

THOROUGHFARE MASTER PLAN  
Tech Memos #6 - #9

CITY OF NOVI  
THOROUGHFARE  
MASTER PLAN



**TECH MEMOS #6 THROUGH #9**  
**IDENTIFICATION OF MULTI-MODAL**  
**NEEDS AND ELEMENTS**  
**OF THE AFFORDABLE PLAN**



March, 2016  
*Updated April, 2016*

Submitted by:

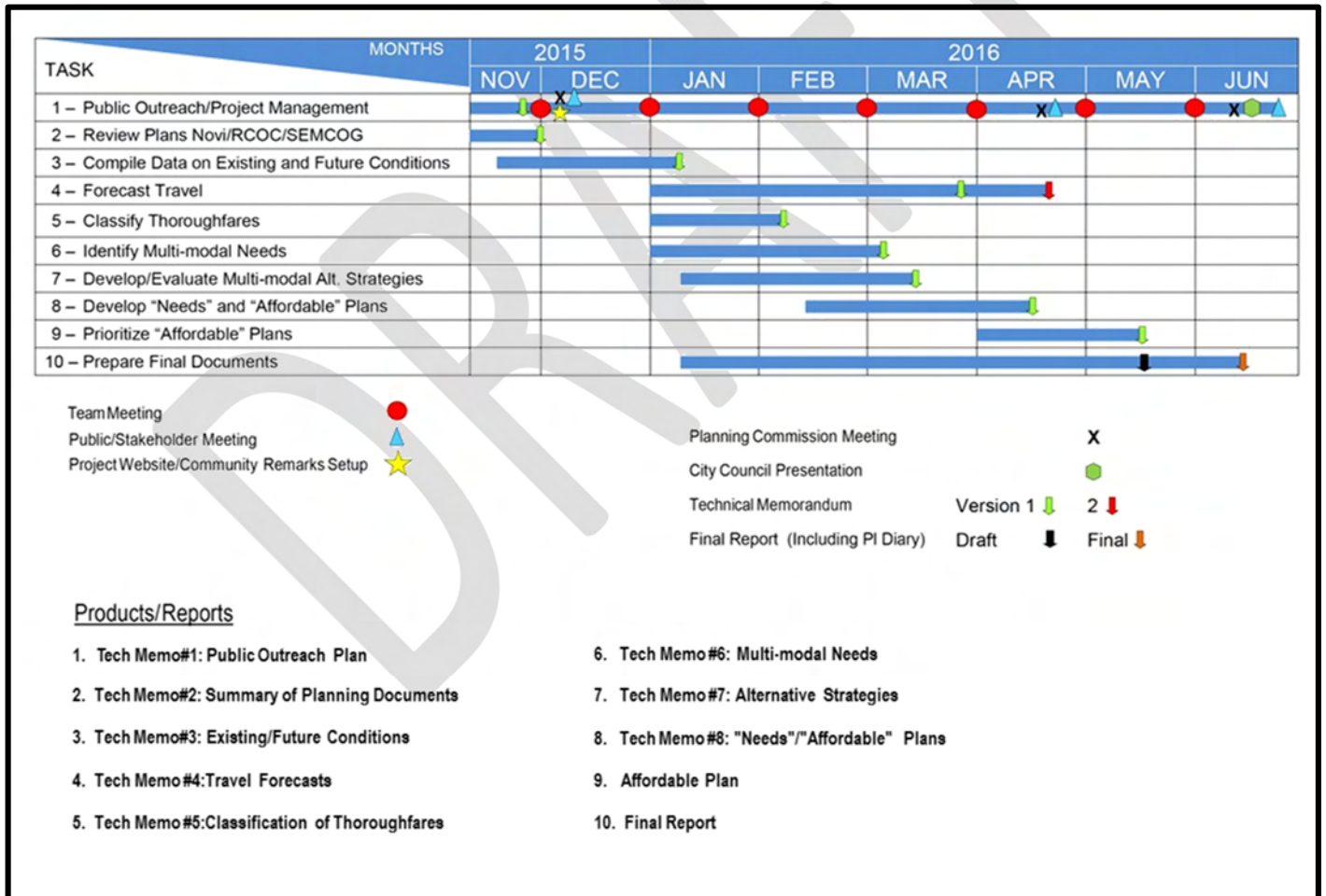


# 1. Introduction

Working with a Project Steering Committee of Novi staff, this report was prepared to cover Tasks 6 through 9 of the 2016 Novi Thoroughfare Master Plan (TMP) (Figure 1). It establishes needed projects, then determines those that can be afforded in the next five to ten years as the top priority. Other improvements will be staged in the final report for implementation in the following years of the 25-year plan.

The draft Final Report of the TMP will be provided to Novi for review in May, 2016. Based on comments received, that document, and all other deliverables will be completed by mid-June, 2016 (Task 10).

Figure 1. Schedule



Source: The Corradino Group of Michigan, Inc.

## 2. Multi-modal Alternatives

### 2.1 Introduction

In examining multi-modal elements of the Novi Thoroughfare Master Plan, the city's "Complete Streets" policy, adopted in 2010, has been an underlying principle. "Complete Streets" are key to creating healthy, active communities. The city's policy recognizes that streets serve multiple purposes and they must be designed to balance the needs of all transportation users. The preliminary recommendations cited here recognize the need to involve multiple uses, including safe, active and ample space for pedestrians, bicyclists and transit riders.

### 2.2 Roads

Multi-modal transportation elements were examined in layers, beginning with the most expensive-to-implement element – roads. Analysis of 2040 traffic conditions are illustrated in **Figure 2** which shows the 2040 volume/capacity (V/C) ratios in the PM peak period. In this analysis, **RED** indicates the V/C ratio exceeds 1.00, reflecting congestion. **GREEN** signifies congestion is not detected by the model. As a result of this analysis a dozen roadway links were identified as needing improvement (**Figure 3**). To determine the potential positive impact on congestion of improving each link, a series of tests was executed (**Table 1**). Data on the vehicle miles traveled in congested conditions were developed (**Figure 4a**). Also, the hours that vehicles spend in congested conditions were calculated in the traffic assignment model (**Figure 4b**). The results point out the following alternatives that lessen

congestion, more than the others as pointed out by the green arrows (←).

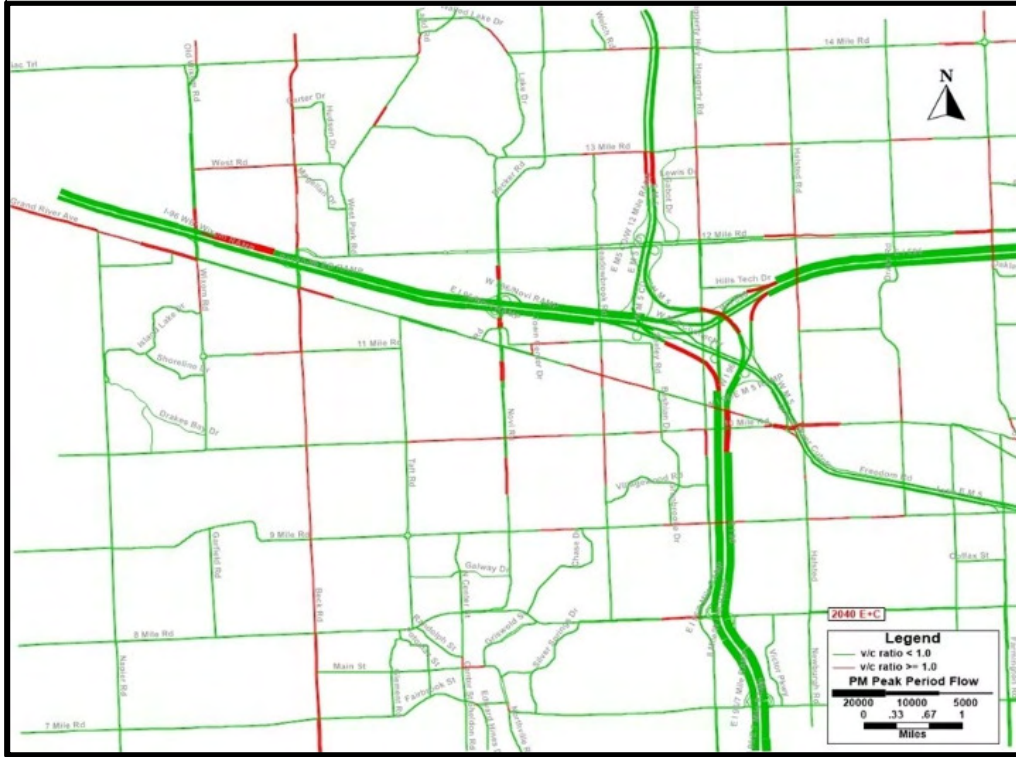
- **Alternative 3:** Widen Beck from Pontiac Trail to 12 Mile;<sup>1</sup>
- **Alternative 7:** Widen Beck from Grand River to 8 Mile; and,
- **Alternative 11:** Widen 10 Mile from Haggerty to Taft.

Combinations of these alternatives were then tested (**Table 2**). The same two measures of congestion relief were computed. The results in **Figures 5a** and **5b** indicate that the most cost-effective alternative is Alternative I (see ←) which combines widening Beck Road from 8 Mile Road to Pontiac Trail (Alternatives 3 and 7) and 10 Mile Road from Haggerty to Taft (Alternative 11). The slight improvement with Alternative H comes with the increased cost to widen Meadowbrook Road between 10 and 12 Mile Roads. That link is to be included in a later stage of implementation.

It is also noted that Alternative G is the most expansive improvement scenario as it combines all roads needing improvement but an Alpha Road extension (Alternative 2) and connecting Meadowbrook Road to Twelve Oaks Mall (Alternative 8). As such, Alternative G would be expected to perform well and demonstrates what could happen if all of Novi's road needs were satisfied. But, this cannot be accomplished in the near term, as a practical matter.

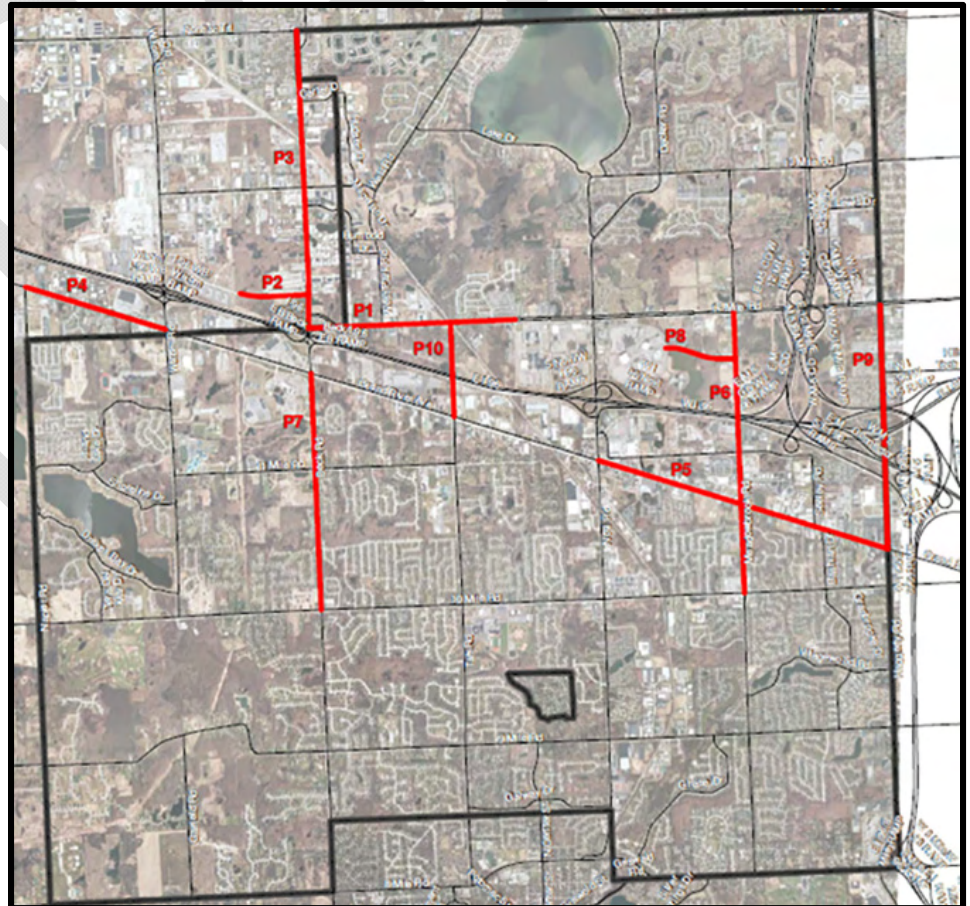
<sup>1</sup> Note that Beck Road from I-96 north to Pontiac Trail is in Wixom, but fixing that road was tested as it affects Novi.

Figure 2. 2040 PM Peak Period Traffic



Source: The Corradino Group of Michigan, Inc.

Figure 3. Critical Links Needing Improvement



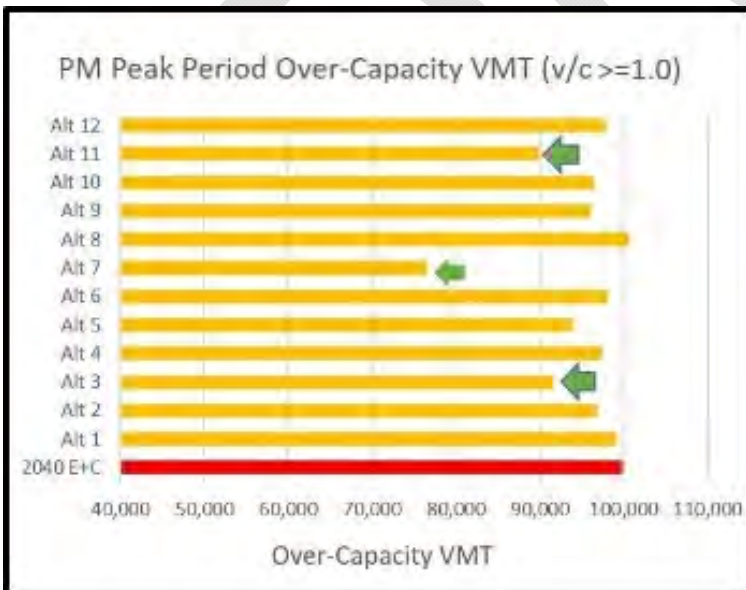
Source: The Corradino Group of Michigan, Inc.

Table 1. Basic Alternative Improvements Tested to Relieve Congestion

Alt 1 (Widen 12 Mile from Beck to Cabaret Dr)
Alt 2 (Connect Alpha Tech Dr to Beck with Road Extension)
Alt 3 (Widen Beck from Pontiac Trail to 12 Mile)
Alt 4 (Widen Grand River from Napier to Wixom)
Alt 5 (Widen Grand River from Novi to Haggerty)
Alt 6 (Widen Meadowbrook from 10 Mile to 12 Mile)
Alt 7 (Widen Beck from Grand River to 8 Mile)
Alt 8 (Connect Meadowbrook to Twelve Oaks Mall with New Road)
Alt 9 (Widen Haggerty Rd from 12 Mile to Grand River)
Alt 10 (Extend Taft Rd over I-96)
Alt 11 (Widen 10 Mile from Haggerty to Taft)
Alt 12 (Widen Novi from 9 Mile to Nick Lidstrom Dr.)

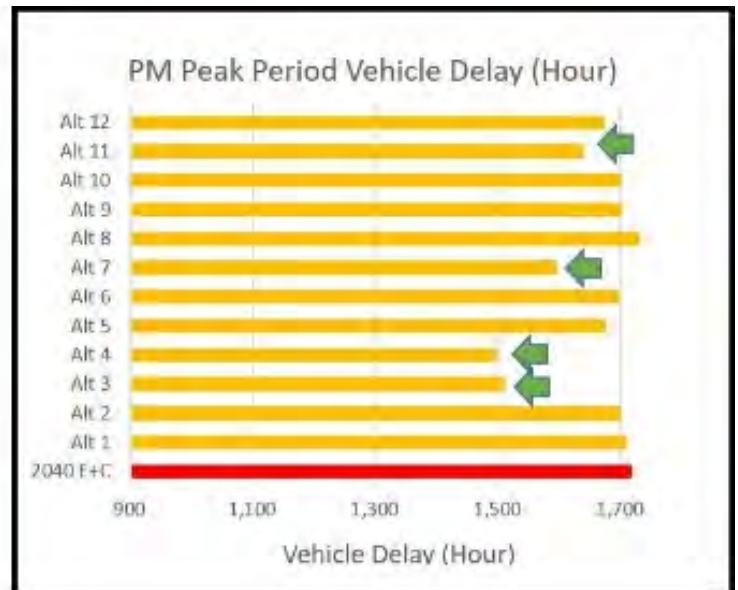
Source: The Corradino Group of Michigan, Inc.

Figure 4a: Basic Alternatives Test Results  
PM Peak Period Over-capacity Vehicle Miles of Travel  
(Volume/Capacity ≥ 1.0)



Source: The Corradino Group of Michigan, Inc.

Figure 4b: Basic Alternatives Test Results  
PM Peak Period Vehicle Hours of Delay  
(Volume /Capacity ≥ 1.0)



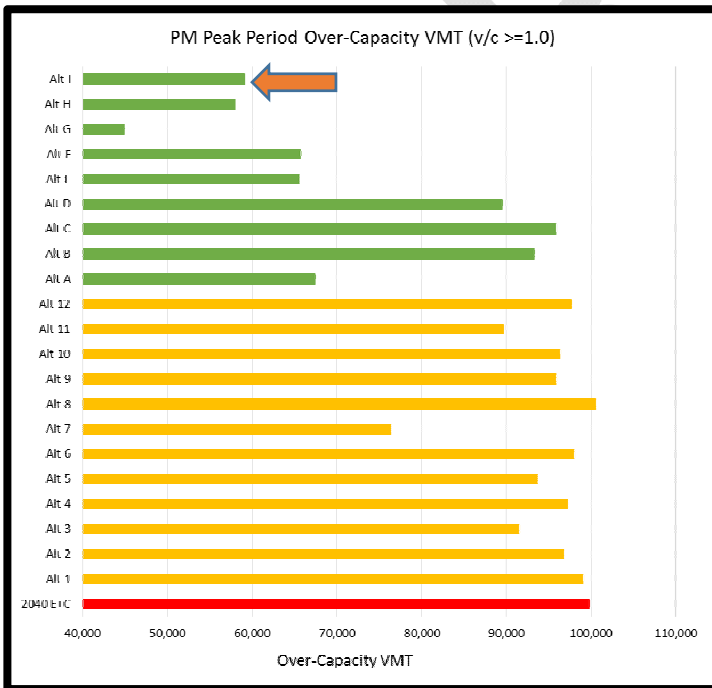
Source: The Corradino Group of Michigan, Inc.

Table 2. Combination Alternatives Tested to Ease Congestion

Alt A (Alt 3 + 7) (Widen Beck Road: Pontiac Trail to 8 Mile)
Alt B (Alt 5 + 6) (Widen Grand River: Novi to Haggerty + Widen Meadowbrook: 10 Mile to 12 Mile)
Alt C (Alt 6 + 9) (Widen Meadowbrook: 10 Mile to 12 Mile + Widen Haggerty: 12 Mile to Grand River)
Alt D (Alt 5 + 6 + 9) (Widen Grand River: Novi to Haggerty + Widen Meadowbrook + Widen Haggerty)
Alt E (Alt 3 + 7 + 10) (Widen Beck + Extend Taft over I-96)
Alt F (Alt 3 + 6 + 7) (Widen Beck + Widen Meadowbrook)
Alt G (All but Alt 2, 8) (All but Alpha Road Extension + Connect Meadowbrook to Twelve Oaks Mall)
Alt H (Alt 3 + 6 + 7 + 11) (Widen Beck + Widen Meadowbrook + Widen 10 Mile)
Alt I (Alt 3 + 7 + 11) (Widen Beck + Widen 10 Mile)

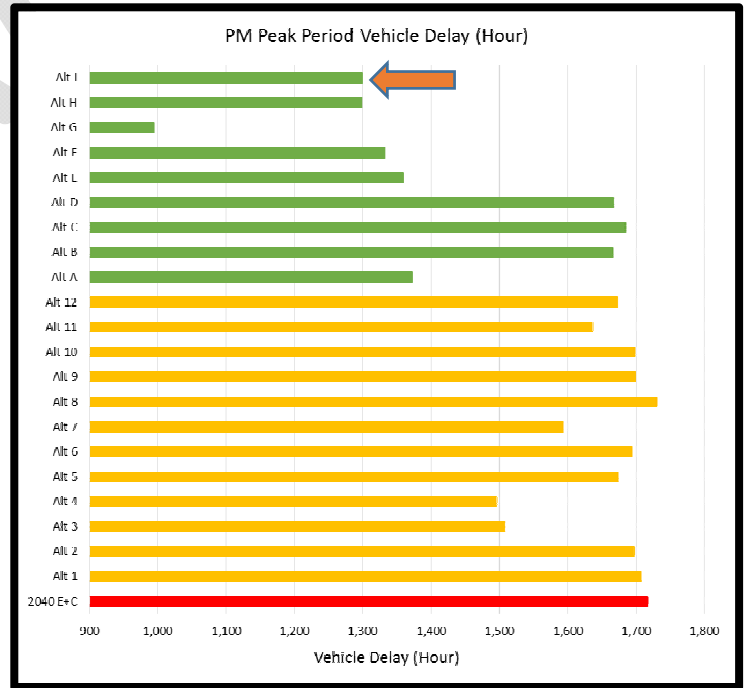
Source: The Corradino Group of Michigan, Inc.

Figure 5a: Combination Alternatives Test Results  
PM Peak Period Over-capacity Vehicle Miles of Travel  
(Volume/Capacity ≥ 1.0)



Source: The Corradino Group of Michigan, Inc.

Figure 5b: Combination Alternatives Test Results  
PM Peak Period Vehicle Hours of Delay  
(Volume/Capacity ≥ 1.0)



Source: The Corradino Group of Michigan, Inc.

## 2.3 Non-Motorized

With the priority established for improving Beck and 10 Mile Roads, the non-motorized system was examined. It incorporates the city's process for identifying and prioritizing its potential non-motorized projects. That process allocates points to proposed sidewalk and pathway segments to prioritize them. Sidewalks are six feet wide, and pathways, eight feet. The screening includes the following factors:

1. Number of accidents within a segment;
2. Road speeds and volumes;
3. Access provided to schools – number and proximity;
4. Access provided to parks;
5. Access provided to hotels;
6. Access provided to shopping;
7. Access provided to places of worship;
8. Connection to system;
9. Population served;
10. Proportion of segment being completed;
11. Expressed public interest; and,
12. Support of Master Plan.

The top 20 segments that emerge from the screening using these factors are then screened again using the following criteria:

1. Ease of construction;
2. Right-of-way availability;
3. Availability of "outside" funding;

4. Relationship to sidewalk or pathway on opposite side of street;
5. Opportunity for private development to build segment; and,
6. Evidence of existing use (worn path).

Some projects/segments that perform well in the priority ranking, but are considered to be part of future development projects, are placed in a "deferred" category pending the associated development project proceeding.

Funding determines the pace of implementation. So, as each of the top 20 sidewalk/pathway segments are completed, new projects advance to the top 20 for assignment of implementation dates. The top 20 projects, as listed in the *Annual Non-Motorized Prioritization 2015-16 Update*, are shown in **Table 4**.

Based on the roadway projects being considered as part of the Thoroughfare Master Plan, several top 20 listed sidewalk/pathway projects would be constructed as the corresponding roadway segment is improved. These are along: 1) Beck Road between 8 Mile Road and Grand River Avenue; and, 2) 10 Mile Road between Taft Road and Haggerty Road (**Table 3 and Figure 6**). Other non-motorized projects will continue to be implemented under the Thoroughfare Master Plan as part of Novi's Annual Non-Motorized Projects Prioritization Process.

**Table 3. 2015-16 Top 20 Priority Pathway/Sidewalk Segments Associated with Potential Road Widening Projects**

Road Segment		Non-motorized Project	Non-motorized Length	Capital Improvement Program Year
P7	Beck Road – 8 Mile to Grand River	Rank 8 – No. 39, west side	1,100'	2017–2018
P11	10 Mile – Taft to Haggerty	Rank 1 – No. 81b, south side	2,750'	2017–2018 & 2019–2020
		Rank 7 – No. 62, north side	400'	
		Rank 11 – No. 90, south side	2,400'	2018–2019

Source: *The Corradino Group of Michigan, Inc.*



Table 4. Table 4A from Annual Non-Motorized Prioritization 2015-16 update

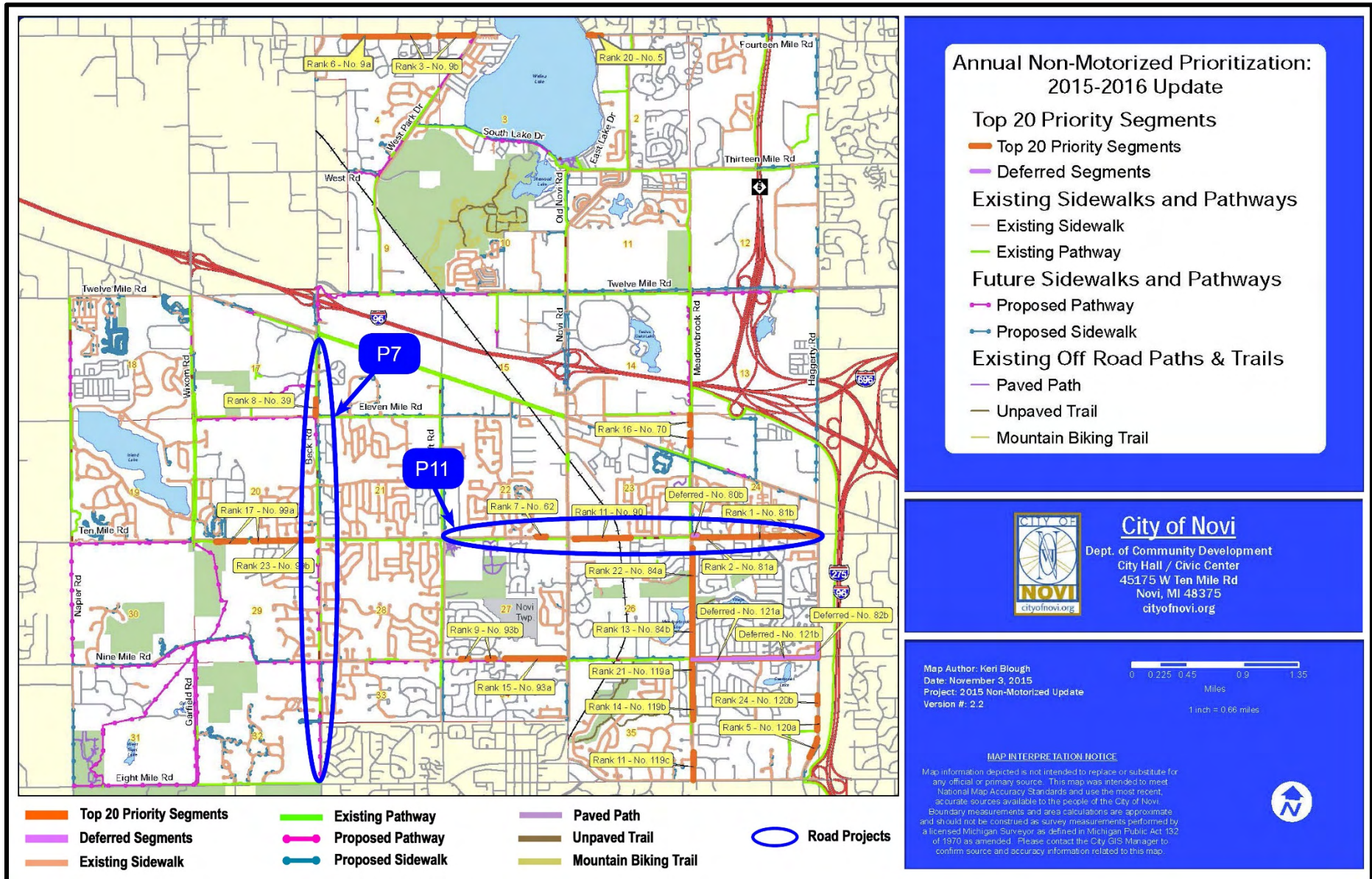
Annual Non-Motorized Prioritization: 2015-2016 Update										
Table 4A: 2015-16 Top 20 Priority Pathway and Sidewalk Segments excluding deferred segments City of Novi										
Overall Segment Rank	Segment Item #	Section #	Type	Side of Street	Location	From	To	# of Pieces in Segment	Segment Length (ft.) excluding Developer Planned & Completed Pieces	Notes
1	81B		P	south	Ten Mile	Willowbrook	Haggerty	1	2,750	17-18 & 19/20 CIP
2	81A	25	P	south	Ten Mile	Meadowbrook	Willowbrook	1	2,530	17-18 & 19/20 CIP
3	9B	4	S	south	Pontiac Trail	Wedgewood	West Park	2	2,560	16-17 & 17-18 CIP
5	120A	36	S	west	Haggerty	Eight Mile	N of Orchard Hill	2	1,390	
6	9A	4	S	south	Pontiac Trail	Beck	Wedgewood	1	2,440	16-17 & 17-18 CIP
7	62	22	S	north	Ten Mile	Eaton Center	Churchill Crossing	1	400	15-16 CIP
8	39	17	P	west	Beck	Eleven Mile	Providence	1	1,100	17-18 CIP
9	93B	27	S	north	Nine Mile	Plaisance	Taft	2	650	
11	90	26	P	south	Ten Mile	Novi Rd.	Chipmunk	1	2,400	18-19 CIP
11	119c	36	S	east	Meadowbrook	Eight Mile	N of Llewelyn	1	1,200	18-19 CIP
13	84B	25	S	east	Meadowbrook	Nine Mile	Chattman	1	2,050	19-20 CIP
14	119B	36	S	east	Meadowbrook	Singh Blvd	N of Llewelyn	1	1,300	18-19 CIP
15	93A	27	S	north	Nine Mile	Novi Rd.	Plaisance	1	2,650	
16	70	23	P	west	Meadowbrook	Eleven Mile	Gateway Village	3	900	
17	99A	29	P	south	Ten Mile	Wixom	400' E of Lynwood	1	2,900	17-18 CIP
20	5	2	S	south	Fourteen Mile	Beachwalk Apartments	East Lake	1	600	19-20 CIP
21	119A	36	S	east	Meadowbrook	Nine Mile	Singh Blvd	1	1,300	18-19 CIP
22	84A	25	S	east	Meadowbrook	Ten Mile	Chattman	1	2,350	19-20 CIP
23	99B	29	P	south	Ten Mile	400' E of Lynwood	Beck	1	1,100	17-18 CIP
24	120B	36	S	west	Haggerty	Orchard Hill	High Pointe	1	375	
									32,945	

**Legend** S= 6 ft. sidewalk P= 8 ft. pathway

- Segments with pathways or sidewalks on most of the opposite side of the street - note that these segments may be critical for system connectivity & must be analyzed separately for connectivity
- Segments with a higher ranking segment planned for the opposite side of the street - note that these segments may be critical for system connectivity & must be analyzed separately for connectivity
- Short Segments (400 ft. or less)     Scheduled Segment     CIP Budget Year

Source: Annual Non-Motorized Prioritization 2015-16 Update

Figure 6. Proposed Thoroughfare Road Improvement Projects Superimposed on 2015-16 Top Priority Pathway and Sidewalk Segments Map



Source: City of Novi, Michigan, and The Corradino Group of Michigan, Inc.

## 2.4 Transit

### 2.4.1 Regional Transit

To improve transit, a regional approach was first examined. This would involve linking to the SMART (Suburban Mobility Authority for Regional Transportation) bus system. SMART is the transit provider in Oakland County. Its Community Partnership Program (CPP) supports local transit service in 75 municipalities by leveraging federal funding and returning those funds to local communities to build their own transit program. SMART supports both fixed route and dial-a-ride (demand responsive) services. The latter is similar to Novi’s Older Adults program. And, while SMART routes do not extend into Novi, as the City has opted out of the millage that underwrites service (along with Northville, Rochester Hills and Wixom, among others), SMART does provide some funding of the Older Adults service.

SMART’s Master Plan indicates Novi is one of several communities that have “emerging” transit demand. It offers a number of ways to serve this demand:

- Premium service — like bus rapid transit;
- Local service – local service
- “Flex” services – a combination of fixed-routes and demand-responsive services; and
- Extension of existing routes.

To test a regional transit approach, a logical starting point is the latter option – extending two existing SMART bus routes that today serve Farmington Hills. The current westernmost limit of these routes is Haggerty Road (Figure 7). Routes 330 and 740 could be extended farther to the west into Novi. (Note that SMART does not run any buses on the freeways that could extend west along I-96. Service is only on arterial streets.) Route 330 follows Grand

Figure 7. SMART Bus Service Near Novi



Source: SMART

River Avenue east and south, terminating in Dearborn Heights. Route 740 serves 12 Mile Road to St. Clair Shores.

If Route 330 were extended, it could serve the many attractions along Grand River Avenue plus an MDOT park-and-ride lot (Figure 8). Annual costs to extend all of SMART’s runs along this route could be upwards of \$7 million (Table 5). If limited weekday service were provided (two inbound trips in the morning and two outbound in the evening), the cost could be near \$1 million.

If Route 740 were extended along 12 Mile Road, it could serve Twelve Oaks Mall and the park-and-ride lot at the interchange of I-96 with Beck Road for \$5 million annually. If limited runs were provided, the cost is estimated at about \$875,000.

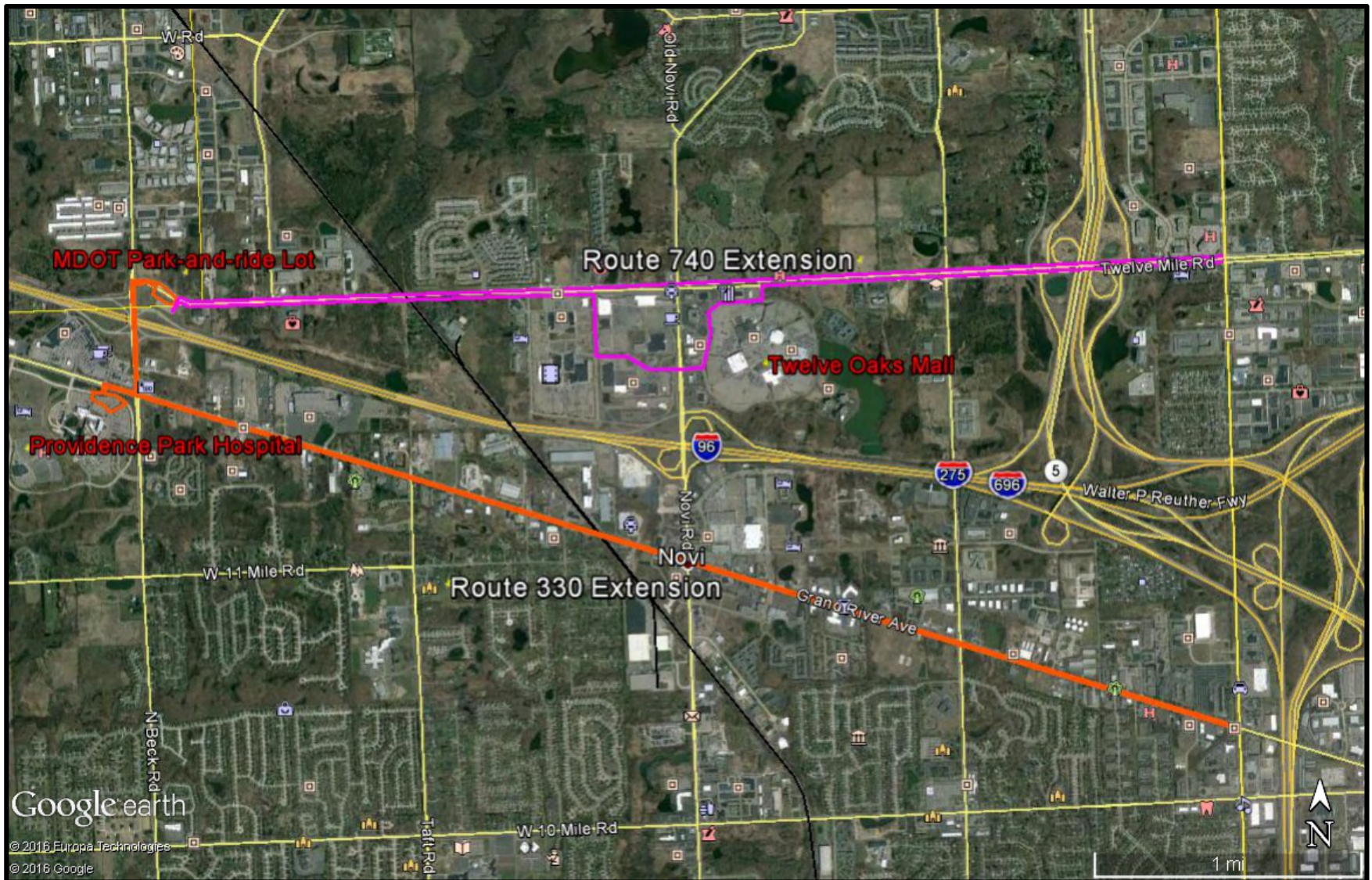
Table 5. Potential Costs to Extend SMART Routes 330 and 740 in Novi

	Extension in miles	Cost/mile*	Cost/run	Runs/wkday	Runs/Sat	Runs/Sun	Yearly runs	Annual Cost
<b>Full Service</b>								
Extension of Route 330	10.4	\$ 100	\$ 1,040	20	17	13	6760	\$ 7,030,400
Extension of Route 740	8.4	\$ 100	\$ 840	18	15	12	6084	\$ 5,110,560
<b>Limited Service</b>								
Extension of Route 330	10.4	\$ 100	\$ 1,040	4	0	0	1040	\$ 1,081,600
Extension of Route 740	8.4	\$ 100	\$ 840	4	0	0	1040	\$ 873,600

\*Operating Expense per Hour as reported to MDOT for 2014.

Source: The Corradino Group of Michigan, Inc.

Figure 8. Example Extensions of SMART Routes 330 and 740 to Serve MDOT Park-and-Ride Lot



Source: The Corradino Group of Michigan, Inc. and Google Earth

In reviewing these services with the TMP Steering Committee, they were considered too expensive. So the focus was directed to improving the Older Adults service. How that can be done will be discussed in the project's final report.

### 2.4.2 Local Transit

A suggestion received through public involvement is to develop an automated people mover/tram. The kinds of systems vary widely, from ski lifts to airport people movers to Disney-type monorails. For illustrative purposes, a 4,100-foot system was assumed (Figure 9), connecting the Twelve Oaks Mall to Town Center then on to Grand River Avenue.

In Portland, Oregon, an aerial tramway was built (2006 opening) over a horizontal distance of 3,300 feet, shorter than the illustration noted here for the Twelve Oaks Mall. A similar tram in Novi could cost on the order of \$100 million.

More moderate costs are associated with ski-lift type facilities. For systems built since 2000, cost adjusted to a 4,100-foot, ten-person enclosed gondolas system ranges from \$5 million to \$15 million.

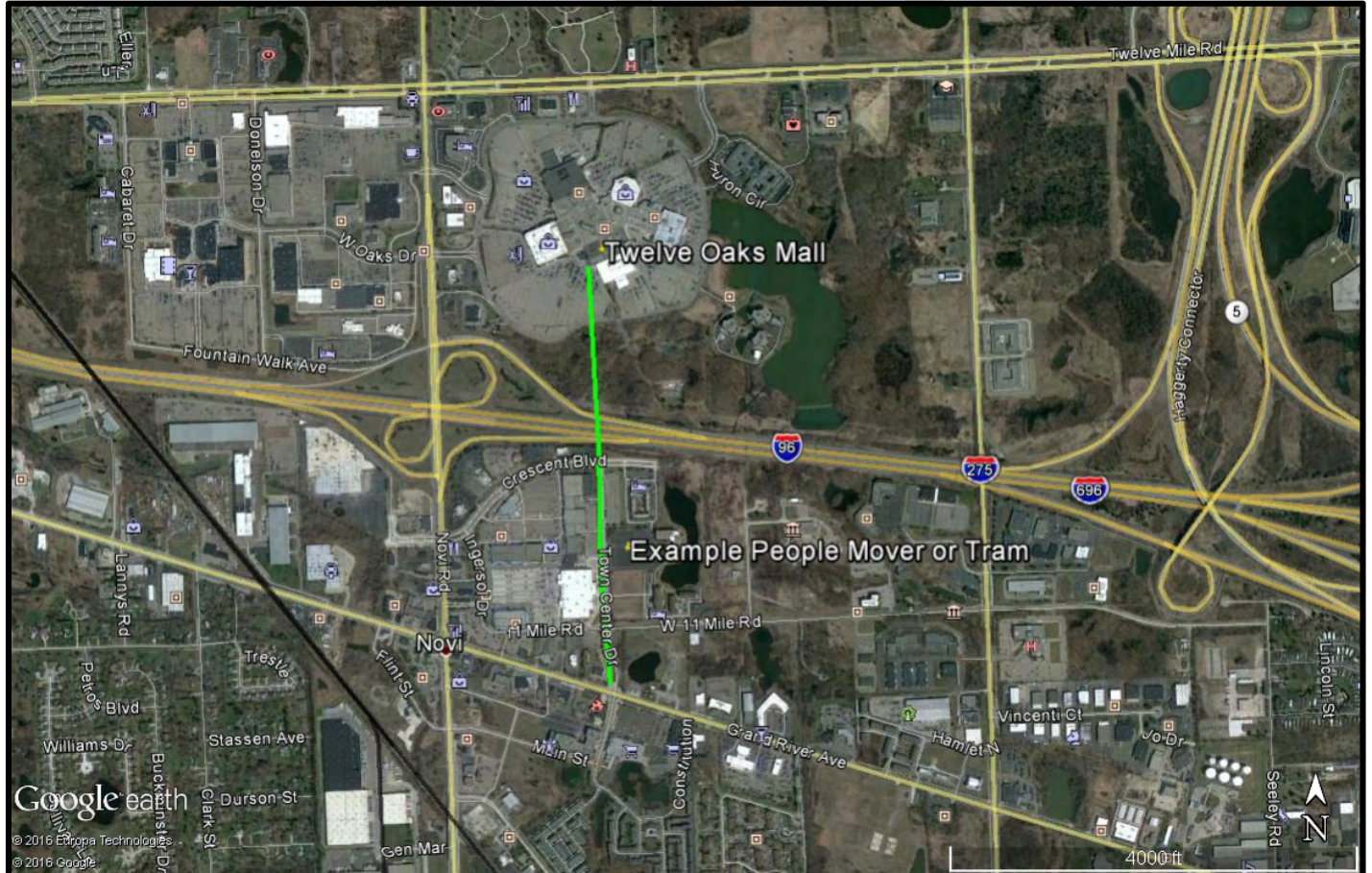


Circulator Bus

From these examples, it is clear a people mover/tram connection of less than one mile will be a multi-million dollar investment. Once again it was concluded this was not an affordable near-term solution. Instead, a circulator using vans was considered a practical option.

The transit circulator examined would connect the Town Center area, around Grand River Avenue, and the Twelve Oaks Mall, plus the retail area to the west across Novi Road. The route shown on Figure 10 is about four miles long. This means the circulator could make two round trips per hour.

Figure 9. Illustrative People Mover/Tram



Source: The Corradino Group of Michigan, Inc. and Google Earth

Figure 10. Example Transit Circulator



Source: The Corradino Group of Michigan, Inc. and Google Earth

An important assumption is that private entities, like Walmart, will allow a circulator on their property so that walking distances are reasonable. Vans with the capacity of ten seats, space for two wheelchairs and a wheelchair lift are envisioned for this service. Data from the Michigan Department of Transportation, which has funded local transit service for years, suggests a new vehicle of this type could cost \$75,000 and could be operated for approximately \$60 per hour.

A number of options are available for which costs estimates are shown on Table 6. The minimum proposed service would be for four hours daily; but, one half-hour is added for each option to cover travel to the start of the route at the beginning of the day and another half-hour at the end of the day. If service were provided eight hours each day, Monday through Saturday, plus the additional “dead head” hour, the annual cost would be almost \$190,000. To defray this costs, the businesses that would directly benefit should be asked to contribute to it.

Table 6. Proposed Novi Circulator between Twelve Oaks Mall Area and Town Center Area

Operating Hours Option	In Service Hours		
	5	7	10
Daily Cost @ \$60/hr	\$ 300	\$ 420	\$ 600
Weekly Cost M-F	\$ 1,500	\$ 2,100	\$ 3,000
Annual Cost M-F	\$ 78,000	\$ 109,200	\$ 156,000
<b>Weekend Day Service Hrs.</b>	<b>5</b>	<b>7</b>	<b>10</b>
<b>Weekend Day Cost</b>	<b>300</b>	<b>420</b>	<b>600</b>
<b>Annual Weekend Day Service</b>	<b>\$ 15,600</b>	<b>\$ 21,840</b>	<b>\$ 31,200</b>
<b>Annual Service 6 Days/Week</b>	<b>\$ 93,600</b>	<b>\$ 131,040</b>	<b>\$ 187,200</b>

Source: The Corradino Group of Michigan, Inc.

### 2.4.3 Older Adults Services Transportation

The City of Novi Older Adult Services Transportation (OAST) provides specialized transportation for Novi residents age 55+ and those under 55 with a limiting disability to doctor appointments, shopping, special events, classes, programs, etc. The program operates Monday through Friday from 8am–5pm and Saturday 9am–3pm; there are no Sunday operations. Reservations are required at least two days in advance and trips are scheduled based on availability. In FY 2014/2015, OAST provided 12,034 one-way rides (including special events) using seven vehicles. Passengers may travel anywhere within the City of Novi for \$3 per one-way ride and \$5 per one-way ride for trips outside the city but within 10 miles from the Novi Civic Center. There are complimentary rides to Meadowbrook Activity Center, Civic Center, Novi Public Library or to a City of Novi special event or program within the city limits.

OAST is supported by the City of Novi General Fund, fare box revenues, program donations, advertising, SMART (funding distributed by the population of the city) and City Council. For FY 2015-2016, the operating budget for the Transportation Program is \$158,770 of which City Council contributed \$25,000. The Older Adult Services is projecting \$30,000 in fare box revenue, \$2,400 in vehicle advertising and \$20,000 in program donations. Nonetheless, it will run a deficit (\$26,916) which is made up from the Novi Parks, Recreation & Cultural Services Fund.

Funding Source	Amount	% of Funding
Fare Box	\$30,000	19%
Novi General Fund	\$25,000	16%
Parks, Recreation	\$26,916	17%
SMART	\$54,454	34%
Donations	\$20,000	12%
Advertising	\$2,400	2%
<b>TOTAL</b>	<b>\$158,770</b>	<b>100%</b>

Source: City of Novi, Michigan

The consultant was interested in examining a “zone-based” fare system as a result of a suggestion made through public involvement. Specifically, it was suggested that OAST fares be adjusted because multiple trips on a single day at \$3 per ride could be an undue burden on a large segment of Novi senior citizens. For example, if an older adult were to travel to the doctor, then to visit a relative, then to shop and then to home, it would cost \$12 (\$3 per trip X 4 trips). To determine the frequency of multi-trip days, trip records for July, 2015, were examined and show:

- 119 different people used the system during July, 2015.
- Weekdays averaged 47 trips.
- Saturdays averaged seven trips.
- Seventy-nine percent of all trips were round trips.
- In nine instances during the month an individual made three trips in a single day. In one case four trips were made.
- Seven individuals made 20 or more trips during the month. One had 47 trips, two had 25, others fewer.
- Twenty-two individuals made 10–19 trips during the month.

So, about eight percent of the people (9+1/119) using OAST in July, 2015, had multi-trip days. The cost was \$9 for all but one of these riders, which is \$3 more than the usual cost. From the consultant’s perspective this is not considered an undue burden and, therefore, it does not recommend that the current system be adjusted, particularly when OAST is running a deficit close to \$27,000 this fiscal year after fare revenue is considered.

### 3. Funding Situation

#### 3.1 State and Federal Programs

After years of frustration at the federal and state levels, both governments enacted transportation funding legislation in 2015. The state program doesn't begin to provide monies until January 1, 2017; it then takes until fiscal year 2020 (Table 7) for the full effect (estimated to be \$1.234 billion per year) to be felt (Table 8). Those funds are to be distributed 696 ways: MDOT, 80 transit agencies, 83 counties, and 533 villages and cities.

At the federal level, the FAST (Fixing America's Surface Transportation) Act will provide five years (FY2016 through FY2020) of funding certainty. For Michigan, that represents \$1.02 billion in the first fiscal year and \$1.17 billion in FY2020 (Figure 11). This is about \$52 million (5.1%) of net new money in 2016 versus 2015 and, then, about \$20 to \$25 million (about 2.25%) of net new money each year after. When combined with state funding, cities in Michigan can expect \$66.4 million in FY2017, when additional Michigan funding begins to flow. That will grow to \$186 million in FY2020 (Figure 12). It must be kept in mind this funding will be divided 533 ways. Novi is the 27<sup>th</sup> largest city in Michigan with about 1 percent of the total city/village population.

It is also important to recognize that these funds are to be dedicated overwhelmingly to routine maintenance and preservation of existing roads (Figure 13). A relatively small amount will be available for projects that will increase capacity.

Table 7. Transportation Legislation

**Michigan Legislation**  
**Effective Jan. 1, 2017:**

- ↑ Gas tax rises 7.3 cents per gallon to 26.3 cents
- ↑ Diesel tax rises 11.3 cents per gallon to 26.3 cents
- ↑ 20% increase in Vehicle Registration Fees and additional registration taxes on electric/hybrids

**General Funds Transferred to Transportation**

- 2019: \$150 M (Oct. 1, 2018-Sept. 30, 2019)
- 2020: \$325 M (Oct. 1, 2019-Sept. 30, 2020)
- 2021: \$600 M (Oct. 1, 2020 & subsequent Oct. 1)

**Beginning in 2022, Fuel taxes indexed to inflation**

Source: NTH Consultants, Ltd. Webinar Slides

Table 8. Full Effect of Michigan's New Transportation Funding Program

**Michigan Legislation**

**THE SOLUTION TO IMPROVE MICHIGAN'S ROADS**  
**\$1.2 BILLION**  
 FOR MICHIGAN'S INFRASTRUCTURE

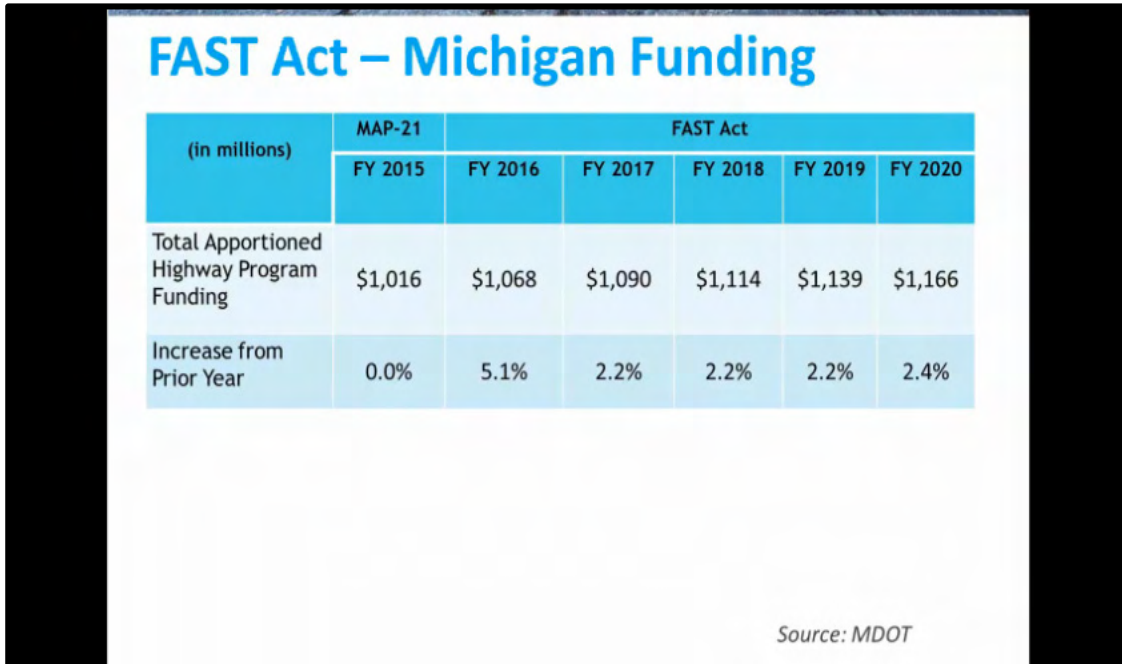
**•• BY THE NUMBERS ••**

- \$1.2 BILLION**  
The largest investment in roads in a half-century.
- 7.3 CENTS**  
The increase in the gasoline tax to help make our roads safer.
- \$20**  
The average registration fee increase per vehicle.
- 330**  
The number of transportation projects that will be accelerated as a result of this investment.
- 60%**  
The amount of funding designated for local and county roads.
- \$600 MILLION**  
Investment that is coming from existing resources with no budget cuts on education, local government, public safety, & other key priorities anticipated.

Source: NTH Consultants, Ltd. Webinar Slides

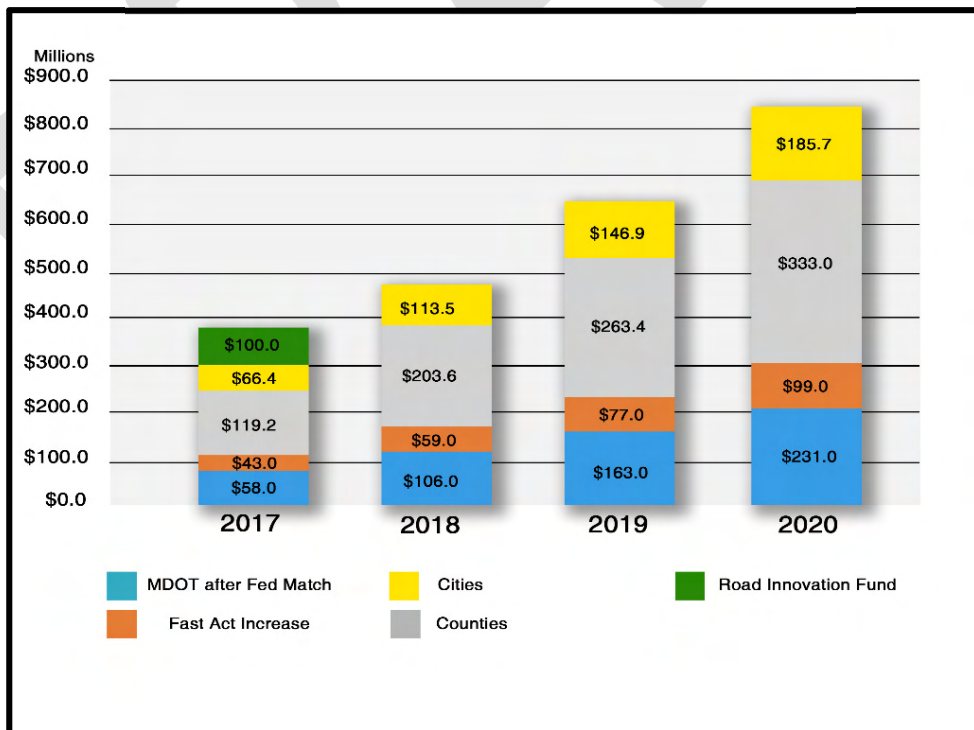


Figure 11. Federal Funding for Michigan



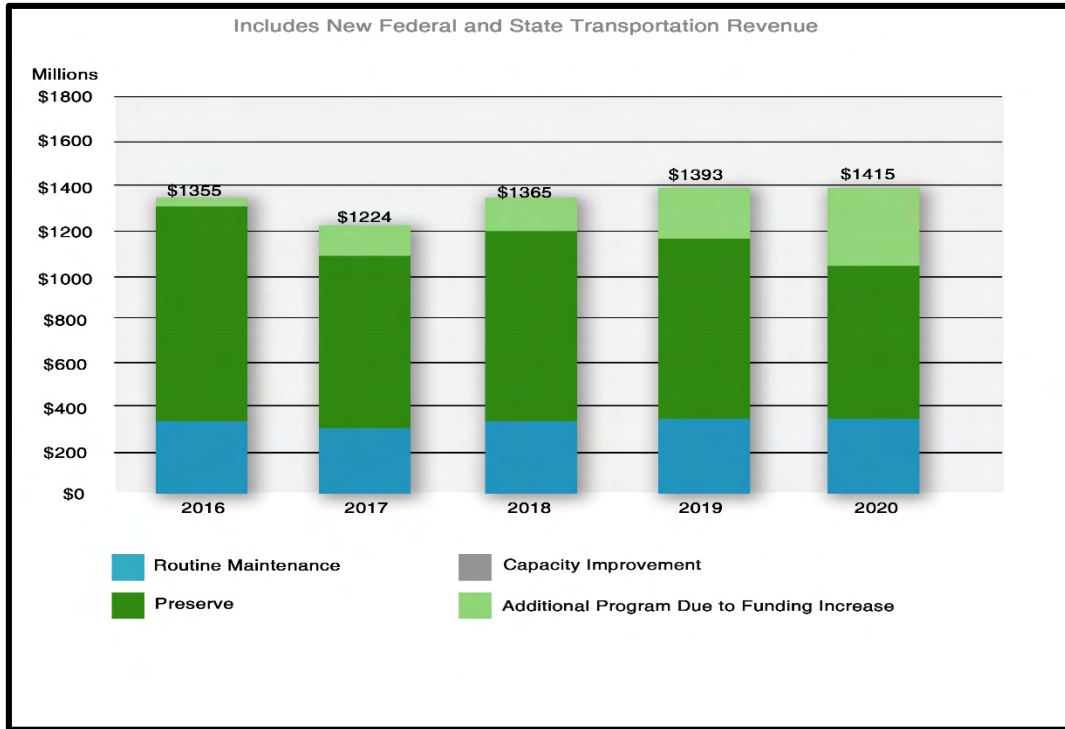
Source: NTH Consultants, Ltd. Webinar Slides

Figure 12. Increased Transportation Revenues



Source: NTH Consultants, Ltd. Webinar Slides

Figure 13. Highway Program Investment by Category  
FY 2016 to 2020



Source: NTH Consultants, Ltd. Webinar Slides

### 3.2 Novi Funding

Approximately \$30 million is projected to be made available by Novi for road-related improvements from, and including, FY2016 through FY2020. Another \$5+ million is expected to flow to Novi from outside sources, principally the Municipal and Major Street Funds through MDOT.

Novi's projected sidewalks/pathways program for the five fiscal years ending in FY2020, totals \$11.15 million, all but \$733,000 to come from the Municipal Street or Major Road

Funds. Phase II of the M5/I-275 Regional Trail Connection is the project for which \$733,000 is needed from local/Novi funds.

The Older Adults Services Transportation costs about \$160,000 per year of which \$25,000 comes from the Novi General Funds and another \$27,000 from the Novi Parks, Recreation & Cultural Services Department budget.

## 4. Findings

The City of Novi Thoroughfare Master Plan has examined a number of improvements by mode that are needed over the Plan's 25-year horizon. Working with a Steering Committee, a practical and affordable set of improvements has been selected for the road, transit, and non-motorized modes to be implemented in the first phase of the project.

- Roads – Widening Beck and 10 Mile Roads is likely to cost over \$30 million. Assuming these are done sequentially over ten years beginning in FY2017, they represent about 6 percent per year of the total federal and state funds available to Michigan cities and villages. Aggressive, but achievable.
- Based on the roadway projects being considered as part of the Thoroughfare Master Plan, several top 20 listed sidewalk/pathway projects would be constructed as the corresponding roadway segment is improved. These are along: 1) Beck Road between 8 Mile Road and Grand River Avenue; and,

2) 10 Mile Road between Taft Road and Haggerty Road (**Table 3 and Figure 6**). Other non-motorized projects will continue to be implemented under the Thoroughfare Master Plan as part of the City of Novi Annual Budget.

- The transit component of the TMP calls for a continuation of the Older Adults Services Transportation. A circulator could be tested on Saturday service over a 6-month period to connect the Town Center area, around Grand River Avenue, and the Twelve Oaks Mall, plus the retail area to the west across Novi Road as shown on **Figure 10**. Six months at 5 hours a day, would cost \$45,000. The OAST vehicles could be used with so few older-adult trips being made on Saturday.

Other "needed" projects will be included in later phases within the 25-year horizon of the TMP. Those will be subject to further review over the next five to ten years.