

Transportation Improvement Plan for the I-96/I-696/I-275 Corridor Plan in Novi and Wixom

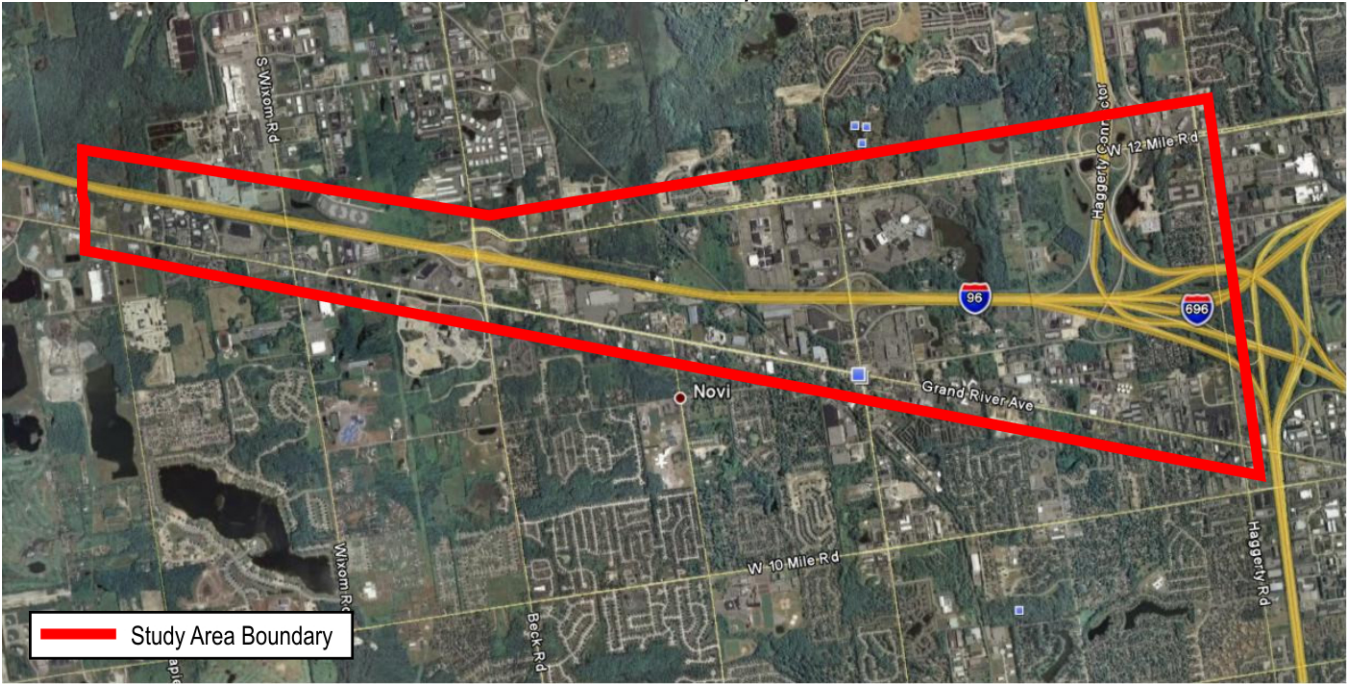
1. Understanding of Service

Background

The concept of an I-96 Corridor Study was developed from the desire of the cities of Novi and Wixom to improve traffic conditions along the surface street network in the area of the I-96/I-275 interchange and to plan for growth in the area. Given the interaction of Novi city streets with county thoroughfares and adjacent state trunkline routes and interchanges, the project was expanded to include a complete planning study of all state and local routes in the area with MDOT as the lead agency (Figure 1). The goal of the study is to develop a prioritized list of projects that improve safety and mobility in the study area and spur economic development for the entire region. As such, the study will meet the following objectives:

- Evaluate all interchanges, freeways, and corridors in the study area for potential operational, capacity, safety, and connectivity improvements, in a comprehensive and coordinated future transportation plan;
- Evaluate access management opportunities along all corridors in the region;
- Evaluate community land use plans, including current and future developments, within the study area and identify opportunities for improved coordination with future roadway plans and implementation; and,
- Evaluate transit and non-motorized transportation options.

Figure 1
I-96/I-696/I-275 Study Area



Transportation Improvement Plan for the I-96/I-696/I-275 Corridor Plan in Novi and Wixom

The agencies partnered to guide this project with MDOT, as the lead, are the cities of Novi and Wixom, the Road Commission for Oakland County (RCOC), and the Southeast Michigan Council of Governments (SEMCOG). Private stakeholders include numerous business entities such as Rock Financial, the Taubman Companies, Providence Hospital, and International Transmission Company (ITC). Just as importantly, key stakeholders include residents and businesses concerned with the viability, sustainability and overall quality of life within this area of Southwest Oakland County.

The Novi community has experienced an estimated population growth of 13.4 percent since the 2000 Census. Wixom has seen a slightly lower, but still robust, growth during this time, at 7.9 percent (Figure 2). Both Novi and Wixom were at the top of the list for nonresidential development in 2005 and 2006 with more than two million and 1.4 million square feet completed in each city, respectively (Figure 3).

Figure 2
Oakland County Population Change, 2000-2006

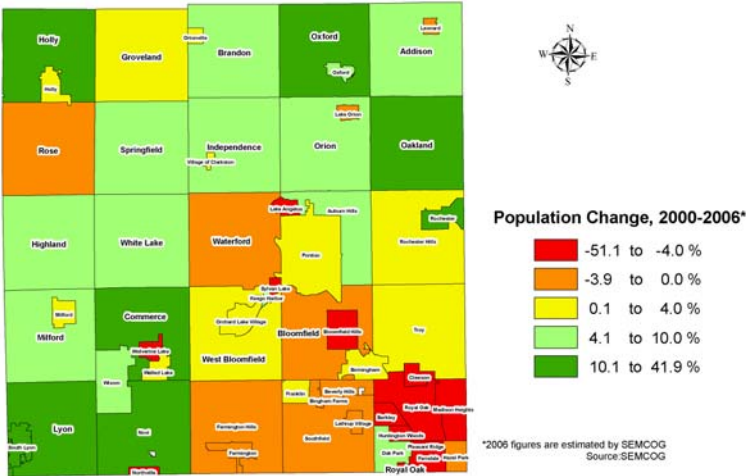
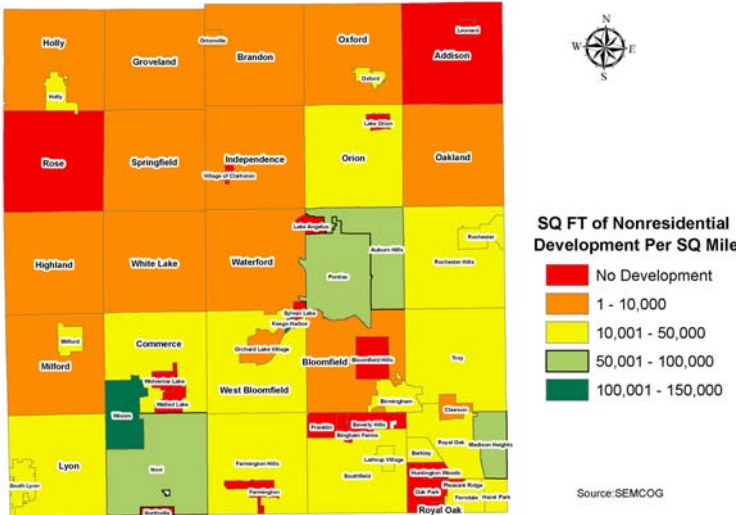


Figure 3
Non-residential Development 2005-2006
Square Feet of Development per Square Mile of Land Area



Transportation Improvement Plan for the I-96/I-696/I-275 Corridor Plan in Novi and Wixom

Recently completed developments include:

- Catholic Central High School
- Rock Financial Showplace (Figure 4)
- Main Street Novi Development (Grand River and Novi)
- Booktown Development (Grand River and Meadowbrook)

Projects on the horizon once the economy is repaired include:

- Redevelopment of the vacant Ford Wixom Engine Plant (Figure 5).
- Expansion of the AlphaTech development to Beck Road.
- Redevelopment of the Novi Expo Center.
- Office Research and Technology Area Between M-5 and Haggerty
- Full build-out of the Providence Hospital Campus (Figure 6).

Figure 4
Recently Completed Rock Financial Showplace



Figure 5
Potential Redevelopment – Ford Wixom Plant



Figure 6
Potential Development – Providence Hospital Campus



Likewise, potential transportation improvements on the horizon include:

- Grade separation of CSX Railroad at 12 Mile Road (Figure 7)
- Extension of 12 Mile Road west of Beck Road to connect with Alpha Drive
- Widening of Grand River Avenue west of 12 Mile Road (Figure 8)

Figure 7
Possible Grade Separation of CSX and 12 Mile Road



Figure 8
Possible Improvements on Grand River Avenue



Transportation Improvement Plan for the I-96/I-696/I-275 Corridor Plan in Novi and Wixom

- Extension of Crescent Boulevard west to Expo Center Drive to Grand River Avenue
- Intersection Improvements at Grand River and Wixom Road, Napier and Grand River, Wixom and 10 Mile Road (Figure 8)
- Widening of 12 Mile Road west of Twelve Mile Crossing at Fountain Walk
- Widening of Beck Road north of 12 Mile Road
- Novi Road "Link " completion from Ten Mile to Grand River with CSX grade separation
- Novi Road widening from two to five lanes, 8 Mile Road to 10 Mile Road
- Road rehabilitation on 9 Mile Road , Haggerty to Meadowbrook, Novi to Taft
- Road rehabilitation on Meadowbrook Road, 8 Mile to 9 Mile
- Road Rehabilitation on Novi Road, 12 Mile to Grand River
- Road Rehabilitation on Grand River, Novi to Haggerty Road
- Novi Road Boulevard, Grand River to 12 Mile Road
- Widen Beck from three to five lanes from West Road to Pontiac Trail, including CSX grade separation

The process of evaluating the performance of these improvements using established criteria consistent with the agreed-upon goals and objectives will lead to developing an integrated land use/transportation plan. The Corradino Team will meet this requirement by building trust and credibility using a transparent process to ensure all voices are heard. In doing so, The Corradino Team will:

- Bring all the stakeholders together to develop a future transportation plan that takes complex and interrelated issues and translates them into common sense terms;
- Build credibility by being able to listen and translate the citizens' thoughts into an implementable and realistic plan; and,
- Articulate a message that is clear and concise using high-impacts graphics.

Task 1 – Initiate Project

Task Duration: From Notice to Proceed to Week 4/Month 1

The project will begin with a Project Team kickoff meeting in its first week. A detailed study schedule will be provided in advance of the meeting. The kickoff meeting agenda, prepared through collaboration of the project managers of MDOT and the consultant, will provide for discussion of the following items: schedule; data collection; goals and objectives; public listening session date/place; past publications of Project Team members; and, other items on which the two PMs decide.

The deliverables of this task are:

- **Project Team Kickoff Meeting**
- **Public Listening Session**
- **Progress Memo A on Results of Kickoff Meeting**
- **Progress Memo B on Results of Public Listening Session**

Transportation Improvement Plan for the I-96/I-696/I-275 Corridor Plan in Novi and Wixom

Task 2 – Collect Data

Task Duration: From Week 2/Month 1 to Week 4/Month 2

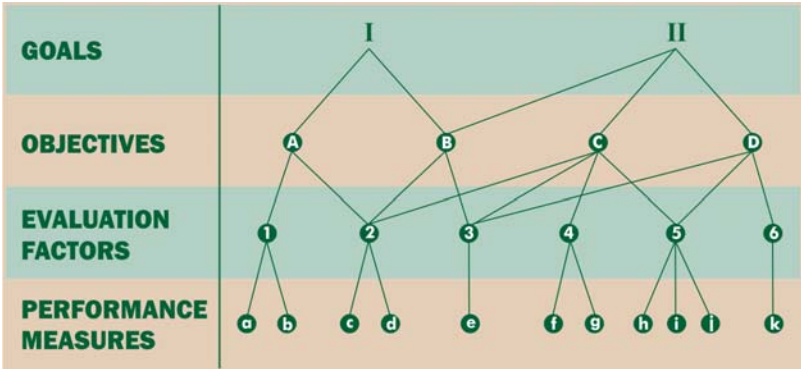
The Project Team will provide the consultant with pertinent land use, community planning, transportation, and funding data. This includes new or proposed developments, committed projects, capital spending, roadway functional classifications, crash data, traffic counts, and established truck routes. Travel time studies on the major arterials will be conducted by the consultant to pinpoint operational concerns and deficiencies for the base year. A floating-car technique with a GPS unit and laptop computer will be used. Additional data collection needs deemed necessary through consultation of The Corradino Team and the Project Team will be reviewed early in the process and a decision made on how information will be collected. Manual traffic counts at a dozen or more locations are contemplated.

Meetings/interviews will be conducted with road agencies, municipalities, other transportation service providers, and private sector stakeholders. The objective is to determine existing and proposed conditions within the study area by “drilling down” on plans, issues, and potential land use developments and infrastructure improvements.

It is important to note that The Greenway Collaborative (TGC) has recently completed updating the non-motorized facility GIS databases used to create SEMCOG’s and MDOT’s bicycle maps. TGC was involved in the Community Foundation for Southeast Michigan’s GreenWays Initiative Regional Trail Planning workshops in 2006. This project involved stakeholders and the public to document existing community trail plans and conceptual greenway routes. TGC will supplement this information by collecting the latest non-motorized GIS inventory from the Oakland County Planning and Development Department, as well as information on all non-motorized plans and projects from the communities of Novi, Wixom. At least one meeting will be held with the Metro Region Non-motorized Task Force.

Two meetings will be held with SEMCOG to obtain the TransCAD model and all applicable data sets, scripts and inputs necessary to run the Transportation Demand Model (TDM) for this project. The Corradino Team has used the SEMCOG Transportation Demand Model on several regional planning and corridor analyses. So, it is very familiar with the 2030 forecasts which show a major downturn in population and employment in the next decade and then a rebound with only small growth by 2030 over 2005. Corradino has already examined the effects of these forecasts on traffic in Oakland County as part of its Rochester Hills Major Thoroughfare Plan.

The Corradino Team will assist in establishing project-specific goals and objectives. The relation between them and evaluation criteria plus performance measures will be documented in a Technical Memo establishing the evaluation methodology.



Transportation Improvement Plan for the I-96/I-696/I-275 Corridor Plan in Novi and Wixom

Goals could cover topics such as accessibility, mobility, safety, protection of the environment, investment, and community inclusion.

Objectives could address reducing congestion, improving non-motorized access, increasing auto occupancy, reducing crashes, financial creativity, and cooperation among communities/agencies.

A sample list of evaluation factors and performance measures is shown below.

Evaluation Factor	Performance Measure
■ Better Connect Links in the Transit and Road Networks	■ Change in travel time from baseline for up to 30 origin-destination pairs (selected in cooperation with City).
■ Maximize Safe Travel	■ Change in crashes compared to baseline system in vehicle miles of travel on 20 roadway segments (selected in cooperation with City).
■ Minimize Purchase of Private Property to Build Transportation Facilities	■ Number of residential and business properties potentially taken.
■ Minimize Neighborhood Disruption	■ Projected traffic volumes/speeds on 20 sensitive (environment, aesthetics, social) roadway segments (selected in cooperation with City).
■ Maintain Good Air Quality	■ CO concentrations at 20 points in the network (selected in cooperation with City) and consistent with noise, community cohesion, and safety factors analysis.
■ Protect Parks/Wetlands	■ Number of acres of public and non-public park potentially lost.
■ Control Noise at Sensitive Locations (e.g., homes, schools, hospitals, etc.)	■ Expected "significant change" in noise due to traffic volume change at 20 points (selected in cooperation with City).

A definition of these evaluation factors, as used successfully, particularly with the public, in the Northeast Ann Arbor Transportation Study, is provided below.

Better Connect Links in Road Networks – To measure the degree to which different connections affect overall travel, the movements between a large number of pairs of connected zones (origins to destinations) will be examined.

Maximize Safe Travel – Each alternative transportation system will be related to the resultant vehicle miles of roadway travel. Vehicle miles of roadway travel can be related to crashes. Calculating the fatal and property damage incidents expected with each alternative will define this evaluation factor.

Minimize Purchase of Private Property to Build Transportation Facilities – Concepts for modifying the elements of the transportation system to develop the year 2030 transportation plan could involve property acquisition. The extent to which this could occur will be measured using GIS data.

Minimize Neighborhood Displacements – The transportation network of the future will have traffic volumes on roadway links that are likely to be different from those of today. To measure the effects of various transportation system alternatives on/near neighborhood areas, the forecast volumes and speeds on a number of roadway segments would be analyzed.

Maintain Good Air Quality – To assess the relative performance of alternative transportation elements tested to develop the year 2030 Transportation Improvement Plan, concentrations of

Transportation Improvement Plan for the I-96/I-696/I-275 Corridor Plan in Novi and Wixom

carbon monoxide (a gas that can cause health impacts) will be determined at a list of locations along the roadway system where people congregate.

Protect Parks/Wetlands – This issue is very much like that of private property acquisition. The acres of potential parkland/wetlands possibly needed to develop various transportation elements will be determined.

Control Noise at Sensitive Locations – Homes, schools, and hospitals are among land uses considered sensitive to noise. The expected change in noise at sensitive locations will be measured. These are only examples. But, they provide a basis to form this study's evaluation methodology.

The products of this task are:

- Tech Memo #1 on Transportation Issues/Concerns
- Tech Memo #2 on Goals/Objectives
- Tech Memo #3 on Evaluation Methodology
- Project Team Meeting #2
- Notes of PT Meeting #2

Task 3 – Evaluate Existing Conditions

Task Duration: From Week 3/Month 1 to Week 4/Month 3

The existing SEMCOG 2008 model plus other microsimulation tools will be used to identify link deficiencies (TDM model of ADT and congestion) and intersection deficiencies (microsimulation of evening peak hour traffic). Existing operational and safety deficiencies will be reviewed in the field by the consultant's engineers. Data will be collected over three weeks at a dozen locations, or more if needed.

Existing (base year) deficiencies will be generated using both a qualitative and quantitative analysis of the data. From a qualitative perspective, comments obtained at the Project Team kickoff meeting, municipal stakeholder meetings/interviews, private stakeholder meetings/interviews, transportation service provider meetings, and the public listening session, will be compiled into the initial list of transportation problems and opportunities. On a quantitative basis, the SEMCOG TransCAD TDM will be used to window in on Oakland County to identify capacity deficiencies for each state trunkline, ramp terminal, county arterial, and city collector street in the study area. A SYNCHRO model of the base year scenario will be developed to further examine evening peak hour performance at critical intersections to identify deficiencies. VISSIM will be used to analyze the freeways. From these qualitative and quantitative assessments, a comprehensive list of corridors, intersections and critical movements that are capacity deficient will be generated for review by the Project Team. Crash data for three years will also be analyzed to identify patterns and potential countermeasures.

To determine travel demand for the non-motorized and transit components of the transportation system, the proximity of complementary land uses, population density, the presence of key destinations and the location of transit stops will be evaluated. The planned and potential links to

Transportation Improvement Plan for the I-96/I-696/I-275 Corridor Plan in Novi and Wixom

and between the existing trail systems surrounding and within the study area, including the Huron Valley Trail System, the I-275 Bikeway, the Hines Park Bikeway and Lakes Community Trail, will be identified. From these datasets a composite map will be developed to illustrate the relative demand for the bikeway/trail and transit components of the transportation system.

To evaluate the existing pedestrian facilities, the sidewalk system will be “graded” based on the completeness of the network and the degree of separation from the roadway. Twenty signalized intersections in the project area will also be graded based on the crosswalk distances, traffic conditions and other factors. Road segments will be graded on a pedestrian’s ability to cross the road between signalized intersections. These evaluations will be based on the principles of quality of service that will be incorporated into the 2010 Highway Capacity Manual. Additionally, the potential to introduce pedestrian facilities into the Beck Road, Novi Road and 12 Mile Road interchanges will be examined with an eye towards improving the pedestrian facilities. A composite pedestrian travel analysis will compare the existing facilities against the travel demand to identify deficiencies.

To evaluate the existing off-road bicycle system, the sidepath suitability will be evaluated based on the number and type of driveway crossings per mile, cross-corridor destinations and ROW availability. To evaluate the existing on-road bicycle conditions, the roadway segments will be graded based on the traffic conditions and the presence of any bicycle facilities. A composite bicycle travel analysis will compare the existing bicycle facilities against the travel demand to identify deficiencies.

To evaluate the existing safety issues, bicycle and pedestrian crashes in the project area that have occurred between 1998 and 2007 will be plotted to obtain as large a sample size as possible. Crash types and locations will be compared against the existing facilities and travel demand. Field observations of bicycle and pedestrian hazards will be incorporated into an analysis.

The technical memorandum produced in this task will provide an overall review of the existing transportation system in the study area, including existing vehicle-based components, existing transit services, surface street interfaces, and bicycle facilities. The existing functional classification of each route will be mapped and compared against future transportation needs in order to determine if functional classification modifications need to be considered. Existing truck routes will be identified and mapped in order to examine truck circulation within the study area for potential improvements or rerouting. An inventory of existing (and planned) Intelligent Transportation System (ITS) assets and infrastructure will be reviewed, including communications equipment, CCTV cameras, traffic detectors, and Dynamic Message Signs.

The products of this task are:

- **Progress Memo C to SEMCOG on Bicycle Facility Inventory**
- **Progress Memo D to SEMCOG Reviewing Bicycle Facility Improvements/Priorities**
- **Tech Memo #4 on Existing Condition/Deficiencies**
- **Project Team Meeting #3**
- **Notes of PT Meeting #3**

Transportation Improvement Plan for the I-96/I-696/I-275 Corridor Plan in Novi and Wixom

Task 4 – Develop Travel Demand Forecasts

Task Duration: From Week 2/Month 2 to Week 2/Month 5

Existing and Committed (E+C) roadway projects will be checked in the future year TransCAD network provided by SEMCOG. Any additional network or land use changes that are planned to be implemented will be documented and added to the TDM information base. This may include refining Traffic Analysis Zones (TAZ) and centroid connections to the adjacent roadway system based on new development specifics or traffic loading. Proposed refinements will be presented to and agreed upon with SEMCOG and the Project Team before any future baseline deficiency analyses are conducted.

Once the network and land use refinements for the Future 2030 Base Condition are complete, the SEMCOG model will be run and deficiencies in the transportation network summarized. The performance measures and evaluation criteria will be reported for the baseline E +C system.

The Corradino Team will analyze bicycle, transit, and non-motorized demand outside of the SEMCOG demand model for connectivity among destinations/activity centers within the study area. It will create a composite bicycle and pedestrian analysis to identify any deficiencies with the current planned and programmed improvements. The composite analysis will address the physical barriers and impediments in developing improvement scenarios.

The products of this task are as follows:

- Tech Memo #5 on 2030 Demand/Deficiencies
- Project Team Meeting #4
- Notes of PT Meeting #4

Task 5 – Develop Improvement Scenarios

Task Duration: From Week 2/Month 4 to Week 4/Month 6

Improvements developed from Project Team and stakeholder involvement to this point in the study, combined with the existing and future deficiency analyses (needs), will shape four preliminary alternative improvement scenarios. These plans will be vetted by the Project Team and refined. Once approved, they will be tested.

Improvement scenarios could potentially include:

- Widening or extension of surface streets (Grand River Avenue, 12 Mile Road, etc.);
- Interchange improvements (I-96/I-275/I-696/M-5 bottleneck);
- Intersection improvements (additional turn lanes, improved signalization, modern roundabouts);
- Bicycle and pedestrian facilities along primary road segments, at signalized intersections, at mid-block crossings, and at freeway interchanges.

Transportation Improvement Plan for the I-96/I-696/I-275 Corridor Plan in Novi and Wixom

- Off-road trail linkages and local road bike routes will also be tested to complement the facilities along the primary road system.
- Improved or expanded transit service (SMART, etc.);
- ITS strategies (incident management routing, real-time traffic information, traffic detection), and integrated corridor management (ICM); and,
- ICM strategies, including development of special traffic signal timing plans to be implemented during freeway-closing incidents that force traffic from I-96 onto parallel streets like Grand River Avenue in order to better manage congestion and improve safety until the freeway can be opened again.

The improvement alternatives will also account for travel demand management techniques (TDM). For example, MDOT will be constructing a Park-N-Ride lot on the southeast corner of the 12 Mile Road/Beck Road intersection in 2009 in order to promote ridesharing. Other potential locations will be investigated. Another example is use of internal service drives among commercial developments as an access management strategy to reduce the number of arterial trips by creating more opportunity for internal trip-making and by concentrating movements at specific driveway locations. Other opportunities, such as land use modifications, telecommuting opportunities, and staggering work shifts at major employment centers, will be examined. Then, SEMCOG trip tables will be manually adjusted to remove those trips to be made by bicycle or eliminated by TDM measures. The adjusted trip table will be used to test the alternative roadway improvement plans.

The products of this task are as follows:

- Progress Memo E on Preliminary Alternatives
- Project Team Meeting #5
- Progress Memo F on Alternatives for Testing
- Project Team Meeting #6
- Notes of PT Meeting #5 and #6

Task 6 – Model Alternative Scenarios

Task Duration: From Week 2/Month 5 to Week 4/Month 7

Performance measures will be calculated for each alternative improvement scenario consistent with evaluation methodology established in Tech Memo #3. Comparisons will be made of each alternative to the E+C system and to each other. Based on early testing results, suggested modifications to the improvement scenarios will be coordinated with the Project Team. It is expected that two additional scenarios will be developed and tested.

Cost estimates for each distinct element of the various improvement scenarios will be generated, including right-of-way acquisition, construction costs, preliminary engineering, and construction engineering. For transit, costs will be developed for needed rolling stock, maintenance facilities, etc. The various transportation funding sources and requirements will be investigated to best determine where/how available resources can be allocated. The analysis will depend on an understanding the funding criteria identified in the SAFETEA-LU reauthorization that is anticipated

Transportation Improvement Plan for the I-96/I-696/I-275 Corridor Plan in Novi and Wixom

later in 2009. Current funding mechanisms like the CMAQ program may or may not be continued. New ones will likely be created.

The products of this task are as follows.

- Progress Memo G on Preliminary Results of Alternatives Testing
- Project Team Meeting #7
- Tech Memo #6 on Results of Alternatives Testing
- Project Team Meeting #8
- Notes of PT Meeting #7 and #8

Task 7 – Develop Preferred Transportation Alternative

Task Duration: From Week 1/Month 6 to Week 4/Month 8

Based on the results from Tasks 5 and 6, recommendations from The Corradino Team and the Project Team working together will develop a preliminary preferred improvement scenario. Final model runs will be completed on this alternative. Then, the consultant will develop a prioritization and implementation plan to include:

1. Individual Project Cost

Each project’s cost will be developed. Costs will include inflation to realistically establish the “real cost” of the project.

2. Year(s) of Implementation

Each component of the plan will be defined in terms of its priority: immediate, moderate or long-term. The staging of each project will be based on a cost-effectiveness analysis that includes ability to handle future traffic, its impacts on the environment, and its cost.

3. Funding Sources

The funding analysis will include a realistic definition of sources of funding and their timing. Sources include public (state, federal, and local) and private funds (Parkland Hospital, Rock Financial, etc.). Federal Stimulus funding could very well be part of this analysis as redistribution of these resources occurs and, perhaps, new “stimulus” efforts are launched. Likewise, the re-authorization of the federal transportation funding, scheduled to occur in late 2009, will allow federal dollars to be targeted to projects developed through this study.

4. Party(ies) Responsible for Implementation

A program will be developed, like the example shown in Table 1, to assign each project to a “responsible party.” “Candidates” include local, state, and federal agencies. Likewise, the private sector may play a role in some funding/implementation.

Table 1
Sample Responsibility Matrix

Plan Component	Plan Element	Responsibility	Capital Cost ^a	Priority
Roadways	U.S. 131/Intertown Road	Road Commission/MDOT	\$75,000 to \$150,000	2009 – 2015
	U.S. 131/Lears Road	Road Commission/MDOT	\$75,000 to \$150,000	2009 – 2015
	U.S. 31/Division Road	Road Commission/MDOT	\$500,000 to \$900,000	2009 – 2015
	U.S. 31/Pickerel Lake Road	Road Commission/MDOT	\$500,000 to 900,000	2009 – 2015
	U.S. 31/M-119	Road Commission/MDOT	\$500,000 to \$1 million	2009 – 2015
	U.S. 31/Cemetery/ Greenwood Road	Road Commission/MDOT/ City of Petoskey	\$75,000 to \$150,000	2009 – 2015
	Extend Atkins Road	City of Petoskey/North Central Michigan College/Road Commission	\$1.0 to \$1.5 million	2009 – 2015
	Access Management Study	City of Petoskey/Bear Creek/Road Commission/MDOT	\$50,000 to \$100,000	2009 – 2010
	Close Country Club Road	With Bear Creek Township conditions/Road Commission	NA	Tied to widening U.S. 31 at Division Road
	Right-of-way Preservation	Local units of government	To be determined	2016 – 2030
Major local road widening/construction	Local units of government and Odawa Indians	\$23.5 to \$35.0 million	2021 – 2040	
Policy	Manage growth	Local units of government and Odawa Indians	NA	2008+
	Secure legislation to allow assessment of Development Impact Fees	Local units of government and Odawa Indians	NA	2008+

^a Cost does not include right-of-way purchase.

^b Cost for the Resort Bluffs section is much higher than typical bike paths because of steep and unstable slopes.

Source: The Corradino Group of Michigan, Inc.

Transportation Improvement Plan for the I-96/I-696/I-275 Corridor Plan in Novi and Wixom

The products of this task are as follows.

- Tech Memo #7 on Preferred Roadway Improvements
- Tech Memo #8 on Preferred Non-motorized Improvements
- Project Team Meeting #9
- Notes of PT Meeting #9

Task 8 – Document Plan

Task Duration: From Week 1/Month 2 to Week 4/Month 11

A final report encompassing and summarizing all eight Technical Memos and seven Progress Memos will be prepared. It will document data collection, travel demand modeling, microsimulation modeling, and include back-up data in appendices for all analyses and recommendations.

An executive summary will be provided as a standalone document with a summary map. A poster-size graphic will provide all relevant plan components in a simple, easy-to-understand depiction of the preferred improvement scenario. An example of this type of graphic is provided here. It was prepared as part of the Northeast Ann Arbor Transportation Plan.

The products of this task are as follows.

- Draft and Final Reports
- Project Team Meeting #10
- Notes of PT Meeting #10



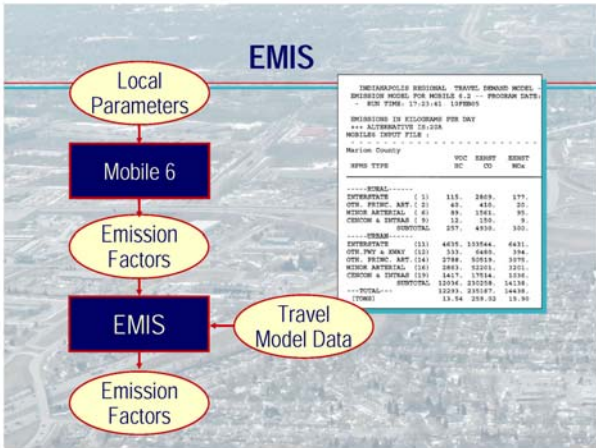
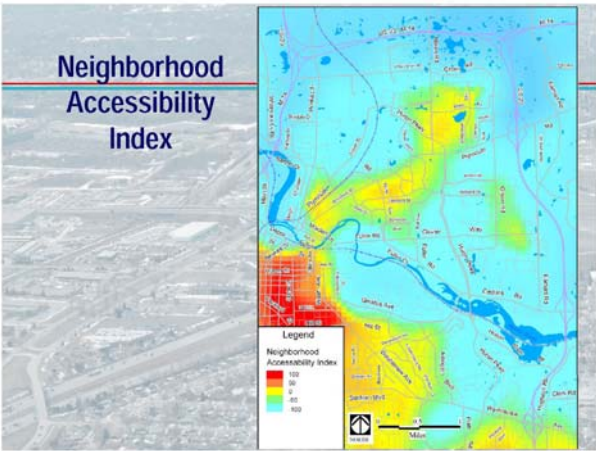
Innovations

The Corradino Team brings a number of innovative tools to the project in the modeling, microsimulation, non-motorized planning, land use planning, project prioritization, and environmental areas: These are:

- In-house application of SEMCOG Model
 - Optimizes efficiency and number of alternatives analyzed
- Simplified Land Allocation Model
 - Analyzes alternative growth scenarios to be tested

Transportation Improvement Plan for the I-96/I-696/I-275 Corridor Plan in Novi and Wixom

- SYNCHRO/Arterials
 - Provides microsimulation performance measures and visualization of analysis results
- VISSIM/Freeways
 - Provides microsimulation performance measures and visualization of analysis results
- Neighborhood Accessibility Index
 - Allows non-motorized connectivity to be analytically calculated and graphically depicted
- Project Prioritization
 - Relates demand capacity and cost to establish roadway priorities
- EMIS
 - A specialized computer attached to the travel demand model program to calculate air quality emissions

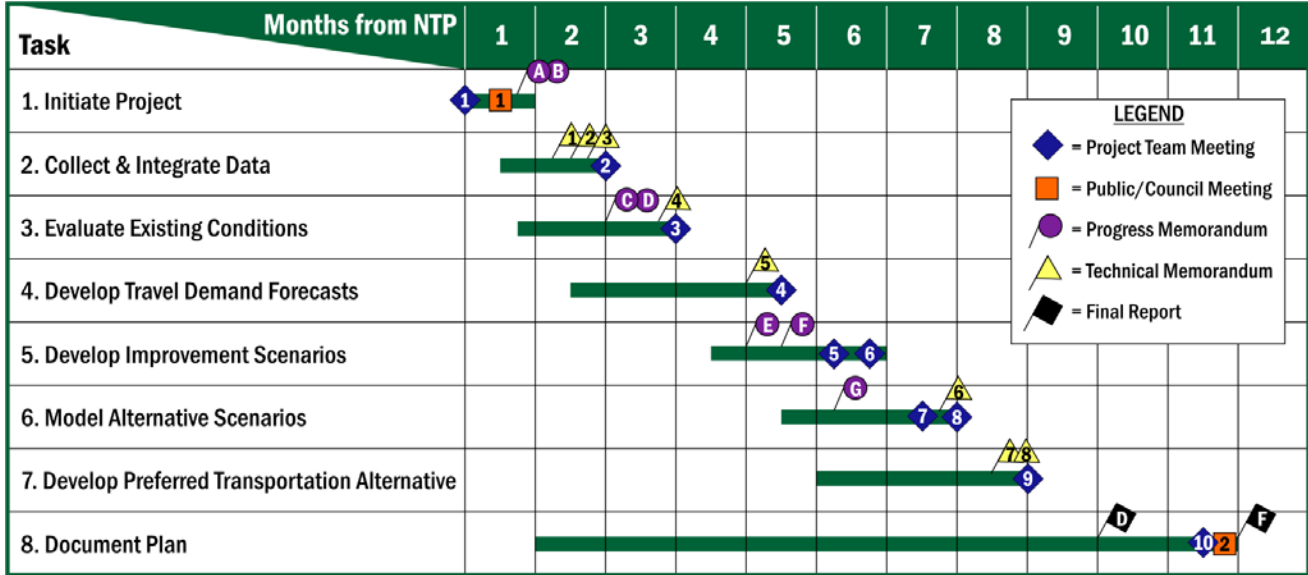


Schedule

The project will be completed within 11 months of issuance of the Notice to Proceed (Figure 9).

Figure 9
Schedule

I-96/I-696/I-275 Corridor Plan in Novi and Wixom



Transportation Improvement Plan for the I-96/I-696/I-275 Corridor Plan in Novi and Wixom

All deliverables will be provided to the Project Team at least one week before each meeting. These include: 1) Progress Memos; 2) Technical Memos; and, 3) the draft and final Final Report.

● Progress Memorandum			▲ Technical Memorandum			◆ Final Report		
Ltr.	Subject	Date	No.	Subject	Date	Ltr.	Subject	Date
A	Results of Project Team Kick off	Wk. 3/Mo. 1	1	Transportation Issues/Concerns	Wk. 1/Mo. 2	D	Draft Final Report	Wk. 4/Mo. 9
B	Results of Public Listening Session	Wk. 3/Mo. 1	2	Goals & Objectives	Wk. 2/Mo. 2	F	Final Report	Wk. 4/Mo. 11
C	To SEMCOG Identifying Bicycle Facility Inventory	Wk. 4/Mo. 2	3	Evaluation Methodology	Wk. 3/Mo. 2			
D	To SEMCOG Reviewing Bicycle Facility Improvements/Priorities	Wk. 4/Mo. 2	4	Existing Conditions/Deficiencies	Wk. 3/Mo. 3			
E	Preliminary Alternatives	Wk. 4 Mo. 5	5	2030 Demand/Deficiencies	Wk. 4/Mo. 4			
F	Alternatives for Testing	Wk. 2/Mo. 6	6	Results of Alternatives Evaluation Cost of Proposed Improvements	Wk. 3/Mo. 7			
G	Preliminary Results of Alternatives Testing	Wk. 2/Mo. 8	7	Preferred Roadway Improvements	Wk. 2/Mo. 8			
			8	Preferred Non-motorized Improvements	Wk. 2/Mo. 8			

There will be ten meetings of the Project Team; interviews with each of the Project Team members plus SMART; meetings on modeling with SEMCOG; at least one meeting with the Metro Region Non-motorized Task Force; and, meetings with the public and City Councils in Novi and Wixom. The subject and schedule of these meetings is summarized below.

Meetings ^a											
Project Team			SEMCOG			Agencies/Municipalities			Public/Councils		
No.	Subject	Date	No.	Subject	Date	No.	Subject	Date	No.	Subject	Date
1	Project Kickoff	Week 1/ Month 1	1	Model Structure/Input	Week 2/ Month 1	1	Existing Bicycle Travel Demand with Metro Region Non-motorized Task Force	Week 1/ Month 2	1	Project Kickoff/ Listening Session	Week 2/ Month 1
2	Goals and Objectives/ Evaluation Methodology	Week 4/ Month 2	2	Model Issues	Week 2/ Month 2	2	With Agencies in Novi and Wixom, SEMCOG, SMART, RCOC, MDOT	Week 2/ Month 2	2	Preferred Plan	Weeks 3-4/ Month 11
3	Existing Conditions/ Deficiencies	Week 4/ Month 3				3	With six private stakeholders	Week 2/ Month 2			
4	2030 Demand/ Deficiencies	Week 2/ Month 5									
5	Preliminary Alternatives	Week 1/ Month 6									
6	Alternatives for Testing	Week 3/ Month 6									
7	Preliminary Results of Alternatives Testing	Week 2/ Month 7									
8	Evaluation Results/ Cost of Improvements	Week 4/ Month 7									
9	Preferred Plan	Week 4/ Month 8									
10	Draft Final Report	Week 2/ Month 10									

^a Notes will be prepared of each meeting.

Transportation Improvement Plan for the I-96/I-696/I-275 Corridor Plan in Novi and Wixom

2. Organization Chart

The Corradino Group (TCG) will be the Prime Consultant, partnered with URS and The Greenway Collaborative (TGC). Corradino will be responsible for and direct the work, which is expected to be divided as follows: Corradino: 50 percent; URS: 35 percent; Greenway Collaborative: 15 percent.

Figure 10 illustrates the proposed organization for this project. It will be managed by Jim Hartman of The Corradino Group. He has successfully led a number of projects including, most recently, the Rochester Hills Master Thoroughfare Plan, an undertaking very similar to the I-96/I-696/I-275 Corridor Study. Mr. Hartman has also led such MDOT projects as access management studies for M-24/Lapeer Road in Oakland County, M-153/Ford Road in Canton Township, and U.S. 24/Telegraph Road in Monroe County. He was Corradino’s project manager on the Miller Road (Genesee County) Feasibility Study. He has played major roles in traffic/transportation analysis using microsimulation tools such as SYNCHRO and VISSIM for MDOT’s Detroit River International Crossing Project and the Detroit Intermodal Freight Terminal Study. He is a registered engineer in Michigan.

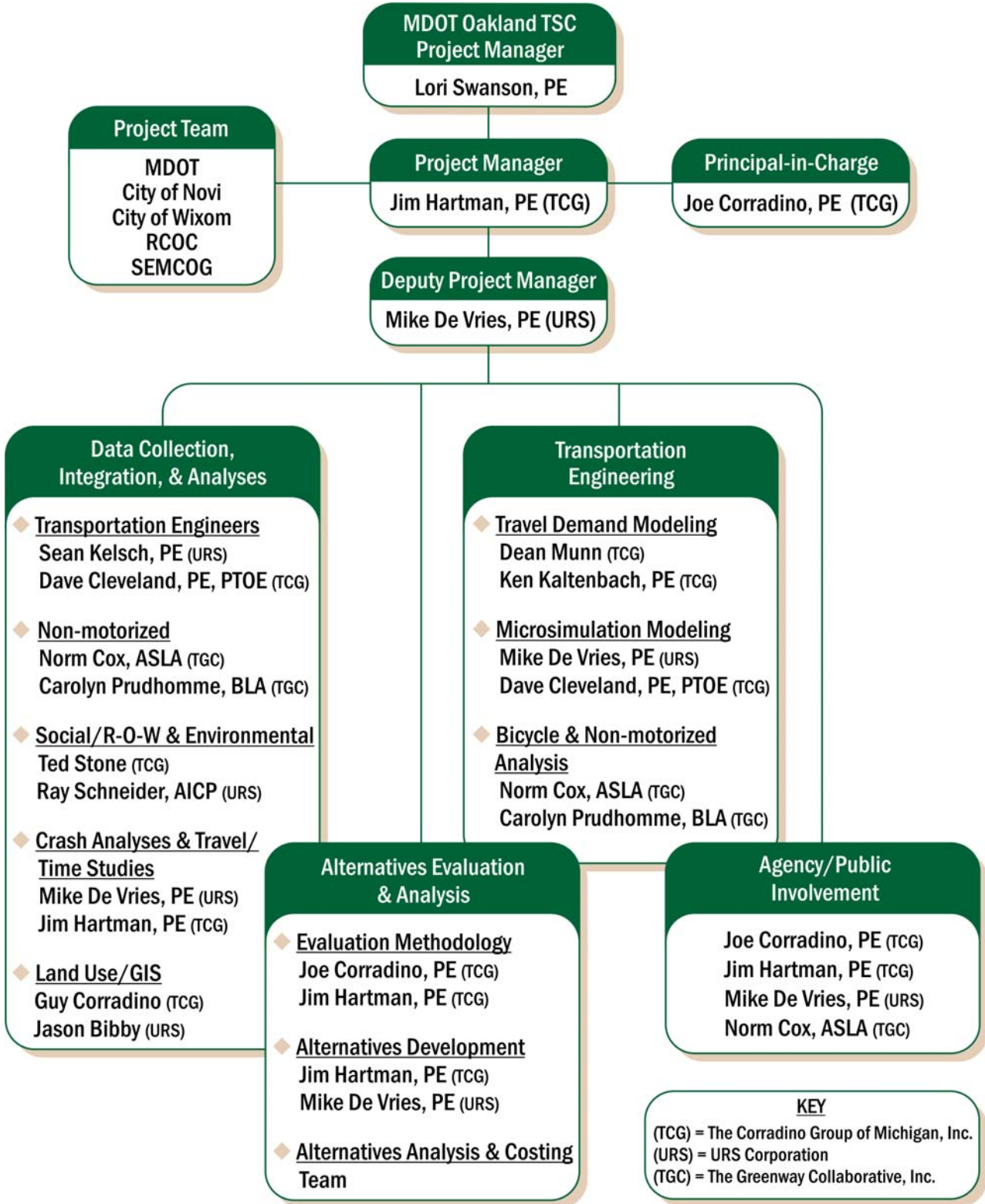
Mike DeVries, PE, will be the Deputy Project Manager. He will also play a key role in the alternatives development and evaluation tasks, and in the microsimulation area. He is a seasoned engineer with 15 years of experience. His experience in the study corridor includes serving as Lead Traffic Engineer for the design of the I-96/Beck Road and I-96/Wixom Road SPUs. His background on other MDOT projects includes: the I-75 Corridor Study in Genesee County; the M-59 Access Management Plan; the U.S. 31 Environmental Impact Statement (Ottawa and Muskegon counties); and, the I-94/U.S. 24 Interchange Access Justification Report. Mike DeVries is a registered PE in Michigan.

Other key members of the team are listed below. Full resumes are included in a later section of this document and not repeated here to accommodate the page limitation.

Support Personnel		
Corradino		
Personnel	Years of Experience	Role(s)
Joe C. Corradino, PE	43	Evaluation Methodology/Agency and Public Involvement
Ken Kaltenbach, PE	37	Travel Demand Modeling
Ted Stone	36	Social/Environmental Issues
Dean Munn	15	Travel Demand Modeling
Guy Corradino	16	Land Use, ArcView/ArcInfo/GIS
URS		
Personnel	Years of Experience	Role(s)
Sean Kelsch, PE	15	Transportation Engineering/R-O-W/Costing
Ray Schneider, AICP	21	Alternative Analysis
Jason Bibby	9	GIS
The Greenway Collaborative		
Personnel	Years of Experience	Role(s)
Norman Cox, ASLA	21	Bicycle/Non-motorized Planning
Carolyn Prudhomme, BLA	8	Bicycle/Non-motorized Planning

Transportation Improvement Plan for the I-96/I-696/I-275 Corridor Plan in Novi and Wixom

Figure 10
Organization Chart
I-96/I-696/I-275 Corridor Plan in Novi and Wixom



Transportation Improvement Plan for the I-96/I-696/I-275 Corridor Plan in Novi and Wixom

3. Qualifications of Team

The Corradino Group of Michigan, Inc. is pre-qualified by MDOT in Traffic Capacity Analysis and Geometric Studies. URS is also pre-qualified in this category plus Complex Traffic Signal Operations. Corradino and URS have been partners before and are now in Michigan (I-75 Engineering Report) and outside (Florida: I-95 Corridor Master Plan and I-95 Managed Lanes).

The experience of the Team is summarized below.

Corradino Team Job Experience by Project Area	
Traffic/Transportation Analysis	Geometrics
<ul style="list-style-type: none"> ■ I-75 HOV Analysis ■ I-95 (Florida) Managed Lanes Analysis ■ Rochester Hills Thoroughfare Plan ■ Northeast Ann Arbor Transportation Plan ■ Ambassador Bridge Gateway Project 	<ul style="list-style-type: none"> ■ Beck/Wixom Roads at I-96 – SPUIs ■ I-75 Engineering Report, Oakland County ■ U.S. 23/M-59 Interchange ■ I-94/Beach Daley Road to Pelham Road, Wayne County ■ I-96/36th Street Interchange
Environmental Assessment/EIS	Travel Demand/Microsimulation Modeling
<ul style="list-style-type: none"> ■ Detroit River International Crossing ■ I-75/Michigan ■ I-69/Indiana ■ I-65/Indiana ■ NEPA Document Review/Indiana 	<ul style="list-style-type: none"> ■ I-95 HOT (Florida) ■ I-75 VISSIM Analysis ■ Tri-County Modeling (Lansing, Mich.) ■ I-96/Beck and I-96 Wixom Microsimulation Analyses ■ Genesee County Model Update
Bicycle/Non-motorized Planning	ArcView/ArcInfo/GIS
<ul style="list-style-type: none"> ■ City of Ann Arbor Non-motorized Plan ■ St. Clair County Non-motorized Guidelines (an MDOT project) ■ Clinton River Trail Master Plan ■ St. Clair County Trails and Routes Action Plan ■ Michigan State University Bicycle Facilities Plan 	<ul style="list-style-type: none"> ■ Detroit River International Crossing ■ U.S. 31 EIS (Ottawa County, Mich.) ■ Ypsilanti Parks Master Plan ■ Detroit Water/Sewage Department ■ Detroit Intermodal Freight Terminal Project

4. Past Performance

Corradino’s related performance ratings by MDOT include the I-75 EIS and Engineering Report for MDOT at 97.5 percent; and, the Detroit Intermodal Freight Terminal Project at 96.4 percent. One of Corradino’s clients, Wendy Rampson of Ann Arbor, in response to the question: **Why would you hire Corradino again?**, said:

“...(because of their) sincere and transparent approach to involving a variety of points of view.... This approach, coupled with a commitment to creative problem solving, comes from the top, and...(continues) throughout the project.”

Corradino’s performance rating on the Detroit River International Crossing Study (DRIC) has not been completed. It is suggested Mohammed Alghurabi, MDOT’s Senior Project Manager on the DRIC, be contacted for an assessment of The Corradino Team.

5. Location

All firms are Michigan-based. All work on this project will be performed in Michigan.

6. Quality Assurance/Quality Control

The overall quality of a project is the responsibility of the Corradino Project Manager. The project’s products will meet the client’s needs, requirements and expectations; on time and within budget. Furthermore, the products will be error free.

Transportation Improvement Plan for the I-96/I-696/I-275 Corridor Plan in Novi and Wixom

Corradino’s quality assurance manual is a fluid document that addresses its long-standing review procedures. To assure that the system is effective, emphasis is placed on continuous monitoring, coordination, communication, review and checking.

Assigning the proper staff and the right individual to lead the staff (Jim Hartman) is the first step towards achieving error prevention. Furthermore, review and coordination procedures will be instituted to reduce errors, improve coordination, and to allow change or improvement before proceeding with any final product.

Corradino will use a well-defined process to ensure error prevention. It will start at the kickoff meeting to refine the scope and clarify the project issues. Quality review will be discussed at this meeting, and the process and persons to review products will be identified. Furthermore, regular coordination meetings will be conducted to ensure that all aspects of the data development, analysis and reporting efforts are coordinated.

Safety Program

Corradino and its partners are committed to protecting employees, clients and the general public on all projects. This philosophy is evidenced by the following:

- Senior management is responsible to support and monitor the safety, health and risk management process.
- The line organization is responsible and accountable to lead and implement the safety, health and risk management process.
- The entire team fosters a culture that aligns safety, health and risk management with the other business objectives of the team.
- The emphasis on safety, health and risk management to reduce incidents is the measure of success.

The Corradino Team will take all precautions to ensure that all employees on this assignment are properly trained in safe job site methods. All requirements of MDOT’s PPE guidelines will be followed through delivery of this service.

