

Appendices

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Appendix A

Public Involvement Plan

SMART 1
Public Involvement Plan

December 2015

Financial assistance for the preparation of this document, the Syracuse Metropolitan Area Regional Transit Study Phase 1 (SMART 1) was provided, in part, by the U.S. Department of Transportation's Federal Highway and Federal Transit Administrations and the New York State Department of Transportation. The Syracuse Metropolitan Transportation Council (SMTC) is solely responsible for its content.

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I. Introduction

Engaging the public early and often in the planning process is critical to the success of any transportation plan or program. When people are involved in a decision-making process and can see how their input has influenced that process, they are more likely to adopt its outcomes. As the joint Federal Highway Administration and Federal Transit Administration guidebook *Public Involvement Techniques for Transportation Decision-Making* states: "Through continued interaction with the entire community, agencies build community support and, more importantly, assure that the public has the opportunity to help shape the substance of plans and projects."

The importance of public involvement is underscored by the fact that it is required by numerous state and federal laws. Metropolitan Planning Organizations (MPO) such as the Syracuse Metropolitan Transportation Council (SMTTC) must provide citizens, affected public agencies, businesses, local government, and other interested parties with a reasonable opportunity to comment on transportation plans and programs.

The SMTTC's **Syracuse Metropolitan Area Regional Transit Study Phase 1 (SMART 1)** will pursue the feasibility of higher-intensity transit services along the Destiny/Regional Transportation Center to Syracuse University and James Street/South Avenue corridors, which were first identified in the 2014 Syracuse Transit System Analysis completed as a component of the New York State Department of Transportation's I-81 Corridor Study. The **SMART 1** study will complete an evaluation of modes, alignments, station locations, ridership, service plans, capital/maintenance/operational costs, economic development, land use, zoning, engineering feasibility and environmental factors associated with the key corridors to identify a single corridor preferred alternative. Throughout this project, the SMTTC will be engaged in a public outreach process in order to get as much input, feedback and community involvement as possible.

The purpose of this public involvement plan (PIP) is to ensure a transparent and comprehensive public outreach process that assures the opportunity for involvement in all phases and at all levels of the planning process. This will be achieved by providing early and continuing involvement, complete information, full access to key decisions, and multiple avenues for sharing opinions and ideas. Public outreach efforts will include a strong educational component, intended to exchange clear information about issues, challenges, and local priorities, with particular attention toward issues of transit access and connectivity. The community participation events scheduled for SMART1 study are in keeping with the main purpose and objectives of SMTTC's umbrella Public Participation Plan (PPP), which can be found at the SMTTC web site, www.smtcmpo.org.

II. Public Engagement Objectives

The goals and objectives for public engagement during the **SMART 1** study is to:

- (1) Gather input on the successes and challenges of the existing transit system,
- (2) Educate and inform the Study Advisory Committee, key stakeholders, and the community at-large on the potential opportunities for bus rapid transit, or similar, system in Syracuse,
- (3) Inform the community at-large about the SMART 1 study's
 - a. purpose and need,
 - b. goals and objectives, and
 - c. alternatives under consideration;
- (4) Provide a feedback loop through a variety of outreach methods for stakeholders and community members to share input throughout the project.

III. Key Study Partners

The key partners in this study are SMTC, the **SMART 1 Study** Advisory Committee (SAC), , key stakeholders and community members, as outlined below. The consultant team will work closely with the SMTC, the SAC, other agencies, and community stakeholders to gather and review existing information as we move forward with the civic engagement events.

Syracuse Metropolitan Transportation Council (SMTC)

As the regional Metropolitan Planning Organization (MPO) SMTC is responsible for the day-to-day administration and project management. Representatives and staff from SMTC will provide project oversight and technical expertise as well as serve as public facilitators throughout the public outreach process. The SMTC Director and Project Manager can be contacted at:

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Consultant Team

The consultant team will provide professional transportation planning and public outreach services on this project. The consultant team consists of IBI Group and Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C (EDR), Creighton Manning and Spartan Solutions. For the purposes of coordinating public involvement efforts, the primary consultant contacts are:

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Study Advisory Committee

The SMART 1 Study Advisory Committee (SAC) will remain involved during this planning initiative and will continue to meet on a regularly scheduled basis. The consultant team anticipates collaborating with SMTC to facilitate all SAC meetings throughout the project. The consultant team will be responsible for summarizing meetings of the SAC, and distributing these summaries. The SAC will meet regularly with the SMTC to assist in managing the project. The SAC's role will be to advise the SMTC and consultant team on the technical content of deliverables and to provide needed input and guidance throughout the study, including:

- Defining the purpose and need statement, goals and objectives;
- Assisting with public outreach; and
- Reviewing draft sections of the SMART 1 document.

The SAC is comprised of representatives from the following agencies:

- Central New York Regional Transportation Authority (CNYRTA)
- City of Syracuse - Planning Division
- Downtown Committee Inc. of Syracuse
- New York State Department of Environmental Conservation (NYSDEC)
- New York State Department of Transportation (NYSDOT)
- Syracuse – Onondaga County Planning Agency (SOCPA)
- University Hill Corporation.

It is anticipated that seven SAC meetings will be held throughout the course of the study. Adjustments to the anticipated timeframe and number of meetings may be made as needed. SMTC will secure a meeting location (facility) and announce SAC meetings through mailings. The consultant team will be responsible for all meeting materials (including preparation of agenda, handouts, presentations, minutes etc.) and to facilitate each SAC meeting.

Stakeholders

Because of the broad scope of this transit analysis, all individuals within the SMTC database will be considered stakeholders for this project. SMTC will actively seek input throughout the course of the study regarding additional individuals interested in participating in this planning activity and provide valuable input and perspective. Public meeting notices and other key project-related communications (as determined by the SAC and SMTC staff) will be mailed to all stakeholders on the SMART 1 Stakeholder List.

IV. Interactive Public Meetings and Social Media

This planning initiative will include a series of public meetings, interactive intercept surveys, project presence at other community events, focus group meetings, and regular communications via a project web site and social media. The purpose of this layered approach is to ensure adequate access to project-related information and decision-makers across a broad range of potential stakeholders. The mix of traditional and non-traditional outreach methods aims to achieve a diversity of input that is representative of the wide range of existing and potential transit users throughout the community. Each method of engagement is described in further detail below.

Note: All meetings (SAC, Existing Transit Focus Group and public) will be held in a handicapped accessible facility in compliance with the Americans with Disabilities Act. The SMTC will make every effort to respond to those who need a sign language interpreter, language translation services, assistive learning system, or any other accommodations to facilitate the public's participation in the transportation planning process. At minimum, select information will be available in both English and Spanish. Other languages may be accommodated at the agency's discretion should the need arise.

Public meetings:

Three public meetings are anticipated throughout the development of the **SMART 1** study. The anticipated timeframe and purpose of each public meeting follows. All dates are subject to change.

For public meetings, the SMTC will be responsible for securing a meeting location, issuing press releases, and mailing meeting fliers. The project consultant will be responsible for creating meeting materials (including an agenda, press releases, presentation slides, a flier, and any visual aids), running the meeting, and preparing a meeting summary. All public meeting materials will be made available on a project specific web site for input and feedback. This will be publicized through numerous channels, including e-mail blasts and social media. The SMTC will also request assistance from a variety of community groups, in addition to the transit rider focus group, in "getting the word out" about the electronic availability of the public meeting materials.

Recognizing that not all members of our community have access to online resources, SMTC staff will seek out opportunities to set up display-board versions of the public meetings. For example, a series of display boards could be set up at a library or community center for a period of time, during which people could view the display and provide feedback. The SMTC may also hold focused community meetings in particular neighborhood areas, based on discussions with the SAC. These meetings would include a brief presentation and set of discussion questions based on the public meeting content.

Public meeting 1: The first public meeting, anticipated in February 2016, will provide the opportunity to formally present the study to the public, present background/existing condition information on the project, and seek initial feedback. The purpose of this phase of outreach will be to inform the public of the study's scope and to review and provide comments on the study's draft purpose and need, goals and objectives. The public meeting will be in an open-house style, with materials and information also available on-line. The format of the meeting will consist of a formal presentation of the two corridors under examination and how they were selected through the Syracuse Transit System Analysis along with an introduction to the different modes being examined. Following the presentation, attendees will circulate through various "stations" for both corridors.

Potential location: Large meeting space in downtown Syracuse (e.g., SKY Armory or similar)

Required materials: Presentation (PPT or similar), display boards, interactive opportunities for submitting public comment, sign-in desk materials (project informational handouts, meeting maps, etc.)

Public meeting 2: The second meeting will begin with a presentation on a variety of data collection efforts completed to date and how evaluation criteria were developed. Alternatives for each corridor will be

described and include information on modes being considered, routing and endpoints, and station locations. After the presentation, attendees will circulate through various “stations.” Public input will be sought on the development/use of evaluation criteria in future analysis tasks and on the desirability of various alternatives.

Potential location: Large meeting space in downtown Syracuse (e.g., SKY Armory or similar)

Required materials: Presentation (PPT or similar), display boards (# TBD), interactive opportunities for submitting public comment, sign-in desk materials (project informational handouts, meeting maps, etc.)

Public meeting 3: The third and final public meeting will present the evaluation process, how recommendations were developed, and the preferred alternative. The format of this meeting will follow a similar format to the prior public meetings (presentation, followed by “station” walk-throughs).

Potential location: Large meeting space in downtown Syracuse (e.g., SKY Armory or similar)

Required materials: Presentation (PPT or similar), display boards (# TBD), interactive opportunities for submitting public comment, sign-in desk materials (project informational handouts, meeting maps, etc.)

Focus group meetings

The interest and support of transit riders, property and business owners, residents, non-profits, and various local transportation and planning experts will be critical to the success of this effort. The consultant team will assist SMTc in identifying and engaging important community stakeholders. The consultant team will engage community stakeholders in ways that respond to local preferences, relative interest in specific elements of the plan, and the pattern of past successful engagements in the City of Syracuse. Up to six stakeholder focus groups are anticipated throughout the course of the study. Three focus group sessions will be facilitated after the first and second public meetings respectively. The first round of focus group meetings will focus on the issues relative to service needs of existing riders and the second round will focus on issues relative to potential effects from location of stations and other transit-related physical attributes along the corridors.

Specific groups of stakeholders may include, but will not be limited to:

- Central New York Regional Economic Development Council
- University Hill Corporation

- Neighborhood associations (e.g., Eastwood Neighborhood Association, Southside TNT, Downtown Committee)
- Community advocacy groups (e.g., Syracuse United Neighbors, Moving People Transportation Coalition, Northside UP)
- Destiny USA
- Central New York Regional Market Authority

Potential location: SMTC conference room

Required materials: Presentation (PPT or similar), maps, agenda, materials to promote discussion.

Community organizations

SMTC will work to coordinate public outreach activities for this study with existing activities of community groups in the SMTC planning area. SMTC will seek the assistance of the SAC, the Existing Transit Focus Group and community organizations to “get the word out” about the study and help publicize public meetings. SMTC will reach out to these community groups early in the study process to inform them of the study and opportunities for public input. If requested, SMTC staff will attend existing community meetings to provide a brief overview of the project. Detailed discussion of the analysis and recommendations will be provided at the study-specific public meetings.

All residents, especially those who are not able to attend the public meetings or participate in direct contact with SMTC staff, are encouraged to submit comments to SMTC at any time. This message will be publicized and made clear throughout the study’s project schedule, verbally, and on all study material and publications in both English and Spanish. The public is also welcome to attend any of the publicized SMTC Executive, Planning and Policy Committee meetings in which the **SMART 1** study may be on the agenda as a discussion item.

Intercept surveys

Intercepts typically consist of interactive display boards set up in a highly public location. At these display boards, the passing public will be able to comment, vote, state preferences, etc. The exact nature and location of these boards shall be left indeterminate to allow the SMTC staff and project consultant to experiment with the utilization of this outreach method. However, possible locations include destinations such as the Museum of Science and Technology, Destiny, Regional Transportation Center, Syracuse University, Onondaga Community College, Southside Community Center, and the Centro Transit Hub. It is

also encouraged that these boards be made available during peak usage times, such as during holidays or weekends. Intercepts may also be used at other community centers, libraries, or schools to reach traditionally underrepresented populations.

Potential locations: To Be Determined

Required materials: Interactive opportunity for submitting public comment, project informational handouts, etc.

Project Web site and Social Media

Project webpage:

A project webpage for the **SMART 1** study will be added to the SMTC web site (www.smtcmpo.org). The project webpage will contain information about the transit examination planning process, announce upcoming meeting dates, and provide updates on the activities and progression of the project, opportunities for public input and feedback, and display materials from each of the public meetings. The SMTC web site will also serve as a resource for general information about the SMTC, the **SMART 1** study, and any final approved reports.

Social media:

Many people communicate and obtain information online through social media, including the use of platforms such as Facebook, YouTube and Twitter. The SMTC seeks to use these social media platforms, as appropriate, to reach a broader audience and gather feedback from the public for the **SMART 1**. The SMTC's Facebook page will primarily serve as a mechanism to drive users to the main SMART 1 webpage mentioned earlier. The SMTC Facebook page would likely include brief status updates alerting users to new material and announcements on the SMART 1 site. The *SMTC's Social Media Policy* will be adhered to when engaging in social media platforms as part of this project.

Email blasts:

E-blasts will be sent out to stakeholders and other interested parties announcing relevant information regarding **SMART 1** study such as project progress, public comment and public meetings.

V. Press Releases / Media Coverage

The SMTC, working with its project consultant will issue press releases announcing the details of all public meetings to all major and minor newspapers, television stations, and radio stations at least two weeks prior to the meeting. If necessary, the SMTC will also send additional press releases, or take the initiative to promote media coverage on pertinent developments pertaining to the **SMART 1** study.

If possible, all media inquiries should be directed to the SMTC staff director or project manager. However, this is not always possible. If you (e.g. SMTC committee members, SAC members, Existing Transit Rider Focus Group member, and/or interested stakeholders associated with the study) are interviewed by the media, please limit your comments to your respective agency's opinion or involvement in the study. As for speaking to the media on specific issues and questions regarding the **SMART 1** study, its progress and development, this is the exclusive responsibility of the SMTC.

VI. SMTC Publications

The SMTC publishes a newsletter, DIRECTIONS, that offers news about its activities and particular studies. This newsletter is distributed to over 3,000 individuals, some of whom include the media; local, state, and federal agencies associated with the SMTC; municipal and elected officials; community agencies and representatives; and a large number of interested citizens. It is anticipated that articles on the **SMART 1** study (i.e., announcement or coverage of a public meeting) will be published in subsequent issues of DIRECTIONS. Should the need arise for the production of a separate newsletter/flier/report to provide information on a specific aspect of the **SMART 1** study; the SMTC working with the project consultant may perform this additional task. It is also important to note that the mailing list of the SMTC newsletter will be updated to include all individuals that sign-in at public meetings for the **SMART 1** study or otherwise request information about the **SMART 1** study.

The **SMART 1** Final Report will be made available at libraries throughout the MPA or at other key locations, as determined by the SAC and SMTC staff. Press releases will be produced to announce the availability of such items.

VII. Public engagement schedule

This PIP serves as a starting point for public outreach. During the course of the project it is expected that additional outreach methods may be researched and applied as relevant. The following table summarizes the expected points of engagement for the discussed in this public engagement plan. The suggested

timeframes in this table will be discussed in further detail with the SMTC. All of the substantive comments garnered during the tasks outlined above will be documented and included as an appendix within the SMART 1 study.

Primary Activity	Timing	Purpose
SAC meeting #1	June, 2015	Project kick off
Project Webpage	January, 2016	Present project information and solicit input
SAC meeting #2	January, 2016	Review Existing conditions technical memorandum; review preliminary content for public meeting #1
Public Meeting #1	February, 2016	Project introduction
Intercept Survey #1	March, 2016	Survey rider interest in convenience and rapid service
Focus group meetings #1	March, 2016	Review service needs
SAC meeting #3	May, 2016	Criteria development
Public Meeting #2	July, 2016	Present initial findings and review evaluation criteria
Intercept Survey #2	August, 2016	Survey preferred alternatives
Focus group meetings #2	August, 2016	Discuss possible physical impacts of stations and transit amenities
SAC meeting #4	September, 2016	Review capital, maintenance and operational plan
SAC meeting #5	December, 2016	Review evaluation of costs, benefits and impacts
SAC meeting #6	February, 2017	Discuss identification of Locally Preferred Alternative
Public meeting #3	January, 2017	Review alternative analysis and solicit feedback
SAC meeting #7	April, 2017	Review and comment on draft final plan

Appendix B

Public Meeting Summaries

SMART 1
Public Meeting Summary

March 2016

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APPENDICES

Appendix A: Meeting boards

Appendix B: Meeting presentation

Appendix C: Participant comments and ZIP Code Map

Appendix D: Publicity materials

Appendix E: Meeting evaluations

1) Executive Summary

The Syracuse Metropolitan Transportation Council (SMTC) hosted the first public meeting for the SMART 1 study in February 2016. This meeting was the first in several steps to the decision-making process for determining the future of transit in the City of Syracuse. This document summarizes the findings and input from the February 2016 public meeting.

The meeting took place at the SKY Armory in downtown Syracuse on February 24, 2016 from 4:00 pm to 7:30 pm. Participants were invited to drop in at any time and stay for as long as they wished. All participants were given two single-use transit passes when signing in at the meeting. American Sign Language and Spanish interpreters were available on site. The meeting featured five stations with informational and interactive boards. Each station was staffed by project team members with relevant expertise. Attendees were provided a Frequently Asked Questions handout at the registration area to enhance their participation in the meeting. Publicity for the meeting was multi-faceted and included flyer distribution via postal mail, email, and direct distribution to several organizations, including a version in Spanish, bus placards, notice on the project website, posting on SMTC's Facebook page, and press releases.

a) Meeting Content

The primary goals for the public at this meeting were to:

- Learn the goals, purpose and need of the SMART 1 study;
- Review the data, methodology, and recommendations of the 2014 Syracuse Transit System Analysis (STSA);
- Review data that reflects the existing conditions within the two corridors, 1) Regional Transportation Center to Syracuse University and 2) Eastwood to Onondaga Community College;
- Learn about the enhanced transit modes under review; and
- Learn the next steps of the SMART I study and how the public can continue being involved.

b) Meeting Evaluation and Participation

There were nearly 100 attendees throughout the meeting, including residents of all ZIP codes within the City of Syracuse and a number of outlying suburbs (see Appendix C). Only four meeting evaluation forms were received from the attendees, but all indicated that the meeting served them well by providing useful information in an effective and comprehensive manner and that the process thus far was transparent and meaningful. Staff at the meeting also indicated that the feedback from attendees on the content of the meeting was positive.

c) Next Steps

Input from the public meeting will be used to inform evaluation criteria and the selection process. The next step is to analyze the possible corridor routes to arrive at a locally preferred alternative for each corridor. Public involvement continues to be an important part of the SMART 1 study and the community can expect to see additional opportunities for public input in the future.

2) Meeting Summary

a) Introduction

The Syracuse Metropolitan Transportation Council (SMTC) hosted the first public meeting for the SMART 1 study in February 2016. This meeting was the first in several steps to the decision-making process for determining the future of transit in the City of Syracuse. This meeting provided the community with the opportunity to learn about the goals, purpose, and need for the SMART 1 study, the enhanced transit modes being considered, and the existing conditions that influence the current, as well as potential future, transit system that serves the City of Syracuse.

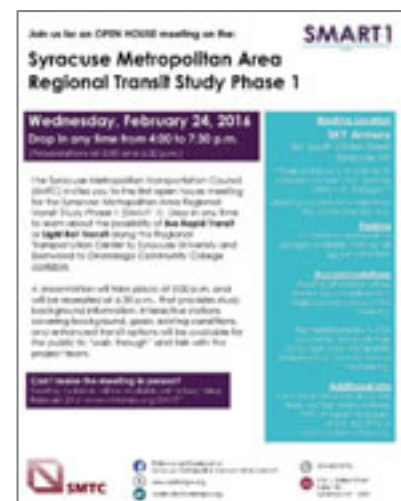
The primary goals for the public at this meeting were to:

- Learn the goals, purpose and need of the SMART 1 study;
- Review the data, methodology, and recommendations of the 2014 Syracuse Transit System Analysis (STSA);
- Review data that reflects the existing conditions within the two corridors, 1) Regional Transportation Center to Syracuse University and 2) Eastwood to Onondaga Community College;
- Learn about enhanced transit modes under review; and
- Learn the next steps of the SMART I study and how the public can continue being involved.

Publicity for the meeting included the following methods:

- Meeting flyers were distributed by various means including direct mailing to 1,760 recipients, emails to 440 recipients, and through a variety of community organizations (including a version in Spanish);
- Placards were placed on Centro buses;
- Project website;
- SMTC Facebook page; and
- Press releases.

The meeting was held at the SKY Armory in downtown Syracuse on February 24, 2015, from 4:00 pm to 7:30 pm. The meeting was conducted on two floors. On the second floor was the open house with display boards at five stations



SMART 1 Public Meeting Flyer

that were available for viewing for the entirety of the meeting. Professional staff members were located at each station to answer questions. Public comment and meeting evaluation forms were provided. Additionally, a presentation was given at 5:00 p.m. and repeated again at 6:30 p.m. and was open to all interested attendees. At the end of the presentation, all attendees were encouraged to return to the stations for further review and discussion.

b) Meeting Content

This section briefly summarizes the content of the public meeting stations, copies of which are provided in Appendix A of this summary.

i) Station 1: Overview of the SMART 1 study

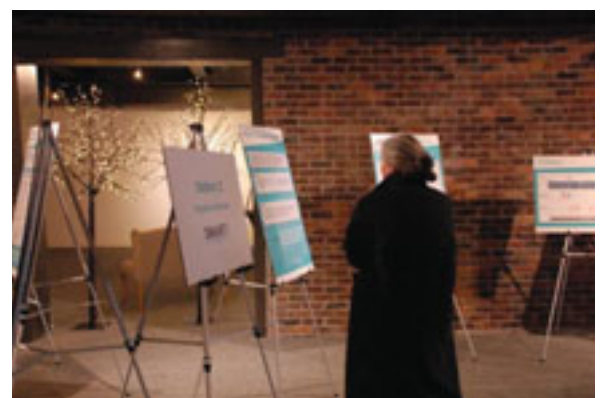
The first station provided attendees with general information about the Syracuse Metropolitan Area Regional Transit Study Phase 1 (SMART 1) project. Attendees were provided with background information regarding the SMTC, the Central New York Regional Transportation Authority (Centro), the STSA study, and the priority corridors identified in that study. For attendees interested in learning more about the STSA, several boards displayed the purpose, the three strategies reviewed, methodology of review, evaluation criteria, final corridor rankings, and final recommendations of the STSA study.



Meeting attendees review informational boards.

ii) Station 2: SMART 1 purpose and need, project schedule, and FTA new starts

The second station provided attendees with general information about the purpose and need for the SMART 1 study, provided them with the project schedule, and information regarding the Federal Transit Administration's (FTA) funding mechanism for enhanced transit systems for communities like Syracuse. On the first board, it was explained that the purpose and need statements, along with project goals, will be used to evaluate different Bus Rapid Transit (BRT) and Light Rail Transit (LRT) alternatives along



Meeting attendee reviews informational boards.

the 2 corridors. The study's Consensus Building, Transportation, and Development goals were provided on the second board. The third board included an illustration of the project schedule which is expected to span over approximately two years, ending in Summary of 2017. The final board in this station provided preliminary information regarding the FTA's Fixed Guideway Capital Investment Grants or "New Starts" program and process for enhanced transit systems of this size and complexity.

iii) Station 3: Corridors under review and existing conditions

In this station attendees learned about existing conditions surrounding the two corridors under review. There was a board for each of the following topics:

- Existing Transit
- Population density
- Existing land use
- Employment
- Households in poverty
- Zero-vehicle households
- Population over 65
- Population under 25



Meeting attendees review informational boards.

iv) Station 4: Transit enhancement strategies

In this station attendees learned that the following transit enhancement strategies will be developed and evaluated: existing service improvements; BRT; LRT and streetcars. Each of the transit modes were further defined with examples provided. A transit enhancement strategies summary table was provided so that attendees could better compare and contrast the issues regarding all three strategies. At this station there were two interactive boards



Meeting attendees review informational boards.

seeking input from attendees regarding their thoughts and opinions as to which potential enhanced transit features would encourage them to use the enhanced transit system.

v) Station 5: Next Steps and Frequently Asked Questions

At this station, attendees learned that public outreach will be ongoing throughout the study. They were informed of the upcoming pop-up meetings and focus group meetings, which are scheduled to occur in the spring of 2016. While outreach continues, the consultant team will continue to analyze the two corridors. Later in 2016 the community will be invited to another public meeting to learn about the outcome of this analysis and more specifically about the locally preferred alternative for each corridor. This station also included boards with answers to frequently asked questions such as the role of SMTC, as well as general aspects of this SMART 1 study.

c) Meeting Evaluation

Meeting evaluation forms were available at the meeting; however, only four completed forms were returned. Based on this limited feedback from attendees, the meeting served them well by providing useful information in an effective and comprehensive manner. The attendees also confirmed that SMTC is thus far meeting its goal of conducting a transparent and meaningful study. SMTC also learned from discussions with attendees that their methods of event notification through mailings, bus placards, email notifications, social media, and press releases were effective. Several attendees suggested that an open question and answer session after each presentation would have been beneficial because this allows attendees to learn from each other's questions.



Meeting attendee provides feedback after reviewing the information presented.

d) Meeting Participation and Public Comments

There were nearly 100 attendees throughout the meeting, many of whom reside in neighborhoods within or adjacent to the two corridors under consideration (see ZIP code map in Appendix C). Many of these attendees provided constructive comments to the SMTC relative to the meeting content, the

alternatives presented in the meeting, and other issues for consideration. Representative comments from Station 4 and public comment forms have been categorized and summarized below; all comments (in their original form) are provided in Appendix C.

- Attendees preferences regarding the alternatives as presented
 - BRT
 - Attendees noted their support for the concept of BRT, though several also raised practical design considerations such as topography and interaction with other traffic.
 - LRT
 - Support for LRT was less widespread, though some was noted – particularly in areas where increased connectivity is warranted due to higher traffic levels and/or a greater density of attractions.
 - General
 - Attendees generally supported improvements to transit offerings, as well as a greater degree of integration with other modes of transportation (e.g., walking, biking).
- Convenience
 - Frequency/schedule
 - Many attendees expressed a desire for increased frequency and timeliness of bus service along existing (or future) routes. Several also noted the need for transit options in off-peak hours.
 - Layout/stops
 - Comments regarding route layout and the location of stops were evenly divided between those in favor of fewer stops (i.e., more efficient service), and those in favor of frequent stops (i.e., more accessible service).
 - Connectivity/accessibility
 - Several attendees noted their reliance on Centro's existing routes and the new Transit Hub. Convenience, safety, and navigability of transit options were frequently cited considerations with regard to individuals' transportation decision-making.
 - Technology

- Attendees recommended a number of improvements that would make transit more attractive to riders, including apps/trackers for personal devices, increased seating capacity, convenient methods of payment, and legible routes/schedules. One comment also pointed out a primary technological advantage of BRT, in that it can be re-routed when necessary (e.g., around a traffic obstruction).
- Cost
 - Positive
 - A number of comments suggested that the cost of transit investments (even those that are more expensive, such as light rail) is mitigated by environmental benefits (e.g., lower energy costs) and the private investment that it enables.
 - Negative
 - Others noted that the investment required to implement LRT would be too costly, though one commenter also noted that the cheapest option may not be the best.
- Additional alternatives or issues to consider
 - Other alternatives not presented
 - Several alternatives were suggested relative to other technologies or transit modes to consider. These included trolleybuses (i.e., buses powered by overhead wires), a subway system, OnTrack, articulating buses, van/small bus services, and a LRT/BRT hybrid.
 - Other issues not covered
 - Attendees encouraged the SMTC to consider a number of other issues in their study, primarily with regard to increasing transit ridership. These included: bicycle and pedestrian access; attractiveness and public perception; safety; private investment; additional corridors (e.g., South Salina Street, West Genesee Street to Camillus/Solvay); and additional case studies (e.g., Madison, Chattanooga, and Eugene).
 - Novel ideas
 - Some attendees suggested novel transportation concepts outside of those presented at the meeting, including a set of “pendulum” trains (two trains

connected via cable to one another), a waterway along Erie Boulevard, and light rail stops inside the Carrier Dome and Destiny USA.

- General comments
 - The SMTC received several general comments in support of transit enhancements. Attendees noted the beneficial impact that transit enhancements could have on community character, economic development, and connectivity/accessibility.
 - One attendee expressed doubt that LRT/BRT would increase development in the area.
 - The SMTC also received suggestions to coordinate with other local decision-makers and stakeholders, and to review resources such as HUD's "Creating Connected Communities" guidebook.

e) Conclusions and Next Steps

Input from the public meeting will be used to inform evaluation criteria and the selection process. The next step is to analyze the possible corridor routes to arrive at a locally preferred alternative for each corridor. Public involvement continues to be an important part of the SMART 1 study and the community can expect to see additional opportunities for public input in the future.

Appendix A: Meeting boards

Overview of the SMART 1 study

What is SMART 1?

The Syracuse Metropolitan Area Regional Transit Study Phase 1 (SMART 1) began in June 2015 to pursue higher-intensity transit services along the Destiny USA/Regional Transportation Center (RTC) to Syracuse University and Eastwood to Onondaga Community College corridors.

This planning study will evaluate the following along these two corridors:

- modes
- service plans
- economic development
- alignments
- costs
- engineering feasibility
- station locations
- land use
- environmental factors
- ridership
- zoning

Who is involved in the SMART 1 study?

The Syracuse Metropolitan Transportation Council (SMTC) is conducting the study, with a consultant team, on behalf of Centro.

A Study Advisory Committee (SAC) will advise the SMTC on the technical content of deliverables and provide needed input and guidance throughout the study. The SAC is comprised of representatives from the following agencies:

- Central New York Regional Transportation Authority (Centro)
- City of Syracuse - Planning Division
- Downtown Committee of Syracuse
- New York State Department of Environmental Conservation (NYSDEC)
- New York State Department of Transportation (NYSDOT)
- Syracuse-Onondaga County Planning Agency (SOCPA)
- University Hill Corporation

What is the SMTC?

The SMTC is the State-designated Metropolitan Planning Organization (MPO) for Onondaga County and portions of Oswego and Madison Counties. The SMTC is the region's forum for cooperative decision making when it comes to developing transportation plans, programs and recommendations. The SMTC is made up of officials representing local, state and federal governments or agencies with an interest in comprehensive transportation policies and services. The SMTC does not own or operate any transportation infrastructure.



Why conduct the SMART 1 study?

Enhanced transit is a community priority

An “enhanced transit system” is identified as a regionally significant, priority project in the SMTC’s 2050 Long Range Transportation Plan. The community has expressed a strong desire for expanded transit options.

A previous transit study, called the Syracuse Transit System Analysis (STSA), recommended “higher-intensity transit services along the Destiny USA/Regional Transportation Center (RTC) to Syracuse University and James Street/South Avenue Corridors.”

The STSA included surveys of transit riders and non-riders/former riders in 2012. A total of 326 rider surveys were returned, and 174 non-rider/former rider surveys were returned.

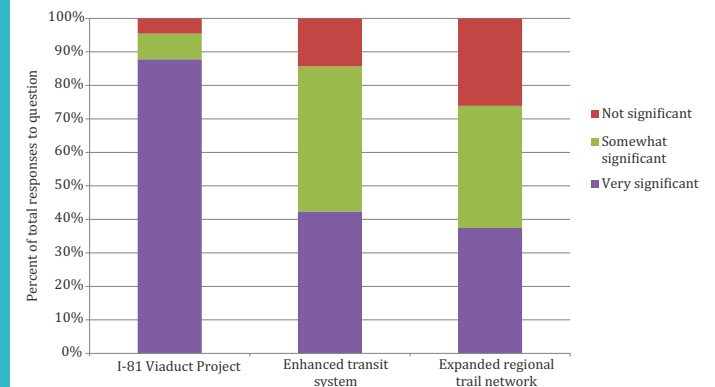
Results from both surveys were used to identify and prioritize transit system needs:

- High priority ↑
1. Increase frequency and hours of operation.
 2. Reduce transit travel time to be more comparable with vehicles.
 3. Improve on-time performance.
 4. Provide direct connections between major regional destinations.
 5. Provide more real-time system information.
 6. Improve safety and public perception of the transit system.
 7. Provide more suburban commuter options.
 8. Maintain an affordable fare.
- ↓ Low priority

The SMTC conducted a survey in December 2014/January 2015 that asked for community input on the goals and objectives for our new Long Range Transportation Plan (LRTP). We received 380 responses.

- 57% of respondents ranked the objective “provide essential transit service to urban areas and major activity centers” as “important.”
- Over 80% of respondents indicated that an “enhanced transit system” would be a significant project for our region.
- Dozens of respondents provided additional comments in support of expanded Centro service or various other enhancements to our regional transit system.

Significance of major regional projects based on LRTP survey results



The next few display boards describe the background transit study in more detail.

Syracuse Transit System Analysis: Corridors

What was the Syracuse Transit System Analysis?

In January 2014, the NYSDOT, in coordination with the SMTC and Centro, completed the Syracuse Transit System Analysis (STSA) as part of The I-81 Corridor Study.

The purpose of the STSA was "To develop a long-range vision for the transit system in the Syracuse metropolitan area to assist in achieving a balanced transportation system that supports economic growth, improves quality of life, and supports the vision of the communities that it serves."



The STSA reviewed the entire Centro system and identified 6 TRANSIT ENHANCEMENT CORRIDORS that would be likely to support increased transit ridership, based on:

- Existing transit ridership and mode share
- Population and employment density
- Households with access to one or no vehicles
- Potential for commuter trips
- Commute times
- Household income
- Existing plans.

Legend

Corridors

- University Hill - RTC
- Northside - Western Lights
- Camillus - Fayetteville
- North Syracuse - South Valley
- East Syracuse - OCC
- Great Northern Mall - Downtown

Key Features

- Roads
- Community Destinations
- 2000 Census Urban Area
- Transit Supportive Areas*

* Transportation Analysis zones or Census tracts with the following characteristics:

- Population density > 4,500 people/sq mi
- Employee density > 4,500 employees/sq mi
- Average Household Income < \$34,560
- % of households with 0 or 1 vehicle > 50%
- % of trips taken by transit > 5%

Syracuse Transit System Analysis: Evaluation

Strategies

The STSA evaluated 3 strategies for each corridor:



Existing service improvements



Bus Rapid Transit (BRT)



Light Rail Transit (LRT)

Evaluation Criteria

Each corridor/strategy combination was evaluated using criteria in five categories, based on the Federal Transit Administration's Project Justification Rating guidance for funding, as well as local stakeholder input.

CATEGORY	WEIGHT	EXAMPLE CRITERIA
Mobility improvements	25%	Annual trips, one-seat rides to major destinations
Economic development	25%	Transit-supportive plans and policies, strategic development areas served
Cost effectiveness	25%	Cost-benefit ratio
Land use	12.5%	Employment served, population density, parking costs/availability
Environmental benefits	12.5%	Air quality, safety, energy use

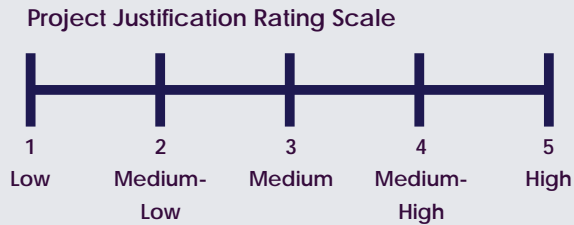


Final scores and ratings for each of the 18 corridor/strategy combinations are shown on the next board.



Syracuse Transit System Analysis: Results

A weighted average score was determined for each corridor/strategy combination, and the score was used to determine the Project Justification Rating.



Final Corridor Rankings

RANK	CORRIDOR	STRATEGY	WEIGHTED AVERAGE SCORE
* 1	Destiny USA/RTC to Syracuse University	Service improvements	3.71
* 2	James St/South Ave	Service improvements	3.21
* 3	James St/South Ave	BRT	3.15
* 4	James Street	LRT	3.05
5	I-81 Express, Central Square to Downtown/University Hill	Service improvements	3.01
* 6	North Salina Street	LRT	2.91
* 7	Solar Street	LRT	2.91
8	Genesee St/Erie Blvd (Camillus to Fayetteville)	Service improvements	2.85
9	Butternut St/Onondaga St	Service improvements	2.83
10	South Salina St/Route 11 to North Syracuse	Service improvements	2.82
11	Genesee St/Erie Blvd (Camillus to Fayetteville)	BRT	2.79
12	US 11 Local	BRT	2.78
13	Liverpool/Route 57, Great Northern Mall to Downtown/University Hill	Service improvements	2.77
14	Syracuse University/Liverpool	BRT	2.72
15	Downtown/University Hill Loop	LRT	2.71
16	OnTrack Extension	LRT	2.58
17	Western Lights-Carrier Circle	BRT	2.54
18	I-81 Express	BRT	2.08

* 6 of the top 10 ranked corridor/strategy combinations from the STSA relate to either the James Street/South Avenue or DestinyUSA-SU corridors.

Syracuse Transit System Analysis: Recommendations

STSA made 4 major recommendations:

Construct a new transit hub on University Hill with supporting infrastructure.

Provide lower-intensity service enhancements in remaining corridors.

Begin a commuter-based service along I-81 from Central Square to Downtown/University Hill.

Pursue higher-intensity transit services along the Destiny USA/RTC to Syracuse University and James Street/South Avenue Corridors.

This type of express bus service is supported by the SMTC's new Long Range Transportation Plan, if funding can be identified. Park-and-ride locations at interchanges would also need to be identified.

The STSA concluded that these corridors

- provide the best opportunity to implement and sustain higher-intensity transit services, such as BRT or LRT; and
- have the best chance of obtaining New Starts or Small Starts funding through the Federal Transit Administration.

SMART 1 study is the next step along the path to obtaining funding for BRT or LRT in these corridors.

SMART 1 and the I-81 Viaduct Project

Why are these separate studies?

The SMART 1 study is advancing a specific recommendation from the Syracuse Transit System Analysis for enhanced transit on two corridors that have the conditions necessary to sustain high ridership.

Centro and the NYSDOT could still pursue an I-81 express commuter bus service with park-and-rides as a separate initiative. The SMART 1 study does not preclude that option.

- Transit mode share in our community would need to increase dramatically to have an impact on the options being considered for the I-81 Viaduct.

How are the project teams coordinating?

As plans for both I-81 and an enhanced transit system progress, SMTC, NYSDOT, and Centro will continue to communicate frequently.

- NYSDOT and Centro are members of the Study Advisory Committee for the SMART 1 study.
- SMTC and Centro are members of the Stakeholder Advisory Working Groups for The I-81 Viaduct Project.

Commuting in the Syracuse area:

Centro routes with highest ridership



= 50 Riders

Commuters who both live AND work in the City of Syracuse:

35,000

Commuters who live in Salina, Clay, and Cicero combined, and work in the City of Syracuse:

19,000

Percent of City of Syracuse residents that currently take transit to work:

8%

Percent of suburban residents that currently take transit to work:

1%

What is Purpose & Need?

The purpose and need is a key factor in determining the range of alternatives considered in an Environmental Impact Statement. The “need” statement describes the problems that the proposed action is intended to address and, to the extent possible, explains the underlying causes of the problems. The “purpose” statement defines, as sharply as possible, the fundamental reasons why the project is being proposed based on meeting the transportation needs.

Purpose

- The purpose of an enhanced transit system in the RTC - SU and Eastwood - OCC corridors is to provide faster, more direct, more frequent, and more reliable transit service between major residential areas and activity centers in the Syracuse metropolitan area, at a reasonable capital and operating cost.

Need

- Fast, efficient, and environmentally sound transit connections between major activity centers are needed throughout the study corridors. Improved mobility for transit dependent populations throughout the study corridors is needed as well, along with a need to encourage redevelopment and revitalization that is supported by public transit.

The Purpose & Need statement will be used, along with project Goals, shown on the next board, to evaluate different BRT and LRT alternatives along the 2 corridors.

What we'll try to achieve

Throughout the SMART 1 effort, we'll seek to accomplish a number of goals developed for the study.

Consensus Building

- Involve a large and diverse mix of community members through an unbiased, transparent, and meaningful outreach program.
- Support the planning goals of SMTC, Centro, City of Syracuse, NYSDOT, and other important stakeholders.
- Adopt a Locally Preferred Alternative that is technically feasible, includes a sound financial plan, and has the broad support of the Centro, SMTC, City of Syracuse and other key stakeholders.
- Follow standard FTA procedures to facilitate the transition to the project development process and assure project competitiveness in the Small Starts program.

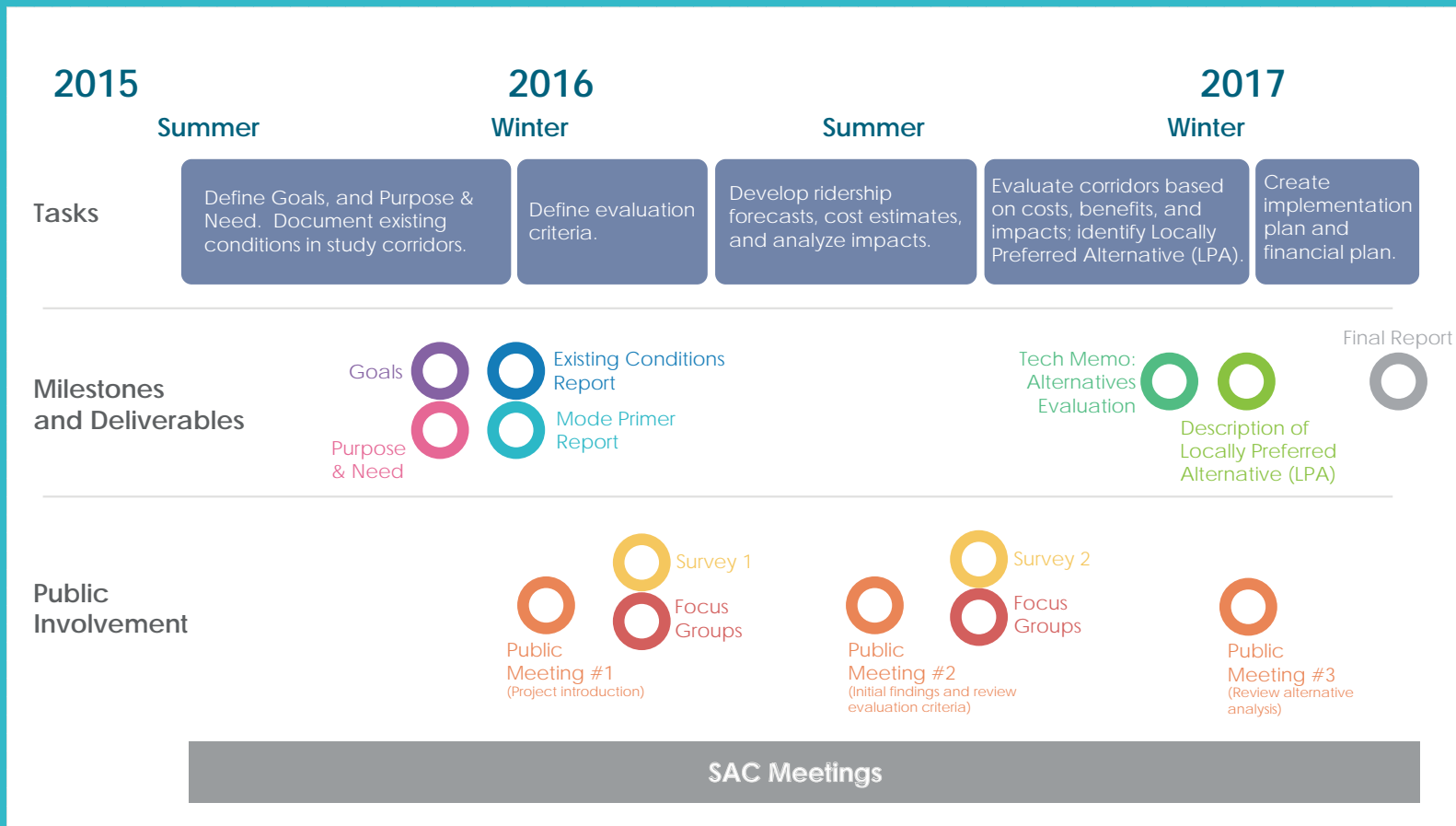
Transportation

- Build on the analysis and conclusions of the Syracuse Transit System Analysis and confirm the selection of the preliminary corridors.
- Improve the utility of transit service for riders by reducing travel time, improving headways, expanding route coverage, and generally increasing travel options.
- Develop a plan for a high-intensity transit investment that is preferred for trips to and within downtown Syracuse because it has:
 - Frequent service;
 - Convenient and accessible alignments and stops;
 - Comfortable vehicles; and
 - Seamless connection to other regional transit services.

Development

- Support revitalization of Syracuse and key neighborhoods along the selected corridors by encouraging transit oriented development and infill.
- Utilize transit to improve connectivity between key locations in Syracuse supporting economic, cultural, social, and health-related development opportunities.
- Plan to increase the effectiveness of transit in Syracuse, providing a vision for how it could contribute to a vibrant, inclusive, and prosperous city.

Schedule

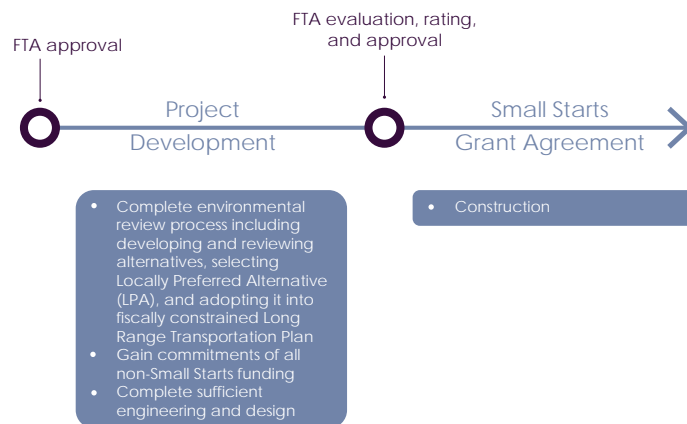


The SMART 1 planning study started in Summer 2015 and is expected to be completed in Spring 2017.

Throughout the course of the planning study, three public meetings/open houses are scheduled, along with various other public engagement activities such as focus groups, community/neighborhood meetings, surveys, and other events.

FTA New Starts

FTA's Fixed Guideway Capital Investment Grants, also known as "New Starts", provides grants for new and expanded rail, bus rapid transit, and ferry systems that reflect local priorities to improve transportation options in key corridors.



- Funding is awarded by the FTA through a competitive process according to the type of project seeking funds (i.e., New Starts or Small Starts projects). New Starts projects are ones with a total estimated capital cost of \$300M or more, or that are seeking \$100M or more in FTA funds. Small Starts projects are ones that have a total estimated capital cost of less than \$300M and that are seeking less than \$100M in FTA funds.
- The SMART 1 study is a planning effort envisioned to complete a number of items outlined in the FTA Small Starts process. Once a Locally Preferred Alternative (LPA) is identified in SMART 1, Centro or another entity could advance the LPA to FTA's Small Starts "Project Development" phase for further environmental review, engineering, and design. FTA approval is necessary to enter "Project Development."
- All potential projects must be evaluated and rated by FTA in accordance with statutorily defined criteria at various points in the development process. In order to receive a construction grant, all projects must go through a multi-step, multi-year process.

Corridors under review

Based on the recommendations of the Syracuse Transit System Analysis (STSA), two transportation improvement corridors will be analyzed in the SMART 1 study.

RTC - SU corridor

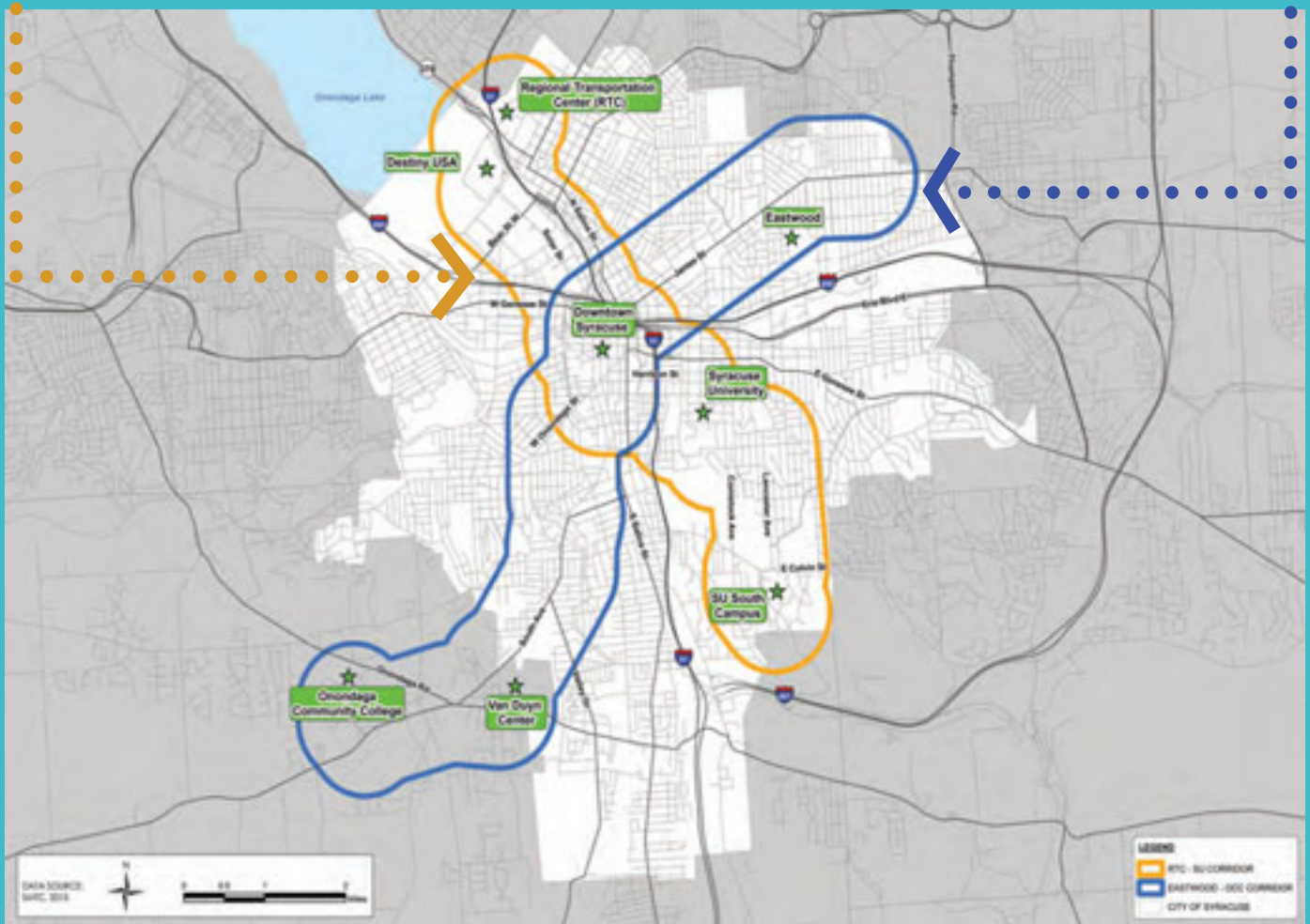
Connects the Regional Transportation Center/Destiny USA and Syracuse University and serves the following:

- SUNY ESF
- Syracuse University
- North Salina Street
- Downtown Syracuse
- East Genesee Street
- Crouse Hospital
- Crouse-Marshall Business District
- Westcott Street
- Carrier Dome
- Upstate University Hospital
- VA Medical Center
- St. Joseph's Hospital Health Center

Eastwood - OCC corridor

Connects the Eastwood neighborhood along James Street and Onondaga Community College, which lie just beyond the Syracuse City Limits, while also serving:

- Downtown Syracuse
- St. Joseph's Hospital Health Center
- Bryant and Stratton College
- Upstate University Hospital Community Campus
- SRC Arena & Events Center
- Syracuse Community Health Center



Existing transit

The Central New York Regional Transportation Authority (Centro) operates a total of 99 bus routes.

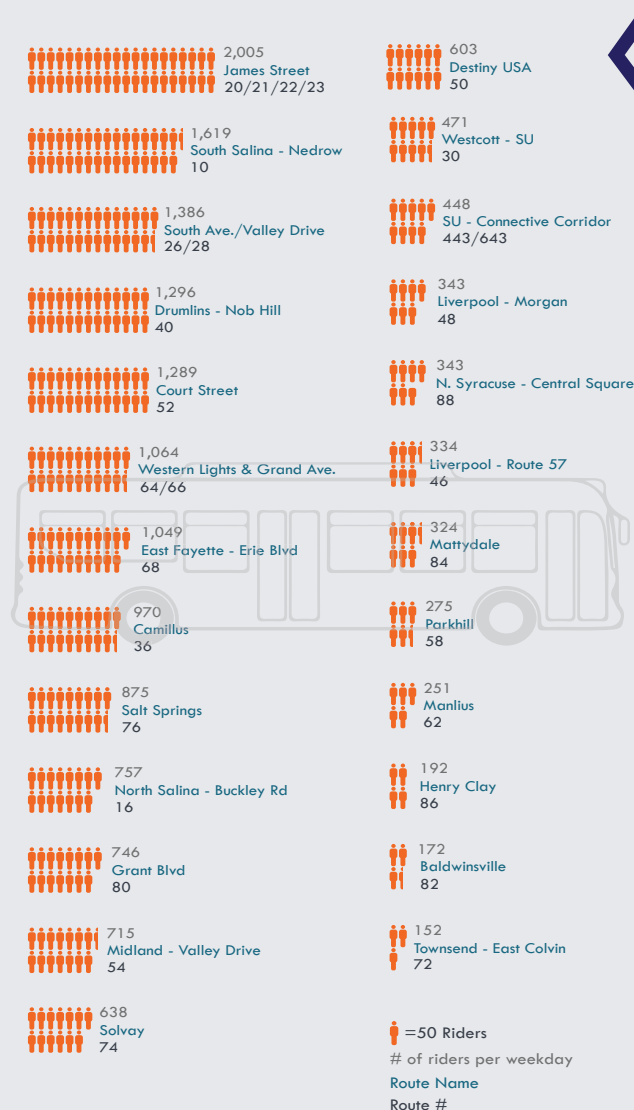
42

bus routes operate within the RTC - SU corridor

41

bus routes operate within the Eastwood - OCC corridor

Average Weekday Ridership by Centro Route (2013)



The James Street, South Salina Street and South Avenue/Valley Drive corridors experienced the highest average weekday ridership in 2013.

Demographics of Current Centro Riders

Ethnic Group

African-American	38%
Native American	3%
Asian	3%
Hispanic	7%
Caucasian	45%
Other	4%

51%
of Centro riders are minorities.

24%
of Centro riders are under the age of 25.

Age

Under 18	4%
18 - 24	20%
25 - 34	19%
35 - 54	39%
55 - 64	14%
65+	3%
No Response	2%

Personal Income

Under \$15,000	41%
\$15,000 - \$29,999	34%
\$30,000 - \$49,999	16%
\$50,000 +	6%
No Response	3%

75%
of Centro riders have an income less than the City of Syracuse's \$30,891 median income.

Population density

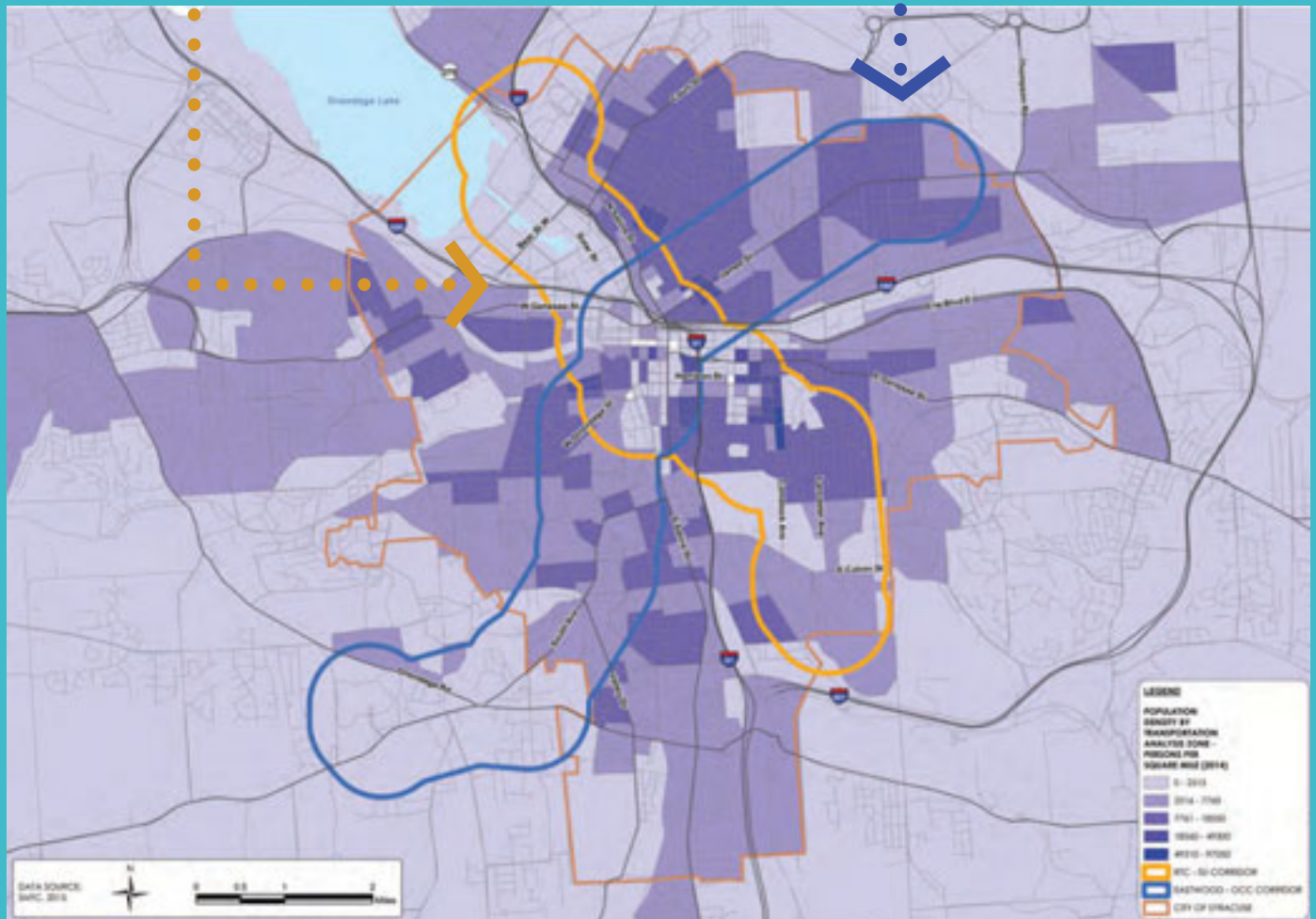
In 2014, approximately 64,000 people lived within the RTC - SU and Eastwood - OCC corridors, accounting for about 45% of the City of Syracuse's total population.

RTC - SU corridor

There are just over 39,000 residents within the RTC - SU corridor, with the majority of them living within close proximity to Syracuse University.

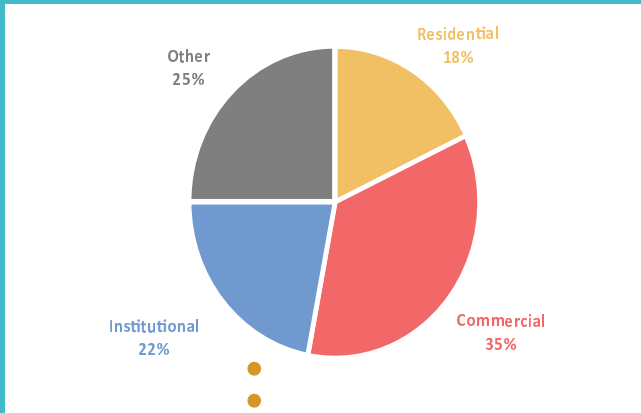
Eastwood - OCC corridor

There are approximately 45,000 people living within the Eastwood - OCC corridor, most of whom are concentrated in neighborhoods adjacent to James Street and South Avenue within the city limits of Syracuse.

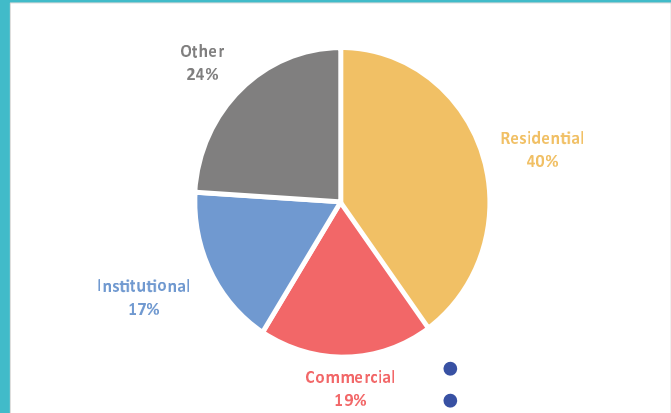


Existing land use

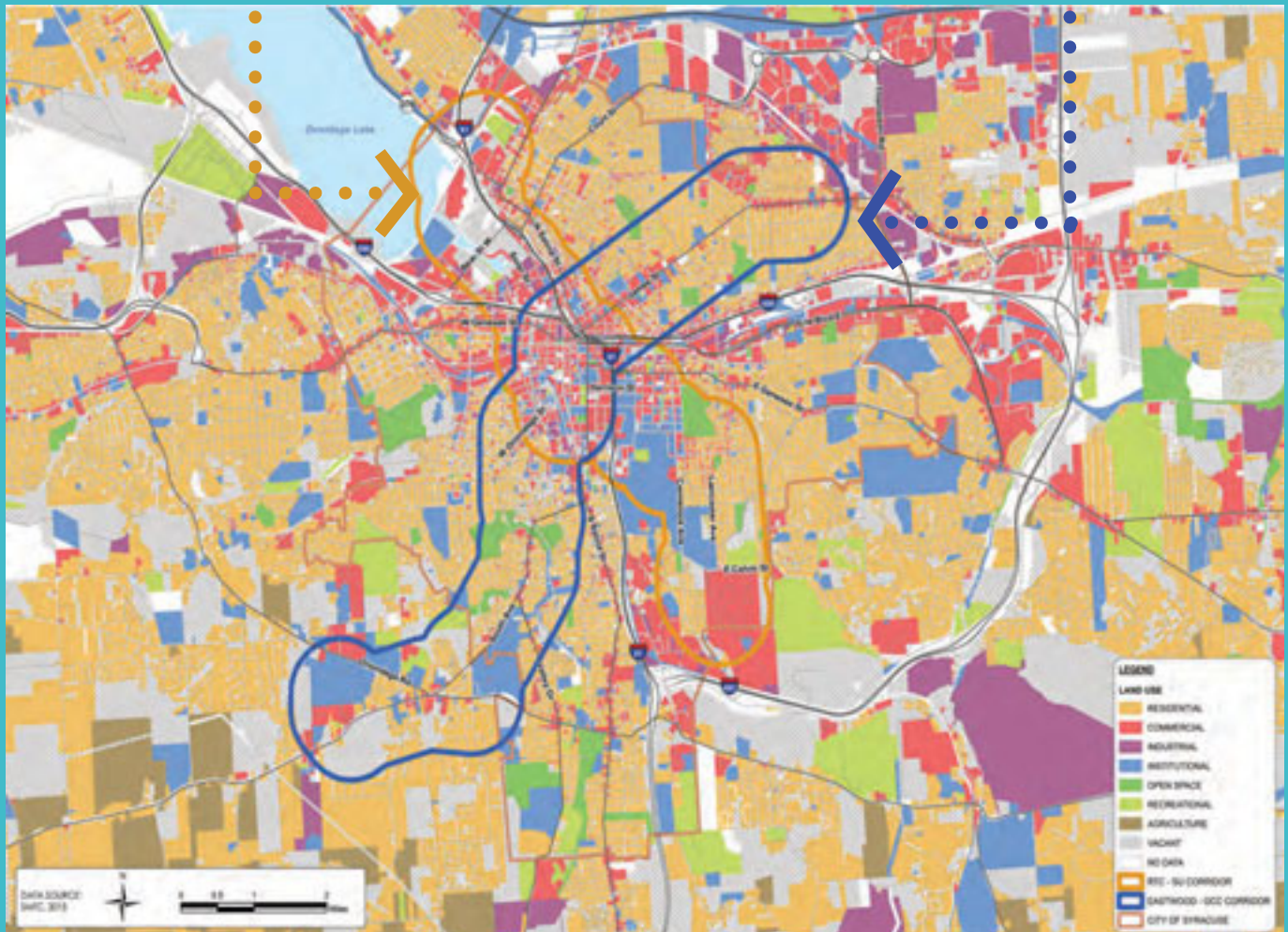
RTC - SU corridor



Eastwood - OCC corridor



* The RTC - SU corridor is predominantly comprised of commercial and institutional land uses, while the Eastwood - OCC corridor is mainly residential and commercial.



Employment

Many of Onondaga County's largest employers are located within one or both study corridors:

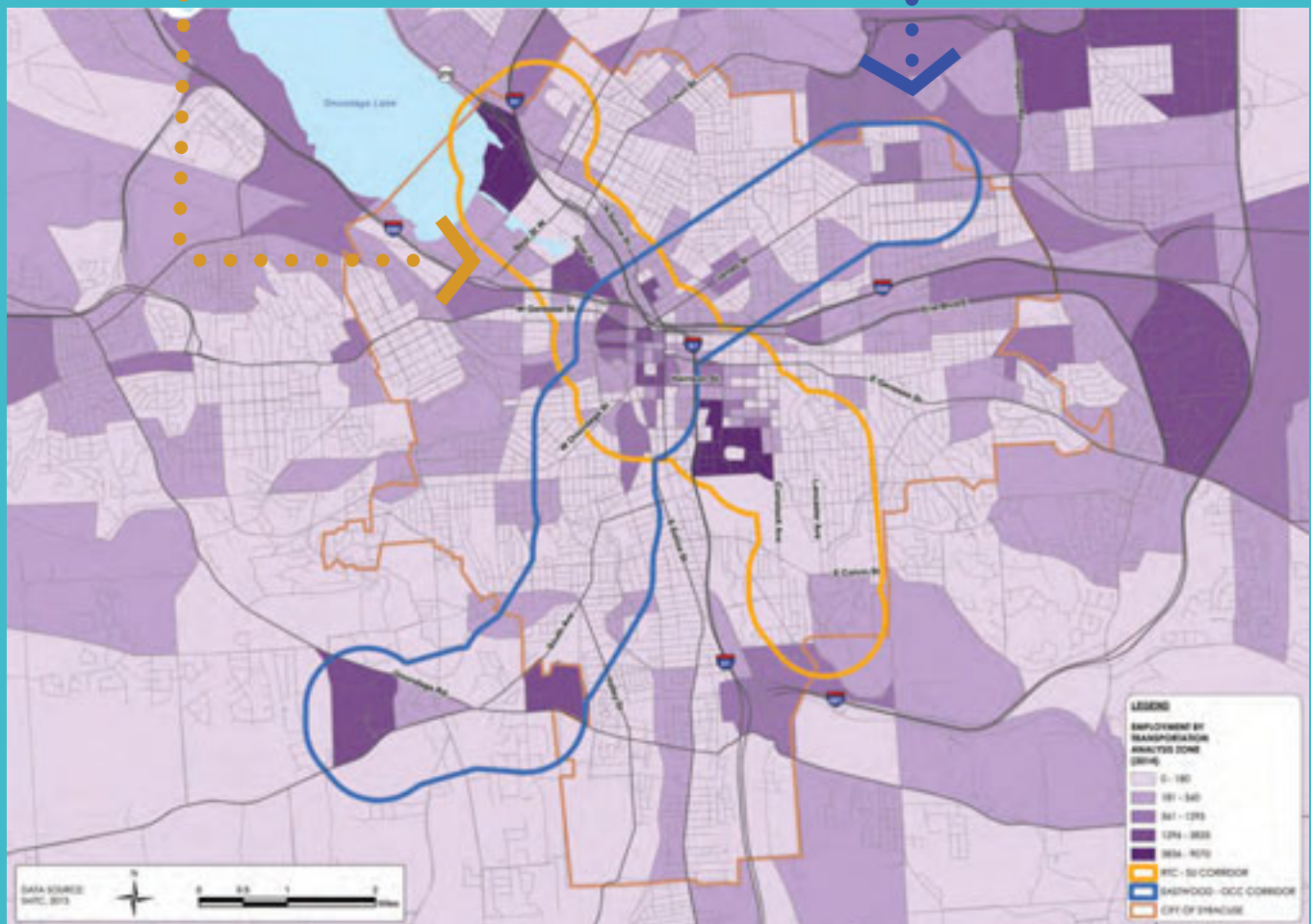
- Upstate University Hospital (Downtown and Community Campuses)
- Destiny USA
- Syracuse University
- St. Joseph's Hospital Health Center
- City, County, State, and Federal Government
- Crouse Hospital
- National Grid
- Time Warner Cable
- Onondaga Community College
- VA Medical Center
- AXA Equitable Life Insurance Company

RTC - SU corridor

80% of jobs in the City of Syracuse are located within this corridor. This amounts to approximately 72,000 jobs, and is 30% of the total employment in Onondaga County.

Eastwood - OCC corridor

53% of jobs in the City of Syracuse are located within this corridor. This amounts to approximately 48,000 jobs, and is 20% of the total employment in Onondaga County.



Households in poverty

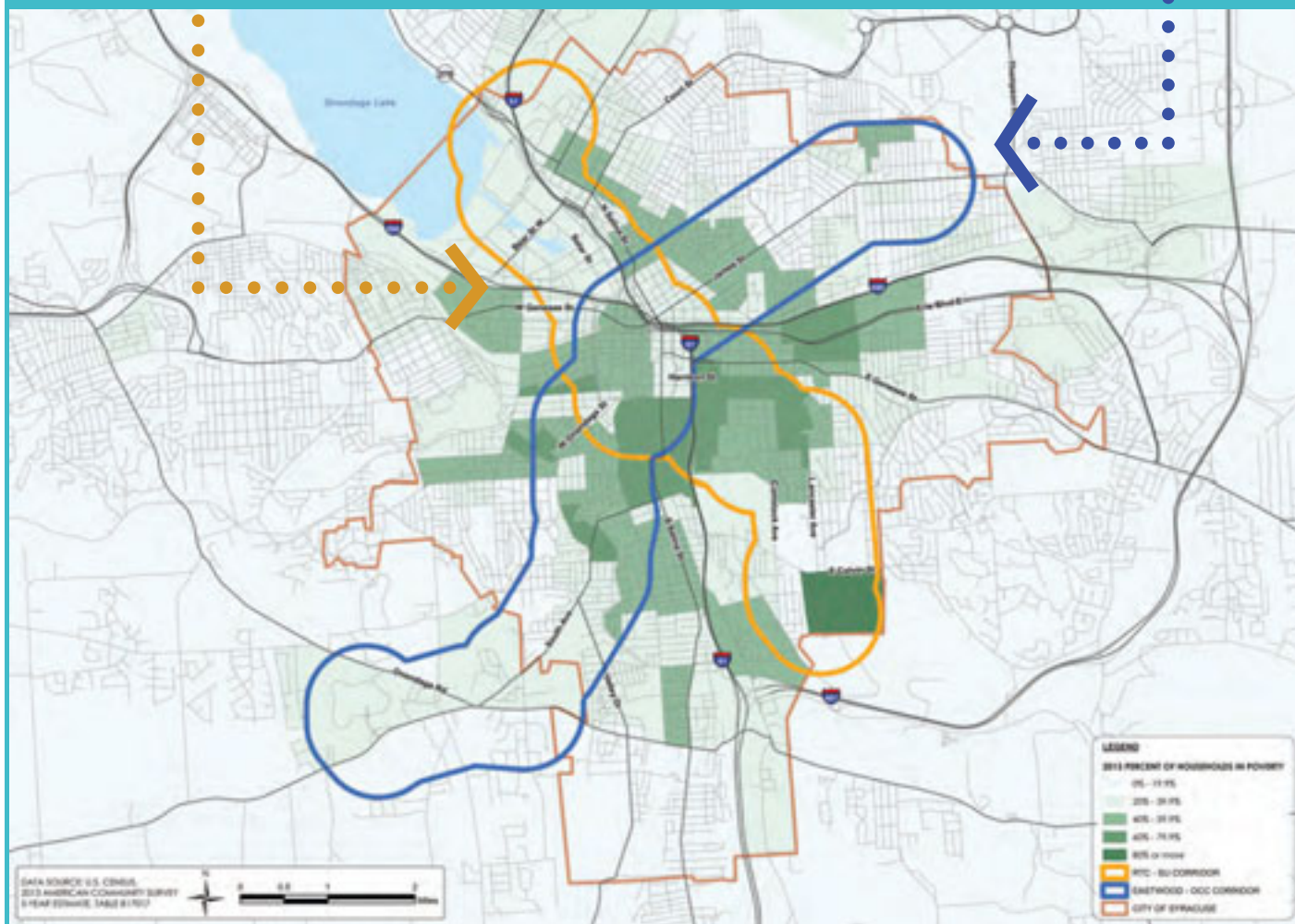
Both corridors have higher poverty rates than the city as a whole, including several extreme poverty neighborhoods, as defined by the U.S. Census Bureau.

RTC - SU corridor

44% of households within this corridor live below the poverty line. Many of these households represent students, and are concentrated near Downtown Syracuse and Syracuse University.

Eastwood - OCC corridor

34% of households within this corridor live below the poverty line. The majority are concentrated within the neighborhoods immediately northwest and south of Downtown Syracuse.



Zero-vehicle households

Households without access to personal automobiles rely heavily on public transportation to access work, school and other daily activities.

In the City of Syracuse, 26% of households have no vehicle; the majority of these households are located in three pockets within the study corridors:

1. West of I-81
2. West of West Street and south of Erie Boulevard
3. North of I-690 and I-81 interchange

✱ Residents within these neighborhoods could be defined as “transit-dependent,” since they often do not own an automobile, causing them to rely heavily on public transit to meet their commuting needs.

Areas with high percentages of households without access to vehicles, overlap with areas with a high concentration of residents under the age of 25 and over the age of 65.



Population over 65

Many residents over the age of 65 are transit-dependent. Car ownership can become a financial burden for senior citizens, since many depend on a fixed income from savings or Social Security.

RTC - SU corridor

The proportion of seniors living along the RTC - SU corridor is relatively low compared to the Eastwood - OCC corridor.

Eastwood - OCC corridor

The senior population is heavily concentrated towards the southern end of the Eastwood - OCC corridor near the Van Duyn Center for Rehabilitation.

- * There is a concentration of senior citizens living along the James Street corridor, where there are assisted-living facilities.



Population under 25

Syracuse has a large population under the age of 25. Individuals in this age cohort are often transit-dependent due to socio-economic factors such as:

- Low income (while in school)
- Low rates of owning a vehicle
- No driver's license

RTC - SU corridor

There are high concentrations of people under the age of 25 around Syracuse University's Main Campus and South Campus.

Eastwood - OCC corridor

There are concentrations of people under the age of 25 southwest of Downtown, along James Street, and near Onondaga Community College.



Transit enhancement strategies

Three transit service enhancement strategies will be developed and evaluated along the RTC - SU and Eastwood - OCC corridors.

Each strategy offers a different level of public transit improvements along the corridors:

1. Existing service improvements
2. Bus Rapid Transit
3. Light Rail Transit and Streetcars

Low Investment \$



High Investment \$\$\$

Existing service improvements



Bus Rapid Transit (BRT)



Light Rail Transit (LRT)/Streetcars



Existing service improvements

Changes to existing bus service, without major capital investment, to boost productivity and efficiency, and lower operating costs by:

- Consolidating low-performing parallel routes into one trunk route with higher frequency and improved travel time.
- Installing Transit Signal Priority (TSP) technology at key intersections to reduce delay.
- Adding bus queue jumpers, slip lanes, and bus priority lanes at congested intersections.
- Consolidating bus stops.
- Upgrading bus stop amenities.

Bus pull-outs



Transit Signal Priority (TSP)



Bus-only lanes



Existing service improvements

Station type: varies, likely to include shelter and other "comfort enhancements"

Distance between stops: 1/8 to 1/4 mile

Service frequency: 10-15 mins. peak, 30 mins. off-peak

Operating speed: depends on level of investment, but comparable to current bus speeds

Power source: current bus fuel source

Seating capacity: 45 people on standard bus, 60 people on articulated bus

Capital cost per vehicle: \$550K for standard bus, \$850K for articulated bus.

Capital cost per route mile (excluding vehicles): \$500K-\$1M

Residential density thresholds: 7 dwelling units/acre for basic service.

Dedicated or shared right-of-way: shared

Bus Rapid Transit (BRT)

Bus Rapid Transit, or BRT, is an integrated system of facilities, equipment, services, and amenities that improves the speed, reliability, and identity of bus transit. BRT systems can be customized to community needs, and can offer significant transit capacity improvements for a lower cost than rail options.

BRT systems can vary in their intensity/investment based on where they operate:

- Mixed traffic: limited bus service operating mostly within mixed traffic on existing arterial roads
- Bus-only lanes: designated bus-only lanes on key roads
- Busways: some portion of route operates on a separate, dedicated bus-only roadway

Mixed traffic



Bus-only lanes



Designated busways



BRT characteristics

Station type: branded station with arrival time information, lighting, and benches; may include low-level platform and off-vehicle fare payment; on side or center of street.

Distance between stops: 1/2 mile (or longer on freeways with high-occupancy vehicle lanes)

Service frequency: 10 mins. peak, 15 mins. off-peak

Operating speed: 15 to 20 MPH in mixed traffic and up to roadway speed limit in dedicated lanes or busways

Power source: diesel, alternative fuel (CNG), electric trolley, diesel-electric hybrid, electric battery

Seating capacity: 45 people on standard bus, 60 people on articulated bus

Capital cost per vehicle: \$550K for standard bus, \$850K for articulated bus, \$1.2M for BRT bus

Capital cost per route mile (excluding vehicles and right-of-way acquisition): \$4M-\$25M

Residential density thresholds: at least 15 dwelling units/acre

Dedicated or shared right-of-way: varies

Low-intensity BRT example: Mixed traffic

CDTA's BusPlus BRT service operates along a 17-mile stretch of Route 5 between Albany and Schenectady. The BRT vehicles travel in mixed traffic, and utilize queue jumpers at major signalized intersections, and stop at 18 upgraded/branded stations, resulting in a significant travel time improvement over the existing route which had 90 stops. The system also incorporates GPS tracking that is used to provide arrival information at the stations.



BusPlus facts:

Location: Albany-Schenectady, NY

Length: 17 miles (18 stations)

Time to construct: 2 years

Construction cost: \$34 million total*,
\$2 million per mile*

Opened: 2011

Annual operating costs: \$8.8 million per year

Ridership: 10,000 per day

Fare: One-way pass \$2.00

All-day pass \$4.00

*Cost does not include Engineering or R.O.W.

Success story

Ridership along the Route 5 corridor has increased 10-15%, with the biggest share coming from the BusPlus route.

Medium-intensity BRT example: Bus-only lanes

The 6.8-mile HealthLine in Cleveland utilizes 212 articulated rapid transit vehicles that can accommodate 47 sitting and 53 standing passengers, and incorporates GPS communication with text and audio announcements. The vehicles operate in bus-only lanes in the center of Euclid Avenue.



HealthLine facts:

Location: Cleveland, OH

Length: 6.8 miles (58 stations)

Time to construct: 3 years

Construction cost: \$112 million total*,
\$16.5 million per mile*

Opened: 2008

Annual operating costs: \$7.2 million

Ridership: 12,500 per day

Fare: One-way pass \$2.25

All-day pass \$5.00

*Cost does not include Engineering or R.O.W.

Success story

Since the completion of the project, \$4.3 billion has been spent on projects along the corridor, including loft apartments, retail, and offices. The HealthLine received its name through a partnership with the Cleveland Clinic and University Hospital.

High-intensity BRT example: Designated busways

The 14-mile Orange Line in Los Angeles uses a completely separate transit right-of-way that follows part of a former railroad line. The system utilizes articulated buses that are 20 feet longer and can hold 50% more passengers than a standard bus.



Orange Line facts:

Location: Los Angeles, CA

Length: 14 miles (14 stations)

Time to construct: 3 years

Construction cost: \$322 million total*,
\$23 million per mile*

Opened: 2005

Annual operating costs: \$24 million

Ridership: 25,485 per day

Fare: One-way pass \$1.50

All-day pass \$5.00

*Cost does not include Engineering or R.O.W.

Success story

Several transit-oriented developments were planned at the completion of the Orange Line. Furthermore, there was a 24% increase in boardings between 2006 and 2008.

Light Rail Transit (LRT)/streetcars

Light Rail Transit, or LRT, and streetcars operate on fixed rail infrastructure. LRT/streetcars can operate separated from other traffic below grade, at-grade, or on an elevated structure, or can operate together with motor vehicles on the surface. Service can be operated with single cars or multiple-car trains. Electric traction power is typically obtained from an overhead wire.

What is Light Rail Transit (LRT)?

Light Rail Transit (LRT) is similar to the modern day streetcar, but different in that the vehicles are usually heavier, have a larger passenger capacity and can run at higher speeds.

Existing Light Rail Transit (LRT)



New Light Rail Transit (LRT)



What are streetcars?

Streetcars run on electric power drawn from overhead catenary wires or direct connection to an electrified track in the street. They are typically installed in existing shared vehicular lanes and operate at the speed of traffic.

Streetcar



LRT/streetcar characteristics

Station type: branded station with arrival time information, lighting, and benches; may include low-level platform and off-vehicle fare payment; on side or center of street.

Distance between stops: 1/2 mile to 1 mile (LRT) or 1/4 mile (streetcar)

Service frequency: 5-30 mins. peak, 10-30 mins. off peak (LRT) or 8-15 mins peak, 12-20 mins. off peak (streetcar).

Operating speed: 20 to 60 MPH (LRT), 6 to 12 MPH (streetcar)

Power source: electricity from overhead catenary wires or battery operated (streetcar only)

Seating capacity: 32-100 people (LRT), 30 people (streetcar)

Capital cost per vehicle: \$2M - \$5M

Capital cost per route mile (excluding vehicles and right-of-way acquisition): \$20M-\$70M

Residential density thresholds: at least 9 - 12 dwelling units/acre (LRT) or 20+ dwelling units/acre (streetcar)

Dedicated or shared right-of-way: dedicated (LRT) or shared (streetcar)

Low-intensity LRT example: Streetcars

The 3.4 mile River Rail Streetcar system operates between Little Rock and North Little Rock, connecting major points of interest in both cities, including a ballpark, convention center, museums, courthouses, riverfront attractions, and loft apartments, among others. The service utilizes five vintage replica trolleys, powered by overhead electric, that operate on track within the flow of traffic.



River Rail facts:

Location: Little Rock, AR

Length: 3.4 miles (15 stations)

Time to construct: 1.5 years

Construction cost: \$27 million total*,
\$8 million per mile*

Opened: 2004

Annual operating costs: \$450,000

Ridership: 800 weekday, 1,500 Saturday

Fare: One-way pass \$1.00

All-day pass \$2.00

*Cost does not include Engineering or R.O.W.



Success story

Economic impacts of the River Rail were felt even before its opening. Two loft apartment buildings and the River Market were proposed once the streetcar route was finalized. The streetcar system has become a tourist attraction, boosting activity within the cities during the weekends.

Medium-intensity LRT example: Existing rail

The River Line is a 34-mile light rail corridor that connects the cities of Camden and Trenton, and passes through many suburban communities in between. It operates mostly along a lightly used freight railroad line that was upgraded for passenger service and is the first LRT system in the United States to utilize self-propelled diesel-electric vehicles.



River Line facts:

Location: Camden - Trenton, NJ

Length: 34 miles (20 stations)

Time to construct: 5 years

Construction cost: \$1.1 billion total*,
\$32.4 million per mile*

Opened: 2004

Annual operating costs: \$18 million

Ridership: 9,000 per day

Fare: One-way pass \$1.50

All-day pass N/A

*Cost does not include Engineering or R.O.W.

Success story

The politically driven project was highly controversial due to the low ridership projections, but the service has exceeded the predicted ridership every year since opening.

High-intensity LRT example: New rail

The 20-mile METRO light rail corridor serves Phoenix, Tempe, and Mesa with low-floor vehicles powered by overhead electrical lines. The vehicles operate in a two-way configuration in the center of city streets, or on the outside of the street in one-way couplets. The system required significant reconstruction of the city streets to incorporate the rail lines and stations.



METRO facts:

Location: Phoenix/Tempe/Mesa, AZ

Length: 20 miles (32 stations)

Time to construct: 3.5 years

Construction cost: \$1.4 billion total*,
\$70 million per mile*

Opened: 2008

Annual operating costs: \$37 million per year

Ridership: 38,700 per day

Fare: One-way pass \$1.50

All-day pass \$3.50

*Cost does not include Engineering or R.O.W.



Success story

Since construction of the METRO light rail, \$4 billion has been spent on transit-oriented developments along the corridor.

Transit enhancement strategies summary

Strategy	Definition	Stations	Distance between stops	Frequency	Operating speed	Power source	Vehicle seating capacity	Vehicle Cost	Capital cost per route mile*	Residential density threshold	Operating right of way
Existing service improvements	Changes to existing bus service, without major capital investment, to boost productivity and efficiency, and lower operating costs.	Varies, likely to include shelter and other "comfort enhancements"	1/8 to 1/4 mile	10-15 mins. peak, 30 mins. off-peak	Depends on level of investment, but comparable to current bus speeds	Current bus fuel source	45 people on standard bus, 60 people on articulated bus	\$550,000 for standard bus, \$850,000 for articulated bus	\$500K-\$1M	7 dwelling units/acre for basic service	Shared
BRT	An integrated system of facilities, equipment, services, and amenities that improves the speed, reliability, and identity of bus transit. Can be customized to community needs, and can offer significant transit capacity improvements for a lower cost than rail options.	Branded stations with arrival time information, lighting, and benches; may include low-level platform and off-vehicle fare payment; on side or center of street.	1/2 mile (or longer on freeways with high-occupancy vehicle lanes)	10 mins. peak, 15 mins. off peak	5 to 20 MPH in mixed traffic and up to roadway speed limit in dedicated lanes or busways	Diesel, alternative fuel (CNG), electric trolley, diesel-electric hybrid, electric battery	45 people on standard bus, 60 people on articulated bus	\$550,000 for standard bus, \$850,000 for articulated bus, \$1.2M for BRT bus	\$4M - \$25M	At least 15 dwelling units/acre	Varies
LRT/streetcar	Fixed-rail infrastructure that can operate separated from other traffic below grade, at-grade, or on an elevated structure, or can operate together with motor vehicles on the surface. Service can be operated with single cars or multiple-car trains. Electric traction power is typically obtained from an overhead wire.	Branded station with arrival time information, lighting, and benches; may include low-level platform and off-vehicle fare payment; on side or center of street.	1/2 mile to 1 mile (LRT) or 1/4 mile (streetcar)	5-30 minutes (LRT) or 8-15 minutes (streetcar). Off-peak: 10-30 minutes (LRT), 12-20 minutes (streetcar)	6 to 12 MPH (streetcar), 20 to 60 MPH (LRT)	Electricity from overhead catenary wires or battery operated (streetcar only)	32-100 people (LRT), 30 people (streetcar)	\$2M-\$5M	\$20M-\$70M	At least 9-12 dwelling units/acre (LRT) or 20+ dwelling units/acre (streetcar)	Dedicated (LRT) or shared (streetcar)

* excludes vehicle costs and right-of-way acquisition

Next steps

1

Pop-up meetings at stop locations

The SMART 1 Team will be going to targeted bus stops along each of the corridors to inform individuals of the project and to solicit feedback regarding their experiences. The content will directly follow what was presented at the first public meeting.

2

Focus Group meetings

The SMART 1 team will conduct several focus groups to discuss how riders might take advantage of the fast, frequent, high-quality services that enhanced transit could provide. Representatives of critical institutions, organizations, employment centers, entertainment or shopping destinations, and neighborhood associations will be invited to a roundtable working session to discuss issues unique to enhanced transit service.

3

Continued analysis

1. Develop detailed route and schedule alternatives
2. Estimate ridership on each alternative
3. Estimate operating and capital costs
4. Assess social and environmental impacts

Additional public meetings
and refined analysis.

Stay involved

Stay informed about the SMART 1 process!



Check our website for updates or to join our mailing list: www.smtcmpo.org/SMART



Follow us on Facebook at
Syracuse Metropolitan Transportation Council.

Contact us anytime:



315-422-5716



contactus@smtcmpo.org

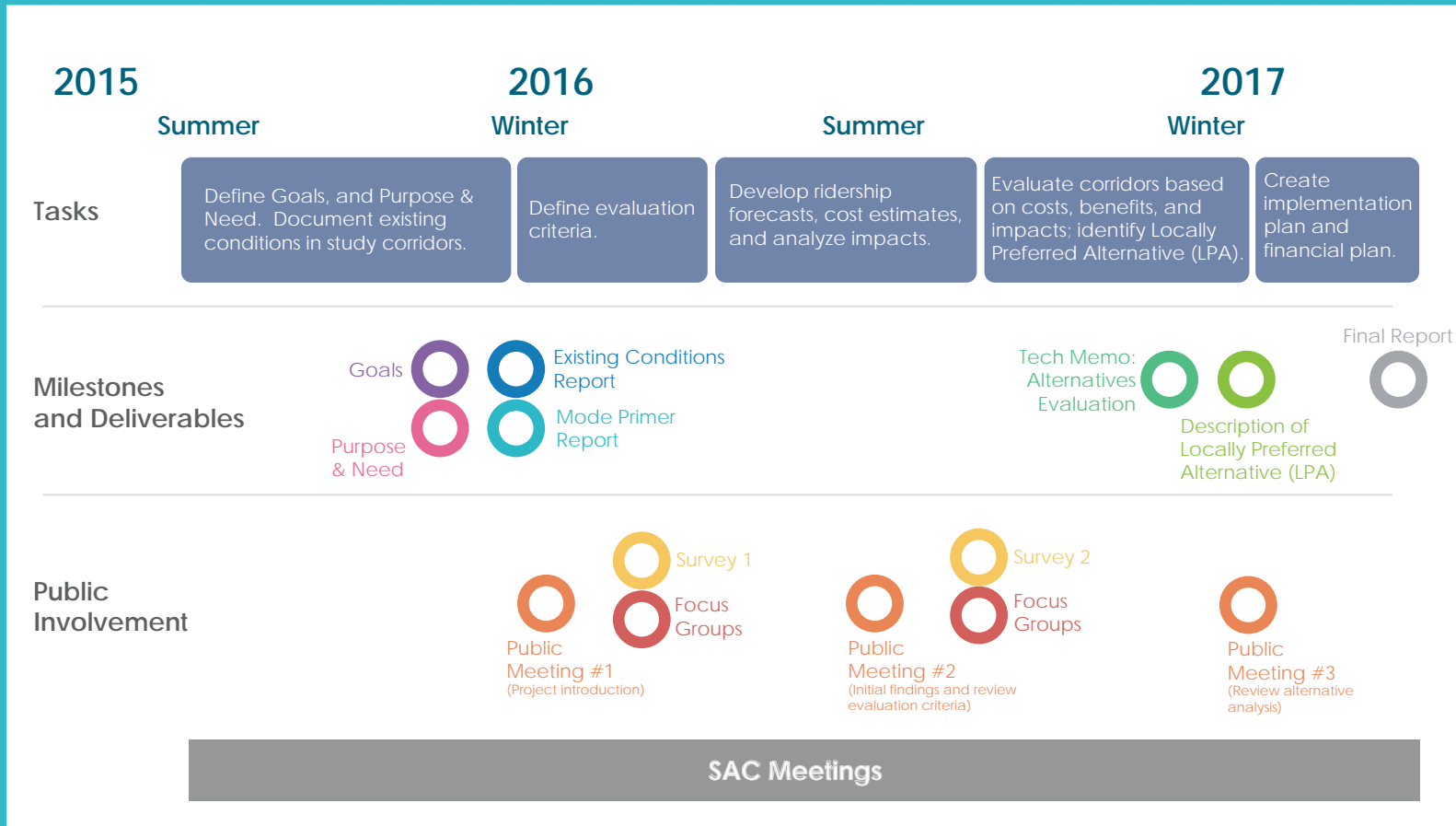


126 N. Salina St., Suite 100,
Syracuse, NY 13202

THANK YOU FOR YOUR PARTICIPATION!

We anticipate that the SMART 1 project will be completed around Spring 2017.

Schedule



The SMART 1 planning study started in Summer 2015 and is expected to be completed in Spring 2017.

Throughout the course of the planning study, three public meetings/open houses are scheduled, along with various other public engagement activities such as focus groups, community/neighborhood meetings, surveys, and other events.

Frequently Asked Questions

What is the SMTC?

The Syracuse Metropolitan Transportation Council (SMTC) is the State-designated Metropolitan Planning Organization (MPO) for Onondaga County and portions of Oswego and Madison Counties. The SMTC is the region's forum for cooperative decision making when it comes to developing transportation plans, programs and recommendations. The SMTC is made up of officials representing local, state and federal governments or agencies with an interest in comprehensive transportation policies and services.

What area do you cover?

The area that the SMTC covers is called its Metropolitan Planning Area (MPA). The MPA includes all of Onondaga County, the Town of Sullivan in Madison County and the Towns of Hastings, Schroepfel and West Monroe, plus a small area of the Town of Granby, in Oswego County.

What are the goals of the SMART 1 study?

Consensus Building:

- Involve a large and diverse mix of community members through an unbiased, transparent and meaningful outreach program.
- Support the planning goals of SMTC, Centro, City of Syracuse, NYSDOT and other important stakeholders.
- Adopt a Locally Preferred Alternative (LPA) that is technically feasible, includes a sound financial plan, and has the broad support of the Centro, SMTC, City of Syracuse and other key stakeholders.
- Follow standard FTA procedures to facilitate the transition to the project development process and assure project competitiveness in the Small Starts program.

Transportation:

- Build on the analysis and conclusions of the Syracuse Transit System Analysis and confirm the selection of the preliminary corridors.
- Improve the utility of transit service for riders by reducing travel time, improving headways, expanding route coverage, and generally increasing travel options.
- Develop a plan for a high-intensity transit investment that is preferred for trips to and within downtown Syracuse because it has:
 - Frequent service
 - Convenient and accessible alignments and stops
 - Comfortable vehicles
 - Seamless connections to other regional transit services.

Development:

- Support revitalization of Syracuse and key neighborhoods along the selected corridors by encouraging transit oriented development and infill.
- Utilize transit to improve connectivity between key locations in Syracuse supporting economic, cultural, social, and health-related development opportunities.
- Plan to increase the effectiveness of transit in Syracuse, providing a vision for how it could contribute to a vibrant, inclusive, and prosperous city.

How are you funded and where does that money come from?

The SMTC's annual planning budget is approximately \$1.2 million. Funds are provided by both the Federal Highway (FHWA) and Federal Transit Administrations (FTA) to the New York State Department of Transportation (NYSDOT). NYSDOT allocates funding to the Metropolitan Planning Organizations throughout New York State on a formula basis. This funding is used strictly for metropolitan transportation planning activities and is not used for capital expenses.

How is the SMART 1 study being funded?

The SMART 1 planning study is being funded through the SMTC's annual planning budget mentioned earlier and in part through a similar statewide transportation planning allocation from NYSDOT known as SPR (Statewide Planning & Research). Funding is used strictly for metropolitan and/or statewide transportation planning activities and is not used for capital expenses. This study does not impact Centro's operating budget.



Frequently Asked Questions

When will this project be completed?

The SMART 1 planning project is expected to be completed in 2017 with the recommendation of a Locally Preferred Alternative. At the conclusion of the SMART 1 study, if desired, an additional environmental review and design phase of the Locally Preferred Alternative could be advanced by Centro, or another entity.

How is the SMART 1 study different from the I-81 Viaduct Project?

The SMART 1 study will focus solely on the assessment of an enhanced transit system (BRT or LRT) operating along two corridors that may have the conditions necessary to sustain high ridership. The I-81 Viaduct Project is focused on a select area of the interstate that is nearing its lifespan. In addition to recommending pursuing higher-intensity transit services, the 2014 STSA also recommended a commuter express service for Interstate 81. Although interstate express bus service is not included in SMART 1, the planning study does not preclude Centro or NYSDOT from advancing the express bus concept. As plans for both I-81 and an enhanced transit system progress, SMTC, Centro, and NYSDOT will continue to communicate frequently. Both Centro and NYSDOT are members of the SMART 1 Study Advisory Committee, while SMTC and Centro are members of NYSDOT's I-81 Stakeholder Advisory Working Groups.

How were the two corridors selected?

The SMART 1 study builds upon the analysis and findings of the 2014 Syracuse Transit System Analysis (STSA) completed by NYSDOT as a component of The I-81 Challenge. The goal of the STSA was to develop a strategy to assist the Syracuse metropolitan area in achieving a balanced transportation system that supports economic growth, improves quality of life, and supports the vision of the communities it serves. The analysis identified six transit improvement corridors and evaluated three different types of improvements (Base Build, BRT or LRT) on each. Each corridor/mode combination was evaluated using numerous evaluation criteria in 5 categories: mobility improvements, economic development impacts, environmental benefits, cost effectiveness, and supportive land use. Six of the top 10 corridor/mode combinations listed in the STSA relate to two corridors: 1) James Street/South Avenue and 2) Destiny/RTC to University Hill. Given this, these two corridors were selected for further analysis in the SMART 1 study.

What area is being looked at?

The SMART 1 planning study is focusing efforts along two corridors primarily in the City of Syracuse
1) the Regional Transportation Center (RTC) – Syracuse University and
2) Eastwood – Onondaga Community College.

Why is the SMTC leading this project and not Centro?

As the area's Metropolitan Planning Organization charged with carrying out the continuous, comprehensive and cooperative transportation planning process, the SMTC agreed to complete the SMART 1 planning study on behalf of Centro. Centro submitted the SMART 1 study application through the SMTC's annual work program known as the Unified Planning Work Program. There is no cost to Centro to have SMTC complete this study (see previous question: "How is the SMART 1 study being funded?").

How can I become involved in this project?

To ensure that interested persons, organizations, and agencies have an opportunity to be involved in the study, the SMTC, with the assistance of the Study Advisory Committee, have designed an extensive public participation effort. Efforts will include open houses, focus groups, community/neighborhood meetings, surveys, and other events that have yet to be planned. Join our SMART 1 e-mail list (send an e-mail to contactus@smtcmpo.org) and you will receive notices of upcoming meetings and other project-related events. Keep checking our website (www.smtcmpo.org/SMART) for project status updates and notices of upcoming SMART 1 public meetings. All SMTC and SMART 1 meetings are open to the public.



Frequently Asked Questions

Who is on the Study Advisory Committee?

A SMART 1 Study Advisory Committee (SAC) was established and will meet on a regularly scheduled basis. The SAC's role will be to advise the SMTC on the technical content of deliverables and to provide needed input and guidance throughout the study. The SAC is comprised of representatives from the following agencies:

- Central New York Regional Transportation Authority (Centro);
- City of Syracuse - Planning Division;
- Downtown Committee Inc. of Syracuse;
- New York State Department of Environmental Conservation (NYSDEC);
- New York State Department of Transportation (NYSDOT);
- Syracuse – Onondaga County Planning Agency (SOCPA); and
- University Hill Corporation.

What about OnTrack?

OnTrack was a unique rail service that operated in Syracuse from 1994 to 2007, with its final years of operation as a special events service during Syracuse University Carrier Dome events. Similar to the discussion on the interstate express bus service (see How is the SMART 1 study different from the I-81 Viaduct Project?), SMART 1 does not preclude the advancement of a special events rail service between Syracuse University and Destiny USA. However, the concept of commuter rail or special events rail service is not included in SMART 1 as the concept(s) ranked very low in the 2014 STSA.

What is a Locally Preferred Alternative?

A Locally Preferred Alternative is the community members' and local officials' preferred option that emerges from the evaluation of modes and alignments for a particular corridor in the planning process. Once a Locally Preferred Alternative is identified, the area's Long Range Transportation Plan will be updated to include the enhanced transit service.

What is BRT?

BRT is an innovative, high capacity, lower cost public transit solution that can significantly improve urban mobility. This permanent, integrated system uses buses or specialized vehicles on roadways or dedicated lanes to quickly and efficiently transport passengers to their destinations, while offering the flexibility to meet transit demand. BRT systems can easily be customized to community needs and incorporate state-of-the-art, low-cost technologies that result in more passengers and less congestion.

What is LRT?

Light rail transit, often known simply as LRT, began as an evolutionary development of the streetcar to allow higher speeds and increased capacity. Light rail transit is characterized by its versatility of operation, as it can operate separated from other traffic below grade, at-grade, or on an elevated structure, or can operate together with motor vehicles on the surface. Service can be operated with single cars or multiple-car trains. Electric traction power is typically obtained from an overhead wire.



Frequently Asked Questions

Will there be a removal of existing bus stops on the two corridors to accommodate BRT or LRT?

If a BRT or LRT system is constructed, there may be a removal of a few stops that will reduce the amount of time for passengers to travel to their destination. Riders will experience a much shorter wait time at stops. This improved level of service and convenience will be provided in exchange for fewer bus stops. However, stops may also remain for local non-BRT or LRT service.

Will other routes be eliminated/consolidated in exchange for the BRT or LRT?

Presently, all existing bus routes, stop locations and shelters along the two corridors will not change. If an enhanced transit service advances to construction some of the routes, stop locations and frequencies along the corridor will very likely change. These items will be taken under consideration in the SMART 1 planning study.

Will the fares for BRT or LRT ridership be more than the existing bus fares on these routes?

At this time it is unknown if fares would increase with the development of a BRT or LRT system. However, the existing fares in no way will be impacted by this planning study. Capital, operating and maintenance costs will be examined in the SMART 1 planning study.

Will the SMART 1 study result in improvements to the existing Centro service?

Centro is one of the SMTC's member agencies and its Board of Members is responsible for approving any changes in service. The SMART 1 study may recommend improvements to the existing transit service provided by Centro, however, the SMTC as an agency has no role on Centro's Board of Members and, therefore, no direct influence on proposed service changes at Centro.

What other cities have implemented a successful BRT or LRT?

There are several BRT systems operating nationwide, with 4 of these systems operating in mid-size cities like Albany, NY; Cleveland, OH; Hartford, CT; and Eugene, OR.

Similarly, there are also various LRT systems in operation throughout the country, although larger in size, some of which are found in Newark, NJ; Phoenix, AZ; Portland, OR; Charlotte, NC; Salt Lake City, UT; and Los Angeles, CA.



Appendix B: Meeting presentation

SMART 1 – Public Meeting #1

February 24, 2016



Agenda

- **Who is the SMTC?**
- **SMART 1 project overview**

Syracuse Metropolitan Transportation Council

An Introduction: Who we are & what we do



What is an MPO?

- A Metropolitan Planning Organization, or MPO, is a transportation **policy-making and planning body** made up of representatives of local, state, and federal government and transportation authorities.



What is an MPO?

- A federal requirement for urbanized areas with a population of 50,000 or more (based on most recent Census).
- The MPO is charged with **comprehensive, cooperative, and continuous** transportation planning for a metropolitan area.



Who is the SMTC?

- **Policy Committee members:**

- CenterState Corporation for Economic Opportunity
- CNY Regional Planning & Development Board
- CNY Regional Transportation Authority (Centro)
- City of Syracuse
 - Office of the Mayor
 - Common Council
 - Planning Commission
- New York State
 - Department of Environmental Conservation
 - Department of Transportation
 - Empire State Development Corporation
 - Thruway Authority
- Onondaga County
 - Office of the County Executive
 - Legislature
 - Planning Board

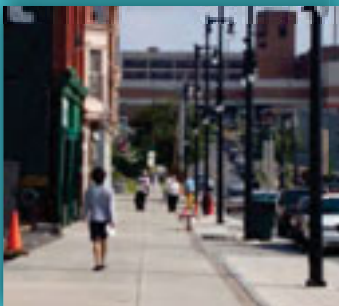
- The Policy Committee (not the staff) is the designated MPO.

Where is the SMTC's planning area?

- All of Onondaga County
- Town of Sullivan in Madison County
- Towns of West Monroe, Hastings, Schroepfel, and small portion of Town of Granby in Oswego County



What does the SMTC do?



- **Comprehensive** transportation planning includes

- Automobiles and the road network
- Freight
- Transit
- Bicycling
- Walking

What does the SMTC do?

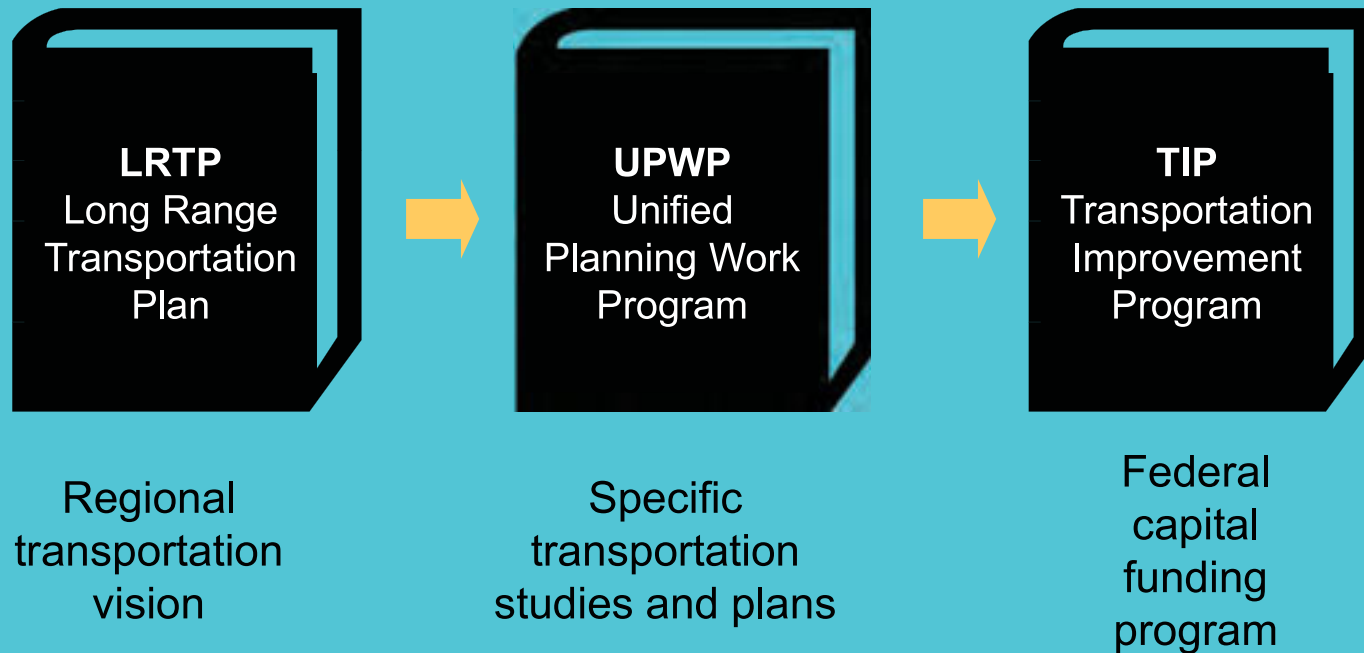


- **Cooperative** transportation planning includes

- Coordinating between federal, state, and local agencies to develop transportation plans and programs;
- Providing an opportunity for citizens to participate in the planning process.

What does the SMTC do?

- **Continuous** transportation planning



Why an MPO process?

The MPO provides a forum to:

- Collaborate between governments, interested parties, and the public
- Forecast the region's future
- Plan to reflect the region's vision
- Prioritize transportation needs
- Balance needs and funding availability
- Invest funds appropriately
- Express community opinion through member agencies and elected officials

Examples of SMTTC planning studies

- Erie Canalway Trail Study
- *The I-81 Challenge* Public Participation
- City of Syracuse Wayfinding Study
- Bicycle Commuter Corridor Study
- Butternut Street Corridor Study
- This study



SMART 1 project overview



Who is involved?



Who is involved in SMART 1?

The Syracuse Metropolitan Transportation Council (SMTC) is conducting this study on behalf of Centro.

A Study Advisory Committee will guide the process:

- Centro
- City of Syracuse – Planning Division
- Downtown Committee of Syracuse
- NYS Department of Environmental Conservation (NYSDEC)
- NYS Department of Transportation (NYSDOT)
- Syracuse-Onondaga County Planning Agency (SOCPA)
- University Hill Corporation

Who is involved in SMART 1?

Public engagement

Your input is essential to the success of this study!

We have designed a public process that will include:

- Pop-up meetings at targeted stop locations along the study corridors
- Focus group meetings on various topics
- Additional large public meetings
- Continued communication through our website, mail/e-mail, and Facebook page

SMTC staff members can also attend your community or neighborhood group meeting to talk about the study.



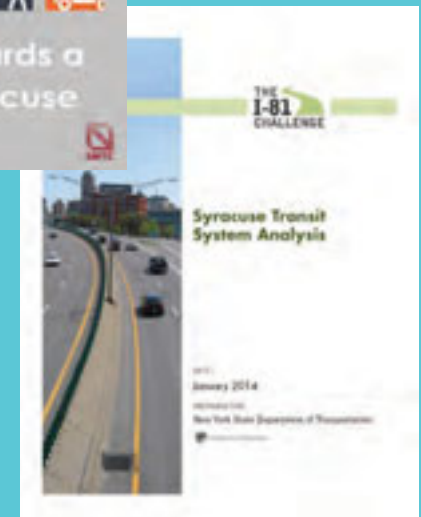
Background



Why conduct the SMART 1 study?

Enhanced transit is a community priority.

- Community has expressed a desire for expanded transit options.
- An “enhanced transit system” is identified as a regionally significant priority project in the SMTC’s 2050 Long Range Transportation Plan.
- A previous transit study, called the Syracuse Transit System Analysis (STSA), recommended “higher-intensity transit services along the Destiny USA/Regional Transportation Center (RTC) to Syracuse University and James Street/South Avenue Corridors.”



Syracuse Transit System Analysis (STSA)

What was the STSA?

Syracuse Transit System Analysis (STSA)

January 2014, the New York State Department of Transportation (NYSDOT), in coordination with the SMTC and Centro, completed the Syracuse Transit System Analysis (STSA) as part of the I-81 Corridor Study. The purpose of the STSA was:

“To develop a long-range vision for the transit system in the Syracuse metropolitan area to assist in achieving a balanced transportation system that supports economic growth, improves quality of life, and supports the vision of the communities that it serves.”

Transit Enhancement Corridors



The STSA reviewed the entire Centro system and identified 6 corridors that would be likely to support increased transit ridership, based on:

- Existing transit ridership and mode share
- Population and employment density
- Households with access to one or no vehicles
- Potential for commuter trips
- Commute times
- Household income
- Existing plans

Evaluation

Strategies

The STSA evaluated 3 strategies for each corridor.



Existing service improvements



Bus Rapid Transit (BRT)



Light Rail Transit (LRT)

STSA Evaluation

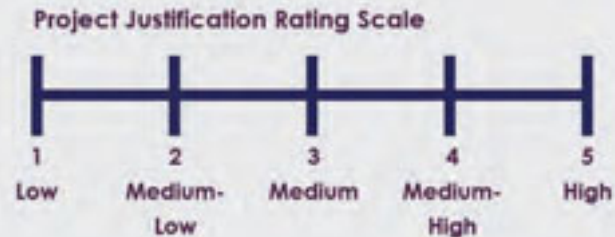
Evaluation Criteria

Each corridor/strategy combination was evaluated using criteria in five categories, based on the Federal Transit Administration's Project Justification Rating guidance for funding, as well as local stakeholder input.

CATEGORY	WEIGHT	EXAMPLE CRITERIA
Mobility improvements	25%	Annual trips, one-seat rides to major destinations
Economic development	25%	Transit-supportive plans and policies, strategic development areas served
Cost effectiveness	25%	Cost-benefit ratio
Land use	12.5%	Employment served, population density, parking costs/availability
Environmental benefits	12.5%	Air quality, safety, energy use

STSA Results

A weighted average score was determined for each corridor/strategy combination, and the score was used to determine the Project Justification Rating.



Final Corridor Rankings

RANK	CORRIDOR	STRATEGY	WEIGHTED AVERAGE SCORE
1	Destiny USA/RTC to Syracuse University	Service Improvements	3.71
2	James St/South Ave	Service Improvements	3.21
3	James St/South Ave	BRT	3.15
4	James Street	LRT	3.05
5	I-81 Express, Central Square to Downtown/University Hill	Service Improvements	3.01
6	North Salina Street	LRT	2.91
7	Solar Street	LRT	2.91
8	Genesee St/Erle Blvd (Camillus to Fayetteville)	Service Improvements	2.85
9	Butternut St/Onondaga St	Service Improvements	2.83
10	South Salina St/Route 11 to North Syracuse	Service Improvements	2.82



6 of the top 10 ranked corridor/strategy combinations from the STSA relate to the James Street/South Avenue or Destiny USA – SU corridors

STSA Recommendations

Four major recommendations:

- * Pursue higher-intensity transit services along the Destiny USA/RTC to Syracuse University and James Street/South Avenue Corridors.**
 - Begin a commuter-based service along I-81 from Central Square to Downtown/University Hill.**
 - Provide lower-intensity service enhancements in remaining corridors.**
 - Construct a new transit hub on University Hill with supporting infrastructure.**

Corridors for examination





What is *SMART* 1?



What is SMART 1?

Syracuse Metropolitan Area Regional Transit Study (SMART)

The Syracuse Metropolitan Area Regional Transit Study Phase 1 (SMART 1) began in June 2015 to pursue higher-intensity transit services along the Regional Transportation Center to Syracuse University and Eastwood to Onondaga Community College corridors. This planning study will evaluate the following along these two corridors:

- modes
- alignments
- station locations
- ridership
- service plans
- Costs
- economic development
- land use
- zoning
- engineering feasibility
- environmental factors

The SMART 1 study is the next step along the path to obtaining funding for BRT or LRT in these corridors.

What is SMART 1?

SMART 1 will:

- **Determine the feasibility of enhanced transit in the two study corridors;**
- **finalize a mode and routing; and**
- **recommend a locally preferred alternative (LPA), if warranted.**

The first steps toward this decision are:

- **to collect and analyze data on the nature of the market for public transit in the study corridors to confirm that there will be demand for improved transit; and**
- **To confirm that the development, land use, policy and other urban characteristics that support expanded transit are present.**

Existing Conditions

Existing Conditions

Conditions that typically influence the potential for increased transit ridership include:

- Existing transit usage
- Population density
- Land use
- Households in poverty
- Zero-vehicle households
- Population under 25 years old
- Population over 65 years old

Existing Transit Use

Centro operates:

- **42** bus routes within the RTC – SU corridor
- **41** bus routes within the Eastwood – OCC corridor
- Of the top four bus routes in the system, three are within one or the other of the study corridors

Average weekday ridership (2013):

- James Street – 2,005
- South Salina/Nedrow – 1,619
- South Avenue/Valley Drive – 1,386
- Drumlins/Nob Hill – 1,296

*** The primary source of additional ridership on new transit lines is usually increased usage by existing riders.**

Population Density

- **39,000 people living within RTC – SU corridor**
 - Majority reside in close proximity to Syracuse University
- **45,000 residents within the Eastwood – OCC corridor**
 - Majority reside in neighborhoods adjacent to James Street and South Avenue within the city limits
- **Higher population density means that more people live within a short walk of a transit station and therefore the total market for transit is higher.**

Existing Land Use

- **RTC – SU corridor is more commercial in character**
 - Commercial: 35% (5.3 square miles) of total land area
 - Institutional: 22% of total land area
 - Residential: 18% of total land area
- **Eastwood – OCC corridor is more residential**
 - Residential: 40% (6.2 square miles) of total land area
 - Commercial: 19% of total land area
 - Institutional: 17% of total land area
- **The two corridors will work together to cover a large proportion of the origins and destinations in Syracuse.**

Percent of Households in Poverty

Both corridors have higher poverty rates than the city overall.

- **44%** of households within the RTC – SU corridor are living below the poverty line
 - Concentrated around Downtown and Syracuse University
- **34%** of households within the Eastwood – OCC corridor are living below poverty
 - Concentrated in the downtown area, Southwest and Southside neighborhoods
- **Lower income households rely more heavily on transit and will benefit from improved mobility.**

Percent Zero-Vehicle Households

High rates of poverty are correlated with low rates of vehicle ownership within the study corridors.

- **26%** of households in the City of Syracuse have no vehicle
 - Majority of these households are located in these three pockets:
 1. West of I-81
 2. West of West Street and South of Erie Boulevard West
 3. North of I-690 and I-81 Junction
- 5.6% of households in the portion of the Metropolitan Planning Area (MPA) outside the City of Syracuse have no vehicle
- Households without vehicles rely on transit more than others and will benefit immediately from improved service.

Percent Population under 25

- **Syracuse has a large population under 25 years of age living near Syracuse University within the RTC – SU Corridor**
- **There is a high density of residents under the age of 25 in the Eastwood – OCC corridor in the communities southwest of Downtown along James Street and near Onondaga Community College**
- **Younger people tend to use transit more than others, and trends show them putting off acquiring licenses and owning cars in favor of other modes and staying touch electronically.**

Percent Population over 65

- Senior population is heavily concentrated along James Street and toward the southern end of Eastwood – OCC corridor near the Van Duyn Center for Rehabilitation
- In general, the proportion of people living in the city who are over 65 is low compared to the inner ring of suburbs just outside
- Older people tend to use transit more than others due to the expense and difficulty of owning and driving cars.

Rapid Transit Strategies

Enhancement Strategies

Three transit service enhancement strategies will be developed to evaluate transit in the two study corridors:

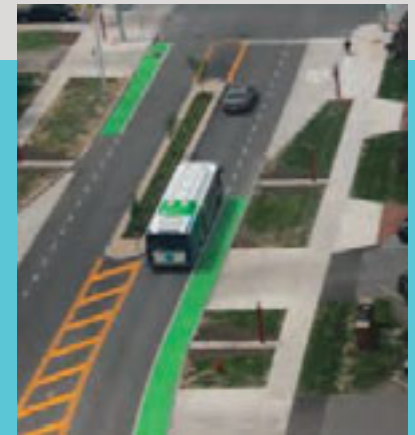
1. Existing Service Improvements – Low Investment
2. Bus Rapid Transit (BRT) – Moderate Investment
3. Light Rail Transit (LRT) and Streetcars – High Investment



Strategy 1: Existing Service Improvements

Centro, and the City of Syracuse can boost productivity, efficiency and lower operating costs of existing local and fixed route bus service by:

1. Consolidating low performing parallel routes into one trunk route
2. Installing Transit Signal Priority (TSP) technology at key intersections
3. Adding bus queue jumpers, slip lanes and bus priority lanes
4. Consolidating stops
5. Upgrading stops with new features



Strategy 2: Bus Rapid Transit (BRT)

BRT is a moderate investment that can enhance the Eastwood – OCC and RTC – SU corridors.

Types of BRT include:

- Mixed Traffic
- Bus-Only Lane
- Busways

BRT: Mixed Traffic
BusPlus, Albany, New York



BRT: Bus Lane
Select Bus Service, The Bronx, New York



Image Source:
Streetsblog.org

BRT: Busway
CTfastrak, Hartford, Connecticut



Strategy 3: Streetcars & Light Rail Transit (LRT)

Streetcars and LRT require their own rail infrastructure and have high initial costs, but where densities and ridership levels warrant, it can be a worthwhile investment.

- **Streetcars:** run on electric power drawn from overhead wires are typically installed in existing shared vehicular lanes and operate at the speed of traffic
- **LRT:** vehicles are usually heavier, have a larger capacity, are built along their own right-of-way or in dedicated lanes, and can run at higher speeds

Streetcar
Portland Streetcar, Portland, Oregon



Image Source:
Railwaypreservation.com

LRT
CTrain, Calgary, Alberta



What's Next?

- **Pop-up meetings at stop locations**
- **Focus Group meetings**
- **Continued analysis**
 - **Route and schedule alternatives**
 - **Ridership**
 - **Capital and operating costs**
 - **Social and environmental impacts**
- **Additional public meetings**

Stay Involved

For more information, please contact us at:

Phone: 315-422-5716

Email: contactus@smtcmpo.org (questions or sign-up to stakeholder list)

**Visit us downstairs for additional information
and to ask questions!**

Appendix C: Participant comments and ZIP Code Map

Public Comment Form

SMART1 Public Meeting #1
February 24, 2016

Please share your thoughts about the SMART 1 study.

The light rail would be the best, but for the cost to build. The cost long term for light rail is lower when you add the cost to encroachment. For the bus you have more long term encroachment cost. Long term energy cost is better with light rail also. Also the water runoff issues with a rail system.

Public Comment Form

SMART1 Public Meeting #1
February 24, 2016

Please share your thoughts about the SMART 1 study.

I was kind of surprised that the south Salina Street corridor was not included as an option for improvement. To me, it looked like ~~the top~~ it had the 2nd biggest ridership. Parking in the University area is always a hassle.

I can't help thinking that they'll choose the cheapest option just because it's ~~the~~ the cheapest. I'd like to point out that buses can be re-routed on a moment's notice, something not possible with rails. One little watermain break could make trains and streetcars unusable.

I noticed ~~the~~ back in the early 1990's that San Francisco had buses that were powered ~~by~~ by overhead wires. You didn't mention that option.

Public Comment Form

SMART1 Public Meeting #1
February 24, 2016

Please share your thoughts about the SMART 1 study.

I'm in favor of Basic improvements and Bus Rapid Transit, rail system is likely to cost too much for the expected return.

I would like additional corridors to be looked at including West Genesee Camillus and part of the Solway Route. Transit Center to SU is already very quick (10 min MAX from Center to College Place) even with a lot of stops in the hospital area. Same with downtown to Destiny.

The ability to get to SU or destiny is the lack of frequent buses along the remaining corridors to the Center Hub.

Public Comment Form

SMART1 Public Meeting #1
February 24, 2016

Please share your thoughts about the SMART 1 study.

Looked forward to this seminar. CNY needs more public transit to move forward. I know the Albany area and used Bus Plus (CDTA) and LRT downstate, Chicago, DC, Buffalo and Boston (subways are certainly not an option as the ground is too soft I was told). Thank you for having this event and I hope to see something added in the foreseeable future in Onondaga County.

Public Comment Form

SMART1

Public Meeting #1
February 24, 2016

Please share your thoughts about the SMART 1 study.

I feel as though this would be an excellent idea.

Centro is my main source of transportation.

The Rail for the busy streets such as James, S. Salina, and others going to Sill and Destiny USA.

I'm already on the mailing list

operating in existing
ROW seems more
feasible

A fine presentation.

I will be doing FB/web type things

[REDACTED]

My area is indirectly affected by all this
and I hope to live long enough to see
benefits. Thank you — [REDACTED]

PUBLIC
INVESTMENT
LEADS TO
PRIVATE
REACTION



Buses in
mixed traffic
good idea if
signal priority
for buses

IF WE ARE
GOING TO INVEST
IN OUR FUTURE
LETS DO IT RIGHT
BRT + LRT!

train travelling
downhill linked
by cable to
train travelling
up hill - saves
energy. (proposed idea)

should
articulated
buses work
well on hill -

BRT in
bus-only lanes.
would improve travel time
enough to make a
difference

Great start.
+ Need a Q&A
after presenting
+ Convince local
decisionmakers
+ Ask working
city residents
+ Ask suburban
commuters

use terrain
so at S.U. the
train would be a
sideway- but
direction it would
be level with land.

Increasing
frequency should
be a goal especially
for community visits
to make it easier to
get around.

Skipping
stops is
okay. People
can walk
a bit more

BRT seems most practical
to me. (Think of our normal
winters!) How will rail work
with salt?

Streetcars



BRT or light rail on the two
identified corridors — the increase
in frequency, as well as a
corridor identity would make
ridership much more appealing.

May not need a separated right of
way, but the increase in speed is
welcome

maintain at least
some reduced service
late for people who
work late, 10pm,
2am, ?

4-16

Great ideas -

Do consider - fewer stops
in Eastwood - means longer
walking distance. 4 blocks on
Jones St plus 2 ~~or~~ or 3 more
to their house may be way too
much esp for older folks - esp
in winter/rain/extreme heat.
Like - TSP - that itself will
take time.

Light rail is
too expensive,
Bigger buses would
be helpful

It makes sense to view communities of a similar size to the Syracuse metro area to see how they have tackled improving Mobility options. Madison, WI, Chattanooga, TN, Eugene, OR maybe more relevant case studies. They combine enhanced transit / BRT with local bicycle improvements / ~~day~~ bike share programs.

Consolidated stops and routes are a concern because walking distance will increase

We need to simplify the transit system to make it easier to navigate. Making stronger connections along the two identified routes makes sense - for visitors to our community - we need to make it easy to navigate from SW Hill to downtown to take front without needing to get in 2 vehicle.

on-tour
service would be
an improvement

I tend to prefer the
BRT option. I think LRT
would be very disruptive as far
as land use, w/o a commensurate
benefit, esp. considering the
huge increase in costs.

"creating connected
communities" document
has good guidance. We
shouldn't have to leave
2 hours early to go to
a Doctor's Appointment.

Please consider pedestrian +
bicycle access.

- getting to ^{from} B/BRT/LRT/streetcar
- sidewalks, street crossings, distance
- access on bus/train/streetcar for bikes,
for ^{"first mile" (going to train)} "last mile" access.

5

Open Erie Blvd to Boon the
AOD & train along side the ~~Boon~~ Blvd that
has a cable that can pull the Boon
It saves energy!

A light rail to SQ could have
two exits - one inside the Dome ✓
A hot spot to SU Campus.

A train could go inside Destiny Building
USF.
Idea from [REDACTED]

I'm hoping that this will ~~not~~
encourage people who work at ESF
& SU to take public transit rather than
use on-street parking in the University Neighborhood.

Also, I hope it encourages students to not
bring their personal vehicle to university,
also to be stored in on-street parking.

University Area is way too congested with
cars, we need space/encouragement for bikes &
walking. In particular, Euclid Ave. between Westcott & Constock

Bring back On Track, 4-17
have BRT on James St
and go to more places.
We had streetcars 100
years ago. Also get
bendable buses for James
St & SU Hill like you see in
Rochester and downstate.

Easy to follow + read
scheduling 4-17

Need improved
pedestrian and bike
access to Transit
stops,

4-17

Service is 4-17
already
"reliable"
and "on time"
-Thank you

I agree -
bring back
On Track 4-17

In Oneida
County
Centros
4-17

You don't
need a bus
stop @ every
block.

4-17

Don't see how
BRT/LRT is ~~x~~
going to increase ~~x~~
development
between SU
and downtown...
already built up.

BUILD A
LRT/BRT HYBRID
TO BRING THE
RESIDENCE BACK
TO THE CITY



4-17

include an
easier way
to pay....
more efficient

4-17

IF YOU
BUILD IT!
DEVELOPMENT
WILL
COME!

4-17

I like the idea
of more frequent
service, A better
on-time record
would also help!

4-17

Increased frequency!
Obvious / branded
corridor / route that
makes it obvious
where route runs

4-17

more frequent
+ faster
service

4-17

More frequent and 4-17
reliable service for
current bus transport.
Specially in the
SU area. Creating an
app with bus times/status
would be a great idea?
Street cars would
also be a good way
to have better connection

GOOD TRANSIT
SYSTEMS HELP
STIMULATE
DENSITY!

NO MORE!
SPRAWL.

4-12

Simple Schedules
& frequent service!
Competing with driving
in Syracuse is difficult -
it needs to be as simple,
easy & convenient as
possible.

More. 4-14
seating
capacity.
Tired of
standing

4-14
My strong
DESIRE IS
to HAVE
ONTRACK BACK

Remember to factor in the "wow"
factor of novel/new transportation modes.
People are more likely to use modes
that are attractive and innovative, AND
convenient. There are also studies showing
fixed-track systems are perceived as more
reliable.

want system
where people feel
safe. New downtown
hub is a good
example. 4-11

Bus Days
are good to keep
stopped buses out
of traffic. 4-14

safe and convenient
service for families
~~in~~ connecting jobs,
home; child care
4-14

I think the bus only lanes⁴⁻¹⁴
feasible provided there are
enough lanes to begin with
You would need at least 4 lanes
Also you might try roundabouts
at certain intersections

Are there options being
considered through means such
as vans/smaller buses to
provide overnight service to
help those working nightshifts?

Faster + more reliable
service is crucial,
including transit at
night + on weekends

4-14



Happy to see
work being done
on this!

I imagine a
light rail line could
attract users that
presently use private
transportation for
tourism & events

Syracuse Metropolitan Transportation Council
100 Clinton Square
126 N. Salina Street, Suite 100
Syracuse, NY 13202



- Great Location for
this event!

- Prioritizing the

corridors to link w/

other modes of transit

- Bike infrastructure

- normal busing

- sidewalk routes for
ample walking.

Syracuse Metropolitan Transportation Council
100 Clinton Square
126 N. Salina Street, Suite 100
Syracuse, NY 13202

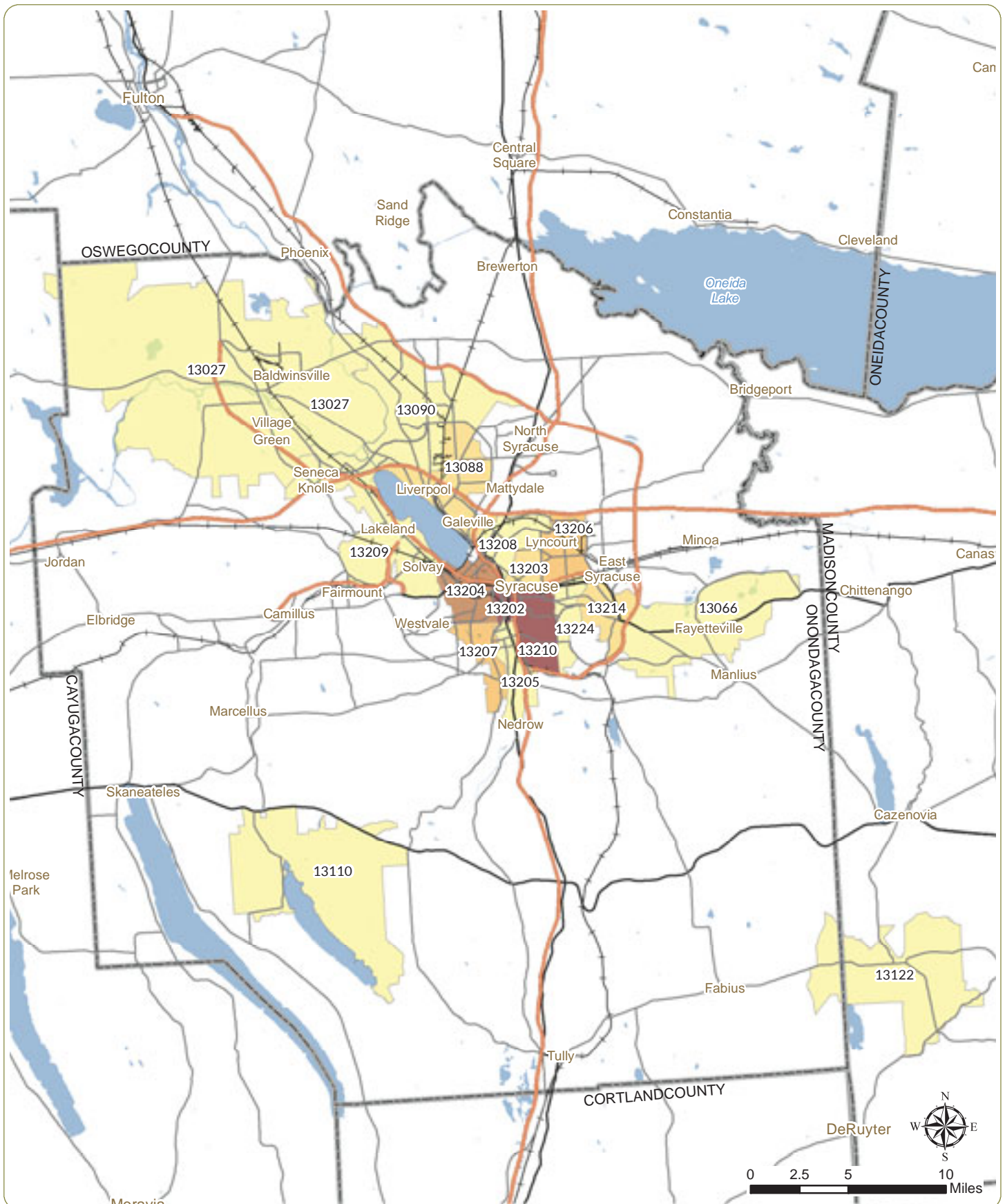


WHAT ABOUT

PRIVATE TRANSPORTATION
INVESTMENT?

THIS COULD PROVIDE
SUPPLEMENTAL SERVICES

Syracuse Metropolitan Transportation Council
100 Clinton Square
126 N. Salina Street, Suite 100
Syracuse, NY 13202



Syracuse Metropolitan Area Regional Transit Study - Phase 1 (SMART 1)

Public Meeting #1 - Geographic distribution of attendees

March 2016

Notes: 1. Basemap: ESRI SDC feature dataset, TIGER County and Town Boundaries
2. This is a color graphic. Reproduction in grayscale may misrepresent the data.

- Major Highways
 - Highways
 - Major Roads
 - Railroads
 - ▭ County Boundary
- Counts of Attendees by ZIP Codes
- 1 - 2 individuals
 - 3 - 4 individuals
 - 5 - 7 individuals
 - 8 - 9 individuals
 - 10 - 24 individuals



www.edrdpc.com

Appendix D: Publicity materials



Syracuse Metropolitan Transportation Council

100 Clinton Square
126 N. Salina Street, Suite 100
Syracuse, New York 13202
Phone (315) 422-5716
Fax (315) 422-7753
www.smtcmpo.org

NEWS RELEASE

For Immediate Release – February 17, 2016

Contact: Patricia A. Wortley

Tel: (315) 422-5716; E-mail: pwortley@smtcmpo.org

SMTC to hold public meeting for the Syracuse Metropolitan Area Regional Transit Study

Syracuse, N.Y. — A public meeting for the Syracuse Metropolitan Area Regional Transit Study Phase 1 (SMART 1) Project will be held on Wednesday, February 24, 2016, from 4:00 – 7:30 p.m., at the SKY Armory, 351 South Clinton Street, Syracuse.

The Syracuse Metropolitan Transportation Council (SMTC) invites you to the first open house meeting for the SMART 1 project. Come to this meeting to learn about the possibility of Bus Rapid Transit or Light Rail Transit along the Regional Transportation Center to Syracuse University and Eastwood to Onondaga Community College corridors.

A presentation will be given at 5:00 p.m., and will be repeated at 6:30 p.m., that provides study background information. The project team will be available throughout the night at interactive stations to provide information on goals, existing conditions, and enhanced transit options.

For additional information about the project or the public meeting, or to ensure accommodation for special needs, please contact the SMTC at (315) 422-5716.

What is the SMTC?

The Syracuse Metropolitan Transportation Council was formed in 1966 as a result of the Federal Aid Highway Act of 1962 and Urban Mass Transportation Act of 1964. Serving as the metropolitan planning organization (MPO) for the Syracuse Metropolitan area, the SMTC provides the forum for cooperative decision making in developing transportation plans and programs for Onondaga County and small portions of Madison and Oswego Counties. The SMTC is comprised of elected and appointed officials, representing local, state and federal governments or agencies having interest in or responsibility for transportation planning and programming.

Log on to the SMTC web site for the latest in transportation planning in the Syracuse Metropolitan Area:

www.smtcmpo.org

Join us for an OPEN HOUSE meeting on the:

Syracuse Metropolitan Area Regional Transit Study Phase 1



Wednesday, February 24, 2016

Drop in any time from 4:00 to 7:30 p.m.

(Presentation at 5:00 p.m. and repeated at 6:30 p.m.)

Location:

SKY Armory

351 South Clinton Street, Syracuse, NY

Come learn about the possibility of **Bus Rapid Transit** or **Light Rail Transit** along the Regional Transportation Center to Syracuse University and Eastwood to Onondaga Community College corridors.

Interactive stations covering background, goals, existing conditions, and enhanced transit options will be available for the public to “walk through” and talk with the project team.

Can't make the meeting in person?

Meeting materials will be available online beginning February 24 at www.smtcmpo.org/SMART

Facility

Main entrance is on Clinton St. (between Modern Malt and the Clinton St. Garage).

Meeting facility is ADA accessible.

Meeting location is 0.4 miles from the Centro Transfer Hub.

Parking

On-street & area parking garages available. Parking will not be validated.

Accommodations

All attendees will receive two complimentary single-use Centro bus passes at the meeting.

American Sign Language (ASL) and Spanish interpreters will be available at the meeting.

For additional information, call the SMTC at
315-422-5716

Join us for an OPEN HOUSE meeting on the:



Syracuse Metropolitan Area Regional Transit Study Phase 1

Wednesday, February 24, 2016

Drop in any time from 4:00 to 7:30 p.m.

(Presentations at 5:00 and 6:30 p.m.)

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Meeting Location

SKY Armory

351 South Clinton Street
Syracuse, NY

**Main entrance is on Clinton St.
(between Modern Malt and the
Clinton St. Garage).**

Meeting location is 0.4 miles from
the Centro Transfer Hub.

Parking

On-street or area parking
garages available. Parking will
not be validated.

Accommodations

Meeting attendees will be
offered two complimentary
single-use bus passes at the
meeting.

The meeting facility is ADA
accessible. American Sign
Language (ASL) and Spanish
interpreters will be available at
the meeting.

Additional info

For more information about the
study, contact Mario Colone,
SMTC Program Manager,
at 315-422-5716 or
mcolone@smtcmpo.org.



Follow us on Facebook at
Syracuse Metropolitan Transportation Council



www.smtcmpo.org



contactus@smtcmpo.org



315-422-5716



126 N. Salina Street
Suite 100
Syracuse, NY 13202

Únase con nosotros para una reunión en la



Syracuse Area Metropolitana de Tránsito Regional Estudio de Fase 1

Miércoles, 24 de febrero 2016

Ven cuando quiera entre las horas de 4:00 to 7:30 p.m.

(Presentaciones a las 5:00 p.m. y las 18:30)

El Consejo de Transporte Metropolitano de Syracuse (SMTC) le invita a asistir a la primera reunión de puertas abiertas para el Área Metropolitana de Tránsito Regional de Syracuse estudio de Fase 1 (SMART 1). Caída en cualquier momento para aprender acerca de la posibilidad de **Autobuses de tránsito rápido** o **Tren ligero a lo largo** del Centro Regional de Transporte de la Universidad de Syracuse y Eastwood a los corredores de Onondaga Community College.

Una presentación tendrá lugar a las 17:00 y se repetirá a las 6:30 p.m. que proporciona la información de fondo del estudio. Estaciones interactivas que cubren el fondo, los objetivos, las condiciones existentes, y las opciones de transporte mejorados estarán disponibles para el público a " caminar a través " y hablar con el equipo del proyecto.

No se puede hacer la reunión en persona?

Materiales de la reunion estaran disponible en linea a partir del 24 de Febrero www.smtcmpo.org/SMART

Lugar de la reunión

SKY Armería

351 South Street Clinton
Syracuse, NY

** La entrada principal está en Clinton St. (entre Modern Malt y el garaje de Clinton St). **

El local de juntas es de 0.4 millas de la transferencia Hub Centro.

Estacionamiento

En la calle y garajes de aparcamiento área disponible. El aparcamiento no será validado.

Alojamiento

Todos los asistentes recibirán dos de un solo uso de autobuses Centro pases de cortesía en la reunión.

La sala de reuniones es accesible de la ADA. Lenguaje de señas americano (ASL) e intérpretes en español estarán disponibles en la reunión.

Información adicional

Para obtener más información sobre el estudio, Contacto

Mario Colone,
SMTC Administrador de programas
315-422-5716 or
mcolone@smtcmpo.org.



Siga con nosotros Facebook at
Syracuse Metropolitan Transportation Council



www.smtcmpo.org



contactus@smtcmpo.org



315-422-5716



126 N. Salina Street
Suite 100
Syracuse, NY 13202

Appendix E: Meeting evaluations

Meeting Evaluation Form

Please take a few minutes to provide your thoughts about this meeting experience. Your feedback will help us plan future meetings.

1. I learned something useful about the SMART 1 study today.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Comments?

2. I am likely to attend future meetings regarding the SMART 1 study.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Comments? It looks like I should have read the choices before I answered the questions,

3. As compared to other meetings I have attended, this event was:

MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

4. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

5. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? *Parking could have been better.*

6. Where did you hear about this meeting? (check all that apply)

- | | |
|--|---|
| <input type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
| <input type="radio"/> Email from SMTC | <input type="radio"/> Radio |
| <input type="radio"/> Other community group email/listserv | <input type="radio"/> TV |
| <input type="radio"/> SMTC Facebook page | <input type="radio"/> Word of mouth |
| <input type="radio"/> Other social media | <input checked="" type="radio"/> Other (please list): <i>Centro.org website</i> |

7. Any other comments about the meeting format that you wish to share?

Media coverage was nearly non-existent as far as I could tell. (It doesn't help that I cancelled the newspaper.) I also don't ~~regularly~~ check the Centro.org website regularly; I just happened to check it to answer a question for someone on 2/20/16.

Meeting Evaluation Form

Please take a few minutes to provide your thoughts about this meeting experience. Your feedback will help us plan future meetings.

1. I learned something useful about the SMART 1 study today.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

2. I am likely to attend future meetings regarding the SMART 1 study.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

3. As compared to other meetings I have attended, this event was:

MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

4. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

5. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

6. Where did you hear about this meeting? (check all that apply)

- | | |
|--|--|
| <input type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
| <input type="radio"/> Email from SMTC | <input type="radio"/> Radio |
| <input type="radio"/> Other community group email/listserv | <input type="radio"/> TV |
| <input type="radio"/> SMTC Facebook page | <input checked="" type="radio"/> Word of mouth |
| <input type="radio"/> Other social media | <input type="radio"/> Other (please list): |

7. Any other comments about the meeting format that you wish to share?

Meeting Evaluation Form

Please take a few minutes to provide your thoughts about this meeting experience. Your feedback will help us plan future meetings.

1. I learned something useful about the SMART 1 study today.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

2. I am likely to attend future meetings regarding the SMART 1 study.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

3. As compared to other meetings I have attended, this event was:

MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

4. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

5. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

6. Where did you hear about this meeting? (check all that apply)

- | | |
|--|--|
| <input checked="" type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
| <input type="radio"/> Email from SMTC | <input type="radio"/> Radio |
| <input type="radio"/> Other community group email/listserv | <input type="radio"/> TV |
| <input type="radio"/> SMTC Facebook page | <input type="radio"/> Word of mouth |
| <input type="radio"/> Other social media | <input type="radio"/> Other (please list): |

7. Any other comments about the meeting format that you wish to share?

Meeting Evaluation Form

Please take a few minutes to provide your thoughts about this meeting experience. Your feedback will help us plan future meetings.

1. I learned something useful about the SMART 1 study today.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

2. I am likely to attend future meetings regarding the SMART 1 study.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

3. As compared to other meetings I have attended, this event was:

MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

4. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

5. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

6. Where did you hear about this meeting? (check all that apply)

- | | |
|--|--|
| <input type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
| <input type="radio"/> Email from SMTC | <input type="radio"/> Radio |
| <input type="radio"/> Other community group email/listserv | <input type="radio"/> TV |
| <input type="radio"/> SMTC Facebook page | <input type="radio"/> Word of mouth |
| <input type="radio"/> Other social media | <input checked="" type="radio"/> Other (please list):
<i>Adon bus</i> |

7. Any other comments about the meeting format that you wish to share?

SMART 1
November 2016 Public Meeting Summary

December 2016

Financial assistance for the preparation of this document, the Syracuse Metropolitan Area Regional Transit Study Phase 1 (SMART 1) was provided, in part, by the U.S. Department of Transportation's Federal Highway and Federal Transit Administrations and the New York State Department of Transportation. The Syracuse Metropolitan Transportation Council (SMTC) is solely responsible for its content.

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APPENDICES

- Appendix A: Meeting display boards
- Appendix B: Meeting presentation
- Appendix C: Participant comments and ZIP Code Map
- Appendix D: Publicity materials
- Appendix E: Meeting evaluations

1) Executive Summary

The Syracuse Metropolitan Transportation Council (SMTC) hosted the second public meeting for the Syracuse Metropolitan Area Regional Transit Study Phase 1 (SMART 1) on November 10, 2016. The purpose of this meeting was to inform the public of the results of the mode screening analysis, as well as the initial selection of alternative routes to be evaluated and the criteria to be used during that evaluation process. This document summarizes the findings and input from the November 2016 public meeting.

The meeting took place at the SKY Armory in downtown Syracuse on November 10, 2016 from 4:00 pm to 7:30 pm with presentations at 5:00 pm and 6:30 pm. All participants were offered two single-use transit passes when signing in at the meeting. American Sign Language and Spanish interpreters were available on site. The meeting featured five stations with informational and interactive boards. Each station was staffed by project team members with relevant expertise. Publicity for the meeting was multi-faceted and included flyer distribution via postal mail, email, and direct distribution to several organizations, including a version in Spanish, bus placards, notice on the project website, posting on SMTC's Facebook page, and press releases.

a) Meeting Content

The primary goals for the meeting were to:

- Present the goals, purpose and need of the SMART 1 study;
- Review the enhanced transit mode and route alternatives;
- Review the evaluation criteria that will be used to select locally preferred alternatives for each corridor; and
- Learn the next steps of the SMART 1 study and how the public can continue being involved.

b) Meeting Evaluation and Participation

There were nearly 64 attendees throughout the meeting, including residents of 19 ZIP codes within the City of Syracuse and several outlying suburbs (see Appendix C). All the meeting evaluations that were received indicated that the meeting provided useful information in an effective and comprehensive manner and that the process thus far was transparent and meaningful. Staff at the meeting also indicated that the feedback from attendees on the content of the meeting was positive, and the few comment sheets that were returned indicated satisfaction with the study process and public meetings.

c) Next Steps

Input from the public meeting will be used to analyze the possible corridor routes to arrive at a locally preferred alternative for each corridor. The project team will analyze the six alternatives to determine a locally preferred alternative for both corridors. The preliminary study findings will be presented to the community in the first half of 2017 for purposes of obtaining their input.

a) Introduction

For purposes of continuity and consistency study background information, goals, purpose and need of the SMART 1 study were provided. However, the primary goals for this meeting were to inform the public of:

- Publicity for the meeting included the following methods:

- Join us for the 2nd OPEN HOUSE on the:

Syracuse Metropolitan Area Regional Transit Study Phase 1

Thursday, November 10, 2016
 Drop in any time from 4:00 to 7:00 p.m.
 (November 10, 4:00 p.m. to 5:00 p.m. at
 the Syracuse Convention Center)

The Syracuse Metropolitan Area Regional Transit Study (RTS) is a study to plan the future transit system for the Syracuse Metropolitan Area. The study will include a study of the current transit system, a study of the future transit system, and a study of the transit system's impact on the region. The study will also include a study of the transit system's impact on the region's economy, environment, and quality of life.

It is an open house where you can learn more about the study and provide your input. The study is a public process and your input is important. The study will be completed by the end of 2017. The study will be a key part of the region's transportation planning process.

Use the following to find out more:
 • Visit the study website at www.syracusearea.org/RTS
 • Call 315-435-1234
 • Email info@syrtss.com

The meeting was held at the SKY Armory in downtown Syracuse on November 10, 2016, from 4:00 pm to 7:30 pm. The meeting was conducted on two floors. On the second floor was the open house with display boards at five stations that were available for viewing for the entirety of the meeting. Professional staff members were located at each station to answer questions. Public comment and meeting evaluation forms were provided. Additionally, a presentation was given at 5:00 pm and repeated at 6:30 pm and was open to all interested attendees. Following the question and answer period after each presentation, all attendees were encouraged to return to the stations for further review and discussion.

b) Meeting Content

This section briefly summarizes the content of the public meeting stations, copies of which are provided in Appendix A of this summary. Stations 1 and 2 provided general information regarding the SMART 1 study and were carried forward from the first public meeting. Stations 3, 4 and 5 provided new preliminary findings as well as the next steps in the study.

i) Station 1: Overview of the SMART 1 Study

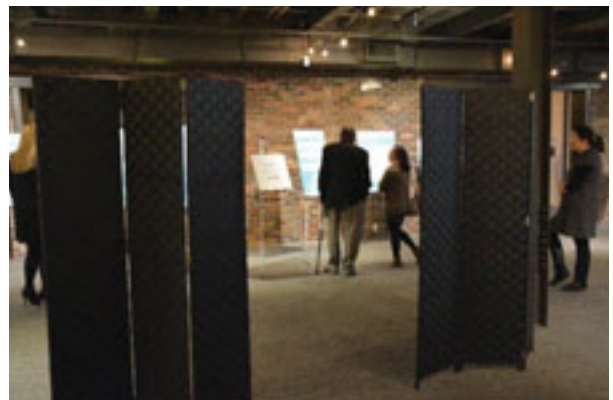
The first station provided attendees with general information about the SMART 1 project. Attendees were provided with background information regarding the SMTC, the Central New York Regional Transportation Authority (Centro), the Syracuse Transit System Analysis (STSA), and the priority corridors identified in that study. For attendees interested in learning more about the STSA, several boards displayed the purpose, the three strategies reviewed, methodology of review, evaluation criteria, final corridor rankings, and final recommendations of the STSA study. There was also information for attendees interested in how the SMART 1 relates to the concurrent I-81 Viaduct Project, both in terms of impacts and team coordination throughout the planning process.



Meeting attendees review informational boards.

ii) Station 2: SMART 1 Purpose and Need

The second station provided attendees with general information about the purpose, need and goals for the SMART 1 study, in addition to providing them with the project schedule. The first board explained that the purpose and need statements, along with project goals, will be used to evaluate different Bus Rapid Transit (BRT) and Light Rail Transit (LRT) alternatives along the two corridors. The study's Consensus Building, Transportation, and Development goals were provided on the second board. The final board included an illustration of the project schedule which is expected to span approximately two years, ending in Summer of 2017.



Meeting attendees review informational boards.

iii) Station 3: Eligibility Screening

In this station attendees learned about the methodology used to screen eligible transit modes and the study's preliminary findings for which transit modes to advance for further evaluation. There was a display board for each of the following topics:

- Corridors under review
- Existing transit
- FTA "New Starts" capital investment grants
- Modes under review
- Small Starts eligibility screening criteria
- Eligibility screening analysis for both corridors
- Community input regarding transit service



Meeting attendees review informational boards.

iv) Station 4: Route/Mode Alternatives

In this station attendees learned that three transit modes will be developed and evaluated: existing service improvements, BRT- Mixed Traffic, and BRT-Bus Lanes.

Each of the three transit modes will be routed along each of the two corridors, resulting in six alternative routes to be evaluated. A summary table showing the combination of each transit mode with each alternative route was provided so that attendees could better compare the issues regarding the alternative routes under consideration. For ease of comparing the six

alternative routes, a map for each alternative route was provided in addition to one combined map highlighting each alternative route with listed improvements. The thirteen evaluation criteria that will be used to assess each alternative were provided for review and input. In summary, attendees learned that the six alternative routes will be evaluated to determine a locally preferred alternative for each corridor.



Meeting attendees review informational boards.

v) Station 5: Next Steps and Frequently Asked Questions

At this station, the public learned that outreach efforts will continue while the consultant team undertakes the analysis phase of the SMART 1 study. Focus group meetings will be conducted and the project website will remain an active site for further information as well as a portal to provide comments for consideration by the study team. This station also included boards with answers to frequently asked questions such as the role of SMTC, as well as general aspects of this SMART 1 study.



Meeting attendees review informational boards.

c) Meeting Evaluation

Consistent with feedback at the first public meeting, the attendees indicated that this meeting served them well by providing useful information in an effective and comprehensive manner. The attendees also confirmed that SMTC continues to meet its goal of conducting a transparent and meaningful study. The format and clarity of information shared was appreciated. Some individuals wanted more technical information but the majority of commenters thought the level of detail and analysis presented was very helpful.

d) Meeting Participation and Public Comments

There were 64 people who attended the meeting, many of whom reside in neighborhoods within or adjacent to the two corridors under consideration (see ZIP code map in Appendix C). Many of these attendees provided constructive comments to the SMTC relative to the meeting content, the alternatives presented in the meeting, and other issues for consideration. Representative comments from public comment forms have been categorized and summarized below; all comments (in their original form) are provided in Appendix C.

- Attendees preferences regarding the alternatives as presented
 - Destiny-SU Corridor
 - Three attendees expressed interest in Alternatives 1 and 2 of the Destiny-SU Corridor, which extend along North Salina Street, as opposed to Alternative 3

which shifts the route to west of I-81, along Solar Street. Priority for these two alternatives were based on a desire to improve services for more existing and potential riders along North Salina and provide economic possibilities for the struggling historic main street.

- One participant wondered if changing angled parking along North Salina Street to parallel parking would free up enough space for a bus lane on each side.
- Eastwood -OCC Corridor
 - One attendee stated that priority should be placed on the Destiny-SU (University Hill) corridor, although James Street to the Centro-Hub was also recognized as a heavily utilized route.
 - A representative from the Strathmore Neighborhood Association requested that the South Avenue route travel closer to the Strathmore neighborhood in the footprint of a previous route that extended along the edge of Onondaga Park.
- General
 - Attendees generally supported improvements to transit offerings, as well as more integration with other modes of transportation (e.g., walking, biking).
- Convenience
 - Frequency/schedule
 - Many attendees expressed a desire for increased frequency and timeliness of bus service along existing (or future) routes.
- Additional alternatives or issues to consider
 - Light Rail
 - One participant expressed interest in light rail transit, specifically street cars, if financing opportunities become available. Another was interested in using the BRT routes to catalyze light rail development in the future.
 - There was also an inquiry about the cost-comparison analysis, specifically wondering if other cities' project costs included undergrounding utilities, adding streetscape and roadway modifications. The attendee's perspective was that the actual cost of putting rails in the ground should be lower than what was presented in the study.
 - Other issues not covered

- Attendees encouraged the SMTC to consider several other issues in their study, primarily about increasing transit ridership. These included: bicycle and pedestrian access (both to bus stops and to buses); increased regional connectivity (to areas like Oneida, Ithaca and Cortland); additional corridors (e.g., Erie Boulevard or Franklin Square); and additional case studies (e.g., Albany’s Bus Plus BRT, Grand Rapids, MI, and Boulder, CO)
 - Novel ideas
 - One attendee suggested pursuing private investors or creating a privatized share-holding company with stocks to facilitate the development of light rail infrastructure.
 - One attendee suggested creating a long-term plan for property acquisition along with zoning work necessary to increase the right-of-way width or establish new building setbacks as needed along the BRT corridors, with the ultimate goal to build a light rail system.
- General comments
 - One attendee expressed doubt that BRT would bring increased ridership to the system, despite decreases to travel time, mobility, and accessibility.
 - The SMTC also received suggestions to coordinate with the process for other relevant planning efforts, particularly to provide input on the I-81 Viaduct Project Environmental Impact Statement.

e) Conclusions and Next Steps

Input from the public meeting will be used to inform evaluation criteria and the selection process. The next step is to analyze the possible corridor routes to arrive at a locally preferred alternative for each corridor. Public involvement continues to be an important part of the SMART 1 study and the community can expect to see additional opportunities for public input in the future.

Appendix A: Meeting boards

Overview of the SMART 1 study

What is SMART 1?

The Syracuse Metropolitan Area Regional Transit Study Phase 1 (SMART 1) began in June 2015 to pursue higher-intensity transit services along the Destiny USA/Regional Transportation Center (RTC) to Syracuse University and Eastwood to Onondaga Community College corridors.

This planning study will evaluate the following along these two corridors:

- modes
- service plans
- economic development
- alignments
- costs
- engineering feasibility
- station locations
- land use
- environmental factors
- ridership
- zoning

Who is involved in the SMART 1 study?

The Syracuse Metropolitan Transportation Council (SMTC) is conducting the study, with a consultant team, on behalf of Centro.

A Study Advisory Committee (SAC) will advise the SMTC on the technical content of deliverables and provide needed input and guidance throughout the study. The SAC is comprised of representatives from the following agencies:

- Central New York Regional Transportation Authority (Centro)
- City of Syracuse - Planning Division
- Downtown Committee of Syracuse
- New York State Department of Environmental Conservation (NYSDEC)
- New York State Department of Transportation (NYSDOT)
- Syracuse-Onondaga County Planning Agency (SOCPA)
- University Hill Corporation



What is the SMTC?

The SMTC is the State-designated Metropolitan Planning Organization (MPO) for Onondaga County and portions of Oswego and Madison Counties. The SMTC is the region's forum for cooperative decision making when it comes to developing transportation plans, programs and recommendations. The SMTC is made up of officials representing local, state and federal governments or agencies with an interest in comprehensive transportation policies and services. The SMTC does not own or operate any transportation infrastructure.



Why conduct the SMART 1 study?

Enhanced transit is a community priority

An “enhanced transit system” is identified as a regionally significant, priority project in the SMTC’s 2050 Long Range Transportation Plan. The community has expressed a strong desire for expanded transit options.

A previous transit study, called the Syracuse Transit System Analysis (STSA), recommended “higher-intensity transit services along the Destiny USA/Regional Transportation Center (RTC) to Syracuse University and James Street/South Avenue Corridors.”

The STSA included surveys of transit riders and non-riders/former riders in 2012. A total of 326 rider surveys were returned, and 174 non-rider/former rider surveys were returned.

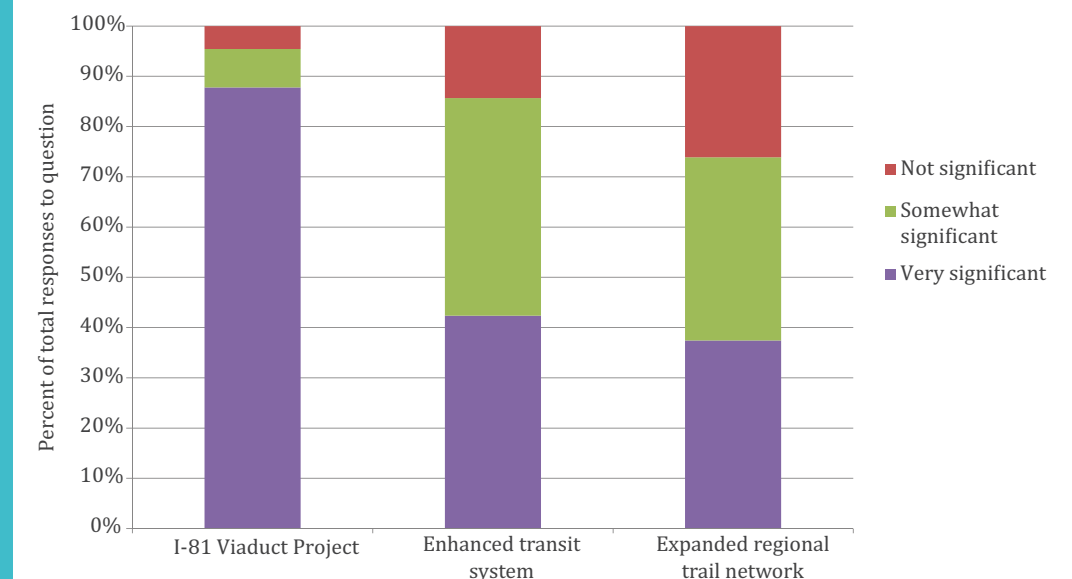
Results from both surveys were used to identify and prioritize transit system needs:

- High priority ↑
1. Increase frequency and hours of operation.
 2. Reduce transit travel time to be more comparable with vehicles.
 3. Improve on-time performance.
 4. Provide direct connections between major regional destinations.
 5. Provide more real-time system information.
 6. Improve safety and public perception of the transit system.
 7. Provide more suburban commuter options.
 8. Maintain an affordable fare.
- ↓ Low priority

The SMTC conducted a survey in December 2014/January 2015 that asked for community input on the goals and objectives for our new Long Range Transportation Plan (LRTP). We received 380 responses.

- 57% of respondents ranked the objective “provide essential transit service to urban areas and major activity centers” as “important.”
- Over 80% of respondents indicated that an “enhanced transit system” would be a significant project for our region.
- Dozens of respondents provided additional comments in support of expanded Centro service or various other enhancements to our regional transit system.

Significance of major regional projects based on LRTP survey results



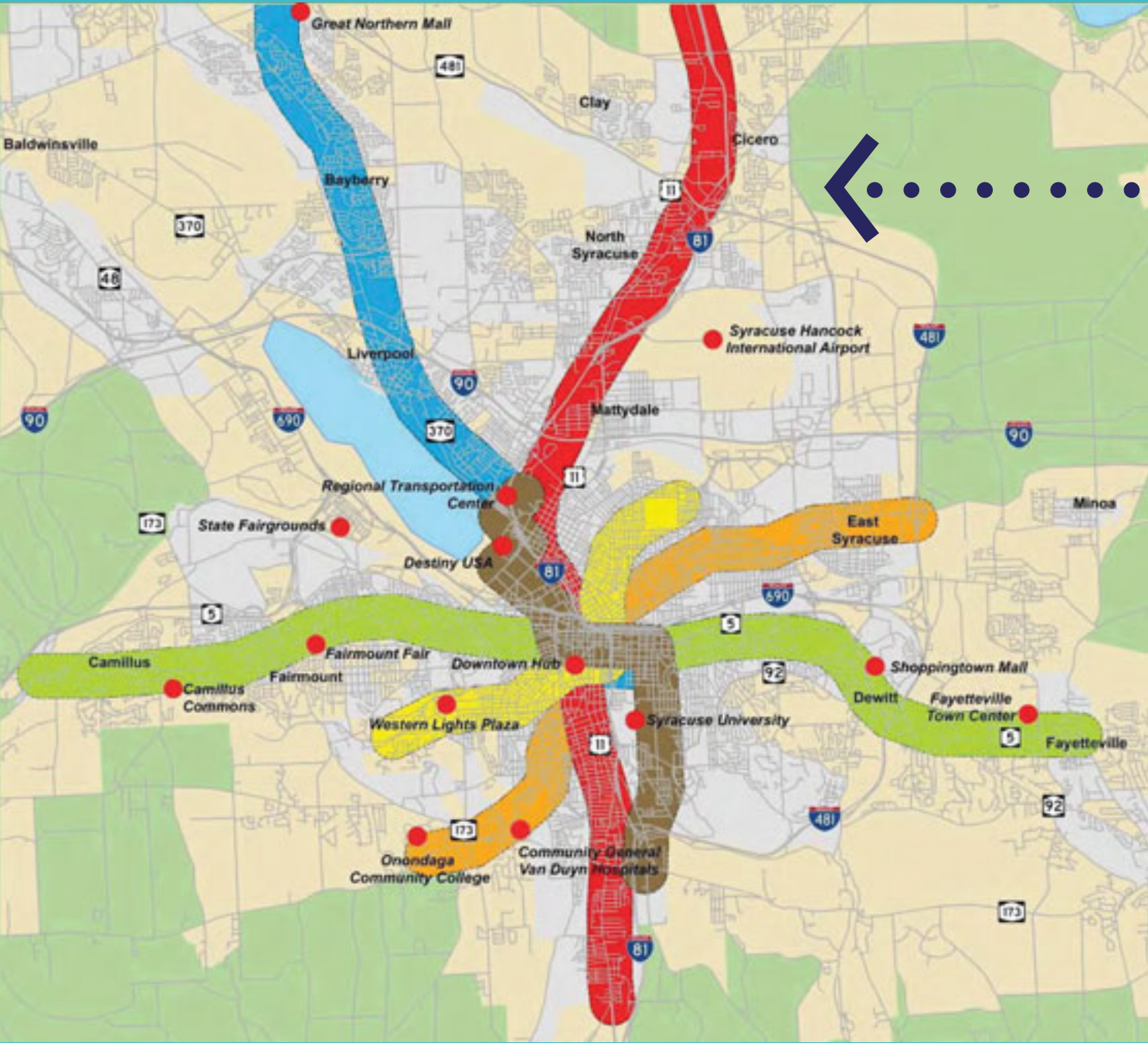
The next few display boards describe the background transit study in more detail.

Syracuse Transit System Analysis: Corridors

What was the Syracuse Transit System Analysis?

In January 2014, the NYSDOT, in coordination with the SMTC and Centro, completed the Syracuse Transit System Analysis (STSA) as part of The I-81 Corridor Study.

The purpose of the STSA was “To develop a long-range vision for the transit system in the Syracuse metropolitan area to assist in achieving a balanced transportation system that supports economic growth, improves quality of life, and supports the vision of the communities that it serves.”



The STSA reviewed the entire Centro system and identified 6 TRANSIT ENHANCEMENT CORRIDORS that would be likely to support increased transit ridership, based on:

- Existing transit ridership and mode share
- Population and employment density
- Households with access to one or no vehicles
- Potential for commuter trips
- Commute times
- Household income
- Existing plans.

Legend

Corridors

- University Hill - RTC
- Northside - Western Lights
- Camillus - Fayetteville
- North Syracuse - South Valley
- East Syracuse - OCC
- Great Northern Mall - Downtown

Key Features

- Roads
- Community Destinations
- 2000 Census Urban Area
- Transit Supportive Areas*

* Transportation Analysis zones or Census tracts with the following characteristics:

- Population density > 4,500 people/sq mi
- Employee density > 4,500 employees/sq mi
- Average Household Income < \$34,560
- % of households with 0 or 1 vehicle > 50%
- % of trips taken by transit > 5%

Syracuse Transit System Analysis: Evaluation

Strategies

The STSA evaluated 3 strategies for each corridor:



Existing service improvements



Bus Rapid Transit (BRT)



Light Rail Transit (LRT)

Evaluation Criteria

Each corridor/strategy combination was evaluated using criteria in five categories, based on the Federal Transit Administration’s Project Justification Rating guidance for funding, as well as local stakeholder input.

CATEGORY	WEIGHT	EXAMPLE CRITERIA
Mobility improvements	25%	Annual trips, one-seat rides to major destinations
Economic development	25%	Transit-supportive plans and policies, strategic development areas served
Cost effectiveness	25%	Cost-benefit ratio
Land use	12.5%	Employment served, population density, parking costs/availability
Environmental benefits	12.5%	Air quality, safety, energy use

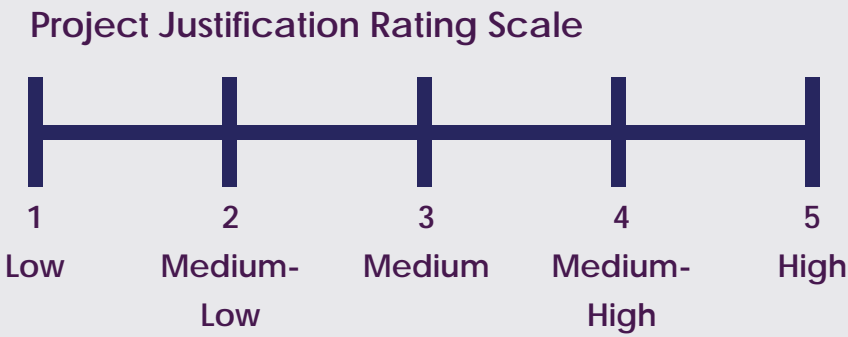


Final scores and ratings for each of the 18 corridor/strategy combinations are shown on the next board.



Syracuse Transit System Analysis: Results

A weighted average score was determined for each corridor/strategy combination, and the score was used to determine the Project Justification Rating.



Final Corridor Rankings

	RANK	CORRIDOR	STRATEGY	WEIGHTED AVERAGE SCORE
✱	1	Destiny USA/RTC to Syracuse University	Service improvements	3.71
✱	2	James St/South Ave	Service improvements	3.21
✱	3	James St/South Ave	BRT	3.15
✱	4	James Street	LRT	3.05
	5	I-81 Express, Central Square to Downtown/University Hill	Service improvements	3.01
✱	6	North Salina Street	LRT	2.91
✱	7	Solar Street	LRT	2.91
	8	Genesee St/Erie Blvd (Camillus to Fayetteville)	Service improvements	2.85
	9	Butternut St/Onondaga St	Service improvements	2.83
	10	South Salina St/Route 11 to North Syracuse	Service improvements	2.82
	11	Genesee St/Erie Blvd (Camillus to Fayetteville)	BRT	2.79
	12	US 11 Local	BRT	2.78
	13	Liverpool/Route 57, Great Northern Mall to Downtown/University Hill	Service improvements	2.77
	14	Syracuse University/Liverpool	BRT	2.72
	15	Downtown/University Hill Loop	LRT	2.71
	16	OnTrack Extension	LRT	2.58
	17	Western Lights-Carrier Circle	BRT	2.54
	18	I-81 Express	BRT	2.08

✱ 6 of the top 10 ranked corridor/strategy combinations from the STSA relate to either the James Street/South Avenue or DestinyUSA-SU corridors.

Syracuse Transit System Analysis: Recommendations

STSA made 4 major recommendations:

Construct a new transit hub on University Hill with supporting infrastructure.

Provide lower-intensity service enhancements in remaining corridors.

Begin a commuter-based service along I-81 from Central Square to Downtown/University Hill.

Pursue higher-intensity transit services along the Destiny USA/RTC to Syracuse University and James Street/South Avenue Corridors.

This type of express bus service is supported by the SMTC's new Long Range Transportation Plan, if funding can be identified. Park-and-ride locations at interchanges would also need to be identified.

The STSA concluded that these corridors

- provide the best opportunity to implement and sustain higher-intensity transit services, such as BRT or LRT; and
- have the best chance of obtaining New Starts or Small Starts funding through the Federal Transit Administration.

SMART 1 study is the next step along the path to obtaining funding for BRT or LRT in these corridors.

SMART 1 and the I-81 Viaduct Project

Why are these separate studies?

The SMART 1 study is advancing a specific recommendation from the Syracuse Transit System Analysis for enhanced transit on two corridors that have the conditions necessary to sustain high ridership.

Centro and the NYSDOT could still pursue an I-81 express commuter bus service with park-and-rides as a separate initiative. The SMART 1 study does not preclude that option.

- Transit mode share in our community would need to increase dramatically to have an impact on the options being considered for the I-81 Viaduct.

How are the project teams coordinating?

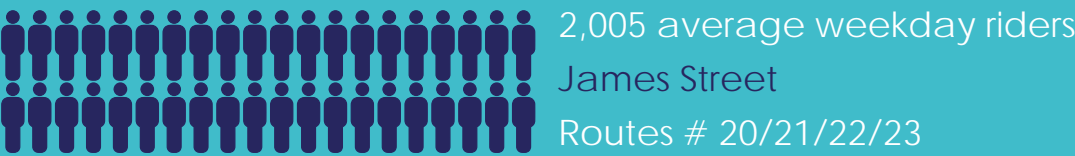
As plans for both I-81 and an enhanced transit system progress, SMTC, NYSDOT, and Centro will continue to communicate frequently.

- NYSDOT and Centro are members of the Study Advisory Committee for the SMART 1 study.
- SMTC and Centro are members of the Stakeholder Advisory Working Groups for The I-81 Viaduct Project.



Commuting in the Syracuse area:

Centro routes with highest ridership



= 50 Riders

Commuters who both live AND work in the City of Syracuse: **35,000**

Commuters who live in Salina, Clay, and Cicero combined, and work in the City of Syracuse: **19,000**

Percent of City of Syracuse residents that currently take transit to work: **8%**

Percent of suburban residents that currently take transit to work: **1%**

What is Purpose & Need?

The purpose and need is a key factor in determining the range of alternatives considered in an Environmental Impact Statement. The “need” statement describes the problems that the proposed action is intended to address and, to the extent possible, explains the underlying causes of the problems. The “purpose” statement defines, as sharply as possible, the fundamental reasons why the project is being proposed based on meeting the transportation needs.

Purpose

- The purpose of an enhanced transit system in the RTC - SU and Eastwood - OCC corridors is to provide faster, more direct, more frequent, and more reliable transit service between major residential areas and activity centers in the Syracuse metropolitan area, at a reasonable capital and operating cost.

Need

- Fast, efficient, and environmentally sound transit connections between major activity centers are needed throughout the study corridors. Improved mobility for transit dependent populations throughout the study corridors is needed as well, along with a need to encourage redevelopment and revitalization that is supported by public transit.

The Purpose & Need statement will be used, along with project Goals, shown on the next board, to evaluate different BRT and LRT alternatives along the 2 corridors.

What we'll try to achieve

Throughout the SMART 1 effort, we'll seek to accomplish a number of goals developed for the study.

Consensus Building

- Involve a large and diverse mix of community members through an unbiased, transparent, and meaningful outreach program.
- Support the planning goals of SMTC, Centro, City of Syracuse, NYSDOT, and other important stakeholders.
- Adopt a Locally Preferred Alternative that is technically feasible, includes a sound financial plan, and has the broad support of the Centro, SMTC, City of Syracuse and other key stakeholders.
- Follow standard FTA procedures to facilitate the transition to the project development process and assure project competitiveness in the Small Starts program.

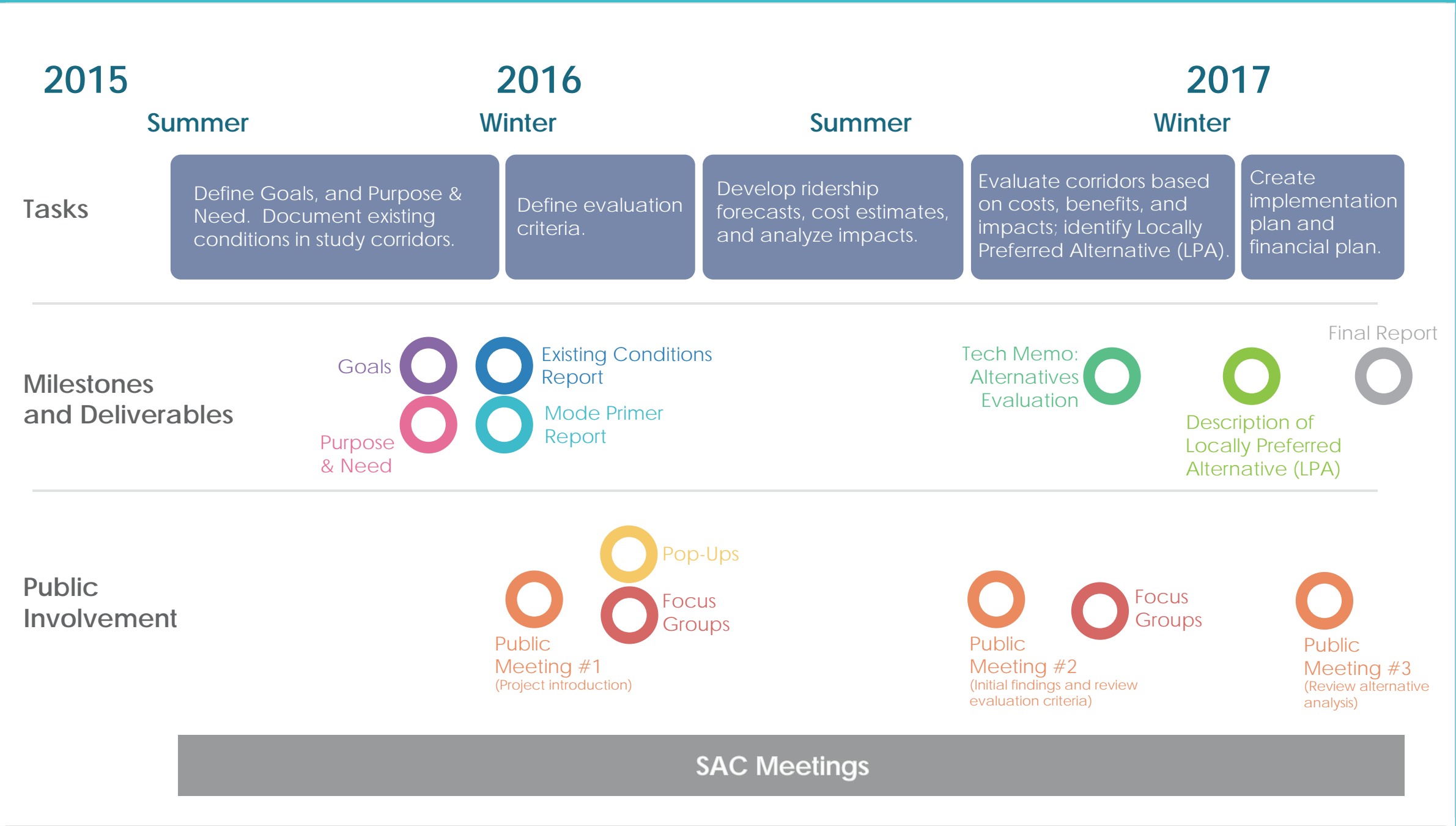
Transportation

- Build on the analysis and conclusions of the Syracuse Transit System Analysis and confirm the selection of the preliminary corridors.
- Improve the utility of transit service for riders by reducing travel time, improving headways, expanding route coverage, and generally increasing travel options.
- Develop a plan for a high-intensity transit investment that is preferred for trips to and within downtown Syracuse because it has:
 - Frequent service;
 - Convenient and accessible alignments and stops;
 - Comfortable vehicles; and
 - Seamless connection to other regional transit services.

Development

- Support revitalization of Syracuse and key neighborhoods along the selected corridors by encouraging transit oriented development and infill.
- Utilize transit to improve connectivity between key locations in Syracuse supporting economic, cultural, social, and health-related development opportunities.
- Plan to increase the effectiveness of transit in Syracuse, providing a vision for how it could contribute to a vibrant, inclusive, and prosperous city.

Schedule



The SMART 1 planning study started in Summer 2015 and is expected to be completed in 2017.

Throughout the course of the planning study, three public meetings/open houses are scheduled, along with various other public engagement activities such as focus groups, community/neighborhood meetings, and other events.

Based on the recommendations of the Syracuse Transit System Analysis (STSA), two transportation improvement corridors will be analyzed in the SMART 1 study.

Connects the Regional Transportation Center/Destiny USA Mall to Syracuse University and serves the following:

- Connects the Eastwood neighborhood along James Street and Onondaga Community College, while also serving:

- 

Existing transit

The Central New York Regional Transportation Authority (Centro) operates a total of 99 bus routes.

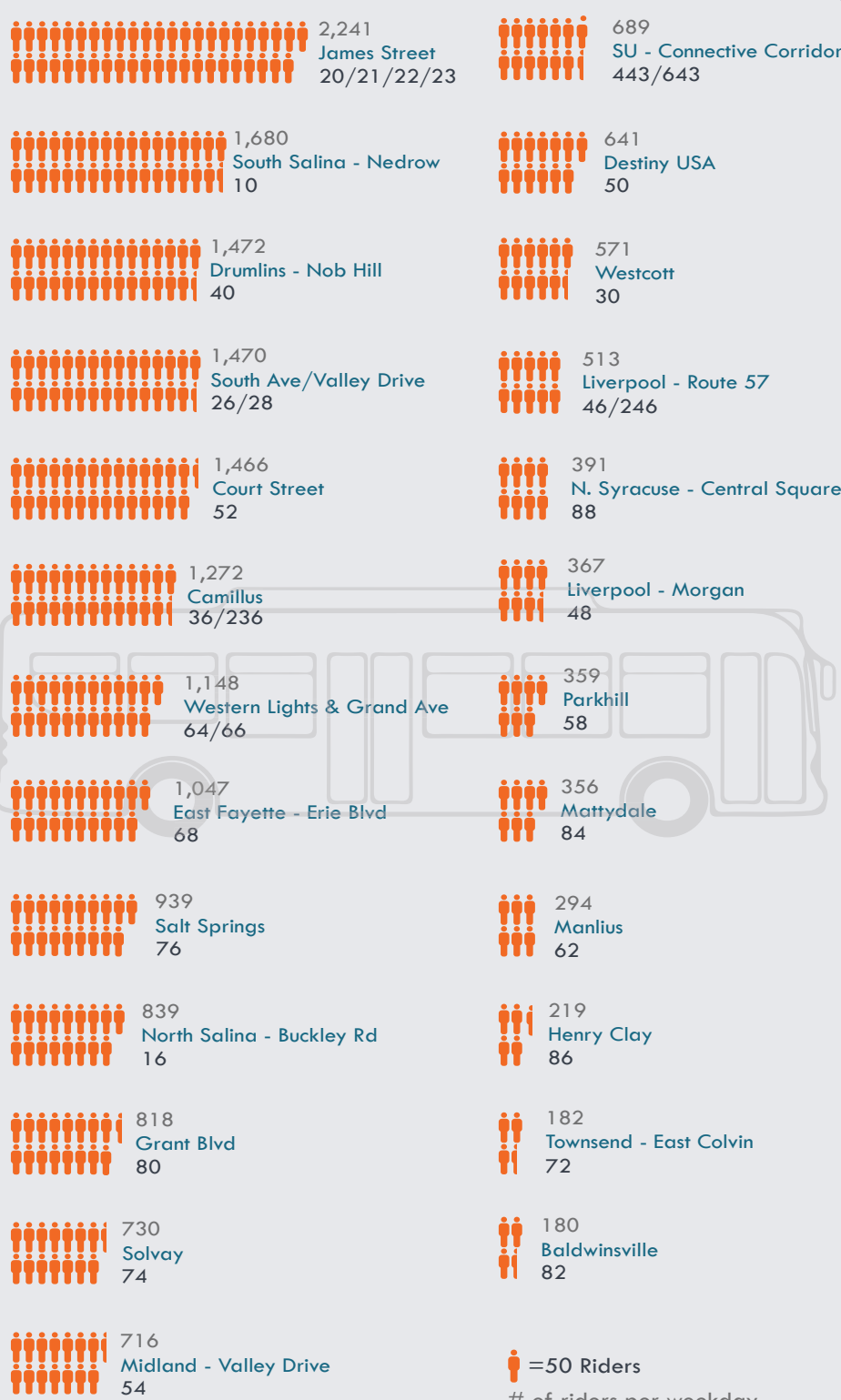
42

bus routes operate within the RTC - SU corridor

41

bus routes operate within the Eastwood - OCC corridor

Average Weekday Ridership by Centro Route (2015)



The James Street, South Salina Street, Drumlins/Nob Hill and South Ave/Valley Drive corridors experienced the highest average weekday ridership in 2015.

Demographics of Centro Riders (2013)

Ethnic Group

African-American	38%
Native American	3%
Asian	3%
Hispanic	7%
Caucasian	45%
Other	4%

51% of Centro riders are minorities.

Age

Under 18	4%
18 - 24	20%
25 - 34	19%
35 - 54	39%
55 - 64	14%
65+	3%
No Response	2%

24% of Centro riders are under the age of 25.

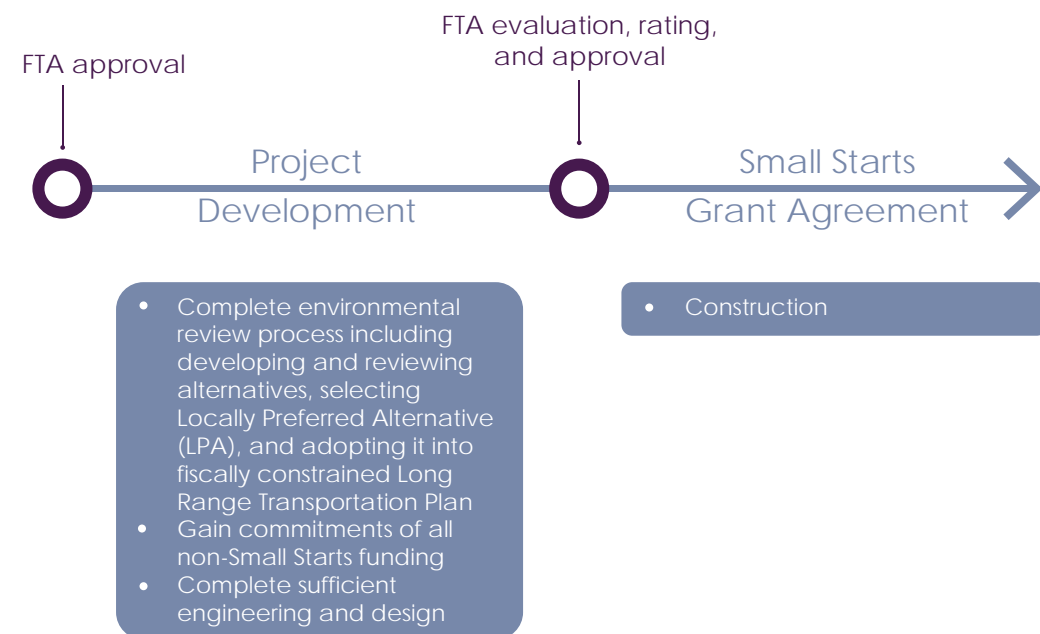
Personal Income

Under \$15,000	41%
\$15,000 - \$29,999	34%
\$30,000 - \$49,999	16%
\$50,000 +	6%
No Response	3%

75% of Centro riders have an income less than the City of Syracuse's \$30,891 median household income.

FTA New Starts

FTA's Fixed Guideway Capital Investment Grants, also known as "New Starts", provides grants for new and expanded rail, bus rapid transit, and ferry systems that reflect local priorities to improve transportation options in key corridors.



- Funding is awarded by the FTA through a competitive process according to the type of project seeking funds (i.e., New Starts or Small Starts projects). New Starts projects are ones with a total estimated capital cost of \$300M or more, or that are seeking \$100M or more in FTA funds. Small Starts projects are ones that have a total estimated capital cost of less than \$300M and that are seeking less than \$100M in FTA funds.
- The SMART 1 study is a planning effort envisioned to complete a number of items outlined in the FTA Small Starts process. Once a Locally Preferred Alternative (LPA) is identified in SMART 1, Centro or another entity could advance the LPA to FTA's Small Starts "Project Development" phase for further environmental review, engineering, and design. FTA approval is necessary to enter "Project Development."
- All potential projects must be evaluated and rated by FTA in accordance with statutorily defined criteria at various points in the development process. In order to receive a construction grant, all projects must go through a multi-step, multi-year process.

Modes under review

The following modes were looked at within the eligibility screening process.



Light Rail Transit

Operates on fixed rail infrastructure in separate, dedicated right-of-way. Vehicles are heavier, have a larger passenger capacity and can run at higher speeds than a modern streetcar.



Modern Streetcar

Operates on fixed rail infrastructure and runs on electric power drawn from overhead catenary wires or direct connection to an electrified track in the street. Typically installed in existing shared vehicle lanes and operate at the speed of traffic.



BRT-Busway

Some portion of route operates on a separate, dedicated bus-only roadway.



BRT-Bus Lane

Designated bus-only lanes on key roads.



BRT-Mixed Traffic

Limited-stop bus service operating mostly within mixed traffic on existing roads.



Existing service improvements

Includes changes to existing bus service, without major capital investment. Improvements include upgrading bus stop amenities, consolidating stops, and installing Transit Signal Priority technology.

Small Starts eligibility screening

The purpose of the eligibility screening analysis is not to examine specific route or design alternatives, but to determine what level of investment and improvement might be justified within the study corridors, and attract Federal capital funding.

Eligibility screening criteria:



Dedicated right-of-way (ROW) -This indicator states whether or not the ROW required to fully implement a mode is available. Since the ROW types differ for each end of the two study corridors, this indicator was applied separately for each half of each corridor.



Total project capital cost- Overall capital cost was developed by researching the capital cost of modes in other regions similar to Syracuse. The threshold is to have a total capital cost of less than **\$300,000,000**.



Maximum practical local funding- The FTA will only fund up to **\$100,000,000** or 80% if total cost is less than or equal to \$125,000,000 for Small Starts projects. Therefore, this number indicates how much local and/or state funding will be required to fulfill the total project budget. This criteria reflects the feasibility of providing the required local share.



Existing riders on corridor- The FTA requires at least **3,000** existing weekday boardings in a corridor to qualify for Small Starts funding.



Limited operating cost increases- This indicator was based on a conceptual service plan for each mode with costs based on experience from agencies that operate in regions similar to Syracuse. Systemwide operating costs must not increase by more than **5%**.

- Eligibility screening results are shown on the next few boards.















Eligibility screening analysis for RTC-SU corridor

Assumed route- 6.9 miles

modes under review

screening criteria

		LRT 	Modern Streetcar 	BRT-Busway 	BRT-Bus Lane 	BRT- Mixed Traffic 
Dedicated ROW North Segment		✓ Available	⊘ N/R	✓ Available	⊘ N/R	⊘ N/R
Dedicated ROW South Segment		✗ Not Available	⊘ N/R	✗ Not Available	⊘ N/R	⊘ N/R
Total Cost (in millions)		✗ \$457	✗ \$426	✓ \$190	✓ \$25	✓ \$10
Local funding (in millions)		✗ \$357	✗ \$326	✗ \$90	✓ \$5	✓ \$2
Existing Ridership		✓ 3,726	✓ 3,726	✓ 3,726	✓ 3,726	✓ 3,726
Operating Cost Increase		✗ 26%	✗ 22%	✗ 18%	✗ 6%	✓ 5%
Further Study?		✗ No	✗ No	✗ No	✓ Yes	✓ Yes













✗ indicates results that do not meet eligibility criteria. ⊘ not required
✓ indicates results that meet eligibility criteria.

Eligibility screening analysis for Eastwood-OCC corridor

Assumed route- 7.4 miles

modes under review

screening criteria

		LRT 	Modern Streetcar 	BRT-Busway 	BRT-Bus Lane 	BRT-Mixed Traffic 
Dedicated ROW North Segment		✓ Available	⊘ N/R	✓ Available	⊘ N/R	⊘ N/R
Dedicated ROW South Segment		✗ Not Available	⊘ N/R	✗ Not Available	⊘ N/R	⊘ N/R
Total Cost (in millions)		✗ \$526	✗ \$491	✓ \$219	✓ \$27	✓ \$11
Local funding (in millions)		✗ \$426	✗ \$391	✗ \$119	✓ \$5	✓ \$2
Existing Ridership		✓ 3,456	✓ 3,456	✓ 3,456	✓ 3,456	✓ 3,456
Operating Cost Increase		✗ 30%	✗ 25%	✗ 20%	✗ 7%	✗ 6%
Further Study?		✗ No	✗ No	✗ No	✓ Yes	✓ Yes

✗ indicates results that do not meet eligibility criteria. ⊘ not required
✓ indicates results that meet eligibility criteria.

What we've heard

Input from our community engagement to date was used to develop the mode recommendations.



You told us you want transit service to be:

- Faster
- More frequent
- More reliable (better on-time performance)
- More visually attractive
- Available for longer hours (late night and early morning)
- Easier and more convenient to use (through the use of technology such as bus tracker apps, online travel planning, electronic fare payment)

We also heard that the public perception of transit needs improvement.

Public comments show strong support for enhanced transit in our community, with BRT receiving more support than LRT due to BRT's lower cost, relative ease of implementation, and flexibility.

- February 2016 public meeting
-nearly 100 attendees
- 3 Focus Groups in Spring 2016
-Major Employers
-Educational Institutions
-Social Service Providers
- 9 Pop-Up meetings in Spring 2016
-Centro Transit Hub
-Destiny USA
-James Street (2 sites)
-OCC
-South Ave
-South Salina Street
-SU (2 sites)

We also heard about numerous planned development projects along the study corridors that could impact future transit ridership. This information will be used later in the study to evaluate the economic impact of an enhanced transit system, which is a required factor in the FTA's funding process.

"Increasing frequency should be a goal especially for community visitors to make it easier to get around."

"Maintain at least some reduced service late for people who work late."

"Light rail is too expensive. Bigger buses would be helpful."

"Good transit systems help stimulate density!"

"Buses in mixed traffic good idea if signal priority for buses."

"BRT seems more practical to me."

Route | Mode Alternatives

Identification Process

Two new transit modes and existing service improvements were recommended for each corridor:

A likely route was defined for each transit mode*:

Each alternative is defined by the combined transit mode and route.

Eastwood - OCC Corridor



Existing service improvements

James St, W Onondaga St, Bellevue Ave, Onondaga Ave, South Ave & Onondaga Rd



Alternative #1



BRT-Mixed Traffic

James St, W Onondaga St, South Ave & Seneca Tnpk



Alternative #2



BRT-Bus Lane

James St, W Onondaga St, South Ave & Seneca Tnpk



Alternative #3

RTC - SU Corridor



Existing service improvements

Court St, N Salina St, Harrison/Adams St, Irving Ave, S Crouse & Waverly Aves



Alternative #1



BRT-Mixed Traffic

N Salina St, Harrison/Adams St, Irving & Waverly Aves



Alternative #2



BRT-Bus Lane

Solar St, Harrison/Adams St, Irving & Waverly Aves

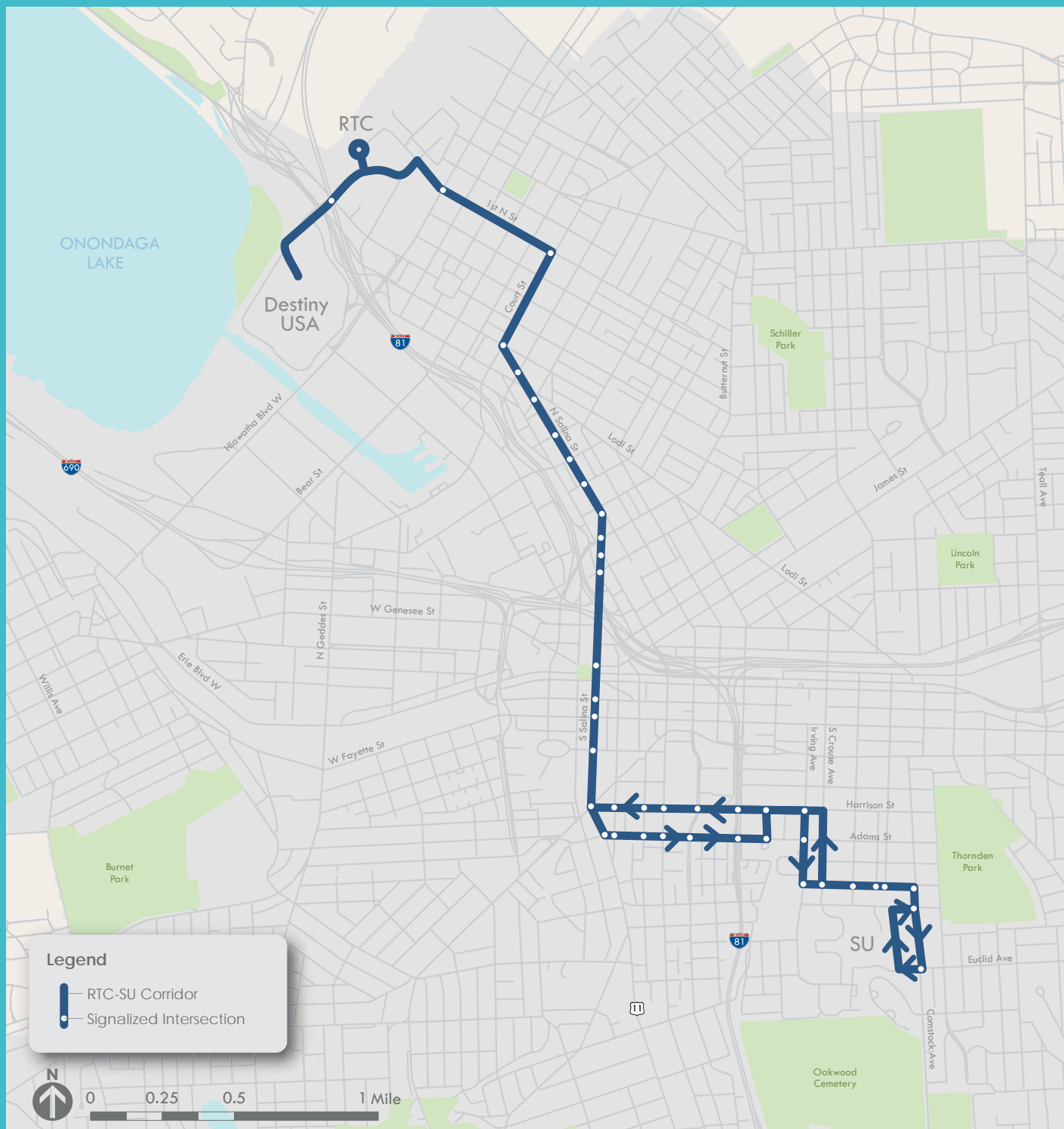


Alternative #3

*All routes pass through the existing Centro Hub and may change following additional review/analysis.

Alternatives are detailed in the following boards

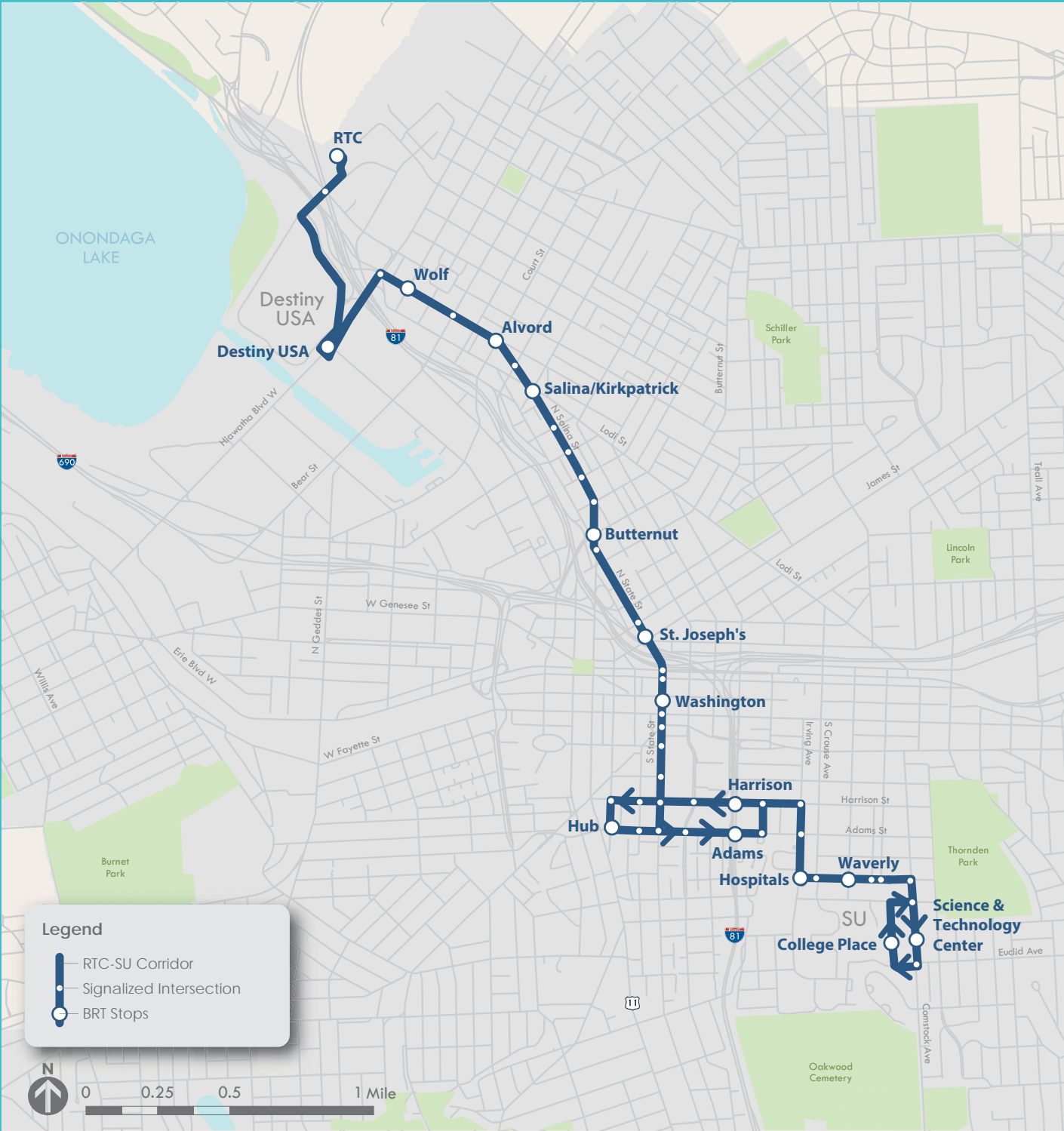
RTC – SU corridor Alternative 1: Existing Service Improvements



This alternative includes efficient, low cost improvements to the existing Centro routes in the RTC – SU corridor to make transit service more attractive to a wider variety of riders. The routes included would be routes 40 and 116. Improvements would include:

- New shelters at busy stops.
- Transit signal priority at key intersections.
- Faster, more frequent service.
- Service from 5:00 a.m. to 12:30 a.m. on weekdays.
- Service at least every 20 minutes between 6:00 a.m. and 7:00 p.m. on weekdays.
- Expanded weekend service.

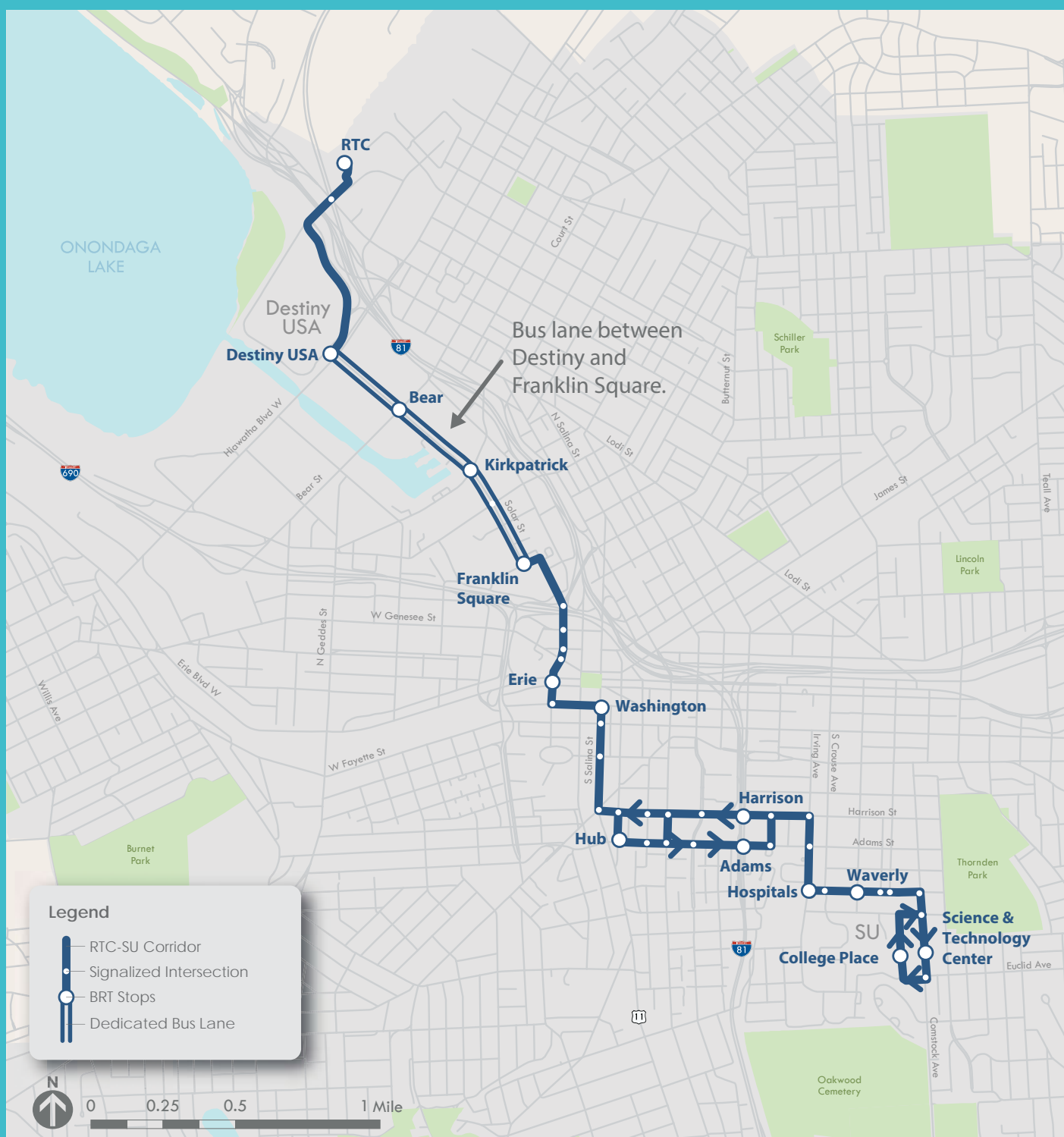
RTC – SU corridor Alternative 2: BRT – Mixed Traffic



This alternative would create a new BRT route in mixed traffic along the RTC-SU corridor primarily via North Salina Street, the Hub, Harrison/Adams Streets, Irving and Waverly Avenues. Improvements would include:

- Faster service.
- New shelters at all BRT stops.
- Level platforms to speed boarding.
- Transit signal priority at key intersections.
- New branded low floor buses.
- Service from 5:00 a.m. to 12:30 a.m. on weekdays.
- Service at least every 10 minutes during rush hours and at least every 15 minutes between 6:00 a.m. and 8:00 p.m. on weekdays.
- Expanded weekend service.

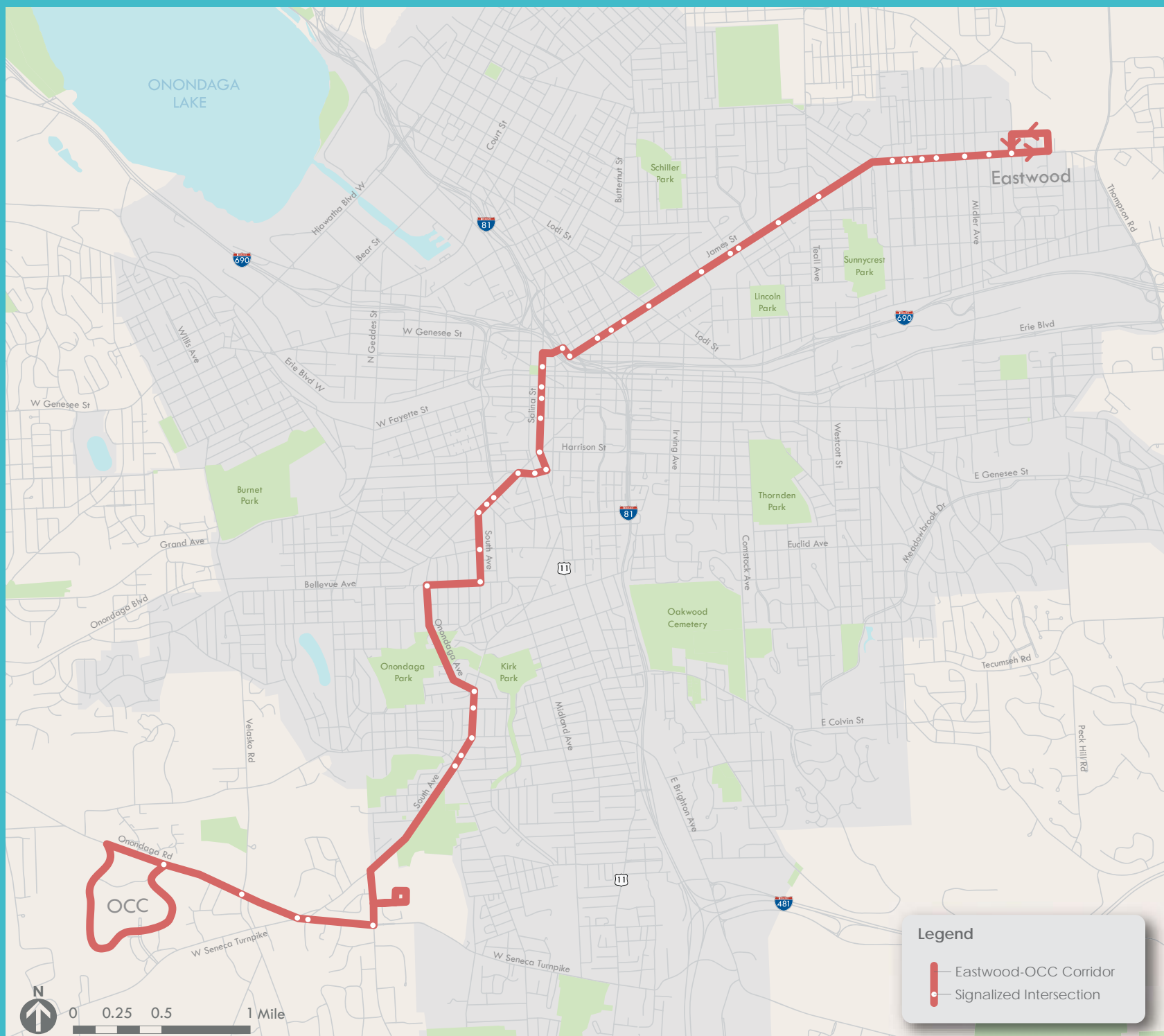
RTC – SU corridor Alternative 3: BRT – Bus Lane



This alternative would create a new BRT route with a bus lane along a portion of the route along the RTC-SU corridor primarily via Solar Street, the Hub, Harrison/Adams Streets, Irving and Waverly Avenues. Improvements would include:

- Faster service.
- New shelters at all BRT stops.
- Level platforms to speed boarding.
- Transit signal priority at key intersections.
- New branded low floor buses.
- Service from 5:00 a.m. to 12:30 a.m. on weekdays.
- Service at least every 10 minutes during rush hours and at least every 15 minutes between 6:00 a.m. and 8:00 p.m. on weekdays.
- Expanded weekend service.

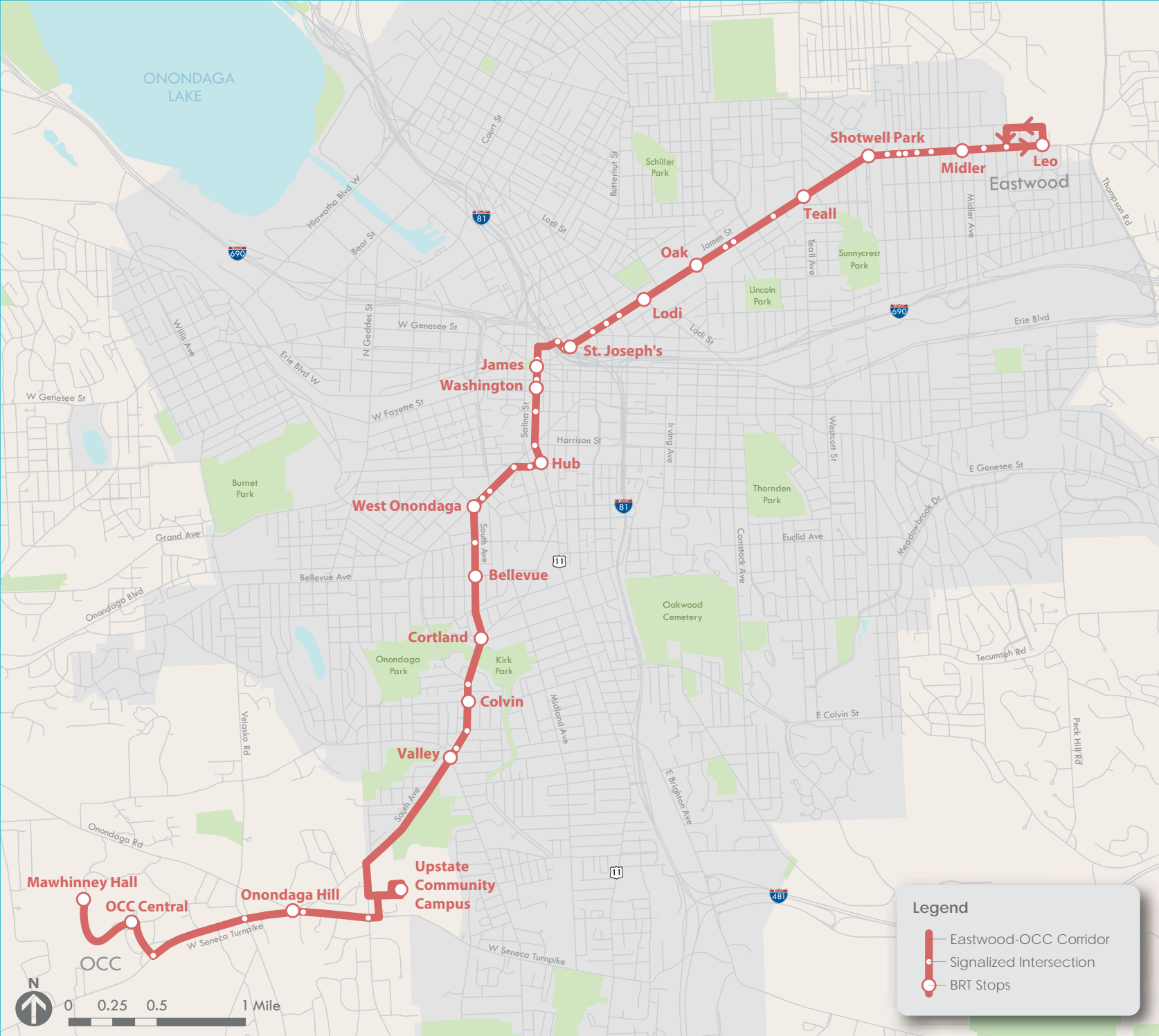
Eastwood – OCC corridor Alternative 1: Existing Service Improvements



This alternative includes efficient, low cost improvements to existing Centro routes in the Eastwood – OCC corridor to make transit service more attractive to a wider variety of riders. The routes included would be routes 20 and 226. Improvements would include:

- New shelters at busy stops.
- Transit signal priority at key intersections.
- Faster, more frequent service.
- Service from 5:00 a.m. to 12:30 a.m. on weekdays.
- Service at least every 20 minutes between 6:00 a.m. and 7:00 p.m. on weekdays.
- Expanded weekend service.

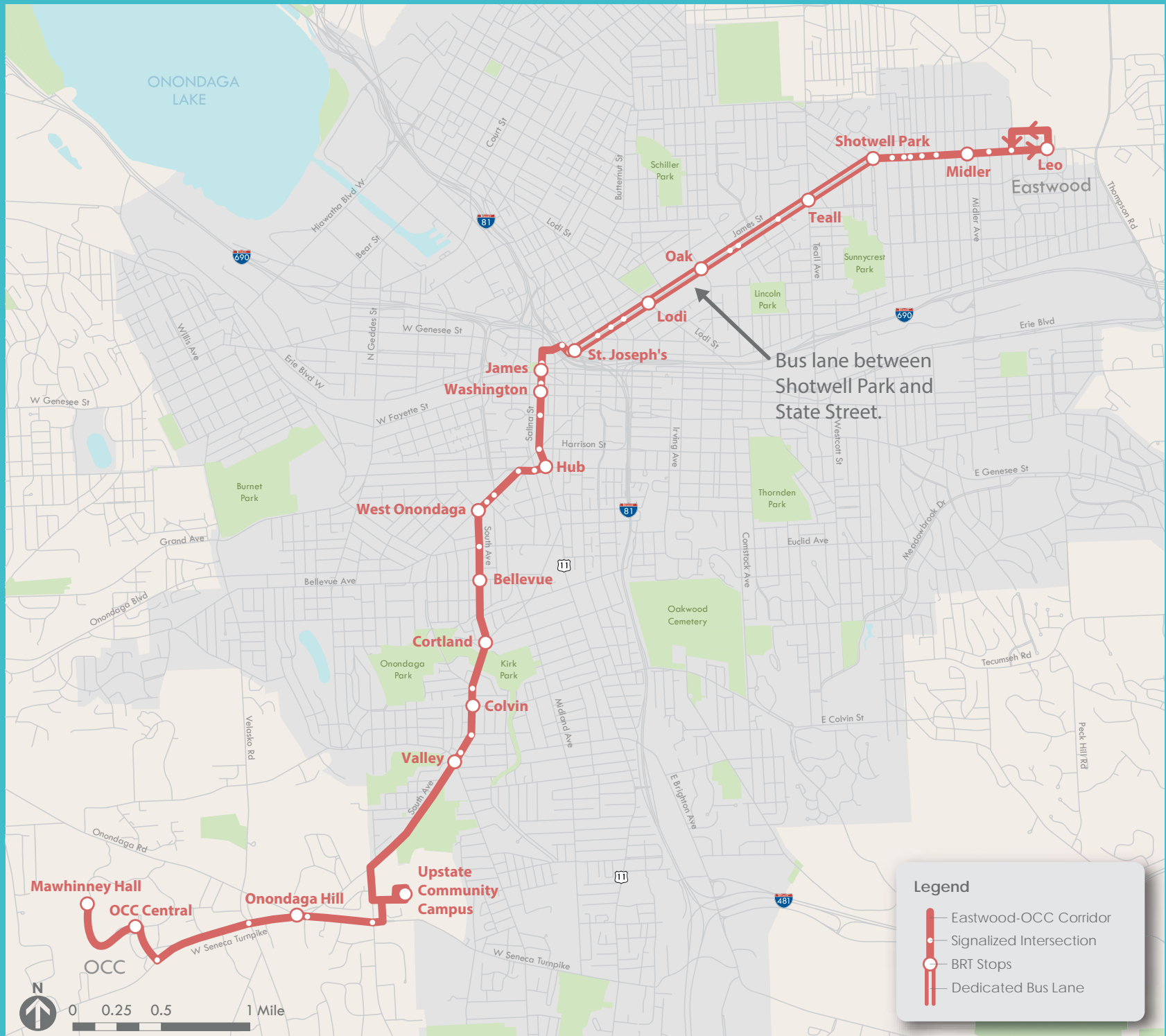
Eastwood – OCC corridor Alternative 2: BRT – Mixed Traffic



This alternative would create a new BRT route in mixed traffic along the Eastwood-OCC corridor primarily via James Street, the Hub, Onondaga Street, South Ave, and West Seneca Turnpike. Improvements would include:

- Faster service.
- New shelters at all BRT stops.
- Level platforms to speed boarding.
- Transit signal priority at key intersections.
- New branded low floor buses.
- Service from 5:00 a.m. to 12:30 a.m. on weekdays.
- Service at least every 10 minutes during rush hours and at least every 15 minutes between 6:00 a.m. and 7:00 p.m. on weekdays.
- Expanded weekend service.

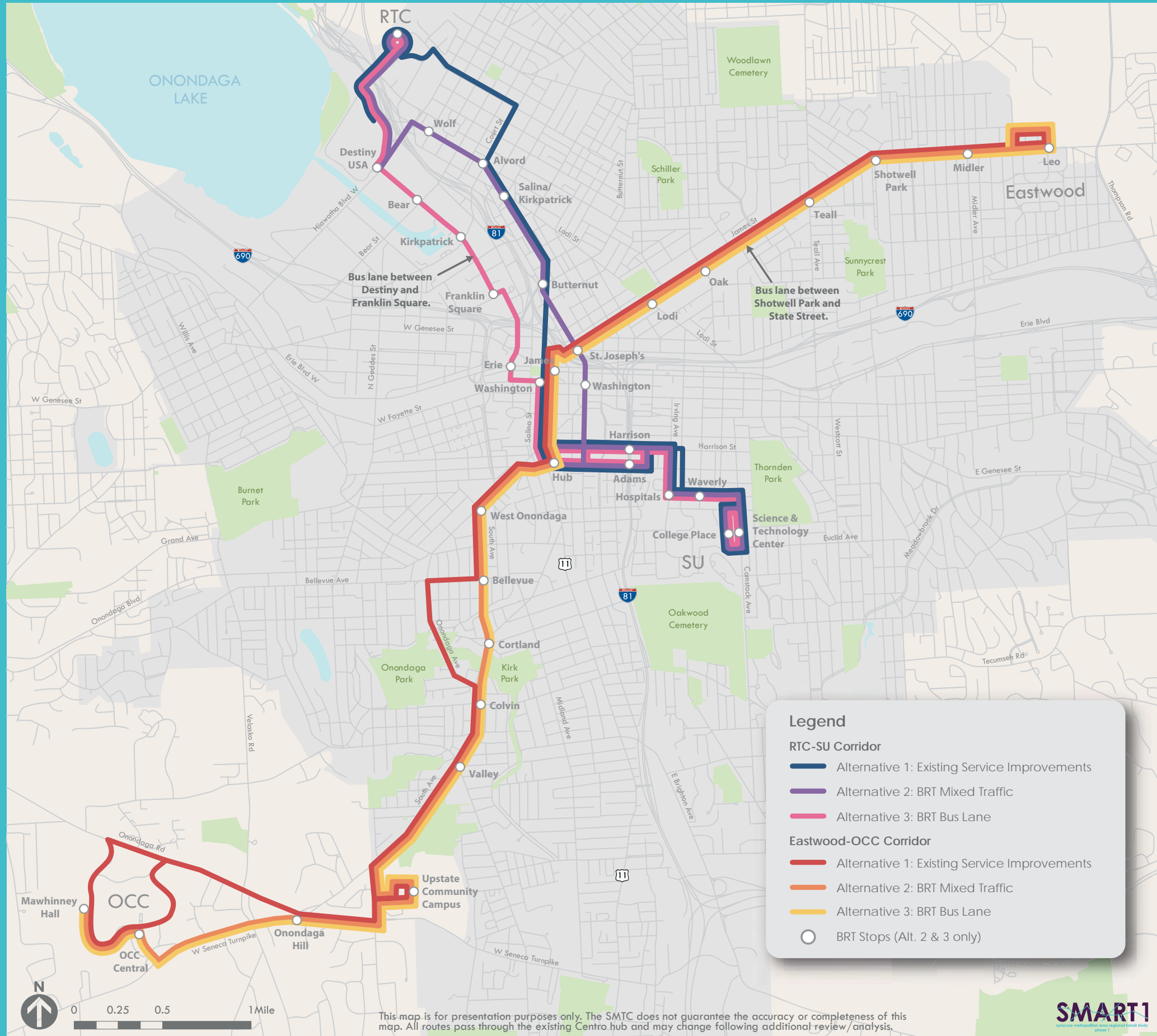
Eastwood – OCC corridor Alternative 3: BRT – Bus Lane



This alternative would create a new BRT route with a bus lane along a portion of the route primarily via James Street, the Hub, Onondaga Street, South Ave, and West Seneca Turnpike. Improvements would include:

- New bus only lanes from Shotwell Park and State Street along a section of James Street that is wide enough to accommodate them.
- Faster service.
- New shelters at all BRT stops.
- Level platforms to speed boarding.
- Transit signal priority at key intersections.
- New branded low floor buses.
- Service from 5:00 a.m. to 12:30 a.m. on weekdays.
- Service at least every 10 minutes during rush hours and at least every 15 minutes between 6:00 a.m. and 7:00 p.m. on weekdays.
- Expanded weekend service.

Route | Mode Alternatives



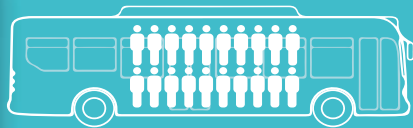
Route | Mode Alternatives

Evaluation Criteria

These criteria will be used to evaluate each of the route/mode alternatives, which will then lead to identifying a locally preferred alternative for each corridor. Most of these criteria are based on the FTA Small Starts process.

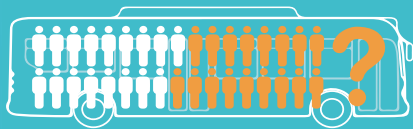
Existing Transit Ridership Along Proposed Route

Improvements to an existing transit route with a higher number of riders means those benefits will be experienced by more riders and the route has a higher likelihood of success.



Estimated New Riders

Higher estimates of new riders on a proposed route increases the number of transit riders who will benefit from improvements.



Travel Time Improvement

Shortened travel time is one of the key benefits of improved service, and is used to determine cost effectiveness.



Change in Vehicle Miles Traveled (VMT)

Improved transit service can reduce car travel, as measured by VMT, which has air quality, traffic congestion, and safety benefits.



Capital Cost

The lower the capital cost relative to expected benefits, the better the return on investment.



Operating Cost

The lower the operating cost relative to expected benefits, the better the return on investment.



Route | Mode Alternatives

Evaluation Criteria

These criteria will be used to evaluate each of the route/mode alternatives, which will then lead to identifying a locally preferred alternative for each corridor. Most of these criteria are based on the FTA Small Starts process.

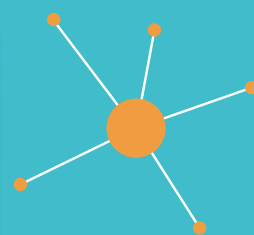
Transit Supportive Plans and Policies

Routes that serve locations where the City of Syracuse is planning for higher density or, transit oriented development, will serve more transit riders.



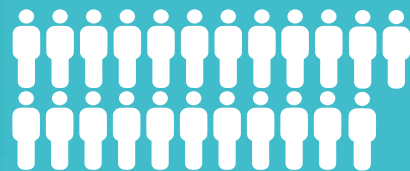
Serves Existing Commercial Nodes

Routes that include hubs of commercial activity serve more riders and an efficiency in number of trips.



Population and Employment Density

Transit routes that serve denser neighborhoods serve more transit riders and thus, improvements to such routes will benefit more riders.



Serves Affordable Housing

Improvements to routes that serve affordable housing are likely to benefit riders that are more dependent on transit service.



Ability of Region to Fund Capital and Operating Cost

Local transit service provider should provide evidence of financial capacity to absorb additional operational costs due to service improvements without negative impact to existing service.



Roadway Suitability

Existing route must reasonably accommodate, or be modified to accommodate, the proposed improved transit service and related infrastructure.

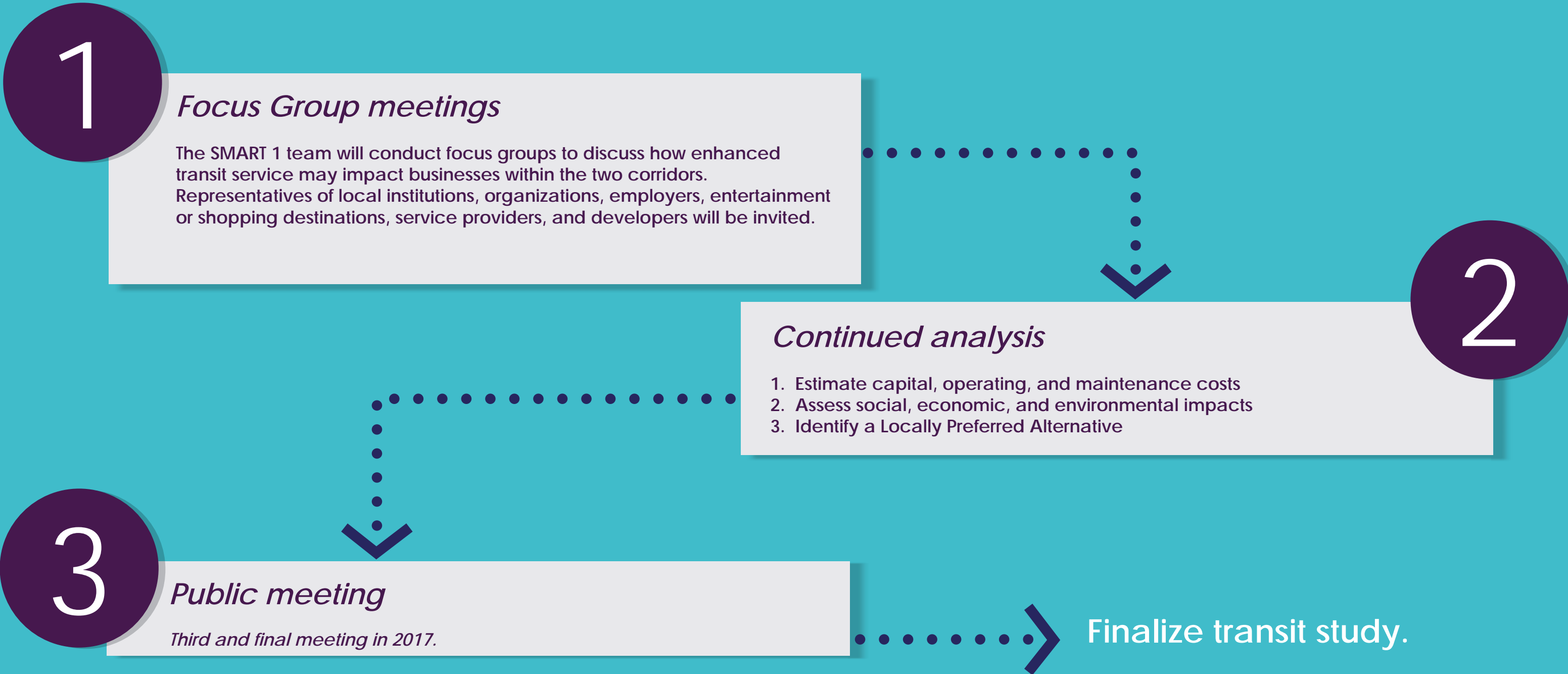


Comments of Stakeholders

Route | Mode Alternatives that directly respond to public comments will show a strong connection with community needs.



Next steps



Stay involved

Stay informed about the SMART 1 process!



Check our website for updates or to join our mailing list: www.smtcmpo.org/SMART



Follow us on Facebook at
Syracuse Metropolitan Transportation Council.

Contact us anytime:



315-422-5716



contactus@smtcmpo.org

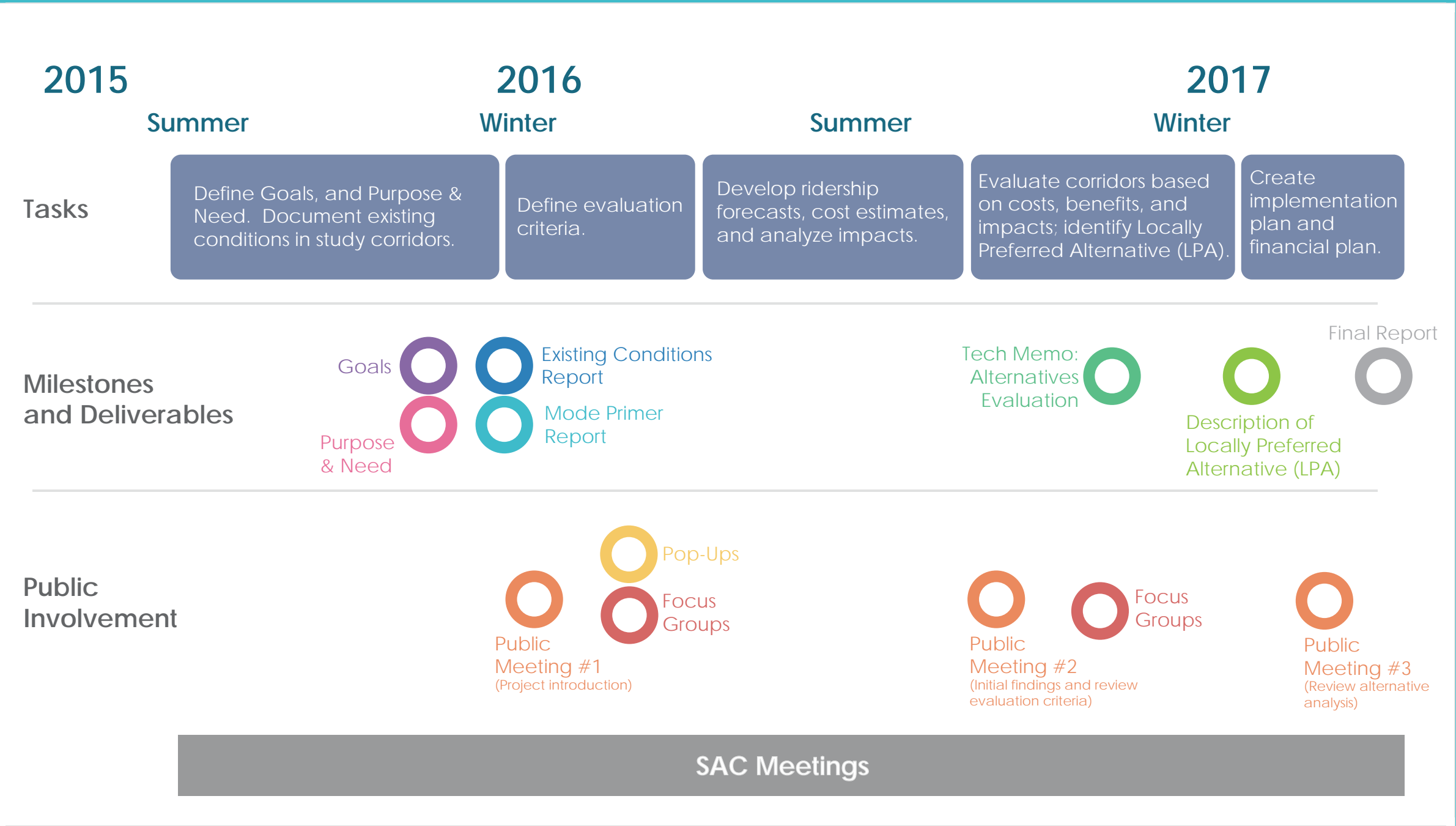


126 N. Salina St., Suite 100,
Syracuse, NY 13202

THANK YOU FOR YOUR PARTICIPATION!

We anticipate that the SMART 1 project will be completed around Summer 2017.

Schedule



The SMART 1 planning study started in Summer 2015 and is expected to be completed in 2017.

Throughout the course of the planning study, three public meetings/open houses are scheduled, along with various other public engagement activities such as focus groups, community/neighborhood meetings, and other events.

Frequently Asked Questions

What is the SMTC?

The Syracuse Metropolitan Transportation Council (SMTC) is the State-designated Metropolitan Planning Organization (MPO) for Onondaga County and portions of Oswego and Madison Counties. The SMTC is the region's forum for cooperative decision making when it comes to developing transportation plans, programs and recommendations. The SMTC is made up of officials representing local, state and federal governments or agencies with an interest in comprehensive transportation policies and services.

What area do you cover?

The area that the SMTC covers is called its Metropolitan Planning Area (MPA). The MPA includes all of Onondaga County, the Town of Sullivan in Madison County and the Towns of Hastings, Schroepfel and West Monroe, plus a small area of the Town of Granby, in Oswego County.

What are the goals of the SMART 1 study?

Consensus Building:

- Involve a large and diverse mix of community members through an unbiased, transparent and meaningful outreach program.
- Support the planning goals of SMTC, Centro, City of Syracuse, NYSDOT and other important stakeholders.
- Adopt a Locally Preferred Alternative (LPA) that is technically feasible, includes a sound financial plan, and has the broad support of the Centro, SMTC, City of Syracuse and other key stakeholders.
- Follow standard FTA procedures to facilitate the transition to the project development process and assure project competitiveness in the Small Starts program.

Transportation:

- Build on the analysis and conclusions of the Syracuse Transit System Analysis and confirm the selection of the preliminary corridors.
- Improve the utility of transit service for riders by reducing travel time, improving headways, expanding route coverage, and generally increasing travel options.
- Develop a plan for a high-intensity transit investment that is preferred for trips to and within downtown Syracuse because it has:
 - Frequent service
 - Convenient and accessible alignments and stops
 - Comfortable vehicles
 - Seamless connections to other regional transit services.

Development:

- Support revitalization of Syracuse and key neighborhoods along the selected corridors by encouraging transit oriented development and infill.
- Utilize transit to improve connectivity between key locations in Syracuse supporting economic, cultural, social, and health-related development opportunities.
- Plan to increase the effectiveness of transit in Syracuse, providing a vision for how it could contribute to a vibrant, inclusive, and prosperous city.

How are you funded and where does that money come from?

The SMTC's annual planning budget is approximately \$1.2 million. Funds are provided by both the Federal Highway (FHWA) and Federal Transit Administrations (FTA) to the New York State Department of Transportation (NYSDOT). NYSDOT allocates funding to the Metropolitan Planning Organizations throughout New York State on a formula basis. This funding is used strictly for metropolitan transportation planning activities and is not used for capital expenses.

How is the SMART 1 study being funded?

The SMART 1 planning study is being funded through the SMTC's annual planning budget mentioned earlier and in part through a similar statewide transportation planning allocation from NYSDOT known as SPR (Statewide Planning & Research). Funding is used strictly for metropolitan and/or statewide transportation planning activities and is not used for capital expenses. This study does not impact Centro's operating budget.



Frequently Asked Questions

When will this project be completed?

The SMART 1 planning project is expected to be completed in 2017 with the recommendation of a Locally Preferred Alternative. At the conclusion of the SMART 1 study, if desired, an additional environmental review and design phase of the Locally Preferred Alternative could be advanced by Centro, or another entity.

How is the SMART 1 study different from the I-81 Viaduct Project?

The SMART 1 study will focus solely on the assessment of an enhanced transit system (BRT or LRT) operating along two corridors that may have the conditions necessary to sustain high ridership. The I-81 Viaduct Project is focused on a select area of the interstate that is nearing its lifespan. In addition to recommending pursuing higher-intensity transit services, the 2014 STSA also recommended a commuter express service for Interstate 81. Although interstate express bus service is not included in SMART 1, the planning study does not preclude Centro or NYSDOT from advancing the express bus concept. As plans for both I-81 and an enhanced transit system progress, SMTC, Centro, and NYSDOT will continue to communicate frequently. Both Centro and NYSDOT are members of the SMART 1 Study Advisory Committee, while SMTC and Centro are members of NYSDOT's I-81 Stakeholder Advisory Working Groups.

How were the two corridors selected?

The SMART 1 study builds upon the analysis and findings of the 2014 Syracuse Transit System Analysis (STSA) completed by NYSDOT as a component of The I-81 Challenge. The goal of the STSA was to develop a strategy to assist the Syracuse metropolitan area in achieving a balanced transportation system that supports economic growth, improves quality of life, and supports the vision of the communities it serves. The analysis identified six transit improvement corridors and evaluated three different types of improvements (Base Build, BRT or LRT) on each. Each corridor/mode combination was evaluated using numerous evaluation criteria in 5 categories: mobility improvements, economic development impacts, environmental benefits, cost effectiveness, and supportive land use. Six of the top 10 corridor/mode combinations listed in the STSA relate to two corridors: 1) James Street/South Avenue and 2) Destiny/RTC to University Hill. Given this, these two corridors were selected for further analysis in the SMART 1 study.

What area is being looked at?

The SMART 1 planning study is focusing efforts along two corridors primarily in the City of Syracuse
1) the Regional Transportation Center (RTC) – Syracuse University and
2) Eastwood – Onondaga Community College.

Why is the SMTC leading this project and not Centro?

As the area's Metropolitan Planning Organization charged with carrying out the continuous, comprehensive and cooperative transportation planning process, the SMTC agreed to complete the SMART 1 planning study on behalf of Centro. Centro submitted the SMART 1 study application through the SMTC's annual work program known as the Unified Planning Work Program. There is no cost to Centro to have SMTC complete this study (see previous question: "How is the SMART 1 study being funded?").

How can I become involved in this project?

To ensure that interested persons, organizations, and agencies have an opportunity to be involved in the study, the SMTC, with the assistance of the Study Advisory Committee, have designed an extensive public participation effort. Efforts will include open houses, focus groups, community/neighborhood meetings, surveys, and other events that have yet to be planned. Join our SMART 1 e-mail list (send an e-mail to contactus@smtcmpo.org) and you will receive notices of upcoming meetings and other project-related events. Keep checking our website (www.smtcmpo.org/SMART) for project status updates and notices of upcoming SMART 1 public meetings. All SMTC and SMART 1 meetings are open to the public.



Frequently Asked Questions

Who is on the Study Advisory Committee?

A SMART 1 Study Advisory Committee (SAC) was established and will meet on a regularly scheduled basis. The SAC's role will be to advise the SMTC on the technical content of deliverables and to provide needed input and guidance throughout the study. The SAC is comprised of representatives from the following agencies:

- Central New York Regional Transportation Authority (Centro);
- City of Syracuse - Planning Division;
- Downtown Committee Inc. of Syracuse;
- New York State Department of Environmental Conservation (NYSDEC);
- New York State Department of Transportation (NYSDOT);
- Syracuse – Onondaga County Planning Agency (SOCPA); and
- University Hill Corporation.

What about OnTrack?

OnTrack was a unique rail service that operated in Syracuse from 1994 to 2007, with its final years of operation as a special events service during Syracuse University Carrier Dome events. Similar to the discussion on the interstate express bus service (see How is the SMART 1 study different from the I-81 Viaduct Project?), SMART 1 does not preclude the advancement of a special events rail service between Syracuse University and Destiny USA. However, the concept of commuter rail or special events rail service is not included in SMART 1 as the concept(s) ranked very low in the 2014 STSA.

What is a Locally Preferred Alternative?

A Locally Preferred Alternative is the community members' and local officials' preferred option that emerges from the evaluation of modes and alignments for a particular corridor in the planning process. Once a Locally Preferred Alternative is identified, the area's Long Range Transportation Plan will be updated to include the enhanced transit service.

What is BRT?

BRT is an innovative, high capacity, lower cost public transit solution that can significantly improve urban mobility. This permanent, integrated system uses buses or specialized vehicles on roadways or dedicated lanes to quickly and efficiently transport passengers to their destinations, while offering the flexibility to meet transit demand. BRT systems can easily be customized to community needs and incorporate state-of-the-art, low-cost technologies that result in more passengers and less congestion.

What is LRT?

Light rail transit, often known simply as LRT, began as an evolutionary development of the streetcar to allow higher speeds and increased capacity. Light rail transit is characterized by its versatility of operation, as it can operate separated from other traffic below grade, at-grade, or on an elevated structure, or can operate together with motor vehicles on the surface. Service can be operated with single cars or multiple-car trains. Electric traction power is typically obtained from an overhead wire.



Frequently Asked Questions

Will there be a removal of existing bus stops on the two corridors to accommodate BRT or LRT?

If a BRT or LRT system is constructed, there may be a removal of a few stops that will reduce the amount of time for passengers to travel to their destination. Riders will experience a much shorter wait time at stops. This improved level of service and convenience will be provided in exchange for fewer bus stops. However, stops may also remain for local non-BRT or LRT service.

Will other routes be eliminated/consolidated in exchange for the BRT or LRT?

Presently, all existing bus routes, stop locations and shelters along the two corridors will not change. If an enhanced transit service advances to construction some of the routes, stop locations and frequencies along the corridor will very likely change. These items will be taken under consideration in the SMART 1 planning study.

Will the SMART 1 study result in improvements to the existing Centro service?

Centro is one of the SMTC's member agencies and its Board of Members is responsible for approving any changes in service. The SMART 1 study may recommend improvements to the existing transit service provided by Centro, however, the SMTC as an agency has no role on Centro's Board of Members and, therefore, no direct influence on proposed service changes at Centro.

Will the fares for BRT or LRT ridership be more than the existing bus fares on these routes?

At this time it is unknown if fares would increase with the development of a BRT or LRT system. However, the existing fares in no way will be impacted by this planning study. Capital, operating and maintenance costs will be examined in the SMART 1 planning study.

What other cities have implemented a successful BRT or LRT?

There are several BRT systems operating nationwide, with 4 of these systems operating in mid-size cities like Albany, NY; Cleveland, OH; Hartford, CT; and Eugene, OR.

Similarly, there are also various LRT systems in operation throughout the country, although larger in size, some of which are found in Newark, NJ; Phoenix, AZ; Portland, OR; Charlotte, NC; Salt Lake City, UT; and Los Angeles, CA.



Appendix B: Meeting presentation

SMART 1 – Public Meeting #2

November 10, 2016



Agenda

- **Who is the SMTC?**
- **SMART 1 project overview**
- **Transit mode screening**
- **Criteria and alternative development**
- **Next steps**

Syracuse Metropolitan Transportation Council

An Introduction:

- Who we are & what we do



What is an MPO?

- A Metropolitan Planning Organization, or MPO, is a transportation **policy-making and planning body** made up of representatives of local, state, and federal government and transportation authorities.



What is an MPO?

- A federal requirement for urbanized areas with a population of 50,000 or more (based on most recent Census)
- The MPO is charged with **comprehensive, cooperative, and continuous** transportation planning for a metropolitan area.



Who is the SMTC?

- **Policy Committee members:**

- CenterState Corporation for Economic Opportunity
- CNY Regional Planning & Development Board
- CNY Regional Transportation Authority (Centro)
- City of Syracuse
 - Office of the Mayor
 - Common Council
 - Planning Commission

- **New York State**

- Department of Environmental Conservation
- Department of Transportation
- Empire State Development Corporation
- Thruway Authority

- **Onondaga County**

- Office of the County Executive
- Legislature
- Planning Board

- The Policy Committee (not the staff) is the designated MPO.

Where is the SMTC's planning area?

- All of Onondaga County
- Town of Sullivan in Madison County
- Towns of West Monroe, Hastings, Schroepfel, and small portion of Town of Granby in Oswego County



What does the SMTC do?



- **Comprehensive** transportation planning includes
 - Automobiles and the road network
 - Freight
 - Transit
 - Bicycling
 - Walking

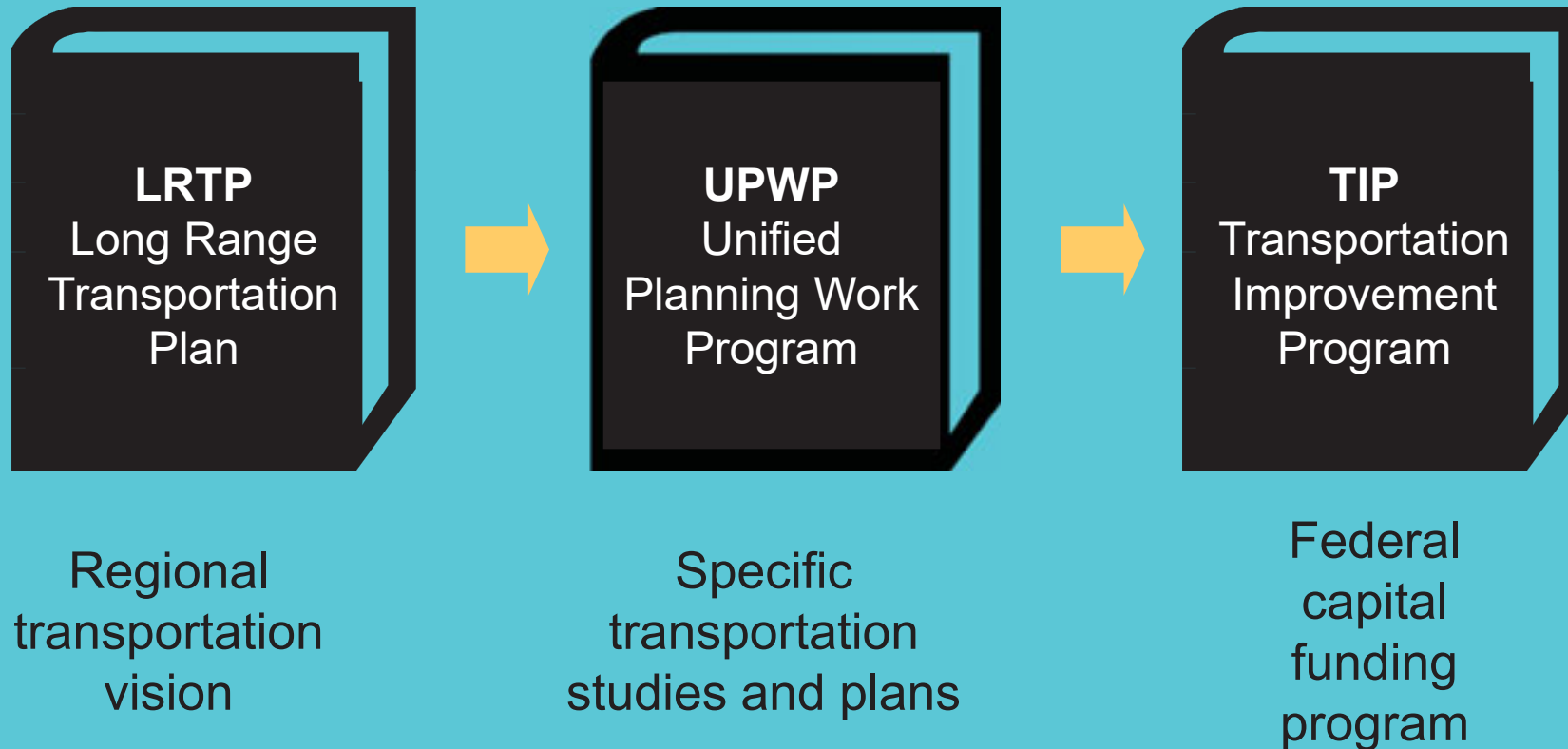
What does the SMTC do?



- **Cooperative** transportation planning includes
 - Coordinating between federal, state, and local agencies to develop transportation plans and programs;
 - Provide an opportunity for citizens to participate in the planning process.

What does the SMTC do?

- **Continuous** transportation planning



Why an MPO process?

The MPO provides a forum to:

- Collaborate between governments, interested parties, and the public
- Forecast the region's future
- Plan to reflect the region's vision
- Prioritize transportation needs
- Balance needs and funding availability
- Invest funds appropriately
- Express community opinion through member agencies and elected officials

Examples of SMTC planning studies

- Erie Canalway Trail Study
- *The I-81 Challenge* Public Participation
- City of Syracuse Wayfinding Study
- Bicycle Commuter Corridor Study
- Butternut Street Corridor Study
- This study



SMART 1 project overview

SMART 1 Study Advisory Committee

SMART 1 Study Advisory Committee:

- Centro
- City of Syracuse – Planning Division
- Downtown Committee of Syracuse
- NYS Department of Environmental Conservation (NYSDEC)
- NYS Department of Transportation (NYSDOT)
- Syracuse-Onondaga County Planning Agency (SOCPA)
- University Hill Corporation



Public engagement

Community input is essential to the success of this study!

Community engagement has included:

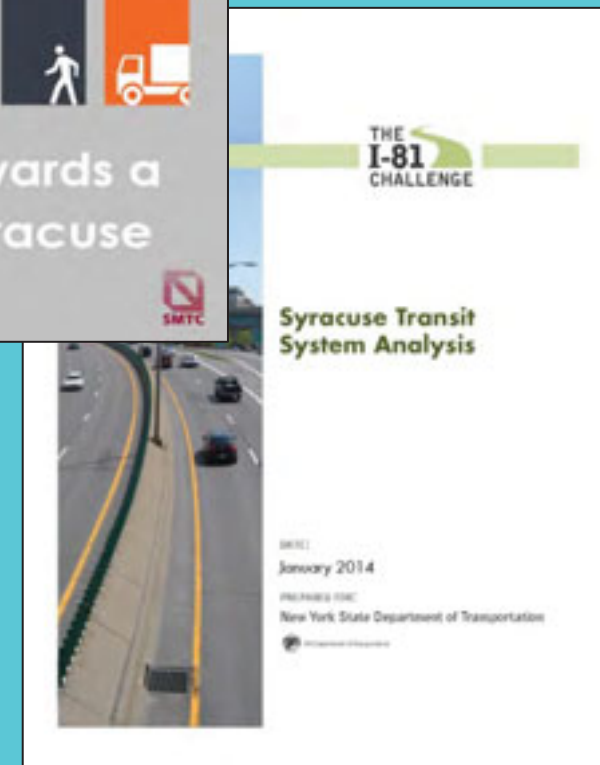
- 9 pop-up meetings at targeted stop locations along the study corridors
- 3 focus group meetings on various topics
- Public meeting on February 24, 2016
- Project website, mail/e-mail, and Facebook page
- SMTC staff have attended up to 3 community or neighborhood group meetings by invitation



Why conduct the SMART 1 study?

Enhanced transit is a community priority:

- **Community request** for expanded transit options.
- **SMTC's 2050 Long Range Transportation Plan** includes an “enhanced transit system” as a regionally significant priority project.
- **Syracuse Transit System Analysis (STSA)**, recommended higher-intensity transit services along the two corridors under study.



STSA Transit Enhancement Corridors



Six corridors were identified as likely to support increased transit ridership. Criteria considered:

- Existing transit ridership and mode share
- Population and employment density
- Households with access to one or no vehicles
- Potential for commuter trips
- Commute times
- Household income
- Existing plans

STSA Transit Modes Evaluated

Transit Modes

The STSA evaluated 3 transit modes for each corridor.



Existing service improvements




Bus Rapid Transit (BRT)



Light Rail Transit (LRT)

STSA Recommendations



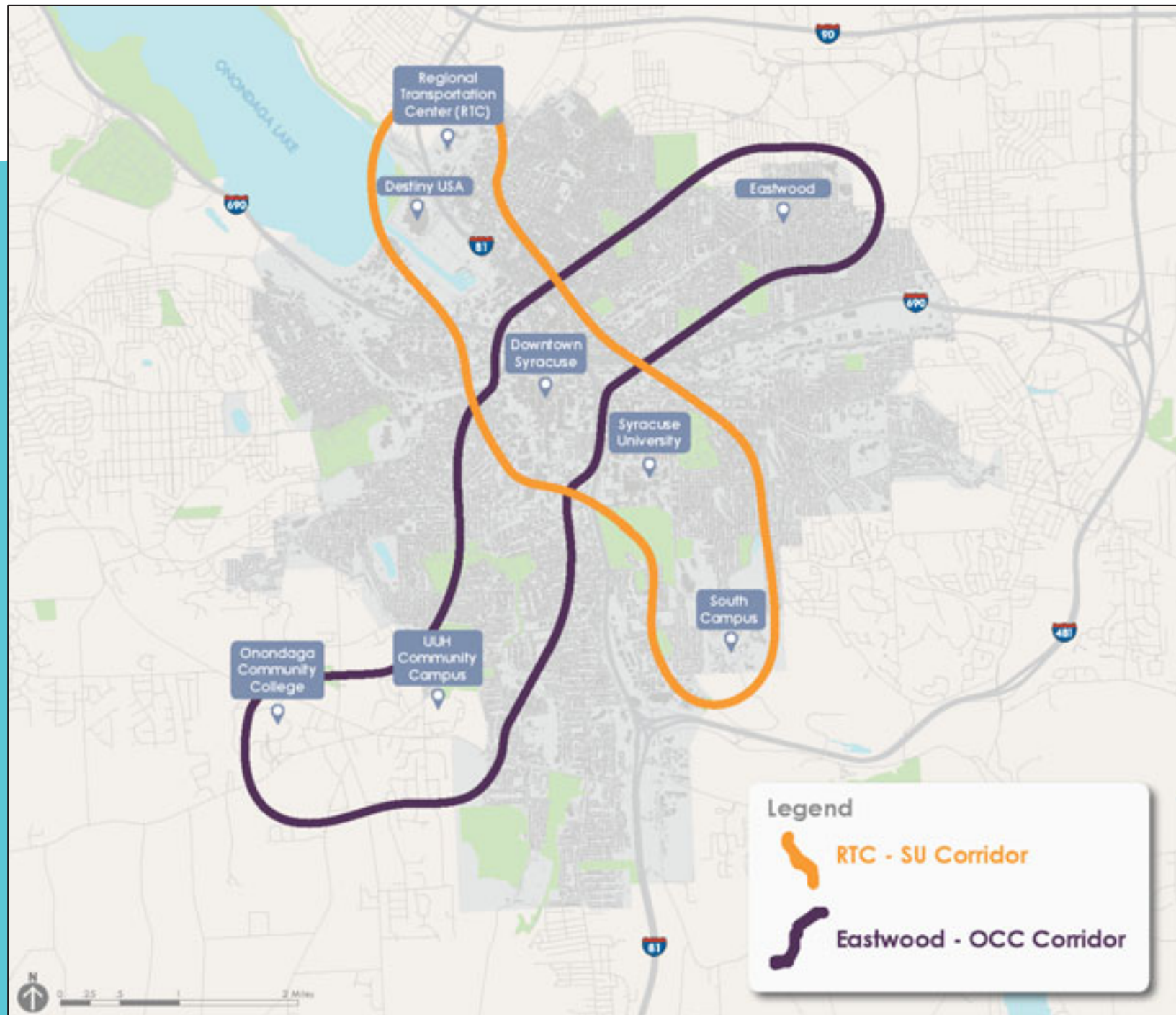
Pursue higher-intensity transit services along the Destiny USA/RTC to Syracuse University and James Street/South Avenue Corridors.

- Begin a **commuter-based service** along **I-81** from Central Square to Downtown/University Hill.
- Provide **lower-intensity service enhancements** in remaining corridors.
- Construct a **new transit hub on University Hill** with supporting infrastructure.



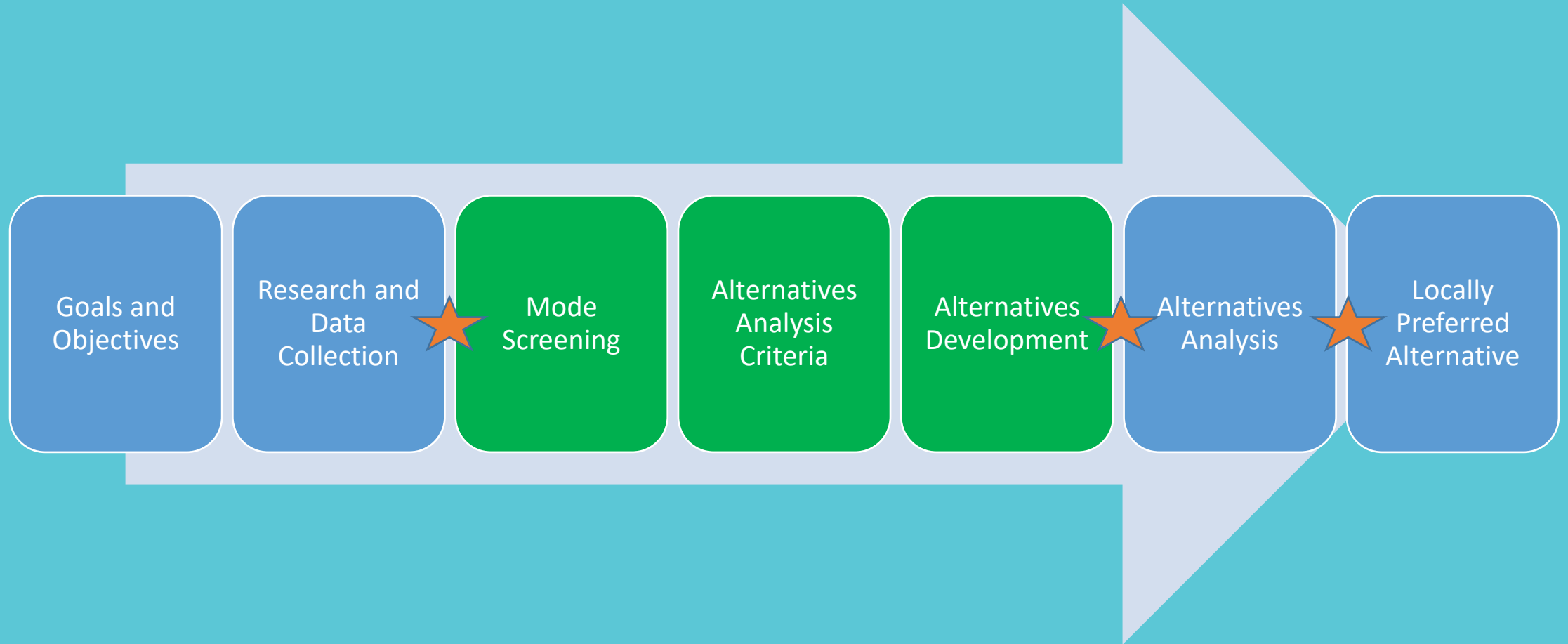
SMART 1 Corridors

- Eastwood to Onondaga Community College
- Regional Transportation Center to Syracuse University



SMART 1 Project Status

Project Process



Local Characteristics

Characteristics that influence increase in ridership:

- Existing transit usage
- Population density
- Land uses
- Households in poverty
- Zero-vehicle households
- Population under 25 years old
- Population over 65 years old



Existing Transit Use

Centro operates:

- RTC – SU corridor - 42 bus routes
- Eastwood – OCC corridor - 41 bus routes
- Top four bus routes in the system:
 - James Street – 2,241
 - South Salina/Nedrow – 1,680
 - Drumlins/Nob Hill – 1,472
 - South Avenue/Valley Drive – 1,470(Average weekday ridership (2015)):



Goals & Objectives

Consensus Building Goals

- Encourage diverse mix of community members

Transportation Goals

- Improve the utility of transit service for core riders

Development Goals

- Support revitalization of Downtown and neighborhoods by improving connectivity along the selected corridors



Community Engagement

Public meeting

February 24, 2016

Focus Groups

May 23rd and May 24th, 2016

Pop Up Meetings

April 28th, April 29th, May 2nd and May 3rd, 2016

What we learned:

- Increased frequency and timeliness is desired
- Overall community support of transit enhancements
- Navigability, convenience, safety and fares are key considerations



Mode Screening

Transit Modes Considered

Five transit modes were evaluated as a first step toward selecting an LPA:

- Light Rail Transit (LRT)
- Modern Streetcars
- Bus Rapid Transit (BRT) – Busway
- BRT – Bus Lane
- BRT – Mixed Traffic



Light Rail Transit (LRT) & Modern Streetcars

Streetcars and Light Rail Transit

- require their own rail infrastructure and
- have high initial costs, but
- can be a worthwhile investment where densities and ridership levels warrant it



LRT
Ctrain, Calgary, Alberta



Streetcar
Portland Streetcar, Portland, Oregon

Bus Rapid Transit (BRT)

Bus Rapid Transit

- Moderate investment that can enhance the Eastwood – OCC and RTC – SU corridors.



Mixed Lane
BusPlus, Albany, NY



Bus-only lanes
Select Bus Service, The Bronx, NY



Busway
Ctfastrak, Hartford, Connecticut

Criteria for Mode Screening

Criteria for eligibility to enter the Federal Transit Authority (FTA) Small Starts program using the simplified “warrants” approach:

- **Dedicated right-of-way:** Does adequate **ROW** exist to construct the project?
- **Total project capital cost:** Less than **\$300,000,000**
- **Maximum practical local funding:** Reflects the feasibility of providing the required local cost share.
- **Existing riders on corridor:** At least **3,000**
- **Limited operating cost increases:** Less than **5%** of current operating costs

Mode Screening RTC – SU corridor

		LRT 	Modern Streetcar 	BRT-Busway 	BRT-Bus Lane 	BRT-Mixed Traffic 
Dedicated ROW North Segment		✓ Available	⊘ N/R	✓ Available	⊘ N/R	⊘ N/R
Dedicated ROW South Segment		✗ Not Available	⊘ N/R	✗ Not Available	⊘ N/R	⊘ N/R
Total Cost (in millions)		✗ \$457	✗ \$426	✓ \$190	✓ \$25	✓ \$10
Local funding (in millions)		✗ \$357	✗ \$326	✗ \$90	✓ \$5	✓ \$2
Existing Ridership		✓ 3,726	✓ 3,726	✓ 3,726	✓ 3,726	✓ 3,726
Operating Cost Increase		✗ 26%	✗ 22%	✗ 18%	✗ 6%	✓ 5%
Further Study?		✗ No	✗ No	✗ No	✓ Yes	✓ Yes

N/R (not required)

Mode Screening Eastwood – OCC corridor

N/R (not required)

		LRT 	Modern Streetcar 	BRT-Busway 	BRT-Bus Lane 	BRT-Mixed Traffic 
Dedicated ROW North Segment		✓ Available	⊘ N/R	✓ Available	⊘ N/R	⊘ N/R
Dedicated ROW South Segment		✗ Not Available	⊘ N/R	✗ Not Available	⊘ N/R	⊘ N/R
Total Cost (in millions)		✗ \$526	✗ \$491	✓ \$219	✓ \$27	✓ \$11
Local funding (in millions)		✗ \$426	✗ \$391	✗ \$119	✓ \$5	✓ \$2
Existing Ridership		✓ 3,456	✓ 3,456	✓ 3,456	✓ 3,456	✓ 3,456
Operating Cost Increase		✗ 30%	✗ 25%	✗ 20%	✗ 7%	✗ 6%
Further Study?		✗ No	✗ No	✗ No	✓ Yes	✓ Yes

Criteria and Alternatives Development

Alternative Analysis Criteria

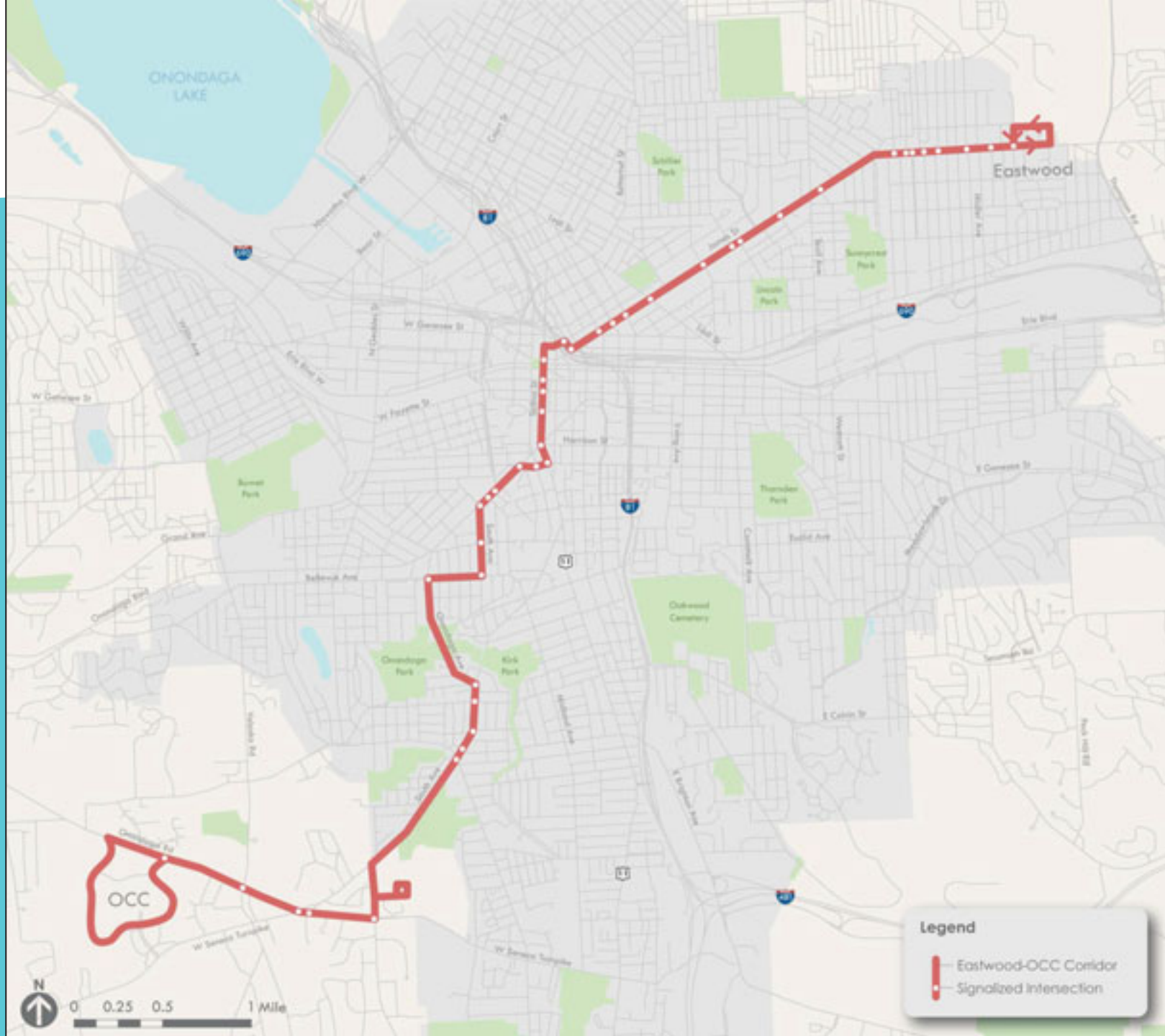
- Existing ridership along proposed route
- Estimated new riders
- Travel time improvement
- Change in vehicle miles traveled (change in auto usage)
- Capital cost
- Operating cost
- Support for transit oriented plans and policies
- Serves existing commercial nodes and activity centers
- Population and employment density
- Serves affordable housing
- Ability of region to fund capital and operating costs
- Roadway suitability
- Stakeholder and public comments

Transit Mode Considered + Route = Alternative

	LRT 	Modern Streetcar 	BRT-Busway 	BRT-Bus Lane 	BRT- Mixed Traffic 
Further Study? ?	 No	 No	 No	 Yes	 Yes

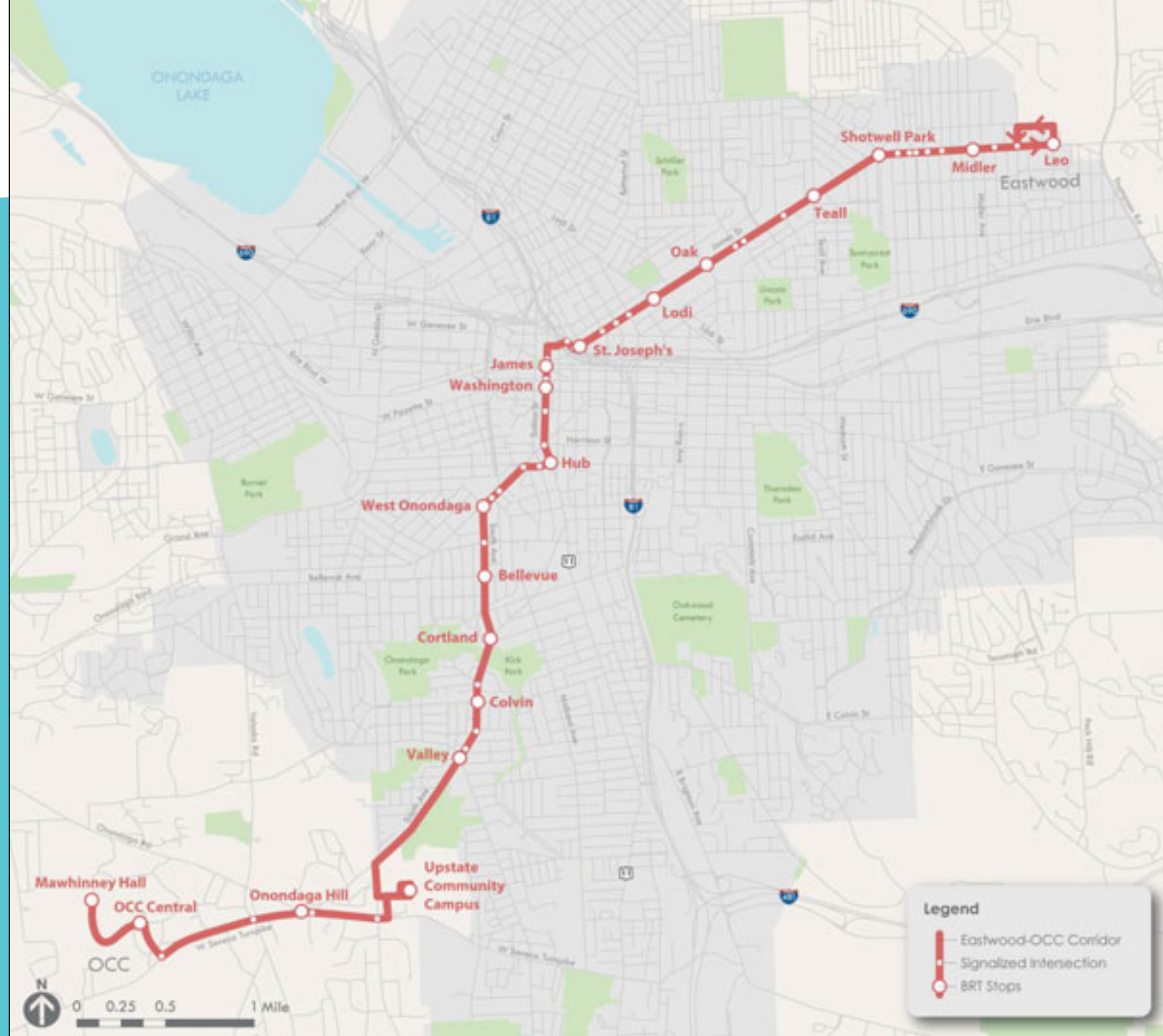
Eastwood – OCC Alt 1: Existing Service Improvements

- **Lower cost option – easier to fund, faster to implement**
- **New shelters**
- **Transit priority at key locations**
- **More frequent service, every 20 minutes**
- **Some improvements in travel time**



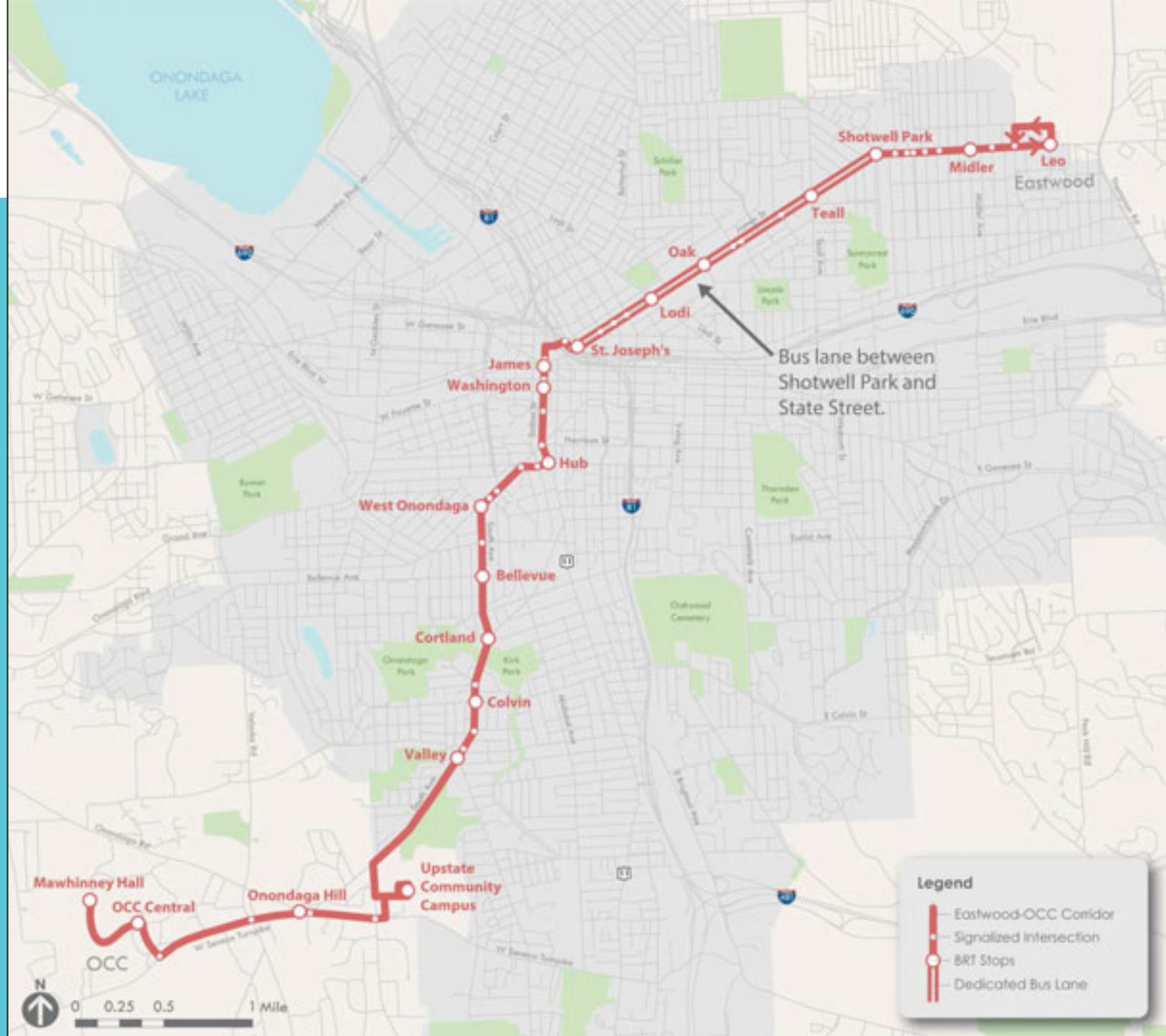
Eastwood – OCC Alt 2: BRT in Mixed Traffic

- Medium cost option – requires FTA funding
- New shelters at all BRT stations
- Transit priority at key locations
- New branded buses
- More frequent service, every 10 to 15 minutes
- Cost effective improvements in travel time



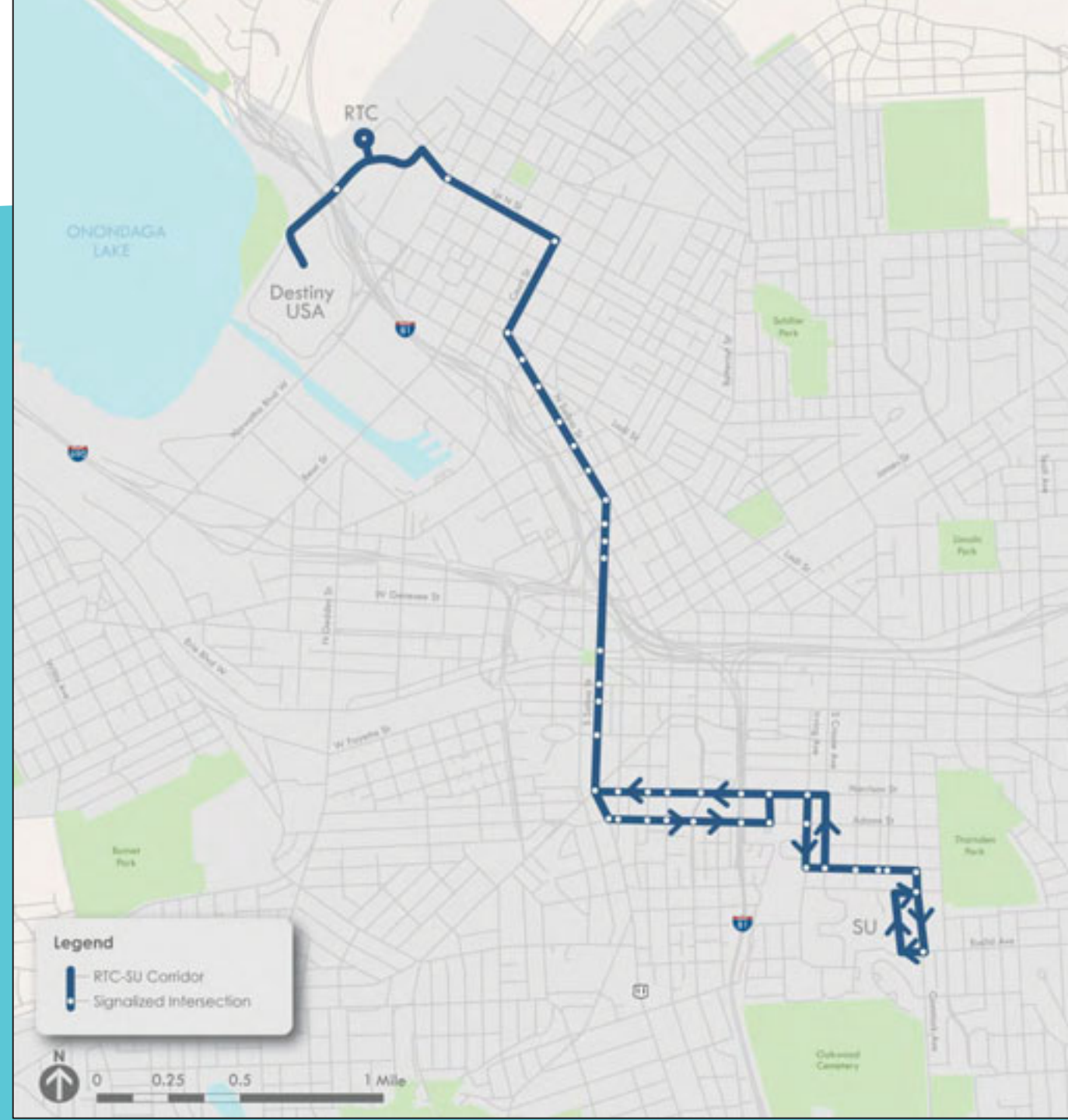
Eastwood – OCC Alt 3: BRT on Bus Lanes

- Higher cost option – requires FTA funding
- Where ROW is available, from Shotwell Park to State Street on James Street, new bus only lanes would be provided
- New shelters at all BRT stations
- New branded buses
- Other transit priority at key locations
- More frequent service, every 10 to 15 minutes
- Highest improvements in travel time



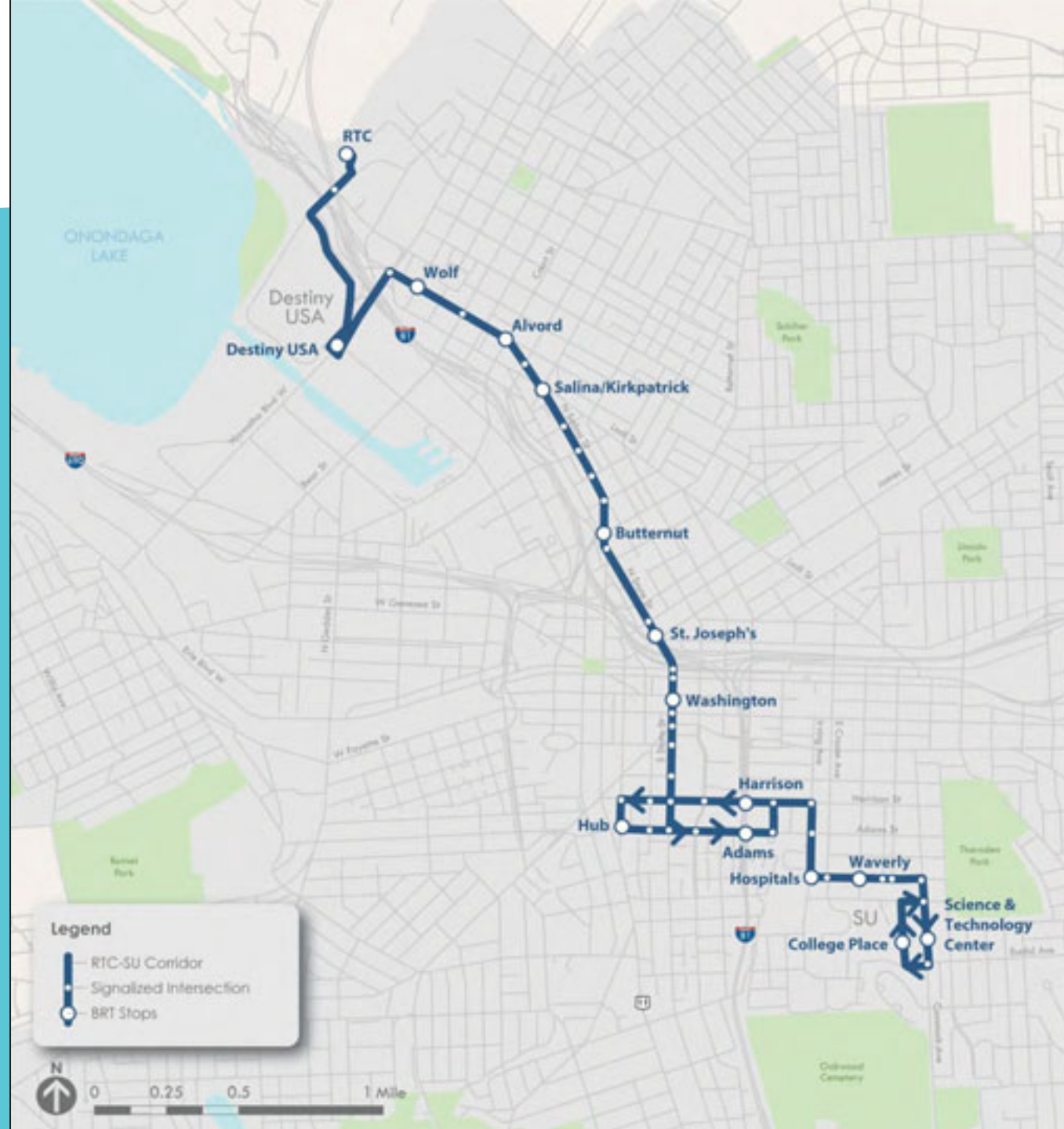
RTC – SU Alt 1: Existing Service Improvements

- Lower cost option – easier to fund, faster to implement
- New shelters
- Transit priority at key locations
- More frequent service, every 20 minutes
- Some improvements in travel time



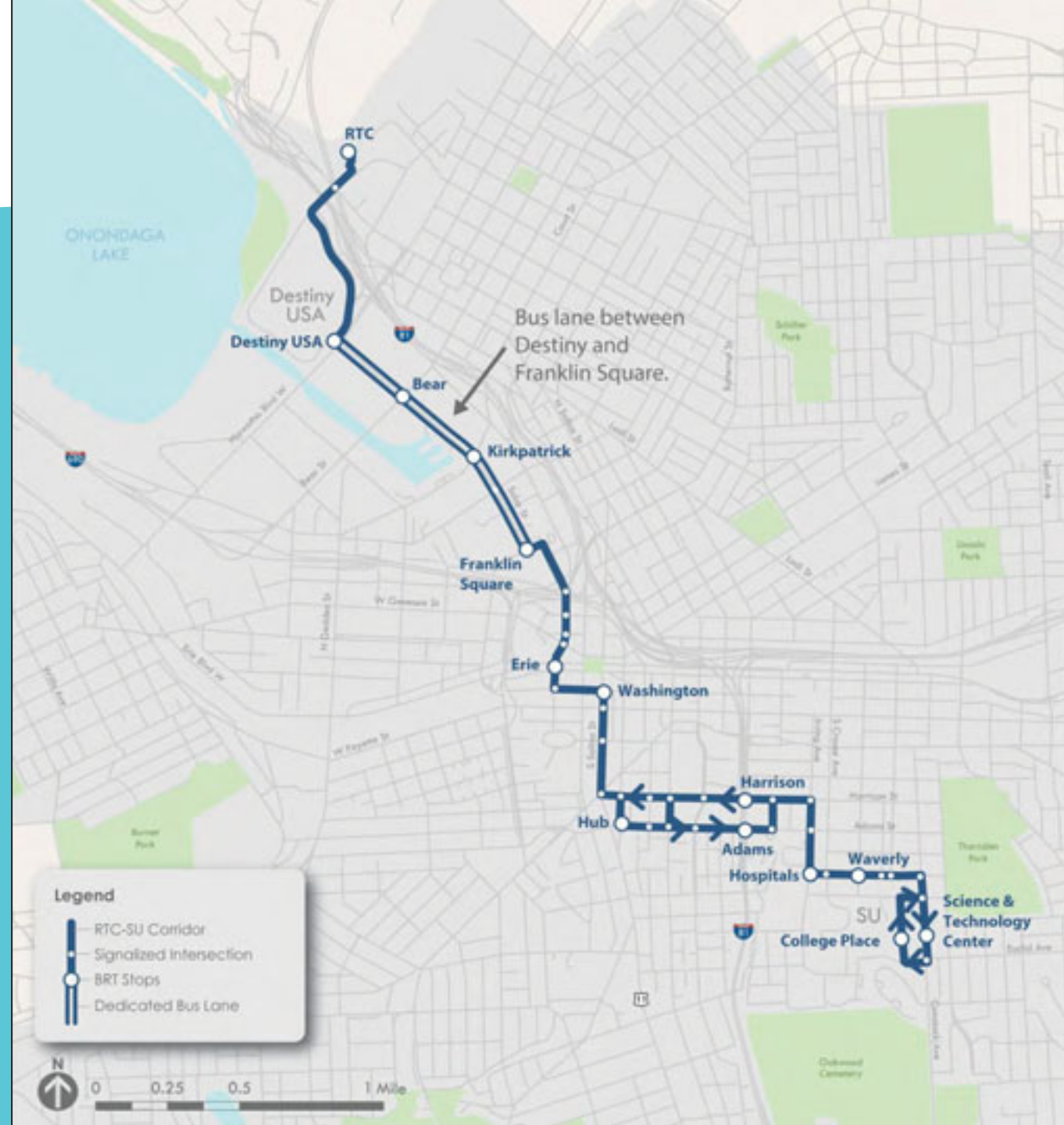
RTC – SU Alt 2: BRT in Mixed Traffic

- Medium cost option – requires FTA funding
- New shelters at all BRT stations
- Transit priority at key locations
- New branded buses
- More frequent service, every 10 to 15 minutes
- Cost effective improvements in travel time



RTC – SU Alt 3: BRT on Bus Lanes

- Higher cost option – requires FTA funding
- Where ROW is available, from Destiny USA to Franklin Square on Solar Street, new bus only lanes would be provided
- New shelters at all BRT stations
- New branded buses
- Other transit priority at key locations
- More frequent service, every 10 to 15 minutes
- Highest improvements in travel time



What's Next?

- Continued analysis of:
 - Route and schedule alternatives
 - Ridership
 - Capital and operating costs
 - Social and environmental impacts
- Selection of Locally Preferred Alternative for each corridor (LPA)
- Further development of LPA's
- Final public meeting next year



Questions?

For more information, please contact us at:

Phone: 315-422-5716

Email: contactus@smtcmpo.org (questions or sign-up to stakeholder list)

**Visit us downstairs for additional information
and to ask questions!**

SMART 1 – Public Meeting #2



Appendix C: Participant comments and ZIP code map

Public Comment Form

SMART1 Public Meeting #2
November 10, 2016

Please share your thoughts about the SMART 1 study.

(1) A BRT system is critical to encourage greater use of Transit; car-pooling & alternate will growth limited by providing for cars

(2) I would give priority to BRT - 54 (University Blvd) would

(3) If could not do entire 2 routes - from to DTA would be good

(4) I like the dedicated bus lane on Jones Street, but East Bus on N. Salina, not Salina would serve more people

(5) Time card is important

(6) good job to date

Name (OPTIONAL):

Organization (OPTIONAL):

Would you like to receive future updates about this study?

☒ Yes, please add me to the e-mail list! E-mail address:

☐ Yes, please add me to the postal mail list!

Address:

City:

State:

Zip:

Please return this form to the comment box or to a project team member at the meeting, or return by November 30 to:

Syracuse Metropolitan Transportation Council
Attn: Mario Colone
126 North Salina Street, Suite 100
Syracuse, NY 13202

or

E-mail: contactus@smtcmpo.org

www.smtcmpo.org/SMART

Public Comment Form

SMART1 Public Meeting #2
November 10, 2016

Please share your thoughts about the SMART 1 study.

Great Job

Name (OPTIONAL):

Organization (OPTIONAL):

Would you like to receive future updates about this study?

☐ Yes, please add me to the e-mail list! E-mail address:

☒ Yes, please add me to the postal mail list!

Address:

City:

Syracuse

State:

NY

Zip:

13206

Please return this form to the comment box or to a project team member at the meeting, or return by November 30 to:

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www.smtcmpo.org/SMART

Public Comment Form

SMART1 Public Meeting #2
November 10, 2016

Please share your thoughts about the SMART 1 study.

But such as CDTA BusPlus in Albany would be more practical than trains which we haven't had in generations apart from OnTrack. Service to Oneida, Ithaca and Cortland not covered by others would be nice. When will the next meeting be in the new year?

Name (OPTIONAL): _____

Organization (OPTIONAL): _____

Would you like to receive future updates about this study?

☐ Yes, please add me to the e-mail list! E-mail address: _____

☐ Yes, please add me to the postal mail list!

Address: _____

City: _____ State: _____ Zip: _____

Please return this form to the comment box or to a project team member at the meeting, or return by November 30 to:

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E-mail: contactus@smtcmpo.org

www.smtcmpo.org/SMART

Public Comment Form

SMART1 Public Meeting #2
November 10, 2016

Please share your thoughts about the SMART 1 study.

I'm very positive about the proposed routes & mode alternatives. I don't have strong feelings about any particular ones.

I would ask that you remember to include racks for bicycles, as ~~there~~ it would expand the usability of these routes for people who ride bikes, either to get to the bus, reach a final destination, or both. (First &/or last mile!)

Also, walkability to and from bus stops is vital.

Thanks!

Name (OPTIONAL):

Organization (OPTIONAL):

BikeCNY

Would you like to receive future updates about this study? I'm already on your list!

☐ Yes, please add me to the e-mail list! E-mail address: _____

☐ Yes, please add me to the postal mail list!

Address: _____

City: _____

State: _____

Zip: 13210

Please return this form to the comment box or to a project team member at the meeting, or return by November 30 to:

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or

E-mail: contactus@smtcmpo.org

www.smtcmpo.org/SMART

Public Comment Form

SMART 1 Public Meeting #2
November 10, 2016

Please share your thoughts about the SMART 1 study.

In regards to the NW-SE corridor, I think it is extremely important to keep in mind the current riders of Centre. Choosing the Bus Lane Alternative, and moving the route to the west of 81 would serve a completely different demographic. I believe that alternative would result in too much development and increased ridership on Centre from demographics that don't normally use the service. I understand the need to increase ridership but it is important those who NEED Centre are the ones who benefit most from this project, especially when it is in this proof of concept stage.

Name (OPTIONAL): _____

Organization (OPTIONAL): _____

Would you like to receive future updates about this study?

☐ Yes, please add me to the e-mail list! E-mail address: _____

☐ Yes, please add me to the postal mail list!

Address: _____

City: _____ State: _____ Zip: _____

Please return this form to the comment box or to a project team member at the meeting, or return by November 30 to:

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E-mail: contactus@smtcmpo.org

www.smtcmpo.org/SMART

Public Comment Form

SMART1 Public Meeting #2
November 10, 2016

Please share your thoughts about the SMART 1 study.

The study was exallant.
Though I understand the SMTc's limitation, but
I strongly believe that the two options available
will not bring new comuters to the system.
It will lessen time of travel, mobility, and
accessibility, but it will not increase numbers
of riders.

Therefore I think a streetcar option is
workable to Syracuse Metropettain, but you
may look for investor or make as a share
holding Company with (stocks) Any way
that make the project a live.

Name (OPTIONAL):

Organization (OPTIONAL):

ESE

Would you like to receive future updates about this study?

☒ Yes, please add me to the e-mail list! E-mail address:

☐ Yes, please add me to the postal mail list!

Address:

City:

State:

Zip:

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Attn: Mario Colone
126 North Salina Street, Suite 100
Syracuse, NY 13202

or

E-mail: contactus@smtcmpo.org

www.smtcmpo.org/SMART

Public Comment Form

SMART1 Public Meeting #2
November 10, 2016

Please share your thoughts about the SMART 1 study.

My question was how will I-81 interact with this study?
Also, how much interaction between the two studies will
take place in the near future. Since this study will
be effected good or bad by I-81 future and this
seuld be added to the environment study of I-81.

Name (OPTIONAL):

Organization (OPTIONAL):

Would you like to receive future updates about this study?

☐ Yes, please add me to the e-mail list! E-mail address: _____

☐ Yes, please add me to the postal mail list!

Address: _____

City: _____

State: _____

Zip: _____

Please return this form to the comment box or to a project team member at the meeting, or return by November 30 to:

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Syracuse, NY 13202

or

E-mail: contactus@smtcmpo.org

www.smtcmpo.org/SMART

Public Comment Form

SMART1 Public Meeting #2
November 10, 2016

Please share your thoughts about the SMART 1 study.

consider BRT on SR 214.

Name (OPTIONAL):

Organization (OPTIONAL):

Would you like to receive future updates about this study?

☒ Yes, please add me to the e-mail list! E-mail address:

☐ Yes, please add me to the postal mail list!

Address:

City:

State:

Zip:

Please return this form to the comment box or to a project team member at the meeting, or return by November 30 to:

Syracuse Metropolitan Transportation Council

Attn: Mario Colone

126 North Salina Street, Suite 100

Syracuse, NY 13202

or

E-mail: contactus@smtcmpo.org

www.smtcmpo.org/SMART

Public Comment Form

SMART1 Public Meeting #2
November 10, 2016

Please share your thoughts about the SMART 1 study.

THE N SALINA CORRIDOR WOULD SEEM TO BE
APPROPRIATE FOR THE ALT 2 AND ALT 3 OPTIONS
AND IT'S NOT CLEAR WHY THE ALT 3 WOULD
BE SHIFTED TO SOLAR, PARTICULARLY GIVEN THE
PRIMARY GOAL OF IMPROVING SERVICE FOR
EXISTING RIDERS, AND ^{GIVEN THE CURRENTLY STRUGGLING} A HISTORIC MAIN ST
CORRIDOR THAT WOULD BENEFIT FROM GRANTING
TRANSIT ALLEX AND ^{ADDITIONAL} POTENTIAL INVESTMENTS.

Name (OPTIONAL):

Organization (OPTIONAL):

Would you like to receive future updates about this study?

☒ Yes, please add me to the e-mail list! E-mail address:

☐ Yes, please add me to the postal mail list!

Address:

City:

State:

Zip:

Please return this form to the comment box or to a project team member at the meeting, or return by November 30 to:

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or

E-mail: contactus@smtcmpo.org

www.smtcmpo.org/SMART

Public Comment Form

SMART1 Public Meeting #2
November 10, 2016

Please share your thoughts about the SMART 1 study.

PLEASE DO FOCUS GROUPS W/ SU STUDENTS SPECIFICALLY.
THEY ARE YOUR PRIMARY SU ROUTE RIDER, AND
THEIR OPINION CENLY MATTERS

Name (OPTIONAL):

Organization (OPTIONAL):

SYRACUSE UNIVERSITY

Would you like to receive future updates about this study?

☒ Yes, please add me to the e-mail list! E-mail address:

☐ Yes, please add me to the postal mail list!

Address:

City:

State:

Zip:

Please return this form to the comment box or to a project team member at the meeting, or return by November 30 to:

Syracuse Metropolitan Transportation Council

Attn: Mario Colone

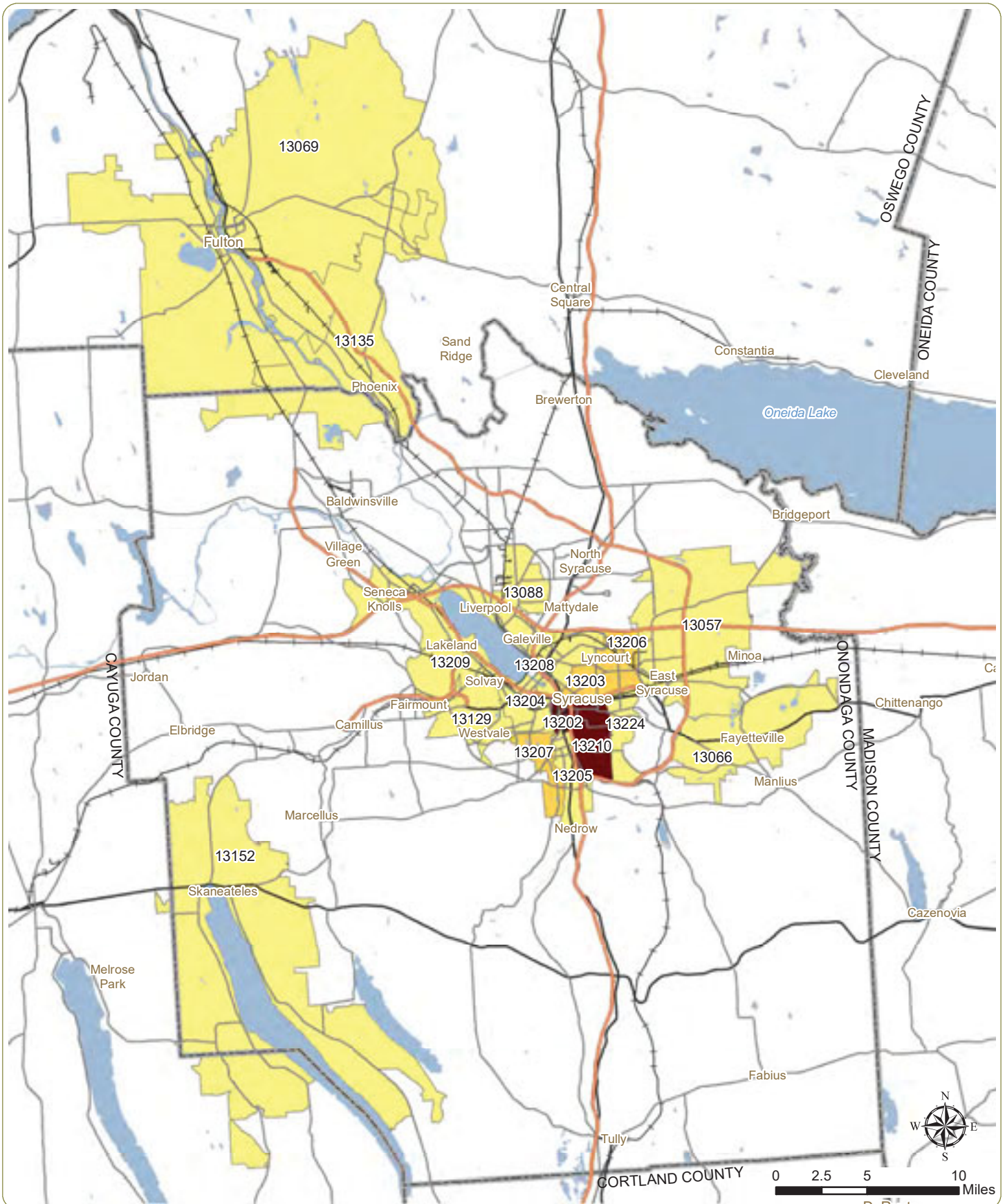
126 North Salina Street, Suite 100

Syracuse, NY 13202

or

E-mail: contactus@smtcmpo.org

www.smtcmpo.org/SMART



Syracuse Metropolitan Area Regional Transit Study - Phase 1 (SMART 1)

Public Meeting #2 - Geographic distribution of attendees

December 2016

Notes: 1. Basemap: ESRI SDC feature dataset, TIGER County and Town Boundaries
2. This is a color graphic. Reproduction in grayscale may misrepresent the data.

- Major Highways
 - Highways
 - Major Roads
 - Railroads
 - ▬ County Boundary
 - Water Bodies
- Counts of Attendees by ZIP Codes**
- 1 - 2 individuals
 - 3 - 4 individuals
 - 5 - 7 individuals
 - 8 - 9 individuals
 - 10 - 15 individuals



www.edrdpc.com

Appendix D: Publicity materials

Save the Date

SMART1 Public Meeting

Thursday, November 10th

Additional details to follow



syracuse metropolitan area regional transit study
phase 1



Syracuse Metropolitan Transportation Council

100 Clinton Square
126 N. Salina Street, Suite 100
Syracuse, New York 13202
Phone (315) 422-5716
Fax (315) 422-7753
www.smtcmpo.org

NEWS RELEASE

For Immediate Release – October 31, 2016

Contact: Patricia A. Wortley

Tel: (315) 422-5716; E-mail: pwortley@smtcmpo.org

SMTC to hold public meeting for the Syracuse Metropolitan Area Regional Transit Study

Syracuse, N.Y. — A public meeting for the Syracuse Metropolitan Area Regional Transit Study Phase 1 (SMART 1) Project will be held on Thursday, November 10, 2016, from 4:00 – 7:30 p.m., at the SKY Armory, 351 South Clinton Street, Syracuse.

The Syracuse Metropolitan Transportation Council (SMTC) invites you to the second open house meeting for the SMART 1 project. Come to this meeting to learn about the possibility of Bus Rapid Transit or Light Rail Transit along the Regional Transportation Center to Syracuse University and Eastwood to Onondaga Community College corridors.

A presentation will be given at 5:00 p.m., and will be repeated at 6:30 p.m., that provides background information and current work efforts. The project team will be available throughout the night at interactive stations to provide information on project background, suggested transit modes, and route alternatives.

For additional information about the project or the public meeting, or to ensure accommodation for special needs, please contact the SMTC at (315) 422-5716.

What is the SMTC?

The Syracuse Metropolitan Transportation Council was formed in 1966 as a result of the Federal Aid Highway Act of 1962 and Urban Mass Transportation Act of 1964. Serving as the metropolitan planning organization (MPO) for the Syracuse Metropolitan area, the SMTC provides the forum for cooperative decision making in developing transportation plans and programs for Onondaga County and small portions of Madison and Oswego Counties. The SMTC is comprised of elected and appointed officials, representing local, state and federal governments or agencies having interest in or responsibility for transportation planning and programming.

Log on to the SMTC web site for the latest in transportation
planning in the Syracuse Metropolitan Area:

www.smtcmpo.org

Join us for the 2nd OPEN HOUSE on the:



Syracuse Metropolitan Area Regional Transit Study Phase 1

Thursday, November 10, 2016

Drop in any time from 4:00 to 7:30 p.m.

(Presentations at 5:00 p.m. and 6:30 p.m.)

The Syracuse Metropolitan Transportation Council (SMTC) invites you to attend the second open house for the Syracuse Metropolitan Area Regional Transit Study Phase 1 (SMART 1). Drop in any time to learn more about the possibility of **Bus Rapid Transit** or **Light Rail Transit** between the Regional Transportation Center to Syracuse University, and Eastwood to Onondaga Community College corridors.

A presentation will take place at 5:00 p.m. and again at 6:30 p.m., that provides background information and current work efforts. Interactive stations, staffed by the project team, will be available for the public to “walk through” and learn more about the project background, suggested modes and route alternatives.

Can't make the meeting in person?

Meeting materials will be available online beginning November 10 at www.smtcmpo.org/SMART

Meeting Location

SKY Armory

351 South Clinton Street
Syracuse, NY

****Main entrance is on Clinton St.
(between Modern Malt and the
Clinton St. Garage).****

Meeting location is 0.4 miles from
the Centro Transit Hub.

Parking

On-street & area parking garages
available. Parking will not be
validated.

Accommodations

All attendees will receive two
complimentary single-use Centro
bus passes at the meeting.

The meeting facility is ADA
accessible. American Sign
Language (ASL) and Spanish
interpreters will be available at
the meeting.

Additional info

For more information about the
study contact Mario Colone,
SMTC Program Manager, at
315-422-5716 or
mcolone@smtcmpo.org.



Follow us on Facebook at
Syracuse Metropolitan Transportation Council



www.smtcmpo.org



contactus@smtcmpo.org



315-422-5716



126 N. Salina Street
Suite 100
Syracuse, NY 13202

Únase con nosotros para una reunión en la



Syracuse Área Metropolitana de Tránsito Regional Estudio de Fase 1

Jueves, 10 de Noviembre 2016

Ven cuando quiera entre las horas de 4:00 to 7:30 p.m.

(Presentaciones a las 5:00 p.m. y las 6:30 p.m.)

El Consejo de Transporte Metropolitano de Syracuse (SMTC) le invita a asistir a la segunda reunión de puertas abiertas para el Área Metropolitana de Tránsito Regional de Syracuse estudio de Fase 1 (SMART 1). Vengan en cualquier momento para aprender acerca de la posibilidad de **Autobuses de tránsito rápido** o **Tren ligero a lo largo** del Centro Regional de Transporte de la Universidad de Syracuse y Eastwood a los corredores de Onondaga Community College.

Una presentación tendrá lugar a las 5:00 p.m. y de nuevo a las 6:30 p.m. que proporciona información de antecedentes y esfuerzos de trabajo actuales. estaciones interactivas, atendidos por el equipo del proyecto, estarán disponibles para el público a "caminar a través" y aprender más sobre los antecedentes del proyecto, se sugiere modos y rutas alternativas.

No se puede hacer la reunión en persona?

Materiales de la reunion estaran disponible en linea a partir del 10 de Noviembre www.smtcmpo.org/SMART

Lugar de la reunión

SKY Armería

351 South Clinton Street
Syracuse, NY

** La entrada principal está en Clinton St. (entre Modern Malt y el garaje de Clinton St). **

El local de juntas es de 0.4 millas de la transferencia Hub Centro.

Estacionamiento

En la calle y garajes de aparcamiento área disponible. El aparcamiento no será validado.

Alojamiento

Todos los asistentes recibirán dos de un solo uso de autobuses Centro pases de cortesía en la reunión.

La sala de reuniones es accesible de la ADA. Lenguaje de señas americano (ASL) e intérpretes en español estarán disponibles en la reunión.

Información adicional

Para obtener más información sobre el estudio, contacto

Mario Colone,
SMTC Administrador de programas
315-422-5716 or
mcolone@smtcmpo.org.



Siga con nosotros Facebook at
Syracuse Metropolitan Transportation Council



www.smtcmpo.org



contactus@smtcmpo.org



315-422-5716



126 N. Salina Street
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Syracuse, NY 13202

Join us for the 2nd OPEN HOUSE on the:

Syracuse Metropolitan Area Regional Transit Study Phase 1



Thursday, November 10, 2016

Drop in any time from 4:00 to 7:30 p.m.

(Presentation at 5:00 p.m. and repeated at 6:30 p.m.)

Location:

SKY Armory

351 South Clinton Street, Syracuse, NY

Come learn about the possibility of **Bus Rapid Transit** or **Light Rail Transit** along the Regional Transportation Center to Syracuse University, and Eastwood to Onondaga Community College corridors.

Interactive stations covering project background, suggested modes, and route alternatives will be available. Project team members will be available for questions.

Can't make the meeting in person?

Meeting materials will be available online beginning November 10 at www.smtcmpo.org/SMART

Facility

Main entrance is on Clinton St. (between Modern Malt and the Clinton St. Garage).

Meeting facility is ADA accessible.

Meeting location is 0.4 miles from the Centro Transit Hub.

Parking

On-street & area parking garages available. Parking will not be validated.

Accommodations

All attendees will receive two complimentary single-use Centro bus passes at the meeting.

American Sign Language (ASL) and Spanish interpreters will be available at the meeting.

For additional information, call the SMTC at
315-422-5716

Appendix E: Meeting evaluations

Meeting Evaluation Form

SMART1 Public Meeting #2
November 10, 2016

Please take a few minutes to provide your thoughts about this meeting experience. Your feedback will help us plan future meetings.

1. I learned something useful about the SMART 1 study today.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

2. I am likely to attend a future meeting regarding the SMART 1 study.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

3. As compared to other meetings I have attended, this event was:

MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

IT'S MY FIRST MEETING
MORE LOOP SYSTEMS
EX. SOLVAY TO CAMILLUS

4. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

5. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

6. Where did you hear about this meeting? (check all that apply)

- | | |
|--|--|
| <input type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
| <input checked="" type="radio"/> Email from SMTC | <input type="radio"/> Radio |
| <input type="radio"/> Other community group email/listserv | <input type="radio"/> TV |
| <input type="radio"/> SMTC Facebook page | <input type="radio"/> Word of mouth |
| <input type="radio"/> Other social media | <input type="radio"/> Other (please list): |

7. Any other comments about the meeting format that you wish to share?

YES WHERE'S 351 S. CLINTON ST
PUT A SIGN → ON CLINTON ST

Meeting Evaluation Form

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November 10, 2016

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Comments?

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<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

*I have been to other
meeting*

4. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

5. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

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Comments?

2. I am likely to attend a future meeting regarding the SMART 1 study.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
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Comments? What did you like or not like?

4. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

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STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

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- | | |
|---|--|
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7. Any other comments about the meeting format that you wish to share?

Meeting Evaluation Form

SMART 1 Public Meeting #2
November 10, 2016

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1. I learned something useful about the SMART 1 study today.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

it is nice to be updated about events of the study.

2. I am likely to attend a future meeting regarding the SMART 1 study.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

3. As compared to other meetings I have attended, this event was:

MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

4. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

5. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

6. Where did you hear about this meeting? (check all that apply)

- | | |
|--|--|
| <input type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
| <input checked="" type="radio"/> Email from SMTC | <input type="radio"/> Radio |
| <input type="radio"/> Other community group email/listserv | <input type="radio"/> TV |
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Meeting Evaluation Form

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November 10, 2016

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<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? I learned about federal ~~Smart~~ Smart Start program

2. I am likely to attend a future meeting regarding the SMART 1 study.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Comments? I'm disappointed that LRT solutions are not being advanced.

3. As compared to other meetings I have attended, this event was:

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<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

4. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

5. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
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Comments?

6. Where did you hear about this meeting? (check all that apply)

- | | |
|--|--|
| <input type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
| <input checked="" type="radio"/> Email from SMTC <i>to the only listserv</i> | <input type="radio"/> Radio |
| <input type="radio"/> Other community group email/listserv | <input type="radio"/> TV |
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Comments?

2. I am likely to attend a future meeting regarding the SMART 1 study.

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Comments? What did you like or not like?

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Comments? What did you like or not like?

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<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

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Meeting Evaluation Form

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November 10, 2016

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<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

2. I am likely to attend a future meeting regarding the SMART 1 study.

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<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

This is the first Mtg on SMART1 I have attended. The material was presented very well, I got a very good understanding of the goals, how the analysis was performed + felt well informed upon completion. Very good + clear - well presented.

4. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

5. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

Nice facility - not too hard to find. Lighting is tough on my eyes - but could see well & hear well what was presented.

6. Where did you hear about this meeting? (check all that apply)

- | | |
|---|--|
| <input checked="" type="radio"/> Postal mail flier | <input checked="" type="radio"/> Newspaper |
| <input checked="" type="radio"/> Email from SMTC | <input type="radio"/> Radio |
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Meeting Evaluation Form

SMART1 Public Meeting #2
November 10, 2016

Please take a few minutes to provide your thoughts about this meeting experience. Your feedback will help us plan future meetings.

1. I learned something useful about the SMART 1 study today.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? I am reassured that you are doing what will most benefit our community in a fiscally responsible way.

2. I am likely to attend a future meeting regarding the SMART 1 study.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

3. As compared to other meetings I have attended, this event was:

MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

Like: - Clear, articulate, easily-understood presentation
- Boards make it easy to follow up on the presentation; see more details.
- Several knowledgeable people on hand to answer questions clearly.

4. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

5. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? Because of time constraints, I had to drive rather than ride my bike. I do like that this is downtown — I just prefer riding my bike downtown, as, living in the Westcott Neighborhood I am very close, so it is convenient. However, last time when I did ride my bike, I noted there are no nearby bike racks.

6. Where did you hear about this meeting? (check all that apply)

- | | |
|---|--|
| <input checked="" type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
| <input checked="" type="radio"/> Email from SMTC | <input type="radio"/> Radio |
| <input checked="" type="radio"/> Other community group email/listserv | <input type="radio"/> TV |
| <input checked="" type="radio"/> SMTC Facebook page | <input type="radio"/> Word of mouth |
| <input type="radio"/> Other social media | <input type="radio"/> Other (please list): |

7. Any other comments about the meeting format that you wish to share?

Thanks for the refreshments!

Meeting Evaluation Form

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November 10, 2016

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<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

The cost layouts and better specifics (routes, BTR vs LRT, costs, etc.) were very helpful to better understand the scope of the project

2. I am likely to attend a future meeting regarding the SMART 1 study.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

3. As compared to other meetings I have attended, this event was:

MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

4. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? *I think the pop up meetings were great to have to make sure you are getting the opinions of actual riders who might not be able to attend meetings like this*

5. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

6. Where did you hear about this meeting? (check all that apply)

- | | |
|---|--|
| <input type="radio"/> Postal mail flier | <input checked="" type="radio"/> Newspaper |
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<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

2. I am likely to attend a future meeting regarding the SMART 1 study.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

3. As compared to other meetings I have attended, this event was:

MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

4. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

5. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

6. Where did you hear about this meeting? (check all that apply)

- | | |
|---|--|
| <input type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
| <input type="radio"/> Email from SMTC | <input type="radio"/> Radio |
| <input checked="" type="radio"/> Other community group email/listserv | <input type="radio"/> TV |
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7. Any other comments about the meeting format that you wish to share?

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STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

2. I am likely to attend a future meeting regarding the SMART 1 study.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

3. As compared to other meetings I have attended, this event was:

MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

4. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? *Advertise more? Not many people here.*

5. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

6. Where did you hear about this meeting? (check all that apply)

- | | |
|---|--|
| <input type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
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7. Any other comments about the meeting format that you wish to share?

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STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

2. I am likely to attend a future meeting regarding the SMART 1 study.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

3. As compared to other meetings I have attended, this event was:

N/A

MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

4. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

5. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

6. Where did you hear about this meeting? (check all that apply)

- | | |
|--|--|
| <input type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
| <input checked="" type="radio"/> Email from SMTC | <input type="radio"/> Radio |
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| <input type="radio"/> SMTC Facebook page | <input type="radio"/> Word of mouth |
| <input type="radio"/> Other social media | <input type="radio"/> Other (please list): |

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Meeting Evaluation Form

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STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

2. I am likely to attend a future meeting regarding the SMART 1 study.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

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MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
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Comments? What did you like or not like?

4. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

5. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

6. Where did you hear about this meeting? (check all that apply)

- | | |
|--|--|
| <input type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
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| <input type="radio"/> SMTC Facebook page | <input checked="" type="radio"/> Word of mouth |
| <input type="radio"/> Other social media | <input type="radio"/> Other (please list): |

7. Any other comments about the meeting format that you wish to share?

*Staff were knowledgeable re
the history of the project.*

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STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? WOULD LIKE MORE BACKGROUND & TECHNICAL INFO.

2. I am likely to attend a future meeting regarding the SMART 1 study.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

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MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

4. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? MAJOR ASSUMPTIONS NOT DETAILED OR DISCUSSED.

5. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

VERY NICE VENUE

6. Where did you hear about this meeting? (check all that apply)

- | | |
|--|--|
| <input type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
| <input checked="" type="radio"/> Email from SMTC | <input type="radio"/> Radio |
| <input type="radio"/> Other community group email/listserv | <input type="radio"/> TV |
| <input type="radio"/> SMTC Facebook page | <input type="radio"/> Word of mouth |
| <input type="radio"/> Other social media | <input type="radio"/> Other (please list): |

7. Any other comments about the meeting format that you wish to share?

THANK YOU.

Meeting Evaluation Form

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STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

2. I am likely to attend a future meeting regarding the SMART 1 study.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

4. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

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STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
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Comments?

6. Where did you hear about this meeting? (check all that apply)

- | | |
|--|--|
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| <input type="radio"/> SMTC Facebook page | <input type="radio"/> Word of mouth |
| <input type="radio"/> Other social media | <input type="radio"/> Other (please list): |

7. Any other comments about the meeting format that you wish to share?

SMART 1
November 2017 Public Meeting Summary

December 2017

Financial assistance for the preparation of this document, the Syracuse Metropolitan Area Regional Transit Study Phase 1 (SMART 1) was provided, in part, by the U.S. Department of Transportation's Federal Highway and Federal Transit Administrations and the New York State Department of Transportation. The Syracuse Metropolitan Transportation Council (SMTC) is solely responsible for its content.

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Syracuse, New York 13202

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www.smtcmpo.org

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APPENDICES

- Appendix A: Meeting display boards
- Appendix B: Meeting presentation
- Appendix C: Participant comments and ZIP Code Map
- Appendix D: Publicity materials
- Appendix E: Meeting evaluations

1) Executive Summary

The Syracuse Metropolitan Transportation Council (SMTC) hosted the third and final public meeting for the Syracuse Metropolitan Area Regional Transit Study Phase 1 (SMART 1) on November 02, 2017. The purpose of this meeting was to inform the public of the methodology, including the criteria used, for selecting the locally preferred alternative, the outcome of that analysis, and the final steps of the study. This document summarizes the meeting materials and community input from the November 2017 public meeting.

The meeting took place at the SKY Armory in downtown Syracuse on November 02, 2017 from 4:00 p.m. to 7:30 p.m. with presentations at 5:00 p.m. and 6:30 p.m. All participants were offered two single-use transit passes when signing in at the meeting. American Sign Language and Spanish interpreters were available on site. The meeting featured four stations with informational and interactive boards. Each station was staffed by project team members with relevant expertise. Publicity for the meeting was multi-faceted and included flyer distribution via postal mail, email, and direct distribution to several organizations including a version in Spanish, bus placards, notice on the project website, posting on SMTC's Facebook page, and a press release.

a) Meeting Content

The primary goals for the meeting were to:

- Review the evaluation criteria and methodology used to select the Locally Preferred Alternatives (LPA) for each corridor;
- Learn about the recommended LPA, and
- Learn the final steps of the SMART 1 study.

b) Meeting Evaluation and Participation

There were nearly 50 attendees throughout the meeting, including residents of 17 ZIP codes within the City of Syracuse and several outlying suburbs (see Appendix C). All the meeting evaluations that were received indicated that the meeting provided useful information in an effective and comprehensive manner and that the process thus far was transparent and meaningful. Staff at the meeting also indicated that the feedback from attendees on the content of the meeting was positive, and the few comment sheets that were returned indicated satisfaction with the study process and public meetings.

c) Next Steps

Input from the public meeting will be considered when finalizing the SMART 1 study. The project team will develop a planning level financial plan and implementation strategies to be included in the SMART 1 study. The intent of the implementation strategies will be to guide the SMTC's transition to SMART 2 and implementation of the recommended LPA. The final report will be available to the community in the first quarter of 2018.

2) Meeting Summary

a) Introduction

The Syracuse Metropolitan Transportation Council (SMTC) hosted the third and final public meeting for the SMART 1 study on November 02, 2017. The main goal for this meeting was to inform the community of the recommended locally preferred alternative corridor and transit mode that will be advanced for inclusion in the SMTC's Long Range Transportation Plan.

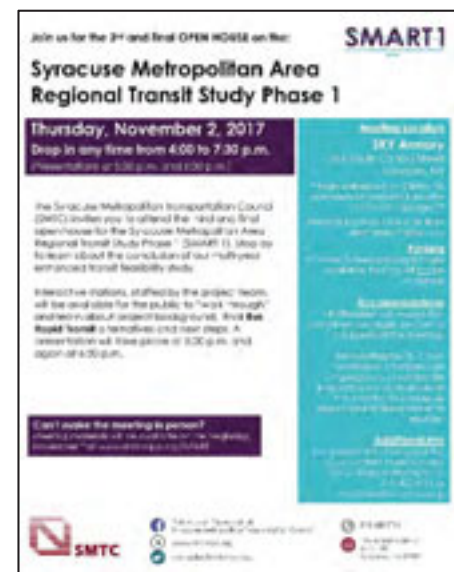
The primary goal for this meeting was to inform the public of:

- The evaluation criteria, process, and recommendation for the Locally Preferred Alternative (LPA);
- The final steps of the SMART I study; and
- The probable funding strategies for implementation within the next six years.

However, for purposes of continuity and consistency, an overview of what transpired to date was provided. This overview included study background information, goals, purpose and need of the SMART 1 study, and eligibility criteria for mode screening.

Publicity for the meeting included the following methods:

- Meeting flyers distributed through various means including direct mailing and emails to recipients, and through a variety of community organizations (including a version in Spanish);
- Placards on Centro buses;
- Project website;
- SMTC Facebook page; and
- Press release.



SMART 1 Public Meeting Flyer

The meeting was held at the SKY Armory in downtown Syracuse on November 02, 2017, from 4:00 p.m. to 7:30 p.m. The structure of the meeting was the same as the first two public meetings. The meeting was conducted on two floors. On the second floor was the open house with display boards at four stations that were available for viewing for the entirety of the meeting. Professional staff members were located at each station to answer questions. Public comment

and meeting evaluation forms were provided. Additionally, a presentation was given at 5:00 p.m. and repeated at 6:30 p.m. on the third floor and was open to all interested attendees. Following the question and answer period after each presentation, attendees were encouraged to return to the stations for further review and discussion.

b) Meeting Content

This section briefly summarizes the content of each of the four stations. Copies of each display board per station are provided in Appendix A of this summary. Stations 1 and 2 provided a study overview which included general information regarding the SMART 1 study. This information was carried forward from the prior two public meetings. Stations 3 and 4 provided new findings as well as the immediate next steps after completion of the study.

i) Station 1: Overview of the SMART 1 Study

The first station provided attendees with the same general information about the SMART 1 project as was provided during the prior two public meetings. Display boards included background information regarding the SMTC, the Central New York Regional Transportation Authority (Centro), the Study Advisory Committee for SMART 1, the purpose, need and goals as well as the project schedule for the SMART 1 study.



Informational boards

Additionally, information was provided on how the SMART 1 study relates to the concurrent I-81 Viaduct Project, both in terms of impacts and team coordination throughout the planning process.

ii) Station 2: Eligibility screening and route/mode alternatives

This station provided attendees an opportunity to review the methodology used to screen eligible transit modes, the alternative routes under consideration, and the outcome of the screening process. A summary of critical public feedback provided during the entire course of the project, including the first two public meetings, was illustrated with the intention of providing a “feedback loop”, reflecting back to the community what the project team has heard.

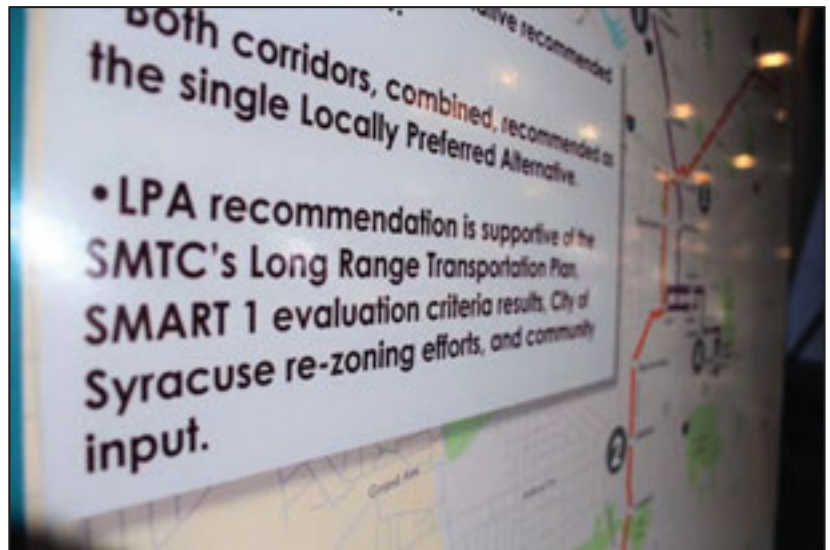


Staff discusses display board content with meeting attendee

iii) Station 3: Locally Preferred Alternative

The recommended LPA was explained in this station. Attendees learned about the methodology, including each of the fourteen criteria, used to analyze the modes/routes considered. Each of the criterion used during this analysis were defined and a matrix illustrating the scoring system was provided. The criteria considered are:

- Existing Ridership
- Estimated Future Total Ridership
- Travel Time Improvement
- Change in VMT
- Riders New to Transit
- Capital Cost
- Operating Cost Increase
- Transit Supportive Plans & Policies
- Serves Existing Activity Centers
- Population & Employment Density



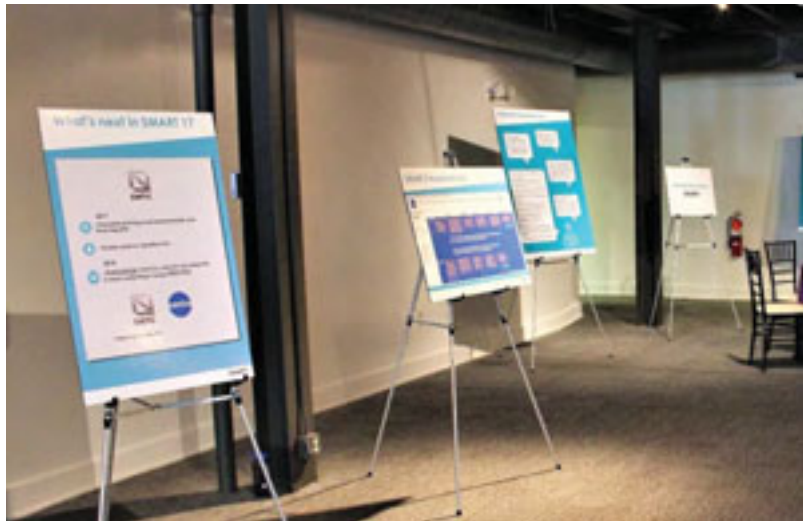
LPA informational board

- Affordable Housing
- Ability of Region to Fund Capital & Operating
- Roadway Suitability & Pedestrian Environment
- Stakeholder Comments

Station 3 also presented 3 “station typology” concept drawings (i.e., high, high w/ existing shelter, and medium) that could potentially accompany any Bus Rapid Transit Mixed Traffic service.

iv) Station 4: What’s next and Frequently Asked Questions

In this station attendees learned that the immediate next steps will entail developing a planning level implementation and financing plan that supports implementation of the identified locally preferred alternative. Upon completion of the SMART 1 study in 2018, the identified LPA will be recommended for adoption in the area’s Long Range Transportation



Informational boards

Plan, which will effectively set the stage for transitio implementation of SMART 2 is expected to begin in 2018 with the goal of partial to full implementation by 2023. This station also included boards displaying the frequently asked questions (and answers) which were provided at the prior two public meetings.

c) Meeting Evaluation

Consistent with feedback at the prior public meetings, attendees indicated that this meeting served them well by providing useful information in an effective and comprehensive manner. The attendees also confirmed that SMTTC continues to meet its goal of conducting a transparent and meaningful study. The format and clarity of information shared was appreciated. Some commenters suggested the meeting should have been held in a neighborhood community center which is transit accessible.

d) Meeting Participation and Public Comments

There were 50 people who attended the meeting, many of whom reside in neighborhoods within or adjacent to the two corridors under consideration (see ZIP code map in Appendix C). The majority of comments provided speak to how to improve existing service for existing ridership. Representative comments from public comment forms have been categorized and summarized below; all comments (in their original form) are provided in Appendix C.

- Attendees preferences regarding routes selected
 - Regional Transportation Center – Syracuse University corridor
 - One participant commented that dedicated bus lanes on University Hill are not a good idea due to lack of space.
 - Eastwood – Onondaga Community College corridor
 - Due to existing high ridership along James Street Corridor, improving overall quality of experience along that route will directly improve daily experiences for existing riders.
- Convenience
 - Frequency/schedule
 - Interests in increased frequency and timeliness of the existing bus service was expressed.
 - The use of articulated buses along the preferred routes was recommended due to the assertion that currently the regular buses are late and crowded.
 - Access to employment
 - Improvements to transit service to/from job locations should be incorporated/considered when determining final recommendations.

e) Conclusions and Next Steps

Community input provided throughout this study has been considered and has directly informed the final recommendations. Even though this meeting was the third and final public meeting, community input will continue to be considered while developing the final locally preferred alternative recommendation, the preliminary financial plan, and implementation strategies. Once completed, in

2018 the SMART 1 study will be presented to the SMTC committees for acceptance and inclusion in this region's Long Range Transportation Plan, which will set the framework for the SMTC to transition into the implementation phase of a local Bus Rapid Transit system.

Appendix A: Meeting boards

Overview of the SMART 1 study

What is SMART 1?

The Syracuse Metropolitan Area Regional Transit Study Phase 1 (SMART 1) began in June 2015 to pursue higher-intensity transit services along the Destiny USA/Regional Transportation Center (RTC) to Syracuse University and Eastwood to Onondaga Community College corridors.

This planning study will evaluate the following along these two corridors:

- modes
- alignments
- station locations
- ridership
- service plans
- costs
- land use
- zoning
- economic development
- engineering feasibility
- environmental factors

Who is involved in the SMART 1 study?

The Syracuse Metropolitan Transportation Council (SMTC) is conducting the study, with a consultant team, on behalf of Centro. ● ● ● ● ●

A Study Advisory Committee (SAC) will advise the SMTC on the technical content of deliverables and provide needed input and guidance throughout the study. The SAC is comprised of representatives from the following agencies:

- Central New York Regional Transportation Authority (Centro)
- City of Syracuse - Planning Division
- Downtown Committee of Syracuse
- New York State Department of Environmental Conservation (NYSDEC)
- New York State Department of Transportation (NYSDOT)
- Syracuse-Onondaga County Planning Agency (SOCPA)
- University Hill Corporation



What is the SMTC?

The SMTC is the State-designated Metropolitan Planning Organization (MPO) for Onondaga County and portions of Oswego and Madison Counties. The SMTC is the region's forum for cooperative decision making when it comes to developing transportation plans, programs and recommendations. The SMTC is made up of officials representing local, state and federal governments or agencies with an interest in comprehensive transportation policies and services. The SMTC does not own or operate any transportation infrastructure.



SMART 1 and the I-81 Viaduct Project

Why are these separate studies?

The SMART 1 study is advancing a specific recommendation from the Syracuse Transit System Analysis for enhanced transit on two corridors that have the conditions necessary to sustain high ridership.

Centro and the NYSDOT could still pursue an I-81 express commuter bus service with park-and-rides as a separate initiative. The SMART 1 study does not preclude that option.

Transit mode share in our community would need to increase dramatically to have an impact on the options being considered for the I-81 Viaduct.

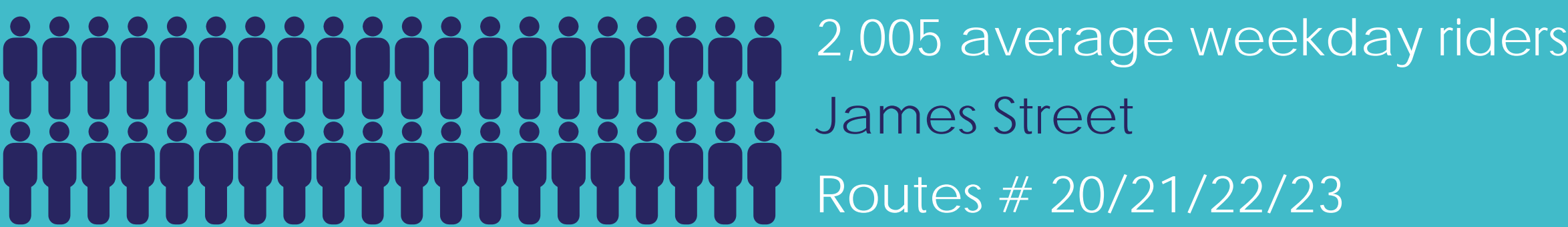
How are the project teams coordinating?

As plans for both I-81 and an enhanced transit system progress, SMTC, NYSDOT, and Centro will continue to communicate frequently.

- NYSDOT and Centro are members of the Study Advisory Committee for the SMART 1 study.
- SMTC and Centro are members of the Stakeholder Advisory Working Groups for The I-81 Viaduct Project.

Commuting in the Syracuse area:

Centro routes with highest ridership



= 50 Riders

Commuters who both live AND work in the City of Syracuse: **35,000**

Commuters who live in Salina, Clay, and Cicero combined, and work in the City of Syracuse: **19,000**

Percent of City of Syracuse residents that currently take transit to work: **8%**

Percent of suburban residents that currently take transit to work: **1%**

What is Purpose & Need?

The purpose and need is a key factor in determining the range of alternatives considered in an Environmental Impact Statement. The “need” statement describes the problems that the proposed action is intended to address and, to the extent possible, explains the underlying causes of the problems. The “purpose” statement defines, as sharply as possible, the fundamental reasons why the project is being proposed based on meeting the transportation needs.

Purpose

- The purpose of an enhanced transit system in the RTC - SU and Eastwood - OCC corridors is to provide faster, more direct, more frequent, and more reliable transit service between major residential areas and activity centers in the Syracuse metropolitan area, at a reasonable capital and operating cost.

Need

- Fast, efficient, and environmentally sound transit connections between major activity centers are needed throughout the study corridors. Improved mobility for transit dependent populations throughout the study corridors is needed as well, along with a need to encourage redevelopment and revitalization that is supported by public transit.

.....➤ The Purpose & Need statement will be used, along with project Goals, shown on the next board, to evaluate different BRT and LRT alternatives along the 2 corridors.

What we'll try to achieve

Throughout the SMART 1 effort, we'll seek to accomplish a number of goals developed for the study.

Consensus Building

- Involve a large and diverse mix of community members through an unbiased, transparent, and meaningful outreach program.
- Support the planning goals of SMTC, Centro, City of Syracuse, NYSDOT, and other important stakeholders.
- Adopt a Locally Preferred Alternative that is technically feasible, includes a sound financial plan, and has the broad support of the Centro, SMTC, City of Syracuse and other key stakeholders.
- Follow standard FTA procedures to facilitate the transition to the project development process and assure project competitiveness in the Small Starts program.

Transportation

- Build on the analysis and conclusions of the Syracuse Transit System Analysis and confirm the selection of the preliminary corridors.
- Improve the utility of transit service for riders by reducing travel time, improving headways, expanding route coverage, and generally increasing travel options.
- Develop a plan for a high-intensity transit investment that is preferred for trips to and within downtown Syracuse because it has:
 - Frequent service;
 - Convenient and accessible alignments and stops;
 - Comfortable vehicles; and
 - Seamless connection to other regional transit services.

Development

- Support revitalization of Syracuse and key neighborhoods along the selected corridors by encouraging transit oriented development and infill.
- Utilize transit to improve connectivity between key locations in Syracuse supporting economic, cultural, social, and health-related development opportunities.
- Plan to increase the effectiveness of transit in Syracuse, providing a vision for how it could contribute to a vibrant, inclusive, and prosperous city.

Schedule

2015

Summer

2017

Tasks



Milestones and Deliverables



Public Involvement



The SMART 1 planning study started in Summer 2015 and will be completed in December 2017.

Throughout the course of the planning study, three public meetings/open houses were scheduled, along with various other public engagement activities such as focus groups, community/neighborhood meetings, and other events.

Corridors under review

Based on the recommendations of the Syracuse Transit System Analysis (STSA), two transportation improvement corridors will be analyzed in the SMART 1 study.

RTC - SU corridor

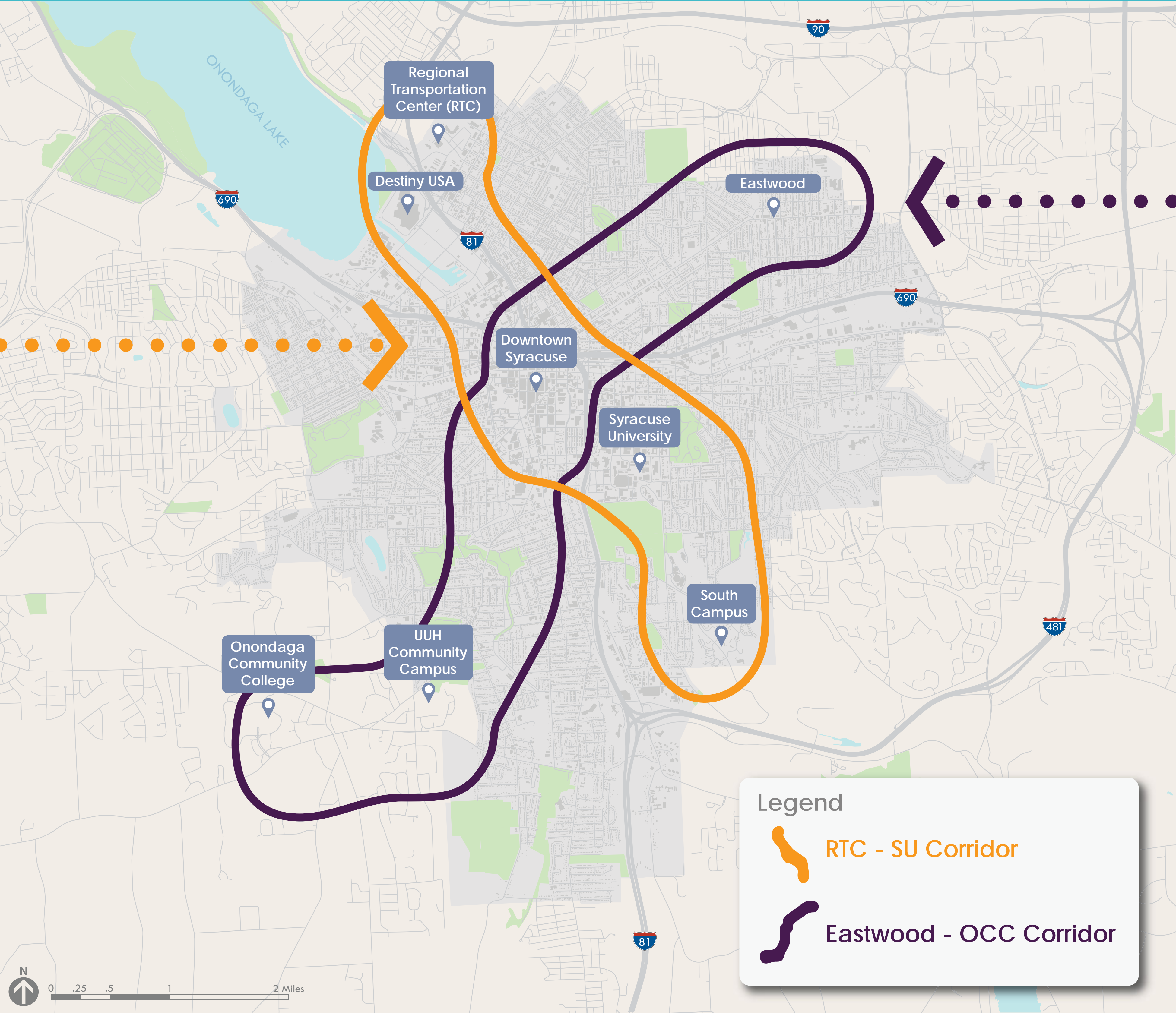
Connects the Regional Transportation Center/Destiny USA Mall to Syracuse University and serves the following:

- SUNY ESF
- Syracuse University
- North Salina Street
- Downtown Syracuse
- East Genesee Street
- Crouse Hospital
- Crouse-Marshall Business District
- Carrier Dome
- Upstate University Hospital
- VA Medical Center
- St. Joseph's Hospital Health Center

Eastwood - OCC corridor

Connects the Eastwood neighborhood along James Street and Onondaga Community College, while also serving:

- Downtown Syracuse
- St. Joseph's Hospital Health Center
- Bryant and Stratton College
- Upstate University Hospital Community Campus
- SRC Arena & Events Center
- Syracuse Community Health Center
- Southwest Community Center



Existing transit

The Central New York Regional Transportation Authority (Centro) operates a total of 99 bus routes.

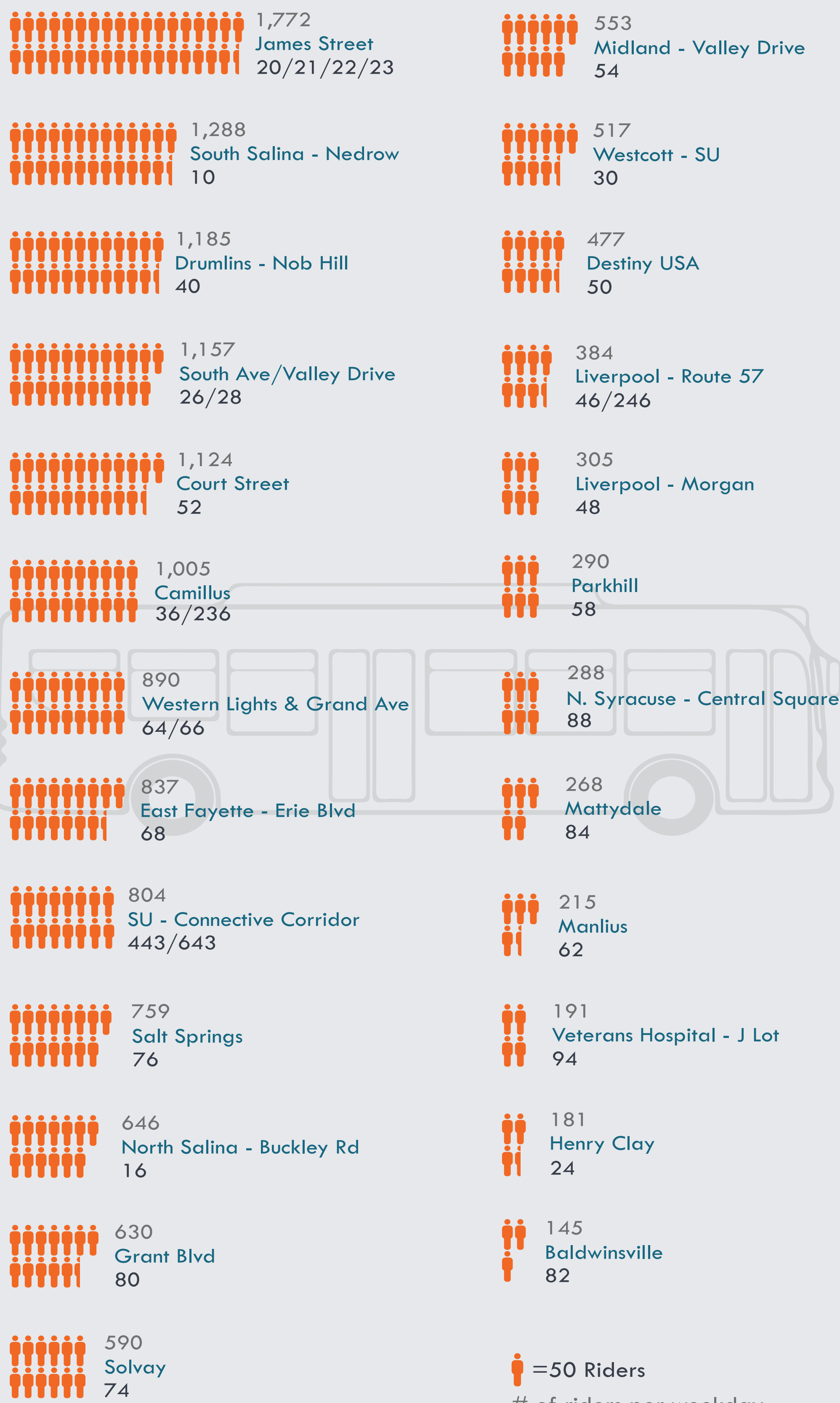
42

bus routes operate within the RTC - SU corridor

41

bus routes operate within the Eastwood - OCC corridor

Average Weekday Ridership by Centro Route (2016)



= 50 Riders
of riders per weekday
Route Name
Route #

The James Street, South Salina Street, Drumlins/Nob Hill and South Ave/Valley Drive corridors experienced the highest average weekday ridership in 2016.

Demographics of Centro Riders (2017)

Ethnic Group

African-American	45%
Native American	4%
Asian	4%
Hispanic	9%
Caucasian	42%
Other	3%

61% of Centro riders are minorities.

22% of Centro riders are under the age of 25.

Age

Under 18	5%
18 - 24	17%
25 - 34	25%
35 - 54	32%
55 - 64	14%
65+	6%

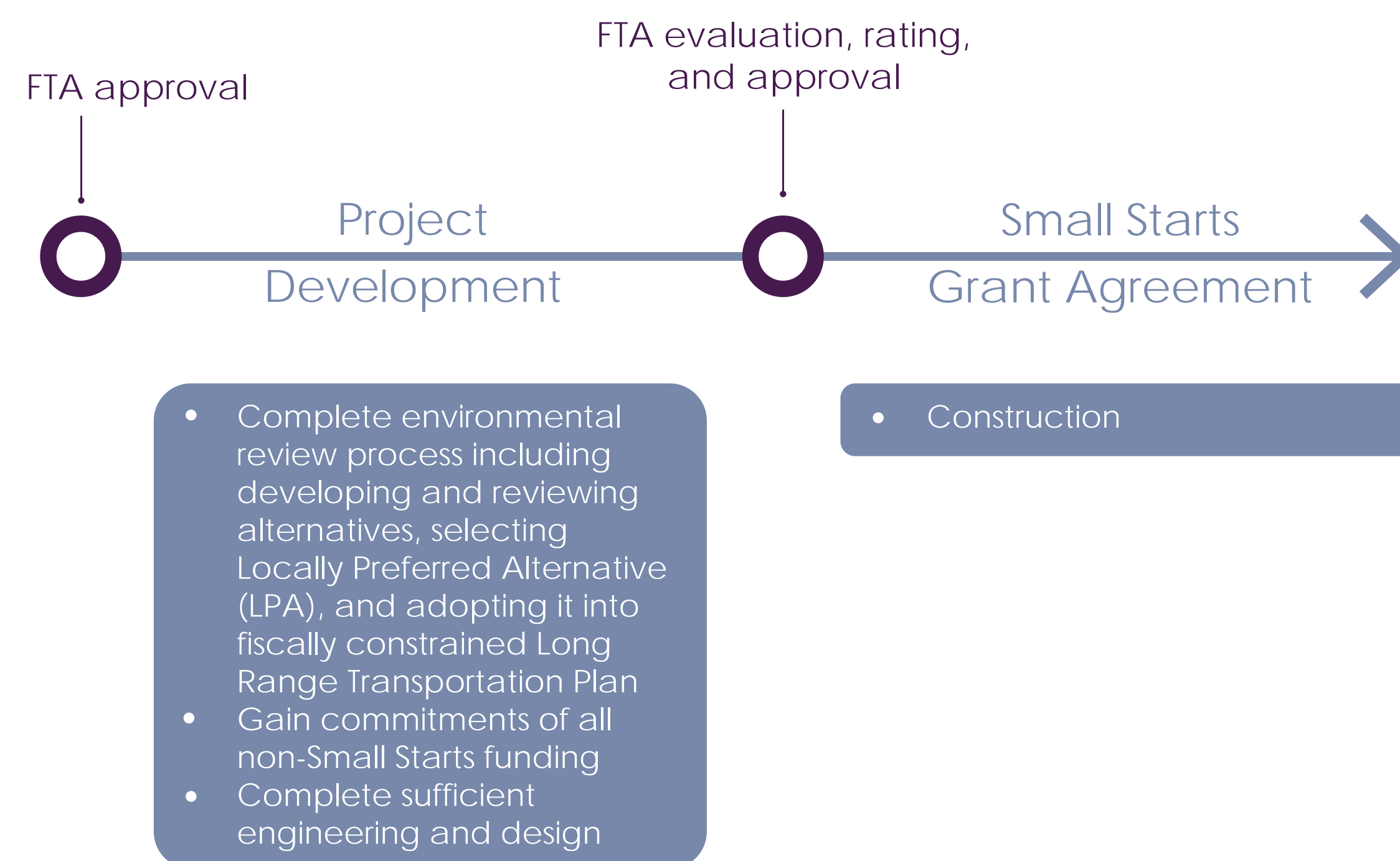
Personal Income

Under \$25,000	61%
\$25,000 - \$29,999	18%
\$30,000 - \$49,999	15%
\$50,000 +	7%

79% of Centro riders have an income less than the City of Syracuse's \$30,891 median household income.

FTA New Starts

FTA's Fixed Guideway Capital Investment Grants, also known as "New Starts", provides grants for new and expanded rail, bus rapid transit, and ferry systems that reflect local priorities to improve transportation options in key corridors.



- Funding is awarded by the FTA through a competitive process according to the type of project seeking funds (i.e., New Starts or Small Starts projects). New Starts projects are ones with a total estimated capital cost of \$300M or more, or that are seeking \$100M or more in FTA funds. Small Starts projects are ones that have a total estimated capital cost of less than \$300M and that are seeking less than \$100M in FTA funds.
- The SMART 1 study is a planning effort envisioned to complete a number of items outlined in the FTA Small Starts process. Once a Locally Preferred Alternative (LPA) is identified in SMART 1, Centro or another entity could advance the LPA to FTA's Small Starts "Project Development" phase for further environmental review, engineering, and design. FTA approval is necessary to enter "Project Development."
- All potential projects must be evaluated and rated by FTA in accordance with statutorily defined criteria at various points in the development process. In order to receive a construction grant, all projects must go through a multi-step, multi-year process.

Modes under review

The following modes were looked at within the eligibility screening process.



Light Rail Transit

Operates on fixed rail infrastructure in separate, dedicated right-of-way. Vehicles are heavier, have a larger passenger capacity and can run at higher speeds than a modern streetcar.



Modern Streetcar

Operates on fixed rail infrastructure and runs on electric power drawn from overhead catenary wires or direct connection to an electrified track in the street. Typically installed in existing shared vehicle lanes and operate at the speed of traffic.



BRT-Busway

Some portion of route operates on a separate, dedicated bus-only roadway.



BRT-Bus Lane

Designated bus-only lanes on key roads.



BRT-Mixed Traffic

Limited-stop bus service operating mostly within mixed traffic on existing roads.



Existing service improvements

Includes changes to existing bus service, without major capital investment. Improvements include upgrading bus stop amenities, consolidating stops, and installing Transit Signal Priority technology.

Small Starts eligibility screening

The purpose of the eligibility screening analysis is not to examine specific route or design alternatives, but to determine what level of investment and improvement might be justified within the study corridors, and attract Federal capital funding.

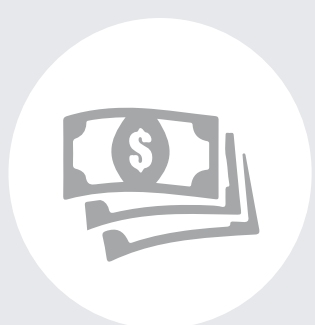
Eligibility screening criteria:



Dedicated right-of-way (ROW) -This indicator states whether or not the ROW required to fully implement a mode is available. Since the ROW types differ for each end of the two study corridors, this indicator was applied separately for each half of each corridor.



Total project capital cost- Overall capital cost was developed by researching the capital cost of modes in other regions similar to Syracuse. The threshold is to have a total capital cost of less than **\$300,000,000**.



Maximum practical local funding- The FTA will only fund up to **\$100,000,000** or 80% if total cost is less than or equal to \$125,000,000 for Small Starts projects. Therefore, this number indicates how much local and/or state funding will be required to fulfill the total project budget. This criteria reflects the feasibility of providing the required local share.



Existing riders on corridor- The FTA requires at least **3,000** existing weekday boardings in a corridor to qualify for Small Starts funding.



Limited operating cost increases- This indicator was based on a conceptual service plan for each mode with costs based on experience from agencies that operate in regions similar to Syracuse. Systemwide operating costs must not increase by more than **5%**.

- Eligibility screening results are shown on the next few boards.















Eligibility screening analysis for RTC-SU corridor

Assumed route- 6.9 miles

modes under review

screening criteria

		LRT 	Modern Streetcar 	BRT-Busway 	BRT-Bus Lane 	BRT- Mixed Traffic 
Dedicated ROW North Segment		✓ Available	⊘ N/R	✓ Available	⊘ N/R	⊘ N/R
Dedicated ROW South Segment		✗ Not Available	⊘ N/R	✗ Not Available	⊘ N/R	⊘ N/R
Total Cost (in millions)		✗ \$457	✗ \$426	✓ \$190	✓ \$25	✓ \$10
Local funding (in millions)		✗ \$357	✗ \$326	✗ \$90	✓ \$5	✓ \$2
Existing Ridership		✓ 3,726	✓ 3,726	✓ 3,726	✓ 3,726	✓ 3,726
Operating Cost Increase		✗ 26%	✗ 22%	✗ 18%	✗ 6%	✓ 5%
Further Study?		✗ No	✗ No	✗ No	✓ Yes	✓ Yes

✗ indicates results that do not meet eligibility criteria.
















































✓ indicates results that meet eligibility criteria.

⊘ not required

Eligibility screening analysis for Eastwood-OCC corridor

Assumed route- 7.4 miles

modes under review

		LRT	Modern Streetcar	BRT-Busway	BRT-Bus Lane	BRT-Mixed Traffic
						
screening criteria	Dedicated ROW North Segment 	 Available	 N/R	 Available	 N/R	 N/R
	Dedicated ROW South Segment 	 Not Available	 N/R	 Not Available	 N/R	 N/R
	Total Cost (in millions) 	 \$526	 \$491	 \$219	 \$27	 \$11
	Local funding (in millions) 	 \$426	 \$391	 \$119	 \$5	 \$2
	Existing Ridership 	 3,456	 3,456	 3,456	 3,456	 3,456
	Operating Cost Increase 	 30%	 25%	 20%	 7%	 6%
	Further Study? 	 No	 No	 No	 Yes	 Yes

 indicates results that do not meet eligibility criteria.

 indicates results that meet eligibility criteria.

 not required

What we've heard

Input from our community engagement to date was used to develop the mode recommendations.



You told us you want transit service to be:

- Faster
- More frequent
- More reliable (better on-time performance)
- More visually attractive
- Available for longer hours (late night and early morning)
- Easier and more convenient to use (through the use of technology such as bus tracker apps, online travel planning, electronic fare payment)

We also heard that the public perception of transit needs improvement.

Public comments show strong support for enhanced transit in our community, with BRT receiving more support than LRT due to BRT's lower cost, relative ease of implementation, and flexibility.

- February 2016 public meeting
-nearly 100 attendees
- 3 Focus Groups in Spring 2016
-Major Employers
-Educational Institutions
-Social Service Providers
- 9 Pop-Up meetings in Spring 2016
-Centro Transit Hub
-Destiny USA
-James Street (2 sites)
-OCC
-South Ave
-South Salina Street
-SU (2 sites)

We also heard about numerous planned development projects along the study corridors that could impact future transit ridership. This information will be used later in the study to evaluate the economic impact of an enhanced transit system, which is a required factor in the FTA's funding process.

"Increasing frequency should be a goal especially for community visitors to make it easier to get around."

"Maintain at least some reduced service late for people who work late."

"Light rail is too expensive. Bigger buses would be helpful."

"Good transit systems help stimulate density!"

"Buses in mixed traffic good idea if signal priority for buses."

"BRT seems more practical to me."

Route | Mode Alternatives

Identification Process

Two new transit modes and existing service improvements were recommended for each corridor:

A likely route was defined for each transit mode*:

Each alternative is defined by the combined transit mode and route.

Eastwood - OCC Corridor



Existing service improvements

James St, W Onondaga St, Bellevue Ave, Onondaga Ave, South Ave & Onondaga Rd

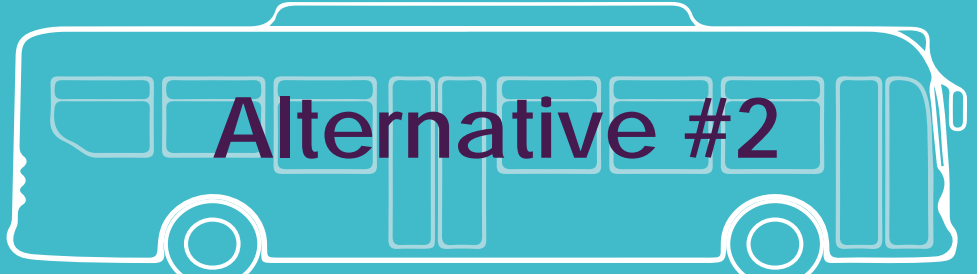


Alternative #1



BRT-Mixed Traffic

James St, W Onondaga St, South Ave & Seneca Tnpk

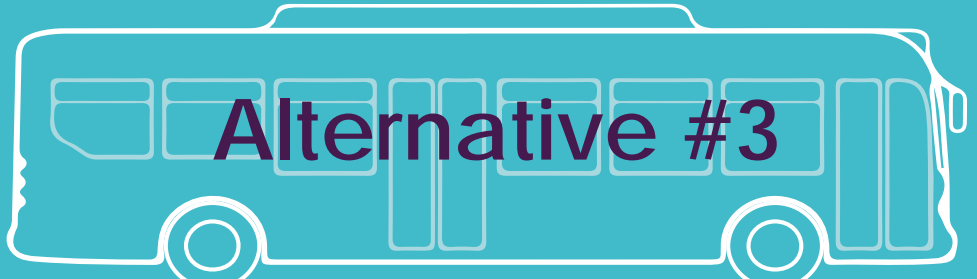


Alternative #2



BRT-Bus Lane

James St, W Onondaga St, South Ave & Seneca Tnpk



Alternative #3

RTC - SU Corridor



Existing service improvements

Court St, N Salina St, Harrison/Adams St, Irving Ave, S Crouse & Waverly Aves



Alternative #1



BRT-Mixed Traffic

N Salina St, Harrison/Adams St, Irving & Waverly Aves



Alternative #2



BRT-Bus Lane

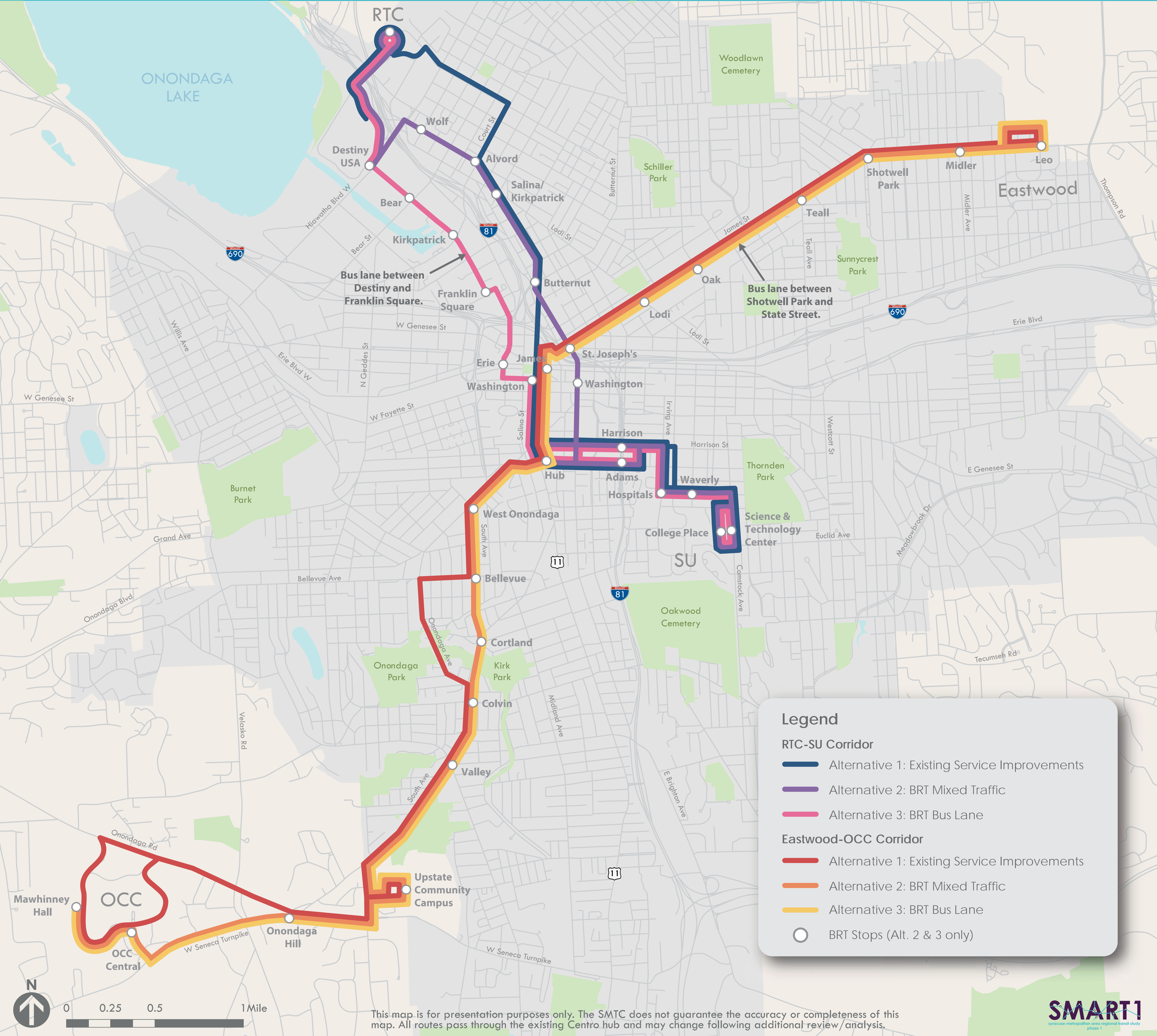
Solar St, Harrison/Adams St, Irving & Waverly Aves



Alternative #3

*All routes pass through the existing Centro Hub.

Route | Mode Alternatives



This map is for presentation purposes only. The SMTC does not guarantee the accuracy or completeness of this map. All routes pass through the existing Centro hub and may change following additional review/analysis.

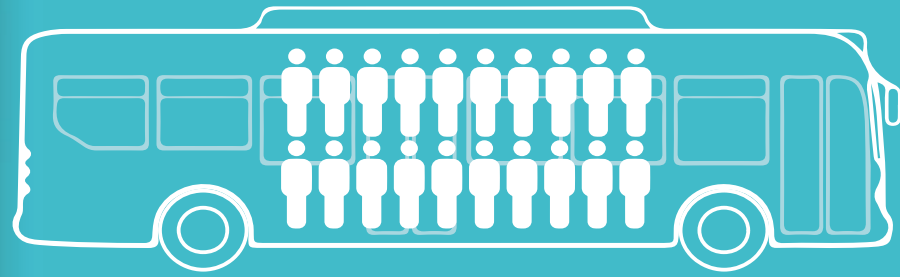
Route | Mode Alternatives

Evaluation Criteria

These criteria will be used to evaluate each of the route/mode alternatives, which will then lead to identifying a locally preferred alternative for each corridor. Most of these criteria are based on the FTA Small Starts process.

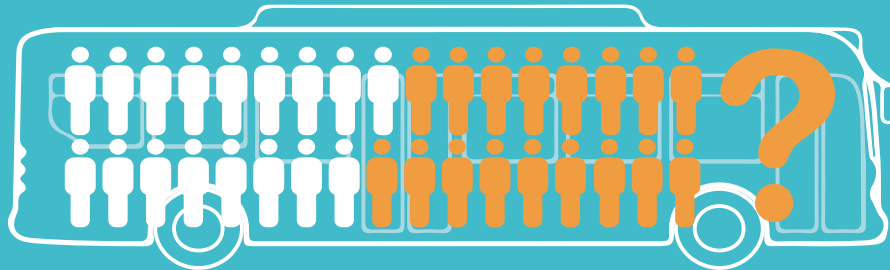
Existing Transit Ridership Along Proposed Route

Improvements to an existing transit route with a higher number of riders means those benefits will be experienced by more riders and the route has a higher likelihood of success.



Estimated New Riders

Higher estimates of new riders on a proposed route increases the number of transit riders who will benefit from improvements.



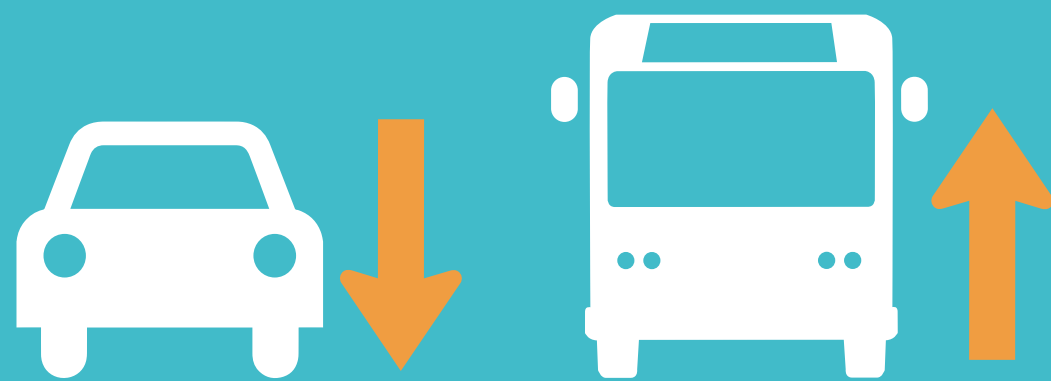
Travel Time Improvement

Shortened travel time is one of the key benefits of improved service, and is used to determine cost effectiveness.



Change in Vehicle Miles Traveled (VMT)

Improved transit service can reduce car travel, as measured by VMT, which has air quality, traffic congestion, and safety benefits.



Capital Cost

The lower the capital cost relative to expected benefits, the better the return on investment.



Operating Cost

The lower the operating cost relative to expected benefits, the better the return on investment.



Route | Mode Alternatives

Evaluation Criteria

These criteria will be used to evaluate each of the route/mode alternatives, which will then lead to identifying a locally preferred alternative for each corridor. Most of these criteria are based on the FTA Small Starts process.

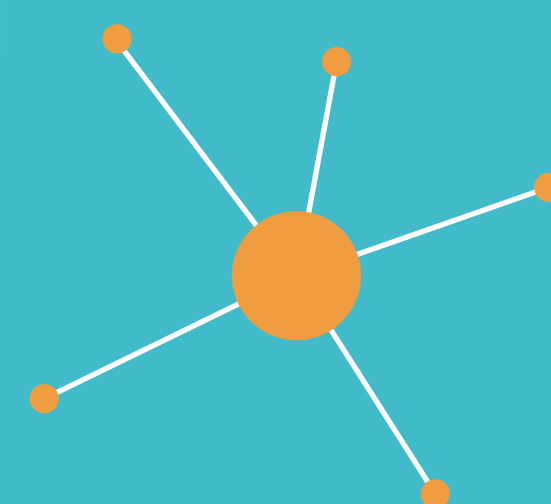
Transit Supportive Plans and Policies

Routes that serve locations where the City of Syracuse is planning for higher density or, transit oriented development, will serve more transit riders.



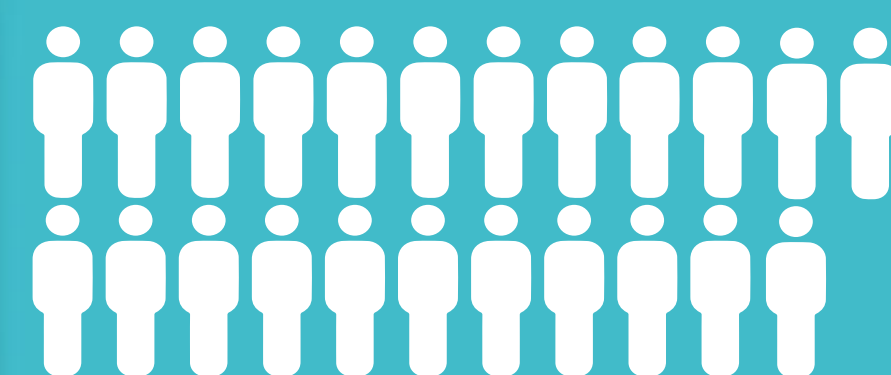
Serves Existing Commercial Nodes

Routes that include hubs of commercial activity serve more riders and an efficiency in number of trips.



Population and Employment Density

Transit routes that serve denser neighborhoods serve more transit riders and thus, improvements to such routes will benefit more riders.



Serves Affordable Housing

Improvements to routes that serve affordable housing are likely to benefit riders that are more dependent on transit service.



Ability of Region to Fund Capital and Operating Cost

Local transit service provider should provide evidence of financial capacity to absorb additional operational costs due to service improvements without negative impact to existing service.



Roadway Suitability

Existing route must reasonably accommodate, or be modified to accommodate, the proposed improved transit service and related infrastructure.



Comments of Stakeholders




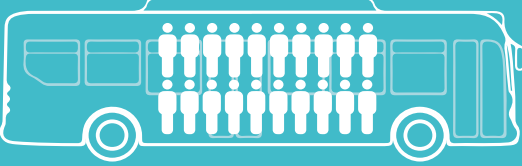
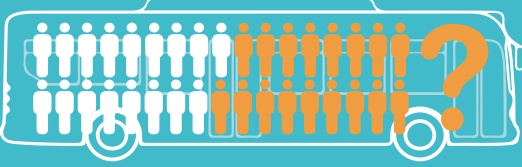





Route | Mode Alternatives that directly respond to public comments will show a strong connection with community needs.



Evaluation results

RTC- SU corridor

evaluation criteria

		Existing Service Improvements	BRT- Mixed Traffic	BRT- Bus Lane
				
Existing Ridership (daily)		<div><div></div></div> 4,070	<div><div></div></div> 4,070	<div><div></div></div> 4,070
Estimated Future Total Ridership (daily)		<div><div></div></div> 4,710	<div><div></div></div> 4,685	<div><div></div></div> 4,415
Travel Time Improvement (minutes)		<div><div></div></div> no change	<div><div></div></div> 12 to 17 mins.	<div><div></div></div> 17 to 22 mins.
Change in VMT		<div><div></div></div> -93,496	<div><div></div></div> -88,239	<div><div></div></div> -45,000
Riders New to Transit (annual)		<div><div></div></div> 38,400	<div><div></div></div> 36,900	<div><div></div></div> 20,700
Capital Cost		<div><div></div></div> \$4.1m	<div><div></div></div> \$14m	<div><div></div></div> \$15.6m
Operating Cost Increase		<div><div></div></div> \$970,000	<div><div></div></div> \$3.1m	<div><div></div></div> \$2.8m
Sub total score:		15	15	13





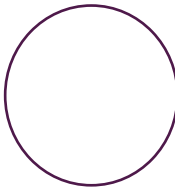
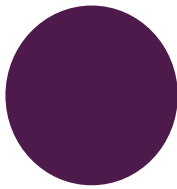
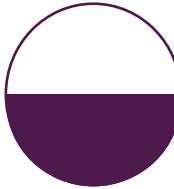
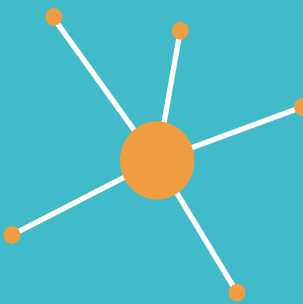
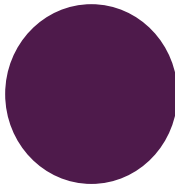
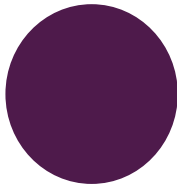
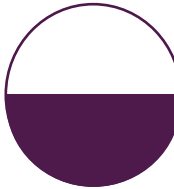
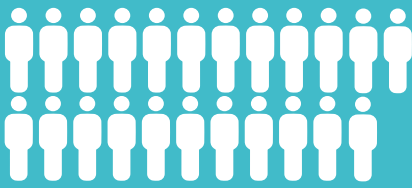
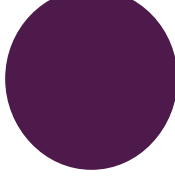
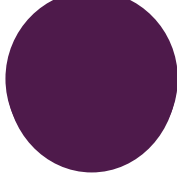
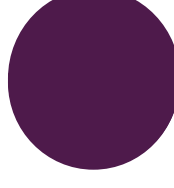

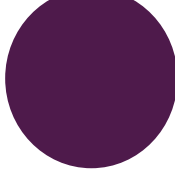
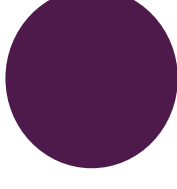
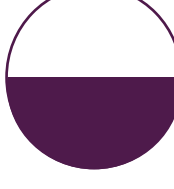

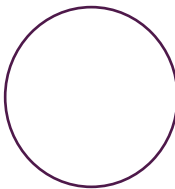
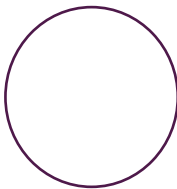
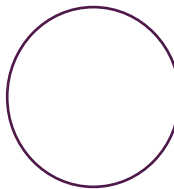

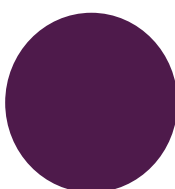
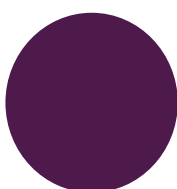
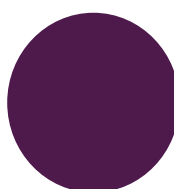
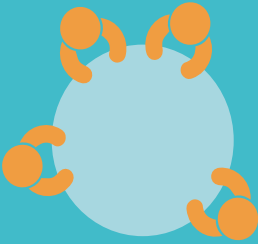
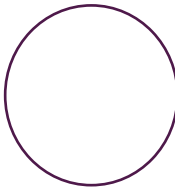
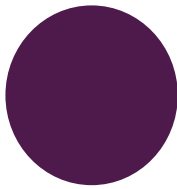
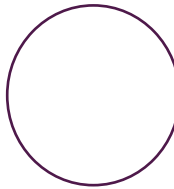
See next board for remaining evaluation criteria results.




- Key:
- Less positive (1 pt.)
 - Positive (2 pts.)
 - More positive (3 pts.)

Evaluation results con't...

RTC - SU corridor

evaluation criteria




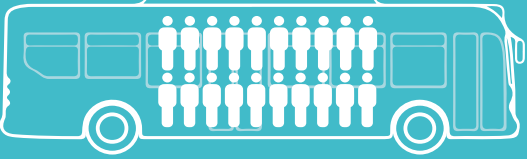
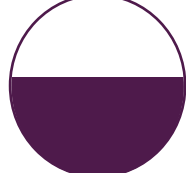
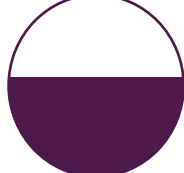

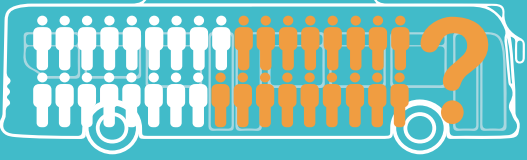
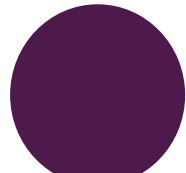
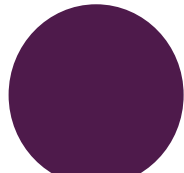
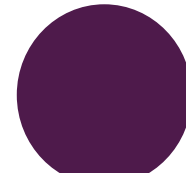

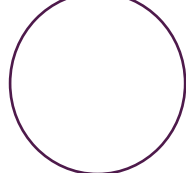
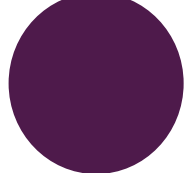
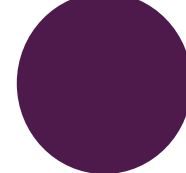

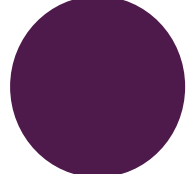
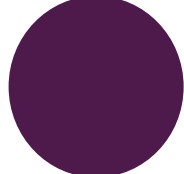
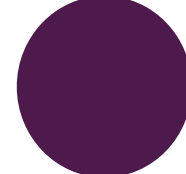

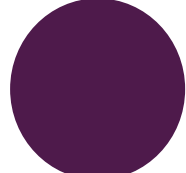
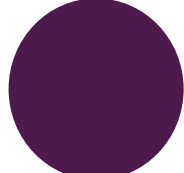
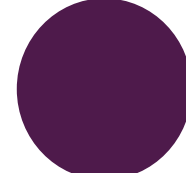

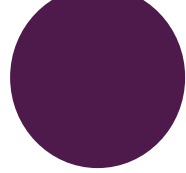
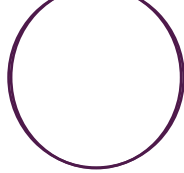
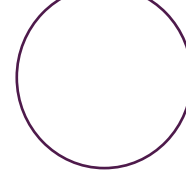

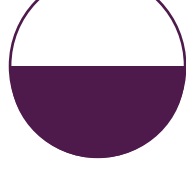
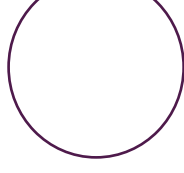
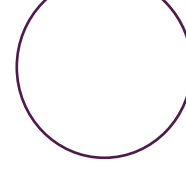
		Existing Service Improvements	BRT- Mixed Traffic	BRT- Bus Lane
				
Transit Supportive Plans & Policies				
Serves Existing Activity Centers				
Population & Employment Density		 23,814	 24,084	 23,105
Affordable Housing		 32%	 30%	 21%
Ability of Region to Fund Capital & Operating				
Roadway Suitability & Pedestrian Environment				
Stakeholder Comments				
Sub total score:		15	19	14
Total score:		30	34	27

- Key:
-  Less positive (1 pt.)
 -  Positive (2 pts.)
 -  More positive (3 pts.)




Evaluation results

Eastwood - OCC corridor

evaluation criteria

		Existing Service Improvements	BRT- Mixed Traffic	BRT- Bus Lane
				
Existing Ridership (daily)		 3,636	 3,636	 3,636
Estimated Future Total Ridership (daily)		 4,710	 4,643	 4,740
Travel Time Improvement (minutes)		 no change	 17 to 19 mins.	 19 to 21 mins.
Change in VMT		 -294,183	 -257,442	 -282,240
Riders New to Transit (annual)		 64,440	 60,420	 66,240
Capital Cost		 \$4.7m	 \$19.5m	 \$21.7m
Operating Cost Increase		 \$1.5m	 \$4.7m	 \$4.6m
Sub total score:		17	16	16





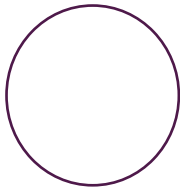
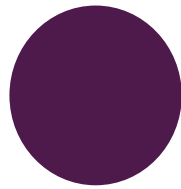
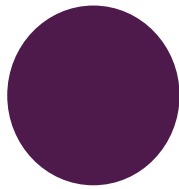
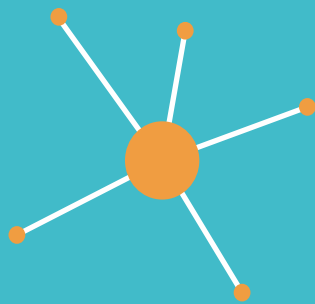
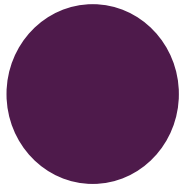
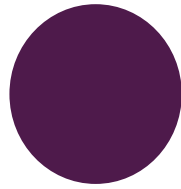
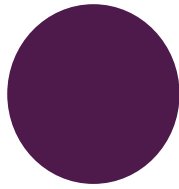
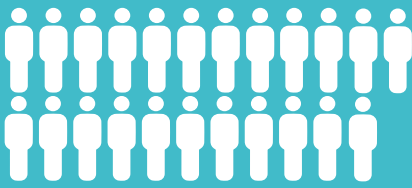
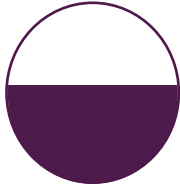
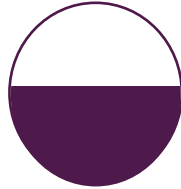
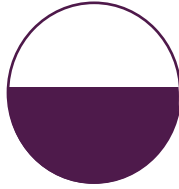

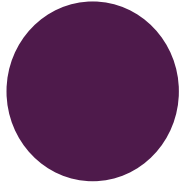
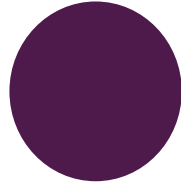
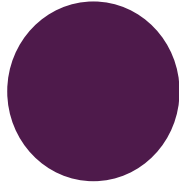

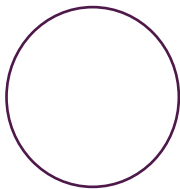
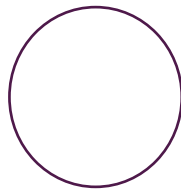
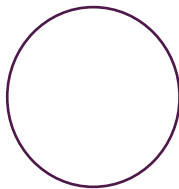

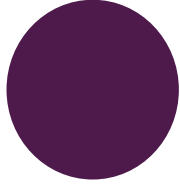
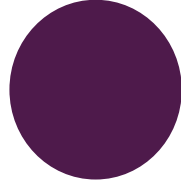
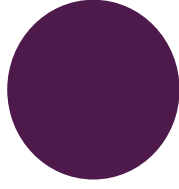
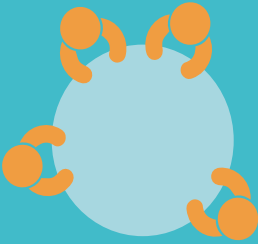
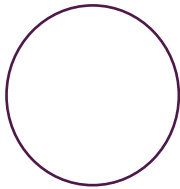
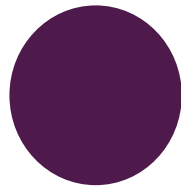
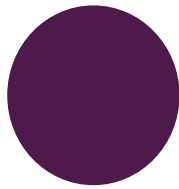
See next board for remaining evaluation criteria results.




- Key:
-  Less positive (1 pt.)
 -  Positive (2 pts.)
 -  More positive (3 pts.)

Evaluation results con't...

Eastwood - OCC corridor

evaluation criteria

		Existing Service Improvements	BRT- Mixed Traffic	BRT- Bus Lane
				
Transit Supportive Plans & Policies				
Serves Existing Activity Centers				
Population & Employment Density		 14,652	 15,257	 15,257
Affordable Housing		 28%	 28%	 28%
Ability of Region to Fund Capital & Operating				
Roadway Suitability & Pedestrian Environment				
Stakeholder Comments				
Sub total score:		14	18	18
Total score:		31	34	34

- Key:
-  Less positive (1 pt.)
 -  Positive (2 pts.)
 -  More positive (3 pts.)

Locally Preferred Alternative

- BRT-Mixed Traffic alternative recommended for each corridor.
- Both corridors, combined, recommended as the single Locally Preferred Alternative.
- LPA recommendation is supportive of the SMTC's Long Range Transportation Plan, SMART 1 evaluation criteria results, City of Syracuse re-zoning efforts, and community input.



Conceptual Station Plans - West

1

Salina / Kirkpatrick



2

Bellevue



3

Glenwood

Existing Pedestrian Crossing

Proposed Pedestrian Crossing

BRT Shelter Location

Bus Stop Zone

BRT Corridor

Densification Potential

Infill Development Potential

Development Potential

A 500 foot radius is shown around each potential station location.

SMART1

syracuse metropolitan area regional transit study

phase 1

Conceptual Station Plans - East



4

Hospitals

5

St. Joseph's
BRT lines cross here,
passengers can transfer
between lines.



6

Hickok

Existing Pedestrian Crossing

Proposed Pedestrian Crossing

BRT Shelter Location

Bus Stop Zone

BRT Corridor

Densification Potential

Infill Development Potential

Development Potential

A 500 foot radius is shown around each potential station location.

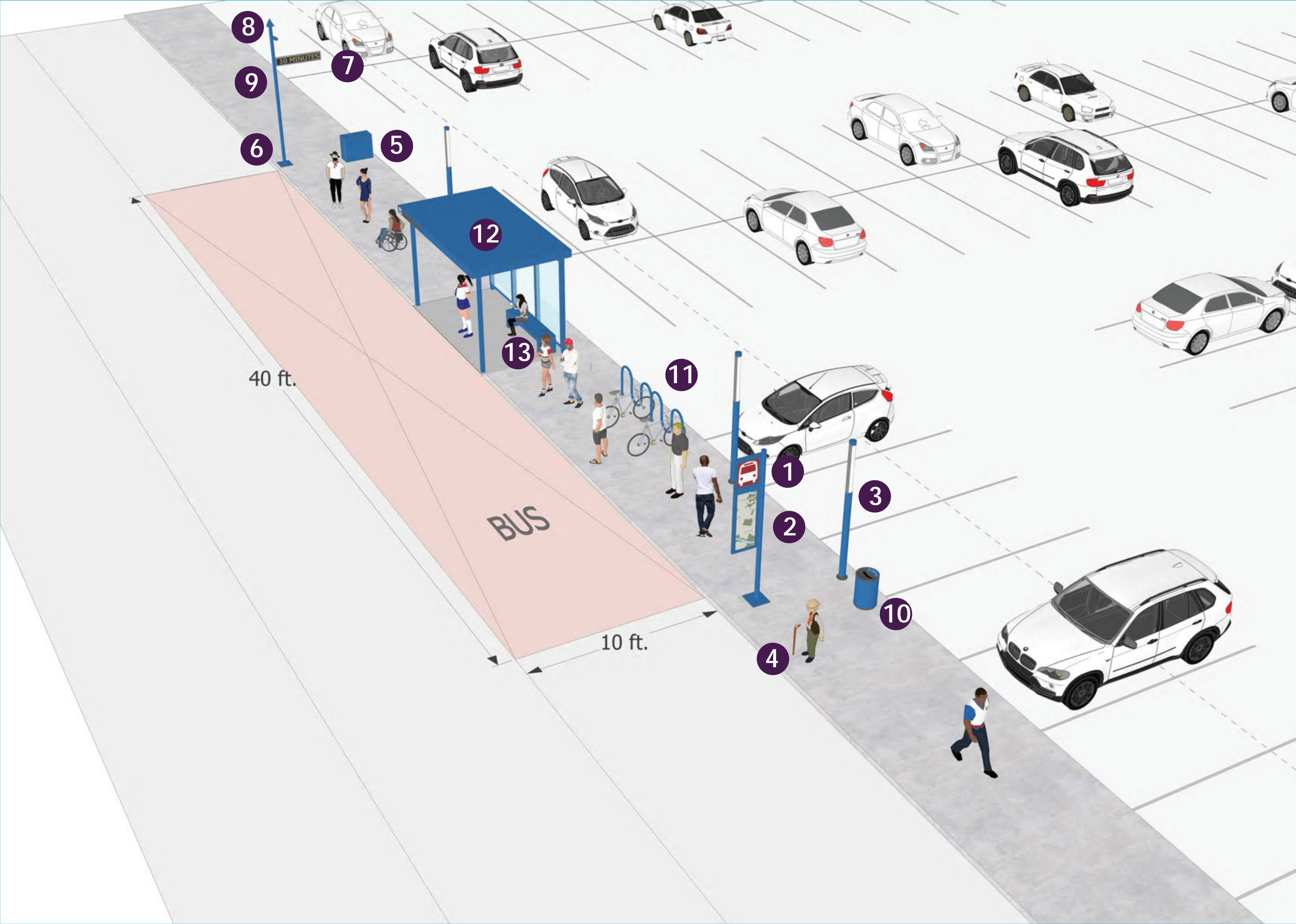
SMART1

syracuse metropolitan area regional transit study
phase 1

Station typology:

Medium

Stations with compact shelters along with a moderate level of amenities fall within this typology. The example model below highlights the recommendations for BRT shelters with most, if not all, amenities to provide the premium BRT experience.



Note: Above diagram is a schematic representation of the proposed amenities and does not depict the actual design of the station.

List of amenities

- | | | | |
|---|---|----|---------------------------|
| 1 | Flag marker | 9 | Security camera |
| 2 | Backlit panel | 10 | Trash receptacles |
| 3 | Pedestrian lighting | 11 | Bicycle rack |
| 4 | ADA accessibility | 12 | Bus shelter (medium size) |
| 5 | Communication and power conduit cabinet | 13 | Shelter seating |
| 6 | Tech. pylon | | |
| 7 | Real time display | | |
| 8 | Cellular router | | |

Station typology:

High

Stations with large shelters and high level of amenities fall within this typology. The example below highlights recommendations for BRT shelters with most amenities to provide a premium BRT experience.



Note: Above diagram is a schematic representation of the proposed amenities and does not depict the actual design of the station.

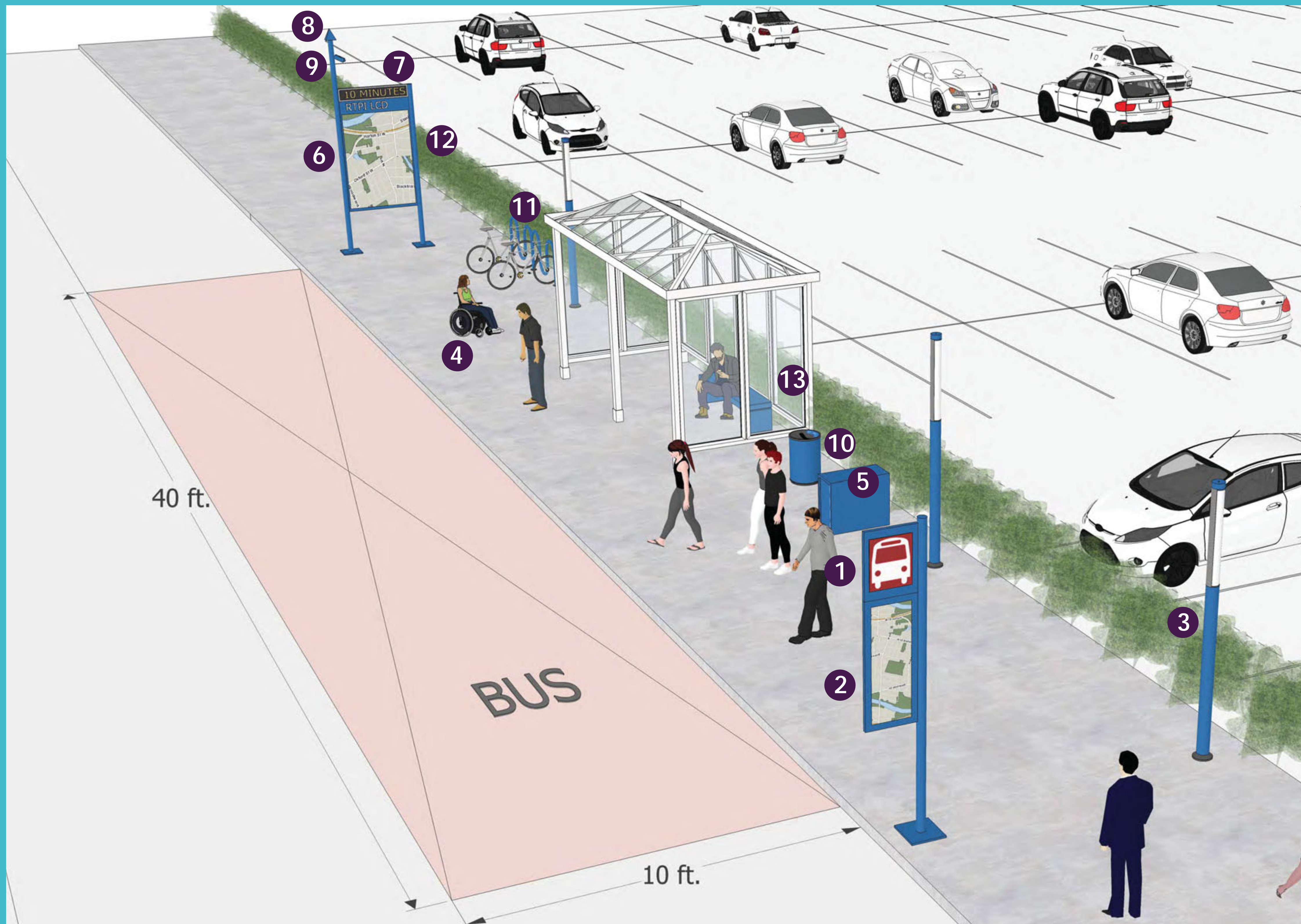
List of amenities

- | | |
|---|-----------------------------|
| 1 Flag marker | 9 Security camera |
| 2 Backlit panel | 10 Trash receptacles |
| 3 Pedestrian lighting | 11 Bicycle rack |
| 4 ADA accessibility | 12 RTPI LCD |
| 5 Communication and power conduit cabinet | 13 Bus shelter (large size) |
| 6 Tech. pylon | 14 Shelter seating |
| 7 Real time display | |
| 8 Cellular router | |

Station typology:

High with existing shelter

The existing shelter facility at the station area is integrated with the required amenities to provide improved passenger experience. The example model below highlights recommendations for BRT stations with existing indoor waiting areas.



Note: Above diagram is a schematic representation of the proposed amenities and does not depict the actual design of the station.

List of amenities

- | | |
|---|----------------------|
| 1 Flag marker | 9 Security camera |
| 2 Backlit panel | 10 Trash receptacles |
| 3 Pedestrian lighting | 11 Bicycle rack |
| 4 ADA accessibility | 12 RTPI LCD |
| 5 Communication and power conduit cabinet | 13 Shelter seating |
| 6 Tech. pylon | |
| 7 Real time display | |
| 8 Cellular router | |

What's next in SMART 1?



2017



- Complete planning level implementation and financing plan.



- Finalize report w/ identified LPA.

2018



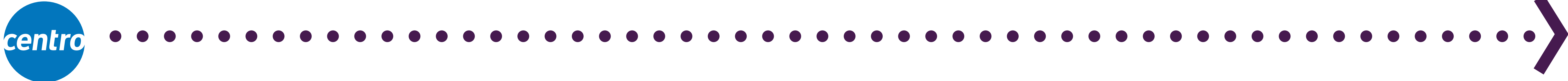
- Acknowledge report as complete and adopt LPA in area's Long Range Transportation Plan.



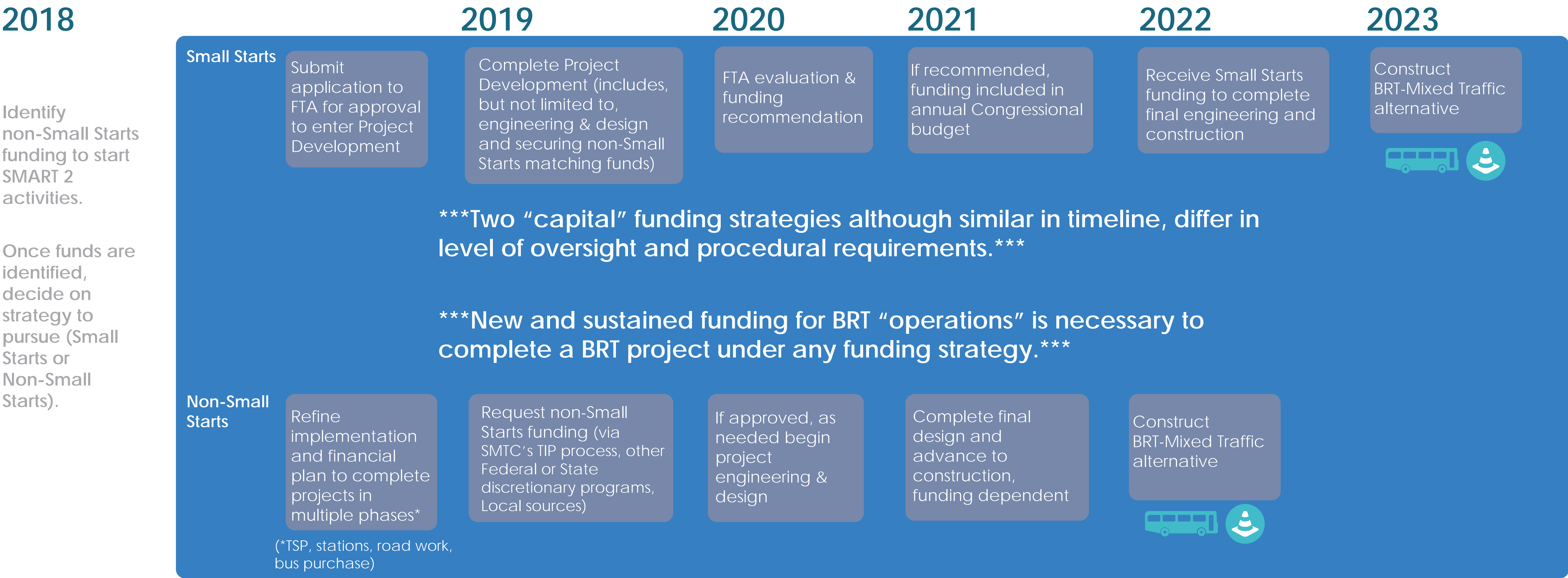
- Transition to SMART 2

SMART 2 implementation

Primary responsibility. Others involved as needed, such as City of Syracuse.



Optimal schedule



(*TSP, stations, road work, bus purchase)

Frequently Asked Questions

What is the SMTC?

The Syracuse Metropolitan Transportation Council (SMTC) is the State-designated Metropolitan Planning Organization (MPO) for Onondaga County and portions of Oswego and Madison Counties. The SMTC is the region's forum for cooperative decision making when it comes to developing transportation plans, programs and recommendations. The SMTC is made up of officials representing local, state and federal governments or agencies with an interest in comprehensive transportation policies and services.

What area do you cover?

The area that the SMTC covers is called its Metropolitan Planning Area (MPA). The MPA includes all of Onondaga County, the Town of Sullivan in Madison County and the Towns of Hastings, Schroepfel and West Monroe, plus a small area of the Town of Granby, in Oswego County.

What are the goals of the SMART 1 study?

Consensus Building:

- Involve a large and diverse mix of community members through an unbiased, transparent and meaningful outreach program.
- Support the planning goals of SMTC, Centro, City of Syracuse, NYSDOT and other important stakeholders.
- Adopt a Locally Preferred Alternative (LPA) that is technically feasible, includes a sound financial plan, and has the broad support of the Centro, SMTC, City of Syracuse and other key stakeholders.
- Follow standard FTA procedures to facilitate the transition to the project development process and assure project competitiveness in the Small Starts program.

Transportation:

- Build on the analysis and conclusions of the Syracuse Transit System Analysis and confirm the selection of the preliminary corridors.
- Improve the utility of transit service for riders by reducing travel time, improving headways, expanding route coverage, and generally increasing travel options.
- Develop a plan for a high-intensity transit investment that is preferred for trips to and within downtown Syracuse because it has:
 - Frequent service
 - Convenient and accessible alignments and stops
 - Comfortable vehicles
 - Seamless connections to other regional transit services.

Development:

- Support revitalization of Syracuse and key neighborhoods along the selected corridors by encouraging transit oriented development and infill.
- Utilize transit to improve connectivity between key locations in Syracuse supporting economic, cultural, social, and health-related development opportunities.
- Plan to increase the effectiveness of transit in Syracuse, providing a vision for how it could contribute to a vibrant, inclusive, and prosperous city.

How are you funded and where does that money come from?

The SMTC's annual planning budget is approximately \$1.2 million. Funds are provided by both the Federal Highway (FHWA) and Federal Transit Administrations (FTA) to the New York State Department of Transportation (NYSDOT). NYSDOT allocates funding to the Metropolitan Planning Organizations throughout New York State on a formula basis. This funding is used strictly for metropolitan transportation planning activities and is not used for capital expenses.

How is the SMART 1 study being funded?

The SMART 1 planning study is being funded through the SMTC's annual planning budget mentioned earlier and in part through a similar statewide transportation planning allocation from NYSDOT known as SPR (Statewide Planning & Research). Funding is used strictly for metropolitan and/or statewide transportation planning activities and is not used for capital expenses. This study does not impact Centro's operating budget.



Frequently Asked Questions

When will this project be completed?

The SMART 1 planning project is expected to be completed in 2017 with the recommendation of a Locally Preferred Alternative. At the conclusion of the SMART 1 study, if desired, an additional environmental review and design phase of the Locally Preferred Alternative could be advanced by Centro, or another entity.

How is the SMART 1 study different from the I-81 Viaduct Project?

The SMART 1 study will focus solely on the assessment of an enhanced transit system (BRT or LRT) operating along two corridors that may have the conditions necessary to sustain high ridership. The I-81 Viaduct Project is focused on a select area of the interstate that is nearing its lifespan. In addition to recommending pursuing higher-intensity transit services, the 2014 STSA also recommended a commuter express service for Interstate 81. Although interstate express bus service is not included in SMART 1, the planning study does not preclude Centro or NYSDOT from advancing the express bus concept. As plans for both I-81 and an enhanced transit system progress, SMTC, Centro, and NYSDOT will continue to communicate frequently. Both Centro and NYSDOT are members of the SMART 1 Study Advisory Committee, while SMTC and Centro are members of NYSDOT's I-81 Stakeholder Advisory Working Groups.

How were the two corridors selected?

The SMART 1 study builds upon the analysis and findings of the 2014 Syracuse Transit System Analysis (STSA) completed by NYSDOT as a component of The I-81 Challenge. The goal of the STSA was to develop a strategy to assist the Syracuse metropolitan area in achieving a balanced transportation system that supports economic growth, improves quality of life, and supports the vision of the communities it serves. The analysis identified six transit improvement corridors and evaluated three different types of improvements (Base Build, BRT or LRT) on each. Each corridor/mode combination was evaluated using numerous evaluation criteria in 5 categories: mobility improvements, economic development impacts, environmental benefits, cost effectiveness, and supportive land use. Six of the top 10 corridor/mode combinations listed in the STSA relate to two corridors: 1) James Street/South Avenue and 2) Destiny/RTC to University Hill. Given this, these two corridors were selected for further analysis in the SMART 1 study.

What area is being looked at?

The SMART 1 planning study is focusing efforts along two corridors primarily in the City of Syracuse

- 1) the Regional Transportation Center (RTC) - Syracuse University and
- 2) Eastwood - Onondaga Community College.

Why is the SMTC leading this project and not Centro?

As the area's Metropolitan Planning Organization charged with carrying out the continuous, comprehensive and cooperative transportation planning process, the SMTC agreed to complete the SMART 1 planning study on behalf of Centro. Centro submitted the SMART 1 study application through the SMTC's annual work program known as the Unified Planning Work Program. There is no cost to Centro to have SMTC complete this study (see previous question: "How is the SMART 1 study being funded?").

How can I become involved in this project?

To ensure that interested persons, organizations, and agencies have an opportunity to be involved in the study, the SMTC, with the assistance of the Study Advisory Committee, have designed an extensive public participation effort. Efforts will include open houses, focus groups, community/neighborhood meetings, surveys, and other events that have yet to be planned. Join our SMART 1 e-mail list (send an e-mail to contactus@smtcmpo.org) and you will receive notices of upcoming meetings and other project-related events. Keep checking our website (www.smtcmpo.org/SMART) for project status updates and notices of upcoming SMART 1 public meetings. All SMTC and SMART 1 meetings are open to the public.



Frequently Asked Questions

Who is on the Study Advisory Committee?

A SMART 1 Study Advisory Committee (SAC) was established and will meet on a regularly scheduled basis. The SAC's role will be to advise the SMTC on the technical content of deliverables and to provide needed input and guidance throughout the study. The SAC is comprised of representatives from the following agencies:

- Central New York Regional Transportation Authority (Centro);
- City of Syracuse - Planning Division;
- Downtown Committee Inc. of Syracuse;
- New York State Department of Environmental Conservation (NYSDEC);
- New York State Department of Transportation (NYSDOT);
- Syracuse – Onondaga County Planning Agency (SOCPA); and
- University Hill Corporation.

What about OnTrack?

OnTrack was a unique rail service that operated in Syracuse from 1994 to 2007, with its final years of operation as a special events service during Syracuse University Carrier Dome events. Similar to the discussion on the interstate express bus service (see How is the SMART 1 study different from the I-81 Viaduct Project?), SMART 1 does not preclude the advancement of a special events rail service between Syracuse University and Destiny USA. However, the concept of commuter rail or special events rail service is not included in SMART 1 as the concept(s) ranked very low in the 2014 STSA.

What is a Locally Preferred Alternative?

A Locally Preferred Alternative is the community members' and local officials' preferred option that emerges from the evaluation of modes and alignments for a particular corridor in the planning process. Once a Locally Preferred Alternative is identified, the area's Long Range Transportation Plan will be updated to include the enhanced transit service.

What is BRT?

BRT is an innovative, high capacity, lower cost public transit solution that can significantly improve urban mobility. This permanent, integrated system uses buses or specialized vehicles on roadways or dedicated lanes to quickly and efficiently transport passengers to their destinations, while offering the flexibility to meet transit demand. BRT systems can easily be customized to community needs and incorporate state-of-the-art, low-cost technologies that result in more passengers and less congestion.

What is LRT?

Light rail transit, often known simply as LRT, began as an evolutionary development of the streetcar to allow higher speeds and increased capacity. Light rail transit is characterized by its versatility of operation, as it can operate separated from other traffic below grade, at-grade, or on an elevated structure, or can operate together with motor vehicles on the surface. Service can be operated with single cars or multiple-car trains. Electric traction power is typically obtained from an overhead wire.



Frequently Asked Questions

Will there be a removal of existing bus stops on the two corridors to accommodate BRT or LRT?

If a BRT or LRT system is constructed, there may be a removal of a few stops that will reduce the amount of time for passengers to travel to their destination. Riders will experience a much shorter wait time at stops. This improved level of service and convenience will be provided in exchange for fewer bus stops. However, stops may also remain for local non-BRT or LRT service.

Will other routes be eliminated/consolidated in exchange for the BRT or LRT?

Presently, all existing bus routes, stop locations and shelters along the two corridors will not change. If an enhanced transit service advances to construction some of the routes, stop locations and frequencies along the corridor will very likely change. These items will be taken under consideration in the SMART 1 planning study.

Will the SMART 1 study result in improvements to the existing Centro service?

Centro is one of the SMTC's member agencies and its Board of Members is responsible for approving any changes in service. The SMART 1 study may recommend improvements to the existing transit service provided by Centro, however, the SMTC as an agency has no role on Centro's Board of Members and, therefore, no direct influence on proposed service changes at Centro.

Will the fares for BRT or LRT ridership be more than the existing bus fares on these routes?

At this time it is unknown if fares would increase with the development of a BRT or LRT system. However, the existing fares in no way will be impacted by this planning study. Capital, operating and maintenance costs will be examined in the SMART 1 planning study.

What other cities have implemented a successful BRT or LRT?

There are several BRT systems operating nationwide, with 4 of these systems operating in mid-size cities like Albany, NY; Cleveland, OH; Hartford, CT; and Eugene, OR.

Similarly, there are also various LRT systems in operation throughout the country, although larger in size, some of which are found in Newark, NJ; Phoenix, AZ; Portland, OR; Charlotte, NC; Salt Lake City, UT; and Los Angeles, CA.



Appendix B: Meeting presentation

SMART 1 – Public Meeting #3

November 2, 2017



Agenda

- **Who is the SMTC?**
- **SMART 1 project overview**
- **Transit mode screening**
- **Locally Preferred Alternative**
- **Next steps**

Syracuse Metropolitan Transportation Council

An Introduction:

- Who we are & what we do



What is an MPO?

- A Metropolitan Planning Organization, or MPO, is a transportation **policy-making and planning body** made up of representatives of local, state, and federal government and transportation authorities.



What is an MPO?

- A federal requirement for urbanized areas with a population of 50,000 or more (based on most recent Census)
- The MPO is charged with **comprehensive, cooperative, and continuous** transportation planning for a metropolitan area.



Who is the SMTTC?

- **Policy Committee members:**

- CenterState Corporation for Economic Opportunity
- CNY Regional Planning & Development Board
- CNY Regional Transportation Authority (Centro)
- City of Syracuse
 - Office of the Mayor
 - Common Council
 - Planning Commission
- New York State
 - Department of Environmental Conservation
 - Department of Transportation
 - Empire State Development Corporation
 - Thruway Authority
- Onondaga County
 - Office of the County Executive
 - Legislature
 - Planning Board

- The Policy Committee (not the staff) is the designated MPO.

Where is the SMTC's planning area?

- All of Onondaga County
- Town of Sullivan in Madison County
- Towns of West Monroe, Hastings, Schroepfel, and small portion of Town of Granby in Oswego County



What does the SMTC do?



- **Comprehensive** transportation planning includes

- Automobiles and the road network
- Freight
- Transit
- Bicycling
- Walking

What does the SMTC do?

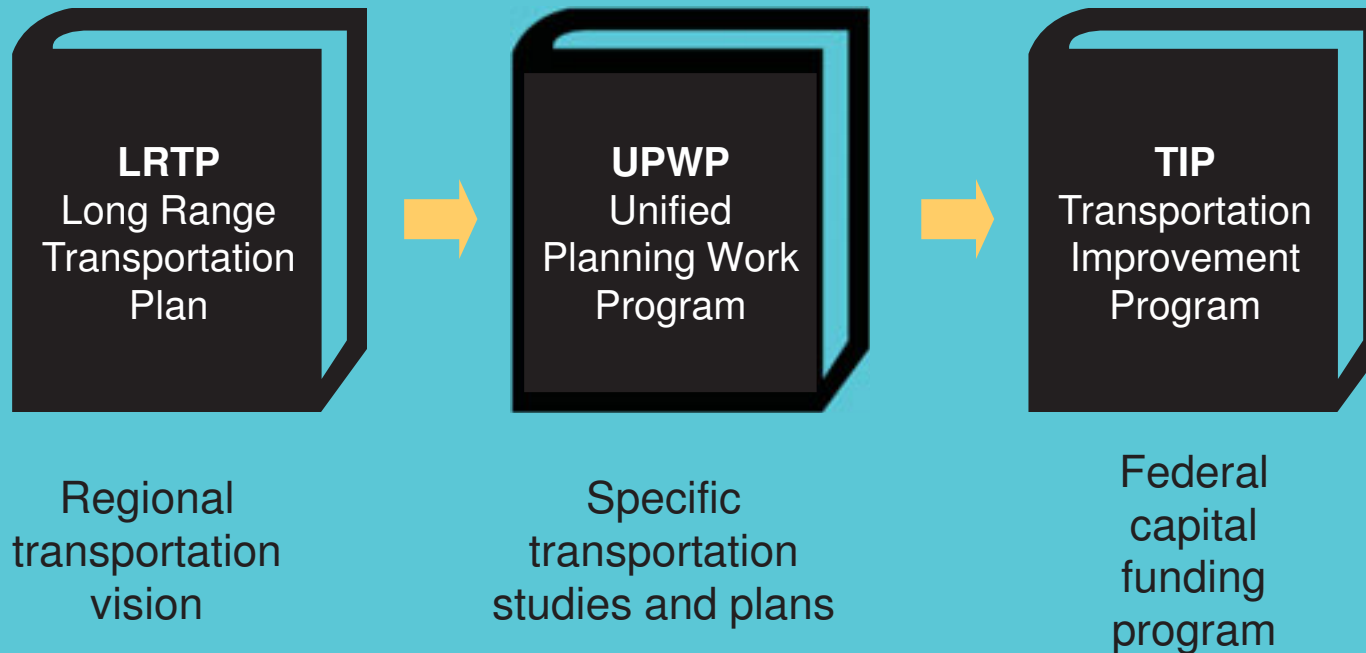


- **Cooperative** transportation planning includes

- Coordinating between federal, state, and local agencies to develop transportation plans and programs;
- Provide an opportunity for citizens to participate in the planning process.

What does the SMTC do?

- **Continuous** transportation planning



Why an MPO process?

The MPO provides a forum to:

- Collaborate between governments, interested parties, and the public
- Forecast the region's future
- Plan to reflect the region's vision
- Prioritize transportation needs
- Balance needs and funding availability
- Invest funds appropriately
- Express community opinion through member agencies and elected officials

Examples of SMTTC planning studies

- Erie Canalway Trail Study
- *The I-81 Challenge* Public Participation
- City of Syracuse Wayfinding Study
- Bicycle Commuter Corridor Study
- Butternut Street Corridor Study
- This study



SMART 1 project overview

SMART 1 Study Advisory Committee

SMART 1 Study Advisory Committee:

- Centro
- City of Syracuse – Planning Division
- Downtown Committee of Syracuse
- NYS Department of Environmental Conservation (NYSDEC)
- NYS Department of Transportation (NYSDOT)
- Syracuse-Onondaga County Planning Agency (SOCPA)
- University Hill Corporation



Public engagement

Community input is essential to the success of this study!

Community engagement has included:

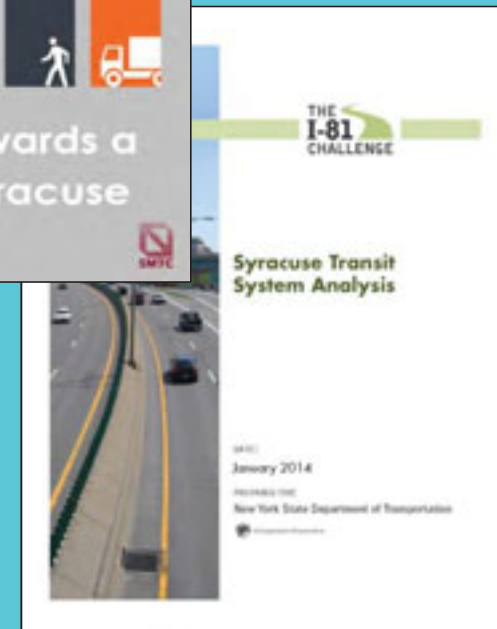
- 9 pop-up meetings at targeted stop locations along the study corridors
- 5 focus group meetings on various topics
- Public meeting on February 24, 2016
- Public meeting on November 10, 2016
- Project website, mail/e-mail, and Facebook page
- SMTC staff have attended 3 community or neighborhood group meetings by invitation



Why conduct the SMART 1 study?

Enhanced transit is a community priority:

- **Community request** for expanded transit options.
- **SMTC's 2050 Long Range Transportation Plan** includes an “enhanced transit system” as a regionally significant priority project
- **Syracuse Transit System Analysis (STSA)**, recommended higher-intensity transit services along the two corridors under study



STSA Transit Enhancement Corridors



Six corridors were identified as likely to support increased transit ridership. Criteria considered:

- Existing transit ridership and mode share
- Population and employment density
- Households with access to one or no vehicles
- Potential for commuter trips
- Commute times
- Household income
- Existing plans

STSA Recommendations

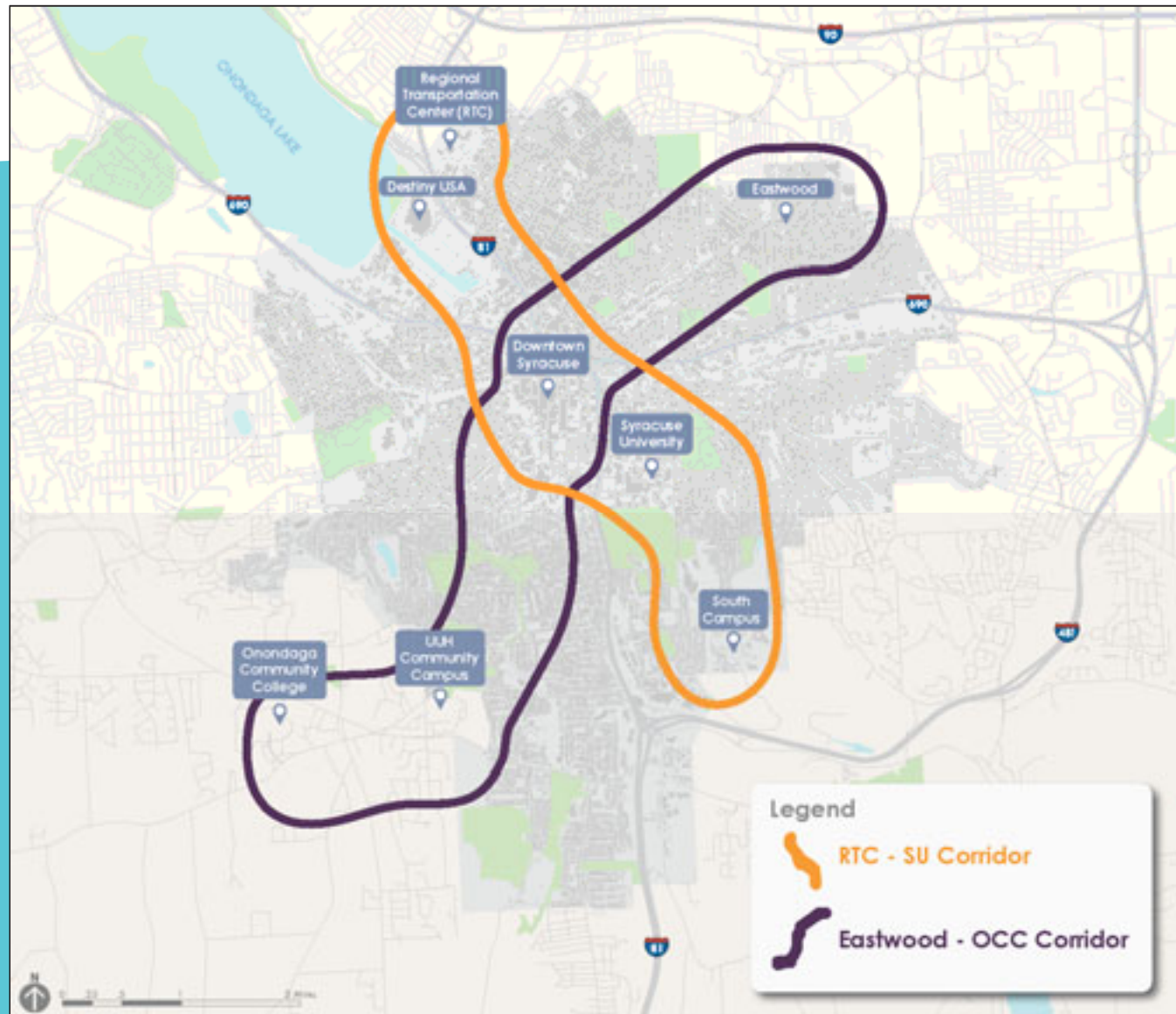
➔ **Pursue higher-intensity transit services along the Destiny USA/RTC to Syracuse University and James Street/South Avenue Corridors.**

- Begin a **commuter-based service along I-81** from Central Square to Downtown/University Hill.
- Provide **lower-intensity service enhancements** in remaining corridors.
- Construct a **new transit hub on University Hill** with supporting infrastructure.



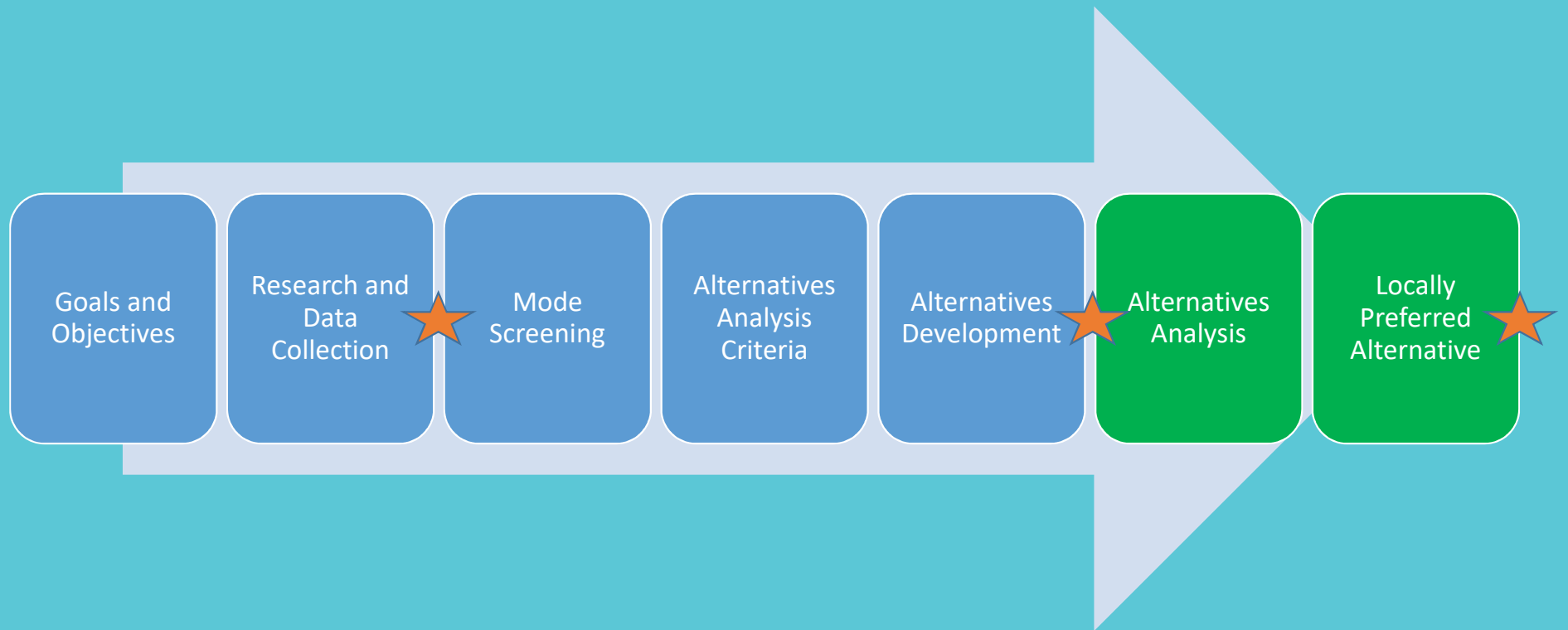
SMART 1 Corridors

- Eastwood to Onondaga Community College
- Regional Transportation Center to Syracuse University



SMART 1 Project Status

Project Process



Local Characteristics

Characteristics that influence increase in ridership:

- Existing transit usage
- Population density
- Land uses
- Households in poverty
- Zero-vehicle households
- Population under 25 years old
- Population over 65 years old



Goals & Objectives

Consensus Building Goals

- Encourage diverse mix of community members

Transportation Goals

- Improve the utility of transit service for core riders

Development Goals

- Support revitalization of Downtown and neighborhoods by improving connectivity along the selected corridors



Mode Screening

Transit Modes

Five transit modes were evaluated as a first step toward selecting an LPA:

- Light Rail Transit (LRT)
- Modern Streetcars
- Bus Rapid Transit (BRT) – Busway
- BRT – Bus Lane
- BRT – Mixed Traffic



Light Rail Transit (LRT) & Modern Streetcars

Streetcars and Light Rail Transit

- require their own rail infrastructure and
- have high initial costs, but
- can be a worthwhile investment where densities and ridership levels warrant it



LRT
CTrain, Calgary, Alberta



Streetcar
Portland Streetcar, Portland, Oregon

Bus Rapid Transit (BRT)

Bus Rapid Transit

- Moderate investment that can enhance the Eastwood – OCC and RTC – SU corridors.



Mixed Lane
BusPlus, Albany, NY



Bus-only lanes
Select Bus Service, The Bronx, NY



Busway
CTfastrak, Hartford, Connecticut

Criteria for Mode Screening

Criteria for eligibility to enter the Federal Transit Authority (FTA) Small Starts program using the simplified “warrants” approach:

- **Dedicated right-of-way:** Does adequate **ROW** exist to construct the project?
- **Total project capital cost:** Less than **\$300,000,000**
- **Local funding:** Is there a source to cover required “**match**”?
- **Existing riders on corridor:** At least **3,000**
- **Limited operating cost increases:** Less than **5%** of current operating costs

Mode Screening RTC – SU corridor

		LRT 	Modern Streetcar 	BRT-Busway 	BRT-Bus Lane 	BRT- Mixed Traffic 
Dedicated ROW North Segment 		✓ Available	⊘ N/R	✓ Available	⊘ N/R	⊘ N/R
Dedicated ROW South Segment 		✗ Not Available	⊘ N/R	✗ Not Available	⊘ N/R	⊘ N/R
Total Cost (in millions) 		✗ \$457	✗ \$426	✓ \$190	✓ \$25	✓ \$10
Local funding (in millions) 		✗ \$357	✗ \$326	✗ \$90	✓ \$5	✓ \$2
Existing Ridership 		✓ 3,726	✓ 3,726	✓ 3,726	✓ 3,726	✓ 3,726
Operating Cost Increase 		✗ 26%	✗ 22%	✗ 18%	✗ 6%	✓ 5%
Further Study? 		✗ No	✗ No	✗ No	✓ Yes	✓ Yes

Mode Screening Eastwood – OCC corridor

		LRT 	Modern Streetcar 	BRT-Busway 	BRT-Bus Lane 	BRT- Mixed Traffic 
Dedicated ROW North Segment		✓ Available	⊘ N/R	✓ Available	⊘ N/R	⊘ N/R
Dedicated ROW South Segment		✗ Not Available	⊘ N/R	✗ Not Available	⊘ N/R	⊘ N/R
Total Cost (in millions)		✗ \$526	✗ \$491	✓ \$219	✓ \$27	✓ \$11
Local funding (in millions)		✗ \$426	✗ \$391	✗ \$119	✓ \$5	✓ \$2
Existing Ridership		✓ 3,456	✓ 3,456	✓ 3,456	✓ 3,456	✓ 3,456
Operating Cost Increase		✗ 30%	✗ 25%	✗ 20%	✗ 7%	✗ 6%
Further Study?		✗ No	✗ No	✗ No	✓ Yes	✓ Yes

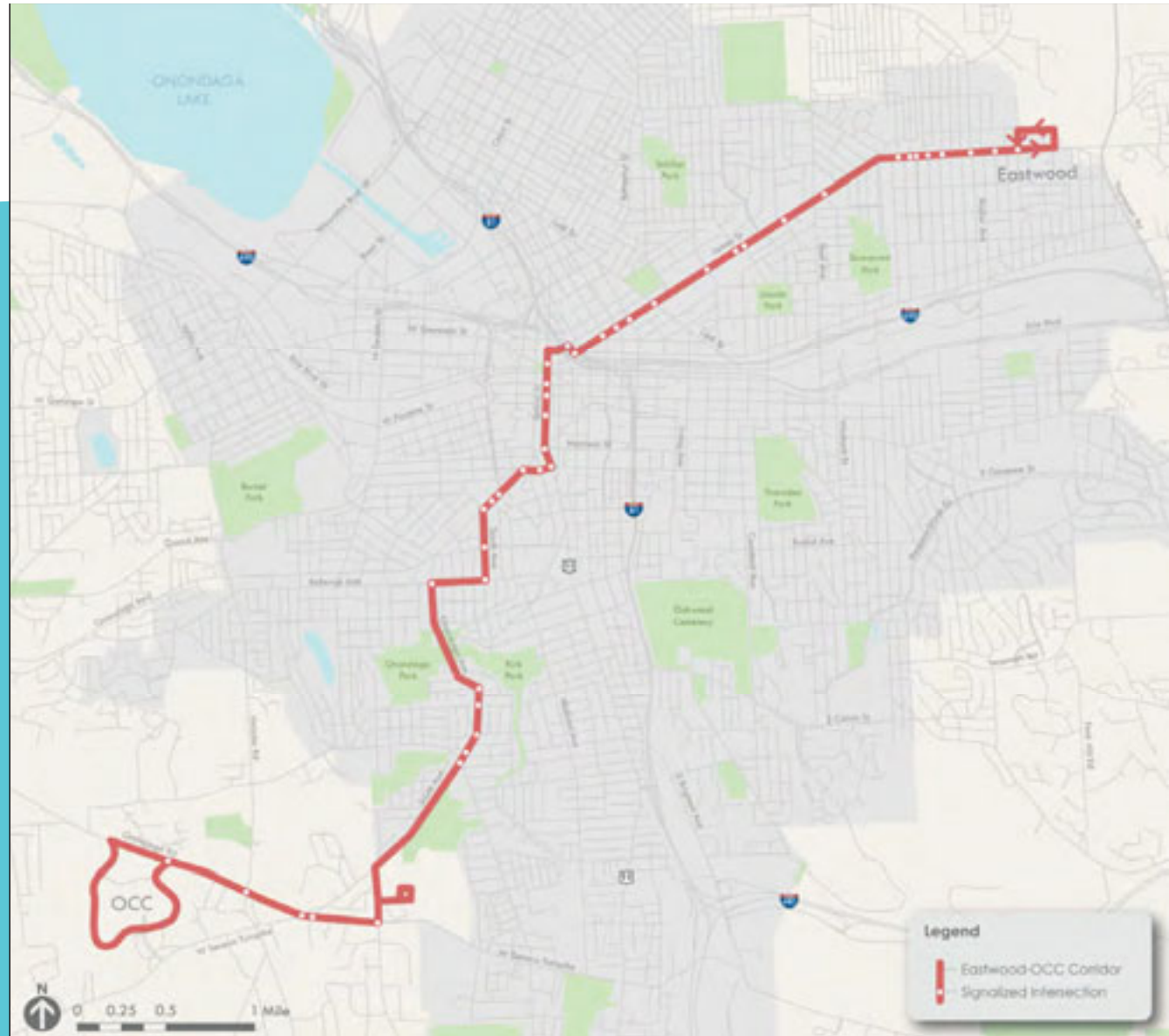


Alternatives Development



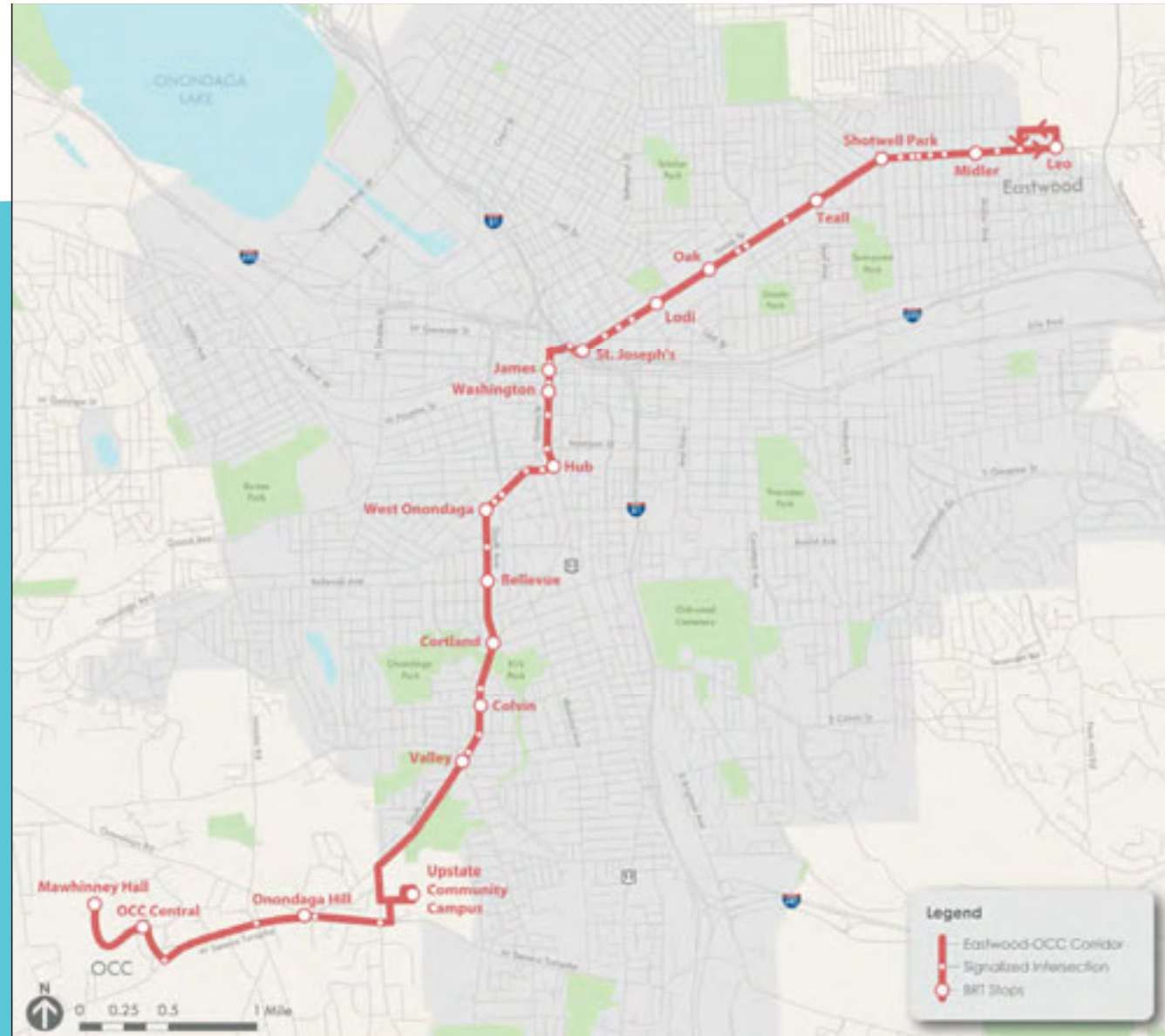
Eastwood – OCC Alt 1: Existing Service Improvements

- Lower cost option – easier to fund, faster to implement
- New shelters
- Transit priority at key locations
- More frequent service, every 20 minutes
- Some improvements in travel time



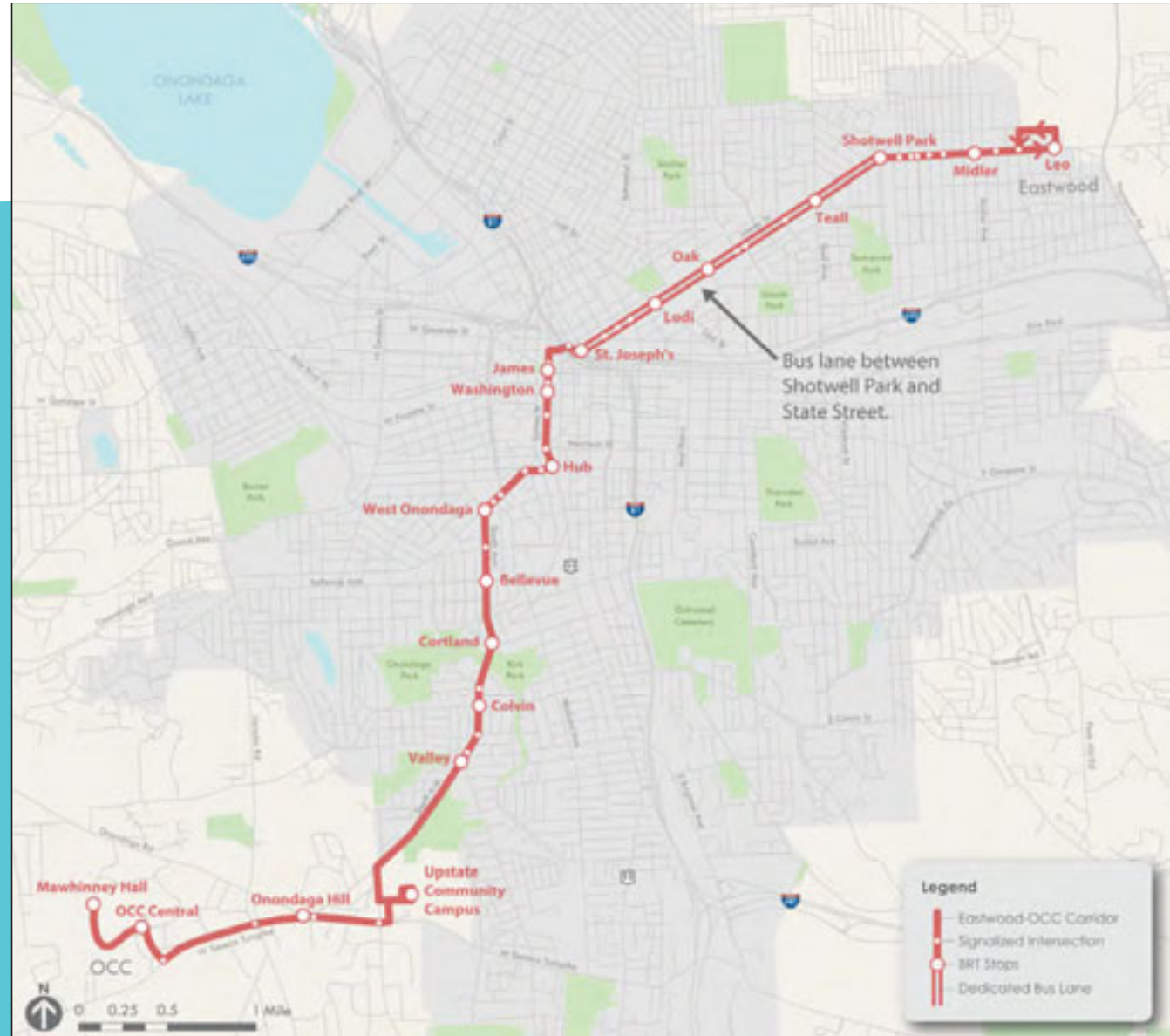
Eastwood – OCC Alt 2: BRT in Mixed Traffic

- Medium cost option
- Added features:
 - New shelters at all BRT stations
 - New branded buses
 - More frequent service, every 10 to 15 minutes
 - Cost effective improvements in travel time



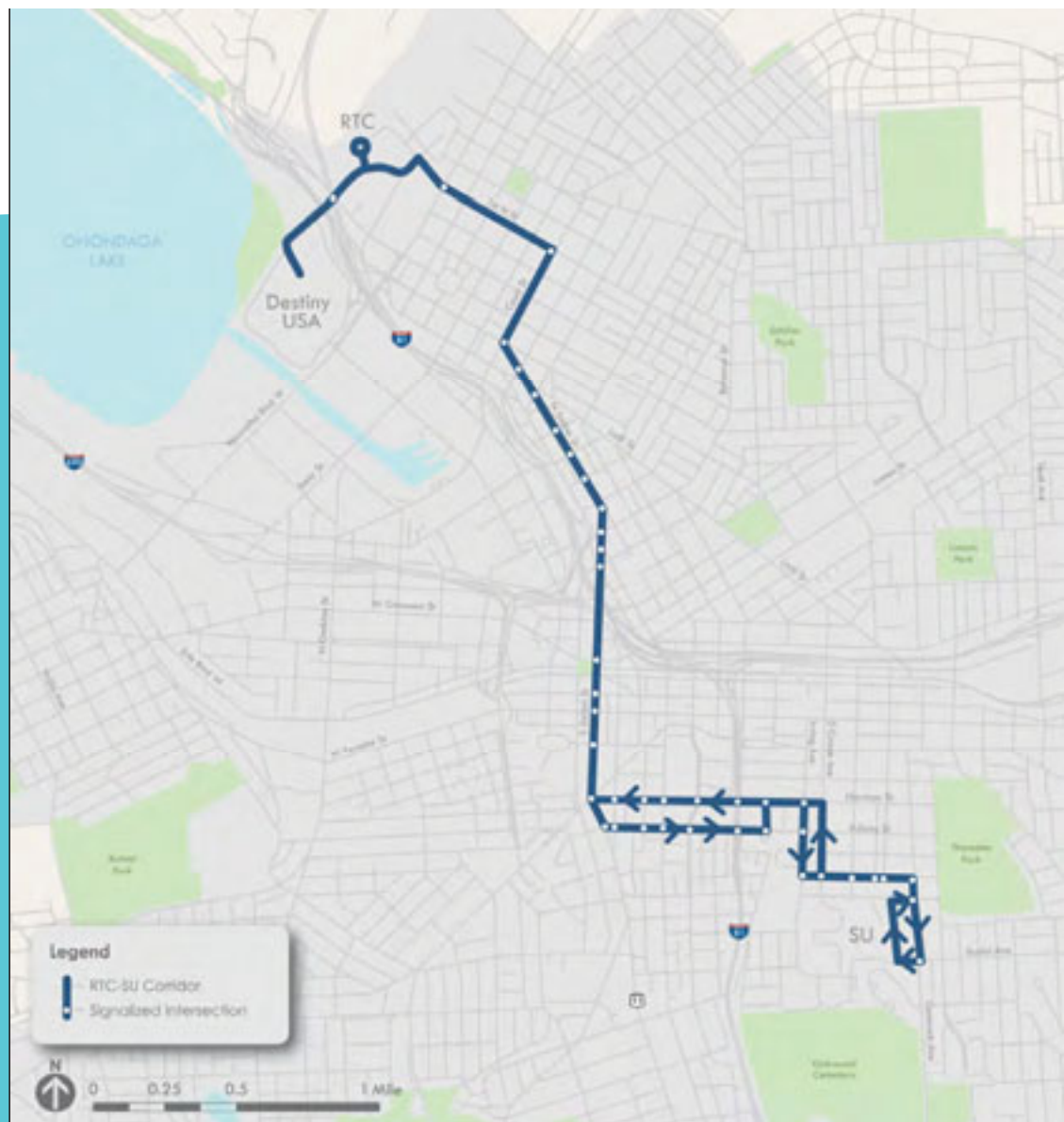
Eastwood – OCC Alt 3: BRT on Bus Lanes

- Higher cost option
- Added features:
 - Where ROW is available, from Shotwell Park to State Street on James Street, new bus only lanes would be provided
 - Highest improvements in travel time



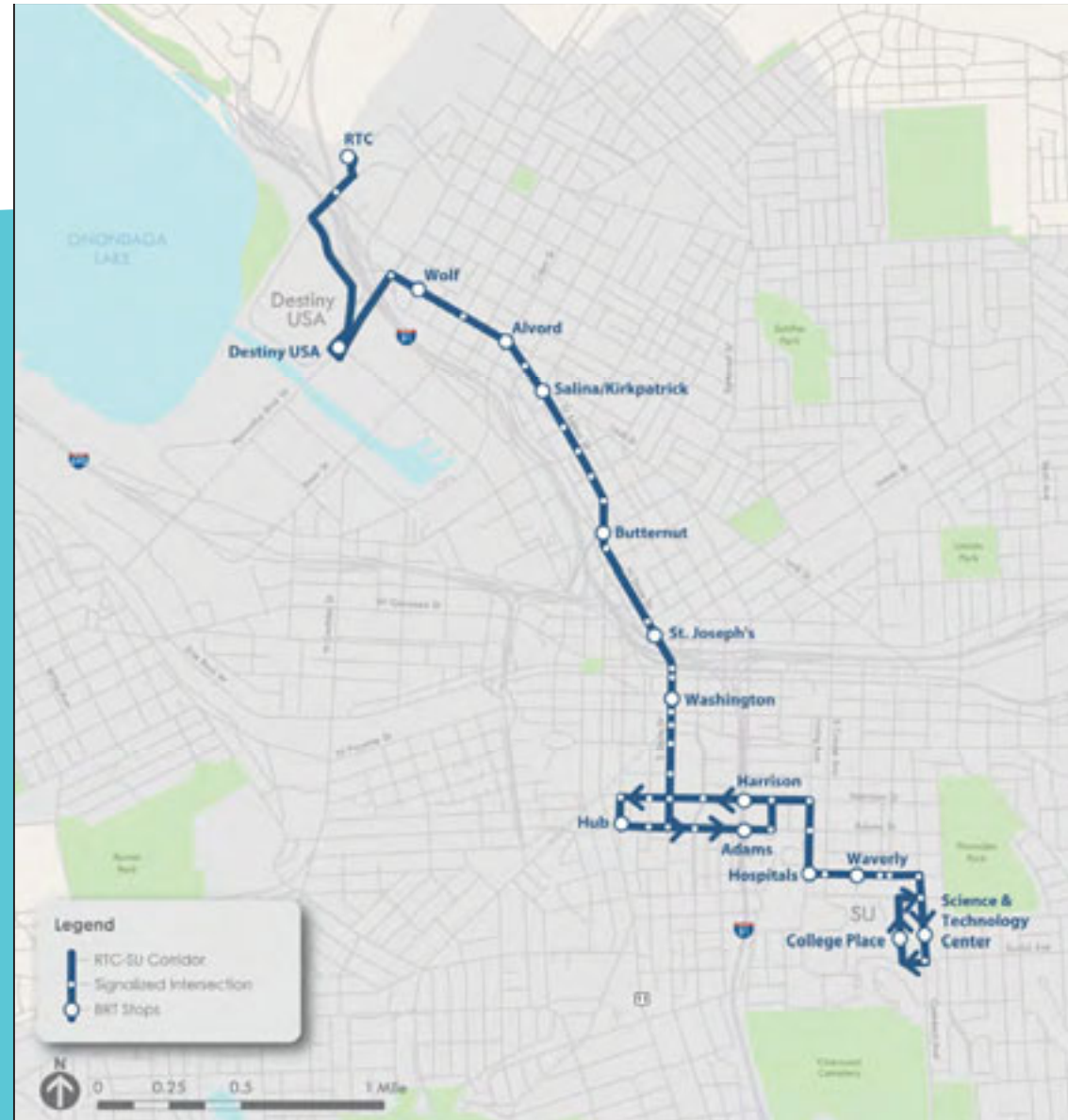
RTC – SU Alt 1: Existing Service Improvements

- **Lower cost option – easier to fund, faster to implement**
- **Added features:**
 - **New shelters**
 - **Transit priority at key locations**
 - **More frequent service, every 20 minutes**
 - **Some improvements in travel time**



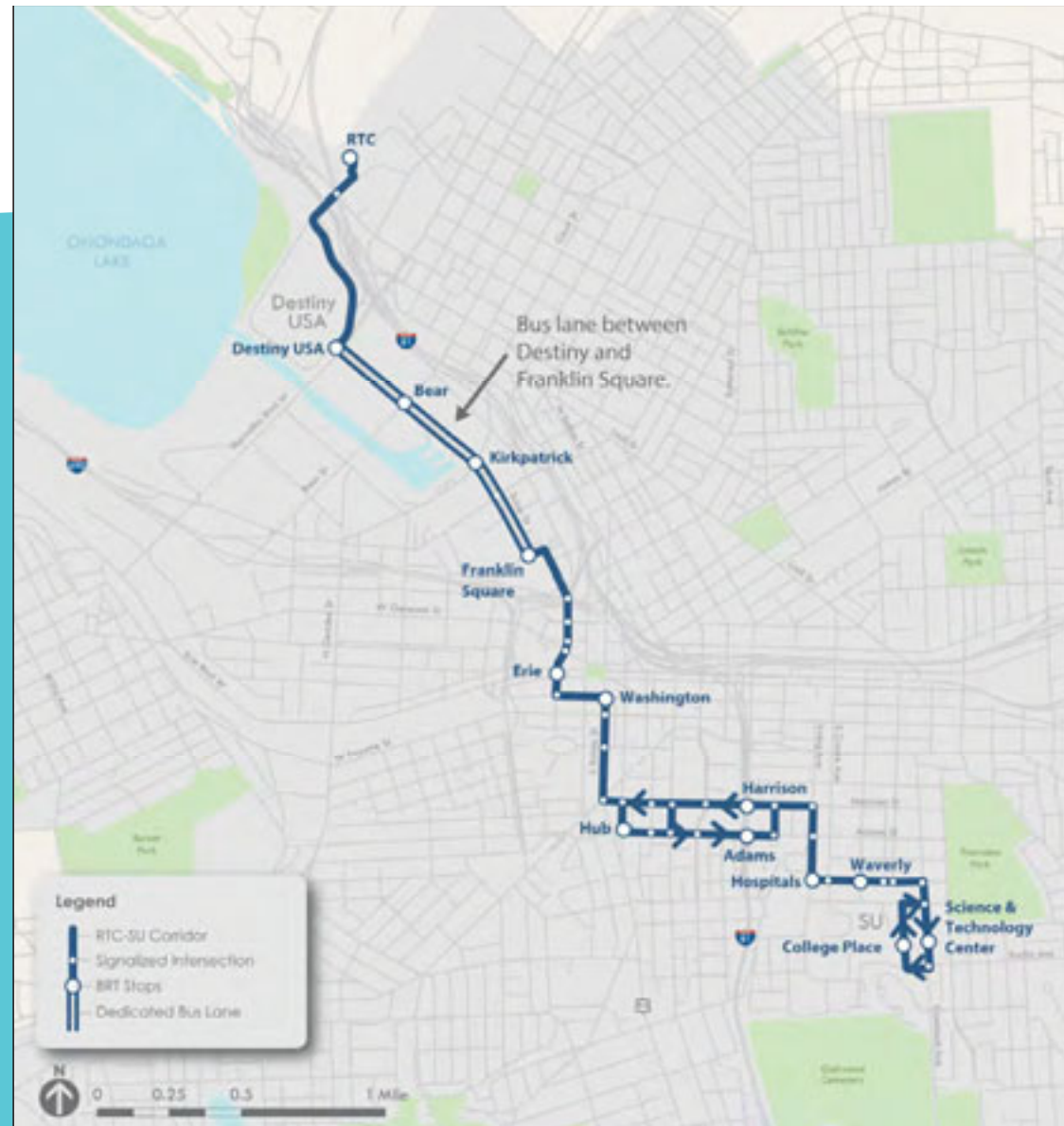
RTC – SU Alt 2: BRT in Mixed Traffic

- Medium cost option
- Added features:
 - New shelters at all BRT stations
 - New branded buses
 - More frequent service, every 10 to 15 minutes
 - Cost effective improvements in travel time



RTC – SU Alt 3: BRT on Bus Lanes

- **Higher cost option**
- **Added features:**
 - Where ROW is available, from Destiny USA to Franklin Square on Solar Street, new bus only lanes would be provided
 - Highest improvements in travel time



Development of LPA




Syracuse's Vision for Enhanced Transit
































- SMTC's *2050 Long Range Transportation Plan* includes an “**enhanced transit system**” as a regionally significant priority project.
- The LRTP goals call for a transportation system that is:
 - Safe
 - Integrated
 - Sustainable
 - Reliable
 - Equitable
- An enhanced transit system is critical to achieving these goals and inspiring people, businesses and institutions to support implementation and funding.
- With this support, regional leadership can commit to spend the money required to transform the transit system.



Evaluation Criteria: Eastwood - OCC




Key:
































-  Less positive (1 pt.)
-  Positive (2 pts.)
-  More positive (3 pts.)

		Existing Service Improvements 	BRT- Mixed Traffic 	BRT- Bus Lane 
Existing Ridership (daily)		 3,636	 3,636	 3,636
Estimated Future Total Ridership (daily)		 4,710	 4,643	 4,740
Travel Time Improvement (minutes)		 no change	 17 to 19 mins.	 19 to 21 mins.
Change in VMT		 -294,183	 -257,442	 -282,240
Riders New to Transit (annual)		 64,440	 60,420	 66,240
Capital Cost		 \$4.7m	 \$19.5m	 \$21.7m
Operating Cost Increase		 \$1.5m	 \$4.7m	 \$4.6m
Sub total score:		17	16	16

Evaluation Criteria: Eastwood - OCC




Key:
































-  Less positive (1 pt.)
-  Positive (2 pts.)
-  More positive (3 pts.)

		Existing Service Improvements 	BRT- Mixed Traffic 	BRT- Bus Lane 
Transit Supportive Plans & Policies 				
Serves Existing Activity Centers 				
Population & Employment Density 		 14,652	 15,257	 15,257
Affordable Housing 		 28%	 28%	 28%
Ability of Region to Fund Capital & Operating 				
Roadway Suitability & Pedestrian Environment 				
Stakeholder Comments 				
Sub total score:		14	18	18
Total score:		31	34	34

Evaluation Criteria: RTC - SU




Key:
































-  Less positive (1 pt.)
-  Positive (2 pts.)
-  More positive (3 pts.)

		Existing Service Improvements 	BRT- Mixed Traffic 	BRT- Bus Lane 
Existing Ridership (daily)		 4,070	 4,070	 4,070
Estimated Future Total Ridership (daily)		 4,710	 4,685	 4,415
Travel Time Improvement (minutes)		 no change	 12 to 17 mins.	 17 to 22 mins.
Change in VMT		 -93,496	 -88,239	 -45,000
Riders New to Transit (annual)		 38,400	 36,900	 20,700
Capital Cost		 \$4.1m	 \$14m	 \$15.6m
Operating Cost Increase		 \$970,000	 \$3.1m	 \$2.8m
Sub total score:		15	15	13

Evaluation Criteria: RTC - SU

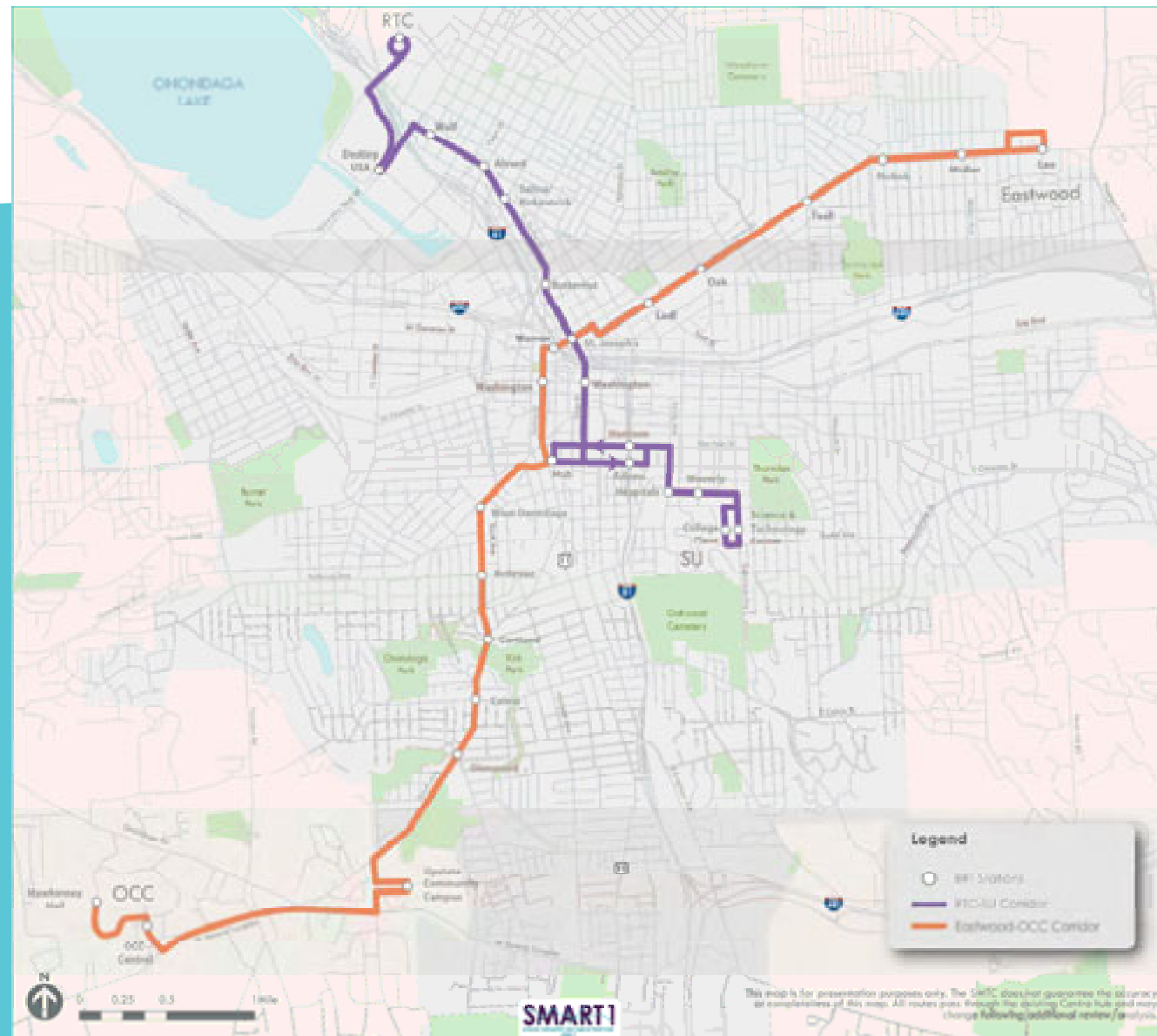
Key:

-  Less positive (1 pt.)
-  Positive (2 pts.)
-  More positive (3 pts.)

		Existing Service Improvements 	BRT-Mixed Traffic 	BRT-Bus Lane 
Transit Supportive Plans & Policies 				
Serves Existing Activity Centers 				
Population & Employment Density 		 23,814	 24,084	 23,105
Affordable Housing 		 32%	 30%	 21%
Ability of Region to Fund Capital & Operating 				
Roadway Suitability & Pedestrian Environment 				
Stakeholder Comments 				
Sub total score:		15	19	14
Total score:		30	34	27

Locally Preferred Alternative

- BRT-Mixed Traffic alternative recommended for each corridor
- Both corridors, combined, recommended as the single LPA
- Recommendation is supportive of the SMTC's Long Range Transportation Plan, SMART 1 evaluation criteria results, City of Syracuse re-zoning efforts, and community input.
- BRT-Mixed Traffic is the region's definition of enhanced transit



Wrapping up SMART 1

- **Implementation Plan**
 - Tasks required to implement recommendations
 - Roles and responsibilities
 - Timeline
- **Financial Plan**
 - Sources of funding for capital *and operating* costs with pros and cons for each
- **Final Report**



What's next?

- Identify funding sources
- Refine and follow through on implementation plan

Community support is essential to move this forward...



Questions

**Visit us downstairs for additional information
and to ask questions!**

For more information, please contact us at:

Phone: 315-422-5716

Email: contactus@smtcmpo.org



SMART 1 – Public Meeting #3

November 2, 2017



Appendix C: Participant comments and ZIP code map

Public Comment Form

SMART1

Public Meeting #3
November 2, 2017

Please share your thoughts about the SMART 1 study.

BRT Mixed Lanes should get articulated
(convention) buses as regular ones now can
be late and crowded

Name (OPTIONAL): _____

Organization (OPTIONAL): _____

Would you like to sign up to the SMTC's contact list to receive agency and project related updates?

☐ Yes, please add me to the e-mail list! E-mail address: _____

☐ Yes, please add me to the postal mail list!

Address: _____

City: _____ State: _____ Zip: _____

Please return this form to the comment box or to a project team member at the meeting, or return by November 30 to:

Syracuse Metropolitan Transportation Council
Attn: Mario Colone
126 North Salina Street, Suite 100
Syracuse, NY 13202

or

E-mail: contactus@smtcmpo.org

www.smtcmpo.org/SMART

Public Comment Form

SMART1 Public Meeting #3
November 2, 2017

Please share your thoughts about the SMART 1 study.

Issues such as Riverside Senior's
which keeps our employees home
after Center closes is a real
concern to what Center provides

Name (OPTIONAL):

Organization (OPTIONAL):

SKT Agency

Would you like to sign up to the SMTC's contact list to receive agency and project related updates?

☒ Yes, please add me to the e-mail list! E-mail address:

☐ Yes, please add me to the postal mail list!

Address:

City:

State:

Zip:

Please return this form to the comment box or to a project team member at the meeting, or return by November 30 to:

Syracuse Metropolitan Transportation Council
Attn: Mario Colone
126 North Salina Street, Suite 100
Syracuse, NY 13202

or

E-mail: contactus@smtcmpo.org

www.smtcmpo.org/SMART

Public Comment Form

SMART1

Public Meeting #3

November 2, 2017

Please share your thoughts about the SMART 1 study.

With a city #1 in Extreme Poverty and having a lot of barriers
for the poor to get to job/work places, Mass Commute,
What can you incorporate in this to help these people with
jobs
I suggest -
You are around 12000 the riders and at 13 Costly for the
Bridges at officers

Name (OPTIONAL):

Organization (OPTIONAL):

Would you like to sign up to the SMTC's contact list to receive agency and project related updates?

☒ Yes, please add me to the e-mail list! E-mail address:

☒ Yes, please add me to the postal mail list!

Address:

City:

State: NY

Zip:

Please return this form to the comment box or to a project team member at the meeting, or return by November 30 to:

Syracuse Metropolitan Transportation Council

Attn: Mario Colone

126 North Salina Street, Suite 100

Syracuse, NY 13202

or

E-mail: contactus@smtcmpo.org

www.smtcmpo.org/SMART

Public Comment Form

SMART1Public Meeting #3
November 2, 2017

Please share your thoughts about the SMART 1 study.

dedicated bus lanes in University Hill aren't a good idea — not enough street space.

The best option throughout the study period is getting service, amenity & signage improvements

Ridership is strong along N. Salina St. condensing buses from SA/TC into bus routes currently serving N. Salina may backfire — not enough seats. However, removing service from Salina St where ridership is not as good consider maintaining bus routes that utilize I-81 (as SA/TC currently does) or park lanes.

A vital short-term improvement that can be implemented immediately is to phase the conversion of the bus routes. Phase 1 routes (SA/TC) will be phased out. The benefit of the initial 10 routes is that it will allow for a "time" | "destination" | "bus route" | Hub/Transfer/Stop

Name (OPTIONAL): _____

Organization (OPTIONAL): _____

Would you like to sign up to the SMTc's contact list to receive agency and project related updates?

☐ Yes, please add me to the e-mail list! E-mail address: _____

☐ Yes, please add me to the postal mail list!

Address: _____

City: _____ State: _____ Zip: _____

Please return this form to the comment box or to a project team member at the meeting, or return by November 30 to:

Syracuse Metropolitan Transportation Council
Attn: Mario Colone
126 North Salina Street, Suite 100
Syracuse, NY 13202

or

E-mail: contactus@smtcmpo.org

www.smtcmpo.org/SMART

Baldwinsville Routes!!

~ In general -
more hours,
extended night
hours ~~to~~ on weekends

THE N SALINA
CORRIDOR WILL
BENEFIT FROM
INCREASED FREQ.
REDEVELOPMENT
EFFORTS WILL
BE BOOSTED!

Have articulated buses
like in Monroe County
and downstate. Also
James St buses after
midnight so people don't
need expensive taxis.

How do you estimate ~~increase~~
future ridership?
Good work!

The residents that need to go to
work need to be considered
Concerning routes added or deleted
How will the plan affect poverty -
increase or decrease?

I like it



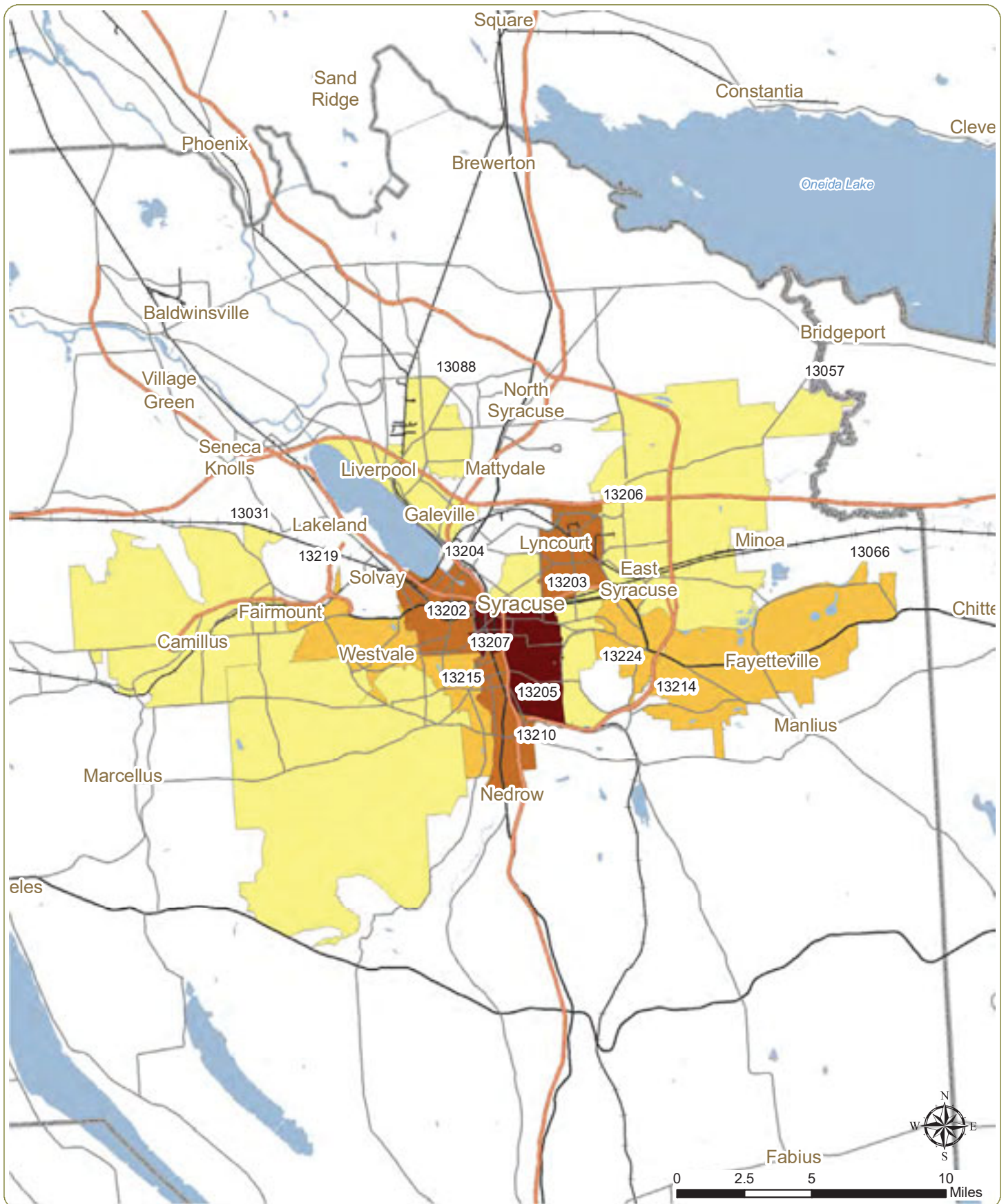
Don't like the
blue racks you
have on the diagrams.
They should be made
where both wheels are
locked to it..

An ~~amish~~
bike rack

Syracuse Metropolitan Transportation Council
100 Clinton Square
126 N. Salina Street, Suite 100
Syracuse, NY 13202

We have a lot of
bus riders in Eastwood
on the James St. Corridor.
Thinking of the quality
of use improvement for
the investment, this is
a great way to improve
~~the~~ many people's daily
experience.

I like it because
when I ~~was~~
go, on field trips
with my grade, some
places we could
use this bus.



**Syracuse Metropolitan Area
Regional Transit Study - Phase 1 (SMART 1)
Public Meeting #3 - Geographic distribution of attendees**

December 2017

- Notes: 1. Basemap: ESRI SDC feature dataset, TIGER County and Town Boundaries
2. This is a color graphic. Reproduction in grayscale may misrepresent the data.
3. One individual attended from each of the following ZIP codes outside of mapped area shown here: 14025 (Erie County) and 13061 (Jefferson County)

- Major Highways
— Highways
— Major Roads
— Railroads
— County Boundary
— Water Bodies
- Counts of Attendees by ZIP**
- 1 individual
 - 2 - 3 individuals
 - 4 - 6 individuals
 - 7 - 9 individuals



www.edrdpc.com

Appendix D: Publicity materials

Save the Date

SMART1 Public Meeting

Thursday, November 2nd

Additional details to follow



syracuse metropolitan area regional transit study
phase 1

Reserva

SMART1 Reunión pública

Jueves, 2 de noviembre

Detalles adicionales a seguir



syracuse metropolitan area regional transit study
phase 1



Syracuse Metropolitan Transportation Council

100 Clinton Square
126 N. Salina Street, Suite 100
Syracuse, New York 13202
Phone (315) 422-5716
Fax (315) 422-7753
www.smtcmpo.org

NEWS RELEASE

For Immediate Release – October 27, 2017

Contact: Patricia A. Wortley

Tel: (315) 422-5716; E-mail: pwortley@smtcmpo.org

SMTTC to hold final public meeting for the Syracuse Metropolitan Area Regional Transit Study

Syracuse, N.Y. — A public meeting for the Syracuse Metropolitan Area Regional Transit Study Phase 1 (SMART 1) Project will be held on Thursday, November 2, 2017, from 4:00 – 7:30 p.m., at the SKY Armory, 351 South Clinton Street, Syracuse.

The Syracuse Metropolitan Transportation Council (SMTTC) invites you to the third, and final, open house meeting for the SMART 1 project. Come to this meeting to learn about the conclusion of our multi-year enhanced transit feasibility study. The meeting will address the final Bus Rapid Transit alternatives and next steps along the Regional Transportation Center to Syracuse University and Eastwood to Onondaga Community College corridors.

A presentation will be given at 5:00 p.m., and will be repeated at 6:30 p.m., that provides background information and current work efforts. The project team will be available throughout the night at interactive stations to provide information on project background, suggested transit modes, route alternatives, and next steps.

For additional information about the project or the public meeting, or to ensure accommodation for special needs, please contact the SMTTC at (315) 422-5716.

What is the SMTTC?

The Syracuse Metropolitan Transportation Council was formed in 1966 as a result of the Federal Aid Highway Act of 1962 and Urban Mass Transportation Act of 1964. Serving as the metropolitan planning organization (MPO) for the Syracuse Metropolitan area, the SMTTC provides the forum for cooperative decision making in developing transportation plans and programs for Onondaga County and small portions of Madison and Oswego Counties. The SMTTC is comprised of elected and appointed officials, representing local, state and federal governments or agencies having interest in or responsibility for transportation planning and programming.

Log on to the SMTTC web site for the latest in transportation planning in the Syracuse Metropolitan Area:

www.smtcmpo.org

Join us for the 3rd and final OPEN HOUSE on the:



Syracuse Metropolitan Area Regional Transit Study Phase 1

Thursday, November 2, 2017

Drop in any time from 4:00 to 7:30 p.m.

(Presentations at 5:00 p.m. and 6:30 p.m.)

The Syracuse Metropolitan Transportation Council (SMTC) invites you to attend the third and final open house for the Syracuse Metropolitan Area Regional Transit Study Phase 1 (SMART 1). Stop by to learn about the conclusion of our multi-year enhanced transit feasibility study.

Interactive stations, staffed by the project team, will be available for the public to “walk through” and learn about project background, final **Bus Rapid Transit** alternatives and next steps. A presentation will take place at 5:00 p.m. and again at 6:30 p.m.

Can't make the meeting in person?

Meeting materials will be available online beginning November 2 at www.smtcmpo.org/SMART

Meeting Location

SKY Armory

351 South Clinton Street
Syracuse, NY

**Main entrance is on Clinton St.
(between Modern Malt and the
Clinton St. Garage).**

Meeting location is 0.4 miles from
the Centro Transit Hub.

Parking

On-street & area parking garages
available. Parking will not be
validated.

Accommodations

All attendees will receive two
complimentary single-use Centro
bus passes at the meeting.

The meeting facility is ADA
accessible. American Sign
Language (ASL) and Spanish
interpreters will be available at
the meeting (Intérpretes de
español estarán disponibles en la
reunión).

Additional info

For more information about the
study contact Mario Colone,
SMTC Program Manager, at
315-422-5716 or
mcolone@smtcmpo.org.



Follow us on Facebook at
Syracuse Metropolitan Transportation Council



www.smtcmpo.org



contactus@smtcmpo.org



315-422-5716



126 N. Salina Street
Suite 100
Syracuse, NY 13202

Únase a nosotros para la tercera y última reunión del



Syracuse Área Metropolitana de Tránsito Regional Estudio de Fase 1

Jueves, 2 de Noviembre 2017

Ven cuando quiera entre las horas de 4:00 to 7:30 p.m.

(Presentaciones a las 5:00 p.m. y las 6:30 p.m.)

El Consejo de Transporte Metropolitano de Syracuse (SMTC) le invita a asistir a la tercera y última jornada de puertas abiertas para la Fase 1 del Estudio de Tránsito Regional del Área Metropolitana de Syracuse (SMART 1). Visite detenidamente la conclusión de nuestro estudio de viabilidad de tránsito mejorado de varios años.

Las estaciones interactivas, equipadas por el equipo del proyecto, estarán disponibles para que el público pueda "caminar" y aprender acerca del fondo del proyecto, las alternativas finales de Bus Rapid Transit y los próximos pasos. Una presentación tendrá lugar a las 5:00 pm y de nuevo a las 6:30 pm

No se puede hacer la reunión en persona?

Materiales de la reunión estarán disponibles en línea a partir del 2 de Noviembre www.smtcmpo.org/SMART

Lugar de la reunión

SKY Armería

351 South Clinton Street
Syracuse, NY

****** La entrada principal está en Clinton St. (entre Modern Malt y el garaje de Clinton St). ******

El local de juntas es de 0.4 millas de la transferencia Hub Centro.

Estacionamiento

En la calle y garajes de aparcamiento área disponible. El aparcamiento no será validado.

Alojamiento

Todos los asistentes recibirán dos de un solo uso de autobuses Centro pases de cortesía en la reunión.

La sala de reuniones es accesible de la ADA. Lenguaje de señas americano (ASL) e intérpretes en español estarán disponibles en la reunión.

Información adicional

Para obtener más información sobre el estudio, contacto

Mario Colone,
SMTC Administrador de programas
315-422-5716 or
mcolone@smtcmpo.org.



Siga con nosotros Facebook at
Syracuse Metropolitan Transportation Council



www.smtcmpo.org



contactus@smtcmpo.org



315-422-5716



126 N. Salina Street
Suite 100
Syracuse, NY 13202

Join us for the 3rd and final OPEN HOUSE on the:

Syracuse Metropolitan Area Regional Transit Study Phase 1



Thursday, November 2, 2017

Drop in any time from 4:00 to 7:30 p.m.

(Presentation at 5:00 p.m. and repeated at 6:30 p.m.)

Location:

SKY Armory

351 South Clinton Street, Syracuse, NY

Come learn about the conclusion of our multi-year enhanced transit study for the Regional Transportation Center to Syracuse University, and Eastwood to Onondaga Community College corridors.

Interactive stations covering project background, final recommended **Bus Rapid Transit** alternatives, and next steps will be available. Project team members will be available for questions.

Can't make the meeting in person?

Meeting materials will be available online beginning November 2 at www.smtcmpo.org/SMART

Facility

Main entrance is on Clinton St. (between Modern Malt and the Clinton St. Garage).

Meeting facility is ADA accessible.

Meeting location is 0.4 miles from the Centro Transit Hub.

Parking

On-street & area parking garages available. Parking will not be validated.

Accommodations

All attendees will receive two complimentary single-use Centro bus passes at the meeting.

American Sign Language (ASL) and Spanish interpreters will be available at the meeting (Intérpretes de español estarán disponibles en la reunión).

For additional information, call the SMTC at
315-422-5716

Appendix E: Meeting evaluations

Meeting Evaluation Form



Public Meeting #3
November 2, 2017

Please take a few minutes to provide your thoughts about this meeting experience.

1. I learned something useful about the SMART 1 study today.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

Venue is great, loved the coffee

2. As compared to other meetings I have attended, this event was:

MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

3. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

4. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

5. Where did you hear about this meeting? (check all that apply)

- | | |
|--|--|
| <input type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
| <input type="radio"/> Email from SMTC | <input type="radio"/> Radio |
| <input type="radio"/> Other community group email/listserv | <input type="radio"/> TV |
| <input type="radio"/> SMTC Facebook page | <input checked="" type="radio"/> Word of mouth |
| <input checked="" type="radio"/> Other social media | <input type="radio"/> Other (please list): |

6. Any other comments about the meeting format that you wish to share?

Meeting Evaluation Form

Please take a few minutes to provide your thoughts about this meeting experience.

1. I learned something useful about the SMART 1 study today.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

2. As compared to other meetings I have attended, this event was:

MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

3. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

4. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

5. Where did you hear about this meeting? (check all that apply)

- | | |
|--|---|
| <input type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
| <input type="radio"/> Email from SMTC | <input type="radio"/> Radio |
| <input type="radio"/> Other community group email/listserv | <input type="radio"/> TV |
| <input checked="" type="radio"/> SMTC Facebook page | <input type="radio"/> Word of mouth |
| <input type="radio"/> Other social media | <input checked="" type="radio"/> Other (please list): <i>right on the bus</i> |

6. Any other comments about the meeting format that you wish to share?

Meeting Evaluation Form



Public Meeting #3
November 2, 2017

Please take a few minutes to provide your thoughts about this meeting experience.

1. I learned something useful about the SMART 1 study today.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

2. As compared to other meetings I have attended, this event was:

MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

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STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

4. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

5. Where did you hear about this meeting? (check all that apply)

- | | |
|---|--|
| <input checked="" type="radio"/> Postal mail flier | <input checked="" type="radio"/> Newspaper |
| <input type="radio"/> Email from SMTC | <input type="radio"/> Radio |
| <input checked="" type="radio"/> Other community group email/listserv | <input type="radio"/> TV |
| <input type="radio"/> SMTC Facebook page | <input type="radio"/> Word of mouth |
| <input type="radio"/> Other social media | <input type="radio"/> Other (please list): |

6. Any other comments about the meeting format that you wish to share?

Meeting Evaluation Form



Public Meeting #3
November 2, 2017

Please take a few minutes to provide your thoughts about this meeting experience.

1. I learned something useful about the SMART 1 study today.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

2. As compared to other meetings I have attended, this event was:

MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

3. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

4. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

5. Where did you hear about this meeting? (check all that apply)

- | | |
|--|--|
| <input checked="" type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
| <input type="radio"/> Email from SMTC | <input type="radio"/> Radio |
| <input type="radio"/> Other community group email/listserv | <input type="radio"/> TV |
| <input type="radio"/> SMTC Facebook page | <input type="radio"/> Word of mouth |
| <input type="radio"/> Other social media | <input type="radio"/> Other (please list): |

6. Any other comments about the meeting format that you wish to share?

Meeting Evaluation Form

Please take a few minutes to provide your thoughts about this meeting experience.

1. I learned something useful about the SMART 1 study today.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

2. As compared to other meetings I have attended, this event was:

MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

The presentation w/ the ability to walk through the stations was great

3. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

4. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

For me, but could hold in community centers for residents who use the bus system in neighborhoods

5. Where did you hear about this meeting? (check all that apply)

- | | |
|--|--|
| <input type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
| <input type="radio"/> Email from SMTC | <input type="radio"/> Radio |
| <input type="radio"/> Other community group email/listserv | <input type="radio"/> TV |
| <input type="radio"/> SMTC Facebook page | <input checked="" type="radio"/> Word of mouth |
| <input type="radio"/> Other social media | <input type="radio"/> Other (please list): |

6. Any other comments about the meeting format that you wish to share?

Not about the meeting, but for this review form: flip the survey scale → 1 worst/disagree to best/agree

Meeting Evaluation Form



Public Meeting #3
November 2, 2017

Please take a few minutes to provide your thoughts about this meeting experience.

1. I learned something useful about the SMART 1 study today.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

2. As compared to other meetings I have attended, this event was:

MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

I liked the boards!
the presentation was a little dry
Overall - well done

3. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

4. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

why not tour the community centers? ~~more~~
~~it was a thing~~ More community spaces
 ↳ more for the people who often use buses

5. Where did you hear about this meeting? (check all that apply)

- | | |
|--|--|
| <input type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
| <input type="radio"/> Email from SMTC | <input type="radio"/> Radio |
| <input type="radio"/> Other community group email/listserv | <input type="radio"/> TV |
| <input type="radio"/> SMTC Facebook page | <input checked="" type="radio"/> Word of mouth |
| <input type="radio"/> Other social media | <input type="radio"/> Other (please list): |

6. Any other comments about the meeting format that you wish to share?

Very cool, awesome idea! Great work! I hope you guys pull it off!!!

Meeting Evaluation Form



Public Meeting #3

November 2, 2017

Please take a few minutes to provide your thoughts about this meeting experience.

1. I learned something useful about the SMART 1 study today.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

2. As compared to other meetings I have attended, this event was:

MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

I am encouraged to see potential progress in the city's public transit system. I would like to see even more radical/progressive studies in the future as downtown redevelopment continues.

3. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

4. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

5. Where did you hear about this meeting? (check all that apply)

- | | |
|--|--|
| <input type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
| <input type="radio"/> Email from SMTC | <input type="radio"/> Radio |
| <input type="radio"/> Other community group email/listserv | <input type="radio"/> TV |
| <input type="radio"/> SMTC Facebook page | <input checked="" type="radio"/> Word of mouth |
| <input type="radio"/> Other social media | <input type="radio"/> Other (please list): |

6. Any other comments about the meeting format that you wish to share?

Meeting Evaluation Form



Public Meeting #3
November 2, 2017

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STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

2. As compared to other meetings I have attended, this event was:

MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

unable to attend presentation due to schedule

3. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

4. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

5. Where did you hear about this meeting? (check all that apply)

- | | |
|--|--|
| <input type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
| <input checked="" type="radio"/> Email from SMTC | <input type="radio"/> Radio |
| <input type="radio"/> Other community group email/listserv | <input type="radio"/> TV |
| <input checked="" type="radio"/> SMTC Facebook page | <input checked="" type="radio"/> Word of mouth |
| <input type="radio"/> Other social media | <input type="radio"/> Other (please list): |

6. Any other comments about the meeting format that you wish to share?

Meeting Evaluation Form

Please take a few minutes to provide your thoughts about this meeting experience.

1. I learned something useful about the SMART 1 study today.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

I appreciate the opportunity to learn about these
ISSUES.
I'd like presenting more examples of what/if your
studies have been implemented. eg.

2. As compared to other meetings I have attended, this event was:

MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

the audience is forgiving
examples of how your studies
worked.

Comments? What did you like or not like?

Did not get a "reminder" email recently.

Microphone ISSUES

NKE SURAN platform

Thanks.

3. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

4. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

5. Where did you hear about this meeting? (check all that apply)

- | | |
|--|--|
| <input type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
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| <input type="radio"/> Other community group email/listserv | <input type="radio"/> TV |
| <input type="radio"/> SMTC Facebook page | <input type="radio"/> Word of mouth |
| <input type="radio"/> Other social media | <input type="radio"/> Other (please list): |

6. Any other comments about the meeting format that you wish to share?

Meeting Evaluation Form



Public Meeting #3
November 2, 2017

Please take a few minutes to provide your thoughts about this meeting experience.

1. I learned something useful about the SMART 1 study today.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

2. As compared to other meetings I have attended, this event was:

MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

3. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

4. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

5. Where did you hear about this meeting? (check all that apply)

- | | |
|--|---|
| <input type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
| <input type="radio"/> Email from SMTC | <input type="radio"/> Radio |
| <input type="radio"/> Other community group email/listserv | <input type="radio"/> TV |
| <input type="radio"/> SMTC Facebook page | <input type="radio"/> Word of mouth |
| <input type="radio"/> Other social media | <input checked="" type="radio"/> Other (please list): <i>Employee email</i> |

6. Any other comments about the meeting format that you wish to share?

Meeting Evaluation Form



Public Meeting #3
November 2, 2017

Please take a few minutes to provide your thoughts about this meeting experience.

1. I learned something useful about the SMART 1 study today.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

2. As compared to other meetings I have attended, this event was:

MUCH BETTER THAN AVERAGE 1	2	3	4	5	MUCH WORSE THAN AVERAGE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments? What did you like or not like?

3. I believe that the SMART 1 process is being structured in a transparent and accessible manner.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

4. I found the meeting location convenient and accessible.

STRONGLY AGREE 1	2	3	4	5	STRONGLY DISAGREE 6
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments?

5. Where did you hear about this meeting? (check all that apply)

- | | |
|---|--|
| <input type="radio"/> Postal mail flier | <input type="radio"/> Newspaper |
| <input checked="" type="radio"/> Email from SMTC | <input type="radio"/> Radio |
| <input checked="" type="radio"/> Other community group email/listserv | <input type="radio"/> TV |
| <input type="radio"/> SMTC Facebook page | <input type="radio"/> Word of mouth |
| <input type="radio"/> Other social media | <input type="radio"/> Other (please list): |

6. Any other comments about the meeting format that you wish to share?

Appendix C

Sketch Level Demand Estimation Methodology

IBI Group analyzed several options for generating ridership demand estimates and projections. Following an examination of the published transit ridership results¹ of the SMTC's regional travel demand forecasting model, IBI Group concluded that it could not be brought into a state sufficient for the project's purposes within available resources due to the complex route structure of the Centro system. Further, IBI Group found that the effort to utilize the Simplified Trips on Project Software (STOPS) developed by the FTA would also require far more resources than would be available. To avoid these difficulties and to conserve project resources, IBI Group constructed a spreadsheet-based demand estimating tool that is grounded in observed behavior yet just flexible enough to test the alternatives identified. Bearing in mind that the Small Starts process does not require a formal forecast meeting the requirements of New Starts, it was accepted that a reasonable indicator of potential demand relative to the existing baseline would be sufficient to compare the alternatives. The basics of the spreadsheet model are as follows:

- The baseline set of existing demand were limited to Centro lines 16, 20, 26, 30, 40, 50, 52, and 80.
- These lines were considered segment by segment, with segment boundaries being established at points where lines or route variations merged or diverged.
- Baseline ridership was established for each segment based on inbound boardings reported by Centro, with line totals being normalized to Centro's ROUTESUM report for October 2016.
- Ridership from route segments on lines 30, 52, and 80 which were far from the corridors identified for the study was not included, and was assumed to remain constant for all alternatives.

The baseline 'existing' conditions were established by:

- Estimating the existing transit share of travel for each segment based on a logit mode split formulation; and
- Imputing a total travel market for each segment from the estimated mode split.

As mentioned above, Centro's route structure presented some difficulties regarding how to represent the level of transit service. In typical regional models, service headways are specified for both peak and off-peak time periods. In Syracuse, the route configuration is very complex, with different variants operating at different times of day, and relatively few fixed headways. The representation of waiting times, typically half the headway in a regional model, were reformulated to a continuous function based on the number of trips operated that accounted for:

- The average wait time at the bus stop for randomly arriving passengers at a constant headway will be no less than $\frac{1}{2}$ of that headway. If service is highly unreliable, it may exceed $\frac{1}{2}$ the headway; and
- At headways as short as 10 or even 5 minutes, some passengers may consult schedules or real-time information sources to plan their trips. Above a 15-minute headway, most passengers do so. The wait time for planned trips is less than $\frac{1}{2}$ the headway, and for very infrequent services, considerably so.

Passengers who plan their travel around the scheduled service incur 'synchronization time' when they have to plan a trip at a time other than their ideal time. Although this time can be spent at home or work (for instance) rather than at a bus stop, it affects decisions on how to travel. Passengers must also take into consideration "schedule inconvenience", the consequences of having to take an earlier bus than desired and having extra time at their destination or conversely, missing a bus and arriving later than desired.

¹ Resource Systems Group, "SMTC Travel Demand Model Version 3.023, Documentation", April 2012

There were not enough data available to formally 'validate' or 'calibrate' the spreadsheet technique, let alone a network-based model such as the SMTC's. The spreadsheet tool was 'ground-truthed' at an aggregate level to the following existing conditions, to match the results for portions of the ridership from the route segments within the City of Syracuse with the following:

- Travel mode shares for the City as reported by the 2010 Census: 7.2% by transit, 10.9% walk, and 81.9% by personal motor vehicle.
- A share of 'choice' travel on transit of 12 %, as reported from rider survey results in the 2014 *Syracuse Transit System Analysis*.

Estimated mode shares for each segment were also reviewed for consistency with ranges that might reasonably be expected, and for consistency between adjacent segments with similar characteristics and transit service quality.

Appendix D

Capital and Operating Costs

Preliminary Capital Cost Estimate

SMART BRT Stations: RTC-SU via Salina

Item	Unit	Quantity	Unit Cost	Total	Notes
BRT Guideway Improvements: Mixed Traffic					
Channelization and Signing	EA	24	\$2,000	\$48,000	Signing and striping allowance per platform
Transit Signal Priority	EA	30	\$30,000	\$900,000	Implementation at 75% of intersections
Concrete Bus Pad (12' x 80')	EA	24	\$15,000	\$360,000	Per platform
Alt 2 Guideway Improvements Subtotal				\$1,308,000	
Existing Service Improvement Amenities					
Flag	EA	12	\$1,200	\$14,400	
Standalone Marker	EA	12	\$20,000	\$240,000	
Tech Pylon	EA	12	\$15,000	\$180,000	Included technology may vary by location
Small Shelter	EA	0	\$35,000	\$0	Includes station marker and seating
Medium Shelter	EA	0	\$44,000	\$0	Includes station marker and seating
Large Shelter	EA	0	\$65,000	\$0	Includes station marker and seating
Shelter Footing	EA	48	\$500	\$24,000	
Shelter Lighting	EA	0	\$5,000	\$0	
Standalone Seating	EA	12	\$2,500	\$30,000	Two-person seating
Trash Receptacles	EA	12	\$5,000	\$60,000	Solar powered, compacting
Pedestrian Lighting	EA	36	\$6,000	\$216,000	Includes pole
Bike Rack	EA	0	\$800	\$0	
Alt 1 Amenities Subtotal				\$764,400	
Existing Service Improvement Technology and Comm					
RTPI LED Display	EA	24	\$11,000	\$264,000	Includes sign and installation
RTPI LCD	EA	0	\$15,000	\$0	Includes sign and installation
RTPI Software, Engineering and Licensing	LS	1	\$220,000	\$220,000	Includes control system, design, testing, and training
RTPI Project Services	LS	1	\$100,000	\$100,000	
RTPI System Warranty (first 3 years)	LS	1	\$45,000	\$45,000	
Security Cameras	EA	24	\$2,000	\$48,000	
Licensing (per camera)	EA	24	\$300	\$7,200	Includes exterior CCTV camera and installation
Camera Equipment on Platform	EA	12	\$3,000	\$36,000	
Network Video Recorders	EA	3	\$9,000	\$27,000	Includes switch, Ethernet extender, and transceiver
Camera Video Management System	LS	1	\$260,000	\$260,000	
Software maintenance agreement (per camera)	EA	24	\$50	\$1,200	Includes VMS, archive server, network integration, design, testing, and training
Camera System Maintenance	LS	1	\$40,000	\$40,000	
Camera System Warranty (first 3 years)	LS	1	\$45,000	\$45,000	Includes spare parts and maintenance tools
Emergency Call Box	EA	0	\$5,500	\$0	
Ticket Vending Machine	EA	0	\$15,000	\$0	Basic, parking style TVM
Fare Collection Back-Office System	LS	0	\$100,000	\$0	Includes central system install, design, testing, and training for a hosted solution
Fare Collection Central Mgmt System Fee (first 3 years)	LS	0	\$75,000	\$0	
Communications Cabinet	EA	12	\$15,000	\$180,000	Includes power
Comm Conduit and Boxes	EA	12	\$60,000	\$720,000	Includes infrastructure on platform and conduit and fiber to nearest comm connection point
Power Conduit and Wiring	EA	12	\$15,000	\$180,000	Includes infrastructure on platform and conduit to nearest power connection point
Cellular Router	EA	12	\$2,000	\$24,000	
Cellular Card	Year	24	\$40	\$960	
Cellular Warranty (first 3 years)	LS	1	\$45,000	\$45,000	
Alt 1 Technology and Comm Subtotal				\$2,243,360	
BRT Amenities					
Flag	EA	24	\$1,200	\$28,800	
Standalone Marker	EA	0	\$20,000	\$0	
Tech Pylon	EA	24	\$15,000	\$360,000	Included technology may vary by location
Small Shelter	EA	0	\$35,000	\$0	Includes station marker and seating
Medium Shelter	EA	4	\$44,000	\$176,000	Includes station marker and seating
Large Shelter	EA	15	\$65,000	\$975,000	Includes station marker and seating
Shelter Footing	EA	76	\$500	\$38,000	
Shelter Lighting	EA	19	\$5,000	\$95,000	
Standalone Seating	EA	5	\$2,500	\$12,500	Two-person seating
Trash Receptacles	EA	24	\$5,000	\$120,000	Solar powered, compacting
Pedestrian Lighting	EA	72	\$6,000	\$432,000	Includes pole
Bike Rack	EA	24	\$800	\$19,200	
Alt 2/3 Amenities Subtotal				\$2,256,500	

BRT Technology and Comm					
RTPI LED Display	EA	48	\$11,000	\$528,000	Includes sign and installation
RTPI LCD	EA	20	\$15,000	\$300,000	Includes sign and installation
RTPI Software, Engineering and Licensing	LS	1	\$220,000	\$220,000	Includes control system, design, testing, and training
RTPI Project Services	LS	1	\$100,000	\$100,000	
RTPI System Warranty (first 3 years)	LS	1	\$45,000	\$45,000	
Security Cameras	EA	48	\$2,000	\$96,000	
Licensing (per camera)	EA	48	\$300	\$14,400	Includes exterior CCTV camera and installation
Camera Equipment on Platform	EA	24	\$3,000	\$72,000	
Network Video Recorders	EA	6	\$9,000	\$54,000	Includes switch, Ethernet extender, and transceiver
Camera Video Management System	LS	1	\$260,000	\$260,000	
Software maintenance agreement (per camera)	EA	48	\$50	\$2,400	Includes VMS, archive server, network integration, design, testing, and training
Camera System Maintenance	LS	1	\$40,000	\$40,000	
Camera System Warranty (first 3 years)	LS	1	\$45,000	\$45,000	Includes spare parts and maintenance tools
Emergency Call Box	EA	0	\$5,500	\$0	
Ticket Vending Machine	EA	24	\$15,000	\$360,000	Basic, parking style TVM
Fare Collection Back-Office System	LS	1	\$100,000	\$100,000	Includes central system install, design, testing, and training for a hosted solution
Fare Collection Central Mgmt System Fee (first 3 years)	LS	1	\$75,000	\$75,000	
Communications Cabinet	EA	24	\$15,000	\$360,000	Includes power
Comm Conduit and Boxes	EA	24	\$60,000	\$1,440,000	Includes infrastructure on platform and conduit and fiber to nearest comm connection point
Power Conduit and Wiring	EA	24	\$15,000	\$360,000	Includes infrastructure on platform and conduit to nearest power connection point
Cellular Router	EA	24	\$2,000	\$48,000	
Cellular Card	Year	62	\$40	\$2,480	
Cellular Warranty (first 3 years)	LS	1	\$45,000	\$45,000	
Alt 2/3 Technology and Comm Subtotal				\$4,567,280	
ALT 1 Existing Service Improvements Infrastructure TOTAL				\$3,007,760	
ALT 2 Mixed Traffic Infrastructure TOTAL				\$8,131,780	
Vehicles: Existing Service Improvements					
40 foot BRT vehicles	EA	3	\$550,000	\$1,650,000	Number of vehicles required including spares as determined by O&M service plan
Alt 2 Vehicles Subtotal				\$1,650,000	
BRT Vehicles: Mixed Traffic					
40 foot BRT vehicles	EA	9	\$650,000	\$5,850,000	Number of vehicles required including spares as determined by O&M service plan
Alt 2 Vehicles Subtotal				\$5,850,000	
ALT 1 Existing Service Improvements Project TOTAL				\$4,657,760	
ALT 2 Mixed Traffic Project TOTAL				\$13,981,780	

Notes:

1. Assumed one pedestrian light approximately every 20 feet.
2. Assumed communications fiber and conduit connections at all Type 2 locations.
3. Assumed RTPI LED Displays and Fare Collection devices (TVMs) at will communicate with the central system via cellular router and network.
4. Ticket vending machines included at high and medium typology locations only.
5. Assumed comm connections will be available within 1,500 feet of sites with Comm Conduit and Boxes.
6. Assumed power connections will be available within 500 feet of sites with Power Conduit and Wiring.
7. Assumed 12 platforms would be upgraded with low level station amenities under the existing service improvement alternative.

Preliminary Capital Cost Estimate

SMART BRT Stations: RTC-SU via Solar

Item	Unit	Quantity	Unit Cost	Total	Notes
BRT Guideway Improvements: Bus Lane					
Channelization and Signing	EA	22	\$2,000	\$44,000	Signing and striping allowance per platform
Bus Lane Striping	EA	5	\$100,000	\$500,000	Per lane mile
Left Turn Lanes	EA	0	\$300,000	\$0	All intersection have existing left turn lanes
Transit Signal Priority, with Queue Jump	EA	28	\$40,000	\$1,120,000	Implementation at 75% of intersections; Queue jump includes negligible costs of parking lane removal and/or use of right turn lanes (no additional lane installation)
Concrete Bus Pad (12' x 80')	EA	22	\$15,000	\$330,000	Per platform
ROW Widening		1	\$2,400,000	\$2,400,000	Widen RTC-SU via Solar Corridor by 10 feet
Alt 3 Guideway Improvements Subtotal				\$4,394,000	
BRT Amenities					
Flag	EA	22	\$1,200	\$26,400	
Standalone Marker	EA	0	\$20,000	\$0	
Tech Pylon	EA	22	\$15,000	\$330,000	Included technology may vary by location
Small Shelter	EA	0	\$35,000	\$0	Includes station marker and seating
Medium Shelter	EA	2	\$44,000	\$88,000	Includes station marker and seating
Large Shelter	EA	15	\$65,000	\$975,000	Includes station marker and seating
Shelter Footing	EA	68	\$500	\$34,000	
Shelter Lighting	EA	17	\$5,000	\$85,000	
Standalone Seating	EA	5	\$2,500	\$12,500	Two-person seating
Trash Receptacles	EA	22	\$5,000	\$110,000	Solar powered, compacting
Pedestrian Lighting	EA	66	\$6,000	\$396,000	Includes pole
Bike Rack	EA	22	\$800	\$17,600	
Alt 2/3 Amenities Subtotal				\$2,074,500	
BRT Technology and Comm					
RTPI LED Display	EA	44	\$11,000	\$484,000	
RTPI LCD	EA	20	\$15,000	\$300,000	
RTPI Software, Engineering and Licensing	LS	1	\$220,000	\$220,000	Includes control system, design, testing, and training
RTPI Project Services	LS	1	\$100,000	\$100,000	
RTPI System Warranty (first 3 years)	LS	1	\$45,000	\$45,000	
Security Cameras	EA	44	\$2,000	\$88,000	
Licensing (per camera)	EA	44	\$300	\$13,200	Includes exterior CCTV camera and installation
Camera Equipment on Platform	EA	22	\$3,000	\$66,000	
Network Video Recorders	EA	6	\$9,000	\$54,000	Includes switch, Ethernet extender, and transceiver
Camera Video Management System	LS	1	\$260,000	\$260,000	
Software maintenance agreement (per camera)	EA	44	\$50	\$2,200	Includes VMS, archive server, network integration, design, testing, and training
Camera System Maintenance	LS	1	\$40,000	\$40,000	
Camera System Warranty (first 3 years)	LS	1	\$45,000	\$45,000	Includes spare parts and maintenance tools
Emergency Call Box	EA	0	\$5,500	\$0	
Ticket Vending Machine	EA	22	\$15,000	\$330,000	Basic, parking style TVM
Fare Collection Back-Office System	LS	1	\$100,000	\$100,000	Includes central system install, design, testing, and training for a hosted solution
Fare Collection Central Mgmt System Fee (first 3 years)	LS	1	\$75,000	\$75,000	
Communications Cabinet	EA	22	\$15,000	\$330,000	Includes power
Comm Conduit and Boxes	EA	22	\$60,000	\$1,320,000	Includes infrastructure on platform and conduit and fiber to nearest comm connection point
Power Conduit and Wiring	EA	22	\$15,000	\$330,000	Includes infrastructure on platform and conduit to nearest power connection point
Cellular Router	EA	22	\$2,000	\$44,000	
Cellular Card	Year	56	\$40	\$2,240	
Cellular Warranty (first 3 years)	LS	1	\$45,000	\$45,000	
Alt 2/3 Technology and Comm Subtotal				\$4,293,640	
ALT 3 Bus Lane TOTAL				\$10,762,140	
BRT Vehicles: Bus Lane					
40 foot BRT vehicles	EA	8	\$600,000	\$4,800,000	Number of vehicles required including spares as determined by O&M service plan
Alt 3 Vehicles Subtotal				\$4,800,000	
ALT 3 Bus Lane Project TOTAL				\$15,562,140	

Notes:

1. Assumed one pedestrian light approximately every 20 feet.
2. Assumed communications fiber and conduit connections at all Type 2 locations.
3. Assumed RTPI LED Displays and Fare Collection devices (TVMs) at will communicate with the central system via cellular router and network.
4. Ticket vending machines included at high and medium typology locations only.
5. Assumed comm connections will be available within 1,500 feet of sites with Comm Conduit and Boxes.
6. Assumed power connections will be available within 500 feet of sites with Power Conduit and Wiring.

Preliminary Capital Cost Estimate

SMART BRT Stations: Eastwood-OCC

Item	Unit	Quantity	Unit Cost	Total	Notes
BRT Guideway Improvements: Mixed Traffic					
Channelization and Signing	EA	38	\$2,000	\$76,000	Signing and striping allowance per platform
Transit Signal Priority	EA	33	\$30,000	\$990,000	Implementation at 75% of intersections
Concrete Bus Pad (12' x 80')	EA	38	\$15,000	\$570,000	Per platform
Alt 2 Guideway Improvements Subtotal				\$1,636,000	
BRT Guideway Improvements: Bus Lane					
Channelization and Signing	EA	38	\$2,000	\$76,000	Signing and striping allowance per platform
Bus Lane Striping	EA	9.8	\$100,000	\$980,000	Per lane mile
Left Turn Lanes	EA	5	\$300,000	\$1,500,000	Two 125 foot left turn lanes per intersection
Transit Signal Priority, with Queue Jump	EA	33	\$40,000	\$1,320,000	Implementation at 75% of intersections; Queue jump includes negligible costs of parking lane removal and/or use of right turn lanes (no additional lane installation)
Concrete Bus Pad (12' x 80')	EA	38	\$15,000	\$570,000	Per platform
Alt 3 Guideway Improvements Subtotal				\$4,446,000	
Existing Service Improvement Amenities					
Flag	EA	12	\$1,200	\$14,400	
Standalone Marker	EA	12	\$20,000	\$240,000	
Tech Pylon	EA	12	\$15,000	\$180,000	Included technology may vary by location
Small Shelter	EA	0	\$35,000	\$0	Includes station marker and seating
Medium Shelter	EA	0	\$44,000	\$0	Includes station marker and seating
Large Shelter	EA	0	\$65,000	\$0	Includes station marker and seating
Shelter Footing	EA	48	\$500	\$24,000	
Shelter Lighting	EA	0	\$5,000	\$0	
Standalone Seating	EA	12	\$2,500	\$30,000	Two-person seating
Trash Receptacles	EA	12	\$5,000	\$60,000	Solar powered, compacting
Pedestrian Lighting	EA	36	\$6,000	\$216,000	Includes pole
Bike Rack	EA	0	\$800	\$0	
Alt 2/3 Amenities Subtotal				\$764,400	
Existing Service Improvement Technology and Comm					
RTPI LED Display	EA	24	\$11,000	\$264,000	
RTPI LCD	EA	0	\$15,000	\$0	
RTPI Software, Engineering and Licensing	LS	1	\$220,000	\$220,000	Includes control system, design, testing, and training
RTPI Project Services	LS	1	\$100,000	\$100,000	
RTPI System Warranty (first 3 years)	LS	1	\$45,000	\$45,000	
Security Cameras	EA	24	\$2,000	\$48,000	
Licensing (per camera)	EA	24	\$300	\$7,200	Includes exterior CCTV camera and installation
Camera Equipment on Platform	EA	12	\$3,000	\$36,000	
Network Video Recorders	EA	3	\$9,000	\$27,000	Includes switch, Ethernet extender, and transceiver
Camera Video Management System	LS	1	\$260,000	\$260,000	
Software maintenance agreement (per camera)	EA	24	\$50	\$1,200	Includes VMS, archive server, network integration, design, testing, and training
Camera System Maintenance	LS	1	\$40,000	\$40,000	
Camera System Warranty (first 3 years)	LS	1	\$45,000	\$45,000	Includes spare parts and maintenance tools
Emergency Call Box	EA	0	\$5,500	\$0	
Ticket Vending Machine	EA	0	\$15,000	\$0	Basic, parking style TVM
Fare Collection Back-Office System	LS	0	\$100,000	\$0	Includes central system install, design, testing, and training for a hosted solution
Fare Collection Central Mgmt System Fee (first 3 years)	LS	0	\$75,000	\$0	
Communications Cabinet	EA	12	\$15,000	\$180,000	Includes power
Comm Conduit and Boxes	EA	12	\$60,000	\$720,000	Includes infrastructure on platform and conduit and fiber to nearest comm connection point
Power Conduit and Wiring	EA	12	\$15,000	\$180,000	Includes infrastructure on platform and conduit to nearest power connection point
Cellular Router	EA	12	\$2,000	\$24,000	
Cellular Card	Year	24	\$40	\$960	
Cellular Warranty (first 3 years)	LS	1	\$45,000	\$45,000	
Alt 2/3 Technology and Comm Subtotal				\$2,243,360	
BRT Amenities					
Flag	EA	38	\$1,200	\$45,600	
Standalone Marker	EA	0	\$20,000	\$0	
Tech Pylon	EA	38	\$15,000	\$570,000	Included technology may vary by location
Small Shelter	EA	0	\$35,000	\$0	Includes station marker and seating
Medium Shelter	EA	22	\$44,000	\$968,000	Includes station marker and seating
Large Shelter	EA	14	\$65,000	\$910,000	Includes station marker and seating
Shelter Footing	EA	144	\$500	\$72,000	
Shelter Lighting	EA	36	\$5,000	\$180,000	
Standalone Seating	EA	2	\$2,500	\$5,000	Two-person seating
Trash Receptacles	EA	38	\$5,000	\$190,000	Solar powered, compacting
Pedestrian Lighting	EA	114	\$6,000	\$684,000	Includes pole
Bike Rack	EA	38	\$800	\$30,400	
Alt 2/3 Amenities Subtotal				\$3,655,000	

<i>BRT Technology and Comm</i>					
RTPI LED Display	EA	76	\$12,000	\$912,000	
RTPI LCD	EA	16	\$10,000	\$160,000	
RTPI Software, Engineering and Licensing	LS	1	\$220,000	\$220,000	Includes control system, design, testing, and training
RTPI Project Services	LS	1	\$100,000	\$100,000	
RTPI System Warranty (first 3 years)	LS	1	\$45,000	\$45,000	
Security Cameras	EA	76	\$2,000	\$152,000	
Licensing (per camera)	EA	76	\$300	\$22,800	Includes exterior CCTV camera and installation
Camera Equipment on Platform	EA	38	\$3,000	\$114,000	
Network Video Recorders	EA	10	\$9,000	\$90,000	Includes switch, Ethernet extender, and transceiver
Camera Video Management System	LS	1	\$260,000	\$260,000	
Software maintenance agreement (per camera)	EA	76	\$50	\$3,800	Includes VMS, archive server, network integration, design, testing, and training
Camera System Maintenance	LS	1	\$40,000	\$40,000	
Camera System Warranty (first 3 years)	LS	1	\$45,000	\$45,000	Includes spare parts and maintenance tools
Emergency Call Box	EA	0	\$5,500	\$0	
Ticket Vending Machine	EA	38	\$15,000	\$570,000	Basic, parking style TVM
Fare Collection Back-Office System	LS	1	\$100,000	\$100,000	Includes central system install, design, testing, and training for a hosted solution
Fare Collection Central Mgmt System Fee (first 3 years)	LS	1	\$75,000	\$75,000	
Communications Cabinet	EA	38	\$15,000	\$570,000	Includes power
Comm Conduit and Boxes	EA	38	\$60,000	\$2,280,000	Includes infrastructure on platform and conduit and fiber to nearest comm connection point
Power Conduit and Wiring	EA	38	\$15,000	\$570,000	Includes infrastructure on platform and conduit to nearest power connection point
Cellular Router	EA	38	\$2,000	\$76,000	
Cellular Card	Year	102	\$40	\$4,080	
Cellular Warranty (first 3 years)	LS	1	\$45,000	\$45,000	
<i>Alt 2/3 Technology and Comm Subtotal</i>				<i>\$6,454,680</i>	
ALT 1 Existing Service Improvements Infrastructure TOTAL				\$3,007,760	
ALT 2 Mixed Traffic TOTAL				\$11,745,680	
ALT 3 Bus Lane TOTAL				\$14,555,680	
<i>Vehicles: Existing Service Improvements</i>					
40 foot BRT vehicles	EA	4	\$550,000	\$2,200,000	Number of vehicles required including spares as determined by O&M service plan
<i>Alt 2 Vehicles Subtotal</i>				<i>\$2,200,000</i>	
<i>BRT Vehicles: Mixed Traffic</i>					
40 foot BRT vehicles	EA	12	\$650,000	\$7,800,000	Number of vehicles required including spares as determined by O&M service plan
<i>Alt 2 Vehicles Subtotal</i>				<i>\$7,800,000</i>	
<i>BRT Vehicles: Bus Lane</i>					
40 foot BRT vehicles	EA	11	\$650,000	\$7,150,000	Number of vehicles required including spares as determined by O&M service plan
<i>Alt 3 Vehicles Subtotal</i>				<i>\$7,150,000</i>	
ALT 1 Existing Service Improvements Project TOTAL				\$5,207,760	
ALT 2 Mixed Traffic Project TOTAL				\$19,545,680	
ALT 3 Bus Lane Project TOTAL				\$21,705,680	

Notes:

1. Assumed one pedestrian light approximately every 20 feet.
2. Assumed communications fiber and conduit connections at all Type 2 locations.
3. Assumed RTPI LED Displays and Fare Collection devices (TVMS) at will communicate with the central system via cellular router and network.
4. Ticket vending machines included at high and medium typology locations only.
5. Assumed comm connections will be available within 1,500 feet of sites with Comm Conduit and Boxes.
6. Assumed power connections will be available within 500 feet of sites with Power Conduit and Wiring.
7. Assumed 12 platforms would be upgraded with low level station amenities under the existing service improvement alternative.

		Weekday					Saturday					Sunday					Best Frequency	VOMS	Fleet Required
Existing Service Improvements <small>Note: This table calculates the marginal increase in cost only.</small>	Time Period	Frequency (minutes)	Span (hours)	Trips	Annual Hours	Annual Miles	Frequency (minutes)	Span (hours)	Trips	Annual Hours	Annual Miles	Frequency (minutes)	Span (hours)	Trips	Annual Hours	Annual Miles			
	Peak	40	6	18	3,060	25,704	0	0	0	-	-	0	-	0	-	-			
	Mid-Day	40	6	18	3,060	25,704	80	18	27	936	7,862	80	18	27	1,044	8,770			
	Evening	40	2	6	1,020	8,568	0	0	0	-	-	0	-	0	-	-			
	Early AM/PM	80	5	8	1,360	11,424	0	0	0	-	-	0	-	0	-	-			
Total			19	50	8,500	71,400		18	27	936	7,862			27	1,044	8,770	40	2	3
BRT Mixed Traffic	Time Period	Frequency (minutes)	Span (hours)	Trips	Annual Hours	Annual Miles	Frequency (minutes)	Span (hours)	Trips	Annual Hours	Annual Miles	Frequency (minutes)	Span (hours)	Trips	Annual Hours	Annual Miles			
	Peak	10	6	72	10,710	100,980	0	0	0	-	-	0	-	0	-	-			
	Mid-Day	20	6	36	6,120	50,490	20	8	48	1,664	13,728	20	8	48	1,856	15,312			
	Evening	20	2	12	2,040	16,830	0	0	0	-	-	0	-	0	-	-			
	Early AM/PM	40	6	18	3,060	25,245	40	10	30	1,040	8,580	40	10	30	1,160	9,570			
Total			20	138	21,930	193,545		18	78	2,704	22,308			78	3,016	24,882	10	7	9
BRT Buslane	Time Period	Frequency (minutes)	Span (hours)	Trips	Annual Hours	Annual Miles	Frequency (minutes)	Span (hours)	Trips	Annual Hours	Annual Miles	Frequency (minutes)	Span (hours)	Trips	Annual Hours	Annual Miles			
	Peak	10	6	72	9,180	91,800	0	0	0	-	-	0	-	0	-	-			
	Mid-Day	20	6	36	4,590	45,900	20	8	48	1,248	12,480	20	8	48	1,392	13,920			
	Evening	20	2	12	1,530	15,300	-	-	0	-	-	-	-	0	-	-			
	Early AM/PM	40	6	18	3,060	22,950	40	10	30	1,040	7,800	40	10	30	1,160	8,700			
Total			20	138	18,360	175,950		18	78	2,288	20,280			78	2,552	22,620	10	6	8

Note: Since this alternative uses the same type of vehicle as Centro's general fleet and the expansion is minimal, only one additional spare was required.

Alternative 1 Assumptions

Cycle Time	80
Route Length (miles)	5.6
Boardings Per Rev Hour	25.26
Average Trip Length	3.00

Alternative 2 Assumptions

Cycle Time	70
Route Length (miles)	5.5
Boardings Per Rev Hour	25.26
Average Trip Length	3.00

Alternative 3 Assumptions

Cycle Time	60
Route Length	5
Boardings Per	25.26
Average Trip Length	3.00

Cycle Time	
Route Length (miles)	
Boardings Per Rev Hour	
Average Trip Length	

Scenario 1

RTC-SU		UNIT COSTS (US\$2016)				EXTENDED AMOUNTS (US\$2016)					Total O&M Expense
	Quantity	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Indirect General & Administrative	
Unit (Annual)											
Revenue Service Hours (RSH)	10,480	\$52.61	\$0.00	\$0.00	\$4.190	\$551,353	\$0	\$0	\$43,911	\$0	\$595,264
Revenue Service Miles (RSM)	88,032	\$0.270	\$0.382	\$0.000	\$0.200	\$23,769	\$33,628	\$0	\$17,606	\$0	\$75,003
Passenger Boardings	188,160	\$0.00	\$0.137	\$0.00	\$0.064	\$0	\$25,778	\$0	\$12,042	\$0	\$37,820
Passenger-miles (PM)	563,727	\$0.066	\$0.000	\$0.000	\$0.020	\$37,206	\$0	\$0	\$11,275	\$0	\$48,481
Fleet Vehicles (peak + 20%)	3	\$2,098	\$26,381	\$2,203	\$13,584	\$6,294	\$79,143	\$6,609	\$40,752	\$0	\$132,798
Totals						\$618,621	\$138,549	\$6,609	\$125,586	\$0	\$889,366

Scenario 2

BRT Mixed Traffic Via North Salina		UNIT COSTS (US\$2016)				EXTENDED AMOUNTS (US\$2016)					Total O&M Expense
	Quantity	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Indirect General & Administrative	
Unit (Annual)											
Revenue Service Hours (RSH)	27,650	\$52.61	\$0.00	\$0.00	\$4.190	\$1,454,667	\$0	\$0	\$115,854	\$0	\$1,570,520
Revenue Service Miles (RSM)	240,735	\$0.270	\$0.382	\$0.000	\$0.200	\$64,998	\$91,961	\$0	\$48,147	\$0	\$205,106
Passenger Boardings	1,377,390	\$0.00	\$0.137	\$0.00	\$0.064	\$0	\$188,702	\$0	\$88,153	\$0	\$276,855
Passenger-miles (PM)	4,126,660	\$0.066	\$0.000	\$0.000	\$0.020	\$272,360	\$0	\$0	\$82,533	\$0	\$354,893
Fleet Vehicles	9	\$2,098	\$26,381	\$2,203	\$13,584	\$18,882	\$237,429	\$19,827	\$122,256	\$0	\$398,394
Totals						\$1,810,907	\$518,092	\$19,827	\$456,943	\$0	\$2,805,768

Scenario 3

BRT Bus Lane Via Solar		UNIT COSTS (US\$2016)				EXTENDED AMOUNTS (US\$2016)					Total O&M Expense
	Quantity	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Indirect General & Administrative	
Unit (Annual)											
Revenue Service Hours (RSH)	23,200	\$52.61	\$0.00	\$0.00	\$4.190	\$1,220,552	\$0	\$0	\$97,208	\$0	\$1,317,760
Revenue Service Miles (RSM)	218,850	\$0.270	\$0.382	\$0.000	\$0.200	\$59,090	\$83,601	\$0	\$43,770	\$0	\$186,460
Passenger Boardings	1,298,010	\$0.00	\$0.137	\$0.00	\$0.064	\$0	\$177,827	\$0	\$83,073	\$0	\$260,900
Passenger-miles (PM)	3,888,838	\$0.066	\$0.000	\$0.000	\$0.020	\$256,663	\$0	\$0	\$77,777	\$0	\$334,440
Fleet Vehicles	8	\$2,098	\$26,381	\$2,203	\$13,584	\$16,784	\$211,048	\$17,624	\$108,672	\$0	\$354,128
Totals						\$1,553,089	\$472,476	\$17,624	\$410,499	\$0	\$2,453,688

Scenario	Description
<i>Alternative 1</i>	<i>Existing</i>
Unit (Annual)	Quantity
Station/stop flag	12
Station/stop marker	12
Tech pylon	12
Small shelter	0
Medium shelter	0
Large shelter	0
Center shelter	0
Station/stop seating	12
Trash receptacles	12
Stop/station pedestrian lighting	36
RTPI LED display (not in pylon)	24
RTPI LCD display	0
Bike rack	0
Leaning rail	0
Security camera	24
Emergency callbox (not in pylon)	0
Linear feet of station platform edge	0
Square feet of station/stop platform	0
Platforms (security/police presence)	0

Alternative 2	Description
<i>Salina</i>	
Unit (Annual)	Quantity
Station/stop flag	24
Station/stop marker	0
Tech pylon	24
Small shelter	0
Medium shelter	4
Large shelter	15
Center shelter	0
Station/stop seating	5
Trash receptacles	24
Stop/station pedestrian lighting	72
RTPI LED display (not in pylon)	48
RTPI LCD display	20
Bike rack	24
Leaning rail	0
Security camera	48
Emergency callbox (not in pylon)	0
Linear feet of station platform edge	1,920
Square feet of station/stop platform	23,000
Platforms (security/police presence)	24

Alternative 3	Description
<i>Solar</i>	
Unit (Annual)	Quantity
Station/stop flag	22
Station/stop marker	0
Tech pylon	22
Small shelter	0
Medium shelter	2
Large shelter	15
Center shelter	0
Station/stop seating	5
Trash receptacles	22
Stop/station pedestrian lighting	66
RTPI LED display (not in pylon)	44
RTPI LCD display	20
Bike rack	22
Leaning rail	0
Security camera	44
Emergency callbox (not in pylon)	0
Linear feet of station platform edge	1,760
Square feet of station/stop platform	21,000
Platforms (security/police presence)	22

Alternative 1
Existing

RTC to SU		UNIT COSTS (US\$2016)				EXTENDED AMOUNTS (US\$2016)					Total O&M Expense
Unit (Annual)	Quantity	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Indirect General & Administrative	
Station/stop flag	12	\$0.00	\$0.00	\$24	\$0.000	\$0	\$0	\$211	\$0	\$77	\$288
Station/stop marker	12	\$0.00	\$0.00	\$320	\$0.000	\$0	\$0	\$2,815	\$0	\$1,025	\$3,840
Tech pylon	12	\$0.00	\$0.00	\$1,750	\$0.000	\$0	\$0	\$15,393	\$0	\$5,607	\$21,000
Small shelter	0	\$0.00	\$0.00	\$9,145	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Medium shelter	0	\$0.00	\$0.00	\$11,225	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Large shelter	0	\$0.00	\$0.00	\$14,100	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Center shelter	0	\$0.00	\$0.00	\$20,370	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Station/stop seating	12	\$0.00	\$0.00	\$250	\$0.000	\$0	\$0	\$2,199	\$0	\$801	\$3,000
Trash receptacles	12	\$0.00	\$0.00	\$300	\$0.000	\$0	\$0	\$2,639	\$0	\$961	\$3,600
Stop/station pedestrian lighting	36	\$0.00	\$0.00	\$240	\$0.000	\$0	\$0	\$6,333	\$0	\$2,307	\$8,640
RTPI LED display (not in pylon)	24	\$0.00	\$0.00	\$1,100	\$0.000	\$0	\$0	\$19,351	\$0	\$7,049	\$26,400
RTPI LCD display	0	\$0.00	\$0.00	\$1,500	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Bike rack	0	\$0.00	\$0.00	\$50	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Leaning rail	0	\$0.00	\$0.00	\$15	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Security camera	24	\$1,200	\$0.00	\$450	\$0.000	\$26,640	\$0	\$7,916	\$0	\$5,044	\$39,600
Emergency callbox (not in pylon)	0	\$0.00	\$0.00	\$550	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Linear feel of station platform edge	0	\$0.00	\$0.00	\$4.45	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Square feet of station/stop platform	0	\$0.00	\$0.00	\$5.25	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Platforms (security/police presence)	0	\$2,400	\$0.00	\$0.00	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL						\$26,640	\$0	\$56,857	\$0	\$22,871	\$106,368

Alternative 2
Salina

RTC to SU		UNIT COSTS (US\$2016)				EXTENDED AMOUNTS (US\$2016)					Total O&M Expense
Unit (Annual)	Quantity	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Indirect General & Administrative	
Station/stop flag	24	\$0.00	\$0.00	\$24	\$0.000	\$0	\$0	\$422	\$0	\$154	\$576
Station/stop marker	0	\$0.00	\$0.00	\$320	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Tech pylon	24	\$0.00	\$0.00	\$1,750	\$0.000	\$0	\$0	\$30,786	\$0	\$11,214	\$42,000
Small shelter	0	\$0.00	\$0.00	\$9,145	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Medium shelter	4	\$0.00	\$0.00	\$11,225	\$0.000	\$0	\$0	\$32,912	\$0	\$11,988	\$44,900
Large shelter	15	\$0.00	\$0.00	\$14,100	\$0.000	\$0	\$0	\$155,030	\$0	\$56,471	\$211,500
Center shelter	0	\$0.00	\$0.00	\$20,370	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Station/stop seating	5	\$0.00	\$0.00	\$250	\$0.000	\$0	\$0	\$916	\$0	\$334	\$1,250
Trash receptacles	24	\$0.00	\$0.00	\$300	\$0.000	\$0	\$0	\$5,278	\$0	\$1,922	\$7,200
Stop/station pedestrian lighting	72	\$0.00	\$0.00	\$240	\$0.000	\$0	\$0	\$12,666	\$0	\$4,614	\$17,280
RTPI LED display (not in pylon)	48	\$0.00	\$0.00	\$1,100	\$0.000	\$0	\$0	\$38,702	\$0	\$14,098	\$52,800
RTPI LCD display	20	\$0.00	\$0.00	\$1,500	\$0.000	\$0	\$0	\$21,990	\$0	\$8,010	\$30,000
Bike rack	24	\$0.00	\$0.00	\$50	\$0.000	\$0	\$0	\$880	\$0	\$320	\$1,200
Leaning rail	0	\$0.00	\$0.00	\$15	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Security camera	48	\$1,200	\$0.00	\$450	\$0.000	\$53,280	\$0	\$15,833	\$0	\$10,087	\$79,200
Emergency callbox (not in pylon)	0	\$0.00	\$0.00	\$550	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Linear feel of station platform edge	1,920	\$0.00	\$0.00	\$4.45	\$0.000	\$0	\$0	\$6,263	\$0	\$2,281	\$8,544
Square feet of station/stop platform	23,000	\$0.00	\$0.00	\$5.25	\$0.000	\$0	\$0	\$88,510	\$0	\$32,240	\$120,750
Platforms (security/police presence)	24	\$2,400	\$0.00	\$0.00	\$0.000	\$53,280	\$0	\$0	\$0	\$4,320	\$57,600
TOTAL						\$106,560	\$0	\$410,187	\$0	\$158,053	\$674,800

Alternative 3
Solar

RTC to SU		UNIT COSTS (US\$2016)				EXTENDED AMOUNTS (US\$2016)					Total O&M Expense
Unit (Annual)	Quantity	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Indirect General & Administrative	
Station/stop flag	22	\$0.00	\$0.00	\$24	\$0.000	\$0	\$0	\$387	\$0	\$141	\$528
Station/stop marker	0	\$0.00	\$0.00	\$320	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Tech pylon	22	\$0.00	\$0.00	\$1,750	\$0.000	\$0	\$0	\$28,221	\$0	\$10,280	\$38,500
Small shelter	0	\$0.00	\$0.00	\$9,145	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Medium shelter	2	\$0.00	\$0.00	\$11,225	\$0.000	\$0	\$0	\$16,456	\$0	\$5,994	\$22,450
Large shelter	15	\$0.00	\$0.00	\$14,100	\$0.000	\$0	\$0	\$155,030	\$0	\$56,471	\$211,500
Center shelter	0	\$0.00	\$0.00	\$20,370	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Station/stop seating	5	\$0.00	\$0.00	\$250	\$0.000	\$0	\$0	\$916	\$0	\$334	\$1,250
Trash receptacles	22	\$0.00	\$0.00	\$300	\$0.000	\$0	\$0	\$4,838	\$0	\$1,762	\$6,600
Stop/station pedestrian lighting	66	\$0.00	\$0.00	\$240	\$0.000	\$0	\$0	\$11,611	\$0	\$4,229	\$15,840
RTPI LED display (not in pylon)	44	\$0.00	\$0.00	\$1,100	\$0.000	\$0	\$0	\$35,477	\$0	\$12,923	\$48,400
RTPI LCD display	20	\$0.00	\$0.00	\$1,500	\$0.000	\$0	\$0	\$21,990	\$0	\$8,010	\$30,000
Bike rack	22	\$0.00	\$0.00	\$50	\$0.000	\$0	\$0	\$806	\$0	\$294	\$1,100
Leaning rail	0	\$0.00	\$0.00	\$15	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Security camera	44	\$1,200	\$0.00	\$450	\$0.000	\$48,840	\$0	\$14,513	\$0	\$9,247	\$72,600
Emergency callbox (not in pylon)	0	\$0.00	\$0.00	\$550	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Linear feel of station platform edge	1,760	\$0.00	\$0.00	\$4.45	\$0.000	\$0	\$0	\$5,741	\$0	\$2,091	\$7,832
Square feet of station/stop platform	21,000	\$0.00	\$0.00	\$5.25	\$0.000	\$0	\$0	\$80,813	\$0	\$29,437	\$110,250
Platforms (security/police presence)	22	\$2,400	\$0.00	\$0.00	\$0.000	\$48,840	\$0	\$0	\$0	\$3,960	\$52,800
TOTAL						\$97,680	\$0	\$376,799	\$0	\$145,171	\$619,650

		Weekday					Saturday					Sunday					Best Frequenc	VOMS	Fleet Required
Existing Service Improvements	Time Period	Frequency (minutes)	Span (hours)	Trips	Annual Hours	Annual Miles	Frequency (minutes)	Span (hours)	Trips	Annual Hours	Annual Miles	Frequency (minutes)	Span (hours)	Trips	Annual Hours	Annual Miles			
<i>Note: This table calculates the marginal increase in cost only.</i>	Peak	40	6	18	4,590	48,195	0	0	0	-	-	0	0	0	-	-			
	Mid-Day	40	6	18	4,590	48,195	80	18	27	1,404	14,742	80	18	27	1,566	16,443			
	Evening	40	2	6	1,530	16,065	0	0	0	-	-	0	0	0	-	-			
	Early AM/PM	80	5	8	2,040	21,420	0	0	0	-	-	0	0	0	-	-			
Total				19	50	12,750	133,875	18	27	1,404	14,742			27	1,566	16,443	40	4	
		Weekday					Saturday					Sunday							
BRT in Mixed Traffic	Time Period	Frequency (minutes)	Span (hours)	Trips	Annual Hours	Annual Miles	Frequency (minutes)	Span (hours)	Trips	Annual Hours	Annual Miles	Frequency (minutes)	Span (hours)	Trips	Annual Hours	Annual Miles			
	Peak	10	6	72	15,300	179,928	0	0	0	-	-	0	0	0	-	-			
	Mid-Day	20	6	36	7,650	89,964	20	8	48	2,080	24,461	20	8	48	2,320	27,283			
	Evening	20	2	12	2,550	29,988	0	0	0	-	-	0	0	0	-	-			
	Early AM/PM	40	6	18	4,590	44,982	40	10	30	1,560	15,288	40	10	30	1,740	17,052			
Total			20	138	30,090	344,862		18	78	3,640	39,749			78	4,060	44,335	10	10	12
		Weekday					Saturday					Sunday							
BRT Buslane	Time Period	Frequency (minutes)	Span (hours)	Trips	Annual Hours	Annual Miles	Frequency (minutes)	Span (hours)	Trips	Annual Hours	Annual Miles	Frequency (minutes)	Span (hours)	Trips	Annual Hours	Annual Miles			
	Peak	10	6	72	13,770	179,928	0	0	0	-	-	0	0	0	-	-			
	Mid-Day	20	6	36	7,650	89,964	20	8	48	2,080	24,461	20	8	48	2,320	27,283			
	Evening	20	2	12	2,550	29,988			0	-	-			0	-	-			
	Early AM/PM	40	6	18	4,590	44,982	40	10	30	1,560	15,288	40	10	30	1,740	17,052			
Total			20	138	28,560	344,862		18	78	3,640	39,749			78	4,060	44,335	10	9	11

Note: Since this alternative uses the same type of vehicle as Centro's general fleet and the expansion is minimal, only one additional spare was required.

Alternative 1 Assumptions

Cycle Time	140
Route Length (miles)	10.5
Boardings Per Rev Hour	35.63
Average Trip Length	3.00

Alternative 2 Assumptions

Cycle Time	100
Route Length (miles)	9.8
Boardings Per Rev Hour	35.63
Average Trip Length	3.00

Alternative 3 Assumptions

Cycle Time	90
Route Length	9.8
Boardings Per	35.63
Average Trip l	3.00

Cycle Time	0
Route Length	0
Boardings Per	0.00
Average Trip l	0.00

Alternative 1

Existing Service Eastwood - OCC		UNIT COSTS (US\$2016)				EXTENDED AMOUNTS (US\$2016)					Total O&M Expense
	Quantity	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Indirect General & Administrative	
Unit (Annual)											
Revenue Service Hours (RSH)	15,720	\$52.61	\$0.00	\$0.00	\$4.190	\$827,029	\$0	\$0	\$65,867	\$0	\$892,896
Revenue Service Miles (RSM)	165,060	\$0.270	\$0.382	\$0.000	\$0.200	\$44,566	\$63,053	\$0	\$33,012	\$0	\$140,631
Passenger Boardings	315,756	\$0.00	\$0.137	\$0.00	\$0.064	\$0	\$43,259	\$0	\$20,208	\$0	\$63,467
Passenger-miles (PM)	946,005	\$0.066	\$0.000	\$0.000	\$0.020	\$62,436	\$0	\$0	\$18,920	\$0	\$81,356
Fleet Vehicles (peak + 20%)	5	\$2,098	\$26,381	\$2,203	\$13,584	\$10,490	\$131,905	\$11,015	\$67,920	\$0	\$221,330
Totals						\$944,522	\$238,216	\$11,015	\$205,927	\$0	\$1,399,681

Alternative 2

BRT Mixed Traffic		UNIT COSTS (US\$2016)				EXTENDED AMOUNTS (US\$2016)					Total O&M Expense
	Quantity	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Indirect General & Administrative	
Unit (Annual)											
Revenue Service Hours (RSH)	37,790	\$52.61	\$0.00	\$0.00	\$4.190	\$1,988,132	\$0	\$0	\$158,340	\$0	\$2,146,472
Revenue Service Miles (RSM)	428,946	\$0.270	\$0.382	\$0.000	\$0.200	\$115,815	\$163,857	\$0	\$85,789	\$0	\$365,462
Passenger Boardings	1,365,042	\$0.00	\$0.137	\$0.00	\$0.064	\$0	\$187,011	\$0	\$87,363	\$0	\$274,373
Passenger-miles (PM)	4,089,666	\$0.066	\$0.000	\$0.000	\$0.020	\$269,918	\$0	\$0	\$81,793	\$0	\$351,711
Fleet Vehicles	12	\$2,098	\$26,381	\$2,203	\$13,584	\$25,176	\$316,572	\$26,436	\$163,008	\$0	\$531,192
Totals						\$2,399,041	\$667,440	\$26,436	\$576,293	\$0	\$3,669,211

Alternative 3

BRT Bus Lane		UNIT COSTS (US\$2016)				EXTENDED AMOUNTS (US\$2016)					Total O&M Expense
	Quantity	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Indirect General & Administrative	
Unit (Annual)											
Revenue Service Hours (RSH)	36,260	\$52.61	\$0.00	\$0.00	\$4.190	\$1,907,639	\$0	\$0	\$151,929	\$0	\$2,059,568
Revenue Service Miles (RSM)	428,946	\$0.270	\$0.382	\$0.000	\$0.200	\$115,815	\$163,857	\$0	\$85,789	\$0	\$365,462
Passenger Boardings	1,393,560	\$0.00	\$0.137	\$0.00	\$0.064	\$0	\$190,918	\$0	\$89,188	\$0	\$280,106
Passenger-miles (PM)	4,175,106	\$0.066	\$0.000	\$0.000	\$0.020	\$275,557	\$0	\$0	\$83,502	\$0	\$359,059
Fleet Vehicles	11	\$2,098	\$26,381	\$2,203	\$13,584	\$23,078	\$290,191	\$24,233	\$149,424	\$0	\$486,926
Totals						\$2,322,089	\$644,966	\$24,233	\$559,833	\$0	\$3,551,121

Scenario	Description
<i>Scenario A</i>	<i>Alternative 1</i>
Unit (Annual)	Quantity
Station/stop flag	12
Station/stop marker	12
Tech pylon	12
Small shelter	0
Medium shelter	0
Large shelter	0
Center shelter	0
Station/stop seating	12
Trash receptacles	12
Stop/station pedestrian lighting	36
RTPI LED display (not in pylon)	24
RTPI LCD display	0
Bike rack	0
Leaning rail	0
Security camera	24
Emergency callbox (not in pylon)	0
Linear feel of station platform edge	0
Square feet of station/stop platform	0
Platforms (security/police presence)	0

Scenario	Description
<i>Scenario B</i>	<i>Alternative 2</i>
Unit (Annual)	Quantity
Station/stop flag	38
Station/stop marker	0
Tech pylon	38
Small shelter	0
Medium shelter	22
Large shelter	14
Center shelter	0
Station/stop seating	2
Trash receptacles	38
Stop/station pedestrian lighting	114
RTPI LED display (not in pylon)	76
RTPI LCD display	16
Bike rack	38
Leaning rail	0
Security camera	76
Emergency callbox (not in pylon)	0
Linear feel of station platform edge	3,040
Square feet of station/stop platform	36,480
Platforms (security/police presence)	38

Scenario	Description
<i>Scenario C</i>	<i>Alternative 3</i>
Unit (Annual)	Quantity
Station/stop flag	38
Station/stop marker	0
Tech pylon	38
Small shelter	0
Medium shelter	22
Large shelter	14
Center shelter	0
Station/stop seating	2
Trash receptacles	38
Stop/station pedestrian lighting	114
RTPI LED display (not in pylon)	76
RTPI LCD display	16
Bike rack	38
Leaning rail	0
Security camera	76
Emergency callbox (not in pylon)	0
Linear feel of station platform edge	3,040
Square feet of station/stop platform	36,480
Platforms (security/police presence)	38

Alternative 1
Existing

Eastwood to OCC		UNIT COSTS (US\$2016)				EXTENDED AMOUNTS (US\$2016)					Total O&M Expense
Unit (Annual)	Quantity	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Indirect General & Administrative	
Station/stop flag	12	\$0.00	\$0.00	\$24	\$0.000	\$0	\$0	\$211	\$0	\$77	\$288
Station/stop marker	12	\$0.00	\$0.00	\$320	\$0.000	\$0	\$0	\$2,815	\$0	\$1,025	\$3,840
Tech pylon	12	\$0.00	\$0.00	\$1,750	\$0.000	\$0	\$0	\$15,393	\$0	\$5,607	\$21,000
Small shelter	0	\$0.00	\$0.00	\$9,145	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Medium shelter	0	\$0.00	\$0.00	\$11,225	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Large shelter	0	\$0.00	\$0.00	\$14,100	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Center shelter	0	\$0.00	\$0.00	\$20,370	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Station/stop seating	12	\$0.00	\$0.00	\$250	\$0.000	\$0	\$0	\$2,199	\$0	\$801	\$3,000
Trash receptacles	12	\$0.00	\$0.00	\$300	\$0.000	\$0	\$0	\$2,639	\$0	\$961	\$3,600
Stop/station pedestrian lighting	36	\$0.00	\$0.00	\$240	\$0.000	\$0	\$0	\$6,333	\$0	\$2,307	\$8,640
RTPI LED display (not in pylon)	24	\$0.00	\$0.00	\$1,100	\$0.000	\$0	\$0	\$19,351	\$0	\$7,049	\$26,400
RTPI LCD display	0	\$0.00	\$0.00	\$1,500	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Bike rack	0	\$0.00	\$0.00	\$50	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Leaning rail	0	\$0.00	\$0.00	\$15	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Security camera	24	\$1,200	\$0.00	\$450	\$0.000	\$26,640	\$0	\$7,916	\$0	\$5,044	\$39,600
Emergency callbox (not in pylon)	0	\$0.00	\$0.00	\$550	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Linear feel of station platform edge	0	\$0.00	\$0.00	\$4.45	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Square feet of station/stop platform	0	\$0.00	\$0.00	\$5.25	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Platforms (security/police presence)	0	\$2,400	\$0.00	\$0.00	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL						\$26,640	\$0	\$56,857	\$0	\$22,871	\$106,368

Alternative 2
Mixed Traffic

Eastwood to OCC		UNIT COSTS (US\$2016)				EXTENDED AMOUNTS (US\$2016)					Total O&M Expense
Unit (Annual)	Quantity	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Indirect General & Administrative	
Station/stop flag	38	\$0.00	\$0.00	\$24	\$0.000	\$0	\$0	\$668	\$0	\$244	\$912
Station/stop marker	0	\$0.00	\$0.00	\$320	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Tech pylon	38	\$0.00	\$0.00	\$1,750	\$0.000	\$0	\$0	\$48,745	\$0	\$17,756	\$66,500
Small shelter	0	\$0.00	\$0.00	\$9,145	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Medium shelter	22	\$0.00	\$0.00	\$11,225	\$0.000	\$0	\$0	\$181,014	\$0	\$65,936	\$246,950
Large shelter	14	\$0.00	\$0.00	\$14,100	\$0.000	\$0	\$0	\$144,694	\$0	\$52,706	\$197,400
Center shelter	0	\$0.00	\$0.00	\$20,370	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Station/stop seating	2	\$0.00	\$0.00	\$250	\$0.000	\$0	\$0	\$367	\$0	\$134	\$500
Trash receptacles	38	\$0.00	\$0.00	\$300	\$0.000	\$0	\$0	\$8,356	\$0	\$3,044	\$11,400
Stop/station pedestrian lighting	114	\$0.00	\$0.00	\$240	\$0.000	\$0	\$0	\$20,055	\$0	\$7,305	\$27,360
RTPI LED display (not in pylon)	76	\$0.00	\$0.00	\$1,100	\$0.000	\$0	\$0	\$61,279	\$0	\$22,321	\$83,600
RTPI LCD display	16	\$0.00	\$0.00	\$1,500	\$0.000	\$0	\$0	\$17,592	\$0	\$6,408	\$24,000
Bike rack	38	\$0.00	\$0.00	\$50	\$0.000	\$0	\$0	\$1,393	\$0	\$507	\$1,900
Leaning rail	0	\$0.00	\$0.00	\$15	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Security camera	76	\$1,200	\$0.00	\$450	\$0.000	\$84,360	\$0	\$25,069	\$0	\$15,971	\$125,400
Emergency callbox (not in pylon)	0	\$0.00	\$0.00	\$550	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Linear feel of station platform edge	3,040	\$0.00	\$0.00	\$4.45	\$0.000	\$0	\$0	\$9,916	\$0	\$3,612	\$13,528
Square feet of station/stop platform	36,480	\$0.00	\$0.00	\$5.25	\$0.000	\$0	\$0	\$140,384	\$0	\$51,136	\$191,520
Platforms (security/police presence)	38	\$2,400	\$0.00	\$0.00	\$0.000	\$84,360	\$0	\$0	\$0	\$6,840	\$91,200
TOTAL						\$168,720	\$0	\$659,531	\$0	\$253,919	\$1,082,170

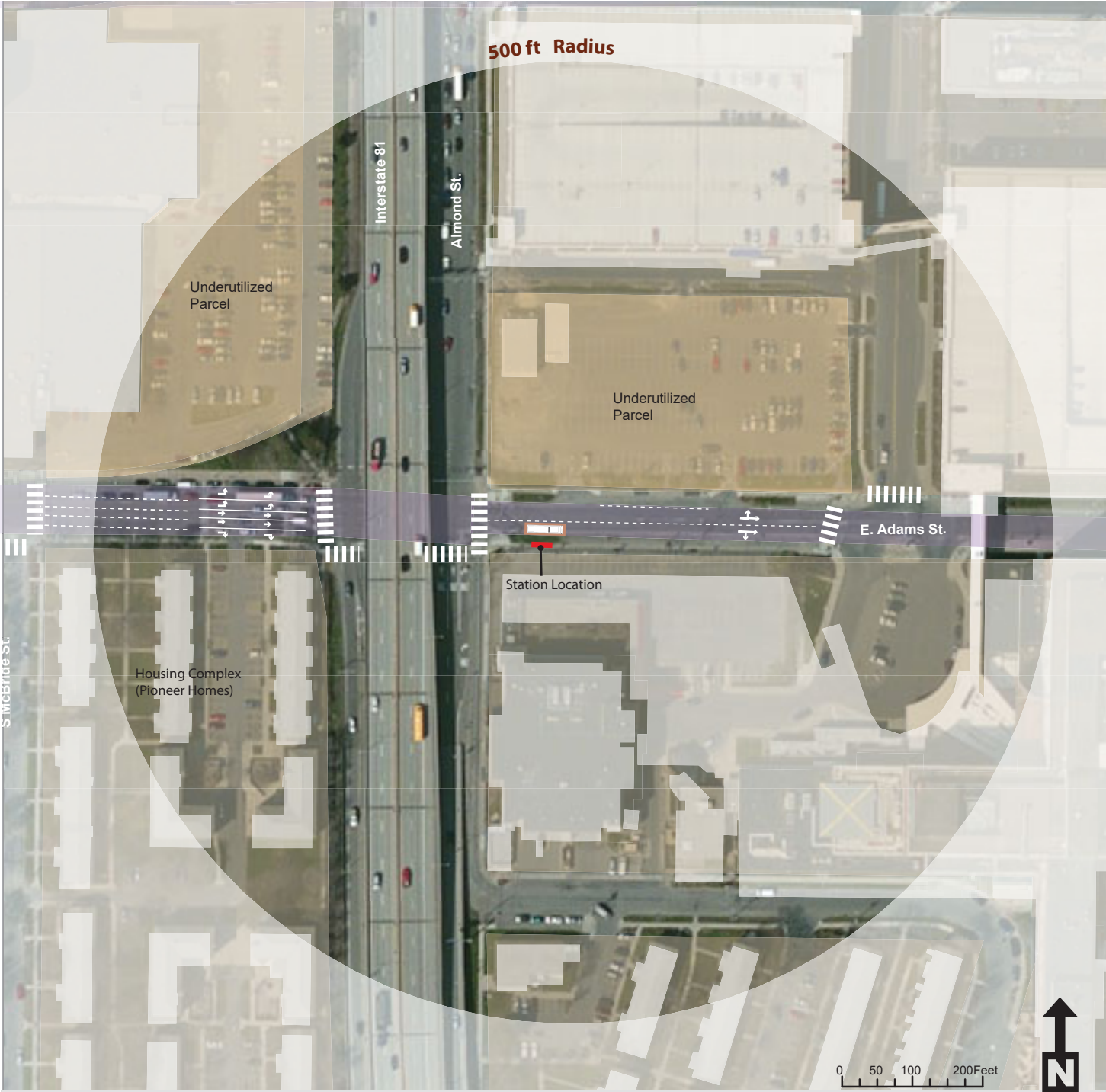
Alternative 3
Bus Lane

Eastwood to OCC		UNIT COSTS (US\$2016)				EXTENDED AMOUNTS (US\$2016)					Total O&M Expense
Unit (Annual)	Quantity	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Vehicle Operations	Vehicle Maintenance	Non-Vehicle Maintenance	Direct General & Administrative	Indirect General & Administrative	
Station/stop flag	38	\$0.00	\$0.00	\$24	\$0.000	\$0	\$0	\$668	\$0	\$244	\$912
Station/stop marker	0	\$0.00	\$0.00	\$320	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Tech pylon	38	\$0.00	\$0.00	\$1,750	\$0.000	\$0	\$0	\$48,745	\$0	\$17,756	\$66,500
Small shelter	0	\$0.00	\$0.00	\$9,145	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Medium shelter	22	\$0.00	\$0.00	\$11,225	\$0.000	\$0	\$0	\$181,014	\$0	\$65,936	\$246,950
Large shelter	14	\$0.00	\$0.00	\$14,100	\$0.000	\$0	\$0	\$144,694	\$0	\$52,706	\$197,400
Center shelter	0	\$0.00	\$0.00	\$20,370	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Station/stop seating	2	\$0.00	\$0.00	\$250	\$0.000	\$0	\$0	\$367	\$0	\$134	\$500
Trash receptacles	38	\$0.00	\$0.00	\$300	\$0.000	\$0	\$0	\$8,356	\$0	\$3,044	\$11,400
Stop/station pedestrian lighting	114	\$0.00	\$0.00	\$240	\$0.000	\$0	\$0	\$20,055	\$0	\$7,305	\$27,360
RTPI LED display (not in pylon)	76	\$0.00	\$0.00	\$1,100	\$0.000	\$0	\$0	\$61,279	\$0	\$22,321	\$83,600
RTPI LCD display	16	\$0.00	\$0.00	\$1,500	\$0.000	\$0	\$0	\$17,592	\$0	\$6,408	\$24,000
Bike rack	38	\$0.00	\$0.00	\$50	\$0.000	\$0	\$0	\$1,393	\$0	\$507	\$1,900
Leaning rail	0	\$0.00	\$0.00	\$15	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Security camera	76	\$1,200	\$0.00	\$450	\$0.000	\$84,360	\$0	\$25,069	\$0	\$15,971	\$125,400
Emergency callbox (not in pylon)	0	\$0.00	\$0.00	\$550	\$0.000	\$0	\$0	\$0	\$0	\$0	\$0
Linear feel of station platform edge	3,040	\$0.00	\$0.00	\$4.45	\$0.000	\$0	\$0	\$9,916	\$0	\$3,612	\$13,528
Square feet of station/stop platform	36,480	\$0.00	\$0.00	\$5.25	\$0.000	\$0	\$0	\$140,384	\$0	\$51,136	\$191,520
Platforms (security/police presence)	38	\$2,400	\$0.00	\$0.00	\$0.000	\$84,360	\$0	\$0	\$0	\$6,840	\$91,200
TOTAL						\$168,720	\$0	\$659,531	\$0	\$253,919	\$1,082,170

Appendix E

Station Area Plans

Corridor : RTC - SU (Alternative 2, and 3)
BRT Station : Adams
Station Typology : High



Existing

- ||||| Pedestrian Crossing
- Road Marking

Proposed

- BRT Shelter
- BRT Corridor
- Bus Stop Zone
- Density Potential





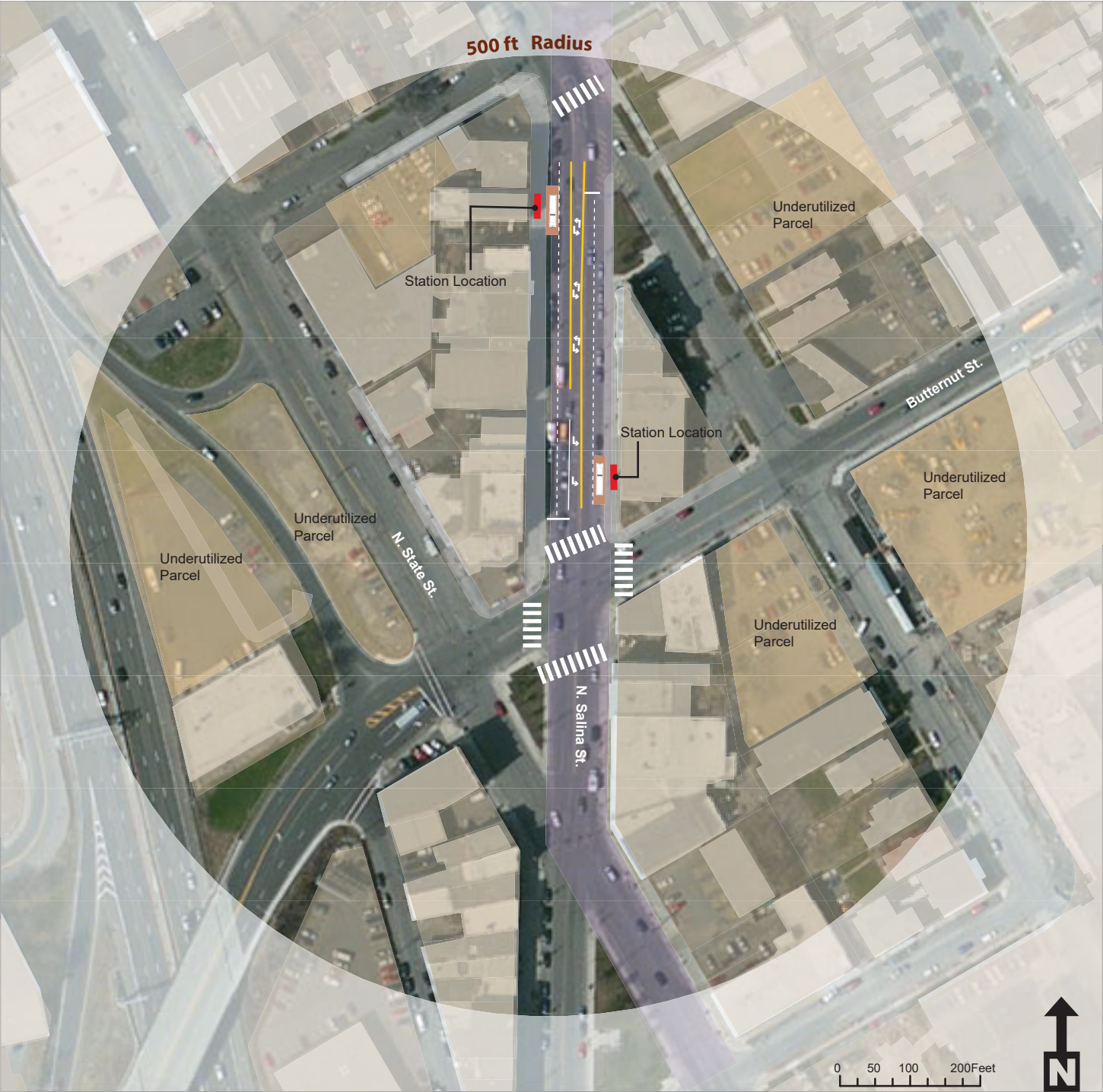
Existing

- ||||| Pedestrian Crossing
- Road Marking

Proposed

- BRT Shelter
- BRT Corridor
- Bus Stop Zone
- Development Potential
- ||||| Pedestrian Crossing
- Density Potential

- Infill Development



Existing

- ||||| Pedestrian Crossing
- Road Marking

Proposed

- BRT Shelter
- BRT Corridor
- Bus Stop Zone
- Density Potential

Corridor: Eastwood - OCC (Alternative 2, and 3)

BRT Station : Colvin

Station Typology : Medium



Existing

- ||||| Pedestrian Crossing
- Road Marking

Proposed

- Red Line BRT Shelter
- Purple Line BRT Corridor
- Orange Line Bus Stop Zone
- Green Line Development Potential
- Brown Line Infill Development
- Yellow Line Densification Potential





Existing

||||| Pedestrian Crossing

Proposed

■ BRT Shelter

■ BRT Corridor

■ Bus Stop Zone

■ Density Potential

||||| Pedestrian Crossing





Existing	Proposed		
Pedestrian Crossing	BRT Shelter	Density Potential	
Road Marking	BRT Corridor	Bus Stop Zone	

Corridor : RTC - SU (Alternative 2, and 3)

BRT Station : Hospitals

Station Typology : High



Existing

||||| Pedestrian Crossing

— Road Marking

Proposed

■ BRT Shelter

■ BRT Corridor

■ Bus Stop Zone

■ Density Potential

||||| Pedestrian Crossing

Corridor : RTC - SU (Alternative 3)
BRT Station : Kirkpatrick
Station Typology : High



Existing

- ||||| Pedestrian Crossing
- Road Marking

Proposed

- BRT Shelter
- BRT Corridor
- Bus Stop Zone
- Development Potential
- Dedicated Bus Lane

Corridor : Eastwood - OCC (Alternative 2, and 3)

BRT Station : Leo

Station Typology : Medium



Existing

- ||||| Pedestrian Crossing
- Road Marking

Proposed

- BRT Shelter
- BRT Corridor
- Bus Stop Zone
- Density Potential
- Pull-out
- ||||| Pedestrian Crossing

Corridor: Eastwood - OCC (Alternative 2)

BRT Station : Lodi

Station Typology : High



Existing

- ||||| Pedestrian Crossing
- Road Marking

Proposed

- BRT Shelter
- BRT Corridor
- Bus Stop Zone

Corridor: Eastwood - OCC (Alternative 3)
BRT Station : Lodi
Station Typology : High



Existing

- ||||| Pedestrian Crossing
- Road Marking

Proposed

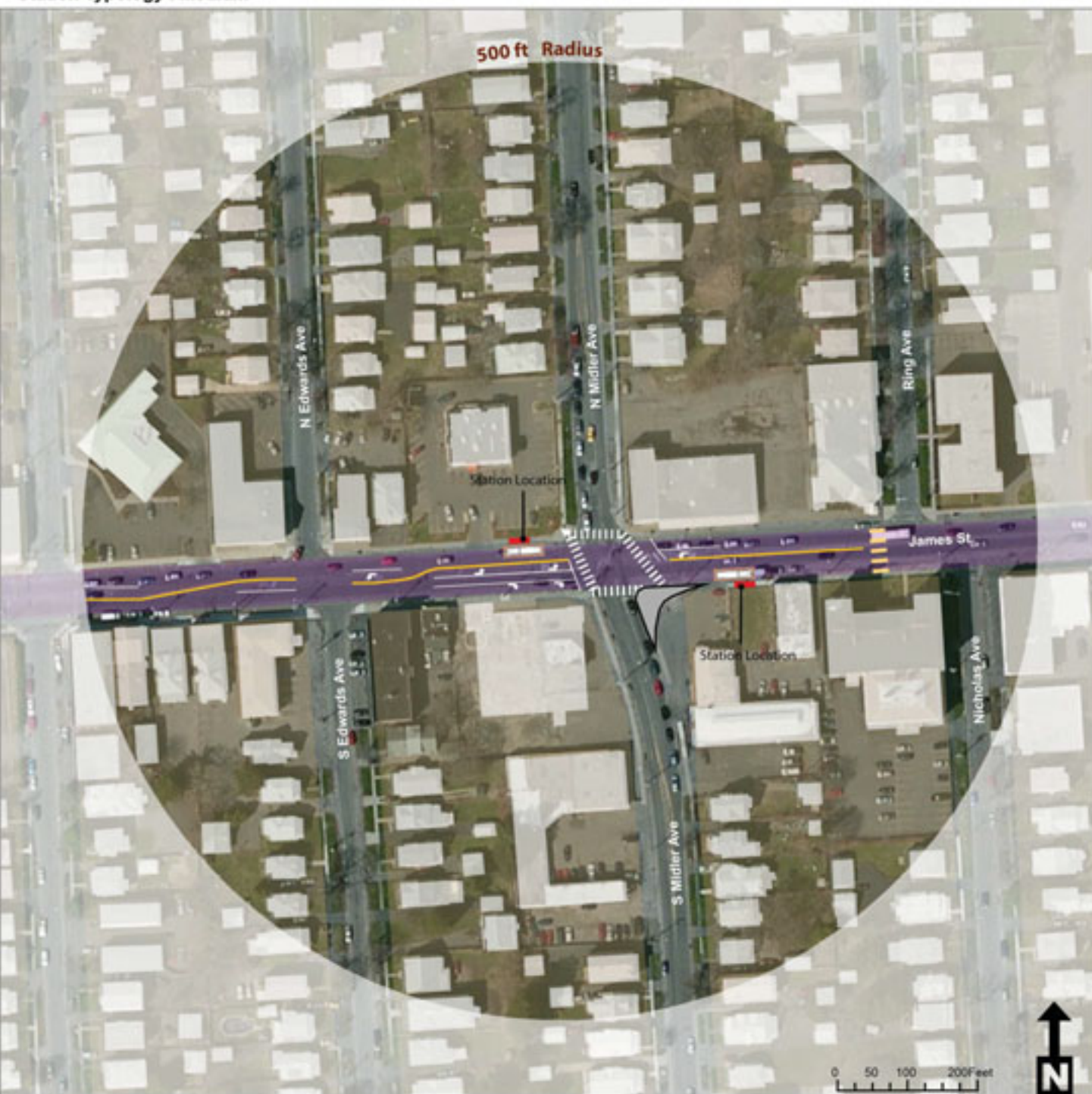
- BRT Shelter
- BRT Corridor
- Bus Stop Zone
- Dedicated Bus Lane



Corridor : Eastwood - OCC (Alternative 2 and 3)

BRT Station : Midler

Station Typology : Medium



Existing

- ||||| Pedestrian Crossing
- Road Marking

Proposed

- BRT Shelter
- BRT Corridor
- Bus Stop Zone
- ||| Pedestrian Crossing
- Reduced Radius for Pedestrian Safety

Corridor: Eastwood - OCC (Alternative 2 and 3)
BRT Stop : OCC Central
Station Typology : High



Existing

- Road Marking
- Bike Lane

Proposed

- BRT Shelter
- BRT Corridor
- Bus Stop Zone
- Densification Potential
- Sidewalk
- Diversion of Bike Lane

- Pedestrian Crossing



Corridor : RTC - SU (Alternative 2)

BRT Station : Salina Kirkpatrick

Station Typology : High



Existing

||||| Pedestrian Crossing

— Road Marking

Proposed

■ BRT Shelter

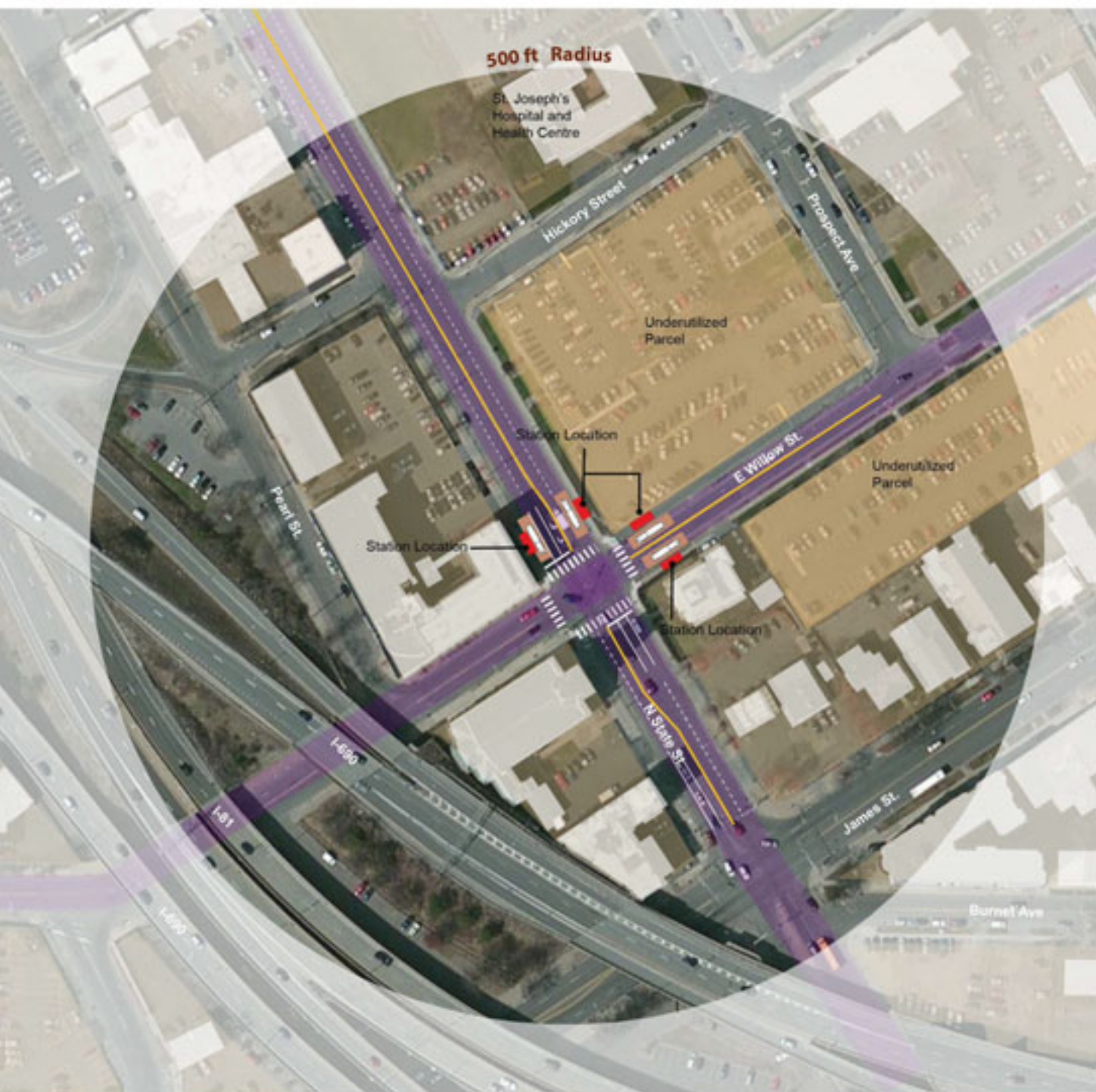
■ BRT Corridor

■ Bus Stop Zone



- | Existing | | Proposed | |
|----------|---------------------|----------|-------------------------|
| | Pedestrian Crossing | | BRT Shelter |
| | Road Marking | | BRT Corridor |
| | | | Bus Stop Zone |
| | | | Densification Potential |





Existing

- ||||| Pedestrian Crossing
- Road Marking

Proposed

- BRT Shelter
- BRT Corridor
- Bus Stop Zone
- Density Potential

Corridor: Eastwood - OCC (Alternative 2, and 3)

BRT Station : Valley/ Glenwood

Station Typology : High



Existing

||||| Pedestrian Crossing

— Road Marking

Proposed

■ BRT Shelter

■ BRT Corridor

■ Bus Stop Zone

■ Densification Potential

■ Infill



- | Existing | Proposed | |
|---------------------|--------------|-------------------|
| Pedestrian Crossing | BRT Shelter | Density Potential |
| Road Marking | BRT Corridor | Bus Stop Zone |



Existing

- ||||| Pedestrian Crossing
- Road Marking
- Bike Lane

Proposed

- BRT Shelter
- BRT Corridor
- Bus Stop Zone
- Density Potential

Appendix F

Environmental Impact Information Regarding the
Proposed Action

The SMART 1 project will be required to follow the requirements of the National Environmental Policy Act (NEPA) and State Environmental Quality Review Act (SEQR). The anticipated project classification is a NEPA Class II Categorical Exclusion (CE) per Code of Federal Regulations (CFR) Title 23 Section 771.118(c) and a SEQRA Type II Action. While the outcome depends upon the final alternative selected for funding, construction and operation, based on the initial findings of the environmental review, it is anticipated that the proposed project will have no significant adverse effect on environmental resources. The initial environmental screening is summarized in Table 1. Each of the 23 environmental impact categories are further detailed below.

Table 1 – Summary of Initial Environmental Screening

Environmental Impact Category	<i>Preliminary Finding for Eastwood - OCC Corridor</i>	<i>Preliminary Finding for RTC - SU Corridor</i>
Land Acquisitions and Relocations Required	Likely no adverse effect (Alt.1&2) Consideration for any right-of-way for bus-only lane (Alt.3)	Likely no adverse effect (Alt.1&2) Consideration for any right-of-way for bus-only lane (Alt.3)
Land Use and Zoning	Likely no adverse effect.	Likely no adverse effect.
Noise Quality	Likely no adverse effect. Further analysis recommended.	Likely no adverse effect. Further analysis recommended.
Water Quality	Likely no adverse effect.	Likely no adverse effect.
Air Quality	Likely a positive effect through transit benefits. Further analysis recommended.	Likely a positive effect through transit benefits. Further analysis recommended.
Wetlands	Likely no adverse effect.	Likely no adverse effect.
Flooding/Surface Water, Groundwater	Likely no adverse effect	Likely no adverse effect (Alt.1&2) Potential groundwater impact (Alt.3)
Navigable Waterways and Costal Zone	Likely no adverse effect.	Likely no adverse effect.
Ecologically Sensitive Areas	Likely no adverse effect.	Likely no adverse effect.
Endangered Species	Likely no adverse effect.	Likely no adverse effect.
Traffic and Parking	Further analysis recommended.	Further analysis recommended.
Energy	Likely a positive effect.	Likely a positive effect.
Historic Properties and Parklands (Section 106)	Likely no adverse effect.	Likely no adverse effect. (Alt.1&2) Consideration for any right-of-way for bus-only lane. (Alt.3)
Construction	Likely only a temporary impact.	Likely only a temporary impact.
Visual	Likely no adverse effect.	Likely no adverse effect.
Community Disruption	Likely only a temporary impact.	Likely only a temporary impact.
Safety and Security	Likely a positive effect.	Likely a positive effect.
Secondary Development	Likely a positive effect.	Likely a positive effect.
Consistency with Local Plans	Likely no adverse effect.	Likely no adverse effect.

Environmental Impact Category	<i>Preliminary Finding for Eastwood - OCC Corridor</i>	<i>Preliminary Finding for RTC - SU Corridor</i>
Environmental Justice	Likely no adverse effect.	Likely no adverse effect.
Hazardous Materials	Further analysis recommended.	Further analysis recommended.
Asbestos	Likely no adverse effect.	Likely no adverse effect.
Vibration	Likely no adverse effect.	Likely no adverse effect.

1.1.1 Land Acquisition and Relocations Required

There will likely be no adverse effect because the BRT service will remain within the right-of-way of the designated roads. However, the third alternative for each scenario has the potential to impact right-of-way because of the proposed bus-only lane. The proposed bus-only lane is located along Solar Street from Franklin Square to Destiny USA for the RTC - SU corridor and along James Street from St. Joseph's to Shotwell Park for the Eastwood - OCC Corridor.

1.1.2 Land Use and Zoning

There will likely be no adverse effect to the Land Use and Zoning to the surrounding area because the BRT service remains within the right-of-way of the road. However, it is important to note that one goal of BRT is to promote transit oriented development throughout the corridor, spurring economic revitalization in an environmentally sustainable way. As previously noted, the City of Syracuse is in the process of revising and updating their zoning ordinance and map to facilitate implementation of the Syracuse Land Use & Development Plan, a component of the City's 2040 Comprehensive Plan. Zoning along each of the two SMART 1 corridors may change based on the City's recent effort.

There are generally four land use areas within the Eastwood - OCC corridor. On the southern end the corridor is located within the OCC and Upstate Community Campus and is thus surrounded by institutional land uses. Between the OCC and Upstate Community Campus and immediately after the campus the surrounding area is characterized by mostly residential housing and some commercial immediately adjacent to the corridor. From West Onondaga Street to Dewitt Street the corridor is in the Urban Core and is characterized by a high density and land uses such as commercial, retail, institutional, and recreational. After Dewitt Street the surrounding land use is again characterized by residential with some commercial. Table 2 summarizes the land uses and zoning surrounding the Eastwood - OCC corridor BRT stations for alternative 2 and 3. The first four stations are within the Town of Onondaga and the last station borders the Town of DeWitt.

Table 2 – Eastwood - OCC BRT Stations Land Use and Zoning

Station	Land Use	Zoning
Mawhinney Hall	Institutional	R-1 (Town of Onondaga)
OCC Central	Institutional	R-1
Upstate Community Campus	Institutional	R-1
Glenwood/Valley	Residential/Some Commercial	BA/RAA/RA-1/RB (Syracuse)
Colvin	Residential/Some Commercial	BA/RAA/RA-1/RB
Cortland	Residential/Some Commercial	BA/RAA/RA
Bellevue	Residential/Some Commercial	BA/RAA/RB
West Onondaga	Residential/Some Commercial	BA/RB/RB-T
Hub	Urban Core	BA/RB/CA/CBD-OSR/CBD-OS
Washington	Urban Core	CBD-OS/CBD-R
James	Urban Core	CBD-OS

St. Joseph's	Urban Core	OB/CA/BA/PID
Lodi	Residential/Commercial (Urban Core)	OB/OA/RB
Oak	Residential/Some Commercial	OA
Teall	Residential/Some Commercial	RA/RAA/RA-1
Hickok	Residential/Some Commercial	RA/RAA/RA-1/BA
Midler	Residential/Some Commercial	BA/RA/RA-1
Leo	Residential/Some Commercial	RC/BA/RA-1 B/IND (Town of Dewitt)

There are generally four land use areas within the RTC - SU corridor. On the southern end the corridor is located within the SU campus and is thus surrounded by institutional land use. Immediately after the campus, the corridor is in the Urban Core and is characterized by high density and land uses such as commercial, retail, institutional, and recreational. For alternatives 1 and 2, after Butternut Street the surrounding land uses are characterized by mostly residential, industrial, and with some commercial. For alternative 3, after the I-690 the surrounding land use is characterized by industrial and vacant lots along Solar Street. All three alternatives stop at Destiny USA. Table 3 summarizes the land uses and zoning surrounding the RTC - SU corridor stations for alternative 2 and 3. All stations are within the City of Syracuse.

Table 3 – RTC - SU BRT Stations Land Use and Zoning

Station	Land Use	Zoning
Alternative 2 & 3		
Science & Technology Center	Institutional	PID
College Place	Institutional	PID
Waverly	Institutional/Urban Core	PID
Hospitals	Hospital/Institutional/Urban Core	PID/RB
Harrison	Urban Core	RB/CBD-LB/CBD-HDR/CBD-OS
Hub	Urban Core	BA/RB/CA/CBD-OSR/CBD-OS
Adams	Urban Core	RB/CBD-LB
Alternative 2 only		
Washington	Urban Core	CBD-OS/CBD-OSR
St. Joseph's	Urban Core/Industrial	OB/CA/BA/PID
Butternut	Urban Core	BA/CA
Salina/Kirkpatrick	Residential/Industrial	BA/RB/CA/RB-1
Alvord	Residential	BA/RB-1
Wolf	Industrial/Commercial/Residential	BA/IA
Alternative 3 only		
Washington	Urban Core	CBD-OS/CBD-R
Erie	Urban Core	CBD-OS/CBD-GS
Franklin Square	Industrial	T5-2/SQ/PK
Kirkpatrick	Vacant (Urban Core)	T5/T5-1
Bear	Vacant (Urban Core)	T5/IB
Alternative 2 & 3		
Destiny USA	Shopping Mall (Urban Core)	IB
RTC	Industrial	IA

The zoning codes for the Town of Onondaga, City of Syracuse and Town of DeWitt are summarized in Table 4.

Table 4 – Zoning Code

Code	Description
City of Syracuse	
RA-1	Residential District, Class A-1
RAA	Residential District, Class AA
RB	Residential District, Class B
RB-1	Residential District, Class B-1
RB-T	Residential District, Class B Transitional
OA	Office District, Class A
OB	Office District, Class B
BA	Local Business District, Class A
CBD-R	Central Business District, Retail District
CBD-GS	Central Business District, General Service District
CBD-HDR	Central Business District, High Density Residential District
CBD-OS	Central Business District, Office and Service District
CBD-OSR	Central Business District, Office and Service District (Restricted)
CBD-LB	Central Business District, Local Business District
CA	Commercial District, Class A
CB	Commercial District, Class B
IA	Industrial District, Class A
IB	Industrial District, Class B
PID	Planned Institutional District
T5	Lakefront District, Urban Center
T5-1	Lakefront District, Urban Center
PK	Park
Town of Onondaga	
R-1	Residential
NS	Neighborhood Shopping
PCO	Professional and Commercial Office
P-R	Planned Residential
P-RC	Planned Residential Community
Town of DeWitt	
B	Business
IND	Industrial

1.1.3 Noise/Water/Air Quality

There will likely be no adverse effect to the Noise/Water/Air Quality for both corridors. However, full technical reports for noise and air quality are recommended.

Noise Quality

Implementation of BRT service along the Eastwood - OCC and RTC - SU corridors would result in enhanced transit service in corridors in which frequent transit operations currently exist. As such, buses and the associated noise are part of the character of the corridors. A three decibel increase in noise creates a discernible change to human ears. To create a three decibel increase, traffic volumes in the corridors would have to double. Enhanced transit service will not double traffic volumes along the Eastwood - OCC and RTC - SU corridors; rather the project has the potential to decrease traffic volumes through modal shifts. Therefore, the implementation of BRT service along the corridors will not negatively impact noise levels.

Water Quality

There are a few water bodies located on or adjacent to the proposed BRT corridors. The Eastwood - OCC corridor crosses over the Onondaga Creek and the Furnace Brook and the

RTC - SU corridor passes near the Onondaga Creek and Ley Creek. Water quality is not anticipated to be negatively impacted by the proposed project since the BRT projects will remain on existing road where the crossings already occur.

Air Quality

The BRT project, when completed, will likely have a positive impact on air quality as the improved public transportation service is anticipated to increase ridership and draw some travelers out of their cars. It is important to note that a full air quality analysis has not been done for this project, so quantitative estimates of reductions in VMT and associated emissions are not available. Air quality will be regulated during the construction process. Construction contracts will include requirements to comply with all Federal, State and local guidelines, including the 1990 Clean Air Act Amendments, et seq. along the proposed BRT routes.

1.1.4 Wetlands

National Wetlands Inventory (NWI) and New York State Department of Environmental Conservation (NYSDEC) Freshwater wetlands maps, topographic mapping, the County Soil Survey, and hydric soils lists were reviewed to assist with identifying potential wetland locations. The NYSDEC Freshwater Wetlands map depicts no wetlands near the Eastwood - OCC corridor and two wetlands near the Destiny USA and RTC stations for all alternatives of the RTC - SU corridor. The NWI maps depict three NWI wetlands, two near OCC and one in Elmwood Park, for all the Eastwood - OCC corridor alternatives and one NWI wetland near Destiny USA for all the RTC - SU corridor alternatives. All the alternatives for both the Eastwood - OCC and RTC - SU corridors utilize existing roadway and as such are not anticipated to have any adverse effects.

The wetlands locations are shown in Attachment A.

1.1.5 Flooding/Surface Water, Groundwater

There will likely be no adverse effect to Flooding/Surface Water, Groundwater for both corridors.

Flooding

Flood areas were determined using the FEMA Flood Maps as seen in Attachment B.

The Eastwood - OCC corridor passes through a 100-year flood zone a few times between South Avenue/Clinton Avenue and West Onondaga Street/Clinton Avenue. The nearest BRT stations for alternative 2 and 3, Cortland and Bellevue, are located just outside of the flood zone and will thus not be impacted. Otherwise, there will likely be no impact because the BRT remains on existing roads within the flood zones.

The RTC - SU corridor passes near two 100-year flood zones near the Regional Transit Center for all alternatives and near Onondaga Creek for only alternative 3. There will likely be no impact to any alternatives since the corridor or stations are not in the flood zones.

Surface Water

The NWI Areas, three near the Eastwood - OCC corridor and one near the RTC - SU corridor, are all wetlands with seasonal surface water. These may or may not be associated with storm water management activities. The project is not expected to impact these surface waters. Any potential adverse impact would be mitigated through storm water management during the State Pollutant Discharge Elimination System (SPDES) permit process for both temporary and permanent conditions.

Groundwater

Both corridors are not situated over a US EPA designated Sole Source Aquifer. However, the portion north of Downtown Syracuse of the RTC - SU corridor is situated over a NYSDEC

designated principal aquifer called Baldwinsville. There are currently no laws or regulations that directly regulate nonpoint source impacts from projects in or adjacent to principal aquifers; however, NYSDEC does regulate water quality. Alternatives 1 and 2 do not involve new highway construction, significant pavement widening, construction of additional travel lanes or a major net increase in impervious area; therefore, further study regarding the effect of the project on the principal aquifer is not necessary. Temporary Erosion and sediment control measures will be incorporated into contract documents as necessary; due to the nature of the project no significant impact to groundwater quality is anticipated for Alternatives 1 and 2. Alternative 3 involves ROW widening for a bus-only lane along Solar Street. Potential adverse impacts would be mitigated through the SPDES permit process for both temporary and permanent conditions. The groundwater map is shown in Attachment C.

1.1.6 Navigable Waterway and Coastal Zones

There will likely be no adverse effect. There are two connected navigable waterways and no coastal zones located near the RTC - SU corridor; Onondaga Lake and Onondaga Creek. Only alternative 3 is located near Onondaga Creek.

1.1.7 Ecological Sensitive Areas

There will likely be no adverse effect. Ecological communities within the project area have been defined using the classification system presented in Ecological Communities of New York (Reschke 1990). No communities were identified near the Eastwood - OCC corridor and only one community was identified near the RTC - SU corridor near Destiny USA. The community is identified as a Salt Marsh within the Estuarine subsystem.

Farmland/Agricultural Property

Both corridors do not fall within any agricultural zoning within the Town of Onondaga, City of Syracuse, and Town of DeWitt. As such, no further involvement is necessary with respect to the Farmland Protection Policy Act. Both corridors are not within an agricultural district according to the Syracuse-Onondaga County Planning Agency (SOCPA). Therefore, the provisions of the Agriculture and Markets Law do not apply. The agricultural districts are shown in Attachment D.

1.1.8 Endangered Species

There will likely be no adverse effect to endangered species. The USFWS County List of Threatened/Endangered Species, Attachment E, identifies the American hart's-tongue fern (*Asplenium scolopendrium* var. *americanum*), Indiana bat (*Myotis sodalis*), Northern Long-Eared Bat (*Myotis septentrionalis*), Eastern Massasauga (=rattlesnake) (*Sistrurus catenatus*), and bog turtle (*Clemmys muhlenbergii*) as occurring in Onondaga County (Reference the USFWS list). Any disturbance associated with the project would affect previously disturbed urbanized areas; therefore, impacts to endangered species is not anticipated to occur.

1.1.9 Traffic and Parking

A full technical analysis is recommended for traffic and parking.

1.1.10 Energy

There will likely be no adverse effect to energy. Both corridors are anticipated to result in decreases in auto-related fuel consumption because public transportation service draws travelers out of their cars.

1.1.11 Historic Properties and Parklands

There will likely be no adverse effect to historic properties and parklands for both corridors. Section 106 coordination with the New York State Office of Parks, Recreation and Historic

Preservation should be initiated to confirm clearance for the project for Historic and Parkland properties.

Historic Properties

The National Register listed six properties adjacent to all alternatives for the Eastwood - OCC corridor and five properties adjacent to each alternative for the RTC - SU corridor (six total). Cultural resources are about equal for all alternatives of each corridor. The historical properties are listed in Table 5 and shown in Attachment F.

Table 5 – Historic Properties

Eastwood-OCC Corridor
Elmwood Park – Historic Designed Landscapes of Syracuse MPS
Onondaga Park - Historic Designed Landscapes of Syracuse MPS
Onondaga Highlands – Swaneola Heights Historic District
Armory Square Historic District
Montgomery Street – Columbus Circle Historic District
Hawley-Green Street Historic District
RTC-SU Corridor
Syracuse University – Comstock Tract Buildings
Thornden Park – Historic Designed Landscapes of Syracuse MPS
Walnut Park Historic District
Montgomery Street – Columbus Circle Historic District
North Salina Street Historic District (Alt 1 & 2 only)
Armory Square Historic District (Alt 3 only)

Parklands

The City of Syracuse Comprehensive Plan (Syracuse 2040) identifies some parks and passive use areas along the Eastwood-OCC and RTC - SU corridors. Most of these locations will not be disturbed by the proposed BRT. Only alternative 3 of the RTC - SU corridor will potentially impact a park because of the additional ROW required for the bus-only lane but would not result in any significant impacts.

1.1.12 Construction

There will likely be a temporary effect due to construction and no long-term adverse effect. Construction impacts associated with the project may result in temporary parking, air quality, noise, vibration, water quality, visual, and access impacts near the proposed BRT station locations.

Any air quality impacts associated with construction activities would be temporary and would be in the form of emissions from diesel-powered construction equipment and wind-blown dust. Air pollution associated with the creation of wind-blown particles would be effectively controlled

through the use of Best Management Practices, including watering of the site during construction to prevent fugitive dust emissions. Air pollution associated with gasoline- or diesel- powered construction equipment would be controlled through effective tuning and maintenance of diesel- and gasoline-powered construction equipment.

Noise and vibration impacts could result from heavy equipment movement and construction activities such as compaction or pile driving. Potential noise and vibration impacts would be controlled through the use of Best Management Practices and observation of City or County noise ordinances, and work time restrictions.

Potential water quality impacts from construction would be controlled through the implementation of approved methods and Best Management Practices included in the New York State Storm Water Management Design Manual.

Some construction equipment and materials stored for the project may be visually displeasing to local residents and businesses. This would be a temporary situation and would result in no long-lasting effects. Maintenance of traffic and sequence of construction would be planned and scheduled so as to minimize traffic delays and inconvenience. Access to some businesses may be temporarily impacted; however, access will be maintained throughout the construction process.

All proposed construction debris will be properly disposed of in construction/demolition landfills. If encountered, lead-based paint and asbestos-containing materials will be disposed of in accordance with all federal, state, and local regulations.

1.1.13 Visual

There will likely be no adverse effect. The proposed project will have a positive impact on the aesthetics of the project area; old bus shelters will be replaced and sidewalks will be improved around the proposed BRT stations where needed.

1.1.14 Community Disruption

There will likely be a temporary effect due to construction and no long-term adverse effect. No areas of the community will be displaced or isolated by the proposed project; however, businesses near the proposed BRT station locations may experience some temporary disruption during construction associated with the project. Upon completion, the project will improve the community with more efficient and reliable transit.

1.1.15 Safety and Security

The proposed BRT service will positively impact safety in the area by updating the shelters and amenities at the proposed BRT station locations.

1.1.16 Secondary Development

There will likely be no adverse effect. The implementation of BRT service will likely have a positive impact on secondary development within the corridor. By having timely and reliable public transportation, more riders/consumers could visit the shops and businesses along the BRT route; therefore, spurring economic stability and growth. The project will also support Transit Oriented Development around BRT stations.

1.1.17 Consistency with Local Plans

There will likely be no adverse effect. The construction of the proposed BRT stations and implementation of BRT service is in accordance with the adopted plans of the City of Syracuse, Town of Onondaga, Town of DeWitt, Onondaga Community College, Syracuse University, and the SMTC.

1.2 Environmental Justice

Title VI of the Civil Rights Act prohibits discrimination on the basis of race, creed, color or national origin in program receiving federal financial assistance. The FTA is responsible for oversight of its grantees to assure compliance with this statute. The currently applicable guidance is contained in FTA Circular C4702.1B issued in October, 2012. For the purpose of this analysis, the proposed implementation of a BRT service along both the Eastwood-OCC and RTC-SU corridors will be considered a major service change. The primary purpose of this assessment is to determine if a specific major service change results in a disparate impact on the basis of race, color or national origin.

The ethnic make-up for the two corridors is representative of the ethnic profile of the City of Syracuse, with values for the White, African American, Asian, Hispanic and those identifying as other populations being nearly the same. The two corridors and Syracuse have minority populations of 45% and 47%, respectively.

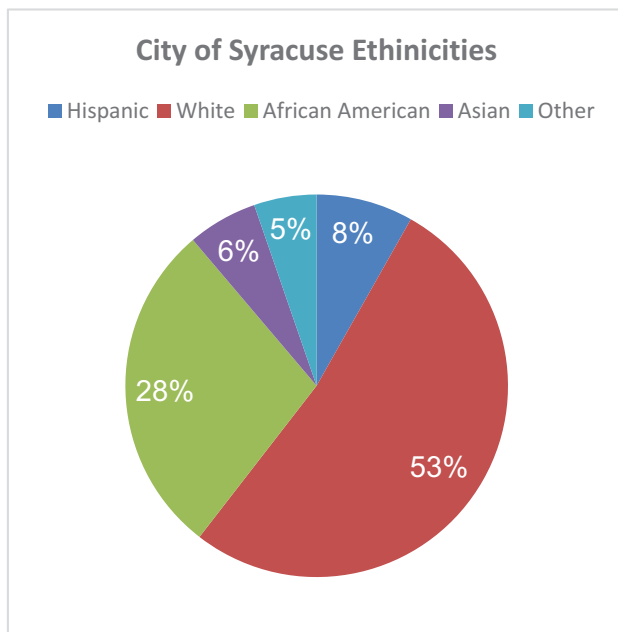


Figure 1: Ethnicities in Syracuse

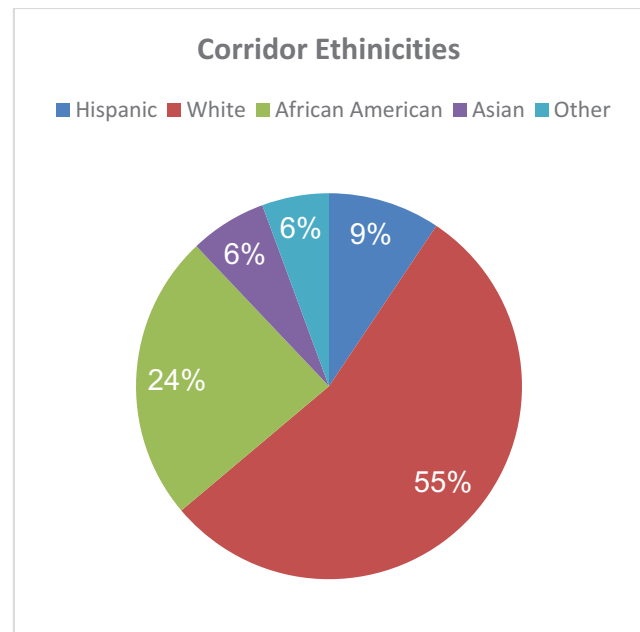


Figure 2: Ethnicities in Corridor

Source: 2013 U.S. Census American Community Survey 5-year estimates Table B02001

Syracuse has one of the highest rates of concentrated poverty in the country among the African American and Hispanic populations. Syracuse has nine (9) extreme poverty neighborhoods, which are defined as census tracts where more than 40% of residents live below the poverty line.

Increased rates of poverty are often correlated with low rates of household vehicle ownership, an effect evident within the study corridors. In the City of Syracuse, 26% of households have no vehicle - the majority of these households are located in three pockets: (1) west of I-81, with a small section extending just east of I-81; (2) west of West Street and south of Erie Boulevard West; and (3) just north of the I-690 and I-81 junction. In the remainder of the MPA, 5.6 % of households have no vehicle, with concentrations located in some of the villages, including East Syracuse, Camillus, Baldwinsville, and North Syracuse. Many households Downtown and in the neighborhood of Hawley – Green do not have access to a personal vehicle. Both of these areas will be served by the RTC – SU and Eastwood – OCC corridors. Other areas with high instances of households without access to a vehicle are along James Street and W. Onondaga Street within the Eastwood – OCC corridor and along N. Salina Street in the RTC – SU corridor.

The effects of the proposed service plan are almost universally positive. There will not be any impacts to properties since the corridors remain within the right-of-way of the existing roads. The right-of-way increase for alternative 3 of the RTC - SU corridor is located in a non-residential area. For all alternatives, the improved service will benefit these populations which are “transit-dependent.”

1.2.1 Additional Environmental Impact Information

There will likely be no adverse effects due to hazardous waste and contaminated materials, asbestos, and vibration. However, further analysis is required.

Hazardous Waste and Contaminated Materials

A hazardous waste and contaminated materials screening will need to be completed during the alternatives analysis. No impacts are anticipated since the projects remain within existing roadways.

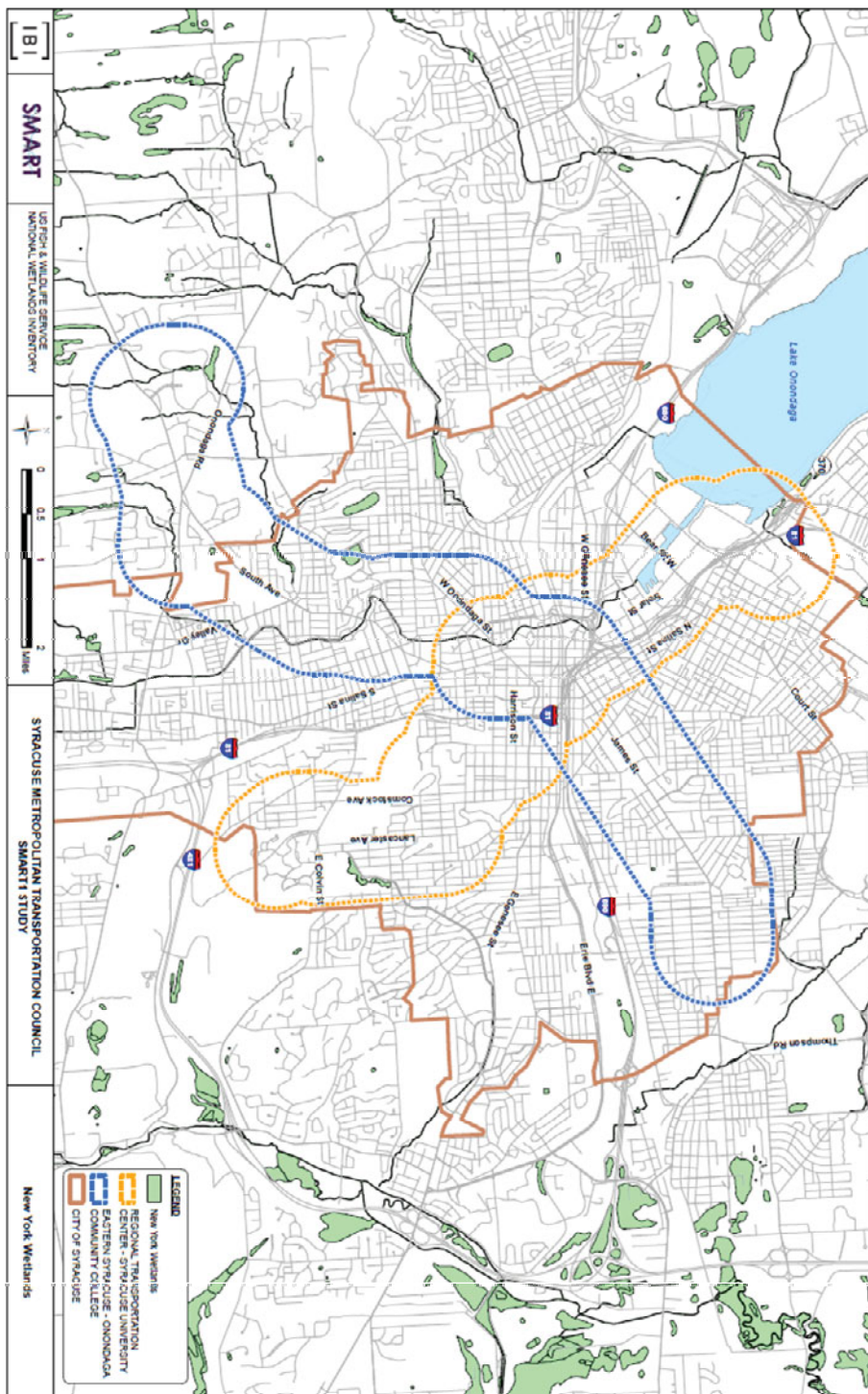
Asbestos

If encountered, lead-based paint and asbestos containing materials will be disposed of in accordance with all federal, state, and local regulations.

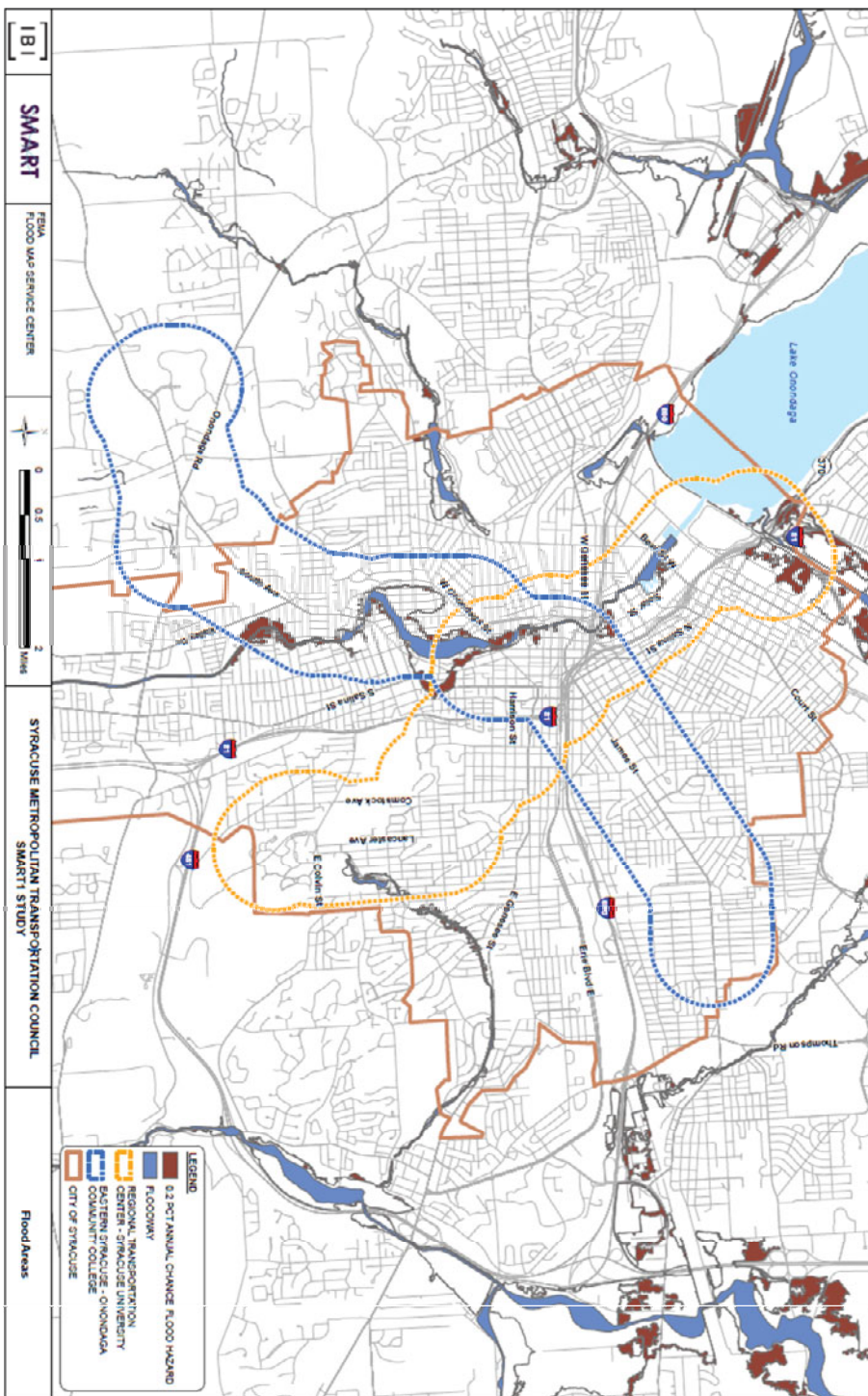
Vibration

Some increased vibration along both corridors may occur during construction activities. Much of the current land use in the corridor is residential, commercial, institutional, and industrial. Existing vibration along the corridor is due to automotive activity along the roadways. The proposed project does not involve new or relocated steel tracks.

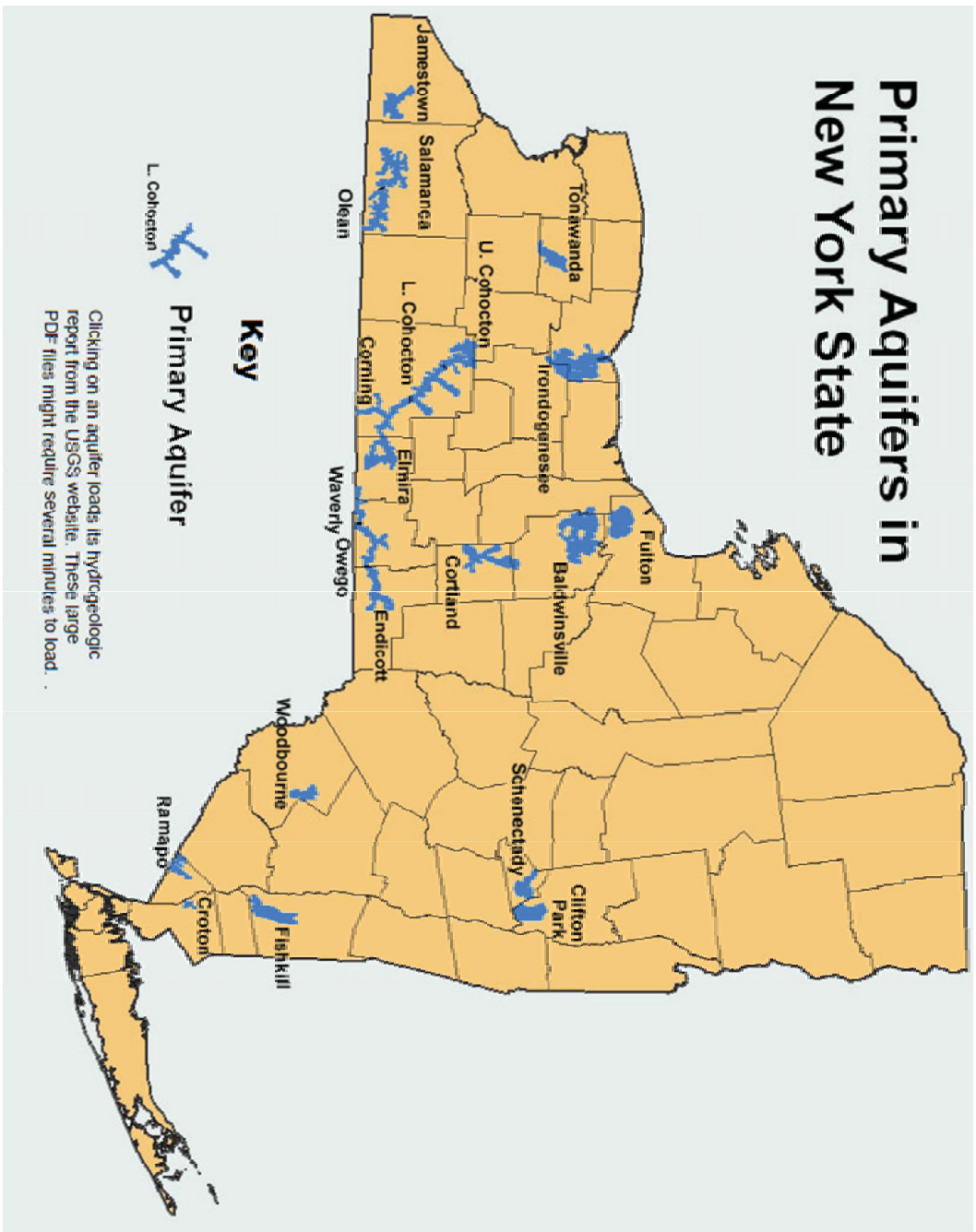
ATTACHMENT A – WETLANDS



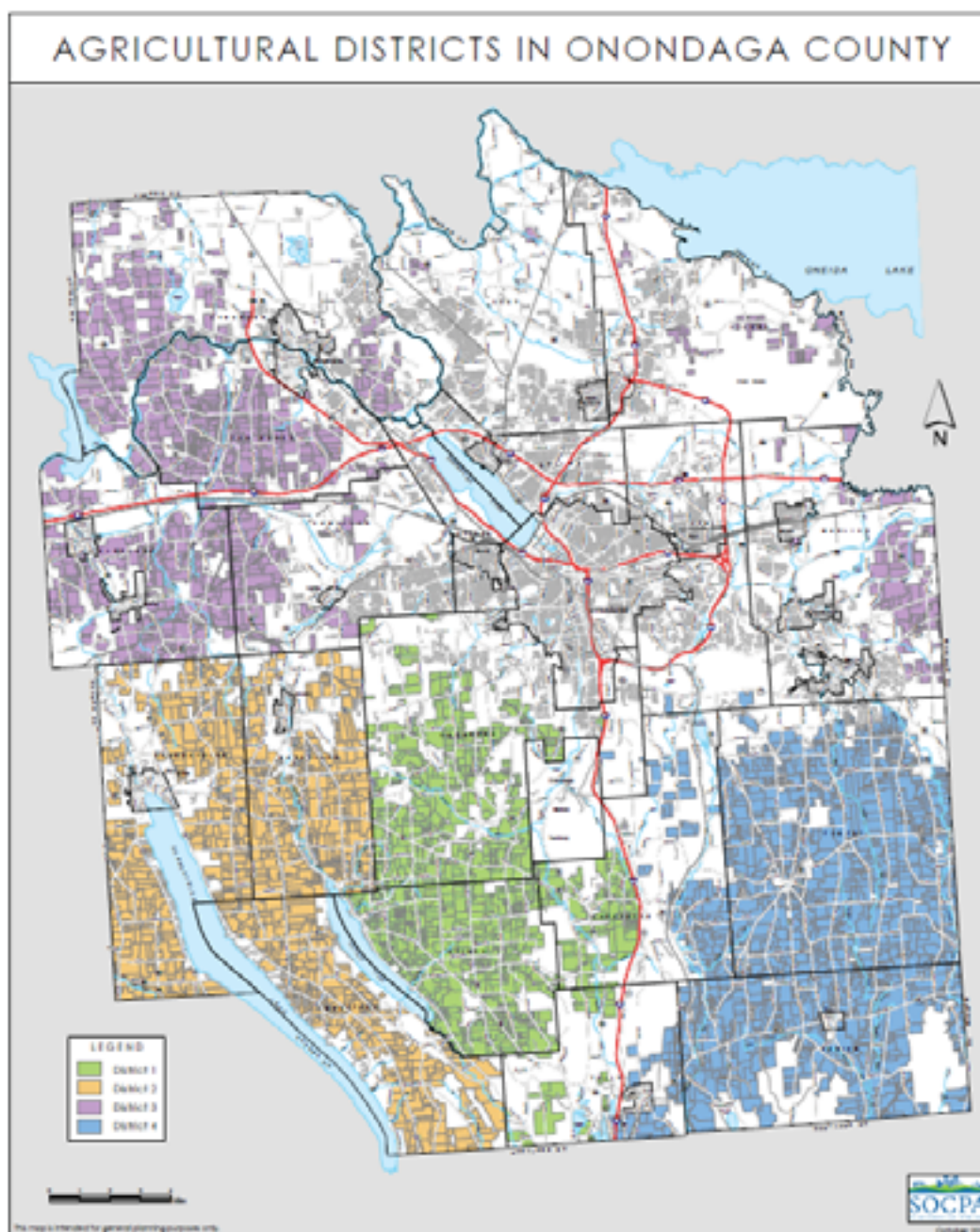
ATTACHMENT B – FLOODING



ATTACHMENT C – GROUNDWATER



ATTACHMENT D – AGRICULTURAL



ATTACHMENT E – USFWS LIST

Group	Name	Population	Status	Lead Office	Recovery Plan	Recovery Plan Action Status	Recovery Plan Stage
Ferns and Allies	American hart's-tongue fern (Asplenium scolopendrium var. americanum)	Wherever found	Threatened	New York Ecological Services Field Office	American Hart's-tongue Fern	Implementation Progress	Final
Mammals	Indiana bat (Myotis sodalis)	Wherever found	Endangered	Indiana Ecological Services Field Office	Indiana Bat (Myotis sodalis) Draft Recovery Plan: First Revision	Implementation Progress	Draft Revision 1
Mammals	Northern Long-Eared Bat (Myotis septentrionalis)	Wherever found	Threatened	Minnesota-Wisconsin Ecological Services Field Office			
Reptiles	Eastern Massasauga (=rattlesnake) (Sistrurus catenatus)	Wherever found	Threatened	Chicago Ecological Service Field Office			
Reptiles	hog turtle (Clemmys muhlenbergii)	Wherever found, except GA, NC, SC, TN, VA	Threatened	New York Ecological Services Field Office	Recovery Plan for the Bog Turtle, Northern Population	Implementation Progress	Final

ATTACHMENT F – HISTORICAL PROPERTIES

