# **James Street Corridor Traffic Study**

## Final Report



**UPWP Fiscal Year 2000-2001** 



Report Prepared by:

Syracuse Metropolitan Transportation Council

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## **Final Report**

## **Fiscal Year 2000-2001**

#### SMTC Unified Planning Work Program Task 3J

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#### **EXECUTIVE SUMMARY**

#### Introduction

The James Street Corridor Traffic Study focuses on the section of James St. between Grant Blvd./Shotwell Pk. in the west and E. James St./Clover Ridge Dr. in the east. The study was requested by the City of Syracuse and was included in the Syracuse Metropolitan Transportation Council's (SMTC) Unified Planning Work Program (UPWP) for Fiscal Year 2000-2001. The study seeks to identify transportation needs; identify and evaluate alternative solutions; and recommend a schedule of improvements for implementation. The scope of work for this study was approved in June 2000.

Public involvement was an important component of this study. A Study Advisory Committee was assembled that provided input and guidance throughout the project. In addition, the public was given the opportunity to provide comment at two public meetings, both of which were held in conjunction with Area 6 Tomorrow's Neighborhoods Today (TNT) meetings.

#### **Transportation Issues**

The study consisted of a multi-modal approach and examined current vehicular, truck, transit, bicycle and pedestrian travel conditions. Analysis of the existing conditions lead to the identification of a number of transportation issues including the following:

- High vehicle travel speeds, especially near Lillian Ave., Homecroft Rd. and at the eastern end of the corridor;
- Pavement from Grant Blvd. to Hillsdale Ave. and Edwards Ave. to Midler Ave. is rated as being in poor condition and pavement markings were found to be in poor condition at the intersections of James St./Midler Ave. and James St./Clover Ridge Dr./E. James St.;
- The northbound left turn lane approach at James St./Midler Ave., and the westbound approach at James St./Homecroft Rd. currently operate at a LOS E and F, respectively;
- The following approaches are projected to operate at a LOS E or F in future year 2015: the southbound approach at James St./Shotwell Pk./Grant Blvd. (LOS E), southbound left turn lane at James St./Midler Ave. (LOS E), southbound thru and right turn lane approaches and the northbound left turn lane approach at James St./Midler Ave. (LOS F), and the westbound approach at James St./Homecroft Rd. that continues to operate at a LOS F;
- The two-phase signals along James St. fall out of coordination if an individual pushes the pedestrian button to request a WALK phase;
- The intersection of James St. with Grant Blvd. is confusing to motorists due to the permitted and protected left turn;
- Five approaches at unsignalized intersections currently operate at a LOS E, and the southbound approach at Leo Ave. currently operates at a LOS F;
- The 2015 future year levels of service for unsignalized intersections revealed that all of the north and southbound approaches are projected to operate at a LOS E or F with a few exceptions;

- There are numerous on-street parking regulations (up to 9 different signs used, multiple regulations at one location, and parking meters) within the corridor that complicate sign posting and have the potential to confuse motorists;
- Two parking signs between Lynwood Ave. and Lamson St. are faded and no longer legible;
- Illegal on-street parking is prevalent, particularly near intersections;
- The waiving of parking requirements for new businesses has occurred in a few locations, exacerbating the current parking issues along the corridor;
- A No Left Turn sign is missing from the E. James St. approach to James St.;
- Three intersections analyzed exceed the New York State Department of Transportation (NYSDOT) average accident rates, and bicycle and pedestrian accidents represent more than 15% of all traffic accidents at James St./Marlborough Rd. and James St./Lillian Ave.;
- There are no designated New York State or City bicycle lanes or bicycle racks within the
  corridor and there is a general lack of awareness and compliance with bicycle safety
  guidelines including lack of helmet use, riding on sidewalks, and traveling against vehicular
  traffic;
- Curb ramps that comply with the Americans with Disabilities Act of 1990 (ADA) do not exist at three locations within the study area;
- An extensive list of issues that impede pedestrian travel were identified;
- There are thirty bus stops within 1.14 miles, causing buses to stop at every block. This sometimes results in the obstruction of traffic flow. In addition, the majority of bus stops are located at the near side of intersections, often resulting in buses obstructing traffic control devices and traffic flow; and
- There is general disregard for City of Syracuse ordinances, such as the one that states that the owner, occupant, or agent of any property in the City of Syracuse is responsible for maintaining and keeping sidewalks clear of snow and ice.

#### **Corridor Wide Recommendations**

A series of corridor wide actions are recommended for implementation that would address mobility issues along the James Street Corridor. These primarily include enforcement, organizational/educational, and regulatory measures to help enhance pedestrian, bicycle, and transit access in the corridor, and lower cost capital improvements.

Recommended enforcement and educational programs include:

- Travel Speed Monitoring/Enforcement;
- Parking Enforcement;
- Bicycle Enforcement/Community Education; and
- Community Awareness of Existing City Regulations/Programs.

Lower cost capital improvement recommendations include:

- Street Striping Program;
- Spot Installation/Repair of ADA Curb Ramps;

- Pedestrian Crossings Buttons and Signage; and
- Far-Side Bus Stops.

Regulatory and development control recommendations include:

- Parking Master Plan; and
- Following the zoning guidelines within the new Eastwood James Street Overlay District.

#### **Streetscape Initiative**

Streetscape characteristics currently exist in the form of street trees and brick along the sidewalk between Marlborough Rd. and Lillian Ave. and just west of N. Edwards Ave. Further use along the corridor of the streetscape examples listed above, coupled with the possibility of the following recommendations, could assist in obtaining the "Village within the City" atmosphere desired by local residents:

- Further use of enhanced road striping to better define travel/turning lanes and pedestrian zones;
- Creation of enhanced crosswalks (either through striping or textured concrete) in key locations, primarily near schools, commercial establishments, and highly pedestrian- and bicycle-traversed areas;
- Consolidation and merging of curb cuts, although this would require extensive coordination with local businesses to create cross access easements; and
- Landscape improvements to create a consistent design character and positive pedestrian setting, such as new street trees, identification banners, and installation of textured concrete verges, benches and trash receptacles.

A higher-level investment might include underground installation of aerial utilities. This could only be feasible under a possible long-term reconstruction of James St.

## **Long-Term Recommendations for James Street**

#### **Signal System**

Inclusion of James St. in the City's signal interconnect system, or some other type of signal system deemed appropriate by the City of Syracuse DPW, would allow for the ease of movement through the intersections and road segments along James St.

#### **Traffic Calming Techniques**

Lower cost improvements involving items like enhanced striping, could be completed in the short-term, at relatively low cost. However, the possibility of adding pavement speed limit markings, grooved pavement, and enhanced pedestrian crossings and/or other traffic calming techniques are recommended in the long-term, and only after further study.

#### Long-Term Reconstruction of James St.

Given the current physical characteristics of portions of James Street (pavement conditions, sidewalk conditions, etc.), as well as the fact that it serves as a main commuter route, the entire corridor could potentially be suitable for reconstruction in the long term.

#### **Site Specific Recommendations**

Recommendations specifically targeted at key locations within and along the James St. corridor were also made.

#### James St./Shotwell Pk./Grant Blvd.

The configuration of this intersection, as well as the timing and phasing of the traffic signal lights should be examined further in order to determine the appropriate course of action for improvements at this location. Therefore, it is recommended that the City of Syracuse complete an engineering and traffic analysis at this location to determine appropriate changes and/or upgrades for this intersection, as it is currently the master intersection, controlling the traffic signal lights eastbound along the corridor to the intersection of Lamson St. and Plymouth Drive.

#### James St./Midler Ave.

In June 1999, consultants to the City of Syracuse completed a Traffic Operations Review of James St. at Midler Ave. The objective for the study was to evaluate the possible need for a left turn signal for eastbound and westbound vehicles at the intersection of James St. and Midler Ave. After reviewing the capacity, accident history, and level of service analyses, it was determined by Clough, Harbour & Associates that an exclusive left turn phase is not warranted at the intersection of James St./Midler Ave.

Although an exclusive left turn phase was not recommended for this intersection, the following recommendations were made:

- Make adjustments to the signal timings (the study recommends specific timings);
- Repaint all faded pavement markings;
- Add additional lane usage pavement markings;
- Consider relocating the bus stop located on Midler Ave.;
- Post a left turn prohibition sign facing vehicles exiting the Byrne Dairy parking lot onto Midler Ave.; and
- Move the southbound stop line on Midler Ave. back 25 feet.

It is recommended that the City of Syracuse DPW follow through with the suggested improvements made through this study. All of the recommendations listed above could be completed in the short-term and at relatively low cost to the City of Syracuse.

#### **Eastern End of Corridor**

The eastern end of the James St. corridor, primarily the area from E. James St. to Walter Dr., serves as a gateway into the Eastwood community. Traveling westbound on James St., prior to reaching E. James St., the pavement is striped for four-lane usage. After reaching E. James St., the pavement is not marked for four lanes, but is often utilized as four lanes. The recommendation for this portion of the corridor is to further examine this location with the possibility of adding pavement markings in the vicinity of E. James St. to indicate a lane merge. Lane merge signage may also be appropriate at this location. Another option could be the addition of on-street parking at this end of the corridor. Utilization of any of these options could also assist in showing the motorist that they are entering a village setting, and may help to slow traffic down in this area of the corridor.

#### **Implementation Plan**

Programmed short-term actions would include additional planning, community education, and enforcement activities along the corridor, as well as lower cost capital projects to enhance mobility and access. Also during this period, further review and assessment of funding availability would be conducted for larger-scale improvements such as streetscape programs and possible long-term reconstruction efforts.

Medium-term actions, if determined to be financially feasible, would focus on studies to determine appropriate improvements for the James St./Shotwell Pk./Grant Blvd. intersection. Medium-term actions would also focus on the corridor wide Streetscape Initiative. In addition, if determined to be reasonable within the context of the SMTC's Long-Range Transportation Plan (LRTP) and Transportation Improvement Plan (TIP), preliminary engineering and necessary environmental clearance could be conducted in this period for the reconstruction of James St.

Long-term actions include the ultimate final design and construction activities associated with a reconstruction project on James Street. It should be noted that the long lead time necessary to review, fund, plan, and design a major reconstruction project would not necessarily preclude the shorter-term capital projects from being reasonable first steps to such a project.

#### **CHAPTER 1 - INTRODUCTION**

### 1.1 Purpose of Study / Goals and Objectives

#### **Purpose of Study**

The Eastwood section of the City of Syracuse has come to be recognized as the "Village within the City". Located in the eastern portion of the City of Syracuse, Eastwood consists of a close-knit community, with commercial development along its main corridor surrounded by residential, recreational, and educational uses.

James Street, or New York State (NYS) Touring Route 290, is the primary east-west corridor within Eastwood, providing a major connection between the City of Syracuse Central Business District (CBD) and locations east of the CBD, including the Eastwood neighborhood, the Village of East Syracuse, DeWitt, Manlius, and connections to Thompson Rd. (NYS Route 635), Carrier Circle, and Interstates 481 and 690.

The James Street Corridor Traffic Study was requested by the City of Syracuse and is included in the Syracuse Metropolitan Transportation Council's (SMTC) Unified Planning Work Program (UPWP). The study seeks to identify transportation needs; identify and evaluate alternative solutions; and recommend a schedule of improvements for implementation.

#### Goals

To give the study direction, the following goals were identified:

- Coordinate vehicle, transit, pedestrian, and bicycle modes of transportation into a single, cohesive system, while improving mobility, access and safety;
- Develop recommendations which enhance, and/or maintain environmental quality and community cohesion along the corridor; and
- Develop recommendations that will provide safe, clean, well maintained and efficient transportation infrastructure including attention to neighborhood beautification.

#### **Objectives**

The following objectives were identified to assist in attaining the study goals:

- Create an effective public involvement forum to give involved agencies and the public the opportunity to take part in the planning process;
- Identify existing conditions, including an infrastructure condition analysis;
- Develop criteria to measure and compare alternative solutions;
- Develop and evaluate alternatives to improve facilities, traffic, and safety;
- Evaluate the impact of the changing nature of business along the corridor and its impact on pedestrian and traffic flow;

- Evaluate the use of regulatory controls such as site plan review, enhanced enforcement, access management and/or zoning changes;
- Evaluate the recommendations made in the Onondaga County Settlement Plan for applicability to James St.; and
- Prepare a recommendations and implementation plan.

#### 1.2 Study Process

In order to complete the study, the following tasks will be accomplished:

Task 1	Define the study's goals and objectives
Task 2	Establish a Public Involvement Plan (PIP)
Task 3	Establish study area limits
Task 4	Data collection and analysis
Task 5	Establish existing conditions
Task 6	Identify transportation issues
Task 7	Develop and evaluate alternative solutions
Task 8	Prepare recommendations and implementation plan
Task 9	Study documentation

## 1.3 Public Involvement Plan (PIP)

Engaging the public early and often in the planning process is critical to the success of any transportation plan or program, and is required by numerous state and federal laws. The goal of the James St. Corridor Traffic Study PIP is to:

- Create public awareness relative to the study's goals, objectives, and process, as well as
  publicize the public participation opportunities and activities available throughout the study;
  and
- Involve the public throughout the planning process.

The PIP includes the formation of two groups to assist the SMTC in the study effort. A Study Advisory Committee (SAC) consisting of representatives from affected organizations, local government, and community representatives, will meet three times throughout the study. The SAC provides input and guidance to the SMTC Project Manager.

In addition to this formal committee, a list of interested "stakeholders" (individuals with significant relations and interest in the study area) is maintained by the SMTC. The stakeholders are sent pertinent study information, kept apprised of significant study developments, and are notified of all public meetings. A copy of the complete PIP for the James St. Corridor Traffic Study, including a list of the SAC members is included in Appendix A.

Two public meetings were held during the study. The first public meeting was held on October 23, 2000 to present the existing conditions to the public. The meeting was held in conjunction with the Area 6 Tomorrow's Neighborhoods Today (TNT) monthly meeting, and over 50 people

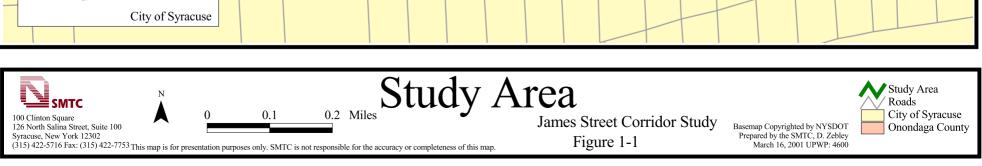
were in attendance. The meeting was held to allow the public to express their opinions and concerns regarding the James Street corridor.

A second public meeting was held on March 26, 2001. The second meeting was also held in conjunction with the Area 6 TNT monthly meeting, where the traffic analysis and preliminary recommendations for the study area were presented for public comment. Minutes from the two public meetings, as well as other project related correspondences, are included in Appendix B.

### 1.4 Study Area Boundaries

The study area for this project extends along James St. between Grant Blvd. on the west and East James St. on the east. Figure 1-1 shows the study area.





#### **CHAPTER 2 - TRANSPORTATION NETWORK**

## 2.1 Roadway

James Street, signed New York State Route 290, is a 39- to 52-foot wide paved roadway that runs in an east-west direction and is designated as a principal arterial. The purpose of a principal arterial is to serve major traffic flows between important activity centers.

The corridor is approximately 1.14 miles in length with 26 intersections, 10 of which are signalized. In addition, there are numerous driveways to residential and commercial establishments

#### **Truck Route**

Throughout the study area James St. is signed as a Thru Truck Route. The SMTC completed a Truck Route Study for the City of Syracuse in May 2000 that identified and evaluated truck routes and truck route signage within the city. At the completion of the study, James St. was proposed to remain as a designated truck route within the City of Syracuse.

#### 2.2 Transit

Centro, a subsidiary of the Central New York Regional Transportation Authority (CNYRTA), provides transit services within the study area. The transit system is based on a hub and spoke system where the bus service originates and ends in downtown Syracuse. Outlying areas are serviced on radial routes from the City.

Transit operations were evaluated to determine the type and location of bus stops within the study area. There are three bus routes that operate on James St. within the study area. They are:

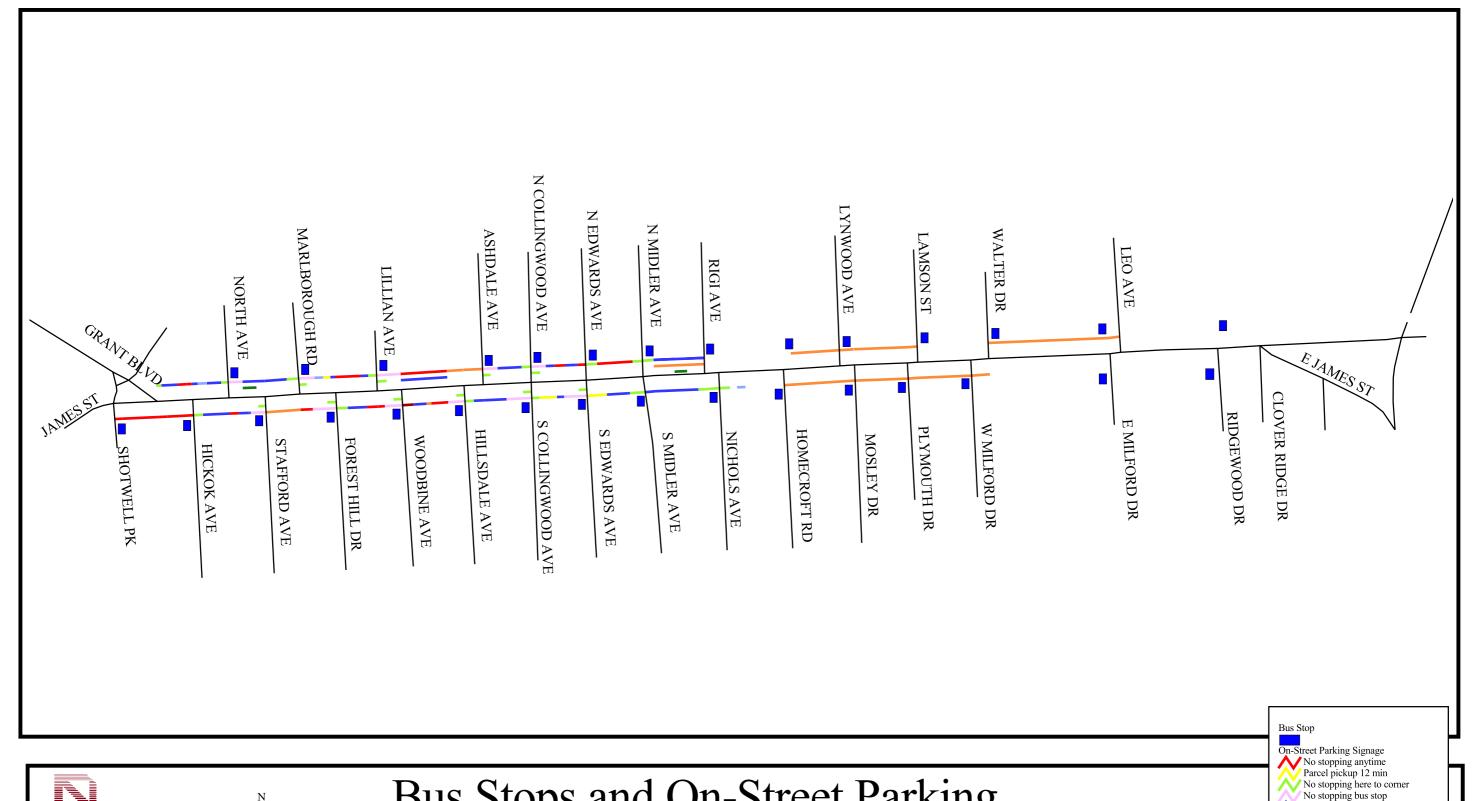
- Carrier & New Venture Gear [2J, 2M]
- East Syracuse & Shoppingtown [2G, 2H, 2S]
- Eastwood & Sunnycrest [2B, 2C, 2D, 2E, 2F]

Fares for all routes within the study area are \$1.00 with a \$0.25 transfer fee.

#### **Bus Stop Locations**

Within the study area there are thirty bus stops, fourteen bus stop locations for buses traveling inbound (routes ending in downtown Syracuse) and sixteen locations for buses traveling outbound (routes originating in downtown Syracuse). The majority of bus stops within the study area are located on the near side of intersections. The bus stop locations are shown in Figure 2-1.

Ridership information for individual stops along James St. was incomplete. Students from the State University of New York (SUNY) Environmental Science and Forestry (ESF) Urban Design





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# Bus Stops and On-Street Parking

0.04 0.08 Miles

James Street Corridor Study Figure 2-1

Basemap Copyrighted by NYSDOT Data Source: SMTC, 2000 Prepared by the SMTC, D. Zebley March 16, 2001 UPWP: 4600 1 hour parking 9am-6pm No standing here to corner No standing anytime Handicapped restricted parking No parking loading zone

Studio 2000 class completed the Eastwood Neighborhood Study in spring 2000. The study focused on various aspects of the Eastwood neighborhood. The class was able to obtain rough estimates of transit ridership from Centro along James St. According to the Eastwood Neighborhood Study, total ridership for all James Street bus runs for July, August, and September 1999 was 21,880; 30,038; and 36,620 respectively. For October, November, and December 1999 the total ridership was 36,614; 39,189; and 40,870. The SUNY ESF project noted that ridership is higher during the winter months.

#### **Bus Stop Amenities**

Bus stop amenities are discussed in Chapter 4: Facility Conditions.

#### 2.3 Bicycle/Pedestrian Facilities

#### **Bicycle Routes**

There are no designated New York State or City Bicycle Routes within the study area.

#### **Pedestrian Facilities**

Pedestrian facilities in the form of sidewalks are present along the entire corridor.

The City of Syracuse Department of Public Works indicated that there are two school crossing guard locations within the study area. They are located at the intersections of James St. and Lillian Ave. and James St. and Homecroft Rd.

Pedestrian facilities, such as sidewalks, curbs and curb ramps will be discussed further in *Chapter 4: Facility Conditions*.

#### **CHAPTER 3 - EXISTING TRAFFIC CONDITIONS**

This chapter examines the existing traffic conditions within the study area.

#### 3.1 Traffic Volumes

#### **Vehicular Traffic Volumes**

The New York State Department of Transportation (NYSDOT) provided year 2000 Average Annual Daily Traffic (AADT) volumes at the eastern and western extremes of the study area. The eastern count was taken between Leo Ave. and Ridgewood Dr. and had a bi-directional AADT of 14,177 (7,540 traveling eastbound and 6,637 traveling westbound). The western count was taken between Paul Ave. and Grant Ave. and had a bi-directional AADT of 9,893 (4,986 traveling eastbound and 4,907 traveling westbound). The AADT volumes have been factored to take seasonal fluctuations in traffic into consideration.

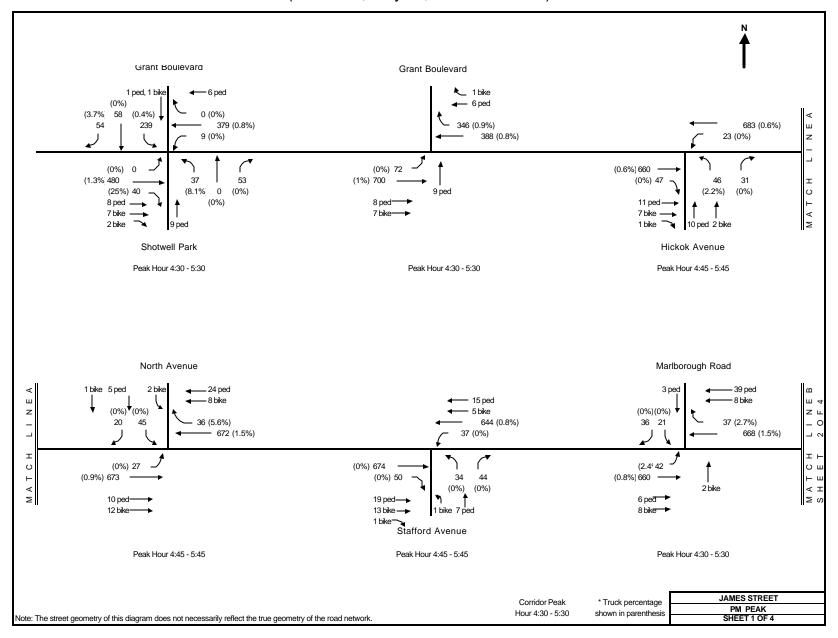
A consultant to the Syracuse Metropolitan Transportation Council (SMTC) completed manual turning movement counts at 22 intersections along James St. in October 2000. The consultant collected vehicle, pedestrian and bicycle counts, as well as the percentage of trucks at each of the 22 intersections. Trucks were described as any vehicle with 6 or more wheels, excluding large pick up trucks. The SMTC staff completed turning movement counts at the intersection of James St./E. James St./Clover Ridge Drive in August 2000, and collected only vehicle, pedestrian and bicycle counts. Turning movement counts for James St./Midler Ave. and James St./Leo Ave./E. Milford Dr. were taken from City of Syracuse traffic reports completed in March 1999 and July 1998, respectively. Vehicles and pedestrians only were counted at both of these locations.

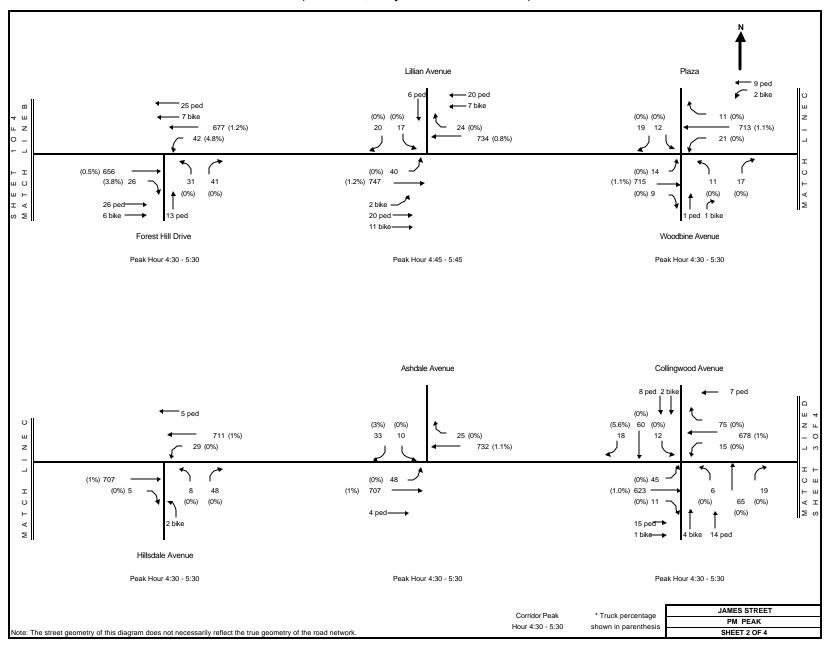
An analysis was completed to determine whether the 1998 and 1999 turning movement volumes should be adjusted along the corridor to correlate with the 2000 volumes. The analysis revealed that the 1998 volumes taken at the James St./Leo Ave./E. Milford Dr. location were comparable with the majority of intersection volumes, since they were within 10% of adjacent locations. Minor adjustments were made to the traffic volumes at James St./Midler Ave. so that this intersection was comparable with adjacent intersections. The complete AM and PM turning movement counts as well as the AADT volumes for the corridor study area are included in Appendix C.

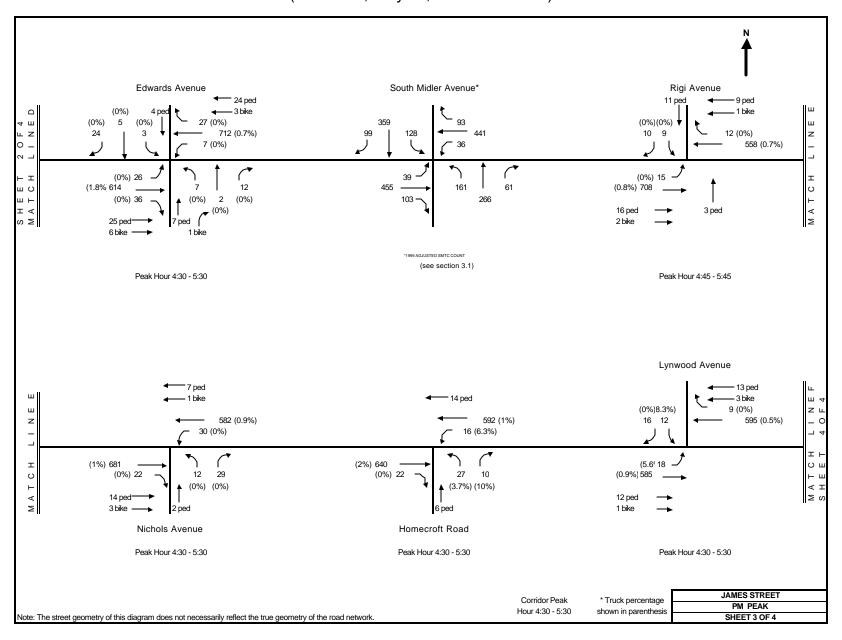
The turning movement traffic volumes for the PM peak hour, determined to be 4:30 PM to 5:30 PM for the corridor, are summarized in Figure 3-1. The volumes indicate that there is a reasonably consistent level of traffic throughout the corridor.

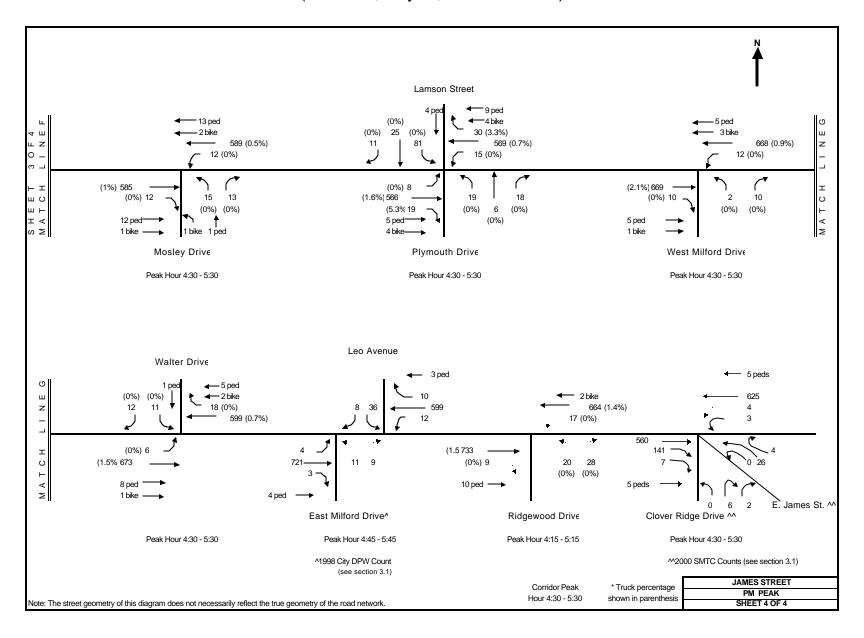
#### **Pedestrian Traffic Volumes**

Pedestrian traffic volumes, shown in Figure 3-1, were obtained at the same time as the turning movement volumes discussed above. Based on this data, the 'T' intersection of Forest Hill Dr. and James St. has the most pedestrian traffic during the PM peak hour with 64 individuals









moving through the intersection. Eighty percent of the pedestrians are traveling east or west along James St., while 20% are traveling north along Forest Hill Dr.

The intersections of James St. with North Ave., Stafford Ave., Marlborough Rd., and Lillian Ave., also show significant pedestrian traffic during the PM peak hour, ranging from 39 to 46 individuals. Approximately 85% of the individuals counted in this area are traveling east or west along James St.

High concentrations of pedestrians are also found near the intersections of James St. with Collingwood Ave., Edwards Ave., Midler Ave. and Rigi Ave. during the PM peak hour. Approximately 67% of the individuals moving through this area are traveling east or west along James St. The remaining 33% are traveling north or south along the intersecting streets.

Pedestrian traffic volumes for the PM peak period in the vicinity of the Blessed Sacrament School (located across from the intersection of James St. with Homecroft Rd.) are in the twenties and decrease as you travel east along James through the remainder of the study area.

The high pedestrian volumes in the western portion of the study area during the PM peak period is most likely due to the concentration of commercial establishments along James Street.

Although pedestrian traffic indicated higher volumes overall during the PM peak, it is important to note that the AM pedestrian traffic volumes at the intersection of Homecroft Rd. and James St., are significantly higher than the PM pedestrian counts at this intersection. Sixty-three pedestrians traveled through this intersection, eleven moving westbound along James St, and fifty-two traveling north on Homecroft Rd during the AM peak hour. The high pedestrian volumes can be attributed to the location of the Blessed Sacrament School, an elementary school that operates between the hours of 8:00 AM and 2:15 PM, which indicates why there are higher pedestrian volumes in the AM peak hour, than in the PM peak hour.

On various field visits through the study area, the SMTC staff noted pedestrians traveling in the roads and not utilizing the sidewalks. This occurred during snowy weather as well as when sidewalks were not snow covered.

#### **Bicycle Traffic Volumes**

Bicycle traffic volumes, also shown in Figure 3-1, were collected at the same time as the turning movement and pedestrian volumes discussed above. Based on this data, the 'T' intersections of James St. and North Ave. and Stafford Ave. have the most bicycle traffic during the PM peak hour with 21 and 20 bicyclists, respectively, moving through these intersections. Ninety-five percent of the bicyclists at these intersections are traveling east or west along James St., with the remainder traveling north on Stafford Ave., or south on North Ave.

Bicycle volumes range from 8 to 10 bicyclists at intersections west of North Ave. during the PM peak period. In addition, intersections just east of Stafford Ave. have bicycle volumes ranging

from 18 to 10. The remainder of the bicycle traffic along James Street fluctuates between 0 and 10, indicating no distinguishing patterns.

As with the pedestrian volumes, bicycle volumes tend to be higher in the western portion of the study area. This is most likely due to the location of various commercial establishments along James St. in this area, coupled with their close proximity to residential land use.

By law, bicyclists must obey the same rules of the road that motorists do. Bicyclists on James St. were observed traveling with and against vehicular traffic by the SMTC staff on various field checks in the study area.

#### 3.2 Traffic Control Devices

An inventory of traffic control devices was completed for the James Street corridor. As stated by the *State of New York Manual of Uniform Traffic Control Devices* (MUTCD), traffic control devices include signs, signals, markings and other devices placed by authority of a public body to regulate, warn, or guide highway traffic. The proper use of traffic control devices promotes safe, orderly, and convenient movement of traffic, both motorized and non-motorized, on the transportation system.

The MUTCD indicates that in order to be effective, a traffic control device should meet five basic requirements. Each device should:

- Fulfill a need:
- Command attention;
- Convey a clear, simple meaning;
- Command the respect of road users; and
- Give adequate time for proper response.

#### **Parking Signs**

Parking signs are used to inform motorists of regulations established to prohibit, restrict, or limit parking, standing, or stopping of vehicles pursuant to the Vehicle and Traffic Law. The SMTC staff completed an inventory of parking signs along James St., identifying variations on the standard parking prohibition signs. In general, there are three main types of standard parking regulations, briefly defined below:

- No Parking: This sign indicates that vehicles may stop while actually loading or unloading merchandise or passengers.
- No Standing: Vehicles may be stopped while actually loading or unloading passengers only.
- No Stopping: Vehicles may not be stopped except to avoid conflict with other traffic or to comply with the directions of a police officer or traffic control sign or signal.

Parking regulations should be established only after a traffic study indicates they are needed. The MUTCD states that the type of parking prohibition (no parking, no standing, or no stopping) should be based on problems caused by parked vehicles, their parking and unparking maneuvers, the need for on-street parking spaces, and adjoining parking regulations. The *City of Syracuse Traffic Code* includes a policy for the placement of parking signs.

Figure 2-1 shows the location of the various on-street parking restrictions and prohibitions along James St. The 1.14-mile corridor exhibits nine types of parking signs, as follows:

- No Parking Loading Zone
- 1 Hour Parking 9am-6pm
- Handicapped Restricted Parking
- No Standing Anytime
- No Standing Here to Corner
- No Stopping Anytime
- No Stopping Here to Corner
- No Stopping Bus Stop
- Parcel Pickup 12 min

From Homecroft Rd. to the east end of the study area, James St. is primarily signed with *No Standing Anytime*. However, the majority of the corridor is signed with all nine of the above listed variations of parking signs. In addition, multiple locations have more than one type of parking sign posted. A majority of the double-signed locations have both *No Stopping Here to Corner* and *No Stopping Bus Stop* signs.

The MUTCD indicates that multiple regulations at a single location or numerous different regulations along a roadway complicate sign posting and may confuse motorists. With the various types of parking signs and multiple regulations at a single location, parking prohibitions along James St. have the potential to confuse drivers.

The field investigation revealed that there are two signs along the corridor that are faded and no longer legible. These signs are located in the block between Lynwood Ave. and Lamson St. on the north side of James St. In addition, there is a pole with no sign attached, located just prior to the intersection of S. Midler Ave. with James St.

Through the public involvement process and field site visits, it was determined that on-street parking is often an issue on James St. The following parking situations were identified:

- Illegal parking in general along the corridor.
- Illegal on-street parking near intersection corners, making it difficult to see, for those turning out of the side streets onto James St.
- When trucks are loading/unloading at commercial establishments along James St., they are often double-parking, which impedes traffic flow.
- Citizens have indicated that there is a lack of adequate parking within the study area, especially since most individuals want easy access to the commercial establishments along James St.

• The waiving of parking requirements for new businesses exacerbates the current parking problems.

Since gathering the parking data for this report, the City of Syracuse Department of Public Works in consultation with the CNYRTA, moved a Centro bus stop sign that was located at the corner of Woodbine Ave. and James St. eastbound, to provide two parking spaces. The City of Syracuse Department of Public Works moved the Centro sign to mid-block between Forest Hill Dr. and Woodbine Ave., just prior to the crosswalk at the intersection of James St. with Lillian Ave. This sign was moved because businesses on the corner of Woodbine Ave. and James St. had no parking for their customers who had been parking illegally where the "No Stopping Bus Stop" sign was located so they could access the businesses. After citizen complaints, the City moved the bus stop sign and added two signs for 30 minute parking at the corner of James St. and Woodbine Ave. Two meters will be installed at these locations once the winter season is over.

#### **Parking Meters**

In addition to the parking signs, numerous parking meters are located throughout the corridor to regulate parking. The parking meters are owned by the City of Syracuse.

#### **Speed Limit Signs**

The area wide speed limit for the City of Syracuse is 30 miles per hour (mph). There are two 30 mph signs posted on the north side of James Street for vehicles traveling west through the corridor. As a vehicle enters the study area from the east, the first speed limit sign encountered is at the City of Syracuse line. The second sign is located just prior to Rigi Ave. Within the study area, there are no 30 mph signs for vehicles traveling east along James St. However, prior to entering the study area, a 30 mph sign is posted on James St. near the intersection with Clifton Pl.

In addition, 20 mile per hour signs with flashing yellow lights are located near the Blessed Sacrament School on the north and south side of James St. prior to Homecroft Rd.

According to the *Manual of Uniform Traffic Control Devices* (MUTCD) maximum speed limit signs should be installed at or near places where speed limits change. As mentioned above, traveling west through the study area, there is a 30-mile per hour (mph) speed limit sign placed prior to Rigi Ave. This sign is placed approximately one block beyond the 20 mph flashing school speed limit sign (which is located just beyond Lynwood Ave.) to inform drivers that the speed limit is again 30 mph. However, traveling east through the study area, there is no 30 mph sign located beyond this 20 mph flashing school sign (located near the intersection of Nichols Ave.) to indicate a return to 30 mph.

#### Other Traffic Signage

There are No Left Turn signs located on the Clover Ridge Dr. approach to James St., as well as across from Clover Ridge Dr., on the north side of James St. The sign on the north side of James

St. is bent. In addition, there appears to be a No Left Turn sign missing from the E. James St. approach to James St.

The SMTC informed the City of Syracuse of the locations of the faded parking signs, pole with no sign attached, speed limit signage, and missing No Left Turn sign in early March 2001.

#### **Traffic Signals (vehicle and pedestrian)**

All ten of the signalized intersections along the James St. corridor have pedestrian signals and pedestrian push button control. The push button allows pedestrians to request a pedestrian walk interval.

The white WALK message or "walking person" symbol indicates that a pedestrian may enter the roadway and cross in the direction of the indication. However, even with a WALK indication, there may be possible conflicts with turning vehicles. The flashing DON'T WALK or upraised "hand" symbol is used as a clearance interval in which pedestrians may complete their crossing, but not start to cross. The DON'T WALK or upraised "hand" symbol, steadily illuminated, indicates that a pedestrian shall not enter the roadway.

Throughout the James St. corridor, where pedestrian buttons exist on the side streets, they are actuated, meaning that a WALK signal is not given unless the pedestrian button is activated.

When the pedestrian button is activated at the signalized intersection of James St. with Homecroft Rd., an exclusive pedestrian phase will occur so that pedestrians can move in all directions, while no vehicular movements are allowed.

#### **Pavement Markings**

Pavement markings within the study area consist of a double yellow centerline separating opposing traffic and white dashed lines separating traffic traveling in the same direction. Several intersections are also striped with exclusive left turn lanes, pedestrian crosswalks and stop bars.

Pavement striping will be further discussed in Section 4.2: Pavement Markings.

## 3.3 Capacity Analysis

#### **Signalized Intersections**

The traffic analysis software Synchro 4.0 was used to determine the existing PM peak hour Level of Service (LOS) at ten signalized intersections along the corridor and to complete an arterial analysis. The traffic volumes shown in Figure 3-1 were obtained primarily by consultants to the SMTC and the existing signal timings and phasings were obtained from the City of Syracuse. The traffic volumes and the timing and phasing of the signals were used to complete the capacity analysis. Summary reports of the information presented in this section are included in Appendix D.

Level of service is a measure relating primarily to speed, delay and density. There are six levels of service ranging from A through F. Level of service A represents free flow with individual vehicles unaffected by the presence of others in the traffic stream. In general, LOS D is considered to be the minimally acceptable level of service. LOS E indicates that traffic flow is operating at the maximum capacity of the transportation system, while LOS F generally indicates a breakdown in the flow of traffic

For the purpose of modeling existing and future traffic along James St., the first two intersections along James Street, James St. with Shotwell Park and James St. with Grant Blvd., were modeled as one intersection within Synchro. This was appropriate for the modeling exercise, as these two intersections operate as one intersection along this corridor via traffic signals. The SMTC met with the City of Syracuse Department of Public Works and their consultant for review of the Synchro analysis.

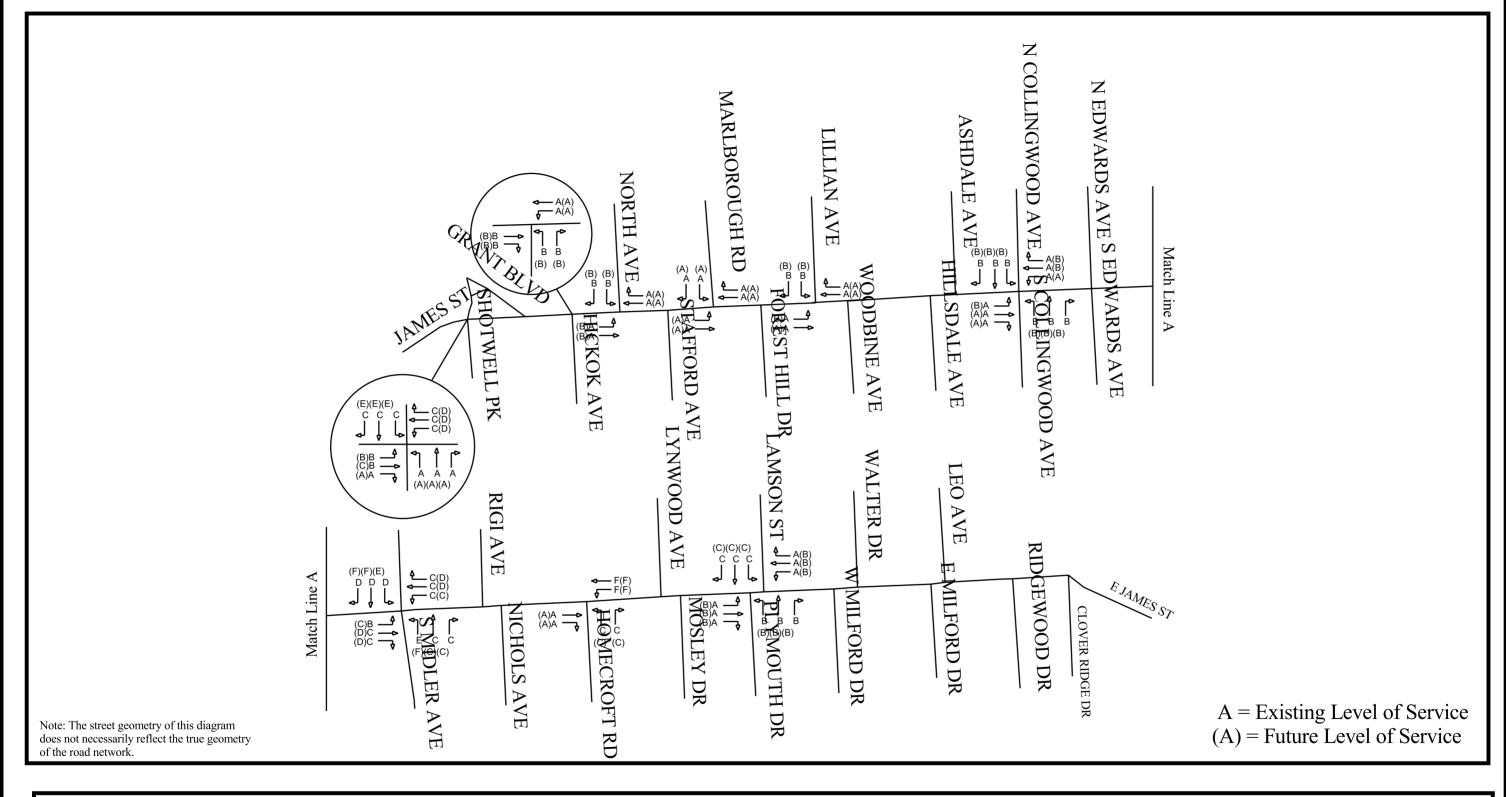
#### Intersection LOS

The Synchro analysis for the existing PM peak hour indicates that on the whole, each signalized intersection operates at a LOS C or better, with the exception of the intersection of James St. with Homecroft Rd. that operates at a LOS D. This is primarily due to the exclusive pedestrian phase that occurs when an individual pushes the pedestrian button at this intersection. Utilizing the pedestrian button at a location with an exclusive pedestrian phase stops all traffic and allows only pedestrians to move for a specified period of time.

The majority of the individual approaches to each of the signalized intersections within the study area operate at a LOS C or better (see Figure 3-2). However, at the intersection of James St. with Midler Ave., the northbound left turn lane approach operates at a LOS E, which means that the traffic flow is exceeding the capacity of the transportation system for the left turn. As mentioned above, the intersection of James St. and Homecroft Rd. operates on the whole at a LOS D. However, if each approach is examined individually, the westbound thru and left approaches at this intersection operate at a LOS F, which means they are failing. Again, this is primarily due to the exclusive pedestrian phase.

In addition to the existing LOS, traffic volumes were projected at a growth rate of 1.0% per year for fifteen years to determine the 2015 future year level of service. The growth rate of 1.0% per year was extracted from the SMTC's TModel (traffic modeling software) by an on-call consultant to the SMTC. Although the LOS for almost every intersection is projected to decrease over the fifteen-year period, the majority of intersections will continue to operate at a LOS C or better in 2015. The intersection of Midler Ave. with James St. is projected to operate at a LOS E, and the Homecroft Rd./James St. intersection is projected to operate at a LOS F. Again, a LOS F at the intersection of James St. with Homecroft Rd. can be attributed to the exclusive pedestrian phase at that intersection.

The majority of individual approaches to the intersections are projected to operate at a LOS C or better in future year 2015. The southbound approach to the James St./Shotwell Pk./Grant Blvd. intersection is projected to operate at a LOS E in fifteen years, as is the southbound left turn lane





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PM Peak Hour Level of Service Existing & Future (2015) Signalized Intersections Basemap Copyrighted by NYSDOT Prepared by the SMTC, V. Hilliges April 11, 2001 UPWP: 4600

James Street Corridor Study Figure 3-2 at the James St./Midler Ave. intersection. The southbound thru and right turn lanes and northbound left turn lane at James St./Midler Ave. are projected to operate at a LOS F. In addition, the westbound approach at James St./Homecroft Rd. will continue to operate at a LOS F in year 2015.

The 2015 PM peak hour LOS for each of the signalized intersection approaches is also shown in Figure 3-2.

#### Arterial LOS

The existing eastbound arterial analysis revealed that all street segments, between the signalized intersections, along the corridor operate at a LOS D or better, with the exception of Shotwell Pk. to Hickok Ave. and S. Collingwood Ave. to S. Midler Ave., which operate at a LOS E. For the future year of 2015, the street segment from S. Midler Ave. to Homecroft Rd. is projected to operate at a LOS E. The street segments from Shotwell Pk. to Hickok Ave., Hickok Ave. to North Ave. and S. Collingwood Ave. to S. Midler Ave. are projected to operate at a LOS F in fifteen years. The overall eastbound arterial currently operates at a LOS D, and is projected to operate at a LOS E during the future year 2015.

For existing conditions in the westbound direction, all street segments operate at a LOS D or better except the segments from Lamson St. to Homecroft Rd. and Hickok Ave. to Grant Blvd., which operate at a LOS F and E, respectively. For the future year of 2015, the street segment from Homecroft Rd. to N. Midler Ave. is projected to operate at a LOS E. The street segments from Lamson Rd. to Homecroft Rd. and Hickok Ave. to Grant Blvd. are projected to operate at a LOS F in fifteen years. The overall existing LOS for the westbound direction is D, and is projected to continue to operate at LOS D for the year 2015.

The arterial analysis also provided information on signal delay and travel time. Tables 3-1 and 3-2 provide a summary of the existing and future arterial analyses for eastbound and westbound conditions, respectively.

Table 3-1
Eastbound Arterial Analysis

Street Segment	Signal Delay (seconds)		Travel Time (seconds)		Arterial LOS	
on our organism	Existing	Future	Existing	Future	Existing	Future
Shotwell Pk to Hickok Ave	14.9	21.7	26.2	33.0	Е	F
Hickok Ave to North Ave	2.1	23.6	7.5	29.0	D	F
North Ave to Marlborough Rd	2.3	3.3	13.0	14.0	С	С
Marlborough Rd to Lillian Ave	2.5	8.8	13.3	19.6	C	D
Lillian Ave to S Collingwood Ave	5.4	8.1	25.8	28.5	C	С
S Collingwood Ave to S Midler Ave	22.0	42.6	37.7	58.3	Е	F
S Midler Ave to Homecroft Rd	14.7	21.2	35.0	41.5	D	Е
Homecroft Rd to Plymouth Dr	7.1	10.6	24.0	27.5	C	D
Total	71.0	139.9	182.5	251.40	D	E

Source: SMTC

Table 3-2 Westbound Arterial Analysis

Street Segment	Signal Delay (seconds)		Travel Time (seconds)		Arterial LOS	
Street Segment	Existing	Future	Existing	Future	Existing	Future
Lamson Rd to Homecroft Rd	85.8	158.5	104.7	177.4	F	F
Homecroft Rd to N Midler Ave	22.9	42.1	45.7	64.9	D	Е
N Midler Ave to N Collingwood Ave	9.0	13.0	29.1	33.1	С	D
N Collingwood Ave to Lillian Ave	8.1	12.8	30.9	35.6	С	С
Lillian Ave to Marlborough Rd	4.8	10.8	18.6	24.6	С	D
Marlborough Rd to North Ave	6.4	13.1	22.0	28.7	D	D
North Ave to Hickok Ave	1.7	6.2	9.7	14.2	С	D
Hickok Ave to Grant Blvd	25.9	40.2	40.4	54.7	Е	F
Total	164.6	296.7	301.1	433.2	D	D

Source: SMTC

#### **Signal Control**

#### Loop Detectors

Consultation with a representative of the City of Syracuse revealed that loop detectors, intended to recognize the presence of a moving or stopped vehicle at signalized intersections, are located along the intersecting streets of the James St. corridor.

The City of Syracuse noted that on occasion, individuals park their vehicles over the loop detectors on the side streets, which disable the detectors and 'confuse' the timing of the light at the intersection. This has been noted to occur at the intersection of James St./North Ave. and also at James St./Homecroft Rd., especially in the morning and evening when school children are being dropped off and picked up.

#### Signal Coordination

Coordination of signal operation between adjacent intersections offers an opportunity for significant benefits to motorists. Signal coordination attempts to accommodate platoons (groups) of vehicles with minimal stops.

All ten of the signalized intersections within the study area, from Shotwell Pk./Grant Blvd. to Lamson St./Plymouth Dr., are time-based coordinated with loop detectors on all side streets. James St. is primarily non-actuated, meaning that there are no loop detectors on James St., except for at the eastbound left turn lane at Grant Blvd.

Through the Synchro review, it was determined that the two-phase signals along James St. (James St. with Hickok Ave., North Ave., Marlborough Rd., Lillian Ave., Collingwood Ave., and Plymouth Dr./Lamson St.), fall out of coordination if an individual pushes the pedestrian button to request a WALK phase. This also occurs at the James St./Homecroft Rd. intersection. Throughout the corridor, the cycle length of the signals has been set for a specified amount of time. Each phase (green, yellow, red, etc.) occurring at a signal has also been set for a specified amount of time, which should add up to the total cycle length. When the pedestrian button is pushed, the walk and clearance phases are activated. The walk phases are then added into the timing of the cycle length, but the amount of time added exceeds the time allotted for the entire cycle. The system will eventually realign itself until the pedestrian button is pushed again.

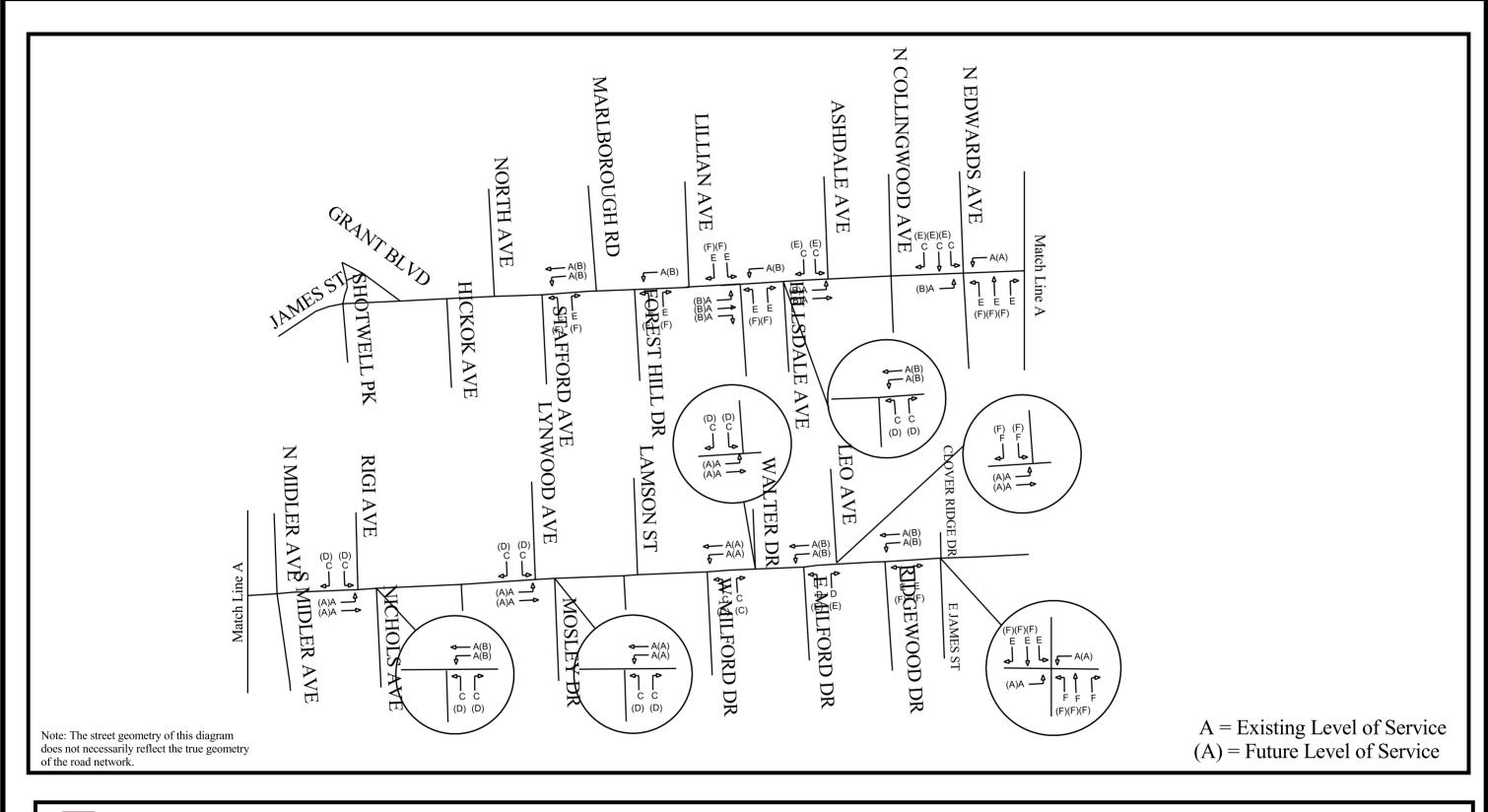
The intersection of James St. with Grant Blvd. has an eastbound left turn lane with a loop detector, meaning once a motorist drives over the loop, the signal will display a protected left turn arrow, indicating that it is safe to make the left turn. Prior to enabling this light, the signal displays a green ball, indicating a permitted left turn. Numerous field visits have indicated that this intersection can be confusing to move through. Sometimes the eastbound left turn lane signal will display a green ball, while traffic traveling westbound will see a red light. At this point, the motorist in the westbound left turn lane does not know if they have the right of way. The confusion at this intersection is due to the protected versus permitted left turn. There is also confusion on the Grant Blvd. approach to this intersection, primarily due to the physical configuration of the intersection.

#### **Unsignalized Intersections**

Unsignalized intersections along the James St. corridor were analyzed using Highway Capacity Software (HCS). At unsignalized intersections, east-west traffic along the James St. corridor operates at free flow, with no stop signs. The unsignalized intersecting side streets along James St. are controlled by stop signs.

Within HCS, level of service for a two way stop controlled intersection is defined for each minor movement. Level of service is not defined for the intersection as a whole within HCS. LOS thresholds differ from those for signalized intersections to reflect different driver expectations. The expectation is that a signalized intersection is designed to carry higher traffic volumes and experience greater delay than an unsignalized intersection. As mentioned previously, there are six levels of service, ranging from A through F, which also apply to unsignalized intersections.

Figure 3-3 displays the existing and future levels of service along James St. for the unsignalized intersection approaches. The existing levels of service for all eastbound and westbound approaches operate at a LOS A. This is expected since there are free flow conditions (i.e. no stop signs or traffic lights) along the corridor for the east-west approaches to these intersections.





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PM Peak Hour Level of Service Existing & Future (2015) Unsignalized Intersections Basemap Copyrighted by NYSDOT Prepared by the SMTC, V. Hilliges April 11, 2001 UPWP: 4600

James Street Corridor Study Figure 3-3 The majority of northbound and southbound approaches currently operate at a LOS C. The northbound approach of E. Milford Dr. operates at a LOS D, the minimally acceptable level of service. The following intersection approaches currently operate at a LOS E:

- Stafford Ave. northbound
- Forest Hill Dr. northbound
- Woodbine Ave. northbound/southbound
- S. Edwards Ave. northbound
- Ridgewood Dr. northbound

The southbound approach to the James St./Leo Ave. intersection currently operates at LOS F.

As done previously with the signalized intersections, the existing LOS traffic volumes were projected at a growth rate of 1.0 % per year for fifteen years to determine the 2015 future year level of service for the unsignalized intersections (see Figure 3-3). For future year 2015, all of the eastbound and westbound approaches are projected to operate at a LOS B or better. The northbound and southbound approaches to the unsignalized intersections are primarily projected to operate at a LOS E or F in future year 2015, with a few exceptions. The northbound approach at James St./W. Milford Dr. is projected to operate at a LOS C. The following intersection approaches are projected to operate at a LOS D:

- Hillsdale Ave. northbound
- Rigi Ave. southbound
- Nichols Ave. northbound
- Lynwood Ave. southbound
- Mosley Dr. northbound
- Walter Dr. southbound

Summary reports of the information presented in this section are included in Appendix D.

## 3.4 Accident Analysis

Using the New York State Department of Transportation (NYSDOT) Centralized Local Accident Surveillance System (CLASS), locations within the study area with ten or more accidents during the last three years of available data were identified. The analysis revealed seven signalized intersections that met that criterion.

A request was made through the NYSDOT to obtain actual Department of Motor Vehicle (DMV) Police Accident Reports at the seven intersections for the most recent three-year period available. Consequently, Police Accident Reports were received and evaluated for the period of January 1996 through December 1998.

The accident rate is the ratio of the number of accidents at an intersection for every million vehicles entering an intersection within the specified study period. The equation used to calculate the accident rate for intersections is as follows:

$$AccidentRate_{Inter\,sec\,tion} = \frac{TotalAcc*10^{6}}{PeakHourVol*AdjFactor*\#ofDaysStudied}$$

TotalAcc = Total number of accidents analyzed during the period studied

AADT = Average Annual Daily Traffic

#ofDaysStudied = Total number of days during the study period

SegmentLength = Length of road segment in miles

PeakHourVol = Volume of traffic during the PM peak hour (4-5pm)

AdjFactor = The factor of 11 was used to convert the PM peak hour volume to an

AADT (Determined by comparing available AADT to peak hour

volumes and averaging over the study area.)

Accident rates were calculated at all of the intersections identified. The accident rates were then compared to the latest NYSDOT Average Accident Rates available, which are based on facility and intersection type. Three of the seven locations analyzed exceed the NYSDOT average accident rates: James St./Grant Blvd./Shotwell Pk., James St./Midler Ave., and James St./Homecroft Rd.

The fourth edition of the *Traffic Engineering Handbook* states that pedestrian accidents account for 15% to 45% of all traffic accidents worldwide with rates in North America being among the lowest. Assuming that bicycle/pedestrian accidents represent 15% of all traffic accidents in the United States, two intersections in the James Street Corridor study area exceed that threshold. The locations that exceed the 15% threshold (James St./Marlborough Rd. and James St./Lillian Ave.) are marked with a double asterisk in Table 3-3.

Table 3-3 Intersection Accident Summary

		Vehicle		Bicycle/Pedestrian			
Intersection	Total Accident Accidents Rate*		NYSDOT Average Accident Rate*	Number of Bike/ Pedestrian Accidents	Percent Bike/ Pedestrian Accidents of Total	Exceeds 15%	
Midler Ave	32	1.19	.64	2	6%		
Grant Blvd and Shotwell Pk	15	.91	.77	1	7%		
Grant Blvd	7	.38	.45	1	14%		
Collingwood Ave	15	.75	.77	2	13%		
Marlborough Rd	7	.38	.45	2	29%	**	
Lillian Ave	7	.36	.45	2	29%	**	
Homecroft Rd	10	.63	.45	0	0%		

Source: SMTC, NYSDOT

Accident summary sheets and diagrams were prepared for each of the locations analyzed and are included in Appendix E. The analysis revealed that the two most frequently occurring accident types of the 94 collisions reviewed are as follows:

- 1. Rear end collision 46.8 %
- 2. Sideswipe 22.3 %

The Institute of Transportation Engineers (ITE) *Traffic Engineering Handbook* states that while human error contributes to 70% - 90% of all accidents, road and vehicle improvements can greatly reduce the likelihood of human error or the consequences of the accident.

Based on our review of the accident reports, driver inattention and/or driver error were major causes of many of the accidents along James St. However, as noted above, street geometry and physical features can play a role. The high number of rear end collisions along the corridor could be due in part to the high number of intersections that create stop and go traffic. Sideswipe accidents may be attributed to unclear lane markings, as segments of James Street are sometimes used as four lanes even though they are marked as two lanes. Table 3-4 provides a summary of the intersection accidents.

<sup>\*</sup>Accident rate = the ratio of the number of accidents at an intersection for every million vehicles entering an intersection within a specified study period.

The specific months, days, times and weather conditions in which the accidents occurred were reviewed, but no pattern could be established.

In addition to the accident information gathered and noted above, the number of accidents in the James St./E. James St./Clover Ridge Dr. area was collected from the Town of DeWitt Police Department. Between January 1, 1999 and December 31, 1999, three accidents were recorded at this location. Five accidents were reported as occurring at this location between January 1, 2000 and January 31, 2000. In total, eight accidents occurred at the intersection of James St./E. James St./Clover Ridge Dr, from 1999 to 2000. The specific information relating to each accident was not available.

Table 3-4
Intersection Accident Summary

Intersection	Midler Ave	Grant Blvd/ Shotwell Park	Grant Blvd	Collingwood Ave	Marlborough Rd	Lillian Ave	Homecroft Rd	Total
Right Angle	4				1		1	6
Rear End	14	7	4	11	1	1	6	44
Head On	1							1
Side Swipe	4	4	2	2	3	3	3	21
Left Turn	5	1			1	1		8
Right Turn								
Pedestrian	2	1	1		1	1		6
Bicycle				2	1	1		4
Fixed Object	1	2						3
Backing	1							1
Unable to Determine								
Total	32	15	7	15	8	7	10	94

Source: SMTC, NYSDOT

## **CHAPTER 4 - FACILITY CONDITIONS**

## 4.1 Pavement

Pavement conditions of State owned facilities and State Touring Routes on local systems (i.e. NYS Route 290) are assessed using the New York State Department of Transportation's (NYSDOT) Pavement Condition Rating Manual. The surface rating scale ranges from very poor to excellent. Pavement ratings along James St. were obtained from the 1999 City of Syracuse Pavement Ratings and the 1999 NYSDOT Highway Sufficiency Ratings. The portion of James Street from Ridgewood Dr. to Clover Ridge Rd/E. James St. was rated by the NYSDOT, as this portion of the study area falls outside city jurisdiction. The City of Syracuse rated the pavement condition from Shotwell Pk. to Ridgewood Dr. along James St. using the same method as the NYSDOT.

Based on this method, the pavement from Shotwell Park to Grant Blvd., from Nichols Ave. to W. Milford Ave., and E. Milford Ave. to Ridgewood Dr. was rated as being in good condition. The locations from Hillsdale Ave. to Edwards Ave., Midler Ave. to Nichols Ave. and W. Milford Dr. to E. Milford Dr. were rated as being in fair condition. The pavement from Grant Blvd. to Hillsdale Ave., and Edwards Ave. to Midler Ave. was rated as being in poor condition (see Figure 4-1).

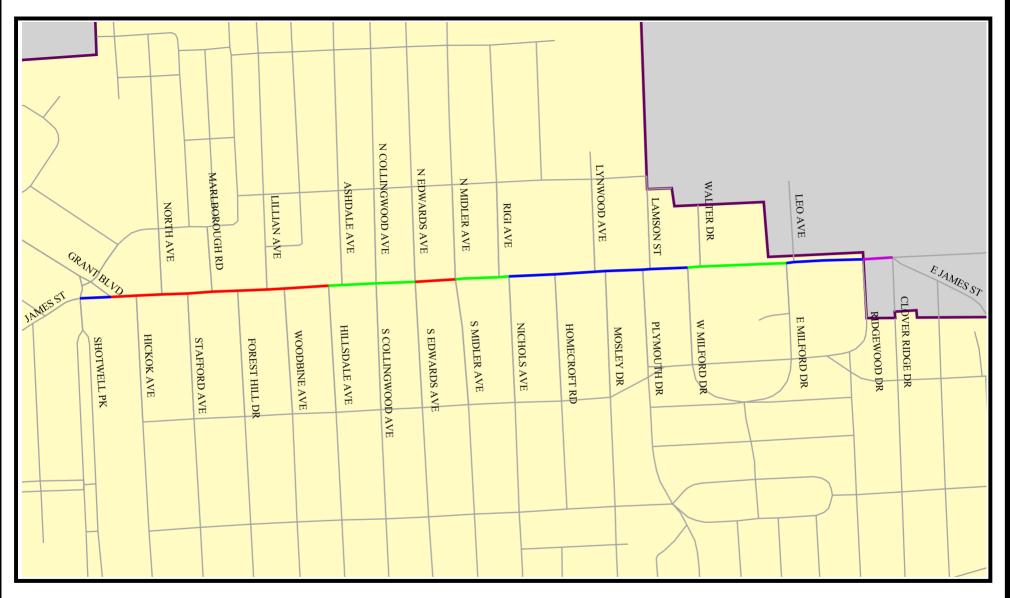
## 4.2 Pavement Markings

Pavement markings were rated by the SMTC staff within the study area, and summarize the overall condition (good, fair, or poor) for each intersection and block. A good rating indicates that the markings are intact, reflective and easy to comprehend. A fair rating indicates that the markings are intact but are faded, and a poor rating indicates that the markings are not intact, faded, and difficult to comprehend. Pavement markings within the study area include intersection markings, such as arrows and lane striping for exclusive left turn lanes, stop bars, and pedestrian crosswalks, as well as travel lane markings.

Of the 26 intersections within the study area, 20 intersections have pavement markings. The following intersections have no pavement markings:

- James St./Lynwood Ave.
- James St./Mosley Dr.
- James St./W. Milford Dr.
- James St./Walter Dr.
- James St./Leo Ave.
- James St./Ridgewood Dr.

Of the intersections with pavement markings, two were rated as being in good condition: James St./Rigi Ave. and James St./Nichols Ave. Sixteen intersections were rated as having fair





0.1 Miles

# **Pavement Ratings**

James Street Corridor Study Figure 4-1 Basemap Copyrighted by NYSDOT Data Source: City of Syracuse & NYSDOT, 1999 Prepared by the SMTC, D. Zebley March 16, 2001 UPWP: 4600



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pavement markings, and two intersections were rated as having poor pavement markings, James St./Midler Ave. and James St./Clover Ridge Dr./E. James St.

At the existing school crossing guard locations, James St. with Lillian Ave. and James St. with Homecroft Rd., the crosswalk pavement markings were rated as being in fair condition.

Travel lane markings were also rated by the SMTC and consist of double yellow centerline striping that separates opposing traffic, as well as white dashed lines that separate traffic traveling in the same direction. The markings along James St. from Collingwood Ave. eastbound were rated as being in good condition. Travel lane markings from Shotwell Pk. to Collingwood Ave. were rated as being in fair condition.

As part of their annual pavement marking program, the City of Syracuse repaints pavement markings throughout the City during the summer months.

## 4.3 Sidewalks

Sidewalks exist along the entire study area of James Street. A sidewalk inventory was completed along the corridor by the SMTC staff in summer 2000. Figure 4-2 identifies sidewalk conditions on a scale of fair, good or poor. The condition rating shown represents the overall worst case condition for the sidewalk segment.

Sidewalks were rated as being in good condition if they showed few signs of wear. A fair rating indicates that the sidewalk is showing signs of wear such as pitting or unevenness. The sidewalk received a poor rating if it was cracked, upheaved, missing chunks or vegetation was growing through it. A variety of sidewalk conditions were found throughout the study area.

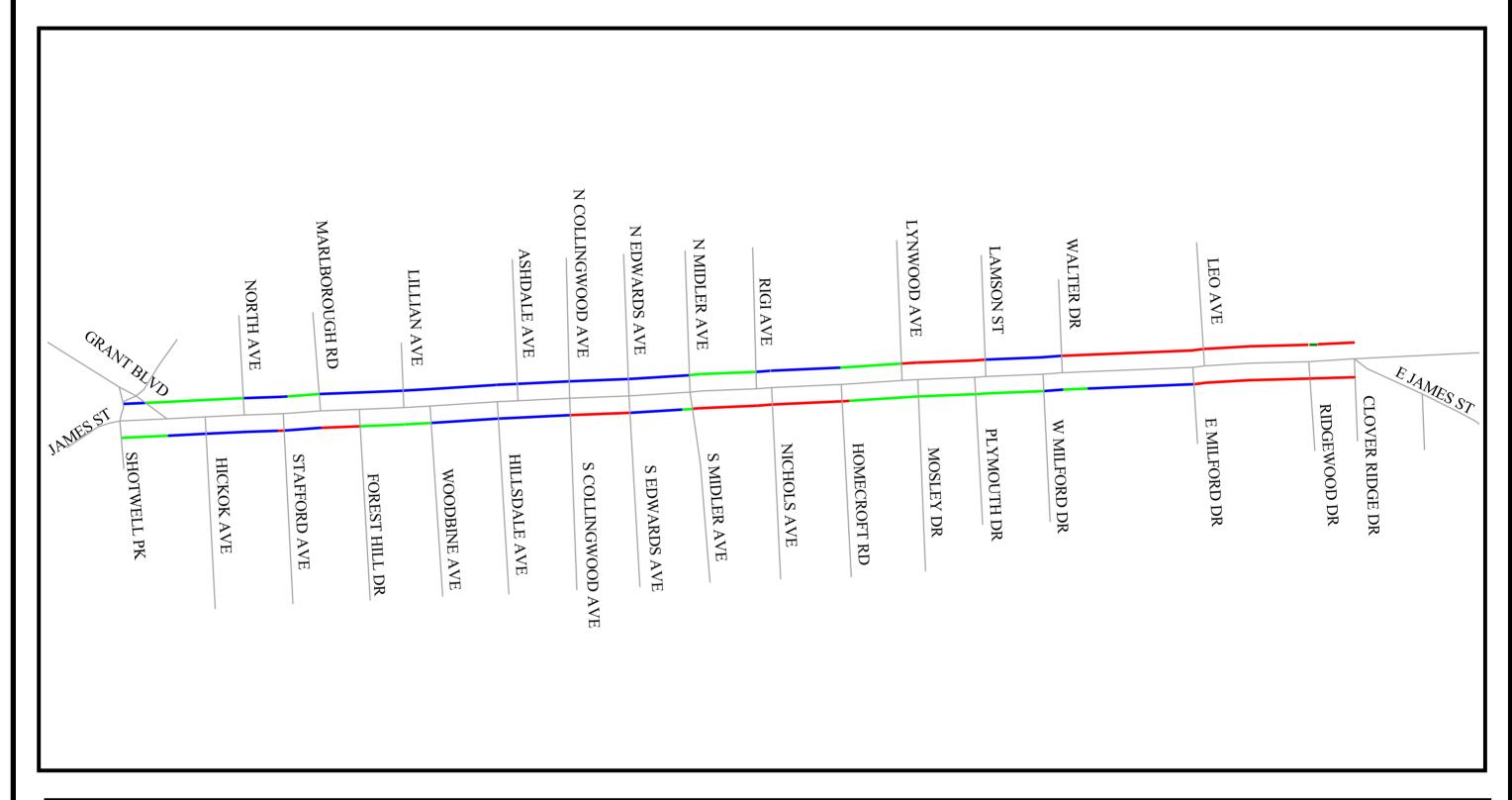
Poor sidewalk conditions exist primarily at the following locations:

- Between S. Collingwood Ave. and S. Edwards Ave.
- From S. Midler Ave. to just beyond Homecroft Rd.
- Between Lynwood Ave. and Lamson St.\*
- From Walter Dr. to Clover Ridge Dr./E. James St. (on the north side of James St.)
- From E. Milford Dr. to Clover Ridge Dr./E. James St. (on the south side of James St.)

There are also a few smaller sections of sidewalk that were rated as being in poor condition along James Street. The remainder of sidewalk along the corridor was rated as being in fair or good condition.

\*The City of Syracuse DPW re-constructed the sidewalk from the northwest corner of Lynwood Ave. to the northeast corner of Lamson St. in early fall 2000.

In addition to the condition of the sidewalks within the study area, the SMTC staff noted a few issues with some of the pedestrian walkways. In various places throughout the study area, asphalt was overlaid on top of concrete sidewalks, and vegetation was found to be growing between, out onto the top of, and hanging down into some of the sidewalks. Also, in portions of the commercial district, the sidewalk becomes quite narrow, primarily because some of the

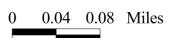




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# Sidewalk Conditions

James Street Corridor Study Figure 4-2 Basemap Copyrighted by NYSDOT Data Source: SMTC, 2000 Prepared by the SMTC, D. Zebley March 16, 2001 UPWP: 4600



parking meters and traffic signs are placed away from the curb and into the pedestrian walkway. This was primarily noticed between S. Collingwood Ave. and S. Edwards Ave., but also exists in other areas. This may force pedestrians to walk on the road in some places.

## 4.4 Curb Ramps

The Americans with Disabilities Act (ADA) of 1990 requires curb ramps to be provided in all existing sidewalks and for new construction and alterations. Curb ramps do not exist at the following locations within the study area:

- SE corner of the intersection of E. James St. and James St.
- SE corner of the intersection of Ridgewood Dr. and James St.
- NE corner of the intersection of Leo Ave. and James St.

Existing curb ramps were rated by the SMTC, using the same rating scale as followed for the sidewalks.

According to ADA requirements, curb ramps should be designed to minimize the grade, cross-slope, and changes in level experienced by users. The transition between the ramp and the street surface should be smooth. At some of the curb ramps along the corridor there is a significant difference in elevation. This height transition can create difficulties for wheelchair users. Curb ramp transitions were found to be less than desirable at the northeast corner of Rigi Ave. and the northwest corner of Walter Dr.

Many curb ramps along the corridor were found to be in fair condition, with pitted and uneven pavement, small portions of missing pavement, and/or ponding water at the bottom of the ramps. The following curb ramps are in fair condition:

- NE corner of North Ave.
- NW corner of Lillian Ave.
- SW corner of Hillsdale Ave.
- SW corner of S. Collingwood Ave.
- SW corner of S. Edwards Ave.
- NE corner of Rigi Ave.
- SW corner of W. Milford Dr.
- NW corner of Walter Dr.
- Plaza entrances between Walter Dr. and Leo Ave.

The following curb ramps were found to be in poor condition:

- NW corner of N. Collingwood Ave.
- NW corner of Leo Ave.

## 4.5 Curbs

An inventory of the curb conditions was completed at the same time as the sidewalk inventory. The majority of the curbs along James St. were rated as being in good condition. The exceptions are the following areas where the curb condition was rated as either fair or poor:

- James Street from Shotwell Pk. to Hickok Ave. on the south side (fair condition)
- James Street from Walter Dr. to Ridgewood Dr. on the north side (fair and poor condition)
- James Street from Marlborough Rd to Forest Hill Dr. on the south side (poor condition)
- James Street from Ridgewood Dr. to E. James St. on the south side (poor condition)

The area just beyond Ridgewood Dr. to E. James St. on the north side of James Street has no curb.

#### 4.6 Corridor Amenities

## Type and Condition of Bus Stops

The bus stops within the study area are designated with a blue Centro sign (refer to Figure 2-1). Upon review of the traffic signage in early 2001, the SMTC discovered that a previously posted Centro sign was missing from the southwest corner of James St. at S. Collingwood Ave.

As mentioned in Section 2.2, there are thirty bus stops along a 1.14-mile corridor, requiring buses to stop in every block, which sometimes slows traffic flow.

There are no bus shelters or bus pull offs along the James St. corridor. In addition, the majority of bus stops are located at the near side of intersections. This condition often results in buses obstructing traffic control devices. Also, through the public involvement process and field observation, the configuration of the James St./Midler Ave. intersection makes it difficult for buses (both Centro buses and school buses) to maneuver.

The SMTC notified Centro of the missing sign, and Centro representatives indicated that Centro has an on-going program for replacement of missing signs, which is completed primarily during summer months.

## **Bicycle Racks**

No bicycle racks were observed along the corridor. However, all Centro buses are equipped with bicycle racks.

## **Trash Receptacles**

Trash receptacles are located at various points along the corridor.

## Lighting

Street lighting is provided primarily by cobra lamps that are mounted on wood or metal utility poles throughout the study area. The lighting appears to be appropriate for vehicular travel, however, along James St. between Shotwell Pk. and E. James St., there is no pedestrian scale lighting.

## **CHAPTER 5 - DEMOGRAPHICS**

The following demographic information is based on 1990 census data, as more recent data is unavailable. The demographic data below was extracted from the Census Transportation Planning Package (CTPP) via Transportation Analysis Zones (TAZ). Transportation analysis zones are geographic units, much like census tracts, that are delineated especially for transportation planning.

## 5.1 Population

The population of the City of Syracuse peaked in 1950 at 220,583 and has decreased steadily to a population of 163,860 in 1990. After 1970, the older towns surrounding the city also began decreasing in population. While the City's population has decreased, population within Onondaga County has experienced growth in the northern, eastern, and western areas.

Population density within the study area is lowest in the northeast portion of the study area, highest at the western end, and fairly consistent in the center with approximately 8,000 people per square mile (see Figure 5-1). The northeastern end of the study area eventually tapers from a residential area into a more industrial area, while the western end of the study area moves into a more residentially dense area.

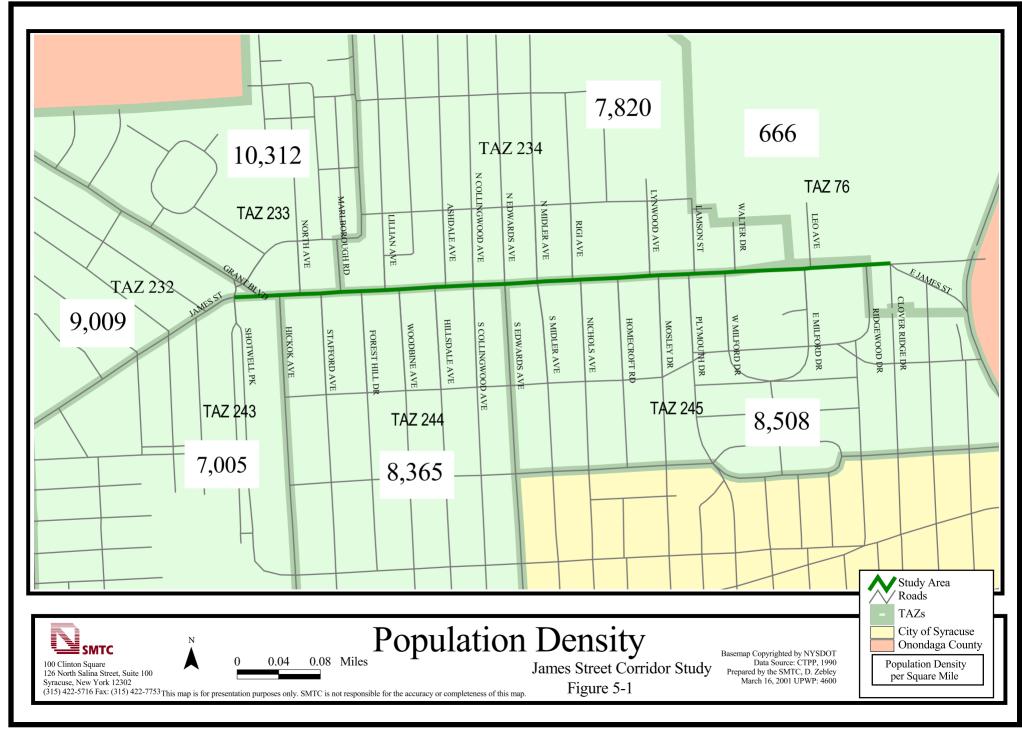
## 5.2 Income

Table 5-1 lists the household income earnings by TAZ within the study area. Approximately 34% of the households make between less than \$5,000 and \$14,900, and about 43% earn between \$15,000 and \$29,999 per year. With approximately 77% of the households earning between less than \$5,000 and \$29,999, the Eastwood area can be considered a low to middle income neighborhood. Approximately 4.5% of the households earn \$50,000 or more.

Table 5-1 Income Earnings by TAZ

TAZ	Households With Earnings	Less Than \$5,000 - \$14,999	\$15,000- \$29,999	\$30,000- \$49,999	\$50,000 and up	No Earnings
76	467	158	229	75	5	14
232	1019	285	455	200	79	60
233	722	265	372	76	9	33
234	1169	447	491	168	63	35
243	1377	432	576	283	86	11
244	1465	437	641	334	53	30
245	1110	444	410	217	39	18
Totals	7329	2468	3174	1353	334	201

Source: Census Transportation Planning Package, 1990



## 5.3 Households and Vehicles

Figure 5-2 shows the percentage of households with no vehicles. The number of households with no vehicles ranges from 4% in TAZ 76, to 29% in TAZ 233.

# 5.4 Transportation to Work

Table 5-2 shows the mode of transportation used by the individuals to get to work by TAZ. Driving alone is the primary mode of transportation to work within the study area. Carpooling, taking the bus, and walking are the next most popular modes of transportation, respectively.

Table 5-2
Mode of Transportation to Work

TAZ	Drove Alone	Car- pool	Bus	Walk	Worked at Home	Bicycle	Other Means	Total
76	413	33	14	21	0	0	0	481
232	822	157	46	48	6	0	0	1079
233	435	95	143	67	15	0	0	755
234	881	158	68	31	45	21	0	1204
243	1059	154	98	39	23	0	15	1388
244	1137	191	101	39	20	0	7	1495
245	836	210	37	29	16	0	0	1128
Totals	5583	998	507	274	125	21	22	7530

Source: Census Transportation Planning Package, 1990

# **5.5** Age

Table 5-3 indicates that the majority of the people within the study area are between 25 and 44 years of age. The next most represented age groups are those under age 16 and individuals between 45 and 61, respectively. The least represented age group is 75 and older.

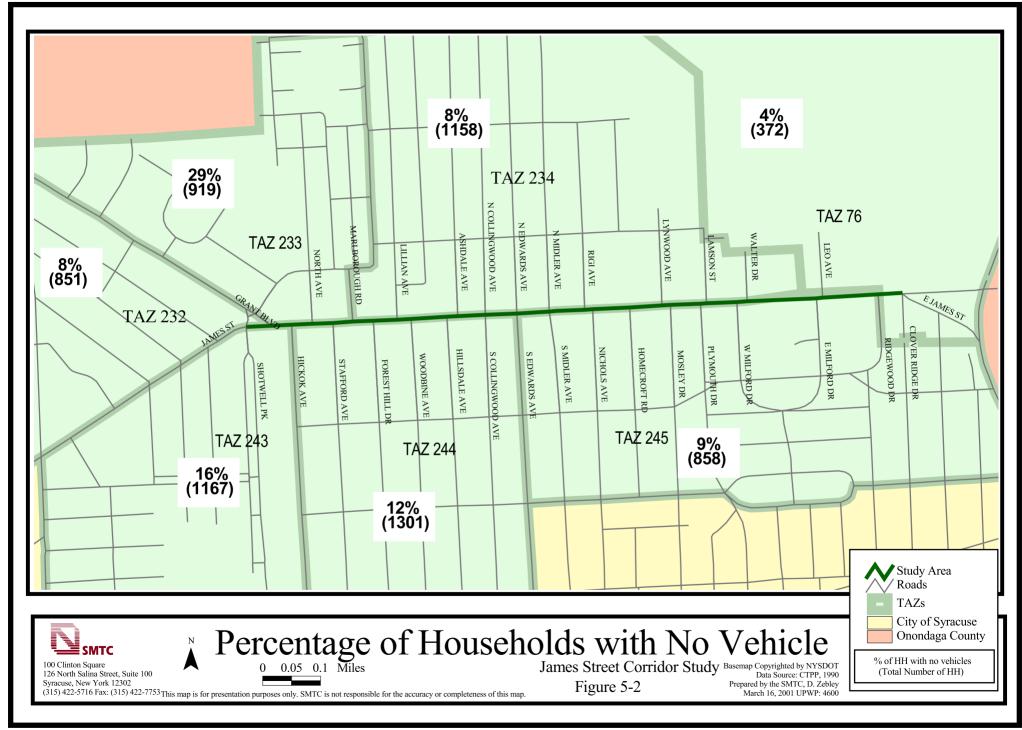


Table 5-3 Age of Population

TAZ	Total	Under 16	16-24	25-44	45-61	62-74	75 and up
76	986	212	85	305	185	154	45
232	2072	434	196	783	258	275	126
233	1753	397	243	548	184	241	140
234	1986	284	284	499	355	352	212
243	2732	529	288	1027	373	327	188
244	2844	496	294	1120	343	367	224
245	2212	475	314	692	336	251	144
Totals	14585	2827	1707	4974	2034	1967	1079

Source: Census Transportation Planning Package, 1990

# CHAPTER 6 – EXISTING REGULATIONS, LAND USE AND DEVELOPMENT CONTROLS

There are a variety of methods utilized to regulate and control what property owners are allowed to do with their land. Zoning, the process for site development and ordinances that citizens and developers must adhere to in the City of Syracuse, is discussed below.

## 6.1 Zoning

The most well known form of land-use control is zoning. Zoning is a set of requirements that apply to every property in the City of Syracuse. For each of the different zone districts, there are controls over allowable uses of the property, such as parking, signs, location of buildings on the lot, fences, swimming pools, garages, satellite dishes and home occupations, etc. James Street from Grant Boulevard on the west to the City line on the east primarily zoned commercial and residential.

Zoning along the corridor is shown in Figure 6-1, and a description of each of the zoning types represented in the study area follows:

## Residential District, Class A-1 (RA-1)

The purpose of this residential district it to provide for areas within the City of Syracuse where the living environment associated with single-family residential development is preserved and/or where the development of such environment is encouraged.

#### Residential District, Class A (RA)

This district provides for one- and two-family dwellings within the City of Syracuse at a greater density than a single-family district. It also serves to protect the basic low-density character of areas developed with a mixture of one- and two-family dwellings.

### Residential District, Class AA (RAA)

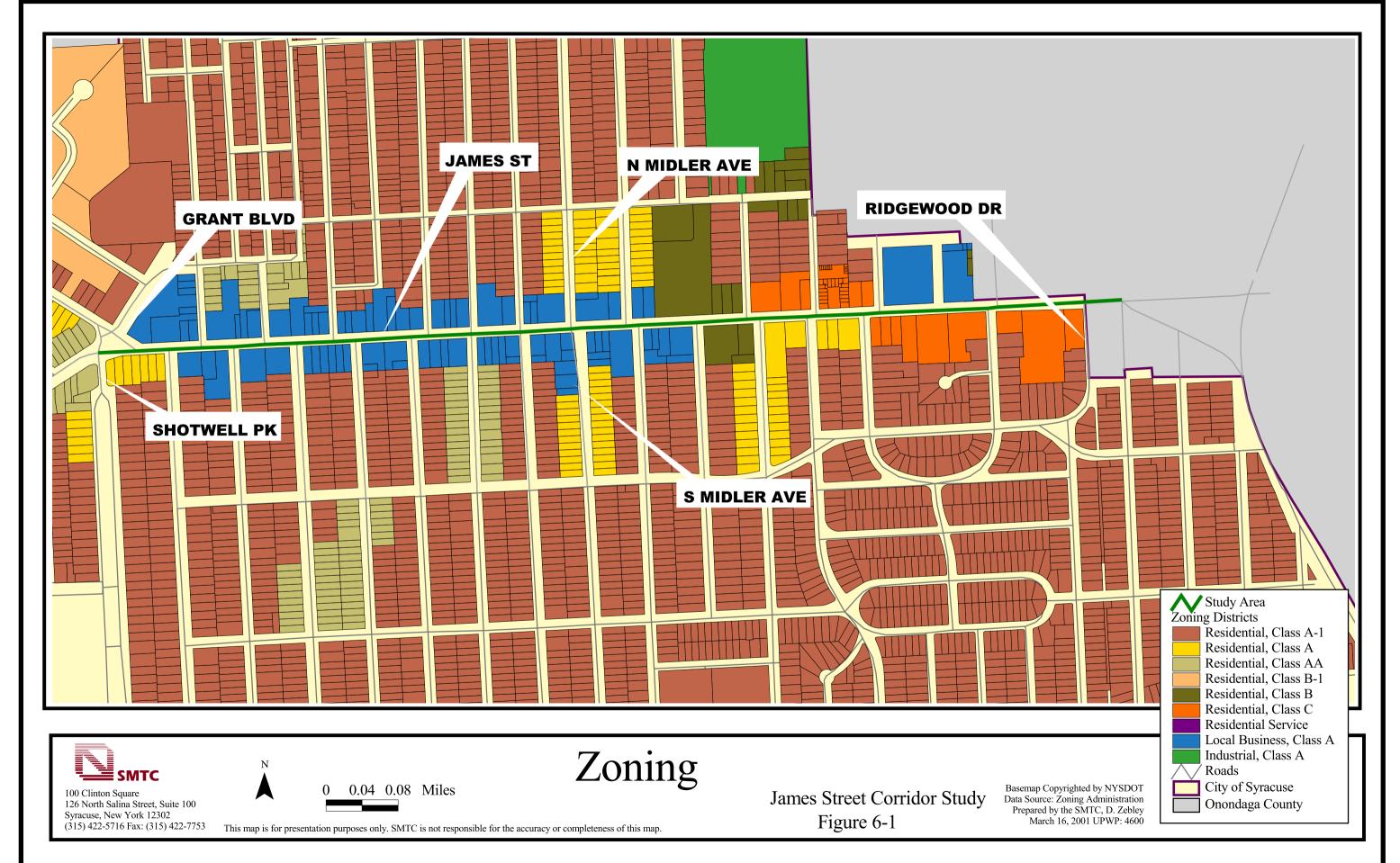
Residential Class AA allows for one- and two-family dwellings at a density slightly greater than that permitted in other one- and two-family districts, but on existing smaller-sized lots. It also serves to protect the amenities and characteristics associated with low-density residential development.

## Residential District, Class B-1 (RB-1)

This purpose of this district is to provide for areas within the city, which permit medium density residential development. This development consists of a mixture of single-, two-, three-, and four-family dwellings, and apartment houses, which preserve to the greatest extent possible, the residential amenities and environment associated with single-and two-family residential areas.

#### Residential District, Class B (RB)

This district provides for areas within the City, which permit high-density residential development. This development consists of a mixture of single-, two-, three-, four-, and



multiple-family dwellings, and other compatible land uses that are characterized by similar high land use intensity.

## Residential District, Class C (RC)

This district provides for the development of areas for medium density residential and certain compatible office and business uses. It provides a means of transition between areas used for residential and nonresidential uses.

## Residential Service District (RS)

This district provides for those service and convenience uses, which can be considered compatible and desirable in or adjacent to residential areas, which provide for the convenience and service requirements of that area. It also provides a means of transition from nonresidential districts to residential districts, and to serve a small residential area in contrast to areas served by larger shopping center developments.

## Local Business District, Class A (BA)

The intent of this district is to provide areas within the City, but outside the Central Business District (CBD), which permit the intensive development of land for mixed residential, retail, service and certain industrial uses.

## Industrial District, Class A (IA)

This district provides appropriate areas on or near major routes within the City permitting the development and continued use of lands for compatible retail, commercial and industrial uses.

The majority of the James Street corridor is zoned Local Business, Class A. This serves as the primary business district for those living in the Eastwood area. The eastern end of the corridor is zoned primarily for residential use, however the residentially zoned areas allow for some special uses, via a special permit, such as business and office use. Variances or special use permits may be granted to property owners when they desire to use the land in a manner or for a purpose which it is otherwise not allowed by the zoning regulations. In order to obtain a variance or special use permit, the landowner must demonstrate a certain set of circumstances and must contact the City of Syracuse Zoning Office to apply for such variances or special use permits. When granted, variances and special use permits are specific to the property. There have been a number of variances granted along James Street which have allowed for larger setbacks and parking in front of some of the buildings. This type of development is inconsistent with the desired pedestrian nature of the community. In addition, the waiving of parking requirements for new businesses has occurred in a few locations, which exacerbates the current parking issues along the corridor.

In the spring of 2000, the Urban Design Studio of the State University of New York College of Environmental Science and Forestry (SUNY ESF) completed an intensive 4-month study of the Eastwood area (see Section 7.3). As a result of their findings, one of the recommendations for the James Street Corridor was to develop a Neighborhood Main Street Overlay District. The Eastwood Neighborhood Planning Group was formed when the Urban Design Studio made this recommendation. This group formulated a resolution that amends the Zoning Rules and Regulations of the City of Syracuse by creating an Eastwood James Street Overlay District. On

August 14, 2000, the City Planning Commission adopted this resolution, which was subsequently signed by the Mayor on September 11, 2000.

The amendment to the Zoning Rules and Regulations is intended to protect the traditional streetscape of the James Street corridor (especially maintaining and stimulating a pedestrian friendly environment) while accommodating and encouraging continued business and civic growth. It also establishes standards for setbacks, yards, parking arrangements, lot coverage, signage, visual barriers, and building facade treatment. In addition, the amendment establishes a Design Review Board and review procedures for projects and changes within the overlay district. Currently, the Eastwood Neighborhood Planning Group is meeting to make recommendations as to who should sit on the Design Review Board (the amendment lists the qualifications for membership). Design Review Board membership must be approved by the Mayor.

The overlay district consists of those properties zoned Local Business Class A within 350 feet of the right-of-way of James St. from Shotwell Pk. east to the city line. A zoning overlay is a specified district classification containing a set of guidelines. These guidelines are overlaid on top of the existing zoning classifications. Any new development must adhere to these new, more restrictive requirements (see Appendix F).

## 6.2 Land Use

Land use within the study area and surrounding areas is shown in Figure 6-2 and is primarily commercial. Commercial properties run along the corridor with higher concentrations west of Nichols Avenue. There are also some residential uses mixed in along with commercial use from Nichols Ave. eastbound.

Areas to the north and south of the study area are primarily used for residential purposes. Cummings Field, located north of the study area's western end is used for recreational purposes (park). The area north of Lynwood Ave is used primarily for industry.

# 6.3 City Ordinances and Enforcement

The City of Syracuse has a number of ordinances that city residents are responsible for adhering to. One of the many ordinances, Section 27-72 D, involves the maintenance of sidewalks. The owner, occupant, or agent of any property in the City of Syracuse is responsible for maintaining and keeping sidewalks clear of snow and ice. The clearing of snow and ice must be completed by 6:00 p.m. of the day following the accumulation. If there is a violation of this ordinance, it can be reported to the city through their hotline, 448-CITY (448-2489). The Division of Code Enforcement would write up a violation and mail it to the property owner who would then have 15 days to clear the sidewalk. The Division of Code Enforcement finds it more effective to have the Office of Police Ordinance Enforcement stop by the property owner's residence or business and ask them to clear the sidewalk. This is often done in lieu of sending a violation notice and yields faster, better results. City property owners are also responsible for keeping their sidewalks clear of trash, yard waste and any other type of debris.

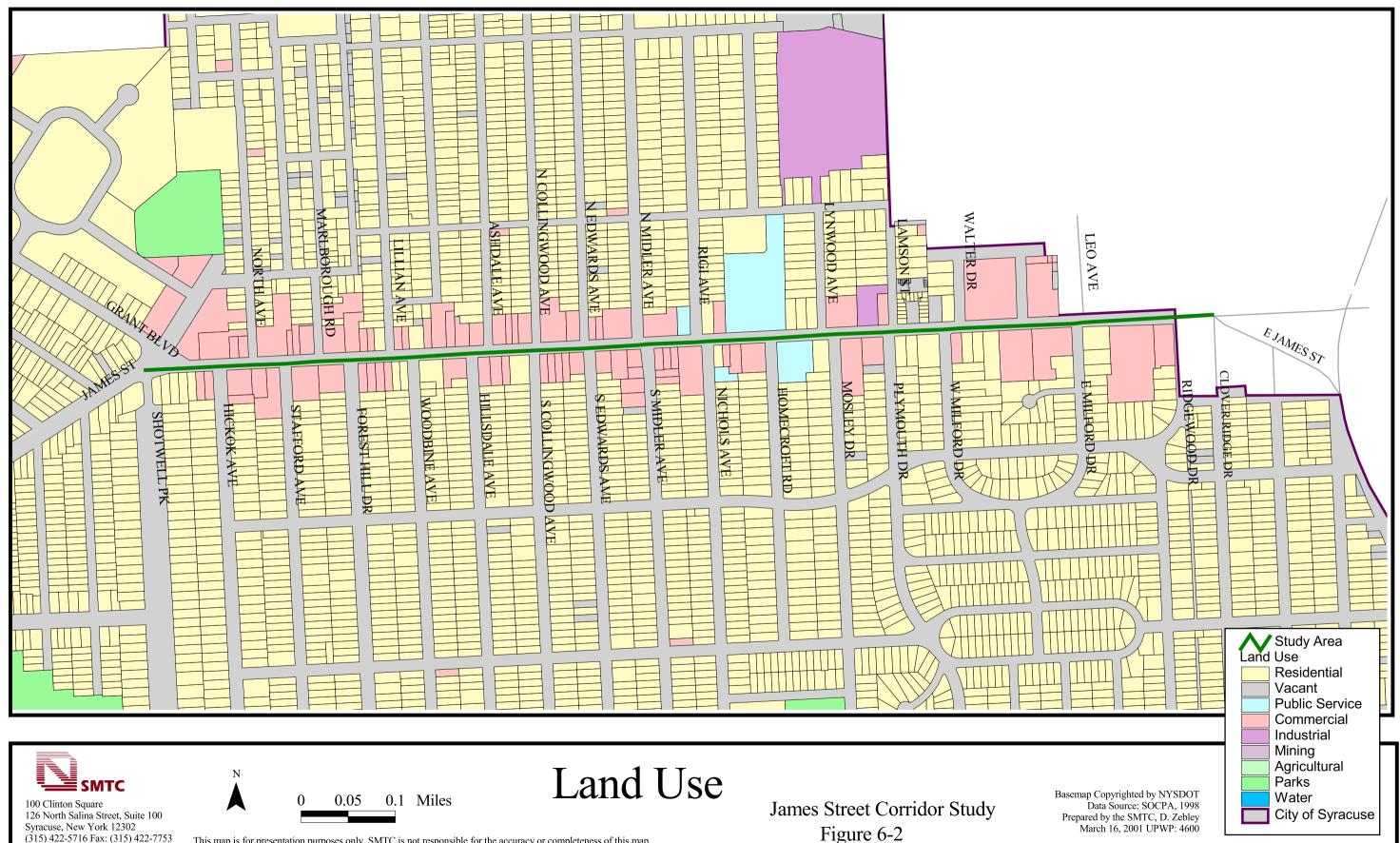


Figure 6-2

The City of Syracuse also has a number of police ordinances that must be adhered to. One of the ordinances, Section 15-316(A), refers to parking regulations. Through this ordinance a person is not allowed to park a vehicle in any of the following places:

- On a sidewalk or between a sidewalk and the curb or the edge of the road where there is no curbing
- Blocking the entrance or exit of a driveway, public or private
- Within ten feet of a fire hydrant
- At any place that is posted by official signs prohibiting stopping, standing or parking; and
- On any ground, lawn or vegetated areas, public or privately owned.

Parking violations can be reported to the Syracuse Police Department's non-emergency phone number at 422-5111. Vehicles parked in violation of this ordinance will be ticketed. Also, vehicles parked in front of a fire hydrant or on any ground, lawn or vegetated areas, public or privately owned, may be towed away by the police at the owner's expense.

## 6.4 Police Presence within Study Area

City of Syracuse Police Department has police presence at 2450 James Street (between Stafford Ave. and Forest Hill Dr.) in their Team of Oriented Police Services (TOPS) trailer, which is open from 8:00 AM – 4:00 PM, Monday through Friday. The basic function of the police presence at this location is to address on-going problems in the Eastwood area and provide a level of comfort to those traveling in the area. In the summer months, the two policemen that man this station are on patrol on their bicycles. They address helmet issues, as well as ordinance problems as they arise in the Eastwood area. The general consensus is that individuals feel more comfortable approaching policemen that are "on the beat", walking and bicycling in their neighborhood.

# CHAPTER 7 - PLANNED IMPROVEMENTS AND/OR DEVELOPMENT

Outlined below are various developments and projects planned on or near James Street. On a broader scale is a description of the Onondaga County Settlement Plan, which may serve as a blueprint for neighborhoods throughout the county.

## 7.1 Private Development

As of fall 2000, no proposals have been submitted to the city for private development along James St.

# 7.2 Central New York Regional Transportation Authority

The Regional Mobility Action Plan (ReMAP), recently completed by the Central New York Regional Transportation Authority, involved research to determine Central New York's public transit needs, deficiencies in the current bus system, opportunities to coordinate services with other agencies, long-term funding and implementation.

One recommendation of this report was the establishment of transit hubs at key locations throughout the region. Although Centro has a hub in downtown Syracuse at the intersection of Fayette St. and S. Salina St. called Common Center, the additional hubs will eliminate the need to go to Common Center to transfer. The new hubs may therefore reduce travel time and increase travel convenience for those whose destinations are outside downtown Syracuse. The ReMAP report states that some hubs may include well lit and weather protected (and sometimes climate controlled) waiting areas, as well as improved user information, all designed to make transfers more convenient.

An amendment to the 1999-2004 Transportation Improvement Program (TIP) included funding for ReMAP hub development at various locations in Onondaga County. Although Shop City, a local shopping area located just outside the northwest end of the study area, has always had a bus shelter, it now functions as a hub. This may be beneficial to those living in the vicinity of James St.

In addition, through the latest round of Community Solutions for Transportation (CST) grants, Centro has applied for money to construct a hub in the vicinity of Carrier Circle, located to the northeast of the study area. Carrier Circle houses many businesses, providing employment opportunities that range from service-oriented jobs to manufacturing/industrial related jobs. The transit services from the Carrier Circle hub would meet the services along James Street, at a point yet to be determined, and would provide frequent service between Carrier Circle and James Street.

## 7.3 Eastwood Neighborhood Study

Under the direction of Professors George W. Curry and Christine Capella Peters, the Urban Design Studio 2000 of the State University of New York College of Environmental Science and Forestry (SUNY ESF), completed an intensive 4-month study of the Eastwood area. The study area was defined by the city boundary on the north, I-690 on the south, Thompson Road on the east and Teall Avenue on the west. The purpose of this investigation was to take an in-depth look at the Eastwood neighborhood in order to develop an urban design strategy to promote planning efforts and support future growth and development. Those involved in this effort completed an inventory and analysis of the study area, examining the physical environment (street trees, parks, open space, topography, circulation, built form) and socio-cultural factors (demographics, community and economic development, organizations and public services, zoning and land use).

The Urban Design Studio then formed goals, objectives and actions for the Eastwood neighborhood. One of the objectives was to enhance the James Street corridor through the establishment of a zoning overlay district, upgrade of crosswalks/signals, incorporation of various site amenities (vegetation, pedestrian lighting, benches, kiosks, newspaper stands and trash receptacles), and synchronization of traffic signals. Various recommendations were made for James Street, such as resetting existing curbs in specific areas, highlighting corridor entries, creating comprehensive and consistent treatments for the "Village Main Street", building facades and infill, and developing a streetscape palette. One of the most significant recommendations made for the James Street Corridor was the Neighborhood Main Street Overlay District (refer to Section 6.1).

# 7.4 City of Syracuse Department of Public Works (DPW)

During any given year the City DPW may undertake a variety of transportation related projects. Projects may range from basic maintenance such as the painting of pavement markings to street pavement rehabilitation.

City DPW projects completed in fall 2000 include the repainting of pavement markings at James St. with Hillsdale Ave., Homecroft Rd. and Lynwood Ave. Streetscape development along the north side of the 2300 block began in fall 2000 as well.

# 7.5 Onondaga County Settlement Plan

Onondaga County has hired a consulting firm to examine a variety of neighborhoods in Onondaga County and make suggestions for improvements. In the fall of 1999, the firm examined eight "pilot neighborhoods" in Onondaga County. The team worked with town and village leaders and business and property owners to identify urban design problems and develop design proposals for specific residential and main streets. The aim was to tackle universal problems on a local scale and leave behind a design blueprint to help remedy and avoid them in the future. Any Central New York community can adopt the ideas. The Settlement Plan is intended to be a new tool that can be provided to the city, towns and villages in Onondaga

County. The final plan will provide a template that can be used and applied to various specific locations within Onondaga County. The final report is expected in spring 2001.

## **CHAPTER 8 - TRANSPORTATION ISSUES**

#### 8.1 Introduction

Through the course of completing the existing conditions portion of the report (Chapters 1-7), and the public involvement process, a number of transportation issues along the James St. corridor were identified. These issues are outlined below along with possible opportunities and constraints. A constraint that applies to almost all of the issues is the availability of funding sources to design, construct, and maintain potential solutions.

## 8.2 Vehicular Travel

## **Travel Speeds**

Issue

High vehicle travel speeds, especially near Lillian Ave. and Homecroft Rd., and the eastern end of the corridor, were observed by the City DPW staff, the SMTC staff and identified through the public involvement process as being an issue. Citizens would like to keep the "Village within the City" atmosphere to their neighborhood and slow traffic down. The posted legal speed limit along the corridor is 30 miles per hour (MPH).

Within the study area, there are no 30 MPH signs for vehicles traveling east along James St. However, prior to entering the study area, a 30 MPH sign is posted on James St. near the intersection with Clifton Pl. According to the *Manual of Uniform Traffic Control Devices* (MUTCD) maximum speed limit signs should be installed at or near places where speed limits change. Traveling east through the study area, there is no 30 MPH sign located beyond the 20 MPH flashing school sign (located near the intersection of Nichols Ave.) to indicate a return to 30 MPH.

#### **Opportunities**

Based on the information in Chapters 1-7, the SMTC informed the City DPW of the need for speed limit signage in March 2001. Also in March 2001, the City DPW requested that the City of Syracuse Police conduct a radar speed check within the James St. corridor.

Keeping vehicle travel speeds within the desired range increases safety and enhances the pedestrian nature of James St. Preserving and/or enhancing the pedestrian nature of the corridor increases the mobility of people, particularly children and the elderly, who would otherwise have difficulty getting around. Potential solutions to controlling excessive speeds include better enforcement of speed regulations and/or the implementation of traffic calming measures.

#### Constraints

Speed limits are imposed in order to promote lower relative speed conditions, better traffic flow, and to reduce accidents. High speeds may be caused by the lack of effective enforcement of local laws.

Residents typically request some form of traffic management measure such as an all way stop, reduced speed limit, or a turn prohibition when they perceive that traffic speeds are unsafe. However, these measures are usually ineffective at correcting the problem.

## Pavement, Pavement Markings, and Curbs

#### Issues

The following issues were identified regarding pavement, pavement markings and curbs:

- Pavement from Grant Blvd. to Hillsdale Ave., and Edwards Ave. to Midler Ave. is rated as being in poor condition.
- Intersection pavement markings are primarily in fair condition throughout the study area, except for the following locations where the markings are in poor condition:
  - James St./Midler Ave.
  - James St./Clover Ridge Dr./E. James St.
- Crosswalk markings at the existing school crossing guard locations are in fair condition:
  - James St./Lillian Ave.
  - James St./Homecroft Rd.
- Travel lane markings from Shotwell Pk. to Collingwood Ave. were rated as being in fair condition.
- The eastern end of the corridor is often used as a four-lane road, even though it is currently striped for two-lane usage. This can be confusing to motorists.
- The designation of lane usage is difficult to determine at the intersection of Shotwell Pk./Grant Blvd./James St.
- The majority of curbs along James St. were rated as being in good condition, however no curb exists on the north side of James St. from the area just beyond Ridgewood Dr. to E. James St. In addition, curb conditions were rated as being poor at the following locations:
  - James St. from Walter Dr. to Ridgewood Dr. on the north side
  - James St. from Marlborough Rd to Forest Hill Dr. on the south side
  - James St. from Ridgewood Dr. to E. James St. on the south side

### **Opportunities**

James St. is one of the primary east-west corridors within the City of Syracuse and handles local traffic as well as a significant amount of commuter traffic. Pavement, pavement markings, and curbs that are in good condition may enhance traffic flow and improve safety.

The City Department of Public Works (DPW) has an annual pavement-marking program to refresh existing pavement markings throughout the city. Through this program, the City DPW may be able to add striping where lane designation is confusing along the corridor. The City DPW also has a Street Reconstruction Program that has been used in the past to fund street improvements in various locations in the City of Syracuse.

The addition of traffic signage and lane striping where lanes merge, particularly at the eastern end of James St., may be beneficial to motorists.

#### Constraints

City budget constraints and availability of other sources of funding may limit the extent of pavement and pavement marking improvements and additions that can be made.

Depending on placement, the addition of traffic signage may add to the numerous signs that already exist along the corridor. This may confuse motorists.

## Intersection and Arterial Level of Service (LOS) - Signalized

#### Issues

The Synchro analysis for the existing PM peak hour indicates that the majority of the approaches to each of the signalized intersections within the study area operate at a LOS C or better except for the following two locations that operate at a LOS E and F, respectively:

- Northbound left turn lane approach at James St./Midler Ave.
- Westbound approach at James St./Homecroft Rd.

The majority of approaches are projected to continue to operate at a LOS C or better through the year 2015, with the exception of the following locations:

- The southbound approach at the intersection of James St./Shotwell Pk./Grant Blvd. that deteriorates to a LOS E.
- The southbound left turn lane at the James St./Midler Ave. intersection that deteriorates to a LOS E. The southbound thru and right turn lane approaches and the northbound left turn lane approach at James St./Midler Ave. that deteriorate to a LOS F.
- The westbound approach at the intersection of James St./Homecroft Rd. that continues to operate at a LOS F.

All of the street segments currently operate at a LOS D or better except for the following:

- In the eastbound direction, the street segments from Shotwell Pk. to Hickok Ave. and S. Collingwood Ave. to S. Midler Ave., which operate at a LOS E.
- In the westbound direction, the street segments from Lamson St. to Homecroft Rd. and Hickok Ave. to Grant Blvd., which operate at a LOS F and E, respectively.

For future year 2015, the following road segments are projected to operate at a LOS E or F:

- In the eastbound direction, the street segment from S. Midler Ave. to Homecroft Rd. is projected to operate at a LOS E.
- In the eastbound direction, the street segments from Shotwell Pk. to Hickok Ave., Hickok Ave. to North Ave. and S. Collingwood Ave. to S. Midler Ave. are projected to operate at a LOS F.
- In the westbound direction, the street segment from Homecroft Rd. to N. Midler Ave. is projected to operate at a LOS E.

• In the westbound direction, the street segments from Lamson Rd. to Homecroft Rd. and Hickok Ave. to Grant Blvd. are projected to operate at a LOS F.

Through the public involvement process, it has been discovered that there are conflicting public views regarding traffic movement through intersections and along the James St. corridor. Many individuals expressed an interest in slowing traffic down to retain the "Village within the City" atmosphere that Eastwood is noted for. Citizens also expressed a high level of interest in placing impedances, such as traffic calming devices, along James St. to discourage commuter use and through traffic. Other citizens expressed interest in promoting other nearby corridors for commuters to travel on.

In direct conflict with this viewpoint, some citizens are concerned about moving through the intersections and street segments, indicating that the current coordination of traffic signals causes vehicular traffic to back up.

## **Opportunities**

In comparing intersection levels of service with street segment levels of service, the intersections on James St. are primarily operating at more acceptable levels of service than the street segments. In general, a LOS D is considered minimally acceptable. The acceptable intersection levels of service may be due to the turn lanes available at many intersections, which allow traffic to move through the intersections more quickly.

The approaches at the intersection of James St. with Homecroft Rd. currently operate at LOS F. This is primarily due to the pedestrian phase that the City DPW incorporated into the traffic signal for the safety of the school children attending Blessed Sacrament School.

In June 1999, Clough, Harbour & Associates completed a Traffic Operations Review of James St. at Midler Ave. for the City of Syracuse. The objective for the study was to evaluate the possible need for a left turn signal for eastbound and westbound vehicles at the intersection of James St. and Midler Ave. After reviewing the capacity, accident history, and level of service analyses, it was determined by Clough, Harbour & Associates that an exclusive left turn phase is not warranted at the intersection of James Street at Midler Avenue. Although an exclusive left turn phase was not recommended for this intersection, the following recommendations were made:

- Make adjustments to the signal timing
- Repaint all faded pavement markings
- Add additional lane usage pavement markings
- Consider relocating the bus stop located on Midler Avenue
- Post a left turn prohibition sign facing vehicles exiting the Byrne Dairy parking lot onto Midler Avenue
- Move the southbound stop line on Midler Avenue back 25 feet

Completing the recommendations made for the James St./Midler Ave. intersection may assist in improving the level of service and safety at this location.

Based on the Synchro analysis, continuation of the coordination of traffic signal lights within the study area is suggested. Discussion with the City of Syracuse traffic consultant indicated that optimizing the signalized intersections along James St. would be beneficial. Optimization of the traffic signals involves adjustment of the timing and/or phasing of traffic lights and may assist in improving the level of service along James St.

The addition of the existing signalized intersections into the City of Syracuse's signal interconnect system, or some other type of system deemed appropriate by the City of Syracuse DPW, may allow for improvement of the coordination of traffic signal lights along James St., as well as improvements to the level of service at intersections and along street segments.

#### **Constraints**

According to the City of Syracuse DPW, the exclusive pedestrian phase at the James St./Homecroft Rd. traffic signal will not be removed because it provides the opportunity for children to cross safely when walking to and from school, as well as the general public, when utilizing this location.

The City of Syracuse may not have the funding opportunities to complete all of the recommendations for the James St./Midler Ave. intersection as made by their consultant.

The signalized intersections would require equipment upgrades and large capital investments in order to be brought into the City's signal interconnect system or some other type of system deemed appropriate by the City of Syracuse DPW.

### **Signal Control**

#### Issues

Consultation with a representative of the City of Syracuse traffic control center revealed that loop detectors, intended to recognize the presence of a moving or stopped vehicle at signalized intersections, are sometimes parked over at the James St./North Ave. and James St./Homecroft Rd. intersections.

All ten of the signalized intersections within the study area are time-based coordinated with loop detectors on all side streets. Based on the Synchro analysis, it is recommended that the signalized intersections within the study area remain coordinated, and that optimization of the signalized intersections would be beneficial.

Through the Synchro review, it was also determined that the two-phase signals along James St. (James St. with Hickok Ave., North Ave., Marlborough Rd., Lillian Ave., Collingwood Ave., and Plymouth Dr./Lamson St.), fall out of coordination if an individual pushes the pedestrian button to request a WALK phase. This also occurs at the James St./Homecroft Rd. intersection. The system will eventually realign itself until the pedestrian button is pushed again.

Numerous field visits have indicated that the intersection of James St. with Grant Blvd. can be confusing to motorists. The eastbound left turn lane is equipped with a loop detector so that when motorists drive over the loop, the signal will display a left turn arrow. Prior to enabling this light, the signal displays a green ball, and sometimes the green ball is displayed when traffic

traveling westbound will see a red light. At this point, the motorist in the westbound left turn lane does not know if they have the right of way.

## **Opportunities**

Coordination of traffic signals between adjacent intersections offers an opportunity for significant benefits to motorists. As mentioned above, continuation of the coordination of traffic lights within the study area is suggested, along with optimizing the current time-based coordinated system.

Beyond time-based coordination, the addition of the existing signalized intersections into the City of Syracuse's signal interconnect system, or some other type of system deemed appropriate by the City DPW, may allow for improvement of the coordination of traffic lights along James St., as well as improvements to the level of service at intersections and along street segments. The City of Syracuse currently has a traffic signal system (the City of Syracuse Signal Interconnect System) that utilizes fiber optic interconnection. According to the City of Syracuse traffic control center, the fiber optic cable utilized in the interconnect system currently runs out to, and stops at the intersection of James St./Shotwell Pk./Grant Blvd. The existing traffic signal equipment for inclusion into this system currently ends at the intersection of James St. and Teall Ave. There is opportunity for continued expansion of the signal interconnect system with the addition of fiber optic cable from James St./Shotwell Pk./Grant Blvd., out to James St./Lamson St./Plymouth Dr., as well as upgrading all of the intersection controllers along the study area. There is also opportunity to add the existing signalized intersections into other types of signal systems, as deemed appropriate by the City of Syracuse DPW.

The City of Syracuse could adjust the timing at the two-phase locations so the signals do not continue to fall out of coordination when an individual requests a pedestrian phase. In addition, adjusting the signal at the intersection of James St./Grant Blvd. may assist the motorist looking to make a left at this intersection.

#### Constraints

The signalized intersections would require both hardware and software equipment upgrades in order to be included as part of the signal interconnect system, or some other type of signal system deemed appropriate. The City of Syracuse DPW may not have the financial opportunities to include the James St. signals from Shotwell Pk./Grant Blvd. to Lamson St./Plymouth Dr. into such a system.

## James St./Shotwell Pk./Grant Blvd.

#### Issues

Through Chapters 1-7, the public involvement process, and site visits to the study area, various issues were noted at the intersection of James St. with Shotwell Pk. and Grant Blvd.

The configuration of this intersection is difficult to maneuver. Traffic traveling southwest on Eastwood Ave. has to merge with traffic traveling southeast on Grant Blvd. Motorists on Eastwood Ave. have a yield sign to adhere to prior to entering the wide intersection created by the joining of Eastwood Ave. with Grant Blvd. If the motorist traveling southwest on Eastwood

Ave. needs to make a right hand turn, it is extremely difficult. In addition, the yield sign at this location is bent

The intersection of James St. with Grant Blvd. has an eastbound left turn lane with a loop detector, meaning once a motorist drives over the loop, the signal should display a left turn arrow, indicating when it is safe to make the left turn. Sometimes the eastbound left turn lane signal will display a green ball, while traffic traveling westbound will see a red light. At this point, the motorist in the westbound left turn lane does not know if they have the right of way.

## **Opportunities**

Further study of this intersection may be necessary in order to make specific engineering recommendations regarding the configuration of the intersection.

With the appropriate upgrades, the addition of this intersection into the City of Syracuse's signal interconnect system, or some other type of signal system deemed appropriate by the City of Syracuse DPW, may allow for further improvement of traffic flow through the intersection.

#### Constraints

Intersections would require equipment upgrades and large capital investments in order to be included in the City's signal interconnect system, or some other type of signal system deemed appropriate.

## Intersection Level of Service (LOS) - Unsignalized

#### Issues

The HCS analysis for the existing PM peak hour indicates that the majority of the approaches to each of the unsignalized intersections within the study area operate at a LOS C or better except for the following locations:

- E. Milford Dr. northbound approach (LOS D)
- Stafford Ave. northbound (LOS E)
- Forest Hill Dr. northbound (LOS E)
- Woodbine Ave. northbound/southbound (LOS E)
- S. Edwards Ave. northbound (LOS E)
- Ridgewood Dr. northbound (LOS E)
- Leo Ave. southbound (LOS F)

The 2015 future year levels of service indicate that all of the northbound and southbound approaches to the unsignalized intersections are all projected to operate at a LOS E or F, with a few exceptions. The northbound approach at James St./W. Milford Dr. is projected to operate at a LOS C and following intersection approaches are projected to operate at a LOS D:

- Hillsdale Ave. northbound
- Rigi Ave. southbound
- Nichols Ave. northbound

- Lynwood Ave. southbound
- Mosley Dr. northbound
- Walter Dr. southbound

## **Opportunities**

If the signalized intersections are optimized, the coordination of the traffic signal lights along James St. may improve. This could ultimately improve the traffic flow through the unsignalized intersections. In addition, if the signalized intersections are upgraded and modified to work as part of the City's signal interconnect system, or some other type of signal system deemed appropriate by the City of Syracuse DPW, traffic flow may improve along the corridor.

In December 1998, the City of Syracuse hired Clough, Harbour & Associates to complete a study of the intersection of Leo Ave. and E. Milford Dr. on James St. The objective of the study was to determine if a traffic signal was needed at the intersection. The criteria used to determine the need for a traffic signal was an evaluation of the traffic volumes, accident history and operating efficiency at the intersection. Based on warrants of the New York State Department of Transportation (NYSDOT) and United States Department of Transportation (USDOT) Manual of Uniform Traffic Control Devices (MUTCD), Clough, Harbour & Associates determined that a traffic signal installation was not warranted at this intersection. However, the observation was made that vehicles approaching James St. while traveling northbound on Milford Dr. encroached the intersection. The following recommendations were made for the intersection of James St./Leo Ave./E. Milford Dr.:

- The intersection should continue to be monitored in case side street traffic volumes meet the minimum threshold to warrant the installation of a traffic signal.
- Continue utilizing the existing stop sign control.
- To improve the safety of the intersection, place an 18-inch stop line on Milford Drive four feet from the corner of the intersection.

The City of Syracuse DPW has added the recommended stop line at E. Milford Dr., but it is now faded (this can be refreshed through the City's annual pavement marking program). As recommended above, the City should continue to monitor the traffic volumes at this location.

#### Constraints

Signalized intersections would require equipment upgrades and large capital investments in order to be included in the City's signal interconnect system, or some other type of signal system as deemed appropriate by the City of Syracuse DPW.

### **8.3** Traffic Control Devices

## **On-Street Parking**

#### Issues

Based on information provided in Chapters 1 - 7 and public comment, the following issues regarding on-street parking were identified:

- There is a general lack of understanding regarding the difference between the three types of parking prohibitions: no parking, no standing, and no stopping.
- There are numerous on-street parking regulations (up to 9 different signs used, multiple regulations at one location, and parking meters) within the study area that complicate sign posting and have the potential to confuse motorists.
- There are two signs along the corridor (between Lynwood Ave. and Lamson St.) that are faded and illegible.
- There is a pole with no sign attached located just prior to the intersection of S. Midler Ave. with James St.
- Illegal on-street parking is prevalent, particularly near intersections. Motorists park over signal loop detectors.
- It is difficult to turn from the side streets onto James St. due to the location of parked cars near intersections, which serve as sight obstructions to motorists.
- Citizens indicated that there is a general lack of adequate parking within the study area, especially since the corridor is primarily lined with commercial establishments.
- When trucks are loading/unloading at commercial establishments along James St., they are often double-parking, impeding traffic flow.
- The waiving of parking requirements for new businesses has occurred in a few locations, which exacerbates the current parking issues along the corridor.

## **Opportunities**

The City DPW has been made aware of the faded and missing signs along the corridor. A parking study to evaluate simplifying on-street parking along the corridor may be beneficial to the City to minimize the number and types of signs that can confuse motorists. The distribution of educational materials and better enforcement of parking regulations may also improve the parking situation. In addition, closely following the new Eastwood James Street Overlay District when new businesses come into the neighborhood will be beneficial.

#### Constraints

Changes to on-street parking should be discussed with businesses and public service agencies along the corridor to ensure adequate parking and consistency. In addition, changes to on-street parking would have City-wide implications.

## Other Traffic Signage

#### Issues

There are No Left Turn signs located on the Clover Ridge Dr. approach to James St., as well as on the north side of James St., across from Clover Ridge Dr. The sign on the north side of James St. is bent. In addition, there appears to be a No Left Turn sign missing from the E. James St. approach to James St.

## **Opportunities**

The SMTC informed the City of Syracuse of the bent and missing No Left Turn sign in March 2001.

## Constraints

No constraints were identified for addressing these issues.

## 8.4 Accidents

#### Issues

The accident analysis presented in Chapter 3 revealed that the two most frequently occurring accidents types within the study area are rear end and sideswipes. The high concentration of curb cuts and intersections along the corridor may contribute to the number of rear end accidents. Sideswipe accidents are fairly evenly dispersed throughout the seven intersections analyzed.

Three of the locations analyzed exceed the NYSDOT average accident rates:

- James St./Midler Ave.
- James St./Grant Blvd./Shotwell Pk.
- James St./Homecroft Rd.

Rear end accidents are the predominant accident type at these locations.

Bicycle/pedestrian accidents represent more than 15% of all traffic accidents at the following locations:

- James St./Marlborough Rd.
- James St./Lillian Ave.

The James St./Midler Ave. intersection is offset by approximately five feet so that the crossing points of each corner do not align. In addition, the pavement markings at this intersection are in poor condition and not all pedestrians utilize the crosswalks at this location.

## **Opportunities**

The Institute of Transportation Engineers (ITE) *Traffic Engineering Handbook* states that while human error contributes to 70% - 90% of all accidents, road and vehicle improvements can greatly reduce the likelihood of human error or the consequences of the accident. Enhancements to the locations noted above may have a positive impact on vehicular, bicycle, and pedestrian safety.

The City Department of Public Works (DPW) has an annual pavement-marking program to refresh existing pavement markings throughout the city.

#### Constraints

City budget constraints and availability of other sources of funding may limit the extent of pavement and pavement marking improvements and additions that can be made.

# 8.5 Bicycle Travel

#### Issues

A number of issues regarding bicycle travel were identified along the corridor including the following:

- There are no designated New York State or City bicycle routes or lanes;
- There are no bicycle racks (although all Centro buses are equipped with bicycle racks); and

• There is a general lack of awareness and compliance with bicycle safety guidelines including lack of helmet use, riding on sidewalks, and traveling against vehicular traffic.

## **Opportunities**

Enhancements to bicycle facilities and educational programs may increase safety and give individuals with limited mobility an additional transportation option.

The Onondaga County Legislature recently passed a law requiring everyone 18 years of age and under to wear a helmet while riding a bicycle. Bicycle safety guidelines could be tied into a campaign to increase awareness of this new regulation.

The presence of the City of Syracuse Police at the Team of Oriented Police Services (TOPS) trailer in Eastwood allow opportunities for police to encourage and enforce bicycle helmet wearing, as well as bicycle laws and regulations. In the summer months, the police officers based at the Eastwood TOPS trailer patrol the James St. area on bicycles.

Because of the street geometry at the eastern end of the corridor, primarily from James St./E. James St./Clover Ridge Dr., opportunity may exist to create a bike lane.

#### Constraints

The existing road geometry and the desire to maintain on-street parking may make it infeasible to safely accommodate a bicycle lane within the commercialized portion of James St., primarily from James St./Shotwell Pk./Grant Blvd. to James St./Homecroft Rd.

Striping a bike lane at the eastern end of the corridor may not be feasible, since it may most likely have to terminate in the vicinity of James St./Homecroft Rd. A further study would have to be completed before this could be recommended. This will be analyzed further in next year's bicycle and pedestrian plan to be completed by the SMTC.

#### **8.6** Pedestrian Travel

#### Issues

The following issues regarding pedestrian travel were identified:

- Poor sidewalk conditions exist primarily at the following locations:
  - Between S. Collingwood Ave. and S. Edwards Ave.
  - From S. Midler Ave. to just beyond Homecroft Rd.
  - From Walter Dr. to Clover Ridge Dr./E. James St. (on the north side of James St.)
  - From E. Milford Dr. to Clover Ridge Dr./E. James St. (on the south side of James St.)
  - There are also a few smaller sections of sidewalk that were rated as being in poor condition along James Street.
- Along the commercialized portion (primarily between Hickok Ave. and Nichols Ave.) of the corridor, some concrete sidewalk has been overlaid with asphalt, especially adjacent to parking lot entrances, making it difficult to distinguish the pedestrian path.
- Sidewalks are often not cleared of snow, ice and other debris.

- In the winter months, pedestrians often walk in the street because the sidewalks have not been cleared of snow.
- In the winter, blind spots are created by the piling of snow.
- Vegetation was found to be growing between, on top of, and hanging down into some of the sidewalks.
- In portions of the commercial district, the sidewalk becomes quite narrow, primarily because some of the parking meters and traffic signs are placed away from the curb and into the pedestrian walkway (primarily between S. Collingwood Ave. and S. Edwards Ave., but this also exists in other areas). This appears to be more of an issue during the winter months when snow is plowed, creating large banks that infringe upon the sidewalk area that is already narrow.
- Some individuals do not realize the benefit of pushing a pedestrian push button or understand pedestrian signal indications.
- Pedestrian scale lighting is desired along the corridor.
- Some residents are not aware that the City has a complaint line (448-CITY) that they can call to report street lighting outages, poor sidewalk conditions, etc.
- Crosswalk pavement markings throughout the study area are in fair condition, including the crossing guard locations at James St./Lillian Ave. and James St./Homecroft Rd.
- Placement of trash receptacles along the corridor is not consistent.

In addition to the above issues, it was determined that curb ramps that comply with the Americans with Disabilities Act of 1990 (ADA) do not exist at the following locations within the study area:

- SE corner of the intersection of E. James St. and James St.
- SE corner of the intersection of Ridgewood Dr. and James St.
- NE corner of the intersection of Leo Ave. and James St.

Also, the transition between existing ramps and the street surface is less than desirable at the northeast corner of Rigi Ave. and the northwest corner of Walter Dr.

### **Opportunities**

The City of Syracuse DPW reconstructed the sidewalk from the northwest corner of Lynwood Ave. to the northeast corner of Lamson St. in fall 2000. In addition, the City DPW has an annual pavement-marking program to refresh existing pavement markings, including crosswalks, throughout the City.

Pedestrian enhancements that address sidewalk/crosswalk conditions, that improve the link to transit, and keep the sidewalks clear of snow and ice, could preserve and improve the pedestrian oriented nature of the corridor desired by Eastwood residents. The following locations have the most pedestrian traffic during the PM peak hour and therefore may be logical locations for making improvements:

- The intersections between and including North Ave. and Lillian Ave.
- The intersections between and including Collingwood Ave. and Rigi Ave.

Since the intersections of James St./Marlborough Ave. and James St./Lillian Ave. were noted as high bicycle/pedestrian accident locations, and they fall within the highly pedestrian traveled locations listed above, improvements in these areas may benefit the most people.

Through receipt of this study, the City DPW can notify the City sidewalk inspector regarding sidewalk conditions within the study area. It is the sidewalk inspector's responsibility to identify the specific areas of sidewalk that need repair and to work with property owners to ensure that the improvements are made. It may be beneficial to increase property owners' knowledge of their responsibilities regarding sidewalks prior to serving any citations for poor conditions.

Citizens at the first public meeting felt that the placement of trees, benches, trash receptacles, and pedestrian scale lighting as part of an overall street enhancement project would be desirable. Streetscaping in the form of trees and brick along the sidewalk currently exists between Marlborough Rd. and Lillian Ave. and also just west of N. Edwards Ave. The City began streetscape efforts in fall 2000 in the 2300 block of James St. The City may have the opportunity to complete this during the summer months.

The Americans with Disabilities Act (ADA) of 1990 requires curb ramps to be provided in all existing sidewalks. Each year, the City of Syracuse DPW brings a set amount of curb ramps into compliance with the ADA. Through receipt of this study, the City DPW can forward the above information on missing ADA curb ramps to the Engineering Inspector for the City.

Local businesses could get together to develop a snow removal system, such as hiring someone to shovel their front walks, that is shared between businesses along the corridor.

### Constraints

Some individuals living within or owning commercial establishments along the study area may not be aware that it is the property owners' responsibility to maintain and keep sidewalks clear of obstructions. This lack of awareness makes providing well-maintained sidewalks clear of obstructions difficult, and restricts the ability to make area wide sidewalk improvements.

Installing street lighting at a pedestrian scale may require the creation of a special lighting district. Typically, in other areas of the City where special lighting districts have been created, the cost has been assessed to the property owners. The immediate James St. study area is primarily made up of commercial establishments. Some business owners may not want to pay for the installation of special street lighting. In addition, there would be costs associated with maintaining the lighting district.

Some business owners may not want to participate in the development of a snow removal system, which may lead to un-shoveled sidewalks along various portions of James St.

### 8.7 Transit

#### Issues

The following issues were identified relating to Centro buses and bus service as identified below:

- There are thirty bus stops within 1.14 miles, causing buses to stop at every block. This sometimes results in the obstruction of traffic flow.
- A number of bus stops are located at the near side of intersections often resulting in buses obstructing traffic control devices and traffic flow.
- All of the bus stops along the corridor are unsheltered.
- A previously posted Centro sign is missing from the southwest corner of James St. at S. Collingwood Ave.
- The configuration of the James St./Midler Ave. intersection makes it difficult for buses (both Centro buses and school buses) to maneuver.

### **Opportunities**

The SMTC notified Centro of the missing sign, and Centro representatives indicated that Centro has an on-going program for replacement of missing signs, which is completed primarily during summer months.

As mentioned previously, a Traffic Operations Review of James St. at Midler Ave. was completed for the City of Syracuse. One of the recommendations made within that study is to move the southbound stop line on Midler Ave. back 25 feet, which may assist buses with making a left turn from eastbound James St. In addition, the study also recommended considering relocating the bus stop located on the west side of the southbound approach to Midler Ave.

In addition, the opportunity exists to consolidate bus stops along the corridor, only after further study is completed to determine the age of the various populations utilizing the stops as well as which stops are least utilized.

### Constraints

Complete ridership data for bus stops along the James. St. corridor was not available. Ridership data could indicate which stops are being most frequently utilized so that bus shelters could be recommended where ridership is highest. This information could also assist in determining which stops could possibly be removed.

Although changing bus stop locations to the far side of intersections may improve vehicle safety and flow, it may impede pedestrians boarding and exiting the bus during periods of snow accumulation. During these periods, buses may actually pull into intersections to allow passengers to board or exit rather than make individuals pass through snow banks. However, if bus stops were moved to the far side of intersections and clear sidewalks and lead walks were available and kept clear of snow, this particular constraint would be invalid. Another constraint to moving bus stops to the far side of intersections is the numerous parking meters along the corridor that may have to be moved to alternate locations in order to accommodate the far side bus stops.

### **8.8** Regulations and Development Controls

### **Zoning**

#### Issues

Residents in the Eastwood area acknowledged that zoning along the corridor should be reexamined especially in regard to building placement. Development that has occurred over the past few years is out of character with the urban setting. Buildings are set further back from the road with large parking areas in front. This type of development is inconsistent with the "Village within the City" nature and feel of the community.

In addition, the waiving of parking requirements for new businesses has occurred in a few locations, exacerbating the current parking issues along the corridor.

### **Opportunities**

The Eastwood Neighborhood Planning group formulated a resolution that amended the Zoning Rules and Regulations of the City of Syracuse by creating an Eastwood James Street Overlay District. On August 14, 2000, the City Planning Commission adopted this resolution, which was subsequently signed by the Mayor on September 11, 2000.

The amendment to the Zoning Rules and Regulations is intended to protect the traditional streetscape of the James Street corridor (especially maintaining and stimulating a pedestrian friendly environment) while accommodating and encouraging continued business and civic growth. It also establishes standards for setbacks, yards, parking arrangements, lot coverage, signage, visual barriers, and building facade treatment. In addition, the amendment establishes a Design Review Board and review procedures for projects and changes within the overlay district.

Closely following the new Eastwood James Street Overlay District when new businesses come into the neighborhood may assist in reducing the incidences of waiving parking requirements along the corridor.

In addition, the Onondaga County Settlement Plan is anticipated to include a blueprint for creating a parallel zoning code that may also be applicable to James St.

### Constraints

James St. is primarily developed and since zoning changes cannot be imposed on existing land uses, it may be a number of years before desired changes are observed.

### City Ordinances and Enforcement

#### Issues

There is general disregard for the following City of Syracuse ordinances:

- The owner, occupant, or agent of any property in the City of Syracuse is responsible for maintaining and keeping sidewalks clear of snow and ice.
- Property owners are responsible for keeping their sidewalks clear of trash, yard waste and any other type of debris.

There is also general disregard for the following City of Syracuse police ordinance that states that a person is not allowed to park a vehicle in any of the following places:

- On a sidewalk or between a sidewalk and the curb or the edge of the road where there is no curbing;
- Blocking the entrance or exit of a driveway, public or private;
- Within ten feet of a fire hydrant;
- At any place that is posted by official signs prohibiting stopping, standing or parking; and
- On any ground, lawn or vegetated areas, public or privately owned.

### **Opportunities**

If there is a violation of the sidewalk ordinance, it can be reported to the City through their hotline, 448-CITY. City parking violations can be reported to the Syracuse Police Department's non-emergency telephone number at 422-5111. Vehicles parked in violation of this ordinance will be ticketed. In addition, vehicles parked in front of a fire hydrant or on any ground, lawn or vegetated areas, public or privately owned may be towed away by the police at the owner's expense.

Educational programs to increase awareness may be beneficial and cut down on the lack of compliance.

Increased enforcement of these ordinances, especially by the police located at the TOPS trailer on James St., may assist in decreasing the number of offenders.

### Constraints

Reaching the target audience to make them aware of their responsibilities may be challenging. In addition, manpower may not be available to fully enforce the existing ordinances.

### CHAPTER 9 – PRELIMINARY ALTERNATIVES

### 9.1 Introduction

This chapter presents preliminary transportation alternatives for implementation regarding corridor improvements along James Street in the City of Syracuse. This chapter also evaluates these alternatives based upon a series of preliminary performance criteria. The alternatives discussed were derived from an assessment of baseline information collected, public comments, and review of similar, previously completed SMTC corridor studies. The preliminary alternatives will be presented to the Study Advisory Committee (SAC) for comment and suggestions.

A range of potential alternatives was developed for addressing various items identified in Chapter 8. Where applicable and appropriate, these alternatives are grouped/classified according to the associated level of effort and/or capital investment necessary for implementation, as follows:

- Low, meaning items primarily associated with management, enforcement, or procedures;
- *Medium*, indicating a middle range of effort, such as larger measures of management or enforcement, possible further examination through more detailed or focused future studies, and/or lower cost capital investments; and
- *High*, indicating a major change of policy, regulations, and/or high level of capital investment and time for approvals/funding.

The preliminary alternatives listed are not intended to represent an exhaustive compilation of fully developed designs or approaches for corridor improvements along James Street. They will serve as a starting point of discussion among the members of the project's SAC regarding the overall reasonableness of design concepts and possible courses of action for improvements.

Each of the alternatives were evaluated in-house against the following performance criteria, which have been utilized in similar, previously completed SMTC corridor studies:

- Ability to improve the safety and security of the transportation system for vehicular and non-vehicular users:
- Ability to facilitate integration and connectivity among various modes of transportation (i.e., automobile, bus, pedestrian, bicycle);
- Specific ability to improve the experience, access, and mobility of pedestrians and transit users in the corridor;
- Ability to maintain adequate traffic mobility for vehicular users in the corridor; and
- Ability to be reasonably implemented, considering policy and regulatory jurisdictions and prerequisites to achieve project funding.

Preliminary alternatives that meet these evaluation criteria will be carried forward for further refinement, development, and analysis in Chapter 10.

### 9.2 Vehicular Travel

### **Travel Speeds**

Issues regarding travel speeds came from comments that were made through the public involvement process, and SMTC staff as well as City of Syracuse DPW staff observation, regarding incidences of traffic moving at speeds higher than the posted speed limit. Analyses indicated that these instances occurred most near the intersections of James St. with Lillian Ave. and Homecroft Rd., as well as at the eastern end of the corridor.

#### **Alternatives**

Low

• Installation of speed limit signs along the corridor where they are missing, and/or where the City of Syracuse Police and/or City of Syracuse DPW deems appropriate.

### Medium

- Periodic use of radar monitoring devices by the Syracuse Police at key points along the
  corridor. The intent of such devices is to inform the driver of their current travel speed
  thereby encouraging compliance with the speed limit. This technique is typically used along
  regularly traveled commuter corridors and around special uses such as schools and hospitals,
  and could be utilized along James St.
- Increased police enforcement efforts along targeted portions of the corridor. The primary intent would be to discourage speeding by developing a reputation for a larger police presence. It would be beneficial to involve the police officers based at the TOPS trailer on James St. in this effort. These efforts should be well publicized in local media for the greatest impact on commuters regularly traveling the corridor.

### High

• Implement a larger program involving construction of more comprehensive traffic calming measures. These could range from lower cost improvements involving items like enhanced striping to more capital-intensive projects (typically arising out of a full reconstruction project) such as the construction of pedestrian bulb-outs at intersections and more constrained lane configurations to encourage slower speeds. Items associated with the former technique are discussed in conjunction with pedestrian improvements under Section 9.5.

### **Evaluation of Alternatives**

It was determined that each of the alternatives listed would meet the evaluation criteria. Enforcement techniques were determined to focus more on monitoring in the short term, followed by a manned presence, in consideration of manpower requirements. The higher-cost capital improvements associated with traffic calming would most likely be best implemented with proposals for improved pedestrian, bicycle and transit access at key areas along the James St. corridor, such as the Lillian Ave., Marlborough Rd., Midler Ave. and Homecroft Rd. areas.

### Pavement, Pavement Markings, and Curbs

Issues identified regarding conditions of pavement focused on the areas from Grant Blvd. to Hillsdale Ave., and Edwards Ave. to Midler Ave., which were rated as being in poor condition. Curb conditions were rated as poor primarily at the eastern end of the corridor. Travel lane markings were rated as being in fair condition from Shotwell Pk. to Collingwood Ave. Intersection pavement markings throughout the corridor are primarily in fair condition, and in are in poor condition at James St./Midler Ave. and James St./Clover Ridge Dr./E. James St.

### **Alternatives**

#### Low

• Re-stripe all pavement markings as part of the City's annual pavement marking program.

### Medium

As part of the City's Street Reconstruction Program, implement a milling and overlay project
to address poor pavement conditions. Such a program could also include spot replacement of
poor curbing in key locations, installation of Americans with Disabilities Act (ADA)
compliant curb ramps, and a comprehensive pavement marking program.

### High

• Undertake a comprehensive reconstruction program of James Street including full reconstruction of the right-of-way (i.e. sidewalks), a comprehensive pavement marking program, as well as the potential for underground installation of aerial utilities, and installation of enhanced lighting.

### **Evaluation of Alternatives**

It was determined that all of the alternatives would meet the evaluation criteria. It was also determined that the medium- and high- level proposals could only be implemented in the long term, given the approval and funding process associated with such capital improvements.

### **Intersection and Arterial Level of Service (LOS)**

The majority of the approaches to each of the signalized intersections within the study area for the existing PM peak hour operate at a LOS C or better, with the exception of specific approaches at James St./Midler Ave. and James St./Homecroft Rd.

The majority of approaches are projected to continue to operate at a LOS C or better through the year 2015, with the exception of specific approaches at James St./Shotwell Pk./Grant Blvd., James St./Midler Ave., and James St./Homecroft Rd.

All of the street segments currently operate at a LOS D or better except for the following:

• In the eastbound direction, the street segments from Shotwell Pk. to Hickok Ave. and S. Collingwood Ave. to S. Midler Ave., which operate at a LOS E.

• In the westbound direction, the street segments from Lamson St. to Homecroft Rd. and Hickok Ave. to Grant Blvd., which operate at a LOS F and E, respectively.

For future year 2015, the following road segments are projected to operate at a LOS E or F:

- In the eastbound direction, street segments from Shotwell Pk. to Hickok Ave., Hickok Ave. to North Ave., S. Collingwood Ave. to S. Midler Ave. and S. Midler Ave. to Homecroft Rd.
- In the westbound direction, street segments from Lamson Rd. to Homecroft Rd., Homecroft Rd. to N. Midler Ave., and Hickok Ave. to Grant Blvd.

Through the public involvement process, it has been discovered that there are conflicting public views regarding traffic movement through intersections and along the James St. corridor. Many individuals expressed an interest in slowing traffic down to retain the "Village within the City" atmosphere that Eastwood is noted for. In direct conflict with this viewpoint, some citizens are concerned about moving through the intersections and street segments, indicating that the current coordination of traffic signals causes vehicular traffic to back up.

### **Alternatives**

### Low

• Continue to monitor the situation prior to implementing measures to expand capacity.

#### Medium

- Based on the Synchro analysis, continued signal coordination within the study area is recommended. Discussion with the City of Syracuse traffic consultant indicated that optimizing the signalized intersections could improve the level of service along James St. Further examination of signal timing and phasing would be required to determine the most appropriate course of action for signal optimization.
- Program and implement intersection improvements at key locations where feasible, such as those recommended at the intersection of James St./Midler Ave. by the City of Syracuse traffic consultant.

### High

- Include the James St. corridor in the signal interconnect system, or some other type of signal system deemed appropriate by the City of Syracuse DPW. This would require hardware and software equipment upgrades at the signalized intersections along the corridor.
- Implement a larger program involving construction of more comprehensive traffic calming measures (see Section 9.2 and 9.5).

### **Evaluation of Alternatives**

It was determined that all of the alternatives would meet the evaluation criteria. It was also determined that while the low- and medium- level alternatives could be completed in the short term, the higher level improvements associated with traffic calming would be best implemented for improved pedestrian, bicycle and transit access at key areas along James St. (see Section 9.2).

### **Signal Control**

Issues associated with signal control include the parking of vehicles over loop detectors at the intersections of James St./North Ave. and James St./Homecroft Rd., where parking is illegal. In addition, opportunities exist to improve signal coordination along James St.

### **Alternatives**

#### Low

- Examine placement of parking signage in relation to loop detectors, and modify parking accordingly.
- Encourage enforcement of parking regulations along the corridor.

### Medium

- Based on the Synchro analysis, continued signal coordination within the study area is recommended. Discussion with the City of Syracuse traffic consultant indicated that optimizing the signalized intersections could improve the level of service along James St. Further examination of signal timing and phasing would be required to determine the most appropriate course of action for signal optimization.
- Program and implement intersection improvements at key locations where feasible, especially those previously recommended at the intersection of James St./Midler Ave. by a consultant to the City of Syracuse.

### High

• Include the James St. corridor in the signal interconnect system, or some other type of signal system deemed appropriate by the City of Syracuse DPW. This would require hardware and software equipment upgrades at the signalized intersections along the corridor.

### **Evaluation of Alternatives**

It was determined that all of these alternatives would meet the evaluation criteria. It was also determined that the high-level improvement could only be implemented in the long-term, given the necessary capital requirements of placing the signalized intersections into some type of signal system.

### Intersection Level of Service (LOS) – Unsignalized

The HCS analysis for the existing PM peak hour indicates that the majority of the approaches to each of the unsignalized intersections within the study area operate at a LOS C or better except for one approach that currently operates at a LOS D, five that operate at a LOS E, and one that operates at a LOS F. The 2015 future year levels of service indicate that the majority of the northbound and southbound approaches to the unsignalized intersections are projected to operate at a LOS E or F, with a few exceptions. The northbound approach at James St./W. Milford Dr. is

projected to operate at a LOS C and six intersection approaches are projected to operate at a LOS D.

### **Alternatives**

### Medium

- Continue to follow the recommendations made by the consultant to the City of Syracuse DPW at the intersection of James St./Leo Ave./E. Milford Dr.
- If the signalized intersections are optimized along the corridor, the coordination of the traffic lights along James St. may improve. This could ultimately improve the traffic flow through the unsignalized intersections. Further examination of signal timing and phasing would be required to determine the most appropriate course of action for signal optimization.
- Complete further studies at heavily traveled unsignalized intersections along the corridor to determine if traffic signals are warranted.

### High

- Inclusion of James St. in the signal interconnect system, or some other type of signal system deemed appropriate by the City of Syracuse DPW, may also assist in improving traffic flow through the unsignalized intersections. This would require hardware and software equipment upgrades at the signalized intersections along the corridor.
- Addition of traffic signal lights at unsignalized intersections where warranted.

### **Evaluation of Alternatives**

It was determined that the medium-level alternative meets the evaluation criteria and could be completed in the short term. It was also determined that the first high-level improvement meets the evaluation criteria and could only be implemented in the long-term, given the necessary capital requirements of placing signalized intersections into the City's interconnect system, or some other type of signal system.

The implementation of the high-level alternative to add signals could only occur if the result of such a study recommends the addition of a traffic signal.

### 9.3 Traffic Control Devices

### **Traffic Signs**

Issues identified included the lack of an appropriate No Left Turn sign on the E. James St. approach to James St. In addition, the No Left Turn sign on the north side of James St. is bent.

### **Alternatives**

### Low

• Installation of appropriate No Left Turn signage at the intersection of James St./Clover Ridge Dr./E. James St.

### **Evaluation of Alternatives**

It was determined that the low level alternative listed would meet the evaluation criteria.

### **On-Street Parking**

Issues identified regarding on-street parking included:

- A lack of understanding regarding the multiple types of parking restrictions along the corridor (e.g., no parking, no standing, no stopping);
- Numerous on-street parking regulations;
- Illegal on-street parking at intersections that diminishes sight distance; and
- Missing/illegible parking control signs in three locations.
- The waiving of parking requirements for new businesses has occurred in a few locations, exacerbating the current parking issues along the corridor.

### **Alternatives**

#### Low

- Implementation of an enhanced police enforcement program along the corridor at key problem locations (primarily between James St./Stafford Ave. and James St./Homecroft Rd, where James St. has more commercial establishments). To help educate the public, such a program could initially consist of an appropriate grace period before actual enforcement measures are undertaken, especially since there has been a general lack of parking enforcement along the corridor.
- Closely following the requirements of the new James Street Overlay District may assist in reducing the incidences of waiving parking requirements along the corridor.

### Medium

- Where critical to improve mobility and safety, use striping to further delineate no parking areas (e.g., key bus stop locations, areas with constrained right-of-way, merge areas, fire hydrants, etc.).
- Explore opportunities for businesses to share access to parking lots (i.e. if a business is only open at night, it may be possible for the public to have access to the parking lot during the day, and vice versa).
- Undertake a comprehensive on-street parking master plan for the corridor in consultation with local residents and businesses. Such a plan would look at techniques to simplify

parking provisions and identify key locations where controls are needed. As part of this plan, the City of Syracuse DPW should look to consolidate loading zones and parcel pick-up areas. In addition, the loading zone and parcel pick-up locations should be reviewed periodically to see if the need still exists for such parking.

### High

- Consider the option of having the businesses load and empty supply trucks in the back of their buildings by creating an alley that runs parallel to James St.
- Consider undertaking actions at the Common Council level to amend the City parking regulations to simplify the number of different parking zones along the corridor (i.e., merging all the "no parking" and "no standing" zones).

### **Evaluation of Alternatives**

It was determined that the low- and medium-level alternatives would meet the evaluation criteria, with one clarification. Implementation of shared parking lots would require the cooperation and coordination of interested business owners. It was determined that the high-level alternatives may be premature absent a comprehensive evaluation of on-street parking in the context of a master plan. However, the formulation of preliminary measures regarding possible changes was progressed to the recommendations phase.

### 9.4 Accidents

Issues identified regarding accidents focused on a relatively high number of rear-end and sideswipe accidents, as well as accidents involving bicycles/pedestrians.

### **Alternatives**

### Low

• Institute educational programs in public schools regarding pedestrian and bicycle safety (see Section 9.4 and 9.5).

### Medium

• Implement a striping program to better differentiate travel lanes from the parking lanes along the corridor, as well as locations where the street appears to be wide enough to accommodate two vehicles, side by side, to encourage better lane compliance and to reduce the chance of sideswipe incidents (especially along the eastern end of the corridor).

### High

• Institute measures in the vicinity of Lillian Ave., Marlborough Dr., and Homecroft Rd., as well as at Midler Ave. to facilitate pedestrian access, such as pavement speed limit markings, grooved pavement, and enhanced pedestrian crossings, and/or other traffic calming techniques.

### **Evaluation of Alternatives**

It was determined that all of the alternatives met the evaluation criteria. It was also determined that high-level capital improvements should be organized in a comprehensive manner with pedestrian access alternatives in key areas (Lillian Ave., Marlborough Rd., Homecroft Rd. and Midler Ave.).

### 9.5 Bicycle Travel

Issues identified regarding bicycle travel included the lack of designated NYS or City bicycle routes or lanes; the lack of bicycle racks along the corridor; and the general lack of awareness of bicycle regulations and guidelines.

Overall, the width of the right-of-way and the presence of on-street parking significantly limit the potential for adding a designated bicycle lane within the more commercialized area along James St., primarily from James St./Shotwell Pk./Grant Blvd. to just beyond James St./Homecroft Rd. However, the possibility of striping a bicycle lane from beyond Homecroft Rd. eastbound could be an option. Pavement markings at this location may also assist in slowing traffic. The majority of alternatives are limited to different levels of education for bicycle safety, due to the fact that most of the corridor is fronted with commercial uses.

#### **Alternatives**

Low

• As part of an awareness campaign/community policing effort, issue informational "citations" (flyers) to younger bicyclists noting key issues on bicycle safety in the field, when instances of unsafe practices are observed. Utilizing the police officers based at the TOPS trailer would be ideal for completing this effort.

### Medium

- Institute an elementary school program on issues of bicycle and pedestrian safety in the Syracuse public and parochial schools as part of the local, county, or state police community relations programs.
- Pending a more detailed study, stripe a bicycle lane from a point near Homecroft Rd. to the eastern end of the study area.

### High

• Implement a needs-based discount or giveaway program for bicycle helmets for area parents. Such a program could have a prerequisite of children's attendance at a safe bicycling course and could be coordinated with local community centers and/or churches.

### **Evaluation of Alternatives**

It was determined that the low and medium alternatives related to the education of bicycle safety, would meet the evaluation criteria and should be implemented as part of a coordinated effort in

the short term. It was also determined that the medium-level addition of a bicycle lane would require a more detailed analysis to examine its feasibility in this location, but could also be implemented in the short term. The implementation of the high-level alternative may be limited to the long-term, based upon funding availability.

### 9.6 Pedestrian Travel

Issues identified for pedestrian facilities are as follows:

- Areas of poor sidewalk conditions, or areas where property owners have paved over sidewalks and lot frontages with asphalt as part of parking lot improvements and/or spot replacement of sidewalk.
- Lack of access during winter months because of snow storage on sidewalks or property owners not clearing sidewalks.
- Lack of knowledge on the operations of and disregard for the use of pedestrian-button activated street crossings.
- Lack of awareness of sidewalk maintenance responsibilities of property owners or hotlines to report items such as poor sidewalk conditions.
- Poor and fair condition of crosswalks.
- Lack of appropriate ADA curb ramps at selected locations and poor transition between the sidewalk and street surface.
- Lack of appropriate street furniture (trash receptacles, benches, pedestrian scale lighting) to adequately define pedestrian areas and create a positive visual environment.

### **Alternatives**

Low

- Undertake a community awareness campaign to distribute informational materials to area homeowners/businesses on their responsibilities for sidewalk maintenance and hotline numbers on safety issues (sidewalks, lighting etc.).
- As part of the City's capital programs, install user-friendly signage as part of pedestrian crossing buttons, noting procedures for safe movements.

### Medium

- Adopt minimum sidewalk improvement standards at the Common Council level to prevent future use of asphalt paving by private property owners.
- Institute spot improvement or replacement program for sidewalks along the corridor. Such a program could be administered by the City as an eligible area benefit activity in its community development block grant program or be structured as a needs-based 50/50 match program tied to a stepped-up enforcement program (i.e., property that could not afford to comply with the standards would be eligible for a grant).
- As part of City's capital improvement activities, install missing ADA curb ramps and

undertake spot repair of existing ramps through milling/overlay to improve sidewalk to street transition

- Explore opportunities for business/community organization-sponsored maintenance from group purchase of services, such as snow removal along frontages/sidewalks.
- Undertake a coordinated program of streetscape and pedestrian improvements at key locations along the corridor. Such a program could seek to reduce the number of curb cuts through coordination with local businesses and install enhanced pedestrian improvements such as crosswalks, sidewalks, patterned concrete verges (grassed area between curbline and sidewalk) in high traffic areas, and appropriate street furniture.

### High

• Develop a plan to undertake a comprehensive, coordinated reconstruction program along the corridor to focus on correcting pedestrian and vehicle conflicts, and issues such as inadequate sidewalks or ADA curb ramps (see 9.2).

### **Evaluation of Alternatives**

It was determined that each of the alternatives would meet the evaluation criteria with two clarifications. Under the medium level alternatives, it was recognized that adoption of minimum sidewalk improvement standards would have City-wide implications and could best be achieved through a comprehensive adoption of site plan improvement standards. Secondly, it was recognized that the creation of a matching grant program for sidewalk replacement might be constrained by funding availability.

### 9.7 Transit

Issues regarding transit include the predominance of bus stops being located on the near-side of intersections. Far-side bus stops would be preferred because they generally produce fewer delays to the traffic surrounding the stop, give more area for the manipulation of the vehicle, allow greater sight distances for both the driver of the bus and passengers boarding and exiting the vehicle, and, in general, provide a safer environment for vehicle and passenger interaction. In addition, there are numerous bus stops within the 1.14-mile study area, causing buses to stop at every block to pick up passengers. This sometimes causes delays in traffic flow. The configuration of the James St./Midler Ave. intersection is difficult for buses to maneuver. Also, bus shelters do not exist along the corridor.

### **Alternatives**

#### Medium

- Implement the recommendations made by the consultant to the City of Syracuse DPW at the James St./Midler Ave. intersection. Moving the stop bar back could assist buses in maneuvering through this intersection.
- Further examination of bus usage along the corridor via a transit use study/survey could be beneficial.

• Where feasible, and after the above transit use study/survey is completed, remove bus stops that are not well utilized.

### High

- Where feasible, from the perspective of adequate right-of-way, lack of parking conflicts, and the moving of parking meters, move bus stops to the far side of intersections.
- Examine opportunities for installation of bus shelters and/or seating at the most heavily used stops along the corridor once the medium-level transit use study/survey is complete.

### **Evaluation of Alternatives**

It was determined that each of the alternatives would meet the evaluation criteria, however, implementation of the high level alternative to add bus shelters and/or seating could only occur after the medium-level transit use survey is complete. In addition, due to parking meter locations, moving bus stops to the far side of intersections could be a costly improvement to implement along the corridor.

### 9.8 Regulations and Development Control

### **Zoning**

Residents in the Eastwood area determined that zoning along the corridor needed to be reexamined especially in regard to building placement. The Eastwood Neighborhood Planning group formulated a resolution amending the Zoning Rules and Regulations of the City of Syracuse by creating the Eastwood James Street Overlay District. On August 14, 2000, the City Planning Commission adopted this resolution, which was subsequently signed by the Mayor on September 11, 2000.

The amendment to the Zoning Rules and Regulations is intended to protect the traditional streetscape of the James Street corridor (especially maintaining and stimulating a pedestrian friendly environment) while accommodating and encouraging continued business and civic growth. It also establishes standards for setbacks, yards, parking arrangements, lot coverage, signage, visual barriers, and building facade treatment. In addition, the amendment establishes a Design Review Board and review procedures for projects and changes within the overlay district.

The waiving of parking requirements for new businesses has occurred in a few locations, exacerbating the current parking issues along the corridor.

In addition, the Onondaga County Settlement Plan is anticipated to include a blueprint for creating a parallel zoning code that may also be applicable to James St. and the surrounding area.

### **Alternatives**

### Low

• Utilize and closely follow the new Eastwood James St. Overlay District anytime new development is being considered.

### High

• Implement alternative or parallel zoning approach(es) that are to be included within the draft Onondaga County Settlement Plan.

### **Evaluation of Alternatives**

While each of these alternatives would meet the evaluation criteria, it was recognized that the high-level alternative addresses issues that have implications reaching beyond the James St. corridor. Recommendations derived from the Onondaga County Settlement Plan would need to be in the context of a citywide program.

### **City Ordinances and Enforcement**

Issues involving other City ordinances center upon general disregard for sidewalk maintenance and parking regulations.

### Alternatives

See Sections 9.2 and 9.6.

### **CHAPTER 10 – RECOMMENDATIONS**

Based on the evaluation of alternatives discussed in Chapter 9, this section presents recommendations that are proposed for further study and implementation along the James St. corridor.

This section includes a discussion of recommendations that apply to the entire corridor as well as a few site-specific recommendations for key locations along the corridor.

In some cases, the recommendations include illustrations of proposed physical improvements along the corridor. These are presented only to illustrate the design and planning concepts set forth in each of the recommendations. They are not intended to represent specific proposals. All of the recommendations included in this section would require further investigation, review, and approval in accordance with local, state, and/or federal rules and regulations, depending on the agency/entity that would ultimately implement the recommendations and associated funding and regulatory jurisdictions.

### 10.1 Corridor Wide Recommendations

A series of corridor wide actions are recommended for implementation that would address mobility issues along the James St. corridor. These primarily include enforcement, organizational/educational, and regulatory measures to help enhance pedestrian, bicycle, and transit access in the corridor, and lower cost, short-term capital improvements. The majority of programs listed in this section have been previously recommended within the South Salina Street Corridor, completed in March 2001 by the SMTC. The programs listed below are also applicable to the James St. corridor and are therefore recommended for James St. as well.

### **Enforcement and Educational Programs**

Travel Speed Monitoring/Enforcement

It is recommended that the Syracuse Police Department examine the potential to complete an enhanced program of monitoring and enforcement to assist in decreasing speed limit violators along the corridor. The objective of such a program would be to facilitate a safer environment for pedestrians, bicyclists, and transit users, particularly during morning and evening peak hours. As mentioned in Section 8.2, the City of Syracuse DPW requested that the City of Syracuse Police Department complete a radar speed check at various points along James St. The City Police are currently in the process of completing the speed check.

Traditionally, when speeding is a problem, the approach has been to deploy a radar-equipped traffic officer to problem locations to monitor the speeds and issue citations. The presence of a patrol car usually causes drivers to slow down while police are present. If an officer is regularly assigned to that location to maintain a visible presence, drivers who regularly traverse that route will at least be mindful of their speed when passing that location.

An alternate approach involves "self policing" traffic speeds, which relies upon the fact that most drivers will reduce excessive speed if they are reminded that they are speeding. The approach is becoming more popular as police departments struggle to do more with limited resources. Driver awareness of travel speed would be gained through the use of an automatic, radar-driven sign that displays speeds to individual drivers as they approach the sign (see Figure 10-1). Such signs could be mounted on a patrol vehicle, built into a trailer, or permanently installed on the side of the road. They are typically used where there is greater risk from someone exceeding the speed limit, such as near school crossing zones (near Homecroft Rd.) or in areas where there is a transition from highway speeds to local speeds, such as near E. James St./Clover Ridge Dr./James St., where traffic is entering/exiting James St. from Thompson Rd. This device can also maintain a record of speeds and the number of vehicles that pass the device. To address the portion of drivers whose driving behavior would not be affected by such an approach, it is also recommended that periodic police monitoring and enforcement be completed.

To ensure public awareness and effectiveness, especially by daily commuters, any enhanced enforcement programs along the corridor should be supplemented with a series of media releases announcing the objectives of the program. Such an approach often focuses on local radio coverage as part of morning/evening traffic reports.

Figure 10-1 Typical Radar Monitoring Device



### Parking Enforcement

As discussed in Section 9.2, the primary issues related to parking along James St. involve general confusion regarding the multiple types of parking regulations that apply to various sections of the corridor, as well as problems with illegal parking around commercial land uses and at intersections. As a first step to address these issues, it is recommended that an enhanced program of parking enforcement be implemented along the corridor, with a first objective of helping to educate residents and visitors regarding the existing parking regulations. This program would involve an enforcement period where only warning citations/information would be issued, including flyers explaining existing parking regulations in clear terms. This phase of the recommended program should continue periodically for a series of months to serve as an appropriate grace period for residents and visitors to gain a better understanding of the objectives and specifics of existing parking controls. Such a phase would be followed by a phase of conventional monitoring and issuance of citations for illegal parking. This would be especially beneficial along James St. since the majority of the time, parking regulations have not been strictly enforced.

### Bicycle Enforcement/Community Education

As discussed in Section 9.4, a major issue regarding bicycle travel is a lack of awareness of bicycle safety issues, primarily by younger bicyclists. It is recommended that a public education program be organized to increase awareness of bicycle safety issues and regulations such as the bicycle helmet law. Such a program could have joint sponsorship by the Syracuse Police Department, Syracuse Public and Parochial Schools in the area, and/or community/church organizations.

Early phases of the program could involve, as part of a community policing effort, the issuance of informational flyers upon observation of unsafe practices (e.g., riding without a helmet, traveling against traffic, etc.). Other elements could include sessions in elementary school classes, ranging from a teacher-conducted program based upon a pre-approved lesson plan prepared by the sponsor, to special visits by police officers to teach the benefits of bicycle and pedestrian safety (similar to typical programs on fire safety). The police officers based out of the Eastwood TOPS trailers are on bicycle patrol during summer months. Their presence at the local schools could assist in reinforcing bicycle regulations when children see them again patrolling their neighborhood streets. Other enhancements could include poster contests for local schools and/or after school programs such as bicycle "fairs" or seminars to teach bicycle safety in local playgrounds or community centers.

### Community Awareness of Existing City Regulations/Programs

Through the public involvement process, it was discovered that some residents along the corridor lack awareness of some of their responsibilities regarding street-level improvements/maintenance, as well as the City's current programs for reporting infrastructure problems. These include:

- Property owners' responsibilities regarding sidewalk maintenance (repairs, snow clearance, etc.).
- Non-emergency police numbers for reporting parking violations.
- City hotlines for reporting inoperative traffic and pedestrian signals, etc.

It is recommended that the City implement a community awareness campaign to better inform citizens of public resources and resident responsibility. Such an effort would include the development of easily understandable brochure materials explaining these issues. These could be distributed to schools, community centers, churches, and commercial establishments as well as business associations. To maximize the potential for reaching target audiences, many communities have issued such materials in conjunction with other widespread mailings, such as property tax billings. Some communities have undertaken joint efforts with utility companies as part of their community service programs, issuing community information as part of regular monthly billings. In addition, local commercial establishments along the corridor may be willing to display and/or distribute such informational material.

### **Parking Master Plan**

It is recommended that the City of Syracuse undertake the development of a Parking Master Plan for the corridor. The objective of such a study would be to conduct a focused assessment of existing parking availability and suggest changes to simplify the existing parking structure to make it more understandable to the general public, as well as to facilitate enforcement efforts. The ultimate product of such a plan would be used to assist the Common Council in proactive changes to the parking regulations along the corridor to best address varying land use needs. It would also be important to closely follow the new James Street Overlay District and the parking requirements contained therein.

Because of the diverse interests that such a plan would need to address, the master plan process would need to solicit the input and opinion of multiple stakeholders (e.g. residents, business owners, churches, schools, etc.). Issues, policies and procedures that should be addressed in such a master plan could include, but not be limited to the following:

• Categories of parking controls (e.g., no stopping, no standing, no parking, etc). Currently the corridor has multiple parking control categories that often cause confusion to residents and visitors. Several short-term recommendations for consolidation or amendment of these controls that would not impact total parking space supply could be examined. For example, most areas along intersections are now regulated as "no stopping" zones. "No stopping" zones are typically used only in areas where maintaining traffic movement is critical in terms of safety. Areas where this is not the situation could be designated as "no parking". In turn, consideration could be given to converting all "no standing" zones to "no parking" zones, given that the difference between such zones is very subtle and is likely not enforced. Changing this classification would only involve allowing vehicles to be stopped while loading/unloading merchandise or passengers rather than passengers only.

• Location and permitting of loading zones/parcel pick-up/handicap spaces. The City's Department of Public Works currently reviews and issues permits for loading zones, parcel pick-up, and handicap spaces. However, no mechanism or process is in place to remove such special permits upon a change of occupancy or use of a building. Consideration could be given to linking other City review processes (e.g., certificate of occupancy, property tax collection, etc.) to periodically update on-street controls such as this. An alternate process could involve annual or biannual renewal of such permits to ensure continued need.

### **Corridor Wide Capital Improvement Recommendations**

A series of lower-cost improvements are recommended to be undertaken as part of the City of Syracuse's regular capital improvement programs. Each of these relate to improvements along the entire James St. corridor to facilitate mobility and access.

### Street Striping Program

It is recommended that the City undertake a street striping program to better define zones for travel lanes, parking areas and pedestrian crossings along the corridor. A first priority in such a program should be given to key areas discussed in Section 10.3, however, this type of program is applicable in all areas of the corridor. A key component of such a program would include the addition of a solid travel lane stripe to separate the travel lane from on-street parking areas. This type of technique has been regularly used in suburban highway sections, but is becoming more common in urban locations. It would better delineate the vehicular zone and prevent drivers from inappropriately using unoccupied parking lanes as traffic lanes, thus avoiding accidents. In addition, use of such a technique in urban areas provides some refuge for bicyclists in the absence of suitable right-of-way width to provide a dedicated bike lane. No striping should be implemented until after a comprehensive parking plan has been undertaken for the corridor so as to avoid potential conflicts.

### Spot Installation/Repair of ADA Curb Ramps

It is recommended that the City of Syracuse undertake a program of inspection and repair/installation of missing or inadequate ADA curb ramps along the corridor. Pending future actions on more comprehensive capital improvements, this should include a small program of milling and overlay at curb ramp locations where there is not a flush transition between the curb and road surface. As a result of the corridor assessment and by copy of this report, the SMTC has given the curb ramp locations to the City of Syracuse DPW for appropriate action.

### Pedestrian Crossings Buttons and Signage

To facilitate better understanding on the use of pedestrian crossings along the corridor, it is recommended that the city institute a program of signage installation at each pedestrian-activated button location (see Figure 10-2). This signage will inform the pedestrian of the meaning of pedestrian crossing signals, as well as when it is safe to proceed.



Figure 10-2 Typical Pedestrian Information Sign at Crossing Button Locations

### Far-Side Bus Stops

Chapter 9 suggested the potential for moving bus stops along the corridor to the far side of an applicable intersection, installed with appropriate lead walks to sidewalks on grass verge areas. In addition, the corridor lacked bus shelters throughout.

It is recommended that Centro further examine the option of creating far side bus stops and bus shelters with benches at key locations along the corridor. A further study on which locations had the most usage would need to be conducted. First priority should be given to existing bus stop locations with the greatest patronage at signalized intersections. These locations would yield the greatest benefits of far-side bus stop location and additions of bus shelters. Secondary priority should be given to far-side stops at other suitable locations at signalized intersections. This information could also be utilized to determine if it would be appropriate to remove any of the existing bus stop locations. It is important to note that moving bus stops to the far side of intersections along the corridor could be a costly venture due to the numerous parking meters that may have to be moved to accommodate far side bus stops.

It is recommended that a joint effort be undertaken by the City, in conjunction with Centro, to examine and develop an urban design program to create a better streetscape environment to achieve these mobility objectives.

### **Zoning Recommendations**

In summer 2000, the Eastwood section of the City of Syracuse reviewed zoning regulations that govern permitted development along the James Street corridor for possible amendment or

refinement to facilitate future development that is more consistent with the urban development character of the corridor. In fall 2000, the Eastwood James St. Overlay District was approved, placing an additional set of regulations in specific locations in Eastwood along the corridor. Utilization of this new overlay district is recommended. Since the waiving of parking requirements for new businesses has occurred in a few locations, it is also recommended that the new regulations be closely followed, especially in regard to the parking requirements.

If a more ambitious approach is still desired, the implementation of a comprehensive "parallel" development ordinance as currently being set forth by Onondaga County's efforts in the development of the Onondaga County Settlement Plan is recommended.

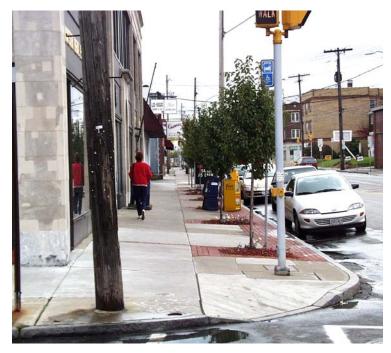
### **Streetscape Initiative**

Streetscape characteristics currently exist in the form of street trees and brick along the sidewalk between Marlborough Rd. and Lillian Ave. (see Figure 10-3), and just west of N. Edwards Ave. The City of Syracuse also has plans to complete streetscaping in the 2300 block of James St. Further use along the corridor of the streetscape examples listed above, coupled with the possibility of the following recommendations, could assist in obtaining the "Village within the City" atmosphere desired by local residents:

- Further use of enhanced road striping to better define travel/turning lanes and pedestrian zones.
- Creation of enhanced crosswalks (either through striping or textured concrete) in key locations, primarily near schools, commercial establishments, and highly pedestrian- and bicycle-traversed areas.
- Consolidation and merging of curb cuts, although this would require extensive coordination with local businesses to create cross access easements.
- Landscape improvements to create a consistent design character and positive pedestrian setting, such as new street trees, identification banners, and installation of textured concrete verges, benches and trash receptacles.

A higher-level investment might include underground installation of aerial utilities. This could only be feasible under a possible long-term reconstruction of James St.

Figure 10-3 Current Streetscaping Along James St.



Between Marlborough Rd. and Lillian Ave.



Between N. Collingwood Ave. and N. Edwards Ave.

### Short-Term Corridor Wide Recommendations

The majority of James St. is recommended for lower level of improvements in the short-term, focusing on striping improvements to better delineate the travel lane from parking areas, sidewalk replacement/repair in key locations, and installation of missing signage.

Recommended improvements involve measures to provide visual and other cues to drivers to reduce speeds and be more aware of pedestrians. These include:

- Enhanced crosswalks and striped travel lanes.
- Addition of ADA ramps where missing.
- Enhanced road markings for approaching traffic to indicate City speed limits, at the outer eastern end of the study area, to encourage transitioning to village speeds.

In addition, it is recommended that heavily traveled unsignalized intersections continue to be monitored within the study area. If deemed appropriate, further studies at these locations could be completed to determine if traffic signals are warranted.

The lower level improvements listed above could be completed in the short-term, depending on availability of funding. A higher-level investment might include underground installation of aerial utilities. This could only be feasible under a possible long-term reconstruction of James St.

### **Long-Term Recommendations for James Street**

Signal System

Inclusion of James St. in the City's signal interconnect system, or some other type of signal system deemed appropriate by the City of Syracuse DPW, would allow for:

- Ease of movement through the intersections and road segments along James St. Signal timings could be designed in such a way that those traveling at slower speeds will receive the green lights along the length of the corridor.
- Depending on the system utilized, if signal adjustments were deemed necessary, they could be made directly from the City of Syracuse traffic control center.

This project could only be implemented in the long-term, given the necessary capital requirements of upgrading the hardware and software at the ten signalized intersections on James St.

### Traffic Calming Techniques

Lower cost improvements involving items like enhanced striping, could be completed in the short-term, at relatively low cost. However, the possibility of adding pavement speed limit markings, grooved pavement, and enhanced pedestrian crossings and/or other traffic calming techniques are recommended in the long-term, and only after further study.

### Long-Term Reconstruction of James St.

Given the current physical characteristics of portions of James Street (pavement conditions, sidewalk conditions, etc.), as well as the fact that it serves as a main commuter route, the entire corridor could potentially be suitable for reconstruction in the long term.

The SMTC and the City could examine the potential for securing state and/or federal funding for a comprehensive road reconstruction project in the long-term future (i.e. 15-20 years). Such a project would need to undergo the standard federal review and approval process, for inclusion as a project in the SMTC's Long-Range Transportation Plan and subsequently its Transportation Improvement Program (TIP). It should be noted that this process would weigh such a reconstruction in terms of public benefits against other major projects in the Metropolitan Planning Organization (MPO) urban area.

Whether administered by NYSDOT or the City of Syracuse as a pass-through project, a reconstruction such as this would also need to follow procedures contained in NYSDOT's *Design Procedure Manual*. Depending on the scale of the project, it could include full reconstruction of the right-of-way (i.e., cartway and sidewalks), a comprehensive pavement marking program, as well as the potential for underground installation of utilities and installation of enhanced lighting. This could involve a substantial public investment.

### **10.2** Site Specific Recommendations

This section outlines recommendations specifically targeted at key locations within and along the James St. corridor.

### James St./Shotwell Pk./Grant Blvd.

The configuration of this intersection, as well as the timing and phasing of the traffic signal lights should be examined further in order to determine the appropriate course of action for improvements at this location. Therefore, it is recommended that the City of Syracuse complete an engineering and traffic analysis at this location to determine appropriate changes and/or upgrades for this intersection, as it is currently the master intersection, controlling the traffic signal lights eastbound along the corridor to the intersection of Lamson St. and Plymouth Dr.

Over the long term and with the appropriate upgrades, this intersection could become part of the City's signal interconnect system, or some other type of signal system deemed appropriate by the City of Syracuse DPW.

### James St./Midler Ave.

As mentioned in Chapter 8, in June 1999, consultants completed a Traffic Operations Review of James Street at Midler Avenue for the City of Syracuse. The objective for the study was to evaluate the possible need for a left turn signal for eastbound and westbound vehicles at the intersection of James Street and Midler Avenue.

After reviewing the capacity, accident history, and level of service analyses, it was determined by Clough, Harbour & Associates that an exclusive left turn phase is not warranted at the intersection of James St./Midler Ave.

Although an exclusive left turn phase was not recommended for this intersection, the following recommendations were made:

- Make adjustments to the signal timings (the study recommends specific timings)
- Repaint all faded pavement markings
- Add additional lane usage pavement markings
- Consider relocating the bus stop located on Midler Avenue
- Post a left turn prohibition sign facing vehicles exiting the Byrne Dairy parking lot onto Midler Avenue
- Move the southbound stop line on Midler Avenue back 25 feet

It is recommended that the City of Syracuse DPW follow through with the suggested improvements made through this study. All of the recommendations listed above could be completed in the short-term and at relatively low cost to the City of Syracuse.

### Eastern End of Corridor

The eastern end of the James St. corridor, primarily the area from E. James St. to Walter Dr., serves as a gateway into the Eastwood community. Traveling westbound on James St., prior to reaching E. James St., the pavement is striped for four-lane usage. After reaching E. James St., the pavement is not marked for four lanes, but is often utilized as four lanes. The recommendation for this portion of the corridor is to further study this location with the possibility of adding pavement markings in the vicinity of E. James St. to indicate a lane merge. Lane merge signage may also be appropriate at this location. Another option could be the addition of on-street parking at this end of the corridor. Utilization of any of these options could also assist in showing the motorist that they are entering a village setting, and may help to slow traffic down in this area of the corridor.

# CHAPTER 11 – PRELIMINARY IMPLEMENTATION PROGRAM

Table 11-1 presents a preliminary plan of implementation for recommended improvements discussed in Chapter 10. Programmed short-term actions would include additional planning, community education, and enforcement activities along the corridor, as well as lower cost capital projects to enhance mobility and access. Also during this period, further review and assessment of funding availability would be conducted for larger-scale improvements such as streetscape programs and possible long-term reconstruction efforts.

Medium-term actions, if determined to be financially feasible, would focus on studies to determine appropriate improvements for the James St./Shotwell Pk./Grant Blvd. intersection. Medium-term actions would also focus on the corridor wide Streetscape Initiative. In addition, if determined to be reasonable within the context of the SMTC's Long-Range Transportation Plan (LRTP) and Transportation Improvement Plan (TIP), preliminary engineering and necessary environmental clearance could be conducted in this period for the reconstruction of James St.

Long-term actions include the ultimate final design and construction activities associated with a reconstruction project on James Street. It should be noted that the long lead time necessary to review, fund, plan, and design a major reconstruction project would not necessarily preclude the shorter-term capital projects from being reasonable first steps to such a project. Where applicable, an estimated range of order-of-magnitude costs is presented for each action in the implementation plan. The cost estimates are preliminary, and are listed as low-, medium- and high-level. The ranges in cost were derived from examining prior, similarly scoped studies.

Table 11-1
Preliminary Implementation Plan

Action	Estimated Order-of- Magnitude Costs	Potential Responsible Agencies
Short-Term (0 to 5 years)		
Corridor Parking Master Plan	High	City of Syracuse
Corridor Wide Striping Program	Medium - High	City of Syracuse
Speed Monitoring/Enforcement	Low – Medium	City of Syracuse
Community Enforcement/Education Programs	TBD	City of Syracuse, Onondaga
(Parking; Bicycle & Pedestrian Safety)		County
Corridor Wide Capital Upgrades:		
- Curb Ramp Installation/Repair	Low - Medium	City of Syracuse
- Pedestrian Button Signage		
Far Side Bus Stops, Lead Walks, Shelter,	High	CNYRTA, City of Syracuse
Moving Parking Meters at Key Locations		
Continue to Implement/Follow the Eastwood	NA	City of Syracuse
James Street Overlay District		
James St./Midler Ave.: Implement previously	Low – Medium	City of Syracuse
recommended improvements		
Eastern End of Corridor: Striping	Low – Medium	City of Syracuse
Medium-Term (5 to 10 years)		
Corridor Wide Streetscape Initiative	High	City of Syracuse
James St./Shotwell Pk./Grant Blvd.: Complete	Medium	City of Syracuse
Engineering and Traffic Analysis		
Preliminary Engineering & Environmental	High	City of Syracuse, NYSDOT,
Review of James St. Reconstruction Program		Federal Highway Administration
Long-Term (10 - 20 years)		
Signal System	High	City of Syracuse
Long Term Traffic Calming Techniques -	High	City of Syracuse
Such as grooved pavement and enhanced		
pedestrian crossings		
Final Design & Construction – Reconstruction	High	NYSDOT, City of Syracuse,
of James St. (Shotwell Pk./Grant Blvd. to E.		Federal Highway Administration
James/Clover Ridge Dr.)		

Source: SMTC

### APPENDIX A Public Involvement Plan

# APPENDIX B Correspondence

### **APPENDIX C** Traffic Volumes

# APPENDIX D Synchro and HCS Analysis Sheets

# APPENDIX E Accident Summaries and Diagrams

# APPENDIX F Eastwood James Street Overlay District