Woodward Avenue Rapid Transit Alternatives Analysis
Purpose and Need

Prepared for
Southeast Michigan Council of Governments

Prepared by
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In Association With
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ACKNOWLEDGEMENTS

Federal Transit Administration

Southeast Michigan Council of Governments

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INTRODUCTION

This chapter summarizes key elements related to the development of the Woodward Avenue Rapid Transit Alternatives Analysis (AA) Purpose and Need. These elements include a historical background of the study area, and demographic and transportation existing conditions along the Woodward corridor.

The Woodward AA is a culmination of the unfinished work begun on the Woodward Light Rail Transit project and the background system planning completed through SEMCOG’s Regional Transit Coordinating Council (RTCC) Comprehensive Regional Transit Plan to bring rapid transit to Woodward Avenue and the broader Southeast Michigan region. The 2008 RTCC plan identified Woodward Avenue as a priority corridor for rapid transit implementation. The Woodward AA study area expands beyond the former 9.3 mile Woodward LRT project boundary in Wayne County and encompasses the entire 27 mile Woodward corridor. It traverses both Wayne and Oakland Counties and eleven distinct communities traveling northwest from Downtown Detroit to Pontiac.

WOODWARD COMMUNITIES NEED MORE MOBILITY OPTIONS INCLUDING RAPID TRANSIT

Woodward is currently the most successful transit corridor in the state of Michigan. The largest transit carrier in the state, the Detroit Department of Transportation (DDOT), and the second largest transit provider, the Suburban Mobility Authority for Regional Transit (SMART), provide service on Woodward. Despite the success of Woodward as a strong transit corridor and the Cities of Detroit and Highland Park having the highest transit dependent populations among communities along the corridor, the personal automobile is still the predominant mode of transport.

Transit Connectivity

Neither DDOT nor SMART provides regular end to end transit service between Pontiac and Downtown Detroit. DDOT does not provide transit service within Oakland County. SMART buses travel from south Oakland County communities to the State Fairgrounds Transit Center south of 8 Mile Road in Detroit. However, SMART offers only limited stop service south of 8 Mile Road in Detroit during weekday peak period hours. In Detroit, SMART buses only pick up passengers on northbound trips and drop off passengers on southbound trips.
Travel Time Reliability

For drivers traveling the entire 27 mile corridor between Pontiac and Detroit, the I-75 corridor rather than Woodward is the preferred route. The I-75 freeway’s increased speed and the absence of signalized intersections make it an attractive route for travelers seeking to reach destinations in a “rapid” manner. However, varying weather and traffic conditions on I-75, especially at the pm peak hours, substantially decrease this option’s travel time reliability.

Mobility Option

Congestion is not the primary driver; the goal is to provide improved mobility choices for the transit dependent population and serve as an engine for economic development.

- Alternative to automobile travel
- Access to jobs
- Connection to Major destination Centers

CHALLENGES AND OPPORTUNITIES

Enabling legislation for the establishment of a Regional Transit Authority for Southeast Michigan was passed December 2012 following decades of unsuccessful efforts. The RTA holds promise in better coordinating transit service between carriers throughout Wayne, Oakland, Macomb, and Washtenaw counties and is building the foundation for a governing structure that can support the management of higher level rapid transit service throughout Southeast Michigan. Woodward Avenue is one of four corridors identified in RTA legislation for future rapid transit service.

While the automotive industry still shapes the Motor City, 15 percent of households in Detroit do not have access to a vehicle. As Metropolitan Detroit continues to evolve from its historic roots as an industrial employment center and positions itself for future growth, the need for a rapid transit system becomes more important than ever.

The Woodward AA is a unique opportunity to meet the need for rapid transit on a champion corridor.
Michigan’s “Main Street” is also home to Detroit’s thriving entertainment district, which includes a world renowned theatre district, two professional sports venues (Comerica Park and Ford Field), and numerous award-winning restaurants, pubs, and other entertainment venues.

Photo Credit: www.detroit2020.com
The Woodward Avenue Rapid Transit Alternatives Analysis (AA) study is one of the major steps in the development of a regional transit system that will improve the quality of transit service and provide mobility choices in Southeast Michigan. The purpose of an AA is to assist a local project sponsor with objectively evaluating potential transit options and selecting the most feasible alternative (Locally Preferred Alternative) based on its ability to address transportation needs in a corridor. The process involves evaluating transit modes and general alignment options before making a final selection. The purpose of the project resulting from the Woodward Avenue Rapid Transit AA is to:

- Improve mobility options.
- Improve job access.
- Connect people with major destinations along the corridor.
- Encourage economic development opportunities along the corridor.

The Purpose and Need explains the transportation history that influenced the decision to study transportation improvements in the Woodward Corridor. This document discusses current issues and how this study plans to address them. In particular, this document describes demographic information about the study area, major economic centers along the corridor, the performance of the current transportation system and the travel markets that can be identified from this information that have potential for serving transit travel. It discusses the major job centers along Woodward that could use reliable and frequent transit service, the need to expand mobility options, and the opportunity to revitalize communities.

FIGURE 1-1. COMMUNITIES ALONG THE WOODWARD CORRIDOR

1.0 Introduction
“The Detroit Zoo is the largest paid family attraction in Michigan with more than one million visitors annually.” (Source: www.detroitzoo.org)

Photo Credit: http://www.waymarking.com/
Woodward Avenue is one of the oldest transportation corridors and the main artery of the Southeast Michigan roadway system. As a cultural and historical asset in the region, it connects two of the state’s oldest cities: Detroit and Pontiac. Woodward is one of the five main “spokes” that radiates from Detroit. Dating back to 1701, it is considered “Detroit’s Main Street;” it connected to the city of Pontiac officially in 1805. In 1909, Woodward became the first concrete paved highway in the world. Woodward followed the route of the Saginaw Trail, a Native American trail that linked Detroit with Pontiac, Flint, Saginaw and eventually the Straits of Mackinac through the Mackinac Trail. The first automobile was driven on Woodward Avenue on March 3, 1896, and became a state trunkline in 1913. Woodward Avenue not only connected two large cities within southeast Michigan, but through time many other cities were established and grew along the corridor, including:

**HIGHLAND PARK**

Birthplace of the Model T and the assembly line. “Downtown” Highland Park is along Woodward Avenue just north of the Davison Freeway. The Davison Freeway was the first freeway built within the state of Michigan due to its importance in serving the automobile industry.

**FERNDALE**

The first inner-ring suburb beyond Detroit located at the 8 Mile Road Wayne/Oakland County boundary. Downtown Ferndale connected to Detroit through the streetcar lines along Woodward Avenue and provided a quaint downtown and ample land for affordable post World War II housing. Today, Ferndale has a growing and expanding downtown which attracts many visitors and still provides affordable housing to a variety of residents.

**ROYAL OAK**

Residential growth extended further north with Royal Oak developing a prosperous Downtown and providing housing for post World War II veterans returning home. Another bedroom community for Detroit workers, a streetcar line ran down Main Street to connect to Woodward Avenue.

**BERKLEY**

Again, the post World War II boom created another bedroom community for Detroit workers. Downtown Berkley is located along 12 Mile Road; however, commercial growth along Coolidge Highway has grown south of 12 Mile Road.

**BIRMINGHAM**

Located mid-way between Detroit and Pontiac, Birmingham started as a stagecoach stop between these two cities and once envisioned becoming an industrial center to rival Birmingham, England (its namesake). Instead, Birmingham became a community for Detroit workers to get away from city life and is now known for its notable downtown shopping district.
Among Woodward Avenue’s many distinctions, the nation’s first four-way traffic signal was installed at the intersection of Woodward and Michigan Avenues in Detroit - a National Scenic Byway. Woodward Avenue also had streetcar operations until 1956.

As well as having major cities along the corridor, there are also major destinations that provide shopping, recreation, entertainment, education, medical, and cultural opportunities. Woodward is one of the few roadways within southeast Michigan that can boast this variety of attractions which are detailed further in the Employment and Land Use subsections of this document.

In addition to the need for transit infrastructure as supported by this Purpose and Need document, the need for transportation infrastructure improvements on Woodward Avenue is also reflected in state, regional, and county transportation visioning and planning documents, namely the Michigan Department of Transportation 2030 long-range transportation plan, the SEMCOG Direction 20352 long-range transportation plan, and the Oakland County Transportation committee’s Business Roundtable Annual Report. These infrastructure improvement goals are detailed in the Agency Transportation Goals section of this document. Recently passed Regional Transit Authority legislation, Assessment of Southeast Michigan Regional Transit Authority (RTA) Act (Senate Bill 909/ House Bill 5309), recognizes rapid transit implementation on Woodward Avenue as a first step in creating a larger regional rapid transit system in southeast Michigan.

1 [http://www.michigan.gov/mdot](http://www.michigan.gov/mdot)

IMAGE 2-1. WOODWARD STREETCAR, 1930s.
Source: Wayne State University
In 2009, the Rosa Parks Transit Center opened in Downtown Detroit. The Center is Detroit’s largest transit facility. It connects to the Detroit People Mover and will be a connection for the enhanced transit alternative resulting from the Woodward Alternatives Analysis.

Source: Parsons Brinckerhoff
Photo Credit: Parsons Brinckerhoff
Regional planning has identified Woodward Avenue as the top priority for investment in an effort to improve Southeast Michigan’s regional transit system. Based on review of existing conditions, references to SEMCOG’s long-range transportation goals, and consultation with steering committee members and public feedback, the need for transit improvements in the corridor is to

- Improve mobility options.
- Improve job access.
- Connect people with major destinations along the corridor.
- Encourage economic development opportunities along the corridor.

Detroit is the only major city in the United States without a rapid transit system in its metropolitan area.

The Woodward Alternatives Analysis will examine transit options and select the best alternative that will address the following needs:

- Improve mobility and reliability for the entire corridor.
- Make transit travel times and service reliability competitive with the automobile.
- Provide better connectivity to key origins and destinations.
- Provide better access to major regional employers, including reverse commute services.
- Support increased mode share of trips for transit.
- Support local and regional planning initiatives and land use strategies that aim to strengthen communities, foster economic development, and fulfill long range growth goals.
The Dequindre Cut is a 1.35 mile greenway that serves as an active transportation/non-motorized facility link between the Detroit Riverfront and Eastern Market, Detroit’s oldest farmer’s market. As part of the $24.8 million Link Detroit infrastructure project, the Dequindre Cut will be linked with the Midtown Loop Greenway located in the Midtown neighborhood. The Woodward AA study area traverses Midtown Detroit and may provide an opportunity for a transit/active transportation connection along the corridor, especially as Midtown Detroit, Inc has a robust program of bicycle infrastructure planned for the neighborhood.

Source: www.detroiteasternmarket.com
Photo Credit: Detroit Riverfront Conservancy
4.0 PROJECT GOALS AND OBJECTIVES

The following goals and objectives have been identified to address corridor needs:

Project goals and objectives are reflective of state, regional, and local municipality transportation goals.

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<th>OBJECTIVES</th>
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<td>Develop a transit alternative that is competitive with the automobile.</td>
<td>Improve transit travel times and speeds within the study area.</td>
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<tr>
<td>Provide transit capacity needed to meet future travel demand and mobility choices.</td>
<td>Reduce the number of transit trips that require a transfer.</td>
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<tr>
<td>Improve transit service reliability within the study area.</td>
<td>Improve on-time performance.</td>
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<tr>
<td>Develop a transit alternative that enhances mobility for the reverse commute market and transit-dependent populations (specifically in Detroit and Pontiac).</td>
<td>Increase transit accessibility.</td>
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<tr>
<td>Develop a transit system that improves connectivity between origins and key destinations and major regional employers.</td>
<td>Provide convenient and accessible transit service to activity centers.</td>
</tr>
<tr>
<td>Develop a transit system that supports local planning initiatives and land use strategies.</td>
<td>Provide transit service that can influence more compact growth patterns. (Corridor communities will vary in this area.)</td>
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Shrine Catholic Grade School, located at 12 Mile and Woodward in Royal Oak, is just one of many primary schools located within the corridor.

Photo Credit: http://tigers.mlblogs.com/2010/05/
A. Population

The study area is a 27-mile corridor along Woodward Avenue, from the Detroit River in downtown Detroit to the Woodward Loop in downtown Pontiac. The study area corridor is generally bound by a one mile buffer on either side of Woodward Avenue; however, this scale changes as appropriate for varying levels of analysis. The area encompasses 11 municipalities; nine in Oakland and two in Wayne Counties. From south to north, the study area is comprised of the Cities of Detroit, Highland Park, Ferndale, Pleasant Ridge, Royal Oak, Huntington Woods, Berkley, Birmingham, Bloomfield Hills, Bloomfield Township, and Pontiac. According to the 2010 Census, the combined population for study area communities is 950,980. Detroit is the most populous city of both the study corridor (see Figure 5-1) and the Southeast Michigan region, representing 75 percent of the total study area population. Figure 5-3 shows population distribution per square mile.

Figures 5-1 through 5-3 illustrate the distribution of population by community in the study area, as well as population density in square miles. As the figures indicate, the highest population density is found in Detroit, which has a population of 713,777. The total population of the study area is 950,980, with Detroit accounting for roughly 75% of the total population. The remaining municipalities vary in population size, with the smallest being Pleasant Ridge with 2,526 residents.

Source: 2010 Census
Despite Detroit’s position as a major population center in southeast Michigan, the city has experienced population decline in the last two decades. The 2008 recession contributed to accelerated population loss as the temporary retraction of the automotive industry, along with the subprime mortgage crisis had a marked impact on the Detroit metropolitan area population. A comparison of Census 2000 and 2010 data viewed in Figure 5-2 offers insight into the population loss experienced by corridor communities over the ten year period. Detroit and Highland Park encountered the most acute population loss at 25 and 30 percent, respectively. Both Ferndale and Pontiac lost 10 percent of their populations, while Huntington Woods and Birmingham gained population. As a community that experienced population loss, the City of Detroit has responded positively to this challenge by refocusing resources in ways that support a brighter future for the city. For example, the city initiated the Detroit Future City Plan\(^3\) effort in 2010 through the Detroit Works Project. The Detroit Future City Plan is a living long-range planning document intended to guide decision-making for Detroit’s future. It offers innovative strategies to achieve an efficient and sustainable city and improve the quality of both life and business in Detroit. Local businesses and philanthropic institutions have come together in providing support for the revitalization of Detroit and its surrounding areas. As of January 2013, the Kresge Foundation has committed $150 million to assist in the implementation of the Detroit Future City Strategic Framework Plan.

\(^3\) The Detroit Strategic Framework can be viewed at http://detroitworksproject.com.
B. Zero Car Households

In the United States access to transportation options influences an individual’s ability to participate fully in the economy through access to job opportunities. Unless adequate transit or non-motorized transportation options are available, cars are necessary for virtually all work and non-work trips. The American Automobile Association (AAA) estimates in its 2012 *Your Driving Costs* study that based on 15,000 miles of driving, it costs sedan owners $8,946/year and SUV owners $11,360 to operate their cars.4 The 2011 5-Year American Community Survey estimates that Michigan’s median household income is $48,669. As such eighteen percent of a Michigander’s income at this level could be allocated to owning and driving a sedan and 23 percent of a resident’s income for an SUV. Low-income households are particularly vulnerable to this cost as it represents a larger reduction of funds available for other housing, food, medical, or emergency expenses.

Figures 5-4 and 5-5 show the distribution of zero-car households along the corridor. Highland Park (15%) and Detroit (8%) have the highest shares of zero-car households in the corridor.

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4 The 2012 *Your Driving Costs* study can be viewed at www.newsroom.aaa.com.
C. Employment

The geographic dispersion of employment centers in southeast Michigan, which is tied to land use and transportation decision-making, is a challenge to the creation of a successful transit corridor. However, Woodward has various community assets and major attractions positioned within one mile of the corridor that currently serve commuters, visitors, and residents alike. These assets include:

- A strong central business district of the 18th largest U.S. city,\(^{5}\)
- Various post-secondary education and medical institutions,
- Sports and entertainment venues,
- Historic downtowns that successfully support small local business,
- Cultural institutions, and
- Multiple downtown cores that serve as regional destinations.

The inter-relation between transportation and land use will remain a key consideration in developing and evaluating transit alternatives.

Figure 5-6 shows the locations of major attractions along the corridor.

SEMCOG’s 2010-2040 projections suggest that the Private Education and Healthcare sector will be the fastest growing section by 2040, adding 45,490 jobs in Wayne County and 50,837 jobs in Oakland County. This growth aligns with United States Bureau of Labor Statistics 2010-2020 national employment projection that forecasts the most industry growth will occur in the Healthcare and Social Assistance sector, gaining 5.6 million jobs by 2020.\(^{6}\) Seamless transportation connections for workers, patients, and visitors to and from medical facilities along the corridor are important considerations for the evaluation of alternatives. The Knowledge-Based Services sector is the second fastest growing in Oakland County, adding 50,033 jobs by 2040. SEMCOG projects that the Services to Households and Firms sector will be the second fastest growing in Wayne County, adding 8,449 jobs by 2040.

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\(^{5}\) www.census.org  
\(^{6}\) http://data.bls.gov/cgi-bin/print.pl/news.release/ecopro.nr0.htm
DMC

The Detroit Medical Center (DMC) is the largest healthcare provider in southeast Michigan and largest private employer in Detroit. It has eight hospitals and institutions within the study corridor that are located between Canfield Street and Mack Avenue to the north and south and St. Antoine and John R Streets to the east and west. Over 10,000 employees work within the DMC system which has over 2,000 licensed beds and 3,000 affiliated physicians.

HENRY FORD HOSPITAL

Henry Ford Hospital is the flagship of the Henry Ford Health System and is located on Grand Boulevard in the New Center Area in Detroit. Henry Ford Hospital is a Level 1 Trauma Center that has earned distinction from its cardiology, cardiovascular surgery, neurology and neurosurgery, orthopedics, sports medicine, multi-organ transplants and cancer treatment. It is an 802-bed tertiary care hospital, education, and research complex. The health system has a total labor force of over 23,000 employees; in 2011 more than 10,035 employees worked in the City of Detroit.7

BEAUMONT HOSPITAL

Beaumont Hospital is located on Thirteen Mile Road in Royal Oak, Michigan, and is a 1,070-bed tertiary hospital. The hospital is currently planning a 346,000 square foot expansion complete with a replacement Emergency Center, a 36-bed intensive care unit, four operating rooms, and a powerhouse.8 In 2013, Beaumont Hospital commenced planning for the redevelopment of Northwood Shopping Center at the intersection of Thirteen Mile Road and Woodward. The vision for this site is to extend the campus footprint through the creation of a mixed-use, pedestrian friendly environment that serves patients, employees, and visitors alike.

ST. JOSEPH MERCY OAKLAND HOSPITAL

St. Joseph Mercy Oakland Hospital is a 443 bed community and teaching hospital that is part of the St. Joseph Mercy Health System.

JOHN D. DINGELL VETERANS ADMINISTRATION MEDICAL CENTER

The John D. Dingell VA Medical Center located in Detroit provides service for veterans throughout southeast Michigan in Wayne, Oakland, Macomb, and St. Clair Counties.

7 http://www.henryford.com/body.cfm?id=38768
There are 219,364 jobs within the corridor, the highest employment densities being in Detroit’s Central Business District (CBD) and Midtown. The Detroit Medical Center (DMC) is the largest employer in the corridor with approximately 10,900 employees in Midtown. Other high density employment nodes exist near Campus Martius and the Renaissance Center in Detroit.
Vinsetta Garage is a recently completed project along the corridor, located directly off Woodward Avenue in Berkley. The former auto garage was renovated into a restaurant in 2012 and maintains much of the garage’s original character.

Photo Credit: http://vinsettagarage.com/#/about.html
A. Existing and Future

As the historic spine of Southeast Michigan, development patterns along Woodward reflect land use patterns of the adjacent communities and of the times these communities developed. Development patterns in the study area range from urban to suburban in character progressing north from Detroit to Bloomfield Hills. An urban quality re-emerges at the northernmost parts of the study area in the City of Pontiac. Appendix A provides land use profiles for 11 communities along Woodward from downtown Detroit to Pontiac, generally terminating at jurisdictional boundaries. The profiles provide insight into the general character of corridor segments, detailing land use, building and parking form, public space and Woodward right-of-way. Within more densely developed areas such as Downtown and Midtown Detroit, an increased variety of uses are supported within one mile of the Woodward corridor, including commercial, multi-family residential, institutional, and entertainment destinations. In communities progressing north from Detroit, traditional strip mall commercial development with frontage on Woodward is a prominent feature. Single-family residential subdivisions back these strip mall developments.

Throughout the study corridor local communities have invested in plans and initiated land use policies that are supportive of transit oriented development and a multi-modal transportation system that acknowledges equal access for all users. Each community relates to these concepts differently, and as such, the approaches to reaching these ideals are varied. Moving forward, the AA process will pursue transit options that assist communities in reaching local goals for transit supportive land use and Complete Streets.

Reviews of local master plans, policy documents, and informal interviews with study corridor communities and agencies were initiated to establish the level of support for transit oriented development and a multi-modal transportation system. The findings of this examination are summarized in Figure 6-1.
FIGURE 6-1. MASTER PLAN SUMMARY

- Supports TOD and Complete Streets
- Supports TOD only
- Supports Complete Streets only
- Does not support TOD or Complete Streets

**DETOIT**
MASTER PLAN SUPPORT
- TOD
- COMPLETE STREETS

http://www.detroitmi.gov/Departmentsandagencies/DepartmentofHealthWellnessPromotion/AboutUs/OfficeofHIPPER.aspx

**PLEASANT RIDGE**
MASTER PLAN SUPPORT
- TOD
- COMPLETE STREETS

Supports mixed use. Suggests Grand Trunk Railroad corridor as future transit route.

**BERKLEY**
MASTER PLAN SUPPORT
- TOD
- COMPLETE STREETS

Supports regional transit. Suggests a stop in downtown Berkley at 12 Mile & Coolidge.

**BIRMINGHAM**
MASTER PLAN SUPPORT
- TOD
- COMPLETE STREETS


**BLOOMFIELD TWP.**
MASTER PLAN SUPPORT
- TOD
- COMPLETE STREETS

Promotes TOD near key commercial nodes. Wishes to improve walking and biking environments, especially for those less able.

**HIGHLAND PARK**
MASTER PLAN SUPPORT
- TOD
- COMPLETE STREETS

Downtown Highland Park as a regional shopping destination for general commercial.

**ROYAL OAK**
MASTER PLAN SUPPORT
- TOD
- COMPLETE STREETS

Fully supportive of TOD and Complete Streets. Suggests Washington Ave. as future transit route.

**HUNTINGTON WOODS**
MASTER PLAN SUPPORT
- TOD
- COMPLETE STREETS


**BLOOMFIELD HILLS**
MASTER PLAN SUPPORT
- TOD
- COMPLETE STREETS

City does not contract for SMART services - may consider in future, but may require voter support. Will coordinate with regional transit agencies.

**PONTIAC**
MASTER PLAN SUPPORT
- TOD
- COMPLETE STREETS

TOD and mixed-use planned within and around the Woodward Loop. Woodward listed as a Potential Intensity Change Area.

**FERNDALE**
MASTER PLAN SUPPORT
- TOD
- COMPLETE STREETS

Promotes regional transit. Downtown surrounding 9 Mile.

**BLOOMFIELD TWP.**
MASTER PLAN SUPPORT
- TOD
- COMPLETE STREETS

**OAKLAND COUNTY**
MASTER PLAN SUPPORT
- TOD
- COMPLETE STREETS

No County Master Plan. Resolution supports Complete Streets concept.

“T.O.D.” refers to Transit-Oriented Development
*Complete Streets coalition formed
B. Recent, Planned, and Proposed Development

In the entire corridor, more than 100 projects have been recently completed, are currently under construction, or are proposed.

More than 75% of these projects in the corridor are in Detroit, with the most development occurring in the Central Business District and Midtown (between the Detroit River and I-94).

Looking specifically at proposed projects, the concentration of these in Detroit’s CBD and Midtown further suggests that these are areas of ongoing and future change within the corridor. In general, proposed projects allude to potential future trip generators.
ANNUAL DETROIT BIKES PEDAL CRUISE

A group of bikers head north on Woodward Avenue, approaching the area where Woodward continues over I-696 and splits off to 8 Mile Road. In consideration of Woodward Avenue’s popularity as a bicycle route, the accommodation of bicyclists, where appropriate, is considered within the AA process.

Photo Credit: http://bbandm.wordpress.com/2011/08/24/woodward-cruise-on-two-wheels/
The following analysis depicts the background in which any proposed transit improvements would be developed, and explores the opportunities and constraints that impinge on the development of those improvements.

**A. Existing Roadways**

Two freeways run parallel to Woodward Avenue within the southern portion of the study area: M-10 to the west and I-75 to the east. These freeways are approximately 0.5 to 1 miles on either side of Woodward Avenue from Downtown Detroit to Highland Park. M-10, also known as the Lodge Freeway, terminates within Detroit on the western side, and I-75 has a spur (I-375) that terminates in Downtown Detroit on the eastern side. North of Highland Park, M-10 curves to the west: it is 8 miles west of Woodward Avenue at its northern terminus in Farmington Hills. I-75 continues to parallel Woodward Avenue closely (within two miles) until I-696. North of there, it remains within five miles of Woodward Avenue until Pontiac.

Access to both M-10 and I-75 are made from many of the same east-west roadways, including 8 Mile Road (M-102), Davidson Freeway (M-8), Grand Boulevard, Warren Avenue, Martin Luther King Jr. Boulevard, and Mack Avenue. Access to major destinations along the corridor is typically accomplished through the adjacent freeways, M-10, and I-75, with roadways within the Mile Road System acting as major connectors to activity centers and commercial downtowns. Woodward Avenue is used mainly as a connector to Downtown Detroit and other destinations along Woodward Avenue for those living along or north of the corridor.

With increases in both vehicle miles traveled and public transit ridership in the last decade, the Woodward corridor must be able to serve a diversity of future transportation needs and support economic development opportunities along the corridor.

**DOWNTOWN DETROIT ROAD SYSTEM: A MAJOR FREEWAY INTERSECTION**

Three major freeways encompass downtown Detroit: M-10 to the west, I-75 to the north, and I-375 to the east. The majority of trips entering Downtown Detroit are completed via M-10 and I-375. Other major gateways include Woodward Avenue, Grand River Avenue, Gratiot Avenue, Jefferson Avenue, and Fort Street.

Within downtown Detroit, roads are predominantly two-way with one or two lanes in each direction. The Congress Street and Larned Street one-way pair has two to four lanes in each direction and are major east-west routes across downtown. A few roads have boulevard cross-sections with a wide median and two lanes in each direction with or without on-street parking. Parking is allowed on many downtown streets with some peak period restrictions.

Figure 7-1 on the following page provides a spatial overview of the study area’s major roads.
FIGURE 7-1. STUDY AREA ROADS
Source: Parsons Brinkerhoff, 2013
WOODWARD AVENUE

Woodward Avenue, a State trunkline known also as M-1, is located in an area with significant access to several State and US highways as well as the interstate system. Once a portion of US-10, Woodward Avenue is also referred to as “Detroit’s [or Michigan’s] Main Street.”

M-1/Woodward Avenue was designated as a Michigan Heritage Route by the Michigan Department of Transportation as a National Scenic Byway under the National Scenic Byways Program and as an All-American Road by the USDOT in 2009.

The M-1 corridor is referred to as Woodward Avenue for its entire length; however, the official state designation of M-1 begins north of Adams Street in the City of Detroit.

The laneage of Woodward Avenue varies throughout the corridor into seven general cross-sections:

- Jefferson Avenue to Campus Martius: A boulevard with three lanes in each direction, left-turns are allowed at the intersection.
- Campus Martius: Three lanes surrounding a circular park in the middle of Woodward Avenue.
- Campus Martius to Park Street/Witherell Street: Two lanes in each direction, left-turns are shared with through traffic lanes.
- Park Street/Witherell Street to Grand Boulevard: Four lanes in each direction with a center left turn lane, parking is utilized in the outside lanes.
- Grand Boulevard to McNichols Road: Three lanes in each direction with a center left-turn lane, parking is utilized in the outside lanes.
- McNichols Road to Downtown Pontiac: A boulevard with four lanes in each direction, left-turns are all indirect at median u-turns.
- Downtown Pontiac: A circular one-way roadway system around downtown Pontiac, laneage varies from three lanes to six lanes.
Table 7-1 below lists the major Woodward intersections with segments that are existing potential hot spot locations for traffic congestion. Most intersections along Woodward Avenue do not experience high levels of congestion even during the peak hours. Occasionally, Woodward Avenue will experience some congestion when there are incidents along I-75 or M-10 causing traffic to divert. At that time, additional intersections will experience a level of service (LOS) E or F.

### TABLE 7-1. MAJOR INTERSECTIONS WITH WOODWARD SEGMENTS WITH LOS E OR F

Source: SEMCOG, Parsons Brinkerhoff

<table>
<thead>
<tr>
<th>INTERSECTION</th>
<th>AM PEAK HOURS</th>
<th>PM PEAK HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarton Rd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State Fair</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Mile Rd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grixdale Ave.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merrill Plaisance St.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bethune Ave.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**LEGEND**

| Indicates intersection is at LOS E or F |

---

**FREEWAY PERFORMANCE**

I-75 is a popular alternate route to travel on Woodward Avenue for commuters living in communities along the Woodward corridor. The increased travel speed and absence of signalized intersections make it a faster and more attractive travel option for auto users. I-75 is a north-south freeway that connects Wayne and Oakland Counties to Michigan’s northern peninsula, and south to Florida’s southern tip.

It is important to evaluate the level of service (LOS) of this alternate route to better understand traffic flow and how it relates to the purpose and need for a rapid transit service on Woodward. Level of Service is a ratio between the traffic volumes on a roadway with that roadway’s capacity and is used to rate roadway performance. Roadways are rated using six classifications: A, B, C, D, E, and F. Level of Service A represents optimal traffic conditions in which there is free flow traffic and demand does not exceed capacity. LOS is also often a common measure on major arterials in large metropolitan areas. Levels of service between A and D are generally recognized as acceptable levels of service by the Michigan Department of Transportation. Levels of Service E and F are characterized by increased traffic congestion and traffic demand that exceeds roadway capacity. Levels of Service E and F are recognized as undesirable or unacceptable roadway performance.

Figures 7-2 and 7-3 on the following pages show AM and PM I-75 LOS for 2010 and 2035 and Woodward average daily traffic (ADT) for 2010-2013. For 2010, at the AM peak period I-75 operates at levels of service ranging between A and D. During the PM peak period I-75 operates at Levels A through D from downtown Detroit to Eight Mile Road, and then generally operates at Levels E and F between Eight Mile Road and Stephenson Highway. The freeway returns to LOS A through D north of Stephenson Highway. This segment that currently operates between LOS E and F corresponds with the segment of Woodward that has the highest average daily traffic (ADT) in the corridor between Nine Mile and Fourteen Mile Roads and is located in the communities of Royal Oak, Berkley, Huntington Woods, and Birmingham. This segment has ADT ranging between 30,000 and 65,000 vehicles. For the 2035 forecast, freeway levels of service during AM and PM remain similar to 2010 levels of service, with better level of service during the AM than at the PM peak period. The change in level of service between AM and PM peak hours is similar to level of service changes in urban environments, although compared with other similarly sized metropolitan statistical areas (MSAs) I-75 operates at a better level of service.
FIGURE 7-2. 2010 LEVEL OF SERVICE (LOS) IN AM & PM PEAK PERIODS ON I-75 AND AVERAGE DAILY TRAFFIC ON WOODWARD AVENUE

Source: SEMCOG
FIGURE 7-3. 2035 LEVEL OF SERVICE (LOS) IN AM & PM PEAK PERIODS ON I-75 AND AVERAGE DAILY TRAFFIC ON WOODWARD AVENUE

Source: SEMCOG, Parsons Brinkerhoff
B. Travel Patterns and Demand

The ever-expanding boundaries of metropolitan areas pose significant challenges to the implementation of reliable mass transit service. In the Detroit metropolitan area, these challenges include the growth of residential neighborhoods and relocation of employment centers to the suburbs in the last forty years; an increase in vehicle miles traveled between home, work, and non-work destinations; and the incompatibility of transit funding levels with the unmet transit needs of the region and the corridor. The resources needed to provide reliable transit service are further challenged by the dispersed regional centers and expanded service areas.

Against this backdrop, in order for higher-level transit along Woodward Avenue to be effective, it is important to consider where, when, and how often people are traveling, and how transit can accommodate those growing needs.

C. Public Transit in Southeast Michigan

SHORT-HAUL / REGIONAL TRANSIT

This section summarizes transit service and facilities within the Woodward corridor. Four major transit service providers operate along the corridor. Four local transit providers, four transit centers, three long-haul transit providers, and many local employer shuttles service the Woodward corridor.9 The alignments of transit services in the corridor are shown on the following page in Figure 7-4.

Detroit Department of Transportation

Detroit Department of Transportation (DDOT) has provided public transportation service in Detroit for approximately 90 years. In its first 30 years of service the agency offered streetcar service. In 1937, bus service was established, and by 1956, streetcar service was discontinued and bus service remained as the sole transit mode.

DDOT is the major bus transit provider in southeastern Michigan and is also the state’s largest transit carrier. The agency serves an area of 144 square miles and 951,270 people with more than 40 fixed routes (2010). Annual weekday ridership totals 121,000 trips occurring in Detroit and 22 neighboring communities, and annual ridership totals 36.6 million (fixed route and demand response combined). The department provides demand response service through its Detroit Metrolift service, which completed 101,000 trips in 2010.

Downtown Detroit to New Center has approximately 60,000 trips per average weekday, along with a wide range of other important destinations (see Figure 5-6) within the corridor, making this area a focal point for transit services. Route 53 is the primary route on Woodward Avenue, a local bus route operating from the State Fairgrounds Transit Center just south of Eight Mile Road to the Rosa Parks Transit Center in Downtown Detroit, and serves virtually the entire alignment of Woodward Avenue within Detroit.

Route 53 operates from 4:00 AM to Midnight. On Monday through Friday, the route operates at a 30-minute headway before 5:00 AM, at a 15-minute headway between 5:00 AM and 6:00 AM, and then at a 10-minute headway from 6:00 AM to 2:00 PM. From 2:00 PM to 6:00 PM, the route operates at an eight-minute headway before returning to a 15-minute headway from 6:00 to 9:00 PM. The route operates at a 30-minute headway from 9:00 PM to midnight.

On Saturdays, the route operates at a 30-minute headway from 4:00 to 6:00 AM, then operates at a 10-minute headway until 6:00 PM. The route operates at a 20-minute headway from 6:00 to 8:00 PM and then at a 30-minute headway from 8:00 PM until Midnight. On Sundays, the route operates at a 40-minute headway until 6:00 AM, then at a 20-minute headway until 8:00 PM. After 8:00 PM, the route operates at a 30-minute headway. During most of the day, the route’s end-to-end running time is about 50 minutes.

The route has an annual ridership of 3.7 million (2011), 10 percent of DDOT’s 2011 annual ridership. Figure 7-5 shows the average daily combined boarding and alighting activity by stop for Route 53. As the map shows, ridership is highest in downtown Detroit and in the segment of the route south of I-94, although ridership is relatively uniformly high throughout the length of the route. In addition to Route 53, eight routes (7, 16, 18, 23, 25, 31, 36 and 78) travel on a portion of Woodward Avenue near downtown, many of them on their way to/from connections at the Rosa Parks Transit Center. Four routes (12, 17, 30 and 54) use a short segment of Woodward south of Eight Mile Road to access the State Fairgrounds Transit Center. Fifty percent of DDOT’s bus routes travel to Downtown from outlying neighborhoods. DDOT’s 19 other bus routes run east-west or north-south, connecting neighborhoods and feeding riders to Downtown routes.

9 2010 National Transit Database information was used based on its consistent availability for analysis between transit providers.
FIGURE 7-4. EXISTING TRANSIT SYSTEM

Source: SMART, DDOT, Parsons Brinkerhoff, 2013
FIGURE 7-5. DDOT ROUTE 53 STOP ACTIVITY
Source: DDOT, Parsons Brinkerhoff, 2013
Suburban Mobility Authority for Regional Transportation

With annual ridership at 12.1 million trips (demand response and fixed route) and average weekday ridership at 41,000 trips (2010), the Suburban Mobility Authority for Regional Transportation (SMART) is the second largest transit provider in Michigan after DDOT. SMART was formed as Southeast Michigan’s regional bus system and has coverage of 1,074 miles with a population of 3,167,075 in more than 75 communities throughout Macomb, Oakland, and Wayne Counties.

SMART operates five routes primarily on Woodward Avenue:

• Route 450 is a local bus route operating from the Phoenix Center in Pontiac to the State Fairgrounds Transit Center just south of 8 Mile Road in Detroit, with weekday peak period service to the SMART Transit Center in downtown Detroit, located at the Buhl Building;

• Route 460 is a local bus route that operates from the Somerset Collection transit center in Troy to the State Fairgrounds Transit Center just south of 8 Mile Road in Detroit, with weekday peak period service to the SMART Transit Center in downtown Detroit. The route essentially operates as a short-turn route paralleling Route 450 from Troy south to Detroit;

• Route 445, a limited stop, commuter-oriented route (southbound in the morning, northbound in the evening) that originates at Telegraph Road and Maple in Birmingham, joins the Woodward Avenue alignment at Maple and continues to the SMART Transit Center in downtown Detroit;

• Route 465, a limited stop, reverse commuter-oriented route (northbound in the morning, southbound in the evening) that originates at the General Motors Truck and Bus plant in Pontiac and serves a number of other industrial sites in Auburn Hills before joining the Woodward Avenue alignment just south of Maple near the Amtrak Station in Birmingham and continuing to the SMART Transit Center in downtown Detroit; and

• Route 475, a limited stop, commuter-oriented route that originates at the Troy Civic Center Park-and-Ride in Troy and enters the Woodward Avenue alignment just south of Maple near the Amtrak Station in Birmingham before continuing to the SMART Transit Center in Downtown Detroit.

Regardless of their local or limited stop designation, due to their lack of a funding relationship with the City of Detroit, the stopping pattern on SMART bus routes effectively precludes them from providing bus service for trips that both begin and end within the City of Detroit on the segments of their routes within Detroit (in the Woodward Corridor, this means route segments south of 8 Mile Road). In that area, SMART local and commuter routes only drop off passengers within the City of Detroit on their southbound trips and only pick-up passengers on their northbound trips. Reverse commute routes pick up northbound passengers in Detroit in the morning and drop off southbound passengers in the evening, but these routes also do not allow for trips that start and end within Detroit.

Routes 450 and 460 operate from 5:00 AM to 2:00 AM on weekdays, on a combined 15 minute headway during most of the day, over the combined segments of the routes from Woodward and Daines to Woodward and the State Fairground Transit Center, where passengers can take DDOT route 53 to complete their trip into Detroit (the route operates to the SMART transit center in downtown Detroit during the peak periods), with each separate route operating at a 30 minute headway. Headways are calculated from the Detroit end of the trip (arrival times on the Southbound trips, departure times on Northbound trips); headways are irregular on the other ends of the trips. Travel times during the off peak period on Route 450 (with the northern Terminus at Phoenix Center in Pontiac) to Woodward and State Fairground average around 45-50 minutes. Travel times to downtown Detroit during peak periods average around 70-75 minutes during the morning peak and around 85-90 minutes during the afternoon peak. Travel times on Route 460 (with the northern terminus at Somerset Collection in Troy) to Woodward and State Fairground range from around 40 to 50 minutes. Travel times on Route 460 to downtown Detroit during peak periods range from around 70 minutes during the morning peak to around 80 minutes during the afternoon peak. On Saturdays and Sundays the route operates only as far south as Woodward and the State Fairgrounds. Saturday service is from 5:00 AM to 2:00 AM, and the two routes operate on an irregular combined headway ranging from 15 to 25 minutes during most of the day (hourly after 10:00 PM). Sunday service operates from 6:00 AM to Midnight, with the two routes operating a combined irregular 15-25 minute headway.

Route 445 operates three trips each morning between 6:28 and 7:28 AM from Telegraph and Maple in Birmingham to downtown Detroit. Running time is 62 minutes. In the afternoon, the route operates four trips northbound between 4:05 and 5:35 PM, with a running time of 61-63 minutes.
Route 465, the reverse commute route, operates five morning northbound trips between 4:08 and 6:40 AM, from downtown Detroit to Big Beaver and Crooks in Auburn Hills. Running time is 56-58 minutes. Six trips operate in the afternoon between 2:42 and 5:09 PM, with a running time of 79-85 minutes.

Route 475 operates four morning trips southbound between 6:10 and 7:38 AM, from Troy Civic Center Park-and-Ride to downtown Detroit. Running time is 65-67 minutes. The route operates four afternoon trips northbound between 4:20 and 6:13 PM, with a running time of 65-69 minutes.

Routes 445, 465 and 475 operate no early morning, midday, evening, night, weekend or Holiday service.

The maps in Figures 7-6 through 7-10 on the following pages show average daily combined boarding and alighting activity for SMART routes 450, 460, 445, 465 and 475, respectively. As the maps for routes 450 and 460 show, boardings along the route are fairly dispersed, with higher ridership stops in the terminal areas (Detroit, Pontiac, and the Amtrak station), at key activity centers and bus transfer points along the route, both in Detroit and in the suburban areas. Ridership on the express routes is much more uniform across the limited stops on those routes, and is only large at the terminal points.

The structure and operating plans of the current bus service in the corridor raises a number of issues. The first and most obvious is the lack of coordination between the DDOT service operating in Detroit and the SMART service operating in the suburban segments of the corridor. The lack of schedule and fare coordination makes travel between the two areas, particularly for travelers from Detroit north to the suburban areas, cumbersome and expensive. There is no service offering a one seat ride and coordinated schedule in both directions across the Detroit-Oakland County line, making transit service in the corridor less convenient than it might be and possibly depriving transit dependent populations from jobs in the corridor.

Finally, service frequencies are relatively low given the significance of this corridor in the regional travel market. This is particularly true in the suburban segment operated by SMART (where headways are never lower than 15 minutes). The demand for service exceeds the capacity along much of the corridor. Both more frequent service and larger vehicles have a role in correcting this imbalance.

**TABLE 7-2. TRANSIT PERFORMANCE SURVEY**

<table>
<thead>
<tr>
<th></th>
<th>DDOT</th>
<th>SMART</th>
<th>DDOT</th>
<th>SMART</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL BOARDINGS</td>
<td>36,555,845</td>
<td>101,429</td>
<td>11,439,394</td>
<td>754,877</td>
</tr>
<tr>
<td>PERCENT OF TOTAL BOARDINGS</td>
<td>99.72%</td>
<td>0.28%</td>
<td>93.81%</td>
<td>6.19%</td>
</tr>
<tr>
<td>VEHICLE REVENUE MILES</td>
<td>13,915,183</td>
<td>808,818</td>
<td>10,658,988</td>
<td>3,888,846</td>
</tr>
<tr>
<td>OPERATING COST PER REVENUE MILE</td>
<td>$11.31</td>
<td>$4.94</td>
<td>$7.38</td>
<td>$5.52</td>
</tr>
<tr>
<td>BOARDINGS PER REVENUE MILE</td>
<td>2.63</td>
<td>0.13</td>
<td>1.07</td>
<td>0.19</td>
</tr>
<tr>
<td>AVERAGE FARE</td>
<td>$0.68</td>
<td>$2.32</td>
<td>$1.12</td>
<td>$1.35</td>
</tr>
<tr>
<td>FARE BOX RECOVERY</td>
<td>15.88%</td>
<td>5.89%</td>
<td>16.24%</td>
<td>5.00%</td>
</tr>
<tr>
<td>OPERATING COST PER BOARDING</td>
<td>$4.31</td>
<td>$39.43</td>
<td>$6.88</td>
<td>$28.43</td>
</tr>
</tbody>
</table>

Source: NTD, 2010

In addition, there is no all day express service in either Detroit or in the suburban segment of the alignment. Apart from SMART Routes 445, 465 and 475, which are highly specialized, commute period routes, no route offers express or limited stop service. Given the length of the route (with many trips taking more than 80 minutes of in-vehicle time, excluding wait or transfer time), the Woodward Corridor is a prime location for express, limited stop or skip-stop service.
FIGURE 7-6. SMART ROUTE 450 STOP ACTIVITY
Source: SMART, Parsons Brinkerhoff, 2013
FIGURE 7-7. SMART ROUTE 460 STOP ACTIVITY

Source: SMART, Parsons Brinkerhoff, 2013
FIGURE 7-8.  SMART ROUTE 445 STOP ACTIVITY
Source: SMART, Parsons Brinkerhoff, 2013
FIGURE 7-9. SMART ROUTE 465 STOP ACTIVITY

Source: SMART, Parsons Brinkerhoff, 2013
FIGURE 7-10. SMART ROUTE 475 STOP ACTIVITY

Source: SMART, Parsons Brinkerhoff, 2013
Detroit Transportation Corporation

The Detroit Transportation Corporation (DTC) operates the Detroit People Mover (DPM) service connecting major activity centers in Downtown via a fully automated guideway system and 13 stations. Eight computer-controlled driverless vehicles travel along a 2.9-mile single-track, one-way, clock-wise loop. In 2009, approximately 5,500 daily passengers used the DPM, with a total annual ridership of 2.1 million passengers. DPM’s ridership for special events is estimated at 10,000 to 15,000 passengers. Originally planned as a downtown circulator, the People Mover never realized its true potential in the absence of a broader regional rapid transit system. It serves a much needed circulation function within Downtown with connections to Cobo Hall (convention center), Joe Louis Arena (hockey/entertainment arena), the Renaissance Center (General Motors international headquarters), various employers in Downtown’s Financial District, Greektown Casino and entertainment district, Comerica Park (baseball/entertainment stadium), Ford Field (football/entertainment stadium), the Theatre District on Broadway, and connections to the Rosa Parks Transit Center on Washington Boulevard and Michigan Avenue.

Transit Windsor

Transit Windsor is Windsor, Ontario, Canada’s transit service provider that operates one bus route that shuttles passengers between Downtown and Windsor, Ontario, via the Detroit-Windsor Tunnel. The bus circulates through Downtown and has one stop along Woodward Avenue at Larned Street. It also stops at the Rosa Parks Transit Center. This route had an annual ridership of about 200,000 in 2009.

Capacity

Decreased availability of revenue sources from the gas tax, vehicle registration fees, and alternate revenue streams have challenged transit providers’ ability to maintain capital equipment and service operations throughout Michigan. Despite these challenges, the Michigan Department of Transportation (MDOT) notes in its 2035 State Long-Range Transportation Plan:

“Public transit ridership [in Michigan] increased by about 15.5 percent from FY 2005 to FY 2010, while miles of service increased by about 7.5 percent. The public’s demand for more transit choices has not wavered...Michigan transit agencies were able to achieve a net increase in miles of service during a period when state operating assistance per year stayed the same.”

Detroit (15 percent) and Highland Park (eight percent) have the highest proportion of zero-car households along the corridor (see Figure 5-4). This demand is ever-present in the capacity issues faced by transit providers operating within the corridor particularly during peak service hours. Similarly, during the peak commuting hours, the Transit Windsor route between Detroit and Windsor, Ontario, operates at capacity. On an average weekday, the Detroit People Mover (DPM) has available capacity all day, but operates over capacity during large events in Downtown Detroit.
Despite demand, funding cuts have impacted the level of service transit providers offer customers. Particularly in the cases of DDOT and SMART, funding cuts have had a marked impact on service offerings through increased reliability and reduced coverage. Since January 2012, the department has undergone three rounds of service cuts that have reduced and stabilized wait times on some routes, increased wait times on others, eliminated some routes, but overall improved the service reliability of the system. In December 2011, SMART instituted a reduction in service to forestall a $7,000,000 budget deficit. This resulted in an 18 percent reduction of weekday service, a 29 percent reduction of Saturday service, and a 31 percent reduction of Sunday Service. These service reductions were achieved by shortening the Main Corridor (arterial) routes into the City of Detroit and eliminating lower productivity routes in each of the three counties SMART serves: Wayne, Oakland, and Macomb. In determining which routes would be affected, SMART worked to maintain a balance between funds received and service provided. After reductions, the income-to-service balance, shown in Table 7-3, was achieved. Through the reductions in service, SMART has maintained an on-time performance of 87 percent system-wide and continues to monitor reliability through route surveys, automatic vehicle location data, and bus operator input. Service reductions have allowed SMART to meet budgetary requirements in FY2012 and FY2013 without further reductions.

MDOT has responded to increased transit service demand and Michiganders’ desire for improved transportation options with increased support for transit projects. Along the Woodward Avenue corridor, demand has been slowly building for transit facilities and services since 2006 when the City of Detroit hosted Super Bowl XL. Emphasis on transit has accelerated between 2011 and 2013, in which projects with transit components were initiated within study area communities as shown in Table 7-4.

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>% OF LOCAL FUNDING</th>
<th>% OF SERVICE PROVIDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wayne</td>
<td>25%</td>
<td>25.03%</td>
</tr>
<tr>
<td>Oakland</td>
<td>39%</td>
<td>39.28%</td>
</tr>
<tr>
<td>Macomb</td>
<td>36%</td>
<td>35.69%</td>
</tr>
</tbody>
</table>

**TABLE 7-4. Woodward Corridor Transit Timeline, 2011-2013**

<table>
<thead>
<tr>
<th>YEAR COMPLETED</th>
<th>TRANSIT-RELATED PROJECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>Pontiac Transportation Center</td>
</tr>
<tr>
<td>2011</td>
<td>Woodward Avenue Light Rail Transit Project</td>
</tr>
<tr>
<td>2012</td>
<td>Woodward Avenue Streetcar Project</td>
</tr>
<tr>
<td>2012</td>
<td>Woodward Avenue Rapid Transit Alternatives Analysis</td>
</tr>
<tr>
<td>2013</td>
<td>Woodward Avenue Complete Streets Master Plan</td>
</tr>
<tr>
<td>2013</td>
<td>Troy Multi-Modal Transit Center</td>
</tr>
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<td>Birmingham Multi-Modal Transportation Plan</td>
</tr>
<tr>
<td>2013</td>
<td>Ferndale Multi-Modal Transportation Plan</td>
</tr>
</tbody>
</table>
Connectivity: City and Suburb

Improved transit connectivity between Detroit and outlying suburbs is necessary for increased job access and transportation options for residents within and beyond the 27-mile Woodward corridor. SMART and DDOT do not provide regular end-to-end service on Woodward Avenue between the downtowns of Pontiac and Detroit. SMART Routes 450 Woodward Local/Pontiac and 460 Woodward Local/Somerset provide end-to-end service between downtown Pontiac and the Rosa Parks Transit Center in downtown Detroit during peak periods only. During off peak hours, Routes 450 and 460 travel between downtown Pontiac and the State Fairgrounds Transit Center (SFTC) at Eight Mile Road in Detroit. Riders must transfer at SFTC to DDOT Route 53 for service to the Rosa Parks Transit Center. The average transfer time ranges between 15 to 35 minutes during the day with wait times being longer during off-peak periods. For both traditional and reverse commuters, this transfer at the State Fairgrounds Transit Center adds travel time and cost between trips. DDOT and SMART have different service frequencies, reliability, coverage, and fare structures. Despite the challenges in connected transit service, Woodward Avenue thrives as a premier transit corridor in Southeast Michigan.

LONG-HAUL / INTERCITY TRANSIT SERVICE

Intercity Rail and Bus Services

Amtrak provides intercity passenger rail service in four corridor communities: Detroit, Royal Oak, Birmingham, and Pontiac. Amtrak’s Wolverine Service offers three daily round-trips on its Chicago-Battle Creek-Ann Arbor-Detroit-Pontiac route. The proposed Ann Arbor to Detroit commuter rail line would use the Amtrak Station in Detroit. SMART and DDOT bus routes have stops located near the Detroit Amtrak station, and SMART has stops located near the Royal Oak, Birmingham, and Pontiac stations, providing connectivity between modes. The Greyhound Bus Terminals in Downtown Detroit and on Lahser Road in Southfield offer intercity bus service.

Megabus offers connections to Chicago, Illinois, and picks up at the Rosa Parks Transit Center as well as at the corner of Warren Avenue and Cass Avenue in Detroit.

**TABLE 7-5. AMTRAK STATION USAGE, 2012**

<table>
<thead>
<tr>
<th>STOPS</th>
<th>BOARDINGS / ALIGHTINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detroit</td>
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</tr>
<tr>
<td>Royal Oak</td>
<td>32,814</td>
</tr>
<tr>
<td>Birmingham (Troy)</td>
<td>19,712</td>
</tr>
<tr>
<td>Pontiac</td>
<td>16,307</td>
</tr>
</tbody>
</table>
Shuttle Services

Three shuttle services operate within the study corridor in the City of Detroit. Wayne State University offers two campus shuttles, free for faculty and students, which provide service between parking facilities and campus buildings. There are nine stops for the Main Campus Shuttle and an additional two stops for the Medical Campus Shuttle. The Medical Campus Shuttle’s service area includes the Detroit Medical Center. The Detroit Medical Center offers three types of shuttles to transport employees, visitors, and patients throughout the Central Campus. The College for Creative Studies, located in the New Center Area, operates one 24-hour weekday and weekend shuttle between its Ford Campus and the Taubman Center. In addition, major employers and high-rise office buildings in the area provide dedicated shuttle services to their patrons, often filling the gaps and/or a portion of the unmet local transit needs.

TRANSIT FACILITIES

Since 2006 when Super Bowl XL was hosted in Detroit, Woodward corridor communities have invested in transit hub facilities that support transit connectivity within and between transit modes.

META EXPO (2012 Proposal Ongoing)

The State Fairgrounds Development Coalition is an organization of individuals from communities, businesses, as well as representatives of organizations and municipalities who have developed an interest in the State Fairgrounds development. The Coalition recommends making transit considerations central to any development plans for the site.

Troy Multi-Modal Transit Center (Opened 2013)

A new intermodal transit center in Troy, Michigan is scheduled to open in August 2013. The project replaces an outdated Amtrak station and includes a 2,000 square foot building with a pedestrian bridge linkage to a new Amtrak platform, a bus stop area, and a passenger/taxi drop off and pick up area. Upon completion, the center will accommodate intercity passenger rail service, regional bus routes, taxi services, and the Troy Oakland Airport.

Pontiac Transportation Center (Opened 2011)

The Pontiac Transportation Center is a 1,400 square foot facility that serves Amtrak intercity passenger rail, SMART bus routes and Greyhound intercity bus service. This passenger rail station is a planned stop on the proposed Chicago to Detroit high-speed rail line.
Rosa Parks Transit Center (Opened 2009)

Rosa Parks Transit Center (RPTC) is a 24-hour multimodal transfer facility connecting passengers to DDOT, SMART, and Transit Windsor buses, as well as to the Detroit People Mover. The Center is a 25,700-square foot three-level building located on a 2.4-acre site bounded by Michigan and Cass Avenues and Times Square. RPTC has a central island with 12 bus bays.

State Fairgrounds Transit Center (Opened 2006)

The State Fairgrounds Transit Center is located on a 1.7 acre site adjacent to the State Fair site. The center, which includes a customer information center, passenger information kiosks, and 12 bus shelters, provides a transfer point for easy access to the downtown. The center is one element of the City of Detroit’s effort to create a functional and appealing city transportation system.

Detroit Amtrak Station (Opened 1994)

Detroit’s Amtrak Station is located on the corner of Woodward and West Baltimore Street in New Center. This station serves Amtrak’s Wolverine line and is a planned stop on both the proposed Chicago to Detroit high-speed rail line and the Ann Arbor to Detroit commuter line.

Royal Oak Transit Center / Amtrak Station

The Royal Oak Transit Center is an Amtrak station in Royal Oak, Michigan that is served by the Wolverine Line and SMART.
D. Travel Time Comparison Between Roadway and Transit Systems

Traveling the entire length between Pontiac and Downtown Detroit is typically done via I-75 if traveling by car and not along Woodward Avenue. Woodward is more for local commute and used also as an alternate to avoid congestion on I-75 for peak period commuter travel. Though it is a longer distance by freeway (31 miles compared to 27 miles along Woodward), the higher speed limit along I-75 and lack of signalized intersections reduces the travel time. On a typical off-peak day, the average travel time from the center of Downtown Pontiac to the center of Downtown Detroit via car is 52 minutes and approximately one hour and 50 minutes via transit (see Table 7-6). As previously discussed in the Public Transportation section, travel by transit during the peak hours between Pontiac and Detroit is done via SMART Route 450; however, during off-peak periods, SMART service stops at the City of Detroit limits, forcing passengers to transfer to DDOT Route 53. This additional transfer adds time onto travel times, causing longer off-peak trip travel times than the peak period trips.

<table>
<thead>
<tr>
<th>TRAVEL VIA</th>
<th>I-75</th>
<th>WOODWARD AVE.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEAK PERIODS</td>
<td>OFF-PEAK PERIODS</td>
<td>PEAK PERIODS</td>
</tr>
<tr>
<td>CAR</td>
<td>45 - 55 min.</td>
<td>31 - 33 min.</td>
</tr>
<tr>
<td>TRANSIT</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

E. Carpooling and Active/Non-Motorized Transportation

CARPOOLING/ CAR-SHARING

The Michigan Department of Transportation and Zipcar are the primary carpooling/car-sharing resources within the study corridor. MDOT sponsors a rideshare program and operates carpool lots throughout the state of Michigan. There are no MDOT carpool lots located within one mile of Woodward; the closest is approximately 2.5 miles away at I-75 and Adams Road in Bloomfield Township. The lot is primarily used by commuters traveling to and from downtown Detroit via I-75.

Zipcar, a private car-sharing service, has three reserved parking space locations near the Wayne State University campus in Midtown Detroit. Zipcar reserved parking spaces are located in a Wayne State University parking lot on Anthony Wayne Drive, a private parking structure on Forest Avenue, and a College for Creative Studies parking structure on Brush Street.

ACTIVE / NON-MOTORIZED TRANSPORTATION FACILITIES

Facilities created for use by pedestrians and bicyclists are generally considered active or non-motorized transportation facilities and provide a common form access to transit for a segment of transit riders. Relating to the Woodward corridor, non-motorized facilities are limited to sidewalks/safety pathways, shared use paths, and bike lanes. Transit users utilize these facilities at the beginning and end of their trip. As such, transit and non-motorized facilities are complementary as every transit trip is inherently multi-modal. The presence of continuous sidewalks between station locations and major trip generators within a quarter mile distance is key for pedestrians. The availability of shared use paths and bike lanes within a one mile distance of station locations is important for cyclists. Bicycles allow transit users to travel beyond the five minute walking threshold for pedestrians, expending their reach to destinations at farther distances.

Sidewalks

There are continuous sidewalks north and southbound along Woodward Avenue between Jefferson Avenue in Detroit and Lincoln Street in Birmingham, providing another common transit-supportive amenity that promotes use of transit. Gaps in sidewalk availability begin to appear at Lincoln Street, and between Big Beaver Road and Hickory Grove Road, there are no sidewalks north or southbound along the corridor. Sidewalk continuity on both sides of the roadway re-emerges from South Boulevard to the Woodward Loop in Pontiac.
F. Potential Travel Markets

Travel between residential origins, employment, and non-work destinations are a central component of the analysis of transit options that are appropriate for the Woodward corridor. Woodward benefits from having both significant residential development, major employers and attractions within one mile of the corridor, particularly in the segment south of Grand Boulevard in Detroit. Figure 7-11 lists major employers along Woodward, some of which are also major attractions shown in Figure 5-6 on page 16.

The Midtown district in Detroit is experiencing population growth and neighborhood revitalization, supported in part by the growth and expansion of the Detroit Medical Center and Wayne State University campuses.

<table>
<thead>
<tr>
<th>MEDICAL</th>
<th>Detroit Medical Center (DMC)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Henry Ford Hospital</td>
</tr>
<tr>
<td></td>
<td>Beaumont Hospital</td>
</tr>
<tr>
<td></td>
<td>St. Joseph Mercy Hospital</td>
</tr>
<tr>
<td></td>
<td>St. John Providence Health Systems</td>
</tr>
<tr>
<td></td>
<td>Barbara Ann Karmanos Cancer Center</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EDUCATION</th>
<th>Wayne State University</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Michigan State University</td>
</tr>
<tr>
<td></td>
<td>University of Detroit Mercy</td>
</tr>
<tr>
<td></td>
<td>College for Creative Studies</td>
</tr>
<tr>
<td></td>
<td>Detroit Public Schools</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OFFICE</th>
<th>U.S. Government</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>State of Michigan</td>
</tr>
<tr>
<td></td>
<td>Wayne County Government</td>
</tr>
<tr>
<td></td>
<td>Quicken Loans</td>
</tr>
<tr>
<td></td>
<td>Chrysler Group, LLC</td>
</tr>
<tr>
<td></td>
<td>DTE Energy</td>
</tr>
<tr>
<td></td>
<td>General Motors Corp.</td>
</tr>
<tr>
<td></td>
<td>U.S. Postal Service</td>
</tr>
<tr>
<td></td>
<td>Blue Cross Blue Shield of Michigan</td>
</tr>
<tr>
<td></td>
<td>MGM Grand Detroit Casino</td>
</tr>
<tr>
<td></td>
<td>MotorCity Casino</td>
</tr>
<tr>
<td></td>
<td>Compuware Corporation</td>
</tr>
<tr>
<td></td>
<td>Comerica Bank</td>
</tr>
<tr>
<td></td>
<td>Deloitte LLP</td>
</tr>
<tr>
<td></td>
<td>American Axle &amp; Manufacturing Holdings</td>
</tr>
<tr>
<td></td>
<td>Johnson Controls - Automotive Experience</td>
</tr>
<tr>
<td></td>
<td>Soave Enterprises, LLC</td>
</tr>
<tr>
<td></td>
<td>PricewaterhouseCoopers, LLP</td>
</tr>
<tr>
<td></td>
<td>Pepsi Beverages Co.</td>
</tr>
</tbody>
</table>

**FIGURE 7-11. MAJOR EMPLOYERS**

Source: Parsons Brinkerhoff, Crain’s Book of Lists 2012

According to a March 2013 news release by Michigan Health and Hospital Association, Michigan’s largest private-sector employer is Health Care.
Figure 7-12 illustrates the various areas along Woodward, which were categorized into four main groups (“districts”) to understand travel patterns within the corridor. They include (from south to north):

- Detroit South: Downtown Detroit, Midtown, New Center
- Detroit North: North End Detroit, Highland Park
- Oakland South: Ferndale, Huntington Woods, Pleasant Ridge, Royal Oak, Berkley
- Oakland North: Birmingham, Bloomfield Township, Bloomfield Hills, Pontiac

In 2010, within the Woodward Districts, which are generally located within one mile of Woodward, there were 183,951 people in 82,366 households. SEMCOG projects that in 2035 the corridor will have 177,658 people living in 83,011 households. Accordingly, the number of households within the Woodward corridor will increase due to a reduction in household size, a shift that is consistent with national household trends. Within ¼-mile or walking distance of the corridor, there are approximately 118,734 people. Residents that live beyond a ½-mile distance of the corridor are more likely to drive to transit facilities. The Trips section summarizes the travel patterns of drivers within the region.

TRIPS

The combination of residents, jobs, and attractions along the corridor generated approximately 1.3 million trips per day within one mile of Woodward in 2010. There were approximately 18.7 million trips per day within the southeast Michigan region, indicating that approximately 7% of all the trips within the region enter, leave, or are within one mile of the corridor - a significant portion. Approximately 350,000 trips per day (or 27%) are all completely within one mile of the corridor, which are those trips that have quick and reasonable access to transit along Woodward Avenue. Approximately 585,000 trips (or 45%) are from the remainder of Oakland and Wayne counties, which are those trips that could likely drive to the corridor and could be candidates for park and ride facilities. Figure 7-14 on the following page represents the nature of daily trips taking place within the corridor.
Approximately 71% of trips within one mile of the corridor are non-work trips, which include those trips involving education, entertainment, shopping, and medical purposes. This is consistent with the number of attractions along the corridor, specifically in Detroit. This trip distribution is a positive indicator for an enhanced transit corridor as its ridership will not depend solely on work trips for ridership, but will attract a significant amount of non-work trips as well.

**FIGURE 7-13. TRIPS WITHIN OR COMING INTO THE CORRIDOR**

Source: Parsons Brickerhoff, 2012

27% of all trips are within 1 mile of the corridor.

71% of all trips within the corridor are non-work trips.

The synergy between non-work trips in the northern part of the corridor and the major destinations in the City of Detroit and converse relationship between job access needs for the transit dependent populations in Detroit/Highland park support the need for higher order transit along Woodward.
In consideration of the vehicular travel patterns shown in Figure 7-14 and Tables 7-7 through 7-11, there are four travel markets that may benefit from rapid transit service on Woodward Avenue:

1. Residents traveling to Downtown, Midtown, and New Center (Detroit South)
2. Residents of the corridor and other commuters traveling for work or higher education
3. Residents of the corridor and other commuters traveling for play
4. Reverse commuters that live within the City of Detroit and want to work in places either along the Corridor or connect to other transit service to another destination

Other travel markets would benefit as well, especially those wanting to access the Amtrak stations in Pontiac and New Center Detroit and the Rosa Parks Transit Center in downtown Detroit. This enhanced service would provide better connectivity between a variety of existing transit centers along the corridor.

Table 7-7 summarizes the total trips (entering and leaving) that were conducted completely within the corridor within each of the four areas for the year 2010.

Trip patterns indicate raw attention to considerable activity within the Detroit South district and from Detroit North to the rest of Wayne and Oakland Counties. Detroit South produces the most within-district trips along Woodward at 176,000 trips per day. There are 347,000 trips traveling to Detroit South from the rest of Oakland and Wayne Counties; these trips represent the largest district-to-district movement within the corridor and denote a traditional commuting pattern from suburbs to urban core. Detroit South is a major destination for residents of the district, as well as residents residing beyond two miles of the Woodward corridor, suggesting that the district is a major regional employment center.

A reverse commute pattern with 34,000 trips occurs from Detroit South to within two miles of the corridor. Table 7-7 shows that fewer trips travel north to the Oakland North area from Detroit South. However, 56,000 within-district trips occur in the Oakland North area. There are approximately 7,000 trips coming from North and South Oakland areas to Detroit South. Approximately 325,000 trips travel from within two miles of the study corridor to within other areas of the corridor.

<table>
<thead>
<tr>
<th>TRIPS GOING TO</th>
<th>DETROIT SOUTH</th>
<th>DETROIT NORTH</th>
<th>OAKLAND SOUTH</th>
<th>OAKLAND NORTH</th>
<th>WITHIN 2 MILES</th>
<th>REST OF OAKLAND &amp; WAYNE</th>
<th>ALL OTHER AREAS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>DETROIT SOUTH</td>
<td>176,820</td>
<td>7,540</td>
<td>3,350</td>
<td>710</td>
<td>41,950</td>
<td>134,220</td>
<td>17,260</td>
<td>381,850</td>
</tr>
<tr>
<td>DETROIT NORTH</td>
<td>13,980</td>
<td>10,720</td>
<td>4,790</td>
<td>470</td>
<td>23,210</td>
<td>36,940</td>
<td>6,380</td>
<td>96,490</td>
</tr>
<tr>
<td>OAKLAND SOUTH</td>
<td>6,040</td>
<td>3,920</td>
<td>47,980</td>
<td>8,920</td>
<td>61,360</td>
<td>69,540</td>
<td>18,210</td>
<td>215,970</td>
</tr>
<tr>
<td>OAKLAND NORTH</td>
<td>1,400</td>
<td>320</td>
<td>7,680</td>
<td>55,780</td>
<td>54,270</td>
<td>85,810</td>
<td>9,710</td>
<td>214,970</td>
</tr>
<tr>
<td>WITHIN 2 MILES</td>
<td>93,130</td>
<td>25,220</td>
<td>73,130</td>
<td>59,350</td>
<td>325,640</td>
<td>N/A</td>
<td>N/A</td>
<td>576,470</td>
</tr>
<tr>
<td>REST OF OAKLAND &amp; WAYNE</td>
<td>347,510</td>
<td>39,060</td>
<td>85,260</td>
<td>112,810</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>584,640</td>
</tr>
<tr>
<td>ALL OTHER AREAS</td>
<td>55,910</td>
<td>8,270</td>
<td>31,400</td>
<td>22,050</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>117,630</td>
</tr>
<tr>
<td>TOTAL</td>
<td>694,790</td>
<td>95,050</td>
<td>253,590</td>
<td>260,090</td>
<td>506,430</td>
<td>326,510</td>
<td>51,560</td>
<td>2,188,020</td>
</tr>
</tbody>
</table>
Enhanced transit service along Woodward Avenue would capture existing transit riders that use the SMART Route 450 and DDOT Route 53 services. However, there is potential to capture additional riders that live and work along the corridor, along with those that live near the corridor within Oakland County and work along the corridor, and then those that want to visit attractions along the corridor. There is also potential to capture reverse commuters, especially those that live in the City of Detroit and have destinations along the corridor or near the corridor. Transit service between the City of Detroit and the outlying suburbs is often challenging and has become more so since suburban SMART service during the off-peak has forced transfers between the systems. An all-day enhanced transit service along Woodward Avenue would improve transit commute in both directions. There are four significant transit markets that would benefit from improved transit service along the corridor, these include:

Residents Traveling to Downtown, Midtown, and New Center (Detroit South)

Downtown through New Center Detroit has approximately 126,119 jobs and various attractions that draw in travel from along the Woodward corridor as well as the Southeast Michigan region. Corporate and government offices, museums, libraries, colleges, hospitals, restaurants, theatres, sports arenas, COBO Convention Center, parks, and the Riverfront are all encompassed within the Detroit South district. Of the 695,000 daily trips coming into this area, approximately 30% of trips coming into Detroit South area are from areas along the corridor. Another 13% of those trips are those within two miles of the corridor, and another 8% are coming from other areas within Oakland County. About a quarter of the trips are work trips coming into Detroit South, and another 11% are those involving shopping. The largest percentages are those doing other trips, including entertainment and higher education (college or university). Approximately 30% of the trips are those that do not begin or end at home; those trips are considered destination-to-destination trips, such as travel between venues, running an errand from work, or lunch trips while at work.

There is a large percentage of trips coming into Detroit South that are from the remainder of Wayne County, outside the two mile buffer around the corridor. These could be served by enhanced transit along this corridor for those that could take east-west transit and connect to the Woodward Avenue corridor. Those living within Oakland County could utilize Park And Ride lots along the northern part of the corridor to access Detroit South.

10 LEHD

<table>
<thead>
<tr>
<th>TRIPS COMING FROM</th>
<th>TYPE OF TRIP</th>
<th>TOTAL TRIPS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HOME TO WORK</td>
<td>HOME TO SHOPPING</td>
</tr>
<tr>
<td>DETROIT SOUTH</td>
<td>9,373</td>
<td>15,252</td>
</tr>
<tr>
<td>DETROIT NORTH</td>
<td>2,279</td>
<td>1,899</td>
</tr>
<tr>
<td>OAKLAND SOUTH</td>
<td>2,383</td>
<td>332</td>
</tr>
<tr>
<td>OAKLAND NORTH</td>
<td>762</td>
<td>15</td>
</tr>
<tr>
<td>WITHIN 2 MILES</td>
<td>17,716</td>
<td>13,138</td>
</tr>
<tr>
<td>REST OF OAKLAND CO.</td>
<td>19,937</td>
<td>1,384</td>
</tr>
<tr>
<td>REST OF WAYNE CO.</td>
<td>83,015</td>
<td>42,363</td>
</tr>
<tr>
<td>ALL OTHER AREAS</td>
<td>32,621</td>
<td>3,443</td>
</tr>
<tr>
<td>TOTAL</td>
<td>168,086 (24%)</td>
<td>77,825 (11%)</td>
</tr>
</tbody>
</table>

Source: Parsons Brinckerhoff, 2012

TABLE 7-8. 2010 TOTAL TRIPS AND TYPES OF TRIPS IN AND NEAR THE WOODWARD DISTRICTS
Residents & Commuters from Surrounding Areas for ‘Work’ (includes School)

Along the corridor there are approximately 219,364 jobs, ten major hospitals including major medical facilities that are specialized in state of the art cancer and heart treatment, nationally acclaimed medical research facilities, and five universities and colleges. Work/school is a key trip purpose along the corridor; especially for the patrons, staff, students and researcher at these medical facilities and higher educational institutions. In total approximately 250,000 trips that are undertaken along the corridor are home-based work trips or higher education trips. Of those, 11% occur from those living within one mile of the corridor, leaving approximately 89% that live outside of that area. Approximately 14% live within two miles of the corridor and could benefit from a rapid transit option that competitive with automobile. Approximately 63% live within the rest of Oakland and Wayne counties. Some currently avail Park And Ride locations in combination with other employer provided transit services and transfer to an enhanced transit option along Woodward Avenue.

### TABLE 7-9. 2010 WORK TRIPS COMING INTO CORRIDOR

**Source:** Parsons Brinckerhoff, 2012

<table>
<thead>
<tr>
<th>TRIPS GOING TO</th>
<th>DETROIT SOUTH</th>
<th>DETROIT NORTH</th>
<th>OAKLAND SOUTH</th>
<th>OAKLAND NORTH</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL OTHER AREAS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALONG CORRIDOR</td>
<td>14,798</td>
<td>1,162</td>
<td>5,689</td>
<td>5,861</td>
<td>27,511</td>
</tr>
<tr>
<td>WITHIN 2 MILES</td>
<td>17,716</td>
<td>1,804</td>
<td>8,638</td>
<td>7,497</td>
<td>35,655</td>
</tr>
<tr>
<td>REST OF OAKLAND COUNTY</td>
<td>19,937</td>
<td>1,739</td>
<td>11,570</td>
<td>25,631</td>
<td>58,877</td>
</tr>
<tr>
<td>REST OF WAYNE COUNTY</td>
<td>83,015</td>
<td>4,493</td>
<td>8,654</td>
<td>4,914</td>
<td>101,077</td>
</tr>
<tr>
<td>TOTAL</td>
<td>153,288</td>
<td>10,446</td>
<td>39,499</td>
<td>48,515</td>
<td>251,747</td>
</tr>
</tbody>
</table>
Residents & Commuters from Surrounding Areas for ‘Play’

Shopping and entertainment along the corridor is significant, and the amount of these types of trips account for 45% of all trips, or approximately 593,000 trips per day. Approximately 24% of these trips are from those living within one mile of the corridor and additional 23% are from those that live within two miles of the corridor. These are excellent candidates to take enhanced transit to reach their destination along the corridor.

**TABLE 7-10. 2010 SHOPPING AND OTHER TRIPS COMING INTO CORRIDOR**

<table>
<thead>
<tr>
<th>TRIPS COMING FROM</th>
<th>DETROIT SOUTH</th>
<th>DETROIT NORTH</th>
<th>OAKLAND SOUTH</th>
<th>OAKLAND NORTH</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALONG CORRIDOR</td>
<td>64,773</td>
<td>10,751</td>
<td>31,911</td>
<td>32,795</td>
<td>140,230</td>
</tr>
<tr>
<td>WITHIN 2 MILES</td>
<td>50,835</td>
<td>14,885</td>
<td>40,285</td>
<td>29,896</td>
<td>135,902</td>
</tr>
<tr>
<td>REST OF OAKLAND COUNTY</td>
<td>10,552</td>
<td>3,161</td>
<td>21,499</td>
<td>44,221</td>
<td>79,432</td>
</tr>
<tr>
<td>REST OF WAYNE COUNTY</td>
<td>158,222</td>
<td>16,813</td>
<td>16,016</td>
<td>4,877</td>
<td>195,929</td>
</tr>
<tr>
<td>ALL OTHER AREAS</td>
<td>16,107</td>
<td>3,501</td>
<td>13,585</td>
<td>8,267</td>
<td>41,460</td>
</tr>
<tr>
<td>TOTAL</td>
<td>300,490</td>
<td>49,111</td>
<td>123,297</td>
<td>120,056</td>
<td>592,953</td>
</tr>
</tbody>
</table>

Reverse Commuters / Transit Dependent

Within the City of Detroit there is a large transit dependent population with approximately 23% with no access to a vehicle. Additionally, there are typically more or higher paying jobs within outlying suburbs. As a result, there is a reverse commute that exists from the City of Detroit and parts of Wayne County into Oakland County. There are approximately 687,000 trips that go from Detroit and Wayne County into Oakland County every day. Woodward is the main arterial roadway for travel. There are approximately 53,000 trips that travel from within two miles of the corridor within Detroit to within two miles of the corridor within Oakland County. Given the prevalence of transit dependency within the City of Detroit, including the city of Highland Park, these trips may benefit from enhanced transit along Woodward Avenue and improvements to feeder route network accessing the enhanced transit.

**TABLE 7-11. 2010 TRIPS FROM DETROIT/WAYNE COUNTY TO OAKLAND COUNTY**

<table>
<thead>
<tr>
<th>TRIPS COMING FROM</th>
<th>DETROIT SOUTH</th>
<th>DETROIT NORTH</th>
<th>OAKLAND SOUTH</th>
<th>OAKLAND NORTH</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>DETROIT SOUTH</td>
<td>3,353</td>
<td>713</td>
<td>6,799</td>
<td>21,365</td>
<td>32,230</td>
</tr>
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<td>DETROIT NORTH</td>
<td>4,794</td>
<td>469</td>
<td>6,441</td>
<td>11,980</td>
<td>23,684</td>
</tr>
<tr>
<td>WITHIN 2 MILES OF CORRIDOR IN DETROIT</td>
<td>11,006</td>
<td>1,508</td>
<td>18,574</td>
<td>40,840</td>
<td>71,928</td>
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<tr>
<td>REST OF DETROIT/WAYNE CO.</td>
<td>32,271</td>
<td>12,076</td>
<td>69,827</td>
<td>445,085</td>
<td>559,259</td>
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<td>TOTAL</td>
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<td>14,766</td>
<td>101,641</td>
<td>519,270</td>
<td>687,101</td>
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G. Ongoing Transit and Related Projects

ANN ARBOR TO DETROIT

The Ann Arbor and Detroit commuter rail service is a segment of the Pontiac-Detroit-Chicago Amtrak corridor. Using existing infrastructure the commuter rail connects downtown Detroit to City of Ann Arbor. In addition, the recent announcement of over a half billion dollars in Federal Railroad Administration (FRA) High Speed Rail (HSR) funds is good news for both the Amtrak trains and the Ann Arbor-Detroit Commuter service as many of the necessary improvements will benefit both of the projects. SEMCOG and MDOT are working closely with FRA and the Federal Transit Administration (FTA) to ensure that the capital improvements for both commuter and Amtrak service are coordinated.

Ongoing work includes the identification and agreement with host railroads on key track improvements, refurbishment of passenger cars, acquiring the necessary locomotives, preliminary design of stations and layover facilities, and coordination with Amtrak. One major capital improvement, the West Detroit connecting track, is expected to be under construction this spring.

The terminal station of this service is at the Amtrak station in Detroit, which will connect to both the proposed M-1 RAIL and any future rapid transit along Woodward.

M-1 RAIL WOODWARD STREETCAR PROJECT

The M-1 RAIL Project will be an urban fixed rail at-grade circulator system connecting Downtown Detroit to the New Center area along Woodward Avenue. It would operate in mixed traffic and run from Larned Street in Downtown Detroit north to Chandler Street/Delaware Street in New Center. The route is 3.31 miles long with 11 station stops. The streetcar system is envisioned to follow a side-running alignment through a majority of the corridor, with transitions to median-running operations at the north and south ends. M-1 RAIL will use modern vehicle technology to link cultural, entertainment, health care, sports, and educational activity centers along the corridor to address unmet higher level transit needs along Woodward.

GREATER DOWNTOWN TOD STRATEGY

The Greater Downtown TOD Strategy was created in support of the M-1 Rail streetcar project on Woodward Avenue between Jefferson Avenue and Grand Boulevard. The M-1 Rail streetcar provides the opportunity to connect major destinations, employment, educational and medical centers in the Greater Downtown to neighborhoods, improving access to jobs and services for residents along the corridor, and offering a new opportunity to live in a walkable environment. The Greater Downtown TOD Strategy seeks to leverage the transit investment to create a framework to guide future development in support of the creation of more dense, vibrant, and walkable districts and neighborhoods.

The success of the Greater Downtown TOD Strategy is predicated on the collaborative cooperation of a diverse range of participants that share the responsibility for shaping the vision for the corridor and in creating a positive community impact in response to the light rail investment. The process was guided by the Greater Downtown TOD Planning Group, made up of members from the public, private and philanthropic sectors, lead by the Detroit Economic Growth Corporation and Downtown Detroit Partnership/M-1 Rail. Through interviews, workshops and critiques of the work, residents and stakeholders participated in the authorship of the vision, principles and action plans that will guide investment and development throughout their communities.

IMAGE 7-12. TARGET DENSITIES AROUND TRANSIT STOPS.
Source: The Greater Downtown TOD Strategy
DETROIT FUTURE CITY (DETROIT STRATEGIC FRAMEWORK PLAN)

The Detroit Strategic Framework Plan articulates a shared vision for Detroit’s future, and recommends specific actions for reaching that future. The vision resulted from a 24-month-long public process that drew upon interactions among Detroit residents and civic leaders from both the nonprofit and for-profit sectors, who together formed a broad-based group of community experts. From the results of this citywide public engagement effort, in turn, a team of technical experts crafted and refined the vision, rendered specific strategies for reaching it, shared their work publicly at key points, and shaped it in response to changing information and community feedback throughout the process.

The Detroit Strategic Framework establishes a set of policy directions and actions designed to achieve a more desirable and sustainable Detroit in the near term and for future generations. The Strategic Framework is organized into Five Planning Elements and a civic engagement chapter. These Five Elements include: Economic Growth, Land Use, City Systems, Neighborhoods, and Public Land and Buildings. These Elements outline a detailed approach to addressing the realities and imperatives that will enable Detroit to move toward a more prosperous and sustainable future.

The Detroit Strategic Framework City Systems Element specifically addresses the critical role of transit in shaping both the future city and region. Today, 163,500 metro Detroiters enter the city for employment while 111,400 Detroit residents leave the city to access employment. This massive inflow and outflow of residents and employees points to the critical need for a regional transit system. To this end, the Detroit Strategic Framework advocates for a tiered regional transit hierarchy that offers fast, efficient and convenient transportation between neighborhoods and job centers. Woodward is a critical corridor to facilitate these transit connections. The Detroit Strategic Framework recommends a combination of bus rapid transit and light rail along the Woodward Corridor.

WOODWARD AVENUE COMPLETE STREETS MASTER PLAN

The Complete Streets Initiative for Woodward Avenue was first announced in August 2011 when the Woodward Avenue Action Association (WA3) received a $752,880 Federal Scenic Byway Grant to prepare a Complete Streets master plan for Woodward’s entire 27 miles. For decades, transportation and engineering plans focused primarily on making roads and streets more efficient for automotive travel, making roadways safer for motorized travel and discouraging walking, biking and transit use. Today, a paradigm shift is occurring in cities and communities across the country that is calling for the building of “Complete Streets” that achieve equality of convenience and choice for pedestrians of all ages and abilities, bicyclists, transit users and drivers. Instituting a “complete street” ensures that roads are designed and function in a way that includes all users, whether young or old, motorist or bicyclist, walker or wheelchair users, transit riders or business owners.

The WA3 is leading a Woodward Complete Streets design advisory team, which is comprised of representatives and policy makers from Wayne and Oakland counties, the 11 municipalities along Woodward, MDOT, M1 Rail, SEMCOG, and cycling advocacy groups. The Complete Streets plan will develop standards and policies to increase the livability of Woodward and its surrounding communities and business districts. It will also make the All American Road function efficiently and safely for residents and visitors to the region.
H. Transit-Supportive Agency Transportation Goals

METROPOLITAN PLANNING

The Southeast Michigan Council of Governments is the Metropolitan Planning Organization for member counties, cities, villages, townships, intermediate school districts, community colleges, and public universities in Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne counties. Woodward Avenue is also identified as a regional corridor priority in SEMCOG’s Direction 2035 long-range regional transportation plan, including the pursuit of rapid transit implementation.

Implementation of rapid transit service spanning the entire length of Woodward Avenue is viewed as an enhancement to the planned 3.3-mile Woodward Avenue Streetcar project in downtown Detroit and aligns with the Regional Transit Coordinating Council (RTCC) 2008 Comprehensive Regional Service Plan recommendation for premium transit service on Woodward. SEMCOG’s long-range goals include:

**Goal: Enhance accessibility and mobility for all people.**

Objectives:

- Reduce time spent traveling.
- Increase access to public transportation, consistent with the regional transit plan.
- Increase coordinated development and use of walking/biking facilities.
- Increase connectivity of transportation service across the region, and provide multimodal access to major land uses.

**Goal: Strategically improve the transportation infrastructure to enhance community and economic vitality.**

Objectives:

- Preserve the existing transportation system, prioritizing highway maintenance before highway expansion.
- Focus transportation investment in areas with high concentrations of people and jobs.
- Improve the efficiency and effectiveness of the transportation system.
- Increase public involvement and ensure equal access to participation in transportation decision making.
- Preserve transportation rights-of-way.

**Other Regional Goals:**

- Attracting and retaining a workforce for the future by linking people to education and jobs;
- Developing transportation assets (such as higher-level transit and walking/biking facilities) perceived by the knowledge-based workforce as fundamental to quality of life;
- Providing a transportation system conducive to aging in place for older adults (the region’s fastest growing segment of the population);
- Stabilizing communities and neighborhoods by promoting livability and sensible development/redevelopment;
- Encouraging land use and housing decisions that foster meaningful transportation choices by providing access to multiple modes of travel for work, school, shopping, recreational, and entertainment;
- Preserving green resources and air and water quality;
- Ensuring the region is safe and secure; and
- Making the region a place where people want to live and visit and where businesses want to invest.

In June 2013, SEMCOG will unveil its 2040 update to the Direction 2035 long-range regional transportation plan (RTP). The RTP update has been shaped by looking ahead to 2040 to anticipated 21st century needs and desired outcomes for the region. SEMCOG’s Creating Success initiative lays the groundwork for that broader look – How will our transportation investment:

- Lead us to the greatest possible economic prosperity?
- Make our communities more desirable for ourselves and the future workers we will need for that economic prosperity?
- Maintain and enhance fiscally sustainable public services?
- Ensure reliable, quality infrastructure, particularly our transportation infrastructure?
- Preserve and enhance healthy and attractive environmental assets?
- Ensure access to services, jobs, markets, and amenities for all of us individually and the region’s businesses?

1 Direction 2035 can be viewed at http://www.semcog.org/Direction2035Goals.aspx.
2 The Regional Transit Coordinating Council’s 2008 Comprehensive Regional Service Plan can be viewed at http://www.semcog.org/RTCC.aspx.
The 2030 long-range transportation was updated in 2012 to extend the planning horizon year to 2035. Public feedback solicited during the update process showed that Michiganders’ top three transportation priorities are to:

- Maintain/preserve the existing transportation system listed Michigan Department of Transportation.
- Improve public transit.
- Recognize the need for intercity rail passenger service.

Woodward Avenue is identified as a priority corridor within the Assessment of Southeast Michigan Regional Transit Authority (RTA) Act (Senate Bill 909/House Bill 5309). The Act was signed into law on December 19, 2012, and recognizes rapid transit implementation on Woodward Avenue as a first step in creating a proposed $500 million, 110-mile rolling rapid transit system (BRT) in southeast Michigan.

Oakland County believes that the enhancement of multi-modal public transit is an important and essential element of economic development and contributes to the improvement of the quality of life in Oakland County and the surrounding region. Living and working in Oakland County both now and in the future will be greatly enhanced with the development of a multi-modal transit system that meets the needs of all people.

In December 2012, the Oakland County Transportation Committee released its Business Roundtable Annual Report which lists transit issues and identified actions Oakland County can take to mitigate them. The commission made four transit-related recommendations.

**Recommendation #1: Support the creation of the Southeast Michigan RTA.**

HB 5309/SB would create the Southeast Michigan Regional Transit Authority (SMRTA). The transit region would include Wayne, Oakland, Macomb, and Washtenaw counties, but contiguous counties could petition to join.

**Recommendation #2: Create a vision for Regional Transit.**

The Oakland County Executive should direct the Oakland County Planning and Economic Development Services Division to work with the Regional Transit Authority (RTA) to determine how Oakland County can best be served by public transportation with the goal to maximize economic development, attract high growth companies and draw a young, talented, and educated workforce in its borders. Short- and long-term strategies to achieve that goal will act as a blueprint for the Oakland County members of the RTA. The plan that emerges should:

- Identify activity centers to be connected by public transit.
- Establish strategies to ensure access to employment and educational opportunities for all county residents.
- Provide special transportation service support to those who need transit.

The effort should create a vision that clarifies what kind of transit system Oakland County wants, establish achievable and realistic strategies to achieve this vision, and ensure that the vision supplements and complements the plans developed by the Regional Transit Authority.

**Recommendation #3: Support the Woodward Avenue Alternatives Analysis project.**

Oakland County is supportive of the Woodward Avenue Transit Alternatives Analysis as explicitly listed in December 2012 Oakland County Transportation Committee recommendations. The Oakland County communities has also expressed support through city council resolutions.

**Recommendation #4: Support a full “All-In” (no opt-out) funding model for SMART.**

With all Oakland County communities participating in the millage, SMART would see an 80% increase in funding of approximately $13.2 million and have the opportunity to build a truly comprehensive multi-modal regional service program for the residents of Oakland County.
Woodward Avenue Rapid Transit Alternatives Analysis
Purpose and Need

Southeast Michigan Council of Governments