

No-Build strategy: defined

The “no-build” strategy would include only routine maintenance, including filling pavement cracks, patching holes in the viaduct deck, and maintaining the highway drainage system.

WHY CONSIDER THIS STRATEGY?

- Required under both federal and state environmental regulations
- Used as a benchmark against which other alternatives can be compared

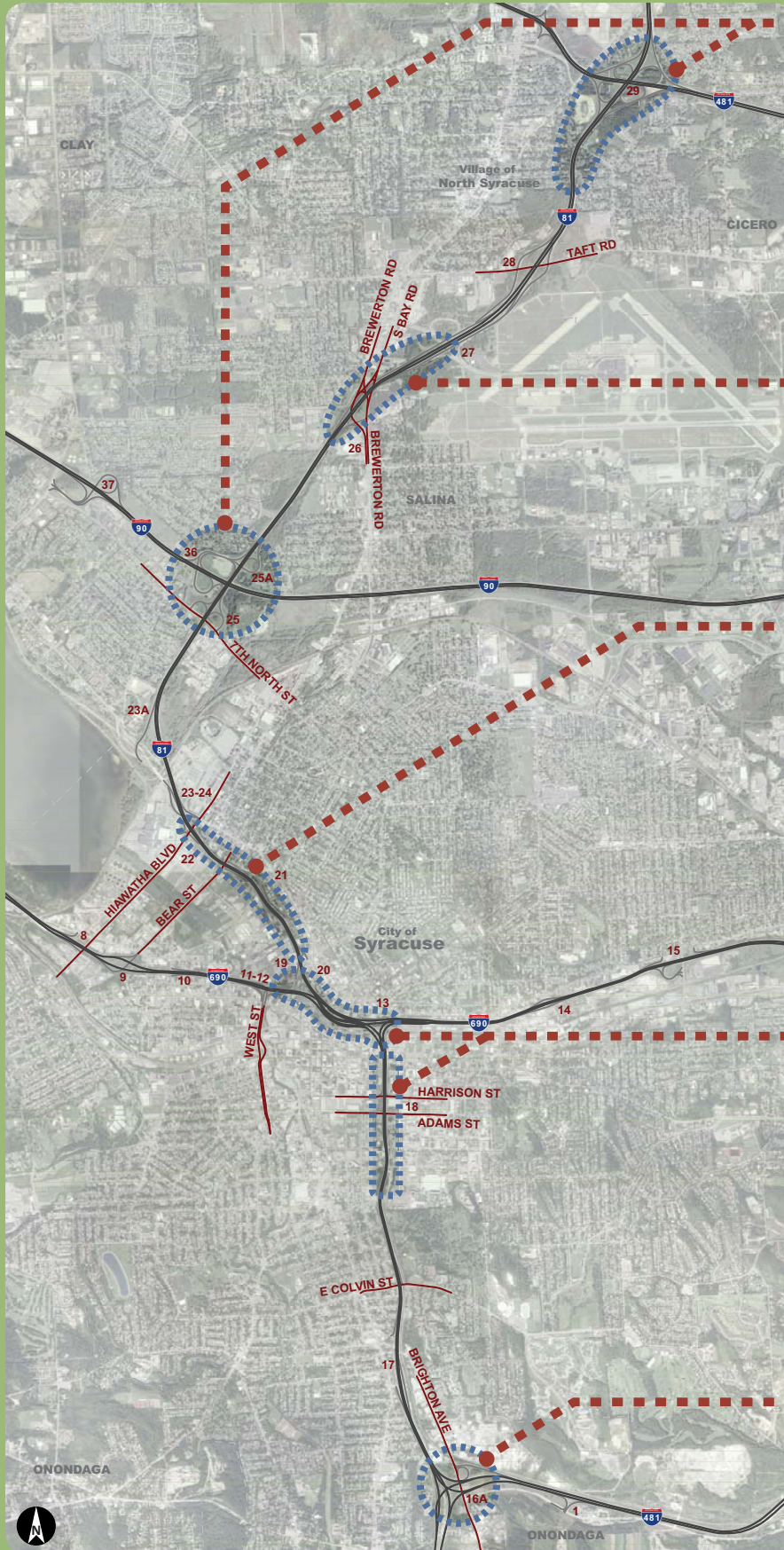
WHAT ISSUES WILL THIS STRATEGY ADDRESS?

- Will not address long-term issues of I-81



No-Build strategy:

Future issues



7TH NORTH ST TO I-90 & TAFT RD TO I-481

- Capacity conditions and congestion will increase
- Safety and accident occurrences will remain, if not increase as a result of increasing congestion
- Non-standard design features will continue to affect capacity and safety

ROUTE 11 AREA (EXIT 26 & 27)

- Traffic capacity will decrease from good to approaching capacity and will likely contribute to increased accident rates

I-690 TO HIAWATHA BLVD

- Capacity conditions and congestion will increase
- Safety and accident occurrences will remain, if not increase, as a result of increasing congestion
- Non-standard design features will continue to affect capacity, safety, and operations

I-81/I-690 INTERCHANGE & VIADUCT AREA

- Bridge conditions continue to deteriorate and require increased funding for out-of-date bridges
- Capacity conditions and congestion will increase
- Safety and accident occurrences will remain, if not increase, as a result of increasing congestion
- Non-standard design features will continue to affect capacity, safety, and operations

I-81/I-481 INTERCHANGE

- Safety and accident occurrences will remain, if not increase, as a result of increasing congestion
- Non-standard design features will continue to affect capacity and safety

Rehabilitation strategy: defined

A rehabilitation strategy for I-81 would restore the current bridges and pavement to a “state of good repair” that would last for the next 30-40 years. Some parts of the I-81 viaduct might be widened or changed to improve safety. Some improvements to exit/entrance ramps to downtown and University Hill might be made.

WHY CONSIDER THIS STRATEGY?

- Supported by public input
- Can be used along with No-Build as a benchmark for other strategies
- Addresses some issues with I-81

WHAT ISSUES WILL THIS STRATEGY ADDRESS?

- Long-term pavement and bridge conditions
- Some of the worst accident, safety, and congestion areas in the corridor
- Extension of the viaduct service life

“One of the positives of living in Central New York is the ease of automobile travel in the region...it would not be a bad thing to keep I-81 exactly as it is now.”

“We must maintain convenient highway access to downtown and to key University and Medical Center destinations. I believe I-81 needs to remain, in some form, where it is.”

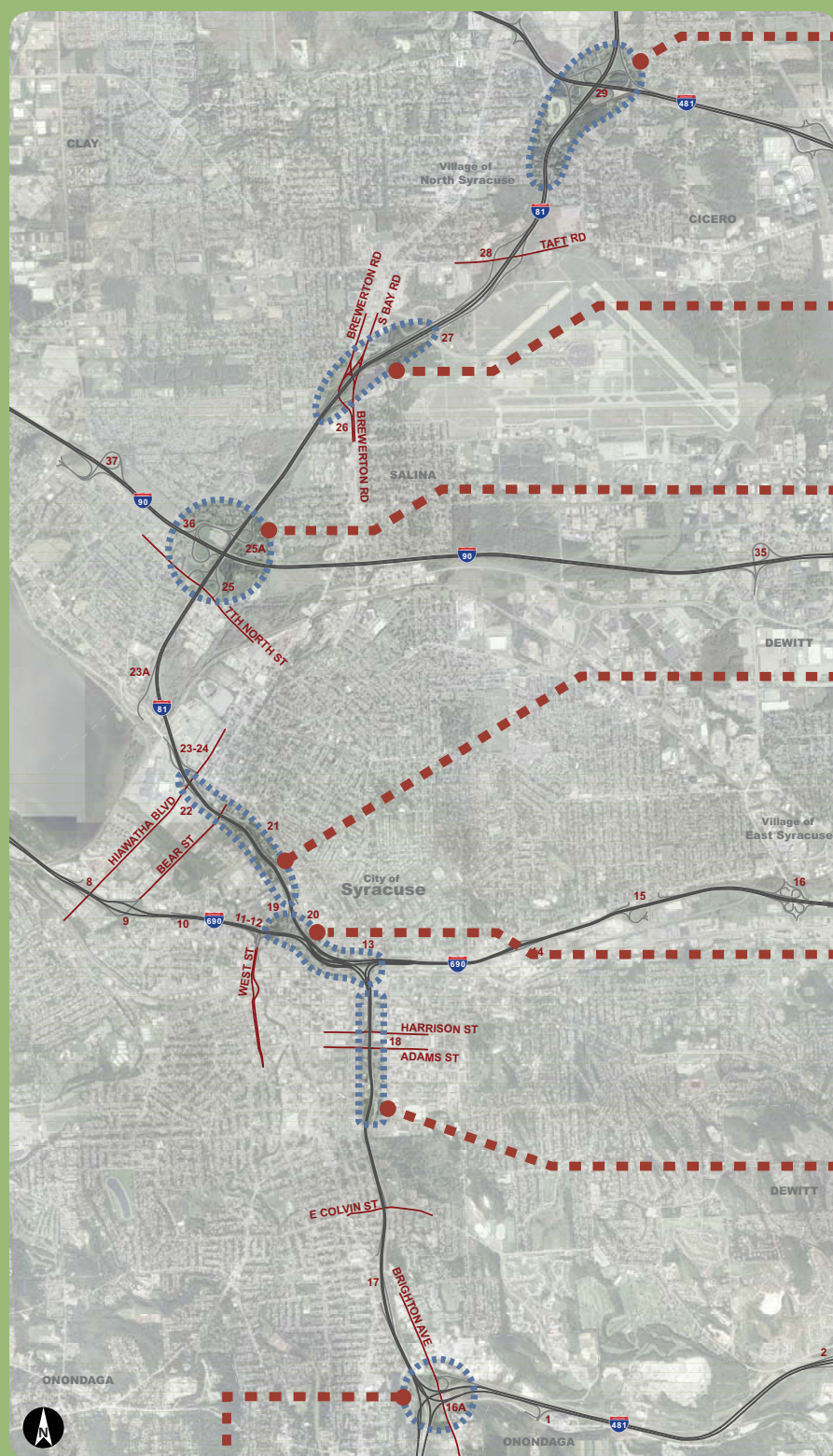
“I-81 makes traveling to work a breeze! I have lived in the University area for over 50 years and 81 has been a blessing to go from one side of the city to the other in little to no time.”

“81 is completely essential to maintaining a working city. Loss of quick travel from north to south Syracuse will drastically increase commute times and destroy what I love most - ease of navigation.”

**What we
heard**

Rehabilitation strategy:

Elements for Stage 1 development



TAFT RD TO I-481

- Develop frontage road for I-81 through the interchange with I-481 to improve weaving conditions
- Review accident history for the Priority Investigation Location to determine if mainline curve contributes to high accident rate

ROUTE 11 AREA (EXIT 26 & 27)

- Review accident history for two Priority Investigation Locations to determine if mainline curve or weaving contributes to high accident rate

7TH NORTH ST TO I-90

- Develop frontage road system to improve weaving conditions
- Provide shoulder-edge rumble strips

I-690 TO HIAWATHA BLVD

- Increase length of ramps
 1. State St to I-81 northbound
 2. Court St to I-81 northbound
 3. I-81 southbound to Genant St
- Remove on-ramp from Genant St to I-81 southbound
- Provide shoulder-edge rumble strips

I-81/I-690 INTERCHANGE

- Increase length of ramps
 1. I-690 eastbound to I-81 southbound
 2. Pearl St ramp to I-81 northbound
 3. I-81 northbound to I-690 westbound

VIADUCT AREA

- Increase length of three of four ramps
 1. Harrison St to I-81 northbound
 2. I-81 southbound to Harrison/Almond
 3. Adams/Almond St to I-81 northbound
- Widen bridge southbound to provide two lanes for southbound ramp to Harrison St
- Improve capacity on Almond St

I-81/I-690 INTERCHANGE & VIADUCT AREA

- Widen bridges to provide shoulders
- Provide skid-resistant pavement
- Provide reflectorized pavement markings
- Provide shoulder-edge rumble strips

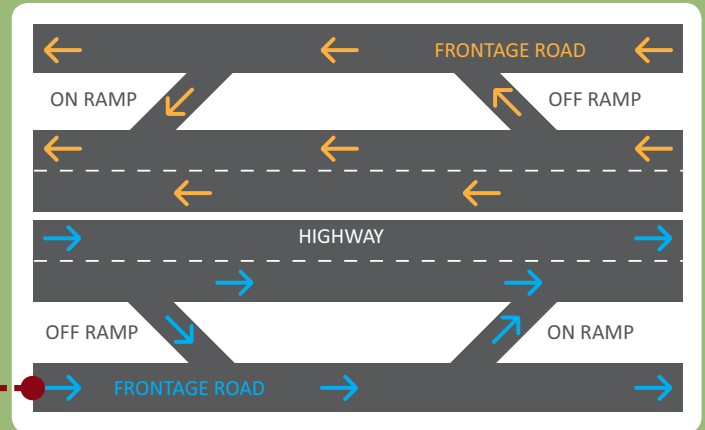
I-81/I-481 INTERCHANGE

- Improve interchange lighting
- Provide reflectorized pavement markings
- Provide shoulder-edge rumble strips

Rehabilitation strategy: considerations

ACCESS IMPROVEMENTS

- Increase ramp spacing
- Use frontage roads - non-limited access roads that run parallel to high-speed roads or highways



Rumble strips and reflective pavement markings

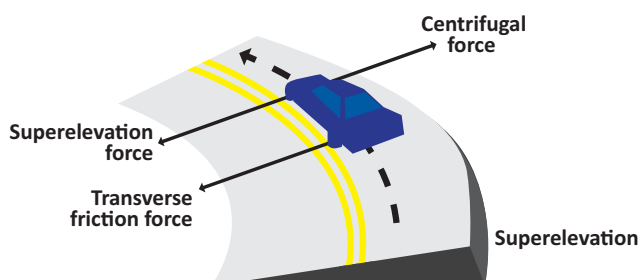
SAFETY AND OPERATIONAL IMPROVEMENTS

- Improved lighting
- Rumble strips
- Bridge widening to provide shoulders
- Skid-resistant pavement
- Reflective pavement markings

GEOMETRIC IMPROVEMENTS

- Straightening of sharp curves

Superelevation Diagram



I-81 north of downtown Syracuse



Tell us what you think



Is there anything missing from this strategy?

Reconstruction strategy: defined

A reconstruction strategy for I-81 would remove the existing viaduct structure and build a new I-81 viaduct within the general vicinity of the current highway. The I-81/I-690 interchange would be rebuilt. Some highway curves would be straightened.

WHY CONSIDER THIS STRATEGY?

- Significant public support
- Addresses long-term issues with I-81
- Meets regional transportation needs through 2040

WHAT ISSUES WILL THIS STRATEGY ADDRESS?

- Long-term pavement and bridge conditions
- High accident locations
- Congestion at I-690 interchange
- Most or all non-standard features
- Aesthetic/built environment improvements in the current viaduct area

“Keep the current I-81 right-of-way through Syracuse, but make major improvements to the infrastructure (i.e additional lanes, carpool (HOV) lanes, fewer exits and entrance ramps, less curves, etc.). Improve signage, lighting, and safety, too.”

“The bridge works, so keep it. Improve the design, widen the highway, and address the design deficiencies of the on ramps and interchanges.”

“Renovate the existing system, maintaining its extraordinary functionality. Improve the interchanges, and enhance the pedestrian environment around the interstate. Eliminate bottlenecks by widening the roadway and lengthening merge lanes.”



What we heard

Reconstruction strategy:

Elements for Stage 1 development



I-690 TO HIAWATHA BLVD

- Straighten I-81 mainline curves
- Develop new ramp system and/or provide a frontage road

I-81/I-690 INTERCHANGE

- Evaluate interchange options
- Straighten mainline curves
- Eliminate left-hand entrances
- Improve ramp spacing
- Improve local surface street connections

VIADUCT AREA

- Remove and replace viaduct bridge
- Identify bridge types with appropriate aesthetics and span lengths
- Review Exit 18 (Adams/Harrison) location for possible changes in relation to I-81/I-690 interchange
- Identify changes to Almond Street in relation to I-81/I-690 interchange

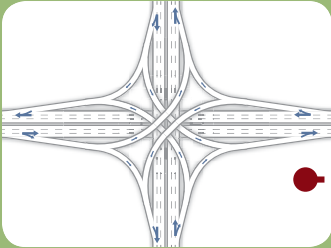
Reconstruction strategy: considerations

FRONTAGE ROADS

- Frontage roads segregate local traffic from the higher speed through traffic
- Frontage roads are used most frequently on highways where their primary function is to distribute and collect traffic between local streets and interchanges



Frontage road along I-71



I-490/I-590 interchange, Rochester, NY

INTERCHANGE LAYOUT

- Interchange configuration and design is based on many factors including traffic volumes and patterns, environmental considerations, and cost
- The most common interchange configurations fill the least space, minimize structural complexity, minimize weaving, and fit the setting
- The most widely used directional interchange is a 4-level System Interchange layout

HIGHWAY VIADUCT

- A new viaduct would conform to current design standards
- Many cities have built new viaducts that are aesthetically pleasing



Seattle viaduct rendering



Modern concrete bridge



Modern steel bridge



Tell us what you think



Is there anything missing from this strategy?

Tunnel/Depressed highway strategy: defined

A tunnel/depressed highway strategy would remove the viaduct and lower I-81 below grade in a tunnel and/or depressed right-of-way. This strategy would require the reconstruction of I-81 on either end of the tunnel/depressed highway.

WHY CONSIDER THIS STRATEGY?

- Significant public support
- Addresses long-term issues of I-81
- Meets regional transportation needs through 2040

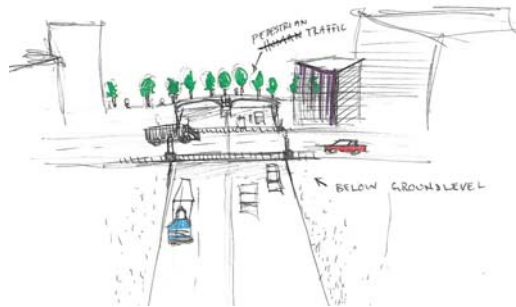
WHAT ISSUES WILL THIS STRATEGY ADDRESS?

- Long-term pavement and bridge conditions
- Accidents
- Non-standard features
- Aesthetic/built environment improvements in the current viaduct area

"I would put I-81 underground and design a tunnel to allow traffic to flow in and out of the city. A tunnel would improve traffic flow, reconnect the downtown area, and decrease accident rates on I-81."

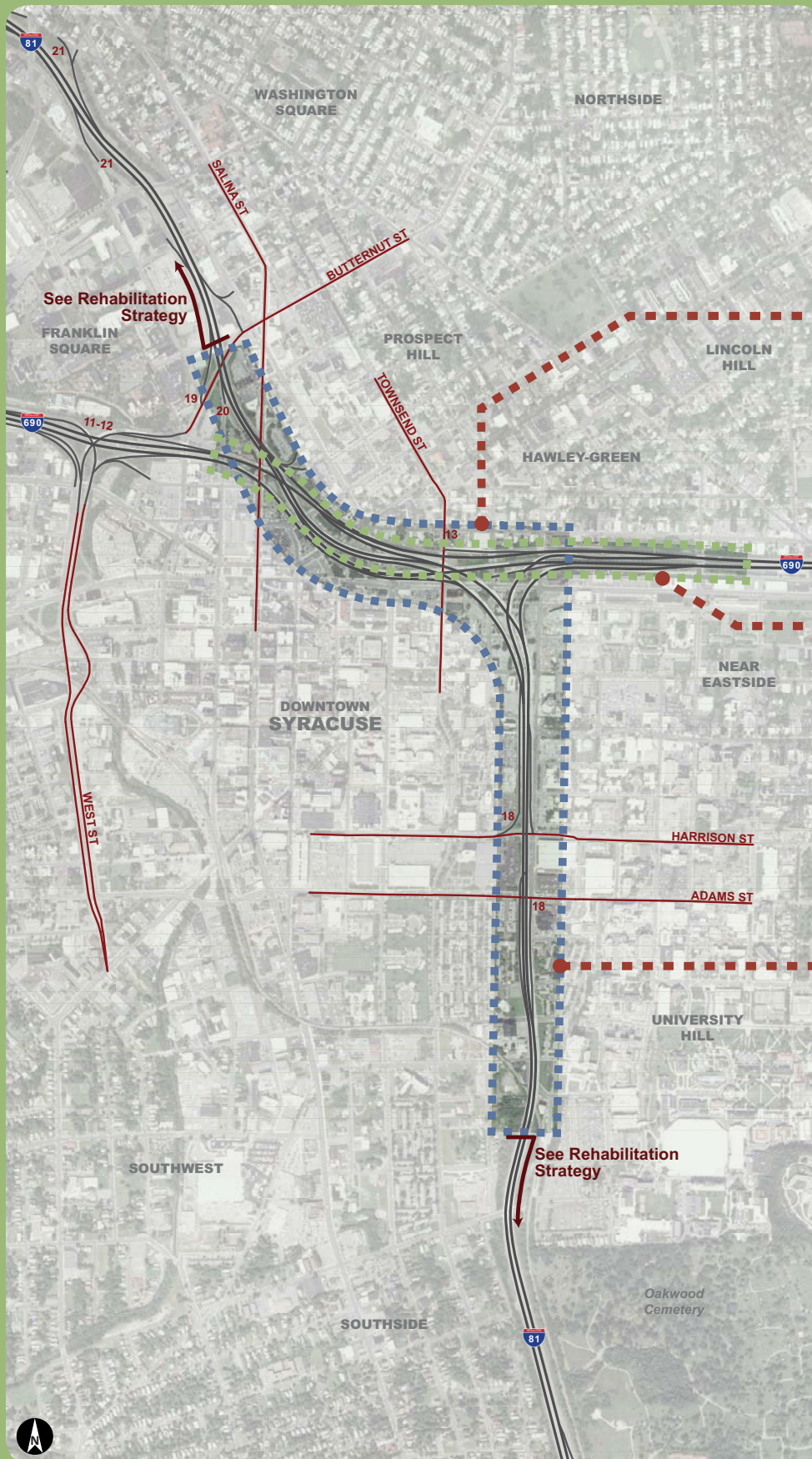


"Create a tunnel for the highway. Then, above ground, use the open space for parks and paths for walking and biking. This strategy would create a unique space in the city and help Syracuse distinguish itself."



**What we
heard**

Tunnel/Depressed Highway strategy: Elements of Stage 1 development



I-81/I-690 INTERCHANGE

- Re-establish all connections between I-81 and I-690
- Provide primary access to downtown and University Hill

I-690: CROUSE AVE TO WILLOW ST

- Investigate tunnel concepts from Crouse Ave to Willow St

I-81: NYS&W RAILROAD TO BUTTERNUT ST

- Investigate and develop 5 tunnel/depressed highway concepts for I-81 from the NYS&W railroad to Butternut St

NORTHERN & SOUTHERN BOULEVARD LIMITS

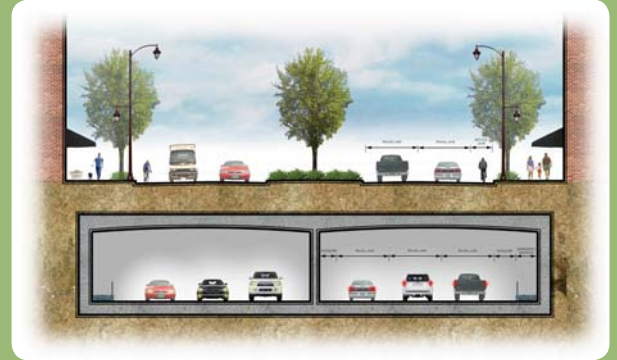
Review other terminus suggestions including:

- City of Syracuse north city line
- I-90 (Thruway) interchange (Exit 25A)
- Castle St (tunnel and depressed highway)
- Colvin St (tunnel)
- Oakwood Cemetery (depressed highway)

Tunnel/Depressed highway strategy: considerations

TUNNEL CONSIDERATIONS

- Grade change
 - Lowering roadway would require a significant transition length
- Local access
 - Re-establish downtown access and University Hill connections
 - Modifications to existing street network necessary for tunnel portal and approaches
- Maintenance issues
 - Drainage
 - Ventilation
 - Fire and emergency systems



Sample tunnel cross section



Central Artery - Boston, MA



Fort Washington Way - Cincinnati, OH



Rochester Inner Loop - Rochester, NY



Tell us what you think



Is there anything missing from this strategy?

Boulevard strategy: defined

A boulevard strategy would require major modification to the regional highway system. The I-81 viaduct would be removed and replaced by a non-interstate boulevard. I-481 would be redesignated as I-81. This strategy would include reconstruction of I-81 on either end of the boulevard and significant changes to the I-81/I-481 interchanges.

WHY CONSIDER THIS STRATEGY?

- Significant public support
- Addresses structural issues of the I-81 viaduct
- Regional transportation needs

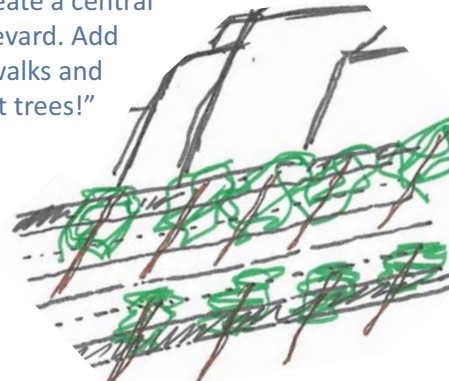
WHAT ISSUES WILL THIS STRATEGY ADDRESS?

- Long-term pavement and bridge conditions
- Accidents
- Non-standard features
- Aesthetic/built environment improvements in the current viaduct area

“Convert I-81 to a street-level arterial highway, similar to the one in Utica, NY. The highway should have turn lanes for major crossroads, and crosswalks or pedestrian bridges at strategic points. This option would be cheaper to maintain and would create more access points for travelers.”

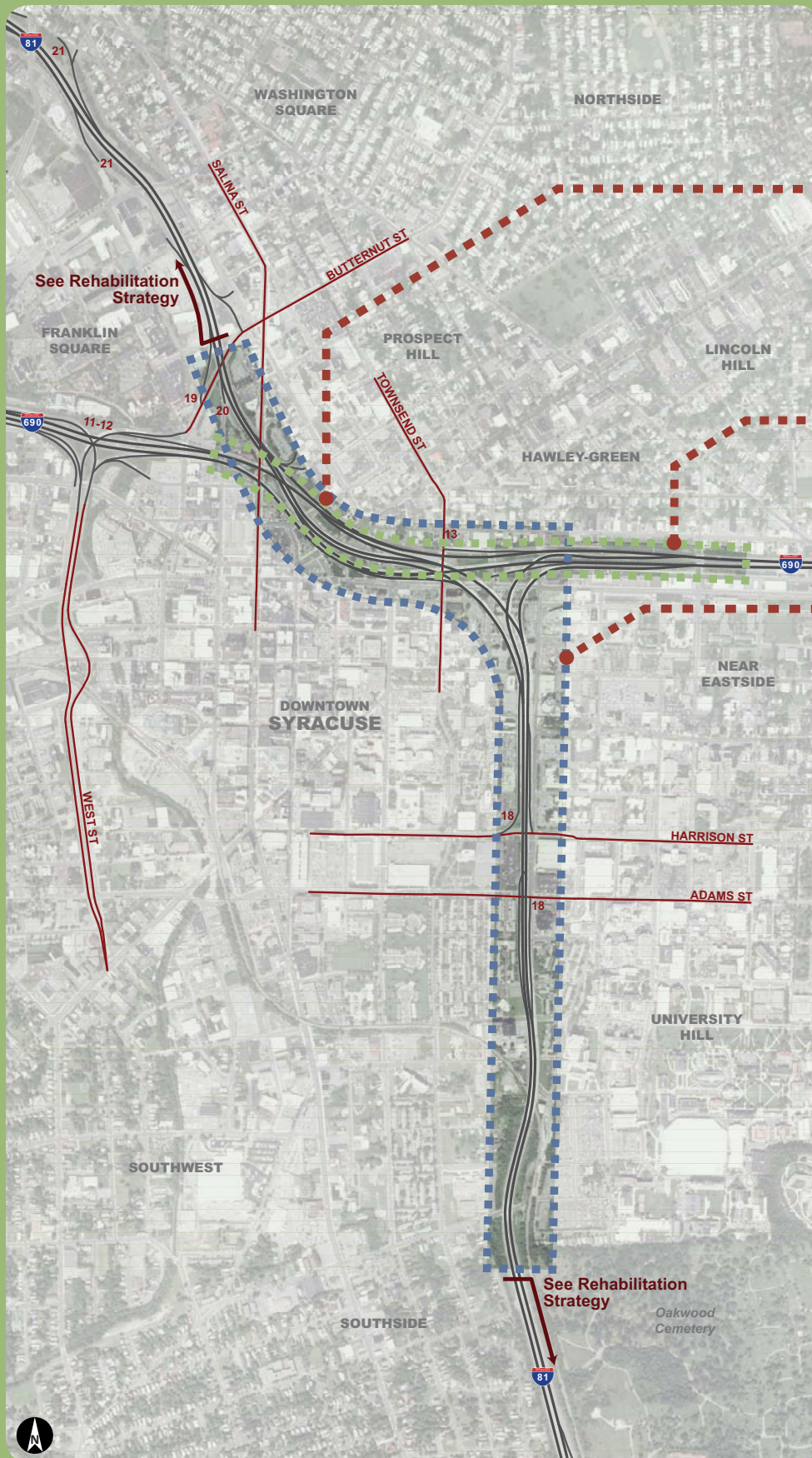
“A boulevard would eliminate the viaduct, which is an eyesore and physical barrier in central Syracuse. It would also calm traffic and reduce noise and pollution.”

“Bring I-81 to street level to create a central boulevard. Add sidewalks and street trees!”



What we heard

Boulevard strategy: Elements of Stage 1 development



I-81/I-690 INTERCHANGE

- Re-establish all connections between I-81 and I-690
- Establish connections to the boulevard
- Provide primary access to downtown and University Hill

I-690: UNIVERSITY AVE TO WEST ST

- Review boulevard from University Ave to West St
- Review boulevard from Route 5 to West St

I-81: OAKWOOD CEMETERY TO BUTTERNUT ST

Investigate and/or develop 4 different boulevard options. Details will include:

- Cross section options (width, # of lanes, green space)
- Southern terminus options (Castle St to Jackson St)
- Northern terminus options (Erie Boulevard, Almond St, or through the interchange)

NORTHERN & SOUTHERN BOULEVARD LIMITS

Review other terminus suggestions for the boulevard concept including:

- I-481 northern interchange (Exit 29)
- I-90 (Thruway)
- Route 370 (Onondaga Lake Parkway)
- City streets including - Hiawatha Blvd, Spencer St, Court St, and Butternut St
- I-481 southern interchange (Exit 16A)
- Brighton Ave
- Colvin St

Boulevard strategy: Associated concepts

LOCAL STREET CONSIDERATIONS

- Reconnect street grid
- Rebuild major streets to boulevard standards
- Better/more connections to State roads
- Improve traffic signal coordination
- Review one-way streets
- Consider roundabouts

ROUTE 5/695

- Rebuild/reconnect ramps and interchange

WESTERN BYPASS (OPTIONAL)

- Consider extending bypass from I-81/I481 interchange (Exit 16A) to NYS Route 5/695 in Fairmount

I-81/I-481 INTERCHANGE

- Rebuild/reconnect ramps and interchange
- Approximate new I-81 mainline



I-81/I-481 INTERCHANGE

- Rebuild/reconnect ramps and interchange
- Approximate new I-81 mainline

I-481

- Re-designate I-481 as I-81
- Review I-690 and I-481 for capacity issues and potential widening

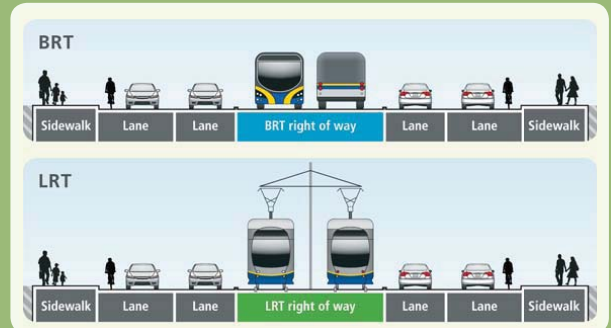
WEST ST AND RAILROAD CORRIDOR (OPTIONAL)

- Investigate the NYS & W Railroad and West St corridor for circulation improvements and/or a possible I-81/I-690 connector

Boulevard strategy: considerations

BOULEVARD CONSIDERATIONS

- Street network changes
 - Elevated to at-grade transition
 - Upgrading of existing arterials
 - New thoroughfares
- Traffic capacity enhancements
 - Review alternative access locations
 - Street grid improvements
- Alternative transportation modes
 - Reserved right-of-way for transit
 - Sidewalks and bike lanes
 - Pedestrian safety
- Improved aesthetics



Surrey Rapid Transit Study Design Guide - TransLink



West Side Highway - New York, NY



Harbor Drive - Portland, OR



Embarcadero - San Francisco, CA



Octavia Boulevard - San Francisco, CA



Octavia Boulevard - San Francisco, CA



Embarcadero - San Francisco, CA



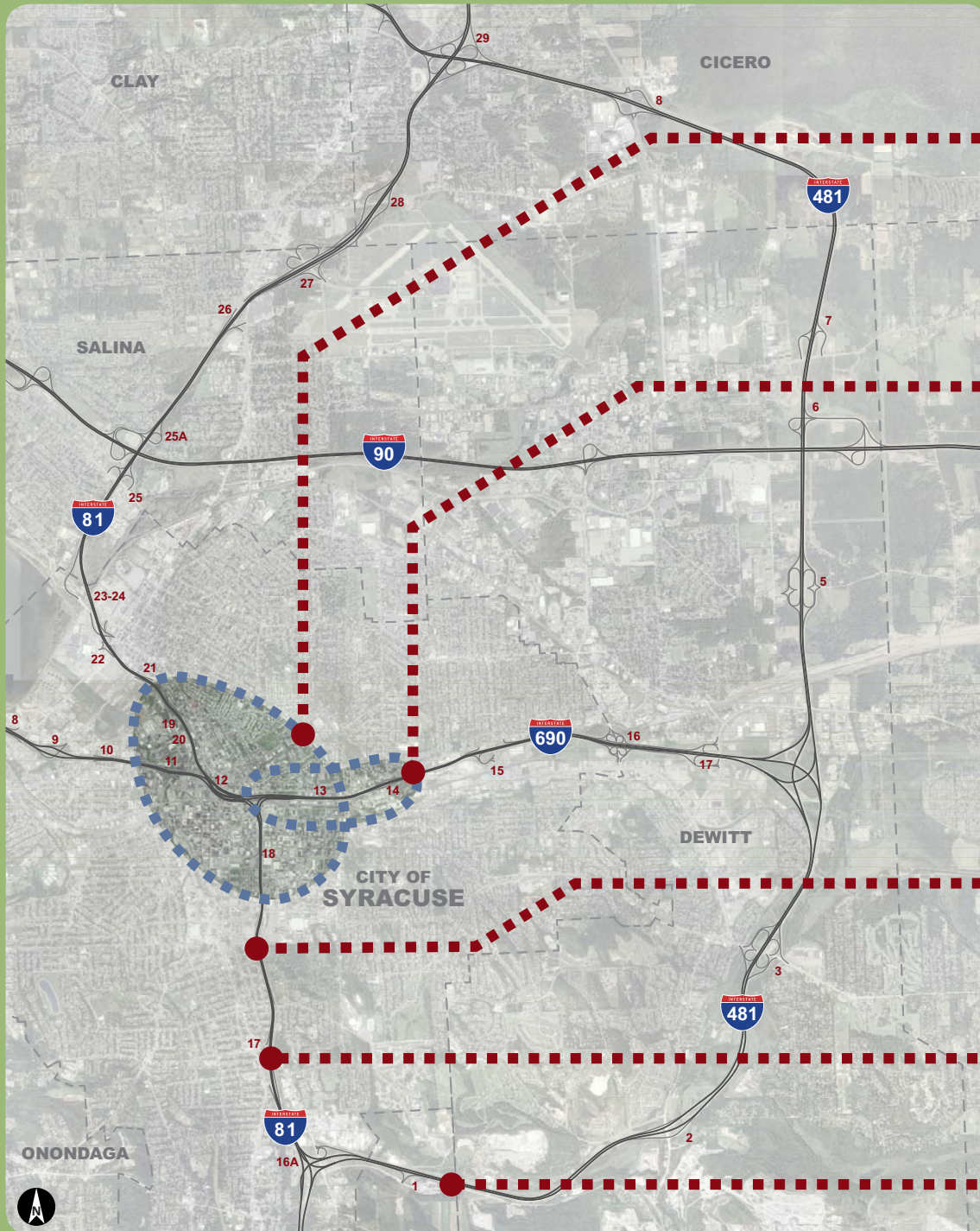
Tell us what you think



Is there anything missing from this strategy?

Common concepts

These concepts represent additional improvements that could be incorporated into any strategy



Develop surface street modifications to facilitate interstate access and improved connectivity

Consider frontage road for improved access to University Hill

Consider a new Castle St interchange (full or partial)

Consider improvements to Exit 17 (State St/Salina St/Brighton Ave), including the Colvin St northbound on-ramp, for improved east side/University Hill access

Consider a new I-481 interchange for University Hill Access

OTHER REGION-WIDE STRATEGIES:

- Review improvements to transit system for improved mobility in downtown core and improved peak hour commuter ridership (see Station 5)
- Review bicycle and pedestrian improvements
- Ensure Americans with Disabilities Act (ADA) guidelines are followed