



JUNE 1, 2018 2PM

Proposal for

Lower Town Mobility Study

City of Ann Arbor
Procurement Unit
301 E. Huron Street
Ann Arbor, MI 48104



June 1, 2018

City of Ann Arbor
Luke Liu, Traffic Engineer
301 E. Huron Street
Ann Arbor, MI 48104

RE: RFP Lower Town Mobility Study

Dear Mr. Liu

Overall mobility and safety remain top priorities for the City of Ann Arbor. As new developments arise, balancing the mobility needs of the users becomes more challenging. This is exactly the case in the Lower Town area of the City, which is attracting new developments and residents in an already developed and yet still growing urban area. This project is more than a technical quest to accommodate the new development. Successful execution of this project must simultaneously address the following:

- ▶ The mobility demands of all users.
- ▶ Traffic impacts and the disruptions that occur during construction and development.
- ▶ Concerns of area stakeholder, residents, pedestrians, bicyclists and motorists.

The OHM Advisors team has decades of experience in listening to the community, understanding issues raised, analyzing complex circumstances, and crafting solutions to achieve a consensus vision. Our team members were specifically chosen for this project because of their expertise to handle the anticipated complexities of this project. Ms. Lauren Hood will lead our public engagement activities. WSP will provide travel demand modeling and forecasting along with traffic engineering support. Traffic Data Collection, Inc. will use video data collection to accurately collect multi-modal data to complete the mobility study.

Our team represents a careful balance between technical considerations and effective public engagement. We are very experienced with travel demand modeling and forecasting, safety studies, and non-motorized planning. We also have a solid plan for effectively reaching out to the public, learning of their needs and concerns, then communicating the essentials of the project with the public and achieving buy-in. Balancing these two project components is critical for the success of this plan.

OHM staff is very familiar with Ann Arbor and the challenges you face. We have worked on numerous successful projects for the City in just the past few years, including the Nixon/Green/Dhu Varren Roundabout Design, Nixon Corridor Study and Seventh Street Speed Management Study. Our successes on those projects reinforce our excellent working relationships with City staff and ability to deliver.

We look forward to continuing to serve the City on this project.

Sincerely,
OHM Advisors



Steven Loveland, PE, PTOE
Project Manager

Infused into everything we do is the belief that putting people first creates a lasting impact on a community and its residents.

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A. PROFESSIONAL QUALIFICATIONS



We think differently.

OHM Advisors is a community advancement firm designing award-winning work across the **engineering, architecture, and planning spheres**. We believe that something incredible grows out of a team of experts with individual specialties – ideas with bigger impact. More energy. Greater synergy.

Firm Ownership

OHM Advisors is a privately held corporation, governed by a seven-member Board of Directors and has thirty-six employee shareholders.

Firm Growth

OHM Advisors was established in 1962 and has been growing steadily ever since. As a growing multidisciplinary organization, we provide a variety of services to our clients with a passion to be Advancing Communities for many years to come.

Our Clients

- Cities, Villages, Towns, Counties and Townships
- State and Federal Agencies
- County Road Agencies
- ODOT, MDOT, TDOT
- K-12, Colleges and Universities
- Drain and Water Resource Commissioners
- Utility Authorities
- Parks Authorities

Community is at the center of everything we do.

As a team of nearly 450 multidisciplinary professionals in three states, we’re wildly diverse and singularly passionate about Advancing Communities.

We’ve proudly had an impact on many communities over the past five-plus decades, but are especially honored that our four original clients are still with us today. They tell us it’s because we make their challenges our own and embed ourselves deeply in their organizations to deliver innovation. We like to think it’s because infused into everything we do is the belief that putting people first makes an impact on a community.

In House Capacity

- 23 Architectural Staff Members
- 25 CADD Technicians
- 93 Civil Engineers
- 72 Construction Inspectors/Managers
- 11 Mechanical / Electrical Engineers
- 7 GIS Specialist
- 21 Surveyors
- 23 Landscape Architects
- 11 Planners
- 7 Technicians/Analysts
- 48 Transportation Engineers
- 7 Structural Engineers
- 34 Water Resources Engineers/Sanitary Engineers
- 54 Administrative Professionals

Our Partners

OHM Advisors and its partners are all licensed to work in the State of Michigan.

OHM Advisors | 734.522.6711
34000 Plymouth Road, Livonia, MI 48150

WSP | 313.963.5760
500 Griswold Street, #2900, Detroit, MI 48226

Traffic Data Collection | 586.786.5407
7504 Sawgrass Drive, Washington, MI 48094

Lauren Hood | 313.610.6004
Detroit, MI



14 Locations
Throughout
Michigan, Ohio,
& Tennessee



Our services list is long, but our philosophy is simple:

Advancing Communities. It's the approach that **guides us in everything we do.**

Civil Engineering

Transportation & Traffic

- Bridge Design, Inspection, Scoping, Rating
- Highway/Interchange Design & Enhancements
- NEPA Planning, Governmental Reviews & Permitting
- Community-Based Streetscape, Complete Street Designs
- Safety Studies, Capacity Analysis, Data Collection
- Traffic Signal Design
- Roundabout Analysis & Design

Stormwater Management

- Stormwater, Drainage, Watershed Planning & Asset Management
- Hydrologic & Hydraulic Modeling
- Stream Restoration Analysis & Design
- Low Impact Development, LEED Site Design
- Collection & Conveyance Design
- Stormwater Utilities
- Permitting & Ordinance Writing

Wastewater Systems

- Facility Master Planning & Asset Management
- Hydrologic & Hydraulic Modeling
- I/I, SSES Analysis & Flow Metering
- Pump Station, Collection System Design & Rehabilitation
- Wastewater Treatment Plant Design
- SCADA Systems

Drinking Water Systems

- Facility Master Planning & Asset Management
- Hydraulic Network Modeling
- Source Water Protection
- Storage Facility, Booster Pump Design & Inspection
- Water Treatment Plant Design
- SCADA Systems

Municipal Engineering

Community Engineering

- Process/Plan Review
- Standards, Ordinance Development
- Stakeholder/Public Engagement
- Strategic Planning

Infrastructure Assessment & Planning

- Pavement Maintenance
- Sewer
- Capital Improvement

Design & Implementation

- Non-motorized Path/Sidewalk
- Utilities
- Roadways
- Parks/Recreation

Architecture

- Site & Facility Evaluation
- Facility Master Planning
- BIM, 3D Modeling & Renderings
- Space Planning & Programming
- Interior Design & Finishes
- Design (incl. LEED) & Documentation
- Construction Administration

Mechanical & Electrical Engineering

- Energy Audits
- HVAC System Design
- Lighting & Controls
- Plumbing System Design
- Fire Protection and Fire Alarm Systems
- Power Distribution
- LEED/Sustainability

Planning & Urban Design

- Community Planning & Visioning
- Park, Streetscape & Corridor Design
- Economic Development Strategies
- Transportation Planning
- Land Planning
- Zoning & Entitlements
- Codes & Standards

Surveying

- Topographic, Right-of-way, Boundary & Geodetic Control Surveys
- Road Design Surveys
- Bridge Surveys
- Hydraulic Surveys
- Construction Staking
- Global Positioning System (GPS) Surveys

Construction Engineering

- Construction Observation
- Fieldbook Administration
- Construction Documentation
- Contractor Payment Requests
- Field Engineering
- Contract Administration & Close-Out
- Preconstruction Meetings

Funding Procurement & Administration

Geospatial Decision Making/GIS

LAUREN HOOD, LLC



Who We Are

Lauren Hood has been providing community engagement services for over a decade. She has worked closely with community stakeholders to help residents, businesses and elected officials enhance the overall quality of life and develop economic opportunities in various neighborhoods throughout Detroit and the surrounding metropolitan area. She is effective at facilitating meetings and developing consensus on difficult topics. She currently serves on the City of Detroit Planning Commission and as an advisor to Detroit Sound Conservancy and Urban Consulate. She has previously served as a mayoral appointee of the Detroit Historic District Commission and board member for Preservation Detroit.

Our Services

- Community Development Activities
- Curriculum and Workshop Design
- Dialogue Facilitation
- Neighborhood Outreach
- Economic Development Planning

Project Participation

Lauren Hood, LLC will work with the project team to create meaningful and realistic desired outcomes. She will facilitate the public engagement process to achieve those goals, and summarize the results for the project record, using the City's Public Engagement Toolkit as a guide.

TRAFFIC DATA COLLECTION



Who We Are

Traffic Data Collection has over 26 years of traffic data collection experience and is one of the longest serving traffic data collection firms in Michigan. We utilize the most current technology combined with trained technicians to ensure every traffic study is executed with the highest quality. We specialize in video and manual turning movement counts and use the newest video systems developed by Miovision and OmniBird which gives us the ability to provide archived and verifiable video data to our clients.

It is our mission to provide our clients with unrivaled data quality, by providing the most accurate data collection and dependable support in pursuit of their project target goals and completion time-lines.

Our firm's credentials include a strong discipline in traffic engineering, with experience of conducting traffic studies for numerous traffic signal optimizations, corridor studies, access management and engineering projects.

Our Services

Our traffic data collection services operate advanced and dependable equipment to conduct traffic studies with over 200 pieces of equipment. Jamar HS Flex Traffic Recorders / Classification, TDC Ultra Traffic Data Collectors, Miovision VCU Scout Video Cameras, OmniBird Video Equipment, and Wavetronix.

TDC has thorough knowledge of the traffic data industry and utilizes the newest technology to provide the utmost

accurate results. We specialize in Video Turning Movement Counts providing ability to give our clients verifiable data by archived photo logging. Because of our diversity within the industry we understand that every study is different and may require special tasks. For this reason, we have developed our services to pay attention to the needs and details of our clients. We strive to provide the most detailed and reliable data at the most effective cost.

Project Team Participation

TDC understands the need for accurate traffic data and this cannot be overstated. Since 1996, Traffic Data Collection has conducted over 2,200 traffic studies in which traffic data has been used as basis for very important conclusions and safety decisions. Our firm's credentials include a strong discipline in traffic engineering, with experience in conducting traffic studies for numerous traffic signal optimizations, corridor studies, access management and engineering projects.

TDC provides a wide range of data collection services supporting both public and private clients. TDC applies our experience to ensure successful completion of client projects in a timely manner and on budget. We have served and assisted multitude of clients throughout Michigan, Ohio and several other states. TDC provides digital file formats of client reports and videos. Files can be delivered in Universal Traffic Data Formats of Excel, Adobe, Jamar, ASCII Text, MDOT, Synchro, SEMCOG MS2 TCDS, Peek or any other specified format.

WSP



Who We Are

GLOBAL REACH. LOCAL EXPERTISE!

Our strength is our ability to adapt to our client culture and local markets. We provide our clients with the same personalized services as a specialist firm while at the same time leveraging our worldwide expertise to undertake the most complex projects and assist our clients to realize their ambitions. We achieve this by remaining agile, with a common-sense approach, and by keeping our structure and business model simple and lean. Our focus on growth also allows us to better serve our clients by expanding our offering, expertise and geographical reach.

WSP has been shaping communities nationwide for more than 132 years. WSP, one of the world's leading engineering and professional services consulting firms, offers a global scale of multidisciplinary services combined with local knowledge of the communities in which we live and work. We provide the specialized expertise and responsiveness of a local firm, but with the breadth and depth to successfully deliver complex projects whether large or small.

Our Services

Locally, WSP has talented staff that can provide value and innovation in the following areas while also having access to national and international experts throughout our company.

We offer unequalled leaders in:

- Transportation Planning
- Highway, Road & Bridge Design
- Traffic Engineering & Design
- Intelligent Transportation Systems
- Environmental & Planning Services
- Construction Administration
- Geotechnical Engineering
- Transit Services
- Utility Coordination
- Connected / Autonomous Vehicles

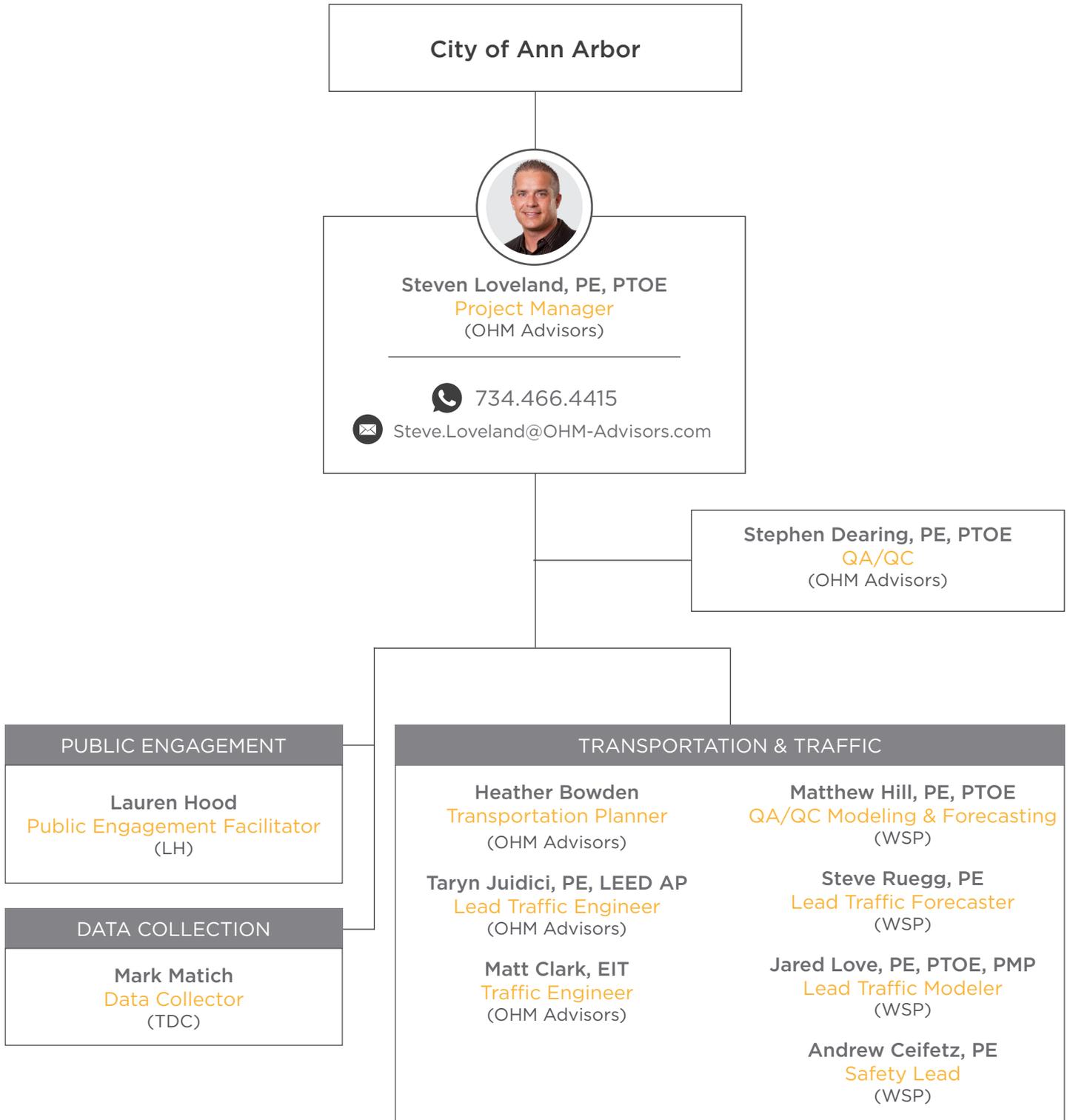
Project team Participation

WSP has experience working with and within the City of Ann Arbor. Current and recent experience includes the South State Street Corridor, I-94 Operational Analysis Study (MDOT). East/West Stadium Bridges and Broadway Bridges projects, Re-Imagine Washtenaw, the Ann Arbor Transportation Master Plan Update, and the most recent alternatives analysis of the Fuller Road/Maiden Lane/East Medical Center Drive intersection to mention a few.

PROFESSIONAL QUALIFICATIONS

Organizational Chart

OHM Advisors attests to the fact that the key personnel provided within this proposal have adequate availability to provide the services as outlined in this document. In addition to the key staff that will support the project directly, we have nearly 450 professionals firm-wide to provide as-needed support to our clients.



PROFESSIONAL QUALIFICATIONS

Key Personnel

Steven Loveland, PE,
PTOE

Project Manager

As a Project Manager in OHM Advisors' Transportation Group, Steven Loveland has experience managing many different types of transportation projects, with the majority of them focused on traffic operations, mobility and safety. He has served as the PM and Senior Engineer for large-scale roadway and operational studies, signal design projects, freeway and non-freeway signing, numerous signal optimization projects, as well as safety audits around the State of Michigan.

In addition to serving as a PM on many large projects, Steven brings extensive traffic modeling and transportation engineering knowledge, having performed as the lead engineer for design, studies and modeling of transportation networks.

Stephen Dearing,
PE, PTOE

QA/QC

As OHM's Practice Leader for Traffic Engineering, Mr. Dearing is responsible for all aspects of offering transportation planning and traffic engineering services. He has led the technical efforts on traffic impact studies, crash analyses, capacity analyses, parking and pedestrian studies, roadway conversion and road diet studies, traffic signal designs, traffic signal optimization, freeway and non-freeway signing, maintenance of traffic planning and design efforts and pedestrian issues. Mr. Dearing has developed expertise in modeling and design of modern roundabouts. Steve has performed quality reviews of some of OHM's most complex MDOT projects and offers his wealth of experience in oversight of each project deliverable.

Lauren Hood

Public Engagement

Lauren is a change agent leveraging lived experience, education and social capital to encourage critical thought and inspired action amongst practitioners and participants within the community development ecosystem. Born & raised in Detroit, Lauren Hood brings an authentic perspective to community engagement & development. Hood holds a Masters Degree in Community Development from the University of Detroit Mercy.

Mark Matich

Data Collection

Mark Matich's credentials include a strong discipline in traffic engineering, with experience of conducting traffic studies for numerous traffic signal optimizations, corridor studies, access management and engineering projects. TDC is one of the longest serving traffic data collection firms in Michigan. They utilize the most current technology combined with trained technicians to ensure every traffic study is executed with the highest quality.

Heather Bowden

Transportation
Planning

Heather Bowden will lead the transportation planning for this effort. With over 20 years of experience, she leads planning projects that build community and promote sustainability. Prior to joining OHM Advisors, Heather had worked in both the public and private sectors. Her public service as the Statewide Bicycle and Pedestrian Planner for the Ohio DOT gave her an opportunity to understanding how funding and policy works for local communities. Through the various planning efforts Heather has been involved with throughout her career, she has excelled in building stewardship and consensus with her enthusiastic can-do attitude.

Taryn Juidici, PE,
LEED AP

Traffic Engineering

Taryn Juidici will lead the traffic engineering on this project. Taryn has extensive experience as a lead traffic engineer working on traffic impact studies, transportation planning and mobility studies, school safety and circulation studies, traffic modeling for complex geometrics, and crash analyses. Taryn has recently completed the training to become a Road Safety Audit facilitator. She has most recently been working in the City of Ann Arbor reviewing multiple area school sites for safety and circulation improvements.

PROFESSIONAL QUALIFICATIONS

Key Personnel

Matt Clark, EIT
Traffic Engineering

Matt Clark will support the traffic engineering effort on this project, specifically utilizing his traffic modeling background. Matt has experience working on a variety of projects, including traffic operations studies, traffic impact studies, crash analyses, traffic data collection, and signal warrant analyses. With respect to traffic operations studies, he is skilled in the use of VISSIM, Synchro/SimTraffic, Paramics, and Rodel. Matt performed the VISSIM modeling for the Nixon Road Corridor Study completed in May 2017. The modeling included numerous roundabouts and signalized intersections, with analysis of performance metrics such as intersection control delay and corridor travel time. Matt is currently using VISSIM to model the I-75 at Front Street and Elm Avenue interchanges in the City of Monroe, which explores alternative designs to improve the safety and mobility.

Matthew Hill, PE,
PTOE
QA/QC for Modeling
and Forecasting

Matt brings over 17 years of experience on a wide variety of transportation and traffic engineering projects. He has served as a key participant in model development and application for MDOT. Matt also has considerable experience in the simulation of downtown mixed-mode environments. His recent experience includes serving as the project manager for a Downtown Holland Transportation Study and the modeling and simulation lead for the I-96 HSR/ATM project and the I-496 ATM project. In addition, Matt is currently serving as the QA/QC engineer of all modeling deliverables for the Fuller Road/Maiden Lane/East Medical Center Drive Intersection AA in Ann Arbor, Michigan.

Steve Ruegg, PE
Traffic Forecasting

Steve is a highly experienced transportation engineer and modeler and has been the leader of developing several DTA forecast modeling projects. Throughout his career, Steve has managed and participated in model development projects for regions, cities and urban corridors across the nation. He has provided training in the use and development of models by public agencies such as city and state departments of transportation. Steve has been instrumental in advancing the state of practice with respect to travel demand modeling at the national level. Steve's recent experience includes the Regional Model Development for the MnDOT Twin Cities project in Minnesota and the DTA Model Design for MTC in San Francisco.

Jared Love, PE,
PTOE, PMP
Traffic Modeling

Jared brings over 11 years of experience specializing in capacity and crash analysis, safety studies, microsimulation modeling, signal optimization, traffic signal design, and traffic control plan. Jared is proficient in a variety of traffic software including Synchro, VISSIM and TransModeler. He has served in a number of roles including project manager, task manager and traffic engineer on similar projects. Recently, Jared served as lead traffic engineer for US 21 & Catawba project in North Carolina, a traffic study to see the impacts of converting an existing signalized intersection adjacent to a diverging diamond interchange. TransModeler was used to show the impacts to traffic through a complex network of innovative designs.

Andrew Ceifetz, PE
Safety

Andrew brings over 15 years of transportation experience within a primary focus in roadway safety, traffic data and safety analysis. He has developed and led trainings for Road Safety Audits, the Highway Safety Manual (HSM), Performance Based Maintenance, and safety reviews for hundreds of MDOT and Local Agency Staff, and developed tools to implement the HSM. Some of Andrew's key achievements include, developing the HSM spreadsheet tool used by the MDOT and led training to implement the HSM in scoping, safety, and design projects for MDOT. He was also instrumental in developing a process to geolocate video using a combination of open source software and custom python and VBA scripting. This process has been applied for safety and signing projects across North America.



Steven Loveland, PE, PTOE | Project Manager



Background

As a Project Manager in OHM Advisors' Transportation Group, Mr. Loveland has experience managing many different types of transportation projects, with the majority of them focused on traffic operations, mobility and safety. He has served as the PM and Senior Engineer for large scale roadway and roundabout studies, signal design projects, freeway and non-freeway signing, numerous signal optimization projects, as well as road safety audits around the State of Michigan. Steven also has extensive experience with traffic operations, traffic impact studies, access management studies, crash analyses, traffic data collection, and signal warrant analyses.

Select Relevant Experience

Nixon/Green/Dhu Varren Roundabout and Nixon Road Corridor Study, Ann Arbor, MI (2016-2017)

Project Manager for the roundabout design at the intersection of Nixon/Green/Dhu Varren and the Nixon Road corridor study. The roundabout design aligns two offset tee intersections with a single lane roundabout. Included in the design are cross sections, alignments, removals, construction sheets, profiles, utilities, construction staging, detailed grading, wetland mitigation, permanent signing, pavement markings, lighting, soil borings, soil erosion and sedimentation control. The corridor study includes evaluation of the Nixon Rd corridor from the north city limit to its intersection with Plymouth Rd. The study is a multi-modal analysis of the corridor, evaluating the needs of motorized vehicles, bicyclists and pedestrians. This effort is to include the trip generation and distribution estimates for two proposed developments in the area, Woodbury Club and Nixon Farms North and South. Vehicle analysis is based on conventional capacity (LOS) methodology, but non-motorized analysis is based on a method that focuses on the quality of the walking and biking experience. Traffic analysis along the corridor was completed with PTV Vissim software. The project also involved extensive Public Engagement campaign.

Seventh Street Traffic Calming Study, Ann Arbor, MI (2017)

Project Manager for the analysis to study and find ways to manage speeds along Seventh St, a City Major roads with a history of resident concerns. Extensive traffic and speed data was collected. The analysis led to various speed management methods being identified for specific locations in the corridor.

I-75 Interchange Modification Study, Monroe, MI (2017-2018)

Project Manager for an evaluation of the operational and safety issues related to the closely spaced interchanges for Front St (Exit 13) and Elm Ave (Exit 14). We were engaged to identify and study various alternatives that would constitute improvement for access to the businesses and industrial uses of the Port of Monroe. The study developed over a dozen illustrative alternatives, then narrowed down to three that the stakeholders are most supportive as meeting their needs.

Education

- Master of Science in Civil Engineering, Michigan Technological University, 2001
- Bachelor of Science in Civil Engineering, Michigan Technological University, 1997

Professional Registrations

Professional Engineer:

- MI, 2002, #49187
- OH, 2010, #75127
- Professional Traffic Operations Engineer, Institute of Traffic Engineers, 2006

Experience

With OHM since 2001

4 years prior experience

Professional Affiliations

- Institute of Transportation Engineers, Michigan Section, Vice President, 2013-present
- Custer Complex Parent Teach Organization, Treasurer, 2013-present



Select Relevant Experience Continued

Road Safety Audits for 3 Locations, MI (2015-2017)

Facilitator and Team Leader for RSA team evaluating three rehabilitation projects. The duties as the Facilitator and Team Leader include compiling data relevant to the project, conducting the project kickoff meeting, giving a presentation on the RSA process and scope of the specific job, leading the field review team and facilitating a debriefing meeting, preparing and giving the findings presentation, and preparing the final report. Along with the safety recommendations, a cost analysis and Highway Safety Manual analysis are also prepared.

Road Diet Study: Campbell Rd, Crooks Rd and Main St, Royal Oak, MI (2012-2014)

Lead Traffic Engineer for this Road Diet Study of 3 corridors (Campbell Rd, Crooks Rd and Main St) in Royal Oak, MI. The purpose of the study was to determine if each of the corridors could be reduced in laneage and accommodate on street bike lanes. The project work included data collection, Synchro/SimTraffic analysis, and report writing.

Textile Road Traffic Study, Ypsilanti Township, MI (2012-2013)

Lead Traffic Engineer responsible for a study to analyze Textile Road from Stony Creek Road to Hitchingham Road and the Stony Creek Road at Hitchingham Road intersection. Alternatives considered and evaluated included: signalized alternative and roundabout alternative. The signalized alternative was analyzed using Synchro/SimTraffic. The roundabout alternative was analyzed using RODEL to determine geometric characteristics and roundabout capacity.

Zeeb Road Corridor Study, Washtenaw County MI (2010-2012)

Lead Traffic Engineer for the evaluation of Zeeb Road from Jackson Boulevard to Miller Road. This encompassed traffic analysis of existing and forecast conditions. The analysis included the evaluation of alternative roadway network configurations. The project included a roundabout

analysis using RODEL software to determine geometric characteristics and roundabout capacity at several intersections in the corridor.

RCOC Signal Optimization Project, Oakland County, MI (2011-2015)

Lead Traffic Engineer responsible to collect data, evaluate the operation and optimize the signal timing plans for 150 intersections in Oakland County.

Huron Parkway at Nixon Road, Roundabout Design, Ann Arbor, MI (2006-2009)

Lead Traffic Engineer for the development of plans for a single-lane roundabout at the intersection. Determined geometric characteristics and roundabout capacity.

AATA Park and Ride, City of Ann Arbor, MI (2008)

Lead Traffic engineer responsible for the preparation of a traffic impact study for a proposed Park and Ride Facility (300 spaces) in the City of Ann Arbor at the US-23/ Plymouth Road freeway interchange.

Fuller Road at Maiden Lane, Roundabout Feasibility Study, Ann Arbor, MI (2005)

Traffic Engineer for a study to evaluate the feasibility of installing a two-lane roundabout at the intersection versus traditional intersection improvements. Developed traffic and pedestrian forecast volumes. Using RODEL, determined geometric characteristics and roundabout capacity.



Stephen Dearing, PE, PTOE | QA/QC



Background

As OHM's Practice Leader for Traffic Engineering, Mr. Dearing is responsible for all aspects of offering transportation planning and traffic engineering services. He has led the technical efforts on traffic impact studies, crash analyses, capacity analyses, parking and pedestrian studies, roadway conversion and road diet studies, traffic signal designs, traffic signal optimization, freeway and non-freeway signing, maintenance of traffic planning and design efforts and pedestrian issues. He works with clients to identify their needs, prepares proposals, project scheduling, budget tracking and quality control for all the studies and plans produced by the engineers and technicians of the group.

Select Relevant Experience

School Safety Studies, Ann Arbor Public Schools, MI (2018 - Ongoing)

Project Manager for evaluation of the safety of traffic and pedestrian circulation on the school property and adjacent streets for Clague Middle School, Huron High School and Pioneer High School. Developed a series of low to moderate cost improvements to eliminate or reduce conflicts.

East / West Corridor Study, Grand Traverse County, MI (2018 - Ongoing)

Lead Traffic Engineer for a Planning and Environmental Linkages (PEL) study for north central Grand Traverse County. Study focus is on traffic and safety concerns, looking for solutions that will improve mobility.

Seventh Street Traffic Calming Study, Ann Arbor, MI (2017)

Traffic Engineer for the analysis to study and find ways to manage speeds along Seventh St, a City Major road with a history of resident concerns. Extensive traffic and speed data was collected. The analysis led to various speed management methods being identified for specific locations in the corridor.

Nixon Road Corridor Study, Ann Arbor, MI (2016 - 2017)

Lead Traffic Engineer for the study and evaluation of the Nixon Rd corridor from the north city limit to its intersection with Plymouth Rd. The study was a multi-modal analysis of the corridor, evaluating the needs of motorized vehicles, bicyclists and pedestrians. This effort included the trip generation and distribution estimates for two proposed developments in the area, Woodbury Club and Nixon Farms North and South. Vehicle analysis was based on conventional capacity (LOS) methodology, but non-motorized analysis was based on a method that focuses on the quality of the walking and biking experience.

Downtown Two-way Conversion Study, Alpena, MI (2017)

Project Manager for an evaluation of the conversion of the one-way pair of Second and Third Avenues, from Washington to Chisholm, to two-way traffic. These segments are part of M-32 and required a vigorous analysis by MDOT. The key consideration was not, however, the capacity of the roadways. Rather, it was a question if large commercial trucks would be able to negotiate right angle turns between M-32 and US-23. Constraints were an extremely tight right-of-way with commercial building in the historic downtown with zero lot line

Education

Bachelor of Science in Civil Engineering, University of Michigan, 1976

Professional Registration

Professional Engineer:

- MI, 1981, #28487
- OH, 2011, #75334
- Professional Traffic Operations Engineer, Institute of Traffic Engineers, 2004

Experience

With OHM since 2000

24 years prior experience

- 11 years City Traffic Engineer, Rochester Hills, MI
- 2 years City Traffic Engineer, Naperville, IL
- 2 years Traffic Safety Engineer, National Safety Council
- 5 years Road Commission for Oakland County, Traffic Safety Department
- 4 years Illinois Central Gulf Railroad

Professional Affiliations

- Institute of Transportation Engineers
- ITE Transportation Safety Council
- ITE Traffic Engineering Council
- SEMCOG Transportation Advisory Council



Select Relevant Experience Continued

setbacks. The study concluded that min-roundabouts held the promise of allowing the conversion, otherwise keeping the existing one-way pair would be necessary.

Beaumont Oakwood Pedestrian Crossing, Dearborn, MI (2017)

Project Manager for the design to install a mid-block pedestrian crossing to facilitate the crossing of staff between Beaumont's Oakwood Hospital and their Medical Office and Education Center buildings. The project also included modifications to the site to allow cross access between the parking lots of the two outbuildings.

City-Wide Bike Route Signs and Markings, City of Royal Oak, MI (2014)

Project Manager for development of bid documents for the installation of the desired signs and pavement markings related to the City's Non-Motorized Transportation Bicycle Network Map and Bike Route Signage Master Plan. The delivery method treated this project as a form of installation inventory, and relied on log plans that detailed the locations to install specific signs and markings, and the accompanying details for the traffic control devices.

As Requested Traffic Engineering Services – City of Troy, MI (2008 - Ongoing), City of Midland, MI (2007 - Ongoing), and City of Rochester Hills, MI (2000 - 2004)

Project Manager and Lead Traffic Engineer, providing a full spectrum of traffic engineering and transportation planning services to communities. On an as-requested basis, have provided advice, evaluations and recommendations to address numerous and varied issues confronting impacted stakeholders. Examples include reviewing traffic impact studies and site plans for proposed developments, assisting in the preparation of funding applications, undertaking crash and operational analyses, reporting on whether intersection

controls (YIELD, STOP or signalization) or other controls (parking, speed limits, etc.) are merited, and reviewing their sign shop operations to make recommendations on modernizing equipment and procedures for sign fabrication, and Inventory and management systems for signs, signals, pavement markings and guardrails.

Signal Optimization Management, Grand, Southwest and University Regions, MDOT (2011-2014)

Project Manager for providing project management services to MDOT for signal optimization efforts performed by six other consultants. The focus is on QA/QC evaluations and analysis of the optimization consultants' work product for 130 locations.

Road Diet Evaluation, City of Royal Oak, MI (2014)

QC Reviewer for a project to review three road corridors: Campbell Road (10 Mile Road to 12 Mile Road), Main Street (Rochester Road to Normandy Road), and Crooks Road (Main Street to Normandy Road). In each case the existing condition was a 4-lane cross section and traffic volumes were declining. The study format included investigation for LOS and safety considerations.

US-23/Plymouth Road Park and Ride Facility, AATA (2008-2009)

Lead Traffic Engineer for the design of a 300+ stall commuter park & ride lot on a parcel within the SE quadrant of the interchange of US-23 and Plymouth Rd. The drive aligned with the signalized SB off-ramp. A traffic impact study was performed, evaluating the operation of the intersection. Reviewed the signal design to upgrade and modify the intersection.

Lauren Hood | Public Engagement Facilitator**Background**

Throughout her career, Lauren helped launch a new nonprofit planning & development organization to enhance quality of life and economic opportunity in Northwest Detroit. She has directed the allocation of CDBG funds, housing rehab projects, demolition efforts and business attraction activities, and has built relationships nationally with social investors, real estate professionals and municipal governments to increase transparency, accountability and access to information for property ownership. Passionate about Detroit's cultural heritage, Hood has spoken & written extensively on preserving Black Space. She currently serves on the City of Detroit Planning Commission and as an advisor to Detroit Sound Conservancy and Urban Consulate. She has previously served as a mayoral appointee of the Detroit Historic District Commission and board member for Preservation Detroit.

Education

- Master of Science in Community Development, University of Detroit Mercy, 2012
- Bachelor of Science in Marketing, University of Detroit Mercy, 2003

Experience

6 years with Lauren Hood
5 Years prior experience

Professional Affiliation(s)

- Policy Link, Detroit Equity Delegate
- Detroit Sound Conservancy, Board of Directors
- Detroit Regional Chamber, Leadership Detroit Fellow XXXIX Class
- City of Detroit Council Appointee Planning Commissioner
- Univ. of Detroit Mercy Masters of Community Development Program Advisory Board

Recognition

- Harvard Business School, Young American Leaders Program
- Placelab Chicago, Ethical Redevelopment Fellowship
- Preservation Detroit, Board of Directors
- City of Detroit Mayoral Appointee, Historic District Commissioner

Select Relevant Experience**LIVE6, Detroit, MI**

Successfully launched place-based, anchor institution partnership organization convened to create and implement community development activities in Northwest Detroit. Designed multiple platforms for gleaning input from residents, business owners, property owners, and neighborhood leaders at levels to create a shared vision for recruiting new businesses, sustaining exiting businesses, vacant property activation and community programming. Served as convening partner connecting community members to philanthropic and financial institutions, city government, service providers and anchor institution leadership. Over the course of a 2-year period, engaged over 1,000 residents in monthly public dialogues, monthly advisory meetings, quarterly cultural events and bi-weekly peacemaking initiatives.

Deep Dive Detroit, LLC, Detroit, MI

Design curriculum and moderate group dialogues on issues pertaining to racial equity & privilege, equitable development, and community engagement. Have successfully engaged over 700 participants at more than a dozen organizations. Previous clients have included the Skillman Foundation, EcoWorks, Challenge Detroit, Detroit Revitalization Fellows, and Wayne State University among others.

Loveland Technologies, Detroit, MI

Partnered with community organizations to develop and execute neighborhood specific outreach strategies to engage residents in a city wide property mapping process. Produced workshop materials, convened and trained over 700 residents on data collection applications.

Economic Development Programs, Highland Park, MI

Responsible for the execution of city-wide economic development programs. Managed initiatives in demolition, deconstruction, housing rehabilitation, public works, and business attraction. Negotiated on behalf of the municipality in grant related hearings with federal, state, and county representatives. Served on the committee to establish the Highland Park Historic District Commission seeking designation for unrecognized physical assets and as the City Hall liaison to the Planning Commission.

Mark Match | Lead Traffic Data Collector



Background

Mark manages and organizes daily traffic operations of his company, Traffic Data Collection. His traffic services involve gathering, recording and processing traffic data information for manual and mechanical studies for traffic engineers, governments & businesses. He has performed various types of traffic studies including vehicle classifications, speed surveys, parking & license plate studies, turning movements, conflict studies, travel time & delay studies, gap studies, driver observance studies (stop signs, traffic signals, pedestrian signals), saturation flow, pedestrian counts and traffic inventories (sign, intersection geometrics, digital photos & video logs) of various highway features.

Select Relevant Experience

Traffic Counts for Nixon Road Corridor Improvement Study, Ann Arbor, MI (2016)

Traffic data collection for nine intersections (24 Hour TMCs & ATRs) in Ann Arbor.

Traffic Counts for U of M Multi-Modal Transit Center Study, Ann Arbor, MI (2015)

Traffic Data Collection, with Parsons Brinkerhoff, performed, supervised and provided oversight for the full field traffic data collection services. TDC conducted 6-hour turning movement counts for fifteen intersections within the university area.

Traffic Counts for S. State Street Corridor Transportation Study, Ann Arbor, MI (2014)

Traffic Data Collection, with Parsons Brinkerhoff, performed, supervised and provided oversight for the full field traffic data collection services. TDC collected traffic data and teamed with PB for eleven major project intersections. Traffic reports were processed into 15 & 60-minute aggregate summaries with peak hours and exported into Universal Traffic Data Format (UTDF). Turning movement counts were recorded and logged with Miovision scout cameras for all locations and then provided to client. TDC collected all pedestrian and bicycle data along the corridor. By using video, TDC was able to collect data, and observe and record multi-modal activity and how its interaction at intersections and mid-blocks and then apply this additional insight into the transportation project.

Traffic Counts for SEMCOG 2017 Bicycle & Pedestrian Count Program, Multiple Locations, MI (2017)

Traffic data collection for 37 Locations (12-16 Hour Multi Modal TMCs) at various locations in southeast Michigan.

Signal Optimization for City of Lansing, University Region M-99, I-96 BL & US-2, Lansing, MI (Ongoing)

Traffic data collection for 69 intersections (TMCs & ATRs) in Lansing.

Signal Optimization for M-59 Corridor, Oakland County, MI (2016)

Traffic data collection for 53 intersections (ATRs & TMCs) in Oakland County. Work was performed for MDOT as a subconsultant.

Education

- Coursework in Business Administration, Central Michigan University, 1990-93
- Associate in Applied Science, Civil Technology, Macomb Community College, 1978-80

Experience

With TDC since 1996
7 Years prior experience

Professional Affiliation(s)

- ITE and ITS Michigan, member
- ATSSA, member
- IMSA, member

Seminars, Workshops and Short Courses

- Synchro & SimTraffic Training Course for Signal Timing, Trafficware
- Traffic Modeling For Managers, MSU
- Jamar Traffic Counting Course, Jamar Technologies, Inc
- MDOT Traffic Signal Specifications Course, IMSA
- Safety Management System, OHS



Heather Bowden | Transportation Planner



Background

Heather has played a key role in developing a variety of plans for local communities. With over 20 years of experience, Heather leads planning projects that build community and promote sustainability. Prior to joining OHM Advisors, Heather had worked in both the public and private sectors. Her public as the Statewide Bicycle and Pedestrian Planner for the Ohio DOT gave her an opportunity to understanding how funding and policy works for local communities. Through the various planning efforts Heather has been involved with throughout her career, she has excelled in building stewardship and consensus with her enthusiastic can-do attitude.

Select Relevant Experience

Master Plan, Livonia, MI (2017 - Ongoing)

Serving as the subconsultant to McKenna and Associates, OHM will work on public involvement and redevelopment visioning plans in 4-6 strategically positions areas. This planning effort has just begun and is anticipated adoption is December 2018. Heather is serving as Senior Planner.

East / West Corridor Study, Grand Traverse County, MI (2017 - Ongoing)

Serving as a Senior Planner for a Planning and Environmental Linkages (PEL) study for north central Grand Traverse County. Study focuses on traffic and safety concerns, looking for solutions that will improve mobility.

Master Plan, Westland, MI (2017 - Ongoing)

As Senior Planner on this effort, this master plan effort has been designed to meet the Michigan Planning Enabling Act requirements and includes a non-motorized transportation plan, along with specialty focus area plans for the Historic Village and Norwayne. To date we have held several Steering Committee Meetings, a public meeting focused on the Historic Village area, and a public meeting focused on Norwayne. A community-wide survey was administered and results tabulated. We are currently scheduling our final stakeholder committee meeting and final public meeting and anticipate adoption of the plan in spring of 2018.

CoGo Bike Share, Columbus, OH (2013 - 2015)*

As General Manager of CoGo Bike Share System, operated by Motivate International, Heather successfully launched the \$1.2 million system in July 2013, with more than 300 bicycles and 30 stations within the downtown core. Created a fiscally solvent system through employment of budget efficiencies and obtaining sponsorship and advertising. Public outreach and engagement efforts included hashtag campaigns, social media efforts, tabling events, and festivals.

Education

Bachelor of Arts, University of Michigan, 1998

Experience

With OHM since 2017
20 years prior experience

Honors & Awards

- 2014 - CoGo Bike Share - Ohio Bicycle Federation's 2014 Horace Huffman Award
- 2014 - CoGo Bike Share - Ohio Chapter of the American Society of Landscape Architects (OCASLA) 2014 Ohio Landscape Architecture Award
- 2013 - CoGo Bike Share - Voted Columbus' 2013 Best Alternative Transportation by Columbus Underground
- 2012 - How We Roll Program - FHWA Exemplary Human Environment Initiatives Award for Encouraging Non-Motorized Transportation



Select Relevant Experience Continued

ODOT Statewide Bicycle and Pedestrian Planner Projects*

1) Access Ohio 2040: MDOT Long Range Transportation Plan (2013)

The plan includes a comprehensive inventory of transportation services and infrastructure, forecasts of transportation demand, asset condition and performance, and an analysis of the trends affecting transportation in Ohio. The Ohio Department of Transportation (ODOT) developed AO40 to guide, inform, and support transportation policies and investment strategies for the coming years. Heather coordinated the bicycle and pedestrian chapter of the plan.

2) ODOT Training and Conferences (2009 - 2014)

- Developed, coordinated, and implemented a bicycle safety campaign entitled “How We Roll” at the Ohio State University. 300 students took bike education tours and 900 bike lights were distributed.
- Developed and distributed a technical brochure entitled “ODOT’s Cycling Smarter Brochure” which provided instruction for on the road bicycle riding.
- Organized and held several training sessions including:
 - > Complete Streets Technical Training Workshop. 100 participants attended.
 - > Safe Bike Education Tour. 40 Engineers and planners took this tour on bike.
 - > Audible Pedestrian Signal Workshop. 130 participants attended.
 - > Pedestrian Safety Workshop. 40 participants attended.
 - > Bicycle and Pedestrian Road Safety Audit Training Workshop. 40 participants attended.
- Organized and held the Healthy Communities Active Transportation Conference in 2010 and 2011. The 2011 Conference was held in Cleveland at the Cleveland Clinic with Michael Roizen as the keynote speaker. Over 400 participants attended each year.

Weinland Park Community Mobility Plan, Columbus, OH (2011)*

This neighborhood within the City of Columbus worked on the development of a \$250,000 community mobility plan that identified improvements to advance bicycle, pedestrian and transit within the neighborhood. Heather assisted in the planning activities, including public involvement, stakeholder meetings, and multi-modal audits for this project as well as the identification of solutions that were included in the plan. She also coordinated the efforts of a non-profit neighborhood organization (University Area Enrichment Association) that led grassroots outreach which included seeking input through porch chats and outreach at local neighborhood events.

Safe Routes to School Statewide Task Order Contract, ODOT, Central Office (2007 - 2009)*

Heather assisted municipalities across the State of Ohio in the development of their Safe Routes to School Travel Plans by providing technical services. This \$500,000 task order included many planning and design efforts and Heather performed over 20 walkability/bikeability audits and completed engineering reports with planning level solutions and preliminary cost estimates. \$500,000

Comprehensive Plan, Hilliard, OH (2009)*

Heather assisted in completion of the bicycle and pedestrian components of the Plan. She digitized and/or confirmed the citywide sidewalk and bicycle inventory and assisted in the existing conditions and recommendations for the plan. This plan also included a brand and character report that defined the “image” for the city through physical design elements, and land use planning strategies.

**Completed prior to joining OHM Advisors.*



Taryn Juidici, PE, LEED AP | Lead Traffic Engineer



Background

Taryn Juidici is experienced in providing traffic engineering services for local municipalities, county agencies and the Michigan Department of Transportation (MDOT). She is experienced in construction staging and the preparation of maintenance of traffic plans and related special provisions. Taryn's experience also includes pavement marking and signing for freeway, non-freeway and non-motorized pathway projects. She is experienced in the creation of traffic simulation models. In addition, she is responsible for the preparation and review of various traffic-engineering studies including signal warrant studies, parking studies, safety studies and traffic impact studies. Taryn is responsible for the preparation of plans and studies in accordance with MDOT standards such as the MMUTCD and the standard highway signs manual as well as standards from other state and local agencies.

Education

Bachelor of Science in
Civil Engineering, Michigan
Technological University, 2004

Professional Registration

Professional Engineer:
MI, 2009, #56020

Experience

With OHM since 2005
1 year prior experience

Professional Certifications

- LEED AP, US Green Building Council, 2009
- Certified Playground Safety Inspector, NRPA, 2014

Professional Affiliations

- American Council of Engineering Companies (ACEC) Emerging Leaders Forum Steering Committee, 2012- present

Select Relevant Experience

School Safety Studies, Ann Arbor Public Schools, MI (2017 - Ongoing)

Lead Engineer for evaluation of the safety of traffic and pedestrian circulation on the school property and adjacent streets for Clague Middle School, Huron High School and Pioneer High School. Developed a series of low to moderate cost improvements to eliminate or reduce conflicts. Recommendations include onsite reconfiguration, policy changes and recommendations for the adjacent streets.

Nixon Road Corridor Study, Ann Arbor, MI (2016 - 2017)

Traffic Engineer for the study and evaluation of the Nixon Rd corridor from the north city limit to its intersection with Plymouth Rd. The study was a multi-modal analysis of the corridor, evaluating the needs of motorized vehicles, bicyclists and pedestrians. This effort included the trip generation and distribution estimates for two proposed developments in the area, Woodbury Club and Nixon Farms North and South. Vehicle analysis was based on conventional capacity (LOS) methodology, but non-motorized analysis was based on a method that focuses on the quality of the walking and biking experience.

Burton Drive Improvements, Detroit Metro Airport, Romulus, MI (2016 - 2017)

Project Engineer for the reconfiguration of the intersection of Rogell Drive at Burton Drive to provide indirect left turns. The reconfiguration will drastically modify the alignment to allow for future development in the median of the roadway. Responsible for the operational analysis and maintenance of traffic plans. The operational analysis demonstrated improved operations with the conversion to indirect left turns.

Squirrel Court Streetscape, City of Auburn Hills, MI (2017)

Lead Engineer for roadway and streetscape improvements in Downtown Auburn Hills. The project involves narrowing the street to widen existing and provide additional pedestrian accommodations. Streetscape enhancements will include landscaping, brick paving and street furniture. The project also includes traffic calming and roadway rehabilitation. Responsible for roadway, landscaping and traffic components of the project.



Select Relevant Experience Continued

Baker Road Intersection Study, Dexter, MI (2015 - 2016)

Lead Traffic and Safety Engineer responsible for the evaluation of the intersections of Baker Rd at Dan Hoey Rd and at Shield Rd. To address concerns with safety and congestion, a variety of alternatives were evaluated including traffic signal modifications as well as the deployment of roundabouts. The analysis included considerations for construction staging and mobility impacts to local residents, business owners, school systems and vehicular and non-motorized traffic.

Grand River Road Diet, City of Farmington, MI (2014)

Traffic Engineer responsible for preparing a road diet and corridor operations study for the Grand River corridor through the city of Farmington. With the potential to expand the limits of the core downtown streetscape the adjacent sections of Grand River were evaluated to determine if a road diet would be feasible for this corridor. Utilized traffic modeling software to evaluate multiple alternatives. The study included a review of available safety data for the study area.

Peters Road Traffic Calming, Village of Milford, MI (2014)

Traffic Engineer responsible for preparing traffic calming recommendations in conjunction with this roadway design project. The paving of Peters Road in the village is expected to raise speeds on a desirable downtown bypass route. In order to maintain lower speeds and address resident concerns. Recommendations include narrow cross-sections and the construction of urban mini roundabouts.

I-75 at University Road, City of Auburn Hills, MI (2014)

Traffic Engineer responsible for preparing a traffic study at the interchange of I-75 and University Avenue to determine the operational characteristic of a proposed interchange reconstruction project to be completed by MDOT. Utilized traffic modeling software to evaluate the selected diverging diamond interchange configuration for further refinement during the design build process. The study included evaluating the interaction between the reconfigured ramps and ramps at an adjacent interchange.

North Campus Accessibility Improvements, University of Michigan (2013)

Lead Engineer responsible for site and accessibility design for the reconfiguration of pedestrian walkways near two University buildings. These buildings were originally designed as private business facilities and the original level of accessibility provided did not meet the needs of an educational use. The project added accessible ramps and routes while minimizing disturbance to the adjacent area.

Parking Lot Improvements, University of Michigan (2012)

Project Engineer responsible for site and utility design for the reconstruction of an existing small parking lot on the University of Michigan's North Campus. This project includes pavement reconstruction, pedestrian paving improvements and the construction of a bicycle parking area. The project also included grading improvements and the construction of a reinforced earth wall to minimize tree removals and provide long term erosion prevention.

North Squirrel Road Geometric Analysis, City of Auburn Hills, MI (2009)

Traffic Engineer for the geometric and operational study of North Squirrel Road in Auburn Hills. The study evaluated multiple geometric alternatives including narrow median boulevards and traditional 3 lane and 5 lane sections. Intersection control alternatives included traditional applications as well as roundabouts.



Matt Clark, EIT | Traffic Engineer



Education

- Master of Science in Civil Engineering, Western Michigan University, 2015
- Bachelor of Science in Civil Engineering, Western Michigan University, 2012

Professional Registration(s)
Engineer in Training

Experience

With OHM since 2015
All experience with OHM

Background

As a Graduate Engineer in OHM's Traffic Group, Matt Clark has experience working on traffic operations studies, traffic impact studies (TIS), crash analyses, traffic data collection, signal warrant analyses, and TIS and site plan reviews for numerous municipalities. He is skilled in the use of Synchro/SimTraffic, ArcGIS, Paramics, Stata, HCS2000, Vissim, Rodel, SignCAD, MicroStation and AutoCAD software. In addition to traffic studies, Mr. Clark has design experience working on non-freeway signing and pavement marking plans, as well as maintaining traffic plans for stage construction.

Prior to joining OHM, Mr. Clark worked for two years at Western Michigan University as a research assistant developing traffic microsimulation models of MDOT ITS corridors and performing statistical analysis of traffic safety data. Mr. Clark also held the position of teaching assistant for Traffic Design, Highway Design and Geomatics courses.

Select Relevant Experience

Harris Road Traffic Study, Ypsilanti Township, MI (2017)

Traffic Engineer for this study that involved investigation of the viability of a roundabout at the intersection of Harris Road and Cross Street in Ypsilanti Township. To coincide with the rehabilitation of Harris Road between Michigan Avenue and Holmes Road, the Washtenaw County Road Commission (WCRC) desired OHM to investigate the traffic impacts (specifically with regards to potential queue spillback into US-12 (Michigan Avenue) located approximately 300' south of Harris Road) which would be caused by implementation of a roundabout at the intersection of Harris Road and Cross Street. Responsible for modeling the intersection under existing and proposed conditions in Synchro and producing the study report.

Seventh Street Traffic Calming Measures Study, Ann Arbor, MI (2017)

Traffic Engineer for this project that involved identifying potential traffic calming measures for the Seventh Street corridor from Miller Avenue to W. Stadium Boulevard in the City of Ann Arbor. A subtask of this project was identifying specific intersection treatments for the intersection of Seventh Street and Madison Avenue. Ultimately, a comprehensive and flexible traffic calming toolbox was produced to give the City options to manage speed on the corridor. A mini-roundabout was recommended at the intersection Seventh Street and Madison Avenue. Responsible for producing the study report and modeling the intersection of Seventh Street and Madison Avenue in Rodel.



Select Relevant Experience Continued

Traffic Impact Study for Uptown at Rivers Edge Development, Bay City, MI (2017)

Traffic Engineer for this project that involved determining the traffic impacts on the City's street system when the Uptown at Rivers Edge Development is fully developed. Responsible for compiling/reviewing traffic count and signal timing data and creating the existing conditions models in Synchro.

Nixon/Green/Dhu Varren Roundabout and Nixon Road Corridor Study, Ann Arbor, MI (2016 - 2017)

Traffic Engineer for the roundabout design at the intersection of Nixon/Green/Dhu Varren and the Nixon Road corridor study. Modeled the proposed roundabout using current and existing volumes using Rodel and PTV Vissim software to aid in geometric design. Responsible for conceptualizing Maintenance of Traffic (MOT) alternatives and producing the MOT staging and detour plans in AutoCAD for the proposed roundabout at Nixon/Green/Dhu Varren. For the corridor study, responsible for modeling the existing corridor and two alternative options in PTV Vissim software. The corridor study includes evaluation of the Nixon Rd corridor from the north city limit to its intersection with Plymouth Rd. The two alternatives analyzed included (1) converting the existing two-lane sections to a three-lane section with a center two-way left-turn lane and (2) converting four intersections to roundabouts. Also aided in writing and compiling the final report for the corridor study.

Baker Road Intersections Traffic Study, City of Dexter, MI (2015 - 2016)

Traffic Engineer responsible for evaluation of the intersections of Baker Road at Dan Hoey Road and at Shield Road. To address concerns with safety and congestion, a variety of alternatives were evaluated and compared, including traffic signal modifications, the deployment of roundabouts and roadway realignment. Analysis was conducted using Synchro/SimTraffic.

Nine Mile Road Concept Plans and Traffic Analysis, City of Oak Park, MI (2016)

Traffic Engineer responsible for a study to analyze the Nine Mile Road at Coolidge Highway intersection. Alternatives considered and evaluated included a road diet on the Nine Mile Road corridor from Westhampton Street to Dante Street, converting the corridor to a boulevard in the vicinity of Coolidge Highway, and implementing roundabouts at the Westhampton and Dante intersections. Analysis was conducted using Synchro/SimTraffic and Rodel.

Road Safety Audit for 3 Locations, MI (2015-2017)

Traffic Engineer responsible for compiling data relevant to the project, preparing the findings presentation and the final report.

Matthew Hill, PE, PTOE | QA/QC Modeling & Forecasting

Background

Matthew's experience is in transportation planning and traffic engineering with special emphasis in microsimulation and complex signal operations. He has worked on various corridor studies, high-end microsimulation models, downtown circulation planning and analysis, roadway safety audits, special event management, signal optimization projects, traffic impact studies, and maintenance of traffic plans. Matthew is proficient in: VISSIM, TSIS (CORSIM), Synchro/SimTraffic, HCS, RODEL, MarcNX, ITE Trip Generation Software, Minitab, SPSS, MicroStation, Visual Basic programming, and Microsoft Office.

Select Relevant Experience
Fuller Road/Maiden Lane/East Medical Center Drive Intersection Alternatives Analysis, Ann Arbor, MI

QA/QC engineer responsible for the review of all microsimulation (VISSIM) modeling deliverables for the 2018 alternatives analysis of the Fuller/Maiden Lane/EMCD intersection in downtown Ann Arbor. This location is the gateway to the University of Michigan's medical campus and experiences high pedestrian and vehicle volumes with significant development growth anticipated in the near future. Alternatives analyzed included variations of roundabout designs, including pedestrian hybrid beacons, pedestrian grade separation, right-turn bypass lanes, queue metering, as well as a signalized option similar to existing operations.

South Surra Area Traffic Analysis, Kuwait

Project Engineer Responsible for leading the macroscopic and microscopic transportation analyses for a traffic analysis of the South Surra area. This area has seen substantial growth in recent years leading to current congestion issues. Several roadway network improvement alternatives were analyzed to determine the optimal solutions to meet current and future operational needs, and in particular, how best to provide efficient access to and from the new Jaber Al Ahmed Hospital. The transportation analyses were conducted using both macroscopic (HCS, SYNCHRO, SIDRA) and microscopic (VISSIM) analysis tools depending on the geographic areas within the district. A detailed microsimulation model was also developed to illustrate circulation concepts of the hospital's internal roadway system for general traffic, VIP traffic, ambulance/emergency vehicles, as well as delivery vehicles.

Re-Imagine Washtenaw, Ypsilanti/Ann Arbor, MI

Project engineer responsible for leading the microsimulation effort to analyze various corridor improvements to a 5 mile stretch of the major arterial Washtenaw Avenue. Several improvements focused on improved access to transit as well as a road diet in certain segments. Applications to improve transit operating times and reliability were also explored as part of this analysis, such as transit signal priority (TSP) and queue jumps. The microsimulation analysis was performed in VISSIM and 3-D AVI movies were prepared to illustrate anticipated operations to key stakeholders as part of the decision making process.

Education

- Bachelor of Science in Civil Engineering, Michigan State University, 2001

Professional Registration(s)

Professional Engineer

- MI, 2006, #53627
- IL, 2011, #062.064085

Experience

With WSP since 2001

0 Years prior experience

Select Relevant Experience Continued

Downtown Holland Transportation Plan, Holland, MI

Project Manager responsible for developing a comprehensive transportation master plan for the downtown CBD area of Holland that is inclusive of all modes of transportation and enhances the walkability of the downtown. The process involved working with a project steering committee to develop circulation alternatives that were presented to the various stakeholders and public to narrow down the alternatives to a recommended preferred alternative through a data driven analysis process. Alternatives included conversion of one-way streets to two-way and road diets to better accommodate bicycle facilities. Short-term and long-term recommendations were made regarding improvements to the transportation network to enhance mobility and safety as well as potential funding mechanisms to drive the construction of the improvements.

Downtown Grand Rapids Access and Circulation Study, Grand Rapids, MI

Project engineer for the evaluation of access and circulation primarily of Michigan Street and I-196 within Downtown Grand Rapids between US-131 and Fuller Avenue. Currently, Michigan Street is a congested corridor just south of I-196. Previous studies reviewed access from I-196 onto Michigan Street but did not include the remainder of downtown and points north of I-196. This study will review existing and future conditions and develop and evaluate feasible solutions within the study area to reduce congestion along Michigan Street and the interchange at I-196 and College Avenue.

The District Detroit Transportation Management Plan, Detroit, MI

Traffic engineering lead responsible with conducting a traffic impact analysis for a new mixed-use development in downtown Detroit that includes a new event center (Little Caesars Arena) where the Detroit Red Wings and Pistons will play. Traffic forecasts were developed for the fully built out development and roadway network recommendations made to accommodate projections that would best meet the needs of all modes (pedestrian, bicyclists, passenger vehicles, and transit). Specific to the Little Caesars Arena, an event transportation management plan was developed that included design of a wayfinding signage on both the freeway and local street system, a tactical operations plan illustrating temporary road closures, police control points, parking lot flagger assignments, courtesy shuttle staging and circulation areas, taxi/rideshare staging and circulation areas, motor coach and VIP access, and general vehicle circulation for ingress and egress. A new color coded parking lot system was also developed and encouraged with the wayfinding signage and social media communications in combination with parking spaces being pre-sold to minimize congestion associated with vehicles searching for parking during events.

Steve Ruegg, PE | Lead Traffic Forecaster



Background

Steve Ruegg is a senior planner and transportation modeler at WSP USA. He has managed and participated in a wide variety of projects, including regional transportation plans, rail transportation feasibility studies, alternative analyses, multi-modal corridor studies, and small-area planning studies. He has also managed and participated in model development projects for regions, cities and urban corridors across the nation. He has provided training in the use and development of models by public agencies such as city and state departments of transportation. As a part of model development efforts, Mr. Ruegg has reviewed transit on-board survey and home interview survey instruments to collect data necessary for model development.

Education

- Master of Science in Civil Engineering, University of California, 1980
- Bachelor of Science in Civil Engineering, University of California, 1979

Professional Registration(s)

- Professional Engineer
- MN, 1980, #16123

Experience

With WSP since 1999
19 Years prior experience

Professional Affiliation(s)

- ASCE, member
- Center for Transportation Studies, Institute of Transportation Engineers

Select Relevant Experience

MnDOT Twin Cities Regional Model Development, Roseville, MN

Project manager/modeler to develop a regional Dynamic Traffic Assignment model for the entire Twin Cities region. The model was developed from the regional 4-step demand model, and later a version compatible with the regional activity based model was also created. Dynus-T was used as a software platform for this model. The model was used to evaluate several major multi-year construction projects, including those on TH169 north of I-494 and I-35W at Lake Street, just south of downtown Minneapolis.

Red Rock Corridor Implementation Plan, Washington County, MN

Steve was the lead modeler for this study, which involved the development of an implementation plan for a 30-mile Transitway connecting Hastings to downtown St. Paul, and extending service to downtown Minneapolis. Forecasting made use of the regional model, with 12 new subdivided zones in the corridor to facilitate more accurate modeling of transit access. Three freeway Bus Rapid Transit (BRT) options were modeled, along with additional modeling of specific phases. The model explicitly treated BRT as a separate mode, with enhanced attributes. Modeling was done in conjunction with review from Washington County and the Metropolitan Council.

Rethinking I-94, Minneapolis/St. Paul, MN

As the lead modeler, Steve evaluated a wide range of solutions to I-94 between downtown St. Paul and Minneapolis. This heavily congested corridor carries a wide variety of trip types and has a large impact on adjoining neighborhoods. The project explores solutions to traffic, environmental and social problems through design, capacity and demand solutions. The modeling uses data from remote sensing to evaluate travel behavior in detail and relies on multi-level tools including demand modeling, dynamic traffic assignment and micro-simulation to achieve a robust analysis of impacts, as well as to test solutions. The region's new activity-based model is used to evaluate travel demand, allowing more insight into traveler characteristics, and time of day response to changes.

Select Relevant Experience Continued

Cedar Avenue Corridor Study, Dakota County, MN

WSP prepared the travel demand forecasts for several combined highway and transit alternatives for Cedar Avenue, a major north-south corridor in Dakota County. Steve oversaw preparing these forecasts using a CUBE-based model. The analysis was conducted using both the regional model and the county model by utilizing the network detail of the county model and the transit forecasting abilities of the regional model. The travel demand forecasts informed the study, resulting in a plan for both capacity improvement and accommodation of a BRT system in the corridor.

Riverview Corridor Major Investment Study (MIS), St. Paul, MN

Steve was responsible for travel demand forecasting as part of this MIS. The purpose of the study was to examine alternatives in the Riverview Corridor from downtown St. Paul to the Twin Cities International Airport and the Mall of America. The modeling included the planned Hiawatha corridor in Minneapolis. The study evaluated both rail and busway alternatives on several alignments within the corridor, and used the results of the model to evaluate efficiency and effectiveness.

Anoka County Long Range Transportation Plan, Anoka County, MN

Steve developed travel demand forecasts (highway and transit) in support of the Anoka County Long Range Transportation Plan. The model is a CUBE/voyager version of the Twin Cities Regional Model. An innovative approach was used to identify key corridors, quantify performance and identify priority for improvement. An analysis was performed with the objective of maintaining the current level of service. Transit demand was also evaluated. The resulting analysis was used to inform the plan recommendations, taking into consideration cost and project feasibility.

Kansas City Northlands Corridor Study, Kansas City, KS

Steve developed the multi-modal forecasts for several highway and transit options to serve the northern part of

the greater Kansas City region (north of the Missouri River). These options involved expanding the bus system, LRT line extension, and various highway capacity improvements, including traditional lane additions and high-occupancy vehicle (HOV) lanes. The regional model was modified to properly account for LRT features, and was used throughout this study, as well as a related study of the south-central area.

Southeast Corridor Transit Study, Nashville, TN

To support a study of transit alternatives, Steve managed the development of a transit network and mode choice model. The Nashville metropolitan planning organization (MPO) was upgrading their regional model generation and distribution steps, and WSP developed a mode choice component at the same time. This was a TransCAD software platform. The model was used to test commuter rail, BRT and express bus options in the corridor, and provided demand estimates that supported the study.

Dan Patch Corridor Commuter Rail Study, Northfield/Minneapolis, MN

Steve developed the demand forecasts for the proposed Dan Patch commuter rail line, from Northfield to downtown Minneapolis. The project required close coordination with other ongoing commuter rail studies, including the Northstar, Central Corridor and Red Rock corridors, as well as incorporation of planned light rail and busway lines.

Downtown to Astrodome Transitway Corridor Study, Houston, TX

Steve participated in this study for which WSP was asked to investigate transit alternatives for the heavily-used corridor from Houston's central business district to the Astrodome. Steve was responsible for travel demand forecasting, which included use of a modified Houston METRO model. This allowed a fair evaluation of both bus and rail options in the corridor. The line is now open and has exceeded forecast ridership projections.

Jared Love, PE, PTOE, PMP | Lead Traffic Modeler

Background

Jared Love has over eleven years of traffic engineering experience specializing in capacity and crash analysis, safety studies, microsimulation modeling, signal optimization, traffic signal design, traffic control plans, maintenance of traffic, and intelligent transportation systems (ITS). He is proficient in a variety of traffic software programs including HCS, Synchro, VISSIM, TransModeler and SIDRA and has experience with Cube. He has successfully served as a task manager and project manager on a variety of projects. Mr. Love is also a skilled roadway engineer with significant experience in geometric design, drainage design and plan development. He is proficient with MicroStation, GeoPak and AutoCAD software.

Select Relevant Experience
US-21 & Catawba, Cornelius, NC

Traffic engineer responsible for overseeing analysis completed for the traffic study to see the impacts of converting an existing signalized intersection adjacent to a diverging diamond interchange. Alternatives considered included multiple variations of a roundabout, a partial CFI, and a jughandle intersection. TransModeler was used to show the impacts to traffic through a complex network of innovative designs. NCDOT is looking to improve this congested intersection that is anticipated to continue to see more traffic volumes as land on the northeast quadrant is redeveloped.

GCRTA Public Square Transit Zone Traffic Analysis, Cleveland, OH

Traffic engineer responsible for overseeing analysis completed for the traffic study which analyzed the impacts of three scenarios affecting transit operations for GCRTA's service in and near Public Square in the heart of downtown Cleveland. This politically charged and time-sensitive analysis examined the impacts on annual operating cost by assessing and comparing operational delay for 28 bus routes traveling through the defined study area which consisted of 34 signalized intersections. Synchro modeling formed the basis of inputs into a series of complex calculations to quantify delay for six time of day periods for weekdays plus two periods for Saturdays and two for Sundays. The accumulated delay for each bus route in each direction was converted to operating cost and annual operating cost. The analysis results were used to inform decision makers in addressing concerns raised by the Federal Transit Administration associated with the downtown transit zones established with the Euclid Corridor bus rapid transit project.

Johnnycake Ridge Road/Old Johnnycake Ridge Road Roundabout Feasibility Study, Concord, OH

Traffic engineer responsible for analyzing the feasibility of a roundabout at the intersection of Johnnycake Ridge Road (S.R. 84) & Old Johnnycake Ridge Road. Concord Township wanted to investigate the possibility of reconfiguring the existing ODOT controlled signalized intersection with a roundabout. Alternatives were vetted through the Lake County Engineer's office as well as ODOT District 12.

Education

- Bachelor of Science in Civil Engineering, The Ohio State University, 2006

Professional Registration(s)

Professional Engineer

- OH, 2011, #75627
- KY, 2012, #28996
- TX, 2013, #114804
- IN, 2016, #11600194
- MN, 2015 #52295

Professional Traffic Operations Engineer, 2012

Experience

With WSP since 2010
3 Years prior experience

Professional Certification(s)

- Project Management Professional, 2017, #2046699

Professional Development

- City of Columbus Americans with Disabilities Act Ramp Training
- ODOT Travel Demand Model Training
- ODOT Traffic Academy Interchange Studies
- ODOT Traffic Academy Safety Studies
- ODOT Traffic Academy Signing and Markings
- ODOT Traffic Academy Traffic Signals
- ODOT Traffic Academy Highway Lighting
- ODOT Traffic Academy

Select Relevant Experience Continued

2016 Republican National Convention Transportation Management, 2016 RNC Host Committee, Cleveland, OH

Assessed traffic operations associated with the proposed road closures and media shuttle route to be implemented as part of the security measures for the 2016 Republican National Convention. Completed traffic analysis to understand shift in travel patterns resulting from the closures and media shuttle operations. Identified expected traffic hot spots and collaborated with US Secret Service, Cleveland Police Department, Cleveland Traffic Engineering, Ohio Department of Transportation, and 2016 RNC Transportation Management team to prepare a traffic management plan. The results were highly effective, traffic flowed smoothly throughout convention week; both delegates and residents of northeast Ohio could get to their desired destinations on time and as scheduled. In addition, provided structural analysis to assist the RNC Committee on arrangements with the placement of eight generators used as system backup for Quicken Loans Arena, site of the Republican National Convention. Assessed structural feasibility of the proposed location on the Tower City parking structure, incorporated proximity of RTA's rail lines and homeland security considerations, and recommended ingress and egress paths to safely transport and place more than 500,000 lbs. of generator equipment that was essential to convention operations.

Hamilton Road; SR-161 to Morse Road, Columbus, OH

Traffic engineer for one mile of roadway widening connecting E. Dublin Granville Road and Morse Road. Project work tasks included preparation of plans and specifications for five reconstructed traffic signals as well as LED street lighting. The five traffic signals are to be interconnected as part of a system using underground fiber optic cable.

HAM-71-3.50 - Uptown Access Study, Cincinnati, OH

Traffic engineer who performed capacity analysis for multiple alternatives using HCS, Synchro, and VISSIM traffic modeling software. This project examined solutions that would be appropriate for a dense urban area and consider safety, multi-modal travel needs, quality of life, travel times, wayfinding and the economic vitality of the Uptown Area in Cincinnati. The design considered future rail or rapid bus transit in the corridor.

Lane Avenue Coordination Project, Upper Arlington, OH

Project manager responsible for preparing and implementing revised signal timing for six signalized intersections. Work included conducting turning movement counts and completing existing and optimized Synchro Analysis to develop time of day signal plans. This project was done at the same time as the City of Upper Arlington purchased wireless equipment to interconnect the six signals from North Star Road to Tremont Road. Before and After travel time runs were completed and field adjustments were made. A Benefit-Cost analysis was completed to fully gauge the impact of the project.

Andrew Ceifetz, PE | Safety Lead



Education

- Bachelor of science in Civil and Environmental Engineering, Michigan State University, 2002

Professional Registration(s)

- Professional Engineer
- MI, #55540

Experience

With WSP since 2017
15 Years prior experience

Background

Andrew Ceifetz has a broad range of experience in roadway safety, traffic data and safety analysis, design, transportation engineering, and inspection. He has developed and led trainings for Road Safety Audits, the Highway Safety Manual, Performance Based Maintenance, and safety reviews for hundreds of MDOT and Local Agency Staff, including tools to implement the HSM. He is a member of TRB's Standing Committees on Tort Liability and Risk Management (AL070) and Low-Volume Roads (AFB30), in addition to sitting on multiple NCHRP Project Panels. His work has been presented at conferences in Michigan, Ohio, Wisconsin, Canada, and New Zealand, and he has been published in both United States and Canadian research journals. Andrew was elected co-chair of the Traffic Safety Engineering Action Team for Michigan's Governor's Traffic Safety Advisory Commission (2015-Present).

Select Relevant Experience

Road Safety Audit, Sterling Heights, MI

Project director, retained by the City to improve safety and identify access management opportunities along a one-mile corridor of 15 Mile Road, centered on Ryan Road.

Integrated Road Safety Strategy, Saskatchewan Ministry of Highways and Infrastructure

Technical lead - Building on our experience in the U.S., WSP was selected to develop an integrated road safety strategy for the Province of Saskatchewan, identifying multi-modal safety concerns and countermeasures incorporating the 4-E's of engineering, enforcement, education, and emergency medicine. This project also includes the development of a communications plan.

Assessment of Countermeasure Gaps, Predictive Crash Analysis, and Engineering Safety Programs, MDOT

Co-principal Investigator working with Michigan State University in reviewing Michigan's progress in moving Toward Zero Deaths (TZD). This research will analyze other states' efforts in reducing fatal crashes and safety countermeasures not currently used in Michigan, safety impacts of filling gaps, prioritization tool development, training, and an assessment of the current safety program. Mr. Ceifetz is leading WSP's work including a national review of TZD and the development and facilitation of training.

Local Road Safety Plans, Statewide, MI

Project manager. As recognized leaders in developing an LRSP, WSP is developing a plan for six Michigan State Planning and Development Regions (14 plans to be developed in the State in all). These plans will identify safety issues, trends, and systemic countermeasures after a systematic risk assessment and consultation with stakeholders. A recent extension of the project is to help with implementation of the plans by developing project applications and supporting information.

Select Relevant Experience Continued

Evaluating Road Delineation Practices in Michigan, MDOT

Principal investigator. Opus (now WSP) was selected to determine if MDOT's current delineation system is appropriate or if a new process should be implemented, considering the available products, installation methods, service life, safety improvements, and benefits/costs based on the various roadway configurations and weather patterns in the state.

Highway Safety Manual Implementation Support, MDOT

Senior transportation engineer & instructor. Helped develop and deliver courses titled: Introduction to the Highway Safety Manual (HSM) and Advanced HSM Applications. Developed tools to actively apply the HSM on MDOT projects.

As-Needed Traffic Safety & Operations Services, MDOT

Project manager. While with Opus, in partnership with WSP; providing MDOT's Metro Region staff assistance with various traffic safety and operations tasks, including Transportation Management Plans, Maintenance of Traffic Plans and Special Provisions, Work Zone & Mobility Field Reviews, Scoping for Traffic and Safety Projects, Active Construction Coordination, Field Review for Safety Improvements, Traffic Engineering Studies and Analysis, and Traffic Signal Design reviews.

Road Safety Audit Facilitation, MDOT and WisDOT

Project manager and senior transportation engineer for a scoping, design, and operational stage Road Safety Audits in two states.

Road Safety Audit Training, MDOT

Lead instructor provided experienced personnel to conduct RSA training for MDOT and Local Agency staff (over 150 to date) using the NHI 380069 course that Opus (now WSP) developed for the FHWA.

Highway 104 Operational & Safety Review, Nova Scotia, Canada

Road safety specialist conducted an operational and safety review of a 38km section of Highway 104 in Nova Scotia, with a focus on near- and mid-term safety and operational improvements. Mr. Ceifetz was responsible for developing a Highway Safety Manual model of this rural corridor including multiple segments and intersections.

Local Agency Programs Before/After Safety Studies, MDOT

Project manager conducted a before and after study and determined the safety effectiveness for each location as well as the overall effectiveness of the Local Agency Safety and High Risk Rural Roads Fiscal Year (FY) 2010 program. Included data collection, statistical analysis, and economic analysis of each treatment and group of treatments.

Tribal Road Safety Initiative, WisDOT

Project manager and senior transportation engineer completed Road Safety Audits and Road Safety Plans for several tribal communities in Wisconsin, as well as a state-wide network screening using the HSM, and synthesis report regarding crashes on Wisconsin Indian Reservations. Evaluated RSAs for two tribes and the associated countermeasures for available funding.

Intersection Safety Evaluations, Macomb County, MI

Project manager conducted intersection safety evaluations at nine locations identified by the County, using the Road Safety Audit methodology Opus (now WSP) developed for the FHWA.

Tribal Transportation Safety Plans, Multiple Tribes (Lac du Flambeau Band of Lake Superior Chippewa Indians, Sault Ste Marie Tribe of Chippewa Indians): project manager/senior transportation engineer assisted multiple tribes in developing comprehensive multi-modal transportation safety plans covering their respective reservations. These plans focused on systemic improvements which will benefit tribal members and visitors alike.



B. PAST INVOLVEMENT WITH SIMILAR PROJECTS



City of Ann Arbor – Nixon / Green / DhuVarren Roundabout & Nixon Road Corridor Study

Ann Arbor, Michigan



OHM Advisors was contracted by the City of Ann Arbor to complete a roundabout design at the intersection of Nixon/ Green/Dhu Varren, and to perform a corridor study along Nixon Road.

The roundabout design aligned two offset tee intersections with a single lane roundabout. Included in the design were cross sections, alignments, removals, construction sheets, profiles, utilities, construction staging, detailed grading, wetland mitigation, permanent signing, pavement markings, lighting, soil borings, soil erosion and sedimentation control.

The corridor study included evaluation of the Nixon Road corridor from the north city limit to its intersection with Plymouth Road. The study was a multi-modal analysis of the corridor, evaluating the needs of motorized vehicles, bicyclists and pedestrians. Vehicle analysis was based on conventional capacity (level of service) methodology, but non-motorized analysis was based on a method that focused on the quality of the walking and biking experience. Traffic analysis along the corridor was completed with PTV Vissim software. The project also involved an extensive public engagement campaign.

OHM Advisors was also involved in the construction phase of the roundabout, providing construction engineering assistance and construction staking.



COMPLETION

Study
02.2016 - 05.2017
Design
03.2016 - 01.2017
CE
06.2017 - 10.2017
Construction
06.2017 - 09.2017

COST

Study
\$165,000
Design
\$560,000
CE
\$140,000
Construction
\$2,426,797

CLIENT INFORMATION

City of Ann Arbor
Igor Kotlyar,
Senior Project Engineer
301 E. Huron Street
Ann Arbor, MI 48104
734.794.6410

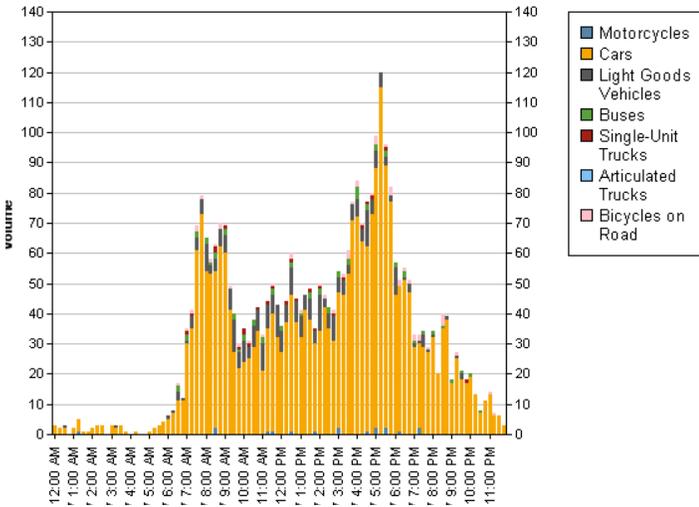
SERVICES PROVIDED

Traffic Study
Design Engineering
Survey Services
Multi-Modal Analysis
Non-Motorized Pathway
Public Engagement
Construction Engineering



City of Ann Arbor – Seventh Street Speed Management Study

Ann Arbor, Michigan



At the request of the City of Ann Arbor, OHM Advisors prepared a traffic study that evaluated speed management along the Seventh Street corridor, from Miller Avenue to West Stadium Boulevard.

Residents of Seventh Street have expressed concerns of speeding and neighborhood safety for many years. As a result, many studies had been completed and various techniques were been tried in the past, including public engagement campaigns, radar speed signs, speedbumps, and installing pedestrian crosswalks. Resident complaints persisted, and OHM Advisors was ready to assist with fact-driven and flexible options to alleviate the problems.

FACT-DRIVEN FLEXIBLE OPTIONS PROVIDED TO THE CITY AND CONCERNED RESIDENTS

OHM collected raw data using traffic counters and video monitoring. This objective data was compiled into a report later presented to the City, and was used by OHM to make recommendations to the City. In our final report, various alternatives were listed, including changing curb location, horizontal alignment changes, signal considerations, and modern roundabout considerations at the intersection of Seventh Street at Madison Avenue.



COMPLETION
Study
03.2017 - 05.2017

COST
Study
\$23,000

CLIENT INFORMATION
City of Ann Arbor
Nick Hutchinson, PE,
City Engineer
301 E Huron Street
Ann Arbor, MI 48107
734.794.6410

SERVICES PROVIDED
Traffic Study
Traffic Count
Recommendations
Stakeholder Meetings



AATA – Plymouth Road Park & Ride Facility

Ann Arbor, Michigan

Situated between U.S. Highway 23, its respective southbound entrance ramp, and Plymouth Road, this project was certainly not your ordinary Park & Ride project. With OHM Advisors’ assistance, the AATA procured a Maintenance Agreement with the Michigan Department of Transportation to build a “green” parking lot facility where MDOT is the acting landlord of the site since it fell under the jurisdiction of MDOT. The project was funded using American Recovery Reinvestment Act administered through the Federal Transit Agency. This project truly felt like a partnership of team members which started with the AATA. Michigan’s 2010 gubernatorial candidate and local Ann Arbor entrepreneur, Rick Snyder commented on WJR-760 Radio that this project was “the nicest park & ride in North America”, and served to improve the parking problems within the Ann Arbor area.

The facility fronts Plymouth Road with a single driveway access aligned opposite the signalized southbound US-23 exit ramp. The facility was built to provide commuter parking coupled with a transit terminal internal to the site. This parking lot provides 245 vehicular spaces which include handicap van accessible, compact parking, 5-minute parking, and electrical vehicle parking (outlets in light fixtures). The transit terminal provides a standing pad, shelter, and benches for bus passengers along with amenities for bicycle storage and storage lockers. The transit terminal is separated from the parking area, and allows buses to circulate the site to pick up and drop off passengers with minimal interference from other vehicles.

Based on work previously conducted by OHM Advisors for the City of Ann Arbor, additional turn lanes on Plymouth Road were required to accommodate right and left turn lanes into the proposed facility. The current traffic signal at the southbound US-23 exit ramp and Plymouth Road were replaced. The diagonal span wire signal was removed due to adjustments in the entrance alignment. The proposed traffic signal layout required a new “box span” signal configuration in accordance with MDOT requirements with upgraded traffic signals heads, and is synchronized with the City of Ann Arbor’s SCOOTs system.



“THE NICEST PARK & RIDE IN NORTH AMERICA”

COMPLETION

Design
12.2009
Construction
06.2010

COST

Design
\$125,000
Construction
\$1,500,000

CLIENT INFORMATION

Ann Arbor Transportation Authority
Chris White,
Mgr. of Service Development
2700 S. Industrial Highway
Ann Arbor, MI 48104
734.794.1850

SERVICES PROVIDED

Funding Assistance
Green Design
Lighting Improvements
Bike & Pedestrian Friendly
LID Elements
Stormwater Mgmt.
Bidding Assistance
Construction Engineering

AWARDS

APWA 2012 Project of the Year



Our Work

WCRC – Dixboro Shared Use Trail

Ann Arbor, Washtenaw County, Michigan

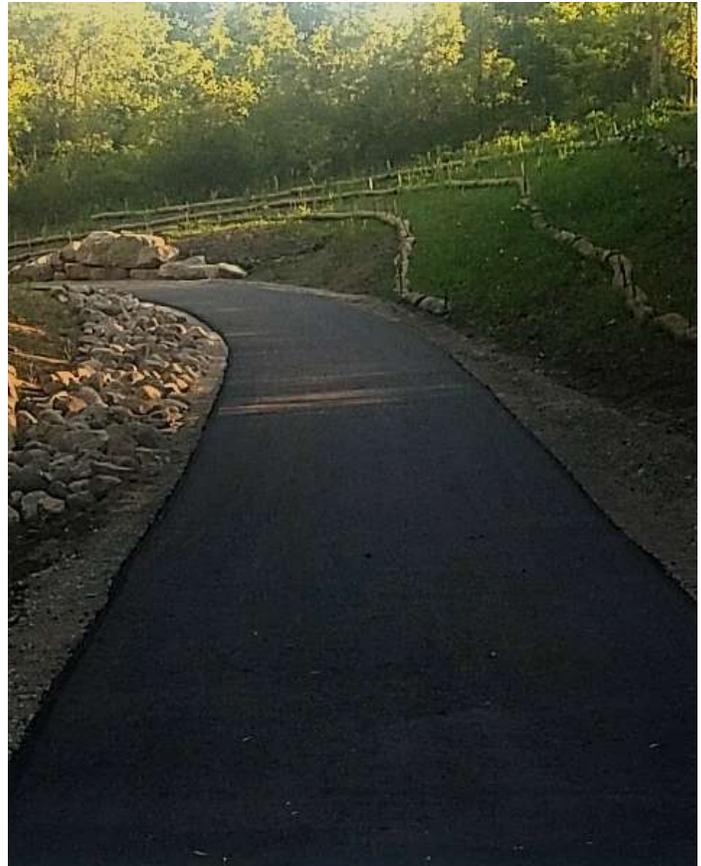
OHM Advisors was contracted by the Washtenaw County Road Commission (WCRC) to complete two miles of shared-use trail construction including clearing and selected tree removals, earth excavation, subgrade undercutting, aggregate base construction, concrete approaches, helical pile installation, open-pile timber boardwalk assembly, hot mix asphalt paving, and site restoration. The work included nearly 500’ of open-pile timber boardwalk over four segments.

This scenic trail provides public access to unique and diverse natural areas within Washtenaw County, extending from Geddes Road to the Matthaei Botanical Gardens in Ann Arbor Township. This trail is regionally significant, as it acts as a non-motorized spur from the Border-to-Border Trail to the Matthaei Botanical Gardens. The trail winds through woods and meadow, and was immediately used by area pedestrians and bicyclists. An easement was granted by the University of Michigan for the trail construction, including properties held by Radrick Farms Golf Course, the U of M Challenge (“Ropes”) Course, and the U of M Matthaei Botanical Gardens.

The proposed path alignment fell within the habitat of the Eastern Mississauga Rattlesnake. Close coordination with U of M Matthaei Botanical Gardens staff was needed to conduct the construction as to limit adverse impacts to this threatened federally protected species. The correct placement, installation, and maintenance of soil erosion and sedimentation control (SESC) devices were of particular importance.

As a Transportation Alternative Program (TAP) funded project, the MDOT Local Agency Program Office requirements along with the MDOT Construction Manual and other standards for testing and record keeping dictated the construction process. Inspector’s Daily Reports (IDR’s) were reviewed and approved. Pay items and quantities were examined, contract modifications were generated, and regular pay estimates were reviewed, approved and processed.

Project stakeholders included MDOT, WCRC, Ann Arbor Township, and U of M.



TWO MILES OF SHARED USE TRAIL WITH VARIED SURFACES

COMPLETION

CE
02.2017 - 12.2017

Construction
03.2017 - 10.2017

COST

CE
\$272,400

Construction
\$1,657,122

CLIENT INFORMATION

Washtenaw County Road Commission
Matthew MacDonell,
Asst. Director of Engineering
555 N. Zeeb Road
Ann Arbor, MI 48103
734.761.1500

SERVICES PROVIDED

Project Management
Construction Engineering
MDOT Policies & Procedures
Multi-Agency Coordination



Ann Arbor Public Schools – School Safety Evaluations

Ann Arbor, Michigan



As an acknowledged leader in school traffic and pedestrian safety, OHM Advisors was asked to evaluate two high schools, Huron and Pioneer, as well as Clague Middle School. OHM identified the traffic safety and operational problems, both on site and along adjacent streets, for these buildings. Our counter-measures for addressing traffic and pedestrian issues were stratified into short and long-term solutions, giving the school district options for immediate implementation while programming the more significant improvements for future budget cycles.

COMPLETION

Study
02.2018 - 06.2018

COST

Study
\$23,000

CLIENT INFORMATION

Ann Arbor Public Schools
Liz Nowland-Margolis,
Executive Dir. Student Safety
2555 S. State Street
Ann Arbor, MI 48104
734.994.2014

SERVICES PROVIDED

Bus Circulation
Parent Circulation
Pedestrian Safety Evaluation
Operational Improvements



Our Work

MDOT – Road Safety Audits (2014-2017)

Various Locations, Michigan

OHM Advisors was contracted by the Michigan Department of Transportation (MDOT) to perform over 20 Road Safety Audits at various locations throughout the state.

The safety audit is a formal safety evaluation of planned or existing roadways by an independent multi-disciplinary team. OHM Advisors personnel served as the facilitator and RSA team leader, and conducted field reviews at the project locations.

ONGOING AUDITS ENSURE SAFETY THROUGHOUT STATE

The duties included compiling data relevant to the project, conducting the project kickoff meeting, giving a presentation on the RSA process and scope of the specific job, leading the field review team and facilitating a debriefing meeting, preparing and giving the findings presentation, and preparing the final report. Along with the safety recommendations, a cost analysis and Highway Safety Manual analysis are also prepared per MDOT and RSA specifications.

Some of the audited locations under this contract were:

MDOT University Region

- I-96 from Clinton/Eaton County Line to Canal Road
- US-23 from M-14 to Silver Lake Road
- US-23 from I-94 to Monroe County Line
- US-12 from Gates Avenue to Onandaga Avenue

MDOT Superior Region

- M-26 from east of Portage Lake Lift Bridge through Ripley
- US-41/M-28 from Northwoods Road to Commerce Drive

MDOT North Region

- M-115 at 20 Mile Road

MDOT Metro Region

- Old M-59 from Crooks Road to Livernois Road

MDOT Southwest Region

- Downtown Kalamazoo



COMPLETION
01.2014 - 10.2017

COST
\$122,434

CLIENT INFORMATION
Michigan Department of Transportation
Carissa McQuiston, PE,
Non-motorized Safety Engineering Specialist
PO BOX 30050
Lansing, MI 48909
517.335.3834

SERVICES PROVIDED
Road Safety Audits

Our Work

Live 6 - Organization Implementation

Detroit, Michigan



Lauren Hood successfully launched a place-based, anchor institution partnership organization convened to create and implement community development activities in Northwest Detroit called Live 6.

She designed multiple platforms for gleaning input from residents, business owners, property owners, and neighborhood leaders at levels to create a shared vision for recruiting new businesses, sustaining exiting businesses, vacant property activation and community programming. Lauren then served as a convening partner connecting community members to philanthropic and financial institutions, city government, service providers and anchor institution leadership.

Over the course of a two-year period, she engaged over 1,000 residents and a cohort of business owners, property owners, local leadership and long time residents to provide space for input and feedback on neighborhood development projects. A 25-member advisory board convened monthly over a year-long period.

COMPLETION
09.2015 - 12.2017

COST
\$275,000

CLIENT INFORMATION
University of Detroit Mercy
Dr. Antoine Garibaldi,
President
4001 W. McNichols
Detroit, MI 48221

SERVICES PROVIDED
Community Engagement
Programming
Economic Development
Meeting Facilitation

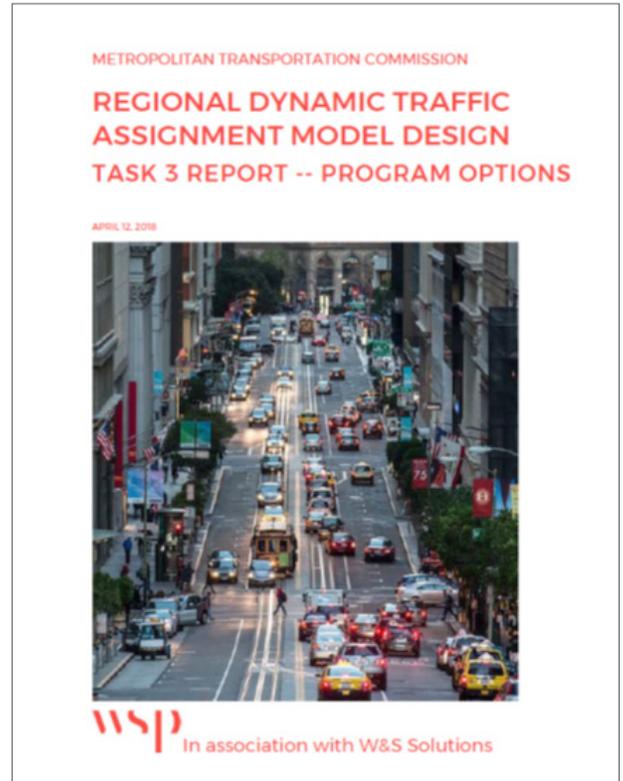
Metropolitan Transportation Commission – Dynamic Traffic Assignment Model Design

San Francisco Bay Area, California

The Metropolitan Transportation Commission (MTC) retained WSP to conduct a structured process to develop a Dynamic Traffic Assignment (DTA) model design. The design included the following elements:

- Performance requirements for DTA
- Available staff resources
- State of the practice experience
- Software capabilities
- Hardware, software and consultant costs
- Timeframe
- Hardware requirements
- Model coverage
- Model uses and results
- Internal Staff Roles
- Advantages and Disadvantages

Eleven peer agencies were surveyed to understand key issues related to regional DTA development and the successes and drawbacks of DTA models. In addition, seven software vendors were surveyed to gather an objective fact-based database with which to evaluate potential software platforms. Four vendors provided extensive presentations on the features of their software products.



Project Challenges

- MTC used this project to lay the foundation for a deliberate DTA model development project that would meet their planning and operation needs.
- Gathering as much objective information on DTA models and software as possible, while educating the client on the nature of DTA models. This was accomplished by targeting peer agencies and software vendors through surveys, and working with both groups to clarify their answers. WSP staff also shared their DTA experience to provide insight into what the critical issues were in applying DTA to a large metropolitan region.

Outcome/Benefits

- The study provided a basis for the MTC planning and operations staff to work together and form a clear development path and a robust recommendation for funding for this effort to the MTC board.

COMPLETION

Design
01.2017 - 06.2018

COST

Design
\$91,461

CLIENT INFORMATION

Metropolitan Transportation Commission
Kevin Chen, PE,
Principal Transportation Engineer
375 Beale Street, Suite 800
San Francisco, CA 94150
415.778.5338

SERVICES PROVIDED

Traffic Modeling
Software/Hardware Consulting

Olympia Development of Michigan - Little Caesars Arena/ The District Transportation Management Plan Detroit, Michigan

WSP was selected by Olympia Development of Michigan, Inc. (ODM) to prepare a transportation management plan (TMP) for the District Detroit, a major new residential, commercial and entertainment district near downtown Detroit. The District includes Little Caesars Arena (LCA), the new home of the Detroit Red Wings NHL franchise and the Detroit Pistons NBA franchise.

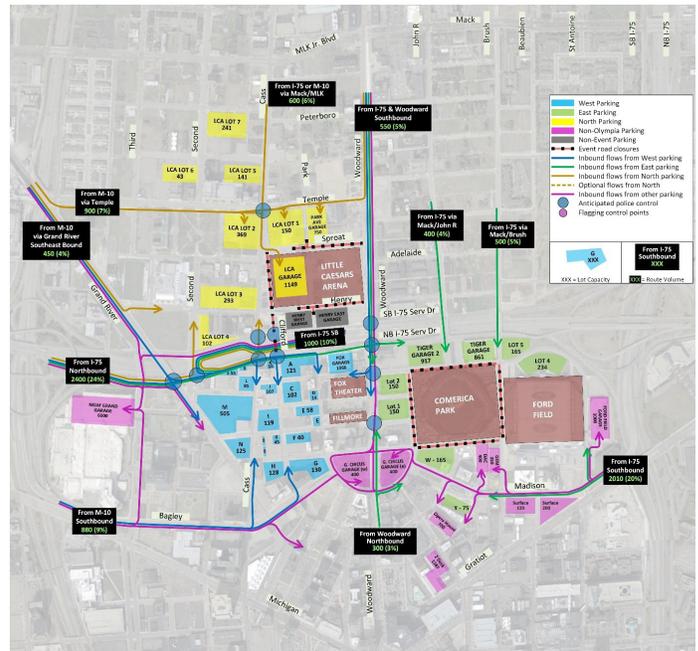
WSP was tasked to develop a number of work products as part of this planning effort:

A master plan study of the entire District and surrounding area was conducted, evaluating day-to-day traffic operations along all roadways within the district and identifying improvements necessary to facilitate anticipated buildout traffic flow. This includes considerations of alternate modes of travel, how trends in car sharing/ride sharing may impact auto needs, and linkages to transit services to/through the area.

The project also included an improvement study for the M-10/Grand River Avenue/Temple Street interchange area. The study looked at a range of geometric and operational improvements to simplify wayfinding and reduce off-ramp queuing onto the freeway.

Specific to the LCA, WSP prepared an event management strategy for the arena and the broader entertainment district. The plan addressed a wide range of elements, including:

- Permanent street closures and proposed one-way to two-way street conversions
- Ingress and egress of vehicular traffic
- Premium parking structure access and egress strategy
- Pedestrian circulation and temporary street/lane closures to accommodate pedestrian volumes
- Special vehicle circulation and staging, including taxis, limos, charter buses and courtesy shuttles
- Resident access to the area during events
- Management of access to the Woodward streetcar line
- Special event traffic signal timing strategy
- Police traffic control locations
- Temporary hard and soft road closure locations
- Impact of the arena security perimeter on circulation



COMPLETION
04.2013 - 09.2017

COST
\$250,000

CLIENT INFORMATION
Olympia Development of Michigan
Aaron Ford
2211 Woodward Ave.
Detroit, MI 48201
313.471.3210

SERVICES PROVIDED
Transportation Plan
Multi-Modal Considerations
Improvement Study
Operational Improvements

Oakland County - Downtown Pontiac Transportation Assessment

Pontiac, Michigan

Oakland County Planning & Economic Development Services, in partnership with the City of Pontiac, was awarded a Sustainable Communities Challenge Grant in October 2010. The Sustainable Communities Challenge Program is a partnership between USDOT, HUD, and Environmental Protection Agency, and encourages communities to develop plans addressing the Six Livability Principles:

- Provide more transportation choices
- Promote equitable, affordable housing.
- Enhance economic competitiveness.
- Support existing communities.
- Coordinate policies and leverage investment.
- Value communities and neighborhoods

WSP was selected to perform planning, traffic engineering, PlaceMaking, and public involvement. WSP was to specifically address the Woodward Loop and other barriers to connectivity and economic growth in, and surrounding, downtown.

The purpose of the Downtown Pontiac Transportation Assessment was to create a plan that detailed the best ways to use the city’s physical and natural assets as the foundation for making better connections between downtown Pontiac, the neighborhoods immediately surrounding it, employment centers, and other nearby communities. These assets included, but were not restricted to, the newly refurbished Pontiac Multi-Modal Transportation Center, the regional bike trail system, the “Loop”, Clinton River and other assets located within the project study area. The public engagement process for the project included a Project Advisory Team, a Citizens Advisory Group, three sets of public meetings (one being a three day charrette), and a multi-media approach to inform and receive public input. The completed plan described the steps for implementation and developed specific design guidelines for redevelopment parcels, transportation connections, wayfinding, improving livability, and safety in Downtown Pontiac.



COMPLETION

Assessment
09.2011 - 02.2013

COST

Assessment
\$300,000

CLIENT INFORMATION

Oakland County Planning & Economic Development Services
Bret Rasegan
2100 Pontiac Lake Road,
Building 41
Waterford, MI 48328
248.858.5445

SERVICES PROVIDED

Traffic Engineering
Complete Streets
Planning
Public Engagement



C. WORK PLAN



As the City of Ann Arbor looks out into the future of the Lower Town area, they understandably are concerned with achieving a reasonable balance for the mobility needs of all users. The transportation network will need to be evaluated from the perspective of personal mobility, rather than merely for vehicles. As such, the OHM team will be investigating the needs of pedestrians, bicyclists, and transit users and how their interests

will be balanced against those traveling in passenger vehicles and the business requirements for commercial trucking and delivery.

We have organized our project approach into a series of major tasks. These tasks are described below:

Task 1: Public Engagement

Our team’s engagement philosophy is to meet residents “where they’re at” through authentic dialogue and relationship building over time, obtaining a critical mass of participation in and support for the mobility study process.

Our engagement team, led by Ms. Lauren Hood, will review information from previous project websites and all planning/policy related documents provided by City staff. The team will also seek feedback from previously engaged stakeholders on the process and outcomes to inform best practices for the mobility study moving forward.

Trust is built through transparency. In order to actively engage participants in a real time process, we will maintain a mailing list and project website with up to date information on the study process. This project website will be used to make documents available to the public, including RFP materials with detailed background information so that all process participants are properly prepared to engage. The project website will include a means of capturing open-ended feedback and provide a project specific email address in order to respond to specific inquiries.

We will engage City staff, employing the existing toolkit, to establish an initial stakeholder database. Ms. Hood will maintain and update the database throughout the study process.

Specific gatherings will be scheduled for the engagement team to give presentations and listen to the stakeholders in the Lower Town communities:

- ▼ **Up to 10 Stakeholder interviews prior to Public Meeting 1**
 - ✓ Identify concerns
- ▼ **Public Meeting 1: Introduction and Kickoff**
 - ✓ Present project details
 - ✓ Inform attendees about alternative engagement platforms (website, mailing list)
 - ✓ Introduce the team
 - ✓ Define “Rules for Engagement” in public meetings (Communicate expectations for behavior, duration of commentary.)
 - ✓ Facilitate community conversation
 - ✓ Document feedback
- ▼ **Public Meeting 2: Existing Condition Findings**
 - ✓ Team presentation
 - ✓ Facilitated dialogue
 - ✓ Document feedback
- ▼ **Public Meeting 3: Future Conditions Findings and Recommendations**
 - ✓ Team presentation
 - ✓ Facilitated dialogue
 - ✓ Document feedback
 - ✓ Propose means for continued engagement

Lauren and the team will compile and present pertinent background materials, visual aids, and support documentation as required. She will engage City staff with regards to the publishing of meeting announcements and will be responsible for the distribution of meeting invitations and coordination.

Ms. Hood will facilitate the meetings. Each meeting agenda shall include a designated community comment session as well as presentations from the team and City personnel

Work Plan

as necessary. The team will design the meeting schedule in accordance with what has been outlined in the RFP. “Public Meetings” to include traditional town halls, one on one interviews and appearances at existing pre-determined stakeholder gatherings.

The engagement team will provide regular updates to the project website, including feedback obtained at the public meetings within a short time frame following the meetings. Drafts of support materials and findings shall also be provided as they are completed and checked.

Lauren and the team shall meet with City staff at designated intervals to ensure milestones are met and that pace of the work adheres to the specified timeline. The team will create the agenda, provide status updates and document meeting outcomes.

Task 2: Documentation Gathering and Review

Undertaking a mobility study for the Lower Town area, indeed for any portion of the City, must be grounded in a full understanding of the context and plans for the community. The RFP has noted a series of planning documents, studies and analyses that will need to be considered. Our OHM team is already conversant with many of the referenced works, since they were inherent to our work in developing the Nixon Road Corridor Study. For those references that are more specific to this new project, such as the U of M North Campus and Medical Center Campus Master Plans, we have already obtained them and are familiarizing ourselves with how they will inform our work for Lower Town mobility.

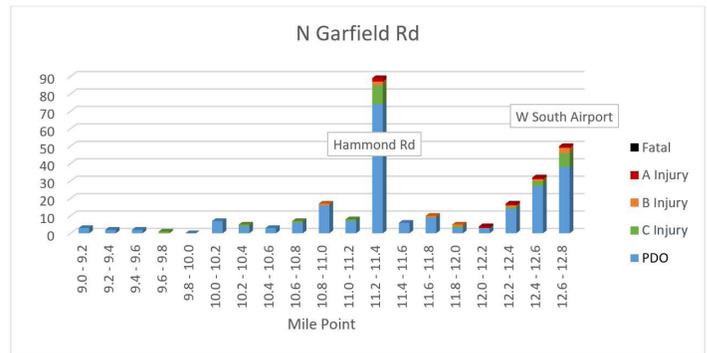
This task will include working with the City to gather information from all available sources, including the documents referenced in the RFP. The team will familiarize themselves with each of the documents. Our deliverable for this task will be a report that summarizes the information collected for use throughout the study.

Task 3: Crash Analysis

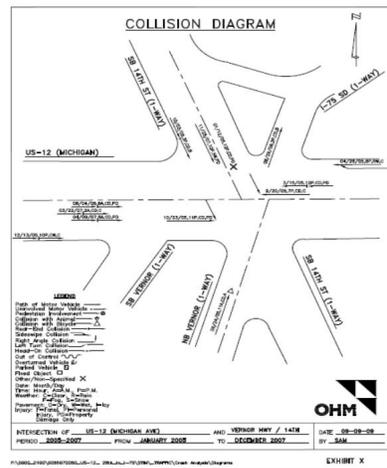
One of a traffic engineer’s most important contributions to traffic safety is the analysis of high crash locations and the recommendation of improvements to address deficiencies to

make travel safer. We are adept at preparing crash summaries and diagrams that are used to identify crash patterns that can be reduced or eliminated by implementing signing, pavement marking, signals and phasing, lane assignment or geometry modifications. A full multi-year crash history review of all of the major roadways in the lower town study area will be undertaken, with specific focus on fatalities and serious injury crashes.

The illustrations below depict examples of how the crash data can be reported out, with a suitable narrative explaining our findings. The deliverable for this task will be a detailed report comprising a series of charts, illustrations and diagrams discussing problematic crash locations and proposed changes to mitigate the current safety issues.



Crash location frequency charts can be used to identify ‘hot spots’, allowing a focused evaluation of specific segments or intersections with safety problems.



Collision diagrams can be created to aid pattern recognition, for the development of crash countermeasures.

Task 4: Travel Data - Video Data Collection

Beyond the safety aspects of the study area, it is important that the operational conditions be investigated and evaluated. This all starts with adequate travel data; data for pedestrians, bicyclists, transit users and vehicles. While we anticipate that some travel data will be identified during Task 2, it is likely that additional data will be needed.

We generally recommend that significant data collection efforts occur during the school year, on typical weekdays. Weekend and/or summer counts only make sense if there are major seasonal recreational facilities that would propel travel demands in excess of normal commuter patterns.

For the purposes of estimating an initial fee for our work plan, we are assuming that data collection will be accomplished by video capture, with a minimum of 48 hours of data for each of 20 locations. Through a careful selection of data collection sites, we will be able to achieve a reasonable recognition of vehicle volumes and turning movements, pedestrian volumes and crossings, bicycle volumes whether on-street or along sidewalks, and bus patrons embarking and disembarking for key stops.

Deliverables would include summary reports detailing travel movements of vehicles, pedestrians and bicycles at specific locations. As needed, this data can be stratified by class of vehicle and provided to the City in a variety of formats, including Excel and Adobe PDF. Further, the videos in AVI format can also be provided, if desired.

Task 5: Road Safety Audit

The RFP has requested that existing safety deficiencies in the study area be identified. Although a full crash analysis is proposed, this is not sufficient to unearth all potential safety issues. Our recommended plan is to conduct a Road Safety Audit (RSA).

This is defined as “the formal safety performance examination of an existing or future road or intersection by an independent, multidisciplinary team. It qualitatively estimates and reports on potential road safety



issues and identifies opportunities for improvements in safety for all road users.”

Road safety audits differ from conventional traffic safety studies in two key ways: road safety audits are pro-active investigations, rather than reactive investigations of sites with histories of complaints or poor safety performance. The investigation team is independent from the staff that owns / maintains the road. A key feature of a road safety audit is the use of a team of professionals with varied expertise. We propose a team that includes a traffic safety engineer, traffic operation engineer, design engineer, maintenance engineer, and law enforcement. Since historical crash data is available, the audit team will make use of them. However, one of the strengths of the audit process is it can find safety concerns before they contribute to crashes.



Regarding the potential safety performance of future roadway improvements, we will be utilizing methods from the Highway Safety Manual (HSM). This is a publication of the American Association of State Highway Transportation Officials. It contains concepts, guidelines, and computational procedures for predicting the safety performance of various highway facilities.



The planned process for the RSA would begin with preparation of information packets for the RSA team to use during their reviews. These packets may include maps, crash summaries, traffic data, etc. The next step would be to schedule the RSA kickoff meeting, which would include

Work Plan

a presentation by the Project Manager and RSA Facilitator, Steven Loveland, explaining the RSA process and providing an opportunity for stakeholders to explain to the team the problems in the area. After this kickoff meeting, the team begins their audit, reviewing the information available and field reviewing the study area during peak periods, off-peak periods and nighttime. The team will identify the safety concerns and prioritize the issues. A findings presentation will be prepared and presented to the stakeholders. For this large of an area, it is envisioned to be approximately a 5-day process from the kickoff meeting to the findings presentation. This would include up to 3 days of field work followed by audit team meetings and presentation preparation. The recommendations coming out of the audit will focus on both short and long term fixes for the Lower Town area.

Our school safety experts' previous work includes evaluating elementary, middle/junior high and high schools for Avondale School District, Farmington Public Schools, Midland School District, Milan Area Schools, Novi Public Schools, Rochester Community Schools, Troy School District and Wyandotte Public Schools. Also, just earlier this year, we have been retained to review a number of Ann Arbor Public Schools. To date, these include Clague Middle, Huron High and Pioneer High Schools.



While the entire Lower Town area will be reviewed during the RSA Process, particular attention will be paid to the follow items:

1. Evaluation of Uncontrolled Crossings (based on guidance from NCHRP 562)

2. Pontiac Street/Pontiac Trail improvements for Transit and Non-Motorized Modes

3. The Center of Lower Town area

4. Broadway/N. Division Congestion

The process of identifying deficiencies also leads to the anticipation of remedial improvements to address those shortcomings. However, there may be competing demands for changes to serve the needs of different modes of travel that cannot all fit within existing road right-of-way (ROW). The OHM team is prepared to develop alternate improvement options, illustrating how the needs of the various modes might be balanced within the ROW.

5. Northside Elementary School Study

One of the concerns for the Lower Town area is the existing congestion surrounding the Ann Arbor STEAM program at Northside Elementary School, located at the corner of Barton Dr and Traver St. The OHM team has extensive experience in reviewing and evaluating the problems with traffic circulation and pedestrian safety at school campuses.



Clague MS, Ann Arbor PS: School site safety requires a holistic view all modes of circulation on-site and on adjacent streets.

We anticipate that the concerns at Northside are related to congestion during its arrival and dismissal times. OHM would be happy to assist in evaluating these problems and developing concepts for corrective actions as appropriate. We will conduct a field review and safety evaluation of the whole site and surrounding streets. We would likely meet with the school principal and other key staff to briefly discuss their concerns and impressions of traffic and pedestrian safety, as well as discuss these issues with City traffic and police staff. We would observe the unique traffic patterns and conflicts for the AM arrival and PM dismissal periods. Based on these



Northside ES, Ann Arbor STEAM: The field review will focus on typical arrival and departure periods for all modes of travel.

observations, we would identify alternative improvements needed to address these problems.

While not explicitly part of the Lower Town study area, it would not be difficult to extend the scope of the RSA to include the location of the existing Amtrak train station on Depot St west of Broadway. For that matter, we could also include the anticipated locations for the relocation of Amtrak to east of Fuller Rd and the desired station location for the WALLY rail line near Plymouth Rd, if desired by the City.



The last step for the RSA Team will be to prepare a report that summarizes the process and findings with recommendations and approximate costs. Again, this will focus on items that can be addressed in the short term and more long term fixes.

Task 6: Modeling Software Selection Process

Urban traffic modeling and analysis is part of the advanced intelligent management technologies that have become crucial tools for traffic management and control. Its main purpose is to predict congestion states of a specific urban transport network, motorized and/or non-motorized, and test improvement strategies to the network. While certain simulation models are specialized to model either overall system planning or detailed operations, certain models have the capability to model both to varying degrees. Toward this end, we understand that the City is looking for either a single solution or specific software combinations to allow for an easy transition between the level of transportation planning and for detailed traffic design and operation for a variety of transportation modes.

WATS, as the county planning organization, is using TransCAD as the macroscopic (travel demand) model for Washtenaw County. This model choice is in keeping with the fact that all county and regional planning organizations in Michigan use this one same modeling tool. The shortcoming of TransCAD, however, is that it generally does not include all federal-aid eligible roadways in the network model, and that the Traffic Analysis Zones (TAZ) that form the basis for

the travel origin / destination matrix are rather large areas. So while eminently useful as a regional tool, looking broadly at cities and counties, it is not suited for focusing in on the analytical needs of less than primary arterials in the districts and neighborhoods of a city.

At the other end of the modeling spectrum, microscopic simulations like SimTraffic or VISSIM focus on depicting the individual details of driver, pedestrian or others behavior. These software platforms are best for modeling of transportation system operations and have a design focus on a smaller scale, such as a highway corridor or the pinch-points of individual intersections. Lane types, signal timing and other traffic related questions can be investigated with them to improve local system effectiveness and efficiency.

WSP has a long history of using microscopic, macroscopic and mesoscopic modeling for transportation networks. Thus, they have used a broad array of software platforms. Most recently, WSP is part of a team developing a Dynamic Traffic Assignment (DTA) forecasting model of southeast Michigan for MDOT that also encompasses the City of Ann Arbor. The DTA model refines the TransCAD model forecasts for a more accurate distribution of trips on the regional network by taking congestion into account and allowing motorists to select alternate routes when there is a travel time savings. This will help with identifying traffic detour patterns for future MDOT construction projects, and helping to plan maintaining traffic strategies and construction phasing. The OHM-WSP Team will be able to explore with the City staff the various solutions that can start with the WATS-maintained TransCAD data relational structure, enrich it to be better able to deal with travel demand forecasting within the confines of the City, and port it to an appropriate microscopic model for detailed operational analysis. The end goal of setting a direction for not only this project, but establishing a methodology that can be replicated successfully on subsequent City transportation studies.

Through a series of workshops, our team will explore with City staff the software option(s) that may best represent the bridge between demand modeling and detailed analysis most appropriate at a city-level. The workshops will focus on three elements:

- Modeling needs and requirements of the City
- Software capabilities matrix

Work Plan

- Identification of a preferred software(s) solution

The results of these workshops will then be reported out with our recommendations to the city for software acquisition, deployment and training for staff.

This is a similar process to one WSP is currently engaged in with the City of San Francisco. This allows the City of Ann Arbor to leverage much of the national best practices and software evaluation research performed under this project in an exceptionally cost-effective manner.

Task 7: Develop Existing Conditions Model

Once the appropriate software tools are identified in Task 6, our team will build a model of the transportation system for the Lower Town study area. Every intersection will be visited to collect the field and geometric data needed to understand the physical and operational characteristics of the intersection.

The project team will collect:

- ▼ **Lane geometry, including intersection widths.**
- ▼ **Travel distances between intersections.**
- ▼ **Turn-pocket lengths and location of stop bar.**
- ▼ **Traffic control devices such as turn-on-red restrictions, left-turn signals and prohibited turns.**
- ▼ **Pedestrian facilities such as crosswalks, signals and push buttons.**
- ▼ **Approach grades and speed limits.**
- ▼ **Ambient lighting.**

The project team will develop the base network models from GIS maps and/or digital orthographic photography. This will allow the roadway networks to be created quickly and efficiently.

Task 8: Deficiency Analysis - Existing

The existing mobility deficiencies will be identified with the aid of the microscopic operational modeling of the study area. A report documenting the existing mobility conditions and deficiencies will be prepared for use in the final report.

These existing deficiencies along with the deficiencies identified through the RSA process will be shared with the public at Public Meeting 2 (see Task 1 – Public Engagement).

Task 9: Travel Demand Modeling

The software selected in Task 6 will guide the travel demand modeling process. The WATS model will be the base for this task, whether directly using the WATS travel demand model, or through a hybrid WATS/3rd Party software approach. Team member WSP has extensive experience with all levels of travel demand forecasting and has worked directly with the WATS model for several projects in and around Ann Arbor, including ReImagine Washtenaw, South State Street Alternatives Analysis, and the Ann Arbor Transportation Master Plan. There are several key questions to be resolved. One will be the forecast year for the analysis. We anticipate that the travel demand information for 2045 should be available. But the City may wish to look out to a shorter horizon, possibly only 10 to 15 years. Another key is whether significant developments, such as the Cottages at Barton Green or at 1140 Broadway, have already been included in the travel demand modeling done by WATS. If not, then our analysis will include trip generation and distribution calculations for any proposed developments. We will also inventory any vacant parcels where no current development proposals are pending. This will involve working with City Planning staff to identify the likely type and scale of development for the parcels so their impacts can also be included in our analysis.



Task 10: Vision, Goals and Alternatives

Our team will meet with the City to review the existing conditions, and to gather stakeholder input into determining the vision and goals for improvements to the Lower Town area. The input received will be used to determine a statement of purpose and need for Lower Town. This purpose and need statement will then be used as a metric for the alternatives to be measured against.

Using a project team brainstorming session, we will develop a series of alternatives that will seek to address current and anticipated travel challenges, while implementing complete streets. Considered will be a variety of metrics, including serving the needs of pedestrians and bicyclists. The alternatives will be illustrated by way of concept-level sketches and vetted with a series of pro / con statements. The outcomes of this task will be presented to the City. Only those alternatives selected by the City will be passed on to the next step, Task 11, where operational characteristics will be calculated and a concept-level cost estimate will also be prepared.

Task 11: Alternatives Analysis

The alternatives selected by the City in Task 10 will be analyzed for mobility, and any deficiencies will be identified. The next step is to mitigate the deficiencies and fine-tune the alternatives to best meet the mobility needs of all users in the Lower Town area. As a step in the fine-tuning process, Transportation System Management (TSM) and Travel Demand Management (TDM) strategies will be considered for the area and even opportunities outside of Lower Town. A report detailing the analysis and TSM/TDM strategies identified for each alternative will serve as the work product for this task. Exhibits for each alternative will be prepared.

Task 12: Reporting and Recommendations

This task will combine all of the reporting generated throughout the study process into a single project report. This report will include all short-term and the long-term recommendations that come out of the RSA, modeling and brainstorming processes. The report will also provide planning level cost estimates for the recommendations. As

the study is wrapping up, this would be an ideal time to hold Public Meeting 3 with a focus on the study findings, recommendations and next steps in the process.

Task 13: Project Management and Meetings

Steven Loveland will be the project manager for the OHM Advisors team. Steve has nearly 20 years of experience and will oversee the entire project effort and be responsible for the work product delivered to the City of Ann Arbor. Mr. Loveland will work closely with the City of Ann Arbor and their Project Manager, Mr. Luke Liu. He will ensure that the scope of services identified in the contract will be delivered on schedule and within the agreed upon budget. All sub-consultants on the OHM team will report directly to Mr. Loveland unless specifically requested to interact with city staff.

An initial Kick-Off Meeting will be held once the contract has been approved. We anticipate that this meeting will be attended by OHM team members and City staff. Throughout the duration of the study, monthly progress meetings will be held. We anticipate that City staff and OHM team members will attend the monthly meetings to collaborate on issues, design options, and alternatives. OHM will prepare an agenda, meeting materials, and a summary.

In addition to the monthly meetings, OHM proposes to have regular check-ins set up on a bi-weekly basis with the City's Project Manager to keep the project on track and moving forward. These meetings can be in person or over the phone and will have a starting point of including OHM's Project Manager, Mr. Loveland and the City Project Manager, Mr. Liu. Key team members from the consultant and city sides can be identified prior to each check-in meeting.

A tentative project schedule is included with this proposal. This schedule will be a starting point for discussions with the city at the kickoff meeting of the project. Once under contract and a project schedule is finalized, Mr. Loveland and the OHM team will follow this schedule and meet the project deadlines. If the city desires to adjust the schedule during the project, Mr. Loveland will work directly with Mr. Liu find the best scheduling solution to meet the needs of the city and project.

Schedule

TASK		2018				2019												2020	
		S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F
Task 1	Public Engagement			1							2							3	
Task 2	Documentation Gathering and Review																		
Task 3	Crash Analysis																		
Task 4	Travel Data - Video Data Collection																		
Task 5	Road Safety Audit																		
Task 6	Modeling Software Selection Process																		
Task 7	Develop Existing Conditions Model																		
Task 8	Deficiency Analysis - Existing																		
Task 9	Travel Demand Modeling																		
Task 10	Vision, Goals and Alternatives Workshop																		
Task 11	Alternatives Analysis																		
Task 12	Reporting and Recommendations																		
Task 13	Project Management & Meetings																		



D. FEE PROPOSAL
(UNDER SEPARATE COVER)



E. AUTHORIZED NEGOTIATOR

AUTHORIZED NEGOTIATOR

The following individuals are authorized to negotiate the Professional Services Agreement with the City. This proposal will be valid for 90 days.



Robert Czachorski, PE

Principal

734.466.4548 | Robert.Czachorksi@OHM-Advisors.com
34000 Plymouth Road
Livonia, MI 48150



Jon Kramer, PE

Vice President of Public Engineering

734.466.4581 | Jon.Kramer@OHM-Advisors.com
34000 Plymouth Road
Livonia, MI 48150



F. ATTACHMENTS

Legal Status of Consultant

ATTACHMENT B
LEGAL STATUS OF RESPONDENT

(The Respondent shall fill out the provision and strike out the remaining ones.)

The Respondent is:

- A corporation organized and doing business under the laws of the state of Michigan, for whom Robert Czachorski bearing the office title of Principal, whose signature is affixed to this proposal, is authorized to execute contracts on behalf of respondent.*

*If not incorporated in Michigan, please attach the corporation's Certificate of Authority

- ~~A limited liability company doing business under the laws of the State of _____, whom _____ bearing the title of _____ whose signature is affixed to this proposal, is authorized to execute contract on behalf of the LLC.~~
- ~~A partnership organized under the laws of the State of _____ and _____ filed with the County of _____, whose members are (attach list including street and mailing address for each.)~~
- ~~An individual, whose signature with address, is affixed to this RFP.~~

Respondent has examined the basic requirements of this RFP and its scope of services, including all Addendum (if applicable) and hereby agrees to offer the services as specified in the RFP.

Robert Cz
Signature

Date: 06/01/18

(Print) Name Robert Czachorski, PE Title Principal

Firm: Orchard, Hiltz & McCliment, Inc. (dba OHM Advisors)

Address: 34000 Plymouth Road, Livonia, MI 48150

Contact Phone 734-466-4548 Fax 734-522-6427

Email Robert.Czachorksi@OHM-Advisors.com

Non-Discrimination Form

ATTACHMENT C CITY OF ANN ARBOR DECLARATION OF COMPLIANCE

Non-Discrimination Ordinance

The "non discrimination by city contractors" provision of the City of Ann Arbor Non-Discrimination Ordinance (Ann Arbor City Code Chapter 112, Section 9:158) requires all contractors proposing to do business with the City to treat employees in a manner which provides equal employment opportunity and does not discriminate against any of their employees, any City employee working with them, or any applicant for employment on the basis of actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight. It also requires that the contractors include a similar provision in all subcontracts that they execute for City work or programs.

In addition the City Non-Discrimination Ordinance requires that all contractors proposing to do business with the City of Ann Arbor must satisfy the contract compliance administrative policy adopted by the City Administrator. A copy of that policy may be obtained from the Purchasing Manager

The Contractor agrees:

- (a) To comply with the terms of the City of Ann Arbor's Non-Discrimination Ordinance and contract compliance administrative policy.
- (b) To post the City of Ann Arbor's Non-Discrimination Ordinance Notice in every work place or other location in which employees or other persons are contracted to provide services under a contract with the City.
- (c) To provide documentation within the specified time frame in connection with any workforce verification, compliance review or complaint investigation.
- (d) To permit access to employees and work sites to City representatives for the purposes of monitoring compliance, or investigating complaints of non-compliance.

The undersigned states that he/she has the requisite authority to act on behalf of his/her employer in these matters and has offered to provide the services in accordance with the terms of the Ann Arbor Non-Discrimination Ordinance. The undersigned certifies that he/she has read and is familiar with the terms of the Non-Discrimination Ordinance, obligates the Contractor to those terms and acknowledges that if his/her employer is found to be in violation of Ordinance it may be subject to civil penalties and termination of the awarded contract.

Orchard, Hiltz & McCliment, Inc. (dba OHM Advisors)

Company Name

Robert Cz
Signature of Authorized Representative

06/01/18
Date

Robert Czachorski, PE Principal

Print Name and Title

34000 Plymouth Road, Livonia, MI 48150

Address, City, State, Zip

734-466-4548 Robert.Czachorksi@OHM-Advisors.com

Phone/Email address

Questions about the Notice or the City Administrative Policy, Please contact:

Procurement Office of the City of Ann Arbor

(734) 794-6500

Revised 3/31/15 Rev. 0

NDO-2

Living Wage Compliance Form

ATTACHMENT D
CITY OF ANN ARBOR
LIVING WAGE ORDINANCE DECLARATION OF COMPLIANCE

The Ann Arbor Living Wage Ordinance (Section 1:811-1:821 of Chapter 23 of Title I of the Code) requires that an employer who is (a) a contractor providing services to or for the City for a value greater than \$10,000 for any twelve-month contract term, or (b) a recipient of federal, state, or local grant funding administered by the City for a value greater than \$10,000, or (c) a recipient of financial assistance awarded by the City for a value greater than \$10,000, shall pay its employees a prescribed minimum level of compensation (i.e., Living Wage) for the time those employees perform work on the contract or in connection with the grant or financial assistance. The Living Wage must be paid to these employees for the length of the contract/program.

Companies employing fewer than 5 persons and non-profits employing fewer than 10 persons are exempt from compliance with the Living Wage Ordinance. If this exemption applies to your company/non-profit agency please check here [] No. of employees__

The Contractor or Grantee agrees:

- (a) To pay each of its employees whose wage level is not required to comply with federal, state or local prevailing wage law, for work covered or funded by a contract with or grant from the City, no less than the Living Wage. The current Living Wage is defined as \$13.22/hour for those employers that provide employee health care (as defined in the Ordinance at Section 1:815 Sec. 1 (a)), or no less than \$14.75/hour for those employers that do not provide health care. The Contractor or Grantor understands that the Living Wage is adjusted and established annually on April 30 in accordance with the Ordinance and covered employers shall be required to pay the adjusted amount thereafter to be in compliance with Section 1:815(3).

Check the applicable box below which applies to your workforce
[] Employees who are assigned to any covered City contract/grant will be paid at or above the applicable living wage without health benefits
[X] Employees who are assigned to any covered City contract/grant will be paid at or above the applicable living wage with health benefits

- (b) To post a notice approved by the City regarding the applicability of the Living Wage Ordinance in every work place or other location in which employees or other persons contracting for employment are working.
(c) To provide to the City payroll records or other documentation within ten (10) business days from the receipt of a request by the City.
(d) To permit access to work sites to City representatives for the purposes of monitoring compliance, and investigating complaints or non-compliance.
(e) To take no action that would reduce the compensation, wages, fringe benefits, or leave available to any employee covered by the Living Wage Ordinance or any person contracted for employment and covered by the Living Wage Ordinance in order to pay the living wage required by the Living Wage Ordinance.

The undersigned states that he/she has the requisite authority to act on behalf of his/her employer in these matters and has offered to provide the services or agrees to accept financial assistance in accordance with the terms of the Living Wage Ordinance. The undersigned certifies that he/she has read and is familiar with the terms of the Living Wage Ordinance, obligates the Employer/Grantee to those terms and acknowledges that if his/her employer is found to be in violation of Ordinance it may be subject to civil penalties and termination of the awarded contract or grant of financial assistance.

Orchard, Hiltz & McCliment, Inc.
(db a OHM Advisors)
Company Name

34000 Plymouth Road
Street Address

Robert Czachorski
Signature of Authorized Representative
06/01/18
Date

Livonia, MI 48150
City, State, Zip

Robert Czachorski, PE Principal
Print Name and Title

734-466-4548
Robert.Czachorksi@OHM-Advisors.com
Phone/Email address

City of Ann Arbor Procurement Office, 734/794-6500, procurement@a2gov.org

Conflict of Interest Form

ATTACHMENT E



VENDOR CONFLICT OF INTEREST DISCLOSURE FORM

All vendors interested in conducting business with the City of Ann Arbor must complete and return the Vendor Conflict of Interest Disclosure Form in order to be eligible to be awarded a contract. Please note that all vendors are subject to comply with the City of Ann Arbor’s conflict of interest policies as stated within the certification section below.

If a vendor has a relationship with a City of Ann Arbor official or employee, an immediate family member of a City of Ann Arbor official or employee, the vendor shall disclose the information required below.

1. No City official or employee or City employee’s immediate family member has an ownership interest in vendor’s company or is deriving personal financial gain from this contract.
2. No retired or separated City official or employee who has been retired or separated from the City for less than one (1) year has an ownership interest in vendor’s Company.
3. No City employee is contemporaneously employed or prospectively to be employed with the vendor.
4. Vendor hereby declares it has not and will not provide gifts or hospitality of any dollar value or any other gratuities to any City employee or elected official to obtain or maintain a contract.
5. Please note any exceptions below:

Conflict of Interest Disclosure*	
Name of City of Ann Arbor employees, elected officials or immediate family members with whom there may be a potential conflict of interest.	<input type="checkbox"/> Relationship to employee <hr/> <input type="checkbox"/> Interest in vendor’s company <input type="checkbox"/> Other (please describe in box below)
OHM Advisors has no conflicts of interest.	

*Disclosing a potential conflict of interest does not disqualify vendors. In the event vendors do not disclose potential conflicts of interest and they are detected by the City, vendor will be exempt from doing business with the City.

I certify that this Conflict of Interest Disclosure has been examined by me and that its contents are true and correct to my knowledge and belief and I have the authority to so certify on behalf of the Vendor by my signature below:		
Orchard, Hiltz & McCliment, Inc. (dba OHM Advisors)	734-522-6711	
Vendor Name	Vendor Phone Number	
	06/01/18	Robert Czachorski, PE
Signature of Vendor Authorized Representative	Date	Printed Name of Vendor Authorized Representative

Questions about this form? Contact Procurement Office City of Ann Arbor Phone: 734/794-6500, procurement@a2gov.org

