

the City of
Rochester's

**INNER
LOOP**

IMPROVEMENT STUDY

September 2001

Prepared For:

***City of Rochester
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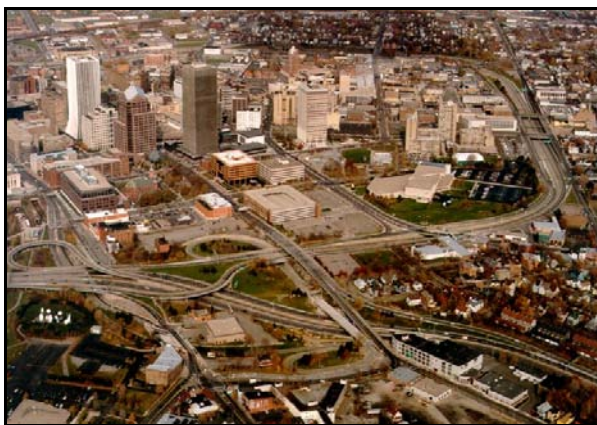


I. INTRODUCTION

The Inner Loop Improvement Study is being prepared by the City of Rochester to assess the existing transportation facility located on the east side of the City's Central Business District. The study's primary focus was to develop alternatives for reconstructing the transportation infrastructure in this area, with a facility of appropriate scale, size and configuration that better meets the community's needs for access, neighborhood cohesion and land use.

Why the Inner Loop

The City of Rochester and the New York State Department of Transportation developed plans in the late 1940's of a network of boulevards and expressways designed to reduce traffic congestion on the local city streets and improve access around the city. Initially, the plans called for the Inner Loop to be at-grade around the city, but as the various segments of the Inner Loop were developed and designed, this initial concept changed to a configuration consisting of a combination of grade-separated and at-grade segments.



*City of Rochester's Central Business District
Year 2000*

The Construction Years

The construction of the Inner Loop required the demolition of various buildings and homes within the surrounding communities and severed various local streets that connected to the downtown area. This facility, being primarily a grade-separated highway, resulted in the separation of the Central Business District from the surrounding residential communities and therefore impacted the cohesion that previously existed. In effect, the Inner Loop today is viewed as a barrier that does not allow easy pedestrian access between the Central Business District and the surrounding communities and thus separates the Central Business District from adjacent neighborhoods and business areas.

Initially the Inner Loop was targeted for completion in 1955, but with various delays and changes the last segment of the Inner Loop was not completed until 1965, 10 years after the original scheduled completion date. This system was intended to provide easy access and mobility to the Central Business District, which was at that time the location of the highest population density and center of regional commerce.

During the development of the Inner Loop, the United States was going through a major renaissance with the evolution of the Eisenhower Interstate System. This renaissance would ultimately improve mobility throughout the United States with an interconnecting expressway network. In Monroe County, the Federal Interstate Highway Act would lead to the construction of I-90 (New York State Thruway), I-390, I-490, Route 104 expressway and I-590 in Monroe County, which in turn would significantly affect the mobility of



people and goods surrounding the City of Rochester. Specifically, I-490 in conjunction with the Inner Loop would provide an east/west route through the city allowing easy access to the surrounding towns and villages. This easy access would result in a major shift in the population density and growth within the region to the development of the surrounding suburbs. These changes in the expressway network and the local demographics have led to a change of functional use and need of the Inner Loop.

The Inner Loop Today

The Inner Loop today provides access around the City of Rochester's Central Business District in addition to enhancing the overall mobility of the region. The existing facility is typically a four to six lane divided expressway with parallel two to three lane frontage roads on each side. The frontage roads and the Inner Loop are connected with entrance and exit terminals located at service points throughout the system. This results in a facility that in some places has as many as twelve travel lanes and occupies a width of 170 feet. In reviewing recent traffic counts, the use of the Inner Loop varies significantly between the section from Monroe Avenue to E. Main Street and the section from E. Main Street to North Clinton Avenue. Traffic demand varies from 6,840 vehicles per day in the vicinity of East Avenue to as high as 46,910 vehicles per day in the vicinity of N. Clinton Avenue (See Appendix B). Based on these volumes the Inner Loop from Monroe Avenue to E. Main Street is significantly underutilized.



Inner Loop – Looking North from Broad Street

Current Momentum

In recent years, the City of Rochester has completed various planning level studies and initiatives that focused on making Rochester a vibrant growing city well into the 21st century. These studies involved extensive evaluations of growth patterns, land uses and master planning for downtown and the surrounding communities. Additionally, the studies assessed the transportation system throughout the region and the ingress and egress of people and goods into the city. These planning studies lead to the identification of Inner Loop infrastructure enhancements that concentrate on improving vehicular and pedestrian access and circulation within the city to accommodate growth and improve the economic vitality. This study of the Inner Loop will evaluate various alternatives to improve the links between Central Business District and surrounding City neighborhoods by modifying the existing grade-separated roadway and developing a facility that better meets the needs of today's transportation and community usage.

Contacts

Additional information regarding this project can be obtained from:

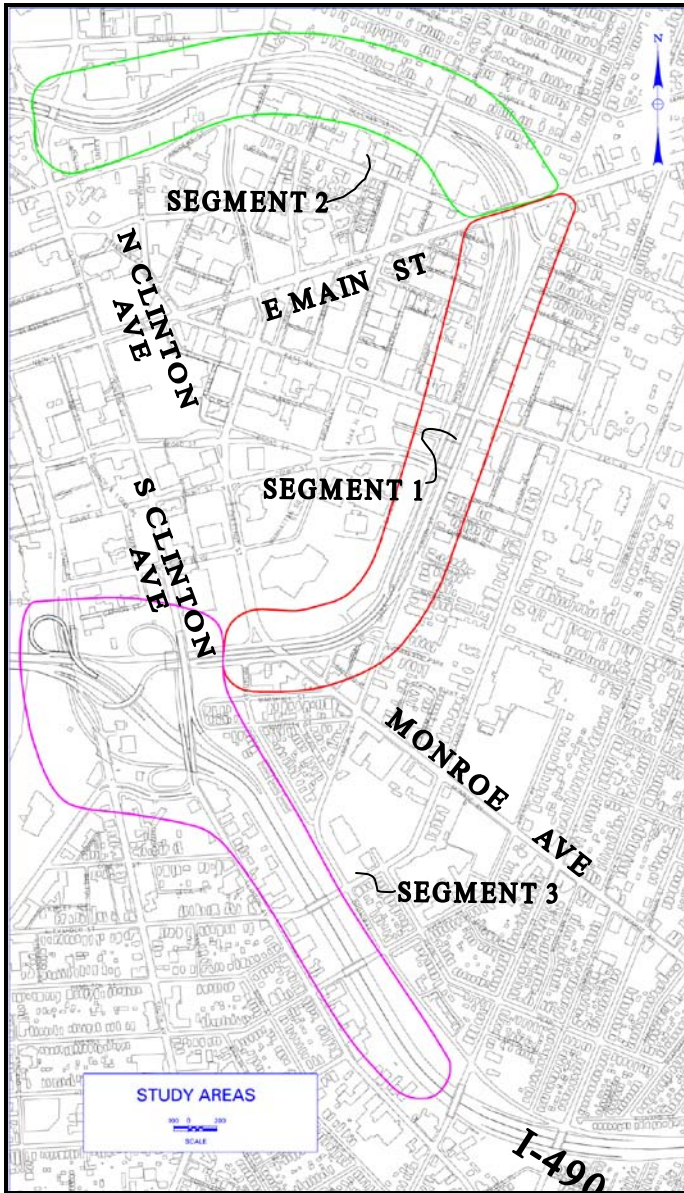
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Identification of the Study Area

The overall study area is divided into three (3) specific areas or segments for review and assessment. Segment 1 included the Inner Loop from Monroe Avenue north to E. Main Street. Segment 2 included the Inner Loop from E. Main Street north and west to N. Clinton Avenue. Finally, Segment 3 included the I-490 interchange with the Inner Loop, S. Clinton Avenue, South Avenue, and the Southwedge area. This segment also included I-490 from the interchange easterly to the Goodman Street interchange. Figure 1 depicts the three (3) segment locations.



Segment 1 - the Inner Loop from Monroe Avenue north to E. Main Street.

Segment 2 – the Inner Loop from E. Main Street west to N. Clinton Avenue.

Segment 3 – the I-490 / Inner Loop interchange and Route I-490 from the Inner Loop interchange to the east.

*Figure 1
Study Area Limits*



Evolution

Vision 2000

In 1991, the City of Rochester completed The Vision 2000 Plan, which evaluated the existing condition of the city and designed a program focused on achieving the full economic and environmental potential of downtown Rochester. The Plan recommended a coordinated series of improvements to enhance the quality of life and accelerate the growth of downtown. These recommended improvements included providing new housing opportunities and encouraging private, commercial and institutional development that is compatible with the city and supportive of the adjacent neighborhoods.

In addition to these improvements, the Plan recommended that existing street barriers such as the Inner Loop be raised and narrowed thus connecting the City Center to the surrounding communities. The Plan also noted that streets needed to be landscaped, open spaces provided, and access to the Genesee River waterfront improved. These types of improvements, along with various other types of initiatives, would accomplish the Plan’s goal of renewing the social and economic vitality of downtown.

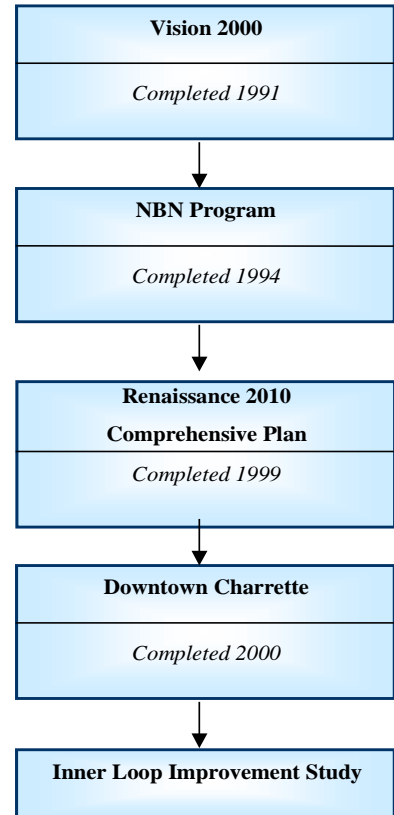
NBN Program

In 1994, the City of Rochester initiated its Neighbors Building Neighborhoods (NBN) program. This program has received national acclaim for its citizen/community planning and visioning process. This planning process has allowed each neighborhood to cohesively come together and identify key issues, priorities, and develop action plans to realize their goals. The City realized that partnering with the local residents and businesses would capitalize on the strengths and assets of each community. The ultimate goal of this program was to establish and maintain stable, healthy and diverse neighborhoods that are developed and sustained by citizens. The action plans that were developed by the NBN program served as the foundation for the initiation of the Renaissance 2010 Comprehensive Plan.

Renaissance 2010

The Renaissance 2010 Comprehensive Plan developed an overall vision that focused energy in 11 key campaigns. This 10-year urban development plan was the first such plan since the 1960’s and was expected to guide the development of public policy. Each one of the campaigns developed key goals and strategies to set the course for the overall renaissance. These campaigns included the following:

Renaissance 2010 Campaigns	
<ul style="list-style-type: none"> • Involved Citizens • Educational Excellence • Health, Safety and Responsibility • Environmental Stewardship • Regional Partnership • Economic Vitality 	<ul style="list-style-type: none"> • Quality Service • Tourism Destination • Healthy Urban Neighborhoods • Center City • Art and Culture



City of Rochester’s Timeline



Of these initiatives, the Center City Campaign focused on establishing a new “boundary” and perception of what the downtown area is. Currently, the downtown area is viewed as the area within the Inner Loop. This strategy envisions the Center City reaching out beyond the Inner Loop into the surrounding neighborhoods. In order to accomplish this vision, the campaign recommends developing the Inner Loop as an at-grade or partially covered arterial to enhance connections from the Center City into the surrounding neighborhoods. This would allow improved pedestrian access, along with a linked pedestrian circulation system.

Downtown Charrette

A Downtown Charrette, sponsored by the Rochester chapter of the American Institute of Architects, was held in May of 2000 to develop visions of Rochester for the 21st Century. This one-day brainstorming session was attended by over 250 people, including city residents, students and over 45 local architects, planners and engineers, who produced numerous community development concepts. The charrette focused on five primary areas within the City of Rochester including the riverfront, urban villages, Clinton Corridor, Main Street Corridor, and the Inner Loop.



ANNETTE LEIN staff photographer
Raymond Shaheen, right, explains his team's design for an urban village in downtown during a forum yesterday.

***Design Charrette
May 2000***

In each one of these five focus areas, numerous alternatives were developed to implement the goals identified in the City’s new master plan, Vision 2010. These alternatives focused on transforming the Center City into a 24-hour activity center that included attractive residential housing and creating a strong visual and aesthetic image of the area. There were various alternatives proposed that would reduce the barrier represented by the Inner Loop and create physical connections to the surrounding areas, neighborhoods and districts.

Summary

In each of these reports, there was a recurring theme that identified the Inner Loop as one of the focus areas for the City of Rochester. The energy and momentum surrounding the City’s revitalization and enhanced connections to the neighboring communities provided the catalyst for the Inner Loop study. The City of Rochester initiated this Inner Loop Improvement Study in spring of 2000 to evaluate the existing conditions and develop potential alternatives that would once again link the City’s Central Business District and the neighborhoods and develop a modified transportation network that better meets the needs of present and future travel and access.



II. STUDY AREA EXISTING CONDITIONS

A. Existing Traffic Volumes and Levels-of-Service

This study used the Syncro 4.0 Model provided by Monroe County Department of Transportation as the basis for assessing existing traffic conditions within the project study segments. This model was reviewed and further supplemented with specific intersection turning movement counts along with count information provided by New York State Department of Transportation. Traffic flow diagrams depicting design hour turning movement volumes are included in Appendix B. The following table identifies the existing levels of service for the intersections with the study limits.

**EXISTING LEVELS-OF-SERVICE
TABLE 1**

<i>Intersection</i>	<i>Existing Geometry AM Peak Hour</i>	<i>Existing Geometry PM Peak Hour</i>
Alexander @ Park	A	A
Alexander @ Broadway	A	A
Averill @ Broadway	A	A
Byron @ Clinton	B	A
Monroe @ Union	B	B
Byron @ Mt. Hope	A	A
Griffith @ South	D	C
Woodbury @ I-490 EB on-ramp	A	A
Inner Loop EB @ Monroe	B	A
Inner Loop WB @ Monroe	A	A
Broad @ Pitkin	A	B
Broad @ Union	B	C
East @ Pitkin	B	B
East @ Union	A	B
Main @ University	B	B
Main @ Inner Loop WB	C	C
Main @ Union	C	C
University @ Union	A	B




B. Existing Transportation Facility

Segment 1- Monroe Avenue to E. Main Street

The transportation network within Segment 1 includes the Inner Loop and the local frontage roads adjacent the Inner Loop. The following identifies the infrastructure attributes of Segment 1.

**SEGMENT 1 INFRASTRUCTURE ATTRIBUTES
TABLE 2**

<i>Inner Loop</i>	<i>Frontage Roads</i>
<ul style="list-style-type: none"> Speed Limit: 45 mph ROW Width (Including Frontage Roads): 160' to 225' Grade-Separated, Depressed Roadway Limited Access Highway 6 Travel Lanes, (3 Northbound, 3 Southbound) <div style="text-align: center; margin-top: 10px;">  </div> <p style="text-align: center; margin-top: 5px;"><i>Inner Loop – Looking North from Broad Street</i></p>	<ul style="list-style-type: none"> Service Adjoining Businesses and Property Owners Union Street- Services Northbound Traffic Pitkin Street-Services Southbound Traffic Speed Limit: 30 mph At-Grade Roadway 4 to 6 Total Travel Lanes Entrance and Exit Terminals near Charlotte Place and Bueva Place Signalized Intersections: Monroe Avenue, Broad Street, and East Avenue Separated from the Inner Loop via concrete retaining wall 3 Bridge Structures: Monroe Avenue, Broad Street, and East Avenue

Interchange Access

At the southern limits, the Inner Loop forms a partial interchange with Interstate 490. This interchange maintains the following direct connections:

- Direct connection from I-490 eastbound to the Inner Loop
- Direct connection from the Inner Loop to I-490 westbound
- Direct connection from the Inner Loop to I-490 eastbound

This interchange currently does not provide access from I-490 westbound to the Inner Loop. I-490 westbound traffic to the Inner Loop is signed to exit at the Goodman Street interchange. At this point, vehicles are routed along the local street network including Broadway Street and Union Street. Once on Union Street, vehicles can access the Inner



Loop by the slip-ramp located near Canfield Place. This lack of directional access from I-490 westbound is a limiting factor in the usage and access to the Inner Loop.

Traffic Operations

The overall transportation infrastructure in this section is from 10 to 12 lanes wide including the Inner Loop, service roads, and ramps. The existing average annual daily traffic ranges from 6840 to 14700 vehicles, which is significantly below the roadway's capacity. The actual volume of traffic is higher on the frontage roads than on the Inner Loop. The intersections along the frontage roads of this segment function at a level of service of C or better.

Condition

A visual observation identified the existing pavement and other roadway appurtenances (i.e. guiderail, signs, curb) within this section to be showing signs of distress. The New York State Department of Transportation's (NYSDOT) Highway Sufficiency Manual rated this section in 1999 from poor to fair condition. The NYSDOT is currently programming a pavement rehabilitation project for this segment of the Inner Loop. A cursory review of the existing geometry identified various non-conforming features (curbing, acceleration distance, deceleration distance) and non-standard features (shoulder width) within this segment of the Inner Loop. With current design standards for example, the existing left hand and right hand shoulder widths are classified as non-standard features (existing shoulders of 1' left and 5' right versus required widths of 4' left and 10' right). In addition, the entrance and exit terminals from the Inner Loop to the frontage road system near Buena Place are classified as non-conforming features, due to their lack of appropriate acceleration and deceleration distances.

Pedestrian Mobility

This section has limited pedestrian access points from the city to the surrounding communities. The three (3) bridge structures located at Monroe Avenue, Broad Street, and East Avenue provide access links, allowing pedestrians to cross the Inner Loop. There is a continuous sidewalk system adjacent to Union Street and along a majority of Pitkin Street.

Major Advantages/Disadvantages

This grade-separated type of roadway layout has the advantage of keeping the faster moving arterial street traffic separate from the slower moving local traffic accessing commercial and residential development along the corridor; thus minimizing conflict points and potential accidents. Despite this advantage, the frontage road system has a split signalized intersection system to coordinate the one-way directional traffic movements. This type of signal system produces two very closely spaced signalized intersections with minimal storage distance between them, which produces undesirable operational characteristics. In addition, the on and off ramps that connect the frontage roads to the Inner Loop have poor geometric layout with difficult maneuvers for vehicles entering and exiting the Inner Loop.



Segment 2 – Main Street to Clinton Avenue

The transportation network within Segment 2 includes the Inner Loop and the local frontage roads adjacent the Inner Loop. The following identifies the infrastructure attributes of Segment 2.

SEGMENT 2 INFRASTRUCTURE ATTRIBUTES
TABLE 3

<i>Inner Loop</i>	<i>Frontage Roads</i>
<ul style="list-style-type: none"> • Speed Limit: 45 mph • ROW Width (Including Frontage Road): 220' to 380' • Grade Separated, Depressed Roadway • Limited Access Highway • Travel Lanes(2 Northbound, 2 Southbound) <div data-bbox="266 898 753 1230" style="text-align: center;"> </div> <p data-bbox="266 1247 753 1276"><i>Inner Loop – Looking East from Scio Street</i></p>	<ul style="list-style-type: none"> • Service Adjoining Property Owners • Lyndhurst Street – Provides Westbound Access • Delevan Street – Provides Eastbound Access • Speed Limit: 30 MPH • At-Grade Roadways • Typically 4 Total Travel Lanes • Entrance and Exit terminals: (E. Main Street, Scio Street) • Signalized Intersections: (E. Main Street, Scio Street) • Typically Separated from the Inner Loop via grass slopes • 4 Bridge Structures: North Street, Scio Street, Main Street, and Inner Loop Ramp

Within this segment, ingress and egress to and from the Inner Loop is provided at E. Main Street, Scio Street and Joseph Avenue/N. Clinton Avenue. These points are key to providing access for the residents on the east and northeast side of the City. One of the major congestion conflict points is the entrance and exit ramp system at E. Main Street. These ramps form one leg of an eight-legged intersection at E. Main Street, Union Street and University Avenue. Due to the high volume of traffic and turning movements that exist at this intersection, a three signal interconnect system exists to maintain acceptable levels-of-service.

The access connections at E. Main Street are fully directional with connecting ramps in each direction. The Scio Street interchange is only partially directional with an eastbound off ramp and a westbound on ramp. There is a fully directional interchange near North Clinton Avenue, which extends to the west outside of the project study limits. This interchange uses the frontage roads and connecting ramps through to St. Paul Street and the bridge over the Genesee River to provide a complete interchange.



The crossing roads and intersections on this segment are spaced farther apart than intersections on Segment 1, with the intersections at North Street, Scio Street, and E. Main Street having satisfactory geometry and operation. The closely spaced, multiple intersections at North Clinton Avenue are outside the boundary of this study.

Traffic Operations

The volume of traffic on Segment 2 is much higher than that of Segment 1, with peak hour volumes that are three (3) to four (4) times those of Segment 1. A large percentage of this traffic accesses the Inner Loop from E. Main Street and University Avenue heading westbound in the morning, with the reverse pattern traveling eastbound and exiting the Inner Loop at E. Main Street in the evening. The average annual daily volume of traffic along the Inner Loop on the north side of the City ranges from 21,000 to 47,000 vehicles. The intersections along the frontage roads or at ramp intersections function at a level of service C or better.

Condition

A cursory review of the existing geometry identified various non-conforming and non-standard features within this segment of the Inner Loop. With current design standards for example, the existing left-hand and right-hand shoulder widths are classified as a non-standard feature existing shoulders of 1' left and 8' right versus required widths of 4' left and 10' right). The left-handed exit terminal from the Inner Loop to E. Main Street is also classified as a non-conforming feature (right hand exit terminals are preferred). A visual observation identified the existing pavement and other roadway appurtenances (i.e. guiderail, signs, curb) within this section to be showing signs of distress. The New York State Department of Transportation's (NYSDOT) Highway Sufficiency Manual rated this section of the Inner Loop in 1999 in poor condition.

Pedestrian Mobility

This section has limited pedestrian access points from the city to the surrounding communities. Three bridge structures located at North Street, Scio Street and E. Main Street provide the access links that allow pedestrians to cross the Inner Loop.

Segment 3 – I-490/Inner Loop Interchange

Segment 3 primarily focuses on the I-490/Inner Loop/South Avenue/S. Clinton Avenue interchange, which is one of the major egress and ingress points to the City of Rochester. The interchange also provides partial access to the Southwedge neighborhood, which is located south of the City. The focus of the study in Segment 3 involved improved access to and from the Interstate to the Inner Loop, the Southwedge and the City of Rochester. The following table summarizes direct access provided at the interchange.



SUMMARY OF DIRECT ACCESS TO AND FROM I-490
TABLE 4

	<i>I-490 Eastbound</i>	<i>I-490 Westbound</i>
<i>To Inner Loop</i>	Direct Access	No Direct Access
<i>From Inner Loop</i>	Redundant Direct Access Points	Direct Access
<i>To Southwedge</i>	Direct Access	No Direct Access
<i>From Southwedge</i>	No Direct Access	No Direct Access
<i>To the C.B.D.</i>	Direct Access (via Monroe Avenue)	Direct Access
<i>From the C.B.D.</i>	Redundant Direct Access Points	Direct Access (via Monroe Avenue)

Through the years this interchange has had various configurations to provide access to the City and the surrounding communities. Originally, the Inner Loop was the only facility planned for this location. The Inner Loop, Interstate 490 and the interchange were later designed and constructed, during the 1950's, 1960's and 1970's.

- Southern section of the Inner Loop (Design 1956)
- I-490-Eastern Expressway (Design 1958)
- I-490-Western Expressway (Design 1969)

During the original planning phases of the local interstate system, I-390 was once planned to connect to I-490 at this location. With the anticipation of these future improvements, various ramps were constructed to provide future access to other facilities. As the plans developed, I-390 was re-directed to the west side of the county. This change in plan left various redundant ramps in the I-490/Inner Loop Interchange area.

A cursory review of the existing geometry identified various non-conforming and non-standard features within this segment of the Inner Loop. For example, various ramp curves within the interchange do not meet current design standards and are classified as non-standard features. Various ramp terminals do not meet current guidelines and therefore are classified as non-conforming features.



South Avenue/I-490 Access

Currently, traffic exiting the City of Rochester on South Avenue has three options (see Figure 2). Option 1 (two-lane ramp) and Option 3 (single lane ramp) are redundant ramps to I-490 eastbound; Option 1 merging into the right-hand side and Option 3 an add lane on the left-hand side of I-490 eastbound. Under Option 1, the entrance ramp becomes an auxiliary lane that parallels I-490 and exits at Goodman Street. This configuration requires traffic exiting the City headed for I-490 Eastbound to merge left. Option 2 (single lane) is provided for traffic continuing on South Avenue to the Southwedge.

This configuration, which provides two options for accessing I-490 eastbound, is very confusing for drivers exiting the City of Rochester. In addition to this confusing configuration, Option 3 is an undesirable layout per current FHWA guidelines, as it enters on the left-hand side of the interstate. Right-hand entrance ramps are the preferred layout, identified by current design standards. South Avenue and its ramps are located on the banks of the Genesee River and therefore inhibit development and access of the waters edge by City residents.



Figure 2
South Avenue Ramps



Inner Loop/I-490 Eastbound Access

Traffic movement from the Inner Loop to I-490 eastbound is provided by two redundant ramp systems (see Figure 3). The majority of the traffic uses Option A, which is the only signed option for direct access to I-490 eastbound from the Inner Loop. Option A is an add lane on the left-hand side of I-490, an undesirable configuration per FHWA guidelines.

The Option B ramp allows traffic to maneuver through two successive loop ramps and merge with I-490 eastbound with a right-hand entrance terminal. This option is not signed for I-490 eastbound. The majority of the traffic using this ramp is destined for the Southwedge.

Pedestrian Access

Within Segment 3, there are not adequate accommodations for pedestrian and bicyclists to efficiently and safely travel between the City's Central Business District and the Southwedge neighborhood. The major obstacle that currently separates the C.B.D. from the neighborhoods to the south is the infrastructure associated with the I-490 expressway and interchange.

There are routes that exist along the Genesee River waterfront and South Avenue, but these routes are not easily accessible or attractive and end at the South Avenue on-ramps from the downtown area. In an effort to improve access within the area, a pedestrian bridge was recently constructed from the Southwedge neighborhood to downtown in the vicinity of South Clinton Avenue. In general, the existing connections in the South Avenue area do not provide "quality" links between the City of Rochester and the Southwedge neighborhoods.

C. Ownership and Maintenance Jurisdiction

Ownership and maintenance of the Inner Loop, I-490 and the interchange is under the jurisdiction of the New York State DOT.



*Figure 3
Inner Loop Ramps*



D. Utilities

In addition to the existing highway infrastructure, the following utilities are located throughout the project area within or adjacent to the Inner Loop right-of-way.

**EXISTING UTILITIES
TABLE 5**

<i>Owner</i>	<i>Utility</i>
Rochester Gas and Electric Corp.	Gas and Electric
City of Rochester Water	Water
City of Rochester Street Lighting	Street Lights
Frontier Telephone	Telephone
Rochester District Heating	Steam Lines
Monroe County	Highway Lighting
Time Warner	Cable Television
Monroe County Pure Waters	Sanitary/Storm

E. Environmental Features

A preliminary environmental screening was performed for the three project segments. The report summarizes whether evidence indicates the presence of recognized environmental sites, buildings, or conditions that may result in environmental and historical concerns within the project corridor. The following table briefly summarizes the report findings for the project area.



ENVIRONMENTAL FEATURES

TABLE 6

	<i>Finding</i>	<i>Actions Required</i>
Ground Water / Aquifers	<ul style="list-style-type: none"> • Not Situated over a NYSDEC Primary or Principal aquifer 	<ul style="list-style-type: none"> • Supplemental groundwater investigations will not be required
Surface Water Quality	<ul style="list-style-type: none"> • Genesee River – Class B Fresh Water Surface • State Pollutant Discharge Elimination System Permit (SPDES) permit required if project disturbs over 5 acres* 	<ul style="list-style-type: none"> • Prepare an Erosion and Sediment Control Plan and a Stormwater Pollution Prevention Control Plan (SWPPCP) • SPDES permit may be required
Local Waterfront Revitalization Plan and Critical Environmental Area	<ul style="list-style-type: none"> • Not within a Coastal Area • Within the limits of the City of Rochester Local Waterfront Revitalization Program (LWRP) and Critical Environmental Area (CEA) limits 	<ul style="list-style-type: none"> • Project is not anticipated to adversely affect the LWRP or CEA, coordination and consistency review will be required
Historical Sites / Cultural Districts	<ul style="list-style-type: none"> • Five (5) buildings on National Historic Registry within project limits • Five (5) buildings on National Historic Registry immediately adjacent to the project limits • Five (5) Historic Districts located within project area • Rochester Landmark Society identified the presence of many registry eligible structures • No archeological sensitive sites are anticipated 	<ul style="list-style-type: none"> • Further review necessary to evaluate the project’s potential impact to historical properties • Coordination with the NYS Office of Parks, Recreation, and Historic Preservation (SHPO)
Section 4(f) and Section 6(f)	<ul style="list-style-type: none"> • No identified recreation, wildlife or waterfowl refuges within project area • Federally funded Genesee Gateway Park located along river 	<ul style="list-style-type: none"> • 4(f) and 6(f) evaluations may be required
Hazardous Waste	<ul style="list-style-type: none"> • One (1) Monroe County suspect disposal site • Two (2) Leaking Underground Storage (LUST) sites within project limits, one (1) site within ½ mile distance • One (1) Underground Storage Tank (UST) site within project limits, five (5) sites within ½ mile distance 	<ul style="list-style-type: none"> • Sites should be further investigated if improvements are proposed in their vicinity
Air Quality	<ul style="list-style-type: none"> • Monroe County is currently an air quality attainment area 	<ul style="list-style-type: none"> • Additional microscale or mesoscale air quality studies may be necessary depending on proposed improvements

*this threshold may change to one acre prior to construction

The complete screening report is presented in Appendix A.



F. Existing Land Uses

Segment 1- Monroe Avenue to E. Main Street

This segment starts at Monroe Avenue near the Strong Museum and extends to East Main Street, a major east-west street with a variety of commercial uses that connects the City Center to the outer neighborhoods. Inside the Inner Loop, along Pitkin Street, the land uses are predominantly mid-size commercial, inter-mixed with storage facilities, parking garages and lots. East Avenue, which is an arterial road with a unique mix of retail and commercial shops and a friendly pedestrian scale, bisects Segment 1 and is one of the few streets that connects the east and west sides of the Inner Loop. At the south along Pitkin Street, the land uses change to institutional at the Strong Museum with additional parking uses and vacant lots.

Outside of the Inner Loop, adjacent to Union Street, the parcels are used as small commercial/retail with some parcels used for storage facilities, surface parking and vacant lots. At Union Street and Gardiner Park, the land use changes to predominantly detached residential frame structures. The land use changes back to small scale commercial and storage facilities southwest of Union Street and Lafayette Park. (See Figure 4 - Existing Land Use)

Segment 2- E. Main Street to N. Clinton Avenue

This segment starts at East Main Street and continuous west along the Inner Loop to N. Clinton Avenue. The portion of the Inner Loop between North Street and East Main Street has a very different character on either side of the highway. The area outside of the Inner Loop is predominantly residential mixed with a few vacant lots. These parcels are part of a residential community that extends for several blocks to the north. The existing buildings are typically two to four stories with multi-unit dwellings. The network of streets and neighborhood fabric of this region ends abruptly where it abuts the Inner Loop with little or no buffer area from the noise and visual impact of the highway. Further west, along Lyndhurst Street and between North Street and North Clinton Avenue, the existing land use changes to large vacant lots, parking garages and industrial/storage facilities.

The highway ramp parcels, which are south of Lyndhurst Street near East Main Street, consist of open space sloped embankments and are underutilized due to their configuration and current grade changes.

The area inside the Inner Loop includes parcels along Delevan Street. These parcels have a variety of land uses which include residential, commercial, school facilities, storage and institutional. (See Figure 4 - Existing Land Use)

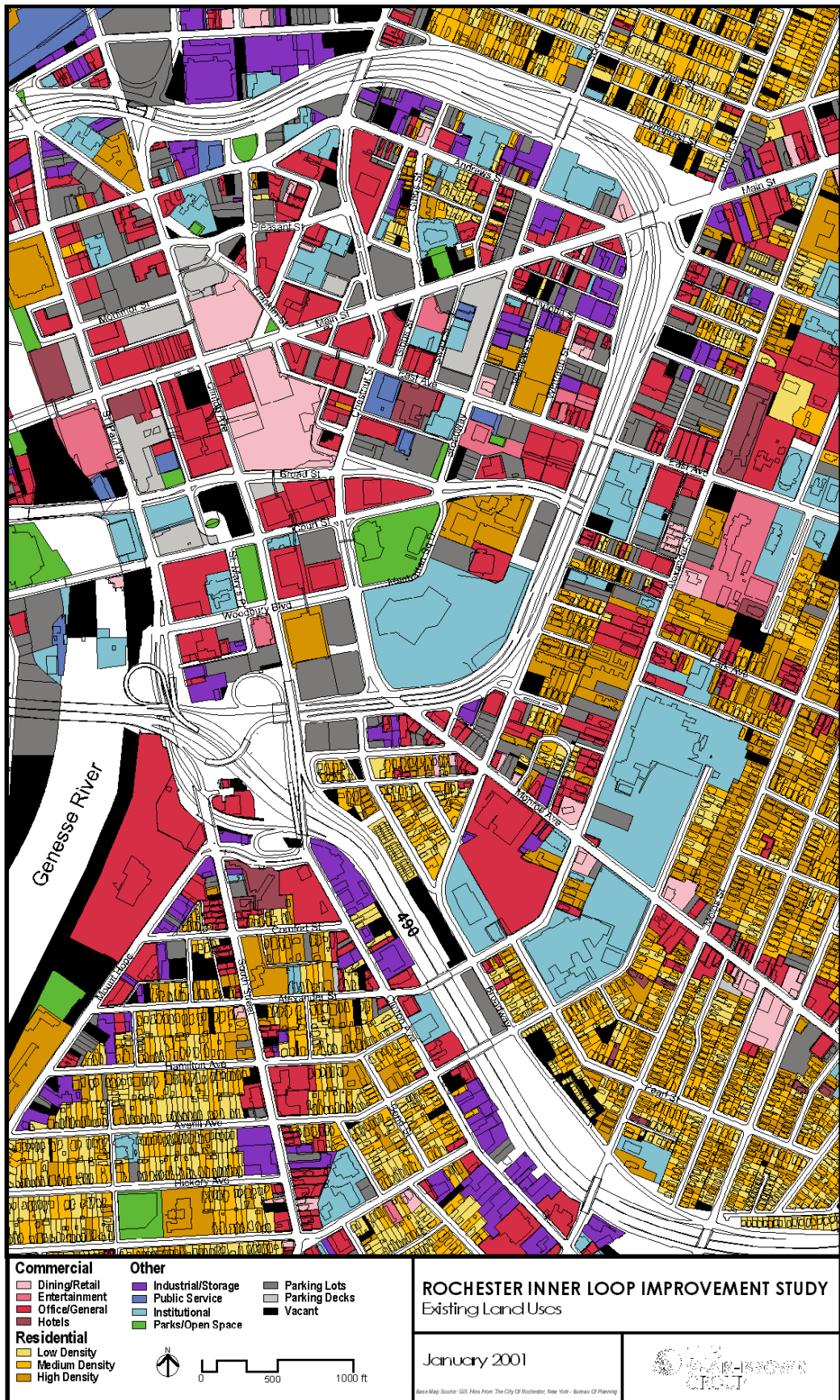


Segment 3 – I-490/Inner Loop Interchange

The land located in Segment 3 north of the I-490 interchange is primarily commercial, with parking lots and entertainment. The land located to the south of the interchange is primarily residential with commercial and office space development buffering the Southwedge neighborhood from the expressway. To the west of the interchange is the Genesee River with vacant waterfront lands available for development. The major highway ramp extends close to the edge of the river, which blocks the continuous pedestrian access along the river edge, creating an inappropriate use of this valuable frontage.

The land located in Segment 3 of the study area from S. Clinton Avenue easterly to Goodman Street includes two strips of land on each side of I-490, both of which create an intermediate area between the highway and the adjacent residential neighborhoods. On the west side of I-490 in this same area, the land includes commercial uses, primarily located at the key intersections, with industrial/storage and parking located mid-block. The east side of I-490 consists of mostly open space, vacant lots, and a small amount of residential. (See Figure 4- Existing Land Use)





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Figure 4



III. PROJECT OBJECTIVES

Based on the assessment of existing conditions and the previous studies completed for the City of Rochester, the following objectives have been identified for this project.

Segments 1 and 2 (Inner Loop from Monroe Avenue to North Clinton Avenue)

1. To create a properly scaled transportation facility that will improve the physical and visual sense of connection between the neighborhoods adjacent the Inner Loop and the downtown area.
- I.
2. To develop a transportation facility that is visually attractive and promotes pedestrian access to and from downtown.
 3. To improve mobility and maintain vehicular access in and around the City of Rochester (i.e. G.T.C. Long Range Plan).
 4. To create concept alternatives that are consistent with the Vision of Rochester for the 21st Century as documented in the Renaissance 2010 Comprehensive Plan.
 5. To develop alternatives that will enhance neighborhood and downtown development, thus supporting economic revitalization of the area.
 6. To minimize social, environmental and economic impacts to the City and the adjacent neighborhoods.

Segment 3 (I-490/ Inner Loop/ Interchange)

1. To improve mobility in and out of the City and the Southwedge neighborhood.
2. To create concept alternatives that are consistent with the Vision of Rochester for the 21st Century as documented in the Renaissance 2010 Comprehensive Plan.
3. To develop alternatives that will enhance the Genesee River waterfront.
4. To develop a pedestrian connection between downtown and the Southwedge that is visually attractive, safe, and efficient.
5. To minimize social, environmental and economic impacts to the City and the neighborhoods.



IV. DESIGN CRITERIA

The following design criteria has been utilized for the development of the project alternatives. This criteria was established for planning purposes only. During future development stages the specific design criteria will have to be established.

**TABLE 4
DESIGN CRITERIA**

	<i>Inner Loop (Segment 1 & 2)</i>	<i>I-490 WB to Union Street Ramp</i>	<i>I-490 WB to Inner Loop Ramp</i>	<i>Byron Street Ramp</i>	<i>South Ave to I-490 EB Ramp</i>	<i>Convert Ramp to 2-way, Clinton Ave to I-490 WB</i>	<i>Inner Loop On & Off Ramps to Main Street</i>
<i>Functional Classification</i>	Urban Arterial	Ramp	Ramp	Ramp	Ramp	Ramp	Ramp
<i>Design Speed</i>	35-50 mph (60 kmh-80 km/h)	35 mph (60 km/h)	30 mph (50 km/h)	20 mph (30 km/h)	40 mph (65 km/h)	15 mph (25 km/h)	25 mph (40 km/h)
<i>Travel Lane Width</i>	11 ft.-12 ft (3.3 m-3.6 m)	18 ft (5.4 m)	18 ft (5.4 m)	21 ft (6.3 m)	20 ft (6.0 m) on curve 28 ft (8.4 m) two lanes	25 ft (7.6 m)	18 ft (5.4 m)
<i>Maximum Grade (Rolling)</i>	8%-7%	6%	7%	8%	6%	8%	7%
<i>Minimum Radius</i>	410 ft-820 ft (125 m-250 m)	410 ft (125 m)	262 ft (80 m)	82 ft (25 m)	525 ft (160 m)	50 ft (15 m)	164 ft (50 m)
<i>Maximum Superelevation</i>	0.06 ft/ft	0.06 ft/ft	0.06 ft/ft	0.06 ft/ft	0.06 ft/ft	0.06 ft/ft	0.06 ft/ft
<i>Minimum Stopping Sight Distance</i>	262 ft-400 ft (80 m-120 m)	262 ft (80 m)	197 ft (60 m)	98 ft (30 m)	295 ft (90 m)	98 ft (30 m)	164 ft (50 m)



V. STUDY ALTERNATIVES

A. Alternatives Considered

The initial screening of alternatives was a series of brainstorming sessions by the Technical Advisory Committee and the Citizen's Advisory Committee to identify alternatives for the three (3) project study segments. This effort focused on each study segment with the goal of identifying as many options as possible that meet the overall project objectives (i.e. properly scaled transportation facility, enhanced connectivity between the C.B.D. and the surrounding communities, etc.) The concepts developed at the downtown charrette were used as the bases for the brainstorming sessions. The following identifies the alternatives and sub-alternatives and provides a brief overview of the concepts. Drawings depicting these alternatives are included in Appendix D.

Segment 1 Alternatives

- **1A – At-Grade East**
This alternative would bring the Inner Loop up to grade from Monroe Avenue to approximately Charlotte Street. Proceeding north from Charlotte Street the Inner Loop would retain its existing grade-separated section under E. Main Street unless the intersection at E. Main Street and University Avenue can be configured to provide an acceptable traffic operation. The proposed alignment would move the Inner Loop east and place it on the existing Union Street location. This location would make land available on the C.B.D./downtown side of the Inner Loop for future land use opportunities.
- **1B – At-Grade West**
This option is identical to Option 1A except the new Inner Loop would be moved as far west of the existing alignment. This location would make land available on the neighborhood side of the Inner Loop for future land use opportunities.
- **1C – At Grade Hybrid**
This option is identical to Option 1A with the exception that the new Inner Loop would be placed on an alignment that would run northeast to the existing alignment. This would make land available on the neighborhood side near Buena Place (on the south end of this section) and on the C.B.D./downtown side near Charlotte Street for future land use opportunities.
- **1D – Decking**
This alternative would retain the existing horizontal and vertical alignment of the Inner Loop and place a deck over the Inner Loop in locations where appropriate vertical clearance could be maintained. Deck would be placed from approximately East Avenue to Broad Street. Decking would allow for the C.B.D. to connect with the surrounding neighborhoods while maintaining the Inner Loop to serve the local and regional transportation system.



Sub-Alternatives:

- **I-490 Ramp to the Inner Loop at Union Street – Direct Ramp**
This alternative would provide a direct exit ramp from I-490 westbound in the vicinity of the Alexander Street overpass to Union Street.
- **I-490 Ramp to the Inner Loop at Union Street – Modified Clinton/Union St. Exit**
This alternative would provide an exit ramp from I-490 westbound to Union Street and S. Clinton Avenue. After the exit terminal from I-490, the ramp would split into two separate ramps, one for Union Street and the other for North Clinton Avenue.
- **I-490 Ramp to the Inner Loop at North Clinton Avenue – Direct Connect Ramp**
This alternative would provide an exit ramp from the existing S. Clinton Avenue exit ramp to the Inner Loop.
- **Convert Broadway to 2-way**
This alternative would also return Broadway Avenue to 2-way, which would enhance land use opportunities between Broadway and I-490.
- **Park Avenue Extension to Broad Street Intersection**
Park Avenue would be extended to the west, transition through a s-curved alignment and intersect with the modified Inner Loop at the Broad Street intersection. This alignment would provide improved access from the Park Avenue area but would impact the residential neighborhood along Chapman and Gardiner Park and the commercial buildings along Alexander Street.
- **Park Avenue Extension to the Inner Loop**
Park Avenue would be extended westward straight to the Inner Loop. This alignment would improve access from the Park Avenue area but would impact buildings along Alexander Street.
- **Inner Loop At-Grade as an Arterial Section**
The at-grade section of the Inner Loop would be proposed as a 5-lane section with sidewalks on either side of the roadway. The center lane would be provided as a turn lane for left-turning vehicles.
- **Inner Loop At-Grade as a Boulevard Section**
The boulevard section would provide a 4-lane section with a center mall area for street landscaping, i.e. trees. At the main intersections within the corridor a center turn lane would be provided for left turning movements.

Segment 2 Alternatives

- **2A – At-Grade**
This alternative would construct the Inner Loop at-grade from the Main Street intersection to North Street. Between North Street and N. Clinton Avenue the Inner Loop would return to a grade-separated facility. The at-grade portion of the Inner



Loop in this section would be placed near the C.B.D./downtown. This would provide for land use opportunities between the Inner Loop and the Lyndhurst Street neighborhoods to the north.

- 2B – Decking
This alternative would retain the existing horizontal and vertical alignment of the Inner Loop and place a deck over the Inner Loop in locations where appropriate vertical clearance could be maintained. This would allow decking to be placed adjacent to the existing bridge structures on E. Main Street, Scio Street, and North Street. Decking could also be placed over the Inner Loop from N. Clinton Street to St. Paul Street. Decking would allow for the C.B.D. to connect with the surrounding neighborhoods while maintaining the Inner Loop to serve the local and regional transportation system.

Segment 3 Alternatives

- 3A – Consolidate South Avenue connection to I-490 eastbound
This alternative would close the left hand on-ramp to I-490 eastbound from downtown and the Inner Loop. This would re-direct traffic from downtown to use the existing right hand on-ramp. The Inner Loop traffic destined for I-490 eastbound would use the existing double loop ramps and enter I-490 with the existing right hand entrance terminal.
- 3B – Consolidate South Avenue connection to I-490 eastbound with 2-way Clinton Avenue
This alternative would include the improvements identified in alternative 3A in addition to modifying South Clinton Avenue and the successive loop ramps from the Inner Loop to I-490 eastbound to a 2-way.
- 3C – Southwedge access to I-490 westbound with Reverse direction of ramp
This alternative would eliminate the Inner Loop ramp to I-490 eastbound and change the direction of travel on the successive loop ramps from the Inner Loop to I-490 eastbound. The ramp connection to I-490 eastbound would be eliminated due to an insufficient weaving distance on the Inner Loop. These modifications would eliminate access from the Inner Loop to I-490 eastbound. A Byron Street ramp to I-490 eastbound would be provided. This alternative would improve access from the Southwedge to I-490 eastbound and I-490 westbound.
- 3D – Southwedge access to I-490 westbound with modified loop ramp to 2-way
This alternative would provide access from the Southwedge to I-490 westbound. In order to provide this movement, the direct ramp from the Inner Loop to I-490 eastbound would be eliminated. Access from the Inner Loop to I-490 eastbound could continue indirectly via the successive loop ramps.
- 3E – Byron Street ramp to I-490 eastbound (Option 1 and Option 2)
These configurations would provide an on-ramp from Byron Street to I-490 eastbound. One of these layouts would modify Byron Street to 1-way (Option 1) while the other option would retain 2-way traffic on Byron Street (Option 2).



B. Study Alternatives

The concepts for each study segment were presented to the general public in the project workshop meeting held in June 2000. Following this meeting, the City worked in close cooperation with the Technical Advisory Committee and the Citizens Advisory Committee to incorporate the comments received at the workshop and address other concerns regarding the project concepts. Appendix C provides meeting minutes summarizing discussions at the workshops. Through the development process, the initial concepts were combined into six (6) overall project alternatives.

In order to assess each of these alternatives, a roadway typical section was established for the new Inner Loop. Three typical roadway sections were developed and are depicted on Figure 5. In general, the boulevard section was selected for evaluation purposes because it develops a character that is consistent with the proposed Vision for the City of Rochester. This roadway section provides a properly scaled transportation facility that will improve the physical and visual sense of connection between the City Centre and the adjacent neighborhoods. This can be accomplished with the following:

- Pedestrian and bicyclist amenities (i.e. sidewalks/crosswalks)
- Streetscape (i.e. landscaping, benches, lighting, curb)

The boulevard section that includes parking lanes is also a feasible option and should be considered in future development stages of this project.

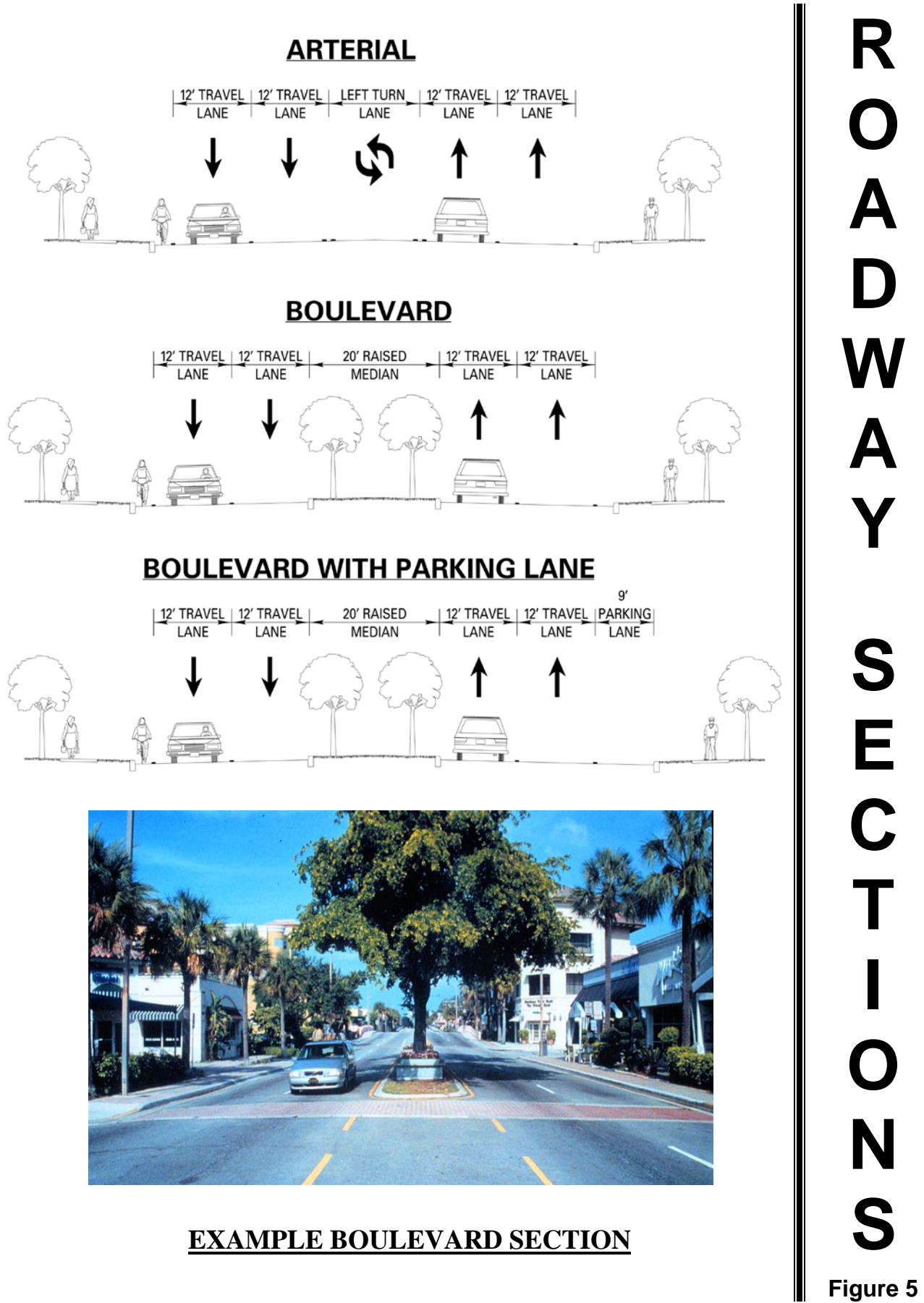


Figure 5



The following provides a brief explanation of each alternative, advantages, disadvantages, and a sketch depicting the alternative.

Alternative 1:

This alternative would replace the existing grade-separated Inner Loop with an at-grade boulevard facility around the eastern portion of the City of Rochester's Central Business District (see Figure 6). In general, this alternative would attempt to restore the original street grid that existed before the Inner Loop was constructed in the 1950's and 1960's.

Monroe Avenue to N. Clinton Avenue

Beginning at Monroe Avenue, the boulevard will follow the existing Inner Loop alignment eastward where it will "T" into Union Street in the vicinity of the Strong Museum. This alignment would remove the existing curvilinear configuration and therefore eliminate the appearance of a Loop around the City. From this intersection, the boulevard alignment will continue north to East Main Street maintaining the existing Union Street configuration. This layout would allow land to be available on the city side of the boulevard for future development. The only exception is a proposed "bulb out" in the alignment near the residential neighborhood from LaFayette Park northerly to Gardiner Park. This alignment was proposed by the Citizens Advisory Group to provide additional green space along the residential neighborhood on the east side of the boulevard, which is a historic district, and to act as a traffic calming measure in an attempt to control speeds along the proposed boulevard.

This alternative also proposes to upgrade Dryer Alley between the new boulevard and Alexander Street to a two-way roadway. In addition, Court Street/Broad Street and Dryer Alley would both be realigned to develop a four-way intersection. This would improve pedestrian and vehicular access from the city to the Park Avenue area.

East Main Street to North Clinton Avenue

From East Main Street to North Street, the boulevard will continue west in the approximate location of existing Delevan Street. This layout would allow land to be available on the north side of the boulevard for future development opportunities. The proposed at-grade boulevard facility would transition to the existing grade-separated Inner Loop between North Street and N. Clinton Avenue on the north side of the city.

Within this section, there would be approximately four (4) signalized intersections including University Avenue, Main Street, Scio Street, and Chestnut Street.



Access Improvements

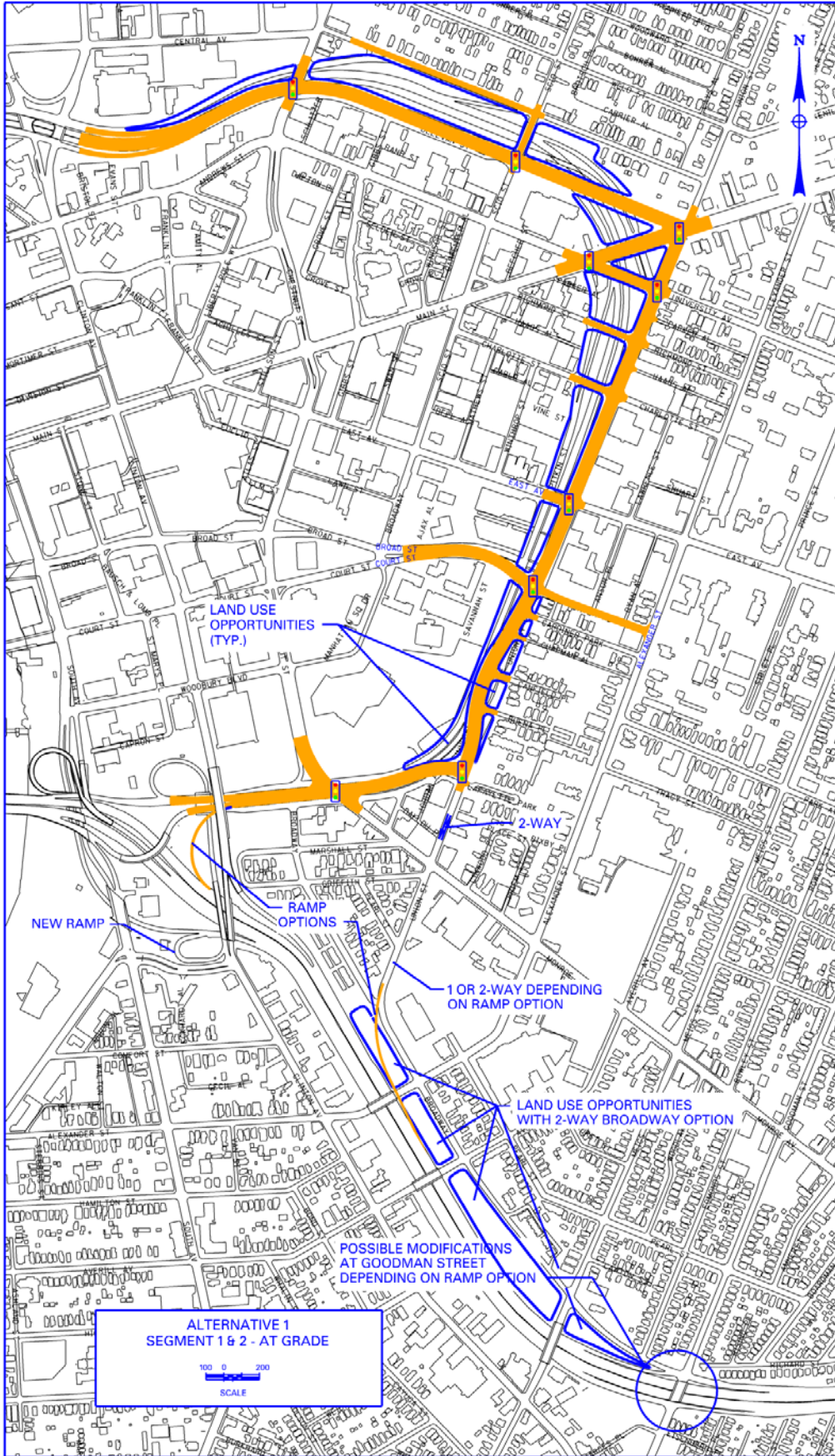
This alternative also proposes to improve access from I-490 westbound to the Inner Loop. The first option would place an off-ramp from I-490 about 800 feet west of the existing South Clinton Street off-ramp. As part of this option, Broadway Street would be converted to a two-way roadway, which would improve access to the vacant land between Broadway Street and I-490. The second option would construct an exit-ramp from I-490 in the vicinity of the Alexander Street overpass structure. This option would provide a direct ramp from the expressway to Union Street.

The following provides a general overview of the advantages and disadvantages of Alternative 1.

ALTERNATIVE 1 ADVANTAGES AND DISADVANTAGES
TABLE 7

<i>Advantages</i>	<i>Disadvantages</i>
+ Elimination of the barrier between City Centre and adjacent neighborhoods.	– Unacceptable intersection layout and operations at Main Street, University Avenue and Union Street.
+ Improved cohesiveness between City Centre and adjacent neighborhoods.	– Mobility of the area would be impacted, in particular from E. Main Street to North Street.
+ Restore original street grid.	– The I-490 westbound off-ramp at Union Street (Option 2) would impact the residential neighborhood adjacent Broadway and not allow conversion of Broadway to 2-way.
+ Land use opportunities.	– Dryer Alley re-alignment would impact adjacent businesses.
+ Improved access from I-490 westbound to the boulevard.	
+ Aesthetic improvement opportunities.	
+ Improved connection between Park Avenue and City Centre via Dryer Alley and Broad Street re-alignment.	
+ Gateway entrance enhancements: Monroe Avenue, East Avenue, Main Street, Scio Street and North Street.	





ALTERNATIVE 1

Figure 6



Alternative 2

Alternative 2 proposes a transportation facility that would include both at-grade and grade-separated sections around the eastern portion of the Central Business District (see Figure 7). This alternative will replace the existing grade-separated Inner Loop from Monroe Avenue to Charlotte Street with an at-grade boulevard facility. From Charlotte Street to N. Clinton Avenue, the grade-separated facility will be retained with some modifications.

Monroe Avenue to E. Main Street

Beginning at Monroe Avenue, the boulevard will follow the existing Inner Loop alignment eastward and retain the curvilinear alignment in the vicinity of Strong Museum. The curvilinear alignment will hug the right-of-way near the museum and transition to the east as the boulevard approaches Charlotte Street. This alignment provides open lands on the east side of the boulevard near Buena Place and provides open lands on the west side of the boulevard near Charlotte Street. In this section, the future traffic volumes support this type of facility. In general, this alternative will attempt to restore the original street grid from Monroe Avenue to E. Main Street.

This alternative also proposes to upgrade Dryer Alley between the new boulevard and Alexander Street to a two-way roadway. Broad Street and Dryer Alley would both be realigned to develop a four-way intersection. This would improve pedestrian and vehicular access from the city to the Park Avenue area.

E. Main Street to N. Clinton Avenue

The alignment from E. Main Street to North Street will be realigned to the south towards downtown. This section will provide retaining walls adjacent the highway and eliminate the grass slopes that currently exist. This would open lands to the north for future land uses. The existing Scio Street entrance and exit ramps would both be eliminated with this layout thus providing land for future land use opportunities. In this area, the bridge structures over the Inner Loop will be widened to provide for landscaping and gateway treatments. A frontage road would be constructed from N. Clinton Avenue to Scio Street on the south side of the Inner Loop to provide access from the Inner Loop to Scio Street. Lastly, a vehicle or pedestrian link could be included from Gibbs Street to Lyndhurst. The traffic volumes are significantly higher in this section and therefore support a grade-separated Inner Loop facility.

Access Improvements

This alternative also proposes to improve access from I-490 westbound to the Inner Loop. The first option would place an off-ramp from I-490 about 800 feet west of the existing Clinton Street off-ramp. As part of this option, Broadway Street would be converted to a two-way roadway, which would improve access to the vacant land between Broadway Street and I-490. The second option would construct an exit-ramp from I-490 in the vicinity of the Alexander Street overpass structure. This option would provide a direct ramp from the expressway to Union Street.

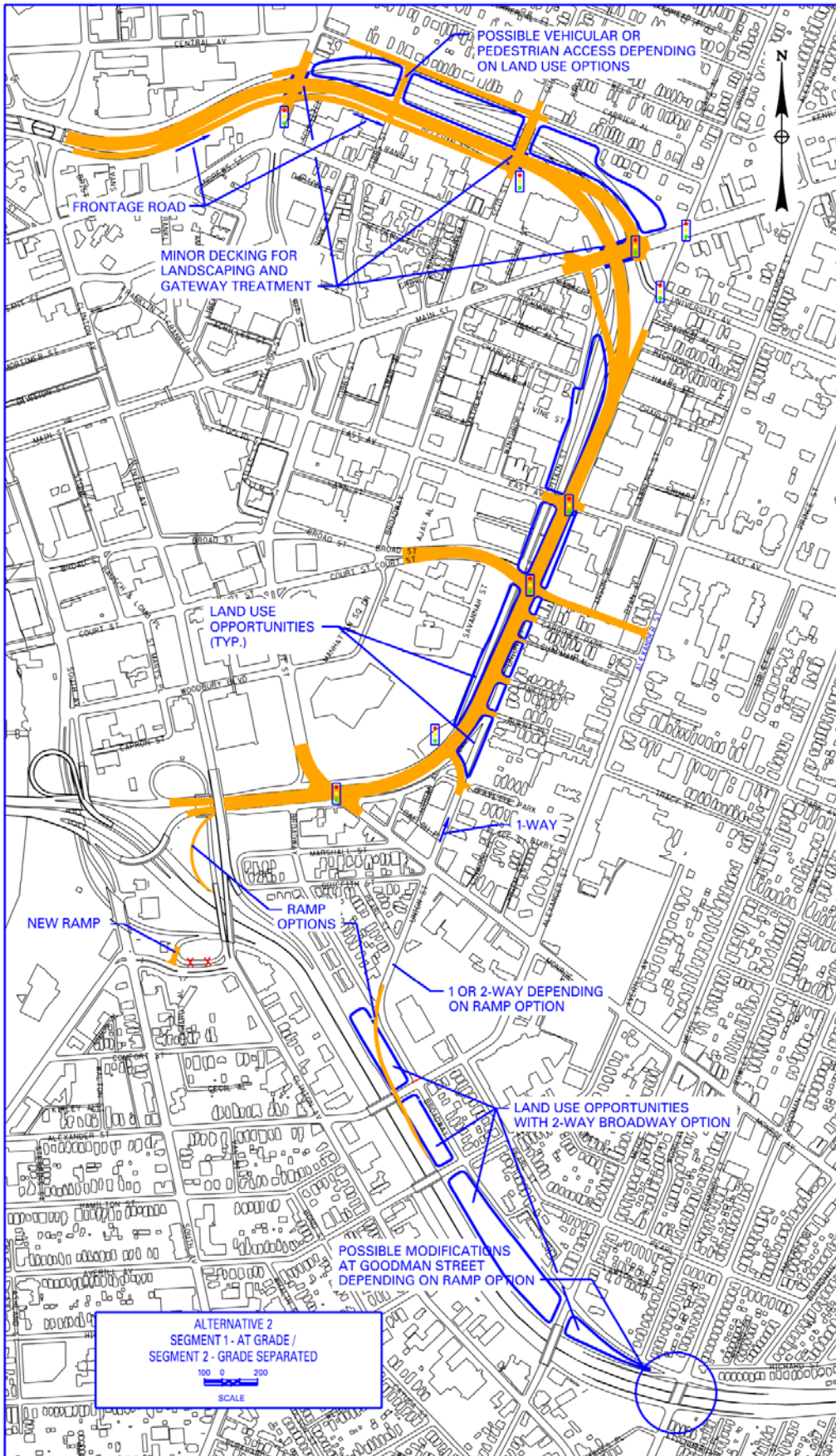


The following provides a general overview of the advantages and disadvantages of Alternative 2.

ALTERNATIVE 2 ADVANTAGES AND DISADVANTAGES
TABLE 8

<i>Advantages</i>	<i>Disadvantages</i>
+ Elimination of the barrier between the City Centre and adjacent neighborhoods (Monroe Avenue to Charlotte Street).	– Retains barrier between the City Centre and adjacent neighborhoods from Charlotte Street to N. Street.
+ Improved cohesiveness between the City Centre and adjacent neighborhoods.	– Elimination of Scio Street ramps, thus impacting mobility of area.
+ Restore original street grid from Monroe Avenue to Charlotte Street.	– The I-490 westbound off-ramp at Union Street (Option 2) would impact the residential neighborhood adjacent Broadway and not allow conversion of Broadway to 2-way.
+ Land use opportunities.	– Dryer Alley re-alignment would impact adjacent businesses.
+ Improved access from I-490 to the boulevard.	– Aesthetics along the Inner Loop from East Main Street to North Street would change from grass/tree side banks to high retaining walls.
+ Gateway entrance enhancements: Monroe Avenue, East Avenue, E. Main Street, Scio Street, North Street.	
+ Enhance aesthetics.	
+ Improved connection between Park Avenue and City Centre via Dryer Alley and Broad Street re-alignment.	





A L T E R N A T I V E 2

Figure 7



Alternative 3:

Alternative 3 proposes a transportation facility that would include both at-grade and grade-separated sections around the eastern portion of the City of Rochester’s Central Business District (see Figure 8). This alternative will replace the existing grade-separated Inner Loop from Monroe Avenue to Main Street with an at-grade boulevard facility. From E. Main Street to N. Clinton Avenue, the grade-separated facility will be retained with some modifications. Alternative 3 creates an at-grade E. Main Street intersection, in contrast to Alternative 2 that keeps the E. Main Street intersection in a grade-separated configuration.

Monroe Avenue to East Main Street

Beginning at Monroe Avenue, the boulevard will follow the existing Inner Loop alignment eastward where it would “T” into Union Street in the vicinity of the Strong Museum. This alignment would remove the existing curvilinear configuration and therefore eliminate the appearance of a Loop around the City. From this intersection, the boulevard alignment will continue north maintaining the existing Union Street configuration. This layout would allow land to be available on the city side of the boulevard for future development. The only exception is a proposed “bulb out” in the alignment near the residential neighborhood from LaFayette Park northerly to Gardiner Park. This alignment was proposed by the Citizens Advisory Group to provide additional green space in the residential neighborhood on the east side of the boulevard, which is a historical district, and to act as a traffic calming measure in an attempt to control speeds along the proposed boulevard. In this section, the future traffic volumes support this type of facility. In general, this alternative will attempt to restore the original street grid from Monroe Avenue to Main Street.

This alternative also proposes to upgrade Dryer Alley between the boulevard and Alexander Street to two-way. In addition Court Street/Broad Street and Dryer Alley will both be realigned to develop a four-way intersection. This will improve pedestrian and vehicular access from the city to the Park Avenue area.

East Main Street to N. Clinton Avenue

The alignment from East Main Street to North Street will be realigned to the south towards the city. This section will provide retaining walls adjacent the highway and eliminate the grass slopes that currently exist. This would open lands to the north for future land uses. The existing Scio Street entrance and exit ramps would both be retained with this layout thus providing access for the neighborhoods to the north of the city. In this area, the bridge structures over the Inner Loop will be widened to provide for landscaping and gateway treatments. The traffic volumes are significantly higher in this section and therefore support a grade-separated Inner Loop Facility.

Access Improvements

This alternative also proposes to improve access from I-490 westbound to the Inner Loop. The first option would place an off-ramp from I-490 about 800 feet west of the existing Clinton Street off-ramp. As part of this option, Broadway Street would be converted to two-way, which would improve access to the vacant land between Broadway Street and I-490. The second option would construct an exit-ramp from I-490 in the vicinity of the



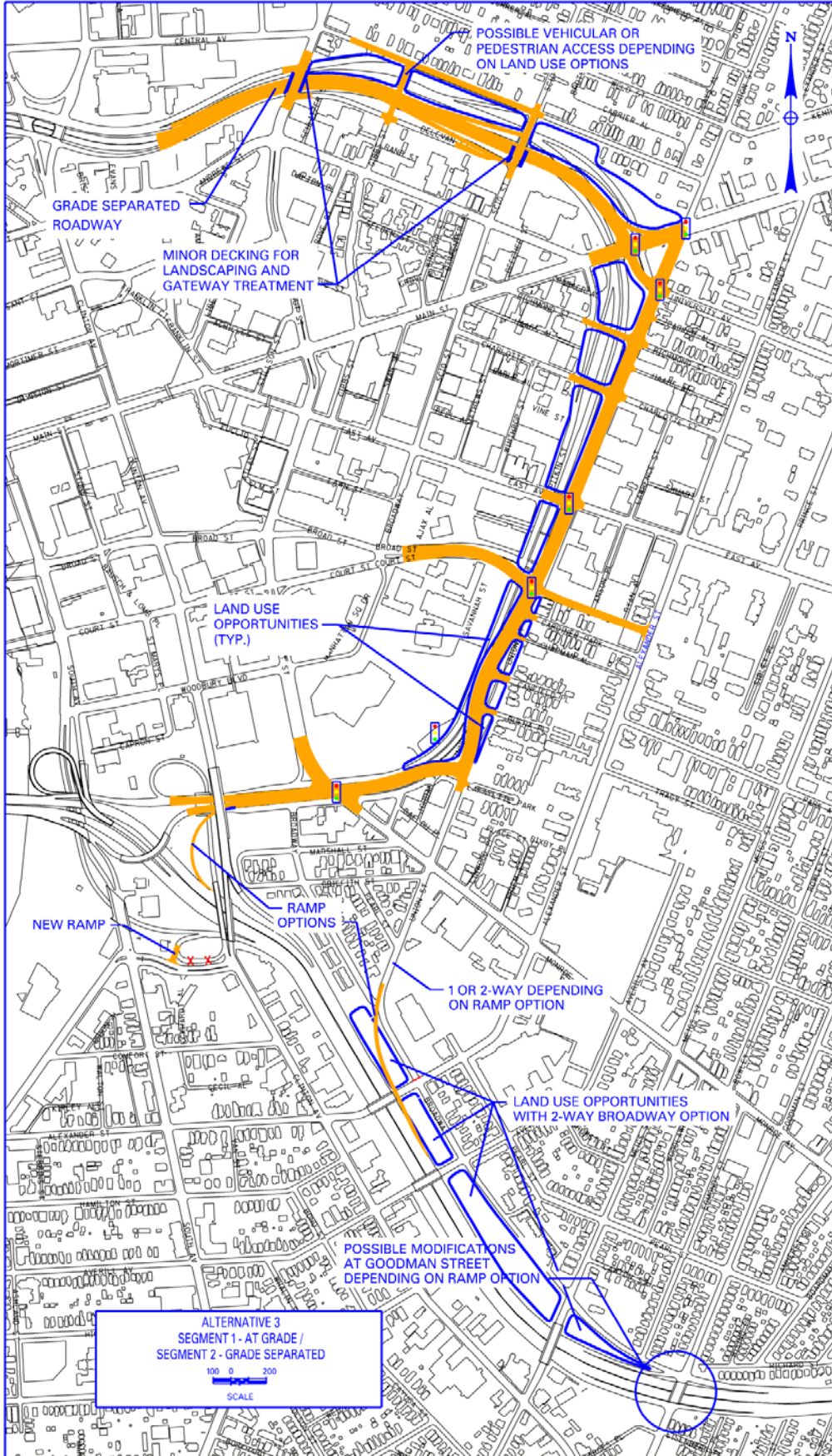
Alexander Street overpass structure. This option would provide a direct ramp from the expressway to Union Street.

The following provides a general overview of the advantages and disadvantages of Alternative 3.

ALTERANTIVE 3 ADVANTAGES AND DISADVANTAGES
TABLE 9

<i>Advantages</i>	<i>Disadvantages</i>
<ul style="list-style-type: none"> + Elimination of the barrier between the City Centre and adjacent neighborhoods (Monroe Avenue to E. Main Street). + Improved cohesiveness between the City Centre and adjacent neighborhoods. + Restore original street grid from Monroe Avenue to E. Main Street. + Land use opportunities. + Improved access from I-490 to the boulevard. + Gateway entrance enhancements: Monroe Avenue, East Avenue, E. Main Street, Scio Street, North Street. + Enhance aesthetics. + Improved connection between Park Avenue and City Centre via Dryer Alley and Broad Street re-alignment. 	<ul style="list-style-type: none"> – Retains barrier between the City Centre and adjacent neighborhoods from E. Main to N. Street. – All Inner Loop traffic at-grade at E. Main Street. – The I-490 westbound off-ramp at Union Street (Option 2) would impact the residential neighborhood adjacent Broadway and not allow conversion of Broadway to 2-way. – Dryer Alley re-alignment would impact adjacent businesses. – Aesthetics along the Inner Loop from Main Street to North Street would change from grass/trees side banks to high retaining walls. – Intersection operations at the triangle (East Main Street, University Avenue, Union Street)





ALTERNATIVE 3

Figure 8



Alternative 4:

Alternative 4 proposes transportation facilities that will include both at-grade and grade-separated sections around the City of Rochester's Central Business District, (see Figure 9).

Monroe Avenue to East Avenue

This alternative will retain the existing grade-separated Inner Loop from Monroe Avenue to East Avenue. Retaining the grade-separated facility between Monroe and East Avenue will not open any lands for future land use opportunities. The bridge structures at Monroe Avenue, Broad Street and East Avenue will include minor decking for landscaping and gateway treatments.

This alternative also proposes to upgrade Dryer Alley between the boulevard and Alexander Street to two-way. Court Street/Broad Street and Dryer Alley would both be realigned to develop a four-way intersection. This would improve pedestrian and vehicular access from the city to the Park Avenue area.

East Avenue to N. Clinton Avenue

The Inner Loop will transition from a grade-separated facility to an at-grade facility between East Avenue and E. Main Street. From E. Main Street to N. Clinton Avenue, an at-grade boulevard facility is proposed in the approximate location of Delevan Street. At North Street the at-grade facility will transition to the grade-separated facility at N. Clinton Avenue. This layout would allow land to be available on the north side of the boulevard for future development opportunities. The realigned roadway between East Avenue and E. Main Street will provide for future land use opportunities on the West Side of the Inner Loop adjacent the city. The at-grade facility in this area will also connect the city to the surrounding neighborhood for enhanced vehicular and pedestrian traffic.

Access Improvements

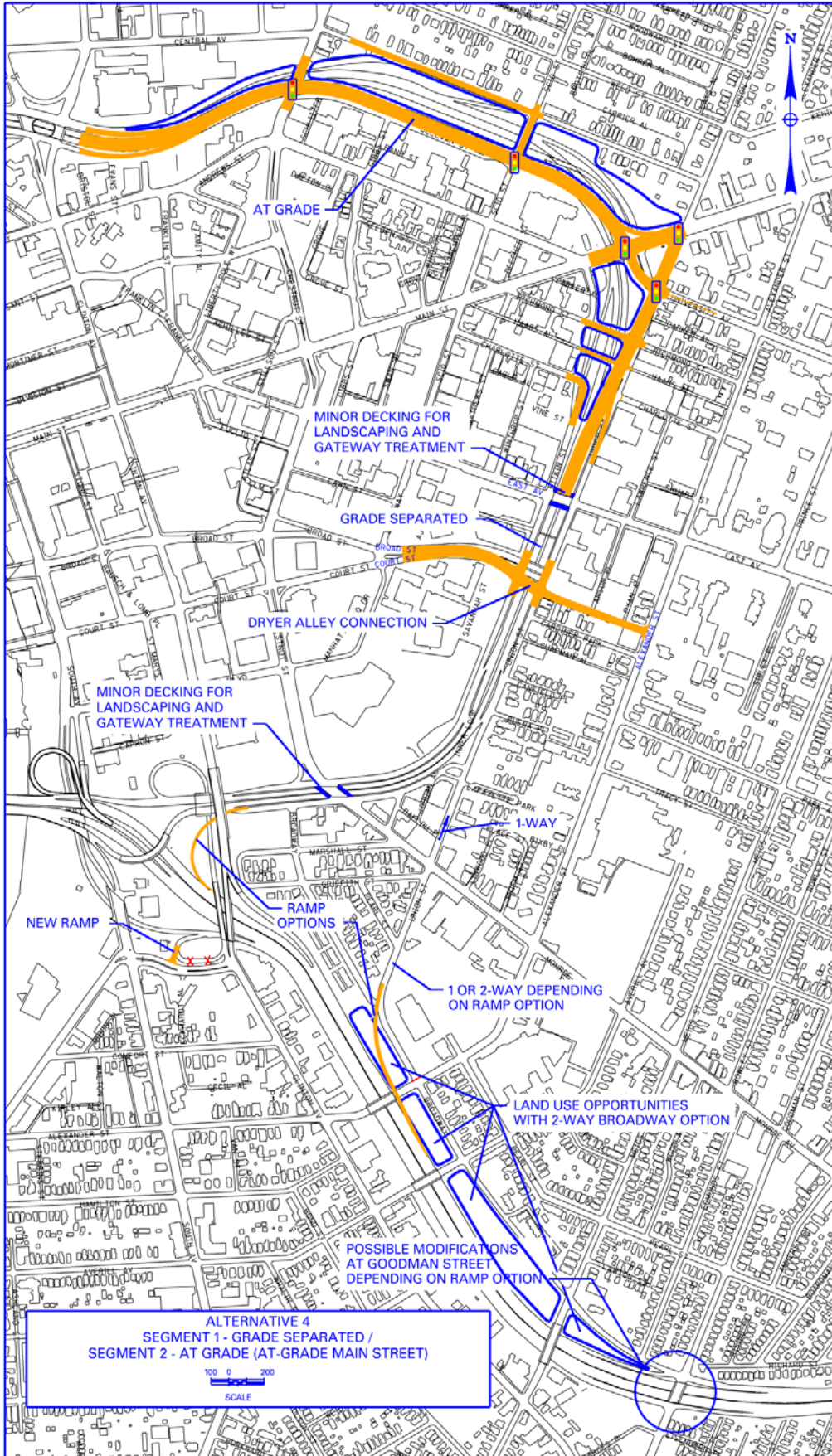
This alternative also proposes to improve access from I-490 westbound to the Inner Loop. The first option would place an off-ramp from I-490 about 800 feet west of the existing Clinton Street off-ramp. As part of this option, Broadway Street would be converted to two-way, which would improve access to the vacant land between Broadway Street and I-490. The second option would construct an exit-ramp from I-490 in the vicinity of the Alexander Street overpass structure. This option would provide a direct ramp from the expressway to Union Street.



**ALTERNATIVE 4 ADVANTAGES AND DISADVANTAGES
TABLE 10**

<i>Advantages</i>	<i>Disadvantages</i>
+ Elimination of barrier between City Centre and adjacent neighborhoods from E. Main Street to North Street.	– Retains barrier between City Centre and adjacent neighborhoods from Monroe Avenue to East Avenue.
+ Improved cohesiveness between City Centre and adjacent neighborhoods from E. Main Street to North Street.	– The I-490 westbound off-ramp at Union Street (Option 2) would impact the residential neighborhood adjacent Broadway and not allow conversion of Broadway to two-way.
+ Restore original street grid (Main Street to North Street).	– Regional Mobility – The Inner Loop segment with the high traffic volumes will be converted to an at-grade facility.
+ Land use opportunities.	– Dryer Alley re-alignment would impact adjacent businesses.
+ Aesthetic improvement opportunities (Main Street to North Street).	– Intersection operations at the triangle (East Main Street, University Avenue, Union Street)
+ Improved access from I-490 westbound to the Inner Loop.	
+ Gateway entrance enhancements: Monroe Avenue, East Avenue, E. Main Street, Scio Street and North Street.	
+ Improved connection between Park Avenue and City Centre via Dryer Alley and Broad Street re-alignment.	





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Figure 9



Alternative 5:

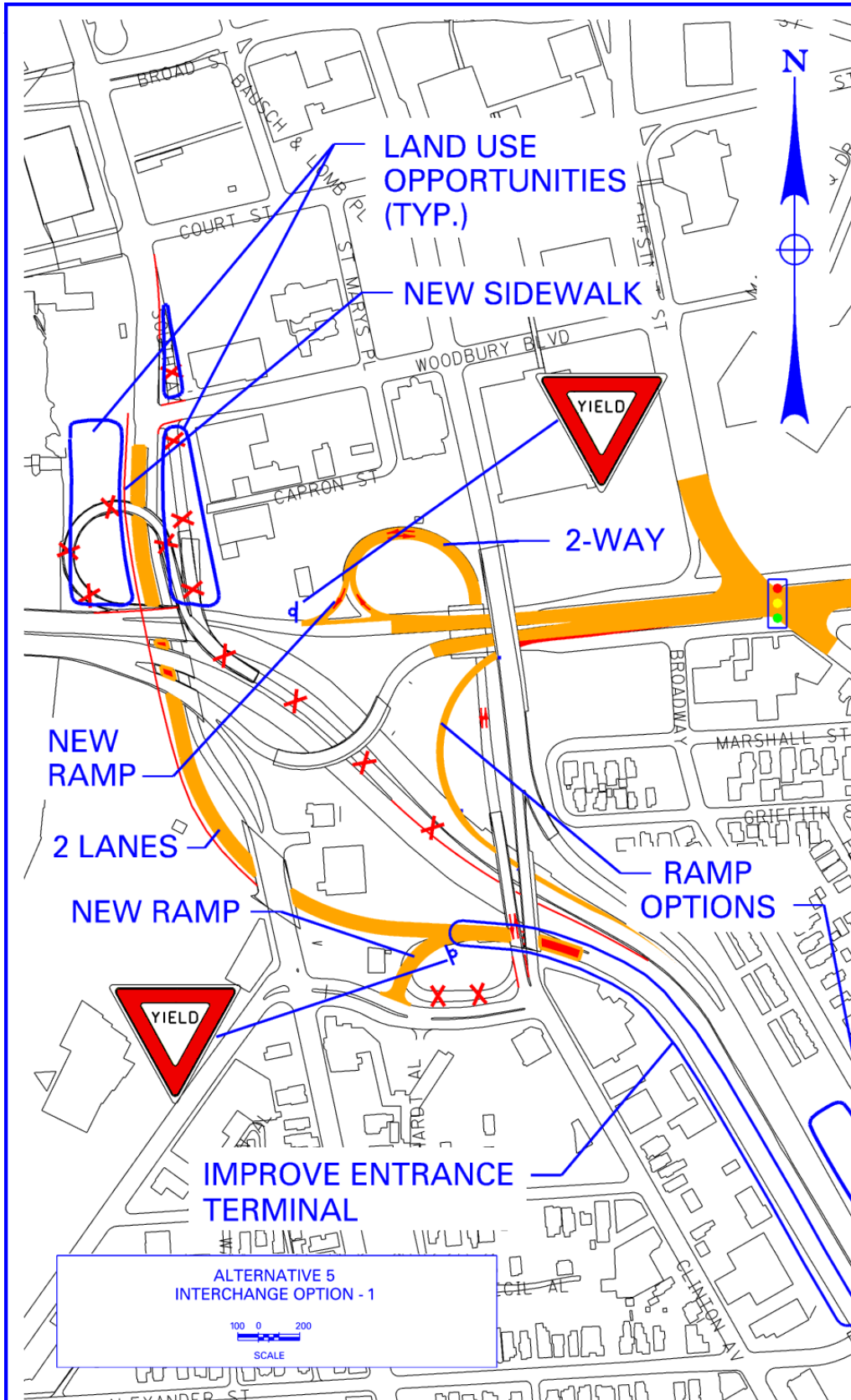
Alternative 5 proposes to modify access within the existing I-490/Inner Loop interchange (see Figure 10). This alternative proposes to eliminate the existing left-hand on-ramp/add lane from the Inner Loop and South Avenue to I-490 eastbound. In addition, the existing ramp from the Inner Loop to S. Clinton Avenue and the Southwedge neighborhood would be converted to two-way. An on-ramp from Byron Street to I-490 eastbound is also included within this alternative.

This alternative would require lane geometric modifications on I-490 eastbound to provide room for a two-lane entrance terminal entering the right-hand side of I-490.

ALTERNATIVE 5 ADVANTAGES AND DISADVANTAGES
TABLE 11

<i>Advantages</i>	<i>Disadvantages</i>
<ul style="list-style-type: none"> + Enhance exit terminal from the City of Rochester on South Avenue (one for I-490 eastbound and one for South Avenue, and thus minimize the existing confusion that currently exists). + Provide direct access from the Southwedge to I-490 westbound and eastbound. + Land use opportunities along the Genesee River. + Improve the pedestrian connection to the city from the Southwedge. + Eliminate the undesirable left-hand on-ramp to I-490 eastbound. + Land use opportunities in the vicinity of Woodbury Place. 	<ul style="list-style-type: none"> – Regional Mobility Impacts – The high volume of traffic from the Inner Loop to I-490 eastbound would not have a direct access ramp. This would cause that traffic to divert to other locations and ramps within the I-490 system. The potential diversions include: South Avenue on-ramp to I-490 eastbound, Clinton Avenue and Byron Street ramps, and Broadway Avenue to the Goodman Street on-ramp. Diversions to the Goodman Street interchange may cause significant impacts and therefore require infrastructure improvements. – Proposed improvements are retrofitted onto the existing non-standard and non-conforming features within the interchange (i.e. ramp horizontal curvature). – Requires lowering Byron Street in order to make the connection to I-490 Eastbound.





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Figure 10



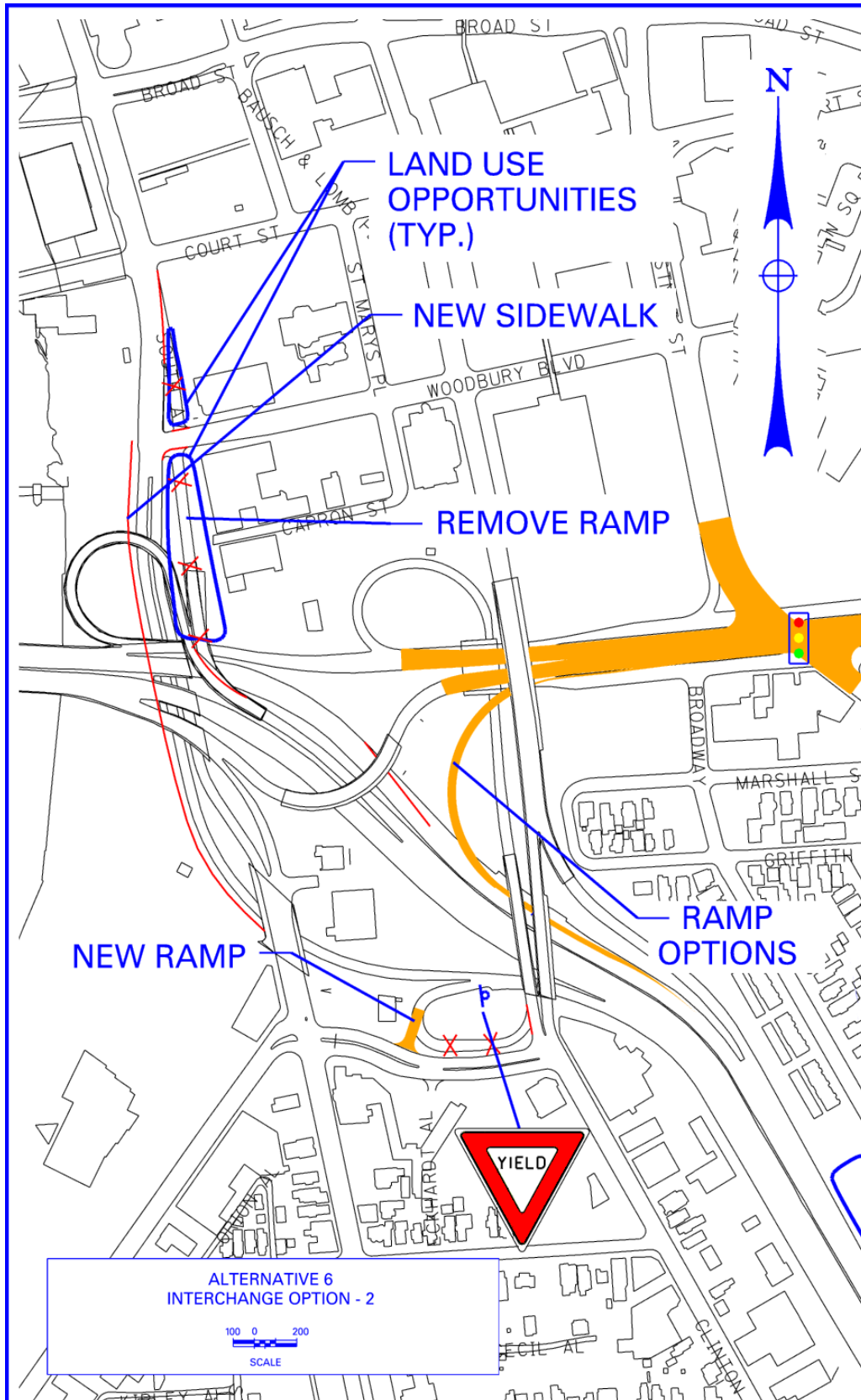
Alternative 6:

Alternative 6 eliminates the left hand on-ramp from South Avenue to I-490 eastbound and retains the right hand on-ramp for drivers accessing I-490 eastbound (see Figure 11). An on-ramp from Byron Street to I-490 eastbound is also included in the alternative.

**ALTERNATIVE 6 ADVANTAGES AND DISADVANTAGES
TABLE 12**

Advantages	Disadvantages
<ul style="list-style-type: none"> + Enhance entrance terminal from South Avenue to I-490 eastbound, thus minimize the decision time required by the driver and improve the safety of the area. + Land use opportunities in the vicinity of Woodbury Place. + Provide access from Southwedge to I-490 eastbound. 	<ul style="list-style-type: none"> – Undesirable left-hand entrance lane from Inner Loop to I-490 eastbound is retained. – Loop ramp from Inner Loop to I-490 eastbound would be retained, continuing to limit access to the Genesee River front. – Lower Byron Street in order to make the connection to I-490 Eastbound.





ALTERNATIVE 6

Figure 11



C. Traffic Assessment of Alternatives

The traffic assessment completed for this study was based on a “worst case” evaluation for the Inner Loop. This evaluation identified existing volumes, assumed essentially no traffic diversions to alternate routes in the downtown area, and projected future volumes to the year 2025 based on an anticipated 1% annual growth rate. In addition, each of these alternatives were assessed assuming the following ramps would be in place:

- I-490 WB off-ramp to the Inner Loop (located in the vicinity of S. Clinton Ave.).
- Byron Street on-ramp to I-490 EB.

The Genesee Transportation Council’s (GTC) TMODEL2 software was initially used to determine traffic diversions resulting from the network changes. The TMODEL results indicate the new off-ramp will service approximately 380 and 300 vehicles during the morning and evening peak hours, respectively. The new on-ramp from Byron Street will service roughly 75 (AM) and 21 (PM) vehicles. This traffic was redistributed throughout the network and Level of Service analysis was conducted at select intersections. Table 13 below shows the Level of Service comparison between existing geometry and the addition of the new ramps. As shown, these ramps may be implemented without having a negative impact on traffic operations.

Table 13
Level of Service Comparison

<i>Intersection</i>	<i>Existing Geometry Am</i>	<i>Existing Geometry Pm</i>	<i>New Ramps AM</i>	<i>New Ramps PM</i>
Alexander @ Park	A	A	A	A
Alexander @ Broadway	A	A	A	A
Averill @ Broadway	A	A	A	A
Byron @ Clinton	B	A	B	A
Monroe @ Union	B	B	B	B
Byron @ Mt. Hope	A	A	A	A
Griffith @ South	D	C	C	C
Woodbury @ I-490 EB on-ramp	A	A	A	A
Inner Loop EB @ Monroe	B	A	A	A
Inner Loop WB @ Monroe	A	A	A	A
Broad @ Pitkin	A	B	A	B



**Table 13 (cont.)
Level of Service Comparison**

<i>Intersection</i>	<i>Existing Geometry Am</i>	<i>Existing Geometry Pm</i>	<i>New Ramps AM</i>	<i>New Ramps PM</i>
Broad @ Union	B	C	B	C
East @ Pitkin	B	B	B	B
East @ Union	A	B	B	A
Main @ University	B	B	B	B
Main @ Inner Loop WB	C	C	C	C
Main @ Union	C	C	C	C
University @ Union	A	B	A	B

Future traffic volumes were forecasted and capacity analysis was completed for the study alternatives. The following provides a summary of the overall traffic analysis, which is included in Appendix B.

Alternative 1:

The following table summarizes the future 2025 levels-of-service, assuming the Inner Loop is brought to grade from Monroe Avenue to Chestnut Street.

<i>Intersection</i>	<i>Alternative 1 Am 2025</i>	<i>Alternative 1 Pm 2025</i>
Inner Loop @ Union	B	B
Inner Loop @ Scio	D	C
Inner Loop @ North	E	E
Alexander @ Park	B	B
Alexander @ Broadway	A	A
Averill @ Broadway	A	A
Byron @ Clinton	B	B
Monroe @ Union	D	D
Byron @ Mt. Hope	A	A
Griffith @ South	D	D
Woodbury @ I-490 EB on-ramp	A	A
Inner Loop @ Monroe	D	D
Inner Loop @ Broad	C	C
Inner Loop @ East	D	D
Main @ University	B	B
Main @ Union	F	F
University @ Inner Loop	C	C



In 2025, the at-grade intersections at Monroe Avenue, Union Street, Broad Street and East Avenue operate at acceptable levels-of-service. E. Main Street and North Street would provide unacceptable levels-of-service.

Alternative 2:

As shown in the table above, the Inner Loop from Monroe Avenue to East Avenue is able to operate acceptably at-grade. Alternative 2 also eliminates the failing conditions from E. Main Street to N. Clinton Avenue, in Alternative 1, by maintaining grade separation. It is important to note that the Scio Street ramps are eliminated under this Alternative, which would increase the number of vehicles on neighborhood streets, thereby causing additional impacts. We feel that these diversions will provide unacceptable operations at various intersections adjacent the area.

Alternative 3:

Under this alternative, Segment 1 of the Inner Loop is at-grade while Segment 2 remains grade separated. The at-grade intersections at Monroe, Union, Broad, and East maintain the same geometry as under Alternative 1 (five lane sections). Under Alternative 3, a series of 4 intersections is created near E. Main Street. With this configuration, all intersections are able to operate acceptably, assuming existing volumes. When the future volumes were analyzed, however, the intersection of Inner Loop at E. Main Street fails. To alleviate the congestion, an additional lane was added in the southbound direction, resulting in four lanes (left, left/thru, thru, and thru/right). This additional lane would be carried through to the intersection of Inner Loop at University Avenue. Here, the eastbound approach would contain 2 through lanes and 2 right turn lanes. With these improvements, Alternative 3 is able to operate acceptably under existing and future volumes. More detailed analysis, however, such as that provided by CORSIM, should be used to model the complex layout of intersections near E. Main Street. CORSIM will provide more detailed results such as queuing and the effects of the signals working and interacting as a system. Table 14 shows the Level of Service for the intersections near E. Main Street. All other at-grade intersections would match those found under Alternative 1.

**ALTERNATIVE 3 LEVELS OF SERVICE
TABLE 14**

<i>Intersection</i>	<i>Alternative 3 Am 2025</i>	<i>Alternative 3 Pm 2025</i>
E. Main @ Union	C	B
E. Main @ Andrews	B	C
Main @ Inner Loop	D	D
University @ Inner Loop	C	D

Alternative 4:

The layout and resulting LOS at the four intersections near E. Main Street match those found under Alternative 3 (Table 15). Again, capacity improvements are required at the Inner Loop / E. Main Street intersection. The segment from E. Main Street to North



Street will match the layout and resulting LOS as shown under Alternative 1 above, with unacceptable LOS at the Inner Loop / North Street intersection.

ALTERNATIVE 4 LEVEL OF SERVICE
TABLE 15

<i>Intersection</i>	<i>Alternative 4 Am 2025</i>	<i>Alternative 4 Pm 2025</i>
Inner Loop @ Scio	D	C
Inner Loop @ North	E	E
Main @ Union	C	B
Main @ Andrews	B	C
Main @ Inner Loop	D	D
University @ Inner Loop	C	D

Alternative 5:

The closing of the left-hand on-ramp/add lane from the Inner Loop and South Avenue to I-490 eastbound results in approximately 1,100 vehicles using the existing right-hand South Avenue on-ramp to I-490 eastbound during the PM peak hour. In addition, approximately 900 vehicles will be redirected to the Clinton Avenue and Byron Street ramps. This would result in over 2,000 vehicles entering I-490 eastbound on the proposed single ramp. This volume would increase to over 2,500 vehicles by the year 2025. With this volume, a 2-lane ramp would be desirable in order to provide sufficient capacity.

Alternative 6:

Eliminating just the ramp on the left side of South Avenue results in 700 vehicles rerouting to the existing right-hand on-ramp to I-490 eastbound. Combined with the 200 vehicles using the Byron on-ramp, the result is approximately 1,300 vehicles accessing I-490 eastbound on this ramp. This volume would increase to over 1,600 vehicles by the year 2025. It is anticipated that with this volume, a one-lane ramp would be sufficient.

D. Land Use

The six alternatives presented focus on developing properly scaled transportation facilities that are consistent with the overall vision of Rochester. These alternatives propose alignment, cross-section and grade modifications that allow for the recovery of land in the existing Inner Loop corridor. This land recovery allows for future land use opportunities and the potential to physically and visually connect the Central Business District to the adjacent neighborhoods. The following identifies land use opportunities for the six (6) alternatives:


Background

It is difficult to determine long-term land use with certainty, as it is dependant on many external factors that are not easily predictable; demographic shifts; market conditions; available public incentives; public policy; economic conditions and interest costs. These



variables are accentuated in this study because the land under study would not be available until the Inner Loop is removed and the replacement transportation facility is completely constructed. Given the long lead-time to solicit approval and environmental review and funding for this type of major transportation project, it is unlikely that the land parcels associated with any of the alternatives would be available before a 7-10 year period. Accordingly, the assessment of land use has been done at a conceptual and comparative level, but does not take into account detailed market ability and feasibility of specific proposals.

The land use for the six alternatives are organized into two geographic areas which include the new parcels in Segment 2 (north of E. Main Street) and the new parcels in Segments 1 and 3 (south of E. Main Street). Each of these new parcels was proposed for the long-term use in the following categories:

Category	Characteristics
<p>Commercial Use</p> 	<p>There is the potential for a variety of office, business, and retail commercial uses. Other acceptable uses might include: cultural and performing arts, public/civic, and institutional uses. Buildings should be compatible with their surrounding context to achieve a continuity in massing and street wall, as well as an engaging street level.</p>
<p>Commercial and/or Residential use</p> 	<p>Uses could be entirely commercial or residential with the possibility to mix uses with commercial/retail at the lower levels and residential uses above. Buildings should be similar in volume and height to the surrounding context with possible upper level step-backs to preserve street character and provide a transition to adjacent uses residential uses of lower height and density.</p>
<p>Residential Use</p> 	<p>Depending on location, residential uses could be single family or multi-family developments that are similar in scale and volume to the surrounding context. If multi-family developments are attached or apartment units, buildings could use smaller scale elements to break up massing and achieve compatibility with adjacent existing uses.</p>
<p>Open Space</p> 	<p>Based on location, the open space could be used as 1) landscaped buffer to existing uses 2) pedestrian paved areas or piazzas to connect existing streets; 3) widened sidewalks with landscaping to improve pedestrian amenities at the street, 4) undeveloped open space – primarily at locations adjacent to on/off ramps for the Inner-Loop. At key locations larger open spaces offer the opportunity to combine parcels to create parks and new development. This could include small buildings, pavilions or landscaped plazas and recreational spaces.</p>



Alternative #1:

Conceptual Land Use - North of E. Main

The land use in this area has three major components (see Figure 12). First, the intersection of North Street and the new boulevard has the most potential for drawing activity from the city center to the north. Thus, Commercial Use was proposed at this intersection. Second, the long parcel that runs parallel to the new boulevard could create a transition zone between the city center and the residential neighborhood to the north and is proposed as Commercial and/or Residential. Another long parcel with Residential is located north of this area, which could further extend the existing neighborhood at Lyndhurst Street to the south as it meets the newly created transition zone mentioned above. Finally, the third component of this area is the Open Space at the intersection of the new boulevard and Main Street. The opportunity exists to have potential development set back from E. Main Street, which would create a public plaza and open space at this intersection.

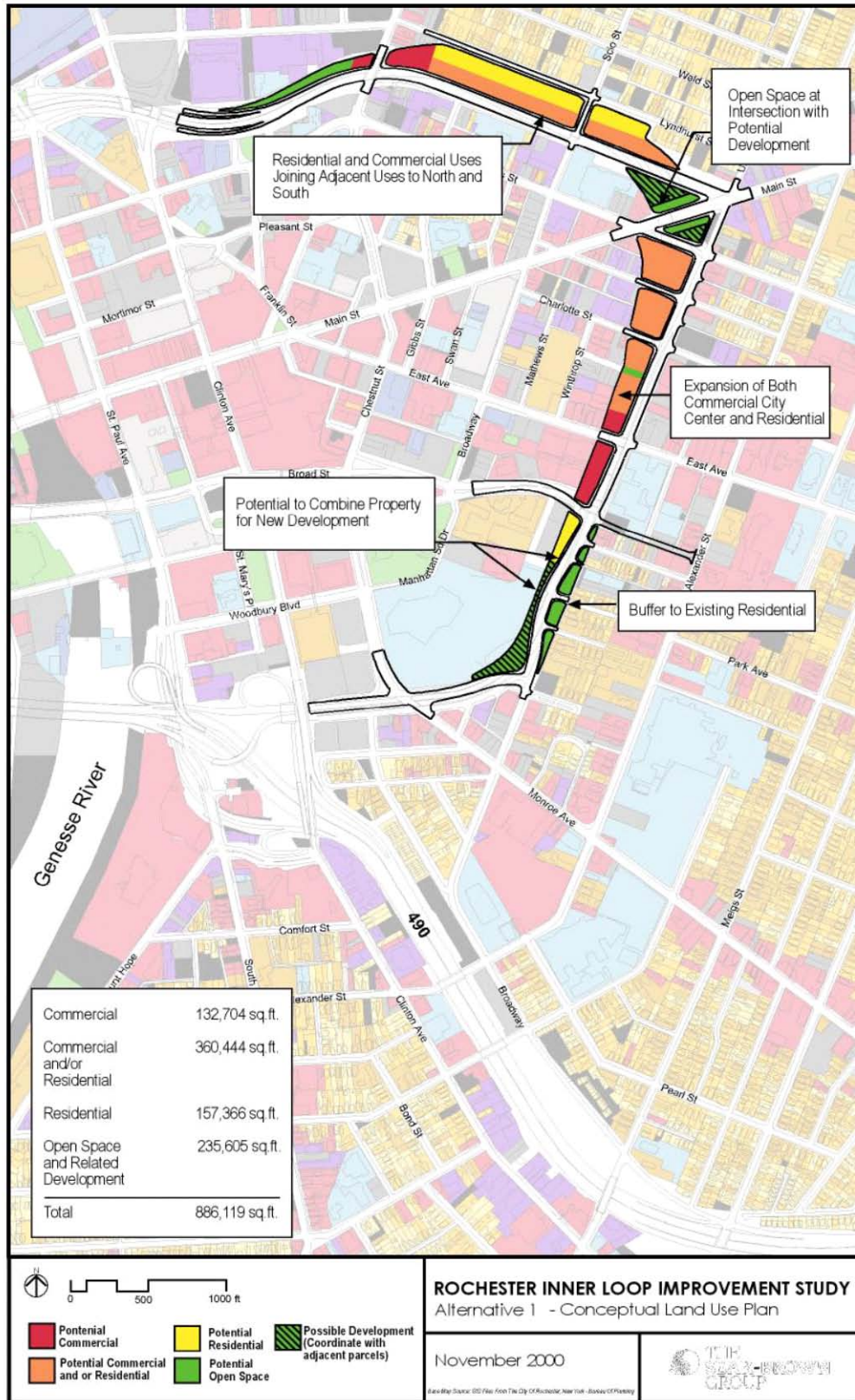
Conceptual Land Use - South of E. Main

The land at the intersection of the new boulevard and E. Main Street is similar to the proposed use on the north side of this intersection (see Figure 12). The parcel is identified as Open Space and has the potential to include some development that is set back from the intersection. Progressing south along the new boulevard, the new parcels are proposed as Commercial and/or Residential, providing the opportunity to have a mix of uses that could expand upon the existing commercial city center and some residential developments that are in this area. The land use at the intersection of East Avenue is proposed to be Commercial to build upon on the existing activities and uses found along this street.

Further south, the land uses on the west side of the new boulevard were proposed to coordinate with adjacent parcels. Residential is assigned to the parcel near Savannah Street to complement the neighboring Midtown Manor apartments, Manhattan Square Apartments, and Savannah Apartments. In addition, the new parcel that runs along the Strong Museum is assigned as open space with the possibility to combine development with adjacent parcels.

There are five small new parcels that are created across from the Strong Museum. Due to the depth and access to these parcels, development is somewhat restrictive. These parcels would be best served as a buffer from the new boulevard and are proposed as Open Space.





ALTERNATIVE 1

Figure 12



Alternative #2:

Conceptual Land Use - North of E. Main

The land use proposed at North Street and E. Main Street, where they intersect the Inner Loop, is Commercial. At both locations the additional commercial use provides for an extension of the existing uses in the area. While both locations extend the fabric of the city, the on and off-ramps and vertical separation of the Inner Loop still create a gap in the continuity of use and frontage along both of these streets.

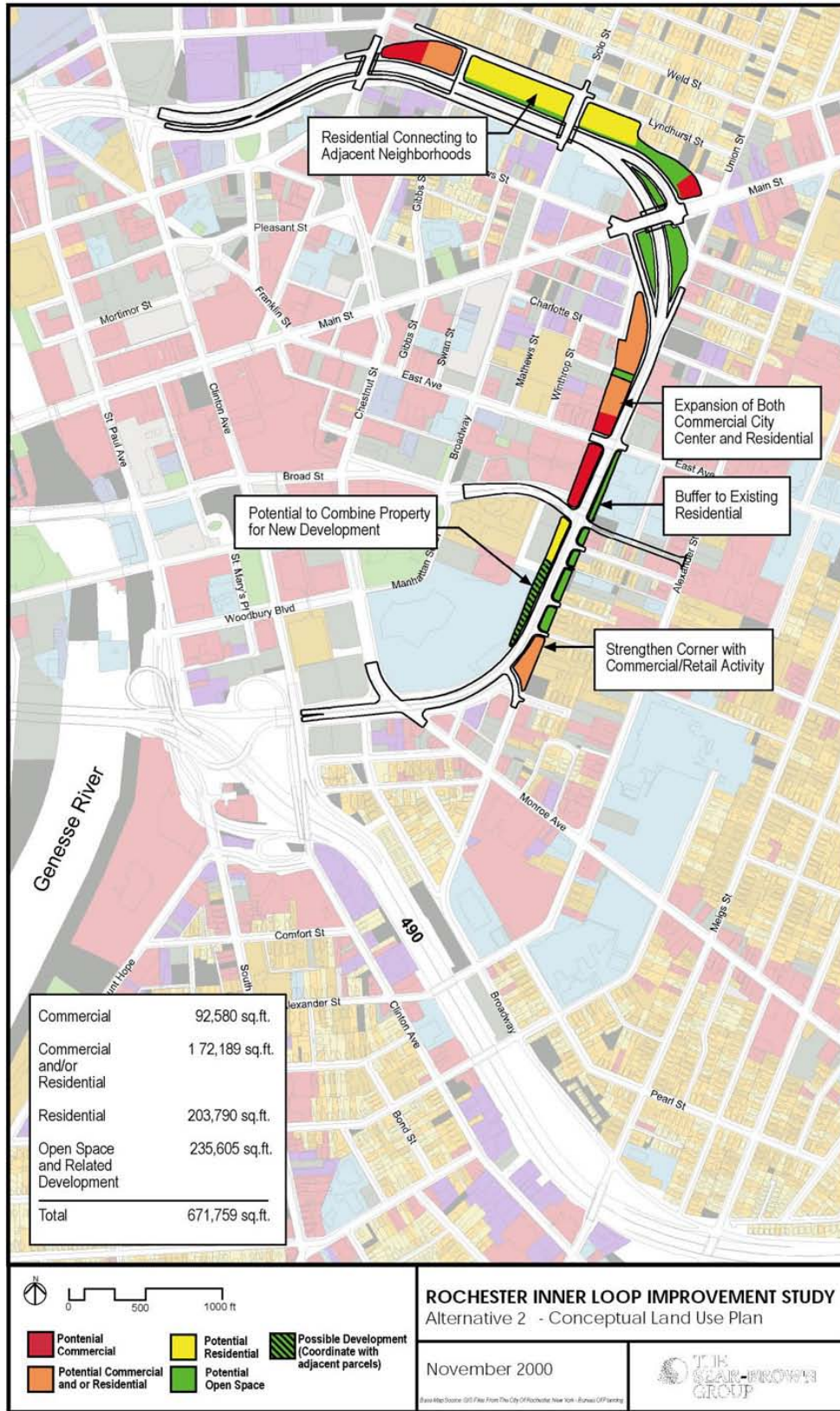
The residential neighborhood along Lyndhurst is extended by proposing Residential to the parcel located outside and to the north of the Inner Loop. Open space is included within these residential parcels to provide for separation and buffering to the highway. In addition, Open Space is proposed for the new parcels created between the Inner Loop and its on/off ramps, near E. Main Street. These open space parcels offer little or no development potential. Figure 13 depicts the proposed land uses associated with this alternative.

Conceptual Land Use - South of E. Main

There are two parcels that are adjacent to E. Main Street which are proposed as Open Space. Due to their shape and functionality, these “residual spaces” between the on/off-ramps and Inner Loop are best suited as buffering to adjacent areas. The west side of the new boulevard, which starts south of Charlotte Street, has several new parcels that are proposed as Commercial and/or Residential. This extends similar uses found in the city center. The addition of mid-block Open Space is included in this parcel to provide a pedestrian extension of Vine Street to the new boulevard. Similar to Alternative #1, the new parcels at East Avenue are proposed as Commercial, which could build upon the existing character and uses found along East Avenue.

While being smaller in size to the parcels in Alternative #1, the parcels along the Strong Museum and the residential area at Savannah Street are proposed as the same Residential and Open Space with the potential to combine development with adjacent areas. The parcels created on the east side of the new boulevard are small and, in most cases, are best served as Open Space. This would provide a buffer to the adjacent institutional uses and residential uses found along Union Street. There is one parcel, however, that is proposed as Commercial and/or Residential at the intersection of Union Street the new boulevard, where the opportunity exists to extend either the Commercial or Residential. Figure 13 depicts the proposed land uses associated with this alternative.





ALTERNATIVE 2

Figure 13



Alternative #3:

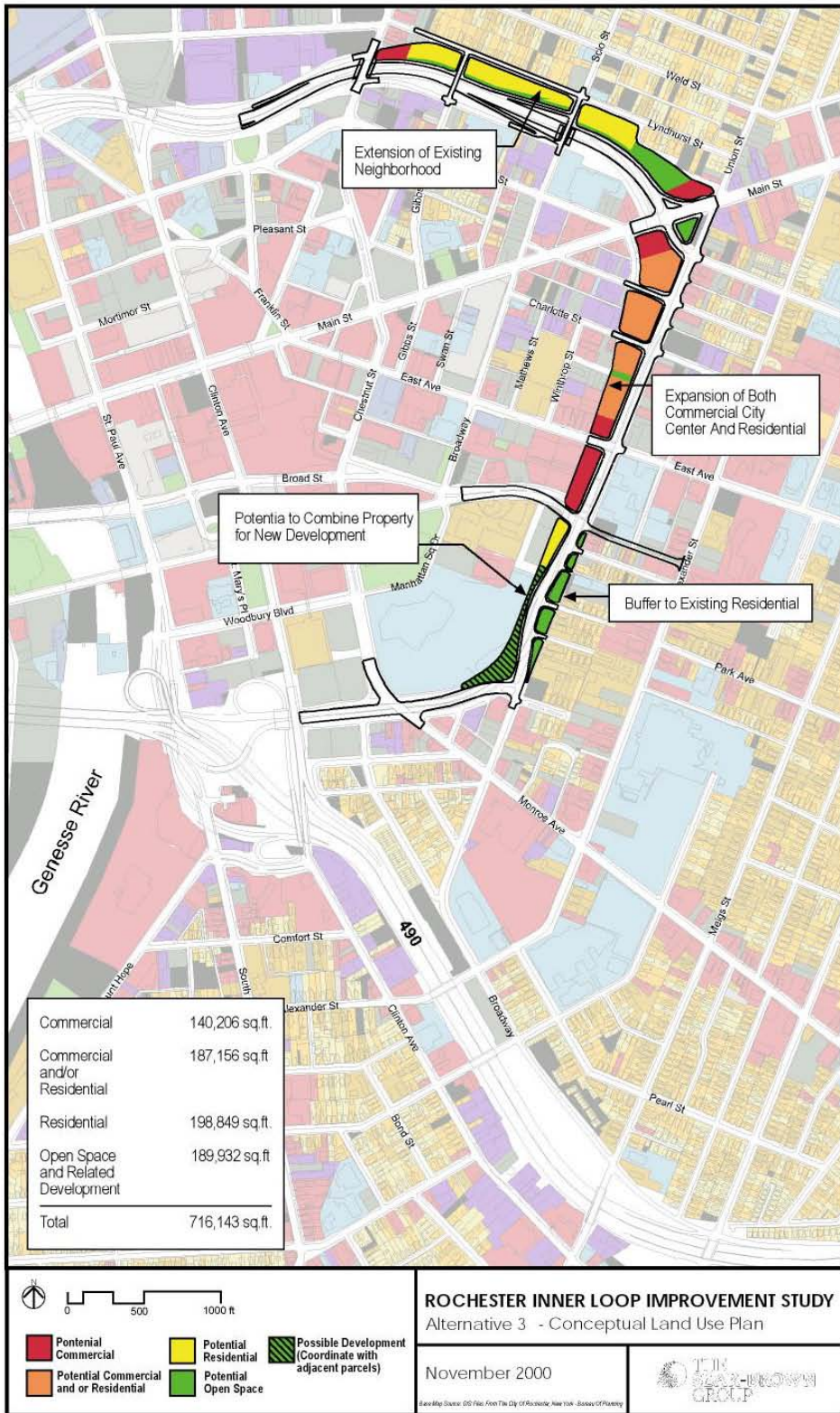
Conceptual Land Use - North of E. Main

The land uses proposed to the north of E. Main Street are similar to Alternative #2, in that the intersections at North Street and E. Main Street are Commercial. There are parcels and portions of parcels adjacent to Lyndhurst Street that are Residential which provide for the expansion of the existing neighborhood from the north. The south sides of these parcels have an area set aside as Open Space to allow for a buffer between the Residential and the Inner Loop. Figure 14 depicts the proposed land uses associated with this alternative.

Conceptual Land Use - South of E. Main

The triangular parcel, at the intersection of University and E. Main Street, is proposed to remain Open Space. A large parcel is created east of Pitkin Street that allows for the expansion of Commercial on the south side of Main Street. Further south, proposed uses along the new boulevard are predominantly Commercial and/or Residential, which expands the existing city center commercial and small amounts of residential. As in the first two alternatives, the parcels located at the intersection of East Avenue have the assignment of Commercial to further extend the existing character and uses commonly found on East Avenue. In addition, the Residential use adjacent to the Savannah apartments, and the assignment of the Open Space and with the possibility to combine development with adjacent parcels are similar to the proposed uses found in Alternative #1. Figure 14 depicts the proposed land uses associated with this alternative.





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Figure 14



Alternative #4:

Conceptual Land Use - North of E. Main

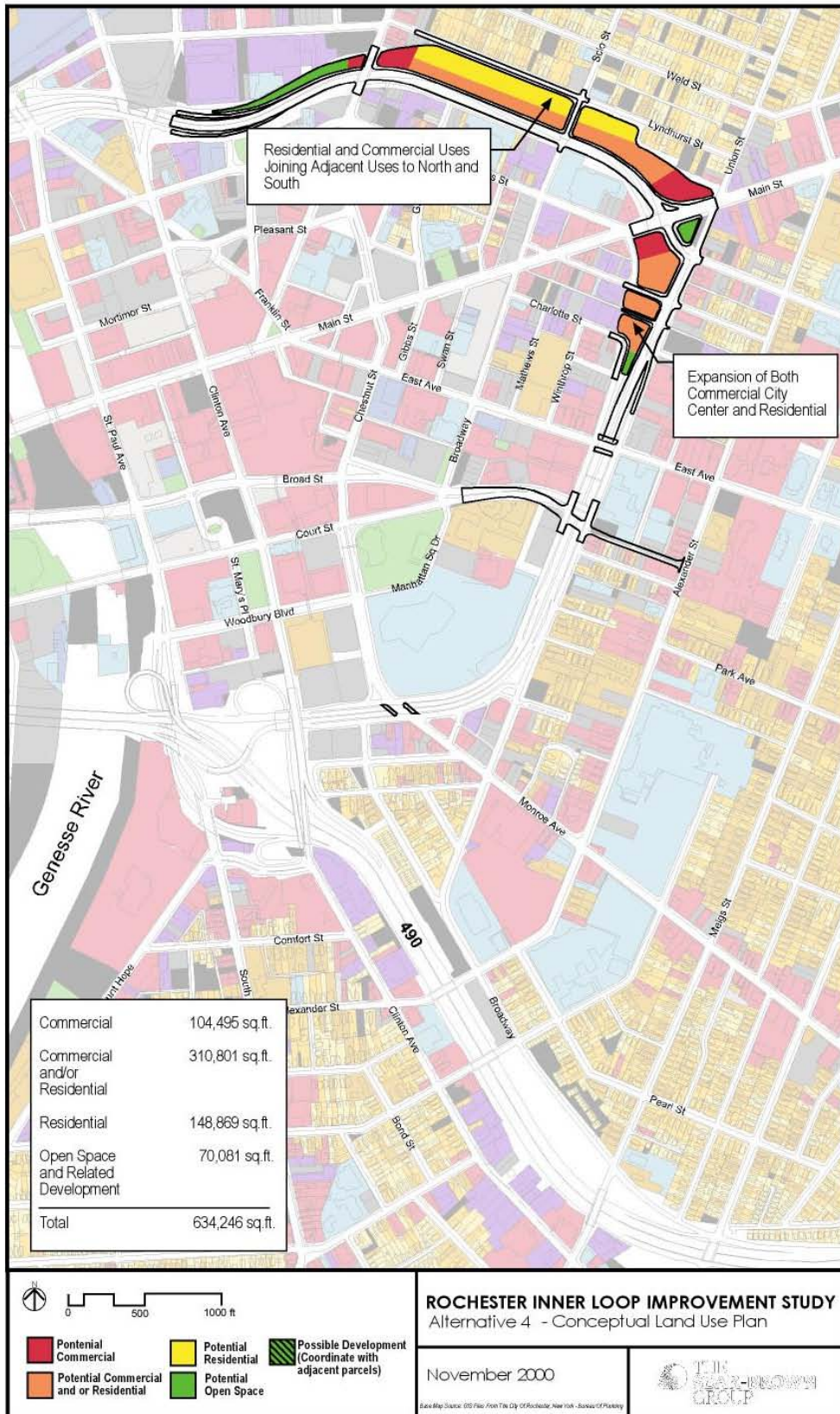
The proposed land use north of E. Main Street is very similar to Alternative #1. The exception is the land use at the intersection of E. Main Street and the new boulevard. Alternative #4 has a larger parcel at this intersection due to the curve of the new boulevard. The size of this parcel provides the opportunity to create a large commercial use that has frontage on the new boulevard and E. Main Street.

The proposed land use is the same as Alternative #1 for all of the other parcels within this area. Figure 15 depicts the proposed land uses associated with this alternative.

Conceptual Land Use - South of E. Main

Alternative # 4 has the least amount of land to the south of E. Main Street. The location of new boulevard, which starts north of East Avenue, creates four new parcels in this area. The triangular parcel at the intersection of University and E. Main is proposed to remain open space. The new parcels are proposed to be Commercial and/or Residential, with the exception of the parcel adjacent to E. Main Street, which is split into two uses. Commercial use is assigned to the portion of the parcel that has frontage on E. Main Street to provide continuity to the existing uses in this area. Figure 15 depicts the proposed land uses associated with this alternative.





ALTERNATIVE 4

Figure 15



Alternative #5:

Conceptual Land Use - North of E. Main

There are no new parcels for Alternative #5 that are located north of Main Street.

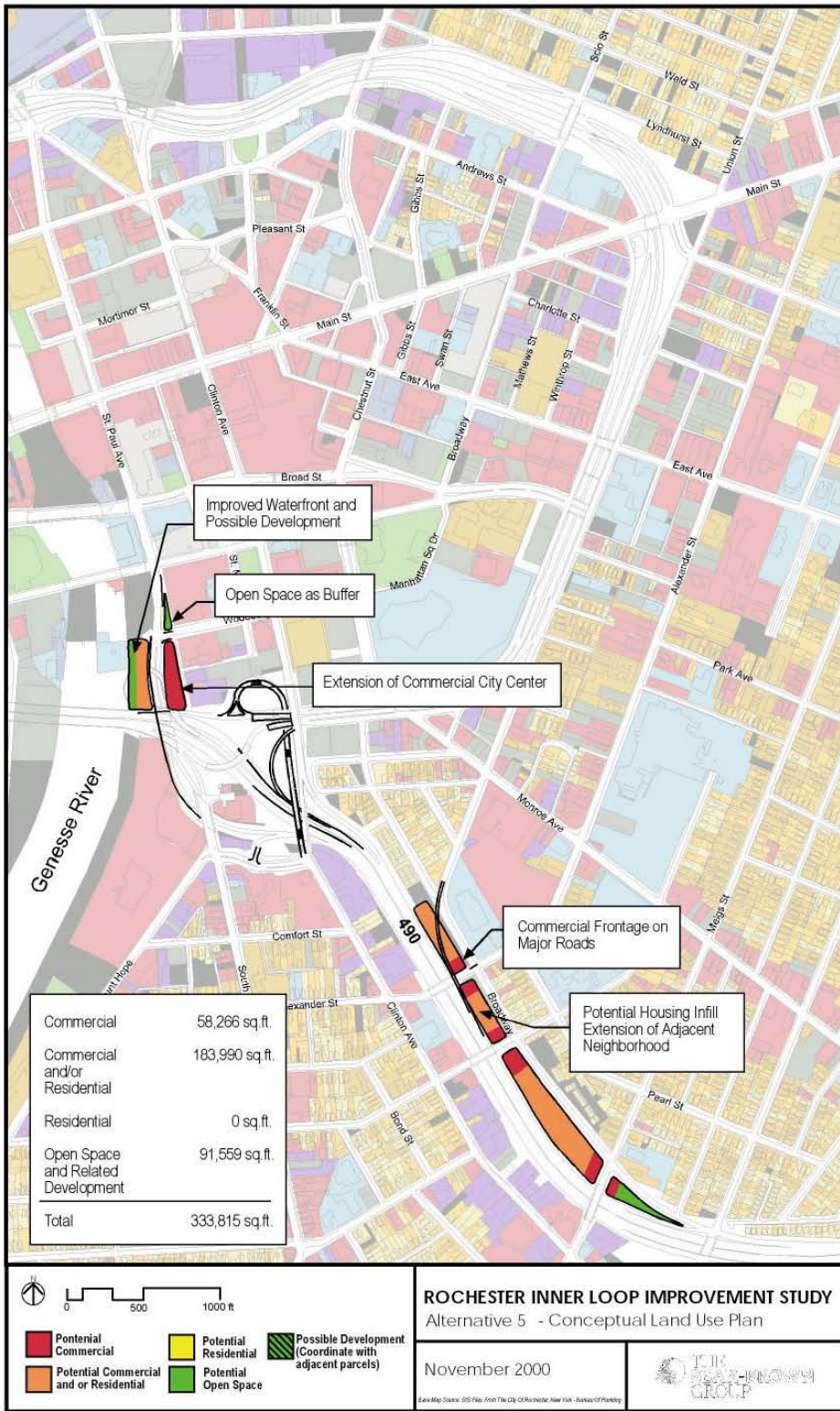
Conceptual Land Use - South of E. Main

There are two areas where the new parcels are located in Alternative #5. First, there are three parcels located near the Genesee River where the ramps for the interchange of I-490 and the Inner Loop get reconfigured. One of which is restrictive in size and is proposed as Open Space. The second is located adjacent to the Genesee River and has the potential to improve upon the existing open space along the waters edge and has a portion of the parcel that is proposed as a mix of Commercial and/or Residential. The third parcel is assigned as Commercial and allows for the extension of the commercial city center.

The second area is further south, along the east side of I-490, where four parcels are created. Commercial use is assigned to the portions of the parcels that face key intersections and roads that cross I-490. Mid-block portions of these parcels are proposed as Commercial and/or Residential so that there may be a mix of housing and retail to create a use zone between the existing interstate and adjacent smaller scale neighborhood.

The proposed land use for the parcels along Broadway will depend upon the configuration and inclusion of the proposed off-ramp near Alexander Street. If this ramp were included in its proposed location, the parcel would most likely not be able to accommodate any development and would be better suited as Open Space. Figure 16 depicts the proposed land uses associated with this alternative.





ALTERNATIVE 5

Figure 16



Alternative #6:

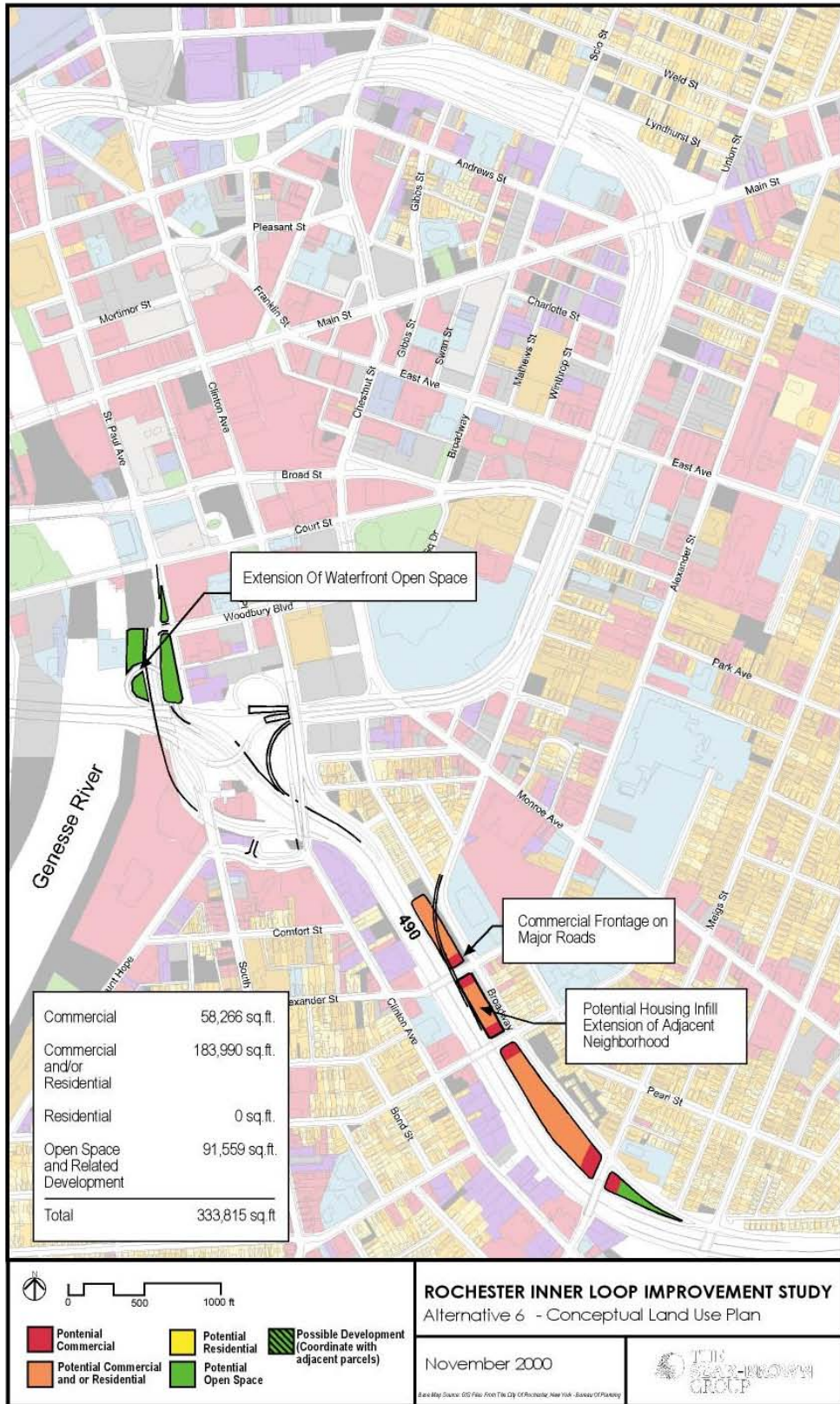
Conceptual Land Use - North of E. Main

There are no new parcels for Alternative #6 that are located north of E. Main Street.

Conceptual Land Use - South of E. Main

The new parcels along Broadway are proposed to be the same uses as Alternative #5, however, the parcels that are adjacent to the Genesee River are assigned as Open Space. The parcels in this area are separated by the ramps for the Inner loop and I-490 interchange. This Open Space would still be limited by the large ramp, however there could be improvements to extend the existing open space that runs along the river's edge. Figure 17 depicts the proposed land uses associated with this alternative.





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Figure 17



PUBLIC AND AGENCY INVOLVEMENT PROGRAM

An extensive public and agency involvement program was developed for this Project that included a Technical Advisory Committee, a Citizens Advisory Committee, and a series of information/workshop meetings. The overall program was founded on the following principles:

- Provide a forum for early input into the needs and objectives for the project,
- Clearly communicate the “needs”, the process and the alternatives so that thoughtful feedback could be provided; and
- Facilitate early involvement of the key stakeholders.

The Technical Advisory Committee included members from the City of Rochester Department of Environmental Services, City of Rochester Department of Economic Development, Monroe County Department of Transportation, New York State Department of Transportation, and the Genesee Transportation Council. This group’s primary role throughout the duration of the project was to provide technical review and oversight of the project development process. In total this group met numerous times to review the progress of the project, review and develop the alternatives, and assess the public’s input.

The Citizens Advisory Committee included members from the various communities surrounding the project study limits who are key stakeholders. The group’s primary role was to assist in the development of the project, communicate the progress of the project to local residents and businesses, and provide feedback to the Citizens Advisory Group on the project’s alternatives based on the local input received. In total this group met 5 times during the planning stages of the project to provide input on the alternatives developed.

The overall involvement program also included three general Development Meetings that were held at the Rochester Central Library. The first meeting included the downtown charrette, which was sponsored by the Rochester Chapter of the American Institute of Architects. This one-day brainstorming session was attended by over 250 people who produced numerous community development concepts for the Central Business District and the Inner Loop. There were various alternatives proposed that focused on reducing the barrier presented by the Inner Loop and creating physical connections to the secondary areas. The second information meeting focused on gathering input on the various preliminary alternatives developed by the Technical Advisory Group for each of the three segments. The meeting started with a general overview of each of the alternatives, which was followed with a workshop where each attendee was able to review the displays and provide valuable input into the development of the alternatives.



Appendix C provides a detailed summary of all the comments received on the conceptual alternatives presented. The following highlights the general comments:

Segment 1 – Monroe Avenue to Main Street

- Eliminate the grade-separated Inner Loop and restore the original street grid network
- Improve the connectivity between the City and the surrounding neighborhoods
- The Park Avenue extension to Union Street would require significant impacts to the existing neighborhood. This option should consider using the existing street network.
- Pedestrian access only from Park Avenue should be considered.
- The existing Inner Loop should be replaced with a boulevard that allows for a center tree landscaped median along with other street beautification improvements.
- Exit ramp from I-490 eastbound to the Inner Loop in the vicinity of Clinton Avenue should be considered.
- Exit ramp from I-490 eastbound to Union Street could cause significant impacts to the existing residential neighborhood on Broadway.

Segment 2 – Main Street to Clinton Avenue

- Eliminate the grade-separated Inner Loop and restore the original street grid network
- Decking seems to be the only option in this section due to the heavy traffic volumes.

Segment 3 – I-490/Inner Loop Interchange

- Improve access from the Southwedge to I-490 eastbound
- Improve access from the Southwedge to I-490 westbound
- Return Clinton Avenue and South Avenue to 2-way traffic
- Enhance the pedestrian corridor from the Southwedge to the City

At the conclusion of the planning stages, a final Public Information Meeting was held to review the refined alternatives, outline the implementation plan, and receive public input. In general, the public supported the overall process and the alternatives that were developed. They requested that the City continues to actively progress the project to the next phase. The public also requested that the City continues to inform the neighborhoods, residents and businesses as the project progresses. Appendix C includes the detailed meeting minutes for this information meeting.



VI. ALTERNATIVE EVALUATION

Matrices have been developed to assist in the evaluation and comparison of the six project alternatives. The comparison of alternatives is made from a consistent baseline, being the No Build Alternative in the 2025 design year. When applicable, quantitative data (i.e. traffic analysis, cost estimates) is provided as a method of comparing alternatives. For subjective comparisons the following definitions are utilized for the alternatives.

- None – There is no change from the Null condition.
- Good/Very Good – There is a positive consequence of the alternative or the alternative meets the project objective(s).
- Poor/Very Poor – There is a negative consequence by the alternative or the alternative does not meet the project objective(s).

The first matrix (Table 16) compares cost, development potential, neighborhood enhancement, transportation service, pedestrian mobility, visual aesthetics, and gateway opportunities per the 2010 Renaissance Plan for alternatives 1 through 4, which focus on the Inner Loop improvements from Monroe Avenue to N. Clinton Avenue.

**TABLE 16
SUMMARY OF ALTERNATIVES 1 – 4**

<i>Alternative</i>	<i>Cost⁴ (Millions)</i>	<i>Development Potential</i>	<i>Neighborhood Enhancement</i>	<i>Transportation Service</i>	<i>Pedestrian Mobility</i>	<i>Visual Aesthetics</i>	<i>2010 Renaissance</i>
No Build	\$6-\$20 ³	Poor	Poor	Acceptable	Poor	Poor	Poor
Alternative 1							
- South Segment	\$7.6	Very Good	Very Good	Acceptable	Very Good	Very Good	Very Good
- North Segment	\$7.3	Very Good	Very Good	Unacceptable ¹	Very Good	Very Good	Very Good
Alternative 2							
- South Segment	\$7.1	Very Good	Very Good	Acceptable	Very Good	Very Good	Very Good
- North Segment	\$16.2	Good	Good	Unacceptable ²	Good	Poor	Good
Alternative 3							
- South Segment	\$7.7	Very Good	Very Good	Acceptable	Very Good	Very Good	Very Good
- North Segment	\$14.0	Good	Good	Acceptable	Good	Poor	Good
Alternative 4							
- South Segment	\$8.2	Poor	Poor	Acceptable	Poor	Poor	Good
- North Segment	\$7.3	Very Good	Very Good	Unacceptable ¹	Very Good	Very Good	Very Good

1. The North Street intersection and the E. Main Street intersection do not provide acceptable intersection operations.
2. This alternative eliminates the Scio Street ramps, which significantly diverts traffic accessing the neighborhoods to the north.
3. No build costs shown indicate a minimum of \$6 million for a short-term rehabilitation or \$20 million for a major reconstruction.
4. Costs shown do not include engineering, inspection or ROW.



The primary focus of this study was to develop alternatives for reconstructing the transportation infrastructure with a facility of appropriate scale, size, and configuration that better meets the community's needs for access, neighborhood cohesion and land use while maintaining acceptable traffic operations for local and regional mobility. In general, an at-grade facility from Monroe Avenue to North Street (Alternative 1) provides the enhancements and elements that meet the overall goals and vision for the City of Rochester as part of their effort to redevelop downtown and reunify the C.B.D. and adjacent neighborhoods. The major potential disadvantage to an at-grade facility around the eastern side of the City of Rochester is the impact to the overall traffic patterns and mobility within the area.

Segment 1 – Monroe Avenue to E. Main Street

This evaluation identified existing volumes, assumed no major traffic diversions, projected future volumes based on the anticipated growth rate, and assessed the at-grade alternative traffic conditions. This evaluation revealed that the at-grade option from Monroe Avenue to E. Main Street would provide acceptable traffic operations with future traffic volumes. Each of alternatives 1, 2 and 3 uses a four-lane boulevard style arterial with left turn lanes at the major intersections. The alternatives vary in their lateral placement within the existing ROW and the connections to the adjoining segments but are otherwise very similar. Alternative 1 and 3 are considered slightly better as they best blend with adjacent land use and work to reestablish the past street grid. As can be seen from the comparisons, this modified Inner Loop would maintain acceptable traffic operations and significantly improve development potential, neighborhood cohesion, pedestrian mobility and aesthetics. It does so consistent with the goals and objectives of the City of Rochester's 2010 Renaissance Plan. For these reasons Alternatives 1, 2 and 3 for the south segment are considered feasible and are recommend for further study. Alternative 4 for the south segment maintains a grade separated facility for the majority of its length and therefore maintains acceptable traffic operations. This alternative does not, however, meet the project's goals and objectives for development potential, neighborhood cohesion, pedestrian mobility or visual aesthetics.

Segment 2 – E. Main Street to N. Clinton Avenue

The challenge that exists along the Inner Loop from E. Main Street to North Street is to develop an alternative that will balance the combined needs of the transportation system and the local neighborhoods. The segment of the Inner Loop from E. Main Street to North Street services a high volume of traffic and is considered a major link in the overall mobility of the area. Alternatives 1 and 4 focused on providing an at-grade facility while Alternatives 2 and 3 proposed retaining a grade separated facility.

Alternatives 1 and 4 proposed an at-grade facility that focused on providing an alternative of appropriate scale, size and configuration that better meets the community's needs for pedestrian access and neighborhood cohesion. The traffic analysis for the Inner Loop in this segment with an at-grade facility revealed that the intersections of North Street/Inner Loop and E. Main Street/Inner Loop would not provide acceptable levels-of-service per the Highway Capacity Manual. Alternatives that consider an at-grade facility within this segment will add additional travel time and inconvenience to the existing and future users of this segment. This condition is



due to the high east west volume on the Inner Loop combined with the high north south volume within the specific intersections. This evaluation assessed various intersection configurations and did not identify any potential solutions to provide desirable operations.

Further, more advanced traffic modeling is required to assess an at-grade facility in Segment 2, which is beyond the scope and funding of this study. This more advanced modeling would involve development of detailed traffic analysis zones and a system link model which would allow for the analysis of possible traffic diversions due to the modified infrastructure. The potential exists that traffic could be diverted from the eastern link to the point of providing acceptable traffic operations. The analysis would then need to evaluate if the diversions would result in traffic impacts at other locations or if the diverted traffic can be assimilated acceptably into the surrounding transportation network. Should the more detailed traffic analysis provide acceptable traffic operations, then these alternatives (Alternatives 1 and 4 – North Segment) may receive further consideration for implementation.

Alternative 2 (North Segment) was developed to review partial downgrading of the Inner Loop through the removal of the Scio Street ramps. The planning level traffic analysis indicates that elimination of the Scio Street Ramps would have unacceptable traffic effects on adjacent access points to the Inner Loop and the collector-distributor road system and as such is not recommended for further study.

Alternative 3 (North Segment) was developed to consider “narrowing” of the Inner Loop corridor while maintaining a grade separated expressway facility including the retention of the Scio Street ramps. This alternative provides/maintains acceptable traffic operations and partially satisfies project goals and objectives for development potential, neighborhood enhancement and pedestrian mobility by reducing the “moat” feel of the roadway. This alternative should be pursued should alternatives 1 or 4 – North Segment not be deemed viable after more advanced traffic analysis and modeling.

In order to provide acceptable operations at E. Main Street, the configuration that is proposed on Alternative 3 would be required with the addition of various turning lanes on the different legs of the intersection. To alleviate congestion, an additional lane was added in the southbound direction, resulting in four lanes (left, left/thru, thru and thru/right). This additional lane would be carried through to the Inner Loop at University Avenue. Here the eastbound approach would contain 2 through lanes and 2 right turn lanes. With these improvements, Alternative 3 is able to operate acceptably under future conditions. More detailed analysis, however such as that provided by CORSIM, should be used to model the complex layout of the intersections near E. Main Street.

Alternatives 1-4 Options

A series of options to Alternatives 1-4 were considered to improve access to and from the Inner Loop and I-490. Table 17 provides a comparison of the options considered.

**TABLE 17
SUMMARY OF OPTIONS TO ALTERNATIVES 1 – 4**

<i>Options</i>	<i>Cost (Millions)</i>	<i>Development Potential</i>	<i>Neighborhood Enhancement</i>	<i>Transportation Service</i>
Union Street Exit from I-490 WB	\$3.2 Million	Poor	Poor	Unacceptable
Direct Inner Loop Exit	\$2.3 Million	Very Good	Very Good	Acceptable
Convert Broadway & Union to 2-Way	\$4 Million***	Very Good	Very Good / Poor	Acceptable**

** Further analysis of Goodman Street / I-490 interchange required.

*** Required improvements to Goodman Street interchange in order to accommodate diverted traffic from the C.B.D. are not included.

The Direct Inner Loop Exit in the vicinity of South Clinton Avenue received the greatest support from the residents, the Technical Advisory Committee, and the Citizens Advisory Committee. The ramp would be placed in the existing I-490 transportation corridor. This location would minimize any impacts to the surrounding communities and greatly improve access to the Downtown area.

The options for a possible direct ramp from I-490 westbound to Union Street were reviewed, however, were considered undesirable due to conformance to interstate geometric criteria (non-conforming weave distances), traffic operations (on I-490) and community impacts (ramp introduced into a residential neighborhood).

The conversion of Broadway / Union to 2-way is consistent with the reestablishment of the Inner Loop as an arterial within the existing street grid. This conversion would provide return access to I-490, however was considered undesirable by residents in the immediate vicinity of Broadway. This option has potential advantages if developed in cooperation with several of the other alternatives in the study.

This option works cooperatively with Alternatives 1 and 3, which are focused on the re-establishment of the original street grid concept. Further, this option is complimentary to Alternative 5 and helps mitigate the traffic impacts to Inner Loop access to I-490 eastbound and thus supports the ability to remove the loop ramp adjacent the Genesee River and open up waterfront access.

This option to convert Broadway / Union to 2-way requires more detailed analysis of the potential usage and possible traffic impacts to the Goodman St. / I-490 interchange.



Segment 3 – I-490/Inner Loop Interchange

The I-490/Inner Loop/South Avenue/Clinton Avenue interchange is one of the major egress and ingress points to the City of Rochester. The alternatives assessed in this area focused on improving existing access to and from the City and the Southwedge neighborhood to the south. In developing feasible alternatives for consideration, it became evident that any major modifications to ingress and egress were either physically limited by the constraints and complexity of the interchange or would require extensive reconstruction efforts and thus capital expenditures beyond the goals and objectives of the study. These possible major reconstruction efforts would also potentially significantly impact the surrounding community.

The primary focus of the feasible alternatives considered the following:

- Consolidation of access from South Avenue to I-490 East (achieved under both Alternatives 5 & 6);
- Improved Southwedge access to I-490. This is improved under two directions with Alternative 5 and one direction for Alternative 6;
- Potential for enhanced Genesee River waterfront land use. This is achieved under Alternative 5;
- Pedestrian access improvements along the South Avenue corridor which is recommended under both alternatives;
- Transportation Service - Under Alternative 5, the South Avenue ramps (to I-490 East) are consolidated and the left hand entrance loop from the Inner Loop is closed. This consolidates all access to I-490 to a conventional right hand connection and eliminates the unconventional left hand connection and the weaving movement on I-490 to the Goodman Street exit. The traffic and/or geometric effects of this modification will require improvements to the on-ramp to 490 Eastbound.
- The undesirable transportation effects of Alternative 5 are the impacts to westbound Inner Loop access to I-490 Eastbound. Traffic would be required to use the double loop connection and access point from Byron Street which is circuitous and has undesirable geometrics. This can be mitigated by the conversion of Broadway/Union to two-way and modifications to the Goodman Street interchange as referenced under the Options to Alternative 1-4. Detailed traffic modeling required to assess this option.
- Alternative 6 should be considered for further study. Alternative 5 should also be considered pending further traffic study of the Broadway/Union conversion to 2-way and analysis of the Goodman/I-490 interchange.



The following provides a comparison matrix of the alternatives under consideration at the I-490/Inner Loop Interchange.

**TABLE 18
SUMMARY OF ALTERNATIVES 5 AND 6**

<i>Alternative</i>	<i>Cost¹</i>	<i>Southwedge Access to I-490</i>	<i>Consolidate South Avenue Ramps</i>	<i>Enhance Waterfront Land Use</i>	<i>Pedestrian Access to Downtown</i>	<i>Transportation Service</i>
Alternative 5	5.6 mil.	2 directions improved	Very Good	Very Good	Very Good	Poor
Alternative 6	2.0 mil.	1 direction improved	Very Good	No Change	Very Good	Good

1. Costs shown do not include engineering, inspection or ROW.

LAND USE ALTERNATIVE EVALUATION

The six alternatives are evaluated in Figure 18, **Evaluation Criteria - ALTS 1-3**, and Figure 19, **Evaluation Criteria - ALTS 4-6**. The alternatives are compared in terms of total square feet of new land and land that is proposed for one of the following four uses; 1) Commercial, 2) Commercial and /or Residential, 3) Residential, and 4) Open Space. The open space category includes the square footage for all parcels that were identified not only as open space, but also those where development could be coordinated with adjacent properties.

The benefits to the surrounding neighborhood and environment are included as part of the criteria (i.e. - size and orientation of parcels, ability to reconnect city fabric, consistency and compatibility of adjacent existing uses, access, frontage on key street, etc.) for evaluating each alternative. The benefits are summarized for the areas north and south of E. Main Street with 1 to 3 plus or minus ratings. While these ratings vary for each alternative, it is important to note that no alternative received a negative (or minus) rating. The specific configuration, quantity and location of the new parcels permitted some alternatives the opportunity to better address the needs of the surrounding environment.

The total quantities of proposed land use for each alternative is just one factor in determining the benefits of each of the alternatives. For example, Alternative #1 has the largest amount of new land (886,119 sq. ft.) and Alternative #3 received second highest with (716,413 sq. ft.). While the total area of Alternative #1 is +/- 170,000 sq. ft. larger than Alternative #3, Alternative #3 has over 40,000 sq. ft. of additional *Residential* than Alternative #1.

Alternative #1 has the highest rating (+++) for the benefit to the surrounding neighborhood and environment. In this case it was due to its improved connection to the neighborhood near Lyndhurst Street, continuous frontage on the new boulevard, availability for commercial use at key intersections, and other considerations. Similarly, Alternative #5 has the highest rating due to the ability of the land use to not only expand



the development along Broadway, but also provide for the potential development along the river's edge.

The land value and total economic impact for the new parcels is difficult to determine due to the estimated 7-10 year time frame for availability of these parcels and the unknown future market of the area. However, based on discussions with the city and a review of recent property development, the land value for parcels could range from \$2-\$15 per square foot, *in current dollars*, depending on location and market conditions at the time they are available. These parcels would have an additional value in terms of annual property tax associated with new development. Depending upon the size and scope of the developments placed on this new land, the city would also benefit from the increase to its existing tax revenue base, as well as from new business development and the economic direct and indirect effects of construction and permanent employment on these parcels.

Benefit Cost Section

A benefit cost comparison has been prepared for the Inner Loop Alternatives 1-4. These analyses have been prepared to compare the potential benefits of modification of the Inner Loop infrastructure and to compare the various alternatives to each other. The analysis is based on several key assumptions and factors. These include:


- Assume that the existing infrastructure will require a major capital reconstruction over the next 10 years due to its age and condition (original construction circa 1950's).
- Does not include any user cost factors for traffic impacts. Assumes acceptable operations.
- Includes estimated benefits for the new land use value for potential commercial, residential and open space.
- Includes consideration of property tax and indirect benefits.
- Does not consider future maintenance costs and life cycle factors. (These may increase the computed benefit of a remodeled Inner Loop).
- Compares the potential benefit of the modified Inner Loop to the No Build option (assuming a major rehabilitation) using the following formula:

$$\frac{(\text{Reconstruct Inner Loop As Is}) - (\text{Land Value}) - (\text{Property /Indirect Benefits})}{(\text{Reconstruct Modified Inner Loop}) - (\text{Land Value}) - (\text{Property/Indirect Benefits})}$$

The following chart summarizes the results of the cost benefit calculations:

	Alternative	Cost-Benefit
Alternative 1	- South Segment	1.8
	- North Segment	1.6
Alternative 2	- South Segment	1.8
	- North Segment	0.6
Alternative 3	- South Segment	1.8
	- North Segment	0.7
Alternative 4	- South Segment	1.4
	- North Segment	1.8




	Alt #1	Alt #2	Alt #3
Area of New Land	886,119 Sq Ft	671,759 Sq Ft	716,143 Sq Ft
Commercial	132,704 Sq Ft	92,580 Sq Ft	140,206 Sq Ft
Commercial and/or Residential	360,444 Sq Ft	172,189 Sq Ft	187,156 Sq Ft
Residential	157,366 Sq Ft	203,790 Sq Ft	198,849 Sq Ft
Open Space	235,605 Sq Ft	203,200 Sq Ft	189,932 Sq Ft
Neighborhood and Environment			
East of Main Street	<p>+++</p> <p>Improves link between residential area and area within Loop</p> <p>Conventional street frontage on Lyndhurst St on new Boulevard</p> <p>Potential commercial at key intersections</p>	<p>++</p> <p>Improves Lyndhurst St. Neighborhood</p> <p>Buffer near Highway</p> <p>Potential Commercial at Key intersections</p>	<p>+</p> <p>Improves Lyndhurst St. Neighborhood</p> <p>Buffer near Highway</p> <p>Potential Commercial at Key intersections</p>
South of Main Street	<p>+++</p> <p>Continuous frontage on new Boulevard</p> <p>Adds Buffer to adjacent Neighborhood</p> <p>Reinforces reinvestment in East Ave. area</p>	<p>++</p> <p>Continuous frontage on new Boulevard</p> <p>Adds Buffer to adjacent Neighborhood</p> <p>Some Parcels still face on/off ramps</p>	<p>+++</p> <p>Continuous frontage on new Boulevard</p> <p>Adds Buffer to adjacent Neighborhood</p> <p>Reinforces reinvestment in East Ave. area</p>
EVALUATION CRITERIA	ROCHESTER INNER LOOP IMPROVEMENT STUDY		
	November 2000		
<small>Base Map Source: GIS File From The City Of Rochester, New York - Bureau Of Planning</small>			

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Figure 18



Alt #4		Alt #5	Alt #6
<p>634,246 Sq Ft</p> <p>104,495 Sq Ft</p> <p>310,801 Sq Ft</p> <p>148,869 Sq Ft</p> <p>70,081 Sq Ft</p>	<p>Area of New Land</p> <p>Commercial</p> <p>Commercial and/or Residential</p> <p>Residential</p> <p>Open Space</p>	<p>363,383 Sq Ft</p> <p>96,905 Sq Ft</p> <p>230,328 Sq Ft</p> <p>0 Sq Ft</p> <p>36,150 Sq Ft</p>	<p>333,815 Sq Ft</p> <p>58,266 Sq Ft</p> <p>183,990 Sq Ft</p> <p>0 Sq Ft</p> <p>91,559 Sq Ft</p>
<p>+++</p> <p>Improves link between residential area and area within Loop</p> <p>Conventional street frontage on Lyndhurst St on new Boulevard</p> <p>Potential commercial at key intersections</p> <p>+</p> <p>Continuous frontage on new Boulevard</p> <p>Adds Buffer to adjacent Neighborhood</p> <p>Reinforces reinvestment in East Ave. area</p>	<p>Neighborhood and Environment</p> <p>East of Main Street</p> <p>South of Main Street</p>	<p>N/A</p> <p>+++</p> <p>Potential expansion of development along Broadway</p> <p>Open space and potential development along waterfront</p>	<p>N/A</p> <p>++</p> <p>Potential expansion of development along Broadway</p> <p>Open space along waterfront</p>
<p>EVALUATION CRITERIA</p>	<p>ROCHESTER INNER LOOP IMPROVEMENT STUDY</p>		
	<p>November 2000</p>		

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Figure 19



VII. RECOMMENDATIONS, FUTURE ACTIONS AND PROCESS

In recent years, the City of Rochester has completed various planning level studies and initiatives that focused on making Rochester a vibrant growing city well into the 21st century. These studies involved extensive evaluations of growth patterns, land uses and master planning for downtown and the surrounding communities.

The planning studies lead to the identification of various infrastructure improvements that concentrate on improving vehicular and pedestrian access and circulation within the city to accommodate growth and improve the economic vitality. The Inner Loop Improvement Study has assessed the transportation facility located on the east side of the City's Central Business District. This study's primary focus was to develop alternatives for reconstructing the transportation infrastructure in this area with a facility of appropriate scale, size, and configuration, that better meets the community's needs for access, neighborhood cohesion and land use, while at the same time maintaining mobility, capacity and access. This study evaluated various alternatives that improve the links between City Center and surrounding city neighborhoods by modifying the existing grade-separated roadway and developing a facility that better meets the needs of today's transportation and community usage.

PAST STUDIES
<ul style="list-style-type: none">• Vision 2000• NBN Program• Renaissance 2010

In general, this study did identify various alternatives that are feasible which meet the overall goals and objectives established by the City of Rochester. Alternatives 1, 3, 5 and 6 satisfy the majority of the objectives established for this project and should be considered for further evaluation. These alternatives have focused on eliminating the grade-separated Inner Loop and providing an at-grade boulevard around the eastern portion of the City. This would eliminate the existing barrier that separates the City Center from adjacent neighborhoods and business areas. In addition to these alternatives the following subalternatives should be considered for further evaluation: the I-490 westbound off-ramp to the Inner Loop in the vicinity of S. Clinton Avenue, the boulevard roadway section along the at-grade Inner Loop, and the conversion of Broadway to a two-way street.

Based on the analysis completed for this study, the following identifies and recommends future actions required for the progression of this project.

Funding

The next step will be for the City of Rochester to initiate the process of seeking funding for the future progression of this project. To receive federal dollars for funding, the City of Rochester will need to submit an application to the Genesee Transportation Council (GTC). GTC is the Metropolitan Planning Organization (MPO) who serves as the transportation policy and planning coordinator for the Genesee region. In this role, it shares responsibility with the State and other key municipalities to cooperatively develop transportation plans and programs to insure adequate, coordinated transportation systems that serve the communities surrounding the Rochester area. GTC provides a regional



decision-making forum for prioritizing transportation projects that meet the changing needs of the area.

The Transportation Improvement Program (TIP) is the capital programming component of the overall planning process. This program consists of a listing of specified federally funded highway projects that are being considered for implementation in the next five-year period. It is updated each year based on the continual re-evaluation of long and short term planning activities. Those projects of high priority are selected each year for funding and implementation. The Inner Loop Improvement study will need to be included in the TIP as a prerequisite to receiving federal funding approval.

As part of the long term maintenance of the Inner Loop, at some point in the future a major capital investment will be required (beyond the short term efforts currently planned by the NYSDOT). These long range costs have been included in the cost benefit analysis which has been performed for this study. These indicate that

Implementation Strategy and Schedule

It is recommended that the implementation program proceed with the first action being performance of a detailed traffic modeling and analysis effort for the Inner Loop: Segments 1, 2 and 3 including suboptions which may influence traffic volumes and operations. Once the more detailed traffic analysis is completed then the concept alternatives identified herein should be checked for geometric and operational feasibility. From this effort, alternatives and specific projects can be identified and Expanded Project Proposals (EPP's) can be prepared in conformance with NYSDOT and Federal Aid guidelines.

The follow-up studies for the Inner Loop should include:

- Detailed traffic modeling and analysis
- Alternative evaluation
- Expanded Project Proposal
- Planned first phase implementation of Segment 1 improvement (Monroe Avenue to E. Main Street)

Further, the follow-up study for the Inner Loop should consider the following options:

- Conversion of Broadway/Union to two-way
- I-490 exit ramp to the Inner Loop at Clinton Avenue
- Boulevard style arterial
- Alternatives 5 and 6

Based on the results of the follow-up studies additional implementation projects are expected to be identified. These may include:

- Inner Loop Segment 2 (E. Main Street to North Clinton Avenue).
- I-490 exit ramp to the Inner Loop at S. Clinton Avenue.
- Other I-490 Interchange improvements (i.e.: Byron Street on-ramp, South Avenue entrance ramp consolidation or pedestrian access improvements).

It is assumed that three distinct projects will be identified and carried forward.

The schedule below identifies the recommended project development program for project implementation.



Implementation Schedule

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Traffic Modeling & Alternative Evaluation	█										
EPP Preparation		█									
Engineering & Design Phases I-VI ~ Project 1 (Inner Loop Segment 1)			█	█	█	█					
Construction: Project 1						█	█				
Engineering & Design Phases I-VI ~ Project 2					█	█	█				
Construction: Project 2								█	█		
Engineering & Design Phases I-VI ~ Project 3							█	█	█		
Construction: Project 3										█	█

Public and Agency Outreach Program

An extensive public and agency involvement program was developed for this project. It included a technical advisory committee, a citizens advisory committee and a series of information/workshop meetings. The overall program was founded on the following principles:

- Providing a forum for early input into the needs and objectives for the project,
- Clearly communicate the “needs”, the process and the alternatives so that thoughtful feedback could be provided; and
- Facilitated early involvement of the key stakeholders.

This program provided valuable input into the development of this Inner Loop Improvement Project. In summary, the public is very excited with the potential improvements outlined in Alternatives 1-6 and the opportunities that exist for connecting to C.B.D. to the adjacent communities. Throughout this project’s development, the public has shown great interest and has requested to be kept informed of the project's progress. Based on this interest, it is recommended that this level of involvement and type of program continue throughout the project development cycle. This type of community involvement is essential in the development of the overall vision for the future.

Transportation Agency Partnership

The existing Inner Loop facility is owned and maintained by the New York State Department of Transportation. Any plans to modify this facility will require close coordination and communication with the department regarding the future disposition of the Inner Loop. This is a great opportunity for the City of Rochester to continue their partnership with the New York State Department of Transportation, Monroe County and



the Genesee Transportation Council (the Local Metropolitan Planning Org.) This partnership will allow all parties to develop this project further and address items such as, funding, future ownership of the facility constructed, disposition of the existing lands currently occupying the Inner Loop infrastructure and future traffic operations.

It is recommended that should the Inner Loop be down graded from an expressway type facility to an arterial then a transfer of maintenance responsibilities and right-of-way be pursued.

Comprehensive Traffic Analysis

The existing Inner Loop is a grade-separated freeway type facility that provides free flowing access around the City of Rochester. This study focused on developing alternatives that would eliminate the barrier effect that the Inner Loop poses on the City of Rochester and the surrounding communities. The alternatives considered with this study would modify the Inner Loop from the existing grade-separated facility to an at-grade boulevard facility. This would change the existing free flowing movement around the East Side of the city to a signalized route.

This Inner Loop Improvement Study completed an initial traffic sensitivity assessment of the alternatives developed for the study area. The goal of this sensitivity assessment was to identify areas that may provide undesirable traffic operations. As part of the data collection phase, the assessment identified the Inner Loop on the north side of the city to carry a high volume of daily commuter traffic from E. Main Street west to I-490 and State Street. There is a heavy A.M. traffic pattern that includes commuter traffic from E. Main Street, University Avenue and Scio Street that are entering the Inner Loop and heading westbound to St. Paul Street, State Street and I-490. In the P.M. peak hour this traffic is returning from these destination points to Scio Street, E. Main Street and University Avenue. The analysis also concluded that the volumes on the segment between Monroe Avenue and E. Main Street are significantly lower than the portion of the Inner Loop to the north.

In conclusion, the traffic analysis completed as part of the study supports an at-grade facility from Monroe Avenue to East Main Street. Based on the projected future operations from E. Main Street to North Clinton Avenue, this study suggests a grade separated facility will best accommodated the volumes within this segment.

With the Inner Loop carrying this heavy commuter traffic in and around the City of Rochester, future traffic analysis needs to assess the impacts on the overall mobility of the area in addition to the diversions that may be caused by the improvements. A comprehensive and detail traffic analysis of the transportation system within the study area and the surrounding neighborhoods should be conducted in the next phase of project development.

Traffic forecasting should be developed in cooperation with GTC using their Regional Traffic Simulation Model (TMODEL2). The regional model should be updated for the project area by reviewing the transportation analysis zones (TAZ's) and updating present and future land use. Land use projection will need to include incorporating the future



lands available adjacent the Inner Loop. Resultant output data shall include projections of future traffic distribution and growth to be utilized for capacity evaluations. In order to assess these impacts, the next phase needs to develop a calibrated sub-model from the overall TMODEL2 program.

Detailed Geometric Assessment

A detailed topographic model needs to be prepared to assess the proposed geometry and identify potential impacts of the feasible alternatives. This type of assessment will allow the identification of all existing non-standard and non-conforming features within the transportation study area.

In addition, a detailed model will allow each alternative to be designed to the necessary standards and accuracy to assess all potential impacts.

