24	30	23	24
	Lafayette	24	26	24	28	23	24	23	28
	Liverpool	17	17	17	17	17	17	17	18
	St. Joseph's Hospital	14	15	14	14	12	13	13	14
Fayetteville/ Manlius	University Hill	16	19	17	16	15	15	15	14
	Baldwinsville	27	30	30	28	29	30	32	30
	Cicero	17	19	19	17	18	17	19	17
	Destiny USA	13	15	15	13	14	14	16	14
	Downtown	14	17	17	15	14	15	17	16
	Fairmount	20	23	23	21	22	22	24	22
	Lafayette	18	18	18	18	19	20	19	19
	Liverpool	16	19	19	18	18	18	21	19
LaFayette	St. Joseph's Hospital	12	15	15	14	13	14	16	15
	University Hill	16	19	17	15	16	16	17	15
	Baldwinsville	30	32	30	35	31	32	31	36
	Cicero	25	26	24	27	25	24	24	26
	Destiny USA	15	17	15	20	15	16	15	20
	Downtown	16	19	16	17	16	15	16	16
	Fairmount	23	25	22	27	24	24	23	28
	Fayetteville/Manlius	18	18	18	18	20	25	19	19
Liverpool	Liverpool	19	21	19	24	20	20	19	24
	St. Joseph's Hospital	17	20	18	18	18	16	17	17
	University Hill	14	18	14	14	15	14	14	14
	Baldwinsville	13	14	14	14	15	14	14	14
	Cicero	14	13	13	13	15	14	14	14
	Destiny USA	6	6	7	7	6	6	8	7
	Downtown	11	10	8	8	9	9	8	9
	Fairmount	16	16	15	16	18	18	17	18
Liverpool	Fayetteville/Manlius	20	20	18	19	20	26	20	21
	Lafayette	23	22	19	24	20	20	20	25
	St. Joseph's Hospital	10	10	8	8	8	8	8	7
	University Hill	15	15	12	12	12	12	11	11



Table 8-2 (cont'd)  
Sample Travel Times (Minutes) in 2056

Origin	Destination	AM				PM			
		Existing	No Build	Viaduct	Community Grid	Existing	No Build	Viaduct	Community Grid
St. Joseph's Hospital	Baldwinsville	19	20	20	21	21	22	23	23
	Cicero	13	12	12	12	13	12	12	13
	Destiny USA	3	3	3	3	3	4	3	4
	Downtown	3	3	3	3	3	3	3	3
	Fairmount	12	13	13	14	14	14	15	16
	Fayetteville/Manlius	14	14	14	16	16	22	16	18
	Lafayette	17	18	17	19	18	18	18	20
	Liverpool	7	7	7	7	7	8	8	8
University Hill	University Hill	7	7	7	8	7	7	8	7
	Baldwinsville	21	21	21	21	22	24	23	23
	Cicero	16	15	14	15	17	16	15	16
	Destiny USA	6	7	6	7	7	7	7	7
	Downtown	6	6	5	6	6	6	6	6
	Fairmount	14	14	13	14	15	16	15	15
	Fayetteville/Manlius	16	15	15	15	17	24	17	17
	Lafayette	16	16	14	15	16	16	15	15
	Liverpool	10	10	10	11	11	12	11	12
	St. Joseph's Hospital	7	6	6	6	6	6	6	7
<b>Notes:</b> A 2013 base year was used as it coincides with the time period when the traffic data was collected, and initial development of the traffic models and analyses began. The 2013 base year has been retained since the study area has not experienced significant travel pattern changes in recent years. For example, annual data such as "Syracuse Urban Area - VMT since 1985" developed by NYSDOT shows a very stable vehicle-miles traveled (VMT) trend since 2013 for the functional classes of freeways, arterials, and collectors in Syracuse urban area.									