The I-81 Challenge

May 2011 Public Workshops Summary Report

Appendix C – Information boards

Prepared for: Syracuse Metropolitan Transportation Council

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Appendix C: Workshop information boards
What is *The I-81 Challenge*?

*The I-81 Challenge* is the official decision-making process to determine the future of I-81 through the Syracuse region.

**WHO IS INVOLVED?**

- The New York State Department of Transportation (NYSDOT)
- The Syracuse Metropolitan Transportation Council (SMTC)
- Agencies, organizations, and individuals from across the community who have a stake in I-81
Why is *The I-81 Challenge* needed?

**AGING INFRASTRUCTURE**
Sections of I-81—particularly sections of the viaduct in downtown Syracuse—are nearing the end of their lifespan.

**LOOKING FORWARD**
Over the coming decades, portions of the highway will need to be replaced, reconstructed, removed, or otherwise changed.
What will *The I-81 Challenge* accomplish?

<table>
<thead>
<tr>
<th>UNDERSTANDING</th>
<th>A clear understanding of our collective transportation needs and problems.</th>
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</thead>
<tbody>
<tr>
<td>GOALS</td>
<td>A set of goals that identify what we want to accomplish with I-81 and the measures by which we will know we have succeeded.</td>
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<tr>
<td>OPTIONS</td>
<td>A short list of viable future options that will go through a formal environmental review.</td>
</tr>
<tr>
<td>SOLUTION(S)</td>
<td>A project or projects that can be implemented.</td>
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</table>
How will The I-81 Challenge lead to a decision?

**PUBLIC + TECHNICAL INPUT**
Generate a wide range of options for the future of I-81 as well as a set of criteria to narrow down options based on broad public participation and technical analysis.

**VIABLE OPTIONS**
Narrow the options through more public involvement and technical analysis.

**ENVIRONMENTAL IMPACT STATEMENT**
Establish a set of viable options for formal environmental review required by federal and New York State law.

**REFINING ALTERNATIVES**
Further refine options through a formal environmental review process—ultimately leading to a decision and a project or projects that can be implemented.
Our early transportation system

Before canals were built, rough trails, roads and natural waterways were the only ways to travel.

The Erie Canal, completed in 1825, ran through Syracuse and spurred economic development in the region.

By the late 1830s, steam powered railroads had come to Syracuse.

Today’s transportation system was influenced by the location of the canals and railways of the past.

Commercial production of automobiles began in the early 1900s.
The report on roads, canals, harbors and rivers

- Presented to Congress in 1808 by Secretary of the Treasury Albert Gallatin
- Detailed many transportation infrastructure projects, including a canal across New York State - that would eventually become the Erie Canal

The Erie Canal

- Created a major economic corridor
- Sparked canal building across the nation
- Established New York as a leader in transportation development

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Railroads began to operate in the 1830s and soon became the preferred method for shipping.

Rail was also important for moving people. Up to 1941, Syracuse operated a dense network of streetcars and interurban trains connecting neighborhoods and other towns with downtown.
Automobiles entered the scene in the early 1900s. The Franklin Automobile Company, based in Syracuse, was one of the first car manufacturers. In its 30 years of existence it sold about 150,000 vehicles.*

By the early 1900s, Syracuse streets began to experience congestion associated with the railroads, streetcars and newly introduced automobiles operating on city streets.

In order to improve road conditions, the Delaware & Lackawana Railroad began operating on an elevated structure and the New York Central Railroad was shifted north and elevated along the alignment of today’s I-690.

* Source: Smithsonian National Museum of American History “America on the Move”
Interstate highway planning

1944 FEDERAL HIGHWAY ACT
- Began a new era of highway building
- Provided significant federal funding for new highway construction across the nation

THE 1955 YELLOW BOOK
- Mapped out what became the interstate highway system
- Located interstate highways through and near major urban centers

FEDERAL-AID HIGHWAY ACT OF 1956
- Authorized $25 billion dollars to construct 41,000 miles of the original interstate system
- Provided federal funds for majority of construction costs
Highway routing

While the federal government laid out general locations of highways, it was up to state and local officials to determine the exact alignment of the new highways.

Key factors that influenced the routes of our current highways:

WHAT IS URBAN RENEWAL?

Urban renewal refers to efforts to revitalize what were considered blighted city areas during the 1940s-1970s.

Urban renewal usually included:
- Relocation of businesses
- Demolition of buildings
- Displacement of people

I-81 was aligned along Almond Street. This alignment allowed for an elevated structure and coincided with the location of the Near East Side Urban Renewal Area.
I-81 and the 15th Ward

I-81 is often cited as the primary force in the loss of the 15th Ward neighborhood. However, it is important to understand that I-81 is only part of the story.

Syracuse, like many cities, experienced controversy around the locations of the highways built during this era. In Syracuse, the controversy involved a variety of concerns including environmental protection, historical and neighborhood preservation, race, and class.

In 1963, Syracuse Mayor William F. Walsh began a major urban renewal effort in the 15th Ward that displaced 1,300 residents and would ultimately make way for a museum, a new police headquarters, a state hospital, a middle-income housing complex and the I-81 viaduct.*

* Source: The Post-Standard, syracusethenandnow.org
The construction of I-81

I-81 was completed in 3 segments, over a ten-year period from 1959-1969

- The first segment, completed in 1959, stretched from Brewerton to the northern end of downtown Syracuse
- The southern segment north to Adams Street opened in 1962
- The last link, which included the viaduct, opened in 1969

1964 - Townsend Street

1966

1967

1965

Cars on a new section of I-81
How does I-81 impact you?

This is some of what we’ve heard so far:

I-81 has facilitated economic development throughout the region

I-81 is perceived as a barrier that divides the city of Syracuse

The highway increases convenience and mobility in our region

Because of I-81, Syracuse is a “20 Minute City”

I-81 played a part in the destruction of the 15th Ward neighborhood

I-81 encourages the use of cars over alternative modes of transportation
Share your stories about I-81

Write and post your responses on the wall

- How has I-81 had an impact on your life?
- What is your personal history with I-81?
- What do you remember about I-81’s construction?
The Evolution of Transportation in the Syracuse Region

This video is about 17 minutes long

The video will be shown on the hour and at :20 and :40 past each hour
Our transportation system today
The I-81 Physical Conditions Analysis is one piece of The I-81 Challenge. It includes:

- A technical analysis of the highway’s existing physical and operational conditions
- A review of the existing land use, economic, and environmental context

**WHY IS THERE MORE THAN ONE STUDY AREA?**

- The primary study area provides a narrow focus for the analysis of physical infrastructure (e.g. roadways, bridges, ramps) of I-81 and adjacent sections of I-690.
- A broad view will help us understand I-81’s role and function in our region. We need to consider land use, economic development, and environmental issues within this broader regional context.
The I-81 Traffic Challenge

Since 2003, traffic volumes on I-81 have grown at what annual rate?

A: Little to no growth
B: Between 2 and 5%
C: Between 5 and 10%
D: Greater than 10%

Answer: A
Available data indicates that there has been little to no growth in traffic volumes since 2003

During peak commute hours, trucks and buses make up what percent of total traffic on I-81?

A: Less than 5%
B: Between 5 and 10%
C: Between 10 and 25%
D: More than 25%

Answer: B
Trucks and buses make up 8.8% of total traffic during the morning rush hour and 7.5% during the evening rush hour
To determine how busy I-81 is, we calculate traffic volumes using vehicle counting stations.

**ANNUAL AVERAGE DAILY TRAFFIC**

**VIADUCT AREA TRAFFIC VOLUMES**

**I-81 YEARLY TRAFFIC—2-WAY AADT**

**DID YOU KNOW?**
- Between 1974 and 2003 traffic increased at an annual rate of 3.3 - 5.4%.
- Since 2003 there has been little if any growth in traffic volumes.
- July and August have the highest traffic volumes, while January and February have the lowest.
- Heavy vehicles (trucks with at least 4 axles and buses) account for 9% of total traffic during the morning rush hour and 8% during the evening rush hour.

**WHAT IS AADT?**
- Average Annual Daily Traffic—referred to commonly as AADT—is calculated by measuring the total number of vehicles passing a point or segment of a highway, in both directions, for one year, divided by the number of days in the year.

Note: No data available between 1985 and 1990 at the south station.
Data was collected at continuous count stations located approximately 15 miles north and approximately 10 miles south of the corridor.
The I-81 Bridge Challenge

What percent of the 76 bridges in the I-81 corridor are not designed to current bridge standards or are in need of rehabilitation?

A: Under 10%
B: Between 10 and 30%
C: Between 31 and 60%
D: More than 60%

Answer: D
Forty-six of these bridges have lane widths, load carrying capacity, clearance, or approach-roadway alignments that do not meet current bridge standards. Seven bridges are in need of rehabilitation or replacement.

In 40 years, what percent of all bridges in the primary study area will have exceeded their expected service life?

A: Under 25%
B: Between 25 and 50%
C: Between 51 and 75%
D: More than 75%

Answer: D
By 2050, over 80% of the bridges in the study corridor will have met or exceeded their expected service life.
NYSDOT conducts periodic inspections to determine pavement and bridge conditions

**HIGHWAYS**
A surface rating survey completed in 2008 found:
- The majority of the pavement in the primary study area to be in “good” condition
- However, given their age, the majority of the highways will need either a major rehabilitation or reconstruction by 2040

**BRIDGES**
Recent inspections of the 76 bridges in the primary study area showed that:
- 46 bridges classified as functionally obsolete do not meet current bridge design standards
  - 18 of these bridges are located in the viaduct section of I-81
- 7 bridges classified as structurally deficient are in need of major rehabilitation or replacement
  - 1 of these bridges is located in the viaduct section of I-81
Assuming only routine maintenance, most of these functionally obsolete and structurally deficient bridges will be in a state of serious deterioration by 2020

**BRIDGE CONDITIONS**

Key:
- Red: Structurally deficient
- Yellow: Functionally obsolete
The I-81 Safety and Congestion Challenge

Along the I-81 viaduct section in the northbound direction, how does the vehicle accident rate compare with the statewide average for similar expressways?

A: Less than the statewide average
B: The same as the statewide average
C: Twice the statewide average
D: More than 3 times the statewide average

During the morning and evening peak hours, what is the average speed in either direction along the I-81 viaduct section?

A: < 15 mph
B: 15 - 25 mph
C: 26 - 40 mph
D: > 40 mph

Answer: D
The accident rate on the northbound Viaduct section is more than three times the statewide average.

Answer: B
Average speeds on the viaduct section of I-81 range between 18 and 23 mph during both the AM and PM rush hours.
Design, congestion & safety deficiencies

**SAFETY, CONGESTION, & DESIGN DEFICIENCIES**

**DESIGN**
When I-81 was constructed in the 1950s and 1960s, highway design standards were different from today. Significant portions of I-81 do not meet today’s design standards. These areas have:
- poor sight distances
- sharp curves
- limited ramp spacing

**CONGESTION**
Highways within the Syracuse region generally have sufficient capacity for current traffic volumes. Certain areas along I-690 and I-81 in the downtown area experience congestion and slow travel speeds during peak periods. Any disruption due to maintenance or accidents can cause severe traffic congestion.

**SAFETY**
Highways in the primary study area have a relatively high rate of accidents when compared to statewide averages.

<table>
<thead>
<tr>
<th>Section of Highway</th>
<th>Accident rate compared to statewide average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northbound viaduct</td>
<td>300%</td>
</tr>
<tr>
<td>I-81 through I-690 interchange</td>
<td>500%</td>
</tr>
<tr>
<td>81 north of I-690 (Carousel Center area)</td>
<td>200%</td>
</tr>
</tbody>
</table>

**WHAT IS LEVEL OF SERVICE?**
Level of Service (LOS) is a way of measuring how well traffic moves along a highway or through an interchange. Letter grades (A-F) are used to designate LOS. LOS A, B or C means there is sufficient highway capacity for the current traffic. Traffic flows well. LOS D, E or F means that traffic volume is approaching or exceeding capacity. Traffic slows down and delays occur.

**LOOK AT THE MAP**
Do you see any correlation between design deficiencies, accident rates, and congestion? Highway sections not meeting current design standards generally coincide with areas of increased congestion and high accident rates.

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**Onondaga**
- Liverpool
- De Witt
- Cicero
- Geddes

**Onondaga Lake**
- Solvay
- East Syracuse
- Syracuse

**Salina**

**Level of Service below C**
- Non-standard or non-conforming design features

**Above average accident rates**

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**LOS B**
- East Syracuse

**LOS D**
- Cicero

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**Onondaga Nation Territory**

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**Section of Highway**
- Northbound viaduct
- I-81 through I-690 interchange
- 81 north of I-690 (Carousel Center area)
On a typical day, 44,000 total vehicles travel on I-81 south of the southern I-481 interchange. What percent of this traffic, on average, passes through the Syracuse area on I-81 alone without stopping?

A: Less than 10%
B: Between 11 and 20%
C: Between 21 and 30%
D: More than 30%

Answer: A

About 6% (2,760 vehicles) of the 44,000 total vehicles pass through without stopping.
Regional interstate traffic on I-81

In April 2010, an analysis was done to understand how much I-81 traffic is passing through our region without stopping along 3 possible routes: I-81, I-81 to I-90 (Thruway) via I-690, and I-481.

The data were collected on a typical weekday using Automated License Plate Reader cameras.

The analysis revealed:
- 44,000 total vehicles per day on I-81 south of the southern I-481 interchange
- Of these 44,000 vehicles, 12% (5,400 vehicles per day) are currently traveling through the region without stopping.

The results suggest that diverting regional interstate through traffic to I-481 or other alternative interstate routes will have little impact on I-81 through Syracuse.

Additional traffic data is likely to be collected to assist in the assessment of different options for I-81.
Planning for more than just cars

Networks of local streets, paths and trails provide space for pedestrians and bicyclists

Centro provides transit service for those without or who choose not to use a car

Some of the busiest pedestrian areas are the Upstate Medical Center, Syracuse University, and the commercial, residential, and office area on East Genesee Street

Centro operates almost 100 bus routes in Syracuse and Onondaga County

Our airport serves long distance travelers and allows for the shipment of goods

Our rail system brings passengers and freight into and out of our region

Hancock International Airport

Syracuse Regional Transportation Center
Transportation modeling

You’ve probably seen or heard about models throughout your life – whether physical models such as a train or a building or more abstract models like those used to give us weather forecasts. What they have in common is that they represent real world objects or processes.

**MODELS HELP US:**
- Know where, when and how people are traveling
- Understand what and where our transportation needs are now and in the future
- Evaluate different strategies and investments to meet those needs
- Determine the impacts of strategies and investments on system performance, air quality, travel time, and land use, just to name a few

**HOW DO THEY KNOW?**
Ever heard that new transit service will take $X$ number of cars off the road? Or that building a new road will cut travel time by $X$ minutes? Ever wondered how planners know that?

*It all comes from a model...*
The Regional Travel Demand Model is a computer software package that replicates our regional transportation system.

SMTC’s model is a “Four Step Model” that takes inputs such as population and economic forecasts, the geographic dispersion of people and jobs throughout the region, and a description of the transportation system – the roads and transit system.

**Mode Split**
- How many people will drive, take the bus, walk, bike, etc.?

**Network Assignment**
- What routes will be used for the trips?

**Trip Generation**
- How many trips will be made?

**Trip Distribution**
- Where will the trips come from and go to?

**Trip Origin / Trip Destination**
- Where will the trips come from and go to?

**Key:**
- Trip Origin
- Trip Destination
- Road/Highway
- Automobile Trip
- Transit Trip
- Pedestrian Trip
- Bicycle Trip

The model outputs, to be used in impact analyses to evaluate transportation system alternatives, include the amount of travel, the performance of the transportation system, and mode usage.
The model can accurately replicate the existing conditions, and it can then be used to predict future travel patterns and demands based on changes in the transportation system, changes in the land use, and changing demographics.

**PROJECTED GROWTH IN TRAFFIC VOLUMES (2007 TO 2040)**

*Assumes no significant changes to I-81*
Modeling the present

The first step in using the Regional Travel Demand Model for The I-81 Challenge is to simulate the current “real world”

I-81 NORTHBOUND TRAFFIC FLOWS: TRAFFIC COUNTS AND MODELED VOLUMES

WHY THE DIFFERENCE?
Modeling peoples’ travel behavior is a difficult undertaking since behavior is variable and complex. Travel models are developed from and compared to a wide variety of data sources, so travel models can’t be expected to match any one source exactly.

MODEL ARTERIAL SPEEDS COMPARED TO OBSERVED ARTERIAL SPEEDS

DAILY WORK TRIPS BY DISTRICT GOING TO SYRACUSE: CENSUS DATA VS. MODEL OUTPUT
What can we do with microsimulation models?

- Understand current operations on the highway: “How, why and where does congestion occur?”

- Evaluate the operational impacts of proposed changes: “What would happen if we changed X?”
How we got here

Transportation often defined towns

Streetcars turned towns to cities

Mass transit led to large cities

And then...our love affair with the car

GROWTH OF CITIES AND TOWNS

- The American city emerged from changes in the economy and means of travel
- Transportation allows access to development opportunities
- Transportation defined the location – and form - of our cities and towns
- Transportation and land use were in balance

Unprecedented growth

And the Eisenhower Interstate System led to...

Cities began to see the effects
The transportation-land use cycle

The cycle results in:
- Unanticipated Sprawl
- Decentralization
- Auto Dependency
- Overabundance of Parking
- Loss of green and farmland

Recent changes in perspective:
- Re-balancing community and mobility needs
- Changing settlement patterns and travel modes
- Focusing on walkable, urban places
Regional trends

**Changing Demographics**
- Steady population
- Fewer persons per household
- More households
- More vehicles per household
- Fewer transit and walking trips

It all adds up to more cars!

**Expanding Urbanized Area**
- Urban land increased 92% since 1970
- 50 square miles added in the 90s alone
- City out-migration accelerated
- Rural towns began to suburbanize

**Impact on Transportation and Land Use**
- Regionally, vehicle miles traveled are rising
- Average commute time has risen to 20 minutes
- Increased trend toward suburban growth
- Average rural lot size less than 8 units per acre
- Home size up 40%

Charts and data taken from: Onondaga County Sustainable Development Plan Presentation, prepared by GSCM; Transportation and Land Use Presentation prepared by SMS.
### Regional challenges and opportunities

#### Challenges
- A reduction in farmland
- An inability to support mass transit
- Demand for facilities and public services in new areas
- Increased driving and a larger carbon footprint
- Abandoned neighborhoods and buildings
- Concentrations of poverty
- Economic competitiveness
- Spreading our tax dollars over a large area

#### Opportunities
- Focus on climate change and reducing pollution
- Rising fuel cost = more interest in other modes/fuel efficiency
- Connections between land use and public health
- Government modernization and efficiency
- Smart growth
- Protection of natural resources

### Model of New Development
Please tell us how future development in Onondaga County should be arranged.

### Location of New Development
Please tell us where most future development in Onondaga County should be located.

### Solutions to Congestion
In your opinion, which of the following do you think is the best long-term solution to reducing auto congestion in Onondaga County?
Smart growth is well-planned development that protects open space and farmland, revitalizes communities, keeps housing affordable and provides more transportation choices.

**What smart growth “is” and “is not”:**

- More transportation choices and less traffic ➤ **Not** against cars and roads
- Vibrant cities, suburbs, and towns ➤ **Not** anti-suburban
- Wider variety of housing choices ➤ **Not** about telling people where or how to live
- Well-planned growth that improves quality of life ➤ **Not** against growth

**SMART GROWTH BENEFITS:**

- Reduce Vehicle Miles Traveled (VMT) up to 30%
- Reduce Green House Gas (GHG) up to 10%
- Modest density shift and no new technology
- Broadened mobility choices
- Renewable energy sources
- New technologies
- Environmental restoration

**Regional residents say they...**

- Strongly support Smart Growth concepts
- Support preservation of and investments in existing resources
- Support planning for future growth
- Strongly tend towards single occupant vehicles
- Are satisfied with overall transportation system
- Are dissatisfied with conditions and non-auto options
- Are interested in exploring transportation options

**RESIDENTS IN SMART GROWTH COMMUNITIES:**

- Make 1.6 fewer auto trips per day
- Travel almost 15 fewer miles per day
- Make 1.8 fewer trips outside the neighborhood each day

Source: Community Planning and Transportation Public Survey, Nov. 2020
Neighborhood design

**NEIGHBORHOOD DESIGN MATTERS**

In traditional development patterns, uses are mixed within walkable distances. This denser type of development:

- Preserves open space
- Allows for a variety of housing types
- Minimizes infrastructure costs
- Allows short trips to be made without a car

**DEVELOPING IN A TRADITIONAL PATTERN**

Here we see an example of a “crossroads” where two major roads intersect in a rural community. This community has already developed a public green and some surrounding mixed-use buildings.

The next step is to develop additional mixed-use space as well as traditional single-family housing. In a village, the density of development increases from the edge to the center – all within a walkable distance.

This type of development can even incorporate large-scale retail, by integrating the big-box site at the edge of the village – accessible by both car and by the local network of sidewalks.
Population & employment

**Population**
- The overall City of Syracuse and Onondaga County population has declined steadily since 1990
- Between 1980 and 2000, upstate New York lost roughly 20% of people aged 20 to 34
- The largest increase in population for City of Syracuse is among 55 to 64 year olds, up 30.8% since 2000, reflecting the large baby boom population entering this age bracket
- 30% of City of Syracuse’s population is under 19 years old

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<tbody>
<tr>
<td>United States</td>
<td>248,709,873</td>
<td>281,421,906</td>
<td>304,374,846</td>
<td>22.4%</td>
</tr>
<tr>
<td>New York State</td>
<td>17,990,455</td>
<td>18,976,457</td>
<td>19,541,453</td>
<td>8.6%</td>
</tr>
<tr>
<td>Onondaga County</td>
<td>468,973</td>
<td>458,336</td>
<td>452,633</td>
<td>-3.5%</td>
</tr>
<tr>
<td>City of Syracuse</td>
<td>163,860</td>
<td>147,306</td>
<td>138,068</td>
<td>-15.7%</td>
</tr>
</tbody>
</table>

**Percent of Employment by Industry**
- Education and health sector represents 43.2% of total employment in Syracuse, or 44,590 employees
- Syracuse University and the State University of New York (SUNY) Upstate Medical University, employ more than 12,300 people

**Total Employees**
- Total employment in the City of Syracuse has decreased 9.6% between 2002 and 2008, from 114,134 to 103,227
- More than 94% of Onondaga County’s working residents also work in the county
A closer look at population

POPULATION DENSITY BY TOWN

MEDIAN HOUSEHOLD INCOME BY TOWN
Onondaga County is a regional employment hub, and many of Onondaga County's jobs are located in the City of Syracuse.

In 2000, the highest percentages of commuters using alternative modes (i.e., biking, walking, riding a motorcycle, or taking transit) were found in the City of Syracuse.
Cultural resources

ARCHAEOLOGICAL RESOURCES
In total, 54 archaeological sites have been reported within the I-81 study area, including prehistoric (Native American), and historic period sites. The I-81 viaduct is located in what is considered an archaeological sensitive area, and may require further investigation to identify additional archeological resources.

HISTORIC RESOURCES IN THE I-81 CORRIDOR

HISTORIC BUILDINGS, STRUCTURES, AND DISTRICTS
The City of Syracuse is home to several historic buildings, structures, and districts that reflect elements of major architectural movements spanning a period of over 100 years. Many of these significant resources were constructed during the heyday of the Erie Canal, and they reflect the city’s important role as a center of commerce and capital during the mid-to-late 1800s and early 1900s.

At a local level, the City of Syracuse has designated several Local Preservation Districts and Protected Sites (individually listed properties) that include historic buildings and structures.

NATIONAL AND STATE HERITAGE AREAS
The Erie Canalway National Heritage area encompasses the I-81 study area and includes all 234 municipalities adjoining the 524 miles of navigable waterway that comprise the New York State Canal System. The state-designated Syracuse Heritage Area focuses on the original trade and banking centers in present-day downtown Syracuse and highlights the unique historical and cultural features of downtown Syracuse.
Water resources

SURFACE WATER IN THE I-81 CORRIDOR

Legend
- SEE Study Area
- Municipal Boundary
- FEMA Flood Plain
- NWI Wetlands
- Freshwater Wetlands
- Protected Stream
- C-Stream
- Non-Primary Aquifer
- Primary Aquifer

Sources:
- NYSDEC Wetlands: NYSDEC, New York State Regulatory Freshwater Wetlands For Onondaga County (2007).
- NYSDEC Classified Waterbodies and Streams: NYS Department of Environmental Conservation, Division of Water, Bureau of Water Assessment and Management, Waterbody Inventory and Priority Waterbodies List (2007).

GROUNDWATER IN THE I-81 CORRIDOR

Legend
- SEE Study Area
- Municipal Boundary
- Primary Aquifer
- Non-Primary Aquifer

Sources:

Miles
- 00
- 0.51
- 1.01
- 1.51
- 2.01
- 2.51
- 3.01
- 3.51
- 4.01
- 4.51
- 5.01
- 5.51
- 6.01
- 6.51
- 7.01
- 7.51
- 8.01
- 8.51
- 9.01

Surface Water/Flood Plain

Interstate 81 Corridor Assessment

North Syracuse
- Onondaga
- Clay
- Cicero
- Dewitt
- East Syracuse
- City of Syracuse
- Salina
- Clay
- Onondaga Lake
- South Salina St
- Onondaga Pkwy
- Almond St
- Court St
- Thompson Rd
- Syracuse
- Cicero
- Clay
- Onondaga
- Lake

C-Stream
Noise & air quality
Learning from other urban highway projects

Cities across the nation have faced similar challenges:

- Syracuse, NY
- Milwaukee, WI
- Providence, RI
- Cincinnati, OH
- San Francisco, CA

These projects’ outcomes can offer insights for The I-81 Challenge
Reconstruct the highway

THE MARQUETTE INTERCHANGE: I-794/I-43/I-94
MILWAUKEE, WI

Lessons learned
- Project benefited from strong public outreach effort that included neighborhood committees
- Visual impacts can be mitigated through aesthetically pleasing design – clean lines, narrow piers, bright colors and decorative features

SIMILARITIES TO I-81
- Designated as an interstate highway
- Carried through and local traffic
- Did not meet design standards
- Included an interchange with other interstate highways
- Located in a similar climate

DIFFERENCES FROM I-81
- Project focused primarily on an interchange
- Major alterations of highway network not considered

SO WHAT HAPPENED?
- Complete reconstruction of Marquette Interchange in downtown Milwaukee
- Project emphasized community involvement to develop a community-sensitive solution
- The new design is considered more attractive and traffic flow has improved
Bury the highway

CENTRAL ARTERY - THE BIG DIG: I-93
BOSTON, MA

Lessons learned
- Cost of burying a highway were significant - final costs of the project were 5 times the original estimate
- Payoffs of burying a highway were also great:
  - Improved connectivity between neighborhoods
  - Improved traffic circulation
  - Enhanced urban environment and stimulated economic development

SIMILARITIES TO I-81
- Designated as an interstate highway
- Carried through and local traffic
- Perceived as a barrier between neighborhoods

DIFFERENCES FROM I-81
- Carried twice the traffic volumes
- Located in an older and more densely populated city with greater development pressures
- Separated sections of the city from the waterfront

SO WHAT HAPPENED?
- I-93 was torn down and an expanded interstate was relocated under the same footprint
- The elevated section of the highway was replaced by public space, improving connectivity to the waterfront and North End neighborhood
- The project also focused on upgrading and expanding public transit
Depress the highway

FORT WASHINGTON WAY: I-71
CINCINNATI, OH

Lessons learned
- Project benefited from effective stakeholder involvement
- Project benefited from extensive planning - 25 alternatives were explored
- Integration of economic development and improved riverfront access contributed to broad support

Similarities to I-81
- Designated as an interstate highway
- Carried through and local traffic
- Carried comparable traffic volume
- Perceived as a barrier between neighborhoods

Differences from I-81
- Existed as a depressed rather than elevated highway
- Separated downtown from the riverfront

So what happened?
- The project included highway widening and the elimination of several exits and entrances to simplify and improve traffic flow
- The total right-of-way width was substantially reduced
- Reclaimed space was developed as a waterfront park and professional sports venues
- Streets crossing the highway were redesigned to include broad sidewalks and landscaping
THE "I-WAY": I-195
PROVIDENCE, RI

Lessons learned
- Relocation allowed for existing road to remain operational, minimizing traffic disruptions
- Project benefited from extensive public outreach – media, websites and podcasts
- Focus on urban design, riverfront connections, and redevelopment opportunities fostered public support

SIMILARITIES TO I-81
- Designated as an interstate highway
- Carried through and local traffic
- Included an interchange with another interstate highway

DIFFERENCES FROM I-81
- Carried higher traffic volumes
- Did not include regional alternatives or bypasses
- Separated sections of city from a waterfront area

SO WHAT HAPPENED?
- The elevated I-195 highway was relocated from downtown Providence to a nearby industrial corridor
- The project opened up valuable redevelopment areas and allowed the city to reconnect parts of the downtown street grid
Remove the highway

CENTRAL FREEWAY - OCTAVIA BOULEVARD
SAN FRANCISCO, CA

SIMILARITIES TO I-81
- Carried comparable traffic volumes
- Existed as an elevated freeway in an urban area

DIFFERENCES FROM I-81
- Not designated as an interstate highway
- Carried no through traffic (spur to downtown)
- Previously closed due to earthquake

Lessons learned
- Surrounding street and transit network was able to absorb significant traffic
- A boulevard can:
  - Carry high traffic volumes
  - Spur development
  - Provide a pedestrian and bicycle-friendly environment

SO WHAT HAPPENED?
- In 1989, an earthquake damaged the freeway forcing it to close temporarily
- In 1996, the freeway was repaired and reopened
- Ultimately, a proposal to replace the freeway with a boulevard gained support, and it was redesigned as Octavia Boulevard
- At its opening, the new boulevard carried about half the volume of the freeway it replaced
What do you think?

I like this because...

I don’t like this because...
Some of the suggestions we have heard already

The case studies you have just explored offer different options for I-81, but they are not the only ones

- Reroute traffic onto I-481 and use the viaduct as an urban park
- Build a tunnel and put I-81 underground
- Repair the viaduct
- Replace the viaduct to modern standards and make it more attractive
- Upgrade the transit system
- Replace the viaduct with an urban boulevard and reroute traffic to I-481
What are your ideas?

Think BIG

Think B R O A D

Think outside the box!
How can we evaluate possibilities for the future of I-81?

HELP US ANSWER THIS QUESTION!
Once we know what we want the ultimate I-81 project or projects to accomplish, we can begin to look at all of the different possibilities to see which ones will achieve our common goals.

IDEAS
Many different ideas will be generated about future options for I-81.

GOALS
The list of goals will be used to reduce possible ideas to a smaller list of potentially viable options.

SOLUTIONS
A project or projects that may be implemented will emerge from the list of potentially viable options.
What should the solution for I-81 accomplish?

The first step in identifying what should ultimately happen with I-81 is determining what is important for us as a region and the role we want I-81 to play in our future.

In the many conversations we have had with communities, elected officials, and other stakeholders, certain key goals have emerged.

The study goals that we have heard so far include:

- Improve public safety
- Enhance the transportation network
- Enhance region-wide mobility
- Maintain or improve economic opportunities
- Support community quality of life
- Preserve or enhance environmental health
- Exercise fiscal responsibility
- Share the burdens and benefits of any solution equitably
What do these goals really mean?

Here are some initial thoughts, but we need your input, too!

**IMPROVE PUBLIC SAFETY**
- Reduce accident occurrences to at or below the statewide average for similar facilities
- Improve the safety of alternative modes of transportation (pedestrian, bicycle, transit)

**SUPPORT COMMUNITY QUALITY OF LIFE**
- Encourage sustainable land use patterns within the city and county
- Enhance local connectivity (such as linking University Hill with downtown)
- Encourage smart growth: sustainable regional land use patterns that minimize suburban sprawl which increases demand for infrastructure and services
- Improve the visual built environment through context sensitive design that contributes to roadside/street ambiance, community character and public safety
- Promote other planning and development visions and initiatives (county, city, and region)

**ENHANCE THE TRANSPORTATION NETWORK**
- Eliminate structural deficiencies
- Improve existing geometric design
- Identify alternative mode improvement in the vicinity of I-81

**PRESERVE OR ENHANCE ENVIRONMENTAL HEALTH**
- Support local, regional and state environmental initiatives
- Maintain or improve air quality (overall emissions and odor)
- Minimize air quality and noise impacts on adjacent neighbors
- Minimize impacts on designated community landmarks and historic resources
- Minimize storm water impacts and improve water quality

**ENHANCE REGION-WIDE MOBILITY**
- Improve peak period mobility and reduce delay on the highway system (primary, secondary and city streets)
- Preserve regional mobility by maintaining travel times
- Improve access to key destinations (i.e. the airport, hospitals, and downtown businesses)
- Improve connectivity of alternative modes of transportation (pedestrian, bicycle, transit)

**EXERCISE FISCAL RESPONSIBILITY**
- Minimize capital costs by ensuring that transportation system investments are cost effective
- Minimize long-term operation and maintenance costs

**SHARE THE BURDENS AND BENEFITS OF ANY SOLUTION EQUitably**
- Share the burdens of impacts during construction and long-term across stakeholders (e.g. suburbs, adjacent neighborhoods, low-income communities, Onondaga Nation)
- Share the benefits across stakeholders (e.g. suburbs, adjacent neighborhoods, low-income communities, Onondaga Nation)

**MAINTAIN OR IMPROVE ECONOMIC OPPORTUNITIES**
- Maintain or improve economic opportunities by addressing multi-modal access
- Improve transportation system efficiency, reliability and reduce travel costs
What do these goals mean to you?

You’ve just read some ideas of what these goals mean. Do you have anything to add?

Answer these questions for as many goals as you would like:

- Do you have other ideas about what the goals mean?
- What specific measurements could we use to know we’ve met the goal?

<table>
<thead>
<tr>
<th>GOALS WE’VE HEARD</th>
<th>YOUR IDEAS</th>
</tr>
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<tbody>
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Help us determine the “right” thing to do

How important are these study goals to you?

- Place your green dots next to the goals that are most important to you:

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</table>
Are any goals missing? Add them!

Are there any study goals you think are missing?

Write your ideas on a post-it note and add them to this board.
Stay a part of
The I-81 Challenge

YOUR ROLE
The I-81 Challenge is about and for you:

- Tell others what you have learned
- Let them know how to take The I-81 Challenge
- And most of all stay involved!

WHAT’S NEXT?

- Additional public meetings
- Additional questionnaires
- Increased web and social media presence
- Additional newsletters
Public participation in **The 1-81 Challenge**

**PUBLIC INVOLVEMENT**

- Newsletters
- Fact sheets
- Educational videos
- Website
- Blog
- Facebook page
- Questionnaires
- Focus groups
- Project committees
- Public meetings

Find these resources and more information at:

www.thei81challenge.org
www.thei81challengeblog.org

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**Welcome (Back) to The 1-81 Challenge!**

You have probably read or heard that portions of I-81, particularly the elevated sections of the highway in Downtown Syracuse, are nearing the end of their design life. The Corridor Study, known as the I-81 Challenge, will advance and analyze in further detail, and a formal environmental review process will begin. That process will lead to a decision and to a project or projects that we can implement. It is time to make a decision for the I-81 Challenge, and we need the public to stay involved every step of the way. Visit www.theI81challenge.org to find out how you can stay informed of project updates.

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**Pieces of The I-81 Challenge**

The I-81 Challenge is made up of three interrelated efforts:

- **Public Participation Program**, a public outreach effort, will provide opportunities to learn about I-81 and play a role in planning for its future.
- **Corridor Study**, being led by NYSDOT, includes a review of the highway's existing and future needs, a wide range of options for the future of I-81 and a set of goals and objectives will be generated. This broad range of options will be narrowed down through the public involvement and continued public involvement. The public options will ultimately be refined and analyzed in further detail, and a formal environmental review process will begin. That process will lead to a decision, and to a project or projects that can be implemented. It is time to make a decision for the future, and we need the public to stay involved every step of the way. Visit www.theI81challenge.org to find out how you can stay informed of project updates.
- **Travel Demand Modeling** effort is a technical project in which the SMTC is using computer simulations to test new potential future options for I-81 affect the transportation network.
Tell us what you think

Take a minute to fill out a meeting evaluation

What did you think of your experience today?

What did you learn?

What could we do better next time?

Is there anything else you want us to know?
The I-81 Challenge questionnaire

Take 10 minutes to complete our questionnaire

How does I-81 impact your life?
How do you use I-81?
What are your transportation needs?