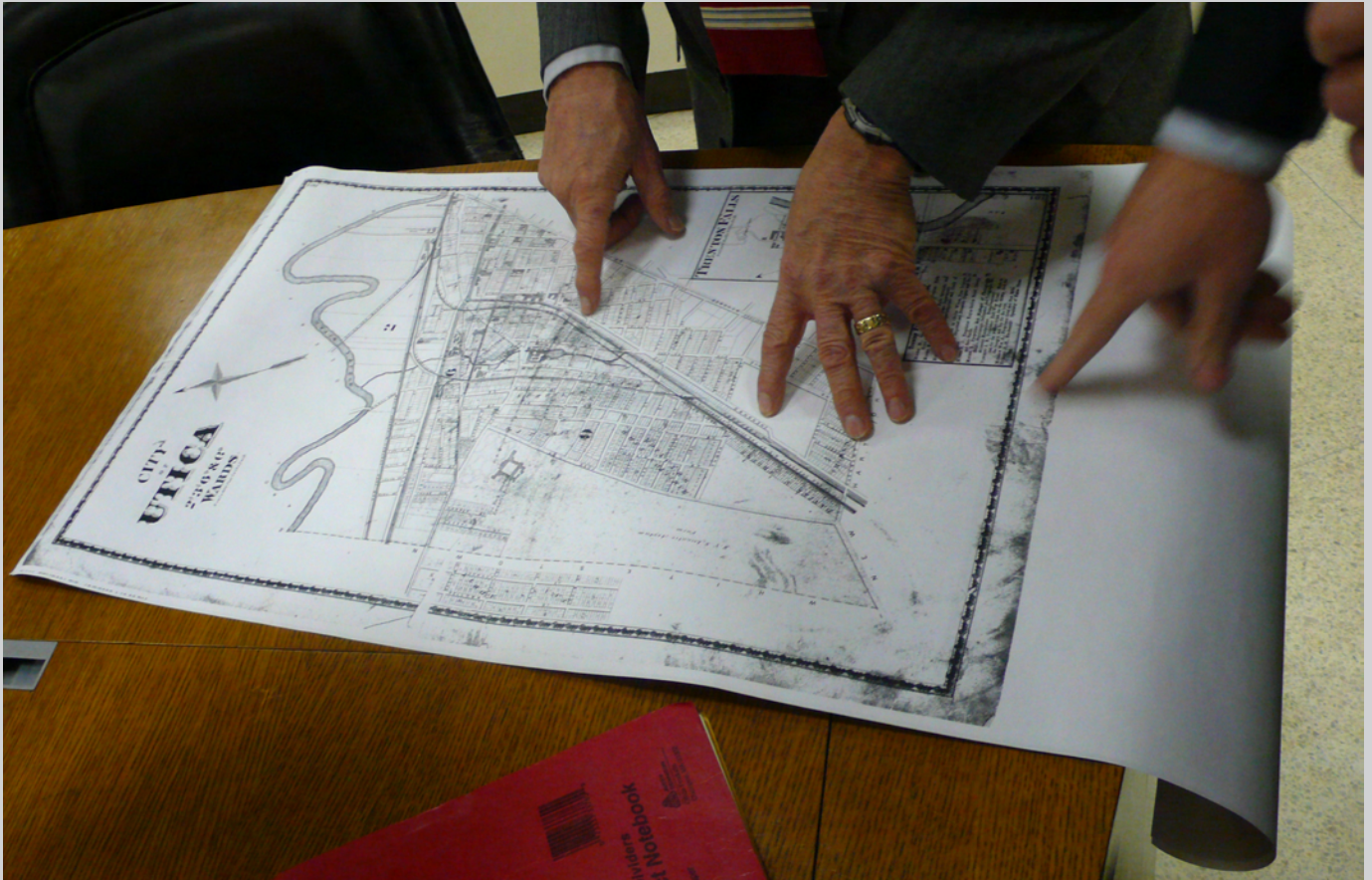


Utica North-South Arterial Corridor Concept Study



Final Report

Herkimer-Oneida Counties Transportation Study
City of Utica
Oneida County
New York State Department of Transportation

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Executive Summary

The New York State Department of Transportation (NYSDOT) built the Utica North - South Arterial in the 1960s to deal with traffic through the City of Utica. Although conceived as an elevated highway, community concerns resulted in the section between Court Street and Oswego Street being built as a surface arterial with street crossings. With five intersections located within three-quarters of a mile, the Arterial has experienced high rates of pedestrian and vehicle accidents. The interests of regional travelers, neighborhood residents, and the City's economic development have been difficult to reconcile. While the Arterial has been studied in the past by the NYSDOT and others, there was clearly a need for a new examination of the Arterial and its improvement needs. In cooperation with the City of Utica, Oneida County and the NYSDOT, the Herkimer-Oneida Counties Transportation Study (HOCTS) initiated the Utica North-South Arterial Corridor Study in 2006. The Study is intended to develop a conceptual plan and vision to improve the operation, safety, mobility and aesthetics of the Arterial.

Public Involvement

Public involvement was a critical component of the planning process. A wide variety of efforts were employed to ensure that was achieved at every step of the process. These included:

- > A Local Advisory Committee with members from city and county government, local businesses and organizations
- > A Public Outreach Meeting early in the process to provide an overview of the Study to the public
- > A Public Design Workshop to brainstorm in small groups about the advantages and disadvantages of each alternative.
- > A Public Presentation to present the four selected alternatives from transportation and land use perspectives.
- > A Final Vision Presentation to present the two final Concept Plans and obtain comments from the public.
- > A Mail-Back Survey of the community regarding Arterial use and its problems
- > An Origin-Destination Survey of Arterial users
- > Focus Groups meetings to solicit more in-depth opinions from specific stakeholder groups
- > A Project Website - www.northsoutharterial.com - on which information about the Study and the emerging alternatives was displayed and comments were solicited.
- > Radio and television reports and newspaper articles, letters and editorials

Inventories and Analyses of Current Conditions

Inventories showed that 36,000 vehicles per day were using the Arterial, most of which were traveling through the downtown section. Accidents at the five intersections were above the statewide average for similar facilities. This can be attributed, in part, to characteristics of the Arterial: the posted speed limit drops to 40 mph in the three-quarters of a mile between 55 mph expressway sections; there are no shoulders and turn lanes on the Arterial; and both drivers and pedestrians often violate traffic regulations.

The Arterial divides what was once a single neighborhood and does not present an attractive gateway to the City. The area is characterized by many vacant and underutilized parcels. Prohibitions of left turns off of the Arterial and, at most intersections onto the Arterial, make access to the area difficult and confusing, which impedes the City's efforts at redevelopment in the area.

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The North-South Arterial serves a number of competing needs:

- > It functions as a major regional transportation artery through the Study Area.
- > It functions as a local road, providing access to and from adjacent city streets.
- > It must also accommodate pedestrians traveling east-west on the adjacent city streets.

At this point in time, the Arterial is not satisfactorily addressing any of them.

Goal and Objectives

A project goal and six objectives were established to guide the development and evaluation of alternative improvements for the Utica N-S Arterial:

Goal

Develop cost effective and environmentally sensitive ways to improve the operation, safety, mobility for vehicles and pedestrians and appearance of the Arterial, improve the character and cohesiveness of the local community, and enhance community and adjoining neighborhood redevelopment.

Objectives

- > Improve the Safety of Pedestrian Access Across the Arterial
- > Improve Traffic Flow on the Arterial
- > Reduce the Frequency of Vehicular Accidents on the Arterial
- > Improve Access to Adjacent Local Streets and Downtown Utica
- > Create connections between the neighborhoods on either side of the Arterial.
- > Create a more pleasant environment on the Arterial.

Development and Evaluation of Alternatives

The project team developed twenty-eight preliminary alternatives, ranging from a new facility bypassing the Study Area to different levels of upgrading the Arterial. In addition to 55-mph expressways, some options were for a 45-mph upgraded arterial with grade separations; others were for a 40-mph arterial with minimal upgrading; others were for a 35-mph street or boulevard. Some alternatives favored through traffic; others emphasized meeting community concerns. An evaluation of these preliminary alternatives led to four distinct facility types to be further developed and evaluated: three expressways - Depressed, Surface and Elevated, and a Multi-Way Boulevard, a new concept for Utica. A Null alternative, a minimal upgrading of the Arterial, was also defined.

The first stage evaluation of the four facility types showed that there were positive and negative features in each alternative. On that basis modifications were made to the alternatives and two final Concept Plans were proposed: a partially depressed Expressway with features of the Elevated, Surface and Depressed Expressways; and a modified Multi-Way Boulevard. The second stage analysis and evaluation involved detailing these Concept Plans and comparing them on the basis of the six objectives. **The modified Expressway Concept Plan achieved most of the objectives better than the Multi-Way Boulevard and was the Study's final recommendation for a solution.**

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The Expressway Concept Plan

The Expressway Concept Plan will provide a 55-mph non-stop route for traffic passing through the Study Area and remove the majority of the existing traffic from street intersections (Figure 1-1). The existing Court Street viaduct, which is to be replaced in the near future, is extended south to pass over and interchange with Court Street. A grade separation at Court Street will remove the majority of the traffic now entering the intersection, and improve its operation and safety significantly. The interchange will permit right and left turns off of and onto the expressway eliminating the convoluted and inconvenient travel for many trips now required for traffic to and from the Arterial to access Study Area locations.

South of Court Street the Expressway will be partially depressed below grade an average of 6 feet. A partially depressed expressway reduces the noise and visual impacts of the facility and lessens the chances of pedestrian crossings. The Expressway will descend about 12 feet below grade near Warren Street, where a crossing about 12 feet over the expressway will be provided, without ramps. The Expressway will rise to the surface at Sunset Avenue and the existing crossing will be closed; a pedestrian bridge will be built at this point to maintain the pedestrian connection across the Expressway. The Expressway will then descend to a level about 12 feet below Noyes Street, permitting a crossing over and ramps about 12 feet over the Expressway. As with the Court Street interchange, the exact location, elevation and layout of the Noyes Street interchange will be determined in future design studies.

The Expressway will rise to the surface at Oswego Street. The Oswego Street intersection will be closed, but a pedestrian bridge will be built two blocks south at Thorn Street to maintain a pedestrian connection between the two sides of the Expressway. Sufficient capacity will be provided at three crossings: Court Street, Warren Street and Noyes Street, for vehicular traffic crossing the expressway and, as today, five crossings will be available for pedestrians.

A southbound frontage road will be added on the west side of the expressway, where no through parallel street now exists and will serve as a collector - distributor road between the Court Street and Noyes Street interchanges; Lincoln Avenue will serve that function for northbound traffic. During construction, when the Arterial is out of service, these parallel routes will be very important to the maintenance of traffic through the study area.

To ease the present sharp curve that limits the sight distance of southbound traffic approaching Court Street the viaduct replacement should be shifted somewhat to the west of its present alignment. Also related to the viaduct replacement are modifications to the existing ramps to and from Route 5A to allow sufficient distance between these ramps and the Court Street ramps for entering and exiting traffic to merge.

The total width of the Expressway and frontage road will vary from 140 to 150 feet and more at the interchanges. It is estimated that 5 - 6 acres of property will be required, most of which is vacant or in non-residential use. The total cost of the Expressway, including right-of-way, is estimated at \$85 -

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\$95 million, including the \$25 million cost of replacing the existing viaduct. This is a preliminary cost estimate; engineering studies in a subsequent preliminary engineering study will refine it further.

By removing the majority of the Arterial traffic that is traveling through the corridor, and placing it onto a safer, access-controlled facility with no intersections, a substantial reduction in accidents can be expected. The Expressway provides significant potential for economic development and compatible land uses in the area. Depressing the Expressway for long sections south of the Court Street interchange will minimize noise and pollution impacts on area residents and encourage pedestrian-oriented retail and mixed uses. There is the potential for one or more small neighborhood parks adjacent to the expressway. In addition, a recreational trail could extend along the west side of the expressway connecting again to a regional system.

Next Steps

A number of actions to implement the Study recommendations should be pursued. The next step is a NYSDOT preliminary engineering study that will review and further refine the recommendations of this Study. It will prepare more detailed designs on the basis of, among other things: further traffic studies; specific right-of-way impacts; construction methods and costs; and environmental studies and impacts. Because of its deteriorating condition the NYSDOT has emphasized the need to replace the Arterial viaduct north of Court Street. The viaduct replacement is included in the Herkimer-Oneida Counties Transportation Study 5-Year Transportation Improvement Program (TIP) for the region. Designs for the Expressway are necessary to ensure that the viaduct replacement will accommodate and, if appropriate, include portions of the Expressway. Programming a Design Study for the Expressway Concept Plan is an essential step.

A Utica North - South Expressway lends itself to staging, if that is deemed necessary on financial or other grounds. The replacement for existing viaduct north of Court Street should be designed to continue over Court Street and under Warren Street returning to the surface at Sunset Avenue. The southbound frontage road would be built from Court Street to Sunset Avenue where a pedestrian bridge would be provided. The northbound and southbound ramps at Court Street will allow for left and right turns onto and off of the expressway. Construction of the expressway from south of Sunset Avenue could be deferred to a later time when funding is available, if that is necessary. At that future time the expressway would be continued to Noyes Street with a southbound frontage road, vehicle and pedestrian crossings and interchange ramps provided according to the recommended Expressway Concept Plan.

In the interim the Court Street grade separation would remove through traffic from the most congested route and the intersection of greatest vehicle and pedestrian accident incidence. Provision of left and right turns off of and onto the expressway will significantly improve access to the study area and downtown Utica.

Short Range Actions

A number of actions can ameliorate Arterial problems in advance of the recommended Expressway

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Concept Plan. Short-range Improvements include:

- > Enforcement and education efforts to increase the safety of both motorists and pedestrians using or crossing the Arterial.
- > Cameras to identify and ticket red-light running vehicles installed at every intersection of the Arterial.
- > Signal preemption equipment to allow emergency vehicles to change the traffic signals at Court Street as they approach an intersection
- > Back-up power generation for the Arterial traffic signals for rapid recovery from power outages.
- > A Traffic Operations Center (TOC) for the Utica region to monitor congestion on the Arterial due to incidents - accidents, vehicle breakdowns and other situations and take remedial action based on the nature of the incidents.
- > Variable message signs on the Arterial and other highways to alert drivers to incidents causing congestion and enable them to avoid those locations.
- > A Highway Emergency Local Patrol (HELP) program for the Arterial. NYSDOT's HELP vehicles patrol highways at busy times and call for the appropriate type of help when they encounter an accident, vehicle breakdown or other incident that is impeding traffic flow.
- > Prompt repair of broken lighting and fencing and better maintenance of the right-of-way.

A number of moderate cost improvements would provide safer driving along and crossing the Arterial, if full implementation is delayed:

- > Right shoulders on the Arterial to provide locations for disabled vehicles to pull off the roadway, for police to stop vehicles to enforce traffic regulations and for emergency vehicle access when traffic on the Arterial has come to a stop
- > Right turn lanes at Arterial intersections to allow vehicles to slow down outside of higher speed traffic.

Conclusion

The Utica North-South Arterial Corridor Study has recommended the Expressway Concept Plan as the best means of improving the Arterial's safety and access and achieving the Arterial's community objectives. Considering the varied, often conflicting roles the Arterial plays in Utica, a wide range of alternatives was developed. Each was analyzed and evaluated for its potential benefits and problems. Public input was sought and provided at every step of the process to assure that the resulting plan would meet its concerns and vision. There is no single solution that will satisfy all of the competing interests in the Arterial and fully meet all of the project Objectives. The Study's recommendation for a balanced solution - the Expressway Concept Plan - offers the best opportunity to meet the needs of the region, the City and the Study Area.

Introduction

To deal with traffic through the City of Utica, the New York State Department of Transportation built the Utica North - South Arterial (referred to hereafter as “the Arterial”) in the 1960s. With the opening of the New York State Thruway in the 1950s, Exit 31 brought traffic destined to downtown Utica and points south onto Genesee Street. The Arterial was planned as a bypass to Genesee Street, along an alignment roughly parallel to and about one-half mile west of it. The Arterial was built as an expressway except for a three-quarter-mile section between Court Street and Oswego Street. Although conceived as an elevated highway, community concerns resulted in the Utica North-South Arterial being built in this section as a surface arterial with street crossings.

With five intersections located within three-quarters of a mile, the Arterial has been an increasing problem for the region, the City, and the adjacent community. The speed limit drops from highway speeds to city street speeds between Court Street and Burrstone Road. Traffic signals on this section are closely spaced which results in frustrating slowdowns and stops. Accidents occur frequently along the Arterial, often involving pedestrians crossing between portions of the neighborhood separated by the Arterial. Prohibitions of left turns off of the Arterial and, at most intersections, onto the Arterial make access to the City difficult and confusing. The problem of access to vacant and underutilized parcels is impeding the City's efforts at redevelopment in the area. Overall, the Arterial does not present an attractive gateway to the City, and it presents a significant inconvenience and danger to both vehicles and to pedestrians.

The Herkimer-Oneida Counties Transportation Study (HOCTS) is the designated metropolitan planning organization for transportation in the two-county region. It prepares long-range plans and short-range programs to meet the transportation needs of the region. In cooperation with the City of Utica and the state Department of Transportation, HOCTS initiated the Utica North-South Arterial Corridor Study in January 2006. The Study is intended to develop a plan to improve the operation, safety, mobility and appearance of the Arterial. Greenman-Pedersen, Inc. and Saratoga Associates, engineering and planning consultants, were retained by HOCTS to conduct the Study. A Project Team was established to guide the consultants, comprised of representatives of the Herkimer-Oneida County Transportation Study (HOCTS), New York State Department of Transportation Utica Region Office (NYSDOT), and the City of Utica Department of Urban and Economic Development. A Local Advisory Committee was established, with business and community members, to provide input to the Project team and the consultants throughout the Study.

This report summarizes the process and the findings of the Study. Section II describes the extensive public involvement effort for the Study and the planning process. Existing conditions are described in Section III; Section IV describes the development and screening of alternatives. Section V presents a detailed analysis and evaluation of the first stage alternatives; the second stage of alternative analysis and evaluation is described in Section VI. Section VII describes the recommended concept plan and the next steps to implement both short- and long-range improvements.

II. Public Involvement and the Planning Process

A wide variety of efforts were employed to ensure that public involvement was achieved at every step of the planning process. First the planning process will be summarized.

A. The Planning Process

The planning process for the Study was comprehensive, including studies and analyses of existing conditions, development of a project goal and objectives, and the development and evaluation of a wide range of alternatives. Extensive efforts were made to include public involvement, described in the next section, at every step in the process.

Inventories of the current street and highway network in the Study Area were conducted to establish its characteristics and performance. Features of the roadway and its intersections were identified; posted speeds were noted and operating speed was measured; traffic volumes were counted and past volumes reviewed to establish the trend of traffic growth. The Level of Service, a measure of performance, was calculated for the Arterial and its intersections. A survey of drivers was conducted to establish the origins and destinations of traffic and help develop alternative improvement concepts. A review of past accident data was made to identify the location and character of safety problems in the corridor. Pedestrian crossings at several intersections were observed to better understand the nature of pedestrian safety issues.

Demographic and economic trends were examined for the Study Area, the city and the region. An inventory and analysis of the type and character of land was conducted and related to City redevelopment efforts in the corridor. A mail survey of City residents and business owners was conducted to identify their perception of the problems and potentials in the corridor.

Early in the process a goal statement and six objectives were established to help guide development of alternatives. A wide range of potential improvements were considered, from bypassing the corridor with a new facility, modest improvements to the Arterial, a partial upgrading and a full upgrading to expressway standards. Options for an expressway included where exits and entrances would be located and which streets would be closed or continued across the expressway. A new concept - a Multi-Way Boulevard, was proposed for consideration. These were screened for more specific alternative development.

The analysis and evaluation was done in two stages. First, the preliminary alternatives were narrowed down to four facility types and then these evaluated against the agreed-upon Objectives. This led to two final concept plans. they were analyzed and evaluated and a recommendation for one was made. Throughout the process a variety of mechanisms was used to ensure continued public participation in the process and obtain its response and assessment of potential improvements. The public participation effort is described below.

II. Public Involvement and the Planning Process

B. Public Involvement Efforts

1. Local Advisory Committee Meetings

The Local Advisory Committee (LAC) represents a cross section of the community, with members from city government, local businesses, organizations and environmental groups. The LAC worked collaboratively to identify, understand, address, and balance issues and concerns related to the North-South Arterial Study. The purpose of the LAC was to serve as a sounding board for the Project Team and its consultants and to assist with refining the ideas developed during the study process. The Project Team invited the LAC members to be part of the study. In turn, the LAC provided a channel for facilitated dialogue involving the community, the Project Team, and other governmental agencies with an interest in the corridor.

The LAC provided recommendations to HOCTS and the consultants for developing and assessing various alternatives, and selection of preferred alternatives that best achieve the project goals and objectives as established jointly by the study team. Seven LAC meetings were held on the following dates:

- > March 7, 2006: kickoff; overview and introduction of project
- > April 3, 2006: review of feedback from the March 7 public workshop, and the community survey and Draft Economic and Demographic Study prepared by Saratoga Associates
- > May 23, 2006: review existing conditions study, receive an update on the O&D and Community surveys and focus groups, and discuss the emerging alternatives for the Arterial
- > July 25, 2006: review the results of the O&D survey and Community survey, and to discuss the process of developing alternatives for the Arterial
- > September 6, 2006: review the four alternatives that the Consultant Team had developed since the July meeting, and get the LAC's feedback on the range of alternatives and the clarity of graphics
- > November 2, 2006: review of two preferred alternatives that emerged from previous four alternatives
- > March 22, 2007: review of Study Recommendation



II. Public Involvement and the Planning Process

2. Public Outreach Meeting

The first public meeting for the Utica North-South Arterial Corridor Study was held on Tuesday, March 7, 2006. Approximately twenty-five people attended the meeting. The purpose of the first public outreach meeting was to provide an overview of the purpose of the project, the process that will be followed, and the system of communication. The meeting aimed to obtain feedback from the public about the corridor, including its problems, constraints, needs, and opportunities, and to identify themes and set priorities. In addition, participants were asked to break into small groups to answer questions about the Arterial and surrounding area, and to identify issues that should be addressed in the study.

Participants identified many issues with the Arterial, ranging from drainage to sun glare, but the overwhelming number of responses cited safety (both pedestrian and vehicular), connectivity, congestion, and aesthetics as the primary issues affecting both drivers and the surrounding community with regard to the Arterial.

3. Public Design Workshop

The second public meeting for the Utica North-South Arterial Corridor Study was held on Tuesday, May 23, 2006. Approximately thirty people attended. The purpose of this design workshop was to introduce the project, to provide information about the emerging alternatives for the study, and brainstorm about the advantages and disadvantages of each alternative in small groups. Following a presentation by HOCTS, GPI and Saratoga Associates, each small group was assigned to one of three alternatives (Expressway, City Street and Integrated alternatives) and asked a set of questions relating to each. An informal audience poll demonstrated the integrated alternative (i.e. there would be access to and from local streets, but that access would be somewhat restricted with no left turns) was preferred by the audience by a margin of over 3:1 over any other option.

4. Public Presentation of Alternatives

The third public meeting for the Utica North-South Arterial Corridor Study was held on Thursday, September 21, 2006. Approximately sixty people attended the meeting. The purpose of this meeting was to explain the ongoing process and goals of the project, and to present the four selected alternatives to the public from transportation and land use perspectives. Utilizing input from previous public meetings and other outreach efforts, the alternatives were narrowed down to the following: Multi-Way Boulevard, Surface Expressway, Elevated Expressway, and Depressed Expressway. Complementary land uses were presented as well—not as a land use plan per se, but rather as a selection of land uses that would best suit these types of roadways. Much of the meeting was devoted to questions, answers, and comments from the public concerning the four alternatives, including access, cost, disruption to the area, and potential property takings.

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5. Final Vision Presentation

The fourth public meeting for the Utica North-South Arterial Corridor Study was held on Thursday, December 7, 2006. Approximately sixty people attended the meeting. The purpose of this meeting was to explain the ongoing process and goals of the project, and to present the two final Concept Plans to the public from transportation and land use perspectives. The two alternatives had been narrowed down and modified from the previous four alternatives based on public input and additional analysis. These two Concept Plans - a Partially Depressed Expressway and a Multi-Way Boulevard - represent the best balance of the project Objectives. As with the third public meeting, much of the meeting was devoted to questions, answers, and comments from the public concerning the two preferred alternatives, including access, cost, disruption to the area, and overall purpose of the Arterial. Concerning the latter, the question continually arose as to whether the purpose of the Arterial was to get drivers through the study area as quickly as possible, or for drivers to engage with the study area.

6. Community Survey

In order to obtain opinions from as diverse a population as possible, a community survey was mailed to residents in the Study Area in May 2006. The use of a random sample of residents ensured in a statistically valid manner that the results were representative of the overall population. The survey, which took respondents approximately 20 minutes to answer, asked questions regarding use patterns, perceived problems with the Arterial, priority of necessary changes, and other related topics. Some salient points that emerged from the community survey include the following:

- > 53.8% of survey respondents use the Arterial daily.
- > The most common opinion on the overall functioning of the Arterial as a transportation corridor was that it was "good" (44.5%).
- > Pedestrian safety is the issue which by far the largest percentage of people is "very concerned" about (70.3%); others with high percentages of "very concerned" respondents are speeding (47.0%) and vehicle safety (42.2%).
- > 42% of respondents are "somewhat concerned" about traffic congestion.
- > 71% of respondents value the Arterial most for quick and convenient N/S travel.
- > By far, the most popular improvement suggestion was pedestrian safety improvements (41.5%).
- > The largest percentage of respondents preferred to promote the Arterial simply as a transportation corridor (43.4%), though there was also a large percentage of people who preferred to promote it as a mixed-use Business District (35.5%).
- > The most desirable (i.e., with the highest percentage of people who marked the option as "very desirable") modifications were enhancement of pedestrian crossings (67.1%), improved signal timing (55.8%), and addition of pedestrian overpasses (47.6%).

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- > The least desirable (i.e., highest percentage of people who marked the option as “very undesirable”) modifications were closing all cross-streets (61.0%), closing some cross-streets (37.9%), and leaving as is (36.5%). When adding in the “somewhat undesirable” responses, increasing the speed limit was also an unpopular idea (54.7% for the two categories combined).

7. Focus Groups

The purpose of the focus groups was to solicit more in-depth opinions from specific stakeholder groups, and to determine how changes to the Arterial would affect their specific interests. Focus groups were held for emergency service providers, neighborhood residents and business owners.

- > Emergency Services Focus Group

Consultant and project team staff met with the Utica Fire Chief, a Utica Police Department Captain, the Deputy Commissioner of Public Safety and the Deputy City Engineer on May 4, 2006. The Chief noted that the Arterial was “ill-conceived” from the beginning because it was lowered from its original elevated design and made into a city street. He stated that Court Street was the most dangerous crossing; motorists are often speeding through the intersection and do not hear or see emergency vehicles. Vehicles that do stop are rear-ended by following vehicles that do not stop in time. Preemption equipment should be installed to permit emergency vehicles to override the traffic signals.

The Police Department Captain noted that the lack of shoulders to pull vehicles off the roadway made enforcement of traffic regulations on the Arterial a challenge. Power outages disable signals and force traffic direction by Police officers; Court and Noyes Street are the most significant crossings; other crossings are barricaded if manpower is not available.

Part of the problem, it was noted, may also be that residents along the Arterial include ex-patients of the Psychiatric Center that do not comprehend the dangers of speeding traffic. Numerous children also cross at the intersections. It was noted that due to the bars and nightlife in West Utica, nighttime crossings by pedestrians are heavy at Court Street.

Maintaining adequate lighting is a problem because replacing light bulbs requires a lane to be closed and accidents have damaged several light fixtures.

- > Neighborhood Focus Group

On July 26, 2006, the Consultant team conducted a focus group with approximately 25 neighborhood residents at a meeting of the West Utica Concerned Citizens at Holy Trinity Church. During the interactive conversation, residents explained their perceptions about the Arterial as a transportation facility and neighborhood feature. Not surprisingly, most attendees perceive the

II. Public Involvement and the Planning Process

road as a structure that isolates West Utica from other parts of the City and has contributed to the blight of the neighborhood. Several suggestions were given for improving the appearance of the area. They would like increased shopping opportunities and enhanced aesthetics, particularly along Court, Warren and Oswego. In terms of the Arterial itself, it could be improved with better lighting, landscape treatments and improved law enforcement. Residents are concerned about isolation from other areas in Utica and asked that all pedestrian crossings be kept open under the final alternative chosen for the Arterial.

> Business Owners' Focus Group

The Utica Business Owners' Focus Group was held on Wednesday, January 10, 2007. Four representatives from Utica businesses attended, in addition to Project Team members and interested agencies. The purpose of the meeting was to present the two emerging alternatives for the Arterial to business owners, to solicit opinions about which is preferred, and how the different scenarios would affect their respective firms. Much of the meeting was devoted to questions and comments from business owners, as guided by GPI, Saratoga Associates, and NYSDOT. In the end, it was determined that the expressway was overwhelmingly the preferred alternative for businesses with operations in Utica, both for employees and customers, where applicable. All business representatives stated that the Multi-Way Boulevard was a valuable idea, but the corridor land use changes necessary for its success were just not practical for Utica (from the viewpoint of residents or businesses), given the existing economic climate in the City.

8. Website

Throughout the project, the consultant team has maintained a website, www.northsoutharterial.com, on which general information is displayed and comments are solicited. The website contains information about the project and its objectives, the history and schedule of the study, location maps, and detailed information on public involvement, including information on past and upcoming meetings. The website is regularly updated with new content and has been an excellent resource for culling opinions from members of the public. Almost 50 responses have been submitted on the website to date.

9. Other Efforts

The Utica City Council was briefed on the Study.

Members of the Study team were interviewed on local radio several times and a special presentation on the Study was produced by the City and televised in the area. The *Utica Observer-Dispatch* has printed letters to the editor as well as editorials on the subject.

III. Existing Conditions

The Utica North-South Arterial, (referred to hereafter as the Arterial), was designed by the New York State Department of Transportation (NYSDOT) to serve as the major connection through Utica between State Route 5 in New Hartford in the south and Route 5A/5S in the north. In subsequent years connections to the Arterial from the north and south have been upgraded. Today the Arterial continues north past the Route 5A/5S interchange and becomes Interstate 790, which connects to the New York State Thruway via Exit 31 and Route 5. State Routes 8 and 12 continue further north as the Marcy-Utica-Deerfield Highway. The section of the Arterial between the Burrstone Road overpass and Court Street is called the General Casimir Pulaski Highway and is designated State Routes 5, 8, and 12. On the south, the Arterial connects in New Hartford with State Routes 5 West, 12 South, 8 South, and 840 West.

The Study is focused on an area about three quarters of a mile wide centered on the Arterial. The Study Area extends from south of the Burrstone Road interchange to north of the Route 5A/5S interchange, with York Street serving as the western boundary. Genesee Street, along which are located Utica's historic downtown and several cultural sites, is the eastern border. (Figure 3-1, Project Location Map).

Utica, like many older cities in upstate New York, has experienced a long-term population decline. Changes in the regional economy have reduced the number of manufacturing, retail and other jobs in the City. Many have been lost to the region and others have relocated to suburban towns. As one of the oldest areas of the City, the Study Area has exhibited a similar reduction in population and economic activity. The Study Area now contains many locations with vacant and underutilized residential and commercial / industrial properties. The City's plans for redevelopment in the Study Area rely on improving transportation and access to these locations. This Section summarizes existing transportation, demographic and land use information presented in the Existing Conditions Report, May 2006 and technical memos.

A. Transportation

1. Arterial Characteristics

The Arterial serves as a major north-south route through the City of Utica. The North-South Arterial extends about 1½ miles between limited access 55-mph sections north of Court Street and south of Oswego Street. The speed limit on this section of the Arterial is 40-mph. It has two 12' lanes in each direction with no shoulders and an 11' raised median with a guide rail in the center. There are no left turn lanes and left turns are prohibited from the Arterial in both directions. Parking is not permitted along the Arterial and there are no driveways to abutting property. Pedestrians and bicycles are prohibited from entering and traveling along the Arterial; they are only permitted to cross at intersections.

The Arterial has five at-grade intersections: Oswego Street, Noyes Street, Sunset Avenue, Warren Street and Court Street. There are no acceleration or deceleration lanes at the intersections, which make right turns off of and onto the Arterial difficult and contribute to accidents at the intersections. The northbound approach of the Arterial at Court Street has a right-turn-only lane.

III. Existing Conditions

Each of the intersections is signalized and signals are coordinated to permit progression through the intersections without stopping when volumes are not high.

Pedestrian signals and crosswalks at each intersection allow pedestrians and bicycles to cross the Arterial during the east-west phase of the signal cycle. Pedestrian signals are timed to permit crossing by most pedestrians, and display countdown time to safely cross. The elderly and handicapped may have difficulty in crossing in one cycle, but the median provides a minimally adequate pedestrian refuge. Pedestrians can actuate the signals from the median at all intersections.

The five streets that cross the Arterial have one lane in each direction for shared travel movements with the exception of Court Street, which has both a through and right-turn-only lane. All of the crossroads provide parking and sidewalks on at least one side of the road and have a posted speed limit of 30 mph. Fay Street west of the Arterial, and Lincoln Avenue and Wheeler Avenue east of the Arterial run parallel to and a short distance from the Arterial.

Turns are restricted at Arterial intersections to maximize Arterial capacity and, in some cases, because of inadequate curb radii. As noted earlier, left turns are prohibited from the Arterial in both directions. Left turns are also prohibited from cross streets onto the Arterial at most intersections, with the exceptions of to the Arterial northbound at Noyes Street and to the Arterial southbound at Oswego Street and Warren Street. The left turn prohibitions off of and onto the Arterial make access to many portions of the Study Area difficult. It is impossible for most trips to return to the same intersection on the Arterial by the same route. Two, three or more turns are required to access areas on the west side of the Arterial from the south, and to access areas on the east side of the Arterial from the north. Areas accessed by simple right turns from the Arterial require inconvenient and, for those unfamiliar with the area, confusing routes through the Study Area to return to the Arterial. This extra travel adds traffic to local streets in the Study Area. It is also a factor inhibiting redevelopment efforts for business and other potential activities in the area.

The right of way (ROW) along the Arterial varies between approximately 112' and 163' in width. The width of ROW on the western side of the Arterial varies from about 4' to 34'. Within the ROW from Noyes Street south is an operating section of the New York, Susquehanna and Western Railway that runs parallel to the Arterial. The portion of the railroad adjacent to Fay Street and the Arterial north of Noyes Street is not operating. The ownership of this section of the ROW is unknown at this point. The eastern side of the Arterial has a ROW width varying between about 10' and 61', with a grass area adjacent to the roadway. Both sides of the Arterial are lined with a chain link fence on or near the ROW line. Some of the fencing is broken. There are no sidewalks; pedestrians and bicycles are prohibited from entering and traveling along the Arterial. There are light poles and sign poles along both sides of the road, as well as boxes with railroad equipment, some of which are broken.

Pavement conditions on the Arterial are rated *Fair* by NYSDOT. The elevated structure north of Court Street is nearing the end of its life span and will have to be replaced in the near future. The

III. Existing Conditions

replacement has been included in the HOCTS Transportation Improvement Program. No other transportation projects within or affecting the Study Area are programmed at this time. A new exit from the Arterial northbound at Mandeville Street has been proposed.

2. Arterial Traffic

The Arterial carries over 36,000 vehicles daily, which is a substantial volume for a 4-lane urban arterial. Traffic has been increasing in recent years at about 0.5% per year. Figure 3-2 shows traffic counts on the Arterial and other streets in the Study Area. Table 3-1 shows Average Annual Daily Traffic (AADT) in the Arterial in the Base Year, 2006. Traffic generally increases from north of Court Street to south of Oswego, reflecting the greater level of development in the City and towns south of the Study Area. About two-thirds of the Arterial traffic is passing through the Oswego Street to Court Street section without turning.

Table 3-1 - Arterial Daily Traffic, 2006

Arterial Section	Vehicles Per Day
North of Court Street	31,000
Court Street to Warren Street	32,800
Warren Street to Sunset Avenue	36,300
Sunset Avenue to Noyes Street	36,600
Noyes Street to Oswego Street	38,300
South of Oswego	38,200

Peak volumes generally occur in the 3 PM to 6 PM period. Peak Hour traffic volumes on the Arterial are shown in Table 3-2. Afternoon volumes are greater in the northbound direction north of Court Street and in the southbound direction south of Oswego Street, probably reflecting drivers heading from non-residential activities in the Study Area to their residences.

Table 3-2 - Arterial Peak Hour Traffic Volumes, 2006

Arterial Section	Northbound	Southbound	Total
North of Court Street	1710	1490	3200
Court Street to Warren Street	1890	1490	3380
Warren Street to Sunset Avenue	1940	1800	3740
Sunset Avenue to Noyes Street	1880	1880	3760
Noyes Street to Oswego Street	1840	1900	3740
South of Oswego	1880	2060	3940

Figure 3-2 AADT and Street Map

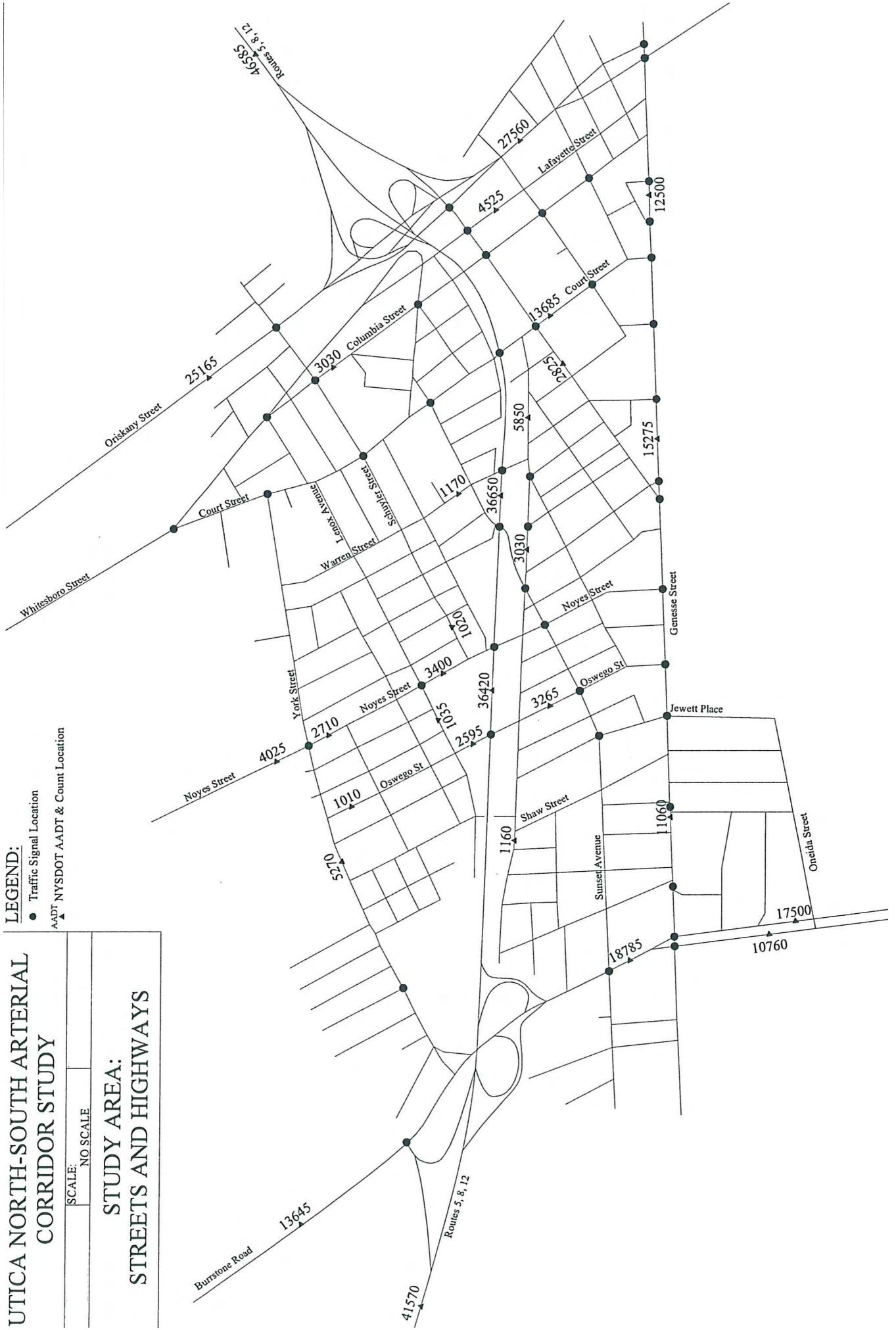
**UTICA NORTH-SOUTH ARTERIAL
CORRIDOR STUDY**

SCALE: NO SCALE

**STUDY AREA:
STREETS AND HIGHWAYS**

LEGEND:

- Traffic Signal Location
- ▲ AADT NYSDOT AADT & Count Location



III. Existing Conditions

Traffic on the five cross streets is shown in Table 3-3. Traffic on the streets on the east side of the Arterial is much greater than traffic on the west side because of the major traffic generators on or near Genesee Street, east of the Arterial. The difference would be even greater were it not for the prohibition on left turns from the Arterial, and from most cross streets to the Arterial. Court Street, the major east-west route across the Arterial, carries the most traffic, 40% to 45% of the total crossing the Arterial.

Table 3-3 - Peak Hour Traffic on Arterial Cross Streets, 2006

Cross Street	West Side of Arterial	East Side of Arterial
Court Street	670	1180
Warren Street	100	485
Sunset Avenue	285	255
Noyes Street	385	310
Oswego Street	215	390

The posted speed limit on the Arterial from Court Street to Oswego Street is 40 mph. Average travel speeds, reflecting the time spent stopped at traffic signals on the Arterial were 34 mph during the AM peak hours, 39 mph during the midday, and 30-mph during the PM peak hours. At times of low traffic some drivers exceed the speed limit. The five signalized intersections cause vehicles to stop on the Arterial, which leads to slowdowns, delays and, at times, congestion. Congestion at the Court Street intersection was often noted at public meetings.

Travel delays and congestion can be measured by determining the difference in speed that traffic moves compared to the amount of time it should take at the posted speed limit. This difference can be quantified using a Level of Service (LOS) analysis. The Level of Service (LOS) for a signalized intersection is defined in terms of average delay per vehicle. Levels of service can be calculated for each movement or approach and for the total intersection as a weighted average of all movements. Delay is dependent on a number of variables including the quality of signal progression, cycle length, green ratio and volume/capacity ratio for the lane group or approach. The delay estimate is used to represent driver discomfort, frustration, and fuel consumption and lost travel time. Levels of Service are designated A through F, where LOS A is excellent, and LOS F is failing. Level D is considered "acceptable," the level just before remedial action is necessary. Facilities are generally designed to perform at LOS C.

III. Existing Conditions

Table 3-4 Level of Service Criteria for Signalized and Unsignalized Intersections

Level of Service	Signalized Intersection Delay Range (sec/veh)	Unsignalized Intersection Delay Range (sec/veh)	Description of Performance
A	≤ 10	≤ 10	Excellent
B	> 10 and ≤ 20	> 10 and ≤ 15	Very Good
C	> 20 and ≤ 35	> 15 and ≤ 25	Good
D	> 35 and ≤ 55	> 25 and ≤ 35	Acceptable
E	> 55 and ≤ 80	> 35 and ≤ 50	Poor
F	> 80	> 50	Failing

The performance of the Arterial and its intersections was analyzed using the LOS criterion. All procedures used for the analysis described were in conformance with the 2000 Highway Capacity Manual. Signalized and unsignalized intersections were analyzed using the Synchro program, Version 5. The results of the Level of Service analysis are shown in Table 3-5 for each intersection and approach.

As shown in Table 3-5, the Study Area intersections currently operate at LOS C or better overall, with most approaches operating at LOS D or better. The only movements with a LOS F are the three movements that allow left turns onto the Arterial northbound at Noyes Street and to the Arterial southbound at Oswego Street and Warren Street. While a LOS E or F is not shown at other locations, the presence of signalized intersections on what is otherwise a high-speed, access-controlled highway causes frustrating slowdowns and stops for Arterial traffic.



III. Existing Conditions

Table 3-5, 2006 Existing Level of Service, PM Peak Hour

Intersection		Level of Service
Arterial/Court St		
Arterial NB	T,R	A
Arterial SB	T,R	B
Court St EB	T,R	C
Court St WB	T,R	C
Overall		B
Arterial/Warren St		
Arterial NB	T,R	B
Arterial SB	T,R	C
Warren St EB	T,R	C
Warren St WB	L,T,R	F
Overall		C
Arterial/Sunset Ave		
Arterial NB	T,R	B
Arterial SB	T,R	A
Sunset Ave EB	T,R	D
Sunset Ave WB	T,R	C
Overall		B
Arterial/Noyes St		
Arterial NB	T,R	A
Arterial SB	T,R	B
Noyes St EB	L,T,R	F
Noyes St WB	T,R	D
Overall		B
Arterial/Oswego St		
Arterial NB	T,R	D
Arterial SB	T,R	A
Oswego St EB	T,R	C
Oswego St WB	L,T,R	F
Overall		C

NB = Northbound,
SB = Southbound,
EB = Eastbound,
WB = Westbound;
L,T,R = Left, Through, Right

III. Existing Conditions

A survey of pedestrian and bicycle crossings at five intersections was conducted at Court Street, Sunset Avenue, Noyes Street and Warren Street. The results are summarized in Table 3-6.

Table 3-6 Observed Pedestrian and Bicycle Crossings

Age	Crossings	Walked Against Signal				Walked With Signal			
		Used Button	%	No Button	%	Used Button	%	No Button	%
Youth	96	8	8.3%	49	51.00%	21	21.9%	18	18.8%
Adult	168	8	4.8%	53	31.50%	70	41.7%	39	23.2%
Senior	9	1	11.1%	2	22.20%	2	22.2%	4	44.4%
Total	273	17	6.2%	104	38.10%	93	34.1%	61	22.3%

Source: Survey conducted from 3 PM to 6 PM on a weekday during the school vacation period

As with vehicle crossings, Court Street had the highest volume, approximately one-third of the total. Of the total, 56% crossed with a green signal; 34% of who also used the pedestrian signal button. The highest percent crossing legally was at Oswego Street and Noyes Street. This may be due to the higher speed traffic coming from or destined to the expressway portion to the south. There are also fewer gaps in traffic coming from the free flowing section to the south.

At Sunset Avenue 90% were observed crossing illegally against the green. One possible explanation is that signals to the north and south have created gaps in Arterial traffic in which pedestrians and bicyclists feel can safely cross; such gaps are less likely at Court Street, Noyes Street and Oswego Street. The high violation percentage may also be due to the greater presence of young people at Sunset Avenue where the majority of those crossing were young people. Crossing times appear to be adequate; in only one case a handicapped senior was unable to cross the arterial in the allotted time and was stranded in the median until the next green light.

3. Arterial Travel

An Origin and Destination (O&D) survey was conducted in May 2006 to better understand the travel needs of Arterial users and to evaluate the benefit of potential improvements.

The study's recommended alternatives to be developed may remove turn prohibitions at certain locations, close some intersections and make other modifications to the existing facility. Knowing the origins and destinations of traffic on the Arterial and at each of the intersections enables planners to estimate the effects of rerouting that may be permitted or required with different alternatives. Among the highlights were:

III. Existing Conditions

- Of the 23,000 vehicles northbound on the Arterial, 10,000 were destined north of the Mohawk River. Of the remaining 13,000, 90 percent were destined to the east side of the Arterial. Over 7,000 of the destinations were in one zone - between Mandeville Street and Liberty Street, between the Arterial and Genesee Street. (Figure 3-3, Destinations of Arterial Traffic Northbound at Oswego Street)
- Of the 19,000 vehicles southbound on the Arterial, 13,000 were destined south of Burrstone Road. Of the remaining traffic, only one-third was destined for the east side of the Arterial. This reflects the inability to make left turns from the Arterial and the availability of a viable alternate route on State Street to the zone east of the Arterial around Court Street, noted above. (Figure 3-4, Destinations of Arterial Traffic Southbound at Court Street)
- Of the 8,800 vehicles eastbound at the intersections 3,400 were travelling to areas north of the Mohawk or south of Burrstone Road. Thirty-two hundred were destined to zones within the Study Area and 2100 to destinations across Genesee Street. (Figure 3-5, Destinations of Eastbound Traffic at Arterial Intersections)
- Seventy percent of the westbound traffic at Arterial intersections (9,300 of 13,100) was destined to areas north of the Mohawk or south of Burrstone Road. Twenty-three hundred were destined to Study Area zones west of the Arterial and 1,400 were destined to areas west of York Street. (Figure 3-6, Destinations of Westbound Traffic at Arterial Intersections)

4. Arterial Safety

With a combination of high volumes, suddenly reduced speed (40 mph) compared to the northern and southern extensions (55 mph), and the five signalized intersections within three-quarters of a mile, the Arterial has a significant number of accidents. Many have involved pedestrians—two in recent years were fatal.

The NYSDOT performed a safety study in January 1988 to analyze the cause of accidents along the Arterial. In the early 1990s safety improvements based on the study were made to the Arterial. These included: repaving the Arterial with a higher friction surface course; milling the pavement near intersections to increase roadway friction to assist stopping vehicles; and installing flashing strobes in the red signals at Court Street and Oswego Street. Accident rates declined significantly in subsequent years but still remain above the statewide average for similar facilities. (Figure 3-7)

Figure 3-3 Destinations of Traffic Northbound at Oswego St.

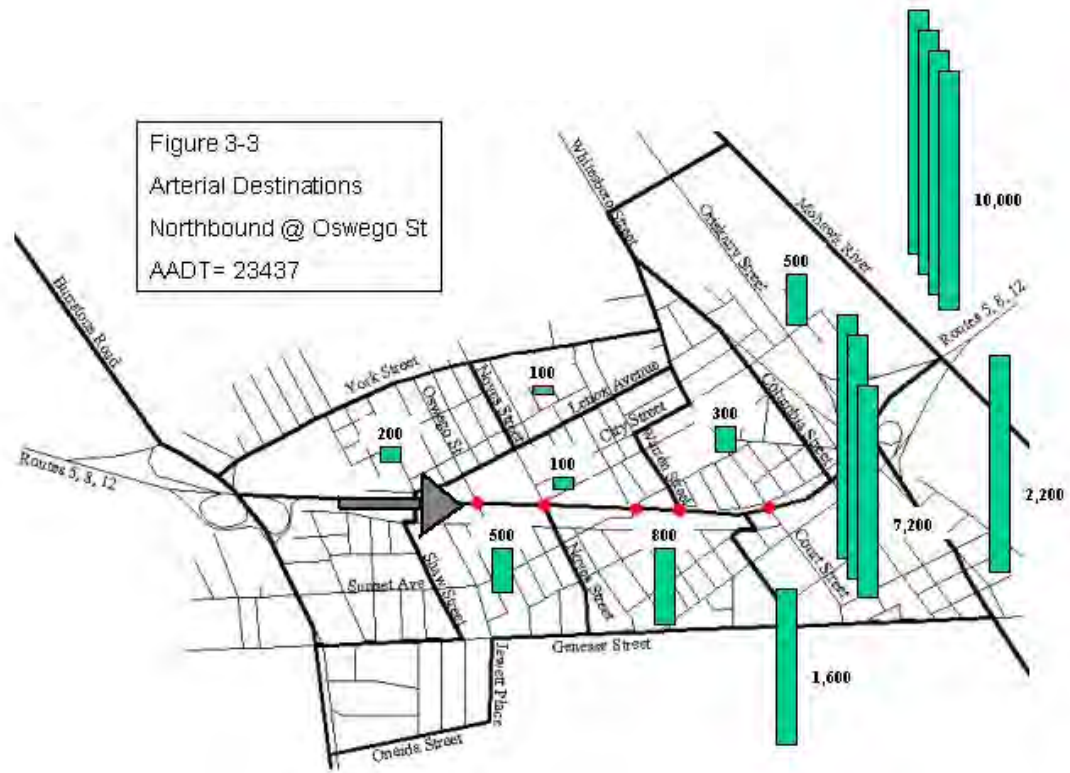


Figure 3-4 Destinations of Traffic Southbound at Oswego St.

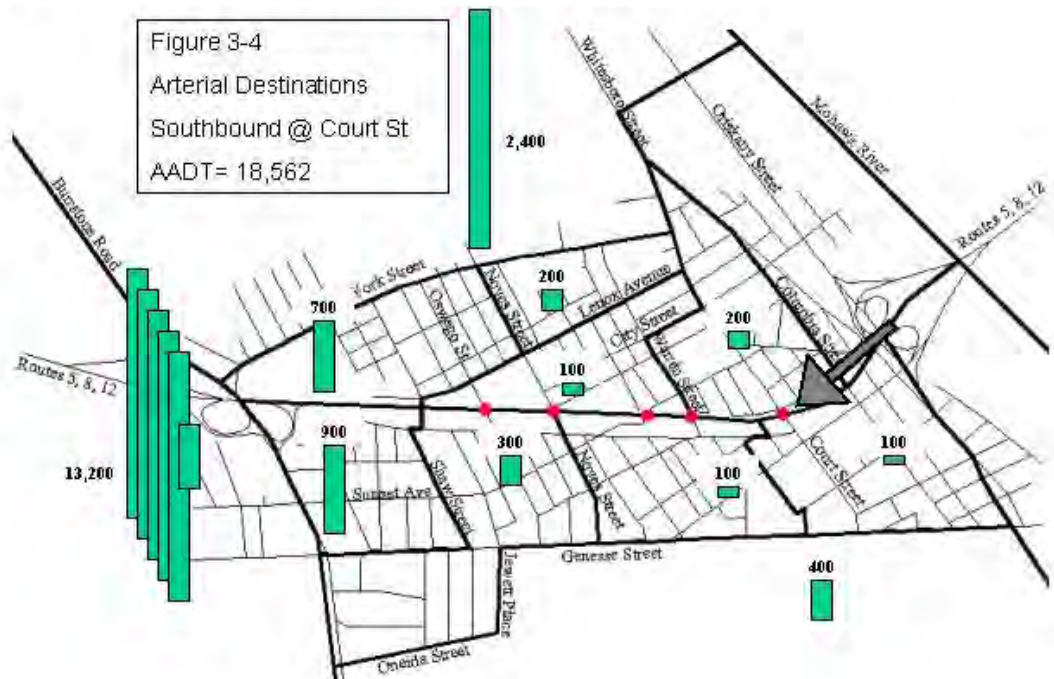


Figure 3-5 Destinations of Eastbound Traffic At Arterial Intersections

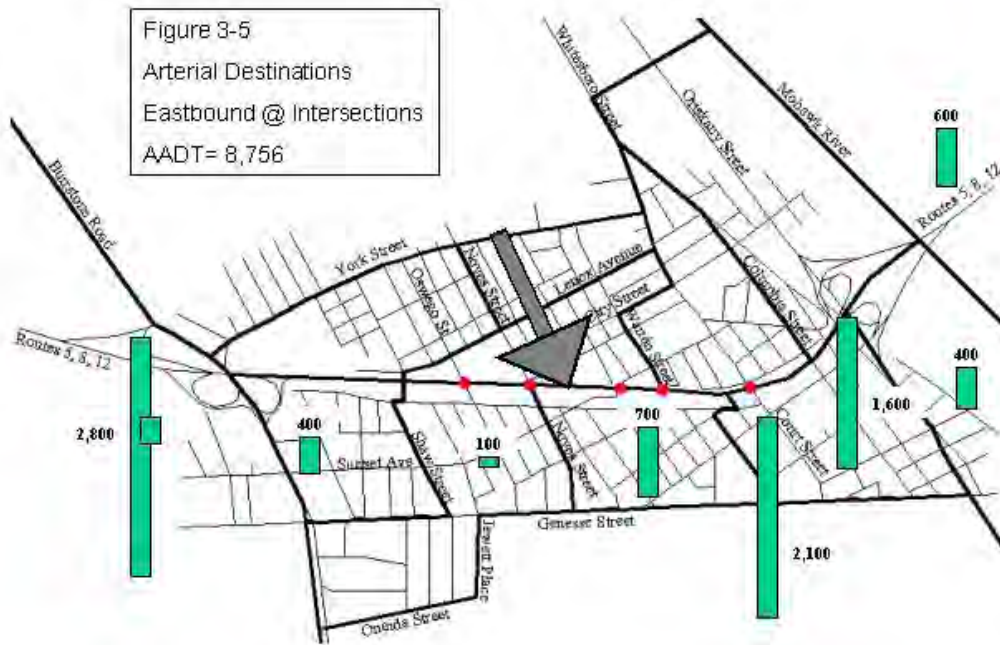
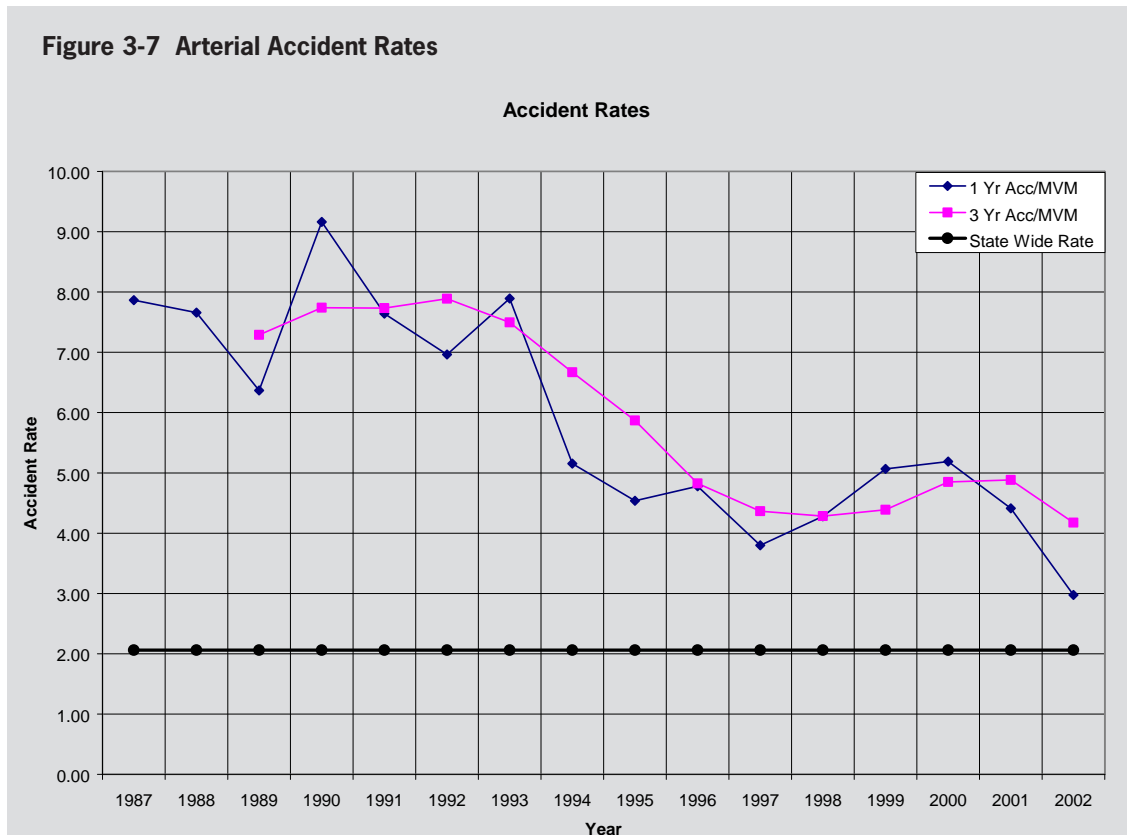


Figure 3-6 Destinations of Westbound Traffic At Arterial Intersections



III. Existing Conditions



The state DOT provided detailed accident data for the 3-year period from 1998 to 2001. The detailed accident data show 209 reported accidents along the Arterial in the Study Area. The overall accident rate for the Arterial is 3.60 acc/MVM, which is 1.75 times the Statewide average of 2.06 acc/MVM for similar roads. Some of the accidents can be attributed to the layout of the Arterial as it approaches the Court Street intersection from the north. There is insufficient distance between the southbound on-ramp from westbound Rt 5A and the southbound off-ramp at Court Street for the merging of entering and exiting traffic. At the same location, the sight distance to the Court Street intersection is blocked by a tall building adjacent to a curve in the Arterial viaduct.

Most of the accidents on the Arterial can be related to the intersections. Rear-end accidents accounted for almost 64% of the total, and occurred more frequently at the intersections of Court Street and Oswego Street due to the abrupt change in speed limits approaching these two signals. Intersection accident rates are based on the number of accidents and the total number of vehicles entering. Each of the five intersections along the Arterial has a much higher accident rate than the Statewide average of 0.34 accidents per million entering vehicles (acc/MEV) for all accident types. As illustrated in Table 3-7, Intersection Accident Rates, the overall intersection accident rates are upwards of 5 to 6 times the Statewide average and double the Statewide average for rear-end accidents.

III. Existing Conditions

Table 3-7, Intersection Accident Rates, 1998 - 2001

Intersection	Total Accidents	Accident Rate	Percent of Statewide Avg
Court Street	57	1.14	335%
Warren Street	18	0.43	126%
Sunset Avenue	41	0.98	288%
Noyes Street	35	0.81	238%
Oswego Street	44	1.04	306%

Statewide Average is 0.34 accidents per million entering vehicles (acc/MEV)

Table 3-8, Pedestrian and Bicyclist Accidents

Intersection	1998 to 2001	
	Accidents	Acc/Yr
Court St	4	1.33
Warren St	1	0.33
Sunset Ave	2	0.67
Noyes St	1	0.33
Oswego St	0	0
Total	8	2.67

Pedestrian and bicycle accidents are a major issue for the residents in the Study Area. Pedestrians and bicyclists cross the Arterial at all of the five intersections for school, shopping, recreation and other reasons. During the reported 3-year period from 1998 - 2001 there were 8 accidents involving pedestrians according to NYSDOT. Table 3-8, Pedestrian and Bicyclist Accidents, details the accidents from each of the data sets.

Records show that most of the pedestrian accidents reported involved pedestrians disregarding the traffic signal and crossing against oncoming traffic. Often youthful pedestrians are involved, who do not have the experience or judgement needed to safely cross a busy Arterial. Since 1987 there have been 4 fatal accidents involving pedestrians on the Arterial. The two most recent fatalities, involving a 9-year-old boy in 2004 and a 26-year-old man in 2005, have intensified debate about the future of the Arterial.

5. Other Transportation Modes

Public bus transportation in the City of Utica is provided by CENTRO of Oneida. None of the bus routes use the Arterial or cross at the Arterial intersections. One route (two buses per day) operates on Lincoln Avenue between Court Street and Shaw Street. Some school buses are routed through the Study Area.

The New York, Susquehanna & Western Railway Corporation (NYSW) has two rail lines within the study area. One rail line is currently operational, located in the middle of Schuyler Street. This line continues south across Oswego Street parallel to and within the ROW of the Arterial. It extends north across Route 5A to connect with the main rail line at Union Station. A second track is located along the west side of the Arterial north of Oswego Street and extends north to Columbia Street between the Arterial ROW and Fay Street. This line is not operational and most of it is either fully or partially buried.

III. Existing Conditions

An east-west on-road bicycle route has been designated along Columbia Street and Lafayette Street, passing under the elevated section of the Arterial north of Court Street. No other bicycle routes have been designated in the Study Area.

B. Demographic, Economic and Land Use Characteristics

1. Demographic and Economic Summary

In comparison to the City as a whole, which has experienced a population decline, the Study Area experienced an even greater population loss since 1990. Its population decreased by over 12 percent between 1990 and 2000, from 23,113 to 20,281. As its population decline has slowed, the Study Area's racial diversity has increased. While in 2000, the Study Area was almost 74 percent white, its black/African American population—the minority group with the largest representation in Utica and the Study Area—represented 17 percent of the area, a 10 percent increase from 1990. The Hispanic population in the Study Area has increased at an even higher rate, at 106 percent.

Housing in the Study Area is a concern for several reasons. While the number of housing units has declined by 6 percent in the City as a whole between 1990 and 2000, it has declined in the Study Area by even more (over 7 percent). This housing reduction has occurred while the overall population has declined. Still, a full 26 percent of rental households in the Study Area pay half or more of their income to rent—paying more than one-third of income to rent is generally considered to be an undesirable financial strain.

Between 1990 and 2000, the number of vacant housing units increased from nearly 9 percent to 14 percent in the City as a whole, and from 10 percent to almost 19 percent—nearly doubling—in the Study Area. In three central census tracts (207.01, 209, and 211.01) one-quarter of all housing units are vacant. This inevitably relates to the population decline and the housing unit growth in the Study Area overall, but shows cause for concern over neighborhood stability. This lack of investment in the Study Area's housing stock is reflected in the median home values, which again are lower than both the City and region. In 2000, the median home value was \$41,256 in the Study Area, \$57,800 in the City, and \$70,350 in Oneida-Herkimer Counties.

Employment in the Study Area is similar to those of the City of Utica—both have experienced a shift from a manufacturing to a service-based economy since the mid-20th century. The proportion of the population in the labor force mirrors that of the City and region (ranging from 56 to 59 percent), but these figures are slightly lower than the national rate of 64 percent. Industry share is the same in all areas. Almost 95 percent of Study Area residents work within Oneida County, a higher rate than both City and region. Potentially related to this is the fact that one-third of households in the Study Area do not have access to a vehicle; however, 44 percent do have access to one vehicle. Overall, however, vehicle access is much lower in the Study Area than it is in the City and region.

III. Existing Conditions

Both the Study Area and City’s median household income are lower than the region and state. In 2000, they were \$21,357 for the Study Area, \$24,916 for the City, \$34,417 for the region, and \$43,393 for the state. Poverty in the area is increasing: a larger proportion of County, City, and Study Area residents were classified as poor in 2000 than 1990, with the Study Area experiencing the greatest change, from 26 percent to almost 32 percent. The central portion of the Study Area has poverty rates over 40 percent; it exhibits the greatest deficiencies in terms of income, poverty, and housing age, vacancy, and value.

2. Land Use and Community Characteristics

Figure 3-8, Land Use, shows the location of the existing land uses in the Study Area. For this report, “Upper West Utica” refers to the Study Area west of the Arterial, “Lower West Utica” is the area east of the Arterial, and “Downtown Utica” is the Central Business District. Approximate boundaries of each area are shown below. The Utica Marsh is a wildlife refuge and agricultural area and is not the focus of this analysis. Within the entire Study Area, seven categories of land use have been utilized based on data obtained from the New York State Office of Real Property Services. Definitions of the land use categories are as follows:

Commercial – Property used for the sale of goods and/or services. Includes hotels, restaurants, storage facilities, retail services, banks and office buildings, and multi-purpose properties.

Community Services – Property used for the well-being of the community. Includes schools, religious facilities, health care facilities, and government facilities.

Industrial – Property used for the production and fabrication of durable and non-durable goods. Includes manufacturing and processing uses.

Public Services – Property used to provide services to the general public. Includes utility and communication services, transportation services (excluding roads) and waste disposal facilities.

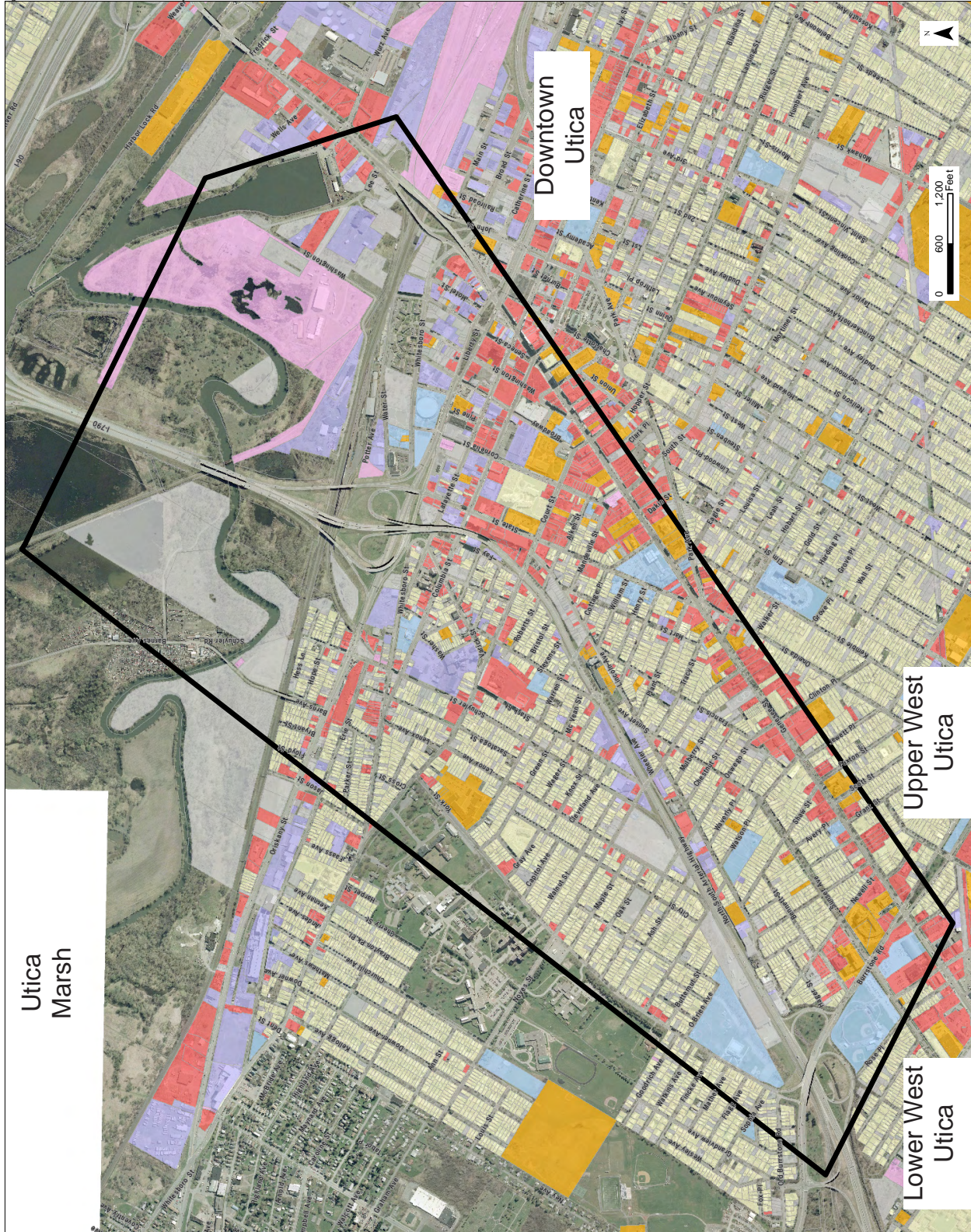
Recreation & Entertainment – Property used by groups for recreation, amusement or entertainment. Includes sports facilities, beaches, marinas, and parks.

Residential – Property used for human habitation including single- and multi-family, year-round and seasonal residences.

Vacant – Property that is not in use or lacks permanent improvement.



Figure 3-7 Land Use



EXISTING LAND USE
 North/South Arterial
 Corridor Study
 January 2006

- KEY**
- PROPOSED STUDY AREA
 - LAND USE CLASSIFICATION
 - NO DATA
 - AGRICULTURAL
 - COMMERCIAL
 - COMMUNITY SERVICES
 - FORESTED/CONSERVATION
 - INDUSTRIAL
 - PUBLIC SERVICES
 - RECREATION & ENTERTAINMENT
 - RESIDENTIAL
 - VACANT

PROJECT # 2006 - 06008.L0P
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SARATOGA ASSOCIATES

Landscape Architects, Architects,
 Engineers, and Planners, P.C.
 EDITION - NEW YORK - SARATOGA SPRINGS

**CITY OF UTICA,
 NEW YORK**

III. Existing Conditions

Table 3-9, Land Use

Land Use Designation	Acreage	Percent of Study Area
Commercial	134.2	13.90%
Community Services	46.8	4.90%
Industrial	81.4	8.50%
Public Services	148.4	15.40%
Recreation & Entertainment	53.2	5.50%
Residential	276.1	28.70%
Vacant	222.8	23.10%
TOTAL	963	100.00%

Source: Calculated from GIS data provided by the City of Utica

Table 3-9, Land Use, shows the acreage and percentage of each category in the Study Area. The most prevalent land use in the Study Area is residential (28.7%) followed by vacant land (23.1%). Public Services comprise 15.4% of the area, followed by commercial uses, which comprise almost 14%. The remaining land use classifications—industrial, recreation and entertainment, and community services—utilize 8.5%, 5.5% and 4.9% of the total Study Area, respectively.

Residential land with a mix of parcel sizes is distributed throughout the Study Area, with concentrations in Upper West Utica (the Study Area boundary) south of Court Street. Few residential buildings are located in Downtown Utica. On both sides of the Arterial south of Court Street, residential development within the Study Area is in the form of single-family homes or low-rise (2- and 3-story) apartment buildings. Many of the larger buildings have been converted from single-to multi-family residences.

Commercial uses in the Study Area are found primarily along Genesee Street, in Downtown Utica, and in the form of neighborhood. The FX Matt Brewery is the most well-known business and attraction in the Study Area. Brodock Press, located in a former manufacturing building along the Arterial, is a nationally recognized printing company. Downtown Utica contains a mix of insurance companies, banks, government buildings and supporting retail uses. Along Genesee Street, law offices, dentists offices, and not for profit organizations are among the more prevalent types of businesses.

The Arterial corridor itself is flanked by many industrial uses on both sides from Court Street south to Burrstone Road. Brick and concrete manufacturing and warehouse buildings flank the viaduct north of Court Street. Some of the formerly active parcels such as the Bossert and Scheideman sites are now vacant and ripe for redevelopment. The City is currently marketing the Bossert site. On the east side of the Arterial, several smaller-scale, light-industrial businesses remain.

Community Services in the Study Area include Kernan Elementary School in Upper West Utica,

III. Existing Conditions

Munson-Williams Proctor Art Institute and the Holy Trinity Church in Lower West Utica, various government buildings in Downtown Utica, Faxton-St. Luke's Healthcare at the Study Area's south end, and other facilities located throughout. The Mohawk Valley Psychiatric Center is a largely vacant facility located on the west side of York Street, and Utica College is located just west of the Psychiatric Center. Several parks and playgrounds are located in the Study Area; notably, Addison Miller Park (at York and O'Brien Streets) and Donovan Stadium, both near Burrstone Road to the south. Utica Marsh, at the north end of the Study Area, has access to the bike path running along the Erie Canal. Vacant land is found throughout the Study Area; it is the second most prevalent land use in the Study Area.

Generally speaking, the Arterial does not present an attractive vista to drivers entering or passing through the Study Area. The roadway is bordered on either side by low-rise industrial buildings and vacant lots, with a partially abandoned railroad line also running along the west side. Buildings generally face away from the road. The fencing that borders the Arterial and all of the pedestrian crosswalks are in need of repair. In addition, the road has inadequate visibility; therefore, lighting is need of upgrade as well. Few street trees or other forms of vegetation exist here. At the intersection of Court Street, brick warehouse buildings hug the road on either side. As one drives south from Court Street, the Arterial becomes a direct yet otherwise unappealing route.

C. Conclusion

The North-South Arterial currently serves a number of competing roles:

- It functions as a major regional transportation link, carrying almost 40,000 vehicles per day through the Study Area.
- It functions as a local road, providing access to and from the residences and businesses on the adjacent city streets.
- Because of its configuration, the Arterial must also accommodate pedestrians traveling east-west on the adjacent city streets.

At this point in time, the Arterial is not satisfactorily addressing any of these needs. Regional traffic is subject to delays and accidents. Local access is hampered by turn prohibitions. The lack of local access limits the development potential of the area, and hurts the local economy. The safety of pedestrian movements across the arterial is a source of concern for both motorists and pedestrians. And finally, the appearance of the Arterial has deteriorated, and it does not offer a good impression of the City to those traveling on the Arterial.

IV. Development and Screening of Preliminary Alternatives

A. Goal and Objectives

The Inventory described in Section III provided a quantitative description for many of the public perceptions of the corridor's characteristics and problems. Development of a goal and objectives for the corridor study are the next steps, important for focussing the development of alternatives and to evaluating them. The goal and objectives were discussed and refined at a meeting of the Local Advisory Committee and presented to the public at subsequent meetings.

1. Project Goal

Develop cost effective and environmentally sensitive ways to improve the operation, safety, mobility for vehicles and pedestrians and appearance of the Arterial, improve the character and cohesiveness of the local community, and enhance community and adjoining neighborhood redevelopment.

2. Objectives

A number of issues were identified in the analysis of existing conditions and six objectives were developed in response. These objectives serve to guide the development and evaluation of alternatives. Below is a discussion of each issue and objective. It is not likely that any one alternative will meet fully all the objectives. There will be a trade-off, necessarily, because attempts to meet any one objective usually come at the expense of others

a. Improve the Safety of Pedestrian Access Across the Arterial

Issue: Many people in the City of Utica do not have access to motor vehicles; they depend on walking and bicycling to meet their needs. Good pedestrian and bicycle connections are needed to serve them. Others might forego auto trips if convenient pedestrian and bicycle facilities were available. Conflicts between high-speed traffic and pedestrians and bicyclists, particularly, make the Arterial a dangerous place to cross.

Objective: Provide safe and convenient pathways between residential, commercial, and institutional activities in and across the Arterial. Reduce the frequency of vehicle/pedestrian conflicts and provide adequate pedestrian crossing facilities. For example, a pedestrian crossing could be provided near Court Street, Warren Street or Noyes Street.

b. Improve Traffic Flow on the Arterial

Issue: Through traffic between areas north and south of the Study Area encounters unexpected stops at cross street intersections, time consuming traffic signals, and, often, frustrating congestion. Level of Service is a measure of this congestion.

IV. Development and Screening of Preliminary Alternatives

Objective: Reduce the number of and time lost at stops along the Arterial. Minimize congestion and speed reductions on the Arterial.

c. Reduce the Frequency of Vehicular Accidents on the Arterial

Issue: Within the Study Area the posted speed drops from 55 to 40 mph and free-flowing traffic encounters unexpected stops at traffic signals; rear end collisions are the most common type of accident. In addition, the absence of shoulders, acceleration / deceleration lanes, turning lanes, and adequate lighting contribute to the number and severity of accidents.

Objective: Provide roadway features for drivers to better anticipate and respond to speed changes. Include design measures to promote better enforcement of speed limits, reduce accident-related congestion and provide improved access for emergency service vehicles.

d. Improve Access to Adjacent Local Streets and Downtown Utica

Issue: Many parcels adjacent to the Arterial and elsewhere in the Study Area are vacant and underused. Better access to and visibility from the Arterial will promote implementation of the City's redevelopment plans. Left turn prohibitions from and onto the Arterial require adverse travel to reach many Study Area locations.

Objective: Provide more direct routing of traffic to Court Street and the Noyes/Oswego area to provide better access to Downtown Utica and parcels planned for redevelopment.

e. Create Connections Between the Neighborhoods On Either Side of the Arterial

Issue: The Arterial currently divides the Study Area; its width and traffic separates neighborhoods making movement from one side to the other difficult.

Objective: In the new roadway design, include features that provide for ease of pedestrian, bicycle, and car travel from one side of the Arterial to the other. Utilize landscaping and other design features to lessen the perceived distance from one side to the other.

Issue: Structures can be unattractive and roadways with heavy traffic flow can be unpleasant for area residents, pedestrians, and cyclists.

Objective: Use landscaping, materials, and other features to mitigate the heavy traffic flow and give the structure a more pleasant appearance.

f. Create a More Pleasant Environment on the Arterial

Issue: The Arterial is uninviting and does not present a positive image of Utica to drivers on the

IV. Development and Screening of Preliminary Alternatives

Arterial or in Upper West Utica. This is due in part to features of the Arterial and in part to the characteristics of the area through which it passes.

Objective: Utilize design features, materials, and landscaping to create an attractive gateway and transform the Arterial into a more appealing thoroughfare.

B. Preliminary Alternatives

Based on the Objectives and the problems and opportunities identified in the Inventory a wide range of preliminary alternatives were developed. Also important factors in developing these preliminary alternatives were public concerns and suggestions at the public outreach and public workshop meetings.

1. Range of Alternatives

The preliminary alternatives ranged from a new facility bypassing the Study Area to different levels of upgrading the Arterial. In addition to 55-mph expressways, some options were for a 45-mph upgraded arterial with grade separations; others were for a 40-mph arterial with minimal upgrading; others were for a 35-mph street or boulevard. Some alternatives favored through traffic; others emphasized meeting community concerns.

Twenty-eight alternatives were considered, including:

- > A new route that would bypass the Study Area and divert most of the Arterial's north-south through traffic;
- > A depressed expressway, with two interchanges; all existing street crossings would be carried across on bridges;
- > Six elevated expressways, differing in where and how many interchanges would be provided; and the provision of frontage roads; all existing crossings would be carried under the expressway
- > Seven at-grade expressways, differing in where and how many interchanges would be provided; and which streets would be carried across the expressway;
- > Three upgraded arterials; with speeds faster than the current Arterial but less than an expressway; no cross traffic, and simpler, partial interchanges;
- > Six city streets, with speeds slower than the existing Arterial, differing in the number of lanes; where turns were permitted, and where cross streets were closed;
- > A multi-way boulevard, with slower speeds, wide side medians and frontage
- > Three other alternatives, different than any of the above.

2. Evaluation of Preliminary Alternatives (Table 4-1)

The alternatives were screened using the Objectives for a preliminary evaluation. Each alternative was rated high (H), medium (M) or low (L) based on the degree to which they appeared to conform

IV. Development and Screening of Preliminary Alternatives

Table 4-1, Preliminary Alternatives

Bypass on New Alignment (55 mph) \$120-150 Million		Remove a considerable amount of through traffic from the arterial by constructing a new road on a new alignment to bypass the study area.								
Alternatives	Comments	Conformance with Objectives(High, Medium, Low)								
		Pedestrian Safety	Vehicle Safety	Traffic Flow	Accessible Land Uses	Community Connect	Attractive Environment			
1	Extend I-790 west to new Mohawk River and Erie Canal crossings and along existing or new north-south routes to Burrstone Road, French Road, or Judd Road Extension.	Although it adds some adverse travel, a 4-lane bypass route to the south, west of the Arterial, will divert considerable traffic from the Arterial, making possible a lower-speed street reconfiguration of the Arterial. Considerable property will be required on new or widened routes dividing and adversely affecting communities outside of the Study Area	Ratings: H: 2 M: 1 L: 0 Passing Rate: 9							
			Rating: 6 (Fail)	M	M	L	H	M	M	

Depressed Expressway (55 mph) \$120-150 Million		Below-grade construction is most costly because, among other things, the need to relocate subsurface utilities; in this case Nail Creek must be moved from the east to the west side of the Arterial. The high cost makes this alternative less likely in the foreseeable future.								
Alternatives	Comments	Conformance with Objectives(High, Medium, Low)								
		Pedestrian Safety	Vehicle Safety	Traffic Flow	Accessible Land Uses	Community Connect	Attractive Environment			
2	Depressed Expressway Carry all existing cross streets over the expressway. Add interchanges at Court Street and Noyes Street.	Access is provided to the most important cross streets. All streets pass over the expressway eliminating the current high traffic barrier. Parkland above all or a portion would be an attractive feature.	Ratings: H: 2 M: 1 L: 0 Passing Rate: 9							
			Rating: 12 (Pass)	H	H	H	H	H	H	

IV. Development and Screening of Preliminary Alternatives

Table 4-1, Preliminary Alternatives, Continued

Elevated Expressway (55 mph) \$70-80 Mil (Viaduct) \$40-50 Mil (Walled)		A viaduct provides open space below the roadway, but as with the viaduct north of Court Street, there is little use for it other than parking. Constructing retaining walls to support the elevated roadway significantly reduces the cost. Even with an attractive design, an elevated expressway has a negative environmental effect. The cost of either elevated option is considerable and might defer this alternative for several years.							
	Alternatives	Comments	Conformance with Objectives (High, Medium, Low)						
			Ratings: H: 2 M: 1 L: 0 Passing Rate: 9	Pedestrian Safety	Vehicle Safety	Traffic Flow	Accessible Land Uses	Community Connect	Attractive Environment
3	Elevated Expressway All local streets cross under No interchanges between Oriskany St and Burrstone Rd.	Existing Oriskany St and Burrstone Rd interchanges are only 1-1/2 miles apart and provide access to the Study Area.	Rating: 6 (Fail)	H	H	M	L	M	L
4	Elevated Expressway Court Street interchange. All local streets cross under.	An interchange at Court Street will improve traffic flow to the Study Area	Rating: 7 (Fail)	H	H	H	L	M	L
5	Elevated Expressway Noyes Street interchange. All local streets cross under.	Noyes Street is about halfway between Oriskany St and Burrstone Rd. An interchange there will improve traffic flow to the Study Area, particularly to the Bossert site, but at the expense of downtown access.	Rating: 7 (Fail)	H	H	M	M	M	L
6	Elevated Expressway Court & Noyes Streets interchanges. All local streets cross under.	Two interchanges in the Study Area maximizes traffic flow and accessibility	Rating: 9 (Pass)	H	H	H	H	M	L
7	Elevated Expressway Court & Noyes Streets partial interchanges and collector - distributor roads. All local streets cross under.	Partial interchanges (to and from the north at Court Street, and to and from the south at Noyes Street) with collector-distributor roads connecting them will provide good access to all cross streets. Lincoln Ave. is a potential northbound collector-distributor.	Rating: 9 (Pass)	H	H	H	H	M	L

IV. Development and Screening of Preliminary Alternatives

Table 4-1, Preliminary Alternatives, Continued

8	Elevated Expressway Court Street interchange, Noyes Street partial interchange and collector - distributor roads. All local streets cross under.	Adding access to and from the south at Court Street to the previous partial interchanges / collector-distributor roads will even better serve the heavier traffic between the north Study Area and the region south of Burrstone Road.	Rating: 9 (Pass)	H	H	H	H	M	L
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At-Grade Expressway (55 mph) \$20-30 Mil		An at-grade expressway eliminates traffic signals and minimizes the aesthetic impact on the community (by not elevating the roadway), but crossings become an issue. The more modest cost makes it feasible in the foreseeable future.							
	Alternatives	Comments	Conformance with Objectives (High, Medium, Low)						
			Ratings: H: 2 M: 1 L: 0 Passing Rate: 9	Pedestrian Safety	Vehicle Safety	Traffic Flow	Accessible Land Uses	Community Connect	Attractive Environment
9	At-Grade Expressway No crossings. No interchanges. Pedestrian bridges at Warren & Shaw Streets.	Oriskany St and Burrstone Rd interchanges are only 1-1/2 miles apart and provide reasonable access to the Study Area without an interchange. Any crossing will require an unattractive structure.	Rating: 5 (Fail)	H	H	L	L	L	M
10	At-Grade Expressway Grade-separate at Court and Noyes Streets with no interchanges. Pedestrian bridges at Warren & Shaw Streets.	Oriskany St and Burrstone Rd interchanges are only 1-1/2 miles apart and provide reasonable access to the Study Area without an interchange. Crossings at Court and Noyes will serve cross traffic.	Rating: 6 (Fail)	H	H	M	L	L	M
11	At-Grade Expressway Grade-separate at Court Street with an interchange. Grade-separate at Noyes Street without an interchange. Pedestrian bridges at Warren & Shaw Streets.	An interchange at Court Street will improve traffic flow to the Study Area. Because of the topography, pedestrian bridges at these locations should be more convenient than the usual case.	Rating: 7 (Fail)	H	H	M	M	L	M

IV. Development and Screening of Preliminary Alternatives

Table 4-1, Preliminary Alternatives, Continued

12	At-Grade Expressway Grade-separate at Court Street, no interchange. Grade-separate at Noyes Street with an interchange. Pedestrian bridges at Warren & Shaw Streets.	Noyes Street is about halfway between Oriskany St and Burrstone Rd. An interchange there will improve traffic flow to the Study Area, particularly to the Bossert site, but at the expense of downtown access. Because of the topography, pedestrian bridges at these locations should be more convenient than the usual case.	Rating: 7 (Fail)	H	H	M	M	L	M
13	At-Grade Expressway Grade-separate at Court Street and Noyes Street with interchanges. Pedestrian bridges at Warren & Shaw Streets.	Two interchanges in the Study Area maximize traffic flow and accessibility. Because of the topography, pedestrian bridges at these locations should be more convenient than the usual case.	Rating: 9 (Pass)	H	H	H	H	M	L
14	At-Grade Expressway Grade-separate at Court & Noyes Streets with partial interchanges and collector - distributor roads. Pedestrian bridges at Warren & Shaw Streets.	Partial interchanges (to and from the north at Court Street, and to and from the south at Noyes Street) with collector-distributor roads connecting them will provide good access to all cross streets. Lincoln Ave would be the northbound collector-distributor. Because of the topography, pedestrian bridges at these locations should be more convenient than the usual case.	Rating: 9 (Pass)	H	H	H	H	M	L
15	At-Grade Expressway Grade-separate at Court Street with an interchange. Grade-separate Noyes Street with a partial interchange and collector - distributor roads. Pedestrian bridges at Warren & Shaw Streets.	A partial interchange at Noyes Street and a full interchange at Court Street with collector - distributor roads connecting them would better serve the heavier traffic between the north Study Area and the region south of Burrstone. Lincoln Ave would be the northbound collector-distributor. Because of the topography, pedestrian bridges at these locations should be more convenient than the usual case.	Rating: 9 (Pass)	H	H	H	H	L	M

IV. Development and Screening of Preliminary Alternatives

Table 4-1, Preliminary Alternatives, Continued

Upgraded Arterial (45 mph) \$20 - 30 Mil		No cross traffic, no traffic signals, but lower speed and simpler interchanges, less right-of-way takings.							
	Alternatives	Comments	Conformance with Objectives(High, Medium, Low)						
			Ratings: H: 2 M: 1 L: 0 Passing Rate: 9	Pedestrian Safety	Vehicle Safety	Traffic Flow	Accessible Land Uses	Community Connect	Attractive Environment
16	Prohibit at-grade cross traffic and eliminate signals. Provide right-in, right-out access at Oswego Street. Grade-separate at Noyes and Court Streets without interchanges. Add pedestrian bridges at Warren & Shaw Streets.	Right-in, right-out access at Oswego will have fewer right-of-way impacts than a full interchange. Pedestrians may be tempted to cross an upgraded arterial, even if fenced. Because of the topography, pedestrian bridges at these locations should be more convenient than the usual case.	Rating: 4 (Fail)	M	H	L	L	L	M
17	Prohibit at-grade cross traffic and eliminate signals. Provide right-in, right-out access at Warren Street and Oswego Street. Grade-separate at Court and Noyes Streets. Add pedestrian bridges at Warren & Shaw Streets.	Right-in, right-out access will have fewer right-of-way impacts than a full interchange. Pedestrians may be tempted to cross an upgraded arterial, even if fenced. Because of the topography, pedestrian bridges at these locations should be more convenient than the usual case.	Rating: 4 (Fail)	M	H	L	L	L	M
18	Prohibit at-grade cross traffic and eliminate signals. Grade-separate at Court Street with an interchange. Provide right-in, right-out access at Oswego Street. Grade-separate at Noyes & Court St. Add pedestrian bridges at Warren & Shaw Streets.	Right-in, right-out access will have fewer right-of-way impacts than a full interchange. Pedestrians may be tempted to cross an upgraded arterial, even if fenced. Because of the topography, pedestrian bridges at these locations should be more convenient than the usual case.	Rating: 5 (Fail)	M	H	M	L	L	M

IV. Development and Screening of Preliminary Alternatives

Table 4-1, Preliminary Alternatives, Continued

City Street (35 mph) \$5-10 Mil		This requires through traffic to slow to 35 mph and cross intersections. Although through travel time increases only a minute or so, other than stops at signals, these travelers will perceive this negatively. Reduced speed and road redesign should improve pedestrian and vehicle safety, but not as much as an expressway solution. However, the minimal cost makes these alternatives feasible in the short term.							
	Alternatives	Comments	Conformance with Objectives(High, Medium, Low)						
			Ratings: H: 2 M: 1 L: 0 Passing Rate: 9	Pedestrian Safety	Vehicle Safety	Traffic Flow	Accessible Land Uses	Community Connect	Attractive Environment
19	Upgraded Street - Intersections. Reduce speed limit; reconfigure N & S approach to introduce traffic calming measures to reduce speed; add shoulders/right turn lanes & islands; add gateway feature, sidewalks, lighting, landscaping, trails.	Amenities should make the roadway more attractive. Left turns off of and, at most intersections, onto the Arterial are still not permitted.	Rating: 4 (Fail)	M	M	L	M	H	H
20	All of 18, plus: Add left turns lanes to permit all turns at intersections.	Intersections will require longer stop times to allow 4 signal phases per cycle; two way cross streets require one or two additional lanes in each directions, Intersections crossings are much longer.	Rating: 7 (Fail)	L	M	L	H	H	H
21	All of 18, plus: Close Warren, Sunset and Oswego intersections; Pedestrian bridges at Warren & Shaw Streets.	The most important crossings are maintained. Two way cross street traffic volumes will not permit removing left turn restrictions. Because of the topography, pedestrian bridges at these locations should be more convenient than the usual case.	Rating: 7 (Fail)	M	M	M	M	M	H

IV. Development and Screening of Preliminary Alternatives

Table 4-1, Preliminary Alternatives, Continued

22	All of 18, plus: Add two through lanes: add left turn lanes to permit all turns at intersections.	Increasing capacity will reduce vehicle congestion. Intersections will require longer stop times to allow four signal phases per cycle; two way cross streets require one or two additional lanes in each directions, intersections crossings are much longer.	Rating: 6 (Fail)	L	M	M	H	L	H
23	All of 18, plus: Redesign Court and Noyes Street intersections with roundabouts. Add left turn lanes at other intersections.	Roundabouts at the two major intersections would reduce stop time for through and cross traffic and permit left turns. They would present difficulties for pedestrians. Two approach lanes would be needed on each direction at the Court St and Noyes St roundabouts. Additional lanes would be needed at the other intersections.	Rating: 7 (Fail)	L	M	M	H	M	H
24	All of 18, plus: Add left turn lanes at cross streets; Make cross streets one-way (except Court Street); Add Shaw Street T-intersection and Shaw Street Pedestrian crossing.	One-way operation is generally safer than two-way because of fewer conflict points between vehicles and between vehicles and pedestrians. With one-way operation only three lanes maximum must be crossed at one time by pedestrians, because left- and right-turn lanes on a roadway are never on the same location. One-way operation also maximizes capacity by reducing the number of phases in a traffic signal cycle. One-way streets are common in other cities. Although some adverse travel would be required, it would probably be no greater than is now the case because of the left turn prohibitions. The Shaw Street intersection will improve access east of the Arterial and divert some traffic from other intersections.	Rating: 8 (Fail)	M	M	M	H	M	H

IV. Development and Screening of Preliminary Alternatives

Table 4-1, Preliminary Alternatives, Continued

Multi-Way Boulevard (35 mph) \$10-15 Mil		A "boulevard" contains center traffic roadways as well as side medians and one-way frontage roads. With extensive landscaping, the side medians provide sitting areas, paths and trails, making the Arterial a unifying rather than a separating feature of the Study Area. Some property and existing parallel streets are required. However, the modest cost makes this alternative feasible in the short term.							
	Alternatives	Comments	Conformance with Objectives (High, Medium, Low)						
			Ratings: H: 2 M: 1 L: 0 Passing Rate: 9	Pedestrian Safety	Vehicle Safety	Traffic Flow	Accessible Land Uses	Community Connect	Attractive Environment
25	All of 18, plus: Add left turn lanes at cross streets; Make cross streets one-way; Add wide side medians and frontage roads Add Shaw Street T-intersection and Shaw Street Pedestrian crossing	One-way operation is generally safer than two-way because of fewer conflict points between vehicles and between vehicles and pedestrians. With one-way operation only three lanes maximum must be crossed at one time by pedestrians, because left- and right-turn lanes on a roadway are never on the same location. One-way also maximizes capacity by reducing the number of phases in a traffic signal cycle. One-way streets are common in other cities. Although some adverse travel would be required, it would probably be no greater than is now the case because of the left turn prohibitions. The Shaw Street intersection will improve access east of the Arterial and divert some traffic from other intersections	Rating: 9 (Pass)	M	M	M	H	H	H

IV. Development and Screening of Preliminary Alternatives

Table 4-1, Preliminary Alternatives, Continued

Other Concepts (Costs Vary)		For the most part, these concepts are distinct from the preceding alternatives, and should be evaluated for their possible inclusion in any of the preferred alternatives.							
	Alternatives	Comments	Conformance with Objectives (High, Medium, Low)						
			Ratings: H: 2 M: 1 L: 0 Passing Rate: 9	Pedestrian Safety	Vehicle Safety	Traffic Flow	Accessible Land Uses	Community Connect	Attractive Environment
26	Oriskany Interchange Redesign Traffic volumes on the Arterial, on 5A/5S, on Oriskany Street and on the connecting ramps do not warrant the extensive ramps and bridges now provided. A simpler interchange can handle the traffic.	Replacing the existing interchange with a simpler design (a SPUI, for example) will save much of the replacement cost required in coming years. More importantly, it would free a large amount of well-located land for development.	Not Applicable	n/a	n/a	n/a	H	n/a	n/a
27	Noyes Street Community Center Carry a wide Noyes Street boulevard over the arterial (no interchange) with adjacent property redeveloped with community commercial uses. Consider roundabouts at the Noyes/Genesee and Noyes/York intersections.	This adds an attractive east-west connection and community focus to help unify both sides of Study Area.	Rating: 10 (Pass)	H	H	M	M	H	H
28	Arterial street with "Michigan Lefts" Separate north and south roadways by wide median, containing landscaping, trails and sitting areas. Left turns made by "U-Turns" after intersections. Add Shaw T-intersection.	Left turns must weave to right turn lanes after turning in median. Intersection spacing would not permit this everywhere.	Rating: 4 (Fail)	L	L	M	H	L	M

IV. Development and Screening of Preliminary Alternatives

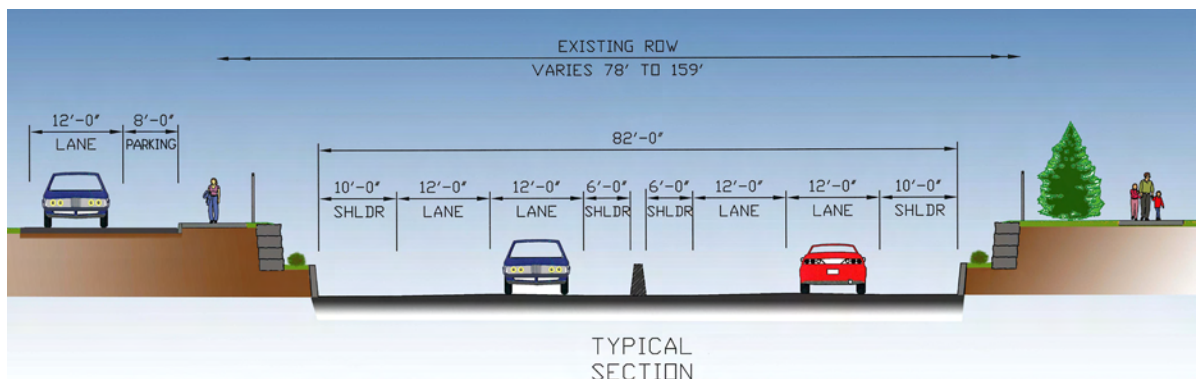
with each Objective. A numeric rating of 2, 1 or 0 was given for H, M or L, respectively, and then summed. A "passing" score of 9 meant that overall, the alternative rated halfway between medium and high.

Table 4-1 gives a brief description of each alternative, some comments on the cost and other issues, and its evaluation and rating. While several "passed" with a score of 9, it became clear that four facility types were appropriate for further development and evaluation. These are described in the next Section.

C. Conclusion: Four Alternative Facility Types

It became clear from screening the preliminary alternatives that four distinct types of facilities should be examined in detail to meet the identified objectives: a depressed expressway; a surface expressway; an elevated expressway and a multi-way boulevard. In addition, a Null alternative, which makes minimal improvements to the Arterial, other than replacement of the existing viaduct, was also laid out. These are described below. The three expressways are not different in character from expressways with which Utica is familiar. The multi-way boulevard is a new concept for Utica.

1. Depressed Expressway



A depressed expressway with four lanes, a median and shoulders and 55-mph speed limit would join the existing expressway sections north of Court Street and north of Burrstone Road. All existing cross streets would cross over the expressway. The width would vary from about 80 to 120 feet. Interchanges are located at Court Street and at Noyes Street, providing excellent access to the existing through streets.

Through traffic would enjoy uninterrupted high-speed movement through the study area with no stops for signals. Pedestrian and vehicle traffic would be provided with all current connections across the highway, but with the danger and delay of crossing the existing highway substantially reduced. Accidents can be expected to decrease substantially.

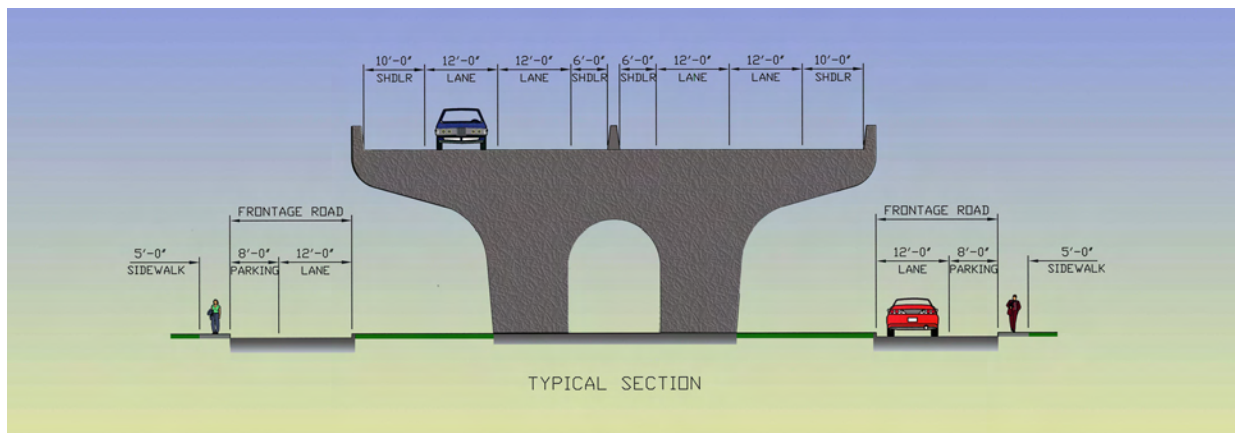
IV. Development and Screening of Preliminary Alternatives

A depressed expressway would be the least obtrusive of the alternatives, removing through traffic from view. The interchanges would require at-grade intersections with the cross streets, but with through traffic removed, intersection design and controls would be simplified. The depressed alternative would be compatible with and encourage new neighborhood retail, commercial and mixed land uses, and upgrading of residential property.

Exits from the expressway would be provided at only two, rather than the five locations as currently on the Arterial and increase traffic on the two streets. On the other hand left turn exits would be provided where none are now, reducing adverse travel that intrudes into residential streets in the Study Area. Some property would be required for the ramps at Court and Noyes Street.

The location of Nail Creek and the high water table makes construction of the depressed expressway alternative challenging. Nail Creek flows north from Burrstone Road in a buried culvert on the east side of the Arterial, crossing to the west side at Sunset Avenue; it is just below the surface and would have to be relocated. A variation of this alternative is to depress the expressway 10 - 12 feet below the surface and have short bridges rise 8 - 10 feet over it at the crossings.

2. Elevated Expressway



An elevated expressway with 4 lanes, a median and shoulders with a 55-mph speed limit would join the existing expressway sections north of Court Street and north of Burrstone Road. The expressway would be on a viaduct structure or walled embankment with all of the current cross streets, except Oswego Street, passing under the expressway. The width of the elevated structure would be about 90 feet and with frontage roadways the expressway would be about 150 feet wide. Through traffic would enjoy uninterrupted high-speed movement through the study area with no stops for signals. Pedestrian and vehicle traffic would be provided with almost all current connections across the highway, but with the danger and delay of crossing the existing highway substantially reduced.

A full interchange at Court Street would serve traffic to and from the south as well as the north. A partial interchange at Noyes Street would serve traffic coming to and from the south. A one-

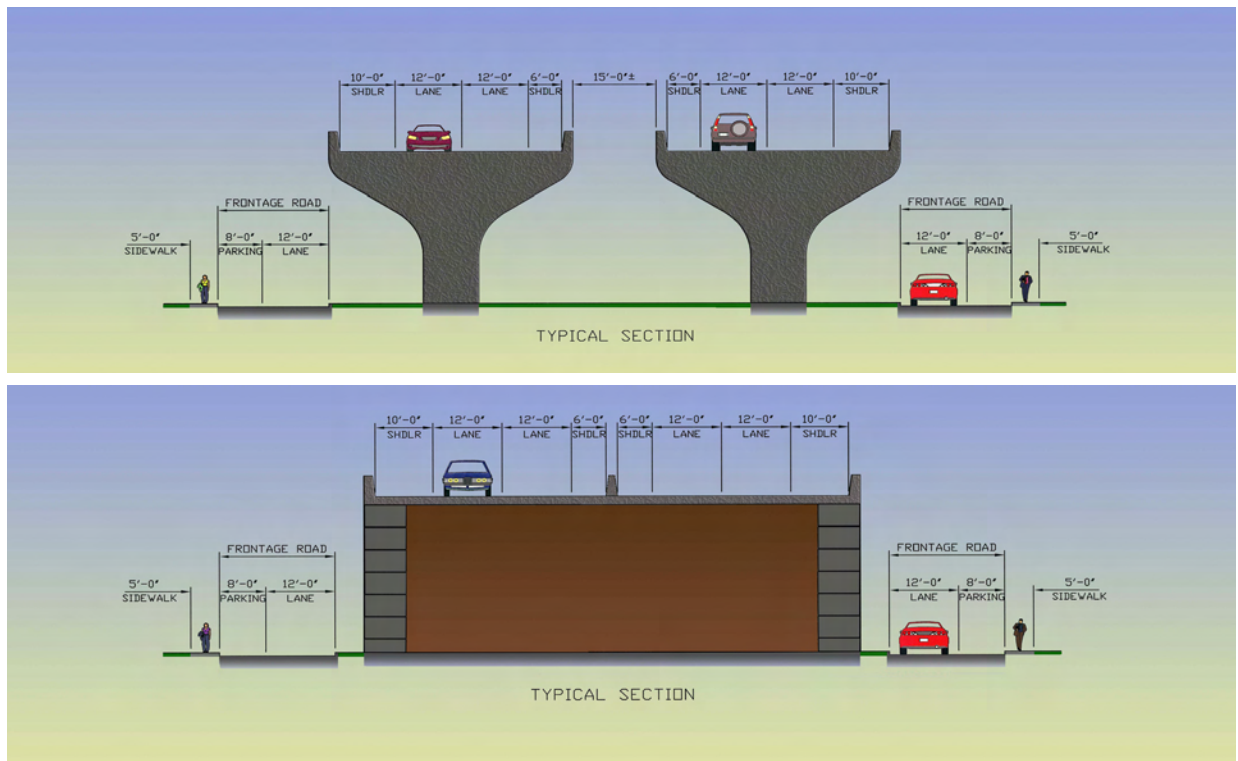
IV. Development and Screening of Preliminary Alternatives

way frontage road would be constructed on each side of the expressway from the Noyes Street interchange to the Court Street interchange connecting all of the current cross streets. The frontage roads would improve access for many study area trips. Vacant and underused property adjacent to the roads would have greater redevelopment potential because of visibility from the elevated expressway and unrestricted turns permitted from the roads.

The Oswego Street crossing would be closed for the Noyes Street ramps; a pedestrian bridge at Thorn Street would provide a replacement pedestrian connection south of Noyes Street. At this location the higher elevation on the west side of the Arterial would make a ramp unnecessary and remove, in part, one of the inconveniences that make pedestrian bridges little used in many cases.

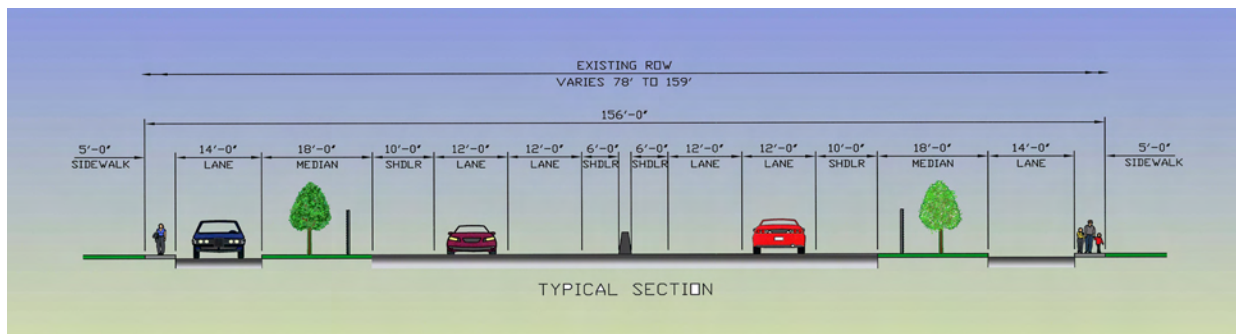
A structure about 20 feet high and 86 feet wide would be placed close to existing development east and west of the highway. While much of the immediately adjacent parcels are industrial, commercial or vacant, the structure would be close to some residential properties and a church. Even if roadways and sidewalks crossing under the structure were well lit, this area might be perceived as dark and unwelcoming. An elevated alternative would be compatible with and encourage new light industrial or commercial redevelopment of vacant sites and upgrading of residential in the Study Area. Some property would be required for the ramps at Court and Noyes Street.

There are several additional options as to how the elevated section can be constructed. Two options are shown below:



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3. Surface Expressway



A surface expressway with 4 lanes, a median and shoulders and 55-mph speed limit would join the existing expressway sections north of Court Street and north of Burrstone Road. All at-grade crossings would be eliminated permitting uninterrupted 55-mph travel along it. The arterial would be widened to include four lanes with adequate inside and outside shoulders, and acceleration and deceleration lanes. The width of the expressway would be about 90 feet and with frontage roadways about 150 feet wide. Through traffic would enjoy uninterrupted high-speed movement through the study area with no stops for signals. Vehicle and pedestrian traffic crossing the expressway would have much reduced delay and danger.

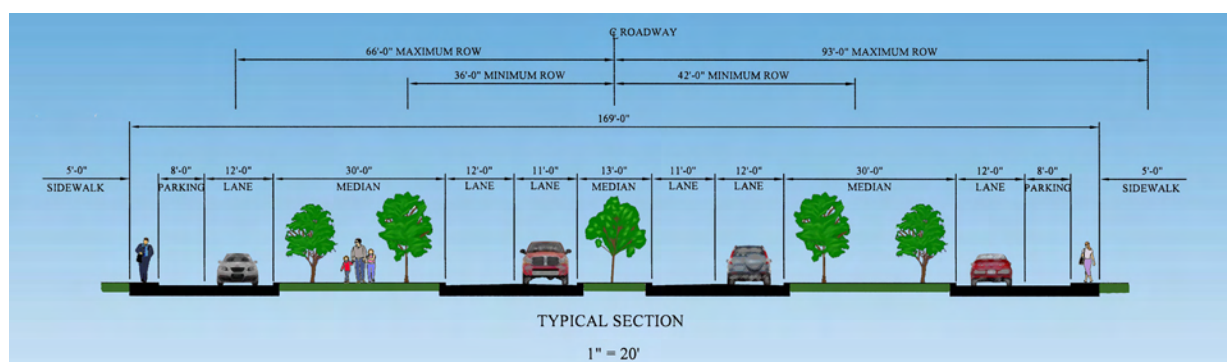
A full interchange at Court Street would serve traffic to and from the south as well as the north. A partial interchange at Noyes Street would serve traffic coming to and from the south. A one-way frontage road would be constructed on each side of the expressway from the Noyes Street interchange to the Court Street interchange, connecting all of the current cross streets. The frontage roads would improve access for many study area trips. The existing structure north of Court Street, when replaced, would be extended south either over or under Court Street and Noyes Street would pass over or under the Expressway, allowing east - west pedestrian and vehicle traffic at these two locations.

The Noyes Street crossing would have to cross both the expressway and the railroad line on Schuyler Street. Whether elevated or depressed, it would extend as far as Lenox Avenue on the west and Sunset Avenue on the east, approximately 1400 feet. Lincoln Avenue would be cut at Noyes Street, and Schuyler Street would end at the Noyes Street bridge or underpass. The intersection of the frontage roads and Noyes Street would be elevated or depressed. A variation of this alternative is to depress the expressway 10 - 12 feet below the surface at Noyes Street and have a shorter bridge extending from Schuyler Street to Lincoln Avenue rise 8 - 10 feet over the expressway. To maintain connections across the expressway pedestrian bridges would be provided at Warren Street, and two blocks south of Oswego Street at Thorn Street. The higher elevation of Warren Street on the east side and Thorn Street on the west side would make ramps on one side unnecessary and eliminate one of the features that make pedestrian bridges inconvenient and seldom used in most situations. While several streets no longer connect across the expressway the

IV. Development and Screening of Preliminary Alternatives

most heavily used streets will still connect. An at-grade expressway would be compatible with and encourage new light industrial or commercial development and upgrading residential property in the Study Area. Some property acquisition might be required for the bridges and ramps at Noyes Street and Court Street.

4. Multi-Way Boulevard



The Multi-Way Boulevard alternative is intended to integrate the Arterial more fully into the community by enlarging the pedestrian environment and providing more extensive landscaping. The Arterial speed limit would be reduced to 35 mph. Traffic calming features, such as curves, narrowed lanes and landscaping, would be included to alert drivers to the changing nature of the Arterial and force a reduction in speed.

This alternative provides two center roadways with two lanes in each direction and a center median; the center roadways intersect the current cross streets. In addition there are two 30-mph one-way side roads separated from the center roadway by landscaped medians of up to 30 feet in width. The side roads have one lane for traffic and one lane for parked vehicles; they provide access to fronting properties and to the streets that do not access the center roadways. The total width of the boulevard, with 5-foot sidewalks at the property line, is about 170 feet.

Boulevards of similar designs were laid out in many cities in the past and, most recently, one was built in California to replace an elevated expressway. The operation of the center roadway / side roadway on boulevards is complicated at intersections, but can work safely. Side roads are not intended to carry significant amounts of traffic. They are controlled by stop signs, while the center roadway is controlled by signals at the crossing streets. Boulevard design can also be flexible. For example, medians can be contracted in width somewhat to avoid property taking at specific locations. The side road can be widened in locations to permit easier truck access.

Where they have been developed in other locations, well-designed boulevards are unifying rather than separating features within communities. They provide an extensive pedestrian environment with trees, benches, paths and other attractive features, as well as an enjoyable driving experience. The

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noise and activity of the central traffic artery is buffered from adjacent property by sidewalks, side roads and side medians. A boulevard-based redevelopment would be compatible with and encourage new multi-family housing, neighborhood retail, mixed use, and recreational land uses as well as upgrading of residential property in the Study Area.

Four of the existing five cross streets - Oswego Street, Noyes Street, Sunset Avenue and Warren Street, become one-way streets in this alternative. The primary reason for one-way operation is to simplify signalization and maximize capacity at the intersections. One-way operation is generally safer than two-way because of fewer conflict points between traffic and between pedestrians and traffic. It will also shorten pedestrian crossing distances, as left turn lanes are not needed at the crossings where right turn lanes are provided. One-way operation is a common operating approach to streets in other cities and would be less confusing to those unfamiliar with the Utica street system than the present indirect routing caused by the left turn prohibitions. One-way streets would require some adverse vehicle travel to go to and from locations in the study area, but probably no more than is now the case because of the prohibitions on left turns at most intersections.

In several locations existing and mapped streets along side the Arterial can be connected and used as the side roads, for example, Fay Street on the west and Wheeler Avenue on the east. The abandoned railroad right-of-way north of Noyes Street and the existing railroad right-of-way south of Noyes Street can be incorporated into the side median on the west side of the Arterial. In some areas the present right-of-way is not sufficient to accommodate the full boulevard width. On the west side of the Arterial south of Sunset Avenue, portions of the industrial / commercial buildings group would be affected. Acquisition of property would be necessary if the full side median is desired immediately. In addition, developed property would be required to connect existing portions of Fay Street, as well as vacant property between the Arterial and Lincoln Avenue south of Court Street. Additional property acquisition would be required at the Arterial intersection with Court Street.

5. Null Alternative

In addition to the four alternatives a Null, or minimally improved alternative was defined for evaluation. A number of deficiencies with the present Arterial lend themselves to minimally disruptive and expensive improvement. It is always prudent and required for federal-aid to evaluate the Null alternative along with other alternatives.

The viaduct north of Court Street will be replaced regardless of the alternative determined, so its construction is included in the Null. The alignment could be shifted somewhat to the west to ease the existing sharp curve north of Court Street that impairs a driver's view of the intersection.

The Null Alternative would maintain with two lane roadways in each direction and a 40-mph speed limit. A 10-foot shoulder would be constructed on the outside of each roadway between Court Street and Oswego Street. This would provide a number of capacity and safety benefits: it provides an area for disabled vehicles to pull off of the through roadway; it would also enhance enforcement of traffic

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regulations by giving an area for police to pull vehicles off of the through roadway; and it provides an access route for emergency vehicles when traffic on the Arterial has stopped. All of the signals will be optimized to account for the new turning lanes provided at each intersection. At each intersection the shoulder could become a 10-foot right-turn lane with an additional 1-foot shoulder. This should reduce the large number of rear-end collisions at present. Improved lighting and signing would be provided to help reduce accidents.

The right-of-way impacts will be limited to the west side of the Arterial and will only minimally effect a few properties.

V. Analysis and Evaluation of Alternatives - First Stage

The analysis and evaluation of alternatives took place in two stages. First the four facility types and the Null alternative were analyzed in detail and compared with each other and then with the Objectives. Features and characteristics of different alternatives that were deemed positive and negative were identified. Modifications were then made to create two final Concept Plans to take advantage of the positive features and avoid or mitigate the problems. The Second Stage analysis and evaluation of these is described in Section VI.

A. Facility Characteristics

1. Design Geometry and Right-of-Way

All three expressway options will have approximately the same main line width of about 82' to include four 12' travel lanes, a median barrier, a 6' left shoulder, and a 10' right shoulder. Because of the short distance between Noyes Street and Court Street the Depressed expressway has an additional lane connecting the northbound on-ramp at Noyes Street and the northbound off-ramp at Court Street to facilitate weaving traffic. The Surface and Elevated expressways will also have 20' wide one-way frontage roads, southbound on the west side and northbound on the east side; parking may be permitted on portions of the frontage roads. The northbound frontage road provides rear access to the properties on Lincoln Avenue. With the frontage roads, the Surface and Elevated expressways will be approximately 150' to 160' wide.

Full interchanges permitting left and right turns are located at Court and Noyes Streets in the Depressed expressway alternative. The intersections may be the simple signalized diamond type or a modern roundabout or single point urban interchange (SPUI). A SPUI is a new type of signalized interchange with greater capacity and often less land requirements than a simple diamond interchange.

The Elevated and Surface expressways have full interchanges at Court Street and partial interchanges at Noyes Street. At Noyes Street a northbound exit and a southbound entrance connect to the frontage roads. Multiple turn lanes may be required at Noyes and Court Street to accommodate large turning movements onto and off of the expressway ramps if they are signalized. This is discussed further in the next section, Traffic and Safety Impacts.

The Multi-Way Boulevard will have two 23-foot center travel roadways; lanes are narrowed somewhat to slow down traffic speed. It will have a 13-foot center median to accommodate left turn lanes at cross streets. At Court Street multiple left turn lanes will be required. Side medians up to 30' wide would create a pedestrian realm between the mainline and the frontage roads. The side median width is flexible; it may be narrowed somewhat, either temporarily or permanently, to avoid taking critical property at the time of implementation. Frontage roads are 20 feet in width, to accommodate a one-way travel lane and a parking lane; they also provide access to adjacent property. The Multi-Way Boulevard will be approximately 170' wide. In some cases it can incorporate mapped and existing streets into the frontage roads, such as Wheeler Avenue and Fay Street. Similarly, the railroad where it is adjacent to the Arterial south of Oswego can be incorporated into the western side median.

V. Analysis and Evaluation of Alternatives - First Stage

The Null alternative will maintain the current lane geometry but will be increased to approximately 80' wide with the addition of 10 feet right shoulders. The shoulders will accommodate vehicles that must leave the roadway because of incidents or breakdowns, and police vehicles that pull vehicles off the roadway. Shoulders would be signed and designated as a right-turn lane at intersections.

It is assumed that all of the alternatives will follow the existing alignment of the Arterial and any changes will be made in the final design. The right-of-way impacts will be approximately the same for all of the alternatives except for the Null, which will have minimal, if any, such impacts. Each of the expressway alternatives may impact approximately 50 to 60 properties, while the Multi-way Boulevard may impact 70 to 80 properties due to its larger width.

In order to lessen the right-of-way impacts for the alternatives there are several things that can be changed for the final design. For the Surface and Elevated expressways the frontage road can utilize an existing adjacent roadway, such as Lincoln Avenue or Fay Street. The width of the side medians for the Multi-Way Boulevard can be varied from 10' to 30' depending on existing right-of-way limits and property importance. If the side medians are reduced to avoid existing structures, redevelopment of the area might allow the side medians to be expanded to the full width of 30' to provide a large pedestrian realm. South of Oswego Street the railroad tracks will also need to be avoided and may require changes in alignment and median widths.

For the most part the expressway alternatives will be similar in terms of alignment and lane geometry. The Multi-Way Boulevard, however, will require significant changes to the existing geometry of the Arterial. Visual cues, such as curves, landscaping, gateway features, and narrower lanes, will be needed at the northern and southern ends to alert motorists that they are exiting a high-speed expressway and entering a slower city street. The medians will have trees and other plantings along with enhanced lighting and benches to provide a pedestrian friendly environment and further alert motorists on the center roadways to that fact.

All of the expressway alternatives involve full or partial interchanges at Court Street and Noyes Street. The interchanges can be built in a variety of ways including a simple diamond interchange, a single point urban interchange or a modern roundabout. Final design will determine the exact layout depending on the right-of-way constraints and future impact studies. The design of the frontage roads will also be dependent on the chosen interchange design because they will need to be incorporated into the interchanges, either serving as access roads to ramps or being diverted to allow the ramps unrestricted flow.

2. Structures

All of the alternatives provide for a replacement for the viaduct north of Court Street, which is nearing the end of its useful life. In the expressway alternatives the replacement is incorporated into the new facility. In the Elevated and Surface alternatives the viaduct is extended over Court Street. In the Depressed alternative, the viaduct may be extended over or under Court Street. If it goes over Court

V. Analysis and Evaluation of Alternatives - First Stage

Street it will then descend to pass under Warren Street. If it goes under it will require the closing of Columbia Street and, if Lafayette cannot be lowered 3 feet, closing that street as well. Neither the Null alternative nor the Multi-way Boulevard have any structures beyond the replacement of the existing viaduct.

The existing viaduct north of Court Street does not now provide an adequate weaving distance for traffic entering the southbound lanes from Liberty Street (Rt 5A) to merge with traffic exiting at Court Street. The viaduct replacement should be modified to allow a greater weaving length if there are ramps to Court Street. The Fay Street Warehouse on the east side of Fay Street between Cooper and Spring Streets could be removed in all alternatives to allow the existing viaduct to be realigned so that the line of sight is clear for vehicles traveling southbound.

A full interchange would be constructed at Court Street with all of the expressway alternatives to provide full access to the study area. The expressway alternatives with the viaduct passing over Court Street could have ramps with a diamond interchange, a single-point urban interchange (SPUI)¹ or a roundabout at the street level. It is not considered feasible to place a roundabout over the Depressed expressway at Court because of the extensive structures required, so a diamond intersection with ramps would be provided.

The Elevated expressway will be a large structure—either a single or twin viaduct or a walled structure. If a walled structure, there would be bridges at all of the current crossings to permit east-west vehicle and pedestrian travel. Both the Surface and Elevated expressways will have a full interchange at Court Street and a partial interchange at Noyes Street with access to and from the south. The Court Street interchange and the frontage roads extending from Court Street to Noyes Street would provide access to and from the north. The Depressed expressway will have retaining walls along its length with bridges carrying all of the existing cross streets over.

The Noyes Street crossing and interchange in the Surface expressway will require an extensive structure. To clear the expressway and the railroad operating in Schuyler Street it would be about 1400 feet long extending from Lenox Avenue to Sunset Avenue, cutting off Lincoln Avenue. The ramps to and from the expressway would have to rise over 20 feet to intersect the crossing bridge. An option of depressing the surface expressway about 10 to 12 feet at Noyes Street would reduce the magnitude of the structure; the crossing bridge would rise only 10 to 12 feet and be half the length, returning to grade at Lincoln Avenue on the east.

3. Constructability Issues

The depth of the existing water table will affect the difficulty of constructing the Depressed expressway; no precise data is available, but the water table is believed to be about 8' to 12' below the surface. A Depressed expressway can be built below the water table but the construction would be difficult and considerably more expensive. The 100-year flood plain does not affect the

¹ A SPUI is a new type of signalized interchange with greater capacity than a single diamond interchange.

V. Analysis and Evaluation of Alternatives - First Stage

Depressed expressway because the depth of the expressway would still be well above the flood level. One option would be to partially depress the expressway for as great an extent as possible and bring the cross streets over. This option would require the bridges to extend about 200 feet into the adjacent neighborhoods, which may not be possible at all cross streets. The Elevated expressway will need some investigation into the soils to determine the design of the piers. The Multi-Way Boulevard and Null alternatives will require very minimal soil investigations.

Utilities along the Arterial may need to be moved or rerouted depending on the alternative. The Null alternative, Multi-way Boulevard, Surface expressway, and Elevated expressway will have minor impacts on the utilities surrounding the Arterial. The Depressed expressway, however, will require any underground utilities to be moved. Underground utilities will need to be rerouted either around the depressed section or onto the bridges carrying the cross streets over. Sewer crossings would be the most challenging utilities requiring rerouting with the Depressed expressway. There are storm sewers crossing the Arterial at Court Street, Sunset Avenue and Noyes Street; and sanitary sewers crossing at Lafayette, Columbia, Roberts, McVean, Sunset and Thorn. Nail Creek is currently enclosed in a box culvert that runs along the east side of the Arterial and crosses the Arterial south of Sunset Avenue. The culvert will need to be rerouted across the Arterial near Burrstone Road prior to the depressed section and then run along the west side of the Arterial to its original route from Sunset Avenue north.

Maintenance and Protection of Traffic (MPT) during construction is also an important issue. Adding shoulders to the Null alternative should be feasible with only limited closure of existing lanes. Adding the side medians and frontage roads for the Multi-Way Boulevard can be done while maintaining traffic on the existing Arterial, which will become, with some modification, the center roadways. The Surface and Elevated expressways include frontage roads. Two lane frontage roads could be constructed to carry a portion of current traffic while the new expressway structure and / or roadways are built. Maintaining traffic while the Depressed expressway is built present real challenges, as no frontage roads were included in this alternative. Lincoln Avenue on the east could handle some of the existing traffic during construction, but there is no parallel street on the west to perform a similar function. Detouring much of existing Arterial traffic to bypass routes will be important.

4. Costs

One of the factors in the consideration of alternatives is the overall price of the project, including construction and right-of-way acquisition. At this stage the cost estimates are very preliminary. Better cost estimates will be made as alternatives are detailed further in the next stage. Final estimates must await a subsequent preliminary design and engineering studies of the final alternative. All alternatives include the replacement of the viaduct north of Court Street, which will be necessary in the next five years; the cost of a replacement is estimated at \$25 Million and has been included in the construction cost for each alternative. The preliminary cost estimates of each alternative are shown in Table 5-1.

V. Analysis and Evaluation of Alternatives - First Stage

Table 5-1 - Cost of Alternatives (Millions)

Alternative	Construction	Right-of-Way	Total
Null	\$25 to \$30	—	\$25 to \$30
Multi-Way Boulevard	\$30 to \$40	5	\$35 to \$45
Surface	\$55 to \$65	5	\$60 to \$70
Elevated-Walled	\$75 to \$85	5	\$80 to \$90
Elevated-Structure	\$85 to \$95	5	\$90 to \$100
Depressed	Over \$100	7	Over \$100M

B. Traffic and Safety Impacts

1. Traffic Estimates

Base year (2006) traffic volumes for each alternative were estimated by dividing the Study Area into zones and distributing zone-to-zone traffic volumes along the shortest and most convenient route for each alternative. The routes varied for different alternatives depending on where exits and entrances were located; where crossings of the facility were located; and the presence of one-way frontage roads with the Surface and Elevated expressways, and one-way crossroads in the Boulevard.

Zone-to-zone traffic was estimated in two ways. TransCad, a computer simulation program generates vehicle trip productions (origins) and attractions (destinations) for each zone based on zonal population and employment characteristics. It then connects trip origins and destinations to create a zone-to-zone vehicle trip table. Finally, it searches out the shortest path in the computerized network of routes and assigns trips to those routes. A second or alternative method is based on the Origin - Destination Survey (described in Section III) which created a similar zone-to-zone vehicle trip table based on information from drivers. Study staff then assigned trips to the shortest and most convenient route for the each alternative. Traffic estimates were based on PM peak factors applied to the summary of zone-to-zone traffic on each network route segment.

Table 5-2 shows base year two-way peak hour traffic volumes on the facility between Noyes Street and Sunset Avenue. The traffic volumes for each alternative are not very different. In general, after adding in frontage road traffic for two alternatives, traffic volumes are somewhat higher. This is due to two factors: provision for left turns from and onto the facility at locations where it is now prohibited will attract some additional traffic and the availability of a signal-free route will also attract some additional traffic to the expressway alternatives.

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Table 5-2 - PM Peak Hour Two-Way Traffic, Base Year (2006)

Alternatives	Main Line	Frontage Road	Total
Null	3800	–	3800
Multi-Way Boulevard	4000	–	4000
Depressed Expressway	4100	–	4100
Surface Expressway	3400	700	4100
Elevated Expressway	3400	600	4000

The estimated volumes on the Surface and the Elevated expressways are nearly identical because their interchanges are located and configured identically. The small difference in the volume of traffic on the frontage roads reflects the crossings under the elevated expressway at Sunset Avenue and Warren Street, which are not provided with the Surface Expressway alternative.

For the three expressway alternatives off- and on-ramp volumes are shown in Table 5-3. The totals are quite similar, the presence of northbound on-ramps and southbound off-ramps at Noyes Street, attracting a bit more to the Depressed alternative because the frontage road route for northbound on and southbound off traffic to the southern portion of the Study Area is somewhat slower. The larger volume at Court Street in the case of the frontage road alternatives might require a different treatment of the intersection. A detailed discussion of the Level of Service will be presented below.

Table 5-3 - PM Peak Hour Ramp Traffic, Expressway Alternatives, Base Year (2006)

Alternatives	Noyes Street				Court Street				Total			
	Off NB	On SB	Off SB	On NB	Off NB	On SB	Off SB	On NB	Off NB	On SB	Off SB	On NB
Depressed	200	400	300	500	800	500	200	300	1000	900	500	800
Surface	200	400	–	–	800	500	500	700	1000	900	500	700
Elevated	200	400	–	–	800	500	500	700	1000	900	500	700

NB = Northbound SB = Southbound

Base Year PM Peak Hour traffic on the cross streets is shown in Table 5-4. Traffic on Noyes Street and Court Street, the two locations with ramps, is greatly increased with the expressway alternatives over the Null alternative amounts. How well these volumes can be handled depends on the turning movements and the intersection treatment, which is discussed in a following section.

Traffic is also greater because left turns are permitted at the Court Street and Noyes Street intersections where, except for the northbound (NB) on, there are no left turns permitted onto or off of the Arterial. This affects the Boulevard alternative as well, where left turns are permitted at both locations. Note that Oswego Street, Noyes Street, Sunset Street and Warren Street are one-way

V. Analysis and Evaluation of Alternatives - First Stage

streets in the Multi-Way Boulevard alternative. There is also an additional cross street in the Multi-Way Boulevard alternative serving the east side of the Study Area; it is estimated to carry 380 vehicles in the PM peak hour, diverted from other cross streets.

Table 5-4 - PM Peak Hour Two-Way Traffic on Cross Streets West and East of the Arterial, Base Year, (2006)

Alternatives	Oswego Street		Noyes Street		Sunset Avenue		Warren Street		Court Street	
	W	E	W	E	W	E	W	E	W	E
Null	200	420	320	310	290	260	100	490	670	1200
Multi-Way Boulevard	280	300	520	300	80	60	170	260	410	1800
Depressed Expwy	40	40	750	950	60	20	40	40	520	1900
Surface Expwy	--	--	930	910	0	60	10	70	350	1800
Elevated Expwy	--	--	930	950	20	190	50	140	300	1900

W = West E = East

Estimated traffic on Sunset Avenue and Warren Street is less than the Null with all the other alternatives. In part, this is because these streets no longer provide access to the Arterial in the Expressway options. In the Surface Expressway these streets end at the frontage roads and do not cross the expressway. With the Multi-Way Boulevard, where access is provided at both these street, volumes would be lower because traffic for some current left turns now appears on both sides of the Arterial and on other cross streets as well. (In general, low estimates should be viewed with caution - larger volume estimates are usually more reliable than small volumes; small volumes are based on a limited number of small zone-to-zone movements; different choices for route assignment will have a greater effect, relatively, on the estimate).

2. Levels of Service

The Level of Service (LOS) criterion is used to evaluate the performance of intersections (LOS is defined in Section III). Signalized and unsignalized intersections were analyzed using the Synchro program for intersections and the Rodel program for roundabouts. The initial setup for each alternative optimized signals with the current lane geometry at each intersection. After the initial analysis, each intersection was reconfigured to best accommodate the new traffic patterns.

For design and evaluation purposes estimates of traffic and movements at each intersection and ramp were made for each alternative and the Null for the Design Year - 2036, thirty years in the future. A background growth rate analysis was performed for the Arterial. In recent years it was found to be growing at 0.5% annually. Over thirty years this equates to a 16% increase in the current traffic volume. This background growth factor was applied to the Base Year traffic volumes predicted for the alternatives to create a 2036 traffic estimate. Table 5-5 shows estimated Levels of Service.

V. Analysis and Evaluation of Alternatives - First Stage

Table 5-5 - Level of Service Evaluation of Alternatives, PM Peak Hour 2036 Traffic

	Null	Boulevard	Surface	Elevated	Depressed
Court St	Signal	Signal	Signal	Signal	Signal
NB	B	D	C	C	A
SB	B	C	D	D	B
EB	D	F	C	C	B
WB	D	D	C	C	C
Overall	C	C	C	C	B
Court St		Roundabout		Roundabout	
NB	--	A		A	
SB	--	F		A	
EB	--	A		A	
WB	--	B		A	
Overall	--	D		A	
Warren St	Signal	Signal	Stop	Signal	
NB	D	C	--	A	--
SB	A	C	--	A	--
EB	C	--	B	B	--
WB	F	E	A	B	--
Overall	D	C	--	A	--
Sunset Ave	Signal	Signal	Stop	Signal	
NB	A	A	--	A	--
SB	B	A	--	A	--
EB	E	E	A	B	--
WB	D	--	B	B	--
Overall	B	A	--	A	--
Noyes St	Signal	Signal	Signal	Signal	Signal
NB	A	B	C	C	B
SB	B	C	C	B	A
EB	E	E	A	B	B
WB	D	--	A	B	B
Overall	B	C	B	B	B
Oswego St	Signal	Signal			
NB	F	C	--	--	--
SB	D	A	--	--	--
EB	C	--	--	--	--
WB	F	E	--	--	--
Overall	E	C	--	--	--
Thorn St		Signal			
NB	--	B	--	--	--
SB	--	A	--	--	--
WB	--	E	--	--	--
Overall	--	B	--	--	--

NB, SB, EB and WB = Northbound, Southbound, Eastbound and Westbound, respectively

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The Null alternative has added right turn lanes at each intersection, which allows more green time to be provided to the through movement. Left turns are only permitted at those few locations where they are currently allowed. Overall, the right turn lanes help to reduce the total delay at each intersection. Oswego Street operates slightly better overall, and Court Street slightly worse overall as green time has been reallocated to help the SB Arterial movement.

The Multi-Way Boulevard alternative allows left turns at all intersections, which will increase the ease of traffic flow. To allow greater capacity at Warren Street, Sunset Avenue, Noyes Street and Oswego Street, as well as improve safety, they have been made one-way streets. They are expected to operate at LOS B or C, with a few movements below that level. A new Thorn Street intersection two blocks south of Oswego Street helps to divert some of the traffic exiting and entering the Multi-Way Boulevard at other intersections. This avoids the Mid-York Library System building at Shaw Street, the initial location of the southernmost intersection.

The Court Street intersection will be a problem for the Multi-Way Boulevard. As a signalized intersection Level of Service C can be achieved at Court Street only with substantial added right-of-way. Court Street will need a dual left turn lane, a through lane, and a right turn lane on the westbound approach to accommodate the traffic volumes. This will mean five lanes to cross Court Street. The Boulevard will need two through lanes, a right turn and a left turn lane, which means four lanes to cross to the median. While the four lane crossings may have one or two islands to break up the lengthy crossing, these would expand further the right-of-way required at the intersection.

An intersection of this magnitude would be a significant impediment to pedestrian and bicycle movement between the two sides of the Boulevard at Court Street. The signal cycle length would be 80 seconds and it would not be feasible for pedestrians to cross in one cycle. A discussion of the safety implications of a signalized crossing of the Boulevard at Court Street is presented in the next section.

Because of the problems of a signalized intersection at Court Street a roundabout was also analyzed for this location. With 4400 vehicles entering from the Multi-Way Boulevard and 1100 from Court Street (PM peak hour estimates for the design year - 2036), a two-lane roundabout with two lane entrances and exits would be required. A roundabout with a diameter of over 300 feet would be necessary to accommodate the estimated volumes and at a LOS no better than D. This would require considerable right-of-way affecting existing and potential land use at the Court Street crossing. Roundabouts are most effective with a diameter of 250 feet or less; at larger dimensions, speeds are not reduced sufficiently within the roundabout to facilitate entering traffic.

Alternatively, a roundabout with bypass lanes for right turns could be designed with a smaller diameter to accommodate through and left turning traffic. However, it would require additional area for the right turn bypass lane and an island in each quadrant, still taking a large area. A pedestrian would have to cross a right turn lane, two entering lanes, two exiting lanes and another right turn lane with three islands separating the roadways. Bicycles would use the pedestrian sidewalk and crossing. The safety implications of a roundabout at this location are discussed in the following

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section. In sum, the Boulevard would have difficulty accommodating future traffic without diverting through traffic from the Court Street intersection on an overpass or underpass.

Expressways Both the Surface and Elevated expressways have frontage roads alongside carrying local traffic. The Surface expressway does not allow Warren Street or Sunset Avenue to connect east-west but provides a stop sign controlled T-intersection where these streets meet the frontage road. Court Street will again need additional lanes to provide adequate capacity, but will not need to be as large as with the Multi-way Boulevard. Signalized intersections will operate at LOS C or better. A one-lane roundabout would provide a better level of service than a signal at the Court Street intersection, with a LOS A. Overall, the levels of service at the intersections for these alternatives would be acceptable for the 2036 design year.

The Depressed expressway has full interchanges at Court Street and at Noyes Street and no frontage roads. The frontage roads in the Elevated and Surface expressway alternatives served a partial interchange at Noyes St and brought NB traffic to and SB traffic from the Court St interchange. Provision of a full interchange at Noyes in the Depressed expressway alternative reduces the interchange traffic at Court Street and allows a better LOS.

3. Safety Evaluation

Safety has been a major concern with the Arterial because of historically high accident rates at its five intersections, and particularly because of recent fatalities. From 1998-2001 209 accidents occurred along the Utica N-S Arterial, 93% of which were at intersections. Accident rates vary by type of facility and the configuration and controls at intersections. The intersections along the Arterial exhibit higher rates than those of similar facilities in the state, in some cases two to three times the average rate. With the expected growth in traffic, accidents can be expected to increase in number, if rates do not change.

The Null alternative includes a number of features intended to reduce accidents: right turn lanes which should reduce the large number of rear-end collisions; full right and left shoulders, which should facilitate enforcement of the 40 mph speed limit and reduce excessive speed; better signing; improved lighting and signage to allow drivers and pedestrians to better see each other; and more extensive education on safe driving and crossing behavior for adults as well as children. It is difficult to predict the effectiveness of these actions, but they should make the Arterial somewhat safer than it is today.

Pedestrians would still have to cross a large and increasing volume of relatively high-speed traffic with the Null alternative, which has been problematic in the past. This is particularly true of the Court Street intersection where traffic volumes are the highest, the number of accidents and the accident rate are the highest of all intersections. The Court Street intersection was also the site of the most pedestrian accidents over an 8-year period, almost as much as at all the other intersections combined. In a 3-hour observation of pedestrian crossings during the inventory, the highest number

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of pedestrians were observed crossing at Court Street

Although examples of Multi-Way Boulevards can be found in many places, most are in other countries. Recent applications in this country are too new to provide meaningful data. Because a Multi-Way Boulevard is a new type of facility in the Utica area, it may take some time before drivers and pedestrians are familiar with its operation. It is not possible to predict the net effect on accidents of the various features included in this alternative. We expect that accidents would be reduced from their current level even more than with the Null alternative.

The Multi-Way Boulevard should be safer than the existing Arterial and the Null Alternative for several reasons. In addition to the right turn lanes, signing, lighting and education efforts included in the Null Alternative, the speed limit is reduced from 40 to 35 mph; lanes are somewhat narrower to slow traffic; and a curved feature is added at both the north and south ends to slow traffic further. A lower speed should reduce both the number and severity of vehicle and pedestrian accidents.

In addition, four of the existing streets have been made one-way and one-way streets substantially reduce the number of conflict points between vehicles and between vehicles and pedestrians. The frontage roads of the Multi-Way Boulevard are considered part of the pedestrian realm and pedestrians should be safe to cross at intersections; the frontage roads are relatively narrow, do not carry significant volumes of traffic, have parallel parking and crossings are controlled by stop signs.

On the other hand pedestrians would still have to cross the higher speed through traffic on the center roadways and the cross streets would need to have multiple turn lanes to handle predicted traffic in most cases, making pedestrian crossings a continued issue. The Court Street intersection is a particular concern. The section above showed that a signalized intersection designed to accommodate the high through and turning volumes at an acceptable LOS would require the addition of many lanes. Pedestrians would have to cross five lanes on Court Street and four lanes to the center median and two lanes from it in order to cross the Boulevard. More than one signal cycle would be required for many crossings. Violations of crossing regulations and pedestrian accidents could be expected.

A roundabout was considered as an alternative to a signalized intersection at Court Street in the Multi-Way Boulevard alternative. It is difficult to compare the safety implications of roundabouts and signalized intersections for the Multi-Way Boulevard. Data do show reductions in accidents where roundabouts have been substituted for signalized intersections. Studies in other countries where roundabouts have been in place for longer periods of time show reductions in pedestrian accidents as well. Experience in this country is not extensive enough to make definitive predictions. Both motorists and pedestrians have to learn new ways of navigating roundabouts, which takes time.

Multilane roundabouts present challenges to pedestrians, especially to older and mentally or physically challenged pedestrians, especially visually impaired. Emergency service providers in Utica interviewed in the Inventory phase of the study noted that many pedestrians at this location are

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mentally challenged, use poor judgement and violate crossing regulations. In addition, bicycles are less visible and more vulnerable at multi-lane roundabouts and they are usually diverted to sidewalks and pedestrian crossings in such cases. If they try to navigate the roundabout roadway, they are at increased risk. In total, these issues raise a real concern with the suitability of a roundabout at Court Street with the Multi-Way Boulevard alternative.

The Expressway alternatives all offer greater potential for reducing the number of accidents. By placing the majority of the Arterial traffic which is traveling through the corridor onto a safer, access controlled facility with no intersections, a substantial reduction in accidents can be expected. Cross streets still carry cross traffic and, where there are interchanges, turning traffic, but with the removal of the through traffic, the volumes predicted and the number of accidents expected would be much less.

With a grade separations taking through traffic over or under the Court Street intersection in the expressway alternatives, a roundabout would handle the remaining traffic more easily. There would be more frequent gaps in traffic accommodating pedestrian crossings more safely. A roundabout could more reasonably be considered along with signalized solutions for the Court Street intersection in these alternatives.

4. Emergency Services

Interviews with Utica fire and police administration officials emphasized the importance of Court Street as the chief east-west route for emergency vehicles connecting fire and police stations with portions of their service area. Noyes Street was cited as important, but to a lesser extent. They noted particularly the difficulty and danger in getting north-south traffic facing a green light on the Arterial to stop when fire or police vehicles were approaching the busy Court Street intersection with sirens and flashing lights, as well as the difficulty in passing vehicles on Court Street at the intersection when they had stopped. Also noted was the lack of a shoulder on the Arterial, which made it impossible for vehicles to pull off the roadway, in case of an accident or vehicle breakdown. The lack of a shoulder made difficult for police to enforce traffic regulations and impossible for emergency vehicles to pass stopped traffic and reach the scene of an incident.

The expressway alternatives all provide a right shoulder of 10 feet which provides a refuge for vehicles to pull off the roadway when necessary and, a lane for emergency vehicles to reach the site of an incident when traffic on the expressway has stopped.

Future approach volumes estimated for the three expressway alternatives at the Court and Noyes Street interchanges are higher on the cross streets but, since through traffic has been removed, lower in total than at present. Emergency service vehicles should be better able to cross the intersections because more lanes will be provided on the cross streets and at the exit ramps, and exiting traffic is more prepared to stop than is through traffic. A roundabout has been analyzed for the Court Street intersection and functions quite well for exiting, entering and cross traffic.

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Emergency service vehicles should also find it preferable to the current intersection situation.

The Null alternative provides a right shoulder that will offer some of the benefits described above for expressway shoulders in case of incidents along the Arterial. Traffic on the north-south approaches will be greater than it is today and the difficulty and danger of getting Arterial through traffic to stop when emergency vehicles are approaching will increase. To some extent the provision of signal preemption at the intersection signals and on emergency vehicles would help; signal preemption allows emergency vehicles approaching a signalized intersection to send a signal from a distance that overrides the programmed cycle and stops traffic in all directions.

The Multi-Way Boulevard does not have shoulders but can provide a place for vehicles to pull out of traffic. In line with the desire to induce slower traffic, the main roadway is laid out similar to a street. However, if plantings in the side medians are offset from the main roadways by about 10 feet, a mountable curb and a grass area could function as a shoulder in those cases where it is needed. As with the Null alternative, traffic volumes approaching the Court and Noyes Street intersections will be somewhat greater in the future. The additional lanes on the cross streets, and the traffic calming feature incorporated into the Court Street intersection if it is signalized, should enable it to function somewhat better for emergency services vehicles than it does today, especially if signal preemption is provided. A roundabout was examined as an alternative treatment for the Court Street intersection; it should function well for emergency vehicles.

C. Community and Environmental Impacts

1. Community Cohesion and Character

With the *Null alternative*, the character of the adjacent community would remain largely as it is—it would not be disrupted by new construction or property acquisition, but it would not have a significant opportunity to improve, either. While the environment along the roadway and in adjacent areas would stay the same, the problems with the Arterial would also be retained. Signal optimization and additional turn lanes could improve safety to a small degree. The Arterial would continue to divide the community, but would maintain its crossings. Overall, the neighborhoods surrounding the Arterial would retain their current look and feel. The primary disadvantages to the Null alternative are safety and overall neighborhood character, existing problems in the Arterial corridor. In terms of neighborhood character, a comprehensive economic development strategy would be most helpful to revive the surrounding community. However, even small improvements, such as landscaping and basic streetscape improvements would make a noticeable difference to this area of Utica.

The Depressed expressway removes the Arterial from view by lowering it below grade. It minimizes the division between two sides of the city, while simultaneously creating opportunities for connection and cohesion within and across the community. There will be five crossings over the expressway, maintaining access between neighborhoods and, by eliminating the threat of traffic conflicts, greatly

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improving the safety for those using the crossings. This will promote a more active connection between neighborhoods, both actual and perceived. While the major roads provide cross-Arterial access, other streets are left small and local, ensuring the preservation of existing neighborhood character. Depressing the expressway below grade reduces traffic noise, thereby further minimizing the impact of the expressway on surrounding neighborhoods.

The primary disadvantage of the Depressed expressway alternative is its high cost, which cannot be minimized or mitigated while retaining all of its salient features. Both the level of the water table and the presence of Nail Creek remain a potential obstacles to lowering the expressway fully below grade. Engineering mitigation strategies may have to be developed in order to overcome these particular obstacles. Another solution to these problems is to depress the expressway only in selected locations that are less sensitive to water table-related issues, and raise the expressway in other areas. The other potential disadvantage of the Depressed expressway is the edge of the expressway; however, this can be mitigated by a green buffer used for open space, bike trails or running paths, as well as thoughtful design for the edge itself. This beautifies the area, reduces “dead space,” and provides opportunities for recreation.

The Elevated expressway removes the Arterial from street level. However, the result is a tall, bulky structure creating a further division between the two sides of the Study Area. This is particularly true if it is elevated on a solid earth / retaining wall base, even with the continued street connections through the walled structure. If the expressway is elevated on a viaduct structure the wall effect would be lessened, but it would still constitute a significant visual object. The character of the under-expressway crossings will depend on the nature of the design; the viaduct could be split into two sections (one for each direction of traffic) and spaced apart, thereby allowing more light and air to reach the underpass. One-way frontage roads will run on either side of the expressway, connecting all cross streets, thereby maintaining connectivity between the two sides.

The primary disadvantage of the Elevated expressway alternative is the continued and increased division of the City, and the creation of marginal space underneath the roadway. Thoughtful treatment of the underpasses—lighting, signage, landscaping, and attention to visual corridors—can help to mitigate the actual or perceived problems and help improve flow through these underpasses. As for the expressway itself, a green buffer abutting the expressway in residential neighborhoods can help mitigate noise, pollution, and aesthetics. Areas where nearby land uses are light industrial will likely require less mitigation of these impacts, as noise and aesthetics are less of an issue in an industrial context.

Despite the options available for the underpasses, the areas underneath the expressway have the potential to be perceived as dark and unwelcoming - even unsafe, thereby creating a negative impact on the surrounding communities. In addition, neighborhoods may further be affected by property acquisition necessary to create entrance/exit ramps and approaches for the Elevated expressway, as well as noise and pollution from the expressway itself.

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The Surface expressway retains the Arterial at roughly the same position it is in now, but includes features that affect vehicles, pedestrians, and neighborhoods. The Arterial would become a high-speed expressway, and thus will be separated from the surface environment through barriers and landscaping. Two through streets with expressway interchanges—Court and Noyes Streets—will cross over the expressway on bridges, allowing vehicular and pedestrian travel between neighborhoods. Other at-grade crossings will be eliminated. In their place, two elevated pedestrian bridges at Warren Street and two blocks south of Oswego street at Thorn Street will maintain connectivity for pedestrians between the two sides of the expressway. Frontage roads would improve access for many trips within the study area, while through traffic would be diverted to the expressway. The pedestrian and vehicular crossings will help improve the flow between sides of the Arterial, although the elevation of the pedestrian crossings may make them less appealing for users than an at-grade crossing might.

The primary disadvantages of the Surface expressway option are noise and pollution. The effect of these could be minimized by the surrounding land uses—they are less pedestrian-oriented, and thus fewer people will be exposed to these impacts. In addition, the commercial and/or light industrial land uses on the east side will serve as a buffer to the surrounding residential and mixed-use communities, ensuring that the expressway's impacts on these areas are minimized. The crossing bridges will be long, perhaps 1400 feet in length; they will block adjacent streets and constitute a serious intrusion into the adjacent neighborhoods. The surrounding neighborhoods would also be affected by property acquisition necessary to create entrance/exit ramps and approaches for the Surface expressway, as well as noise, pollution, and dirt from the expressway itself.

The Multi-Way Boulevard seeks to make the area around the roadway a pedestrian-oriented, mixed-use focus for the community, through a combination of slower speeds, wide pedestrian areas, frontage roads and landscaping. The goal is not only to preserve existing community character, but also to enhance it by attracting commerce and residence to the area. The overall feel of the area will be more small-scale, as the speed limit of the center travel roadway of the Boulevard would be reduced to 35 mph. Altogether 50 feet of pedestrian "realm" on each side would buffer adjacent development from the through traffic in the center roadways. Cross-boulevard access would encourage flow between neighborhoods on both sides of the Multi-Way Boulevard. Four of the cross streets would become one-way, further improving safety in the area.

Despite the advantages of the Multi-Way Boulevard in terms of community character, this option may require significant property acquisition on both sides of the Arterial in order to accommodate the complete array of travel and parking lanes, medians, and landscaped buffers. Varying the side median width in certain locations could reduce the amount and cost of property acquisition. Concerns of pollution and noise are almost nonexistent in the Multi-Way Boulevard alternative, owing to the slower speeds and local character of this alternative. As stated above, however, the drawback of this option would be to not have adequate and appropriate economic development. In order to make sure that it is worthwhile to slow traffic and create parking, an economic development strategy must be developed and implemented with this alternative.

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Conclusion Community cohesion is driven by connectivity. Existing community character is threatened when long-standing neighborhoods are divided, as well as when flow between neighborhoods is limited. Consequently, the alternatives for the North-South Arterial that most support community cohesion are those that divide the Study Area the least - the Multi-Way Boulevard and the Depressed expressway. The Multi-Way Boulevard seeks to embrace the Arterial as a part of the community, with its public spaces, landscaping, and slower vehicle speeds. All three expressway options provide crossings and connectivity, but to varying degrees, the roadway is always a barrier within the community. Of all the expressway options, the Depressed expressway seeks to minimize the presence of the roadway the most, and therefore promotes community cohesion more than the surface and elevated expressway alternatives.

2. Economic Development

The Null alternative does not assume a change in adjacent land uses as they are directly related to the character of the Arterial. Therefore, any new economic development would have to be generated by other means. As is, there currently exists a large proportion of vacant land in the Study Area. The Bossert site, which is currently being marketed by the City, would still be suitable for a mix of uses, as noted by nearby residents. However, without the impetus of changes to the Arterial, its marketability may be limited to a degree.

The Depressed expressway provides significant potential for economic development in that it promotes active neighborhood retail, mixed use, and back office space on both sides of the expressway. The elimination of the expressway from view would also allow pedestrian-oriented retail and mixed use to become established and thrive, without the conflicts of noise and traffic. Finally, although its future presently remains undecided, the Bossert site presents the opportunity for a neighborhood-oriented development (for instance, a grocery store, pharmacy, and related uses), that would complement the mixed-use character of the surrounding area.

The Elevated expressway differs significantly in terms of potential land use compared to the other alternatives. The two sides of the Study Area will be more difficult to connect due to the presence of a large piece of infrastructure in between. However, this option allows the City to pursue two separate land use and economic development strategies for the area. Rather than encouraging mixed use and residential uses for both sides of the expressway, under this scenario, one side would be suitable for back office space or other light industrial uses, and the other would be more suitable for residential and commercial uses. This two-tiered approach provides extensive opportunities for economic development, particularly the light industrial uses that might otherwise be discouraged in a more pedestrian-oriented development scenario. Potential uses for the Bossert site would remain retail and neighborhood-oriented, but with less emphasis on achieving a pedestrian environment.

Surface Expressway Due to the noise and pollution from a Surface expressway, residential and mixed-use land uses would find adjacent property less desirable. However, the area would be well

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suited to be an industrial and/or commercial corridor, giving Utica ample opportunity for economic development in these sectors. This would make good use of the existing industrial and commercial building stock surrounding the roadway. The corridor could include back office space and light industrial uses, such as warehousing, which would not have an adverse impact on the neighborhood, and in turn would not be affected by the impacts of the expressway. Potential uses for the Bossert site could still remain retail and neighborhood-oriented.

The Multi-Way Boulevard is designed to encourage compatible mixed use, commercial, and residential land uses, all on a local, walkable community scale - similar to the Depressed expressway, except with extensive parkland and additional local vehicular and parking access to the areas surrounding the Boulevard. Unlike the Elevated and Surface expressway alternatives, light industrial land uses are relegated to other locations in the City, since the Boulevard aims to create a community-oriented "Main Street" feel to the area.

This alternative demonstrates the greatest need for a symbiotic relationship with a economic development strategy - without local businesses (shops, restaurants, galleries, etc.) lining the Boulevard, there will be fewer incentives for pedestrians to utilize the area, fewer reasons for local traffic to travel there, and fewer reasons for people to live there. A boulevard lined with empty storefronts would fail. Consequently, it is critical that this alternative go hand-in-hand with a proactive economic redevelopment strategy to attract businesses to the vacant and industrial/warehouse property lining the boulevard, and thus to create a vibrant, successful, mixed-use community. The Bossert site presents the opportunity for a pedestrian-oriented development (for instance, a grocery store, pharmacy, and related uses), that would complement the mixed-use character of the surrounding area.

Conclusion The preferred alternative with respect to economic development depends on what type of development the City considers desirable and feasible in the area. If the City wants mixed-use, small scale and pedestrian-oriented retail, residential and commercial development and believes it can be achieved, the Multi-Way Boulevard is compatible with it. The Depressed expressway alternative is also compatible with it and less speculative. If the City is seeking to encourage an industrial or commercial corridor, the Surface expressway is the most compatible, since the adverse impacts such as noise and dirt from the surface expressway would be less of a detriment to these land use types. If the City desires a combination of land uses, the Elevated expressway presents the opportunity, due to the relative lack of connectivity between sides of the expressway, for one type of economic development on one side (residential and mixed use) and another type of economic development (commercial / light industrial) on the other.

It is important to note that the discussion of land use is not intended to be a specific directive for existing properties to immediately change uses. Rather, the land uses mentioned here are identified as those that would best suit a particular Arterial alternative. Depending on the overall vision for the Study Area and what residents and officials would realistically like to see it become (i.e. a mixed-use pedestrian-oriented area, or an office and industrial area), different alternatives would tend to lend

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themselves to certain land use patterns outlined here.

Ultimately, in order to achieve an eventual shift in land uses, several steps would need to be taken. The desired land uses would need to be incorporated into the zoning map/code (and similarly, the zoning districts with incompatible land uses would be removed), with provisions for current properties with newly nonconforming uses (i.e. “grandfathering”). As properties are eventually turned over, modified, or newly built, they would be built in accordance with the new zoning regulations and would eventually tilt the balance towards the desired land uses. Design guidelines would be included in the zoning regulations, in order to address issues such as sidewalks, setbacks, parking, landscaping, and other elements that affect community character. Design guidelines can be mandatory or advisory, or a combination of both. Finally, it is required by law that a municipality’s zoning code adheres to the goals and recommendations in its Comprehensive Plan. Depending on the nature of the changes desired by the City, this may require modification to Utica’s Comprehensive Plan.

3. Open Space and Recreation

The Null alternative does not result in the development of any additional open and recreation space, nor does it remove any existing open or recreational space within the Study Area.

Depressed Expressway Compatible land uses for the Depressed expressway allow neighborhoods to come right up to the edge of the depressed area. The result is very little “dead space,” as well as good opportunities for greenways, bicycle trails or running/pedestrian pathways along the border on one or both sides of the expressway. While these recreation spaces serve as a buffer to the Depressed expressway, they also remain integrated with the neighborhood, creating a relatively seamless progression. In addition, the trails can potentially be extended to a larger network, connecting users with the Varick Street / Brewery district or nearby schools and parks.

The Elevated expressway option does not provide many opportunities for greenways or trail networks along the roadway due to the nature of the large raised structure. However, the need to create a buffer for pollution and/or noise from the elevated expressway presents an opportunity for green and open space—including both trailways and larger green or open areas, such as pocket parks—along the Arterial in areas with primarily residential or mixed-use land uses. If the expressway is elevated using a viaduct structure, and if care were taken to make these spaces accessible, safe and well lit, the space underneath the elevated expressway could potentially be utilized for mobile recreational spaces such as bicycle or running pathways. The area underneath the expressway would not be suitable for passive open and recreational space, however.

The Surface expressway alternative presents fewer opportunities for open space and recreation than the other alternatives, primarily due to the surrounding commercial and industrial land uses that do not require a buffer from the noise and pollution of the expressway. Open spaces directly adjacent to the roadway would experience these adverse effects of the expressway and thus would not be well suited for recreational uses. However, the improved safety of the crossings compared to the

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Arterial could improve access to Utica's existing recreational and open spaces on both sides of the expressway.

The Multi-Way Boulevard alternative provides extensive opportunities for open space and recreation, owing to its smaller, safer, local feel. First, the access roads within the boulevard are calm and slow enough to safely accommodate bicycles. A trail could be provided within the west side median; this could be connected to a larger trailway system, connecting locations such as the Varick Street / Brewery District, schools or open spaces throughout the City. The quieter, less polluting nature of the boulevard lends itself to open space fronting the boulevard in selected locations. Areas within the landscaped side medians would function as public open spaces, providing benches and places for pedestrians to rest and relax.

Conclusion In terms of the creation of new open and recreational space, the Multi-Way Boulevard and Depressed expressway present the most opportunities, through a combination of trails, green buffer spaces and in some cases, wide landscaped medians. The Elevated expressway provides some limited potential for new open space as a buffer between the expressway and the adjoining residential and mixed-use neighborhoods. The Surface expressway is the least favorable alternative in terms of open and recreational space, due to a combination of the physical characteristics of the roadway itself and the surrounding land uses.

4. Air Quality, Noise and Energy

Air Quality Because tailpipe emissions from moving vehicles contribute to air pollution, the corridor alternatives will have an impact on air quality both in the neighborhood and the region. The three main pollutants from on-road mobile sources that are regulated by the Environmental Protection Agency (EPA) are Volatile Organic Compounds (VOC, a precursor of ozone), Nitrous Oxides (NOx) and Carbon Monoxide (CO). Levels of these pollutants in the region do not currently exceed EPA's national ambient air quality standards. As a result the area is designated as "Attainment." Although estimates made by HOCTS are preliminary, it is expected that air pollution from motor vehicles in the region will decrease substantially over the next twenty years, by 59%, 76% and 34% for VOC, NOx and CO, respectively. This is due despite increases in vehicle-miles of travel, because vehicles will be substantially cleaner, emitting far fewer pollutants per mile. Arterial emissions rates for vehicles as predicted by the state DOT would be 74%, 84% and 63% lower for VOC, NOx and CO, respectively.

Within the corridor, emissions from the Null alternative should be significantly reduced from present levels, even with the moderate amount of growth projected. Emissions with the Multi-Way Boulevard alternative would be similar; one-way operation of four crossroads and improvements at Court Street might reduce congestion and resulting emissions even further.

All of the expressway alternatives would place Arterial through traffic on a high-speed facility. Emission rates for vehicles on expressways are slightly lower for VOC and slightly higher for NOx and CO than on arterials. Emissions from the remaining street traffic should be reduced because of less

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street congestion. The net effect would be emissions substantially lower and air quality substantially better than today.

Noise impacts of the corridor alternatives will vary. The noise of traffic can be at best an annoyance and at worst a health hazard. The state DOT uses federal criteria for the level of noise required for noise abatement actions. The criteria in decibels (dBA) vary with the nature of the surrounding area and are shown in Table 5-6.

Table 5-6 - Noise Abatement Criteria (NAC) Hourly A-Weighted Sound Level in Decibels (dBA)*

Activity Category	Leq(h)	L10(h)	Description of Activity Category
A	57 (Exterior)	60 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose
B	67 (Exterior)	70 (Exterior)	Picnic areas, recreation areas, active sports areas, parks, residences, motels, hotels schools, churches, libraries, and hospitals
C	72 (Exterior)	75 (Exterior)	Developed land, properties or activities not included in Categories A or B above
D	—	—	Undeveloped lands
E	52 (Interior)	55 (Interior)	Residences, motels, hotels, meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

*Either Leq(h) or L10(h) (but not both) may be used on a project.

Source: NYSDOT Environmental Procedures Manual, Chapter 3.1, August 1998

There were few complaints noted in public meetings and other communications about the present level of noise from the Arterial. It is expected that the level of noise with the Null alternative and the Boulevard alternative would be relatively similar to that of today, reflecting the modest growth forecast for the corridor. Noise might also increase with the Null alternative somewhat because of more acceleration and deceleration at intersections as they become more congested. To a lesser degree this would be true for the Multi-Way Boulevard where one-way operation at four intersections and intersection improvements can be expected to reduce congestion and stops.

The expressway alternatives can be expected to generate higher levels of noise, as noise generation increases with speed. In addition, additional truck noise will be generated on ramp and main line gradients with the different expressway alternatives. To some degree the area east of the expressway will be shielded from noise by the existing "wall" of industrial / warehouse buildings that back against the present Arterial.

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The Depressed expressway alternative can be expected to have the least noise impact on surrounding areas because walls and embankments below grade absorb much of the generated sound. The Elevated expressway and, to a lesser extent, the Surface expressway may still produce high enough noise levels in parts of the surrounding area to make noise walls part of the project. Measurements of current noise levels and forecasts of future noise levels would have to be made to assess this possibility. The addition of noise walls to the Elevated and the Surface expressways would increase the concern with community separation noted in an earlier section.

Energy Consumption Frequent stops and starts cause high energy consumption on the present Arterial. Both the Null and Multi-Way Boulevard alternatives will have little if any effect on energy consumption. The right turn lanes in the Null alternative will improve traffic flow slightly and one-way and additional lanes at intersections in the Multi-Way Boulevard alternative may improve traffic flow somewhat more, reducing vehicle fuel consumption a small amount. Non-stop traffic on the expressway alternatives will bring more significant reductions in energy consumption, although to some degree this is negated by the higher operating speed on the expressway

5. Natural Areas and Historic Sites

Natural Areas The Utica Marsh State Wildlife Management Area is located in the Study Area adjacent to the Mohawk River. It is northwest of the viaduct portion of Routes 5, 8 and 12 and would not be affected by any alternative. The majority of the Study Area has been urbanized for many years and there are no undeveloped natural areas. No wetlands or other environmentally sensitive areas have been identified in the Study Area that would be affected by the Null, the Multi-Way Boulevard or any of the Expressway alternatives.

Historic Sites and Areas The New York State Office of Parks, Recreation and Historic Preservation (OPRHP) has identified 10 sites on the State or National Register of Historic Places in or adjacent to the Study Area. Most are on Genesee Street; none are less than two blocks from the Arterial. The alternatives would have little if any adverse impact on these sites. Further studies may identify sites of historic significance eligible for inclusion on the State or National Register.

The OPRHP has also designated an Archeologically Sensitive Area including a broad area on both sides of the Mohawk River that include a portion of the northern part of the Study Area. The Arterial is within this area to the north of Court Street. A depressed grade separation and interchange at Court Street, an option in the Surface and Depressed Expressway alternatives, would require excavation in the Archeologically Sensitive Area. It is uncertain what would be encountered.

Remnants of the former Chenango Canal might be affected by the alternatives. The Chenango Canal, connected the Erie Canal in Utica with Binghamton; it operated from 1837 to 1878 when it was abandoned. In the City of Utica it was located in the present alignment of the Arterial as far as Oriskany Street, where it entered the Erie Canal. At some later date the portion in the Study Area was

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filled in. There were locks located south of Columbia Street, north of Court Street, at Warren Street and south of Thorn Street. It is not known what if any remains of the Canal are buried within the alignment nor at what depth beneath the present surface. Excavation for the Depressed expressway between Court Street and Oswego Street could uncover some remains of the Canal if they are present. Further research and field investigation will be necessary to judge what might be expected.

6. Environmental Justice Impacts

Environmental justice principles urge planners to carefully consider the siting of projects that can disproportionately affect marginal, overlooked, low-income and minority populations. These populations often lack the resources (financial or otherwise) or political support to influence the location of infrastructure that could adversely affect nearby residents and community members. Noise and air pollution are the primary environmental impacts of all of the North-South Arterial alternatives. Those who live closest to the Arterial have experienced the majority of these impacts, which affect conditions including asthma, respiratory diseases and lead poisoning from automobile exhaust and mental health/quality of life issues from noise impacts.

The area surrounding the Study Area is generally more diverse, less wealthy, and slightly less educated than the surrounding City and region, making environmental justice issues a potential concern. The 2000 Census indicated that 26 percent of the population of the Study Area is nonwhite, as compared to approximately 20 percent in the City of Utica. In 2000 32 percent of the population was classified as living below the poverty level, compared to 25 percent and 13 percent in the City of Utica and the region, respectively. In sum, the residents of areas closest to the Arterial that have the potential to be most affected by the environmental impacts of the roadway are proportionally the most disadvantaged and vulnerable of the region.

The population of the Study Area has borne the negative impacts of the Arterial for four decades. These impacts will continue into the future if no action is taken or the Null alternative is chosen. Taking no action or this limited action does mean no new construction impacts, aside from those resulting from the reconstruction of the Court Street viaduct.

The Elevated expressway can be expected to have negative impacts on nearby populations - there will be significant exposure to noise and pollution. In addition, unlike the other alternatives, the Elevated expressway presents an adverse visual impact on the nearby communities. If the character of the underpasses is not carefully considered, these have the potential to become marginal, even hazardous spaces, which could be perceived as an additional environmental justice impact, albeit not scientifically "toxic." Residents are likely to perceive this option by the as the least sensitive to environmental justice principles.

The Surface expressway also has negative environmental justice impacts on nearby populations - it is a high-speed expressway at grade, which means that there will be significant exposure to noise and pollution. Its impacts would probably be perceived, however, as less negative than those of the Elevated expressway alternative. Due to the sunken nature of the Depressed expressway, noise and

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pollution impacts will be reduced to a degree, particularly compared to the Surface expressway and Elevated expressway options. This option is likely to be perceived as less intrusive to the surrounding neighborhoods in terms of environmental justice.

The Multi-Way Boulevard presents fewer environmental justice impacts related to noise and pollution, due to the slower speeds and more local character of this option. This option is less likely to be viewed as “blight” and more as a positive addition to the neighborhood, in both environmental and social contexts, and even potentially as a way to help uplift the area.

Conclusion The Multi-Way Boulevard is likely to have the best public perception of environmental justice, since it will be viewed as an investment in the area. Of the expressway alternatives, the Depressed Expressway is the preferred alternative for meeting environmental justice criteria, since the environmental impacts of the roadway (air pollution, noise, and dirt) will be minimized when the roadway is below grade. Both the Multi-Way Boulevard and the Depressed Expressway will likely be perceived as environmental improvements to the current Arterial; The Surface and Elevated Expressways, however, are likely to be seen as negative changes.

D. Summary and Comparison With Objectives

1. Summary of Analyses

A summary of some of the most important aspects of each alternative is shown in Table 5-7.

2. How Well Do The Alternatives Meet the Project Objectives and How Can They Be Improved?

The analysis of the four improvement alternatives and the Null alternative has shown that each has characteristics that are positive and negative. Clearly, none of the alternatives is best for every factor considered. There is inevitably a trade-off between objectives, as one is often achieved at the expense of another. But we can identify features for new alternatives that give the best balance of the project objectives.

Following is a discussion of each of the Project Objectives presented earlier in the report and the modifications that will maximize the positive and minimize the negative characteristics of a solution.

Objective 1: Improve the Safety of Pedestrian Access Across the Arterial

The three expressway alternatives - Elevated, Surface and Depressed - move the Arterial's through traffic off of the street system reducing street traffic substantially. This will make pedestrian crossings between the two portions of the Study Area far safer. Even at interchange locations - Noyes Street and Court Street - the lower volumes should permit adequate time for pedestrian phases.

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The Multi-Way Boulevard would also improve safety for pedestrians. The lower 35 mph speed and one-way operation of four cross streets should reduce pedestrian accidents. The Court Street crossing, however, was found to be a problem. The through and turning volumes are so great that a signalized diamond intersection would require added lanes to cross - a total of five lanes across Court Street and six lanes across the Boulevard. A multi-lane roundabout at this intersection could also handle anticipated traffic but would require a large radius and significant property. A multi-lane roundabout would be a serious concern especially to older and physically or mentally challenged pedestrians. Emergency service providers in Utica interviewed for this study noted that many pedestrians at this location are mentally challenged, use poor judgement and violate crossing regulations. In addition, bicycles are less visible and more vulnerable at multi-lane roundabouts and they are diverted to sidewalks and pedestrian crossings in such cases; if they use the roundabout roadway they are at increased risk. In sum, these issues raise a real concern with the suitability of a roundabout at Court Street with the *Multi-Way Boulevard* alternative.

To meet safety concerns and to achieve a reasonable level-of-service for traffic, a grade separation and interchange at Court Street is recommended with the *Multi-Way Boulevard* alternative. In the *modified multi-way boulevard concept* the boulevard treatment would then begin near Warren Street and extend about $\frac{5}{8}$ mile to Thorn Street.

Objective 2: Improve Traffic Flow on the Arterial

The three expressway alternatives provide a non-stop route for through traffic through the Study Area, reducing travel time and stops at intersections. While the *Depressed* and *Elevated* expressways maintain all or nearly all current vehicle and pedestrian crossings they had other issues. The high water table and Nail Creek crossing at Sunset Avenue complicate construction of a Depressed expressway, and the barrier effect of the structure with the *Elevated* alternative would affect the community negatively. The *Surface* expressway alternative removed three of the existing crossings and was a significant separation between two sides of the Study Area.

This suggests a *modified expressway concept* combining features of both the *Depressed* and *Surface* expressways. After a Court Street grade separation, it would be partially depressed at Warren Street permitting a crossing at that location as well as further south at Noyes Street. It would come to the surface between these crossings at the critical Sunset Avenue Nail Creek crossing.

The Multi-Way Boulevard alternative had five intersections at which through traffic stopped. These intersections permitted left turns, which maximized access to Study Area property for redevelopment. The modified multi-way boulevard concept described above, would remove through traffic from the busiest intersection. A further modification that closes Sunset Avenue and substitutes roundabouts for intersections at Warren and Thorn Streets would reduce stops for through traffic to just two signalized intersections - Noyes and Oswego Streets. Left turns would be permitted at the intersections and roundabouts. Pedestrian bridges would be included near Sunset

Table 5-7, Utica N-S Arterial Corridor Study Summary of Alternative Analysis

Evaluation Factor	Null: Add shoulders and right turn lanes	Multi-Way Boulevard	Surface Expressway	Elevated Expressway	Depressed Expressway
Traffic (2036)	Left turn prohibition limits access, thru traffic stopped at intersections	One-way crossings limit access; Thru traffic stopped at intersections	Diverts most traffic from streets, no stops for thru traffic	Diverts most traffic from streets, no stops for thru traffic	Diverts most traffic from streets, no stops for thru traffic
Intersection Level of Service Analysis (2036)	LOS C at Court, Warren D, Oswego E, but long cycles	Signal at Court LOS C, but additional lanes, or large roundabout	Signal or SPUI: LOS C; roundabout LOS A	Signal or SPUI: LOS C; roundabout LOS A	Signal or SPUI: LOS B; roundabout LOS A
Pedestrian Safety	Accidents may increase from traffic growth	Safer than Arterial but crossing issues at Court Street	Less street traffic, pedestrian/traffic conflicts reduced	Less street traffic, pedestrian / traffic conflicts reduced	Less street traffic, pedestrian / traffic conflicts reduced
Vehicle Safety	Shoulders & right turn lanes help, but street crossings remain	Safer than Arterial because of lower speed and one-way crossings	Safer Expressway travel; less street traffic and accidents	Safer Expressway travel; less street traffic and accidents	Safer Expressway travel; less street traffic and accidents
Emergency Services	Increased traffic across main E - W route - Court Street	Increased traffic across main E - W route - Court Street	Less traffic on main E - W route - Court Street	Less traffic on main E - W route - Court Street	Less traffic on main E - W route - Court Street
Construction Issues	Minimum construction	No structures other than viaduct replacement	Moderate construction	Major structure	Constructability challenges from water table, utilities
Right-of-Way	No takings	5 acres, but flexible \$5 Mil	4 acres, \$5 mil	4 acres, \$5 mil	7 acres, \$7 mil
Community Character and Cohesion	Surface artery divides community, but many crossings	Surface artery unites community with many crossings	Wide facility divides community, with fewer crossings; crossing structures intrude	Elevated facility divides community, but many crossings; marginal space underneath	Wide facility divides community, but less than other expressways; many crossings
Economic Development Potential	Limited because of poor access	Need for adjacent commercial, residential and mixed use	Frontage roads provide better access for redevelopment: industrial / commercial corridor	Frontage roads provide better access for redevelopment: one side - back office / light industrial; other side - mixed use	Left turns at interchanges improve access for redevelopment; mixed uses
Environmental Impacts and Constraints	Current noise and pollution are not alleviated	Noise and air pollution reduced slightly; arterial character improved	Noise levels may need mitigation; air quality should improve	Noise levels may need mitigation; air quality should improve	Archeological features may be affected; noise & air quality should improve
Opportunities for Open Space and Enhancements	No additional open space or enhancements	Landscaping, trails, benches, paths, gathering locations in side medians	Landscaping, no space for parks or enhancements	Landscaping, possible parks and trail connections along frontage roads	Landscaping, possible parks adjacent or over expressway
Environmental Justice impacts	Lower income community divided; depressed environment is not alleviated	Lower income community united; may be perceived as community benefit	Through traffic removed from lower income community but fewer crossings	Through traffic removed from lower income community, but barrier divides	Through traffic removed from lower income community
Energy Consumption	High consumption from frequent intersection stops	High consumption from frequent intersection stops	Non-stop through traffic has lower consumption but higher speed negates gain to some degree	Non-stop through traffic has lower consumption but higher speed negates gain to some degree	Non-stop through traffic has lower consumption but higher speed negates gain to some degree
Maintenance and Protection of Traffic	Little disruption to existing traffic	Frontage roads can be used for traffic during construction	Detours needed but frontage roads can be used for traffic during construction	Detours needed but frontage roads can be used for traffic during construction	Detours needed; limited availability of parallel routes for diversion
Total Cost	\$25-\$30 Million	\$35-\$45 Million	\$60-\$70 Million	\$80-\$100 Million	over \$100 Million

RB: 12/14/06

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Avenue and Thorn Street as alternatives for crossing the roundabouts.

Objective 3: Reduce the Frequency of Vehicle Accidents on the Arterial

The *Null* alternative provides right shoulders and right turn lanes. This modest improvement would bring some reduction in vehicle accidents at the existing intersections.

The *expressway* alternatives remove through traffic from the street system, substantially reducing street traffic and accidents. Traffic on the expressway is still subject to accidents, but at a much lower rate.

The *Multi-Way Boulevard* alternative required either an extensive and complex intersection at Court Street or a large diameter roundabout where safety characteristics would not be optimal. The addition of a Court Street grade separation and interchange, discussed above, reduces this problem substantially. The boulevard treatment would then extend from Warren to Thorn Streets; the roundabouts at either end would serve to reduce vehicle speed to the 35 mph boulevard level.

Objective 4: Improve Access to Adjacent Local Streets

The *expressways* improve access for potential redevelopment in the area by allowing left turns at interchanges. The frontage roads included with the *Elevated* and *Surface* expressways provided additional access to intersecting streets and to property adjacent to the expressway and could be added to the *Depressed* expressway. With removal of the unused railroad track on the west side of the Arterial Fay Street could be extended and function as the southbound frontage road. To reduce the overall width of an expressway a northbound frontage road could be eliminated on the east side; Lincoln Avenue could serve as the a northbound collector - distributor offering improved access to the corridor.

The *Multi-Way Boulevard* alternative provided access to potential redevelopment sites in the Study Area at six cross streets, but this advantage was somewhat reduced by making four of them one-way. With a grade separation and interchange at Court Street, roundabouts at Warren and Thorn Streets, a *modified multi-way boulevard concept* would require only two one-way cross street intersections at Noyes Street and Oswego Street.

Objective 5: Create Connections Between the Neighborhoods on Either Side of the Arterial

The three expressway alternatives relate differently to this objective. The *Elevated* keeps all current cross streets, but it presents a high wall or elevated structure, which may increase the perceived separation between the two sides of the Study Area. The *Surface* alternative removes three cross streets and, with the frontage roads, presents a wide, noisy corridor within the Study Area. It also required a 20- to 23-foot high elevated interchange at Noyes Street with the crossing extending from Lenox Avenue to Sunset Avenue, cutting off Lincoln Avenue. The *Depressed* expressway maximized

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connections between each side by extending every existing cross street across, but it required difficult construction in an area with a high water table.

The new *modified expressway concept* described above is at the surface at only a few places and is partially below grade for much of its length. The interchange and crossing at Noyes Street rises only about 12 feet and extends only from Schuyler Street to Lincoln Avenue. Lincoln Avenue is used as a northbound collector - distributor instead of an east side frontage road, reducing the expressway width. Depressed about 12 feet at Warren Street, the modified expressway concept would permit another short crossing at Warren Street, rising about 12 feet between Sunset and Lincoln Avenues.

The Multi-Way Boulevard had the most connections between the two sides of the Study Area. With its wide side medians, trees, landscaping, trails and benches, it could be a unifying focus for the Study Area. It is intended to foster commercial, residential and mixed use redevelopment of property facing the Boulevard, attracting people to its recreational and other activities.

Objective 6: Create a More Pleasant Environment Along the Arterial

The expressway alternatives - the *Surface*, the *Depressed*, and possibly the *Elevated*, offer some opportunity for landscaping that would make the expressway more attractive than the existing Arterial. A bicycle trail connected to a larger regional system could be located alongside an expressway. Crossings under the Elevated expressway will always present difficult environment with which to deal. Even if well-lit, such spaces are not attractive environments. The Depressed expressway is clearly preferable as a neighbor, minimizing the visual and noise impact on the adjacent area. The modified expressway concept, partially depressed for portions of its length, would have less visual and noise impacts than either the Surface or Elevated expressways.

The *modified Multi-Way Boulevard concept* would provide the greatest opportunity to add attractive landscaping and other features to the Study Area. In addition to the wide side medians, the roundabouts at Warren and Thorn Street provide sites for gateway features that welcome travelers into the community. If adjacent land use developed in a supporting manner - with mixed use residential, retail and other commercial activities facing the boulevard, it would provide the most attractive and pleasant environment.

Conclusion This discussion led to two new concepts: a *modified expressway concept*; and a *modified Multi-Way Boulevard concept* - modifications of the four alternatives that might better meet the project Objectives. They are described and analyzed in the next Section.

VI. Analysis and Evaluation of Alternatives - Second Stage

This section presents the second stage of analysis and evaluation of the alternatives. In Section V four alternatives and the Null alternative (no significant change) were analyzed and evaluated. The analysis and evaluation led to two different solutions that would meet the project objectives, but in distinctly different ways. To develop the final Concept Plans, features and characteristics of each alternative that were deemed positive or negative were identified. Modifications to the alternatives were then made to take advantage of positive features and avoid or mitigate the problems.

- > Multi-Way Boulevard Concept Plan - Extending from Warren Street to Thorn Street, south of a Court Street Grade Separation and Interchange
- > Expressway Concept Plan - Partially Depressed up to 12 Feet Below Grade after a Court Street Grade Separation and Interchange.

These Concept Plans were presented to the public at a December 2006 meeting and posted on the project website for comment. The two concept plans, as modified on the basis of comments and after further refinement, are described below. In Section C the two Concept Plans are evaluated against the Objectives.

A. Multi-Way Boulevard Concept Plan - Extending from Warren Street to Thorn Street, south of a Court Street Grade Separation and Interchange (Figure 6-1)

The Multi-Way Boulevard Concept Plan is intended to integrate the Arterial more fully into the community by enlarging the pedestrian environment and providing an attractive park - like area within the study area. The boulevard treatment begins at a Warren Street roundabout south of the Court Street grade separation and interchange; it extends about $\frac{5}{8}$ mile south to a Thorn Street roundabout. The speed limit would be reduced to 35 mph. In addition to the roundabouts, other traffic calming features would be included to alert drivers to the different nature of the road and effect a reduction in vehicle speed. The roundabouts also offer a location for gateway features to welcome drivers to this section of Utica.

Boulevards of similar design were laid out in many cities in the past and, most recently, one was built in California to replace an elevated expressway. Well-designed boulevards are unifying rather than separating features within communities. They provide an extensive pedestrian environment with trees, benches, paths and other attractive features for the community, as well as an enjoyable driving experience for through travelers. The noise and activity of the central traffic artery is buffered from adjacent property by sidewalks, side roads with parked cars, and side medians. Boulevard-based redevelopment would be compatible with and encourage new multi-family housing, neighborhood retail, mixed and recreational land uses as well as upgrading of residential property in the Study Area.

1. Facility Description
 - a. Viaduct Extension and Interchange at Court Street

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The Multi-Way Boulevard Concept Pan extends the existing viaduct, which is to be replaced in the near future, to pass over and interchange with Court Street. This intersection is the busiest along the corridor, with the highest number of vehicle and pedestrian accidents. A grade separation will remove the majority of the traffic now entering the intersection, which will improve its operation and safety significantly. A grade separation also ameliorates the difficulties encountered by police and fire vehicles on Court Street in stopping Arterial traffic and crossing quickly and safely in emergencies.

The interchange at Court Street permits right and left turns off of and onto the expressway eliminating the convoluted and inconvenient travel for many trips now required for traffic between the Arterial and Study Area locations. The Court Street intersection may be a signalized diamond intersection, a single-point urban interchange (SPUI)² or a modern roundabout.

The viaduct replacement would be shifted to the west at Court Street to ease the present sharp curve that limits the sight distance of southbound traffic approaching the Court Street intersection. Related to the viaduct replacement are modifications to the existing ramps to and from Rt 5A. The southbound on-ramp to and northbound off-ramp from the Arterial would be relocated north about 300 - 400 feet to allow sufficient weaving distance between these ramps and the Court Street ramps for traffic entering and exiting to merge.

b. Multi-Way Boulevard Dimensions and Cost

The Multi-Way Boulevard treatment (refer to page 51 for cross-section) begins about 800 feet south of Warren Street. It will have two 23-foot center travel roadways; lanes are narrowed somewhat to slow down traffic speed. It will also have a 13 foot center median to accommodate left turn lanes at cross streets. Side medians up to 30' wide would create a pedestrian realm between the mainline and the frontage roads. The side median width is flexible; it may be narrowed somewhat, either temporarily or permanently, to avoid taking critical property at the time of implementation. Frontage roads are 20 feet in width, to accommodate a one-way travel lane and, where appropriate, a parking lane; they also provide access to adjacent property.

The Multi-Way Boulevard will require visual clues at the northern and southern termini to alert motorists that they are exiting a high-speed expressway and entering a slower city street. These may include such features as roadway curves, landscaping, narrower lanes and gateway features. The medians will have trees and other plantings along with enhanced lighting and benches to provide a pedestrian friendly environment and further alert motorists on the main line to the new environment.

The Multi-Way Boulevard will be approximately 170' wide. In some cases it can incorporate mapped and existing streets into the frontage roads, such as Wheeler Avenue and Fay Street. Similarly, the railroad where it parallels the Arterial south of Oswego Street can be incorporated into the western side median. Acquisition of about 6 acres of property may be necessary.

² A SPUI is a new type of signalized interchange with greater capacity than a single diamond interchange.

VI. Analysis and Evaluation of Alternatives - Second Stage

Besides the Court Street interchange, access to the Study Area is provided from the Boulevard at four locations: the roundabouts at Warren Street and Thorn Street, and signalized intersections at Noyes Street and Oswego Street. Modern roundabouts are unlike older traffic circles and are being increasingly substituted for intersections. After drivers become familiar with their operation, roundabouts provide greater safety and capacity with fewer delays compared to signalized intersections.

Noyes Street and Oswego Street become one-way streets in the Multi-Way Boulevard Concept Plan. In addition to their safety benefits, one-way operation will simplify signalization at the intersections and increase their capacity. One-way operation will also shorten pedestrian crossing distances, as left turn lanes are not needed at those intersection approaches where right turn lanes are provided. One-way operation is a common operating approach to streets in other cities and would be less confusing to those unfamiliar with the Utica street system than the present indirect routing caused by the left turn prohibitions.

The Multi-Way Boulevard provides a new access location at Thorn Street, two blocks south of Oswego Street, to divert traffic from other cross streets and reduce their traffic volume. The roundabout serves only the east side of the Study Area, which, because of the development along Genesee Street, generates more trips than the west side. Subsequent studies can examine if the topography will permit access to the west side as well. Thorn Street will be the first intersection north of Burrstone Road. The roundabout should be effective in reducing the speed of northbound traffic on the Boulevard to 35-mph. There would be no pedestrian crossing at this location. A pedestrian bridge at Thorn Street would connect the two sides of the Study Area.

Maintenance and protection of traffic during construction should be feasible. The ramps at Court Street should be constructed first. With some diversion to detours outside the corridor the ramps can carry a portion of the through traffic while the Court Street grade separation is being built. The frontage roads for the Multi-Way Boulevard can be built while maintaining traffic on the existing Arterial, which will become, with some modification, the center roadways.

Cost estimates made during the concept planning phase are approximate. More precise costs will require a subsequent preliminary engineering study. The estimated cost of the Multi-Way Boulevard is just about \$65 - \$75 million, as shown in Table 6-1.

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Table 6-1 Cost of Multi-Way Boulevard

Item	(\$ Millions)
Viaduct From Railroad Overpass To 800' South Of Court Street	34
Reconstruct Ramps To / From Route 5S	1.2
Court Street Ramps	2
Multi-Way Boulevard, Warren to Thorn Streets	9.5
Roundabouts, Warren and Thorn Streets	0.6
Traffic Signals	0.4
Pedestrian Bridges At Sunset And Thorn	0.6
Trails, Landscaping and Other Amenities	1.5
Expressway Sections North and South of Multi-Way Boulevard	3.6
Utility Relocations	1
Subtotal	54.4
Contingencies, 20%	10.9
Right-of-Way	6
Total	71.3

- 2. Traffic and Safety
 - a. Traffic Volumes and Level-of-Service

The Multi-Way Boulevard Concept Plan would extend the existing 55-mph expressway section about 800 feet south of its present terminus at Court Street. It would require negotiating two roundabouts and 5/8 mile of 35-mph boulevard. The net effect would be lengthening travel time for through trips by perhaps three to four minutes. While this is not large, some travelers would perceive this as a deterioration of service compared to the present 40-mph, five signalized intersection route.

For design and evaluation purposes estimates of traffic were made for both the base year - 2006 and a Design Year 30 years in the future - 2036. Over thirty years this a 16% increase in the current traffic is expected. In addition, trips were added to the Bossert and Scheidelman zones to reflect their future development. Table 6-2 shows base year and Design Year traffic volumes on the Multi-Way Boulevard.

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Table 6-2 Estimated Multi-Way Boulevard Traffic, AADT and (PM Peak Hour)

	Southbound			Northbound	
Year	2006	2036		2006	2036
North of Court	16,200 (1670)	18,800 (1960)	North of Court	16,200 (1670)	18,800 (1940)
Court to Warren	19,600 (2020)	22,700 (2340)	Court to Warren	20,700 (2130)	24,000 (2470)
Warren to Noyes	20,700 (2090)	28,100 (2420)	Warren to Noyes	20,600 (2120)	23,900 (2460)
Noyes to Oswego	21,500 (2210)	29,700 (2560)	Noyes to Oswego	19,100 (1960)	22,000 (2270)
Oswego to Thorn	20,700 (2130)	28,700 (2470)	Oswego to Thorn	18,700 (1930)	21,700 (2240)
South of Thorn	20,000 (2060)	27,700 (2390)	South of Thorn	17,400 (1790)	20,200 (2080)

Table 6-3 shows the peak hour traffic volume on the cross streets east and west of the Multi-Way Boulevard. For design and evaluation purposes estimates of traffic and movements at each intersection and ramp were made for the base year and the Design Year.

Table 6-3 Multi-Way Boulevard Cross Street Traffic Volumes, PM Peak Hour

Cross Street	East Side 2006	East Side 2036	West Side 2006	West Side 2036
Court Street	1840	2130	490	570
Warren Street	420	490	300	350
Noyes Street	360	420	650	750
Oswego Street	310	360	370	430
Thorn Street	420	490	—	—

Based on traffic estimated for the Design Year - 2036, the performance and the configuration of the interchange, the roundabouts and intersections necessary to accommodate future traffic were evaluated. Performance was analyzed using the Level of Service (LOS) criterion, described in Section III. Turn lanes and through lanes were added as necessary to make the intersections function satisfactorily.

The results of the Level of Service (LOS) analysis for the base year and the Design Year are shown in Table 6-4. Overall, the levels of service at the intersections for these alternatives would be acceptable for the 2036 design year. The LOS at the two roundabouts is B and C in 2006 and is reduced to D by 2036; LOS D is still considered acceptable. Other crossings of the Boulevard are expected to operate at LOS B or C, with a few movements below that level. Only in the case of the

VI. Analysis and Evaluation of Alternatives - Second Stage

northbound ramps at Court Street will there be more than two lanes for pedestrians to cross; an island should be provided to facilitate this pedestrian crossing. A roundabout was also examined as an alternative to signalized ramps signals at the Court Street intersection; it would provide even better level of service than a signalized intersection, with a LOS A.

Table 6-4 - Multi-Way Boulevard : Intersection Level-of-Service, PM Peak Hour

	2006 Signalized	2006 Roundabout	2036 Signalized	2036 Roundabout
Court Street	NB B SB B	A	NB B SB C	A
Warren Street	—	C		D
Noyes Street	B	—	C	—
Oswego Street	C	—	C	—
Thorn Street	—	B	—	D

(LOS ratings vary from A - best, to F - failure; D is considered acceptable).

b. Safety

By extending the existing expressway south over Court Street the Multi-Way Boulevard would remove through traffic from the busiest and most dangerous intersection in the Study Area. The number of both vehicle and pedestrian accidents at this location can be expected to be substantially reduced.

Pedestrians still cross the boulevard section between Warren and Thorn Streets, but it should be safer than the existing Arterial for several reasons. The speed limit is reduced from 40 to 35 mph; lanes are somewhat narrower to slow traffic; and a curved feature is added at both the north and south ends to slow traffic further. A lower speed should reduce both the number and severity of vehicle and pedestrian accidents. The frontage roads of the Multi-Way Boulevard are considered part of the pedestrian realm and should be safe for pedestrians to cross at intersections. The frontage roads have 30-mph speed limits, are relatively narrow, do not carry significant volumes of traffic, have parallel parking and crossings are controlled by stop signs.

In addition, Noyes and Oswego Streets have been made one-way. One-way operation is generally safer than two-way because there are fewer conflict points between vehicles and between pedestrians and vehicles. Right and left turn lanes have been added at these intersections which should reduce the large number of rear end accidents.

Although examples of Multi-Way Boulevards can be found in many places, most are in other countries. Recent applications in this country are too new to have meaningful data. Because a Multi-Way Boulevard is a new type of facility in the Utica area, it may take some time before drivers and pedestrians are familiar with its operation. It is not possible to predict the effect on accidents of the various features included in this alternative. We expect that accidents would be reduced from their current level.

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Roundabouts are proposed for Warren and Thorn Streets. While pedestrians can safely cross roundabouts, pedestrian bridges would also be provided near the roundabouts, at Sunset Avenue and Thorn Street. Because of the topography at these locations these would be easy-to-cross bridges with ramps level on one side. The lower speed limit (35-mph), one-way operation of Oswego and Noyes Streets and the pedestrian bridges should reduce the number and severity of pedestrian accidents in the boulevard segment.

In line with the desire to induce slower traffic, the center roadway of the Multi-Way Boulevard is laid out similar to a street, without paved shoulders. However, a mountable curb at the side median and a grass area at least eight feet from the center roadways could function as a shoulder in those cases where it is needed. For example, when stopped vehicles need to pull off the roadway, when emergency vehicles need to pass stopped traffic and reach the scene of an incident, or when police need to stop vehicles to enforce traffic regulations, they could use the open area of the side median.

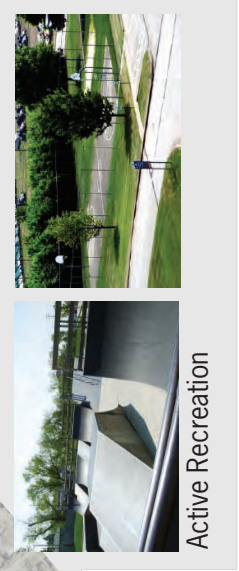
As with the Expressway Concept plan, the extension of the viaduct over Court Street in the Multi-Way Boulevard Concept Plan provides a right shoulder of 10 feet for vehicles to pull off the roadway and, when necessary, a lane for emergency vehicles to reach the site of an incident when traffic on the expressway has stopped. Emergency service vehicles should be better able to cross the Noyes and Court Street intersections because more lanes will be provided on the cross streets and ramps, and exiting traffic is more prepared to stop than is through traffic. A roundabout has been analyzed for the Court Street intersection and functions quite well for exiting, entering and cross traffic. Emergency service vehicles should also find it preferable to the current intersection situation.

Variable message signs should be provided to convey information to motorists, particularly when there is an incident that affects the operation of the expressway. In addition, the provision of signal preemption at the intersection signals and on emergency vehicles would help further; signal preemption allows emergency vehicles approaching a signalized intersection to send a signal from a distance that overrides the programmed cycle and stops traffic in all directions.

3. Community and Environmental Impacts
 - a. Land Use, Economic Development and Community Cohesion

The Multi-Way Boulevard is intended to make the area around the roadway a pedestrian-oriented, mixed-use focus for the community, through a combination of slower speeds, wide pedestrian areas, frontage roads and landscaping (Figure 6-2). All of these would encourage drivers and pedestrians to slow down or even stop to utilize the features (businesses, trails, etc.) located alongside the Boulevard. The overall feel of the area will be more small-scale and local, as even the center travel lanes of the boulevard would maintain a speed limit of 35 mph. Altogether 50 feet of pedestrian realm on each side would buffer adjacent development from the through traffic in the center roadways. Cross-Boulevard access would encourage flow between neighborhoods on both sides

Figure 6-2 Multi-Way Boulevard Complementary Land Use



**MULTI-WAY
BOULEVARD:
COMPLEMENTARY
LAND USES**

North/South Arterial
Corridor Study
January 2007

- Industrial/Office
- Open Space
- Commercial
- Mixed Use
- Residential
- Community Facilities
- Bicycle Path
- Key Intersections

PROJECT #06008 200M
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of the Multi-Way Boulevard. Two of the cross streets would become one-way, further improving pedestrian safety in the area.

The Multi-Way Boulevard is designed to encourage compatible mixed use, commercial, and residential land uses, all on a local, walkable community scale - the Boulevard aims to create a community-oriented feel to the area. Of all the alternatives, it demonstrates the greatest need for a symbiotic relationship with an economic revitalization of the area. Without local businesses (shops, restaurants, galleries, etc.) lining the boulevard, there will be fewer incentives for pedestrians to utilize the area, fewer reasons for local traffic to travel there, and fewer reasons for people to live there. A boulevard lined with empty storefronts would fail. The Bossert site presents one opportunity for a pedestrian-oriented development (for instance, a grocery store, pharmacy, and related uses) that would complement the mixed-use character of the surrounding area. In order to make sure that it is worthwhile to slow traffic and create parking, an economic development strategy must be developed and implemented with this alternative.

Consequently, it is critical that this alternative go hand-in-hand with a development strategy to assure its design fosters a pedestrian-oriented environment. Changes to zoning regulations will be necessary to ensure a compatible type of development. Design guidelines for the placement, size and shape of buildings would also be important.

Despite the advantages of the Multi-Way Boulevard in terms of community character, this option may require property acquisition on both sides of the Arterial in order to accommodate the complete array of travel and parking lanes, medians, and landscaped buffers; seven to eight acres may be required. Varying the side median width in certain locations could reduce the amount and cost of property acquisition.

b. Open Space and Recreation

The Multi-Way Boulevard alternative provides extensive opportunities for open space and recreation, owing to its smaller, safer, local feel. First, the access roads within the boulevard are calm and slow enough to safely accommodate bicycles. The Multi-Way Boulevard could be connected to a larger trailway system, connecting locations such as the F.X. Matt Brewery, schools, or other existing open spaces throughout the city. For example, a recreational trail could extend from the regional system to O'Brien and Thorn, along the west side of the expressway from Thorn Street to Sunset Avenue and then up Sunset Avenue, west on Court Street, north on Schuyler, connecting again to a regional system. The quieter, less polluting nature of the boulevard lends itself to open space fronting the boulevard in selected locations. Areas within the treed side medians would function as public open spaces, providing benches and places for pedestrians to rest and relax.

c. Air Quality, Noise and Energy

Within the corridor, emissions from the Multi-Way Boulevard should be significantly reduced from

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present levels, even with the moderate amount of growth projected. Levels of air pollution in the region do not currently exceed EPA's national ambient air quality standards. It is expected that air pollution from motor vehicles in the region will decrease substantially over the next twenty years. This is due despite increases in vehicle-miles of travel, because vehicles will be substantially cleaner, emitting far fewer pollutants per mile. The roundabouts, the one-way operation of two crossroads and the grade separation at Court Street might reduce congestion and emissions even further.

The level of noise from the Boulevard should be relatively similar to that of Arterial today, reflecting the modest growth forecast for the corridor. There were few complaints noted in public meetings and other communications about the present level of noise from the Arterial.

Frequent stops and starts make for high energy consumption on the present Arterial. The Multi-Way Boulevard will have little if any effect on energy consumption. The viaduct extension, the roundabouts and the one-way operation and additional lanes at intersections in the Multi-Way Boulevard alternative may improve traffic flow somewhat more, reducing vehicle fuel consumption by a small amount.

d. Natural Areas and Historic Sites

No wetlands or other environmentally sensitive areas have been identified in the study area that would be affected by the Multi-Way Boulevard. Ten sites on the state or National Register of Historic Places are located in or adjacent to the Study Area; none are less than two blocks from the Arterial. The impacts of the Multi-Way Boulevard would be minor if at all. Other sites of historic significance eligible for the Registers may be identified in further studies.

The Arterial is located in the alignment of the former Chenango Canal in the Study Area. It is not known what if any remains of the canal are buried within the alignment nor at what depth beneath the present surface. The Arterial north of Court Street is also within an area designated as Archeologically Sensitive by the OPRHP. During construction to replace the viaduct, the remains of Native American culture and of the former Chenango Canal may be encountered. Further research and field investigation will be necessary to judge what might be expected.

e. Environmental Justice Impacts

The Study Area is generally more diverse, less wealthy, and slightly less educated than the surrounding city and region, making environmental justice issues a potential concern. The Multi-Way Boulevard presents fewer environmental justice impacts related to noise and pollution, due to the slower speeds and more local character of this option. It is less likely to be viewed as "blight" and more as a positive addition to the neighborhood, in both environmental and social contexts, and even potentially as a way to help uplift the area.

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B. Expressway Concept Plan - Partially Depressed Up to 12 Feet Below Grade after a Court Street Grade Separation and Interchange (Figure 6-3)

The Expressway Concept Plan combines features of the Elevated, Surface and Depressed Expressway alternatives. Replacing the Arterial, the Expressway will provide a 55-mph non-stop route for traffic passing through the study area and remove the bulk of the existing traffic from street intersections. Full interchanges at Court Street and Noyes Street provide improved access to the northern and the southern portions of Genesee Street and the Study Area.

1. Facility Description
 - a. Profile, Crossings and Interchanges

The Expressway Concept extends the existing viaduct, which is to be replaced in the near future, to pass over and interchange with Court Street. This intersection is the busiest along the corridor, with the highest number of vehicle and pedestrian accidents. A grade separation will remove the majority of the traffic now entering the intersection, which will significantly improve its operation and safety. A grade separation also ameliorates the difficulties encountered by police and fire vehicles on Court Street in stopping Arterial traffic and crossing quickly and safely in emergencies.

The interchange at Court Street permits right and left turns off of and onto the expressway eliminating the convoluted and inconvenient travel for many trips now required for traffic between the Arterial and Study Area locations. The Court Street intersection may be a signalized diamond intersection, a single-point urban interchange (described in Section V A1) or a modern roundabout.³

The viaduct replacement could be shifted to the west at Court Street to ease the present sharp curve that limits the sight distance of southbound traffic approaching the Court Street intersection. Related to the viaduct replacement are modifications to the existing ramps to and from Rt 5A. The southbound on-ramp to and northbound off-ramp from the Arterial would be relocated north about 300 - 400 feet to allow sufficient weaving distance between these ramps and the Court Street ramps for entering and exiting traffic to merge.

South of Court Street the Expressway is partially depressed below grade an average of 6 feet between Warren Street and Oswego Street, descending about 12 feet at two points and rising to the surface at one point between them. Compared to a fully depressed expressway, a partially depressed expressway will significantly reduce the difficulty and cost of construction in an area with

³ A variation for the grade separation is for the viaduct replacement to descend after the 5A interchange and go under Court Street. This would require closing Columbia Street and, if it cannot be lowered about 3 feet, Lafayette Street as well. The variation passing under Court Street will involve complex utility rerouting and more complicated and costly construction in an area designated by the state as archeologically sensitive. The problems of maintenance and protection of traffic (MPT) during construction will also be more difficult to deal with. It avoids bringing an elevated structure into the residential neighborhood and obstructing visually the most important east-west route in the corridor. Because of the extensive land requirements, if the expressway passes under Court Street, a SPUI or a roundabout are not considered practical alternatives; a signalized diamond intersection would be built.

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a high water table and facilitate drainage under the crossings. Depressing the expressway about 12 feet at the crossings allows for short bridges, which would not require high structures extending hundreds of feet into the neighborhoods on either side of the expressway.

Going south from the Court Street interchange, the Expressway would descend about 12 feet below grade near Warren Street, where a crossing could be provided. The crossing would accommodate vehicles and pedestrians and rise about 12 feet over the expressway. It would not have ramps to or from the expressway. The low rise would allow the bridge to come down to grade at Sunset Avenue on the west and Lincoln Avenue on the east. The bridge alignment could follow existing Warren Street or could be shifted slightly north, east of the Arterial, to align with Cottage Place and eliminate the jog required for traffic at present. The land north of Warren Street between the Arterial and Lincoln Avenue is vacant.

Depressing the Expressway at Warren Street maintains a connection between the two portions of the Study Area that would not otherwise be possible without a higher and longer structure. A structure over a surface expressway would be visually obtrusive and would block Sunset and Lincoln Avenues. The Expressway will be below grade for a considerable distance on either side of the Warren Street crossing minimizing noise and pollution from traffic, as well as the visual impact of the structure and the traffic on it. There is also less chance of pedestrians attempting to cross a depressed, walled facility, which can happen even with fenced-off surface expressways.

Continuing south, the Expressway rises to the surface at Sunset Avenue to pass over the existing Nail Creek culvert. Nail Creek flows north in a concrete culvert just below the surface along the Arterial alignment on the east side of the existing roadway until just south of Sunset Avenue, at which point it crosses under the roadway and leaves the alignment. At Sunset Avenue the culvert crosses a few feet below the roadway surface. While any construction below grade will disturb underground water, sewer, gas and other utilities, diversion of an underground stream presents major issues. Depressing the expressway at this location would require rerouting the Nail Creek culvert at some point south of the depressed section of the expressway and replacing it on the west side. This would occur at a considerable cost. South of Noyes, the New York Susquehanna and Western Railroad (NYSW) railroad tracks parallel the expressway on the west side, which would complicate the culvert relocation. Bringing the Expressway back to the surface at Sunset Avenue is the preferable solution to this problem.

Two streets parallel to the expressway would act as collector - distributor roads between the Court Street and Noyes Street interchanges. They would not carry significant volumes of traffic, but they would provide access to adjacent property and enhance the redevelopment potential of the vacant Bossert site and other vacant or underutilized properties. The Expressway Concept Plan adds a new southbound roadway on the west side of the expressway, where no through parallel street now exists; Fay Street can be used for part of this roadway. The expressway plan does not add a northbound frontage road on the east side of the expressway. The location of Lincoln Avenue parallel to the expressway would allow it to serve that function and reduce the width of the expressway and

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the resulting amount of property acquisition. During construction, when the Arterial is out of service, the parallel routes would be very important to the maintenance of traffic through the Study Area. The southbound frontage road should be constructed as a first step.

Proceeding further south, the Expressway would again descend to a level about 12 feet below Noyes Street, permitting a crossing and interchange about 12 feet above the expressway. Ramps to and from the expressway would have to rise to the level of the elevated Noyes Street crossing. A Noyes Street crossing and interchange is important to provide access to the southern portion of the study area. Aside from Court Street, Noyes Street is the only street in the Study Area that extends past York Street into West Utica. The Noyes Street crossing could return to grade at Sunset Avenue on the east and Schuyler Street on the west and would not block those streets, as would a higher and longer crossing of a surface expressway.

A signalized intersection could handle expressway entering and exiting traffic at Noyes Street. The Noyes Street crossing would come to grade near Schuyler Street where traffic would cross the NYSW tracks. Given the current limited use of the railroad tracks an at-grade railroad crossing should not present a problem. An increase in train use could raise an issue in the future.

As with the Court Street interchange, the exact location, elevation and layout of the Noyes Street crossing and ramps would be determined in future design studies. These would reflect, among other things, utilities, property takings and other features of the final design. A number of options will need to be considered, for example, to raise or move the railway tracks a small amount to allow for an adequate gradient on the crossing bridge. To minimize impacts on adjacent property it may be desirable to connect the northbound off- and on-ramps to Lincoln Avenue a distance north and south of Noyes Street. A partial interchange without a northbound on-ramp and a southbound off-ramp is another option; it relies on the Court Street interchange and the collector - distributor roadways to serve traffic to and from the north. Elevating the expressway to pass over a partially depressed Noyes Street is also an option.

The existing Sunset Avenue and Oswego Street crossings would be closed. Sufficient capacity is provided at Court Street, Warren Street and Noyes Street for vehicular traffic crossing the expressway. To minimize the inconvenience to pedestrians from the street closings, pedestrian bridges would be provided at Sunset Avenue and Thorn Street. Because of the higher elevation on one side of each bridge, one side would be at ground level; this type of bridge is more likely to be used than the more typical pedestrian bridge that requires steps or ramps up and then down.

b. Alignment, Right-of-Way and Construction Cost

The expressway generally follows the existing alignment of the Arterial. The most significant difference is at Court Street where the existing viaduct replacement could be shifted somewhat to the west. This would ease the present sharp curve that limits the sight distance of southbound traffic approaching Court Street. Shifting the alignment west would require demolition of a 10-

VI. Analysis and Evaluation of Alternatives - Second Stage

story warehouse, which was served in the past by a railroad track adjacent to Fay Street. It would minimize the adverse impact on the buildings and parking east of the Arterial where reuse and redevelopment of older structures has been more successful.

Related to the viaduct replacement are modifications to the existing ramps to and from Rt 5A. The southbound on-ramp to and northbound off-ramp from the Arterial would be relocated north about 300 - 400 feet to allow sufficient weaving distance between these ramps and the Court Street ramps for entering and exiting traffic to merge.

The Expressway consists of two 2-lane 24-foot roadways separated by 6-foot left shoulders and a median barrier. On the right are 10-foot shoulders, where disabled vehicles could be pulled out of the traffic stream. The right shoulder also provides an area for temporary snow storage during snowstorms. Closed drainage systems with sufficient capacity to drain the roadways would be provided. The 20-foot frontage roadway on the west would consist of a 12-foot travel lane and an 8-foot lane available for parking. The varying width between the west side frontage road and the Expressway would contain a sidewalk and / or a bicycle path.

The total width of the Expressway and frontage road varies from 140 to 150 feet and more at the interchanges. The current width of the Arterial varies from about 80 to 160 feet, which means that property acquisition will be required for portions of the right-of-way. In some cases existing and mapped streets such as Fay Street and Wheeler Avenue could be incorporated into the right-of-way. It is estimated that 5 - 6 acres of property would be required, most of which is vacant or in non-residential use. This assumes simple diamond interchanges at Court and Noyes Streets; roundabouts or SPUI interchanges take somewhat more area and would require additional property acquisition. The right-of-way cost is estimated at \$7.5 million and greater with the larger interchanges. There is also a possibility of modification to the railroad alignment to accommodate the Noyes Street interchange, which could affect right-of-way costs.

Utility relocation is a substantial cost for a depressed Expressway. Sewer crossings would be the most challenging utilities requiring rerouting. There are storm sewers crossing the Arterial at Court Street, Sunset Avenue and Noyes Street; and sanitary sewers crossing at Lafayette, Columbia, Roberts, McVean, Sunset and Thorn.

Maintenance and protection of traffic must be provided during the construction period when the Arterial is closed. Diversion of Arterial traffic to roads outside the corridor to the maximum extent possible will mitigate traffic problems in the Study Area during construction. One possibility is to detour southbound traffic onto NY5A westbound to NY84, then south and eastbound back to NY12. The ramps at Court Street should be constructed first. These ramps could carry some portion of existing traffic while the Court Street grade separation is being built. Construction of the southbound frontage road should precede the removal of the Arterial south of the Court Street interchange. The width of the frontage road and the ramps may have to be larger than ultimately required to accommodate traffic during construction.

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The total cost of the Expressway, including right-of-way, is estimated at about \$85 - \$95 million, as shown in Table 6-5. These are preliminary cost estimates; engineering studies in a subsequent design study will refine these further.

Table 6-5 - Estimated Cost of Expressway Concept Plan

Item	(\$ Millions)
Viaduct From Railroad Overpass To 800' South Of Court Street	34
Reconstruct Ramps To / From Route 5S	1.2
Court Street Ramps	2
Depressed / Surface Expressway From 800' South Of Court Street To Burrstone Road	22
Warren Street Bridge And Approaches	1.2
Noyes Street Bridge and Ramps	2.8
Pedestrian Bridges At Sunset And Thorn	0.6
Frontage Road, Court To Noyes, West Side	1.2
Trail, Landscaping, Other Amenities	1
Utility Relocations	2
Subtotal	68
Contingencies, 20%	13.6
Right-of-Way	7.5
Total	89.1

- 2. Traffic and Safety
 - a. Traffic Volumes and Level-of-Service

As described in Section V, traffic volumes were estimated by distributing zone-to-zone traffic volumes along the shortest and most convenient route with the Expressway. The routing reflected where interchanges were located and where crossings of the facility were located. The PM peak hour was deemed the critical peak period due to the higher volumes of traffic experienced in that period on the Arterial.

For design purposes estimates of traffic with the expressway were made for both the base year - 2006 and a Design Year 30 years in the future - 2036. In order to calculate Design Year forecasts, a background growth rate analysis was performed for the Arterial. In recent years traffic was found to be growing at 0.5% annually. Over thirty years this equates to a 16% increase in the current

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traffic. In addition, trips were added to the Bossert and Scheidelman zones to reflect their future development. Table 6-6 shows base year and future traffic volumes on the expressway.

Table 6-6 - Expressway Traffic, AADT and (PM Peak Hour)

	Southbound			Northbound	
Year	2006	2036		2006	2036
N of Court	16,300 (1680)	19,000 (1960)	N of Court	16,500 (1700)	19,100 (1970)
Off Ramp	2100 (220)	2400 (250)	On Ramp	3400 (350)	4000 (410)
On Ramp	5300 (550)	6200 (640)	Off Ramp	7600 (780)	8700 (900)
Court to Noyes	19,600 (2020)	22,700 (2340)	Court to Noyes	20,600 (2120)	23,900 (2460)
Off Ramp	3300 (340)	3800 (390)	On Ramp	4800 (490)	(570)
On Ramp	4500 (470)	5300 (550)	Off Ramp	2400 (250)	(290)
S of Noyes	21,000 (2160)	24,300 (2500)	S of Noyes	18,300 (1880)	(2180)
	May not add due to rounding			May not add due to rounding	

Based on traffic estimated for the Design Year - 2036, the performance and the configuration of each interchange necessary to accommodate future traffic was evaluated. Performance was analyzed using the Level of Service criterion for the intersection. Northbound and southbound expressway ramp intersections were analyzed separately as signalized intersections. Turn lanes and through lanes were added as necessary to make the interchanges function satisfactorily.

The results of the Level-of-Service analysis for the base year and the Design Year are shown in Table 6-7. Only in the case of the northbound ramps at Court Street will there be more than two lanes for pedestrians to cross; an island should be provided to facilitate this pedestrian crossing. A roundabout was also examined as an alternative to signalized ramps signals at the Court Street intersection; it would provide even better level of service than the signalized intersections, with a LOS A. Overall, the levels of service at the intersections for these alternatives would be acceptable for the 2036 design year.

Table 6-7 - Expressway: Intersection Level-of-Service (LOS) 2006 and 2036

	Signalized 2006	Signalized 2036	Roundabout 2006	Roundabout 2036
Court Street NB Ramps	B	B	A	A
Court Street SB Ramps	A	A	A	A
Noyes Street NB Ramps	A	B	—	—
Noyes Street NB Ramps	B	C	—	—

(LOS ratings vary from A = best, to F = failure; D is considered acceptable).

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b. Safety

The expressway offers the greatest potential for reducing the number of traffic accidents. By removing from the street system the majority of the Arterial traffic which is traveling through the corridor, and placing it on a safer, access-controlled facility with no intersections, a substantial reduction in accidents can be expected. The Court and Noyes Street interchanges carry considerable volumes of cross and turning traffic, but with the removal of the through traffic, the number of accidents expected should be reduced. Warren Street, with no ramps, carries a low volumes of cross traffic. In addition, pedestrian bridges at Sunset and at Thorn Street, two blocks south of Oswego Street, would provide traffic-free alternatives for pedestrians crossing the expressway.

Many people at the public meetings cited inadequate lighting as contributing to accidents along the Arterial. The new expressway should be provided with appropriate levels of lighting to assure that vehicles and pedestrians at crossings are clearly visible.

The lack of shoulders on the Arterial make it dangerous for police to stop vehicles on the roadway to enforce traffic regulations. This condition also makes it for impossible for emergency vehicles to pass stopped traffic and reach the scene of an incident. The expressway provides a right shoulder of 10 feet, which provides a safe area for police to stop vehicles. It also provides a refuge for vehicles to pull off the roadway and, when necessary, a lane for emergency vehicles to reach the site of an incident when traffic on the expressway has stopped.

Emergency service vehicles should be better able to cross the Noyes and Court Street intersections because more lanes will be provided on the cross streets and ramps, and exiting traffic is more prepared to stop than is through traffic. A roundabout has been analyzed for the Court Street intersection and functions quite well for exiting, entering and cross traffic. Emergency service vehicles should also find it preferable to the current intersection situation.

Variable message signs should be provided to convey information to motorists, particularly when there is an incident that affects the operation of the expressway. In addition, the provision of signal preemption at the intersection signals and on emergency vehicles would help further; signal preemption allows emergency vehicles approaching a signalized intersection to send a signal from a distance that overrides the programmed cycle and stops traffic in all directions.

3. Community and Environmental Impacts

a. Community Cohesion and Character

The Expressway Concept Plan seeks to minimize the presence of the roadway as much as possible, given the other roles it must fill. By being depressed up to 12 feet below grade south of the Court Street interchange, the Expressway removes the road and traffic from view for most of its length.

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In so doing, it minimizes a potential visual division between two sides of the city. There will be five crossings of the Expressway - three for vehicles and pedestrians and two for pedestrians only. This will maintain the connection between neighborhoods, both actual and perceived. Placing the Expressway below grade reduces traffic noise, further reducing the impact of the expressway on surrounding neighborhoods.

b. Land Use and Economic Development

The Expressway Concept Plan provides significant potential for economic development in that it promotes active neighborhood retail, mixed use, and back office space on both sides of the expressway; residential uses are generally limited to the segments where the roadway is depressed, in order to minimize impacts on residents (Figure 6-4).

One side of the viaduct over Court Street would be more suitable for back office space or other light industrial uses, and the other would be more suitable for residential and commercial uses. Pocket parks could be provided where feasible in order to provide a buffer from the roadway and to beautify the immediate area. The elimination of the expressway from view for long sections south of the Court Street interchange would also allow pedestrian-oriented retail and mixed use to thrive, without the conflicts of noise and traffic. Finally, although its future presently remains undecided, the Bossert site presents an opportunity for a neighborhood-oriented development (for instance, a grocery store, pharmacy, and related uses, with the possibility of incorporating open space that would complement the mixed-use character of the surrounding area.

As this alternative is studied further, additional complementary land use options may become apparent and desirable to explore. For instance, the emerging connectivity between the east and west sides of the City - for both vehicles and pedestrians - resulting from the changes implemented to the expressway may open up opportunities for an east - west commercial corridor traversing the Expressway at Noyes Street. This would present new opportunities for economic development and neighborhood revitalization, and would provide economic encouragement in the Study Area in a new direction. Other new land use patterns may emerge with time, as use and traffic patterns for the Expressway adapt to the changes.

c. Open Space and Recreation

Compatible land uses for the expressway allow neighborhoods to come right up to the edge of the depressed area. The result is very little "dead space," as well as excellent opportunities for greenways, bicycle trails or running / pedestrian pathways along the border on the west side of the Expressway. While these recreation spaces serve as a buffer to the expressway, they also remain integrated with the neighborhood, creating a relatively seamless transition. In addition, the trails can potentially be extended to a larger network, connecting users with the Varick Street / Brewery district or nearby schools and parks. For example, a recreational trail could extend from the regional system to O'Brien and Thorn, along the west side of the expressway from Thorn Street to Sunset Avenue

Figure 6-4 Expressway Complementary Land Use



**PARTIALLY
DEPRESSED
EXPRESSWAY:
COMPLEMENTARY
LAND USES**

North/South Arterial
Corridor Study
January 2007

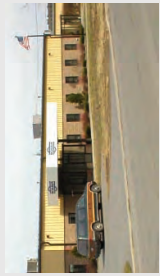
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- Open Space
- Commercial
- Residential
- Community Facilities
- Mixed Use
- Bicycle Path
- ★ Key Intersections

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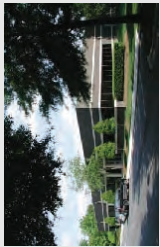


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NEW YORK - SARATOGA SPRINGS



Back Office Space



Neighborhood retail, including grocery store



Active Recreation



Mixed Use Residential and Commercial



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and then up Sunset Avenue, west on Court Street, north on Schuyler, connecting again to a regional system.

There is also potential for one or more small neighborhood parks adjacent to the expressway (particularly in the area between Court and Noyes Streets), on top of the expressway along Warren Street, or within the redeveloped Bossert site, as part of a future development on the site. These parks and open spaces can serve multiple purposes - they can function as a buffer from areas of the expressway that are closer to the surface, or they can take advantage of the depressed sections of the expressway by providing a green "edge" to the neighborhood.

d. Air Quality, Noise and Energy

The Expressway will have an impact on air quality in the neighborhood and the region. Levels of air pollution in the region do not currently exceed EPA's national ambient air quality standards. It is expected that air pollution from motor vehicles in the region will decrease substantially over the next twenty years. This is due despite increases in vehicle-miles of travel, because vehicles will be substantially cleaner, emitting far fewer pollutants per mile.

The Expressway will divert Arterial through traffic to a high-speed facility. Emission rates for vehicles on expressways are slightly lower for Volatile Organic Compounds, a precursor of ozone, and slightly higher for Nitrous Oxides than Carbon Monoxide than on arterials. Emissions from the remaining street traffic should be reduced because of less street congestion. The overwhelming effect, because of reduced emissions per vehicle-mile in the future, would be emissions substantially lower and air quality substantially better than today.

The expressway can be expected to generate higher levels of noise than the present Arterial, as noise generation increases with speed. In addition, additional truck noise may be created on main line and ramp gradients. In the partially depressed portions of the expressway, the noise impact on surrounding areas should be limited because walls and embankments below grade will absorb some of the generated sound. The noise will be more noticeable at the Court Street overpass and where the expressway comes to the surface at Sunset Avenue and Oswego Street. It would be similar to the Arterial section north of Burrstone Road, which functions as an expressway until Oswego Street. Measurements of current noise levels and forecasts of future noise levels would have to be made to assess the need for noise walls.

Frequent stops and starts make for high energy consumption for vehicles on the present Arterial. Non-stop traffic on the expressway will bring more significant reductions in energy consumption, although to some degree this is negated by the higher expressway operating speeds.

e. Natural Areas and Historic Sites

No wetlands or other environmentally sensitive areas have been identified in the study area that would be affected by the Expressway Concept Plan. Ten sites on the state or National Register of Historic Places are located in or adjacent to the Study Area; none are less than two blocks from the

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Arterial. The impacts of the Expressway would be minor if at all. Other sites of historic significance eligible for the Registers may be identified in further studies.

The Arterial is located in the alignment of the former Chenango Canal in the Study Area. There were four canal locks located in the corridor - south of Columbia Street, north of Court Street, at Warren Street and south of Thorn Street. It is not known what if any remains of the canal are buried within the alignment nor at what depth beneath the present surface. Excavation for the expressway between Court Street and Oswego Street could uncover some remains of the Canal if they are present. The Arterial north of Court Street is also within an area designated as Archeologically Sensitive by the OPRHP. During construction to replace the viaduct, the remains of Native American culture and of the former Chenango Canal may be encountered. Further research and field investigation will be necessary to judge what might be expected.

f. Environmental Justice Impacts

The Study Area is generally more diverse, less wealthy, and slightly less educated than the surrounding city and region, making environmental justice issues a potential concern. The residents of areas closest to the Expressway that have the potential to be most affected by the environmental impacts of the roadway are proportionally the most disadvantaged and vulnerable of the region. Due to the partially depressed nature of the Expressway, noise and pollution impacts will be reduced, compared to the present-day Arterial. In these areas the Expressway is likely to be perceived as less intrusive to the surrounding neighborhoods in terms of environmental justice than the Arterial is today.

C. Conclusion: The Concept Plan That Best Meets the Goal and Objectives

Two distinctly different Concept Plans have been described above that attempt to meet the Project Goal:

Develop cost effective and environmentally sensitive ways to improve the operation, safety, mobility for vehicles and pedestrians and appearance of the Arterial, improve the character and cohesiveness of the local community, and enhance community and adjoining neighborhood redevelopment.

To develop a single recommendation, the two Concept Plans are evaluated below against the project Objectives. The benefits of the Expressway Concept plan are related to its design and features. The benefits of the Multi-Way Boulevard are dependent, in large part, to changes in the behavior of drivers and pedestrians, and in changes in the character of land use and development along it. This evaluation, therefore, places considerable importance on public input on these issues.

Improve the Safety of Pedestrian Access Across the Arterial

Both Concept Plans have a grade separation and interchange at Court Street. By removing through

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traffic from the busiest and most dangerous intersection on the Arterial, pedestrian safety should be improved. A well-designed intersection with the interchange ramps should substantially reduce pedestrian accidents at this location.

The Expressway plan eliminates all pedestrian-through traffic conflicts and will completely eliminate their contribution to pedestrian accidents. Pedestrians must still cross the Court Street and the Noyes Street interchange ramp intersections but they will present far less traffic for pedestrians to cross than they now deal with on the Arterial.

Since by definition, the Multi-Way Boulevard Concept Plan is designed to incorporate local pedestrian activity, not all pedestrian-vehicle conflicts will be eliminated. On the Multi-Way Boulevard south of the Court Street interchange, pedestrians must still cross the substantial volume of through traffic to reach the other side. The Concept Plan has traffic speed reduced on the Boulevard from current 40-mph to 35-mph. The present speed limit is often exceeded and questions were raised at many meetings as to whether, even with enhanced enforcement, drivers would actually reduce their speed.

Two pedestrian bridges are proposed, but most of the pedestrian crossings will probably take place at the two roundabouts and two intersections. While these locations can be designed for safe pedestrian crossing, accident reduction will depend on the judgement of pedestrians and drivers and their willingness to observe traffic regulations. These have been a continuing problem with the Arterial and could be with the Multi-Way Boulevard as well. While the various features of the Multi-Way Boulevard Concept Plan should reduce pedestrian accidents from their current level, by reducing substantially the number potential pedestrian-vehicle conflicts the Expressway Concept Plan would be safer for pedestrians.

Improve Traffic Flow on the Arterial

While the Expressway provides high-speed, non-stop flow for through traffic, the Multi-Way Boulevard does not. Drivers must slow down and sometimes stop at the two roundabouts and will often have to stop at the two signalized intersections. While the difference in travel time between the two Concept Plans may be only three to four minutes, the perception of drivers will undoubtedly be that slow downs and stops are impeding their travel and wasting their time and fuel. At meetings and in correspondence many of the public questioned a major new investment in the Arterial corridor that did not meet the goal of the original Arterial concept forty years earlier – that is, of taking through traffic off of the City streets.

If traffic increases at a greater rate than projected congestion might be noticeable at the crossings. The Utica Police Department expressed the preference for a solution that avoided surface intersections of any design, which would slow down traffic, cause congestion and major delays, which ultimately impact cross and through traffic and police response. Clearly the Expressway will improve traffic flow better than the Multi-Way Boulevard, both through and within the Study Area.

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Reduce the Frequency of Vehicular Accidents on the Arterial

Expressways, by removing potential conflicts between vehicles and between vehicles and pedestrians, are much safer for vehicular travel than are streets. Both the Expressway and the Multi-Way Boulevard Concept plans extend the expressway section south of a Court Street interchange. This should substantially reduce the number of vehicle as well as pedestrian accidents at Court Street, the location with the greatest number of vehicle accidents reported.

In the Boulevard plan, a number of features are added to reduce vehicle accidents: the roundabouts at Warren and Thorn Streets should be safer than intersections; the intersections at Noyes and Oswego Streets would be made one-way and right and left turn lanes will be provided; a mountable curb and grass shoulder will be provided for disabled vehicles to pull off the roadway into the side medians; and the speed limit will be reduced to 35 mph. These features should reduce the frequency and severity of vehicular accidents from what is occurring today on the Arterial. The degree of reduction, however, will depend on drivers' response to these features. Because the benefits of the Expressway depend on its features rather than on changes in driver behavior, the Expressway will have a greater and more certain improvement in vehicle safety.

Improve Access to Adjacent Local Streets and Downtown Utica

Both plans provide an extension to the south of the existing expressway with an interchange at Court Street. The provision for left turns off of and onto the expressway at this location where they are not now permitted with the Arterial will improve access to the Study Area and, particularly, to Downtown Utica and Genesee Street.

The Multi-Way Boulevard has four locations south of Court Street for access to the local street system, although two are one-way. The frontage roads of the Boulevard also provide better access to intersecting streets that do not cross the Boulevard.

The Expressway has one interchange south of Court Street but the parallel collector - distributor roads should provide improved access to the adjacent area. A southbound frontage road is provided on the west side and Lincoln Avenue serves that purpose for northbound traffic on the east side.

In summary, access to local streets should be improved with both Plans.

Create Connections Between the Neighborhoods on Either side of the Arterial

Both the Expressway and the Multi-Way Boulevard are wide facilities - 150 feet and more. The Expressway has features that attempt to mitigate and reduce the effect of the separation between neighborhoods on different sides. There are three vehicle and pedestrian crossings and two additional pedestrian crossings. Depressing the Expressway south of Court Street an average of 6 feet reduces the visual, noise and other environmental impacts to some degree. Landscaping,

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sidewalks and trails mask the facility somewhat.

The Multi-Way Boulevard attempts to reduce the separation by being a unifying element - one that will attract people into the wide space to enjoy the parks, benches and trails within the Boulevard and the vibrant activity at the retail, office and residential uses facing the Boulevard.

While there was much appreciation and praise expressed at meetings and in correspondence for this attractive environment, there was skepticism by many that it could realistically come about. Questions were raised as to whether there was a market for this type of development in Utica and, if so, whether this was the likely location. There may be far greater potential, for example, on Genesee Street where there are existing retail, service, office and cultural attractions and underutilized upper floor space available for residential conversion.

The Boulevard-type of vibrant pedestrian activity in the park areas along the Boulevard and along the facing properties is a new concept in Utica and is somewhat speculative. The transition from an industrial / warehouse and low-density residential area to this type of development may be difficult, even with City promotion and inducements. There is a substantial risk in assuming redevelopment of this character facing the Boulevard.

Each alternative approaches neighborhood connectivity and aesthetic environment differently. The Expressway seeks to minimize the presence of the Arterial. The Multi-Way Boulevard concept plan seeks to become a unifying element, but makes no sense unless this type of compatible and supporting land use comes into being.

Create a More Pleasant Environment on the Arterial

The Study Area has a wide variety on environments, ranging from leafy residential streets and active commercial areas, to dingy industrial and warehouse areas and other areas with vacant lots and buildings. While there are many factors for these conditions, traffic on the Arterial does not encourage the activities and land uses that engender a pleasant environment.

The Multi-Way Boulevard includes park-like areas with landscaping, benches and trails. But a pleasant environment will require significant change in adjacent land uses in a way that is unique for Utica and for most cities. Skepticism was expressed throughout the public involvement process that this kind of change would take place. Given the continued and growing volume of through traffic along the Boulevard, it cannot be expected with any great degree of confidence.

The Expressway can include features to make the environment around it as pleasant as is possible, with features such as landscaping, trails and, if possible, a welcoming feature for drivers. Depressing the roadways up to 12 feet below the surface puts it out of sight to a degree and mitigate the noise and other unpleasant impacts. Small parks along the right-of-way can be part of redevelopment plans. A new expressway through an established unified neighborhood is never a welcome addition.

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But to the Study Area, suffering for decades from the effects of the Arterial through its center and the dangers and pollution emanating from it, the Expressway could actually produce a more pleasant environment.

Conclusion: The Expressway plan achieves the better balance of the project objectives. By systematically evaluating all of the project Objectives in relation to each Concept Plan the Expressway Plan has been shown to bring increased pedestrian and vehicle safety, improved traffic flow and access to local streets and a more attractive and integrated community than the Multi-Way Boulevard.

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After screening a wide range of potential alternatives with the project goal and objectives, evaluating four alternatives and a Null alternative in detail and comparing two Concept Plans developed on the basis of the alternatives, the Study recommends a long range plan and a several short range actions, described below.

A. Expressway Concept Plan

The Expressway replacing the Arterial will provide a 55 mph non-stop route for traffic passing through the Study Area and remove the majority of the existing traffic from street intersections. Full interchanges at Court Street and Noyes Street will provide improved access to the northern and the southern portions of Genesee Street and the Study Area. (Figure 7-1, fold-out at back of report)

The interchange at Court Street permits right and left turns off of and onto the expressway eliminating the convoluted and inconvenient travel for many trips now required for traffic between the Arterial and Study Area locations. The Court Street intersection may be a signalized diamond intersection, a single-point urban interchange (SPUI)⁴ or a modern roundabout.

The Expressway generally follows the existing alignment of the Arterial. The most significant difference is at Court Street. The existing viaduct north of Court Street must be replaced in the next few years. Its replacement would be shifted to the west to ease the present sharp curve that limits the sight distance of southbound traffic approaching the Court Street intersection. Related to the viaduct replacement are modifications to the existing ramps to and from Route 5A. The southbound on-ramp to and northbound off-ramp from the Arterial would be relocated north about 300 - 400 feet to allow sufficient weaving distance between these ramps and the Court Street ramps for entering and exiting traffic to merge. (Figure 7-2, Court Street Area)

South of Court Street the Expressway is partially depressed below grade up to 12 feet. Excavation and construction for a partially depressed expressway will significantly reduce the difficulty and cost of construction in an area with a high water table; a fully depressed expressway would have to be located 22 to 24 feet below the surface. A partially depressed expressway reduces the noise and visual impacts of the facility, as well, and lessens the chances of pedestrian crossings (Figure 7-3, Expressway Cross-Section).

Going south from the Court Street interchange, the Expressway would descend about 12 feet below grade near Warren Street, where a crossing could be provided. The crossing would accommodate vehicles and pedestrians and rise about 12 feet over the expressway. It would not have ramps to or from the expressway. (Figure 7-4, Warren Street Crossing) The low rise would allow the bridge to come down to grade at Sunset Avenue on the west and Lincoln Avenue on the east

Continuing south, the Expressway rises to the surface at Sunset Avenue. This allows the roadway to pass over the existing Nail Creek culvert, which crosses from the east to the west side just below the existing Arterial pavement. Depressing the Expressway at this location would require rerouting the Nail Creek culvert at some distance to the south and replacing it on the west side at a considerable cost. The Sunset Avenue intersection would be closed. A pedestrian bridge would be built at this

⁴ A SPUI is a new type of signalized interchange with greater capacity than a single diamond interchange.

Figure 7-2 Court Street Area

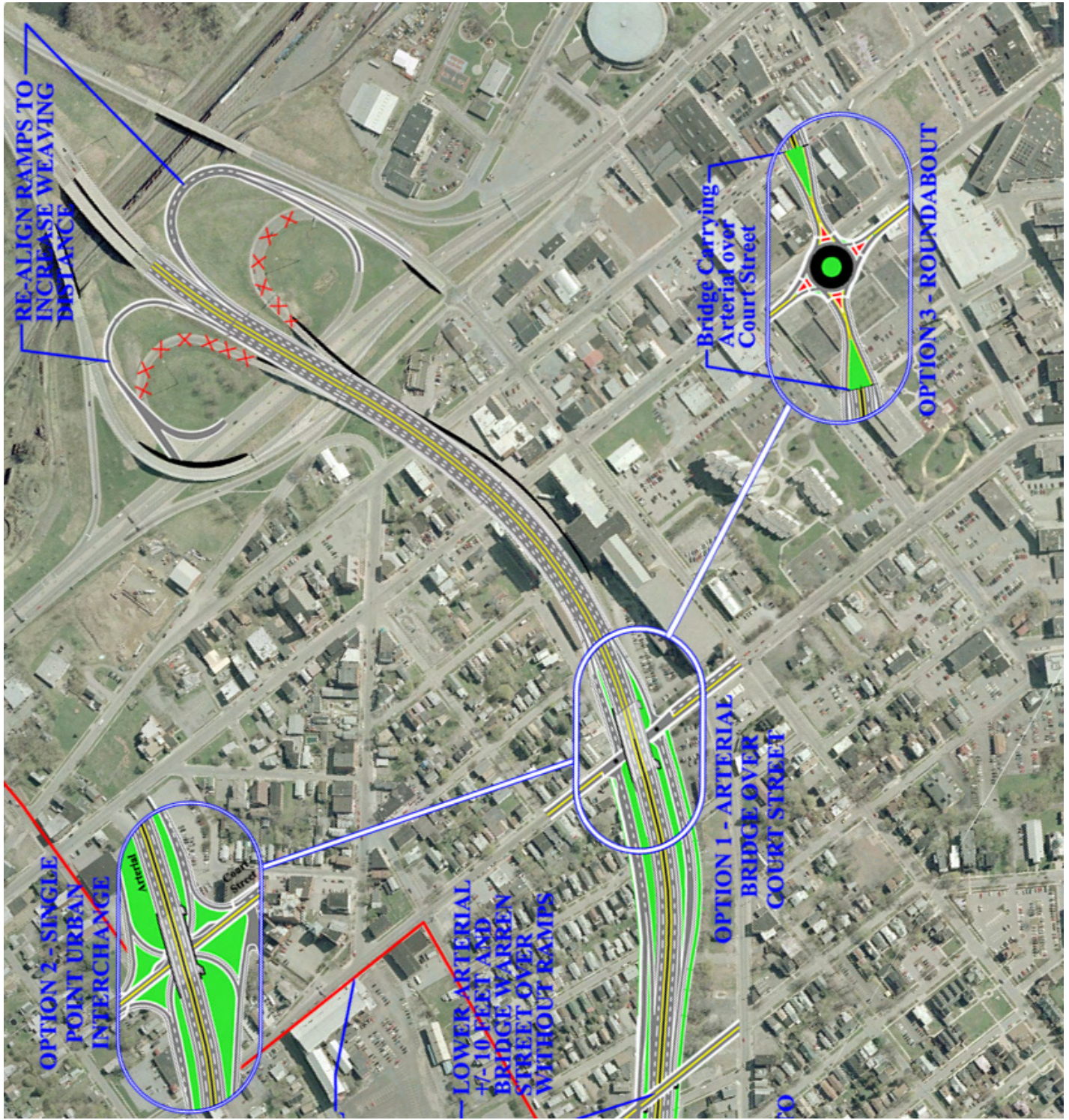


Figure 7-3 Cross-Section of Expressway

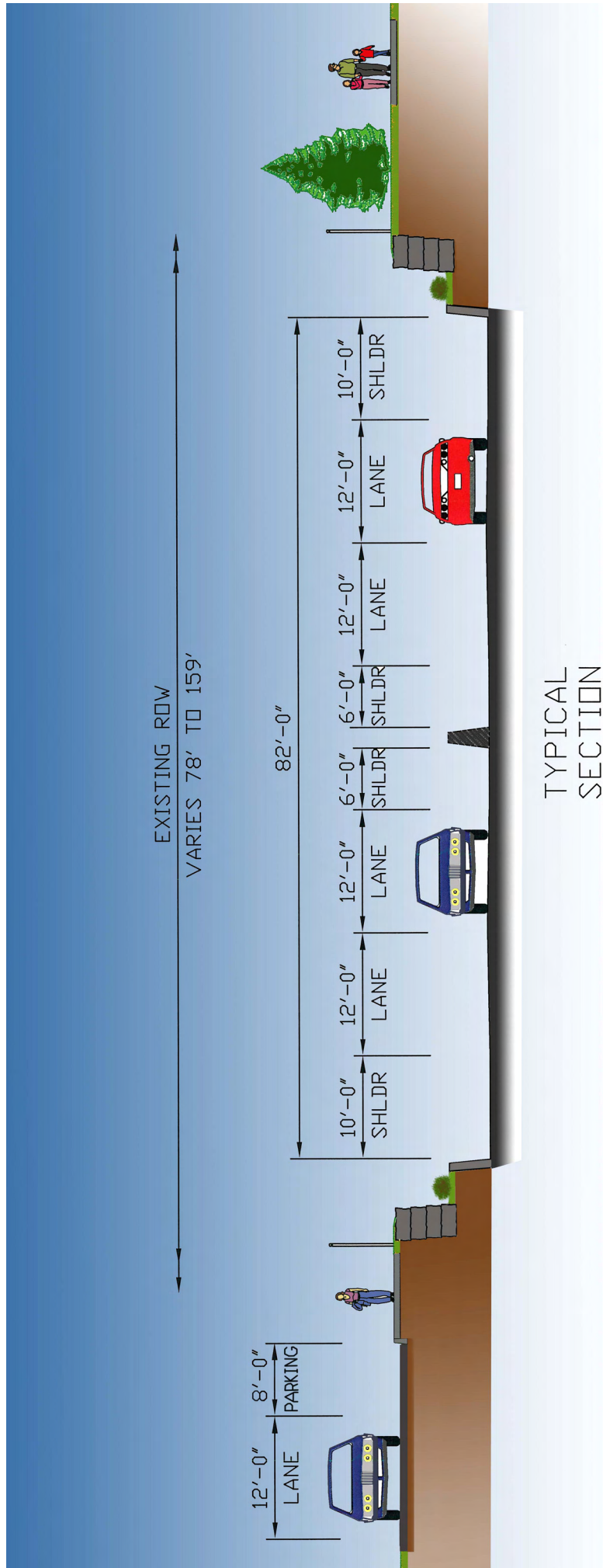
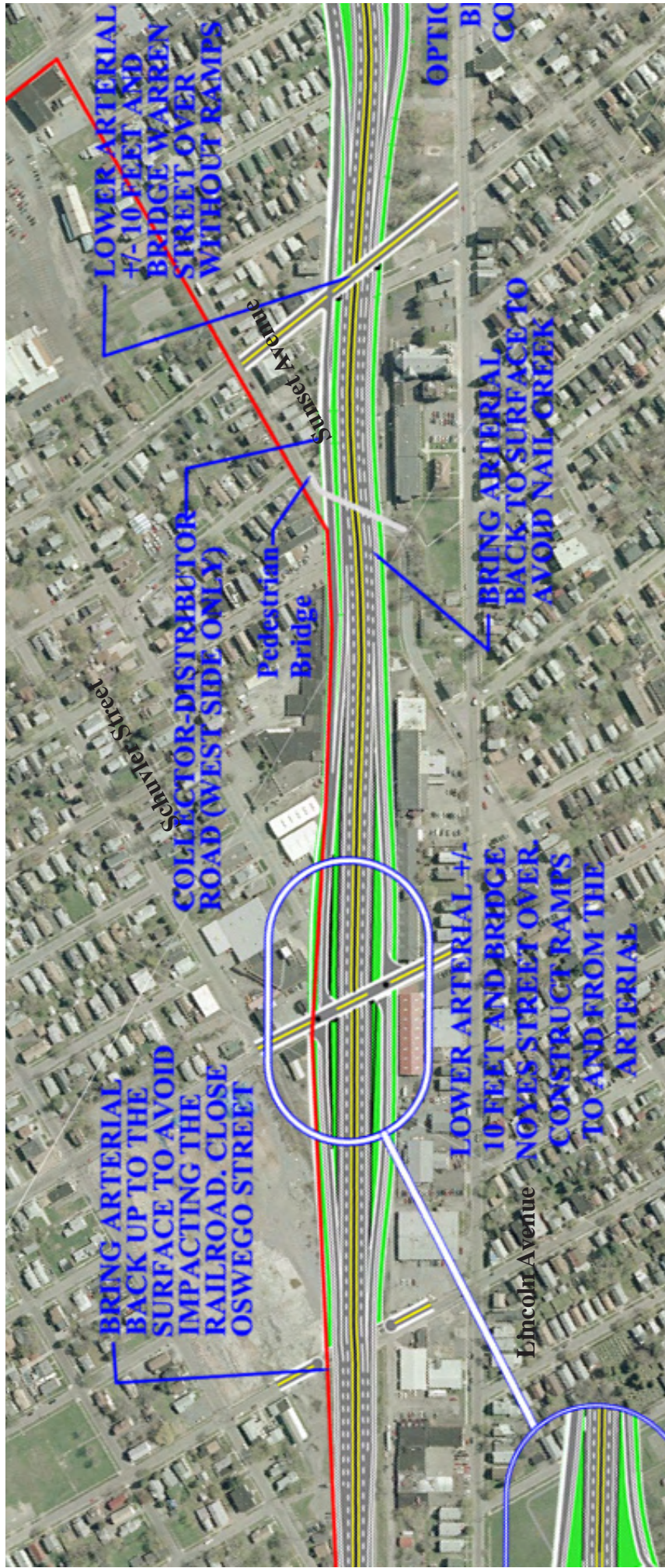


Figure 7-4 Warren Street Crossing



Figure 7-5 Expressway, Warren to Thorn Streets



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point to maintain the pedestrian connection between the two sides of the Expressway. Because the land on the east side rises steeply from the Expressway, the pedestrian bridge could be level on that side. Such a bridge is more likely to be used than the more typical pedestrian bridge that requires stairs and/or ramps up and then down. (Figure 7-5, Expressway, Warren to Thorn Streets).

Two streets parallel to the expressway would act as collector - distributor roads between the Court Street and Noyes Street interchanges. They would not carry significant volumes of traffic, but they would provide access to adjacent property and enhance the redevelopment potential of the vacant Bossert site and other vacant or underutilized properties. The Expressway Concept Plan adds a new southbound roadway on the west side of the expressway, where no through parallel street now exists; Fay Street can be used for part of this roadway. The expressway plan does not add a northbound frontage road on the east side of the expressway. The location of Lincoln Avenue parallel to the expressway would allow it to serve that function and reduce the width of the expressway and the amount of property acquisition. During construction, when the Arterial is out of service, these parallel routes would be very important to the maintenance of traffic through the study area. The southbound frontage road should be constructed as a first step.

Proceeding further south, the Expressway would again descend to a level about 12 feet below Noyes Street, permitting a crossing and interchange about 12 feet above the expressway. Ramps to and from the expressway would have to rise to the level of the elevated Noyes Street crossing. A Noyes Street crossing and interchange is important to provide access to the southern portion of the study area. Aside from Court Street, Noyes Street is the only street in the Study Area that extends past York Street into West Utica. A signalized intersection could handle expressway entering and exiting traffic at Noyes Street. The Noyes Street crossing could return to grade at Sunset Avenue on the east and Schuyler Street on the west and would not block those streets, as would a higher and longer crossing of a surface expressway.

At Schuyler Street, Noyes Street traffic would cross the NYSW tracks. Given the current limited use of the railroad tracks an at-grade railroad crossing should not present a problem. An increase in train use could raise an issue in the future.

As with the Court Street interchange, the exact location, elevation and layout of the Noyes Street crossing and ramps would be determined in future design studies. These would reflect, among other things, utilities, property takings and other features of the final design. A number of options will need to be considered, for example, to raise or move the railway tracks a small amount to allow for an adequate gradient on the crossing bridge. To minimize impacts on adjacent property it may be desirable to connect the northbound off- and on- ramps to Lincoln Avenue a short distance north and south of Noyes Street. A partial interchange without a northbound on-ramp and a southbound off-ramp is another option; it relies on the Court Street interchange and the collector - distributor roadways to serve traffic to and from the north. Elevating the expressway to pass over a partially depressed Noyes Street is also an option.

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The Expressway returns to the surface near Oswego Street, where the railroad tracks parallel the Arterial. Oswego Street would be closed across the Expressway but a pedestrian bridge would be built two blocks south at Thorn Street. Similar to the Sunset Avenue pedestrian bridge, it would be level on one side and easier to cross.

The total width of the Expressway and frontage road varies from 140 to 150 feet and more at the interchanges. The current width of the Arterial varies from about 80 to 160 feet, which means that property acquisition will be required for portions of the right-of-way. In some cases existing and mapped streets such as Fay Street and Wheeler Avenue could be incorporated into the right-of-way. It is estimated that 5 - 6 acres of property would be required, most of which is vacant or in non-residential use.

Maintenance and protection of traffic must be provided during the construction period when the Arterial is closed. Diversion of Arterial traffic to roads outside the corridor to the maximum extent possible will mitigate traffic problems in the Study Area during construction, for example, detouring southbound traffic onto Route 5A westbound to Route 840 and then south and eastbound back to Route 12. Phased construction can minimize the impacts of closures as well. The ramps at Court Street could be constructed first and could carry some portion of existing traffic while the Court Street grade separation is being built.

The total cost of the Expressway is estimated at \$85 to \$95 million, including the \$25 million cost of replacing the viaduct. This is a preliminary cost estimate; engineering studies in a subsequent design study will refine it further. The Expressway construction can be staged, with the Court Street overpass and interchange included in the viaduct replacement project. This is discussed further in the next section.

Safety has been a major concern with the Arterial because of historically high accident rates at its five intersections, and particularly because of recent fatalities. By removing from the street system the majority of the Arterial traffic that is traveling through the corridor, and placing it onto a safer, access-controlled facility with no intersections, a substantial reduction in accidents can be expected. The Court and Noyes Street interchanges carry considerable volumes of cross and turning traffic, but with the removal of the through traffic, the number of accidents expected should be reduced. In addition, pedestrian bridges at Sunset and at Thorn Street would provide traffic-free alternatives for pedestrians crossing the Expressway.

There is the potential for one or more small neighborhood parks adjacent to the expressway (particularly in the area between Court and Noyes Streets), on top of the expressway along Warren Street, or within the redeveloped Bossert site as part of a future development on the site. These parks and open spaces can serve multiple purposes - they can function as a buffer from areas of the expressway that are closer to the surface, or they can take advantage of the depressed sections of the expressway by providing a green "edge" to the neighborhood. In addition, a recreational trail could extend from the regional system to O'Brien and Thorn Streets, along the west side of the

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expressway from Thorn Street to Sunset Avenue and then up Sunset Avenue, west on Court Street, north on Schuyler, connecting again to a regional system.

The Expressway provides significant potential for economic development and compatible land uses. It would accommodate active neighborhood retail, mixed use, and back office space on both sides of the Expressway; residential uses are generally limited to the segments where the roadway is depressed, in order to minimize impacts on residents. One side of the viaduct over Court Street would be more suitable for back office space or other light industrial uses, and the other would be more suitable for residential and commercial uses. The elimination of the Expressway from view for long sections south of the Court Street interchange would also encourage pedestrian-oriented retail and mixed uses. Although its future presently remains undecided, the Bossert site presents an opportunity for a neighborhood-oriented development (for instance, a grocery store, pharmacy, and related uses, with the possibility of incorporating open space that would complement the mixed-use character of the surrounding area.

It is important to note that the discussion of land use is not intended to be a specific directive for existing properties to immediately change use. Rather, the land uses mentioned here are identified as those that would best suit the Expressway Concept Plan. In order to achieve an eventual shift in land uses, several steps would need to be taken. The desired land uses would need to be incorporated into the zoning map/code (and similarly, the zoning districts with incompatible land uses would be removed), with provisions for current properties with newly nonconforming uses (i.e. "grandfathering"). As properties are eventually turned over, modified, or newly built, they would be built in accordance with the new zoning regulations and would eventually tilt the balance towards the desired land uses. Design guidelines would be included in the zoning regulations, in order to address issues such as sidewalks, setbacks, parking, landscaping, and other elements that affect community character. Design guidelines can be mandatory or advisory, or a combination of both. Finally, a municipality's zoning code must adhere to the goals and recommendations in its Comprehensive Plan. Depending on the nature of the changes desired by the City, this may require modification to Utica's Comprehensive Plan.

B. Next Steps

1. Programming and Design

Programming the Expressway Concept Plan is the next step in implementing the recommendations for upgrading the Utica N-S Arterial. The Herkimer-Oneida Counties Transportation Study (HOCTS), the Metropolitan Planning Organization for transportation in the region, prepares the Long Range Plan and the Transportation Improvement Program (TIP) for the region. The Long Range Plan - Destinations 2005-2025, should be updated to reflect the results of this Study.

The project must then be included in the HOCTS 5-Year Transportation Improvement Program (TIP). This program is amended as needed and reflects, among other things, the availability of federal,

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state and local funding. A Utica N-S Expressway - State Routes 5, 8 & 12, is a state Department of Transportation (DOT) responsibility. Funding will have to come from state and federal-aid sources. Financial resources available for the state DOT region in which the project is located are quite limited. An average of \$50 million is expected annually in the coming years, and maintenance of the present system is a priority. A project of this magnitude - \$85 - \$95 million may require staging if all of the funds required for its completion cannot be expected at one time.

Because of its deteriorating condition the NYSDOT has emphasized the need to replace the Arterial viaduct north of Court Street in the near future. A decision and designs for the Expressway are necessary to ensure that the viaduct replacement will accommodate and, if appropriate, include portions of the Expressway. The next step, therefore, is a state Department of Transportation preliminary engineering study that will review and further refine the recommendations of this study. It will prepare more detailed designs on the basis, among other things: further traffic studies; specific right-of-way impacts; construction methods and costs; and environmental studies and impacts. Programming this study for the immediate future should be added to the TIP. At this time no funding has been identified for implementing the recommendations of the Study beyond the funding for the replacement of the viaduct.

A Utica North - South Expressway lends itself to staging, if that is deemed necessary on financial or other grounds. A first stage would include the replacement for the existing viaduct north of Court Street, continuing over Court Street and under Warren Street, returning to the surface at Sunset Avenue. The southbound frontage road would be built from Court Street to Sunset Avenue where a pedestrian bridge would be provided. The northbound and southbound ramps at Court Street will allow for left and right turns onto and off of the expressway.

Construction of the Expressway south of Sunset Avenue could be deferred to a later time when funding is available, if that is necessary. At that future time the expressway would be continued a southbound frontage road, vehicle and pedestrian crossings and interchange ramps provided according to the recommended Expressway Concept Plan. In the interim the Court Street grade separation would remove through traffic from the most congested route and the intersection of greatest vehicle and pedestrian accident incidence. Provision of left and right turns off of and onto the expressway will significantly improve access to study area and downtown Utica.

2. Short Range Improvements
 - a. Lower Cost Actions for the Immediate Future

A number of relatively low cost actions, compared to the cost of the Expressway, were identified during the Study. These could bring significant benefits in the short term and are recommended for immediate consideration:

Enforcement and education were cited by many participants in the Study as ways to increase the

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safety of motorists and pedestrians using or crossing the Arterial. Many accidents can be ascribed to not following traffic regulations. Enforcement is necessary to change injudicious and illegal behavior. Observations of pedestrians crossing the Arterial during the Study showed many violations, particularly by young people who often cannot judge well the dangers they are taking. The efforts of the NYSDOT to educate young people in schools about the regulations and procedures concerning pedestrian crossing signals should be continued and expanded.

Intelligent Transportation Systems (ITS) is a term that has been given to a host of evolving technological and operational ideas to improve capacity and safety short of additional lanes. Many are applicable to the Arterial corridor.

Red-light running and illegal left turns onto or off of the Arterial are potential accident generators. Cameras to identify and ticket red-light running vehicles should be installed at every intersection of the Arterial. Experience elsewhere has shown significant improvements in driver behavior when red-light running cameras are installed, publicized and enforced.

The problem of emergency vehicles crossing the Arterial when responding to emergency calls was noted during the Study. Vehicles on the Arterial approach the Court Street intersection at high speed. It is difficult to get vehicles to stop in time and it is dangerous for emergency vehicles to assume vehicles have stopped even when sirens and flashing lights are in use. Signal preemption equipment, when installed in emergency vehicles and traffic control boxes, allows emergency vehicles to change the signals to red in all directions from a distance as they approach an intersection. Provision of signal preemption equipment should be implemented as soon as possible; it will be important as part of the future Court Street interchange of the expressway, as well.

Another problem noted by the Utica Police is operation of the Arterial during power outages when traffic signals do not function. As an alternative to police officers manually directing traffic, provision should be made for back-up power to keep signals operating. This could be a separate power system connecting all intersections that would automatically start in the case of a power failure. Allowing portable power generator access to the traffic control boxes by Utica personnel is another option. Traffic signal timing at the Arterial intersections is periodically reviewed by the NYSDOT and updated. Traffic volumes should be monitored closely to see if more frequent retiming is necessary as traffic volumes and peak periods change.

Incident management has been found to be a low cost method of restoring capacity and increasing safety on arterial roadways. Much of the congestion encountered on the Arterial is due to incidents such as accidents and vehicle breakdowns. They are often responsible for additional accidents involving other vehicles. A Traffic Operations Center (TOC) for the region can quickly ascertain incidents and resulting congestion and take remedial action. For example, tow trucks, police, fire and / or ambulances can be dispatched, based on the nature of the incident. Incident reports are obtained by cell phone and other calls from the public, among other means. Cameras observing traffic flow and incidents at critical points provide another source of information to the traffic control

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center. The cameras are placed on towers where they can turn and/or zoom-in under the control of the traffic operations center staff to identify the cause of a traffic problem. They are designed to not show individual license plates, avoiding any privacy concern. A State TOC is being established for the Utica region and should be advanced to full operation as soon as possible.

Among the constructive actions that can be taken to deal with traffic incidents is providing information to motorists. When drivers are informed of traffic problems they can make individual decisions to avoid particular locations by diverting to alternate routes. Information can be provided by regular radio and television alerts, highway advisory radio broadcasting on special radio stations, and on variable message signs (VMS). The NYSDOT is increasingly deploying variable message signs on major highways to alert drivers to incidents and enable them to avoid those locations. Installation on the Arterial and/or on major connecting roads such as SR 5A , 5S and the Thruway exit should be considered.

Along with or in advance of a Traffic Control Center, a Highway Emergency Local Patrol (HELP) program should be considered. NYSDOT's HELP vehicles patrol highways at busy times. They can call immediately for the appropriate type of help when they encounter an accident, vehicle breakdown or other incident that is impeding traffic flow. Tow trucks can be dispatched to quickly remove disabled vehicles, restoring capacity and reducing the chance of additional accidents. HELP vehicles carry small amounts of gas that they provide to vehicles that have run out of gas. The NYSDOT's HELP program is one of the largest and most successful in the nation. The Utica N-S Arterial is a prime candidate for such patrols.

Restriping the roadway may alleviate the problem of insufficient weaving distance between the southbound on-ramp from westbound Rte 5A and the southbound off-ramp at Court Street.

Other issues that should be investigated to bring short-term improvements include timely replacement of inoperative lighting and repair of damaged fencing. Removing or covering non-operating railroad tracks or appropriate posting would allow school buses and following traffic to avoid unnecessary stopping.

b. Arterial Upgrading

If the expressway is staged, features of the Null alternative which identified minimal improvements to the Arterial should be implemented in the southerly portion of the corridor. They should make for safer driving along and crossing the Arterial until the Arterial is fully converted to an expressway. If the viaduct replacement / Court Street interchange is more than five years away, they should be considered for that section as well.

The Null alternative called for right shoulders to be added to the Arterial. They would provide locations for disabled vehicles to pull off the roadway, for police to stop vehicles to enforce traffic regulations and for emergency vehicle access when traffic on the Arterial has come to a stop

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because of incidents. The grass area to the right on the northbound Arterial roadway provides sufficient area for a paved shoulder. The southbound roadway is close to the NYSW railroad track on its right. The track along Fay Street in the northern section of the Arterial is no longer operating. It should be removed and the right-of-way acquired, if it is not already public property. South of Noyes where the track coming from Schuyler Street is in use, a paved shoulder is also important.

Right turn lanes should be added at the intersections to allow vehicles to slow down outside of higher speed traffic. If and when shoulders are provided they can be marked to function as right turn lanes at intersections. To avoid lengthening the pedestrian crossing where right turn lanes are added, small right turn islands may be provided. If the northbound acceleration lane from Burrstone Road westbound is extended to an Oswego Street right turn lane, it can function as a weaving section, allowing entering and exiting traffic to safely merge.

C. Conclusion

The Utica N-S Arterial Corridor Study has recommended the Expressway Concept Plan as the best solution to the Arterial's safety, access and environmental problems. Considering the varied, often conflicting roles played by the Arterial, a wide range of alternatives was developed. Each was analyzed and evaluated for its potential benefits and problems. Public input was sought and provided at every step of the process to assure that the resulting plan would meet its concerns and vision. No solution was found to be possible that will satisfy everyone's desires and meet fully all of the project Objectives. The Expressway Concept Plan, the Study's recommendation for a balanced solution, offers the best opportunity to meet the needs of the region, the City and the Study Area.

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Responses to Public Comments

1. The Arterial was originally conceived as an elevated highway providing a through route with no intersections in the Study Area. Not building it as originally conceived has meant decades of problems for both through traffic and the residents of the Study Area. It should be done now.

The Expressway Concept Plan will effectuate the original concept of a through route reducing the time wasted by vehicles slowing and stopping at intersections in the Study Area. By being partially depressed for much of its length, however, it will divide the Study Area less than an elevated expressway.

2. The safety problems of the Arterial are due to speeding and improper actions by drivers and illegal and imprudent crossing by pedestrians. Rather than spending large amounts of money on new construction, more efforts at enforcement and education will alleviate the safety problems.

A number of short- and mid-range actions will help reduce accidents on the Arterial and should be implemented; these include cameras to identify vehicles running red lights; shoulders and right turn lanes; greater education on safe driving and crossing; and increased enforcement of traffic regulations. But much greater and more assured reductions in accidents will come about by placing the large volume of through traffic on an expressway and greatly reducing the number of vehicle- and pedestrian - vehicle conflicts on the surface street system.

3. The Study Area is divided by a dangerous, polluting Arterial. The Arterial improvement should reduce the division of the Area.

The Multi-Way Boulevard Concept Plan retains through traffic on a surface roadway and intersection crossings. The Expressway Concept Plan has features intended to reduce the division of the Study Area: many safer crossings for vehicles and pedestrians; a partially depressed roadway for much of its length, and landscaping to mask it as much as possible. Its divisive effect may be less than that of the existing Arterial.

4. The pedestrian-oriented mixed land use in the Multi-Way Boulevard Concept Plan is an attractive environment and will help unify the area.

The park development and adjacent land use of the Multi-Way Boulevard Concept Plan was widely praised, even by people favoring the Expressway. Redevelopment of adjacent property in this supporting way is crucial to the success of the Multi-Way Boulevard Concept; it makes no sense without this type of development.

Many public comments, however, raised real doubts that, even with City promotion and incentives, this type of private development would occur with the Multi-Way Boulevard. Existing manufacturing

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and warehouse activities would have to be relocated and small-scale retail, service and residential uses would have to be attracted into an area with a high volume roadway in its center. Simply building a Boulevard does not mean the mixed use will come about. If this type of environment is to develop in Utica there may be far greater potential in other areas, for example along Genesee Street, where there are retail, office and institutional activities and underutilized space for residential conversion

5. Access to the Study Area is impeded by the turn prohibitions of the Arterial. How will this be improved?

The interchanges of the Expressway Concept Plan at Court Street and Noyes Street will permit left turns onto and off of the Expressway. With the collector - distributor roads on either side, the Expressway will improve access to the Study Area and downtown Utica. This is especially important for the City's redevelopment plans for vacant and underutilized property in the Study Area. The Multi-Way Boulevard has many points of access to the Study Area; the two streets adjacent to the Bossert site are one-way, however, which would necessitate some adverse travel.

6. Both the Multi-Way Boulevard and the Expressway Concept Plans show an overpass at Court Street. This will extend the viaduct north of Court Street into the Study Area, further dividing the Study Area and obstructing the east-west view along Court Street, the most important cross street in the Study Area.

A grade separation was added to the original Multi-Way Boulevard alternative when it was found that traffic volumes required a large, complex intersection at Court Street that would be difficult for pedestrians to cross. The Concept Plans show an elevated crossing of Court Street because depressing the viaduct extension 20 - 25 feet below Court Street would present a number of problems. It would require extensive and difficult construction in an area with a high water table and an area designated as archeologically sensitive by the state: it would require closing Columbia Street and, if it cannot be lowered three feet, Lafayette street, as well; and it would complicate maintenance and protection of traffic during construction.

An engineering study will follow the Concept Plan Study in which a number options will be developed and evaluated in detail. At the Court Street interchange the options of passing over and under Court Street will be examined, including simulations of the appearance of different solutions. These will be available for public review and comment at meetings and in various media.

7. By closing some existing crossings, the Expressway will impede access by emergency vehicles to portions of the Study Area.

Utica Police and Fire Department representatives emphasized Court Street as the most important access route to West Utica, and Noyes Street to a lesser extent. Grade separations at these crossings will remove the majority of through traffic from the intersections and alleviate the existing

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difficult and dangerous crossing by emergency service vehicles.

The Expressway Concept Plan eliminates the crossings at Sunset Avenue and Oswego Street and will require revision to emergency service routes that utilize these crossings. If the nearby crossings at Warren Street and Noyes Street are used a small amount of additional time would be required; the lower traffic at these crossings would reduce any added time to some degree. Signal preemption, which allows emergency vehicles approaching an intersection to turn signals to red and stop traffic, will also help in the short- and long-term.

8. A depressed expressway would have no space for snow storage, and would be vulnerable to flooding, a frequent occurrence on the Arterial today.

A ten-foot shoulder included in the Expressway design would provide snowplows with an area for temporary storage of snow. NYSDOT has procedures to remove snow as soon as possible from depressed roadways so that the shoulder is available for emergency use.

The depressed portion of the Expressway would have features to ensure proper drainage. Depressing the Expressway no more than 12 feet at the Warren and Noyes Street crossings should facilitate drainage. An underpass at Court Street, one of the options for the interchange would raise more difficult drainage issues.

9. Will the Expressway Concept Plan and its ramps require taking some of the remaining active manufacturing, commercial and residential property in the Study Area?

In the engineering design studies that will follow and refine the Plan, the properties required with various options will be identified. Every effort will be made to minimize the cost and impacts of the property takings. The parcels proposed to be acquired for the right-of-way will be presented and subject to public review.

Utica North -South Arterial Corridor Concept Study

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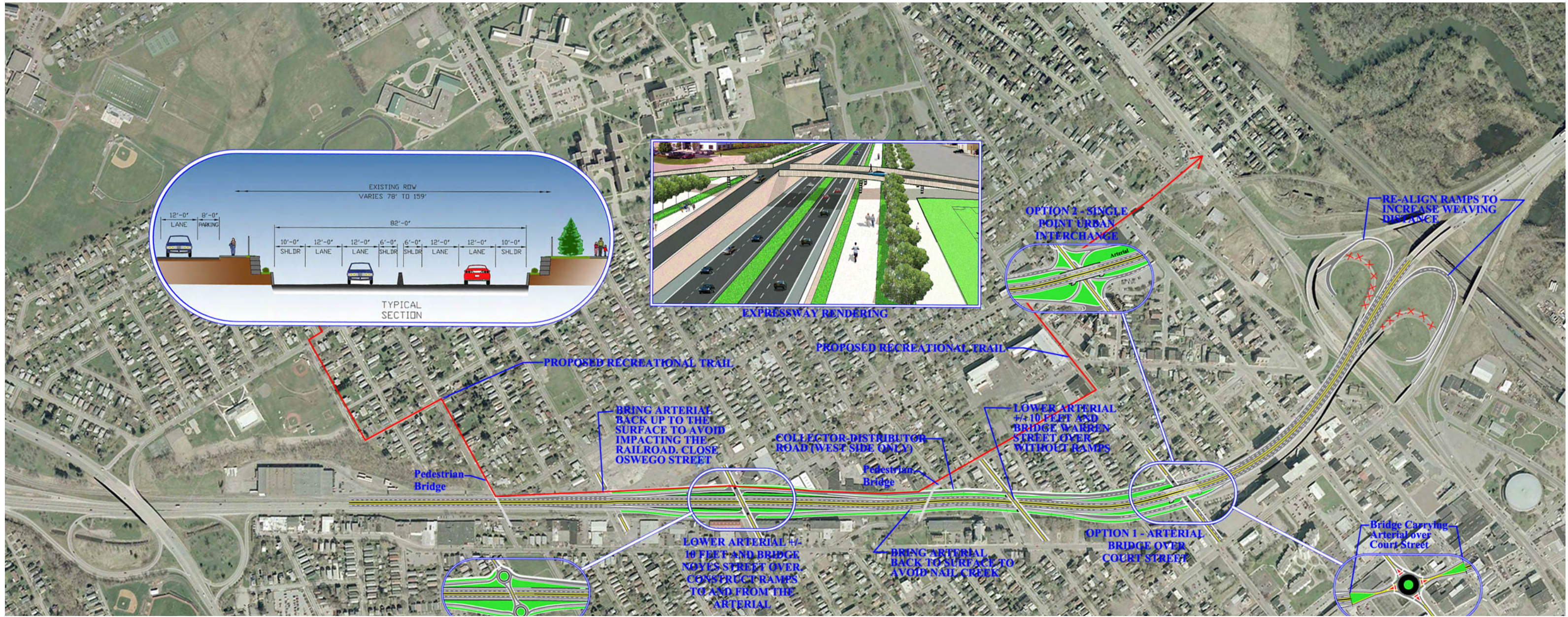
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* **Dan Sitler, a Principal at Saratoga Associates, passed away in January 2007. The Study participants wish to acknowledge his contribution to its successful completion.**

Figure 7-1 Expressway



Profile

